

# INSTRUCTIONS

## DIRECT READING COMPASS

### MOUNTING

Select a location for the compass where the helmsman can conveniently read it. Make a compensation check (see instructions below) with the compass taped in place. Relocate the compass if necessary. After it is positively determined that the compass can be properly compensated in the position selected, proceed with installation.

The location should be at least 300mm from tools or large metal objects or any equipment, which could magnetically affect the compass. The U-bracket permits the compass to be mounted on a horizontal, vertical or slanted surface. The bracket should be mounted at a right angle to the keel of the boat. (See figure 1). Secure into position using the non-magnetic screws provided. Should other fasteners be used, be certain that they are non-magnetic.

Fully Adjustable  
U-Bracket Mount

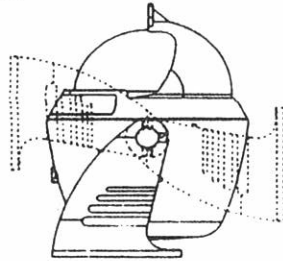


Figure 1

### ADJUSTING THE COMPASS

This marine compass is simple to adjust or compensate for the magnetic field of a boat by means of the internal compensators. Notice the slotted shafts in the holes in the side of the case and that when received the slots are parallel to the bottom of the case. With the slots in this position, the compensators are in neutral and are not appreciably affecting the compass reading.

These compensators are designed to be turned with your fingers or a piece of brass or copper of proper thickness. Do not use a screwdriver as they are often steel and may interfere with the adjusting process. Begin the adjusting procedure after having located N-S and E-W markers or sighting points whose direction is reliably known.

As the compass is strictly a magnetic device, it will indicate only MAGNETIC headings. The compensators are used only to minimize any magnetic effect or metal parts of the boat and cannot be expected to correct the compass for TRUE readings.

Further references to directions are made, in all cases, to magnetic directions.

1. Line up the boat on the mark for the NORTH heading and observe the compass reading. If it is not indicating a NORTH heading, turn the "N-S" compensator shaft (which is located to the right of the fore and aft center line of the compass, see Figure 2) slowly until the reading is NORTH (Magnetic).
2. Turn the boat to the East marker and correct one-half the error observed by turning the "E-W" shaft.
3. Repeat the steps above, if necessary, correcting one-half observed error in each direction.
4. If, after attempting to follow the steps outlined above it is found impossible to compensate the compass to a reasonable amount of deviation, observe the position of the compensator shaft slots. If either one or both slots are in the vertical position shown in the illustration, the full strength of the compensator is in effect and cannot correct the compass in its present location. To gain correct compensation move the compass to another location where it will be away from the magnetic interference affecting it.

Some owners employ professional compass adjusters to compensate their compasses. The services of a reliable compass adjuster are often well worth the investment, especially when the compass is to be used for long range navigation.

After compensation is satisfactorily completed, a deviation table may be constructed as an aid in course determination.

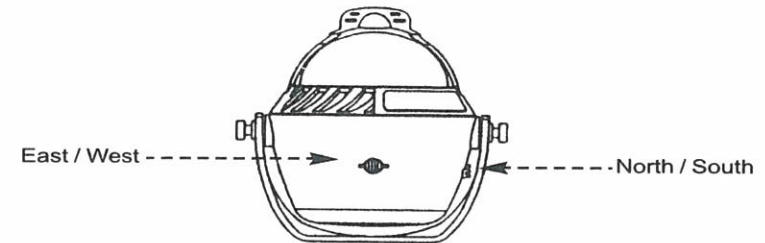
The absolute compensation of a marine compass is a very unusual occurrence. It is very difficult, if not impossible, to get any compass to be absolutely correct on every compass heading, due to the large number of magnetic interference such as iron and steel masses and the electrical wiring and components present on modern craft. After doing the best possible job of compensating the compass as explained above, you should check its performance against known magnetic headings and prepare a Deviation Chart your installation.

Using a current, reliable chart of the local area, plot a series of known magnetic courses using visual sightings.

Ideally these will be at 15 intervals. Carefully travel on these courses and note your compass headings. Mark the exact number of degrees of deviation present on each heading and the direction (Easterly or Westerly) of the deviation. Double-check the figures.

Compensation should be rechecked at the beginning of each season to be certain that the magnetic field within the boat has not changed. A check should also be made whenever additional major equipment is installed in the boat or after major engine repairs.

### COMPENSATORS



When slots are Horizontal,



Compensator is Neutral.

When slots are Vertical,



Compensation is at Maximum.

Figure 2

### ILLUMINATION (If your compass is fitted with a light)

As shipped from the factory the light socket in the compass is equipped with a light bulb (12-Volt).

The two leads from the compass light may be connected to the light switch of regular electrical system of the boat. Some prefer including a small rheostat to regulate the level of brightness. In making the installation, both wires should be twisted around each other to prevent setting up a disturbing magnetic field. Switches or rheostats should be located at least 300mm from the compass.

### MAINTENANCE

Salt spray should be wiped from all parts of the compass to prevent a deposit from accumulating. Occasional wiping with a clean soft, damp cloth will keep the compass hemisphere and other parts bright and clear. For long storage, it is recommended that the compass be removed from the boat and stored at room temperature.

A small bubble may appear at the top of the compass capsule at low temperatures. This bubble will usually disappear as the temperature rises and in no way interferes with proper operation of the compass.