



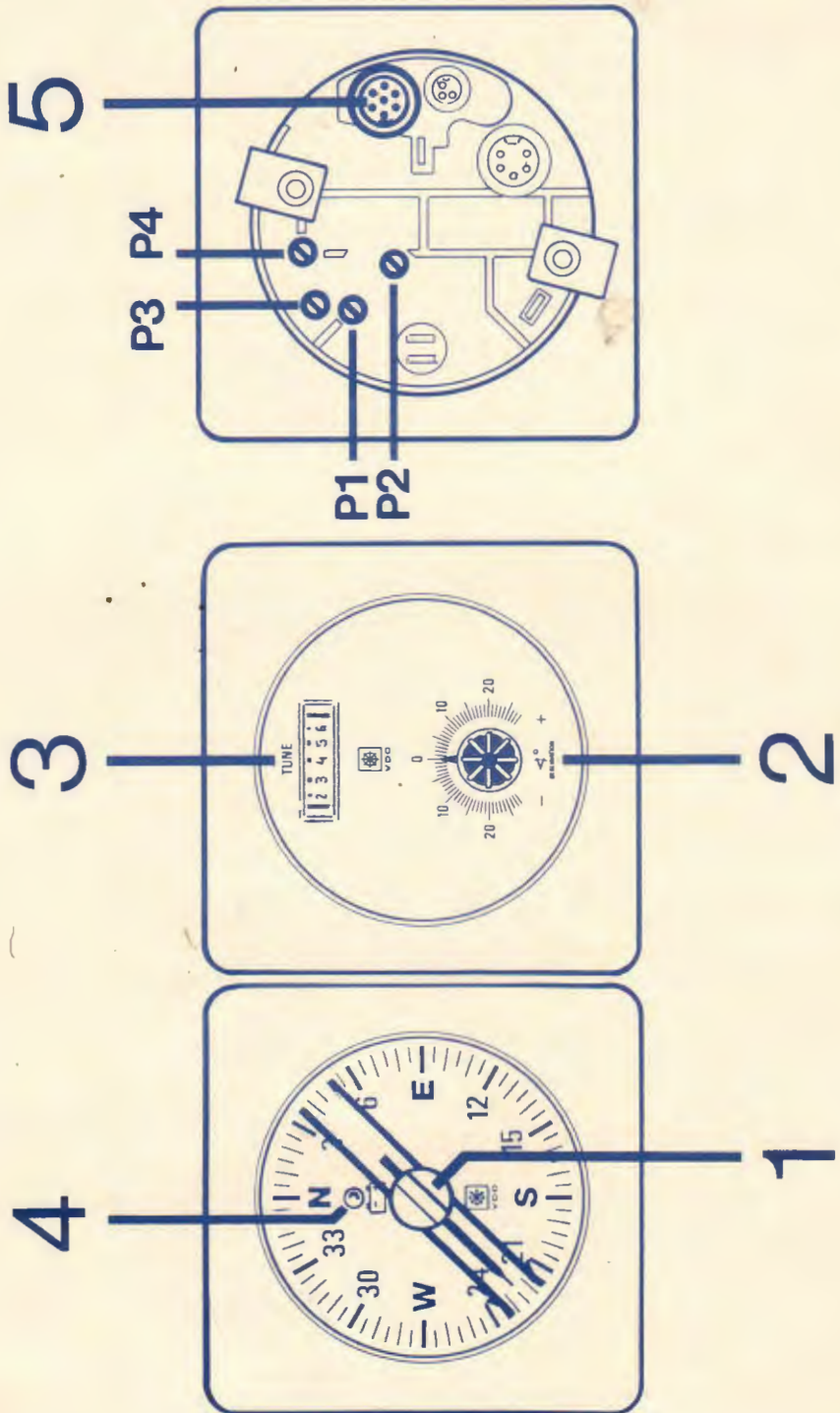
**Wichtiges Dokument.
Bitte an Bord aufbewahren!**
**Important Data:
Please keep booklet on board for
future reference!**

**Bedienungsanleitung
Operating Instructions
Bruksanvisning
Instrucciones para el manejo
Notice de l'utilisateur**

Analog Direction Indication System

Adis 360

VDO



VDO Remote Compass System Adis 360

Please read carefully and keep on board for future reference.

Description of Features

The Flux-Gate Sensor

The flux-gate sensor senses the direction of the magnetic field.

Important! Ferromagnetic materials must not be placed near the flux-gate sensor. Neither may magnetic fields – e.g., set up by electric motors, generators, alternators, loudspeakers – be in its vicinity.

The Compass Display Head

This is a steering compass with a rotatable grid (1) to facilitate steering a compass course. A light-emitting diode (4) has been added for low-voltage indication.

At the owner's option, a lens without the grid can be fitted by a VDO service point.

The Analog Computer

Located at the front of the computer head are the adjustment knob (2) for applying variation (the regional angular difference between magnetic and true north, called also declination) and a field-force tuning indicator (3) for use in compensating for deviation (magnetic interference aboard ship) and in verifying the result.

Compass Adjustment

Compensation for Deviation

Slowly turn your boat through 360°. If you observe a change in pointer deflection of half a graduation or more on the tuning scale (3), compensation for deviation is necessary.

To rule out magnetic interference from other boats, sheetpiling, boatyards, etc., it is best to swing ship outside the harbour in a calm sea.

Guided by the compass display head, first swing your boat to the north. Adjust rheostat control (P 4) at the rear of the analog computer until the tuning indicator (3) is centered on the scale.

Check again to see that she is headed due north, and note down exact reading of tuning indicator (e.g., 4.1).

Then swing her to the south. Take another reading, add the values obtained for north and south, and divide the sum by two. Keeping her headed south, adjust rheostat (P 1) until the value resulting from the division appears on the tuning indicator.

Also swing her to the east and to the west. Note down the respective readings of the tuning indicator, add them, and divide the sum by two. While she is still headed west,

adjust rheostat (P 3) until the value resulting from this division appears on the tuning indicator.

Having swung your boat to the north or to the south once more, adjust rheostat (P 2) until the tuning indicator also shows this second quotient for its setting.

Example

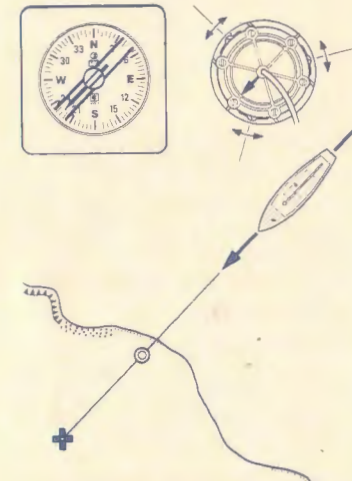
Heading	Tuning Indicator	Arithmetic	Result	Rheostat
North	4.1	$\frac{4.1 + 3.7}{2}$	= 3.9	P 1
South	3.7			
East	3.5	$\frac{3.5 + 3.9}{2}$	= 3.7	P 3
West	3.9			
North or south			3.7	P 2

Next, by adjusting variation control (2), apply variation for the waters you are sailing.

Example

Variation: +3° (3° east)
Setting: +3°

For final alignment, you will need somebody to assist you. Set your boat on a true heading – obtained, for instance, by taking a bearing on two charted landmarks. Bearings taken while the boat is riding at anchor may possibly enable better alignment.



Have your assistant slue the housing of the flux-gate sensor until the display of the VDO Remote Compass System coincides exactly with this heading. Then fix the sensor in place.

Verifying Compensation

The accuracy of the display depends on careful compensation. To check, slowly turn your boat through 360° again. The smaller the change in the deflection of the tuning indicator as she goes full circle, the greater the accuracy of the compass display.

If pointer deflection does not exceed half a graduation – remaining, e. g., between 3.8 and 4.2 – compensation will be fairly accurate.

Should fluctuation be greater, compensation will have to be repeated.

When satisfactorily compensated, your compass display head will show the true heading.

Just make sure that you always apply the pertinent variation via the adjustment knob (2) when you enter another part of the sea.

Signal Output

At its rear, the analog computer has signal output (5) for satnav, autopilot, etc.

Because of the great variety of systems currently on the market, VDO cannot provide the interface electronics for all units. Please consult the manufacturer of the equipment you would like to connect.

Information on interfaces between VDO Adis 360 and various satnav and autopilot systems will be furnished by VDO on request.

Troubleshooting Guide

No reading of heading, no deflection of the tuning indicator?

Check voltage of ship's supply (10.8 ... 30 V) and the power available at instrument side.

Check to see whether + (positive) and – (negative) have been reversed.

Is the light-emitting diode (4) in the compass display flashing?

Caution! Reading may be incorrect due to low voltage (under approx. 10 volts) of ship's supply. The performance of all other electrical equipment on board may also suffer. Recharge battery or check supply lines.

Does the tuning indicator show a sudden and pronounced change from the established value?

Check to see whether ferromagnetic objects have been placed next to the flux-gate sensor.

Please note: With steel hulls there may be a shift in the magnetic interference aboard ship due to extended moorage. Check on compensation for deviation by turning your boat through 360° as previously described. If necessary, repeat compensation.

Does the pointer of the tuning indicator hit the end of the scale?

Boat has entered a region where there is a pronounced difference in the earth's magnetic field. Center tuning indicator via rheostat (P 4) and check on compensation for deviation.

Does the pointer of the tuning indicator hit both ends of the scale?

Magnetic interference at installation site of sensor is too great. Relocate sensor in a spot with less magnetic interference.

Technical details are subject to change without notice.