Instrument Serial Numbers

Each instrument manufactured by Tektronix has a serial number on a panel, insert or tag, or stamped on the chassis. The first letter in the serial number designates the country of manufacture. The last five digits of the serial number are assigned sequentially and are unique to each instrument. Those manufactured in the United States have six unique digits. The country of manufacture is identified as follows:

B010000 Tektronix, Inc., Beaverton, Oregon, USA
E200000 Tektronix Unitec Kingdom, Ltd., London
J300000 Sony/Tektronix, Japan
H700000 Tektronix Holland, NV, Heerlenveen, The Netherlands

Instruments manufactured for Tektronix by external vendors outside the United States are assigned a two digit alpha code to identify the country of manufacture (e.g., JP for Japan, HK for Hong Kong, etc.).

Copyright © Tektronix, Inc., 1990. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. The following are registered trademarks: TEKTRONIX, TEK, TEKPROBE, SCOPEMOBILE and

Tektronix, Inc.
P.O. Box 500
Beaverton, OR 97077

Contents

Task Reference ......................... 1
Command Reference .................... 19
Alphabetic Command Summary (foldout)
Functional Command Summary (foldout)
Escape Character Set ........... Inside back cover
ASCII & GPIB Code Chart ........... back cover

Printed in U.S.A.
First Print DEC 1990
Task Reference

This section of the Quick Reference lists common tasks you can perform using the 11402A and 11403A Digitizing Oscilloscopes, and the steps to take to execute each task. Tasks are sorted into groups.

Key to symbols used in this reference:

- a button on the front panel
- a selection from the major menu area
- a selection from a pop-up menu
- an adjustment performed using the knobs

Icons that appear on the display:
Contents

Basics ........................................... 4
   Engaging Enhanced Accuracy ............... 4
   Clearing All Settings ...................... 4
   Checking the ROM Version ................. 4
   Initializing the Scope .................... 4
   Removing Pop-Up Menus .................... 4
   Setting the Time and Date ................. 4
   Turning On the Scope ...................... 4

Changing the Display ....................... 5
   Display Colors (11403A only) .............. 5
   Display Intensity (overall) ............... 5
   Graticules ................................ 5
   Changing Persistence Mode ................. 6
   Changing Persistence Time ................ 6
   Clearing Waveforms ....................... 6

Window Operations ......................... 7
   Creating a Window ......................... 7
   Removing a Window ......................... 7
   Removing a Waveform ...................... 7

Acquiring Waveforms ...................... 8
   Acquiring with Autoset .................... 8
   Applying Math Functions to a Waveform .... 8
   Create a New Waveform .................... 8
   FFT Displays (11403A Only) ............... 8

Displaying Waveforms ..................... 9
   Changing Vertical Controls ............... 9
   Changing Horizontal Controls ............. 9
   Using Pan and Zoom ....................... 9
   Changing Trigger Settings ................. 9
   Setting Record Length ..................... 10

Labeling Waveforms and Settings ......... 11
   Creating a Label ......................... 11
   Changing or Deleting the Label .......... 11
   Positioning the Label ..................... 11

Making a Hardcopy ......................... 12
   Setting Hardcopy Parameters .............. 12
   Initiating a Hardcopy ..................... 12
   Aborting a Hardcopy ...................... 12

Measurement Functions ................... 13
   Taking Measurements ...................... 13
   Taking a Measurement on More than One Waveform ........................................ 13
   Taking Measurements on Noisy or Jittery Waveforms ........................................ 13

Setting Up GPIB ............................. 14
   Mode ...................................... 14
   Address .................................. 14
   Terminator ................................ 14
   Debug .................................... 14

Setting RS-232-C Parameters .......... 15
   Baud Rate ................................ 15
   Echo ..................................... 15
   Stop Bits ................................ 15
   Parity ................................... 15
   Flagging ................................ 15
   Delay .................................... 15
   EOL String ................................ 15
   Verbose Mode ............................. 15
   Debug Mode ............................... 15

Storing Waveforms and Settings ........ 16
   Waveforms ................................ 16
   Settings .................................. 16

Using Diagnostics ......................... 17
   Self-Test Diagnostics ...................... 17
   Extended Diagnostics ..................... 17
Task Reference

Basics

Clearing All Settings

UTILITY, Initialize

Checking the ROM Version

UTILITY, Idant. Read firmware versions in the pop-up menu under PW Vers.

Engaging Enhanced Accuracy

UTILITY, ENHANCED ACCURACY

Initializing the Scope

UTILITY, Initialize

Removing Pop-Up Menus

Touch anywhere in graticule outside pop-up menu. Alternate: Touch highlighted selector that displayed pop-up. Alternate: press any menu button

Setting the Time and Date

UTILITY, Time & Date, select item to change, adjust using knobs

Turning On the Scope

Set rear panel Principal Power Switch to ON, Set Standby to ON

Changing the Display

Display Colors (11403A only)

UTILITY, Color, select color to be set from top of pop-up, then use Hue, Lightness, and Saturation with knobs. Select next color and continue. Previous colors resets all colors to what they were when the pop-up was first displayed.

Assigning Colors to Waveforms

Select waveform, UTILITY, Color, selected Wfm Color repeatedly until set to desired color. Window waveforms cannot be reasigned

Resetting Colors

UTILITY, Color, Default Color

Display Intensity (overall)

UTILITY, Color, Overall Intensity, either knob

Graticules

Creating a Second Graticule

WAVEFORM, Graticules, Create Second Graticule

Moving Waveforms Between Graticules

WAVEFORM, Graticules, Reduce to Single Graticule

Removing the Second Graticule

WAVEFORM, Graticules, Reduce to Single Graticule
Changing Persistence Mode

vasive, Horizontal Desc, Normal, Infinity Persist, or Variable Persist. Alternate (11403A, Option 1S only): EXTENDED FEATURES, Persist/Histograms, Normal, Variable, Infinity, or Color Grading (color grading can be selected only if both the Main and Window record length is set to 512 points)

Changing Persistence Time

vasive, Horizontal Desc, Persist Time, Either knob. Alternate (11403A, Option 1S only): EXTENDED FEATURES, Persist/Histograms, Persist Time, Either knob

Clearing Waveforms

Select waveform, WAVEFORM, Remove/Clear Wfm #, Either knob

Window Operations

Creating a Window

Select source waveform, Window1 or Window2

Removing a Window

Select window waveform to delete, Remove/Clear Wfm #, Remove Wfm #

Removing a Waveform

Select waveform to delete, Remove/Clear Wfm #, Remove Wfm #
Acquiring Waveforms

Acquiring with Autoset

AUTOSET button. Alternate: Probe ID button, if set.

Applying Math Functions to a Waveform

WAVEFORM, Vertical Desc, as needed then Enter Desc.

Create a New Waveform

and as needed (all waveforms). Alternate: Input channel (single-channel waveforms only).

FFT Displays (11403A Only)

Defining an FFT

Page, FFTmag (or FFTphase, select the channel or define an arbitrary waveform, ) then Enter Desc. Alternate: Select the desired waveform, then FFTmag.

Frequency Span/div

, Top knob.

Frequency Resolution

, Bottom knob.

FFT Scaling

UTILITY, Modes, FFT Scaling.

FFT Window

UTILITY, Modes, FFT Window.

Displaying Waveforms

Changing Vertical Controls

Volts/Div (Vertical Size)

Select waveform, , Top knob.

Vertical Position (Offset)

Select waveform, , Bottom knob.

Changing Horizontal Controls

Horizontal Position (Main Position)

Select waveform, , Bottom knob.

Time/Div (Main Size)

Select waveform, , Top knob.

Using Pan and Zoom

Select waveform, , Pan/Zoom to On, Top knob for magnification, Bottom knob for position.

Changing Trigger Settings

Trigger Coupling

TRIGGER, Trigger Select (Main or Window) then Coupling, select coupling method.

Trigger Level

or , Top knob. Alternate: TRIGGER, Level, Top knob.

Trigger Holdoff

or , Bottom knob. Alternate: TRIGGER, Time Holdoff, Bottom knob.
Making a Hardcopy

Setting Hardcopy Parameters

UTILITY, Hardcopy, as necessary

Initiating a Hardcopy

HARDCOPY

Aborting a Hardcopy

UTILITY, Hardcopy, Hardcopy Abort

Measurement Functions

Taking Measurements

MEASURE, Measurements, select measurement

Taking a Measurement on More than One Waveform

MEASURE, Measurements, select measurement, select measurement, Measured Waveform until desired waveform is assigned

Taking Measurements on Noisy or Jittery Waveforms

Using Histograms

EXTENDED FEATURES, Persist/Histograms, Vertical Histogram or Horizontal Histogram

Changing the Size of the Histogram Box—Persist/Histograms, Vertical Limits or Horizontal Limits, Top or bottom knob as needed

Changing Histogram Scaling—Persist/Histograms, Histogram Scaling

Limiting Acquisitions—Persist/Histograms, Set N Waveform or Set N Samples, Adjust either knob, Stop N Waveform or Stop N Samples
Setting Up GPIB

Mode

- UTILITY, GPIB, Mode as necessary

Address

- UTILITY, GPIB, Address to desired address

 Terminator

- UTILITY, GPIB, Terminator as necessary

 Debug

- UTILITY, GPIB, Debug as necessary

Setting RS-232-C Parameters

Baud Rate

- UTILITY, RS232C, Bottom knob

Echo

- UTILITY, RS232C, Echo, as necessary

Stop Bits

- UTILITY, RS232C, Stop Bits, as necessary

Parity

- UTILITY, RS232C, Parity, as necessary

Flagging

- UTILITY, RS232C, Flagging, as necessary

Delay

- UTILITY, RS232C, Delay, Top knob

EOL String

- UTILITY, RS232C, EOL String, as necessary

Verbose Mode

- UTILITY, RS232C, Verbose

Debug Mode

- UTILITY, RS232C, Debug
Storing Waveforms and Settings

Waveforms

STOR/RECALL, Store Waveform, select waveform or Store All

Settings

STOR/RECALL, Store Setting, select associated menu at bottom of pop-up menu, then Set Next FPS and either knob, then Store Next FPS

Using Diagnostics

Self-Test Diagnostics

UTILITY, Self Test

Extended Diagnostics

UTILITY, Extended Diagnostic, Extended Diagnostic then run desired tests, then Exit, Exit
Command Reference

This section of the quick reference lists the functions you can perform using the 11402A and 11403A Digitizing Oscilloscopes, and the steps to take to execute each function. Functions are listed in alphabetical order.

Key to symbols used in this reference:

- a button on the front panel
- a selection from the major menu area
- a selection from a pop-up menu
- an adjustment performed using the knobs

Icons that appear on the display:
Command Reference

A to B, intensified zone
see Window

Abort Hardcopy
UTILITY, Hardcopy, Abort

AC Coupling, trigger
TRIGGER, Trigger Select (Main or Window) then Coupling, AC

AC Coupling, vertical channel
WAVEFORM, Coupling, select channel then AC

Acquiring Time Base Main or Window
WAVEFORM, observe Horizontal Desc status area

Acquisition, on/off
DIGITIZER Run/Stop

Add Waveform
and as needed (all waveforms), then Enter Desc. Alternate: Input channel (single-channel waveforms only)

Address, GPIB
UTILITY, GPIB, Address

Annotation, Measurement
MEASURE, selector displaying measurement value

Area, measurements
MEASURE, Measurements, Area + or Area -

Assign Measurement, assigning a measurement to a waveform
MEASURE, Measurements, select measurement, select measurement, Measured Waveform until desired waveform is assigned

Audio Feedback, on/off
UTILITY, Modes, Audio Feedback

Auto Level Trigger Mode
TRIGGER, Trigger Select (Main or Window) then Mode, Auto Level

Auto Trigger Mode
TRIGGER, Trigger Select (Main or Window) then Mode, Auto

Autoset
AUTOSET button. Alternate: Probe ID button, If set

Autoset, set probe ID button
UTILITY, Probes, Wfm Select/New Wfm & Autoset

Autoset, undo
UTILITY, Modes, Undo Last Autoset

Autoset Options, configuring
UTILITY, Modes, Vertical and Horizontal

Average, on/off
WAVEFORM, Acquire Desc, Average N

Average, set N
WAVEFORM, Acquire Desc, Set AvgN, Top knob

Axis
see Graticule

B Sweep
see Window

Bandwidth Limit
WAVEFORM, BW Limit, select channel then select limit

Baseline, default measurement parameter
MEASURE, Stats Comp Test & Def, Default Parameters then Baseline then Bottom knob

11402A/11403A Quick Reference
21
Baud Rate, RS-232-C

- UTILITY, RS232C, Baud Rate, Bottom knob

Beeping, on/off

- UTILITY, Modes, Audio Feedback

Brightness

- see Intensity

Calculations, waveform

- WAVEFORM, Vertical Desc, as needed then Enter Desc

Calibrate (internal), oscilloscope

- ENHANCED ACCURACY

Calibrate, probes

- UTILITY, Probes, connect probe or input to calibrator and select channel

Channel Select

- Input channel, Alternate: Default, as needed

Clear, delete displayed or stored waveform

- STORE/RECALL, Clear Waveform, select individual waveform(s) or All Waveforms, Delete Selected Waveforms

Clear, waveform data points

- STORE/RECALL, Clear Wfm #, Remove/Clr Wfm #

Coarse, knob resolution

- Knob label, Coarse

Color, change waveform assignment

- Select waveform, UTILITY, Color, Selected Wfm Color repeatedly until set to desired color. Window waveforms cannot be re-assigned

Color, default all (11403A only)

- UTILITY, Color, Default Color

Color, set one or more (11403A only)

- UTILITY, Color, select color to be set from top of pop-up, then use Hue, Lightness, and Saturation with knobs. Select next color and continue. Previous Colors resets all colors to what they were when the pop-up was first displayed.

Color Grading, on/off

(11403A, Option 1S only)

- EXTENDED FEATURES, Persist/Histograms, Color Grading. Note: both Main and Window record lengths must be set to 512 points to use the Color Grading mode.

Color Grading, display scaling

(11403A, Option 1S only)

- EXTENDED FEATURES, Color Grad Scale

Communication parameters

- UTILITY, RS232C or GPIB, as needed

Compare, measurement on/off

- MEASURE, Stats Comp Test & Def, Compare Options then Compare (on/off)

Compare, set measurement reference value

- MEASURE, Stats Comp Test & Def, Compare Options then Measure Selected Wfm Save as References or adjust by touching a measurement reference selector in “Adjust References” section, use either knob

Compensation, probe

- UTILITY, Probes, connect probe or input to calibrator and select channel

Conditional Acquisition

- WAVEFORM, Acquire Desc, %Fill Complete or Single Trigger or Continuous or Average Complete or Envelope Complete or Both Avg & Env
Command Reference

**Contrast**, default all (11402A only)
- UTILITY, intensity, Default Contrast

**Contrast**, default one (11402A only)
- UTILITY, intensity, select contrast to be set from top of pop-up, then Default Contrast

**Contrast**, overall
- UTILITY, Color (11403A) or intensity (11402A), overall intensity, either knob

**Contrast**, set one or more (11402A only)
- UTILITY, intensity, select contrast to be set from top of pop-up, knobs. Select next contrast and continue. Previous contrast resets all contrasts to what they were when the pop-up was first displayed.

**Copy**
see Hardcopy

**Coupling**, trigger
- TRIGGER, Trigger Select (Main or Window) then Coupling, as needed

**Coupling**, vertical channel
- WAVEFORM, Coupling, select channel then select coupling

**Create New Waveform**
-作为一种和 as needed (all waveforms). Alternate: Input channel (single-channel waveforms only)

**Cross**, measurement
- MEASURE, Measurements, Cross

**Cursors**, across two waveforms
Select first waveform, Cursors, Cursor Type, Split, Dot, then selector for second waveform

**Cursors**, auto measurement area
see Annotation, measurement

**Cursors**, setting type
- Select waveform, Cursors, Cursor Type, select type

**Cursors**, turning off
- Page to Previous Menu. Alternate: WAVEFORM

**Cursors**, turning on
- Select waveform, Cursors

**Data Interval**, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then Data Interval

**Date**, set
- UTILITY, Time & Date, select item to change, knob

**DC Coupling**, trigger
- TRIGGER, Trigger Select (Main or Window) then Coupling, DC

**DC Coupling**, vertical channel
- WAVEFORM, Coupling, select channel then DC

**Debug Mode**, programming
- UTILITY, RS232C or GPIB, Debug

**Default**, measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then select parameter, knob

**Define**, new waveform
- as needed (all waveforms). Alternate: Input channel (single-channel waveforms only)

**Delay**, by Events or Time
see Holdoff

**Delay**, RS-232-C
- UTILITY, RS232C, Delay, Top knob
Delay, timing measurement
   $\text{MEASURE, Measurements, Delay}$

Delayed Sweep
   see Window

Delete, displayed or stored waveform
   $\text{STORE/RECALL, Delete Waveform, select individual waveform(s) or All Waveforms, Delete Selected Waveforms}$

Delete, displayed waveform
   Select waveform to delete, Remove/Clear Wfm #, Remove Wfm #

Delete, stored setting
   $\text{STORE/RECALL, Delete Setting, select individual settings or All Settings, Delete Selected Settings}$

Deskew, probe
   $\text{UTILITY, Probes, connect probe or input to calibrator and select channel}$

Diagnostics, extended
   $\text{UTILITY, Extended Diagnostic, Extended Diagnostic then run desired tests then Exit}$

Diagnostics, self test
   $\text{UTILITY, Self Test}$

Display Intensity, adjustment
   $\text{UTILITY, Color (11403A) or Intensity (11402A), Overall Intensity, either knob}$

Display Mode, vector on/off
   $\text{UTILITY, Modes, Vectored Waveforms}$

Distal, default measurement parameter
   $\text{MEASURE, Stats Comp Test & Def, Default Parameters then Distal then Top knob}$

Dot Cursors
   Select waveform, [Cursor], Cursor Type, Paired Dots

Duty Cycle, timing measurement
   $\text{MEASURE, Measurements, Duty Cycle}$

Echo, RS-232-C
   $\text{UTILITY, RS232C, Echo}$

ECL, Autoset mode
   $\text{UTILITY, Modes, Vertical}$

Edge, Autoset mode
   $\text{UTILITY, Modes, Horizontal}$

Energy, measurement
   $\text{MEASURE, Measurements, Energy}$

Enhanced Accuracy, set auto or manual
   $\text{UTILITY, Modes, Enhanced Accuracy Mode}$

Enhanced Accuracy, execute
   $\text{ENHANCED ACCURACY}$

Envelope, on/off
   $\text{WAVEFORM, Acquire Desc, Envelope N}$

Envelope, set N
   $\text{WAVEFORM, Acquire Desc, Set EnvN, Bottom knob}$

EOL String, RS-232-C
   $\text{UTILITY, RS232C, EOL String}$

Events, delay window trigger by
   see Holdoff

Extended Diagnostics
   $\text{UTILITY, Extended Diagnostic, Extended Diagnostic then run desired tests then Exit}$

Extinction Ratio, amplitude measurement
   $\text{MEASURE, Measurements, Extinction Ratio}$
**Command Reference**

**Fall Time**, timing measurement  
- MEASURE, Measurements, Fall

**Fast** (definition)  
*Integer waveform computations. See Forced to force High Prec floating-point computations.*

**FFT**, magnitude display (11403A only)  
- Utility, FFTmag, (select channel), Enter  
Desc. Alternate: Select waveform

**FFT**, phase display (11403A only)  
- Utility, FFTphas, (select channel), Enter  
Desc. Alternate: Select waveform

**FFT**, scaling (11403A only)  
- Utility, Modes, FFTScaling

**FFT**, window (11403A only)  
- Utility, Modes, FFTWindow

**Filter**, trigger coupling  
- TRIGGER, Trigger Select (Main or Window) then Coupling, select desired coupling

**Fine**, knob resolution  
- Knob label, Fine

**Flagging**, RS-232-C  
- Utility, RS232C, Flagging

**Forced**, high-precision waveform scaling  
- Utility, Modes, Waveform Scaling to Forced (all new complex waveforms will be High Prec). See High Prec

**Frequency**, timing measurement  
- Measure, Measurements, Frequency

**Front-Panel Setting**  
see Setting

**Functions**, waveform  
- WAVEFORM, Vertical Desc, as needed then Enter Desc

**Gain**, amplitude measurement  
- MEASURE, Measurements, Gain

**GPIB Parameters**  
- Utility, GPIB, as needed

**Graticule**, create second  
- WAVEFORM, Graticules, Create Second Graticule

**Gray Shade**, default all (11402A only)  
- Utility, Intensity, Default Contrast

**Gray Shade**, default one (11402A only)  
- Utility, Intensity, select contrast to be reset from top of pop-up, then Default Contrast

**Gray Shade**, set one or more (11402A only)  
- Utility, Intensity, select contrast to be set from top of pop-up knobs. Select next contrast and continue. Previous Contrast resets all contrasts to what they were when the pop-up was first displayed.

**Hardcopy**, abort  
- Utility, Hardcopy, Abort

**Hardcopy**, make  
- HARDCOPY

**Hardcopy**, set mode  
- Utility, Hardcopy, as necessary

**High Pass Filter**, trigger coupling  
- TRIGGER, Trigger Select (Main or Window) then Coupling, select coupling

**High Prec** (definition)  
*Floating-point waveform computations. All waveforms using multiplication, division, or certain functions will always be High Prec. Other waveforms can be High Prec — see Forced*
Command Reference

Histograms, adjusting limits
(11403A, Option 1S only)
- EXTENDED FEATURES, Persist/Histograms, Vertical Limits or Horizontal Limits,
  either knob as appropriate

Histograms, on/off
(11403A, Option 1S only)
- EXTENDED FEATURES, Persist/Histograms, Vertical Histogram or Horizontal Histogram

Holdoff window trigger by events, establishing
- TRIGGER, Window Holdoff Md,
  Holdoff by Events Triggered from Window

Holdoff window trigger by time, establishing
- TRIGGER, Window Holdoff Md,
  Holdoff by Time Triggered from Window

Holdoff window trigger by time or events, adjusting
  Bottom knob, Alternate: TRIGGER,
  Time Holdoff or Events Holdoff, Bottom knob

Holdoff, window trigger, removing
- TRIGGER, Window Holdoff Md,
  No Holdoff Triggered from Main

Horizontal Bar Cursors
Select waveform, Cursor, Cursor Type,
  Horizontal Bars

Horizontal Histograms, on/off
(11403A, Option 1S only)
- EXTENDED FEATURES, Persist/Histograms, Horizontal Histogram

Horizontal Magnify
Select waveform, Pan/Zoom to On,
  Top knob for magnification, Bottom knob for position

Horizontal Position
Select waveform, either knob

Horizontal Size
Select waveform, Top knob

Impedance, Signal
- WAVEFORM, Impedance, select channel then select impedance

Infinite Persistence, on/off (11403A only)
- WAVEFORM, Horizontal Desc, Infinite Persistence, Alternate (Option 1S only):
- EXTENDED FEATURES, Persist/Histograms, Infinite

Initialize, all default measurement parameters
- MEASURE, Stats Comp Test & Def,
  Default Parameters then Initialize Defaults

Initialize oscilloscope
- UTILITY, Initialize

Intensified Zone
see Window

Intensity, default all (11402A only)
- UTILITY, Intensity, Default Contrast

Intensity, default one (11402A only)
- UTILITY, Intensity, select contrast to be reset from top of pop-up, then Default Contrast

Intensity, overall display
- UTILITY, Color (11403A) or Intensity (11402A), Overall Intensity, either knob

Intensity, set one or more (11402A only)
- UTILITY, Intensity, select contrast to be set from top of pop-up, either knobs. Select next contrast and continue. Previous Contrast resets all contrasts to what they were when the pop-up was first displayed.

Inverted Waveform
- Desc, then source description then Enter Desc

Jitter, timing measurement
(11403A, Option 1S only)
- MEASURE, Measurements, Jitter (only with Color Grading on)
Keypad, numeric
- Knob label, enter number, magnitude (m for milli, etc.) then Enter

Knob Resolution
- Knob label, Coarse or Medium or Fine

Label, define and display
- UTILITY, Label, select entity to display (first Displayed Waveforms, Stored Waveforms, or Stored Settings, then the entity from the list below), then type label (from key list of Upper Case, Lower Case, or Numbers), Back Space to correct errors, then Display, Exit

Label, change or delete
- UTILITY, Label, select entity to change or delete (first Displayed Waveforms, Stored Waveforms, or Stored Settings, then the entity from the list below), then type label (from key list of Upper Case, Lower Case, or Numbers). Back Space to correct errors or delete text. Exit

Label, move
Select waveform, UTILITY, Label Displayed Waveforms then Position, to move

Label, on/off
- UTILITY, Label, Displayed Waveforms then Display, then Exit

Label, stored waveform time/date
- UTILITY, Modes, Stored Wfm Time/Date (shows time/date stamp on menu selectors for stored waveforms)

Left Limit, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then Left Limit, Top knob

Level, trigger
- or , Top knob. Alternate: TRIGGER, Level, Top knob

Level Mode, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then Level Mode

Line Trigger
- TRIGGER, Trigger Select (Main or Window) then Source Desc, Line, Enter Desc

Low Pass Filter, trigger coupling
- TRIGGER, Trigger Select (Main or Window) then Coupling, select coupling

Main Position
Select waveform, Bottom knob

Main Size
Select waveform, Top knob

Main→Win Trigger, timing measurement
- MEASURE, Measurements, Main→Win Trig Time

Main, record length
- WAVEFORM, Horizontal Desc, Main Record Length, Top knob

Mask Testing, clear hits
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, Clear Hits

Mask Testing, creating masks
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, select a Mask # selector, select Edit Mask Definition, both knobs to specify a mask point, Add Point, add points as necessary, Exit Mask Editing

Mask Testing, deleting masks
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, Mask # for the mask to be deleted, Delete Mask Definition

Mask Testing, on/off
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, Count Mask Hits
Mask Testing, set N mask hits
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, Mask #, Set N Mask Hits, either knob

Mask Testing, set N waveforms
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, Mask #, Set N Waveforms, either knob

Mask Testing, stop counting hits after N mask hits
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, Mask #, Stop N Mask Hits

Mask Testing, stop counting hits after N total hits
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, Mask #, Stop N Total Hits (N is defined by Set N Mask Hits value)

Mask Testing, stop counting hits after N waveforms
(11403A, Option 1S only)
- EXTENDED FEATURES, Mask Testing, Mask #, Stop N Waveforms

Max, amplitude measurement
- MEASURE, Measurements, Max

Mean, amplitude measurement
- MEASURE, Measurements, Mean

Measured Waveform, assigning a measurement to a waveform
- MEASURE, select measurement, Measured Waveform until measurement is "assigned" to desired waveform

Measurement, to remove all
- MEASURE, Measurements, Delete All

Measurement, to select
- MEASURE, Measurements, select up to six

Measurement Compare, on/off
- MEASURE, Stats Comp Test & Def, Compare Options then Compare (on/off)

Measurement Compare, set compare value
- MEASURE, Stats Comp Test & Def, Compare Options then Measure Selected Wfm Save as References or adjust by touching a measurement reference selector in "Adjust References" section, use either knob

Measurement Statistics, on/off
- MEASURE, Stats Comp Test & Def, Statistics
Note: Main→Win Trig Time measurement has its own statistics control: Main→Win Trig Time, "Statistics" section

Measurement Statistics, restart logging
- MEASURE, Stats Comp Test & Def, Reset

Measurement Statistics, set N
- MEASURE, Stats Comp Test & Def, Statistics N, either knob

Medium, knob resolution
- Knob label, Medium

Menu, remove pop-up
Touch anywhere in graticule outside pop-up menu. Alternate: touch highlighted selector that displayed pop-up. Alternate: press any menu button

Mesial, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then Mesial, Top knob

Mid, amplitude measurement
- MEASURE, Measurements, Mid

Min, amplitude measurement
- MEASURE, Measurements, Min

Mode, GPIB
- UTILITY, GPIB, Mode

Move Waveform to Other Graticule
Select waveform to move, WAVEFORM, Upper Graticule or Lower Graticule, Move Waveform to Other Graticule
New Waveform
- Arrow and select as needed (all waveforms). Alternate: Input channel (single-channel waveforms only)

Noise, amplitude measurement
- (11403A, Option 1S only)
- MEASURE, Measurements, Noise (only with Color Grading on)

Noise Filter, trigger coupling
- TRIGGER, Trigger Select (Main or Window) then Coupling, select coupling

Normal Trigger Mode
- TRIGGER, Trigger Select (Main or Window) then Mode, Normal

Numeric Keypad
- Knob label, enter number, magnitude (m for milli, etc.) then Enter

Offset, vertical position
- Select waveform, ↑, Bottom knob

Optional, fast or high-precision waveform scaling
- UTILITY, Modes, Waveform Scaling to Optional (new waveforms will be Fast or High Prec depending on calculations invoked)

Overshoot, amplitude measurement
- MEASURE, Measurements, Overshoot

Pan and Zoom, multiple waveforms
- UTILITY, Modes, Multitrace Pan/Zoom, then use Pan/Zoom as with single waveforms

Pan and Zoom, set pivot (center of magnification)
- UTILITY, Modes, Pan/Zoom Pivot

Pan and Zoom, using
- Select waveform, Pan/Zoom to On, Top knob for magnification, Bottom knob for position

Parity, RS-232-C
- UTILITY, RS232C, Parity

Peak to Peak, amplitude measurement
- MEASURE, Measurements, Peak

Peak to Peak, Pk-Pk Autoset mode
- UTILITY, Modes, Vertical

Period, Autoset mode
- UTILITY, Modes, Horizontal

Period, timing measurement
- MEASURE, Measurements, Period

Persistence Mode, on/off
- WAVEFORM, Horizontal Desc, Infinite Persist or Variable Persist to turn on or Normal to turn off. Alternate (11403A, Option 1S only): EXTENDED FEATURES, Persist/ Histograms, as desired

Phase, timing measurement
- MEASURE, Measurements, Phase

Pop-Up Menu, remove
- Touch anywhere in graticule outside pop-up menu. Alternate: touch highlighted selector that displayed pop-up. Alternate: press any menu button

Position, horizontal
- Select waveform, ↑, Bottom knob

Position, vertical (offset)
- Select waveform, ↑, Bottom knob

Pre-Trigger View
- Select waveform, ↑, Bottom knob

Probe ID Button, set function
- UTILITY, Probes, Wfm Select/New Wfm or Wfm Select/New Wfm & Autoset or Sequence Settings
Probes, calibrate (deskew, compensate)
- UTILITY, Probes, connect probe or input to calibrator and select channel

Propagation Delay, timing measurement
- MEASURE, Measurements, PropDelay, select delayed waveform from top of menu

Proximal, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then Proximal then Bottom knob

Pulse, Autoset mode
- UTILITY, Modes, Horizontal

Pulse Width, timing measurement
- MEASURE, Measurements, Width

Recall, stored setting
- STORE/RECALL, Recall Setting, select setting

Recall, stored waveform
- STORE/RECALL, Recall Waveform, select waveform

Record Length, set by Initialize
- UTILITY, Modes, Init Sets Rec Len To

Record Length, main
- WAVEFORM, Horizontal Desc, Main Record Length, Top knob

Record Length, window
- WAVEFORM, Horizontal Desc, Window Record Length, Bottom knob

Reference Level, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then Reference Level then either knob

Reference Value, for measurement compare
- MEASURE, Stats Comp Test & Def, Compare Options then Measure Selected Wfm Save as References or adjust by touching a measurement reference selector in "Adjust References" section, use either knob

Remove Waveform
Select waveform to delete, Remove/Ctrl Wfm #, Remove Wfm #

Remove Window
Select window waveform to delete, Remove/Ctrl Wfm #, Remove Wfm #

Remove, pop-up menu
Touch anywhere in graticule outside pop-up menu. Alternate: touch highlighted selector that displayed pop-up. Alternate: press any menu button

Reset Oscilloscope
- UTILITY, Initialize

Reset, all default measurement parameters
- MEASURE, Stats Comp Test & Def, Default Parameters then Initialize Defaults

Reset, waveform measurement parameters to defaults
Select waveform, MEASURE, Stats Comp Test & Def, Default Parameters then Copy Defaults to Sel Wfm

Right Limit, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then Right Limit, Bottom knob

Rise Time, timing measurement
- MEASURE, Measurements, Rise

RMS, amplitude measurement
- MEASURE, Measurements, RMS

RS-232-C Parameters
- UTILITY, RS232C, as needed
Runs After Delay
- TRIGGER, Window Holdoff Md, No Holdoff Triggered from Main

Sample Interval, display
- WAVEFORM, Horizontal Desc, read out at top of pop-up menu.

Save Current Measurement Values as Compare Reference
- MEASURE, Stats Comp Test & Def, Compare Options then Measure Selected Wfm Save as Reference.

Save Setting
- STORE/RECALL, Store Setting, select associated menu at bottom of pop-up menu, then Set Next FPS and either knob, then Store Next FPS

Save Waveform
- STORE/RECALL, Store Waveform, select waveform or Store All

Scaling, waveform
- UTILITY, Modes, Waveform Scaling. See also Fast and High Prec.

Select Waveform
- Touch waveform on display. Alternate: WAVEFORM, Page to All Wfm Status then select waveform in major menu area.

Self Test
- UTILITY, Self Test

Self Test, extended diagnostics
- UTILITY, Extended Diagnostic, Extended Diagnostic then run desired tests then Exit

Setting, recall front panel setup
- STORE/RECALL, Recall Setting, select setting

Setting, sequence to next
- STORE/RECALL, Sequence Settings, Sequencing (set to On) then Next Setting. Alternate: press probe button if ID function is set to sequence setting (see Probe ID Button)

Setting, store front panel setup
- STORE/RECALL, Store Setting, select menu to be stored with setting at bottom of pop-up menu, then Set Next FPS and either knob, then Store Next FPS

Signal Source
- UTILITY, as needed (all waveforms). Alternate: Input channel (single-channel waveforms only)

Signal/Noise Ratio, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then S/N Ratio, Bottom knob

Size, adjust horizontal
- Select waveform, Top knob

Size, adjust vertical
- Select waveform, Top knob

Skew, timing measurement
- MEASURE, Measurements, Skew

Slope, default measurement parameter
- MEASURE, Stats Comp Test & Def, Default Parameters then Slope

Source, signal
- UTILITY, Modes, Audio Feedback

Alternate: as needed (all waveforms). Alternate: Input channel (single-channel waveforms only)
Command Reference

Source, trigger

TRIGGER, Trigger Select (Main or Window) then Source Desc, type description then Enter Desc

Split Dot Cursors

Select first waveform, Cursor Type, Split Dots then touch selector for second waveform

Statistics, on/off

MEASURE, Stats Comp Test & Def, Statistics Options, Statistics
Note: Main→Win Trig Time measurement has its own statistics control. Main→Win Trig Time, Statistics section

Statistics, restart logging

MEASURE, Stats Comp Test & Def, Reset

Statistics, set N

MEASURE, Stats Comp Test & Def, Statistics Options, Statistics N, either knob

Status, waveform

WAVEFORM, Vertical Desc selector shows some status or Page to All Wfms Status

Stop Bits, RS-232-C

UTILITY, RS232C, Stop Bits

Store Setting

STORE/RECALL, Store Setting, select associated menu at bottom of pop-up menu, then Set Next FPS and either knob, then Store Next FPS

Store Waveform

STORE/RECALL, Store Waveform, select waveform or Store All

Stored Waveform, recall

STORE/RECALL, Recall Waveform, select waveform

Stored Waveform, time/date label

UTILITY, Modes, Stored Wfm Time/Date (shows time/date stamp on menu selectors for stored waveforms)

Terminator, GPIB

UTILITY, GPIB, Terminator

Time, delay window trigger by see Holdoff

Time, set

UTILITY, Time & Date, select item to change, adjust using knobs

Time A→B, timing measurement

MEASURE, Measurements, Main→Win Trig Time

Time/Div

Select waveform, ↔, Top knob

Time Base Position

Select waveform, ↔, Bottom knob

Time Base Size

Select waveform, ↔, Top knob

Time Mode, default measurement parameter

MEASURE, Stats Comp Test & Def, Default Parameters then Time Mode

Topline, default measurement parameter

MEASURE, Stats Comp Test & Def, Default Parameters then Topline then Top knob

Touch Panel, on/off

TOUCH PANEL

Tracking, default measurement parameter

MEASURE, Stats Comp Test & Def, Default Parameters then Tracking

Trig After Delay

TRIGGER, Window Holdoff Md, Holdoff by Time Triggered from Window

42 11402A/11403A Quick Reference
Command Reference

Trigger Time Delay, timing measurement
  MEASURE, Measuremennts,
  Main → Win Trig Time

Trigger, AC coupling
  TRIGGER, Trigger Select (Main or Window) then Coupling, AC

Trigger, auto level mode
  TRIGGER, Trigger Select (Main or Window) then Mode, Auto Level

Trigger, auto mode
  TRIGGER, Trigger Select (Main or Window) then Mode, Auto

Trigger, DC coupling
  TRIGGER, Trigger Select (Main or Window) then Coupling, DC

Trigger, high pass filter coupling
  TRIGGER, Trigger Select (Main or Window) then Coupling, select

Trigger holdoff window by events, establishing
  TRIGGER, Window Holdoff Md, Holdoff by Events Triggered from Window

Trigger holdoff window by time, establishing
  TRIGGER, Window Holdoff Md, Holdoff by Time Triggered from Window

Trigger holdoff window by time or events, adjusting
  Bottom knob. Alternate: TRIGGER, Time Holdoff or Events Holdoff, Bottom knob

Trigger, holdoff window, removing
  TRIGGER, Window Holdoff Md, No Holdoff Triggered from Main

Trigger, level
  Top knob. Alternate: TRIGGER, Level, Top knob

Trigger, line
  TRIGGER, Trigger Select (Main or Window) then Coupling, Line

Trigger, low pass filter coupling
  TRIGGER, Trigger Select (Main or Window) then Coupling, select coupling

Trigger, noise filter coupling
  TRIGGER, Trigger Select (Main or Window) then Coupling, select coupling

Trigger, normal mode
  TRIGGER, Trigger Select (Main or Window) then Mode, Normal

Trigger, single shot
  WAVEFORM, Acquire Desc, Single Trigger (press DIGITIZER for each successive acquisition)

Trigger, slope
  TRIGGER, Trigger Select (Main or Window) then Slope

Trigger, source
  TRIGGER, Trigger Select (Main or Window) then Source Desc, type description then Enter Desc

Trigger window holdoff by events, establishing
  TRIGGER, Window Holdoff Md, Holdoff by Events Triggered from Window

Trigger window holdoff by time, establishing
  TRIGGER, Window Holdoff Md, Holdoff by Time Triggered from Window

Trigger window holdoff by time or events, adjusting
  Bottom knob. Alternate: TRIGGER, Time Holdoff or Events Holdoff, Bottom knob

Trigger, window holdoff, removing
  TRIGGER, Window Holdoff Md, No Holdoff Triggered from Main

TTL, Autoset mode
  UTILITY, Modes, Vertical
Undershoot, amplitude measurement
- MEASURE, Measurements, Underneath

Variable Persistence, on/off
- WAVEFORM, Horizontal Desc, Variable Persist. Alternate (11403A, Option 15 only):
- EXTENDED FEATURES, Persist/Histograms, Variable Persist

Vector Mode, display mode on/off
- UTILITY, Modes, Vectored Waveforms

Verbose, RS-232-C
- UTILITY, RS232C, Verbose

Vertical Bar Cursors
- Select waveform, Cursor, Cursor Type, Vertical Bars

Vertical Offset
- Select waveform, Bottom knob

Vertical Size
- Select waveform, Top knob

Volts/Div
- Select waveform, Top knob

Waveform, calculations and functions
- WAVEFORM, Vertical Desc, as needed then Enter Desc

Waveform, clear data points
- STORE/RECALL, Clear Wfm, as needed. Alternate: Select waveform, Remove/Ctr Wfm #, Clear Wfm #

Waveform, create new
- ENTER and as needed (all waveforms). Alternate: Input channel (single-channel waveform only)

Waveform, move to other graticule
- Select waveform to move, WAVEFORM, Upper Graticule or Lower Graticule, Move Wfm to Other Graticule

Waveform, recall stored
- STORE/RECALL, Recall Waveform, select waveform

Waveform, remove
- Select waveform to delete, Remove/Ctr Wfm #, Remove Wfm #

Waveform, scaling
- UTILITY, Modes, Waveform Scaling. See also Fast and High Prec

Waveform, select
- Touch waveform on display. Alternate: WAVEFORM, Page to All Wfm Status then select waveform in major menu area

Waveform, status
- WAVEFORM, Vertical Desc selector shows some status or Page to All Wfm Status

Waveform, store
- STORE/RECALL, Store Waveform, select waveform or Store All

Waveform, vertical description
- WAVEFORM, Vertical Desc (shows some status), extend or modify as needed then Enter Desc

Waveform, XY from two live waveforms
- Create and select Y waveform, WAVEFORM, Horizontal Desc, select X waveform

Waveform, XY from two stored waveforms
- Create and select stored Y waveform, WAVEFORM, Horizontal Desc, select X stored waveform

Waveform Color, change assignment
(11403A only)
- Select waveform, UTILITY, Color, Select Wfm Color repeatedly until set to desired color. Window waveforms cannot be reassigned. Note: see Color for more color control
Command Reference

Waveform Label, define
- UTILITY, Label, select entity to display (first Displayed Waveforms, Stored Waveforms, or Stored Settings, then the entity from the list below), then type label (from key list of Upper Case, Lower Case, or Numbers).
- Back Space to correct errors or delete text. Exit

Waveform Label, change or delete
- UTILITY, Label, select entity to change or delete (first Displayed Waveforms, Stored Waveforms, or Stored Settings, then the entity from the list below), then type label (from key list of Upper Case, Lower Case, or Numbers).
- Back Space to correct errors or delete text. Exit

Waveform Label, move
- Select waveform, UTILITY, Label, Displayed Waveforms then Position, then Exit, to move

Waveform Label, on/off
- UTILITY, Label, Displayed Waveforms then Display

Waveform Label, stored waveform time/date
- UTILITY, Modes, Stored Wfm Time/Date (shows time/date stamp on menu selectors for stored waveforms)

Window Position
- Select waveform, , Bottom knob

Window Size
- Select waveform, , Top knob

Window, create new waveform
- Select source waveform, Window or Window

Window, record length
- WAVEFORM, Horizontal Desc, Window Record Length, Bottom knob

Window, remove
- Select window waveform to delete, Remove/Ctr Wtm #, Remove Wfm #
# Tektronix 11402A/11403A
## Alphabetic Command Summary

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt; &gt;</code></td>
<td>Defined item</td>
</tr>
<tr>
<td><code>{}</code></td>
<td>One item from group required</td>
</tr>
<tr>
<td><code>()</code></td>
<td>Optional item(s)</td>
</tr>
<tr>
<td>`</td>
<td>`</td>
</tr>
<tr>
<td>`</td>
<td>`</td>
</tr>
<tr>
<td>FPS</td>
<td>Front Panel Setting</td>
</tr>
<tr>
<td><code>&lt;NR1&gt;</code></td>
<td>Signed integer</td>
</tr>
<tr>
<td><code>&lt;NR2&gt;</code></td>
<td>Floating point, no exponent</td>
</tr>
<tr>
<td><code>&lt;NR3&gt;</code></td>
<td>Floating point with exponent</td>
</tr>
<tr>
<td><code>&lt;NRx&gt;</code></td>
<td>`{ &lt;NR1&gt;</td>
</tr>
<tr>
<td><code>&lt;ul&gt;</code></td>
<td>Unsigned integer</td>
</tr>
<tr>
<td><code>&lt;curve data&gt;</code></td>
<td>Tek Codes &amp; Formats binary block data <code>&lt;bblock&gt;</code> or ASCII data points <code>&lt;NR1&gt; [{, &lt;NR1&gt; ...}]</code></td>
</tr>
<tr>
<td><code>&lt;qstring&gt;</code></td>
<td>Quoted string</td>
</tr>
<tr>
<td><code>?</code></td>
<td>Query-only header or link</td>
</tr>
</tbody>
</table>

**HEader**
- Header, link, or argument; minimum spelling in CAPs

**RESPonse**
- Query response; minimum spelling in CAPs

Commands are set/query unless otherwise noted. Query-only headers are followed by a `?`. Query-only links are indicated with a leading `?`; the argument(s) in parentheses after the colon show the response form. (Note: Do not enter the colon when querying a link.)

### A-B

- **ABBwmpre** `{ON|OFF}`
- **ABStouch** `{CLEar|<NRx>,<NRx>}`
- **ADJtrace** `<ul> <link>:<arg>`
- **HMAg** `<NRx>`
- **HPo sitio** `<NRx>`
- **HPosition** `<NRx>`
- **HSize** `<NRx>`
- **PANzoom** `{ON|OFF}`
- **TSep** `<NRx>`
- **VPos** `<NRx>`
- **VSize** `<NRx>`
- **ALTlinkjet** `<link>:<arg>`
- **DIRec** `{HORiz|VERt}`
- **FORMat** `{DRAf|HRes|REDuced}`
- **PORT** `{CENTRonic|GPiB|RS232}`
- **AUTOset** `{<link>;<arg>}`
- **HORiz** `{EDGE|OFF|PERiod|PULse}`
- **START** (Set-only)
- **UNDO** (Set-only)
- **VERBi** `{ECL|PP|TTL|OFF}`
- **AVG** `{ON|OFF}`
- **BASEline** `<NRx>`
- **BELL**
- **BITMap** `<link>:<arg>`
- **DATACompress** `{ON|OFF}`
DATAFormat: (BINary|BINHex)  
DIRect: (HORiz|VERT)  
FORMat: (DItthered|DRAFT|HRes|REDuced|SCResen)  
PORT: (CENTRomics|GPIb|RS232)  
BYT.or (LSB|M SB)  

CALProbe <link>:<arg>  
FULL: <slot>:<ui>  
SHORT: <slot>:<ui>  

CALstatus?  
CCAlorrections <ui>: <NRx>  
CH <slot>:<ui> <slot>:<ui> <link>:<arg>  
AMPoffset: <NRx>  
BW: <NRx>  
BWHi: <NRx>  
BWLo: <NRx>  
COUplng: (AC|DC|VC|OFF)  
IMPedance: <NRx>  
MNSCoupling: (AC|DC|VC|OFF)  
MNSCouplt: <NRx>  
? MNSProbe (<qstring>)  
OFFset: <NRx>  
PLSCoupling: (AC|DC|VC|OFF)  
PLSoffset: <NRx>  
? PLSProbe (<qstring>)  
? PROBe (<qstring>)  
PROTest: (ON|OFF)  
SENSitivity: <NRx>  
? UNITS (<qstring>)  
VCOffset: <NRx>  
CLEar (ALL|<qstring>|TRAc=<ui>)  
COLor <ui>:<arg>  
HUE: <NRx>  
LIGhtness: <NRx>  
SATration: <NRx>  
COLor DEFAULT  
COMpar (ON|OFF)  
CONDitio <link>:<arg>  
FILL: <NRx>  
? REMining (<NR1>)  
TYPE: (AVG|BOTH|CONTinuous|ENV|FIL|GRADed)  
HIST:pl/MASK [<ui>]:<ui> [Singl|WAFlm]  
CONFig?  
COPy [link]:<arg>  
ABORT (Set-only)  
FORMat: (DItthered|DRAFT|HRes|REDuced|SCResen)  
PORT: (CENTRomics|GPIb|RS232)  
PRInt: (ALTinkJet|BITMap|HPGL|PIN8|PIN24)  
TEK4969|TEK4969|TEK4962  
START (Set-only)  
? STATUS ([IDle|SPooling|PRINTIng|ABORTing])  
CPLugin <qstring>  
CUR Sor <link>:<arg>  
READout (ON|OFF)  
REFerence TRAc=<ui>  
TYPE: (HBA|PAl|SPLIt|VBArs)  
? XUNI: ({AMP|D|Gree|DBM|HERt|OHN|SEConds|VOLt|WATts})  
? YUNI: ({AMP|D|Gree|DBM|HERt|OHN|VOLt|WATts})  
LiNEAR  
CURve <curve data>  

DAInt (SINgle|WHole)  
DATE <qstring> = "<dd>-<mm>-<yy>"  
DEBuG <link>:<arg>  
GPIb: (ON|OFF)  
RS232: (ON|OFF)  
DEF <qstring>:<qstring>  
DELAY [<ui>]  
DELet (<link>:<arg> <qstring>)  
? FPS <ui>: <qstring>  
STO <ui> | MENU <id> |  
ALL: {FPS|MENU|STO}  
DIAG?  
DIGlitter (RUN|STOP)  
DISPersion (PP|RMSDev)  
DISPLAY <link>:<arg>  
C.WINBottom: <NRx>  
C.WINLeft: <NRx>  
C.WINRight: <NRx>  
C.WINTop: <NRx>  
D.WINBottom: <NRx>  
D.WINLeft: <NRx>  
D.WINRight: <NRx>  
D.WINTop: <NRx>  
? DATA (<curve data>)  
GRADFirst: (ON|OFF)  
? GRADScale (<ui>)  
GRADcur: (DUAL|SINgle)  
INTENSITY: <NRx>  
MODEs: (DOT|VECTores)  
? NR PT (<ui>)  
PERSistence: <NRx>  
REFRESH: <NRx>  
STATes: (HISTogram|MAKES)  
? Xsize (<ui>)  
? Ysize (<ui>)  
DISTR (<NRx>)  
DLYtrace TRAc=<ui>  
DOT1Abs: D0T2Abs <link>:<arg>  
PCTg: <NRx>  
XCOOrd: <NRx>  
YCOOrd: <NRx>  
? XQUAd ((EQ|LT|GT|UN})  
? YCOOrd (<NR3>)  
? YDIV (<NR3})  
? YQUAd ((EQ|LT|GT|UN})  
DOT1Ref: DOT2Ref <link>:<arg>  
PCTg: <NRx>  
XCOOrd: <NRx>  
YCOOrd: <NRx>  
DYSmenu [link]:<arg>  
? ALL Wavflm CURScr|DISPly|EXTFeat|MEAS|STOR|Recall|Trigg|UTIL|  
UTILITY2|Wavftm (<link>:<arg>  
EXTMenu: {MENU <id> | NONE}  
ENCdg <link>:<arg>  
DISPly: (ASCII|BINary)  
HISTogram: (ASCII|BINary)  
SET: (ASCII|BINary)  
Wavftm: (ASCII|BINary)  
ENV: (ON|OFF)
<table>
<thead>
<tr>
<th>Event</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEO</td>
<td>Set-only</td>
</tr>
<tr>
<td>FFT</td>
<td></td>
</tr>
<tr>
<td>FORMat: DBM LNear</td>
<td></td>
</tr>
<tr>
<td>WINDom: BLackman BL Harris HAMming</td>
<td></td>
</tr>
<tr>
<td>HANning: RECTangular TRIAngular</td>
<td></td>
</tr>
<tr>
<td>FPAnel: ON OFF</td>
<td></td>
</tr>
<tr>
<td>FPSList?</td>
<td></td>
</tr>
<tr>
<td>FPSNum?</td>
<td></td>
</tr>
<tr>
<td>FPUpdate: ALWAYS EMPTY NEVER</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>H - I</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1Bar, H2Bar</td>
</tr>
<tr>
<td>YCOOrd:</td>
</tr>
<tr>
<td>YDIV:</td>
</tr>
<tr>
<td>HIStogram</td>
</tr>
<tr>
<td>WINBottom:</td>
</tr>
<tr>
<td>WINLeft:</td>
</tr>
<tr>
<td>WINRight:</td>
</tr>
<tr>
<td>WINTop:</td>
</tr>
<tr>
<td>DWINBottom:</td>
</tr>
<tr>
<td>DWINLeft:</td>
</tr>
<tr>
<td>DWINRight:</td>
</tr>
<tr>
<td>DWINTop:</td>
</tr>
<tr>
<td>? DATA:</td>
</tr>
<tr>
<td>HISTScaling:</td>
</tr>
<tr>
<td>TYPE:</td>
</tr>
<tr>
<td>HNUMber:</td>
</tr>
<tr>
<td>HPGI:</td>
</tr>
<tr>
<td>COLOR:</td>
</tr>
<tr>
<td>COLOR: DEFault</td>
</tr>
<tr>
<td>FORMat:</td>
</tr>
<tr>
<td>PORT:</td>
</tr>
<tr>
<td>ID?:</td>
</tr>
<tr>
<td>IDProbe?:</td>
</tr>
<tr>
<td>INIT</td>
</tr>
<tr>
<td>INPut: {STO &lt;ui&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>J - L</th>
</tr>
</thead>
<tbody>
<tr>
<td>JITTER:</td>
</tr>
<tr>
<td>JITHistpt?</td>
</tr>
<tr>
<td>JITTLEvel?</td>
</tr>
<tr>
<td>JITTLOCation: CROs, MESSial</td>
</tr>
<tr>
<td>KBAssign:</td>
</tr>
<tr>
<td>GRANularity: COarse, FINE, MEDITum</td>
</tr>
<tr>
<td>LOWer:</td>
</tr>
<tr>
<td>UPPER:</td>
</tr>
<tr>
<td>LABELs:</td>
</tr>
<tr>
<td>PCTg:</td>
</tr>
<tr>
<td>XCOOrd:</td>
</tr>
<tr>
<td>YDIV:</td>
</tr>
<tr>
<td>LABEL:</td>
</tr>
<tr>
<td>DELet: {ALL, FPS &lt;ui&gt;</td>
</tr>
<tr>
<td>TRAc:</td>
</tr>
<tr>
<td>DISPlay:</td>
</tr>
<tr>
<td>FPS &lt;ui&gt;:</td>
</tr>
<tr>
<td>STO &lt;ui&gt;:</td>
</tr>
<tr>
<td>TRAc &lt;ui&gt;:</td>
</tr>
<tr>
<td>LABRel:</td>
</tr>
<tr>
<td>PCTg:</td>
</tr>
<tr>
<td>XCOOrd:</td>
</tr>
<tr>
<td>YDIV:</td>
</tr>
</tbody>
</table>

11402A/11403A Alphabetic Command Summary
<table>
<thead>
<tr>
<th>Table: Tektronix 110402A/110403A Functional Command Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; &gt; &lt; &gt;  Defined item</td>
</tr>
<tr>
<td>( ) One item from group required</td>
</tr>
<tr>
<td>( ) Optional item(s)</td>
</tr>
<tr>
<td>( ) Response to a query</td>
</tr>
<tr>
<td>[ ] Exclusive or</td>
</tr>
<tr>
<td>FPS Front Panel Setting</td>
</tr>
<tr>
<td>&lt;NR1&gt; Signed integer</td>
</tr>
<tr>
<td>&lt;NP2&gt; Floating point, no exponent</td>
</tr>
<tr>
<td>&lt;NP3&gt; Floating point with exponent</td>
</tr>
<tr>
<td>&lt;NRx&gt; &lt;NRx&gt;</td>
</tr>
<tr>
<td>&lt;ui&gt; Unsigned integer</td>
</tr>
<tr>
<td>&lt;12-byte data&gt; Tek Codes &amp; Formats binary block data</td>
</tr>
<tr>
<td>&lt;qstring&gt; Quoted string</td>
</tr>
<tr>
<td>? Query-only header or link</td>
</tr>
<tr>
<td>HEAders Header, link, or argument; minimum</td>
</tr>
<tr>
<td>RESponse Query response; minimum spelling in CAPs</td>
</tr>
<tr>
<td>Commands are set/query unless otherwise noted.</td>
</tr>
<tr>
<td>Query-only headers are followed by a ?. Query-only links</td>
</tr>
<tr>
<td>are indicated with a leading ?; the argument(s) in</td>
</tr>
<tr>
<td>parentheses after the colon show the response form.</td>
</tr>
<tr>
<td>(Note: Do not enter the colon when querying a link.)</td>
</tr>
<tr>
<td>Copyright © Tektronix, Inc., 1993. All rights reserved.</td>
</tr>
<tr>
<td>Permission is given to make copies of this fold-out</td>
</tr>
<tr>
<td>command summary for use by Tektronix customers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acquisition Commands</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTOSet [&lt;link&gt;&gt;:&lt;arg&gt;</td>
</tr>
<tr>
<td>HORIZ [EDGE</td>
</tr>
<tr>
<td>STAR: (Set-only)</td>
</tr>
<tr>
<td>VERT: [ECL</td>
</tr>
<tr>
<td>COND:q acq:&lt;link&gt;:&lt;arg&gt;</td>
</tr>
<tr>
<td>FILL: &lt;NRx&gt;</td>
</tr>
<tr>
<td>REMain (NRT)</td>
</tr>
<tr>
<td>TYPE: [AVG</td>
</tr>
<tr>
<td>HIST: [n</td>
</tr>
<tr>
<td>DIGItizer [RUN</td>
</tr>
<tr>
<td>ENV [ON</td>
</tr>
<tr>
<td>FFT [&lt;link&gt;]:&lt;arg&gt;</td>
</tr>
<tr>
<td>FORMat: [DBM</td>
</tr>
<tr>
<td>WINDow: [BLAcksman</td>
</tr>
<tr>
<td>NAVg &lt;NRx&gt;</td>
</tr>
<tr>
<td>NENV &lt;NRx&gt;</td>
</tr>
<tr>
<td>NGRAded &lt;NRx&gt;</td>
</tr>
<tr>
<td>NHISIt: &lt;NRx&gt;</td>
</tr>
<tr>
<td>NMAss &lt;NRx&gt;</td>
</tr>
<tr>
<td>NWAVfrm &lt;NRx&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Calibration Commands</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALProbe &lt;link&gt;:&lt;arg&gt;</td>
</tr>
<tr>
<td>FULL: &lt;sloT&gt; &lt;ui&gt;</td>
</tr>
<tr>
<td>SHOt: &lt;sloT&gt; &lt;ui&gt;</td>
</tr>
<tr>
<td>CALStatus:</td>
</tr>
<tr>
<td>CCAconstants &lt;ui&gt;:&lt;NRx&gt;</td>
</tr>
<tr>
<td>LCAconstants &lt;ui&gt;:&lt;NRx&gt;</td>
</tr>
<tr>
<td>MCAconstants &lt;ui&gt;:&lt;NRx&gt;</td>
</tr>
<tr>
<td>RCAconstants &lt;ui&gt;:&lt;NRx&gt;</td>
</tr>
<tr>
<td>SELFcRl &lt;FORce&gt; &lt;link&gt;:[&lt;arg&gt;]</td>
</tr>
<tr>
<td>MODE: [AUTO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Channel Vertical Commands</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH &lt;sloT&gt;:&lt;ui&gt; &lt;link&gt;:&lt;arg&gt;</td>
</tr>
<tr>
<td>AMPoff &lt;NRx&gt;</td>
</tr>
<tr>
<td>BW: &lt;NRx&gt;</td>
</tr>
<tr>
<td>BWHI: &lt;NRx&gt;</td>
</tr>
<tr>
<td>BWLO: &lt;NRx&gt;</td>
</tr>
<tr>
<td>COUpling: [AC</td>
</tr>
<tr>
<td>IMpedance: &lt;NRx&gt;</td>
</tr>
<tr>
<td>MNSCoupling: [AC</td>
</tr>
<tr>
<td>MNSoff &lt;NRx&gt;</td>
</tr>
<tr>
<td>? MNSProbe &lt;qstring&gt;</td>
</tr>
<tr>
<td>OFFSET: &lt;NRx&gt;</td>
</tr>
<tr>
<td>PLSCoupling: [AC</td>
</tr>
<tr>
<td>PLSoff &lt;NRx&gt;</td>
</tr>
<tr>
<td>? PLS Probe &lt;qstring&gt;</td>
</tr>
<tr>
<td>PROBe: [ON</td>
</tr>
<tr>
<td>SENitivity: &lt;NRx&gt;</td>
</tr>
<tr>
<td>? UNITS: &lt;qstring&gt;</td>
</tr>
<tr>
<td>VCOff &lt;NRx&gt;</td>
</tr>
<tr>
<td>CPULugin &lt;qstring&gt;</td>
</tr>
<tr>
<td>LPLULugin &lt;qstring&gt;</td>
</tr>
<tr>
<td>RPLULugin &lt;qstring&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursor Commands</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURSor &lt;link&gt;:&lt;arg&gt;</td>
</tr>
<tr>
<td>READout: [ON</td>
</tr>
<tr>
<td>REFerence: TRAco &lt;ui&gt;</td>
</tr>
<tr>
<td>TYPE: [HBArs</td>
</tr>
<tr>
<td>? XUNIt: [AMPs</td>
</tr>
<tr>
<td>? OHMs: [SEConds</td>
</tr>
<tr>
<td>? YUNIt: [AMPs</td>
</tr>
<tr>
<td>? OHMs: [SEConds</td>
</tr>
<tr>
<td>DOT1Abs: DOT2Abs &lt;link&gt;:&lt;arg&gt;</td>
</tr>
<tr>
<td>PCTg: &lt;NRx&gt;</td>
</tr>
<tr>
<td>XCOOrd: &lt;NRx&gt;</td>
</tr>
<tr>
<td>XDIV: &lt;NRx&gt;</td>
</tr>
<tr>
<td>? XOUrl: [EO</td>
</tr>
<tr>
<td>? YCOOrd &lt;NRx&gt;</td>
</tr>
<tr>
<td>? YDIV &lt;NRx&gt;</td>
</tr>
<tr>
<td>? YOUrl: [EO</td>
</tr>
<tr>
<td>DOTT1Rel: DOTT2Rel &lt;link&gt;:&lt;arg&gt; (Set-only)</td>
</tr>
<tr>
<td>PCTg: &lt;NRx&gt;</td>
</tr>
<tr>
<td>XCOOrd: &lt;NRx&gt;</td>
</tr>
<tr>
<td>XDIV: &lt;NRx&gt;</td>
</tr>
<tr>
<td>H1Bar: H2Bar &lt;link&gt;:&lt;arg&gt;</td>
</tr>
<tr>
<td>YCOOrd: &lt;NRx&gt;</td>
</tr>
<tr>
<td>YDIV: &lt;NRx&gt;</td>
</tr>
<tr>
<td>V1Bar: V2Bar &lt;link&gt;:&lt;arg&gt;</td>
</tr>
<tr>
<td>XCOOrd: &lt;NRx&gt;</td>
</tr>
<tr>
<td>XDIV: &lt;NRx&gt;</td>
</tr>
</tbody>
</table>
## Commands

- **ABB/MPRO [ON/OFF]**
- **BYT or [LSB/MSB]**
- **CURVE <curve data>**
- **ENC<dg> (ASC|BInary)**
- **DIS<play> (ASC|BInary)**
- **HIST<ogram> (ASC|BInary)**
- **SET (ASC|BInary)**
- **WA<(Fm|Fvm) (ASC|BInary)**

### Data Transfer Commands

- **arg>**

### C/OFF

- **IMPut {STO<u|> | qstring}**
- **CUTput {STO<u|> | TRAc<e<u|> | qstring}**
- **SE<T (block)**
- **SE<T**

### WAVfm?

- **WFM<pro <link> : <arg>**

### Lit[VA<rs]

- **Gl<ees [DBM|HER]Z**
- **[VOLts|WAtts]**
- **[Grea|DBM|HER]Z**
- **[VOLts|WAtts]**

### Diagnostic Commands

- **DIAg?**
- **T<EST [XTNG]**

### Display and Color Commands

- **BELL**
- **COLOR <u|> <link> : <arg>**
- **HUE <N|Rx**
- **LIGhtness <N|Rx**
- **SATuration <N|Rx**
- **COLOR DEFault**

### External I/O Commands

- **ALTink jet <link> : <arg>**
- **DIR(ector) [HOR|VIR]**
- **FORMat [DRAW|HPRes|REDuced]**
- **PORt [G|E|N|T|ro|ni|co|s| GP|ib |RS|2|3|2**

- **BITMap <link> : <arg>**
- **DATACompress : [ON/OFF]**
- **DATAFormat : [BI|N|ary|BIN|Hex]**
- **DIR(ector) [Hor|Z|VIR]**
- **FORMat : [DI|thered|DRAW|HIP|Res|RED|uced|SC|reen]**
- **PORt [G|E|N|T|ro|ni|co|s| GP|ib |RS|2|3|2**

---

[11402A/11403A Functional Command Summary]
External I/O Commands (Cont.)

COPY [<link>],<arg>  
ABort               (Set-only)
FORMat: [DIR|Thered] [DRAFT|HRes|REDuced|Screen]  
PRINTER: [ALT|letter] [BITMap] [HPGL] [PIN8|PIN24]  
TEK4692; TEK4696; TEK4697  
STArt               (Set-only)
DEBug, [<link>,],<arg>  
GPiB: [ON|OFF]  
RS232: [ON|OFF]  
HPGi: [<link>],<arg>  
COLOR:<ul>  
COLOR: DEFAULT  
FORMat: [DIR|Thered] [HRes|Screen]  
PORT: [CENTronics|G PiB] [RS232]  
PIN8: PIN24  
FORMat: [DIR|Thered] [REDuced]  
PORT: [CENTronics|G PiB] [RS232]  
RS232: [<link>],<arg>  
BAud:<NrX>  
DELAY:<NrX>  
ECHO: [ON|OFF]  
EOI:[CR|CRLF|LF|LFcr]  
FLAGging: [SOFT|HARD|OFF]  
PARity: [ODD|EVEN|NONE]  
STOPBits:<NrX>  
VERBose:[ON|OFF]  
TEK4692: [<link>],<arg>  
COLOR:<ul>  
COLOR: DEFAULT  
DIREction: [HORiZ|VERTI]  
FORMat: [DIR|Thered] [DRAFT|HRes|Screen]  
PORT: [CENTronics|G PiB] [RS232]  
TEK4696; TEK4697: [<link>],<arg>  
COLOR:<ul>  
COLOR: DEFAULT  
DIREction: [WORLd|VERTI]  
FORMat: [DIR|Thered] [DRAFT|HRes|REDuced|Screen]  
PORT: [CENTronics|G PiB] [RS232]  

Label and Text Commands

LABABS [<link>],<arg>  
PCTg,<NrX>  
XCOORD,<NrX>  
YDiV,<NrX>  
LABel: [<link>],<arg>  
DELTa:{[ALL] [FPS]<ul>},<qstring>,[STO]<ul>  
TRAce,<ul>  
DISPLAY:[ON|OFF]  
FPS:<ul>  
STO,<qstring>  
TRAce,<ul>  
LABREL [<link>],<arg>  
PCTg,<NrX>  
XCOORD,<NrX>  
YDiV,<NrX>  
TEX: [CLEar]<link>,<arg>  
STArr:,<qstring>  
X:<ul>  
Y:<ul>  

Measurement Commands

BASEline,<NrX>  
COMPare:[ON|OFF]  
DAInt:{WHole|SINgle}  
DISPersion:{P|P|RMSDev}  
DISTal,<NrX>  
DLYtrace,TRAcE,<ui>  
HNUmber,<NrY>  
JITThrotpt  
JTTLLevel  
JITTLocation [{CORes|MESs}i]  
LMZoMe,<NrX>  
MEAS,<meas>,<arg>  
<meas>:=([^AMPlitude|CROses|DELAY|DUTY]<EXTLinewidth|FALline|FRZes|FR|J|T|T|GAIN|MAX|MEAN|MIN|NOline|O|E|en|ope|P||P|DELay|PERiod|PHase|P|R|Sel|sel|M|S|SFrequency|SKew|SMagnitude|THD|TTR|t|U|T|Undershoot|W|IN|YEnergy|Y|TMin_area|YTPis_area})  
MEDgi  
MESsMii,<NrX>  
MLEvel: {ABSOLUTE|BASEDelta|RELative|TOPDelta}  
MHLimit,<meas>[<ul>],<NrX>  
MLEvel: {ABSOLUTE|BASEDelta|RELative|TOPDelta}  
MMLimit,<meas>[<ui>],<NrX>  
MScount,<NrX>  
MList: [EMPty]<meas>[<ul>][]<meas>[<ui>][]<meas>[<ui>][]<meas>[<ui>][]<meas>[<ui>][]<meas>[<ui>][]<meas>[<ui>][]  
MSLOpe:[PLU]e[MINUs]  
MS:<meas>  
MSNum  
MSTa  
MSTatt  
MSVs:[ON|OFF]  
MTMe: {ABSOLUTE|RELative}  
MTTracE:[BASEline|BOTh|OFF|ON|TOPline]  
NEDge  
NOIshiptt  
NOISLocation:[BASEline|TOPline]  
PFResult  
PFTest:[OFF|ON]  
PIN<ui>  
PRXLimal,<NrX>  
REFLevel,<NrX>  
REFSet:<link>,<arg>  
CURRent[<meas>[<ul>][<meas>[<ui>]]<meas>[<ui>]]<meas>[<ui>]]<meas>[<ui>]]<meas>[<ui>]]<meas>[<ui>]]<meas>[<ui>]]<meas>[<ui>]]<meas>[<ui>]]<meas>[<ui>]]  
RMZoMe,<NrX>  
SHIlo  
SMOdE:[HARMonicn|PEAK]  
SNRaTio,<NrX>  
STATISTICS:[ON|OFF]  
TOPline,<NrX>  
TTAverage,<NrX>  

Miscellaneous/System Commands

ABCStouch: [CLEar]  
DATE:<qstring>  
DEF:<qstring>  
DSYmenu,[link],<arg>  
{ALL|Wavform|CURSor|DISPlay|EXTFeatures}  
MEAS|STORE|RECALL|TRigger|UTILITY|  
UTILITY|WAV|Wavform,<link>,<arg>  
EXTMenu:[MENU]<[NONE]  

11402A; 11403A Functional Command Summary 2
Status and Event Commands

CONFIG?
EVENT?
ID?
IDProbe?
PIVersion?
RGS (ON/OFF)
SRQMask <link>:<arg>
ABStouch: (ON/OFF)
CALDate: (ON/OFF)
CMDerr: (ON/OFF)
EXErr: (ON/OFF)
EXWarn: (ON/OFF)
IDProbe: (ON/OFF)
INErr: (ON/OFF)
INWarn: (ON/OFF)
MENTouch: (ON/OFF)
OPComt: (ON/OFF)
USER: (ON/OFF)
STByte?
UID <link>:<arg>
CENTER: <string>
LEFT: <string>
MAIN: <string>
RIGHT: <string>

Time Base/Horizontal Commands

MAINpos <NRx>
TBMain: TBWin <link>:<arg>
LENth: (NRx)
TIMing: (NRx)
? XINor (<NR3>)
WIN1Pos <NRx>
WIN2Pos <NRx>

Triggering Commands

TR?
TRMain <link>:<arg>
ALEvel: (NRx)
ANLevel: <NRx> [(VOLts) DIVS]
COUplng: (AC|ACCL|ACCH|ACChi|ACNoise) | DC | DCHI |
DCNoise| HIbw)
MODe: (AUTO|AUTOlev|NORMal)
SLOpe: (PLUS|MINUS)
SOURce: <string>
? STATUS (TRIG|NOTRIG)
TIHoldoff: <NRx>
TRWin <link>:<arg>
ALEvel: (NRx)

COWNplng: (AC|ACCL|ACCH|AChi|ACNoise) | DC | DCHI |
DCNoise| HIbw)
EVID: (NRx)
MODe: (AUTOlev|NORMal)
NLVch: <NRx> [(VOLts) DIVS]
SLOpe: (PLUS|MINUS)
SOURce: <string>
? STATUS (TRIG|NOTRIG)
TIHoldoff: <NRx>
WTFMode: (MAIN|EVID|TIHoldoff|TIHoldoff)

Waveform and Settings Commands

ADJtrace <ui> <link>:<arg>
HMAC: <NRx>
HPolAr: <NRx>
HPolPos: <NRx>
HPSizE: <NRx>
PAN: zoom: (ON/OFF)
TRSep: <NRx>
VPOlAr: <NRx>
VPSizE: <NRx>
ADJtrace?:
CLEAR (TRACE <ui> | <string> | ALL)
DELETE [<link>]:<arg>
(FPS <ui> | <string> | MENU | <id> | STO <ui>)
ALL: (FPS | MENU | STO)
FPLIST?
FPLNum?
MASK <ui> (DELETE <link>:<arg>)
C.Points: <xcoord>, <ycoord> [. <xcoord>, <ycoord> . . .]
D.Points: <xcoord>, <ycoord> [. <xcoord>, <ycoord> . . .]
? NCOUNT (ui)
? NR: pt (<ui>)
MASKStat (CLEAR <link>:<arg>)
COUNT: (OFF|ON)
? NWRM (<ui>)
? TOTal (<ui>)
NVRam?

PZMode <link>:<arg>
MAXtrace: (ON|OFF)
PZCvent: (LEFT|CENter|RIGHT) TRigger)
RECcall (FPNext | FPS <ui> | <string>
REMover [TRACE <ui> | <string> | ALL]
SELect [TRACE <ui> | <string>]
SETSeq ON|OFF)
STOLIST?
STONum?

STOR <ui> <link>:<arg>
TRace <ui> | (STO <ui> | <string> |
<STRING> STO <ui>
TRace <ui> <link>:<arg>
ACCumulate: (ON|OFF)
? ACState ([EHHNed | [NENHanced])
DEScription: <string>
GRLocation [U|P|L]
GRTyp (LINEar)
? WFMCalc ([FAS] | [HIrec]
? XUNIT ([amps] | [DBM] | [DEGrees] | [DIVS] | [HERTZ] | [OHMS] | [SEConds] | [VOLts] | [WATTS])
? YUNIT ([amps] | [DBM] | [DEGrees] | [DIVS] | [HERTZ] | [OHMS] | [SEConds] | [VOLts] | [WATTS])
TRSet (<ui>?)
TRAMult (FORce | OPTional)

At Tektronix, we the latest electronic and component ir as soon as they are d
Sometimes, c requirements, w im may conta following pages.
A single chan Since the change ir manual until all of s duplicatio n appear following ti printed.
### Escape Character Set

<table>
<thead>
<tr>
<th>Bits</th>
<th>00</th>
<th>01</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
</tr>
<tr>
<td>0001</td>
<td>e</td>
<td>f</td>
<td>g</td>
<td>h</td>
</tr>
<tr>
<td>0010</td>
<td>i</td>
<td>j</td>
<td>k</td>
<td>l</td>
</tr>
<tr>
<td>0011</td>
<td>m</td>
<td>n</td>
<td>o</td>
<td>p</td>
</tr>
<tr>
<td>0100</td>
<td>q</td>
<td>r</td>
<td>s</td>
<td>t</td>
</tr>
<tr>
<td>0101</td>
<td>u</td>
<td>v</td>
<td>w</td>
<td>x</td>
</tr>
<tr>
<td>0110</td>
<td>y</td>
<td>z</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>0111</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>1000</td>
<td>G</td>
<td>H</td>
<td>I</td>
<td>J</td>
</tr>
<tr>
<td>1001</td>
<td>K</td>
<td>L</td>
<td>M</td>
<td>N</td>
</tr>
<tr>
<td>1010</td>
<td>O</td>
<td>P</td>
<td>Q</td>
<td>R</td>
</tr>
<tr>
<td>1011</td>
<td>S</td>
<td>T</td>
<td>U</td>
<td>V</td>
</tr>
<tr>
<td>1100</td>
<td>W</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
</tr>
<tr>
<td>1101</td>
<td>[</td>
<td>]</td>
<td>{</td>
<td>}</td>
</tr>
<tr>
<td>1110</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1111</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Key**

<table>
<thead>
<tr>
<th>Code</th>
<th>17</th>
<th>( \beta )</th>
<th>Escape character</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hex</td>
<td>f</td>
<td>\text{Decimal}</td>
<td>10</td>
</tr>
</tbody>
</table>