



CI00402

- M1-M3
- RF Conducted Immunity System
- 100 Watts nominal
- 10kHz-400MHz

Features

Complete Testing Solutions to the following standards:

- MIL-STD-461 CS114
- DO160 (Section 20) BCI Testing
- EN/IEC 61000-4-6
- IEC 60601-1-2
- EN 50130-4
- EN 61000-6-1/2
- EN 55024
- ISO 11452-4

The Model CI00402 is a fully self-contained state of the art system designed to test RF Conducted Immunity. The system contains a signal generator, spectrum analyzer, 100W nominal AR amplifier 9 kHz to 400MHz, directional coupler, and emcware® control software. Everything is contained in a single housing, which eliminates setup issues. This system provides the versatility needed for every test laboratory



and equipment manufacturer. The RF amplifier, signal generator and spectrum analyzer can be used independently of the system. If special needs arise or standards were to change a larger amplifier can be connected to the system. The use of spectrum analyzer and signal generator may also be controlled by the software.

Option 1 adds data acquisition capability. Option 2 provides a laptop PC preloaded with the test software. Option 3 is a lower cost solution providing all the functions and features of the full CI00402 base model without the cost of the internal amplifier.

The export classification for this equipment is EAR99. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

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Internal Test Specifications (See NOTE 1)

CI00402
MIL-STD-461 (CS114)
DO160 (Sec 20 BCI Test)
IEC/EN 60601-1-2
IEC/EN 50130-4
IEC/EN 61326
IEC/EN 61000-6-1
IEC/EN 61000-6-2
IEC/EN 61000-4-6
CISPR 24/EN 55024
ISO 11452-4
EMC-CS-2009
GM GMW3097
BMW GS95002
Chrysler DC-11224
Renault 36-00-808

NOTE 1: Specifications can be met using AR-specified external accessories (injection probes, monitor probes, cal fixtures, CDN's, attenuators, etc.) Contact AR for further information.

Signal Generator Specifications

Frequency range	9 kHz to 1.5 GHz
resolution	0.01Hz
Power range	-110 to +13 dBm
resolution	0.01dB
Modulation	AM, FM, Phase, Int Pulse, Ext Pulse

Spectrum Analyzer Specifications

Frequency range	9 kHz to 1.5 GHz
resolution	1 Hz
RF Power CW (max)	20 dBm
Atten = 30 dB	
Resolution BW	10 Hz to 1 MHz
Video BW	1 Hz to 3 MHz
Amplitude Measurement Range	-110 dBm to +20 dBm in 1 dB steps
Preamplifier Gain	20 dB (nom)
Sweep Time, span > 100 Hz	10 msec to 1500 sec

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Specifications

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RF Amplifier Specifications	
Frequency range	9 kHz to 400 MHz
Power rating	100 Watts Minimum
1dB compression	75 Watts Minimum
Harmonic Distortion	-20dBc at 75 Watts
Mismatch tolerance	100% of rated power without fold back. Will operate without damage or oscillation with any magnitude of source and load impedance.
Gain	50 dB minimum

Connections	
RF Out	Type N (front)
Monitor Port In	Type N (front)
Signal Generator Out	Type N (rear)
RF Amp In	Type N (rear)
Directional Coupler In	Type N (rear)
RF Amp Out	Type N (rear)
Pulse In	BNC (rear)
Communication	USB B (rear)
Directional Coupler Fwd Out	Type SMA (rear)
Directional Coupler Fwd In	Type SMA (rear)
Directional Coupler Rev Out	Type SMA (rear)
Directional Coupler Rev In	Type SMA (rear)

General	
Power	115/230 VAC, 50/60 Hz, single phase 16A
Breaker	2 pole, 20A
Cooling	active cooling, air ventilation
Environmental conditions	10°C - 40°C
Dimensions,	50.3 x 53.3 x 55.1 cm 19.8 x 21.0 x 21.7 in
Weight	49.9 kg (110 lb)

Control Interface	
USB B	Connection to the computer

Control Software	
emcware® Software Suite	
PC Requirements	
Computer	Intel Pentium 4, AMD Athlon 64 or better processor
Operating system	Windows 7, Windows 8, Windows 10
RAM	2 GB Minimum
Screen Resolution	1024 x 768
Ports	2 available USB 2.0 ports
Software Requirements	Microsoft Word/Excel 2007 or newer

Options	
1	Data acquisition card
2	Laptop PC with software preinstalled
3	Amplifier and directional coupler removed; requires use of external amplifier.

MODEL CONFIGURATIONS	
MODEL	DESCRIPTION
CI00402M1	Includes Option 1
CI00402M2	Includes Option 2
CI00402M3	Includes Option 3

Accessory Kits

Application	Model	Description
IEC 61000-4-6 BCI Clamp	TK1000	Conducted immunity test kit containing all the attenuators, injection probes, calibration fixtures, calibration resistors, and termination resistors necessary for IEC testing of cables up to 32mm diameter.
IEC 61000-4-6 BCI Clamp	TK1001	Conducted immunity test kit containing all the attenuators, injection probes, calibration fixtures, calibration resistors, and termination resistors necessary for IEC testing of cables up to 66mm diameter.
IEC 61000-4-6 EM Clamp	TK1002	Conducted immunity test kit containing all the attenuators, injection probes, calibration fixtures, calibration resistors, and termination resistors necessary for IEC testing.
MIL-STD-461 DO160	TK2000	Conducted immunity test kit containing all the attenuators, injection probes, calibration fixtures, calibration resistors, and termination resistors necessary for MIL-STD-461 and DO160 testing.
Automotive	TK3000	Conducted immunity test kit containing all the attenuators, injection probes, calibration fixtures, calibration resistors, and termination resistors necessary for automotive testing.