

ALLEENVERTEGENWOORDIGING VOOR NEDERLAND:

**C. N. ROOD N.V.**

POSTBUS 4042 - TELEFOON 985153

RIJSWIJK (Z.-H.)

*Redesigned for:*

**EASIER OPERATION  
GREATER RELIABILITY  
HIGHER PERFORMANCE**



TEKTRONIX  
TYPES 545A,  
541A, 535A,  
531A



Type 535A

Function Correlation through **COLOR**

TEKTRONIX TYPES 545A, 541A, 535A, 531A OSCILLOSCOPES

*Redesigned for:*

## EASIER OPERATION

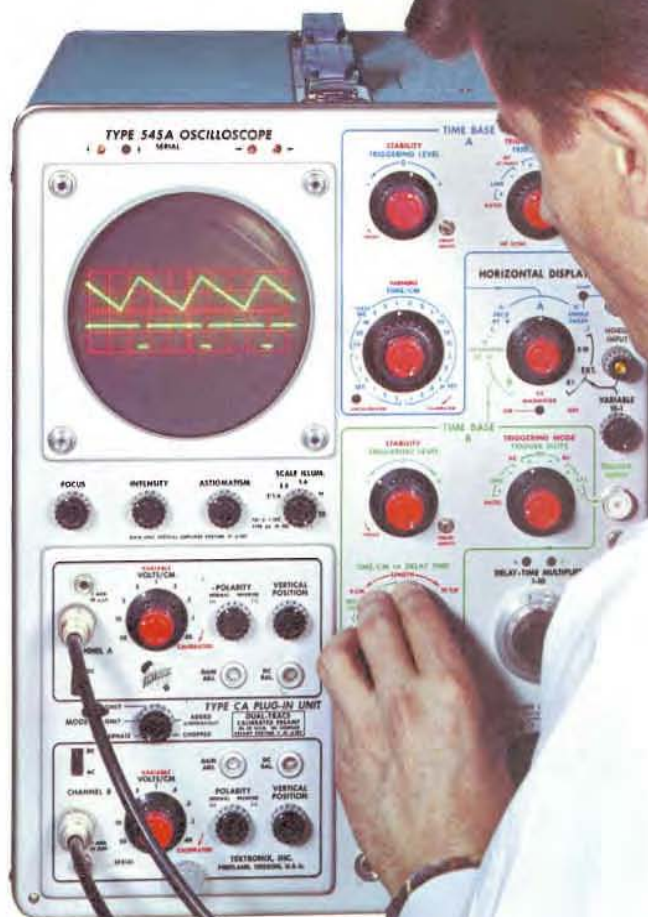
- Simplified Panel Layout.
- Color-Correlated Controls.
- Single-Knob Sweep Time Control.
- Simplified Display Control.
- Internal Triggering for Sweep Delay.
- Single-Knob Calibrator Control.
- Improved One-Shot Sweep Operation in Types 535A and 545A.

## GREATER RELIABILITY

- New Frame-Grid Twin Triodes Replace Older Types.
- Silicon Rectifiers Replace Selenium in Power Supplies.

## HIGHER PERFORMANCE

- New DC-to-15 MC Vertical Amplifiers in Types 531A and 535A.
- New Wider Sweep-Delay Range in Types 535A and 545A.



### Type 541A Fast-Rise Oscilloscope

Same as Type 545A, except that it does not have Time-Base B or provision for sweep delay or single sweeps.

**Price**—Type 541A, without plug-in units . . . \$1200



### Type 535A Wide-Band Oscilloscope with Sweep Delay

Same specifications as Type 545A, except for main vertical amplifier. DC-to-15 MC passband, 23-m $\mu$ sec risetime, 50-mv/cm deflection factor with Type K Plug-In Pre-amplifier.

**Price**—Type 535A, without plug-in units . . . \$1400

## Type 545A Fast-Rise Oscilloscope with Sweep Delay

### VERTICAL SPECIFICATIONS

DC-to-30 MC passband, 12- $\mu$ sec risetime, 50-mv/cm deflection factor with Type K Plug-In Pre-amplifier.

Many other plug-in units available for specialized applications. Signal delay permits observation of leading edge of waveform that triggers the sweep.

### HORIZONTAL SPECIFICATIONS

#### Two Time-Base Generators—

**Time Base A**—0.1  $\mu$ sec/cm to 5 sec/cm in 24 calibrated steps.

Continuously adjustable from 0.1  $\mu$ sec/cm to 12 sec/cm. 5x magnifier increases calibrated range to 0.02  $\mu$ sec/cm. Single sweep provision for one-shot applications.

**Time Base B**—Also functions as a sweep delay generator. 2  $\mu$ sec/cm to 1 sec/cm in 18 calibrated steps.

#### Sweep Delay—Two modes of operation

**Triggered**—Delayed sweep started by signal under observation. Steady display, even of signals with inherent jitter.

**Conventional**—Delayed sweep started by delayed trigger. Time jitter less than one part in 20,000.

**Range of Delay**—1  $\mu$ sec to 10 sec in 18 calibrated ranges, each range divisible into 1000 parts by 10-turn control with incremental accuracy of 0.2%.

### OTHER CHARACTERISTICS

10-KV Accelerating potential.

Built-in blanking for switching transients in dual-trace operation.

Amplitude calibrator—0.2 mv to 100 v.

Electronically-regulated power supplies.

**Price**—Type 545A, without plug-in units . . . . . \$1550



#### Type 531A Wide-Band Oscilloscope

Same as Type 535A, except that it does not have Time-Base B or provision for sweep delay or single sweeps.

**Price**—Type 531A, without plug-in units . . . . . \$995

## RACK-MOUNTING MODELS

Designed mechanically for mounting in a standard rack. Dimensions: 19" wide, 14" high, 22½" rack depth. Slide-out mounting for servicing convenience.

**Type RM45A**—electrically identical to the Type 545A Oscilloscope.

**Price**, without plug-in units . . . . . \$1650

**Type RM35A**—electrically identical to the Type 535A Oscilloscope.

**Price**, without plug-in units . . . . . \$1500

**Type RM41A**—electrically identical to the Type 541A Oscilloscope.

**Price**, without plug-in units . . . . . \$1300

**Type RM31A**—electrically identical to the Type 531A Oscilloscope.

**Price**, without plug-in units . . . . . \$1095



*Prices f. o. b. factory*



*Turn page for Plug-In Pre-amplifiers*



## PLUG-IN UNITS

For types 545A, 541A, 535A, 531A Oscilloscopes

Nine Plug-In Preamplifiers are available for use with the oscilloscopes described on the preceding pages, providing them with an unusually high degree of signal-handling versatility. In addition, a plug-in unit is available for measurement of transistor rise, fall, delay, and storage times.



### PREAMPLIFIER CHARACTERISTICS

Plug-In Unit	With Types 531A & 535A RM31A & RM35A		With Types 541A & 545A RM41A & RM45A		Calibrated Deflection Factor	Input Capacitance	Price
	PASSBAND	RISETIME	PASSBAND	RISETIME			
Type A Wide-Band DC	dc to 14 mc	0.025 $\mu$ sec	dc to 20 mc	0.018 $\mu$ sec	0.05 v/cm to 20 v/cm	47 $\mu$ mf	\$90
Type B Wide-Band High-Gain	2 c to 10 mc	0.035 $\mu$ sec	2 c to 12 mc	0.03 $\mu$ sec	5 mv/cm to 0.05 v/cm	47 $\mu$ mf	\$135
	dc to 14 mc	0.025 $\mu$ sec	dc to 20 mc	0.018 $\mu$ sec	0.05 v/cm to 20 v/cm		
Type C-A Dual-Trace DC	dc to 15 mc	0.023 $\mu$ sec	dc to 24 mc	0.015 $\mu$ sec	0.05 v/cm to 20 v/cm	20 $\mu$ mf	\$250
Type D High-Gain DC Differential	dc to 2 mc	0.18 $\mu$ sec	dc to 2 mc	0.18 $\mu$ sec	1 mv/cm to 50 mv/cm	47 $\mu$ mf	\$155
Type E Low-Level AC Differential	0.06 c to 60 kc	6 $\mu$ sec	0.06 c to 60 kc	6 $\mu$ sec	50 $\mu$ v/cm to 10 mv/cm	50 $\mu$ mf	\$175
Type G Wide-Band DC Differential	dc to 14 mc	0.025 $\mu$ sec	dc to 20 mc	0.018 $\mu$ sec	0.05 v/cm to 20 v/cm	47 $\mu$ mf	\$185
Type H High-Gain Wide-Band DC	dc to 11 mc	0.031 $\mu$ sec	dc to 15 mc	0.023 $\mu$ sec	5 mv/cm to 20 v/cm	47 $\mu$ mf	\$185
Type K Fast-Rise DC	dc to 15 mc	0.023 $\mu$ sec	dc to 30 mc	0.012 $\mu$ sec	0.05 v/cm to 20 v/cm	20 $\mu$ mf	\$135
Type L Fast-Rise High-Gain	3 c to 15 mc	0.023 $\mu$ sec	3 c to 24 mc	0.015 $\mu$ sec	5 mv/cm to 2 v/cm	20 $\mu$ mf	\$200
	dc to 15 mc	0.023 $\mu$ sec	dc to 30 mc	0.012 $\mu$ sec	0.05 v/cm to 20 v/cm		



### TYPE R Transistor Risetime Plug-In Unit

The Type R supplies a fast-rising pulse and the required supply and bias voltages for measurements of transistor rise, fall, delay, and storage times. Pulse output impedance is 50 ohms, amplitude is  $\pm 10$  v dc in 8 calibrated steps, continuously variable between steps. Risetime of the pulse is less than 5  $\mu$ sec. Overall risetime with Types 545A and 541A — 12  $\mu$ sec,

with Types 535A and 531A — 23  $\mu$ sec. The 400-ma collector supply is continuously adjustable from 1 v to 15 v. Bias voltage is available for base or emitter in two ranges, -0.5 v through zero to +0.5 v, and -5 v through zero to +5 v. The base driving resistance can be selected from 9 values, 50 ohms to 20 kilohms. Price ..... **\$300**

Prices f.o.b. factory

# Tektronix, Inc.

P. O. Box 831 • Portland 7, Oregon  
Phone CYPRESS 2-2611 • TWX-PD 311 • Cable: TEKTRONIX

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