

Intro to the Nano VNA

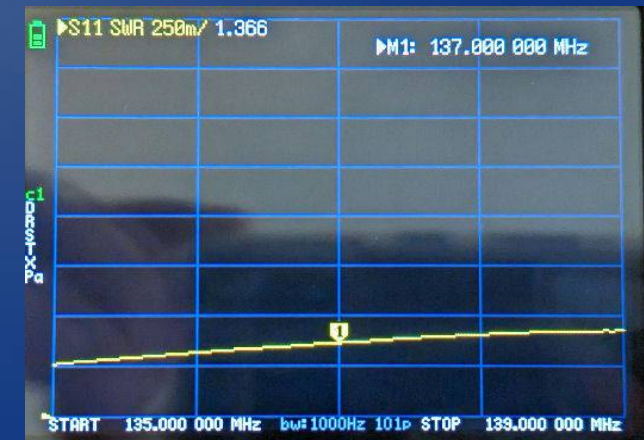
Measuring SWR

Dave Kennett – VE7BBV

This presentation is a scaled down version for posting on the library. Some slides have been removed.

Selecting a Trace and Setting for SWR

- When you first turn your Nano VNA on it can be overwhelming with all 4 traces displayed. We're going to turn off all the ones we're not using.
- Open the menu, select 'Display' and tap 'Trace'. Tap Trace 1, 2 and 3 until all three are grey. Only Trace 0 should still be coloured and have a check in the box.
- Once you have only Trace 0 displayed tap 'Back' and select 'Format S11 (REFL)'. Next tap on 'SWR'. You can tap the center of the screen to close the menu.

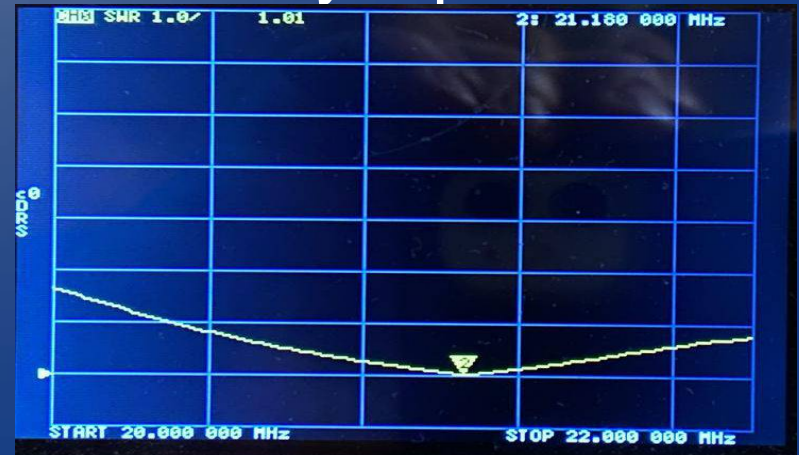


Setting the Frequency Range

- Tap the screen to bring up the menu and select 'Stimulus'. Here we set our frequency range for the measurement by selecting 'Start' and 'Stop' respectively and entering the desired frequencies. For testing a 2 meter antenna I might enter 140.00M to start and 150.00M to stop. '
- Note: Some useful ranges to store are 5Mhz – 30Mhz and 50Mhz – 500Mhz. These can be used to find the resonant frequency of an unknown antenna and you can narrow the range after the fact.

Setting the Scale

- We'll now adjust the scale on the display. Open the menu and select 'Display". You might need to hit 'Back' a couple times to find it. Next select 'Scale' then 'Scale/Div'. I normally set it to 0.25 then hit 'ENT'
- With this setting your bottom line is 1:1. Two lines up is 1.5:1. The middle is 2:1 and the very top is 3:1.
- This example shows 1.25:1



Calibration

- On the device, tap the screen on the right to bring up the menu.
- Select 'Calibration' from the menu.
- Tap 'Reset'.
- Tap 'Calibrate',
- Tap 'Calibrate' and tap open, short and load as you connect each load to Port 1 (CH0).
- After all calibrations tap 'Save' and select a slot.
- You can reload any saved settings by selecting 'Recall' on the main menu.



The Display

Along the bottom of the screen will be your Start and Stop frequencies. Somewhere on the displayed line there will be a tiny yellow marker with the #1. This can be moved along the line with your stylus or, depending on your model of Nano VNA the buttons or wheel next to the on/off switch. As you move it two values will change. First on the top right will be the frequency where the marker is currently resting. Second, on the top left it will read the SWR.

