

Keithley Instruments  
 28775 Aurora Road  
 Cleveland, Ohio 44139  
 1-800-833-9200  
[tek.com/keithley](http://tek.com/keithley)

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**NEW AND IMPROVED**

- Added support for Windows® 11
- Supports Keithley Series 2280S-32-6 and 2280S-60-3 Precision Measurement, Low Noise, Programmable DC Power Supplies
- Supports Keithley 2231A-30-3 Triple-Channel Bench Power Supply
- Supports Keithley Series 2220 and 2230 Multi-Channel Programmable DC Power Supplies
- Supports Keithley Model 2306-LAN Dual Channel Battery/Simulator
- Supports Keithley Series 2281S-20-6 Dynamic Battery Simulator only as a power supply
- Ability to independently force 0 volts on all channels using a multi-channel power supply
- Ability to independently control dwell-time settings when using a multi-channel power supply
- Ability to turn off voltage measurements and collect programmed voltage values to improve speed when the Measure Voltage option is cleared
- Ability for the power supply app to indicate tool-tip information for all settings and improved data collection speed

**KICKSTART SOFTWARE****IMPROVEMENTS**

<b>Issue number:</b>	KS-5063
<b>Description:</b>	Added automatic database recovery feature. This will allow you to automatically recover most of your run data from a corrupted database file.
<b>Issue number:</b>	KS-4575
<b>Description:</b>	KickStart is now supported on Windows® 11.
<b>Issue number:</b>	KS-4052
<b>Description:</b>	KickStart apps now export statistics along with data. This is supported for both .csv and .xlsx formats.



## USAGE NOTES

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<b>Issue number:</b>	KS-4891
<b>Description:</b>	Instruments that are powered off and connected to a serial adapter may show up in the instruments list. However, they cannot be used until powered on.

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## FIXED ISSUES

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<b>Issue number:</b>	KS-5058
<b>Description:</b>	When performing a .csv data export operation on a Windows® installation for German language, the header information was not rendered correctly. This issue has been resolved.
<b>Issue number:</b>	KS-4835
<b>Description:</b>	KickStart software will crash when you select the Manage License button. This issue has been resolved.
<b>Issue number:</b>	KS-4561
<b>Description:</b>	Due to certain Windows® settings, tooltips in KickStart may appear on the left side of the mouse cursor and cause interference with other KickStart settings. In some cases, you may observe tooltips flickering. This issue has been resolved.

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## DATA LOGGER APP

### KNOWN ISSUES

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<b>Issue number:</b>	KS-4146
<b>Description:</b>	In the Data Logger app, KickStart consumes large amounts of memory when running scans of large channel counts with the Model 3706A.

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## DMM APP

### FIXED ISSUES

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<b>Issue number:</b>	KS-5053
<b>Description:</b>	Setting a negative source value for the Model 6517B in 2-wire resistance mode sends a negative value for the measure range, causing a parameter out of range error. This issue has been resolved

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## I-V CHARACTERIZER APP

### IMPROVEMENTS

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<b>Issue number:</b>	KS-4642
<b>Description:</b>	The I-V Characterizer app List Sweep mode now supports the "Export to File" feature which allows you to export the List Sweep table to a .csv file.

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<b>Issue number:</b>	KS-4222
<b>Description:</b>	The upper limit of the repeat count has been increased from 10 to 1,000,000. However, the data collection is limited by the amount of free memory available in the instrument. You should consider adjusting the sweep points and repeat count to accommodate the instrument buffer capacity, otherwise you may see errors.

## KNOWN ISSUES

<b>Issue number:</b>	KS-4718
<b>Description:</b>	When using the I-V Characterizer app with a Model 2651A SMU connected over LAN, generating pulses, and measuring the complete pulse at certain sample rates and source/sweep point combinations, the instrument generates an error message: "Error -285: TSP Syntax error at line 2: '=' expected near '<of>'"
<b>Workaround:</b>	Reduce the sample rate or the number of source/sweep points. Alternatively, you can use the GPIB interface to communicate with the instrument.
<b>Issue number:</b>	KS-4383
<b>Description:</b>	When you open the I-V Characterizer app and switch between DC and Pulse source, or Voltage and Current functions, the previous source and measure settings are not retained.
<b>Workaround:</b>	Re-apply the settings.
<b>Issue number:</b>	KS-4370
<b>Description:</b>	When using the I-V Characterizer app with more than one channel in List sweep mode, and a row in the list is deleted, the last row may be out of order.
<b>Workaround:</b>	Toggle between channels by clicking on the channel blocks will correct the order.
<b>Issue number:</b>	KS-4297
<b>Description:</b>	When selecting Complete pulse measurement mode using the I-V Characterizer app, with a Model 2461 SMU to output pulses and measuring the complete waveform, there are gaps in the data due to instrument limitation in processing the data. The collected data is complete and correct. However, the time taken for the instrument to process the data is evident and can be seen as gaps between measurement groups.
<b>Issue number:</b>	KS-3673
<b>Description:</b>	When using the I-V Characterizer app with a 2657A instrument in pulse mode with default settings, an "ADC trigger failure" error is generated by the instrument.
<b>Issue number:</b>	KS-3667
<b>Description:</b>	In the I-V Characterizer app, if the graph is visible while running a pulsed I-V test, the graph may stop updating.
<b>Workaround:</b>	To correct this issue, press the autoscale button.

## USAGE NOTES

<b>Issue number:</b>	KS-4679
<b>Description:</b>	All instruments in a TSP-Link network must be powered on for the entire network to function correctly.

<b>Issue number:</b>	KS-4154
<b>Description:</b>	<p>In the updated version of KickStart 2.6.0, if you open a project from KickStart software versions 2.0.0 through 2.5.0 using the I-V Characterizer test, some settings that were stored in previous projects will not convert to version 2.6.0. This is due to moving some channel specific settings to the common settings section. This is apparent when you open a multi-channel test, and the following settings now apply to all channels:</p> <ul style="list-style-type: none"> <li>• Repeat Count</li> <li>• Source/Sweep Points</li> <li>• Source to Measure Delay</li> <li>• NPLC</li> </ul> <p>If you have a multi-channel test, and the settings do not match in all the channels, the largest value will be chosen for all channels.</p>

**FIXED ISSUES**

<b>Issue number:</b>	KS-4737
<b>Description:</b>	<p>When multiple runs are selected from the run history for comparison, the settings tab remained visible. This allowed the user to change their settings while comparing runs. This was not intended, and the settings tab is now hidden when comparing runs.</p> <p>This issue has been resolved.</p>
<b>Issue number:</b>	KS-4728
<b>Description:</b>	<p>In certain circumstances, exporting data with Complete Pulse and DC Measurements in the same test can cause the I-V Characterizer app to stop working.</p> <p>This issue has been resolved.</p>
<b>Issue number:</b>	KS-4684
<b>Description:</b>	<p>When using the I-V Characterizer app to perform nested sweeps (in stepper-sweeper mode), if the stepper channel is set to perform a dual sweep, the graph does not plot the descending steps of the sweep.</p> <p>This issue has been resolved.</p>
<b>Issue number:</b>	KS-4672
<b>Description:</b>	<p>When running a multi-channel, I-V Characterizer test, the SMU outputs would not turn off when the test is complete. This caused test execution time to be longer than required.</p> <p>This issue has been resolved.</p>
<b>Issue number:</b>	KS-4278
<b>Description:</b>	<p>Dual SMU complete pulse export is malfunctioning.</p> <p>This issue has been resolved.</p>

## POWER SUPPLY APP

### IMPROVEMENTS

<b>Issue number:</b>	KS-4846, KS-4844, KS-4843, KS-4805, KS-4804, KS-4502
<b>Description:</b>	The Power supply app now supports the Keithley Model 2231A-30-3 Triple-Channel Bench Power Supply and the Keithley Series 2200, 2260B series Programmable DC Power Supplies, and the Model 2306-LAN Dual Channel Battery Charger/Simulator.
<b>Issue number:</b>	KS-4722
<b>Description:</b>	When using a multi-channel power supply model with the Power Supply app in KickStart, you can now independently force 0 volts on all the channels that are configured to run in List Sweep mode. This is a one-time operation.
<b>Issue number:</b>	KS-4721
<b>Description:</b>	The Power Supply app now allows you to independently control dwell-time settings when using a multi-channel power supply model.
<b>Issue number:</b>	KS-4345
<b>Description:</b>	The Power supply app now allows you to turn off voltage measurements by clearing the Measure Voltage option. When cleared, the programmed voltage values are collected.
<b>Issue number:</b>	KS-4064
<b>Description:</b>	Added tool-tip information for all settings in the Power Supply app.
<b>Issue number:</b>	KS-4053
<b>Description:</b>	Improved the data collection speed of the Power Supply app.

### FIXED ISSUES

<b>Issue number:</b>	KS-4724
<b>Description:</b>	In the Power Supply app, when you change the bias level, the value would not update in the user interface display.  This issue has been resolved.
<b>Issue number:</b>	KS-4723
<b>Description:</b>	When using the Power Supply app with a multi-channel power supply model, with channels operating in mixed mode (Bias and List Sweep), data in the table and graph did not update for the Bias channel.  This issue has been resolved.
<b>Issue number:</b>	KS-545
<b>Description:</b>	When using the Power Supply app with Model 2280 and setting the overvoltage protection (OVP) level lower than the source level, the instrument will generate an error. To prevent this, the Power Supply app no longer allows you to set the OVP less than the source level.  This issue has been resolved.

**PULSING FOR INSTRUMENTS**

**Issue number:** KS-4240

**Description:** The following table indicates the bias level and limit values allowed in KickStart during pulsing for each instrument series:

Series 260x				
Region	Source voltage	Max current limit	KickStart max bias level	KickStart max bias limit
1	40 V	1 A	40 V	1 A
1	6 V	3 A	40 V*	1 A
2	40 V	1.5 A	40 V	1 A
3	35 V	5 A	40 V	1 A
4	20 V	10 A	40 V	1 A
5	6 V	5 A	Not supported	Not supported
Region	Source current	Max voltage limit	KickStart max bias level	KickStart max bias limit
1	1 A	40 V	3 A*	6 V
1	3 A	6 V	3 A	6 V
2	1.5 A	40 V	3 A	6 V
3	5 A	35 V	3 A	6 V
4	10 A	20 V	3 A	6 V
5	5 A	6 V	Not supported	Not supported
Series 261x/263x				
Region	Source current	Max voltage limit	KickStart max bias level	KickStart max bias limit
1	100 mA	200 V	1 A*	20 V
1	1.5 A	20 V	1 A	20 V
2	1 A	180 V	1 A	20 V
3**	1 A	200 V	1 A	20 V
4	10 A	5 V	1 A	20 V
Region	Source voltage	Max current limit	KickStart max bias level	KickStart max bias limit
1	200 V	100 mA	200 V	100 mA
1	20 V	1.5 A	200 V*	100 mA
2	180 V	1 A	200 V	100 mA
3	200 V	1 A	200 V	100 mA
4	5 V	10 A	200 V*	100 mA

\*In some cases, KickStart will allow higher bias levels that are not supported by the instrument.

\*\*KickStart allows 1 A @ 200 V pulsing that may yield unexpected pulse characteristics; this will be corrected in a future release.

## GENERAL INFORMATION

### SUPPORTED MODELS

This software is intended for use with the following Keithley Instruments and Tektronix product models using USB, LAN (ethernet), or GPIB interfaces. The use of RS-232 (serial) is not supported. You can find the supported operating systems here: [Supported operating systems](#).

#### Product category

##### DAQ

2700	2701	2750	3706A	3706A-NFP	DAQ6510*
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\*Includes DAQ6510-US

##### Switch cards

2000-SCAN	2001-TCSCAN	3720	3721	3722	3723
3724	7700	7701	7702	7703	7706
7707	7708	7710			

##### DMM

2000	2010	2100	2110	DMM6500*	DMM7510*
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\*Includes DMM6500-US, DMM-7510-US, DMM-7510-NFP, DMM7510-NFP-US, DMM7510-RACK, DMM7510-RACK-US, DMM7510-NFP-RACK, DMM7510-RACK-US

##### SMU

2400	2400-C	2401	2410	2410-C	2420
2420-C	2425	2425-C	2430	2430-C	2440
2440-C	2450	2460	2461	2470	2601A
2601B	2602A	2602B	2604B	2606B	2611A
2611B	2612A	2612B	2614B	2634B	2635B
2636A	2636B	2651A	2657A	2601B-PULSE	

##### Sensitive

6430	6485	6487	6514	6517A	6517B
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Power Supply					
222x	223x	2280S-32-6	2280S-60-3	2281S-20-6	2200-20-5
2200-30-5	2200-32-3	2200-72-1	2200-60-2	2260B-30-36	2260B-80-13
2260B-250-4	2260B-800-1	2260B-30-72	2260B-80-27	2260B-30-108	2260B-250-9
2260B-800-2	2260B-250-13	2260B-800-4	2231A-30-3	2306-LAN	
Oscilloscope					
DPO3012	DPO3014	DPO3032	DPO3034	DPO3052	DPO3054
DPO4014B	DPO4032	DPO4034	DPO4034B	DPO4054	DPO4054B
DPO4102B	DPO4102B-L	DPO4104	DPO4104B	DPO4104B-L	MDO3012
MDO3014	MDO3022	MDO3024	MDO3032	MDO3034	MDO3052
MDO3054	MDO3102	MDO3104	MDO32	MDO34	MDO4014-3
MDO4014B-3	MDO4024C	MDO4034-3	MDO4034B-3	MDO4034C	MDO4054-3
MDO4054-6	MDO4054B-3	MDO4054B-6	MDO4054C	MDO4104-3	MDO4104-6
MDO4104B-3	MDO4104B-6	MDO4104C	MSO3012	MSO3014	MSO3032
MSO3034	MSO3052	MSO3054	MSO4012B	MSO4012B-L	MSO4032
MSO4034	MSO4034B	MSO4054	MSO4054B	MSO4104	MSO4104B
MSO4012B-L	TBS1000C	TBS1022	TBS1032B	TBS1032B-EDU	TBS1042
TBS1052B	TBS1052B-EDU	TBS1052C	TBS1062	TBS1064	TBS1072B
TBS1072B-EDU	TBS1072C	TBS1102	TBS1102C	TBS1104	TBS1152
TBS1152B	TBS1154	TBS1202B	TBS1202C	TBS2072B	TBS2074B
TBS2102B	TBS2104B	TBS2202B	TBS2204B	TBS1202B-EDU	TBS2000B
TBS2072	TBS2074	TBS2102	TBS2104	TBS2202	TBS2204
TDS210	TDS220	TDS224	TDS1001	TDS1001B	TDS1001C-SC
TDS1002	TDS1002B	TDS1002C-SC	TDS1012	TDS1012B	TDS1012C-SC
TDS2001C	TDS2002	TDS2002B	TDS2002C	TDS2004	TDS2004B
TDS2004C	TDS2012	TDS2012B	TDS2012C	TDS2014	TDS2014B
TDS2014C	TDS2022	TDS2022B	TDS2022C	TDS2024	TDS2024B
TDS2024C					



## SUPPORTED OPERATING SYSTEMS

KickStart is supported on the following operating systems:

Windows® 11 and Windows® 10, 64-bit; KickStart version 2.0.0 and newer  
Windows® 7 and Windows® 8; however, KickStart is no longer being tested or updated to support these obsolete operating systems

## SUPPORTED COMMUNICATION INTERFACES

USB  
LAN  
GPIB

## MINIMUM PC REQUIREMENTS

Processor: Dual-core processor @ 2 GHz or better  
NTFS file system  
RAM: 8 GB  
Display resolution: Minimum 1920 × 1080 recommended  
Disk drive space required: 8 GB of free space

## RECOMMENDED PC REQUIREMENTS

Processor: 4-core processor @ 2 GHz or better  
NTFS file system  
RAM: 16GB or more  
Display resolution: Minimum 1920 × 1080 recommended  
Disk drive space recommended: 100 GB or more free space for data storage

## SOFTWARE PREREQUISITES

NI VISA™ 17.5 Runtime Engine or later (installation package included in KickStart installer)  
Microsoft® Visual Studio® C++ 2013 x64 Redistributable Package  
Microsoft® Visual Studio® C++ 2017 x64 Redistributable Package  
.NET Framework 4.7.

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## NOTE

When installing KickStart without an internet connection, make sure that the last three software prerequisites are installed on your computer before installing. The NI VISA 17.5 Runtime Engine is packaged with the KickStart installer.

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## INSTALLATION INSTRUCTIONS

### *To install KickStart software:*

1. Download the KickStart 2.7.0 installer from [tek.com/keithley-kickstart](http://tek.com/keithley-kickstart).
2. Unzip the file and run `KickStartSetup.exe`.
3. Follow the installation instructions and accept all default settings.

The required files are installed in the following default location: `C:\Program Files\Keithley Instruments\KickStart`.

KickStart version 2.7.0 requires a software license. You can activate a one-time 30-day free trial with most KickStart apps. For more information on licenses available for KickStart version 2.7.0, please visit [tek.com/keithley-kickstart](http://tek.com/keithley-kickstart).

For more information on KickStart, see the *KickStart Quick Start Guide* (document number: KKS-903-01), available online at [tek.com/keithley-kickstart](http://tek.com/keithley-kickstart).

**KICKSTART INSTRUMENT CONTROL SOFTWARE HISTORY**

<b>Version</b>	<b>Release date</b>
2.7.0	November 2021
2.6.0	September 2021
2.5.0	April 2021
2.4.0	November 2020
2.3.0	April 2020
2.2.1	February 2020
2.2.0	November 2019
2.1.1	September 2019
2.1.0	June 2019
2.0.6	February 2019
2.0.5	November 2018
2.0.4	October 2018
2.0.3	August 2018
2.0.2	July 2018
2.0.1	July 2018
2.0.0	April 2018