

Marine antenna



Fault Finding

Power failure

■ Power unit task

- ☞ Regulate the 24V from the TPU to 6.5V, +13V and -13V

■ Symptoms:

- ☞ A: Antenna doesn't move at all

■ Measurements:

- ☞ A1: Power from the antenna cable: 24V
- ☞ A2: Power from Power unit to Tracking unit
 - J14-3, p5: 6,5V
 - J14-3, p6: +13V
 - J14-3, p7: -13V
- ☞ A2: Power from Tracking unit to Power unit
 - J14-3, p9: 24V

Elevation movement failure 1

■ Elevation task

- ☞ Activate Elevation offset when TPU is turned on
- ☞ Move to different decrease in elevation.

■ Symptoms

- ☞ A: Elevation offset is not activated, but it has elevation movements
- ☞ B: Antenna does not move in elevation under initialization.

■ Measurements

- ☞ A: Tracking unit is probably not given the offset signal
- ☞ B1: Power from “Tracking unit”:
 - J14-1, P1-2 +/- 13V
- ☞ B2: It is a faulty with the “Elevation motor control”, if B1 and elevation offset is OK.

Elevation movement failure 2

- Symptoms following from last page

- ☞ C: Antenna move in wrong elevation from normal initialization movements
- ☞ D: The antenna movement is rough

- Measurements following from last page

- ☞ C: Adjust the sensor unit to 45 deg. respective elevation in 90 deg.
- ☞ D: the strap is to Slack or to tight

Azimuth movement failure

■ Azimuth motor task

- ☞ Step in azimuth under initialization or when commanded from “Cross elevation switch”.

■ Symptoms

- ☞ A: Antenna does not move in azimuth
- ☞ B: The antenna movement is rough

■ Measurements

- ☞ A1: Faulty on the “Azimuth step motor” or power from “Power supply PCB”
- ☞ A2: faulty on “Cross elevation switch”
- ☞ B: the strap is too Slack or too tight

Cross elevation faulty

■ Cross elevation motor task:

- ☞ Fine-tuning on satellite signal. Give a message to the “Azimuth step motor” to turn left or right.

■ Symptoms

- ☞ A: No movement in cross elevation
- ☞ B: The antenna patch tramples in one edge, trying to give information to azimuth motor to turn.

■ Measurements

- ☞ A1: Simulate movements in azimuth to check if the antenna crossing movements follows. If it do not follow the “Cross elevation DC motor” or “Tracking unit” can be faulty
- ☞ A2: Tracking unit failure
- ☞ B: Check the earth point on each edge on the “Azimuth motor switch”, or check if it is a azimuth failure

RF-card failure

- RF card task:

- ☞ Transfer the TX and RX

- Symptoms:

- ☞ A: Initialization works fine, but it is not possible to get a connection. The antenna keep searching and searching.

- Measurements

- ☞ A1: “RF”- card faulty

- ☞ A2: “Control unit” faulty