

## AC LEISURE PRO SHORE COMMANDER ( BLACK CONTROL BOX )

### Troubleshooting Guide

Picture shown below is a vertical mount system



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## SYSTEM RECALL PROGRAM

Commander Products, LLC would like to address certain AC Shore Commander systems that are in the field from our 2005 season. During our 2005 season we experienced a bad run of circuit boards and/or touch pads that may cause these systems to malfunction.

I have outlined the ways to identify these systems: Please see attached images for reference.

1. Systems will have a green or white sticker on the back of the control box with a date indicating the year 2005.
2. The attention writing on the front stating;

***Attn: This unit must be plugged into a GFCI outlet*** will be in white font.

If any your dealers have stock or know of any 2005 systems in the field, please have them contact Mike in our Service Department to verify and determine a plan of action at 877-240-6464

Thank you for your cooperation.

Best regards,

Service Department  
Commander Products, LLC.  
(877) 240-6464



## **GENERAL INFORMATION**

### **Shore Commander Advantages**

#### **Safety**

- No fingers getting caught in crank wheel or rubber wheel drive.
  
- Anyone is able to use the lift with more ease. Eliminating the wheel also allows more room to enter and exit the boat lift.
  
- Keypad access limits who can operate the lift. Keeps small children from being able to operate (without the key fob).
  
- A light is included for better night / early a.m. visibility.
- Limit switch is available to prevent over winding the cable.
  
- Safe and reliable, worm gear drive replaces industry standard, ratchet pawl wheel lock mechanism.

#### **Easy To Operate**

- Wireless remote control! No more cranking! Remote has up to 100 feet of range.
  
- If you forget your remote key fobs or lose them, use your keypad code to access the operating controls.
  - If you lose power, a manual backup bit is provided for use with a cordless drill to run the lift up and down.

#### **Quiet**

- Commander Product's reliable worm gear drive system eliminates the need for the noisy, ratcheting brake kit.

#### **Maintenance Free**

- Gearbox is oil filled and permanently sealed so you never have to drain and refill.
  
- Both the control box and the motor are designed to withstand the elements.
  - It is recommended the unit be removed at the end of the boating season and stored in a cool dry place.

## Technology

- Commander Products' *patented* direct drive technology eliminates slippage commonly found with rubber wheel drives, chains that can stretch or rust over time and simplifies installation.
  - The variable frequency drive (smart controls) optimizes electrical efficiency, draws minimum amperage and gives the 3 phase motor more startup torque than a single phase motor.
    - Commander's "smart" controls reduce the possibility of damage to the motor due to situations such as seriously overloaded boat lifts and poor power situations by simply shutting down the motor before it is burned out. It is always recommended that, in a poor power situation, a battery powered system is suggested over AC power.
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## **SPECIAL NOTICE**

Commander Products, LLC would like to address certain AC Shore Commander systems that are in the field from our 2005 season. During our 2005 season we experienced a bad run of circuit boards and/or touch pads that may cause these systems to malfunction.

I have outlined the ways to identify these systems: Please see attached images for reference.

3. Systems will have a green or white sticker on the back of the control box with a date indicating the year 2005.
4. The attention writing on the front stating: **Attn: This unit must be plugged into a GFCI outlet** will be in a white font.

**Picture shown below is a horizontal mount system, this special notice also applies to a vertical mounted system**

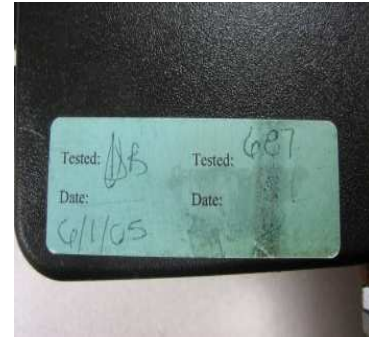


The attention writing on the front stating

**Attn: This unit must be plugged into a GFCI outlet will be in white font.**



Systems will have a **green** or **white** sticker on the back of the control box with a date indicating the year 2005. **\*2006 control box has engraving on the back which indicates a good control board inside**



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## 1.0 Power recommendations for the AC Leisure Pro Shore Commander

### - Licensed Electrician

***Warning:*** Do not plug your AC Leisure Pro Shore Commander into a 220v AC current or higher.

*Damage will occur resulting in voiding of the manufacturer's warranty.*

*To prevent serious injury due to electrocution, a licensed electrician is highly recommended by the manufacturer to assess that all AC wiring is correctly installed before the AC Leisure Pro Shore Commander should be used.*

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## 1.1 Power recommendations for the AC Leisure Pro Shore Commander

### - General Power Recommendation

A. The AC Leisure Pro Shore Commander motor is only as good as the power it is supplied while "**Under Load**" and will cause damage to the AC motor voiding the Manufacturer's warranty.

*The AC motor UL tag indicates that the supply is 240/440 - 3 phase. however, since it is designed to operate as a single system, 120v AC is required.*

*Any voltage over 120v can cause severe damage to the circuit board and void all manufacturers' warranty.*

*A 20 amp GFI (ground fault Interrupt) protector "must" be installed at the shore by a licensed electrician.*

*12-2 awg outdoor wiring is recommended for a distance of 100' feet or less from the power supply to the AC Leisure Pro Shore Commander.*

*10-2 awg outdoor wiring is recommended for a distance of 100' feet or greater from the power supply to the AC Leisure Pro Shore Commander.*

*The normal operating voltage "Under Load" is between 114v – 120v AC with an amp draw between 6 – 15 amps.*



Voltage Meter



## **1.2 System does not work at all when plugged into AC power supply**

### **CHECK SPECIAL NOTICE**

Check power supply to the AC Leisure Pro Shore Commander system.

*System requires 120v AC power to work properly – Refer to section 1.0 & 1.1*

Plug a separate AC powered device into the outlet where the Commander system is located to make sure that there is power going through the line.



*Power drill, drop light etc.*

*Note: this test does not indicate proper power level of current only whether or not the line is active.*

If there is no power from the power supply or through the power line.

*Contact a licensed electrician*

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### **1.3 System has power but no touchpad or wireless key remote operation**

#### **CHECK SPECIAL NOTICE**

**A.** Unplug the AC Leisure Pro Shore Commander from the power supply for approximately 5 minutes to allow the internal capacitor to discharge of all power.

**B.** After 5 minutes, plug the AC system back into the power supply and listen for a “beep” to come from within the control box.

*If no “beep” is heard from within the control box – Refer to section 1.7*

*If a “beep” is heard from within the control board, proceed to step C below.*

**C.** The “beep” from within the control box is an indication that the control board and VFD (variable Frequency Drive) is functioning and power is supplied to the AC Leisure Pro Shore Commander System.

**D.** On the touchpad, depress the “code” button on the touchpad, followed by your four digit PIN number.

**E.** Once you depress the “code” button, a green led light should appear on the touchpad followed by a red light once you depress the fourth number of your PIN on the touchpad.

*If system still does not work, continue with troubleshooting*

**Warning:** *Do not place your fingers inside the control box without unplugging the AC Leisure Pro Shore Commander from the power source. The VFD capacitors do maintain a 120v charge for 5 minutes after unplugged. Wait until all the led lights are off inside the control box before servicing.*

**F.** Unplug the AC Leisure Pro Shore Commander from the power supply.

**G.** Loosen the plastic cable gland located on the control box with the wires leading to the canopy light and limit switch. Once the cable gland is loose, slowly push approximately a ½” of black wire into the control box.

**H.** Remove the six small black philip lid screws on the control box and carefully open the lid so you do not accidentally unplug any of the internal wires.

**I.** Visually inspect that all of the internal wire connectors are plugged in, **(Note)** especially the black antenna wire to the circuit board attached to the bottom of the lid.

**J.** If the antenna wire is unplugged, the circuit board system will activate showing a red flashing LED light when the system is plugged in, however it will not allow the touchpad or key remotes to work.

**K.** If the antenna is unplugged, disconnect the power supply from the AC Leisure Pro Shore Commander – wait 5 minutes for all of the power in the VFD to discharge and then you may plug the antenna wire back into the three slotted pin header into the circuit board located on the bottom of the lid.

**L.** Plug the AC Leisure Pro Shore Commander back into the power supply. You will hear a “beep” and there will be two solid lights visible on the VFD (Variable Frequency Drive) One Green and One Yellow.

*If you observe a red flashing light or any other color light flashing – Refer to section 1.8*

**M.** You may also notice a red flashing LED light briefly on the circuit board on attached to the bottom of the lid which indicates the circuit board in operational.

*If the circuit board on the bottom of the lid has “No” flashing red led light – Refer to section 1.9*

**N.** On the touchpad, depress the “code” button on the touchpad followed by your four digit PIN number.

**O.** Once you depress the “code” button, a green LED light should appear on the touchpad followed by a red light once you depress the fourth number of your PIN on the touchpad.

**P.** If the red LED light is activated – push the “UP” or “Down” button to test.  
*If the system is working*

**Q.** Carefully place the lid back on the control box, but make sure that “no” wires get pinched or cut. Put the lid screws back into the lid fastening it to the control box and tighten the loose cable gland on the control box.

*System still does not have touchpad or key remote function – continue to troubleshoot.*

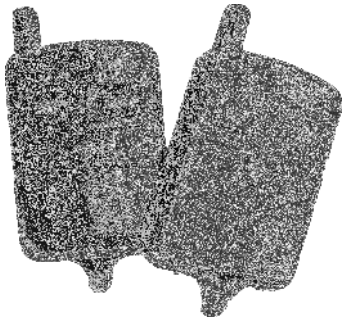
**R.** Visually inspect the antenna wire leading from the control box to the 2"x 3" antenna box for any cuts in the wire. If no cut is found, remove and open the antenna box and check to see if the antenna inside this box is plugged into the antenna wire or if there are any signs of water or corrosion.

**S.** If water or corrosion are present inside the antenna control box or a cut antenna wire is noticed – this will cause the touchpad and wireless key remotes to not work at all and show a flashing red LED light on the circuit board attached to the control board lid.

**T.** If water is seen inside the antenna box, you can dry it out with a hair dryer which will allow the system to work, but a new antenna must be ordered as soon as possible since corrosion will form.

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## **1.4 Wireless key remotes work but not the Touchpad**



**CHECK SPECIAL NOTICE**

**A.** The only thing that can be done is to visually inspect that the touchpad is plugged into the circuit board by following steps in *section 1.4*

**B.** If the touchpad is plugged in and still no function, contact Commander Products service department for a replacement touchpad.

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## **1.5 Touchpad works but not the Wireless key remote(s)**

**CHECK SPECIAL NOTICE**

**A.** Open the remote and check for corrosion. If corrosion is found, Commander Products service department for a replacement remote.

**B.** If no corrosion is found and you have no blue flashing light on your wireless key remote – replace the battery.

*Note: If a replacement wireless remote is obtained, it must be programmed into the AC system, Refer to section 2.0*

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## **1.6 Touchpad activates however motor stops running and will not go again**

### **CHECK SPECIAL NOTICE**

- A.** Unplug the AC Leisure Pro Shore Commander from the power supply.
- B.** Loosen the plastic cable gland located on the control box with the wires leading to the canopy light and limit switch. Once the cable gland is loose, slowly push approximately a ½” of black wire into the control box.
- C.** Remove the six small black philip lid screws on the control box and carefully open the lid so you do not accidentally unplug any of the internal wires.
- D.** Visually inspect that all of the internal wire connectors are plugged into the VFD and the bottom of the lid.
- E.** Plug the AC Leisure Pro into the power sources and note the LED lights on the VFD for diagnosis. *Refer to section 1.8*
- F.** When completed inside the control box, carefully place the lid back on the control box, but make sure “no” wires get pinched or cut. Put the lid screws back into the lid fastening it to the control box and tighten the loose cable gland on the control box.
- G.** Inspect mechanical function of the boat lift. (Cables, level, lift etc)
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## **1.7 No “Beep” is heard from within the control box when plugged in**

## CHECK SPECIAL NOTICE

- A. Unplug the AC Leisure Pro Shore Commander from the power supply.
- B. Loosen the plastic cable gland located on the control box with the wires leading to the canopy light and limit switch. Once the cable gland is loose, slowly push approximately a ½” of black wire into the control box.
- C. Remove the six small black philip lid screws on the control box and carefully open the lid so you do not accidentally unplug any of the internal wires.
- E. Visually inspect that all of the internal wire connectors are plugged into the VFD and the bottom of the lid.

***Warning: Do not attempt to work on VFD with the main power applied. High voltage exists in the drive. Fire and / or electrocution can result if caution is not exercised.***

- F. Plug the AC Leisure Pro into the power sources and note the LED lights on the VFD for diagnosis. ***Refer to section 1.8***

**G** When completed inside the control box, carefully place the lid back on the control box, but make sure “no” wires get pinched or cut. Put the lid screws back into the lid fastening it to the control box and tighten the loose cable gland on the control box.

### **1.8 VFD Diagnostic lights**

***Warning: Do not attempt to work on VFD with the main power applied. High voltage exists in the drive. Fire and / or electrocution can result if caution is not exercised.***

**Note:** Slow flash = 1.0 second on and 1.0 second off.  
Quick flash = 0.25 second on and 0.25 second off

Normal operation	Slow flash Green
Overload 120% – 160% full load	Steady Red 2
Drive timed out	Quick FLash Red
Short Circuit	Slow flash red
Under voltage	Quick Flash red / yellow 3
Over voltage	Slow flash red / yellow 3
Stop	steady yellow

- A. If the VFD LED lights indicate a short circuit or overload, contact commander products. This is a problem with the motor and needs replacement.



**LED lights are located at the upper corner next to the red plastic pins on the VFD Board.**

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## **1.9 Circuit board on the bottom of the control box lid does not work**

### **CHECK SPECIAL NOTICE**

A. Visually inspect that all of the internal wire connectors are plugged into the circuit board located on the bottom of the control box lid.

## **2.0 Programming Wireless remotes**

A. Loosen the plastic cable gland located on the control box with the wires leading to the canopy light and limit switch. Once the cable gland is loose, slowly push approximately a ½” of black wire into the control box.

- This will allow you to open the control box lid without pulling any wires off of the circuit board which is located at the opposite side of the lid.
- After replacing lid, tighten cable gland again.

B. Remove the six small black philip lid screws on the control box and carefully open the lid so you do not accidentally unplug or loosen any of the internal wires.

C. While looking at the inside – reverse side of the control box lid:

- Locate the small “white” button near the lower left hand side of the circuit board.
- Depress the small white button.
  - A red light will come on next to the white button on the circuit board.
  - Once the red light comes on, press the “UP” button on your remote.
  - The red light will then go off once it receives the signal from the remote.
  - Test the remote.
- D. You can program up to 4 remotes for this system. To program more than one remote, proceed with the steps mentioned above.
- F. If your remote is programmed, carefully close the control box lid to make sure no wires will be pinched or cut.
- G. Put the lid screws back in – but make sure they are not too tight.
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## 2.1 Canopy Light does not work



- A. Loosen the plastic cable gland located on the control box with the wires leading to the canopy light and limit switch. Once the cable gland is loose, slowly push approximately a ½” of black wire into the control box.
- This will allow you to open the control box lid without pulling any wires off of the circuit board which is located at the opposite side of the lid.
- B. Remove the six small black philip lid screws on the control box and carefully open the lid so you do not accidentally unplug any of the internal wires.

***Warning: Do not place your fingers inside the control box without unplugging the AC Leisure Pro Shore Commander from the power source. The VFD capacitors do maintain a 120v charge for 3 minutes after unplugged. Wait until all the led lights are off inside the control box before servicing.***

- C.** While looking at the inside – reverse side of the control box lid:  
-Locate the small 1 amp fuse near the lower left hand side of the circuit board.
- D.** If fuse is blown replace. If the fuse is alright, check the bulb inside the canopy light.
- E.** If bulb is bad, replace it with a 12v DC bulb #912. Do not use a #921 bulb since this bulb will draw over 1 amp resulting in damage to the control board.
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## **2.2 Motor will not pickup the boat**

### **Motor torque adjustment**

***Warning: Do not attempt to work on VFD with the main power applied. High voltage exists in the drive. Fire and or electrocution can result if caution is not exercised.***

- A.** Loosen the plastic cable gland located on the control box with the wires leading to the canopy light and limit switch. Once the cable gland is loose, slowly push approximately a ½” of black wire into the control box.
- B.** Remove the six small black philip lid screws on the control box and carefully open the lid so you do not accidentally unplug any of the internal wires.
- This will allow you to open the control box lid without pulling any wires off of the circuit board which is located at the opposite side of the lid.





C. Above the two capacitors (brown cylinders) is a row of dials adjustable by small Phillips screwdriver. ([Pictured above](#)) Locate the dial with the word MAX next to it.

***\*\*DO NOT FORCE IT BEYOND IT'S STOPPING POINT\*\****

***Note: DO NOT TAMPER WITH THE OTHER DIALS.***

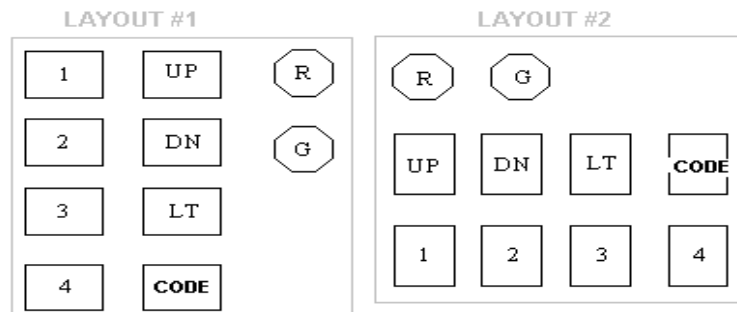
D. With your screwdriver, carefully turn the dial counter-clockwise. This will reduce the speed of the motor, increasing torque. This adjustment is very sensitive, you may only need to make a very fine adjustment. Start with a quarter turn only.

E. Replace cover, plug back into power source and test the unit.

***Note: If the adjustment is turned fully counter-clockwise and the motor still does not operate, inspect the power supply for sufficient power (from the service to the shore and the unit from the shore). A minimum of a 10-2 gauge extension cord is required with a 20 amp service breaker. Refer to section 1.0 & 1.1***

F. Also, inspect the lift to make sure there is no binding anywhere on the lift cables. Another possibility is that the lift is overloaded and a larger capacity lift may be needed for your boat.

## 2.3 TOUCHPAD OPERATION



- 1 – 4**      **Code entry keys**
- UP**        **Move lift up**
- DN**        **Move lift down**
- LT**        **Toggle light ON or OFF**
- CODE**      **Code entry key**

### Normal operation:

- A.**        To unlock keypad, push the “Code” button then enter “1” “2” “3” “4”.  
              This is the factory default 4-digit code.  
On the first number key pressed the Green LED lights to indicate that the keypad is in the code entry mode.
- B.**        When the fourth digit of the programmed code is entered, the Red LED lights to indicate that the keypad is unlocked. You can then operate your lift. A timeout is started after code is entered and systems will auto-lock after 5 min of being dormant.
- C.**        Pressing the Code key while the keypad is active will cancel the active mode and lock your system.

### To Change Factory Code:

- D.**        To enter your own user defined password , enter the factory default code { “Code” “1” “2” “3” “4”}, then press & hold the Ccode key until the red LED starts blinking then enter your own custom 4 digit code. The LED’s will automatically go out and your system has accepted the new code.
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## 2.4 CHANGING THE ANTENNA ASSEMBLY

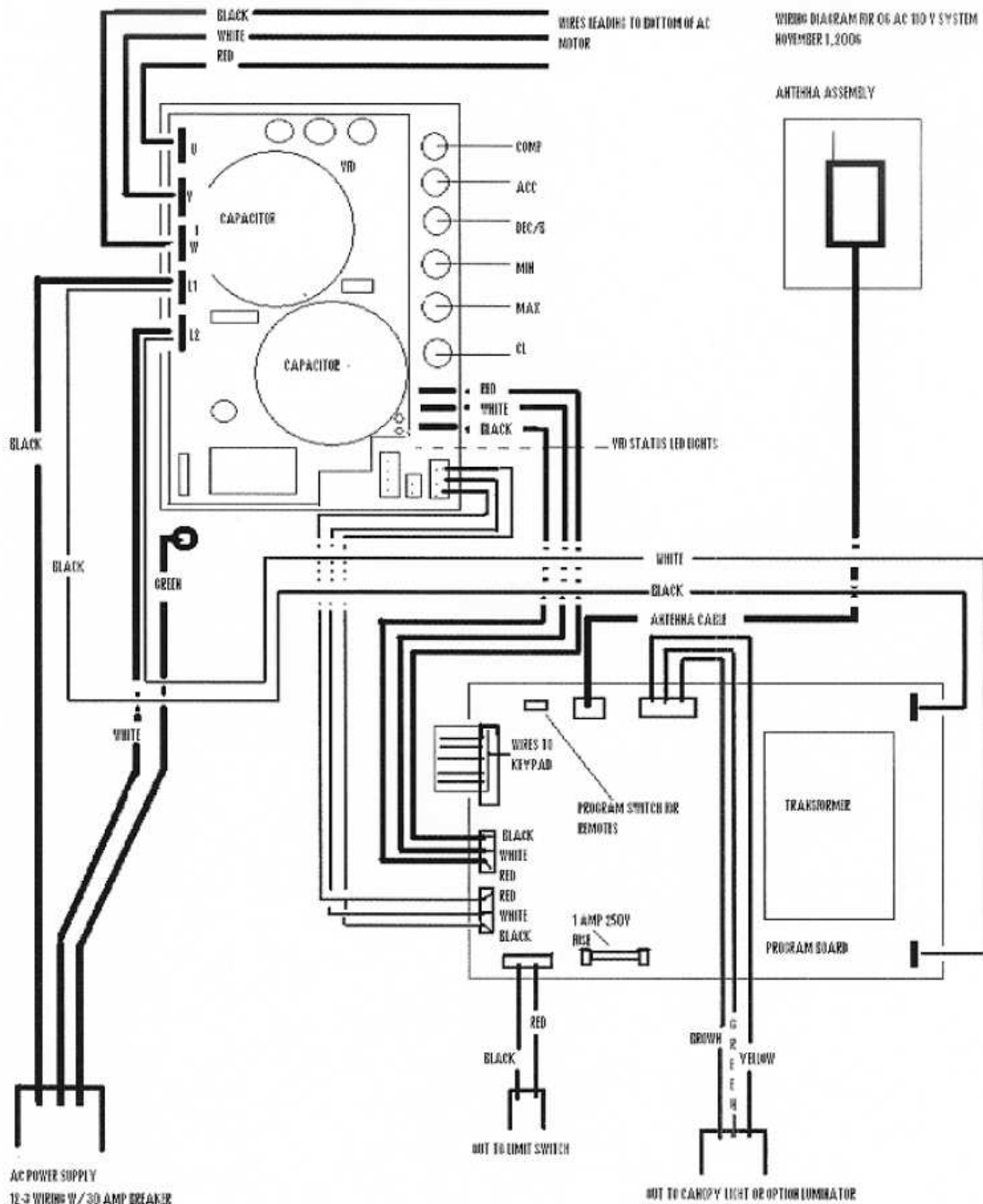
- A. Remove faceplate of control box and carefully rotate lid off to the side so you can get at the antenna connection inside.
- B. Remove the strain reliever with a needle nose pliers. You may have to loosen gently first with a flat head screwdriver. Carefully disconnect the antenna wire by tugging slightly side to side to loosen it from the connection.
- C. Next, run the new antenna wire w/ connector through open hole and “plug” into connection where old connector was removed from.

***You may need to gently use a small flathead screw driver to assist you in getting it to snap into the connection***

- C. Once connected, attach supplied strain reliever to wire about 1 inch away from hole in box compressing in over the wire using a needle nose pliers
- D. Press the strain reliever into the open hole in the box (it should snap into place). Next, carefully replace the faceplate being careful not to get any wires caught between it and the control box. Re-mount the antenna box to the boatlift canopy frame or another frame member making sure to follow the “this side up” advice on the sticker. In the event that water gets into the antenna box again, make sure to open up the small black box as soon as possible and let it dry out completely before reinstalling. ***Do not mount the antenna close to the control box.***

**Diagram attached**

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WIRING DIAGRAM FOR 06 AC 110V SYSTEM  
NOVEMBER 1, 2006

ANTENNA ASSEMBLY

AC POWER SUPPLY  
12-3 WIRING W/ 30 AMP BREAKER

WIRE TO LIMIT SWITCH

WIRE TO CANOPY LIGHT OR OPTION LUMINAIRE

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