

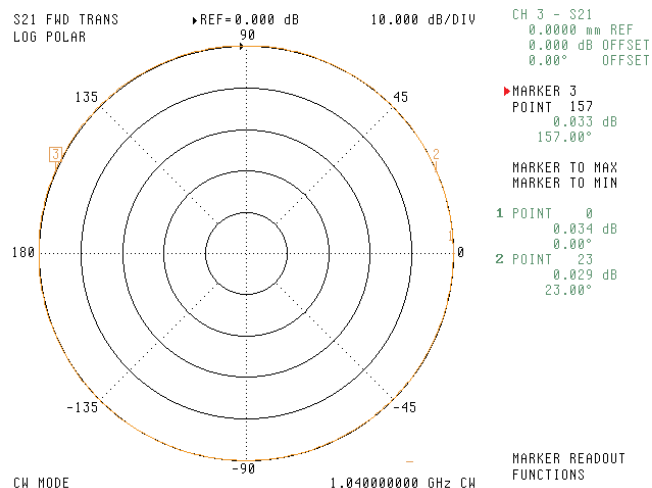
MAKING ANTENNA MEASUREMENTS USING C W DRAW AND THE ANRITSU 37000 VECTOR NETWORK ANALYZER

The Lightning series of VNA's allows a customer to easily make Polar or Rectangular antenna plots. It requires you to tell the VNA how many data points it will require to complete the plot and provide an external TTL signal (which dictates when the VNA takes data).

Before starting the VNA Set-up, you should boresight the Antennas for Max. Signal as the calibration will now calibrate out the system frequency response and this Max. Signal will be your reference level.

1. Reset Lightning by pressing Default, Default
2. Do a "N Discrete calibration over the desired frequency range. (N-Discrete calibrations allow you to pick the exact frequencies that you wish to work with)
3. Press Set-Up Menu, Select CW Mode and enter frequency.
4. Press Channel 3
5. Press Graph Type, Select Log Polar (or Rectangular if desired)
6. Press Channel Menu, select Single Channel
7. Press Set Scale
 - a. Set 10 dB/ division and Ref. Value = 0.
 - b. Select Polar Chart Mode and change to Magnitude Vs Position.
8. Press Options
 - a. Select Trigger External
 - b. Automatic IF Cal to Off
9. Press Data Points, set Points Drawn in CW to the number of points desired to complete a 360 degree circle.
EXAMPLE – If you wish a point every (1) degree of rotation, you would select 361 to complete the circle.
10. HOLD Button may be set to do one sweep and hold (see Hold Button Functions under the SETUP MENU button)
11. Connect the TTL signal from the antenna controller to the EXT Trigger connector on the rear of the VNA.
Now with the antenna rotating, you should have a Polar Plot displayed on the VNA display.
You may wish to save this set-up to the Internal Memory (or a floppy disk) for later recall.

NOTE – If you're doing fine grain measurements, you may wish to trigger an Internal IF Calibration (not required if the VNA has been on for an hour or so). To do so, press Options then select Trigger and Trigger IF cal. Remember to turn the IF cal Off before making antenna plots.





Specifications are subject to change without notice.

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