

Keysight U1731C/ U1732C/U1733C Handheld LCR Meter

Quick Start
Guide

Contacting Keysight

www.keysight.com/find/assist
(worldwide contact information for repair and service)

Safety and EMC Information

This meter is safety-certified in compliance with the following safety and EMC requirements:

- IEC61010-1:2001/
EN61010-1:2001
(Second Edition)
- IEC 61326-1:2005/
EN 61326-1:2006
- Canada: ICES/NMB-001:
Issue 4, June 2006
- Australia/New Zealand:
AS/NZS CISPR11:2004

Safety Notices





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.

Safety symbols

	Earth (ground) terminal
	Equipment protected throughout by double insulation or reinforced insulation
	Caution, risk of electric shock
	Caution, risk of danger (refer to this manual for specific Warning or Caution information)

For further safety information details, refer to the
Keysight U1731C/U1732C/U1733C Handheld LCR Meter User's Guide.



Verify that you received the following items in the shipment of your LCR meter:

- ✓ One pair of alligator clip test leads
- ✓ One 9 V alkaline battery
- ✓ Printed copy of the U1731C/U1732C/U1733C Quick Start Guide
- ✓ Printed copy of the Certificate of Calibration

If any item is missing or damaged, keep the shipping materials and contact the nearest Keysight Sales Office.

NOTE

The descriptions and instructions in this guide apply to the U1731C, U1732C, and U1733C handheld LCR meters.

The model U1733C appears in all illustrations.

All related documents and software are available for download at www.keysight.com/find/hhTechLib.

Install the Batteries

Your LCR meter is powered by a single 9 V alkaline battery (included with the shipment).

- 1** Turn the LCR meter OFF and remove the test leads from the terminals.
- 2** Lift the tilt stand and loosen the screw with a suitable Phillips screwdriver.
- 3** Remove the battery cover and observe the polarity markings.
- 4** Insert the battery and replace the battery cover and screw.



Turn On the LCR Meter

To power ON your LCR meter, press the power-on button once.

**WARNING**

To avoid damage to the device, do not exceed the input limit. Do not apply voltage to the input terminals. Discharge the capacitor before testing.

NOTE

Your LCR meter is capable of remote data logging. To use this feature, you will need an IR-USB cable (U5481A, purchased separately) and the Keysight GUI Data Logger Software (downloadable from www.keysight.com/find/hhTechLib).








The LCR Meter at a Glance



NOTE

The external AC to DC power adapter input jack requires an input voltage of +12 VDC.

Understanding the Keypad

Legend	Key response when pressed for:	
	Less than 1 second	More than 1 second
	Turns the LCR meter on or off	-
	Starts or stops the auto identification mode	Enables or disables the ESR (equivalent series resistance) mode ^[a]
	Holds or releases the present reading on the display	Starts or stops the static recording mode
	Switches between dissipation factor (D), quality factor (Q), and phase angle (θ) measurement	Enables or disables the limit comparison mode
	Selects a test frequency	Enables or disables the DCR (direct current resistance) mode ^[b]
	Disables autoranging and sets a manual range	Enables autoranging
	Switches between impedance (Z), inductance (L), capacitance (C), and resistance (R) measurement	Toggles between parallel and series circuit mode
	Enables the tolerance mode	Turns the backlight display on or off ^[c] or disables the tolerance mode (if tolerance is enabled)
	Sets the null/relative mode	Enters the open/short calibration mode for selected range and test frequency


[a] Autoranging only. ESR mode exits to capacitance (C) measurement by default.

[b] Applicable for U1733C model only. DCR mode exits to inductance (L) measurement by default.


[c] Applicable for U1732C and U1733C models only.




Performing LCR Measurements

Auto Identification (Ai)

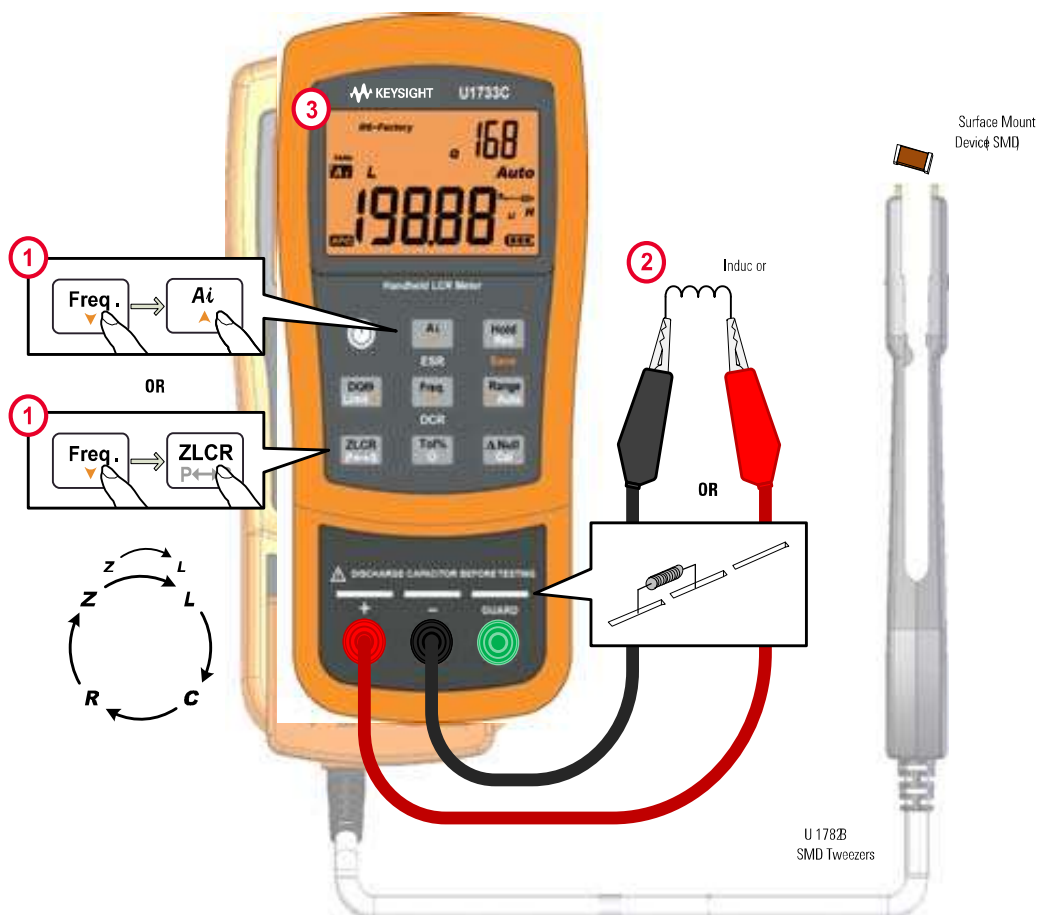
Press the  button to automatically identify and select an appropriate primary measurement function (L, C, or R), secondary measurement function (D, Q, or θ), and measurement mode (parallel or series) for the device-under-test.

NOTE

The LCR meter powers up in the Ai mode by default.  is shown on the left of the display screen when the Ai mode is enabled.

-  flashes when the LCR meter is identifying a measurement function and mode.
- Press  again while  is shown to exit the Ai mode.

LCR measurement steps



Secondary (D/Q/ θ) measurements



Inductance (L) measurements



Capacitance (C) measurements



Resistance (R) measurements



THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK.

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

© Keysight Technologies 2011-2017
Edition 5, July 1, 2017

Printed in Malaysia



U1731-90070

www.keysight.com