

Keithley Instruments
 28775 Aurora Road
 Cleveland, Ohio 44139
 1-800-833-9200
tek.com/keithley

Contents

General Information	1
Version 2.6.0 release notes	5

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*
------	------	------	-------	-----------	----------

*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*
------	------	------	------	----------	----------

*Includes DMM6500-US, DMM-7510-US, DMM-7510-NFP, DMM7510-NFP-US, DMM7510-RACK, DMM7510-RACK-US, DMM7510-NFP-RACK, DMM7510-RACK-US



Product category**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
------	------	------	------	-------	-------

Power Supply

222x	223x	2280S-32-6	2280S-60-3	2281S-20-6	
------	------	------------	------------	------------	--

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		

Product category

Oscilloscope

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® 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

GPB

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.

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.

INSTALLATION INSTRUCTIONS

To install KickStart software:

1. Download the KickStart 2.6.0 installer from 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 2.6.0 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 2.6.0, please visit 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.

KICKSTART INSTRUMENT CONTROL SOFTWARE HISTORY

Version	Release date
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

VERSION 2.6.0 RELEASE NOTES

VERSION 2.6.0 KNOWN ISSUES

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.

Issue number:	KS-3667
Description:	In the I-V Characterizer app, if the graph is visible while running a pulsed I-V test, the graph may stop updating.
Workaround:	To correct this issue, press the autoscale button.
Issue number:	KS-3673
Resolution:	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.
Issue number:	KS-4146
Description:	In the Data Logger app, KickStart consumes large amounts of memory when running scans of large channel counts with the Model 3706A.
Issue number:	KS-4297
Description:	When selecting Complete pulse measurement mode using the I-V Characterizer app, with a Model 2461 SMU to output pulses and measure 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.
Issue number:	KS-4370
Description:	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.
Workaround:	Toggleing between channels by clicking on the channel blocks will correct the order.
Issue number:	KS-4383
Description:	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.
Workaround:	You will have to re-apply the settings.
Issue number:	KS-4684
Description:	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.
Issue number:	KS-4718
Description:	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 '<eof>'"
Workaround:	Reduce the sample rate or the number of source/sweep points, alternatively, you can use the GPIB interface to communicate with the instrument.

VERSION 2.6.0 ENHANCEMENTS

Issue number:	KS-1854
Improvement:	Added a repeat field to the I-V Characterizer app that allows you to define how many times the sweep is repeated. This setting is only available when using sweep and list sweep modes. It is not available when using bias or pulse train modes.
Issue number:	KS-3435, KS-3442, KS-3446
Improvement:	Added configuration support to the I-V Characterizer app to run multiple DC and Pulse channels within the same test. These channels can also be configured to run in a stepper-sweeper configuration.
Issue number:	KS-3437, KS-3443
Improvement:	Added waveform visualizer to the I-V Characterizer app so that you can quickly confirm the output pulse shape, measurement windows, and timings.
Issue number:	KS-3444
Improvement:	Added channel summary blocks to the I-V Characterizer app so that you can quickly verify their channel settings.
Issue number:	KS-4314
Improvement:	Enhanced measurement timing with the Measure Window indicator that is now located above the NPLC input control. When the NPLC is adjusted, the Measurement Window field is automatically updated to help you see the connection between the two settings.
Issue number:	KS-4366
Improvement:	Improved the standard deviation statistics in the Table to show either the absolute value or the percentage of the mean. Instead of augmenting standard deviation, the table contains a new row indicating the coefficient of variance (CV) factor with units in percentage.
Issue number:	KS-4468
Improvement:	Improved the I-V Characterizer app user experience to allow the ability to add, remove, or replace an instrument directly in the app by selecting Add Instrument or Remove/Swap instrument buttons.

VERSION 2.6.0 USAGE NOTES

Issue number:	KS-4154
Description:	<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">• Repeat Count• Source/Sweep Points• Source to Measure Delay• NPLC <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>
Issue number:	KS-4456
Description:	Starting with KickStart version 2.6.0, the one-time 60-day trial for KickStart has changed to a 30-day trial.
Issue number:	KS-4561
Description:	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.
Workaround:	<ol style="list-style-type: none">1. Click the windows key and "R" on your keyboard at the same time. The Run command prompt opens.2. Copy and paste the following to the command prompt: explorer shell:::{80F3F1D5-FECA-45F3-BC32-752C152E456E}3. Your Tablet PC Settings window will open. Click the Other tab.4. Select the Left-handed radio button and click OK.
Issue number:	KS-4679
Description:	All instruments in a TSP-Link network must be powered on for the entire network to function correctly.

VERSION 2.6.0 RESOLVED ISSUES

Issue number:	KS-684
Symptom:	When using the I-V Characterizer app to perform sweeps that start at a negative value and end at a positive value, the step size calculation was incorrect.
Resolution:	This has been resolved.
Issue number:	KS-2023
Symptom:	When using the I-V Characterizer app to generate pulses at a specific pulse width and measure at the top of the pulse, the width of the pulses output by the instrument were inaccurate.
Resolution:	This has been resolved.
Issue number:	KS-2997
Symptom:	When using the Data Logger app, the time to configure the instrument after clicking on the Run button was unnecessarily long.
Resolution:	This has been resolved.
Issue number:	KS-3730, KS-3751, KS-3778, KS-3903
Symptom:	Using I-V Characterizer app with a 2461 SMU to generate high current pulses did not work correctly.
Resolution:	This has been resolved.
Issue number:	KS-4285
Symptom:	Running scans in the Data Logger app using a DMM6500 with 2000-SCAN card in Chinese or Japanese local language caused the app to stop prematurely.
Resolution:	This has been resolved.
Issue number:	KS-4315, KS-4560
Symptom:	Prior versions of KickStart software contained some Chinese and Japanese technical language translations that were not aligned with native speakers' expectations.
Resolution:	This has been resolved.
Issue number:	KS-4320
Symptom:	When using the I-V Characterizer app to generate pulses and collect complete pulse measurements, the graph default x-axis selection was inconsistent regarding current and voltage source functions.
Resolution:	This has been resolved.
Issue number:	KS-4354
Symptom:	When the I-V Characterizer app was configured to perform a linear sweep, the source limit was incorrectly set to 10% of the requested value.
Resolution:	This has been resolved.

Issue number:	KS-4419
Symptom:	When using the I-V Characterizer app in bias mode, with the Series 2600 SMUs, the specified measure delay was not enforced, and the readings returned prematurely, and potentially unsettled.
Resolution:	This has been resolved.
Issue number:	KS-4423
Symptom:	There were instances when users stopped their I-V Characterizer tests, using the Series 2600B instruments, and the outputs did not turn off.
Resolution:	This has been resolved.
Issue number:	KS-4427
Symptom:	When using the I-V Characterizer app with Model 2470 SMU, the 1000 V range was missing.
Resolution:	This has been resolved.
Issue number:	KS-4433
Symptom:	Configuring the I-V Characterizer app to output a single pulse when using a 2461 SMU was not allowed. Now you can output a single pulse by selecting Train as the source mode.
Resolution:	This has been resolved.
Issue number:	KS-4476
Symptom:	When using the power supply app with a Model 2230G power supply, while performing long duration tests (for example, 100 to 1000 hours), the power supply turned off with a timeout error within 50 to 80 minutes.
Resolution:	This issue had been resolved.
Issue number:	KS-4459, KS-4623
Symptom:	Configuring a voltage sweep using any 26xx SMU in the I-V Characterizer app would ignore the current limit specified by the user.
Resolution:	This has been resolved.
Issue number:	KS-4541
Symptom:	In the DMM app, if an instrument was replaced with another instrument, the original instrument was not cleared properly for reuse.
Resolution:	This has been resolved.