



## NAVIGATION SOUNDER

# Model F-2000

### MAIN FEATURES:

**Full color echogram across an 8-inch daylight-viewing TFT LCD screen with three selectable background colors. Echoes are shown in up to 7 user-definable colors, or alternatively only the bottom contour can be displayed in a single color. Up to 4 echo dynamic ranges are also selectable to suit local bottom conditions.**

**Dual frequency operation covering 5 to 1000 meters of depth in 8 range steps manually or automatically, with a single keypress selecting high frequency (200, 135 or 100 kHz) or low frequency (33 or 50 kHz). Readout in fathoms or feet is also available.**

**Fully automatic functions including depth range selection, receiver gain and TVG settings and transmit power level for hands-free operation under most bottom conditions. Manual override is also possible in situations where you want the depth range fixed or where you want to control the gain or power for specific applications.**

**Password-protected menu system prohibits unauthorized access to critical control parameters and software settings.**

**1kW rms (max.) transmit output with power level automatically adjusted to suit the range selected. Manual override is also possible in special situations where more power is needed for shallow water sounding.**

**Shows LAT/LON and water temperature data in addition to soundings and associated date/time with appropriate optional sensors plugged in. These types of data are automatically output via RS-232C and RS-422 ports for use by ECDIS, VDR and other onboard electronics.**

### Specifications

●**Display:** 8-inch 7-analog color TFT-LCD, VGA ●**Transducer:** 50 & 200 kHz (standard), 33 & 100 kHz (user-supplied), 135 kHz (user-supplied)  
●**Ranges:** 5, 10, 20, 40, 100, 200, 400, 1000m (2.5-500 fthm or 20-4000 ft) ●**Discrimination:** 5 mm/m (20m range), 0.5 mm/m (200m range) ●**Min. Detectable Depth:** 0.5m (200 kHz), 1m (33, 50, 135 kHz) ●**Power:** 4 steps up to 1 kW rms ●**Sounding Rate:** 120 to 30/min. ●**Accuracy:** Better than ±0.5 meters (20m range), ±5m (200m range) ●**Data Storage:** Up to 24h of data in non-volatile memory. ●**Data Retrieval:** Data of past 15 min., 1, 3, 6, 12 & 24h ●**Echogram Feed Rates:** 3 steps ●**Echo Dynamic Ranges:** 3, 4, 5, and 6 dB ●**Display Duration:** Approx. 20 min ●**Background Colors:** Dark Blue, Black, White ●**Noise Reduction:** 3 steps ●**Alarms:** Shallow, Missing Bottom, Low Voltage, Power Shutoff (audible) ●**Dimensions & Weight:** (Cabinet): 224W X 224H X 102D mm, 3.4 kg with mounting bracket. (AC Adapter): 200W X 68H X 140D mm, 0.85 kg ●**Power Supply:** 24VDC (nominal) or 110-220 VAC, approx. 17W (DC) or 20VA (AC) ●**Ambient Temperature:** -15 to 55°C, 95% RH (operating), -40°C (storage) ●**Compass Safe Distances:** 1.8m (Cabinet), 2.4m (Bracket) ●**Data I/O Interface:** IEC 61162-1(NMEA-0183) data via RS-232C and RS-422 ports, and 8-pin I/O DATA connector ●**Printer Port:** Centronics parallel, for monochrome printers with ESC/P protocol ●**Temperature Sensor:** T-200 thermistor (embedded in dual freq. transducer), ●**Compliance:** IMO Res. MSC.74(69) and MED 96/98/EC, Directive 2002/75/EC ●**Options:** Model RD-300 Remote Display, T-200 Temp. Sensor, GA-280 GPS Sensor

NOTE: Specifications other than those stipulated in IMO resolution MSC.74(69) Annex 4 and IEC test standards are subject to change without notice or obligation.

**Large capacity non-volatile (flash) memory automatically stores sounding data, associated date/time and other optionally available data for up to 24 hours.**

**Stored data can be displayed graphically as well as digitally in a special data history window accessible with a single keypress, and can be uploaded to a PC for off-line processing and analysis.**

**A graphics printer can be plugged into a devoted rear panel connector to print out a monochrome hard copy of the current echogram.**

**Echogram feed rate can be changed in 3 steps for extended display period across the screen without affecting the sounding rate.**

**An extensive alarm function visually and audibly warns the navigator against decreasing depth, missing or weakening bottom echo, falling power supply voltage and audibly against power outage/shutoff.**

**A separate AC power adapter (Model AC-2000) is supplied as standard. When connected up via the AC-2000, the system will automatically switch to the ship's auxiliary DC power source in the event of an AC power line failure.**

**Complies with IMO Resolution MSC.74(69) and MED.**

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