
**User's
Manual**

Wirepuller

IM B9852UC-01E
6th Edition

Foreword

This user's manual contains useful information about the precautions, functions, and operating procedures of the Wirepuller program that is downloadable from <http://www.yokogawa.com/tm/tm-softdownload.htm>. To ensure correct use, please read this manual thoroughly during operation.

After reading the manual, keep it in a convenient location for quick reference whenever a question arises during operation.

For information about the handling precautions, functions, and operating procedures of the WT1600 Digital Power Meter and DL series digital oscilloscopes, and the handling and operating procedures of Windows, see the manuals that accompany the particular instrument you are using.

Notes

- The contents of this manual are subject to change without prior notice as a result of continuing improvements to the instrument's performance and functions. The figures given in this manual may differ from the actual screen.
- Every effort has been made in the preparation of this manual to ensure the accuracy of its contents. However, should you have any questions or find any errors, please contact your nearest YOKOGAWA dealer.

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Product Overview

Functions

Controlling the WT1600 Digital Power Meter and DL Series Digital Oscilloscopes

Enables the WT1600 Digital Power Meter and DL7100/DL7200 and DL1600/DL1700/DL1700E/DL7400/DL750^{*1} series digital oscilloscopes to be controlled from your PC via the NIC, USB^{*2}, or GP-IB interface. When the software program starts, the front panel image of the connected WT or DL (control panel) appears on the monitor of your PC. Using a mouse, you can control the WT or DL from your PC through operations that are similar to those for the front panel keys of the instrument.

*1 Starting with version 1.17 of Wirepuller, support is offered for DL750P.

*2 The USB interface can only be used with DL750/DL1600/DL1700/DL1700E/DL7400 series instruments.

Saving Screen Images

Saves the screen image data displayed on your PC in BMP format.

Selecting the Control Window Size

You can select the size of the control window that is displayed on your PC from the choices below. When the display resolution of the PC is small, the control window can be displayed reduced in size.

- 100%: Displays the screen image of the WT/DL using the same number of pixels as the number of pixels of the entire screen of the connected instrument.
- 75%: Displays the screen image of the WT/DL using 75% of the number of pixels of the entire screen of the connected instrument.
- 50%: Displays the screen image of the WT/DL using 50% of the number of pixels of the entire screen of the connected instrument.

Selecting the Display Update Rate

You can select the display update rate of the WT/DL screen image from the following. However, the actual display update rate may be slower than the specified update rate depending on the network transmission system or the amount of communication load. "1 second to 1 hour," or "Minimum." (At the maximum update rate in your environment. The time may vary depending on network loads.)

Updating the Screen

The screen image of the WT/DL can be forcibly updated. This is done when the display update rate is set to a low value or when the display update is paused.

Changing the Brightness

Changes the display brightness of the screen image.

Pausing Display Update Operation

Pauses the display update operation.

Pausing the display update operation improves the response of the software program such as when turning ON/OFF numerous items at once or when entering values from a keyboard.

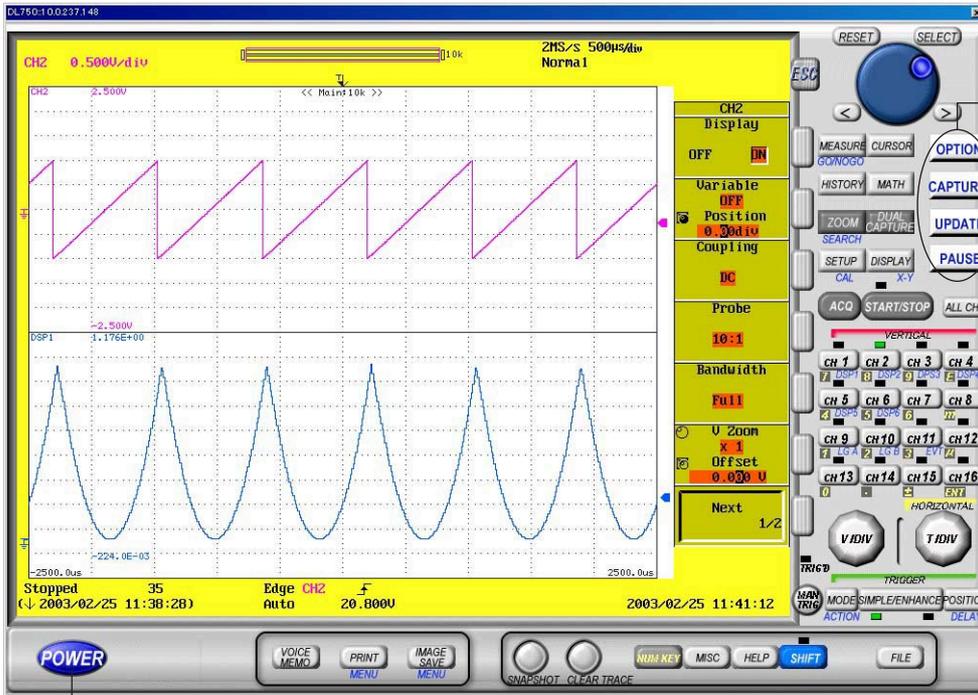
Control Screens

Environment Settings Keys

The following keys can be used to enter environment settings. They are not present on the unit itself.

- OPTION: Set the window size, display update rate, and brightness
- CAPTURE: Save the screen image data
- UPDATE: Execute display update
- PAUSE: Pause display update

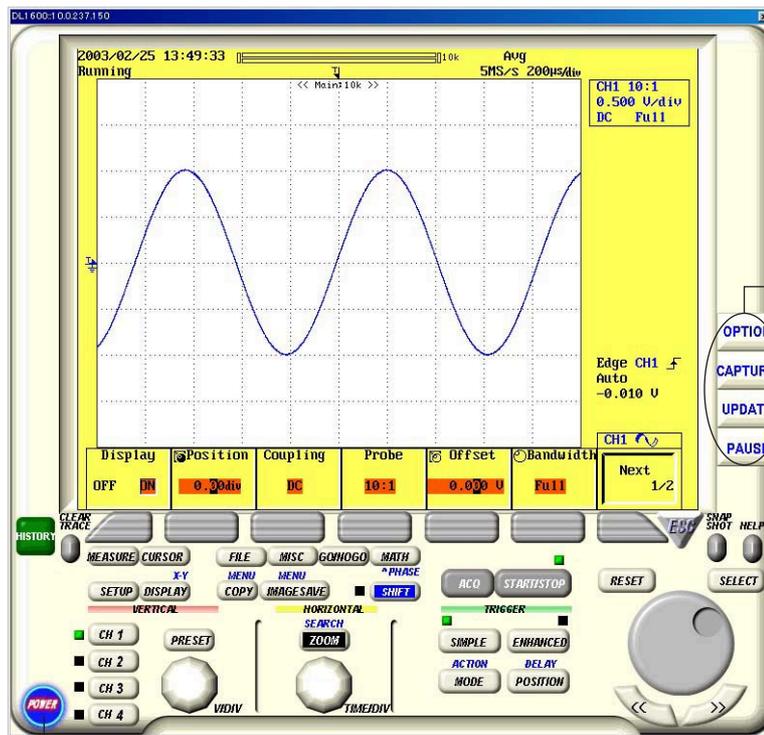
For DL750 series Digital Oscilloscope (For DL750P, the keys of DUAL CAPTURE and VOICE MEMO are changed the other keys. See the display showing for operation.)



Keys that are not available on the front panel of DL750 instruments

Exit the Software.

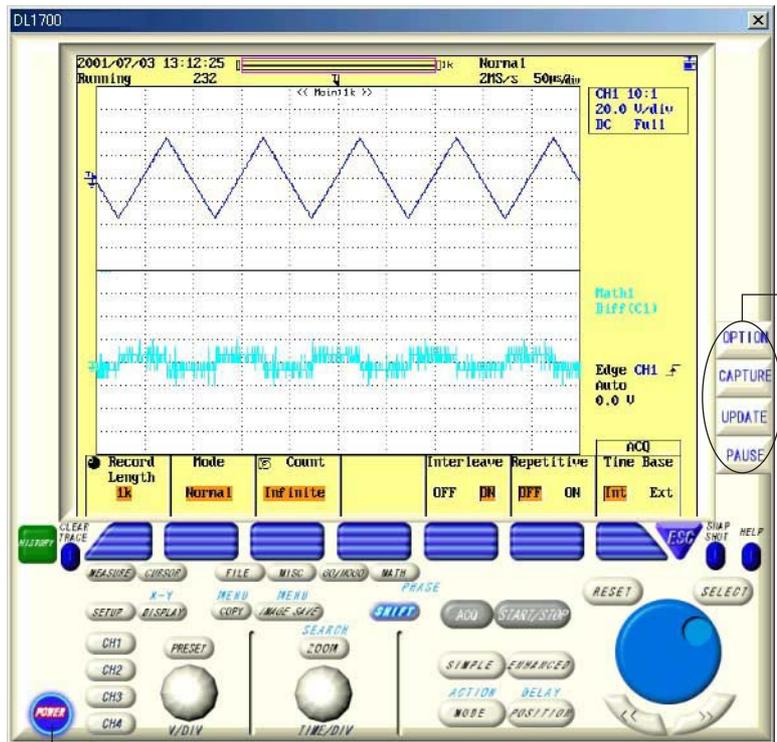
For DL1600 Series Digital Oscilloscopes



Keys that are not available on the front panel of DL1600 series instruments

Exit the Software.

For DL1700/DL1700E Series Digital Oscilloscopes

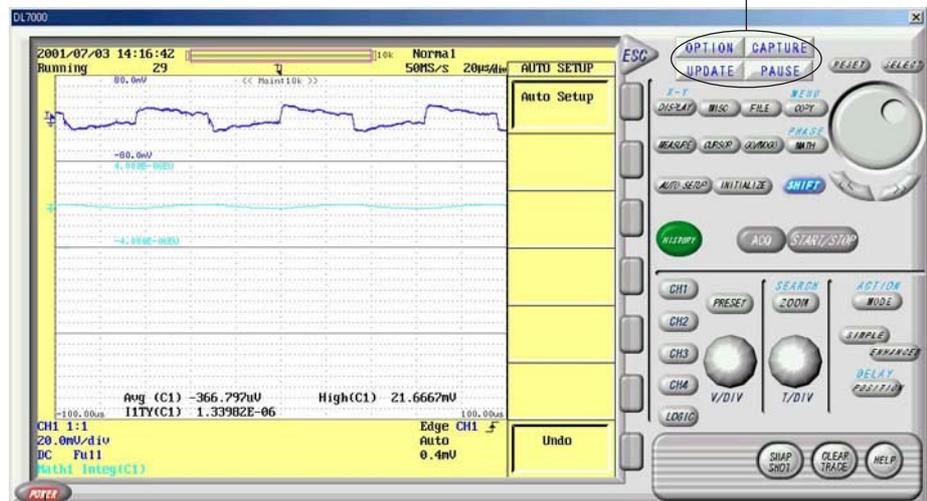


Keys that are not available on the front panel of DL1700/DL1700E series instruments

Exit the Software.

For DL7100/DL7200 Digital Oscilloscopes

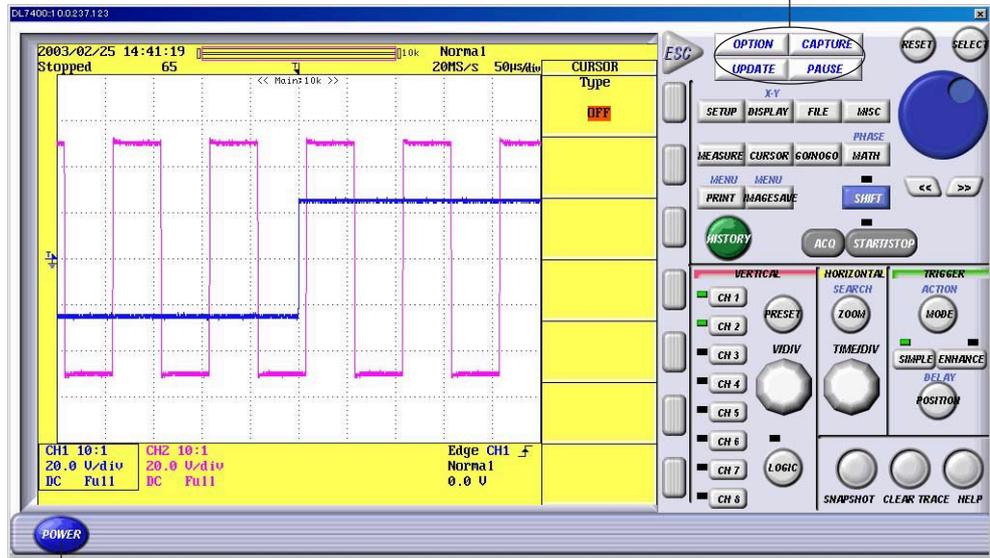
Keys that are not available on the front panel of DL7100/DL7200 instruments



Exit the Software.

For DL7400 Series Digital Oscilloscopes

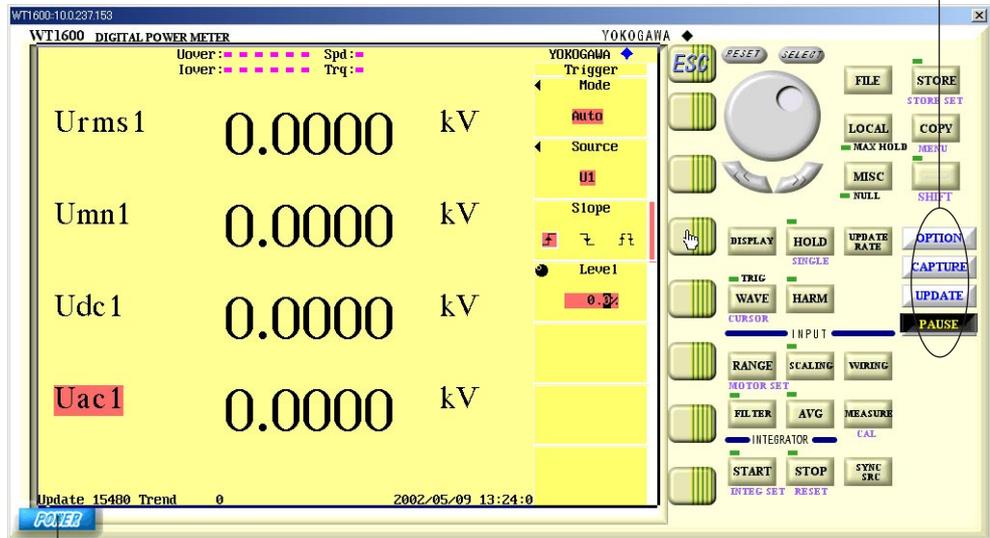
Keys that are not available on the front panel of DL7400 series instruments



Exit the Software.

For WT1600 Digital Power Meter

Keys that are not available on the front panel of the WT1600



Exit the Software.

PC System Requirements

PC

PC capable of running Windows 2000 or Windows XP with at least a Celeron 800 MHz processor and at least 256 MB of memory.

Operating System

The required OS varies depending on the interface used as follows.

- **NIC interface**

Windows 2000 or Windows XP

- **GP-IB Interface**

Windows 2000 or Windows XP

- **USB interface**

Windows 2000 or Windows XP

The USB interface can be used only in DL series. WT1600 does not carry the USB interface. In addition, a USB driver for the connected DL is required. For details on the USB drivers, see the user's manual for the relevant DL.

CRT, printer, and mouse

Display: SVGA/XGA (XGA or better recommended)

Color: 256 colors or more (65536 colors or more recommended)

GP-IB Board

When using the GP-IB interface, GP-IB board by National Instruments or a PCMCIA card is required. However, operation of the PCMCIA-GPIB card in Windows XP is outside a guarantee.

Firmware Version of the DL1700/DL1700E/DL7000 Series Digital Oscilloscopes Required for Operation

DL750 Series Instruments:	Version 1.07 or later
DL1600 Series Instruments:	Version 1.30 or later
DL1700 Series Instruments:	Version 1.30 or later
DL1700E Series Instruments:	Version 2.02 or later
DL7100/DL7200 Instruments:	Version 3.01 or later
DL7400 Series Instruments:	Version 1.04 or later
WT1600 Digital Power Meter:	Version 2.01 or later

Notes on Using the Software

Exemption from Responsibility

Yokogawa Electric Corporation shall not be held responsible by any party for any losses or damage, direct or indirect, caused by the use or any unpredictable defect of the product.

Precautions Concerning the Use of the Software

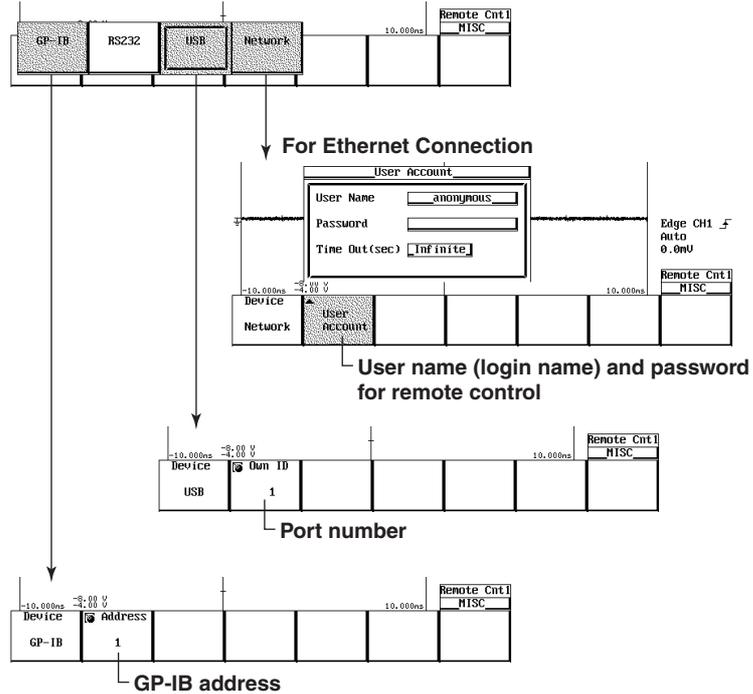
- Do not perform operations directly on the WT1600 Digital Power Meter or DL series digital oscilloscopes while using this software program. Doing so can lead to erroneous operation.
- If the standby mode provided on your PC is activated, the operation of the software may not be able to continue.
When using the software, turn OFF the standby mode.
- If you run the software using a NIC interface, the line load is 800 kbytes/s maximum and 400 kbytes/s or less in normal conditions.
Consult your network administrator on using the NIC interface.
- Do not set the network or communication parameters of the WT1600 or DL series using this software program. The connection may be disconnected.
- Do not execute self-tests using this software program.
- Only a single WT1600 digital power meter or DL series digital oscilloscope can be controlled by this software program. In addition, simultaneous connections from multiple PCs to a single WT1600 digital power meter or DL series digital oscilloscope are not allowed.
- You can run multiple instances of the software program on a single PC to control multiple WT1600 digital power meters or DL series digital oscilloscopes. However, the operation may slow down depending on the specifications of your PC or the line condition. In addition, the program may not operate properly if multiple copies of the program are running simultaneously, depending on the CPU or memory size of your PC.
- The thumbnail preview function on DL1600/DL1700/DL1700E series digital oscilloscopes is not supported. Also, the thumbnail display and preview display functions on DL7400 series digital oscilloscopes is not supported.
- If a connection error occurs when connecting to a WT power meter or DL digital oscilloscope, power cycle the WT/DL.
- Use a data update rate of 200 ms or more for the WT1600. However, if you increase the update rate, an overload may occur causing reduced performance.

1. Controlling the DL Series Digital Oscilloscopes and WT1600 Digital Power Meter

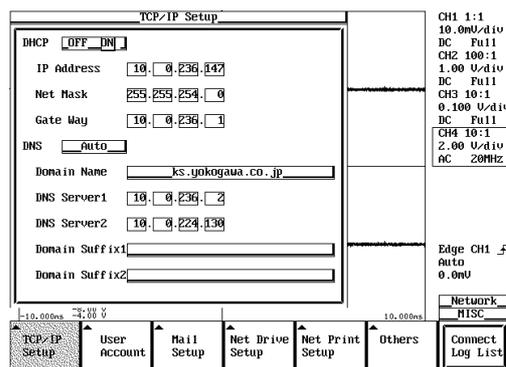
Setting the Interface

- Set the interface to be used from the front panel of the WT/DL.
 For DL750/DL1600/DL1700/DL1700E: MISC > Remote Cntl > Device
 For DL7100/DL7200: MISC > Communication > Device
 For DL7400: MISC > Remote Cntl > Device
 For the WT1600: MISC > Communication > Comm Device

• Example (DL1740)



<Only for Ethernet connection (MISC > Network)>

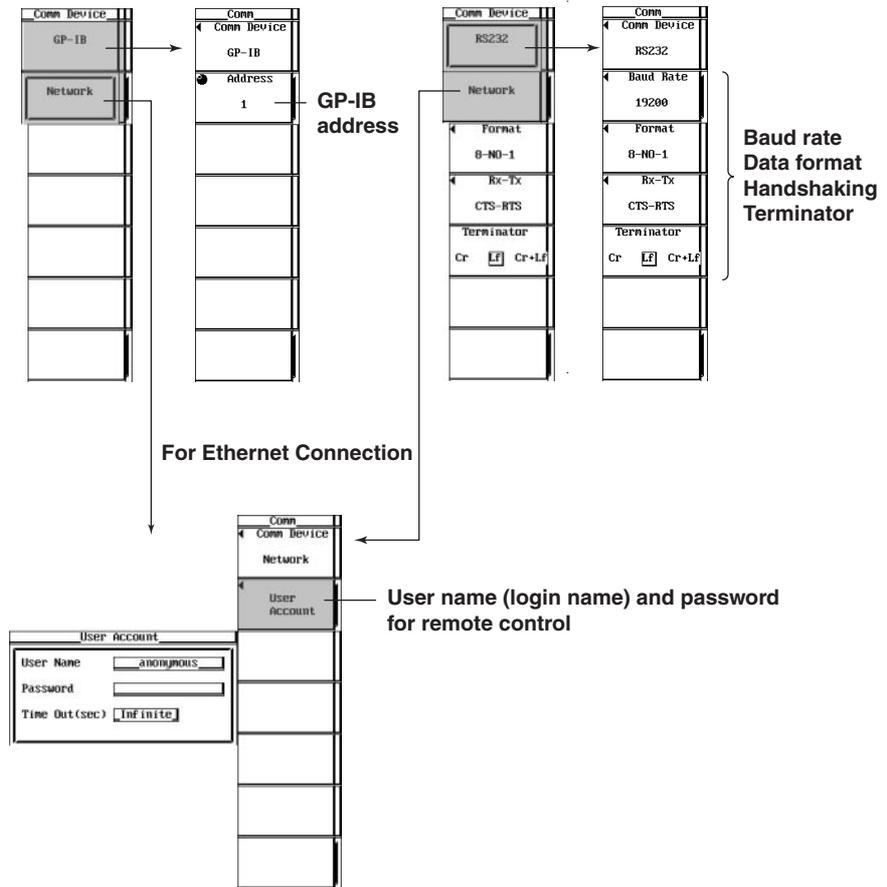


1. Controlling the DL Series Digital Oscilloscopes and WT1600 Digital Power Meter

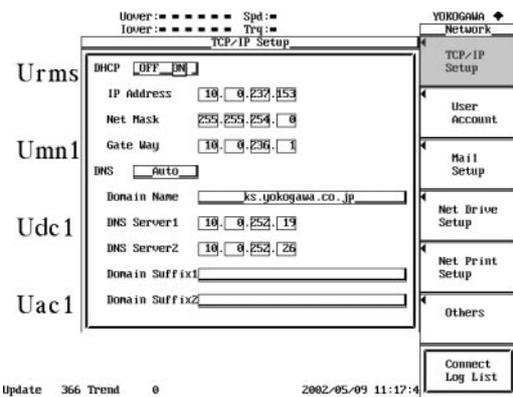
- **Example (WT1600)**

-C1 specs (for GPIB)

-C2 specs (for serial)



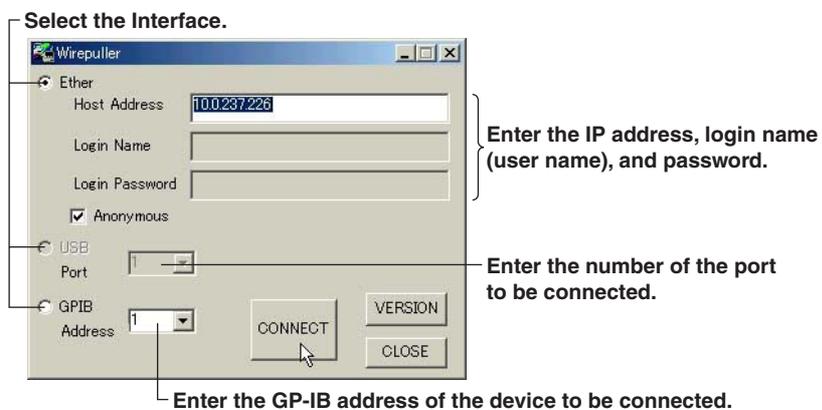
<Only for Ethernet connection (MISC > Network > TCP/IP Setup)>



1. Controlling the DL Series Digital Oscilloscopes and WT1600 Digital Power Meter

Starting the Software and Selecting the Interface

- Click the file Wirepuller.exe to display the following dialog box.
Select the interface to be used and set the necessary parameters according to the interface.



Controlling the WT/DL

- Click **CONNECT** to display the front panel image (control window) of the target WT/DL.
Move the cursor to the key you wish to operate and click to carry out the same operation as when the front panel key is pressed.

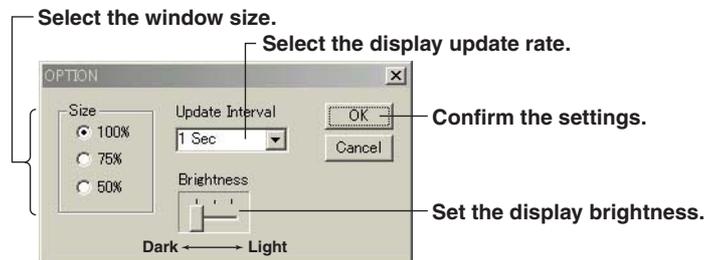
Note

For details on how to operate the WT/DL, see the user's manual for the WT/DL.

2. Setting the Environment

Setting the Window Size, Display Update Rate, and Brightness

Click **OPTION** to display the following dialog box. Set the items as necessary.

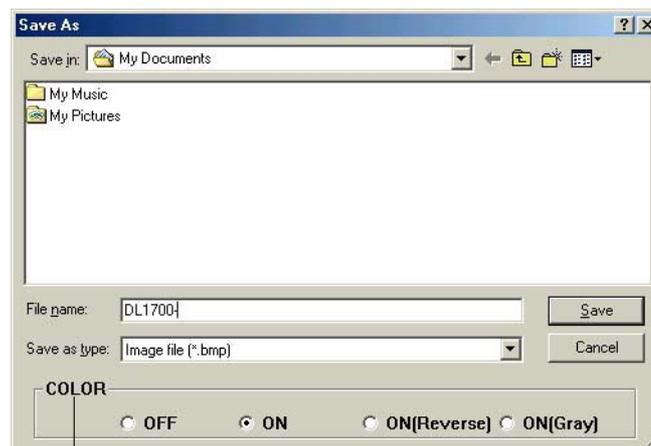


Note

The display brightness cannot be specified when using Windows 95.

Saving the Screen Image Data

Click **CAPTURE** to display the following dialog box.



Specify a color to be used when saving screen images.

- OFF:** Black and White
- ON:** Uses on-screen colors
- ON (Reverse):** Uses the opposite of the on-screen colors
- ON (Gray):** Grayscale

To save the screen image data, specify the file name type, and color scheme then click **Save**.

Note

The only available data format for saving the data is BMP.

Updating the Display and Pausing the Display Update Operation

Click **PAUSE** to pause the updating of the screen image of the WT/DL.

Click **UPDATE** to update the screen image of the WT/DL.

3. Control Window Operation

Using the Mouse

The displayed icon and the mouse operation vary depending on where the mouse pointer is located on the control window. The following table shows the mouse operation for each icon and the operation of the WT1600 Digital Power Meter and DL series digital oscilloscopes.

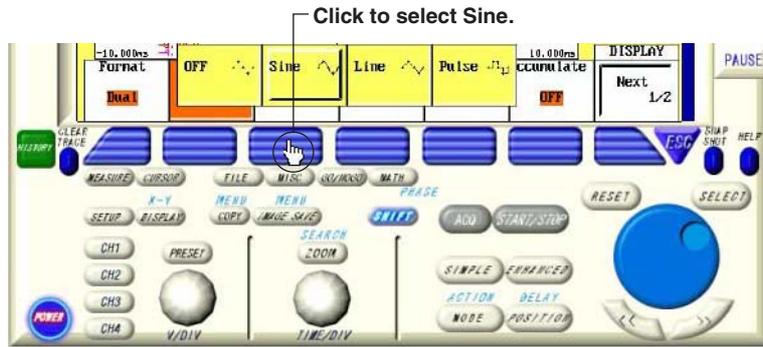
Mouse Pointer Position	Displayed Icon and Operation Mouse Operation	
Operation key		Click operation Same as pressing the operation key
Soft key menu or dialog box		Click operation Same as pressing the soft key or button Wheel operation Same as turning the jog shuttle
Voltage axis information display area*		Click operation Same as pressing the CH key Wheel operation Same as turning the V/DIV knob
Time axis information display area*		Wheel operation Same as turning the T/DIV knob
Area to the left or right of the jog shuttle*		Click operation Same as turning the jog shuttle to the left or right Wheel operation Same as turning the jog shuttle
Area to the left or right of the V/DIV knob*		Click operation Same as turning the V/DIV knob to the left or right Wheel operation Same as turning the V/DIV knob
Area to the left or right of the T/DIV knob*		Click operation Same as turning the T/DIV knob to the left or right Wheel operation Same as turning the T/DIV knob

* Not displayed on the WT1600

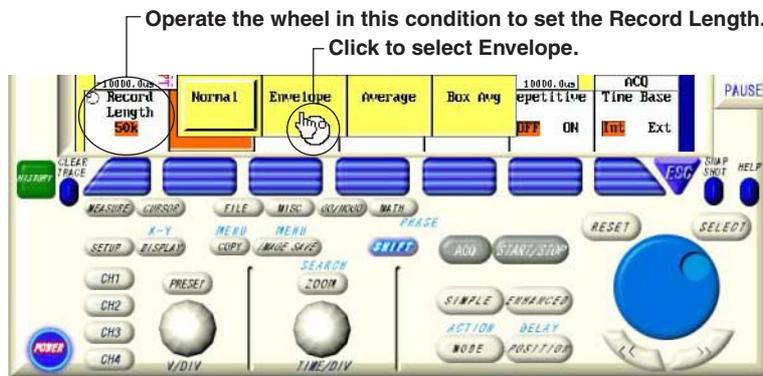
3. Control Window Operation

Example of Mouse Operation

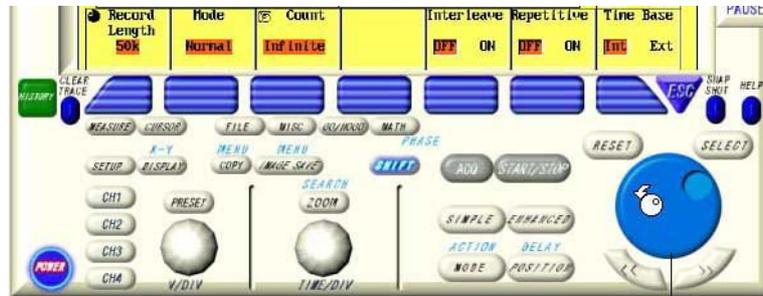
1. Operation Key Operation



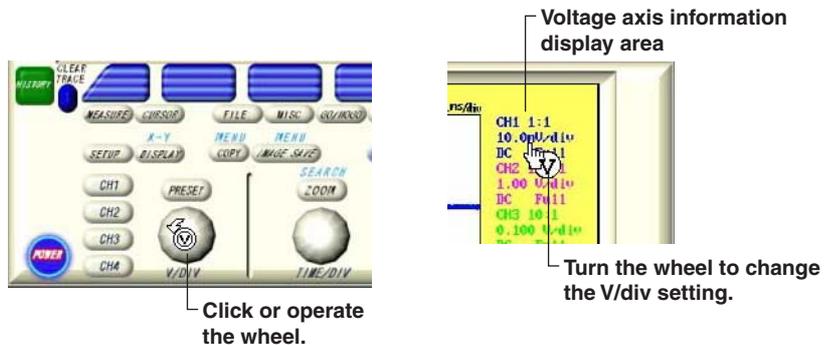
2. Soft Key Menu Operation (Operations not available on the front panel of the WT1600 Digital Power Meter or DL series digital oscilloscopes)



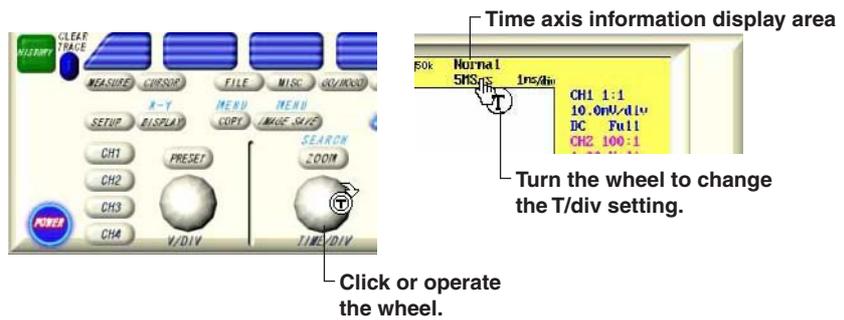
3. Jog Shuttle Operation



4. V/DIV Knob Operation (DL series instruments only)



5. T/DIV Knob Operation (DL series instruments only)



6. Dialog Box Operation

- Move to the item you wish to turn on: Click the **jog shuttle** or perform wheel operation.
- Set ON/OFF: Click **SELECT** or click directly as shown in the following figure.

