

HAWK XTS-2500

Non-Linear Junction Detector



AUTOMATIC FREQUENCY SELECTION (AFS)

On power up the HAWK XTS detector scans all available operating frequencies and measures the ambient RF signal levels. The optimum frequency is chosen and automatically selected in less than a second.

Features

- Excellent detection range, ERP up to 4W coupled with -133dBm sensitivity
- Automatic DSP power control to prevent saturation of targets and provide more accurate analysis
- 2.4GHz operating frequency, automatic frequency selection
- Dual Harmonic with discrimination algorithms and differential audio tone minimizes false alarms
- Continuous wave (CW) transmission removes risk of missing a target due to sweeping to quickly
- Tactile bright AMOLED full colour touch screen display
- Extendable carbon arm (telescopic antenna)
- Simple user interface for quick evaluation of targets
- Lightweight, balanced ergonomic design for ease of use, quick fit Lithium-ion batteries

Applications

- TSCM (detection of active and passive surveillance devices)
- Detection of mobile phones and similar devices in prisons
- Defensive building search (venues)
- High risk search capabilities (suspect packages)
- Protecting the railways from attack
- IED search (detection of improvised explosive devices)
- Detection of buried ammunition and arms caches
- Engineer search operations in a conventional military context and in aid to the civil power



Technical Specifications

Transmitter		Controls	
Power Output	Auto or manual range control Adjustable from 2mW to 2W/4W ERP (0 dBm to 33/36 dBm ERP)	Display Handle	5 way scroll wheel for Range level adjustment, Auto or Manual Range control and selection of operating modes (E) or (C)
Frequency Range	10 spot frequencies within 2410-2485MHz	Antenna	
Frequency Bandwidth (for each frequency)	Approx. +/-6KHz (6dB down) and +/-10KHz (40dB down)	Frequency Coverage	2.400-2.500GHz 4.800-5.000GHz and 7.200-7.500GHz
Filtering	10 Section filtering	Gain	Transmitter 8dBi – Circular polarisation Receivers 6dBi – Circular polarisation
Signal Type	CW (Continuous wave transmission)	Charger	
Modulation	Selectable FM, 1KHz tone (Listen ID mode)	Type	Smart technology stand alone desktop charger
Receiver 1 – (E) Electronic - 2nd Harmonic		Input Voltage	100-240V AC, 2.50 Amps DC
Audio Output	5 Selectable modes linked to internal speaker or headphones	Charge Current	Variable up to 2.0 Amps
Demodulation	AM, FM and Tone (5Hz to 1KHz)	Communication	SMBus between charge and battery
Sensitivity	Detection at -133dBm (DSP for optimisation of detection range)	Charge Time	Approximately 2.5 hours
Frequency Range	4.820 to 4.970GHz	Display	LEDs to indicate charge status
Filtering	10 Section filtering	Battery	
Receiver 2 – (C) Corrosive - 3rd Harmonic		Type	Lithium-ion Battery
Audio Output	5 Selectable modes linked to internal speaker or headphones	Voltage	7.5V DC
Demodulation	AM, FM and Tone (5Hz to 1KHz)	Capacity	5,000mAH
Sensitivity	Detection at -133dBm (DSP for optimisation of detection range)	Run time	4 Hours (2W)
Frequency Range	7.230 to 7.455GHz	Display	Full gauge to indicate battery capacity
Filtering	10 Section filtering	Bluetooth Wireless Headphones (optional)	
Display Screen		Range	Up to 8m
Type	AMOLED – Active Matrix Organic Light Emitting Display	Run time	8 Hours
Viewing Angle	180 Degrees	Control	Volume up/down, on and off
Lifetime	55,000 Hours	Frequency	2.400GHz
Screen Information	Transmit power level – Auto or Manual operation. Circular graphical display for Electronic (E) and Corrosive (C) signal levels	Charger Voltage	100-240V AC
Five Operational Modes Displayed:		Test Target (Electronic)	
(1) Search 1 – Comparison of Electronic (E) and Corrosive (C) signal levels		Detection Range	Minimum of 1.0m – in Electronic mode and maximum power (in open space)
(2) Search 2 – Unprocessed Electronic (E) and Corrosive (C) signal levels		Test Target (Corrosive)	
(3) Listen ID – Transmitter FM modulation and Receiver FM demodulation selected		Detection Range	Minimum of 0.5m – in Corrosive mode and maximum power (in open space)
(4) Listen FM – FM demodulation		Operational Environment	
(5) Listen AM – AM demodulation		Operating Temperature -5°C to + 50°C	
Touch Screen Volume Selection		Storage Temperature -20°C to +60°C	
– 10 levels and audio mute		Relative Humidity up to 95%	
Touch Screen Frequency Selection		Warranty	
– 10 frequencies displayed		The HAWK XTS comes with a return-to-base warranty against defective materials and workmanship for a period of 2 years from delivery.	
Touch Screen Power Off Control		After Sales Support	
– slide tab to power OFF		Technical Support business hours (GMT) Monday – Friday 8.30am – 5.30pm E: technicalsupport@winkelmann.co.uk	
Battery Level Status Indicator			
3 levels and battery level warning screens at 9 minutes and 60 seconds operating time remaining			
Threat Indicator Located on Antenna Head			

CONFIGURATION

For ease of use the HAWK XTS-2500 has an integral extendable arm that can be adjusted without interrupting a search. The arm can be quickly extended to search for targets that have been placed in ceilings or buried in the ground.



"All-in-One"
Configuration



Arm Support

Physical Data

Transit Case

Black, moulded in structural resin with foam inserts
Dimensions 55 x 33 x 20cm
Weight 4.2Kg

Control Module

Black, machined aluminium case
Dimensions 26 x 5.5 x 4cm
Weight 0.7Kg

Display and Telescopic Antenna Module

Black, machined aluminium, carbon fibre and foam grip
Dimensions 64 x 8 x 5.5cm (Antenna head 16 cm diameter)
Dimensions 100 x 8 x 5.5cm (Extended)
(With the Control Module fitted and when extended the overall length is 126cm)
Weight 1.15Kg

110/240V AC Charger

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

Earphone

Black, rubberised ear grip
Dimensions 6 x 4 x 2cm
Weight 0.02Kg

Battery Pack (2)

Black, Lithium-ion battery
Dimensions 16 x 4 x 2cm
Weight 0.3Kg each

Screen Shade

Black, padded nylon
Dimensions 8 x 6 x 6cm (folded)
Weight 0.02Kg

Test Target (E)

Black, plastic case
Dimensions 9 x 6 x 2cm
Weight 0.06Kg

Test Target (C)

Black, plastic case
Dimension 9 x 6 x 2.5cm
Weight 0.04Kg

Arm Support

Black, aluminium and black, woven strap
Dimensions 14 x 13 x 7cm
Weight 0.07Kg

Pouch (for control module)

Black cloth
Dimensions 16 x 4.5 x 4.0 cm

Separation Lead (optional)

Black, 1 meter lead

Operational Weight

Including battery and arm support 2.22Kg

Complete System

Total weight of all items in transit case 7.6Kg

Lightweight,
collapsible,
rugged design
with telescopic
antenna



The HAWK XTS-2500 is a portable, simple to use advanced Electronic Device Detector, also known as a Non-Linear Junction Detector (NLJD).

The HAWK XTS-2500 is capable of locating and confirming the presence of electronic components found in devices, regardless whether they are switched on or off.

The HAWK XTS-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 and determine if the area is free from "bugging devices" or an Improvised Explosive Device (IED).

The HAWK XTS-2500 is lightweight, utilizes modern technology shaped to allow easy handling; single-body design containing transceiver, antenna and display assembly on a single extendible unit.

The HAWK XTS-2500 gives both audible and visual alarms to allow the operator to conduct searches in a covert environment.

The HAWK XTS-2500 is robust, easy to carry, fitted with a removable arm support and separation lead (optional) for extended operations delivered in a shock resistant transport case.

During the life of the HAWK XTS-2500 it may be deployed on a range of domestic operations such as technical surveillance countermeasures (TSCM), sweeps and non-combat operations such as peacekeeping missions, and on civil emergency tasks, where it can provide RCIED/IED search-and-support to react to terrorism threats.

Technology

The HAWK XTS NLJD is used for the detection of electronic circuits commonly found in IEDs and radio transmitters. Most sophisticated electronic circuits contain semi conductors, which are non-linear junctions. The HAWK XTS can find these by emitting a very high frequency signal which simulate the non linear junction into emitting harmonic signals at two and three times the fundamental frequency. The XTS contains two highly sensitive receivers to pickup these harmonic frequencies and indicates the proximity of the device by means of a visual and audible alarm.

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). ■

Product Codes

HAWK XTS-2500 Non-Linear Junction Detector – Full Systems

- 3-299-236** HAWK XTS – 2500MHz – 2Watt max (ERP) c/w control module & pouch, display handle/telescopic antenna head (8dBi), 110-240V AC charger, charger PSU and lead, Lithium-ion battery pack (2), earphone, test targets (E) and (C), screen shade, arm support, mains adaptors, guidance manual & transit case with foam inserts
- 3-299-237** HAWK XTS – 2500MHz – 4Watt max (ERP) c/w control module & pouch, display handle/telescopic antenna head (8dBi), 110-240V AC charger, charger PSU and lead, Lithium-ion battery pack (2), earphone, test targets (E) and (C), screen shade, arm support, mains adaptors, guidance manual & transit case with foam inserts

HAWK XTS-2500 Non-Linear Junction Detector – Accessories, Components & Upgrades

- XTS-TCF-000** Transit case with foam inserts
- XTS-CON-002** Control module
- XTS-RFD-224** RF/Display and antenna module - 2500 MHz -2W
- XTS-RFD-244** RF/Display and Antenna module - 2500 MHz -4W
- XTS-SEP-006** Separation lead
- XTS-PAB-008** Pouch and belt to allow module separation
- XTS-ARM-010** Arm support
- XTS-BAT-020** Lithium-ion battery
- XTS-CHR-030** 110/240V AC battery charger
- XTS-LEU-031** Mains charger lead - EU plug
- XTS-LUK-032** Mains charger lead - UK plug
- XTS-LUS-033** Mains charger lead - US plug
- XTS-EAR-040** Earphone
- XTS-SSA-050** Screen shade
- XTS-TTE-060** Test target - electronic
- XTS-TTC-070** Test target - corrosive
- XTS-UGM-090** Guidance manual
- XTS-WIR-2500** Wireless headphones for XTS-2500 only

ADVANTAGES OF 2.5GHZ

The higher frequency of the XTS-2500 detector has an advantage on well-screened targets such as mobile phones and similar devices. The smaller waveform at 2.5GHz makes it more likely for the signal to get through gaps in the screening enclosure of the electronic device.



Quick fit Lithium-ion battery with smart charger

Wireless bluetooth headphones (optional)

For further information contact

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