WAVEFORM DIGITIZER

Compatible with all 5000 Series mainframes.

Digital Storage.

CRT readout for complete operational status at a glance.

Powerful Triggering Capability.

1% Accuracy.

Dual Channel.

1 MHz Sample Frequency.

Save Reference Waveforms

X-Y Recorder Output.

Signal conditioning via left vertical plug-in.

The 5D10 enhances all Tektronix 5000 Series mainframes by providing the ability to store transient events with frequency components up to 100 KHz for a single channel acquisition and up to 50 KHz for dual channel acquisition, all in a compact two-wide plug-in.

The Digital Storage characteristics of the high performance 5D10 duplicate most of what CRT storage can do but additionally give you these important features:

Digital Storage which provides clear, crisp and bright displays with indefinite viewing time.

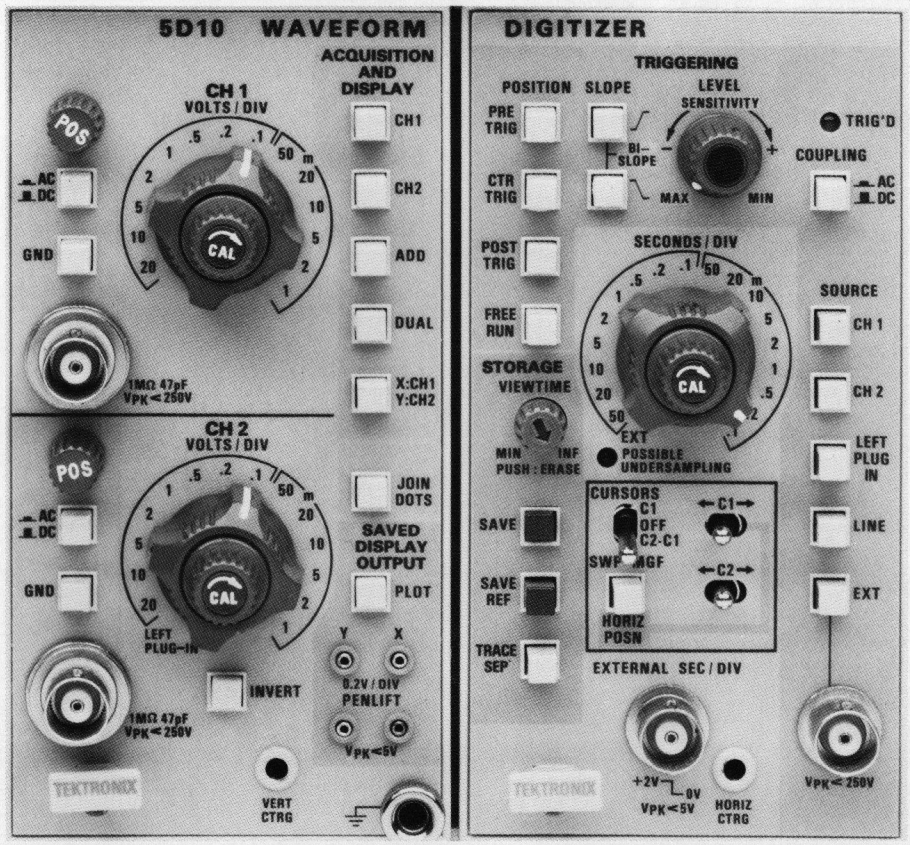
Cursors to permit convenient single point or point-to-point measurements of time and amplitude for fast, accurate and reliable answers.

CRT Readout of all pertinent instrument settings, cursors, and displayed waveform levels let you read out complete operational status at a glance.

Pretrigger allows viewing information prior to the trigger event, so you can see all your data. Center and post trigger selection is also provided.

Free Run optimizes the data presentation for low speed phenomena, much like a stripchart recorder.

1% Accuracy, both vertical and horizontal improves measurement quality.



Dual Samplers ensure time coincidence between the two input channels.

Bi-Slope Triggering assures triggering when you are unsure of the slope of your transient event.

1 MHz Sample Frequency stores single shot events to approximately 100 KHz in bandwidth with 8 bit vertical resolution.

Save Reference permits comparisons of signals stored at different times.

X-Y Displays with less than 1 degree phase shift up to 100 KHz of parametric related signals.

X-Y Recorder Output for inexpensive, archivable hard copies complete with readout, graticule and displayed waveforms.

Left Vertical Plug-in may be used to precondition up to two signals for channel 2 of the 5D10. For example, a high gain differential plug-in such as the 5A26 or 5A22N can be used.

Tektronix®
COMMITTED TO EXCELLENCE

Specifications

Vertical Characteristics

Vertical Modes—Ch 1, Ch 2, ADD, Dual, X-Ch 1, and Y-Ch 2.

Ch 2 Modes—V/div, Left plug-in.

Deflection Factor—1 mV/div to 20V/div in 14 calibrated steps (1-2-5 sequence).

Accuracy—
Input to readout numbers:
5 mV/div to 1 V/div ±1%
1 mV/div to 2 mV/div ±2%
2 V/div to 20 V/div ±2%
Input to CRT Graticule ±2%

From left vertical plug-in—Add ±1% to above specifications.
ADD mode—Add ±1% to above specifications.

Input R & C—1M ohm ±0.5%; 47 pF approximately.

Max Input—250 V (dc+peak ac); 250 V p-p ac at 1 KHz or less.

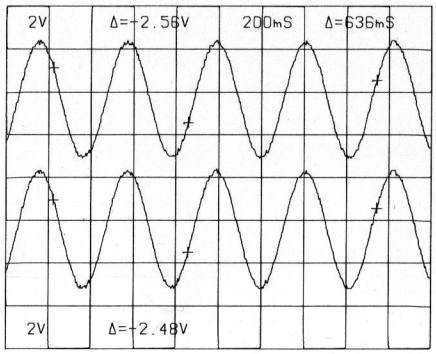
Bandwidth—
Single Channel — Suitable from dc to 100 KHz.
Dual Channel — Suitable from dc to 50 KHz.
Ac Coupling −3 db point—10 Hz or less (1 Hz with 10x probe).

Common Mode Rejection—
At least 50:1, dc to 100 KHz.

Resolution—
Vertical: x-y or y-t; 0.04 division (8-Bit digitizer).
Horizontal: y-t; 0.01 division (1024 memory locations shared among all traces displayed).

Phase Shift—Less than 1.0 degree phase shift between Ch 1 and Ch 2, dc to 100 KHz.

Display Output (to x-y Recorder)—
Amplitude — 0.2 V/div ±2%.
Speed — Compatible with x-y recorders with 20 inches/second slew rate, or faster.
Pen Lift — Isolated switch contacts, SPST (floating); Normally open or normally closed selected by internal jumper.



Example of plotter waveforms with graticule scaling information.

Time Base Characteristics

Sweep Rates—0.1ms to 50 sec/div in 18 calibrated steps 1-2-5-sequence.

Accuracy—Within ± 1% of readout numbers.

External Input—Allows external pulse generator to determine acquisition rate. TTL levels up to 1 MHz rate.

Possible Under-sampling Indicator—Indicator lights when fewer than eight sample pulses occur during interval between successive threshold crossing of triggering signals.

Triggering Characteristics

Sources—
Channel 1, Channel 2, left plug-in (via mainframe), line, external.

Coupling—Dc, ac

Sensitivity—
External—100 mV; dc to 50 kHz 250 mV; 50 kHz to 250 kHz.
Ch 1, Ch 2, Left—0.4 div, dc to 50 kHz; 1.0 div, 50 kHz to 250 kHz.

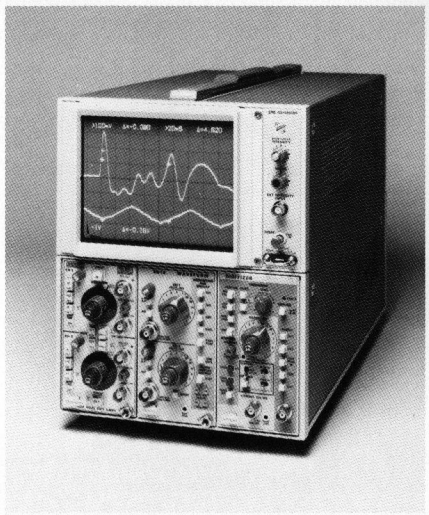
Bi-slope Trigger—Amplitude, frequency, and pulsewidth specifications apply to absolute value of signal (rectified).

External Trigger Input—
Input R & C—
1 M ohm ±2%; 47 pF approximately.
Max Input 250 V (dc + peak ac); 250 V p-p ac at 1 kHz or less.

Trigger Position—
After trigger event is recognized, acquisition stops with:
Pre—⅞ of memory data prior to trigger, ⅛ following.
Center—½ of memory data prior and following trigger.
Post—⅛ of memory data prior to trigger, ⅞ following.

Free Run—
Acquisition is continuous, and stops only when SAVE or SAVE REF is pushed manually.

Dimensions	Cm	Inches
Height	12.7	5.0
Width	13.2	5.2
Length	30.5	12.0
Weight (approx.)	Kg.	Lb.
Net	2.3	5.0
Shipping	4.6	10.0



5D10 Installed in 5110 mainframe.

Ordering Information
5D10 Waveform Digitizer

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