

RfPatrol MKII User Manual

(English)



droneshield.com

Table of Contents

1.	Dis	sclaimer	'S	7
	1.1	Disc	claimer	7
	1.2	ISO	9001	7
	1.3	War	rranty	7
	1.4	RF L	Library	7
	1.5	Ship	pping	7
	1.6	Not	es	7
	1.7	War	rnings	8
	1.8	Higł	h Noise Environment	8
	1.9	Dev	vice Security	8
2.	Sa	fety		9
3.	Ар	plicatior	n	11
4.	Ke	y Featur	res	11
5.	Ou	t of the l	Вох	12
6.	Pro	oduct Ov	verview	13
	6.1	Pro	duct Details	13
	6.2	Pro	duct Dimensions	14
	6.3	Pro	duct Mounting	15
7.	User Interface			16
	7.1	Con	ntrols	16
	7.2	Disp	play Navigation	18
		7.2.1	Power On	18
		7.2.2	Viewing Detections	19
		7.2.3	Accessing RfPatrol Menu	20
		7.2.4	Configuration	20
		7.2.5	Status	21
		7.2.6	Spectrum Recorder	22
		7.2.7	Spectrum View	24
		7.2.8	Settings	25
		7.2.9	Enable / Disable Detection Bands	25
		7.2.10	Detection Filters	26
		7.2.11	Adding Filter from a Detection	27
		7.2.12	Display Test	28



	7.3	Audio	o Feedback	28
8.	Po	rts and Co	omponents	29
	8.1	Antei	nnas	29
		8.1.1	Alpha Antenna	30
		8.1.2	Bravo Antenna	30
		8.1.3	Charlie Antenna	30
		8.1.4	Antenna Extension Cable and Pouch	31
		8.1.5	Correct Antenna Orientation	32
	8.3	MOLI	LE Clips	33
	8.4	Dust	Caps	33
	8.5	VESA	Mount	34
	8.6	Batte	ery	35
		8.6.1	DroneShield Approved Batteries	35
	8.8	Сара	bility Expansion Kits	36
		8.8.1	Direction Finding Kit	36
		8.8.2	Roof Mount Antenna Kit	37
9.	Connect to Device Manager			38
	9.1	Conn	ecting via RJ45 to USB Adaptor (PC)	39
		9.1.1	Connection through USB (Windows)	39
	9.2	Conn	ecting via RJ45 to USB Adaptor (MAC)	43
		9.2.1	Connection through USB (MAC)	43
	9.3	Conn	ecting via RJ45 direct to PC	46
		9.3.1	Static Network Address	46
		9.3.2	Connection through RJ45 direct to PC	46
	9.4	Conn	ecting via Static Network	50
		9.4.1	Static Network Address	50
		9.4.2	Connection through RJ45 direct to PC	50
	9.5	Conn	ecting via Dynamic Network	52
		9.5.1	Dynamic Network Address	52
		9.5.2	Connection through Dynamic Network	52
10.	Rf	Patrol MK	II Device Manager	54
	10.1	Login	1	54
	10.2	Dash	board	55
		10.2.1	User Settings	56



	10.2.2	Rebooting the Device	56
	10.2.3	Alerts	57
	10.2.4	Critical Errors	58
10.3	Detect	tions Tab	59
	10.3.1	Download Detection Logs	60
10.4	Device	e Summary	61
	10.4.1	Device Information	61
	10.4.2	Microcontroller Temp	61
	10.4.3	Network Information	61
	10.4.4	Device GPS Status	62
10.5	Filters	s Tab	63
	10.5.1	RF Detectors	63
	10.5.2	Advanced RF Filters	64
	10.5.3	Adding a New Advanced Filter	65
	10.5.4	Wi-Fi Filters	65
	10.5.5	Add Filter	66
10.6	Spectr	rum View	67
	10.6.1	Frequency Bands	68
	10.6.2	Scan Controls	68
	10.6.3	Reset Scan	68
	10.6.4	Zoom Slider	69
	10.6.5	Crop (Draw to Zoom Chart)	69
	10.6.6	Download Data	70
	10.6.7	Performance Overlay	70
10.7	Spectr	rum Recorder	71
	10.7.1	Use Scenarios	72
	10.7.2	Recording Settings	72
	10.7.3	Progress Interface	73
	10.7.4	Viewing & Actioning Recordings	74
10.8	Updat	res Tab	75
	10.8.1	Perform a Software Update	76
	10.8.2	NTP Clock Reset	76
10.9	Settin	gs	77
	10.9.1	System Status Logging	78
	10.9.2	Detection Auto-Recorder	78
	10.9.3	Wi-Fi Scanning	78
	10.9.4	Enhanced Awareness	78
	10.9.5	Detection Metadata	78



		10.9.6	Time Settings	78
		10.9.7	Trigger Test Detection	79
		10.9.8	ТСР	79
		10.9.9	UDP	79
		10.9.10	CoT TCP Client	79
		10.9.11	CoT UDP Client	79
		10.9.12	SAPIENT	80
		10.9.13	Silvus Radio	80
		10.9.14	Persistent Systems Radio	80
		10.9.15	Use Saved Position	80
		10.9.16	Dynamic IP	81
		10.9.17	Static IP	81
		10.9.18	Set Subnet	81
		10.9.19	Static Gateway	81
		10.9.20	ASCOM Server Notifications	82
		10.9.21	Device Configuration Settings	82
		10.9.22	gRPC Client	83
		10.9.23	gRPC Server	83
		10.9.24	RF Attenuation	83
		10.9.25	Save/Restore Defaults	83
	10.10	Downl	oading from Device Manager	85
		10.10.1	Changing Download Folder	85
11.	De	vice Integr	ation Overview	86
	11.1	RF Sig	nal Metadata Schema	87
12.	AP	ls		88
	12.1	JSON		88
		12.1.1	JSON v1 - Detection	88
		12.1.2	JSON v1 - Status	89
		12.1.3	JSON v2 - Detection	90
		12.1.4	JSON v2 - Status	91
	12.2	Cursor	r-on-Target (CoT)	92
		12.2.1	CoT v1 - Detection	93
	12.3	SAPIE	NT	94
		12.3.1	SAPIENT v1 - Registration	94
		12.3.2	SAPIENT v1 - Detection	95
		12.3.3	SAPIENT v1 - Status	95
	12.4	gRPC		96



		12.4.1	Repository	96
		12.4.2	Outputs	96
13.	Re	equired Pe	orts	101
14.	Th	nird Party	Device Integration	101
	14.1	Data	a Connector Output	101
		141.1	Data Connector Specification	101
		14.1.2	Data Cable Specification	101
	14.2	Silvı	us Radio Integration	102
	14.3	Pers	sistent Systems MPU5 Integration	103
15.	Ba	attery Ins	tructions	104
16.	Pr	oduct Ac	ceptance Test	105
17.	M	aintenan	ce	107
	17.1	Non	critical Faults	107
		17.1.1	TNC/Military Connector Dust Caps Missing/Damaged	107
		17.1.2	Display Glass Scratched	107
		17.1.3	Fogging Behind Display Glass	107
		17.1.4	Serial Label	108
		17.1.5	Connectors Clear of Debris	108
		17.1.6	Battery Clip	108
	17.2	Criti	ical Faults	109
		17.2.1	Display Glass Cracked/Shattered	109
		17.2.2	Damaged Battery Connector	109
		17.2.3	Damaged Rotary Switch	110
		17.2.4	RfPatrol MKII Fails to Power On	110
		17.2.5	RfPatrol MKII Displays Error Status	110
	17.3	Batt	tery Maintenance	111
		17.3.1	Battery Storage	111
		17.3.2	Battery O-ring	111
	17.4	Fast	tener Guide	112
18.	De	estruction	n	113
19.	Sp	ecificatio	ons	114
20.	Co	ontact		115



1. Disclaimers

1.1 Disclaimer

DroneShield or "the Company" retains the right to make changes to the product at any time which may not be reflected in this document. Please contact DroneShield or your distributor if you require any further assistance.

It is the owner's sole responsibility to setup and use DroneShield products in a manner that will not cause accidents, personal injury or property damage. DroneShield disclaims all liability for any use of this product in any way that may cause accident, damage or that may violate the law. The company or supplier is not liable for damage to personal property or injuries. By using this product the user acknowledges and agrees to the terms of the DroneShield EULA (End User License Agreement). For more information please contact info@droneshield.com.

1.2 ISO 9001

All DroneShield products are designed and manufactured according to a Quality Management System that is registered to ISO 9001 by SAI Global.



1.3 Warranty

12 month warranty is included in RfPatrol MKII purchase. The warranty is not transferable and does not cover damage to the exterior, nor damage caused by natural disaster, misuse, abuse, negligence, improper assembly or operation, self-modification or repair, and maintenance carried out by anyone but the manufacturer. Additional warranty is available (up to 5 years) for an additional charge.

1.4 RF Library

RfPatrol MKII will carry the latest drone library database as of time of purchase. For subscription options, please contact DroneShield or your distributor. The drone library can be updated through the Device Manager interface.

1.5 Shipping

HS Code: 85269130

1.6 Notes

Please read the user manual carefully before use

The parts included may differ slightly from the diagram shown, due to improvements to the product The company reserves the right to alter or change any part and design of the product at any time without notice



This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.7 Warnings

Make sure the provided and/or recommended re-chargeable battery is fully charged and inserted into the battery connector as per instructions in this manual, or this product may not perform as expected

- Do not drop, physically damage or abuse the batteries. Dispose of batteries responsibly, as per your local regulations
- If RfPatrol MKII is damaged in any part or whole, please contact your local authorised distributor for further advice

Do not attempt to charge the RfPatrol MKII battery with the supplied charger when the

- ambient temperature is below 0 Deg C / 32 Deg F. This may result in permanent damage to the re-chargeable battery
- Do not attempt to modify the RfPatrol MKII. Any changes or modifications not expressively approved by DroneShield could void the user's authority to use this equipment
- Modification of this device to recieve cellular radiotellephone service signals is prohibitted under FCC rules and federal law

1.8 High Noise Environment

RfPatrol MKII detection range may be negatively affected when used in high noise environments due to increased noise on ISM bands.

1.9 Device Security

DroneShield detection series devices have on-chip Advanced Encryption Standard (AES) decryption logic to provide a high degree of design security. Encrypted designs cannot be copied or reverse engineered for use on unintended devices. The AES system consists of software-based encryption and on-chip bit stream decryption with dedicated memory for storing the encryption key.



2. Safety



Keep RfPatrol MKII and RfPatrol MKII battery away from open flames.



Do not use non DroneShield approved batteries with the RfPatrol MKII.



While RfPatrol MKII is designed to meet IP67 rating, avoid submerging in water to increase product lifespan.



RfPatrol MKII should always be powered down by turning the mode switch to the OFF position and waiting for the countdown screen to finish. Disconnecting the power-supply without powering down the unit could corrupt detection logs.



Do not allow the RfPatrol MKII to sustain heavy impacts such as dropping.



Do not attempt to modify or disassemble the RfPatrol MKII in any way. Doing so will void the warranty and may damage or destroy the device.



Ensure RfPatrol MKII is turned OFF when placed into carry case to prevent overheating and damage.



3. Application

RfPatrol MKII is a compact and lightweight omni-directional drone detection solution. Its design and size allows it to be portable and worn by the operator.

4. Key Features

Robust & Compact Radio Style Design

- Durable aluminium construction
- Tested for use in harsh environments (tested to IP67, MIL-STD-810)
- Quick release & replace battery operation
- Secure fastening to MOLLE or dashboard mount for operational versatility

DroneShield Advanced Technology

- Integrated electronic modules for compact application
- Use of NATO Military approved batteries
- Ready for operation out of the box, no software updates required for operation
- · Regular software updates to extend detection capabilities

Intuitive User Interface

- Select between "Stealth Mode" for night operation (no visible light emitted) and "Glimpse Mode" for normal operation
- Low profile display navigation buttons
- Display and audio indicates when battery is low or when mute is enabled



5. Out of the Box





6. Product Overview

6.1 Product Details







TOP VIEW

6.2 Product Dimensions





6.3 Product Mounting



The RfPatrol MKII has 4x threaded mounting holes on the back of the device. These can be used for attaching MOLLE clips, VESA mounts or custom brackets.



7. User Interface

7.1 Controls

The mode switch at the top of the RfPatrol MKII has three positions that allow the user to select from three different states.







RfPatrol Device Shortcuts



Mute Audio

To mute audio alerts, hold Volume Down button for 2 seconds



Lock / Unlock Screen

To lock the display, hold both Volume Up and Volume Down buttons for 3 seconds.



Accessing Menu and Settings

To access the RfPatrol menu, hold the Select button for 2 seconds.



7.2 Display Navigation

7.2.1 Power On

When the device software has loaded, the device will begin scanning for drones on the default detections screen. When no detections are active, a scrolling scan bar will be shown.







7.2.2 Viewing Detections

When drones or controllers have been detected, these will be displayed to the user on the interface.



RfPatrol MKII Detailed Detection Screen: (Scroll to a detection and press SELECT)



Historical Detection Strength (shows signal strength for the selected detection as a graph over time)

Detection Count (for the current detection only)



7.2.3 Accessing RfPatrol Menu

To access the on-device RfPatrol menu, hold SELECT for 2 seconds.

Page 1



Page 2



7.2.4 Configuration

RfPatrol MKII Config Screen:

RF PATROL CONFIG	
SERIAL: 0351234567000 •	Unit Serial Number
VER: 4.1.0 •	Device Software Version
QUARTER VER: Q4-2022 •	Quarterly Release Version
IP: 192.168.99.234 •	Static/Dynamic IP
TEMP: 50°C •	CPU Temperature (Celsius)
BATTERY: 79% •	Battery Charge Level (shown on next page)



7.2.5 Status

Page 1



Page 2

RF PATROL STATUS	
LOGGING: OK	Detection Log
RTC BATT: OK	Real Time Clock Real Time Clock Battery
UTC TIME: D:M:Y H:M:S 31:08:2020 12:36:05•	UTC Time



7.2.6 Spectrum Recorder

The Spectrum Recorder is a feature which allows the user to record radio-frequency data on select frequency bands. This feature is useful for recording new drones, false detection signatures or conducting site surveys.

This feature is accessed via both the RfPatrol device and the device manager. For instructions on using the Spectrum Recorder on the device manager, see "10.7 Spectrum Recorder".

To access the Spectrum recorder on the physical device, first navigate to the **Menu**. Next, select **Spectrum Recorder.**

SPECTRUM RECORDER					
START RECORDING					
RECORDING SETTINGS					
RECORDING LOGS					
EXIT					

Recording Settings

Bands: Select which frequency bands are to be scanned. Ensure all enabled bands have an antenna attached before proceeding. Increasing the number of frequency bands will increase the duration and size of the recording.

Scan Cycles: The number of scans the device will conduct for the given recording. DroneShield recommends a minimum of 30 scans. Increasing scan cycles will increase the duration and size of the recording.

Scan Type: For a detailed explanation of use scenarios, see "10.7.1

Use Scenarios".





Start a Recording

When the user selects Start Recording, the progress bar will appear. This will update as each scan is completed.



View Spectrum Recordings

To view recordings stored locally on the device, navigate to **Recording Logs**. From this screen, all logs can be cleared locally from the device.



Viewing Individual Recordings

To view and individual recording, use the SELECT button. In the detailed log screen, the user can view the recording name, size and number of scan cycles. The user also has the option to delete the individual log from the device.





7.2.7 Spectrum View

The Spectrum View is a feature available on both the RfPatrol device and via the device manager. To access the Spectrum View on the RfPatrol device, select **Spectrum View** from the menu.

Next, the user will be prompted to select a frequency band to scan. Ensure the correct antenna is attached to the corresponding port before proceeding.



Once a frequency band has been selected, the user must select the type of Spectrum View display.

Entire Spectrum

View the full bandwidth for the selected frequency. This allows the user to identify any spurious or significant emissions in the band, which can be looked at closer using a magnified view.



Lower Bandwidth Limit

Magnified Spectrum: View a detailed view of the selected frequency. In this mode, the full frequency bandwidth is split into five segments. Each view will show 20% of the total frequency bandwidth.





Spectrum View Controls



Clear Peaks

To clear spectrum peaks, press the UP button.



Scroll Magnified Spectrum

To scroll across the frequency, use the LEFT and RIGHT buttons.



Clear Average

To clear spectrum average, press the DOWN button



Exit Spectrum View

To exit spectrum view, press the SELECT button.

7.2.8 Settings



7.2.9 Enable / Disable Detection Bands

Users can enable/disable the frequency bands operating on the device. Before enabling a frequency band, the user should check the appropriate antenna has been attached to the device.





7.2.10 Detection Filters

Detection filters can be viewed, enabled/disabled and deleted directly from the RfPatrol device. Selecting a filter shows time remaining if it has been configured as a temporary filter. The individual filter is deleted from this interface.



Delete filter from device



7.2.11 Adding Filter from a Detection

Users can add a live detection directly to the device filters. This is done by selecting the detection on the default detection screen.

Default Detection Screen

(Scroll to detection and press SELECT)



Detailed Detection Screen

(To add detection as filter, hold SELECT or Right Arrow)



Set Filter Screen

(Select time period for filter, then press SELECT)





7.2.12 Display Test

Note: When on the Display Test Screen, the RfPatrol LED will flash and buzzer will activate.



7.3 Audio Feedback

The RfPatrol MKII provides users with audio feedback via the audio connector and cable. The following audio alerts are provided:

Trigger:	Audio Feedback:
Single drone detected	"Detection, one drone"
Multiple drones detected	"Detection, multiple drones"
Drone has high RSSI	"High signal strength"
Drone has medium RSSI	"Medium signal strength"
Drone has low RSSI	"Low signal strength"
User mutes audio	"Mute mode on"
User un-mutes audio	"Mute mode off"
Battery falls below 10%	"Battery low"
Volume button up or down	*Beeps* progressively louder or softer



8. Ports and Components

8.1 Antennas

There are three antenna ports on the top of the RfPatrol MKII. Each antenna provides detection capabilities for different bands.





8.1.1 Alpha Antenna

Frequency: 2000MHz - 6000MHz Gain: 2 - 4 dBi Typ. Polarisation: Linear (Vertical) Beamwidth: 360° Azimuth, 45° - 65° Elevation VSWR: 2:1 Power Rating: 10W Mass: 96grams (0.21lbs) Groundplane: Independent Connector: TNC (M) Dimensions: 212mm x 18mm

8.1.2 Bravo Antenna

Frequency: 420MHz - 470MHz Gain: 2 dBi Typ. Polarisation: Linear (Vertical) Beamwidth: 360° Azimuth, 70° Elevation VSWR: 2:1 Power Rating: 10W Mass: 300grams (0.66lbs) Groundplane: Independent Connector: TNC (M) Dimensions: 426mm x 25mm

8.1.3 Charlie Antenna

Frequency: 800MHz - 2720MHz Gain: 3.5 dBi Typ. Polarisation: Linear (Vertical) Beamwidth: 360° Azimuth, 70° Elevation VSWR: 2:1 Power Rating: 10W Mass: 200grams (0.44lbs) Groundplane: Independent Connector: TNC (M) Dimensions: 363mm x 32mm



Users should disable any frequency band that does not have a matching antenna installed on the RfPatrol MKII or risk false detections.

433MHz, 868MHz, 915MHz and 5.2GHz frequency bands are disabled by default. For instructions on frequency band activation, see section: "10.5.1 RF Detectors" on page 63.



8.1.4 Antenna Extension Cable and Pouch

RfPatrol MKII antennas can be routed elsewhere on the body with a TNC male to TNC female extension cable and antenna sleeve. It should be noted that the antenna extension cable will result in some signal loss and reduced detection range.



Alpha Antenna in sleeve





Bravo Antenna in sleeve

Charlie Antenna in sleeve



Antenna sleeve mounted on to MOLLE webbing



8.1.5 Correct Antenna Orientation

The Gooseneck Antennas supplied with the RfPatrol must be oriented vertically for optimal performance. Any bend which causes the antenna element to be greater than 5 degrees from vertical can significantly reduce range of the device.

For optimal performance, the antennas should be positioned greater than 1.5m (5') from the ground.



Incorrect Antenna Orientation

Antenna lobe pattern is skewed when antenna is oriented greater than 5° from vertical.

Detection range and consistency may decrease.



Correct Antenna Orientation

Antenna lobe pattern is aligned with horizon, providing optimal detection performance.



8.3 MOLLE Clips MOLLE Clips (included) can be attached to the rear of the RfPatrol MKII to allow 0 for mounting directly to the body without MOLLE Clip (2) the use of a carry pouch. ٢ "C O M4 x 8 Socket Head CTSK (4) 8.4 Dust Caps TNC Dust Caps (3) To help protect the antenna and data/ audio ports, tethered dust caps are provided. These dust caps can be removed by the user if needed. Dust Cap Eyelet (2) 6 The TNC dust caps are anchored to two eyelets on the back of the RfPatrol M3 x 6 Socket Head CTSK (2) MKII. To remove these dust caps, Loctite 243 applied unscrew the eyelets.



8.5 VESA Mount

The RfPatrol MKII can be mounted to a VESA mount using an optional adaptor and fastener kit. VESA mounting allows the RfPatrol MKII to be mounted to a vehicle dashboard, window or pole.





8.6 Battery

To attach the battery, make contact with the pogo-pins at 60° and turn the battery clockwise. Ensure that the battery pins are clear of debris.



Do not force the battery or battery accessories to connect. This may damage the RfPatrol MKII. If the battery does not turn smoothly, check contacts, realign and try again.

8.6.1 DroneShield Approved Batteries

Brentronics - BT-70716BG or BT-70716BV (Supplied) THALES - 1600842-2 Harris - AN/PRC 152 Battery RomeoSix - MP5355-7

Unapproved batteries may cause damage to the RfPatrol MKII unit and void the product warranty.



8.8 Capability Expansion Kits

The RfPatrol MKII can adapt to different user requirements with the inclusion of an expansion kit. These kits can be purchased separately and include their own user manuals. Below is a summary of the kits available:

8.8.1 Direction Finding Kit

The Direction Finding Kit allows operators to determine the direction of a drone detection with either the DAU (Directional Antenna Unit) or the Patch Antenna. The RfSwitch allows the user to switch between the Omni-antenna and the directional antenna with the flick of a switch, removing the need to detach and attach cables.

Contents:

- Directional Antenna Unit
- Patch Antenna
- RfSwitch
- RF cables
- Quick Start Guide
- Hard case

DAU:

Range: Up to 1.5km Weight: 700g (1.54lbs) Angular Accuracy: 45° Frequency: 2.4GHz, 5.8GHz Dimensions: 330mm x 83mm x 168mm

Patch Antenna:

Range: Up to 1.5km Weight: 30g (1oz) Angular Accuracy: 60° Frequency: 2.4GHz, 5.8GHz Dimensions: 80mm x 80mm x 15mm

RfSwitch:

Weight: 260g (0.57lbs) Dimensions: 110mm x 80mm x 40mm Connector Type: TNC (F)





8.8.2 Roof Mount Antenna Kit

The Roof Mount Antenna Kit provides operators with a combined magnetic antenna that can mount to the roof of a vehicle while the RfPatrol MKII remains in the cabin. Having the antenna on the roof greatly improves detection performance when on the move and is not impaired by the orientation of the vehicle.

Contents:

- Magnetic Wide Band Antenna
- V-mount / Triplexer
- Suction VESA mount
- RF cables
- Quick Start Guide
- Hard case

Magnetic Wide Band Antenna:

Frequencies: 433MHz, 868MHz, 915MHz, 2.4GHz, 5.2GHz, 5.8GHz Installation requirements: Install on ferrous metal flat plane Weight: 1450g (3.2lbs) Dimensions: 400mm x 121mm x 121mm



V-Mount / Triplexer: Mounting System: VESA 75 Weight: 340g (0.75lbs) Dimensions: 90mm x 90mm x 45mm





9. Connect to Device Manager





9.1 Connecting via RJ45 to USB Adaptor (PC)

Users can connect to the RfPatrol MKII via the included RJ45 to USB adaptor. Only one RfPatrol MKII can be connected at a time with this method.

9.1.1 Connection through USB (Windows)



1.

Plug data cable into *RJ45* to *USB* adapter (provided)



2.

Plug data cable into RfPatrol MKII data port

3.

Plug *RJ45 to USB adapter* into PC USB port

4.

Power on RfPatrol MKII

5.

Open Network Connections application, by typing **ncpa.cpl** into the search bar, and opening.







×

51abled 00:04:43

Clos

Ethemet & Status

Detais...

Packets: 515

Connectio IPU4 C

6.

Look for device name ASIX AX88179 USB 3.0 to Gigabit Ethernet Adapter and double click

7. Click *Properties*



8.

. 0

Select Internet Protocol Version 4 (TCP/IPv4) and click Properties



.

Bluctooth Na
 Ethernet
 Gil Local Area C
 dil Wi-Fi
 Ethernet 4

T T Control Panel + Network and Inter	set a Network Lonnections w D. Senith	NHTWORKS. Contractions.		2
paniae Disable this network device. Diagnose t	his connection Rename this connection View status of this connection	Change settings of th	his connection (II) ~ [
nte P	Promision why it	etwork Category	Diwner	
Bilatotal Network Connection Channel Local Area Connection* 10 W-Fi Ehternet 4	Internet Protocol Version 4 (TCP/Pr-4) Properties X Connersi You can get IP settings assigned automatically if your rection's supports the capacity college and automatically if your rection is always and automatically () College assigned automatically () Law the following IP address: P address: P address: P address: 29 address: 214 233 234 28 0	ilic nativosk anci nativosk	Systems Systems Systems Systems Systems Systems	
	Defaut gatering:			
	Valdate settings upon exit advanced OK Cancel			

Select Use the following IP address: and change the IP address to: 192.168.99.100

Then change subnet mask to: 255.255.255.0



10. Open web browser



11.

Enter the *RfPatrol MKII config* screen. Take note of the *IPV4* address





Enter the *RfPatrol MKII IPV4 address* into the search bar of the internet browser with the prefix: http://

(If Device Manager page does not load, turn the *RfPatrol MKII* off and on again)

(If Device Manager page still does not load, disable other network devices in: *Control Panel\Network and Internet*

Network Connections)

13.

Continue to section 10 of the manual



9.2 Connecting via RJ45 to USB Adaptor (MAC)

Users can connect to the RfPatrol MKII via the included RJ45 to USB adaptor. Only one RfPatrol MKII can be connected at a time with this method.

9.2.1 Connection through USB (MAC)



1.

Plug data cable into RJ45 to USB adapter (provided)



2.

Plug data cable into RfPatrol MKII data port

3.

Plug RJ45 to USB adapter into PC USB port

4.

Power on RfPatrol MKII

5.

Go to System Preferences

6.

Click Network





< >	Network		Q Search
Loca	tion: Automatic	3	
AX8817thernet	Status:	Connected	
Wi-Fi Connected		AX88179 USB 3.0 to Gigat currently active and has th 192.168.1.234.	bit Ethernet is ne IP address
Bluetooth PAN 👔	Configure IPv4:	Manually	
Thundeet Slot 1	IP Address:	192.168.99.100	
Not Connected	Subnet Mask:	255.255.255.0	
Not Connected	Router:		
	DNS Server:		
	Search Domains:		

Look for AX88179 USB 3.0 to Gigabit Ethernet

If the device cannot be found, go to: *https://www.asix.com.tw/products*

.php?op=pltemdetail&PltemID= 131;71;112

8.

Select *Manually* for *Configure IPv4*:

9.

Change the IP Address: to 192.168.99.100

10:

Change Subnet Mask: to: 255.255.255.0

11.

Open web browser





12.

Enter the RfPatrol MKII config screen. Take note of the IPV4 address

Enter the RfPatrol MKII IPV4 address into the search bar of the internet browser with the prefix: http://

(If Device Manager page does not load, turn the RfPatrol MKII off and on again)

(If Device Manager page still does not load, disable other network device)

14.

Continue to section 10 of the manual

9.3 Connecting via RJ45 direct to PC

Users can connect to the RfPatrol MKII via a direct RJ45 connection to the PC. Only one RfPatrol MKII can be connected at a time with this method.

9.3.1 Static Network Address

The RfPatrol MKII has a factory set default static IP which is used to connect to the device. When multiple RfPatrol MKII devices are in use, it is recommended that this IP address is changed. For more information on changing the static IP address of the RfPatrol MKII, contact support@droneshield.com

RfPatrol MKII Default Static IP	192.168.99.234
---------------------------------	----------------

9.3.2 Connection through RJ45 direct to PC

1.

Plug data cable into RfPatrol MKII data port

2.

Plug RJ45 end of the data cable into PC

3.

Power on RfPatrol MKII

Open Network Connections application, by typing *ncpa.cpl* into the search bar, and opening.

Look for Ethernet port that RfPatrol MKII is plugged into and double click

6. Click *Properties*

7.

Select Internet Protocol Version 4 (TCP/IPv4) and click Properties

Select Use the following IP address: and change the IP address to 192.168.99.100. Then change subnet mask to 255.255.255.0

9. Open web browser

10.

Enter the RfPatrol MKII config screen. Take note of the IPV4 address

Enter the RfPatrol MKII IPV4 address into the search bar of the internet browser with the prefix: http://

(If Device Manger page does not load, turn the RfPatrol MKII off and on again)

(If Device Manager page still does not load, disable other network devices in:

Control Panel/Network and Internet/Network Connections)

12.

Continue to section 10 of the manual

Note: After updating, go back to step 10 and change to obtain IP address automatically so the PC can reconnect to the internet.

9.4 Connecting via Static Network

Users can connect to the RfPatrol MKII through a network using the static IP address. Only one RfPatrol MKII can be connected at a time with this method. Ensure the PC and RfPatrol MKII are on the same subnet. The PC should not be connected to the network via Wi-Fi.

9.4.1 Static Network Address

The RfPatrol MKII has a factory set default static IP which is used to connect to the device. When multiple RfPatrol MKII devices are in use, it is recommended that this IP address is changed. For more information on changing the static IP address of the RfPatrol MKII, contact support@droneshield.com

RfPatrol MKII Default Static IP	192.168.99.234
---------------------------------	----------------

9.4.2 Connection through RJ45 direct to PC

1.

Plug data cable into RfPatrol MKII data port

2.

Plug RJ45 end of the data cable into modem/network switch

3.

Power on RfPatrol MKII

4.

Open web browser

DRONESHIELD

Enter the RfPatrol MKII config screen. Take note of the IPV4 address

6.

Enter the RfPatrol MKII IPV4 address into the search bar of the internet browser with the prefix: http://

(If Device Manager page does not load, turn the RfPatrol MKII off and on again)

(If Device Manager page still does not load, disable other network devices in:

Control Panel/Network and Internet/Network Connections)

7.

Continue to section 10 of the manual

9.5 Connecting via Dynamic Network

Users can connect to the RfPatrol MKII through a dynamic network. Multiple RfPatrol MKII devices can be connected at a time with this method. Ensure the PC and RfPatrol MKII are on the same subnet. The PC should not be connected to the network via Wi-Fi.

9.5.1 Dynamic Network Address

The RfPatrol MKII can be accessed through a dynamic network with the following address:

http://rfpatrol-035###########.local

9.5.2 Connection through Dynamic Network

1.

Plug data cable into RfPatrol MKII data port

2.

Plug RJ45 end of the data cable into modem/network switch. The network will allocate an IP address to the RfPatrol MKII. (This may take up to 2 minutes)

Power on RfPatrol MKII

4	
-	•

Open web browser

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	Google Search I'm Feding Lucky		
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^{3.}

Enter:

http://rfpatrol-serialnumber.local into the search bar of the internet browser

(If Device Manager page does not load, turn the RfPatrol MKII off and on again)

6.

Continue to section 10 of the manual

10. RfPatrol MKII Device Manager

10.1 Login

Enter username and password to access the RfPatrol MKII.

By default: Username: **user** Password: **user**

Note: DroneShield recommends a Chromium browser for best performance (Google Chrome, Microsoft Edge).

It is recommended for the security of the device that the username and password are changed upon receiving the RfPatrol MKII.

10.2 Dashboard

0	"10.3	Detections Tab"
H	"10.4	Device Summary"
Ŧ	"10.5	Filters Tab"
*	"10.6	Spectrum View"
чþ	"10.7	Spectrum Recorder"
c	"10.8	Updates Tab"
٠	"10.9	Settings"

DRONESHIELD.						© 8N 0350198542092 201	22-09-30 16:02:54 AEST 🛕 👘	5 ±
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Enhanced Aw	vareness							
Type	Harma	Protocol		Frequency	Rss	Count	Actions	
Ŷ	ETHWELK, 2, RGHz	miti						
Ŷ	etinwika_score			5.000 4942				
							12012	
Logs								
Troe	Name	Prelocol	Frequency	RST	Deter	lion Number Tumuslamp (Local	Tunu) Actions	
ж	Auto Eve OFDM	TEST Protocol	5.000 GHz		10541	0 2022-09-29 18:56	35. 😴	
щ	AUX SUA ILO	ni38	5737696	ne	1054	10 2022-09-29 15-5#	42 🜩	
Ш	OJI SKY KIA	W OFDM	5.821 GHz		1054	16 2022-09-29 13:43		
						Rows	perpage 5 + 15 of 180	
DOWNEDAD CS	SV CLEAR LOOS							

10.2.1 User Settings

The RfPatrol MKII user settings is accessed via the top right of the device manager.

Change Password

Passwords can be changed from the user settings drop-down, which prompts the user to set and confirm a new password for the current username. Password requires an uppercase, lowercase and number for security reasons.

It is recommended for the security of the device that the username and password are changed upon receiving the RfPatrol MKII.

Customers should take care to record the new username and password upon changing it. If the new username and password are forgotten, contact support@droneshield.com for assistance.

10.2.2 Rebooting the Device

The device can be rebooted using the button located on the top right of the device manager.

Do not reboot the RfPatrol MKII device during any stage of an update, or where otherwise instructed not to do so. Rebooting the RfPatrol MKII at the incorrect time may damage the device.

10.2.3 Alerts

Alerts present current detections on the alerts bar on the right of the screen and an audible alarm sound while navigating to any tab.

Alerts Bar

Add filter directly from detection

Name

Name of drone detected, as reported by drone

Protocol Service Set Identifier. Network name/Drone identifier

Frequency Frequency band drone currently detected on

Alert Settings

Audio Alerts Mute alert sound

Auto Show Alerts Show/hide alert pop-ups

Note: If the Device Manager is displaying the Detections Tab, the alerts panel will not be accessible as live detection information will already be displayed on the interface.

10.2.4 Critical Errors

If the RfPatrol device encounters a 'critical' error, this will be reported in the Device Manager under the 'Critical Errors' dropdown. Critical errors require assistance from an authorised DroneShield representative. If a critical error appears, the user should note the error code, time and date, then contact <u>support@droneshield.com</u>.

Example of an error code: "CFG0016 - Device settings error; repair unsuccessful. Contact support@ droneshield.com"

10.3 Detections Tab

Active Detections (current detections will colour red before fading to grey)

RONESHIELD					() sh	0350198542087 20224	19-30 16:02:54 AEST 🔥
Active Detection	15						
Туре	Name	Prilocol		Trequency	RSS	Coont	Actions
#	OJI AUT XIA	FHSS		5 797 GH2	-86	105489	
							÷
Enhanced Aware	eness						
Туре	Name	Prol	oosi	Frequency	859	Court	Actions
(7	KTRWELK, 2, 4GHz	miti		2.462 GHz			
ê	eTIRWELK_SGH2			5.000 (2)12			
							124/2
Logs							
757	Name	Prelocol	Гунципсу	Rosa	Detection Number	Terrestarra (Local Terre	1) Actions
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曲	AIX TUA ILO	FH3S	\$ 737 644	-86	105489	2022-09-29 15:58:43	
出	GJI SKY XIA	W OFDM	51821 644		105486	2022-09-29 13;43:15	
						Rows per	page: 5 🗸 1-5 of 180
DOWNEDAD CSV	CLEAR LOGS						
	н с	listoric Logs		Change h	ow many rows are	displayed per pa	age 🗕
	L C	lear Logs					
					Canall th	rough pogoo of l	

10.3.1 Download Detection Logs

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D	tection Number	Cottelation Ray	with M	AC ASSIRTI Na	mai Proto	xol Name	Frequency (Hz) Mex	Powert (8551) M	in Power (RSS) Ma	suffacturer Name Detection Court:	Timentamp (UTC) U	ptime (Seconds since boot)													
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8	105412	23976MU62	FAIST	DIVALITXM	DS OFDAR	DI ALTRIA	5795500000	-50	-100	24	A/10/2022 23:37	41894.16													
2	105431	2397658162	FALSE	BAR TURING	CS DYDAR	DILAUTERA.	5795300000	-90	-97	38	A/10/2022 23:37	81882.75													
8	105630	1809702647	FALSE	Dill AUT KIA	FHRS	DITAUT HA	5784500000	-90	90		A/10/2022 23:34	41662.79													
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Downloaded logs are shown as above in a .csv format.

