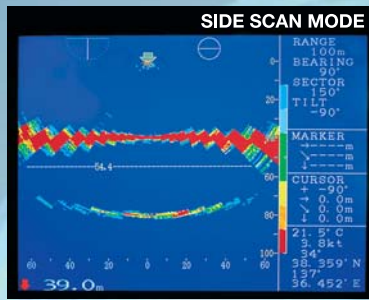
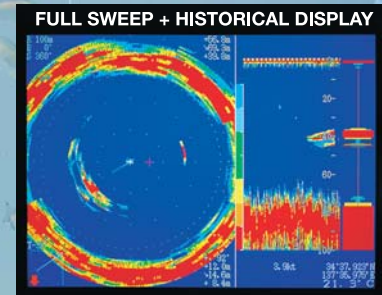




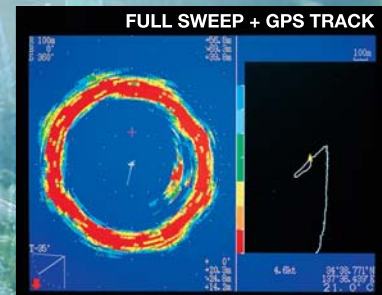
# Model CSS-3000-160



Hull Unit



Control Unit



## Featuring:

**Sector scan type sonar system**, covering a 45-degree sector/ping through 360 degrees for high speed fishing or navigational applications. Conventional searchlight scan mode is also selectable in 2 sector width steps for operation requiring slow or high-density sonar imagery across a limited bearing range.

**Automatic selection of optimum transmit power level and pulse width for the range in use**; pulse length may be fixed on all ranges.

**Operating modes include sonar (normal/off-center), sidescan (bottom scan) and echo sounder**, each mode image spread across full screen area or split screen displays with the sub display listing major system parameters or vertical, time-wise compressed presentation of sonar or sidescan echogram.

**Single-touch keypress for instant storage and recall of 3 sets of user-defined system parameters optimized for different type of fishing, different underwater conditions or for use by different sonar operators**

**Target lock function allows the energy beam to stay locked onto a user-specified moving target while maneuvering the ship.**

**Built-in transducer stabilizer allows energy beam tilt to stay fixed at user-specified angle regardless of ship's pitching/rolling.**

**Color palette function offers a total of 4096 different colors to choose from for displaying sonar or other mode echo imagery in user-defined colors.**

**Audio output of sonar pings for remotely monitoring target detection via a commercially available speaker at a location away from the sonar screen, relieving the operator of the need to constantly watch the screen**

**Provides XGA video output for uncompromised echogram resolution across an optional 17" LCD marine monitor display (MM-17C) or a low cost commercial PC display that accepts XGA format video input.**

VGA format is also supported. An existing VGA monitor, e.g. **MM-15**, can also be used.

Model CSS-3000-160

## Specifications:

Frequency & Beam Width:	160kHz, 13°(H) X 6°(V) at -6dB points
Transmit Power:	Approx. 1 kW RMS (8 kW peak/peak); adjustable in 4 steps
Pulse Widths:	Normal, Narrow, Wide; automatically selected for range in use
Operating (Display) Modes:	Sonar (normal & off-center), Sidescan (Bottom Scan), Echo Sounder
Scanning Types:	Sector Scan (45° sector/ping), Searchlight Scan
Scanning Speeds (360°):	
▪ Sector Scan:	3 seconds/40m range, 6.0 seconds/320m range
▪ Searchlight Scan:	4.8 seconds/40m range, 18.3 seconds/320m range in 10° step scan
Scan Sector Widths and Steps:	
▪ Sonar Mode Operation:	
- Sector Scan:	45°, 135°, 225°, 360° in 45° sector steps
- Searchlight Scan:	360° in 6°, 12°, 18° sector steps
▪ Sidescan Mode Operation:	
- Sector Scan:	45°, 135°, 225°, 360° in 45° sector steps
- Searchlight Scan:	6°, 30°, 54°, 78°, 102°, 126°, 150°, 174° in 6° sector steps 12°, 36°, 60°, 84°, 108°, 132°, 156°, 180° in 12° sector steps +5°(above transducer level) to -90°(straight down) in 1° steps
Beam Tilt Angle Range:	17 ranges with the following maximum limits:
Search/Depth Ranges:	
▪ Sonar (normal):	2000m/1600 fthm/1600 br/6000 ft
▪ Sonar (off-center):	3000m/2400 fthm/2400 br/9000 ft
▪ Sidescan:	2000m/1600 fthm/1600 br/6000 ft
Gain Control Offsets:	10, 20, 30, 40 dB
Echo Dynamic Ranges:	1, 2, 3 dB
TVG Control Curves:	10Log R, 20Log R, 30Log R, 40Log R
Soundome Hoist Pipe Length:	1360 mm (standard); 1550, 2120, 3000 mm (option)
Soundome Travel:	200 to 400 mm
Soundome Hoist Speed:	Approx. 12 seconds/400 mm travel (@24V to Hull Unit)
Recommended Trunk:	190 mm (8") inside diameter (soundome diameter: 186 mm)
Power Requirements:	
▪ Hull Unit:	24 VDC, approx. 110W; safely operates over 20 to 30V range.
▪ Control Unit:	11 to 40 VDC, approx. 9W
Weight:	Approx. 60.1 kg (Hull Unit), approx. 3.2 kg (Control Unit)
External Interfaces:	DSub-15 (VGA/XGA), NMEA I/O, TX Trigger I/O, Audio Output (4 Ω)
Options:	Marine Monitors <b>MM-17C</b> (17" XGA), <b>MM-15</b> (15" VGA)

NOTE: Specifications are subject to change without notice or obligation.

