![CoastKey®]

INSTALLATION GUIDE

EVINRUDE E-TEC™

Evinrude – E-TEC

(Does not apply to ICON/G2)

Contents:

Master FOB – Remote control
Start Panel
CECU (CoastKey Engine Control Unit)
CoastKey harness
User manual
Screws and cable ties

Installation:

Checklist before installation

- Check that the battery terminals, main power switch and common connection points are free from corrosion and that there are no loose connections. Check that the engine(s) tilt, and any other devices to which CoastKey is to be connected operates normally before installation. The main power switch must be turned off during the installation.
- Read the installation guide and user manual completely before installing the CoastKey system.
- The CoastKey system must not be installed in an explosive environment.
- The CoastKey system and design may not be changed or tampered with.
- The CoastKey should only be used for its original purpose and only installed as per the directions in this Installation Guide.
- Familiarize yourself with all safety rules and regulations in your region to avoid a breach of these rules and help prevent accidents.
- The installation of the CECU (CoastKey Engine Control Unit) is permitted only in areas that are protected against water intrusion. Ensure the CECU (CoastKey Engine Control Unit) unit is securely and firmly attached to the inside of the console with strips or screws.
- Strong electromagnetic fields may affect the system. The Start Panel should therefore not be placed in the immediate vicinity of other live cables or any radio devices such as VHF, radar or similar equipment.
- For security reasons, the power supply to the CECU is to be connected through a main power switch.
- Power supply 12-24V. Maximum system load per. output is 5A.
  (Check current draw when connecting to external systems like anchor winch etc.)
- Remember to complete the Test and Safety Form in this guide.

i | If your boat is equipped with multiple engines, repeat the installation procedure for each engine. If the tilt function is to be connected to multiple engines, the signal (Yellow and White wires) from the CoastKey harness on the first CECU (CoastKey Engine Control Unit) must be connected to the wires for common tilt of the engines.
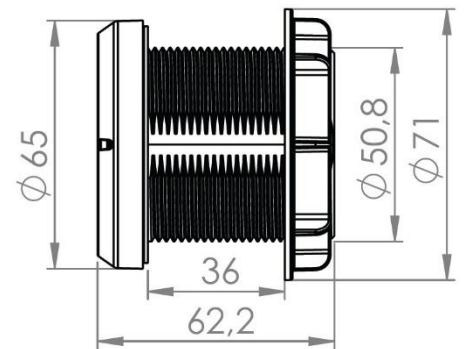
Location of the Start Panel

Drilling of holes:

The diameter of the Start Panel is 50.8 mm. Therefore, use a 52mm (2-1/16") hole saw of good quality designed for the material to be drilled.
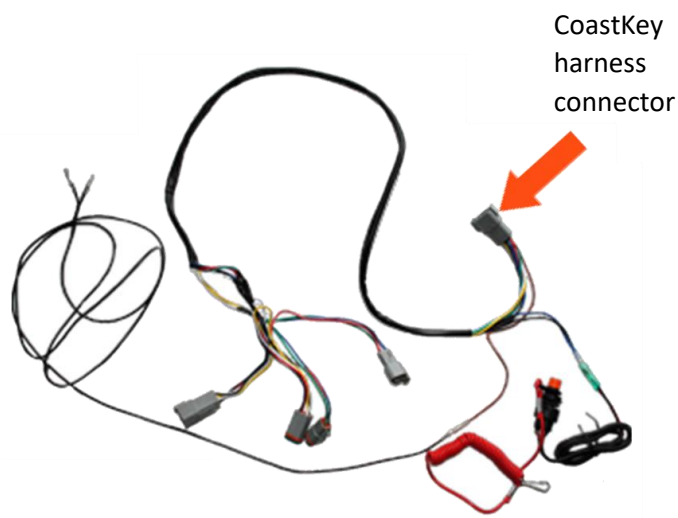
⚠️ | Make sure not to damage existing cables or installations when drilling the hole!

Installation procedure

1. General

Make sure the battery terminals, the main power switch and all common connection points are free of corrosion and that there are no loose connections. Check that the engine(s), tilt and any other devices that CoastKey will be connected to, are functioning normally before starting the installation. The main switch must be switched off during the installation.

CoastKey harness connector

2. Key switch and connections

Modify the key switch and its connections according to the description below:

Disconnect the yellow wire with red stripe from the post on the rear side of the ignition lock. (you might need to pull back the rubber boot to be able to loosen the connector.) Connect the female plug on the black T-split harness provided with the kit to the same post. The male connector on the T-split is then connected to the yellow and red wire that was removed from the ignition lock.

Figure 1

This ensures that your start-in-gear protection isn't compromised. (Figure 1)

A side-mounted remote control must be opened to access the ignition switch to perform the installation. The black T-split harness used to connect the start signal is routed out of the remote control along the control cables for gear and throttle. The black T-split harness' single end is connected to the brown wire in CoastKeys main harness.

Remove the black wire with yellow stripe from the ignition switch. (Figure 2)

Figure 2

(You might need to pull back the rubber boot to be able to loosen the connector.)

This wire will stay disconnected. Pull the rubber boot back on to the connector to avoid any possibility of a short circuit. On a top-mounted or panel mounted remote control application the ignition switch is installed in the console. In this case there is no need to open the remote control to perform the installation.

Figure 3

A gray/black 6-pin connector is located 20-30 cm (8-12") down the main harness from the ignition switch / remote control. This is the main connector between the ignition switch and the main harness from the engine. This connector is disconnected and the corresponding connectors on CoastKeys harness are inserted between the original connectors so that they form a T-connection. (See figure 3.)

The same procedure is done with the triangular gray 3-pin connector for the tilt signals. On a side-mounted remote control you'll find this connector in the same area as the main connector.
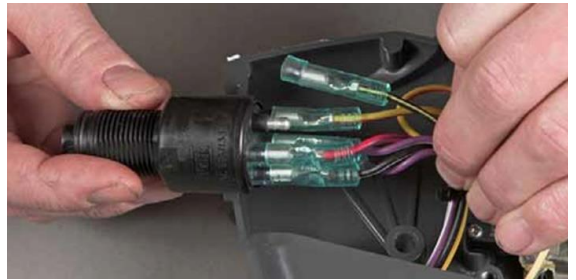On a top-mounted remote control you'll find this connector on the signal cables from the control handle.

i Be careful when opening the side-mounted control lever. Throttle and shift cables might be under tension!

3. Lanyard Switch (Optional)

Drill a 16mm (5/8") hole for the engine kill switch provided with the kit. Install it in a suitable place in the console. (See Figure 4)

Connect the kill-switch's wires to the black and blue wire on Coast- Key's harness. (See Figure 5)

The kill-switch is provided with the kit because the original manual lanyard cord attached to the key switch will stop operating when the black wire with yellow stripe is disconnected from the key switch.

If not in use, insulate the loose endings.

Figure 4

4. CECU (CoastKey Engine Control Unit) and Start Panel

Install the CECU according to the "Checklist before installation". Next plug the CECU into the CoastKey harness. Then connect to the Start Panel using the cord from the CECU and make sure that the connection is tightened.
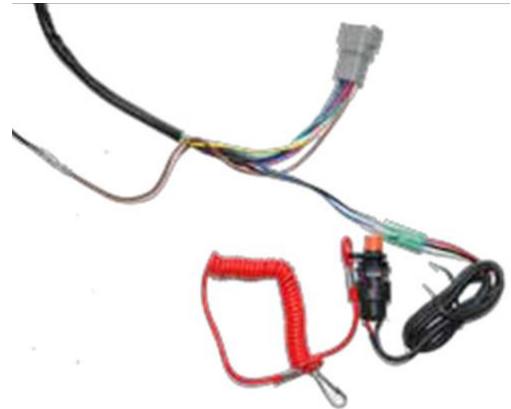
Figure 5

Circuit for additional functions (Optional)

The drawing shows an example of connection to an anchor winch. (Figure 45)

Locate the color code on the UP-signal cord from the switch. Strip and join together with the YELLOW cable from the CoastKey supplied harness.

Locate the color code on the DOWN-signal cord from the switch. Strip and join together with the WHITE cord from the CoastKey supplied harness.
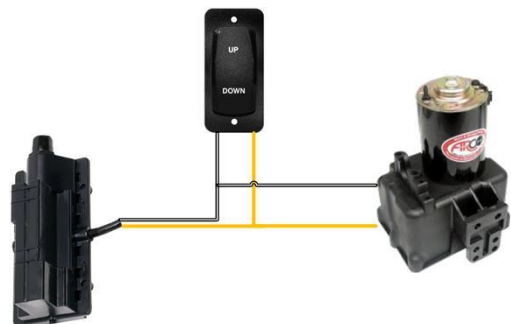

Figure 6 - Circuit for additional functions (Optional)

The CECU is always connected in parallel with the manual switch.

i | Secure the CoastKey harness and other loose wires using cable ties to ensure that no cables remain loose. Turn on the main power switch and complete the "Test and Safety Form" before using the system.

i | If your boat is equipped with multiple engines, repeat the installation procedure for each of the engines. If the tilt function is to be connected to multiple engines, the signal (Yellow and White wires) from the engine cable on the first CECU (CoastKey Engine Control Unit) must be connected to the wires for common tilt of the engines.

i | If the additional function(s) are used to operate third party equipment, the installer must ensure that the total power consumption is within the specifications. If you exceed the load of 5A the output must be connected via a separate relay. (Power supply 12-24V)

Checklist after Installation

Please refer to user manual for proper procedure for carrying out the steps below.	OK	Fail
Turn on the ignition and start the engine(s) with the Master FOB unit. Check that the start sequence works correctly and as specified.		
Check the radio range by moving the Master FOB unit more than 20 meters away from the boat to make sure that the wireless lanyard cord is functioning properly and stops the engine(s). (The distance needed to stop the engine(s) on land can vary based on the radio reflection where the boat is located.)		
The ignition is activated automatically 12 seconds after a man overboard situation has occurred. Check that the engine(s) can be started directly from the Start Panel after a simulated man overboard situation.		
Enter your PIN code by pressing the buttons on the Start Panel and check that the engine(s) start.		
Check that the AUX functions work from the Start Panel. (Only single engine installation)		
(Optional) If AUX function(s) are connected please check that they are working from the Master FOB unit.		

Electrical circuit color codes

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Signal function of the CECU	**Color on the CoastKey harness**	**Color on the ignition / control lever**	**Signal function engine**
12VDC	Red	Red / Lilac	12VDC
Ground	Blue	Black / White	Ground
Start	Brown	Yellow / Red	Start signal
Ignition	Green	Lilac	Ignition signal
Engine Cut-off signal	Black	Black / Yellow	Engine Cut-off signal
Tilt up signal	Yellow	Blue / White	Tilt up signal
Tilt down signal	White	Green / White	Tilt down signal
Digital input	Gray	*Not in use*	*Not in use*

Technical data

Master FOB
Dimensions (D x H): 50x12mm
Weight: 42g
Battery: CR2032
Battery life: Up to 2 years
(700-800 hours of engine operating time)
IP class: 67

CECU (CoastKey Engine Control Unit) (single)
Dimensions (L x W x H): 130x65x50mm
Weight: 180g
Power supply: 12/24V
IP class: 44
Power consumption:
• 0.3 mA with main power on and ignition off.
• 0 mA with main power is off.
Max load per output: 5A

Start Panel
Dimensions (D x H): 65x63mm
Weight: 75g
Power supply: 12/24V
IP class: 66
Power consumption:
• 1.7 mA at main power on and ignition off.
• 0 mA at main power is off.

CECU (CoastKey Engine Control Unit) (twin)
Dimensions (L x W x H): 130x65x50mm
Weight: 250g
Power supply: 12/24V
IP class: 44
Power consumption:
• 0.6 mA with main power on and ignition off.
• 0 mA with main power is off.
Max load per output: 5A

General data
Radio Frequency: 2.4 GHz
Range: 6-10 meters
Temperature range: -25C to + 60C

CECU (CoastKey Engine Control Unit) (triple)
Dimensions (L x W x H): 130x65x50mm
Weight: 430g
Power supply: 12/24V
IP class: 44
Power consumption:
• 0.6 mA with main power on and ignition off.
• 0 mA with main power is off.
Max load per output: 5A

This product is certified according to the following standards:
- CE Safety: EN 60950-1
- EMC: EN 301 489-17 V3.1.1
- Radio: EN 300 328 V2.1.1
- FC FCC Part 15.249
- ISED RSS-210

CECU (CoastKey Engine Control Unit) (quad)
Dimensions (L x W x H): 130x65x50mm
Weight: 500g
Power supply: 12/24V
IP class: 44
Power consumption:
• 0.6 mA with main power on and ignition off.
• 0 mA with main power is off.
Max load per output: 5A

i **Disclaimer**
See the user manual for further information.
The user manual must be read completely before using the CoastKey system.
Repairs that include the CoastKey product shall only be carried out by CoastKey AS, or by certified personnel, in accordance with applicable instructions.

Designs, manuals and features are subject to change.

For more information, visit our website:

www.CoastKey.com