

LOWRANCE®

Ghost® Series

Installation Manual

ENGLISH



Preface

As Navico is continuously improving this product, we retain the right to make changes to the product at any time, which may not be reflected in this version of the manual. Please contact your nearest distributor if you require any further assistance.

It is the owner's sole responsibility to install and use the product and transducers in a manner that will not cause accidents, personal injury or property damage. The user of this product is solely responsible for observing safe boating practices.

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This statement, any instruction manuals, user guides and other information relating to the product (Documentation) may be translated to, or has been translated from, another language (Translation). In the event of any conflict between any Translation of the Documentation, the English language version of the Documentation will be the official version of the Documentation. This manual represents the product as at the time of printing. Navico Holding AS and its subsidiaries, branches and affiliates reserve the right to make changes to specifications without notice.

Compliance Statements

Europe

Navico declare under our sole responsibility that the product conforms with the requirements of:

- Trolling motor CE under RED Directive 2014/53/EU
- Compass CE under EMC Directive 2014/30/EU

-

United States of America

Navico declare under our sole responsibility that the product conforms with the requirements of:

- Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

! Warning: The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

- **Note:** This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that of the receiver is connected.
- Consult the dealer or an experienced technician for help.

ISED Canada

This device complies with Innovation, Science and Economic Development Canada's license-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

La traduction française de ce document est disponible sur le site Web du produit. **Australia**

and New Zealand

Navico declare under our sole responsibility that the product conforms with the requirements of:

- Level 2 devices of the Radiocommunications (Electromagnetic Compatibility) standard 2017.
- Radiocommunications (Short Range Devices) Standards 2014.

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- NMEA® and NMEA 2000® are trademarks of the National Marine Electronics Association.
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Introduction

About this manual

This manual is a reference guide for installing the trolling motor. Important text that requires special attention from the reader is emphasized as follows:

→ **Note:** Used to draw the reader's attention to a comment or some important information.

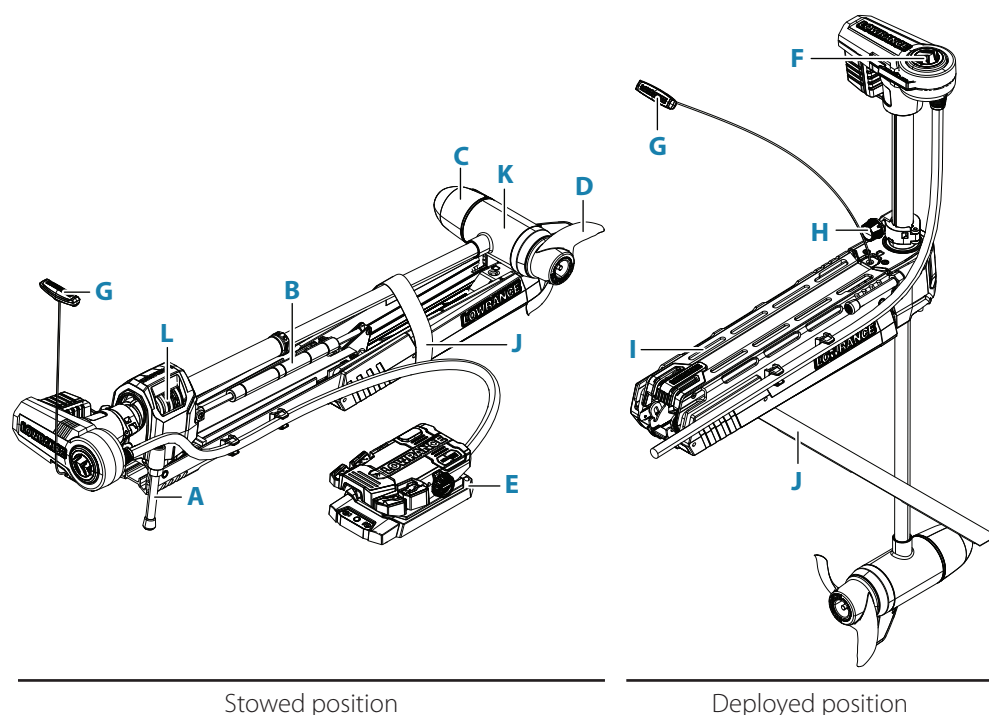
! **Warning:** Used when it is necessary to warn personnel that they should proceed carefully to prevent risk of injury and/or damage to equipment/personnel.

Limitations

! **Warning:** To avoid damage to your boat, this device should be installed by a qualified marine installer. Specific knowledge of marine electrical systems is required for proper installation.

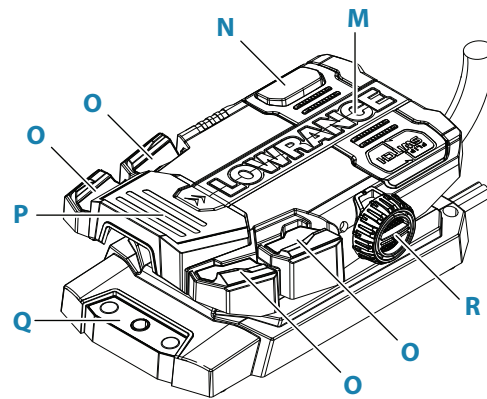
! **Warning:** This product is intended to be used in freshwater only and a sacrificial anode (sold separately) is required for use in brackish water. Use of the product in brackish water (without the anode) or saltwater will void the warranty.

Product overview



- A** Stabilizer
Supports the trolling motor when in the stowed position.
- B** Stow and deploy assist spring
Reduces the force needed to stow and deploy the trolling motor.
- C** HDI Nose cone transducer
- D** Propeller
- E** Foot pedal

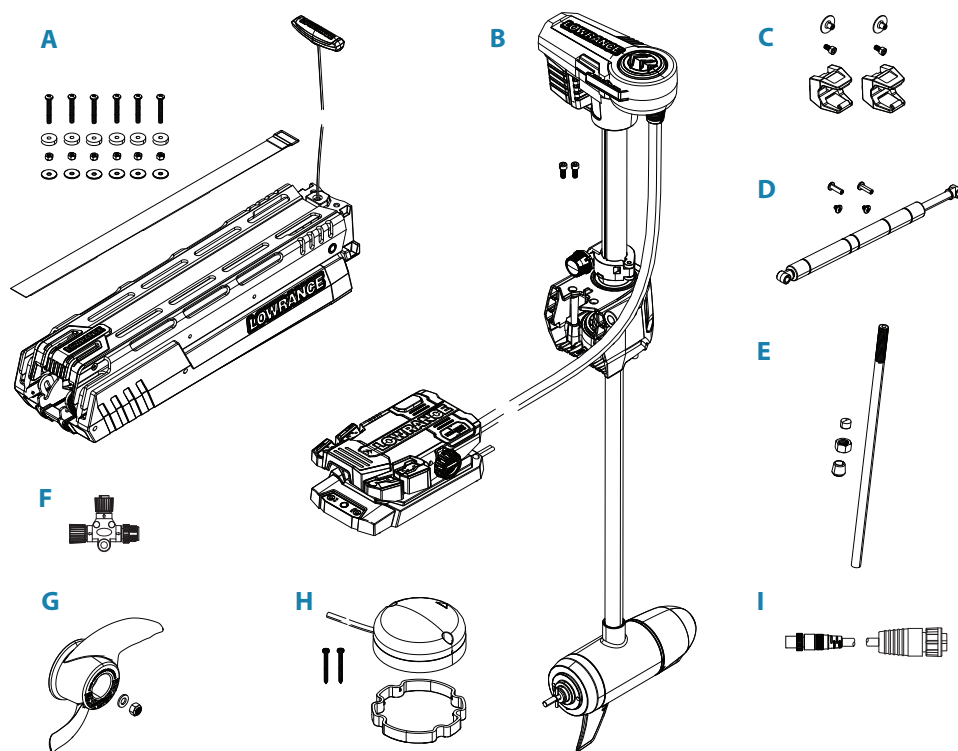
- F** Direction indicator
- G** Braided stainless steel pull cable and handle
Used when stowing and deploying the trolling motor. The trolling motor is latched in both stowed and deployed positions, pulling the cable releases the latching.
- H** Depth adjustment knob
When loosened, the lower unit depth can be adjusted.
- I** Motor mount
- J** Stow strap
- K** Lower unit
- L** 360 breakaway



Foot pedal

- M** Toe end
- N** Momentary switch
- O** Mode and action keys
- P** Heel end
- Q** Power key and battery capacity indicator
- R** Speed adjustment knob

Parts included



A Mount and hardware kit

- 1x Mount
- 1x Stow strap
- 6x 1/4"-20 x 3.5" Phillips screw
- 6x Rubber spacer
- 6x Washers
- 6x 7/16" Nylock nut

B Motor assembly kit

- 1x Motor assembly
- 2x M8 20 mm hex screw

C Cable management clip kit

- 2x Cable clips
- 2x M4 8 mm hex screw
- 2x M4 binding barrel

D Stow and deploy assist spring kit

- 1x Gas spring
- 2x 1/4"-20 x 5/16" Phillips screw
- 4x Washers
- 2x 5/16" binding barrel

E Stabilizer kit

- 1x Top cap
- 1x Jam nut 3/4"-10
- 1x Stabilizer rod
- 1x Foot cap

F NMEA 2000 T-connector

G Propeller kit

- 1x M10 Nylock nut
- 1x Washer
- 1x Propeller

- H Trolling motor compass (TMC-1) kit
 - 1x TMC-1
 - 1x TMC-1 gasket
 - 2x 6-20 x 1-1/2" Phillips screw
- I Transducer cable adapter (mini 9-pin to regular 9-pin connector)

Opening and closing the mount

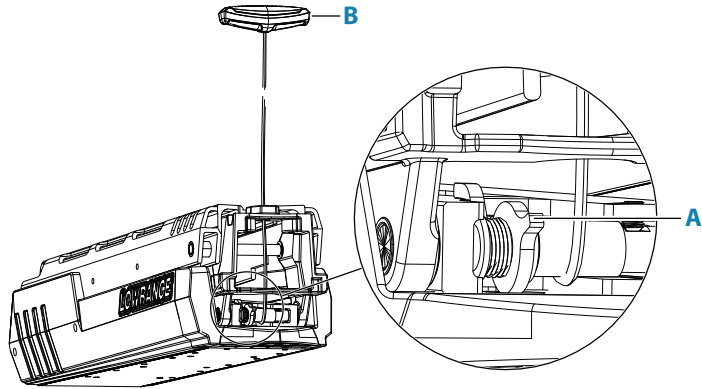
The mount will latch in both its open and closed position.

! Warning: The mount has a secondary latch that prevents unintentional opening or closing of the mount when the motor assembly is not attached to the mount. Do not override the secondary latch if the stow and deploy assist spring has been installed. Overriding the secondary latch can cause the mount to open unexpectedly with considerable force.

The secondary latch is automatically deactivated when the motor assembly is attached to the mount.

To open the mount

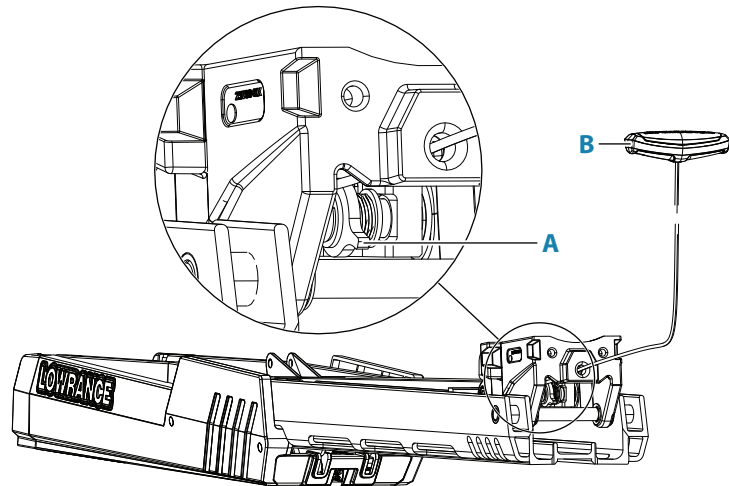
Push the secondary latch (A) down and simultaneously pull the pull cable (B) to unlatch and open the mount.



To close the mount

- 1 Push the secondary latch (A) down and simultaneously pull the pull cable (B) to unlatch the mount from the stowed position.

→ **Note:** The mount can be damaged if slammed shut without pushing the secondary latch.



- 2 While holding the secondary latch (A) down, slowly close the mount while allowing the front latch to lock into place.

2

Installation

Mounting guidelines

Do not:

- Mount any part where it will interfere with the operation, launching, or retrieving of the boat.

Do:

- Mount the trolling motor on the port side of the boat.
- Mount the trolling motor as close to the keel or centerline of the boat as possible.
- Make sure the area under the mounting location is clear to drill holes, and install nuts and washers.
- Make sure that the shaft has a clearance of at least 40 mm (1.5") to the gunwale of the boat.
- Mount the motor in a way that it does not encounter any obstructions as it is lowered into the water or raised into the boat when stowed and deployed.

Cable management clips

Parts required

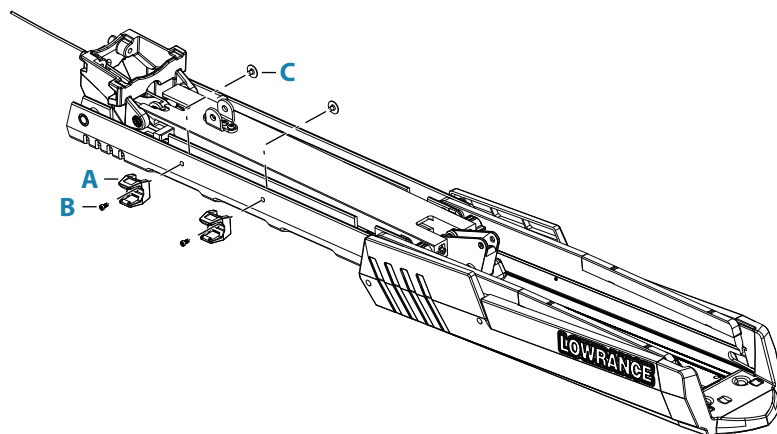
Item	Qty	Description
A	2	Cable management clips
B	2	M4 8 mm hex screw
C	2	M4 binding barrel

Tools required

- 3 mm hex key

Procedure

- 1 Open the mount, refer to "Opening and closing the mount" on page 9.
- 2 Install the cable management clips to the mount. It should be possible to rotate the cable management clips when the screws and binding barrels are fully tightened.



Attach the motor to the mount

It is recommended that the mount is placed on a workbench during assembly.

Parts required

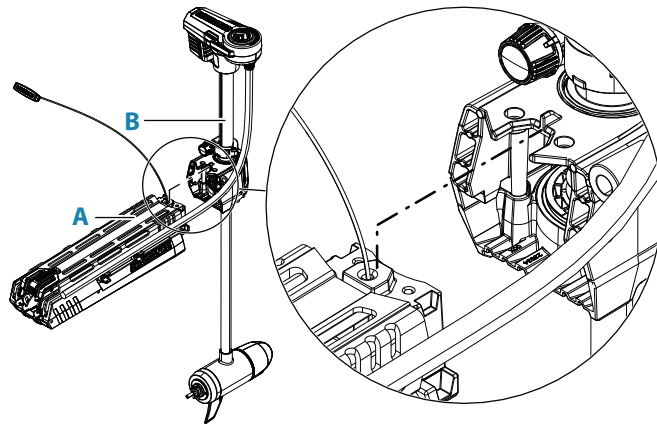
Item	Qty	Description
A	1	Mount
B	1	Motor assembly
C	2	M8 20 mm hex screw

Tools required

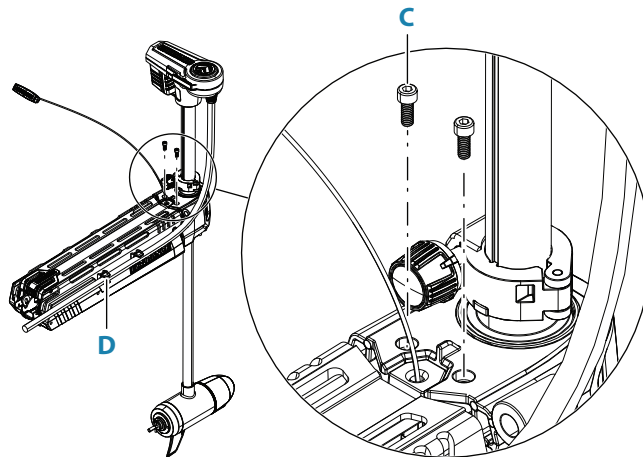
- 6 mm hex key

Procedure

- 1 Close the mount, refer to “Opening and closing the mount” on page 9.
- 2 Align the keyways on the motor assembly to the keyways on the mount. Lower the motor assembly until it rests on the mount.



- 3 Secure the motor assembly to the mount with the screws. Before tightening the screws, make sure that it is possible to open the mount by operating the pull cable. When correctly installed, the motor assembly will deactivate the secondary latch, refer to “Mounting guidelines” on page 10. Torque the screws to 19 Nm +/- 2 Nm (14 ft lbs +/- 1.5 ft lbs). Secure the trolling motor cable in the cable management clips (D). Cable ties can be used with the clips to provide additional cable retention if needed.



Mount the trolling motor on the boat

The trolling motor should be mounted on the port side of the boat. Mount the trolling motor so that the shaft is as close to the keel or centerline of the boat as possible. It is recommended that the stow and deploy assist spring is installed after the trolling motor is mounted to the deck of the boat.

Parts required

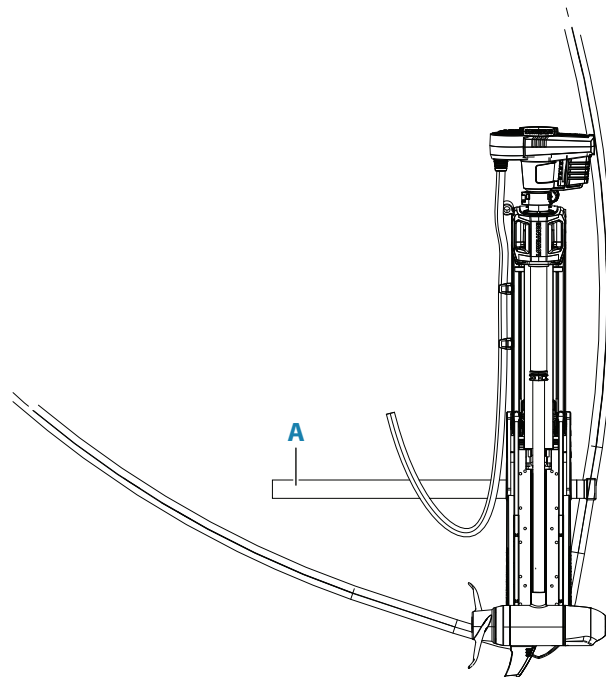
Item	Qty	Description
A	1	Stow strap
B	6	1/4"-20 x 2" Phillips screw
C	6	Rubber spacers (optional)
D	6	Washers
E	6	1/4" Nylock nut

Tools required

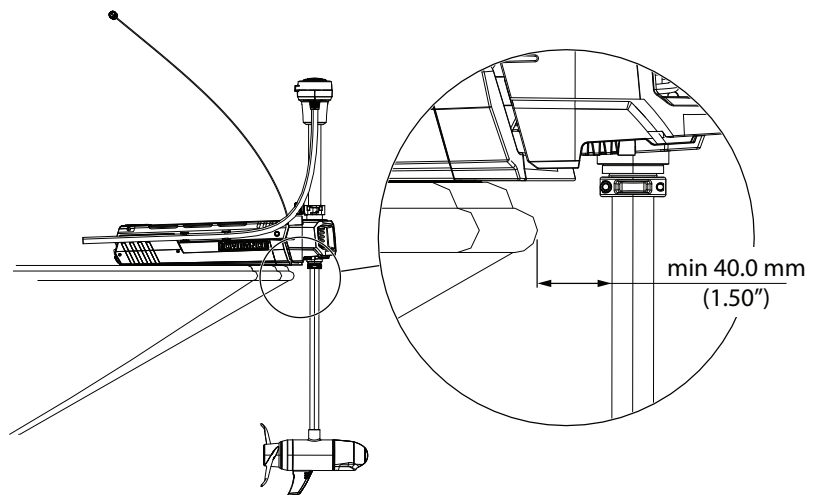
- Phillips screwdriver #2
- 7/16" box end wrench
- Tape-measure
- Drill with 9/32" Drill Bit
- Marker pen

Procedure

- 1 Check the placement of the trolling motor when in the stowed position. Place the stow strap under the mount, between the second and third set of bolt holes from the bow of the boat. Test that the hold stow strap can be used to secure the trolling motor shaft when in stowed position.

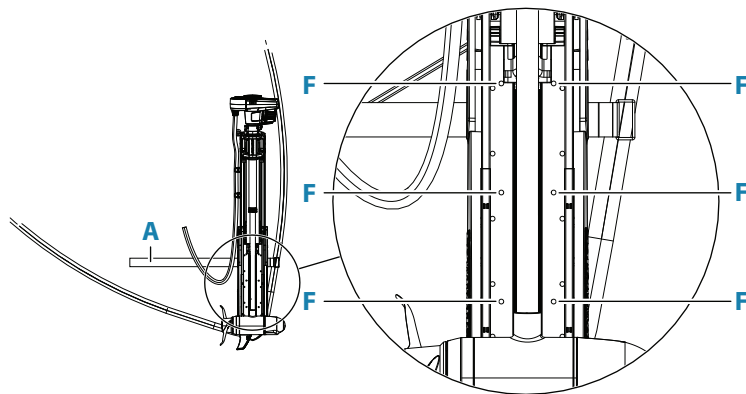


- 2** Check the placement of the trolling motor in the deployed positions. Make sure that the shaft has a clearance of at least 40 mm (1.5") to the gunwale of the boat.



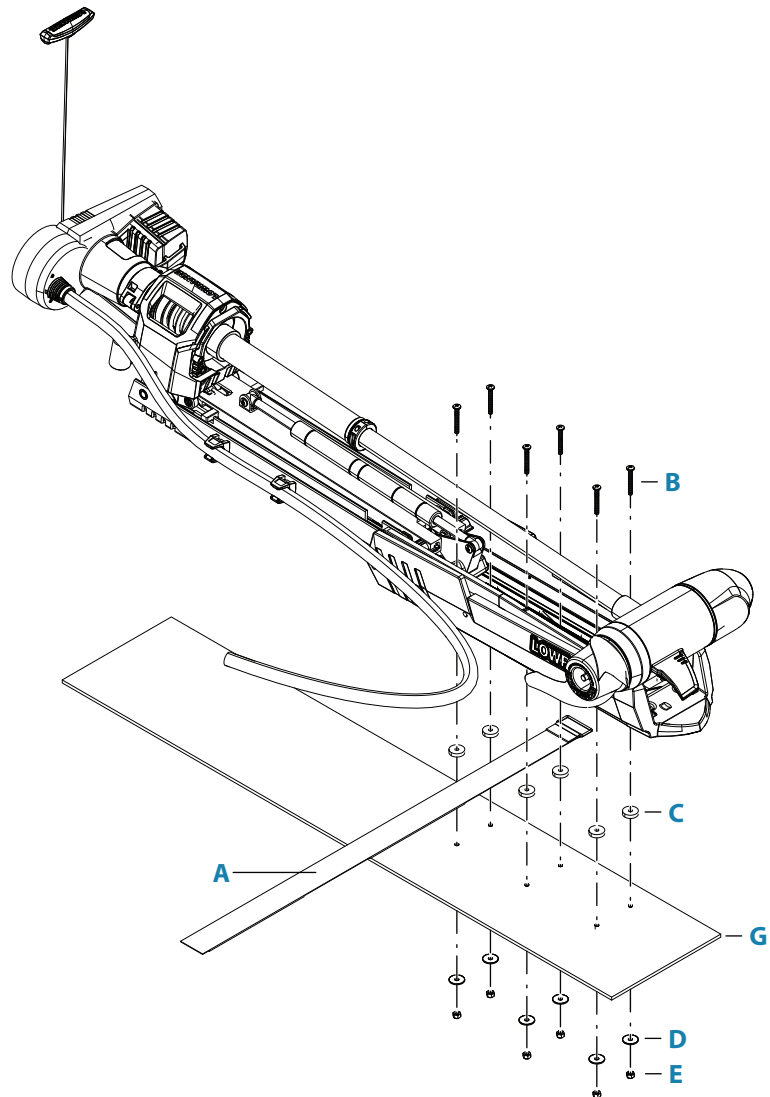
- 3** Once the mount is in position, mark the bolt holes to be used. It is recommended to use the bolt holes (**F**) highlighted in the illustration below. The bolt pattern you selected may depend on the available deck space and/or if you are replacing another trolling motor. Drill through the deck of the boat using a 7.5 mm (9/32") drill bit.

It is recommended to use all 6 screws when installing the mount. 4 screws must be used, at a minimum. In the event that you are unable to use all 6 screws, it is recommended to have at least 2 screws on each side that are located the farthest apart on the base of the mount.



- 4** Make sure that the stow strap is located between the second and third set of bolt holes from the bow of the boat. Double check that it can close around the Mount when the trolling motor is in the stowed position.

- 5 Screw the trolling motor assembly to the deck of the boat (G). Use marine grade sealant in the holes to prevent water ingress. The rubber spacers are optional and can be used to level the trolling motor on the deck.



Stow and deploy assist spring

In the images below, the motor assembly is hidden for illustration purposes.

! **Warning:** The mount has a secondary latch that prevents unintentional opening or closing of the mount when the motor assembly is not attached to the mount. Do not override the secondary latch if the stow and deploy assist spring has been installed.

Parts required

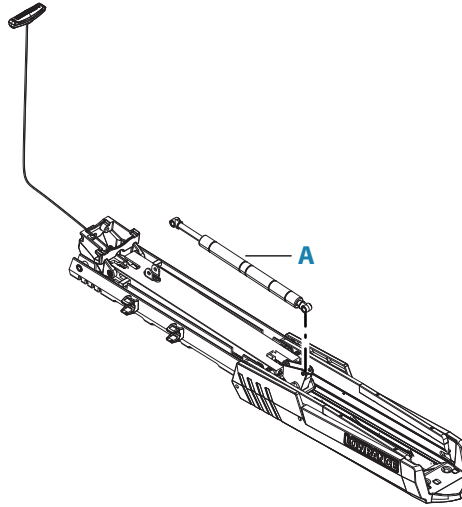
Item	Qty	Description
A	1	stow and deploy assist spring
B	2	1/4"-20 x 5/16" Phillips screw
C	2	5/16" binding barrel

Tools required

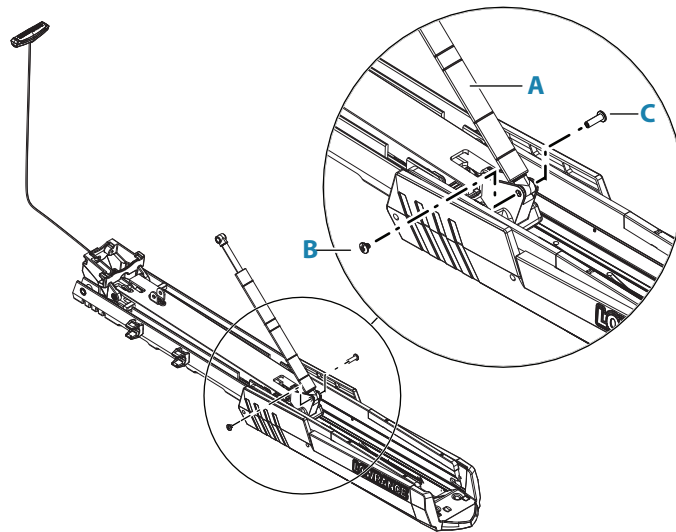
- 2x Phillips screwdriver #3

Procedure

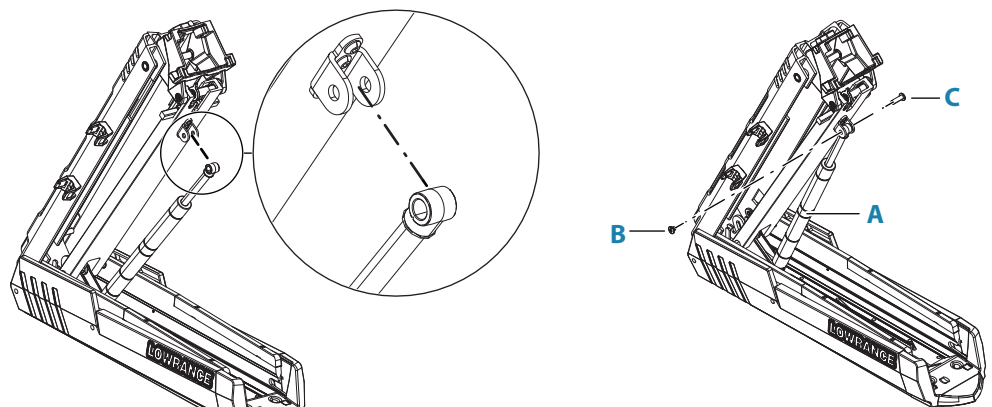
- 1 Position the trolling motor in the stowed position and place the stow and deploy assist spring and the two washers in the lower bracket. Ensure that the direction arrow on the spring is pointing to the top of the mount.



- 2 Secure the stow and deploy assist spring and the washers to the lower bracket using the screw and binding barrel.



- 3 Raise the motor until the stow and deploy assist spring reaches the upper bracket. Place the two washers inside the bracket and secure the upper arm of the stow and deploy assist spring.



Stabilizer

The stabilizer is used to support the trolling motor when in stowed position.

! **Warning:** If the stabilizer rod is too long it can prevent proper latching of the trolling motor in the stowed position. If the stabilizer rod is too short, it will cause inadequate support of the trolling motor. Improper latching or support may cause damage.

Parts required

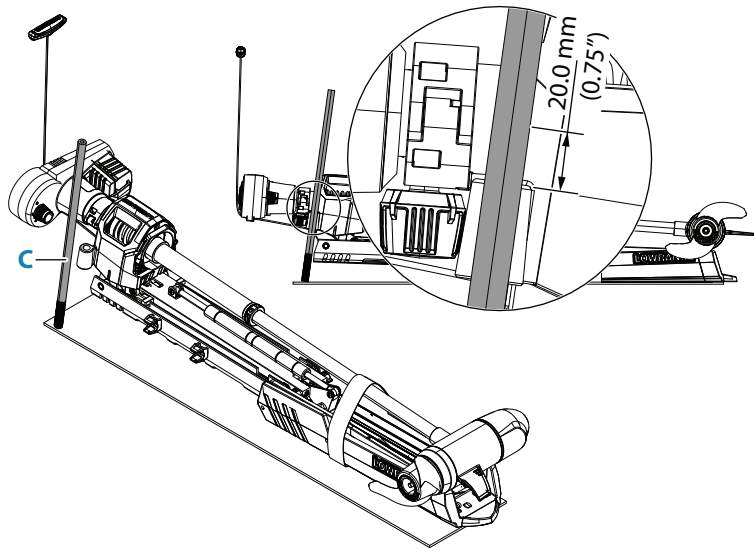
Item	Qty	Description
A	1	Top cap
B	1	Jam nut 3/4"-10
C	1	Stabilizer rod
D	1	Foot cap

Tools required

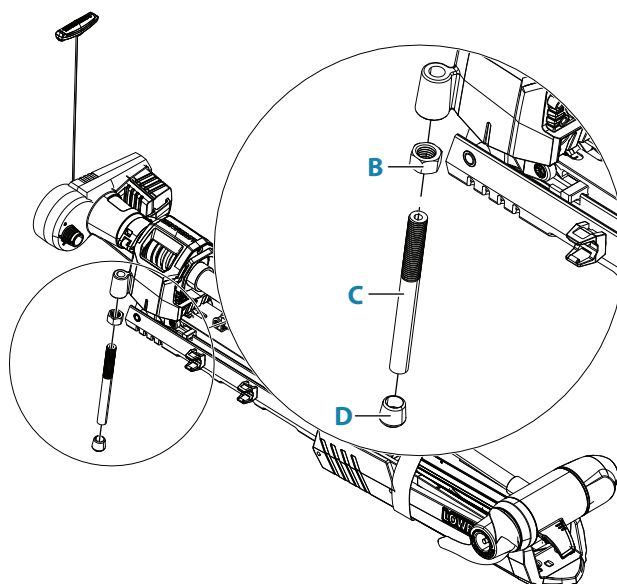
- Hack saw
- File
- Wrench

Procedure

- 1 Place the motor in the stowed position. Measure the proper length of the stabilizer rod by placing it, with the threaded end down, onto the deck surface so that it is parallel to the stabilizer rod adapter. Mark the rod 20 mm (0.75") past the top of the stabilizer rod adapter.



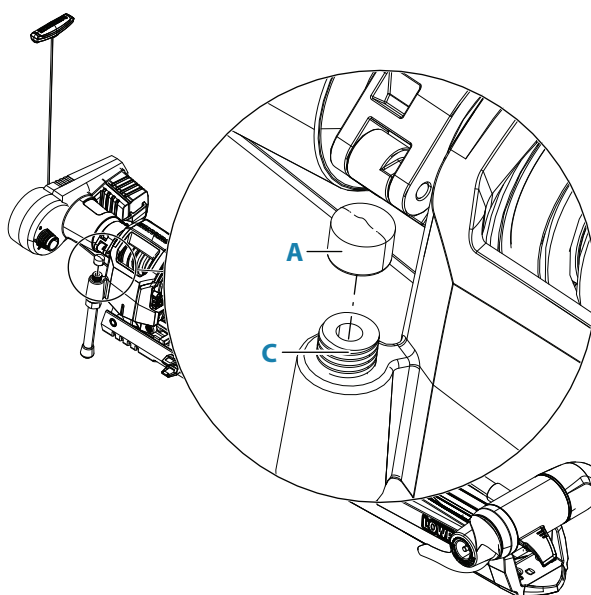
- 2 Cut the rod. Remove any sharp edges around the cut.
- 3 Attach the foot cap and screw down the jam nut on the stabilizer rod. Install the stabilizer rod into the adapter located on the 360 breakaway.



- 4 Adjust the stabilizer rod in the adapter so that the foot cap touches the deck surface. You should be able to lift the foot approximately 10 mm (1/2") before you hit the latch. Once in the correct position, tighten the jam nut against the stabilizer rod adapter.

! Warning: Incorrect installation could cause the mount to open in rough conditions.

- 5 Install the top cap if there are threads exposed above the adapter.



Propeller

Parts required

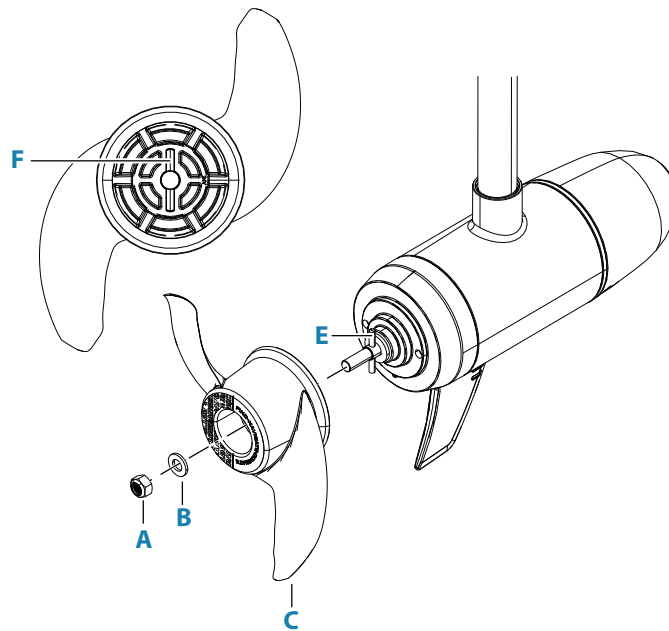
Item	Qty	Description
A	1	M10 nylock nut
B	1	Washer
C	1	Propeller
D	1	Anti-seize compound 1g

Tools required

- 17 mm deep socket

Procedure

Install the propeller (torque 13 Nm (10 ft-lb)). Make sure that the drive pin (**E**, pre-installed) aligns with the slot in the propeller (**F**). Clean threads of the propeller shaft of any pre-existing grease and debris and apply included anti-seize compound (**D**) prior to installing M10 nylock nut (**A**).



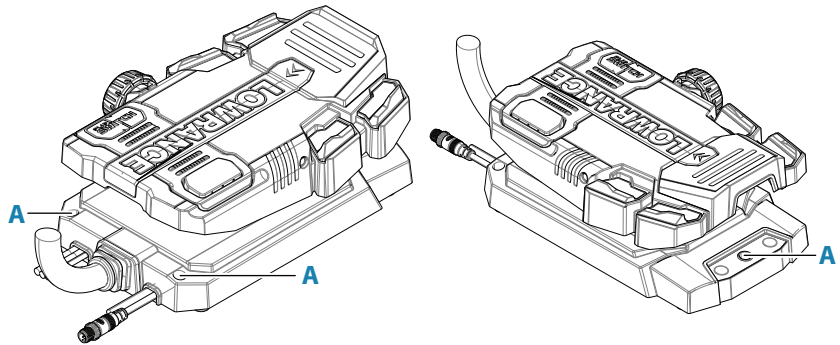
! Warning: Do not use power tools to install the nylock nut (**A**). Only hand tools should be used for installation of the nut.

Foot pedal

It is recommended to mount the foot pedal to the deck of the boat to prevent it from being damaged during transport and to make motor operation more reliable. The foot pedal has 3 mounting holes (A). Only tighten enough to slightly compress the bumper pads underneath the foot pedal.

For foot pedal dimensions, refer to "Dimensional drawings" on page 28.

- **Note:** Mounting hardware is not supplied. Obtain mounting hardware that suits your boat and installation. Use screws with a diameter of 3.17 - 4.76 mm (1/8" - 3/16").



How to use the FlipSwitch

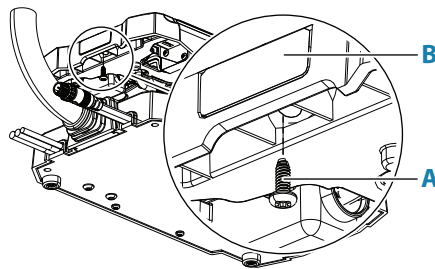
FlipSwitch allows you to position the momentary switch on the left or right side of the foot pedal.

Tools required

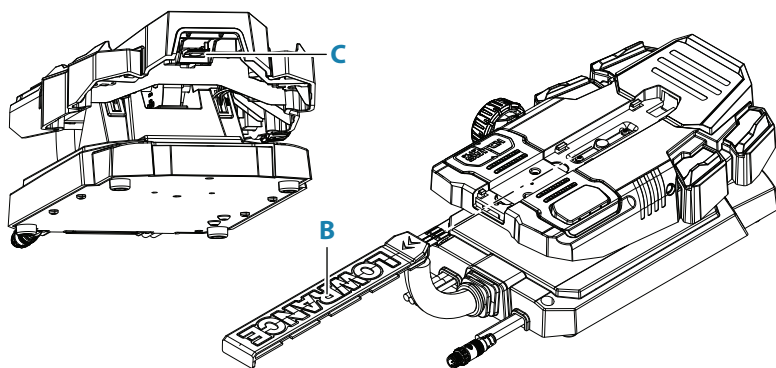
- 1x Phillips screwdriver #2

Procedure

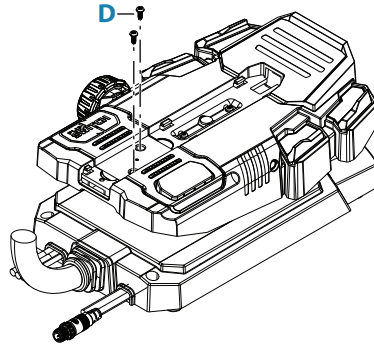
- 1 Remove the lock screw (A) that secures the cover plate (B).



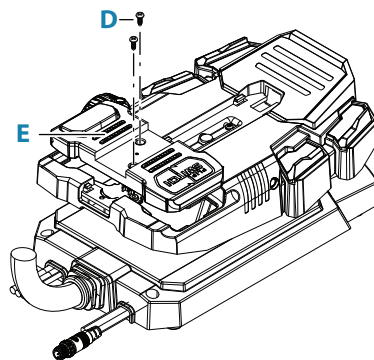
- 2 Press the locking tab (C) upwards and slide the cover plate (B) forward until it is free.



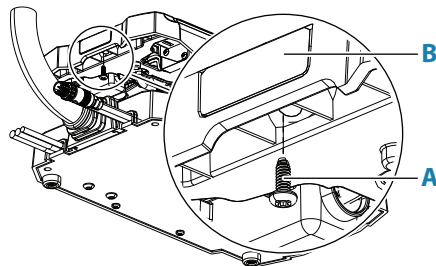
- 3 Remove the screws (D) that secure the FlipSwitch assembly.



- 4 Turn the FlipSwitch assembly (E) 180° and fasten the screws (D) that secure the FlipSwitch assembly.



- 5 Slide the cover plate (B) back in place and fasten the lock screw (A).



Trolling motor compass (TMC-1)

The compass (B) should be mounted horizontally with the arrowhead pointing forward, parallel to the keel of the boat (D).

The mounting location should be as far as possible (minimum 0.9 m (3 ft)) from disturbing magnetic influences such as engines, ignition cables, or other large ferrous metal objects, and at least 0.6 m (2 ft) from the trolling motor head and mount. A TMC-1 extension cable (000-15582-001) can be purchased separately if necessary.

Parts required

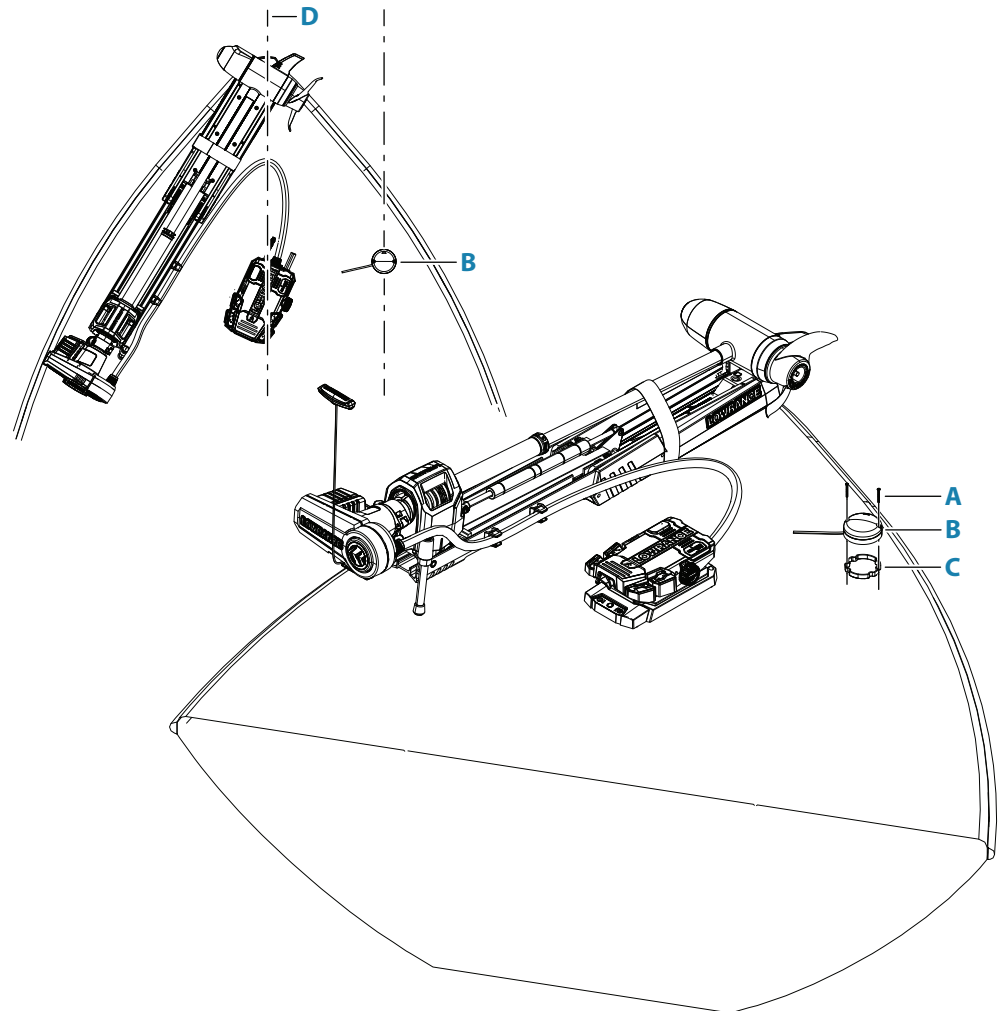
Item	Qty	Description
A	2	6-20 x 1-1/2" Phillips screw
B	1	TMC-1
C	1	TMC-1 gasket

Tools required

- Phillips screwdriver #2

Procedure

- 1 Mark the screw holes using the compass as a template.
- 2 Drill 3 mm (0.12") pilot holes.
- 3 Insert the compass gasket into the compass body.
- 4 Screw the compass to the boat.



Transducer

For transducer installation, refer to separate documentation supplied with your transducer.

3

Wiring

Wiring guidelines

Do not:

- Make sharp bends in the cables
- Run cables in a way that allows water to flow down into the connectors
- Run the data cables adjacent to radar, transmitter, large/high current carrying cables, or high frequency signal cables
- Run cables so they interfere with mechanical systems
- Run cables over sharp edges or burrs

Do:

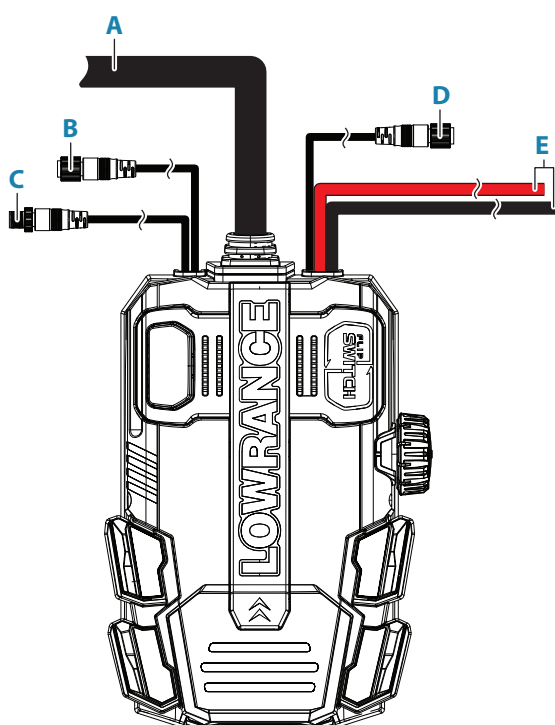
- Make drip and service loops
- Use cable-tie on all cables to keep them secure
- Solder/crimp and insulate all wiring connections if extending or shortening the cables
- Ensure the correct wire diameter is used
- Keep joins as high as possible to minimize possibility of water ingress
- Leave room adjacent to connectors to ease plugging and unplugging of cables
- Make sure that the insulation of the power cables is not damaged

! Warning: Before starting the installation, be sure to turn electrical power off. If power is left on or turned on during the installation, fire, electrical shock, or other serious injury may occur. Be sure that the voltage of the power supply is compatible with the unit.

! Warning: The positive supply wire (red) should always be connected to (+) DC with a fuse or a circuit breaker (closest available to fuse rating).

Wiring overview

All wiring is made to and from the foot pedal.



- A** Cable to trolling motor
- B** Transducer output, mini 9 pin male connector
- C** NMEA 2000 interface, Micro-C connector
- D** Trolling motor compass (TMC-1) input, 5 pin female connector
- E** Power input, red and black wires

Power

The trolling motor can be powered from a 24 V DC or 36 V DC system. Refer to the technical specifications for more information.

Batteries

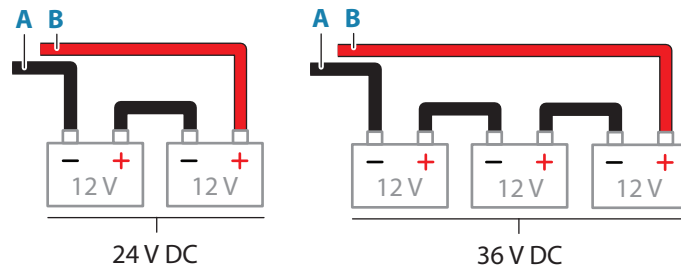
It is recommended to use deep cycle marine batteries. Use batteries with a high ampere hour rating to get the most out of your trolling motor. Refer to the battery manufacturer for maintenance and mounting information.

Wire and circuit breaker recommendations

Electrical system	Recommended circuit breaker	Recommended extension wire size		
		1.5 - 3 m (5 - 10 ft)	4.5 m (15 ft)	6 - 7.5 m (20 - 25 ft)
24 V DC	50 A at 24 V DC	8.5 mm ²		13.5 mm ²
36 V DC	50 A at 36 V DC	(8 AWG)		(6 AWG)

Connecting the batteries

! Warning: The positive supply wire (red) should always be connected to (+) DC with a fuse or a circuit breaker (closest available to fuse rating).



- A** DC negative to foot pedal, Black
- B** DC positive 24 V DC / 36 V DC to foot pedal, Red

Trolling motor compass (TMC-1)

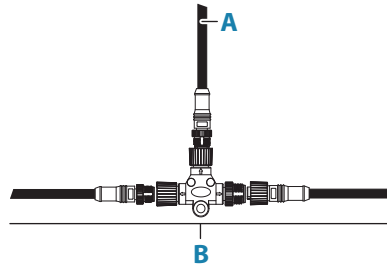


- A** Foot pedal compass (TMC-1) input, 5 pin female connector
- B** Compass (TMC-1) connector, 5 pin male connector

NMEA 2000

To control the trolling motor from a display unit, connect the trolling motor to the NMEA 2000 backbone. Refer to the display unit documentation for further instructions on how to control the trolling motor.

The trolling motor software can be updated from a display unit connected to the network. Refer to the documentation supplied with your display unit.

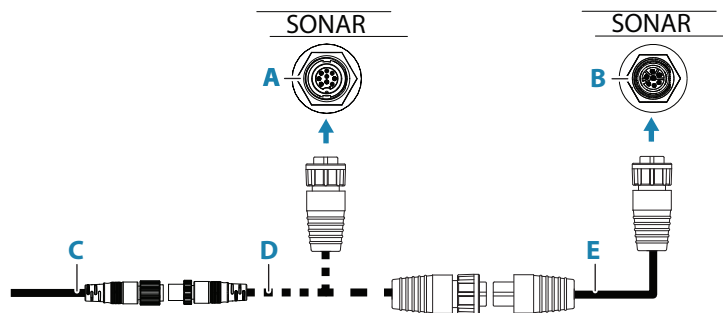


- A** Foot pedal NMEA 2000 interface cable, Micro-C connector
- B** NMEA 2000 backbone

Sonar

If a nose cone transducer is installed, connect the sonar cable to a display unit.

A 9-pin to 7-pin adapter cable can be used if your display unit is equipped with a 7-pin sonar port.



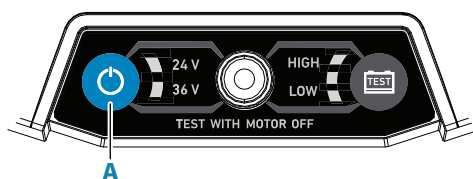
- A** Display unit with regular 9-pin transducer connector (sold separately)
- B** Display unit with regular 7-pin transducer connector (sold separately)
- C** Foot pedal transducer cable, mini 9-pin male connector (included)
- D** Mini 9-pin to regular 9-pin adapter (included)
- E** 9-pin to 7-pin adapter cable (sold separately, 000-13977-001)

4

Setup and commissioning

Power the trolling motor ON or OFF

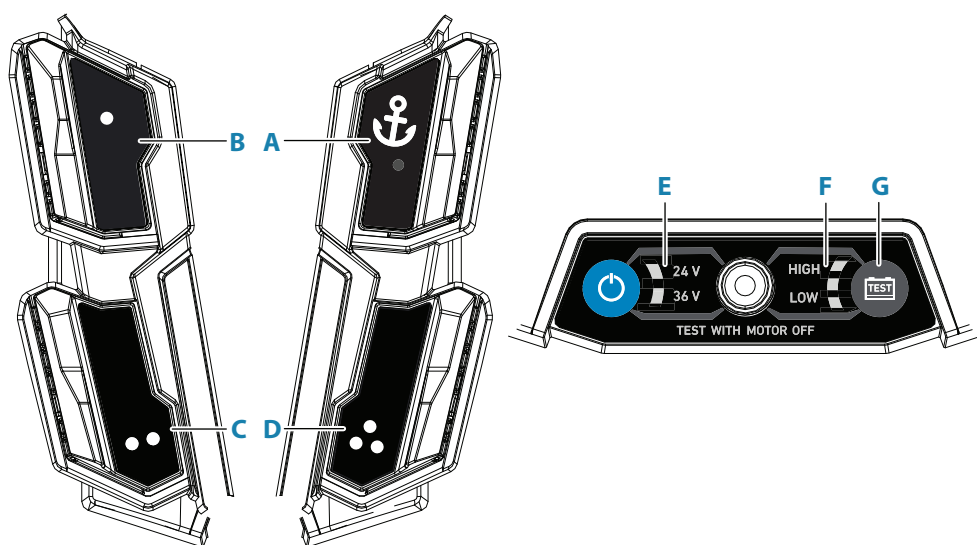
Press the power key (A) to power the trolling motor ON or OFF.



Configuration

All setup is done in the configuration mode.

Key and LED functionality



- A** Anchor key
- B** Configurable key 1
Default function: Propeller constant ON
- C** Configurable key 2
Default function: none
- D** Configurable key 3
Default function: none
- E** Power LEDs
- F** Battery status LEDs
- G** Battery test key

User configuration

Activate configuration mode

Entering configuration mode will allow you to select system voltage and perform calibration procedures.

Press and hold the Configurable key 2 and the Configurable key 3 until the Power LEDs start blinking. The direction indicator flashes 2 times and 2 long beeps will be heard.

You will need to exit configuration mode once you have completed the procedures.

Exit configuration mode

Press and hold the Configurable key 2 and the Configurable key 3 until the Power LEDs stop blinking. The direction indicator flashes 3 times and 3 long beeps will be heard.

Select voltage input level

- 1 Activate configuration mode.
 - 2 Press the Battery test key repeatedly until the correct Power LED is lit.
 - 3 Press and hold the Battery test key to save. The direction indicator flashes 3 times and 3 long beeps will be heard.
 - 4 Exit configuration mode or proceed with other calibrations.
- **Note:** An incorrect voltage setting will not damage the trolling motor.

Calibration of the TMC-1 compass

Good calibration compensates for the deviation (local field) on board the boat, and adapts the sensors to the earth's magnetic field strength for optimal resolution.

- **Note:** The setup of the compass should be done in calm conditions, with minimal wind and current, to obtain good results. Ensure that there is enough open water around the vessel to make a full turn.
- **Note:** For optimal performance, new calibration may be required if the boat has traveled to a location where the earth's magnetic field is significantly different from the location where it was last calibrated. This is because the strength of the magnetic field varies in different locations.
- 1 Activate configuration mode.
 - 2 Press and release the Configurable key 3. The direction indicator LED starts flashing and 2 long beeps will be heard.
 - 3 Perform a 390 degree turn (circle) with a steady, stable, low rate of turn (2-3°/second). This process could take a few minutes. If your rate of turn is too slow or quick, 2 beeps will be heard. Alter the rate of turn and perform another 390 degree turn.
 - 4 Once calibration is complete, the direction indicator will stop flashing and 3 long beeps will be heard.
 - 5 Exit configuration mode or proceed with other calibrations.

Calibration of mount bow offset

- **Note:** Misalignment between the lower unit and the heading sensor after calibration will cause poor performance in automatic steering modes.
- 1 Align the lower unit to the centerline of the boat before entering configuration mode.
 - 2 Activate user configuration mode.
 - 3 Press and release the Anchor key to calibrate the bow offset. The direction indicator flashes 3 times and 3 long beeps will be heard.
 - 4 Exit configuration mode or proceed with other calibrations.

Bluetooth pairing

- 1 Activate configuration mode.
- 2 Press and hold the Battery test key until the battery status LEDs start blinking. The direction indicator flashes 2 times and 2 long beeps will be heard.
- 3 Pair the trolling motor with your Bluetooth device.
- 4 When the pairing is completed the battery status LEDs stop blinking. The direction indicator flashes 3 times and 3 long beeps will be heard.
The trolling motor is now paired with your device.
- 5 Exit the configuration mode or proceed with other calibrations.

Factory reset

- 1 Activate configuration mode.
- 2 Press and hold the Configurable key 1 and Configurable key 2 until the direction indicator flashes 3 times and 3 long beeps are heard.
All user settings and calibrations are now set to factory defaults.

Modes and actions

- **Note:** The direction indicator will stay illuminated when in Course lock, Heading lock, or Propeller constant ON. In anchor mode, the direction indicator will illuminate when the propeller is active.

Configure trolling motor keys

The configurable keys can be configured from a compatible multifunction display unit to access additional modes and functionalities.

- **Note:** Please visit [www.ghostseries.com](#) to ensure your product is compatible and that the display software is up to date. The trolling motor and display must be connected to the same NMEA 2000 network. To configure the keys, refer to the documentation for your display unit.

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Dimensional drawings

Foot pedal

