

Continuing our reputation of superior radar systems, Telephonics Corporation's search, surveillance, and weather avoidance radar is the ideal choice for fixed or rotary-wing maritime surveillance



### About the System

Telephonics' RDR-1700A radar is a lightweight, X-band, and 360-degree digital color system offering standard display modes of:

- Aircraft Heading Reference
- North Reference
- Ground Reference
- Display Offset

These modes, along with target marker capabilities, allow operators to determine range and bearing (latitude/longitude) of a target from the aircraft and relative range and bearing between targets. The system also has the capability to offset the sweep center to any location on the display.

The system provides four operating modes:

- Surface Search with Sea-Clutter Rejection/Terrain Mapping
- Weather Alert and Avoidance
- Radar Beacon Interrogation and Identification
- Test Mode with Continuous Built-in-Test

The RDR-1700A interfaces with aircraft navigation systems to display radar returns, search patterns, waypoints, and flight log information.



Beechcraft 350

### System Design and Capabilities

The RDR-1700A is designed for fixed or rotary-wing aircraft engaged in maritime patrol, surveillance, rescue missions, and precision terrain mapping. The system may be configured in numerous system configurations, but the major components consist of four Line Replaceable Units:

- Receiver/Transmitter (R/T)
- Interface Unit
- Radar Indicators or Radar Control Panel
- Antenna Array and Antenna Drive

Options include three different sized radar multi-function indicators, a 15-inch console display, 8.4-inch console display, 6.4-inch cockpit display, and a multi-function display with NTSC or PAL formats in either RGB or composite.

System capabilities include long-range navigation position update, target position transmission, and a 20-target Track-While-Scan processor providing location latitude and longitude, target heading, and velocity.

## Technical Specifications

| System Temperature   |   |
|--|---|
| Receiver/Transmitter   | -40° - +55° C   |
| Interface Unit   | -15° - +55° C   |
| System Power Requirements  |   |
| 28 VDC @ 8 amps<br>115 VAC/400 Hz @ 1 amp  |   |
| System Weight  |   |
| 63.5 lb./28.8 kg (360° Operation - No Control Panel, 15" radar indicator)<br>59.7 lb./27.0 kg (180° or 120° Operation - No Control Panel, 15" radar indicator) |   |
| System Display Overlay Modes   |   |
| Radar Only<br>Heading Overlay<br>Navigation Overlay  |   |
| Radar Specifications   |   |
| Range  | 0.625 NM - 160.0 NM   |
| Transmitter Frequency  | 9,375 MHz   |
| Transmitter Power Output   | 10 KW nominal   |
| Pulse Width  | 0.1/0.5/2.35 usec   |
| Pulse Repetition Frequency   | 1,600/800/200 Hz  |
| Receiver Frequency (Search/Weather Modes)  | 9,375 MHz   |
| Receiver Frequency (Beacon Modes)  | 9,310 MHz   |
| Antenna Drive  | 360° Circular Scan<br>180° Sector Scan<br>120° Sector Scan  |
| Antenna Array  | 39 x 9 in., 33 x 9 in., and 29 x 9 in. for 360°<br>18 or 12 in. Circular or 18 x 12 in. for 180°<br>18 or 12 in. Circular or 18 x 12 in. for 120° |
| Scan Rate  | 45° - 90°/Sec (360° Sector Scan)<br>28°/Sec (120° or 180° Sector Scan)  |