

CLIPPER **ECHOSOUNDER REPEATER**

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INTRODUCTION

Clipper Echosounder Repeater units are supplied with a standard mounting kit. They are also supplied with an attached 5-metre lead which plugs into the rear socket on the master unit. They require no other connections, because they get their power and signals from the master unit, which are in turn powered by the vessel's power supply. Clipper Echosounder Repeater units work only with a Clipper Master Unit.

PRE-TEST OF INSTRUMENT

Before mounting the repeater unit, check that the instrument is complete and undamaged. Plug the lead from the repeater into the back of the master unit and apply 12 volts. Confirm that a reading is shown on both the displays.

INSTALLING THE REPEATER UNIT

Select a convenient position for the repeater on a panel or bulk-head. The site must be flat and the cavity behind the panel must remain dry at all times. (The cable entry is deliberately not sealed to ensure adequate ventilation. This prevents misting of the display).

Cut a hole in the panel 67mm high and 87mm wide. Pass the attached cable through the hole ready for routing to the master unit.

Unscrew and remove the two wing nuts from the rear of the instrument and remove the stainless steel clamping bracket. Fit the "O" ring seal into the groove in the panel mounting face of the instrument. Ensure that it is correctly lying in its groove before fitting the instrument to the panel, which provides the watertight seal for the display.

Fit the instrument into the panel, fit the stainless clamp over the studs, fit and tighten the two wing nuts finger tight only.

It is important that the O-ring rubber seal makes good contact with the panel to prevent water getting behind the unit and entering the cavity behind the panel.

It is good practice to run the cables vertically downwards from the unit, even if they later have to rise to connect to the master unit. Doing so prevents any water that might get onto the cables from running back along the cables and into the unit.

GETTING STARTED

When the Clipper Echosounder Repeater is first turned on, it automatically performs a number of self-test processes, and after a brief delay switches on the backlight illumination at the factory pre-set level. It then displays a symbol representing the master unit's keel offset for about a second.

Under normal circumstances, the display then almost immediately shows the word DEPTH, and the depth below the transducer, as shown on the master unit (see Figure 1). Under all normal circumstances, the Repeater shows the same as the master unit.

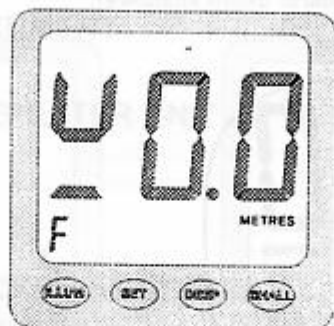


Figure 1 - Power-Up Display

If Engineering is being done on the master unit, the repeater displays the progress. No Engineering settings are available on the Echosounder Repeater.

CHANGING THE BACKLIGHT SETTING

Backlighting is provided to allow the unit to be seen at night. In the same way as for the master units, the backlit area is restricted in the top corners of the display to concentrate the lighting in the areas of interest. The brightness of the backlighting can be adjusted at any time independently of the backlight setting of the master unit. The brightness is adjusted by pressing the ILLUM button. Each press of the button increases the brightness by one in the range 0 to 7, shown by the backlight indicator in the bottom left of the Repeater display.

A setting of zero switches the backlighting off, and a setting of 7 is maximum. In common with all the other settings in the unit, the backlight setting is stored even when the unit is off, so that it returns to the chosen setting whenever the unit is powered up again.

CHANGING DEPTH ALARM SETTINGS

At any time during normal operation of the unit, it is a simple matter to set an alarm for too shallow and another alarm for too deep. The alarm settings can be different from the setting of the master's alarm setting.

To set up the deep alarm depth (below which an alarm will sound), press the DEEP button to show the present deep alarm setting. The display shows the word DEEP, and the present deep alarm depth. The factory pre-set deep alarm setting is 50 metres. Press the DEEP button to make the deep alarm depth deeper, and the SHALL button to make the deep alarm depth shallower.

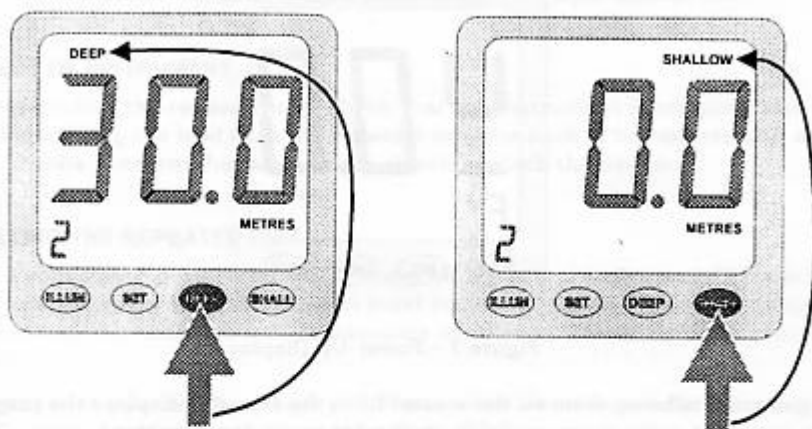


Figure 2 - Selecting Deep or Shallow Alarm Setting

If the SHALLOW button is pressed steadily, the setting reduces continually in 1.5 foot or 0.5 metre steps. If the DEEP button is pressed steadily, the setting increases in 1.5 foot or 0.5 metre steps. The step size depends on whether the master unit is set to measure feet or metres.

If the deep alarm depth setting reaches 99.5m, or attempts to pass the shallow alarm setting, it stops changing. When the desired alarm depth is set, press SET to store the deep alarm depth setting. The display returns to measuring depth after briefly showing SET.

In the same way, pressing the SHALL button during echo-sounding switches to setting the shallow alarm depth. The word SHALLOW is shown, and the shallow alarm setting depth is displayed. The factory pre-set shallow alarm depth is zero. Pressing the DEEP button makes the alarm depth setting deeper, and pressing the SHALL button makes the setting shallower. If an attempt is made to increase the shallow setting below the deep alarm setting, or to reduce it to less than zero, the settings no longer change. Press SET to store the shallow alarm depth setting, whereupon the display returns to displaying the depth measurement from the master unit.

ACTIVATING DEPTH ALARMS

At any time, the deep and shallow alarms may be activated or de-activated together at the set levels by pressing the DEEP and SHALL buttons together, as shown on Figure 3. When alarms are active, a bell symbol is displayed, but is absent when alarms are de-activated. Whenever the measured (and averaged) depth is at, or shallower than, the repeater's shallow alarm setting, the alarm sounds, and the word SHALLOW is shown. Whenever the measured (and averaged) depth is at, or deeper than, the repeater's deep alarm setting, the alarm sounds, and the word DEEP is shown.

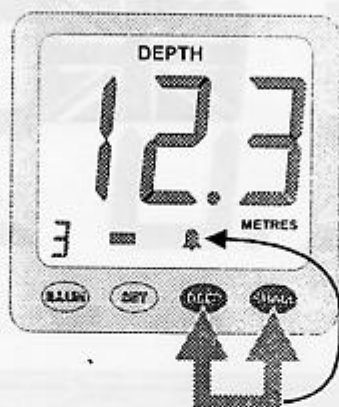


Figure 3 - Activating and de-Activating the Alarms

The alarm can be stopped either by moving the vessel so the depth is between the settings, by altering the alarm settings themselves, or by de-activating alarms by pressing DEEP and SHALL together again. Each press of DEEP and SHALL together switches the alarm on or off.

When alarms are enabled on the repeater, the master unit's alarm settings are ignored. On the repeater, the bell symbol is shown, and the DEEP and SHALLOW symbols are shown and the alarm sounded whenever the measured depth is either deeper or shallower than the repeater's depth alarm settings.

When alarms are disabled on the Repeater, the alarm symbols DEEP or SHALLOW are a repeat of those on the master unit. The repeater's bell symbol is not shown, and the repeater's alarm does not sound when either DEEP or SHALLOW is showing.

DESIGNED AND
MANUFACTURED
IN ENGLAND



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