

# **SEE** and **HEAR** THE DIFFERENCE . . with a digital **CTFM SONAR**

**LONG RANGE SEARCH AND OBSTACLE AVOIDANCE (to 3000 ft)**  
**CTFM AUDIO TONE (proportional to target range)**  
**PINGER MODE (operator tunable over a range of 20-50 kHz)**  
**FAST SCAN RATE (28 degrees per second)**  
**FULL OCEAN DEPTH OPTION**

## **ACTIVE AND PASSIVE MODES**

**Active Mode:** The versatile, dual-frequency SS300 CTFM sonar provides long-range, high resolution and fast information rate. It is very effective for bottom navigation, obstacle avoidance and search operations. Operator selectable 360 degree scan or sector scans of 30, 90, 180 degrees.

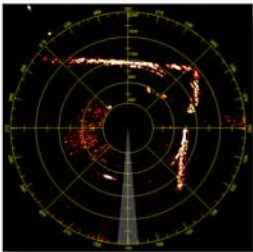
**Passive Mode:** The SS300 provides a built-in beacon location mode for locating downed aircraft emergency pingers, relocating marked targets, and other acoustic devices.

For ROVs,  
Towed Vehicles,  
Manned Subs,  
AUVs,  
Harbor  
Surveillance

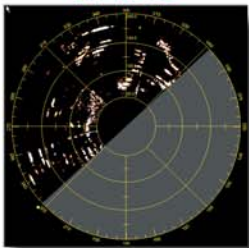


# **SS300** **CTFM SONAR**

**QUAY WALL**



**PILINGS**



## **THE CTFM AUDIO TONE**

Unlike any other sonar system on the market today, the SS300 series provides an audio signal which is proportional to target range. This tone is very useful in locating and classifying targets. Helps to reduce operator fatigue and accidents.

## **APPLICATIONS**

Long-range search and obstacle avoidance, beacon location, survey, inspection, swimmer detection, protection of water borne assets. Protect harbor entrances and ships at anchor as well as many other critical operations where long range and high detection probability are required. CTFM's narrow band processing provides superior operation in a noisy environment.

## **DUAL FREQUENCY**

The SS300 provides dual frequency capability for maximum range and resolution with interlaced FFT processing.

## **RECORD DATA FOR FUTURE REPLAY**

The data acquisition and display software, a Windows 2000 based program, permits operators to record data and replay later for mission reconstruction.



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## OPERATING SYSTEM HOST PC

WINDOWS 2000

## OPERATING MODES

Active: CTFM (Continuous Transmission  
Frequency Modulated)  
Passive: Beacon Receiver

## OPERATING FREQUENCY

105 – 120 kHz Swept Band (CTFM)  
70 – 85 kHz Optional

## COMMUNICATION INTERFACE

TYPES RS-422, RS-485  
PROTOCOL FULL DUPLEX  
RATE 230 KB

## SHIP'S INTERFACE (Optional)

HEADING NMEA 0183 Standard  
GPS NMEA 0183 Standard  
(Types GLL or RMC)

## RANGE SCALES (Selectable)

FEET	METERS
4 - 20	1.2 - 6
15 - 75	4 - 20
40 - 200	12 - 60
150 - 750	40 - 200
400 - 2000	120 - 600
600 - 3000	200 - 1000

## RANGE RESOLUTION

1% of Range Scale

## SCAN RATE

360° Coverage in 12 Seconds

## DEPTH

Depth	Feet	Configuration
SS300-S	5,000	Customer tank
SS300-P	20,000	Customer tank
SS300LL	17,000	Customer tank
SS305	5,000	In-cylinder (Alum)
SS310	10,000	In-cylinder (Alum)
SS320	20,000	In-cylinder (Titanium)

## BEAM WIDTH

Transmit - 15° Elevation x 40° Azimuth  
Receive - 15° Elevation x 3.5° Azimuth

## BEARING RESOLUTION

3° Sonar - 10° in Beacon /  
Pinger Mode (at mid-band)

## EMERGENCY BEACON

## FREQUENCY TUNING

20 to 50 kHz

SS300  
TRANSDUCER  
CONNECTORS



## OPERATOR INTERFACE

COMMANDS Range Scale and Range Marks  
Mode (ACTIVE or BEACON)  
Receiver Gain  
Beacon Tune  
Target Display Threshold  
Audio Level  
Sector Bearing and Width  
Scan Reverse  
Frequency Select  
Transmit Power Level  
Target Color Mapping

DISPLAY Plan position indicator, full circle or  
Sector, 6 Range Marks  
Range Bearing and true Heading to  
Target

AUDIO ( $\Delta f$ ) 200 Hz to 3000 Hz

## POWER / DIMENSIONS

POWER INPUT Current 0.6 AMPS @ 117 VAC  
Voltage 90 to 130 VAC  
Frequency 50 – 60 Hz

TRAINING MECHANISM, DIMENSIONS Height 14.00"  
Diameter 6.75"

PRESSURE VESSEL, DIMENSIONS Length 20.90"  
Diameter 6.10"

WEIGHT TRAINING MECHANISM In Water 14 lbs  
ELECTRONICS, AL CYL In Water 13 lbs

## LEAK DETECTION

ELECTRONICS BOTTLE and TRAINING MECHANISM Leak detect circuits installed in both units to help prevent catastrophic failure due to AC leakage currents in salt water. In the event of a leak, the operator is notified by visual alarm.

## LEAK PREVENTION

ELECTRONICS BOTTLE O-Ring piston seal with double PARBAK rings. Both end caps.

TRAINING MECHANISM Oil filled, pressure compensated. Training Mechanism shaft protected by seal plate fitted with ride slipper shaft seal and face seal plus neoprene silt seal.

## MEDIA DATA STORAGE

All Mission data may be archived in real time, to the hard drive for mission reconstruction. Data may be transferred to removable storage media at operator's option.

FOR MORE INFORMATION CONTACT:

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SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE



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