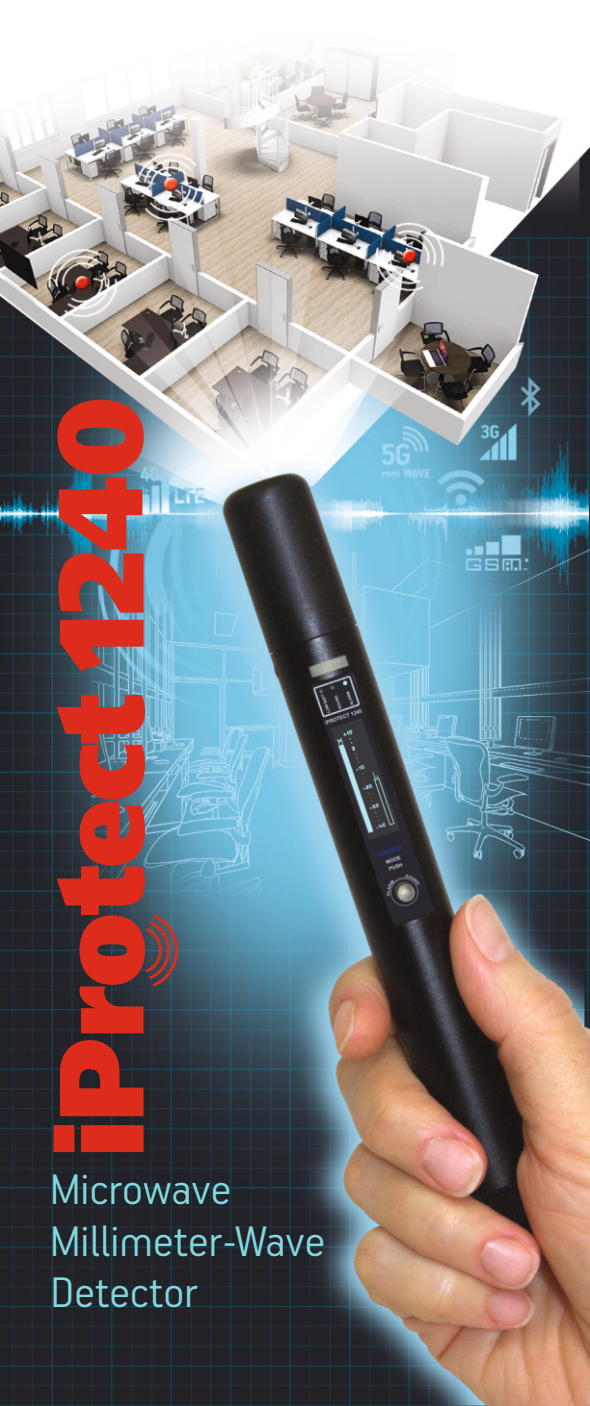

iProtect1240
Microwave
Millimeter-Wave
Detector
5G
mm WAVE
3G
4G
LTE
GSM
iPROTECT 1240
MODE
PUSH

iProtect 1240

Microwave Millimeter-Wave Detector

The evolution of mobile communications and the emergence of 4G/5G have changed the methods and technical solutions used for covert information retrieval (bugging devices). Modern mobile network infrastructure provides unprecedented possibilities:

- transmission of audio, visual, and other information in real time
- wide bandwidth ensuring high-quality transmission
- wide network coverage
- unlimited data transmission distance, and absence of the necessity to deploy a monitoring post near the surveillance object
- remote control capability, accumulation of information,and accelerated transfer to increase concealment
- the possibility of storing information on cloud services with full anonymity

To detect radio-frequency covert surveillance devices, including those operating via 4G/5G channels, field detectors, mobile signal detectors, and specialized spectrum analyzers are used. Typically, they cover frequency ranges up to 6 GHz or 12 GHz and can effectively detect signals within those limits. However, several 5G bands operate at higher frequencies, and such signals cannot be detected by standard search equipment. These are the millimeter-wave (mmWave) bands. Although these bands have limited penetration through walls and structures and are mostly used outdoors or in areas with large crowds, there remains a possibility they may be used for illegal information transmission. Therefore, during a professional bug sweep, detecting and localizing signal sources in the millimeter-wave range becomes essential.

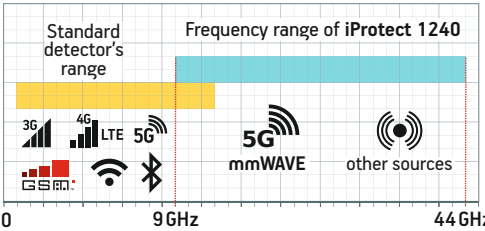
5G Millimeter-Wave Bands

Band	Frequency (GHz)	Region
n257	26.50 – 29.50	Japan, South Korea and other countries of Asian
n258	24.25 – 27.50	Europe, Australia and other regionsn
n260	37.00 – 40.00	United States
n261	27.50 – 28.35	United States

5G

The new **iProtect 1240** detector has a frequency range of 9–44 Ghz and is capable of detecting signals inaccessible to other detectors and many spectrum analyzers:

- mobile devices using 5G millimeter-wave bands, including those transmitting illegally obtained audio or video
- 5G mmWave access points
- other high-frequency signals, including bugging devices using proprietary non-5G protocols



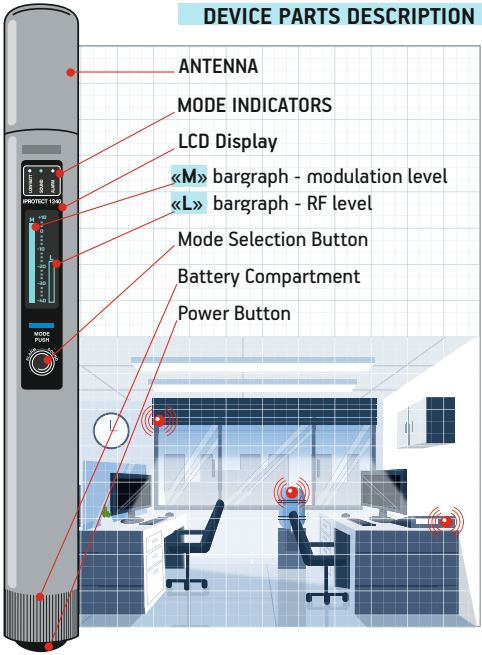
Main Features

- Detects covert radio-frequency surveillance devices operating in ultra-high-frequency ranges that standard detectors cannot identify, such as hidden microphones, cameras, 5G mmWave transmitters, or other microwave transmitters
- Excellent addition to a professional sweep kit by expanding the detection range up to 44 GHz
- Significantly lower cost than professional spectrum analyzers and much easier to operate
- Ignores signals outside its range (below 9 GHz), simplifying operation
- Detects signals regardless of modulation type or transmitted information
- Three operating modes:
  - **Silent** (visual indication only)
  - **ALARM** (audio alert + visual)
  - **SOUND** (amplitude component playback + visual)
- Dual-level bargraph:
  - **Modulation Level** (high sensitivity, long-distance detection)
  - **RF Level** (precise localization)
- Built-in antenna with 30° directional pattern
- Compact and durable duralumin housing
- Powered by one AA battery (LR06)
- Low battery indication
- Battery life: 10–20 hours

Specifications

Frequency range	9–44 GHz
Sensitivity	-40 dBm
Modes	• **Silent** — visual indication only • **ALARM** — audio alert + visual indication • **SOUND** — amplitude component playback + visual
Bargraph types	• Modulation Level • RF Level
Control buttons	• Power • Mode
Display	OLED 128x32
Battery life	10 – 20 hours
Dimensions	172 x 19 mm
Current consumption	120 – 200 mA
Power	1 battery AA (LR06)

DEVICE PARTS DESCRIPTION



USAGE

Warning: The iProtect 1240 is a range expander that extends your sweep kit capabilities. If your goal is to detect bugging devices, do not rely solely on the iProtect 1240, as it cannot detect signals below 9 GHz. For a full inspection, use comprehensive equipment.

False Alarms

The iProtect 1240 ignores most signals below 9 GHz (phones, Wi-Fi, Bluetooth, etc.). However, signals from powerful sources near the upper limit—such as 5 GHz and 6 GHz Wi-Fi—may still cause short-range triggers. To avoid this, disable Wi-Fi routers and switch nearby devices to airplane mode before starting a sweep.

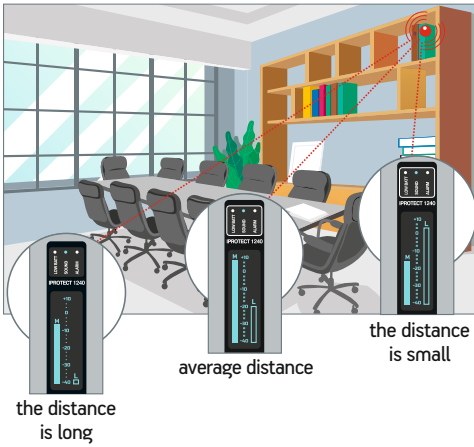
Level bargraphs

- M **Modulation Level** — detects transmitters at longer distances due to sensitivity to amplitude variations. Values may vary inconsistently with distance and cannot be used for localization.
- L **RF Level** — used for precise localization. Increases as you move closer to the transmitter.

Mode Selection

Use the MODE button to switch between:

- **Silent** (no LEDs) — discreet searches, monitor the screen
- **ALARM** (ALARM LED) — tonal alert when the RF level increases; useful for inaccessible places
- **SOUND** (SOUND LED) — playbacks amplitude component; experienced operators can determine device type based on sound pattern



Room Inspection

Detection distance depends on transmitter power and mutual antenna alignment. Expected detection range: 30 cm to 3 m.

Turn on the detector using the button on the battery compartment cap. Ensure battery charge is sufficient.

Inspect the room and all objects within detection distance. Use a ladder for ceilings and upper wall sections. Rotate the detector to scan its surroundings. Monitor level bargraphs or audio output depending on the mode.

Move around the room in one direction (clockwise/counter-clockwise), checking all surfaces and objects. Pay attention to electrical wiring, as bugging devices may be powered from it. Inspect furniture, ceilings (including behind suspended panels), and floors.

The primary working zone (area around the frequently used workspace) must be inspected thoroughly.

Due to poor penetration of millimeter-wave signals through walls, transmitters may be located outside the room. When possible, scan from outside: through windows, outer walls, etc.

After detecting a strong RF level zone, perform a physical inspection and disassemble the object to locate the transmitter.

Do not stop scanning after finding one device—there may be more.

Power

Power is controlled by the button on the detector's lower end. Upon switching on, the display shows battery level.

A low battery triggers the LOW BATT LED and on-screen icon.

Replace the battery when low. Open the compartment cap and insert a new AA battery following polarity marks.

Use alkaline batteries only.

iProtect 1240

Microwave
Millimeter-Wave
Detector