

The **HM1005** is a multi-function oscilloscope loaded with features such as true 3-channel operation, a genuine second time base, and even a separate second trigger facility.

Up to 6 traces can be displayed for evaluating waveform relationships by using the alternating time base mode and all three input channels. In this configuration, the normal signal is displayed together with the expanded signal section. The second trigger facility, with its own separate slope and level control, provides for the stable viewing of normally troublesome asynchronous signal components.

The main time base trigger circuit is designed to provide reliable triggering to greater than 130 MHz, at signal levels as low as 1 division. A user-selectable x10 magnifier extends the maximum sweep range to 5ns/division.

An active TV Sync Separator extracts clean field and line sync. pulses to ensure a high degree of display stability when viewing composite video signals. The built-in delay line permits viewing of the trigger edge at all times. The overscan feature indicates if any part of the trace passes beyond the vertical limits of the CRT screen.

An analog Y-output, switchable to Channel I or II, allows further external processing of the signal. Another new feature on the HM 1005 is the easy to read 3-digit LED delay time multiplier for accurate measurements.

The HM 1005 offers the right combination of triggering control, frequency response and time base versatility, to facilitate measurements in every environment from Workshop to Field service.

Specifications

Vertical Deflection

Operating Modes:	Ch.1 or Ch.11 individually. Ch.1 or 11 alternate or chopped(ch/freq.0.5MHz) Ch.111 can be displayed with Ch.1 and 11
Sum or Difference:	From Ch.1 and 11 (with dedicated "invert" control for Ch.11)
X-Y Mode:	Via Channel 1(X) and Channel 11(Y)
Frequency Range:	3 x DC to 100MHz (-3 dB).
Risetime:	<3.5 nS. Overshoot: $<1\%$
Deflection Coefficient(Ch.1/11):	10 calibrated steps from 5mV to 5V/div $\pm 3\%$ in 1-2-5 sequence, variable 2.5:1 to min.12.5V/div
Y Mag. x5:	Calibrated to 1mV/div $\pm 5\%$ (Freq DC to 10MHz)
Deflection Coefficient(Ch 111):	50mV/div $\pm 3\%$ variable to min 250mV/div
Input Impedance Ch.1 -111:	1MR # 22pF
Input Coupling(Ch.1 - 111):	DC-AC GD(Ground)
Input Voltage:	Max 400V(DC \pm peak AC)
Y Output from Ch. or 11:	~ 45 mV/div (50R). Delay line: approx. 90nS
Triggering:	With automatic 10Hz-120MHz(>5 mm height) normal, DC-130MHz with "Level"adjust(>10 mm)
Slope:	Positive or Negative. LED indication for trigger
Coupling:	AC (>10 Hz-40MHz), DC (0-40MHz), HF (15kHz-130MHz), LF (0-1kHz)
TV Sync-seperator:	For line and frame, pos / neg
Triggering Timebase B:	(Internal only) with level control (AC coupling) slope positive or negative

Horizontal Deflection

Timebase A: 23 calibrated steps from 50nS to 1S/div. 3% in 1-2-5 sequence, variable 2.5:1 to min 2.5S/div with Mag. x 10 to 5nS/div 5%

Timebase B: 21 calibr. steps from 50nS to 0.2S/div. 1-2-5 seq. with X Mag. x 10 to 5nS/div 5%
Delay Pos 1000:1 with Digital display 0.1%

Operating Modes: A+ Display with main timebase A only
Alt. altern display with intensified A and Del. B
B display with delayed time B only

Selectable: Delay time, untriggered or triggered start, slope trigger lever, B intensity, vertical A to B trace sep

Bandwidth X-Amplifier: DC -4MHz (3dB). Input X-Amplifier via Ch. 1

X-Y Phase Shift: <3° below 120kHz

Ramp Output Approx.: 5V positive going

Accessories Supplied: Line cord, Operators Manual, 2 x Probes-HZ51

Optional Accessories: 50R feedthrough termination HZ22
Viewing Hood HZ47, Carry Case HZ96

Note: All Hameg Oscilloscopes have a 2 year warranty