# DATA DISPLAY AND INTERFACE KW950-E

**VERSATILE INTERFACE & PROTOCOL CONVERTER**


- Display of data at various places
- Interface for radar, ECDIS, VDR, AIS etc.
- Gyro heading & data filtering
- Speed from log, pulses per mile
- Speed from GPS to 200/400 pulses/mile
- Depth from echosounder
- Watchkeeping alarm
- Shaft or engine RPM
- Rudder angle interface
- More. **Check the option list for details**
- Course and data recorder

**SPECIFICATION FOR THE HEADING FUNCTIONS**

INPUT 1: Stepper 6 steps per degree, including raw rectified stepper, 20 to 70v. Features include the automatic wide range of inputs plus a DIP-SWITCH selection of options, many for the offshore survey industry.
Synchro 1 rev/degree 50-115 v.ref. 20-90 v signals. 400Hz "contactless transmitter."
M-Type stepper. OR NMEA 0183 heading, $HEHDT

INPUT 2: NMEA 0183 heading sentences. Gyro priority.
Cetrek, Yokogawa, , SGBrown proprietary data
Or, in pass-through mode, NMEA 0183 data.
Robertson and Anschutz Coursebus interfaced, but with caution!

OUTPUT: NMEA 0183 default $HEHDT,x.x,T and $HEROT
One per second and whenever heading changes or various fixed rates.
Or Yokogawa, SGB data, Anschutz Coursebus & Robertson, with caution!
"Pass-through" mode. Heading and GPS data.

BAUD RATES: Variable 2400, 4800 (default) 9600, 38400 selected by option dip switch.
The data inputs can not handle 38400 baud as standard.

**BRIEF SPECIFICATION FOR SPEED FUNCTIONS**

INPUT: NMEA 0183 VBW or GPS speed over the ground.
OUTPUT: NMEA 0183 & 200 PPM.
INPUT: 100, 200 or 400 pulses per miles
OUTPUT: NMEA 0183 VBW or VHW
INPUT: Proprietary, JRC log
OUTPUT: NMEA 0183 VBW

**BRIEF SPECIFICATION FOR ECHO SOUNDER INTERFACE**

INPUT: Transmission pulse and echo pulse. 5 to 30 volts
OR...
Serial data from Marconi Seachart echosounder
OUTPUT: NMEA 0183 SDDPT and SDDBT

**BRIEF SPECIFICATION FOR RPM INTERFACE**

INPUT: Pulses or AC waveform to opto isolator, 5 to 30 volts.
Slow rate, typical of shaft revolutions: 10 pulses per rev. (Max about 500 RPM)
High rate, typical of engine revs: 5000 Hz = 2000 RPM or 150 pulses per rev. (Max 6000 RPM)
Both these values may be altered by changing two locations in the EPROM.
INPUT: Astern DC indication.
OUTPUT: $ERRPM.
Centre, port or starboard, and shaft or engine revs, 6 options.
Rate 1 per second

**BRIEF SPECIFICATION FOR WATCHKEEPING ALARM**

SETUP: Set time count-down on display in minutes. Retained in battery backed RAM.
LOCAL ALARM: 5v for a 5v local audible warning device. This will start sounding on the bridge to alert the watchkeeper.
EXTERNAL ALARM: 5v for a device normally located in the accommodation which will alert the crew. The watchkeeper must press the reset button before the count down expires to avoid the alarm sequence.

**BRIEF SPECIFICATION FOR COURSE RECORDER**

INPUT: Heading and GPS. Option: rudder angle by RSA sentence
OUTPUT: 4800 baud data for a plain-language print-out
PROGRAM: The course recorder uses an EPROM program available on request.

**GENERAL DATA**

DISPLAY: 4 digit red LED 0.6 inch, 15mm high for heading speed etc. Adjustable illumination.
CONTROL: 3 push button switches for align, increase, decrease.
OUTPUT: 5v CMOS drivers via 47 ohms
POWER: 10 to 32 volts DC at 5 watts.
CONNECTIONS: Via cable glands to lift-off terminal blocks. (Cables not supplied.)
HOUSING: DIN case 144 wide, 72 high, 142 mm deep. Flame retardant to DIN 43700
Supplied with a trunnion. Screw clamps for panel mounting optional extra

**OPTION LIST: Published on the web site below. Email to request latest EPROM data.**

**DATA SHEET UPDATED 22/09/2006. The KW950E is designed and manufactured in the UK**

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