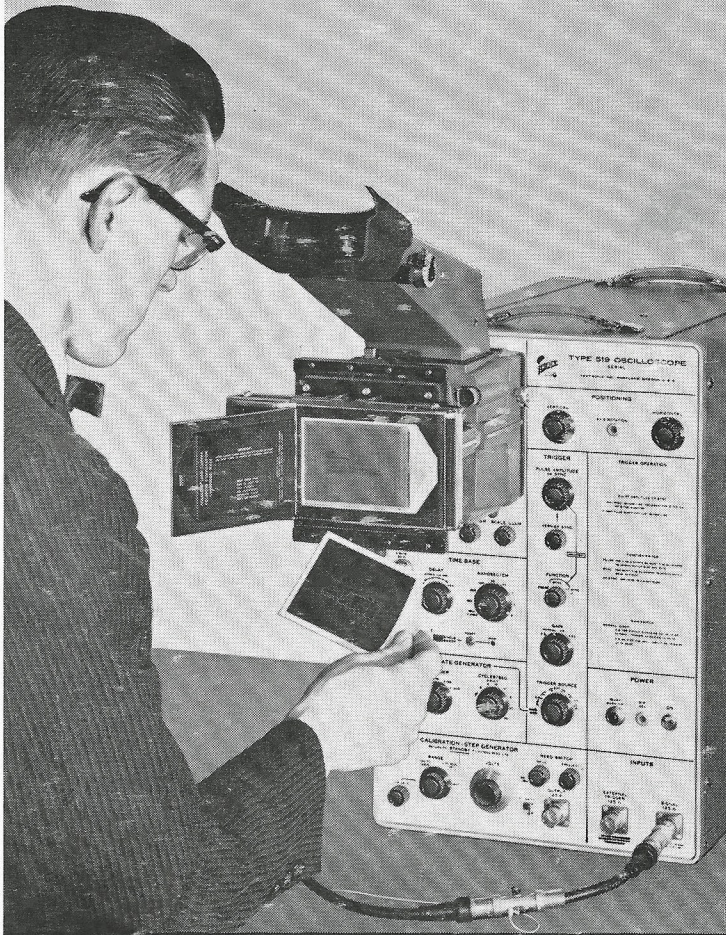


For recording high-speed one-shot occurrences



Avalanche test as illustrated may produce only one waveform of significance. The upper single-shot trace at 2 nanoseconds per centimeter displays approximately 0.4-nanosecond risetime. It is the result of the very first avalanche event. The lower 1 gigacycle* timing trace illustrates sweep linearity.



NOW, you can see and record non-repetitive, high-speed phenomena with a standard oscilloscope—one that does not depend upon sampling techniques. On its distributed-deflection CRT, you can observe bright displays with 100-line-per-centimeter definition. You can photograph fractional-nanosecond signals with ease on its full 2 x 6 centimeter display area.

With a Tektronix Type 519 Oscilloscope and associated C-19 Camera, you can easily photograph a single transient at 2 nanoseconds per centimeter—as illustrated in the avalanche test.

You will find the Type 519 engineered for convenience . . . *Internally*—all circuit components of the complete unit fit compactly, yet are readily accessible for easy maintenance. A fixed signal-delay line plus variable sweep-delay control maintains the wide display passband and eliminates any need for adjusting delay-cable lengths.

Externally—the Type 519 features a minimum of controls and connectors for an instrument in this range. A carefully-coordinated front-panel layout facilitates your test setups and procedures, aids greatly in saving engineering time and effort.

You need no auxiliary equipment for many high-speed applications. In fact, for normal operation, you make two connections only: (1) you plug-in the power cord, (2) you couple-in the signal source.

With such operational ease—combined with its inherent Tektronix reliability—the Type 519 is an ideal laboratory oscilloscope for your high-speed measurements up to the gigacycle region and slightly beyond—especially those applications demanding a photographic record of one-shot occurrences.*

CHARACTERISTICS **Passband**—from dc, 3db point typically above 1 gigacycle. **Instrument Risetime**—less than 0.35 nanosecond (including trigger takeoff, delay line, CRT, and termination). **Synchronization**—200 mv peak-to-peak, 1 MC to 1 gigacycle. **Accelerating Potential**—24 kilovolts. **Sensitivity**—10 volts/centimeter, maximum, into 125 ohms. **Time Base**—linear 6-centimeter sweeps from 2 nanoseconds/centimeter to 1 microsecond/centimeter in 9 steps. **Sweep Delay**—through 35 nanoseconds. **Triggering**—jitter-free: **External**—3-microwatt (20-millivolt) pulse of 1-nanosecond duration. **Internal**—2-tracewidth pulse of 1-nanosecond duration. Signal waveform undisturbed by trigger takeoff. **Power and High-Voltage Supplies**—electronically regulated. **Calibration-Step Generator. Avalanche-Transistor Rate Generator.**

TEKTRONIX TYPE 519 Oscilloscope \$3800
 C-19 CAMERA

- Full-Intensity Mirror Viewing.
- Direct Recording.
- One-Hand Portability.
- Lift-On Mounting.
- Swing-Away Hinging.
- Comfortable Viewing—with or without glasses.

C-19 CAMERA \$650
 Includes f/1.5 lens with 1:0.5 (object-to-image ratio) complete with cable release, Focusing Back, Polaroid[†] Back, other accessories. 1[®] by Polaroid Corporation

*1 gigacycle = 10⁹ cycles. U.S. Sales Prices f. o. b. Beaverton, Oregon

For a demonstration of these instruments in your own wide-band applications, please call your Tektronix Field Engineer.

Tektronix, Inc. P. O. BOX 500 • BEAVERTON, OREGON / Mitchell 4-0161 • TWX-BEAV 311 • Cable: TEKTRONIX

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