

# Tempest 4 (T4) Installation Instructions Yamaha GP800R Ignition

**For use with the following Yamaha models:**

GP760 Waverunner  
GP800R

The T4 GP800R Ignition System is a modified plug and play device. The T4 GP800R does not use the two black connectors that connect to the OEM Ignition. Instead remove these parts and connect the T4 directly to the boat wiring. All T4 connections are pluggable so there is no wire stripping or soldering required.

## Optional T4 Ignition functions available on this vehicle:

- 3 water control channels
- Hole shot (stutter) limiter
- TPS (Throttle Position Sensor), with additional hardware

Contact the sales department at Advent Ignitions for additional information.

## Installation overview

Installing the T4 GP800R is straight forward but requires the installer to have some basic mechanical and electrical knowledge. During the process feel free to call Advent for any assistance you may require.

- Each step of the installation has a check box next to it. When you complete a step, check the box.

## First Things First



**Disconnect the battery positive cable (red) before proceeding.**

## Remove OEM Ignition Module - all model years

- 1. Remove the screws that secure the bracket across the top of the OEM ignition. Set the screws aside.
- 2. Lift the OEM ignition from its mounting location and unplug the two black connectors. Set the ignition aside.

## The next 4 steps refer to the black 8 wire female connector

- 3. Using a pair of wire cutters, cut the Wht/Red and Wht/Brn wires leading from the connector. Cut these wires about 4" from where they exit the electrical box.
- 4. Trace each of the remaining wires from the connector to their respective in-line connectors. These connectors are found under a wire clamp attached to the bracket removed in step 1.
- 5. Trace the black wire from the connector to where it attaches to a 6mm bolt. Remove the bolt then remove the black wire and its ring lug from the bolt's shaft. Loosely re-install the bolt with all the other ring lugs attached.

- 6. All the wires from the connector should be disconnected. Set the connector aside.  
'2004 model or newer - Remove the Kawasaki factory connector assembly  
The black connectors that were attached to the factory ignition will be removed from the electric box.
- 1. Locate either of the black connectors and trace each wire back to an in-line connector. Separate each of these connectors and set this wire assembly aside.
- 2. Repeat this for the other black connector assembly and set it aside.

### **Install the T4 Ignition Module**

- 1. With the connector and cable installed on the T4 ignition, position the ignition on the metal plate to find the precise location to mount it. Be sure that no structures interfere with the ignition once it is mounted in position.
- 2. Remove the protective coverings from the two strips of double-face tape on the back of the T4 ignition, position the ignition over the plate in the desired position and press it in place. Be sure of your positioning because the tape cannot be removed once in place.
- 3. Reconnect all wires and plugs that were disconnected when the factory ignition was removed. Do not reconnect the battery cable at this time. Some or all of the wires shown in the table below will not be reconnected because those circuits are not used by the T4 Ignition.

Black/Red, Blue (from inlet air sensor)

Red/Yellow, Black (from water temp sensor)

- 4. None of these wires carry voltage, simply cover each one with electrical tape.
- 5. Reconnect the battery cable. **NOTE:** You may see a spark when you touch the battery cable to the battery terminal. This is normal and expected and is caused by the T4 ignition turning on for a moment, then turning off.

### **Last things Next**

Reconnect the battery cable removed at the beginning of this installation procedure.

**If you have any questions or comments, please contact us by phone, FAX or e-mail.  
Be sure to reference the year and model of your watercraft .**

**The T4 installation is now complete!**

**Continue to sections –  
"Installing auxiliary electrical devices and switches"**

# Installing auxiliary electrical devices and switches

The Relay control feature of the T4 Ignition provides the user with the ability to control up to 2 auxiliary electrical engine devices. These may include water control, fuel pumps, bilge pumps, power valves (RAVE valves) etc. Each relay control circuit is capable of handling up to 1.0A of current.

## Tools Required:

- 8" Slip joint pliers
- Diagonal cutters
- Black electrical tape

## First Things First, For Safety...

**ⓘ Disconnect the battery positive cable (red) before proceeding.**

## Installation Overview

Three wires are provided to connect to three electrically operated relays, valves auxiliary fuel pumps, etc.

The gray cable attached to the T4 connector

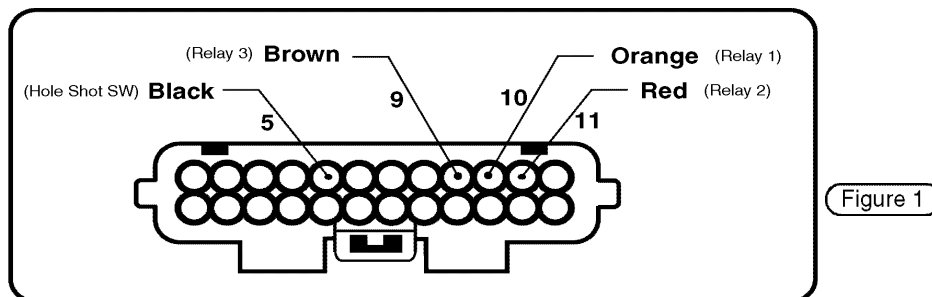
- ◆ 4 conductor cable with water tight bulk head fitting
- ◆ 4 discrete wires for installations in engine compartments

## Adding Wires to the T4 Connector

If your T4 does not have relay control wires installed in the connector you can order a wire kit that is easily installed.

If your T4 ignition does not have a 15" relay cable attached figure 1 shows the connector locations for the relay control wires.

1. Remove the light blue water seals from the wire holes indicated in Figure 1.
2. Again referring to Figure 1 insert each wire into its respective hole. Note that the metal connector end will enter the hole in only one orientation. If the metal connector does not insert and click into place easily, remove it and try another orientation.



Gray cable for 3 relay outputs & Hole Shot SW

## Electrical Devices that Can be Connected to the T4

- ◆ Relays used to control high current type electrical devices or motors such as bulge pumps.
- ◆ Electrically operated solenoids
- ◆ Devices designed to operate at 6 to 21Vdc
- ◆ Devices that draw 1.0 amps or less

## Electrical Devices that Cannot be Connected to the T4

- ◆ Devices such as incandescent lamps over .5 Amp or motors
- ◆ Devices that require more than 1.0 amp of current.
- ◆ Devices that are designed to operate on voltage up to 21Vdc
- ◆ Devices that are designed to operate on AC voltage

**ⓘ If any of these types of devices are connected the T4 has internal safety feature that will turn the device off to protect the T4 ignition module.**

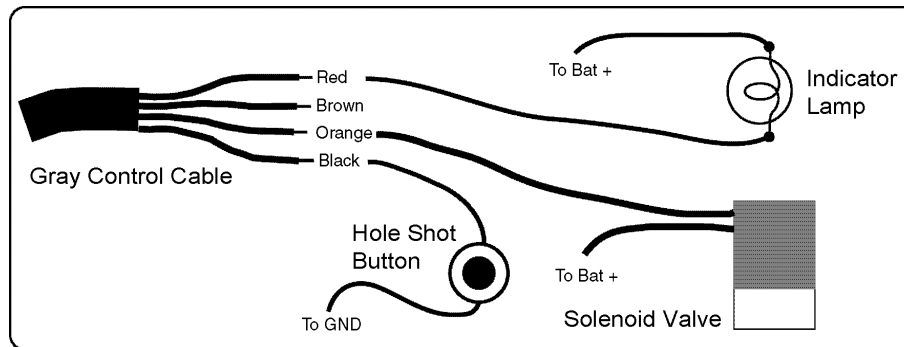


Figure 2

## Wiring Devices to the T4 Gray Control Circuit

**NOTE: Devices such as relays, solenoids and lamps do not have an electrical polarity. This is to say that it does not matter how their wires are connected to the T4 circuits and power.**

1. Figure 2 shows how to hook up electrical control devices and indicator lamps to T4 relay channels 1 and 2.
2. Figure 2 shows connection of a handle bar mounted Hole Shot switch.

## Last Things Next

1. Re-attach the battery terminal.
2. Use the Curve Devil to design your Relay control On/Off profiles and other operating parameters of your T4 ignition.

**If you have any questions or comments, please contact us by phone, FAX or e-mail.  
Be sure to reference the year and model of your watercraft.**

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