

10 MHz, 2-Channel Oscilloscope CS-1575D

OUTLINE

The CS-1575D is a 10 MHz, 2-channel oscilloscope capable of displaying waveform and phases simultaneously. The frequency response is DC to 10 MHz (-3 dB), the maximum sensitivity is $5\text{ mV} \pm 3\%$ and the sweep rate is 0.5 s/div to $0.5\text{ }\mu\text{s/div} \pm 3\%$. During observation of 2 phenomena, the left/right display and the simultaneous Lissajous waveform display are possible in addition to the conventional up/down display. Other versatile waveform display features include the simultaneous display of the Lissajous waveform and 0 (degree) phase waveform, the dual triggering function and the auto-freerun function.

FEATURES

Up/down and left/right waveform display

In the 2-channel mode, waveforms can be displayed and observed in a left/right display as well as in the conventional up/down display.

Simultaneous dual-trace and Lissajous waveform display

In the 2-channel mode, the Lissajous waveform which is convenient for measuring the phase difference between two signals can be displayed together with the two signals.

0° phase and Lissajous pattern

When only a Lissajous waveform is displayed, it is possible to display the waveform of the 0° phase (a trace, the value of which increases from the left to right) together.

Convenient dual triggering

In the single-phenomenon and 2-channel modes, the trigger sources are selected automatically according to the waveforms. CH1 and CH2 use independent auto-freerun circuits so that a stable waveform can be displayed even when no signal is applied to the other input channel.



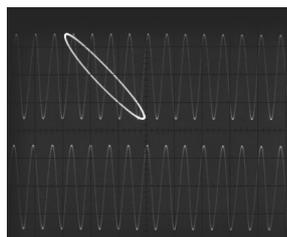
Automatic CHOP/ALT switching in interlocking with the sweep rate

LINE sync

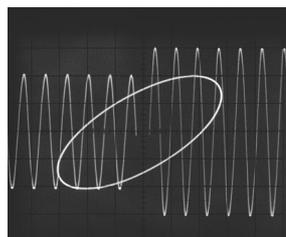
High-sensitivity X-Y mode using CH1 as the Y axis and CH2 as the X axis

Auto-free-run for displaying a trace even without signal input

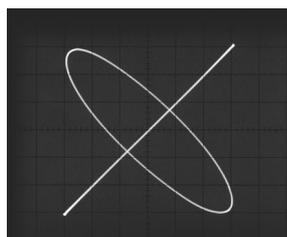
Close-up bezel for facilitating waveform photography



Dual-trace (up, down) plus Lissajous waveform (The Lissajous waveform can be erased.)



Dual-trace (left, right) plus Lissajous waveform (The Lissajous waveform can be erased.)



Lissajous waveform plus 0° phase waveform (The Lissajous waveform can be erased.)

SPECIFICATIONS

CRT

Type	150mm rectangular, with internal graticule
Accelerating voltage	2kV
Effective area	8div×10div (1div=10mm)
Vertical amplifier (Common for CH1 and CH2)	
Operating modes	Dual-H :left/right dual-trace Dual-V :up/down dual-trace CH1 :CH1 trace only CH2 :CH2 trace only X-Y :CH1=Y axis, CH2=X axis
Dual-trace switching	CHOP operation with the SWEEP TIME/DIV. 1ms or less. ALT operation with the SWEEP TIME/DIV. 0.5ms or more.
Phase display	Phase display is possible simultaneous with the lissajous pattern. For the X-Y display mode, the 0° phase waveform may also be simultaneously displayed.
Sensitivity	5mV to 5V/div ±3%
Attenuator	1-2-5 steps, 10 ranges and fine adjustment.

Input impedance	1MΩ±2%, Approx 38pF
Frequency response	DC :DC to 10MHz (-3dB) AC :5Hz to 10MHz (-3dB)
Rise time	Approx. 35ns
Crosstalk	-40dB max.
Chopping frequency	Approx. 250kHz
Maximum input withstand voltage	800Vp-p or 400V (DC+ACpeak)

Horizontal amplifier

Operating modes	X-Y mode is selectable using the mode switch. CH1 :Y axis CH2 :X axis
Sensitivity	Same as CH2 vertical axis.
Input impedance	Same as CH2 vertical axis.
Frequency response	DC :DC to 1MHz (-3dB) AC :5Hz to 1MHz (-3dB)
X-Y phase difference	3° max. (at 50kHz)
Maximum input withstand voltage	Same as CH2 vertical axis.

Sweep

Sweep mode	Auto free-run sweep
Sweep time	0.5μs/div to 0.5s/div ±3% in 1-2-5 steps, 19 ranges and fine adjustment.

Linearity 3%

Triggering

Source	DUAL :Automatic selection of CH1 and CH2 as the sync input. CH1 :CH1 signal CH2 :CH2 signal LINE :Line power frequency EXT :EXT.TRIG signal
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External triggering

Input impedance	Approx. 1MΩ, 35pF
Maximum input withstand voltage	100Vp-p or 50V (DC+ACpeak)
Coupling	AC coupling
Sensitivity	DUAL, CH1, CH2 :0.5div (50Hz to 3MHz) 1div (20Hz to 10MHz) EXT :0.2Vp-p (50Hz to 3MHz) 0.5Vp-p (20Hz to 10MHz)

Calibration signal

Waveform	Square wave, positive polarity
Voltage	1Vp-p, ±3%
Frequency	100Hz or 120Hz (double line frequency)

Trace rotation

Adjustment system	Semi-fixed controller on the front panel.
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Power requirement

Power voltage	AC 100V/120V/220V/230V ±10%
Line power frequency	50Hz or 60Hz
Power consumption	Max. 35W

Dimensions and weight

Dimensions	290 (W)×150 (H)×380 (D)
Maximum dimensions	290 (W)×170 (H)×440 (D)
Weight	Approx. 7kg
Operating temperature and humidity	
Temperature and humidity guaranteed by the specifications	10°C to 35°C, 85% or less (no condensation)
Operating temperature	0°C to 40°C
Operating humidity	85% or less (no condensation)

Accessories	Accessory cables model CA-41 (2), Instruction manual (1), Power cable (1)
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