

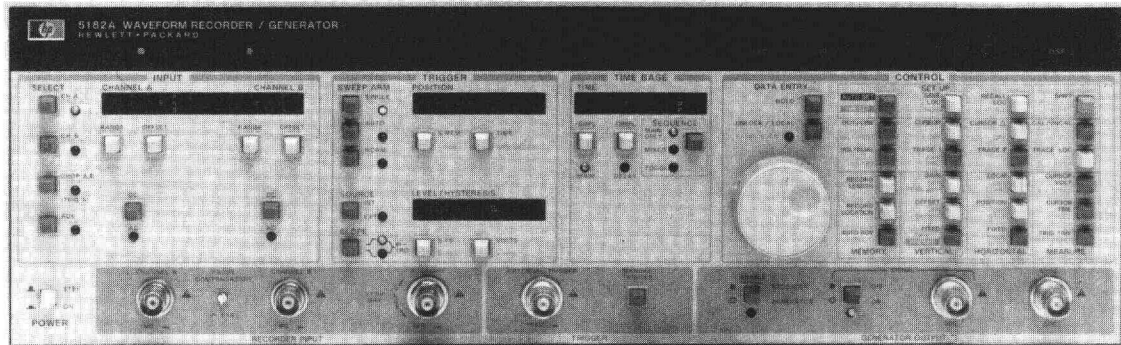
OSCILLOSCOPES & WAVEFORM ANALYZERS

Waveform Recorder/Generator, 20 MHz, 10 Bits, 16K Word Memory

Model 5182A

- 16K nonvolatile waveform memory
- Fully programmable via HP-IB
- Quickly transfer waveforms to/from computer
- Easily simulate complex, real signals
- Record single-shot, replay repetitively

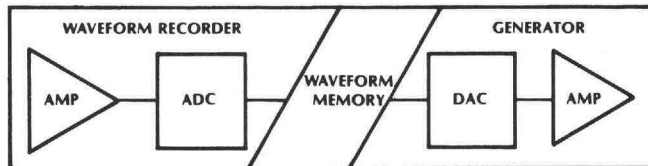
DESIGNED FOR
HP-IB
SYSTEMS



Duplicate Infrequent Waveforms Whenever You Need Them

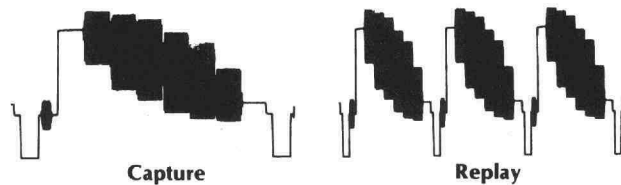
Get an "instant replay" of your single shot signal when you buy a HP 5182A Waveform Recorder/Generator. Also create repetitive signals by playing back a single recording over and over again with no time gap between replays.

Now you can test your circuits with the actual signal you record rather than a theoretical one. "What if testing can be done by adding a computer to modify and store the waveforms. An HP Series 200/300 Technical Computer, HP 9111A Graphics Tablet and an HP 5182A comprise the HP 5182S Waveform Generation System.



A Waveform Recorder/Generator is a High Speed Digital "Tape" Recorder

The "tape" is silicon memory. At 20 M samples per second, it can store 819 *us*, 819 seconds at 20 samples per second. This digitized waveform can be played back once, or over and over again with no time gap. For example, you can accurately store 16 separate lines of video, or a single sector of data from a floppy disc drive. The video signal can generate color bar patterns to test video circuits. The disc signal can be used to test read-recovery circuits.



Capture and Save in the Field, Replay on the Bench

Continuous (battery backed up) waveform memory allows you to record up to 32 waveforms on site. Remove the power and carry the HP 5182A back to the lab. Now you can play them back to test your circuits or for further analysis. Attach the HP 5182A to an HP Series 200/300 Technical Computer and you can store the waveforms on disc, process them further and modify them for "what if testing."

Simulate Expensive, Single-Shot Experiments

Some experiments can be very time consuming and expensive to repeat, for example: biomedical experiments, measurements of explosions, and propagation experiments such as radar and sonar. With the HP 5182A you can capture the signal accurately, when it occurs. Then, switch to generator mode, and you're ready to replay it, any time you need it.

A sync pulse is generated once per playback cycle for synchronizing other equipment.

Generator Section Specifications

For accessories and specifications of the recorder section, please see page 00.00.

Peak output voltage (for full-scale waveform) into 50 ohms

Range	Vernier Range		Vernier Step Size
	Min	Max	
5.12V	520 mV	5.12V	40 mV
512 mV	52 mV	512 mV	4 mV
51.2 mV	5.2 mV	51.2 mV	0.4 mV

Max. output voltage into open circuit: 10 V (NOMINAL).

Output Offset: -5.12 V to +5.11 V in 10 mV steps into 50 ohms.

AC Performance: Noise: -65 dBc.

Harmonic distortion (dc to 1 MHz): -48 dBc.

Spurious (sample rate related): -40 dBc TYPICAL.

Output risetime: 100 ns max. (10% to 90%).

Amplifier bandwidth (-3dB): 10 MHz (NOMINAL)

DC performance (10 bits resolution per sample)

Differential nonlinearity: <1 LSB (Monotonic).

Integral nonlinearity: <3 LSB.

Offset accuracy: 100 mV (20-30°C).

Absolute accuracy: 1% of p-p full scale range (20-30°C).

Internal trigger: Output automatically triggered when armed.

External trigger: Slope, level, hysteresis, width, impedance, coupling and maximum input same as for Recorder. (See page 00.00).

Insertion delay: 250 ns max.

Time base modes

Main only: Available in Single, Auto, and Normal Sweep Arm modes.

Mixed (main, delay): Available in Single and Normal Sweep Arm modes.

Memory size: 16384 10-bit words; Segmentation: 1,2,4,8,16 or 32 equal length blocks. Generation: Data may be generated from any memory block. Within any one block, a portion of the waveform may be generated by setting the starting point and stopping point. An even number of points is always output.

Sync output: Voltage: 0 to -0.75 V NOMINAL into 50 ohms, Pulse Width: One sample interval with the falling (first) edge active (or approximately 100 *us* when the sync pulse is past the stop position, and Sweep Arm is Single or Normal). Position: Settable from first point in the record to the last point. If the sync position is set outside the limits of the Start and Stop Position markers, the output record is extended to include the Sync Position by assigning a dc voltage (equal to the nearest Start/Stop Position marker) to the waveform between the Start/Stop Position marker and the sync position.

Ordering Information

HP 5182A Waveform Recorder/Generator

\$317.00