



USER MANUAL

Analog and Digital Bug Detector

0 - 20GHz

M1- PRO Multifunction TSCM



Introduction

Multifunction analog and digital detector M1-PRO is designed and manufactured in Italy according to high quality standards.

Detecting hidden high-tech surveillance devices used by foreign agencies, terrorists or criminals is now more difficult. However, with the next generation M1-PRO multiple detection system, the operator will find hidden devices, whether wireless or wired, using its array of smart probes that are tuned to detect these hidden threats from 0 up to 20GHz .

The system takes the operator to the hidden threat with its distance measuring tool which pinpoints the location of hidden transmitters or transmission link such as GSM LTE 2G 3G 4G 5G WIFI mobile phone Bluetooth and audio or video devices. Real-time analysis data is logged and stored directly in the system for immediate identification of current or historical threats.



M1-PRO detects:

- transmission spy devices hidden in the home, car, office or any environment
- GPS-Lojack trackers installed in cars and vehicles
- sending and receiving SMS from mobile phones, access signals to the Internet from mobile phones
- suspicious radio signals in the environment
- hidden wireless cameras
- mini earphones in transmission
- Jammers (signal jammers)
- Spying devices even turned off and not powered
- Spy devices turned on not transmitting

M1-PRO functions:

- Detection from 0 to 20 Ghz of Analog and Digital signals
- Full Band Scan Speed 1 Second
- Detection of magnetic GPS switched off and not powered
- Detection of Jammers (Signal Jammers)
- Omnidirectional antennas locate signals in every direction.
- The directional antenna locates devices at a specific point.
- The integrated thermographic antenna identifies sources of heat generated by switched on warning devices
- The T1 antenna forces the locators in standby and programmed to transmit the signal to be detected
- The T2 antenna detects laser microphones and infrared microphones
- The T3 antenna obliges the audio bugs to stand by and programmed to transmit the signal to be detected
- The T4 Probe detects on, off, unpowered and invisible black infrared cameras (used by spy cameras).
- Your APP will give you the possibility to:
 - Measure the distance of the detected signals in cm
 - Measure the signal detected in dB using a graph
 - Represent the detected signal in cm using the dB on the graph
 - 24/7 monitoring of signals with event log
 - Represent on the graph the disturbance detected by a jammer on



Technical features:

- Detection modes to select on the detector: Full Band Detector Analogue and Digital, GPS, Wifi and Magnet.
 - Thermographic detection to identify hidden spy devices
 - Detection of off micro cameras and hidden black infrared
 - Jammer detection
 - Lojack GPS Locators Detection
 - Forced activation mode of GPS and Audio Bugs in Stand by and programmed in delayed mode
 - Detection of laser and infrared microphones
 - Measure the signal detected in dB using graph + Logger
 - Measure the distance of the detected signals in cm + graph + Logger
 - 24/7 monitoring
 - Sensitivity adjustment to reduce or increase the detection range.
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- Compact portable and lightweight device.
 - Spectrum detection from 0 – 20 GHz, covering all currently used international and national communication frequency bands.
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- Full band scan rate 1 second, to ensure that all signals are captured in real time.
 - The signal strength is divided into 16 segments, which can effectively confirm the signal strength and distance of the transmission signal source.
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- The detection sensitivity is divided into two sections (high and low) ranging from 0cm to 30m (according to the situation).
 - Wide-field detection with absolute precision.
 - Dynamic range 68dBm.
 - Mode: beep and mute.



Outer Appearance Detector:



1. (USB1) for probes
2. (ANT1) Detection antenna input from 10 KHz to 20 GHz
3. Jack input for APP
4. (ANT2) WIFI detection antenna input
5. (USB2) for probes
6. Signal Detected Alarm Indicator
7. Detection of all bands from 10Khz to 20GHz
8. 900Mhz / 1800MHz bands detection
9. Wifi detection
10. App activation
11. Mute
12. (Power) On and Off key
13. (Mode) Operating mode key
14. (Range) Button to adjust the sensitivity from Low / High
15. Battery charging LED
16. Charging cable input
17. Magnet Detection Antenna
18. Speakerphone



Using the Keys on the Detector:

Press and hold the power switch for 3 seconds, release your finger after hearing the beep, the "Full Band Detector" light will be on, the default detection mode of 0 – 20GHz full frequency band is activated and the Antenna receiving terminal (ANT1) is activated. Two antennas can be installed arbitrarily according to your needs. Short press (MODE) to switch the working mode, there are 4 modes to switch. Long press (MODE) to switch to mute mode, the mute light in mute mode is always on (to cancel mute mode, press and hold again).

Short press (Range) to adjust the sensitivity level, there are two levels high and low for you to adjust.





Detection Mode Full Band Detector:

In this mode, first select the detection sensitivity (Low/High) and then start sweeping the environment to detect the bug signal. You can have a real-time representation of the signal detected with the 16-element bar, you can measure the signal in dB and the signal strength.

With the M1-PRO app you will have additional functions and the graphic representation of the signal with logger and signal measurement also in cm.



1. Indicates the antenna in use ANT 1
2. Low / High sensitivity mode
3. Detection of all bands in real time
4. RSSI: Signal measurement in dBm
5. PWR: Measurement of signal strength



Locators and Bugs Detection Mode in the 900 /1800 frequency:

In this mode, first select the detection sensitivity (Low/High) and then start sweeping the environment to detect the 900/1800 signal. You can have real-time measurement of the signal in dbm over the detected power.

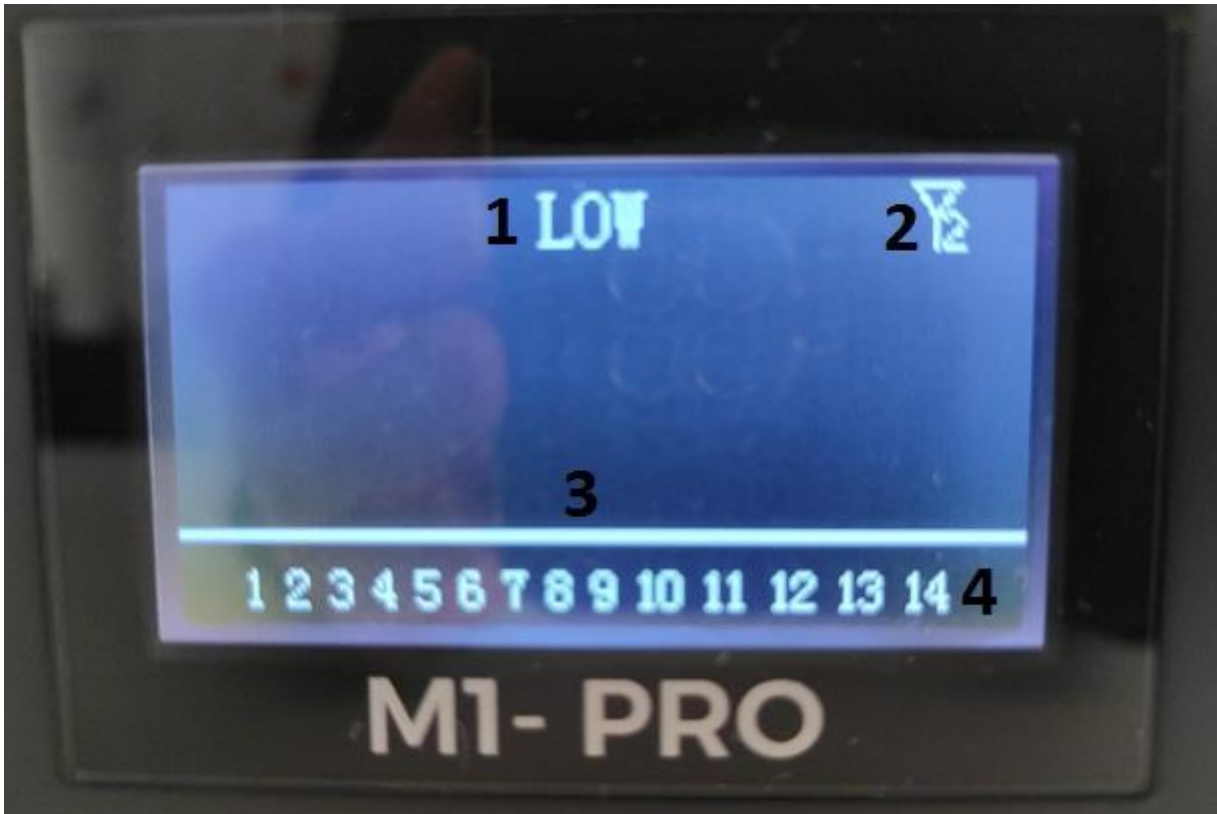


1. Indicates the antenna in use ANT 1
2. Low / High sensitivity mode
3. Frequency of detection
4. Indicates signal detection
5. RSSI: Signal measurement in dBm



WIFI Band Detection Mode:

In this mode, first select the detection sensitivity (Low/High) and then start sweeping the environment to detect the wifi signal. You can measure the power of the detected signal in real time, the graph will show you the representation of the harmonic of the signal up to the point of origin.



1. Low / High sensitivity mode
2. Indicates the antenna in use ANT 2
3. Detection power in graph
4. Signal carrying scale from 1 to 14

Magnet Detection Mode

In this mode, first select the detection sensitivity (Low/High) and then start moving the device at a distance of about 5/10 cm from the point to be reclaimed.
As soon as the device detects the signal, the magnetic value and return power will be displayed and the 16-segment bar will activate.



1. Indicates the value of the detected magnet
2. Indicates return signal strength
3. Signal Detection Bar

Directional Omni antennas

Two man-direction antennas are supplied, capable of detecting the signals present in the environment to be reclaimed in all directions.

Screw the antennas into the ANT1 and ANT2 inputs for use.



Directional Antenna

A directional antenna is provided which can detect the signal following the precise direction. The antenna can be used in both the ANT1 and ANT2 inputs as needed. Screw the antenna into the ANT1 or ANT2 input for use.



T1 antenna

This antenna forces the locators in stand by to transmit the signal to be detected. The T1 antenna will saturate the tracker signal in stand by and force it to restart and then transmit the signal.

Keep the detector switched off, insert the T1 antenna into the input (as in the photo) and place the detector in the car to be checked for 5/10 minutes.

It is advisable to enter the car first, insert the T1 probe and place the detector on the seat, then close the door and move away from the vehicle. For 5/10 minutes no one must be inside or near the car.

After 5/10 minutes get into the vehicle and immediately remove the T1 probe, turn on the detector and start the vehicle sweeping procedure.

Warnings

The T1 probe is very powerful and saturates the GPS signal this means that when it is in operation it is recommended that nobody is in the vicinity of the vehicle because the probe gives off an ultrasonic saturation signal. Approach only to activate and deactivate the probe.



T2 antenna

This antenna is used to detect laser and infrared microphones, these devices are very dangerous because they can be installed hundreds of meters outside the environment to be monitored. Insert the T2 antenna in the entrance (as in the photo) and pass the probe uniformly over all the windows of the place to be reclaimed. If the probe detects a spying signal a blue LED on the back of the antenna will light up. The led stays on until the detected signal is constant, if the detected signal is alternating you will have several flashes. To identify bugs and infrared spy signals present inside the environment, the entire environment must be swept using the T2 probe as if it were a directional antenna.





T3 antenna

This antenna generates a particular ambient noise which is used to wake up the audio and video bugs in stand by and voice activated, it forces the activation of the transmission of the spy device so as to be easily identified by the detector. Insert the T3 antenna into the input (as in the photo) at this point the antenna is activated automatically and you can start sweeping the environment in order to identify the presence of spy devices.



T4 probe

This probe allows you to sweep the environment and find audio and video micro-cameras on, off or not powered, it can also identify the black infrared of spy micro-cameras.



The probe has a color video monitor with integrated camera from which you can see the black infrared of the hidden micro-cameras.

Monitor operation:

Once the cable is connected to the central unit, the monitor will turn on. To keep the display on, press the (on) key every 10 seconds (this will activate the IR identification function and keep the display always on).

The probe also has a led monocle to find the micro cameras even if they are switched off. The probe connects via its supplied cable (as in the photo), the probe is activated automatically.

When using the T4 probe, keep the detector off. To restart probe T4, press the Power key.

To activate the LEDs to use the monocular, press the LED key.

The LED button has 4 lighting modes, each time it is pressed a different power and flashing mode will be activated.

The LEDs are red and are designed to quickly reflect the optics of the micro cameras.



1. Power key
2. LED activation key
3. Vision monitor for the built-in camera
4. Vision monacle
5. LEDs (RED)
6. Micro camera

Thermographic probe

This probe uses thermography technology to identify the presence of heat generated by both battery and mains powered spy devices.

The thermographic probe must be passed over objects or points with no heat in order to check whether there are any spying electronic devices inside them.

Two inspections are recommended:

1. Survey the environment or vehicle with the power still on
2. Inspect the environment or the vehicle after turning off the power and waiting for cooling

Insert the probe into the input (as in the photo) using its connector, it will be recognized automatically and will activate immediately.

When using the T4 probe, keep the detector off.



1. Detection of the heat point
2. Temperature measurement
3. Environmental thermography detection bar
4. Thermographic detection sensor



Using the MEFF M1-PRO APP:

Download APK APP and install it on your Android device.



In the package there is a jack cable and a usb type c adapter.

The jack cable can be connected directly to the headphone input of any android device, the screen will automatically turn off after 10 seconds and the "LED light on the device will remain on at this point you can open the MEFF M1-PRO app.

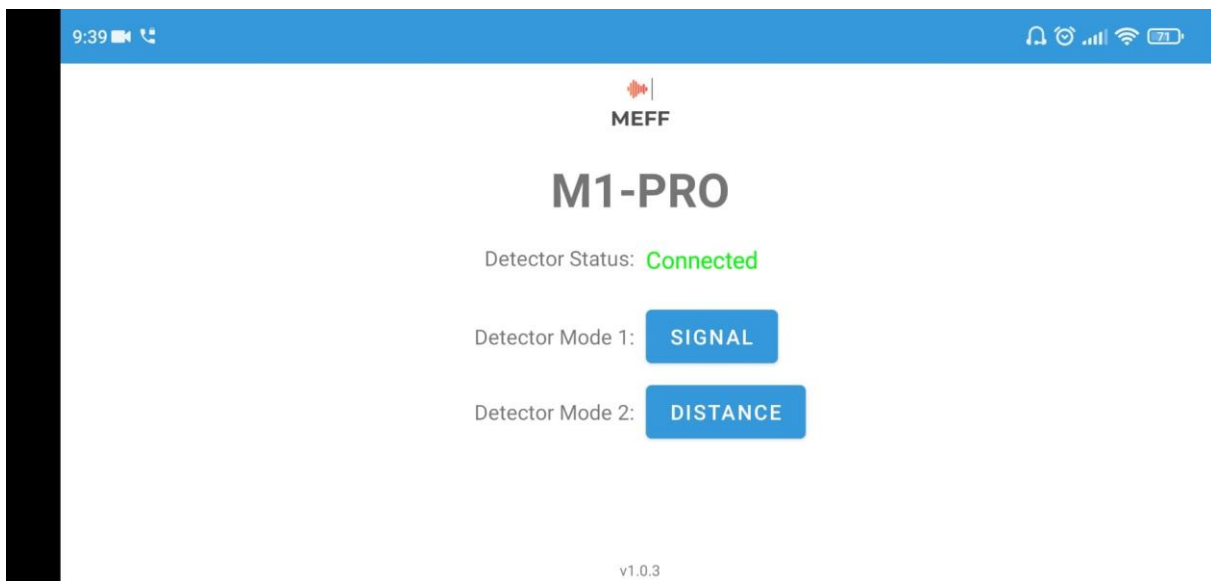
Otherwise, if you have an android mobile phone with a usb type c input, connect the adapter and then insert the Jack cable inside, in many versions the detector stays on and you can view both the app and the detector display live.

Open APP MEFF M1-PRO, you will find two modes available:

Detector Mode 1:

In this mode you can detect the signal in db, have a graph of the detection and use the history for environmental monitoring.

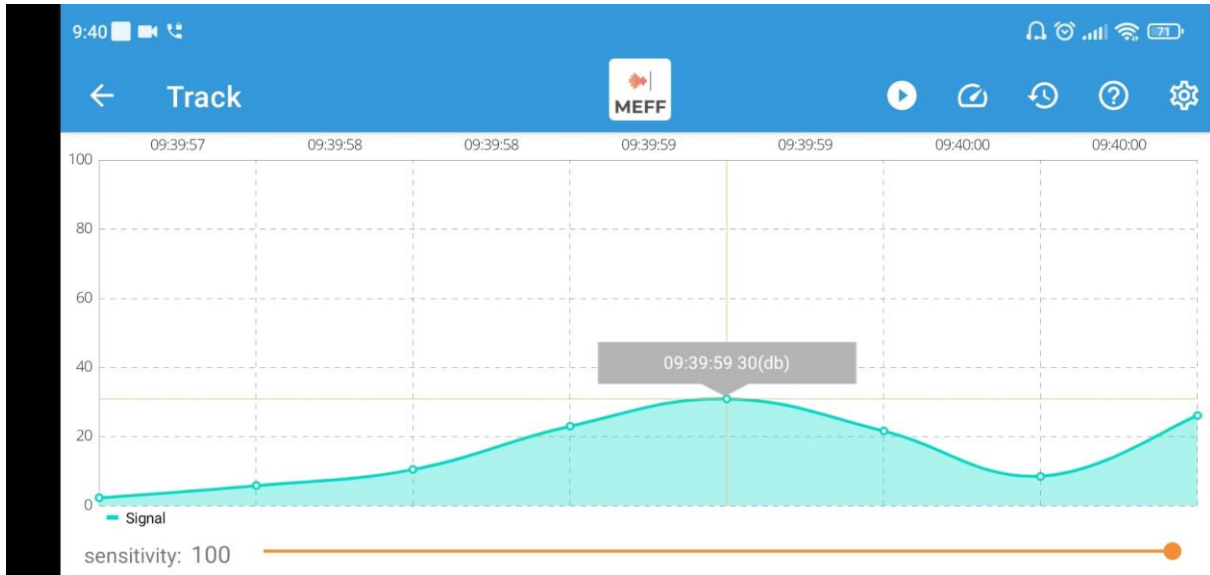
Click on **SIGNAL**





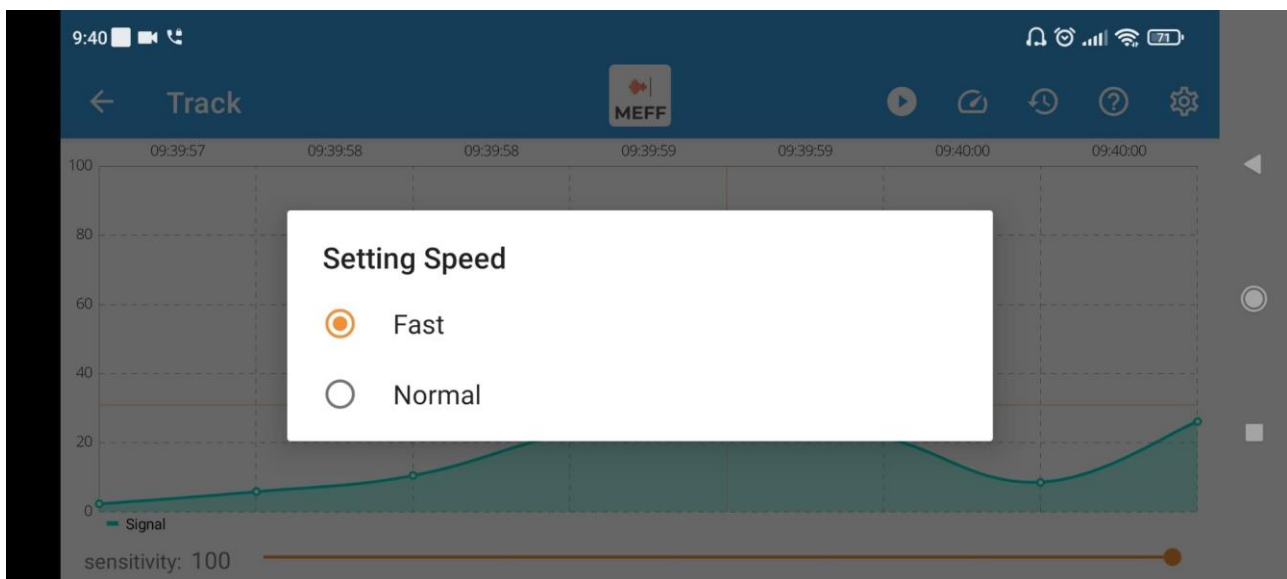
In this screen you will see the signal detected in db represented.

When the db mark 100 it means that the signal is far from the device, the closer you get the more the db goes down until it reaches zero.



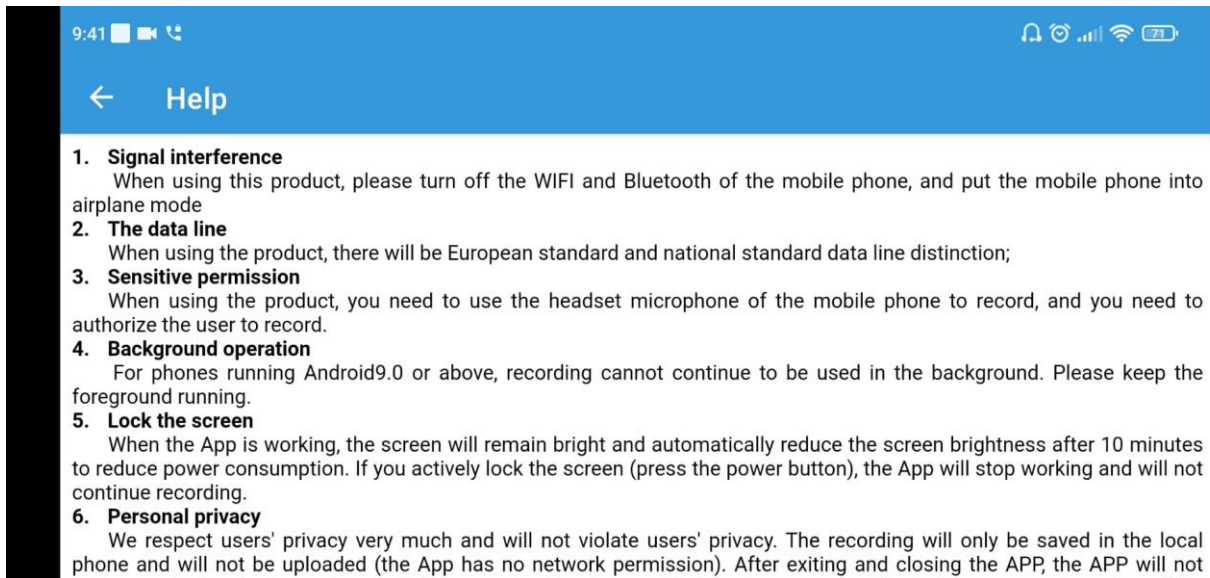
You can adjust the sensitivity from 0 to 100

In this screen you can select the detection speed (Fast - Normal)

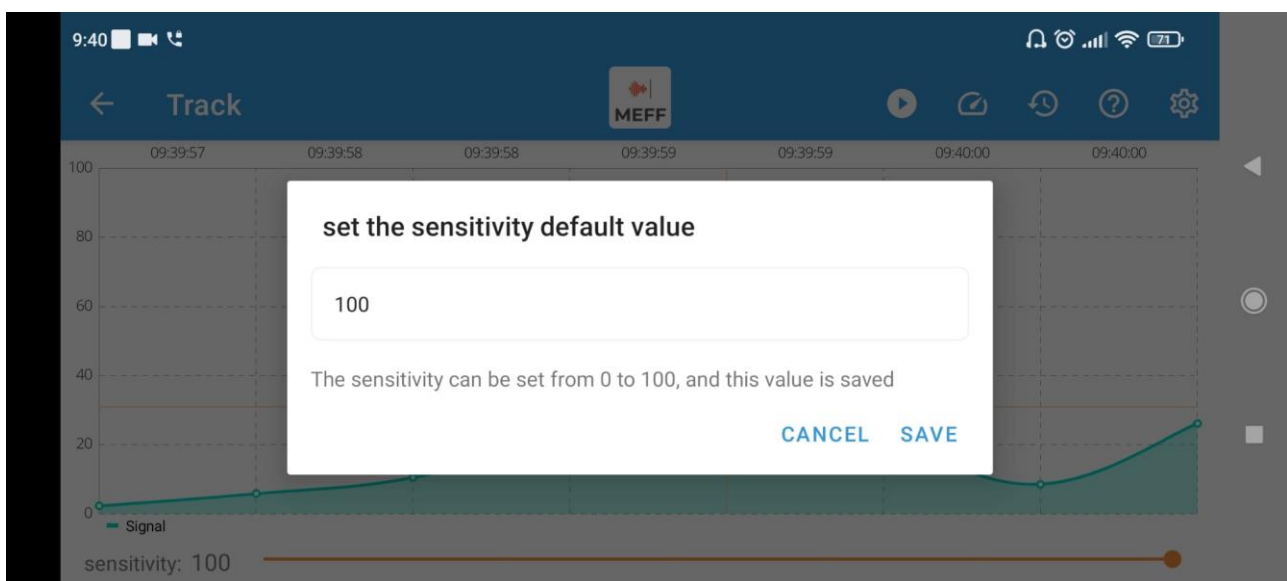




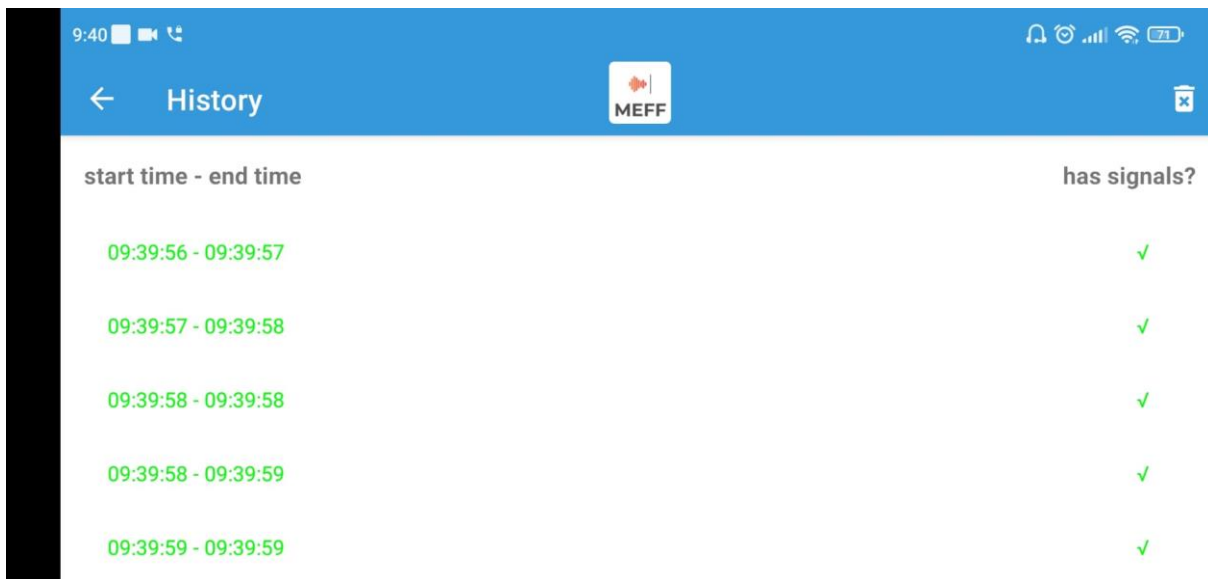
In this screen you will find all the information to use the MEFF M1-PRO APP correctly



In this screen you can manually adjust the sensitivity of signal detection



In this mode you can view the event history



The screenshot shows the 'History' screen of the MEFF app. The header is blue with a back arrow, the text 'History', the MEFF logo, and a close icon. The main content is a table with two columns: 'start time - end time' and 'has signals?'. The table contains five rows of data, each with a green time range and a green checkmark.

start time - end time	has signals?
09:39:56 - 09:39:57	✓
09:39:57 - 09:39:58	✓
09:39:58 - 09:39:58	✓
09:39:58 - 09:39:59	✓
09:39:59 - 09:39:59	✓

Detector Mode 2:

This mode has an innovative function, the possibility of detecting the distance in cm of the signal.

Our detector through a new patent is able to measure the distance, this is possible by combining and analyzing the various information received from the M1-PRO.

The distance is determined by the propagation time of the transmitted signal and by its power.

This function may be accurate or approximate depending on the signal strength, ambient noise or the type of transmitting device. As we know, not all devices and environments to be reclaimed are the same.

For a correct use of the function, it is recommended to first put the mobile phone in use with APP in Airplane mode, turn off all known signals and then start the measurement. The measurement takes place omnidirectionally, this means that if the device indicates 60cm, it means that the signal is in an omnidirectional radius of approximately 60cm from the position of the detector.

In this mode you can also leave the device in monitoring and view the history with the measurements in cm at a later time, this is very useful because you can then go and look for signals in the indicated range. The system can give two results:

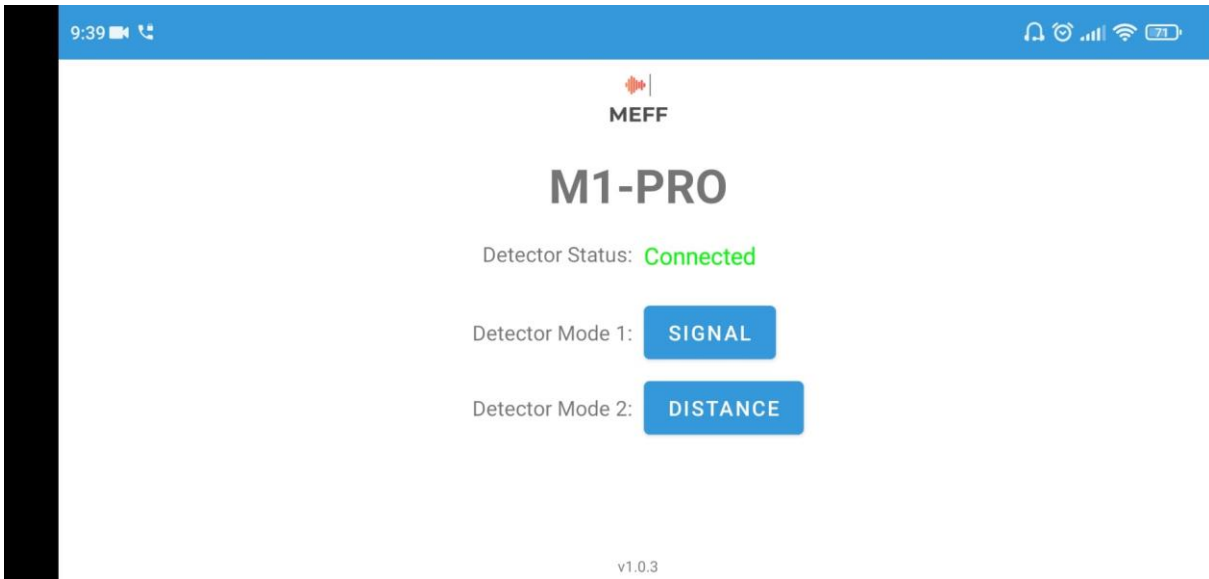
Example:

Distance: 20cm

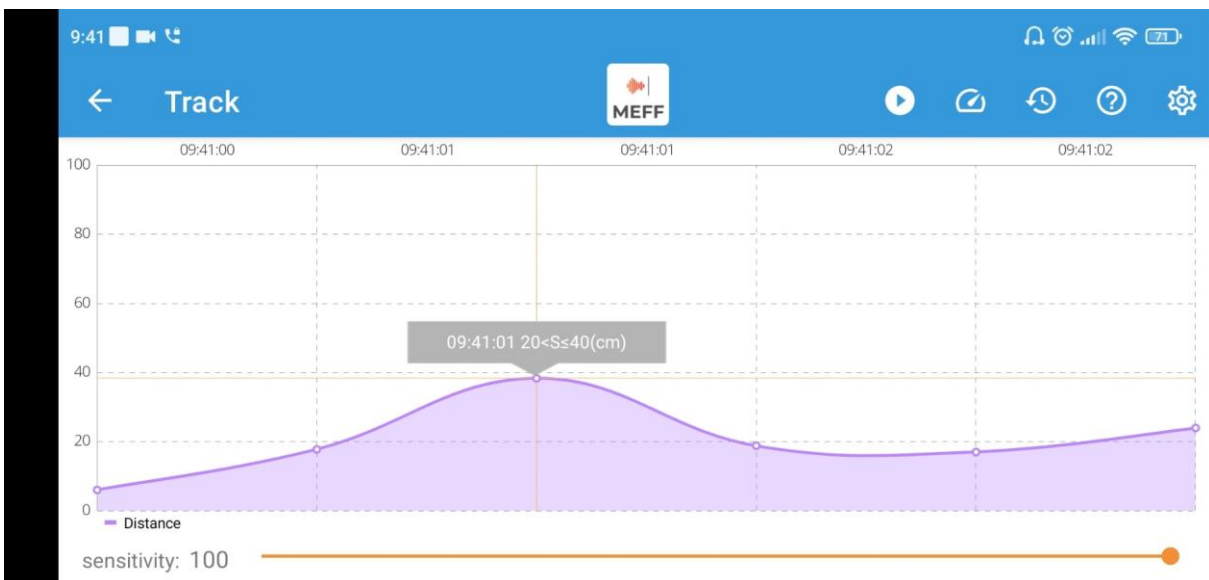
Distance between 20cm-40cm



To activate the function:
Click on **DISTANCE**



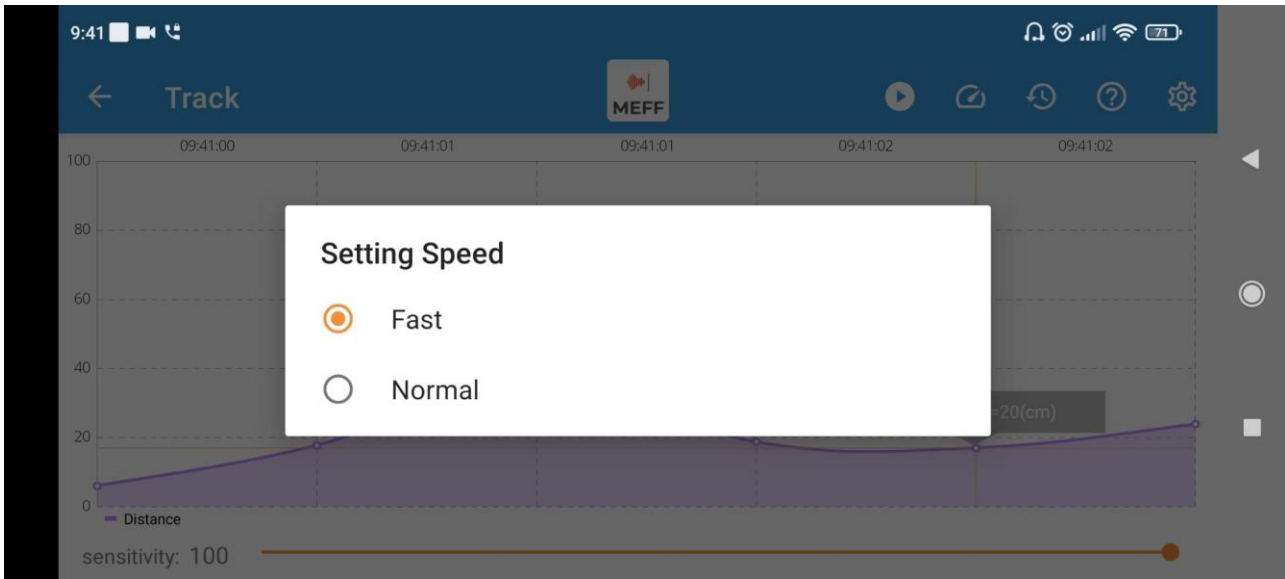
In this screen you will see the signal detected in cm shown.



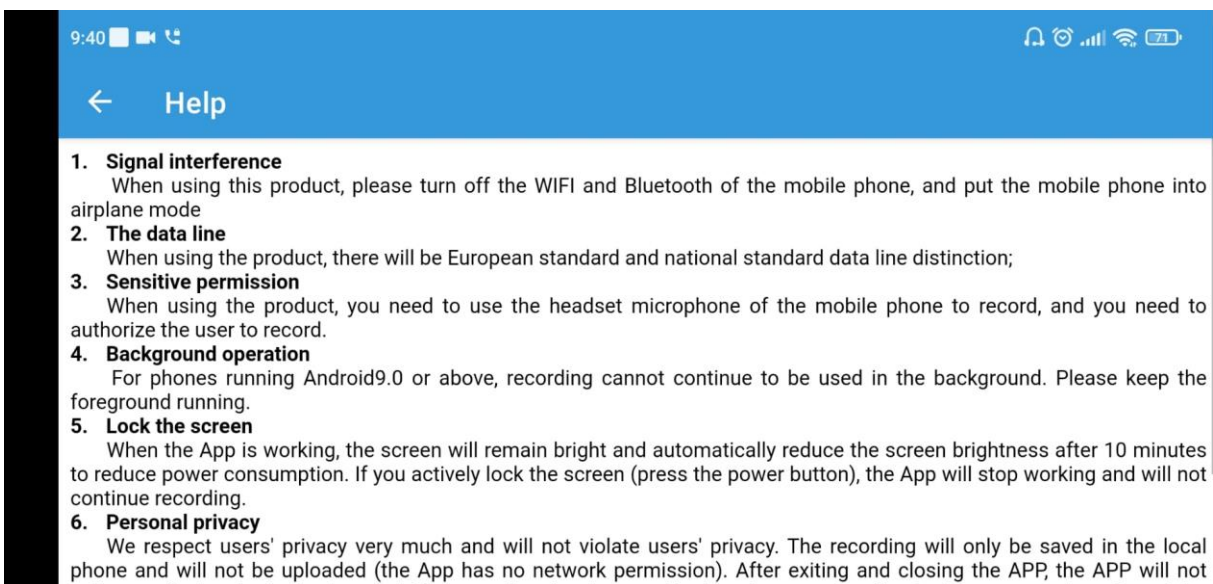
You can adjust the sensitivity from 0 to 100



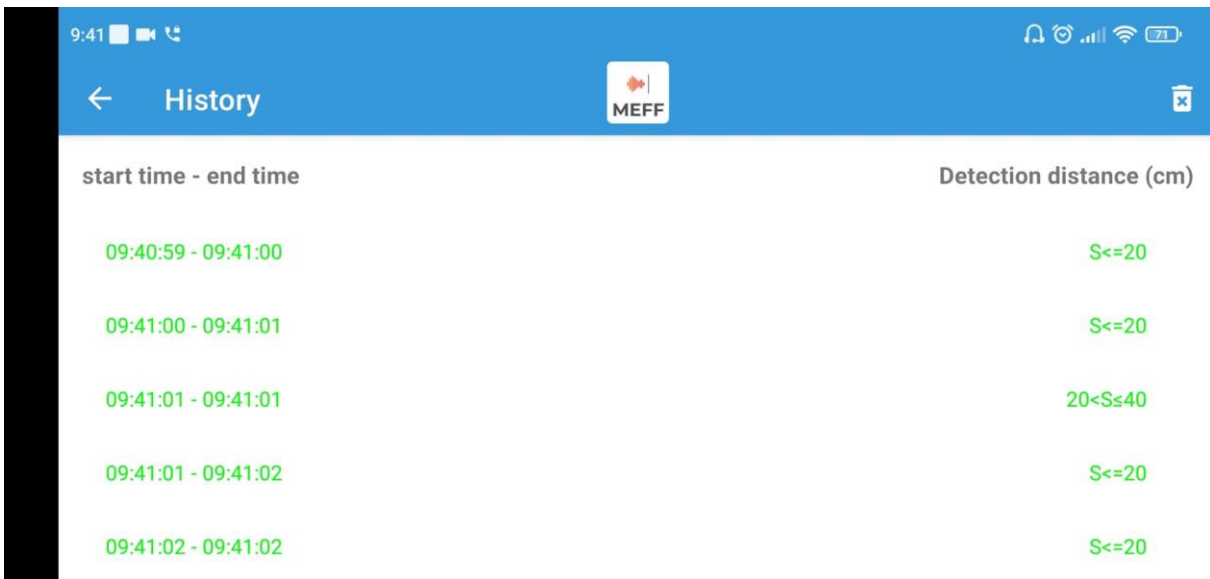
In this screen you can select the detection speed (Fast – Normal)



In this screen you will find all the information to use the MEFF M1-PRO APP correctly



In this mode you can view the event history with date and measurement in cm of the distance detected



start time - end time	Detection distance (cm)
09:40:59 - 09:41:00	$S \leq 20$
09:41:00 - 09:41:01	$S \leq 20$
09:41:01 - 09:41:01	$20 < S \leq 40$
09:41:01 - 09:41:02	$S \leq 20$
09:41:02 - 09:41:02	$S \leq 20$

In this screen you can manually adjust the sensitivity of signal detection

