

# SEARCHER-2500

## Non-Linear Junction Detector



### FEATURES

- Excellent detection range, ERP up to 2W coupled with  $> -130\text{dBm}$  sensitivity
- 2.4GHz operating frequency
- Continuous wave (CW) transmission removes risk of missing a target due to sweeping to quickly
- Ultra sharp AMOLED full colour touch screen display
- Quick set range control operation
- Single scroll wheel for operation of major functions
- Simple user interface for target evaluation
- Light weight, compact and rugged design, quick fit Lithium-ion battery with fuel gauge

### APPLICATIONS

- Detection of concealed “bugging” devices
- Mail screening for concealed electronic devices
- Unobtrusive body-search for concealed recording devices or high value items
- Technical Surveillance Counter Measures (TSCM) sweeps of small offices
- High risk search capabilities
- Detection of mobile phones
- Search operations in a conventional military context and in aid to the civil power

#### QUICK SET-UP

Quick-start operating system plus simple user-interface to enable easy evaluation of targets



# TECHNICAL SPECIFICATIONS

Transmitter	
<b>Power output</b>	Adjustable from 2mW up to 2W ERP (0dBm to 33dBm ERP)
<b>Frequency range</b>	10 spot frequencies 2410 to 2485 MHz
<b>Filtering</b>	10 section filtering
<b>Signal type</b>	CW (continuous wave)
<b>Modulation</b>	Selectable FM, 1 KHz tone (Listen ID mode)
Receiver	
<b>Audio output</b>	4 selectable modes linked to the internal speaker or headphones
<b>Demodulation</b>	FM, AM, ID and TONE (5Hz to 1 KHz)
<b>Sensitivity</b>	Better than -130 dBm
<b>Frequency range</b>	4820 to 4970 MHz
<b>Filtering</b>	10 section filtering
Display Screen	
<b>Type</b>	AMOLED - Active Matrix Organic Light Emitting Display
<b>Viewing angle</b>	180 degrees
<b>Life time</b>	55,000 hours
<b>Screen Information</b>	Transmitter power level (RANGE) Circular graphical display for evaluation of the received signal level
<b>Four operating modes:</b>	
1. SEARCH mode - Rising tone (5Hz to 1 KHz)	
2. LISTEN FM mode - FM Demodulated	
3. LISTEN AM mode - AM Demodulated	
4. LISTEN ID mode - Transmitter FM modulated and Receiver FM demodulation	
<b>Touch screen operation Volume adjustment</b> – 10 levels and audio mute	
<b>Touch screen operation Frequency selection</b> – 10 spot frequencies available	
<b>Touch screen operation Power Off control</b> – Slide tab to turn Off and memorise settings	
<b>Battery level status indicator</b> – 3 levels and battery low warning screens	
Controls	
5 Way scroll wheel for Range level adjustment and operating mode selection	
Antennas	
<b>Transmitter</b>	2400 to 2500 MHz
<b>Transmitter gain</b>	8dBi - Circular polarisation
<b>Receiver</b>	4800 to 5000 MHz
<b>Receiver gain</b>	8dBi - Circular polarisation
Charger	
<b>Type</b>	Smart technology, desktop charger
<b>Input voltage</b>	110 - 240 VAC
<b>Charge current</b>	Variable upto 2 amps
<b>Communication</b>	SMBus between charger and battery
<b>Charge time</b>	Approximately 2.5 hours
<b>Display</b>	Indicates charge status
Battery	
<b>Type</b>	Lithium-ion battery

<b>Voltage</b>	7.5 Volts DC
<b>Capacity</b>	5600 mAH
<b>Run time</b>	3-4 Hours (2W)
<b>Display</b>	Fuel gauge to indicate remaining capacity
Test Target	
Electronic test target- minimum of 1 meter with maximum power	
Wireless Headphones	
<b>Range</b>	Up to 10 meters
<b>Run time</b>	8 Hours (auto switch off)
<b>Controls</b>	Volume Up/Down and Power on/off
<b>Frequency</b>	2400-2483 MHz
<b>Charger voltage</b>	110 - 240 VAC
Operational Environment	
Operating Temperature -5°C to + 50°C	
Storage Temperature -20°C to +60°C	
Relative Humidity up to 95%	



## COMPACT DESIGN

The SEARCHER-2500 is the most compact handheld Non-Linear Junction Detector available on the market today.

For international sweep teams the SEARCHER-2500 is an ideal choice weighing only 725g. It has been designed to the very highest standards, in terms of functionality, ease of operation and reliability.



## PHYSICAL DATA

### Transit Case

Black, moulded in structural resin with foam inserts  
 Dimensions 40 x 30 x 20 cm  
 Weight 3.5 Kg

### SEARCHER-2500 module

Black, machined aluminium and plastic housings  
 Dimensions 26 x 16 x 10 cm  
 Weight 725 g (without battery)

### Handle Protector

Black, padded material and fasteners  
 Dimensions 14 x 14 x 0.3 cm  
 Weight 5 g

### Battery Pack

Black, Lithium-ion battery  
 Dimensions 15 x 4 x 2 cm  
 Weight 235 g

### 110/240 VAC Charger

Black, plastic housing complete with psu and plug  
 Dimensions 18 x 9 x 5.5 cm  
 Weight 0.7Kg

### Test Target

Black, plastic case  
 Dimensions 9 x 6 x 2.5 cm  
 Weight 8 g

### Earphone

Black, plastic housings  
 Dimensions 0.8m cable  
 Weight 8 g

### Operational Weight

Including battery and handle protector 965 g

### Complete system

Total weight of all standard items in the transit case 5.2 Kg

### Warranty

The SEARCHER-2500 comes with a return-to-base warranty against defective materials and workmanship for a period of 2 years from delivery.

### After Sales Support

Technical Support business hours (GMT)  
 Monday – Friday 8.30am – 5.30pm  
 E: [technicalsupport@winkelmann.co.uk](mailto:technicalsupport@winkelmann.co.uk)

### Training

Winkelmann and its Partners are able to offer full training in the operation of products together with general countermeasures training and seminars (Contact us about basic & advanced TSCM courses).

## ADVANTAGES OF 2.5 GHz OPERATION

The SEARCHER-2500 (2410-2485 MHz) has a higher transmitter frequency than conventional NLJD's, which makes it more likely for the signal to get through small gaps in the screening enclosure of the electronic device and to be picked up by shorter conductors in small electronic circuitry.

The SEARCHER-2500 has a narrower beam, which makes it easier to pinpoint the location of the electronic device in a site with a lot of other 'friendly' electronics. The higher frequency of the SEARCHER-2500 detector has an advantage. On various targets the SEARCHER-2500 detector is more efficient than detectors operating at 800-900 MHz frequencies with greater power.

The higher frequency of 2.5 GHz operation is better at detecting mobile phones



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SEARCHER-2500 is an essential part of the equipment used in counter measure and defensive search. Used for protecting airports, train stations, governmental, military or public buildings and organisations worldwide.

The SEARCHER-2500 is capable of searching for electronic devices such as mobile phones (even when switched off), covert surveillance devices (radio microphones, microphone amplifiers, digital recorders etc.) and high value electronics.

The SEARCHER-2500 allows the operator to search voids and areas where they are unable to gain physical or visual access, in order to detect electronic components (covert electronic devices containing semi-conducting components) and determine if the area is free from bugging devices.

## TECHNOLOGY

All modern electronic devices contain semi-conducting components. Using SEARCHER-2500 it is possible to detect these components. When SEARCHER-2500 high frequency signal is transmitted towards a target, energy is re-radiated back at a different frequency. This energy can then be analysed to determine if a potentially threatening target has been discovered. ■

## PRODUCT CODES

### SEARCHER-2500 Non-linear Junction Detector - Full System

**3-299-241** SEARCHER – 2500MHz – 2Watt max (ERP) - c/w handle protector, 110-240VAC charger, Lithium-ion battery pack (2), test target (E), bluetooth wireless headphones, earphone, guidance manual & transit case with foam inserts

### SEARCHER-2500 NLJD – Accessories & Components

**SHR-TCF-SR01** Transit case with foam insert

**SHR-BAT-SR02** Spare Lithium-ion Battery

**SHR-HPR-SR03** Handle protector

**SHR-CHR-SR04** Battery charger

**SHR-TST-SR05** Test target

**SHR-EAR-SR06** Earphone

**SHR-GDM-SR07** Guidance manual

**SHR-WIR-SR08** Wireless Headphones



### For further information contact

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