



The Echo is a handheld vector impedance and spectrum analyzer with FDR for measuring antennas, networks and cables. The Echo has the capability of providing digital measurements and graphical sweep displays of impedance, RF power gain or cable quality. The Echo's testing functionality combined with its 100 KHz to 1.0 GHz or 100 KHz to 2.5 GHz frequency ranges makes it a versatile tool for numerous service applications.

The Echo PC Vision™ software application, included with the VIA Echo, provides the user with the capability of remotely operating the VIA Echo through a USB port while viewing real time results or stored data on a PC. PC Vision provides color Cartesian and Smith Charts of vector plot data. The PC Vision software makes the capture, storage and printing of documentation and reports easy.

## Preliminary

### Specifications

- Frequency range
  - 100 KHz to 1.0 GHz
  - 100 KHz to 2.5 GHz \*
- Tuning/display resolution
  - 1 KHz up to 1.1 GHz,
  - 10 KHz for ~ 1.1GHz-2.5GHz
- Input power range
- FDR cable length
  - 35 to >10Kft (10 to >3300m)
- Measurement speed
  - ~3 sweeps / second
- Frequency display width
  - 250 points x N x resolution (N=intiger)
- Impedance range
  - 2 to 2000 Ohms
- Impedance plotting scales
  - 0 to 50 Ohms min, 0 to 2000 ohms max
- Phase angle plotting scales
  - +/- 15 to +/- 180 degrees
- Impedance formats
  - Resistance, reactance, Z, Z angle, SWR, return loss , S11 vector
- Gain formats
  - Log, linear, phase and group delay
- Harmonic and spurious
  - >30 dB below fundamental
- Output power
  - ~ +0dBm @ 50 Ohms
- Power requirements
  - 10-20 VDC @ 500 mA. minimum or 8 AA(Alkaline or NiMH or Nicd)
- Antenna connectors
  - "N" or SMA
- Size
  - 8.5" x 4.3" x 2.25"
- Weight
  - 2 lbs 3 oz with case and batteries

### Features

- Simultaneously view two separate plots with different scales
- Automatic calibration and self-test
- Large numeric display in CW mode
- S11 and S21 test ports
- Cable/fixtures nulling
- 250 memory slots for both plot storage and setup data
- Echo PC Vision™ software included
  - Real time display of plots on PC
  - Smith chart display
  - EASY uploads into PC
- Quarter VGA backlit LCD
- Auditory cues for non-visual tuning
- Spectrum analyzer and FDR \* (Echo 2500)
- MRI version is non-magnetic
- Lightweight and portable
- Internal NiMH or NiCd recharger
- USB communication to PC