

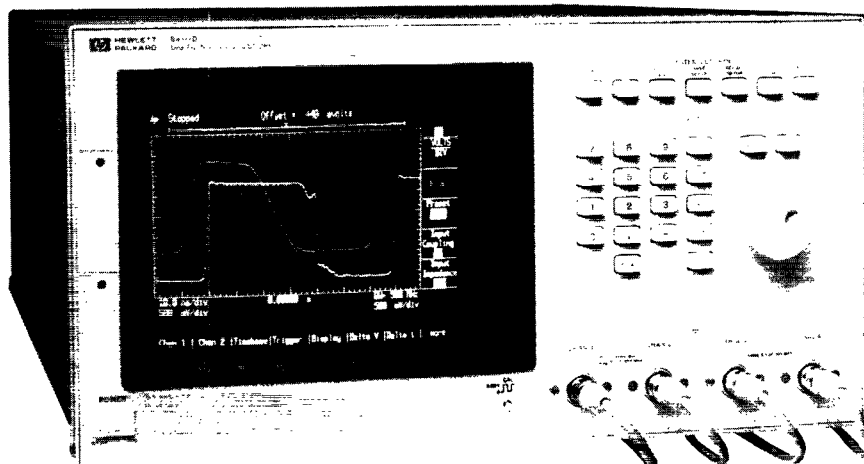
OSCILLOSCOPES & WAVEFORM ANALYZERS

Digitizing Oscilloscopes (cont'd)

Model 54111D

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- 1 Gigasample/second digitizing rate
- 500 MHz repetitive bandwidth
- 8k memory depth



The HP 54111D features a 1 gigasample/second digitizing rate and a 500 MHz bandwidth.

HP 54111D: High-speed General-Purpose Scope

The HP 54111D is a 1 gigasample/second, two-channel digitizing oscilloscope with a memory depth of 8k samples per channel. The HP 54111D retains all of the key features and user friendliness of the HP 54100/110 oscilloscopes . . . such as automatic measurements, auto-scaling, cursors, and a functional color display. Plus, the HP 54111D adds features necessary for controlling and managing the added memory depth, such as scroll, zoom, and memory bar.

Key Contributions

- 1 gigasample/second digitizing rate (maximum)
- 500 MHz repetitive bandwidth
- 250 MHz single-shot bandwidth
- 8k memory per channel
- Up to eight bits of vertical resolution with bandwidth limits
- Two channels of simultaneous capture at the full digitizing rate
- Pre-trigger information
- Automatic measurements
- Fully HP-IB programmable with HP's oscilloscope language (HP-OL)
- Complex triggering capabilities
- Instant hardcopy output
- Flexible display modes

General-purpose to Special Applications

With a 1 gigasample/second digitizing rate, the HP 54111D gives you the fastest sampling rate available in a general-purpose digitizing oscilloscope. However, the HP 54111D is much more than an instrument for capturing fast single-shot transients. With random repetitive sampling, this instrument provides a bandwidth of 500 MHz for high-speed circuit design and test.

In addition to its single-shot and repetitive capabilities, the HP 54111D provides flexible input coupling with a side dynamic range for viewing and analyzing a variety of signals. Use this scope for just about any general-purpose application from very slow to very high-speed repetitive or non-repetitive waveforms.

Memory Bar Simplifies Data Viewing

The HP 54111D provides 8k samples of memory per channel. This results in 16 screens of waveform information in each real-time or

single-shot acquisition cycle. To simplify management of all this data, the HP 54111D displays a memory bar. The memory bar is displayed along the top edge of the graticule and shows the portion of memory being viewed relative to the entire memory record. In addition, the trigger point is also shown along the memory bar.

Ultra High Digitizing Rate

No longer do you need a manual analog storage oscilloscope to capture high-speed single-shot phenomena found in:

- high-speed pulse analysis
- nuclear test studies
- plasma discharge
- high voltage arcing
- high frequency bursts

All these single-shot events can be captured easily with two simultaneous digitizers running at 1 GHz, with 8 μ s of data stored for review and analysis.

High-speed ECL Design

Non-repetitive glitches appearing on the clock signal can be captured easily with the 250 MHz single-shot performance of the HP 54111D. Eight μ s of pre-trigger data is invaluable for determining the cause of the glitch.

High-speed Semiconductor Design

Single-shot performance of 250 Mhz permits you to measure the outputs from latches (i.e., one-time events for multiple clock periods in ECL circuits).

Laser and High Energy Research

Photo detector pulses can be measured via single-shot capture using the 1 GHz sampling rate and built-in automatic pulse parameters measurements. Infinite persistence can also be used to show and measure maximum variations of the waveform to 500 MHz repetitive bandwidth.

The HP 54111D's two simultaneous 1 gigasample/second channels give you the single-shot performance of the most advanced analog storage oscilloscopes, but with all the advantages and ease of use of a digitizing oscilloscope. And with a staggered over-sampling technique, the HP 54111D provides this single-shot performance with up to eight bits of non-blooming vertical resolution.