

# SAM 4620

## Navigation Echosounder



# The new Generation for Navigation

Full color echogram with 8 inch day-light TFT screen with 3 selectable background colors.

The DEBEG 4620 provides detailed depth information and meets the IMO performance standard.

It is universally applicable for navigation purposes from shallow to deep waters and can be operated with one or two transducers, 50, 100 or 200 kHz single or dual channel operation covering 5 to 1000 meters of depth in 8 range steps manually or automatically. Depth read out in fathoms or feet is also available.

Shows LAT/LON and speed information in addition to sounding data and the associated date/time if GPS is connected.

These types of data are interfaced in compliance with IEL 61162 vici RS-232C and RS 422 for use by ECDIS, VDR and other onboard electronics.

## Key Features

- Operation for frequencies of 50/100 kHz or 100/100 kHz or 50/200 kHz
- Selection of channel 1 or channel 2 or dual channel display mode by single button operation
- Automatic TVG
- Automatic gain-control

Up to 24 hours of sounding and other data are automatically stored in non-volatile (flash) memory protected from power off or system reset.

Echogram feed rate can be changed in 3 steps for extended display period across the Screen without affecting the current echogram.

An extensive audible and visually alarm function warns the navigator against decreasing depth, missing or weakening bottom echo, power supply voltage drop and power loss.

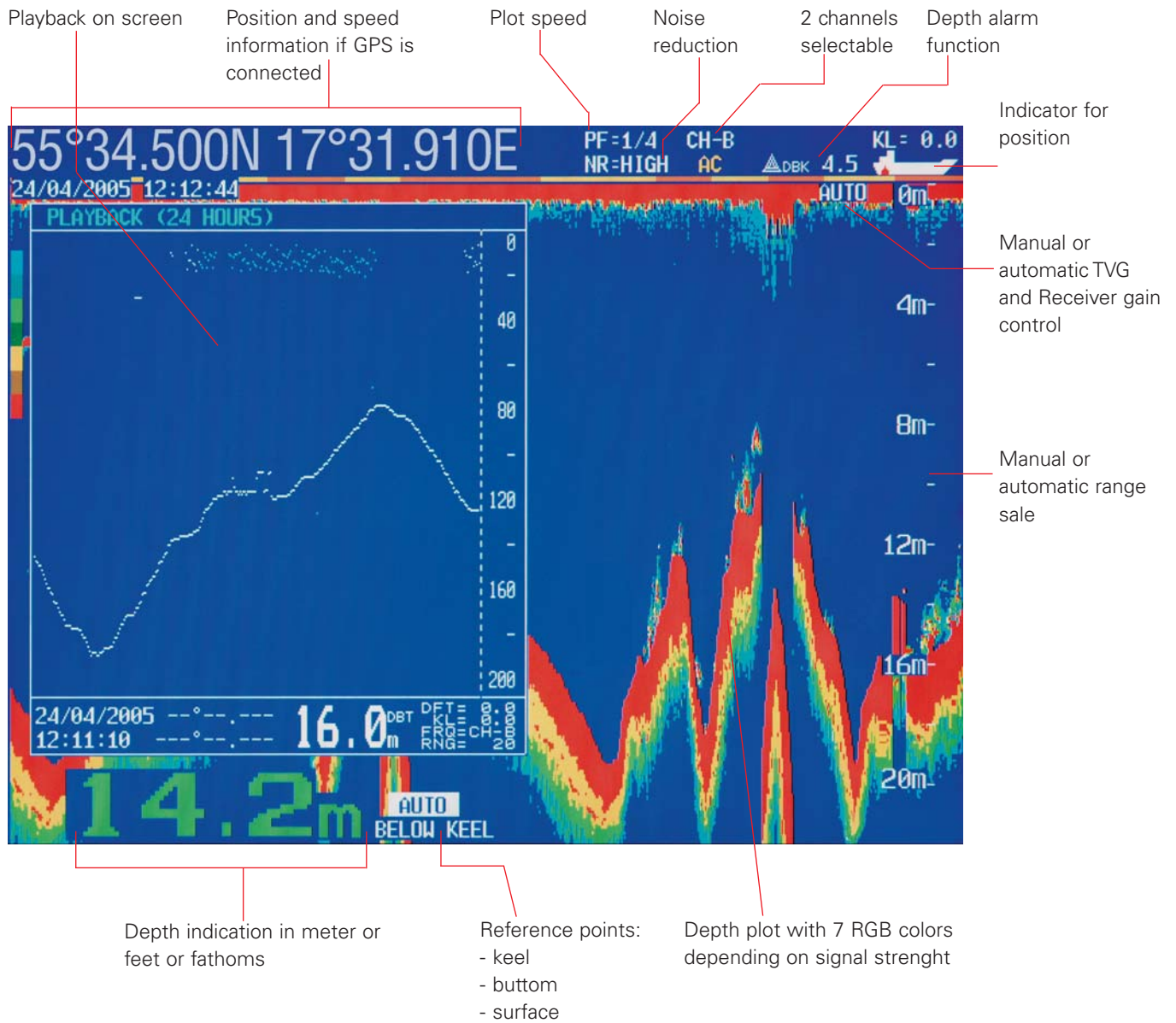
Stored data can be displayed graphically as well as digitally in a special data history window accessible by a single button operation, and can be uploaded to a PC for off-line processing and analysis. A graphics printer can be plugged into a devoted rear panel connector to print out a monochrome hard copy of the current echogram.

## Repeater Units

- Universal Digital Display
- SAM 4900 with depth alarm

Complies with IMO Resolution MSC.74(69) and Wheel Mark regulation.

# Standard Functions



# Technical Data

Display Screen	8 inch 7-analog RGB-color TFT display, VGA (640x480 pixels)
Transducer Frequencies	50, 100 and 200 kHz
Depth ranges	5, 10, 20, 40, 100, 200, 400, 1000m (2.5-500 fathoms or 20-4000 feet)
Mini/Max Detectable Depth	1 - 800 m depending on transducer type
Transmitter Power	Approx. 1kW RMS adjustable in 4 steps (1/1, 1/4, 1/25, 1/100) automatically for range in use or manually
Sounding Rate	120 to 30/minute automatically selected for range in use
Accuracy	Better than $\pm 0,5$ meters (20m range), $\pm 5$ m (200m range)
Data Storage	Up to 24 hours of data in non-volatile memory. Up to 1 hour of full color echogram in temporary storage
Data Retrieval	Data of past 15 min., 1, 3, 6, 12, and 24 hours via history window
Echogram Feed Rates	1/1, 1/2, 1/4
Echogram Presentation	7 analog RGB colors, depending on strength
Echo Dynamic Ranges	3, 4, 5 and 6 dB
Echogram Display Duration	Approx. 20 minutes at fastest feed rate
Background Colors	Dark blue, black and white
Noise Reduction	3 steps
Alarms	Depth (shallow), missing bottom, voltage drop, power shutoff (audible only) Alarm output available via open collector interface
Dimension and Weight	224W X 226H X 105D mm (cabinet), 6.0 kg (with mounting bracket)
Power Requirements	11 to 40 VDC, approx. 1.5 A at 12 V
Ambient Temperature	-15 to + 55° C, 95% RH (operating without condensation) -40° (storage)
Compass Safe Distance	1,8 meters
Data I/O Interface	IEC 61162 compliant NMEA sentences via RS-232C and RS-422 ports and 8 pin I/O DATA connector
Printer Output	Centronics parallel, for monochrome printers with ESC/P protocol
TVG / Gain Control	Automatic or manual