

## Mesuring the Impedance of a Coax Using an SWR Analyser

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- Calculate the required frequency (F in MHz), which is related to the cable length L in feet :  
$$F = 185 / L$$
 (This is approximately the quarter wavelength frequency)
- Connect the cable to the SWR analyzer and terminate the other end with a 50 ohms load.
- Measure the SWR. If you get 1:1, then the cable impedance is 50 ohms.  
If the SWR is above 1:1, change the frequency to maximize the SWR reading.
- Calculate  $Z_{cable}$  at the frequency where the SWR is maximum, or use the graph below:  
$$Z_{cable} = 50 * \sqrt{SWR}$$
  
Exemple: SWR = 2.25 gives  $Z_{cable} = 75$  ohms
- NOTE: This technique is valid for  $Z_{cable} \geq 50$  ohms.

