

Technical Surveillance Countermeasures equipment is expensive and requires operation by skilled technical personnel. It is often useful to supplement regular full searches with easier to use equipment. The Lockhart collection of devices helps operators uncover hidden eavesdropping devices by alerting to their egress methods upon a search.

Lockhart RF Scanner

The Radio Signal Detector and Analyser is a broadband signal detector which displays its results in both amplitude and time domains, offering an entirely new method of detection and analysis.

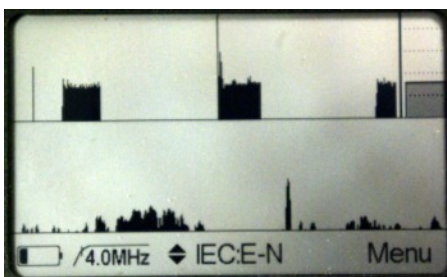
Based around a state-of-the-art logarithmic amplifier it is especially useful for detecting and identifying pulsed signals. Furthermore, the internal analysis software will identify Time Domain Multiple Access signals in real time. This enables GSM transmissions, very commonly used for cheap, quick plant eavesdropping devices, to be quickly identified and located, as well as identifying Bluetooth and DECT transmissions. Version available with audio output.

Lockhart Conducted Signals Scanner

The Lockhart Conducted Signal Detector and Analyser will detect high frequency signals on infrastructure wiring. It provides an easy to use capability for scanning mains and data cabling to identify unwanted or hostile signals.

It comprises a broadband detector with a frequency response exceeding well beyond 10MHz enabling it to detect signals which cannot be detected with broadband field-strength meters. The Detector will display its output both in time and frequency domain using a split screen.

With a DSP-based Fast Fourier Transform Spectrum Analyser it has a dynamic range of 80dB and sees clearly even the smallest carrier signals. The time domain display clearly shows the pulsed signals which the analyser may find difficult.



Left: the Conducted Signals Scanner display with both time and frequency domain shown on a split screen. Frequency and the input feed are displayed below, alongside battery life.

Lockhart Surface Scanner

The Lockhart Surface Scanner assists the physical search by providing a visual means to identify plaster rework and pinholes. Using low-power led technology the ergonomically designed scanner makes detailed searching effortless.

Lockhart Optical Scanner

Detection of optical emissions which may contain intelligence is straightforward using the new Lockhart Optical detector. Based around state-of-the-art Indium Gallium Arsenide and Silicon sensors the detector will capture emissions up to $1.7\mu\text{m}$ - well above the capability of silicon sensors alone.

Visible light and near-IR signals are detected by conventional silicon sensors to give coverage of all likely emitting sources. The signals are displayed in a unique rolling time-domain format coupled with a spectrum analyser which will give clear indication of any modulation content of the signals. It is also equipped with an audio output to give the operator audible warning of signals and signal strength.



L-R: Lockhart RF, Conducted Signals, Optical.
Top: Surface Scanner

Lockhart Collection

The time domain display feature common to the Lockhart TSCM devices allow them to be used as portable "sweeping" devices for searching rooms prior to meetings or as a permanent monitor of a room to detect if hostile devices are being brought into a room following a professional TSCM sweep.

All devices use standard AA batteries, available all around the world. Standard one-year warranty applied to all equipment.

Technical Specification - Lockhart RF Scanner

Technical Specification	Min	Typ	Max
Useable Frequency Range	1 MHz		7 GHz
Minimum Displayed Signal Level	-70 dBm	-65 dBm	- 60 dBm
Maximum Displayed Signal Level	-13 dBm	-8 dBm	-3 dBm
Minimum Signal Duration for Full Sensitivity		10 µs	
RF Detector Video Bandwidth		4 MHz	
Operating Temperature (excluding batteries)	-10°C		+50°C
Battery Life (Energizer E91)	40hrs (operating)	40 hours	5yrs (standby)

Technical Specification - Lockhart Optical Scanner

Technical Specification	Min	Max
Detectable Wavelengths - Near IR	780 nm	1030 nm
Visible + IR	560 nm	1040 nm
Mid IR	930 nm	1680 nm
Display	68mm	
Spectrum analyser Bandwidth	4 MHz	
Operating Temperature (excluding batteries)	-10°C	+50°C
Battery Life (Energizer E91)	X (operating)	X (standby)

Technical Specification - Lockhart Conducted Signals Scanner

IEC Port (110 VAC to 240 VAC, 50-60 Hz)

Measurement Module	Frequency Range	Amplitude Range	Response Time
Broadband Detector (Lowpass)	10 kHz - 4 MHz	10 mV - 1 V	1 ms
Broadband Detector (Highpass)	4 MHz - >10 MHz	10 mV - 1 V	1 ms
Spectrum Analyser (narrowband carrier)	30 kHz - 3.9 MHz	1 mV - 1 V	100 ms

CAT5 Port

Measurement Module	Frequency Range	Amplitude Range	Response Time
Broadband Detector (Lowpass)	2 kHz - 4 MHz	10 mV - 1 V	1 ms
Broadband Detector (Highpass)	4 MHz - >10 MHz	10 mV - 1 V	1 ms
Spectrum Analyser (narrowband carrier)	30 kHz - 3.9 MHz	1 mV - 1 V	100 ms

Technical Specification - Lockhart Surface Scanner

Battery Life	Min	Max
Operating Temperature (excluding batteries)	-10°C	50°C
Battery Life (Energiser E91)	150hrs (dimmiest)	9hrs (brightest)
Illumination Distance	20mm	2000mm