

Sondeur Seafarer D800

Mode d'emploi

Tous les tests doivent être effectués avec le capteur correctement installé et le coaxial branché sur l'instrument. Le navire doit être à flot (aucun résultat significatif ne sera obtenu si la sonde fonctionne dans l'air).

Ayant inséré les piles, tournez à fond à gauche les deux boutons de commande. Ensuite, tournez le bouton On/Off dans le sens horaire jusqu'à la position "on". L'appareil est maintenant en marche et une lecture sera présente dans l'écran d'affichage.

Si, en plus de chiffres, ce symbole (~) est également affiché dans le coin supérieur gauche de l'écran, c'est que l'appareil est en mode alarme.

Pour sélectionner le mode profondeur, appuyez sur le commutateur "mode" une fois. Avant le réglage de gain, deux points (:) seront présents au milieu de l'écran. C'est l'indicateur d'écho manquant. Tournez la commande de gain lentement dans le sens horaire jusqu'à ce que les deux points (:) soient éteints. L'appareil va maintenant indiquer la profondeur correcte sous la sonde. Si, au cours d'une utilisation normale, le symbole (:) réapparaît, réglez la commande de gain comme précédemment.

Alarme de profondeur

L'instrument est équipé d'une alarme qui en eau peu profonde qui peut être réglé pour fonctionner à une profondeur comprise entre 0,8 mètres à 20 mètres (normalement) ou de 2,6 pieds à 60 pieds, selon le modèle.

Pour régler l'alarme, appuyez sur le commutateur de mode une fois. Le symbole de mode alarme (~) apparaîtra dans la fenêtre d'affichage. Maintenant, tournez profondeur / contrôle d'alarme dans le sens horaire jusqu'à ce que la profondeur d'alarme requise soit indiquée dans la fenêtre d'affichage. Retour au mode profondeur en appuyant une nouvelle fois sur le commutateur « mode » .

L'appareil va maintenant fonctionner normalement, sauf si la profondeur de l'eau descend en dessous du réglage de l'alarme. Dans ce cas, un signal sonore retentit. Signal qui ne peut être éteint qu'en réajustant le contrôle d'alarme ou en déplaçant le bateau en eau plus profonde.

rappel des symboles d'affichage (~)(:)

(~) Indique que l'appareil est en mode "réglage de l'alarme" (il n'affiche pas la profondeur)

(:) Indique "écho manquant" et le gain doit être augmenté pour faire apparaître la profondeur correcte à l'écran

**The Seafarer product range
also includes**

Commercial and Small Craft Radars. Speed Logs, Electro-Magnetic and Trailing. VHF Radio Telephones. Portable Distress Radio Telephone. Radio Direction Finders. Automatic Pilots. Echo Sounders.

*If you would like further details of any of these items,
please contact us at the address below*

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The Seafarer Navigation International Limited policy is one of continuous development, and consequently this product may vary in detail from the description and specification in this booklet.

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Seafarer D800

SEAFARER RANGE

SEAFARER D800

ECHO SOUNDER

Installation and Operating Instructions

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INSTALLATION AND OPERATING INSTRUCTIONS

Please read this booklet thoroughly before installing and operating this equipment.

INTRODUCTION

The Seafarer D800 echo sounder operates by measuring the time interval between transmission and reception of ultra-sonic pulses from the sea bed via a piezo electric transducer fitted in the hull of the boat.

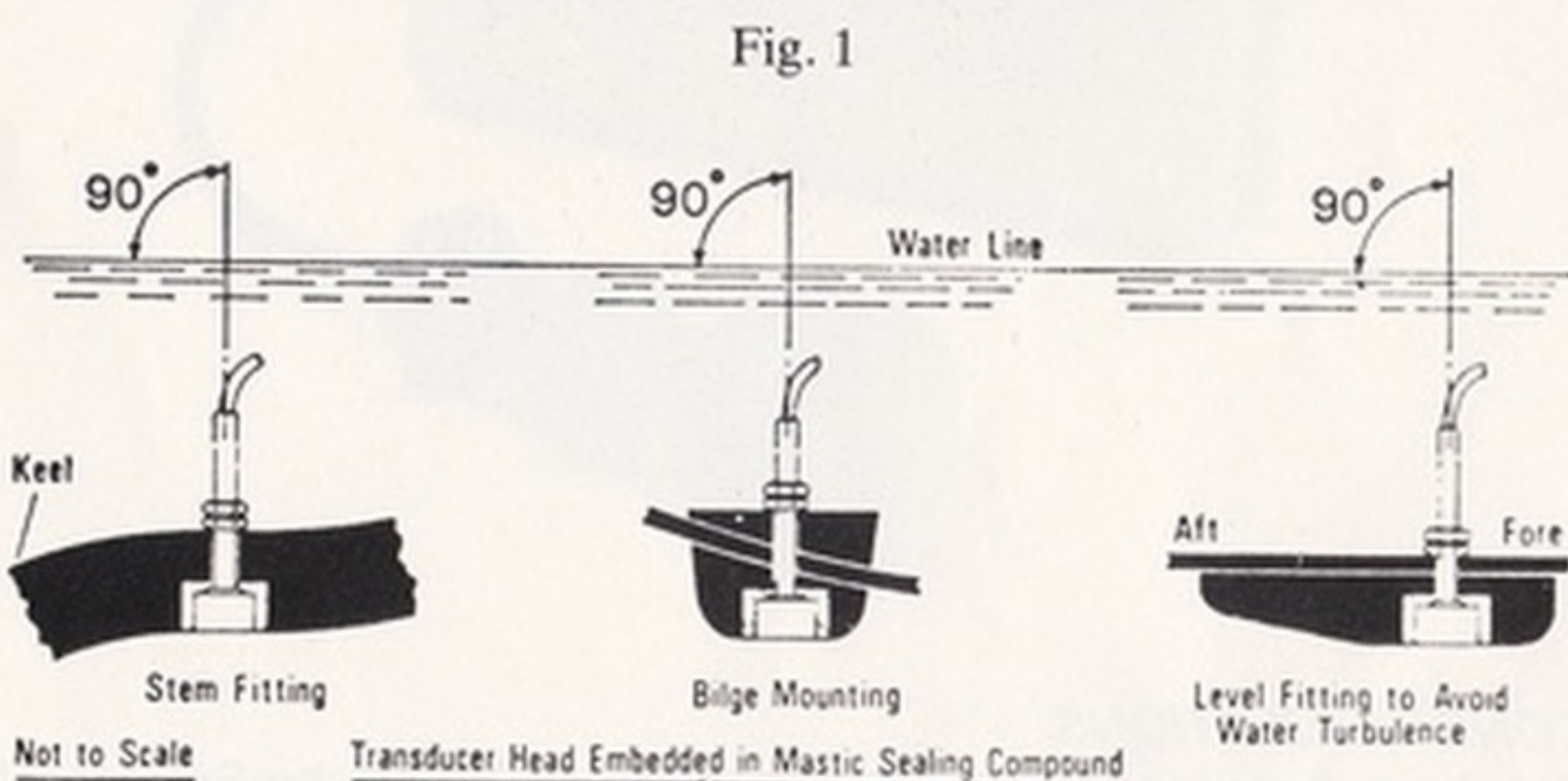
Depth readings are indicated on a large, high contrast, liquid crystal display. By incorporating a 3½ digit display, it has been possible to dispense with the range switch associated with normal, analogue echo sounders and depth is now displayed on a single range. There is a choice from two models, one providing depth in feet (2-199.9) the other in metres (0.6-60).

Additional facilities include a shallow water alarm, which can be set to operate at any depth between 0.8 to 20 metres (2.6 to 60 feet). This provides an audible warning signal, when the depth of water falls below the pre-set level. A missing echo indicator, in the form of a colon, appears in the middle of the display, in the event of the return echo becoming lost for any reason. In which case, the instrument will "REMEMBER" the last valid reading and continue to display this, in conjunction with the colon, until the gain control has been adjusted and signal reception restored.

TRANSDUCER INSTALLATION

WARNING: The co-axial cable is sealed into the stem of the transducer and if damaged in any way cannot be reconnected. The transducer lead has a nominal length of 24 feet (7.3 metres) and should not be extended or cut without the advice of a service engineer. Any excess cable should be coiled away from excessive heat or sources of electrical interference. Transducers with longer cable can be supplied to special order. For full depth performance the transducer stem should be mounted as near vertical as possible. Install the transducer in a part of the hull which is as clear as possible from aerated or turbulent water and where accidental damage is unlikely to occur. Normally a position slightly aft of amidships is preferable. For fin-keel sailing boats it may be preferable to fully recess the transducer into the stem so that the face is completely flush. It should be remembered that the beam angle of the transducer is $\pm 22\frac{1}{2}^\circ$ and care should be taken that a false echo is not created by the keel. If a single transducer is installed on the centre line of the boat depth readings will be obtained up to an heel angle of $22\frac{1}{2}^\circ$. If two transducers are required, to avoid fin-keels for instance, then each should be fitted in opposite bilges facing outward at an angle of approximately 15° . By using an automatic change-over switch (optional extra) available from all good chandlers, a twin transducer installation will enable the Seafarer D800 to give accurate depth readings to an heel angle of $37\frac{1}{2}^\circ$.

The following illustration indicates typical transducer installations using a wooden fairing block



TRANSDUCER INSTALLATION DIAGRAM

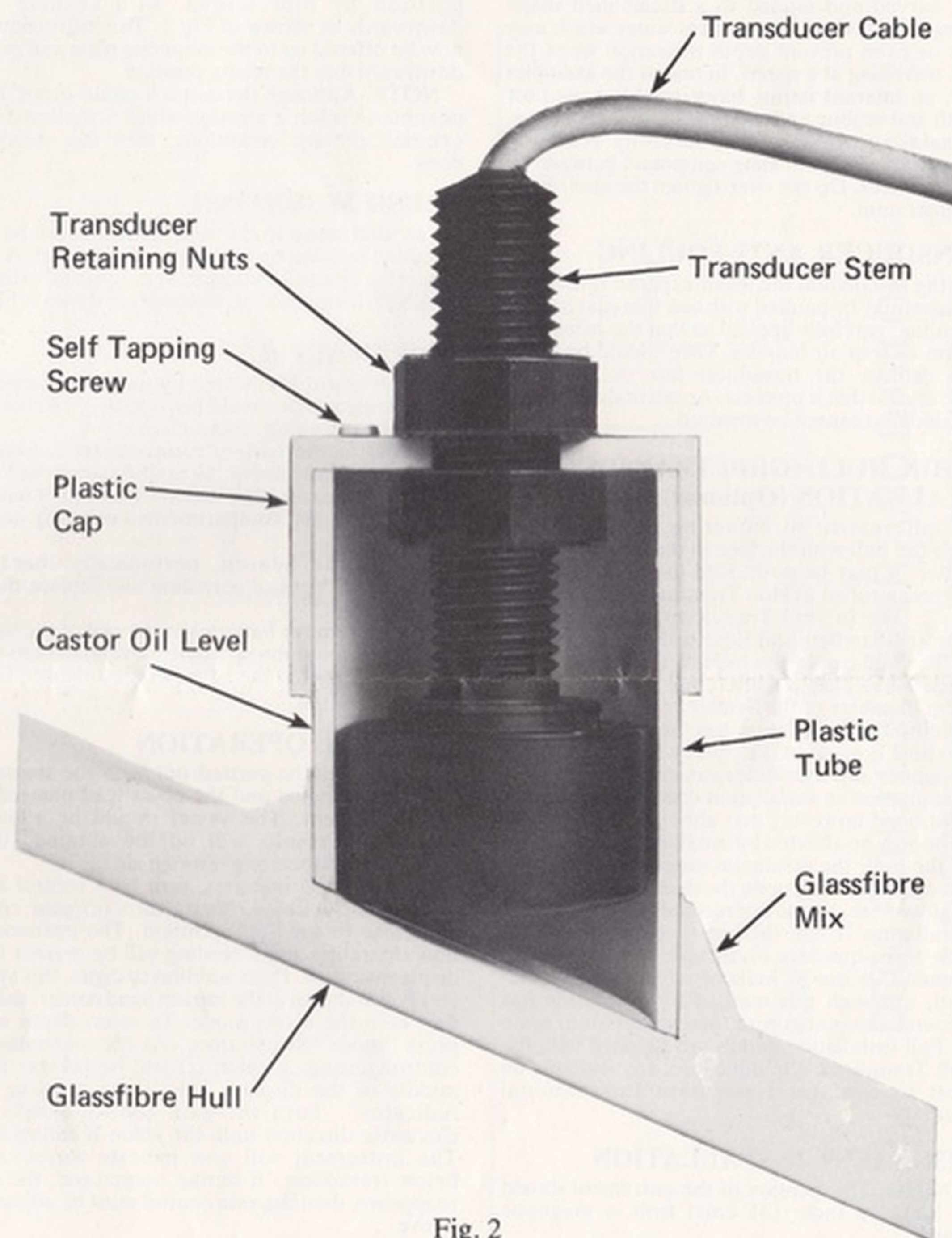


Fig. 2
In-Hull Transducer

outside the hull. The fairing block has been carefully bored, carved and sanded to a streamlined shape avoiding the creation of turbulent water which may reduce or even prevent depth indication when the boat is travelling at a speed. In one of the examples shown, an internal fairing block has been used for strength and sealing and to allow for hull curvature. The installation should be carefully rendered watertight by using a sealing compound between all mating surfaces. Do not over-tighten the nuts on the transducer stem.

TRANSDUCER ANTI-FOULING

Following installation the water exposed face of the transducer may be painted with one thin coat of hard Antifouling, carefully applied so that the paint does not form or trap air bubbles. Care should be taken not to damage the transducer face or the piezo electric crystal that it protects. Accidental damage to this sealed unit cannot be repaired.

WITHIN HULL (GRP) TRANSDUCER INSTALLATION (Optional)

As an alternative to mounting the transducer through the hull with the face in direct contact with the water, it may be positioned inside a glass-fibre hull by means of an In Hull Transducer Kit as shown in Fig. 2. The In Hull Transducer Kit is available from most Chandlers and Boatyards, as an optional extra. The end cap of the In Hull Transducer Kit is provided with a push-out insert making it suitable for the stem diameter of the Seafarer D800 transducer. This method of installation has the dual advantage that no hole is made in the vessel's hull and that the echo sounder and transducer can easily be removed for examination or installation elsewhere. It should be mentioned however, that although the accuracy will in no way be affected by installing the transducer inside the hull, the maximum range sensitivity may be reduced depending upon the thickness and quality of the glass-fibre. We do not recommend this method of installation if the thickness of the glass-fibre exceeds three-quarters of an inch. Neither do we recommend its use in hulls of wood, steel or aluminium, although this method of installation has been found acceptable with these materials in some cases. Full installation details are supplied with the In Hull Transducer Kit and copies are available on request to Seafarer Navigation International Limited.

INSTRUMENT INSTALLATION

WARNING: The location of the instrument should be at least 18 inch. (45 cms) from a magnetic compass.

Before selecting a suitable location for mounting this instrument, please note that the display window is set at an angle to the front panel. The optimum position for mounting will therefore be slightly below

eye level. The mounting plate is then fixed into position by four screws, with keyhole slots downwards as shown in Fig 3. The instrument can now be offered up to the mounting plate and pushed downward into the secure position.

NOTE—Although the unit is weather-proof, if it is possible to select a location which is sheltered from extreme climatic conditions, then this should be done.

FLUSH MOUNTING

As an alternative to the above, the unit can be flush mounted into instrument panel of bulkhead. A flush mounting kit can be supplied as an optional extra and details of this method of mounting are shown in Fig. 4.

POWER SUPPLY

The instrument is powered by six HP7 batteries (or equivalent) which should provide over 100 hours of use, before needing replacement.

Access to the battery compartment is from the front of the instrument, as can be seen from Fig. 3. Remove the cover plate and insert a battery unit into each of the six compartments, ensuring correct polarity.

During the Season, periodically check the batteries for signs of corrosion and replace them if this is present.

Always remove batteries at the end of the Season and also, should the instrument ever need servicing, please ensure that the batteries are removed before despatching.

GENERAL OPERATION

All tests must be carried out with the transducer correctly installed and the co-ax lead plugged into the instrument. The vessel should be afloat, as meaningful results will not be obtained if the transducer is operating through air.

Having fitted batteries, turn both control knobs fully anti-clockwise. Next, turn off/gain control clockwise to the "on" position. The instrument is now operating and a reading will be present in the display window. If, in addition to digits, this symbol (~) is also shown in the top left hand corner, then the unit is in the alarm mode. To select depth mode, press "mode" switch once. At the minimum gain control setting, a colon (:) will be present in the middle of the display. This is the "missing echo indicator". Turn the gain control slowly in a clockwise direction until the colon is extinguished. The instrument will now indicate correct depth below transducer. If during normal use, the colon reappears, then the gain control must be adjusted as above.

DEPTH ALARM OPERATION

The instrument is fitted with a shallow water alarm which can be set to operate at any depth between 0.8

Fig. 3

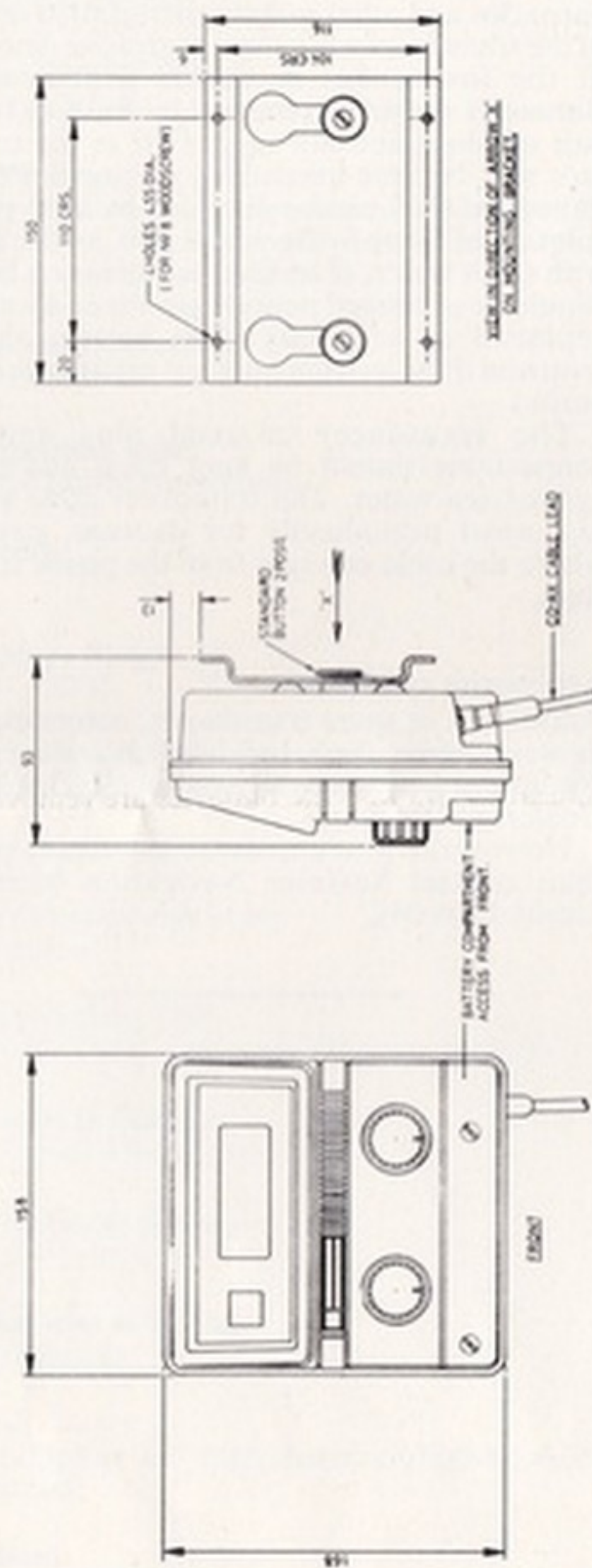
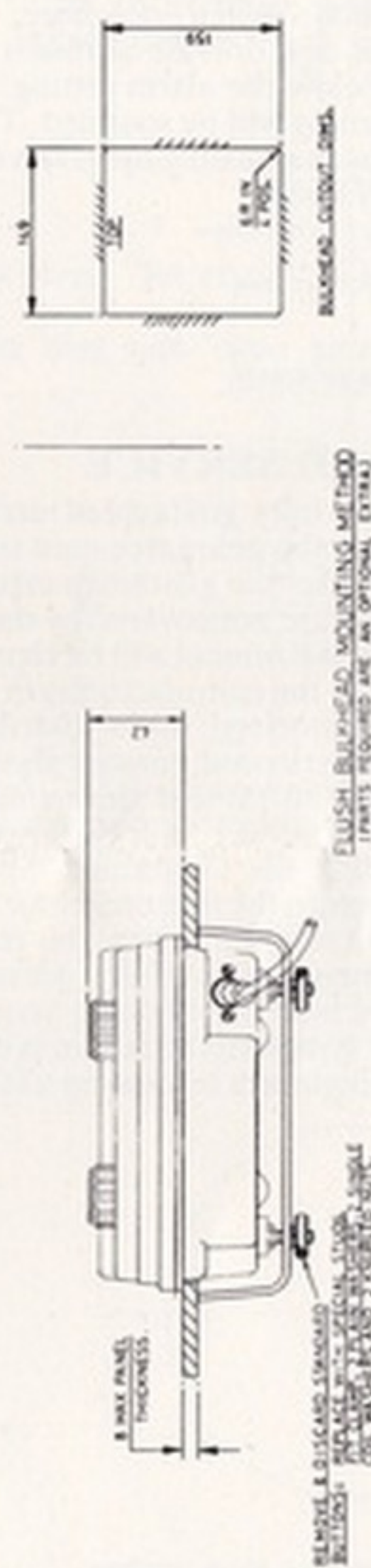


Fig. 4



D800 ECHO SOUNDER AND DIGILOG

OUTLINE DIMENSIONS AND MOUNTING ARRANGEMENTS

metres to 20 metres (nominal) or 2.6 feet to 60 feet depending on model.

To set the alarm, depress mode switch once. Alarm mode symbol ~ will appear in display window. Now turn depth/alarm control in a clockwise direction until the required alarm depth is indicated in the display window. Return to the depth mode by depressing mode switch once more.

The instrument will now operate normally unless depth of water falls below the alarm setting. In this event, an audible warning will be sounded. This can only be switched off by readjusting the alarm control or moving into deeper water.

Reminder of display symbols—

~ - Indicates unit is in "alarm set" mode and not displaying depth.

: - Indicates "missing echo" and gain must be increased for correct depth.

GUARANTEE AND SERVICE

The Seafarer D800 is fully guaranteed under the conditions as stated on the guarantee card supplied with the instrument. After the guarantee expires, or if problems arise which are not covered by the terms of the guarantee, your instrument will be repaired in the United Kingdom by the manufacturers or by one of their officially authorised main distributors. Unauthorised or inexperienced persons should not attempt to service the instrument since this is not only likely to worsen whatever fault has arisen, but will immediately nullify the Guarantee. Should it ever be necessary to return the instrument for service it is essential that the internal battery be removed and that the instrument be carefully packed and insured for transit. A brief note (giving your name and address) and the symptoms of failure is of great assistance to service engineers in locating a fault.

Routine Maintenance

The transducer should be examined periodically and if fitted outside the hull a thin coat of hard anti-fouling paint should be applied to the face of the transducer with a soft brush, care being taken not to trap air bubbles under the paint. A build-up of barnacles and other marine encrustation on the face of the transducer will cause progressive deterioration of the instrument maximum depth capability. Barnacles should be removed by crushing between a pair of pliers and not tugged off as the transducer face may become irreparably damaged. Particles of imbedded shell can be dissolved by applying a 20% solution of dilute hydrochloric acid, and be rinsed off with fresh water. If an internal battery is fitted, this should be examined periodically for acid leakage and replaced as necessary. The battery should be removed if the instrument is not used for an extended period.

The transducer co-axial plug and socket connections should be kept clean and protected against sea water. The transducer cable should be examined periodically for damage, particularly where the cable emerges from the plastic transducer stem.

Accessories and Spares

Additional or spare transducers, automatic change-over switches, flush bulkhead mounting kits and mounting plates are available from Yacht Chandlers, Dealers or Boatyards.

However, if you encounter any supply problems, then contact Seafarer Navigation International Limited directly.

SEAFARER D800 TECHNICAL DATA

Maximum Depth Reading:
199.9 feet (60 metres).

Minimum Depth Reading:
2.1 feet \pm 0.1 feet.

Output Power:
Typically 80 watts peak to peak envelope power (28 watts R M S). Minimum 60 watts peak to peak envelope power (21 watts R M S).

Frequency of Operation:
150 KHz nominal.

Pulse Repetition Rate:
Approx 10 pulses per second.

Pulse Width:
150 μ S.

Temperature Range:
 -10°C to $+50^{\circ}\text{C}$.

Accuracy over full temperature range - on the assumption that velocity of sound in water is 1500 m/s:
 $\pm 1.5\% \pm 1$ least significant digit.

Current Consumption at 9v:
13 mA approx.

Minimum Battery Life:
With standard HP7 batteries 100 hours typically.

Alarm Mode Indication:
By use of sealed touch switch.

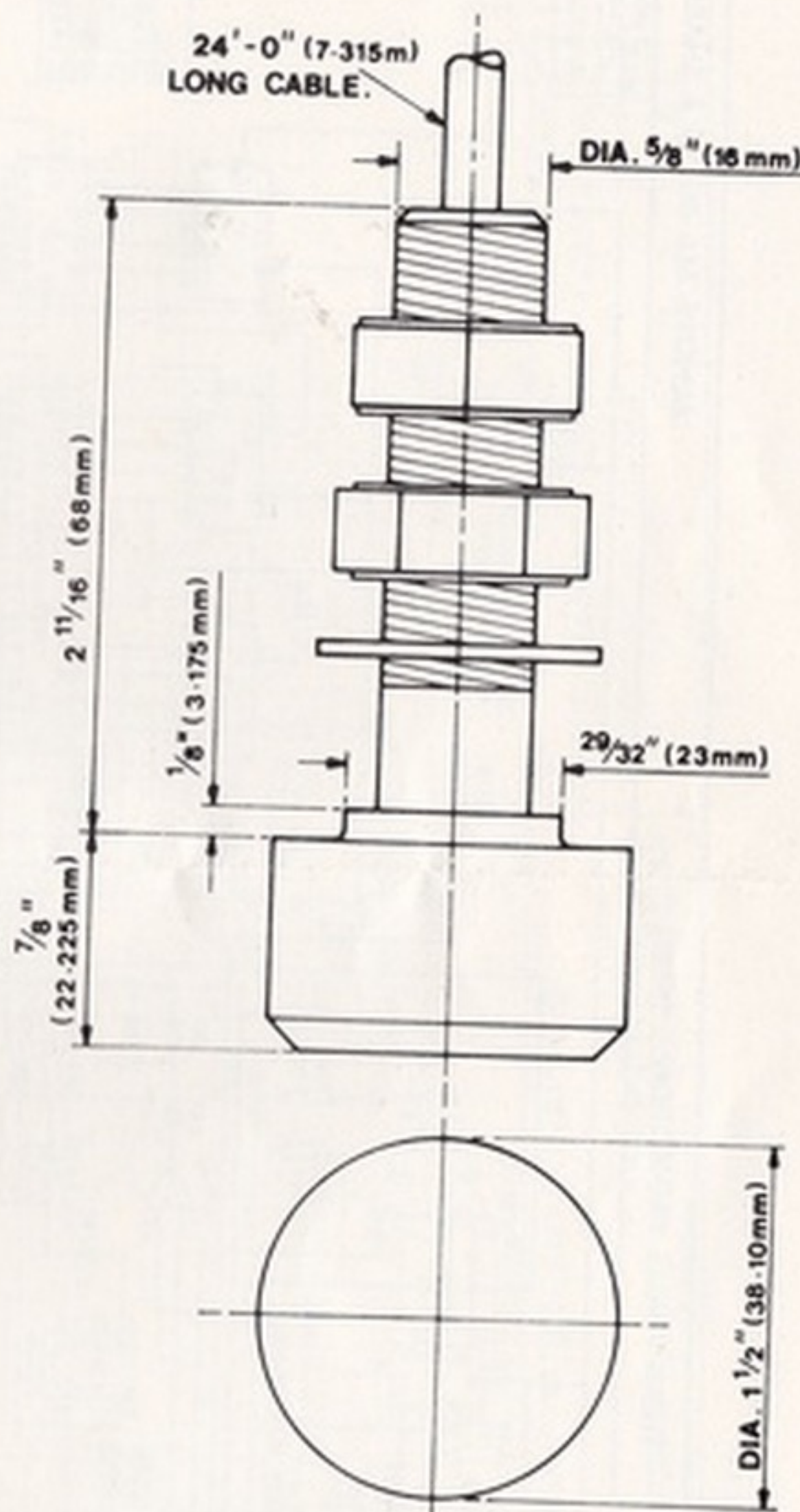
Minimum Alarm Setting:
2.1 feet \pm 0.1 feet.

Maximum Alarm Setting:
60 feet minimum.

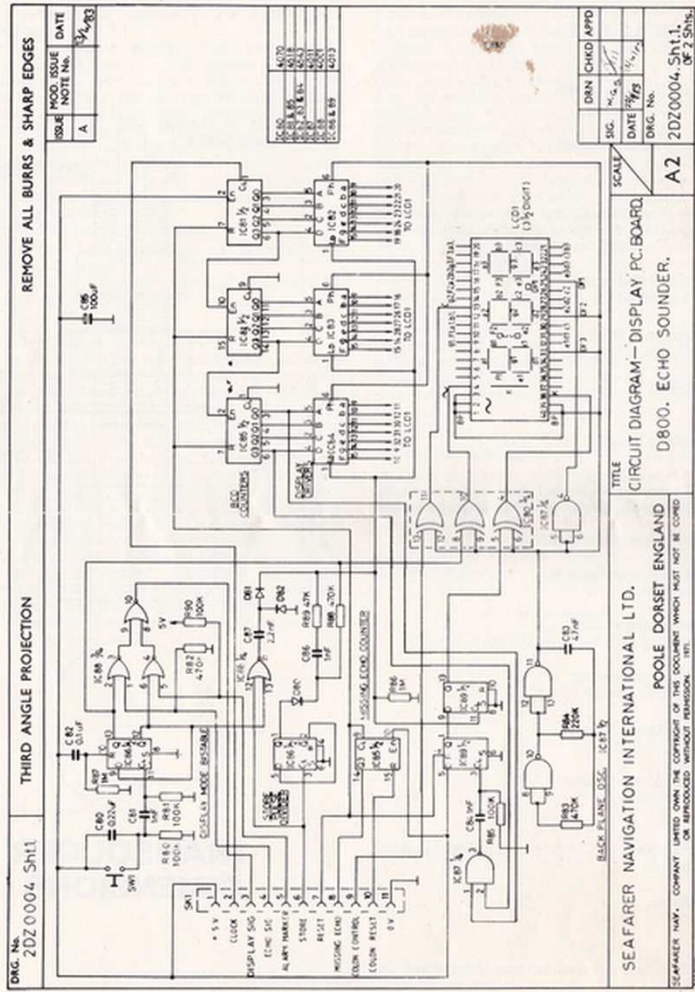
L.C.D.:
3½ digit display, 0.7" high characters high humidity, high contrast.

Dimensions:
158 x 168 x 77 mm.

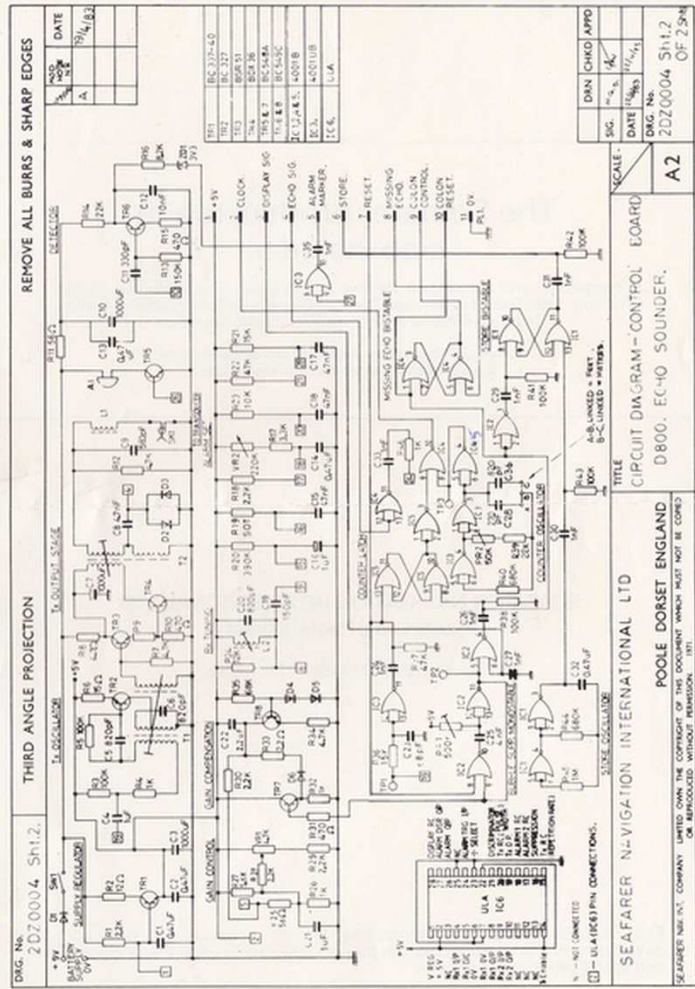
Weight:
0.45 kilograms (excluding mounting plate and transducer)



**TRANSDUCER
DIMENSIONS**



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