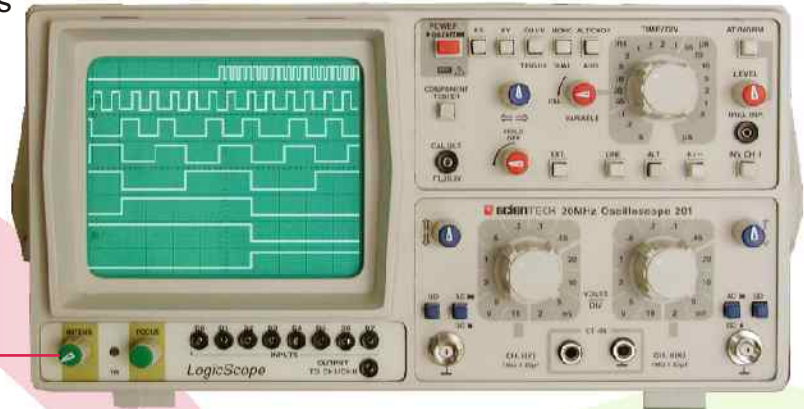


# 20 MHz-2mV Dual Trace Oscilloscope with Component and Continuity Tester

- Choice of any one Built-in option
- Stable Triggering up to 40 MHz
- Algebraic sum & difference of both channels
- Alternate Triggering
- Line Trigger
- Variable Hold-Off
- Component & Continuity Tester
- X 5 magnification
- Z Modulation (TTL)
- Max. sweep speed 40 ns/cm
- Bright Trace & Internal Graticule CRT
- Low Line and Portable



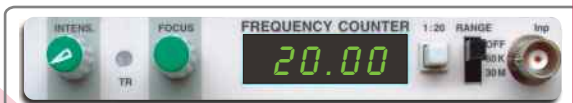
## Built-in options

### Function Generator



**Modes:** Sine, Square, Triangle, DC  
**DC Offset (Switchable)**  
**Frequency:** 10 Hz to 100 KHz in 4 steps  
**Output Voltage:** 10 V<sub>pp</sub> into 50Ω  
**Sinewave Distortion:** ≤ 3%  
**Square wave Risettime:** ≤ 150 ns  
**Output Short Circuit Proof**

### Frequency Counter



**Frequency Range:** 20 Hz - 30 MHz  
**Resolution:** 10 Hz, 10 KHz  
**Sensitivity:** 0.5 Volts  
**Accuracy:** ± (0.5% + 1D) of rdg  
**Attenuation:** 1:1, 1:20  
**Input coupling:** AC  
**Input Impedance:** 1 MΩ  
**Max. Input Voltage:** 200 V (DC+AC peak)  
**Display:** 4 digit 7 segment LED display

### Power Supply



**Fixed Output Voltage :** 5V/500 mA  
 +12V/200mA  
 - 12/ 200mA

**Ripple:** ≤ 8 mV<sub>rms</sub>  
**Tolerance :** ± 0.2 V  
**Line Regulation :** 2%  
 +5V is floating & ±12V has common ground but floating from scope chassis.

## Model 201 with built-in LogicScope

**Logic Inputs :** 8 No.s (TTL Timing diagrams)  
**Output:** to Oscilloscope  
 Ideal for experiments in Digital Laboratories



### Digital Voltmeter



**Range :** 2 V, 20 V and 200V  
**Resolution:** 1mV, 10mV, 0.1V  
**Accuracy:** ± (1% + 1D) of rdg  
**Maximum Input :** 500 V<sub>pk</sub> for 20 V & 200V  
 100 V<sub>pk</sub> for 2 V  
**Input Impedance:** 10 MΩ

### Curve Tracer



**Vce Scan Voltage :** 0 - 35V adjustable  
**Step Base current :** 20 μA each Step  
**Step Amplitude :** 0.5 Volts  
**No. of steps :** Adjustable 0 to 7  
**Step Polarity :** Automatically selected with PNP/NPN selection  
**Display :** On 201 Via Y input - Ch I  
 X Input - Ch II

**More Functions - More value**

*Experience the Ultimate Benefits !*

# Model 201

20 MHz-2mV Dual Trace Oscilloscope with Component & Continuity Tester

## Technical Specifications

### Operating Modes

Channel I, Channel II, Channel I & II Alternate or chopped (approx. 500 KHz), X-Y operation (Ratio 1:1 Input via CH I), Add/ Sub CHI  $\pm$  CHII, Invert CH II.

### Vertical deflection (Y)

(Identical channels)

**Bandwidth** : DC-20 MHz(-3dB)  
DC-28MHz(-6dB)

**Risetime** : 17.5 ns (approx.)

### Deflection coefficients :

12 calibrated steps 2mV/cm - 10V/cm (1-2-5 sequence)

**Accuracy** :  $\pm 3\%$

**Variable Hold-Off** : For stable Triggering

**Input Impedance** : 1 M $\Omega$  || 25 pF

**Input coupling** : DC-AC-GND

**Maximum Input voltage** : 400 V (DC + Peak AC)

### Timebase :

**Time coefficients** : 18 calibrated steps, 0.5  $\mu$ s/cm-0.2 s/cm (1-2-5 sequence) with magnifier x 5 to 100 ns/cm, with variable control to 40 ns/cm.

**Accuracy** :  $\pm 3\%$  (in Cal position)

**Ramp output** : 5 V<sub>pp</sub> (approx.)

### Trigger System :

**Modes** : Automatic or Variable Trigger level

**Source** : CH I, CH II, ALT-CH I/CH II, Line, Ext.

**Slope** : Positive or Negative

**Coupling** : AC, Line Trigger

**Sensitivity** : Int 5 mm., Ext 0.8 V (approx.)

**Trigger Bandwidth** : 40 MHz

### Horizontal Deflection (x) :

**Bandwidth** : DC-2.3 MHz (-3 dB)

**X-Y mode** : Phase Shift < 3° at 60 KHz

**Deflection coefficients** : 12 calibrated steps 2mV/cm-10 V/cm (1-2-5 sequence)

**Input Impedance** : 1 M $\Omega$  || 25 pF.

### Built-in Single Touch

#### Component Tester

**Test Voltage** : Max 8.6 V<sub>rms</sub> (Open)

**Test Current** : Max 8 mA<sub>rms</sub> (Shorted)

**Test Frequency** : 50Hz, Test circuit grounded to chassis

**Continuity Tester** :

Beeper sounds < 75  $\Omega$  approx.

### General Information

**Cathode Ray Tube** : 140 mm

Rectangular tube with internal graticule. P31 Phosphor

**Accelerating potential** : 2000 V

**Display** : 8 x 10 cm

**Trace rotation** : Adjustable on front panel

**Calibrator** : Square Wave generator 1 KHz(approx.), 0.2 V $\pm$  1% for probe compensation.

**Z Modulation** : TTL level

**Stabilized Power Supply** :

All operating voltages including the EHT.

**Mains voltage** : 220 V-240V  $\pm$  10%, 50 Hz. (Switch at back)

**Power Consumption** : 33 VA (approx.)

**Weight (approx)** : 7.5 Kg (approx.)

**Dimensions (mm)** : W285-H145-D380

**Operating Temp.** : 0-40°, 95% RH

**Finish** : Off white with handle and tilt stand.

### Included Accessories:

1. Manual 1 No.
2. BNC-Test Prod 1 No.
3. BNC - Crocodile Cable 1 No.
4. Test Prods 1 pair

### Built-in-Options (Optional)

Function Generator

Frequency Counter

Power Supply

Digital Volt Meter

Curve Tracer

LogicScope

The Scientech Model 201 is a high performance, low-line oscilloscope. The user has a choice of selecting any one of six built-in options(optional) i.e. Logic Scope, Function Generator, Frequency Counter, Curve Tracer, Digital Voltmeter, Power Supply. Each Add On has been carefully designed so that the user gets maximum benefit while conducting experiments thus providing more value to the oscilloscope.

It is so convenient and student friendly in any laboratory that within a short time, it has become the most popular Oscilloscope in the country.

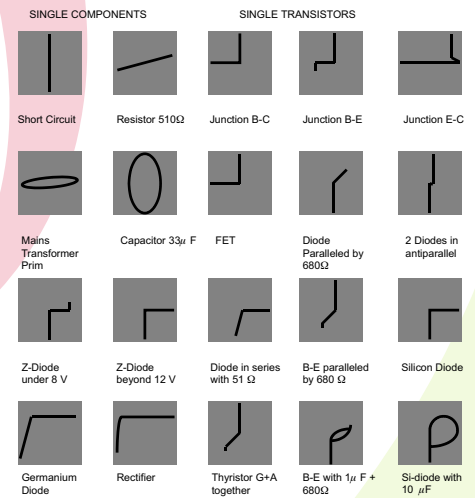
Oscilloscope 201 with built-in options will find very useful applications in Digital Lab, Basic Electronic Lab, Communication Lab, and many industrial applications like Induction Furnaces, UPS Maintenance etc.

It is ideal for Electronic Design Engineers, Defence Services, Educational Institutions and Servicing of Consumer Electronics Equipments, Testing of Digital circuit, Maintenance, Testing of Induction furnaces, etc

Model 201 is backed by a strong service network all over the country and carries a warranty of 2 years.

Model 201 also available without any built-in option.

### Test Patterns (Component Tester)



Subject to change



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