

TDA-3 Technical Installation Manual

INSTALLATION:

The TDA3 should be mounted as high as possible and placed away from obstructing elements as funnels, radio communication antennas, masts, smokestacks etc to avoid reflection and interference. Make sure it can be rotated freely.

Be careful when mounting the TDA-3, antenna elements must not be damaged.

The TDA3 is designed to be mounted on a rotor. The rotor shall be of heavy-duty type. See "Technical specifications side above."

The TDA3 should be mounted as close as possible to the rotor, preferably bolted directly, or with a short tube not over 300mm long. Tube diameter 50mm. The mounting base of the TDA3 can be fitted with a mounting flange Naval No 164038 for 50mm-mast tube. See drawing of mounting base.

The coaxial downlead should be well protected and secured to the mast. Make sure to provide sufficient slack so the TDA3 can rotate without stretching the coaxial cable. Unload the downlead cable with by means of cable clamps and protect it from mechanical damage. Avoid outdoor cable joints, but if necessary make sure they are waterproof by using self-vulcanising rubber tape or similar. Factors as transmitting power, polarization, radiation angle and antenna height affect the received signal strength.

The TDA3 shall be connected to the downlead with a 75-Ohm N-connector.

Use self-vulcanising rubber tape or similar to make the connection waterproof.

MAINTENANCE:

The TDA3 is made of high quality aluminium and the surface is anodized in black to furnish a durable surface.

TDA3 must be inspected annually in order to maintain proper function.

Check list:

The elements of the TDA3 is protected with rubber plugs, replace if worn.

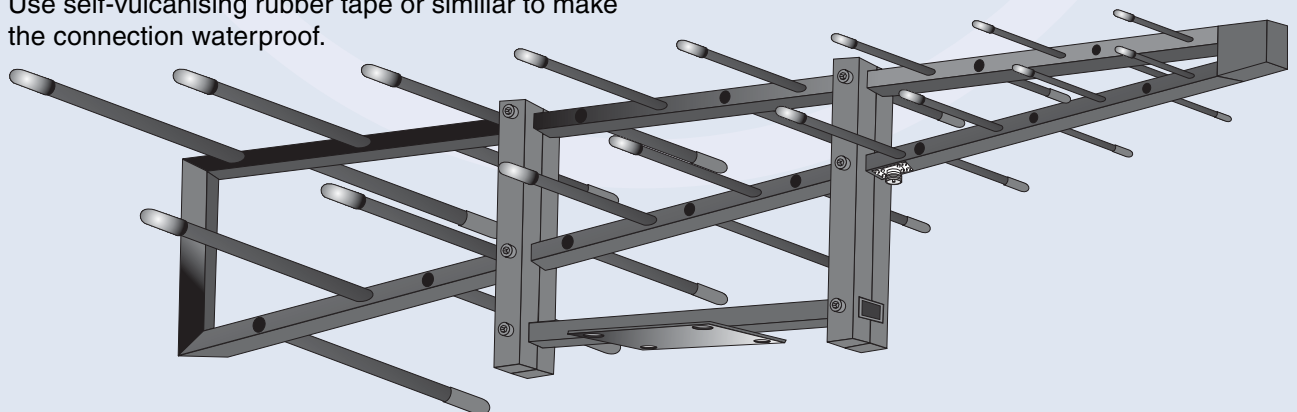
Make sure the seal of the coaxial connection is in good condition. If worn replace with new self-vulcanising rubber tape or similar.

Check the cable clamps unloading the downlead. Replace if worn.

Check the bolts on the TDA3 and on the rotator, tighten if loose or replace if worn.

If an element of the TDA3 is bent, carefully straighten out the element. If an element is broken and loss in performance is noticed, the TDA3 can be repaired.

Maintenance of the rotor se the manufacturers manual.



0605

Since 1971, the objective of Naval Electronics has been to offer the best possible products for TV and Radio reception at sea. Naval began with omnidirectional antennas and is the world leader in this field of technology today. Now, with an expanded product range, the name Naval means much more than antennas. Naval operates in more than 40 countries and has installations on thousands of vessels all over the world.

All specifications stated are subject to change without notice.

 **Naval**[®]
Marine Broadband Communication

Naval Electronics AB

Höjdrodergatan 18, SE-212 39 Malmö, Sweden

Tel. +46(0)40-29 20 45. Fax +46(0)40-18 74 13

E-mail: sales@naval.se www.naval.se



3022

TDA-3 Terrestrial Directional Antenna

USER MANUAL:

The TDA3 is designed to cover the frequency range 170-890 MHz, however TDA3 will also perform with reduced specifications in the area of 40-170 MHz as well. The high gain of the TDA3 makes it perform well during weak signal conditions. With high attenuation of the back and sidelobes the TDA3 will secure good reception in areas with many reflected signals as encountered in harbours.

To get the best performance from the TDA3 the rotor should be controlled from a Navtrack unit. This unit will keep the TDA3 pointed automatically at a designated transmitter. For further information see Navtrack Technical leaflet and manual.

TECHNICAL SPECIFICATIONS

Dimensions

Height	350 mm
Rotating diameter	1870 mm
Width	990 mm

Gain

40-170 MHz	Unspecified
170-230 MHz	9 dBi
470-890 MHz	8 dBi

Half power beamwidth

170-230 MHz	$\pm 30^\circ$
470-890 MHz	$\pm 32^\circ$

Front to back ratio

170-230 MHz	28 dB
470-890 MHz	22 dB

Front to side ratio

170-230 MHz	26 dB
470-890 MHz	23 dB

Minimum recommended

rotation torque 60Nm

Operation temp. range -40 - +70°C

Weight 8 kg

Material Aluminium

Finish Military green (RAL6014)

Mechanical measurements of mounting flange

