

## Installation and Maintenance Instructions

### For the X-21 Dash Mount RITCHIE® Compasses Made In U.S.A



**CAUTION!**

All Magnetic Compasses are vulnerable to magnetic interference, which will produce errors, called DEVIATION. It is the Owner/Operator and/or Helmsman's responsibility to make sure the compass is properly installed and compensated. COMPENSATION is the act of correcting for deviation. Magnets (speakers, microphones etc.), ferrous metals (steel, iron, etc.) and current carrying devices are common causes of deviation. It is important to understand that magnetic compasses point toward Magnetic North. There is a difference between Magnetic North and True North, and that difference is called VARIATION. Variation differs depending on your geographical location and can be determined by referring to a local chart.

### PLEASE READ THE INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION.

The X-21 compass is not equipped with internal compensators; it is a precision instrument that is intended to be used as a HEADING REFERENCE. Care should be taken to select a mounting location that causes the least error in the compass readings.

#### Selecting the Proper Location:

The compass should be close enough to the helmsman and positioned below the helmsman's line of sight so it is easily read during normal operation. You will need a flat surface that is perpendicular to the centerline of the boat. The slope of the surface can be between 45 degrees and vertical. 60 degrees will give optimal viewing day and night.

Select a location that has the least amount of deviation on any of the four **cardinal points (N S E and W)**. Some shipboard devices can cause varying magnetic fields. Devices such as windshield wipers, high current carrying wire and even some steering wheels must be considered when selecting a location for your compass.

#### Installation:

**Caution!** *Disconnect the battery during installation.*

#### Mounting the Compass:

You can use a standard 2 1/16" instrument knock out or cut your own hole. Slide the compass with Ritchie logo on top into the hole and level. *It is important that you use the mounting gasket. We do NOT recommend the use of bedding compound as some brands contain chemicals that could damage the plastic lens.*

Slide the nut over the housing until it bottoms against the panel then snug it up by turning it clockwise.

- If the panel is thin and the nut will not press up to the panel, rotate the nut counterclockwise while pressing in until it bottoms then snug it up by turning it clockwise.
- If you have a thicker panel and the nut will not tighten, carefully screw the stainless ring back into the nut and retry.

#### Wiring the Night Light:

We recommend using marine grade stranded wire that is no lighter than 22 AWG, with 1/4" tab size female disconnects (blade terminals) to connect the compass light.

- Connect one "disconnect" to the terminal on the compass marked "+" and the opposite end of the wire to the positive side of the boats instrument lighting circuit.
- Connect the other "disconnect" to the terminal on the compass marked "-" and the opposite end of that wire to the boats electrical Ground "-". Usually ground is available in several locations at or near other instruments.

#### Maintenance:

Ritchie compasses require very little care. To remove salt spray deposits or dirt, rinse the entire compass with clean, fresh water and wipe carefully with a damp cloth. Important Note: Never Use Chemical or Abrasive Cleaners.

#### Light Replacement:

Ritchie's night-lights are designed to last for years of use. If you need to replace one, contact the factory with your model and serial number.

The X-21 uses an LED mounted in a twist socket. To remove, turn the socket 1/8<sup>th</sup> turn counterclockwise and pull it out. When re-installing the light be sure to observe polarity so that the white mark is up.

#### Warranty:

We warrant all Ritchie Magnetic Marine Compasses to be free of defects in workmanship or materials. If within five years of purchase date, a compass fails to give satisfactory service, it will be repaired or replaced without charge. This warranty does not cover breakage through accident or misuse.