KEITHLEY
A Tektronix Company

Series 2281S

DC Power Supply and Battery Simulator

Version 1.08 Firmware Release Notes

Keithley Instruments
28775 Aurora Road
Cleveland, Ohio 44139
1-800-935-5595
tek.com/keithley

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GENERAL INFORMATION

SUPPORTED MODELS

This firmware is intended for use on the following Keithley Instruments product models:

    2281S-20-6

Firmware upgrade and downgrade instructions

CAUTION

Do not turn off power or remove the USB flash drive until the upgrade process is complete.

To upgrade or downgrade the firmware from the front panel:

1. Copy the firmware upgrade file to a USB flash drive that is less than or equal to 2 GB and formatted in the FAT file format. The file is: `ki_2281_V01_08.tfb`.
2. Verify that the upgrade file is in the root directory of the flash drive.
   2281S firmware files end with the file extension `.tfb` (example: `H:\ki_2281_V01_08.tfb`).
3. Disconnect any input and output terminals that are attached to the instrument.
4. Turn on instrument power.
5. Insert the flash drive into the USB port on the front panel of the instrument.
6. From the instrument front panel, press the **MENU** key.
7. Under **System**, select **Information**.
8. Next to **Version**, select **Upgrade.**
9. Select **OK** in the dialog box.
10. Select the type of upgrade you want to do:
    - To upgrade to a newer version of firmware: Select **New**.
    - To force downgrading to an older version of firmware: Select **Previous**.
11. When the upgrade is complete, reboot the instrument.

UPGRADE CONSIDERATIONS FOR ALL SERIES 2281S MODELS

The following table lists the considerations that should be made when deciding whether to upgrade your Series 2281S instrument firmware to version 1.08.

Consideration for upgrade	From any previous version
Recalibration required?	No
Backward compatibility concerns?	Yes
Requalification recommended?	No
Should you upgrade?	Review[1]

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[1] Review the entire list of changes and compatibility concerns made in all firmware versions between your current version and version 1.08. Upgrade if any of the fixes or enhancements are wanted.

VERSION 1.08 RELEASE NOTES

OVERVIEW

Version 1.08 is a maintenance release containing fixes and enhancements. See below for specific items fixed and new enhancements.

CRITICAL FIXES

Reference number:	PSDN-1544
Symptom:	AUTO command for Line 1 set to Trigger In
Resolution:	AUTO command now sets Line 1 to Manual In
Reference number:	PSDN-1540
Symptom:	Keithley link in header of web page can't load.
Resolution:	This issue has been corrected.
Reference number:	PSDN-1522
Symptom:	Update State of Charge in Dynamic Mode Battery Simulation is incorrect. The display has two decimal places on the screen for SoC but does not update accordingly during tests.
Resolution:	This issue has been corrected.
Reference number:	PSDN-1512
Symptom:	The :BATT1:SIM:SAMP:INT 0.1 command results in -113 error.
Resolution:	This issue has been corrected.
Reference number:	PSDN-1387
Symptom:	Battery simulation does not discharge the battery if current is low.
Resolution:	This issue has been corrected.
Reference number:	PSDN-240
Symptom:	LXI: Fetch data is wrong.
Resolution:	This issue has been corrected.
Reference number:	PSDN-133
Symptom:	Sometimes the cycle for a test script will show up as 0 in the User Interface.
Resolution:	This issue has been corrected.
Reference number:	PSDN-114
Symptom:	After sending a *RST command, BATT:TRAC:TRIG:VOLT/CURR:STAT SCPI command cannot be set to 1.
Resolution:	This issue has been corrected.

Reference number:	PSDN-112
Symptom:	LXI: Fetch data fails on the virtual front panel when an Overflow occurs.
Resolution:	This issue has been corrected.
Reference number:	PSDN-80
Symptom:	User Interface sourcing with a small current does not change the SOC value.
Resolution:	This issue has been corrected.

NONCRITICAL FIXES

Reference number:	PSDN- 1513
Symptom:	Digital I/O Trigger In should not be an option for Battery Test or Battery Simulation.
	The trigger model is not accessible in the Battery Test or Battery Simulation modes of the 2281S. "Trigger In" should be removed as an option for Digital I/O line 1 for these modes and the default should be changed to "Manual In."
Resolution:	This issue has been corrected.
Reference number:	PSDN-1508
Symptom:	Graph labeled incorrect for Voc plot, the label displays Vt
Resolution:	This issue has been corrected.
Reference number:	PSDN-200
Symptom:	In the user interface, the "h" after the Ah value is missing when the value is greater than 1 Ah.
Resolution:	This issue has been corrected.

ENHANCEMENTS

Reference number:	PSDN-1525
Symptom:	Instrument powers up with GPIB Remote Interface as default. (2280S and 2281S)
Enhancement:	The instrument now powers up using the same remote interface that was last selected when previously powered on.
Reference number:	PSDN-180
Symptom:	The interval timer was starting at the same time the Voc delay started.
Enhancement :	The interval timer now starts after the Voc measurement is complete.

VERSION 1.07 RELEASE NOTES

OVERVIEW

Version 1.07 is the enhancement for 2281S. It adds the script test and capacitance measurement ability to 2281S series power supply and battery simulator. Also, it fixed some bugs found in previous version. See below.

COMPATIBILITY CONCERNS

Compared to firmware version 1.01, firmware version 1.07 added a _capacity record_ inside the battery model file.

CRITICAL FIXES

Reference number:	CR00508290
Symptom:	The device under test will crash after a long period of time.
Resolution:	This issue has been corrected.
Reference number:	CR00509514
Symptom:	The user interface and remote interface will be locked up after running commands.
Resolution:	This issue has been corrected.
Reference number:	CR00508289
Symptom:	The remote interface will be locked up after running a random stress test.
Resolution:	This issue has been corrected.

NONCRITICAL FIXES

Reference number:	CR00510858
Symptom:	After a *RST is issued, the :BATT:TRAC:TRIG:VOLT/CURR:STAT command cannot set to 1
Resolution:	This issue has been corrected.
Reference number:	CR00511273
Symptom:	The charging and discharging status fails to be displayed.
Resolution:	This issue has been corrected.
Reference number:	CR00511414
Symptom:	"Discharge C" fails to show in the global area.
Resolution:	This issue has been corrected.

Reference number:	CR00510128
Symptom:	I-Limit in Test mode fails to become immediately affected.
Resolution:	This issue has been corrected
Reference number:	CR00510139
Symptom:	When an empty model is selected from the Home screen in SIM mode, it should cause an error.
Resolution:	This issue has been corrected by adding a Dead Socket Port (5030)
Reference number:	CR00510003
Symptom:	The :BATT:TEST:MEAS:EVOC? Command times out when running stress test with GPIB.
Resolution:	This issue has been corrected.
Reference number:	CR00510773
Symptom:	Two focuses on entry screen.
Resolution:	This issue has been corrected
Reference number:	CR00509552
Symptom:	When OXP happens, the calculation results are only partly displayed.
Resolution:	This issue has been corrected.
Reference number:	CR00510482
Symptom:	LXI: Copy All on Data Logging loses data after an overflow happens.
Resolution:	This issue has been corrected.
Reference number:	CR00509551
Symptom:	LXI: when OXP occurs, Vmax, Vmin, and Vavg are displayed incorrectly.
Resolution:	This issue has been corrected.

ENHANCEMENTS

Reference number:	CR00512748
Enhancement:	Implement Test script function..
Reference number:	CR00512749
Enhancement :	Implement capacitance measurement.

VERSION 1.01 RELEASE NOTES

OVERVIEW

Version 1.01 is the initial release for 2281S.
It provides the functionality of the 2281S series power supply and battery simulator.