

# CMA-100

## COUNTERMEASURES AMPLIFIER

High gain audio amplifier for testing wiring systems and communication lines.

### CMA-100 FEATURES

- Multi-functional high gain amplifier with selectable audio filters
- Automatic gain control with 145 dB dynamic range (with manual selection option)
- Bias voltage adjustable between -15V to +15V DC used to activate devices that are voltage or current sensitive
- Balanced and unbalanced high impedance input provides connectivity to suspect wiring
- Built-in AC/DC digital voltmeter



### CMA-100 APPLICATIONS

- Detect and identify certain types of surveillance devices attached to telephone wiring, LAN and server systems, AC power, and alarm wiring.
- Ensure that building wiring is not being utilized to transport audio.
- Expose vulnerabilities on phone sets or conference call microphones.



# TECHNICAL SPECIFICATIONS

## INPUT IMPEDANCE

50k  $\Omega$  balanced

Common mode rejection: >75 dB

Maximum usable input: 31V p-p

Preamp auto attenuator: 0 to -40 dB (with overload warning LED)

## BIAS CONTROL

0 to +/-14.5V DC, 5 mA max (over current protected, input impedance is reduced to 3.6k ohms when bias is active)

## MAXIMUM INPUT VOLTAGE

250V AC/DC

Leakage resistance to case: >10M  $\Omega$

## AUTOMATIC GAIN CONTROL

Dynamic range: 145 dB

Manual gain control: 0, 25, 50, 75, 100 dB

Headphone gain control: 0 to 15 dB

Maximum system gain: 115 dB - Manual Mode; 120 dB - Auto Mode

## DIGITAL VOLTMETER

Auto zero, auto polarity, +/-199.9V AC/DC

## FREQUENCY RESPONSE

No filtering: 25 Hz to 44 KHz

High pass filter: 320 Hz to 44 kHz

Low pass filter: 25 Hz to 3.2 kHz

Band pass filter: 320 Hz to 3.2 kHz

## AUDIO

Headphone audio output

Line-out audio output: 600  $\Omega$

## POWER

Battery: 9V Alkaline (5 - 30 hours typical run time)

## MECHANICAL

Unit dimensions: 7.3 in. (184.4 mm.) x 2.75 in.

(69.8 mm.) x 1.75 in. (44.5 mm.)

Unit weight: 12.1 oz. (343 g)

## ACOUSTIC LEAKAGE PROBE (optional)

Evaluates structure bound acoustic leakage (walls, windows, etc.)

Frequency response: 50 Hz - 10 kHz

(surface dependant)

Impedance: 47K Ohm

## REI Training Center

REI operates the largest commercially-available TSCM training facility in the world. Courses are designed to teach the basic and advanced procedural concepts of conducting a counter surveillance investigation. All courses include hands-on exercises in dedicated project rooms that simulate threat scenarios.



Custom, on-site training courses are also available. View course dates and register online at [www.reiusa.net](http://www.reiusa.net).



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