



communications

HydroStar 4900 - SURVEY ECHOSOUNDER

- operation with up to 4 transducers
- paperless digital echosounder
- frequency 10 kHz to 1 MHz
- IHO accuracy
- sediment classification
- Windows operating system



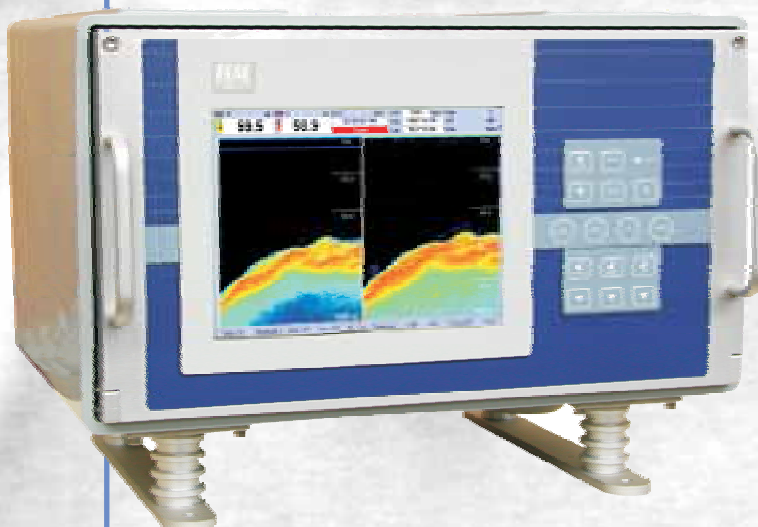
by courtesy of NOAA

The hydrographic echosounder HydroStar 4900 is a modular echosounder system, available as stand-alone equipment or integrated into a 19"-rack.

The Control and Display Unit SEB 4900 houses all the required electronics for transmitting, receiving and processing signals and the man-machine interface. The HydroStar 4900 displays the measured values on a colour graphical display and stores the data on an internal hard disk. For additional records on paper the unit can be interfaced to a standard printer.

The design according to DIN dimensional standards also allows integration into already existing navigation- or survey systems.

HIGHLY SOPHISTICATED DEEPSEA SOUNDER



HydroStar 4900 represents the new generation of medium and deep sea high-precision single beam survey sounder. It incorporates latest electronic components.

HydroStar 4900 is the designated measurement tool for oceanographic and hydrographic surveys. It offers precise depth data and highest resolution, compliant with IHO regulations.

Four transducers can be interfaced. The acquired data can be used for naval charting purposes as well as scientific research. Data can be used for navigation charts, sediment classification research and habitat mapping. Standard interfaces to DGPS and heave sensor are provided for.

Data processing software packages are available.

Echostrength measuring (EMG) can be offered as an optional tool for bottom backscatter.

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TECHNICAL DATA

ACOUSTICS

Frequency range:	10 kHz to 1 MHz
Maximum standard scale settings:	0-1000; -3000; -6000; -10000 m
Units:	meters, fathoms, feet selectable
Gain control:	TVG, and Automatic Gain Control for depth finding or manual control
Measuring accuracy:	better than +/- 0,25% of scale end value
Minimum sounding depth below transducer:	< 0,3 m
Draft correction:	0 to 30 m, in steps of 0,01 m
Sound velocity:	1400 to 1650 m/s, manually, or automatically in steps of 1 / 0,1 m/s
Bandwidth receiver:	10 kHz to 30 Hz depending on transmitting pulse length with digital filter
Transmitting power:	max. 2000 W RMS, depending on transducer
Pulse length	automatically switched to suit selected range
Depth resolution:	up to 2,5 cm depending on the range

Transducers

Model	LSE 179	LSE 138	LSE 134	LSE 313	LSE 141	LSE 184
Frequency	12/15 kHz	30 kHz	50 kHz	200 kHz	400 kHz	1 MHz
Depth performance over	6.000 m	3.000 m	2.000 m	500 m	80 m	40 m
Elements	37	7/14	7	1	1	1
Beamwidth	14°/12°	15/16°- 10/13°	11/12°	12°	12°	4°
Output power	2000 W	2000 W	1000 W	200 W	40 W	30 W
Weight w/housing	265 kg	95 kg	35 kg	4 kg	0,5 kg	0,5 kg
Diameter	602 mm	368 mm	267 mm	132 mm	70 mm	70 mm
Height	190 mm	151 mm	151 mm	105 mm	80 mm	80 mm

Programmable synthesizer transceiver also allows use of transducers of other manufacturers.

INTERFACES / SOFTWARE AND POWER REQUIREMENTS

Interfaces

Input:	Log (analog and RS 422), CTD, VRU, DGPS, trigger
Output:	NMEA 0183 (RS 422), LAN, video, blanking, trigger, printer

Operating software: Windows NT embedded 4.0 on internal HDD

Power supply: 115 / 220 V AC

Power consumption: < 200 VA

PHYSICAL CHARACTERISTICS

Reliability:	MTBF: Electronics > 6.000 hrs Transducer > 30.000 hrs
Display:	10,4" VGA TFT, 640 x 480 pixels Echos: 256 colours or monochrome
Weight:	stand-alone unit w/housing approx. 40 kg; for integration into 19" rack: approx. 25 kg
Dimensions:	height 400 x width 505 x depth 422 stand-alone unit including housing; for integration into 19" rack: 6 HU