

# Designed-in High Quality and a Range of

150mm rectangular, illuminated graticule CRT (6kV)/Maximum sensitivity of 1mV/div (DC–10MHz)/

\*Items apply to the CS-1010 and CS-1012 only.

\*(2kV)

\*(DC~7MHz)

Maximum sweep speed of 20ns/div (at  $\times 10$  MAG)/ $\pm 3\%$  Accuracy/(both voltage and time axes, 0–40°C)/Video

\*50ns/div

clamping to eliminate the need for video syncing/8 div of displayed dynamic range/CH1 Output

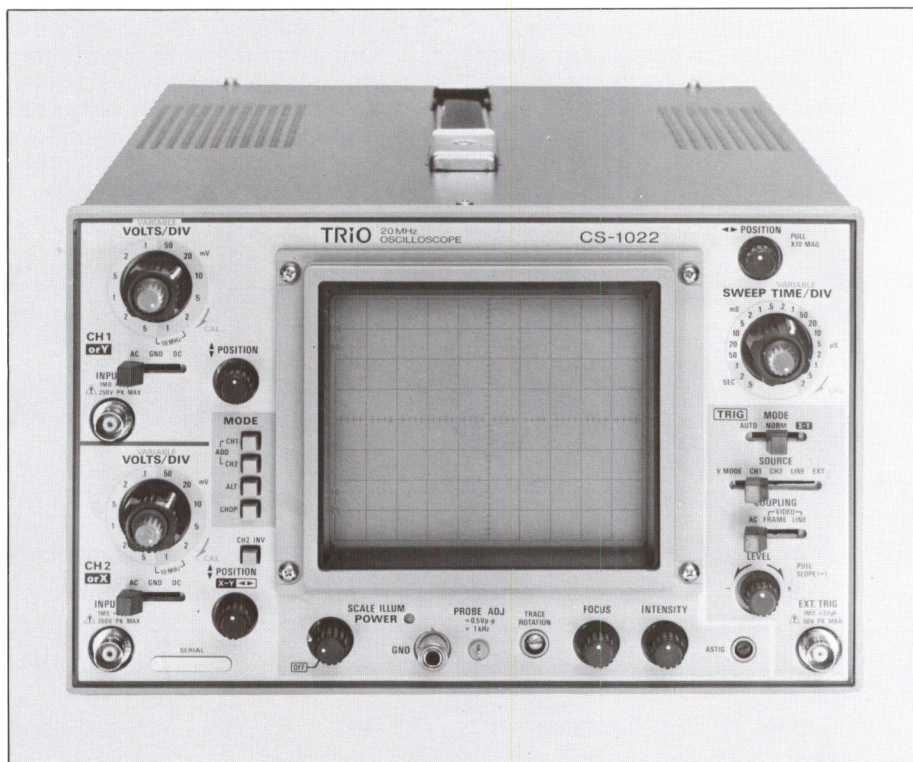
\*6 div

20MHz Dual-Trace  
CS-1022

20MHz Single-Trace  
CS-1020

10MHz Dual-Trace  
CS-1012

10MHz Single-Trace  
CS-1010



**These full-feature scopes have all the performance and reliability you could expect from a high-quality, professional oscilloscope. The key to their success is the Trio insistence on excellence.**

In addition to the obvious requirements in terms of basic oscilloscope specifications, today's demanding scope users are placing more and more emphasis on both quality and reliability in the scopes they purchase.

And more and more users are finding what they need in the Trio oscilloscope product line—a product line that has the depth to offer quality scopes for virtually any application. The key to the Trio oscilloscope success story lies in many years of experience in developing and manufacturing high-quality, reliable, and easy-to-use scopes, and this exciting new series of four new oscilloscopes joins the Trio family of scopes with all these attributes.

Born of both Trio's insistence on the latest in oscilloscope technology combined with unique Trio innovations, this series is a fitting testimony to Trio's leadership, and is destined once again to gain the attention of demanding scope users worldwide.

## Features

### ★ 150mm Rectangular CRT (6kV) with illuminated inner-face graticule

These scopes use a large (150mm rectangular) domed mesh, post-accelerator type CRT, which ensures both a bright display and high resolution, while having the added advantage of eliminating parallax-caused reading errors. The scale illumination highlights the graticule for easy waveform observation as well as providing a convenient part of photographic waveform records. (The CS-1010 and CS-1012 feature the same type of illuminated inner graticule, high-intensity CRT, but with a 2kV accelerating potential.)

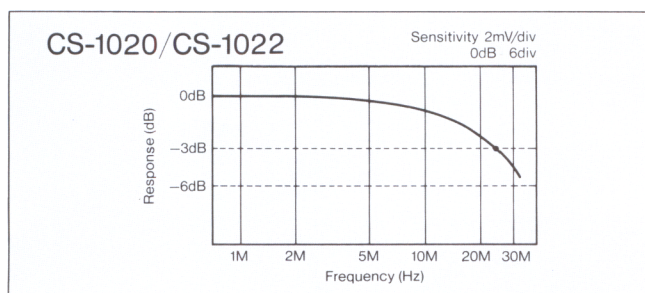
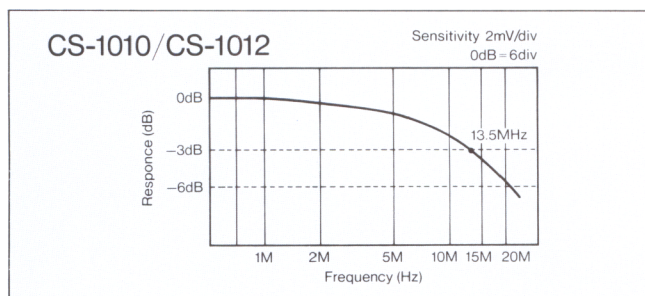
### ★ High-sensitivity design provides a maximum of 1mV/div vertical axis sensitivity

The vertical axis sensitivity is continuously settable by means of an attenuator from 1mV/div to 5V/div. The 1mV/div range is particularly valuable in observing complex, low-level waveforms, and these scopes are powerful measurement tools in observing a wide range of waveforms, including video signal, digital signals, pulse signals and audio signals.

(At 1mV/div sensitivity, the frequency response of the CS-1020 and CS-1022 is DC~10MHz and for the CS-1010 and CS-1012 is DC~7MHz, measured at the -3dB point.)



# Features to Satisfy the Toughest Customer



★ **Fast 20ns/div maximum sweep speed enables easy display of even fast-changing signals**

The sweep time is continuously variable from 0.5s/div to 0.2 $\mu$ s/div and, using the  $\times 10$  MAG sweep expansion function, the sweep is quickly magnified ten times at the touch of a front panel button, providing a detailed look at parts of complex waveforms.

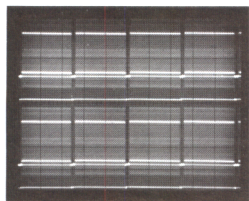
(The CS-1010 and CS-1012 sweep time range is variable from 0.5s/div to 0.5 $\mu$ s/div, with the fastest sweep being 50ns/div.)

★ **To ensure high-precision waveform observation, Trio guarantees  $\pm 3\%$  accuracy (0~40°C, at below 85%)**

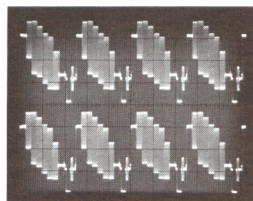
Oscilloscope accuracy, an elusive measure of performance which is often difficult to determine from published specifications, has been guaranteed for the most important specifications—vertical sensitivity and sweep time—as 3% over the temperature range 0~40°C and at a humidity of up to 85%. And all other published specifications are guaranteed as well.

★ **No troublesome syncing operations—a special video signal clamping function provides the solution to this tricky problem**

A video clamping function is provided to enable quick syncing of vertical and horizontal video signals. This technique eliminates the troublesome setup usually required with conventional syncing, and provides amazingly stable syncing.



Vertical video signal



Horizontal video signal

★ **8 Divisions of dynamic ranges ensures accurate, undistorted waveform displays**

These scopes provide 8 full divisions of linear, undistorted vertical axis dynamic range, thus enabling use to the frequency response limit without waveform

distortion.

(The CS-1010 and CS-1012 provide 6 full divisions of dynamic range.)

★ **Convenient vertical axis signal output**

This output is derived by dividing a vertical signal input internally, the amplitude output being approximately 50mV/div. This provides a convenient signal for input to such external devices as a frequency counter to enable accurate frequency measurement of even extremely low-level signals while observing them on the CRT display.

(The CS-1012 and CS-1022 provide CH1 signal output.)

★ **The V MODE uses the input mode to select the trigger source.**

★ **Instant ALT/CHOP mode selection**

★ **Easy-to-use, human-engineered front panel layout**

★ **Simple setting and verification of reference levels**

★ **Convenient X-Y display mode is useful in measuring phase differences of two input signals**

★ **Simple compensation for trace rotation caused by the earth's magnetic field**

★ **Sums and differences of waveforms displayed**

★ **Observation of intensity-modulated signals**

★ **A Standardly supplied 10:1/1:1 probe (PC-20) greatly enhances the usefulness of these scopes**

★ **Standard camera bezel simplifies the creation of permanent waveform records**

★ **Models CS-1022H, CS-1020H, CS-1012H, and CS-1010H with carrying handles are also available.**

