

# GEM Auto-Stop Limit Switch Yellow Top KFLS, KRLS AND KELS

## Step by Step Procedure

6/17/08

**NOTE:** Do not attach KFLS (all metal box) a limit switch mechanically until the lift is completely set up and adjusted. Attaching the old limit switch mechanically before the lift is set up can destroy the limit switch and cause it to malfunction.

**Tools:** Phillips Screwdriver, Small Regular Screwdriver, wire strippers.

- 1: Turn off main power to dock. Strip limit switch and GEM's units limit switch wires.
2. Bypass the limit switch during an initial setup by connecting (a wire nut) the three limit switch wires together inside the GEM box.  
**It is against code to sell or run an Auto-Stop unit without a limit switch.** If your limit switch does not have wires attached, call the boat lift company that sold you the unit. If it is not a GEM limit switch system, it is not covered under warranty or product liability.
3. Note the Auto-Stop LED at the top of the face card. If it is light then press the Auto-stop button and the LED will turn off. You want it off.
4. Check to see that lift goes in right direction on the face card(make sure the tail on the face card is connected) and the remote.
5. Get all motors level and running in the same direction. Place the lift 1 foot from the maximum **up** position.
6. If installing KFLS on a BHUS or BLUS lift check for clearance of **a bolt** see next page. When mounting the limit switch, the fork must be parallel to the pipe (in the center). If the fork is not parallel, the limit switch could get damaged and malfunction. On a KFLS remove the two top bolts on the worm gear. Note the holes in the KFLS that match up to the bolts. If your unit has a white plastic backer that covers the nuts undue the top 2 guide pins for the motor cover this should give you more room to work. Some Flat Plate winches have an extra zerker fitting. You can remove it or drill an extra hole in the KFLS plate. For clearance for the motor and limit you might need to drill 2 holes in the top of the motor cover closer to the edge of your cover. Over the years these holes have gotten farther away from the edge and causing interference.
7. Remove Yellow caps by removing two screws (these will be loose from GEM Remotes).
8. Press up on the transmitter and watch the direction that the two cams turn when your lift is at the max height. Release the up button.
9. Now remove the bypass wire nut and connect the wires from the limit switch to the GEM wires. (Black 18 to Black 18, Red 18 to Red 18, & Blue18 to Blue 18 limit switch wires).

**Adjustment Procedures:** To adjust the upper limit use screw 2o-2(blue wire on micro switch).

10. Your lift should be at the max height if you followed the directions above. Loosen retainer screw 1o(**1/2 TO 3/4 TURN**) inside the case as shown in the picture below.
11. Adjust the upper limit using screw 2o-2(blue wire). Adjust the screw so the cam hits the micro switch roller arm in the direction the cam was turning. You will hear a small click. If the arm is already on the cam, back it away and adjust until you hear the click.
12. Press the up button. The lift should not turn on. **Re-tighten retainer screw!!!(1o)**. Check to see that the Auto-Stop LED is flashing fast.
13. Now press the down button on the transmitter. Watch the cams to see that they travel away from the roller switch arm. If the down switch arm is on the down cam and the unit will not lower go to step 11 and adjust the lower cam away from the roller switch arm.  
**Always re-tighten the retainer screw (1o) before you activate the lift.**
14. When the lift is at the lowest point to be able to launch your boat at a **low** tide, or before the lift hits bottom, or it has only 3 wraps of cable on the drive pipe, adjust the bottom cam screw (2o -1 red wire) until you hear the click. This should engage the micro switch roller arm. Try pressing the down button on the transmitter. The lift should not turn on; check to see a slow flashing of the Auto-Stop LED.
15. **Re-tighten the retainer screw (1o) before you activate the lift.**
16. Press the Auto-Stop button. The lift should run continuously by pressing a button once. Run the lift up a foot then press the stop button, and the lift should stop. Now the down button(built in 3 second delay when changing direction) make sure the lift stops at the lower limit, if not readjust the limit then test again. Test run the lift in both directions to ensure proper operation **check that the lift stops in the correct positions**. The new 2007 units have a six minute time out, if the lift runs for six minutes, the lift will stop. If you need more time just press the same button again and it will run for another six minutes.

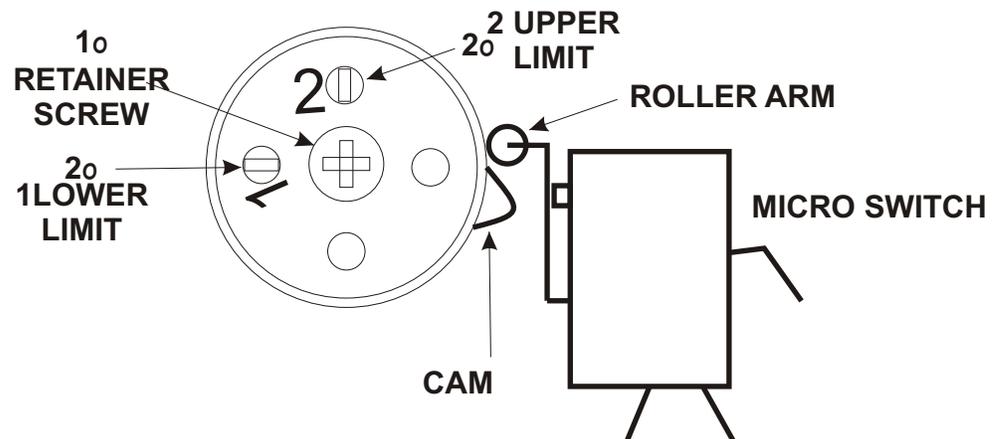
**FAILURE to follow these directions voids all warranties to equipment as written or implied. GEM will assume no responsibility to damages that were a result of improper installation or user error.**

**WARNING:** Failure to tighten the retainer screw might not allow the cams to move, therefore the LIFT WILL NOT STOP.

This could possibly cause damage to the limit switch, boat lift, boat, and/or the entire system.

**Read the instructions on the yellow face card. For maximum safety, we recommend that the GEM unit be turned off at the power source when not in use.**

## Inside the Yellow Limit Switch Box



# GEM REMOTES E-DRIVE LIMIT SWITCH INSTRUCTIONS 6/17/08

1. Mount the unit horizontally as shown in the pictures.  
Note: There is a small drain hole on the bottom. This allows the water to drain.
2. See next page for adjustment instructions.

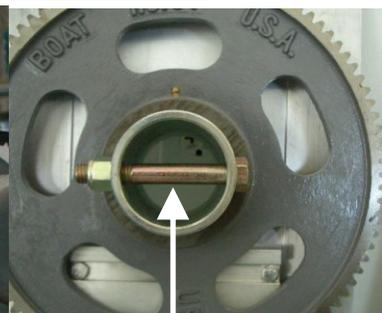


KELS

Picture complements of Atlantic lifts of South Dade.

New KFLS 05 might not work on Boat Hoist US Boat Lift US due to extra long bolt check for clearance here Read instructions on the next page for installation

KFLS



KFLS

Install a KFLS limit switch when the bolt on the flat plate is horizontal.

Bolts for installing KFLS

## GEM REMOTE'S Rotary LIMIT SWITCH INSTRUCTIONS

Tools: Phillips Screwdriver, Small Regular Screwdriver, for KRLS units you might need a drill and 1/4 metal drill bit.

You may need to drill a hole in the drive pipe and attach the bolt that came with the limit switch make sure bolt clears Beams.

Note: bolt past the bearing.



KRLS

Questions? Call GEM 239-642-0873