

PPE050 Through Wall Radar

The TWR is a lightweight, durable and highly sophisticated through-wall radar. It is designed to provide police, special forces and the emergency services with accurate covert intelligence of the location and movement of people in situations where it would otherwise be impossible to gain such insight.

Using ultra-wide band radar, TWR can see through brick, block and concrete walls, and doors, and over a range of up to 20 metres, providing comprehensive coverage of internal spaces. It can be used for the rapid evaluation of room occupancy or it can be used for more detailed intelligence gathering. TRW is the most advanced portable through-wall radar system in the world for three significant reasons:

- Advanced signal processing highlights moving people and objects in complex environments
- The user interface is quick to respond, fast to load and intuitive to use
- Its ergonomics allow the operative to use it one-handed or two-handed



Covert intelligence

TWR has been designed for dangerous and life-threatening situations, where without invasive sensors it presents reliable information to the operative. Using highly sophisticated software, the unit can analyse radar signals and instantly filter out objects that are not moving behind a wall or door.

This means that TWR can be used in a range of different environments – even offices with their angular surfaces and metal objects, which act as a ‘hall of mirrors’ to standard radar equipment. This level of analysis means that users do not waste their valuable time in translating spurious data; they can focus their attention on what is most important – the people inside.

Easy to use

Whether police, special forces or emergency services, the people using TWR need to be able to act quickly on the information presented. This means that the user interface is of critical importance and this is why it has been a focus of the product’s development.

Based around just four navigation buttons, the interface is structured in such a way that the user can quickly switch between views (front, plan and profile), as well as view the scenario within a 3D environment, which can be rotated to look at a room from various entry points. The display can also be switched from day to night mode, which means that TWR has uses in the widest possible range of real-life situations.

Maximum range	Will detect personnel up to 20m
Field of view	120° horizontally and 90° vertically
Display	2D and 3D colour display with 640 x 480 resolution
Wall materials	Proven with: brick and block separated by a cavity; timber; cinder block; concrete block; 9" brick; reinforced concrete (subject to reinforcing bar spacing)
Frequency range	1.7–2.2 GHz
Resolution	30cm
Environmental	Rugged, IP68; operating temperature –20°C to 55°C
Transmit power	–10dBm per MHz average across the band
Dimensions and Weight	305 × 450 × 210mm; 5.7kg inc battery
Battery	3–5 hours' continuous use on a single charge (typically up to 24hrs standby)
NATO Stock Number (NSN)	5840-99-679-8569

Highlights

- Advanced signal processing to highlight moving objects and people in cluttered environments
- Tough, durable, lightweight and waterproof casing
- Colour display with front, plan, profile and 3D views
- TCP/IP interface for networking and laptop connection
- Battery powered, providing 3–5 hours' continuous use
- Intuitive user interface
- One-handed, two-handed or tripod operation

