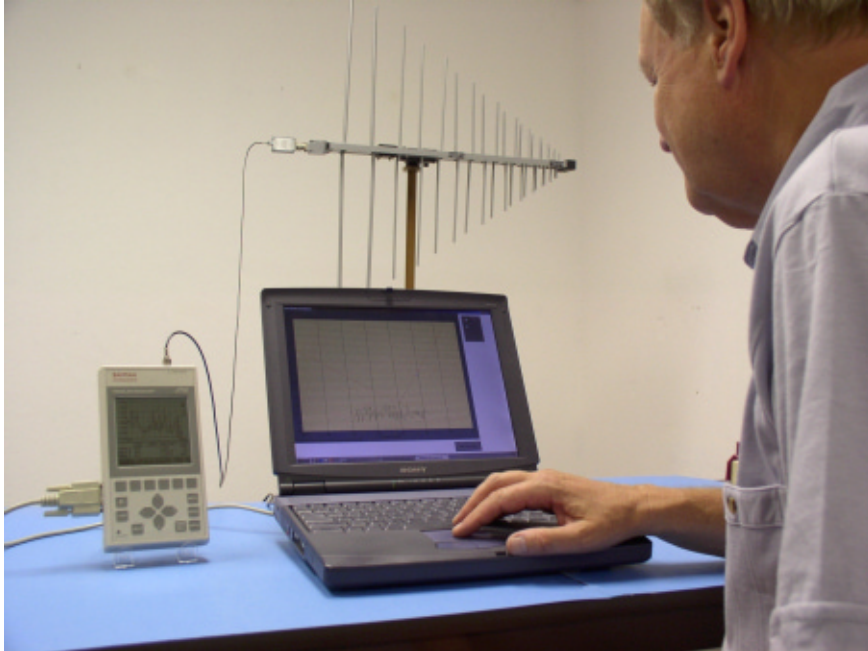


BANTAM INSTRUMENTS

MIL-STD-461E PRE-COMPLIANCE MEASUREMENT SYSTEM

MODEL EMC-461

1 MHz to 1000 MHz



Simple, straightforward radiated pre-compliance measurement to all radiated emissions specifications

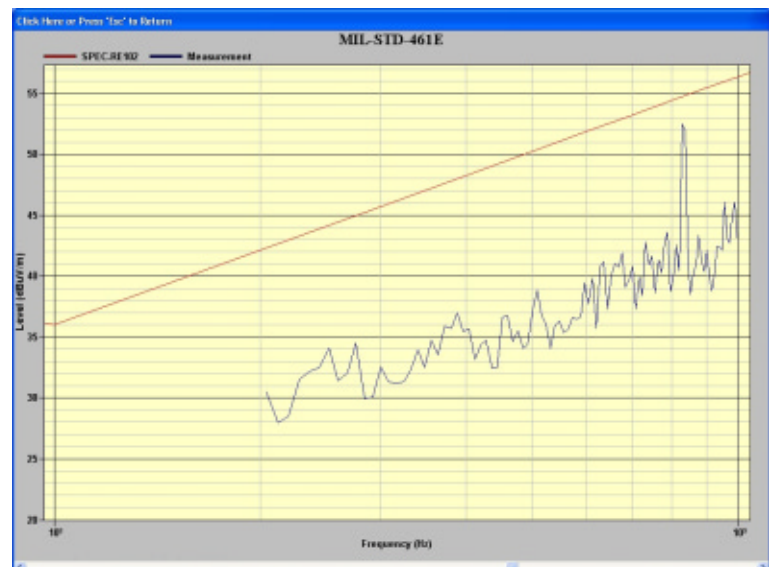
- RE102-1 Surface Ship Applications
- RE102-2 Submarine Applications
- RE102-3 Aircraft and Space Systems
- RE102-4 Ground Applications
- Stored Antenna Factors for many popular EMC measurement antennas
- Antenna Factors for other antennas can easily be entered

Radiated EMC pre-compliance measurements to MIL-STD-461E are now straightforward with the EMC-461 measurement system. Measurements can be made from 1 MHz to 1000 MHz. This frequency range tends to be especially troublesome as many internal digital clocks, IF frequencies, and harmonics of switching power supplies fall within this frequency range. This range of frequencies is also the most difficult from the mechanical shielding standpoint.

The EMC-461 measurement system can be used with any EMC measurement antenna. The EMC-461 software contains antenna factors for popular EMC measurement antennas from several manufacturers, or the user can enter his own antenna factors from the keyboard. The program automatically interpolates antenna factor as a function of frequency. A 26 dB gain preamplifier, powered by the Model 401B spectrum analyzer gives sufficient gain for measurements to all MIL-STD-461E specifications with most EMC measurement antennas. The preamplifier is supplied with a type-N male connector which interfaces directly to EMC antennas with type N female connectors.

Results are displayed in dB μ V/m corrected for antenna factor, preamplifier gain, and cable length. In addition, the data can be plotted on a linear frequency or log frequency axis. Results can be stored on the PC hard drive or printed to any Windows compatible printer.

The EMC-461 software operates on any Windows 98, ME, NT, or XP platform. The system comes complete with everything required to make measurements with the users existing EMC measurement antennas. If EMC measurement antenna are required, they may be purchased directly from any of the many antenna manufacturers.



*Typical pre-compliance measurement from 200 MHz to 1 GHz
using a Log Periodic Antenna*

EMC-461 SYSTEM MEASUREMENT CAPABILITIES

See Model 401B Data Sheet for Spectrum Analyzer Performance Specifications

FREQUENCY

Frequency Range Capability: 1 MHz to 1000 MHz
 (Frequency Range is dependent upon EMC Measurement Antenna used)
 Span: 0 MHz to Entire Band
 Resolution Bandwidth: 120 kHz
 Video Bandwidth: 30 kHz
 Measurement Time: 2 Seconds, typical
 Frequency Axis: Log or Linear

AMPLITUDE

Measurement Dynamic Range: 70 dB
 Measurement Noise Floor, dBμV/m:

$$\text{Noise Floor} = \text{AF} + \text{CL} - 2$$

AF = Antenna Factor
 CL = Cable Loss, dB

Measurement Units: dBμV/m
 Detection Mode: Quasi-Peak or Peak Hold
 Preamplifier Input Connector: Type N, Male
 Preamplifier Output Connector: SMA Female
 Preamplifier Safe Input Level: +23 dBm, 50 VDC, max
 Displayed Limit Lines: RE102-1 Surface Ship
 RE102-2 Submarine
 RE102-3 Aircraft / Space
 RE102-4 Ground

If other limit lines are required, they may be entered by the user.

SYSTEM SOFTWARE

Operating System Compatibility: Windows 98, ME, NT, XP
 Software Media: CD ROM
 Data Interface: RS-232
 Interface Speed: 57,600 Baud
 Stored Antenna Factors:

A. H. Systems: SAS-510 Log Periodic
 SAS-521F-2 Broadband
 SAS-540 Biconical

Electro-Metrics: EM-6917B-1
 EM-6917C-1

ETS Lindgren: 3301B Monopole (Rod)
 3103 Conical Log Spiral
 3104C Biconical
 3142C Broadband
 3144 Log Periodic
 3148 Log Periodic

Sunol Sciences: BC1 Biconical
 JB1, JB2, JB3 Broadband
 LP1 Log Periodic

Antenna Factors for other antennas can easily be entered by user.



EMC-461 Measurement setup screen assures ease of use with simple selection of antenna type, cable length, desired specification limit, and log or linear frequency display.

ORDERING INFORMATION

EMC-461 Pre-Compliance Measurement System.....\$3900

Includes: Model 401B Spectrum Analyzer
 PA01A 26 dB gain Preamplifier
 P101A Active E-Field Probe
 PC Software for MIL-STD-461E Measurements
 6 ft. (1.8m) SMA Cable
 Battery Charger, 100-240 VAC, 50/60 Hz
 Serial Interface Cable
 PC Enhancement Software
 Soft Carrying Case for Model 401B
 Operating Manual
 One Year Warranty

Option 001, Warranty Extension to 3 years \$200

Option 002, Backlight, for use in low illumination..... \$150

Option 003, Substitute ANT01A Active Antenna
 for P101A Active E-Field Probe..... no charge

OPTIONAL ACCESSORIES

9020-0002, SMA Male Cable, RG174A/U, 12 ft (3.6m)... \$70

9020-0003, SMA Male Cable, RG174A/U, 2 ft (0.6m).... \$50

BANTAM INSTRUMENTS

197 South Murphy Avenue
 Sunnyvale, CA 94086 USA

TEL: (408) 736-3030

FAX: (408) 904-5221

Email: info@BantamInstruments.com

www.BantamInstruments.com