

# HAWK XDi

## High Gain Non-Linear Junction Detector



**Nato Stock No.**

(8Watt Version)  
5820-99-562-6913

## FEATURES

- Excellent detection range, ERP up to 8W coupled with -133dBm sensitivity
- Automatic DSP power control to prevent saturation of targets and provide more accurate analysis
- 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
- Bright OLED screen plus Wireless Bluetooth Headphones
- 10 selectable frequencies
- Minimum set-up time, no bulky transceiver unit to carry
- Light weight, balanced ergonomic design for ease of use

## APPLICATIONS

- Detection of remote-controlled detonators
- High Risk Search Capabilities
- Protecting the railways from attack
- Detection of buried ammunition and arms caches
- Detection of surveillance devices - Technical Surveillance Counter Measures
- Detection of Mobile Phones in Prisons
- Search operations in a conventional military context and in aid to the civil power



# TECHNICAL SPECIFICATIONS

<b>Transmitter</b>		<b>Control module</b>	
<b>Power output</b>	Auto or manual range control. Adjustable from 2mW to 2W/8W ERP (0dBm to 33/39dBm ERP)	4 buttons for Volume Up / Down Frequency select and On / Off	
<b>Frequency range</b>	10 spot frequencies within 869 to 916 MHz	<b>Antenna</b>	
<b>Filtering</b>	10 section filters	<b>Frequency coverage</b>	860 - 920 MHz, 1.720 - 1.840 GHz and 2.580 -2.760 GHz
<b>Output connector</b>	50 ohm double screened co-ax socket	<b>Gain</b>	Transmitter 8dBi - Circular polarisation Receiver 6dBi - Circular polarisation
<b>Modulation</b>	Continuous wave transmission (CW)	<b>Main lobe angle</b>	60 x 60 degrees
<b>Receiver (RX1) - Electronic (2nd Harmonic)</b>		<b>Charger</b>	
<b>Audio output</b>	Auto or manual audio output	<b>Type</b>	Smart technology - Stand alone desktop charger / calibrator
<b>Audio type</b>	Tone	<b>Input voltage</b>	90 - 260 VAC, 2.5A DC
<b>Demodulation</b>	AM, FM or Tone (5Hz to 1 KHz)	<b>Charge current</b>	Variable up to 2.0A
<b>Sensitivity</b>	Detection at -133dBm (DSP for optimised detection range)	<b>Communication</b>	SMBus between charger & battery
<b>Frequency range</b>	1.732 to 1.832 GHz	<b>Charge time</b>	Approximately 1 hr
<b>Filtering</b>	6 section filter	<b>Display</b>	LEDs to indicate charging status Battery
<b>Input connector</b>	50 ohm double screened co-ax socket	<b>Battery</b>	
<b>Receiver (RX2) - Corrosive (3rd Harmonic)</b>		<b>Type</b>	Nickel metal Hydride
<b>Audio output</b>	Auto or manual audio output	<b>Voltage</b>	10.8 VDC
<b>Audio type</b>	Pulsed	<b>Capacity</b>	3850 mAh
<b>Demodulation</b>	AM, FM or Pulsed Tone (5Hz to 500Hz)	<b>Run time</b>	Auto mode - approx. 3 hrs 2 Watt version 1.5 hrs 8 Watt version
<b>Sensitivity</b>	Detection at -133dBm (DSP for optimised detection range)	<b>Display</b>	Fuel gauge to indicate battery capacity
<b>Frequency range</b>	2.607 to 2.748 GHz	<b>Bluetooth Headphones</b>	
<b>Filtering</b>	6 section filter	<b>Range</b>	Up to 8 meters
<b>Input connector</b>	50 ohm double screened co-ax socket	<b>Run time</b>	8 hours battery life
<b>Display screen</b>		<b>Control</b>	Volume Up / Down, On and Off
<b>Type</b>	OLED active matrix - organic light emitting display	<b>Frequency</b>	2.4 GHz
<b>Viewing angle</b>	180 degrees	<b>Charger</b>	100 - 240VAC
<b>Life time</b>	55,000 hours	<b>Test Target</b>	
<b>Screen information</b>	Transmit power level - Auto or Manual 'X' framework displays Electronic (E) and Corrosive (C) signal levels or Comparison of Electronic and Corrosive signals. Audio output selected (E) or (C) - Auto/Manual. Audio demodulation type/tone selection. Quick view 'Threat' status box either Electronic or Corrosive. Frequency selection - 10 frequencies displayed. Volume level - 10 levels and audio mute. Battery status - 3 levels and battery level warning screens at 9 mins and 60 seconds remaining.	<b>Detection range in open space</b>	not less than 1m (in mode with maximum power) electronic
<b>Controls</b>		<b>Detection range in open space</b>	not less than 0.5m (in mode with maximum power) corrosive
<b>Display handle</b>	5 way thumb control on handle for Range level adjustment, Auto or Manual operation and Audio mode selection (E) or (C)	<b>Operation Conditions</b>	
		<b>Operation temperature range</b>	-15° C to +60° C
		<b>Humidity</b>	95% RH
<b>Warranty</b>			
The HAWK XDi comes with a return-to-base warranty against defective materials and workmanship for a period of 2 years from delivery.			
<b>After Sales Support</b>			
Technical Support business hours (GMT) Monday – Friday 8.30am – 5.30pm E: technicalsupport@winkelmann.co.uk			
<b>Training</b>			
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).			

# PHYSICAL DATA

## Transit Case

Black, moulded in structural resin with foam inserts  
Dimensions 50 x 40 x 22 cm  
Weight 4.5 Kg

## Control Module

Black, machined aluminium case and protective pouch  
Dimensions 21 x 11 x 4 cm  
Weight 1 Kg

## Display Module

Black, aluminium tube, plastic display fascia,  
foam grip  
Dimensions 35 cm by 3.6 cm diameter  
(display width 4.6cm)  
Weight 0.41 Kg

## Antenna Head

Black, fibreglass abs with aluminium bracket  
Dimensions 40 x 25 x 5 cm  
Weight 0.53 Kg

## Extension Tube

Black, aluminium tube  
Dimensions 36 cm by 2.5 cm diameter  
Weight 0.18 Kg

## Separation Lead

Black, co-ax lead with protection braid covering  
Dimensions 120 cm  
Weight 0.32 Kg

## 110/240 Charger

Black, plastic housing complete with psu lead  
and plug  
Dimensions 18 x 9 x 5.5 cm  
Weight 0.70 Kg

## Earphone

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

## Bluetooth Headphones

Black, plastic rubberised neckband, charger  
and receiver  
Dimensions 15 x 14 x 5 cm  
Weight 0.04 Kg

## Battery Pack (3)

Black, Nickel Metal Hydride battery  
Dimensions 21 x 5 x 1.8 cm  
Weight 0.48 Kg each

## Screen Shade

Black, aluminium and composite material  
Dimensions 8 x 6 x 2 cm  
Weight 0.02 Kg

## Test Target

Plastic case and pcb  
Dimensions 8 x 7 x 0.7 cm  
Weight 0.02 Kg

## Straps

Black woven belt straps and shoulder straps  
Dimensions 100 x 4 (belt) and 100 x 2 cm (shoulder)  
Weight 0.02 Kg each

## Complete System

Total weight of all items in transit case 9.3 Kg

The **XDi** has been designed to be as versatile as possible. It provides the operator with the option of an 'All-in-one' single-body unit or separated as with previous modules.



The device is successfully deployed in military operations.

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

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

The HAWK XDi 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 an Improvised Explosive Device (IED).

The XDi is lightweight, robust, and utilizes modern technology shaped to allow easy handling. The XDi gives both audible and visual alarms to allow the searcher to conduct searches in a covert environment.

During the life of the XDi it may be deployed on a range of domestic operations and non-combat operations such as peacekeeping missions, and on civil emergency tasks, where it can provide CBRN and IED search-and-support to react to terrorism threats.

## TECHNOLOGY

The HAWK XDi High Gain 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 XDi 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 XDi 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. ■

## PRODUCT CODES

### HAWK XDi Non-Linear Junction Detector - Full System

**3-299-231** HAWK XDi – 8Watt max (ERP) – c/w control module, display handle, antenna head (8dBi), 90/260VAC charger, charger lead, battery pack(3), separation lead, extension tube, earphone, test target (electronic & corrosive), bluetooth headphones, screen shade, mains adaptors, user manual & transit case (10 user selectable frequencies, 860 – 920MHz).

**3-299-232** HAWK XDi – 2Watt max (ERP) – c/w control module, display handle, antenna head (8dBi), 90/260VAC charger, charger lead, battery pack(3), separation lead, extension tube, earphone, test target (electronic & corrosive), bluetooth headphones, screen shade, mains adaptors, user manual & transit case (10 user selectable frequencies, 860 – 920MHz).

### HAWK XDi Non-Linear Junction Detector - Accessories & Components

<b>XDi-7001-2W</b>	HAWK XDi - Control Module (2Watt Version)
<b>XDi-7002-2W</b>	HAWK XDi - Display Module (2Watt Version)
<b>XDi-7001-8W</b>	HAWK XDi - Control Module (8Watt Version)
<b>XDi-7002-8W</b>	HAWK XDi - Display Module (8Watt Version)
<b>XDi-7003</b>	HAWK XDi - Antenna Head
<b>XDi-7004N</b>	HAWK XDi - NiMH Battery Charger 110/240V
<b>XDi-7004L</b>	HAWK XDi - LITHIUM Battery Charger 110/240V
<b>XDi-7005</b>	HAWK XDi - Charger Lead
<b>XDi-7006N</b>	HAWK XDi - NiMH Battery Pack
<b>XDi-7006L</b>	HAWK XDi - LITHIUM Battery Pack
<b>XDi-7007</b>	HAWK XDi - Separation Cable
<b>XDi-7008</b>	HAWK XDi - Extension Tube
<b>XDi-7009</b>	HAWK XDi - Earshell (Earphone)
<b>XDi-7010</b>	HAWK XDi - Wireless Headphones (TX, RX & Charger)
<b>XDi-7011E</b>	HAWK XDi - Test Target (Electronic)
<b>XDi-7011C</b>	HAWK XDi - Test Target (Corrosive)
<b>XDi-7012</b>	HAWK XDi - Guidance Manual
<b>XDi-7013</b>	HAWK XDi - Transit Case with foam
<b>XDi-7014</b>	HAWK XDi - Pouch, belt & strap
<b>XDi-7015</b>	HAWK XDi - Screen Shade
<b>XDi-7016</b>	HAWK XDi - Maintenance Kit
<b>XDi-7017</b>	HAWK XDi - Maintenance Manual



### For further information contact

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