

Keysight GUI Data Logger Software for U1731C, U1732C, and U1733C Handheld LCR Meter



Quick Start
Guide

NOTICE: This document contains references to Agilent Technologies. Agilent's former Test and Measurement business has become Keysight Technologies. For more information, go to **www.keysight.com**.



Notices

Copyright Notice

© Keysight Technologies 2011-2017

No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Keysight Technologies as governed by United States and international copyright laws.

Manual Part Number

U1731-90089

Edition

Edition 3, July 1, 2017

Printed in:

Printed in Malaysia

Published by:

Keysight Technologies
Bayan Lepas Free Industrial Zone,
11900 Penang, Malaysia

Technology Licenses

The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license.

Declaration of Conformity

Declarations of Conformity for this product and for other Keysight products may be downloaded from the Web. Go to <http://www.keysight.com/go/conformity>. You can then search by product number to find the latest Declaration of Conformity.

U.S. Government Rights

The Software is “commercial computer software,” as defined by Federal Acquisition Regulation (“FAR”) 2.101. Pursuant to FAR 12.212 and 27.405-3 and Department of Defense FAR Supplement (“DFARS”) 227.7202, the U.S. government acquires commercial computer software under the same terms by which the software is customarily provided to the public. Accordingly, Keysight provides the Software to U.S. government customers under its standard commercial license, which is embodied in its End User License Agreement (EULA), a copy of which can be found at <http://www.keysight.com/find/sweula>. The license set forth in the EULA represents the exclusive authority by which the U.S. government may use, modify, distribute, or disclose the Software. The EULA and the license set forth therein, does not require or permit, among other things, that Keysight: (1) Furnish technical information related to commercial computer software or commercial computer software documentation that is not customarily provided to the public; or (2) Relinquish to, or otherwise provide, the government rights in excess of these rights customarily provided to the public to use, modify, reproduce, release, perform, display, or disclose commercial computer software or commercial computer software documentation. No additional government requirements beyond those set forth in the EULA shall apply, except to the extent that those terms, rights, or licenses are explicitly required from all providers of commercial computer software pursuant to the FAR and the DFARS and are set forth specifically in writing elsewhere in the EULA. Keysight shall be under no obligation to update, revise or otherwise modify the Software. With respect to any technical data as defined by FAR 2.101, pursuant to FAR 12.211 and 27.404.2 and DFARS 227.7102, the U.S. government acquires no greater than Limited Rights as defined in FAR 27.401 or DFAR 227.7103-5 (c), as applicable in any technical data.

Warranty

THE MATERIAL CONTAINED IN THIS DOCUMENT IS PROVIDED “AS IS,” AND IS SUBJECT TO BEING CHANGED, WITHOUT NOTICE, IN FUTURE EDITIONS. FURTHER, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, KEYSIGHT DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, WITH REGARD TO THIS MANUAL AND ANY INFORMATION CONTAINED HEREIN, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. KEYSIGHT SHALL NOT BE LIABLE FOR ERRORS OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE FURNISHING, USE, OR PERFORMANCE OF THIS DOCUMENT OR OF ANY INFORMATION CONTAINED HEREIN. SHOULD KEYSIGHT AND THE USER HAVE A SEPARATE WRITTEN AGREEMENT WITH WARRANTY TERMS COVERING THE MATERIAL IN THIS DOCUMENT THAT CONFLICT WITH THESE TERMS, THE WARRANTY TERMS IN THE SEPARATE AGREEMENT SHALL CONTROL.

Safety Information

CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

Table of Contents

Introduction	9
System requirements	9
Installing and Connecting the LCR Meter	10
Using the Keysight GUI Data Logger	13
Automatic - Continuous mode	14
Automatic - Up to x count mode	16
Manual mode	17
Removing the Keysight GUI Data Logger	20
Uninstalling from the Windows Start menu	20
Uninstalling from the Windows Add/Remove Programs	20

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK.

List of Figures

Figure 1	Keysight GUI Data Logger InstallShield Wizard	10
Figure 2	Keysight GUI Data Logger shortcut icon	10
Figure 3	Keysight GUI Data Logger for Handheld LCR Meter	11
Figure 4	Cable connection for remote communication	11
Figure 5	Communication panel	12
Figure 6	Configuration panel	13
Figure 7	Logging panel with Automatic - Continuous selected	14
Figure 8	Logged data	15
Figure 9	Storing the logged data in the PC	15
Figure 10	Logging panel with Automatic - Up to x count selected	16
Figure 11	Logged data	16
Figure 12	Storing the logged data in the PC	17
Figure 13	Logging panel with Manual selected	18
Figure 14	Logged data	18
Figure 15	Storing the logged data in the PC	19
Figure 16	Uninstall Data Logger for Keysight Handheld LCR Meter	20
Figure 17	Remove Data Logger for Keysight Handheld LCR Meter	21

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK.

Introduction

The U1731C, U1732C, and U1733C handheld LCR meter models are equipped with a bi-directional (full duplex) communication capability that eases data storing from the LCR meter to your PC.

The required accessory for this communication capability is the U5481A IR-USB cable and the *Keysight GUI Data Logger for Keysight Handheld LCR Meter (U1730C)* application software, which is available for free on the Keysight website (www.keysight.com/find/hhTechLib).

NOTE

The U5481A IR-USB cable functions as a serial RS-232 port that connects the LCR meter to the USB port of your PC.

System requirements

Before installing the Keysight GUI Data Logger application software, ensure that your PC meets the following minimum system requirements.

Processors	1.6 GHz Pentium® IV or higher
32-bit OS platforms	Windows® XP, Windows® Vista, or Windows® 7
Memory	512 MB or higher (recommended)
Hard disk space	1 GB free disk space at runtime
Supported models	Keysight U1731C, U1732C, and U1733C
Prerequisite	Microsoft .NET Framework version 3.5 ^[a] PL-2303 USB-Serial Driver


[a] Available with any of the following redistributable packages on the Microsoft® website:

Microsoft® .NET Framework version 3.5 Redistributable Package, or
Microsoft® .NET Framework version 4.0 Redistributable Package.

Installing and Connecting the LCR Meter

NOTE

You are recommended to disconnect the U5481A IR-USB cable before installing the software.

- 1 Download the *Keysight GUI Data Logger for Keysight Handheld LCR Meter (U1730C)* application software from www.keysight.com/find/hhTechLib.
- 2 Click  **setup** to begin the installation. The required drivers and Microsoft .NET Framework are automatically installed if they are not detected on your PC.

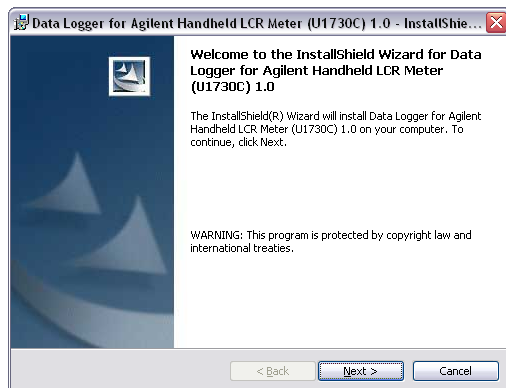


Figure 1 Keysight GUI Data Logger InstallShield Wizard

- 3 Click **Start > All Programs > Keysight > Data Logger for Keysight Handheld LCR Meter (U1730C)** to run the Keysight GUI Data Logger. Or alternatively, you can click the Keysight GUI Data Logger shortcut icon on your desktop.



Figure 2 Keysight GUI Data Logger shortcut icon



Figure 3 Keysight GUI Data Logger for Handheld LCR Meter

- 4 Connect the LCR meter to your PC via the U5481A IR-USB cable (Figure 4) and turn on the LCR meter.

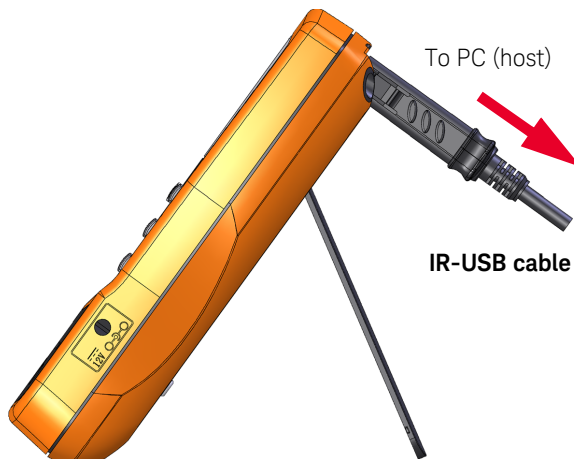


Figure 4 Cable connection for remote communication

NOTE

The U5481A IR-USB cable is an optional accessory. You can purchase the cable at your nearest Keysight Sales Office.

- 5 In the **Communication** panel, configure the LCR meter's communication settings.

- a Select **Auto** (Figure 5) to allow the Keysight GUI Data Logger to automatically search for a connected LCR meter.
- b Select **Manual** (Figure 5) to manually update the Keysight GUI Data Logger's communication settings.

Select the communication Port that your LCR meter is connected to. Clicking **Update port** will update the port selections that are available on your PC.

Match the Baud Rate, Parity, and Data Bits settings (Figure 5) to the settings of the connected LCR meter.

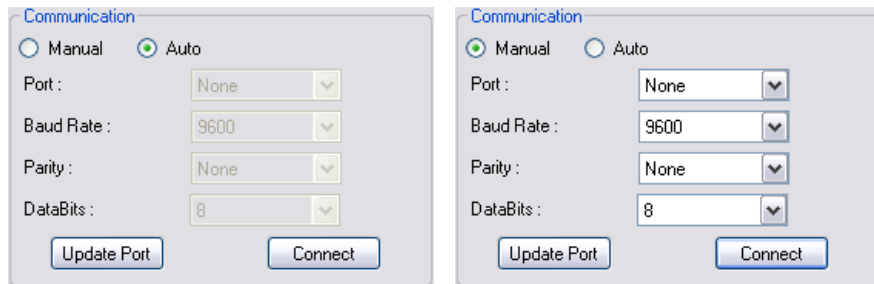


Figure 5 Communication panel

- 6 Click **Connect**. If the Keysight GUI Data Logger's communication settings matches with the LCR meter's communication settings, the **Meter Connected** notification will be shown in the status bar.
- 7 If the connection fails (**Meter Disconnected** notification), check that the U5481A IR-USB cable is connected securely to the LCR meter and that the LCR meter is turned on.

NOTE

The RS232 port is not meant for hot plugging or hot swapping. Disconnecting the U5481A IR-USB cable when it is in use will crash the Keysight GUI Data Logger.

Using the Keysight GUI Data Logger

The Keysight GUI Data Logger software is a simple graphical user interface (GUI) that allows you to perform basic controls and measurements through a PC.

The Keysight GUI Data Logger allows data to be transferred from the LCR meter to a PC via the U5481A IR-USB cable with data storing options. Three types of logging mode are available in the Keysight GUI Data Logger software:

- Automatic -Continuous
- Automatic -Up to x count
- Manual

Prior to selecting a logging mode, select the measurement configuration options from the Configuration panel.

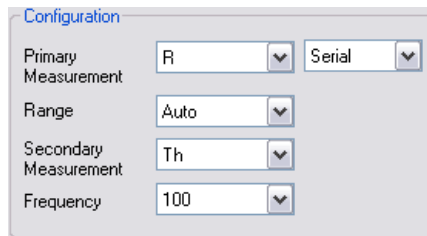


Figure 6 Configuration panel

For further explanation of the measurement configuration options, refer to the *U1731C/U1732C/U1733C User's Guide*.

Automatic - Continuous mode

The Automatic - Continuous mode allows the data to be transferred to the PC automatically and continuously with a specific log interval.

Procedures:

- 1 In the Logging panel, select **Automatic - Continuous** in the Logging Mode drop down list.
- 2 Set the desired Logging Interval in seconds by clicking on the up/down button or by keying in the required value.

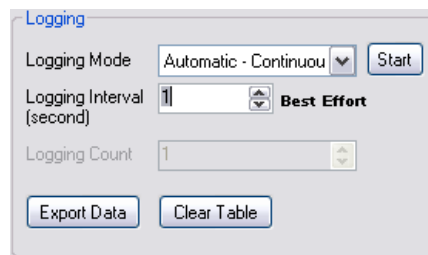


Figure 7 Logging panel with Automatic - Continuous selected

NOTE

- The Logging Interval is defined as the delay within the PC when it is sending a command to fetch the latest reading.
- The Logging Interval's best effort for communication between the PC and the LCR meter is subjected to the following conditions:
 - It is dependant on PC activity for USB communications.
 - It is not a true realtime-stamp.
 - It is subjected to software delays when sending commands to obtain readings.
- In this mode, the Logging Count option is disabled.

- Click **Start** to start the data logging. The logged data will be displayed in the measurements table.

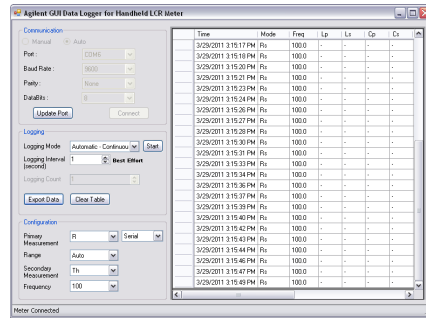


Figure 8 Logged data

- Click **Stop** to stop the data logging.
- Click **Export Data** to store the logged data in the PC. All the logged data shown in the measurements table will be saved as a .csv file.

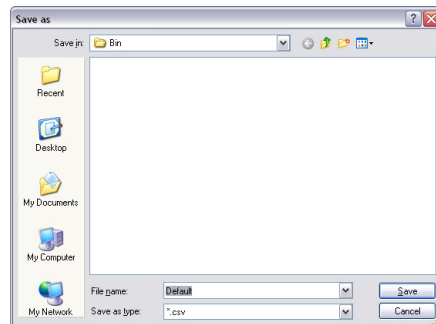


Figure 9 Storing the logged data in the PC

- Click **Clear Table** to clear all the previously logged data shown in the measurements table.

Automatic - Up to x count mode

The Automatic-Up to x count mode allows the data to be transferred to the PC at a specific logging count and log interval set by you.

Procedures:

- 1 In the Logging panel, select **Automatic - Up to x count mode** in the Logging Mode drop down list.
- 2 Set the desired Logging Interval in seconds and Logging Count by clicking on the up/down button or by keying in the required value.

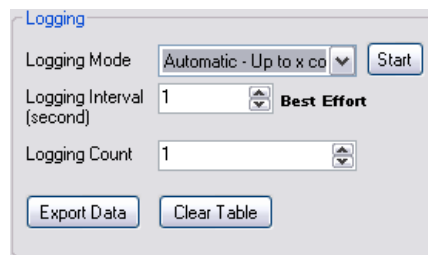


Figure 10 Logging panel with Automatic - Up to x count selected

- 3 Click **Start** to start the data logging. The logged data will be displayed in the measurements table.

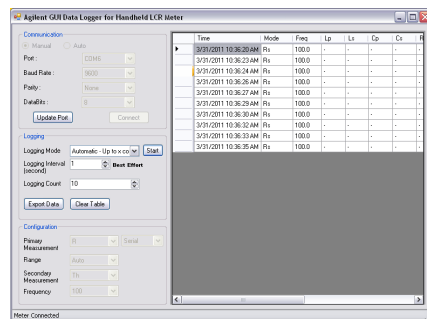


Figure 11 Logged data

- 4 Click **Stop** to stop the data logging.

- 5 Click **Export Data** to store the logged data in the PC. All the logged data shown in the measurements table will be saved as a .csv file.

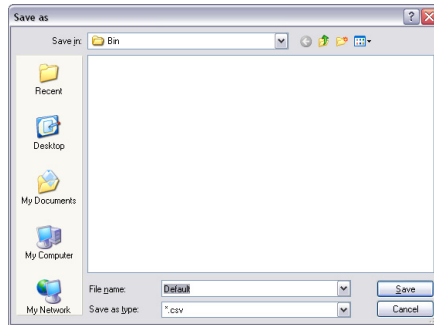


Figure 12 Storing the logged data in the PC

- 6 Click **Clear Table** to clear all the previously logged data shown in the measurements table.

Manual mode

The Manual mode allows the data to be transferred to the PC manually.

Procedures:

- 1 In the Logging panel, select **Manual** in the Logging Mode drop down list.

NOTE

In this mode, the Logging Interval and Logging Count option are disabled.

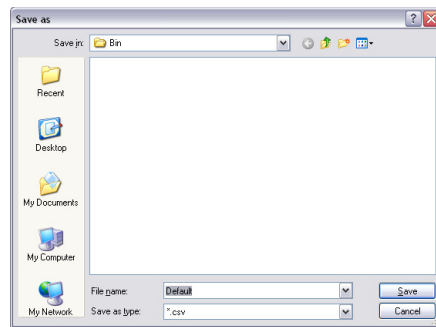


Figure 15 Storing the logged data in the PC

- 4 Click **Clear Table** to clear all the previously logged data shown in the measurements table.

Removing the Keysight GUI Data Logger

The software can be removed either from the Windows Start menu or by using the Windows Add/Remove Programs.

Uninstalling from the Windows Start menu

To remove the software from the Windows Start menu, proceed as follows:

- 1 Select **Start (Windows taskbar) > All Programs > Keysight > Uninstall Data Logger for Keysight Handheld LCR Meter (U1730C)**.



Figure 16 Uninstall Data Logger for Keysight Handheld LCR Meter

- 2 The Windows Installer dialog box will appear and prompt you to confirm the complete removal of the application.
- 3 Click **Yes** to proceed. To cancel the uninstallation, click **No**.
- 4 Follow the instructions on the screen to complete the removal process.

Uninstalling from the Windows Add/Remove Programs

To remove the software by the Windows Add/Remove Programs, proceed as follows:

- 1 Select **Start (Windows taskbar) > Control Panel** to open the Control Panel window.
- 2 Double-click **Add or Remove Programs**. The Add or Remove Programs window will appear containing a list of currently installed programs.
- 3 Browse the list of currently installed programs to search for the **Data Logger for Keysight Handheld LCR Meter (U1730C)** as shown below.

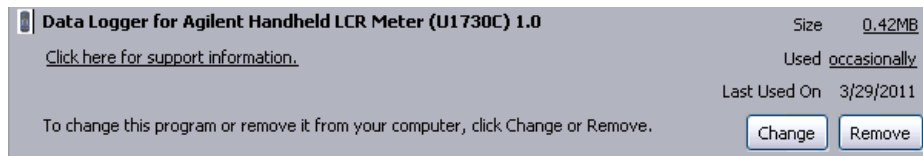


Figure 17 Remove Data Logger for Keysight Handheld LCR Meter

- 4 Click **Remove** to uninstall the selected application.
- 5 The **Add or Remove Programs** dialog box will appear and prompt you to confirm the complete removal of the application. Click **Yes** to proceed. To cancel the uninstallation, click **No**.
- 6 Follow the instructions on the screen to complete the removal process.

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK.



This information is subject to change without notice. Always refer to the English version at the Keysight website for the latest revision.

© Keysight Technologies 2011-2017
Edition 3, July 1, 2017

Printed in Malaysia



U1731-90089

www.keysight.com