Agilent 14585A Control and Analysis Software for Advanced Power Supplies

Data Sheet

Easily access the advanced features of the Advanced Power System N7900 Series and N6705 DC power analyzer

Free 30-day trial!

Download software at:
www.agilent.com/find/14585A

Supported models:

N6705A, N6705B DC power analyzer mainframe
  All N6700 Series DC power modules

Advanced Power System N7900 Series dynamic DC power supplies
  N7950A - N7977A with or without N7909A power dissipater unit(s)

Anticipate___Accelerate___Achieve

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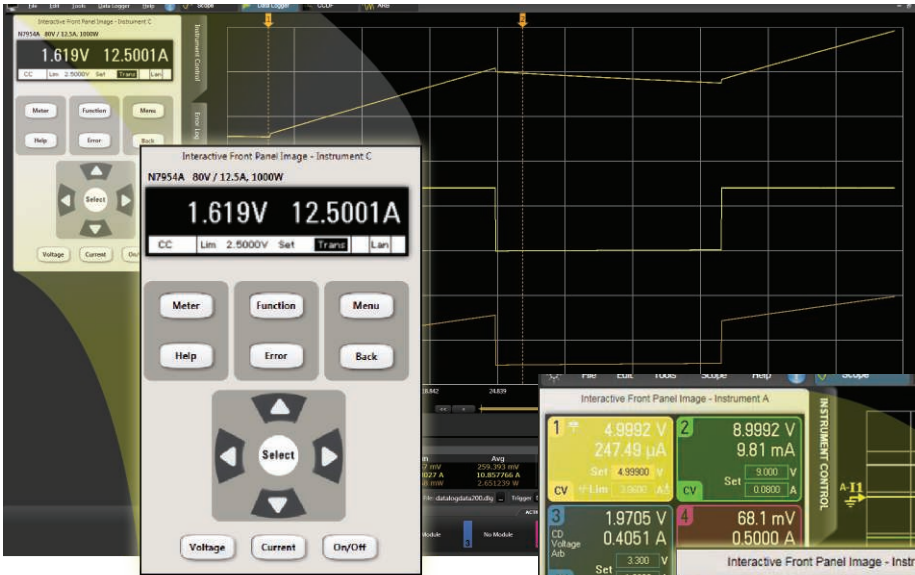# Easily Access Your Power Supply's Advanced Sourcing and Measurement Features

The Agilent 14585A control and analysis software for advanced power supplies was designed to give you fast and easy access to the advanced sourcing and measurement functionality of your N6705 DC power analyzer and/or Advanced Power System (APS) N7900 Series power supplies without any programming. It is a flexible R&D tool for any application. It can control any of the N6700 family's more than 30 DC power modules when installed in a N6705 mainframe as well as any of the APS N7900 Series' 12 models. When used to control an N6781A SMU, it can be used for advanced battery drain analysis applications.

Compare features

N6705A, N6705B DC power analyzer	new! Advanced Power System N7900 Series
• Complements the N6705 DC power analyzer's front panel controls	• Provides easy access to the advanced features of the N7900 without any programming
• Controls and analyzes data from up to four N6705 DC power analyzer mainframes and any installed modules at once — that's up to 16 power supplies simultaneously.	• Controls and analyzes data from up to four N7900 Advanced Power System models
• Controls any of the more than 30 N6700 DC power modules when installed in the N6705 DC power analyzer	

- Control any combination of four N6705 or N7900 models
- Four modes of operation: scope (short-term waveform capture), data logger (long-term waveform capture), CCDF (statistical analysis), and ARB (waveform creation)
- Enhanced control and analysis of data — use familiar PC controls and large display
- Graphical user software — no programming required
- Accurately capture current drain measurements from seconds to days at up to 200,000 measurements per second (in scope mode) directly to a PC
- Advanced marker readout (min, avg, max, RMS, peak-to-peak, charge/energy)
- Easily create complex waveforms to stimulate or load a DUT by inputting a formula, choosing from built-in waveforms or importing waveform data
- Data log measurements directly to a PC
- Export data to a Microsoft Excel spreadsheet or text file
- Capture a waveform, then "play" it back — use scope or data logger to capture a waveform, then use the power supply's source/sink function to reproduce it
- Apply mathematic functions to waveforms
- Name and choose colors for waveform traces for easy identification
- Perform statistical analysis (CCDF) of power consumption

Control

Access all the features of the power supply you are connected to via a virtual front panel of the instrument or the scope, data logger, CCDF, or ARB features of the software.

14585A connected to an N7954A

Measurements: Scope and data logger modes

Setup short-term measurements using scope mode or long-term measurements using data logger mode to gain insights into your device's power consumption quickly and easily. If you know how to use an oscilloscope, you'll find the software easy and intuitive to use.
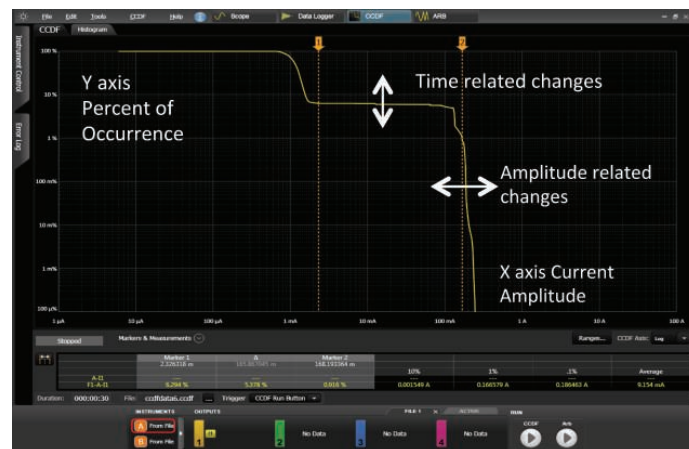

14585 connected to an N6705B with four DC power modules installed

Statistical analysis: CCDF mode

To help you analyze distribution profiles, the 14585A software includes a complementary cumulative distribution function (CCDF).[1]

This function provides a concise way to display long-term dynamic random current drain. It is also an effective way to quantify the impact of design changes— hardware, firmware or software— on current flows in your device.
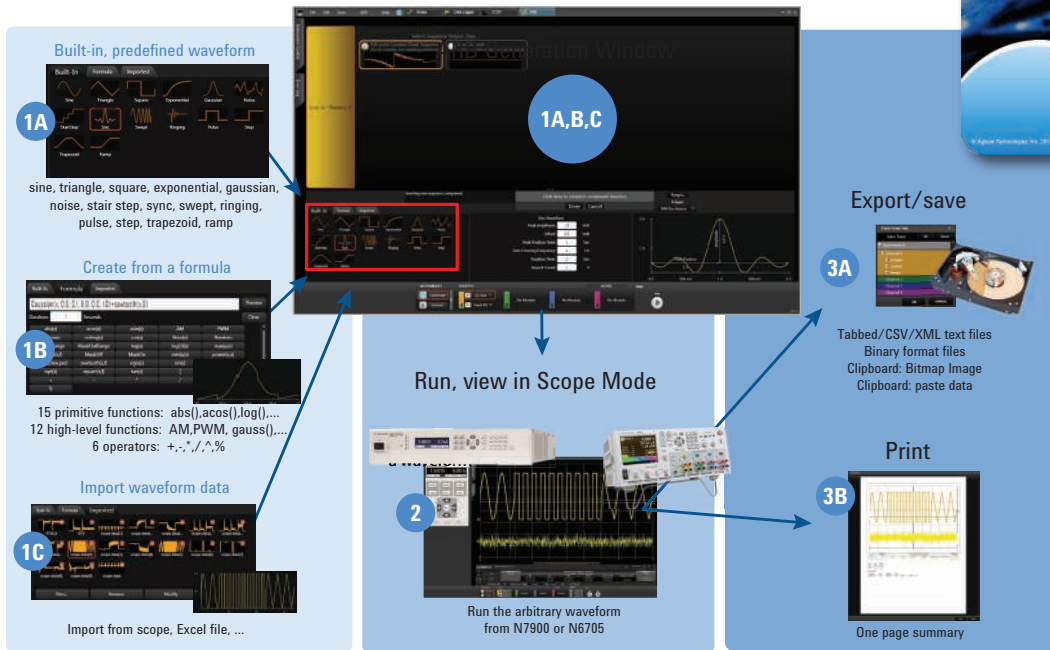

This CCDF measurement reveals the key attributes of standby current in a smartphone.

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1.   The CCDF value equals (1 – CDF) and the CDF is the area under the probability density function (PDF) curve. Because the CDF ranges from 0 to 100 percent probability, the CCDF ranges from 100 to 0 percent probability.

Arbitrary waveforms

Easily create complex waveforms to stimulate or load a DUT by inputting a formula, choosing from built-in or importing waveform data.
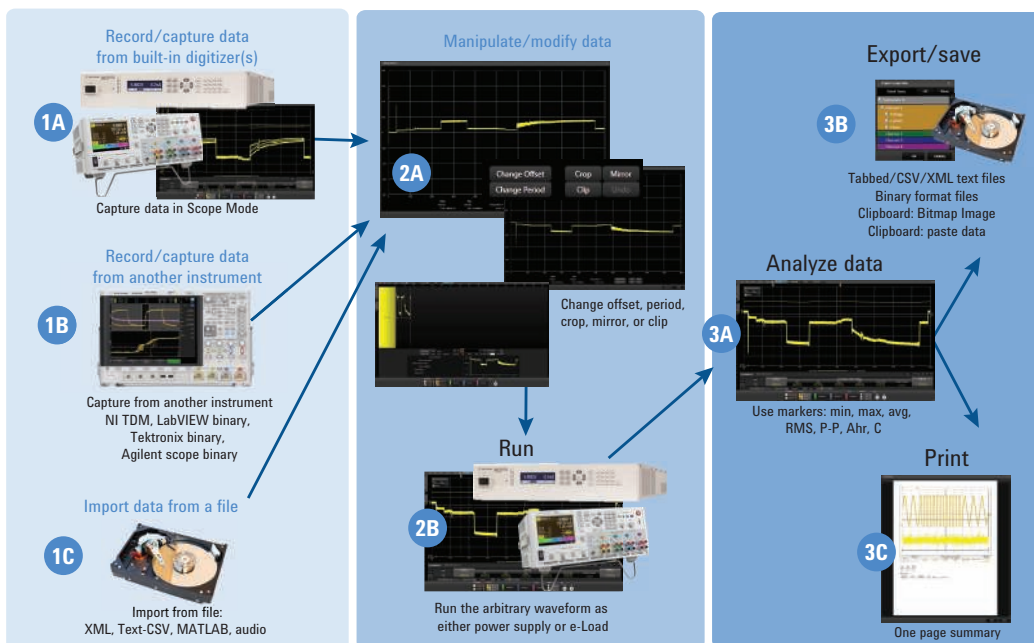
Waveform generation using the 14585A

Built-in, predefined waveform

1A sine, triangle, square, exponential, gaussian, noise, stair step, sync, swept, ringing, pulse, step, trapezoid, ramp

Create from a formula

1B 15 primitive functions: abs(),acos(),log(),...
12 high-level functions: AM,PWM, gauss(),...
6 operators: +,-,*,/,^,%

Import waveform data

1C Import from scope, Excel file, ...

1A,B,C

Run, view in Scope Mode

2 Run the arbitrary waveform from N7900 or N6705

Export/save

3A Tabbed/CSV/XML text files
Binary format files
Clipboard: Bitmap Image
Clipboard: paste data

Print

3B One page summary

Easily create arbitrary waveforms with only a few clicks.

Record and playback – Combining the power of measurement and source/sink capabilities

Use the scope or data logger modes to capture a waveform and easily transfer the data to the ARB function of the software. Once transferred, the data can be used to reproduce the waveform via the power supply's source or sink (electronic load) capabilities.

Capturing and "playing back" data

Record/capture data from built-in digitizer(s)

1A Capture data in Scope Mode

Record/capture data from another instrument

1B Capture from another instrument
NI TDM, LabVIEW binary,
Tektronix binary,
Agilent scope binary

Import data from a file

1C Import from file:
XML, Text-CSV, MATLAB, audio

Manipulate/modify data

2A Change offset, period, crop, mirror, or clip

Run

2B Run the arbitrary waveform as either power supply or e-Load

Export/save

3B Tabbed/CSV/XML text files
Binary format files
Clipboard: Bitmap Image
Clipboard: paste data

Analyze data

3A Use markers: min, max, avg, RMS, P-P, Ahr, C

Print

3C One page summary

Record a waveform, then "play" it back.

Free trial and Licensing

The 14585A software is available to download and use free of charge. A license is required when connecting the 14585A software to an N6705A/B DC power analyzer mainframe or an APS N7900 Series model. The license resides inside the instrument, not on the PC, and is specific to the instrument's model and serial number. Any copy of the 14585A software can connect to any N6705A/B mainframe and/or N7900 APS as long as the instrument has a license installed in it. Connect to your instrument for free with the built-in 30-day trial license.

How to order a license for the N6705

Situation	How to get a license
I do not own a DC power analyzer mainframe yet...	When ordering your new N6705B mainframe, add Option 056 to the order. A license will be delivered with your new N6705B mainframe.
I already own an N6705A or N6705B mainframe...	You can add a license to your currently owned N6705A or N6705B by ordering the N6705U-056. A license key will be provided to you to activate the license on your mainframe.

How to order a license for the N7900

In all cases, order product number 14585A as a separate line item.

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