

U1251B-05

S E R V I C E N O T E

Supersedes:
NONE

U1251B True RMS Multimeter

Serial Numbers: MY49450001 to MY53449999, SG49450001 to SG53449999

Incorrect DC Voltage values displayed with Filter switched off when measuring mixed (AC+DC) signal source

Parts Required:

P/N	Description	Qty.
NONE		

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:		
MODIFICATION RECOMMENDED		
ACTION <input type="checkbox"/> ON SPECIFIED FAILURE CATEGORY: X AGREEABLE TIME	STANDARDS LABOR: 0.0 Hours	
LOCATION X CUSTOMER INSTALLABLE CATEGORY: <input type="checkbox"/> ON-SITE (active On-site contract required) <input type="checkbox"/> SERVICE CENTER <input type="checkbox"/> CHANNEL PARTNER	SERVICE <input type="checkbox"/> RETURN INVENTORY: <input type="checkbox"/> SCRAP X SEE TEXT	USED <input type="checkbox"/> RETURN PARTS: <input type="checkbox"/> SCRAP X SEE TEXT
AVAILABILITY: PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL: 1 Dec 2014	
<input type="checkbox"/> Calibration Required X Calibration NOT Required	PRODUCT LINE: WC AUTHOR: SJ	
ADDITIONAL INFORMATION: Information only		

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PRINTED IN U.S.A.

December 3, 2013

Rev. 21



Situation:

The U1251B Handheld Digital Multimeter may display an incorrect DC voltage reading with the Filter switched OFF and when the signal being measured contains both DC and AC components. The incorrect reading will be stable and lower than the DC component from the mixed signal source.

The unit will display the accurate DC value of the signal being measured when the product's Filter is enabled. The product's Filter can be turned on by changing the product's filter settings.

To maintain safe operation on the multimeter, it is recommended to verify the multimeter's operation by measuring a known voltage before use. Always manually select the highest measurement range when measuring an unknown signal. Users are cautioned to turn on the filter at all times when making DC voltage measurements for mixed signal.

Solution/Action:

The U1251B Handheld Digital Multimeter will display accurate DC value of the mixed signal (that contains both AC and DC components) being measured when the product's Filter is turned ON. As the U1251B is not firmware upgradeable, therefore please see point A for the steps to change the product's filter settings.

To enhance user safety, Agilent has updated the **U1251B/U1252B Handheld Digital Multimeter User's Guide** to include additional WARNING statements to emphasize the need to turn ON Filter at DC Voltage measurement function (see point B).


A. Change product's Filter settings:

Please turn on the product's Filter by changing the product's filter settings according to steps 1 to 4 below to measure the correct DC voltage value of a mixed AC+DC signal source:


1. Download and review the revised **U1251B/U1252B Handheld Digital Multimeter User's Guide**. Discard the older version.
2. Verify that your multimeter(s) corresponds to the above model and serial numbers.
3. Check the Multimeter firmware version by pressing the NULL button while turning ON the multimeter from OFF position.
4. If the firmware version is 2.17 or below, please follow steps 4.1 to 4.6 to turn ON the Filter function for DC measurement mode.

4.1 Turn the meter OFF.


4.2 From the OFF position, press and hold  while turning the rotary switch to any non- OFF position.


4.3 Press  to scroll through the Menu of "FILTE" as per below:



4.4 Press  to turn on the filter.



4.5 Press  to save changes. This parameter will remain in the non-volatile memory.

4.6 Press  for more than 1 second to exit the Setup Mode.

5. With the introduction of new firmware version 2.18, the Filter function is turned ON by default. Units with S/N starting with MY53450001 are loaded with the firmware version 2.18 and above, and users of these units do not need to follow through steps 4.1 to 4.6 above, which manually turn ON the filter function.

B. Download latest product User's Guide:

To enhance user safety, Agilent has updated the **U1251B/U1252B Handheld Digital Multimeter User's Guide** to include additional WARNING statements to emphasize the need to turn ON Filter at DC Voltage measurement function.

User's Guide	U1251B/U1252B Handheld Digital Multimeter User's Guide
Filter use and setting at measurement	Chapter 2 Making Measurements > Measuring DC Voltage ; and >Measuring AC and DC Signals (U1252B only)
Filter setting	Chapter 4. Changing The Default Setting > Selecting Setup Mode > Setting the Filter

For the latest user's guide version, please visit our Web site at:

<http://www.agilent.com/find/hhTechLib>

- **U1251B/U1252B Handheld Digital Multimeter User's Guide**
(<http://cp.literature.agilent.com/litweb/pdf/U1251-90036.pdf>)
- **U1251B/U1252B Handheld Digital Multimeter Quick Start Guide**
(<http://cp.literature.agilent.com/litweb/pdf/U1251-90046.pdf>)

Revision History:

Revision Number	Date	Author	Reason For Change
1.0	22-11-2013	SJ	As published