

ELECTRONIC COUNTER MEASURES

MRA-5

MEMORY RADIO ANALYZER

Version S1.7

The MRA-5 is a special radio receiver designed for instant detection of any radio bug.

A special ultra-fast scanning system detects low power listening transmitters even in conditions where much stronger TV, FM, mobile phone or radio signals disable other conventional detection systems.

Comparing with older, very popular MRA-3 the MRA-5 has higher sensitivity on the highest frequencies, extended frequency range, improved pulse and digital signal detection, possibility of the alarm sensitivity adjustment from the setting menu, correction of DECT systems and particularly much higher false alarm resistance.

Businessmen, bankers, stockbrokers and anybody who could suffer from a leak of information should realise that the radio bug is the most common form of eavesdropping. This is because it's cheap, it's simple and, from the legal point of view, its use is hard to prove.

The unique radio part of the MRA-5 provides very fast, accurate and effective scanning of the spectrum range 34-3600 MHz, both automatically and manually. The sweep frequency is at least 100 times greater than that which any conventional scanner can achieve.

All parameters are optimised for continuous use and easy operation by the non-specialist. In comparison with other systems on the market no special training is required - if you can set your video recorder you can use this unit!

The basis of the system is the spectrum memory. Ultrafast scanning takes place every ten seconds and the received signals are compared with the initially stored „clean“ background spectrum. The presence of a new signal activates a three level alarm output and the new signal is stored in an independent alarm memory. An intelligent system monitors the pre-alarm, alarm, and post-alarm phases and this eliminates false-alarms caused by different legal signals such as TV or FM or digital broadcast, WiFi, mobile radios, cordless phones, GSM phones, air radios etc.

The unit is user-friendly, with a simple two-line LCD display providing information about all system functions, and, a built-in loudspeaker allowing an immediate check of all radio signals. The system is protected against un-authorized interference by a unique identification code which is automatically generated during the previous memory-in cycle.



The Main Advantage: Unattended Permanent Protection

Look how the MRA-5 overcomes the problems normally associated with bug detectors.

USUAL SOLUTION

1. Sensitivity

Low sensitivity of all common wide band detectors (in millivolts).

2. Selectivity

Almost all signals (TV, radio, mobile phones, data links etc.) are much stronger than the bugs. The result is very low sensitivity and numerous false alarms.

3. Alarm processing

Almost all detectors simply indicate the increase in any radio signal or receive the strongest signal. In practice 99% of alarms are false.

4. User parameters

Common detectors are not sensitive and produce many false alarms.

Special detectors with acceptable parameters are more or less laboratory equipment and are not suitable for everyday use in the office.

MRA-5 SMART SOLUTION

High sensitivity of selective superheterodyne receiver (in microvolts).

The selective processing of the entire radio spectrum allows automatic separation of legal signals and weak bug transmitters.

Three level intelligent processing of new signals only (pre-alarm, alarm, post-alarm) eliminates virtually all the alarms caused by legal transmissions.

The MRA-5 is sensitive and selective enough to protect the VIP office.

Its small size and attractive design, with clear controls supported by a well-arranged 2x16 character LCD display, allow permanent installation in any room.

Technical Specification MRA-5 Version S1.7

• Frequency range	34-3600 MHz
• Sensitivity for S/N = 10 dB	34-2200 MHz 20-50 μ V 2200-3600 MHz, 50-1000 μ V
• Demodulation	WBFM, NBFM, AM
• IF bandwidth	500 kHz
• LCD display	2x16 character alphanumeric
• S-meter dynamic range	73 dB
• Signal strength measurement	40 level LCD linebars
• Distance measurement for 1mW source	1-50 meters
• Memory backup	internal battery
• Background spectrum memory	512 multifrequency channels
• New (alarm) signal memory	100 re-writable channels, signal level & time information
• Pre-alarm	after each scan cycle
• Alarm signalling	acoustic and LED
• Automatic scan cycle duration	10 seconds
• Alarm period	adjustable 1 – 40 minutes
• Last alarm information	max. 99hours 59minutes
• Time information about alarm channel activity	sum, last signal appearance max. 45 days
• ID codes against unauthorised use	65536
• Fine-tuning	+/- 1 multifrequency channel
• Frequency measurement	34-3600 MHz, resolution 0.1 MHz
• Front panel volume control	for earphone and internal loudspeaker
• Power	9V internal ACCU or 6F22 battery
• Battery low indicator	below 7V, automatic off below 6,5V
• Current consumption	SCAN cca. 30mA, OFF below 0,7 μ A
• Cross polarity protection	
• Built-in telescopic antenna	
• External power	12 – 25V DC, after power drop out automatic re-start
• Size	136 x 49 x 137 mm
• Weight (inc. battery)	620 g