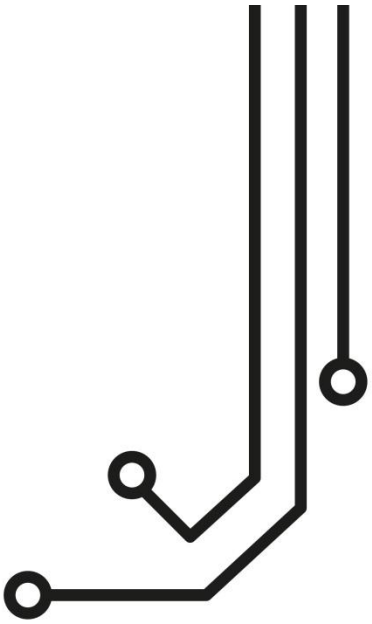
DIGITAL YACHT



NAVAlarm
NMEA 2000 Klaxon

Installation and instruction Manual

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1. Introduction

Congratulations on the purchase of your NAVAlarm smart Klaxon. This product is designed to provide a simple to install, stand alone and very loud Klaxon that responds to NMEA 2000 Alerts and MOB events.

Any NMEA 2000 compatible device that transmits NMEA 2000 Alert PGNs can trigger NAVAlarm to sound Alarm tone 1 and any NMEA 2000 AIS device that transmits the AIS MOB message can trigger the NAVAlarm to sound Alarm tone 2. .

Before installing NAVAlarm, it is recommended that you familiarise yourself with the operation of the NMEA 2000 devices that will be sending the Alert or Alarm data to the NAVAlarm to ensure safe interoperability

2. Before you start

To install and test your NAVAlarm Alarm system you will need:

- M4 screws or other fixings appropriate to the mounting location
- A spare NMEA 2000 network connection (T-Piece) to allow the NAVAlarm to connect to the NMEA 2000 network*
- Some suitable marine sealant to waterproof the screw holes
- An NMEA 2000 device(s) that transmits the Alert or Alarm PGNs that NAVAlarm will respond to
- An NMEA 2000 drop cable (up to 6m) to connect the NAVAlarm to the network

* NOTE – if you require any additional NMEA 2000 networking components or cables please click on the link below..

https://digitalyacht.co.uk/product-category/nmea-2000/nmea-2000-cables/

3. Installation

Before starting installation select a suitable location for the NAVAlarm klaxon. NAVAlarm should be installed in as sheltered location as possible. It is only IP65 rated (protected from spray) and cannot be submersed. It should be mounted on a vertical bulkhead, in a location where it will be easily heard by crew when it sounds and can be quickly accessed for pressing of the silence button.

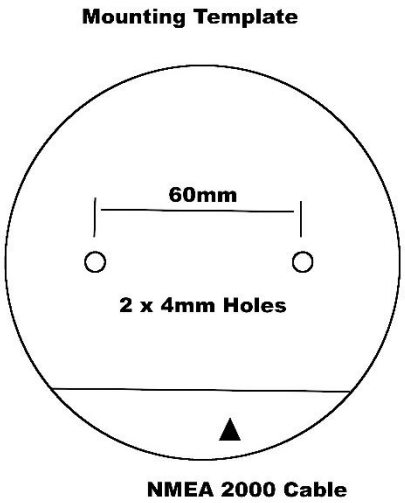
A suitable NMEA 2000 drop cable (up to 6m) will be required to connect the NAVAlarm to the NMEA 2000 network. When locating the units you should consider:

- Routing of the NMEA2000 cable from the NAVAlarm to the NMEA 2000 network
- Access to the NAVAlarm silent switch
- Provision of sufficient space around the units for comfortable cable routing
- Maintaining the compass safe distance of 0.5m

3.1 Mounting the NAVAlarm

The NAVAlarm Klaxon has a removable base that can be detached by twisting it approximately 10mm anti-clockwise, which will reveal the NMEA 2000 interface and interconnection cables. Care should be taken to not damage the PCB or allow water to enter the NAVAlarm base, which mounting the unit.

The base has two 4mm diameter fixing holes in its base (60mm apart). Use suitable fixings (not supplied) to fix the NAVAlarm to a flat surface – using the dimensions and details shown in the drawing. It is recommended that a small amount of marine sealant is applied to the screw holes to avoid water ingress after the unit is screwed to the vertical bulkhead.



DO NOT over tighten the screws.

Once the base is correctly mounted, re-assemble the NAVAlarm unit by carefully twisting the top and bottom sections together ensuring the o ring seal is correctly seated around the rim where the two parts join. The two sections of the NAVAlarm housing can be secured in place with the small screw (supplied).

3.2 Connecting to NMEA2000 Network

- The NAVAlarm, has a panel mount NMEA2000 male connector. A NMEA 2000 drop cable will be required to connect it to a spare “T-Piece” on the NMEA 2000 network. Any drop cable up to 6m in length can be used.
- If you are creating a new NMEA2000 network, you may wish to consider Digital Yacht’s NMEA2000 Starter Kit, that provides all of the cables, connectors and terminators required for a basic NMEA2000 network.
- If you are connecting NAVAlarm to a non-standard NMEA2000 network, then a suitable adaptor cable will need to be sourced from the relevant manufacturer;
    - SeaTalkNG (Raymarine P/No A06045)
    - Simnet (Simrad P/No 24006199)
- The NAVAlarm takes its power and data from the NMEA 2000 and its LEN = 2.
- The NAVAlarm supports the following PGNs;
    - Man Over Board PGN 127233
    - AIS Man Over Board PGNs 129038 and 129802
    - Alert PGNs 126983, 126984 and 129985

4.0 Operation

Once the NAVAlarm has been installed, and the NMEA 2000 network powered up, it will automatically operate with no additional interaction.

NAVAlarm has two Alarm sounds:

- Alarm 1 = Continuous Tone 970Hz at 99dBA
- Alarm 2 = Continuous Tone 2400Hz at 106dBA

NAVAlarm will constantly be monitoring the NMEA 2000 network waiting to receive Alert or Alarm PGNs.

When it receives an Alert PGN 126983 NAVAlarm will sound Alarm 1 until either the Reset Switch is pressed for 1 sec or another device on the NMEA 2000 network silents or acknowledges the Alert.

When it receives a MOB PGN 127233 or AIS MOB PGNs 129038/129802 the NAVAlarm will sound Alarm 2 until the Reset Switch is pressed for 4 secs.

With the exception of the mandatory Heart Beat PGN and other general NMEA 2000 bus management PGNs, NAVAlarm only transmits the Alert Response PGN 126984 when its Push Switch is pressed to silence the alarm.

The default tones can be changed by adjusting the DIP switches on the top section of the NAVAlarm (see image below) and also the volume can be reduced by adjusting the rotary volume adjuster.

TONE	TONE TYPE	TONE DESCRIPTION/ APPLICATION Tones are only certified @highest volume adjustment	DIP SWITCH 1 - 2 - 3 - 4 - 5	2nd	dBA @ 1m	mA
1.		970Hz	O - O - O - O - O	18	99	17
2.		800Hz/970Hz @ 2Hz	O - O - O - O - I	1	100	16
3.		800Hz – 970Hz @ 1Hz	O - O - O - I - O	1	100	16
4.		970Hz 1s OFF/1s ON	O - O - O - I - I	1	99	10
5.		970Hz, 0.5s/ 630Hz, 0.5s	O - O - I - O - O	4	99	15
6.		554Hz, 0.1s/ 440Hz, 0.4s (AFNOR NF S 32 001)	O - O - I - O - I	1	97	9
7.		500 – 1200Hz, 3.5s/ 0.5s OFF (NEN 2575:2000 Dutch Slow Whoop)	O - O - I - I - O	1	99	12
8.		420Hz 0.6s ON/0.6s OFF (Australia AS1670 Alert tone)	O - O - I - I - I	9	96	5
9.		1000 - 2500Hz, 0.5s/ 0.5s OFF x 3/1.5s OFF (AS1670 Evacuation)	O - I - O - O - O	1	104	10
10.		550Hz/440Hz @ 0.5Hz	O - I - O - O - I	19	97	10
11.		970Hz, 0.5s ON/0.5s OFF x 3/ 1.5s OFF (ISO 8201)	O - I - O - I - O	1	98	8
12.		2850Hz, 0.5s ON/0.5s OFF x 3/1.5s OFF (ISO 8201)	O - I - O - I - I	1	94	17
13.		1200Hz – 500Hz @ 1Hz (DIN 33 404)	O - I - I - O - O	1	99	13
14.		400Hz	O - I - I - O - I	18	95	9
15.		550Hz, 0.7s/1000Hz, 0.33s	O - I - I - I - O	1	98	13
16.		1500Hz – 2700Hz @ 3Hz	O - I - I - I - I	1	104	30
17.		750Hz	I - O - O - O - O	1	99	14
18.		2400Hz	I - O - O - O - I	1	106	41
19.		660Hz	I - O - O - I - O	18	96	13
20.		660Hz 1.8s ON/1.8s OFF	I - O - O - I - I	19	96	8
21.		660Hz 0.15s ON/0.15s OFF	I - O - I - O - O	19	96	7
22.		510Hz, 0.25s/ 610Hz, 0.25s	I - O - I - O - I	1	98	11
23.		800/1000Hz 0.5s each (1Hz)	I - O - I - I - O	1	100	17
24.		250Hz – 1200Hz @ 12Hz	I - O - I - I - I	1	98	9
25.		500Hz – 1200Hz @ 0.33Hz	I - I - O - O - O	1	99	14
26.		2400Hz – 2900Hz @ 9Hz	I - I - O - O - I	18	101	36
27.		2400Hz – 2900Hz @ 3Hz	I - I - O - I - O	18	104	36
28.		500 - 1200Hz, 0.5s/ 0.5s OFF x 3/1.5s OFF (AS1670 Evacuation)	I - I - O - I - I	8	98	6
29.		800Hz – 970Hz @ 9Hz	I - I - I - O - O	1	99	16
30.		800Hz – 970Hz @ 3Hz	I - I - I - O - I	1	100	6
31.		800Hz, 0.25s ON/1s OFF	I - I - I - I - O	1	99	4
32.		500Hz – 1200Hz, 3.75s/0.25s OFF (AS2220)	I - I - I - I - I	8	99	13

4.1 Further Information

For NAVAlarm technical support please email support@digitalyacht.co.uk