



TE1000 RF Vector Impedance Analyzer



Measures

- Vector impedance
- SWR
- R-L-C equivalent circuit
- Vector reflection coefficient
- Return loss

A high precision, portable test instrument at a very attractive price

Key features:

- Completely portable, for use on the bench or in the field
- Precise vector impedance measurements from less than 1 Ω to more than 10k Ω
- Frequency range 0.4MHz to 150MHz, fully synthesized
- Directly displays vector impedance, reflection coefficient, SWR, return loss, R-L-C equivalent circuit
- Sophisticated PC based software included to allow data logging, frequency sweeping and a range of graphical displays



Overview of the TE1000 RF Impedance Analyzer

The Tomco TE1000 RF Impedance Analyzer is a powerful, easy to use test instrument providing outstanding performance at a very affordable price.

Typical applications include :-

- **RF engineering design and development**
- **antenna testing and tuning**
- **impedance matching**
- **component test**
- **cable fault finding**
- **filter design and test**
- **cutting cables to precise electrical lengths**

The TE1000 impedance analyzer is a versatile, portable test instrument which enables the user to make highly accurate impedance measurements at RF frequencies. The TE1000 has full vector measurement capability, and accurately resolves the resistive, capacitive and inductive components of a load. The user can display the vector impedance plus a range of related parameters including SWR, reflection coefficient, return loss and R-L-C equivalent circuit. These features make the TE1000 ideally suited for precision bench testing and development while also making it a superior alternative to portable SWR meters and antenna testers that can only provide a fraction of this information.

The TE1000 impedance analyzer operates from 0.5-150MHz. The unit is rugged, lightweight and can be powered by mains or by internal battery making it ideally suited for both benchtop and portable use. The unit's RS232 interface and PC based software further increase the power of the instrument, by providing swept frequency capability and facilities for complex data analysis, data logging and graphical display. The TE1000 is supplied in a lightweight, rugged aluminium case.

Our product offers similar functionality to other major manufacturers' products with comparable accuracy and many additional features at a fraction of the cost.

The TE1000 offers:-

- complete portability with the option of operating on batteries or plugpack
- powerful built-in computational capabilities allow the TE1000 to display a wider range of parameters:- not just impedance, but also reflection coefficient, series or parallel R-L-C equivalent circuit, SWR and return loss
- sophisticated built-in algorithms eliminate contamination of measurements due to stray reactances in the probe
- vector quantities can be displayed in polar or rectangular coordinates
- swept frequency measurements and data logging via a simple serial interface (software supplied)
- sophisticated, user friendly software to log and display data in a range of plots including Smith charts
- range of adaptors available allowing the probe to connect directly to N-type connectors or to surface mount components via tweezer adaptor
- calibration certificate available



Tweezer adaptor



Spring loaded ground pin adaptor

Specifications

Model number	TE1000
Frequency range	0.5—150MHz
Frequency resolution	0.400 - 9.999MHz in 1kHz steps 10.0 - 99.99MHz in 10kHz steps 100.0 -150.0MHz in 100kHz
Impedance measurement range	Measures impedance at any angle Magnitude range 1 Ω to 10k Ω
Measurement speed	Display updated every 500 milliseconds approx.
Typical accuracy of measurement	The accuracy depends on the impedance being measured. Guaranteed accuracy for 3 standard impedance's are listed below: Impedance = 50Ω magnitude +/- 1%, angle +/- 1° Impedance = 10Ω magnitude +/- 3%, angle +/- 3° Impedance = 1kΩ magnitude +/- 3%, angle +/- 3°
Measurement Modes	Complex impedance in polar or rectangular form R-L-C in series or parallel equivalent circuit format SWR for any system characteristic impedance Complex reflection coefficient for any system characteristic impedance Return loss in dB for any system characteristic impedance Swept measurements and data logging to a PC via the RS232 serial port
SWR measurement range	Greater than 100:1 (depends on system characteristic impedance)
Power source	DC plug-pack or internal battery (auto power-save in battery mode)
Display	80 character alphanumeric LCD
Measurement probe	Active probe on 1 Meter cable. Allows direct in-circuit measurements
Interface	RS232 on 9-pin D connector
Software	Windows software permits swept frequency measurements, data logging and graphical displays (software supplied) Software runs under Windows XP
Weight	1.9kg
Dimensions	250w x 200d x 80h
Accessories	Operation handbook (supplied) Coaxial adapter (adapts the probe to plug directly onto an N-type 50 Ω connector) (supplied) Spring-loaded probe grounding pin for in circuit measurements (supplied) SMD tweezer fixture (optional extra) Calibration certificate (optional)

