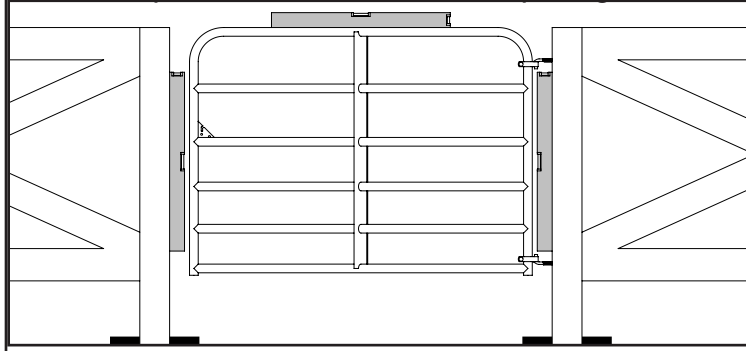


Quickstart Guide for TSS1 Single and TDS2 Dual Automatic Gate Opener Kits

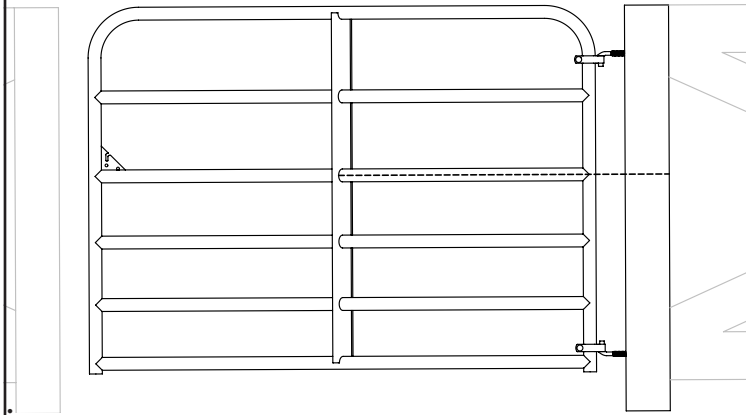
This installation overview shows the most common installation of a single, pull to open application and is intended for use as a guide once you have read and understand the complete installation manual. Please refer to the installation manual for safety instructions prior to installing your automatic gate opener. The installation manual is required for information on additional features, programming, dual applications, and push to open applications.

A complete installation video can be viewed at: ghostcontrols.com/support/installation-video

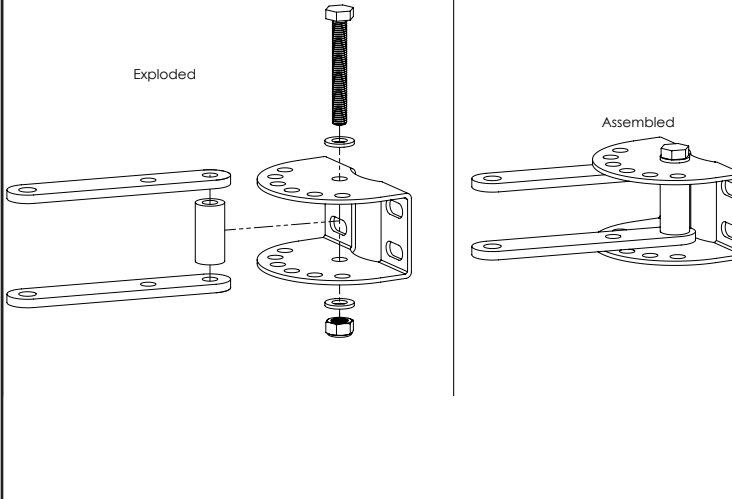
PREPARE THE GATE
 Post must be a minimum of 6"x6" wood or 3" steel and set in concrete. Gate must be plumb, level, and swing freely. Wheels cannot be used and ball bearing hinges are recommended for gates weighing over 200 lbs. Operator is not for use on solid panel gates.



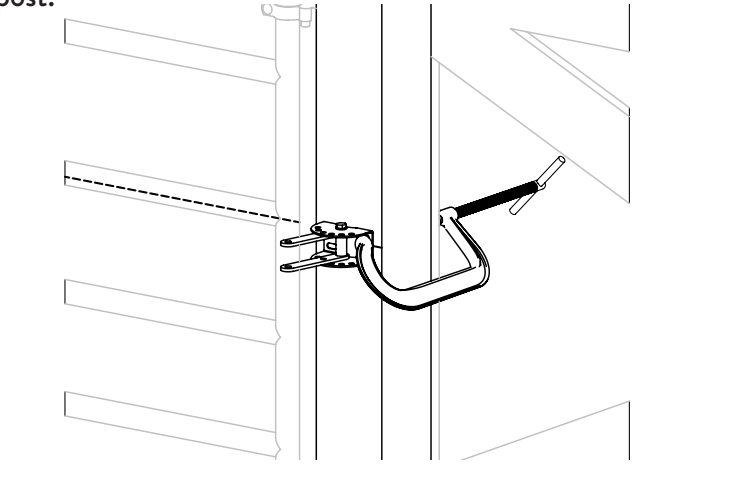
1. Operator should be mounted as close to the center of the gate as possible. Determine the mounting location of the operator and mark the center line on the gate hinge post.



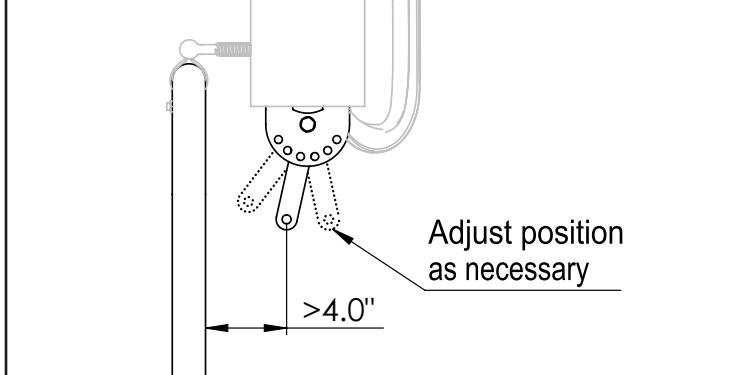
2. Pre-assemble the post pivot bracket as shown. Do not completely tighten at this point..



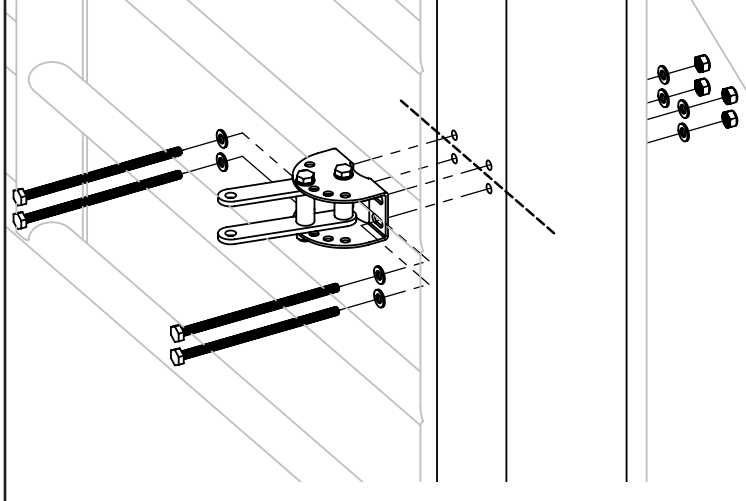
3. Align the center of the post pivot bracket over your established center line and clamp the bracket to the hinge post.



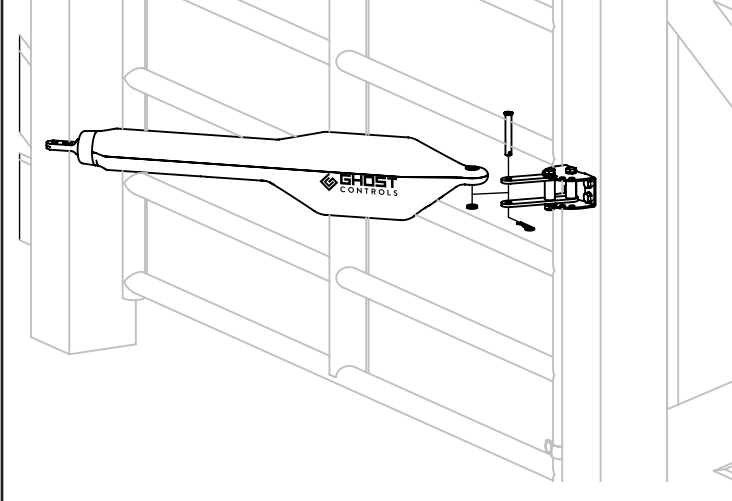
4. Adjust the post bracket and pivot brackets as needed to achieve a minimum of 4" clearance between the hole in the pivot brackets and the inside of the gate in the desired open position. Add the 2nd pivot bracket bolt and tighten both.



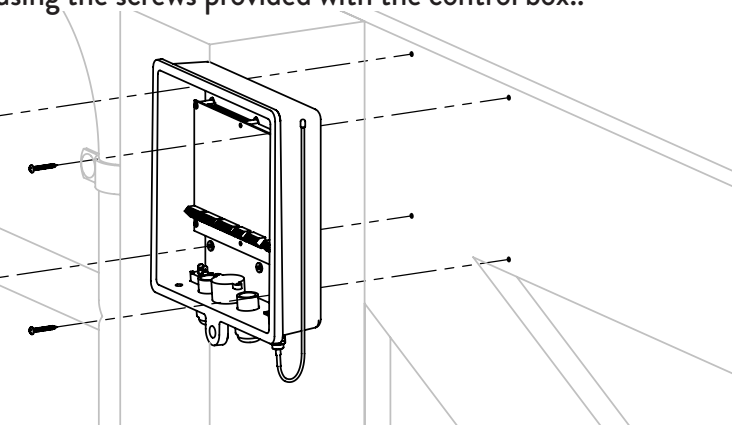
5. Mark the bolt holes and drill using a 13/32" drill bit. Install the 4 mounting bolts and tighten.



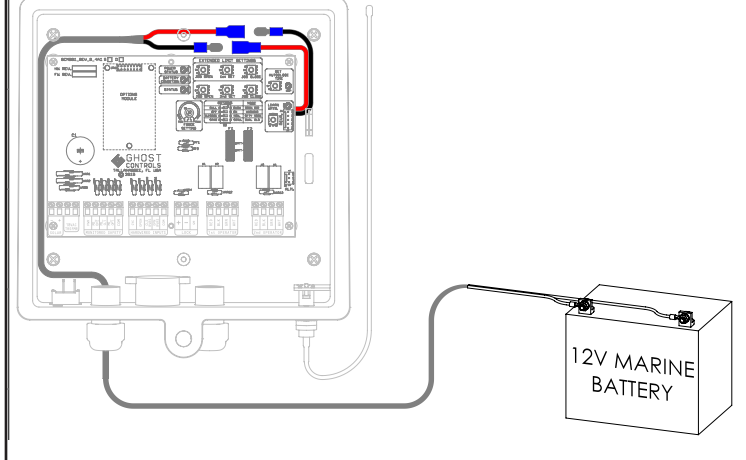
6. Install the rear of the operator using the clevis pin, bushing, and hairclip as shown.



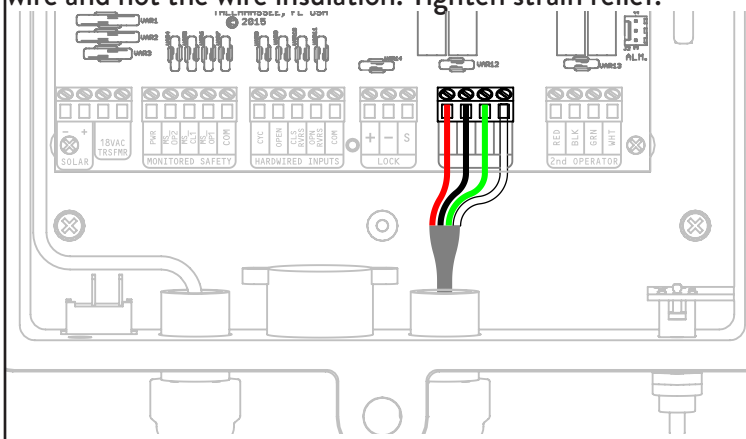
7. Determine the mounting location for the control box making sure the arm power cable will reach. Pre-drill the control box mounting holes with a 7/32" drill bit and mount using the screws provided with the control box..



8. Insert the battery harness through the strain relief and attach to the control board, then attach the other end to your battery. *ABBT Battery Box Kit not shown here.*



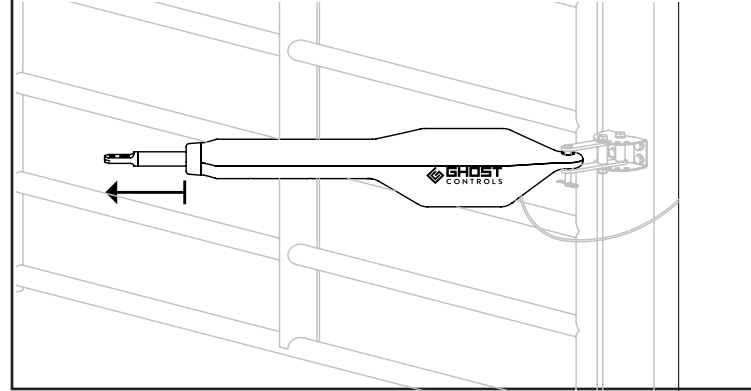
9. Insert the arm cable through the strain relief and attach using the screw terminals on the control board. Make the screw terminal connections are tight and are contacting the wire and not the wire insulation. Tighten strain relief.



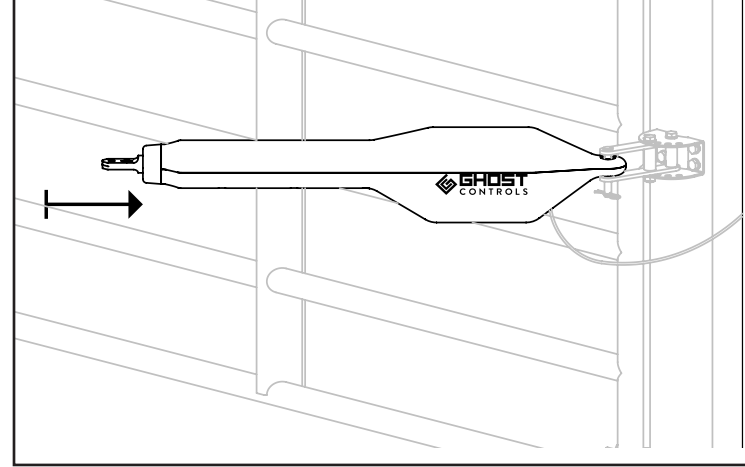
10. Verify that the dip switches are set to the correct position as shown.

DIP Switch #	OFF Position	ON Position
1	<input checked="" type="checkbox"/> Factory Default: Pull-To-Open	<input type="checkbox"/> Push-To-Open
2	<input type="checkbox"/> Warning Disabled	<input checked="" type="checkbox"/> Factory Default: Warning Enabled
3	<input checked="" type="checkbox"/> Factory Default: SafeForce® Mode	<input type="checkbox"/> Monitored External Safety Devices Mode
4	<input checked="" type="checkbox"/> Factory Default: Delay Open 2nd Arm	<input type="checkbox"/> Simultaneous Open

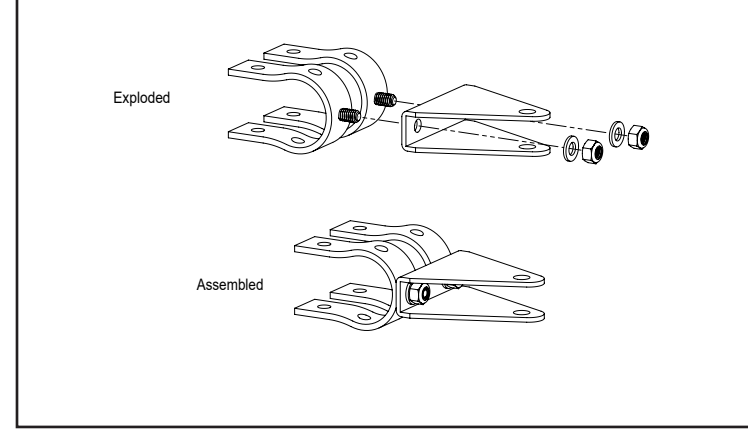
11. Turn the control box to the on position using the switch located on the bottom left side of the control box. Press and hold the Transmitter button to run the arm out a few inches. Press the Transmitter button to retract the arm until it stops on its own. Turn the control box off.



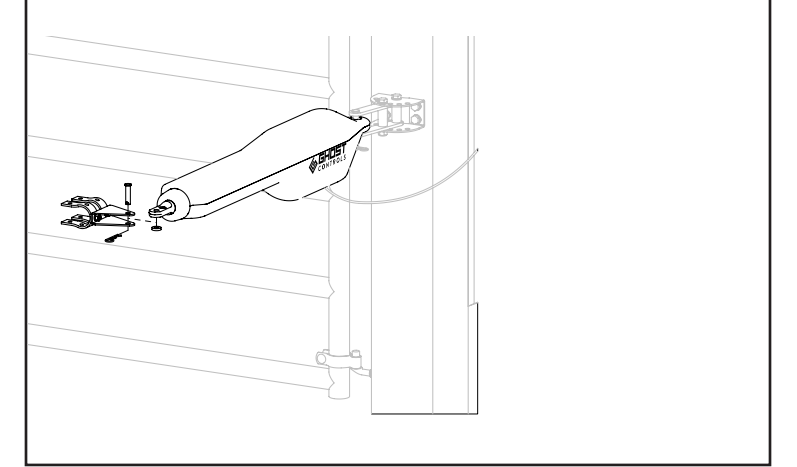
12. The arm has an internal limit switch that is fixed and is not adjustable. **The arm in the fully retracted position will determine the open position of the gate.**



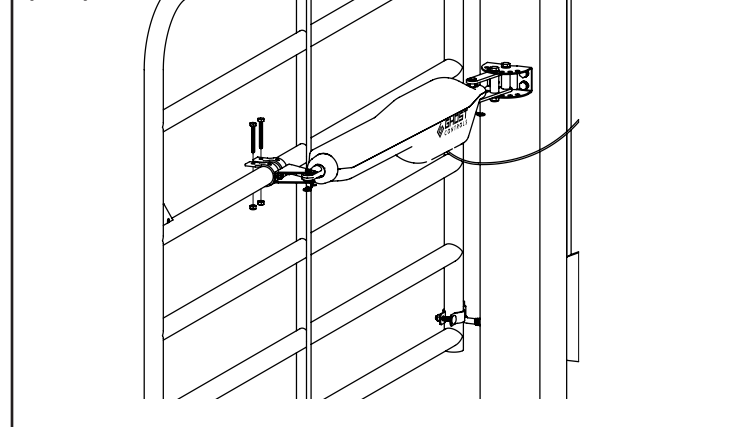
13. For attaching the operator to a tube gate, assemble the gate bracket assembly as shown. For other types of gates, please refer to the installation manual for alternative mounting solutions.



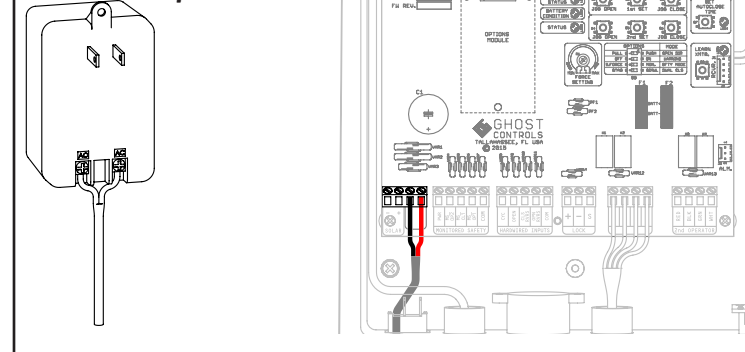
14A. Move the gate to the desired open position. Attach the gate bracket assembly to the fully retracted operator as shown.



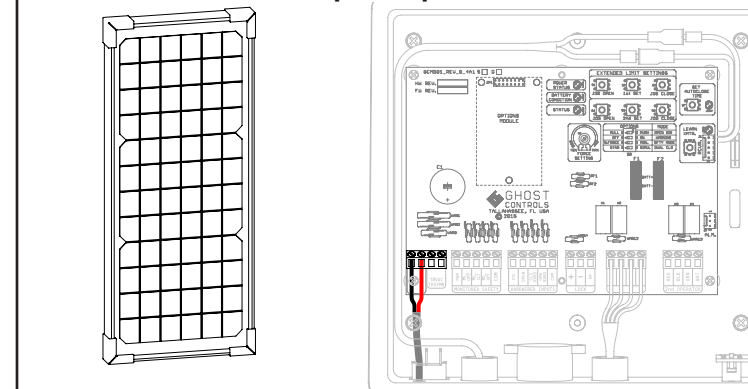
14B. Place the bracket assembly on the gate and tighten the bolts. **This will determine the open position of the gate.** Adjust the gate bracket as needed to achieve the desired open position.



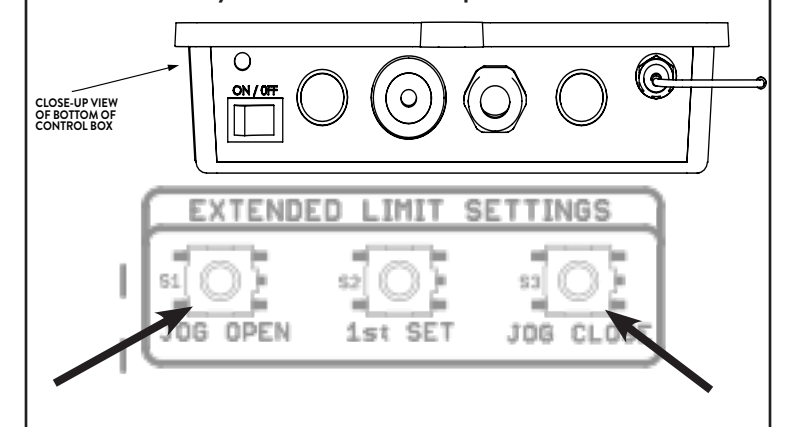
15. If using AC power to recharge your battery, connect the transformer wires to the transformer and to the control board as shown. The transformer is not polarity sensitive so either wire can go to either terminal. The left terminal will not be used. **Do not plug in the transformer until the wiring has been completed.**



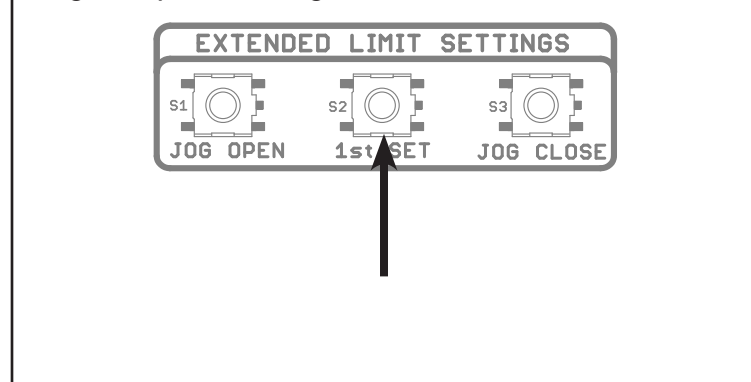
16. If solar power is being used to charge your battery, connect the red wire from the solar panel to the positive (+) terminal and connect the black wire to the negative (-) terminal as shown. The middle terminal will not be used. **Do not use solar and transformer power at the same time.**



17. Turn the control box on. Press and hold the **JOG CLOSE** button until the gate reaches your desired closed position. Use both **JOG OPEN** and **JOG CLOSE** as needed to fine tune your desired closed position.



18. Press and hold the **1st SET** button until it beeps, then release. Press the transmitter button to activate the gate and let the gate open fully. When the gate reaches its open position, the control board will sound a single beep, confirming the closed limit has been set.



19. Press the transmitter button to activate the gate and confirm the closed position has been set correctly. Repeat steps 19 and 20 if needed to change your desired closed position.



20. For a Dual system, repeat steps 3-7, 10, 12-16, and 19-21 with the second operator arm. We recommend that you get the first arm completely installed and working properly before installing the second arm so that you can isolate any connection problems on each arm before proceeding further.

21. To set the AUTOCLOSE feature, press and hold the **SET AUTOCLOSE TIME** button until it beeps. Wait until the desired autoclose time has been reached (the led will blink once a second) then press and release the **SET AUTOCLOSE TIME** button. Autoclose time can be set from 6 seconds to 60 minutes.

