CoastKey®

Yamaha Plug & Play
INSTALLATION GUIDE
Revision 2.6 - English version

CoastKey harness

CoastKey
harness
connector
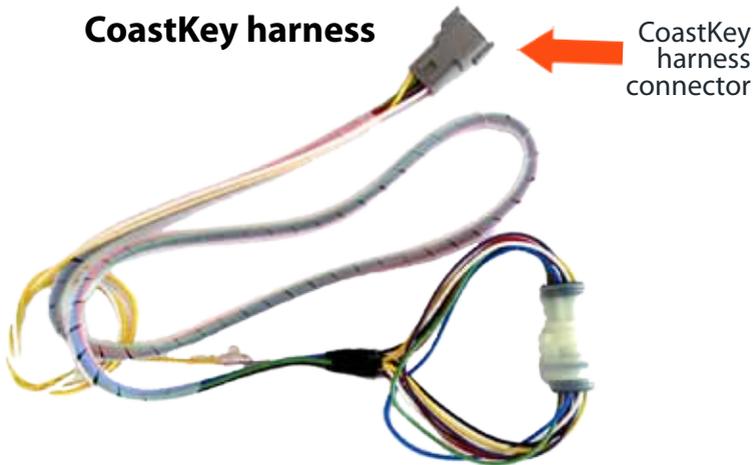
Checklist before installation:

• Read the installation guide and user manual before installing the CoastKey system.

• Check that the engine(s) functions and operates normally before installation.

• The CoastKey system shall not be installed in an explosive environment.

• The CoastKey system and design may not be changed or tampered with.

• The system should only be used for its original purpose and only installed as per the directions in this Installation Guide.

• Familiarise yourself with the national safety rules and regulations in your region to avoid a breach of these rules and help prevent accidents.

• The installation of the lock unit is permitted only in areas that are protected against water intrusion.

• The lock unit shall be installed on a fiberglass, wood, plastic, glass or other non-conductive surface. The lock unit must not be attached to carbon, cables, wire or other metal surfaces as this leads to loss of signal strength, which will affect radio communication between the key and lock unit. Strong electromagnetic fields may also affect the system. Locating the lock unit in the immediate vicinity of conductive cables and any radio devices such as VHF, radar, etc. should also be avoided.

• To achieve optimal radio and signal conditions, it is recommended to install the lock unit as high as possible in the boat (at least 70 cm above the waterline).

• Ensure that the lock unit is secure and stable, so it is easy to operate the push button. Clean the attachment point with acetone or a similar cleaning fluid before the supplied Velcro strip is attached.

• Other wireless systems that use the same frequency (In Europe: 433 MHz), such as a remote controlled anchor winch or bow thruster, can affect the operational stability of the CoastKey system.

• The distance between the installation point of the lock unit and the pilot's usual position should be as short as possible and not exceed a radius of 1.5 meters.

• In a dual installation the lock units should be placed at least 30 cm apart.

• For security reasons, the power supply to the lock unit(s) is to be connected through a main power switch.

• Maximum system load is 10 amps. (Check current draw when connecting to external systems like anchor winch etc.)

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.

2. Key switch and connections
Modify the key switch and it's connections according to the description below:

Cut the white wire connecting the ignition key switch to the manual lanyard switch approx. 3 cm from the ignition key switch.
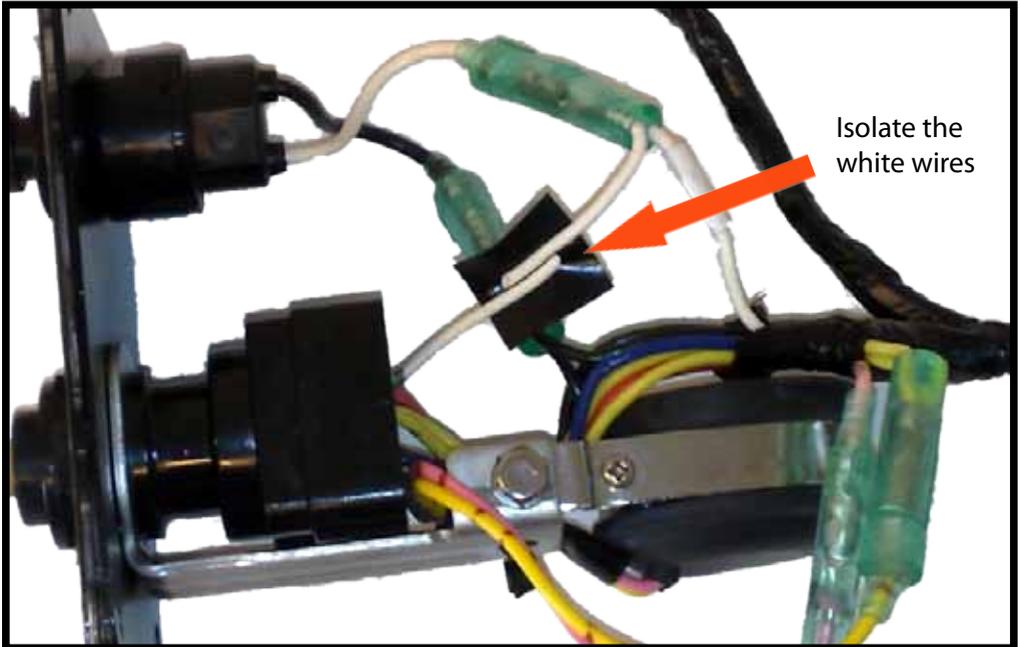
Figure 1:
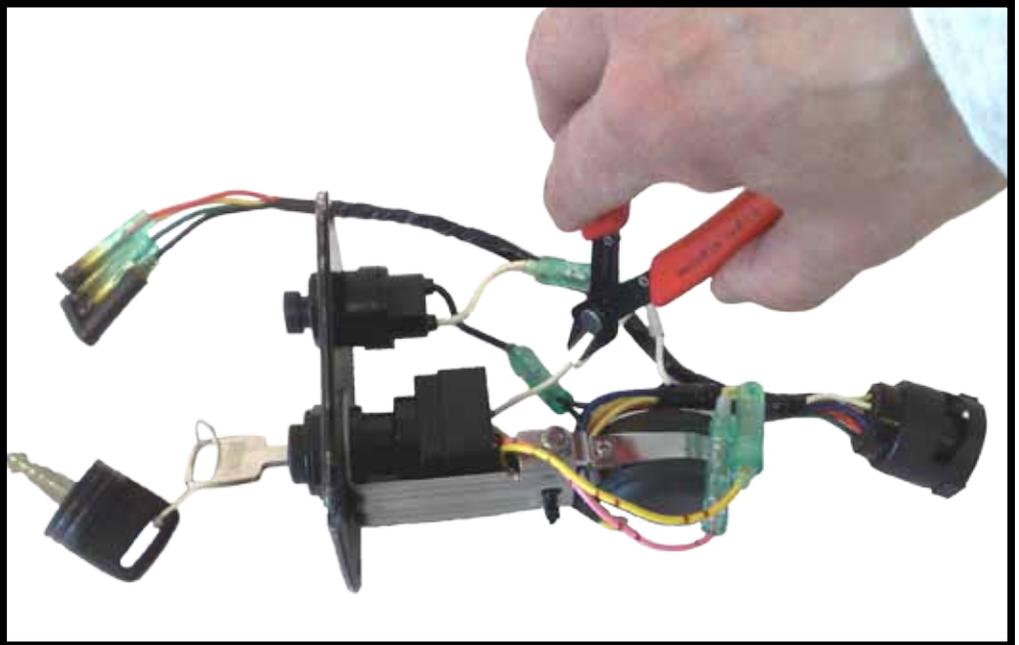
The white wire coming from the engine's main harness should still be connected to the manual lanyard switch after this procedure, it's only the connection between the ignition keyswitch and the lanyard switch that needs to be disconnected (cut) in order to start the engine(s) without using the ignition key.
(See Figure 1).

On a side-mounted remote control the remote control box must be opened to access the ignition switch and perform the procedure. Check that the manual lanyard switch works normally after the modification is performed.

Figure 2:

Isolate the white wires

Insulate the cut wire ends with electrical tape (see Figure 2).

20-30 cm along the cable from the ignition key switch / remote control there is a black circular connector that connects the ignition key switch to the engines main harness.

Disconnect the connector and insert the corresponding connectors on CoastKey's harness between the original connectors to form a T-connection (see Figure 3).

Figure 3:
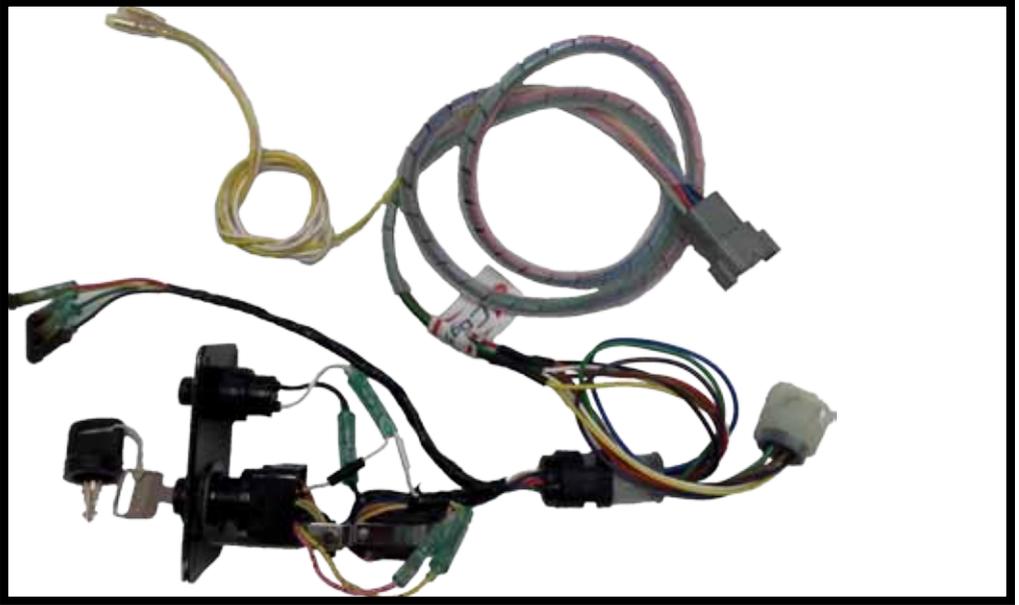
If the tilt function is to be used, perform the following procedures:
· Locate the light blue wire coming from the control handle. Splice it with the yellow wire in CoastKey's harness.
· Locate the light green wire coming from the control handle. Splice it with the white wire in CoastKey's harness.

Note:
Exercise care when opening a side-mounted remote control. The throttle and gir cables can be in tension!

The bullet connectors on the yellow and white wire in CoastKey's harness can be used on some of the Yamaha remote controls, on others it is necessary to cut and splice the two to the respective wires in the Yamaha harness.

In order to start the engine(s) from the original ignition key switch the Coast-Key lock unit has to be disconnected from the CoastKey harness. In this case the engine (s) can only be stopped by using the manual lanyard switch. (The white wire previously cut will have to be re-connected for the ignition key switch to work as before)

3. The lock unit

Clean the surface where the lock unit is to be placed with acetone or similar, and place it according to the guideline in "Installation checklist" located on page 2. Plug the lock unit into CoastKey's harness.

4. Test and Safety

Secure CoastKey's harness and other loose wires with cable ties. Turn on the main switch and complete the "Test and Safety Form" on the next page before you use the boat for the first time.

Note:
If the boat is equipped with two engines, repeat the above installation procedure for engine No. 2

5. Electrical circuit color codes

Yamaha			
Signal function of the lock unit	**Color on the lock unit cable**	**Color on the ignition / control lever**	**Signal function engine**
12VDC	Red	Red	12VDC
Ground	Blue	Black	Ground
Start	Brown	Brown	Start signal
Ignition	Green	Yellow	Ignition signal
Engine Cut-off signal	Black	White	Engine Cut-off signal
Tilt up signal	Yellow	Light blue	Tilt up signal
Tilt down signal	White	Light green	Tilt down signal
Digital input	Gray	*Not in use*	Not in use

Checklist for Installation
Test and Safety Form

Checklist for Installation Please refer to user manual for proper procedure for carrying out the points below.	OK	Error
Turn on the ignition and start the engine(s) with the key fob. Check that the start sequence works correctly and as specified.		
Check the radio range by moving the key device 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)		
Check that the key device vibrates and the signal beacon is activated when a "Man overboard" situation is simulated.		
The ignition is switched back on automatically 12 seconds after a man overboard situation has occurred. Check that the engine(s) can be started directly from the lock unit's push button after a simulated man overboard situation. Reset the system by taking control via the key fob by turning it off and then back on by switching the main switch off and back on before the next test.		
Enter the 4-digit PIN code provided with your CoastKey system by pressing the lock unit's button to unlock the system and check that the engine(s) starts after the confirmation tone.		
(Optional) Check that the aux. functions work from the key unit. If connected to trim in a dual installation, check that both engines tilt in parallel. If connected to an anchor winch, the anchor must be secured with a strap. Make sure the winch pulls in when you unlock the key-lock on the key fob.		
Check that the manual ignition switch works normally when the lock unit is disconnected. (The lock unit is disconnected by disconnecting the gray 8-pin connector located 15 cm down the lock unit's harness.) When the system is disconnected, there are some types of engines that can only be stopped using the manual lanyard switch.		

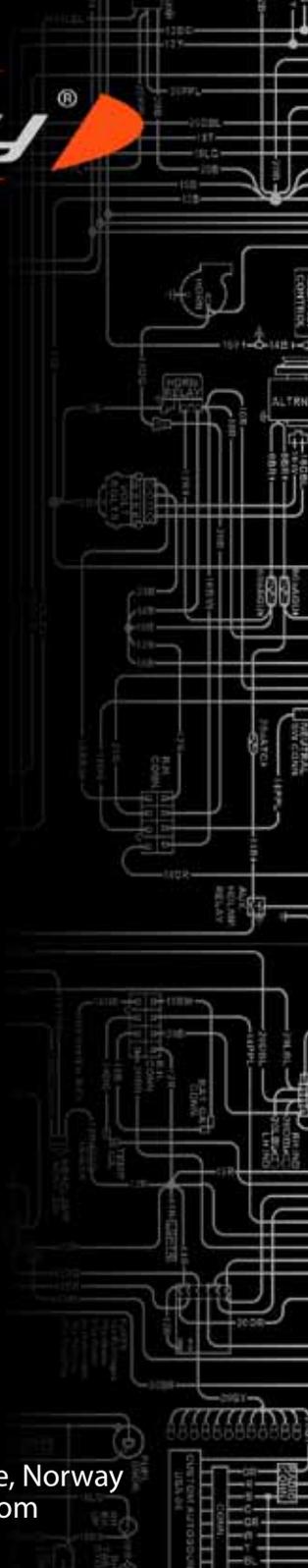*The User Manual must be read before the CoastKey system is used.*

Drivers and passengers must be informed of the lock unit's position and how to restart the engine(s) in an emergency.

Take care of your owner's manual as a future reference.

Disclaimer:
CoastKey AS will not be held responsible for any damage to personnel or property arising from the incorrect use or installation of any CoastKey product.

It is mandatory to read the installation manual, user manual and complete the test and security form before attempting any CoastKey installation.