Obriy 1.3, an algorithmic drone detector (produced, sold & used in Ukraine)

This wearable device detects the approach and direction of DJI-type and FPV drones from 2.5 to 4 km away.

It is intended to be used by tourists, travelers, homeowners, and farmers, to protect their privacy and safety.

It continuously scans 1.2G/ 2.4G/ 5.8G bands and identifies the presence of drone signals while filtering out interferences using a proprietary software algorithm.

The device has undergone successful field testing, is mass-produced, and receives regular software updates.

Detection capabilities of the Obriy 1.3 model

Model	Possibility of detection	Frequency bands at which the device can detect a drone — It shows at which bands drones are transmitting signals and our ability to detect them. If we can detect signals at all of the bands of a particular drone, the drone can't hide. If, in contrast, a drone has bands where we are blind, the drone can go unnoticed when operating in those bands.				
		1.2G	2.4G	5.2G	5.6G	5.8G
Quadcopters:						
Dji Mavic 3, Dji Mavic 3 Pro, Dji Mavic 3 Classic, Dji Mavic 2, Dji Mavic 2 Enterprise Series, Dji Mavic 2 Pro, Dji Mini 3, Dji Mini 3 Pro, Dji Mini 2, Dji Air 2s, Dji Matrice 30 Series, Dji Matrice 300 RTK	✅		✅			✅
Dji Mavic 3 Enterprise, Dji Mini 4 Pro, Dji Air 3, Dji Matrice 350 RTK	✅	✅	✅	✅		✅
EVO II, EVO II Pro V2, EVO II Dual 640T V3, EVO II RTK Series V3, EVO II Enterprise V2	✅		✅			✅
EVO Lite Series, EVO Nano Series	✅	✅	✅	✅		✅
EVO II Pro V3, EVO II Enterprise V3, EVO II Dual 640T V2, EVO II RTK Series V2	✅	✅	✅		✅	✅
EVO Max Series	✅	✅	✅	✅	✅	✅
Large russian UAVs:						
Orlan, Zala, Lancet	⛔					
FPVs, classified by their video transmitter type:						
Video at 5.8, telemetry at any frequency	✅					✅
Video at 2.4, telemetry at any frequency	✅		✅			
Video at 1.2, telemetry at any frequency	✅	✅				
Video at any other frequency	⛔					
HDZero Race V2 VTX, HDZero Whoop Lite, Rush Tank Ultimate Plus, TBS Unify Pro32 HV, TBS Unify Pro32 HV, Rush Tank MAX SOLO (2.5W) / SOLO (1.6W), Eachine TX805, Happymodel ELRS Fyujon AIO Board, TBS Unify Pro32 Nano, SpeedyBee TX800 VT, iFlight Blitz Whoop, JHEMCU 2,5 Вт VTX, Diatone Mamba VTX Ultra	✅					✅
Matek VTX-1G3SE Video Transmitter	✅	✅				

The functionality of the Obriy detector version 1.3:

- Detection of FPV, DJI, and Autel drones on the 1.2GHz, 2.4GHz, and 5.8GHz(4.9-6.0GHz) bands
- Automatic scanning
- The possibility of receiving and displaying video images from the FPV drone on the screen
- The ability to distinguish between FPV and DJI drones
- WIFI ignore mode
- Alarm threshold calibration mode
- Intuitive change of alarm activity depending on signal strength (the stronger the signal from the drone, the faster the device beeps and vibrates)
- The possibility of connecting headphones for silent signaling
- Direction finding mode (you can determine where the drone signal is coming from in 15-20 seconds)
- Battery life is 8 hours
- Blackout mode (the ability to turn off the LEDs)
- The possibility of turning off the sound alarm
- Ability to disable scanning on selected bands
- Drone detection mode only 200-500 meters away from you
- USB data transfer for visualization purposes

Detection start: 2500m (Mavic 3 at 300m altitude in open terrain with an omnidirectional antenna; the video below demonstrates FPV detection at 2100m at 90m altitude).

Maximum detection range: 4000m (tested with Mavic 3 at 500m altitude and an omnidirectional antenna).
Continuous alarm: 500m (Mavic 3 at 100m altitude with an omnidirectional antenna).

Detection below the surface: up to 100m (Mavic 2, three meters below the surface in a forest with an omnidirectional antenna).

* As tested on FPV drones, Mavic 3, Mavic 2, Mavic 3 Classic, and others. For the maximum detection range, please calibrate the device according to the manual.

Performance characteristics

Designed for	Professionals who inspect the land using drones, foot travelers, foresters, hunters, safari car crews, scientists, etc.
How to use	You can carry the device in a bag or put it in a trench
Frequencies	1080 – 1360MHz, 2370 – 2510 MHz, 4900 – 6050 MHz
The principle of work	Radio radiation detection, with short pulse filtering and WiFi filtering
Sensitivity	-85 dBM on the bands 2.4 i 5.8, and -95 dBm on 1.2
Antennas	One directional antenna for each of the bands, and two non-directional ones of different sensitivities for each of the bands
Connector	USB type C
Kit	Detector, three pairs of antennas, USB type C cable
Battery	10 000 mAh
Battery charge is enough for	8 hours
The possibility of direction-finding	+
Waterproofing	Resistant to dust and water drops, but prolonged exposure to rain or immersion will damage the device