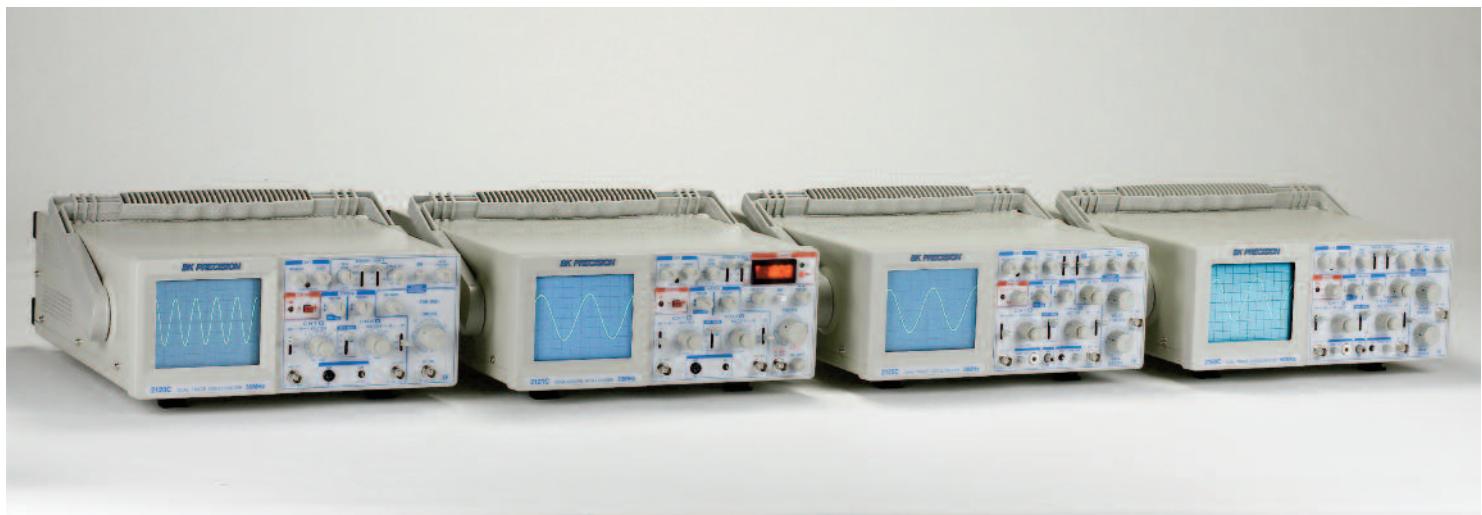


Data Sheet

Analog Oscilloscopes With Probes 2100C Series



B&K Precision's 212x Series are dual trace oscilloscopes that offers high performance at a low price. Most competitor's entry level oscilloscopes have a 20 MHz bandwidth, while B&K Precision's 212x Series have a bandwidth of 30-60 MHz.

These oscilloscopes are built by and backed by B&K Precision, a company that has been selling reliable, durable, value priced test instruments for over 60 years.

Common Features & Benefits

- Dual or single trace operation
- 5 mV/div sensitivity
- Calibrated 23-step time base with X10 magnifier
- Video sync trigger
- Alternate/chop sweep
- Sum and difference capability

Additional Features

- Built-in component tester (2125C & 2160C)
- Built-in 50 MHz frequency counter (2121C only)
- Delayed time base
- Main, Mix, Delay, X-Y sweep modes

Specifications	2120C	2121C	2125C	2160C
Bandwidth	30 MHz	30 MHz	30 MHz	60 MHz
Sweep Time	0.1 μ s/div to 2 s/div			20 ns/div to 5 s/div
Component Tester	-	-	✓	✓
Counter	-	✓	-	-



Analog Oscilloscopes

2100C Series

Specifications		2120C & 2121C
VERTICAL AMPLIFIERS (CH 1 and CH 2)		
Sensitivity	5 mV/div to 5 V/div, 1 mV/div to 1 V/div at X5	
Attenuator	10 steps in 1-2-5 sequence. Vernier control provides full adjustment between steps	
Accuracy	±3%, ±5% at X5	
Input Impedance	1 MΩ ±2%	
Input Capacitance	25 pF ±10 pF	
Frequency Response	5 mV to 5 V/div: DC to 30 MHz (-3dB). X5: DC to 10 MHz (-3dB)	
Rise Time	12 ns (Overshoot ≤5%)	
Operating Modes	CH 1: CH 1, single trace	
CH 2	CH 2, single trace	
ALT	dual trace, alternating	
CHOP	dual trace, chopped	
ADD	algebraic sum of CH 1 + CH 2	
Polarity Reversal	CH 2 only	
Max. Input Voltage	400 V (DC + AC peak)	
SWEEP SYSTEM		
Sweep Speed	0.1 μs/div to 2 s/div in 1-2-5 sequence, 23 steps. Vernier control provides fully adjustable sweep time between steps.	
Accuracy	±3%	
Sweep Magnification	10x ±10%	
TRIGGERING		
Triggering Modes	AUTO (free run) or NORM, TV-V, TV-H	
Trigger Source	CH 1, CH 2, ALT, EXT, LINE	
Max External Trigger Voltage	300 V (DC + AC peak)	
Trigger Coupling	AC 30 Hz to 30 MHz	
TV H	Used for triggering from horizontal sync pulses	
TV V	Used for triggering from vertical sync pulses	
TRIGGER SENSITIVITY		
Auto	Bandwidth: 100 Hz-30 MHz, Internal: 1.5 div, External: ≥0.5Vp-p	
Norm	Bandwidth: DC to 30 MHz, Internal: 1.5 div, External: ≥0.5Vp-p	
TV V	Bandwidth: 20 Hz-1 kHz, Internal: 1.0 div, External: ≥0.5Vp-p	
TV H	Bandwidth: 1 kHz-100 kHz, Internal: 1.0 div, External: ≥0.5Vp-p	
HORIZONTAL AMPLIFIER (Input through channel 1 input)		
X-Y Mode	Switch selectable using X-Y switch. 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 typical (-3 dB)	
X-Y Phase Difference	Approximately 3° at 50 kHz	
Maximum Input Voltage	Same as vertical channel 2	
CRT		
Type	Rectangular with internal graticule	
Display Area	8 x 10 div (1 div = 1 cm)	
Accelerating Voltage	2 kV	
Phosphor	P31	
Trace Rotation	Electrical, front panel adjustable	
Calibrating Voltage	1 kHz (±10%) positive square wave, 2 V p-p (±3%)	
COUNTER (2121C)		
Display	5 digits, 0.36" red LED, display at "Hz" or "kHz" auto range	
Display Resolution	Auto select from 0.001 Hz to 1 kHz depending on the frequency	
Max. Counter Range	0.1 Hz to 50 MHz	
Accuracy	+0.01% + 1 digit or 1/99999 + 1 digit	
Time Base	18.432 MHz + 10ppm (23 °C ± 5 °C)	
GENERAL		
Temperature	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	
AC Input	100/120/220/240 VAC ±10%, 50/60 Hz, approximately 40 W	
Dimensions (WxHxD)	7 x 14.5 x 17.25" (180 x 370 x 440 mm)	
Weight	16.8 lbs (7.6 kg)	

One Year Warranty

Supplied Accessories	Instruction manual, two PR-33A X1/X10 probes or equivalent, AC power cord and spare fuse
Optional Accessories	PR-32A demodulator probe, PR-37A x1/x10/REF probe, PR-100A x100 probe, PR-55 high voltage x1000 probe, LC-210A carrying case

Specifications		2125C & 2160C
VERTICAL AMPLIFIERS (CH 1 and CH 2)		
Sensitivity	5 mV/div to 5 V/div, 1 mV/div to 1 V/div at X5	
Attenuator	10 steps in 1-2-5 sequence. Vernier control provides full adjustment between steps	
Accuracy	±3%, ±5% at X5	
Input Impedance	1 MΩ ±2%	
Input Capacitance	25 pF ±10 pF	
Frequency Response	5 mV to 5 V/div: DC to 30 MHz (-3dB), X5: DC to 10 MHz (-3dB)	
Rise Time	12ns (Overshoot ≤5%)	
Operating Modes	CH 1: CH 1, single trace	
CH 2	CH 2, single trace	
ALT	dual trace, alternating	
CHOP	dual trace, chopped	
ADD	algebraic sum of CH 1 + CH 2	
Polarity Reversal	CH 2 only	
Max. Input Voltage	400 V (DC to AC peak)	
SWEEP SYSTEM		
Operating Modes	Main, mix (both main sweep and delay sweep displayed), or Delay (only delay sweep displayed), X-Y	
Main Sweep Speed	0.1 μs/div to 2.0 s/div in 1-2-5 sequence, 23 steps Vernier control provides fully adjustable sweep time between steps	
Accuracy	±3%	
Sweep Magnification	10X ±5%	
Delayed Sweep Speed	0.1 ms/div to 0.1s/div in 1-2-5 sequence, 23 steps	
Holdoff	Continuously variable for Main sweep up to 10 times normal	
Delay Time Position	Continuously variable to control percentage of display that is devoted to main and delay sweep	
TRIGGERING		
Triggering Modes	AUTO (free run) or NORM, TV-V, TV-H	
Trigger Source	CH 1, CH 2, ALT, EXT, LINE	
Trigger Voltage	300 V (DC + AC peak)	
Trigger Coupling	AC 30 Hz to 30 MHz, TV H used for triggering from horizontal sync pulses, TV V Used for triggering from vertical sync pulses	
TRIGGER SENSITIVITY		
Auto	Bandwidth: 100Hz - 40MHz, Internal: 1.5 div, External: ≥0.5Vp-p	
Norm	Bandwidth: 100Hz - 40MHz, Internal: 1.5 div, External: ≥0.5Vp-p	
TV-V	Bandwidth: DC - 1kHz, Internal: 1.0 div, External: ≥0.5Vp-p	
TV-H	1 kHz - 100kHz, Internal: 1.0 div, External: ≥0.5Vp-p	
HORIZONTAL AMPLIFIER (Input through channel 1 input)		
X-Y Mode	Switch selectable using X-Y switch. CH 1: X axis, CH 2: Y axis	
Sensitivity	Same as vertical channel 2	
Accuracy	Y-Axis: ±3%. X-Axis: ±6%	
Input Impedance	Same as vertical channel 2	
Frequency Response	DC to 1MHz typical (-3 dB), to 6 div horizontal deflection	
X-Y Phase Difference	3° or less at 50 kHz	
Max. Input Voltage	Same as vertical channel 2	
CRT		
Type	Rectangular with internal graticule	
Display Area	8 x 10 div (1 div = 1 cm)	
Accelerating Voltage	2 kV, 12 kV (2160C)	
Phosphor	P31	
Trace Rotation	Electrical, front panel adjustable	
COMPONENT TESTER		
Components Tested	Resistors, Capacitors, Inductors, and Semiconductors	
Test Voltage	6 V rms maximum (open)	
Test Current	11 mA maximim (shorted)	
Test Frequency	Line frequency (60 Hz in USA)	
Calibrating Voltage	1 kHz (±10%) positive square wave, 0.2 V p-p (±2%)	
GENERAL		
Temperature	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	
AC Input	100/120/220/240 VAC ±10%, 50/60 Hz, Approximately 40 W	
Dimensions (WxHxD)	7 x 14.5 x 14.25" (180 x 370 x 440 mm)	
Weight	16.8 lbs (7.6 kg)	

One Year Warranty

Supplied Accessories	Instruction manual, two PR-33A X1/X10 probes or equivalent, AC power cord and spare fuse
Optional Accessories	PR-32A demodulator probe, PR-37A x1/x10/REF probe, PR-100A x100 probe, PR-55 high voltage x1000 probe, LC-210A carrying case

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[B&K Precision:](#)

[2120C](#) [2121C](#) [2125C](#) [2160C](#)