rf/microwave instrumentation

Model CI00400, M1, M2, M3
RF Conducted Immunity System
100Watts nominal
10 kHz–400 MHz

Complete Testing Solutions to the following standards:

- MIL-STD-461D & E CS114
- DO160D & E BCI Testing
- EN/IEC 61000-4-6
- IEC 60601-1-2
- EN 50130-4
- EN 61000-6-1/2
- EN 55024

The Model CI00400 is a fully self-contained state of the art system designed to test RF Conducted Immunity. The CI00400 contains all the instruments needed to perform conducted immunity testing for MIL-STD-461D/E, DO160D/E, and IEC 61000-4-6 specifications. The system contains a signal generator, 2 channel power meter, 100W nominal AR amplifier 10kHz to 400MHz, directional coupler, and 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 and the signal generator 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 analyzers and monitoring equipment may also be controlled by the software.

Internal Test Specifications*	
MIL-STD-461D	CS114
MIL-STD-461E	CS114
DO160D	Section 20 BCI Testing
DO160E	Section 20 BCI Testing
IEC/EN 60601-1-2 IEC/EN 50130-4 IEC/EN 61326 IEC/EN 61000-6-1 IEC/EN 61000-6-2 CISPR 24/EN 55024	IEC 61000-4-6 procedure and levels

**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 resolution	9 kHz to 1.2 GHz 1Hz
Power range resolution	-140 to +13 dBm 0.1dB
Modulation	AM, FSK. FM, Phase, External Pulse

Power Meter Specifications**	
Channels	2
Power heads	2
Type	diode
Frequency	10kHz to 8GHz
Range	-60 to +20 dBm
***The use of a spectrum analyzer may be necessary on some of the low level bulk current injection tests. This is especially true on power and I/O lines with a great amount of ambient noise.*	

RF Amplifier Specifications	
Frequency range	10 kHz to 400 MHz
Power rating	100 Watts Nominal
1dB compression	75 Watts Nominal
Harmonic Distortion	-20dBc at 50 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	51dB minimum

Connections	
RF Out	Type N Male (front)
Monitor port In	Type N Male (front)
Signal Generator Out	Type N Male (rear)
Directional Coupler In	Type N Male (rear)
Amplifier out/in	Type N Male (rear)
Pulse In	BNC Male (rear)
Communication	GPIB (IEEE 488) (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 42.2 x 52.1 cm 19.8 x 16.6 x 21.7 in
Weight	22.7 kg (50.0 lb)

PC Requirements	
Computer	Pentium III, 500 MHz Minimum Pentium IV, 1 GHz Recommended
Operating system	Windows 2000, XP
RAM	128 Mb Minimum
Screen Resolution	1024 x 768
Ports	2 available USB ports
GPIB adaptor	USB to GPIB adaptor included (NI GPIB-USB-HS)

Options	
1	Additional power meter and power head to add the ability to monitor reverse power
2	Data acquisition card.
3	Laptop PC with software preinstalled

MODEL CONFIGURATIONS

MODEL	DESCRIPTION
CI00400M1	Includes Option 3
CI00400M2	Includes Options 2 and 3
CI00400M3	Includes Option 2

ACCCESSORY KITS

Application	Model	Description
IEC 61000-4-6	TK1000	AF06150, 6 dB 150 watt fixed attenuator BI00250, 10 kHz -250 MHz injection probe CF00250, 10 kHz- 250 MHz calibration fixture AF20025, 20 dB 25 watt fixed attenuator CR00100BC, 150-50 ohm adapter TL50010, 50 ohm 10 watt termination BP00250, 10 kHz – 250 MHz Monitor Probe 50 Ω Shielded Coaxial Cable 1.5m N male connectors (Qty 2) 50 Ω Shielded Coaxial Cable 0.3m N male connectors
MIL/DO	TK2000	AF06150, 6 dB 150 watt fixed attenuator BI00400, 10 kHz – 400 MHz injection probe CF00400, 10 kHz – 400 MHz calibration fixture AF10025, (Qty 2) 10 dB 25 watt fixed attenuators AF20025, 20 dB 25 watt fixed attenuator TL50010, 50 ohm 10 watt termination BP00400, 10 kHz – 400 MHz monitor probe BP00100, 10 kHz – 100 MHz monitor probe 50 Ω Shielded Coaxial Cable 1.5m N male connectors (Qty 2) 50 Ω Shielded Coaxial Cable 0.3m N male connectors