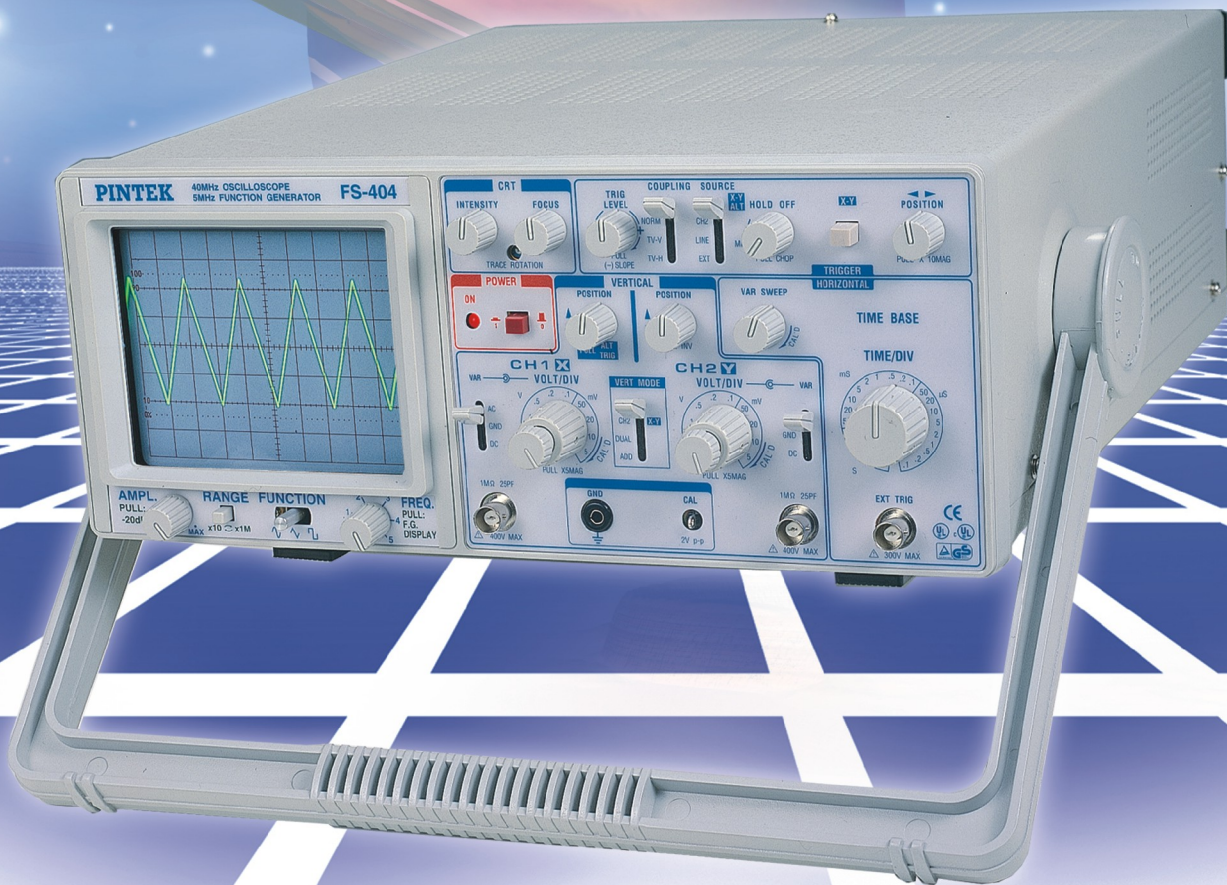


PINTEK 40MHz OSCILLOSCOPE WITH FUNCTION GENERATOR **FS-404**



OSCILLOSCOPE

- 40MHz Dual Trace, Dual Trigger
- 1mV Sensitivity.
- 10ns Resolution.

FUNCTION GENERATOR

- 0.5Hz~5MHz Frequency.
- Sine, Square, Triangle, 3 waveforms .
- Max output:20Vp-p(No Load), 10Vp-p(50Ω Load).
- TTL Synchronous Output.

FS-404

CE

CRT

Type : 6-inch rectangular with integral graticule, P31 phosphor.

Display Area : 8 x 10 div (1 div = 1 cm).

Accelerating Voltage : 2 kV.

Phosphor : P31.

Trace Rotation : Electrical, front panel adjustable.

VERTICAL AMPLIFIERS (CH 1 and CH 2)

Sensitivity : 5 mV/div to 5 V/div, 1 mV/div to 1 V/div at X5 MAG.

Attenuator : 10 calibrated steps in 1-2-5 sequence. Variable control provides fully adjustable sensitivity between steps, range 1/1 to at least 1/3.

Accuracy : $\pm 3\%$, 5 mV to 5 V/div, 5%, at X5 MAG.

Input Resistance : 1 M Ω $\pm 2\%$.

Input Capacitance : 25 pF ± 10 pF

Frequency Response :

5 mV/div to 5 V/div : DC to 40 MHz (-3 dB).

X5 MAG : DC to 10 MHz (-3 dB).

Rise Time :

8.8 nS; 35 nS at X5 MAG.

Overshoot : Less than 5%.

Operating Modes :

CH 1 : CH 1, single trace.

CH 2 : CH 2, single trace.

DUAL : CH 1 and CH 2, dual trace.

Alternate or Chop selectable at any sweep rate.

ADD : Algebraic sum of CH 1 + CH 2.

Chop Frequency : Approximately 500KHz.

Polarity Reversal : CH 2 invert

Maximum Input Voltage : 400 V (dc + ac peak).

HORIZONTAL AMPLIFIER

(Input through channel 1 input)

X-Y mode :

CH 1 = X axis.

CH 2 = Y axis.

Sensitivity : Same as vertical channel 2.

Input Impedance : Same as vertical channel 2.

Frequency Response :

DC to 1 MHz (-3 dB).

X-Y Phase Difference : 3° or less at 50 kHz.

Maximum Input Voltage : Same as vertical channel 2.

SWEEP SYSTEM

Operating Modes :

Main Time Base, X-Y Operating.

Main Time Base : 0.1 μ S/div to 2.0 S/div in 1 -2-5

sequence, 23 steps. Variable control provides fully adjustable sweep time between steps.

Accuracy : $\pm 3\%$, except $\pm 6\%$ on 0.2 S/div and $\pm 20\%$ on 0.1 μ S/div.

Sweep Magnification : X10 $\pm 10\%$.

Holdoff : Continuously adjustable for main time base from NORM to 5 times normal.

TRIGGERING

Trigger Modes :

AUTO (free run), NORM, TV-V, TV-H.

Trigger Source :

CH 1, CH 2, Alternate, EXT, LINE.

Slope :

(+) or (-)

Trigger Coupling :

AUTO : Sweep free-runs in absence of suitable trigger signal.

NORM : Sweep triggered only by adequate trigger signal.

TV-V : Video vertical sync pulses are selected. Also usable for high frequency reject.

TV-H : Video horizontal sync pulses are selected. Also usable for low frequency reject.

Trigger Sensitivity :

AUTO : 1.5 div (internal) > 0.5 Vp-p (external) 100 Hz -40 MHz

NORM : 1.5 div (internal) 20.5 Vp-p (external) 100 Hz -40 MHz

TV-V : 1.0 div (internal) > 0.5 Vp-p (external) DC -1KHz

TV-H : 1.0 div (internal) > 0.5 Vp-p (external) 1KHz-100 KHz

Maximum External Trigger Voltage :

300 V (dc + ac peak).

FUNCTION GENERATOR

GENERAL SPECIFICATIONS :

Frequency : 0.5Hz ~ 5MHz in 6 steps, controlled by one push switch.

Output Waveform : Sine, Square, Triangle, 3 waveforms total.

Stability : 0.1% - 15 minutes after power-on

0.2% - 24hrs after power-on

Limits of Operation : 0°C ~ 40°C, 10~80%R.H.

Storage Environment : -20°C ~ 70°C, 0~90%R.H.

TRIANGLE WAVE :

Frequency : 0.5Hz - 5MHz.

Symmetry : 50% (rise wave) to 50% (fall wave), $< 2\%$, 1Hz ~ 100KHz.

Linearity : $< 1\%$, 1Hz ~ 100KHz.

SINE WAVE :

Frequency : 0.5Hz ~ 5MHz.

Distortion : $< 2\%$, 1Hz ~ 100KHz.

Harmonic Ratio : < 30 dB, 100KHz ~ 5MHz.

Frequency Response : < 0.1 dB up to 100KHz.

< 1 dB 100KHz to 5MHz.

SQUARE WAVE :

Frequency : 0.5Hz ~ 5MHz.

Symmetry : 50% (positive half) to 50% (negative half), $< 2\%$, 1Hz ~ 100KHz.

Rise Time : < 60 ns.

MAIN OUTPUT :

Output Impedance : 50 Ω , $< 2\%$ Accuracy.

Max. Output : 20 Vp-p (No load), ± 1 V

10 Vp-p (50 Ω load), ± 0.5 V

Min. Output : 0.1 Vp-p (No load) and 0.05V (50 Ω load)

Attenuator : one -20dB switch, $< 2\%$ Accuracy.

SYNCHRONOUS OUTPUT :

Output Impedance : 50 Ω , $< 2\%$ Accuracy.

Output Level : TTL level, > 3 Vp-p fixed amplitude.

Fanout : > 20 .

Rise Time : < 60 ns (no load).

OTHER SPECIFICATIONS

Cal/Probe Compensation Voltage : 2 V p-p $+3\%$ square wave, 1KHz nominal.

CH 2 (Y) Output : 50 mV/div (nominal into 50 ohm load).

Output Impedance : Approximately 50 ohms.

Frequency Response : 20 Hz to 30 MHz, -3 dB.

Power Requirement : 100~130 VAC or 200-260 VAC, 50/60 Hz, 50 watts.

Dimensions (H x W x D) :

5.2" x 12.8" x 15.7" (132 x 324 x 398 mm).

Weight : 18.7 lbs (8.5 kg).

Environment :

Within Specified Accuracy : $+10^\circ$ to $+35^\circ$ C, 10-80%

Full Operation : 0° to $+50^\circ$ C, 10-80% relative humidity.

Storage : -30° to $+70^\circ$ C, 10-90% relative humidity.

ACCESSORIES SUPPLIED :

Two Switchable X1/X10 Probes.

Instruction Manual.

AC Line Cord.

One cable (BNC to BNC).