

LA302 & LA303 Analog Scopes

Main Features

- 100 & 200 MHz
- 2 + 1 channels
- Sensitivity of 2 mV/div max
- Max sweep speed of 1 ns/div
- High-speed auto setup
- Cursor measurements
- Full TV trigger with field and line selection
- Save and recall panel settings
- Frequency counter
- High-intensity CRT



The LA302 and LA303 analog oscilloscopes offer three channels and up to 200 MHz bandwidth. They have high-level performance and low cost.

They are perfect instruments for service and educational applications. Equipped with extensive TV triggering, both scopes are excellent for video testing.

Like the other LeCroy analog scopes, their standard multipurpose trigger, five-digit counter, and comprehensive cursors make them useful and universal Instruments.

Features

Convenient Fine-Adjustment Mode

Pressing FINE and turning the knob enables slow scrolling of waveforms – a function comparable to a digital storage scope's roll mode.

Line Triggering Provided for AC Line Measurement

AC line-related measurement of various frequencies can be obtained.

Third-Channel Input

CH3 provides three sensitivity levels for a wider range of measurements.

Input with Probe Sensor Function

When using a probe, the range display is automatically calibrated by detecting 10:1 or 100:1 with the probe sensor.

Specifications

Display

CRT: 6-inch rectangular, internal graticule (8 x 10 div with scale illumination), meshless CRT

Accelerating Voltage: Nominal 16 kV

Vertical Deflection System

Mode: CH1, CH2, CH3, ADD, ALT, CHOP

Frequency Response:

Model LA302:

5 mV/div - 5 V/div, DC 100 MHz;
2 mV/div, DC 50 MHz

Model LA303:

5 mV/div - 5 V/div, DC 200 MHz;
2 mV/div, DC 50 MHz

Accuracy: $\pm 2\%$

Bandwidth Limiter: 20 MHz

Risetime:

Model LA302: 3.5 ns or less

Model LA303: 1.75 ns or less

Signal Delay Time: At least 30 ns

Input RC Direct: 1 M Ω $\pm 1.5\%$ //
20 pF ± 2 pF

Input RC with Probe: 10 M Ω $\pm 3\%$ //
12.5 pF ± 2 pF

Max Input: Direct, ± 400 V max, with
10:1 probe, ± 600 V max

Polarity Switching: Possible only for
CH2

Channel 1 & 2

Sensitivity: 2 mV/div - 5 V/div, 11 step
(1-2-5); 2 mV/div - 12.5 V/div (with
vernier)

Input Coupling: AC, DC, GND (The
lowest usable frequency is 4 Hz with
AC coupling.)

Channel 3

Sensitivity: 50 mV/div, 100 mV/div,
500 mV/div, $\pm 2\%$

Input Coupling: AC, DC

A Triggering

Sources: CH1, CH2, CH3, LINE

Coupling: AC, DC, HFREJ, LFREJ

B Triggering

Sources: CH1, CH2, CH3

Coupling: AC, DC, HFREJ, LFREJ

TV Triggering: ODD, EVEN, BOTH,
line selection, TV system (NTSC,
PAL/SECAM — HDTV optional in
LA302, standard in LA303)

Trigger Sensitivity

LA302: DC - 10 MHz, 0.4 div
10 - 100 MHz, 1.0 div

LA303: DC - 10 MHz, 0.4 div
10 - 100 MHz, 1.0 div
100 - 200 MHz, 1.5 div

B sweep

Sweep Time:

Model LA302: Fastest range,
20 ns/div; slowest range, 5 ms/div;
accuracy A/B, $\pm 2\%$

Model LA303: Fastest range,
10 ns/div (1-2-5 step); slowest range,
5 ms/div; accuracy A/B, $\pm 2\%$

Magnifier: 10 times

Accuracy: $\pm 3\%$

Fastest Range:

Model LA302: 2 ns/div

Model LA303: 1 ns/div

Delay Jitter: 1/20,000

Hold-Off Time: Variable (up to sweep
length or longer)

Auto Setup

Input Channel: CH1, CH2

Frequency Response: 50 Hz -
50 MHz

**CH2 Signal Output (factory
option):**

Model LA302: DC 50 MHz

Model LA303: DC 100 MHz

**EXT Z-axis Input (factory
option):** 0.5 Vp-p

Utilities

Calibrator

Waveform: Square-wave, 1 kHz $\pm 0.1\%$,
0.6 Vp-p $\pm 1\%$

CTR Readout

Readout: Attenuator range, ADD,
UNCAL, AC/DC/GND, vertical mode, CH2
polarity, A/B sweep range, x10 MAG,
UNCAL, horizontal display mode, hold-
off, trigger coupling, trigger source, trig
slope, TV-field, TV-line, TV-system (NTSC,
PAL/SECAM for both models — HDTV
in the LA303)

Cursor Measurement

Time Difference: ΔT

Voltage Difference: ΔV

Division Calculation by ΔT : $1/\Delta T$

Frequency Counter

Display Digits: 5 digits, decimal

Accuracy: $\pm 0.01\%$

Frequency Measurement range:

Model LA302: 2 Hz - 100 MHz
(option six digit)

Model LA303: 2 Hz - 200 MHz,
reciprocal (option six digit)

Save/Recall Function

Number of Panel Setups:

Model LA302 and LA303: 32 max

Model LA302: 255 in banks of 63

Backup: Battery back-up (approx.
30,000 hr)



Power Supply

Voltage Range: AC 90 V - 132 V/180 V - 250 V

Frequency Range: 48 Hz - 440 Hz

Power Consumption: 110 VA max

Dimensions and Weight

Dimensions: 272W x 152H x 410L

Weight: Approx. 7.5 kg (w/o access)

Environmental Conditions

Operating: 0° C – +40° C, 90% RH (40° C)

Performance Guarantee: +10° C – +35° C

Ordering Information

Analog Oscilloscopes

	Product Code
100 MHz, 3-Channel	LA302
200 MHz, 3-Channel	LA303

Included with Standard Configuration

Two each 10:1 10 MΩ Passive Probes	PP005
Operator's Manual	
Panel Cover	
Power Cable	
Two Fuses	

Accessories

800 MHz FET Probe	SFP-4A
1 GHz FET Probe	SFP-5A
Calibrator	IE-1066
NIST Calibration	LAXXX-CCNIST
MIL Standard Calibration	LAXXX-CCMIL