NOVEMBER 1972

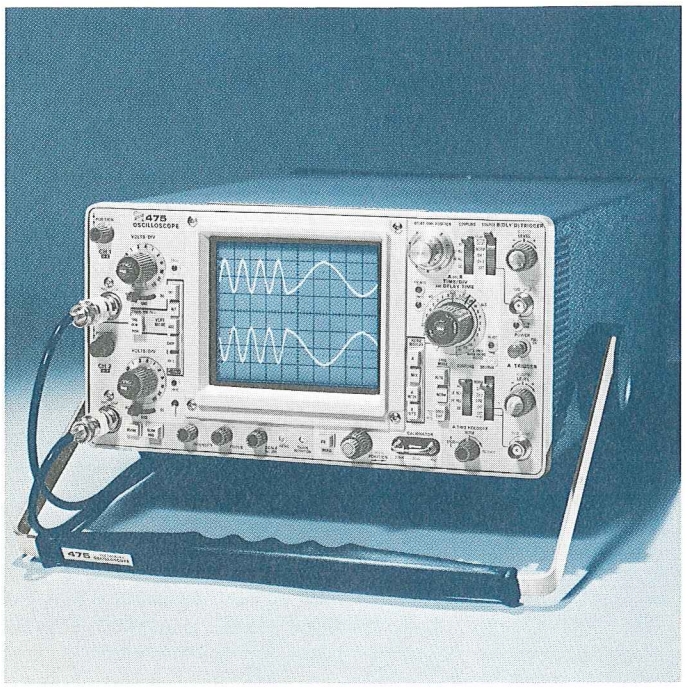
11/72

TEKTRONIX®

NEW PRODUCTS

SUPPLEMENT NO. 1 TO 1973 CATALOG

PORTABLE OSCILLOSCOPES



465 and 475 Oscilloscopes—The low cost of the 465 with 100 MHz bandwidth at 5 mV/div and the 475 with 200 MHz at 2 mV/div represents a price/performance breakthrough for portables that assures top value for the future.

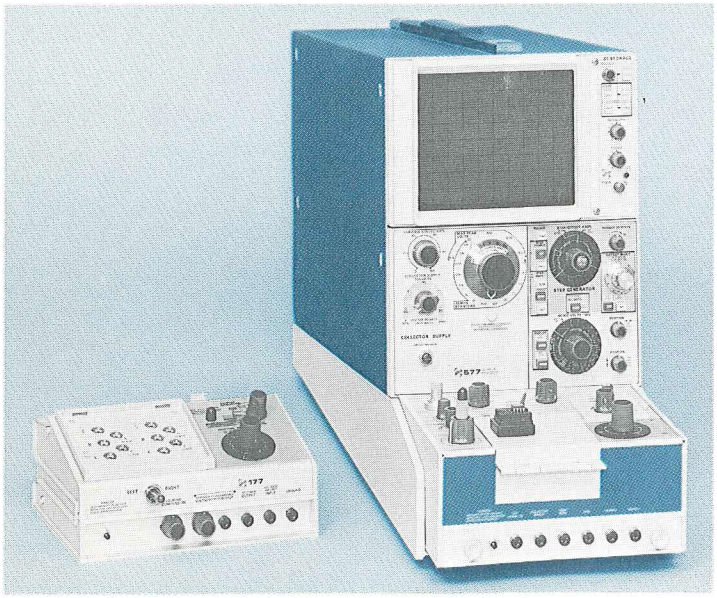
A big 8 x 10-cm CRT display, new versatile trigger selection, trigger view, and automatic volts/div readout are just a few of the many features designed into these lightweight portable instruments.

At less than 23 pounds, the new 465 and 475 are easy to carry (25.3 pounds with panel cover and accessories). They use less travel space and are about 20% lighter than the TEKTRONIX 453A and 454A, the world's most widely traveled oscilloscopes.

The 465 and 475 can be operated from either a free-standing battery pack or one which attaches directly to the oscilloscope. Both are small and lightweight, providing a handy solution for making measurements in difficult environments.

465 Oscilloscope	$1725
Option 4 EMI Modification	Add $75
Option 5 TV Sync Separator	Add $100
475 Oscilloscope	$2500
Option 4 EMI Modification	Add $75

SEMICONDUCTOR CURVE TRACERS



The 577 Curve Tracer is a solid-state system for measuring the parameters of semiconductor devices such as linear ICs, tunnel diodes, Zener diodes, signal diodes, rectifier diodes, NPN or PNP transistors, field effect transistors, and silcon controlled rectifiers. The 577 can be used with either the D1 Storage or the D2 Nonstorage display module.

Two test fixtures are presently available for the 577. The 178 Linear IC Test Fixture introduces the capability of displaying the characteristics of linear ICs; gain, common-mode rejection ratio, power supply rejection ratio, input current, supply current, and 1/F noise are among the characteristics that can be displayed. The 177 standard test fixture enables fast, reliable measurements of the characteristics of two-, three- and four-layer semiconductor devices.

577/D1 Storage Curve Tracer	$2000
577/D2 Nonstorage Curve Tracer	$1550
177 Standard Test Fixture	$300
178 Linear IC Test Fixture	$900

Return the enclosed inquiry card for further information on the products, or copies of the literature described in this supplement.

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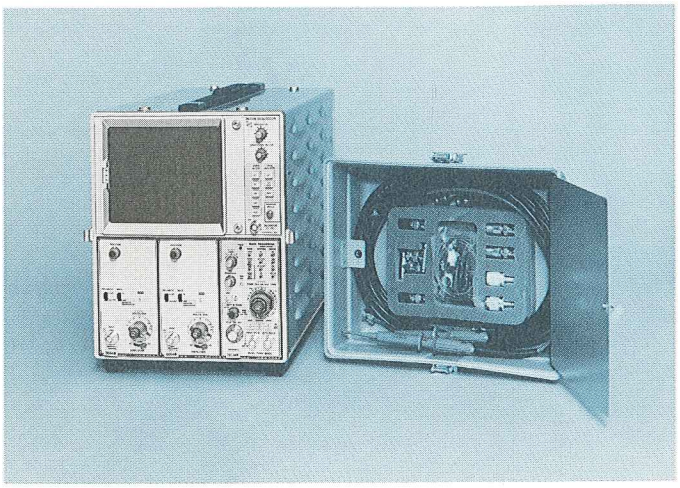
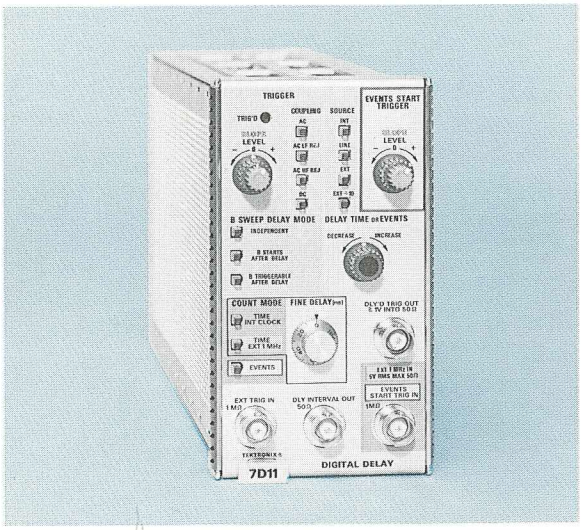
7000-SERIES PRODUCTS



The 7603N Option 11S Ruggedized 50-MHz Oscilloscope System meets rigid environmental and electrical specifications required by the military. The complete system is qualified under MIL-0-24311(EC) and appears on U.S. Navy QPL-24311. Tektronix, Inc. has developed and built into this system performance which is unmatched in versatility and flexibility. The System consists of a three-plug-in mainframe, two single-trace amplifiers, a dual time base, and a front-panel cover with probes and accessories.

This system (mainframe and plug-ins) is compatible with the TEKTRONIX 7000-Series product line, providing added measurement convenience and flexibility. TEKTRONIX 7000-Series Plug-ins include Amplifiers, Samplers, Spectrum Analyzers, TDR, Curve Tracer, Differentials, and other Time Bases.

7603N Option 11S Oscilloscope System (AN/USM-281C) $3025



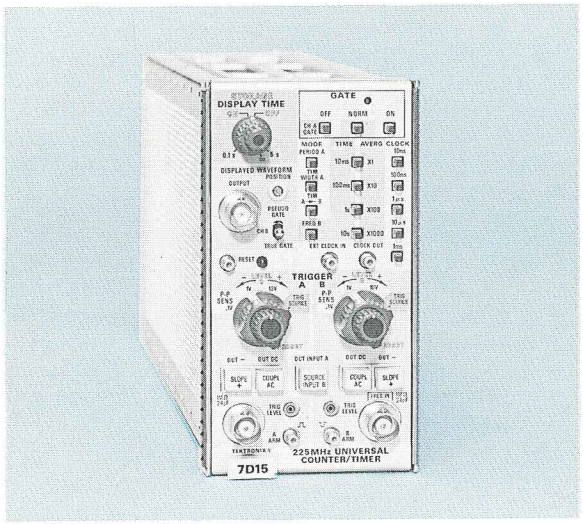
The 7D11 Digital Delay Unit provides very accurate, stable delays for TEKTRONIX 7000-Series Oscilloscopes with CRT READOUT. The unit offers both time delays and the ability to delay by a number of events. These delays enhance scope waveform viewing, and are available as output signals for other applications.

Delay-by-Time: Following a trigger and after a pre-selected time, this unit will give a delayed trigger output. The delay time is indicated on the scope CRT READOUT and is displayed along with the measured signal.

Delay-by-Events: Following a selectable number of events after a master sync or index pulse, the unit provides delay outputs. The low-jitter delayed trigger output is especially useful in disc, computer, radar, and other timing applications.

Accuracy: 0.5 ppm ±2 ns. Jitter: less than 2.2 ns. Delay time: 100 ns to 1 second. Resolution: 1 ns.

7D11 Digital Delay Unit $1475



The 7D15 Universal Counter/Timer provides more convenient counting and timing measurements with greater accuracy and confidence at a lower cost per measurement.

The 7D15 can be used with all 7000-Series Oscilloscopes with CRT READOUT. Signals from the scope can be used to arm and control the Counter/Timer. The measured signal can be seen on the CRT, along with the measurement interval and the counter Schmitt trigger signal. Signals can be preconditioned through the various 7000-Series plug-ins.

There are eight modes for this DC-to-225 MHz Counter/Timer: Time Interval • Time Interval Averaging • Period • Multi-period • Frequency • Frequency Ratio • Totalize • Manual Stop Watch.

Resolution is 10 nanoseconds in single-shot time measurements, and 100 picoseconds in time interval averaging. TEK's unique CRT READOUT displays a full eight digits.

7D15 Universal Counter/Timer $1475

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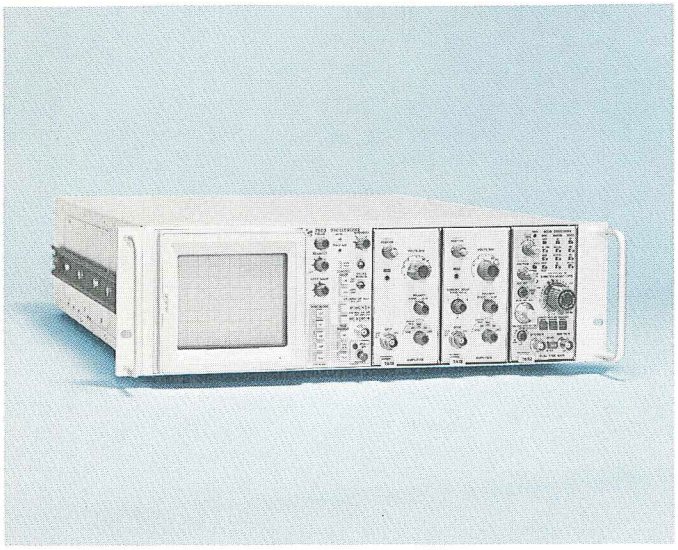


The R7903 Oscilloscope is the widest bandwidth, real-time oscilloscope available in a 5¼-inch rackmount today. General purpose measurements up to 500 MHz at 10 mV/div can be made using the 7A19 Amplifier plug-in.

A complete line of plug-ins is available for a variety of applications. Included are: Amplifier, Time Base, Digital Counter, Digital Delay, Digital Multimeter, Spectrum Analysis, Sampling, TDR, and Curve Tracer plug-ins.

CRT READOUT is available on the R7903. Its use reduces set-up time and measurement errors; it also increases operator accuracy and speed.

The R7903's performance can be extended to 1 GHz via direct CRT access with the 7A21N Direct Access plug-in. Less than 4 V/div driving signal is required and the input can be either single ended or differential. CRT READOUT and vertical amplifier functions are bypassed and inoperative when direct access is used.

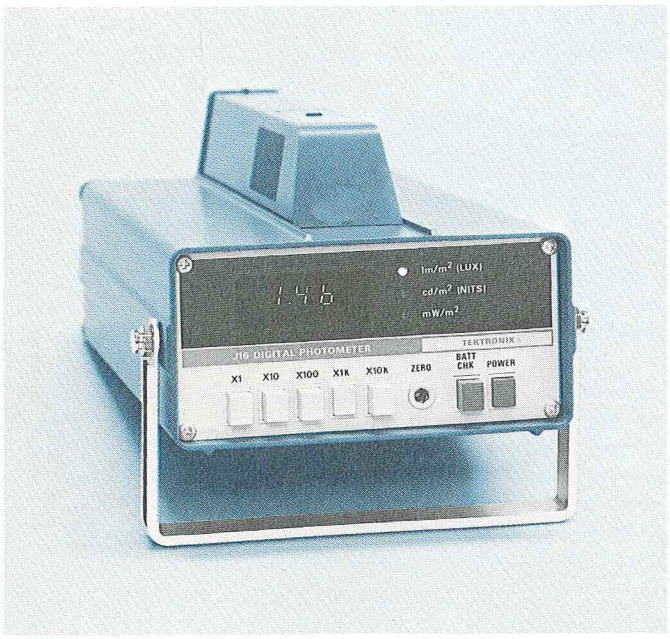
The R7903 system includes instrument options, thus allowing you to custom tailor the system to your measurement requirments. These options give you: • a brighter CRT for increased writing speed • EMI modification • phosphor change • pulsed graticule for single-shot photography • deletion of CRT READOUT.

R7903 Oscilloscope **$2900**

R7903 Options

Option 1 W/O CRT READOUT	**Sub $400**
Option 3 EMI Modification	**Add $75**
Option 4 Max Brightness CRT	**Add $350**
Option 8 Phosphor Change (P11)	**No Charge**
Option 10 Pulsed Graticule	**Add $100**

ELECTRO-OPTIC PRODUCTS



The J16 Option 2 Digital Photometer/Radiometer is a portable photometer/radiometer which provides measurement readout in metric units. A choice of five probes provides accurate measurements of illuminance in Lumens/m² (Lux), irradiance in Candelas/m² (nits), and luminance in milliwatts/m². Each probe uses a silicon photodiode which has excellent long-term stability and reliability. Easy-to-read 2½-digit LED readout reduces measurement error, particularly in low ambient light conditions.

At least two hours of continuous operation is provided by the internal rechargeable batteries. A shoulder strap is provided for carrying ease and the bottom of the case and probe have a standard ¼ inch—20 mount for tripod or optical bench use.

A standard version of the J16 Photometer/Radiometer is also available which provides readout in conventional units.

J16 Option 2 Digital Photometer/Radiometer without Probe ..	**$600**
J6501 Illuminance Probe, Option 2	**$200**
J6502 Irradiance Probe, Option 2	**$250**
J6503 Luminance Probe, Option 2	**$250**
J6504 Uncorrected Probe	**$150**
J6505 LED Test Probe, Option 2	**$250**

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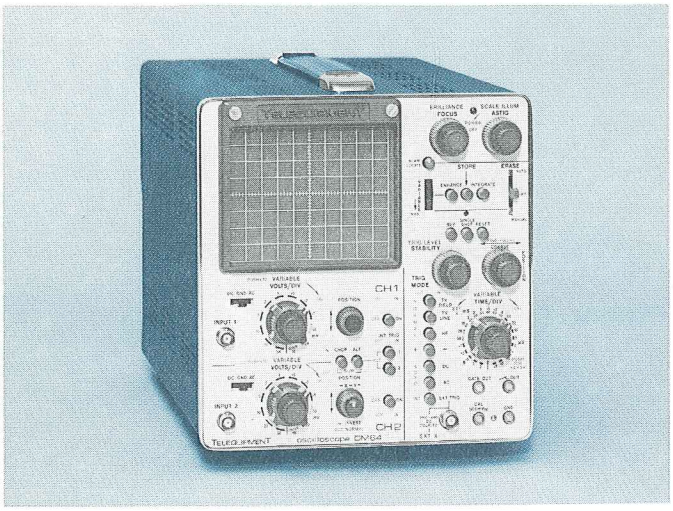
TELEQUIPMENT PRODUCTS

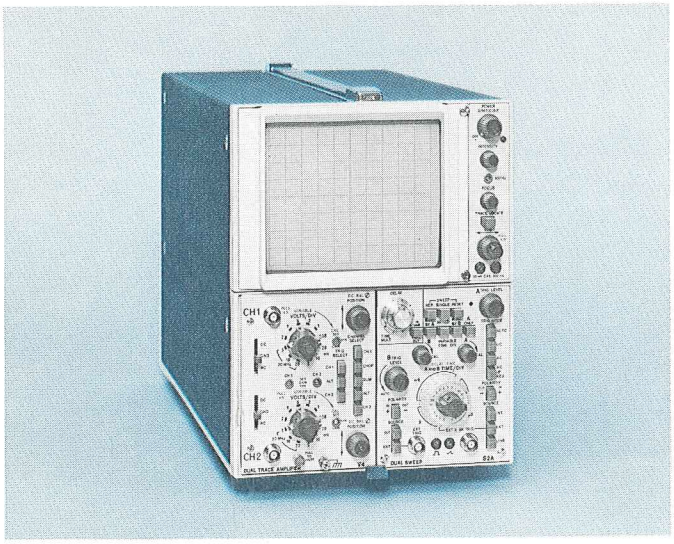


The DM64 Oscilloscope, the world's least expensive bistable storage oscilloscope, is now available in the TELEQUIPMENT product line. The heart of this oscilloscope is the proven CRT from the TEKTRONIX 560-Series Oscilloscope storage line. The CRT is a single screen version of the CRT used in the 564 and provides a full 8 x 10-cm display area.

The normal stored writing speed is at least 25 cm/ms. Writing speed can be increased to at least 250 cm/ms by using the Enhanced Mode. The storage view time is up to one hour.

The bandwidth of the DM64 is 10 MHz at a deflection factor of 10 mV/cm; using the X10 gain extends the sensitivity to 1 mV/cm. Sweep rates extend from 100 ns/div to 2 sec/div. A full complement of vertical display modes is included: channel 1, channel 2 (normal and inverted), chopped (approx 150 kHz rate), alternate, and added. X-Y relationships can be measured with the same ease as Y-T measurements.

DM64 Oscilloscope **$1095**



The D83 Oscilloscope—A bandwidth of 50 MHz at 5 mV/div and the concept of plug-in selectability are the main features of this oscilloscope. The plug-ins include a differential amplifier, a dual-trace amplifier, and a Dual Time Base. The CRT in the D83, from the field proven 7000-Series TEKTRONIX line of oscilloscopes, has a display area of 8 x 10 div — 1.22 cm/div. A 15-kV accelerating potential gives the D83 a clear and bright display to view and measure delayed sweeps. Sweep rates extend from 2 s/div to 100 ns/div (to 10 ns/div with X10 magnifier).

A full complement of vertical display modes is included: channel 1, channel 2 (normal and inverted), chopped (approx 350-kHz rate), alternate, and added. Signal delay permits viewing the leading edge of the waveform.

D83 Oscilloscope **$800**
V3 Dual-Trace Amplifier **$295**
V4 Differential Amplifier **$295**
S2A Dual Time Base **$400**

NEW LITERATURE AVAILABLE

Digital Counter Application Note describes use of the 7D14 Digital Counter and a current probe to make frequency measurements. Advantages of this method of measurement as well as complete instructions are given.

The TELEQUIPMENT Catalog provides complete information on the entire TELEQUIPMENT product line, including a characteristic curve tracer, and the new storage and plug-in oscilloscopes.

Machine Control Data Sheets on TEKTRONIX N/C systems are available in a packet which explains the position of Tektronix, Inc. as a machine control supplier. The 15 data sheets include information on turning, milling, positioning, verifying, and editing applications.

Spectrum Analysis and CATV Systems Booklet discusses the new FCC requirements for cable television systems and how a TEKTRONIX Spectrum Analyzer can be used to make these and many other measurements. Also includes a brief tutorial on spectrum analyzers and specifications of TEKTRONIX Spectrum Analyzers.

Time Domain Reflectometry Application Note No. 2 covers some fundamentals of coaxial cables. This note, written in an easy-to-read question and answer style, leads you through some of the old mysteries of coaxial cables. The paper covers such items as how to figure dB losses in a line and how to determine the optimum impedance of a cable. These and other questions are answered using very little math.

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