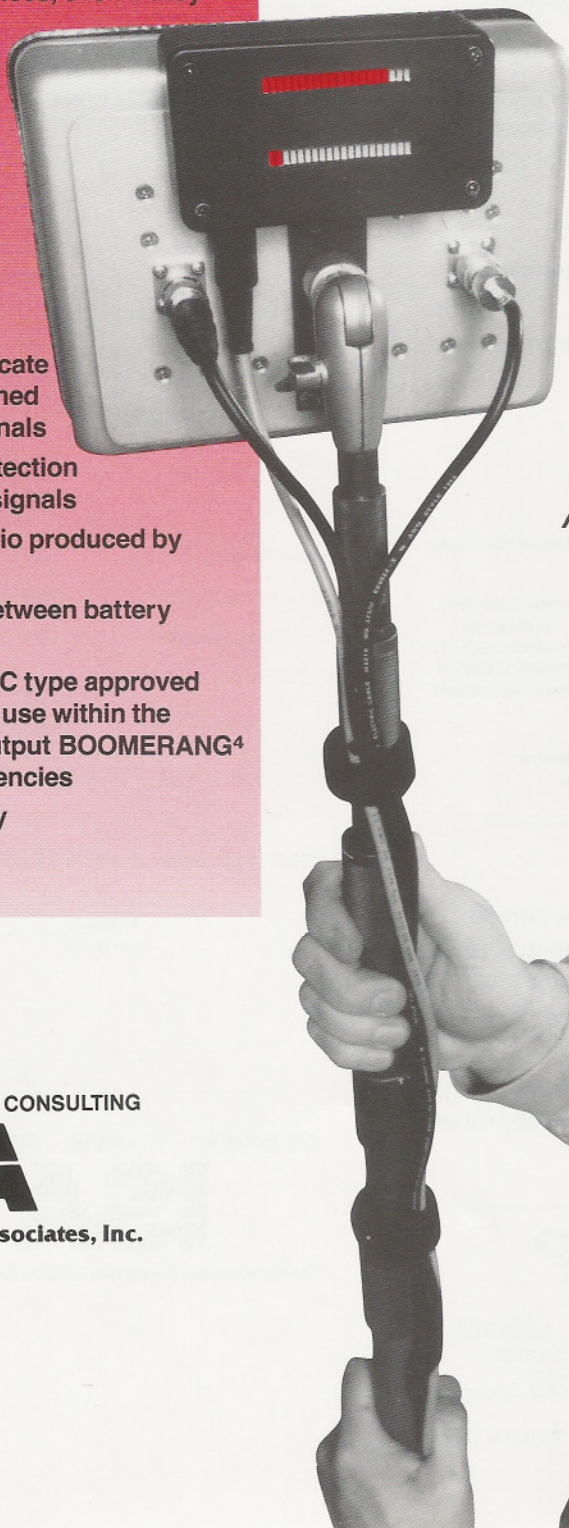


BOOMERANG⁴™

Fourth Generation Boomerang Non-Linear Junction Detector

- Find covert electronic devices, even if they are not operating
- Quickly, reliably locates hidden tape recorders, radio transmitters and amplified microphones
- 2nd and 3rd harmonic sensitivity differentiates between semiconductor junctions and dissimilar metals
- LED bargraph meters indicate relative strengths of returned 2nd and 3rd harmonic signals
- Audible tone indicates detection of 2nd and 3rd harmonic signals
- Operator can listen to audio produced by unusual listening devices
- Five hours of operation between battery charges
- Two models available: FCC type approved BOOMERANG⁴ NJD-4 for use within the USA; and 500 milliWatt output BOOMERANG⁴ NJD-5 for government agencies
- Two-year factory warranty
- American made



ISA's BOOMERANG⁴ Non-Linear Junction Detector locates eavesdropping devices during a Technical Surveillance Countermeasures sweep. BOOMERANG⁴ is the fourth and latest generation of junction detectors from ISA, marking quantum improvements over existing detectors of clandestine listening devices, e.g., radio transmitters, tape recorders, amplified microphones, etc.

It quickly and easily detects devices hidden in walls, ceilings, plants, chairs, and other room furnishings...even when they are not in operation!

How BOOMERANG⁴ works...

BOOMERANG⁴ emits a low power microwave signal from its extendable antenna. When the signal is received by a transistor, diode or other semiconductor in a clandestine listening device ["bug"], the semiconductor radiates or reflects energy called harmonics.



Microwave Induced Harmonic Reflection

BOOMERANG⁴ is equipped with a super-sensitive receiver that detects second and third harmonic radiations, even if they are ultralow level. The operator can quickly identify the presence of electronic devices hidden within an area during a security survey.

EQUIPMENT ■ TRAINING ■ CONSULTING

ISA

Information Security Associates, Inc.

State of the Art technique

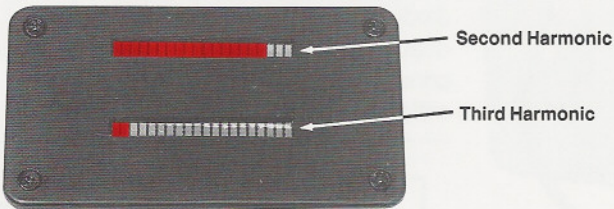
Previous non-linear junction detectors have had difficulty differentiating between semiconductors and false returns caused by dissimilar metallic junctions, including sheetrock screws, steel studs, paper clips, rebar, etc.

BOOMERANG⁴ detects two different types of harmonic signals, displaying the difference between an actual "bug" and false return caused by dissimilar metals. Here's how...

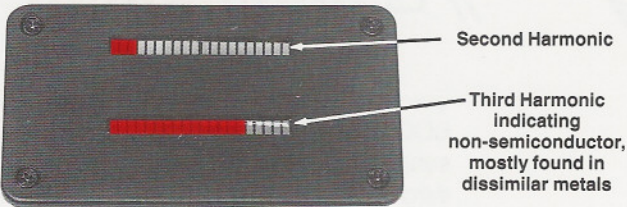
No False Returns

Semiconductor components radiate a **second harmonic**. Upwards of 90% of the signal reflected by a semiconductor is second harmonic. Dissimilar metals, on the other hand, reflect a significant quantity of third harmonic.

By simply comparing the quantities of second and third harmonics on the LED bargraph meters, the operator can instantly determine whether a return is caused by a false return or a "bug".



BOOMERANG⁴ detecting semiconductor found in "bug"



BOOMERANG⁴ detecting sheet rock screws, paper clips, cabinet drawer slides, rebar and non-semiconductor dissimilar metals

High Reliability

BOOMERANG⁴'s state of the art electronic and production techniques utilize surface mount components and integrated circuits throughout. It's circuitry is designed to operate at low stress levels for longevity. Ultrastable crystal controlled oscillators provide trouble-free operation without the need for factory calibration or periodic maintenance.

Two Models

The BOOMERANG⁴ NJD-4 is available in a low power configuration, FCC approved for use by civilian groups within the USA. The high powered BOOMERANG⁴ NJD-5, available to government groups and for export, has a 500 milliWatt transmitter for greater detection range, especially in dense materials. The NJD-5 also has an integral multi-step attenuator to allow the user to control the actual detection range by lowering the transmitter output.

Specifications

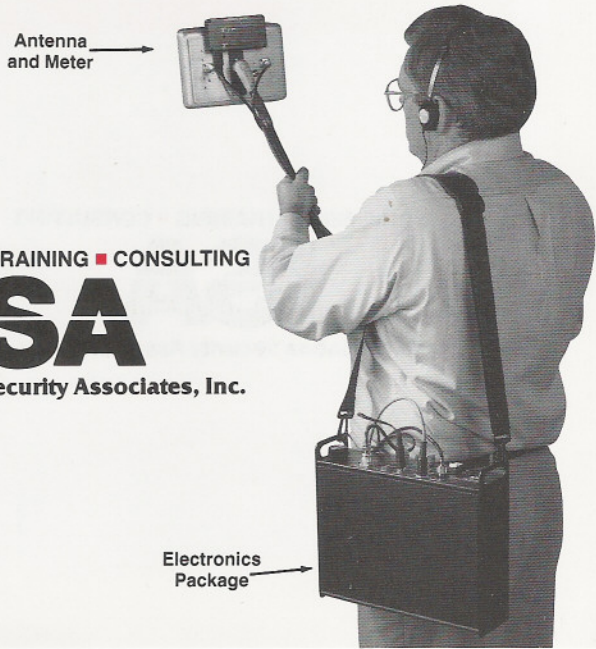
Transmitter Power:	NJD-4 100 milliWatts NJD-5 500 milliWatts
Transmitter Attenuation:	NJD-4 0 or 6 dB user selectable NJD-5 0 to 30 dB in 3 dB steps
Operating Frequency:	915 MHz
Receiver Frequencies:	1830 MHz and 2745 MHz
Power:	12 VDC internal rechargeable gelcell batteries. 110/220 VAC external supply
Antenna Polarization:	Vertical or Horizontal-user selectable
Shipping Weight:	39 lbs.
Operating Weight:	16 lbs.
Accessories Supplied:	Headset- 110/220 VAC 50/60 Hz switching Charger. External Power Supply. Two antenna cables. Test Target. Back-pack carrying harness. Instruction Manual. Heavy duty shipping/carrying case.

NJD-5G is available under GSA contract GS-07F-9556G

Simple Operation

The antenna, mounted on the extendable handle, sweeps walls, ceilings or other objects being investigated, without physical contact. Even a non-technical operator can master the BOOMERANG⁴ after a few practice sessions.

Powered by self-contained rechargeable gel cell batteries, BOOMERANG⁴ will operate continually for over ten hours before recharging.



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