

Agilent 33500 Series Waveform Generators: Using the Built-in Web Interface

Technical Overview

The Agilent 33500 Series waveform generators include a front panel that allows you to configure and control the instrument quickly and easily. When you are not physically near the instrument, you may control the instrument via the Standard Commands for Programmable Instruments (SCPI) programming language.

But what if you are not near the instrument and you are not a SCPI expert? Or suppose you are a SCPI expert, but you want to take advantage of your computer's large screen to control the instrument and view its configuration. Perhaps you are on a business trip or working from home and you want to control and monitor your instrument. For these situations and more, the answer is the

instrument's built-in Web interface. The Web interface also provides a convenient way to learn the SCPI programming language.

To begin using the Web interface, simply connect your waveform generator to the LAN and enter the instrument's IP address into your computer's Web browser. To find the instrument's IP address, look at the lower left corner of the screen during boot-up, or press **[System] > [I/O Config] > [LAN Settings]** on the front panel.

After you enter the IP address into your browser, you will see the Web interface's main screen, as shown in Figure 1.

Information about this Web-Enabled 33522B:	
Instrument:	33522B
Serial Number:	
Description:	
DNS Hostname:	
NetBIOS Name:	
mDNS Hostname:	
IP Address:	
VISA TCPIP Connect String:	

(Information specific to your instrument and LAN appears here)

[Turn On Front Panel Identification Indicator](#)

Advanced information about this Web-Enabled 33522B

Use the navigation bar on the left to access your 33522B and related information.

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LXI LAN eXtensions for Instrumentation

Figure 1. Main screen for a Web-enabled 33522B waveform generator



In some network configurations, a proxy server may prevent access to the instrument (“Page cannot be displayed”). In this situation, the proxy must be configured from the browser such that the proxy is not used for IP addresses within the range of those that can be assigned to the instrument.

When your waveform generator is connected to the LAN, you will see four small tabs on the upper left side of the screen, as shown in Figure 2.





	Home	Displays basic information about the instrument and its LAN connection
	Control	Allows you to configure and operate the instrument
	LAN	Allows you to configure the instrument for the LAN
	Help	Displays help on using the Web interface

Figure 2. The four tabs on a Web-enabled waveform generator and their functions

Configuring and Controlling Your Instrument via the LAN

Use the control tab on the Web interface to configure and control your waveform generator.

The typical use model for this page is described below. The numbers correspond to the numbers shown in Figure 3.

1. Select a radio button to indicate whether you want to configure Channel 1 or Channel 2.
2. Press a button to indicate whether you want to configure parameters relating to the waveform, modulation, sweep, burst, or output.
3. Configure the parameters relevant to the channel and the button selected in steps 1 and 2, above.
4. Press **Apply** to apply the saved parameters to the instrument, or press **Undo Changes** to undo the changes that you made to the parameters on the screen.

If you attempt to choose a different button in area 1 or 2 before you have applied your changes to the instrument, the Web interface will issue the reminder shown in Figure 4.

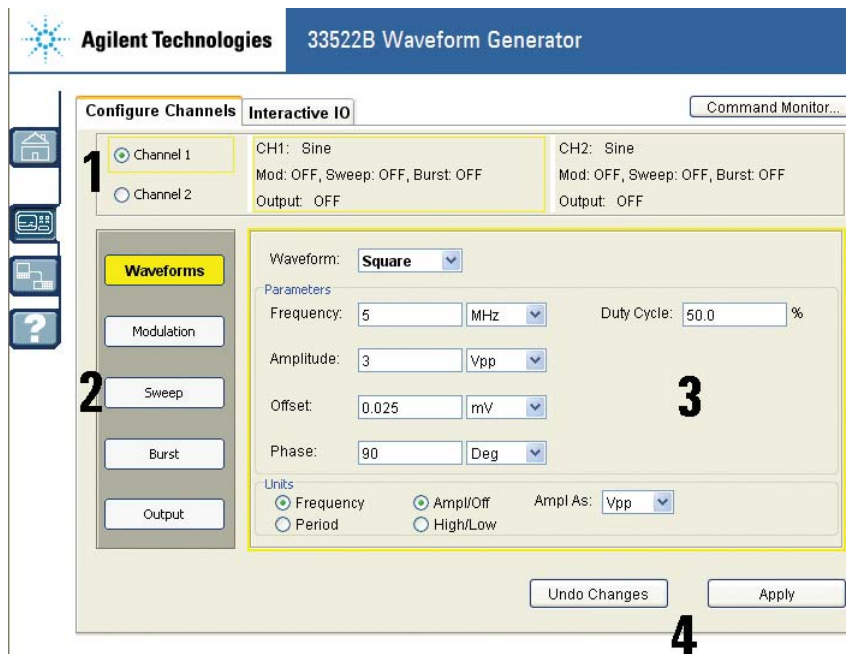


Figure 3. Pressing the control tab brings you to a screen where you can configure your waveform generator.



Figure 4. The Web interface will remind you to apply your changes if you neglect to do so before you choose a different button.



Figure 5. The Command Monitor button is in the upper right corner of the Control window.

Learn SCPI Commands Using Command Monitor

The Web interface includes a command monitor that helps you learn the instrument's SCPI language. To use this feature, simply press the **Command Monitor** button in the upper right corner of the Control window, as shown in Figure 5.

The command monitor opens with the Command History tab selected. This tab lists the commands that have been sent to the instrument from the Control tab, as shown in Figure 6. As the Web interface logs the SCPI commands related to changes made to the instrument's configuration, you can learn the SCPI language and copy commands into your programming environment as desired.

The second tab in the Command Monitor window is Current Configuration. This tab shows all of the commands that put the instrument in its current state, as shown in Figure 7. Note that this list includes the commands for the instrument's default power-on configuration, so this list may be substantially longer than the list in the Command History tab.

Summary

The 33500 Series Web interface is a powerful and easy-to-use tool that allows you to easily control the instrument remotely. You can use the Web interface to configure the instrument and monitor its operation. As you interact with your instrument via the interface, you can use the Command Monitor to learn the SCPI programming language.

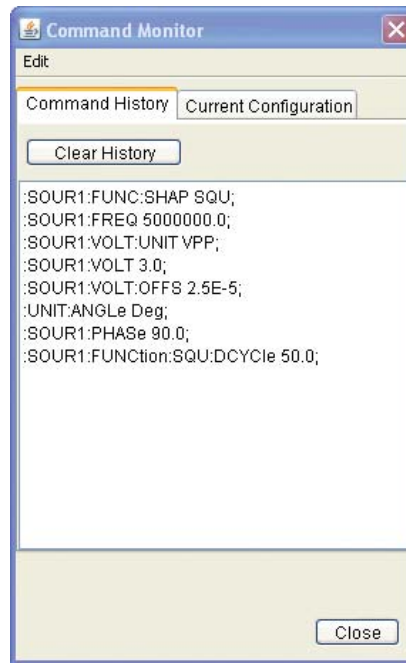


Figure 6. The Command tab lists the SCPI commands that have been sent to the instrument based on your selections in the Control tab.

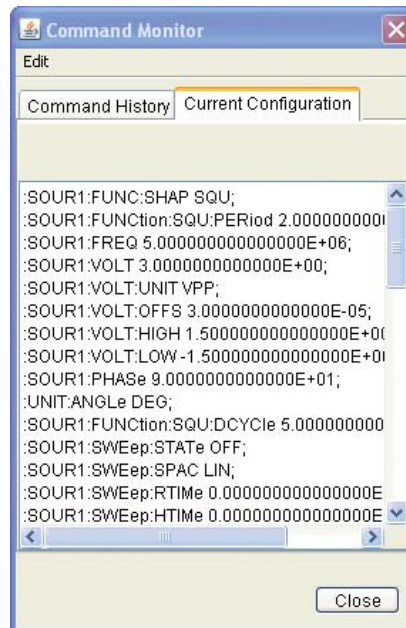


Figure 7. The Current Configuration tab shows the entire list of commands that put the instrument in its current state, including the commands for the power-on sequence.



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Revised: January 6, 2012

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© Agilent Technologies, Inc. 2012
Published in USA, October 1, 2012
5991-1132EN



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