



ELECTRONIC TAPE HEADING REPEATER COMPASS COMPARATOR ALARM (or OFF COURSE ALARM)

The X991-H display is used to interface and display ship's heading and output NMEA 0183 heading from the gyro or magnetic compass.

The screen presentation of a moving tape allows the instrument to be used for position keeping.

The X991-H is available with either of the following options;

- **Off Course Alarm function OCA**

The OCA version allows the operator, once on the desired course, to enable the alarm function and adjust the off course tolerance limits. If the ships heading strays outside the set tolerance a visual alarm is displayed.

- **Compass Comparator function CCA**

The CCA version allows the operator to set and adjust the tolerance limits. If the secondary heading input (second gyro or magnetic compass) strays outside the set tolerance limit a visual alarm is displayed.



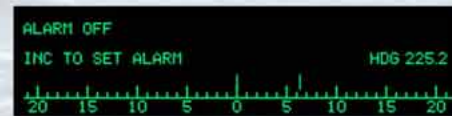
DISPLAY INFORMATION



Tape repeater at 8 pixels per degree showing > +/- 30 degrees.



Digital Rate Of Turn and rate of turn indicator. (Degrees per minute).



Off Course Screen



Tape repeater at 10 pixels per degree showing > +/- 25 degrees



Very large heading display. (Rounded to nearest degree).



Off Course Screen

SPECIFICATIONS

INPUT 1: DC stepper, 4 to 90v.
 360:1 Synchro up to 115v/90v. 50/60 400/500 Hz.
 90X 400 Hz contactless transmitter.
 Tracking rate = Frequency / 3deg/sec. (DC step 333 deg/sec)
 NMEA 0183 input, Input 1 must be \$HEHDT,x.x,T

INPUT 2: NMEA 0183, all heading sentences, gyro input takes priority.

OUTPUT 1: NMEA 0183 \$HEHDT,x.x,T or and \$HEROT.
 Rate 1 per second and whenever heading changes.

OUTPUT 2: 3 x 5v CMOS ports to sink or source 5 mA.
 Alarm output as default.
 Options: A 5 volt low power audible alarm.
 Stepper 5v to drive a step amplifier or electronic interface.
 Cetrek data, Furuno data, Yokogawa data.

DISPLAY: 166 x 41 mm viewing area. Variable brightness, keypad control.

SCREENS: Tape; width +/- 15 degrees and +/- 12.5 degrees.
 Tape traverse rate 20 deg/second independent of input.
 Large digital 41 mm high.
 Digital heading with ROT bar graph +/- 30 deg/minute.
OCA screen — will show a visual alarm when the heading strays outside the preset limits around desired course.
CCA screen — will show a visual alarm when the secondary input strays outside the preset limits.

POWER: Nominal 24 volts at 12 watts. Switch on surge 2 amps.

ENCLOSURE: 330 x 180 x 90mm 2.8kg Supplied with trunnion. Optional flush mount.

APPROVALS: IEC60945

The X991 Display Unit can also be configured to other functions such as;



**The X991 Display Units are also supplied with the AMI Marine Ship Movement Information Display System (SMIDS)