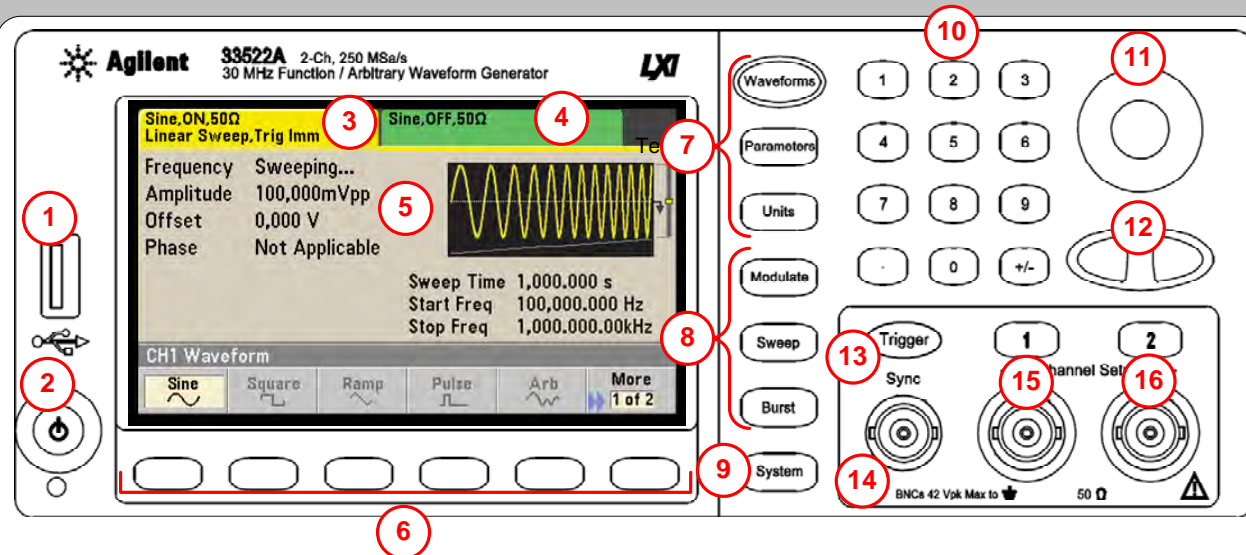


## The Front Panel at a Glance



Lighted keys indicate active keys and functions (for example, **Sweep** ).

### The Primary Front Panel Features:

- |                                       |  |
|---------------------------------------|--|
| 1 USB Port                            | 9 System Key                               |
| 2 On/Off Switch                       | 10 Numeric Keypad                          |
| 3 Channel 1 Summary Tab               | 11 Knob                                    |
| 4 Channel 2 Summary Tab               | 12 Cursor Keys (Arrows)                    |
| 5 Waveform and Parameter Display Area | 13 Manual Trigger / Trigger Configuration  |
| 6 Menu Operation Softkeys             | 14 Sync Connector                          |
| 7 Waveforms/Parameters/Units Keys     | 15 Channel 1                               |
| 8 Modulate/Sweep/Burst Keys           | 16 Channel 2 (two-channel instrument only) |

## Get Help on Any Key

Press and hold any function key or softkey to display a help topic for that key or feature.

For example, press and hold the **Sine** softkey:

Outputs a sinusoidal waveform at frequencies from 1  $\mu$ Hz to 30 MHz.

Or press **(System)** and **Help** for the Help Menu:

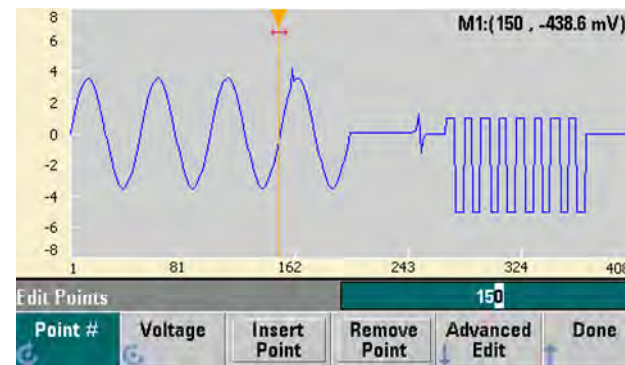
Highlight the desired topic and press **SELECT**.  
 1 View the last message displayed.  
 2 Get HELP on any key  
 3 Agilent Technical Support

## Some Helpful Hints

1. Lighted keys indicate active keys or functions such as the currently active waveform (for example, **Burst** ). Most keys toggle on (lighted) or off.
2. No signal is output unless the **(1)** or **(2)** key is lighted.
3. The six softkeys allow you to select parameters and functions as shown in the softkey menu at the bottom of the display. Some softkeys toggle between related parameters. For example, the left softkey toggles between **Frequency** and **Period** below:



4. You can specify a signal by its amplitude and offset, or by setting its **Hi Level** (maximum) and **Lo Level** (minimum) values. See Chapter 1 in the *User's Guide* for further information.
5. The Agilent 33500 Series lets you connect to your PC with GPIB, USB, or LAN. See "Remote Interface Configuration" in Chapter 3 of the *Agilent Series 33500 User's Guide* for further information.
6. You can create arbitrary waveforms on Agilent 33500 Series with the instrument's embedded waveform editor software. See the *Agilent 33500 Series User's Guide* for more information.



7. To turn off the instrument, you must hold the power switch down for about 500 ms. This prevents you from accidentally turning off the instrument by brushing against the power switch.
8. For the latest documentation and software updates, go to:  
[www.agilent.com/find/33521A](http://www.agilent.com/find/33521A) or [www.agilent.com/find/33522A](http://www.agilent.com/find/33522A)

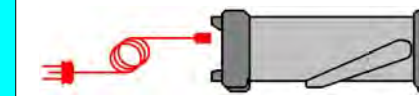
# Agilent 33500 Series 30 MHz Function/Arbitrary Waveform Generator Quick Start Tutorial

## Six easy steps to learn the basics!

### 1. Prepare for Use

#### Connect the Power Cord.

Then plug in the instrument.



**Tip** No Worries! Just Plug It In!

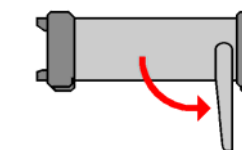
The Agilent 33500 Series automatically senses standard power line voltages. There are no switches to set or fuses to change.

#### Adjust the Carry Handle.

Grasp the handle by the sides and pull outward:

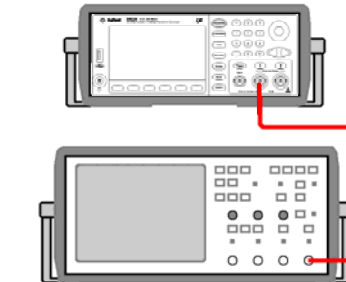


Then adjust the handle to the desired position:



#### Connect an Output (Optional).

Connect a BNC cable to the Output connector. Then connect the cable to your test system or oscilloscope:

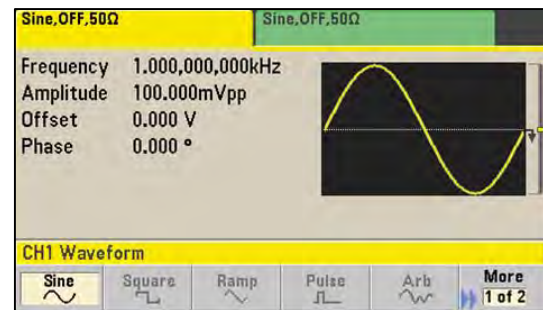




Turn Page for Step 2



## 2. Turn On by Pressing

After a brief self test, the instrument turns on with the sine wave function selected and the Channel 1 tab (yellow) selected:



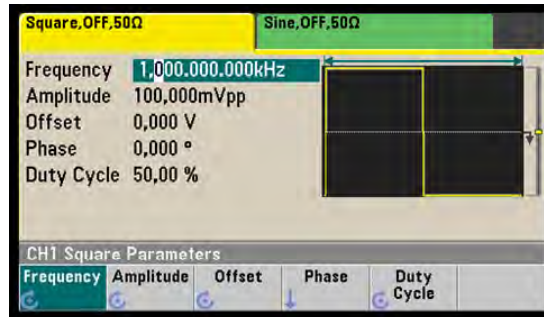
**Note:** To protect your equipment, no signal is output until you press the  or  button above the channel and then press **Output Off / On**. Pressing these channel buttons also brings the channel's tab into view.

## 3. Select a Waveform

To select a waveform, press the appropriate key. For example, press the **Square** softkey to select a square wave.



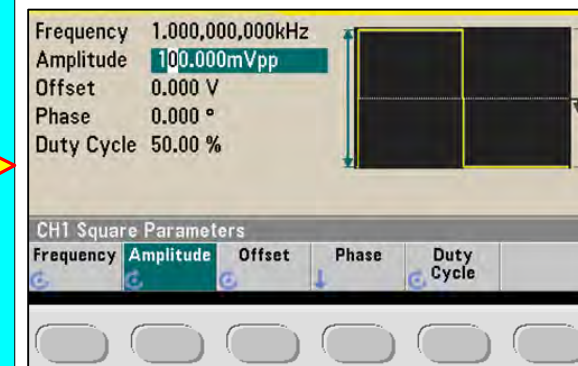
The square wave menu is displayed:





## 4. Change Waveform Parameters (Knob)

Use the six softkeys to select parameters.

For example, press the **Amplitude** softkey to select amplitude:



Now let's change the value using the knob.

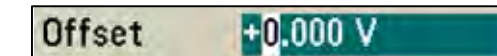
First, use the cursor keys (   ) to select the first digit.



Now, use the knob to change the value (turn clockwise to increase). Set it to **500 mVpp**:

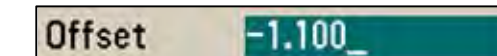


Now, press **Offset** to select that parameter:



Use the knob to set the offset to **-1.1 Vdc**:

- Turn left past zero for a negative value.
- Use the cursor keys to select digits.



To finish, press the V softkey to indicate that the offset unit is Volts.



### Another Way to Set Signal Levels

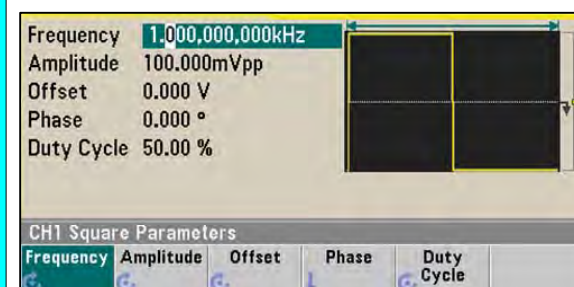
You can also specify a signal by setting its **High** (maximum) and **Low** (minimum) values. (See Chapter 1 in the *User's Guide*.)

Go to Step 5 at Far Left, Below

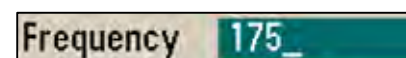
## 5. Change Waveform Parameters (Keypad)

Now let's use the numeric keypad to set the **Frequency**.

Press the left softkey to select **Frequency**:



Key in a value on the keypad. The display changes. For example, enter **175**.

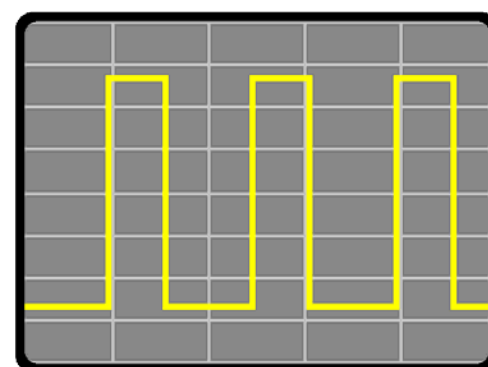


Press the softkey for the desired unit (for example, **kHz**) to enter the value:



## 6. Output the Waveform

You can view the waveform by connecting an output channel to an oscilloscope. Press the button above the channel that you want to output. Then press the **Output Off / On** softkey to enable output on the channel.



## Embedded Waveform Editor

The 33500 Series includes a waveform editor that allows you to create and edit custom waveforms. To start the embedded waveform editor, click **Arb** on the Waveforms menu.



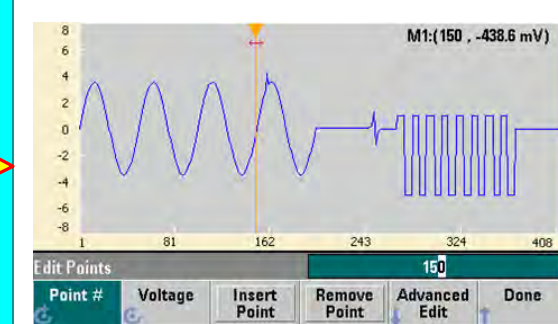
Then click **Arbs**.



This takes you to the embedded waveform editor main menu, shown below..



See the tutorial at the end of Chapter 2 of the *Agilent 33500 Series User's Guide* to learn how to use the embedded waveform editor.



## For Further Information

Refer to the following for further information:

1. The other side of this card:
  - "The Front Panel at a Glance"
  - "Some Helpful Hints"
2. The Agilent 33500 Series built-in Help:
  - Press and hold any key for context-sensitive help on that key.
  - Press **(System)** and **Help** for the Help Menu.
3. The *Agilent 33500 Series User's Guide*
4. The *Agilent 33500 Series Service Guide*
5. The *Agilent 33500 Series Programmer's Reference Help*