

BAE SYSTEMS

Technical Services
Electronic Systems Division



capabilities



RADAR

Precision Range
Instrumentation Radars
(RIR)

Radar Upgrades and
Subsystems




ELECTRO-OPTICS

Multi-Sensor Optical
Tracking Systems (OTS)

Precision Laser Tracking
Systems

Compact Tracking Radars
(CTR)

Range Only Radars (ROR)



The Electronic Systems Division (ESD) includes the Range Instrumentation Radar, Electro-Optics, and Electronic Warfare (EW) sectors of Technical Services, a business unit of BAE SYSTEMS. Over the years, we have become widely known as a reliable source for innovative range instrumentation radars, electro-optical systems, ground-based EW systems, and associated ancillary equipment.

The technologies and resources of ESD are dedicated to designing and producing the products you require for current and future test, evaluation and training support. We take pride in our ability to apply the latest advances in technology to develop innovative solutions for a wide range of testing and training applications.

By any measure, BAE SYSTEMS is a very strong technical company. Equally important, we are a people-oriented organization. The high value we place on personal relationships is evident in the respect we demonstrate for our customer's wishes and the responsiveness we show in meeting their specific requirements. In short, we are team players. We excel at what we do and we are ready to put our team to work for you.

At BAE SYSTEMS, we sincerely value your business. We will continue to earn your trust and confidence through a solid commitment to quality and cost-competitive products and services. We invite your inquiries, we welcome your challenges, and we look forward to serving you.

BAE SYSTEMS

electronic systems division

the radar people

RADARS





made to the original Range Instrumentation Radar (RIR) design resulting in a cost-effective system that is recognized as the standard for the industry. VME-based design and modular hardware and software enhance system flexibility and future upgrade capability. System modularity and embedded computer control enables customization to meet unique customer requirements.

BAE SYSTEMS is the world leader in design, development, manufacture, and field support of computer-based instrumentation radars and related equipment. Over 80 BAE SYSTEMS radars have been delivered and more than 175 range instrumentation radars are being supported at test facilities throughout the world. BAE SYSTEMS support includes design, and manufacture of radar systems; installation; integration with other range resources; depot level maintenance; modifications and upgrades; training; and engineering field support.

BAE SYSTEMS computer-based range instrumentation radars use unique vector track and star calibration techniques that were introduced in 1974. Since then, continuous improvements have been



BAE SYSTEMS is proud of our reputation as “The Radar People” and we look forward to opportunities to further support existing as well as new customers. Our engineers are ready to meet any challenge, from minor upgrades of existing systems to design of sophisticated new radar systems customized to support unique requirements.



RADAR electronic system

ELECTRO-OP





as division
TICS



BAE SYSTEMS

1970s

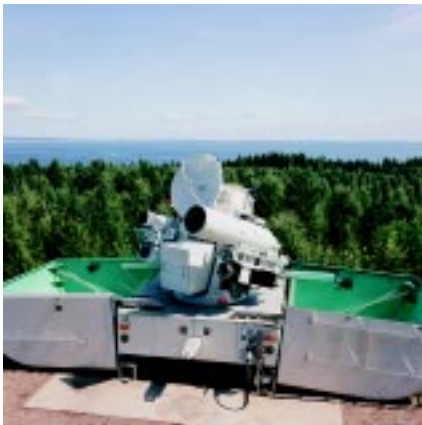


ELECTRO-OPTICS

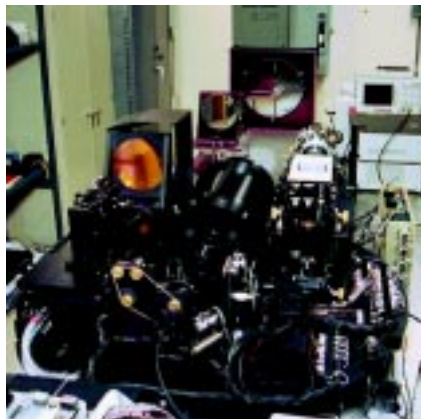
prepared for the
demands of the 21st

BAE SYSTEMS

1980s



2000



b

BAE SYSTEMS electro-optic products include laser radars, optical tracking systems, range-only radars, compact tracking radars, laser rangefinders and multi-sensor tracking systems. Tracking systems feature quick response, high accuracy, flexible architecture, and real-time corrected data output.

BAE SYSTEMS laser radar is designed to meet the constantly changing mission scenarios of modern test ranges. The system provides maximum mobility and easy set-up and calibration. High accuracy requirements are supported by proven calibration and tracking techniques.

BAE SYSTEMS optical tracking systems achieve extraordinary angle accuracy. This exceptional performance is achieved by selecting the best sensors, mounts, and video

trackers available and integrating them with BAE SYSTEMS proven control and star calibration software into a total turn-key system.



Sensor options include long range, high-MTF, multi-focal length optics; broadcast quality zoom lenses and cameras; long or short wavelength thermal cameras; eye-safe laser rangefinders or angle trackers; or X band ranging radars. System features include VMEbus-based computer control and calibration, data and video recording, and post-mission video and digital data reduction.

The range accuracy and dynamic response of BAE SYSTEMS optical tracking systems are well suited for testing munitions, including those with submunitions, or ground truth testing of airborne position sensors such as GPS.

BAE SYSTEMS Compact Tracking Radar (CTR), designed for integration on optical tracking systems, adds the flexibility of a full angle and range tracking sensor.

BAE SYSTEMS is prepared to meet your demands for more capable, less costly, and more efficient electro-optical instrumentation for the 21st century.

century



RADAR SYSTEMS

service life
extension programs

BAE SYSTEMS

BAE SYSTEMS offers cost effective modifications and upgrades to improve performance and extend the operational life of older radar systems. Comprehensive upgrade programs have been developed for specific types of existing radars including the AN/FPS-16, AN/MPS-25, AN/FPQ-6, AN/TPQ-39, and NIKE systems. Some upgrade features from which to choose include a new modernized operator's console, central VME computer control, software packages, laser rangefinder integration, radar signal processor, which provides coherent on receive digital processing, solid state transmitter, transmitter control from the console, automatic acquisition, pedestal refurbishment, and computer-assisted servo system.



RADAR TRACKING GROUP The Radar Tracking Group provides IF Receiver and range tracker functions, video display generation, coherent waveform generation, C-band LO signals to the RF receiver and C-band RF excitation to the radar transmitter. Functionally, the RTG comprises an IF receiver, a digital signal processor, and a waveform generator.



RADAR SIGNAL PROCESSOR. The 3-channel Radar Signal Processor (RSP) will provide state of the art, digital filtering techniques for signal processing. The RSP subsystems provides the functions previously provided by the Digital Moving Target Indicator Receiver and Intelligent Range Tracker. It accepts 3-channel monopulse IF inputs, digitally processes the signals, and produces filtered angle error and target range information. It additionally incorporates Doppler processing to reduce the effects of stationary clutter.

TOUCHSCREEN BASED CONSOLE The "Glass Console" approach is made up of multiple CRT monitors incorporating the latest multiple window and touch screen technology. Any interactive computer subsystem associated with the system is "transparent" to the radar operator. Interaction with the computer subsystems occur automatically through the use of dedicated console operational controls and does not require access through a keyboard terminal during the course of a mission.

“A Center of Excellence” “A Center of Excellence”

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Radar System Upgrades and
Subsystems

Range Design

BAE SYSTEMS

Technical Services

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