

BV9200B PathWave BenchVue Advanced Power Control and Analysis Software

Introduction

The BV9200B and BV9201B PathWave BenchVue software from Keysight Technologies are advanced tools designed for easy access to sophisticated sourcing and measurement capabilities in the N6705 DC power analyzer, RP7900 Series Regenerative Power System, and Advanced Power System (APS) N7900 Series power supplies. These software solutions offer control over up to four instruments simultaneously (BV9200B) or a single instrument (BV9201B), making them versatile assets for research and development applications.



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PATHWAVE

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

The Keysight Technologies BV9200B and BV9201B PathWave BenchVue Advanced Power 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, RP7900 Series Regenerative Power System, and/or Advanced Power System (APS) N7900 Series power supplies without any programming. The BV9201B will allow user to control a single instrument, while the BV9200B will allow users to control up to four instruments at once. They can control any of the N6700 family's more than 36 DC power modules when installed in a N6705 mainframe, any of the RP7900 Series' 23 models, as well as any of the APS N7900 Series' 12 models. When used to control an N6781A SMU, they can be used for advanced battery drain analysis applications. The BV9200B and BV9201B also supports RP7900 Series operation in primary/secondary mode which enables parallel units to be configured easily for greater output current.



Compare Features

N6705 DC Power Analyzer

- Complements the N6705 DC power analyzer's front panel controls
- 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 any of the more than 36 N6700 DC power modules when installed in the N6705 DC power analyzer

Advanced Power System N7900 Series / RP7900 Series Regenerative Power System

- Provides easy access to the advanced features of the N7900 or RP7900 without any programming
- Controls and analyzes data from up to four N7900 Advanced Power System or RP7900 Series Regenerative Power System models

- Integrate software functions into users programming environment via API (automation programming interface)
- Control any combination of four N6705, N7900 or RP7900 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.

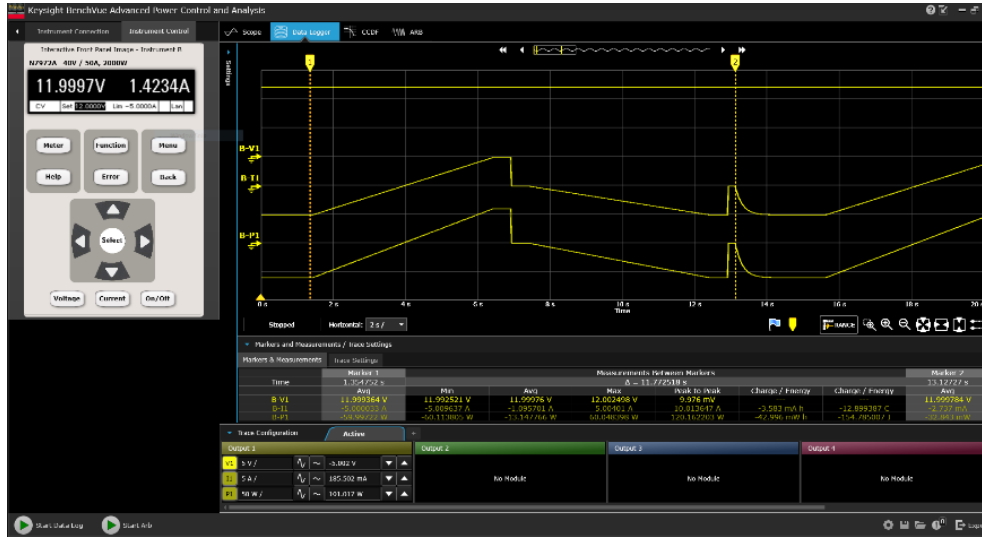


Figure 1. BV9200B connected to an N7972A

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.



Figure 2. BV9200B connected to an N6705 with four DC power modules.

Statistical analysis CCDF mode

To help you analyze distribution profiles, the BV9200B 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.

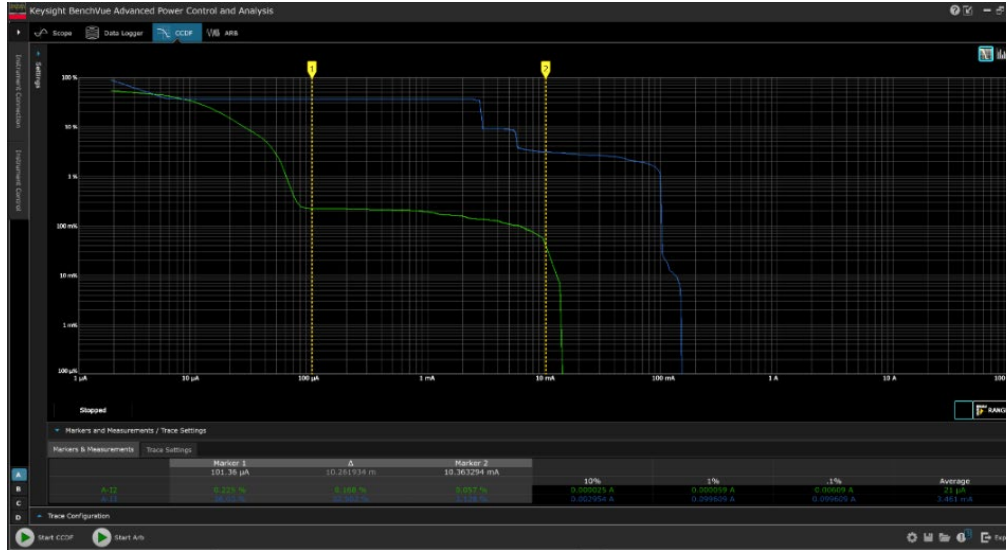


Figure 3. This CCDF measurement reveals the key attributes of current in a Bluetooth® low energy devices

Arbitrary waveforms

Easily create complex waveforms to stimulate or load a DUT by inputting a formula, choosing from built-in or importing waveform data.

Wave generation using the BV9200B

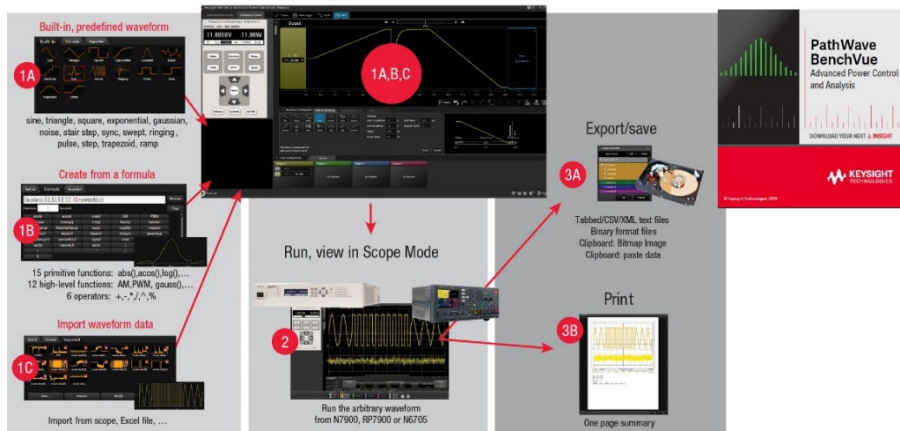


Figure 4. Easily create arbitrary waveforms with only a few clicks.

¹ The CCDF value equals $(1 - \text{CDF})$ 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.

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

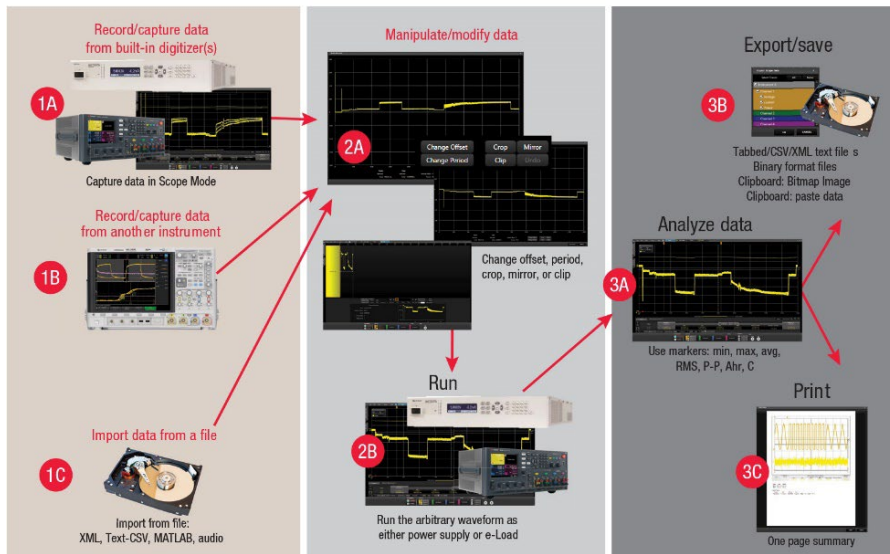


Figure 5. Record a waveform, then “play” it back.

Free Trial and Licensing

The BV9200B software is available to download with a 7-day free trial period. A license is required when connecting the BV9200B software to an N6705C DC power analyzer mainframe, a RP7900 Series model, or an APS N7900 Series model. The license resides on the PC or network depending on which type of license purchased. The BV9200B software can connect to any N6705C mainframe, and/or RP7900, and/or N7900 APS as long as a license is purchased. Connect to your instrument for free with the built-in 7-day trial license. After the 7 days trial period an extension trial is available for an additional 30 days once user credential are provided.

How to order a license :

Step 1 Determine the software model	Step 2 Choose License Term	Step 3 Select License Type
<p>Choose the right software model to meet adequate number of instruments being connected to software:</p> <ul style="list-style-type: none">• BV9201B: Allows only one instrument connection at a time.• BV9200B: Allows up to four instrument connection at a time.	<ul style="list-style-type: none">• Perpetual• Subscription	<ul style="list-style-type: none">• Node-locked• Transportable• USB portable• Floating<ul style="list-style-type: none">○ Single site○ Single region○ Worldwide
Step 4 Select duration	Step 5 Select USB HW Key	Step 6 Select Delivery Method
<ul style="list-style-type: none">• 12,24,36,60 months (Perpetual)• 3,6,12,24,36 months (Subscription)	<ul style="list-style-type: none">• Only applicable for USB portable licenses and if the customer currently does not possess an existing USB dongle	<ul style="list-style-type: none">• Paper Certificate• eMail and Paper Certificate• eMail Certificate



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For more information

Free 30-days Trial: [BV9200B- 4 Instrument Connection Trial](#)

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