

WaveSurfer™ Option

USB to GPIB Converter

WS-GPIB User's Manual



LeCroy

WaveSurfer is a trademark of LeCroy Corporation.

Windows is a registered trademark or a trademark of Microsoft Corporation in the United States and other countries.

Foreword

- ◇ Thank you for purchasing LeCroy's WS-GPIB Converter (hereafter referred to as "WS-GPIB" or "instrument".)
- ◇ Before using this instrument, please read this manual thoroughly to gain a good understanding of it. After reading, please keep the manual in a safe place.
- ◇ This manual describes notes on use and basic usage of the WS-GPIB.

Notes

- ◇ Parts of the contents of this manual may be modified without prior notice for improvements in performance and functions.
- ◇ Reproduction or reprinting of the contents of this manual without prior permission from LeCroy is prohibited.
- ◇ If you have questions about this instrument, please contact LeCroy Corporation. (Refer to the contact address given at the end of this manual.)

Revision History

- ◇ August 2004: 1st edition
- ◇ December 2004: 2nd edition

Checking the Packing Content

On delivery of the instrument, check each item. If any of the items are missing or there is any damage, immediately contact LeCroy or the sales office in charge.

[Items to be present]

- Converter 1
- User's manual..... 1

Sending Back for Repairs

If the instrument is inoperable, send it back to LeCroy Corporation. (Refer to the contact address given at the end of this manual.) We will repair it without charge as long as it is under warranty.

When sending back the instrument, explicitly describe the following: product name, serial number, description of the trouble, name/post/phone number of the contact person.

Safety Information

This symbol may appear on the product: 

This refers you to additional information contained in the operator's manual. The corresponding information in this manual is similarly denoted.

To avoid personal injury or damage to the WS-GPIB or any equipment connected to it, review and comply with the following safety precautions.

Use only as intended.

The WS-GPIB is intended to be used only with the LeCroy WaveSurfer series oscilloscopes. Do not connect the USB connector of the WS-GPIB to any device other than a WaveSurfer oscilloscope.

Use of the WS-GPIB and/or the equipment it is connected to in a manner not specified by the manufacturer(s) may impair the protection mechanisms.

Connect and disconnect properly.

Do not connect or disconnect equipment to the GPIB connector of the WS-GPIB while the equipment power is on.

Do not disconnect equipment when red LED is ON. The red LED of the WS-GPIB lights up while the communication is in progress.

Disconnecting equipment during this time may result in data corruption or equipment damage.

Do not use in wet/damp or explosive atmospheres.

For indoor use only.

The WS-GPIB is intended for indoor use and should be operated in a clean, dry, environment.

Do not operate with suspected failures.

Do not use WS-GPIB if any part is damaged. All maintenance should be referred to qualified service personnel.

Keep product surfaces clean and dry.

Cleaning

The outside of the WS-GPIB should be cleaned with a soft cloth dampened with either deionized / distilled water or isopropyl alcohol. Allow the surface to dry completely before returning the instrument to service.

Use and Maintenance

WS-GPIB is a high quality, precision instrument. To maintain accuracy and signal fidelity, mechanical shock should be avoided, as well as damage to the cable through excessive bending. All maintenance and component replacement should be referred to qualified personnel.

Table of Contents

■ Overview.....	1
■ How to Use the WS-GPIB.....	1
(a) Connection.....	1
(b) Setting up the GP-IB	2
(c) Communication status.....	3
■ Specifications.....	4
Product Specifications.....	4
Certifications	4



■ Overview

Connecting the WaveSurfer and a PC equipped with a GP-IB interface using the WS-GPIB allows you to control the WaveSurfer via the GP-IB. The GP-IB connector conforms to IEEE488.2 standard. Its delimiter setting is LF+EOI. The USB connector conforms to USB 2.0. For details of the GP-IB commands, see the Remote Control Manual in the User's Manual CD supplied with the WaveSurfer. Note that the WS-GPIB does not functions as a controller. Make sure to thoroughly read this manual and have a good understanding of the GP-IB prior to using it.

■ How to Use the WS-GPIB

Use the WS-GPIB following the steps shown below.

(a) Connection

As shown in Figure 1 below, connect the USB connector of the WS-GPIB to the USB port of the WaveSurfer, then connect the other end, the GP-IB connector, to that of the PC.

NOTE: During this operation, keep the power button of the WaveSurfer, the PC in the OFF state.

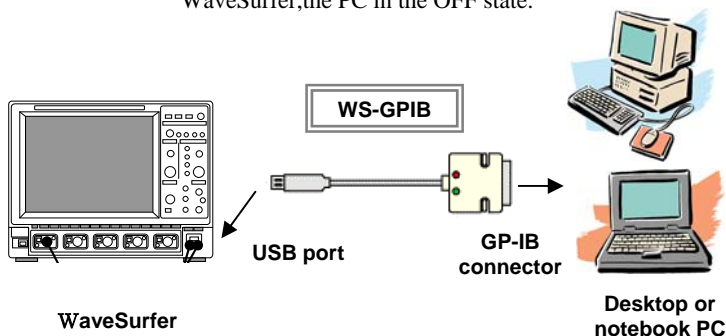


Figure 1 Connection Diagram of GP-IB Control

(b) Setting up the GP-IB

Set up the GP-IB on the measurement screen of the WaveSurfer (Figure 2) following the steps shown below.

- ① Touch [Utilities] in the menu bar and select [Utilities Setup] from the pull-down menu.
- ② Click the Remote tab in the setup area in the lower part of the screen.
- ③ Select the GpibAddress and set an address by entering a value.

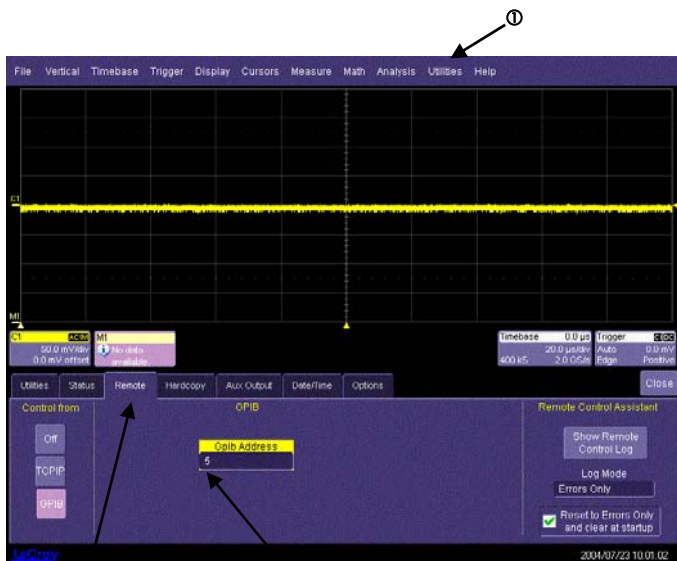
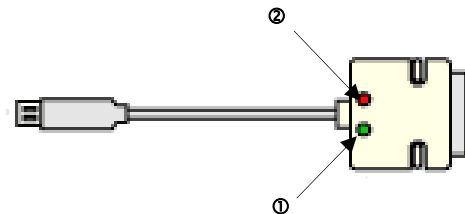


Figure 2 Measurement Screen of the WaveSurfer

(c) Communication status

The WS-GPIB is equipped with two LEDs on the GP-IB connector side to indicate the communication status. The LEDs indicate the following statuses respectively.

- ① Green POWER LED is ON: Power to the WS-GPIB is ON
- ② Red ACCESS LED is ON: Communication is in process



■ Specifications

Product Specifications

Item	Specifications
Power feed	Bus-powered
USB standard	Conforms to USB Specification Revision 2.0
USB connector	Type A
GP-IB connector	Amphenol 24-pin (male)
Power consumption	350mA at the maximum(during operation)
Temperature, operating	5°to +40°C
Temperature, storage	-40° to +71°C
Humidity, operating	≤ 80% RH (non-condensing)
Altitude, operating	3048 m (10,000 ft) max at ≤ 25°C
External dimensions	61 (W) × 22 (H) × 62 (L) (mm)
Cable length	1,500 (mm)
Mass	Approx. 105 g
Applicable PC (GP-IB side)	PC/AT-compatible PCs equipped with a National Instruments-compatible GP-IB card
Applicable device (USB side)	WaveSurfer series Oscilloscopes

* The source voltage is supplied from the USB port.

** The appearance or parts of the specifications subject to change without prior notice.

Certifications

	Meets intent of the European Council Directive
--	--

<p>EC Declaration of Conformity</p>	<p>89/336/EEC with Amendments 92/31 EEC and 93/68/EEC for Electromagnetic Compatibility. This declaration is based upon compliance of the WS-GPIB to the following standards:</p> <p>EN 61326:1997+A1:1998</p> <p>EMC requirements for electrical equipment for measurement, control, and laboratory use.</p> <p>EN 55022:1998+A1:2000+A2:2003 Radiated Emissions (Class A)</p> <p>EN 61000-4-2:1995+A1:1998+A2:2001 Electrostatic discharge(+4kV contact discharge; +8kV air discharge)</p> <p>EN61000-4-3:2002 Radio-frequency electromagnetic field 3V/m (unmodulated, r.m.s.) 80% AM (1kHz)</p>
---	---

LeCroy Corporation

700 Chestnut Ridge Road

Chestnut Ridge, NY 10977-6499

Tel: (845) 578 6020, Fax: (845) 578 5985

Internet: www.lecroy.com

© 2006 by LeCroy Corporation. All rights reserved.

LeCroy, ActiveDSO, ProBus, JitterTrack, WavePro, WaveMaster, and Waverunner are registered trademarks of LeCroy Corporation. Information in this publication supersedes all earlier versions. Specifications subject to change without notice.

WaveSurfer Option

LeCroy