

# Data Sheet

## 60 MHz Analog Oscilloscope with Probes

### Model 2160A

B&K Precision's model 2160A is a high performance oscilloscope with many features at a low cost. The model 2160A includes a built in component tester, which is an excellent tool for in circuit troubleshooting. This oscilloscope is built by and backed by B&K Precision, a company that has been selling reliable, durable, value priced test instruments for over 50 years.

- 5mV/div sensitivity
- 23 calibrated ranges (main time base)
- 23 calibrated ranges (delayed time base)
- Signal delay time
- Component tester
- Z axis input
- Single sweep
- cUL certified



Specifications		model
		2160A
<b>VERTICAL AMPLIFIERS (CH 1 and 2)</b>		
Sensitivity	5 mV/ 5 V/div, 1 mV/div to 1 V/div (X5 MAG)	
Attenuator	1-2-5 sequence, plus x 5 gain step, Vernier control provide fully adjustable sensitivity between steps range 1/1 to at least 1/2.5	
Accuracy	± 3%, 5 mV to 5 V/div; ± 5%, 1 mV, 2 mV/div	
Input impedance	1 MΩ ± 2%	
Input Capacitance	25 pF ± 10%	
Frequency Response	DC to 60 MHz (5 mV/div to 5 V/div), DC to 15 MHz (X5 MAG)	
Rise Time	5.8 ns (Overshoot ≤ 5%)	
Operating Modes	CH1, CH2, Dual, Alternate Chop	
Polarity Reversal	CH 2 invert	
Maximum Input Voltage	400V (DC + AC peak)	
<b>SWEEP SYSTEM</b>		
Sweep Display Modes	Main, Mix, Delay, XY	
Hold Off Time	5:1 continuously variable	
<b>Main Sweep</b>		
Sweep Speed	0.1 μs/div. to 2.0s/div. in 1-2-5 sequence, 23 steps	
Accuracy	± 3%	
Variable Time Control	5:1, uncalibrated, continuously variable between steps	
Sweep Magnification	10 x, ± 10%, extended sweep speed up to 10 ns/div	
<b>Delay Sweep</b>		
Sweep Speed	0.1 μs/div. to 2.0 s/div. in 1-2-5 sequence, 23 steps	
Accuracy	± 3%	
Sweep Magnification	10 x, ± 10%, extended sweep speed up to 10 ns/div	
Delay Time Position	Variable control to locate desirable waveform for extending	
<b>Triggering</b>		
Trigger Coupling	AUTO, NORM, TV-V, TV-H	
Trigger Source	CH1, CH2, ALT, EXT. LINE	
Slope	+/-	
<b>HORIZONTAL AMPLIFIER</b> (Input through channel 2 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: DC to 1MHz (-3 dB). AC: 5 Hz or 2 MHz (-3 dB)	
X-Y Phase Difference	3° or less at 50 kHz	
Maximum Input Voltage	Same as vertical channel 2	

<b>CH 2 Output (on rear panel)</b>	
Output Voltage	50 mV/div (nominal into 50 Ω load)
Output Impedance	Approximately 50 Ω
Frequency Response	20 Hz to 60 MHz, -3 dB into 50 V

<b>CRT</b>	
Type	6-inch rectangular with internal graticule
Display Area	8 x 10 div (1 div = 1 cm)
Accelerating Voltage	12 kV
Phosphor	P31
Scale Illumination	Continuously variable
Trace Rotation	Electrical, front panel adjustable

<b>COMPONENT TESTER</b>	
Components Tested	Resistors, capacitors, inductors, and semiconductors
Test Voltage	6 V rms maximum (open)
Test Current	11 mA maximum (shorted)
Test Frequency	Line frequency (60 Hz in USA)

<b>Other Specifications</b>	
Cal/Probe	
Compensation Voltage	2.0 V p-p ± 3% square wave, 1 kHz nominal
Sweep Output	TTL level allows synchronization of external equipment with scope sweep

<b>Intensity Modulation</b>	
Input Signal	TTL level, intensity increasing with more positive levels
Input Impedance	50 kΩ
Usable Freq. Range	DC to 5 MHz
Maximum Input Voltage	30 V (DC + AC peak)

<b>Environment</b>	
Within Specified Accuracy	50° to 95°F (10° to 35°C), 10-80% RH
Full Operation	32° to 122°F (0° to +50°C), 10 - 80% RH
Storage	-22° to 158°F (-30° to +70°C), 10 - 90% RH
Power Requirements	110/120/220/240 V ± 10%, 50/60 Hz
Dimensions (H x W x D)	12.76 x 15.68 x 5.2" (324 x 398 x 132mm)
Weight	16.75 lbs. (7.6kg)

<b>Three Year Warranty</b>	
Accessories	
Supplied: Instruction Manual, Two PR 33A x1/x10 Probes or equivalent, AC Power Cord, Spare Fuse	
Optional: PR 32A Demodulator Probe, PR 37AG x1/x10/REF Probe, PR 100A x100 Probe, PR-55 High Voltage x1000 Probe, LC 210A Carrying Case	