

SUPER BIRD RADAR!

FURUNO®

High-Power 60 kW

17-INCH S-BAND RADAR

Model **FR-1760DS**

- 17-inch multicolor CRT display
- 16-level monochrome yellow or green target gradations or in combinations of yellow, green and red
- 3 preset function keys to instantly optimize the systems performance. This is especially useful for seabird detection and in changing sea conditions
- Highly advanced automatic target processing techniques
- 2 individually adjustable guard zone alarms*
- 10-target electronic plotting aid (EPA) with true** or relative target vessel vectors
- On screen display of cursor L/L position and range and TTG*** from own vessel
- True** or relative timed target vessel trails
- 2 VRM's and 2 EBL's
- ARP-17 autoplotter (option) for manual acquisition and automatic tracking of up to 20 target vessels with data vectors
- RP-17 video plotter (option) with true** or relative motion display and radar overlay



The FURUNO FR-1760DS is a new high-performance **Bird Radar** with 60 kW of S-band output power. Using S-band assures you of optimum target detection especially in bad weather or sea conditions. The FR-1760DS is a state of the art color radar developed for fishing vessels and workboats that must operate in such adverse conditions.

The rugged 17-inch display paints a vivid picture in the day or at night with 16-levels of green or yellow target gradations. Tri-color targets (red, yellow and green) may also be selected. The background color is chosen from light blue, dark blue or black.

Target detection is remarkably enhanced with FURUNO's unique signal processing techniques. The FR-1760DS has been optimized for the detection of smaller ships, buoys, birds and net floats.

Another noticeable advantage of the FR-1760DS is its capability to detect flocks of even individual

seabirds. Sea bird detection and tracking has always been very important for purse seiners and other types of fishing vessels throughout the world.

Two guard zone alarms* can be set to detect incoming targets and provide audio-visual alerts. The standard plotter (EPA) allows the manual cursor acquisition and tracking of up to ten targets. True** or relative vectors may be selected. The ARP-17** auto plotter option permits automatic or manual acquisition and tracking of up to twenty targets. All targets are shown with vectors as well as collision alert alarms. Data for a selected target including its course, speed, CPA and TCPA are shown on the display. The RP-17 video plotter option presents an electronic chart overlay atop the radar image, along with 100 waypoints and 10 routes.

*US patent No. 5,032,842

**Heading and speed data required.

***Position data and heading/speed data required.



The future today with FURUNO's electronics technology.

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Catalogue No. R-170b

TRADE MARK REGISTERED
MARCA REGISTRADA

SPECIFICATIONS OF FR-1760DS

ANTENNA RADIATOR

- Type** Slotted waveguide array
- Length** 8 ft (SN4A) 9 ft (SN5A)
- Beamwidth** Hor: 2.6° 2.3°
Ver: 25° 25°
- Rotation Speed** 24 rpm
- Wind Load** 100 knots relative wind

RF TRANSCIVER

- Frequency** 3050 ± 30 MHz (S-band)
- Output Power** 60 kW
- Pulselengths (P/L) and Pulse Repetition Rates (PRR)**

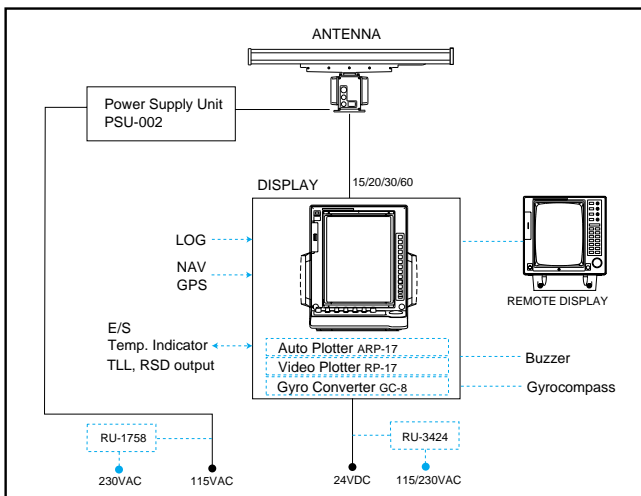
Range (nm)	P/L (μs)	PRR (Hz)
0.125 to 0.5	0.08	1900
0.75 to 3	0.08/0.3	1900/1100
4, 6	0.2/0.6	1100/600
8, 12	0.2/0.6/1.2	1100/600
16, 24	0.6/1.2	600/450
32 to 120	1.2	450

(PRR is set to 450 Hz when second-trace echo is suppressed at P/L 0.3-1.2 μs).
- Mixer and Local Oscillator**
Microwave integrated circuit
- Duplexer** Ferrite circulator with diode limiter
- IF amplifier** Logarithmic amplifier, IF 60 MHz
Bandwidth: 27 MHz (0.08/0.3 μs),
3 MHz (0.6/1.2 μs)
- Noise Figure** 4 dB nominal

DISPLAY UNIT

- Picture Tube**
17-inch color CRT (Effective dia. 225 cm)
768 (H) x 1024 (V) dots
- Display Colors**
16-level green or yellow monochrome gradation or 3 colors for radar echo on light blue, dark blue or black background
- Presentation Modes**
Head-up, Course-up*, North-up*, Head-up true bearing*, True motion**
*Heading data required.
**Heading and speed data required.
- Range Scales and Range Ring Intervals (nm)**

Range: 0.125 0.25 0.5 0.75 1 1.5 2 3 4 6 8 12 16 24 32 48 64 72 96 120
Rings: 0.025 0.05 0.1 0.25 0.2 0.25 0.5 0.5 1 1 2 2 4 4 8 8 16 12 16 20
- Minimum Range** 25 m
- Range Discrimination** 20 m or better
- Accuracy**
Range: 1% of range in use or 8 m, whichever is greater
Bearing: EBL accuracy ±1° or better



8. Echo Trails

True* or relative echo trails in monotone or multi-level shading (*Heading and speed data required)
Trail length: 15, 30 sec., 1, 3, 6, 15, 30 min., or continuous

9. EPA

Manual plotting of up to 10 targets with true/rel vectors (Ship speed and heading data required for vectors)

10. Other Features

Automatic tuning, A/C sea/rain controls, Echo stretch, Two VRMs, Two EBLs with true/rel bearing readout*, EBL/VRM offset, Trackball cursor with range and true/rel bearing* plus L/L** readouts, Parallel cursor, Off-centering, Picture zoom (2x), Quick restart in case of accidental power-off, Nav data display**, 2 x guard alarm zones, User-definable function keys
*Heading data required for true bearing readout.
**Position data inputs required.

ENVIRONMENTAL CONDITIONS (Meets IEC 60945)

Temperature: -25°C to +70°C (Antenna unit)
-15°C to +55°C (Display unit)

POWER SUPPLY (Specify when ordering)

Display Unit: 24 VDC, 135 W
Antenna Unit (PSU-002 unit):
115 VAC, 50/60 Hz, 1ø, 300 VA max.

EQUIPMENT LIST

Standard

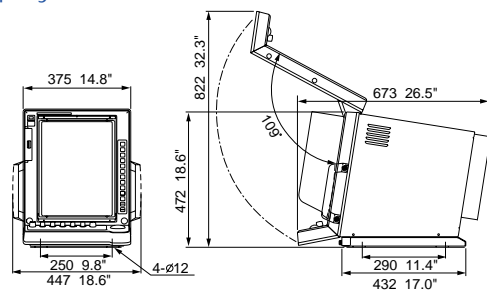
- Display Unit RDP-120 with sun visor 1 unit
- Antenna Unit with 8 ft (SN4A) or 9 ft (SN5A) radiator 1 unit
- Power Supply Unit PSU-002 for antenna unit 1 unit
- Antenna Cable 15, 20, 30 or 60 m (Specify when ordering.) 1 pc.
- Standard spare parts and installation materials 1 set

Option

- External Alarm Buzzer OP3-21 for guard zone alarm
- Remote Display FMD-811 (LCD)
- Remote Display FMD-8010
- Gyro Converter GC-8 (built-in type)
- Gyro Converter AD-100
- Auto Plotter ARP-17 (built-in type)
- Video Plotter RP-17 (built-in type)
- Handgrips

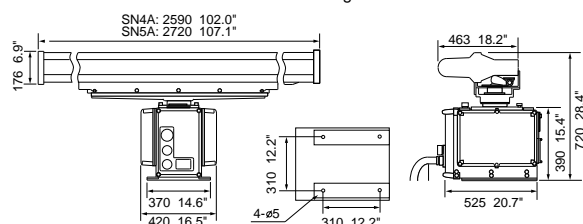
Display unit

Weight 38 kg 83.3 lb



Antenna unit

Weight SN4A: 90 kg 198.4 lb
SN5A: 92 kg 83.8 lb



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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