

Interference from any iron or steel can cause malfunction of the compass unit. To prevent this occurring a minimum distance of 1 meter (3 feet) should be kept from any steel or other ferromagnetic materials. This includes speakers and radios with internal speakers.

Fasten the compass bracket with non-magnetic screws. The compass must be mounted in a near **vertical** position. See also the diagram labelled "Compass Installation".

Wiring

The magnetic sensor unit or compass-top-sensor which comes with your **AP4** autopilot is fitted with a plug which fits into the socket labelled "compass" on the rear of the autopilot. If the cable must be extended, we recommend that a good quality 5-core shielded extension cable be used. This is available from your supplier or TMQ Electronics. Refer to the drawings section of this manual for details of fitment of EMC suppression ferrite to compass cable.

Calibration

The compass unit will need to be rotated in its holder after installation for the correct heading to be displayed. After initial testing, further adjustment may be required to reduce any heading error displayed. If the **AP4** compass does not adequately match your ships compass then you may need to re-calibrate the **AP4** compass. See the Compass Calibration section of this manual.

Interchanging Magnetic Sensor Unit and Compass Top Sensor

The magnetic sensor unit (fluxgate compass) can be interchanged with a compass top sensor. This is desirable when the autopilot is to be fitted to a steel hulled vessel or vessel containing large amounts of steel.

If the magnetic sensor unit and compass top sensor are interchanged, the compass detector DIP switches must be altered. The DIP switch is identified as component **S1** on the PCB and as SWDIP-4 on the component overlay diagram at the rear of this manual.

Switch **1 and 2 OFF** - for magnetic sensor unit (fluxgate)

Switch **1 and 2 ON** - for compass top sensor

Switch **3 is not used.**

Switch **4** can be set to ON if used with a rudder feedback unit which gives full voltage back to the autopilot. **In the AP4, switch 4 is normally set to OFF for RFUS.**