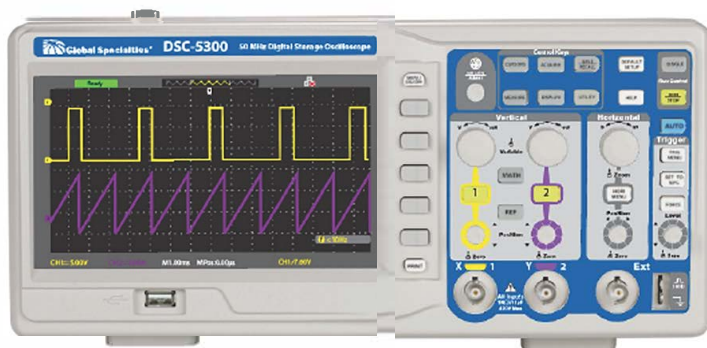


DSC-5300

50 MHz Digital Storage Oscilloscope

Quick Start Guide



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GETTING STARTED

1 Package Contents

Please inspect the instrument mechanically and electrically upon receiving it. Unpack all items from the shipping carton, and check for any obvious signs of physical damage that may have occurred during transportation. Report any damage to the shipping agent immediately. Save the original packing carton for possible future reshipment.

The DSC-5300 is shipped with the following contents:

- 1 x DSC-5300 50 MHz Digital Storage Oscilloscope
- 1 x Quick Start Guide (printed)
- 1 x AC Power Cord
- 1 x USB Type A to Type B Cable
- 2 x 70 MHz (1x/10x) Oscilloscope Probe

2 Front Panel

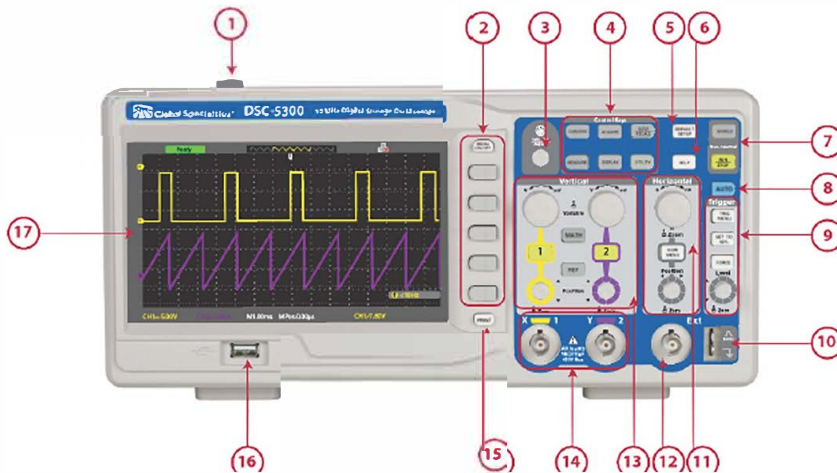


Figure 1. Front Panel



Lighted keys indicate active keys and functions
(for example *Run* above)

1. On/Off Button
2. Menu On/Off Key, Menu Softkeys
3. Intensity Adjustment
4. Control Keys
5. Default Setup Key
6. Help Key
7. Run Control Panel
8. Autoset Key
9. Trigger Control Panel
10. Probe Compensator (1 kHz and Ground)
11. Horizontal Controls (Time Base)
12. External Trigger Input
13. Vertical Controls
14. Input Channels (BNC)
15. Print Key
16. Front USB (Type A) Connector
17. Display



3 Rear Panel

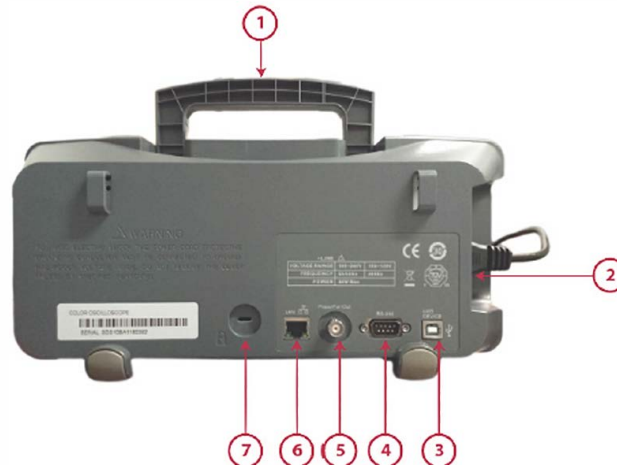


Figure 2. Rear Panel

1. Carrying Handle
2. Power Input Connector
3. Rear USB (Type B) Device Connector
4. RS-232 Connector
5. Pass/Fail Output
6. LAN Connector
7. Security Lock Receptacle

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4 Preparing the Oscilloscope for Use

a. Tilt the Oscilloscope for Easy Viewing

There are tabs under the oscilloscope's front feet that can be flipped out to tilt the oscilloscope.

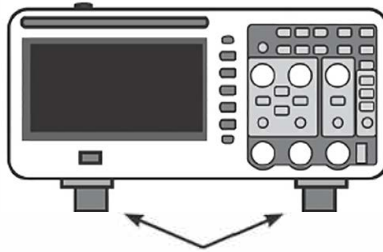


Figure 3. Flip-Out Tabs

b. Connect the power cord and then plug in the instrument.

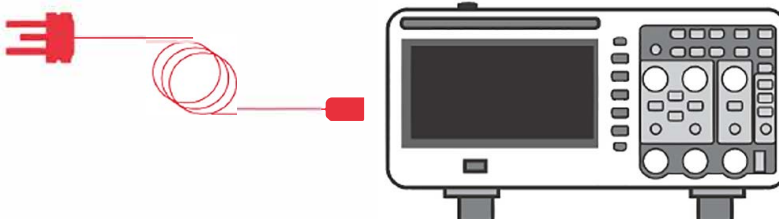


Figure 4. AC Line Input



No worries! Just plug it in!
The Global Specialties DSC-5300 automatically senses standard power line voltages. There are no switches to set or fuses to change.

WARNING

Always use a grounded power cord. Do not defeat the power cord ground.

c. Press the Power Switch.

The power switch is located on the top of the unit. The oscilloscope will power on and be ready in a few seconds.

d. Default Settings

The oscilloscope is set up for normal operation when it is shipped from the factory. This is the default setup. To recall this setup, press the **Default Setup Key**. The major default settings are:

Major Default Settings	
Horizontal	500 μ s/div scale, 0 s delay, center time reference
Vertical (Analog)	Channel 1 on, 1 V/div scale, DC coupling, 0 V position
Trigger	Edge trigger, auto trigger mode, 0 V level, channel 1 source, DC coupling, rising edge slope, 100 ns holdoff time
Display	Persistence off, brightness 40%
Acquire	Sampling acquisition, real time mode
Attenuation	1x



5 Preparing a Probe

a. Test Signal

Before using a probe on a live circuit or device under test, check it first with the 1 kHz test signal on the Probe Compensator. This signal is used for compensating probes.

1. Connect an oscilloscope probe to Input Channel 1.
2. Connect the probe's ground lead to the ground terminal on the Probe Compensator.
3. Touch the probe's tip to the 1 kHz connection on the Probe Compensator.

b. Use Autoset

Press the **Autoset Key** to automatically configure the oscilloscope to best display the input signals. You should see a waveform on the oscilloscope's display similar to Figure 5.

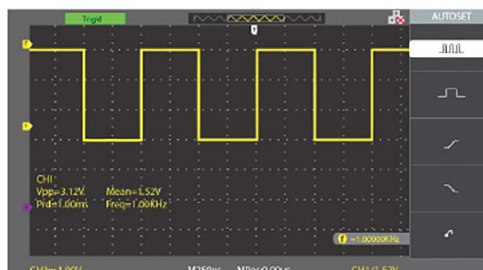


Figure 5. Test Signal on Probe Compensator

If you do not see the waveform, make sure the probe is connected securely to the front panel input channel BNC and to the 1 kHz connection on the Probe Compensator.

If you see the waveform, but the square wave is not shaped correctly as shown above, try the following two procedures.

c. Probe Attenuation Setting

Probes are available with various attenuation factors which affect the vertical scale of the signal. Check that the probe attenuation factor on the oscilloscope matches the attenuation factor of the probe. In the Vertical Controls area push the key for the channel you are using: **1** or **2**. Use the Menu Key for **Probe** to select the attenuation factor that matches your probe. For the included probes, this will either be 1x or 10x.

d. Compensate Passive Probes

Each oscilloscope passive probe must be compensated to match the input characteristics of the oscilloscope channel to which it is connected. A poorly compensated probe can introduce significant measurement errors.

1. Input the Probe Compensator test signal. See section 5 (a), "Test Signal," above.
2. Press **Default Setup Key** to recall the default oscilloscope setup.
3. Press the **Autoset Key** to automatically configure the oscilloscope for the Probe Compensator test signal.
4. Your signal should be square as in Figure 5. See Figures 6 & 7 which show poorly compensated probes.

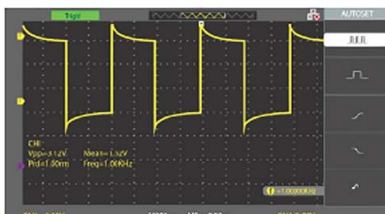


Figure 6. Over Compensated

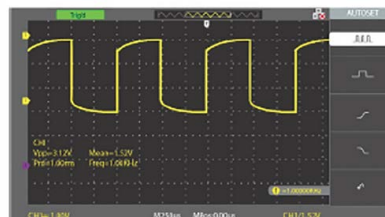


Figure 7. Under Compensated

If you do not have proper square shape, use the Trimmer Tool included with your probe to adjust the Compensation Trimmer for the flattest shape possible. See Figure 8.

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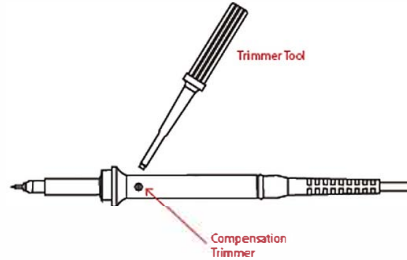


Figure 8. Adjusting the Probe Compensation

6 Using a Probe

You are now ready to use the probe with the oscilloscope. Connect the probe tip to the point of interest on the circuit or device under test. Be sure to connect the probe ground lead to a ground point on the circuit.

CAUTION

Maximum input voltage at analog inputs:

- CAT I 400 V (DC+Peak AC)
- With included probes: CAT II 300 V (DC+Peak AC)

CAUTION

Do not float the oscilloscope chassis.

Defeating the ground connection and “floating” the oscilloscope chassis will probably result in inaccurate measurements and may also cause equipment damage. The probe ground lead is connected to the oscilloscope chassis and the ground wire in the power cord. If you need to measure between two live points, use a differential probe with sufficient dynamic range.





Do not negate the protective action of the ground connection to the oscilloscope. The oscilloscope must remain grounded through its power cord. Defeating the ground creates an electric shock hazard.

7 Enter Help Mode

Press the **Help Key** to enter Help Mode. You may now access helpful instructions for each key simply by pressing it. You can continue to press different keys for more information so long as you remain in Help Mode. To exit Help Mode, press the **Help Key** once again.

For Menu Softkeys, alternate information will be displayed depending on which Menu item was showing when the Help Key was pressed.

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NOTES





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