



SABRE

MICROWAVE FLOODING SYSTEM

Sabre Radar Unit

Transmitter

| | |
|--------------|---|
| Power Output | Adjustable from below 10 to 100 mW, maximum into 50 ohms measured at output socket of main unit |
| Frequency | 888.5 MHz \pm 5 KHz |
| Antenna Gain | >10 dB |

Receiver

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|--------------|---|
| Frequency | Locked to transmitter typically 888.625 MHz |
| Sensitivity | Better than -95 dBm for 20 dB S/N |
| Antenna Gain | >10 dB |

Power Requirements

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|---------------------|---------------------------|
| Power Supply | 18 VDC Charger input |
| Current Consumption | Maximum 280 mA at 100 VAC |
| Audio Output | Typically 30 mV pk-pk |

Dimensions

| | |
|--------|-------------------------------|
| Size | 158 x 85 x 290 mm (W x H x D) |
| Weight | 4 Kgs |

Sabre Transponder

Frequency Specification

| | |
|-------------------------|---------|
| Sub-carrier Frequency | 125 KHz |
| Modulation | 5 KHz |
| Integral Dipole Antenna | |

Power Requirements

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|-------------------|---|
| Battery Pack | (internal) 8 x 3 VDC lithium 'Coin' cells |
| Power Consumption | less than 70 μ A (400 μ W) |
| Audio Bandwidth | -3 dB points better than 100 Hz to 10 KHz |

Dimensions

| | |
|--------|----------------------------|
| Size | 30 x 9 x 133mm (W x H x D) |
| Weight | 34 gms |

Accessories

| | |
|--------------------|--------------------------------------|
| Sabre yagi Antenna | 185 x 22 x 760 mm (W x H x D), 1 Kgs |
|--------------------|--------------------------------------|

System Components

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|------------------|---|
| Standard Package | Radar unit, 4 x transponders, radar unit PSU, yagi antenna (x 2), tripod (x 2), headphones, user manual, carry case |
|------------------|---|



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Features

- Excellent receiver sensitivity
- Excellent audio quality
- Compact and portable
- Rapid deployment - radar unit can be deployed in minutes
- Low cost transponders
- Extremely long operational lifetime

A unique audio surveillance system using a radar technique to relay audio from the surveillance target area. Effectively a wireless device for audio pick-up, Sabre is extremely difficult to detect using conventional countermeasures. Thanks to its ultra low power technology and low cost, Sabre can be installed in large numbers, months or even years before active surveillance is required.

Sabre has two operational parts, the transponder - a miniature listening device which is sited in the target area, and a radar unit - which is deployed nearby.

The transponder lies dormant, effectively inert, with no appreciable RF radiation. To 'transmit' audio information from the target area, the transponder is 'illuminated' with a highly directional radio beam by the Sabre Radar Unit. This beam is modulated with the audio data and is reflected back by the transponder to be picked up by the Sabre Radar Unit.

The transponder does not contain any active transmitting circuitry, and using low power technology can be powered by its internal battery pack for up to 15 months. Using an external battery pack this can be extended to an operational life of years. The compact dimensions of the transponder unit allow for many concealment options.

These two features of the transponder, together with the low unit cost means that Sabre can be installed in locations impossible with conventional listening devices and in such a way that there is no indication that the target area has been disturbed or modified in any way.

Countersurveillance Defence

The lack of any transmitting energy originating from the transponder makes it extremely unlikely to be located using conventional countersurveillance.

The intermittent nature and close focus of the illuminating beam also reduce the likelihood of discovery. The signal from the Radar Unit is also difficult to identify because it carries no audio information and originates outside the target area. The reflected signal in comparison is very low power and by adjusting the power of the illuminating signal the reflected signal can be kept to an absolute minimum and cut off instantly by the surveillance team.

