



Usermanual

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Contents

Contents.....	2
Thank you for choosing Coastkey.....	3
Radio range	3
Brief description of button features.....	4
Setup when installing the system	5
Start Panel.....	7
The Master FOB unit, Remote Control.....	13
The Kill Switch Function - MOB	18
Change PIN code	20
Pairing a new or extra Master Fob unit.....	21
Battery replacement on the Master FOB device.....	22
Safety and warnings.....	23
Update / Download of new Firmware TBD!!.....	24
Use of App.....	24
Configuration	24
Before calling for support	25
Technical data	26
Disclaimer	28
Guarantee	29
Environment	29
FCC Statements.....	30

Thank you for choosing Coastkey

Equipped with CoastKey, you can move safely and freely around the boat and preserve the Kill Switch function without being attached to the traditional kill cord. With CoastKey, you also have the option to control up to four engines at the same time.

It is recommended that the CoastKey system is installed by a professional, with good knowledge of electrical connections.

Please read the user manual carefully before using the CoastKey system. Keep the user manual for future reference.

Radio range

The CoastKey system will normally provide you with a safety range of 6-10 meters from the location of the start panel. Keep in mind that the range will depend on the surroundings around the boat and where the start panel is placed. Therefore, the exact safety range will vary. It is important that you get familiar with the range after the system is installed. We recommend that you do a test of the safety range on board your boat. This should be done in open sea while you move around the boat.



Figure 1 Start Panel

Figur 2 Master FOB

Brief description of button features

Start Panel

1. AUX1 up / number 1
2. AUX2 right / number 2
3. AUX 1 down / number 3
4. AUX 2 left / number 4
- 5a. Ignition on / start button
- 5b. Ignition / stop button
6. LED light (Green / Red / Yellow / Blue)

MasterFOB - Remote

1. AUX1 up / number 1 (green LED)
2. AUX2 right / number 2
3. AUX1 Down / number 3 (Red LED)
4. AUX2 left / number 4
5. Ignition / Start / Stop - On / Off Button

Startpanel

1. AUX1 opp / tall 1
2. AUX2 høyre / tall 2
3. AUX 1 ned / tall 3
4. AUX 2 venstre / tall 4
- 5a. Tenning på/start-knapp
- 5b. Tenning av/stopp-knapp
6. LED lys (Grønn/Rød/Gul/Blå)

Setup when installing the system

First time power is turned on the Start Panel, the yellow LED will flash quickly. This means that a PIN must be created. Enter your required PIN. The code must be a combination of the numbers 1-4 (Figures 1, 1 to 4). The code may have 4-6 digits. Then press the START button to confirm your PIN. Write down and take care of your PIN code! Your PIN is the system's key (see separate section on PIN).

When the panel is opened, the supplied FOB device can be paired / connected to the system. To pair FOB with Start Panel, do the following:

Sequence	Action
1.	Hold the START button (fig.1, 5a) and the up arrow button (fig.1, 1) at the same time.
2.	After 5 seconds, yellow LED (fig.1, 6) will start flashing.
3.	Release START (fig.1, 5a) and up arrow button (fig.1, 1).
4.	Press and hold Center button (fig.2, 5) on FOB.
5.	After approx. 5 seconds, the green LED on the FOB will flash fast 5 times.
6.	Yellow LED on Start Panel stops blinking (fig.1, 6).
7.	Release the Center button (fig.2, 5) on FOB.
8.	FOB and Start Panel are now paired / connected.

NOTE: If the yellow LED does not flash when Start Panel is powered, the system has received a PIN at the factory. The default PIN code will then be: 1 2 3 4. In this case, FOB will already be paired with the Start Panel. It is recommended that you change this password. See how in the chapter "Change PIN."

NOTE:

- All engines must have separate starter batteries.
- Tilt the engine(s) into the water before starting the engine(s) to avoid damage.
- If a manual Kill Switch is installed, it must be properly secured before the engine(s) can be started.
- The main power switch must always be turned off when the boat is not in use.

Start Panel

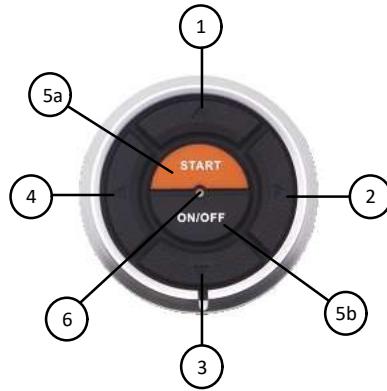


Figure 3 – Start Panel

When ignition is turned off, the red LED will flash. The red LED indicates that the panel is locked, but that the CoastKey unit is powered.

If the panel is locked it will not be possible to use the panel. The panel opens by entering your PIN code and turning the ignition on or pressing Start from the Master FOB.

Backlight

The backlight goes on when CoastKey is powered and each time a key is pressed. The backlight is always on for 2 minutes after power-up and after each last keystroke.

Unlock panel and ignition

Sequence	Action
1.	Enter the PIN code by pressing and releasing the buttons marked with numbers 1-4 (fig.3). The PIN consists of 4 to 6 numbers combined.
2.	The green LED flashes when the correct PIN is entered, while the red LED flashes incorrectly.
3.	Within 5 seconds, press and release ON / OFF (fig.3, 5b) button to turn on ignition.
4.	Ignition is activated on all installed engines.

If the ignition is not set within 5 seconds after the PIN code is verified, the panel will be locked.

When you start the engine from the Master FOB, no PIN code is required. The panel opens and ignition is activated.

Features available from open panel:

- Start / stop of engine(s)
- Individual start / stop of engine (multi-motor installation)
- AUX functions
- Pairing Fob
- Create new PIN code

Start and stop engine(s) from panel

NOTE:

- The panel must be unlocked.
- The Kill Switch function is not enabled in this case, which is indicated by yellow flashing LED and audio signal.
- Beep will only be active during the first 2 minutes.

Start engine(s)

Sequence	Action
1.	Press and hold the START button (fig.3, 5a).
2.	After about 2 seconds, the start signal goes on to all installed motors.
3.	Release START button when engine(s) have started.

Stop engine(s) – Ignition off

Sequence	Action
1.	Press and release the ON / OFF button (Fig.3, 5b).
2.	The engine(s) will stop and ignition switched off (stopping the engine(s) and ignition will run in the same sequence).
3.	The panel will be locked when ignition goes off (on all installed motors).

If your boat is equipped with several engines

If your boat is equipped with multiple engines, each engine can be individually started / stopped, and the ignition turned on / off.

When the panel is unlocked, ignition is also turned on for all installed motors.

NOTE:

- The panel must be unlocked.
- The Kill Switch function is not enabled in this case, which is indicated by yellow flashing LED and audio signal.
- Beep will only be active during the first 2 minutes.

Start one of the engines

Sequence	Action
1.	Press and release one of the numbered keys, 1 to 4 (Fig.3) to select engine: <ul style="list-style-type: none">• 1 = engine number 1• 2 = engine number 2• 3 = engine number 3• 4 = engine number 4
2.	The green LED (fig.3, 6) will start to flash quickly.
3.	Press and hold the START button (fig.3, 5a).
4.	After about 2 seconds, the start signal goes on to all installed motors.
5.	Release START button when engine have started.
6.	The green LED stops blinking quickly.

Stop one of the engines and ignition off

Sequence	Action
1.	Press and release one of the numbered keys, 1 to 4 (Fig.3) to select engine. <ul style="list-style-type: none">• 1 = engine number 1• 2 = engine number 2• 3 = engine number 3• 4 = engine number 4
2.	The green LED (fig.3, 6) will start to flash quickly.
3.	Press and release the ON / OFF button (Fig.3 - 5b) to stop the selected engine.
4.	The selected engine will stop and Ignition on the selected engine goes off
5.	The green LED stops blinking quickly.

AUX functions (arrow keys)

There are two AUX channels on the CoastKey system. One channel is standard for an engine installation (Single installation), but has two channel option. Two channels are standard for multi-engine installation (Multi installation).

The AUX function can be used for f.ex. tilt of motors up / down, anchor winch, bow propeller etc.

Channel 1 is controlled by arrow keys (fig.3, 1 and 3) above and below the START / ON / OFF buttons while channel 2 is controlled from the arrow keys (fig.3, 2 and 4) on each side of the START / ON / OFF buttons.

NOTE:

- **By default, the AUX channels are set to provide 12 / 24V. Both channels can configure to active high or active low signals, depending on the third-party equipment used.**
- **Common for both channels is max voltage of 24V and max load of 5 amps.**
- **The ignition must be activated.**

Start AUX function

Sequence	Action
1.	Press and hold the arrow key (fig. 3, 1 - 4) for the desired connected function.
2.	Output for the corresponding arrow button goes on after 2 seconds.
3.	Release the arrow key to turn off. AUX functions are active for 5 seconds after the key is released.
4.	Within 5 seconds, arrow keys (AUX functions) can be started seamlessly - output goes on as soon as the key is pressed.

the key is pressed after 5 seconds, repeat step 1 - 3 again.

The Master FOB unit, Remote Control



Figure 4 – The Master FOB

The Master FOB device (remote control) must be used to enable The Kill Switch function.

The same features found on Start Panel can also be performed from the Master FOB device. When using the Master FOB device, PIN code entry is not required to open the Start Panel. If the boat is equipped with several engines, a common ignition and start signal will be given.

IMPORTANT:

CoastKey will only work as a Kill Switch if the Master FOB unit is used for ignition on / off engine(s). Activation of the Kill Switch function is done automatically when you use the Master FOB device to start the engine(s). If you choose to start from the Start Panel, you can activate the Kill Switch function by pressing and releasing the center button (Figure 4-5).

IMPORTANT:

If the Startup Panel is beeping and a flashing yellow LED, this indicates that the Kill Switch function is NOT in use. The beep will be active for 2 minutes.

Start and stop engine(s) from Master FOB

Start engine(s)

Sequence	Action
1.	Press and hold center button (fig.4, 5).
2.	The green LED of the FOB flashes fast 5 times to indicate that ignition is on.
3.	After about 2 seconds, the start signal goes on to all installed motors.
4.	Release center button when engine(s) has started.
5.	MOB (Kill Switch) function is enabled - ON.

Stop engine(s)

Sequence	Action
1.	Press and hold center button (fig.4, 5).
2.	After about 2 seconds, ignition signal goes off and stops signal on all installed motors.
3.	Red LED on FOB flashes fast 5 times to indicate that ignition goes off.
4.	Release center button when engine(s) have stopped.
5.	MOB (Kill Switch) function is deactivated - OFF.

Activate only the ignition

If ignition is off, it can be switched on without starting the engine.

Sequence	Action
1.	Press and release center button (fig.4, 5).
2.	The green LED on the FOB unit flashes fast 5 times to indicate that ignition is on.
3.	MOB (Kill Switch) function is enabled - ON.

Turn ignition OFF (engine not started):

If ignition is switched on and engine(s) has not started.

Sequence	Action
1.	Press and release center button (fig.4, 5).
2.	Red LED on the FOB unit flashes fast 5 times to indicate that ignition is off.
3.	MOB (Kill Switch) function is deactivated - OFF.

AUX functions (Arrow keys)

There are two AUX channels on the CoastKey system. A channel is the default for an engine installation (Single installation), but has two channel option. Two channels are standard for multi-engine installation (Multi installation).

The AUX function can be used for tilt of motors up / down, anchor winch, bow propeller etc.

Channel 1 is controlled by arrow keys (Fig.3, 1 - 3) above and below the START / ON / OFF buttons while channel 2 is controlled from the arrow keys (Fig.3, 2 - 4) on each side of the START / ON / OFF buttons .

NOTE:

- By default, the AUX channels are set to provide 12 / 24V. Both channels can configure to active high or active low signals, depending on the third-party equipment used.
- Common for both channels is max voltage of 24V and max load of 5 amps
- The ignition must be activated

Start AUX features

Sequence	Action
1.	Press and hold the arrow key (fig.4, 1 - 4) for the desired connected function.
2.	Output for the corresponding arrow button goes on after 2 seconds.
3.	Release the arrow key to turn off. AUX functions are active for 5 seconds after the key is released.
4.	Within 5 seconds, arrow keys (AUX functions) can be started seamlessly - output goes on as soon as the key is pressed.

If the key is pressed after 5 seconds, perform steps 1-3 again.

The Kill Switch Function - MOB

If the boat driver falls overboard with the Master FOB unit attached to his body, the engine(s) will stop. In case of a man overboard situation, the start panel will output a beep for 12 seconds and start flashing red as an indication of a MOB situation.

NOTE:

The gear lever must be in neutral for the engine(s) to start.

WARNING:

The CoastKey system will only work as a Kill Switch if the Master FOB device is enabled.

CoastKey will only stop the engine(s) if the driver falls overboard and has the Master FOB unit attached. NEVER leave the Master FOB device in the boat while driving.

CoastKey will not stop the engine(s) in case of fall aboard the boat. The center button on the Master FOB unit must then be pressed and held to stop the engine(s).

When the driver is back in the boat after a MOB situation, the Master FOB unit must be reactivated for the Kill Switch function to be connected.

Start engine after MOB situation

Sequence	Action
1.	Wait until the MOB process is complete! 12 seconds after a MOB situation, ignition switches on.
2.	Press and hold START button (fig.3, 5a) on the Start Panel.
3.	After about 2 seconds, the start signal goes on to all installed motors.
4.	Release START button when engine(s) have started.

Take control if a false MOB situation occurs

Sequence	Action
1.	Press and release the ON / OFF button (fig.3, 5a) on the Start Panel.
2.	The MOB process will be interrupted, and ignition switches on.
3.	Press and hold the START button (fig.3, 5a).
4.	After about 2 seconds, the start signal goes on to all installed motors.
5.	Release START button when engine(s) have started.

Change PIN code

Start Panel is locked and ignition is off.

Sequence	Action
1.	Enter your pin code (Green LED flashes when the correct PIN is entered, while red LED flashes if the combination is wrong).
2.	Within 5 seconds, press and hold START (fig. 3-5a) and the right arrow (fig. 3-2) for approx. 5 seconds.
3.	Yellow LED will start blinking.
4.	Release the START button and the right arrow button.
5.	Enter your new desired PIN code. Press and release the number buttons. The PIN code can consist of 4, 5 or 6 digits.
6.	Press and release START button to confirm and save your new PIN.
7.	Yellow LED on Start Panel (fig. 3-6) will stop blinking.

Note: Once your PIN code is changed, the FOB unit must be paired with the Start Panel again.

Note: If system is pre-set with the default PIN (1-2-3-4), it is very important that you change the PIN immediately to your personal PIN upon installation. This is to safe guard the security in case of theft.

Pairing a new or extra Master Fob unit

Start Panel is locked, and ignition is off.

Sequence	Action
1.	Enter your pin code (Green LED flashes when the correct PIN is entered, while red LED flashes if the combination is wrong).
2.	Within 5 seconds, press and hold START (fig.3, 5a) and the up arrow (fig.3, 1) for approx. 5 seconds.
3.	Yellow LED will start blinking.
4.	Release the START button and the up arrow button.
5.	On FOB unit: Press and hold the Center button (fig.4, 5).
6.	On FOB unit: After approx. 5 seconds green LED flashes fast 5 times
7.	On Start Panel: Yellow LED on Start Panel (Fig.3, 6) stops blinking.
8.	At FOB: Release the Center button (fig.4, 5).
9.	FOB and Start Panel are now paired.

It is possible to pair / connect up to 10 FOB units to the Start Panel.

Battery replacement on the Master FOB device

Battery change can be performed by a boat owner. The battery should be replaced after approx. 600 hours of engine use, or minimum every third year.

Quick red LED flashing will indicate that a battery change is required. Battery change must then be performed within 10 hours of motor operating time.

The battery is located on the back of the Master FOB unit. Turn the battery cover clockwise to unlock the cover. Notice how the battery is placed due to polarity.

Insert a new CR 2032 (3V lithium) battery. Put the battery cover in place and screw clockwise. **Important! Incorrect polarity can damage the electronics.**



Note: On the battery cover there is an O-ring that should be changed every third year to keep the Master FOB unit waterproof.

Safety and warnings

1. The system shall be used only on board the vessel and within a radius of 6-10 meters from the steering position.
2. During the boat trip, the Master FOB unit must always be activated and attached to the boat driver for the Kill Switch to work as described.
3. If you have multiple Master FOB devices, only one must be active while driving.
4. If there are several wireless systems on board the vessel, this may affect operating stability.
5. Operating stability can also be affected by external radio noise conditions.
6. Consult your authorized healthcare professional and read the instructions of the manufacturer of the medical device before using the product near cardiac stimulators or other medical devices.
7. The Master FOB device must not be near metal surfaces or carbon during use as this will impair the radio signals.
8. The FOB unit should only be in water in case of a real man overboard situation.
9. If the system behaves abnormally, turn off the main power switch immediately.
10. CoastKey will only stop the engine(s) if the driver falls overboard and has the Master FOB attached. **CoastKey will NOT stop the engine(s) if the driver falls aboard the boat.**
11. The Master FOB unit with an attached string will float if it falls into the water. Additional weight attached to the Master FOB unit will cause it to sink.

Update / Download of new Firmware
TBD!!

Use of App
TBD!!

Configuration
TBD!!

Before calling for support

The ignition is not activated when the ON button on the Master FOB is pressed:

- Make sure that the main power switch is on and that the battery has enough voltage
- If ignition is not activated by the Master FOB device, the battery may be discharged. Battery must be replaced. See separate chapter (Battery Type: CR2032).
- Make sure that you are within the radio range (max. 10 meters) from the control position / Start Panel mounting location.

The engines will not start from the Master FOB device:

- Make sure the main power switch is on and the battery has enough voltage.
- Check that the gear lever is in neutral
- Check that the manual Kill Switch is correctly inserted if used.
- If ignition is not activated by the Master FOB device, the battery may be discharged. Battery must be replaced. See separate chapter (Battery Type: CR2032).
- Make sure that you are within the radio range (max. 10 meters) from the control position / Start Panel mounting location.

The engine(s) will not start from the Start Panel when entering a PIN:

- Make sure that the main power switch is on and that the battery has enough voltage.
- Make sure you entered the correct PIN code
- Check that the gear lever is in neutral
- Check that the manual Kill Switch is set correctly if it is in use.

Technical data

Master FOB device

Dimensions (D x H): 50x12mm
Weight: 42g
Battery: CR2032
Battery life: Up to 2 years (750 hours of motor operating time)
IP class: 67

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.

Motor module (single)

Motor module (single)
Dimensions (L x W x H): 130x65x50mm
Weight: 180g
Power supply: 12 / 24V
IP class: 67
Power consumption:

- 0.3 mA at main power on and ignition off.
- 0 mA at main power is off.

Motor module (twin)

Dimensions (L x W x H): 130x65x50mm

Weight: 250g

Power supply: 12 / 24V

IP class: 67

Power consumption:

- 0.6 mA at main power on and ignition off.
- 0 mA at main power is off.

General data

Radio Frequency: 2,4 GHz

Range: 15-25 meters (using repeater)

Temperature range: -25 to + 60

The product is certified according to the following standards:

- Safety: EN 60950-1
- EMC: EN 301 489-17 V3.1.1
- Radio: EN 300 328 V2.1.1

Disclaimer

The manufacturer and distributor cannot be held liable for damage or defects caused by improper use, or use in violation of the user manual and the installation instructions.

CoastKey AS disclaims any liability for errors or damages that may occur if safety and warning instructions are not followed.

If faults and / or damage occurs due to disassembly or assembly of the equipment other than specified by CoastKey AS, the manufacturer's liability for the product will be waived. The manufacturer's responsibility is limited to the product itself.

Reparations that include the CoastKey product shall only be carried out by CoastKey AS, or by certified personnel, in accordance with applicable instructions. When repairing, only original CoastKey parts must be used.

Damage etc. due to irresponsible actions or omissions as well as actions or omissions in violation of instructions in this manual, the manufacturer and the supplier disclaims.

Consult your authorized healthcare professional and read the instructions from the manufacturer of the medical device before using the product near cardiac stimulators or other medical devices.

Guarantee

Environment

Follow the national laws and regulations for waste and recycling of electronic products.

FCC Statements

General FCC required statements

Changes or modifications to the equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with 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.

This applies to CoastKey Instrument unit and remote controller:
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This applies to CoastKey Motor unit:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 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 to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This portable device with its antenna complies with FCC/IC RF exposure limits for general population / uncontrolled exposure. The antenna used for this device must not be co-located or operating in conjunction with any other antenna or transmitter.

ISED Canada required statements

This Device complies with Industry Canada License-exempt RSS standard(s). 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage ; (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



Introduction
video

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