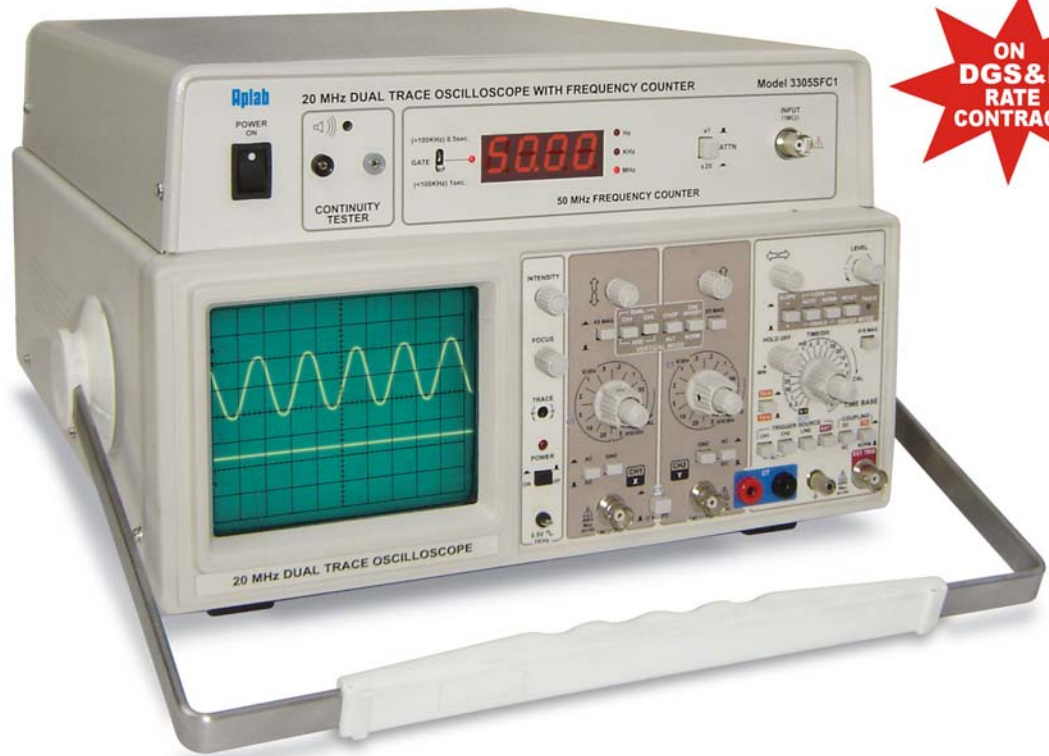


# Aplab

## 20MHz DUAL TRACE OSCILLOSCOPE WITH FREQUENCY COUNTER 3305SFC1



ON  
DGS&D  
RATE  
CONTRACT

### Features

- Elegant
- DC to 20MHz Bandwidth
- 1mV/div Sensitivity on Both Channels
- CH1 & CH2 Independent Channels
- CH1 or CH2 Trigger Signal Output
- Algebraic Addition and Subtraction
- X-Y Operation
- 10ns/div to 0.2s/div Time Base
- Z Modulation TTL Level
- 8 x 10 cm Display Internal Graticule
- TV Triggering Frame (V) & Line (H)
- Line Trigger
- ALT Triggering
- Trigger Lock Facility
- Variable Hold Off
- Single Sweep
- Component Tester
- 50MHz Auto Ranging Frequency Counter
- Continuity Tester

## Technical Specifications

### VERTICAL DEFLECTION (Y)

**Deflection Coefficient (CH1 & CH2)** : 1mV/div to 20V/div. 5mV/div to 20V/div in 12 calibrated steps in 1-2-5 sequence.

x5 Magnification increases the sensitivity to 1mV/div.

**Accuracy** : x1 :  $\pm 3\%$ , x5 :  $\pm 5\%$ .

**Variable** : 1 / 2.5 times uncalibrated continuously variable control extends the Deflection Coefficient approx. to 50V/div.

**Bandwidth** : x1 : DC to 20MHz (-3dB), dc coupled.  
: 10Hz to 20MHz (-3dB), ac coupled.  
x5 : DC to 5MHz (dc coupled)  
10Hz to 5MHz (ac coupled).

**Rise Time** : 17.5ns.

**Display Modes** : CH1, CH2, DUAL (CH1, CH2 ALT/CHOP), Algebraic ADD and SUBTRACT, CH2 INVT & X-Y (CH1 as X, CH2 as Y).

**Input Impedance** : 1M ohms // 25pF approx.

**Maximum Input Voltage** : 400 Volts (dc + peak ac).

**Internal Trigger Signal** : CH1, CH2 or Alternate, CAT II.

### TRIGGER SIGNAL OUTPUT

**Output Voltage** : Minimum 100mV for 1 div of CH1 / CH2 trigger signal.

### TIME BASE

**Sweep Speed** : 20 Calibrated steps. 0.1 $\mu$ s/div to 0.2s/div in 1, 2 & 5 sequence.

**Accuracy** : 3%.

**Sweep Magnifier** : x10 Magnification increases the fastest sweep upto 10ns/div.

**Accuracy** :  $\pm 8\%$ .

**Variable** : Uncalibrated continuously variable control between steps, extends slowest sweep speed to 0.5s/div (approx.).

### TRIGGER SYSTEM

**Sweep Mode** : AUTO, NORM, SINGLE.

**Source** : CH1, CH2, ALT, LINE, EXT.

**Slope** : Positive or Negative.

**Coupling** : AC/DC coupling.

### Trigger Sensitivity

**Internal** : Auto : 0.3 div - 20Hz to 20MHz.  
Normal : 0.3 div - 10Hz to 20MHz.  
Lock : 2.0 div - 50Hz to 10MHz.  
Alt :  $\geq 3$ div - 50Hz to 20MHz.

**External** : Auto : 0.3V p-p - 20Hz to 20MHz.  
Normal : 0.3V p-p - 10Hz to 20MHz.  
Lock : 0.3V - 50Hz to 10MHz.  
Typical : 40MHz.

### HORIZONTAL DEFLECTION

**Deflection Coefficient** : Same as CH1.

**Bandwidth** : DC - 2.5MHz (-3dB).

**Input Impedance** : 1M ohms // 25pF approx.

**Phase Difference** :  $\leq 3^\circ$  (DC - 60KHz).

### COMPONENT TESTER

Component Tester allows V-I characteristics of a Device Under Test (D.U.T.).

**Test Voltage** : 7.5 V r.m.s. (approx.).

**Test Current** : 20 mA max. (approx.).

**Test Frequency** : 50Hz or 60Hz (MAINS).

**CONTINUITY TESTER** : Beeper sounds <75 $\Omega$  approx.

### AUTORANGING FREQUENCY COUNTER

**Frequency Range** : 10Hz to 50MHz.

**Gate Time** : 1 sec for <100KHz  
0.5 sec for >100KHz.

**Resolution** : 0.01Hz (10 to 99.99Hz)  
0.1Hz (100 to 999.9Hz)  
1Hz (1 to 9.999KHz)  
10Hz (10 to 99.99KHz)  
100Hz (100 to 999.9KHz)  
1KHz (1 to 9.999MHz)  
10KHz (10 to 50MHz).

**Sensitivity** : 100mV rms.

**Accuracy** : 0.1%  $\pm 1$  digit.

**Attenuation** : 1:1, 1:20.

**Input Coupling** : AC.

**Input Impedance** : 1M // 30pf.

**Max. Input Voltage** : 300V rms.

**Display** : 7 segment 4 digit LED display.

### GENERAL INFORMATION

**Cathode Ray Tube** : 140mm Rectangular screen, Internal Graticule, 8 x 10 cm, P31 phosphor.  
Accelerating potential : 2kV.

**Trace Rotation** : Front panel control allows  $\pm 5^\circ$  of trace adjustment.

**Z-Modulation** :  $\pm 5$ V p-p signal upto 2MHz modulates at normal intensity.

**Calibrator** : Provides 0.5V  $\pm 2\%$ , 1KHz  $\pm 2\%$  square-wave output for probe compensation.

**Power Requirement** : 230V AC  $\pm 10\%$ , 50Hz  $\pm 5\%$ , 40VA (max.).

**Dimensions** : 220 (H) x 320 (W) x 400 (D) mm.

**Weight** : 9 Kgs. approx.

**Standard Accessories** : Instruction Manual, Mains cord, BNC to Crocodile Input Leads - 2 Nos, Component Tester Leads.

**Optional Accessories** : High impedance switch probe with x1 or x10 attenuation.

**Environmental Specifications** : Operating conditions  
Normal : 10°C to 35°C, RH 45% to 85%.  
Operational : 0°C to 40°C, RH 35% to 85%.

WE PURSUE A POLICY OF CONTINUOUS DEVELOPMENT AND PRODUCT IMPROVEMENT. THUS THE SPECIFICATIONS IN THIS DOCUMENT AND THE LOCATION OF CONTROLS ON THE FRONT PANEL MAY BE CHANGED WITHOUT NOTICE.

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