

12K BASIC Manual

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1. Text Editor

The Central Data text editor allows a user to create and change source code (ASCII) files for use with an assembler, interpreter, or any other application of this type. The user's file (otherwise called the text or the source code) is read into a RAM buffer where the user can inspect it and make changes to it.

The editor takes full advantage of the system's features. The video display is always used to display the lines of text in the immediate area of last editing which frees the user from the task of trying to remember where he is in the file. The cassette interface is used to store files and also allows editing of files which are larger than the amount of RAM that you have available for the editing buffers. The supervisor program is used by the editor for its serial input and output routines.

Basic Information

The editor takes up roughly 2K of RAM starting at address H2000. This space includes all of the working RAM locations that the editor needs. The editor requires two buffers to operate: the edit buffer and the insert buffer. The edit buffer is where the source code is held while editing. The insert buffer is where all changes to the edit buffer are made. After an editing operation is finished (i.e. an insert), the insert buffer is merged into the edit buffer to form the new source code.

There are two restrictions concerning the buffers:

1. The edit buffer must be before the insert buffer in RAM, and there can be no space between the two buffers.
2. The buffers must be multiples of 256 bytes long, and their starting and ending addresses must also be multiples of 256 bytes.

Examples of incorrect formatting of the buffers are:

<u>Text Buffer Start</u>	<u>Insert Buffer Start</u>	<u>Reason Why Wrong</u>
H6000	H5A00	The edit buffer must start at a lower address than the insert buffer.
H5800	- H5A10	Buffers must start in multiples of 256 bytes.

If the text buffer were to start at H5A00 and the insert buffer at H5E00 this would work fine. Note that this means that the edit buffer has 1024 bytes of space (H5A00 to H5E00). You can't tell how big the insert buffer is since its ending address is not known. You must, therefore, also specify an address (256 byte multiple) for the first byte after the insert buffer. This byte's address will be called the end of RAM location from here on. If this address was H6000 in this case, the length of the insert buffer would be 512 bytes. Thus far, in our example of correct buffer addressing, we have the following:

<u>Text Buffer Start</u>	<u>Insert Buffer Start</u>	<u>End Of RAM</u>
H5A00	H5E00	H6000

The user defines where the buffers start and end by altering three RAM locations (using the supervisor) before executing the editor. Because of the 256-byte-multiple address restriction, it can be seen that the low byte of each address is H00. For this reason, you need only specify the high byte of the address for the edit buffer, insert buffer, and the end of RAM location. You alter locations H2003 through H2006 to give this information to the editor and then jump to the editor (address H2000). In our example, location H2003 would be changed to H5A, while H2004 would be changed to H5E, and H2006 would be changed to H60. Address H2005 is changed to allocate a buffer in BASIC, and this is explained later.

The buffers have no size restrictions so they can span from any one address to any other as long as the end address is greater than the start address.

After the three bytes have been set up for the editor (using the alter command) and the editor has been jumped to (by the execute command) using the supervisor, you are able to edit your source code using one of the 21 editor commands which are described later.

Display Format

While you are inspecting the source code of your file, the editor displays a header line and up to 15 lines of text. The header line tells you how many completely empty blocks (256 bytes per block) you have left in the edit buffer and displays the command you have entered. The bottom 15 lines of the display are used for the text. These lines are numbered from 1 to 15 as they progress down the page. Note that a line can be up to 256 characters long and that the line numbers are not actually part of the text. The line numbers are simply displayed on the screen to allow you to reference each individual line easily.

In the edit buffer, the end of a line is indicated by a ASCII carriage return code (HOD). The end of file is sensed to be the first character in the buffer with bit 7 set to one. Note that the ASCII characters are all encoded using bits 0 through 6, so bit 7 is free for this use.

Commands

There are 21 commands which the editor accepts. All commands are typed in through the keyboard, and all except four are executed after the press of the carriage return key. The four commands that do not require a carriage return are position moving commands which are used so frequently that they are allowed to take only one keypress. They are explained in detail in the section called 'Moving Around in the File' as well as in the Command Reference Section. The other 17 commands require a carriage return for their execution. These other commands also allow you to type in up to sixteen additional characters which tell the routines exactly what should be done. The backspace key is active during command entering so that mistakes can be easily corrected. Pressing control-P causes the last command entered to be executed again.

Depending on the command, the additional characters may be alphabetic, numeric, or not used. If a number is required (such as in the Forward command) it can be of any size, although the maximum number sent to the routine will be 255. For example, if the command typed was F3000 (move forward 3000 lines), the user would only be moved ahead 255 lines. More details about the Forward command are presented later. Also, if a command requiring a number is entered with no extra characters (just the command and then a carriage return), a number of one will automatically be used. This feature was added due to frequent changes the user will make to the 1st line of text.

The specific command explanations tell you what you should enter after the command (a number, a word, or nothing).

User Defined Commands

You can cause the editor to jump to your own routines by utilizing any of the unused command letters. All that you need to do is change the correct locations in the command address table. Refer to the program listing to find out which two memory locations to change for your command.

Moving Around in the File

Since the display can show only 15 lines at a time and the file can be much larger than this, there are commands which allow you to move around in the file (display different areas of the file).

Four of these commands are executed immediately when the command key is pressed. These four commands are: go to end of file (+), go to beginning of file (-), go forward 15 lines (space), and go backward 15 lines (/). The only exception to this immediate action is when another command is entered, erased (by back-spaces) and then one of the four immediate action commands is entered. The four commands then will require a carriage return to execute them.

The other moving commands are: forward x lines (Fx), backward x lines (Bx), and search for an ASCII string 'xxxx' (Xxxxx). The detailed explanations for all seven of the moving commands are given in the command reference section.

Inserting New Lines

To enter new lines of text, use the Insert (I) command. This command should be followed by a number which signifies which line on the screen the text should be inserted after.

After the command, number, and carriage return have been entered, the screen is cleared and you are in INSERT MODE. In this mode you simply type in your new text pressing carriage return at the end of each line. Backspace is active to the beginning of your current line. Note that while in insert mode the characters you type in are being put in the insert buffer, and they are held there until ETX is pressed. Pressing ETX (control-C) when you are done inserting will put the lines just typed into the edit buffer after the line number originally typed with the command.

If you insert too much text (either the insert buffer is

full or it can be seen that the text to be inserted will fill the edit buffer), insert mode is automatically ended and the lines are inserted.

Modifying a String

To modify one ASCII string to another there are two commands available. Using the preset modify strings (P) command you can tell the editor what the original string is and what the new string should be. With the modify (M) command, you tell the editor to look for the original ASCII string on a specified line and, if the string is found, to change it to the new string.

The sequence of steps for a modify is:

- 1) Type "P" for the preset modify command.
- 2) Type old string you would like to modify.
- 3) Hit carriage return. The top line of the display will change to:
-- MODIFY STRING "old string just typed " TO
- 4) Type in the new string.
- 5) Hit carriage return.
At this point, the two strings have been entered and are stored in a special set of RAM locations.

To continue modifying lines containing the same old string to the new one:

- 6) Type "M" for the modify command.
- 7) Type the line number where the old string can be found.
- 8) Hit carriage return.
If the old string is found in that line, it is changed to the new string.
If the old string is not found, an error message of NOT FOUND is displayed.

You can continue to modify the old string throughout your program using the "M" command.

Saving and Appending Lines

If you have a number of lines of code that repeat themselves

throughout a program, rather than having to retype the lines at each point in the program you can hold the lines in the insert buffer and place them as you wish in the program.

To hold lines in the insert buffer, bring the first line to be held to the top of the screen (using the forward and backward commands) and type "Hx" to hold the top x lines. After the carriage return is pressed, the command is executed. If you try to hold more lines than will fit in the insert buffer, the editor will give you an error message saying TOO MUCH.

To insert these lines, use the append (A) command. This command is in the form of "Ax" with x being the line number after which the held lines should be inserted. If there is no room in the text buffer for all of the lines, the command is aborted and you are given an error message of TOO MUCH.

Deleting Lines

To delete selected lines, bring the first line to be deleted to the top of the screen. Then use the delete (D) command followed by a line number to delete that number of lines from the text buffer (starting from the top line on the screen).

Changing Lines

If you have a line in the text buffer which is wrong, you can change it (without having to retype the whole thing). To change a line, type "Cx", with x being the line number. The screen is then cleared and the line selected is displayed. At this time several keys are active:

- 1) Copy character (control-U): causes one character from the old line to be copied to the new line. The new line is written just below the old one as the characters are copied.
- 2) Copy word (control-Y): does continued character copies until the first occurrence of a space or comma.
- 3) Delete old character (control-O): causes one character of the old line to be deleted. In other words one or more characters from the old line can be skipped from being copied.
- 4) Erase (control-H): just erases one character from the new line.
- 5) Erase word (control-N): erases characters until it comes to a space or a comma.

6) Copy to end of line (control-P): causes all of the remaining characters of the old line to be copied to the new line.

7) Any printable (non-control) character will be added to the new line.

8) Carriage return ends the change of this line. After this key is pressed, the next line in the text buffer is displayed and you are allowed to change it.

If you press ETX (control-C) right after a new line appears, the editor returns to the normal page showing all of the corrected lines.

Storing your Text

The editor allows you to store and retrieve your programs using cassette tape. You can name your text with labels of up to eight characters long and therefore have the system keep track of the various programs on a tape.

To store the edit buffer on cassette tape, turn the tape recorder to record and type "Sxxxx" with xxxx being the name (up to 8 characters). After carriage return is pressed, the editor starts sending the name and the text to the tape recorder. It finishes when the end of file is reached (any byte in the edit buffer with bit 7 set) and will simply prompt for a new command.

To load that file back just as it was before storing it, first move to the beginning of the file (using the "-" command). Then type "Lxxxx" followed by a carriage return and play the tape recorder. The editor will read everything on the tape and will load the data contained in blocks with the name xxxx. After the end of file byte is read in, the routine terminates.

You should note that the load routine starts loading at the current line position (it starts loading over the top line on the screen). Thus you can merge two files by loading one in as was explained earlier, moving to the end of that file, and loading the second file. Once it is loaded it will appear after the first file in the text buffer.

Also, the full name need not be typed in for the load routine. The routine only checks the tape against the letters typed in with the command, and no others. For instance, if you have a file named STARTREK on tape, you can load it back by typing any of the following as the command:

LSTARTREK	will load only startrek
L	will load any file
LSTAR	will load any file whose name's first four letters are STAR

Note that the last two methods have the possibility of loading the wrong program--the second one loading anything and the third one loading anything which starts with STAR (i.e. STARWAR OR STAR).

Jumping out of the Editor

Use the command 'E' to return to the supervisor program. Type the command 'R' to run your program, and 'G' to go to the OPTION in BASIC.

2. Editor Command Reference

The following abbreviations are used in this section:

- l--a line number
- n--a number of lines
- a--an ASCII string (up to 16 characters)

Also, note that all commands (except the ones with immediate action) must be terminated with a carriage return.

Command: APPEND

Format: A1

Description: This command places what is in the insert buffer immediately after the line listed in the command. The data in the insert buffer may be the result of a HOLD, INSERT, CHANGE, or MODIFY command.

Errors: If the text in the insert buffer is too large to fit in the edit buffer, you are given an error saying TOO MUCH.

Example:

If the insert buffer had the following lines in it:

```
NOW IS THE TIME
FOR ALL GOOD MEN
TO COME TO THE AID
```

And the screen looked like:

```
                BLOCKS LEFT: 04    COMMAND:
1  THIS IS LINE ONE
2  THIS IS LINE TWO
3  THIS IS LINE THREE
```

And the command "A2" was executed, the insert buffer would remain the same and the screen would change to:

```
                BLOCKS LEFT: 04    COMMAND:
1  THIS IS LINE ONE
2  THIS IS LINE TWO
3  NOW IS THE TIME
4  FOR ALL GOOD MEN
5  TO COME TO THE AID
6  THIS IS LINE THREE
```

Command: BACKWARD

Format: Bn

Description: This command causes the editor to start displaying n lines before the top line on the screen.

Example:

If the screen had displayed the 10th-13th lines of a program as shown below:

```
                                BLOCKS LEFT:  04    COMMAND:
1  THIS IS LINE 10
2  THIS IS LINE 11
3  THIS IS LINE 12
4  THIS IS LINE 13
```

And the command "B3" was executed, the first line displayed is number 7 and the display would change to:

```
                                BLOCKS LEFT:  04    COMMAND:
1  THIS IS LINE 7
2  THIS IS LINE 8
3  THIS IS LINE 9
4  THIS IS LINE 10
5  THIS IS LINE 11
6  THIS IS LINE 12
7  THIS IS LINE 13
```

Command: CHANGE

Format: C1

Description: This command allows you to change a line of text. After entering this command, the screen is cleared and the line selected is displayed on the top of the screen. You can then type control-U to copy a character of the old line to the new one, control-Y to copy a word from the old line to the new one, control-O to skip a character of the old line from being copied, control-H (erase) to delete a character from the new line, control-N to erase a word from the new line, control-P to copy all of the remaining characters from the old line to the new line, or any printable (non-control) character to just be added to the new line. After the new line is as you want it, press carriage return. The next line of the text buffer is then displayed and you can change it. Pressing ETX (control-C) at this point returns you to the command entry page with the corrections entered into the text buffer.

Example:

If you have the line NOW IA THE TIME ready to change (you have just entered the "C" command), the following keypresses will correct the mistake:

<u>KEY</u>	<u>New line so far</u>
control-Y	NOW
control-U	NOW (there is a space after NOW)
control-U	NOW I
control-O	NOW I (the A was deleted)
S	NOW IS
control-P	NOW IS THE TIME

Pressing carriage-return and ETX now will return you to the normal editor display page with the changes in effect.

Command: DELETE

Format: Dn

Description: This command deletes n lines from the text buffer starting with the top line on the screen.

Example:

If the screen had lines 6-10 of the text buffer displayed as is shown below:

```
                BLOCKS LEFT: 04          COMMAND:  
1  LINE 6  
2  LINE 7  
3  LINE 8  
4  LINE 9  
5  LINE 10
```

And the command "D2" was executed, text lines 6&7 would be deleted and the screen would look like:

```
                BLOCKS LEFT: 04          COMMAND:  
1  LINE 5  
2  LINE 8  
3  LINE 9  
4  LINE 10
```

Command: EXIT

Format: E

Description: This command exits the user back to location 0
(normally back into the supervisor program).

Command: FORWARD

Format: Fn

Description: This command causes the editor to start displaying n lines after the present line.

Example:

If the screen had the 10th-16th lines of the text buffer displayed as below:

```
                BLOCKS LEFT:  04          COMMAND:
1  LINE 10
2  LINE 11
3  LINE 12
4  LINE 13
5  LINE 14
6  LINE 15
7  LINE 16
```

And the command "F5" was executed, the first text line now displayed is line 15 and the screen will look as below:

```
                BLOCKS LEFT:  04          COMMAND:
1  LINE 15
2  LINE 16
```

Command: GO TO THE BASIC

Format: G

Description: This command jumps the user into BASIC's
OPTION mode.

Command: HOLD

Format: Hn

Description: Copies n lines of the text buffer into the insert buffer starting with the first line displayed on the screen.

Errors: If you try to hold too may lines, you will get an error message of TOO MUCH.

Example:

If the display looked as it does below:

```
                BLOCKS LEFT:  02          COMMAND:
1  LINE 1
2  LINE 2
3  LINE 3
4  LINE 4
5  LINE 5
6  LINE 6
```

And the command "H3" was executed, the screen will remain the same and the insert buffer will be changed to

```
LINE 1
LINE 2
LINE 3
```

Command: INSERT

Format: I1

Description: This command allows the insertion of new text. The new text is typed in after the command and is ended by a ETX (control-C) key. Then the text is inserted after the line number specified in the command.

Errors: If you try to type in too much text (either too much for the insert buffer to hold or too much to be able to put back into the edit buffer), the insert is automatically ended just as if you had pressed ETX.

Example:

If the screen looked as it does below:

```
                                BLOCKS LEFT:  04          COMMAND:
1  LINE 1
2  LINE 2
3  LINE 3
4  LINE 4
5  LINE 5
```

And the command "I2" was executed, the screen would be erased and you would be allowed to type in new text. If you typed in the following lines (each line followed by a carriage return):

```
NOW IS THE TIME
FOR ALL GOOD MEN
TO COME TO THE AID
```

And pressed ETX, the 3 new lines would be inserted after line 2 of the text buffer, and the screen would change to:

```
          -BLOCKS LEFT:  04          COMMAND:
1  LINE 2
2  NOW IS THE TIME
3  FOR ALL GOOD MEN
4  TO COME TO THE AID
5  LINE 3
6  LINE 4
7  LINE 5
```

Command: LOAD

Format: Lx

Description: Loads a file from cassette tape into the text buffer. The name, x, can be up to 8 characters, and any file which has at least the letters specified in the command will be loaded. A simple "L" command (one with no file name) will load any file. Loading ceases when a byte is read in with the end of file bit set.

The file is loaded starting at the first character position on the screen. Any lines before the ones displayed will not be changed during the load.

Errors: If you run out of text buffer space before a load is complete, you will get an error saying TOO MUCH. If upon loading, a cassette error occurs, you are given a SUMCHECK ERROR message and you must reload.

Command: MODIFY

Format: M1

Description: This command uses the old and new ASCII strings entered with the "P" command. First, the line number specified in the command is searched for the old string. If it is found, that old ASCII string is replaced with the new string.

Errors: If the old string is not found in the line, you are given an error of NOT FOUND.

Example:

If the text buffer had the following lines displayed:

```
                                BLOCKS LEFT: 04          COMMAND:
1  NOW IS THE TIME
2  FOR ALL GOOD MEN
3  TO COME TO THE AID
```

And you wanted to change the word "come" in line 3 to "go", you would first enter the two strings using the P command and then do a "M3" command. The text would be changed, and the screen would change to:

```
                                BLOCKS LEFT: 04          COMMAND:
1  FOR ALL GOOD MEN
2  TO GO TO THE AID
```

Command: NORMAL MODE

Format: N

Description: this command turns the upper case mode OFF.

Command: PRESET MODIFY STRINGS

Format: Pa

Description: To allow entry of two ASCII strings for later use with the Modify command. The string to be looked for and replaced (the old string) with the modify is typed in with this command followed by a carriage return. After that, the top line of the screen will change to:

MODIFY STRING "old string just typed" TO

at which time you should type in the string which is to replace the old one (the new string) followed by a carriage return.

Command: STORE

Format: Sx

Description: This command stores the text buffer onto cassette tape. A name (x) is also stored on the tape, and that specific name can be referenced during a LOAD command.

Command: UPPERCASE MODE

Format: U

Description: this command bumps all characters displayed on the screen to upper case. It does not affect what is stored in the text buffer, only what you see. Upper case mode is off when you enter the editor.

Command: X-SEARCH

Format: Xa

Description: This command searches for the ASCII string starting at the 2nd line displayed on the screen. If the string is found, the line with the string is brought to the top of the screen.

Errors: If the string is not found, you are given the error message of NOT FOUND.

Example:

If the screen looked as it is pictured below:

```
                BLOCKS LEFT:  04          COMMAND:
1  THIS IS LINE ONE
2  THIS IS LINE TWO
3  THIS IS LINE THREE
4  THIS IS LINE FOUR
5  THIS IS LINE FIVE
```

And the command "XTHREE" is entered, the screen would start displaying at line 3 and would look as follows:

```
                BLOCKS LEFT:  04          COMMAND:
1  THIS IS LINE THREE
2  THIS IS LINE FOUR
3  THIS IS LINE FIVE
```

Command: GO TO BEGINNING--IMMEDIATE ACTION

Format: -

Description: Starts displaying lines at the first line of the file.

Command: GO TO END--IMMEDIATE ACTION

Format: +

Description: Starts displaying lines beginning at the last line in the file. You should note that after this command is executed, the screen will contain only one line of text (the last line of the text buffer).

Command: FORWARD 15 LINES--IMMEDIATE ACTION

Format: space

Description: This command functions exactly the same way as the command "F15".

Command: BACKWARD 15.LINES--IMMEDIATE ACTION

Format: /

Description: This command functions in exactly the same way as the command "R15".

3. 12K BASIC

The Central Data 12K BASIC interpreter is a powerful program which allows a person to use virtually any BASIC program written for a microcomputer today. The program resides starting at address H2000 and can be entered through the editor by the GO TO BASIC command. When you enter BASIC you will get the following message:

OPTION:

where you should type one of the following characters: 'R', 'B', 'S', or 'D'. These four letters correspond to the options of RUN, SET POINTER TO BEGINNING, SINGLE STEP, and DIRECT MODE. Each option is explained in detail below. If at any time during the execution of your program you wish to return to the OPTION message, you can simply hit escape. If you hit escape at the OPTION message, you will return to the editor.

RUN: This option will start execution of your program at the current line. The current line is the first line of the program if you just entered BASIC; but, if you hit escape in the middle of program execution, then the current line is the one that would have executed had you not halted the program. Also, if you single step through a section of the program and then leave single step mode, the current line is the one that would have been executed at the time that you left step mode.

SET POINTER TO BEGINNING: This option sets the current line to be the first line of the program. The next time that you give 'R' or 'S' as the option the program will start its execution from the beginning of the program.

SINGLE STEP: This option allows you to single step through your program. After entering the option, the next line to be executed (the current line as described above) is printed. You then have the choice of hitting the space bar to execute the line or escape to return to choose a new option. If you decide to choose a new option, the current line will not change. If you type 'S' again, the same line will be displayed. If you choose to execute the line, the next line of the program will be displayed after the execution is complete.

DIRECT MODE: This option allows you to enter BASIC statements and have them executed immediately. The cursor moves to the next line after choosing this command, and you are allowed to enter a statement. You should hit return after the statement is entered, and it will then be executed. You can then type another line for DIRECT MODE execution or hit escape to return to choose another option. Note that direct mode will execute only one statement--if you type in multiple statements on the line (seperated by colons), only the first will be executed.

General Information

Several features that this BASIC allows are listed below:

1) A colon (:) between statements will allow multiple statements per line. This is especially useful in IF statements where you want several things to happen on the occurrence of one event. Also note that our BASIC requires a colon before the ELSE phrase of an IF statement (see the statement reference section for more information about the IF statement).—

2) Putting an explanation point (!) after the end of a statement in a line will cause the interpreter to ignore all characters past that point. This allows you to place comments in the same line as a statement.

3) An asterisk (*) as the first character of a line will indicate to the program that this is a comment line and it should be ignored. This functions exactly like a REM statement (which is also supported). Note that a comment line will only terminate with a carriage return (and not a colon).

4) Variable names can be up to four characters in length. For string variables, the '\$' at the end of the name is not included in this count of four.

5) You can use the plus sign (+) in an arithmetic expression to concatenate (put together) strings. In other words, the statement:

```
LET B$="IT IS A "+"NICE"+" DAY"
```

would store "IT IS A NICE DAY" into the variable named B\$.

6) The LET statement is default, so you do not need to type the word LET at the beginning of these lines.

7) Strings are stored in a dynamic buffer area which allows

their length to change as needed. This means that the length of a string can vary throughout the program from zero to the maximum (255 characters).

Buffer Setup

There are three buffers in BASIC: the text buffer, the string buffer, and the variable table. The length of each buffer can be changed by altering addresses H2003 to H2006. Note that these addresses are the same as those used in the editor, and their values will not be changed when switching between programs.

The text buffer remains the same as it is in the editor, but the insert buffer is divided to form the string buffer and the variable table. Upon executing the program for the first time, you will get the message:

DO YOU WISH TO DELETE THE EXTENDED FUNCTIONS? (Y/N)

where you are allowed to shorten BASIC by 1.25K by removing some of BASICs functions. After typing either a 'Y' or 'N', the text buffer start address is automatically set to the lowest possible address. This address is H5800 with the extended functions and H5300 without those functions implemented. The functions that are deleted are listed in the next chapter as EXTENDED FUNCTIONS. Also, the exponential operator (x^y) is no longer available. You are allowed to change this address if you need the space directly after BASIC for one of your routines.

The string buffer is used to hold all of the strings that are stored in variables at any time. It must, therefore, be at least as long as the maximum number of characters that you will have stored in string variables at one time will be. If you don't plan to use strings extensively, you can probably set this buffer to 256 bytes without any problems. A STR SPACE OVF error will occur if you try to store into a string variable when the string buffer is filled up.

The variable table is used to hold all of the variables which are needed to run your program. This table starts at the address given by H2005 and progresses toward the end of RAM. The stack area is located at the end of RAM moving downward. This area is constantly changing, and it is very hard to predict what space it will consume at any one time. It is best to allow at least 512 bytes for it alone, not counting the variable area. This variable area can be calculated as follows:

15 bytes for each floating point variable
10 bytes for each string variable

8+n*8*x bytes for each dimensioned floating var
8+n*3*x bytes for each dimensioned string variable
9 bytes for each user defined function

where n is the number of dimensions and x is the total number of variables (remember that each dimension starts at zero).

Note that for most programs space should not be so tight that you will have to calculate the amount of storage required for each buffer. Normally, you can set the string buffer to 512 bytes and the variable table to 1024 bytes and leave the rest of the space for the text buffer. Naturally, if you have a very large program, you may have to experiment to find the best buffer settings.

The buffers are set (as in the editor) by altering the following locations:

<u>Address</u>	<u>Function</u>
H2003	Text buffer start
H2004	String buffer start
H2005	Variable table start
H2006	End of RAM

Expression Evaluation

Expressions are evaluated in the normal way for algebra. There are, however, changes due to the addition of relational operators in expressions. These operators are as follows: =, <, >, <=, =>, and <> corresponding to the relations of equal, less than, greater than, less than or equal and greater than or equal, and not equal. These operations are evaluated after all of the arithmetic operations. (They are the level below addition and subtraction). If a relational operation results in a true condition, the resultant number will be -1. If the operation has a false condition the value of the expression will be 0.

Note that the IF statement uses these facts to determine what to do. Also note that this arrangement allows you to emulate the AND and OR operations by using the multiplication and addition functions. Whenever you do that, be sure that the relational operations are put in parenthesis so that they are done first. For example, if you wanted to have an IF statement with the logic 'A>B AND C<D', then you would enter as the expression for the statement: (A>B)*(C<D).

Error Messages

Below are listed the possible error messages that you can encounter in BASIC. When an error occurs, the error message is displayed on the screen with the line containing the error displayed on the line below it. Whenever possible, BASIC places a pointer (^) in the statement to indicate the approximate location of the error. Note that this pointer can sometimes be several characters away from the error and, in some cases, will not be there at all.

USR FN ERROR: this means that something is wrong with the user defined function that you called. The DEF statement may have more or less arguments than what you used; you may have put a string expression where a floating point expression was needed; etc.

OUT OF DATA ERROR: this error means that you don't have enough data (in your DATA statements) to cover all of the READ statements in the program.

SYNTAX ERROR: this is the most common error, and it can mean just about anything. Usually it means that a statement is not in its correct form: it is missing some punctuation, etc.

OVF ERROR: this error means that there was an arithmetic overflow (or underflow) when evaluating one of the expressions in the statement. The maximum number for a floating point variable is $10^{**}99$ and the smallest number is $10^{**-}99$. You can also get an overflow error if an expression is too large in a statement or function which deals with the machine language (CALL, OUT, etc.).

LINE NOT FOUND ERROR: means that a line referenced in a statement cannot be found in the program.

NEST ERROR: this error is given when FOR-NEXT loops are not done in the proper sequence. The error can also occur in GOSUB statements if you violate the rules of BASIC.

TYPE MISMATCH ERROR: means that the expression that you gave for a statement or function is of the wrong type (it is a string and should be floating point or the other way around).

ARG ERROR: means that an expression that you have in a function or statement is either missing or is in another way wrong.

DIM ERROR: means that the argument of a DIM statement is out of range for dimensioned variables. (Each dimension can be only 255 long.)

STK OVF ERROR: means that the amount of space that you allocated to the variable table will have to be increased, or you will have to change your program.

STR SPACE OVF ERROR: means that the amount of space allocated to strings must be increased. Note that the string space is not packed; the total number of string characters can be less than the total string space allocated and you can still get this error.

VAR ALREADY DEFINED ERROR: this error means that the variable listed in a DIM or DEF statement has already been defined. Remember that if a dimensioned variable is referenced in the program without it being previously defined, it will be dimensioned with all sizes equal to 10. This will cause an error if you reference a variable before its respective DIM statement.

FXPR TOO COMPLEX ERROR: means that an expression in the statement has too many nesting levels (of parentheses or function calls) to be evaluated. You will have to split the expression into several parts.

4. BASIC Command and Function Reference

The following pages list the commands and functions available in 12K BASIC. The following terms are used throughout the section:

<line number>	must be a constant value in the range of 1 to 9999
<expr>	is an arithmetic expression which can be a constant, variable, function call, or any combination of these in a valid arithmetic expression
<string expr>	is any string expression which can be a constant, variable, or any combination of these concatenated
<var>	is a floating point variable
<string var>	is a string variable
<constant>	is a constant
EXTENDED FN	Indicates that this function will not be available if the extended functions are deleted

Function: Absolute value

Format: ABS(<expr>)

Description: this function returns the absolute value of the expression listed. It will return (<expr>) if <expr> is positive or zero and will return (-<expr>) if <expr> is negative.

Function: ASCII numeric value

Format: ASC(<string expr>)

Description: this function returns the number corresponding to the ASCII code of the first character in the string. For example, the function ASC(" ") will return the number 32.

Function: Arctangent

EXTENDED FN

Format: ATN(<expr>)

Description: this function returns the arctangent of the expression listed. The value returned will be in radians and will be in the equivalent range of +90 to -90 degrees.

Function: Call an assembler language routine

Format: CALL([<expr>],<expr>)

Description: this function causes a branch to subroutine to an assembly language program. The value of the second expression is the address of the routine. If the first expression is given, it will be passed to the routine in R0 (high) and R1 (low).

Note that all expressions in BASIC are in decimal; you have to convert any hex addresses and/or values to decimal before entering them. Also, the two expressions possible in this function have a maximum value of 65,535.

When the assembly language routine executes a RETURN instruction, the processor will return to BASIC and will convert the values found in R0 and R1 to decimal using these as the returned value of the function. With this method you can send data to and receive data from the subroutine.

Statement: Clear all variables

Format: CLEAR

Description: this command erases all variables from the variable table and allows the user to start from scratch. It is suggested that you place this command at the beginning of your program so that any dimensioned variables or defined functions will be erased before their DIM or DEF statement is executed again (thus avoiding the VAR ALREADY DEFINED error).

Function: Character from ASCII numeric value

Format: CHR\$(`<expr>`)

Description: this function is the opposite of the ASC function in that its argument is a numeric value between 32 and 127. A string with a length of one is returned with the corresponding character in it.

Function: Cosine

EXTENDED FN

Format: COS(<expr>)

Description: this function returns the cosine of the listed expression. The expression is expected to be in radians.

Statement: Data

Format: DATA <any expr> [,<any expr>...]

Description: the DATA statement is used to hold values which are to be read by the READ statement. If a DATA statement is encountered in a program, it is skipped over.

Statement: Define a user function

Format: DEF <name>(<param>[,<param>...])=<expr>

Description: this statement sets up a user defined function. This function can be used like any other function in BASIC (in any expression) and can have a variable number of parameters. When a user defined function is encountered in a program, all of the values contained within its parentheses are transferred to the variables listed in the DEF statement in their corresponding order. Next, the expression to the right of the equal sign in the DEF statement is evaluated, and that value is returned for the function. For instance, if you wanted a function for the secant of a number, you could define it in the following way:

```
DEF SEC(X)=1/COS(X)
```

Then, whenever the expression SEC(<expr>) is found, the expression is transferred into X and then the function returns $1/\cos(X)$. In this way you can form any of the trigonometric functions which are not intrinsic to BASIC.

The expression to the right of the equal sign in a DEF statement must be less than 40 characters. Anything more will give you a DEF error when you try to use the function.

The name of the function is stored in the variable table for simplicity. For this reason, you cannot name a variable the same as a function. Also, this allows function names up to four characters. Note that the first two characters need not be FN like in other BASICs; but, they can be if the user so desires.

Statement: Dimension a variable

Format: DIM <var>(<dim1>[,<dim2>...]) [,<var>...]
or
DIM <string var>(<dim1>[,<dim2>...]) [,<string
var>...]

Description: this statement creates space for a dimensioned variable in the variable table. The variable can have up to seven dimensions, and each can have a value of up to 255. When referencing a dimensioned variable, remember that the first index is always zero and the maximum index is that which is set forth in the statement.

If a variable which was not dimensioned is used in an expression, space is automatically allocated to it in the variable table (just as if the user had done the DIM statement). The number of dimensions allocated will be the same as the number used in the variable, but the size of the dimensions will vary according to the following rules:

1) If any of the dimensions given in the variable is less than 10, that dimension is forced to be 10.

2) If any dimension is 10 or greater, then that will be made the size of the dimension.

For example, if the statement

```
LET B(2,15)=3
```

were executed without a previous dimension statement for the variable 'B', then the variable would be dimensioned with the sizes (10,15). Remember that if the DIM statement later appears in the program you will get a VAR ALREADY DEFINED error since the variable was defined during execution of another statement.

Statement: End of program

Format: END

Description: this statement should be placed at the end of every program. If it is not, and the program is allowed to execute past its actual text, you may get a SYNTAX error with an unrecognizable line displayed.

Statement: Erase the screen

Format: ERASE

Description: this statement will cause the screen to be erased and the cursor will be positioned in the upper-left hand corner of the screen.

Statement: Set error recovery line number

Format: ERROR [<line number>]

Description: this statement sets the line number where BASIC is to go whenever it encounters an OUT OF DATA or TYPE MISMATCH error while executing a READ statement. At this line the appropriate action can be taken to correct for this error. If the line number is not specified, then the feature is disabled and BASIC will handle any errors in the normal fashion.

The function ERR(0) can be referenced to see which of the two errors caused the branch to the line.

The RESUME statement MUST end the error handling routine. If this is not done, a NEST error may result.

Function: Error type

Format: ERR(O)

Description: this function returns a value of 2 if the last error was OUT OF DATA and a value of 10 if the last error was TYPE MISMATCH. It is normally used in conjunction with an error processing routine setup with the ERROR statement.

Statement: Exit FOR-NEXT loops

Format: EXIT <line number>

Description: the operation of this statement is exactly the same as the GOTO statement except that all current FOR-NEXT loops are terminated.

Function: 'e' to an expression

EXTENDED FN

Format: EXP(<expr>)

Description: this function returns the value of e (approx. 2.71828) raised to the given power.

Function: Truncate a variable

Format: FIX(<expr>)

Description: this function returns the truncated portion of the given expression. This function differs from the INT function in that the decimal part of this expression is simply "chopped off", but the INT function returns the first integer GREATER THAN or EQUAL to the expression.

Statement: Start FOR loop

Format: FOR <var>=<expr> TO <expr> [STEP <expr>]

Description: this statement begins a FOR-NEXT loop. The end of the loop is signaled with the corresponding NEXT statement. When this statement is first executed, the first expression is transferred into the variable listed. This FOR-NEXT loop is executed at least one time and at the end of each loop <var> is incremented by either 1 or the STEP value (if given). It is then compared to the expression given after the 'TO' in the statement. If it is greater than this value (for positive steps, less than for negative steps), then the FOR-NEXT loop is terminated and execution will continue after the NEXT statement. If, however, the variable is still less than or equal to the TO expression (or greater than or equal in the case of negative steps), then the loop is executed once again starting at the statement after the FOR statement.

Note that the loop itself can modify the value of the variable, and it will affect the operation at the following NEXT statement; but, the values of the three possible expressions are only evaluated at the time the FOR statement is first executed (and thus cannot be modified with any effect inside the loop).

Function: Fractional part

Format: FRC(<expr>)

Description: this function returns the fractional part of the expression. The sign of the returned value is the same as that of the expression.

Statement: Goto subroutine

Format: GOSUB <line number>

Description: this statement allows the user to branch to a BASIC subroutine at the listed line number. The statements at this line number are executed until a RETURN statement is reached. At this point control passes back to the point just after the GOSUB statement.

Note that a NEXT statement cannot be done in the middle of a BASIC subroutine. Also a RETURN cannot be done in the middle of a FOR-NEXT loop which was called by a GOSUB.

Statement: Goto line

Format: GOTO <line number>

Description: this statement transfers control to the specified line in the program.

Statement: IF

Format: IF <expr> [THEN] <aaa> [:ELSE <bbb>]
or
IF <expr> [THEN] <aaa>
ELSE <bbb>

Description: the expression in this statement is evaluated and if the result is zero the condition is considered to be false. If the result is non-zero the condition is considered true. If the condition is found to be true, then <aaa> will be in effect. If the condition is found to be false, then <bbb> will be in effect (if present).

<aaa> and <bbb> are either line numbers or statement lists (statements separated by colons). If either is a line number and it is put into effect, then that line number is jumped to (just like in a GOTO). If it is a statement list, then all of the statements in the list are executed. These statements may be anything including other IF statements.

Note that the ELSE section of the IF statement (if present) can be either on the same line as the IF (if preceded by a colon) or on the line directly following the line with the IF. If the BASIC interpreter should ever come upon an ELSE statement by itself, it is just ignored (all the way to the next return).

Statement: Input data

Format: INPUT [{"<prompt string>"}] <any var>
[,<any var>...]

Description: this statement allows the user to enter data into variables. If a prompt string is given, it is printed to prompt the user's input. If no prompt string is listed, then a question mark is printed as a prompt. In any event, a space is printed after the prompt and the user is allowed to input the data.

All of the data must be typed in at one time; and, if there are several variables, their input data must be separated by commas. After entry of all of the data, the user should hit return. If the types and amount of data match the variables as specified, then the data is stored into the associated variables. If there is a type mismatch or the number of items typed is fewer than the number of items listed, then the user must retype the entire list. When this happens, the user will get the message

REDO FROM START:

where he should check what he just typed and re-enter the correct data.

If nothing is listed after the 'INPUT' in the statement, then the statement will simply wait for the user to hit return before going on.

Function: Input from port

Format: INP(<expr>)

Description: this function returns the value which is read from the port number given by the expression. Note that the expression given must be in the range of 0 to 255 and that this number corresponds to the number of the extended port that the user is accessing. If the user wishes to have access to the DATA or CONTROL ports of the computer, he will have to write an assembly language subroutine to do so and interface to it using the CALL function.

Function: Search for string

Format: INSTR(<string expr>,<string expr>[,<expr>])

Description: this function returns the starting position that the second string was found in the first string. If it was found starting at the first character, it returns 1. If the second string cannot be found in the first string, then the function returns 0.

The optional expression sets the starting position for the search. It defaults to 1.

Function: Integer

Format: INT(<expr>)

Description: this function returns the first integer greater than or equal to the value of the expression. You may need the FIX function if what you want is the truncated portion of the expression.

Function: Left part of string

Format: LEFT\$(<string expr>,<expr>)

Description: this function returns the leftmost characters of the string expression. The number of characters returned is either the second expression listed or the length of the string expression (whichever is smallest).

Function: Length of string

Format: LEN(<string expression>)

Description: this function returns the length of the string expression given as its argument. This length can vary from 0 to 255.

Statement: Assign an expression to a variable

Format: [LET] <var>=<expr> [,<var>=<expr>...]
or
[LET] <string var>=<string expr> [,<string
var>=<string expr>...]

Description: this statement assigns the listed expression to the variable. Several assignments can be done with one LET statement by separating them with commas. Also, the word 'LET' in the statement is optional which makes it the default statement.

If an expression is stored into a string variable its length is changed to the length of the expression.

Function: Natural log

EXTENDED FN

Format: LN(<expr>)

Description: this function returns the natural log (to the base e) of the expression.

Function: Common log

EXTENDED FN

Format: LOG(<expr>)

Description: this function returns the common log (to the base 10) of the expression.

Function: Line-print position

Format: LPOS(0)

Description: this function returns a value corresponding to the current position of the print head on the line printer. (The line printer is accessed by the LPRINT statement.) The LPOS function will return a 1 if nothing has been sent to the line printer.

Statement: Line print

Format: LPRINT <argument> [<delimiter> <argument>] [<end
delimiter>]

Description: this statement performs much the same way as the PRINT statement; but, instead of routing the output to the video display, this statement sends it to the user's printer.

The only option available in the regular PRINT statement which is not available in the LPRINT statement is to set the cursor position (naturally). All other operations are exactly the same, including PRINT USING. Every time a new line is to be printed on the printer, BASIC sends a carriage return code (HOD) to the printer. No line feed code is ever sent to the printer by BASIC.

The printer driver routine (which is used to interface to the printer) must be written by the user and most likely will reside in display memory (the area from H1510 to H17E9). The BASIC program must be modified to inform the LPRINT routine where to find your routine. This can be done by modifying addresses H2006 to H2008 as follows:

<u>Address</u>	<u>Value</u>
H2006	H1F
H2007	High byte of address of your routine
H2008	Low byte of address of your routine

After this change is made, BASIC will branch to this routine every time it needs to send a character to the printer. These characters will be sent in register 0. All characters sent will be ASCII, and they can be upper or lower case (as can anything in BASIC). Special control codes can be sent to the printer by using the control code option as in the PRINT statement. This allows special functions to be performed which may be peculiar to your printer.

This printer driver routine must not alter any registers in bank 1 or the program status word (lower). It can use a maximum of 4 levels of subroutine nesting. Register bank 1 is available for its use and can be changed by the routine. Remember, however, that the routine must return with the bank select cleared.

Function: Middle of string

Format: MID\$(<string expr>,<expr> [,<expr>])

Description: this function returns characters from the middle of the string expression given. The first character returned is the one corresponding to the first numeric expression given. The number of characters returned is either

1) the maximum number returnable because the string expression ends. (This is always the case if the optional expression is not given.)

or

2) the value of the optional expression (if smaller than the remainder of the string expression).

If the string expression given has a length of zero, then a string is returned with a length of zero (a null string).

Statement: Store into the middle of a string

Format: MID\$(<string var>,<expr> [,<expr>]=<string expr>

Description: this statement stores the string expression into the middle of the listed string variable. The start position for the store is given by the first numeric expression, and the maximum number of characters to be stored is given by the second (optional) numeric expression. If the second expression is excluded, the characters are stored until the variable ends or the string expression runs out of characters.

This statement should not be confused with the MID\$ function which loads from the middle of a string expression. This statement stores into the middle of a string variable.

Statement: End FOR-NEXT loop

Format: NEXT [<var>] [,<var>]

Description: this statement marks the end of a FOR-NEXT loop. The variables listed in the statement correspond to the variable used in the FOR statement associated with this statement. If the variable is omitted, BASIC assumes that it is the one associated with the inner-most FOR-NEXT loop. Note that you can terminate several FOR statements with a single NEXT statement by separating the variables by commas. An example of this is given below:

```
FOR SIZE=1 TO 20
FOR LEN=1 TO 10
FOR INDX=5 TO -1 STEP -1
.
.
(statments for the loop)
.
.
NEXT INDX,LEN,SIZE
```

Statement: Conditional line numbers

Format: ON <expr> GOTO <line number list>
or
ON <expr> GOSUB <line number list>
or
ON <expr> RESTORE <line number list>
or
ON <expr> EXIT <line number list>
or
ON <expr> ERROR <line number list>
or
ON <expr> RESUME <line number list>

Description: these statements allow a user to give a conditional line number to any of the above six statements. The line number list is simply a list of line numbers separated by commas. The line number chosen for the command is the one indexed by the expression listed. This expression must be in the range of 0 to 65,535 or an overflow error will result.

If the expression is zero, the statement will fall through (as if it wasn't even executed). The same is the case if the expression is greater than the number of lines in the list. If, however, the expression can be matched with a corresponding line in the list, then the correct action will be taken with that line.

If you wanted to GOTO lines 100, 110, or 120 depending on whether the variable X was equal to -4, -3, or -2 you could use the following line:

```
ON X+5 GOTO 100,110,120
```

Statement: Output to a 2650 port

Format: OUT <expr>,<expr>

Description: this command sends the data given by the second expression to the extended output port numbered by the first expression. Both expressions must be in the range of 0 to 255 or you will get an overflow error. Remember that (as in all BASIC statements) all expressions given are in decimal. You will have to convert hex values to decimal before expecting BASIC to use them.

This statement only allows access to the extended I/O ports of the system. If you need to write to the data or control ports you will need to set up an assembly language subroutine which does it and interface to it using the CALL function.

Statement: Pause

Format: PAUSE <expr>

Description: this statement causes the program to pause for approx. <expr> tenths of a second. The expression is truncated, and the maximum delay is 6,553.5 seconds. Naturally, longer delays can be introduced by doing several PAUSE statements in a loop.

Function: Read from memory

Format: PEEK(<expr>)

Description: this function returns the value found when reading the memory location addressed by the listed expression. This number is guaranteed to be in the range of 0 to 255, and the expression given for the function must be between 0 and 32,767.

Statement: Write to memory

Format: POKE <expr>,<expr>

Description: this statement writes the data given by the second expression to the address given by the first expression. The first expression has bounds of 0 to 32,767 and the second expression has the limits of 0 to 255.

Function: Cursor position

Format: POS(0)

Description: this function returns a numeric value for the horizontal position of the cursor on the screen at the moment. The left-most position is number 1.

Statement: Print on the screen

Format: PRINT [#<expr>,<expr>] <argument> [<delimiter>
<argument>] [<end delimiter>]

Description: this statement prints data on the video screen. The first argument possible will set the cursor location to the line and character positions specified in the two expressions following the at sign (@). If that option is not exercised, then a linefeed will occur (unless it was inhibited by the last PRINT or LPRINT statement).

After the starting cursor location is determined, the arguments are printed. The arguments can be either string or floating point variables, and the floating point variables are printed in their most condensed form. The delimiter can be either a comma (,) or a semicolon (;). If it is a comma, a tab is made to the next tab stop. Each tab stop is 16 positions away from the previous one (and the first is at position 17). If the delimiter is a semicolon, then no space is put between the arguments. If either delimiter ends a line (with no further arguments beyond it) then the linefeed of the next PRINT or LPRINT statement is inhibited.

The following special arguments are also allowed in this PRINT statement:

&<expr> prints the control-code value of the expression. This is mainly useful in the LPRINT statement for causing special actions to happen with a printer

TAB(<expr>) moves the cursor to the specified location on the line. The cursor cannot be moved to the left.

Statement: Formatted print

Format: PRINT USING <string expr>;<arg> [,<arg>...]

Description: this statement allows a user to format printing so that a specified number of print columns is used for each argument printed. This allows neat tables of numbers and words to be output to the screen or a printer.

The string expression given before the semicolon gives a map of how the line is to be layed out. Each character in this string will directly correspond to one character that is output. If the character of the string is any except the ones listed below, it will be transferred directly to the screen.

String formatting

An exclamation point (!) sets up a one character field for the string expression given by the next argument. If the argument is longer than one character, then only the first character will be printed. If the argument is a null string then a space is printed.

The up-arrow is used to set up a n-character string field. Two up-arrows are needed for each field of this type, and any number of characters (which are meaningless) can be between them. If, for instance, the following characters are in the control string: ^xxx^, then a five character string field will be set up. If the actual string (obtained from one of the arguments) is greater than this length, then only its first characters are printed. If the actual string has fewer characters, then the remaining character positions are filled with spaces.

Numeric Formatting

To format a number for output, you have several choices. You can set the number of spaces for the integer portion of the number as well as whether the number should print with a decimal point; and, if so, how many decimal digits should be printed. Each formatting string for a number must begin with a number sign (#). Everything after that is up to you. This first character will be available for a significant digit if the number is positive, but will be used for the minus sign if the number is negative. If more number signs are placed after the first, then the number of possible integer digits is increased accordingly. If a decimal point is placed in the string, it will force the decimal point to be in that relative position on the line. If any number signs appear after the decimal point, they will indicate how many decimal places will print.

If a comma is inserted between any of the number signs for the integer part of the number, then that number will be printed with commas inserted as needed. Most often you will insert commas every three characters for clarity, but only one is needed to cause the option to go into effect.

If the actual number turns out to be too large for the space that you allotted it, a field of asterisks (*) will appear. This field will exactly fill up the space that you gave to the number.

Some examples of numeric print formatting are given below:

<u>Formatting String</u>	<u>Number</u>	<u>Characters Output</u>
###	12.5	13
###,###.##	1234.674	1,234.67
###.	-5.25	- 5.
###.##	999.995	***.**

Note that the last example prints overflow because, after rounding, the number is larger than can fit in the space allotted.

Statement: Setup the random number generator

Format: RANDOMIZE

Description: this statement initializes the random number generator to a random value. This statement only works if the user has done an INPUT since the last RANDOMIZE statement.

Statement: Read data

Format: READ <any var> [,<any var>...]

Description: this statement loads the next values from the DATA statements into the variables listed. If all of the data in the DATA statements has been exhausted, then an OUT OF DATA error may occur. Also, if the type (string or floating point) of the next data does not match up with the type of the variable you may get a TYPE MISMATCH ERROR.

If the ERROR statement was used to setup a line number to branch to in case of one of these errors, then that error handling routine will take control rather than BASICs normal error handler.

Statement: Restore the data pointer

Format: RESTORE [<line number>]

Description: this statement resets the data pointer to the start of the program or to the line number (if specified). The next READ statement will read the first data after this point in the program.

Statement: Resume execution after error handling routine

Format: RESUME [<line number>]

Description: this statement must be used at the end of any error handling routine that you may have. Refer to the ERROR statement's reference sheet for more information regarding error handling.

If the optional line-number is not supplied, then BASIC restarts execution at the line following the one that caused the error. If the line number is present, then execution resumes at that line number.

Statement: Remark

Format: REM <comment>
or
* <comment>

Description: this statement causes no operation in BASIC.
The line is totally ignored up to the next carriage return.
(A colon will not terminate a REM statement.)

Statement: Return from subroutine

Format: RETURN

Description: this statement marks the end of a BASIC subroutine. It will cause a branch to the statement after the GOSUB which corresponds to this RETURN.

Function: Right part of string

Format: RIGHT\$(<string expr>,<expr>)

Description: this function returns the right-most character of the string expression listed. The number of characters returned is given by the second expression unless the string expression has a length less than this. If that is the case then the length of the string returned is equal to the length of the string expression.

Function: Random number

Format: RND(<expr>)

Description: this function returns a pseudo-random number in the range of 0 to the expression listed. The sequence of random numbers can be changed using the RANDOMIZE statement.

Function: Sign of expression

Format: SGN(<expr>)

Description: this function returns 1 if the expression is positive, 0 if the expression is zero, and -1 if the expression is negative.

Function: Sine

EXTENDED FN

Format: SIN(<expr>)

Description: this function returns the sine of the expression. The expression given must be expressed in radians.

Statement: Stop

Format: STOP

Description: this statement will cause program execution to halt, and the user will be returned to choose an option. Several stop statements can be in a program while only one END statement can be.

Function: Square root

EXTENDED FN

Format: SQR(<expr>)

Description: this function returns the square root of the expression. If the expression is negative, an overflow error will result.

Function: String representation of an expression

Format: STR\$(<expr>)

Description: this function returns a string which is the exact representation of the given floating point expression. This function is just the opposite of VAL. The string is filled with the same characters that would be used if the expression were to be printed.

**** IMPORTANT NOTICE ****

THE STR\$ FUNCTION CANNOT BE USED IN ANY PRINT STATEMENTS.

Function: Create multi-character string

Format: STRING\$(`<expr>`,`<expr>`)

Description: this function returns a string with the length given by the first expression. All of the characters of the string are equal to CHR\$(`<second expr>`). Note that the first expression has the limits of 0 to 255 and the second expression has the bounds of 32 to 127.

Statement: Swap two variables

Format: SWAP <var>,<var>

or

SWAP <string var>,<string var>

Description: this statement transfers the contents of the first variable to the second, and at the same time transfers the contents of the second variable to the first.

Function: Tangent

EXTENDED FN

Format: TAN(<expr>)

Description: this function returns the tangent of the expression. The expression is assumed to be in radians.

Function: Value of string

Format: VAL(<string expr>)

Description: this function returns a number which represents the string expression given. For example, the function VAL("4.5") would return the NUMBER 4.5. Naturally, you can have operations in the string which will be evaluated before the conversion.

One note of caution: the VAL function will not operate properly if any of the following functions are used in the expression: ASC, INSTR, or LEN.

Function: Variable pointer

Format: VARPTR(<any var>)

Description: this function returns the address where the specified variable is stored. This function is usually used inside the CALL function to pass the address to an assembly language subroutine.

The address returned is that of the first byte of a floating point variable or that of the last byte of a three byte parcel containing information about a string variable. This three byte area (of which VARPTR will return the address of the last byte) contains the address that the string is stored at (in the string storage area) and the length of the string. The address is first, using two bytes, and the length is the third byte.

This function is only meant for use by advanced users of BASIC, and no further information will be supplied about it by the factory.

Statement: Wait for input port

Format: WAIT <expr>,<expr> [,<expr>]

Description: this statement will pause until the specified input port's data meets certain criteria. The first expression gives the number of the extended input port to be accessed. The second expression gives a value to be ANDed with this input. The third expression (if present) will be exclusive-ORed with the data prior to the ANDing operation.

BASIC will not proceed until the results of the above operations are non-zero. In effect, the third expression can set bits which must be low to pass (as long as those bits are also tested with the second expression). The second expression masks off any bits that are not to be tested, and at least one bit that is tested by this argument must be high in order to proceed.

5. Program Listing

This section contains the program listing for 12K BASIC.

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0200	0200						OPG	0200	
0201	0200						EXEC	STRT	
0202	0200					R0	FCU	0	
0203	0200					R1	FCU	1	
0204	0200					R2	FCU	2	
0205	0200					R3	FCU	3	
0206	0200					PC	FCU	0	
0207	0200					OT	FCU	1	
0208	0200					IT	FCU	2	
0209	0200					IN	FCU	3	
0210	0200					NE	FCU	00	
0211	0200					LE	FCU	01	
0212	0200					GE	FCU	02	
0213	0200					Z	FCU	0	
0214	0200					N	FCU	2	
0215	0200					OFY	FCU	1	
0216	0200					OCY	FCU	2	
0217	0200					OVF	FCU	4	
0218	0200					WC	FCU	0	
0219	0200					RS	FCU	10	
0220	0200					CP	FCU	0D	
0221	0200					LF	FCU	2A	
0222	0200					ESC	FCU	1B	
0223	0200					BS	FCU	0	
0224	0200					CCOPY	FCU	10	
0225	0200					*			
0226	0200					*			
0227	0200					*			
0228	0200					*			
0229	0200					*			
0230	0200					*			
0231	0200					*			
0232	0200					*			
0233	0200					*			
0234	0200					*			
0235	0200					*			
0236	0200					*			
0237	0200					*			
0238	0200					*			
0239	0200					*			
0240	0200					*			
0241	0200					*			
0242	0200					*			
0243	0200					*			
0244	0200					*			
0245	0200					*			
0246	0200					*			
0247	0200					*			
0248	0200					*			
0249	0200					*			
0250	0200					*			
0251	0200					*			
0252	0200					*			
0253	0200					*			
0254	0200					*			
0255	0200					*			
0256	0200					*			
0257	0200					*			
0258	0200					*			
0259	0200					*			
0260	0200					*			
0261	0200					*			
0262	0200					*			
0263	0200					*			
0264	0200					*			
0265	0200					*			
0266	0200					*			
0267	0200					*			
0268	0200					*			
0269	0200					*			
0270	0200					*			
0271	0200					*			
0272	0200					*			
0273	0200					*			
0274	0200					*			
0275	0200					*			
0276	0200					*			
0277	0200					*			
0278	0200					*			
0279	0200					*			
0280	0200					*			
0281	0200					*			
0282	0200					*			
0283	0200					*			
0284	0200					*			
0285	0200					*			
0286	0200					*			
0287	0200					*			
0288	0200					*			
0289	0200					*			
0290	0200					*			
0291	0200					*			
0292	0200					*			
0293	0200					*			
0294	0200					*			
0295	0200					*			
0296	0200					*			
0297	0200					*			
0298	0200					*			
0299	0200					*			
0300	0200					*			
0301	0200					*			
0302	0200					*			
0303	0200					*			
0304	0200					*			
0305	0200					*			
0306	0200					*			
0307	0200					*			
0308	0200					*			
0309	0200					*			
0310	0200					*			
0311	0200					*			
0312	0200					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0206	023A	00	7E				ERNR.R1	BASIC1	
0207	023C	00	13	4E			LODA.R1	CTEMP	
0208	023F	00	41				ADDI.R1	1	
0209	0241	00	13	4E			STRA.R1	CTEMP	
0210	0244	00	00	25			COMA.R1	WARSE	
0211	0247	1A	6D				BCTR.LT	BASIC0	
0212	0249	3F	45	91			BSTA.UN	FRASE	
0213	024C	27	00				LODI.R3	0	
0214	024E	3F	30	19			BSTA.UN	DFCSP	
0215	0251	3F	31	9A			BSTA.UN	BEGIN	
0216	0254	1F	42	A0			BCTA.UN	OPTION	
0217	0257					*			
0218	0257	3F	2E	55		SHLIN	BSTA.UN	LPCR	
0219	025A	5A	05			SHLIN2	BHNR.R2	SHLIN3	
0220	0260	24	5E				LODI.R0		
0221	0261	3F	2E	23		BSTA.UN	WRT		
0222	0261	A6	01			SHLIN3	SUBI.R2	1	
0223	0263	02	A2				LODR.R0	*SHPNT	
0224	0265	3F	71	EE		BSTA.UN	CHKCR		
0225	0268	14					RETC.EG		
0226	0269	E4	0A				COMI.R0	LF	
0227	026B	18	13				BCTR.EG	SHLIN4	
0228	026D	3F	2E	23		SHLIN5	BSTA.UN	WRT	
0229	0272	28	14				LODR.R0	SHPNT-1	
0230	0272	84	01				ADDI.R0	1	
0231	0274	00	10				STRR.R0	SHPNT-1	
0232	0276	96	02				BCTR.EC	SHLIN2	
0233	0278	38	2E				LODR.R0	SHPNT	
0234	027A	84	01				ADDI.R0	1	
0235	027C	00	07				STRR.R0	SHPNT	
0236	027E	1B	EA				BCTR.UN	SHLIN2	
0237	0287	3F	2E	55		SHLIN4	BSTA.UN	LPCR	
0238	0288	1B	68				BCTR.UN	SHLIN5	
0239	028E					*			
0240	028E					*			
0241	028E					*			
0242	028E					*			
0243	028E					*			
0244	028E					*			
0245	028E					*			
0246	028E					*			
0247	028E					*			
0248	028E					*			
0249	028E					*			
0250	028E					*			
0251	028E					*			
0252	028E					*			
0253	028E					*			
0254	028E					*			
0255	028E					*			
0256	028E					*			
0257	028E					*			
0258	028E					*			
0259	028E					*			
0260	028E					*			
0261	028E					*			
0262	028E					*			
0263	028E					*			
0264	028E					*			
0265	028E					*			
0266	028E					*			
0267	028E					*			
0268	028E					*			
0269	028E					*			
0270	028E					*			
0271	028E					*			
0272	028E					*			
0273	028E					*			
0274	028E					*			
0275	028E					*			
0276	028E					*			
0277	028E					*			
0278	028E					*			
0279	028E					*			
0280	028E					*			
0281	028E					*			
0282	028E					*			
0283	028E					*			
0284	028E					*			
0285	028E					*			
0286	028E					*			
0287	028E					*			
0288	028E					*			
0289	028E					*			
0290	028E					*			
0291	028E					*			
0292	028E					*			
0293	028E					*			
0294	028E					*			
0295	028E					*			
0296	028E					*			
0297	028E					*			

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
0111	00A5	24	4F				LODI,R0	COMTBL	
0112	00A7	25	4E				LODI,R1	COMTBL	
0113	00A9	2F	4F	F7			BSTA,UN	LOOKUP	
0114	00AC	2F	43	13			BCFA,EQ	LEFT	
0115	00AF	10	14	14		EXEC2	STRA,R3	DODST	
0116	00B2	00	14	14			STRA,R3	DODST-1	
0117	00B5	1F	24	24			BCTA,UN	*DODST	
0118	00B8					*			
0119	00B9					*			
0120	00BA	31	4F	01		FRASER	BSTA,UN	FRASI	
0121	00BB	1F	31	A3			BCTA,UN	NITLIN	
0122	00BE					*			
0123	00BF					*			
0124	00C0	3F	33	0F		POKF	BSTA,UN	FVAL	
0125	00C1	3F	03	0E			BSTA,UN	ENS	
0126	00C4	3F	39	0F			BSTA,UN	STRCT	
0127	00C7	3F	46	4E			BSTA,UN	SKPCOM	
0128	00CA	3F	33	0F			BSTA,UN	FVAL	
0129	00CD	3F	29	07			BSTA,UN	ENS1B	
0130	00D0	00	03	4F			STRA,R1	*CTEMP	
0131	00D3	1F	31	A3			BCTA,UN	NITLIN	
0132	00D6					*			
0133	00D7					*			
0134	00E0	3F	32	03		GCSUP	BSTA,UN	FNDLIN	
0135	00E0	00	43	07			BCFA,EQ	LNFR	
0136	00E3	2F	11	00			LODA,R3	CINPT-1	
0137	00E6	3F	32	19			BSTA,UN	DECSP	
0138	00E9	0F	11	0F			LOLA,R3	CINPT	
0139	00EB	3F	30	19			BSTA,UN	DECSP	
0140	00ED	27	12				LODI,R3	2	
0141	00EA	3F	32	19			BSTA,UN	DECSP	
0142	00E5	1F	A2	02			BCTA,UN	*RTNADR	
0143	00E8					*			
0144	00F0					*			
0145	00F0	3F	30	01		RETURN	BSTA,UN	INOSP	
0146	00F3	F7	02				COMI,R3	2	
0147	00F6	00	46	7B			BCFA,EQ	NOSTR	
0148	00F9	3F	39	01			BSTA,UN	INOSP	
0149	00FB	0F	11	04			STRA,R3	INPT	
0150	00FE	3F	30	19			BSTA,UN	INOSP	
0151	0101	0F	11	05			STRA,R3	INPT+1	
0152	0104	1F	46	3A			BCTA,UN	SKPLIN	
0153	0107					*			
0154	0107					*			
0155	0107	3F	32	53		PESTOR	BSTA,UN	FNDLIN	
0156	010A	1F	43	07			BCTA,LT	LNFR	
0157	010E	10	13				BCTF,GT	REST2	
0158	0110	20	11	04			LODA,R0	INPT	
0159	0112	21	11	05			LOLA,R1	INPT-1	
0160	0115	0F	11	04		REST1	STR,R0	DATPMT	
0161	0117	09	14				STR,R1	DATPMT-1	
0162	0119	3F	31	01			BSTA,UN	CRINPT	
0163	011C	20					ICRZ,R0		
0164	011D	08	2F				STR,R2	PDATA	
0165	011F	1F	31	06			BCTA,UN	CINXTL	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
0166	0127	3F	31	06		REST2	BSTA,UN	CSINPT	
0167	0128	00	20	03			LOLA,R0	BSTART	
0168	0128	0F	20				LODI,R1	0	
0169	012A	1B	69				BCTR,UN	REST1	
0170	012C					*			
0171	012C					*			
0172	012D	07	00			DATPMT	RES	2	
0173	012E	22				PDATA	RES	1	
0174	012F					*			
0175	012F					*			
0176	012F	3F	29	6E		FOR	BSTA,UN	GCVAR	
0177	0132	00	46	34			BCFA,EQ	N STR	
0178	0135	3F	30	6E			BSTA,UN	STRCT	
0179	0138	02					STRZ,R2		
0180	0139	21					LODZ,R1		
0181	013A	23					STRZ,R3		
0182	013B	3F	30	D9			BSTA,UN	DECSP	PUSH VAR. LOCATION
0183	013E	02					LODZ,R2		
0184	013F	03					STRZ,R3		
0185	0140	3F	30	D9			BSTA,UN	DECSP	
0186	0143	0F	11	05			LOLA,R3	INPT-1	
0187	0146	3F	30	D9			BSTA,UN	DECSP	PUSH INPT
0188	0149	0F	11	04			LODA,R3	INPT	
0189	014C	3F	30	D9			BSTA,UN	DECSP	
0190	014F	3F	46	40			BSTA,UN	SKPEQ	
0191	0152	3F	33	0F			BSTA,UN	FVAL	
0192	0155	00	46	34			BCFA,EQ	NOSTR	
0193	0158	3F	21	10			BSTA,UN	POPCT	
0194	015B	04	46				LODI,R0	FORTBL	
0195	015B	05	30				LODI,R1	FORTBL	
0196	015F	3F	45	F7			BSTA,UN	LOOKUP	
0197	0162	00	31	01			BCFA,EQ	STNER	
0198	0165	15	01				COMI,R1	1	
0199	0167	00	31	01			BCFA,EQ	STNER	
0200	016A	3F	33	0F			BSTA,UN	FVAL	
0201	016D	00	46	34			BCFA,EQ	NOSTR	
0202	0170	04	48				LODI,R0	FORTBL	
0203	0172	05	30				LODI,R1	FORTBL	
0204	0174	3F	45	F7			BSTA,UN	LOOKUP	
0205	0177	00	0D				BCFR,EQ	FOR2	
0206	0179	15	02				COMI,R1	2	
0207	017B	00	31	01			BCFA,EQ	STNER	
0208	017E	3F	33	0F			BSTA,UN	FVAL	
0209	0181	00	46	34			BCFA,EQ	NOSTR	
0210	0184	15	03				BCTR,UN	YOP3	
0211	0186	3F	45	AC		FOR2	BCTA,UN	PUSB1	
0212	0189	07	03			FOR3	LODI,R3	3	
0213	018B	3F	30	D9			BSTA,UN	DECSP	
0214	018E	1F	31	A3			BCTA,UN	NITLIN	
0215	0191					*			
0216	0191					*			
0217	0191	00	00	00	00	NTEMP	RES	4	
0218	0191	00	00	00	00	NTEMP	RES	8	
0219	0191	00	00	00	00	NTEMP	RES	8	
0220	0191	00	00	00	00	NTEMP	RES	8	
0221	0191	00	00	00	00	NTEMP	RES	8	
0222	0191	00	00	00	00	NTEMP	RES	8	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0201	21A1	27	22	22	27	*			
0202	21A6					*			
0203	21A6					*			
0204	21A6	3F	30	E1		NEXT	BSTA,UN	INCSP	
0205	21A6	87	73				COMI,R3	3	
0206	21A6	97	45	78			FCFA,FC	NEXTER	
0207	21A1	24	21				LODI,R0	TEMP	POP STEP VALUE
0208	21A7	01	92				LODI,R1	TEMP	
0209	21A1	04	31	55			BSTA,UN	POPFP	
0210	21A4	04	21				LODI,R0	TEMP	POP TO VALUE
0211	21B0	28	95				LODI,R1	TEMP	
0212	21B0	17	77				BSTA,UN	POPFP	
0213	21B0	06	FF				LODI,R1	FF	
0214	21B1	26	24				LODI,R2	4	
0215	21B1	37	11			NEXT1	BSTA,UN	INCSP	PCP INPT. VAR LOC.
0216	21C0	03					LODZ,R3		
0217	21C7	0D	21	41			STRA,R1	NTEMPS,+	
0218	21C6	FA	77				BCFR,R2	NEXT1	
0219	21C9	03	35	77			BSTA,UN	LOCVAP	
0220	21C8	10	0F				BCTR,GT	NEXTX	
0221	21D1	1E	4E	7C			BCTA,LT	TYFFR	
0222	21D2	10	01	83			COMA,R0	NTEMPS+2	
0223	21D3	00	45	76			FCFA,FC	NEXTER	
0224	21D6	ED	71	64			COMA,R1	NTEMPS+3	
0225	21D8	9C	4E	72			FCFA,FC	NEXTER	
0226	21D0	20	21	63		NEXTY	LODA,R0	NTEMPS-2	
0227	21D7	0D	21	64			LODA,R1	NTEMPS-3	
0228	21D0	3F	31	38			BSTA,UN	PUSHFP	
0229	21D7	04	21				LODI,R0	TEMP	
0230	21D7	25	9D				LODI,R1	TEMP	
0231	21D9	3F	31	38			BSTA,UN	PUSHFP	
0232	21E0	3F	3A	72			BSTA,UN	FFAED	
0233	21E1	3F	4E	E7			BSTA,UN	PCPC2	
0234	21E2	25	2E				LODI,R1	8	
0235	21E4	01	58	66		NEXT2	LODA,R1	CBUF2,-	
0236	21E7	01	E1	63			STRA,R1	*NTEMPS+2,I	
0237	21E6	01	61	85			LODA,R1	NTEMP,I	
0238	21E5	01	73	58			STRA,R1	CBUF1,I	
0239	21E0	58	72				BRNR,R1	NEXT2	
0240	21E2	3F	32	32			BSTA,UN	COMMON	
0241	21E5	20	21	9F			LODA,R0	TEMP+2	
0242	21E8	1A	31				BCTR,LT	NEXT3	
0243	21E0	E7	02				COMI,R3	LT	
0244	21E0	18	31				BCTR,FC	NEXT4	
0245	2201	75	04			NEXT5	LODI,R1	4	
0246	2210	21	41	91		NEXT5	LODA,R1	NTEMPS,-	
0247	2213	03					STRZ,R3		
0248	2214	3F	3F	00			BSTA,UN	DECSP	
0249	2217	89	77				BRNR,R1	NEXT5	
0250	2219	04	21				LODI,R0	TEMP	
0251	2215	25	9F				LODI,R1	TEMP	
0252	221D	3F	31	38			BSTA,UN	PUSHFP	
0253	2220	24	21				LODI,R0	TEMP	
0254	2222	25	9D				LODI,R1	TEMP	
0255	2224	3F	31	38			BSTA,UN	PUSHFP	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0276	2227	27	03				LODI,R3	3	
0277	2229	3F	30	E9			BSTA,UN	LECSF	
0278	222C	20	21	91			LODA,R2	NTEMPS	
0279	222F	0C	11	84			STRA,R0	INPT	
0280	2232	00	21	92			LODA,R0	NTEMPS-1	
0281	2235	0C	11	85			STRA,R0	INPT+1	
0282	2238	1F	4E	7A			BCTA,UN	SKPLIN	
0283	223F	E7	01			NEXT3	COMI,R3	GT	
0284	223D	98	4F				BCFR,FC	NEXT6	
0285	223F	3F	4E	40		NEXT4	BSTA,UN	SKPSP	
0286	2242	E4	2C				COMI,R0	,	
0287	2244	10	21	A*			BCTA,FC	NEXT	
0288	2247	3F	32	13			BSTA,UN	DECTP	
0289	224A	1F	31	A3			BCTA,UN	NITLIN	
0290	224E					*			
0291	224E					*			
0292	224D	3B	03			PURGE	BSTR,UN	PURGES	
0293	224F	1F	31	A3			BCTA,UN	NITLIN	
0294	2252					*			
0295	2252	2C	00	05		PURGES	LODA,R0	VAPST	
0296	2255	0C	00	0A			STRA,R0	TABEND	
0297	2258	20					EORZ,R0		
0298	2259	0C	00	0B			STRA,R0	TABEND+1	
0299	225C	0C	00	0A			STRA,R0	*TABEND	
0300	225F	17					RETC,UN		
0301	2260					*			
0302	2260					*			
0303	2260	00	00			SWAPS	RES	2	
0304	2262					*			
0305	2262					*			
0306	2262	3F	29	6E		SWAP	BSTA,UN	GCVAR	
0307	2265	1A	28				BCTR,LT	SWAPST	
0308	2267	1D	45	00			BCTA,GT	ARGER	
0309	226A	3F	30	6E			BSTA,UN	STRCT	
0310	2261	3F	46	46			BSTA,UN	SKPCOM	
0311	2270	3F	29	6E			BSTA,UN	GCVAR	
0312	2273	9C	46	34			BCTA,FC	NOSTR	
0313	2276	07	08				LODI,R3	8	
0314	2278	08	60			SWAP2	STR,R0	SWAPS	
0315	227A	09	60				STR,R1	SWAPS-1	
0316	227C	0F	02	60		SWAP3	LODA,R3	*SWAPS,-	
0317	227F	01					STRZ,R1		
0318	2280	2F	F3	4E			LODA,R3	*CTEMP,I	
0319	2283	0F	F2	60			STRA,R3	*SWAPS,I	
0320	2286	01					LODI,R1		
0321	2287	0F	F3	4E			STRA,R3	*CTEMP,I	
0322	228A	5B	70				BRNR,R3	SWAFS	
0323	228C	17	31	A3			BCTA,UN	NITLIN	
0324	228F	3F	32	6E		SWAPST	BSTA,UN	STRCT	
0325	2292	3F	46	46			BSTA,UN	SKPCOM	
0326	2295	3F	29	6E			BSTA,UN	GCVAR	
0327	2298	9E	46	74			BCTA,LT	NOSTR	
0328	229B	07	07				LODI,R3	3	
0329	229D	1E	59				BCTR,UN	SWAP2	
0330	229F					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0331	020F								
0332	020F	00				DCLPCR	RES	1	
0333	020F	02				PRTYPE	RES	1	
0334	020F	00				LPOS	RES	1	
0335	020F	00				FUSP	RES	1	
0336	020F	00	49	4E		USINGL	ALIT		'USING.'
0337	020F	47	01						
0338	020F	00	20	FF		DATA			0.0.FF
0339	020C								
0340	020C								
0341	020C	09	74			STRPUS	STRB,R1		PUSP
0342	020C	17					RETC,UN		
0343	020F								
0344	020F								
0345	020F	24	FF			LPRINT	LODI,R0		FF
0346	020F	00	61				STRB,R0		PRTYPE
0347	020F	1F	13				BCTR,UN		PRNTAL
0348	020F								
0349	020F								
0350	020F	22				PRINT	FORZ,R0		
0351	020F	00	60				STRB,R0		PRTYPE
0352	020F	24	FF				LODI,R0		FF
0353	020F	00	02	A7			STRB,R0		PUSP
0354	020F	3F	40	40			BSTA,UN		SKFSP
0355	020F	14	42				COMI,R0		'0'
0356	020F	10	24	00			BCTA,EQ		PRNTAT
0357	020F	3F	32	13			BSTA,UN		DICFT
0358	020F	04	21			PRNTAL	LODI,R0		CR
0359	020F	01	22	0F			LODA,R3		DCLPCR
0360	020F	30	24	05			BSTA,EC		SENDIT
0361	020F	20					ICRZ,R0		
0362	020F	00	02	0F			TRA,R0		DCLPCR
0363	020F	24	FF				LODI,R0		'USINGL
0364	020F	25	A3				LODI,R1		'USINGL
0365	020F	0F	4F	F7			BSTA,UN		LOCKUP
0366	020F	10	43	F4			BCTA,EC		PUSING
0367	020F	00	91	04		PRINT2	LODA,R0		*INPT
0368	020F	14	20				COMI,R0		'6'
0369	020F	10	2F	00			BCTA,EC		PRNTCT
0370	020F	3F	31	00			BSTA,UN		CHKCR
0371	020F	10	31	A3			BCTA,EC		NXTLIN
0372	020F	3F	33	0F			BSTA,UN		EVAL
0373	020F	10	14				BCTR,GT		FPINT3
0374	020F	1A	00				BCTR,LT		PRINT4
0375	020F	3F	23	29			BSTA,UN		PRNTF
0376	020F	15	24	00			BCTA,UN		PRNTD
0377	020F	00	FF			PRINT4	LODI,R1		FF
0378	020F	3B	15				BCTR,UN		PRNTS
0379	020F	1F	24	00			BCTA,UN		PRNTD
0380	020F	10	23	29			BCTA,EC		PRNTF
0381	020F	1A	00				BCTR,LT		PRNTS
0382	020F	04	40			PRINT3	LODI,R0		TABLIT
0383	020F	00	01				LODI,R1		TABLIT
0384	020F	3F	45	F7			BSTA,UN		LOOKUP
0385	020F	00	31	B1			BCTA,EQ		SYNER

PRINT USING

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0386	030F	1F	24	49			BCTA,UN		PRNTAB
0387	0312								
0388	0312								
0389	0312	3F	30	B1		PRNTS	BSTA,UN		INCSP
0390	0315	3F	30	B1			BSTA,UN		INCSP
0391	0318	03					LODZ,R3		
0392	0319	02					STRZ,R2		
0393	031A	02				PRNTS2	LODZ,R2		
0394	031B	10	00				BCTR,EQ		PRNTS3
0395	031F	0E	10	D7			LODA,R2		*SF,
0396	0320	3F	24	05			BSTA,UN		SENDIT
0397	0323	F9	75				BDHR,R1		PRNTS2
0398	0325	03				PRNTS3	LODZ,R3		
0399	0326	1F	30	B*			BCTA,UN		INCSP2
0400	0329								
0401	0329								
0402	0329	3F	45	D9		PRNTF	BSTA,UN		POPC1
0403	0320	00	13	52			LODA,R0		CBUF1-2
0404	032F	3F	23	FB			BSTA,UN		PRTSGM
0405	0332	3F	2B	D9		PRNTF1	BSTA,UN		CILEN
0406	0335	00					LODZ,R0		
0407	0336	00	24				BCTR,EQ		PRNTF2
0408	0336	3F	24	03			BSTA,UN		SEND0
0409	033B	17					RETC,UN		
0410	0330	0F	13	F0		PRNTF2	LODA,R2		CBUF1
0411	033F	1A	10				BCTR,LT		PRNTF3
0412	0341	00	13	51			LODA,R1		CBUF1+1
0413	0344	15	10				COMI,R1		10
0414	0346	1D	23	00			BCTA,GT		PRTEXP
0415	0349	3F	20	11		PRNTF4	BSTA,UN		CIGET
0416	0340	15					BCTR,GT		
0417	0341	14					BCTR,EQ		
0418	034E	C3					STRZ,R3		
0419	034F	00	05				BRNR,R1		PT4A
0420	0351	04	2F				LODI,R0		
0421	0353	3F	24	05			BSTA,UN		SENDIT
0422	0356	A5	01			PT4A	SUBI,R1		1
0423	0358	03					LODZ,R3		
0424	0359	3F	24	03			BSTA,UN		SEND0
0425	0350	10	00				BCTR,UN		PRNTF4
0426	0351	0F	13	51		PRNTF3	LODA,R2		CBUF1+1
0427	0351	14	0A				COMI,R0		A
0428	0353	00	02				BCTR,EQ		PT3A
0429	0355	04	10				LODI,R0		10
0430	0357	04	06			PT3A	ADDI,R0		66
0431	0359	02					ADDI,R2		
0432	036A	04					DAP,R0		
0433	036B	04	12				COMI,R0		12
0434	0367	15	11				BCTR,GT		PRTEXP
0435	036F	04	01				LODI,R0		
0436	0371	3F	24	05			BSTA,UN		SENDIT
0437	0374	00	13	51			LODA,R1		CBUF1+1
0438	0377	00	0A			PT3D	BRNR,R1		PT3B
0439	0379	3F	20	11		PT3C	BSTA,UN		CIGET
0440	037C	15					RETC,GT		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2551	2458	24	20				LODI,R0		
2552	245A	3F	24	05			BSTA.UN	SENDIT	
2553	245C	23					LOI2,R3		
2554	245E	09	74				BIPR,R0	TAB1	
2555	2460					*			
2556	2460					*			
2557	2462	3F	4E	40		PRNTD	BSTA.UN	SKPSF	
2558	2463	7F	31	16			BSTA.UN	CHCR	
2559	2466	10	A2	92			RCTA,EQ	*RTNADR	
2560	2469	E4	21				COMI,R0		
2561	246B	10	4F	3A			ECTA,EG	SKPLIN	
2562	246E	24	3B				COMI,R0		
2563	2470	18	29				BCTR,EG	PRNTD4	
2564	2472	E4	20				COMI,R0		
2565	2474	90	31	71			ECTA,EG	STWER	
2566	2477	3F	24	A3			BSTA.UN	GETPOS	
2567	247A	E4	40				COMI,R0	42	
2568	247C	19	11				BCTR,GT	PRNTD5	
2569	247E	01					STRA,R1		
2570	247F	A5	71				SUFI,R1	1	
2571	2481	01				PRNTD2	LODI,R1		
2572	2482	44	7F				ANDI,R0	F	
2573	2484	18	30				BCTR,EG	PRNTD4	
2574	2485	24	20				LODI,R0		
2575	2489	3F	24	CF			BSTA.UN	SENDIT	
2576	248B	05	01				ADDI,R1	1	
2577	248E	15	72				BCTR,UN	PRNTD0	
2578	2491	3F	2E	55		PRNTD5	BSTA.UN	LFGR	
2579	2492	3F	32	12		PRNTD4	BSTA.UN	SKPDEC	
2580	2495	3F	31	BE			BSTA.UN	CHCR	
2581	2499	90	22	DE			ECTA,EG	PRINT2	
2582	249E	24	7F			PRNTD6	LODI,R0	FF	
2583	249F	00	27	0F			STRA,R0	DOLFOR	
2584	24A2	1F	31	A3			BCTA,UN	NKTLIN	
2585	24A3					*			
2586	24A3					*			
2587	24A3	20	22	A2		GETPOS	LOIA,R0	PTYPE	
2588	24A6	18	24				BCTR,EG	GETDIS	
2589	24A8	20	02	A1			LOIA,R2	LPOS	
2590	24A8	17					RETC,UN		
2591	24AC	0D	0E	C7		GETDIS	LODA,R1	CURSOR	
2592	24AF	0C	0E	08			LODA,R0	CURSCR+1	
2593	24B2	77	08				PPSL	WC	
2594	24B4	51					RRR,R1		
2595	24B5	59					RRR,R0		
2596	24B6	51					RRR,R1		
2597	24B7	50					RRR,R0		
2598	24B8	51					RRR,R1		
2599	24B9	59					RRR,R0		
2600	24BA	51					RRR,R1		
2601	24BB	50					RRR,R0		
2602	24BC	44	7F				ANDI,R0	7F	
2603	24BE	75	08				CPSL	WC	
2604	24C0	04	01				ADDI,R0	1	
2605	24C2	17					RETC,UN		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2606	24C3					*			
2607	24C3					*			
2608	24C3	64	30			SEND0	IOPI,R0	'0'	
2609	24C5	77	12			SENDIT	PPSL	RS	
2610	24C7	0D	02	A0			LOIA,R1	PTYPE	
2611	24CA	75	10				CPSL	RS	
2612	24CC	18	10				BCTR,EQ	SEND1	
2613	24CE	15	22				BCTR,GT	SEND3	
2614	24D0	E4	0E				COMI,R0	CR	
2615	24D2	90	12				BCTR,EQ	SEND2	
2616	24D4	04	01				LODI,R0	1	
2617	24D6	00	02	A1			STRA,R0	LPOS	
2618	24D9	24	2E				LODI,R0	CR	
2619	24DB	1F	20	07			BCTA,UN	PRNT	
2620	24DE	E4	0D			SEND1	COMI,R0	CR	
2621	24E0	10	2F	55			ECTA,EG	LFGR	
2622	24E3	1F	2F	23			BCTA,UN	WRT	
2623	24E6	3F	20	07		SEND2	BSTA.UN	PRNT	
2624	24E9	00	02	A1			LODA,R0	LPOS	
2625	24FC	04	01				ADDI,R0	1	
2626	24FE	00	02	A1			STRA,R0	LPOS	
2627	24F1	17					RETC,UN		
2628	24F2	77	10			SEND3	PPSL	RS	
2629	24F4	0E	1E	9E			LODA,R1	TYF3SP	
2630	24F7	0D	3E	9F			STRA,R1	STRSS,+	
2631	24FA	0D	1E	9E			STRA,R1	TYF3SP	
2632	24FD	75	10				CPSL	RS	
2633	24FF	17					RETC,UN		
2634	2500					*			
2635	2500					*			
2636	2500	3F	31	FD		PRNTCT	BSTA.UN	INCPT	
2637	2503	3F	32	28			BSTA.UN	GETCHR	
2638	2506	E4	40				COMI,R0	40	
2639	2508	1E	45	74			BCTA,LT	OVFER	
2640	250E	F4	5F				COMI,R0	5F	
2641	2510	11	45	74			BCTA,GT	OVFER	
2642	2510	44	1F				ANDI,R0	1F	
2643	2512	33	24	05			BSTA.UN	SENDIT	
2644	2514	1F	24	08			BCTA,UN	PRNTD	
2645	2516					*			
2646	2518					*			
2647	2518	00				ERRTYP	RES	1	
2648	2519					*			
2649	2519					*			
2650	2519	00	06	34		DATER	LODA,R0	ERWAIT	
2651	251C	10	33	2E			BCTA,EG	ZPROB	
2652	251F	0F	77				STRA,R3	ERRTYP	
2653	2521	0F	11	05			LODA,R0	IMPT+1	
2654	2524	3F	30	D9			BSTA.UN	DYCSF	
2655	2527	0F	11	04			LOIA,R3	IMPT	
2656	252A	3F	30	D9			BSTA.UN	DYCSF	
2657	252C	07	02				LODI,R3	2	
2658	252F	3F	30	D9			BSTA.UN	DYCSF	
2659	2532	00	06	32			LODA,R0	ERRTM	
2660	2535	00	11	04			STRA,R0	IMPT	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2661	2576	20	06	33			LODA,R0	ERRTN+1	
2662	2577	20	11	6F			STRA,R0	INPT+1	
2663	2577	1F	A0	02			BCTA,UN	*RTNADR	
2664	2541					*			
2665	2541					*			
2666	2541	27	07			RDNIE	LODI,R3	NCEPR	
2667	2542	1E	54				BCTA,UN	DATERR	
2668	2545	07	0A			RTIIE	LODI,R3	TYPEPR	
2669	2547	1E	50				BCTA,UN	CATERR	
2670	2546					*			
2671	2549					*			
2672	2549	20	07			ONSTG	RES	2	
2673	254E	20				INON	RES	1	
2674	254C					*			
2675	254C					*			
2676	254C	3F	33	0F		ON	ESTA,UN	IVAL	
2677	254F	3F	0B	0E			ESTA,UN	ENS	
2678	2542	09	75				STRR,R1	ONSTG	
2679	2554	02					LODI,R0		
2680	2555	00	45	3A			BCTA,EC	SKPLIN	
2681	2556	01					LODI,R1		
2682	2557	10	46	3A			BCTA,EC	SKPLIN	
2683	255C	04	47				LODI,R0	ONTBL	
2684	255C	0F	FF				LODI,R1	ONTBL	
2685	2560	3F	45	F7			ESTA,UN	LOOKUP	
2686	2563	20	31	B1			BCTA,EC	SYNER	
2687	2565	03	FF				STRR,R1	ONSTG-1	
2688	2568	05	FF				LODI,R1	ONSTG	
2689	256A	05	01			ON1	COMI,R1	1	
2690	256C	1B	2F				BCTA,EC	ON2	
2691	256E	3F	32	28		ON1E	ESTA,UN	GETCHR	
2692	2571	3F	31	B6			ESTA,UN	CHKCR	
2693	2574	10	A0	02			BCTA,EC	*RTNADR	
2694	2577	14	2C				COMI,R0		
2695	2579	0A	73				BCTA,EC	ON1B	
2696	257B	19	6D				BDRR,R1	ON1	
2697	257E	14	FF			ON2	LODI,R0	FF	
2698	257F	0F	4A				STRR,R0	INON	
2699	2581	0E	47				LODI,R1	ONSTG+1	
2700	2583	0C	65	02			LODA,R1	ONPTR,I	
2701	2586	0C	14	D4			STRA,FP	DODST	
2702	2589	01	2F	02			LODI,R1	ONPTR,+	
2703	2590	0C	14	D5			STRA,FP	DODST+1	
2704	259F	1F	24	D4			BCTA,UN	*DODST	
2705	2592					*			
2706	2592					*			
2707	2592	43	81	28	D6	ONPTR	ACON	GOTO,GOSUB,RESTOR,EXIT,ERRORC,RESUME	
2708	2596	21	07	25	F7				
2709	259A	26	3C	44	1A				
2710	259E					*			
2711	259E					*			
2712	259F	3F	33	0F		IF	ESTA,UN	EVAL	
2713	25A1	00	45	3A			BCTA,EC	NOSTR	
2714	25A4	3F	45	D0			ESTA,UN	POP31	
2715	25A7	00	13	53			LODA,R0	CBUF1+3	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2716	25AA	18	13				BCTA,EC	IFELSF	0-FALSE
2717	25AC	04	47				LODI,R0	IFTEL	
2718	25AF	0F	FF				LODI,R1	IFTEL	
2719	25B2	3F	45	F7			ESTA,UN	LOOKUP	
2720	25B3	00	04				BCTA,EC	IFTHEN	
2721	25B5	01					LODI,R1		
2722	25B6	00	31	B1			BCTA,EC	SYNER	
2723	25B9	3F	32	83		IFTHEN	ESTA,UN	FNDLIN	
2724	25BC	1F	A0	02			BCTA,UN	*RTNADR	
2725	25BF	3F	32	28		IFELSE	ESTA,UN	GETCHR	
2726	25C0	14	3A				COMI,R0		
2727	25C4	18	13				BCTA,EC	ELSE2	
2728	25C6	14	0D				COMI,R0	CR	
2729	25C8	08	7F				BCTA,EC	IFELSE	
2730	25CA	3F	32	10			ESTA,UN	SKPDEC	
2731	25CD	04	47				LODI,R0	ELSTBL	
2732	25CF	0F	F6				LODI,R1	ELSTBL	
2733	25D1	3F	45	F7			ESTA,UN	LOOKUP	
2734	25D4	1E	A0	02			BCTA,LT	*RTNADR	
2735	25D7	1E	60				BCTA,UN	IFTHEN	
2736	25D9	3F	32	10		ELSE2	ESTA,UN	SKPDEC	
2737	25DC	04	47				LODI,R0	ELSTBL	
2738	25DE	0F	F6				LODI,R1	ELSTBL	
2739	25E0	3F	45	F7			ESTA,UN	LOOKUP	
2740	25E3	00	5A				BCTA,EC	IFELSE	
2741	25E5	1B	52				BCTA,UN	IFTHEN	
2742	25E7					*			
2743	25E7					*			
2744	25E7	2F	00	D7		EXIT	LODA,R3	*SP	
2745	25EA	E7	03				COMI,R3	3	
2746	25EC	0C	43	01			BCTA,EC	GOTO	
2747	25EF	06	17				LODI,R2	17	
2748	25F1	3F	30	B1		EXIT1	ESTA,UN	INCSP	
2749	25F4	FA	7E				BDRR,R2	EXIT1	
2750	25F6	1E	6F				BCTA,UN	EXIT	
2751	25F8					*			
2752	25F8					*			
2753	25F8	3F	33	0F		WAIT	ESTA,UN	EVAL	
2754	25FB	3F	2B	97			ESTA,UN	ENS1B	
2755	25FE	09	26				STRR,R1	WAIT4+1	
2756	2600	3F	46	48			ESTA,UN	SKPCOM	
2757	2603	3F	33	0F			ESTA,UN	EVAL	
2758	2606	3F	2B	97			ESTA,UN	ENS1B	
2759	2609	0D	13	4E			STRA,R1	CTEMP	
2760	260C	3F	32	10			ESTA,UN	SKPDEC	
2761	260F	14	2C				COMI,R0		
2762	2611	08	2D				BCTA,EC	WAIT2	
2763	2613	3F	31	FD			ESTA,UN	INCPT	
2764	2616	3F	33	0F			ESTA,UN	EVAL	
2765	2619	10	25				BCTA,GT	WAIT2	
2766	261B	3F	2B	97			ESTA,UN	ENS1B	
2767	261E	1B	02				BCTA,UN	WAIT3	
2768	2622	2F	00			WAIT2	LODI,R1	0	
2769	2622	0D	13	4F		WAIT3	STRA,R1	CTEMP+1	
2770	2625	54	08			WAIT4	BCTA,RE	0	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2771	2627	20	13	4F			EORA,R0	CTEMP-1	
2772	262A	40	17	4E			ANDA,R0	CTEMP	
2773	2625	90	31	A3			BCFA,EO	NITLIN	
2774	2632	19	73				BCTR,UN	WAIT4	
2775	2632					*			
2776	2632					*			
2777	2635	07	02				FRFTN RES	2	
2778	2634	02					FRWAIT RES	1	
2779	2635					*			
2780	2635					*			
2781	2635	3F	32	E3		ERROR	BSTA,UN	FNILIN	
2782	2639	1F	43	B7			BCTA,LT	LWFER	
2783	263B	19	14				BCTR,GT	ENF	
2784	263D	20	11	B4			LODA,R0	INPT	
2785	2642	0A	72				STRR,R0	ERRTN	
2786	2642	20	11	B5			LODA,R0	INPT+1	
2787	2645	08	60				STRR,R0	ERRTN+1	
2788	2647	24	FF				LODI,R0	FF	
2789	2649	08	69				STRR,R0	E WAIT	
2790	264E	3F	31	B1			BSTA,UN	CRINPT	
2791	264F	1F	31	C6			BCTA,UN	CKNXTL	
2792	2651	02				ENF	EORZ,P0		
2793	2652	08	60				STRR,R0	FRWAIT	
2794	2654	1F	31	C6			BCTA,UN	CKNXTL	
2795	2657					*			
2796	2657					*			
2797	2657	3F	35	77		DEF	BSTA,UN	LOKVAR	
2798	265A	90	45	B0			BCTA,GT	ACER	
2799	265E	3F	29	E0			BSTA,UN	GETNA	
2800	2662	35	FF				COMI,R1	FF	
2801	2665	10	31	B1			BCTA,EO	SYNER	
2802	2665	14	28				COMI,R0	?	
2803	2667	3F	31	B1			BCTA,EO	SYNER	
2804	266A	26	72				LODI,R2	2	
2805	266C	07	04				LODI,R3	4	
2806	266C	3F	2A	1D			BSTA,UN	GCSUB	
2807	2671	20	11	B4			LODA,R0	INPT	
2808	2674	3F	32	A7			BSTA,UN	PSHOP1	
2809	2677	20	11	B5			LODA,R0	INPT-1	
2810	267A	3F	32	A7			BSTA,UN	PSHOP1	
2811	267D	3F	29	CD			BSTA,UN	PSHEND	
2812	2680	1F	46	3A			BCTA,UN	SKPLIN	
2813	2683					*			
2814	2683					*			
2815	2683	3F	75	77		DIM	BSTA,UN	LOKVAR	
2816	2686	9F	45	8C			BCTA,GT	ACER	
2817	2689	24	FF				LODI,R0	FF	
2818	268B	00	2A	3C			STRA,R0	GCDIMS	
2819	268E	3F	29	78			BSTA,UN	GCV	
2820	2691	1D	45	80			BCTA,GT	ARGER	
2821	2694	3F	32	10			BSTA,UN	SKPDEC	
2822	2697	E4	2C				COMI,R0	.	
2823	2699	90	31	A3			BCFA,EO	NITLIN	
2824	269C	3F	31	FD			BSTA,UN	INCPT	
2825	269F	19	62				BCTR,UN	DIM	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2826	26A1					*			
2827	26A1					*			
2828	26A1					CMSTRS	RES	100	
2829	27A1					*			
2830	27A1	00	00			INSTG	RES	2	
2831	27A3					*			
2832	27A3					*			
2833	27A3	0F	02	9F		INPUT	LODA,R3	DOLFCR	
2834	27A6	3C	2E	5E			BSTA,EO	LFCR	
2835	27A9	20					EORZ,P0		
2836	27AA	00	02	9F			STRA,R0	DOLFCR	
2837	27AD	3F	46	40			BSTA,UN	SKPSP	
2838	27B0	3F	31	B6			BSTA,UN	CHKCP	
2839	27B3	98	0B				BCTR,EO	INPUTA	
2840	27B5	3F	2E	E2			BSTA,UN	FAUSE	
2841	27B8	F4	1B				COMI,P0	RSC	
2842	27BA	10	42	A0			BCTA,EO	OPTION	
2843	27BD	1F	A7	92			BCTA,UN	*FINADR	
2844	27C0	F4	22			INPUTA	COMI,EO		
2845	27C2	98	26				BCTR,EO	INPUT1	
2846	27C4	00	51	B4		INPUT2	LODA,R0		
2847	27C7	1E	31	B1			BCTA,LT	SYNER	
2848	27CA	3F	31	FD			BSTA,UN	INCPT	
2849	27CD	E4	0D				COMI,R0	CR	
2850	27CF	10	31	B1			BCTA,EO	SYNER	
2851	27D2	F4	2A				COMI,R0	LF	
2852	27D4	10	31	B1			BCTA,EO	SYNER	
2853	27D7	F4	22				COMI,R0		
2854	27D9	0A	0A				BCTR,EO	INPUT2	
2855	27DE	3F	46	40			BSTA,UN	SKPSP	
2856	27DE	F4	3B				COMI,R0	?	
2857	27E0	90	31	B1			BCFA,EO	SYNER	
2858	27E3	1F	0D				BCTR,UN	INPUT3	
2859	27E5	3F	2E	23		INPUT2	BSTA,UN	WRT	
2860	27E8	1B	5A				BCTR,UN	INPUT0	
2861	27EA	3F	32	13		INPUT1	BSTA,UN	DECP	
2862	27EE	04	3F				LODI,R0	?	
2863	27EF	3F	2E	23			BSTA,UN	WRT	
2864	27F2	3F	2E	21		INPUT3	BSTA,UN	WRBL	
2865	27F5	3F	31	86			BSTA,UN	CSIMPT	
2866	27F8	3F	32	7F		INPT3A	BSTA,UN	AROWCB	
2867	27FB	3F	28	B1			BSTA,UN	SWITCH	
2868	27FE	3F	29	6F		INFWIT	BSTA,UN	GCVAR	
2869	2801	1A	16				BCTR,LT	INPSTR	
2870	2803	10	23				BCTR,EO	INPPT	
2871	2805	1F	31	A3			BCTA,UN	NITLIN	
2872	2809	3F	30	6E		INFPPT	BSTA,UN	SWCT	
2873	280B	3F	26	81			BSTA,UN	SWITCH	
2874	280E	3F	37	9F			BSTA,UN	EVAL	
2875	2811	90	26	7E			BCFA,EO	INPERR	
2876	2814	3F	21	18			BSTA,UN	POPCT	
2877	2817	1B	37				BCTR,UN	INPDEL	
2878	2819	3F	32	5E		INPSTR	BSTA,UN	SWCT	
2879	281C	3F	27	F7			BSTA,UN	ZSTR	
2880	281F	3F	28	81			BSTA,UN	SWITCE	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0881	0800	3F	30	10			BSTA,UN	SKPDEC	
0882	0804	14	2E				COMI,R0		
0883	0808	18	20				BCTR,EQ	INPST2	
0884	0812	2E	FF				LODI,R2	FF	
0885	0816	00	01	B4		INPST0	LODA,R0	*INPT	
0886	0820	14	21				COMI,R0	CR	
0887	0824	14	12				BCTR,FC	INPST1	
0888	0828	14	14				COMI,R0	IF	
0889	0832	14	21				BCTR,FC	INPST1	
0890	0836	11	2A				COMI,R0		
0891	0840	14	2A				BCTR,FC	INPST1	
0892	0844	1F	26	A1			STRA,R2	CMSTRS,+	
0893	0848	1F	31	FD			BSTA,UN	INCPY	
0894	0852	1E	60				BCTR,UN	INPST0	
0895	0856	14	21			INPST1	ADDI,R2	1	
0896	0860	14	26				LODI,R0	CMSTRS	
0897	0864	2E	A1				LODI,R1	CMSTRS	
0898	0868	1E	32	F2			BSTA,UN	PUSBST	
0899	0872	1F	20	32			BSTA,UN	STRING	
0900	0876	1E	2A				BCTR,UN	INPDEL	
0901	0880	1E	33	5F		INPST2	BSTA,UN	EVAL	
0902	0884	0A	01				BCTR,LT	INPERR	
0903	0888	1F	2B	32		INPDEL	BSTA,UN	STRING	
0904	0892	1F	2B	01			BSTA,UN	SWTCH	
0905	0896	1F	32	12			BSTA,UN	SKPDEC	
0906	0898	14	20				COMI,R2		
0907	0900	14	31	A3			BCTA,EC	NITLIN	
0908	0904	14	31	7E			BSTA,UN	INCPY	
0909	0908	14	2F	01			BSTA,UN	SWTCH	
0910	0912	1F	2F	42			BSTA,UN	SKPSP	
0911	0916	14	20				COMI,R0		
0912	0920	0A	2E				BCTR,FC	INPERR	
0913	0924	1F	2A	41			BSTA,UN	SWTCH	
0914	0928	1F	20	FF			BCTA,UN	INPNXT	
0915	0932	1F	31	01		INPERR	BCTA,UN	CRINPT	
0916	0936	07	74				LODI,R3	WRMSG	
0917	0940	1F	4E	57			BSTA,UN	WRMCR	
0918	0944	1F	27	FB			BCTA,UN	INPT3A	
0919	0948					*			
0920	0952					*			
0921	0956	0C	12	A6		SWTCH	LODA,R0	BTEMP	
0922	0960	0E	11	84			LODA,R1	INPT	
0923	0964	0C	11	84			STRA,R0	INPT	
0924	0968	0B	1C	A6			STPA,R1	BTEMP	
0925	0972	0C	12	A7			LODA,R0	BTEMP+1	
0926	0976	0E	11	85			LODA,R1	INPT-1	
0927	0980	0E	11	85			STRA,R2	INPT-1	
0928	0984	0E	12	A7			STPA,R1	BTEMP-1	
0929	0988	17					BCTR,UN		
0930	0992					*			
0931	0996					*			
0932	1000	3F	A2			RBUF	ACON	RBUF	
0933	1004					*			
0934	1008					*			
0935	1012	0C	2D	EP		RANDOM	LODA,R0	NEWSID	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0936	280F	0C	88	5A			STRA,R0	*RBUF	
0937	2812	1F	31	A3			BCTA,UN	NITLIN	
0938	2816					*			
0939	2818					*			
0940	281C	02	02	00	00	MIDSTG	RES	7	
0941	2820	00	00	00	00				
0942	2824					*			
0943	2828					*			
0944	282C	3F	29	6E		MID3	BSTA,UN	OCVAR	
0945	2830	9E	4E	34			BCTA,LT	NOSTR	
0946	2834	3F	39	5E			BSTA,UN	STRCT	
0947	2838	26	25				LODI,R2	3	
0948	283C	07	25				LODI,R3	5	
0949	2840	0F	13	4E		MID1	LODA,R2	*CTEMP,-	
0950	2844	0F	4E	A5			STRA,R3	MIDSTG,-	
0951	2848	5A	78				BRNR,R2	MID1	
0952	2854	3F	46	48			BSTA,UN	SKPCOM	
0953	2858	3F	33	9F			BSTA,UN	EVAL	
0954	2864	3F	2B	97			BSTA,UN	ENS1B	
0955	2868	01					LODI,R1		
0956	2874	1C	4E	74			BCTA,EQ	OVFER	
0957	2878	09	5F				STPR,R1	MIDSTG	
0958	2884	05	FF				LODI,R1	FF	
0959	2888	3F	46	40			BSTA,UN	SKPSP	
0960	2894	14	29				COMI,R0		
0961	2898	18	13				BCTR,EQ	MID2	
0962	2904	14	20				COMI,R0		
0963	2908	9C	31	E1			BCTA,EC	SYNER	
0964	2914	3F	33	9F			BSTA,UN	EVAL	
0965	2918	3F	2B	97			BSTA,UN	ENS1B	
0966	2924	3F	46	40			BSTA,UN	SKPSP	
0967	2928	14	29				COMI,R0		
0968	2934	9C	31	E1			BCTA,EC	SYNER	
0969	2938	3F	46	50		MID2	BSTA,UN	SKPDEC	
0970	2944	1C	26	AC			STRA,R1	MIDSTG-1	
0971	2948	3F	33	9F			BSTA,UN	EVAL	
0972	2954	9E	4E	34			BCTA,LT	NOSTR	
0973	2960	3F	30	E1			BSTA,UN	INOSP	
0974	2966	3F	30	E1			BSTA,UN	INOSP	
0975	2972	01	26	AC			LODA,R1	MIDSTG+4	
0976	2978	1C	26	50			BCTA,EC	MID77	
0977	2984	0F	FF				LODI,R2	FF	
0978	2990	0F	4E	A7		MID3	LODA,R2	*MIDSTG-2,+	
0979	2996	0E	6E	A1			STRA,R2	CMSTRS,I	
0980	3002	10	76				BDRR,R1	MID3	
0981	3008	0C	0B	AG			LODA,R0	MIDSTG+4	
0982	3014	1C	09	AG			COMA,R0	MIDSTG	
0983	3020	1E	29	52			BCTA,LT	MID77	
0984	3026	1C	09	AG			SUBA,R0	MIDSTG	
0985	3032	84	21				ADDI,PP	1	
0986	3038	0C	26	AA			STRA,R0	MIDSTG+5	
0987	3044	1E	2B	AG			LODA,R2	MIDSTG	
0988	3050	AE	21				SUBI,R2	1	
0989	3056	0E	0B	AG			LODA,R1	MIDSTG-1	
0990	3062	1C	26	5A			BCTA,EC	MID77	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1201	290A	07	2E	AE			STRA,R3	MIDSTG-6	
1202	2907	17	22			MID4	COMI,R3	0	
1203	2907	18	27				BCTR,EQ	MID5	
1204	2911	0F	10	E7			LODA,R3	*SP,-	
1205	2914	0E	0E	A1			STRA,R2	CMSTRS.1	
1206	2917	0E	21				ADDI,R2	1	
1207	2919	1E	26	A9			COMA,R2	MIDSTG-4	
1208	291C	18	27				BCTR,EG	MID5	
1209	291E	09	07				BDRR,R1	MID4	
1210	2920	21	09	A9		MID5	LODA,R1	MIDSTG-4	
1211	2923	26	FF				LODI,R2	FF	
1212	2925	2E	2E	A1		MID6	LOTA,R2	CMSTRS.-	
1213	2928	0E	18	A7			STPA,R2	*MIDSTG-2.1	
1214	292F	19	2E				BDRR,R1	MID6	
1215	2931	0F	28	AB			LODA,R3	MIDSTG-6	
1216	2937	23				MID77	LODZ,R3		
1217	2941	3F	30	F5			BSTA,UN	INCSPI	
1218	2944	1F	31	A3			BCTA,UN	NXTLIN	
1219	2947								
1212	2957								
1211	2947	30	14	72		GCSFND	LOIA,R2	LTEMP	
1212	295A	2D	15	73			LOIA,R1	LTEMP+1	
1213	2961	A5	72				SUBI,R1	2	
1214	296F	77	75				FPSL	WC	
1215	2971	A4	78				SUBI,R0	0	
1216	2983	75	29				CPSL	WC	
1217	2985	07	FF				LODI,R3	FF	
1218	2987	17					RETC,UN		
1219	2988								
1220	2988								
1221	2998	02	02	02	22	NAME	RES	4	
1222	299C	02	02			GCSAV	RES	2	
1223	29F1								
1224	296F								
1225	29F1	27				GCVAR	IORZ,R2		
1226	29F1	0C	2A	3C			STRA,R2	GCDIMS	
1227	2972	35	3F	77			BSTA,UN	LOIVAR	
1228	2975	14					RETC,EQ		
1229	2976	1A	5F				BCTR,LT	GCSFND	
1230	2978	0C	11	04		GCV	LODA,R2	INPT	
1231	2979	08	0F				STRP,R2	GCSAV	
1232	297D	0C	11	05			LODA,R2	INPT-1	
1233	2987	08	0B				STRP,R0	GCSAV-1	
1234	2982	3F	20	E0			BSTA,UN	GETNA	
1235	2985	25	FF			GCV2	COMI,R1	FF	
1236	2987	1C	46	59			BCTA,EG	RETNGT	
1237	298A	14	24				COMI,R0	'4'	
1238	298C	1C	2A	0A			BCTA,EG	GOSTR	
1239	298F	14	26				COMI,R2	'(
1240	2991	1C	2A	3D			BCTA,EG	GCDIM	
1241	2994	38	32	13			BSTA,UN	DFCPT	
1242	2997	48	08				LODI,R2	8	
1243	2999	07	02				LODI,R3	0	
1244	299B	3F	2A	1D		GCV3	BSTA,UN	GCSUB	
1245	299E	20				GCV6	EOPZ,R0		

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1246	299F	16	07				COMI,R2	7	
1247	29A1	1A	08				BCTR,LT	GCNT	
1248	29A3	18	04				BCTR,EQ	GC7	
1249	29A5	24	F0				LODI,R0	F0	
1250	29A7	1B	02				BCTR,UN	GCNT	
1251	29A9	24	09			GC7	LODI,R2	90	
1252	29AB	3F	30	A7		GCNT	BSTA,UN	PSHOP1	
1253	29AE	FA	6E				BDRR,R2	GCV6	
1254	29B0	3F	29	0D			BSTA,UN	PSHEND	
1255	29B3	20					IORZ,R2		
1256	29B4	3F	30	A7			BSTA,UN	PSHOP1	
1257	29B7	2C	18	06			LODA,R0	OP2	
1258	29BA	0D	18	97			LODA,R1	OP2+1	
1259	29BE	05	05				ADDI,R1	5	
1260	29C1	77	08				FPSL	WC	
1261	29C1	84	00				ADDI,R2	0	
1262	29C3	75	08				CPSL	WC	
1263	29C4	05	00				LODI,R2	0	
1264	29C7	E7	00				COMI,R3	0	
1265	29C9	14					RETC,EQ		
1266	29CA	07	FF				LODI,R3	FF	
1267	29CC	17					RETC,UN		
1268	29CD								
1269	29CD								
1270	29CD	0C	10	7A		PSHEND	LODA,R0	OP1	
1271	29D0	0C	00	0A			STRA,R0	TABEND	
1272	29D3	3F	30	AC			BSTA,UN	PSHOP2	
1273	29D6	0C	10	7B			LODA,R0	OP1+1	
1274	29D9	0C	00	0B			STRA,R0	TABEND+1	
1275	29DC	3F	30	AC			BSTA,UN	PSHOP2	
1276	29DF	17					RETC,UN		
1277	29E0								
1278	29E0								
1279	29E0	0C	00	0A		GETNA	LODA,R0	TABEND	
1280	29E3	0D	00	0B			LODA,R1	TABEND-1	
1281	29E6	3F	30	75			BCTA,UN	STROP1	
1282	29E9	3F	30	91			BSTA,UN	STROP2	
1283	29FC	05	04				LODI,R1	4	
1284	29FE	20					IORZ,R2		
1285	29FF	0C	45	68		GCV1	STRA,R1	NAME,-	
1286	29FF	0C	45	68			BDRR,R1	GCV1	
1287	29FF	0C	45	68			LODI,R1	FF	
1288	29FF	0C	45	68		GCV3	BSTA,UN	GETCHR	
1289	29FF	0C	45	68			BSTA,UN	CHKAN	
1290	29FF	0C	45	68			RETC,LT		
1291	29FF	0C	45	68			RETC,GT		
1292	29FF	0C	45	68			ADDI,R1	1	
1293	2A00	FF	03				COMI,R1	3	
1294	2A07	1C	45	68			BCTA,GT	ARCEP	
1295	2A05	0D	69	68			STRA,R1	NAME.1	
1296	2A25	1F	6C				BCTR,UN	GCV3	
1297	2A2A								
1298	2A2A								
1299	2A2A	3F	32	2B		GCV3	BSTA,UN	GETCHR	
1300	2A2C	07	07				LODI,R3	2	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1101	2A0F	E4	2B				COMI,R0	'(
1102	2A11	1B	2C				BCTR,EC	GCDSTR	
1103	2A13	3F	32	13			BSTA,UN	DEOPT	
1104	2A16	46	23				LODI,R2	3	
1105	2A18	47	21				LODI,R3	1	
1106	2A1A	1F	29	5B			BCTA,UN	GCV8	
1107	2A1C						*		
1108	2A1E						*		
1109	2A1F	2F				GCSUB	FORZ,R0		
1110	2A1F	3F	32	A7			BSTA,UN	PSHOP1	
1111	2A21	3F	32	A7			BSTA,UN	PSHOP1	
1112	2A24	23					LODZ,R3		
1113	2A26	3F	32	A7			BSTA,UN	PSHOP1	
1114	2A28	2F	3F				LODI,R1	FF	
1115	2A2A	2D	29	6F		GCV5	LODA,R1	NAME,+	
1116	2A2D	3F	32	A7			BSTA,UN	PSHOP1	
1117	2A30	1F	23				COMI,R1	3	
1118	2A32	2B	2E				BCTR,EC	GCV5	
1119	2A34	17					RETC,UN		
1120	2A36						*		
1121	2A38						*		
1122	2A3E	72	27	22	22	GCLEN	PES	6	
1123	2A39	72	27	22	22				
1124	2A3E	22				GCTYPE	PES	1	
1125	2A3C	27				GCDIMS	PES	1	
1126	2A3D					*			
1127	2A3C					*			
1128	2A3C					GCLIM	LODI,R3	3	
1129	2A3F	0F	2A	3B		GCDSTR	STRA,R3	GCTYPE	
1130	2A42	3F	2A	1D			BSTA,UN	GCSUB	
1131	2A45	26					FORZ,R0		
1132	2A46	05	2A	3F			STRA,R0	GCLEN	
1133	2A46	0C	2A	37			STRA,R2	GCLEN+2	
1134	2A48	04	21				LODI,R0	1	
1135	2A4E	07	2A	3E			STRA,R0	GCLEN-1	
1136	2A51	02	12	7A			LODA,R0	OP1	
1137	2A54	0C	2A	3B			STRA,R0	GCLEN+3	
1138	2A57	2C	12	7B			LODA,R0	OP1+1	
1139	2A5A	0C	2A	39			STRA,R0	GCLEN+4	
1140	2A5D	3F	32	9C			BSTA,UN	INCOPI	SKIP 1 BYTE # OF DIMS
1141	2A62	3F	33	9F		GCD4	BSTA,UN	EVAL	
1142	2A63	11	2A	AC			BCTA,GT	GCD2	
1143	2A66	3F	2B	97			BSTA,UN	ENSI1B	
1144	2A69	01					LODZ,R1		
1145	2A6A	1C	45	E4			BCTA,EQ	DIMER	
1146	2A6D	1F	0A				COMI,R1	A	
1147	2A6F	10	07				BCTR,GT	GCD3	
1148	2A71	2F	2A	3C			LODA,R3	GCDIMS	
1149	2A74	1A	22				BCTR,LT	GCD3	
1150	2A76	24	0A				LODI,R0	A	DEFAULT TO 18
1151	2A78	03				GCD3	STRA,R3		
1152	2A79	3F	30	A7			BSTA,UN	PSHOP1	
1153	2A7C	2C	0A	37			LODA,R0	GCLEN-2	
1154	2A7F	04	21				ADDI,R0	1	
1155	2A81	0C	2A	37			STRA,R0	GCLEN-2	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1156	2A8A	0C	2A	35			LODA,R0	GCLEN	
1157	2A87	2C	0A	36			LODA,R1	GCLEN-1	
1158	2A8A	5D	2A	36		GCD3B	ADDA,R1	GCLEN-1	
1159	2A8D	77	26				PPSL	WC	
1160	2A8F	8C	0A	35			ADDA,R0	GCLEN	
1161	2A92	75	0B				CPSL	WC	
1162	2A94	E5	21				TPSL	CFY	
1163	2A96	1C	45	84			BCTA,EQ	DIMER	
1164	2A99	FE	6F				BRRR,R3	GCD3B	
1165	2A9E	0C	2A	35			STRA,R0	GCLEN	
1166	2A9E	07	2A	36			STRA,R1	GCLEN-1	
1167	2AA1	3F	4C	4E			BSTA,UN	SKIPSP	
1168	2AA4	14	2C				COMI,R0	'(
1169	2AA6	1C	2A	60			BCTA,EQ	GCD4	
1170	2AA8	3F	32	13			BSTA,UN	DEOPT	
1171	2AA8	0C	2A	37		GCD2	LODA,R0	GCLEN+2	
1172	2AAF	1C	45	84			BCTA,EC	DIMER	
1173	2AB2	0C	2A	3B			STRA,R0	*GCLEN+3	STORE # OF DIMS
1174	2AB5	3F	32	2B			BSTA,UN	GETCHR	
1175	2AB8	E4	29				COMI,R0	'(
1176	2ABA	9C	31	B1			BCFA,EQ	STNER	
1177	2ABD	2C	0A	3B			LODA,R0	GCTTFF	
1178	2AC0	14	22				COMI,R0	2	
1179	2AC2	18	24				BCTR,EQ	GCD5	
1180	2AC4	07	2B				LODI,R3	8	
1181	2AC6	1B	22				BCTR,UN	GCD6	
1182	2AC8	07	23			GCD5	LODI,R3	3	
1183	2ACA	0F	2A	3B		GCD6	STPA,R3	GCTYPE	
1184	2ACD	2F	2A	3B		GCD7	LODA,R3	GCTYPE	
1185	2AD0	20				GCD8	FORZ,R0		
1186	2AD1	E7	27				COMI,R3	7	
1187	2AD3	1A	2B				BCTR,LT	GCDNT	
1188	2AD5	1E	24				BCTR,EQ	GCEQ7	
1189	2AD7	04	22				LODI,R0	FB	
1190	2AD9	1B	22				BCTR,UN	GCDNT	
1191	2ADB	E4	99			GCI07	LODI,R0	99	
1192	2ADD	3F	30	A7		GCDNT	BSTA,UN	PSHOP1	
1193	2AE7	FE	6F				BRRR,R3	GCD8	
1194	2AE2	2C	0A	35			LODA,R0	GCLEN	
1195	2AF5	FD	2A	36			LODA,R1	GCLEN+1	
1196	2AF8	A5	21				SUBI,R1	1	
1197	2AFA	77	26				PPSL	WC	
1198	2AEC	A4	26				SUBI,R0	0	
1199	2AE3	75	0B				CPSL	WC	
1200	2AE5	0C	2A	35			STRA,R0	GCLEN	
1201	2AE8	0C	2A	36			STPA,R1	GCLEN+1	
1202	2AF5	22					LODZ,R0		
1203	2AF7	98	54				BCFR,EQ	GCD7	
1204	2AF9	21					LODZ,R1		
1205	2AFA	9B	51				BCFR,EQ	GCD7	
1206	2AF0	2C	10	7A			LODA,R0	OP1	
1207	2AFF	0C	20	2A			STRA,R0	TABEND	
1208	2B22	3F	32	AC			BSTA,UN	PSHOP2	
1209	2B25	0C	10	7B			LODA,R0	OP1-1	
1210	2B28	0C	20	2B			STRA,R0	TABEND-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1211	2B0F	3F	30	AC			BSTA,UN	PSROP2	
1212	2B0E	20					EORZ,R0		
1213	2B0F	3F	30	A7			BSTA,UN	PSHCP1	
1214	2B10	20	20	60			LODA,R0	GCSAV	
1215	2B15	00	11	84			STRA,R0	INPT	
1216	2B16	20	20	6D			LCDA,R0	GCSAV+1	
1217	2B1F	00	11	85			STRA,R0	INPT+1	
1218	2B1E	1F	35	77			BCTA,UN	LOKVAR	
1219	2B21						*		
1220	2B21						*		
1221	2B01	00	17	4F	CTOS		LODA,R0	CTEMP	
1222	2B04	0R	2A				STPR,R0	STMP-4	
1223	2B26	00	13	4F			LODA,R0	CTEMP+1	
1224	2B20	00	26				STPR,R0	STMP-5	
1225	2B2F	17					RETC,UN		
1226	2B2C						*		
1227	2B2C						*		
1228	2B70	20	20	20	20	STMP	RES	6	
1229	2B30	P0	20				*		
1230	2B32						*		
1231	2B30						*		
1232	2B37	3B	6D			STRING	BSTR,UN	CTOS	
1233	2B34	1F	30	B1		STRG	BSTA,UN	INCSP	
1234	2B37	3F	30	B1			BSTA,UN	INCSP	
1235	2B3A	23					LODZ,R3		
1236	2B3E	02					STRZ,R2		
1237	2B3C	01					STRZ,R1		
1238	2B71	00	07	04			LODA,R0	12ST	
1239	2B42	0B	6C				STPR,R2	STMP-2	
1240	2B42	20					EORZ,R0		
1241	2B43	0B	6A				STPR,R0	STMP+3	
1242	2B4F	03					STRZ,R3		
1243	2B46	12					COMZ,R2		
1244	2B47	10	2B	87			BCTA,EQ	STRB	
1245	2B4A	0B	62			STR1	LODR,R0	STMP+2	
1246	2B4C	0B	5E				STPR,R0	STMP	
1247	2B4E	0B	5D				STPR,R3	STMP+1	
1248	2B50	0F	EB	2E		STR2	LODA,R3	*STMP+2.1	
1249	2B53	07	21				ADDI,R3	1	
1250	2B55	98	10				BCTP,EQ	STR6	
1251	2B57	0F	15				LODR,R0	STMP-2	
1252	2B59	04	21				ADDI,R0	1	
1253	2B5E	0B	51				STPR,R0	STMP-2	
1254	2B61	10	00	25			COMA,R0	VARST	
1255	2B60	1A	0F				BCTR,LT	STR6	
1256	2B62	07	0E				LODI,R3	STRERR	
1257	2B64	1F	33	2E			BCTA,UN	ERROR	
1258	2B67	20				STR6	LODZ,R0		
1259	2B68	96	20				BCTP,EQ	STR3	
1260	2B6A	FA	64				BDRR,R2	STR2	
1261	2B6C	07	00			STR4	LODI,R3	0	
1262	2B6F	00	0B	2C			LODA,R0	STMP	
1263	2B71	00	0B	32			STRA,R0	*STMP+4	
1264	2B74	00	0B	2D			LODA,R0	STMP+1	
1265	2B77	0F	AF	30			STRA,R3	*STMP+4,+	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1266	2B7A	01					LODZ,R1		*STMP+4,+
1267	2B7B	0F	AF	30			STRA,R3		
1268	2B7E	21					LODZ,R1		
1269	2B7F	14					RETC,EQ		
1270	2B80	3F	30	B1		STRC5	BSTA,UN	INCSP	
1271	2B83	03					LODZ,R1	*STMP,-	
1272	2B84	01	0B	2C			STRA,R1	STRC5	
1273	2B87	59	77				BRRR,R1		
1274	2B89	17					RETC,UN		
1275	2B8A	01				STR3	LODZ,R1		
1276	2B62	02					STRZ,R2		
1277	2B8C	1F	2B	4A			BCTA,UN	STR1	
1278	2B91	06	03			STRB	LODI,R2	3	
1279	2B91	0E	0B	30		STRBA	STRA,R2	*STMP+4,-	
1280	2B94	5A	7B				BRRR,R2	STRBA	
1281	2B96	17					RETC,UN		
1282	2B97						*		
1283	2B97						*		
1284	2B97	3B	05			ENS1B	BSTR,UN	ENS	
1285	2B99	00					LODZ,R0		
1286	2B9A	0C	4E	74			BCTA,EQ	OVPER	
1287	2B9D	17					RETC,UN		
1288	2B9E						*		
1289	2B9E						*		
1290	2B9E	9C	4E	34		ENS	BCTA,EQ	MOSTR	
1291	2BA1	3F	45	D9		ENS2	BSTA,UN	POPC1	
1292	2BA4	20				DTOB	EORZ,R0		
1293	2BA5	01					STRZ,R1		
1294	2BA6	0F	13	50			LODA,R3	CBUF1	
1295	2BA9	16					RETC,LT		
1296	2BA8	0F	13	52			LODA,R3	CBUF1-2	
1297	2BA0	15					RETC,LT		
1298	2BAE	0F	13	53			LODA,R3	CBUF1-3	
1299	2BB1	14					RETC,EQ		
1300	2B82	00	13	51			LODA,R0	CBUF1-1	
1301	2B85	00	00	0F			STRA,R0	CMAI	
1302	2B88	20					EORZ,R0		
1303	2B85	00	00	10			TRA,R0	CPTP	
1304	2B8C	01					STRZ,R1		
1305	2B8D	03				DTOB1	STRZ,R3		
1306	2BB1	3F	2C	11			BSTA,UN	CIGIT	
1307	2B01	15					RETC,GT		
1308	2B02	14					RETC,EQ		
1309	2B03	02					STRZ,R2		
1310	2B04	03					LODZ,R3		
1311	2B05	3F	44	F3			BSTA,UN	I10	
1312	2B06	03					STRZ,R3		
1313	2B09	01					LODZ,R1		
1314	2B0A	02					ADDZ,R2		
1315	2B0E	01					STRZ,R1		
1316	2B0C	77	0B				PPSL	WC	
1317	2B0E	20					EOPZ,R0		
1318	2B0F	03					ADDZ,R3		
1319	2B10	7F	0B				CPSL	WC	
1320	2B02	05	01				TPSL	CRY	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1321	2E14	10	4F	74			BCTA,EO	CVFER	
1322	2E17	1B	64				BCTR,UN	DTOB1	
1323	2E19					*			
1324	2E19					*			
1325	2E19	2F	08			CILEN	LODI,R2	B	
1326	2E19	27	22				LODI,R3	B	
1327	2E1D	0F	31				STRR,R3	CPTR	
1328	2E1F	01	57	50		C11FM1	LODA,R2	CBUF1,-	
1329	2E1E	1F	28				BCTR,EO	CILEN2	
1330	2E14	44	7F				ANDI,R0	F	
1331	2E1E	9F	2A				BCTR,EO	CILEN3	
1332	2E1E	27	01				ADDI,R3	1	
1333	2E1A	1F	06				BCTR,UN	CILEN3	
1334	2E1C	1F	02			CILEN2	ADDI,R3	2	
1335	2E13	27	2A				COMI,R3	A	
1336	2E19	06	51				BCTR,EO	CILEN1	
1337	2E12	04	7A			CILEN3	LODI,R0	A	
1338	2E14	03					SUBZ,R3		
1339	2E1F	0B	12				STRR,R0	CMAK	
1340	2E17	2F	13	50			LODA,R2	CBUF1	
1341	2E1A	1F					PETC,LT		
1342	2E1E	14	2A				COMI,R0	A	
1343	2E1E	14					PETC,EO		
1344	2E1F	1C	13	51			COMA,R0	CBUF1+1	
1345	2E21	1E					PETC,GT		
1346	2E22	14					PETC,EO		
1347	2E27	2C	13	51			LODA,0	CBUF1+1	
1348	2E26	14	2E				COMI,R0	B	
1349	2E28	1A	02				BCTR,LT	CILEN4	
1350	2E2A	24	2A				LODI,R0	A	
1351	2E20	0E	01			CILEN4	STRR,R0	CMAK	
1352	2E2E	17					PETC,UN		
1353	2E2F					*			
1354	2E2F					*			
1355	2E2F	02				CMAK	RES	1	
1356	2E19	02				CPTR	RES	1	
1357	2E11					*			
1358	2E11					*			
1359	2E11	2A	7D			CIGET	LODR,R2	CPTR	
1360	2E13	1A	7A				COMR,R2	CMAK	
1361	2E16	1F					PETC,GT		
1362	2E16	14					PETC,EO		
1363	2E17	02					LODZ,R2		
1364	2E18	5F					RRR,R0		
1365	2E19	44	7F				ANDI,R0	7F	
1366	2E1F	84	03				ADDI,R0	3	
1367	2E11	2C	73	50			LODA,R0	CBUF1,I	
1368	2E20	F0	21				TMI,R2	1	
1369	2E22	10	24				BCTR,EO	CIGET2	
1370	2E24	5F					RRR,R0		
1371	2E25	5F					RRR,R0		
1372	2E26	50					RRR,R0		
1373	2E27	5F					RRR,R0		
1374	2E28	44	0F			CIGET2	ANDI,R0	F	
1375	2E2A	06	01				ADDI,R2	1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1376	2C2C	CA	62				STRR,R2	CPTP	
1377	2C2E	06	FF				LODI,R2	FF	
1378	2C32	17					RETC,UN		
1379	2C31					*			
1380	2C31					*			
1381	2C31	3F	31	06		GETDAT	ESTA,UN	CSINPT	
1382	2C34	2C	01	2C			LODA,R0	DATPNT	
1383	2C37	0C	11	04			STRA,R0	INPT	
1384	2C3A	0C	01	2D			LODA,R0	DATPNT-1	
1385	2C3E	0C	11	05			STRA,R0	INPT+1	
1386	2C42	2C	01	2E			LODA,R0	PDATA	
1387	2C43	10	28				BCTR,EO	GETD2	
1388	2C45	3F	46	40			ESTA,UN	SKPSP	
1389	2C48	14	2C				COMI,R0	011	
1390	2C4A	10	05				BCTR,EO	GETD3	
1391	2C4C	3F	32	13			ESTA,UN	DECPY	
1392	2C4F	12	3F				BCTR,UN	GETD4	
1393	2C51	3F	33	9F		GETD3	ESTA,UN	EVAL	
1394	2C54	13					SPSL		
1395	2C55	03					STRZ,R3		
1396	2C56	04	FF				LODI,R0	FF	
1397	2C58	0C	01	2E			STRA,R0	PDATA	
1398	2C5B	0C	11	04			LODA,R0	INPT	
1399	2C5E	0C	01	2C			STRA,R0	DATPNT	
1400	2C61	0C	11	05			LODA,R0	INPT-1	
1401	2C64	0C	01	2D			STRA,R0	DATPNT-1	
1402	2C67	3F	31	91			ESTA,UN	CRINPT	
1403	2C6A	03					LODZ,R3		
1404	2C6B	03					LPSL		
1405	2C6C	17					RETC,UN		
1406	2C6E	3F	31	D9		GETD2	ESTA,UN	GETLIN	
1407	2C70	04	4B				LODI,R0	DATTEL	
1408	2C72	05	44				LODI,R1	DATTEL	
1409	2C74	3F	45	F7			ESTA,UN	LOOKUP	
1410	2C77	08	02				BCTR,EO	GETD4	
1411	2C79	E1					COMZ,R1		
1412	2C7A	10	55				BCTR,EO	GETD3	
1413	2C7C	E5	03				COMI,R1	3	
1414	2C7E	06	06				BCTR,EO	GETD4	
1415	2C80	3F	31	91		GETD5	ESTA,UN	CRINPT	
1416	2C83	04	21				LODI,R0	1	
1417	2C85	17					RETC,UN		
1418	2C86	3F	33	2C		GETD4	ESTA,UN	SKPCR	
1419	2C89	0C	91	64			LODA,R0	*INPT	
1420	2C8C	9A	1F				BCTR,LT	GETD2	
1421	2C8E	1F	70				BCTR,UN	GETD5	
1422	2C90					*			
1423	2C90					*			
1424	2C90	01	02	A2		POGET	LODA,R1	PUSP	
1425	2C91	01	2F	A1			LODA,R1	CMSTRS,-	
1426	2C96	0B	02	A2			STPA,R1	PUSP	
1427	2C99	17					RETC,UN		
1428	2C9A					*			
1429	2C9A					*			
1430	2C9A					*			
1431	2C9A					*			
1432	2C9A					ZEROMS	ECRZ,R0		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1431	205E	02					STRZ,R2		
1432	2060	0E	46	A1		ZERCM2	STRA,R2	CMSTPS,-	
1433	206F	5A	7B				BRNR,R2	ZERCM2	
1434	20A1	17					RTCC,UN		
1435	20A2					*			
1436	20A2					*			
1437	20A2	1F	02	02	02	FSTG	RES	5	
1438	20A6	02							
1439	20A7					*			
1440	20A7					*			
1441	20A7	06	79			PRNTFU	STRR,R2	FSTG	
1442	20A9	09	7E				STRR,R1	FSTG+1	
1443	20AB	0A	77				STRR,R2	FSTG+2	
1444	20AD	03	76				STRR,R3	FSTG+3	
1445	20AF	F4	2A				COMI,R0	A	
1446	20B1	1D	31	F1			BCTA,GT	SYNER	
1447	20B4	1E	3A				COMI,R1	A	
1448	20B6	11	31	F1			BCTA,GT	SYNER	
1449	20B9	3F	45	D9			BSTA,UN	POPC1	
1450	20BC	2C	13	53			LODA,R0	CBUF1-3	
1451	20BE	5F	12				BCFR,EC	PFU1	
1452	20C1	7E	2C	A7		PFU98	LODA,R2	FSTG	
1453	20C4	14	27				BCTR,EG	PFU2	
1454	20C6	04	20			PFU02	LODI,R0		
1455	20C6	3F	24	C5			BSTA,UN	SENDIT	
1456	20C8	7A	79				BFRP,RC	PFU00	
1457	20CD	31	2D	E3		PFU07	BSTA,UN	SEND00	
1458	20D0	1F	2D	7E			BCTA,UN	PFU9	
1459	20D3	3F	45	E0		PFU1	BSTA,UN	PUSEC1	
1460	20D6	70					ICRZ,R2		
1461	20D7	05	04				LODI,R2	4	
1462	20D9	05	03	54		PFU2	STRR,R2	CBUF1-4,-	
1463	20DC	5A	78				BRNR,R2	PFU2	
1464	20DE	04	F0				LODI,R0	F2	
1465	20E0	07	13	58			STRA,R0	CBUF1	
1466	20E3	0C	0C	A3			LODA,R0	FSTG-1	
1467	20E6	0C	13	51			STRA,R0	CBUF1-1	
1468	20E9	04	50				LODI,R0	50	
1469	20EB	0C	13	53			STRA,R0	CBUF1-3	
1470	20EE	3F	45	E0			BSTA,UN	PUSHC1	
1471	20F1	3F	3A	72			BSTA,UN	FEADD	ROUND OFF NUMBER
1472	20F4	3F	45	D9			BSTA,UN	POPC1	
1473	20F7	0C	2C	A3			LODA,R2	FSTG-1	
1474	20FA	5E	0F				BCFR,EC	PFU99	
1475	20FC	3F	45	E0			BSTA,UN	PUSHC1	
1476	20FF	3F	3D	5F			BSTA,UN	PFPIX	
1477	2D02	3F	45	D9			BSTA,UN	POPC1	
1478	2D05	0C	13	53			LODA,R0	CBUF1-3	
1479	2D08	1C	2C	C1			BCTA,EG	PFU98	
1480	2D0B	2C	13	52		PFU99	LODA,R0	CBUF1-2	
1481	2D0E	18	05				BCTR,EO	PFU3A	
1482	2D10	3F	23	FD			BSTA,UN	PRTM1	
1483	2D13	15	28				BCTR,UN	PFU3B	
1484	2D15	0C	0C	A2		PFU3A	LODA,R0	FSTG	
1485	2D18	F4	01				ADDI,R0	1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1486	2D1A	0C	0C	A2			STRA,R0	FSTG	
1487	2D1D	05	00			PFU3B	LODI,R1	0	
1488	2D1F	0C	13	50			LODA,R0	CBUF1	
1489	2D22	1A	03				BCTR,LT	PFU4	
1490	2D24	0D	13	51			LODA,R1	CBUF1-1	
1491	2D27	0E	0C	A6		PFU4	STRA,R1	FSTG-4	
1492	2D2A	0C	0C	A4			LODA,R0	FSTG-2	
1493	2D2D	19	0C				BCTR,GT	PFU5	
1494	2D2F	01					LODZ,R1		
1495	2D30	03					STRZ,R3		
1496	2D31	F7	03			PFU4A	COMI,R3	3	
1497	2D33	99	06				BCFR,GT	PFU5	
1498	2D35	0F	01				ADDI,R1	1	
1499	2D37	A7	03				SUBI,R3	3	
1500	2D39	18	76				BCTR,UN	PFU4A	
1501	2D3B	0C	0C	A2		PFU5	LODA,R0	FSTG	
1502	2D3E	A1					SUBZ,R1		
1503	2D3F	1E	2D	B2			BCTA,LT	FOVF	
1504	2D42	C1					STRZ,R1		
1505	2D43	18	07				BCTR,EG	PFU7	
1506	2D45	04	20			PFU6	LODI,R0		
1507	2D47	3F	24	C5			BSTA,UN	SENDIT	
1508	2D4A	F9	79				BFRP,R1	PFU6	
1509	2D4C	3F	2B	T9		PFU7	BSTA,UN	CILEW	
1510	2D4F	2D	0C	A6		PFU7B	LODA,R1	FSTG-4	
1511	2D52	18	24				BCTR,EG	PFU8	
1512	2D54	A5	01				SUBI,R1	1	
1513	2D56	0D	0C	A6			STRA,R1	FSTG-4	
1514	2D59	3F	2C	11			BSTA,UN	CIGET	
1515	2D5C	3F	24	C3			BSTA,UN	SEND0	
1516	2D5F	0C	0C	A4			LODA,R0	FSTG-2	
1517	2D62	19	6B				BCTR,GT	PFU7B	
1518	2D64	0D	0C	A6			LODA,R1	FSTG-4	
1519	2D67	F5	03			PFU7C	COMI,R1	3	
1520	2D69	18	06				BCTR,EG	PFU7A	
1521	2D6B	1A	62				BCTR,LT	PFU7B	
1522	2D6D	A5	03				SUBI,R1	3	
1523	2D6F	18	76				BCTR,UN	PFU7C	
1524	2D71	04	2C			PFU7A	LODI,R0		
1525	2D73	3F	24	C5			BSTA,UN	SENDIT	
1526	2D75	18	57				BCTR,UN	PFU7B	
1527	2D78	0C	0C	A5		PFU8	LODA,R0	FSTG-3	
1528	2D7B	15					RETC,GT		
1529	2D7C	04	21				LODI,R0		
1530	2D7E	3F	24	C5			BSTA,UN	SENDIT	
1531	2D81	0C	0C	A3			LODA,R0	FSTG-1	
1532	2D84	14					RETC,EG		
1533	2D85	0C	13	50			LODA,R1	CBUF1	
1534	2D88	9A	14				BCFR,LT	PFU9A	
1535	2D8A	0D	13	51			LODA,R1	CBUF1-1	
1536	2D8E	F1					COMI,R1		
1537	2D91	19	01				BCTR,GT	PFU9B	
1538	2D94	C1					STRZ,R1		
1539	2D91	A1				PFU9B	SUBZ,R1		
1540	2D92	0C	0C	A3			STRA,R0	FSTG+1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1541	2D05	3F	21	03		PFU9C	BSTA,UN	SEND00	
1542	2D06	7F	7F				BOPR,R1	PFU9C	
1543	2D0A	20	20	A3		PFUG	LODA,R0	FSTG-1	
1544	2D0C	14					RETC,EO		
1545	2D0F	A4	01			PFUGA	SUBI,R0	1	
1546	2D10	07	20	A7			STRA,R0	FSTG-1	
1547	2D13	3F	20	11			BSTA,UN	CIGET	
1548	2D15	1A	25				BCTR,LT	PFU10	
1549	2D18	3F	20	13			BSTA,UN	SEND00	
1550	2D1A	1E	6D				BCTR,UN	PFUG	
1551	2D1D	3F	24	03		PFU14	BSTA,UN	SEND0	
1552	2D1F	1E	6E				BCTR,UN	PFUG	
1553	2D22	0D	20	A2		FOVF	LODA,R1	FST	
1554	2D24	1A	27				BCTR,FC	FOVF2	
1555	2D27	24	2A			FOVF1	LODI,R0	*	
1556	2D29	3F	24	05			BSTA,UN	SENDIT	
1557	2D2C	7F	7F				BOPR,R1	FOVF1	
1558	2D2E	2D	20	A5		FOVF2	LODA,R1	FSTG-3	
1559	2D31	1E					RETC,GT		
1560	2D32	04	2E				LODI,R0		
1561	2D34	2F	04	0F			BSTA,UN	SENDIT	
1562	2D37	2D	20	A3			LODA,R1	FSTG-1	
1563	2D3A	14					RETC,EO		
1564	2D3C	74	2A			FOVF3	LODI,R0	*	
1565	2D3E	3F	24	05			BSTA,UN	SENDIT	
1566	2D40	7F	7F				BOPR,R1	FOVF3	
1567	2D42	17					RETC,UN		
1568	2D43					*			
1569	2D44					*			
1570	2D45	20				SEND00	BOPR,R0		
1571	2D48	1F	24	03			BCTA,UN	SENDE	
1572	2D49					*			
1573	2D4A					*			
1574	2D4B	3F	25			GETER	BSTR,UN	PAUSE	
1575	2D4C	3F	2F	23			BSTA,UN	WRT	
1576	2D4D	24	21				LODR,R0	KBBUF	
1577	2D4E	17					RETC,UN		
1578	2D4F					*			
1579	2D50					*			
1580	2D51	20				KBBUF	RES	1	
1581	2D52	07				NEWSED	RES	1	
1582	2D53	02				PAUSES	RES	1	
1583	2D54					*			
1584	2D55					*			
1585	2D56	0A	7D			PAUSE	STRR,R0	PAUSES	
1586	2D57	70				PAUSE1	RECD,R0		
1587	2D58	9A	24				BOPR,LT	PAUSE2	
1588	2D59	8E	01				ADDI,R2	1	
1589	2D5A	1B	79				BCTR,UN	PAUSE1	
1590	2D5B	0A	77			PAUSE2	BSTR,R0	NEWSED	
1591	2D5C	0A	72				LODR,R0	PAUSES	
1592	2D5D	20	8E				STRR,R0	KBBUF	
1593	2D5E	74				FL	RECD,R0		
1594	2D5F	0A	7D				BOPR,LT	PI	
1595	2D60	70	6E				LODR,R0	KBBUF	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1596	2E75	17					RETC,UN		
1597	2E77					*			
1598	2E78					*			
1599	2E79	3F	19			SETCUR	BSTR,UN	EROLD	
1600	2E7A	0F	2E	07			STRA,R0	CURSOR	
1601	2E7B	0D	2E	08			STRA,R1	CURSOR-1	
1602	2E7C	04	10				LODI,R0	10	
1603	2E7D	0C	8E	07			STRA,R0	*CURSOR	
1604	2E7E	17					RETC,UN		
1605	2E7F					*			
1606	2E80					*			
1607	2E81	2C	2E	07		ERAS1	LODA,R0	CURSOR	
1608	2E82	24	10				COMI,R0	10	
1609	2E83	28	06				BOPR,FC	EROLD	
1610	2E84	2C	0E	08			LODA,R0	CURSOR-1	
1611	2E85	14	10				COMI,R0	10	
1612	2E86	16					RETC,LT		
1613	2E87	04	20			EROLD	LODI,R0		
1614	2E88	0C	8E	07			STRA,R0	*CURSOR	
1615	2E89	17					RETC,UN		
1616	2E8A					*			
1617	2E8B					*			
1618	2E8C	2C	13	4E		POPCT	LODA,R0	CTEMP	
1619	2E8D	2D	13	4F			LODA,R1	CTEMP-1	
1620	2E8E	1F	31	55			BCTA,UN	POPPF	
1621	2E8F					*			
1622	2E90					*			
1623	2E91	04	20			WRBL	LODI,R0		
1624	2E92	77	10			WRT	PPSL	RS	
1625	2E93	01					STRZ,R1		
1626	2E94	25	7F				FORI,R1	FF	
1627	2E95	75	60				MI,R1	60	
1628	2E96	18	26				BCTR,EO	WRTPTN	
1629	2E97	74	60				MI,R0	60	
1630	2E98	16	02				BCTR,FC	WRTLC	
1631	2E99	44	3F				ANDI,R0	3F	
1632	2E9A	0C	8E	07		WRTLC	STRA,R0	*CURSOR	
1633	2E9B	25	10				LODI,R1	10	
1634	2E9C	0E	0E	08			ADDA,R1	CURSOR-1	
1635	2E9D	0C	8E	08			STRA,R1	CURSOR-1	
1636	2E9E	27	80				PPSL	WC	
1637	2E9F	25	80				LODI,R1	0	
1638	2EA0	0E	0E	07			ADDA,R1	CURSOR	
1639	2EA1	0C	8E	07			STRA,R1	CURSOR	
1640	2EA2	75	28				PPSL	WC	
1641	2EA3	75	25				MI,R1	5	
1642	2EA4	18	2D				BCTR,EO	LFGR2	
1643	2EA5	0E	10				LODI,R1	10	
1644	2EA6	0C	8E	07			STRA,R1	*CURSOR	
1645	2EA7	75	10			WRTLC	PPSL	RS	
1646	2EA8	17					RETC,UN		
1647	2EA9					*			
1648	2EAA					*			
1649	2EAB	77	10			LFGR	PPSL	RS	
1650	2EAC	3F	2F	12			BSTA,UN	EROLD	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1651	215A	21	2E	09		LPCR2	LODA,R1	CURSOR-1	
1652	215C	F5	2F				TMI,R1	F	
1653	215F	14	21				BCTR,EC	SCROLL	
1654	2161	8F	21				ADDI,R1	1	
1655	2163	45	2F				ANDI,R1	F	
1656	2166	01	2E	09			STPA,R1	CURSOR-1	
1657	2169	07	10			CIRLIM	LODI,R2	10	
1658	216A	03	2E	07			STPA,R3	CURSOR	
1659	216C	24	20				LODI,R0		
1660	216F	06	20				LODI,R2	0	
1661	2171	01	2E	07		ELL1	STRA,R2	*CURSOR,I	
1662	2174	80	17				ADDI,R2	10	
1663	2176	90	20				BCTR,EC	ELL1	
1664	2178	80	21				ADDI,R3	1	
1665	217A	0F	2E	07			STRA,R3	CURSOR	
1666	217C	17	15				COMI,R3	15	
1667	217F	50	20				BCTR,FQ	ELL1	
1668	2181	27	17				LODI,R3	12	
1669	2183	0F	2E	07			STPA,R3	CURSOR	
1670	2186	05	10				LODI,R1	10	
1671	2188	01	2E	07			STRA,R1	*CURSOR	
1672	218B	25	10				CPSL	RS	
1673	218D	17					RETC,UM		
1674	218F	24	14			SCROLL	LODI,R0	14	
1675	2192	0C	2E	07			STRA,R0	CURSOR	
1676	2193	2F					EORZ,R0		
1677	2194	00	2E	09			TFA,R0	CURSOR+1	
1678	2197	0E	20			SCROL2	LODI,R2	0	
1679	2199	07	FF				LODI,R3	FF	
1680	219B	01	2E	07		SCROL1	LODA,R2	*CURSOR,+	
1681	219E	26	FF				ICPI,R2	FF	
1682	21A2	26	2F				TMI,R2	F	
1683	21A4	18	1F				BCTR,EC	SCROL4	
1684	21A4	01	2E	07			STPA,R3	*CURSOR,+	
1685	21A7	26	FF			SCROL5	ICPI,R2	FF	
1686	21A9	16	FF				COMI,R2	FF	
1687	21AB	90	FE				BCTR,EC	SCROL1	
1688	21AC	0C	2E	07			LODA,R0	CURSOR	
1689	21B0	A4	21				SUBI,R0	1	
1690	21E2	E4	2F				COMI,R2	F	
1691	21E4	18	25				BCTR,EC	SCPOL3	
1692	21E6	0C	2E	07			STPA,R2	CUPSOP	
1693	21E9	1B	5C				PCTR,UN	SCROL2	
1694	21EB	24	2F			SCPOL3	LODI,R0	F	
1695	21ED	0C	2E	09			STPA,R0	CURSOR-1	
1696	21EC	1F	2F	68			ECTA,UM	CLFLIN	
1697	21C3	87	21			SCROL4	ADDI,R3	1	
1698	21C5	1E	20				PCTR,UN	SCPOL5	
1699	21C7					*			
1700	21C7					*			
1701	21C7	20	20			CURSOR	RES	2	
1702	21C5	20	20			TMFA	RES	2	
1703	21C7					*			
1704	21C3					*			
1705	21C3	08	7C			ARROW	STPR,R0	TMFA	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1706	21CD	C9	78				STPR,R1	TMFA+1	
1707	21CF	25	FF				LODI,R1	FF	
1708	21E1	3F	2D	E7		INLOOP	BSTA,UN	GETKB	
1709	21E4	E4	1F				COMI,R0	ESC	
1710	21E6	1C	2F	2B			BCTA,EC	ARROW?	
1711	21E9	E4	00				COMI,R0	BS	
1712	21EB	66	2F				BCTR,EC	WCS	
1713	21ED	E5	FF				COMI,R1	FF	
1714	21EF	18	20				BCTR,EC	INLOOP	
1715	21F1	3F	2F	2E			BSTA,UN	BACKSP	
1716	21E4	1A	69				BCTR,LT	INLOOP	
1717	21E6	A5	21				SUBI,R1	1	
1718	21E8	96	01				ADDI,R2	1	
1719	21EA	1B	6A				BCTR,UN	INLOOP	
1720	21EC	E4	1E			NOBS	COMI,R0	15	
1721	21EE	98	1E				BCTR,EC	STRIN	
1722	21F0	E5	FF				COMI,R1	FF	
1723	21F2	90	5C				BCTR,EC	INLOOP	
1724	21F4	ED	AE	C9		NOBS2	LODA,R1	*TMFA,+	
1725	21F7	18	0B				BCTR,EC	STRIN2	
1726	21F9	E4	01				COMI,R0	CR	
1727	21FB	18	27				BCTR,EC	STRIN2	
1728	21FD	3F	2F	23			BSTA,UN	WRT	
1729	21F0	FA	72				EDRR,R2	NOBS2	
1730	21F2	1B	0E				BCTR,UN	CPWAIT	
1731	21F4	A5	01			STRIN2	SUBI,R1	1	
1732	21F6	1B	45				BCTR,UN	INLOOP	
1733	21F8	01	2E	C9		STRIN	STPA,R1	*TMFA,+	
1734	21F8	E4	0D				COMI,R0	CR	
1735	21F0	18	12				BCTR,EC	CLRLAS	
1736	21F7	F1	2E	D1			EDRA,R2	INLOOP	
1737	21F2	70				CRWAIT	REDC,R0		
1738	21F3	E4	00				COMI,R0	BS	
1739	21F5	1C	2E	D1			BCTA,EC	INLOOP	
1740	21F8	E4	0D				COMI,R0	CR	
1741	21F1	60	76				BCTR,EC	CPWAIT	
1742	21F1	3F	2D	F1			BSTA,UN	FL	
1743	21F1	20					EORZ,R0		
1744	21F0	17					RETC,UN		
1745	21F2	20					BCTR,UN		
1746	21F2	01	2E	C9		CL	STRA,R1	*TMFA,I	
1747	21F2	8F	01				ADDI,R1	1	
1748	21F2	FA	79				EDRR,R2	CL	
1749	21F2	20					EORZ,R0		
1750	21F2	17					RETC,UN		
1751	21F2	04	FF			ARROW?	LODI,R0	FF	
1752	21F2	17					RETC,UN		
1753	21F2					*			
1754	21F2					*			
1755	21E1	3F	2F	25		BACKSP	BSTA,UN	ERAS1	
1756	21F1	16					RETC,LT		
1757	21F2	0F	2E	C9			LODA,R3	CURSOR-1	
1758	21F2	0C	2E	C7			LODA,R0	CURSOR	
1759	21F0	A7	10			BACKS1	SUBI,R3	10	
1760	21F3	77	06				PPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPEPAND	COMMENTS
1761	2F3C	A4	22				SUBI,R2	0	
1762	2F3E	2F	22				CPSL	WC	
1763	2F40	0F	21	C8			STRA,R3	CURSOR+1	
1764	2F42	0C	21	C7			STRA,R0	CURSOR	
1765	2F44	24	1C				LODI,R2	1C	
1766	2F46	0C	21	C7			STRA,R0	*CURSOR	
1767	2F48	17					RETC,UN		
1768	2F4C								
1769	2F4C	2F	13			EPROPR2	LODI,R2	13	
1770	2F4E	25	0F				LODI,R1	0F	
1771	2F50	1F	21	F2			BSTA,UN	SFTCUR	
1772	2F52	2F	2F	1C			BSTA,UN	PRING	
1773	2F54	24	22				LODI,R0		
1774	2F56	0C	21	C7			STRA,R0	*CURSOR	
1775	2F58	1F	21	F2			BSTA,UN	FAUSE	
1776	2F5A	1F	49	09			BSTA,UN	FEIN	
1777	2F61								
1778	2F61	3F	2F	P5		BACK1	BSTA,UN	ERAS1	
1779	2F64	16					ETC,LT		
1780	2F66	2C	2F	C6			LODA,R2	CURSOR-1	
1781	2F68	A4	1P				SUBI,R2	10	
1782	2F6A	0C	21	C8			STRA,R0	CURSOR-1	
1783	2F6C	27	25				PPSL	WC	
1784	2F6E	2C	21	C7			LODA,R0	CURSOR	
1785	2F70	A4	22				SUBI,R2	0	
1786	2F72	0C	21	C7			STRA,R0	CURSOR	
1787	2F74	25	22				CPSL	WC	
1788	2F76	24	1C				LODI,R2	1C	
1789	2F78	0C	21	C7			STRA,R0	*CURSOR	
1790	2F7A	A4	21				SUBI,R1	1	
1791	2F7C	15	2F				COMMI,R1	FF	
1792	2F7E	22	2F				BCTR,IC	NOSUB1	
1793	2F80	22	2F				LODI,R2	*TMP	
1794	2F82	A4	21				SUBI,R2	1	
1795	2F84	26	22				STR,R2	*TMP	
1796	2F86	22				WCSUB1	ICPZ,R2		
1797	2F88	17					RETC,UN		
1798	2F8C								
1799	2F8C	2F	C9				ACON	TMPA	
1800	2F91								
1801	2F91	27	22			OLFOR	LODI,R2		
1802	2F93	0F	2F	C7			STRA,R3	*CURSOR	
1803	2F95	0F	2F	C8		OLFOR2	LODA,R3	CURSOR-1	
1804	2F97	47	21				ANDI,R3	F	
1805	2F99	27	21				ANDI,R3	1	
1806	2FA1	47	21				ANDI,R3	F	
1807	2FA3	0F	21	C8			STRA,R3	CURSOR-1	
1808	2FA5	27	1C				LODI,R3	1P	
1809	2FA7	0F	21	C7			STRA,R3	CURSOR	
1810	2FA9	24	22				LODI,R2		
1811	2FAB	0C	21	C7	L2		STRA,R0	*CURSOR	
1812	2FAD	27	1C				LODI,R3	1P	
1813	2FAE	2F	21	C8			ADDA,R3	CURSOR-1	
1814	2FAC	0F	21	C8			STRA,R3	CURSOR-1	
1815	2FB1	27	22				PPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPEPAND	COMMENTS
1816	2FB3	27	22				LODI,R3	0	
1817	2FB5	0F	21	C7			ADDA,R3	CURSOR	
1818	2FB7	0F	21	C7			STRA,R3	CURSOR	
1819	2FB9	25	26				CPSL	WC	
1820	2FBB	F7	25				TMI,R3	5	
1821	2FBD	26	65				BCTR,EQ	L2	
1822	2FBF	0F	21	C8			LODA,R3	CURSOR-1	
1823	2FC1	0F	21	C8			STRA,R3	CURSOR-1	
1824	2FC3	27	1C				LODI,R3	10	
1825	2FC5	0F	21	C7			STRA,R3	CURSOR	
1826	2FC7	24	1C				LODI,R2	1C	
1827	2FC9	0C	21	C7			STRA,R0	*CURSOR	
1828	2FD1	17					RETC,UN		
1829	2FD2								
1830	2FD2								
1831	2FD2	24	22			WRTBL	LODI,R0		
1832	2FD4	1F	2E	23			BSTA,UN	WRT	
1833	2FD7								
1834	2FD7								
1835	2FD7	52	25				TMSS	ACON	MSG02
1836	2FD9								
1837	2FD9								
1838	2FD9	3F	2E	24		FSTRNG	BSTA,UN	LFCR	
1839	2FDB	0F	2F	17		PRING	LODA,R3	*TMSS,1	
1840	2FDF	16					RETC,LT		
1841	2FE0	3F	2E	23			BSTA,UN	WRT	
1842	2FE2	0F	2F	17			BIRR,R3	PRING	
1843	2FE5								
1844	2FE5								
1845	2FE5								
1846	2FE5								
1847	2FE5								
1848	2FE5	20	22			ZSTRS	RES	2	
1849	2FE7								
1850	2FE7								
1851	2FE7	3F	2E	21		ZSTR	BSTA,UN	CTOS	
1852	2FEA	25	2F			ZER	LODI,R2	FF	
1853	2FEC	2E	AB	32			LODA,R2	*STMP-4,+	
1854	2FEF	0E	24				STR,R0	ZSTRS	
1855	2FF1	2E	AB	32			LODA,R2	*STMP-4,+	
1856	2FF4	0E	24				STR,R0	ZSTRS-1	
1857	2FF6	0E	24	32			LODA,R2	*STMP-4,+	
1858	2FF9	14					RETC,IC		
1859	2FFA	02					STRZ,R2		
1860	2FFB	22					ICPZ,R2		
1861	2FFC	0E	CF	15		ZSTR2	STRA,R2	*ZSTRS,-	
1862	2FFF	5A	2B				BPNP,R2	ZSTR2	
1863	3001	17					ETC,UN		
1864	3002								
1865	3002								
1866	3002	2C	13	5A		COMNUM	LODA,R2	CBUF2+2	
1867	3005	1C	13	52			COMA,R2	CBUF1+2	
1868	3005	9C	18	65			BCTR,IC	COMN3	
1869	3005	25	2F				LODI,R1	FF	
1870	3005	2C	33	53		COMNE	LODA,R1	CBUF1+3,+	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1871	3212	FF	23	5B			COMA,R1	CBUF2-3,1	
1872	3213	94	32				BCTR,FC	COMN1	
1873	3215	15	24				COMI,R1	4	
1874	3217	94	74				BCTR,FC	COMN0	
1875	3219	20	13	5B			LODA,R2	CBUF2	
1876	3210	EC	13	5B			COMA,R0	CBUF1	
1877	321F	16	11				BCTR,FC	COMN2	
1878	3221	3F	32	6F		COMIN2	BCTA,UN	COMN3	
1879	3224	20	13	52		COMIN3	LODA,R0	CBUF1-2	
1879	3227	14					BCTR,FC		
1881	3229	27	02			INVR1	COMI,R2	LT	
1881	322A	15	23				BCTR,FC	INVR	
1883	322C	27	02				LODI,R3	LT	
1884	322E	17					BCTR,UN		
1885	322F	27	01			INVR	LODI,R3	GT	
188C	3231	17					BCTR,UN		
1887	3232	27	02			COMN2	LODI,R3	FC	
1888	3234	27	13	51			LODA,R0	CBUF1-1	
1889	3237	EC	13	5B			COMA,R0	CBUF2-1	
1890	323A	14					BCTR,FC		
1891	323B	15	29				BCTA,UN	COMN3	
1892	323D	20	13	50			BCTR,FC	COMN1	
1893	3240	15	62				BCTA,UN	INVR	
1894	3245	15	29	29			BCTR,UN	COMIN3	
1895	3245	15	5C				BCTR,UN	COMIN3	
1896	3247	35	17			COMN1	BCTR,UN	COMN3	
1897	3249	20	13	5B			LODA,R2	CBUF2	
1898	324C	EC	13	5B			COMA,R0	CBUF1	
1899	324F	94	52				BCTR,FC	COMIN2	
1899	3251	27					LODI,R0		
1901	3252	1A	0A				BCTR,LT	COMN4	
1902	3254	27	13	51			LODA,R2	CBUF1-1	
1903	3257	FC	13	5B			COMA,R2	CBUF2-1	
1904	325A	18	48			COMN5	BCTR,FC	COMIN2	
1905	325C	1F	43				BCTR,UN	COMIN2	
1906	325E	2C	13	50		COMN4	LODA,R2	CBUF2-1	
1907	3261	FC	13	51			COMA,R0	CBUF1-1	
1908	3264	18	74				BCTR,UN	COMN5	
1909	3266	1C	03			COMN3	BCTR,ST	COMN3A	
1910	3268	27	02				LODI,R3	LT	
1911	326A	17					BCTR,UN		
1912	326B	27	01			COMN3A	LODI,R3	GT	
1913	326D	17					BCTR,UN		
1914	326E					*			
1915	326F					*			
1916	326E	CC	13	4E		STRCT	STPA,R0	CTEMP	
1917	3271	CC	13	4F			STRA,R1	CTEMP+1	
1918	3274	17					BCTR,UN		
1919	3275					*			
1920	3275					*			
1921	3275	08	03			STROP1	STRR,R0	OP1	
1922	3277	08	02				STRR,R1	OP1-1	
1923	327C	17					BCTR,UN		
1924	327A					*			
1925	327A					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1926	327A	02	02			OP1	RES	2	
1927	327C					*			
1928	327C					*			
1929	327C	08	7D			INCOF1	LODR,R0	OP1-1	
1930	327E	04	21				ADDI,R0	1	
1931	3280	08	79				STRR,R0	OP1-1	
1932	3282	16					BCTR,LT		
1933	3283	15					BCTR,GT		
1934	3284	08	74				LODR,R0	OP1	
1935	3285	04	01				ADDI,R0	1	
1936	3288	08	76				STRR,R0	OP1	
1937	328A	FC	18	D7			COMA,R0	SP	
1938	328D	9E	30	C7			BCTA,LT	SOER	
1939	3291	17					BCTR,UN		
1940	3291					*			
1941	3291					*			
1942	3291	08	03			STROP2	STRR,R0	OP2	
1943	3293	09	02				STRR,R1	OP2-1	
1944	3295	17					BCTR,UN		
1945	3296					*			
1946	3296					*			
1947	3296	02	00			OP2	RES	2	
1948	329E					*			
1949	329E					*			
1950	329E	08	7D			INCOF2	LODR,R0	OP2+1	
1951	329A	04	01				ADDI,R0	1	
1952	329C	08	79				STRR,R0	OP2-1	
1953	329E	16					BCTR,LT		
1954	329F	15					BCTR,GT		
1955	32A0	08	74				LODR,R0	OP2	
1956	32A2	04	01				ADDI,R0	1	
1957	32A4	08	76				STRR,R0	OP2	
1958	32A6	17					BCTR,UN		
1959	32A7					*			
1960	32A7					*			
1961	32A7	08	D1			PSHOP1	STRR,R0	*OP1	
1962	32A5	1F	30	7C			BCTA,UN	INCOF1	
1963	32AC					*			
1964	32AC					*			
1965	32AC	08	E8			PSROP2	STRR,R0	*OP2	
1966	32AF	1F	30	5F			BCTA,UN	INCOF2	
1967	32B1					*			
1968	32B1					*			
1969	32B1	0E	A4			INCSP	LODR,R3	*SP	
1970	32B3	04	01				LODI,R0	1	
1971	32B5	08	71			INCSP2	ADDR,R0	SP-1	
1972	32B7	09	1F				STRR,R0	SP-1	
1973	32B5	07	08				PSL	WC	
1974	32B3	04	1A				LODR,R0	SP	
1975	32B5	04	20				ADDI,R2	0	
1976	32B7	08	16				STRR,R0	SP	
1977	32C1	2F	09				PSL	WC	
1978	32C3	EC	02	0E			COMA,R0	ENDRAM	
1979	32C6	16					BCTR,LT		
1980	32C7	0C	00	0E		SOER	LODA,R2	ENDRAM	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1061	300A	A4	21				SUBI,R0	1	
1062	300C	08	09				STRR,R0	SP	
1063	300E	04	FF				LODI,R0	FF	
1064	3010	04	2E				STRR,R0	SP-1	
1065	30D2	07	2D				LODI,R3	SOPRR	
1066	30D4	1F	33	2E			BCTA,UN	ERROR	
1067	3017					*			
1068	3027					*			
1069	3027	02	00			SP	RES	2	
1090	3028					*			
1091	3028					*			
1092	3028	28	7D			DECSF	LODR,R0	SP-1	
1093	302B	A4	01				SUBI,R0	1	
1094	302D	04	79			DFCSP2	STRR,R0	SP-1	
1095	302F	77	2E				PPSL	WC	
1096	3031	08	74				LODR,R0	SP	
1097	3033	A4	22				SUBI,R0	0	
1098	3035	08	70				STRR,R0	SP	
1099	3037	75	26				CPCL	WC	
2000	3039	0C	02	0A			CJMA,R0	TABEND	
2001	303C	9C	32	07			ECFA,GT	SOPR	
2002	303F	0E	EC				STRR,R3	*SP	
2003	3041	17					FETC,UN		
2004	3042					*			
2005	3042					*			
2006	3042	0C	11	36		FUSHST	STRA,R0	UTEMP	
2007	3045	0D	11	37			STRA,R1	UTEMP-1	
2008	3048	02					LODZ,R2		
2009	3049	03					STRZ,R3		
2010	307A	10	2F				BCTP,FC	PUSH3	
2011	30FC	09	5A				LODR,R2	SP-1	
2012	30FF	A2					SUBZ,R2		
2013	30FF	7E	5C				BSTR,UN	DFCSP2	
2014	3101	25	FF				LODI,R1	FF	
2015	3103	0D	B1	36		FUSH2	LODA,R1	*UTEMP,-	
2016	3106	0E	I0	I7			STRA,R2	*SP,-	
2017	3109	5A	70				PPNP,R2	PUSH2	
2018	310B	7E	4C			PUSH3	BSTR,UN	DFCSP	
2019	310D	07	01				LODI,R3	1	
2020	310F	1F	4E				BCTR,UN	DFCSP	
2021	3111					*			
2022	3111					*			
2023	3111	0A	73			POFST	STRR,R0	UTEMP	
2024	3113	09	72				STRR,R1	UTEMP-1	
2025	3115	27	21				LODI,R3	1	
2026	3117	0C	50	D7			LODA,R0	*SP	
2027	311A	13					COMZ,R3		
2028	311B	0C	45	7C			ECFA,FC	*TYPER	
2029	311E	2F	F0	D7			LODA,R3	*SP,I	
2030	3121	02					STRZ,R2		
2031	3122	01					STRZ,R1		
2032	3122	19	2C				BCTP,EO	POPST3	
2033	3125	2F	B0	D7		POPST2	LODA,R3	*SP,+	
2034	3129	0D	D1	36			STRA,R1	*UTEMP,-	
2035	312E	5C	70				EPNR,R1	POPST2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2036	312E	02					LODZ,R2		
2037	312F	3F	30	B5			BSTA,UN	INCSP2	
2038	3131	24	82			POPST3	LODI,R0	2	
2039	3133	1F	30	B5			BCTA,UN	INCSP2	
2040	3136					*			
2041	3136					*			
2042	3136	00	00			UTEMP	RES	2	
2043	3138					*			
2044	3138					*			
2045	3138	08	7C			PUSHFP	STRR,R0	UTEMP	
2046	313A	09	7B				STRR,R1	UTEMP-1	
2047	313C	0C	10	D8			LOLA,R0	SP-1	
2048	313F	A4	09				SUBI,R0	9	
2049	3141	07	02				LODI,R3	0	
2050	3143	3F	30	DD			BSTA,UN	DFCSP2	
2051	3146	06	08				LODI,R2	0	
2052	3146	05	FF				LODI,R1	FF	
2053	314A	07	09				LODI,R3	9	
2054	314C	0E	E1	36		PUSHF2	LODA,R1	*UTEMP,+	
2055	314F	CF	D0	D7			STRA,R3	*SP,-	
2056	3152	FA	78				BDRR,R2	PUSHF2	
2057	3154	17					RITC,UN		
2058	3155					*			
2059	3155					*			
2060	3155	08	5F			POFFP	STRR,R0	UTEMP	
2061	3157	09	5E				STRR,R1	UTEMP-1	
2062	3159	06	08				LODI,R2	0	
2063	315B	07	00				LODI,R3	0	
2064	315D	0C	90	D7			LODA,R0	*SP	
2065	3160	9C	45	7C			ECFA,EO	*TYPER	
2066	3163	0F	E2	D7		POFFP2	LODA,R3	*SP,+	
2067	3166	CF	D1	36			STRA,R2	*UTEMP,-	
2068	3169	5A	78				BRRR,R2	POFFP2	
2069	316B	04	09				LODI,R0	9	
2070	316D	1F	30	B5			BCTA,UN	INCSP2	
2071	3170					*			
2072	3170					*			
2073	3170	0E	12			SINPT	LODR,R0	INPT	
2074	3172	0E	05				STRR,R0	STEMP	
2075	3174	08	0F				LODR,R0	INPT-1	
2076	3176	0E	02				STRR,R0	STEMP-1	
2077	3178	17					RITC,UN		
2078	3179					*			
2079	3179					*			
2080	3179	02	00			STEMP	RES	2	
2081	317B					*			
2082	317B					*			
2083	317B	08	7C			RIMPT	LODR,R0	STEMP	
2084	317D	0C	05				STRR,R0	INPT	
2085	317F	2F	79				LODR,R0	STEMP-1	
2086	3181	0E	02				STRR,R0	INPT-1	
2087	3183	17					RITC,UN		
2088	3184					*			
2089	3184					*			
2090	3184	00	00			INPT	RES	2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2091	3166					*			
2092	3166					*			
2093	3166	02	70			CSINPT	LODR,R0	INPT	
2094	3166	02	04				STRR,R0	CINPT	
2095	316A	76	76				LODR,R0	INPT-1	
2096	316C	08	07				STRR,R0	CINPT-1	
2097	31-1	17					RETC,UN		
2098	316F					*			
2099	316F					*			
2100	316F	00	00			CINPT	RES	2	
2101	3101					*			
2102	3101					*			
2103	3101	02	70			CRINPT	LODR,R2	CINPT	
2104	3103	08	0F				STRR,R0	INPT	
2105	3105	28	29				LODR,R0	CINPT-1	
2106	3107	08	60				STRR,R0	INPT-1	
2107	3109	17					RETC,UN		
2108	310A					*			
2109	310A					*			
2110	310A	00	02	03		BEGIN	LODR,R0	ESTART	
2111	310E	09	65				STRR,R0	INPT	
2112	310F	22					LODR,R0		
2113	3112	08	63				TPR,R0	INPT-1	
2114	3112	17					RETC,UN		
2115	31A3					*			
2116	31A3					*			
2117	31A3	3F	45	40		NXTLIN	BSTA,UN	SKPSP	
2118	31A7	3F	31	86			BSTA,UN	CHKCR	
2119	31A5	10	A2	92			BCTA,EC	*BTNADR	
2120	31AC	E4	P1				COMI,R0		COMMENT FROM HERE ON
2121	31AE	10	47	3A			BCTA,EC	SKPLIN	
2122	31B1	07	05			SYNER	LODR,R2	SEWER	
2123	31B3	1F	33	2E			BCTA,UN	ERROR	
2124	31B6					*			
2125	31B6					*			
2126	31B6	E4	21			CHKCR	COMI,R0	CR	
2127	31B5	14					RETC,EO		
2128	31B5	E4	3A				COMI,R0		
2129	31BB	17					RETC,UN		
2130	31B0					*			
2131	31B0					*			
2132	31B0	75	00			RETCCT	CPSL	00	
2133	31B1	77	02				FPSL	00	
2134	31C0	17					RETC,UN		
2135	31C1					*			
2136	31C1					*			
2137	31C1	75	00			RETCCT	CPSL	00	
2138	31C3	77	42				PPSL	40	
2139	31C5	17					RETC,UN		
2140	31C6					*			
2141	31C6					*			
2142	31C6	00	05	4B		CKNXTL	LODR,R0	INON	
2143	31C5	0F	00				LODR,R2	0	
2144	31C8	0E	05	4B			BSTA,R0	INON	
2145	31C0	02					LODR,R0		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2146	31C0	10	31	A3			BCTA,EC	NXTLIN	
2147	31C2	1F	45	3A			BCTA,UN	SKPLIN	
2148	31D5					*			
2149	31D5					*			
2150	31D5	00	00	00	00	LINNUM	RES	4	
2151	31D5					*			
2152	31D9					*			
2153	31D9	22				GETLIN	LODR,R0		
2154	31DA	05	04				LODR,R1	4	
2155	31DC	0E	51	D5		GETLN2	STRA,R1	LINNUM,-	
2156	31DF	09	7B				BRNR,R1	GETLN2	
2157	31E1	05	FF				LODR,R1	FF	
2158	31E3	3F	46	40		GETLN3	BSTA,UN	SKPSP	
2159	31E6	E4	30				COMI,R0	0	
2160	31E8	18	79				BCTA,EC	GETLN3	
2161	31EA	3F	45	40		GETN4	BSTA,UN	CHKNUM	
2162	31ED	90	32	13			BCTA,EC	DECP	
2163	31F0	E4	04				COMI,R1	4	
2164	31F2	10	45	74			BCTA,EC	OVFER	
2165	31F5	0D	31	D5			STRA,R1	LINNUM,+	
2166	31F8	3F	32	20			BSTA,UN	GETCHR	
2167	31FB	1B	6D				BCTA,UN	GETN4	
2168	31FD					*			
2169	31FD					*			
2170	31FD	0F	11	05		INCP	LODR,R3	INPT+1	
2171	3200	07	01				ADDI,R3	1	
2172	3202	0F	11	05			STRA,R3	INPT+1	
2173	3205	16					RETC,LT		
2174	3206	1F					RETC,GT		
2175	3207	0F	11	04			LODR,R3	INPT	
2176	320A	07	01				ADDI,R3	1	
2177	320C	0F	11	04			STRA,R3	INPT	
2178	320F	17					RETC,UN		
2179	3210					*			
2180	3210					*			
2181	3210	3F	46	40		SKPDEC	BSTA,UN	SKPSP	
2182	3213	0F	11	05		DECP	LODR,R3	INPT+1	
2183	3216	A7	01				SUBI,R3	1	
2184	3218	0F	11	05			STRA,R3	INPT+1	
2185	321B	77	06				PPSL	WC	
2186	321D	0F	11	04			LODR,R3	INPT	
2187	3220	A7	00				SUBI,R3	0	
2188	3222	0F	11	04			STRA,R3	INPT	
2189	3225	75	06				CPSL	WC	
2190	3227	17					ITC,UN		
2191	3228					*			
2192	3228					*			
2193	3228	20	91	04		GETCHR	LODR,R0	*INPT	
2194	322F	3F	45	AC			BSTA,UN	LTOU	
2195	3231	00					LODR,R0		
2196	323F	5A	40				BCTA,LT	INCP	
2197	3231	1F	31	B1			BCTA,UN	STWER	
2198	3234					*			
2199	3234					*			
2200	3234	00	00	00	00	INBUF	RES	41	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2221	3234	02	02	02	02				
2222	3230	02	02	02	02				
2223	3240	02	02	02	02				
2224	3244	02	02	02	02				
2225	3248	02	02	02	02				
2226	3240	02	02	02	02				
2227	3250	02	02	02	02				
2228	3254	02	02	02	02				
2229	3254	02	02	02	02				
2230	3254	02	02	02	02				
2231	3260	02	02	02	02				
2232	3264	02	02	02	02				
2233	3268	02	02	02	02				
2234	3260	02	02	02	02				
2235	3270	02	02	02	02				
2236	3274	02							
2237	3275					*			
2238	3275					*			
2239	3275	04	32			AROWCR	LODI,R0	INBUF	
2240	3277	05	34				LODI,R1	INBUF	
2241	3270	05	42				LODI,R2	48	
2242	3275	3F	2E	0B			BSTA,UN	APROW	
2243	3271	0C	47	0B			BCFA,EC	BEGW	
2244	3251	01	40				LODI,R1	48	
2245	3257	21	52	34		APCWC2	LODA,R1	INBUF,-	
2246	3256	58	04				BRNR,R0	AROWC3	
2247	3250	58	79				BRNR,R1	AROWC2	
2248	3254	A	01				SUBI,R1	1	
2249	3250	04	2D			APOWC3	LODI,R0	CP	
2250	3257	0D	32	34			STRA,R1	INBUF,+	
2251	3251	0C	11	04			LODA,R0	INPT-	
2252	3254	05	10				STRR,R0	BTEMP	
2253	3256	03	11	05			LODA,R0	INPT+1	
2254	3259	0B	0C				STRR,R0	BTEMP-1	
2255	3255	04	32				LODI,R0	INBUF	
2256	3250	0C	11	04			STRA,R0	INPT	
2257	3249	04	34				LODI,R0	INBUF	
2258	3242	0C	11	05			STRA,R0	INPT+1	
2259	32A5	17					PETC,UN		
2260	32A6					*			
2261	32A6					*			
2262	32A6	02	00			PTMP	RES	2	
2263	32A9					*			
2264	32A9					*			
2265	32A8	08	7C			RECBT	LODR,R0	BTEMP	
2266	32AA	0C	11	04			STRA,R0	INPT	
2267	32A5	08	7F				LODR,R0	BTEMP-1	
2268	32AF	0C	11	05			STRA,R0	INPT-1	
2269	32B2	17					PETC,UN		
2270	32B3					*			
2271	32B3	3F	3B	0B		ENDLIN	BSTA,UN	ECONST	
2272	32B6	0C	46	09			BCFA,EC	RETNGT	
2273	32B4	3F	31	0B			BSTA,UN	CSINPT	
2274	32B0	3F	31	0A			BSTA,UN	BEGIN	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2275	32B7	3F	31	7F		FIND12	BSTA,UN	SINPT	SAVE BEGINNING OF THIS LINE
2276	32C2	3F	31	19			BSTA,UN	GETLIN	
2277	32C5	05	01				ADDI,R1	1	
2278	32C7	11	13	51			COMA,R1	CBUF1-1	
2279	32D4	09	21				BCFR,EC	FINDL5	
2280	32C0	05	FF				LODI,R1	FF	
2281	32C1	07	00				LODI,R3	0	
2282	3216	01	31	15		FINDL1	LODA,R1	LINNUM,-	
2283	32D3	44	0F				ANDI,R0	F	
2284	32D5	05	01				TMI,R1	1	
2285	3217	18	01				PCTR,EC	FINDL3	
2286	3219	1C					RPL,R0		
2287	321A	00					RRL,R0		
2288	321B	00					RRL,R0		
2289	321C	00					RRL,R0		
2290	321D	00					RRL,R0		
2291	32DD	03				FINDL3	IORZ,R3		
2292	32DE	03					STRZ,R3		
2293	32DF	15	03				COMI,R1	3	
2294	32E1	18	27				BCTR,EC	FINDL4	
2295	32E3	15	01				COMI,R1	1	
2296	32E5	08	69				BCFR,EC	FINDL1	
2297	32E7	02					STRZ,R2		
2298	32E8	1E	64				BCTR,UN	FINDL1-2	
2299	32EA	1E	13	53		FINDL4	COMA,R2	CBUF1+3	
2300	32ED	08	0A				BCFR,EC	FINDL5	
2301	32EF	1F	13	54			COMA,R3	CBUF1-4	
2302	32F2	08	05				BCFR,EC	FINDL5	
2303	32F4	3F	31	7B			BSTA,UN	RINPT	
2304	32F7	20					IORZ,R0		
2305	32F8	17					RETG,UN		
2306	32F9	3F	33	0C		FINDL5	BSTA,UN	SKPCR	
2307	32FC	04	0D				COMI,R0	CP	
2308	32FE	08	79				BCFR,EC	FINDL5	
2309	3300	0C	91	04			LODA,R0	*INPT	
2310	3303	0F	32	0F			BCFA,LT	FINDL2	
2311	3306	3F	31	51			BSTA,UN	CRINPT	
2312	3309	04	FF				LODI,R0	FF	
2313	330B	17					RETG,UN		
2314	330C					*			
2315	330C					*			
2316	330C	0F	11	05		SKPCR	LODA,R3	INPT-1	
2317	330F	20					FORZ,R2		
2318	3310	0C	11	05			STRA,R0	INPT-1	
2319	3313	0F	11	04		SKPCR2	LODA,R3	*INPT,1	
2320	3316	07	01				ADDI,R3	1	
2321	3318	08	0A				BCFR,EC	SKPCR3	
2322	331A	0F	11	04			LODA,R3	INPT	
2323	331D	07	01				ADDI,R3	1	
2324	331F	0F	11	04			STRA,R0	INPT	
2325	3322	07	00				LODI,R3	0	
2326	3324	3F	31	0B		SKPCR3	BSTA,UN	CHKCR	
2327	3327	08	0A				BCFR,EC	SKPCR2	
2328	3329	0F	11	05			STRA,R3	INPT-1	
2329	332C	17					RETG,UN		
2330	332E					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2311	3320					*			
2312	3320	20				FTMP	RES	1	
2313	3320					*			
2314	3320					*			
2315	3320	04	22			ERRDP	LODI,R0	2	
2316	3320	03				LISL			
2317	3321	0F	7A			STRB,R8	ITEMP		
2318	3323	07	12			LODI,R3	ASTMSG		***
2319	3325	31	45	53		BSTA,UN	WRMCR		
2320	3326	2B	73			LOIR,R3	ITEMP		
2321	332A	3F	45	56		BSTA,UN	WRTM		
2322	3330	07	11			LODI,R3	FRRMS3		ERROR ***
2323	3331	3F	45	56		BSTA,UN	WRTM		
2324	3340	2E	11	8F		LOFA,R2	INPT-1		
2325	3345	A5	27	86		SUBA,R7	SRPNT-1		
2326	3348	3F	22	-7		BSTA,UN	SHLIN		
2327	3349	1F	42	0E		BCTA,UN	IEGN		
2328	334F					*			
2329	334E					*			
2332	334E	22	22			CTEMP	RES	2	
2331	3352	22	22	22	22	CPUF1	RES	8	
2337	3354	3F	22	22	22				
2332	3358	22	22	22	22	DEUF2	RES	8	
2334	335C	00	00	00	00				
2335	3360					*			
2336	3360					*			
2337	3360	26	2F			PUSHOP	LODR,R1	OPSP	
2338	3362	00	73	72		STRA,R1	OPSTK.I		
2339	3364	64	23			ALDI,R1		1	
2340	3367	00	24			STBP,R1	OPSP		
2341	3369	15	24			COMI,R1	22		
2342	3375	16				RETC,LT			
2343	3380	27	13			CSOFR	LODI,R3	CSOFR	
2344	3381	19	33	2E		BCTA,UN	ERRPR		
2345	3391					*			
2346	3391					*			
2347	3391	22				OPSP	RES	1	
2348	3392	26	22	22	22	OPSTK	RES	22	
2349	3396	22	22	22	22				
2350	339A	20	20	20	20				
2351	339F	02	22	22	22				
2352	33A2	20	20	20	20				
2353	33A6	07	22	22	22				
2354	33AA	22	22	22	22				
2355	33AF	22	22	22	22				
2356	33D2	00				EVALCC	RES	1	
2357	33D2					*			
2358	33D3					*			
2359	33D3	26	50			POPOP	LOIP,R1	OPSP	
2360	33D6	A5	71			SUPI,R1	1		
2361	33D7	1A	53			BCTR,LT	CSOFR		
2362	33D9	09	46			STFP,R1	CPSP		
2363	33DB	2D	73	72		LOFA,R1	OPSTK.I		
2364	33DF	17				RETC,UN			
2365	33DF					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2366	33DF					*			
2367	33DF	20				EVAL	IORZ,R0		
2368	33E0	0F	4F			TFR,R2	OPSP		
2369	33E2	08	61			STRB,R2	EVALCC		
2370	33E4	0C	14	92		STRA,R0	PA*WST		
2371	33E7	24	27			LODI,R0	7		
2372	33E9	3F	33	60		BSTA,UN	PUSHOP		
2373	33EC	3F	45	26		BSTA,UN	CRNEG		
2374	33EF	3F	35	77		BSTA,UN	LOIYAR		
2375	33F2	99	10			BCTR,GT	EVAL1		
2376	33F4	3F	38	BB		BSTA,UN	ECONST		
2377	33F7	99	17			BCTR,GT	EVAL1		
2378	33B9	3F	32	28		BSTA,UN	GETCHR		
2379	33BC	E4	28			COMI,R2			
2380	33BE	10	34	81		BCTA,EQ	ELPAR		
2381	33C1	3F	32	13		BSTA,UN	DECP		
2382	33C4	04	46			LODI,R0	FCW*TAB		
2383	33C6	05	66			LODI,R1	FCW*TAB		
2384	33C8	3F	45	F7		BSTA,UN	LOOKUP		
2385	33CB	10	34	EA		BCTA,EC	IFCM		
2386	33CD	1F	2E			BCTR,UN	ENDEFV1		
2387	33D0	18	25			BCTR,EC	EVAL2		
2388	33D2	3F	38	F2		BSTA,UN	PUSHST		
2389	33D5	1E	03			BCTR,UN	EVAL3		
2390	33D7	3F	31	38		BSTA,UN	PUSHFP		
2391	33DA	04	FF			LODI,R0	FF		
2392	33DC	0C	13	92		STRA,FP	EVALCC		
2393	33DF	3F	46	40		BSTA,UN	SKPSP		
2394	33E2	E4	2C			COMI,R2			
2395	33F4	10	3D	2B		BCTA,EQ	FP*COM		
2396	33F7	E4	25			COMI,R0			
2397	33F9	10	34	93		BCTA,EQ	ERRPAR		
2398	33EC	E4	22			COMI,R2	2		
2399	33EE	10	37	23		BCTA,EQ	RT*VAL		
2400	33F1	0F	29			LODI,R1	8		
2401	33F3	1D	55	49		COMA,R1	OPT*PL-		
2402	33F6	10	34	23		BCTA,EQ	ICP		
2403	33F9	59	78			BRNR,R1	EVAL4		
2404	33FB	3F	32	13		BSTA,UN	DECP		
2405	33FE	3F	33	93		BSTA,UN	POPOP		
2406	3401	03				STRZ,R3			
2407	3402	E4	27			COMI,R0	7		
2408	3404	16	0C			BCTR,EC	ENDEF2		
2409	3406	44	27			ANDI,R0	7		
2410	3408	E4	23			COMI,R0	3		
2411	340A	1D	31	F1		BCTA,GT	SYNER		
2412	340E	3F	34	99		BSTA,UN	DOOP		
2413	3411	13	6C			BCTR,UN	ENDEFV1		
2414	3415	0C	13	92		LOFA,FP	EVALCC		
2415	3418	10	31	C1		BCTA,EQ	RT*COM		
2416	341B	3F	33	F1		BSTA,UN	INCSP		
2417	341F	3F	32	59		BSTA,UN	DECSF		
2418	3421	03				LODI,R3			
2419	3421	14				RT*EQ			
2420	3422	E4	FF			LODI,R2	FF		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPEPAND	COMMENTS
3421	3422	17					RETC.UN		
3422	3423					*			
3423	3423					*			
3424	3422	14	24			EOF	CCMI.R1	4	
3425	3425	16	2A				BCTR.R2	EOF4	
3426	3427	01	25	51			LCDA.R1	OPCOD.1	
3427	342A	01					RPL.R1		
3428	3429	01					RPL.R1		
3429	342C	01					RPL.R1		
3430	342D	01					IOR2.R1		
3431	342E	06	12				STR.R2	TEMPOP	
3432	3430	01	37	03		FOF2	BSTA.UN	FOFOP	
3433	3430	01					STR2.R1		
3434	3434	44	77				ANDI.R2	7	
3435	3435	23	14				LOTR.R2	TEMPOP	
3436	3435	47	27				ANDI.R2	7	
3437	343A	13					COMI.R2		
3438	343E	05	7C				BCTR.LF	EOP3	
3439	343C	01					LODZ.R1		
3440	343E	3F	33	40			BSTA.UN	PUSHOP	
3441	3441	25	27				LOTR.R2	TEMPOP	
3442	3441	17	33	52			BSTA.UN	PUSHOP	
3443	3444	1F	33	AF			BSTA.UN	EVAL2	
3444	3444	01				EOF3	LODZ.R1		
3445	3444	03					STR2.R2		
3446	3445	3F	34	59			BSTA.UN	DOOP	
3447	344E	11	62				BCTR.UN	EOP2	
3448	3452					*			
3449	3452					*			
3450	3452	22				TEMPOP	RES	1	
3451	3451					*			
3452	3451					*			
3453	3451	3F	26			EOF4	BSTR.UN	CONVGT	
3454	3453	01					LODZ.P1		
3455	3454	07					STR2.R2		
3456	3455	00	01	64			LODA.R2	*INPT	
3457	3458	2F	02				LODI.R1	6	
3458	345A	ED	55	49		FOF4A	CCMA.R1	OPTBL.-	
3459	3460	12	07				BCTR.EQ	EOP5	
3460	345F	1E	2E				COMI.R1	5	
3461	3461	0E	27				ROPR.EQ	EOP4A	
3462	3460	12	06				BCTR.UN	EOP5A	
3463	3465	3F	31	7D		EOF5	BSTA.UN	INOPT	
3464	3465	3F	31	7D			BCTR.UN	CCNVGT	
3465	346A	21					LOTR.P1		
3466	346B	02					IOR2.R2		
3467	346C	02					STR2.R2		
3468	3467	02				FOP5A	RPL.R2		
3469	3467	12					RPL.R2		
3470	3467	12					RPL.R2		
3471	3472	66	23				IORI.P2	3	
3472	3472	02					LODZ.R2		
3473	3473	00	14	58			STRA.R2	TEMPOP	
3474	3475	1F	34	32			BSTA.UN	EOP2	
3475	3479					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPEPAND	COMMENTS
3476	3475					*			
3477	3475	AF	24			CONVGT	SUPI.R1	4	
3478	3475	1E	23				COMI.R1	3	
3479	347D	16					RETC.LT		
3480	347E	01	04				LODI.R1	4	
3481	3480	17					RETC.UN		
3482	3481					*			
3483	3481					*			
3484	3481	2E	2F			ELFAR	LOTR.R2	PARNST	
3485	3483	84	01				ADDI.R2	1	
3486	3485	0E	09				STR.R2	PARNST	
3487	3487	04	05				LODI.R2	5	
3488	3489	3F	33	60			BSTA.UN	PUSHOP	
3489	348C	3F	45	29			BSTA.UN	CKNEG	
3490	348F	1F	33	AF			BSTA.UN	EVAL2	
3491	3492					*			
3492	3492					*			
3493	3492	02				PARNST	RES	1	
3494	3493					*			
3495	3493					*			
3496	3493	08	7D			ERFAR	LOTR.R2	PARNST	
3497	3495	96	06				BCTR.EQ	ERPAR2	
3498	3497	3F	32	13		ERFAR1	BSTA.UN	DEOPT	
3499	349A	1F	33	FE			BSTA.UN	ENDEVL	
3500	349D	A4	01			ERFAR2	SUPI.R2	1	
3501	349F	08	71				STR.R2	PARNST	
3502	34A1	3F	33	53		ERFAR3	BSTA.UN	FOFOP	
3503	34A4	03					STR2.R3		
3504	34A5	44	07				ANDI.R2	7	
3505	34A7	14	07				COMI.R2	7	
3506	34A9	1C	31				BSTA.EQ	STWER	
3507	34AC	14	06		B1		COMI.R2	5	
3508	34AE	1C	33	DA			BSTA.EQ	EVAL3	
3509	34B1	14	06				COMI.R2	6	
3510	34B3	1B	21				BCTR.EQ	EPCNEI	
3511	34B5	3B	22				BSTR.UN	DOOP	
3512	34B7	1B	68				BCTR.UN	ERFAR3	
3513	34B8					*			
3514	34B9					*			
3515	34B9	03				DOCP	LODZ.R3		
3516	34BA	44	07				ANDI.R2	7	
3517	34BC	14	03				COMI.R2	3	
3518	34BE	1C	3D	2C			BSTA.EQ	FPCOMP	
3519	34C1	53					RPL.R3		
3520	34C2	53					RPL.R3		
3521	34C3	47	21				ANDI.R3	E	
3522	34C5	0F	75	56			LCDA.R3	OPJUMP.1	
3523	34C8	00	14	D4			STPA.R2	DODST	
3524	34C8	0F	34	56			LCDA.R3	OPJUMP.1	
3525	34C8	00	14	D5			STPA.R2	DODST.1	
3526	34C1	1F	B4	D4			BSTA.UN	*DODST	
3527	34C4					*			
3528	34C4					*			
3529	34C4	02	02			DODST	RES	2	
3530	34C6					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2531	342E								
2532	342E	63				*EFCNEX	RFR,R3		
2533	342F	63					RFR,R3		
2534	342F	47	3F				ANDI,R3	3E	
2535	3431	2F	75	2G			LODA,R3	FCNJMP,1	
2536	3430	08	25				STRP,R0	DDST	
2537	343F	23	3E	25			LODA,R3	FCNJMP,*	
2538	3430	08	71				STRP,R2	DDST-1	
2539	3434	33	E4	D4			BSTA,UN	*DDST	
2540	3437	13	32	DA			BOTA,UN	EVAL3	
2541	343A								
2542	343A								
2543	343A	33	4C	4P		*EFCN	BSTA,UN	SKPSP	
2544	343D	34	7P				COMI,R0	1	
2545	343F	00	31	R1			BCFA,EC	SYNER	
2546	343D	20	14	02			LODA,R0	PARNST	
2547	343E	34	R1				ADDI,R0	1	
2548	343D	00	14	02			STRP,R0	PARNST	
2549	343A	11					RRL,R1		
2550	343B	11					RRL,R1		
2551	343C	11					RRL,R1		
2552	343C	6E	25				IORI,R1	6	
2553	343F	21					LODZ,S1		
2554	3522	3F	33	6P			BSTA,UN	PUSHOP	
2555	3523	3F	45	29			BSTA,UN	CHNE2	
2556	3525	1F	37	AF			BOTA,UN	EVAL2	
2557	3525	3D	5A	3D	4F	FCNJMP	ACON	FFAPS,FFSON,FFFIX,FFPEEK,FFCHR,FFIN,FFLEN,FFPOS	
2558	3525	3D	6F	3F	34				
2559	3511	3F	47	3E	R2				
2560	3519	3F	60	3E	A1				
2561	3519	3F	67	3D	A3	ACON		FFASC,FFINT,FFPEP,FFPOS,FFCALL,FFRIGT,FFLEET,FFMID	
2562	3519	3F	ED	3D	E4				
2563	3522	3F	54	41	E0				
2564	3525	4A	30	49	A1				
2565	3525	40	25	3F	A3	ACON		FFSTRG,FFPND,FFWAPP,FFINST,FFPFC,FFSTR,FFVA1	
2566	3525	3F	12	4P	2P				
2567	3531	3F	25	3E	B0				
2568	3535	3E	DA			ACON		FFSIN,FFCOS,FFATAN,FFATN,FFPLN,FFLOG,FFEXP2,FFSQR,FFUSR	
2569	3532	33	16	54	27				
2570	3532	34	0F	54	AB				
2571	353F	5E	60	54	05				
2572	3543	54	35	52	FC				
2573	3547	37	06						
2574	354C	13	2A	2F	2B	CPTBI	ALIT	*/+<=>=	
2575	354D	2F	30	3E	3D				
2576	3551	02	R1	01	02	OPG0D	DATA	0.1,1,2,2	
2577	3555	02							
2578	3556	45	14	3B	F1	OPJUMP	ACON	FFEXP,FFMULT,FFDIV,FFADD,FFSUB	
2579	355A	3E	E2	3A	72				
2580	355E	3A	E4						
2581	3560								
2582	3560								
2583	3560	08	11			POPLT	IOIP,R0	LTEMP-1	
2584	3562	04	71				ADDI,R0	1	
2585	3564	08	02				STRR,R0	LTEMP-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2586	3566	08	26				POPP,EQ	POPLT2	
2587	3568	08	08				LODR,R0	LTEMP	
2588	356A	04	71				ADDI,R0	1	
2589	356C	08	04				STRR,R0	LTEMP	
2590	356E	0C	95	72		POPLT2	LODA,R0	*LTEMP	
2591	3571	17					RETC,UN		
2592	3572								
2593	3572								
2594	3572	22	02	22	00	LTEMP	RES	5	
2595	3576	00							
2596	3577								
2597	3577								
2598	3577	3F	32	10		LOKVAR	BSTA,UN	SKPDEC	
2599	357A	3F	31	70			BSTA,UN	SINFT	
2600	357C	0C	00	05			LOIA,R0	VARST	
2601	3580	A4	21				SUBI,R0	1	
2602	3582	08	6E				STRP,R0	LTEMP	
2603	3584	04	FF				LODI,R0	FF	
2604	3585	08	59				STRR,R0	LTEMP-1	
2605	3588	33	55			LOKV1	BSTR,UN	POPLT	
2606	358A	10	3A	16			BCFA,EC	ECRETN	
2607	358C	08	6F				STRP,R0	LTEMP-2	
2608	358F	3F	41				BSTR,UN	POPLT	
2609	3591	06	62				STRR,R0	LTEMP-3	
2610	3593	3E	4E				BSTR,UN	POPLT	
2611	3595	09	5F				STRP,R0	LTEMP-4	
2612	3597	06	04				LODI,R2	4	
2613	359C	3E	4E			LOKV2	BSTR,UN	POPLT	
2614	359B	18	29				BCTR,FC	LOKV2A	
2615	359D	3F	32	28			BSTA,UN	GETCHR	
2616	35A0	3F	20				COMR,R0	*LTEMP	
2617	35A2	08	20				BCTR,EC	LOKV3	
2618	35A4	FA	73				BDRR,FP	LOKV2	
2619	35A6	0C	91	04		LOKV2A	LODA,R0	*INFT	
2620	35A9	3F	4E	A6			BSTA,UN	LTCU	
2621	35AC	3F	45	3C			BSTA,UN	CHKAN	
2622	35AF	18	1F				BCTR,EC	LOKV3	
2623	35B1	A6	01				SUBI,R2	1	
2624	35B7	59	05				BCTR,GT	LOKV5	
2625	35B5	3F	35	60		LOKV4	BSTA,UN	POPLT	
2626	35B6	1A	7E				BDRR,R0	LOKV4	
2627	35FA	0C	15	76		LOKV5	LOIA,R0	LTEMP-4	
2628	35B1	E4	91				COMI,R0	1	
2629	35BF	11	36	14			BCFA,GT	LOKDIM	
2630	35C0	18	26				BCTR,EC	LOKSTR	
2631	35C4	3F	35	58		LOKV6	BSTA,UN	POPLT	
2632	35C7	4C	15	72			LODA,R0	LTEMP-1	
2633	35CA	2C	15	73			LODA,R1		
2634	35C1	07	00				LODI,R3	0	
2635	35C3	17					RETC,UN		
2636	35C0	3F	31	7E		LOKV3	BSTA,UN	PINPT	
2637	35C3	0C	16	74			LODA,R0	LTEMP-2	
2638	35C6	21	15	75			LODA,R1	LTEMP-3	
2639	35C5	45	01				SUBI,R1	1	
2640	35C7	45	01				PSL	WC	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2641	3E0D	F4	R2				SUBI,R2	R	
2642	3E10	F5	R2				CFSL	WC	
2643	3E11	00	16	R2			STPA,R2	LTEMP	
2644	3E14	00	15	R3			STPA,R1	LTEMP-1	
2645	3E17	1F	3E	R8			BCFA,UN	LOKVI	
2646	3E1A					*			
2647	3E1A					*			
2648	3E1A	F7	10	R6		LOKSTP	BSTA,UN	GETCHR	
2649	3E1D	E4	F4				COMI,R2	4	
2650	3E1F	90	3A	10			BCFA,EQ	FORFEN	
2651	3E20	3F	4F	R2		LOKST2	BSTA,UN	POPLT	
2652	3E23	00	16	R2			STRZ,R3		
2653	3E26	00	15	R2			BSTA,UN	POPLT	
2654	3E29	3F	3E	R2			STRZ,R1		
2655	3E2C	3F	3E	R2			BSTA,UN	POPLT	
2656	3E2F	00	16	R2			STRZ,R2		
2657	3E32	00	15	R2			LODZ,R3		
2658	3E35	00	15	R2			LODI,R3	FF	
2659	3E38	10	10				RETG,UN		
2660	3E3B					*			
2661	3E3B					*			
2662	3E3E	00	20	R2	R2	LDIMS	RES	A	
2663	3E41	00	20	R2	R2				
2664	3E44	00	20	R2					
2665	3E47	00	20	R2	R2	DIMSTK	RES	B	
2666	3E4A	00	20	R2	R2				
2667	3E4D	00	20	R2	R2				
2668	3E50					*			
2669	3E50					*			
2670	3E53	00	20	R2	R2	LOKDIM	STRZ,R2	LDIMS	
2671	3E56	00	20	R2	R2		COMI,R2	4	
2672	3E59	10	37	R1			BCFA,EQ	RNEVAL	
2673	3E5C	00	16	R2			COMI,R2	2	
2674	3E5F	00	16	R2			BCFP,EQ	LOKDNS	
2675	3E62	00	16	R2			BSTA,UN	GETCHR	
2676	3E65	00	16	R2			COMI,R2	6	
2677	3E68	00	16	R2			BCFA,EQ	RETNGT	
2678	3E6B	00	16	R2		LOKDNS	BSTA,UN	POPLT	
2679	3E6E	00	16	R2			STRZ,R2	LDIMS-1	# OF DIMS
2680	3E71	00	16	R2			LODI,R2	R	
2681	3E74	00	16	R2			LODI,R3	1	
2682	3E77	00	16	R2			STPA,R2	LDIMS-6	
2683	3E7A	00	16	R2			STPA,R3	LDIMS-6	
2684	3E7D	00	16	R2		LOKD2	LODA,R2	LDIMS-6	
2685	3E80	00	16	R2			LODA,R3	LDIMS-6	
2686	3E83	00	16	R2		LOKDA	STRZ,R2	LDIMS-5	
2687	3E86	00	16	R2			BSTA,UN	POPLT	
2688	3E89	00	16	R2			STRZ,R1		
2689	3E8C	00	16	R2		LOKD3	STPA,R2	LDIMS-7	
2690	3E8F	00	16	R2			ADDA,R3	LDIMS-9	MULT BY THIS DIM
2691	3E92	00	16	R2			PESE	WC	
2692	3E95	00	16	R2			ADDA,R2	LDIMS-6	
2693	3E98	00	16	R2			CFSL	WC	
2694	3E9B	00	16	R2			BCFA,R1	LOKDB	
2695	3E9E	00	16	R2			STPA,R2	LDIMS-6	
2696	3EA1	00	16	R2			STPA,R3	LDIMS-9	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2697	3E97	F7	30	D9			BSTA,UN	DFOSP	
2698	3E9A	00	16	R2			LODZ,R2		
2699	3E9D	00	16	R2			STRZ,R2		
2700	3E9F	3F	30	D9			BSTA,UN	DFOSP	STORE IT
2701	3EA2	00	16	R2			LODA,R3	LDIMS-2	STORE THIS DIM
2702	3EA5	00	16	R2			BSTA,UN	DFOSP	
2703	3EA8	00	16	R2			LODA,R2	LDIMS-6	
2704	3EAB	00	16	R2			BCFA,R2	LOKD2	
2705	3EAE	00	16	R2			LODA,R2	LTEMP	SAVE LTEMP
2706	3EAF	00	16	R2			STPA,R2	LDIMS-3	
2707	3EB2	00	16	R2			LODA,R2	LTEMP-1	
2708	3EB5	00	16	R2			STPA,R2	LDIMS-4	
2709	3EB8	3F	46	A9			BSTA,UN	SKPSP	
2710	3EBC	F4	28				COMI,R2	(
2711	3EBF	90	71	R1			BCFA,EQ	SYNER	
2712	3EC2	00	16	R2			LODI,R1	6	
2713	3EC5	00	16	R2		LOKDB	STPA,R1	LDIMS-2	
2714	3EC8	3F	32	10			BSTA,UN	SKPEOC	
2715	3ECB	3F	4F	48			BSTA,UN	CHENUM	
2716	3ECF	90	36	AB			BCFA,EQ	LOKDB	
2717	3ED2	3F	31	FD			BSTA,UN	INOPT	
2718	3ED5	44	0F				ANDI,R0	F	
2719	3ED8	00	16	R2			STRZ,R2		
2720	3EDA	00	16	R2		LOKDB	LODA,R2	*INPT	
2721	3EDD	00	16	R2			BSTA,UN	CHENUM	
2722	3EDF	00	16	R2			BCFP,EQ	LOKD7	
2723	3EE2	00	16	R2			STRZ,R1		
2724	3EE5	00	16	R2			ANDI,R1	F	
2725	3EE8	3F	31	FD			BSTA,UN	INOPT	
2726	3EEB	00	16	R2			LODI,R3	9	
2727	3EEE	00	16	R2			LODZ,R2		
2728	3EF1	00	16	R2		LOKDB	ADDA,R2	LOKDB	
2729	3EF4	FB	7D				BCFA,R3		
2730	3EF7	00	16	R2			ADDA,R1		
2731	3EFA	00	16	R2			STRZ,R2		
2732	3EFD	10	69				BCFP,UN	LOKIS	
2733	3EFF	3F	3E	77		LOKDB	BSTA,UN	LOKVAR	
2734	3F02	90	46	59			BCFA,EQ	RETNGT	
2735	3F05	3F	31	36			BSTA,UN	PUSHFP	
2736	3F08	3F	2F	A1			BSTA,UN	ENS2	
2737	3F0B	00	16	R2			LODZ,R2		
2738	3F0E	00	16	R2			BCFA,EQ	RETNGT	
2739	3F11	00	16	R2			LODZ,R1		
2740	3F14	00	16	R2		LOFD7	STRZ,R2	LDIMS-2	STACK POINTER
2741	3F17	00	16	R2			LODA,R1		
2742	3F1A	00	16	R2			LODZ,R2		
2743	3F1D	00	16	R2			STPA,R1	DIMSTK-	
2744	3F20	00	16	R2			LODZ,R1		
2745	3F23	00	16	R2			BCFA,EQ	RETNGT	
2746	3F26	10	46	59			BSTA,UN	SEPSF	
2747	3F29	3F	46	49			BSTA,UN	SEPSF	
2748	3F2C	3F	46	49			COMI,R2		
2749	3F2F	10	36	R1			BCFA,EQ	LOKDB	
2750	3F32	10	36	R1			COMI,R2		
2751	3F35	10	36	R1			BCFA,EQ	RETNGT	
2752	3F38	10	36	R1			ADDA,R1	LDIMS-1	# OF DIMS

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2751	365E	F1	02				COMI,R1	8	
2752	365F	0C	4E	59			BCFA,FC	RETNGT	# OF DIMS # OF SUBSP
2753	3660	00					FORZ,R0		
2754	3661	00	1F	7E			STRA,R0	LDIMS-6	
2755	3662	00	16	20			STRA,R2	LDIMS-7	
2756	3664	20	1F	24			LODA,R1	LDIMS-2	STACK POINTER
2757	3667	A5	02				SUPI,R1	2	
2758	3668	E5	26			LOKDC	COMI,R1	6	
2759	366B	10	37	2F			BCTA,EC	LOKEF	LAST SUBSCRIPT
2762	366F	20	3F	0C			LODA,R1	DI*STK,+	
2761	3671	01	16	24			STRA,R1	LDIMS-2	
2760	3674	02					STRZ,R2		
2762	3675	33	32	E1			BSTA,UN	INCF	
2764	367F	22					LOIZ,R2		
2765	3680	E3					COMZ,R3		
2768	368A	15					RETC,GT		
2767	368E	3F	32	E1			BSTA,UN	INCF	
2766	368E	3F	32	E1			BSTA,UN	INCF	
2767	3691	07	21				LODI,R3	1	
2762	3692	0F	10	17			LODA,R3	*SP,1	
2761	3695	00	16	2A			STRA,R2	LDIMS-6	
2762	3695	00	16	27			LODA,R3	*SP,1	
2763	369C	00	1F	2B			STRA,R2	LDIMS-9	
2764	369F	22					FORZ,R0		
2765	3702	01					STRZ,R1		
2766	3705	03					STRZ,R3		
2767	3707	15	22				COMI,R2	8	
2768	370A	1F	10				BCTA,EC	LOKDF	
2769	370B	61	16	2B		LOKD4	ADDA,R1	LDIMS-6	
2769	370B	61	16	2B			FPSL	WC	
2771	370F	2F	25				ADDA,R3	LDIMS+6	
2771	3710	2F	16	0A			ADDA,R3	LDIMS+6	
2772	3710	2F	16	0A			ADDA,R3	LDIMS+6	
2773	3718	25	24				ADDR,R2	LOKD4	
2774	3720	15	16	00		LOKD5	ADDA,R1	LDIMS-7	
2775	3724	11	16	29			STRA,R1	LDIMS-7	
2776	3728	27	29				FPSL	WC	
2777	372A	4F	16	29			ADDA,R3	LDIMS+6	
2778	372D	00	16	0B			STRA,R3	LDIMS-6	
2779	3730	2F	25				CPSL	WC	
2780	3730	2F	16	04			LODA,R1	LDIMS-2	
2781	3735	13	25	1C			BCTA,UN	LOKDC	
2782	3739	3F	32	E1		LOKEF	BSTA,UN	INCF	
2783	373E	1F	16	13			COMA,R3	DI*STK-7	
2784	3741	13	4E	59			BCTA,LT	RETNGT	
2785	3741	3F	32	E1			BSTA,UN	INCF	
2786	3744	3F	32	E1			BSTA,UN	INCF	
2787	3747	20	3F	2C			LODA,R1	DI*STK,+	
2788	374A	80	16	20			ADDA,R0	LDIMS-7	
2789	374D	00	16	09			STRA,R2	LDIMS-7	
2792	3750	27	29				FPSL	WC	
2791	3752	20					FORZ,R2	LDIMS+6	
2792	3753	40	16	28			ADDA,R2	LDIMS-6	
2793	3756	00	16	08			STRA,R0	WC	
2794	3759	25	25				CPSL	WC	
2795	375B	23	16	22			LODA,R2	LDIMS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2806	3761	55	02				COMI,R2	2	
2807	3762	1A	02				BCTA,EC	LOKED	
2808	3762	05	07				LODI,R2	7	
2809	3764	0F	16	28		LOKDD	LODA,R3	LDIMS-6	
2810	3767	20	16	20			LODA,R1	LDIMS-7	
2811	376A	80	16	20		LOKDF	ADDA,R1	LDIMS-7	
2812	376D	27	29				FPSL	WC	
2813	376F	4F	16	26			ADDA,R3	LDIMS-6	
2814	3772	25	20				CPSL	WC	
2815	3774	FA	74				ADRR,R2	LOKDF	
2816	3775	81	16	0E			ADDA,R1	LDIMS+4	
2817	3779	27	20				FPSL	WC	
2818	377B	5F	16	25			ADDA,R3	LDIMS+3	
2819	377E	25	09				CPSL	WC	
2820	3780	0F	1F	72			STRA,R3	IFMP	
2821	3783	0D	15	73			STRA,R1	LTIME-1	
2822	3786	0C	16	02			LODA,R0	LDIMS	
2823	3789	14	02				COMI,R2	2	
2824	378B	10	35	F2			BCTA,EC	LOKST2	
2825	378E	1F	35	04			BCTA,UN	LOKVE	
2826	3791								
2827	3791								
2828	3791	3F	46	40		FNEVAL	BSTA,UN	SKIPSP	
2829	3794	24	25				COMI,R0	1	
2830	3796	06	1A				BCTA,EC	FNRGT	
2831	3798	2C	14	52			LODA,R0	PARNST	
2832	379E	54	21				ADDI,R0	1	
2833	379D	0C	14	52			STRA,R0	PARNST	
2834	37A0	3F	35	67			BSTA,UN	POFLT	
2835	37A3	0B	10				STRR,R2	FNS	
2836	37A5	3F	35	60			BSTA,UN	POPLT	
2837	37A8	0B	18				STRR,R0	FNS+1	
2838	37AA	24	FF				LODI,R0	FF	
2839	37AC	3F	33	62			BSTA,UN	PUSHCP	
2840	37AF	1F	3E	F6			BCTA,UN	VAL2	
2841	37B2	2C	1E	16		FNRGT	LODA,R0	VALS	
2842	37B5	00	11	64			STRA,R0	INPT	
2843	37B8	02	1E	D9			LODA,R0	VALS-1	
2844	37BB	00	11	65			STRA,R0	INPT-1	
2845	37BE	24	21				LODI,R2	1	
2846	37C0	17					RETC,UN		
2847	37C1								
2848	37C1								
2849	37C1	22	22	22	22	FNS	PES	5	
2850	37C5	26							
2851	37C6								
2852	37C6								
2853	37C6	20	11	64		FPUS5	LODA,R0	INPT	
2854	37C9	00	1E	06			STRA,R0	VALS	
2855	37CC	20	11	65			LODA,R0	INPT+1	
2856	37CF	20	1E	19			STRA,R2	VALS+1	
2857	37D2	20	1E	19			LODR,R2	FNS	
2858	37D4	00	11	64			STRA,R0	INPT	
2859	37D7	20	1E	06			LODR,R2	FNS-1	
2860	37D9	11	11	65			STRA,R2	INPT+1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1881	3700	35	30	00		FNC	BSTA.UN	GETOPR	
1882	3700	35	31	00			BSTA.UN	CHKOP	
1883	3700	10	39	0A			BCTA.EC	UFERR	
1884	3700	14	39				COMI.R0		
1885	3700	04	73				BCTP.EC	FN2	
1886	3700	37	40	42			BSTA.UN	SKIPP	
1887	3700	14	30				COMI.R0		
1888	3700	30	34	0A			BCTA.EC	UFERR	
1889	3701	07	11	04			LODI.R0	INFT	
1890	3704	09	41				STRA.R0	FNS-0	
1891	3700	03	11	04			LODI.R0	INFT-1	
1892	3700	03	05				STRA.R0	FNS-3	
1893	3700	03	11	70			BSTA.UN	SINFT	
1894	3701	04	07				LODI.R0	FF	
1895	3701	07	00	2A		FNE	BSTA.UN	GETCHR	
1896	3701	07	00	2A			BSTA.UN	FNCTG-	
1897	3701	07	00	2A			COMI.R0	42	
1898	3702	05	47				BCTA.EC	UFERR	
1899	3702	10	05	0A			COMI.R0	CR	
1900	3702	14	05				BCTP.EC	FNE	
1901	3702	04	05				LODI.R0	2	
1902	3701	04	02				STRA.R0	FNSTG.I	
1903	3701	03	04	00			BSTA.UN	PINFT	
1904	3701	03	04	00			LODI.R0	3	
1905	3700	37	30	17		FN3	BSTA.UN	LFCPT	
1906	3700	37	30	17			BCTP.R0	FN3	
1907	3701	11	00	17		FN3A	BSTA.UN	LFCPT	
1908	3701	00	01	04			LODI.R0	*INFT	
1909	3704	14	00				COMI.R0		
1910	3700	10	07				BCTP.EC	FN4	
1911	3700	14	00				COMI.R0		
1912	3700	10	00				BCTP.EC	FNEND	
1913	3700	10	00				BCTP.UN	FN3A	
1914	3700	00				FN4	BCTP.R0		
1915	3700	10	00				BCTP.UN	FNE	
1916	3701	04	07			FNEND	LODI.R0	FF	
1917	3700	00	17	00		FNS	STRA.R0	FNS-4	
1918	3700	35	31	01			BSTA.UN	INCPY	
1919	3700	35	31	01			BSTA.UN	SCVAP	
1920	3700	11	00	0A			BCTA.R0	UFERR	
1921	3700	1A	31				BCTP.LT	FNCTR	
1922	3701	03	01	00			BSTA.UN	FCFPP	
1923	3700	00	00	10		FN1	LODI.R0	*SP	
1924	3700	00	00	10			COMI.R0	5	
1925	3700	14	00				BCTP.EC	FNDONE	
1926	3700	00	10	00			LODI.R0	FNS-4	
1927	3700	00	10	00			BCTA.EC	UFERR	
1928	3700	00	10	00			BSTA.UN	INCSF	
1929	3700	00	10	00		FN2	BSTA.UN	LFCPT	
1930	3700	00	01	04			LODI.R0	*INFT	
1931	3700	00	00				COMI.R0		
1932	3700	00	00				BCTP.EC	FN2	
1933	3700	10	00	10			BCTA.UN	FN3A	
1934	3700	00	17	00		FNDONE	LODI.R0	FNS-4	
1935	3704	10	24				BCTP.EC	UFERR	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2016	3800	04	20				LODI.R0	FNS-0	
2017	3800	07	11	04			STRA.R0	INFT	
2018	3800	04	07				LODI.R0	FNSTG	
2019	3800	07	11	05			STRA.R0	INFT-1	
2020	3800	10	05	00			BCTA.UN	VAL2	
2021	3801	00	00	30		FNSTR	STRA.R0	STMP-4	
2022	3800	00	00	31			STRA.R1	STMP-5	
2023	3800	00	00	1A			BSTA.UN	ZER	
2024	3800	00	00	17			LODI.R0	*SP	
2025	3801	04	01				COMI.R0	1	
2026	3801	00	40	70			BCTA.EC	TYERR	
2027	3804	00	00	34			BSTA.UN	STEG	
2028	3807	10	30	44			BCTA.UN	FND	
2029	380A					*			
2030	380A					*			
2031	380A	07	03			UFERR	LODI.R0	UFERR	
2032	3800	10	33	2E			BCTA.UN	ERROR	
2033	380F					*			
2034	380F					*			
2035	380F	00	00	00	00	FNSTG	RES	29	40 BYTE MAXIMUM
2036	3800	00	00	00	00				
2037	3807	00	00	00	00				
2038	3800	00	00	00	00				
2039	3800	00	00	00	00				
2040	3800	00	00	00	00				
2041	3807	00	00	00	00				
2042	3800	00	00	00	00				
2043	380F	00	00	00	00				
2044	3800	00	00	00	00				
2045	3807	00							
2046	3800					*			
2047	3800					*			
2048	3800	00				DPFND	RES	1	
2049	3800	00	00			ECSTG	RES	2	
2050	3800					*			
2051	3800					*			
2052	3800	00				ECONST	FORZ.R0		
2053	3800	00	7A				TRR.R0	DPFND	
2054	3801	00	7A				STRA.R0	ECSTG-1	
2055	3800	00	00				LODI.R0	0	
2056	3800	00	00	00		ECON1	STRA.R0	CRUFI-	
2057	3800	00	70				BPNR.R0	ECON1	
2058	3800	00	30	10			BSTA.UN	SKFIEC	
2059	3800	00	31	00			BSTA.UN	SINFT	
2060	3800	00	30	00			BSTA.UN	GETCHR	
2061	3800	14	20				COMI.R0		
2062	3800	10	3A	01			BCTA.EC	ESTR	
2063	3800	00	30	10			BSTA.UN	DIOPY	
2064	3800	00	00				LODI.R0	0	
2065	3800	00	00				LODI.R0	0	
2066	3800	00	00	00		ECON4	BSTA.UN	GETCHR	
2067	3800	00	00	00			COMI.R0		
2068	3801	00	00	00			BCTP.EC	ICON4	
2069	3800	00	00				BCTP.R0	DPFND	
2070	3800	10	3A	10			BCTA.LT	ICRPTN	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3271	3278	01	17	51			STRA,R2	CBUF1-1	
3272	3278	04	FF				LODI,R0	FF	
3273	3281	08	49				STRA,R0	DPFND	
3274	3281	5A	68				BNR,R2	ECONB	
3275	3281	3F	32	2E		ECONB	BSTA,UN	DECT	
3276	3284	14	12				COMI,R2	ECONA	
3277	3284	08	2F				ECTR,R2	67	
3278	3284	88	67				ADDI,R2		
3279	3284	08					IAR,R2		
3280	3285	1F	74				ECTR,UN	ECONB	
3281	3281	28				ECONA	LODI,R2		
3282	3282	1F	2A				ECTR,EC	ECONC	
3283	3282	04	5F				LODI,R2	F2	
3284	3282	00	13	57			STRA,R0	CBUF1	
3285	3282	00	13	51			STRA,R2	CBUF1-1	
3286	3282	26	90				LODI,R2	0	
3287	3284	3F	31	13		ECONC	BSTA,UN	DEOPT	
3288	3284	00	4T				ECTR,UN	ECONR	
3289	3284	3F	49	46		ECON4	BSTA,UN	CHKNUM	
3290	3284	0A	77				BCFR,EC	ECON5	
3291	3284	54	72				COMI,R2	0	
3292	3284	50	2F				ECTR,EC	ECON4A	
3293	3285	2F	18	35			LODA,R3	DPFND	
3294	3285	1A	KA				ECTR,LT	ECON4A	
3295	3281	5A	72				BNR,R2	ECON4A	
3296	3281	04	FF				LODI,R0	FF	
3297	3281	00	18	EA			STRA,R0	ECSTG-1	
3298	3284	1F	38	10			BSTA,UN	ECONB	
3299	3277	44	2F			ECON4A	ANTI,R2	F	
3300	3279	FF	01				TMI,R2	1	
3301	3283	18	29				ECTR,EC	ECON6	
3302	3283	18	2F				COMI,R1	5	
3303	3283	18	24				ECTR,EC	ECON6	
3304	3281	00					RRL,R0		
3305	3282	12					RRL,R0		
3306	3283	72					RRL,R0		
3307	3284	2F					RRL,R0		
3308	3285	01	73	53		ECON6	IORA,R1	CBUF1-3.1	
3309	3285	8E	57				ADLI,R2	67	
3310	3284	26					IAR,R2		
3311	3282	0F	05				COMI,R1	5	
3312	3282	10	39	DC			ECTR,EO	ECONB	
3313	3284	01	73	53			STRA,R1	CBUF1-3.1	
3314	3284	06	01				TMI,R2	1	
3315	3284	10	39	DC			BCTA,FC	ECONR	
3316	3284	10	38	DC			BIRA,R1	ECONB	
3317	3284	06	22			ECON5	COMI,R2	0	
3318	3284	00	12				PCFR,EQ	ECON5B	
3319	3284	00	18	EA			LODA,R0	ECSTG-1	
3320	3285	10	34	16			PCTA,EQ	ECRETW	
3321	3285	04	F2				LODI,R0	F0	
3322	3287	00	13	52			STRA,R0	CBUF1	
3323	3284	01	99				LODI,R0	99	
3324	3280	00	13	51			STRA,R2	CBUF1-1	
3325	3285	11	12				ECTR,UN	ECON	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3326	3281	20	18	88		ECON5B	LODA,R0	DPFND	
3327	3284	1A	F3				ECTR,LT	ECON5A	
3328	3285	03	13	51		ECON5A	STRA,R2	CBUF1-1	
3329	3289	3F	32	13			BSTA,UN	DEOPT	
3330	3280	3F	48	40			BSTA,UN	SKPSP	
3331	3281	E4	4A				COMI,R0	F	
3332	3271	16	2A				ECTR,EQ	ECON9	
3333	3271	3F	32	13		ECON	BSTA,UN	DEOPT	
3334	3276	04	13				LODI,R2	CBUF1	
3335	3278	03	52				LODI,R1	CBUF1	
3336	327A	07	02				LODI,R3	0	
3337	327C	17					BCTC,UN		
3338	327D	27				ECON5	ICRZ,R0		
3339	327E	00	18	89			STRA,R0	ECSTG	
3340	3281	3F	46	40			BSTA,UN	SKPSP	
3341	3284	F4	2E				COMI,R0	+	
3342	3286	10	2E				BCTR,EC	ECONB	
3343	3286	E4	2E				COMI,R0	+	
3344	328A	98	07				BCFR,EC	ECONA	
3345	328C	04	F2				LODI,R0	F0	
3346	328E	00	18	89			STRA,R0	ECSTG	
3347	3291	1F	03				ECTR,UN	ECONB	
3348	3283	3F	32	13		ECONA	BSTA,UN	DEOPT	
3349	3286	00	91	84		ECONB	LODA,R0	*INPT	
3350	3289	3F	45	48			BSTA,UN	CHKNUM	
3351	328C	98	55				BCFR,EQ	ECON	
3352	3291	3F	31	FD			BSTA,UN	INOPT	
3353	3291	44	0F				ANTI,R0	F	
3354	3293	C2					STRZ,R2		
3355	3294	00	91	84			LODA,R0	*INPT	
3356	3297	31	4F	48			BSTA,UN	CHKNUM	
3357	329A	98	08				BCFR,EQ	ECONC	
3358	32AC	3F	31	FD			BSTA,UN	INOPT	
3359	32AF	E2					RRL,R2		
3360	32B0	E2					RRL,R2		
3361	32B1	D2					RRL,R2		
3362	32B2	E2					RRL,R2		
3363	32B3	44	2F				ANTI,R0	F	
3364	32B5	02					ICRZ,R2		
3365	32B6	C2					STRZ,R2		
3366	32B7	00	18	89		ECONC	LODA,R0	ECSTG	
3367	32BA	EC	13	88			COMA,R0	CBUF1	
3368	32BC	98	10				BCFR,EQ	ECONC1	
3369	32BF	A6	66				ADDI,R2	66	
3370	32C1	01	13	51			ADIA,R2	CBUF1-1	
3371	32C4	96					IAR,R2		
3372	32C5	B5	01				TPSL	CRY	
3373	32C7	10	45	74			BCTA,EC	OVFER	
3374	32CA	03	13	51			STRA,R2	CBUF1-1	
3375	32CD	1B	27				ECTR,UN	ECON6	
3376	32CF	EF	13	51		ECONC1	COMA,R2	CBUF1-1	
3377	32D0	19	15				ECTR,ST	ECONC	
3378	32D4	1A	09				ECTR,LT	ECONC2	
3379	32D6	27					ECTR,R0		
3380	32D7	00	13	52			STRA,R0	CBUF1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3141	3A40	13	13	51			STRA,R0	CBUF1-1	
3142	3A41	13	17				BCTR,UN	ECONE	
3143	3A42	13	13	51		ECONC2	LODA,R0	CBUF1-1	
3144	3A43	13	13	51			SUBD,R0		
3145	3A44	13	13	51			TAR,R0		
3146	3A45	13	17	51			STRA,R0	CBUF1-1	
3147	3A46	13	21				BCTR,UN	ECONE	
3148	3A47	13	13	51		ECONC2	SUBA,R0	CBUF1-1	
3149	3A48	13	13	51			TAR,R0		
3150	3A49	13	13	51			TAR,R0	CBUF1-1	
3151	3A4A	13	13	51			LODA,R0	ECS G	
3152	3A4B	13	13	51			STRA,R0	CBUF1	
3153	3A4C	13	13	51		ECONC1	BSTA,UN	GETCHR	
3154	3A4D	13	13	51			BSTA,UN	CHKNUM	
3155	3A4E	13	13	51			BCTR,EC	ECPEFN	
3156	3A4F	13	13	51			BCTA,UN	FCCK	
3157	3A50					*			
3158	3A51					ESTR	LODI,R2	0	
3159	3A52	20	01	54		ESTR1	LODA,R0	*INFT	
3160	3A53	13	13	51			BCTA,LT	SYNFP	
3161	3A54	13	13	51			BSTA,UN	INCPT	
3162	3A55	14	01				COMI,R0	CF	
3163	3A56	14	01				BCTR,EC	ECPEFN	
3164	3A57	14	01				COMI,R0		
3165	3A58	14	01				BCTR,EC	ESTR2	
3166	3A59	14	01				BCTR,EC	ESTR1	
3167	3A5A	14	01			ECPEFN	BSTA,UN	PINFT	
3168	3A5B	14	01				BCTA,UN	BETNOT	
3169	3A5C	14	01			ESTR2	LODA,R0	STEMP	
3170	3A5D	14	01				LODA,R1	STEMP-1	
3171	3A5E	14	01				ADDI,R1	+	
3172	3A5F	14	01				PPSL	WC	
3173	3A60	14	01				ADDI,R0	P	
3174	3A61	14	01				CPSL	WC	
3175	3A62	14	01				LODI,R3	FF	
3176	3A63	14	01				BCTR,UN		
3177	3A64					LEN	ECU	5	
3178	3A65					LENG	ECU	8	
3179	3A66					CFST	ECU	66	
3180	3A67					BUN	LATA	PE	
3181	3A68					DTP	RES	2	
3182	3A69					CNTR	RES	1	
3183	3A6A					CPA	RES	1	
3184	3A6B					EXPA	RES	1	
3185	3A6C					SMAA	RES	1	
3186	3A6D	22	22	22	22	MANA	RES	LEN+1	
3187	3A6E	22	22	22	22				
3188	3A6F					OPB	RES	1	
3189	3A70					EX:2	RES	1	
3190	3A71					SHAB	RES	1	
3191	3A72	22	22	22	22	*MAB	RES	LEN+1	
3192	3A73	22	22	22	22	EXT	RES	LEN+1	
3193	3A74	22	22	22	22				
3194	3A75	22	22	22	22				

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3136	3A49	22				EEXP	RES	1	
3137	3A4A					*			
3138	3A4A					*			
3139	3A4A	24	3A			TRAN	LODI,R0	OPA	
3140	3A4B	25	31				LODI,R1	OPA	
3141	3A4C	3F	31	55			BSTA,UN	POFFP	
3142	3A4D	24	3A				LODI,R0	OPB	
3143	3A4E	25	3A				LODI,R1	OPB	
3144	3A4F	3F	31	55			BSTA,UN	POFFP	
3145	3A50	22					FORZ,R0		
3146	3A51	00	1A	39			STRA,R0	MANA-LEN	
3147	3A52	25	25				LODI,R1	LENG	
3148	3A53	01	5A	42		TRAN2	STRA,R1	MANB-LEN.-	
3149	3A54	01	5A	7B			BNR,R1	TRAN2	
3150	3A55	17					RETC,UN		
3151	3A56					*			
3152	3A56					*			
3153	3A56	3F	64			FPSUB	BSTR,UN	TRAN	
3154	3A57	01	1A	33			LODA,R3	OPA-2	
3155	3A58	27	F0				FORI,R3	F0	CHG SIGN
3156	3A59	01	1A	33			STRA,R3	OPA-2	
3157	3A5A	13	0E				BCTR,UN	DA2	
3158	3A5B	00	00	D7		FPADD	LODA,R0	*SP	
3159	3A5C	14	01				COMI,R0	1	
3160	3A5D	10	30	D6			BCTA,EC	ADDSTR	
3161	3A5E	3F	3A	4A			BSTA,UN	TRAN	
3162	3A5F	01	1A	33			LODA,R3	OPA-2	
3163	3A60	27	28			DA2	PPSL	WC	
3164	3A61	25	01				CPSL	CPY	
3165	3A62	0D	1A	3A			LODA,R1	OPB	
3166	3A63	1E	1A	31			COMA,R1	OPA	
3167	3A64	18	16				BCTR,EC	DA6	
3168	3A65	59	0F			DA3	ERNR,R1	DA5	
3169	3A66	04	3A			DA7	LODI,R0	OPA	
3170	3A67	05	31				LODI,R1	OPA	
3171	3A68	26	08			DA4	LODI,R2	LENG	
3172	3A69	3F	30	92			BSTA,UN	SHFR	
3173	3A6A	3F	30	80			BSTA,UN	INCR	
3174	3A6B	11	64				BCTR,UN	DA2	
3175	3A6C	04	3A			DA5	LODI,R0	OPB	
3176	3A6D	05	3A				LODI,R1	OPB	
3177	3A6E	1E	72				BCTR,UN	DA4	
3178	3A6F	0C	1A	3F		DA6	LODA,R0	EIPB	
3179	3A70	1C	1A	32			COMA,R0	EXPA	
3180	3A71	19	62				BCTR,GT	DA3	
3181	3A72	1E	24				BCTR,EC	DA00	
3182	3A73	05	62				ERNR,R1	DA7	
3183	3A74	1E	20				BCTR,UN	DA5	
3184	3A75	0C	1A	33		DA0	LODA,R0	SMAA	
3185	3A76	1F	1A	30			COMA,R3	SHAB	
3186	3A77	09	11				BCTR,EC	DA1	
3187	3A78	3E	2F				BSTR,UN	ADD	
3188	3A79	25	29				LODI,R2	LENG-1	
3189	3A7A	24	3A				LODI,R0	OPB	
3190	3A7B	25	3A				LODI,R1	OPB	

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LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3161	3A5E	2F	3C	02			STA,UN	SHFP	
3162	3A61	3F	3C	00			ESTA,UN	INCR	
3163	3A64	1F	3F	45			ECTA,UN	RDY	
3164	3A6D	7C	21			DAT1	PFSL	CRY	CLEAR BOPROW
3165	3A6C	3E	32				BSTR,UN	COMP	
3166	3A6E	1F	2E				BCTR,LT	DAT2	
3167	3A6D	3F	32				ESTP,UN	SUB	
3168	3A6F	1F	3F	45			PCTA,UN	RDY	
3169	3A6C	0F	1A	3C		DAD2	STPA,R3	SPAB	
3170	3A6F	0F	2F				LODI,R2	LEN-1	
3171	3A70	4F	5A	34		DAD3	LOTA,R2	MANA,1	
3172	3A7A	A1	7A	3D			SUPA,R2	MANB,1	
3173	3A71	54					DAP,R0		
3174	3A7F	0F	7A	31			STRA,R2	MANP,1	
3175	3A71	5A	74				BHRN,R2	DAD3	
3176	3A7F	1F	3F	45			ECTA,UN	RDY	
3177	3A7E					*			
3178	3A7E					*			
3179	3A7E	75	01			ADD	CPSL	CRY	
3180	3A7E	0E	2C				LODI,R1	0	
3181	3A7E	0E	2E				LODI,R2	LEN-1	
3182	3A7C	51				ADD1	FRP,R1		
3183	3A71	0E	5A	3D			LODA,R2	MANB,-	
3184	3A7F	04	66				ADTI,R2	66	
3185	3A7F	11					FRP,R1		
3186	3A7D	04	7A	34			ADDA,R2	MANA,1	
3187	3A7E	04					DAP,R0		
3188	3A7F	0F	7A	3D			TRA,R2	MANB,1	
3189	3A7A	0A	72				BHRN,R2	ADD1	
3190	3A7E	17					RETC,UN		
3191	3A7E					*			
3192	3A7E					*			
3193	3A7E	0C	FA			COMP	LODI,R2	0-LEN-1	
3194	3A7F	0F	79	43		COM1	LODA,R2	MANB-100-LEN+1,1	
3195	3A7C	1E	79	3A			COMA,R2	MANA-102-LEN+1,1	
3196	3A7E	0A	R2				BCTR,EC	COM2	
3197	3A7F	0A	7E				FIFP,R2	COM1	
3198	3A7E	17				COM2	RETC,UN		
3199	3A7A					*			
3200	3A7A					*			
3201	3A7A	77	01			SUB	PFSL	CRY	
3202	3A7C	0E	26				LODI,R2	LEN-1	
3203	3A7C	0E	5A	3D		SUB1	LODA,R2	MANB,-	
3204	3E11	A1	7A	34			SUPA,R2	MANA,1	
3205	3E14	04					TAP,R2		
3206	3E15	0E	7A	3D			STRA,R2	MANP,1	
3207	3E18	0A	74				BHRN,R2	SUB1	
3208	3E1A	17					RETC,UN		
3209	3E1E					*			
3210	3E1E					*			
3211	3E1E	07	2E			DIV	LODI,R3	LEN-LEN+1	
3212	3E1E	07	20			DIV1	LODI,R1	0	
3213	3E1E	07	2C			DIV2	PFSTR,UN	COMP	
3214	3E1E	07	2C				BCTR,LT	DIV3	
3215	3E21	1A	07				BSTR,UN	SUB	
3216	3E23	0E	0E						

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LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3246	3E25	05	66				ADDI,R1	66	
3247	3E27	95					DAR,R1		
3248	3E28	1E	7E				BCTR,UN	DIV2	
3249	3E2A	8D	1A	46		DIV3	ADDA,R1	MANB-LEN+LEN-1	
3250	3E2D	0D	1A	46			STRA,R1	MANB-LEN+LEN+1	
3251	3E30	04	3A				LODI,R0	OPB	
3252	3E32	05	3A				LODI,R1	OPB	
3253	3E34	06	0F				LODI,R2	LENG+LEN-2	
3254	3E36	3F	3E	9C			BSTA,UN	SHFP	
3255	3E39	FB	62				BDRP,R3	DIV1	
3256	3E3E	3F	3C	0E			ESTA,UN	INCR	
3257	3E31	07	0E				LODI,R3	LEN-LEN-1	
3258	3E40	3F	3E	A5		DIV4	ESTA,UN	SFL	
3259	3E43	7E	7E				BTRP,R3	DIV4	
3260	3E45	04	3A			RDY	LODI,R0	OPB	
3261	3E47	05	3A				LODI,R1	OPB	
3262	3E49	06	0A				LODI,R2	LENG+2	
3263	3E4B	0E	13				BSTR,UN	NORM	
3264	3E4D	3F	3C	7A			BSTA,UN	RND	
3265	3E49	0C	1A	49			LODA,R0	EEXP	
3266	3E51	0C	4F	74			BCTA,EC	OVFER	
3267	3E56	04	02				LODI,R2	2	
3268	3E58	93					LFSL		
3269	3E59	04	3A				LODI,R0	CPB	
3270	3E5B	05	3A				LODI,R1	OPB	
3271	3E5D	1F	31	38			ECTA,UN	PUSHFP	
3272	3E60					*			
3273	3E60					*			
3274	3E62	0F	1A	3D		NORM	STRA,R2	CNTR	
3275	3E63	0C	1A	2K		NRM2	STRA,R0	PTR	
3276	3E66	0C	1A	2F			STRA,R1	PTR+1	
3277	3E69	07	02				LODI,R3	0	
3278	3E6B	05	02				LODI,R1	2	
3279	3E6D	75	01				CPSL	CRY	
3280	3E6F	21	EA	21		NRM1	LODA,R1	*PTR+	
3281	3E72	9A	19				BCTR,EC	NRM2	
3282	3E74	07	02				ADDI,R3	2	
3283	3E76	1F	0E				COMI,R1	LENG	
3284	3E78	96	75				BCTR,EC	NRM1	
3285	3E7A	01					STRA,R1		
3286	3E7B	04	FE				LODI,R0	FE	
3287	3E71	0C	9A	2E			STRA,R0	*PTR	
3288	3E62	04	29				LODI,R0	99	
3289	3E62	0C	EA	2E			STRA,R1	*PTR+	
3290	3E65	0E					ICR2,R0		
3291	3E66	0C	EA	2E			STRA,R1	*PTR+	
3292	3E69	0C	1A	49			STRA,R0	ELIP	
3293	3E6C	17					RETC,UN		
3294	3E6C					*			
3295	3E6C					*			
3296	3E6C	44	FE			NRM2	ANDI,R2	FE	
3297	3E61	9B	02				BCTR,EC	NRM3	
3298	3E61	07	01				ADTI,3	1	
3299	3E63	03				NRM3	LODZ,R3		
3300	3E64	14					RETC,EC		

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LINE	ADDR	E1	E2	E3	E4	LABE1	OPCODE	OPERAND	COMMENTS
3371	3E05	75	0E			NRM4	BSTR.UN	SFL	
3372	3E07	78	21				BSTR.UN	DECR	
3373	3E08	7E	7A				BIRR.R3	NRM4	
3374	3E09	10					BETC.UN		
3375	3E0C					*			
3376	3E0C					*			
3377	3E0D	0E	1A	32		SHFL	STRA.R2	CNTR	
3378	3E0F	0C	1A	2E		SFL3	STRA.R0	PTR	
3379	3E10	0D	1A	2F			STRA.R1	PTR-1	
3380	3E11	2E	2A			SFL	LODI.R1	4	
3381	3E17	2E	1A	32		SFL1	LODA.R2	CNTR	
3382	3E1A	0E	0E				CFSL	CRY	
3383	3E1C	2E	1A	2E		SFL2	LODA.R2	*PTR,-	
3384	3E1F	0C	FA	2E			PRL.R2		
3385	3E1F	0C	FA	2E			STRA.R2	*PTR,I	
3386	3E23	0E	0E				COM1.R2	3	
3387	3E24	0E	7E				BCTR.EC	SHL2	
3388	3E27	0E	6E				BSTR.R1	SFL1	
3389	3E29	17					BETC.UN		
3390	3E2A					*			
3391	3E2A					*			
3392	3E2A	2D	9A	2E		DFOR	LODA.R1	*PTR,+	
3393	3E2C	2E	9A	2E			LODA.R2	*PTR	
3394	3E2E	1E	2A				BCTR.EC	DEC3	
3395	3E2E	04	67			DEC1	ADDI.R2	67	
3396	3E34	04					DAR.R2		
3397	3E35	1C	4E	74			BCTR.EC	OVFER	
3398	3E38	1C	7	2E		DEC2	STRA.R1	*PTR,I	
3399	3E38	17					BETC.UN		
3400	3E38	5E	0E			DEC3	BRNR.R2	DEC5	
3401	3E3C	10	1A	49			COMA.R2	EXIP	
3402	3E3D	0E	0E				BCTR.EC	DEC4	
3403	3E3D	2E	0E				LODI.R2	F2	
3404	3E3E	0E	9A	2E			STRA.R2	*PTR	
3405	3E40	1E	6E				BCTR.UN	DEC1	
3406	3E40	0C	1A	49		DEC4	STRA.R2	EXIP	
3407	3E41	A4	0E			DEC5	SUBI.R2	0	
3408	3E47	0E	94				DAR.R2		
3409	3E47	1B	6E				BCTR.UN	DEC2	
3410	3E48					*			
3411	3E48					*			
3412	3E48	3E	3A	4A		FPIV	BSTA.UN	TRAN	
3413	3E4B	2E	1A	31			LODA.R2	OPA	
3414	3E4B	2E	F0				ECPI.R2	F2	
3415	3E4C	0E	1A	31			STRA.R2	OPA	
3416	3E4E	27	0E				LODI.R3	0B	
3417	3E4F	1E	0E				BCTR.UN	DM1	
3418	3E51	3E	3A	4A		PFMULT	BSTA.UN	TRAN	
3419	3E54	2E	1A	31			LODA.R2	OPA	
3420	3E54	2E	1A	31			LODI.R3	0	
3421	3E57	0E	0E			DM1	PFSL	WC-CRY	
3422	3E58	0E	7E				LODI.R3		
3423	3E5C	1E	0E				BCTR.EC	DM2	
3424	3E5E	0C	1A	34			LODA.R2	MANA	
3425	3E5E	10	4E	74			BCTR.EC	OVFER	

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LINE	ADDR	E1	E2	E3	E4	LABE1	OPCODE	OPERAND	COMMENTS
3356	3C24	0C	1A	3C		DM2	LODA.R2	SMAB	
3357	3C27	0C	1A	33			COMA.R2	SMAA	
3358	3C2A	1E	04				BCTR.EC	IM3	
3359	3C2C	04	F0				LODI.R2	F0	
3360	3C2E	1E	0E				BCTR.UN	DM4	
3361	3C10	2E				DM3	BSTR.R2		
3362	3C11	0C	1A	3C		DM4	TR1.R2	SMAB	
3363	3C14	0E	1A	3A			COMA.R2	OPB	
3364	3C17	0E	0E				BCTR.EC	DMU	
3365	3C16	2C	1A	32			LODA.R2	EXPA	
3366	3C1C	04	6E				ADDI.R2	6E	
3367	3C1E	0C	1A	3B			ADDA.R2	EXPB	
3368	3C21	04					DAR.R2		
3369	3C22	F1					RL.R1		
3370	3C23	1B	1E				BCTR.UN	DMU4	
3371	3C25	0C	1A	3B		DMU	LODA.R2	EXFB	
3372	3C28	0C	1A	32			COMA.R2	EXPA	
3373	3C2B	19	0C				BCTR.GT	DMU2	
3374	3C2D	0E	22				BCTR.EC	DMU1	
3375	3C2F	0E	0E				LODI.R2	0	
3376	3C31	0C	1A	32		DMU1	LODA.R2	EXPA	
3377	3C34	AC	1A	3B			SUBA.R2	EXPB	
3378	3C37	1B	0E				BCTR.UN	DMU3	
3379	3C39	0E	1A	3A		DMU2	LODA.R2	OPE	
3380	3C3C	AC	1A	32			SUBA.R2	EXPA	
3381	3C3F	04				DMU3	DAR.R2		
3382	3C40	0E	1A	3A			STRA.R2	OPB	
3383	3C43	0C	1A	3B		DMU4	STRA.R2	EXFB	
3384	3C46	0C	1A	49			STRA.R1	EXFP	
3385	3C49	7E	F1				CFSL	CRY	
3386	3C4B	04	3A				LODI.R2	OPA	
3387	3C4D	0E	31				LODI.R1	OPA	
3388	3C4F	0E	0E				LODI.R2	LENG	
3389	3C51	3E	37				BSTR.UN	SEVB	
3390	3C53	57	3E	1E			BRNA.F3	DIV	
3391	3C56	77	0E			MUL	LODI.R3	LEN-LEN+2	
3392	3C59	04	3A			MUL1	LODI.R2	OPB	
3393	3C5A	2E	3A				LODI.R1	CPB	
3394	3C5C	0E	0E				LODI.R2	LENG-LEN+1	
3395	3C5E	3B	32				BSTR.UN	SEVR	
3396	3C60	F5	7E				BSTR.F3	MUL1	
3397	3C62	07	0A				LODI.R3	LEN-LEN	
3398	3C64	3E	3E			MUL2	BSTR.UN	SHF	
3399	3C66	0C	1A	4E		MUL3	LODA.R2	MANB-LEN-LEN+1	
3400	3C69	1E	0A				BCTR.EC	*UL4	
3401	3C6E	A4	0E				SUBI.R2	F	
3402	3C6D	0C	1A	4B			STRA.R2	MANB-LEN-LEN+1	
3403	3C70	3E	3A	1E			BSTA.UN	ACC	
3404	3C73	1E	71				BCTR.UN	MUL3	
3405	3C75	FB	6D			MUL4	BSTR.R3	MUL2	
3406	3C77	1E	3B	4E			BCTR.UN	RDY	
3407	3C7A					*			
3408	3C7A					*			
3409	3C7A	0C	1A	2D		RND	LODA.R2	ROUN	
3410	3C7E	0E	0E				LODI.F1	LEN-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3411	3C7F	01	5A	3D		RND1	ADDA,R1	MANB,-	
3412	3C87	04					DAR,R2		
3413	3C83	0D	7A	3D			STPA,R1	MANB,I	
3414	3C86	04	66				LODI,R2	OFST	
3415	3C88	09	75				BRNR,R1	RND1	
3416	3C8A	05	01				TPSL	CRY	
3417	3C8C	16					PETC,LT		
3418	3C8D	03	PC				PSTR,UN	SHF	
3419	3C8F	0B	1F				PSTR,UN	INCR	
3420	3C91	17					PETC,UN		
3421	3C92					*			
3422	3C92					*			
3423	3C92	01	1A	3D		SHFR	STRA,R2	CNTR	
3424	3C97	0C	1A	2E		SHF0	STRA,R2	PTR	
3425	3C98	07	1A	2F			STRA,R1	PTR+1	
3426	3C99	05	04			SHF	LODI,R1	4	
3427	3C91	06	02			SHF1	LODI,R2	2	
3428	3C91	21	2A	2E		SHF2	LODA,R2	*PTR,+	
3429	3C92	52					RRR,R2		
3430	3C9A	0F	FA	2E			STRA,R2	*PTR,I	
3431	3C9E	15	1A	3D			COMA,R2	CNTR	
3432	3C9C	04	74				BCFR,EO	SHF2	
3433	3C9B	05	01				CPSL	CRY	
3434	3C9D	05	6E				ETRR,R1	SHF1	
3435	3C9F	17					PETC,UN		
3436	3C9E					*			
3437	3C9E					*			
3438	3C9E	0E	EA	2E		INCR	LODA,R1	*PTR,+	
3439	3C93	02	9A	2E			LODA,R2	*PTR	
3440	3C96	09	2E				PCFR,EO	INC2	
3441	3C98	04	67				ADDI,R2	67	
3442	3C9A	04					DAR,R2		
3443	3C99	0F	05				BCFR,EO	INC1	
3444	3C9D	05	01				LODI,R1	1	
3445	3C9F	0C	1A	49			STPA,R1	EEXP	
3446	3C92	01	FA	2E		INCL	STRA,R1	*PTR,I	
3447	3C9E	17					PETC,UN		
3448	3C9E	08	03			INCL	BRNR,R2	INC3	
3449	3C9B	0C	1A	49			STRA,R2	EEXP	
3450	3C9E	A4	22			INCL	SUBI,R2	0	
3451	3C9D	04					DAR,R2		
3452	3C91	06	72				BRNR,R2	INC1	
3453	3C92	0C	9A	2E			STRA,R2	*PTR	
3454	3C93	15	6D				CTPR,UN	INC1	
3455	3C95					*			
3456	3C95					*			
3457	3C91	27				ADDSTS	RES	1	
3458	3C96					*			
3459	3C96					*			
3460	3C96	3F	4E	E4		ADDSTR	BSTA,UN	PFSTRS	
3461	3C9E	3F	30	B1			BSTA,UN	INCSP	
3462	3C9D	07	01				COMI,R3	1	
3463	3C9E	0C	45	7C			PCFA,EO	TYPB	
3464	3C91	3F	32	B1			BSTA,UN	INCSP	
3465	3C94	02					LODZ,R2		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3466	3C9F	03					ADDZ,R3		
3467	3C96	05	21				TPSL	CRY	
3468	3C98	06	0E				BCFR,EO	ADDST2	
3469	3C9A	04	FF				LODI,R2	FF	
3470	3C9C	A3					SUBZ,R3		
3471	3C9D	C2					STRZ,R2		
3472	3C9F	04	FF				LODI,R2	FF	
3473	3C9E	0C	1C	E5		ADDST2	STRA,R2	ADDSTS	
3474	3C93	3F	40	ED			BSTA,UN	PHSTRS	
3475	3C96	3F	30	B1			BSTA,UN	INCSP	
3476	3C95	3F	30	B1			BSTA,UN	INCSP	
3477	3C9C	0F	1C	D6			BSTA,R3	ADDSTS	
3478	3C9F	3F	32	D9			BSTA,UN	DECSP	
3479	3D02	07	01				LODI,R3	1	
3480	3E04	1F	30	D9			BCTA,UN	DECSP	
3481	3D07					*			
3482	3D07					*			
3483	3E07	3F	40	E4		STCOMP	BSTA,UN	COMSTR	
3484	3E0A	1B	10				BCTR,UN	FPCM2	
3485	3D0C					*			
3486	3D0C					*			
3487	3D0C	0B	15			FPCOMP	STRR,R3	COMPS	
3488	3E0E	0C	90	D7			LODA,R2	*SP	
3489	3E11	90	74				BCFR,EO	STCOMP	
3490	3E13	3F	45	E7			BSTA,UN	POFC2	
3491	3E16	3F	45	E9			BSTA,UN	PCPC1	
3492	3E15	3F	30	02			BSTA,UN	COMMON	
3493	3E1C	0F	7D	28		FPCM2	LODA,R3	COMPTB,I	
3494	3E1F	40	06				AMDR,R2	COMPS	
3495	3E21	0C	45	B3			BCTA,EO	PUSHM1	
3496	3E24	1F	45	BA			BCTA,UN	PUSH0	
3497	3E27					*			
3498	3E27					*			
3499	3E27	02				COMPS	RES	1	
3500	3E29	20	10	02		COMPTP	DATA	20,10,0	
3501	3E2B					*			
3502	3E2B					*			
3503	3E2E	0C	14	92		FPCOM	LODA,R2	PARNST	
3504	3E2F	1C	34	E7			BCTA,EO	ERPAB1	
3505	3D31	3F	33	93		FPCOM1	BSTA,UN	POF P	
3506	3D34	E4	02				COMI,RT	2	
3507	3E35	1C	04				BCTR,OT	FPCOM2	
3508	3E35	3F	34	B9			BSTA,UN	DOOP	
3509	3E3E	1B	74				BCTR,UN	FPCOM1	
3510	3E35	3F	33	6E		FPCOM2	BSTA,UN	PUSHOP	
3511	3E40	07	05				LODI,R3	5	
3512	3E47	3F	32	D6			BSTA,UN	DECSP	
3513	3E45	1F	33	AF			BCTA,UN	IVAL2	
3514	3E4E					*			
3515	3E4E					*			
3516	3E48	3F	45	D9		FPCOM	BSTA,UN	POPC1	
3517	3E49	0C	13	53			LODA,R2	CBUF1-3	
3518	3E4E	1C	45	FA			BCTA,EO	PUSH0	
3519	3E51	2C	13	52			LODA,R2	CBUF1-2	
3520	3E54	1F	45	B3			BCTA,LT	PUSRM1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPEPAND	COMMENTS
3521	3157	1F	45	AC			BCTA,UN	PUSH1	
3522	3158					*			
3523	3159					*			
3524	315A	3F	45	I9		FFAPS	BSTA,UN	POPC1	
3525	315B	00	13	52			FORZ,R0		
3526	315C	00	13	52			TPA,R2	CBUF1-2	
3527	315D	1F	45	I9			BCTA,UN	PUSHC1	
3528	315E					*			
3529	315F					*			
3530	3160	3F	45	D9		FFPOS	BSTA,UN	POPC1	
3531	3161	3F	24	AC			BSTA,UN	GETDIS	
3532	3162	01					STRZ,R1		
3533	3163	22					FORZ,R0		
3534	3164	1F	3D	FA			BCTA,UN	BTOD	
3535	3165					*			
3536	3166					*			
3537	3167	3F	45	D9		FFFIX	BSTA,UN	POPC1	
3538	3168	00	13	52		FIX0	LODA,R2	CBUF1	
3539	3169	1E	45	FA			BCTA,LT	PUSH0	
3540	3170	21	13	51			LODA,R1	CBUF1-1	
3541	3171	2E	29				COMI,R1	9	
3542	3172	17	45	I9			BCTA,GT	PUSHC1	
3543	3173	26	2F				LODI,R2	8	
3544	3174	24	12				LODI,R0	12	
3545	3174	A1					SUBZ,R1		
3546	3175	94					DAR,R0		
3547	3176	01					STRZ,R1		
3548	3177	25	71			FIX1	COMI,R1	1	
3549	3178	19	21				BCTP,GT	FIX2	
3550	3179	1E	45	F2			BCTA,LT	PUSHC1	
3551	317A	24	12				LODI,R2	12	
3552	3180	4E	53	50			ANDA,R2	CBUF1,-	
3553	3181	01	73	50			STRZ,R2	CBUF1,I	
3554	3182	1E	45	F2			BCTA,UN	PUSHC1	
3555	3183	A5	82			FIX2	SUBI,R1	2	
3556	3184	22					FORZ,R0		
3557	3185	01	53	50			STRZ,R2	CBUF1,-	
3558	3186	1E	66				BCTP,UN	FIX1	
3559	31A1					*			
3560	31A1					*			
3561	3DA1	3F	45	I9		FPLPCS	BSTA,UN	POPC1	
3562	3DA4	2D	22	A1			LODA,R1	LPOS	
3563	3DA7	22					FORZ,R2		
3564	3DAB	1F	3D	FA			BCTA,UN	BTOD	
3565	3DAB					*			
3566	3DAB					*			
3567	3DAF	3F	45	I9		FFINT	BSTA,UN	POPC1	
3568	3DAE	00	13	52			LODA,R2	CBUF1-2	
3569	3DB1	10	3D	72			BCTA,IQ	FIX0	
3570	3DB4	26	0A				LODI,R2	A	
3571	3DB6	00	13	52			LODA,R2	CBUF1	
3572	3DB9	1A	2E				BCTP,LT	FFINT2	
3573	3DBF	2F	13	51			LODA,R3	CBUF1-1	
3574	3DB1	1E	29				BCTP,IQ	FFINT2	
3575	3DB2	17	29				COMI,R3	9	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPEPAND	COMMENTS
3576	3DC2	1F	45	I9			BCTA,GT	PUSHC1	
3577	3DC5	04	0A				LODI,R2	A	
3578	3DC7	A3					SUBZ,R3		
3579	3DC8	C2					STRZ,R2		
3580	3DC9	07	28			FPINT2	LODI,R3	8	
3581	3DCB	2F	53	52		FPINT4	LODA,R3	CBUF1,-	
3582	3DCE	16	01				COMI,R2	1	
3583	3DD0	1E	45	I9			BCTA,LT	PUSHC1	
3584	3DD3	19	27				BCTR,GT	-FPINT3	
3585	3DD5	44	2F				ANDI,R0	F	
3586	3DD7	98	28				BCTR,EC	FPINT5	
3587	3DD8	1F	45	I9			BCTA,UN	PUSHC1	
3588	3DDC	A6	02			FPINT3	SUBI,R2	2	
3589	3DDE	02					LODZ,R2		
3590	3DDF	16	5A				BCTR,EC	FPINT4	
3591	3DE1	3F	45	F0		FPINT5	BSTA,UN	PUSHC1	
3592	3DE4	3F	45	AC			BSTA,UN	PUSH1	
3593	3DE7	3F	3A	64			BSTA,UN	FFSUB	
3594	3DEA	1F	3D	EF			BCTA,UN	FFFIX	
3595	3DED					*			
3596	3DED					*			
3597	3DED	3F	45	D9		FPERR	BSTA,UN	POPC1	
3598	3DF0	01	05	18			LODA,R1	ERRTYP	
3599	3DF3	20					FORZ,R0		
3600	3DF4	1F	3D	FA			BCTA,UN	BTOD	
3601	3DF7					*			
3602	3DF7	00	02	00					
3603	3DF7	00	02	00		BTODS	RES	3	
3604	3DFA					*			
3605	3DFA					*			
3606	3DFA	C2				BTOD	STRZ,R2		
3607	3DFB	01					LODZ,R1		
3608	3DFC	C3					STRZ,R3		
3609	3DFE	22					FORZ,R0		
3610	3DFE	C8	77				STRR,R2	BTODS	
3611	3E00	C8	76				STRR,R0	BTODS-1	
3612	3E22	C8	75				STRR,R2	BTODS-2	
3613	3E24	05	12				LODI,R1	12	
3614	3E25	28	71			BTOD2	LODR,R0	BTODS-2	
3615	3E28	84	66				ADDI,R0	66	
3616	3E2A	86	6D				ADDR,R2	BTODS-2	
3617	3E2C	94					DAR,R2		
3618	3E2C	C8	6A				STRR,R0	BTODS-2	
3619	3E2F	77	28				FFSL	WC	
3620	3E31	09	64				LODR,R2	BTODS-1	
3621	3E33	64	6E				ACTI,R2	6E	
3622	3E35	68	61				ADDR,R2	BTODS-1	
3623	3E37	04					DAR,R2		
3624	3E38	0F	5E				STRR,R2	BTODS-1	
3625	3E3A	08	53				LODR,R2	BTODS	
3626	3E3C	04	66				ADDI,R2	66	
3627	3E3E	02	57				ADDR,R0	BTODS	
3628	3E40	14					DAR,R2		
3629	3E41	19	54				STRR,R2	BTODS	
3630	3E43	75	02				CPCL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3631	3125	F6	R2				TMI,R2	B0	
3632	3127	08	1A				BCFR,EQ	BTOD3	
3633	3129	24	67				LODI,R0	67	
3634	312B	80	4C				ADDR,R0	BTODS+2	
3635	312E	04					TAR,R0		
3636	3131	08	46				STRR,R0	BTODS+2	
3637	3133	77	28				FPFL	WC	
3638	3132	04	66				LODI,R0	66	
3639	3134	08	47				AIFF,R2	BTODS-1	
3640	3136	04					DAR,R0		
3641	3137	00	1D	F8			STRA,R0	BTODS-1	
3642	313A	04	66				LODI,R0	66	
3643	313C	80	1D	F7			ADDA,R0	BTODS	
3644	313F	04					TAR,R0		
3645	3142	00	1D	F7			STRA,R0	BTODS	
3646	3143	77	2E			BTOD3	FPFL	WC	
3647	3145	D3					RRL,R3		
3648	3146	D2					RRL,R2		
3649	3147	77	0E				CPSL	WC	
3650	3149	F1	3E	26			EDPA,R1	BTOD2	
3651	314C	27					FORZ,R0		
3652	314C	01	00				LODI,R1	B	
3653	314F	01	53	50		BTOD4	STRA,R1	CBUF1-	
3654	3150	59	75				BRNR,R1	BTOD4	
3655	3154	00	11	F7			LODA,R0	BTODS	
3656	3157	00	13	53			STRA,R0	CBUF1+3	
3657	315A	00	11	F6			LODA,R0	BTODS+1	
3658	3157	00	13	54			STRA,R0	CBUF1+4	
3659	3162	00	11	F6			LODA,R0	BTODS+2	
3660	3163	00	13	55			STRA,R0	CBUF1+5	
3661	316E	24	26				LODI,R0	6	
3662	3168	00	13	51			STRA,R0	CBUF1+1	
3663	3163	04	33				LODI,R0	CBUF1	
3664	3161	0E	50				LODI,R1	CBUF1	
3665	316F	26	26				LODI,R2	B	
3666	3171	77	00				FPFL	WC	
3667	3173	3F	3E	60			BSTA,UN	WORM	
3668	3176	75	28				CPSL	WC	
3669	3178	24	33				LODI,R0	CBUF1	
3670	317A	25	50				LODI,R1	CBUF1	
3671	317C	1F	31	78			BCTA,UN	PUSHFP	
3672	317F						*		
3673	317F						*		
3674	317F	17	2E	A1		ENSX	BCTA,UN	ENS2	
3675	3182						*		
3676	3182						*		
3677	3182	00	00			CALLS	RES	2	
3678	3184						*		
3679	3184						*		
3680	3184	3F	3E	7E		FPCALL	BSTA,UN	ENSX	
3681	3187	06	70				STRP,R0	CALIS	
3682	3189	08	78				STRP,R1	CALIS+1	
3683	3183	2C	00	17			LODA,R0	*SP	
3684	318E	E4	05				COMI,R0	5	
3685	3192	08	26				BCFR,EQ	CALL2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3686	3192	3F	3E	B1			BSTA,UN	INCSP	
3687	3195	3F	3E	7F			BSTA,UN	ENSX	
3688	3198	3F	3E	82		CALL2	BSTA,UN	*CALLS	
3689	319B	1F	3D	FA			BCTA,UN	BTOD	
3690	319F						*		
3691	319F						*		
3692	3191	07				TYP3SP	RES	1	
3693	319F	02	00	00	20	STR5S	RES	11	
3694	31A3	02	00	00	20				
3695	31A7	02	00	00	20				
3696	31AA	22	00	00	00				
3697	31AF	02							
3698	31B2						*		
3699	31B2						*		
3700	31B0	04	01			FPSTR	LODI,R0	1	
3701	31B2	00	22	A2			STRA,R2	PTYPE	
3702	31B5	04	FF				LODI,R0	FF	
3703	31E7	09	65				STRR,R0	TYP3SP	
3704	31B9	06	11				LODI,R2	11	
3705	31BB	20					EORZ,R0		
3706	31BC	0F	5E	9F		STZ2	STRA,R2	STR5S.-	
3707	31BF	5A	7E				BRNR,R2	STZ2	
3708	31C1	3F	23	29			BSTA,UN	FRNTF	
3709	31C4	06	11				LODI,R2	11	
3710	31C6	0E	5E	5F		STZ3	LODA,R2	STR5S.-	
3711	31C9	98	04				BCFR,EQ	STZ4	
3712	31CB	5A	79				BRNR,R2	STZ3	
3713	31CD	A6	01				SUBI,R2	1	
3714	31CF	86	01			STZ4	ADDI,R2	1	
3715	31D1	04	3E				LODI,R0	STR5S	
3716	31D3	05	9F				LODI,R1	STR5S	
3717	31D5	1F	3D	F2			BCTA,UN	PUSHST	
3718	31D8						*		
3719	31D8						*		
3720	31D8	00	00			VALS	RES	2	
3721	31DA						*		
3722	31DA						*		
3723	31DA	3F	40	E4		FPVAL	BSTA,UN	FPSTRS	
3724	31DD	04	02				LODI,R0	2	
3725	31DF	3F	40	00			BSTA,UN	VALSUB	
3726	31E2	00	11	24			LODA,R0	INPT	
3727	31E5	08	71				STRR,R0	VALS	
3728	31E7	0C	11	05			LODA,R0	INPT+1	
3729	31EA	06	67				STRR,R0	VALS+1	
3730	31EC	04	42				LODI,R0	FPSTRS	
3731	31EE	00	11	24			STRA,R0	INPT	
3732	31F1	04	E5				LODI,R0	FPSTRS	
3733	31F3	00	11	25			STRA,R0	INPT+1	
3734	31F6	12				VAL2	SPSU		
3735	31F7	01					STZ,R1		
3736	31FB	A4	01				SUBI,R0	1	
3737	31FA	44	27				ANDI,R0	7	
3738	31FC	45	F8				ANDI,R1	F8	
3739	31FE	61					ICR7,R1		
3740	31FF	92					LPSU		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3741	3F72	15	33	AF			ECTA,UN	EVAL0	
3742	3F73					*			
3743	3F73					*			
3744	3F73	06	53			RTNVAL	LODR,R0	VALS	
3745	3F74	0C	11	E4			STRA,R0	INPT	
3746	3F74	06	4F				LODR,R0	VALS-1	
3747	3F74	0C	11	E5			STRA,R0	INPT-1	
3748	3F74	1F	33	DA			ECTA,UN	EVALS	
3749	3F74					*			
3750	3F74					*			
3751	3F72	0C	50	D7		FFVAF	LODA,R0	*SP	
3752	3F73	15	04				ECTR,0T	VAPP2	
3753	3F75	3F	45	D9			EFTA,UN	POPC1	
3754	3F78	1B	03				ECTR,UN	VAPP3	
3755	3F7A	3F	42	F4		VAPP2	EFTA,UN	PFSTRS	
3756	3F7C	0C	16	72		VAPP3	LODA,P0	LTEMP	
3757	3F72	01	15	73			LODA,R1	LTEMP-1	
3758	3F73	1F	31	FA			ECTA,UN	BTCD	
3759	3F76					*			
3760	3F76					*			
3761	3F76	3F	45	D9		FFERC	EFTA,UN	POPC1	
3762	3F76	3F	15	E2			EFTA,UN	PUSPC1	
3763	3F7C	3F	3D	72			EFTA,UN	FIX0	
3764	3F7F	1F	3A	64			ECTA,UN	FFSUB	
3765	3F72					*			
3766	3F72					*			
3767	3F72	02	06			PEEKS	RES	2	
3768	3F34					*			
3769	3F34					*			
3770	3F34	72				FFPEEK	EOPZ,P0		
3771	3F35	3F	3E	7F			EFTA,UN	ENSX	
3772	3F35	08	78				STRR,R0	PEEKS	
3773	3F3A	08	77				STRR,R1	PIFIS-1	
3774	3F3C	08	F4				LODR,R1	*PEEKS	
3775	3F3E	00					EOPZ,P0		
3776	3F3F	1F	3D	FA			ECTA,UN	BTCD	
3777	3F42					*			
3778	3F42					*			
3779	3F42	3F	3F	5A		FFCHR	EFTA,UN	ENSX1B	
3780	3F45	01					LODR,R1		
3781	3F46	1F	45	74			EFTA,LT	OVFER	
3782	3F47	15	22				COMI,R1	20	
3783	3F47	1F	45	74			EFTA,LT	OVFER	
3784	3F4F	03					STRZ,R3		
3785	3F4F	3F	30	D9			EFTA,UN	DECSP	
3786	3F50	07	01				LOCI,R3	1	
3787	3F54	71	32	D0			EFTA,UN	DECSP	
3788	3F57	1F	32	D9			EFTA,UN	DECSP	
3789	3F5A					*			
3790	3F5A	3F	2E	A1		ENSX1B	EFTA,UN	ENS2	
3791	3F5D	2C					LOIZ,P0		
3792	3F5F	9C	45	74			EFTA,EQ	OVFER	
3793	3F61	17					RETC,UN		
3794	3F62					*			
3795	3F62					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3796	3F62	3E	76			FPIN	EFTA,UN	ENSX1B	
3797	3F64	08	81				STRR,R1	4+3	
3798	3F65	5E	02				HEDE,R1	0	
3799	3F69	20					EOPZ,R0		
3800	3F69	1F	31	FA			ECTA,UN	BTCD	
3801	3F6C					*			
3802	3F6C	3F	30	B1		FPLEN	EFTA,UN	INCSP	
3803	3F6F	E7	01				COMI,R3	1	
3804	3F71	9C	45	7C			EFTA,EQ	TYPFR	
3805	3F74	3F	32	B1			EFTA,UN	INCSP	
3806	3F77	03					LOIZ,R3		
3807	3F78	C1					STRZ,R1		
3808	3F79	C2					STRZ,R2		
3809	3F7A	5A	04			LEN1	BRNR,R2	LEN2	
3810	3F7C	20					EOPZ,R0		
3811	3F7D	1F	3D	FA			ECTA,UN	BTOD	
3812	3F80	3F	32	B1		LEN2	EFTA,UN	INCSP	
3813	3F83	A6	01				SUPI,R2	1	
3814	3F85	1B	73				ECTR,UN	LEN1	
3815	3F87					*			
3816	3F87					*			
3817	3F87	3F	30	B1		FPASC	EFTA,UN	INCSP	
3818	3F8A	E7	01				COMI,R3	1	
3819	3F8C	9C	45	7C			EFTA,EQ	TYPFR	
3820	3F8F	3F	30	B1			EFTA,UN	INCSP	
3821	3F92	03					LOIZ,R3		
3822	3F93	C1					STRZ,R1		
3823	3F94	1C	45	80			EFTA,EQ	ARGEN	
3824	3F97	3F	30	B1		ASC1	EFTA,UN	INCSP	
3825	3F9A	3F	7E				EDRR,R1	ASC1	
3826	3F9C	03					LODZ,R3		
3827	3F9D	C1					STRZ,R1		
3828	3F9E	20					EOPZ,R0		
3829	3F9F	1F	3D	FA			ECTA,UN	BTOD	
3830	3FA2					*			
3831	3FA2					*			
3832	3FA2	00				RBUY	RES	1	
3833	3FA3					*			
3834	3FA3					*			
3835	3FA3	00	7D			FFRND	LODR,R0	RBUY	
3836	3FA5	64	01				IORI,P0	1	
3837	3FA7	C2					STRZ,R2		
3838	3FA8	C3					STRZ,R3		
3839	3FA9	20					EOPZ,R0		
3840	3FAA	75	01				CPSL	CRY	
3841	3FAC	77	08				PSSL	WC	
3842	3FAE	A3					SUBZ,R3		
3843	3FAF	A6	00				SUPI,R2	0	
3844	3FB1	A3					SUBZ,P3		
3845	3FB2	A6	00				SUPI,R2	0	
3846	3FB4	52					ERR,R2		
3847	3FB5	42					ERR,R0		
3848	3FB5	52					ERR,R2		
3849	3FB7	50					ERR,R0		
3850	3FB6	75	00				CPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2641	2F5A	0E	06				STRP,R0	RRUF	
2642	2F60	01					STRP,R1		
2643	2F67	02					ICRZ,R0		
2644	2F6E	3F	31	FA			BSTA,UN	BTOD	
2645	2F74	04	3F				LODI,R0	F1/255	
2646	2F7B	05	01				LODI,R1	F1/255	
2647	2F81	31	11	34			BSTA,UN	PUSHFP	
2648	2F88	3F	3E	F1			BSTA,UN	FPMULT	
2649	2F8F	1F	3E	F1			BCTA,UN	FPMULT	
2649	2F0F					*			
2651	2F0E					*			
2652	2F0E	FA	02	20	39		F1 255 ACON	F02.2039.2156.8627	
2653	2F10	01	5E	86	27				
2654	2F10					*			
2655	2F10					*			
2656	2F16	0C	90	D7		LOADSP	LODA,R0	*SP	THIS IS FOR ROUTINES IN THE NEXT PAGE
2657	2F19	17					RETC,UN		
2658	2F1A	21	00	I7		IASSUP	COMA,R1	*SP,I	FOR NEXT PAGE
2659	2F1E	17					RETC,UN		
2670	2F1E	0F	D0	D7		COMSB	LODA,R3	*SP,-	
2671	2F21	17					RETC,UN		
2672	4200						OPG	4000	
2673	4200					*			
2674	4200					*			
2675	4220	01	60	EB		VALSUP	STPA,R2	FPSTRS,I	
2676	4223	17					RETC,UN		
2677	4224					*			
2678	4224					*			
2679	4224	3F	42	E4		COMSTP	BSTA,UN	FPSTRS	
2680	4227	7F	30	E1			BSTA,UN	INCSP	
2681	422A	17	21				COMI,R3	1	
2682	422C	04	42	7C			BCFA,EC	*YPER	
2683	422F	3F	32	E1			BSTA,UN	INCSP	
2684	4232	23					LODZ,R3		
2685	4232	10					COMZ,R2		
2686	4234	00	70	66			BCFA,EC	COMN3	
2687	4237	05	77				LODI,R1	FF	
2688	4238	3F	3F	EF		COMST2	BSTA,UN	COMSB	
2689	423C	11	00	EB			COMA,R1	FPSTRS,-	
2690	423F	60	30	66			BCFA,EC	COMN3	
2691	4240	05	70				BRNR,R3	COMST2	
2692	4244	17					RETC,UN		
2693	4245					*			
2694	4245					*			
2695	4225	3F	2F	5A		FPSTPC	BSTA,UN	ENSX1B	
2696	4228	01					LODZ,R1		
2697	4229	1F	4F	74			BCTA,LT	OVFER	
2698	422C	5E	22				COMI,R1	Z0	
2699	422E	1E	45	74			BCTA,LT	OVFER	
2700	4231	01	01	2E			STRA,R1	STRS	
2701	4234	3F	32	E1			BSTA,UN	INCSP	
2702	4237	17	05				COMI,R3	5	
2703	4238	00	40	80			BCFA,EC	ARGER	
2704	423C	3F	3F	5A			BSTA,UN	ENSX1B	
2705	423F	01					LODZ,R1		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2906	4248	02					STRZ,R2		
2907	4241	03					STRZ,R3		
2908	4242	18	00				BCTR,EC	STRG3	
2909	4244	0C	01	1F			LODA,R0	STRS	
2910	4247	0F	40	1B		STRG2	STRA,R3	FPSTRS,-	
2911	424A	5B	70				BRNR,R3	STRG2	
2912	424C	1F	40	DD		STRG3	BCTA,UN	PHSTRS	
2913	424F					*			
2914	424F					*			
2915	424F					*			
2916	424F	0F	20			MIDS	RYS	2	
2917	4251					*			
2918	4251					*			
2919	4251	3F	3F	5A		FPMID	BSTA,UN	ENSX1B	
2920	4254	06	79				STRP,R1	MIDS	LENGTH
2921	4256	3F	30	E1			BSTA,UN	INCSP	
2922	4259	E7	05				COMI,R3	5	
2923	425B	0C	45	82			BCFA,EC	ARGER	
2924	425E	3F	3F	D6			BSTA,UN	LOADSP	
2925	4261	0E	16				BCFA,EC	MED3	
2926	4263	3F	3E	7F			BSTA,UN	ENSX	
2927	4266	1E	00				COMI,R1	0	
2928	4268	1C	4F	74			BCTA,EC	OVFER	
2929	426B	A5	01				SUBI,R1	1	
2930	426D	05	61				STRR,R1	MIDS-1	
2931	426F	3F	30	B1			BSTA,UN	INCSP	
2932	4272	E7	05				COMI,R3	5	
2933	4274	0C	45	82			BCFA,EC	ARGER	
2934	4277	1E	01				BCTP,UN	MED4	
2935	4279	2B	54			MED3	LODR,R0	MIDS	
2936	427B	1C	45	74			BCTA,EC	OVFER	
2937	427E	A4	01				SUBI,R0	1	
2938	4280	0B	4E				STRR,R0	MIDS-1	
2939	4282	04	FF				LODI,R0	FF	
2940	4284	08	49				STRR,R0	MIDS	
2941	4286	3F	40	I4		MED4	BSTA,UN	FPSTRS	
2942	4289	FE	02	50			COMA,R2	MIDS-1	
2943	428C	99	2A				BCTR,CT	MED6	
2944	428E	A1	02	50			SUBA,R2	MIDS-1	
2945	4291	FE	02	4F			COMA,R2	MIDS	
2946	4294	1A	23				BCTR,LT	MED5	
2947	4296	03	02	4F			LODA,R2	MIDS	
2948	4299	0E	02	4F		MED5	STRA,R2	MIDS	
2949	429C	02					LODZ,R2		
2950	429E	10	19				BCTR,EC	MED6	
2951	429F	20	20	50			LODA,R1	MIDS-1	
2952	42A2	20	60	1F		MID7	LODA,R1	FPSTRS,I	
2953	42A5	00					STRZ,R3		
2954	42A5	3F	30	19			BSTA,UN	DFCSP	
2955	42A8	05	02				ACDI,R1	1	
2956	42AB	FA	7E				EDR,R2	MID7	
2957	42AD	2F	00	4F			LOCA,R3	MIDS	
2958	42B0	31	30	26		MID8	BSTA,UN	DFCSP	
2959	42B3	07	21				LODI,R3	1	
2960	42B5	1F	30	19			BCTA,UN	DFCSP	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3001	4088	27	02			MED6	LODI,R3	0	
3002	408A	1F	74				BCTR,UM	MID8	
3003	408C					*			
3004	408C					*			
3005	408C	3F	3F	5A		FPLEFT	BSTA,UN	ENX1B	
3006	408F	01	21	EC			STRA,R1	FPLRS	
3007	4092	3F	30	B1			BSTA,UN	INCSP	
3008	4095	E7	25				COMI,R3	5	
3009	4098	9C	45	07			BCFA,EC	ARGER	
3010	409A	7F	47	E4			BSTA,UN	PFSTRS	
3011	409E	01	21	EE			STPA,R2	STRS	
3012	409F	7D	01	EC			LODA,R1	FPLRS	
3013	40A3	11	01	EB			COMA,R1	STRS	
3014	40D6	9C	23				BCFR,GT	LEFT2	
3015	40D8	2D	21	EB			LODA,R1	ST 5	
3016	40E1	01				LEFT2	LODZ,R1		
3017	40E2	02					STBZ,R2		
3018	40E4	24	42			PHSTRS	LODI,R2	FPSTRS	
3019	40E7	05	EE				LODI,R1	FPSTRS	
3020	40E1	1F	30	F2			BCTA,UN	PUSHST	
3021	40E4					*			
3022	40E4	04	42			PPSTRS	LODI,R0	FPSTRS	
3023	40E8	05	EE				LODI,R1	FPSTRS	
3024	40EB	1F	31	11			BCTA,UN	POPST	
3025	40EB					*			
3026	40EB					FPSTRS	RES	100	
3027	40EB	02				STRS	RES	1	
3028	40EB	02				FPLRS	RES	1	
3029	41ED					*			
3030	41ED					*			
3031	41E1	3F	3F	5A		FPRIOT	BSTA,UN	ENX1B	
3032	41E2	0C	7A				STPP,R1	FPLRS	
3033	41E2	3F	30	B1			BSTA,UN	INCSP	
3034	41E5	E7	25				COMI,R3	5	
3035	41E7	9C	45	00			BCFA,EC	ARGER	
3036	41FA	7F	47	E4			BSTA,UN	PFSTRS	
3037	41FD	CA	6C				STPP,R2	STRS	
3038	41FF	01	21	EC			LODA,R1	FPLRS	
3039	4202	E7	01	EB			COMA,R1	STRS	
4227	4205	09	23				BCFR,GT	RIGHT2	
4221	4227	01	01	EB			LODA,R1	STRS	
4222	420A	21				RIGHT2	LODZ,R1		
4223	420E	07					STBZ,R2		
4224	420E	07					LODA,R0	STRS	
4225	4201	A1					SUBZ,R1		
4226	4210	04	EP				ADDI,R0	FPSTRS	
4227	4212	01					STRZ,R1		
4228	4213	77	00				FPSL	WC	
4229	4215	04	42				LODI,R0	FPSTRS	
4212	4217	04	20				ADDI,R0	0	
4211	4219	75	00				CPSL	WC	
4217	421B	1F	30	F2			BCTA,UN	PUSHST	
4213	421E					*			
4214	421E					*			
4215	421E	0C	00	00	00	INSTS	RES	4	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4016	4222					*			
4017	4222					*			
4018	4222	05	01			FPINST	LODI,R1	1	
4019	4224	3F	3F	DE			BSTA,UN	LOADSP	
4020	4227	08	0F				BCFR,EC	INST2	
4021	4229	3F	3F	5A			BSTA,UN	ENX1B	
4022	422C	01					LODZ,R1		
4023	422D	1C	45	74			BCFA,EC	CVFER	
4024	4230	3F	30	B1			BSTA,UN	INCSP	
4025	4233	E7	05				COMI,R3	5	
4026	4235	9C	45	00			BCFA,EC	ARGER	
4027	4238	A5	01			INST2	SUBI,R1	1	
4028	423A	CD	32	1E			STRA,R1	INSTS	INDEX
4029	423D	3F	40	E4			BSTA,UN	PFSTRS	
4030	4240	0E	02	1F			STPA,R2	INSTS+1	
4031	4243	3F	30	B1			BSTA,UN	INCSP	
4032	4246	E7	05				COMI,R3	05	
4033	4248	9C	45	00			BCFA,EC	ARGER	
4034	424B	3F	30	B1			BSTA,UN	INCSP	
4035	424E	E7	01				COMI,R3	1	
4036	4250	9C	45	7C			BCFA,EC	TYFER	
4037	4253	3F	30	B1			BSTA,UN	INCSP	
4038	4256	FF	02	1F			COMA,R3	INSTS	
4039	4259	9D	42	97			BCFA,GT	INST3A	
4040	425C	CF	02	21			STRA,R3	INSTS+3	
4041	425F	AF	02	1E			SUBA,R3	INSTS	
4042	4262	CF	02	20			STRA,R3	INSTS+2	
4043	4265	0D	02	20		INST2A	LODA,R1	INSTS+2	
4044	4268	0C	02	1F			LODA,R0	INSTS+1	
4045	426E	A4	01				SUBI,R0	1	
4046	426D	E1					COMZ,R1		
4047	426E	1C	42	97			BCTA,EC	INST3A	
4048	4271	A5	01				SUBI,R1	1	
4049	4273	CD	02	20			STRA,R1	INSTS+2	
4050	4276	06	FF				LODI,R2	FF	
4051	4278	0F	02	1F			LODA,R3	INSTS+1	
4052	427B	0E	20	EB		INST3	LODA,R2	FPSTRS+1	
4053	427E	3F	3F	1A			BSTA,UN	INSSUB	
4054	4281	96	62				BCFR,EC	INST2A	
4055	4283	A5	01				SUBI,R1	1	
4056	4285	FB	74				BDRR,R3	INSTS	
4057	4287	0C	02	21			LODA,R0	INSTS+3	
4058	428A	3F	30	B5			BSTA,UN	INCSP2	
4059	428D	2D	02	21			LODA,R1	INSTS+3	
4060	4292	A1	02	20			SUBA,R1	INSTS+2	
4061	4293	22					FORZ,R0		
4062	4294	1F	3D	FA			BCTA,UN	BTOD	
4063	4297	0C	02	21		INST3A	LODA,R0	INSTS+3	
4064	429A	3F	30	B5			BSTA,UN	INCSP2	
4065	429C	1F	45	BA			BCTA,UN	PUSHP	
4066	42A0					*			
4067	42A0					*			
4068	42A0	07	00			OPTION	LODI,R3	OPTMSG	
4069	42A2	3F	45	F3			BSTA,UN	WTFMR	
4070	42A5	3F	2D	D7			BSTA,UN	GETKB	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4271	42A8	3F	4F	A8			BETA.UN	LTCU	
4272	42A8	E4	1E				COMI.R0	ESC	
4273	42AD	10	49	7A			BETA.EQ	EDITOR	
4274	42B0	E4	42				COMI.R0	"B	
4275	42B0	18	17				BCTR.EC	BEGN	
4276	42B4	E4	52				COMI.R0	R	
4277	42B6	18	19				BCTR.EC	RUN	
4278	42B8	E4	53				COMI.R0	"S	
4279	42BA	1A	2F				BCTR.EC	STEP	
4280	42BC	E4	44				COMI.R0	"D	
4281	42BE	10	43	26			BETA.EC	DIRECT	
4282	42C1	3F	2E	21			BETA.UN	WBEL	
4283	42C4	E4	3F				LODI.R0	"?	
4284	42C6	3F	2E	23			BETA.UN	WPT	
4285	42C8	1E	5F				BCTR.UN	OPTION	
4286	42CC						*		
4287	42CE						*		
4288	42D3	3F	31	9A		BEGN	BETA.UN	BEGIN	
4289	42D5	1F	42	A2			BETA.UN	OPTION	
4290	42D1						*		
4291	42D1						*		
4292	42D1	02	21			RUN	LODI.P3	OKMSG	
4293	42D3	3F	4F	46			BETA.UN	WBTM	
4294	42D6	72				NORM1	PEDD.P0		
4295	42D7	44	7F				ANDI.R0	7F	
4296	42E8	E4	1E				COMI.R0	ESC	
4297	42EB	06	06				BCTR.EC	PUNE	
4298	42ED	3F	2D	F1			BETA.UN	PL	
4299	42F0	1F	42	A7			BETA.UN	OPTION	
4300	42F3	E4	42				LODI.P0	"NOPM1	
4301	42F5	25	D6				LODI.R1	"NOPM1	
4302	42F7	1F	20	94			BETA.UN	EXEC	
4303	42FA						*		
4304	42FA						*		
4305	42FA	27	21			STEP	LODI.R3	OKMSG	
4306	42FC	3F	45	56			BETA.UN	WBTM	
4307	42FE	3F	20	87		STEP1	BETA.UN	SAVINP	
4308	42FF	26	FF				LODI.R0	FF	
4309	42FA	3F	20	57			BETA.UN	SELIN	
4310	42FB	3F	2D	I2			BETA.UN	PAUSE	
4311	42FA	E4	1E				COMI.P0	ESC	
4312	42FC	10	42	AC			BETA.EC	OPTION	
4313	42FF	E4	42				LODI.P0	STEP1	
4314	4301	05	EF				LODI.R1	STEP1	
4315	4303	1F	20	94			BETA.UN	EXEC	
4316	4306						*		
4317	4306						*		
4318	4306	3F	2E	66		DIRECT	BETA.UN	LFPR	
4319	4309	3F	32	75			BETA.UN	ARONCR	
4320	430C	E4	42				LODI.R0	DIRECT	
4321	430E	05	06				LODI.R1	DIRECT	
4322	4310	1F	22	94			BETA.UN	EXEC	
4323	4313						*		
4324	4313						*		
4325	4313	3F	29	6E		LET	BETA.UN	GCVAR	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4126	4316	1A	1F				BCTR.LT	LETSTR	
4127	4318	1E	45	80			BETA.GT	ARGER	
4128	431B	3F	30	6E			BETA.UN	STRICT	
4129	431E	3F	46	50			BETA.UN	SKPIQ	
4130	4321	3F	33	9F			BETA.UN	EVAL	
4131	4324	0C	4F	34			BETA.EQ	NOSTR	
4132	4327	3F	2E	18			BETA.UN	POPCT	
4133	432A	3F	46	40		LETD	BETA.UN	SKPSP	
4134	432D	E4	2C				COMI.R0	"?	
4135	432F	18	62				BCTR.EC	LET	
4136	4331	3F	32	13			BETA.UN	DROPT	
4137	4334	1F	31	A3			BETA.UN	WITLIN	
4138	4337	3F	32	6E		LETSTR	BETA.UN	STRICT	
4139	433A	3F	2F	F7			BETA.UN	ZSTR	
4140	433D	3F	46	50			BETA.UN	SKPIQ	
4141	4340	3F	33	9F			BETA.UN	EVAL	
4142	4343	0E	46	34			BETA.LT	NOSTR	
4143	4346	3F	2B	32			BETA.UN	STRING	
4144	4349	1B	5F				BCTR.UN	LETD	
4145	434B						*		
4146	434B						*		
4147	434B	3F	33	8C		REM	BETA.UN	SKPCR	
4148	434E	E4	8D				COMI.R0	CR	
4149	4350	06	79				BCTR.EQ	REM	
4150	4352	1F	A2	92			BETA.UN	*RTNADR	
4151	4355						*		
4152	4355						*		
4153	4355	3F	33	9F		EXTOUT	BETA.UN	EVAL	
4154	4358	3F	2B	97			BETA.UN	ENSIB	
4155	435B	09	0A				STR.P1	WRITEP-1	
4156	435D	3F	46	40			BETA.UN	SKPCOM	
4157	4360	3F	33	9F			BETA.UN	EVAL	
4158	4363	3F	2B	97			BETA.UN	ENSIB	
4159	4366	D5	00			WRITEP	WTF.R1	@	
4160	4368	1F	31	A3			BETA.UN	WITLIN	
4161	436B						*		
4162	436B						*		
4163	436E	3F	31	9A		END	BETA.UN	BEGIN	
4164	4371	1E	09				BCTR.UN	STCP1	
4165	4378	3F	46	40		STOP	BETA.UN	SKPSP	
4166	437B	3F	31	8C			BETA.UN	CHICR	
4167	437E	0C	51	F1			BETA.EQ	STNER	
4168	437F	07	07			STOP1	LODI.R3	STOMSG	
4169	437E	3F	45	53			BETA.UN	WRMCR	
4170	437E	1F	42	A0			BETA.UN	OPTION	
4171	4381						*		
4172	4381						*		
4173	4381	3F	32	83		GOTO	BETA.UN	FMNLI	
4174	4384	10	A2	92			BETA.EC	*RTNADR	
4175	4387	07	0E			LNFER	LODI.P3	LNFER	
4176	4389	1F	33	2F			BETA.UN	EPFOR	
4177	4390						*		
4178	4390						*		
4179	4390	3F	33	9F		PAUSER	BETA.UN	EVAL	
4180	4393	3F	2B	6E			BETA.UN	ENS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4181	4392	02					STRZ,R2		
4182	4393	21				PAUS2	LOI2,R1		
4183	4394	98	04				BCFR,EQ	PAUS3	
4184	4396	02					LOI2,R2		
4185	4397	10	31	A3			BCTA,EO	NXTLIN	
4186	439A	07	30			PAUS3	LOI1,R3	30	68 DECIMAL
4187	439C	39	14			PAUS4	RSTR,UN	D1	
4188	439E	70					REED,R0		
4189	439F	44	7F				ANCI,R0	7F	
4190	43A1	E4	1E				COMI,R0	ESC	
4191	43A3	10	42	A2			BCTA,EO	OPTION	
4192	43A6	FE	74				BDRR,R3	PAUS4	
4193	43A8	A5	01				SUBI,R1	1	
4194	43AA	77	0B				PPSL	WC	
4195	43AC	A6	00				SUBI,R2	0	
4196	43AE	75	0B				CPSL	WC	
4197	43B0	1B	61				BCTR,UN	PAUS2	
4198	43B2					*			
4199	43B2					*			
4200	43B2	24	1E			L1	LOI1,R0	DB	
4201	43B4	FA	7F				BDRR,R2	5	
4202	43B6	17					PETC,UN		
4203	43B7					*			
4204	43B7					*			
4205	43B7	3F	29	6E		READ	ESTA,UN	GCVAR	
4206	43BA	1A	17				BCTR,LT	PCSTR	
4207	43BC	11	4F	80			BCTA,GT	ARGER	
4208	43BF	3F	3A	6E			ESTA,UN	STPCT	
4209	43C0	3F	20	31			ESTA,UN	GETDAT	
4210	43C0	1E	2F	41			BCTA,GT	RENDE	
4211	43C0	1E	2F	45			BCTA,LT	RDTYPE	
4212	43C0	3F	21	18			ESTA,UN	POPCT	
4213	43C0	3F	4B	47		EDDEL	ESTA,UN	SKFSP	
4214	43C1	E4	20				COMI,PP		
4215	43C3	1A	62				BCTR,EQ	READ	
4216	43C5	3F	32	13			ESTA,UN	DECFI	
4217	43C8	1F	31	A3			BCTA,UN	NXTLIN	
4218	43D1	3F	32	6E		RDSTR	ESTA,UN	STROF	
4219	43D1	3F	2F	E7			ESTA,UN	ZSTR	
4220	43D1	3F	20	31			ESTA,UN	GETDAT	
4221	43D4	1E	2F	41			BCTA,GT	RENDE	
4222	43E7	10	25	45			BCTA,EO	RDTYPE	
4223	43FA	3F	2B	32			ESTA,UN	STPING	
4224	43E1	1E	5F				BCTR,UN	REDEL	
4225	43EF					*			
4226	43EF					*			
4227	43F1	00				COMMA	RES	1	
4228	43F0	02				DP	RES	1	
4229	43F1	00	20	20		PUSIG	RES	3	
4230	43F4					*			
4231	43F4					*			
4232	43F4	3F	33	9F		PUSING	ESTA,UN	EVAL	
4233	43F7	0F	46	34			BCFA,LT	NOSTR	
4234	43FA	3F	2C	9A			ESTA,UN	ZEROMS	
4235	43FD	04	26				LCI1,R0	CMSTRS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4236	43FF	05	A1				LOI1,R1	CMSTRS	
4237	4401	3F	31	11			ESTA,UN	POPST	
4238	4404	3F	4F	40			ESTA,UN	SKFSP	
4239	4427	E4	3E				COMI,R0	1	
4240	4429	9C	31	F1		PUIOCP	BCFA,EQ	SYNER	
4241	442C	3F	2C	90			ESTA,UN	PUGET	
4242	442F	10	44	D0			BCTA,EO	PUREPT	
4243	4432	E4	21				COMI,R0	1	
4244	4434	98	11				BCFR,EQ	PU2	
4245	4436	3F	33	9F			ESTA,UN	EVAL	
4246	4439	3F	24	9B			BCTA,GT	PRNTDS	
4247	443C	9E	46	34			BCFA,LT	NOSTR	
4248	443F	05	01				LOI1,R1	1	
4249	4441	3F	23	12			ESTA,UN	PRNTS	
4250	4444	1F	44	BD			BCTA,UN	PUDEL	
4251	4427	E4	5E			PU2	COMI,R0		
4252	4429	98	22				BCFR,EQ	PU3	
4253	442B	06	01				LOI1,R2	1	
4254	442D	3F	2C	90		PU2B	ESTA,UN	PUGET	
4255	4430	06	01				ADDI,R2	1..	
4256	4432	E4	5E				COMI,PP		
4257	4434	98	77				BCFR,EQ	PU2B	
4258	4436	CE	03	F1			STRA,R2	PUSIG	
4259	4439	3F	33	9F			ESTA,UN	EVAL	
4260	443C	10	24	9B			BCTA,GT	PRNTDS	
4261	443F	9E	46	34			BCFA,LT	NOSTR	
4262	4442	01	03	F1			LOI1,R1	FUSIG	
4263	4445	3F	23	12			ESTA,UN	PRNTS	
4264	4448	1F	44	BD			BCTA,UN	PUDEL	
4265	444B	E4	23			PU3	COMI,R0		
4266	444D	18	06				BCTR,EQ	PU4	
4267	444F	3F	24	C5			ESTA,UN	SENDIT	
4268	4452	1F	44	EC			BCTA,UN	PULOOP	
4269	4455	06	01			PU4	LOI1,R2	1	
4270	4457	CE	03	EF			STRA,R2	COMMA	
4271	445A	CE	03	FE			STRA,R2	DP	
4272	445D	22					ICRZ,R0		
4273	445F	00	03	F3			STRA,R0	PUSIG-2	
4274	4461	3F	2C	90		PU5	ESTA,UN	PUGET	
4275	4464	06	01				ADDI,R2	1	
4276	4466	E4	23				COMI,R0	1	
4277	4468	18	77				BCTR,EO	PU5	
4278	446A	E4	2C				COMI,R0	1	
4279	446C	18	10				BCTR,EO	PU6	
4280	446E	E4	21				COMI,R0	1	
4281	4470	98	18				BCFR,EQ	PUEND	
4282	4472	A6	01				SUBI,R2	1	
4283	4474	CE	03	F2			STRA,R2	PUSIG-1	
4284	4477	06	00				LOI1,R2	0	
4285	4479	CE	03	FE			STRA,R2	DP	
4286	447C	1B	53				BCTR,UN	PU5	
4287	447E	2C	23	F0		PU6	LOI1,R0	DP	
4288	4481	10	31	B1			BCTA,EO	SYNER	
4289	4484	20					ICRZ,R0		
4290	4485	00	03	EF			STRA,R0	COMMA	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4261	4489	19	57				BCTR.UN	FUS	
4262	4494	A9	21			PUEND	SUBI.R1	1	
4263	4490	3F	22	AC			BSTA.UN	STRFUS	
4264	448F	AF	21				SUBI.R2	1	
4265	4491	07	03	F0			LODA.R0	IF	
4266	4494	18	0F				BCTR.EC	PUT	
4267	4496	01	03	F2			STRA.R2	FUSTG-1	
4268	4489	19	53				BCTR.UN	FUB	
4269	449E	01	03	F3		PUT	STRA.R2	FUSTG-2	
4270	449E	3F	23	0F		PUB	BSTA.UN	EVAL	
4271	44A1	1D	24	0E			BCTA.GT	FRNTLE	
4272	44A4	90	45	34			BCFA.EC	MCSTR	
4273	44A7	20	23	F2			LODA.R0	FUSTG-1	
4274	44AA	A4	21			FU9	SUBI.R0	1	
4275	44AC	E4	FF				COMI.R0	FF	
4276	44AE	10	31	F1			BCTA.EQ	SYNER	
4277	44B1	2D	23	F3			LODA.R1	FUSTG-7	
4278	44B4	0E	03	1F			LODA.R2	COMMA	
4279	44B7	0F	03	F0			LODA.R3	IF	
4280	44BA	3F	20	A7			BSTA.UN	FRNTFU	
4281	44B1	3F	45	40		PUDIL	BSTA.UN	SKFSP	
4282	4432	F4	20				COMI.R0	1	
4283	4432	10	44	20			BCTA.EQ	PULOOP	
4284	4435	E4	7E				COMI.R0	1	
4285	4437	10	44	20			BCTA.EQ	PULOOP	
4286	44CA	3F	32	13			BSTA.UN	DECPT	
4287	44C7	1F	35	A3			BCTA.UN	NITLIN	
4288	44E2	2F	F3			FUREPT	LODI.R0	FF	
4289	44D7	00	04	D8			STRA.R2	*IFUSP	
4290	44D5	1F	44	20			BCTA.UN	PULOOP	
4291	44E9	22	A2			IFUSP	ACOM	FUSE	
4292	44EA					*			
4293	44EA					*			
4294	44CA	3F	32	B3		RESUME	BSTA.UN	FNDLIN	
4295	44D0	90	20	F0			BCFA.EQ	RETURN	
4296	44E0	3F	30	B1			BSTA.UN	INCSP	
4297	44E3	F7	02				COMI.R3	2	
4298	44E5	90	45	70			BCFA.EQ	NESTER	
4299	44E8	3F	30	B1			BSTA.UN	INCSP	
4300	44E8	3F	30	B1			BSTA.UN	INCSP	
4301	44EF	1F	A0	92			BCTA.UN	*RTNADR	
4302	44F1					*			
4303	44F1					*			
4304	44F1	02	02			X2STG	RES	2	
4305	44F3					*			
4306	44F3					*			
4307	44F3					*			
4308	44F3					X10	LODI.R3	0	
4309	44F5	77	20				PFSL	MC	
4310	44F7	7F	01				CPSL	CRY	
4311	44F9	D1					RL.R1		
4312	44FA	D0					RL.R0		
4313	44FB	D3					RL.R3		
4314	44FC	05	73				STRR.R0	X2STG	
4315	44FE	09	72				STRR.R1	X2STG-1	
4316	4500	D1					RL.R1		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4346	4501	D0					RRL.R0		
4347	4502	D3					RRL.R3		
4348	4503	D1					RRL.R1		
4349	4504	D0					RRL.R0		
4350	4505	D3					RRL.R3		
4351	4506	85	6A				ADDR.R1	X2STG-1	
4352	4508	66	07				ADDR.R0	X2STG	
4353	450A	07	02				ADDI.R3	0	
4354	450C	75	08				CPSL	MC	
4355	450E	67	00				ICRI.R3	0	
4356	4510	90	45	74			BCFA.EQ	OFFER	
4357	4513	17					RETC.UN		
4358	4514					*			
4359	4514					*			
4360	4514	3F	45	D0		FPEXP	BSTA.UN	POPC1	
4361	4517	3F	45	E7			BSTA.UN	POPC2	
4362	451A	3F	45	EP			BSTA.UN	FUSHC1	
4363	451D	3F	44	EP			BSTA.UN	FUSHC2	
4364	4520	3F	55	00			BSTA.UN	FPLM	
4365	4523	3F	3E	F1			BSTA.UN	FPMULT	
4366	4526	1F	54	35			BCTA.UN	FPEXP2	
4367	4529					*			
4368	4529					*			
4369	4529	3F	46	40		CKNEG	BSTA.UN	SKPSP	
4370	452C	F4	2B				COMI.R0		
4371	452E	14					RETC.EQ		
4372	452F	E4	2D				COMI.R0		
4373	4531	90	32	13			BCFA.EQ	DECPT	
4374	4534	3F	45	BA			BSTA.UN	FUSHC0	
4375	4537	06	22				LODI.R0	22	
4376	4539	1F	33	60			BCTA.UN	PUSHCP	
4377	453C					*			
4378	453C					*			
4379	453C	3B	0A			CHKAN	BSTR.UN	CHKNUM	
4380	453E	14					RETC.EQ		
4381	453F	E4	41			CKALPH	COMI.R0	'A'	
4382	4541	16					RETC.LT		
4383	4542	F4	5A				COMI.R0	'Z'	
4384	4544	15					RETC.GT		
4385	4545	75	00				CPSL	00	
4386	4547	17					RETC.UN		
4387	4548					*			
4388	4548					*			
4389	4548	F4	30			CHKNUM	COMI.R0	'0'	
4390	454A	16					RETC.LT		
4391	454B	F4	39				COMI.R0	'9'	
4392	454D	15					RETC.GT		
4393	454E	75	00				CPSL	00	
4394	454F	17					RETC.UN		
4395	4551					*			
4396	4551					*			
4397	45D1	00	02			WRTHS	RIS	2	
4398	4553					*			
4399	4553					*			
4400	4553	3F	2E	55		WRTHCR	BSTA.UN	LFCR	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4471	4556	06	00			WRTM	LODI,R2	0	
4472	4558	05	FF				LODI,P1	FF	
4473	455A	02				WRTM2	LODI,R2		
4474	455B	13					COMZ,R3		
4475	455C	10	00				BCTP,EC	WRTM4	
4476	455F	2D	27	34		WRTM3	LODA,R1	MSCP,+	
4477	4561	14	7E				COMI,R0		
4478	4563	05	75				BCTR,EC	WRTM3	
4479	4565	06	01				ADDI,R2	1	
4472	4567	13	71				BCTR,UN	WRTM2	
4471	4560	0D	27	34		WRTM4	LODA,R1	MSCP,+	
4472	456C	14	2E				COMI,R2		
4473	456E	14					RETC,EC		
4474	456F	33	2E	23			BSTA,UN	WRT	
4475	4572	13	75				BCTR,UN	WRTM4	
4476	4574					*			
4477	4574					*			
4478	4574	07	05			OFFER	LODI,R3	OFFERR	
4479	4576	1F	1C				BCTR,UN	ERJMP	
4480	4578					*			
4481	4578					*			
4482	4578	07	05			WESTER	LODI,R3	NSTERR	
4483	457A	1F	1C				BCTR,UN	ERJMP	
4484	457C					*			
4485	457C					*			
4486	457C	07	0A			TYFER	LODI,R3	TYFERR	
4487	457E	1F	1E				BCTR,UN	ERJMP	
4488	4580					*			
4489	4580					*			
4490	4580	07	0B			ARGER	LODI,R3	ARGERR	
4491	4582	1E	0A				BCTR,UN	ERJMP	
4492	4584					*			
4493	4584					*			
4494	4584	07	0C			DIMER	LODI,R3	DIMERR	
4495	4586	1F	0E				BCTR,UN	ERJMP	
4496	4588					*			
4497	4588					*			
4498	4588	07	02			WDER	LODI,R3	WDERR	
4499	458A	1E	02				BCTR,UN	ERJMP	
4500	458C					*			
4501	458C					*			
4502	458C	07	0F			ADER	LODI,R3	ADERR	
4503	458E	1F	33	2E		E JMP	BCTA,UN	ERCR	
4504	4591					*			
4505	4591					*			
4506	4591	06	10			ERASE	LODI,R2	10	
4507	4593	05	08				LODI,R1	08	
4508	4595	3F	2D	F7			BSTA,UN	SETCUR	
4509	4598	05	10				LODI,R1	10	
4510	459A	3F	2E	55		ERASE1	BSTA,UN	IFCR	
4511	459C	F0	7E				BCTR,R1	ERASE1	
4512	459F	06	10				LODI,R2	10	
4513	45A1	05	00				LODI,R1	00	
4514	45A2	1F	2E	F7			BCTA,UN	SETCUR	
4515	45A6					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4456	45A6					*			
4457	45A6	14	60			LTOU	TMI,R0	60	
4458	45A8	16					RETC,LT		
4459	45AB	44	1F				ANDI,R0	DF	
4460	45AB	17					RETC,UN		
4461	45AC					*			
4462	45AC					*			
4463	45AC	04	45			PUSH1	LODI,R0	FP1	
4464	45AE	05	09				LODI,R1	FP1	
4465	45B0	1F	31	38			BCTA,UN	PUSHFP	
4466	45B3					*			
4467	45B3					*			
4468	45B3	04	45			PUSHM1	LODI,R0	FPM1	
4469	45B5	25	D1				LODI,R1	FPM1	
4470	45B7	1F	31	38			BCTA,UN	PUSHFP	
4471	45BA					*			
4472	45BA					*			
4473	45BA	04	45			PUSH2	LODI,R2	FP2	
4474	45BC	05	D1				LODI,R1	FP2	
4475	45BE	1F	31	38			BCTA,UN	PUSHFP	
4476	45C1					*			
4477	45C1					*			
4478	45C1	F0	09	00	00	FP0	ACON	F099,0000,0000,0000	
4479	45C5	00	00	00	00		ACON		
4480	45C9	00	01	00	10	FP1	ACON	0001,0010,0000,0000	
4481	45CD	00	00	00	00		ACON		
4482	45D1	00	01	F0	10	FPM1	ACON	0001,F010,0000,0000	
4483	45D5	00	00	00	00		ACON		
4484	45E5					*			
4485	45E5					*			
4486	45E9	04	33			POPC1	LODI,R0	CBUF1	
4487	45EB	05	50				LODI,R1	CBUF1	
4488	45ED	1F	31	55			BCTA,UN	POPPF	
4489	45F0					*			
4490	45F0					*			
4491	45F0	04	33			PUSHC1	LODI,R0	CBUF1	
4492	45F2	05	50				LODI,R1	CBUF1	
4493	45F4	1F	31	38			BCTA,UN	PUSHFP	
4494	45F7					*			
4495	45F7					*			
4496	45F7	04	33			POPC2	LODI,R0	CBUF2	
4497	45F9	05	50				LODI,R1	CBUF2	
4498	45FB	1F	31	55			BCTA,UN	POPPF	
4499	45FE					*			
4500	45FE					*			
4501	45FE	04	33			PUSHC2	LODI,R0	CBUF2	
4502	45FF	05	50				LODI,R1	CBUF2	
4503	45F2	1F	31	38			BCTA,UN	PUSHFP	
4504	45F5					*			
4505	45F5					*			
4506	45F5	00	00			TABSTG	RIS	2	
4507	45F7					*			
4508	45F7					*			
4509	45F7	08	70			LOOKUP	STRR,R0	TABSTG	
4510	45F5	05	7E				STRR,R1	TABSTG-1	

LINE	ADIP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4511	451B	3F	32	10			BSTA,UN	SKPDEC	
4512	451F	3F	31	70			BSTA,UN	SINPT	
4513	4521	70	FF				LOT1,R1	FF	
4514	4523	3F	32	70		LOOK2	BSTA,UN	GETCHP	
4515	4526	03					STPZ,R3		
4516	4527	21	A5	F5			ICCA,R1	*TABSTG.-	
4517	452A	E4	2E				COMI,R0		
4518	452C	1F	17				BCFR,EC	LOOK4	
4519	452E	E3					COMI,R3		
4520	452F	10	72				BCFR,EC	LOOK2	
4521	4531	0D	A5	F5		LOOK3	LODA,R1	*TABSTG.-	
4522	4534	E4	2E				COMI,R0		
4523	4536	06	70				BCFR,EC	LOCK3	
4524	4538	3F	31	70			BSTA,UN	PINPT	
4525	453B	03					ADDI,R1	3	
4526	453E	01	F5	F5			ICCA,R1	*TABSTG.I	
4527	4542	1E					RETC,LT		
4528	4545	A5	21				SUBI,R1	1	
4529	4548	10	5F				BCFR,UN	LOOK2	
4530	454B	21	A5	F5		ICCK4	LODA,R1	*TABSTG.-	
4531	454E	03					STPZ,R3		
4532	4550	0E	A5	F5			LODA,R1	*TABSTG.-	
4533	4553	01					STPZ,R1		
4534	4556	03					LODZ,R3		
4535	4559	3F	32	13			BSTA,UN	DECPT	
4536	455B	75	02				CFSL	02	
4537	455E	17					RETC,UN		
4538	4560					*			
4539	4563					*			
4540	4566	17	45	02		NOSTR	BCTA,GT	ARGER	
4541	4569	15	45	70			BCTA,UN	TIFER	
4542	456B					*			
4543	456E					*			
4544	4571	3F	32	00		SKPLIN	BSTA,UN	SKPOR	
4545	4574	1F	A0	02			BCTA,UN	*FINADR	
4546	4577					*			
4547	457A					*			
4548	457D	3F	32	20		SKFSF	BSTA,UN	GETCHR	
4549	457F	E4	2E				COMI,R0		
4550	4582	10	70				BCFR,EC	SKPSP	
4551	4585	17					RETC,UN		
4552	4588					*			
4553	458B					*			
4554	458E	35	76			SKPCOM	ESTP,UN	SKPSP	
4555	4591	E4	2E				COMI,R0		
4556	4594	0C	31	E1			BCFA,EC	SYNER	
4557	4597	17					RETC,UN		
4558	459A					*			
4559	459D					*			
4560	45A0	33	4F	42		SKPEC	BSTA,UN	SKPSP	
4561	45A3	E4	2E				COMI,R0		
4562	45A6	0C	31	E1			BCFA,EC	SYNER	
4563	45A9	17					RETC,UN		
4564	45AC					*			
4565	45AF					*			

LINE	ADIP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4566	45B9	75	02			RETNGT	CFSL	02	
4567	45BC	77	42				PFSL	40	
4568	45BF	17					RETC,UN		
4569	45C2					*			
4570	45C5					*			
4571	45C8	75	02			RETMLT	CFSL	00	
4572	45CB	77	00				PFSL	00	
4573	45CE	17					RETC,UN		
4574	45D1					*			
4575	45D4					*			
4576	45D7	75	02			RETCIC	CFSL	00	
4577	45DA	17					RETC,UN		
4578	45DD					*			
4579	45E0					*			
4580	45E3	41	42	53	2E	FONTAB	ALIT	'ABS.'	
4581	45E6	00	00				ACON	0	
4582	45E9	53	47	4E	2E		ALIT	'SGN.'	
4583	45EC	00	01				ACON	1	
4584	45EF	46	49	58	2E		ALIT	'FIX.'	
4585	45F2	00	02				ACON	2	
4586	45F5	52	45	45	4B		ALIT	'PEEK.'	
4587	45F8	2E							
4588	45FB	00	03				ACON	3	
4589	45FE	43	40	52	24		ALIT	'CHRS.'	
4590	4601	2E							
4591	4604	00	04				ACON	4	
4592	4607	49	4E	50	2E		ALIT	'IMP.'	
4593	460A	00	05				ACON	5	
4594	460D	40	45	4E	2E		ALIT	'LEN.'	
4595	4610	00	06				ACON	6	
4596	4613	40	50	4F	53		ALIT	'LFOS.'	
4597	4616	2E							
4598	4619	00	07				ACON	7	
4599	461C	41	53	43	2E		ALIT	'ASC.'	
4600	461F	00	08				ACON	8	
4601	4622	49	4E	54	2E		ALIT	'INT.'	
4602	4625	00	09				ACON	9	
4603	4628	45	52	52	2E		ALIT	'ERR.'	
4604	462B	00	0A				ACON	A	
4605	462E	52	4F	53	2E		ALIT	'POS.'	
4606	4631	00	0B				ACON	B	
4607	4634	43	41	4C	4C		ALIT	'CALL.'	
4608	4637	2E							
4609	463A	00	0C				ACON	C	
4610	463D	52	40	47	4B		ALIT	'RIGHTS.'	
4611	4640	54	24	2E					
4612	4643	00	0D				ACON	D	
4613	4646	40	45	46	54		ALIT	'LEFTS.'	
4614	4649	24	2E						
4615	464C	00	0E				ACON	E	
4616	464F	41	45	44	24		ALIT	'MIDS.'	
4617	4652	2E							
4618	4655	00	0F				ACON	F	
4619	4658	53	54	52	49		ALIT	'STRINGS.'	
4620	465B	41	47	24	2E				

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
4621	4618	00	10				ACON	12	
4622	461A	52	4F	44	2F		ALIT	'END.'	
4623	461F	00	11				ACON	11	
4624	4612	5E	41	52	52		ALIT	'VARIABLE'	
4625	4614	54	52	2F					
4626	4617	02	12				ACON	12	
4627	4619	4E	41	53	54		ALIT	'INSTR.'	
4628	461D	52	2F						
4629	461F	02	13				ACON	13	
4630	4611	46	52	43	2E		ALIT	'PROC.'	
4631	4613	20	14				ACON	14	
4632	4617	52	54	52	24		ALIT	'STR6.'	
4633	461F	2F							
4634	461C	00	15				ACON	15	
4635	461E	5F	41	40	2E		ALIT	'VAL.'	
4636	4712	20	16				ACON	16	
4637	4704	53	49	4E	2E	ZTAB	ALIT	'SIN.'	
4638	4728	00	17				ACON	17	
4639	472A	43	4F	53	2E		ALIT	'COS.'	
4640	470E	00	18				ACON	18	
4641	4710	54	41	4E	2E		ALIT	'TAN.'	
4642	4714	20	19				ACON	19	
4643	4716	41	54	4E	2E		ALIT	'ATN.'	
4644	471A	00	1A				ACON	1A	
4645	471C	40	41	2E			ALIT	'LN.'	
4646	471F	00	1B				ACON	1B	
4647	4721	40	4F	47	2E		ALIT	'LOG.'	
4648	4725	00	1C				ACON	1C	
4649	4727	4E	5B	50	2E		ALIT	'EXP.'	
4650	472B	00	1D				ACON	1D	
4651	472D	53	51	52	2E		ALIT	'SQRT.'	
4652	4731	00	1E				ACON	1E	
4653	4733	FF					DATA	FF	
4654	4734	4F	50	54	49	MSG0	ALIT	'OPTION: '	
4655	4739	4F	4E	3A	FF				
4656	473C	00	2E						
4657	473E	00	4F	43	2E		ALIT	'OK.'	
4658	4742	4F	55	54	20		ALIT	'OUT OF DATA.'	
4659	4746	4F	4E	20	44				
4660	474A	41	54	41	2E				
4661	474E	55	53	52	20		ALIT	'USR FN.'	
4662	4752	4F	4E	2E					
4663	4755	42	4F	44	4F		ALIT	'READ FROM START: '	
4664	4759	02	4E	52	4F				
4665	475D	4F	20	53	54				
4666	4761	41	52	54	3A				
4667	4765	20	20	2F					
4668	4768	53	50	4E	54		ALIT	'SYNTAX.'	
4669	476C	41	5E	2E					
4670	476F	4F	56	4E	2E		ALIT	'OFF.'	
4671	4773	53	54	4F	52		ALIT	'STOPPED.'	
4672	4777	50	4E	44	2E				
4673	477B	40	49	4F	45		ALIT	'LINE NOT FOUND.'	
4674	477F	20	4E	4F	54				
4675	4783	20	4E	4F	55				

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
4676	4787	4E	44	2E					
4677	478A	43	4E	53	54		ALIT	'NEST.'	
4678	478E	00	2E						
4679	4791	54	50	50	4E		ALIT	'TYPE MISMATCH.'	
4680	4793	20	4D	49	53				
4681	4797	4D	41	54	43				
4682	479B	4E	2E						
4683	479D	41	57	47	2E		ALIT	'ARG.'	
4684	47A1	44	49	4D	2E		ALIT	'DIM.'	
4685	47A5	52	54	4E	20		ALIT	'STR OVF.'	
4686	47A9	4F	56	4E	2E				
4687	47AD	53	54	52	20		ALIT	'STR SPACE OVF.'	
4688	47B1	53	50	41	43				
4689	47B5	4E	20	4F	56				
4690	47B9	4E	2E						
4691	47BF	56	41	52	20		ALIT	'VAR ALREADY DEFINED.'	
4692	47C1	41	4C	52	4E				
4693	47C3	41	44	59	20				
4694	47C7	44	4E	48	49				
4695	47CB	4E	4E	44	2E				
4696	47CF	2A	2A	2A	20		ALIT	'*** '	
4697	47D3	21							
4698	47D4	20	4E	52	52		ALIT	'ERROR ***.'	
4699	47D8	4F	52	20	2A				
4700	47DC	2A	2A	2E					
4701	47E1	4E	52	52	52		ALIT	'EXPR TO COMPLETE.'	
4702	47E3	22	54	4F	20				
4703	47E7	43	43	4D	52				
4704	47EB	40	4E	52	2E				
4705	47EF								
4706	47EF								
4707	47EF	54	48	4E	4E	IFSTBL	ALIT	'THEN.'	
4708	47F3	00							
4709	47F4	00	00				ACON	0	
4710	47F6	45	4C	53	4E	ELSTBL	ALIT	'ELSE.'	
4711	47FA	2F							
4712	47FE	00	21				ACON	1	
4713	47FF	FF					DATA	FF	
4714	47FF								
4715	47FF								
4716	47FF	47	4F	54	4F	ONTEL	ALIT	'GOTO.'	
4717	4822	00							
4718	4823	00	20				ACON	0	
4719	4825	47	43	53	55		ALIT	'GOSUB.'	
4720	4829	42	21						
4721	482E	00	22				ACON	0	
4722	4831	57	4E	53	54		ALIT	'RESCOPE.'	
4723	4835	4F	57	4E	2E				
4724	4839	00	24				ACON	4	
4725	483D	4E	5F	49	54		ALIT	'EXIT.'	
4726	4841	00	25						
4727	484C	00	26				ACON	6	
4728	4851	4E	57	57	4F		ALIT	'ERRCP.'	
4729	4855	10	21						
4730	4859	00	27				ACON	5	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4721	462F	52	45	F3	4E		ALIT		'RESUME.'
4722	462A	4D	45	2E			ACON	A	
4723	462D	2F	EA				DATA	FF	
4724	462F	5F							
4725	4630								
4726	4630								
4727	4630	54	4F	2E		FORTBL	ALIT		'TO.'
4728	4631	20	21				ACON	1	
4729	463F	53	54	4F	50		ALIT		'STEP.'
4730	463C	2E							
4741	463A	20	22				ACON	2	
4742	463C	FF					DATA	FF	
4743	4631								
4744	463D								
4745	463D	54	41	42	2E	TABLIT	ALIT		'TAB.'
4746	4641	20	20				ACON	0	
4747	4643	FF					DATA	FF	
4748	4644								
4749	4644								
4750	4644	44	41	54	41	DATTBL	ALIT		'DATA.'
4751	4640	2E							
4752	4640	20	22				ACON	0	
4753	4640	45	41	44	2E		ALIT		'END.'
4754	4641	20	23				ACON	3	
4755	4651	FF					DATA	FF	
4756	4652								
4757	4652								
4758	4652	40	4F	54	2E	COMTBL	ALIT		'LET.'
4759	4655	41	13				ACON		LET
4760	4658	50	52	40	4E		ALIT		'PRINT.'
4761	465C	54	21						
4762	4651	20	25				ACON		PRINT
4763	4652	50	41	55	57		ALIT		'PAUSE.'
4764	4654	45	23						
4765	4655	41	50				ACON		PAUSER
4766	4659	40	46	2E			ALIT		'IF.'
4767	4651	20	5E				ACON		IF
4768	4650	47	4F	54	4F		ALIT		'GOTO.'
4769	4651	21							
4770	4672	43	61				ACON		GOTO
4771	4674	47	4F	53	55		ALIT		'GOSUB.'
4772	4676	42	2E						
4773	467A	22	1E				ACON		GOSUB
4774	467C	52	45	54	55		ALIT		'RETURN.'
4775	4682	52	43	2E					
4776	4683	20	50				ACON		RETURN
4777	4685	45	4F	52	2E		ALIT		'FOR.'
4778	4682	21	2F				ACON		FOR
4779	4685	41	40	56	54		ALIT		'NEXT.'
4780	468F	2E							
4781	4692	31	A5				ACON		NEXT
4782	4692	40	4F	50	55		ALIT		'INPUT.'
4783	4696	54	2E						
4784	4698	27	A3				ACON		INPUT
4785	469A	44	41	54	41		ALIT		'DATA.'

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4786	469E	2E							
4787	469F	46	3A				ACON		SKPLIN
4788	46A1	45	52	41	53		ALIT		'ERASE.'
4789	46A5	45	2E						
4790	46A7	20	BE				ACON		ERASEB
4791	46A2	52	45	41	44		ALIT		'READ.'
4792	46AD	2E							
4793	46AE	43	E7				ACON		READ
4794	46B0	50	4F	4B	45		ALIT		'POKE.'
4795	46B4	2E							
4796	46B5	20	BE				ACON		POKE
4797	46F7	4F	55	54	2E		ALIT		'OUT.'
4798	46BB	43	55				ACON		EXTOUT
4799	46BD	44	49	4D	2E		ALIT		'DIM.'
4800	46C1	26	83				ACON		DIM
4801	46C3	52	4F	53	54		ALIT		'RESTORE.'
4802	46C7	4F	52	45	2E				
4803	46CB	21	77				ACON		RESTOR
4804	46CD	45	4C	53	45		ALIT		'ELSE.'
4805	46C1	2E							
4806	46C2	45	3A				ACON		SKPLIN
4807	46D4	45	4E	44	2E		ALIT		'END.'
4808	46DB	43	6B				ACON		END
4809	46EA	53	54	4F	50		ALIT		'STOP.'
4810	46E1	2E							
4811	46DF	43	70				ACON		STOP
4812	46E1	52	45	4D	2E		ALIT		'REM.'
4813	46E6	43	4B				ACON		REM
4814	46F7	57	57	41	50		ALIT		'SWAP.'
4815	46EB	2E							
4816	46FC	27	62				ACON		SWAP
4817	46FE	4F	4E	2E			ALIT		'ON.'
4818	46F1	25	4C				ACON		ON
4819	46F3	45	58	49	54		ALIT		'EXIT.'
4820	46F7	2E							
4821	46F8	25	E7				ACON		EXIT
4822	46FA	57	41	49	54		ALIT		'WAIT.'
4823	46F1	2E							
4824	46F7	25	76				ACON		WAIT
4825	46E1	4C	50	52	49		ALIT		'LPRINT.'
4826	46E5	4E	54	2E					
4827	46E8	22	AF				ACON		LPRINT
4828	46FA	45	52	52	4F		ALIT		'ERROR.'
4829	46E1	52	2E						
4830	46E2	26	35				ACON		ERRORC
4831	46E2	52	45	53	55		ALIT		'RESUME.'
4832	46E6	4D	4F	2E					
4833	46E9	44	DA				ACON		RESUME
4834	46E8	44	45	46	2E		ALIT		'DEF.'
4835	46E1	26	E7				ACON		DEF
4836	46E1	52	41	4E	44		ALIT		'RANDOMIZE.'
4837	46E5	4F	4D	49	5A				
4838	46E9	4F	2E						
4839	46E1	25	E7				ACON		RANDOM
4840	46E2	4D	49	44	24		ALIT		'MID\$.'

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4641	4931	28	2E				ACON	MDS	
4642	4931	26	AC				ALIT	"CLEAR."	
4643	4935	43	4C	45	41				
4644	4932	52	2E				ACON	PURGE	
4645	493E	22	41				DATA	FF	
4646	4931	FF							
4647	493E					*			
4648	493E					*			
4649	493E					OPTMSG	ICU	0	
4650	493E					QMSG	ICU	1	
4651	493E					NDERR	ICU	2	
4652	493E					UFERR	ICU	3	
4653	493E					WBTMSG	ICU	4	
4654	493E					STNERR	ICU	5	
4655	493E					OVFPFR	ICU	6	
4656	493E					STOMSG	ICU	7	
4657	493E					LNFPFR	ICU	8	
4658	493E					NSTERR	ICU	9	
4659	493E					TYFPFR	ICU	A	
4660	493E					ARGERR	ICU	B	
4661	493E					DIMERR	ICU	C	
4662	493E					SOERR	ICU	D	
4663	493E					STREPR	ICU	E	
4664	493E					ADVER	ICU	F	
4665	493E					ASTMSG	ICU	10	
4666	493E					EPRMSG	ICU	11	
4667	493E					OSCEPR	ICU	12	
4668	493E					*			
4669	493E					*			
4670	493E					HT	ICU	09	
4671	493E					ETX	ICU	03	
4672	493E					CTRLP	ICU	10	
4673	493E					CTRLU	ICU	15	
4674	493E					CTPLY	ICU	19	
4675	493E					CTRLM	ICU	0F	
4676	493E					CTRLQ	ICU	0F	
4677	493E					*			
4678	493E					SER0	ICU	024F	
4679	493E					SER1	ICU	02F9	
4680	493E					DELAY	ICU	0278	
4681	493E					*			
4682	493E					*			
4683	493E					CURA	RES	2	
4684	493E	00	00			DUMA	RES	1	
4685	4942	00				DUM2	RES	1	
4686	4941	00				TMPAE	RES	1	
4687	4942	00				TMP2	RES	1	
4688	4941	00				BSA1	RES	2	
4689	4944	00	00			CRGA	RES	2	
4690	4940	00	00			CBGST	RES	2	
4691	4940	00	00			*			
4692	494A					BSTR2	ACON	BSTART	
4693	494A	00	00			IBST2	ACON	IBST	
4694	494C	00	04			CBST	ACON	VARST	
4695	494E	00	0E						

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4896	4980	20	06			ENDRM2	ACON	ENDRAM	
4897	4982	07				TABS	DATA	7	
4898	4983	12					DATA	12	
4899	4984	1E					DATA	1B	
4900	4985					*			
4901	498E					*			
4902	4985	02	00	02	00	MBUF	RES	10	
4903	4980	00	00	00	00				
4904	4981	00	00	00	00				
4905	4981	00	00	00	00				
4906	4985	00				COMS	RES	1	
4907	4986	00	00	00	00	NAME2	RES	10	
4908	498A	00	00	00	00				
4909	498E	00	00	00	00				
4910	497E	00	00	00	00				
4911	4976	00				TMFS	RES	1	
4912	4977	00				TEMP	RES	1	
4913	4978					*			
4914	4978					EBC	ICU	03	
4915	4978					*			
4916	4978					*			
4917	4978					BSRT	ACON	BSTART	
4918	4978	00	00			EDITOR	LODI.R0	02	
4919	497A	04	02				LPSL		
4920	497C	0C					PFSU	40	
4921	497E	20	40				FORZ.R0		
4922	4980	00	0A	59			STRA.R0	ULC	
4923	4983	3F	4F	91			BSTA.UN	PHASE	
4924	4983	3F	4B	9A			BSTA.UN	BEGIN2	
4925	4985					*			
4926	4985					*			
4927	4980	3F	4A	7F		FRDN	BSTA.UN	DISP	
4928	498C	06	10			COMD	LODI.R0	10	
4929	498E	05	2F				LODI.R1	2F	
4930	4990	3F	21	F7			BSTA.UN	SETCUR	
4931	4993	3F	2F	0E			BSTA.UN	OLFCR	
4932	4996	06	10				LODI.R2	10	
4933	4998	05	0F				LODI.R1	0F	
4934	499A	3F	21	F7			BSTA.UN	SETCUR	
4935	499D	07	00				LODI.R3	MSGC-MSG02	
4936	499F	3F	2F	DC			BSTA.UN	FRING	
4937	49A2	3F	4B	2F			BSTA.UN	FININD	
4938	49A5	0F	09	4C			LODI.R0	*IBST2	
4939	49A8	AF	09	4E			SUBA.R0	DUMA	
4940	49AB	A7	01				SUBI.R0	01	
4941	49AD	3F	4B	E2			BSTA.UN	DFCCUT	
4942	49B0	0C	13				LODI.R2	13	
4943	49B2	05	20				LODI.R1	20	
4944	49B4	3F	21	F7			BSTA.UN	SETCUR	
4945	49B7	07	5B				LODI.R3	MSG1D-MSG02	
4946	49B5	3F	2F	DC			BSTA.UN	FRING	
4947	49B7	08				RL1	FEED.P0		
4948	49B0	1A	7D				RCTR.LT	RL1	
4949	49B7	3F	4A	F7			BSTA.UN	OLC	
4950	49C7	24	49				LODI.R0	CCMS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4951	4904	05	65				LODI,R1	COMS	
4952	4906	06	11				LODI,R2	11	
4953	4908	07	03	CB			BSTA,UN	ARPCW	
4954	490B	0C	20	A3			BCFA,EC	83	
4955	490E	0D	00	65			LODA,R2	COMS	
4956	4910	0E	4F	A6			PSTA,UN	LTOU	
4957	4914	0F	4A	E7			BSTA,UN	OLC	
4958	4917	20					IORZ,R0		
4959	491B	01					STRZ,R1		
4960	491D	27	FF				LODI,R3	FF	
4961	4920	2F	20	66	NI		LODA,R3	NAME2,+	
4962	4921	1F	26				BCTR,EC	CK0	
4963	4923	E7	10				COMI,R3	10	
4964	4928	9A	2C				BCFR,LT	FADD	
4965	492A	E4	3F				COMI,R0	0	
4966	492E	1A	26				BCTR,LT	DS	
4967	4930	E4	39				COMI,R0	'9'	
4968	493A	19	27				BCTR,GT	DS	
4969	4940	01					LODZ,R1		
4970	4941	2E	20				LODI,R2	09	
4971	4942	81			ONE2		ADDZ,R1		
4972	4948	E5	01				TPSL	CRT	
4973	494E	1F	0E				BCTR,EC	D255	
4974	4954	1A	70				BCTR,EC	ONE2	
4975	495C	01					STRZ,R1		
4976	4957	0F	05	66			LODA,R3	NAME2,1	
4977	495A	A4	32				SUBI,R0	'0'	
4978	495C	81					ADDZ,R1		
4979	4960	01					STRZ,R1		
4980	4961	E5	21				TPSL	CRT	
4981	4A20	08	50				BCFR,EC	NI	
4982	4A22	05	FF		D255		LODI,R1	FF	
4983	4A24	19	0A				BCTR,UN	FADD	
4984	4A26	E7	00		CK0		COMI,R3	00	
4985	4A29	08	2E				BCFR,EQ	FADD	
4986	4A2A	05	F1				LODI,R1	01	
4987	4A2C	1E	22				BCTR,UN	FADD	
4988	4A2E	05	02		DS		LODI,R1	00	
4989	4A10	0C	05	65	EADD		LODA,R0	COMS	
4990	4A13	3F	45	A5			BSTA,UN	LTOU	
4991	4A16	03					STRZ,R3		
4992	4A17	A7	41				SUBI,R3	'A'	
4993	4A19	17	19				COMI,R3	19	
4994	4A1B	1D	49	BC			BCTR,GT	COMD	
4995	4A1E	D3					RRL,R3		
4996	4A1F	67	00				IOPI,R3	00	
4997	4A21	0E	01				STRZ,R3	5-3	
4998	4A23	1B	02				BCTR,UN	COMTB	
4999	4A25	4E	07		COMTB		ACON	ISAVE	A=APPEND BUFFER AFTER LINE X
5000	4A27	4F	42				ACON	BACK	B=BACK X LINES
5001	4A29	4F	04				ACON	CHANGE	C=CHANGE LINES
5002	4A2B	4D	16				ACON	DEL	D=DELETE X LINES FROM TOP
5003	4A2D	02	03				DATA	00,03	E=EXIT TO SUP.
5004	4A2F	4E	48				ACON	FORWD	F=FORWARD X LINES
5005	4A31	70	0C				ACON	BASIC	G=GO TO BASIC

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5006	4A33	4E	26				ACON	SAVE	H=HOLD X LINES IN INSTRT BUFFER
5007	4A35	4E	1E				ACON	INST	I=INSERT LINES AFTER LINE X
5008	4A37	49	BC				ACON	COMD	
5009	4A39	49	BC				ACON	COMD	
5010	4A3B	51	70				ACON	LCADL	L=LOAD X LINES FROM DISK
5011	4A3D	4E	CC				ACON	MODIFY	M=MODIFY STRING IN LINE X
5012	4A3F	4A	5A				ACON	ULCASE	N=NORMAL LOWERCASE MODE
5013	4A41	49	BC				ACON	COMD	
5014	4A43	4E	A4				ACON	PMD	P=PRESET MODIFY PATTERNS
5015	4A45	49	BC				ACON	COMD	
5016	4A47	49	BC				ACON	COMD	
5017	4A49	51	41				ACON	TAPEO	S=STORE X LINES TO DISK
5018	4A4B	49	BC				ACON	COMD	
5019	4A4D	4A	50				ACON	UPONLY	U=GO INTO UPPER CASE ONLY MODE
5020	4A4F	49	BC				ACON	COMD	
5021	4A51	49	BC				ACON	COMD	
5022	4A53	4E	0E				ACON	SEARCH	X=SEARCH FOR ASCII STRING X
5023	4A55	49	BC				ACON	COMD	
5024	4A57	49	BC				ACON	COMD	
5025	4A59					*			
5026	4A59	00				ULC	RES	1	
5027	4A5A					*			
5028	4A5A	20				ULCASE	IORZ,R0		
5029	4A5B	08	7C				STRZ,R0	ULC	
5030	4A5D	1F	49	BC			BCTR,UN	COMD	
5031	4A60					*			
5032	4A60	04	FF			UPONLY	LODI,R0	FF	
5033	4A62	08	75				STRZ,R0	ULC	
5034	4A64	1F	49	BC			BCTR,UN	COMD	
5035	4A67					*			
5036	4A67					*			
5037	4A67	E4	2B			OLC	COMI,R0	2B	
5038	4A69	1C	4B	2E			BCTR,EC	INDF	
5039	4A6C	E4	21				COMI,R0	2D	
5040	4A6E	1C	4B	94			BCTR,EC	BFGNB	
5041	4A71	E4	20				COMI,R0	/	
5042	4A73	1C	4B	4E			BCTR,EC	FW15	
5043	4A76	E4	2F				COMI,R0	/	
5044	4A78	1C	4B	4E			BCTR,EC	BK15	
5045	4A7B	17					BCTR,UN		
5046	4A7C					*			
5047	4A7C	2E	08			CURIT	ACON	CURSOR-1	
5048	4A7E	02				LINEI	RES	1	
5049	4A7F					*			
5050	4A7F	3F	4B	A5		DISP	BSTA,UN	MTDA	
5051	4A82	01					STRZ,R1		
5052	4A83	20					IORZ,R0		
5053	4A84	0C	8A	7C			BCTR,R0	*CURIT	
5054	4A87	0C	09	41			STRZ,R0	DUMA-1	
5055	4A8A	0E	72				STRZ,R0	LINEI	
5056	4A90	0F	2F	EE		LINEW	BSTA,UN	CLF00	
5057	4A8F	2C	6A	7C			LODA,R0	*CURIT	
5058	4A92	44	0F				ANDI,R0	F	
5059	4A94	14					BCTR,EC		
5060	4A95	0C	15	40			LODA,R1	*DUMA,1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5051	4A98	1E	4A	DE			BCTA,LT	CLREND	
5052	4A9F	7F	61				LODR,R0	LINEX	
5053	4AA0	84	21				ADDI,R0	1	
5054	4AA1	08	5D				STRR,R0	LINEX	
5055	4AA1	03					STRZ,R3		
5056	4AA2	14	79				COMI,R0	0	
5057	4AA4	10	05				BCTR,GT	TWOCH	
5058	4AA6	3F	2F	D2			BSTA,UN	WRTEL	
5059	4AA6	1E	07				BCTR,UN	WR2ND	
5070	4AA8	24	31			TWOCH	LODI,R0	'1'	
5071	4AA8	3F	2E	23			BSTA,UN	WRT	
5072	4AA9	A7	2A				SURI,R3	A	
5073	4AA1	67	30			WR2ND	IORI,R3	'0'	
5074	4AA4	23					LODZ,R3		
5075	4AB5	3F	2E	23			BSTA,UN	WRT	
5076	4AB2	3F	2F	D2			BSTA,UN	WRTEL	
5077	4AB3	2E	EG	40		NITC	LODA,R1	*DUMA,I	
5078	4ABE	1A	1E				BCTR,LT	CLREND	
5079	4AC0	03					STRZ,R3		
5080	4AC1	29	2F				BIRR,R1	NA1	
5081	4AC3	3F	4B	1A			BSTA,UN	AIDA	
5082	4AC6	2A	16				BCFF,LT	CLREND	
5083	4AC8	17	0D			NA1	COMI,R3	CR	
5084	4ACA	1C	4A	0C			BCTA,EC	LINENO	
5085	4AC7	23					LODZ,R3		
5086	4ACE	3F	2E	23			BSTA,UN	WRT	
5087	4AD1	1E	68				BCTR,UN	NITC	
5088	4AD3	20				EPAST2	BCTR,R0		
5089	4AD4	0C	8A	7C			STRA,R0	*CURIT	
5090	4AD7	3F	4A	DI			BSTA,UN	CLREND	
5091	4ADA	3F	2F	0E			BSTA,UN	D CLFCR	
5092	4ADD	17					BCTR,UN		
5093	4ADF	2C	8A	7C		CLREND	LODA,R0	*CURIT	
5094	4AE1	14	0F				TMI,R0	F	
5095	4AE3	14					PETC,EC		
5096	4AE4	3F	2F	0E			BSTA,UN	D CLFCR	
5097	4AE7	13	75				BCTR,UN	CLREND	
5098	4AE9	22				FTEMP	PES	1	
5099	4AEA	3F	4B	A5		FWDI	BSTA,UN	MTDA	
5100	4AEC	02				FWDI	STRZ,R2		
5101	4AE1	01					LODZ,R1		
5102	4AEF	14					PETC,EC		
5103	4AF0	20					EORZ,R0		
5104	4AF1	0C	09	41			STRA,R0	DUMA+1	
5105	4AF4	0E	19	40		NITCHR	LODA,R2	*DUMA,I	
5106	4AF7	1A	1D				BCTR,LT	ENDFW	
5107	4AF9	08	6E				STRR,R0	FTEMP	
5108	4AFB	EA	11				BIRR,R2	CRCK	
5109	4AFD	3F	4B	1A			BSTA,UN	AIDA	
5110	4B00	1A	0C				BCTR,LT	CRCK	
5111	4B22	3F	4C	24			BSTA,UN	SIDA	
5112	4B25	06	FF				LODI,R0	FF	
5113	4B27	04	03				LODI,R0	EBC	
5114	4B29	0E	19	40			STRA,R2	*DUMA,I	
5115	4B2C	1B	26				BCTR,UN	ENDFW	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5116	4B2E	04	59			CRCK	LODR,R0	FTEMP	
5117	4B10	E4	0D				COMI,R0	CR	
5118	4B12	90	60				BCFR,EQ	NITCHR	
5119	4B14	F9	5E				BIRR,R1	NITCHR	
5120	4B16	CE	09	41		ENDFW	STRA,R2	DUMA+1	
5121	4B19	17					PETC,UN	1	
5122	4B1A	04	01			AIDA	LODI,R0	1	
5123	4B1C	8C	09	40			ALDA,R2	DUMA	
5124	4B1F	0C	09	40			STRA,R0	DUMA	
5125	4B22	1C	09	4C			COMA,R0	*IBST2	
5126	4B2E	17					BCTR,UN		
5127	4B2E					*			
5128	4B2E					*			
5129	4B2E	3F	07			ENDF	BSTR,UN	FINDND	
5130	4B28	3F	4F	00			BSTA,UN	MTCA	
5131	4B28	25	01				LODI,R1	1	
5132	4B2D	1B	13				BCTR,UN	BACK	
5133	4B2F	3E	4B	A5		FINDND	BSTA,UN	MTDA	
5134	4B32	05	FF			FINDND2	LODI,R1	FF	
5135	4B34	3F	4A	ED			BSTA,UN	FWDI2	
5136	4B37	0C	09	40			LODA,R0	*DUMA	
5137	4B3A	16					BCTR,LT		
5138	4B3B	0C	09	41			LODA,R0	DUMA+1	
5139	4B3E	12	72				BCTR,UN	FINDND2	
5140	4B40	05	0F			BACK	LODI,R1	F	
5141	4B42	3B	0C			BACK	BSTR,UN	BACKY	
5142	4B44	1B	05				BCTR,UN	FWBKD	
5143	4B46	05	0F			FWDI	LODI,R1	F	
5144	4B48	3F	4A	EA		FORWD	BSTA,UN	FWDI	
5145	4B4B	3B	33			FWBKD	BSTR,UN	MTCA	
5146	4B4D	1F	49	89			BCTA,UN	FBDN	
5147	4B50	3F	4B	A5		BACKY	BSTA,UN	MTDA	
5148	4B53	02					STRZ,R2		
5149	4B54	20					EORZ,R0		
5150	4B55	0C	09	41			STRA,R0	DUMA+1	
5151	4B58	05	01				ADDI,R1	1	
5152	4B5A	1B	03				BCTR,UN	CHK	
5153	4B5C	0E	09	40		SUBL	LODA,R2	*DUMA,-	
5154	4B5F	03				CHK	STRZ,R3		
5155	4B60	1E	00				COMI,R2	0	
5156	4B62	90	08				BCFR,EC	NOSU	
5157	4B64	3F	4C	B4			BSTA,UN	SIDA	
5158	4B67	1C	05	4A			COMA,R0	*BSTR2	
5159	4B6A	1A	28				BCTR,LT	BEGNB	
5160	4B6C	17	0D				COMI,R3	CR	
5161	4B6E	90	0C				BCFR,EQ	SUBL	
5162	4B70	F0	6A				BDEE,R1	SUBL	
5163	4B72	16	00				COMI,R2	0	
5164	4B74	3C	4B	1A			BSTA,EC	AIDA	
5165	4B77	06	01				ADDI,R2	1	
5166	4B79	3C	4B	1A			BSTA,EC	AIDA	
5167	4B7C	0E	09	41			STRA,R2	DUMA+1	
5168	4B7F	17					BCTR,UN		
5169	4B80	0C	05	40		MTCA	LODA,R0	DUMA	
5170	4B83	0C	09	3E			STRA,R0	CURA	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5171	4B96	2C	09	41			LODA,R2	DUMA+1	
5172	4B99	0C	09	3F			STRA,R0	CURA+1	
5173	4B9C	17					RETC,UN		
5174	4B9D					*			
5175	4B9E					*			
5176	4B9F					*			
5177	4BA1	3F	0E			CREATE	BSTR,UN	BEGIN2	
5178	4BA4	04	83				LODI,R2	IBC	
5179	4BA1	0C	09	3E			STRA,R0	*CURA	
5180	4B94					*			
5181	4B94	3F	4E	5A		PCGN8	BSTA,UN	BEGIN2	
5182	4B97	1F	49	89			BCTA,UN	FBCN	
5183	4B9A	0C	09	4A		BEGIN2	LOLA,R0	*BSTR2	
5184	4B9D	0C	09	3E			STRA,R0	CURA	
5185	4BA2	22					FORZ,R0		
5186	4BA1	0C	09	3F			STRA,R0	CURA+1	
5187	4BA4	17					RETC,UN		
5188	4BA5					*			
5189	4BA6	2C	09	3E		MTDA	LODA,R0	CURA	
5190	4BA9	0C	09	40			STRA,R0	DUMA	
5191	4BA9	0C	09	3F			LODA,R0	CURA+1	
5192	4BA1	0C	09	41			STRA,R2	DUMA+1	
5193	4BA1	17					RETC,UN		
5194	4B9E					*			
5195	4B9E	17	63			DECOU	COMI,R3	63	
5196	4B9A	09	07				BCTR,GT	NO100	
5197	4B9E	04	31				LODI,R0	'1'	
5198	4B9B	3F	2E	23			BSTA,UN	WRT	
5199	4B9B	A7	04				SUBI,R3	64	
5200	4B91	24	00			NO100	LODI,R2	0	
5201	4B9F	17	09			SUB10	COMI,R3	0	
5202	4B91	09	0E				BCTR,GT	TENIN	
5203	4B93	A7	2A				SUBI,R3	A	
5204	4B95	06	01				ADDI,R2	1	
5205	4B97	1B	06				BCTR,UN	SUB10	
5206	4B99	22				TENIN	LODD,R2	'0'	
5207	4B9A	54	32				ICRI,R0	'0'	
5208	4B9C	3F	2E	23			BSTA,UN	WRT	
5209	4B9E	03					LODD,R3	'0'	
5210	4B9E	64	30				ICRI,R0	'0'	
5211	4B92	3F	2E	23			BSTA,UN	WRT	
5212	4B95	17					RETC,UN		
5213	4B96					*			
5214	4B9E					*			
5215	4B96	3F	4A	23		INST	BSTA,UN	FRASE2	
5216	4B99	3F	4C	2A			BSTA,UN	IBADD	
5217	4B9C	3F	4A	2A			BSTA,UN	FWDI	
5218	4B9F	3F	4B	20			BSTA,UN	MTCA	
5219	4B9E	3F	4B	2F			BSTA,UN	FINDND	
5220	4B9E	06	00				LODI,R1	00	
5221	4B97	3F	2E	D7		NEXI	BSTA,UN	GFTKB	
5222	4B9A	14	08				COMI,R0	BS	
5223	4B9C	1C	4C	E5			BCTA,EC	BACKN	
5224	4B9F	14	09				COMI,R0	BT	
5225	4B91	1C	4C	E3			BCTA,EC	TAR0	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5226	4B94	14	03				COMI,R0	ITX	
5227	4B96	19	0E				BCTR,EQ	BYFAS	
5228	4B98	3F	4F	49			BSTA,UN	CKCTRL	
5229	4B9E	1A	0A				BCTR,LT	NEXI	
5230	4B91	01	E9	42		BYPAS	STRA,R1	*TMPAE,I	
5231	4C02	14	03				COMI,R0	IFY	
5232	4C02	19	31				BCTR,EC	ENDI	
5233	4C04	E4	01				COMI,R0	CR	
5234	4C06	3C	2F	55			BSTA,EQ	LFCP	
5235	4C09	3B	02				BSTR,UN	INSTS2	
5236	4C0B	1E	0A				BCTR,UN	NEXI	
5237	4C0D					*			
5238	4C0D	04	01			INSTS2	LODI,R0	1	
5239	4C0F	06	02				LODI,R2	2	
5240	4C11	3F	4D	47			BSTA,UN	ADDANY	
5241	4C14	0C	09	4C			COMA,R0	*IBST2	
5242	4C17	1A	0A				BCTR,LT	INCR2	
5243	4C19	3F	4C	B4			BSTA,UN	SIDA	
5244	4C1C	04	FE				LODI,R0	FE	
5245	4C1E	0C	09	41			STRA,R0	DUMA+1	
5246	4C21	1B	19				BCTR,UN	ENDINS	
5247	4C23	29	0D			INCR2	BIRR,R1	RETCUN	
5248	4C25	04	01				LODI,R0	1	
5249	4C27	0C	09	42			ADDA,R0	TMPAE	
5250	4C2A	0C	09	50			COMA,R0	*ENDRM2	
5251	4C2D	5A	04				BCTR,LT	STRTMP	
5252	4C2F	0C	09	42			STRA,R0	TMPAE	
5253	4C32	17				RETCUN	RETC,UN		
5254	4C33	04	01			STRTMP	LODI,R0	1	
5255	4C3F	0E	02				LODI,R2	2	
5256	4C37	3F	4C	F6			BSTA,UN	SUBANY	
5257	4C3A	05	FF				LODI,R1	FF	
5258	4C3C	04	03			ENDINS	LODI,R0	ITX	
5259	4C3E	01	E9	42			STRA,R1	*TMPAE,I	
5260	4C41					*			
5261	4C41					*			
5262	4C41					*			DUMA HAS THE ADDRESS OF NEW LAST BYTE OF BUFFER
5263	4C41	0C	09	40		ENDI	LODA,R0	DUMA	
5264	4C44	0C	09	42			STRA,R0	TMPAE	
5265	4C47	0F	09	41			LODA,R3	DUMA+1	
5266	4C4A	3F	4E	2F			BSTA,UN	FINDND	
5267	4C4D	3F	4C	BD			BSTA,UN	SDCA	
5268	4C50	01	09	41			LODA,R1	DUMA+1	
5269	4C53	20					FORZ,R0		
5270	4C54	0C	09	41			STRA,R0	DUMA+1	
5271	4C57	0C	09	43			STRA,R0	TMPAE+1	
5272	4C5A	01	E9	40		DOWN	LODA,R1	*DUMA,I	
5273	4C5D	0F	19	42			STRA,R3	*TMPAE,I	
5274	4C60	04	01				LODI,R0	1	
5275	4C60	05	06				LODI,R2	6	
5276	4C64	3F	4C	F6			BSTA,UN	SUBANY	
5277	4C67	56	05				BCTR,EQ	NOCK	
5278	4C69	0C	09	45			LODA,R0	BSA1+1	
5279	4C6B	10	1E				BCTR,EC	INSTEN	
5280	4C6E					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5281	40C1	A5	01			NCKK	SUBI,R1	1	
5282	40C2	15	FF				COMI,R1	FF	
5283	40C2	9E	08				ECPA,EQ	WSIDA	
5284	40C4	71	4C	B4			BSTA,UN	SIDA	
5285	40C7	7C	89	4A			COMA,R0	*IBST2	
5286	40C7	1A	10				ECPA,LT	INSTDM	
5287	40C7	A7	01			NSIDA	SUBI,R3	01	
5288	40E1	E7	FF				COMI,R3	FF	
5289	40E6	9E	58				BCTR,FC	DOWN	
5290	40E7	2C	09	42			LODA,R0	TMPAE	
5291	40E7	A4	01				SUBI,R2	01	
5292	40E7	CC	09	42			STRA,R2	TMPAE	
5293	40E8	1B	4E				BCTR,UN	DOWN	
5294	40E8					*			
5295	40C0	3F	4C	DA		INSTDM	BSTA,UN	IBADD	
5296	40C1	3F	4E	A5			BSTA,UN	MTDA	
5297	40C2	01					STRZ,R1		
5298	40C3	22					EORZ,R0		
5299	4094	CC	09	41			STRA,R0	DUMA+1	
5300	4097	07	FF				LODI,R3	FF	
5301	4099	2F	AG	42		INSERT	LODA,R3	*TMPAE,+	
5302	40C0	14	23				COMI,R0	ITX	
5303	40C1	12	0F				BCTR,FC	INSTE	
5304	40A2	01	E9	40			STRA,R1	*DUMA,I	
5305	40A3	E7	FF				COMI,R3	FF	
5306	40A5	3C	4D	0D			BSTA,EQ	A1TA	
5307	40A8	D9	6F				B1RR,R1	INSERT	
5308	40AA	3F	4E	1A			BSTA,UN	A1TA	
5309	40AD	1A	6A				BCTR,LT	INSERT	
5310	40AF	25	01			INSTE	LODI,R1	1	
5311	40B1	1F	4E	42		*	BCTA,UN	PACK	
5312	40B4								
5313	40B4	0C	09	40		SIDA	LODA,R0	DUMA	
5314	40F7	A4	01				SUPI,R0	1	
5315	40B9	CC	09	40			STRA,R0	DUMA	
5316	40E0	17					ETC,UN		
5317	40E0					*			
5318	40E0	0C	09	41		SDCA	LODA,R0	DUMA+1	
5319	40C0	AC	08	3F			SUBA,R0	CURA+1	
5320	40C3	CC	08	45			STRA,R0	BSA1+1	
5321	40C6	77	0E				PPSL	WC	
5322	40C8	2C	0C	40			LODA,R0	IUMA	
5323	40C8	AC	29	3E			SUBA,R0	CURA	
5324	40C1	CC	09	44			STRA,R0	BSA1	
5325	40E1	75	0E				CPSL	WC	
5326	40E3	24	01				LODI,R0	1	
5327	40D5	06	0E				LODI,R2	6	
5328	40D7	1F	4E	47			BCTA,UN	ADDANT	
5329	40CA					*			
5330	40CA	2C	69	4C		IBADD	LODA,R0	*IBST2	
5331	40DD	CC	09	42			STRA,R0	TMPAE	
5332	40E0	20					EORZ,R0		
5333	40E1	CC	09	43			STRA,R0	TMPAE+1	
5334	40E4	17					ETC,UN		
5335	40E5					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5336	40E5	3F	2F	61		PACKN	BSTA,UN	BACK1	
5337	40E6	1F	4B	E7			BCTA,LT	NEXI	
5338	40E7	24	01				LODI,R0	1	
5339	40E7	06	02				LODI,R2	2	
5340	40E7	3F	4C	F6			BSTA,UN	SUBANT	
5341	40F2	1F	4B	E7			BCTA,UN	NEXI	
5342	40F5					*			
5343	40F5								
5344	40F5	00				STORE	RES	1	
5345	40F6	09	7D			SUBANT	STRR,R0	STORE	
5346	40F6	0E	69	3F			LODA,R2	CURA+1,I	
5347	40F8	A8	78				SUBR,R0	STORE	
5348	40FD	CE	69	3F			STRA,R2	CURA+1,I	
5349	4D20	77	08				PPSL	WC	
5350	4D02	0E	69	3E			LODA,R2	CURA,I	
5351	4D07	A4	00				SUBI,R0	0	
5352	4D07	CE	69	3E			STRA,R2	CURA,I	
5353	4DCA	75	08				CPSL	WC	
5354	4D0C	17					ETC,UN		
5355	4D0D					*			
5356	4D0D	04	01			A1TA	LODI,R0	1	
5357	4DFF	8C	09	42			ADDA,R0	TMPAE	
5358	4D12	CC	09	42			STRA,R0	TMPAE	
5359	4D15	17					ETC,UN		
5360	4D16					*			
5361	4D16	3F	4A	EA		DELT	BSTA,UN	FWDI	
5362	4D19	7F	0E				BCTR,UN	SHIF	
5363	4D1B	05	01				LODI,R1	1	
5364	4D1E	1F	4B	42			BCTA,UN	BACK	
5365	4D20					*			
5366	4D20	0F	09	3E		SHIF	LODA,R3	CURA	
5367	4D23	CF	09	42			STRA,R3	TMPAE	
5368	4D26	0F	09	3F			LODA,R3	CURA+1	
5369	4D29	0D	09	41			LODA,R1	DUMA+1	
5370	4D2C	20					EORZ,R0		
5371	4D2E	CC	09	43			STRA,R0	TMPAE-1	
5372	4D30	CC	09	41			STRA,R0	DUMA-1	
5373	4D33	0D	E9	40		UP	LODA,R1	*DUMA,I	
5374	4D36	CF	E9	42			STRA,R3	*TMPAE,I	
5375	4D39	16					PETC,LT		
5376	4D3A	87	01				ADDI,R3	1	
5377	4D3C	3C	41	0D			BSTA,FC	A1TA	
5378	4D3F	E9	72				B1RR,R1	UP	
5379	4D41	3F	4B	1A			BSTA,UN	A1DA	
5380	4D44	1A	6D				BCTR,LT	UP	
5381	4D46	17					ETC,UN		
5382	4D47					*			
5383	4D47	0E	69	3F		ADDANT	ADDA,R2	CURA+1,I	
5384	4D4A	01	69	3F			STRA,R2	CURA+1,I	
5385	4D4C	77	08				PPSL	WC	
5386	4D4F	20					EORZ,R0		
5387	4D50	0F	69	3E			ADDA,R2	CURA,I	
5388	4D53	CF	69	3E			STRA,R2	CURA,I	
5389	4D56	75	08				CPSL	WC	
5390	4D58	17					ETC,UN		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5351	4D59					*			
5352	4D59								
5353	4D59 27 19					NOTFON	LODI,R3	MSG1-MSG2	
5354	4D59 1F 2F 4C						ECTA,UN	ERROR2	
5355	4D59 07 10					TMF	LODI,R3	MSG1-MSG2	
5356	4D59 1F 2F 4C						ECTA,UN	ERROR2	
5357	4D63					*			
5358	4D63 7F 4D 79					TARO	BSTA,UN	TABSUB	
5359	4D66 1C 4B E7						ECTA,EC	NEXI	
5422	4D69 24 20					T13	LODI,R0		
5421	4D69 0E 19 42						STRA,R1	*TMPAE,I	
5422	4D6E 3F 2E 23						BSTA,UN	WBT	
5423	4D71 3F 4C 0D						BSTA,UN	INSTS2	
5424	4D74 7F 73						ECTA,EC	T13	
5425	4D7E 1F 4E E7						ECTA,UN	NEXI	
5426	4D79					*			
5427	4D79 07 FF					TABSUB	LODI,R3	FF	
5428	4D7E 2C 20 42						LODA,R0	TMPAE	
5429	4D7E 0C 20 44						STRA,R0	BSA1	
5430	4D7E 0C 20 44						STRA,R1	BSA1-1	
5431	4D7E 07 31 45					TL1	ADDI,R3	1	
5432	4D86 04 01						LODI,R0	1	
5433	4D86 0E 26						LODI,R2	0	
5434	4D8A 3F 4C F6						BSTA,UN	SUBANT	
5435	4D8D 1C 20 4C						COMA,R0	*IBST2	
5436	4D90 1A 27						ECTR,LT	CRFND	
5437	4D92 0C 20 44						LODA,R0	*BSA1	
5438	4D9D 04 0D						COMI,R0	CP	
5439	4D97 08 5B						ECTR,EQ	TL1	
5440	4D99 0E FF					CRFND	LODI,R2	FF	
5441	4D9E 2E 29 52					TL2	LODA,R2	TABS,+	
5442	4D9E 1F 23						COMI,R2	03	
5443	4DA2 14						RETC,EC		
5444	4DA1 E7						COMZ,R3		
5445	4DA2 09 77						BCFR,ST	TL2	
5446	4DA4 AC						SUBZ,R3		
5447	4DA5 03						STRZ,R3		
5448	4DA6 17						RETC,UN		
5449	4DA7					*			
5450	4DA7 3F 4B A5					S2	BSTA,UN	MTDA	
5451	4DA8 21						STRZ,R1		
5452	4DA8 28						EORZ,R0		
5453	4DA8 0C 20 41						STRA,R0	DUMA-1	
5454	4DA8 0C 20 41						STRA,R0	SSTAT	
5455	4DA8 0C 20 42						LODA,R0	DUMA	
5456	4DA8 0C 20 42						STRA,R0	TMPAE	
5457	4DA8 0C 20 43						STRA,R1	TMPAE-1	
5458	4DA8 0E FF					REDO	LODI,R2	FF	
5459	4DA8 0E 29 56					SL2	LODA,R2	NAME2,+	
5460	4DC2 18 33						ECTR,EC	FOUND	
5461	4DC2 3F 45 A6						BSTA,UN	LTOU	
5462	4DC5 1E 10						COMI,R2	10	
5463	4DC7 1E 2C						ECTR,EQ	FOUND	
5464	4DC9 03						STRZ,R3		
5465	4DCA 21 E9 42						LODA,R1	*DUMA,I	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5446	4DCD 1E 4E 26						ECTA,LT	NF	
5447	4DD2 3F 45 A6						BSTA,UN	LTOU	
5448	4DD3 0C 20 76						STRA,R0	TMPS	
5449	4DD3 0E 26						BIBR,R1	NCAD	
5450	4DD6 3F 4B 1A						BSTA,UN	AIDA	
5451	4DD6 0A 29						BCFR,LT	NF	
5452	4DD6 0C 20 76					NCAD	LODA,R0	TMPS	
5453	4DD6 E3						COMZ,R3		
5454	4DE1 18 5A						ECTR,EC	SL2	
5455	4DE3 04 01						LODI,R0	1	
5456	4DE5 0E 04						LODI,R2	4	
5457	4DE7 3F 4D 47						BSTA,UN	ADDANT	
5458	4DEA 0C 09 42						LODA,R0	TMPAE	
5459	4DED 0C 09 42						STRA,R0	DUMA	
5460	4DF2 0D 09 43						LODA,R1	TMPAE-1	
5461	4DF3 1E 46						ECTR,UN	RETC	
5462	4DF5 0D 09 41					FOUND	STRA,R1	DUMA+1	
5463	4DF8 0E 09 77						STRA,R2	TEMP	
5464	4DFE 22						LOEZ,R2		
5465	4DFC 0E 02						LODI,R2	02	
5466	4DFE 3F 4C F6						BSTA,UN	SUBANT	
5467	4FE1 0E 05 77						LODA,R2	TEMP	
5468	4E24 17						RETC,UN		
5469	4E25					*			
5470	4E25 20					SSTAT	RES	1	
5471	4E25 04 FF					WF	LODI,R0	FF	
5472	4E26 08 73						STRZ,R0	SSTAT	
5473	4E2A 3F 4B A5						BSTA,UN	MTDA	
5474	4E2E 17						RETC,UN		
5475	4E2E					*			
5476	4E2E 05 01					SEARCH	LODI,R1	01	
5477	4E30 3F 4A EA						BSTA,UN	FWDI	
5478	4E33 3F 4E 00						BSTA,UN	MTCA	
5479	4E36 3F 4D A7						BSTA,UN	S2	
5480	4E39 08 6A						LODR,R0	SSTAT	
5481	4E3B 1E 41 56						ECTA,LT	NOTFON	
5482	4E3E 3F 4B 00						BSTA,UN	MTCA	
5483	4E41 0E 00						LODI,R1	00	
5484	4E43 1F 4B 42						ECTA,UN	BACK	
5485	4E26					*			
5486	4E26 3F 4C DA					SAVE	BSTA,UN	IBADD	
5487	4E29 3F 4A EA						BSTA,UN	FWDI	
5488	4E2C 3F 4C BD						BSTA,UN	SDCA	
5489	4E2F 3F 4B A5						BSTA,UN	MTDA	
5490	4E32 01						STRZ,R1		
5491	4E33 20						EORZ,R0		
5492	4E3A 0C 09 41						STRA,R0	DUMA+1	
5493	4E37 03						STRZ,R3		
5494	4E3F 2D E5 40					SL	LODA,R1	*DUMA,I	
5495	4E42 0F F9 42						STRA,R3	*TMPAE,I	
5496	4E41 19 05						BIBR,R1	CRZ	
5497	4E42 3F 4B 1A						BSTA,UN	AIDA	
5498	4E43 2A 1A					CKPS	ECTR,LT	SL3	
5499	4E45 0E 08						BIBR,R3	SLOC	
5500	4E47 3F 4D 2D						BSTA,UN	ALTA	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5611	4F44	27	12				PSSL	RS	
5612	4F56	01					STR2.R1		
5613	4F57	24	FF				FORI.RP	FF	
5614	4F5C	1F	EP				TMI.R1	1E	
5615	4F5B	24	05				PCFP.EG	NOCTCK	
5616	4F5D	27	02				PSSL	8F	
5617	4F5F	21	52				CPSL	50	
5618	4F61	17					RETC.UN		
5619	4F62	75	DE			NOCTCK	CPSL	DB	
5620	4F64	17					RETC.UN		
5621	4F65	21							
5622	4F66	10	49	BC		CHANGE	LODZ.R1	COMD	
5623	4F68	3F	40	DA			RCTA.EQ	IRADD	TMPAE-IBST
5624	4F6C	A5	21				BSTA.UN	1	
5625	4F6E	3F	4A	EA			SUPI.R1		
5626	4F71	3F	4B	92			BSTA.UN	FWDI	
5627	4F74	3F	4A	13			BSTA.UN	MTCA	CURA=ADDRESS OF BYTE TO CHANGE
5628	4F77	3F	4E	2F			BSTA.UN	FRASE2	
5629	4F7A	CC	29	3E			BSTA.UN	FINDND	DUMA=END OF BUFFER
5630	4F7C	CC	29	46			LODA.R2	CHGA	CHGA=ADDRESS OF BYTE TO CHANGE
5631	4F7E	CC	29	46			STRA.R2	CUFA	
5632	4F80	CC	29	3F			LODA.R2	CHGA	
5633	4F83	CC	29	47			STRA.R2	CURA-1	
5634	4F86	2E	02				LODI.R1	02	
5635	4F88	3F	2E	55		DISPL	BSTA.UN	LFCP	
5636	4F8B	20	8A	70			LODA.R2	*CUPIT	
5637	4F8E	F4	2F				TMI.R2	F	
5638	4F92	30	4A	13			BSTA.EQ	FRASE2	
5639	4F93	2E	29	46			LODA.R2	CHGA	
5640	4F96	0E	05	44			STRA.R2	BSA1	
5641	4F99	0F	05	47		DISPL	LODA.R2	CHGA-1	
5642	4F9C	0C	05	46			LODA.P3	*CHGA	
5643	4F9F	1E	51	19			BSTA.LT	INDCHG	IOF
5644	4FA2	E4	02				COMI.RP	CR	
5645	4FA4	16	12				BCFR.EQ	ILFND	
5646	4FA6	3F	2E	23			BSTA.UN	WPI	BUMP CHGA
5647	4FA9	F4	01				LODI.R2	1	
5648	4FAE	06	02				LODI.R2	2	
5649	4FAD	3F	41	47			BSTA.UN	ADDANY	
5650	4FB0	10	80	40			COMA.R2	*IBST2	
5651	4FB3	1A	67				BSTA.UN	DISPLP	
5652	4FB5	1F	51	19			BSTA.UN	INDCHG	
5653	4FB8	0F	29	47		ILFND	STRA.R3	CHGA-1	
5654	4FB9	0C	29	44			LODA.R2	BSA1	
5655	4FB9	0C	29	46			STRA.R2	CHGA	
5656	4FC1	3F	2E	55			BSTA.UN	LFCP	
5657	4FC4	3F	2E	D7		CHGL	BSTA.UN	GETKB	
5658	4FC7	F4	2F				COMI.R2	BS	
5659	4FC9	98	25				BCFR.EQ	NOCHBS	
5660	4FCB	3F	51	21			BSTA.UN	CHBACK	
5661	4FC1	1E	74				BSTA.UN	CHGL	TAB
5662	4FC2	E4	02			NOCHBS	BSTA.UN	HT	
5663	4FD2	0E	15				BCFR.EQ	NOHT	
5664	4FD4	3F	4E	79			BSTA.UN	TABSUB	
5665	4FD7	16	62				BCTR.EQ	CHGL	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5666	4FE9	0F	29	44		TABL3	STRA.R3	BSA1	
5667	4FEC	07	20				LODI.R3	1	
5668	4FEE	3F	52	E1			BSTA.UN	STRTMS	
5669	4FF1	0F	29	44			LODA.R3	BSA1	
5670	4FF4	FE	73				ERR.R3	TABL3	
5671	4FF6	1F	4F	C4			BSTA.UN	CHGL	
5672	4FF9	F4	15			NOHT	COMI.R2	CTRLU	
5673	4FFB	98	2A				BCFR.EQ	NOCOPY	
5674	4FFD	3F	50	CA			BSTA.UN	LOADD	
5675	4FF2	18	52				BCFR.EQ	CHGL	
5676	4FF3	3F	50	E1			BSTA.UN	STRTMS	
5677	4FF5	1B	4D				BCTR.UN	CHGL	
5678	4FF7	F4	15				COMI.R2	CTRLU	
5679	4FF9	98	26				BCFR.EQ	NCCWD	
5680	4FFB	3F	50	CA		CWD1	BSTA.UN	LOADD	
5681	4FF1	18	44				BCTR.EQ	CHGL	
5682	5020	F7	28				COMI.R3	CWD3	
5683	5022	98	1E				BCFR.EQ	STRTMS	
5684	5024	3F	50	E1			BSTA.UN	CWD1	
5685	5027	1B	72			CWD2	LODA.R3	*CHGA	
5686	5029	0F	89	46			COMI.R3	1	
5687	502C	E7	20				RCTA.EQ	CHGL	
5688	502E	10	4F	C4			COMI.R3	1	
5689	5031	F7	20				RCTA.EQ	CHGL	
5690	5033	10	4F	C4			BSTA.UN	LOADD	
5691	5036	3F	50	CA			BSTA.EQ	CHGL	
5692	5039	10	4F	C4		CWD3	BSTA.UN	STRTMS	
5693	5040	3F	50	I1			BCTR.UN	CWD2	
5694	5041	1B	68				COMI.R2	CTRLN	
5695	5021	F4	0E			NOCWD	BCFR.EQ	NOERWD	
5696	5023	98	35				STRA.R1	CHGST-1	
5697	5025	0D	29	49			LODA.R2	TMPAI	
5698	5028	20	05	42			STRA.R2	CHGST	
5699	502E	CC	09	48				A	
5700	502E	26	2A			ERWD1	LODI.R2	1	
5701	5028	04	21				BSTA.UN	SUBANY	
5702	5032	3F	4C	76			LODA.R2	*CHGST	
5703	5035	20	89	48			COMI.R2	1	
5704	5038	14	28				BCFR.EQ	ERWD3	
5705	503A	58	19				BSTA.UN	CHBACK	
5706	503C	3F	51	21			BCTR.UN	ERWD1	
5707	503F	1B	6D					A	
5708	5041	06	0A			ERWD2	LODI.R2	1	
5709	5043	04	21				LODI.R2	1	
5710	5045	3F	4C	76			BSTA.UN	SUBANY	
5711	5048	20	89	48			LODA.R2	*CHGST	
5712	504B	F4	20				COMI.R2	1	
5713	504D	10	4F	C4			RCTA.EQ	CHGL	
5714	5050	F4	20				COMI.R2	1	
5715	5052	10	4F	C4			RCTA.EQ	CHGL	
5716	5055	3F	51	21		ERWD3	BSTA.UN	CHBACK	
5717	5058	1B	67				BCTR.UN	ERWD2	
5718	505A	F4	12			NOERWD	COMI.R2	CTRLP	
5719	505C	98	2B				BCFR.EQ	NOCTOL	
5720	505E	3F	50	CA			COFPLP	BSTA.UN	LOADD

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5721	50E1	10	4F	C4			BCTA,EO	CHGL	
5722	50F4	3F	52	11			BSTA,UN	STRTMS	
5723	50E7	1F	7E				BCTR,UN	CCPLP	
5724	50E9	14	2F			NOCEOL	COMI,R2	CTPL0	
5725	50EB	08	0E				BCFR,EO	MODISC	
5726	50ED	3F	52	CA			BSTA,UN	LOADD	
5727	5078	1F	47	C4			BCTA,UN	CHGL	
5728	5073	03				MODISC	STRZ,R3		
5729	5074	14	23				COMI,R2	ETI	
5730	5278	18	2E				ECTE,EO	BYPASS	
5731	5078	3F	4F	49			BSTA,UN	CKCTRL	
5732	5078	11	4F	24			BCTA,LT	CHGL	
5733	507E	1F	50	EE		BYPASS	BSTA,UN	STRT2	
5734	5071	23					LODZ,R3		
5735	5282	14	2D				COMI,R2	CR	
5736	5084	1F	2F				BCTR,EO	ENDCHL	
5737	5085	14	03				COMI,R2	ETI	
5738	5085	20	4F	C4			BCTA,EO	CHGL	
5739	5088	04	01				LODI,R2	1	
5740	5277	08	22				LODI,R2	2	
5741	508F	3F	4D	FE			BSTA,UN	SUBANY	GET RID OF FTX BEING IN PICTURE
5742	5092	11	50	A2			BCTA,UN	ENDCH	
5743	5095	3F	52	CA		ENDCHL	BSTA,UN	LCADD	
5744	5095	08	78				BCFR,EO	ENDCHL	
5745	509A	3F	50	D2			BSTA,UN	AISC	
5746	509D	1F	43	29			BCTA,UN	DISPI	
5747	50A2					*			
5748	50A2	20	29	48		ENDCH	LODA,R2	DUMA	
5749	50A3	00	25	44			STRA,R2	B5A1	
5750	50A2	20	29	41			LODA,R2	DUMA+1	
5751	50A5	00	29	45			STRA,R2	B5A1+1	
5752	52AC	20	29	46			LODA,R2	CHGA	
5753	50AF	00	29	42			STRA,R2	DUMA	
5754	5012	00	29	47			LODA,R2	CHGA+1	
5755	52B5	00	29	41			STRA,R2	DUMA+1	
5756	52B8	3F	4D	20			BSTA,UN	SRIF	
5757	501F	20	29	44			LODA,R2	B5A1	
5758	502E	00	29	43			STRA,R2	DUMA	
5759	5021	00	29	45			LODA,R2	B5A1+1	
5760	5024	00	29	41			STRA,R2	DUMA+1	
5761	5027	1F	4C	41			BCTA,UN	ENDI	
5762	52CA					*			
5763	50CA	2F	29	46		LOADD	LODA,R2	CHGA	
5764	50C5	17	2D				COMI,R3	CR	
5765	50C7	14					RETC,EO		
5766	5272	04	01			AISC	LODI,R2	1	DECR DUMA
5767	5272	06	02				LODI,R2	2	
5768	50D4	3F	4C	FE			BSTA,UN	SUBANY	
5769	5017	04	01				LODI,R2	1	BUMP CHGA
5770	5019	25	28				LODI,R2	2	
5771	50DB	3F	4D	47			BSTA,UN	ADDANY	
5772	50DE	04	50				LODI,R2	2E	
5773	5210	17					RETC,UN		
5774	52E1					*			
5775	50E1	23				STRTMS	LODZ,R3		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5776	5012	3F	2E	23			BSTA,UN	WRT	
5777	50E5	23				STRT2	LODZ,R3		
5778	5016	05	19	42			STRA,R1	*TMPAE,I	
5779	5019	04	01				LODI,R2	1	BUMP DUMA
5780	50E8	08	02				LODI,R2	2	
5781	50E8	3F	4C	47			BSTA,UN	ADDANY	
5782	5018	1C	29	4C			COMA,R2	*IBST2	
5783	5015	1A	28				BCTR,LT	A1R1	
5784	50F5	3F	4C	B4			BSTA,UN	SIDA	
5785	5018	04	01				LODI,R2	FE	
5786	50FA	00	29	41			STRA,R2	DUMA-1	
5787	5011	1F	51	19			BCTA,UN	ENDCHG	
5788	5122	09	2D			A1R1	B1PR,R1	RETCN	
5789	5122	04	01				LODI,R2	1	
5790	5124	0C	29	42			ADDA,R2	TMPAE	
5791	5127	1C	29	50			COMA,R2	*ENDRM2	
5792	512A	9A	04				BCFR,LT	ABRUPT	
5793	512C	00	29	42			STRA,R2	TMPAE	
5794	512F	17				RETCN	RETC,UN		
5795	5110	04	01			ABRUPT	LODI,R2	1	
5796	5112	06	02				LODI,R2	2	
5797	5114	3F	4C	FE			BSTA,UN	SUBANY	
5798	5117	05	FF				LODI,R1	FF	
5799	5119	04	03			ENDCHG	LODI,R2	ETI	
5800	511E	0D	19	42			STRA,R1	*TMPAE,I	
5801	511E	1F	50	A0			BCTA,UN	EN7CH	
5802	5121					*			
5803	5121	3F	2F	61		CHBACK	BSTA,UN	BACK1	
5804	5124	16					RETC,LT	1	
5805	5125	04	01				LODI,R2	2	
5806	5127	06	02				LODI,R2	2	
5807	5125	3F	4C	FE			BSTA,UN	SUBANY	
5808	512C	17					RETC,UN		
5809	512D					*			
5810	512D	22	22	22		LOADLS	RES	3	
5811	5130					*			
5812	5132	3F	51	FC		LOADL	BSTA,UN	AOK	
5813	5133	3F	51	91			BSTA,UN	LOADA	
5814	5136	90	51	3C			BCFA,EO	SCERR	
5815	5139	1F	49	29			BCTA,UN	FREN	
5816	513C					*			
5817	513C	27	49			SCERR	LODI,R3	MSG10-MSG27	
5818	513E	1F	2F	4C			BCTA,UN	ERROR2	
5819	5141					*			
5820	5141	3F	51	FC		TAPEO	BSTA,UN	AOK	
5821	5144	20	89	4A			LODA,R2	*BSTRT2	
5822	5147	00	29	40			STRA,R2	DUMA	
5823	514A	20				TAPEOT	IOPIZ,R2		
5824	514B	08	27				STRA,R2	*SUM1	
5825	5147	00	29	41			STRA,R2	DUMA	
5826	5152	27	3B				LODI,R3	1	
5827	5152	3F	22	4F			BSTA,UN	SIFO	
5828	5155	05	FF				LODI,R1	FF	
5829	5157	21	29	EC		NAMEO	LODA,R1	NAME2,-	
5830	515A	03					STRZ,R3		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5231	515B	7F	02	4F			BSTA,UN	SERC	
5232	515E	E5	27				COMI,F1	07	
5233	5150	00	75				BCTR,EO	NAMO	
5234	5157	00	A0				LOCP,R3	*SUMK	
5235	5154	3F	22	4F			BSTA,UN	SERO	
523C	5157	05	F0				LODI,R1	00	
5237	5155	00	50				STRP,R1	*SUMK	
523E	515B	20	F9	40		BYTE0	LODA,R1	*DUMA,I	
5239	515E	03					STRZ,R3		
5240	515F	1A	15				BCTR,LT	ENDO	
5241	5171	3F	02	4F			BSTA,UN	SERO	
5242	5174	00	75				BIRR,R1	BYTE0	
5243	5176	00	0C				LODR,R3	*SUMK	
5244	5170	3F	02	4F			BSTA,UN	SERC	
5245	5170	3F	4B	1A			BSTA,UN	AIDA	
5246	517E	0E	40	00			BCTA,LT	FBDN	
5247	5151	1F	51	4A			BCTA,UN	TAPICT	
5248	5154								
5249	5154	17	F9				*SUMK	ACON	17F9
5250	5150								
5251	5156	3F	02	4F			ENDO	BSTA,UN	SERC
5252	5150	0E	70				ENIT	LOIP,R3	*SUMK
5253	5155	3F	02	4F			BSTA,UN	SERO	
5254	515E	1F	40	00			BCTA,UN	FBDN	
5255	5151								
5256	5151	3F	4B	A5		LOADA	BSTA,UN	MTDA	
5257	5154	20				WAITE	FORZ,R0		
5258	5155	00	91	04			STRA,R0	*SUMK	
5259	5156	3F	02	4F			BSTA,UN	SERP	
525A	515B	E7	3E				COMI,F3	'F'	
525B	515D	00	75				BCTR,EO	WAITE	
525C	515F	05	F0				LODI,R1	FF	
525D	51A1	3F	02	4F		NAML	BSTA,UN	SERP	
525E	51A4	00	20	00			LODA,R1	NAMIP	
525F	51A7	10	03				BCTR,EO	OVY SI	
5260	51AC	10					COMZ,F3		
5261	51AA	00	65				BCTR,EO	WAITE	
5262	51AC	E5	07			OVERSI	COMI,R1	07	
5263	51A5	00	71				BCTR,EO	NAML	
5264	51B0	3F	02	4F			BSTA,UN	SERP	
5265	51B3	00	91	04			LODA,R0	*SUMK	
5266	51B5	10					RETC,LT		
5267	51B7	15					RETC,GT		
5268	51B0	00	00	41			LODA,R1	DUM2	
5269	51B0	00	20	41			STRA,RP	DUM2	
526A	51B0	00	20	70			STRA,R0	TMPS	
526B	51C1	3F	02	4F		ASCII	BSTA,UN	SERP	
526C	51C4	03					LODR,R3		
526D	51C5	01	E9	40			STRA,R1	*DUMA,I	
526E	51C0	1A	20				BCTR,LT	ENDING	
526F	51C0	00	17				BIRR,R1	LL1	
5270	51C0	3F	4B	1A			BSTA,UN	AIDA	
5271	51C0	1A	01				BCTR,LT	LL1	
5272	51D1	3F	40	E4			BSTA,UN	SIDA	
5273	51D4	05	FF				LODI,R1	FF	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5266	51D6	04	0C				LODI,R0	FBC	
5267	51D0	00	F9	40			STRA,R1	*DUMA,I	
5268	51D0	1F	40	5F			BCTA,UN	TME	
5269	51D0	00	00	70		LL1	LODA,R2	TMPS	
526A	51E1	00	01				ADDI,R2	01	
526B	51E3	01	00	70			STRA,R2	TMPS	
526C	51E6	00	50				BCTR,EO	ASCII	
526D	51E0								
526E	51E0	3F	02	4F		ENDTP	BSTA,UN	SERP	
526F	51E0	00	00	41			STRA,R1	DUM2	
5270	51E0	00	91	04			LODA,R3	*SUMK	
5271	51F1	10	51	04			BCTA,EO	WAITE	
5272	51F4	17					RETC,UN		
5273	51F5								
5274	51F5	3F	02	4F		ENDING	BSTA,UN	SERP	
5275	51F0	00	91	04			LODA,R0	*SUMK	
5276	51F0	17					RETC,UN		
5277	51F0								
5278	51F0								
5279	51F0	07	63			AOK	LODI,R3	MSG1F-MSG02	
527A	51FE	3F	2F	DC			BSTA,UN	PRING	
527B	5201	3F	2E	05			BSTA,UN	ERAS1	
527C	5204	17					RETC,UN		
527D	5205								
527E	5205								
527F	5205					MSG02	EOU	\$	
5280	5200	42	40	4F	43	MSGC	ALIT		*BLOCKS LEFT:
5281	5220	4B	53	20	20				
5282	520D	4C	45	46	54				
5283	5211	3A	20	20					
5284	5214	FF					DATA	FF	
5285	5215	54	4F	4F	20	MSGD	ALIT		'TOO MUCH'
5286	5219	4D	55	43	40				
5287	521E	FF					DATA	FF	
5288	521E	4E	4F	54	20	MSGE	ALIT		'NOT FOUND'
5289	5222	46	4F	55	4E				
528A	5226	44							
528B	5227	FF					DATA	FF	
528C	5228	4D	4F	44	40	MSGF	ALIT		'MODIFY STRING '
528D	522C	46	50	20	53				
528E	5230	54	52	40	4E				
528F	5234	47	20	27					
5290	5237	00	00	00	00	*NAME	RYS	10	
5291	523B	00	00	00	00				
5292	523F	00	00	00	00				
5293	5243	00	00	00	00				
5294	5247	20	20	54	4F		ALIT		' TO '
5295	524B	20	27						
5296	524F	FF					DATA	FF	
5297	524F	53	55	4D	43	MSG10	ALIT		'SUMCHECK ERROR'
5298	5252	40	45	43	4E				
5299	5256	20	45	52	52				
529A	525A	4F	52						
529B	525C	FF					DATA	FF	
529C	525D	43	4F	4D	4D	MSG1D	ALIT		'COMMAND:
529D	5261	41	4E	44	3A				

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5941	5265	20	20						
5942	5267	FF					DATA	FF	
5943	5268	20	43	4B		MSG17	ALIT	'OK'	
5944	5269	FF					DATA	FF	
5945	526C								
5946	526C						ZFP	EQU	\$
5947	526C								
5948	526C	3F	52	1B		FPSQR	BSTA.UN	POPC3	
5949	5261	3F	52	14			BSTA.UN	PUSHC3	
5950	5270	20	16	29			LOTA.R0	C3S1G	
5951	5275	1E	45	74			BCTA.L7	OVIEP	
5952	5276	3F	52	19			BSTA.UN	POPC4	
5953	527E	20	16	30			LOTA.R0	C4EX	
5954	527E	59					RPR.R0		
5955	527E	44	77				ANDI.R0	77	
5956	5281	00	12	D5			STRA.R0	FPSQUT	
5957	5284	20					EORT.R0		
5958	5285	00	16	3F			STRA.R0	ZTEMP1	
5959	5288	3F	52	F2			BSTA.UN	PUSHC4	
5960	528B	24	57				LODI.R0	CTR	
5961	528D	25	4D				LODI.R1	CTR	
5962	528F	3F	31	38			BSTA.UN	PUSHFP	
5963	5292	3F	3E	F1			BSTA.UN	FFMULT	
5964	5295	3F	32	F9			BSTA.UN	POPC4	
5965	5296	00	3P				LODR.R0	FPSQUT	
5966	529A	00	16	30			STRA.R0	C4EX	
5967	529D	3F	52	F2			BSTA.UN	PUSHC4	
5968	52A0	3F	45	E7			BSTA.UN	POPC2	
5969	52A3	3F	45	1E		SCU1	BSTA.UN	PUSHC2	
5970	52A6	3F	45	D9			BSTA.UN	POPC1	
5971	52A9	3F	52	E4			BSTA.UN	PUSHC3	
5972	52AC	3F	45	10			BSTA.UN	PUSHC1	
5973	52AF	3F	3E	E2			BSTA.UN	FFDIV	
5974	52B2	3F	45	E0			BSTA.UN	PUSHC1	
5975	52B5	3F	3A	70			BSTA.UN	FFACD	
5976	52B8	3F	52	D6			BSTA.UN	PUSHH	
5977	52BB	3F	3B	F1			BSTA.UN	FFMULT	
5978	52BE	04	01				LODI.R0	E1	
5979	52C0	00	16	3F			ABTA.R0	ZTEMP1	
5980	52C3	F4	FF				COMI.R0	ZF	
5981	52C5	15					RETC.GT		
5982	52C6	00	16	3F			STRA.R0	ZTEMP1	
5983	52C9	3F	45	F7			BSTA.UN	POPC2	
5984	52CC	3F	30	02			BSTA.UN	COMMUM	
5985	52CF	00					LOIZ.R3		
5986	52D2	00	F1				TCFR.E0	SCU1	
5987	52D2	1F	45	E1		SQUEND	BCTA.UN	PUSHC2	
5988	52D5								
5989	52D5								
5990	52D6								
5991	52D6								
5992	52D6	04	57				PUSHH	LODI.R0	HALF
5993	52D6	05	41				LODI.R1	HALF	
5994	52DA	1F	31	38			BCTA.UN	PUSHFP	
5995	52DD								

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5996	52DD								
5997	52DD	04	57			PS2	LODI.R0	TWO	
5998	52DF	05	F5				LODI.R1	TWO	
5999	52E1	1F	31	38			BCTA.UN	PUSHFP	
6000	52E4								
6001	52E4								
6002	52E4	04	56				PUSHC3	LODI.R0	CSTEMP
6003	52E6	05	27				LODI.R1	CSTEMP	
6004	52E8	1F	31	38			BCTA.UN	PUSHFP	
6005	52EB								
6006	52EB	04	56				PCPC3	LODI.R0	CSTEMP
6007	52ED	05	27				LODI.R1	CSTEMP	
6008	52EF	1F	31	55			BCTA.UN	POPPF	
6009	52F2								
6010	52F2	04	56				PUSHC4	LODI.R0	C4TEMP
6011	52F4	05	27				LODI.R1	C4TEMP	
6012	52F6	1F	31	38			BCTA.UN	PUSHFP	
6013	52F9								
6014	52F9	04	56				POPC4	LODI.R0	C4TEMP
6015	52FB	05	27				LODI.R1	C4TEMP	
6016	52FD	1F	31	55			BCTA.UN	POPPF	
6017	5300								
6018	5300	04	56				PUSHC5	LODI.R0	C5TEMP
6019	5302	05	27				LODI.R1	C5TEMP	
6020	5304	1F	31	38			BCTA.UN	PUSHFP	
6021	5307								
6022	5307	04	56				POPC5	LODI.R0	C5TEMP
6023	5309	05	27				LODI.R1	C5TEMP	
6024	530B	1F	31	55			BCTA.UN	POPPF	
6025	530E								
6026	530E								
6027	530E	04	57				PUSHPI	LODI.R0	PIE
6028	5310	05	1D				LODI.R1	PIE	
6029	5312	1F	31	38			BCTA.UN	PUSHFP	
6030	5315								
6031	5315	04	57				PUSHE	LODI.R0	EE
6032	5317	05	05				LODI.R1	EE	
6033	5319	1F	31	38			BCTA.UN	PUSHFP	
6034	531C								
6035	531C	04	57				PUSHIN	LODI.R0	IN(10)
6036	531E	05	05				LODI.R1	IN(10)	
6037	5320	1F	31	38			BCTA.UN	PUSHFP	
6038	5323								
6039	5323								
6040	5323								
6041	5323	04	57				PUSHLC	LODI.R0	LOGC
6042	5325	05	0D				LODI.R1	LOGC	
6043	5327	1F	31	38			BCTA.UN	PUSHFP	
6044	532A								
6045	532A								
6046	532A								
6047	532A	3F	45	D9			CGTERM	BSTA.UN	POPC1
6048	5321	3F	45	10			BSTA.UN	PUSHC1	
6049	5322	3F	30	02			BSTA.UN	COMMUM	
6050	5323	00					LODR.R3		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6251	5324	3F	45	17			BCFR,EO	GTERM	
6252	5326	24	01				LODI,R0	1	
6253	5336	17					RETC,UN		
6254	5336	3F	45	17		GTERM	BSTA,UN	POPC2	
6255	533C	3F	45	1E			BSTA,UN	PUSHC2	
6256	533F	3F	52	F4			BSTA,UN	PUSHC3	ACCUMULATED X
6257	5342	3F	52	F2			BSTA,UN	PUSHC4	INITIAL X
6258	5345	3F	3E	F1			BSTA,UN	PFMULT	
6259	534F	3F	52	EB			BSTA,UN	POPC3	
6260	534F	3F	52	F4			BSTA,UN	PUSHC3	
6261	534E	0C	16	44			LODA,R1	TERMNM	
6262	5351	0D	16	41			ADDA,R1	DUP	
6263	5354	0C	16	44			STRA,R1	TERMNM	
6264	5357	15	78				COMI,R1	78	END OF TERMS
6265	5359	15	14				BCFR,GT	GTERM2	
6266	535E	15	15	42			ADDA,R1	OFFSET	
6267	535E	05	05				ADDI,R1	KTAB	
6268	5360	77	08				FFSL	WC	
6269	5363	22					ECRZ,R0	KTAB	
6270	5363	04	56				ADDI,R0	KTAB	
6271	5365	75	09				CPSL	WC	
6272	53C7	3F	31	38			BSTA,UN	PUSHFP	
6273	53C8	3F	7B	F1			BSTA,UN	PFMULT	
6274	53C3	02					ECRZ,R0		
6275	53C1	17					RETC,UN		
6276	5363	3F	45	D9		GTERM2	BSTA,UN	POPC1	
6277	5372	24	01				LODI,R0	1	
6278	5374	17					RETC,UN		
6279	5375					*			
6280	5375					*			
6281	5375					*			
6282	5375	3F	52	F9		GTERM	BSTA,UN	POPC4	
6283	5378	3F	52	F2			BSTA,UN	PUSHC4	
6284	5373	24	78				LODI,R0	08	
6285	537D	0C	16	41			STRA,R0	DUP	
6286	5380	24	F8				LODI,R0	F8	
6287	5382	0C	16	44			STRA,R0	TERMNM	
6288	5385	02					ECRZ,R0		
6289	5386	0C	16	42			STRA,R0	OFFSET	
6290	5389	0C	16	43			STRA,R0	SSIGN	
6291	538C	3F	45	AC			BSTA,UN	PUSH1	
6292	538F	1F	52	FE			BSTA,UN	POPC3	
6293	5392					*			
6294	5392					*			
6295	5392					*			
6296	5392	3F	52	F2		DOUBLE	BSTA,UN	PUSHC4	
6297	5395	3F	52	F2			BSTA,UN	PUSHC4	
6298	5398	3F	52	F1			BSTA,UN	PFMULT	
6299	539C	3F	52	F9			BSTA,UN	POPC4	
6300	539E	24	12				LODI,R0	12	
6301	53A2	0C	16	41			STRA,R0	DUP	
6302	53A3	17					RETC,UN		
6303	53A4					*			
6304	53A4					*			
6305	53A4					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6126	53A4	3F	45	D9		CSIGN	BSTA,UN	POPC1	
6127	53A7	3F	45	E0			BSTA,UN	PUSHC1	
6128	53AA	3F	45	E0			BSTA,UN	PUSHC1	
6129	53AD	3F	53	0E			BSTA,UN	PUSHF1	
6130	53B0	3F	38	E2			BSTA,UN	PFDIV	
6131	53B3	3F	37	0F			BSTA,UN	PFMIX	
6132	53B6	3F	52	F8			BSTA,UN	POPC4	
6133	53B9	0C	16	38			LODA,R0	C4EX	
6134	53BC	18	21				BCFR,EO	CSIGN2	
6135	53BE	E4	2A				COMI,R0	A	
6136	53C0	19	2A				BCFR,GT	CSIGN2	
6137	53C2	02					STPZ,R2		
6138	53C3	A4	01				SUBI,R0	1	
6139	53C5	50					RRF,R0		
6140	53C6	44	07				ANCI,R0	7	
6141	53C8	2C	76	32			LODA,R0	C4MAIN,I	
6142	53CB	F6	01				TPI,R2	1	
6143	53CD	98	04				BCFR,EO	CSIGN3	
6144	53CF	50					RRF,R0		
6145	53D0	50					RRF,R0		
6146	53D1	50					RRF,R0		
6147	53D2	50					RRF,R0		
6148	53D3	F4	01			CSIGN3	TPI,R0	1	
6149	53D5	98	15				BCFR,EO	CSIGN2	
6150	53D7	3F	52	F2			BSTA,UN	PUSHC4	
6151	53DA	3F	45	AC			BSTA,UN	PUSH1	
6152	53DD	0C	16	31			LODA,R0	C4SIGN	
6153	53E0	18	05	64			BCFR,EO	CSIGN5	
6154	53E2	3F	3A	64			BSTA,UN	PFMIX	
6155	53E5	1B	06				BCFR,UN	CSIGN4	
6156	53E7	3F	3A	70		CSIGN5	BSTA,UN	YFADD	
6157	53EA	1B	03				BCFR,UN	CSIGN4	
6158	53EC	3F	52	F2			CSIGN2	BSTA,UN	PUSHC4
6159	53EF	3F	53	0F		CSIGN4	BSTA,UN	PUSHF1	
6160	53F2	3F	3E	F1			BSTA,UN	PFMULT	
6161	53F5	1F	3A	64			BSTA,UN	PFMIX	
6162	53F8					*			
6163	53F8					*			
6164	53F8	3F	53	A4		FPSIN	BSTA,UN	CSIGN	
6165	53FB	3F	53	75			BSTA,UN	GTERM	
6166	53FE	3F	52	F9			BSTA,UN	POPC4	
6167	5401	3F	52	F2			BSTA,UN	PUSHC4	
6168	5404	3F	52	FB			BSTA,UN	POPC3	
6169	5407	3F	52	F2			BSTA,UN	PUSHC4	
6170	540A	20					ECRZ,R0		
6171	540B	0C	16	44			STRA,R0	TERMNM	
6172	540E	3F	53	02		SERI	BSTA,UN	DOUBLE	
6173	5411	3F	53	39			BSTA,UN	GTERM	
6174	5414	3F	3A	64			BSTA,UN	PFMIX	
6175	5417	3F	53	2A		FPSIN1	BSTA,UN	GTERM	
6176	541A	15					RETC,GT		
6177	541B	3F	3A	70			BSTA,UN	YFADD	
6178	541E	3F	53	2A			BSTA,UN	GTERM	
6179	5421	15					RETC,GT		
6180	5422	3F	3A	64			BSTA,UN	PFMIX	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6161	5425	1F	7E				BCTR,UN	FFS141	
6162	5427					*			
6163	5427					*			
6164	5427					*			
6165	5427	3F	53	75		FFCOS	BSTA,UN	CTERM	
6166	5428	3F	53	A4			BSTA,UN	GSIGN	
6167	542D	3F	52	F9			BSTA,UN	POPC4	
6168	5436	3F	4F	AC			BSTA,UN	PUSH1	
6169	543C	1F	7E				BCTR,UN	SIRI	
6170	543E					*			
6171	543E					*			
6172	543E					*			
6173	543E					*			
6174	543E					*			
6175	543E	3F	53	75		FFPIX2	BSTA,UN	CTERM	
6176	543E	3F	53	27			BSTA,UN	POPC5	
6177	543E	3F	53	90			BSTA,UN	PUSHC5	
6178	543F	3F	52	72			BSTA,UN	PUSHC4	
6179	5441	3F	3D	5A			BSTA,UN	FPAYS	
6180	5444	3F	2B	A1			BSTA,UN	ENS2	
6181	5447	2F					LOD7,R0		
6182	544F	2D	45	74			BCTA,EO	CVFER	
6183	544E	2D	16	42			STRA,R1	ZTEMP2	
6184	544E	3F	3F	26			BSTA,UN	FFPRC	
6185	5451	3F	52	F9			BSTA,UN	POPC4	
6186	5454	3F	45	AC			BSTA,UN	PUSH1	
6187	5457	2D	16	42		FPEX1	LODA,R1	ZTEMP2	
6188	545A	1F	17				BCTP,EO	FPEX2	
6189	545C	A5	21				SUPI,R1	01	
6190	545E	2D	16	42			STRA,R1	ZTEMP2	
6191	5461	3F	53	1F			BSTA,UN	PUSH1	
6192	5464	2D	16	38			LODA,R0	CSSIGN	
6193	5467	1F	2E				BCTR,EO	FPEX3	
6194	546B	3F	3B	F7			BSTA,UN	FPDIV	
6195	546C	1F	69				BCTR,UN	FPMULT	
6196	5471	3F	3F	F1		FPEX5	BSTA,UN	FPEX1	
6197	5471	1B	54				BCTP,UN	FPEX1	
6198	5473	3F	45	AC		FPEX2	BSTA,UN	PUSH1	
6199	547E	3F	53	79			BSTA,UN	CTERM	
6200	547F	3F	3A	7E			BSTA,UN	FPADD	
6201	547C	3F	67	2A		FPEX3	BSTA,UN	CGTERM	
6202	547F	3F	67	2A			BCTR,EO	FPEX4	
6203	5481	3F	3A	7E			BSTA,UN	FPADD	
6204	5484	1F	7E				BCTP,UN	FPEX3	
6205	548E	1F	3B	F1		FPEX4	BCTA,UN	FPMULT	
6206	5489					*			
6207	5489					*			
6208	5489					*			
6209	5489	3F	45	D9		FFLOG	BSTA,UN	POP01	
6210	5490	3F	53	23			BSTA,UN	PUSHLG	
6211	549F	3F	4F	E0			BSTA,UN	PUSHC1	
6212	5492	3F	55	6C			BSTA,UN	FPLM	
6213	5495	1F	3B	F1			BCTA,UN	FPMULT	
6214	5496					*			
6215	5496					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6216	5496					*			
6217	5496	3F	53	07		FPTAN	BSTA,UN	POPC5	
6218	549P	3F	53	28			BSTA,UN	PUSHC5	
6219	549E	3F	53	7E			BSTA,UN	FFS14	
6220	54A1	3F	53	08			BSTA,UN	PUSHC5	
6221	54A4	3F	54	27			BSTA,UN	ZPCOS	
6222	54A7	1F	3B	E2			BCTA,UN	FPDIV	
6223	54AA					*			
6224	54AA					*			
6225	54AA	2D				FPTSN	RES	1	
6226	54A5					*			
6227	54AB	3F	52	F9		FFPATN	BSTA,UN	POPC4	
6228	54A1	3F	52	F2			BSTA,UN	PUSHC4	
6229	54B1	2D	16	31			LODA,R0	C4SIGN	
6230	54B4	0B	74				STRR,R2	FPTSN	
6231	54B6	3F	3D	5A			BSTA,UN	FPAYS	
6232	54B9	3F	45	D9			BSTA,UN	PCPC1	
6233	54BC	3F	45	AC			BSTA,UN	PUSH1	
6234	54BF	3F	45	I7			BSTA,UN	PCPC2	
6235	54C2	3F	30	02			BSTA,UN	COMMON	
6236	54C5	E7	01				COMI,R3	GT	
6237	54C7	9C	54	EB			BCTA,EO	ATN2	
6238	54CA	24	57				LODI,R0	HALFPI	
6239	54CC	25	E5				LODI,R1	HALFPI	
6240	54CE	3F	31	38			BSTA,UN	PUSHFP	
6241	54D1	3F	45	AC			BSTA,UN	PUSH1	
6242	54D4	3F	4F	E0			BSTA,UN	PUSHC1	
6243	54D7	3F	3B	F2			BSTA,UN	FPDIV	
6244	54DA	2F					BCTP,R0		
6245	54DE	3F	1F				BCTR,UN	APPROX	
6246	54DE	3F	3A	64			BSTA,UN	FPSUB	
6247	54E3	3F	52	F9		FPTEND	BSTA,UN	POPC4	
6248	54E3	2E	45				LODR,R2	FPTSN	
6249	54E5	2D	16	31			STRA,R0	C4SIGN	
6250	54E8	1F	52	F2			BCTA,UN	PUSHC4	
6251	54E8					*			
6252	54E8	3F	45	E0		ATN2	BSTA,UN	PUSHC1	
6253	54EE	2D					ICR2,R0		
6254	54F1	3F	24				BCTR,UN	APPROX	
6255	54F1	1F	61				BCTR,UN	FPTEND	
6256	54F3					*			
6257	54F3	2D				ACTFS	RES	1	
6258	54F4	2D				APTEM	RES	1	
6259	54F5					*			
6260	54F5	0B	7C			APPROX	STPR,R0	ACTFS	
6261	54F7	2E	02				LODI,R1	0	
6262	54F9	0D	79				STPR,R1	APTEM	
6263	54F5	3F	1C	EB			BSTA,UN	PCPC3	
6264	54F1	3F	52	F4			BSTA,UN	PUSHC3	
6265	5521	3F	52	F6			BSTA,UN	POPC4	
6266	5524	3F	52	F2			BSTA,UN	PUSHC4	
6267	5527	2E	6A				LODR,R1	ACTFS	
6268	5529	65	45				ADDI,R1	ATAB	
6269	5525	77	0E				PPSU	WC	
6270	552D	2D					ICR2,R0		

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6391	5627					*			
6392	5627					*			
6393	5627 00					CSTEMP RES		1	
6394	5629 00					CSEI RES		1	
6395	5629 20					CSSIGN RES		1	
6396	562A 00 00 00 00					C5MAIN RES		5	
6397	562E 00					*			
6398	562F					*			
6399	562F					*			
6400	562F 00					C4TEMP RES		1	
6401	5630 00					C4EI RES		1	
6402	5631 00					C4SIGN RES		1	
6403	5632 20 22 00 70					C4MAIN RES		5	
6404	563F 00					*			
6405	5637					*			
6406	5637 00					C5TEMP RES		1	
6407	5638 00					C5EI RES		1	
6408	5639 00					C5SIGN RES		1	
6409	563A 70 00 00 00					C5MAIN RES		5	
6410	563F 00					*			
6411	563F					*			
6412	563F					*			
6413	563F					*			
6414	563F 00					ZTEMP1 RES		1	
6415	5640 00					ZTEMP2 RES		1	
6416	5641 20					IUB RES		1	
6417	5642 20					OFFSET RES		1	
6418	5643 00					SSIGN RES		1	
6419	5644 20					TERMIN RES		1	
6420	5645					*			
6421	5645					*			
6422	5645					*			
6423	5645 27 00 00 00					ATAB DATA		00,00,00,99,99,99,33,29	
6424	5649 00 00 33 20					DATA		00,00,70,33,32,98,76,00	
6425	5641 00 00 10 33					DATA		00,00,00,19,94,65,35,99	
6426	5651 30 00 00 25					DATA		00,00,00,13,98,85,33,51	
6427	5655 02 00 00 19					DATA		70,01,00,96,42,00,44,10	
6428	5659 04 00 35 99					DATA		70,01,70,55,98,98,86,10	
6429	566D 27 00 70 13					DATA		70,02,70,46,54,05,00,00	
6430	5671 00 00 33 51					DATA		00,00,00,99,99,99,66,42,39	
6431	5675 70 21 00 06					DATA		00,00,70,49,98,74,12,30	
6432	5679 42 00 44 10					DATA		00,00,00,33,17,99,02,50	
6433	5681 70 21 70 55					DATA		00,00,00,24,07,33,00,04	
6434	5671 00 98 86 10					DATA		00,00,00,16,66,66,66,67	
6435	5675 70 21 20 21					DATA		70,01,00,41,66,66,66,67	
6436	5679 86 12 28 00					DATA		70,02,00,83,33,33,33,33	
6437	567D 70 02 72 40					DATA		70,02,70,13,82,88,88,89	
6438	5681 54 05 00 00					DATA		70,03,00,19,84,12,69,84	
6439	5685					*			
6440	5685 00 00 00 00					ATAB DATA		00,01,00,10,00,00,00,00	
6441	5689 99 96 42 39					DATA		00,00,00,50,00,00,00,00	
6442	568D 00 00 72 49					DATA		00,00,00,16,66,66,66,67	
6443	5691 00 74 12 38					DATA		70,01,00,41,66,66,66,67	
6444	5695 00 00 00 33					DATA		70,02,00,83,33,33,33,33	
6445	5699 17 99 22 50					DATA		70,02,70,13,82,88,88,89	
6446	569D 07 00 72 24					DATA		70,00,00,16,05,90,43,84	
6447	56C5					*			
6448	56C5					*			
6449	56C5					*			
6450	56C5 00 01 00 10					ATAB DATA		00,01,00,10,00,00,00,00	
6451	56C9 00 00 00 00					DATA		00,00,00,50,00,00,00,00	
6452	56CD 00 00 00 00					DATA		00,00,00,16,66,66,66,67	
6453	56D9 00 00 00 16					DATA		70,01,00,41,66,66,66,67	
6454	56E5 66 66 66 67					DATA		70,02,00,83,33,33,33,33	
6455	56E9 70 01 00 41					DATA		70,02,70,13,82,88,88,89	
6456	56ED 66 66 66 67					DATA		70,03,00,19,84,12,69,84	
6457	56F1 70 02 00 83					DATA		70,04,00,24,00,15,07,30	
6458	56F5 33 33 33 33					DATA		70,05,00,27,55,73,19,22	
6459	56F9 70 02 00 13					DATA		70,06,00,27,55,73,19,22	
6460	56FD 00 00 00 27					DATA		70,07,00,25,05,31,08,39	
6461	5701 55 73 19 22					DATA		70,08,00,20,07,07,00,99	
6462	5705 55 73 19 22					DATA		70,00,00,16,05,90,43,84	
6463	5709 70 06 00 27					DATA		70,10,00,11,47,07,45,60	
6464	5711 55 73 19 22					DATA		70,12,00,76,47,16,37,32	
6465	5715 70 07 00 25					DATA		70,13,00,47,49,47,73,32	
6466	5719 05 31 08 39					DATA		00,00,00,20,00,00,00,00	
6467	5723 70 08 00 20					DATA		00,00,00,20,00,00,00,00	
6468	5727 07 07 56 99					DATA		00,00,00,16,06,66,66,67	
6469	572B 70 09 00 16					DATA		00,01,00,10,00,00,00,00	
6470	572F 25 00 43 84					DATA		00,00,00,50,00,00,00,00	
6471	5731 70 10 00 11					DATA		00,00,00,33,33,33,33,33	
6472	5735 47 07 45 60					DATA		00,00,00,20,00,00,00,00	
6473	5739 70 12 00 76					DATA		00,00,00,20,00,00,00,00	
6474	573D 47 16 37 32					DATA		00,00,00,20,00,00,00,00	
6475	5741 70 13 00 47					DATA		00,00,00,16,06,66,66,67	
6476	5745 49 47 73 32					DATA		00,01,00,10,00,00,00,00	
6477	5749					ATAB2 EQU		\$	
6478	5749 00 01 00 10					ONE DATA		00,01,00,10,00,00,00,00	
6479	574D 00 00 00 20					DATA		00,00,00,50,00,00,00,00	
6480	5751 00 00 00 00					DATA		00,00,00,33,33,33,33,33	
6481	5755 00 00 00 33					DATA		00,00,00,20,00,00,00,00	
6482	5759 33 33 33 33					DATA		00,00,00,20,00,00,00,00	
6483	5763 70 02 00 20					DATA		00,00,00,16,06,66,66,67	
6484	5767 00 00 00 20					DATA		00,00,00,20,00,00,00,00	
6485	576B 00 00 00 20					DATA		00,00,00,16,06,66,66,67	
6486	576F 00 00 00 20					DATA		00,00,00,16,06,66,66,67	
6487	5773 00 00 00 20					DATA		00,00,00,16,06,66,66,67	
6488	5777 00 00 00 20					DATA		00,00,00,16,06,66,66,67	
6489	577B 00 00 00 20					DATA		00,00,00,16,06,66,66,67	
6490	577F 00 00 00 16					DATA		00,00,00,16,06,66,66,67	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6436	56A1 07 33 00 04								
6437	56A5 00 00 00 16					DATA		00,00,00,16,76,54,07,11	
6438	56A9 76 54 07 11					DATA		70,01,70,95,32,93,09,70	
6439	56AD 70 01 70 05					DATA		70,01,00,36,00,84,93,70	
6440	56B1 30 93 09 70					DATA		70,02,70,64,53,54,42,00	
6441	56B5 70 01 00 36					DATA		00,00,00,16,66,66,66,67	
6442	56B9 08 84 93 70					DATA		70,01,00,41,66,66,66,67	
6443	56BD 70 02 00 64					DATA		70,02,00,83,33,33,33,33	
6444	56C1 53 54 42 00					DATA		70,02,70,13,82,88,88,89	
6445	56C5					*			
6446	56C5					*			
6447	56C5					*			
6448	56C5 00 01 00 10					ATAB DATA		00,01,00,10,00,00,00,00	
6449	56C9 00 00 00 00					DATA		00,00,00,50,00,00,00,00	
6450	56CD 00 00 00 00					DATA		00,00,00,16,66,66,66,67	
6451	56D9 00 00 00 16					DATA		70,01,00,41,66,66,66,67	
6452	56E5 66 66 66 67					DATA		70,02,00,83,33,33,33,33	
6453	56E9 70 01 00 41					DATA		70,02,70,13,82,88,88,89	
6454	56ED 66 66 66 67					DATA		70,03,00,19,84,12,69,84	
6455	56F1 70 02 00 83					DATA		70,04,00,24,00,15,07,30	
6456	56F5 33 33 33 33					DATA		70,05,00,27,55,73,19,22	
6457	56F9 70 02 00 13					DATA		70,06,00,27,55,73,19,22	
6458	56FD 00 00 00 27					DATA		70,07,00,25,05,31,08,39	
6459	5701 55 73 19 22					DATA		70,08,00,20,07,07,00,99	
6460	5705 55 73 19 22					DATA		70,00,00,16,05,90,43,84	
6461	5709 70 06 00 27					DATA		70,10,00,11,47,07,45,60	
6462	5711 55 73 19 22					DATA		70,12,00,76,47,16,37,32	
6463	5715 70 07 00 25					DATA		70,13,00,47,49,47,73,32	
6464	5719 05 31 08 39					DATA		00,00,00,20,00,00,00,00	
6465	5723 70 08 00 20					DATA		00,00,00,20,00,00,00,00	
6466	5727 07 07 56 99					DATA		00,00,00,16,06,66,66,67	
6467	572B 70 09 00 16					DATA		00,01,00,10,00,00,00,00	
6468	572F 25 00 43 84					DATA		00,00,00,33,33,33,33,33	
6469	5731 70 10 00 11					DATA		00,00,00,20,00,00,00,00	
6470	5735 47 07 45 60					DATA		00,00,00,20,00,00,00,00	
6471	5739 70 12 00 76					DATA		00,00,00,20,00,00,00,00	
6472	573D 47 16 37 32					DATA		00,00,00,16,06,66,66,67	
6473	5741 70 13 00 47					DATA		00,00,00,16,06,66,66,67	
6474	5745 49 47 73 32					DATA		00,01,00,10,00,00,00,00	
6475	5749					ATAB2 EQU		\$	
6476	5749 00 01 00 10					ONE DATA		00,01,00,10,00,00,00,00	
6477	574D 00 00 00 20					DATA		00,00,00,50,00,00,00,00	
6478	5751 00 00 00 00					DATA		00,00,00,33,33,33,33,33	

5. Program Listing

This section contains the program listing for 12K BASIC.

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2201	2202						ORG	2202	
2202	2202						EXEC	STRT	
2203	2202					R0	ECU	0	
2204	2202					R1	ECU	1	
2205	2202					R2	ECU	2	
2206	2202					R3	ECU	3	
2207	2202					R4	ECU	4	
2208	2202					R5	ECU	5	
2209	2202					R6	ECU	6	
2210	2202					R7	ECU	7	
2211	2202					R8	ECU	8	
2212	2202					R9	ECU	9	
2213	2202					R10	ECU	10	
2214	2202					R11	ECU	11	
2215	2202					R12	ECU	12	
2216	2202					R13	ECU	13	
2217	2202					R14	ECU	14	
2218	2202					R15	ECU	15	
2219	2202					R16	ECU	16	
2220	2202					R17	ECU	17	
2221	2202					R18	ECU	18	
2222	2202					R19	ECU	19	
2223	2202					R20	ECU	20	
2224	2202					R21	ECU	21	
2225	2202					R22	ECU	22	
2226	2202					R23	ECU	23	
2227	2202					R24	ECU	24	
2228	2202					R25	ECU	25	
2229	2202					R26	ECU	26	
2230	2202					R27	ECU	27	
2231	2202					R28	ECU	28	
2232	2202					R29	ECU	29	
2233	2202					R30	ECU	30	
2234	2202					R31	ECU	31	
2235	2202					R32	ECU	32	
2236	2202					R33	ECU	33	
2237	2202					R34	ECU	34	
2238	2202					R35	ECU	35	
2239	2202					R36	ECU	36	
2240	2202					R37	ECU	37	
2241	2202					R38	ECU	38	
2242	2202					R39	ECU	39	
2243	2202					R40	ECU	40	
2244	2202					R41	ECU	41	
2245	2202					R42	ECU	42	
2246	2202					R43	ECU	43	
2247	2202					R44	ECU	44	
2248	2202					R45	ECU	45	
2249	2202					R46	ECU	46	
2250	2202					R47	ECU	47	
2251	2202					R48	ECU	48	
2252	2202					R49	ECU	49	
2253	2202					R50	ECU	50	
2254	2202					R51	ECU	51	
2255	2202					R52	ECU	52	
2256	2202					R53	ECU	53	
2257	2202					R54	ECU	54	
2258	2202					R55	ECU	55	
2259	2202					R56	ECU	56	
2260	2202					R57	ECU	57	
2261	2202					R58	ECU	58	
2262	2202					R59	ECU	59	
2263	2202					R60	ECU	60	
2264	2202					R61	ECU	61	
2265	2202					R62	ECU	62	
2266	2202					R63	ECU	63	
2267	2202					R64	ECU	64	
2268	2202					R65	ECU	65	
2269	2202					R66	ECU	66	
2270	2202					R67	ECU	67	
2271	2202					R68	ECU	68	
2272	2202					R69	ECU	69	
2273	2202					R70	ECU	70	
2274	2202					R71	ECU	71	
2275	2202					R72	ECU	72	
2276	2202					R73	ECU	73	
2277	2202					R74	ECU	74	
2278	2202					R75	ECU	75	
2279	2202					R76	ECU	76	
2280	2202					R77	ECU	77	
2281	2202					R78	ECU	78	
2282	2202					R79	ECU	79	
2283	2202					R80	ECU	80	
2284	2202					R81	ECU	81	
2285	2202					R82	ECU	82	
2286	2202					R83	ECU	83	
2287	2202					R84	ECU	84	
2288	2202					R85	ECU	85	
2289	2202					R86	ECU	86	
2290	2202					R87	ECU	87	
2291	2202					R88	ECU	88	
2292	2202					R89	ECU	89	
2293	2202					R90	ECU	90	
2294	2202					R91	ECU	91	
2295	2202					R92	ECU	92	
2296	2202					R93	ECU	93	
2297	2202					R94	ECU	94	
2298	2202					R95	ECU	95	
2299	2202					R96	ECU	96	
2300	2202					R97	ECU	97	
2301	2202					R98	ECU	98	
2302	2202					R99	ECU	99	
2303	2202					R100	ECU	100	
2304	2202					R101	ECU	101	
2305	2202					R102	ECU	102	
2306	2202					R103	ECU	103	
2307	2202					R104	ECU	104	
2308	2202					R105	ECU	105	
2309	2202					R106	ECU	106	
2310	2202					R107	ECU	107	
2311	2202					R108	ECU	108	
2312	2202					R109	ECU	109	
2313	2202					R110	ECU	110	
2314	2202					R111	ECU	111	
2315	2202					R112	ECU	112	
2316	2202					R113	ECU	113	
2317	2202					R114	ECU	114	
2318	2202					R115	ECU	115	
2319	2202					R116	ECU	116	
2320	2202					R117	ECU	117	
2321	2202					R118	ECU	118	
2322	2202					R119	ECU	119	
2323	2202					R120	ECU	120	
2324	2202					R121	ECU	121	
2325	2202					R122	ECU	122	
2326	2202					R123	ECU	123	
2327	2202					R124	ECU	124	
2328	2202					R125	ECU	125	
2329	2202					R126	ECU	126	
2330	2202					R127	ECU	127	
2331	2202					R128	ECU	128	
2332	2202					R129	ECU	129	
2333	2202					R130	ECU	130	
2334	2202					R131	ECU	131	
2335	2202					R132	ECU	132	
2336	2202					R133	ECU	133	
2337	2202					R134	ECU	134	
2338	2202					R135	ECU	135	
2339	2202					R136	ECU	136	
2340	2202					R137	ECU	137	
2341	2202					R138	ECU	138	
2342	2202					R139	ECU	139	
2343	2202					R140	ECU	140	
2344	2202					R141	ECU	141	
2345	2202					R142	ECU	142	
2346	2202					R143	ECU	143	
2347	2202					R144	ECU	144	
2348	2202					R145	ECU	145	
2349	2202					R146	ECU	146	
2350	2202					R147	ECU	147	
2351	2202					R148	ECU	148	
2352	2202					R149	ECU	149	
2353	2202					R150	ECU	150	
2354	2202					R151	ECU	151	
2355	2202					R152	ECU	152	
2356	2202					R153	ECU	153	
2357	2202					R154	ECU	154	
2358	2202					R155	ECU	155	
2359	2202					R156	ECU	156	
2360	2202					R157	ECU	157	
2361	2202					R158	ECU	158	
2362	2202					R159	ECU	159	
2363	2202					R160	ECU	160	
2364	2202					R161	ECU	161	
2365	2202					R162	ECU	162	
2366	2202					R163	ECU	163	
2367	2202					R164	ECU	164	
2368	2202					R165	ECU	165	
2369	2202					R166	ECU	166	
2370	2202					R167	ECU	167	
2371	2202					R168	ECU	168	
2372	2202					R169	ECU	169	
2373	2202					R170	ECU	170	
2374	2202					R171	ECU	171	
2375	2202					R172	ECU	172	
2376	2202					R173	ECU	173	
2377	2202					R174	ECU	174	
2378	2202					R175	ECU	175	
2379	2202					R176	ECU	176	
2380	2202					R177	ECU	177	
2381	2202					R178	ECU	178	
2382	2202					R179	ECU	179	
2383	2202					R180	ECU	180	
2384	2202					R181	ECU	181	
2385	2202					R182	ECU	182	
2386	2202					R183	ECU	183	
2387	2202					R184	ECU	184	
2388	2202					R185	ECU		

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
2111	20A5	04	48				LODI,R0	COMTBL	
2112	20A7	05	52				LODI,R1	COMTBL	
2113	20A9	3F	45	F7			BSTA,UN	LOOKUP	
2114	20AC	9C	43	13			BCFA,EQ	LFT	
2115	20AF	0C	14	D4		EXEC2	STRA,R0	DODST	
2116	20F2	01	14	1F			STRA,R1	DODST-1	
2117	20B8	1F	34	D4			BCTA,UN	*DODST	
2118	20B9					*			
2119	20BA					*			
2120	20B6	3F	45	01		ERASEB	BSTA,UN	ERASE	
2121	20BB	1F	31	A3			BCTA,UN	NXTLIN	
2122	20BE					*			
2123	20BF					*			
2124	20BE	3F	33	9F		POKE	BSTA,UN	EVAL	
2125	2201	3F	2E	8E			BSTA,UN	ENS	
2126	2204	3F	32	6E			BSTA,UN	STRICT	
2127	2007	3F	46	48			BSTA,UN	SKPCCM	
2128	220A	3F	33	9F			BSTA,UN	EVAL	
2129	220C	3F	2E	8E			BSTA,UN	ENS13	
2130	2200	01	14	1F			STRA,R1	*CTEMP	
2131	2014	1F	31	A3			BCTA,UN	NXTLIN	
2132	22DE					*			
2133	22DE					*			
2134	207F	3F	32	B3		COSUP	BSTA,UN	ENDLIN	
2135	2010	0C	43	87			BCFA,EQ	LNFR	
2136	20D0	0F	11	00			LODA,R3	CINPT-1	
2137	20DF	3F	32	D9			BSTA,UN	DECSF	
2138	20E2	0F	11	8F			LODA,R3	CINPT	
2139	20E5	3F	30	T9			BSTA,UN	DECSF	
2140	20E8	07	02				LODI,R3	2	
2141	20EA	3F	32	D9			BSTA,UN	DECSF	
2142	20E1	1F	A2	92			BCTA,UN	*RTNADR	
2143	22F2					*			
2144	22F2					*			
2145	20F7	3F	30	E1		RETURN	BSTA,UN	INCSP	
2146	20F3	F7	02				COMI,R3	2	
2147	20F6	9C	46	78			BCFA,EQ	NESTER	
2148	20F8	3F	37	B1			BSTA,UN	INCSP	
2149	20F5	0F	11	84			STRA,R3	INPT	
2150	20F9	3F	32	F1			BSTA,UN	INCSP	
2151	2121	0F	11	85			STRA,R3	INPT-1	
2152	2124	1F	46	3A			BCTA,UN	SKPLIN	
2153	2127					*			
2154	2127					*			
2155	2107	3F	32	B3		RESTOR	BSTA,UN	ENDLIN	
2156	210A	1E	43	87			BCTA,LT	LNFR	
2157	210E	16	13				BCTF,GT	REST2	
2158	212F	2C	11	84			LODA,R0	INPT	
2159	2112	21	11	85			LODA,R0	INPT-1	
2160	2116	08	1F			REST1	STRR,R0	DATPMT	
2161	2117	09	14				STRR,R1	DATPMT-1	
2162	2119	3F	31	91			BSTA,UN	CRINPT	
2163	211C	20					FOR2,R0		
2164	211D	08	2F				STRR,R2	PDATA	
2165	211F	1F	31	06			BCTA,UN	CKNXTL	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
2166	2122	3F	31	86		REST2	BSTA,UN	CSINPT	
2167	2125	2C	22	03			LODA,R0	BSTART	
2168	2128	05	22				LODI,R1	0	
2169	212A	1B	6F				BCTR,UN	REST1	
2170	212C					*			
2171	212C					*			
2172	2120	07	20			DATPMT	RES	2	
2173	2120	20				PDATA	RES	1	
2174	212F					*			
2175	212F					*			
2176	212F	3F	29	6E		FOR	BSTA,UN	GOVAR	
2177	2132	9C	46	34			BCFA,EQ	N STR	
2178	2135	3F	32	6E			BSTA,UN	STRICT	
2179	2138	02					STRZ,R2		
2180	2139	21					LODZ,R1		
2181	213A	03					STRZ,R3		
2182	213B	3F	30	D9			BSTA,UN	DECSF	PUSH VAR. LOCATION
2183	213E	02					LODZ,R2		
2184	213F	03					STRZ,R3		
2185	2140	3F	30	D9			BSTA,UN	DECSF	
2186	2143	0F	11	85			LODA,R3	INPT-1	
2187	2146	3F	30	D9			BSTA,UN	DECSF	PUSH INPT
2188	2149	0F	11	84			LODA,R3	INPT	
2189	214C	3F	30	D9			BSTA,UN	DECSF	
2190	214F	3F	46	F8			BSTA,UN	SKPEQ	
2191	2152	3F	33	9F			BSTA,UN	EVAL	
2192	2152	9C	46	34			BCFA,EQ	NOSTR	
2193	2152	3F	21	1E			BSTA,UN	POPCT	
2194	215B	04	48				LODI,R0	FORTBL	
2195	215D	25	32				LODI,R1	FORTBL	
2196	215F	3F	45	F7			BSTA,UN	LOOKUP	
2197	2162	9C	31	F1			BCFA,EQ	SYNER	
2198	2165	F5	01				COMI,R1	1	
2199	2167	9C	31	F1			BCFA,EQ	SYNER	
2200	216A	3F	33	9F			BSTA,UN	EVAL	
2201	216D	9C	46	34			BCFA,EQ	NOSTR	
2202	2170	04	48				LODI,R0	FORTBL	
2203	2172	05	30				LODI,R1	FORTBL	
2204	2174	3F	45	F7			BSTA,UN	LOOKUP	
2205	2177	98	0D				BCFR,EQ	FOR2	
2206	2179	E5	02				COMI,R1	2	
2207	217B	9C	31	F1			BCFA,EQ	SYNER	
2208	217E	3F	33	9F			BSTA,UN	EVAL	
2209	2181	9C	46	34			BCFA,EQ	NOSTR	
2210	2184	1E	03				BCTR,UN	FOR3	
2211	2186	3F	45	AC		FOR2	BSTA,UN	PUSH1	
2212	2189	07	03			FOR3	LODI,R3	3	
2213	218B	3F	30	D9			BSTA,UN	DECSF	
2214	218E	1F	31	A3			BCTA,UN	NXTLIN	
2215	2191					*			
2216	2191					*			
2217	2191	00	00	00	00	NTEMP	RES	4	
2218	2195	00	00	00	00	NTEMP	RES	8	
2219	2199	00	00	00	00				
2220	219D	00	00	00	00	DTEMP	RES	8	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2201	21A1	07	00	00	27				
2202	21A5					*			
2203	21A5					*			
2204	21A5	3F	30	E1		NEXT	BSTA,UN	INCSF	
2205	21A5	E7	23				COMI,R3	3	
2206	21AA	9C	45	78			BCFA,EC	~NESTER	
2207	21A7	24	21				LODI,R0	DTEMP	POP STEP VALUE
2208	21A7	05	9D				LODI,R1	DTEMP	
2209	21B1	3F	31	5E			BSTA,UN	POPF	
2210	21B4	04	21				LODI,R0	~NTEMP	POP TO VALUE
2211	21B5	05	9E				LODI,R1	NTEMP	
2212	21B5	3F	31	5E			BSTA,UN	POPF	
2213	21B5	05	9E				LODI,R1	FF	
2214	21B5	05	9E				LODI,R2		
2215	21B7	1F	24			NEXT1	BSTA,UN	4	PCP INPT, VAR LOC.
2216	21B7	1F	24				BSTA,UN		
2217	21C7	22	32	F1			LODI,R3		
2218	21C3	07	21	91			STRA,R1	NTEMPS,-	
2219	21C8	FA	77				BRDR,R2	NEXT1	
2220	21D9	3F	35	77			BSTA,UN	LOKVAP	
2221	21D3	1C	0F				BCTR,GT	NEXTX	
2222	21D0	1F	45	7C			BCTA,LT	TYFER	
2223	21D2	0C	01	93			COMA,R0	NTEMPS-2	
2224	21D3	0C	45	78			BCFA,EC	NESTER	
2225	21D5	ED	01	94			COMA,R1	NTEMPS-3	
2226	21D5	9C	45	72			BCFA,EC	NESTER	
2227	21D0	2C	01	93		NEXTY	LODA,R0	NTEMPS-2	
2228	21D1	2D	01	94			LODA,R1	NTEMPS-3	
2229	21E0	3F	31	38			BSTA,UN	FUSHP	
2230	21E5	04	31				LODI,R0	DTEMP	
2231	21E5	2E	5D				LODI,R1	DTEMP	
2232	21E9	3F	31	38			BSTA,UN	PUSHFP	
2233	21F0	3F	3A	70			BSTA,UN	FPADD	
2234	21F3	3E	4F	F7			BSTA,UN	PCPC2	
2235	21F2	25	08				LODI,R1	8	
2236	21F4	27	53	5E		NEXT2	LODA,R1	CBUF2,-	
2237	21F7	01	21	93			STRA,R1	*NTEMPS-2,1	
2238	21F8	01	61	95			LODA,R1	NTEMP,1	
2239	21F8	01	75	92			STRA,R1	CBUF1,1	
2240	2200	3F	33	02			BRNR,R1	NEXT2	
2241	2205	2C	01	9F			BSTA,UN	COMNUM	
2242	2208	1A	31				LODA,R0	DTEMP-2	
2243	220A	1F	02				BCTR,LT	NEXT3	
2244	220C	18	31				COMI,R3	LT	
2245	220C	18	31				BCTR,EG	NEXT4	
2246	220E	05	04			NEXT6	LODI,R1	4	
2247	2210	01	41	91		NEXT5	LODA,R1	NTEMPS,-	
2248	2213	03					STRZ,R3		
2249	2214	3F	30	D0			BSTA,UN	DECSP	
2250	2217	59	77				BRNR,R1	NEXT5	
2251	2219	04	21				LODI,R0	NTEMP	
2252	221E	05	9E				LODI,R1	NTEMP	
2253	221D	3F	31	38			BSTA,UN	PUSHFP	
2254	2220	04	21				LODI,R0	DTEMP	
2255	2222	0F	9D				LODI,R1	DTEMP	
2256	2224	3F	31	38			BSTA,UN	PUSHFP	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2276	2227	27	03				LODI,R3	3	
2277	2229	3F	30	E9			BSTA,UN	LECSF	
2278	222C	0C	01	91			LODA,R0	NTEMPS	
2279	222F	CC	11	94			STRA,R0	INPT	
2280	2232	0C	01	92			LODA,R0	NTEMPS-1	
2281	2235	CC	11	95			STRA,R0	INPT-1	
2282	2238	1F	46	7A			BCTA,UN	SKPLIN	
2283	223E	E7	01			NEXT3	COMI,R3	GT	
2284	223D	9B	4F				BCTR,FG	NEXT6	
2285	223F	3F	46	40		NEXT4	BSTA,UN	SKPSP	
2286	2242	E4	2C				COMI,R0	,	
2287	2244	10	21	A7			BCTA,EG	NEXT	
2288	2247	3F	32	13			BSTA,UN	DECF	
2289	224A	1F	31	A3			BCTA,UN	NITLIN	
2290	2241					*			
2291	2241					*			
2292	224D	3E	03			PURGE	BSTR,UN	PURGES	
2293	224F	1F	31	A3			BCTA,UN	NITLIN	
2294	2252					*			
2295	2252	0C	00	05		PURGES	LODA,R0	VAPST	
2296	2255	CC	00	0A			STRA,R0	TABEND	
2297	2258	20					EORZ,R0		
2298	2259	CC	00	0B			STRA,R0	TABEND+1	
2299	225C	CC	00	0A			STRA,R0	*TABEND	
2300	225F	17					RETC,UN		
2301	2260					*			
2302	2260					*			
2303	2260	00	00			SWAPS	RES	2	
2304	2262					*			
2305	2262					*			
2306	2262	3F	29	6E		SWAP	BSTA,UN	GCVAR	
2307	2265	1A	28				BCTR,LT	SWAPST	
2308	2267	1D	45	80			BCTA,GT	ARGER	
2309	226A	3F	30	6E			BSTA,UN	STRCT	
2310	226D	3F	46	48			BSTA,UN	SKPCOM	
2311	2270	3F	29	6E			BSTA,UN	GCVAR	
2312	2273	9C	46	34			BCFA,EC	NOSTR	
2313	2276	07	06				LODI,R3	8	
2314	2279	08	66			SWAP2	STRR,R0	SWAPS	
2315	227A	09	65				STRR,R1	SWAPS-1	
2316	227C	0F	C2	60		SWAP3	LODA,R3	*SWAPS,-	
2317	227F	C1					STRZ,R1		
2318	2280	0F	F3	4E			LODA,R3	*CTEMP,I	
2319	2283	CF	F2	60			STRA,R3	*SWAFS,I	
2320	2286	01					LODI,R1		
2321	2287	CF	F3	4E			STRA,R3	*CTEMP,I	
2322	228A	5B	70				BRNR,R3	SWAF3	
2323	228C	1F	31	A3			BCTA,UN	NITLIN	
2324	228F	3F	30	6E		SWAPST	BSTA,UN	STRCT	
2325	2292	3F	46	48			BSTA,UN	SKPCOM	
2326	2295	3F	29	6E			BSTA,UN	GCVAR	
2327	2298	9E	46	74			BCFA,LT	NOSTR	
2328	229B	07	03				LODI,R3	3	
2329	229D	1E	59				BCTR,UN	SWAF2	
2330	229F					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0331	229F					*			
0332	229F	00				DOLFOR	RES	1	
0333	22A0	00				FTYPE	RES	1	
0334	22A1	00				LPOS	RES	1	
0335	22A2	00				FUSP	RES	1	
0336	22A3	55	49	4F		USINGL	ALIT		USING.
0337	22A7	47	01						
0338	22A8	22	22	FF		DATA		2,2,FF	
0339	22AC					*			
0340	22AC					*			
0341	22AC	09	74			STRPUS	STRR,R1	PUSP	
0342	22AE	17					RETC,UN		
0343	22AF					*			
0344	22AF					*			
0345	22AF	24	FF			LPRINT	LODI,R0	FF	
0346	22B1	08	61				STRR,P0	PTYPE	
0347	22B3	1B	13				BCTR,UN	PRNTAL	
0348	22B5					*			
0349	22B5					*			
0350	22B5	22				PRINT	FORZ,R0		
0351	22B6	06	68				STRR,R0	PTYPE	
0352	22B8	24	FF				LODI,R0	FF	
0353	22BA	00	02	A7			STRA,R0	PUSP	
0354	22B5	37	46	48			BSTA,UN	SKPSP	
0355	22C2	14	42				COMI,R0	'0'	
0356	22C7	10	24	08			BCTA,EQ	PRNTAT	
0357	22C8	37	32	13			BSTA,UN	DECF	
0358	22C8	74	21			PRNTAL	LODI,R0	CR	
0359	22CA	7F	02	0F			LODA,P0	DOLFOR	
0360	22CC	30	24	05			BSTA,EQ	SENDIT	
0361	22D2	20					FORZ,R0		
0362	22D1	00	02	0F			STRA,R0		
0363	22D4	24	02				LODI,R0	DOLFOR	
0364	22D6	2A	A3				LODI,R1	USINGL	
0365	22E8	37	46	F7			BSTA,UN	LOCKUP	
0366	22E8	10	43	54			BCTA,EQ	PUSING	PRINT USING
0367	22F0	00	91	84		PRINT2	LODA,R0	*INPT	
0368	22F1	14	28				COMI,R0	'&'	
0369	22E3	10	2F	20			BCTA,EQ	PRNTC0	
0370	22E6	3F	31	8E			BSTA,UN	CHECP	
0371	22E9	10	31	A3			BCTA,EQ	NXTLIN	
0372	22E0	3F	33	9F			BSTA,UN	EVAL	
0373	22F7	16	14				BCTR,GT	PRINT3	
0374	22F1	1A	08				BCTR,LT	PRINT4	
0375	22F3	3E	23	29			BSTA,UN	PRNTF	
0376	22F5	1F	24	E0			BCTA,UN	PRNTD	
0377	22F9	0E	FF			PRINT4	LODI,R1	FF	
0378	22FE	3B	15				BSTR,UN	PRNTS	
0379	22FE	1F	24	E0			BCTA,UN	PRNTD	
0380	2302	10	23	29			BCTA,EQ	PRNTF	
0381	2303	1A	2D				BCTR,LT	PRNTS	
0382	2305	04	48			PRINT3	LODI,R0	TABLI1	
0383	2307	0E	7E				LODI,R1	TABLI1	
0384	2308	3F	7E	57			BSTA,UN	LOOKUP	
0385	230C	9C	31	B1			BCTA,EQ	SYNER	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0386	230F	1F	24	49			BCTA,UN	PRNTAT	
0387	2312					*			
0388	2312					*			
0389	2312	3F	30	B1		PRNTS	BSTA,UN	INCSP	
0390	2315	3F	30	B1			BSTA,UN	INCSP	
0391	2318	03					LOI2,R3		
0392	2319	02					STRZ,R2		
0393	231A	02				PRNTS2	LOI2,R2		
0394	231B	18	08				BCTR,EQ	PRNTS3	
0395	231D	0E	10	D7			LODA,R2	*SP,-	
0396	2320	3F	24	0E			BSTA,UN	SENDIT	
0397	2323	19	75				BDRR,R1	PRNTS2	
0398	2325	03				PRNTS3	LOI2,R3		
0399	2326	1F	30	B5			BCTA,UN	INCSP2	
0400	2329					*			
0401	2329					*			
0402	2329	3F	45	D9		PRNTF	BSTA,UN	POPC1	
0403	2320	0C	13	52			LODA,R0	CBUF1-2	
0404	232F	3F	23	FB			BSTA,UN	PRTSGW	
0405	2332	3F	2B	D9		PRNTF1	BSTA,UN	CILIN	
0406	2335	00					LOI2,R0		
0407	2336	08	04				BCTR,EQ	PRNTF2	
0408	2338	3F	24	C3			BSTA,UN	SEND0	
0409	233B	17					RETC,UN		
0410	233C	0E	13	50		PRNTF2	LODA,R2	CBUF1	
0411	233F	1A	1D				BCTR,LT	PRNTF3	
0412	2341	0D	13	51			LODA,R1	CBUF1-1	
0413	2344	1E	10				COMI,R1	10	
0414	2346	1D	23	9C			BCTA,GT	PRTEXP	
0415	2349	3F	20	11		PRNTF4	BSTA,UN	CIGET	
0416	234C	15					RETC,GT		
0417	234E	14					RETC,EQ		
0418	234E	C3					STRZ,R3		
0419	234F	59	05				BRNR,R1	PT4A	
0420	2351	04	2E				LODI,R0		
0421	2353	3F	24	0E			BSTA,UN	SENDIT	
0422	2356	AE	01			PT4A	SUBI,R1	1	
0423	2358	03					LOI2,R3		
0424	2359	3F	24	C3			BSTA,UN	SEND0	
0425	235C	1B	6P				BCTR,UN	PRNTF4	
0426	235E	0E	13	51		PRNTF3	LODA,R2	CBUF1-1	
0427	2361	14	0A				COMI,R0	A	
0428	2363	98	02				BCTR,EQ	PT3A	
0429	2365	04	10				LODI,R0	10	
0430	2367	84	66			PT3A	ADDI,R0	66	
0431	2369	82					ADDI,R2		
0432	236A	94					DAR,R0		
0433	236B	E4	12				COMI,R0	12	
0434	236D	19	1D				BCTR,GT	PRTEXP	
0435	236F	04	2E				LODI,R0		
0436	2371	3F	24	0E			BSTA,UN	SENDIT	
0437	2374	0D	13	51			LODA,R1	CBUF1-1	
0438	2377	59	0A			PT3C	BRNR,R1	PT3B	
0439	2379	3F	20	11		PT3C	BSTA,UN	CIGET	
0440	237C	15					RETC,GT		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2441	2301	14					RETC, EQ		
2442	2301	3F	24	03			BSTA, UN	SEND0	
2443	2301	1B	76				BCTA, UN	PTSC	
2444	2303	24	30			PTTE	LODI, R0	0	
2445	2303	3F	24	03			BSTA, UN	SENDIT	
2446	2305	4E	01				SUBI, R1	1	
2447	230A	1B	6B				BCTR, UN	PTSD	
2448	230C	3F	20	11		PTTYP	BSTA, UN	C1GET	
2449	230F	3F	24	03			BSTA, UN	SEND0	
2450	2320	20	20	2F			LODA, R0	CMAX	
2451	232F	14	01				COMI, R0	1	
2452	2330	10	23	AF			BCTA, EQ	PRTE5	
2453	233A	24	0F				LODI, R0	.	
2454	233C	3F	24	03			BSTA, UN	SENDIT	
2455	233F	3F	20	11		PRTE2	BSTA, UN	C1GET	
2456	2342	0A	27				BCTR, LT	PRTE5	
2457	2344	24	30				IORI, R0	0	
2458	2346	3F	24	03			BSTA, UN	SENDIT	
2459	2349	1B	74				BCTR, UN	PRTE2	
2460	234B	24	4F			PRTE5	LODI, R0	'F'	
2461	234D	3F	24	03			BSTA, UN	SENDIT	
2462	234F	3F	13	50			LOIA, R2	CBUF1	
2463	2351	1A	3F				BCTR, LT	PRTE6	
2464	2354	20	13	51			LODA, R0	CBUF1+1	
2465	2359	A4	21				SUBI, R0	1	
2466	235A	04					DAR, R0		
2467	235E	14	09				COMI, R0	99	
2468	2360	20	2F				BCTR, EQ	PRTE7	
2469	2361	24	12				LOI, R0	F0	
2470	2361	20	13	F0			STRA, R0	CBUF1	
2471	2364	20	13	51		PRTE6	LODA, R0	CBUF1+1	
2472	2367	14	09				COMI, R0	99	
2473	236B	1B	75				BCTR, EQ	PRTE8	
2474	236E	04	07				ADDI, R0	67	
2475	2370	04					DAR, R0		
2476	2370	00	13	51		PRTE7	STRA, R0	CBUF1+1	
2477	2371	13	01				BCTR, UN	PRTE9	
2478	2373	3F	23	FD		PRTE8	BSTA, UN	PRTM1	
2479	23D6	24	2A				LODI, R0	*	
2480	23D8	3F	24	05			BSTA, UN	SENDIT	
2481	23DB	24	2A				LODI, R0	*	
2482	23DD	3F	24	05			BSTA, UN	SENDIT	
2483	23E0	17					RETC, UN		
2484	23E1	20	13	F0		PRTE9	LODA, R0	CBUF1	
2485	23E4	3F	23	FB			BSTA, UN	PRTSGN	
2486	23E7	20	13	51			LODA, R0	CBUF1+1	
2487	23E8	02					STRZ, R2		
2488	23E9	02					RRP, R0		
2489	23F0	57					RRP, R0		
2490	23F1	57					RRP, R0		
2491	23F1	58					RRP, R0		
2492	23EF	44	0F				ANDI, R0	F	
2493	23F1	3F	24	03			BSTA, UN	SEND0	
2494	23F4	02					LODZ, R0		
2495	23F5	44	0F				ANDI, R0	F	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2496	23F7	3F	24	03			BSTA, UN	SEND0	
2497	23FA	17					RETC, UN		
2498	23FB					*			
2499	23FB					*			
2500	23FB	18	05			PRTSGN	BCTR, EQ	PRTS2	
2501	23FD	04	2D			PRTM1	LODI, R0	'-'	
2502	23FE	1F	24	05			BCTA, UN	SENDIT	
2503	2402	04	20			PRTS2	LODI, R0	' '	
2504	2404	1F	24	05			BCTA, UN	SENDIT	
2505	2407					*			
2506	2407					*			
2507	2407	02				ATSTG	RES	1	
2508	2408					*			
2509	2428					*			
2510	2408	3F	33	9F		PRNTAT	BSTA, UN	EVAL	
2511	240B	3F	2B	97			BSTA, UN	ENS1B	
2512	240E	E5	10				COMI, R1	10	
2513	2410	1D	45	74			BCTA, GT	OVFER	
2514	2413	21					LOI2, R1		
2515	2414	10	45	74			BCTA, EQ	OVFER	
2516	2417	A5	01				SUBI, R1	1	
2517	2419	0D	24	07			STRA, R1	ATSTG	
2518	241C	3F	46	49			BSTA, UN	SKPCOM	
2519	241F	3F	33	9F			BSTA, UN	EVAL	
2520	2422	3F	2B	97			BSTA, UN	ENS1B	
2521	2425	E6	50				COMI, R1	50	
2522	2427	11	45	74			BCTA, GT	OVFER	
2523	242A	E8	20				COMI, R1	0	
2524	242C	10	45	74			BCTA, EQ	OVFER	
2525	242F	A5	21				SUBI, R1	1	
2526	2431	D1					RRL, R1		
2527	2432	77	28				PPSL	WC	
2528	2434	D0					RRL, R0		
2529	2435	D1					RRL, R1		
2530	2436	D0					RRL, R0		
2531	2437	D1					RRL, R1		
2532	2438	D0					RRL, R0		
2533	2439	D1					RRL, R1		
2534	243A	D0					RRL, R0		
2535	243B	75	28				CPSL	WC	
2536	243D	64	10				IORI, R0	10	
2537	243F	02					STRZ, R2		
2538	2440	6D	24	07			ICRA, R1	ATSTG	
2539	2443	3F	2D	F7			BSTA, UN	SETOUR	
2540	2446	1F	22	DE			BCTA, UN	PRINT2	
2541	2449					*			
2542	2449					*			
2543	2449	3F	33	9F		PRNTAB	BSTA, UN	EVAL	
2544	244C	3F	2B	97			BSTA, UN	ENS1B	
2545	2447	21					LOI2, R1		
2546	2450	02					STRZ, R2		
2547	2451	3F	24	A3			BSTA, UN	GETPOS	
2548	2454	E2				TAB1	COM2, R2		
2549	2455	0A	29				BCTR, GE	PRNTD	
2550	2457	03					STRZ, R3		

SUBI, R1 1 - 242A - A5 01
 BCTA, N OVFER - 242C - 1E 45 74
 CPSL 01 242F - 75 01

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2551	245E	04	23				LODI,R0		
2552	245A	3F	24	05			BSTA,UN	SENDIT	
2553	2451	03					LOIZ,R3		
2554	245F	D8	74				BIBR,R0	TAB1	
2555	2460					*			
2556	2460					*			
2557	2460	3F	46	40		PRNTD	BSTA,UN	SKPSP	
2558	2463	7F	31	E6			BSTA,UN	CHKCR	
2559	2466	10	A0	02			BCTA,EQ	*RTNADR	
2560	2469	E4	21				COMI,R0	'	
2561	246E	10	46	3A			BCTA,EQ	SKPLIN	
2562	246E	E4	33				COMI,R0	'	
2563	2477	18	20				BCTR,EQ	PRNTD4	
2564	247C	E4	20				COMI,R0	'	
2565	247A	90	31	R1			BCTA,EC	SYNER	
2566	2477	3F	24	A3			BSTA,UN	GETPOS	
2567	247A	E4	40				COMI,R0	40	
2568	247C	19	11				BCTR,GT	PRNTD5	
2569	247E	01					STRZ,R1		
2570	247F	A5	01				SURI,R1	1	
2571	2481	01				PRNTD	LODZ,R1		
2572	2482	44	0F				ANDI,R0	F	
2573	2484	18	30				BCTR,EQ	PRNTD4	
2574	2486	04	20				LODI,R0		
2575	2488	3F	04	05			BSTA,UN	SENDIT	
2576	248E	E5	01				ADDI,R1	1	
2577	248F	1B	72				BCTR,UN	PRNTD0	
2578	249F	3F	2E	E5		PRNTD5	BSTA,UN	LFCR	
2579	24A2	3F	32	10		PRNTD4	BSTA,UN	SKPDEC	
2580	24A5	3F	31	B6			BSTA,UN	CHKCR	
2581	24A9	90	22	DE			BCTA,EC	PRINT2	
2582	24CE	04	FF			PRNTD6	LODI,R0	FF	
2583	249D	00	22	EF			STPA,R0	DOLFCR	
2584	24A7	1F	31	A3			BCTA,UN	NXTLIN	
2585	24A3					*			
2586	24A3					*			
2587	24A3	00	22	A2		GETPOS	LODA,R0	PTYPE	
2588	24A6	18	24				BCTR,EC	GETDIS	
2589	24A8	00	02	A1			LODA,R0	LPOS	
2590	24A5	17					RETC,UN		
2591	24A0	0D	02	C7		GETDIS	LODA,R1	CURSOR	
2592	24A7	00	02	08			LODA,R0	CURSCR-1	
2593	24B2	77	08				PPSL	WC	
2594	24B4	51					RRR,R1		
2595	24B5	59					RRR,R0		
2596	24B6	51					RRR,R1		
2597	24B7	50					RRR,R0		
2598	24B8	51					RRR,R1		
2599	24B9	59					RRR,R0		
2600	24BA	51					RRR,R1		
2601	24BB	50					RRR,R0		
2602	24BC	44	7F				ANDI,R0	7F	
2603	24BE	75	08				CPSL	WC	
2604	24C0	04	01				ADDI,R0	1	
2605	24C2	17					RETC,UN	1	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2606	24C3					*			
2607	24C3					*			
2608	24C3	54	30			SEND0	IORI,R0	'0'	
2609	24C5	77	12			SENDIT	PPSL	RS	
2610	24C7	0D	02	A0			LODA,R1	PTYPE	
2611	24CA	75	13				CPSL	RS	
2612	24CC	18	10				BCTR,EQ	SEND1	
2613	24CE	19	22				BCTR,GT	SEND3	
2614	24D0	E4	01				COMI,R0	CR	
2615	24D2	98	12				BCTR,EQ	SEND2	
2616	24D4	04	01				LODI,R0	1	
2617	24D6	00	02	A1			STRA,R0	LPOS	
2618	24D9	04	2D				LODI,R0	CR	
2619	24DB	1F	20	07			BCTA,UN	PRNT	
2620	24DE	14	0D			SEND1	COMI,R0	CR	
2621	24E0	10	2E	E5			BCTA,EC	LFCR	
2622	24E3	1F	2E	E3			BCTA,UN	WRT	
2623	24E6	3F	20	07		SEND2	BSTA,UN	PRNT	
2624	24E9	0C	02	A1			LODA,R0	LPOS	
2625	24EC	84	01				ADDI,R0	1	
2626	24EE	00	02	A1			STRA,R0	LPOS	
2627	24F1	17					RETC,UN		
2628	24F2	77	10			SEND3	PPSL	RS	
2629	24F4	01	1E	9E			LODA,R1	TYP3SP	
2630	24F7	0D	3E	9F			STRA,R1	STR5S,+	
2631	24FA	0D	1E	9E			STRA,R1	TYP3SP	
2632	24FE	75	10				CPSL	RS	
2633	24FF	17					RETC,UN		
2634	2500					*			
2635	2500					*			
2636	2500	3F	31	FD		PRNTCT	BSTA,UN	INCPCT	
2637	2503	3F	32	2B			BSTA,UN	GETCHR	
2638	2506	E4	40				COMI,R0	40	
2639	2508	1E	45	74			BCTA,LT	OVFER	
2640	250E	E4	5F				COMI,R0	5F	
2641	250D	1E	45	74			BCTA,GT	OVFER	
2642	2510	44	1F				ANDI,R0	1F	
2643	2512	3F	24	05			BSTA,UN	SENDIT	
2644	2515	1F	24	02			BCTA,UN	PRNTD	
2645	2518					*			
2646	2518					*			
2647	2518	00				ERRTYP	RES	1	
2648	2519					*			
2649	2519					*			
2650	2519	00	06	34		DATERR	LODA,R0	ERWAIT	
2651	251C	10	33	2E			BCTA,EC	ERROR	
2652	251F	0F	77				STRR,R3	ERRTYP	
2653	2521	0F	11	85			LODA,R3	INPT-1	
2654	2524	3F	30	D9			BSTA,UN	DECSP	
2655	2527	0F	11	84			LODA,R3	INPT	
2656	252A	3F	30	D9			BSTA,UN	DECSP	
2657	252D	07	02				LODI,R3	2	
2658	252F	3F	30	D9			BSTA,UN	DECSP	
2659	2532	00	06	32			LODA,R0	ERRTN	
2660	2535	00	11	84			STRA,R0	INPT	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0661	2538	0C	06	33			L0DA,R0	ERRTN+1	
0662	253F	0C	11	8F			STRA,R0	INPT+1	
0663	253E	1F	A0	92			RCTA,UN	*RTNADR	
0664	2541						*		
0665	2541						*		
0666	2543	07	02			RDNDE	L0DI,R3	NDERR	
0667	2543	1E	54				RCTR,UN	DATERR	
0668	2545	07	0A			RDTYF	L0DI,R3	TYPERR	
0669	2547	1E	5F				RCTR,UN	DATERR	
0670	2549						*		
0671	2549						*		
0672	2549	07	02			ONSTG	RFS	2	
0673	254B	22				INON	RES	1	
0674	254C					*			
0675	254C					*			
0676	254C	0F	33	9F		ON	BSTA,UN	EVAL	
0677	254F	3F	2B	9E			BSTA,UN	ENS	
0678	2552	09	75				STRR,R1	ONSTG	
0679	2554	02					L0DZ,R0		
0680	2555	0C	46	3A			RCTA,EC	SKPLIN	
0681	2558	01					L0DZ,R1		
0682	2559	1C	46	3A			RCTA,EC	SKPLIN	
0683	255C	04	47				L0DI,R0	ONTBL	
0684	255E	0F	FE				L0DI,R1	ONTBL	
0685	2560	3F	45	F7			BSTA,UN	LOOKUP	
0686	2563	0C	31	B1			RCTA,EC	SYNER	
0687	2565	0E	22				STRR,R1	ONSTG-1	
0688	2566	09	5F				L0DF,R1	ONSTG	
0689	256A	1E	01			ON1	COMI,R1	1	
0690	256C	1B	0F				RCTR,EC	ON2	
0691	256F	3F	32	28		ON1B	BSTA,UN	GETCHR	
0692	2571	3F	31	B6			BSTA,UN	CHKCR	
0693	2574	1C	A0	92			RCTA,EC	*RTNADR	
0694	2577	F4	2C				COMI,R0		
0695	2578	0A	73				RCTR,EC	ON1B	
0696	2579	F9	6D				RDRR,R1	ON1	
0697	257D	04	FF			ON2	L0DI,R0	FF	
0698	257F	0E	4A				STRR,R0	INON	
0699	2581	0E	47				L0DR,R1	ONSTG+1	
0700	2583	0D	65	92			L0DA,R1	ONPTR,I	
0701	2586	0C	14	D4			STRA,R0	D0DST	
0702	2588	01	2F	92			L0DA,R1	ONPTR,+	
0703	258D	0C	14	D5			STRA,R0	D0DST+1	
0704	258F	17	B4	D4			RCTA,UN	*D0DST	
0705	2592					*			
0706	2592					*			
0707	2592	43	81	20	D6	ONPTR	ACON	GOTO,GOSUB,RESTOR.EXIT ERRORC.RESUME	
0708	2596	21	07	25	F7				
0709	259A	26	3F	44	DA				
0710	259E					*			
0711	259E					*			
0712	259E	3F	33	9F		IF	BSTA,UN	EVAL	
0713	25A1	0C	46	3A			RCTA,EC	NOSTR	
0714	25A4	3F	45	D6			BSTA,UN	POPC1	
0715	25A7	0C	13	53			L0DA,R0	CBUF1-3	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0716	25AA	1B	13				RCTR,EC	IFELSF	0=FALSE
0717	25AC	04	47				L0DI,R0	IFTEL	
0718	25AF	0F	FF				L0DI,R1	IFTEL	
0719	25B0	3F	45	F7			BSTA,UN	LOOKUP	
0720	25B3	0E	04				RCTR,EC	IFTHEN	
0721	25B5	01					L0DZ,R1		
0722	25B6	0C	31	B1			RCTA,EC	SYNER	
0723	25B9	3F	32	B3		IFTHEN	BSTA,UN	FNDLIN	
0724	25BC	1F	A0	92			RCTA,UN	*RTNADR	
0725	25BF	3F	32	28		IFELSE	BSTA,UN	GETCHR	
0726	25C2	F4	2C				COMI,R0		
0727	25C4	1B	13				RCTR,EC	ELSE2	
0728	25C8	F4	0E				COMI,R0	CR	
0729	25C8	0E	7F				RCTR,EC	IFELSE	
0730	25CA	3F	32	10			BSTA,UN	SKPDEC	
0731	25CD	04	47				L0DI,R0	ELSTBL	
0732	25CF	0F	F6				L0DI,R1	ELSTBL	
0733	25D1	3F	45	F7			BSTA,UN	LOOKUP	
0734	25D4	1F	A0	92			RCTA,LT	*RTNADR	
0735	25E7	1E	60				RCTR,UN	IFTHEN	
0736	25E9	3F	32	10		ELSE2	BSTA,UN	SKPDEC	
0737	25DC	04	47				L0DI,R0	ELSTBL	
0738	25DE	0E	F6				L0DI,R1	ELSTBL	
0739	25E0	3F	45	F7			BSTA,UN	LOOKUP	
0740	25E3	0A	5A				RCTR,EC	IFELSE	
0741	25E5	1B	52				RCTR,UN	IFTHEN	
0742	25E7					*			
0743	25E7					*			
0744	25E7	2F	90	D7		EXIT	L0DA,R3	*SP	
0745	25EA	07	03				COMI,R3	3	
0746	25EC	0C	43	81			RCTA,EC	GOTO	
0747	25EF	06	17				L0DI,R2	17	
0748	25F1	3F	30	B1		EXIT1	BSTA,UN	INCSP	
0749	25F4	FA	7B				RDRR,R2	EXIT1	
0750	25F6	1E	6F				RCTR,UN	EXIT	
0751	25F8					*			
0752	25F8					*			
0753	25F8	3F	33	9F		WAIT	BSTA,UN	EVAL	
0754	25FB	3F	2B	97			BSTA,UN	ENS1B	
0755	25FE	C9	26				STRR,R1	WAIT4+1	
0756	2600	3F	46	48			BSTA,UN	SKPCOM	
0757	2603	3F	33	9F			BSTA,UN	EVAL	
0758	2606	3F	2B	97			BSTA,UN	ENS1B	
0759	2609	0D	13	4E			STRA,R1	CTEMP	
0760	260C	3F	32	10			BSTA,UN	SKPDEC	
0761	260F	F4	2C				COMI,R0		
0762	2611	0A	0D				RCTR,EC	WAIT2	
0763	2613	3F	31	FD			BSTA,UN	INCP	
0764	2615	3F	37	9F			BSTA,UN	EVAL	
0765	2618	0E	05				RCTR,GT	WAIT2	
0766	261B	3F	2B	97			BSTA,UN	ENS1B	
0767	261E	1B	02				RCTR,UN	WAIT3	
0768	2620	0F	00			WAIT2	L0DI,R1	0	
0769	2622	0D	13	4F		WAIT3	STRA,R1	CTEMP+1	
0770	2625	54	00			WAIT4	REDE,R0	0	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2771	2627	20	13	4F			EORA,R0	CTEMP-1	
2772	262A	40	13	4E			ANDA,R0	CTEMP	
2773	2625	90	31	A3			BCFA,E0	NXTLIN	
2774	2632	1B	73				BCTR,UN	WAIT4	
2775	2632					*			
2776	2632					*			
2777	2633	22	00				ERRTN RES	2	
2778	2634	22					ERWAIT RES	1	
2779	2635					*			
2780	2635					*			
2781	2635	3F	32	B3		ERRORC	BSTA,UN	FNCLIN	
2782	2636	1F	43	B7			BCTA,LT	LAFER	
2783	263B	19	14				BCTP,GT	ENF	
2784	2631	20	11	B4			LODA,R0	INPT	
2785	2642	26	12				STRA,R0	ERRTN	
2786	2642	20	11	B5			LODA,R0	INPT-1	
2787	2645	26	10				STRA,R0	ERRTN-1	
2788	2647	24	FF				LODI,R0	FF	
2789	2648	2E	69				STRA,R0	E WAIT	
2790	264B	3F	31	B1			BSTA,UN	CRINPT	
2791	2641	1F	31	B6			BCTA,UN	CKNXTL	
2792	2651	20					FORZ,R0		
2793	2652	2E	60				STRA,R0	ERWAIT	
2794	2654	1F	31	B6			BCTA,UN	CKNXTL	
2795	2657					*			
2796	2657					*			
2797	2657	3F	35	77		DEF	BSTA,UN	LOKVAR	
2798	265A	2D	4E	80			BCFA,GT	ADER	
2799	265D	3F	39	10			BSTA,UN	GETNA	
2800	2662	2E	FF				COMI,R1	FF	
2801	2669	10	31	B1			BCTA,EQ	SYNER	
2802	2668	14	78				COMI,R0	' ('	
2803	2667	0F	31	B1			BCFA,EQ	SYNER	
2804	266A	2E	22				LODI,R2	2	
2805	2660	27	24				LODI,R3	4	
2806	266E	3F	2A	1D			BSTA,UN	GCSUB	
2807	2671	2C	11	B4			LODA,R0	INPT	
2808	2674	3F	32	A7			BSTA,UN	PSHOP1	
2809	2677	20	11	B5			LODA,R0	INPT-1	
2810	267A	3F	32	A7			BSTA,UN	PSHOP1	
2811	267D	3F	29	CD			BSTA,UN	PSHEND	
2812	2679	1F	46	3A			BCTA,UN	SKPLIN	
2813	2687					*			
2814	2683					*			
2815	2687	3F	35	77		DIM	BSTA,UN	LOKVAR	
2816	2689	2D	4E	80			BCFA,GT	ADER	
2817	2686	24	FF				LODI,R0	FF	
2818	268B	20	2A	3C			STRA,R0	GCDIMS	
2819	268E	3F	29	78			BSTA,UN	GCV	
2820	2691	1D	4E	80			BCTA,GT	ARGER	
2821	2684	3F	32	10			BSTA,UN	SKPDEC	
2822	2697	E4	2C				COMI,R0	' '	
2823	2699	90	31	A3			BCFA,EQ	NXTLIN	
2824	269C	3F	31	FD			BSTA,UN	INCPY	
2825	269F	1B	62				BCTR,UN	DIM	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2826	26A1					*			
2827	26A1					*			
2828	26A1					CMSTRS	RES	100	
2829	27A1					*			
2830	27A1	00	00			INSTG	RES	2	
2831	27A3					*			
2832	27A3					*			
2833	27A3	2F	22	9F		INFUT	LODA,R3	DOLFCR	
2834	27A6	30	2E	EE			BSTA,EQ	LFCR	
2835	27A9	20					EORZ,R0		
2836	27AA	00	22	9F			STRA,R0	DOLFCR	
2837	27AD	3F	46	40			BSTA,UN	SKPSP	
2838	27B0	3F	31	B6			BSTA,UN	CHKCR	
2839	27B3	98	0B				BCFR,EQ	INPUTA	
2840	27B5	3F	2D	E2			BSTA,UN	PAUSE	
2841	27B8	E4	1B				COMI,R0	ESC	
2842	27BA	10	42	A0			BCTA,EQ	OPTION	
2843	27BD	1F	A2	92			BCTA,UN	*BTADR	
2844	27C0	E4	22			INPUTA	COMI,R0		
2845	27C2	98	26				BCFR,EQ	INPUT1	
2846	27C4	00	51	B4		INPUT0	LODA,R0	*INPT	
2847	27C7	1F	31	B1			BCTA,LT	SYNER	
2848	27CA	3F	31	FD			BSTA,UN	INCPY	
2849	27CD	E4	20				COMI,R0	CR	
2850	27CF	10	31	B1			BCTA,EQ	SYNER	
2851	27D2	E4	0A				COMI,R0	LF	
2852	27D4	10	31	B1			BCTA,EQ	SYNER	
2853	27D7	E4	22				COMI,R0		
2854	27D9	98	0A				BCFR,EQ	INPUT2	
2855	27DE	3F	46	40			BSTA,UN	SKPSP	
2856	27DE	E4	3B				COMI,R0	' '	
2857	27E0	90	31	B1			BCFA,EQ	SYNER	
2858	27E3	1E	0D				BCTR,UN	INPUT3	
2859	27E5	3F	2E	E3		INPUT2	BSTA,UN	WRT	
2860	27E8	1B	5A				BCTR,UN	INPUT0	
2861	27EA	3F	32	13		INPUT1	BSTA,UN	DECPY	
2862	27ED	04	3F				LODI,R0	' ?'	
2863	27EF	3F	2E	E3			BSTA,UN	WRT	
2864	27F2	3F	2E	E1		INPUT3	BSTA,UN	WRBL	
2865	27F5	3F	31	B6			BSTA,UN	CSINPT	
2866	27F8	3F	32	7F		INPTCA	BSTA,UN	AROWCR	
2867	27FB	3F	28	B1			BSTA,UN	SWITCR	
2868	27FE	3F	29	6F		INPNXT	BSTA,UN	GCVAR	
2869	2801	1A	16				BCTR,LT	INPSTR	
2870	2803	1B	03				BCTR,EQ	INFPY	
2871	2805	1F	31	A3			BCTA,UN	NXTLIN	
2872	2809	3F	38	6F		INFPY	BSTA,UN	STRCT	
2873	280B	3F	28	B1			BSTA,UN	SWITCR	
2874	280E	3F	33	7F			BSTA,UN	EVAL	
2875	2811	90	28	76			BCFA,EQ	INPERR	
2876	2814	3F	2E	18			BSTA,UN	POPCT	
2877	2817	1B	3F				BCTP,UN	INPDEL	
2878	2819	3F	32	6E		INPSTR	BSTA,UN	STRCT	
2879	281C	3F	2F	E7			BSTA,UN	ZSTR	
2880	281F	3F	28	B1			BSTA,UN	SWITCR	

LINE	ADIP	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
0881	2822	3F	7C	12			BSTA,UN	SKPDEC	
0882	2826	F4	21	01			COMI,R0		
0883	2827	1E	27	07			BCTA,UN	INPST2	
0884	2828	2E	FF				LODI,R2	FF	
0885	282E	02	31	84		INISTP	LODA,R0	*INPT	
0886	282E	F4	21				COMI,R0	CR	
0887	2830	1E	12				BCTA,UN	INPST1	
0888	2832	E4	6A				COMI,R0	IF	
0889	2874	1E	12				BCTA,UN	INPST1	
0890	2832	F1	77				COMI,R0		
0891	2878	1E	0E				BCTA,UN	INPST1	
0892	287A	1E	0E	A1			STRA,R2	CMSTRS,	
0893	283D	3F	31	FD			BSTA,UN	INCPT	
0894	2840	1E	60				BCTA,UN	INPST0	
0895	2840	6E	31			INPST1	ADDI,R2	1	
0896	2844	74	26				LODI,R0	CMSTRS	
0897	284E	2E	A1				LODI,R1	CMSTRS	
0898	284E	1E	32	F2			BSTA,UN	PUSHST	
0899	284E	3F	2B	3E			BSTA,UN	STRING	
0900	284F	1E	0E				BCTA,UN	INPDEL	
0901	2850	3F	3E	3F		INPST2	BSTA,UN	EVAL	
0902	2850	3E	31				BCTA,UN	INPERR	
0903	2858	3F	2B	3E			BSTA,UN	STRING	
0904	285B	3F	2B	3E		INPDEL	BSTA,UN	SWITCH	
0905	285B	3F	2B	3E			BSTA,UN	SKPDEC	
0906	285E	F4	21				COMI,R2		
0907	2867	2C	31	A3			BCTA,UN	NXTLIN	
0908	2868	3F	31	FD			BCTA,UN	INCPT	
0909	286E	3F	2B	3E			BSTA,UN	SWITCH	
0910	286E	3F	46	40			BSTA,UN	SKPSP	
0911	286C	E4	60				COMI,R0		
0912	286E	3F	2B	3E			BCTA,UN	INPERR	
0913	2872	3F	2B	3E			BSTA,UN	SWITCH	
0914	2873	1E	27	FF			BCTA,UN	INPNT	
0915	2876	3F	31	81		INPERR	BSTA,UN	CRINPT	
0916	2878	07	24				LODI,R3	WRTMSG	
0917	287E	3F	46	40			BSTA,UN	WRTMCR	
0918	287E	1E	0E	38			BCTA,UN	INP3A	
0919	2881					*			
0920	2881					*			
0921	2881	0C	12	AE		SWITCH	LODA,R0	BTEMP	
0922	2884	01	11	E4			LODA,R1	INPT	
0923	2887	11	11	E4			STRA,R0	INPT	
0924	288A	0A	15	AE			STRA,R1	BTEMP	
0925	288E	01	11	E4			LODA,R0	BTEMP-1	
0926	2891	0C	11	AE			LODA,R1	INPT-1	
0927	2895	01	11	AE			STRA,R0	INPT+1	
0928	289E	01	12	A7			STRA,R1	BTEMP-1	
0929	2898	17					RETC,UN		
0930	28CA					*			
0931	28CA					*			
0932	28CA	3F	A2			RBUF	ACON	RBUF	
0933	28CC					*			
0934	28CC					*			
0935	289C	2C	2D	EP		RANDOM	LODA,R0	NEWSID	

LINE	ADIP	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
0936	289F	0C	88	9A			STRA,R0	*RBUF	
0937	28A2	1F	31	A3			BCTA,UN	NXTLIN	
0938	28A4					*			
0939	28A5					*			
0940	28A5	02	02	02	02	MIDSTG	RES	7	
0941	28A6	00	02	02					
0942	28AC					*			
0943	28AC					*			
0944	28AC	3F	29	6E		MID3	BSTA,UN	GCVAR	
0945	28AF	9E	46	34			BCTA,UN	NOSTR	
0946	28B2	3F	32	6E			BSTA,UN	STROT	
0947	28B5	0E	23				LODI,R2	3	
0948	28B7	07	25	6E			LODI,R3	5	
0949	28B9	0F	13	4E		MID1	LODA,R2	*CTEMP,-	
0950	28BC	0F	48	A5			STRA,R3	MIDSTG,-	
0951	28BF	5A	78				BRNR,R2	MID1	
0952	28C1	3F	46	40			BSTA,UN	SKPDOM	
0953	28C4	3F	33	9F			BSTA,UN	EVAL	
0954	28C7	3F	2B	97			BSTA,UN	ENS1B	
0955	28CA	01					LODZ,R1		
0956	28CB	1C	45	74			BCTA,UN	OVFER	
0957	28CF	09	5F				STRA,R1	MIDSTG	
0958	28D0	0E	FF				LODI,R1	FF	
0959	28D2	3F	46	40			BSTA,UN	SKPSP	
0960	28D5	F4	29				COMI,R0		
0961	28D7	1E	13				BCTA,UN	MID2	
0962	28D9	E4	2C				COMI,R0		
0963	28DB	9C	31	E1			BCTA,UN	SYNER	
0964	28DE	3F	33	9F			BSTA,UN	EVAL	
0965	28E1	3F	2B	97			BSTA,UN	ENS1B	
0966	28E4	3F	46	40			BSTA,UN	SKPSP	
0967	28E7	F4	29				COMI,R0		
0968	28E9	9C	31	E1			BCTA,UN	SYNER	
0969	28EC	3F	46	80		MID2	BSTA,UN	SKPEQ	
0970	28EF	2D	08	A6			STRA,R1	MIDSTG+1	
0971	28F2	3F	33	9F			BSTA,UN	EVAL	
0972	28F5	9E	46	34			BCTA,UN	NOSTR	
0973	28F6	3F	30	E1			BSTA,UN	INCSP	
0974	28F8	3F	30	E1			BSTA,UN	INCSP	
0975	28FE	01	08	A6			LODA,R1	MIDSTG+4	
0976	2901	1C	29	50			BCTA,UN	MID77	
0977	2904	06	FF				LODI,R2	FF	
0978	2906	0E	A8	A7		MID3	LODA,R2	*MIDSTG-2,+	
0979	2909	0E	68	A1			STRA,R2	CMSTRS,I	
0980	290C	F8	78				BDRR,R1	MID3	
0981	290E	0C	2B	A9			LODA,R0	MIDSTG+4	
0982	2911	FC	08	A5			COMA,R0	MIDSTG	
0983	2914	1E	29	50			BCTA,UN	MID77	
0984	2917	1C	2E	A5			SUBA,R0	MIDSTG	
0985	291A	84	21				ADDI,R0	1	
0986	291C	0C	28	AA			STRA,R0	MIDSTG+6	
0987	291F	0E	08	A5			LODA,R2	MIDSTG	
0988	2922	A6	01				SUBI,R2	1	
0989	2924	0D	08	A6			LODA,R1	*MIDSTG+1	
0990	2927	1C	29	50			BCTA,UN	MID77	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1001	202A	0F	2E	AE			STRA,R3	MIDSTG+6	
1002	202D	F7	22			MID4	COMI,R3	0	
1003	202F	18	2F				BCTR,EQ	MID5	
1004	2031	0F	10	D7			LODA,R3	*SP,-	
1005	2034	01	5F	A1			STRA,R2	CMSTRS,I	
1006	2037	0F	01				ADDI,R2	1	
1007	2039	1F	20	A9			COMA,R2	MIDSTG-4	
1008	203C	18	2C				BCTR,EQ	MID5	
1009	203E	F8	6D				BDRR,R1	MID4	
1010	2040	01	02	A9		MID5	LODA,R1	MIDSTG-4	
1011	2043	26	FF				LODI,R2	FF	
1012	2046	01	26	A1		MID6	LODA,R2	CMSTRS,+	
1013	2048	0E	18	A7			STRA,R2	*MIDSTG+2.1	
1014	204B	F8	78				BDRR,R1	MID6	
1015	204D	F7	2B	AB			LODA,R3	MIDSTG-6	
1016	204F	03				MID77	LODZ,R3		
1017	2051	2F	30	B5			ESTA,UN	INCSPL	
1018	2054	1F	31	A3			ECTA,UN	NXTLIN	
1019	2057					*			
1020	2057					*			
1021	2057	3C	1F	72		GCSFND	LODA,R0	LTEMP	
1022	205A	2D	15	73			LODA,R1	LTEMP-1	
1023	205D	A5	72				SUBI,R1	2	
1024	205F	77	2E				FPSL	WC	
1025	2061	A4	20				SUBI,R0	0	
1026	2063	75	28				CPSL	WC	
1027	2065	27	FF				LODI,R3	FF	
1028	2067	17					RETC,UN		
1029	2068					*			
1030	2068					*			
1031	2068	0F	22	00	20	NAME	RES	4	
1032	206C	02	02			GCSAV	RES	2	
1033	206E					*			
1034	206E					*			
1035	206E	07				OCVAR	EORZ,R0		
1036	206F	0C	0A	3C			STRA,R0	GCDIMS	
1037	2072	3F	3F	77			BSTA,UN	LOKVAR	
1038	2075	14					RETC,EQ		
1039	2076	1A	5F				BCTR,LT	GCSFND	
1040	2078	2C	11	B4		GCV	LODA,R0	INPT	
1041	207B	2E	6F				STRP,R0	GCSAV	
1042	207D	2C	11	B5			LODA,R0	INPT-1	
1043	207F	3E	6F				STRP,R0	GCSAV+1	
1044	2082	31	29	E0			ESTA,UN	GETNA	
1045	2085	F8	FF			GCV2	COMI,R1	FF	
1046	2087	1C	46	59			ECTA,EC	RETNGT	
1047	208A	F4	24				COMI,R0	44	
1048	208C	1C	2A	2A			ECTA,EC	GCSTR	
1049	208F	F4	26				COMI,R0	4	
1050	2091	1C	2A	3D			ECTA,EC	GCDIM	
1051	2094	3F	32	13			BSTA,UN	DEOPT	
1052	2097	06	28				LODI,R2	8	
1053	2099	07	22				LODI,R3	0	
1054	209B	3F	2A	1D		GCV3	BSTA,UN	GCSUB	
1055	209E	23				GCV6	EOPZ,R0		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1046	209F	16	27				COMI,R2	7	
1047	20A1	1A	08				BCTR,LT	GCNT	
1048	20A3	18	04				BCTR,EQ	GC7	
1049	20A5	24	30				LODI,R0	F0	
1050	20A7	1B	02				ECTR,UN	GCNT	
1051	20A9	24	26			GCV7	LODI,R0	99	
1052	20AB	31	30	A7		GCNT	ESTA,UN	PSHOP1	
1053	20AE	F4	51				BERR,R2	GCV6	
1054	20B0	3F	29	0D			BSTA,UN	PSHEND	
1055	20B3	20					EORZ,R0		
1056	20B4	3F	30	A7			BSTA,UN	PSHOP1	
1057	20B7	2C	12	96			LODA,R0	OP2	
1058	20BA	27	12	97			LODA,R1	OP2+1	
1059	20BD	25	05				ADDI,R1	5	
1060	20BF	77	08				FPSL	WC	
1061	20C1	84	02				ADDI,R0	0	
1062	20C3	75	08				CPSL	WC	
1063	20C5	0E	00				LODI,R2	0	
1064	20C7	E7	00				COMI,R3	0	
1065	20C9	14					RETC,EQ		
1066	20CA	07	FF				LODI,R3	FF	
1067	20CC	17					RETC,UN		
1068	20CD					*			
1069	20CD					*			
1070	20CD	0C	10	7A		PSHEND	LODA,R0	OP1	
1071	20D0	0C	00	0A			STRA,R0	TABEND	
1072	20D3	3F	30	AC			BSTA,UN	PSHOP2	
1073	20D6	0C	10	7B			LODA,R0	OP1-1	
1074	20D9	0C	00	0B			STRA,R0	TABEND-1	
1075	20DB	3F	30	AC			BSTA,UN	PSHOP2	
1076	20DD	17					RETC,UN		
1077	20E0					*			
1078	20E0					*			
1079	20E0	2C	00	0A		GETNA	LODA,R0	TABEND	
1080	20E3	0D	00	0B			LODA,R1	TABEND-1	
1081	20E6	3F	30	7E			BSTA,UN	STROP1	
1082	20E9	3F	30	91			BSTA,UN	STROP2	
1083	20FC	05	04				LODI,R1	4	
1084	20FE	22					FORZ,R0		
1085	20FF	0D	49	68		GCV1	STRA,R1	NAME,-	
1086	20F2	59	7E				ERRR,R1	GCV1	
1087	20F4	05	FF				LODI,R1	FF	
1088	20F6	3F	32	28		GCV3	BSTA,UN	GETCHR	
1089	20F8	3F	45	3C			BSTA,UN	CHKAN	
1090	20FC	16					RETC,LT		
1091	20FD	15					RETC,GT		
1092	20FF	85	01				ADDI,R1	1	
1093	2A00	F8	03				COMI,R1	3	
1094	2A02	1E	45	80			ECTA,GT	ARGER	
1095	2A05	0D	69	68			STRA,R1	NAME,I	
1096	2A08	1F	6C				BCTR,UN	GCV3	
1097	2A0A					*			
1098	2A0A					*			
1099	2A0A	3F	32	28		GCSTR	BSTA,UN	GETCHR	
1100	2A0E	07	02				LODI,R3	2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1101	2A0F	E4	28				COMI,R0	'('	
1102	2A11	18	20				BCTR,EC	GCDSTR	
1103	2A13	3F	32	13			BSTA,UN	DECPT	
1104	2A16	06	03				LODI,R2	3	
1105	2A18	07	21				LODI,R3	1	
1106	2A1A	1F	28	0B			BCTA,UN	GCV6	
1107	2A1D					*			
1108	2A1D					*			
1109	2A1E	20				GCSUB	FORZ,R0		
1110	2A1F	3F	72	A7			BSTA,UN	PSHOP1	
1111	2A21	3F	32	A7			BSTA,UN	PSHOP1	
1112	2A24	03					LODZ,R3		
1113	2A26	3F	30	A7			BSTA,UN	PSHOP1	
1114	2A28	2F	FF				LODI,R1	FF	
1115	2A2A	0D	28	06		GCV5	LODA,R1	NAME,+	
1116	2A2E	3F	32	A7			BSTA,UN	PSHOP1	
1117	2A30	1F	03				COMI,R1	3	
1118	2A32	0B	76				BCTR,EC	GCV5	
1119	2A34	17					RETC,UN		
1120	2A36					*			
1121	2A36					*			
1122	2A37	00	22	20	00	GCLEN	RES	6	
1123	2A39	00	00						
1124	2A3E	00				GCTYPE	RES	1	
1125	2A3C	27				GCDIMS	RES	1	
1126	2A3D					*			
1127	2A3E					*			
1128	2A3F	07	03			GCEIM	LODI,R3	3	
1129	2A3F	0F	2A	35		GCDSTR	STRA,R3	GCTYPE	
1130	2A42	3F	2A	1D			BSTA,UN	GCSUB	
1131	2A45	02					FORZ,R0		
1132	2A48	00	0A	35			STRA,R0	GCLEN	
1133	2A48	00	0A	37			STRA,R2	GCLEN+2	
1134	2A4C	04	21				LODI,R0	1	
1135	2A4E	00	2A	36			STRA,R0	GCLEN-1	
1136	2A51	00	10	7A			LODA,R0	OP1	
1137	2A54	00	0A	36			STRA,R0	GCLEN+3	
1138	2A57	00	10	7B			LODA,R0	OP1-1	
1139	2A5A	00	0A	39			STRA,R0	GCLEN+4	
1140	2A5D	3F	30	7C			BSTA,UN	INCOPI	SKIP 1 BYTE # OF DIMS
1141	2A62	3F	33	9F		GCD4	BSTA,UN	EVAL	
1142	2A63	1E	2A	AC			BCTA,GT	GCD2	
1143	2A66	3F	0B	97			BSTA,UN	ENS1B	
1144	2A69	01					LODZ,R1		
1145	2A6A	10	45	F4			BCTA,EC	DIMER	
1146	2A6E	15	0A				COMI,R1	A	
1147	2A6F	10	07				BCTR,GT	GCD3	
1148	2A71	0F	2A	3C			LODA,R3	GCDIMS	
1149	2A74	1A	02				BCTR,LT	GCD3	
1150	2A76	04	0A				LODI,R0	A	DEFAULT TO 10
1151	2A78	03				GCD3	STRZ,R3		
1152	2A79	3F	30	A7			BSTA,UN	PSHOP1	
1153	2A7C	00	0A	37			LODA,R0	GCLEN+2	
1154	2A7F	04	01				ADDI,R0	1	
1155	2A81	00	0A	37			STRA,R0	GCLEN+2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1156	2A84	00	0A	35			LODA,R0	GCLEN	
1157	2A87	0D	0A	36			LODA,R1	GCLEN+1	
1158	2A8A	0E	0A	36		GCD3B	ADDA,R1	GCLEN+1	
1159	2A8D	77	08				PPSL	WC	
1160	2A8F	0C	0A	35			ADDA,R0	GCLEN	
1161	2A92	75	0E				CPSL	WC	
1162	2A94	05	01				TPSL	CRY	
1163	2A96	10	45	04			BCTA,EC	DIMER	
1164	2A99	0F	0F				BDRR,R3	GCD3B	
1165	2A9B	00	0A	35			STRA,R0	GCLEN	
1166	2A9E	07	0A	36			STRA,R1	GCLEN+1	
1167	2AA1	3F	46	40			BSTA,UN	SKFSP	
1168	2AA4	E4	2C				COMI,R0	'	
1169	2AA6	1C	2A	60			BCTA,EC	GCD4	
1170	2AA9	3F	32	13			BSTA,UN	DECPT	
1171	2AAC	0C	0A	37		GCD2	LODA,R0	GCLEN+2	
1172	2AAF	1C	4F	04			BCTA,EC	DIMER	
1173	2AB2	0C	0A	36			STRA,R0	*GCLEN+3	STORE # OF DIMS
1174	2AB5	3F	32	28			BSTA,UN	GETCHR	
1175	2AB8	E4	29				COMI,R0	'	
1176	2ABA	0C	31	B1			BCFA,EC	STNER	
1177	2ABD	0C	0A	3B			LODA,R0	GCTYPE	
1178	2AC0	E4	02				COMI,R0	2	
1179	2AC2	16	04				BCTR,EC	GCD5	
1180	2AC4	07	08				LODI,R3	8	
1181	2AC6	1B	02				BCTR,UN	GOD6	
1182	2AC8	07	03			GCD5	LODI,R3	3	
1183	2ACA	0F	0A	3B		GCD6	STRA,R3	GCTYPE	
1184	2ACD	0F	0A	3B		GCD7	LODA,R3	GCTYPE	
1185	2AD0	20				GCD8	FORZ,R0		
1186	2AD1	E7	07				COMI,R3	7	
1187	2AD3	1A	00				BCTR,LT	GCDNT	
1188	2AD5	16	04				BCTR,EC	GCEQ7	
1189	2AD7	04	F0				LODI,R0	F0	
1190	2AD9	1B	02				RCTR,UN	GCDNT	
1191	2ADB	04	99			GCEQ7	LODI,R0	99	
1192	2ADD	3F	30	A7		GCDNT	BSTA,UN	PSHOP1	
1193	2AE7	FB	6E				BDRR,R3	GCD8	
1194	2AE2	0C	0A	35			LODA,R0	GCLEN	
1195	2AE5	0D	0A	36			LODA,R1	GCLEN+1	
1196	2AE8	AF	01				SUBI,R1	1	
1197	2AEA	77	08				PPSL	WC	
1198	2AEC	A4	00				SUBI,R0	0	
1199	2AEF	75	08				CPSL	WC	
1200	2AF0	0C	0A	35			TRA,R0	GCLEN	
1201	2AF3	0D	0A	36			STRA,R1	GCLEN+1	
1202	2AF6	02					LODZ,R0		
1203	2AF7	08	F4				BCTR,EC	GCD7	
1204	2AF9	01					LODZ,R1		
1205	2AFA	08	51				BCTR,EC	GCD7	
1206	2AFC	0C	10	7A			LODA,R0	OP1	
1207	2AFF	0C	00	0A			STRA,R0	TABEND	
1208	2B02	3F	30	AC			BSTA,UN	PSHOP2	
1209	2B05	0C	10	7B			LODA,R0	OP1-1	
1210	2B08	0C	00	0B			STRA,R0	TABEND-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1211	2B0F	3F	30	AC			BSTA,UN	PSHOP2	
1212	2B0E	20					EORZ,R0		
1213	2B0F	3F	30	A7			BSTA,UN	PSHOP1	
1214	2B12	0C	09	6C			LODA,R0	GCSAV	
1215	2B15	0C	11	64			STRA,R0	INPT	
1216	2B15	0C	09	6D			LODA,R0	GCSAV+1	
1217	2B15	0C	11	65			STRA,R0	INPT+1	
1218	2B1E	1F	35	77			BCTA,UN	LOKVAR	
1219	2B21					*			
1220	2B21					*			
1221	2B21	0C	13	4F		CTOS	LODA,R0	CTEMP	
1222	2B24	08	2A				STRR,R0	STMP+4	
1223	2B26	0C	13	4F			LODA,R0	CTEMP+1	
1224	2B29	08	26				STRR,R0	STMP+5	
1225	2B2E	17					RETC,UN		
1226	2B2C					*			
1227	2B2C					*			
1228	2B2C	20	20	20	20	STMP	RES	6	
1229	2B30	22	22						
1230	2B32					*			
1231	2B32					*			
1232	2B32	3B	6D			STRING	BSTR,UN	CTOS	
1233	2B34	3F	30	B1		STRG	BSTA,UN	INCSP	
1234	2B37	3F	30	B1			BSTA,UN	INCSP	
1235	2B3A	23					LODZ,R3		
1236	2B3B	02					STRZ,R2		
1237	2B3C	01					STRZ,R1		
1238	2B3D	0C	07	04			LODA,R0	IBST	
1239	2B42	08	5C				STRR,R0	STMP-2	
1240	2B42	22					EORZ,R0		
1241	2B43	08	5A				STRR,R0	STMP+3	
1242	2B45	03					STRZ,R3		
1243	2B46	12					COMZ,R2		
1244	2B47	1C	2B	0F			BCTA,EQ	STR8	
1245	2B4A	02	62			STR1	LOLR,R0	STMP-2	
1246	2B4C	08	FF				STRR,R0	STMP	
1247	2B4E	0B	5D				STRR,R3	STMP-1	
1248	2B50	0F	EB	2E		STR2	LODA,R3	*STMP+2.I	
1249	2B53	07	01				ADDI,R3	1	
1250	2B55	08	10				RCFR,EC	STR6	
1251	2B57	0E	55				LODR,R0	STMP-2	
1252	2B59	04	01				ADDI,R0	1	
1253	2B5B	08	51				STRR,R0	STMP-2	
1254	2B5D	1C	00	25			COMA,R0	VARST	
1255	2B60	1A	0F				RCTR,LT	STR6	
1256	2B62	07	0E				LODI,R3	STRERR	
1257	2B64	1F	33	2E			BCTA,UN	ERROR	
1258	2B67	07				STR6	LODZ,R0		
1259	2B68	06	20				RCFR,EC	STR3	
1260	2B6A	FA	64				BDRR,R2	STR2	
1261	2B6C	07	00			STR4	LODI,R3	0	
1262	2B6E	0C	0E	2C			LODA,R0	STMP	
1263	2B71	0C	0B	30			STRA,R0	*STMP+4	
1264	2B74	0C	0B	2D			LODA,R0	STMP+1	
1265	2B77	CF	AF	30			STRA,R3	*STMP+4,+	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1266	2B7A	01					LODZ,R1		
1267	2B7E	0F	AE	30			STRA,R3	*STMP+4,-	
1268	2B7E	01					LODZ,R1		
1269	2B7F	14					RETC,EC		
1270	2B80	3F	30	B1		STRC5	BSTA,UN	INCSP	
1271	2B83	03					LODZ,R3		
1272	2B84	0D	CB	2C			STRA,R1	*STMP,-	
1273	2B87	59	77				BRNR,R1	STRC5	
1274	2B89	17					RETC,UN		
1275	2B8A	01				STR3	LODZ,R1		
1276	2B8B	02					STRZ,R2		
1277	2B8C	1F	2B	4A			BCTA,UN	STR1	
1278	2B8F	06	03			STR8	LODI,R2	3	
1279	2B91	0E	CB	30		STR8A	STRA,R2	*STMP+4,-	
1280	2B94	5A	7B				BRNR,R2	STR8A	
1281	2B96	17					RETC,UN		
1282	2B97					*			
1283	2B97					*			
1284	2B97	3B	05			ENS1B	BSTR,UN	ENS	
1285	2B9C	00					LODZ,R0		
1286	2B9A	0C	45	74			BCTA,EQ	OVFER	
1287	2B9D	17					RETC,UN		
1288	2B9E					*			
1289	2B9E					*			
1290	2B9E	0C	46	34		ENS	BCTA,EQ	NOSTR	
1291	2BA1	3F	45	D9		ENS2	BSTA,UN	POPC1	
1292	2BA4	20				DTOB	FORZ,R0		
1293	2BA5	C1					STRZ,R1		
1294	2BA6	0F	13	50			LODA,R3	CBUF1	
1295	2BA9	16					RETC,LT		
1296	2BAA	0F	13	52			LODA,R3	CBUF1+2	
1297	2BAD	16					RETC,LT		
1298	2BAE	0F	13	53			LODA,R3	CBUF1+3	
1299	2BB1	14					RETC,EQ		
1300	2BB2	0C	13	51			LODA,R0	CBUF1+1	
1301	2BB5	0C	0C	0F			STRA,R0	CMAI	
1302	2BB8	20					EORZ,R0		
1303	2BB9	0C	0C	10			TRA,R0	CPTR	
1304	2BBC	C1					STRZ,R1		
1305	2BED	C3				DTOB1	STRZ,R3		
1306	2BBE	3F	2C	11			BSTA,UN	C1GET	
1307	2BC1	15					RETC,GT		
1308	2BC2	14					RETC,EQ		
1309	2BC3	C2					STRZ,R2		
1310	2BC4	03					LODZ,R3		
1311	2BC5	3F	44	F3			BSTA,UN	X10	
1312	2BC8	C3					STRZ,R3		
1313	2BC9	01					LODZ,R1		
1314	2BCA	02					ADDZ,R2		
1315	2BCB	C1					STRZ,R1		
1316	2BCC	77	08				PPSL	WC	
1317	2BCE	20					EORZ,R0		
1318	2BCF	03					ADDZ,R3		
1319	2BD0	75	08				CPSI	WC	
1320	2BD2	B5	01				TPSL	CRY	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1321	2ED4	10	4F	74			BCTA, EQ	OVFER	
1322	2ED7	1F	64				BCTR, UN	DTOB1	
1323	2ED9					*			
1324	2ED9					*			
1325	2ED9	06	06			CILEN	LODI, R2	8	
1326	2ED9	27	20				LODI, R3	0	
1327	2EDD	03	31				STRR, R3	CPTR	
1328	2EF1	01	53	50		C1IFW1	LODR, R2	CBUF1, -	
1329	2EF2	14	25				BCTR, EQ	C1LEN2	
1330	2EF4	44	2F				ANDI, R0	F	
1331	2EF6	92	0A				BCTR, EQ	C1LEN3	
1332	2EF8	P7	01				ADDI, R3	1	
1333	2EFA	12	06				BCTR, UN	C1LEN3	
1334	2EE0	87	22			C1LEN2	ADDI, R3	2	
1335	2E1E	17	0A				COMI, R3	A	
1336	2E10	98	6D				BCTR, EQ	C1LEN1	
1337	2E12	04	0A			C1LEN3	LODI, R2	A	
1338	2E14	AS					SUBZ, R3		
1339	2E16	05	18				STRR, R2	CMAx	
1340	2E17	2F	13	50			LODA, R2	CBUF1	
1341	2E1A	18					RETC, LT		
1342	2E1E	14	0A				COMI, R0	A	
1343	2E1D	14					RETC, EQ		
1344	2E1F	1C	13	51			COMA, R2	CBUF1+1	
1345	2C21	15					RETC, GT		
1346	2C22	14					RETC, EQ		
1347	2C23	2C	13	51			LODA, 0	CBUF1-1	
1348	2C26	E4	2E				COMI, R2	B	
1349	2C28	1A	2F				BCTR, LT	C1LEN4	
1350	2C2A	04	0A				LODI, R2	A	
1351	2C2C	05	01			C1LEN4	STRR, R2	CMAx	
1352	2C2E	17					RETC, UN		
1353	2C2F					*			
1354	2C2F					*			
1355	2C2F	20				CMAx	RES	1	
1356	2C10	02				CFTR	RES	1	
1357	2C11					*			
1358	2C11					*			
1359	2C11	0A	7D			C1GET	LODR, R2	CPTR	
1360	2C13	EA	7A				COMB, R2	CMAx	
1361	2C15	15					RETC, GT		
1362	2C16	14					RETC, EQ		
1363	2C17	22					LODZ, R2		
1364	2C18	57					RRR, R0		
1365	2C19	44	7F				ANDI, R0	7F	
1366	2C1E	84	23				ADDI, R0	3	
1367	2C1D	0C	73	50			LODA, R0	CBUF1, I	
1368	2C20	FE	01				TMI, R2	1	
1369	2C22	18	24				BCTR, EQ	C1GET2	
1370	2C24	57					RRR, R0		
1371	2C26	57					RRR, R0		
1372	2C28	50					RRR, R0		
1373	2C29	57					RRR, R0		
1374	2C28	44	0F			C1GET2	ANDI, R0	F	
1375	2C2A	66	01				ADDI, R2	1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1376	2C2C	CA	62				STRR, R2	CPTP	
1377	2C2E	06	FF				LODI, R2	FF	
1378	2C32	17					RETC, UN		
1379	2C31					*			
1380	2C31					*			
1381	2C31	3F	31	86		GETDAT	BSTA, UN	CSINPT	
1382	2C34	2C	01	2C			LODA, R0	DATPNT	
1383	2C37	0C	11	84			STRA, R0	INPT	
1384	2C3A	0C	01	2D			LODA, R0	DATPNT-1	
1385	2C3D	0C	11	86			STRA, R0	INPT+1	
1386	2C42	2C	01	2E			LODA, R0	PDATA	
1387	2C43	18	28				BCTR, EQ	GETD2	
1388	2C45	3F	46	40			BSTA, UN	SKPCF	
1389	2C48	E4	2C				COMI, R0		
1390	2C4A	18	05				BCTR, EQ	GETD3	
1391	2C4C	3F	32	13			BSTA, UN	DECPT	
1392	2C4F	1B	3F				BCTR, UN	GETD4	
1393	2C51	3F	33	9F		GETD3	BSTA, UN	FVAL	
1394	2C54	13					SPSL		
1395	2C55	03					STRZ, R3		
1396	2C56	04	FF				LODI, R0	FF	
1397	2C58	0C	01	2E			STRA, R0	PDATA	
1398	2C5B	0C	11	84			LODA, R0	INPT	
1399	2C5E	0C	01	2C			STRA, R0	DATPNT	
1400	2C61	0C	11	85			LODA, R0	INPT+1	
1401	2C64	0C	01	2D			STRA, R0	DATPNT+1	
1402	2C67	3F	31	91			BSTA, UN	CRINPT	
1403	2C6A	03					LODZ, R3		
1404	2C6B	93					LPSL		
1405	2C6C	17					RETC, UN		
1406	2C6E	3F	31	D9		GETD2	BSTA, UN	GETLIN	
1407	2C70	04	48				LODI, R0	DATPNT	
1408	2C72	05	44				LODI, R1	DATPNT	
1409	2C74	3F	45	F7			BSTA, UN	LOOKUP	
1410	2C77	98	21				BCTR, EQ	GETD4	
1411	2C79	E1					COMZ, R1		
1412	2C7A	18	55				BCTR, EQ	GETD3	
1413	2C7C	E5	03				COMI, R1	3	
1414	2C7E	98	06				BCTR, EQ	GETD4	
1415	2C80	3F	31	91		GETD5	BSTA, UN	CRINPT	
1416	2C83	04	01				LODI, R0	1	
1417	2C85	17					RETC, UN		
1418	2C86	3F	33	0C		GETD4	BSTA, UN	SKPCR	
1419	2C89	0C	01	84			LODA, R0	*INPT	
1420	2C8C	9A	5F				BCTR, LT	GETD2	
1421	2C8E	1B	70				BCTR, UN	GETD5	
1422	2C90					*			
1423	2C90					*			
1424	2C90	0D	02	A2		PUGET	LODA, R1	PUSF	
1425	2C93	0D	26	A1			LODA, R1	CMSTRS, -	
1426	2C96	0D	02	A2			STRA, R1	PUSF	
1427	2C99	17					RETC, UN		
1428	2C9A					*			
1429	2C9A					*			
1430	2C9A	20				ZERCMS	ECRZ, R0		

LINE	ADDR	B1	B2	B3	P4	LABEL	OPCODE	OPERAND	COMMENTS
1431	2C8B	02					STRZ,R2		
1432	2C90	0E	46	A1		ZERCM2	STRZ,R2	CMSTRS,-	
1433	2C95	5A	7B			BRNR,R2	ZERCM2		
1434	2CA1	17				RETC,UN			
1435	2CA2					*			
1436	2CA2					*			
1437	2CA2	00	00	00	00	FSTG	RES	5	
1438	2CA6	02							
1439	2CA7					*			
1440	2CA7					*			
1441	2CA7	00	79			PRNTFU	STRR,R0	FSTG	
1442	2CA9	09	76				STRR,R1	FSTG-1	
1443	2CAB	0A	77				STRR,R2	FSTG-2	
1444	2CAD	0B	76				STRR,R3	FSTG-3	
1445	2CAF	E4	0A				COMI,R2	A	
1446	2CB1	1D	31	B1			BCTA,GT	SYNER	
1447	2CB4	E5	0A				COMI,R1	A	
1448	2CB6	1E	31	B1			BCTA,GT	SYNER	
1449	2CB9	3F	4E	D9			BSTA,UN	POPC1	
1450	2CB0	2C	13	53			LODA,R7	CBUF1-3	
1451	2CB5	56	12				BCFR,EC	PFU1	
1452	2CC1	2E	2C	A2		PFU98	LODA,R2	FSTG	
1453	2CC4	1-	07				BCTR,EG	PFU2	
1454	2CC6	24	20			PFU02	LODI,R2		
1455	2CC8	3F	24	0F			BSTA,UN	SENDIT	
1456	2CC8	34	75				BRRR,RC	PFU00	
1457	2CC0	3F	2E	D3		PFU2	BSTA,UN	SEND00	
1458	2C10	1F	2D	76			BCTA,UN	PFU9	
1459	2CC3	3F	4E	E0		PFU1	BSTA,UN	PUSHC1	
1460	2CD0	28					BCTR,R2		
1461	2CD7	0E	04				LODI,R2	4	
1462	2CD9	0E	53	54		PFU2	STRZ,R2	CBUF1-4,-	
1463	2CD0	5A	7B				BRNR,R2	PFU2	
1464	2CDE	04	F0				LODI,R2	F0	
1465	2CE0	00	13	50			STRZ,R2	CBUF1	
1466	2CE3	2C	0C	A3			LODA,R2	FSTG-1	
1467	2CE6	00	13	51			STRZ,R2	CBUF1-1	
1468	2CE9	04	50				LODI,R2	50	
1469	2CEB	00	13	53			STRZ,R2	CBUF1-3	
1470	2CEE	3F	4E	E0			BSTA,UN	PUSHC1	
1471	2CF1	3F	3A	72			BSTA,UN	FPADD	POUND OFF NUMBER
1472	2CF4	3F	4E	D9			BSTA,UN	POPC1	
1473	2CF7	0C	2C	A3			LODA,R2	FSTG-1	
1474	2CFA	58	0F				BCFR,EC	PFU99	
1475	2CFC	3F	4E	E0			BSTA,UN	PUSHC1	
1476	2CFF	3F	3D	6F			BSTA,UN	FPFIX	
1477	2D02	3F	4E	D9			BSTA,UN	POPC1	
1478	2D05	0C	13	53			LODA,R2	CBUF1-3	
1479	2D08	1C	2C	01			BCTA,EG	PFU98	
1480	2D0B	2C	13	52		PFU99	LODA,R2	CBUF1-2	
1481	2D0E	18	0E				BCTR,EG	PFU5A	
1482	2D10	3F	23	FD			BSTA,UN	PRTM1	
1483	2D13	15	06				BCTR,UN	PFU3B	
1484	2D15	0C	0C	A2		PFU3A	LODA,R2	FSTG	
1485	2D16	54	01				ADDI,R2	1	

LINE	ADDR	B1	B2	B3	P4	LABEL	OPCODE	OPERAND	COMMENTS
1486	2D1A	0C	0C	A2			STRZ,R2	FSTG	
1487	2D1D	05	00			PFU3B	LODI,R1	0	
1488	2D1F	0C	13	50			LODA,R2	CBUF1	
1489	2D22	1A	03				BCTR,LT	PFU4	
1490	2D24	2D	13	51			LODA,R1	CBUF1-1	
1491	2E27	0E	0C	A6		PFU4	STRZ,R1	FSTG-4	
1492	2D2A	2C	0C	A4			LODA,R2	FSTG-2	
1493	2D2D	19	2C				BCTR,GT	PFU5	
1494	2D2F	01					LODZ,R1		
1495	2D30	03					STRZ,R3		
1496	2D31	E7	03			PFU4A	COMI,R3	3	
1497	2D33	99	06				BCFR,GT	PFU5	
1498	2D35	8F	01				ADDI,R1	1	
1499	2D37	A7	23				SUBI,R3	3	
1500	2D39	1B	76				BCTR,UN	PFU4A	
1501	2D3B	0C	0C	A2		PFU5	LODA,R2	FSTG	
1502	2D3E	A1					SUBZ,R1		
1503	2D3F	1E	2D	B2			BCTA,LT	FOVF	
1504	2D42	01					STRZ,R1		
1505	2D43	18	07				BCTR,EG	PFU7	
1506	2D45	04	20			PFU6	LODI,R2		
1507	2D47	3F	24	05			BSTA,UN	SENDIT	
1508	2D4A	F9	79				BRRR,R1	PFU6	
1509	2D4C	3F	2B	D9		PFU7	BSTA,UN	C1LEN	
1510	2D4F	2D	0C	A6		PFU7B	LODA,R1	FSTG-4	
1511	2D52	18	24				BCTR,EG	PFU8	
1512	2D54	AF	01				SUBI,R1	1	
1513	2D56	0E	0C	A6			STRZ,R1	FSTG-4	
1514	2D59	3F	2C	11			BSTA,UN	C1GET	
1515	2D5C	3F	24	03			BSTA,UN	SEND0	
1516	2D5F	0C	0C	A4			LODA,R2	FSTG-2	
1517	2D62	19	6B				BCTR,GT	PFU7B	
1518	2D64	0D	0C	A6		PFU7C	LODA,R1	FSTG-4	
1519	2D67	E5	03				COMI,R1	3	
1520	2D69	18	06				BCTR,EG	PFU7A	
1521	2D6B	1A	02				BCTR,LT	PFU7B	
1522	2D6D	A5	03				SUBI,R1	3	
1523	2D6F	1B	76				BCTR,UN	PFU7C	
1524	2D71	04	20			PFU7A	LODI,R2		
1525	2D73	3F	24	05			BSTA,UN	SENDIT	
1526	2D75	1B	57				BCTR,UN	PFU7B	
1527	2D78	0C	0C	A5		PFU8	LODA,R2	FSTG-3	
1528	2D7B	15					RETC,GT		
1529	2D7C	04	2E				LODI,R2		
1530	2D7E	3F	24	05			BSTA,UN	SENDIT	
1531	2D81	0C	0C	A3			LODA,R2	FSTG-1	
1532	2D84	14					RETC,EC		
1533	2D85	0E	13	50			LODA,R1	CBUF1	
1534	2D88	9A	14				BCFR,LT	PFU9A	
1535	2D8A	0D	13	51			LODA,R1	CBUF1-1	
1536	2D8D	E1					COMZ,R1		
1537	2D8F	19	01				BCTR,GT	PFU9B	
1538	2D90	C1					STRZ,R1		
1539	2D91	A1				PFU9B	SUBZ,R1		
1540	2D92	0C	0C	A3			STRZ,R2	FSTG-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1541	2D95	3F	2E	D3		PFU9C	BSTA,UN	SEND00	
1542	2D95	3F	7E				BDRR,R1	PFU9C	
1543	2D9A	2C	2C	A3		PFU9	LODA,R0	FSTG-1	
1544	2D9D	14					RETC,EO		
1545	2D9E	A4	21			PFUGA	SUBI,R0	1	
1546	2DA2	0C	2C	A3			STRA,R0	FSTG-1	
1547	2DA3	3F	2C	11			BSTA,UN	CIGET	
1548	2DA5	1A	25				BCTR,LT	PFU10	
1549	2DA6	3F	2D	D3			BSTA,UN	SEND00	
1550	2DA6	1E	6D				BCTR,UN	PFU9	
1551	2DAD	3F	24	03		PFU10	BSTA,UN	SEALP	
1552	2DE0	1F	66				BCTR,UN	PFU9	
1553	2DE2	01	2C	A2		FOVF	LODA,R1	FST	
1554	2DE5	14	27				BCTR,EO	POVF2	
1555	2DE7	04	2A			FOVF1	LODI,R0	*	
1556	2DE9	3F	24	0E			BSTA,UN	SENDIT	
1557	2DEC	F9	79				BDRR,R1	FOVF1	
1558	2DEF	2D	2C	A5		FOVF2	LODA,R1	FSTG+3	
1559	2DC1	16					RETC,GT		
1560	2DC2	04	2E				LODI,R0		
1561	2DC4	3F	24	0E			BSTA,UN	SENDIT	
1562	2DC7	2D	2C	A3			LODA,R1	FSTG+1	
1563	2DCA	14					RETC,EO		
1564	2DCC	04	2A			FOVF3	LODI,R0	*	
1565	2DC7	3F	24	0E			BSTA,UN	SENDIT	
1566	2DC9	F9	79				BDRR,R1	FOVF3	
1567	2DE2	17					RETC,UN		
1568	2DE3					*			
1569	2DE3					*			
1570	2DD7	20				SEND20	BDRR,R0		
1571	2DD4	1F	24	03			BCTA,UN	SEND2	
1572	2DD7					*			
1573	2DD7					*			
1574	2D17	3F	25			GETKB	BSTR,UN	PAUSE	
1575	2D19	3F	2E	23			BSTA,UN	WRT	
1576	2DDC	04	21				LODR,R2	KBBUP	
1577	2DDE	17					RETC,UN		
1578	2DDE					*			
1579	2DDE					*			
1580	2DDF	20				KBBUF	RES	1	
1581	2DE0	20				NEWSFD	RES	1	
1582	2DE1	20				PAUSES	RES	1	
1583	2DE2					*			
1584	2DE2					*			
1585	2DE2	CA	7D			PAUSE1	STRR,R0	PAUSES	
1586	2DE4	70				PAUSE1	RELL,R0		
1587	2DE5	3A	04				BCTR,LT	PAUSE2	
1588	2DE7	0E	01				ADDI,R2	1	
1589	2DE9	1E	79				BCTR,UN	PAUSE1	
1590	2DEA	CA	77			PAUSE2	STRR,R2	NEWSFD	
1591	2DEE	CA	72				LODR,R2	PAUSES	
1592	2DEF	0E	6E				STRR,R0	KBBUF	
1593	2DF1	70				PL	RELL,R0		
1594	2DF2	5A	7D				BCTR,LT	PL	
1595	2DF4	0E	69				LODR,R0	KBBUF	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1596	2DF6	17					RETC,UN		
1597	2DF7					*			
1598	2DF7					*			
1599	2DF7	3E	19			SETCUR	BSTR,UN	EROLD	
1600	2DF8	0E	0E	C7			STRA,R2	CURSOR	
1601	2DFC	2D	2E	0A			STRA,R1	CURSOR+1	
1602	2DFE	04	1C				LODI,R0	1C	
1603	2E01	0C	0E	C7			STRA,R0	*CURSOR	
1604	2E04	17					RETC,UN		
1605	2E05					*			
1606	2E05					*			
1607	2E2F	2C	0E	C7		ERAS1	LODA,R0	CURSOR	
1608	2E28	E4	10				COMI,R0	10	
1609	2E2A	98	06				BCTR,EO	EROLD	
1610	2E2C	2C	0E	0A			LODA,R0	CURSOR-1	
1611	2E2F	E4	10				COMI,R0	10	
1612	2E11	16					RETC,LT		
1613	2E12	04	2F			EROLD	LODI,R0		
1614	2E14	0C	0E	C7			STRA,R0	*CURSOR	
1615	2E17	17					RETC,UN		
1616	2E18					*			
1617	2E18					*			
1618	2E18	0C	13	4E		POPCT	LODA,R0	CTEMP	
1619	2E1B	2D	13	4F			LODA,R1	CTEMP+1	
1620	2E1E	1F	31	55			BCTA,UN	POPP	
1621	2E21					*			
1622	2E21					*			
1623	2E21	24	20			WRBL	LODI,R0		
1624	2E23	77	10			WRT	PSSL	RS	
1625	2E25	01					STRZ,R1		
1626	2E26	25	FF				BORI,R1	FF	
1627	2E28	F5	62				MI,R1	62	
1628	2E2A	18	2E				BCTR,EO	WRTRN	
1629	2E2C	F4	60				TMI,R0	60	
1630	2E2E	18	02				BCTR,EO	WRTLC	
1631	2E30	44	3F				ANDI,R0	3F	
1632	2E32	0C	0E	C7		WRTLC	STRA,R0	*CURSOR	
1633	2E35	05	10				LODI,R1	10	
1634	2E37	8D	0E	0A			ADDA,R1	CURSOR-1	
1635	2E3A	0D	0E	0A			STRA,R1	CURSOR-1	
1636	2E3D	77	08				PSSL	WC	
1637	2E3F	05	00				LODI,R1	0	
1638	2E41	8D	0E	C7			ADDA,R1	CURSOR	
1639	2E44	0E	0E	C7			STRA,R1	CURSOR	
1640	2E47	75	08				CPSL	WC	
1641	2E49	F5	05				TMI,R1	5	
1642	2E4B	18	0D				BCTR,EO	LFCR2	
1643	2E4E	05	1C				LODI,R1	1C	
1644	2E4F	0D	6E	C7			STRA,R1	*CURSOR	
1645	2E52	75	10			WRTR*W	CPSL	RS	
1646	2E54	17					RETC,UN		
1647	2E55					*			
1648	2E55					*			
1649	2E55	77	10			LPCR	PSSL	RS	
1650	2E57	3F	2F	12			BSTA,UN	EROLD	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1651	2E5A	3D	2E	08		LFCR2	LODA,R1	CURSOR+1	
1652	2E5D	F5	2F				TMI,R1	F	
1653	2E5F	15	2D				BCTR,EC	SCROLL	
1654	2E61	65	21				ADDI,R1	1	
1655	2E63	45	2F				STRA,R1	F	
1656	2E65	07	2E	08			STRA,R1	CURSOR-1	
1657	2E68	07	10			CIRLIN	LODI,R2	12	
1658	2E6A	01	01	07			STRA,R3	CURSOR	
1659	2E6E	24	22				LODI,R2		
1660	2E6F	06	02				LODI,R2	2	
1661	2E71	07	FF	07		FILL	STRA,R2	*CURSOR,1	
1662	2E74	85	19				ADDI,R2	12	
1663	2E76	99	29				BCTR,EQ	FILL	
1664	2E78	87	21				ADDI,R3	1	
1665	2E7A	07	2E	07			STRA,R3	CURSOR	
1666	2E7D	F7	15				COMI,R3	15	
1667	2E7F	98	20				BCTR,EQ	FILL	
1668	2E81	37	12				LODI,R3	12	
1669	2E83	07	2E	07			STRA,R3	CURSOR	
1670	2E86	25	10				LODI,R1	10	
1671	2E88	01	81	07			STRA,R1	*CURSOR	
1672	2E8B	25	12				CPSL	RS	
1673	2E8E	17					RETC,UN		
1674	2E91	24	14			SCROLL	LODI,R2	14	
1675	2E92	00	2E	07			STRA,R2	CURSOR	
1676	2E93	29					BORZ,R2		
1677	2E94	00	0E	08			TRA,R2	CURSOR-1	
1678	2E97	25	20			SCROLL2	LODI,R2	2	
1679	2E99	07	FF				LODI,R3	FF	
1680	2E9E	01	A1	07		SCROLL1	LODA,R2	*CURSOR,-	
1681	2E9F	26	FF				ECRI,R2	FF	
1682	2EA0	76	2F				TMI,R2	F	
1683	2EA2	19	1F				BCTR,EQ	SCROLL4	
1684	2EA4	07	A1	07			STRA,R3	*CURSOR,-	
1685	2EA7	26	FF			SCROLL5	ECRI,R2	FF	
1686	2EA9	76	FF				COMI,R2	FF	
1687	2EAB	98	2E				BCTR,EQ	SCROLL1	
1688	2EAD	00	0E	07			LODA,R2	CURSOR	
1689	2EAF	A4	21				SUBI,R2	1	
1690	2EB0	E4	2F				COMI,R2	F	
1691	2EB4	19	25				BCTR,EQ	SCROLL3	
1692	2EB6	00	2E	07			STRA,R2	CURSOR	
1693	2EB9	1B	50				BCTR,UN	SCROLL2	
1694	2EBB	24	2F			SCROLL3	LODI,R2	F	
1695	2EBF	00	0E	08			STRA,R2	CURSOR+1	
1696	2EC0	1F	2E	68			BCTA,UN	CLPLIN	
1697	2EC3	87	21			SCROLL4	ADDI,R3	1	
1698	2EC5	1E	60				BCTR,UN	SCROLL5	
1699	2EC7					*			
1700	2EC7					*			
1701	2EC7	22	22			CURSOR	RES	2	
1702	2EC8	22	00			TMFA	RES	2	
1703	2ECC					*			
1704	2ECC					*			
1705	2ECC	08	70			ARROW	STPR,R2	TMFA	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1706	2ECD	C9	78				STPR,R1	TMFA+1	
1707	2ECF	25	FF				LODI,R1	FF	
1708	2E11	3F	2D	D7		INLOOP	BSTA,UN	GETKB	
1709	2E14	F4	1F				COMI,R0	ESC	
1710	2ED6	10	2F	2B			BCTA,EQ	ARROW?	
1711	2ED9	F4	28				COMI,R2	BS	
1712	2EDE	98	2F				BCTR,EQ	NCBS	
1713	2EDD	F5	FF				COMI,R1	FF	
1714	2EDF	18	22				BCTR,EQ	INLOOP	
1715	2E11	3F	2F	2E			BSTA,UN	BACKSP	
1716	2EE4	1A	68				BCTR,LT	INLOOP	
1717	2EE6	A5	21				SUBI,R1	1	
1718	2EE8	9C	21				ADDI,R2	1	
1719	2EEA	1B	65				BCTR,UN	INICOP	
1720	2EEC	F4	15			NCBS	COMI,R2	15	
1721	2EEE	98	15				BCTR,EC	STRIN	
1722	2EF0	F5	FF				COMI,R1	FF	
1723	2EF2	98	5D				BCTR,EQ	INLOOP	
1724	2EP4	2D	AE	C9		NOBS2	LODA,R1	*TMFA,-	
1725	2EF7	18	2B				BCTR,EQ	STRIN?	
1726	2EF9	F4	2D				COMI,R2	CR	
1727	2EFB	18	27				BCTR,EQ	STRIN2	
1728	2EFD	3F	2E	23			BSTA,UN	WRT	
1729	2F00	FA	72				BDRR,R2	NOBS2	
1730	2F02	18	2E				BCTR,UN	CPWAIT	
1731	2F04	A5	21			STRIN?	SUBI,R1	1	
1732	2F06	1B	49				BCTR,UN	INLOOP	
1733	2F08	CD	AE	C9		STRIN	STRA,R1	*TMFA,-	
1734	2F0B	E4	2D				COMI,R2	CR	
1735	2F0D	18	12				BCTR,EQ	CLRLAS	
1736	2F0F	FE	2E	D1			BDRR,R2	INLOOP	
1737	2F12	20				CRWAIT	REDD,R2		
1738	2F13	E4	28				COMI,R2	BS	
1739	2F15	1C	2E	D1			BCTA,EQ	INLOOP	
1740	2F18	F4	2D				COMI,R2	CR	
1741	2F1A	98	76				BCTR,EQ	CRWAIT	
1742	2F1C	3F	2D	F1			BSTA,UN	FL	
1743	2F1F	26					BORZ,R2		
1744	2F20	17					RETC,UN		
1745	2F21	20				CLRLAS	RETC,UN		
1746	2F22	01	EE	C9		CL	STRA,R1	*TMFA,1	
1747	2F25	85	01				ADDI,R1	1	
1748	2F27	FA	79				BDRR,R2	CL	
1749	2F29	22					BORZ,R2		
1750	2F2A	17					RETC,UN		
1751	2F2B	04	FF			ARROW?	LODI,R2	FF	
1752	2F2D	17					RETC,UN		
1753	2F2E					*			
1754	2F2E					*			
1755	2F2E	3F	2F	25		BACKSP	BSTA,UN	ERAS1	
1756	2F31	16					RETC,LT		
1757	2F32	07	0E	C8			LODA,R3	CURSOR-1	
1758	2F35	0C	0E	C7			LODA,R2	CURSOR	
1759	2F38	A7	10			BACKS1	SUBI,R3	10	
1760	2F3A	77	08				PPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1761	2F3C	A4	20				SUBL,R0	0	
1762	2F3E	7E	00				CPSL	WC	
1763	2F40	0F	0F	00			STRA,R3	CURSOR-1	
1764	2F43	00	0E	07			STRA,R0	CURSOR	
1765	2F46	04	10				LODI,R0	10	
1766	2F49	00	0F	07			STRA,R0	*CURSOR	
1767	2F4B	17					RETC,UN		
1768	2F4C					*			
1769	2F4C	0F	13			ERROR2	LODI,R2	13	
1770	2F4E	2E	00				LODI,R1	C0	
1771	2F50	31	2D	F0			BSTA,UN	SFTCUR	
1772	2F53	7E	2F	10			BSTA,UN	PRING	
1773	2F56	04	02				LODI,R0		
1774	2F58	00	0E	07			STRA,R0	*CURSOR	
1775	2F5B	3F	2D	F0			BSTA,UN	PAUSE	
1776	2F5F	1F	49	89			BSTA,UN	FEDN	
1777	2F61					*			
1778	2F61	3F	2E	05		BACK1	BSTA,UN	ERAS1	
1779	2F64	16					ETC,LT		
1780	2F6F	00	0E	06			LODA,R0	CURSOR-1	
1781	2F6E	A4	10				SUBL,R0	10	
1782	2F7A	00	0E	00			STRA,R0	CURSOR-1	
1783	2F6E	77	0E				PPSL	WC	
1784	2F6F	00	0E	07			LODA,R0	CURSOR	
1785	2F72	A4	00				SUBL,R0	0	
1786	2F74	00	0E	07			STRA,R0	CURSOR	
1787	2F77	0E	00				CPSL	WC	
1788	2F79	04	10				LODI,R0	10	
1789	2F7B	00	0F	07			STRA,R0	*CURSOR	
1790	2F7E	A5	01				SUBL,R1	1	
1791	2F82	55	FF				COMI,R1	FF	
1792	2F82	00	06				BCFR,E0	NOSUB1	
1793	2F84	2E	06				LODI,R0	*TMM	
1794	2F86	A4	01				SUBL,R0	1	
1795	2F88	06	02				STRR,R0	*TMM	
1796	2F8A	00				NCSUB1	FORZ,R0		
1797	2F8B	17					RETC,UN		
1798	2F8C					*			
1799	2F8C	2E	00			TMM	ACON	TMPA	
1800	2F91					*			
1801	2F91	27	20			OLFOR	LODI,R2		
1802	2F92	0F	0F	07			STRA,R3	*CURSOR	
1803	2F93	0F	0E	08		OLFCR2	LODA,R3	CURSOR-1	
1804	2F96	47	0F				ANDI,R3	F	
1805	2F98	07	01				ANDI,R3	1	
1806	2F9A	47	0F				ANDI,R3	F	
1807	2F9C	0F	0E	06			STRA,R3	CURSOR-1	
1808	2F9F	07	10				LODI,R3	10	
1809	2FA1	0F	0E	07			STRA,R3	CURSOR	
1810	2FA4	04	02				LODI,R0		
1811	2FA6	00	0E	07		L2	STRA,R0	*CURSOR	
1812	2FAG	27	10				LODI,R3	10	
1813	2FAE	0F	0E	08			ADDA,R3	CURSOR-1	
1814	2FAC	0F	0E	08			STRA,R3	CURSOR-1	
1815	2FB1	77	00				PPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1816	2FB3	07	00				LODI,R3	0	
1817	2FB5	0F	0E	07			ADDA,R3	CURSOR	
1818	2FB6	0F	0E	07			STRA,R3	CURSOR	
1819	2FB7	7E	00				CPSL	WC	
1820	2FB7	07	06				TMI,R3	5	
1821	2FB7	00	06				BCFR,E0	L2	
1822	2FC1	0F	0E	08			LODA,R3	CURSOR-1	
1823	2FC4	0F	0E	08			STRA,R3	CURSOR-1	
1824	2FC7	07	10				LODI,R3	10	
1825	2FC9	0F	0E	07			STRA,R3	CURSOR	
1826	2FC0	04	10				LODI,R0	10	
1827	2FCE	00	0E	07			STRA,R0	*CURSOR	
1828	2FD1	17					RETC,UN		
1829	2FD2					*			
1830	2FD2					*			
1831	2FD2	04	20			WRTBL	LODI,R0		
1832	2FD4	1F	2E	23			BSTA,UN	WRT	
1833	2FD7					*			
1834	2FD7					*			
1835	2FD7					*			
1836	2FD7	52	05			TMESS	ACON	MSG02	
1837	2FD9					*			
1838	2FD9	3F	2E	55		PSTRNG	BSTA,UN	LFCR	
1839	2FDC	0F	0E	17		PRING	LODA,R3	*TMESS.I	
1840	2FDF	16					RETC,LT		
1841	2FE0	3F	2E	23			BSTA,UN	WRT	
1842	2FE3	DF	77				BIRR,R3	PRING	
1843	2FE5					*			
1844	2FE5					*			
1845	2FE5					*			
1846	2FE5					*			
1847	2FE5					*			
1848	2FE5	00	00			ZSTRS	RES	2	
1849	2FE7					*			
1850	2FE7					*			
1851	2FE7	3F	2B	21		ZSTR	BSTA,UN	CTOS	
1852	2FEA	06	FF			ZER	LODI,R2	FF	
1853	2FEC	0E	AB	30			LODA,R2	*STMP-4,+	
1854	2FEF	08	74				STRR,R0	ZSTRS	
1855	2FF1	0E	AB	30			LODA,R2	*STMP-4,+	
1856	2FF4	08	70				STRR,R0	ZSTRS-1	
1857	2FF6	0E	AB	30			LODA,R2	*STMP-4,+	
1858	2FF9	14					PETC,E0		
1859	2FFA	02					STRZ,R2		
1860	2FFE	20					FORZ,R0		
1861	2FFC	0E	0F	15		ZSTR2	STRA,R2	*ZSTRS,-	
1862	2FFF	5A	7B				BRNR,R2	ZSTR2	
1863	3001	17					ETC,UN		
1864	3002					*			
1865	3002					*			
1866	3002	00	13	5A		COMNUM	LODA,R0	CBUF2+2	
1867	3005	FC	13	52			COMA,R0	CBUF1+2	
1868	3006	9C	70	66			BCFA,E0	COMN3	
1869	300B	05	FF				LODI,R1	FF	
1870	300D	0D	33	53		COMN0	LODA,R1	CBUF1+3,+	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
1871	3212	E1	73	58			COMA,R1	CRUF2-3.1	
1872	3213	58	32				BCTR,FC	COMN1	
1873	3215	E5	24				COMI,R1	4	
1874	3217	58	74				BCTP,EC	COMN0	
1875	3218	00	13	58			LODA,R2	CRUF2	
1876	3219	EC	13	50			COMA,P2	CRUF1	
1877	3221	E5	11				BCTR,FC	COMN2	
1878	3221	R1	30	56		COMIN2	BSTA,UN	COMN3	
1879	3224	00	13	52		COMIN3	LODA,R0	CRUF1-2	
1880	3227	14					RETC,FC		
1881	3229	E7	00			INVRT	COMI,R3	LT	
1882	322A	E5	23				BCTR,FC	INVP	
1883	322C	P7	02				LODI,R2	LT	
1884	322E	17					RETC,UN		
1885	322F	20	31			INVT	LODI,R3	GT	
1886	3231	17					RETC,UN		
1887	3232	07	00			COMN2	LODI,R3	FC	
1888	3234	00	13	51			LODA,P2	CRUF1-1	
1889	3237	EC	13	50			COMA,R0	CRUF2-1	
1890	323A	14					BCTR,FC		
1891	323B	30	20				BSTR,UN	COMN3	
1892	323D	20	17	50			LODA,P2	CRUF1	
1893	3240	10	52				BCTR,FC	COMIN3	
1894	3242	3F	30	20			BSTA,UN	INVRT	
1895	3245	1F	50				BCTR,UN	COMIN3	
1896	3247	3E	17			COMN1	BSTR,UN	COMN3	
1897	3249	20	13	58			LODA,R2	CRUF2	
1898	324C	EC	13	50			COMA,R0	CRUF1	
1899	324F	58	52				BCTR,FC	COMIN2	
1900	3251	02					LODZ,R2		
1901	3252	1A	2A				BCTR,LT	COMN4	
1902	3254	27	13	51			LODA,R2	CRUF1-1	
1903	3257	50	13	50			COMA,R2	CRUF2-1	
1904	325A	10	48			COMN5	BCTR,FC	COMIN2	
1905	325C	1F	43				BCTR,UN	COMIN2	
1906	325E	20	13	50		COMN4	LODA,P2	CRUF2-1	
1907	3261	EC	13	51			COMA,R0	CRUF1-1	
1908	3264	10	74				BCTR,UN	COMN5	
1909	3266	10	03			COMN2	BCTR,GT	COMN3A	
1910	3268	07	02				LODI,R3	LT	
1911	326A	17					RETC,UN		
1912	326B	07	21			COMN3A	LODI,R3	GT	
1913	326D	17					RETC,UN		
1914	326E					*			
1915	326F					*			
1916	326E	00	13	4F		STRCT	STRA,R0	CTEMP	
1917	3271	00	13	4F			STRA,R1	CTEMP-1	
1918	3274	17					RETC,UN		
1919	3275					*			
1920	3275					*			
1921	3275	08	03			STROP1	STRR,R0	OP1	
1922	3277	08	02				STRR,R1	OP1-1	
1923	3279	17					RETC,UN		
1924	327A					*			
1925	327A					*			

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
1926	327A	00	00				OP1	RES	2
1927	327C					*			
1928	327C					*			
1929	327C	08	7D			INCOP1	LODR,R0	OP1-1	
1930	327E	04	01				ADDI,R0	1	
1931	3280	08	79				STRR,R0	OP1+1	
1932	3282	16					RETC,LT		
1933	3283	1F					RETC,GT		
1934	3284	08	74				LODR,R0	OP1	
1935	3286	04	01				ADDI,R0	1	
1936	3288	08	70				STRR,R0	OP1	
1937	328A	EC	13	D7			COMA,R0	SP	
1938	328D	0E	30	07			BCTA,LT	SOER	
1939	3290	17					RETC,UN		
1940	3291					*			
1941	3291					*			
1942	3291	08	03			STPOP2	STRR,R0	OP2	
1943	3293	09	02				STRR,R1	OP2-1	
1944	3295	17					RETC,UN		
1945	3296					*			
1946	3296					*			
1947	3296	00	00			OP2	RES	2	
1948	3296					*			
1949	3298					*			
1950	3298	08	7D			INCOP2	LODR,R0	OP2+1	
1951	329A	04	01				ADDI,R0	1	
1952	329C	08	79				STRR,R0	OP2+1	
1953	329E	16					RETC,LT		
1954	329F	15					RETC,GT		
1955	32A0	08	74				LODR,R0	OP2	
1956	32A2	04	01				ADDI,R0	1	
1957	32A4	08	70				STRR,R0	OP2	
1958	32A6	17					RETC,UN		
1959	32A7					*			
1960	32A7					*			
1961	32A7	08	D1			PSHOP1	STRR,R0	*OP1	
1962	32A9	1F	7C				BCTA,UN	INCOP1	
1963	32AC					*			
1964	32AC					*			
1965	32AC	08	EB			PSHOP2	STRR,R0	*OP2	
1966	32AE	1F	30	5F			BCTA,UN	INCOP2	
1967	32B1					*			
1968	32B1					*			
1969	32B1	0B	A4			INCSP	LODR,R3	*SP	
1970	32B3	04	01				LODI,R0	1	
1971	32B5	02	21			INCSP2	ADDR,R0	SP+1	
1972	32B7	08	1F				STRR,R0	SP+1	
1973	32B9	77	08				PPSL	WC	
1974	32BB	00	1A				LODR,R0	SP	
1975	32BD	04	00				ADDI,R2	0	
1976	32BF	08	16				STRR,R0	SP	
1977	32C1	7F	00				CPSL	WC	
1978	32C3	EC	00	06			COMA,R2	ENDRAM	
1979	32C6	16					RETC,LT		
1980	32C7	00	00	06		SOER	LODA,R2	ENDRAM	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1991	30CA	A4	21				SUBI,R0	1	
1992	30CC	08	09				STRR,R0	SP	
1993	30CE	04	FF				LODI,R0	FF	
1994	30D0	0A	26				STRP,R0	SP+1	
1995	30D2	07	2D				LODI,R3	SOFRR	
1996	30D4	1F	33	2F			BCTA,UN	ERROR	
1997	30D7					*			
1998	30D7	02	00				SP RES	2	
1999	30D9					*			
2000	30DB	28	7D				DECSF	LODR,R0	SP+1
2001	30DB	A4	01				SUBI,R0	1	
2002	30DD	04	78				DFCSF2	STRR,R0	SP-1
2003	30DF	77	28				PFSL	WC	
2004	30E1	08	74				LODR,R0	SP	
2005	30E3	A4	22				SUBI,R0	2	
2006	30E5	08	70				STRR,R0	SP	
2007	30E7	77	28				CPSL	WC	
2008	30E9	FC	02	0A			COMA,R0	TAREND	
2009	30EB	0E	32	07			BCTA,GT	SOFR	
2010	30ED	0E	E6				STRR,R3	*SP	
2011	30F1	17					RETC,UN		
2012	30F2					*			
2013	30F2					*			
2014	30F2	0C	11	3E			PUSHST	STRA,R0	UTEMP
2015	30F5	0D	11	37				STRA,R1	UTEMP-1
2016	30F8	02					LODZ,R2		
2017	30F8	03					STRZ,R3		
2018	30FA	18	2F				BCTP,FC	PUSH3	
2019	30FC	0B	5A				LODR,R0	SP-1	
2020	30FF	A2					SUBZ,R2		
2021	30FF	7E	FC				BSTR,UN	DFCSF2	
2022	3101	25	FF				LODI,R1	FF	
2023	3103	0D	B1	3E			LODA,R1	*UTEMP,-	
2024	3105	0E	D0	D7			STRA,R2	*SP,	
2025	3105	5A	78				PPNR,R2	PUSH2	
2026	3108	31	40				BSTR,UN	DFCSF	
2027	310F	07	01				LODI,R3	1	
2028	310F	1F	4E				BCTR,UN	DECSF	
2029	3111					*			
2030	3111					*			
2031	3111	08	23				POPST	STRR,R0	UTEMP
2032	3113	05	22					STRR,R1	UTEMP-1
2033	3115	07	21				LODI,R3	1	
2034	3117	0C	S0	D7			LODA,R0	*SP	
2035	311A	F3					COMZ,R3		
2036	311B	9C	45	7C			BCTA,FC	TYPFR	
2037	311E	2F	F0	D7			LODA,R3	*SP,I	
2038	3121	02					STRZ,F2		
2039	3122	01					STRZ,R1		
2040	3123	18	2C				BCTR,E0	POPST3	
2041	3125	0F	B0	D7			LODA,R3	*SP,+	
2042	3128	0D	D1	3E			STRA,R1	*UTEMP,-	
2043	312E	59	78				PPNR,R1	POPST2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2036	312E	02					LODZ,R2		
2037	312F	3F	30	F5			BSTA,UN	INCSP2	
2038	3131	04	02				LODI,R0	2	
2039	3133	1F	30	F5			BCTA,UN	INCSP2	
2040	3136					*			
2041	3136					*			
2042	3136	00	00				UTEMP RES	2	
2043	3138					*			
2044	3138					*			
2045	3138	0B	7C				PUSHFP	STRR,R0	UTEMP
2046	313A	09	7B				STRR,R1	UTEMP-1	
2047	313C	0C	10	D8			LODA,R0	SP+1	
2048	313F	A4	09				SUBI,R0	9	
2049	3141	07	02				LODI,R3	2	
2050	3143	3F	30	D8			BSTA,UN	DFCSF2	
2051	3146	06	08				LODI,R2	8	
2052	3146	05	FF				LODI,R1	FF	
2053	314A	07	09				LODI,R3	9	
2054	314C	D1	F1	36			LODA,R1	*UTEMP,+	
2055	314F	CF	D0	D7			STRA,R3	*SP,-	
2056	3152	FA	78				BDRR,R2	PUSHFP2	
2057	3154	17					RETC,UN		
2058	3155					*			
2059	3155					*			
2060	3155	08	5F				POPFP	STRR,R0	UTEMP
2061	3157	09	5F				STRR,R1	UTEMP-1	
2062	3159	06	08				LODI,R2	8'	
2063	315B	07	00				LODI,R3	0	
2064	315D	0C	90	D7			LODA,R0	*SP	
2065	3160	9C	45	7C			BCTA,FC	TYPFR	
2066	3163	0F	E0	D7			LODA,R3	*SP,+	
2067	3166	CF	D1	36			STRA,R2	*UTEMP,-	
2068	3169	5A	78				PPNR,R2	POPFP2	
2069	316B	04	09				LODI,R0	9	
2070	316D	1F	30	F5			BCTA,UN	INCSP2	
2071	3170					*			
2072	3170					*			
2073	3170	08	12				SINPT	LODR,R0	INPT
2074	3172	08	05				STRR,R0	STEMP	
2075	3174	08	0F				LODR,R0	INPT-1	
2076	3176	06	02				STRR,R0	STEMP-1	
2077	3178	17					RETC,UN		
2078	3178					*			
2079	3178					*			
2080	3178	00	00				STEMP RES	2	
2081	3178					*			
2082	3178					*			
2083	3178	08	7C				RINPT	LODR,R0	STEMP
2084	317D	08	05				STRR,R0	INPT	
2085	317F	0A	79				LODR,R0	STEMP-1	
2086	3181	08	02				STRR,R0	INPT-1	
2087	3183	17					RETC,UN		
2088	3184					*			
2089	3184					*			
2090	3184	00	00				INPT RES	2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2091	3186								
2092	3186								
2093	3186	08	70			CSINPT	LODR,R0	INPT	
2094	3186	08	70				STPR,R0	CINPT	
2095	318A	08	70				LODR,R0	INPT-1	
2096	318C	08	70				STPR,R0	CINPT-1	
2097	318E	17					RETC,UN		
2098	318F								
2099	318F								
2100	318F	20	00			CINPT	RES	2	
2101	3191								
2102	3191								
2103	3191	08	70			CRINPT	LODR,R0	CINPT	
2104	3193	08	70				STPR,R0	INPT	
2105	3195	08	70				LODR,R0	CINPT-1	
2106	3197	08	60				STPR,R0	INPT-1	
2107	3199	17					RETC,UN		
2108	319A								
2109	319A								
2110	319A	20	00	73		BEGIN	LODA,R0	BSTART	
2111	319F	08	60				STPR,R0	INPT	
2112	319F	20					EOBZ,R0		
2113	31A2	08	63				TPR,R0	INPT-1	
2114	31A2	17					RETC,UN		
2115	31A3								
2116	31A3								
2117	31A3	3F	46	40		NXTLIN	BSTA,UN	SKPSP	
2118	31A3	3F	31	80			BSTA,UN	CHKCR	
2119	31A3	10	A2	00			BCTA,EO	*BTNAIR	
2120	31A3	E4	71				COMI,R0	1	COMMENT FROM HERE ON
2121	31A5	10	4F	3A			BCTA,EO	SKPLIN	
2122	31B1	07	05			SYNER	LODI,R0	SYNER	
2123	31B3	1F	33	2F			BCTA,UN	ERROP	
2124	31B6								
2125	31B6								
2126	31B6	E4	2D			CHKCR	COMI,R0	CR	
2127	31B8	14					RETC,EO		
2128	31B8	E4	3A				COMI,R0		
2129	31B8	17					RETC,UN		
2130	31B0								
2131	31B0								
2132	31B0	75	00			RETCLT	CPSL	00	
2133	31B5	77	00				FPFL	00	
2134	31C0	17					RETC,UN		
2135	31C1								
2136	31C1								
2137	31C1	75	00			RETCLT	CPSL	00	
2138	31C3	77	00				FPFL	40	
2139	31C5	17					RETC,UN		
2140	31C6								
2141	31C6								
2142	31C6	00	05	4B		CKNXTL	LODA,R0	INON	
2143	31C9	05	00				LODI,R0	0	
2144	31CB	0F	05	4B			STRA,R0	INON	
2145	31CF	00					LODR,R0		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2146	310F	10	31	A3			BCTA,EO	NXTLIN	
2147	3112	1F	46	3A			BCTA,UN	SKPLIN	
2148	31D5								
2149	31D5								
2150	31D5	00	00	00	00	LINNUM	RES	4	
2151	31D9								
2152	31D9								
2153	31D9	20				GETLIN	FORZ,R0		
2154	31DA	05	04				LODI,R1	4	
2155	31DC	01	51	D5		GETLN2	STRA,R1	LINNUM,+	
2156	31DF	09	7B				BRRR,R1	GETLN2	
2157	31E1	05	FF				LODI,R1	FF	
2158	31E3	3F	46	40		GETLN3	BSTA,UN	SKPSP	
2159	31E5	E4	70				COMI,R0	0	
2160	31E8	18	79				BCTR,EO	GETLN3	
2161	31EA	3F	45	40		GETN4	BSTA,UN	CHKNUM	
2162	31ED	00	32	13			BCTA,EO	DECPY	
2163	31F0	E5	04				COMI,R1	4	
2164	31F2	10	45	74			BCTA,EO	OVFER	
2165	31F5	0D	31	D5			STRA,R1	LINNUM,+	
2166	31F8	3F	32	20			BSTA,UN	GETCHR	
2167	31FB	1B	6D				BCTR,UN	GETN4	
2168	31FD								
2169	31FD								
2170	31FD	0F	11	05		INCPY	LODA,R3	INPT-1	
2171	3200	07	01				ADDI,R3	1	
2172	3202	0F	11	05			STRA,R3	INPT-1	
2173	3205	16					RETC,LT		
2174	3206	1F					RETC,GT		
2175	3207	0F	11	04			LODA,R3	INPT	
2176	320A	07	01				ADDI,R3	1	
2177	320C	0F	11	04			STRA,R3	INPT	
2178	320F	17					RETC,UN		
2179	3210								
2180	3210								
2181	3210	3F	46	40		SKPDEC	BSTA,UN	SKPSP	
2182	3213	0F	11	05		DECPY	LODA,R3	INPT-1	
2183	3216	A7	01				SUBI,R3	1	
2184	3218	0F	11	05			STRA,R3	INPT-1	
2185	321B	77	06				PPSL	WC	
2186	321D	0F	11	04			LODA,R3	INPT	
2187	3220	A7	00				SUBI,R3	0	
2188	3222	0F	11	04			STRA,R3	INPT	
2189	3225	75	08				CPSL	WC	
2190	3227	17					ETC,UN		
2191	3228								
2192	3228								
2193	3228	00	91	04		GETCHR	LODA,R0	*INPT	
2194	322B	3F	45	A6			BSTA,UN	LTOU	
2195	322E	00					LODZ,R0		
2196	322F	0A	4C				BCTR,LT	INCPY	
2197	3231	1F	31	B1			BCTA,UN	STNER	
2198	3234								
2199	3234								
2200	3234	00	00	00	00	INBUF	RES	41	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3311	332D					*			
3312	332D	00				FTEMP	RES	1	
3313	332E					*			
3314	332E					*			
3315	332E	04	02			ERR0R	LODI,R0	2	
3316	332F	03				LBSL			
3317	3331	0E	7A			STAR,R7	ETEMP		
3318	3333	07	12			LODI,R3	ASOMSG		***
3319	3335	3F	45	53		BSTA,UN	WRTMOR		
3320	3338	0E	72			ICLR,R3	ETEMP		
3321	333A	3F	45	56		BSTA,UN	WRTM		
3322	333D	07	11			LODI,R3	ERRMS3		ERROR ***
3323	333F	3F	45	56		BSTA,UN	WRTM		
3324	3342	2E	11	EF		LOPA,R2	INPT-1		
3325	3345	AF	22	26		SUBA,R2	SHPNT-1		
3326	3348	3F	22	27		BSTA,UN	SHLIN		
3327	334B	1F	42	0E		BCTA,UN	IEGN		
3328	334F					*			
3329	334F					*			
3330	334F	22	02			CTEMP	RES	2	
3331	3350	22	02	22	22	CBUF1	RES	8	
3332	3354	22	02	22	22				
3333	3358	22	24	22	02	CBUF2	RES	8	
3334	335C	22	02	22	22				
3335	3362					*			
3336	3362					*			
3337	3362	09	7F			PUSHOP	LODR,R1	OPSP	
3338	3362	0D	73	72		STRA,R1	OPSTK.I		
3339	3366	0F	21			ALDI,R1		1	
3340	3367	0C	28			STPR,R1	OPSP		
3341	3369	E5	2K			COMI,R1		22	
3342	336B	16				RETC,LT			
3343	336C	27	12			OSOER	LODI,R3	OSCFRR	
3344	336E	1F	33	2E		BCTA,UN	ERR0R		
3345	3371					*			
3346	3371					*			
3347	3371	22				OPSP	RES	1	
3348	3372	02	02	02	02	OPSTK	RES	22	
3349	3376	02	02	02	02				
3350	337A	20	20	20	20				
3351	337E	04	02	02	02				
3352	3382	02	02	02	02				
3353	3386	02	02	02	02				
3354	338A	02	02	02	02				
3355	338F	22	72	22	22				
3356	3392	06				EVALCC	RES	1	
3357	3393					*			
3358	3393					*			
3359	3393	05	50			POPOP	LODR,R1	OPSP	
3360	3395	A7	01			SUBI,R1		1	
3361	3397	1A	53			BCTR,LT	OSOER		
3362	3399	09	56			STPR,R1	CPSP		
3363	339B	2D	73	72		LODA,R1	OPSTK.I		
3364	339F	17				RETC,UN			
3365	339F					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3366	339F					*			
3367	339F	26				EVAL	FORZ,R0		
3368	33A0	09	4F			TFR,R2	OPSP		
3369	33A2	08	51			STRR,R2	EVALCC		
3370	33A4	00	14	02		STRA,R0	PARNST		
3371	33A7	04	07			LODI,R2		7	
3372	33A9	3F	33	60		BSTA,UN	PUSHOP		
3373	33AC	3F	45	25		BSTA,UN	CKNEG		
3374	33AF	3F	35	77		BSTA,UN	LOXTAR		
3375	33B2	99	10			BCTR,GT	EVAL1		
3376	33B4	3F	38	BB		BSTA,UN	ECONST		
3377	33B7	99	12			BCTR,GT	EVAL1		
3378	33B9	3F	32	28		BSTA,UN	GETCHR		
3379	33BC	E4	28			COMI,R2			
3380	33BE	10	34	81		BCTA,E0	ELPAR		
3381	33C1	3F	32	13		BSTA,UN	DEOPT		
3382	33C4	04	46			LODI,R0	PCNTAB		
3383	33C6	05	66			LODI,R1	PCNTAB		
3384	33C8	3F	45	F7		BSTA,UN	LOOKUP		
3385	33CB	10	34	EA		BCTA,E0	EPCN		
3386	33CF	1F	2E			BCTR,UN	ENDEVL		
3387	33D0	18	05			BCTR,E0	EVAL2		
3388	33E2	3F	3F	F2		BSTA,UN	PUSHST		
3389	33E5	1E	03			BCTR,UN	EVAL3		
3390	33E7	3F	31	38		BSTA,UN	PUSHFP		
3391	33DA	04	FF			EVAL3	LODI,R0	FF	
3392	33DC	00	13	92		STRA,RP	EVALCC		
3393	33E1	3F	45	40		BSTA,UN	SKPSP		
3394	33E2	E4	2C			COMI,R2			
3395	33E4	10	3D	2B		BCTA,E0	FPCOM		
3396	33E7	E4	28			COMI,R0			
3397	33E9	10	34	33		BCTA,E0	ERPAR		
3398	33EC	E4	27			COMI,R2			
3399	33EE	10	3F	23		BCTA,E0	RTNVAL		
3400	33F1	05	08			LODI,R1		8	
3401	33F3	ED	55	49		EVAL4	COMA,R1	OPTFL,-	
3402	33F6	10	34	23		BCTA,E0	EOP		
3403	33F9	59	78			BRNR,R1	EVAL4		
3404	33FB	3F	32	13		BSTA,UN	DEOPT		
3405	33FE	3F	33	93		BSTA,UN	POPOP		
3406	3401	03				STRZ,R3			
3407	3402	E4	27			COMI,R0		7	
3408	3404	1F	2C			BCTR,E0	ENDE2		
3409	3406	44	07			ANDI,RP		7	
3410	3408	E4	23			COMI,RP		3	
3411	340A	1F	31	E1		BCTA,GT	SYNER		
3412	340B	3F	34	89		BSTA,UN	DOOP		
3413	3410	1E	6C			BCTR,UN	ENDEVL		
3414	3412	0C	13	92		LODA,R0	EVALCC		
3415	3415	10	31	01		BCTA,E0	RETCGT		
3416	3418	3F	30	E1		BSTA,UN	INCSF		
3417	341B	3F	30	D9		BSTA,UN	DECSF		
3418	341E	03				LCBZ,R3			
3419	341F	14				RETC,E0			
3420	3420	04	FF			LODI,RP	FF		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPEPAND	COMMENTS
3421	3422	17					RETC,UN		
3422	3423					*			
3423	3423					*			
3424	3423	1F	24			EOP	COMI,R1	4	
3425	3423	1F	2A			BCTR,RT		EOP4	
3426	3427	0F	75	51		LODA,R1		OPCOD,I	
3427	3429	01				RRL,R1			
3428	3429	01				RRL,R1			
3429	3429	01				RRL,R1			
3430	3429	01				IORZ,R1			
3431	3429	02	02			STRZ,R0		TEMPCP	
3432	3430	3F	33	93		BSTA,UN		POPOF	
3433	3433	01				STRZ,R1			
3434	3434	44	07			ANDI,R0		7	
3435	3439	08	14			LODR,R0		TEMPCP	
3436	3439	47	27			ANDI,R0		7	
3437	343A	83				COMZ,R3			
3438	343B	09	7C			BCTR,LE		EOP3	
3439	343D	01				LODZ,R1			
3440	343E	3F	33	80		BSTA,UN		PUSHOP	
3441	3441	25	0E			LODR,R0		TEMPCP	
3442	3443	3F	33	62		BSTA,UN		FUSROP	
3443	3446	1F	33	AF		BCTA,UN		EVAL2	
3444	3449	01				LODZ,R1			
3445	344A	03				STRZ,R3			
3446	344B	3F	34	89		BSTA,UN		DOOP	
3447	344B	1F	32			BCTR,UN		EOP2	
3448	3452					*			
3449	3452					*			
3450	3450	02				TEMPOP RES		1	
3451	3451					*			
3452	3451					*			
3453	3451	3F	26			EOP4	BSTR,UN	CONVGT	
3454	3453	01				LODZ,R1			
3455	3454	02				STRZ,R0			
3456	3455	00	01	84		LODA,R0		*INFT	
3457	3459	0F	02			LODI,R1		8	
3458	345A	FD	56	40		OPTEL,-			
3459	345D	1F	2F			BCTR,EQ		EOP5	
3460	3459	1F	25			COMI,R1		5	
3461	3461	02	77			BCTR,EQ		EOP4A	
3462	3462	13	08			BCTR,UN		EOP5A	
3463	3465	3F	31	FD		EOP5	BSTA,UN	INCPY	
3464	3469	3F	2F			BSTR,UN		CONVGT	
3465	346A	01				LODZ,R1			
3466	346B	02				IORZ,R2			
3467	346D	02				STRZ,R2			
3468	346D	02				RRL,R2			
3469	346E	1F				RPL,R2			
3470	346F	02				RRL,R2			
3471	3472	66	23			IORI,R2		3	
3472	3472	07				LODZ,R2			
3473	3473	00	14	50		STRA,R0		TEMPOP	
3474	3473	1F	34	32		BCTA,UN		EOP2	
3475	3475					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPEPAND	COMMENTS
3476	3475					*			
3477	3476	AF	24			CONVGT	SUPI,R1	4	
3478	347B	05	03			COMI,R1		3	
3479	347D	16				RETC,LT			
3480	347E	0F	24			LODI,R1		4	
3481	3480	17				RETC,UN			
3482	3481					*			
3483	3481					*			
3484	3481	02	2F			ELPAR	LODR,R0	PARNST	
3485	3483	04	01			ADDI,R0		1	
3486	3487	02	05			STRZ,R0		PARNST	
3487	3487	04	05			LODI,R2		5	
3488	3489	3F	33	60		BSTA,UN		PUSHOP	
3489	3490	3F	45	29		BSTA,UN		CKNEG	
3490	348F	1F	33	AF		BCTA,UN		EVAL2	
3491	3492					*			
3492	3492					*			
3493	3492	02				PARNST RES		1	
3494	3493					*			
3495	3493					*			
3496	3493	08	7D			ERPAR	LOIR,R0	PARNST	
3497	3495	06	06			BCTR,EQ		ERPAR2	
3498	3497	3F	32	13		ERPAR1	BSTA,UN	DEOPT	
3499	349A	1F	33	FE		BCTA,UN		ENDEVL	
3500	349D	A4	01			ERPAR2	SUPI,R0	1	
3501	349F	08	71			STRZ,R0		PARNST	
3502	34A1	3F	33	93		ERPAR3	BSTA,UN	POPOF	
3503	34A4	03				STRZ,R3			
3504	34A5	44	07			ANDI,R0		7	
3505	34A7	E4	07			COMI,R0		7	
3506	34A5	1C	31	E1		BCTA,EQ		SYNER	
3507	34A6	E4	05			COMI,R0		5	
3508	34A8	1C	33	DA		BCTA,EQ		EVAL3	
3509	34B1	E4	06			COMI,R0		6	
3510	34B1	E4	21			BCTR,EQ		ERCNEX	
3511	34B5	3F	02			BSTR,UN		DOOP	
3512	34B7	1B	68			BCTR,UN		ERPAR3	
3513	34B9					*			
3514	34B9					*			
3515	34B9	23				DOOP	LODZ,R3		
3516	34BA	44	07			ANDI,R0		7	
3517	34BC	E4	03			COMI,R0		3	
3518	34BE	1C	3D	0C		BCTA,EQ		FPCOMP	
3519	34C1	E3				RRR,R3			
3520	34C2	E3				RRR,R3			
3521	34C3	47	0E			ANDI,R3		E	
3522	34C5	0F	75	56		LODA,R3		OPJUMP,I	
3523	34C8	0C	14	D4		STRA,R0		DODST	
3524	34C8	0F	3F	56		LODA,R3		OPJUMP,.	
3525	34C8	0C	14	D5		STRA,R0		DODST*1	
3526	34D1	1F	B4	D4		BCTA,UN		*DODST	
3527	34D4					*			
3528	34D4					*			
3529	34D4	00	00			DODST RES		2	
3530	34D6					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2821	3406						*		
2822	3406	83				EFCNEX	RRR,R3		
2823	3417	83					RRR,R3		
2824	3428	47	3E			ANTI,R3		3E	
2825	34DA	27	75	29		LODA,R3		FCNJMP,1	
2826	34DT	08	75			STRP,R3		DODST	
2827	3417	27	1E	29		LODA,R3		FCNJMP,-	
2828	3412	08	71			STRP,R2		DODST-1	
2829	3414	3E	14	14		BSTA,UN		*DODST	
2830	3417	1E	3E	1A		BCTA,UN		FVAL3	
2831	341A					*			
2832	341A					*			
2833	341A	01	4E	47		FFCN	BSTA,UN	SKPSP	
2834	3411	14	7E				COMI,R2		
2835	341E	00	71	F1		BCFA,EC		SYNER	
2836	3412	00	14	02		LODA,R2		PARNST	
2837	341E	04	21			ADDI,R2		1	
2838	3417	10	14	02		STRP,R2		PARNST	
2839	341A	11				RRL,R1			
2840	341E	11				RRL,R1			
2841	3417	11				RRL,R1			
2842	3417	11				RRL,R1			
2843	3417	11				RRL,R1			
2844	3417	11				RRL,R1			
2845	3417	11				RRL,R1			
2846	3417	11				RRL,R1			
2847	3417	11				RRL,R1			
2848	3417	11				RRL,R1			
2849	3417	11				RRL,R1			
2850	3417	11				RRL,R1			
2851	3417	11				RRL,R1			
2852	3417	11				RRL,R1			
2853	3417	11				RRL,R1			
2854	3417	11				RRL,R1			
2855	3417	11				RRL,R1			
2856	3417	11				RRL,R1			
2857	3417	11				RRL,R1			
2858	3417	11				RRL,R1			
2859	3417	11				RRL,R1			
2860	3417	11				RRL,R1			
2861	3417	11				RRL,R1			
2862	3417	11				RRL,R1			
2863	3417	11				RRL,R1			
2864	3417	11				RRL,R1			
2865	3417	11				RRL,R1			
2866	3417	11				RRL,R1			
2867	3417	11				RRL,R1			
2868	3417	11				RRL,R1			
2869	3417	11				RRL,R1			
2870	3417	11				RRL,R1			
2871	3417	11				RRL,R1			
2872	3417	11				RRL,R1			
2873	3417	11				RRL,R1			
2874	3417	11				RRL,R1			
2875	3417	11				RRL,R1			
2876	3417	11				RRL,R1			
2877	3417	11				RRL,R1			
2878	3417	11				RRL,R1			
2879	3417	11				RRL,R1			
2880	3417	11				RRL,R1			
2881	3417	11				RRL,R1			
2882	3417	11				RRL,R1			
2883	3417	11				RRL,R1			
2884	3417	11				RRL,R1			
2885	3417	11				RRL,R1			
2886	3417	11				RRL,R1			
2887	3417	11				RRL,R1			
2888	3417	11				RRL,R1			
2889	3417	11				RRL,R1			
2890	3417	11				RRL,R1			
2891	3417	11				RRL,R1			
2892	3417	11				RRL,R1			
2893	3417	11				RRL,R1			
2894	3417	11				RRL,R1			
2895	3417	11				RRL,R1			
2896	3417	11				RRL,R1			
2897	3417	11				RRL,R1			
2898	3417	11				RRL,R1			
2899	3417	11				RRL,R1			
2900	3417	11				RRL,R1			
2901	3417	11				RRL,R1			
2902	3417	11				RRL,R1			
2903	3417	11				RRL,R1			
2904	3417	11				RRL,R1			
2905	3417	11				RRL,R1			
2906	3417	11				RRL,R1			
2907	3417	11				RRL,R1			
2908	3417	11				RRL,R1			
2909	3417	11				RRL,R1			
2910	3417	11				RRL,R1			
2911	3417	11				RRL,R1			
2912	3417	11				RRL,R1			
2913	3417	11				RRL,R1			
2914	3417	11				RRL,R1			
2915	3417	11				RRL,R1			
2916	3417	11				RRL,R1			
2917	3417	11				RRL,R1			
2918	3417	11				RRL,R1			
2919	3417	11				RRL,R1			
2920	3417	11				RRL,R1			
2921	3417	11				RRL,R1			
2922	3417	11				RRL,R1			
2923	3417	11				RRL,R1			
2924	3417	11				RRL,R1			
2925	3417	11				RRL,R1			
2926	3417	11				RRL,R1			
2927	3417	11				RRL,R1			
2928	3417	11				RRL,R1			
2929	3417	11				RRL,R1			
2930	3417	11				RRL,R1			
2931	3417	11				RRL,R1			
2932	3417	11				RRL,R1			
2933	3417	11				RRL,R1			
2934	3417	11				RRL,R1			
2935	3417	11				RRL,R1			
2936	3417	11				RRL,R1			
2937	3417	11				RRL,R1			
2938	3417	11				RRL,R1			
2939	3417	11				RRL,R1			
2940	3417	11				RRL,R1			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2886	3566	06	26				BCFR,EQ	POPLT2	
2887	3568	08	08				LODR,R2	LTEMP	
2888	356A	04	71				ADDI,R2	1	
2889	356C	08	24				STRP,R2	LTEMP	
2890	356E	0C	95	72		POPLT2	LODA,R2	*LTEMP	
2891	3571	17					RETC,UN		
2892	3572					*			
2893	3572					*			
2894	3572	02	02	02	02	LTEMP	RES	5	
2895	3576	02							
2896	3577					*			
2897	3577					*			
2898	3577	3F	32	12		LOKVAR	BSTA,UN	SKPDEC	
2899	357A	3F	31	72			BSTA,UN	SINFT	
2900	357E	7C	00	0E			LODA,R2	VARST	
2901	3580	A4	21				SUBI,R2	1	
2902	3582	08	6E				STRP,R2	LTEMP	
2903	3584	04	FF				LODI,R2	FF	
2904	3586	08	09				STRP,R2	LTEMP-1	
2905	3588	3E	86			LOKV1	BSTR,UN	POPLT	
2906	358A	1C	3A	16			BCTA,EC	ECRETN	
2907	358E	08	6E				STRP,R2	LTEMP-2	
2908	358F	3E	4F				BSTR,UN	POPLT	
2909	3591	08	62				STRP,R2	LTEMP-3	
2910	3593	3E	4E				BSTR,UN	POPLT	
2911	3595	0A	5F				STRP,R2	LTEMP-4	
2912	3597	0E	04				LODI,R2	4	
2913	3597	3E	4E			LOKV2	BSTR,UN	POPLT	
2914	3598	18	20				BCTR,EC	LOKVGA	
2915	3599	3F	32	28			BSTA,UN	GETCHR	
2916	35A2	12	D2				COMB,R2	*LTEMP	
2917	35A2	08	2C				BCTR,EC	LOKV3	
2918	35A4	FA	73				BCTR,EC	LOKV2	
2919	35A8	0C	31	84		LOKVPA	LODA,R2	*INFT	
2920	35A8	3F	4E	A6			BSTA,UN	LTCU	
2921	35AC	3F	45	3C			BSTA,UN	CHKAN	
2922	35AF	18	1F				BCTR,EC	LOKV3	
2923	35B1	A6	21				SUBI,R2	1	
2924	35B3	99	0E				BCTR,GT	LOKV5	
2925	35B5	3F	35	60		LOKV4	BSTA,UN	POPLT	
2926	35B8	1A	7B				BDRR,R2	LOKV4	
2927	35BA	0C	1E	76		LOKV5	LODA,R2	LTEMP-4	
2928	35BD	E4	21				COMI,R2	1	
2929	35BF	1D	36	14			BCTA,GT	LOKDIM	
2930	35C2	19	26	58			BCTR,EC	LOKSTR	
2931	35C4	3F	3E	58		LOKV6	BSTA,UN	POPLT	
2932	35C7	0C	15	72			LODA,R2	LTEMP	
2933	35CA	0C	15	73			LODA,R1	LTEMP-1	
2934	35CC	07	02				LODI,R3	0	
2935	35CF	17					BCTR,UN		
2936	35D0	3F	31	7B		LOKV3	BSTA,UN	RINPT	
2937	35D3	0C	1E	74			LODA,R2	LTEMP-2	
2938	35D6	2E	1E	7E			LODA,R1	LTEMP-3	
2939	35D8	A5	21				SUBI,R1	1	
2940	35DB	07	28				PPSL	WC	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2641	35DD	14	02				SUBL,R2	2	
2642	35DF	15	2A				CFSL	WC	
2643	35E1	0C	15	72			STRA,R2	LTEMP	
2644	35E4	0D	15	73			STRA,R1	LTEMP-1	
2645	35E7	1F	35	AB			BCFA,UN	LOKV1	
2646	35EA					*			
2647	35EA					*			
2648	35EA	3F	32	2F		LOKSTR	BSTA,UN	GETCHR	
2649	35ED	14	04				COMI,R2	'(
2652	35EE	3C	3A	16			BCFA,EC	ECFETN	
2651	35E7	37	3F	27		LOKSTR	BSTA,UN	POPLT	
2652	35E8	37	3F	27			STRA,R3		
2653	35E9	37	3F	27			BSTA,UN	POFLT	
2654	35EA	01					STRA,R1		
2655	35EA	31	35	6D			BSTA,UN	POFLT	
2656	35EB	02					STRA,R2		
2657	35EC	27					LODZ,R3		
2658	35ED	27					LODI,R2	FF	
2659	35EE	17					PETC,UN		
2660	35F1					*			
2661	35F2					*			
2662	35F2	27	20	22	22	LDIMS	RFS	A	
2663	35F2	27	20	22	22				
2664	35F2	27	20	22	22				
2665	35F2	27	20	22	22	DIMSTK	RFS	B	
2666	35F2	27	20	22	22				
2667	35F2					*			
2668	35F2					*			
2669	35F4	2A	2C			LOKDIM	STRA,R2	LDIMS	
2670	35F4	14	04				COMI,R2	4	
2671	35F4	1C	37	F1			BCFA,EC	PNEVAL	
2672	35F4	14	02				COMI,R2	2	
2673	35F4	38	38	0A			BCFA,EC	LOKDNS	
2674	35F4	3F	32	2F			BSTA,UN	GETCHR	
2675	35F4	14	02				COMI,R2	5	
2676	35F4	14	02				BCFA,EC	RETNGT	
2677	35F4	3F	35	6D		LOKDNS	BSTA,UN	POFLT	
2678	35F4	2A	2C				STRA,R2	LDIMS-1	# OF DIMS
2679	35F4	06	22				LODI,R2	2	
2680	35F4	07	01				LODI,R3	1	
2681	35F4	0E	16	2A			STRA,R2	LDIMS-6	
2682	35F4	1F	16	2B			STRA,R3	LDIMS-6	
2683	35F4	23	16	2A		LOKDR	LODA,R2	LDIMS-6	
2684	35F4	25	16	2B			LODA,R3	LDIMS-6	
2685	35F4	08	49			LOKDA	STRA,R2	LDIMS-5	
2686	35F4	3F	3F	20			BSTA,UN	POFLT	
2687	35F4	01					STRA,R1		
2688	35F4	0C	16	24			STRA,R2	LDIMS-2	
2689	35F4	1F	16	2B		LOKDR	ADDA,R3	LDIMS-9	MULT BY THIS DIM
2690	35F4	77	0A				PPSL	WC	
2691	35F4	8F	16	2A			ADDA,R2	LDIMS-8	
2692	35F4	75	08				CFSL	WC	
2693	35F4	79	74				EDRR,R1	LOKDR	
2694	35F4	0E	16	2A			STRA,R2	LDIMS-8	
2695	35F4	0F	16	2B			STRA,R3	LDIMS-8	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2696	35F7	3F	32	D9			BSTA,UN	DFOSP	
2697	35FA	02					LODZ,R2		
2698	35FB	03					STRZ,R3		
2699	35FC	3F	32	D9			BSTA,UN	DFOSP	STORE IT
2700	35FD	2F	16	24			LODA,R3	LDIMS-2	STORE THIS DIM
2701	35FE	3F	32	D9			BSTA,UN	DFOSP	
2702	35FF	0C	16	27			LODA,R2	LDIMS-6	
2703	3600	FC	36	36			BDRA,R2	LOKDR	
2704	3600	0C	16	27			LODA,R2	LTEMP	SAVE LTEMP
2705	3600	0C	16	25			STRA,R2	LDIMS-3	
2706	3601	0C	15	73			LODA,R2	LTEMP-1	
2707	3601	0C	16	2E			STRA,R2	LDIMS-4	
2708	3602	3F	46	4F			BSTA,UN	SKPSP	
2709	3603	F4	28				COMI,R2	'(
2710	3604	9C	71	F1			BCFA,EC	SYNER	
2711	3605	05	08				LODI,R1	2	
2712	3606	0D	16	24		LOKDR	STRA,R1	LDIMS-2	
2713	3607	3F	32	D9			BSTA,UN	SKFDEC	
2714	3608	3F	4F	4E			BSTA,UN	CHKNUM	
2715	3609	0C	36	AB			BCFA,EC	LOKDR	
2716	360A	3F	31	FD			BSTA,UN	INCPT	
2717	360B	44	0F				ANDI,R2	F	
2718	360C	02					STRZ,R2		
2719	360D	0C	31	84		LOKDR	LODA,R2	*INPT	
2720	360E	3F	45	4E			BSTA,UN	CHKNUM	
2721	360F	96	22				BCFA,EC	LOKDR	
2722	3610	C1					STRZ,R1		
2723	3611	45	0F				ANDI,R1	F	
2724	3612	3F	31	FD			BSTA,UN	INCPT	
2725	3613	07	09				LODI,R3	9	
2726	3614	02					LODZ,R2		
2727	3615	82				LOKDR	ADDZ,R2		
2728	3616	FB	7E				EDRR,R3	LOKDR	
2729	3617	B1					ADDZ,R1		
2730	3618	C2					STRZ,R2		
2731	3619	1E	69				BCFA,UN	LOKDR	
2732	361A	3F	3E	77		LOKDR	BSTA,UN	LOKVAP	
2733	361B	3C	46	56			BCFA,EC	RETNGT	
2734	361C	3F	31	36			BSTA,UN	PUSHFF	
2735	361D	3F	2F	A1			BSTA,UN	ENS2	
2736	361E	02					LODI,R2		
2737	361F	0C	46	59			BCFA,EC	RETNGT	
2738	3620	01					LODZ,R1		
2739	3621	02					STRZ,R2		
2740	3622	0D	16	24		LOKDR	LODA,R1	LDIMS-2	STACK POINTER
2741	3623	02					LODZ,R2		
2742	3624	01	E6	0C			STRA,R1	DIMSTK,-	
2743	3625	01					LODZ,R1		
2744	3626	1C	46	59			BCFA,EC	RETNGT	
2745	3627	3F	46	4E			BSTA,UN	SKPSP	
2746	3628	E4	2C				COMI,R2	'(
2747	3629	1C	36	81			BCFA,EC	LOKDR	
2748	362A	E4	29				COMI,R2	'(
2749	362B	9C	46	59			BCFA,EC	RETNGT	
2750	362C	FD	16	23			ADDA,R1	LDIMS-1	# OF DIMS

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2751	3616	01	02				COMI,R1	6	
2752	3616	00	46	59			FORZ,R0		RETNGT # OF DIMS # OF SUBOP
2753	361D	00	18	28			STRA,R0		
2754	361E	00	18	28			STRA,R2		LDIMS-6
2755	361F	00	18	28			STRA,R2		LDIMS-7
2756	361A	00	18	24			LODA,R1		LDIMS-2 STACK POINTER
2757	3617	00	22				SUBI,R1	2	
2758	3618	00	26			LOKDC	COMI,R1	6	
2759	3619	10	30	39			BCTA,R0		LOKIF LAST SUBSCRIPT
2762	3618	00	18	20			LODA,R1		DIMSTK,+
2761	3611	00	16	24			STRA,R1		LDIMS-2
2760	3614	00	22				STRZ,R2		
2762	3615	10	32	41			BSTA,UN		INCSP
2764	3619	20					LODT,R2		
2765	3619	03					COMZ,R3		
2766	361A	18					RETC,R1		
2767	3618	20	32	41			BSTA,UN		INCSP
2768	3618	20	32	41			BSTA,UN		INCSP
2769	3710	00	21				LODI,R3	1	
2772	3723	20	32	41			LODA,R3		*ST,1
2771	3723	00	16	2A			STRA,R2		LDIMS-6
2772	3723	20	32	D7			LODA,R3		*SP,-
2773	3720	00	16	2B			STRA,R0		LDIMS-9
2774	3725	20					FORZ,R0		
2775	3710	01					STRZ,R1		
2776	3711	03					STRZ,R3		
2777	3712	05	22				COMI,R2	2	
2778	3714	10	20				BCTF,R0		LOKDF
2779	3716	00	16	2B		LOKD4	ADDA,R1		LDIMS-6
2780	3713	00	18	0A			WC		
2781	3713	00	18	0A			ADDA,R2		LDIMS-6
2782	3713	05	20				CPSL	WC	
2783	3720	00	24				BDRR,R2		LOKD4
2784	3720	00	16	28		LOKD5	ADDA,R1		LDIMS-7
2785	3720	00	16	28			STRA,R1		LDIMS-7
2786	3720	00	20				PPSL	WC	
2787	3720	00	16	28			ADDA,R3		LDIMS-6
2788	3720	00	16	28			STRA,R3		LDIMS-6
2789	3720	00	16	28			CPSL	WC	
2790	3720	00	16	24			LODA,R1		LDIMS-2
2791	3720	10	30	39			BCTA,UN		LOKIC
2792	3720	20	30	31		LOKIF	BSTA,UN		INCSP
2793	3720	10	13				COMA,R3		DIMSTK-7
2794	3720	10	46	59			BCTA,LT		RETNGT
2795	3741	30	32	41			BSTA,UN		INCSP
2796	3744	30	32	41			BSTA,UN		INCSP
2797	3747	00	16	20			LODA,R1		DIMSTK,-
2798	3748	00	16	26			ADDA,R0		LDIMS-7
2799	3740	00	16	26			STRA,R0		LDIMS-7
2800	3750	00	28				PPSL	WC	
2801	3752	20					FORZ,R0		LDIMS-6
2802	3753	00	16	28			ADDA,R0		LDIMS-6
2803	3756	00	16	28			STRA,R0		LDIMS-6
2804	3756	00	16	28			CPSL	WC	
2805	3758	00	16	22			LOTA,R0		LDIMS

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2806	3751	00	22				COMI,R2	2	
2807	3762	10	22				BCTR,R0		LOKDD
2808	3762	00	07				LODI,R2	7	
2809	3764	00	16	28		LOKDD	LODA,R3		LDIMS-6
2810	3767	00	16	28			LODA,R1		LDIMS-7
2811	376A	00	16	28		LOKDE	ADDA,R1		LDIMS-7
2812	376E	00	26				PPSL	WC	
2813	376E	00	16	26			ADDA,R3		LDIMS-6
2814	3770	00	28				CPSL	WC	
2815	377A	0A	74				BDRR,R2		LOKDF
2816	3778	00	16	0E			ADDA,R1		LDIMS-4
2817	3779	00	28				PPSL	WC	
2818	3779	00	16	0E			ADDA,R3		LDIMS-3
2819	3779	00	0E				CPSL	WC	
2820	3769	00	16	72			STRA,R3		ITMP
2821	3783	00	16	72			STRA,R1		ITMP-1
2822	3786	00	16	02			LODA,R0		LDIMS
2823	3789	04	22				COMI,R0	2	
2824	3788	10	35	72			BCTA,R0		LOKST2
2825	378E	10	35	04			BCTA,UN		LOKVE
2826	3791						*		
2827	3791						*		
2828	3791	30	46	40		FNEVAL	BSTA,UN		SKPSP
2829	3794	04	28				COMI,R0	1	
2830	3796	08	1A				BCFR,R0		FNRGT
2831	3798	0C	14	92			LODA,R0		PARNST
2832	379E	04	01				ADDI,R0	1	
2833	379D	0C	14	92			STRA,R0		PARNST
2834	37A0	00	35	67			BSTA,UN		POFLT
2835	37A3	00	10				STRR,R2		FNS
2836	37A5	00	35	60			BSTA,UN		POPLT
2837	37A9	00	18				STRR,R0		FNS+1
2838	37AA	04	FF				LODI,R0	FF	
2839	37AC	00	33	60			BSTA,UN		PUSHOP
2840	37AF	10	3E	F6			BCTA,UN		VAL2
2841	37B2	00	1E	D6		FNRGT	LODA,R0		VALS
2842	37B5	00	11	84			STRA,R0		INFT
2843	37B6	00	1E	D9			LODA,R0		VALS-1
2844	37B8	00	11	86			STRA,R0		INFT-1
2845	37B8	04	21				LODI,R0	1	
2846	37C0	17					RETC,UN		
2847	37C1						*		
2848	37C1						*		
2849	37C1	20	20	00		FNS	FNS	5	
2850	37C8	00					*		
2851	37C8						*		
2852	37C8						*		
2853	37C6	00	11	84		FPUSE	LODA,R0		INFT
2854	37C9	00	1E	D8			STRA,R0		VALS
2855	37C0	00	11	85			LODA,R0		INFT-1
2856	37C0	00	1E	D9			STRA,R0		VALS+1
2857	37D2	00	6D				LODR,R0		FNS
2858	37D4	00	11	84			STRA,R0		INFT
2859	37D7	00	2E	59			LODR,R0		FNS+1
2860	37D9	00	11	85			STRA,R0		INFT-1

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0001	0000	00	00	00	00		GETCHR		
0002	0001	00	00	00	00		CHKCP		
0003	0002	00	00	00	00		UFER		
0004	0003	00	00	00	00		COMI,R2		
0005	0004	00	00	00	00		FCR,R2		
0006	0005	00	00	00	00		FCR,R2		
0007	0006	00	00	00	00		FCR,R2		
0008	0007	00	00	00	00		FCR,R2		
0009	0008	00	00	00	00		FCR,R2		
0010	0009	00	00	00	00		FCR,R2		
0011	0010	00	00	00	00		FCR,R2		
0012	0011	00	00	00	00		FCR,R2		
0013	0012	00	00	00	00		FCR,R2		
0014	0013	00	00	00	00		FCR,R2		
0015	0014	00	00	00	00		FCR,R2		
0016	0015	00	00	00	00		FCR,R2		
0017	0016	00	00	00	00		FCR,R2		
0018	0017	00	00	00	00		FCR,R2		
0019	0018	00	00	00	00		FCR,R2		
0020	0019	00	00	00	00		FCR,R2		
0021	0020	00	00	00	00		FCR,R2		
0022	0021	00	00	00	00		FCR,R2		
0023	0022	00	00	00	00		FCR,R2		
0024	0023	00	00	00	00		FCR,R2		
0025	0024	00	00	00	00		FCR,R2		
0026	0025	00	00	00	00		FCR,R2		
0027	0026	00	00	00	00		FCR,R2		
0028	0027	00	00	00	00		FCR,R2		
0029	0028	00	00	00	00		FCR,R2		
0030	0029	00	00	00	00		FCR,R2		
0031	0030	00	00	00	00		FCR,R2		
0032	0031	00	00	00	00		FCR,R2		
0033	0032	00	00	00	00		FCR,R2		
0034	0033	00	00	00	00		FCR,R2		
0035	0034	00	00	00	00		FCR,R2		
0036	0035	00	00	00	00		FCR,R2		
0037	0036	00	00	00	00		FCR,R2		
0038	0037	00	00	00	00		FCR,R2		
0039	0038	00	00	00	00		FCR,R2		
0040	0039	00	00	00	00		FCR,R2		
0041	0040	00	00	00	00		FCR,R2		
0042	0041	00	00	00	00		FCR,R2		
0043	0042	00	00	00	00		FCR,R2		
0044	0043	00	00	00	00		FCR,R2		
0045	0044	00	00	00	00		FCR,R2		
0046	0045	00	00	00	00		FCR,R2		
0047	0046	00	00	00	00		FCR,R2		
0048	0047	00	00	00	00		FCR,R2		
0049	0048	00	00	00	00		FCR,R2		
0050	0049	00	00	00	00		FCR,R2		
0051	0050	00	00	00	00		FCR,R2		
0052	0051	00	00	00	00		FCR,R2		
0053	0052	00	00	00	00		FCR,R2		
0054	0053	00	00	00	00		FCR,R2		
0055	0054	00	00	00	00		FCR,R2		
0056	0055	00	00	00	00		FCR,R2		
0057	0056	00	00	00	00		FCR,R2		
0058	0057	00	00	00	00		FCR,R2		
0059	0058	00	00	00	00		FCR,R2		
0060	0059	00	00	00	00		FCR,R2		
0061	0060	00	00	00	00		FCR,R2		
0062	0061	00	00	00	00		FCR,R2		
0063	0062	00	00	00	00		FCR,R2		
0064	0063	00	00	00	00		FCR,R2		
0065	0064	00	00	00	00		FCR,R2		
0066	0065	00	00	00	00		FCR,R2		
0067	0066	00	00	00	00		FCR,R2		
0068	0067	00	00	00	00		FCR,R2		
0069	0068	00	00	00	00		FCR,R2		
0070	0069	00	00	00	00		FCR,R2		
0071	0070	00	00	00	00		FCR,R2		
0072	0071	00	00	00	00		FCR,R2		
0073	0072	00	00	00	00		FCR,R2		
0074	0073	00	00	00	00		FCR,R2		
0075	0074	00	00	00	00		FCR,R2		
0076	0075	00	00	00	00		FCR,R2		
0077	0076	00	00	00	00		FCR,R2		
0078	0077	00	00	00	00		FCR,R2		
0079	0078	00	00	00	00		FCR,R2		
0080	0079	00	00	00	00		FCR,R2		
0081	0080	00	00	00	00		FCR,R2		
0082	0081	00	00	00	00		FCR,R2		
0083	0082	00	00	00	00		FCR,R2		
0084	0083	00	00	00	00		FCR,R2		
0085	0084	00	00	00	00		FCR,R2		
0086	0085	00	00	00	00		FCR,R2		
0087	0086	00	00	00	00		FCR,R2		
0088	0087	00	00	00	00		FCR,R2		
0089	0088	00	00	00	00		FCR,R2		
0090	0089	00	00	00	00		FCR,R2		
0091	0090	00	00	00	00		FCR,R2		
0092	0091	00	00	00	00		FCR,R2		
0093	0092	00	00	00	00		FCR,R2		
0094	0093	00	00	00	00		FCR,R2		
0095	0094	00	00	00	00		FCR,R2		
0096	0095	00	00	00	00		FCR,R2		
0097	0096	00	00	00	00		FCR,R2		
0098	0097	00	00	00	00		FCR,R2		
0099	0098	00	00	00	00		FCR,R2		
0100	0099	00	00	00	00		FCR,R2		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0101	0000	00	00	00	00		LODI,R2	FNSTG	
0102	0001	00	00	00	00		STRA,R2	INPT	
0103	0002	00	00	00	00		LODI,R2	FNSTG	
0104	0003	00	00	00	00		STRA,R2	INPT-1	
0105	0004	00	00	00	00		LODI,R2	VAL2	
0106	0005	00	00	00	00		STRA,R2	STMP-4	
0107	0006	00	00	00	00		STRA,R1	STMP-5	
0108	0007	00	00	00	00		STRA,UN	ZER	
0109	0008	00	00	00	00		LODI,R2	*SP	
0110	0009	00	00	00	00		COMI,R2	1	
0111	0010	00	00	00	00		ECTA,EC	TYPER	
0112	0011	00	00	00	00		ECTA,UN	STRG	
0113	0012	00	00	00	00		ECTA,UN	FND	
0114	0013	00	00	00	00				
0115	0014	00	00	00	00				
0116	0015	00	00	00	00				
0117	0016	00	00	00	00				
0118	0017	00	00	00	00				
0119	0018	00	00	00	00				
0120	0019	00	00	00	00				
0121	0020	00	00	00	00				
0122	0021	00	00	00	00				
0123	0022	00	00	00	00				
0124	0023	00	00	00	00				
0125	0024	00	00	00	00				
0126	0025	00	00	00	00				
0127	0026	00	00	00	00				
0128	0027	00	00	00	00				
0129	0028	00	00	00	00				
0130	0029	00	00	00	00				
0131	0030	00	00	00	00				
0132	0031	00	00	00	00				
0133	0032	00	00	00	00				
0134	0033	00	00	00	00				
0135	0034	00	00	00	00				
0136	0035	00	00	00	00				
0137	0036	00	00	00	00				
0138	0037	00	00	00	00				
0139	0038	00	00	00	00				
0140	0039	00	00	00	00				
0141	0040	00	00	00	00				
0142	0041	00	00	00	00				
0143	0042	00	00	00	00				
0144	0043	00	00	00	00				
0145	0044	00	00	00	00				
0146	0045	00	00	00	00				
0147	0046	00	00	00	00				
0148	0047	00	00	00	00				
0149	0048	00	00	00	00				
0150	0049	00	00	00	00				
0151	0050	00	00	00	00				
0152	0051	00	00	00	00				
0153	0052	00	00	00	00				
0154	0053	00	00	00	00				
0155	0054	00	00	00	00				
0156	0055	00	00	00	00				
0157	0056	00	00	00	00				
0158	0057	00	00	00	00				
0159	0058	00	00	00	00				
0160	0059	00	00	00	00				
0161	0060	00	00	00	00				
0162	0061	00	00	00	00				
0163	0062	00	00	00	00				
0164	0063	00	00	00	00				
0165	0064	00	00	00	00				
0166	0065	00	00	00	00				
0167	0066	00	00	00	00				
0168	0067	00	00	00	00				
0169	0068	00	00	00	00				

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3201	3278	11	13	01			STRA,R0	CBUF1-1	
3202	327B	04	FF				LODI,R0	FF	
3203	327C	08	46				STRA,R0	DPFND	
3204	327D	0A	0B				BRNR,R0	ECONB	
3205	327E	0D	02	2F		ECONB	BSTA,UN	DECTP	
3206	327F	14	72				COMI,R0	0	
3207	3280	08	2F				BCFR,EC	ECONA	
3208	3281	08	07				ANLI,R0	07	
3209	3282	00					DAR,R0		
3210	3283	1B	04				BCTR,UN	ECONB	
3211	3284	22				ECONA	LODZ,R0		
3212	3285	1B	0A				BCTR,EC	ECONC	
3213	3286	04	07				LODI,R0	F2	
3214	3287	00	43	07			STRA,R0	CBUF1	
3215	3288	1B	13	01			STRA,R0	CBUF1-1	
3216	3289	08	72				LODI,R0	0	
3217	328A	03	13			ECONC	BSTA,UN	DECTP	
3218	328B	1B	4F				BCTR,UN	ECONB	
3219	328C	03	4F	4F		ECON4	BSTA,UN	CHKNUM	
3220	328D	08	07				BCFR,EC	ECON5	
3221	328E	04	77				COMI,R0	0	
3222	328F	00	07				BCFR,EC	ECON4A	
3223	3290	07	16	0F			LODZ,EC	DPFND	
3224	3291	1A	2A				BCTR,LT	ECON4A	
3225	3292	0A	78				BRNR,R0	ECON4A	
3226	3293	04	09				LODI,R0	FF	
3227	3294	00	1B	0A			STRA,R0	ECSTG-1	
3228	3295	11	0B	10			BCTR,UN	ECONB	
3229	3296	44	07			ECON4A	ANLI,R0	F	
3230	3297	00	01				TMI,R0	1	
3231	3298	1B	0B				BCTR,EC	ECON6	
3232	3299	1B	0F				COMI,R1	5	
3233	329A	1B	04				BCTR,EC	ECON6	
3234	329B	00					RRL,R0		
3235	329C	12					RRL,R0		
3236	329D	12					RRL,R0		
3237	329E	07					RRL,R0		
3238	329F	01	77	03		ECON6	IOFA,R1	CBUF1-3.1	
3239	32A0	08	07				ADLI,R2	07	
3240	32A1	06					DAR,R0		
3241	32A2	0A	05				COMI,R1	5	
3242	32A3	10	38	10			BCTR,EC	ECONB	
3243	32A4	01	72	03			STRA,R1	CBUF1-3.1	
3244	32A5	F6	01				TMI,R2	1	
3245	32A6	10	28	10			BCTR,FC	ECONB	
3246	32A7	11	38	10			BIFA,R1	ECONB	
3247	32A8	F6	22			ECON5	COMI,R2	2	
3248	32A9	08	12				BCFR,EC	ECON5B	
3249	32AA	00	1A	0A			LODZ,EC	ECSTG-1	
3250	32AB	10	3A	16			BCTR,EC	ECRETN	
3251	32AC	04	0F				LODI,R0	F0	
3252	32AD	07	14				STRA,R0	CBUF1	
3253	32AE	01	09				LODI,R0	09	
3254	32AF	00	17	01			STRA,R0	CBUF1-1	
3255	32B0	1B	12				BCTR,UN	ECON	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3226	3261	00	18	0B		ECON5B	LODZ,R0	DPFND	
3227	3262	1A	03				BCTR,LT	ECON5A	
3228	3263	0B	13	01			STRA,R2	CBUF1-1	
3229	3264	0F	32	13		ECON5A	BSTA,UN	DECTP	
3230	3265	07	46	40			BSTA,UN	SKPSP	
3231	3266	E4	45				COMI,R0	F	
3232	3267	1B	2A				BCTR,EC	ECON9	
3233	3268	0F	32	13		ECON	BSTA,UN	DECTP	
3234	3269	04	13				LODI,R0	CBUF1	
3235	326A	05	00				LODI,R1	0	
3236	326B	07	00				LODI,R0		
3237	326C	17				ECON5	BCTR,UN		
3238	326D	07					IOFZ,R0		
3239	326E	00	1B	0B			STRA,R0	ECSTG	
3240	326F	0F	46	40			BSTA,UN	SKPSP	
3241	3270	14	2B				COMI,R0		
3242	3271	1B	0E				BCTR,EC	ECONB	
3243	3272	E4	2F				COMI,R0		
3244	3273	08	07				BCFR,EC	ECONA	
3245	3274	04	F0				LODI,R0	F0	
3246	3275	00	1B	0B			STRA,R0	ECSTG	
3247	3276	1F	03				BCTR,UN	ECONB	
3248	3277	0F	32	13		ECONA	BSTA,UN	DECTP	
3249	3278	00	01	0A		ECONB	LODZ,R0	*INPT	
3250	3279	0F	46	40			BSTA,UN	CHKNUM	
3251	327A	08	05				BCFR,EC	ECON	
3252	327B	0F	31	0D			BSTA,UN	INCPY	
3253	327C	44	0F				ANLI,R0	F	
3254	327D	02					STRZ,R2		
3255	327E	00	01	0A			LODZ,R0	*INPT	
3256	327F	0F	4F	48			BSTA,UN	CHKNUM	
3257	3280	08	0B				BCFR,EC	ECONC	
3258	3281	0F	31	0D			BSTA,UN	INCPY	
3259	3282	F2					RPL,R2		
3260	3283	02					RRL,R2		
3261	3284	02					RRL,R2		
3262	3285	02					RRL,R2		
3263	3286	44	0F				ANLI,R0	F	
3264	3287	02					IOFZ,R2		
3265	3288	02					STRZ,R2		
3266	3289	00	1B	0B		ECONC	LODZ,R0	ECSTG	
3267	328A	EC	13	03			COMA,R0	CBUF1	
3268	328B	08	10				BCFR,EC	ECONC1	
3269	328C	06	66				ADLI,R2	66	
3270	328D	0E	13	01			ADDA,R2	CBUF1-1	
3271	328E	06					DAR,R2		
3272	328F	B5	21				TPSL	CRY	
3273	3290	10	46	74			BCTR,EC	OVFER	
3274	3291	0E	13	01			STRA,R2	CBUF1-1	
3275	3292	1B	27				BCTR,UN	ECONB	
3276	3293	EE	13	01		ECONC1	COMA,R2	CBUF1-1	
3277	3294	19	1F				BCTR,GT	ECONC	
3278	3295	1A	09				BCTR,LT	ECONC2	
3279	3296	20					IOFZ,R2		
3280	3297	00	13	07			STRA,R0	CBUF1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3091	3074	00	13	81			STRA,R0	CBUF1-1	
3092	3075	15	17				BCTR,UN	FOONE	
3093	3076	20	13	81		ECONC2	LODA,R0	CBUF1-1	
3094	3077	02					SUBZ,R0		
3095	3078	04					TAR,R0		
3096	3079	00	17	81			STRA,R0	CBUF1-1	
3097	3080	12	01				BCTR,UN	ECONE	
3098	3081	17	81			EOCON2	SUBA,R0	CBUF1-1	
3099	3082	02					TAR,R0		
3100	3083	0F	13	81			TAR,R0	CBUF1-1	
3101	3084	00	18	84			LODA,R0	ECS,G	
3102	3085	00	17	82			STRA,R0	CBUF1	
3103	3086	0F	30	08		FOONE	BSTA,UN	GETCHR	
3104	3087	0F	40	40			BSTA,UN	CHKNUM	
3105	3088	0F	46				BCTR,EC	ECHRTN	
3106	3089	0F	70	70			BSTA,UN	FOCK	
3107	3090					*			
3108	3091					*			
3109	3092	0F	72			ESTR	LODI,R0	0	
3110	3093	0F	81	84		ESTR1	LODA,R0	*INPT	
3111	3094	13	31				BCTA,LT	SWNER	
3112	3095	0F	31	71			BSTA,UN	INCPT	
3113	3096	04	81				COMI,R0	CP	
3114	3097	0E	28				BCTR,EC	ECHRTN	
3115	3098	04	22				COMI,R0		
3116	3099	18	28				BCTR,EC	ESTR2	
3117	3100	1A	01				BCTR,EC	ESTR1	
3118	3101	0F	31	05		FCPRTN	BSTA,UN	RINPT	
3119	3102	1F	4F	50			BCTA,UN	RETNGT	
3120	3103	00	11	39		ESTR2	LODA,R0	STEMP	
3121	3104	0D	11	7A			LODA,R1	STEMP-1	
3122	3105	08	01				ADDI,R1	1	
3123	3106	77	06				PFSI	WC	
3124	3107	04	02				ADDI,R0	2	
3125	3108	76	08				CPSL	WC	
3126	3109	07	0F				LODI,R0	FF	
3127	3110	17					RETC,UN		
3128	3111					LEN	ICU	5	
3129	3112					LENG	ICU	8	
3130	3113					CFST	ICU	66	
3131	3114	16				ROUN	LATA	28	
3132	3115	00	-2			JTP	RES	2	
3133	3116	00				CNTR	RES	1	
3134	3117	07				CPA	RES	1	
3135	3118	02				FXPA	RES	1	
3136	3119	02				SMAA	RES	1	
3137	3120	02	20	22		MANA	RES	LEN-1	
3138	3121	02	20						
3139	3122	02				OPB	RES	1	
3140	3123	02				FXPE	RES	1	
3141	3124	02				SMAR	RES	1	
3142	3125	02	00	00		MANB	RES	LEN-1	
3143	3126	02	00						
3144	3127	02	00	22		EXT	RES	LEN-1	
3145	3128	02	00						

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3136	3A49	02				IEXP	RES	1	
3137	3A4A					*			
3138	3A4A					*			
3139	3A4A	04	3A			TRAN	LODI,R0	CPA	
3140	3A4C	05	31				LODI,R1	CPA	
3141	3A4E	3F	31	55			BSTA,UN	POFFP	
3142	3A51	04	3A				LODI,R0	CPA	
3143	3A53	05	3A				LODI,R1	OPB	
3144	3A55	3F	31	55			BSTA,UN	POFFP	
3145	3A58	00					FORZ,R0		
3146	3A59	00	1A	39			STRA,R0	MANA-LEN	
3147	3A5C	05	28				LODI,R1	LENG	
3148	3A5F	0D	5A	42		TRAN2	STRA,R1	MANB-LEN,-	
3149	3A61	68	78				ERNR,R1	TRAN2	
3150	3A63	17					RETC,UN		
3151	3A64					*			
3152	3A64					*			
3153	3A64	0F	64			FPSUB	BSTR,UN	TRAN	
3154	3A68	0F	1A	33			LODA,R0	CPA-2	
3155	3A69	27	F0				FORI,R0	F0	CRG SIGN
3156	3A6E	0F	1A	33			STRA,R0	CPA-2	
3157	3A6E	13	0E				BCTR,UN	DA2	
3158	3A70	00	00	D7		FPADD	LODA,R0	*SP	
3159	3A71	14	01				COMI,R0	1	
3160	3A78	10	7C	06			BCTA,EC	ADDSTR	
3161	3A78	3F	3A	4A			BSTA,UN	TRAN	
3162	3A7B	0F	1A	33			LODA,R0	CPA-2	
3163	3A7E	27	08			DA2	PFSI	WC	
3164	3A80	75	01				CPSL	CPY	
3165	3A82	0D	1A	3A			LODA,R1	OPB	
3166	3A86	ED	1A	31			COMA,R1	CPA	
3167	3A88	18	16				BCTR,EC	DAS	
3168	3A8A	09	0F			DA3	ERNR,R1	DAS	
3169	3A8C	04	3A			DA7	LODI,R0	CPA	
3170	3A8E	0F	31				LODI,R1	CPA	
3171	3A92	26	08			TA4	LODI,R2	LENG	
3172	3A92	3F	3C	02			BSTA,UN	SHFP	
3173	3A95	3F	3C	00			BSTA,UN	INCR	
3174	3A98	1E	64				BCTR,UN	DA2	
3175	3A9A	04	3A			TA5	LODI,R0	OPB	
3176	3A9C	05	3A				LODI,R1	OPB	
3177	3A9E	1F	70				BCTR,UN	DA4	
3178	3AA0	00	1A	3B		DA6	LODA,R0	EXPB	
3179	3AA2	0C	1A	32			COMA,R0	EXPA	
3180	3AA5	19	62				BCTR,GT	DA3	
3181	3AA5	18	24				BCTR,EC	DAL0	
3182	3AA8	00	62				ERNR,R1	DA7	
3183	3AA8	1B	6C				BCTR,UN	DAS	
3184	3AAE	0C	1A	33		DAD0	LODA,R0	SMAA	
3185	3AB1	5F	1A	3C			COMA,R0	SMAB	
3186	3AB4	08	11				BCTR,EC	DAD1	
3187	3AB6	3F	2F				BCTR,UN	ADD	
3188	3AB8	06	20				LODI,R2	LENG+1	
3189	3ABA	04	3A				LODI,R0	OPB	
3190	3ABC	05	3A				LODI,R1	OPB	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3161	3AE5	3F	70	80			BSTA.UN	SHFP	
3162	3AC1	3F	30	E0			BSTA.UN	INCR	
3163	3AC4	1F	3E	4F			BSTA.UN	RDY	
3164	3AC7	27	21			DAT1	PFSL	CRY	CLEAR BOPROW
3165	3AC9	3B	32				BSTR.UN	COMP	
3166	3ACB	1A	08				BCTR.LT	LAT2	
3167	3AC1	3B	3B				BSTR.UN	SUB	
3168	3ACF	1F	3F	48			BSTA.UN	RDY	
3169	3AD2	0F	1A	30		DAT2	STRA.R3	SMAB	
3170	3AD5	08	28				LODI.R2	LEN-1	
3171	3AD7	1F	5A	34		DAD3	LODA.R2	MANF.I	
3172	3ADA	A8	7A	3D			SUPA.R2	MANF.I	
3173	3AD1	84					DAR.R0		
3174	3AD3	08	7A	3E			STRA.R2	MANF.I	
3175	3AE1	5A	74				BRNR.R2	DAD3	
3176	3AE7	1F	3B	4F			BSTA.UN	RDY	
3177	3AE5					*			
3178	3AE6					*			
3179	3AE8	78	21			ADD	OPSL	CRY	
3180	3AE9	3E	28				LODI.R1	0	
3181	3AEA	08	28				LODI.R2	LEN-1	
3182	3AE1	51				ADD1	BRP.R1		
3183	3AE1	0E	5A	3D			LODA.R2	MANF.-	
3184	3AE7	04	66				ADDI.R2	66	
3185	3AE0	11					PFL.R1		
3186	3AE3	61	7A	34			ADDA.R2	MANF.I	
3187	3AE6	04					DAR.R0		
3188	3AE7	0F	7A	3E			TEA.R2	MANF.I	
3189	3AEA	5A	72				BRNR.R2	ADD1	
3190	3AFC	17					RETC.UN		
3191	3AF1					*			
3192	3AF1					*			
3193	3AF1	00	FA			COMP	LODI.R2	0-LEN-1	
3194	3AFF	0F	29	43		COM1	LODA.R2	MANF-100-LEN-1.I	
3195	3B22	1E	78	3A			COMA.R2	MANF-100-LEN-1.I	
3196	3B45	08	02				BCTR.EQ	COM2	
3197	3B77	DA	78				RIFP.R2	COM1	
3198	3B28					COM2	RETC.UN		
3199	3B2A					*			
3200	3B4A					*			
3201	3B6A	77	21			SUB	PFSL	CRY	
3202	3B70	08	26				LODI.R2	LEN-1	
3203	3B6F	01	5A	3E		SUB1	LODA.R2	MANF.-	
3204	3E11	A1	7A	34			SUPA.R2	MANF.I	
3205	3E14	04					AS.R2		
3206	3E15	0E	7A	3D			STRA.R2	MANF.I	
3207	3E16	0A	74				BRNR.R2	SUB1	
3208	3E1A	17					RETC.UN		
3209	3E1E					*			
3210	3E1E					*			
3211	3E1F	27	2E			DIV	LODI.R3	LEN-LEN-1	
3212	3E1F	26	20			DIV1	LODI.R1	0	
3213	3E1F	3B	50			DIV2	BSTR.UN	COMP	
3214	3E21	1A	27				BCTR.LT	DIV3	
3215	3E23	3E	6F				BSTR.UN	SUB	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3246	3B25	85	66				ADDI.R1	66	
3247	3B27	98					DAR.R1		
3248	3B28	1F	74				BCTR.UN	DIV2	
3249	3B2A	8D	1A	48		DIV3	ADDA.R1	MANF-LEN+LEN-1	
3250	3B2F	02	1A	48			STRA.R1	MANF-LEN+LEN-1	
3251	3B32	04	3A				LODI.R0	OPB	
3252	3B3C	06	3A				LODI.R1	OPB	
3253	3B34	06	0F				LODI.R2	LENG-LEN-2	
3254	3B36	3F	3E	80			BSTA.UN	SHFL	
3255	3B39	FB	62				BDRR.R3	DIV1	
3256	3B3E	3F	30	E0			BSTA.UN	INCR	
3257	3B3E	27	2B				LODI.R3	LEN-LEN-1	
3258	3B40	3F	3E	A5		DIV4	BSTA.UN	SFL	
3259	3B43	FB	7B				BDRR.R3	DIV4	
3260	3B45	04	3A			RDY	LODI.R0	OPB	
3261	3B47	05	3A				LODI.R1	OPB	
3262	3B49	06	2A				LODI.R2	LENG-2	
3263	3B4B	3B	13				BSTR.UN	NORM	
3264	3B4D	3F	30	7A			BSTA.UN	RND	
3265	3B50	20	1A	49			LODA.R0	EEXP	
3266	3B51	0C	45	74			BCTA.EC	OVFER	
3267	3B56	04	02				LODI.R2	2	
3268	3B58	03					LFSL		
3269	3B59	04	3A				LODI.R0	OPB	
3270	3B5B	05	3A				LODI.R1	OPB	
3271	3B5D	1F	31	38			BCTA.UN	PUSHFP	
3272	3B60					*			
3273	3B62					*			
3274	3B62	01	1A	33		NRM*	STRA.R2	CNTR	
3275	3B63	00	1A	2E		NRM2	STRA.R2	PTR	
3276	3B66	01	1A	2F			STRA.R1	PTR-1	
3277	3B69	07	08			NRM*	LODI.R3	0	
3278	3B6B	05	28				LODI.R1	2	
3279	3B6D	75	01				OPSL	CRY	
3280	3B6F	21	FA	2E		NRM1	LODA.R1	*PTR.-	
3281	3B72	08	19				BCTR.EQ	NRM2	
3282	3B74	87	02				ADDI.R3	2	
3283	3B76	1F	08				COMI.R1	LENG	
3284	3B78	06	75				BCTR.EQ	NRM1	
3285	3B7A	01					STRZ.R1		
3286	3B7E	04	F0				LODI.R0	F0	
3287	3B7F	00	9A	2E			STRA.R0	*PTR	
3288	3B80	04	99				LODI.R0	99	
3289	3B82	0D	EA	2E			STRA.R1	*PTR.+	
3290	3B85	20					IOBZ.R0		
3291	3B86	0D	EA	2E			STRA.R1	*PTR.+	
3292	3B89	00	1A	49			STRA.R0	EEXP	
3293	3B8C	17					RETC.UN		
3294	3B81					*			
3295	3B8D					*			
3296	3B8D	44	F0			NRM2	ANDI.R2	F0	
3297	3B8F	98	02				BCTR.EQ	NRM3	
3298	3B91	87	01				ADDI.S	1	
3299	3B93	03				NRM3	LODZ.R3		
3300	3B94	14					RETC.EC		

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3301	3E05	3E	0E			NRM4	BSTR.UN	SFL	
3302	3E07	3B	21				BSTR.UN	DECR	
3303	3E08	FE	7A				BSTR.R3	NRM4	
3304	3E0F	17					PETC.UN		
3305	3E10					*			
3306	3E10					*			
3307	3E10	0F	1A	33		SBFL	STRA.R2	CNTR	
3308	3E17	0C	1A	2F		SFL0	STRA.R0	PTR	
3309	3E17	01	1A	2F			STRA.R1	PTR-1	
3310	3E18	2F	2A			SFL	LODI.R1	4	
3311	3E17	2F	1A	30		SFL1	LODI.R2	CNTR	
3312	3E1A	76	21				CPSL	CRY	
3313	3E1C	2F	1A	2E		SFL2	LODI.R2	*PTR,-	
3314	3E1F	06					BRR.R2		
3315	3E22	0F	FA	2E			STRA.R2	*PTR,I	
3316	3E23	08	03				COMI.R2	3	
3317	3E24	08	7F				BCTR.EC	SFL2	
3318	3E27	08	6F				BCTR.R1	SFL1	
3319	3E30	17					PETC.UN		
3320	3E3A					*			
3321	3E3A					*			
3322	3E3A	2D	3A	2E		DFCP	LODI.R1	*PTR,+	
3323	3E37	2F	9A	2E			LODI.R2	*PTR	
3324	3E32	18	2A				BCTR.EC	DEC3	
3325	3E30	84	67			DFC1	ADDI.R2	67	
3326	3E34	94					DAR.R2		
3327	3E3F	1C	4F	74			PCTA.EC	OVFER	
3328	3E3B	01	F	2E		DEC2	STRA.R1	*PTR,I	
3329	3E3B	17					PETC.UN		
3330	3E37	5F	0F			DEC3	BRR.R2	DEC5	
3331	3E3E	0C	1A	40			COMA.R2	EXXP	
3332	3E31	5F	07				BCTR.EC	DEC4	
3333	3E35	2F	F0				LODI.R2	F0	
3334	3E35	01	9A	2E			STRA.R2	*PTR	
3335	3E3A	1E	65				BCTR.UN	DEC1	
3336	3E3A	0C	1A	40		DEC4	STRA.R2	EXXP	
3337	3E31	A4	06			DEC5	SUBI.R2	2	
3338	3E37	94					DAR.R2		
3339	3E32	1B	66				BCTR.UN	DEC2	
3340	3E32					*			
3341	3E32					*			
3342	3E32	3F	3A	4A		FPDIV	BSTA.UN	TRAN	
3343	3E35	2F	1A	31			LODI.R2	OPA	
3344	3E3A	2F	F0				BOP.R2	F0	
3345	3E3A	0E	1A	31			STRA.R2	OPA	
3346	3E37	27	88				LODI.R3	88	
3347	3E3F	1B	20				BCTR.UN	DM1	
3348	3E31	37	3A	4A		FFMULT	BSTA.UN	TRAN	
3349	3E34	2E	1A	31			LODI.R2	OPA	
3350	3E37	27	F0				LODI.R3	0	
3351	3E35	27	09			DM1	FFSL	WC-CRY	
3352	3E3E	03					LODI.R3		
3353	3E3C	1F	26				BCTR.EC	DM2	
3354	3E3E	2C	1A	34			LODI.R0	MANA	
3355	3C31	1C	4F	74			BCTA.EC	OVFER	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3356	3C24	2C	1A	3C		DM2	LODI.R2	SMAB	
3357	3C07	0C	1A	33			COMA.R2	SMAA	
3358	3C2A	18	04				BCTR.EC	DM3	
3359	3C0C	04	F0				LODI.R0	F0	
3360	3C0E	1B	01				BCTR.UN	DM4	
3361	3C10	20				IM3	FORZ.R2		
3362	3C11	0C	1A	3C		DM4	TRA.R2	SMAB	
3363	3C14	EE	1A	3A			COMA.R2	OPB	
3364	3C17	98	2C				BCTR.EC	DMU	
3365	3C19	2C	1A	32			LODI.R2	EXPA	
3366	3C1C	84	65				ADDI.R2	65	
3367	3C1E	8C	1A	3B			ADDA.R2	EXPB	
3368	3C21	94					DAR.R2		
3369	3C22	D1					RE.R1		
3370	3C23	1E	1E				BCTR.UN	DMU4	
3371	3C25	2C	1A	3B		DMU	LODI.R2	EXPB	
3372	3C28	0C	1A	32			COMA.R2	EXPA	
3373	3C2E	19	0C				BCTR.CT	DMU2	
3374	3C2D	98	02				BCTR.EQ	DMU1	
3375	3C2F	06	00				LODI.R2	0	
3376	3C31	0C	1A	32		DMU1	LODI.R0	EXPA	
3377	3C34	AC	1A	3B			SUBA.R2	EXPB	
3378	3C37	1B	06				BCTR.UN	DMU3	
3379	3C39	0E	1A	3A		DMU2	LODI.R2	OPB	
3380	3C3C	AC	1A	32			SUBA.R2	EXPA	
3381	3C3F	94				DMU3	DAR.R2		
3382	3C40	0E	1A	3A			STRA.R2	OPB	
3383	3C43	0C	1A	3B		DMU4	STRA.R0	EXPB	
3384	3C46	CD	1A	49			STRA.R1	BEXP	
3385	3C49	75	01				CPSL	CRY	
3386	3C4B	04	3A				LODI.R0	OPA	
3387	3C4D	05	31				LODI.R1	OPA	
3388	3C4F	06	08				LODI.R2	LENG	
3389	3C51	3E	3F				BSTR.UN	SHFR	
3390	3C53	5F	3E	1B			BRNA.R3	DIV	
3391	3C55	07	2C			MUL	LODI.R3	LEN+LEN+2	
3392	3C59	04	3A			MUL1	LODI.R2	OPB	
3393	3C5A	2E	3A				LODI.R1	OPB	
3394	3C5C	06	31				LODI.R2	LENG+LEN+1	
3395	3C5E	3B	32				BSTR.UN	SHFR	
3396	3C60	F5	76				BRR.R3	MUL1	
3397	3C62	07	0A				LODI.R3	LEN+LEN	
3398	3C64	3E	35			MUL2	BSTR.UN	SHF	
3399	3C66	0C	1A	4E		MUL3	LODI.R2	MANB+LEN+LEN+1	
3400	3C69	18	0A				BCTR.EC	MUL4	
3401	3C6B	A4	2F				SUBI.R2	F	
3402	3C6D	CC	1A	48			STRA.R2	MANB+LEN+LEN+1	
3403	3C70	3F	3A	EE			BSTA.UN	ADD	
3404	3C73	1F	71				BCTR.UN	MUL3	
3405	3C75	FB	6D			MUL4	BRR.R3	MUL2	
3406	3C77	1F	3B	45			PCTA.UN	RDY	
3407	3C7A					*			
3408	3C7A					*			
3409	3C7A	2C	1A	2D		RND	LODI.R2	ROUN	
3410	3C7D	0E	0E				LODI.R1	LEN+1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3411	300F	R1	FA	3D		RND1	ADDA,R1		MANE,-
3412	3010						DAR,R2		
3413	300E	7A	3D				STRA,R1		MANE,I
3414	300E	24	6E				LODI,R2		OFST
3415	300B	50	75				BRNR,R1		RND1
3416	300A	58	21				TPSL		CRY
3417	3000	18					PETC,LT		
3418	300D	33	70				BSTR,UN		SHF
3419	300F	3B	1F				BSTR,UN		INCR
3420	3001	10					RETU,UN		
3421	3000					*			
3422	3000					*			
3423	3002	03	1A	3F		CHFR	STRA,R2		CNTR
3424	302F	00	1A	2F		SHF2	STRA,R2		PTR
3425	300B	0D	1A	2F			STRA,R1		PTR-1
3426	300B	26	04			SHF	LODI,R1		4
3427	3001	06	02			SHF1	LODI,R2		2
3428	300F	2E	EA	2F		SHF2	LODA,R2		*PTR,-
3429	30A2	50					RRR,R2		
3430	30A3	0F	FA	2F			STRA,R2		*PTR,I
3431	30A6	1E	1A	70			COMA,R2		CNTR
3432	30A6	02	04				BCTR,EQ		SHF2
3433	30A6	78	01				CPSL		CRY
3434	30AD	78	6E				BDRR,R1		SHF1
3435	30AF	17					RETU,UN		
3436	30B2					*			
3437	30B0					*			
3438	30F2	0D	EA	2E		INCR	LODA,R1		*PTR,-
3439	30E3	2E	9A	2E			LODA,R2		*PTR
3440	30F6	08	2E				BCTR,EQ		INCR
3441	30B6	04	67				ADDI,R2		67
3442	301A	04					DAR,R2		
3443	3014	08	05				BCTR,EQ		INC1
3444	30ED	08	21				LODI,R1		1
3445	30F1	01	1A	40			STRA,R1		EEFX
3446	3002	01	FA	2F		INC1	STRA,R1		*PTR,I
3447	300B	17					RETU,UN		
3448	3002	8B	23			INC2	BRNR,R2		INC3
3449	300A	00	1A	49			STRA,R2		EEFX
3450	30CE	A4	02			INC3	SUBI,R2		0
3451	30CD	04					DAR,R2		
3452	3001	58	72				BRNR,R2		INC1
3453	3072	00	9A	2E			STRA,R2		*PTR
3454	30D3	15	6D				BCTR,UN		INC1
3455	30D5					*			
3456	3016					*			
3457	30D4	27				ADDSTS	RES		1
3458	3076					*			
3459	30D6					*			
3460	3016	3F	42	E4		ADDSTR	BSTA,UN		FPSTRS
3461	3016	3F	30	B1			BSTA,UN		INCSP
3462	30D0	07	21				COMI,R3		1
3463	30DE	80	45	70			BCTA,EQ		TYPFR
3464	30E1	3F	72	B1			BSTA,UN		INCSP
3465	30F4	02					LODZ,R2		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3466	30F6	83					ADDZ,R3		
3467	30F6	88	21				TPSL		CRY
3468	30E8	08	02				BCTR,EQ		ADDST2
3469	301A	04	FF				LODI,R2		FF
3470	30E0	A3					SUBZ,R3		
3471	30ED	C2					STRZ,R2		
3472	30EF	04	FF				LODI,R2		FF
3473	30F0	00	10	2E		ADDST2	STRA,R2		ADDSTS
3474	30F3	3F	42	ED			BSTA,UN		FPSTRS
3475	30F6	3F	32	B1			BSTA,UN		INCSP
3476	30F6	3F	32	B1			BSTA,UN		INCSP
3477	30FC	0F	10	2F			LODA,R2		ADDSTS
3478	30FF	3F	32	D9			BSTA,UN		DECSP
3479	3D02	07	21				LODI,R3		1
3480	3D04	1F	32	D9			BCTA,UN		DECSP
3481	3D07					*			
3482	3D07					*			
3483	3D07	3F	42	04		STCOMP	BSTA,UN		COMSTR
3484	3D0A	1B	12				BCTR,UN		FPCM2
3485	3D0C					*			
3486	3D0C					*			
3487	3D0C	0B	15			FPCOMP	STRR,R3		COMPS
3488	3D0F	00	90	E7			LODA,R2		*SP
3489	3D11	08	74				BCTR,EQ		STCOMP
3490	3D13	3F	45	E7			BSTA,UN		FPCM2
3491	3D16	3F	45	E9			BSTA,UN		PCPC1
3492	3D19	3F	30	02			BSTA,UN		COMMON
3493	3D10	0F	7D	2B		FPCM2	LODA,R3		COMPTB.I
3494	3D1F	48	06				ANER,R2		COMPS
3495	3D21	00	45	B3			BCTA,EQ		PUSHM1
3496	3D24	1F	45	BA			BCTA,UN		PUSH0
3497	3D27					*			
3498	3D27					*			
3499	3D27	02				COMPS	RES		1
3500	3D28	20	10	08		COMPTB	DATA		20,10,8
3501	3D2B					*			
3502	3D2B					*			
3503	3D2E	00	14	92		FPCOM	LODA,R2		PARNST
3504	3D2F	10	34	97			BCTA,EQ		ERPARI
3505	3D31	3F	33	93		FPCOM1	BSTA,UN		POP P
3506	3D34	E4	02				COMI,R2		2
3507	3D38	3F	05				BCTR,GT		FPCM2
3508	3D38	3F	05	B9			BSTA,UN		DOOP
3509	3D39	1B	74				BCTR,UN		FPCOM1
3510	3D3D	3F	33	60		FPCOM2	BSTA,UN		PUSHOP
3511	3D40	27	0E				LODI,R3		5
3512	3D42	3F	32	D9			BSTA,UN		DECSP
3513	3D45	1F	33	AF			BCTA,UN		EVAL2
3514	3D46					*			
3515	3D46					*			
3516	3D48	3F	45	D9		FPCGN	BSTA,UN		POPC1
3517	3D49	20	13	53			LODA,R2		CBUF1-3
3518	3D4F	10	45	EA			BCTA,EQ		PUSH0
3519	3D51	20	13	52			LODA,R2		CBUF1-2
3520	3D54	1F	45	B3			BCTA,LT		PUSHM1

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3571	31E7	1F	4E	AC			BCTA,UN	PUSH1	
3572	31E8				*				
3573	31E9				*				
3574	31EA	3F	4E	19	FFABS	ESTA,UN	POPC1		
3575	31EB	07				EORZ,R0			
3576	31EC	00	13	52		TPA,R2	CBUF1-2		
3577	31ED	1F	4E	E2		BCTA,UN	PUSHC1		
3578	31EE				*				
3579	31EF				*				
3580	31F0	3F	4E	D9	FFPOS	ESTA,UN	POPC1		
3581	31F1	3F	24	AC		BSTA,UN	GETDIS		
3582	31F2	01				STRZ,R1			
3583	31F3	02				EORZ,R0			
3584	31F4	1F	3D	FA		BCTA,UN	BTOD		
3585	31F5				*				
3586	31F6				*				
3587	31F7	3F	4E	19	FFFIX	BSTA,UN	POPC1		
3588	31F8	0C	13	52	FIX0	LODA,R2	CBUF1		
3589	31F9	1F	4E	FA		ECTA,LT	PUSH0		
3590	31FA	21	17	F1		LODA,R1	CBUF1-1		
3591	31FB	21	20			CCM1,R1	0		
3592	31FC	1F	4E	E2		BCTA,GT	PUSHC1		
3593	31FD	26	2F			LODI,R2	0		
3594	31FE	24	12			LODI,R0	10		
3595	31FF	A1				SUBZ,R1			
3596	3200	04				DAR,R0			
3597	3201	21				STRZ,R1			
3598	3202	25	71		FIX1	CCM1,R1	1		
3599	3203	10	01			ECP,GT	FIX2		
3600	3204	1E	4F	E2		ECTA,LT	PUSHC1		
3601	3205	04	F2			LODI,R2	F0		
3602	3206	4E	53	52		ANPA,R2	CBUF1-		
3603	3207	1E	73	50		STPA,R2	CBUF1-1		
3604	3208	1F	4E	E2		BCTA,UN	PUSHC1		
3605	3209	4E	02		FIX2	SUB1,R1	2		
3606	320A	22				EORZ,R0			
3607	320B	03	52	E0		STRA,R2	CBUF1-		
3608	320C	1E	66			BCTP,UN	FIX1		
3609	320D				*				
3610	320E				*				
3611	320F	3F	4E	10	FFLPOS	BSTA,UN	POPC1		
3612	3210	2D	02	A1		LODA,R1	LPOS		
3613	3211	22				EORZ,R0			
3614	3212	1F	3D	FA		BCTA,UN	BTOD		
3615	3213				*				
3616	3214				*				
3617	3215	3F	4E	19	FFINT	BSTA,UN	POPC1		
3618	3216	0C	13	52		LODA,R2	CBUF1-2		
3619	3217	1C	3D	72		ECTA,EQ	FIX2		
3620	3218	0E	0A			LODI,R2	A		
3621	3219	0C	1A	52		LODA,R2	CBUF1		
3622	321A	1A	0E			BCTR,LT	FFINT2		
3623	321B	0F	13	51		LODA,R3	CBUF1-1		
3624	321C	1E	09			BCTR,EC	FFINT2		
3625	321D	17	09			CCM1,R3	9		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3576	31C2	1D	4E	E0			BCTA,GT	PUSHC1	
3577	3DC0	04	0A				LODI,R2	A	
3578	3DC1	A3					SUBZ,R3		
3579	3DC2	02					STRZ,R2		
3580	3DC3	07	26			FPINT2	LODI,R3	0	
3581	3DC4	2F	53	52		FPINT4	LODA,R3	CBUF1-	
3582	3DC5	5F	01				CCM1,P2	1	
3583	3DC6	1E	4E	E2		BCTA,LT	PUSHC1		
3584	3DC7	19	07			ECTR,GT	FPINT3		
3585	3DC8	44	3F			ANDI,R2	F		
3586	3DC9	08	08			BCTR,EC	FPINT5		
3587	3DD0	1F	4E	E2		BCTA,UN	PUSHC1		
3588	3DD1	A6	02			FPINT3	SUB1,R2	2	
3589	3DD2	02					LODZ,R2		
3590	3DD3	16	6A			BCTR,EC	FPINT4		
3591	3DD4	3F	4E	E0		FPINT4	BSTA,UN	PUSHC1	
3592	3DE4	3F	4E	AC		BSTA,UN	PUSH1		
3593	3DE7	3F	3A	64		BSTA,UN	FFSUB		
3594	3DEA	1F	3D	EF		BCTA,UN	FFFIX		
3595	3DED				*				
3596	3DED				*				
3597	3DED	3F	4E	D9	FFERR	BSTA,UN	POPC1		
3598	3DF0	0E	05	18		LODA,R1	ERRTYP		
3599	3DF3	22				EORZ,R0			
3600	3DF4	1F	3D	FA		BCTA,UN	BTOD		
3601	3DF7				*				
3602	3DF7	00	00	00	BTODS	RES	3		
3603	3DFA				*				
3604	3DFA				*				
3605	3DFA				*				
3606	3DEA	02			BTOD	STRZ,R2			
3607	3DF0	01				LODZ,R1			
3608	3DF0	03				STRZ,R3			
3609	3DF1	20				EORZ,R0			
3610	3DFE	08	77			STRR,R0	BTODS		
3611	3E00	08	76			STRR,R0	BTODS-1		
3612	3E02	08	75			STRR,R0	BTODS-2		
3613	3E04	05	12			LODI,R1	10		
3614	3E06	08	71		BTOD2	LODR,R0	BTODS-2		
3615	3E08	84	66			ADDI,R0	66		
3616	3E0A	88	6D			ADDR,R2	BTODS-2		
3617	3E0C	94				DAR,R0			
3618	3E0D	08	6A			STRR,R0	BTODS-2		
3619	3E0F	77	08			FFSL	WC		
3620	3E11	08	6E			LODR,R2	BTODS-1		
3621	3E13	84	66			ADDI,R0	66		
3622	3E15	88	61			ADDR,R2	BTODS-1		
3623	3E17	94				DAR,R0			
3624	3E18	08	5E			STRR,R0	BTODS-1		
3625	3E1A	28	5B			LODR,R0	BTODS		
3626	3E1C	84	66			ADDI,R0	66		
3627	3E1E	88	57			ADDR,R0	BTODS		
3628	3E20	84				DAR,R0			
3629	3E21	08	54			STRR,R2	BTODS		
3630	3E23	75	08			FFSL	WC		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3631	3E28	F6	R2				TMI,R2	B0	
3632	3E27	88	1A				BCFR,EC	BTOD3	
3633	3E29	24	67				LODI,R0	67	
3634	3E2E	88	4C				ADDF,R0	BTODS-2	
3635	3E2D	04					DAR,R0		
3636	3E2E	08	4C				STRR,R0	BTODS-2	
3637	3E30	77	28				PFSL	WC	
3638	3E32	04	56				LODI,R0	56	
3639	3E34	58	47				ADDF,R0	BTODS-1	
3640	3E36	24					DAR,R0		
3641	3E37	00	11	F8			STRA,R2	BTODS-1	
3642	3E3A	24	66				LODI,R0	66	
3643	3E3C	80	1D	F7			ADDA,R0	BTODS	
3644	3E3F	04					DAR,R0		
3645	3E42	00	11	F7			STRA,R0	BTODS	
3646	3E43	77	28			BTOD3	PFSL	WC	
3647	3E45	08					RRL,R3		
3648	3E46	08					RPL,R2		
3649	3E47	77	28				CPSL	WC	
3650	3E4C	71	31	26			BRPA,R1	BTOD2	
3651	3E4C	00					FORZ,R0		
3652	3E4E	08	03				LODI,R1	8	
3653	3E4F	01	63	F2		BTOD4	STRA,R1	CBUF1,-	
3654	3E50	00	03				BRNR,R1	BTOD4	
3655	3E54	00	1D	F7			LODA,R0	BTODS	
3656	3E50	00	13	63			STRA,R0	CBUF1-3	
3657	3E5A	00	1D	F8			LODA,R0	BTODS-1	
3658	3E51	00	13	64			STRA,R0	CBUF1-4	
3659	3E52	00	1D	F9			LODA,R0	BTODS-2	
3660	3E53	00	13	65			STRA,R0	CBUF1-5	
3661	3E56	04	26				LODI,P0	6	
3662	3E5B	00	13	61			STRA,R0	CBUF1-1	
3663	3E5F	04	33				LODI,R0	CBUF1	
3664	3E61	08	50				LODI,R1	CBUF1	
3665	3E6F	08	28				LODI,R2	8	
3666	3E71	77	28				PFSL	WC	
3667	3E73	3F	3E	60			BSTA,UN	NORM	
3668	3E76	77	28				CPSL	WC	
3669	3E76	24	33				LODI,R0	CBUF1	
3670	3E7A	08	50				LODI,R1	CBUF1	
3671	3E7D	1F	31	7E			BCTA,UN	PUSHPP	
3672	3E7F					*			
3673	3E7F					*			
3674	3E71	1F	2B	A1		ENX	BCTA,UN	ENS2	
3675	3E7C					*			
3676	3E62					*			
3677	3E62	00	00			CALLS	RES	2	
3678	3E74					*			
3679	3E74					*			
3680	3E64	3F	3E	7F		FPCALI	BSTA,UN	ENX	
3681	3E67	08	25				STRR,R0	CALLS	
3682	3E69	09	28				STRR,R1	CALLS+1	
3683	3E63	20	00	D7			LODA,P0	*SP	
3684	3E6E	F4	25				COMI,R0	5	
3685	3E92	08	26				BCFR,EC	CALL2	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3686	3E92	3F	30	B1			BSTA,UN	INCSP	
3687	3E95	3F	3E	7F			BSTA,UN	ENX	
3688	3E99	3F	3E	82		CALL2	BSTA,UN	*CALLS	
3689	3E98	1F	3D	FA			BCTA,UN	BTOD	
3690	3E91					*			
3691	3E91					*			
3692	3E91	00				TYP3SP	RES	1	
3693	3E9F	00	00	00	00	STR\$S	RES	11	
3694	3EA3	00	00	00	00				
3695	3EA7	00	00	00	00				
3696	3EAF	00	00	00	00				
3697	3EAF	00							
3698	3EB2					*			
3699	3EB0					*			
3700	3EB0	04	01			FPSTR	LODI,R0	1	
3701	3EB2	00	02	A0			STRA,R2	PTYPE	
3702	3EB5	04	FF				LODI,P0	FF	
3703	3EB7	08	68				STRR,R0	TYP3SP	
3704	3EB9	06	11				LODI,R2	11	
3705	3EBB	20					EORZ,P0		
3706	3EBC	0F	5F	9F		STZP	STRA,R2	STR\$S,-	
3707	3EBF	5A	7E				BRNR,R2	STZ2	
3708	3EC1	3F	23	29			BSTA,UN	PRNTP	
3709	3EC4	06	11				LODI,R2	11	
3710	3EC6	0F	5F	SF		STZ3	LODA,R2	STR\$S,-	
3711	3EC9	98	04				BCFR,EC	STZ4	
3712	3ECB	5A	79				BRNR,R2	STZ3	
3713	3ECD	A6	21				SUBI,R2	1	
3714	3ECF	A6	01			STZ4	ADDI,R2	1	
3715	3ED1	04	3E				LODI,R0	STR\$S	
3716	3ED3	05	9F				LODI,R1	STR\$S	
3717	3ED5	1F	30	F2			BCTA,UN	PUSHST	
3718	3ED8					*			
3719	3ED8					*			
3720	3ED8	00	00			VALS	RES	2	
3721	3EDA					*			
3722	3EDA					*			
3723	3EDA	3F	40	E4		FPVAL	BSTA,UN	PPSTRS	
3724	3EDD	04	02				LODI,R0	2	
3725	3EDF	3F	40	00			BSTA,UN	VALSUB	
3726	3EE2	00	11	84			LODA,R0	INPT	
3727	3EE5	08	71				STRR,R0	VALS	
3728	3EE7	00	11	85			LODA,R0	INPT-1	
3729	3EEA	08	5E				STRR,R0	VALS-1	
3730	3EEC	04	40				LODI,R0	FPSTRS	
3731	3EEF	00	11	84			STRA,R2	INPT	
3732	3EF1	04	EB				LODI,R0	FPSTRS	
3733	3EF3	00	11	85			STRA,R0	INPT-1	
3734	3EF6	12				VAL2	SFSU		
3735	3EF7	01					STRZ,R1		
3736	3EF9	A4	01				SUBI,R0	1	
3737	3EFA	44	07				ANDI,R0	7	
3738	3EFC	45	F8				ANDI,R1	F8	
3739	3EFF	61					IORZ,R1		
3740	3EFF	02					LFSU		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3741	3F02	1F	33	AF			ECTA,UN	EVAL0	
3742	3F03					*			
3743	3F03					*			
3744	3F03	00	53			RTNVAL	LODR,R0	VALS	
3745	3F05	00	11	B4			STRA,R0	INPT	
3746	3F09	00	4F				LODR,R0	VALS-1	
3747	3F0A	00	11	B8			STRA,R0	INPT-1	
3748	3F01	1F	33	DA			ECTA,UN	EVAL3	
3749	3F10					*			
3750	3F10					*			
3751	3F12	20	80	D7		FFVARF	LODA,R0	*SF	
3752	3F13	10	2F				BCTR,OT	VARF2	
3753	3F15	3F	48	D9			BSTA,UN	POPC1	
3754	3F18	1B	23				BCTR,UN	VARF3	
3755	3F1A	3F	42	F4		VARF2	BSTA,UN	FFTR3	
3756	3F11	20	10	F0		VARF3	LODA,R0	LTEMP	
3757	3F20	00	16	73			LODA,R1	LTEMP-1	
3758	3F03	1F	33	FA			ECTA,UN	BTOD	
3759	3F06					*			
3760	3F26					*			
3761	3F26	3F	45	L9		FFFR3	BSTA,UN	POPC1	
3762	3F00	3F	1F	E2			BSTA,UN	PUSPC1	
3763	3F00	3F	3D	72			BSTA,UN	FIX2	
3764	3F03	1F	3A	B4			ECTA,UN	FPSUB	
3765	3F06					*			
3766	3F06					*			
3767	3F72	00	96			PEEKS	RES	2	
3768	3F34					*			
3769	3F34					*			
3770	3F34	27				FFPEEK	EORZ,R0		
3771	3F38	3F	3F	7F			BSTA,UN	ENXS	
3772	3F32	02	78				STRP,R0	PEEKS	
3773	3F3A	00	77				STRP,R1	PEEKS-1	
3774	3F30	20	F4				LODR,R1	*PEEKS	
3775	3F3E	20					EORZ,R0		
3776	3F3F	1F	3D	FA			ECTA,UN	BTOD	
3777	3F42					*			
3778	3F42					*			
3779	3F42	3F	3F	5A		FFCHR	BSTA,UN	ENXS1B	
3780	3F45	01					LODR,R1		
3781	3F46	1E	45	74			ECTA,LT	OVFFP	
3782	3F40	E5	20				COMI,R1	20	
3783	3F4F	1E	45	74			ECTA,LT	OVFER	
3784	3F4F	03					STRZ,R3		
3785	3F4F	3F	3F	D9			BSTA,UN	DFCSP	
3786	3F00	07	01				LODI,R3	1	
3787	3F0A	7F	32	10			BSTA,UN	DECSP	
3788	3F07	1F	30	D6			ECTA,UN	DECSP	
3789	3F0A					*			
3790	3F5A					ENXS1B	BSTA,UN	ENS2	
3791	3F00	20	2E	A1			LODR,R0		
3792	3F5F	00	45	74			BCFA,EQ	OVFER	
3793	3F61	17					RETU,UN		
3794	3F62					*			
3795	3F62					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3796	3F62	3F	76			FPIN	PSTR,UN	ENXS1B	
3797	3F64	00	01				STRP,R1	4+3	
3798	3F65	55	00				REDE,R1	2	
3799	3F65	20					EORZ,R0		
3800	3F65	1F	3D	FA			ECTA,UN	BTOD	
3801	3F6C					*			
3802	3F6C	3F	30	B1		FPLEN	BSTA,UN	INCSP	
3803	3F61	E7	01				COMI,R3	1	
3804	3F01	00	45	70			BCFA,EQ	TYPFR	
3805	3F74	3F	30	B1			BSTA,UN	INCSP	
3806	3F77	03					LOEZ,R3		
3807	3F78	01					STRZ,R1		
3808	3F79	02					STRZ,R2		
3809	3F7A	5A	04			LEN1	BRNR,R2	LEN2	
3810	3F7C	20					EORZ,R0		
3811	3F7D	1F	3D	FA			ECTA,UN	BTOD	
3812	3F82	3F	30	B1		LEN2	BSTA,UN	INCSP	
3813	3F83	A6	01				SUBI,R2	1	
3814	3F85	1B	73				BCTR,UN	LEN1	
3815	3F87					*			
3816	3F87					*			
3817	3F87	3F	30	B1		FFASC	BSTA,UN	INCSP	
3818	3F8A	E7	01				COMI,R3	1	
3819	3F8C	00	45	70			BCFA,EQ	TYPFR	
3820	3F8F	3F	30	B1			BSTA,UN	INCSP	
3821	3F92	03					LODZ,R3		
3822	3F93	01					STRZ,R1		
3823	3F94	1C	45	80			BCTA,EQ	ARGER	
3824	3F97	3F	30	B1		ASC1	BSTA,UN	INCSP	
3825	3F9A	E5	7E				BDRR,R1	ASC1	
3826	3F9C	03					LODZ,R3		
3827	3F9D	01					STRZ,R1		
3828	3F9E	22					STRZ,R1		
3829	3F9F	1F	3D	FA			EORZ,R0		
3830	3FA2						ECTA,UN	BTOD	
3831	3FA2					*			
3832	3FA2	00				REUF	RES	1	
3833	3FA3					*			
3834	3FA3					*			
3835	3FA3	00	7D			FFRND	LODR,R0	REUF	
3836	3FA5	64	01				IORI,R0	1	
3837	3FA7	02					STRZ,R2		
3838	3FA8	03					STRZ,R3		
3839	3FA9	20					EORZ,R0		
3840	3FAA	75	01				CPSL	CRY	
3841	3FAC	77	08				PPSL	WC	
3842	3FAD	A3					SUBZ,R3		
3843	3FAF	A6	00				SUBI,R2	0	
3844	3FB1	A3					SUBZ,R3		
3845	3FB2	A6	00				SUBI,R2	0	
3846	3FB4	E2					RRR,R2		
3847	3FB5	E2					RRR,R0		
3848	3FB6	E2					RRR,R2		
3849	3FB7	E2					RRR,R0		
3850	3FB8	75	08				CPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3961	40BA	27	22			MED6	LODI,R3	0	
3962	40EA	1F	74				PCTR,UN		MIDR
3963	40FC					*			
3964	40FC					*			
3965	40FC					*			
3966	40FC	3F	3F	5A		FPLEFT	BSTA,UN		ENSX1B
3967	40FD	01	21	EC			STRA,R1		FPLRS
3968	40FE	3F	30	E1			BSTA,UN		INCSP
3969	40FF	E7	05				COMI,R3	5	
3970	4100	80	45	27			BCFA,EC		ARGER
3971	4101	CF	21	EE			BSTA,UN		PPSTRS
3972	4102	2D	21	EC			LODA,R1		FPLRS
3973	4103	EL	21	EE			COMA,R1		STRS
3974	4104	99	23				BCFR,GT		LEFT2
3975	4105	2D	21	EE			LODA,R1		ST S
3976	4106	21				LEFT2	LODZ,R1		
3977	4107	02					STRZ,R2		
3978	4108	24	42			PHSTRS	LODI,R2		FPSTRS
3979	4109	25	EB				LODI,R1		FPSTRS
3980	410A	1F	30	EF			BCTA,UN		PUSHST
3981	410B					*			
3982	410C	24	42			FPSTRS	LODI,R2		FPSTRS
3983	410D	25	EB				LODI,R1		FPSTRS
3984	410E	1F	31	11			BCTA,UN		POPST
3985	410F					*			
3986	4110					FPSTRS	RES	122	
3987	4111	20				STPS	RES	1	
3988	4112	20				FPLPS	RES	1	
3989	4113					*			
3990	4114					*			
3991	4115	3F	3F	5A		FPRIGHT	BSTA,UN		ENSX1B
3992	4116	00	7A				STRA,R1		FPLRS
3993	4117	3F	30	E1			BSTA,UN		INCSP
3994	4118	E7	05				COMI,R3	5	
3995	4119	90	45	20			BCFA,EC		ARGER
3996	411A	3F	42	E4			BSTA,UN		PPSTRS
3997	411B	CA	00				STRR,R2		STRS
3998	411C	21	21	EC			LODA,R1		FPLRS
3999	411D	ED	21	EE			COMA,R1		STRS
4000	411E	99	23				BCFR,GT		RIGHT2
4001	411F	21	21	EE			LODA,R1		STRS
4002	4120	21				RIGHT2	LODZ,R1		
4003	4121	02					STRZ,R2		
4004	4122	20	21	EE			LODA,R2		STRS
4005	4123	A1					SUBZ,R1		
4006	4124	84	EF				ADDI,R0		FPSTRS
4007	4125	C1					STRZ,R1		
4008	4126	77	26				FPSL		WC
4009	4127	04	42				LODI,R0		FPSTRS
4010	4128	B4	29				ADDI,R0	0	
4011	4129	75	26				CPSL		WC
4012	412A	1F	30	F2			BCTA,UN		PUSHST
4013	412B					*			
4014	412C					*			
4015	412D	22	22	22	22	INSTS	RES	4	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4016	4222					*			
4017	4222					*			
4018	4222	05	01			FPINST	LODI,R1	1	
4019	4224	3F	3F	E6			BSTA,UN		LOADSP
4020	4227	98	0F				BCFR,EQ		INST2
4021	4229	3F	3F	5A			BSTA,UN		ENSX1B
4022	422C	01					LODZ,R1		
4023	422E	1C	45	74			BCTA,EC		OVFR
4024	4230	3F	30	E1			BSTA,UN		INCSP
4025	4231	E7	05				COMI,R3	5	
4026	4235	90	45	20			BCFA,EC		ARGER
4027	4239	A5	01			INST2	SUBI,R1	1	
4028	423A	CD	22	1E			STRA,R1		INSTS INDEX
4029	423D	3F	42	E4			BSTA,UN		PPSTRS
4030	4240	CE	22	1F			STRA,R2		INSTS-1
4031	4243	3F	30	B1			BSTA,UN		INCSP
4032	4246	E7	05				COMI,R3	05	
4033	4248	90	45	20			BCFA,EC		ARGER
4034	424B	3F	30	B1			BSTA,UN		INCSP
4035	424E	E7	01				COMI,R3	1	
4036	4250	90	45	70			BCFA,EC		TYFER
4037	4253	3F	30	B1			BSTA,UN		INCSP
4038	4256	EF	02	1E			COMA,R3		INSTS
4039	4259	9D	42	97			BCFA,GT		INST3A
4040	42FC	CF	02	21			STRA,R3		INSTS-3
4041	42FF	AF	02	1E			SUBA,R3		INSTS
4042	4262	CF	02	20			STRA,R3		INSTS-2
4043	4265	0D	02	20		INST2A	LODA,R1		INSTS-2
4044	4268	2C	02	1F			LODA,R0		INSTS-1
4045	426B	A4	01				SUBI,R0	1	
4046	426D	E1					COMI,R1		
4047	426F	1C	42	97			BCTA,EC		INST3A
4048	4271	A5	01				SUBI,R1	1	
4049	4273	CD	02	20			STRA,R1		INSTS-2
4050	4276	2F	FF				LODI,R2		FF
4051	4278	0F	02	1F			LODA,R3		INSTS-1
4052	427B	2E	20	EB		INST3	LODA,R2		FPSTRS
4053	427F	3F	3F	DA			BSTA,UN		INSSUB
4054	4281	98	62				BCFR,EQ		INST2A
4055	4283	A5	01				SUBI,R1	1	
4056	4285	FE	74				BDRR,R3		INST3
4057	4287	2C	02	21			LODA,R0		INSTS-3
4058	428A	3F	30	B5			BSTA,UN		INCSP2
4059	428D	0D	02	21			LODA,R1		INSTS-3
4060	4290	A1	02	20			SUBA,R1		INSTS-2
4061	4293	22					FORZ,R2		
4062	4294	1F	3D	FA			BCTA,UN		BTOD
4063	4297	2C	02	21		INST3A	LODA,R0		INSTS-3
4064	429A	3F	30	B5			BSTA,UN		INCSP2
4065	429D	1F	45	BA			BCTA,UN		PUSHR
4066	42A0					*			
4067	42A7					*			
4068	42A0	07	00			OPTION	LODI,R3		OPTMSG
4069	42A2	3F	45	F3			BSTA,UN		WRMCR
4070	42A5	3F	2D	D7			BSTA,UN		GETKB

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4271	42A8	3F	4F	AF			BSTA.UN	LTCU	
4272	42AB	E4	1B				COMI.R0	ESC	
4273	42AD	10	49	7A			BCTA.EQ	EDITOR	
4274	42B2	E4	42				COMI.R0	'B'	
4275	42B3	1B	17				BCTR.EQ	BEGN	
4276	42B4	E4	52				COMI.R0	'R'	
4277	42B6	1B	19				BCTR.EQ	RUN	
4278	42B9	E4	10				COMI.R0	'S'	
4279	42BA	1B	21				BCTR.EQ	STEP	
4280	42BC	E4	44				COMI.R0	'D'	
4281	42BE	1C	40	06			BCTA.EQ	DIRECT	
4282	42C1	3F	31	21			BSTA.UN	WABL	
4283	42C4	E4	3F				LODI.R0	'?'	
4284	42C6	3F	2E	23			BSTA.UN	WRT	
4285	42C8	1E	FF				BCTR.UN	OPTION	
4286	42CB					*			
4287	42CE					*			
4288	42D2	3F	31	9A		BEGN	BSTA.UN	BEGIN	
4289	42D4	1F	42	A0			BCTA.UN	OPTICN	
4290	42D1					*			
4291	42D1					*			
4292	42D1	07	21			RUN	LODI.R3	OKMSG	
4293	42D3	3F	4F	F8			BSTA.UN	WRTM	
4294	42D6	70				NORM1	BCTA.EQ		
4295	42D7	44	7F				ANDI.R0	7F	
4296	42D9	E4	1B				COMI.R0	ESC	
4297	42DB	08	26				BCTR.EQ	PUNF	
4298	42DD	3F	2D	F1			BSTA.UN	PL	
4299	42E0	1F	42	A7			BCTA.UN	OPTION	
4300	42E3	24	40			PUNF	LODI.R0	NORM1	
4301	42E5	0E	D6				LODI.R1	NOPM1	
4302	42E7	1F	20	04			BCTA.UN	EXEC	
4303	42EA					*			
4304	42EA					*			
4305	42EA	07	21			STEP	LODI.R3	OKMSG	
4306	42EC	3F	4E	5E			BSTA.UN	WRTM	
4307	42EF	7F	20	07		STEP1	BSTA.UN	SAVINP	
4308	42F0	26	FF				LODI.R0	FF	
4309	42F4	3F	26	57			BSTA.UN	SHLN	
4310	42F7	3F	2D	E2			BSTA.UN	PAUSE	
4311	42FA	E4	1B				COMI.R0	ESC	
4312	42FB	1C	42	A2			BCTA.EQ	OPTION	
4313	42FF	04	46				LODI.R0	STEP1	
4314	4301	0F	1F				LODI.R1	STEP1	
4315	4303	1F	20	04			BCTA.UN	EXEC	
4316	430E					*			
4317	430E					*			
4318	430E	3F	2E	5F		DIRECT	BSTA.UN	LFCR	
4319	4309	3F	32	76			BSTA.UN	AROWCR	
4320	430C	04	43				LODI.R0	DIRECT	
4321	430E	0F	26				LODI.R1	DIRECT	
4322	4310	1F	20	04			BCTA.UN	EXEC	
4323	4313					*			
4324	4313					*			
4325	4313	3F	29	6E		LET	BSTA.UN	GCVAR	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4326	4316	1A	1F				BCTR.LI	LETSTR	
4327	4319	1F	4E	00			BCTA.GT	ARGR	
4328	431E	3F	30	EE			BSTA.UN	STRCT	
4329	431F	3F	46	00			BSTA.UN	SKPEQ	
4330	4321	3F	33	9F			BSTA.UN	EVAL	
4331	4324	0C	4F	34			BCTA.EQ	NOSTR	
4332	4327	3F	2E	16			BSTA.UN	POPCT	
4333	432A	3F	46	40		LETD	BSTA.UN	SKPSP	
4334	432D	E4	20				COMI.R0	'.'	
4335	432F	1B	62				BCTR.EQ	LET	
4336	4331	3F	32	13			BSTA.UN	DEOPT	
4337	4334	1F	31	A3			BCTA.UN	NXTLIN	
4338	4337	3F	32	6E		LETSTR	BSTA.UN	STRCT	
4339	433A	3F	2F	E7			BSTA.UN	ZSTP	
4340	433D	3F	46	50			BSTA.UN	SKPEQ	
4341	4340	3F	33	9F			BSTA.UN	EVAL	
4342	4343	0E	46	34			BCTA.LT	NOSTR	
4343	4346	3F	2B	32			BSTA.UN	STRING	
4344	4349	1B	5F				BCTR.UN	LETD	
4345	434E					*			
4346	434E					*			
4347	434E	3F	33	0C		REM	BSTA.UN	SKPCR	
4348	434E	E4	0D				COMI.R0	CR	
4349	4350	08	79				BCTR.EQ	REM	
4350	4352	1F	A2	02			BCTA.UN	*RTNADR	
4351	4355					*			
4352	4355					*			
4353	435F	3F	33	0F		EXTOUT	BSTA.UN	EVAL	
4354	4359	3F	2B	07			BSTA.UN	ENSIB	
4355	435B	09	2A				STR.R1	WRITEP-1	
4356	435D	3F	46	4B			BSTA.UN	SKPCOM	
4357	4360	3F	33	0F			BSTA.UN	EVAL	
4358	4363	3F	2B	07			BSTA.UN	ENSIB	
4359	4365	D5	00			WRITEP	WRT.R1	0	
4360	4368	1F	31	A3			BCTA.UN	NXTLIN	
4361	436B					*			
4362	436B					*			
4363	436E	3F	31	9A		END	BSTA.UN	BEGIN	
4364	436E	1B	09				BCTR.UN	STOP1	
4365	4370	3F	46	40		STOP	BSTA.UN	SKPSP	
4366	4373	3F	31	8E			BSTA.UN	CHKCR	
4367	4376	0C	31	B1			BCTA.EQ	SYNER	
4368	4379	07	07			STOP1	LODI.R3	STOMSG	
4369	437B	3F	4E	53			BSTA.UN	WRTMCR	
4370	437E	1F	42	A0			BCTA.UN	OPTION	
4371	4381					*			
4372	4381					*			
4373	4381	3F	32	83		GOTO	BSTA.UN	FNDLIN	
4374	4384	1C	A2	92			BCTA.EQ	*RTNADR	
4375	4387	07	0E			LNFR	LODI.R3	LNFR	
4376	4389	1F	33	2F			BCTA.UN	ERROR	
4377	439C					*			
4378	439C					*			
4379	439C	3F	33	0F		PAUSER	BSTA.UN	EVAL	
4380	439F	3F	2B	0E			BSTA.UN	ENS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4141	4392	02					STRZ,R2		
4142	4393	01				PAUS2	LODZ,R1		
4143	4394	98	04				BCFR,EQ	PAUS3	
4144	4396	02					LODZ,R2		
4155	4397	10	31	A3			BCTA,EQ	NXTLIN	
4156	439A	07	30			PAUS3	LODI,R3	30	60 DECIMAL
4157	439C	7B	14			PAUS4	BSTR,UN	D1	
4158	439E	70					FEED,R0		
4159	439F	44	7F				ANDI,R0	7F	
4160	43A1	E4	1E				COMI,R2	ESC	
4161	43A3	10	42	A2			BCTA,EQ	OPTION	
4162	43A5	FE	74				BDRR,R3	PAUS4	
4163	43A8	AE	31				SUBI,R1	1	
4164	43AA	77	08				PPSL	WC	
4165	43AC	A6	00				SUBI,R2	0	
4166	43AF	7F	0E				CPSL	WC	
4167	43B0	1B	61				BCTR,UN	PAUS2	
4168	43B2					*			
4169	43B4					*			
4200	43B5	04	1B			L1	LODI,R0	DB	
4201	43B4	04	7F				BDRR,R2	5	
4202	43B6	17					BETC,UN		
4273	43E7					*			
4274	43E7					*			
4275	43E7	3F	29	6E		READ	ESTA,UN	GCVAR	
4226	43BA	1A	17				BCTR,LT	RDSTR	
4227	43BC	11	4F	02			BCTA,GT	ARGER	
4228	43BF	7F	30	6E			ESTA,UN	STROCT	
4209	43C2	75	20	31			ESTA,UN	GETDAT	
4210	43C5	1F	2E	41			BCTA,GT	RDND6	
4211	43C8	1F	2E	45			BCTA,LT	RDTYPE	
4212	43CB	3F	2E	18			ESTA,UN	POPCT	
4213	43CE	3F	46	42		RDDEL	ESTA,UN	SKISF	
4214	43D1	E4	20				COMI,R0		
4215	43D3	10	62				BCTR,EQ	READ	
4216	43DE	3F	32	13			ESTA,UN	DECPT	
4217	43E0	1F	31	A3			BCTA,UN	NXTLIN	
4218	43E3	3F	30	6E		RDSTR	ESTA,UN	STROCT	
4219	43E5	3F	2F	E7			ESTA,UN	ZSTR	
4220	43E8	3F	20	31			ESTA,UN	GETDAT	
4221	43EA	1D	2F	41			BCTA,GT	RDND6	
4222	43E7	10	2E	45			BCTA,EQ	RDTYPE	
4223	43EA	3F	2B	32			ESTA,UN	STRING	
4224	43E1	1B	5F				BCTR,UN	RDEL	
4225	43E1					*			
4226	43E1					*			
4227	43E5	00				COMMA	RES	1	
4228	43E0	02				DP	RES	1	
4229	43E1	00	20	30		PUSG	RES	3	
4230	43E4					*			
4231	43E4					*			
4232	43F4	3F	33	0F		PUSING	ESTA,UN	EVAL	
4233	43F7	0F	46	34			BCFA,LT	NOSTR	
4234	43FA	3F	20	9A			BSTA,UN	ZERCMS	
4235	43FD	04	26				LODI,R0	CMSTRS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4236	43FF	75	A1				LODI,R1	CMSTRS	
4237	4401	3F	31	11			ESTA,UN	POPST	
4238	4404	71	4E	40			ESTA,UN	SKFSP	
4239	4407	F4	3B				COMI,R2		
4240	4409	90	31	F1			BCFA,EQ	STNER	
4241	4420	3F	20	90		FULOOP	ESTA,UN	PUGET	
4242	4427	10	44	D0			BCTA,EQ	PUREPT	
4243	4412	E4	21				COMI,R0	1	
4244	4414	98	11				BCFR,EQ	PU2	
4245	4416	3F	33	0F			BSTA,UN	EVAL	
4246	4419	1D	24	9B			BCTA,GT	PRNTD6	
4247	441C	9E	46	34			BCFA,LT	NOSTR	
4248	441F	05	01				LODI,R1	1	
4249	4421	3F	23	12			BSTA,UN	PRNTS	
4250	4424	1F	44	BD			BCTA,UN	PUDL	
4251	4427	F4	5F			PU2	COMI,R0		
4252	4429	98	22				BCFR,EQ	PU3	
4253	442B	26	01				LODI,R2	1	
4254	442D	3F	20	90		FU2B	ESTA,UN	PUGET	
4255	4430	86	01				ADDI,R2	1	
4256	4432	E4	5E				COMI,R0		
4257	4434	98	77				BCFR,EQ	PU2B	
4258	4436	05	03	F1			STRA,R2	PUSG	
4259	4439	3F	33	0F			ESTA,UN	EVAL	
4260	443C	1D	24	9B			BCTA,GT	PRNTD6	
4261	443F	9E	46	34			BCFA,LT	NOSTR	
4262	4442	0D	03	F1			LODI,R1	FUSTG	
4263	4445	3F	23	12			BSTA,UN	PRNTS	
4264	4448	1F	44	BD			BCTA,UN	PUDL	
4265	444B	F4	23			FU3	COMI,R0		
4266	444D	18	2E				BCTR,EQ	PU4	
4267	444F	3F	24	05			BSTA,UN	SENDIT	
4268	4452	1F	44	20			BCTA,UN	FULOOP	
4269	4455	06	01			PU4	LODI,R2	1	
4270	4457	0E	03	EF			STRA,R2	COMMA	
4271	445A	0E	03	F0			STRA,R2	DP	
4272	445D	20					EORZ,R0		
4273	445F	00	03	F3			STRA,R0	PUSG-2	
4274	4461	3F	20	90		FU5	BSTA,UN	PUGET	
4275	4464	86	01				ADDI,R2	1	
4276	4466	E4	23				COMI,R0	'#'	
4277	4468	18	77				BCTR,EQ	PU5	
4278	446A	E4	20				COMI,R0	'.'	
4279	446C	18	10				BCTR,EQ	PU6	
4280	446E	E4	21				COMI,R0	'.'	
4281	4470	98	18				BCFR,EQ	PUNED	
4282	4472	A6	01				SUBI,R2	1	
4283	4474	0E	03	F2			STRA,R2	PUSG+1	
4284	4477	0E	00				LODI,R2	0	
4285	4479	0E	03	F0			STRA,R2	DP	
4286	447C	1B	63			PU6	BCTR,UN	PU5	
4287	447E	00	03	F0			LODI,R2	DP	
4288	4481	10	31	B1			BCTA,EQ	STNER	
4289	4484	20					EORZ,R0		
4290	4485	00	03	EF			TRA,50	COMMA	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4281	4488	1E	E7				BCTR,UN	PUS	
4282	448A	A6	21			PUEXD	SUBI,R1	1	
4283	448C	3F	22	AC			BSTA,UN	STREPS	
4284	448E	A6	21				SUBI,R2	1	
4285	4491	20	23	F2			LODA,R0	IF	
4286	4494	18	2F				BCTR,EC	PU7	
4287	4496	0E	23	F2			STRA,R2	PUSTG-1	
4288	4499	1B	23				BCTR,UN	PUS	
4289	449B	0E	23	F3		PUS	STRA,R2	PUSTG+2	
4290	449E	3F	33	2F		PUG	BSTA,UN	EVAL	
4291	44A1	1D	24	2E			BCTA,GT	FRNTD6	
4292	44A4	9C	46	34			BCTA,EQ	NCSTR	
4293	44A7	20	23	F7			LODA,R0	PUSTG-1	
4294	44AA	A4	01			PUG	SUBI,R0	1	
4295	44AC	E4	FF				COMI,R0	FF	
4296	44AE	1C	31	E1			BCTA,EQ	SYNER	
4297	44B1	2D	23	F3			LODA,R1	PUSTG+7	
4298	44B4	2E	23	F7			LODA,R2	COMMA	
4299	44B7	2F	23	F2			LODA,R3	DP	
4300	44BA	3F	20	A7			BSTA,UN	PRNTFU	
4301	44B5	3F	46	4C		PUDYL	BSTA,UN	SKPSP	
4302	44B7	E4	20				COMI,R0		
4303	44C2	1C	44	2C			BCTA,EQ	PULCOP	
4304	44C5	E4	7E				COMI,R0		
4305	44C7	1C	44	2C			BCTA,EQ	PULCOP	
4306	44CA	3F	32	13			BSTA,UN	DECPY	
4307	44CD	1F	31	A3			BCTA,UN	NXTLIN	
4308	44D0	24	FF			PUPERT	LODI,R0	FF	
4309	44D2	0C	84	D8			STRA,R2	*IFUSP	
4310	44D5	1F	44	2C			BCTA,UN	PULCOP	
4311	44E8	22	A2			IFUSP	ACON	PUSP	
4312	44EA					*			
4313	44EA					*			
4314	44EA					RESUME	BSTA,UN	ENDLIN	
4315	44DD	9C	20	F0			BCTA,EQ	RETURN	
4316	44E0	3F	30	B1			BSTA,UN	INCSP	
4317	44E3	E7	02				COMI,R3	2	
4318	44E5	9C	45	7E			BCTA,EQ	NESTER	
4319	44E8	3F	30	B1			BSTA,UN	INCSP	
4320	44EB	3F	30	B1			BSTA,UN	INCSP	
4321	44EF	1F	A0	02			BCTA,UN	*RTNADR	
4322	44F1					*			
4323	44F1					*			
4324	44F1	02	00			X2STG	RES	2	
4325	44F3					*			
4326	44F3					*			
4327	44F3	27	22			X10	LODI,R3	2	
4328	44F5	77	29				PFSI	WC	
4329	44F7	7E	01				CPSI	CRY	
4330	44F9	D1					RL,R1		
4331	44FA	D2					RRL,R0		
4332	44FB	D3					RRL,R3		
4333	44FC	0E	73				STR,R0	X2STG	
4334	44FE	0E	72				STR,R1	X2STG+1	
4335	4500	L1					RRL,R1		

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LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4336	4502	D2					RRL,R0		
4337	4502	D3					RRL,R3		
4338	4503	E1					RRL,R1		
4339	4504	02					RRL,R0		
4340	4505	03					RRL,R3		
4341	4506	0A				ADDR,R1		X2STG-1	
4342	4508	0E	E7			ADDR,R0		X2STG	
4343	450A	07	02			ADDI,R3		0	
4344	450C	75	08			CPSI		WC	
4345	450E	07	00			ICRI,R3		0	
4346	4510	0C	45	74		BCTA,EQ		CVFEP	
4347	4513	17				RETC,UN			
4348	4514					*			
4349	4514					*			
4350	4514	3F	45	D9		FPEXP	BSTA,UN	POP01	
4351	4517	3F	45	F7			BSTA,UN	POP02	
4352	451A	3F	45	E0			BSTA,UN	PUSH01	
4353	451D	3F	45	EE			BSTA,UN	PUSH02	
4354	4520	3F	55	6C			BSTA,UN	PFLN	
4355	4523	3F	3B	F1			BSTA,UN	FPMULT	
4356	4526	1F	54	35			BCTA,UN	FPEXP2	
4357	4529					*			
4358	4529					*			
4359	4529	3F	46	40		CKNEG	BSTA,UN	SKPSP	
4360	452C	E4	2B				COMI,R0		
4361	452E	14					RETC,EQ		
4362	452F	E4	2D				COMI,R0		
4363	4531	9C	32	13			BCTA,EQ	DECPY	
4364	4534	3F	45	EA			BSTA,UN	PUSH0	
4365	4537	04	22				LODI,R0	22	
4366	4539	1F	37	62			BCTA,UN	PUSHOP	
4367	453C					*			
4368	453C					*			
4369	453C	7E	0A			CHKAN	BSTR,UN	CHNUM	
4370	453E	14					RETC,EQ		
4371	453F	E4	41			CKALPH	COMI,R0	'A'	
4372	4541	16					RETC,LT		
4373	4542	E4	5A				COMI,R0	'Z'	
4374	4544	15					RETC,GT		
4375	4545	75	C0				CPSI	C0	
4376	4547	17					RETC,UN		
4377	4548					*			
4378	4548					*			
4379	4548	E4	30			CHNUM	COMI,R0	'0'	
4380	454A	1C					RETC,LT		
4381	454B	E4	39				COMI,R0	'9'	
4382	454D	15					RETC,GT		
4383	454E	75	C0				CPSI	C0	
4384	4550	17					RETC,UN		
4385	4551					*			
4386	4551					*			
4387	4551	00	02			WRTMS	RES	2	
4388	4553					*			
4389	4553					*			
4390	4553	3F	2E	55		WRTMCR	BSTA,UN	LF0R	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4421	4556	06	00			WRTM	LODI,R2	0	
4422	4558	08	FF				LODI,R1	FF	
4423	455A	02				WRTM2	LODI,R2		
4424	455B	03					COMZ,R3		
4425	455C	18	0F				BCTR,EO	WRTM4	
4426	455E	20	27	34		WRTM3	LODA,R1	MSG0,-	
4427	4561	14	01				COMI,R0		
4428	4563	06	76				BCTR,EO	WRTM3	
4429	4565	06	01				ADDI,R2	1	
4430	4567	18	21				BCTR,UN	WRTM2	
4431	4569	20	27	34		WRTM4	LODA,R1	MSG0,-	
4432	456C	14	01				COMI,R2		
4433	456E	14					RETC,EO		
4434	456F	33	21	23			BSTA,UN	WRT	
4435	4570	18	2F				BCTR,UN	WRTM4	
4436	4574					*			
4437	4574	27	06			OVFER	LODI,R3	OVFERP	
4438	4576	18	16				BCTR,UN	ERJMP	
4439	4578					*			
4440	4578					*			
4441	4578					*			
4442	4579	07	06			NESTER	LODI,R3	NSTERR	
4443	457A	18	16				BCTR,UN	ERJMP	
4444	457C					*			
4445	457C					*			
4446	457C					*			
4447	457C	27	0A			TYPFR	LODI,R3	TYPERR	
4448	457E	18	2E				BCTR,UN	ERJMP	
4449	4580					*			
4450	4580					*			
4451	4580	27	0B			ARGER	LODI,R3	ARGERR	
4452	4582	18	0A				BCTR,UN	ERJMP	
4453	4584					*			
4454	4584					*			
4455	4584	27	0C			DIMEP	LODI,R3	DIMERR	
4456	4586	18	26				BCTR,UN	ERJMP	
4457	4588					*			
4458	4588					*			
4459	4588	27	02			NDEP	LODI,R3	NDEPR	
4460	458A	18	02				BCTR,UN	ERJMP	
4461	458C					*			
4462	458C					*			
4463	458C	27	07			ADER	LODI,R3	ADEPR	
4464	458E	18	33	2E		FJMP	BCTA,UN	IFROR	
4465	4591					*			
4466	4591					*			
4467	4591	06	10			EPASE	LODI,R2	10	
4468	4593	06	20				LODI,R1	20	
4469	4595	3F	23	F7			BCTA,UN	SETCUR	
4470	4598	05	10				LODI,R1	10	
4471	459A	3F	21	55		EPASE1	BCTA,UN	1FCR	
4472	459D	10	2E				BCTR,R1	EPASE1	
4473	459F	08	10				LODI,R2	10	
4474	45A1	26	02				LODI,R1	02	
4475	45A3	1F	2D	F7			BCTA,UN	SETCUR	
4476	45A6					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4456	45A6					*			
4457	45A6	14	60			LTCU	TMI,R0	60	
4458	45A8	40					RETC,LT		
4459	45A9	44	DF				ANDI,R0	DF	
4460	45AB	17					RETC,UN		
4461	45AC					*			
4462	45AC					*			
4463	45AC	24	45			PUSH1	LODI,R0	FP1	
4464	45AE	26	09				LODI,R1	FP1	
4465	45B0	1F	31	38			BCTA,UN	PUSHFP	
4466	45B3					*			
4467	45B3					*			
4468	45B7	04	45			PUSHM1	LODI,R0	FPM1	
4469	45B9	26	D1				LODI,R1	FPM1	
4470	45B7	1F	31	38			BCTA,UN	PUSHFP	
4471	45BA					*			
4472	45BA					*			
4473	45BA	24	45			PUSH2	LODI,R2	FP2	
4474	45BC	06	01				LODI,R1	FP2	
4475	45BE	1F	31	38			BCTA,UN	PUSHFP	
4476	45C1					*			
4477	45C1					*			
4478	45C1	F0	96	00	00	FP0	ACON	F099,0000,0000,0000	
4479	45C5	00	00	00	00				
4480	45C9	02	21	00	10	FP1	ACON	0001,0010,0000,0000	
4481	45CD	02	00	00	00				
4482	45D1	02	21	00	10	FPM1	ACON	0001,F010,0000,0000	
4483	45D5	02	00	00	00				
4484	45D6					*			
4485	45D6					*			
4486	45D9	04	33			POPC1	LODI,R0	CBUF1	
4487	45DB	06	50				LODI,R1	CBUF1	
4488	45E1	1F	31	55			BCTA,UN	POPPF	
4489	45E0					*			
4490	45E0					*			
4491	45E0	24	33			PUSHC1	LODI,R0	CBUF1	
4492	45E2	06	50				LODI,R1	CBUF1	
4493	45E4	1F	31	38			BCTA,UN	PUSHFP	
4494	45E7					*			
4495	45E7					*			
4496	45E7	24	33			POPC2	LODI,R0	CBUF2	
4497	45E9	06	58				LODI,R1	CBUF2	
4498	45EB	1F	31	55			BCTA,UN	POPPF	
4499	45EE					*			
4500	45EE					*			
4501	45EE	24	33			PUSHC2	LODI,R0	CBUF2	
4502	45F0	06	58				LODI,R1	CBUF2	
4503	45F2	1F	31	38			BCTA,UN	PUSHFP	
4504	45F5					*			
4505	45F5					*			
4506	45F5	00	00			TABSTG	RES	2	
4507	45F7					*			
4508	45F7					*			
4509	45F7	08	7C			LOOKUP	STRR,R0	TABSTG	
4510	45F9	09	7B				STRR,R1	TABSTG+1	

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LINE	ADDP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4511	451B	3F	32	10		BSTA,UN	SKPDEC		
4512	451F	3F	31	70		BSTA,UN	SINPT		
4513	4521	2F	FF			LODI,R1	FF		
4514	4523	3F	32	20	LOOK2	BSTA,UN	GETCHR		
4515	4526	03				STRZ,R3			
4516	4527	21	A5	F5		LODA,R1	*TABSTG,-		
4517	452A	E4	2E			COMI,R0			
4518	452C	1A	17			BCTR,EQ	LOOK4		
4519	452E	E3				COMZ,R3			
4520	452F	1A	72			BCTP,EQ	LOOK2		
4521	4511	2D	A5	F5	LOOK3	LODA,R1	*TABSTG,-		
4522	4514	E4	2E			COMI,R0			
4523	4516	0A	79			BCTR,F1	LOOK3		
4524	4518	3F	31	70		BSTA,UN	SINPT		
4525	451B	3F	32	10		ADDI,R1	3		
4526	451E	21	1E	F5		LODA,R1	*TABSTG,I		
4527	4522	1A	21			RETC,LT			
4528	4523	1A	21			SUBI,R1	1	LOOK2	
4529	4526	01	A5	F5	LOOK4	BCTR,UN	*TABSTG,-		
4530	4527	03				LODA,R1	*TABSTG,-		
4531	452A	0D	A5	F5		STRZ,R3	*TABSTG,-		
4532	452C	01				LODA,R1			
4533	452E	03				STRZ,R3			
4534	452F	03	32	13		BSTA,UN	DFCPT		
4535	4531	75	02			CFSL	02		
4536	4533	17				RETC,UN			
4537	4534					*			
4538	4534					*			
4539	4534	17	45	80	NOSTR	BCTA,GT	ARGER		
4540	4537	1F	45	70		BCTA,UN	TYPER		
4541	453A					*			
4542	453A					*			
4543	453A					*			
4544	453A	3F	32	20	SKPLIN	BSTA,UN	SKPCR		
4545	453D	1F	A7	92		BCTA,UN	*RTNADR		
4546	4540					*			
4547	4542					*			
4548	4542	3F	32	20	SKPSP	BSTA,UN	GETCHR		
4549	4543	E4	22			COMI,R0			
4550	4545	1E	79			BCTR,E3	SKPSP		
4551	4547	17				RETC,UN			
4552	4548					*			
4553	4548					*			
4554	4548	3F	76		SKPCOM	BCTR,UN	SKPSP		
4555	454A	E4	20			COMI,R0			
4556	454C	0C	31	E1		BCTA,E3	SYNER		
4557	454E	17				RETC,UN			
4558	4550					*			
4559	4550					*			
4560	4550	3F	46	40	SKPFC	BSTA,UN	SKPSP		
4561	4553	E4	3E			COMI,R0			
4562	4555	0C	31	E1		BCTA,E3	SYNER		
4563	4558	17				RETC,UN			
4564	4559					*			
4565	4559					*			

LINE	ADDP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4566	4559	75	02			RETNGT	CPSL	02	
4567	4559	77	42			PFSL		40	
4568	455D	17				RETC,UN			
4569	455E					*			
4570	455E					*			
4571	455E	75	02			RETNLT	CPSL	00	
4572	455D	77	42			PFSL		80	
4573	4562	17				RETC,UN			
4574	4563					*			
4575	4563					*			
4576	4563	75	02			RETCEG	CPSL	00	
4577	4565	17				RETC,UN			
4578	4566					*			
4579	4566					*			
4580	4566	41	42	53	2E	FONTAB	ALIT	'ABS.'	
4581	456A	00	00			ACON		0	
4582	456C	53	47	4E	2E	ALIT		'SGN.'	
4583	4570	00	01			ACON		1	
4584	4572	46	49	58	2E	ALIT		'FIX.'	
4585	4576	02	02			ACON		2	
4586	4578	52	4F	4F	4B	ALIT		'PEEK.'	
4587	457C	2E							
4588	457D	02	23			ACON		3	
4589	457F	43	4B	52	24	ALIT		'CHRS.'	
4590	4583	2E							
4591	4584	00	04			ACON		4	
4592	4586	49	4E	50	2E	ALIT		'INP.'	
4593	458A	02	05			ACON		5	
4594	458C	40	45	4E	2E	ALIT		'LEN.'	
4595	4590	02	06			ACON		6	
4596	4592	40	50	4F	53	ALIT		'LFOS.'	
4597	4596	2E							
4598	4597	02	07			ACON		7	
4599	4599	41	53	43	2E	ALIT		'ASC.'	
4600	459D	02	08			ACON		8	
4601	459F	49	4E	E4	2E	ALIT		'INT.'	
4602	45A3	00	09			ACON		9	
4603	45A5	45	52	52	2E	ALIT		'EBR.'	
4604	45A9	02	0A			ACON		A	
4605	45AB	50	4F	53	2E	ALIT		'POS.'	
4606	45AF	02	0B			ACON		B	
4607	45B1	43	41	4C	4C	ALIT		'CALL.'	
4608	45FE	2E							
4609	45FE	02	0C			ACON		C	
4610	45BB	52	49	47	46	ALIT		'RIGHTS.'	
4611	45BC	54	24	2E					
4612	45FF	40	45	46	54	ACON		D	
4613	45C1	4C	45	46	54	ALIT		'LEFTS.'	
4614	45C5	24	2E						
4615	45C7	02	0E			ACON		E	
4616	45C9	41	49	44	24	ALIT		'MIDS.'	
4617	45CD	2E							
4618	45CE	02	0F			ACON		F	
4619	45D0	53	54	52	49	ALIT		'STRINGS.'	
4620	45D4	4E	47	24	2E				

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4621	4618	00	10				ACON	10	
4622	461A	52	4F	44	2F		ALIT	'RND.'	
4623	461E	00	11				ACON	11	
4624	4612	58	41	52	52		ALIT	'VARPTR.'	
4625	4614	54	52	2F			ACON	12	
4626	4617	02	12				ALIT	'INSTR.'	
4627	4619	46	4E	53	84		ACON	13	
4628	461D	52	2E				ALIT	'TRC.'	
4629	461F	46	52	43	2E		ACON	14	
4630	461E	00	14				ACON	14	
4631	4617	53	54	50	24		ALIT	'STR\$.'	
4632	461E	2E					ACON	15	
4633	461C	20	15				ALIT	'VAL.'	
4634	461F	58	41	40	2E		ACON	16	
4635	4722	20	16				ACON	16	
4636	4724	53	49	4E	2E	ZTAB	ALIT	'SIN.'	
4637	4720	00	17				ACON	17	
4638	472A	43	4F	53	2E		ALIT	'COS.'	
4639	472E	00	18				ACON	18	
4640	4710	54	41	4E	2E		ALIT	'TAN.'	
4641	4714	22	19				ACON	19	
4642	4716	41	54	4E	2E		ALIT	'ATN.'	
4643	471A	00	1A				ACON	1A	
4644	471C	40	4E	2E			ALIT	'LN.'	
4645	471F	02	1E				ACON	1B	
4646	4721	40	4F	47	2E		ALIT	'LOG.'	
4647	4725	00	1C				ACON	1C	
4648	4727	45	58	50	2E		ALIT	'EXP.'	
4649	472B	00	1D				ACON	1D	
4650	472D	53	51	52	2E		ALIT	'SOR.'	
4651	4731	22	1E				ACON	1E	
4652	4733	FF					DATA	FF	
4653	4734	4F	52	54	49	MSG0	ALIT	'OPTION: '	
4654	4738	4F	4E	3A	20		ALIT		
4655	473C	20	2E				ALIT	'OK.'	
4656	4742	4F	55	54	20		ALIT	'OUT OF DATA.'	
4657	4746	4F	46	20	44		ALIT		
4658	474A	41	54	41	2E		ALIT	'USR FN.'	
4659	474E	55	52	52	20		ALIT		
4660	4752	4F	4E	20			ALIT	'REDO FROM START: '	
4661	4755	52	4E	44	4F		ALIT		
4662	4759	22	46	52	4F		ALIT		
4663	475D	4D	20	53	54		ALIT		
4664	4761	41	52	54	3A		ALIT		
4665	4765	22	20	2E			ALIT	'SYNTAX.'	
4666	4769	53	59	4E	54		ALIT		
4667	476C	41	58	2E			ALIT	'OVF.'	
4668	476F	4F	56	46	2E		ALIT	'STOPPED.'	
4669	4773	53	54	4F	52		ALIT		
4670	4777	50	4E	44	2E		ALIT		
4671	477B	4C	49	4E	45		ALIT	'LINE NOT FOUND.'	
4672	477F	20	4E	4F	54		ALIT		
4673	4783	20	46	4F	5F		ALIT		

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LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4676	4787	4E	44	2E			ALIT	'WEST.'	
4677	478A	41	45	53	54		ALIT	'TYPE MISMATCH.'	
4678	478E	2E					ALIT		
4679	478F	54	59	50	45		ALIT		
4680	4793	20	4D	49	53		ALIT		
4681	4797	4D	41	54	43		ALIT		
4682	479B	40	2E				ALIT	'ARG.'	
4683	479D	41	52	47	2E		ALIT	'DIM.'	
4684	47A1	44	49	4D	2E		ALIT	'STX OVF.'	
4685	47A5	53	54	4B	20		ALIT		
4686	47A9	4E	56	46	2E		ALIT	'STR SPACE OVF.'	
4687	47AD	53	54	52	20		ALIT		
4688	47B1	53	50	41	43		ALIT		
4689	47B5	4E	20	4F	56		ALIT		
4690	47B9	4E	2E				ALIT	'VAR ALREADY DEFINED.'	
4691	47BB	56	41	52	20		ALIT		
4692	47BF	41	4C	52	45		ALIT		
4693	47C3	41	44	50	20		ALIT		
4694	47C7	44	45	46	49		ALIT		
4695	47CB	4E	45	44	2E		ALIT	'***'	
4696	47CF	2A	2A	2A	20		ALIT	'ERROR ***'	
4697	47D3	2E					ALIT		
4698	47D4	20	45	52	52		ALIT		
4699	47D8	4F	52	20	2A		ALIT		
4700	47DC	2A	2A	2E			ALIT	'EXPR TO COMPLEX.'	
4701	47DF	4E	58	50	52		ALIT		
4702	47E3	20	54	4F	20		ALIT		
4703	47E7	43	4F	4D	50		ALIT		
4704	47EB	4C	45	58	2E		ALIT		
4705	47EF					*	ALIT		
4706	47EF					*	ALIT		
4707	47EF	54	48	45	4E	IFTB	ALIT	'THEN.'	
4708	47F3	2E					ACON	0	
4709	47F4	20	00				ALIT	'ELSE.'	
4710	47F6	45	4C	53	45	ELSTB	ALIT		
4711	47FA	2E					ACON	1	
4712	47FE	00	01				DATA	FF	
4713	47FD	FF					ALIT		
4714	47FE					*	ALIT		
4715	47FE					*	ALIT		
4716	47FE	47	4F	54	4F	ONTEL	ALIT	'GOTO.'	
4717	4802	2E					ALIT		
4718	4803	00	00				ACON	0	
4719	4805	47	4F	53	55		ALIT	'GOSUB.'	
4720	4809	42	2E				ALIT		
4721	480B	00	02				ACON	2	
4722	480D	52	45	53	54		ALIT	'RESTORE.'	
4723	4811	4F	52	45	2E		ALIT		
4724	4815	00	04				ACON	4	
4725	4817	45	58	49	54		ALIT	'EXIT.'	
4726	481B	2E					ACON	6	
4727	481C	00	0C				ALIT	'ERRCR.'	
4728	481F	45	52	52	4F		ALIT		
4729	4822	52	2E				ALIT		
4730	4824	00	08				ALIT	8	

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LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4731	4826	52	45	53	55		ALIT	'RESUME.'	
4732	482A	4D	45	2E					
4733	482C	20	2A				ACON	A	
4734	482F	FF					DATA	FF	
4735	4830						*		
4736	4832						*		
4737	4833	54	4F	2E		FORTEL	ALIT	'TO.'	
4738	4833	00	21				ACON	1	
4739	4835	52	54	4F	52		ALIT	'STEP.'	
4740	483D	2E							
4741	483A	20	22				ACON	2	
4742	483C	FF					DATA	FF	
4743	483E						*		
4744	483D						*		
4745	483D	54	41	42	2E	TABLIT	ALIT	'TAB.'	
4746	4841	20	20				ACON	0	
4747	4843	FF					DATA	FF	
4748	4844						*		
4749	4844						*		
4750	4844	44	41	54	41	DATTEL	ALIT	'DATA.'	
4751	4848	21							
4752	4848	20	22				ACON	2	
4753	4848	45	41	44	2E		ALIT	'END.'	
4754	484F	20	23				ACON	3	
4755	4851	FF					DATA	FF	
4756	4852						*		
4757	4852						*		
4758	4852	40	4F	54	2E	COMTEL	ALIT	'LET.'	
4759	4856	43	13				ACON	LET	
4760	4859	50	52	40	4E		ALIT	'PRINT.'	
4761	485C	54	2E						
4762	485E	20	25				ACON	PRINT	
4763	4860	50	41	55	5F		ALIT	'PAUSE.'	
4764	4864	45	2E						
4765	4866	43	20				ACON	PAUSER	
4766	4869	40	46	2E			ALIT	'IF.'	
4767	486B	25	2E				ACON	IF	
4768	486D	47	4F	54	4F		ALIT	'GOTO.'	
4769	4871	2E							
4770	4872	43	51				ACON	GOTO	
4771	4874	47	4F	53	55		ALIT	'GOSUB.'	
4772	4878	42	2E						
4773	487A	20	25				ACON	GOSUB	
4774	487C	52	45	54	55		ALIT	'RETURN.'	
4775	4880	52	45	2F					
4776	4881	22	20				ACON	RETURN	
4777	4885	40	4F	52	2E		ALIT	'FOR.'	
4778	4889	20	2F				ACON	FOR	
4779	488F	41	45	56	54		ALIT	'NEXT.'	
4780	4891	2E							
4781	4892	21	A5				ACON	NEXT	
4782	4892	40	4F	50	55		ALIT	'INPUT.'	
4783	4896	54	2E						
4784	4899	27	A3				ACON	INPUT	
4785	489A	44	41	54	41		ALIT	'DATA.'	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4786	489E	2E							
4787	489F	45	3A				ACON	SKPLIN	
4788	48A1	45	52	41	53		ALIT	'ERASE.'	
4789	48A5	45	2E						
4790	48A7	20	25				ACON	ERASEB	
4791	48AC	52	45	41	44		ALIT	'READ.'	
4792	48AD	2E							
4793	48AF	43	E7				ACON	READ	
4794	48B0	50	4F	4B	45		ALIT	'POKE.'	
4795	48B4	2E							
4796	48B5	20	2E				ACON	POKE	
4797	48F7	4F	55	54	2E		ALIT	'OUT.'	
4798	48BB	43	55				ACON	EXTOUT	
4799	48BD	44	49	4D	2E		ALIT	'DIM.'	
4800	4901	76	83				ACON	DIM	
4801	48C3	52	45	53	54		ALIT	'RESTORE.'	
4802	48C7	4F	52	45	2E				
4803	48CB	21	27				ACON	RESTOR	
4804	48CD	45	40	53	45		ALIT	'ELSE.'	
4805	48D1	2E							
4806	48D2	45	3A				ACON	SKPLIN	
4807	48D4	45	4E	44	2E		ALIT	'END.'	
4808	48DB	43	6B				ACON	END	
4809	48DA	53	54	4F	50		ALIT	'STOP.'	
4810	48DE	2E							
4811	48DF	43	7F				ACON	STOP	
4812	48E1	52	45	4D	2E		ALIT	'REM.'	
4813	48E5	43	4B				ACON	REM	
4814	48F7	53	57	41	50		ALIT	'SWAP.'	
4815	48EB	2E							
4816	48EC	22	62				ACON	SWAP	
4817	48EE	4F	4E	2E			ALIT	'ON.'	
4818	48F1	25	40				ACON	ON	
4819	48F3	45	58	49	54		ALIT	'EXIT.'	
4820	48F7	2E							
4821	48F8	25	E7				ACON	EXIT	
4822	48FA	57	41	49	54		ALIT	'WAIT.'	
4823	48FE	2E							
4824	48FF	2E	F8				ACON	WAIT	
4825	4901	40	50	52	49		ALIT	'LPRINT.'	
4826	4905	4E	54	2E					
4827	4908	22	AF				ACON	LPRINT	
4828	490A	45	52	F2	4F		ALIT	'ERROR.'	
4829	490E	52	2E						
4830	4910	26	35				ACON	ERRORC	
4831	4912	52	45	53	55		ALIT	'RESUME.'	
4832	4916	4D	45	2E					
4833	4919	44	DA				ACON	RESUME	
4834	491B	44	45	46	2E		ALIT	'DEF.'	
4835	491F	26	57				ACON	DEF	
4836	4921	22	41	4E	44		ALIT	'RANDOMIZE.'	
4837	4925	4F	4D	49	5A				
4838	4929	45	2E						
4839	492E	25	50				ACON	RANDOM	
4840	492D	4D	49	44	24		ALIT	'MID.'	

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LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4541	4931	28	2E						
4542	4933	26	AC				ACCN	MIDS	
4543	4935	43	40	45	41		ALIT	"CLEAR."	
4544	4939	52	2E						
4545	493F	22	4E				ACCN	PURGE	
4546	493E	FF					DATA	FF	
4547	493F					*			
4548	493F					*			
4549	493F					OPTMSG	ECU	0	
4550	493F					OKMSG	ECU	1	
4551	493F					NDERR	ECU	2	
4552	493F					UPFRP	ECU	3	
4553	493F					WBTMSG	ECU	4	
4554	493F					SHNFRP	ECU	5	
4555	493F					OFNFRP	ECU	6	
4556	493F					STOMSG	ECU	7	
4557	493F					LNFRP	ECU	8	
4558	493F					WSTFRP	ECU	9	
4559	493F					TYFRP	ECU	A	
4560	493F					ARGFRP	ECU	B	
4561	493F					DIMFRP	ECU	C	
4562	493F					SOFRP	ECU	D	
4563	493F					STFRP	ECU	E	
4564	493F					ADFRP	ECU	F	
4565	493F					ASTMSG	ECU	10	
4566	493E					ERRMSG	ECU	11	
4567	493E					OSCEFRP	ECU	12	
4568	493E					*			
4569	493E					*			
4570	493E					*			
4571	493E					RT	ECU	29	
4572	493E					ETX	ECU	33	
4573	493E					CTRLF	ECU	10	
4574	493E					CTRLU	ECU	15	
4575	493E					CTPLY	ECU	19	
4576	493E					CTRLN	ECU	20E	
4577	493E					CTRLC	ECU	20F	
4578	493E					*			
4579	493E					SERP	ECU	024F	
4580	493E					SERP	ECU	02E9	
4581	493E					RELAY	ECU	0278	
4582	493E					*			
4583	493E					*			
4584	493E	00	00			CURA	RES	2	
4585	4947	07				DUMA	RES	1	
4586	4941	00				DUM2	RES	1	
4587	4947	00				TMFAE	RES	1	
4588	4947	00				TEMP2	RES	1	
4589	4944	00	00			BSA1	RES	2	
4590	4946	00	00			CHGA	RES	2	
4591	4946	00	00			CHGST	RES	2	
4592	494A					*			
4593	494A	00	00			BSRT2	ACCN	BSTART	
4594	494C	00	04			IBST2	ACCN	IBST	
4595	494E	00	05			CBST	ACCN	VARET	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4896	4950	20	06			ENDRM2	ACCN	ENDRAM	
4897	4952	07				TABS	DATA	7	
4898	4953	12					DATA	12	
4899	4954	1E					DATA	1B	
4900	4955					*			
4901	495E					*			
4902	4955	00	00	00	00	MBUF	RES	10	
4903	4959	00	00	00	00				
4904	4961	00	00	00	00				
4905	4961	00	00	00	00				
4906	4965	00				COMS	RES	1	
4907	4968	00	00	00	00	NAME2	RES	10	
4908	496A	00	00	00	00				
4909	496E	00	00	00	00				
4910	4972	00	00	00	00				
4911	4976	00				TMFS	RES	1	
4912	4977	00				TEMP	RES	1	
4913	4978					*			
4914	4978					EBC	ECU	03	
4915	4978					*			
4916	4978					*			
4917	4978					*			
4918	4978	00	03			BSRT	ACCN	BSTART	
4919	497A	04	02			EDITOR	LODI,R0	02	
4920	497C	03				LPSL			
4921	497D	76	40			PPSU		40	
4922	497F	20				EORZ,R2			
4923	4980	00	0A	59		STRA,R0		ULC	
4924	4983	3F	45	91		BSTA,UN		FRASE	
4925	4986	3F	4B	9A		BSTA,UN		BEGIN2	
4926	4986					*			
4927	4989	3F	4A	7F		FEDN	BSTA,UN	DISP	
4928	498C	06	10			COMD	LODI,R2	10	
4929	498E	05	2F				LODI,R1	2F	
4930	4990	3F	2E	F7			BSTA,UN	SETCUR	
4931	4993	3F	2F	0E			BSTA,UN	OIFCR	
4932	4996	06	10				LODI,R2	10	
4933	4998	05	80				LODI,R1	80	
4934	499A	3F	2E	F7			BSTA,UN	SETCUR	
4935	499D	07	00				LODI,R3	MSGC-MSG00	
4936	499F	3F	2F	DC			BSTA,UN	FRING	
4937	49A2	3F	4B	2F			BSTA,UN	FRING	
4938	49A5	0F	89	4C			LODI,R2	*IBST2	
4939	49A8	AF	09	40			SUBA,R3	DUMA	
4940	49AE	A7	01				SUBI,R3	01	
4941	49AD	3F	4B	E2			BSTA,UN	DFCCUT	
4942	49B0	06	13				LODI,R2	13	
4943	49E2	05	20				LODI,R1	20	
4944	49E4	3F	2E	F7			BSTA,UN	SETCUR	
4945	49F7	07	58				LODI,R3	MSG1D-MSG02	
4946	49F6	3F	2F	DC			BSTA,UN	FRING	
4947	49B0	70				RL1	REDD,R0		
4948	49BD	1A	7D				RCTR,LT	RL1	
4949	49BF	3F	4A	67			BSTA,UN	OLC	
4950	49C2	04	49				LODI,R0	CCMS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4951	4974	25	65				LODI,R1	COMS	
4952	4975	26	11				LODI,R2	11	
4953	4976	3F	21	CF			BSTA,UN	ARRCW	
4954	4977	80	22	83			BCFA,EC	83	
4955	4978	20	25	65			LODA,R2	COMS	
4956	4979	3F	45	A6			BSTA,UN	LTOU	
4957	497A	7F	4A	67			BSTA,UN	OLC	
4958	497B	01					FORZ,R2		
4959	497C	01					STRR,R1		
4960	497D	27	FF				LODI,R3	FF	
4961	497E	FF	29	66	NI		LODA,R3	NAME2,+	
4962	497F	1F	2F				BCTR,EC	CK2	
4963	4980	17	10				COMI,R3	12	
4964	4981	0A	00				BCFR,LT	EADD	
4965	4982	E4	32				COMI,R2	'2'	
4966	4983	1A	28				BCTR,LT	DS	
4967	4984	E4	35				COMI,R3	'9'	
4968	4985	19	27				BCTR,GT	DS	
4969	4986	01					LODZ,R1		
4970	4987	29	29				LODI,R2	29	
4971	4988	81			ONE2		ADDZ,R1		
4972	4989	E5	01				TFSL	CRY	
4973	498A	1F	01				BCTR,EC	I255	
4974	498B	1A	29				BDRR,R2	ONE2	
4975	498C	01					STRZ,R1		
4976	498D	0F	05	66			LODA,R3	NAME2.1	
4977	498E	A4	32				SUBI,R2	'0'	
4978	498F	81					ADDZ,R1		
4979	4990	01					STRZ,R1		
4980	4991	E5	21				TFSL	CRY	
4981	4992	29	66				BCFR,EC	NI	
4982	4993	25	FF		D255		LODI,R1	FF	
4983	4994	1F	0A				BCTR,UN	EADD	
4984	4995	17	02		CK2		COMI,R3	02	
4985	4996	08	2E				BCFR,EC	EADD	
4986	4997	05	01				LODI,R1	01	
4987	4998	13	02				BCTR,UN	EADD	
4988	4999	05	02		DS		LODI,R1	02	
4989	4A00	20	20	65	EADD		LODA,R2	COMS	
4990	4A01	3F	45	A6			BSTA,UN	LTOU	
4991	4A02	03					STRZ,R3		
4992	4A03	A7	41				SUBI,R3	'A'	
4993	4A04	17	19				COMI,R3	19	
4994	4A05	1D	49	8C			BCTA,GT	COMD	
4995	4A06	D3					RRL,R3		
4996	4A07	67	80				IORI,R3	80	
4997	4A08	0E	01				STRR,R3	5+3	
4998	4A09	13	02				BCTR,UN	COMTEB	
4999	4A0A	4E	87		COMTEB		ACON	ISAVE	A=APPEND BUFFER AFTER LINE X
5000	4A0B	4B	42				ACON	BACK	B=BACK X LINES
5001	4A0C	4F	8F				ACON	CHANGE	C=CHANGE LINES
5002	4A0D	4D	16				ACON	DELT	D=DELETE X LINES FROM TOP
5003	4A0E	32	83				DATA	00,83	E=EXIT TO SUP.
5004	4A0F	4B	45				ACON	FORWD	F=FORWARD X LINES
5005	4A10	20	20				ACON	BASIC	G=GO TO BASIC

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5006	4A33	4F	26				ACON	SAVE	H=HOLD X LINES IN INSERT BUFFER
5007	4A34	4F	26				ACON	INST	I=INSERT LINES AFTER LINE X
5008	4A35	49	8C				ACON	COMD	
5009	4A36	49	8C				ACON	COMD	
5010	4A37	F1	70				ACON	LCADL	L=LOAD X LINES FROM DISK
5011	4A38	4E	0C				ACON	MODIFY	M=MODIFY STRING IN LINE X
5012	4A39	4A	5A				ACON	ULCASE	N=NORMAL LOWERCASE MODE
5013	4A41	45	8C				ACON	COMD	
5014	4A43	4E	A4				ACON	PMOD	P=PRESET MODIFY PATTERNS
5015	4A45	45	8C				ACON	COMD	
5016	4A47	45	8C				ACON	COMD	
5017	4A49	51	41				ACON	TAPEO	S=STORE X LINES TO DISK
5018	4A4B	49	8C				ACON	COMD	
5019	4A4D	4A	50				ACON	UPONLY	U=GO INTO UPPER CASE ONLY MODE
5020	4A4F	49	8C				ACON	COMD	
5021	4A51	49	8C				ACON	COMD	
5022	4A53	4E	0F				ACON	SEARCH	X=SEARCH FOR ASCII STRING X
5023	4A55	49	8C				ACON	COMD	
5024	4A57	49	8C				ACON	COMD	
5025	4A59						*		
5026	4A59	20				ULC	RES	1	
5027	4A5A					*			
5028	4A5A	20				ULCASE	FORZ,R2		
5029	4A5B	08	7C				STRR,R2	ULC	
5030	4A5D	1F	49	8C			BCTA,UN	COMD	
5031	4A60					*			
5032	4A60	04	FF			UPONLY	LODI,R2	FF	
5033	4A62	08	75				STRR,R2	ULC	
5034	4A64	1F	49	8C			BCTA,UN	COMD	
5035	4A67					*			
5036	4A67					*			
5037	4A67	E4	2B			OLC	COMI,R2	2B	
5038	4A68	1C	4B	26			BCTA,EC	ENDF	
5039	4A6C	14	21				COMI,R2	2D	
5040	4A6E	1C	4B	04			BCTA,EC	BFGNB	
5041	4A71	E4	20				COMI,R2		
5042	4A72	1C	4F	46			BCTA,EC	FW15	
5043	4A75	E4	27				COMI,R2	'7'	
5044	4A78	1C	4B	42			BCTA,EC	BK15	
5045	4A7B	17					BCTR,UN		
5046	4A7C					*			
5047	4A7C	2E	08			CURIT	ACON	CURSOR+1	
5048	4A7E	20				LINEX	FES	1	
5049	4A7F					*			
5050	4A7F	3F	4B	A5		DISP	BSTA,UN	MTDA	
5051	4A82	01					STRZ,R1		
5052	4A83	20					FORZ,R2		
5053	4A84	0C	8A	7C			STRA,R2	*CURIT	
5054	4A87	0C	89	41			STRA,R2	DUMA+1	
5055	4A8A	08	72				STRR,R2	LINEX	
5056	4A8C	3F	2F	EE	LINEO		BSTA,UN	OLFCR	
5057	4A8F	20	8A	7C			LOTA,R2	*CURIT	
5058	4A92	44	0F				ANDI,R2	F	
5059	4A94	14					BCTR,EC		
5060	4A9F	21	E9	40			LOTA,R1	*DUMA.1	

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LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5071	4A88	1E	4A	DF			ECTA,LT	CLREND	
5072	4A89	2F	61				LODR,R0	LINEX	
5073	4A8D	84	21				ADDI,R0	1	
5074	4A8E	0F	5D				STRZ,R0	LINEX	
5075	4A91	03					STBZ,R0		
5076	4A9C	14	79				COMI,R0	0	
5077	4A9A	10	05				ECTR,OT	TWOCH	
5078	4A9E	3F	2F	D2			BSTA,UN	WRTBL	
5079	4A9C	1F	07				ECTR,UN	WEND	
5070	4A9E	24	31			TWOCH	LODI,R0	1	
5071	4A9D	3F	2F	23			BSTA,UN	WRT	
5072	4A9D	A7	2A				SUBI,R3	A	
5073	4A9C	27	30			WRND	IORI,R3	'0'	
5074	4A94	23					LODZ,R3		
5075	4A9E	3F	2E	23			BSTA,UN	WRT	
5076	4A9E	3F	2F	D2			BSTA,UN	WRTBL	
5077	4A9E	2E	1E	40		NXTC	LODA,R1	*DUMA,I	
5078	4A9E	1A	1E				ECTR,LT	CLREND	
5079	4A9C	03					STRZ,R3		
5080	4A91	00	2E				EIRR,R1	NA1	
5081	4A9C	3F	4E	1A			BSTA,UN	AIDA	
5082	4A9C	2A	16				BCFP,LT	CLREND	
5083	4A9C	17	21			NA1	COMI,R3	CR	
5084	4A9A	10	4A	0C			ECTA,EC	LINENO	
5085	4A97	03					LODZ,R3		
5086	4A9E	3F	2E	23			BSTA,UN	WRT	
5087	4A9E	1E	68				ECTR,UN	NXTC	
5088	4A9D	20				EPASER	EORZ,R0		
5089	4A9A	0C	8A	7C			STRA,R2	*CURIT	
5090	4A97	3F	4A	DE			BSTA,UN	CLREND	
5091	4A9A	3F	2F	BE			BSTA,UN	OLFCR	
5092	4A9D	17					RETC,UN		
5093	4A9E	2C	8A	7C		CLREND	LODA,R0	*CURIT	
5094	4A91	F4	2F				TMI,R0	F	
5095	4A93	14					RETC,EC		
5096	4A94	3F	2F	BE			BSTA,UN	OLFCR	
5097	4A97	1B	78				ECTR,UN	CLREND	
5098	4A9C	22				FTEMP	PES	1	
5099	4A9A	3F	4B	A5		FWDX	BSTA,UN	MTDA	
5100	4A9C	0F				FWDX2	STRZ,R2		
5101	4A9E	01					LODZ,R1		
5102	4A9F	14					RETC,EC		
5103	4A9F	22					EORZ,R0		
5104	4A91	0C	09	41			STRA,R0	DUMA+1	
5105	4A94	0E	09	40		NXTCHR	LODA,R2	*DUMA,I	
5106	4A97	1A	1D				ECTR,LT	ENDFW	
5107	4A9E	0F	6E				STRZ,R0	FTEMP	
5108	4A9E	2A	11				EIRR,R1	CRCK	
5109	4A9D	3F	4B	1A			BSTA,UN	AIDA	
5110	4B00	1A	2C				ECTR,LT	CRCK	
5111	4B02	3F	4C	P4			BSTA,UN	SIDA	
5112	4B05	0F	FF				LODI,R2	FF	
5113	4B07	04	03				LODI,RP	EBC	
5114	4B0C	0E	09	40			STRA,R2	*DUMA,I	
5115	4B0C	1B	05				ECTR,UN	ENDFW	

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LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5116	4B0E	0E	59			CRCK	LODR,R2	FTEMP	
5117	4B10	04	0D				COMI,R0	CR	
5118	4B12	08	60				BCFP,EC	NXTCHR	
5119	4B14	09	5E				EIRR,R1	NXTCHR	
5120	4B16	0E	09	41		ENDFW	STRA,R2	DUMA+1	
5121	4B10	17					RETC,UN		
5122	4B1A	04	01			AIDA	LODI,R0	1	
5123	4B1C	0C	09	40			ADDA,R0	DUMA	
5124	4B1F	0C	09	40			STRA,R2	DUMA	
5125	4B22	1C	09	4C			COMA,R0	*IBST2	
5126	4B25	17					RETC,UN		
5127	4B26					*			
5128	4B26					*			
5129	4B26	3F	07			ENDF	BSTR,UN	FINDND	
5130	4B28	3F	4B	0C			BSTA,UN	MTCA	
5131	4B2B	25	01				LODI,R1	1	
5132	4B2D	1B	13				ECTR,UN	BACK	
5133	4B2F	3F	4B	A5		FINDND	BSTA,UN	MTDA	
5134	4B32	05	FF			FINDND2	LODI,R1	FF	
5135	4B34	3F	4A	ED			BSTA,UN	FWDX2	
5136	4B37	0C	09	40			LODA,R0	*DUMA	
5137	4B3A	16					RETC,LT		
5138	4B3E	0C	09	41			LODA,R0	DUMA+1	
5139	4B3E	1B	72				ECTR,UN	FINDND2	
5140	4B40	0E	0F			BK15	LODI,R1	F	
5141	4B42	3B	0C			BACK	BSTR,UN	BACKY	
5142	4B44	1B	05				ECTR,UN	FWBKD	
5143	4B46	0E	0F			FW15	LODI,R1	F	
5144	4B48	3F	4A	EA		FORWD	BSTA,UN	FWDY	
5145	4B4E	3B	33			FWBKD	BSTR,UN	MTCA	
5146	4B4D	1F	49	08			ECTA,UN	FBDN	
5147	4B50	3F	4B	A5		BACKX	BSTA,UN	MTDA	
5148	4B53	02					STRZ,R2		
5149	4B54	20					EORZ,R0		
5150	4B55	0C	09	41			STRA,R0	DUMA+1	
5151	4B58	05	01				ADDI,R1	1	
5152	4B5A	1B	03				ECTR,UN	CHEK	
5153	4B5C	0E	09	40		SUBL	LODA,R2	*DUMA,-	
5154	4B5F	03				CHEK	STRZ,R3		
5155	4B60	16	00				COMI,R2	0	
5156	4B62	08	08				BCFP,EC	NOSU	
5157	4B64	3F	4C	B4			BSTA,UN	SIDA	
5158	4B67	1C	09	4A			COMA,R0	*BSTR2	
5159	4B6A	1A	28				ECTR,LT	BEGNR	
5160	4B6C	F7	0D			NOSU	COMI,R3	CR	
5161	4B6F	08	0C				BCFP,EC	SUBL	
5162	4B70	12	6A				EIRR,R1	SUBL	
5163	4B72	16	00				COMI,EC	0	
5164	4B74	3C	4B	1A			ECTA,EC	AIDA	
5165	4B77	06	01				ADDI,R2	1	
5166	4B79	3C	4B	1A			BSTA,EC	AIDA	
5167	4B7C	0F	09	41			STRA,R2	DUMA+1	
5168	4B7F	17					RETC,UN		
5169	4B80	0C	09	40		MTCA	LODA,R0	DUMA	
5170	4B83	0C	09	3E			STRA,R2	CURA	

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
8171	4E8E	20	29	41			LODA,R2	DUMA+1	
8172	4E8F	30	29	3F			STRA,R2	CURA+1	
8173	4E90	17					RETC,UN		
8174	4E91					*			
8175	4E92					*			
8176	4E93	3F	2E			CREATE	BSTR,UN	BEGIN2	
8177	4E94	24	23				LODI,R2	ERC	
8178	4E95	30	29	2E			STRA,R2	*CURA	
8179	4E96					*			
8180	4E97	3F	4B	2A		BEGR8	BSTA,UN	BEGIN2	
8181	4E98	1F	49	29			BCTA,UN	FBDN	
8182	4E99	20	29	4A		BEGIN2	LOLA,R2	*BSTR2	
8183	4E9A	30	29	2E			STRA,R2	CURA	
8184	4E9B	22					FORZ,R2		
8185	4E9C	30	29	3F			STRA,R2	CURA+1	
8186	4E9D	17				*	RETC,UN		
8187	4E9E					*			
8188	4E9F	20	29	3F		*TDA	LODA,R2	CURA	
8189	4EA0	30	29	42			STRA,R2	DUMA	
8190	4EA1	30	29	3F			LODA,R2	CURA-1	
8191	4EA2	30	29	41			STRA,R2	DUMA-1	
8192	4EA3	17				*	RETC,UN		
8193	4EA4					*			
8194	4EA5	27	23			DECOUT	COMI,R3	63	
8195	4EA6	26	27				BCTP,CT	NO122	
8196	4EA7	24	31				LODI,R2	'1'	
8197	4EA8	3F	2E	23			BSTA,UN	WRT	
8198	4EA9	A7	24				SUBI,R3	64	
8199	4EAA	26	20			NO120	LODI,R2	2	
8200	4EAB	30	29			SUB12	COMI,R3	0	
8201	4EAC	26	26				BCTP,CT	TENIN	
8202	4EAD	A7	2A				SUBI,R1	A	
8203	4EAE	26	21				ADDI,R2	1	
8204	4EAF	15	26				BCTA,UN	SUB12	
8205	4EB0	22				TENIN	LODE,R2		
8206	4EB1	24	32				ICRI,R2	'0'	
8207	4EB2	3F	2E	23			BSTA,UN	WRT	
8208	4EB3	23					LODE,R3		
8209	4EB4	24	32				ICRI,R2	'0'	
8210	4EB5	3F	2E	23			BSTA,UN	WRT	
8211	4EB6	17				*	RETC,UN		
8212	4EB7					*			
8213	4EB8					*			
8214	4EB9	3F	4A	23		INST	BSTA,UN	FRASE2	
8215	4EBA	3F	4C	DA			BSTA,UN	IBADD	
8216	4EBB	3F	4A	EA			BSTA,UN	FWDX	
8217	4EBC	3F	4B	29			BSTA,UN	WFOA	
8218	4EBD	3F	4B	2F			BSTA,UN	FINDND	
8219	4EBE	26	20				LODI,R1	20	
8220	4EBF	3F	2E	17		NEXI	BSTA,UN	GITKE	
8221	4EC0	24	28				COMI,R2	RS	
8222	4EC1	1C	4C	15			BCTA,EC	BACKN	
8223	4EC2	14	29				COMI,R2	HT	
8224	4EC3	1C	4D	63			BCTA,EC	TARO	

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
8226	4EF4	14	23				COMI,R2	ETX	
8227	4EF5	19	2F				BCTP,EC	BYFAS	
8228	4EF6	3F	4F	49			BSTA,UN	CICTRL	
8229	4EF7	1A	2A				BCTA,LT	NEXI	
8230	4EF8	2E	E9	42		EYPAS	BSTA,R1	*TMPAE,I	
8231	4EF9	24	23				COMI,R2	ETX	
8232	4EFA	16	31				BCTP,EC	ENDI	
8233	4EFB	14	2D				COMI,R2	CR	
8234	4EFC	30	2F	55			BSTA,EC	LFOP	
8235	4EFD	3B	22				BSTR,UN	INSTS2	
8236	4EFE	1E	2A				BCTA,UN	NEXI	
8237	4EFF					*			
8238	4EF0	24	21			INSTS2	LODI,R2	1	
8239	4EF1	26	22				LODI,R2	2	
8240	4EF2	3F	4D	47			BSTA,UN	ADDANY	
8241	4EF3	30	29	4C			COMA,R2	*IBST2	
8242	4EF4	1A	2A				BCTA,LT	INCR2	
8243	4EF5	3F	4C	B4			BSTA,UN	SIDA	
8244	4EF6	24	2E				LODI,R2	FE	
8245	4EF7	30	29	41			STRA,R2	DUMA+1	
8246	4EF8	1B	19				BCTA,UN	ENDINS	
8247	4EF9	19	2D			INCR2	BIRR,R1	RETCUN	
8248	4EFA	24	21				LODI,R2	1	
8249	4EFB	30	29	42			ADDA,P2	TMPAE	
8250	4EFC	1C	29	50			COMA,R2	*ENDRM2	
8251	4EFD	2A	24				BCTA,LT	STRTMP	
8252	4EFE	26	29	42			STRA,R2	TMPAE	
8253	4EFF					RETCUN	RETC,UN		
8254	4F00	24	21			STRTMP	LODI,R2	1	
8255	4F01	26	22				LODI,R2	2	
8256	4F02	3F	4C	F6			BSTA,UN	SUBANY	
8257	4F03	25	2F				LODI,R1	FF	
8258	4F04	24	23			ENDINS	LODI,R2	ETX	
8259	4F05	2D	29	42			STRA,R1	*TMPAE,I	
8260	4F06					*			
8261	4F07					*	DUMA	HAS THE ADDRESS OF NEW LAST BYTE OF BUFFER	
8262	4F08					*			
8263	4F09	20	29	40		ENDI	LODA,R2	DUMA	
8264	4F0A	30	29	42			STRA,R2	TMPAE	
8265	4F0B	2F	29	41			LODA,R3	DUMA+1	
8266	4F0C	3F	4B	2F			BSTA,UN	FINDND	
8267	4F0D	3F	4C	BD			BSTA,UN	SDCA	
8268	4F0E	2D	29	41			LODA,R1	DUMA+1	
8269	4F0F	20					FORZ,R2		
8270	4F10	30	29	41			STRA,R2	DUMA+1	
8271	4F11	30	29	43			STRA,R2	TMPAE-1	
8272	4F12	2D	29	42		DOWN	LODA,R1	*DUMA,I	
8273	4F13	2F	29	42			STRA,R3	*TMPAE,I	
8274	4F14	24	21				LODI,R2	1	
8275	4F15	26	22				LODI,R2	2	
8276	4F16	3F	4C	F6			BSTA,UN	SUBANY	
8277	4F17	2B	25				BCTP,EC	NCOI	
8278	4F18	2C	29	45			LODA,R2	BSA1+1	
8279	4F19	1B	1E			*	BCTA,EC	INSTDN	
8280	4F1A					*			

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5261	4061	A5	01			NCCK	SUBI,R1	1	
5262	4072	F5	FF				COMI,R1	FF	
5263	4072	98	08				ECFR,EC	NS1DA	
5264	4074	3F	4C	B4			BSTA,UN	S1DA	
5265	4077	FC	89	4A			COMA,R0	*BSTR2	
5266	407A	1A	10				ECTR,LT	INSTDN	
5267	407C	A7	01			NS1DA	SUBI,R3	01	
5268	407E	F7	FF				COMI,R3	FF	
5269	4082	98	58				ECFR,EC	DOWN	
5270	4081	20	29	42			LODA,R0	TMPAE	
5271	4084	A4	21				SUBI,R0	01	
5272	4087	CC	06	4C			STRA,R0	TMPAE	
5273	408A	1B	4E				BCTR,UN	DOWN	
5274	408C					*			
5275	4090	3F	4C	DA		INSTEN	BSTA,UN	IBADD	
5276	409F	3F	4E	A5			BSTA,UN	MTDA	
5277	4092	C1					STRZ,R1		
5278	4097	22					FORZ,R0		
5279	4094	CC	09	41			STRA,R0	DUMA+1	
5280	4097	07	FF				LODI,R0	FF	
5281	4099	21	A6	42		INSERT	LODA,R3	*TMPAE,+	
5282	409C	F4	27				COMI,R0	ETX	
5283	409E	18	0F				ECTR,EC	INSTE	
5284	40A2	01	E0	40			STRA,R1	*DUMA,I	
5285	40A3	F7	FF				COMI,R3	FF	
5286	40A5	3C	41	2D			BSTA,EC	A1TA	
5287	40A8	D9	0F				BIRR,R1	INSERT	
5288	40AA	3F	4E	1A			BSTA,UN	A1DA	
5289	40AD	1A	6A				BCTR,LT	INSERT	
5290	40AF	25	01			INSTE	LODI,R1	1	
5291	40B1	1F	4E	42			BCTA,UN	BACK	
5292	40B4					*			
5293	40B4	20	29	42		S1DA	LODA,R0	DUMA	
5294	40F7	A4	21				SUBI,R0	1	
5295	4096	CC	09	42			STRA,R0	LUMA	
5296	409C	17					RETC,UN		
5297	409D					*			
5298	409D	20	29	41		SDCA	LODA,R0	DUMA+1	
5299	409E	AC	09	3F			SUBA,R0	CURA+1	
5300	409C	CC	09	45			STRA,R0	BSA1+1	
5301	4096	77	28				PPSL	WC	
5302	4095	20	29	40			LODA,R0	LUMA	
5303	4095	AC	09	3E			SUBA,R0	CURA	
5304	4097	CC	09	44			STRA,R0	BSA1	
5305	4091	75	25				CPSL	WC	
5306	40F3	24	01				LODI,R0	1	
5307	40D5	26	06				LODI,R0	6	
5308	40D7	1F	4D	47			BCTA,UN	ADDANT	
5309	40DA					*			
5310	40DA	20	29	4C		IBADD	LODA,R0	*IBST2	
5311	40DD	CC	09	42			STRA,R0	TMPAE	
5312	40E0	20					FORZ,R0		
5313	40E1	CC	09	43			STRA,R0	TMPAE+1	
5314	40E4	17					RETC,UN		
5315	40E5					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5316	40E5	3F	2F	61		PACKN	BSTA,UN	BACK1	
5317	40E8	1F	4F	F7			BCTA,LT	NEXI	
5318	40E1	24	01				LODI,R0	1	
5319	40E2	26	02				LODI,R2	2	
5320	40E7	3F	4C	F6			BSTA,UN	SUBANY	
5321	40F2	1F	4B	F7			BCTA,UN	NEXI	
5322	40F5					*			
5323	40F5					*			
5324	40F5	20				STORE	RES	1	
5325	40F6	05	7D			SUBANY	STRP,R0	STORE	
5326	40F8	2E	59	3F			LODA,R2	CURA+1,I	
5327	40FB	A8	78				SUBR,R0	STORE	
5328	40FD	CE	59	3F			STRA,R2	CURA+1,I	
5329	4D00	77	28				PPSL	WC	
5330	4D02	0E	69	3E			LODA,R2	CURA,I	
5331	4D05	A4	80				SUBI,R0	0	
5332	4D07	CE	69	3E			STRA,R2	CURA,I	
5333	4D0A	75	28				CPSL	WC	
5334	4D0C	17					RETC,UN		
5335	4D0D					*			
5336	4D0D	04	01			A1TA	LODI,R0	1	
5337	4D0F	0C	09	42			ADDA,R0	TMPAE	
5338	4D12	CC	09	42			STRA,R0	TMPAE	
5339	4D15	17					RETC,UN		
5340	4D16					*			
5341	4D16	3F	4A	EA		DELT	BSTA,UN	FWDK	
5342	4D1C	3F	05				BCTR,UN	SHIF	
5343	4D1B	26	01				LODI,R1	1	
5344	4D1D	1F	4B	42			BCTA,UN	BACK	
5345	4D20					*			
5346	4D20	2F	09	3E		SHIF	LODA,R3	CURA	
5347	4D23	CF	09	42			STRA,R3	TMPAE	
5348	4D26	0F	06	3F			LODA,R3	CURA-1	
5349	4D29	0D	09	41			LODA,R1	DUMA+1	
5350	4D2C	20					FORZ,R0		
5351	4D2D	CC	09	43			STRA,R0	TMPAE+1	
5352	4D30	CC	09	41			STRA,R0	DUMA+1	
5353	4D33	2D	E9	40		UP	LODA,R1	*DUMA,I	
5354	4D36	CF	E9	42			STRA,R3	*TMPAE,I	
5355	4D39	16					RETC,LT		
5356	4D3A	87	01				ADDI,R3	1	
5357	4D3C	3C	41	0D			BSTA,EC	A1TA	
5358	4D3F	D9	72				BIRR,R1	UP	
5359	4D41	3F	4B	1A			BSTA,UN	A1DA	
5360	4D44	1A	6D				BCTR,LT	UP	
5361	4D45	17					RETC,UN		
5362	4D47					*			
5363	4D47	AE	69	3F		ADDANT	ADDA,R2	CURA-1,I	
5364	4D4A	CE	69	3F			STRA,R2	CURA-1,I	
5365	4D4D	77	28				PPSL	WC	
5366	4D4F	22					FORZ,R0		
5367	4D50	2E	69	3E			ADDA,R2	CURA,I	
5368	4D53	CE	69	3E			STRA,R2	CURA,I	
5369	4D56	75	28				CPSL	WC	
5370	4D58	17					RETC,UN		

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5391	4DE9					*			
5392	4DE9					NOTPON	LODI,R3	MSGI-MSG02	
5393	4DE9	27	19				ECTA,UN	ERROR2	
5394	4DEB	1F	2F	4C		TME	LODI,R3	MSGD-MSG02	
5395	4DEE	07	10				ECTA,UN	ERROR2	
5396	4DE7	1F	2F	4C		*			
5397	4DE3					TABO	BSTA,UN	TABSUB	
5398	4DE3	3F	4D	79			ECTA,EC	NEXI	
5399	4DE6	1C	4B	E7		TIS	LODI,R0		
5400	4DE5	24	20				STRA,R1	*TMPAE,I	
5401	4DEB	0D	FB	42			BSTA,UN	WRT	
5402	4DE5	3F	2E	23			BSTA,UN	INSTS2	
5403	4D71	3F	4C	2D			BSTA,UN		
5404	4D74	3F	73				BSTA,UN	TIS	
5405	4D76	1F	4F	E7		*			
5406	4D79					TABSUB	LODI,R3	FF	
5407	4D7E	2C	29	42			LODA,R0	TMPAE	
5408	4D7E	0C	29	44			STRA,R0	BSA1	
5409	4D81	07	29	45			STRA,R1	BSA1+1	
5410	4D84	07	31			TL1	ADDI,R3	1	
5411	4D86	04	01				LODI,R0	1	
5412	4D89	06	06				LODI,R2	6	
5413	4D8A	3F	4C	F6			BSTA,UN	SUBANY	
5414	4DBD	EC	89	4C			COMA,R0	*IBST?	
5415	4DB0	1A	27				ECTR,LT	CRFND	
5416	4DB2	0C	88	44			LODA,R0	*PSA1	
5417	4DB5	14	2D				COMI,R0	CR	
5418	4DB7	06	6B				ECTR,EC	TL1	
5419	4DB9	06	FF			CRFND	LODI,R2	FF	
5420	4DBE	0E	29	52		TL2	LODA,R2	TABS,+	
5421	4DBE	18	23				COMI,R2	03	
5422	4DA2	14					RETC,EC		
5423	4DA1	17					COMZ,R3		
5424	4DA2	09	77				ECTR,ST	TL2	
5425	4DA4	A3					SUBZ,R3		
5426	4DA5	03					STRZ,R3		
5427	4DA5	17					RETC,UN		
5428	4DA7					*			
5429	4DA7	3F	4E	A5		S2	BSTA,UN	MTDA	
5430	4DA8	01					STRZ,R1		
5431	4DA8	20					IORZ,R0		
5432	4DAC	0C	29	41			STRA,R0	DUMA+1	
5433	4DA7	0C	2E	05			STRA,R0	SSTAT	
5434	4DB2	0C	29	42			LODA,R0	DUMA	
5435	4DB5	0C	29	42			STRA,R0	TMPAE	
5436	4DB8	0D	39	43			STRA,R1	TMPAE-1	
5437	4DB8	06	FF			REDO	LODI,R2	FF	
5438	4DB1	0E	29	5E		SL2	LODA,R2	NAME2,-	
5439	4DC2	18	33				ECTR,EC	FOUND	
5440	4DC2	3F	45	A6			BSTA,UN	LTOU	
5441	4DCE	1C	10				COMI,R2	10	
5442	4D37	18	2C				ECTR,EC	FOUND	
5443	4DC9	03					STRZ,R3		
5444	4DCA	01	E9	42			LODA,R1	*DUMA,I	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5446	4DCD	1E	4E	26			ECTA,LT	NF	
5447	4DD2	3F	45	A6			BSTA,UN	LTOU	
5448	4DD3	0C	29	76			STRA,R0	TMPS	
5449	4DD6	D9	05				BIRR,R1	NCAD	
5450	4DD8	3F	4B	1A			BSTA,UN	AIDA	
5451	4DD8	0A	29				ECTR,LT	NF	
5452	4DD1	0C	29	76		NCAD	LODA,R0	TMPS	
5453	4DE0	E3					COMZ,R3		
5454	4DE1	18	5A				ECTR,EC	SL2	
5455	4E13	04	01				LODI,R0	1	
5456	4E15	06	04				LODI,R2	4	
5457	4DE7	3F	4D	47			BSTA,UN	ADDANY	
5458	4E1A	0C	29	42			LODA,R0	TMPAE	
5459	4E1C	0C	29	42			STRA,R0	DUMA	
5460	4DF0	2D	09	43			LODA,R1	TMPAE+1	
5461	4DF3	1F	46				ECTR,UN	RETC	
5462	4DF5	0D	29	41		FOUND	STRA,R1	DUMA+1	
5463	4DF8	0F	09	77			STRA,R2	TEMP	
5464	4DFB	22					LOI2,R2		
5465	4DFC	06	02				LODI,R2	02	
5466	4DFE	3F	4C	F6			BSTA,UN	SUBANY	
5467	4E01	0E	09	77			LODA,R2	TEMP	
5468	4E04	17					RETC,UN		
5469	4E05					*			
5470	4E05	02				SSTAT	RES	1	
5471	4E06	04	FF			NF	LODI,R0	FF	
5472	4E08	08	7B				STRR,R0	SSTAT	
5473	4E0A	3F	4B	A5			BSTA,UN	MTDA	
5474	4E0D	17				*			
5475	4E0E					SEARCH	LODI,R1	01	
5476	4E10	3F	4A	EA			BSTA,UN	FWDX	
5477	4E13	3F	4F	80			BSTA,UN	MTCA	
5478	4E16	3F	4F	A7			BSTA,UN	S2	
5479	4E19	06	6A				LODR,R2	SSTAT	
5480	4E1B	1E	4F	59			ECTA,LT	NOTPON	
5481	4E1E	3F	4B	80			BSTA,UN	MTCA	
5482	4E21	05	02				LODI,R1	00	
5483	4E23	1F	4B	42			ECTA,UN	BACK	
5484	4E26					*			
5485	4E26	3F	4C	DA		SAVE	BSTA,UN	IBADD	
5486	4E29	3F	4A	EA			BSTA,UN	FWDX	
5487	4E2C	3F	4C	BD			BSTA,UN	SDCA	
5488	4E2F	3F	4B	A5			BSTA,UN	MTDA	
5489	4E32	01					STRZ,R1		
5490	4E33	20					IORZ,R0		
5491	4E34	0C	29	41			STRA,R0	DUMA+1	
5492	4E37	03					STRZ,R3		
5493	4E38	2D	E9	40		SL	LODA,R1	*DUMA,I	
5494	4E3B	0F	E9	42			STRA,R3	*TMPAE,I	
5495	4E3E	D9	05				BIRR,R1	CKR3	
5496	4E40	3F	4B	1A			BSTA,UN	AIDA	
5497	4E4C	0A	1A				ECTR,LT	SL3	
5498	4E45	DE	08			CKR3	BIRR,R3	SLCK	
5499	4E47	3F	4D	2D			BSTA,UN	AITA	

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5521	4E4A	0C	89	52			COMA,R2	*ENDRM2	
5522	4E4D	1A	02				BCTR,LT	SLCK	
5523	4E4F	24	21			SICK	LODI,R0	1	
5524	4E51	26	26				LODI,R2	6	
5525	4E53	3F	4C	F6			BSTA,UN	SUBANY	
5526	4E55	59	20				BCFR,EQ	SL	
5527	4E56	2C	23	45			LODA,R0	BSA1+1	
5528	4E58	F4	01				COMI,R2	1	
5529	4E5F	26	26				BCTR,EQ	SL	
5530	4E61	0F	EQ	42		SL3	LODI,R0	ETX	
5531	4E64	1F	49	8C			STRA,R3	*TMPAE,I	
5532	4E67						BCTA,UN	COMD	
5533	4E67					*			
5534	4E67	3F	44	EA		ISAVE	BSTA,UN	FWDX	
5535	4E6A	3F	4B	82			BSTA,UN	MTCA	
5536	4E6C	3F	43	CF			BSTA,UN	FINDND	
5537	4E69	3F	4C	DA			BSTA,UN	IBADD	
5538	4E73	26	26				LODI,R1	2	
5539	4E75	74	03			ISL2	LODI,R0	ETX	
5540	4E77	1D	F9	42		ISL	COMA,R1	*TMPAE,I	
5541	4E7A	1P	2D				BCTR,EQ	IFOUND	
5542	4E7C	D9	79				BIRR,R1	ISL	
5543	4E7E	3E	41	2D			BSTA,UN	A1TA	
5544	4E81	1C	69	52			COMA,R0	*ENDRM2	
5545	4E84	2E	49	89			BCFA,LT	FBDN	
5546	4E87	1P	6C				BCTR,UN	ISL2	
5547	4E89	2C	23	42		IFOUND	LODA,R0	TMPAE	
5548	4E8C	AC	89	4C			SUBA,R0	*IBST2	
5549	4E8F	8C	29	42			ADDA,R0	DUMA	
5550	4E92	2C	23	42			STRA,R0	DUMA	
5551	4E95	01					LODZ,R1		
5552	4E96	2E	22				LODI,R2	22	
5553	4E98	71	41	47			BSTA,UN	ADDANY	
5554	4E9B	1C	89	4C			COMA,R0	*IBST2	
5555	4E9E	3F	4D	5E			BCFA,LT	TME	
5556	4EA1	1F	4C	41			BCTA,UN	ENDI	
5557	4EA4					*			
5558	4EA4	26	15			PMOD	LODI,R2	15	
5559	4EA6	2A	2F				LODI,R1	2F	
5560	4EA8	3F	2D	F7			BSTA,UN	SETCUR	
5561	4EA8	3F	2F	8E			BSTA,UN	OLFCR	
5562	4EA5	25	FF				LODI,R1	FF	
5563	4E90	21	29	6E		NXTNM	LODA,R1	NAME2,+	
5564	4E93	01	72	37			STRA,R1	MNAME,I	
5565	4E96	15	2F				COMI,R1	F	
5566	4E98	98	78				BCFR,EQ	NITNM	
5567	4E9A	27	23			WRIMB	LODI,R3	MSGF-MSG02	
5568	4E9C	3F	2F	DC			BSTA,UN	PRING	
5569	4E9F	25	55				LODI,R1	MBUF	
5570	4F01	24	49				LODI,R0	MBUF	
5571	4F03	06	10				LODI,R2	10	
5572	4F05	3F	2E	CB			BSTA,UN	ARROW	
5573	4F08	1F	49	8C			BCTA,UN	CCMD	
5574	4F08					*			
5575	4F08					MTEMP	RES	1	

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5556	4F0C	01				MODIFY	LODZ,R1		
5557	4E0D	1C	49	8C			BCTA,EO	COMD	
5558	4E10	A5	01				SUBI,R1	1	
5559	4E12	3F	4A	EA			BSTA,UN	FWDX	
5560	4E15	3F	4B	82			BSTA,UN	MTCA	
5561	4E18	05	FF				LODI,R1	FF	
5562	4E1A	06	10				LODI,R2	10	
5563	4E1C	2D	32	37		XFER	LODA,R1	MNAME,-	
5564	4E1F	0D	69	66			STRA,R1	NAME2,I	
5565	4E22	1A	78				EDRR,R2	XFER	
5566	4E24	25	01				LODI,R1	1	
5567	4E26	3F	4A	EA			BSTA,UN	FWDX	
5568	4E29	0C	89	42			LODA,R0	*DUMA	
5569	4E2C	0F	5D				STRA,R0	*MTEMP	
5570	4E2E	04	83				LODI,R0	EBC	
5571	4E30	0C	89	42			STRA,R0	*DUMA	
5572	4E33	3F	41	A7			BSTA,UN	S2	
5573	4E36	01	29	76			STRA,R2	TMPS	
5574	4E39	3F	4B	82			BSTA,UN	MTCA	
5575	4E3C	05	01				LODI,R1	1	
5576	4E3E	3F	4A	EA			BSTA,UN	FWDX	
5577	4F01	28	48				LODR,R0	MTEMP	
5578	4F03	0C	89	40			STRA,R0	*DUMA	
5579	4F06	2C	0E	05			LODA,R0	SSTAT	
5580	4F09	1E	4D	59			BCTA,LT	NOTFON	
5581	4F0C	3F	4B	A5			BSTA,UN	MTDA	
5582	4F0F	0C	29	76			LODA,R0	TMPS	
5583	4F12	26	02				LODI,R2	2	
5584	4F14	3F	4D	47			BSTA,UN	ADDANY	
5585	4F17	3F	4D	20			BSTA,UN	SHIF	
5586	4F1A	3F	4C	DA			BSTA,UN	IBADD	
5587	4F1D	05	FF				LODI,R1	FF	
5588	4F1F	0D	29	55		ML1	LODA,R1	MBUF,-	
5589	4F22	18	29				BCTR,EQ	ENDM	
5590	4F24	0D	E9	42			STRA,R1	*TMPAE,I	
5591	4F27	15	0F				COMI,R1	0F	
5592	4F29	98	74				BCFR,EQ	ML1	
5593	4F2B	85	10				LODI,R1	10	
5594	4F2D	24	23			ENDM	LODI,R0	ETX	
5595	4F2F	0D	F9	42			STRA,R1	*TMPAE,I	
5596	4F32	0D	29	76			STRA,R1	TMPS	
5597	4F35	3F	4B	2F			BSTA,UN	FINDND	
5598	4F38	0C	89	76			LODA,R0	TMPS	
5599	4F3B	26	02				LODI,R2	2	
5600	4F3D	3F	4D	47			BSTA,UN	ADDANY	
5601	4F40	1C	89	4C			COMA,R0	*IBST2	
5602	4F43	0E	41	5E			BCFA,LT	TME	
5603	4F46	1F	4C	41			BCTA,UN	ENDI	
5604	4F49					*			
5605	4F49	14	2D			CKCTRL	COMI,R0	CR	
5606	4F4B	58	05				BCFR,EQ	CKLP12	
5607	4F4D	75	82				CPSL	82	
5608	4F4F	77	42				PSSL	42	
5609	4F51	17					RETC,UN		
5610	4F52	24	FF			CKLP12	ECRI,R0	FF	

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5611	4F54	27	12				PPSL	RS	
5612	4F56	C1					STRZ,R1		
5613	4F57	24	FF				EORI,RP	FF	
5614	4F58	FF	E0				TMI,R1	E0	
5615	4F59	88	85				BCFR,EG	NOCTCK	
5616	4F5D	77	88				PPSL	87	
5617	4F5F	76	58				CPSL	58	
5618	4F61	17					CPTC,UN		
5619	4F62	75	D4			NOCTCK	CPSL	D0	
5620	4F64	17					RETC,UN		
5621	4F65					*			
5622	4F65	21				CHANGE	LODZ,R1		
5623	4F66	10	49	80			BCTA,EO	COMD	
5624	4F69	3F	40	DA			BSTA,UN	IBADD	TMPAE=IBST
5625	4F6C	A5	01				SUBI,R1	1	
5626	4F6E	3F	4A	EA			BSTA,UN	FWDY	
5627	4F71	3F	4B	90			BSTA,UN	MTCA	CURA=ADDRESS OF BYTE TO CHANGE
5628	4F74	3F	4A	03			BSTA,UN	ERASE2	
5629	4F77	3F	4B	2F			BSTA,UN	FINDND	DUMA=END OF BUFFER
5630	4F7A	20	29	3E			LODA,R0	CURA	CHGA=ADDRESS OF BYTE TO CHANGE
5631	4F7E	20	29	46			STRA,R0	CHGA	
5632	4F82	20	29	3F			LODA,R0	CURA-1	
5633	4F83	20	29	47			STRA,R0	CHGA-1	
5634	4F86	28	20				LODI,R1	00	
5635	4F88	3F	2E	55		DISPL	BSTA,UN	LFCR	
5636	4F8B	20	2A	70			LODA,R0	*CURIT	
5637	4F8E	F4	2F				TMI,R0	F	
5638	4F90	30	4A	03			BSTA,EC	ERASE2	
5639	4F93	20	29	46			LODA,R0	CHGA	
5640	4F97	20	29	44			STRA,R0	BSA1	
5641	4F99	20	29	47			LODA,R0	CHGA-1	
5642	4F9C	20	29	46		DISPLP	LODA,R0	*CHGA	
5643	4F9F	1E	51	19			BCTA,LT	ENDCHG	EOF
5644	4FA2	F4	2D				COMI,R0	CR	
5645	4FA4	18	12				BCTR,EG	ELFND	
5646	4FA6	3F	2E	23			BSTA,UN	WPT	
5647	4FA9	24	21				LODI,R0	1	BUMP CHGA
5648	4FAE	06	02				LODI,R0	0	
5649	4FAD	3F	41	47			BSTA,UN	ADDANY	
5650	4F90	20	29	40			COMA,R0	*IBST2	
5651	4FB3	1A	07				BCTR,LT	DISPLP	
5652	4FEE	1F	51	19			BCTA,UN	ENDCHG	
5653	4F98	20	29	47		ELFND	STRA,R0	CHGA-1	
5654	4F9B	20	29	44			LODA,R0	BSA1	
5655	4F9E	20	29	46			STRA,R0	CHGA	
5656	4F01	3F	2E	55			BSTA,UN	LFCR	
5657	4F04	3F	2D	D7		CHGL	BSTA,UN	GETKB	
5658	4F07	F4	2E				COMI,R0	BS	
5659	4F09	98	25				BCTR,EG	NOCHES	
5660	4F0B	3F	51	21			BSTA,UN	CHBACK	
5661	4F0E	1F	74				BCTR,UN	CHGL	
5662	4F12	F4	20			NOCHES	COMI,R0	HT	TAB
5663	4FD2	08	15				BCTR,EG	NOHT	
5664	4FD4	3F	41	79			BSTA,UN	TABSUB	
5665	4FD7	18	08				BCTR,EG	CHGL	

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5666	4FD8	CF	03	44		TABL3	STRA,R0	BSA1	
5667	4FD9	27	20				LODI,R0		
5668	4FDE	3F	50	E1			BSTA,UN	STRTMS	
5669	4FE1	0F	09	44			LODA,R0	BSA1	
5670	4FE4	FE	73				BCTR,EG	TABL3	
5671	4FE6	F4	15	C4			BCTA,UN	CHGL	
5672	4FE9	F4	15			NOHT	COMI,R0	CTRLU	
5673	4FE8	98	2A				BCTR,EG	NOCOPY	
5674	4FEF	3F	50	CA			BSTA,UN	LOADD	
5675	4FF0	18	52				BCTR,EG	CHGL	
5676	4FF2	3F	50	E1			BSTA,UN	STRTMS	
5677	4FF5	1B	4D				BCTR,UN	CHGL	
5678	4FF7	E4	19			NOCOPY	COMI,R0	CTRLU	
5679	4FF9	98	26				BCTR,EG	NOCWD	
5680	4FFB	3F	50	CA		CWD1	BSTA,UN	LOADD	
5681	4FFE	18	44				BCTR,EG	CHGL	
5682	5000	F7	20				COMI,R0		
5683	5002	98	16				BCTR,EG	CWD3	
5684	5004	3F	50	E1			BSTA,UN	STRTMS	
5685	5007	1B	72				BCTR,UN	CWD1	
5686	5009	0F	09	46		CWD2	LODA,R0	*CHGA	
5687	500C	E7	20				COMI,R0		
5688	500E	10	4F	C4			BCTA,EG	CHGL	
5689	5011	F7	20				COMI,R0		
5690	5013	10	4F	C4			BCTA,EG	CHGL	
5691	5016	3F	50	CA			BSTA,UN	LOADD	
5692	5019	10	4F	C4			BCTA,EG	CHGL	
5693	501C	3F	50	E1		CWD3	BSTA,UN	STRTMS	
5694	501F	1B	68				BCTR,UN	CWD2	
5695	5021	F4	0E			NOCWD	COMI,R0	CTRLU	
5696	5023	98	35				BCTR,EG	NOERWD	
5697	5025	0D	09	49			STRA,R1	CHGST+1	
5698	5028	20	09	42			LODA,R0	TMPAI	
5699	502E	00	09	48			STRA,R0	CHGST	
5700	502E	06	0A			ERWD1	LODI,R0	A	
5701	5030	04	01				LODI,R0	1	
5702	5032	3F	4C	16			BSTA,UN	SUBANY	
5703	5035	00	09	48			LODA,R0	*CHGST	
5704	5038	F4	20				COMI,R0		
5705	503A	98	19				BCTR,EG	ERWD3	
5706	503C	3F	51	21			BSTA,UN	CHBACK	
5707	503F	1F	6D				BCTR,UN	ERWD1	
5708	5041	06	0A			ERWD2	LODI,R0	A	
5709	5043	04	01				LODI,R0	1	
5710	5045	3F	4C	16			BSTA,UN	SUBANY	
5711	5048	00	09	48			LODA,R0	*CHGST	
5712	504B	F4	20				COMI,R0		
5713	504D	10	4F	C4			BCTA,EG	CHGL	
5714	5050	F4	20				COMI,R0		
5715	5052	10	4F	C4			BCTA,EG	CHGL	
5716	5055	3F	51	21		ERWD3	BSTA,UN	CHBACK	
5717	5058	1B	67				BCTR,UN	ERWD2	
5718	505A	F4	12			NOERWD	COMI,R0	CTRLU	COPY TO END OF LINE
5719	505C	98	0B				BCTR,EG	NOCROL	
5720	505E	3F	50	CA		COPYLP	BSTA,UN	LOADD	

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5721	50E1	10	4F	C4			RCTA, EQ	CHGL	
5722	50E4	3F	50	E1			BSTA, UN	STRTMS	
5723	52E7	1F	7E				BCTR, UN	COPTLP	
5724	50E8	34	0F			NOCCEOL	COMI, R0	CTRLO	
5725	50E8	0E	06				BCFR, EQ	NODISC	
5726	50ED	3F	52	CA			BSTA, UN	LOADD	
5727	507E	1F	4F	C4			EFTA, UN	CHGL	
5728	5075	03				NODISC	STRZ, R3		
5729	5074	14	23				COMI, R0		
5730	5076	1E	9E				EFTA, EQ	BYPASS	
5731	5078	3F	4F	40			BSTA, UN	CKCTEL	
5732	5078	1E	4F	C4			EFTA, LT	CHGL	
5733	5078	3F	50	EE		BYPASS	BSTA, UN	STRZ2	
5734	5081	03					LODI, R3		
5735	5080	04	0D				COMI, R2	CR	
5736	5084	1E	0F				BCTR, EC	FNDCHL	
5737	508E	14	03				COMI, R0	ETX	
5738	508F	0C	4F	C4			PCFA, EC	CHGL	
5739	509B	04	01				LODI, R2	1	
5740	50A1	0E	22				LODI, R2	2	
5741	509E	3F	4C	FE			BSTA, UN	SUBANY	GET RID OF FTX BEING IN PICTURE
5742	5092	1F	50	A0			BSTA, UN	FNDCH	
5743	5093	3F	50	CA		ENDCCL	BSTA, UN	ICADD	
5744	5098	0E	0B				BCFR, EC	ENDCHL	
5745	509A	3F	52	D2			BSTA, UN	AISC	
5746	509D	1F	4F	00			BSTA, UN	DISPI	
5747	50A0					*			
5748	50A2	0C	09	40		ENDCH	LODA, R0	DUMA	
5749	50A3	0C	09	44			STRA, R0	BSA1	
5750	50A8	0C	09	41			LODA, R0	DUMA+1	
5751	50A8	0C	09	45			STRA, R0	BSA1+1	
5752	50A0	0C	09	46			LODA, R0	CHGA	
5753	50A0	0C	09	42			STRA, R0	DUMA	
5754	50E2	0C	09	47			LODA, R0	CHGA+1	
5755	50E0	0C	09	41			STRA, R0	DUMA+1	
5756	50E0	3F	41	20			BSTA, UN	SHIF	
5757	50E0	2C	75	44			LODA, R0	BSA1	
5758	50C1	0C	09	42			STRA, R0	DUMA	
5759	50C1	0C	09	45			STRA, R0	BSA1+1	
5760	50C4	0C	09	41			STRA, R0	DUMA+1	
5761	50C7	1F	4C	41			BSTA, UN	ENDI	
5762	50CA					*			
5763	50CA	2F	80	46		LOADD	LODA, R3	*CHGA	
5764	50CD	17	0D				COMI, R3	CR	
5765	50CF	14					RETC, EC		
5766	50D0	24	21			AISC	LODI, R0	1	DECR DUMA
5767	50D2	0E	22				LODI, R0	2	
5768	50D4	3F	4C	FE			BSTA, UN	SUBANY	
5769	50E7	24	01				LODI, R0	1	BUMP CHGA
5770	50E9	2E	2E				LODI, R0	2	
5771	50DB	3F	4D	47			BSTA, UN	ADDANY	
5772	50DE	04	50				LODI, R0	80	
5773	50E0	17					RETC, UN		
5774	50E1					*			
5775	50E1	23				STRTMS	LODZ, R3		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5776	50E2	3F	2E	23			BSTA, UN	WRT	
5777	50E5	23				STRZ2	LODZ, R3		
5778	50E6	0C	19	42			STRA, R1	*TMPAE, I	
5779	50E8	04	01				LODI, R0	1	BUMP DUMA
5780	50E8	0E	02				LODI, R0	2	
5781	50E1	3F	4C	47			BSTA, UN	ADDANY	
5782	50E0	1C	59	40			COMA, R0	*IBST2	
5783	50E3	1A	00				BCTR, LT	A1R1	
5784	50E5	3F	4C	B4			BSTA, UN	SIDA	
5785	50E8	04	FE				LODI, R0	FE	
5786	50FA	0C	09	41			STRA, R0	DUMA+1	
5787	50FD	1F	51	10			BSTA, UN	ENDCHG	
5788	5100	0C	09	42		A1R1	B1PR, R1	RETCN	
5789	5102	04	01				LODI, R0	1	
5790	5104	0C	09	42			ADDA, R0	TMPAI	
5791	5107	1C	59	50			COMA, R0	*ENDRM2	
5792	510A	0A	04				BCFR, LT	ABRUPT	
5793	510C	0C	09	42			STRA, R0	TMPAE	
5794	510F	17				RETCN	RETC, UN		
5795	5110	04	01			ABRUPT	LODI, R0	1	
5796	5112	0C	02				LODI, R0	2	
5797	5114	3F	4C	FE			BSTA, UN	SUBANY	
5798	5117	0E	FF				LODI, R1	FF	
5799	5119	04	03			ENDCHG	LODI, R0	ETX	
5800	511E	0C	19	42			STRA, R1	*TMPAE, I	
5801	511E	1F	50	A0			BSTA, UN	ENDCH	
5802	5121					*			
5803	5121	3F	2F	61		CHEACK	BSTA, UN	BACK1	
5804	5124	16					RETC, LT		
5805	5125	04	01				LODI, R0	1	
5806	5127	0E	02				LODI, R0	2	
5807	5129	3F	4C	FE			BSTA, UN	SUBANY	
5808	512C	17					RETC, UN		
5809	512D					*			
5810	512D	02	00	00		LOADLS	RES	3	
5811	5130					*			
5812	5132	3F	51	FC		LOADL	BSTA, UN	ACK	
5813	5133	3F	51	01			BSTA, UN	LOADA	
5814	5136	0C	51	3C			BCFA, EC	SCERR	
5815	5135	1F	49	89			BSTA, UN	FFDN	
5816	513C					*			
5817	513C	07	49			SCERR	LODI, R3	MSG12-MSG00	
5818	5131	1F	2F	4C			BSTA, UN	ERROR2	
5819	5141					*			
5820	5141	3F	51	FC		TAPEO	BSTA, UN	ACK	
5821	5144	0C	80	4A			LODA, R0	*BSTRZ2	
5822	5147	0C	09	40			STRA, R0	DUMA	
5823	514A	20				TAPEOT	IOFZ, R0		
5824	514B	0B	E7				STRR, R0	*SUMX	
5825	514D	0C	09	41			STRA, R0	DUM2	
5826	5150	07	3B				LODI, R3	'	
5827	5152	3F	02	4F			BSTA, UN	SFRO	
5828	5155	0E	FF				LODI, R1	FF	
5829	5157	01	29	56		NAMO	LODA, R1	NAME2, -	
5830	515A	03					STRZ, R3		

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S →

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
8831	816B	7F	02	4F			BSTA,UN	SERC	
8832	816E	1E	27				COMI,R1	07	
8833	8162	08	75				BCFR,EQ	NAMO	
8834	8167	0B	A0				LODR,R3	*SUMK	
8835	8164	3F	22	4F			BSTA,UN	SERO	
8836	8167	05	00				LODI,R1	00	
8837	8168	09	66				STRZ,R3	*SUMK	
8838	816B	2D	E9	40		BYTE0	LODA,R1	*DUMA,I	
8839	816F	C3					STRZ,R3		
8840	816F	1A	16				BCTR,LT	ENDO	
8841	8171	3F	22	4F			BSTA,UN	SERC	
8842	8174	D8	76				BIRR,R1	BYTE0	
8843	817C	2B	8C				LODR,R3	*SUMK	
8844	8178	3F	22	4F			BSTA,UN	SERC	
8845	817B	3F	4B	1A			BSTA,UN	AIDA	
8846	817E	0E	48	89			BCFA,LT	FBDN	
8847	8181	1F	51	4A			BCTA,UN	TAPECT	
8848	8184								
8849	8184	17	F8				SUMK	ACON	17F9
8850	8186								
8851	8186	3F	22	4F			ENDO	BSTA,UN	SERC
8852	818C	71	75				ENDT	LODR,R3	*SUMK
8853	818E	3F	22	4F			BSTA,UN	SERO	
8854	8191	1F	49	89			BCTA,UN	FBDN	
8855	8191								
8856	8191	3F	4F	A5		LOADA	BSTA,UN	MTDA	
8857	8194	20				WAITF	BCRZ,R0		
8858	8198	0C	91	84			STRA,R0		
8859	8198	3F	02	E9			BSTA,UN	*SUMK	
8860	819B	E7	38				COMI,R3	SERP	
8861	819D	08	75				BCFR,EQ	WAITF	
8862	819F	05	FF				LODI,R1	FF	
8863	81A1	3F	22	E9		NAML	BSTA,UN	SERP	
8864	81A4	2D	29	66			LODA,R1	NAMEZ,+	
8865	81A7	1B	03				PCTR,EC	OVE SI	
8866	81A9	E3					COMZ,R3		
8867	81AA	08	66				BCFR,EQ	WAITF	
8868	81AC	1E	07			OVERSI	COMI,R1	07	
8869	81AE	20	71				BCFR,EQ	NAML	
8870	81B0	3F	02	E9			BSTA,UN	SERP	
8871	81B3	2C	91	84			LODA,R0	*SUMK	
8872	81B5	16					RETC,LT		
8873	81B7	1F					RETC,GT		
8874	81B8	07	08	41			LODA,R1	DUM2	
8875	81B8	0C	28	41			STRA,R0	DUM2	
8876	81B8	0C	26	76			STRA,R0	TMPS	
8877	81C1	3F	02	E9		ASCII	BSTA,UN	SERP	
8878	81C4	03					LODR,R3		
8879	81C8	01	E9	40			STRA,R1	*DUMA,I	
8880	81D2	1A	2B				BCTR,LT	ENDING	
8881	81C4	DC	12				BIRR,R1	LL1	
8882	81C0	3F	4B	1A			BSTA,UN	AIDA	
8883	81C7	1A	2D				BCTR,LT	LL1	
8884	81D1	3F	40	E4			BSTA,UN	SIDA	
8885	81D4	26	FF				LODI,R1	FF	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
8886	81D6	04	FC				LODI,R0	FRC	
8887	81D9	CD	E0	40			STRA,R1	*DUMA,I	
8888	81DB	1F	4D	5F			BCTA,UN	TME	
8889	81DD	0B	02	76		LL1	LODA,R2	TMPS	
8890	81E1	86	01				ADDI,R2	01	
8891	81E7	01	02	76			STRA,R2	TMPS	
8892	81E6	96	50				BCFR,EQ	ASCII	
8893	81E8								
8894	81E8	3F	02	E9		ENDTP	BSTA,UN	SERP	
8895	81EB	0D	09	41			STRA,R1	DUM2	
8896	81EE	07	91	84			LODA,R3	*SUMK	
8897	81F1	1C	51	94			BCFA,EQ	WAITF	
8898	81F4	17					RETC,UN		
8899	81F5								
8900	81F5	3F	02	E9		ENDING	BSTA,UN	SERP	
8901	81F8	2C	91	84			LODA,R0	*SUMK	
8902	81F9	17					RETC,UN		
8903	81FC								
8904	81FC	07	63			AOR	LODI,R3	MSG1F-MSG02	
8905	81FE	3F	2F	DC			BSTA,UN	PRNG	
8906	8201	3F	2E	05			BSTA,UN	IRAS1	
8907	8204	17					RETC,UN		
8908	8205								
8909	8205								
8910	8205					MSG02	ECU	\$	
8911	820F	42	4C	4F	43	MSG0	ALIT	'BLOCKS LEFT:'	
8912	8209	4B	53	20	20				
8913	820D	4C	45	46	54				
8914	8211	3A	20	20					
8915	8214	FF							
8916	8215	54	4F	4F	20	MSGD	ALIT	FF	'TOO MUCH'
8917	8219	4D	55	43	49				
8918	821D	FF							
8919	821E	4E	4F	54	20	MSGE	ALIT	FF	'NOT FOUND'
8920	8222	46	4F	55	4E				
8921	8226	44							
8922	8227	FF							
8923	8228	4D	4F	44	49	MSGF	ALIT	FF	'MODIFY STRING '='
8924	822C	45	59	20	53				
8925	8230	54	52	49	4E				
8926	8234	47							
8927	8237	00	00	00	00	*NAME	RES	10	
8928	823B	02	00	00	00				
8929	823F	00	00	00	00				
8930	8243	02	00	00	00				
8931	8247	27	20	54	47				
8932	824B	02	27				ALIT	' TO '	
8933	824D	FF							
8934	824E	53	55	4D	43	MSG10	ALIT	FF	'SUMCHECK ERROR'
8935	8252	48	45	43	45				
8936	8256	20	45	52	52				
8937	825A	4F	52						
8938	825C	FF							
8939	825D	43	4F	4D	4D	MSG1D	ALIT	FF	'COMMAND:'
8940	8261	41	4E	44	3A				

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
8041	5265	20	22						
8042	5267	FF					DATA	FF	
8043	5268	22	4F	4B		MSG1F	ALIT	'OK'	
8044	526F	FF					DATA	FF	
8045	526C					*			
8046	526C					ZFP	ICU	\$	
8047	526C					*			
8048	526C	3F	52	FB		FPSQR	BSTA,UN	POPC3	
8049	526F	3F	52	F4			BSTA,UN	PUSHC3	
8050	5272	20	16	29			LOTA,R0	CSSIGN	
8051	5275	11	46	74			BCTA,LT	OVIEP	
8052	5276	3F	52	F5			BSTA,UN	POPC4	
8053	527E	20	16	32			LOTA,R0	CAEX	
8054	527E	32					FRP,R0		
8055	527F	44	77				ANDI,R0	77	
8056	5281	00	12	D5			STRA,R0	FPSQUT	
8057	5284	22					IORT,R2		
8058	5285	00	16	3F			STRA,R0	ZTEMP1	
8059	5288	3F	52	F2			BSTA,UN	PUSHC4	
8060	528B	24	E2				LODI,R0	QTR	
8061	528D	25	E0				LODI,R1	QTR	
8062	528F	3F	31	38			BSTA,UN	PUSHFP	
8063	5292	3F	3E	F1			BSTA,UN	FFMULT	
8064	5295	3F	02	F9			BSTA,UN	POPC4	
8065	5298	02	3P				LODR,R0	FPSQUT	
8066	529A	20	16	30			STRA,R0	CAEX	
8067	529D	3F	52	F2			BSTA,UN	PUSHC4	
8068	52A2	3F	45	E7			BSTA,UN	POPC2	
8069	52A3	3F	45	F1		SQU1	BSTA,UN	PUSHC2	
8070	52A6	3F	45	D9			BSTA,UN	POPC1	
8071	52A8	3F	52	F4			BSTA,UN	PUSHC3	
8072	52AC	3F	45	E0			BSTA,UN	PUSHC1	
8073	52A1	3F	3B	E2			BSTA,UN	FFDIV	
8074	52B2	3F	45	E0			BSTA,UN	PUSHC1	
8075	52E5	3F	3A	78			BSTA,UN	FFADD	
8076	52E8	3F	42	16			BSTA,UN	PUSHB	
8077	52E9	3F	3B	F1			BSTA,UN	FFMULT	
8078	52EB	24	01				LODI,R0	01	
8079	52ED	00	16	3F			ALTA,R0	ZTEMP1	
8080	5203	74	FF				COMI,R0	FF	
8081	5275	15					RETC,GT		
8082	5208	00	16	3F			STRA,R0	ZTEMP1	
8083	5209	3F	45	F7			BSTA,UN	POPC2	
8084	520C	3F	32	E2			BSTA,UN	COMNUM	
8085	520F	23					LODZ,R3		
8086	5212	05	F1				PCFR,EO	SQU1	
8087	52D2	1F	45	E1		SQUEND	BCTA,UN	PUSHC2	
8088	52D5					*			
8089	521B	00				FPSOUT	RES	1	
8090	52D6					*			
8091	52D6					*			
8092	52D6	24	57			PUSHH	LODI,R0	HALF	
8093	52D8	2F	4D				LODI,R1	HALF	
8094	52DA	1F	31	38			BCTA,UN	PUSHFP	
8095	52DD					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
8096	52DD					*			
8097	52DD	24	57			PS2	LODI,R0	TWO	
8098	52DF	05	F5				LODI,R1	TWO	
8099	52F1	1F	31	38			BCTA,UN	PUSHFP	
8220	52E4					*			
8221	52E4					*			
8222	5214	04	56			PUSHC3	LODI,R0	C3TEMP	
8223	5216	05	27				LODI,R1	C3TEMP	
8224	5218	1F	31	38			BCTA,UN	PUSHFP	
8225	52EB					*			
8226	52EE	04	56			POPC3	LODI,R0	C3TEMP	
8227	52ED	05	27				LODI,R1	C3TEMP	
8228	52EF	1F	31	55			BCTA,UN	POPPF	
8229	52F2					*			
8230	52F2	24	56			PUSHC4	LODI,R0	C4TEMP	
8231	52F4	25	2F				LODI,R1	C4TEMP	
8232	52F6	1F	31	38			BCTA,UN	PUSHFP	
8233	52F9					*			
8234	52F9	24	56			POPC4	LODI,R0	C4TEMP	
8235	52FB	25	2F				LODI,R1	C4TEMP	
8236	52FD	1F	31	55			BCTA,UN	POPPF	
8237	5300					*			
8238	5300	24	56			PUSHC5	LODI,R0	C5TEMP	
8239	5302	25	37				LODI,R1	C5TEMP	
8240	5304	1F	31	38			BCTA,UN	PUSHFP	
8241	5307					*			
8242	5307	24	56			POPC5	LODI,R0	C5TEMP	
8243	5309	25	37				LODI,R1	C5TEMP	
8244	530B	1F	31	55			BCTA,UN	POPPF	
8245	530E					*			
8246	530E					*			
8247	530E	24	57			PUSHPI	LODI,R0	PIE	
8248	5310	05	DD				LODI,R1	PIE	
8249	5312	1F	31	38			BCTA,UN	PUSHFP	
8250	5315					*			
8251	5315	24	57			PMSHE	LODI,R0	EEE	
8252	5317	25	D5				LODI,R1	EEE	
8253	5319	1F	31	38			BCTA,UN	PUSHFP	
8254	531C					*			
8255	531C	24	57			PUSHIN	LODI,R0	IN(10)	
8256	531E	25	C5				LODI,R1	IN(10)	
8257	5320	1F	31	38			BCTA,UN	PUSHFP	
8258	5323					*			
8259	5323					*			
8260	5323					*			
8261	5323	24	57			PUSHLG	LODI,R0	LOGC	
8262	5325	25	CD				LODI,R1	LOGC	
8263	5327	1F	31	38			BCTA,UN	PUSHFP	
8264	532A					*			
8265	532A					*			
8266	532A					*			
8267	532A	3F	45	D9		CGTERM	BSTA,UN	POPC1	
8268	532D	3F	45	E0			BSTA,UN	PUSHC1	
8269	5330	3F	32	02			BSTA,UN	COMNUM	
8270	5333	03					LODZ,R3		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6251	5334	56	03				BCFR,EO	GTERM	
6252	5336	04	01				LODI,R0	1	
6253	5338	17					RETC,UN		
6254	5339	3F	45	E7		GTERM	BSTA,UN	POPC2	
6255	5339	3F	45	EE			BSTA,UN	PUSHC2	
6256	5341	3F	52	F4			BSTA,UN	PUSHC3	ACCUMULATED X
6257	5342	3F	52	F1			BSTA,UN	PUSHC4	INITIAL X
6258	5345	3F	7E	F1			BSTA,UN	FPMULT	
6259	5348	3F	52	EE			BSTA,UN	POPC3	
6260	5349	3F	52	F4			BSTA,UN	PUSHC3	
6261	534E	02	16	44			LODA,R1	TERMNM	
6262	5351	0D	16	41			ADDA,R1	DUP	
6263	5354	02	16	44			STRA,R1	TERMNM	
6264	5357	1E	28				COMI,R1	78	END OF TERMS
6265	5359	16	14				BCTR,GT	GTERM2	
6266	535B	1E	1E	42			ADDA,R1	OFFSET	
6267	535D	05	05				ADDI,R1	KTAB	
6268	5360	77	08				FPSL	WC	
6269	5363	20					EORZ,R0		
6270	5363	64	56				ADDI,R0	KTAB	
6271	5365	75	06				CPSL	WC	
6272	5367	3F	31	38			BSTA,UN	PUSHFP	
6273	536A	3F	3E	F1			BSTA,UN	FPMULT	
6274	536D	20					EORZ,R0		
6275	536E	17					RETC,UN		
6276	536E	3F	45	D9		GTERM2	BSTA,UN	POPC1	
6277	5372	24	91				LODI,R2	1	
6278	5374	17					RETC,UN		
6279	5375					*			
6280	5376					*			
6281	5378					*			
6282	5378	7F	52	F0		GTERM	BSTA,UN	POPC4	
6283	5378	3F	52	F2			BSTA,UN	PUSHC4	
6284	537E	44	38				LODI,R2	06	
6285	537D	0C	16	41			STRA,R0	DUP	
6286	5380	24	F8				LODI,R0	F8	
6287	5382	0C	16	44			STRA,R0	TERMNM	
6288	5385	20					EOPZ,R0		
6289	5386	0C	16	42			STRA,R0	OFFSET	
6290	5389	0C	16	43			STRA,R0	SSIGN	
6291	538C	3F	45	AC			BSTA,UN	PUSH1	
6292	538F	1F	52	EE			BSTA,UN	POPC3	
6293	5392					*			
6294	5392					*			
6295	5392					*			
6296	5392	3F	52	F2		DOUBLE	BSTA,UN	PUSHC4	
6297	5395	3F	52	F2			BSTA,UN	PUSHC4	
6298	5398	3F	3E	F1			BSTA,UN	FPMULT	
6299	539B	3F	02	F0			BSTA,UN	POPC4	
6300	539E	04	10				LODI,R0	10	
6301	53A0	0C	16	41			STRA,R0	DUP	
6302	53A3	17					RETC,UN		
6303	53A4					*			
6304	53A4					*			
6305	53A4					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6126	53A4	3F	45	D9		GSIGN	BSTA,UN	POPC1	
6127	53A7	3F	45	E0			BSTA,UN	PUSHC1	
6128	53AA	3F	45	E0			BSTA,UN	PUSHC1	
6129	53AD	3F	53	EE			BSTA,UN	PUSHF1	
6130	53B0	3F	3E	F2			BSTA,UN	FFDIV	
6131	53B3	3F	7E	F1			BSTA,UN	CFIX	
6132	53B6	3F	52	F0			BSTA,UN	POPC4	
6133	53B9	7C	16	38			LODA,R0	POPC4	
6134	53BC	1E	21				BCTR,EO	CSIGN2	
6135	53BE	14	2A				COMI,R0	A	
6136	53C0	19	2A				BCTR,GT	CSIGN2	
6137	53C2	02	02				STRZ,R2		
6138	53C3	A4	01				SUBI,R0	1	
6139	53C5	50					RRR,R0		
6140	53C6	44	07				ANDI,R0	7	
6141	53C8	0C	76	32			LODA,R0	C4MAIN,I	
6142	53CB	F6	01				TMI,R2	1	
6143	53CD	98	04				BCFR,EO	CSIGN3	
6144	53CF	50					RRR,R0		
6145	53D2	50					RRR,R2		
6146	53D1	50					RRR,R0		
6147	53D2	50					RRR,R0		
6148	53D3	74	01			CSIGN3	TMI,R0	1	
6149	53D5	98	15				BCFR,EO	CSIGN2	
6150	53D7	3F	52	F2			BSTA,UN	PUSHC4	
6151	53DA	3F	45	AC			BSTA,UN	PUSH1	
6152	53DD	0C	16	31			LODA,R0	C4SIGN	
6153	53E0	18	05				BCTR,EO	CSIGN5	
6154	53E2	3F	3A	54			BSTA,UN	FPSUB	
6155	53E5	1B	08				BCTR,UN	CSIGN4	
6156	53E7	3F	3A	72		CSIGN5	BSTA,UN	FPADD	
6157	53EA	1E	03				BCTR,UN	CSIGN4	
6158	53EC	3F	52	F2		CSIGN2	BSTA,UN	PUSHC4	
6159	53EF	3F	53	0F		CSIGN4	BSTA,UN	PUSHF1	
6160	53F2	3F	3E	F1			BSTA,UN	FPMULT	
6161	53F5	1F	3A	64			BSTA,UN	FPSUB	
6162	53F8					*			
6163	53F8					*			
6164	53F8	3F	53	A4		FPSIN	BSTA,UN	GSIGN	
6165	53FB	3F	53	75			BSTA,UN	GTERM	
6166	53FE	3F	52	F9			BSTA,UN	POPC4	
6167	5401	3F	52	F2			BSTA,UN	PUSHC4	
6168	5404	3F	52	EE			BSTA,UN	POPC3	
6169	5407	3F	52	F2			BSTA,UN	PUSHC4	
6170	540A	20					EORZ,R0		
6171	540E	0C	16	44			STRA,R0	TERMNM	
6172	540E	3F	53	92		SERI	BSTA,UN	DOUBLE	
6173	5411	3F	53	39			BSTA,UN	GTERM	
6174	5414	3F	3A	64			BSTA,UN	FPSUB	
6175	5417	3F	53	2A		FPSIN1	BSTA,UN	GTERM	
6176	541A	1E					BCTR,GT		
6177	541B	3F	3A	70			BSTA,UN	FPADD	
6178	541F	3F	53	2A			BSTA,UN	GTERM	
6179	5421	1E					RETC,GT		
6180	5422	3F	3A	64			BSTA,UN	FPSUB	

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
6161	6405	3F	52	70			ECTR,UN	FFSIN1	
6162	6407					*			
6163	6407					*			
6164	6407					*			
6165	6407	3F	53	75		FPCOS	BSTA,UN	CTERM	
6166	6408	3F	53	A4			BSTA,UN	GSIGN	
6167	6408	3F	52	F9			BSTA,UN	POPC4	
6168	6408	3F	45	AC			BSTA,UN	PUSH1	
6169	6407	1F	50				ECTR,UN	SERI	
6170	6408					*			
6171	6408					*			
6172	6408					*			
6173	6408					*			
6174	6408					*			
6175	6408	3F	53	75		FPEXP2	BSTA,UN	CTERM	
6176	6408	3F	53	27			BSTA,UN	POPC5	
6177	6408	3F	53	00			BSTA,UN	PUSHC5	
6178	6408	3F	52	F2			BSTA,UN	PUSHC4	
6179	6441	3F	3D	5A			BSTA,UN	FPABS	
6180	6444	3F	2B	A1			BSTA,UN	ENS2	
6181	6447	2F						LOD2,R0	
6182	6448	2F	45	74			ECTA,EC	CVFER	
6183	6448	2F	1A	48			STRA,R1	ZTEMP2	
6184	6448	2F	3F	26			ECTA,UN	FFPRC	
6185	6451	4F	32	F9			BSTA,UN	POPC4	
6186	6454	3F	45	AC			BSTA,UN	PUSH1	
6187	6457	2F	1A	48		FPEX1	LODA,R1	ZTEMP2	
6188	6458	2F	17				ECTR,EC	FPEX2	
6189	6458	2F	01				SUPI,R1	01	
6190	6458	2F	1A	48			STRA,R1	ZTEMP2	
6191	6461	3F	53	15			BSTA,UN	PUSHF	
6192	6464	2F	16	39			LODA,R0	GSSIGN	
6193	6467	2F	35				ECTR,EC	FPEX5	
6194	6468	3F	35	F9			BSTA,UN	FPDIV	
6195	6468	1F	59				ECTR,UN	FPEX1	
6196	6468	3F	3F	F1		FPEX5	BSTA,UN	FFMULT	
6197	6471	1F	54				ECTR,UN	FPEX1	
6198	6473	3F	45	AC		FPEX2	BSTA,UN	PUSH1	
6199	6473	3F	53	30			BSTA,UN	GTERM	
6200	6473	3F	3A	70			BSTA,UN	FPADD	
6201	6473	3F	53	2A		FPEX3	BSTA,UN	CGTERM	
6202	6473	2F	05				ECTR,EC	FPEX4	
6203	6473	2F	3A	70			BSTA,UN	FPADD	
6204	6468	1F	76				ECTR,UN	FPEX3	
6205	6468	1F	3B	F1		FPEX4	BSTA,UN	FFMULT	
6206	6468					*			
6207	6468					*			
6208	6468					*			
6209	6468	3F	45	D9		FFLOG	BSTA,UN	POPC1	
6210	6468	3F	52	23			BSTA,UN	PUSH1G	
6211	6468	3F	45	F0			BSTA,UN	PUSHC1	
6212	6468	3F	53	60			BSTA,UN	FFPLN	
6213	6468	1F	3B	F1			ECTR,UN	FFMULT	
6214	6468					*			
6215	6468					*			

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
6216	6468					*			
6217	6468	3F	53	07		FFIATN	BSTA,UN	POPC5	
6218	6468	3F	53	00			BSTA,UN	PUSHC5	
6219	6468	3F	53	75			BSTA,UN	FFSIN	
6220	6441	3F	53	00			BSTA,UN	PUSHC5	
6221	6441	3F	54	27			BSTA,UN	FPCOS	
6222	6477	1F	3B	E2			ECTR,UN	FPDIV	
6223	644A					*			
6224	644A					*			
6225	644A	20				FPTSN	RES	1	
6226	644B					*			
6227	644B	3F	52	19		FFPATN	BSTA,UN	POPC4	
6228	6441	3F	52	F2			BSTA,UN	PUSHC4	
6229	6451	20	16	31			LODA,R0	G4SIGN	
6230	645A	08	74				STRR,R2	FPTSN	
6231	6458	3F	3D	5A			BSTA,UN	FPABS	
6232	6459	3F	45	I9			BSTA,UN	POPC1	
6233	645C	3F	45	AC			BSTA,UN	PUSH1	
6234	645F	3F	45	E7			BSTA,UN	POPC2	
6235	6462	3F	30	22			BSTA,UN	COMNUM	
6236	6465	E7	01				COMI,R3	GT	
6237	6467	00	54	EB			BCFA,EC	ATN2	
6238	646A	24	57				LODI,R0	HALFPI	
6239	646C	08	EB				LODI,R1	HALFPI	
6240	646E	3F	31	38			BSTA,UN	PUSHFP	
6241	6471	3F	45	AC			BSTA,UN	PUSH1	
6242	6474	3F	45	E0			BSTA,UN	PUSHC1	
6243	6477	3F	3B	E2			BSTA,UN	FPDIV	
6244	647A	2F					EOR2,R0		
6245	647F	3F	1A				BSTR,UN	APPROX	
6246	6481	3F	5A	64			BSTA,UN	FFSUB	
6247	6482	3F	52	F9		FPTEND	LODA,UN	POPC4	
6248	6483	08	45				LODR,R0	FFPSN	
6249	6485	00	16	31			STRA,R0	G4SIGN	
6250	648B	1F	52	F2			ECTR,UN	PUSHC4	
6251	648B					*			
6252	648B	3F	45	E0		ATN2	BSTA,UN	PUSHC1	
6253	648E	20					EOR2,R0		
6254	649F	3B	04				BSTR,UN	APPROX	
6255	64F1	1B	6D				ECTR,UN	FPTEND	
6256	6473					*			
6257	6473	00				AOFFS	RES	1	
6258	6474	20				APTM	RES	1	
6259	6475					*			
6260	6475	08	7C			APPROX	STRR,R0	AOFFS	
6261	6477	08	02				LODI,R1	0	
6262	6479	09	79				STRR,R1	APTMM	
6263	647B	3F	42	EB			BSTA,UN	POPC3	
6264	647E	3F	52	E4			BSTA,UN	PUSHC3	
6265	6501	3F	52	F9			BSTA,UN	POPC4	
6266	6504	3F	52	F2			BSTA,UN	PUSHC4	
6267	6507	08	6A				LODR,R1	AOFFS	
6268	6509	08	45				ADDI,R1	ATAB	
6269	650B	77	05				EOR2,R0	WC	
6270	650D	22					EOR2,R0		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6271	882E	84	F6				ADDI,R0	ATAB	
6272	8812	78	28				CPSL	WC	
6273	8812	3F	31	38			BSTA,UN	PUSHFF	
6274	8815	3F	3E	F1			BSTA,UN	PPMULT	
6275	8818	3F	45	D9			BSTA,UN	POPC1	
6276	8819	45	08			APP2	LODI,R1	08	
6277	881D	8D	85				ADDR,R1	APTEM	
6278	881F	1F	40				COMI,R1	40	
6279	8821	1C	45	E0			BCTA,EC	PUSHC1	
6280	8824	09	41				STRR,R1	APTEM	
6281	8825	38	4E				ADDF,R1	ACFFS	
6282	8825	88	45				ADDI,R1	ATAB	
6283	882A	77	28				PPSL	WC	
6284	882D	27					RORZ,R0		
6285	882D	84	86				ADDI,R0	ATAB	
6286	882F	78	28				CPSL	WC	
6287	8831	3F	31	38			BSTA,UN	PUSHFF	
6288	8834	3F	3E	F1			BSTA,UN	PUSHC4	
6289	8834	3F	3E	F1			BSTA,UN	PUSHC3	
6290	8834	3F	3E	F1			BSTA,UN	PPMULT	
6291	8834	3F	3E	F1			BSTA,UN	PPMULT	
6292	8834	3F	3E	F1			BSTA,UN	PPMULT	
6293	8834	3F	3E	F1			BSTA,UN	PPMULT	
6294	8834	3F	3E	F1			BSTA,UN	PPMULT	
6295	8834	3F	3E	F1			BSTA,UN	PPMULT	
6296	8834	3F	3E	F1			BSTA,UN	PPMULT	
6297	8834	3F	3E	F1			BSTA,UN	PPMULT	
6298	8834	3F	3E	F1			BSTA,UN	PPMULT	
6299	8834	3F	3E	F1			BSTA,UN	PPMULT	
6300	8834	3F	3E	F1			BSTA,UN	PPMULT	
6301	8834	3F	3E	F1			BSTA,UN	PPMULT	
6302	8834	3F	3E	F1			BSTA,UN	PPMULT	
6303	8834	3F	3E	F1			BSTA,UN	PPMULT	
6304	8834	3F	3E	F1			BSTA,UN	PPMULT	
6305	8834	3F	3E	F1			BSTA,UN	PPMULT	
6306	8834	3F	3E	F1			BSTA,UN	PPMULT	
6307	8834	3F	3E	F1			BSTA,UN	PPMULT	
6308	8834	3F	3E	F1			BSTA,UN	PPMULT	
6309	8834	3F	3E	F1			BSTA,UN	PPMULT	
6310	8834	3F	3E	F1			BSTA,UN	PPMULT	
6311	8834	3F	3E	F1			BSTA,UN	PPMULT	
6312	8834	3F	3E	F1			BSTA,UN	PPMULT	
6313	8834	3F	3E	F1			BSTA,UN	PPMULT	
6314	8834	3F	3E	F1			BSTA,UN	PPMULT	
6315	8834	3F	3E	F1			BSTA,UN	PPMULT	
6316	8834	3F	3E	F1			BSTA,UN	PPMULT	
6317	8834	3F	3E	F1			BSTA,UN	PPMULT	
6318	8834	3F	3E	F1			BSTA,UN	PPMULT	
6319	8834	3F	3E	F1			BSTA,UN	PPMULT	
6320	8834	3F	3E	F1			BSTA,UN	PPMULT	
6321	8834	3F	3E	F1			BSTA,UN	PPMULT	
6322	8834	3F	3E	F1			BSTA,UN	PPMULT	
6323	8834	3F	3E	F1			BSTA,UN	PPMULT	
6324	8834	3F	3E	F1			BSTA,UN	PPMULT	
6325	8834	3F	3E	F1			BSTA,UN	PPMULT	
6326	8834	3F	3E	F1			BSTA,UN	PPMULT	
6327	8834	3F	3E	F1			BSTA,UN	PPMULT	
6328	8834	3F	3E	F1			BSTA,UN	PPMULT	
6329	8834	3F	3E	F1			BSTA,UN	PPMULT	
6330	8834	3F	3E	F1			BSTA,UN	PPMULT	
6331	8834	3F	3E	F1			BSTA,UN	PPMULT	
6332	8834	3F	3E	F1			BSTA,UN	PPMULT	
6333	8834	3F	3E	F1			BSTA,UN	PPMULT	
6334	8834	3F	3E	F1			BSTA,UN	PPMULT	
6335	8834	3F	3E	F1			BSTA,UN	PPMULT	
6336	8834	3F	3E	F1			BSTA,UN	PPMULT	
6337	8834	3F	3E	F1			BSTA,UN	PPMULT	
6338	8834	3F	3E	F1			BSTA,UN	PPMULT	
6339	8834	3F	3E	F1			BSTA,UN	PPMULT	
6340	8834	3F	3E	F1			BSTA,UN	PPMULT	
6341	8834	3F	3E	F1			BSTA,UN	PPMULT	
6342	8834	3F	3E	F1			BSTA,UN	PPMULT	
6343	8834	3F	3E	F1			BSTA,UN	PPMULT	
6344	8834	3F	3E	F1			BSTA,UN	PPMULT	
6345	8834	3F	3E	F1			BSTA,UN	PPMULT	
6346	8834	3F	3E	F1			BSTA,UN	PPMULT	
6347	8834	3F	3E	F1			BSTA,UN	PPMULT	
6348	8834	3F	3E	F1			BSTA,UN	PPMULT	
6349	8834	3F	3E	F1			BSTA,UN	PPMULT	
6350	8834	3F	3E	F1			BSTA,UN	PPMULT	
6351	8834	3F	3E	F1			BSTA,UN	PPMULT	
6352	8834	3F	3E	F1			BSTA,UN	PPMULT	
6353	8834	3F	3E	F1			BSTA,UN	PPMULT	
6354	8834	3F	3E	F1			BSTA,UN	PPMULT	
6355	8834	3F	3E	F1			BSTA,UN	PPMULT	
6356	8834	3F	3E	F1			BSTA,UN	PPMULT	
6357	8834	3F	3E	F1			BSTA,UN	PPMULT	
6358	8834	3F	3E	F1			BSTA,UN	PPMULT	
6359	8834	3F	3E	F1			BSTA,UN	PPMULT	
6360	8834	3F	3E	F1			BSTA,UN	PPMULT	
6361	8834	3F	3E	F1			BSTA,UN	PPMULT	
6362	8834	3F	3E	F1			BSTA,UN	PPMULT	
6363	8834	3F	3E	F1			BSTA,UN	PPMULT	
6364	8834	3F	3E	F1			BSTA,UN	PPMULT	
6365	8834	3F	3E	F1			BSTA,UN	PPMULT	
6366	8834	3F	3E	F1			BSTA,UN	PPMULT	
6367	8834	3F	3E	F1			BSTA,UN	PPMULT	
6368	8834	3F	3E	F1			BSTA,UN	PPMULT	
6369	8834	3F	3E	F1			BSTA,UN	PPMULT	
6370	8834	3F	3E	F1			BSTA,UN	PPMULT	
6371	8834	3F	3E	F1			BSTA,UN	PPMULT	
6372	8834	3F	3E	F1			BSTA,UN	PPMULT	
6373	8834	3F	3E	F1			BSTA,UN	PPMULT	
6374	8834	3F	3E	F1			BSTA,UN	PPMULT	
6375	8834	3F	3E	F1			BSTA,UN	PPMULT	
6376	8834	3F	3E	F1			BSTA,UN	PPMULT	
6377	8834	3F	3E	F1			BSTA,UN	PPMULT	
6378	8834	3F	3E	F1			BSTA,UN	PPMULT	
6379	8834	3F	3E	F1			BSTA,UN	PPMULT	
6380	8834	3F	3E	F1			BSTA,UN	PPMULT	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6326	8806	00	16	2F			STRA,R0	C4TEMP	
6327	8809	00	16	37			STRA,R0	C5TEMP	
6328	880C	04	21				LODI,R0	1	
6329	880E	00	16	30			STRA,R0	C4EX	
6330	88A1	04	22				LODI,R0	02	
6331	88A3	00	16	38			STRA,R0	C5EX	
6332	88A6	04	26				LODI,R0	C5TEMP	
6333	88A8	08	37				LODI,R1	C5TEMP	
6334	88AA	08	38				LODI,R2	LING	
6335	88AC	77	28				PPSL	WC	
6336	88AE	3F	3B	60			BSTA,UN	NORM	
6337	88F1	04	22				LODI,R0	02	
6338	88B3	83					LPSL		
6339	88E4	3F	53	1C			BSTA,UN	PUSHIN	
6340	88E7	3F	53	00			BSTA,UN	PUSHC5	
6341	88EA	3F	45	AC			BSTA,UN	PUSH1	
6342	88ED	3F	3A	64			BSTA,UN	PPSUB	
6343	88E9	3F	38	F1			BSTA,UN	PPMULT	
6344	88E3	3F	45	BA			BSTA,UN	PUSH0	
6345	88E8	3F	42	F2			BSTA,UN	PUSHC4	
6346	88C6	3F	45	D9		LN2	BSTA,UN	POPC1	
6347	88C0	3F	45	AC			BSTA,UN	PUSH1	
6348	88C1	3F	45	F7			BSTA,UN	POPC2	
6349	88D2	3F	30	02			BSTA,UN	COMNUM	
6350	88D5	E7	02				COMI,R3	LT	
6351	88D7	18	1E				BCTR,EC	LN3	
6352	88D9	3F	42	DD			BSTA,UN	PS2	
6353	88DC	3F	45	E7			BSTA,UN	POPC2	
6354	88DF	3F	30	02			BSTA,UN	COMNUM	
6355	88E2	E7	01				COMI,R3	GT	
6356	88E4	98	23				BCTR,EC	LN4	
6357	88E6	3F	45	AC			BSTA,UN	PUSH1	
6358	88E9	3F	3A	70			BSTA,UN	FPADD	
6359	88F0	3F	45	E0			BSTA,UN	PUSHC1	
6360	88F3	3F	52	D6			BSTA,UN	PUSH1	
6361	88F2	3F	3B	F1			BSTA,UN	PPMULT	
6362	88F5	1E	02				BCTR,UN	LN2	
6363	88F7	3F	45	AC		LN3	BSTA,UN	PUSH1	
6364	88FA	3F	3A	64			BSTA,UN	PPSUB	
6365	88F1	3F	45	DD			BSTA,UN	PUSHC1	
6366	88E0	3F	45	DD			BSTA,UN	PS2	
6367	88E3	3F	38	F1			BSTA,UN	PPMULT	
6368	88E6	1F	55	09			BCTA,UN	LN2	
6369	88E9	04	07			LN4	LODI,R0	LN(2)	
6370	880B	05	ED				LODI,R1	LN(2)	
6371	880D	3F	31	38			BSTA,UN	PUSHFF	
6372	8810	3F	3E	F1			BSTA,UN	PPMULT	
6373	8813	3F	3A	70			BSTA,UN	FPADD	
6374	8816	3F	45	E0			BSTA,UN	PUSHC1	
6375	8819	3F	45	AC			BSTA,UN	PUSH1	
6376	881C	3F	3A	64			BSTA,UN	PPSUB	
6377	881F	04	40				LODI,R0	BTAB-ATAB	
6378	8821	3F	54	F5			BSTA,UN	APPROX	
6379	8824	1F	3	70			BCTA,UN	FPADD	
6380	8827					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6381	5627					*			
6382	5627					*			
6383	5627	00				C3TEMP	RES	1	
6384	5628	00				C3EX	RES	1	
6385	5628	00				C3SIGN	RES	1	
6386	562A	00	00	00	00	C3MAIN	RES	5	
6387	562E	00				*			
6388	562F					*			
6389	562F					*			
6390	5630	00				C4TEMP	RES	1	
6391	5630	00				C4EX	RES	1	
6392	5631	00				C4SIGN	RES	1	
6393	5632	00	00	00	00	C4MAIN	RES	5	
6394	5632	00				*			
6395	5637					*			
6396	5637	00				C5TEMP	RES	1	
6397	5638	00				C5EX	RES	1	
6398	5638	00				C5SIGN	RES	1	
6399	563A	00	00	00	00	C5MAIN	RES	5	
6400	563F	00				*			
6401	563F					*			
6402	563F					*			
6403	563F					*			
6404	563F	00				ZTEMP1	RES	1	
6405	5640	00				ZTEMP2	RES	1	
6406	5641	00				LUB	RES	1	
6407	5642	00				OFFSET	RES	1	
6408	5643	00				SSIGN	RES	1	
6409	5644	00				TERMMN	RES	1	
6410	5645					*			
6411	5645					*			
6412	564F	00	00	00	00	ATAB	DATA	00,00,00,99,99,99,33,20	
6413	5649	99	99	33	20				
6414	564E	00	00	F0	33	DATA		00,00,F0,33,32,98,F6,0F	
6415	5651	00	00	00	00				
6416	5651	00	00	00	00	DATA		00,00,00,19,94,65,35,99	
6417	5650	04	65	35	99				
6418	5651	00	00	F0	33	DATA		00,00,F0,13,90,85,33,51	
6419	5651	00	85	33	51				
6420	5655	F0	01	00	06	DATA		F0,01,00,06,42,00,44,10	
6421	5653	42	00	44	10				
6422	566D	F0	01	F0	55	DATA		F0,01,F0,55,90,98,86,10	
6423	5671	90	98	86	10				
6424	5675	F0	01	00	21	DATA		F0,01,00,21,86,12,28,80	
6425	5679	86	12	28	80				
6426	567E	F0	02	F0	40	DATA		F0,02,F0,40,54,05,80,00	
6427	5681	54	05	80	00				
6428	5685					*			
6429	5685	00	00	00	00	BTAP	DATA	00,00,00,99,99,96,42,39	
6430	5689	99	96	42	39				
6431	568D	00	00	F0	49	DATA		00,00,F0,49,98,74,12,38	
6432	5691	98	74	12	38				
6433	5695	00	00	00	33	DATA		00,00,00,33,17,99,02,58	
6434	5699	17	99	02	58				
6435	569D	00	00	F0	24	DATA		00,00,F0,24,07,33,82,84	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6436	56A1	00	00	00	00	DATA		00,00,00,16,76,54,07,11	
6437	56A5	00	00	00	16				
6438	56A5	76	54	07	11				
6439	56AD	F0	01	F0	0F	DATA		F0,01,F0,0F,32,93,89,70	
6440	56B1	32	93	89	70				
6441	56B5	F0	01	00	70	DATA		F0,01,00,3E,08,84,93,70	
6442	56B9	08	84	93	70				
6443	56BD	F0	02	F0	64	DATA		F0,02,F0,64,53,84,42,00	
6444	56C1	53	54	42	00				
6445	56C5					*			
6446	56C5					*			
6447	56C5	00	01	00	10	KTAB	DATA	00,01,00,10,00,00,00,00	
6448	56C9	00	00	00	00				
6449	56D1	00	00	00	52	DATA		00,00,00,50,00,00,00,00	
6450	56D1	00	00	00	00				
6451	56D5	00	00	00	16	DATA		00,00,00,16,66,66,66,67	
6452	56D9	66	66	66	67				
6453	56DD	F0	01	00	41	DATA		F0,01,00,41,66,66,66,67	
6454	56E1	66	66	66	67				
6455	56E5	F0	02	00	83	DATA		F0,02,00,83,33,33,33,33	
6456	56E9	33	33	33	33				
6457	56ED	F0	02	00	13	DATA		F0,02,00,13,88,88,88,89	
6458	56F1	88	88	88	89				
6459	56F5	F0	03	00	19	DATA		F0,03,00,19,84,12,69,84	
6460	56F9	84	12	69	84				
6461	56FD	F0	04	00	24	DATA		F0,04,00,24,90,15,87,30	
6462	5701	80	15	87	30				
6463	5705	F0	05	00	27	DATA		F0,05,00,27,55,73,19,22	
6464	5709	55	73	19	22				
6465	570D	F0	06	00	27	DATA		F0,06,00,27,55,73,19,22	
6466	5711	55	73	19	22				
6467	5715	F0	07	00	25	DATA		F0,07,00,25,05,31,08,39	
6468	5719	05	31	08	39				
6469	571D	F0	08	00	20	DATA		F0,08,00,20,87,67,56,99	
6470	5721	87	67	56	99				
6471	5725	F0	09	00	16	DATA		F0,09,00,16,05,90,43,84	
6472	5729	05	90	43	84				
6473	572D	F0	10	00	11	DATA		F0,10,00,11,47,07,45,60	
6474	5731	47	07	45	60				
6475	5735	F0	12	00	76	DATA		F0,12,00,76,47,16,37,32	
6476	5739	47	16	37	32				
6477	573D	F0	13	00	47	DATA		F0,13,00,47,49,47,73,32	
6478	5741	49	47	73	32				
6479	5745					EQU		\$	
6480	5745	00	01	00	10	ONE	DATA	00,01,00,10,00,00,00,00	
6481	5749	00	00	00	00				
6482	574D	00	00	00	50	HALF	DATA	00,00,00,50,00,00,00,00	
6483	5751	00	00	00	00				
6484	5755	00	00	00	33	DATA		00,00,00,33,33,33,33,33	
6485	5759	33	33	33	33				
6486	575D	00	00	00	25	QTR	DATA	00,00,00,25,00,00,00,00	
6487	5761	00	00	00	00				
6488	5765	00	00	00	20	DATA		00,00,00,20,00,00,00,00	
6489	5769	00	00	00	00				
6490	576D	00	00	00	16	DATA		00,00,00,16,66,66,66,67	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6461	5771	66	66	66	67				
6462	5775	00	00	00	14		DATA	00,00,00,14,28,57,14,29	
6463	5779	28	57	14	20				
6464	5771	00	00	00	12		DATA	00,00,00,12,05,00,00,00	
6465	5761	0F	02	02	02				
6466	5765	00	00	00	11		DATA	00,00,00,11,11,11,11,11	
6467	5769	11	11	11	11				
6468	578D	00	00	00	10		DATA	00,00,00,10,00,00,00,00	
6469	57C1	00	00	00	00				
6500	5795	10	01	02	00		DATA	F0,01,00,90,90,90,90,91	
6501	5799	50	50	50	51				
6502	579D	10	01	02	03		DATA	F0,01,00,83,33,33,33,33	
6503	57A1	33	33	33	33				
6504	57A5	10	01	02	76		DATA	F0,01,00,76,92,30,76,92	
6505	57A9	92	32	76	92				
6506	57AD	10	01	02	71		DATA	F0,01,00,71,42,85,71,43	
6507	57B1	42	85	71	43				
6508	57B5	10	01	02	66		DATA	F0,01,00,66,66,66,66,67	
6509	57B9	66	66	66	67				
6510	57BD	10	01	02	62		DATA	F0,01,00,62,05,00,00,00	
6511	57C1	05	00	00	00				
6512	57C5				*				
6513	57C9				*				
6514	57CD				*				
6515	57D5	02	01	02	23	IN(10)	DATA	00,01,00,23,02,58,50,93	
6516	57D9	02	58	50	93				
6517	57E5	02	02	02	43	LOGC	DATA	00,00,00,43,42,94,48,20	
6518	57E1	42	94	48	20				
6519	57F5	00	01	02	27	EEF	DATA	00,01,00,27,18,28,18,28	
6520	57F9	18	28	18	28				
6521	57DD	00	01	02	31	PIE	DATA	00,01,00,31,41,59,26,54	
6522	57E1	41	59	26	54				
6523	57E5	00	01	02	15	HALFFI	DATA	00,01,00,15,70,79,63,27	
6524	57E9	70	79	63	27				
6525	57E1	00	00	00	69	LN(2)	ACON	0000,0069,3147,1805	
6526	57F1	31	47	18	05				
6527	57F5	00	01	02	20	TWO	ACON	0001,0020,0000,0000	
6528	57F9	27	02	00	00				
6529	57FD				*				
6530	57FD				*				
6531	57F1				ZEND	EQU	\$		
6532	57FD				*				
6533	57FD				*				
6534	57A0				*	ORG	5A00		
6535	5A20				*				
6536	5A20				*				
6537	5A20	04	22			ZSET	LODI,R0	02	
6538	5A20	03					IPSL		
6539	5A23	3F	4A	D3			BSTA,UN	ERASE2	
6540	5A26	07	00				LODI,R3	00	
6541	5A28	04	4C				LODI,R3	EDITOR	
6542	5A2A	CF	BA	60			STRA,R3	*ZSTART,-	
6543	5A2D	04	7A				LODI,R0	EDITOR	
6544	5A2F	CF	BA	69			STRA,R3	*ZSTART,+	
6545	5A12	04	FF				LODI,R0	FF	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6546	5A14	0F	58				LODI,R1	~ZEND-100	
6547	5A16	0F	9A	67			STRA,R1	*ZBSTRT	
6548	5A18	0C	1A	61			STRA,R1	ZTEMP	
6549	5A1C	0C	9A	61			STRA,R0	*ZTEMP	
6550	5A1F	3F	2E	55			BSTA,UN	LFCP	
6551	5A22	07	00				LODI,R3	00	
6552	5A24	2F	7A	6B		ZPRINT	LODI,R3	ZPTAB,I	
6553	5A27	1A	2F				BCTA,ST	ZCON	
6554	5A29	3F	2F	23			BSTA,UN	WT	
6555	5A2C	DB	76				BIRR,R3	ZPRINT	
6556	5A2E	3F	2F	E2		ZCON	BSTA,UN	PAUSE	
6557	5A31	3F	45	A6			BSTA,UN	LTOU	
6558	5A34	E4	4E				COMI,R0	'N'	
6559	5A36	1C	20	00			BCTA,EQ	STRT	
6560	5A39	E4	59				COMI,R0	'Y'	
6561	5A3B	98	71				BCTA,EQ	ZCON	
6562	5A3D	04	FF				LODI,R0	FF	
6563	5A3F	0C	9A	65			STRA,R0	*ZAB	
6564	5A42	05	53				LODI,R1	~ZFP+100	
6565	5A44	0C	1A	61			STRA,R1	ZTEMP	
6566	5A47	0C	9A	61			STRA,R0	*ZTEMP	
6567	5A4A	0D	9A	67			STRA,R1	*ZBSTRT	
6568	5A4D	07	FF				LODI,R3	FF	
6569	5A4F	04	1F				LODI,R0	1F	
6570	5A51	CF	BA	63			STRA,R3	*FPX00,-	
6571	5A54	04	31				LODI,R0	~SYNER	
6572	5A56	CF	BA	63			STRA,R3	*FPX00,+	
6573	5A59	04	B1				LODI,R0	SYNER	
6574	5A5B	CF	BA	63			STRA,R3	*FPX00,-	
6575	5A5F	1F	20	00			BCTA,UN	STRT	
6576	5A61				*				
6577	5A61	20	02			ZTEMP	RES	2	
6578	5A63				*				
6579	5A63	4F	14			FPX00	ACON	FPXP	
6580	5A65	47	04			ZAB	ACON	ZTAB	
6581	5A67	22	03			ZBSTRT	ACON	BSTART	
6582	5A69	20	00			ZSTART	ACON	STRT	
6583	5A6E	44	4F	20	59	ZPTAB	ALIT	'DO YOU WISH TO DELETE THE EXTENDED FUNCTIONS? Y/N'	
6584	5A6F	4F	55	20	57				
6585	5A73	49	53	48	20				
6586	5A77	54	4F	20	44				
6587	5A7B	45	4C	45	54				
6588	5A7F	45	20	54	48				
6589	5A83	45	20	45	58				
6590	5A87	54	45	4E	44				
6591	5A8B	45	44	20	46				
6592	5A8F	55	4E	43	54				
6593	5A93	49	4F	4E	53				
6594	5A97	3F	20	28	59				
6595	5A9B	2F	4E	29	20				
6596	5A9F	20							
6597	5AA0	FF				DATA	FF		
6598	5AA1	FF							
6599	5AA2				*				
6600	5AA2				*				