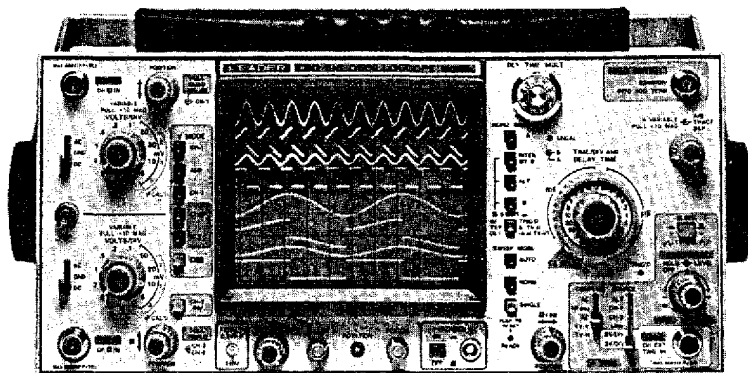


100-MHz Three Channel Dual Time Base Oscilloscope

- Eight Trace Capability
- Alternate Triggering
- High Vertical Input Sensitivity
- Excellent Triggering Sensitivity



LBO-516

The LBO-516 is an economical 100-MHz, 3-channel, alternate time base oscilloscope. It has all of the important features that are expected in a 100-MHz oscilloscope such as full front panel operation, alternate triggering for simultaneous view of asynchronous signals and independent or simultaneous display of main and delayed time bases. The bright 20-kV PDA CRT and 0.5-mV sensitivity permit sharp, bright displays of even those normally tough to see critical signals.

Eight trace capability is possible by displaying main and delayed versions of CH-1, CH-2, CH-3, and CH-1 + CH-2. Also included are comprehensive triggering facilities with video sync separators, variable trigger holdoff, excellent trigger sensitivity and more.

The LBO-516 is the perfect answer for those who do not wish to compromise performance, even at an attractive price!

SPECIFICATIONS

VERTICAL DEFLECTION

Bandwidth (-3 dB)

dc coupled: dc to 100 MHz.
ac coupled: 10 Hz to 100 MHz.

Rise Time

3.5 ns.

Deflection Coefficients (CH-1, CH-2)

5 mV/cm to 5 V/cm in 10 calibrated steps, 1-2-5 sequence; continuously variable between steps. X10 multiplier provides 500 μ V/cm sensitivity up to 5 MHz (-3 dB). (CH-3) 0.2 V/cm, 2 V/cm.

Accuracy

$\pm 3\%$, $\pm 5\%$ with X10 magnifier.

Input Impedance

1 M Ω $\pm 2\%$, 25 pF ± 3 pF.

Signal Delay

20 ns; leading edge can be observed.

Maximum Input Voltage

400 V (dc plus ac peak).

Common Mode Rejection Ratio

>20 dB at 20 MHz.

Display Modes

CH-1; CH-2; ALtErnate; CHOP; ADD; SUBtract (with CH-2 INVert); TRIPLE; QUAD; X-Y. (CHOP frequency is 250 kHz).

Output

CH-1 output on front panel of 25 mV per cm of deflection on CRT (into 50 Ω).

EXTERNAL HORIZONTAL DEFLECTION (X-Y Mode)

Bandwidth (-3 dB)

dc coupled: dc to 3 MHz.
ac coupled: 10 Hz to 3 MHz.

Phase Shift

<3° at 100 kHz.

All other specifications same as vertical deflection specifications.

INTERNAL HORIZONTAL DEFLECTION (Sweep Mode)

Display Modes

Main time base; delayed time base; main time base intensified by delayed time base; alternate main and delayed time base.

Main Time Base

20 ns/cm to 0.5 s/cm in 23 calibrated steps, 1-2-5 sequence, continuously variable between steps.

Delayed Time Base

20 ns/cm to 50 ms/cm in 20 steps, 1-2-5 sequence, continuously variable between steps.

Magnifier

X10 magnifier at any sweep speed setting both time bases. Extends maximum sweep speed to 2 ns/cm.

Accuracy

$\pm 3\%$ ($\pm 5\%$ with X10 magnifier).

Delay Time Jitter

1 part in 20,000.

MAIN TIME BASE TRIGGERING

Sources

CH-1; CH-2; ALtErnate; LINE; EXtErnal.

Modes

AUTOMATIC; NORMAl; SINGLE shot.

Coupling

AC; HF REJect; DC; TV-Vertical; TV-Horizontal.

Slope

+ or -.

Level

PRESET or Variable.

Holdoff

NORMAl, Variable, B-ENDS-A.

Sensitivity

	Bandwidth	Internal	External
NORM	dc- 10 MHz	0.4 div	0.1 V
	dc-100 MHz	1.5 div	0.4 V
AUTO	30 Hz- 10 MHz	0.4 div	0.1 V
	30 Hz-100 MHz	1.5 div	0.4 V

Input Impedance

1 M Ω $\pm 2\%$, 25 pF ± 3 pF.

DELAYED TIME BASE TRIGGERING

Modes

Immediate (AFTER DLY): Delayed time base sweep begins immediately after delay.

Triggered (TRIG'D & TV-H): Delayed time base sweep begins on the first trigger after delay.

Coupling

Same as main time base except that TV-H coupling is in effect when the main time base coupling is set at TV-V.

Z-AXIS (INTENSITY) MODULATION

Inut Level

TTL compatible (Blanked at TTL High)

Input Impedance

10 k Ω .

Bandwidth

10 MHz.

Maximum Input Voltage

50 Vp-p (dc plus ac peak).

INTERNAL CALIBRATOR

500 mV p-p $\pm 1\%$, 1 kHz $\pm 10\%$.

CRT

Display

150 mm rectangular.

Graticule

Internal, illuminated 8x10 div (1 div = 1 cm).

Phosphor

P31.

Accelerating Potential

20 kV/2 kV (post deflection acceleration).

Adjustments

Rotation, focus, main and delayed time base intensity, graticule illumination.

GENERAL

Size (W x H x D)

12 x 5 $\frac{3}{4}$ x 15 $\frac{1}{4}$ in.
305 x 145 x 400 mm.

Weight

19 $\frac{1}{4}$ lbs.
8.9 kg.

Operating Temperature

0-50°C (specifications guaranteed over 15-35°C).

POWER REQUIREMENTS

100, 120, 200, 220, 240 Vac, 50/60 Hz, 65 W.

SUPPLIED ACCESSORIES

Instruction Manual.
2 ea. 100 MHz X10/X1 probes, LP-100X.
2 ea. BNC to post adapters.
1 ea. extra fuse.

AVAILABLE ACCESSORIES

19" Rackmount Kit LR-2402.
Probe Pouch LP-2017.
Front Cover LC-2016.
CRT Hood LH-2015.
Technicart™ Instrument Carts.