

## Bode using LAN

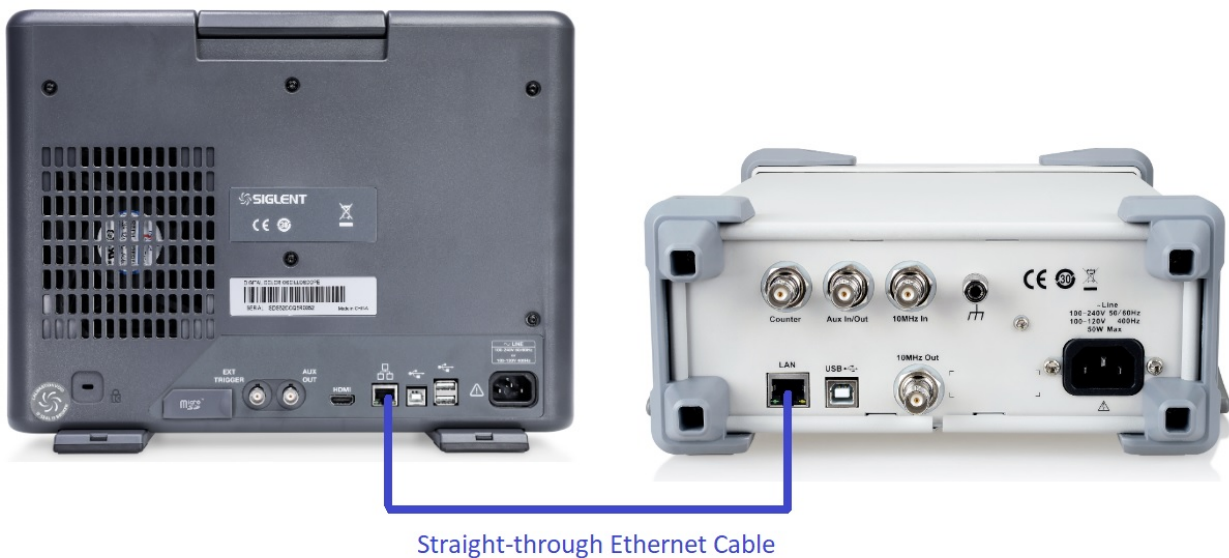
October 13, 2022

Many SIGLENT SDS oscilloscopes, including the SDS6000A series, can perform automated Bode plotting to provide frequency response for [power supply stability](#), [filters](#), and more. This integrated approach simplifies testing and delivers results much more quickly than building your own system, integrating separate instruments with software and an external controlling computer.

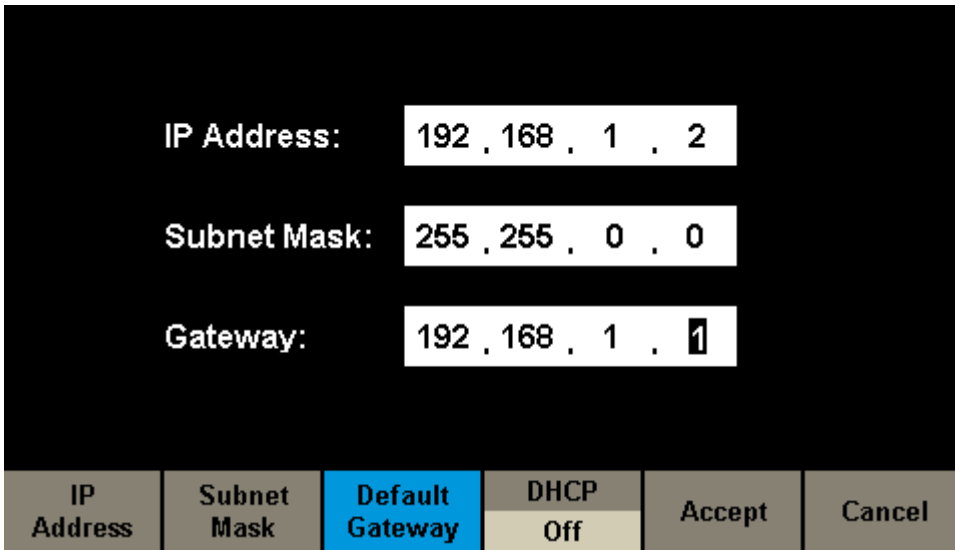
In the examples above, we used USB to connect the controlling oscilloscope to the external function generator.

In this operating tip, we show how to connect a SIGLENT SDS6000A oscilloscope and an SDG1000X series arbitrary waveform generator using a direct LAN connection for use with the SIGLENT Bode application.

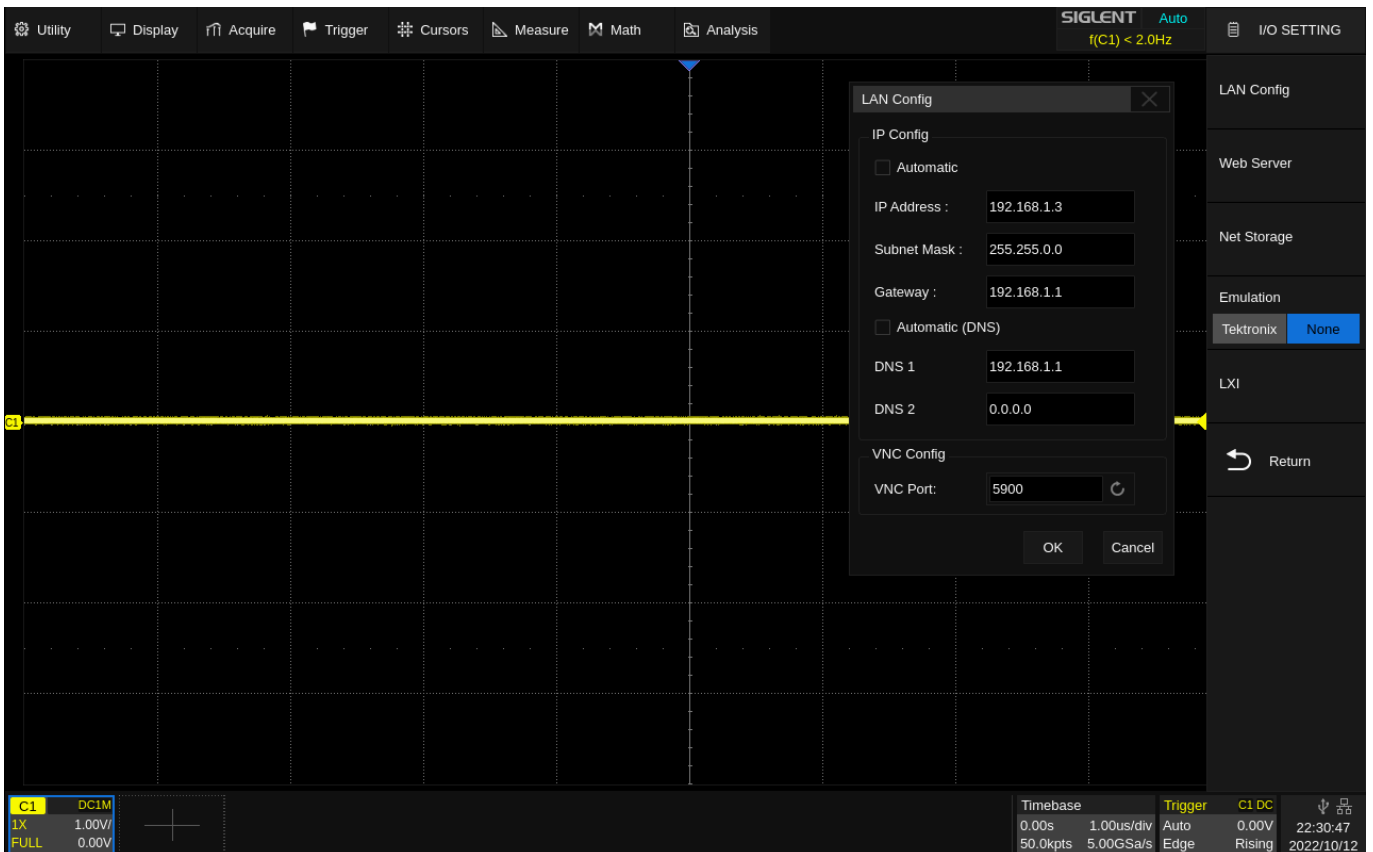
1. Connect the LAN port of the scope to the LAN port of the SIGLENT SDG generator:



2. Set the full IP address, Subnet mask, and Gateway for the SDG by entering the Interface menu (SDG1000X Press Utility > Arrow over to page 2/2 > Interface > LAN state ON and press LAN Setup):



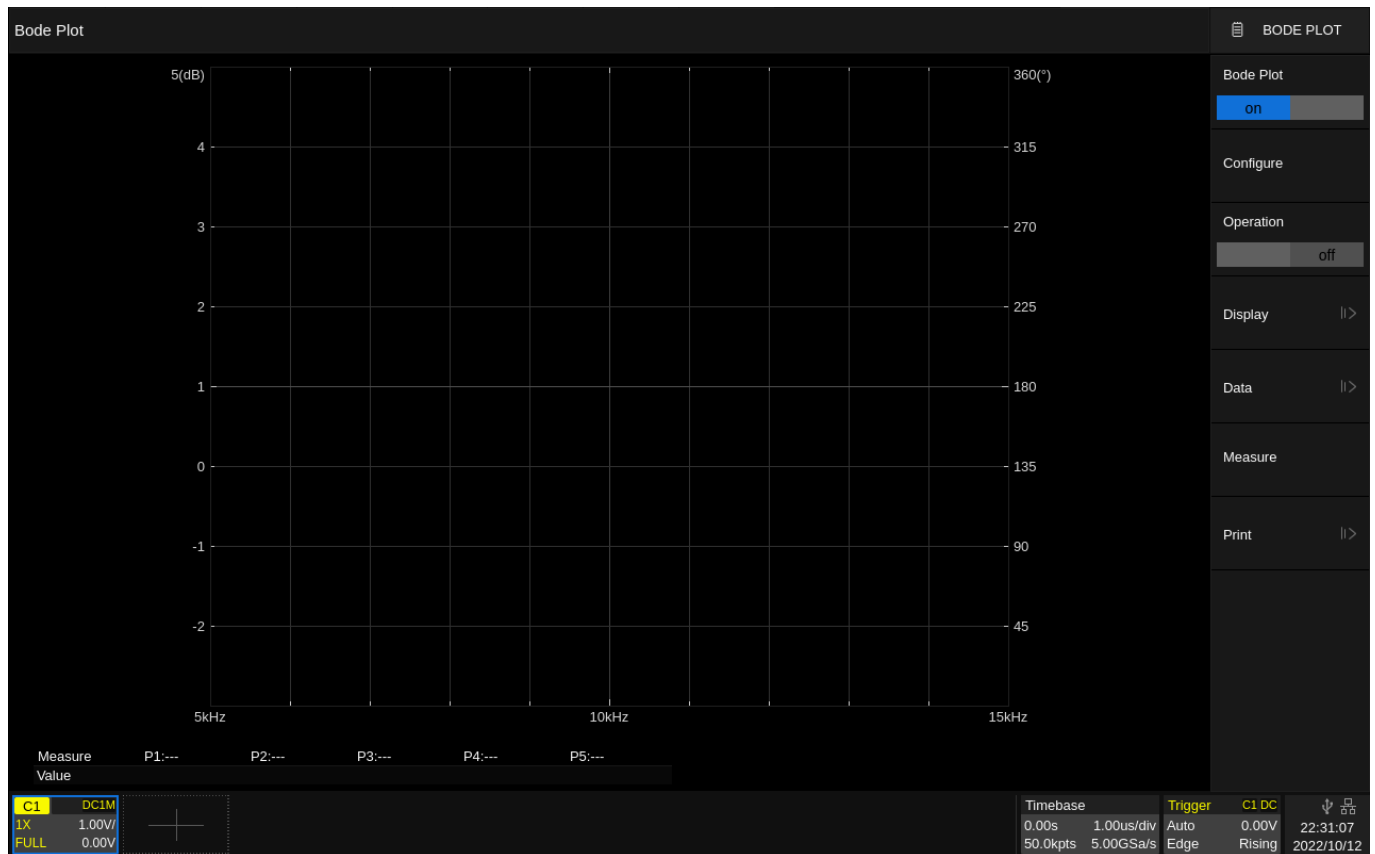
3. Set the full IP address, Subnet mask, and Gateway for the SDS scope (SDS6000A Press Utility > I/O > LAN Config):



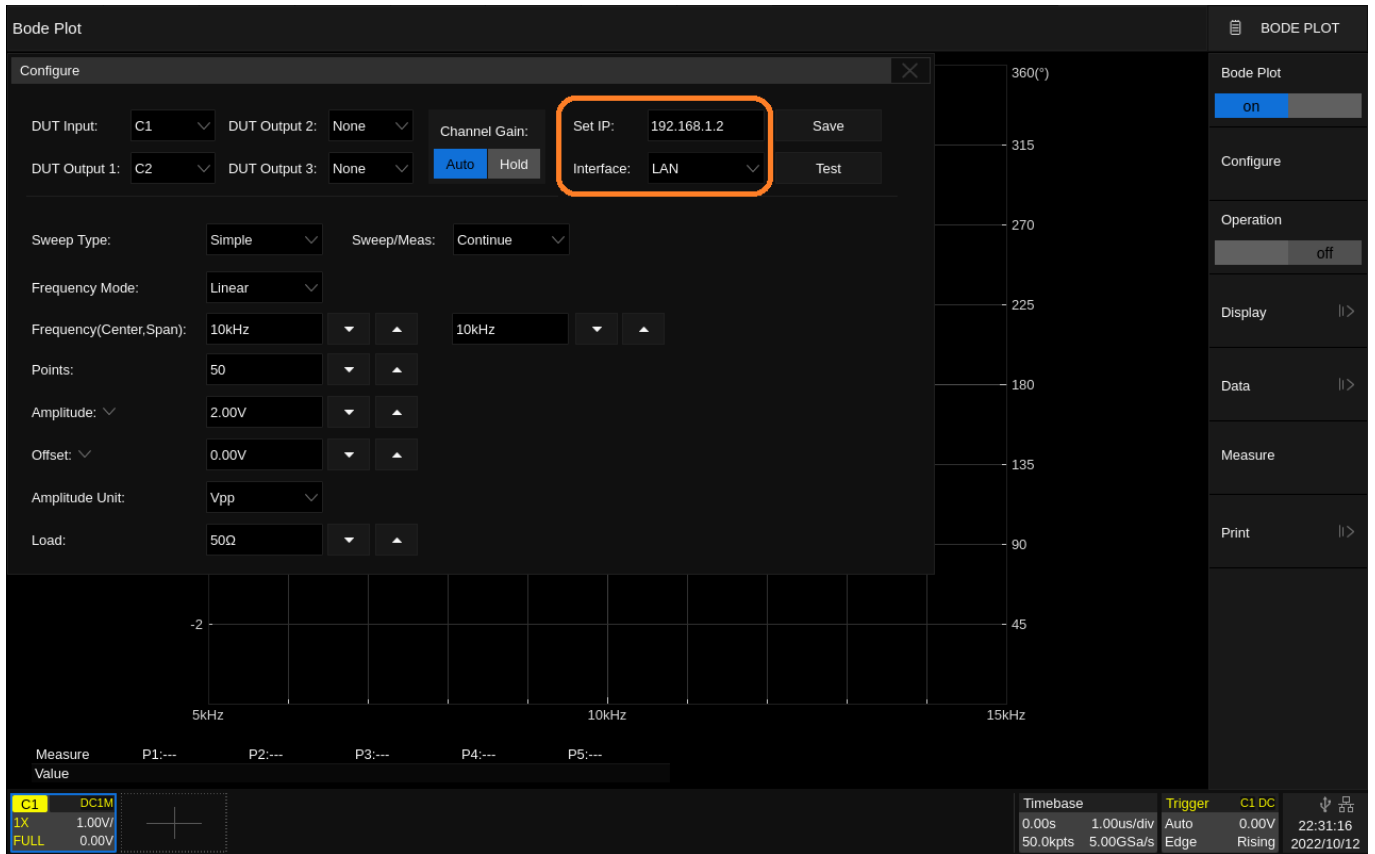
NOTE: The Gateway and Subnet Mask values for both instruments need to be identical. The first three triplets of the IP address must also be the same. If they are not, the connection will fail.

4. Set the function generator IP address in the Bode II application by opening the Bode menu. On the SDS6000A, press Analysis > Bode.

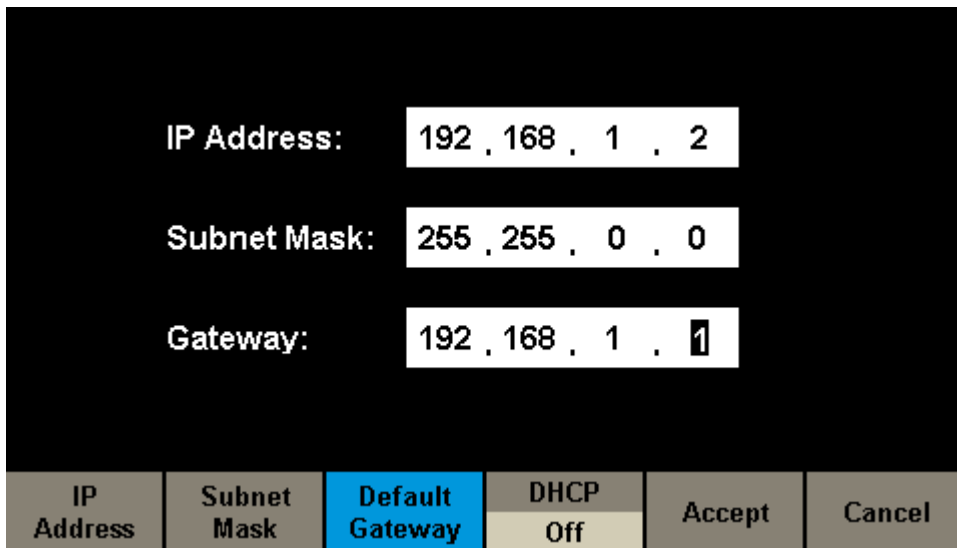
That will open the Bode menu as shown:



Select Configure> Set the interface as LAN and set the IP address **of the generator** into the text box:



Here is the generator LAN configuration page, for reference:



5. Test the connection by pressing Test:

Measure	P1:---	P2:---	P3:---	P4:---	P5:---
C1	DC1M				
IX	1.00V				
FULL	0.00V				

Timebase	Trigger	C1 DC
0.00s	Auto	0.00V
50.0kpts	Edge	Rising

22:31:35  
2022/10/12

Once you have the connection working, you can configure your Bode plot and start taking data.

The most common problems center around cabling. Are they connected to the proper instruments? Proper ports? Are the cables ok?

Other issues tend to center around the LAN settings. Check them again before contacting support for additional help.



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