Oscilloscopes, Function Generator & Stroboscopes

**STROBOSCOPE (XENON) (ELP.112.183)**

The instrument is housed in a strong metal case provided with a carry handle and rubber feet. An inclined rear panel carries the flash rate control, range selector, sockets, and switch for external synchronization, and the power ON/OFF switch.

**Flashing Rate**

Range 1: 1-10 flashes per second at 0.8j
Range 2: 10-100 flashes per second at 0.2j
Range 3: 100-250 flashes per second at 0.1j
Main Flashing power 5W APPROXIMATELY Accuracy + _ 2% f.s.d on each range

**Flash Duration**

12 U sec. Approximately

**Triggering**

Internal oscillator, External shorting contacts

**Overall Dimensions:** 210x170x175mm

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**Oscilloscope 15 MHz. Model LAB-800 (ELP.112.184)**

This is a compact lightweight single trace microcontroller based Oscilloscope that has been specially designed to meet the requirements of both the service technician and advanced amateur. The sweep circuit employs the LPS trigger technique developed by us. This technique gives the instrument outstanding trigger performance far beyond the bandwidth of the vertical amplifier. All important supply voltages are stabilized. A principal feature of the Oscilloscope, which makes it an indispensable instrument for servicing, is the built-in component tester. This allows both passive and active components to be tested, while still in-circuit and therefore makes servicing more efficient and cost effective.

The front panel has been designed for easy operation with all controls clearly identified. This oscilloscope is user friendly & an ideal service instrument.

**Specifications:**

- Microcontroller based
- Digital Readout with backlit LCD.
- RS 232 interface and PC Software.
- Compact Size
- 15 MHz Bandwidth
- Maximum Sweep Speed 200 ns
- Stable Triggering upto 30 MHz
- Component and Continuity Tester
- Sharp Trace CRT & Auto focus
- Gold Plated BNC Connectors.

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**Oscilloscope 20MHz. Model LAB-802 (ELP.112.185)**

20MHz Microcontroller Based Dual Trace Oscilloscope with Component & Continuity Tester.

This is a Completely Indigenously designed Microcontroller Based Oscilloscope. Besides setting a new trend, it gives a feel of smooth Digital Touch. It’s super bright LED's display Volts/Div and Time/Div steps when these controls are operated. Equipped with RS232 Interface and PC software, Oscilloscope can be remotely controlled for these settings. Rugged yet light weight, has sharp and bright trace. Oscilloscope is the ideal user friendly scope for education and industry. Oscilloscope can be controlled through PC via optional Bluetooth Adaptor also.

**Specifications:**

- Microcontroller based
- Super Bright LED’s for display of Volts & Time / Div
- RS232 Interface & PC Software
- X 10 Magnification
- 20 ns max sweep speed
Stable triggering up to 40MHz.
Alternate triggering.
Variable hold off & Line triggering.
Component and Continuity Tester.
Sharp Trace CRT & Auto focus.
Gold Plated BNC Connectors.

**Oscilloscope 20MHz. Model LAB-804 (ELP.112.186)**

2 Channel 4 Trace High Sensitivity Oscilloscope with Digital Readout

Caddo 804 is a Microcontroller Based Oscilloscope. Besides setting a New Trend, it gives a feel of smooth Digital Touch. It’s sleek Digital Readout backlit LCD displays Volts/Div and Time/Div settings when these controls are operated. Equipped with RS232 Interface and PC software, Caddo 804 can be remotely controlled for these settings. Rugged yet light weight 804 has sharp and bright trace. The Vertical Bandwidth is more than adequate for all your needs and you can easily view signals upto 50 MHz. The 4 Trace feature let’s you view original and expanded signals simultaneously for quick analysis.

Microcontroller based
Digital Readout with Backlit LCD
RS232 Interface & PC Software
Improved 50 MHz HF Triggering
Max sweep 20 ns
X10 Magnification
2 Channel - 4 Trace display
Alternate Triggering & Variable Hold-Off
Max 1 mV sensitivity
Component & Continuity Tester
Sawtooth output & Z-Modulation
LED indication for TB uncal and 1 mV operation
Bright Trace CRT & Auto Focus
Illuminated Display
Optional Demodulator Probes Bandwidth 0.1-750 MHz (?3 dB) Max.
Input Voltage : 50 V AC - 200 V DC
Gold Plated BNC Connectors
Wireless controlled through PC using Bluetooth Technology (optional)

**Oscilloscope 20MHz. Model LAB-805 (ELP.112.187)**

35 MHz - 2 Channel 4 Trace Oscilloscope with Digital Readout

Caddo 805 is a Microcontroller Based Oscilloscope. Besides setting a New Trend, it gives a feel of smooth Digital Touch. It’s sleek Digital Readout backlit LCD displays Volts/Div and Time/Div settings when these controls are operated. Equipped with RS232 Interface and PC software, Caddo 805 can be remotely controlled for these settings. Rugged yet light weight 805 has sharp and bright trace. The Vertical Bandwidth is more than adequate for all your needs and you can easily view signals upto 50 MHz. The 4 Trace feature let’s you view original and expanded signals simultaneously for quick analysis.

Specifications :
- Microcontroller based
- Digital Readout with Backlit LCD
- RS232 Interface & PC Software
- 2 Channel - 4 Trace display
- Bandwidth DC-35 MHz
- Improved 50 MHz HF Triggering
- Max sweep 20 ns
- X10 Magnification
- Calibrated Sweep Delay (Digitally Controlled)
- Alternate Triggering & Variable Hold-Off
- Max 1 mV sensitivity
- Component & Continuity Tester
- Sawtooth output & Z-Modulation
- LED indication for TB uncal and 1 mV operation
- Bright Trace CRT & Auto Focus
- Gold Plated BNC Connectors
- Wireless controlled through PC using Bluetooth Technology (optional)

**Fixed Frequency Sine Wave Oscillator 1 MHz**
Audio Frequency Function Generator 20 Hz to 200KHz (ELP.112.189)

SPECIFICATIONS:
- FREQUENCY RESPONSE: 20 Hz to 200 KHz in four decade step.
- DIAL ACCURACY: + 5% of Range.
- WAVE FROM: SINE & SQUARE WAVE.
- OUTPUT VOLTAGE: Sine Wave – 0 – 10V & 0 – 1V continuously Variable.
- DISTORSION: Less than 0.5% form 100KHz.
- SQUARE WAVE RISE TIME: Less than 100 nano sec.
- SQUARE WAVE SYMMETRY: Duty Cycle variable from 0% to 80%.
- OUTPUT IMPEDANCE: 600 Ohm ± 5%.
- POWER: 230V AC + 10%.

Audio Frequency Function Generator 1 Hz to 220KHz (ELP.112.190)

Wave shapes Sine Square & Triangular waves selectable using band switch Frequency range 1 Hz to 220 KHz settable using fine & coarse controls Accuracy +/- 3% on all ranges Output impedance App. 60 Ohms Amplitude for sine wave output 20 V P/P

SINE/SQUARE OSCILLATOR 0.1 Hz - 1 MHz (ELP.112.191)

This FUNCTION GENERATOR’ is capable of Providing SINE, SQUARE,TRIANGLE Wave From. It has linear Frequency Scale very low Distorsion & constant signal amplitude with the output Signal Symmetry about Zero. The DC coupled output provides square wave without any appreciable Sag at low frequency. It has maximum 20 VP/P amplitude. The output is protected against short circuit. It has a offset control provided to shift the base line of signal by + 10 volts. The continuously variable DC offset controls further enhance the versatility of the instrument. The equipment is used in Audio Electronics and other Laboratory & Research Work.

SPECIFICATION:-
- FREQUENCY RANGE: 0.1 Hz to 1MHz in six decade Range.
- DEAL ACCURACY: +_ 5% Of Range
- AMPLITUDE: 0-20V P/P for all Function.
- WAVE FORMS: SINE, SQUARE, TRIANGLE, TTL, SQUARE WAVE (SEPARATE O/P)
- SINE WAVE DISTORSION: Less than 1% from 100Hz to 100 KHz
- SQUARE WAVE DUTY CYCLE: 49% To 51%
- SQUARE WAVE RISE TIME: Less than 100 nano Sec. at Maximum Amplitude.
- OUTPUT IMPEDANCE: 600 Ohm +_ 5%
- POWER REQUIRED: 230V AC +_ 10%

FUNCTION GENERATOR WITH DIGITAL COUNTER (ELP.112.192)

- Excellent wave shape, signal linearity and wave from symmetry.
- Wide frequency range from 0.01Hz to 1MHz.
- Commendable frequency and amplitude stability.
- Voltage controlled frequency sweeping facility.
- Separate TTL / CMOS Output and facility of DC offset

TECHNICAL SPECIFICATION:-
- FREQUENCY RANGE: 0.01 Hz to 1MHz in suitable steps.
- FUNCTION: Sine, Square, Triangle, Ramp, Pulse, TTL/CMOS pulse output.
- DISPLAY: Digital (4Digit 7 segment display)
- ACCURACY: Better than +_ 1% + 3 digit of F.S.
- AMPLITUDE: 30V p - p into open circuit.
- AMPLITUDE CONTROL: 0 to 60 dB variable (2 x 20 dB fine)
- DC OFFSET: Up to +_ 15V into open circuit, continuously variable independent control.
- OUTPUT IMPEDANCE: 250 Ohm & 600 Ohm +_ 10% (Switchable).
- POWER REQUIRED: 230V +_ 10% AC