# 8588A & 8558A Firmware, Update by USB

**8588A & 8558A USB (zip) (2.39 Mo)** (/fr/secure-download?u=https%3A%2F%2Fdownload.flukecal.com%2Fsecure%2Fsoftware%2Fv1.28_210811.zip%3Fnvb%3D20211130153007%26amp%3Bnva%3D20211130154507%26amp%3Btoken%3D0e004a

| TITLE | USE WITH |
|---|---|
| 8588A & 8558A | All |

The updating of embedded software should only be performed after given specific instructions to do so from Technical Support (mailto:electricalsupport@flukecal.com) or a Fluke Calibration Authorized Service Center.

If the update isn't performed properly, your product may be inoperable until it is.

**Instructions to update by USB**

An empty USB stick (of greater than 10Mbytes) will be required. This should be formatted using the Microsoft FAT32 format.

Note: A Microsoft NTFS formatted USB stick is not compatible with the instrument.

1. Expand the contents of the downloaded ‘update’ zip file, and copy the “firmware” folder and its contents onto the empty USB stick.
2. Turn off the instrument, and then insert the USB stick into one of the front or rear USB slots, and then turn the instrument back on.
3. After 15 to 30 seconds the instrument will display a prompt asking for the USB stick to be removed.
4. On removing the USB stick, another prompt will be displayed to indicate that the update has begun. The update process should take no more than 40 seconds to a minute.
5. The update is complete when the instrument display’s the ‘DCV’ function screen, at this point it is safe to turn the instrument off.

**Updates Include:**

**Main Version 1.28 (2021 Oct 19)**

The following issues affect both the 8588A and the 8558A:

1) When using the Digitize function via the front panel UI invalid data can be returned, (remote operation is not affected).

2) If the MATH 'M' parameter is enabled, and 'M' is greater than 1, the resultant displayed value will be incorrect if more than one measurement is taken, (remote operation is not affected).

3) The TRUE_OHM 'LOI_ON' parameter has no effect on first use, (needs cycling on and off to apply requested change).

More details on the above changes can be found in the ChangeLog.txt file that is part of the download package

**Main Version 1.27 (2021 Jan 27)**

The following issues affect both the 8588A and the 8558A:

1) The MATH function had issues with normalize and displayed resolution. These issues are corrected.

2) Recorded resolution did not always reflect the value displayed

3) The AC function filter can show the incorrect state after a full reset

4) Corrected Shunt management error messages on screen

5) Corrected a case where the remote command “FNOW?” could lock the instrument if configuration(Trigger) did not result in measurements being taken

6) Corrected an issue with the "CONFigure:FRESistance" remote command

7) Corrected an issue in 3458A remote emulation with “PRESET DIG” command

8) Corrected an issue in 3458A remote emulation with “OFORMAT DINT” command

More details on the above changes can be found in the ChangeLog.txt file that is part of the download package

**Main Version 1.26 (2020 Jul 17)**

The following issues affect both the 8588A and 8558A:

1) When in True Ohms resistance function, if the range is changed, then a front/rear scan operation is selected, the active range can be incorrectly reset to the 10KOhm (default) range.

2) When 8508A emulation is active, the input impedance for DCV is set to 1MOhm, the preferred input impedance should 'AUTO', as this better matches the behavior of an 8508A, (in DCV).

**Main Version 1.25 (2020 Mar 17)**

The following issues affect the 8558A only:

1) The ZERO function generates an exception when activated in the DCI or the ACI function.

The following issues effect the 8588A only:

1) When the frequency or period function is active and the signal input is ACI (30A), setting rear terminals will hang-up the instrument.

The following issues effect both the 8588A and 8558A:

1) When aborting a ZERO function operation the final 'restored' range is not displayed.

**Main Version 1.24 (2020 Feb 18)**

The following issues affect both the 8588A and 8558A.

1) Remote operation: The Fluke 8508A emulation was missing the FWR and TWR function parameters, (these are 'legacy' alternatives to the TWO_WR, and FOUR_WR parameters).

2) Remote operation: HP3458A emulation did not set the correct GPIB EOI termination when the 'END ON' command was sent, (acted like END ALWAYS instead).

3) Remote operation: Emulations of the Fluke 8508A and HP3458A did not always report the correct measurement overload value, (i.e. +/-1.0E38 for the HP3458, +/-200.0E33 for 8508), instead SCPI values would be used).

**Main Version 1.23 (2020 Jan 19)**

The following issues affect both the 8588A and 8558A.

Remote operation: Incorrect remote/local transitions can prevent correct entry to Fluke 8508A emulation mode.

Remote operation: Front panel function indicators can be left in incorrect state on exit from 8508A emulation mode.

Remote operation: SRQ events can be missed when in 3458A emulation mode and using 'TRIG SGL' triggering.

Remote operation: It was not possible to use the rear terminals when 3458A emulation mode was active.

Front panel: The Counter function range soft-key legend can show an incorrect default value.

**Main Version 1.22 (2019 Nov 20)**

Fix: The 8558A DCI & ACI auto ranging feature can be become unresponsive when the highest current range was selected, (or transitioned through). Note: current overload detection can also be effected by this issue.

Fix: The 8588A/8558A does not apply internal correction factors when the three or four wire PRT function is active.

Fix: ACV/ACI input zero operation can give an incorrect response on the first attempt.

Fix: Remote operation: When using the National Instruments 'NI-MAX', (Measurement & Automation Explorer) utility, the 8588A/8558A can fail to automatically identify itself, (GPIB only).

Fix: Remote operation: When SCAN ratio and/or MATH operations are active the remotely reported measurement value's resolution does not always match the on-screen value.

Fix: Front panel: When the SCAN ratio, (or division) operations were active, the displayed measurement units did not change to a 'unitless' form.

Fix: Remote operation: The <range> parameter for the shunt commands CONFigure:XCURrent:AC <range, resolution> and CONFigure:XCURrent[:DC] <range, resolution> is now the input voltage range. Note: This is a secondary display field value, (if selected). The resolution is the setting used by the 'primary', (i.e. current) field.

Fix: Remote operation: The external shunt (DC and AC) commands to modify or delete a shunt entry did not report an error if the shunt was not in the shunt list, (in some cases).

Fix: Front panel: The DCI/ACI shunt power uncertainty displayed value can show too many significant figures.

Fix: Front panel: The ACI shunt auto-range setting persistence was not consistant between resets and function changes.

Fix: Remote operation: The trigger "..:EXTernal POSitive|NEGative[,TTL|BIPolar]" command reverses the polarity of the selected edge.

Fix: Front panel: The 'trigger initiation' status, (i.e. continuous measurement on/off) was not shown as 'unselectable' when the digitize function was active.

Fix: Front panel: The PRT and thermocouple settings where not always redisplayed correctly after resets.

Fix: Front panel: The DCV 'Z-in', ('input impedance' setting) key legend is sometimes incorrect after a function change/reset.

**Main Version 1.21 (2019 Aug. 28)**

Fix: Remote operation: The remote SCPI commands 'CONFIGure' and 'MEASure' did not set the instrument to auto-ranging if no range parameter was set, or the DEFault range parameter was used.

Fix: Remote operation: Remote command 'CONFigure:FRESistance' followed by another 'CONFigure:FRESistance' toggles two/four wire state, (same for 'MEASure' equivalent).

Fix: Remote operation: If remote 'MEASure:POWer?' sent without fitting RF sensor, system would timeout and require 'SDC' to unblock measurement system - now responds with 'NAN' value, (without hang).

Fix: Remote operation: Remote command 'SENSe:POWer:FREQuency' responds with 'unknown' error if RF power sensor not fitted.

Fix: Remote operation: When remotely modifying the 'immediate' AC shunt slot, (slot index 0), values can be rejected due to invalid parameters, when these parameters are actually ignored in the case of slot 0, so should be accepted without error ,(i.e. empty name/model fields).

Fix: Remote operation: The 'CONF?' and 'SENSe:FUNCtion?' queries don't return the shortest keyword form possible for SENSe:CURRent:DC and XCURRENT:DC (i,e 'CURR' and XCUR').

Fix: Front panel: After a reset, (initiated from front panel or remotely), the DCI/ACI Capacitance and AC external shunt functions did not display the correct range and resolution, (in some cases).

**Main Version 1.20 (2019 Aug. 9)**

Fix: Front panel: Reset operation did not always reset all functions to their default states.

Fix: Front panel: ACI shunt function - 'AC-DC difference' parameter does not accept negative values.

Fix: Front panel: ACI/DCI shunt function - incorrect values can be set for some shunt parameters, (i.e. if very large values are entered, values can mathematically overflow).

Fix: Front panel: ACI shunt function - when 'AC-DC difference' popup is displayed and no points entered, pressing 'edit point' can cause the instrument to hang.

Fix: Front panel: Selecting MATH with only rolling or block average enabled causes the units prefix to not be displayed.

Fix: Front panel: Changing remote settings 'ethernet EOL' state does not update displayed value on UI, (but action was performed).

Fix: Front panel: Changing 'timestamp' setting generates empty measurement records, (if no measurement data was available when button pressed).

Fix: Remote operation: The SCPI trigger command ':SLOPe POSitive|Negative' is inverted, (i.e. selects the opposite edge to the one requested).

Fix: Remote operation: CONFigure/MEASure SCPI commands do not update the selected function's range when requested, (if range and resolution parameters both set).

Fix: Remote operation: GPIB TACS/TADS transitions can be incorrect, (causing unexpected 'Unterminated' errors).

Fix: Remote operation: GPIB IFC/DCL commands immediately followed by query command can time out with an 'unterminated query' error.

Fix: 3458A emulation: PRESET FAST command and TRIG command did not set the instrument AUTO, (i.e. 'continuous') trigger state correctly in all cases.

Fix: 3458A emulation: A spurious termination character can appear at the start of error query strings returned by ER

**Main Version 1.19 (2019 July 4)**

Fix: Remote 8508 emulation measurements could return with truncated precision.

Fix: Remote (non-ACV) scan measurements could incorrectly report individual front and rear measurement values when using ‘FETCH? n’ command.

Fix: Terminal Scan ratio and division modes did not always change displayed unit to engineering notation form, (i.e. show value as x.xE+nn).

Fix: Remote *PUD command did not support *PUB #0xxxxx version of arbitrary block program data format. (Note: Will now also accept *PUB “nnnn” format as well).

**Main Version 1.15 (2019 May 30)**

Fix: asynchronous handling issues, (when under remote control), that could affect entry/exit from instrument adjustment mode.

Fix: asynchronous handling issues, (when under remote control), that could affect the correct selection of instrument adjustment points.

Fix: remote/local control issue that resulted in the instrument not returning to remote correctly after pressing the 'go to local' soft-key.

Fix: remote control issue where the Capacitance function could return measurements with an incorrect precision and/or report a false 'resolution too large' error.

Fix: remote issue where TALK? command did not use the selected EOL character(s) in all cases.

Add: Extra information is now displayed when in remote adjustment mode, so the active adjustment point can be easily seen.

Add: Remote SCPI 'CALibration:STORe' tree (query only) commands will be accepted even if no adjustment password has been entered.

**Main Version 1.14 (2019 May 22)**

Fix: The remote command “PRESET NORM” did not always reset the instrument to the same conditions as “*RST”, (as stated in the manual).

Fix: The ‘ANALYZE’ histogram chart can incorrectly show ‘0%’ on the y axis.

Fix: The 8558A can report an ‘illegal configuration’ error when a current range greater than 1A is requested, and the ‘Digitize’ function selected.

Fix: The Digitize function can report an incorrect range value (remotely only), on first entry to the digitize function (intermittently).

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