

# Commander SL Long Range Tactical Air Defence Radar

Proven in real operational conditions and across a range of extreme environments, the robust and agile Commander SL radar system provides high availability together with superior, consistent and reliable performance. It is designed to support both local and integrated Command and Control of air defence forces while operating from prepared or unprepared locations, either in a static or mobile posture. The versatile Commander SL radar provides operational flexibility through rapid redeployment and has full tactical mobility by land, sea and air.



#### **Long Range Detection**

- Outstanding detection performance on small targets at low level
- Consistent detection performance to counter future air threats, including Uninhabited Air Vehicles (UAV), Cruise Missiles and long-range stand-off weapons

#### **Operationally Versatile and Agile**

- Small operational footprint
- Flexible, easily expandable configuration
- Hardware options ranging from a basic, unattended Reporting Post to a manned Control and Reporting Post or Air Control Centre
- Static system performance with the advantage of full tactical mobility
- Extensive in-service operational usage with the Royal Air Force and a wide range of overseas users in the most extreme environments
- Proven successfully by the MOD UK on operations and in a full range of ECM conditions
- Deployable by Land, Sea and Air (C130)

#### **Excellent ECCM Features**

- Large bandwidth
- Extremely low side lobes
- Use of 2-way pencil beam
- Pulse to pulse, beam to beam and burst to burst frequency agility
- Azimuth diversity
- Waveforms and pulse lengths vary with elevation
- PRF stagger and random jitter
- CFAR processing
- Burn-through mode of operation

#### **Detection in rain and chaff**

- Maximum levels of ground and rain rejection using versatile and effective MTI
- High resolution clutter maps in all elevation beams
- Phase Monopulse height measurement to ground level

## LIFETIME SUPPORT

### Solid State Transmit Receive Integrated Modules

The high-efficiency, air-cooled Solid-State Transmit Receive Integrated Modules (TRIMS), mounted on the rear of the antenna, provide an extremely reliable RF power source with built-in redundancy.

- No antenna cooling required

### High Reliability, Availability and Maintainability

- Mean Time Between Critical Failures (MTBCF) of over 1500 hours
- Operational availability of over 99%
- Mean Time To Repair (MTTR) of less than 30 minutes
- Low scheduled maintenance requirement

- Built In Test Equipment (BITE) removes the need for special test equipment to be carried with the system
- Reduced requirement for technical training skill

### Commercial off the Shelf (COTS) signal processing

- Independent processing of each receive beam in real time to achieve optimum performance
- Industry standard hardware for data processing, communications and radar data displays
- Upgrade path without significant software change
- Low spares inventory
- High reliability

### Cost of Ownership

Commander SL has been designed for the lowest possible through-life costs. It achieves this through having small, prime power requirements, high reliability and by using commercial hardware. The radar requires routine maintenance quarterly and it may be operated unattended if required. A full Life Cycle Costing Analysis is carried out to determine the best value for each individual user.

In the Reporting Post configuration, the radar is controlled remotely from the air defence system and comprehensive Built in Test Equipment (BITE). Continuous self-test of the whole system ensures ease of repair and optimum performance. The small deployment team of 6 men can provide a full operational and maintenance capability in the tactical role.

### Integrated Logistic Support

The radar is supported in service by a full Integrated Logistic Support package. This includes the training of operators and technicians, the provision of electronic manuals, and an in-country repair/replacement capability. End users receive full back-up by a dedicated support team in the UK. An annual inspection and local continuation training package is available.



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