



# WAM-108t

Multiband  
Wireless Activity  
Monitor

Wideband 0-14 Ghz

Cellular 2G/3G/4G

Bluetooth/Wifi 2.4 &  
5 GHz

## FEATURES

- Multiband Wireless Detection and logging of all types of RF signals
- 8 Separate RF detectors operating simultaneously to give complete RF coverage:  
1 x 0-14 GHz Wideband Detector, 5 x Cellular 2G/3G/4G Detectors and 2 x Wifi/Bluetooth 2.4 GHz & 5 GHz Detectors
- Detects all types of RF devices: Audio and Video Bugs, Mobile Phones, Smartphones, GPS Trackers, SMS (Texts), GSM Bugs, 3G/4G Video, Bluetooth & Wifi Devices, Burst and 'Store & Forward' devices
- Wideband detection range of 0-14 GHz – our highest ever detection coverage with 6 GHz frequency counter for analogue and digital signals
- Cellular bands detect 800 MHz (4G), 900 MHz (2G/4G), 1800 MHz (2G/4G), 2100 MHz (3G), 2600MHz (4G)
- Separate 2.4 GHz and new 5Ghz band detector for Wifi/Bluetooth/Video and other latest generation devices
- Ultra-sensitive - Detects signals from up to 50 metres
- Livescan feature plots a real time detection trace on screen
- Band Selection feature allows user to monitor/ignore selected bands as required
- Event Log records Time/Date, Detected Band, Duration & Signal Strength of up to 4000 Events
- Log can be viewed on screen and downloaded to USB stick for storage/viewing on a computer
- Graph Mode plots real time or historical graph of all detected signals
- New Digital Viewer software (Windows) allows user to view Event Log in an easy to view graphic or list format on a computer
- Four antennae supplied – 3 x omnidirectional and 1 x High Gain Directional antenna for precision pin-pointing of the signal source
- 3.5 inch Colour TFT Display with easy to use menu driven operation
- Audio Demodulation through built in loudspeaker or earphones
- Audible Signal Strength 'Beep' and Silent Vibrate Mode
- Machined Aluminium Enclosure for maximum durability
- Internal Lithium Polymer battery pack – Charger supplied
- Supplied in Heavy Duty Military Standard Carry case

The **WAM-108t Multiband Wireless Activity Monitor** is a high specification portable handheld multiband detector for the detection and logging of all types of radio frequency devices. Designed for the ever increasing threat from more sophisticated and higher frequency RF devices, the WAM-108t provides complete coverage and logging of all activity in the surrounding area.



The WAM-108t is designed to detect and locate transmissions from all types of Radio Frequency devices. It contains an unprecedented eight separate RF detectors operating simultaneously to give complete RF coverage: 1 x 0-14 GHz Wideband, 5 x Cellular 2G/3G/4G and 2 x Wifi/Bluetooth 2.4 GHz and 5 GHz.

The 0-14 GHz Wideband detector provides the highest range of coverage of all RF activity in the target area. The frequency of the detected signal (up to 6GHz) can be seen simultaneously and the new 'Livescan' software shows the detected live signal pattern graphically to help identify the signal type. This

can be particularly useful when searching for pulsing or burst devices such as GPS trackers.

The five cellular bands offer complete detection of all 2G/3G/4G mobile based devices including mobile phones, smartphones, vehicle trackers, GSM listening devices (bugs) and covert wireless 3G/4G cameras. There are now more devices than ever using these cellular bands and the WAM-108t ensures they will all be detected.

The WAM-108t also has a separate 2.4 GHz and a new 5 GHz band for the rapidly growing threat from Wifi/Bluetooth/Video and other latest generation 'Store & Forward' devices. Such devices can for example, record audio over long periods and then transmit it in short regular bursts. It will also detect other devices that use these bands such as covert wireless video transmitters. Complex algorithms analyse the detected signal to help identify the signal type. ie. Bluetooth, Wifi, or other 2.4Ghz or 5Ghz signals.

The WAM-108t can be used in any environment where radio frequency detection is required such as sensitive meeting rooms/offices to check for hidden listening devices, covert cameras, unauthorised mobile phone usage in offices, exam halls, hospitals or prisons and in vehicles to locate hidden GPS tracking devices. Multiple high gain amplifiers ensure detection up to 50 meters depending on signal strength and ambient conditions.

A simple, intuitive menu driven system displayed on a colour TFT screen allows the user to perform real time detection or to view events that have previously occurred. Each of the eight detected bands has an individual 20 element signal strength meter enabling the precise source of a detected signal to be located with ease. The frequency/band of the detected signal can be seen simultaneously and the new 'Livescan' software shows the detected live signal pattern graphically to help identify the signal type. This can be particularly useful when searching for pulsing or burst devices such as GPS trackers.

If required the user can select the bands that they wish to be detected and ignore those that they are not interested in. For example it may not be necessary to look for Wifi devices on 2.4Ghz so that band can be switched off.

An audible 'Beep' mode allows the user to monitor without looking at the display and a silent vibrate mode can also be used for particularly sensitive areas. Detected signals can also be listened to via the built in speaker or earphones (supplied) using the Audio Demodulation feature: useful for example when detecting conventional analogue bugging devices that contain microphones.

Up to 4000 events can be stored within the WAM-108t for viewing as list or graphically. For each detected signal (no matter how long or short) it will record the Time/Date, Duration, Band/Frequency detected and Signal strength. This can be particularly useful in identifying the type of device that is being detected. For example: a string of regular short bursts in one particular band may represent those from a GSM/GPS Tracking device. These could be clearly viewed in Graph Mode as



lines of regular spacing representing the pulsing nature of the transmission. Also by looking at cellular activity at certain times of the day may help identify unauthorised phone use in sensitive areas such as prisons, company board rooms, exam halls, etc. The entire event log can also be downloaded to a USB stick for storage or transfer to a computer where it can be viewed/sorted for analysis or reporting.

The WAM-108t is supplied with our new JJN Digital Viewer software for Windows based computers. The memory log can be downloaded to a USB Memory Stick and viewed on a computer in an easy to read graphic or list format. Events can be scrolled through manually or specific times and dates can be called up instantly to check activity in any required period.



The WAM-108t is supplied with four antennae: three conventional omni-directional whip antenna for general use and a new high gain directional antenna for pinpointing high frequency signals at greater distance.

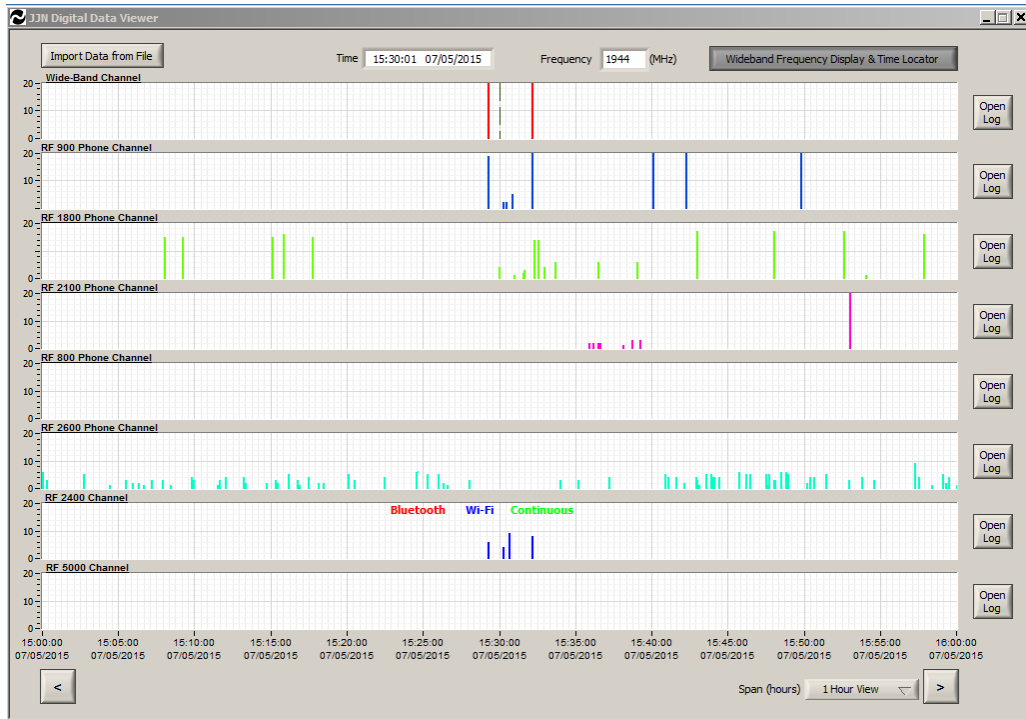
The WAM-108t is designed and manufactured in the UK to the highest specification and is enclosed in customised machined aircraft-grade aluminium enclosure. It uses an integral Lithium-polymer battery pack and is supplied with an international charger. The complete system is supplied in a heavy duty military standard carry case for ultimate protection.

#### SUPPLIED ACCESSORIES

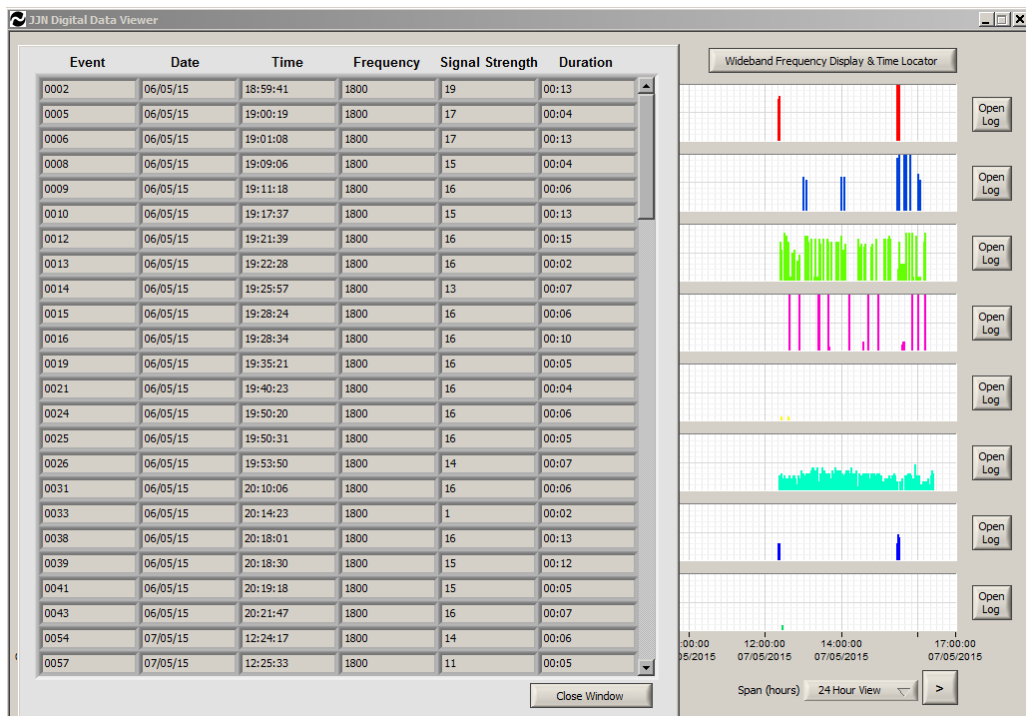
- Flexible Multiband Whip Antenna Long (Wideband)
- Flexible Cellular Antenna (Medium)
- Rigid 2.4 GHz & 5 GHz Antenna (Short)
- Directional High Gain Antenna – LPA14
- 5V DC Charger - 110V to 240V AC input (Auto Switching) with International Adaptors
- USB Memory Stick with Data Viewer Software for Windows based computers.
- Earphones
- High Protection Military Standard Carry Case



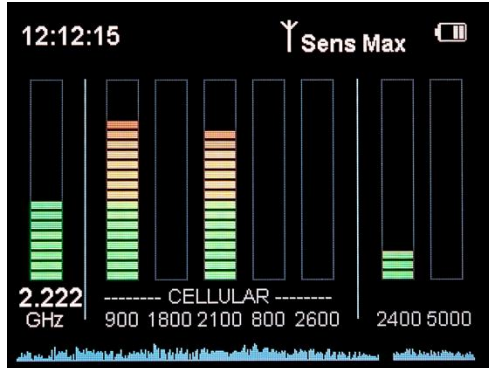
Data Viewer Software for Windows computers - Screen shots



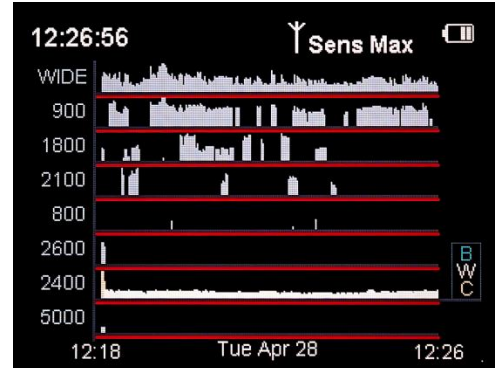
1 Hour  
Graph View



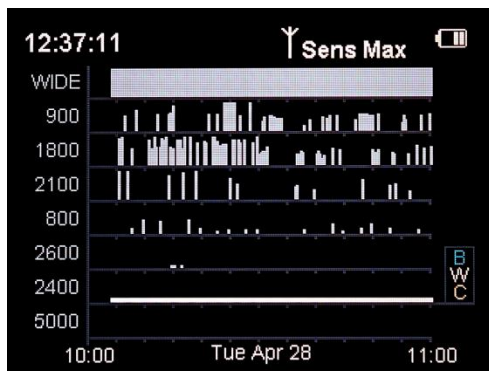
24 Hour  
Graph View  
with 1800 MHz  
Cellular Band  
list open



Main Live Screen showing detected signals



Live Graph Mode (8 Minutes)

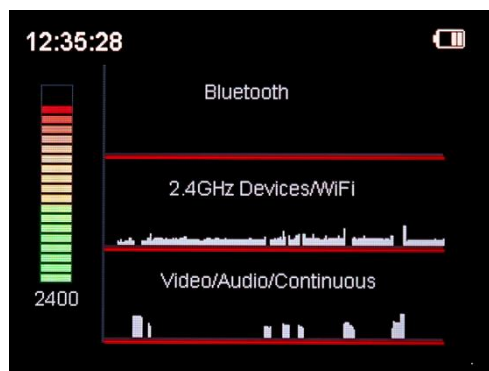


Event Log Graph Mode (1 hour period)

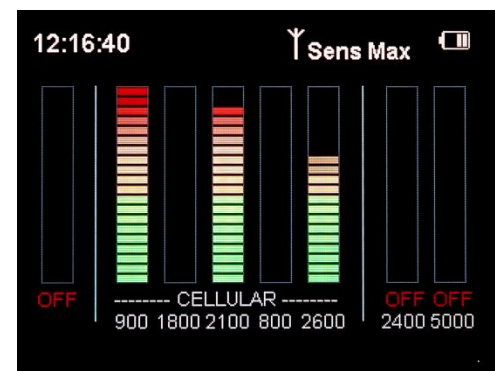
12:14:39 Sens Max

Event	Date	Time	Frequency	Sig	Dur.
265	27/04/15	20:05:45	Wideband	2	00:02
266	27/04/15	20:06:00	399.7 MHz	12	00:08
267	27/04/15	20:06:12	433.9 MHz	13	00:09
268	27/04/15	20:06:12	800	10	00:09
269	27/04/15	20:06:44	2.437 GHz	15	00:44
270	27/04/15	20:25:53	5.749 GHz	20	08:08
271	27/04/15	20:25:57	WI-FI	0	--:--
272	27/04/15	20:26:50	1800	11	00:55

Event Log in List Format



Live 2.4Ghz showing Bluetooth/Wifi etc



Main Screen showing 3 bands switched off

**TECHNICAL SPECIFICATIONS** Typical Performance Characteristics - at 20 degrees C

<b>Wideband</b>	
<b>Input Frequency Range</b>	<b>10MHz – 14000MHz (14.0GHz)</b>
<b>Sensitivity</b>	
100MHz	-49 dBm
200MHz	-48 dBm
500MHz	-47 dBm
1GHz	-44 dBm
2GHz	-50 dBm
5GHz	-42 dBm
10Ghz	-30 dBm
14Ghz	-2 dBm

<b>Cellular Bands</b>	
<p><b>4G 800MHz</b>            Band Width: 824 – 849 MHz            Out-of-Band Attn: &gt;40dB typ            Min. Detection Level: -60dBm</p>	<p><b>3G (UMTS) (WCDMA) 2100 MHz</b>            Band Width: 1925 - 1975MHz            Out-of-Band Attn: &gt; 70dB            Min. Detection Level: -76dBm</p>
<p><b>2G 900MHz</b>            Band Width: 880 - 915MHz            Out-of-Band Attn: &gt;40dB typ            Min. Detection Level: -52dBm</p>	<p><b>4G 2600MHz</b>            Band Width: 2500 – 2570 MHz            Out-of-Band Attn: &gt;40dB typ            Min. Detection Level: -53dBm</p>
<p><b>2G/4G 1800MHz</b>            Band Width: 1710 - 1785MHz            Out-of-Band Attn: &gt;40dB typ            Min. Detection Level: -52dBm</p>	

<b>2.4 &amp; 5 GHz Wireless Bands</b>
<p><b>2400MHz WIFI/BLUETOOTH etc.</b>            Band Width: 2400 – 2485 MHz            Out-of-Band Attn: &gt;40dB typ            Min. Detection Level: -56dBm</p>
<p><b>5000MHz WIFI/WLAN etc.</b>            Band Width: 4900 to 5950MHz            Out-of-Band Attn: &gt;40dB typ            Min. Detection Level: -52dBm</p>



Display	TFT Colour 3.5' High Contrast Graphic Display
Battery	Internal Li-Ion rechargeable Operating Duration – fully charged battery 8 hours Charge Time – 4 hours
Operating Temperature Range	-15 to +50 degrees C - Relative Humidity < 90%
Dimensions	186mm x 195mm x 34mm (max)
Weight	600 g – Main Unit
Signal Processing and Control	RISC Based Microcontroller with real time clock
Event Log	Maximum 4000 Events
USB Socket	For USB Stick Event Log download only