

APOLLO Slide Gate Troubleshooting

The Apollo 835/836 board is the standard board in all ETL compliant Apollo Gate Operators. Single gate systems use the 835 board (distinguished by MASTER and EMERGENCY BYPASS modular receptacles) and DUAL gate systems use the 836 board (distinguished by MASTER, SLAVE and EMERGENCY BYPASS receptacles). The 836 board may be used in single gate applications by simply turning PROGRAM SWITCH #3 to the OFF position and only using the MASTER receptacle of the board.

Apollo 7000 ETL and 7100 ETL systems use a Stature Electric direct current motor while the Commercial 7200 ETL and 7300 ETL use a Bison direct current motor. Both motors are similar in design and thus trouble shooting for all of the slide gate systems is covered in one manual. Keep in mind that SLIDE GATE operators do NOT utilize the "SMART ACTUATOR" feature of the 835/836 board so Program switch #10 must ALWAYS be in the OFF position.

Trouble Shooting the Apollo 7000/7100/7200/7300 ETL systems:

1. Check your battery! The battery in your gate operator is the power source for the entire system. If it is not adequately charged, the system will not operator properly. Test the battery by checking the voltage with a volt-meter while the battery is under load (gate operating). For AC charged systems – unplug the battery charger before load testing battery. Battery voltage should be 11.5 volt DC or higher while the operator is running (battery under load).
2. Program Switch Settings: At the upper center of the board there are 10 program switches. These switches enable and disable certain features of the Apollo system. DEFAULT setting of these switches is as follows: SINGLE GATE – 1,2,3,5 ON (all others OFF) DUAL GATE – 1,2,5 ON (all others OFF)
3. LED ENABLE BUTTON: On the right side of the board – half way down is the LED ENABLE button. Pressing this button once and releasing it "enables" the LEDs on the board for approximately 15 minutes. When the LEDs are enabled – the "STOP" light should always be lit on the left side of the board. Other LEDs may be lit as well – depending on the status of the operator. If the gate(s) are in the OPEN position, the OPEN limit indicator(s) should be lit. If the gate(s) are CLOSED, the CLOSED limit indicator(s) should be lit. (The OPEN and CLOSED LEDs should never be on at the same time) Any LEDs that are lit on the left side of the board or at the lower right corner of the board (except the STOP LED) indicate a TRIGGER from an accessory device connected at that location. Devices connected where an LED is lit should be removed before further testing is done. After the system is made operational – these devices may be reconnected one at a time. Check for proper system operation after each connection.
4. Current Sensitivity: At the top center of the board is the "Current Sensitivity" adjustment. It adjusts the amount of force the operator will exert before it senses an obstruction. As the wheel is turned counter clockwise, the operator will reverse more easily. As the wheel is turned clockwise, the operator will push harder. Any time the system "CURRENT SENSES" it will stop and reverse for two (2) seconds. If the system "CURRENT SENSES" a second time before fully opening or closing – it will again reverse for two (2) seconds and then go into a HARD SHUTDOWN (see below). Sensitivity should be set to a level that is sufficiently strong to open and close the gate in all conditions – yet still sensitive enough to be safe. A good starting point is the one o'clock position.

5. **Activating the system:** A momentary connection between activation inputs and ground (GND) is how the system is activated. At the upper left and bottom right of the board are terminals marked INP or INPUT. These terminals - when momentarily shorted to ground (GND) - will open, stop and close the gate with each activation. The button on the side of the box (swing gates ONLY) is connected to these terminals and may be used to activate the gate when the key is in the horizontal position. On our newest boards there is an "OPERATE" button at the upper left area of the board that may be used in the same manner.
6. **HARD SHUTDOWN:** If the system has encountered an obstruction two times before fully opening or closing – the HARD SHUTDOWN LED (upper right of board) will begin flashing – indicating a Hard Shutdown situation. Check to see that any obstructions are removed from the gates path and then press the "HARD SHUTDOWN RESET" button to restart the system.
7. **Left Hand / Right Hand Operation:** All APOLLO Slide Gates are shipped from the factory wired to close to the left (when looking out of the property). It is suggested to install and adjust the operator as it comes from the factory – then re-wire the system if necessary. The easiest way to determine if your system requires re-wiring is to use the LED Enable button. Once the LEDs are enabled, the OPEN LIMIT light should come on in the open position and the CLOSED LIMIT light should come on when the gate is closed. Should these be backwards – make the following changes: From the MASTER plug – there are five wires going to a terminal strip... Reverse the RED with the BLACK - and - reverse the ORANGE with the WHITE. To verify that the wiring has been changed correctly: Manually move the gate to the mid-way position and plug the main harness into the EMERGENCY BYPASS receptacle – the gate should OPEN. If it closes – the RED and BLACK motor wires must be reversed. Once it is verified that the EMERGENCY BYPASS does open the gate – then check the limit switch wiring. Dis-engage the mechanical release and open the gate fully – verify the OPEN LIMIT led is on. Close the gate fully – verify the CLOSED LIMIT led. If the limits are backwards – reverse the ORANGE and WHITE limit wires.
8. **Dual Gate Systems:** Test dual gate systems individually. Turn program switch #3 ON (disables SLAVE side of board) and test actuators one at a time using MASTER side of board only. Confirm proper operation of each actuator. If both test 100% - then test together by connecting both actuators and turning program switch #3 to the OFF position.
9. **EMERGENCY BYPASS:** At the bottom left of the board is the EMERGENCY BYPASS receptacle. Plugging the operator harness into this receptacle will OPEN the gate ONLY! It is intended to open the gate(s) should other methods fail. Note that if the motor draws more than 15 amps of current the fuse above the receptacle will blow. Also, the gate operator will not stop by its self at the open position. The plug must be removed to stop the gate. (This is also a handy way to test that the current consumption of the motor is within the normal limits)
10. **FIRMWARE:** In the upper right area of the board there is a micro-processor that has a white label on it. This is the "FIRMWARE" of the system. Currently (May 2005) we are using firmware version V31.00.02. For troubleshooting versions of the firmware earlier than V31.00.00 consult your original instructions that were included with your system. Systems that are out of warranty may be upgraded to newer version firmware for a nominal fee.

