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Find the *Tektronix TDS754D* at our website: ***Click HERE***

Reference

TDS 500D, TDS 600C & TDS 700D Digitizing Oscilloscopes

071-0504-00

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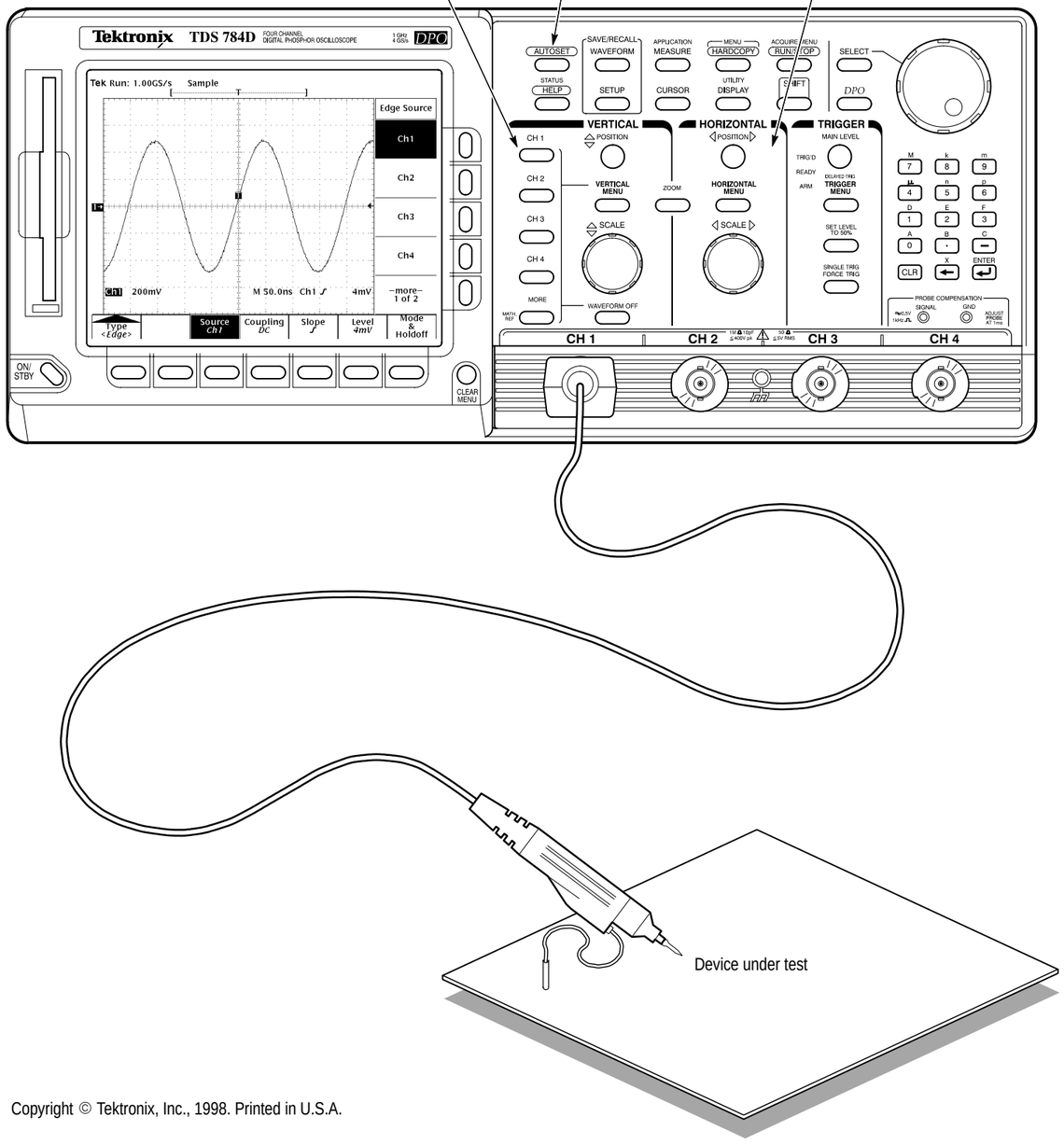
To Display a Waveform:

1 Attach a probe to **CH 1** and hook the probe to your signal.

2 Press **CH 1**.

3 Press **AUTOSET.**

4 Adjust **VERTICAL** and **HORIZONTAL POSITION** and **SCALE**.



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To Preview a Waveform:

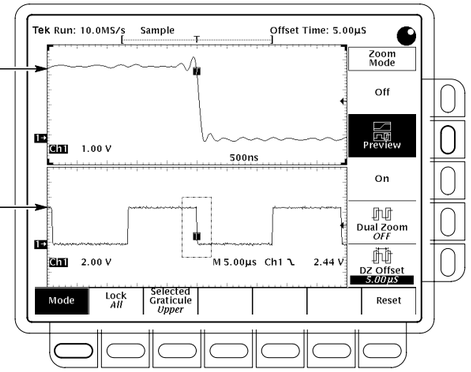
1 Press **ZOOM**.



2 Press **Mode** in the main menu. Then press **Preview** in the side menu to turn on Dual Window Zoom.

Upper graticule zooms the boxed area on the selected waveform.

Lower graticule displays the selected waveform unzoomed with the zoomed area in box.



3 Use the **Selected Graticule** menu to select the upper or lower waveform. Use the vertical and horizontal knobs to adjust the waveform in the graticule you select.

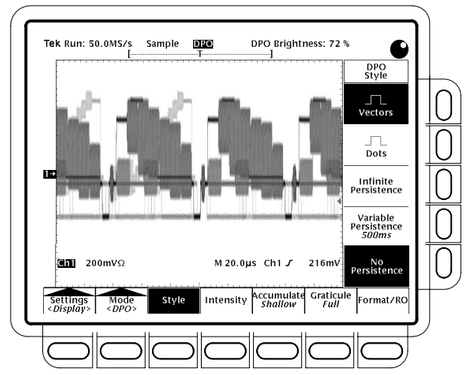
To Capture Infrequent Events (TDS 500D & 700D Models):

Press **DPO** to toggle between **DPO** and **Normal** waveform capture rates.



When in **DPO** mode:

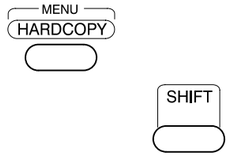
- Waveforms displayed are updated thousands of times faster than normal.
- Very brief changes in waveforms are captured.
- Certain features, such as Limit Testing, Math Waveforms, Zoom, and record lengths longer than 500 points, are not available.



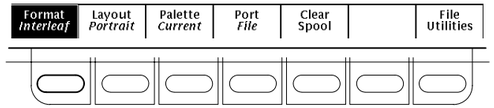
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To Save a Hardcopy to the File System:

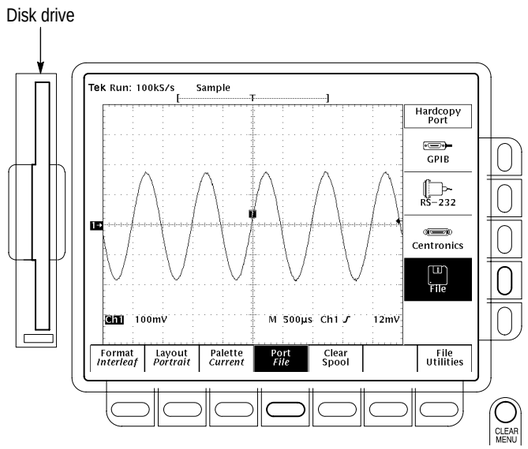
1 Press **SHIFT**, and then press **HARDCOPY**.



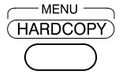
2 Press **Format** in the main menu, and select a hardcopy format from the side menu.



3 Press **Port** in the main menu, press **File** in the side menu, and then press **CLEAR MENU**.



4 Press **HARDCOPY** anytime to save a copy of the current screen to a unique file in the oscilloscope file system.

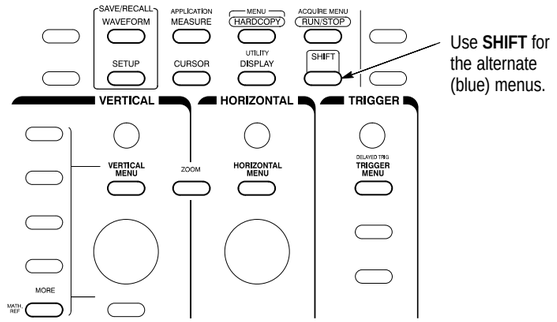


To Perform Other File System Operations:

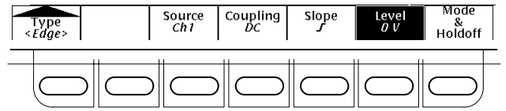
- Press **SAVE/RECALL WAVEFORM,** and use the menu buttons to save a waveform to a file or recall it from a file.
- Press **SAVE/RECALL SETUP,** and use the menu buttons to save a setup to a file or recall it from a file.
- Press **File Utilities** in the Save/Recall Waveform, Save/Recall Setup, or Hardcopy menus to access utilities that create directories, copy files, and do other operations in the oscilloscope file system.

To Set Up Using a Menu:

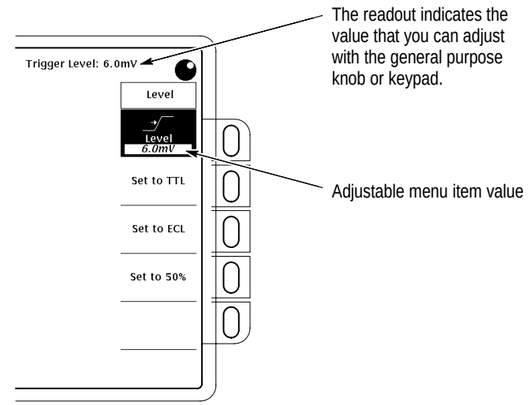
1 Press any of the front panel menu buttons.



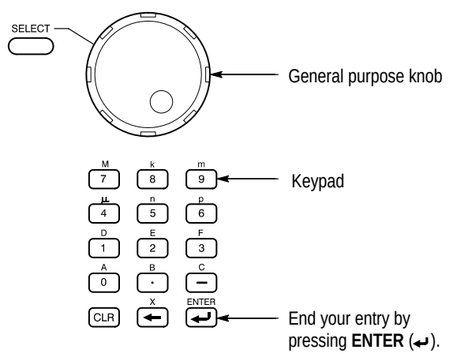
2 Select an item from the main (bottom) menu.



3 Select an item from the side menu, if displayed.



4 Adjust menu item values using the general purpose knob or by entering numbers on the keypad.



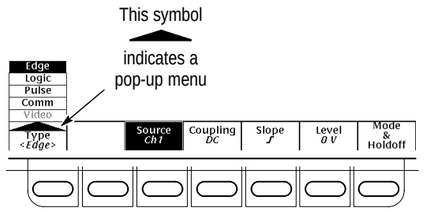
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To Select a Trigger:

1 Press **TRIGGER MENU**.

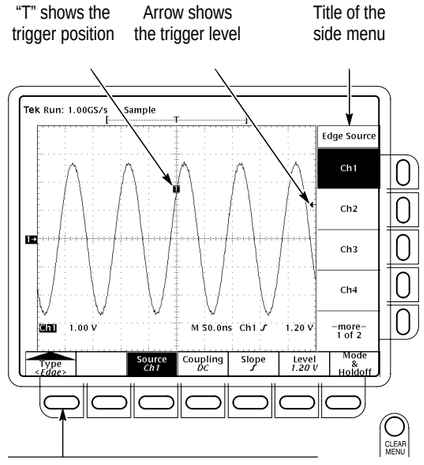


2 Select a trigger type or parameter from the main menu.



3 Set **TRIGGER MAIN LEVEL**.





Trigger Selections (On some models, Ax 1 & Ax 2 replace Ch 3 & Ch 4)

	TYPE <Edge>		TYPE <Logic> CLASS <Pattern>		TYPE <Logic> CLASS <State>		TYPE <Logic> CLASS <Setup/Hold>	
Source	Select any one of Ch 1 thru Ch 4, Line, or DC Aux		Define Inputs	Define levels High, Low, or Don't Care for Ch 1 thru Ch 4	Define Inputs	Define levels High, Low, or Don't Care for Ch 1 thru Ch 3 Select edge for the clock (always Ch 4)	Data Source	Select one of Ch 1 thru Ch 4 as the data source Do not select the same channel used as the clock source
Slope	Positive Negative		Define Logic	AND OR NAND NOR	Define Logic	AND OR NAND NOR	Clock Source	Select one of Ch 1 thru Ch 4 as the clock source Select the clock edge Do not select the same channel used as the data source
Level	Level Set level or select preset level based on TTL or ECL logic		Set Thresholds	Set a threshold level for each of Ch 1 thru Ch 4	Set Thresholds	Set a threshold level for each of the pattern channels, Ch 1 thru Ch 3, and the clock, Ch 4.	Levels	Clock Data Set levels or select preset levels based on TTL or ECL logic
Coupling	DC AC HF Reject LF Reject Noise Rej (DC Low Sensitivity)	DC AC	Trigger When	Goes TRUE Goes FALSE TRUE for less than[1] TRUE for more than[1]	Trigger When	Goes TRUE Goes FALSE	Setup/Hold Times	Select and set the Setup Time Select and set the Hold Time

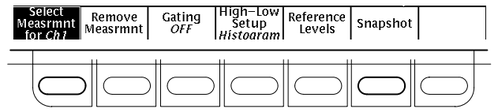
[1]Qualification by time

To Take Measurements Automatically:

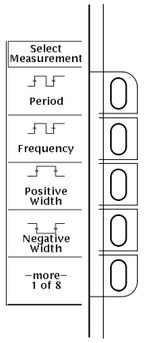
1 Press **MEASURE**.



2 Press **Select Measrmnt** or **Snapshot** in the main menu.



3 Select up to four measurements.



4 Press **CLEAR MENU** to move the measurement readouts away from the graticule.



Automated Measurement Selections

Select Measurement							
Period	Rise Time	Delay	High	Pk–Pk	Mean	Area	Extinction Ratio
Frequency	Fall Time	Phase	Low	Amplitude	Cycle Mean	Cycle Area	Extinction % (FDDI)
Positive Width	Positive Duty Cycle	Burst Width	Max	Positive Overshoot	RMS		Extinction dB (SONET)
Negative Width	Negative Duty Cycle		Min	Negative Overshoot	Cycle RMS		Mean dBm (Average Optical Power)
—more— 1 of 8	—more— 2 of 8	—more— 3 of 8	—more— 4 of 8	—more— 5 of 8	—more— 6 of 8	—more— 7 of 8	—more— 8 of 8

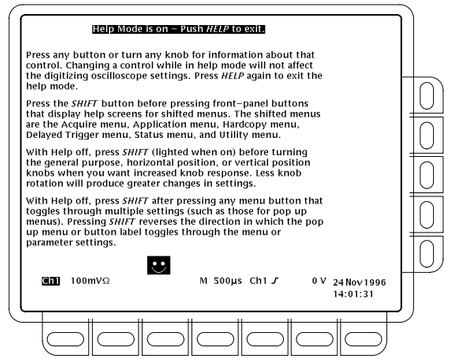
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To Display Help On Screen:

1 Press **HELP**.



2 Now turn any knob or press any button and read a description of it on the display. Press **HELP** again to exit help.

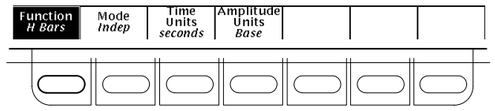


To Take Measurements With Cursors:

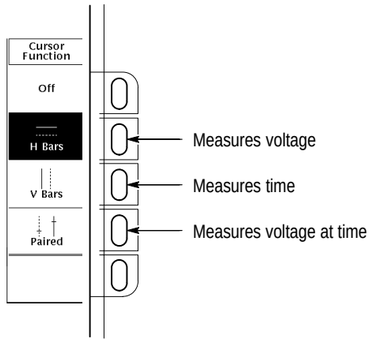
1 Press **CURSOR**.



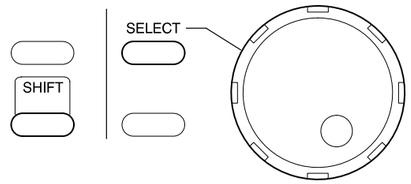
2 Press **Function** in the main menu.



3 Select from the side menu.



4 Move the cursor with the general purpose knob. Press **SELECT** to switch between the cursors. Press **SHIFT** to speed up/slow down the cursor movement.



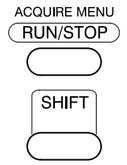
TYPE <Pulse>										TYPE <Video> (Optional)		TYPE <Comm> (Optional)	
CLASS <Glitch>		CLASS <Runt>		CLASS <Width>		CLASS <Slew Rate>		CLASS <Time Out>					
Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4
Polarity & Width	Positive Negative Either Width	Polarity	Positive Negative Either	Polarity	Positive Negative	Polarity	Positive Negative Either	Polarity	Stays High Stays Low Either	Sync Polarity	Negative Sync Positive Sync	Code	AMI CMI NRZ
Level	Level Set level or select preset level based on TTL or ECL logic	Thresholds	Runt Upper Runt Lower Set levels or select preset levels based on TTL or ECL logic	Level	Level Set level or select preset level based on TTL or ECL logic	Thresholds	High Low Set levels or select preset levels based on TTL or ECL logic	Level	Level Set level or select preset level based on TTL or ECL logic	Field/Line	Set video field and line number	Level/Threshold	Level High Low Set level or select preset levels
Glitch (Filter)	OFF Accept Glitch ON Reject Glitch	Trigger When	Select trigger when any runt occurs or ... Select triggering when a runt wider than specified occurs[2]	Trigger When	Within Limits Out of Limits Set Lower and Upper Limits	Trigger When	Faster Slower Delta Time Select faster than or slower than and set delta time The oscilloscope computes the slew rate readout from the delta time and thresholds settings	Time	Select and set the Timeout Time	Standard	NTSC PAL HDTV FlexFmt	Standard	DS<x> E<x> FC<x> OC<x> STS-<x> STM<x> FDDI 4:2:2 4fsc NTSC <x>Base-T Gigabit Ethernet Custom

[2]Qualification by width

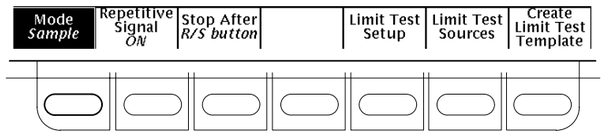
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To Choose an Acquisition Mode:

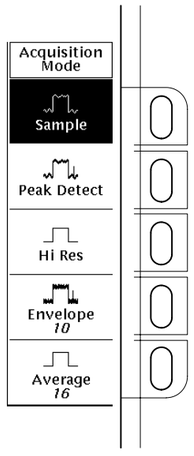
1 Press **SHIFT**, and then press **ACQUIRE MENU**.



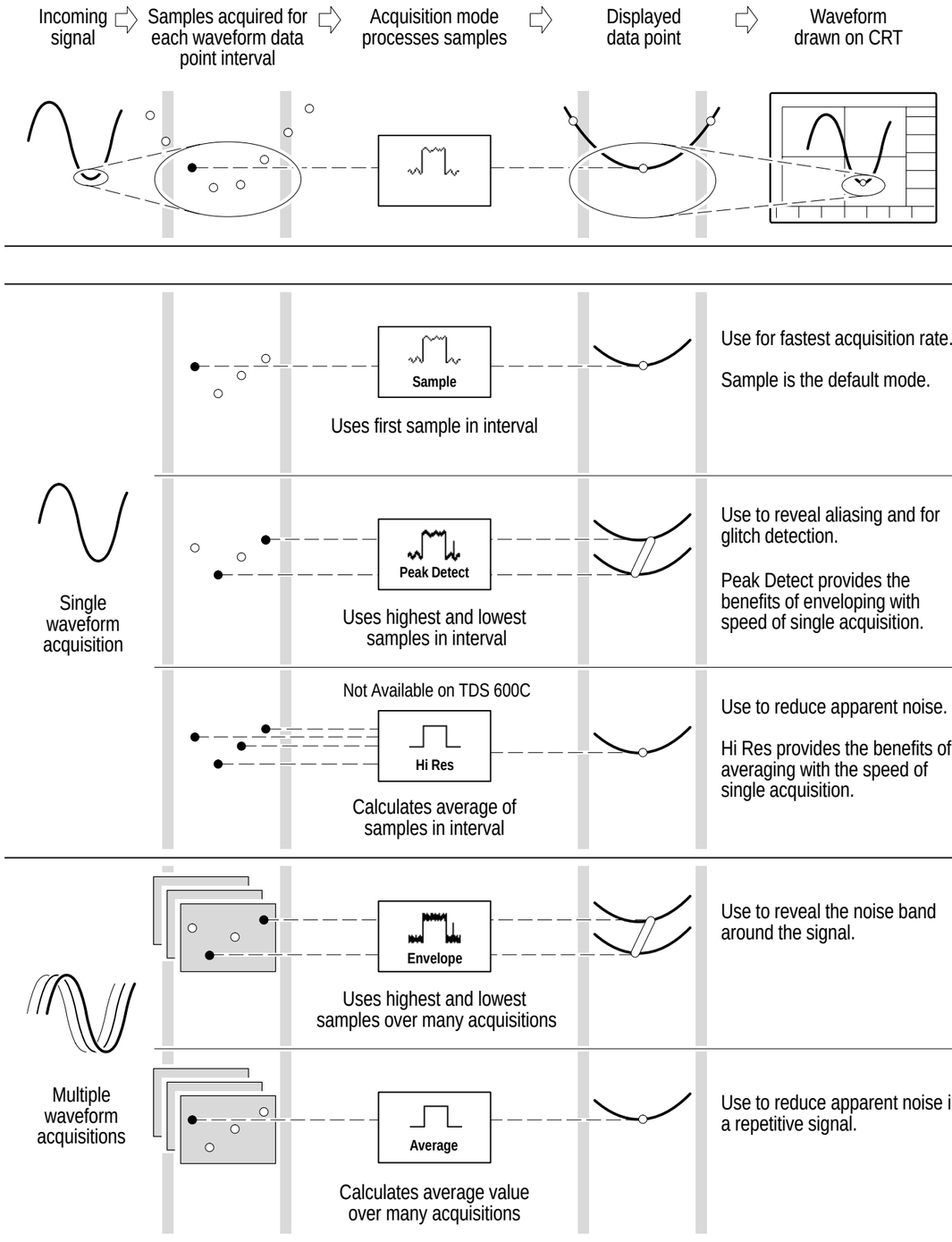
2 Press **Mode** in the main menu.



3 From the side menu, select an acquisition mode that will serve your application.



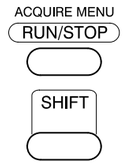
How the Acquisition Modes Work:



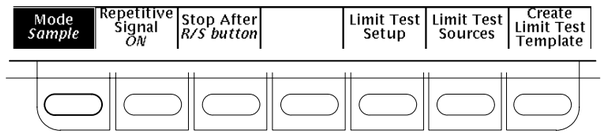
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To Choose an Acquisition Mode:

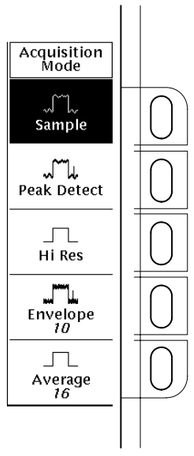
1 Press **SHIFT**, and then press **ACQUIRE MENU**.



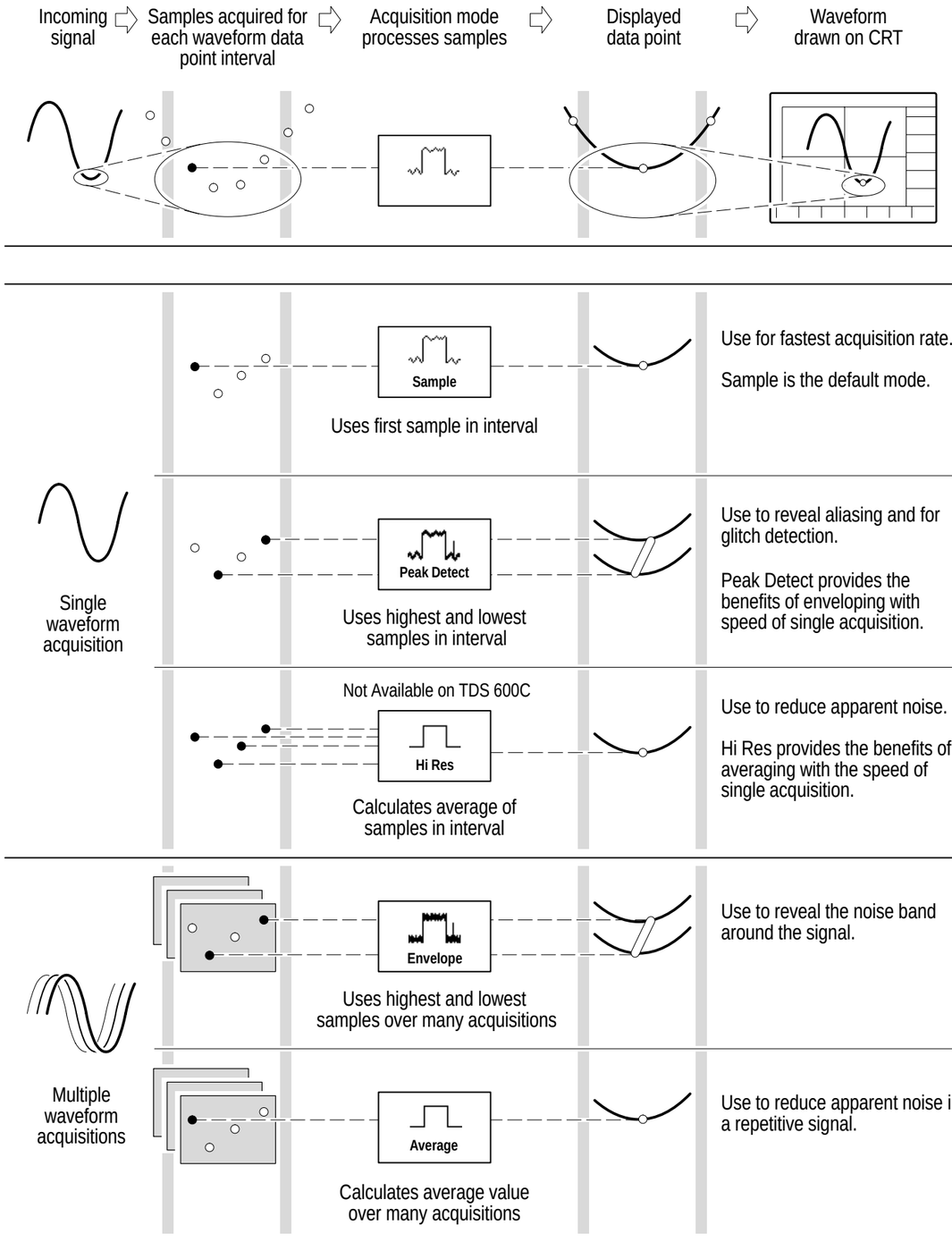
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3 From the side menu, select an acquisition mode that will serve your application.



How the Acquisition Modes Work:



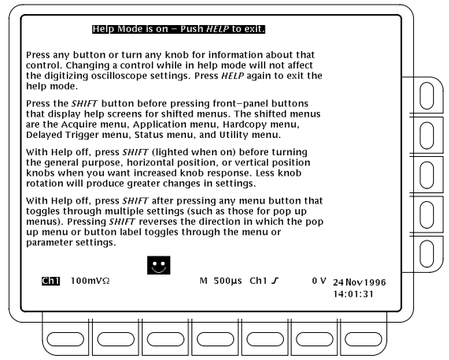
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1 Press **HELP**.



2 Now turn any knob or press any button and read a description of it on the display. Press **HELP** again to exit help.

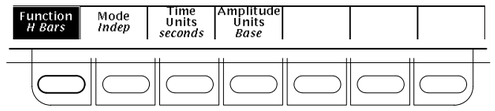


To Take Measurements With Cursors:

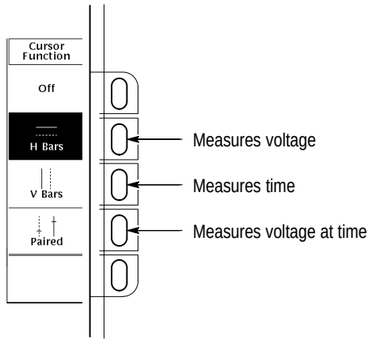
1 Press **CURSOR**.



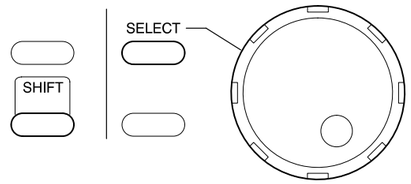
2 Press **Function** in the main menu.



3 Select from the side menu.



4 Move the cursor with the general purpose knob. Press **SELECT** to switch between the cursors. Press **SHIFT** to speed up/slow down the cursor movement.



TYPE <Pulse>										TYPE <Video> (Optional)		TYPE <Comm> (Optional)	
CLASS <Glitch>		CLASS <Runt>		CLASS <Width>		CLASS <Slew Rate>		CLASS <Time Out>					
Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4	Source	Select any one of Ch 1 thru Ch 4
Polarity & Width	Positive Negative Either Width	Polarity	Positive Negative Either	Polarity	Positive Negative	Polarity	Positive Negative Either	Polarity	Stays High Stays Low Either	Sync Polarity	Negative Sync Positive Sync	Code	AMI CMI NRZ
Level	Level Set level or select preset level based on TTL or ECL logic	Thresholds	Runt Upper Runt Lower Set levels or select preset levels based on TTL or ECL logic	Level	Level Set level or select preset level based on TTL or ECL logic	Thresholds	High Low Set levels or select preset levels based on TTL or ECL logic	Level	Level Set level or select preset level based on TTL or ECL logic	Field/Line	Set video field and line number	Level/Threshold	Level High Low Set level or select preset levels
Glitch (Filter)	OFF Accept Glitch ON Reject Glitch	Trigger When	Select trigger when any runt occurs or ... Select triggering when a runt wider than specified occurs[2]	Trigger When	Within Limits Out of Limits Set Lower and Upper Limits	Trigger When	Faster Slower Delta Time Select faster than or slower than and set delta time The oscilloscope computes the slew rate readout from the delta time and thresholds settings	Time	Select and set the Timeout Time	Standard	NTSC PAL HDTV FlexFmt	Standard	DS<x> E<x> FC<x> OC<x> STS-<x> STM<x> FDDI 4:2:2 4fsc NTSC <x>Base-T Gigabit Ethernet Custom

[2]Qualification by width

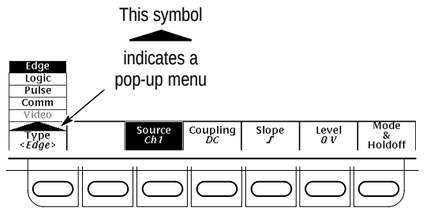
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To Select a Trigger:

1 Press **TRIGGER MENU**.

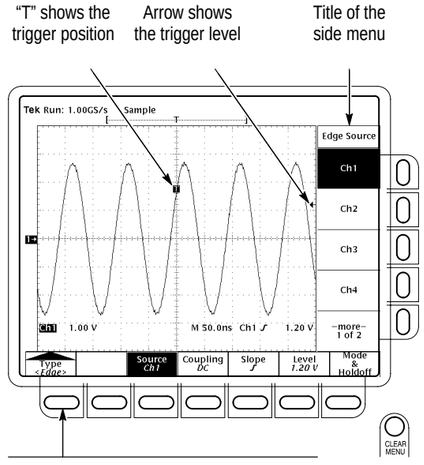


2 Select a trigger type or parameter from the main menu.



3 Set **TRIGGER MAIN LEVEL**.





Trigger Selections (On some models, Ax 1 & Ax 2 replace Ch 3 & Ch 4)

	TYPE <Edge>		TYPE <Logic> CLASS <Pattern>		TYPE <Logic> CLASS <State>		TYPE <Logic> CLASS <Setup/Hold>	
Source	Select any one of Ch 1 thru Ch 4, Line, or DC Aux		Define Inputs	Define levels High, Low, or Don't Care for Ch 1 thru Ch 4	Define Inputs	Define levels High, Low, or Don't Care for Ch 1 thru Ch 3 Select edge for the clock (always Ch 4)	Data Source	Select one of Ch 1 thru Ch 4 as the data source Do not select the same channel used as the clock source
Slope	Positive Negative		Define Logic	AND OR NAND NOR	Define Logic	AND OR NAND NOR	Clock Source	Select one of Ch 1 thru Ch 4 as the clock source Select the clock edge Do not select the same channel used as the data source
Level	Level Set level or select preset level based on TTL or ECL logic		Set Thresholds	Set a threshold level for each of Ch 1 thru Ch 4	Set Thresholds	Set a threshold level for each of the pattern channels, Ch 1 thru Ch 3, and the clock, Ch 4.	Levels	Clock Data Set levels or select preset levels based on TTL or ECL logic
Coupling	DC AC HF Reject LF Reject Noise Rej (DC Low Sensitivity)	DC AC	Trigger When	Goes TRUE Goes FALSE TRUE for less than[1] TRUE for more than[1]	Trigger When	Goes TRUE Goes FALSE	Setup/Hold Times	Select and set the Setup Time Select and set the Hold Time

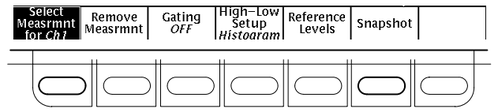
[1]Qualification by time

To Take Measurements Automatically:

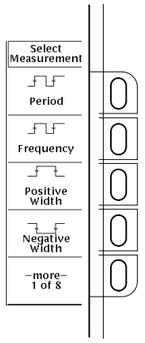
1 Press **MEASURE**.



2 Press **Select Measrmnt** or **Snapshot** in the main menu.



3 Select up to four measurements.



4 Press **CLEAR MENU** to move the measurement readouts away from the graticule.



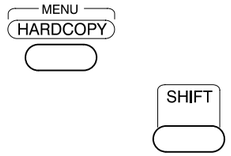
Automated Measurement Selections

Select Measurement							
Period	Rise Time	Delay	High	Pk–Pk	Mean	Area	Extinction Ratio
Frequency	Fall Time	Phase	Low	Amplitude	Cycle Mean	Cycle Area	Extinction % (FDDI)
Positive Width	Positive Duty Cycle	Burst Width	Max	Positive Overshoot	RMS		Extinction dB (SONET)
Negative Width	Negative Duty Cycle		Min	Negative Overshoot	Cycle RMS		Mean dBm (Average Optical Power)
—more— 1 of 8	—more— 2 of 8	—more— 3 of 8	—more— 4 of 8	—more— 5 of 8	—more— 6 of 8	—more— 7 of 8	—more— 8 of 8

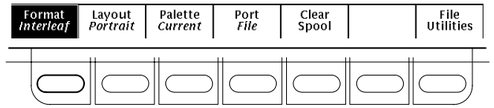
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To Save a Hardcopy to the File System:

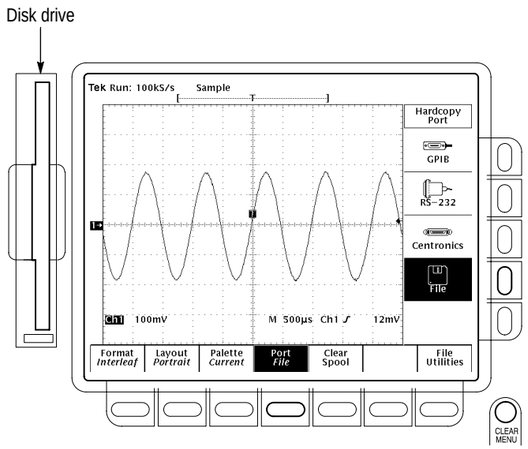
1 Press **SHIFT**, and then press **HARDCOPY**.



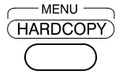
2 Press **Format** in the main menu, and select a hardcopy format from the side menu.



3 Press **Port** in the main menu, press **File** in the side menu, and then press **CLEAR MENU**.



4 Press **HARDCOPY** anytime to save a copy of the current screen to a unique file in the oscilloscope file system.

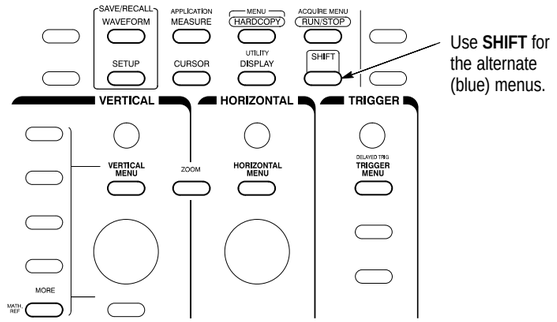


To Perform Other File System Operations:

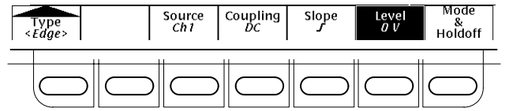
- Press **SAVE/RECALL WAVEFORM,** and use the menu buttons to save a waveform to a file or recall it from a file.
- Press **SAVE/RECALL SETUP,** and use the menu buttons to save a setup to a file or recall it from a file.
- Press **File Utilities** in the Save/Recall Waveform, Save/Recall Setup, or Hardcopy menus to access utilities that create directories, copy files, and do other operations in the oscilloscope file system.

To Set Up Using a Menu:

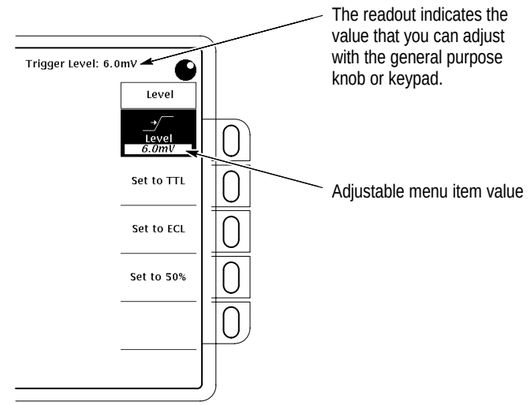
1 Press any of the front panel menu buttons.



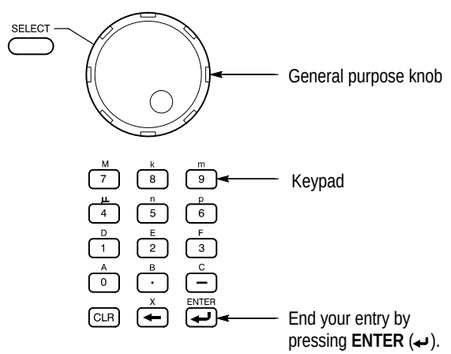
2 Select an item from the main (bottom) menu.



3 Select an item from the side menu, if displayed.



4 Adjust menu item values using the general purpose knob or by entering numbers on the keypad.



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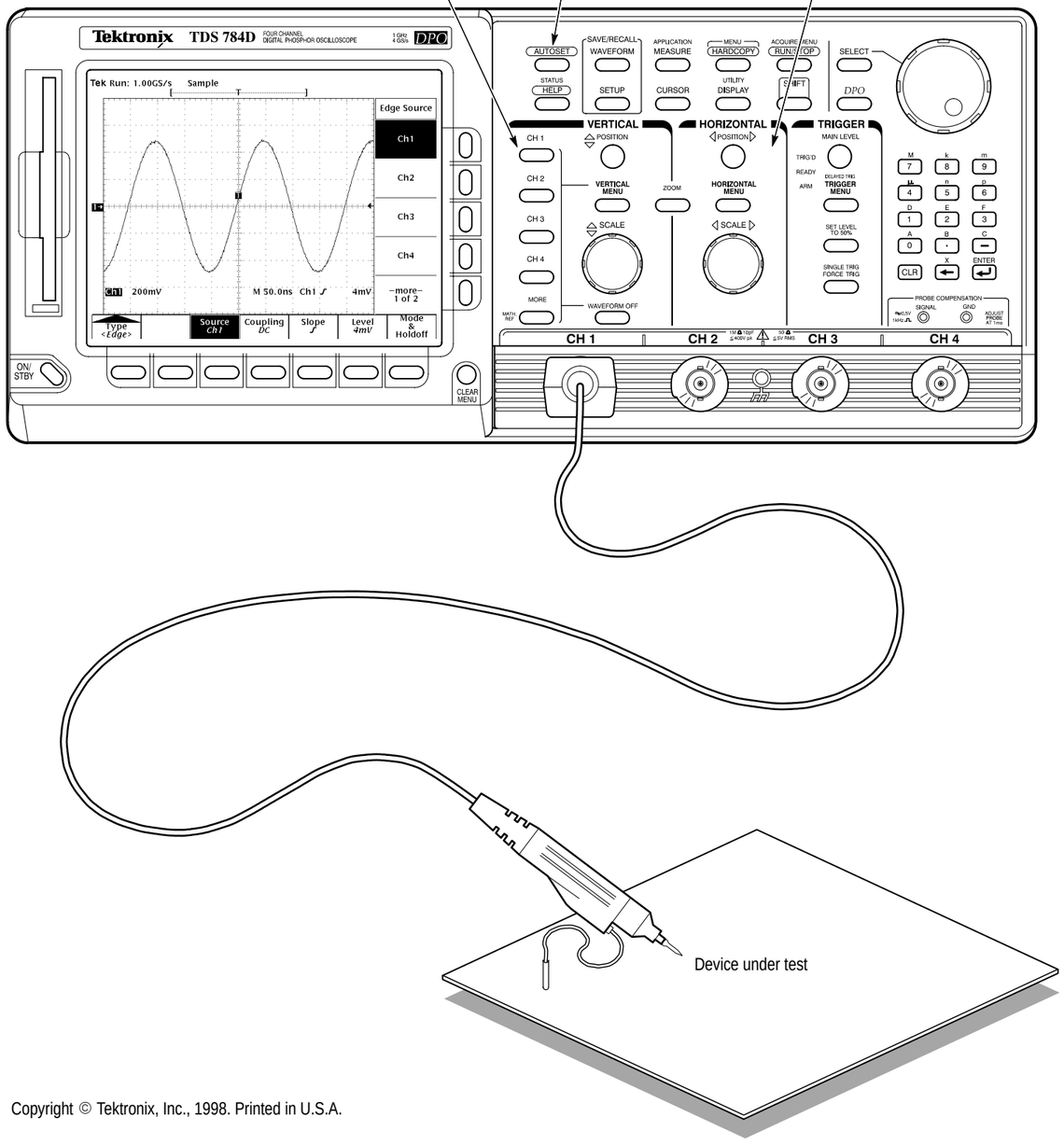
To Display a Waveform:

1 Attach a probe to **CH 1** and hook the probe to your signal.

2 Press **CH 1**.

3 Press **AUTOSET.**

4 Adjust **VERTICAL** and **HORIZONTAL POSITION** and **SCALE**.



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To Preview a Waveform:

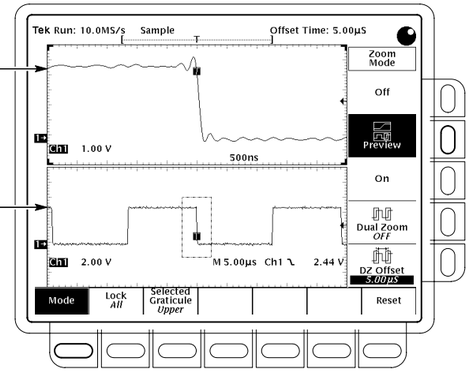
1 Press **ZOOM**.



2 Press **Mode** in the main menu. Then press **Preview** in the side menu to turn on Dual Window Zoom.

Upper graticule zooms the boxed area on the selected waveform.

Lower graticule displays the selected waveform unzoomed with the zoomed area in box.



3 Use the **Selected Graticule** menu to select the upper or lower waveform. Use the vertical and horizontal knobs to adjust the waveform in the graticule you select.

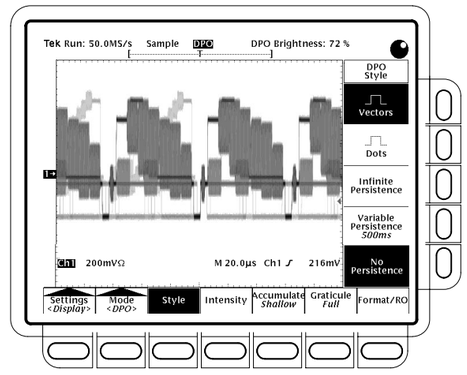
To Capture Infrequent Events (TDS 500D & 700D Models):

Press **DPO** to toggle between **DPO** and **Normal** waveform capture rates.



When in **DPO** mode:

- Waveforms displayed are updated thousands of times faster than normal.
- Very brief changes in waveforms are captured.
- Certain features, such as Limit Testing, Math Waveforms, Zoom, and record lengths longer than 500 points, are not available.



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