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200MHz
SCOPE
PM3320
FAST 200 MHz DIGITAL SCOPE WITH 250 MS/s



Breaking the barriers in digital
storage oscilloscope performance

FINAL
PHILIPS
DESIGN

PHILIPS



Test &
Measurement

The design challenge: a new concept in digital storage oscilloscopes

High-tech. specification: analog bandwidth 200 MHz, sampling rate 250 MS/s for 4 ns single-shot resolution and synchronous clocking for 2 channels, 10-bit vertical resolution;

New, easier-to-use front panel using a combination of direct-action keys and softkeys for fast, clear and secure selection of over 150 functions;

Semi-automatic measurements: a single measurement or a sequence of measurements must be repeatable without the need to reset the controls;

Automatic measurements: the oscilloscope must be completely remote-controllable via IEEE-488 (IEC 625) bus, RS-232 interface and even over a long distance (by telephone). Programming must be simple and easy to understand.

Make use of the full bandwidth: if the timebase speed requires a sampling frequency above that of the ADC, a good equivalent sample system is needed to store, analyze and measure signals at full bandwidth;

Pre- and post-triggering: as well as post-triggering, pre-triggering must also be possible, for example when timebase speed requires equivalent sampling;

Fast detail search at full resolution: a built-in system must be able to search for signal details quickly, after which these can be recorded at full bandwidth;

Separate display areas for text and traces: the trace display area is kept free of text, except for channel identification. And the separate text display area is free of traces, for clear reading.

Autoset: the Philips multi-parameter Autoset function makes conventional beamfinders look outdated and inadequate! Autoset sets timebase, amplitude and triggering, for instant and optimum display of input signals.

With the PM 3320, our design team started with a clean sheet. But also with a lot of experience in high-speed sampling techniques. The challenge? To create a new concept in digital storage oscilloscopes. In performance. In speed. In ease and security of operation.

250 MS/s sampling (4 ns); 10-bit vertical resolution

The result is a high-technology instrument that sets the new standard in leading-edge digital storage oscilloscopes. With a 200 MHz bandwidth, and a 250 MS/s sampling rate giving a 4 ns single-shot

resolution, plus glitch-catcher circuitry to reveal 3 ns wide spikes if lower timebase speeds are required, PM 3320 is made-to-measure for the most demanding applications, like R&D and production-line quality control.

Choice of waveform displays

The central 8x10 cm area of the 10x12 cm screen is reserved for an uncluttered display of the waveforms. Channel identification is provided for each trace. The top two lines of the screen always show actual acquisition parameters, along with the measured results.

The softkeys in the right margin of the screen allow selection of traces from each of the four memories, or of their inverted displays. Also, the position controls can be assigned the function of influencing the entire display, or selected individual traces only.

In addition, the bottom two lines can either show additional actual acquisition parameters, or can present the full acquisition settings which were valid at the moment of recording. This information is stored for all waveforms in each of the registers.

