MARPORT TE EXPLORER

QUICK REFERENCE GUIDE

Purpose

Marport's Trawl Explorer is your eye on the fishing gear. This sounder can be placed on your trawl headrope or tunnel in order to send useful information to the wheelhouse.

Thanks to the sounder you will see:

· On the echogram, the trawl opening and fish entering the net.
· Also on the echogram, the distance between the footrope and seabed to see if the gear touches the bottom.
· Depth data
· Temperature data
· Pitch and roll data
· Distance from the sensor to the seabed or footrope

The Trawl Explorer can adapt to different types of fishing methods. For example, you can fully configure the sounding modes in accordance with your fishing method to have optimum results.

On the latest version of Trawl Explorer sensor, the echogram displays target strength values. They are useful to identify fish.

Main Parts
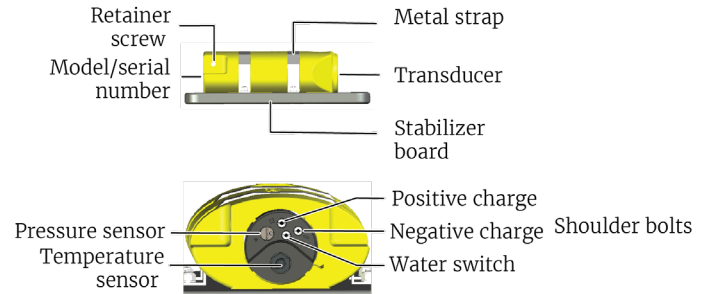
⚠ Caution:
· Do not insert foreign objects into pressure sensor opening or try to open it.
· Do not remove the shoulder bolts from the outside of the sensor. It may damage the components.
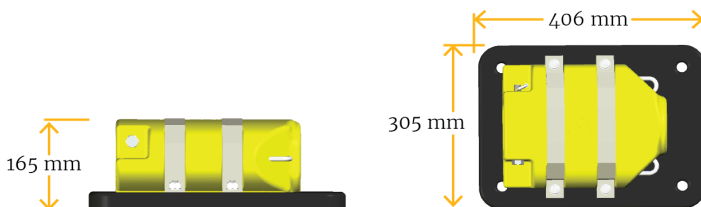
Firmware

Name of firmware	NBTE V1	NBTE V2	NBTE V3
Number of firmware	FIRM121	FIRM126	FIRM128
Autorange feature	no	yes	yes
Target strength on echograms	no	no	yes

Dimensions

Standard Trawl Explorer
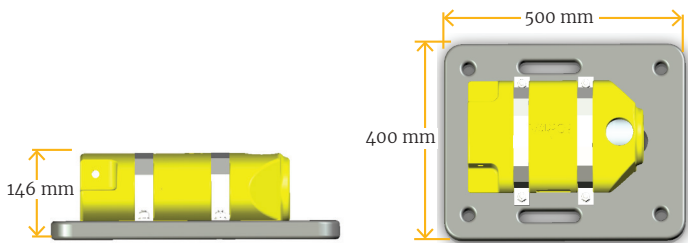
Mini Trawl Explorer

Beamwidth
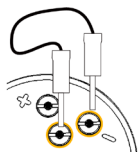
Beamwidths for Uplink pings

Beamwidth	@ 35 kHz	@ 50 kHz	@ 60 kHz
–3dB	46°	40°	30°

Beamwidths for Up and Down pings

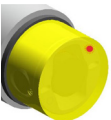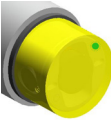| Beamwidth	@ 125 kHz	@ 160 kHz	@ 200 kHz
–3dB	26°	24°	22°

Sensor Configuration

Sensors can be fully configured from the vessel or from the office with Marport Mosa2 configuring tool, using a wireless connection or the Configuration Cable product on any Mac Os device.

Wireless connection: to activate the sensor outside sea water, use a jumper to connect and disconnect the negative charge and the water switch.

Refer to the LED in the transducer to see the state of the sensor:

State	Situation	Action	LED
Charging	Charger plug is connected.	Batteries are charging.	No light
Running	Sensor is in water or activated with jumper.	After an initialization phase, echo sounder is operating.	Flashing red
Configuring	Sensor is out of water.	Configuration via wireless connection. Turns off after 10 min. without user action.	Flashing green

With Mosa2 configuring tool, you can:
· Configure all settings for your sensor
· Export the sensor settings
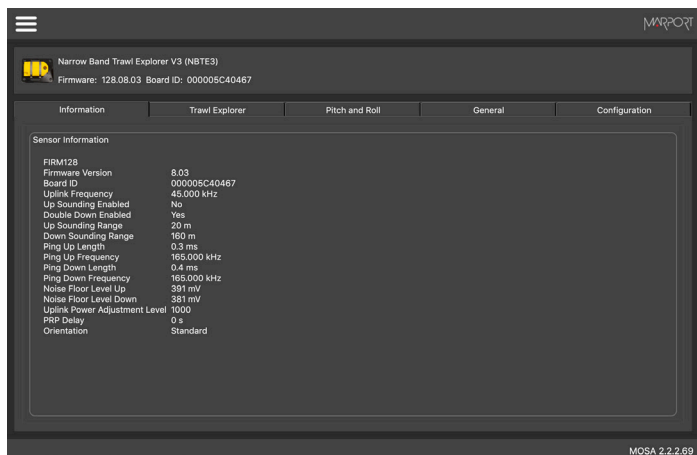
Note: Only advanced users or Marport technicians should configure the sensor. For further information, refer to Trawl Explorer user guide.

System Configuration

Firmware	Mx version	Scala version
NBTE V1 (FIRM121)	all	all
NBTE V2 (FIRM126)	03.01.23 and later	all
NBTE V3 (FIRM128)	04.02.28 and later	01.02.05 and later

Add your Trawl Explorer to the receiver with Marport Scala2 software.

When adding the sensor to the receiver:
· Make sure that your sensor configuration (Mosa2) and receiver configuration (Scala2) are identical, especially the uplink frequency of the sensor.
· Trawl Explorer sensor uses a 400Hz frequency bandwidth. When adding other sensors to the system, make sure there is enough distance between their uplink frequency (200 Hz margin above and below used frequency). If not, there will be signal interferences.

For further information, refer to Trawl Explorer user guide.

Installing

1 Place sensor (1) at the centre of the net's headrope (2), facing the vessel.

2 Install a double mesh piece of netting (3) to stabilize the sensor.
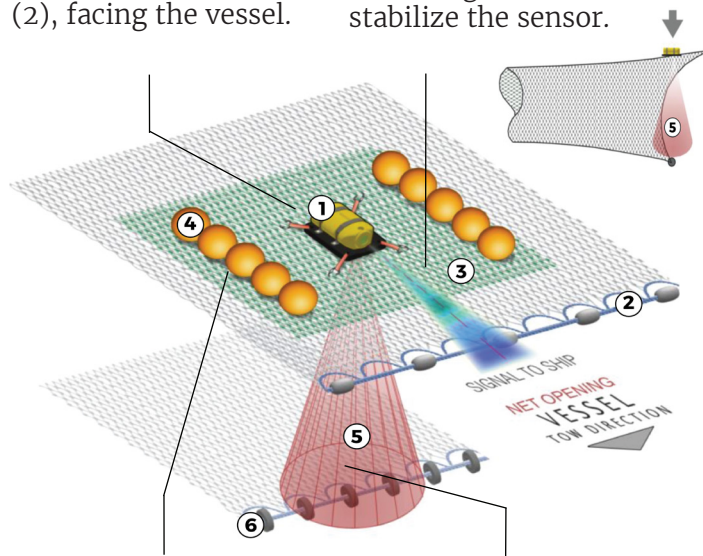
3 Buoys (4) on either sides stabilize the sensor during trawling operations.

4 Buoys ensure that down-looking transducer beam (5) is vertical for footrope (6) detection.
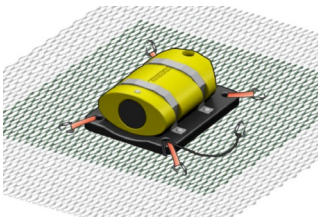
Marport recommends the use of a netting bag located in the desired mounting position. Use a safety line between one of the sensor's attachment lugs and a suitable location in the net, as shown in the above image.

The safety line should be a steel wire with fitted small shackles at either end. Sensors that are not properly secured may be lost during fishing operations.

If you want to see the footrope, move back the sensor of a few meters.

Display

Sensor data such as echogram, depth, temperature, pitch and roll are displayed on Scala2 software.

You can customize their display types:

- Text
- History Plot
- Dial
- Gauge

Trawl Explorer has different features to help you monitor your trawl. These features depend on your sensor version.

- **Target Strength** (V3): Target strength of individual targets is displayed on the echogram when you hover over it with your mouse. It helps you identify fish.

- **TVG:** Pings sent by the sensor are attenuated in the water. It means the deeper the target is, the more attenuated signals will be received and sent back. TVG (time variable gain) is here to compensate this effect by using a lower gain level when signals travel toward a target at a small distance and higher gain level when signals travel toward deeper targets. The end result is to compensate sounding attenuation and therefore to show a same target strength for a same target at different depths.

  You can set TVG at 20 log (better target strength values of bottom and schools of fish.), 40 log (better target strength values of individual targets) or 30 log (compromise between the 2 others).

- **Autorange** (V2, V3): The range of the sounding can adapts automatically to the bottom detected. This enables you to have better echogram image quality when at shallow depths, because the range will become smaller (the smaller the range, the better the image quality). You can use this mode only with Down only mode and with a trawl opening less than 20 m.

Below are examples of echograms from Trawl Explorers.
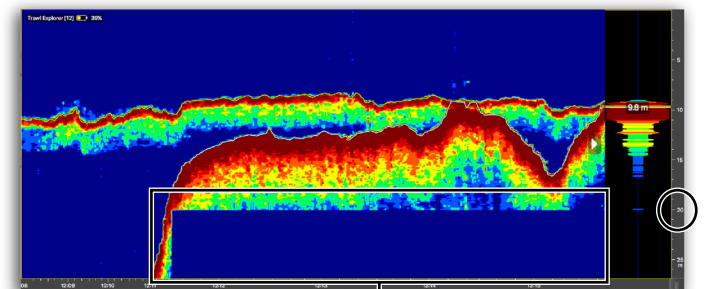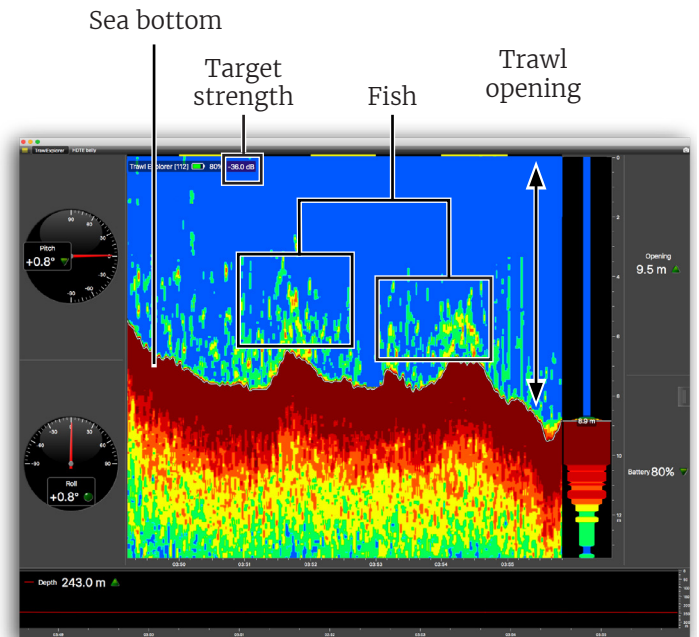
Autorange

Sensor Daily Use

The Trawl Explorer sensor automatically starts when in sea water. It switches to wireless connection mode when out of water. When in wireless mode, the sensor turns off after 10 minutes if there is no user action.

When the sensor is not in operation, look at the transducer LED to make sure that the unit is not in running mode and discharging the batteries.

Rinse the sensor with fresh water between uses, especially the shoulder bolts (see illustration p.1). You can do it when the sensor is in running mode out of water. Dry the charging bolt afterwards.

The operational life time can be up to 75 hours depending on the power uplink settings and options.

Trawl Explorer sensors has Lithium-Ion batteries. Charge them with Marport Basic Sensor Charger or Multi-Charger. Avoid full discharges and charge the battery whenever possible, at any battery level.

Maintenance

External

- Check that all attachment equipment are not worn or torn. Replace when appropriate.
- Make sure that Trawl Explorer sensor is clean. Remove debris with a piece of wood or screwdriver. Wash away mud or debris with warm water but do not use highly abrasive materials.

⚠ Be careful with the sensor. Sensors and components are sensitive to mechanical shocks and contamination.

Internal

Only an approved Marport dealer can access the internal unit. Warranty will become void if anyone other than an approved dealer tries to do internal maintenance duties on sensors.

Dealers, please refer to the Trawl Explorer service manual for more detailed maintenance instructions.

Marport recommends you to return Trawl Explorer sensors to an approved Marport dealer every 2 years for maintenance.

⚠ To ensure proper and safe use of this equipment, carefully read and follow the instructions in the Trawl Explorer user guide.

Offices

France
Marport France SAS
8, rue Maurice Le Léon
56100 Lorient, France
supportfrance@marport.com

Iceland
Marport EHF
Fossaleyni 16
112 Reykjavík, Iceland
supporticeland@marport.com

Norway
Marport Norge A/S
Breivika Industrivei 69,
6018 Ålesund, Norway
ggrimsson@marport.com

South Africa
Marport South Africa
Cape Town, Western Cape,
11 Paarden Eiland Road,
Paarden Eiland, 7405
csanter@marport.com

Spain
Marport Spain SRL
Camino Chouzo 1
36208 Vigo (Pontevedra) Spain
supportspain@marport.com

USA
Marport Americas Inc. USA
12123 Harbour Reach Drive
Mukilteo, WA 98275 USA
supportusa@marport.com