

Commander SL

Long range air defence radar

BAE Systems is at the forefront of radar technology, delivering sensor systems that give military commanders superior situational awareness and air defence solutions.

Proven in real operational conditions and extreme environments, the robust, agile Commander radar system provides high availability with superior, consistent and reliable performance. It supports both local and integrated Command and Control of air defence forces while operating from prepared or unprepared locations, in static or mobile configurations.

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Long range detection

- Outstanding detection performance on small targets at low level
- Consistent detection performance to counter future air threats, including unmanned aerial vehicles (UAVs), cruise missiles and long-range stand-off weapons.

Operationally versatile and agile

- Small operational footprint
- Flexible, easily expandable configuration through a modular approach to capability
- 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 extreme environments
- Deployable by land, sea and air.

Features

- E/F Band
- Agile across 400 MHz bandwidth
- Phased monopulse height measurement
- Identification friend or foe/secondary surveillance radar (IFF/SSR) modes 1, 2, 3/A, C, 4, 5 and S
- ASTERIX
- Comprehensive built-in test equipment (BITE).

Excellent ECCM

- 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
- Pulse repetition frequency (PFR) stagger and random jitter
- Constant false alarm rate (CFAR) processing
- Burn-through mode of operation.

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 3,000 hours
- More than 99% operational availability
- Less than 30 minutes mean time to repair (MTTR)
- Low scheduled maintenance requirement
- 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

- Real-time independent processing of each receive beam achieves optimum performance
- Industry-standard hardware for data processing, communications and radar data displays
- Upgrade path without significant software change
- Low spares inventory
- High reliability.

Performance

Instrumented range	470 km
Ceiling	100,000 ft
Elevation coverage	20°
Electronic beam tilt	-2° to +5.8°
Accuracy at 200km	
Range	50 m
Azimuth	0.2°
Height	2,000 ft
Range resolution	200 m

Integrated logistics support

The radar is supported in-service by a full-integrated logistics support package. This includes training operators and technicians, providing 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 also available.



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