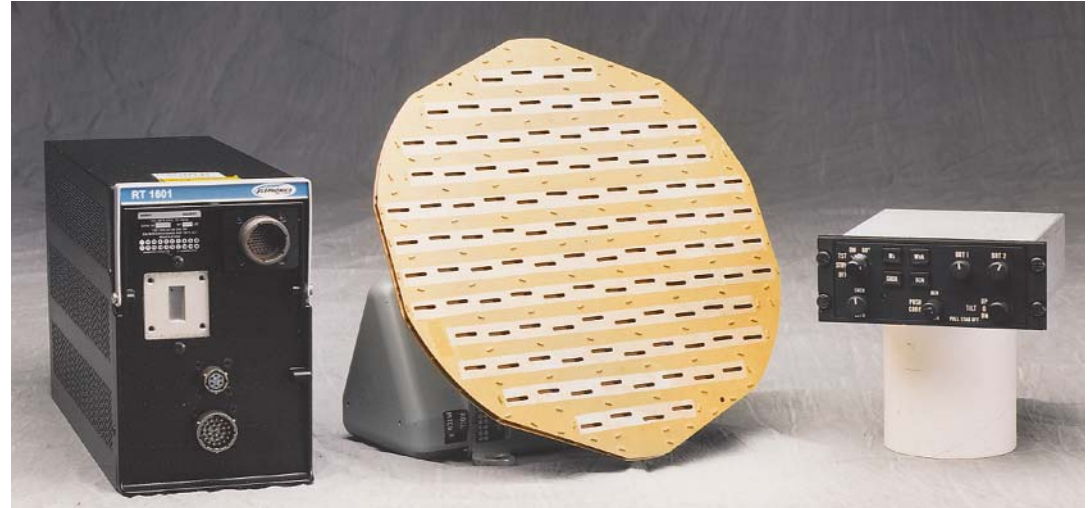


RDR-1600

Search and Rescue, and Weather Avoidance Radar System



Telephonics Corporation anticipated the needs of the aerospace industry by addressing the development and adoption of glass configured flight decks. This was accomplished through the development of Telephonics' RDR-1600, a state-of-the-art, digital technology, Search and Rescue, and Weather Avoidance Radar System.



This is a new generation system fully compatible with integrated flight decks, including the latest glass cockpit configurations.

The RDR-1600 is the next generation industry standard, 25% lighter in weight and 25% lower in power consumption than its predecessor, the RDR-1400C. In addition, its improved

short-range performance yields a minimum detection range of 450 feet.

Weather Detection

Search and rescue may be one of the most difficult aviation missions to perform successfully with inclement weather being the rule rather than the exception. Critical air-to-surface sweeps demand constant attention from both pilot and crew, and the challenge of intercepting a beacon or target in heavy seas can be enormous.

With a 240 nm maximum display range, the RDR-1600 allows plenty of time to plan weather avoidance maneuvers. For clear, detailed close-ups, two modes permit selection of full-scale ranges of either 1 nm or .5 nm, enhancing safety and precision of movement. The RDR-1600's weather alert feature flashes a warning whenever third-level (red) weather areas are detected up to 25 nm beyond the selected range.

Airborne Surveillance

Different surveillance missions require different capabilities. The RDR-1600 provides three specialized search modes:

- Search 1 incorporates special sea clutter rejection circuitry to help detect small boats or buoys down to a minimum range of 150 yards.
- Search 2 is designed for precision ground mapping, where high target resolution is important.
- Search 3 mode includes normal ground mapping which is useful to detect prominent land objects and coastlines.

Operating Capabilities

Complying with TSO C102 and TSO C63c, the RDR-1600 enables land or sea approaches in 200-foot ceiling, ½-mile visibility minimums. Its beacon tracking mode permits operation with either current beacon codes or the newer DO-172/16 format, changing with the push of a button.

The Telephonics RDR-1600 is a state-of-the-art, digital technology, Search and Rescue and Weather Avoidance Radar System.

Delivering 10 kW of power, the system excels in the detection of small targets. For example, the RDR-1600 can locate a 9-meter (30-foot) target in Sea State 2 from up to 10 nm away, while operating at a typical helicopter altitude of 152 meters (500 feet).

Useful Features

The RDR-1600 provides full-color presentation of weather returns, auto pitch/roll correction, pilot-selectable antenna tilt and scan angle, and built-in-test.

The RDR-1600 provides the following features:

- Five Primary Operational Modes
 - Weather Detection/Weather Alert
 - Search and Rescue
 - Surveillance
 - Beacon Detection Mode
 - Ground Mapping
- Narrow Pulse Precision Approach Mode (450 feet minimum detection range)
- 10 kW Peak Power
- Built-in-Test Circuitry
- Improved Clutter Detection
- ARINC 429 & 453 Interface

Value and Reliability

With a host of capabilities and features, the rugged and reliable RDR-1600 is a cost-effective weather radar available as a competitively priced commercial system.

The RDR-1600 has a two-year, no-hassle warranty and a worldwide network of service centers to keep you flying in all kinds of weather.

System Specifications

- TSO Compliance: C63c and C102
- Range Frequency: X-band
- RF Power Output: 10 kW nominal
- Antenna Size: 10 in., 12 in., 18 in. or 12 in. x 18 in.
- Scan Angle: 120 or 60 degrees
- Scan Rate: 28 degrees/sec
- Display Range/ Marks: 0.5/0.125; 1.0/0.25; 2.0/0.5; 5.0/1.25; 20/5; 40/10; 80/20; 160/40; 240/60 nm
- Minimum Detection Range (Weather Mode): 1500 feet (470m)
- Minimum Detection Range (Search Mode): 450 feet (135m)
- Beacon Range: Line of sight or up to 80 nm
- Size:
 - Receiver/Transmitter: Width: 5 in. (12.7 cm)
Height: 7.82 in. (19.86 cm)
Depth: 14.05 in. (35.69 cm)
 - Antenna: Swing
Radius: 10 in. - 6.62 in. (16.82 cm)
12 in. - 7.62 in. (19.35 cm)
18 in. - 10.62 in. (26.97 cm)
Depth: 7.68 in. (19.5 cm)
 - Control Panel: Width: 5.78 in. (14.58 cm)
Height: 2.28 in. (5.79 cm)
Depth: 8.52 in. (16.5 cm)
- Weight:
 - Receiver/Transmitter: 17.3 lbs (7.8 kg)
 - Antenna and Drive: 10 in. - 7.4 lbs. (3.4 kg)
12 in. - 7.6 lbs (3.5 kg)
18 in. - 11.7 lbs (5.3 kg)
 - Control Panel: 1.7 lbs (0.77 kg)
- Power Requirements: 28 VDC @ 3.0 amps
115 VAC, 400 Hz @ 3.0 voltamps
- Temperature:
 - Receiver/Transmitter: -50 deg. C to +55 deg. C
 - Control Panel: -50 deg. C to +55 deg. C

For further information contact:

Telephonics Corporation
Command Systems Division
 815 Broad Hollow Road,
 Farmingdale, NY 11735-3904
 (631) 755-7000
 Fax (631) 755-7200
 www.telephonics.com

