

# **HA0365**

## LIFT CONTROL UPGRADE PERMANENT 6.0





## **Table of Contents**

Safety Definitions	2 - 3
Safety Instructions	2 - 3
Pre-Installation	4
Installation Instructions	4 - 12



# **WARNING**

DO NOT INSTALL OR OPERATE A LIFT OR ITS ACCESSORIES WITHOUT STUDYING THIS MANUAL AND INFORMATION ON LABELS INCLUDED WITH THE LIFT. FAILURE TO DO SO CAN LEAD TO IMPROPER INSTALLATION RESULTING IN SERIOUS PERSONAL INJURY AND/OR PRODUCT DAMAGE. IF YOU HAVE FURTHER QUESTIONS AFTER REVIEWING THIS INFORMATION, CONTACT A SHORESTATION REPRESENTATIVE.

# **Safety Definitions**

Safety messages are presented throughout this document and labels affixed to the product. The messages alert you to potential hazards to you and/or property. The signal words DANGER, WARNING, and CAUTION are preceded by an alert symbol and communicate the severity of potential hazard. The severity of each type of message is defined as follows:

- DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

# **Safety Instructions**

Working with electrical equipment and installations over the water present many potential hazards to the installer. Every installation presents unique conditions that the installer should evaluate before installing or servicing the equipment. The following instructions must be followed, but may not encompass all potential hazards:





Never use this equipment to lift people. People must exit the boat prior to lifing it out of the water

Never use this equipment to lift overhead. Install the platform so it remains at or below dock level.

This equipment is designed to lift boats. Never use it to lift other items.

Do not allow children to operate or play on the equipment.

Do not install if there are any signs of damage.

Never install or work on the equipment without first verifying that the A/C power supply (if present) is protected by a functioning Ground Fault Circuit Interrupt (GFCI) in accordance with National Electric Code section 210.8 and any additional local code requirements.

Review all operating instructions with the user(s) before installation.

Disconnect all A/C power from the dock before installing or working on the equipment.

Do not exceed the recommended capacity of the equipment.

Do not modify the equipment unless you have received direct written approval from the manufacturer (ShoreStation).

Remove any metallic objects from your person before working with DC or AC electrical components.

Always wear proper personal protective equipment such as safety glasses, gloves, hardhats, and clothing.

Installation may require entering the water. Never enter the water without a proper personal floatation device. Disconnect any power to the lift and dock before entering the water.

Never work alone and observe safe lifting practices such as team lifting and proper lifting posture.

# **AWARNING**

NEVER WORK ALONE.

ALWAYS WEAR
PERSONAL FLOATATION
DEVICES WHEN WORKING
IN AND OVER WATER.

ALWAYS WEAR
PERSONAL PROTECTIVE
DEVICES WHEN
ASSEMBLING AND
INSTALLING EQUIPMENT.

OBSERVE ALL SAFETY REQUIREMENTS FOR ALL EQUIPMENT USED FOR INSTALLATION.

## A DANGER

AVOID ELECTROCUTION.
DO NOT WORK ON OR
NEAR THE DOCK WITHOUT
FIRST VERIFYING THAT A
FUNCTIONING GFCI IS
PRESENTON ANY A/C
SUPPLY TO THE DOCK &
BOAT HOUSE. NEVER
ASSUME – VERIFY THE
FUNCTION OF GFCI USING
A GFCI OUTLET TESTER.



NOTE: HARDWARE FOR THIS INSTALL USES EXISTING HARDWARE CURRENTLY ON YOUR LIFT. SAVE ALL HARDWARE DURING THE DISSASSEMBLE. BEFORE ARRIVING AT THE INSTALL, SHORESTATION RECOMMENDS HAVING EXTRA HARDWARE BEFORE INSTALL IN CASE SOMETHING IS MISSING OR LOST.

#### **Tools Required**

1/2 wrench or nut driver

7/16 wrench or nut driver

3/8 wrench or nut driver

9mm nut driver

13mm nut driver

Phillips head screwdriver

Flat head screwdriver

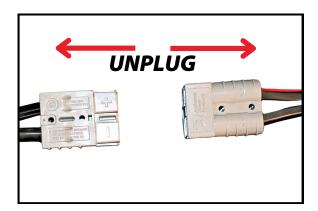
**Electrical tape** 

Side cutters or tin snips

**Drill and drill bits** 

### **Assembly Instructions**

Step 1: Disconnect the main power BEFORE replacing any components.

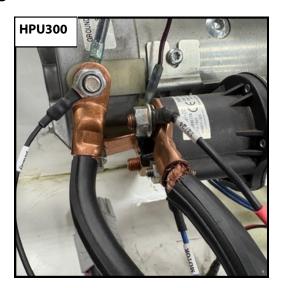


Step 2: Remove the old control unit.

Using a 7/16" nut driver, remove the old control unit from the box, keeping the bolts and nuts for reuse later to mount the new control unit. Once removed, unplug the gray 12 pin connector and discard old control unit

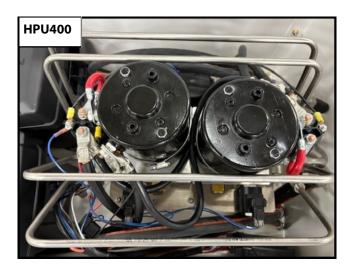


Step 3: Remove old wiring harness.



The following wires need to be removed/unplugged in order to successfully remove the old harness. These can be removed in any order. Be sure to unplug any external accessories such as a limit switch or lights before attempting to remove the harness.

NOTE: The HPU400 features two motors, two motor solenoids and four reversing coils. These are connected using jumper wires. DO NOT REMOVE JUMPER WIRES. Only the wires attached to the main harness need to be removed. Pay special attention to the routing of these wires to ensure proper installation of the new harness.



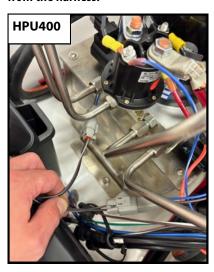
Main Power — red or orange wire with an inline fuse. Located on the positive terminal of the motor solenoid. 1/2" wrench to remove.

Solenoid Power – small blue wire. Located on the top of the motor solenoid. 3/8" wrench to remove.

Reversing Coil – The HPU300 features two reversing coils, one on top and one on bottom. Depending upon the age of the unit, the plug for these units will either be directly on top of the coil or on an extension.



The HPU400 features four reversing coils, two on either side of the pump. Simply unplug the connection to free the coil from the harness.



Ground – black wire. 1/2" bolt/nut holding to the housing.

Limit Switch — black/blue wire leading to the external upper limit. Unplug and pull up through the bottom of the box. Additional wires/plugs to note:

Amber light — this light was used in the old programming of remotes and plugged into light 1 output. It can be removed as it is no longer needed.

Orange Wire — this wire is the antenna for the old controller and will be attached to the harness. In some cases, this wire will be ran outside of the box. It can be removed as it is no longer needed.

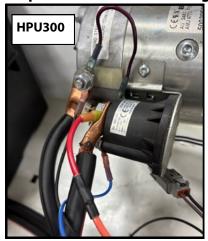


#### Step 4: Install the new controller

Locate the new control unit and wiring harness located in the HA0365 parts box. Reinsert the control bolts into the pump box and mount the new controller. Tighten down the nuts with a 7/16" wrench.



Step 5: Install the new wiring harness





The wires on the new harness go back into the same places as the wires removed and get tightened down.

NOTE: On HPU400 units, follow the photo closely to ensure proper wiring

Main power — Orange wire with inline fuse. Positive terminal of the motor solenoid and main battery positive cable gets reinstalled with it. 1/2" nut, tighten fully.

Solenoid Power – small blue wire. Top of the motor solenoid. 3/8" nut, tighten fully.

Reversing Coil – small brown wire. Reversing coil stud. 9mm nut, tighten fully.

Ground – 1/2" bolt/nut.

Limit Switch: Some permanent lifts feature external limit switches. These are not needed in many applications, however the blue and black limit switch wire on the harness must see a complete connection or the lift will not run up. The new wiring harness comes complete with this limit switch wire jumped. If the external limit switch will continue to be used, unplug the looped wire on the blue and black wire and plug into the limit switch. Note that an extension may need to be used to complete this connection. If the limit switch will no longer be used, it can be removed and no additional harness steps are required.

Double check that all connections are tight and completed.

#### Step 6: Test controller before running extensions

NOTE: IF A SHORESCREEN IS PRESENT, SKIP TO THE SHORESCREEN SECTION BEFORE TESTING THE UNIT. ONCE SHORESCREEN COMPONENTS ARE INSTALLED, RETURN TO THIS STEP TO CONTINUE.

Before running any extension harnesses, the system should be checked for proper function. Locate the square gray keypad connector. Using the keypad included in the kit, plug the gray connector into the back of the keypad. ShoreStation recommends plugging in any extension harnesses needed as well during this step. This ensures all wiring is present and working BEFORE running it through the canopy frame or to the keypads final destination.



Plug main power back into the batteries. Keypad should light up with a solid green light on the left next to the battery indicator and a flashing blue light on the right next to the padlock symbol. This is known as "wireless only" mode. Pressing UP or DOWN will ONLY run the screen. To test the lift, the keypad must be placed in "dockside mode". To enter this mode, press the STOP button once, watch for the flashing green light and enter the default code of 1-2-3-4. Upon completion, the flashing green light next to the padlock symbol will turn solid green. This indicates the keypad is now in "dockside mode" and the UP and DOWN buttons will operate the lift.



Once the test is completed and the components all work as intended, unplug the main battery power along with the keypad and any extension harnesses and move onto the next step.

#### **Step 7: Running extension harnesses**

The keypad can be mounted to an existing ShoreScreen mounting arm.

NO CANOPY PRESENT — Plug the keypad connection into the back of the keypad. Using the included, self-tapping screws, attach the keypad in the customers desired location. Be sure the keypad wire is plugged into the back of the keypad before securing and be careful NOT to run the self-tapping screw into the keypad wire. DO NOT RUN ANY WIRES OR CONNECTIONS UNDER WATER. Make final connection of the extension harness into the main wiring harness installed at the pump. Hide any additional wire(s) neatly inside the pump box. Plug back in the main battery power and close the pump box lid to complete installation.

CANOPY PRESENT / NO SCREEN – If a ShoreStation canopy is present, without the addition of a ShoreScreen, decide where the keypad will be mounted first. Plug the main keypad connection end of the extension harness into the back of the keypad. Using the provided, self-tapping screws, mount the keypad directly in the customers desired location. Be sure the keypad wire is plugged into the back of the keypad before securing and be careful NOT to run the self-tapping screw into the keypad wire. Run additional wires back to the pump box, using zip-ties whenever possible to secure the wire to the frame. Hide any excess wire(s) neatly in the pump box and make final connection of the extension harness into the main wiring harness installed at the pump. Plug back in the main battery power and close the pump box lid to complete the installation.



www.shorestation.com

#### **SHORESCREEN 6.0 STEPS**

The following steps need ONLY to be completed when a ShoreScreen system is present during a controller upgrade. The SK5310366 or SK0374 kit WILL be needed in addition to the HA0364 to complete this setup, as well as the HA0327 15FT extension harness.

NOTE: IN NO SCENARIO WILL THE MOTOR WIRES NEED TO BE CHANGED/RE-RAN. SIMPLY UNPLUG THE MOTOR LEADS FROM THE EXISTING RELAY AND REUSE THEM.

Step 1: Remove old relay (if applicable, see below).

ShoreStation ShoreScreen systems have featured 2 different versions of a relay. These different versions are as follows:

**Cube Relay – NOT COMPATIBLE WITH 6.0** 

3.0 Relay - COMPATIBLE WITH 6.0

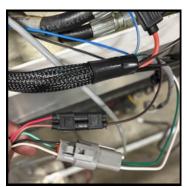
If a cube relay is present, it must be removed as it is not compatible with the 6.0 control upgrade. Additionally, the cube relay featured a smaller gauge wire for the battery and it will not fit the new relay version. In this case, 5310352 and 5310365, battery power cables will be needed to complete the change (sold separately).

Remove the cube relay using a 7/16" wrench, unplugging the motor and key switch wires. The motor wires will be reused, the key switch wires will not.

Cube relay replacements will require the SK0374 relay kit to upgrade. This includes the main wiring harness needed.

Step 2: Install the new relay to the canopy frame using the existing 7/16" hardware and run 15ft extension harness down to pump box and make connections.







**MAIN PUMP WIRE HARNESS** 

MIDWEST IND

#### **SHORESCREEN 6.0 STEPS (continued)**

Step 3: Removing old key switch and run extension harnesses.

Now that the system has been tested and the new relay is installed in the canopy frame, it is time to run the extension harnesses. Begin by removing the old key switch assembly mounted to the ShoreScreen mounting arm. A phillips head screwdriver can be used to remove the top screw.



The bottom screw cannot be accessed without the removal of the key switch faceplate. Simply grab the key switch housing by the top and pull away from the ShoreScreen mounting arm. HOLD ONTO THE MOUNTING ARM BEING CAUTIOUS NOT TO DAMAGE IT OR PULL IT AWAY FROM THE FRAME. The light plastic around the bottom screw head should break allowing the key switch assembly to fall free.



Once the key switch assembly is free, use a pair of snips to cut the wire near the key switch and discard the key switch assembly. Pull the cut wire up and through the hole in the canopy frame and let it hang for now.



#### **SHORESCREEN 6.0 STEPS (continued)**

Locate the extension harness included in the HA0364 kit and run the keypad square connection end through the canopy frame and down the mounting arm.



Reinstall the bottom screw into the keypad assembly.



Hold the keypad assembly in place and mark the new top hole location.



Rotate the keypad assembly out of the way and use a drill and bit to drill a new hole.

Plug the keypad harness into the keypad and rotate to it's final position. Install the top screw.

Take the open end of the keypad harness and tape it off to the old key switch harness that was cut.

Using the old harness, pull gently to feed the new harness into the canopy frame and the old harness out of the canopy frame.

Once the keypad harness end is above the relay, cut the tape off and discard the old key switch wire.

Run the new harness down the canopy leg and into the pump box. Hide any excess wire(s) neatly in the pump box and make final connection of the extension harness into the main wiring harness installed at the pump. Plug back in the main battery power and close the pump box lid to complete the installation.

