176/186 Dual Console Quick Guide and Schematics

For 2014 and 2015 Models
Welcome to the Key West Family!

Dear New Boat Owner,

On behalf of every employee at Key West Boats, we are pleased to welcome you to the Key West Family! For over 25 years, Key West Boats has continuously set new standards in safety, construction, and design. Our skilled team, from our laminators and riggers to our sales and engineering department, are dedicated to every boat we build and we are constantly working to improve our product. Our dedication to each boat and inspiration for new ideas comes from the most the important people, our customers. We value your input and encourage you to share your thoughts with us as well as the memories you make aboard your 176DC or 186DC! Owning a boat is an amazing experience and we dedicate ourselves to making sure your 176DC or 186DC will be the best experience you have on the water...

Like all Key West Boats, the 176DC and 186DC were designed and built to provide owners with unmatched safety that includes but not limited to, its upright and level floatation that makes the 176DC and 186DC both unsinkable and guaranteed to remain upright if swamped. Although extremely safe by design, your boat is only as safe as the manner in which it is operated. Regardless of your experience, we encourage you to read the generic manual we have provided with your boat and other resources for information on rules of the road and safe boating practices to ensure you are operating your boat safely and within the rules at all times.

Like all Key West Boats, the 176DC and 186DC were designed to be low maintenance, ergonomic and an efficient boat to maintain and operate. Familiarizing yourself with the boats systems and working closely with your dealer will go a long way in providing that. We are pleased to provide you with this guide and schematics of the systems in your boat to ensure you are confident before you step aboard for your first memorable trip! Following the information in this guide and your dealer’s service plan will help to provide you with many years of reliable service so that you can consistently enjoy your time on the water, experience things only possible with and discover the joy that owning a Family Sportsman brings!

Finally and most importantly, like all Key West Boats, your boat was built by a dedicated and experienced team who gave it a unique and personalized story that started when you and your dealer gave it a unique and one of a kind character. 25+ years and over 20,000 boats later, we still look at each boat we build as having its own unique character, story and as an important part of our family. Your new FS is not just another “Unit” and becoming the owner of this FS does not make you just another “customer”. It makes you a part of our family, a family we have been dedicated to for over 25 years and is over 20,000 unique and personalized stories strong. We are honored to have you part of our family and write another unique and personalized story...Safe passages and Tight Lines!

Sincerely,

The Key West Team
Fuel System

176DC Tank
The 176DC is equipped with a single, 40 Gallon, pressurized fuel tank. The tank is of Polyethylene construction and is secured/insulated with foam during the construction of the boat. The tank is located on centerline forward of the cockpit floor hatch. There is a sending unit installed in the tank. Inspection ports in the deck and head compartment provide access to tank fittings. The 176DC fuel system “breathes” through a carbon canister located in the anchor locker that vents overboard through a vent on the starboard side of the hull.

186DC Tank
The 186DC is equipped with a single, 60 Gallon, pressurized fuel tank. The tank is of Polyethylene construction and is secured/insulated with foam during the construction of the boat. The tank is located on centerline, directly below the cockpit floor lid. There is a sending unit installed in the tank. Inspection ports in the deck and head compartment provide access to tank fittings. The tank vents though the gas fill that incorporates a cap that allows air to move into and out of the tank.

Fuel Supply
There is a fuel pickup installed in the tank. The pickup incorporates a shut off valve along with an anti-siphon valve than can be accessed through the in deck inspection plate under the leaning post. There is an on deck fuel fill located on the port side of the boat, just forward of the console. Access to the fill is provided through an inspection port. The fuel fill also incorporates a vent that allows venting of the tank. It is recommended that these connections be inspected annually.

The 176DC/186DC will come pre-rigged from the factory with an engine matched fuel water separator. In the 176DC, the fuel water separator is installed in the starboard transom locker. In the 186DC, the fuel water separator is installed in the bilge and accessed through the bilge access hatch. The Fuel Water separator should be checked periodically to ensure the fuel is free of water. Fuel should be disposed of in an approved waste collection device when servicing/replacing. The filter must be filled with fuel after servicing/replacing them in order to prime the engine. A primer bulb for the engine is located in the engine splash well. It is used to prime the engine and system before starting the engine. This should be done after service or after periods of downtime for the boat. When fueling your boat, whether on trailer or at a marina, the pressurized system will prevent overfilling. Any blockage of the vent and or vent line will prematurely trigger the shut off on the fuel nozzle and will prevent you from filling the tank completely. It is recommended to inspect your fuel system annually to ensure that all hose fittings are secured and the lines are free of any kinks. All components of the 176DC and 186DC fuel systems are approved for use with ethanol blended fuels up to 10%. E85 fuel should never be used. Key West recommends using non ethanol fuels whenever possible to reduce the risk of moisture retention in the fuel system, especially in areas of high heat/humidity.

Due to the emission requirements of the EPA, certified fuel tanks and systems will not fill to the top of the tank. Instead, there will be a ullage in the top 10% of the tank. The specified capacity of the tank accounts for this ullage when the tank is static and level. Therefore, it is important to make sure the boat is as level as possible when filling the tank. Any forward or aft tilt will cause fuel to collect in one end of the tank and prematurely reach either the forward or aft tank vent. When fuel reaches these vents, it triggers the shut off. When the boat is level, fuel will reach these vents at the same time and allow the maximum quantity of fuel into the tank. The tanks ullage will also affect your fuel gauge as the tanks sending unit will not reach the top of the tank, even when the tank is filled. This will cause the fuel gauge to not read full, even though it is. Do not rely on the fuel gauge exclusively as variations will occur.
Raw Water System

Raw Water Supply (176DC)
The 176DC features a single high speed venturi pickup for raw water intake. Before using the boat, it is important to note the location of the seacock and the means to achieve access to it. In the event of a rupture in a raw water line or pump that allows unrestricted flow of water into the bilge, shutting the seacock will be critical. The seacock should be checked periodically and the valves moved to verify operation and unrestricted movement. If problems are found, they should be addressed immediately by your dealer.

Raw Water Supply (186DC)
The 186DC features a thru hull intake scoop located on the transom.

Livewell System (176DC and 186DC)
There is one 800GPH livewell pump. The pump is installed on the seacock in the 176DC. On the 186DC, the pump is mounted on the thru hull intake. The pump provides raw water to the transom livewell. The pump has an independent switch and fuse (See Electrical Schematics). The livewell pump is a centrifugal pump that is not pressure regulated. Therefore, it is recommended that the pump only be used when using the livewell. The pump is self-priming. Before activating the pump, check that the seacock is open (176DC) and make sure the livewell fill valve is open. It is important to check the livewell pump annually and periodically spray it with a corrosion inhibitor.

Raw Water Wash Kit (176DC)
The 176DC is equipped with a raw water wash kit. The system uses the livewell pump to provide raw water to the provided washdown hose. Please note though that using the system does not allow use of the livewell. To use the system, unscrew the livewell fill valve on the livewell and thread the hose onto the inlet. The livewell pump is not pressure regulated. Therefore, only engage the livewell pump when you are going to use the washdown. Do not leave the pump on when not using the washdown. Verify that the seacock is open before activating pump. A lack of water to the pump will cause the pump to run dry and may damage the pump.

High Pressure Washdown system (186DC)
The 186DC is equipped with a high pressure, raw water washdown system. The system is fed by a pump that is located in the aft end of the port transom dry storage compartment. The pump is controlled by a switch and fuse (See Electrical Schematics). Water is supplied to the pump off of the accessory port on the livewell pump (lower hose connection on the livewell pump). Using the raw water washdown does not require the livewell pump to be on. The raw water pump features an in-line strainer for collecting any debris that could damage the pump. The strainer should be checked before using the pump. The strainer features a clear cap for easy inspection. If any debris is found, remove the strainer screen by untwisting the clear cap and clean the screen. The pump features a built-in pressure regulator that will shut the pump off when pressure is achieved in the system. The raw water washdown faucet is located on the port side, under the gunwale cap and adjacent to the port jump seat. If trailering the boat or using the boat after an extended period of downtime, it will be necessary to prime the washdown pump. Before activating the pump, open the washdown faucet and then switch on the pump. When the system is free of air, you can either close the faucet or shut off the pump. It is important to check the washdown pump annually and periodically spray it with a corrosion inhibitor.

System Operation and Maintenance
When using any of the two raw water pumps, it is important to pay attention to the water you are operating the boat in. Operating the pumps in shallow/muddy water or water with high amounts of floating debris such as grass or trash may result in ingestion and damage the pumps. Loss of pressure in pumps may be the result of contaminants blocking the thru hulls, binding of the pumps impellor, clogged strainer basket and/or blockage in lines. When operating in the contaminated water, check the supply of and quality of water to the livewell and/or washdown frequently. Any loss of pressure or flow should be addressed immediately to prevent damage.
Raw Water System Troubleshooting

Baitwell and/or Raw Water Pump (186DC) run, but do not pump water
- Pickup is blocked and is preventing water from reaching the pumps. Put boat in reverse to clear the intake. If problem persists, do not continue to operate pumps. Clean intake when boat is out of water to remove debris
- Seacock is closed (176DC)
- There is air in the raw water washdown system. Prime the system as described on previous page
- Raw Water Pump Strainer is clogged. Clean Strainer

Baitwell and/or Raw Water pump (186DC) run but water flow is reduced
- Debris is partially blocking intake. Clear debris
- Seacock is not fully open (176DC)
- Raw Water Pump Strainer is partially clogged. Clean Strainer
- Baitwell sprayer head Valve is not fully open. Open Valve fully
- Raw Water Faucet is not fully open. Open Valve Fully (186DC)
- Hose(s) are damaged and are either leaking and or sucking air. Check hoses
- Low Voltage to Pump(s). Check connections for loose or corroded wiring. Check battery voltage
- Pump(s) are damaged or defective. Replace Pump(s)

The Raw Water washdown pump continues to run, even after faucet is closed (186DC)
- The intake hose going to the pump is damaged and is sucking air. Replace hose
- Intake hose is loose causing a leak and loss of pressure to the pump. Inspect connections at both the livewell pump and washdown pump to ensure they are tight.
- Discharge hose from pump to faucet is loose causing a leak and drop of pressure. Inspect connections and fittings at both the pump and faucet to ensure they are tight and not damaged. Replace if damaged
- Strainer is clogged. Clean Strainer
- Pressure switch on pump is defective. Replace pump or pressure switch
- Voltage to the pump is low. Check connections for loose or corroded wiring. Check battery voltage
- Pump is damaged or defective. Replace Pump
Raw Water Schematic

- Raw Water Washdown Pump and In-Line Strainer
- 800GPH Aerator Pump with Thru Hull Scoop Pickup
- Livewell Fill Hose
- Livewell
- Raw Water Washdown Faucet
Drainage System (176DC & 186DC)

General Overview
All water in the 176DC and 186DC is drained either via gravity or pump. Water is either drained directly overboard or to the aft bilge where it can be drained out either via the garboard drain plug or the bilge pump. It is important to check the drainage system frequently to verify water flows freely, hoses are secure and there are no leaks. The drains and discharge pumps are as follows starting at the bow:

Anchor Locker – Gravity drain along centerline of hull to aft bilge

Port/Starboard Bow Lockers– Gravity drains to cockpit.

Passenger Cabin Recess Drain– Gravity drain to bilge.

Console Recess Drain – Gravity drain, drains directly to the bilge

Port Cockpit Drain – Gravity drain to port transom 1-1/2” Thru Hull

Starboard Cockpit Drain – Gravity drain to starboard inboard 1-1/2” Thru Hull

Port/Starboard Transom Storage lockers– Gravity drain directly to aft bilge

Transom Livewell Overflow Drain – Gravity drain connects via T-Connector to Transom Livewell Drain

Transom Livewell Drain – Gravity drain to starboard transom 1-1/8” Thru Hull

Aft Bilge Pump – Located in aft bilge, discharges to aft port thru hull near transom
Floor Drain Overview

Two of the most important pieces of equipment on your boat are the cockpit floor drains as their operation is integral to your safety on the water. At 1-1/2” in diameter, they are designed to allow massive quantities of water to leave the cockpit of your boat in a very short period of time in the event of a swamping or extreme down flooding event. All the drains in your boat operate this way, however, the floor drains are designed so that water can only flow in one direction; out of your boat. The drain features a unique design that acts like a check valve thereby preventing backflow of water into the cockpit of your boat.

The design of the drain and its operation is solely dependent on the foam ball and seal ring. Any degradation in the foam will compromise the ball’s ability to seal against the seal ring. Therefore, do not apply power washers or any cleaning chemicals directly to the drain area as this will compromise the foam in the ball. When using chemical cleaners in your boat’s interior, use a sufficient quantity of water to dilute the chemical(s) when spraying off so that they do not affect the foam ball when draining out.

The seal ring needs to be kept free of debris so that foam ball will seal flush. The drain features a grate so that debris cannot flow into the drain. In the event that a sufficient amount of debris collects around the seal, the grate and top of the drain assembly can be removed. Use a spanner wrench to unscrew the top of the drain and clean the drain assembly. This will also provide access to the foam ball which can then be removed and replaced if necessary. Only do this if it becomes evident that ball is not sealing properly. This will be manifested by small amounts of water coming through the drain when the boat is sitting at rest in the water. **DO NOT** remove the drain while the boat is in the water.

Under normal conditions when the thru hulls are above water, the ball is below the seal ring thereby allowing water to flow out of the cockpit and overboard.

Whenever the thru hulls are submerged below water, back pressure seals ball against seal ring, creating a watertight seal and prevents backflow of water from the thru hulls.
Drainage System Troubleshooting

Reduction in water flow from bilge pump
- Blue Intake screen on bottom of pump is clogged with debris. Clean Intake Screen
- Voltage to the pump is low. Check for corrosion and loose connections. Check battery Voltage
- Discharge hose is blocked or kink. Check discharge hose and clean/repair
- Pump is defective. Replace Pump

Bilge Pump continues to run even though bilge is dry
- Float switch on pump is stuck due to debris or build up on switch. Ensure float switch is clean and free of debris

Bilge is full of water and pump is not running
- The Inline Fuse for the automatic bilge pump is blown. Replace the Fuse
- The battery is dead. Check voltage and charge if necessary
- The pumps impeller is clogged by debris. Clean pump impeller
- The connections/wires to the pump are corroded. Check and replace connections/wires
- The Built-In float switch is defective. Replace Pump
- The Pump is defective. Replace Pump

Bilge pump will not run when the manual switch on the helm is engaged
- ATC Fuse on fuse block is blown. Replace Fuse.
- The battery switch is off or the battery is disconnected. Turn on battery switch/reconnect battery
- The pumps impeller is clogged by debris. Clean pump impeller
- Switch is defective. Replace the switch
- The connections/wires to the pump are corroded. Check and replace connections/wires
- Pump is defective. Replace Pump
Drainage Schematic

Battery Box Drain to Bilge
Livewell Overflow Drain to 1-1/8" Thru Hull
Livewell Drain to 1-1/8" Thru Hull
500GPH Bilge Pump to Port 1-1/8" Discharge
Port/Starboard Cockpit Drain to 1-1/2 Thru Hulls

Driver/Passenger Console Drains to Bilge
Port/Starboard Bow Locker Drains to Cockpit
Anchor Locker Drain to Bilge
500GPH Bilge Pump to Port Thru Hull Discharge
Livewell Overflow and Drain to 1-1/8" Transom Thru Hull
Port/Starboard Cockpit Drains to 1-1/2" Thru Hulls

Console Recess Drains to Bilge
Port/Starboard Bow Locker Drains to Cockpit
Anchor Locker Drains to Bilge
Electrical System

General Overview (176DC and 186DC)
The boat is equipped with a 12V DC Electrical system that can be equipped with an optional AC battery charger. The boat can only be rigged for a single motor. If the boat is rigged without an optional battery selector switch, the boat will be rigged for x1 Group 24 battery. If the battery selector switch is installed, the boat will be rigged for x2 Group 24 batteries. The battery(s) will provide power to the engine and house systems.

12V power is distributed to the 12V factory installed systems through ATC fuses located on a fuse block inside the console. All 12V systems are grounded via a single 10GA black wire attached directly to the negative post on the battery. A 30amp main circuit breaker is installed in the console to protect the house systems from overload and is connected either directly to the batteries or the optional battery selector switch. Additional circuit breakers for the auto bilge pumps and stereo memory are wired directly to either the battery or battery selector switch.

The system is designed so that turning the battery switch off will still allow the bilge pump to function in an automatic mode. Key West recommends that boats that are going to be left in the water or in a boat lift, where access to the drain plug is not feasible, be installed with a battery charger to prevent discharge by the bilge pump. Trim Tabs and optional power steering are connected directly to the battery and feature overcurrent protection. They do not energize until the engine ignition switch is turned to the “On” position.

Battery Selector Switch (Optional)
As an option, a battery selector switch can be installed. The battery selector switch is installed on the starboard side of the console. The battery switch provides power to the engine and 12V accessories. The switch is a dual circuit switch and has 4 positions (OFF, 1, 2, Both). This allows power to be supplied by either battery 1, battery 2, or both simultaneously. The switch also directs the charging current from the engines alternator.

If position “1”, is selected on the switch, the engine and 12V accessories will receive power from Battery 1 and the engine's alternator will charge Battery 1. Battery 2 will be isolated and in reserve. If position “2”, is selected on the switch, the engine and 12V accessories will receive power from Battery 2 and the engine’s alternator will charge Battery 2. Battery 1 will be isolated and in reserve. If position “Both” is selected, the switch connects the batteries in parallel and the engine and 12V accessories will receive power from both batteries. The engine’s alternator will charge both batteries simultaneously as well. When the boat is underway, placing the switch in the “Both” position is recommended so that both batteries charge. When the boat is moored (Engine Off) and 12V accessories are being used, it is recommended to select position “1” or “2” so that one battery is isolated and can be used to crank the engine. When using the windlass, it is recommended to place the battery switch in the “Both” position due to the high power demand.
Electrical System

Trolling Motor Packages (176DC and 186DC)
The 176DC and 186DC can be fitted with an optional trolling motor harness and plug. If you choose to, a 24V trolling motor can be installed at the factory. 24V trolling motors will be rigged with two batteries that are rigged in series. A circuit breaker is installed, adjacent to the batteries, that allows you to disconnect the batteries from the trolling motor harness whenever the boat is stored or the trolling motor is not being used. The trolling motor harness features a plug and receptacle located in the bow. To use your trolling motor, insert the plug into the receptacle and make sure the trolling motor circuit breaker is closed. The trolling motor’s electrical system is completely isolated from the 12V house and engine systems. The charging system on the engine is not designed to charge the trolling motor batteries. The trolling motor batteries can only be charged via the battery charger that comes with the trolling motor package. If you anticipate using your trolling motor, fully charge the batteries before each use. Low voltage in any of the two batteries will cause the motor to not function properly. Please see “Dealer Installed Equipment” section on next page for further information regarding battery installation.

Battery Charger (176DC and 186DC)
As an option, a battery charger can be installed that will charge one or both batteries, depending on the battery installation. The battery charger converts AC power into DC power that is used to charge the batteries. The charger is powered by a plug on the console that receives a standard 110V plug from the female end of a 110V extension chord. It allows you to plug the boat into a regular 110V outlet. Please consult the battery charger’s manual before using your charger for the first time. If the optional Battery selector switch is installed, it does not need to be on to direct the charge from the battery charger.
Electrical System

**Electrical System Maintenance**
All connections in the electrical harness feature deutsche connectors and heat shrink butt connectors to minimize corrosion. Key West recommends that all connections and terminals be checked at least twice a year and sprayed with a corrosion inhibiting spray at least once a year to protect and maintain the integrity of electrical connections.

**Dealer Installed Equipment**
When your boat arrives at your dealer, the dealer will install batteries and may install additional equipment. It is important to check with your dealer regarding the batteries installed in your boat. The three common types of batteries are Wet Cell, Gel Cell and AGM Batteries. Gel Cell and AGM batteries are sealed and maintenance free. If your boat is equipped with Wet Cell batteries, they will require the following inspections and service. Regularly check the electrolyte levels in the batteries and add DISTILLED WATER if needed. If a battery charger is used regularly, the electrolyte levels will need to be replenished more often. Fluid level should be just above the plates in the battery. Do not overfill. Only use distilled water. If your boat is installed with a battery charger, before using the charger, make sure the charge mode is set to the battery type (Wet, Gel, or AGM) installed on your boat. If a battery needs to be replaced, make sure it is the same type as the other battery. It is ok to install a larger or smaller battery provided it is the same type (Wet, Gel, or AGM) as the other battery in the boat.

Consult with your dealer regarding wiring and installation of electronics installed at the factory. If equipment is connected to available accessory switches on the dash panel, your dealer’s service department should verify the capacity of the equipment being installed and install the appropriately sized ATC Fuse. Verify that installed equipment does not overload the capacity of the 30amp main breaker installed inside the console when all 12V accessories are running.
12V Electrical Schematic

- Electrical System Main Circuit Breaker 30Amp
- Battery Selector Switch (Optional)
- Group 24 Batteries (Cranking/House)
  Bilge Auto Fuse and Stereo Memory Fuse
- ATC Fuse Block for all Electrical Components
  Helm Switch Panel
1) Anchor Light - 14GA Grey/White
2) Bilge Pump Manual - 14GA Brown
3) Livewell Pump - 16GA Brown/Orange
4) Fuel - 16GA Pink
5) Courtesy Lights - 16GA Blue/White
6) Ignition - 14GA Purple
7) Navigation Lights - 14GA Grey
1) Navigation(Top) / Off(Middle) / Anchor(Bottom)
2) Off(Automatic)/ON - Activates Bilge Pump in manual mode. Return to off position for Auto mode.
3) Off/On - Activates Aerator Pump for Livewell
4) Off/On - Activates Accessory
5) Off/On - Activates Interior Courtesy Lights
6) Off/On - Activates Accessory
7) Off/On - Activates Accessory
8) Off/On - Activates Livewell Light
9) Spring Loaded Off/On - Press to engage horn. Release to Disengage

Note A: If optional equipment is installed at the Factory, Accessory Switches will be used and labeled according to their function and will therefore, no longer be available as accessory switches. Please consult your dealer regarding installation of additional equipment requiring the use of an accessory switch to verify amperage requirements. Do not "piggy back" off labeled switches as it may overload the rated amperage of the Fuse.
12V Electrical Schematic

- Electrical System Main Circuit Breaker 30Amp
- Battery Selector Switch (Optional)

- Group 24 Batteries (Cranking/House)
- Bilge Auto Fuse and Stereo Memory Fuse

- ATC Fuse Block for all Electrical Components
- Helm Switch Panel
1) Raw Water Pump - 16GA Brown/Green
2) Bilge Pump Manual - 14GA Brown
3) Livewell Pump - 16GA Brown/Orange
4) Anchor Light - 14GA Grey/White
5) Fuel - 16GA Pink
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7) Ignition - 14GA Purple
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2) Off(Automatic)/ON - Activates Bilge Pump in manual mode. Return to off position for Auto mode.
3) Off/On - Activates Aerator Pump for Livewell
4) Off/On - Activates Raw Water Washdown Pump
5) Off/On - Activates Interior Courtesy Lights
6) Off/On - Activates Accessory
7) Off/On - Activates Accessory
8) Off/On - Activates Accessory
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