

# ***GATE COMMAND***

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## ***Signature Series***

### **Manual**

The GATE COMMAND *SIGNATURE SERIES* Remote Control is designed to provide the ultimate in convenience and safety to open and close residential gates from the comfort of your vehicle. *SIGNATURE SERIES* can open one gate or two gate leaves simultaneously, and features an optional intercom and keypad, which allows guests to communicate with the residence or provide access by entering a keypad code.

GATE COMMAND is a radio frequency (RF) controlled device that allows operation of a single or dual gate system from a hand held transmitter operated remotely. The Transmitter, which operates at 418 MHz FM, transmits encoded information to the Receiver, which then decodes the information and performs the desired function. When coupled with the electric cylinders, this system may be used to open or close two gates simultaneously. The Transmitter and Receiver are designed to operate within 600' but actual range is dependent on operating environment.

#### **Features :**

- Simplicity of design and quality of engineering.
- User selectable Transmitter security code.
- FM Wireless Intercom System (Optional)
- Keyless Entry (Optional)
- LED Indicator lights.
- 9v Transmitter Battery
- Ease of installation.
- All functions can be by either Keyless Entry or Remote Control
- The Receiver can be operated by Multiple Transmitters.

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# Specifications:

## Transmitter:

Power:	9 volt dc battery
Frequency:	418 MHz
Modulation:	FM
Indicators:	Power/Transmit Red LED
Case Size:	2.5" x 4.2" x .8"
Weight:	.25 lb.
Range:	300'+ (depending on environment)
Antenna:	1.3" Fixed Mini Tuned
Security Code:	2 <sup>8</sup> selections

## Receiver:

Power:	12vdc 12AmpHr Sealed Rechargeable Battery
Battery Charger:	Solar Panel 5W or 110vac Wall Adapter
Standby Current:	40mA
Security Code:	2 <sup>8</sup> selections
Indicators:	Power On LEDS Receive RF Data Yellow LED Channel Active Green LEDS Keypad Standby & Keypad Active LEDS
Options:	Latched/Momentary Data FM Wireless Intercom Keyless Entry
Antenna:	7" Flexible Tuned
Overall Size:	9"x 10-1/2"x 6-1/2"

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Weight: 10 lb.

## Electric Cylinder

Force: 200lb.  
Stroke: 24 in  
Speed: 54 in/per min  
Electrical: 12vdc 11.5A max

# INSTALLATION INSTRUCTIONS

## Receiver Installation:

Mount the Receiver case securely in a location offering minimum signal interference for the antennae and providing installation access. The Receiver should be mounted with the Antennae UP and in a location where the Keypad is accessible and can be operated in full view of the Electric Cylinders. Be sure to allow space for the front cover to open.

**SAFETY FIRST! Be sure all power is off before attempting any connections or servicing. Use only qualified personnel.**

Unlatch the Receiver cover and open the case. Connect the wire extending from the interior of the case to the terminal on the battery. This powers the Receiver and the Red Power ON led's will light.

To connect the battery charging circuit:

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#### On AC Charged Systems:

Thread the wires from the 15vdc output Wall Adapter through the Sealing Grommet in the bottom of the case. Connect the wires to the terminal block as indicated.

**NOTE: The wires MUST be connected with the proper polarity as marked.**

#### On Solar Panel Charged Systems:

Thread the wires from the Solar Panel through the Sealing Grommet in the bottom of the case. Connect the wires to the terminal block as indicated. **NOTE: The wires MUST be connected with the proper polarity as marked.**

For AC Powered units equipped with the AC Intercom Option, thread the wires from the **12vac** output Wall Adapter through the Sealing Grommet in the bottom of the case. Connect the wires to the terminal block as indicated. These wires do not have a polarity.

Using sufficiently heavy gage wire, connect the electric cylinders to the pigtail wire for the selected channel on the Output Drivers Connector on the Receiver. If the actuator does not run the desired direction when activated, reverse these two wires. See Page 11 for instructions on setting the limit switches.

## Solar Panel Installation:

Install solar panel in a suitable location facing southward and approximately 40 degrees upward. The panel may be mounted using 2 ¼" Hex Head bolts which slide into the channels on the back of the panel. Connect the wires to the Receiver as indicated. **Observe the correct polarity!**

## Auto-Close Feature:

Auto-Close is a convenient solution to allow one-button operation for a complete gate cycle (open/close). The user can select the time delay that the gate will remain open prior to automatically closing. This Auto-Close feature is enabled whether the gate is operated by the RF Transmitter, the keyless entry, or an external switch (e.g. loop detector).

It works as follows:

Whenever "Open" is pressed on the Transmitter, the timer starts. The timer stops if any other button is pressed on the transmitter.

Whenever the gate is opened via the keyless entry, the timer begins counting when the "keypad active" lights stop flashing. The timer is stopped if the keypad is used to close the gate. Stopping the gate while it is opening with the keyless entry does NOT stop the timer.

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The keyless entry has priority over the transmitter. If the transmitter is used to open the gate and start the timer, but then the keyless entry is pressed to open the gate, the timer will restart from when the “keypad active” lights stop flashing. To stop the timer with the keyless entry, open the gate, then re-enter the code to close the gate and immediately press any key to stop the gate. Alternatively, when the “keypad active” lights are not flashing, press “Open” then “Stop” on the Transmitter.

When the gate is auto-closing it be interrupted by any input from the transmitter, keyless entry, or external switch.

The timing interval can be adjusted with the trim pot located on the back of the main control circuit board. The delay is adjustable from a minimum of 20 seconds to a maximum of 1 minute 20 seconds. Turning the trim pot counter-clockwise will increase the interval. Turning it clockwise will decrease the interval.

## **External Input – loop detector:**

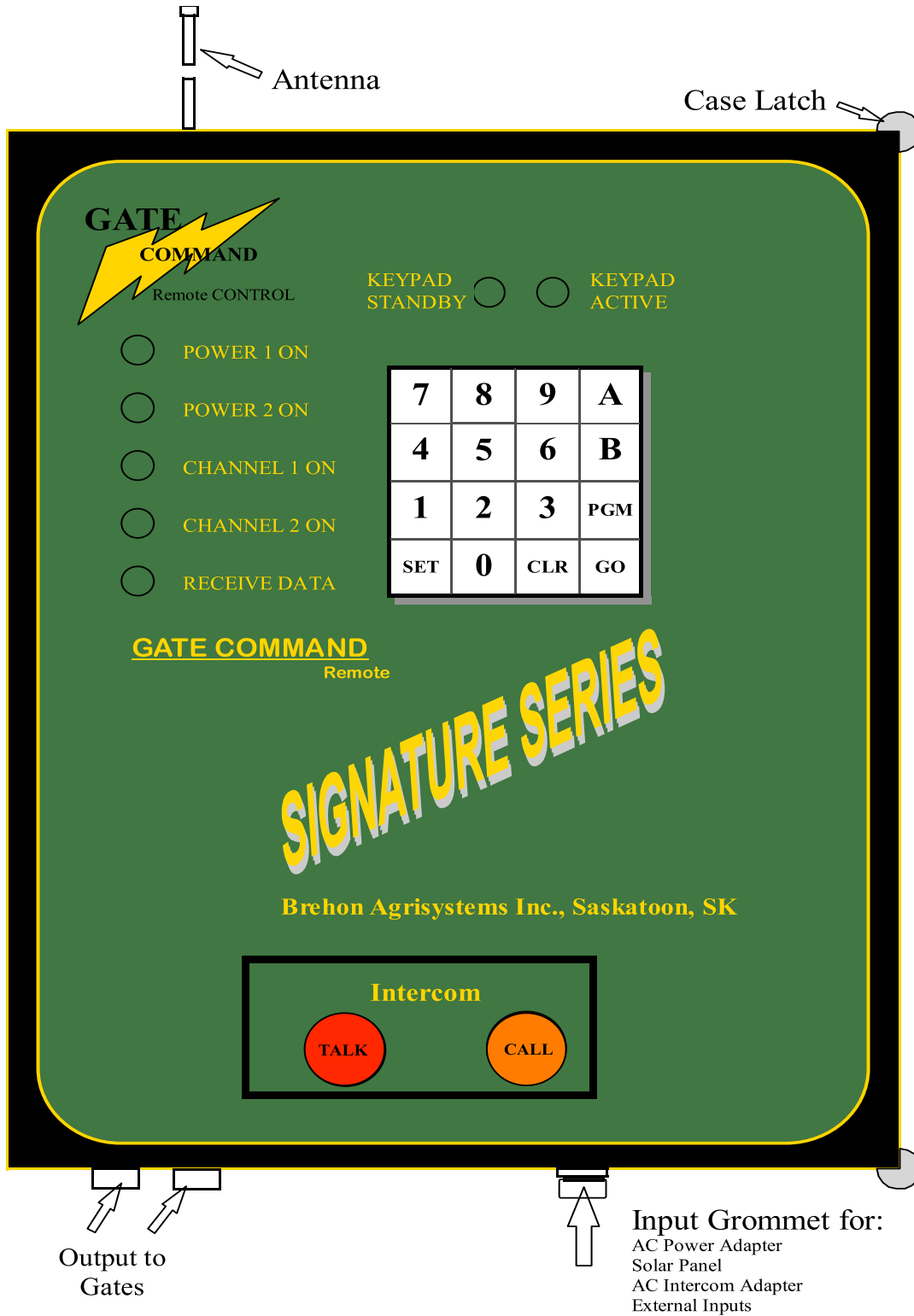
The Gate Command Receiver has the option of accepting an external input device to open the gate. This can be a doorbell type switch, a loop detector, an infra-red beam, or any similar type of switching device. The Gate Command Receiver provides a 12vdc output to power these devices, if required, and a 5vdc power and signal circuit to receive the input. The input is “momentary” which means that the gate will open as long as signal is detected.

In the case of a loop detector, the gate will Open as long as a vehicle is detected by the loop. Once the vehicle leaves the loop the timer will begin the auto-close countdown. The gate will automatically close when the adjustable delay has expired.

## **Receiver Stand-by Mode:**

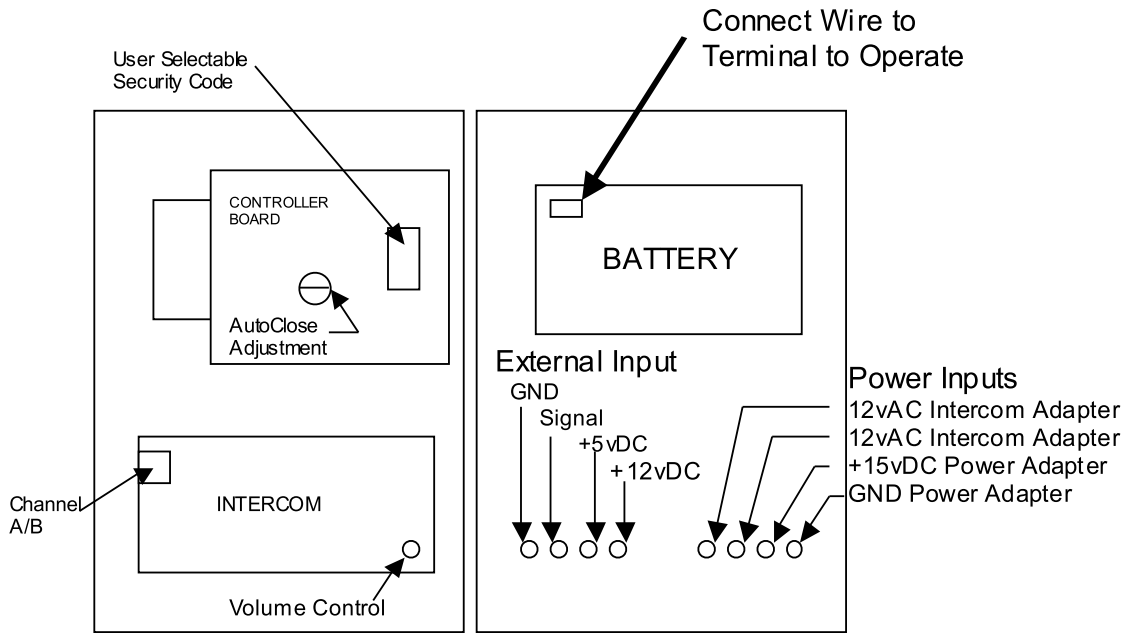
To conserve power, which is especially important for solar charged applications, the Receiver automatically turns off all of its outputs after 3 minutes of inactivity. The Receiver remains constantly ready to receive any transmitter, keyless entry, or external input.

# Gate Command Front Panel and Enclosure

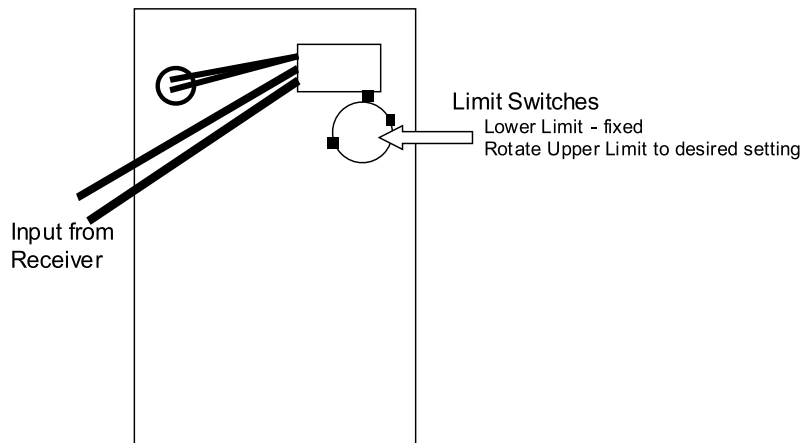


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# Gate Command Enclosure – Interior View



## Linear Driver – Wiring Connections

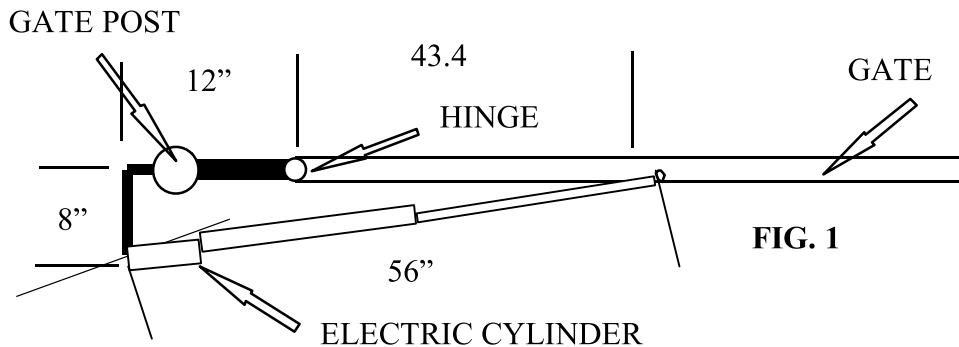


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## Electric Cylinder Installation

Before mounting the electric cylinder(s) it is important to plan the best installation configuration. The mounting options are very flexible, but care must be taken to ensure there is room for the cylinder to pivot on its mounts and the desired gate travel is achieved.

The electric cylinder can be mounted to any post or gate by welding, bolting, or otherwise attaching suitable supports (not supplied) to the post and gate to allow the cylinder to be pinned in place. Sample cylinder mounting dimensions are shown in Figs. 1. The pin position on the drive head and the pin position on the gate result in various stroke and space requirements.



It is recommended that a stroke length of 18" to 23" be used. An 18" stroke length will result in an opening/closing time of approximately 15 seconds. A 23" stroke will require 20 seconds. Please consult the manufacturer if specialized installation requirements exist.

# General Operation:

## RECEIVER:

The *SIGNATURE SERIES* Receiver is designed to operate a dual gate system allowing two gates to be operated simultaneously. When powered, the two "Power On" RED LEDS should be lit indicating normal operation. The Electric Cylinders can be operated using the Transmitter, or Keypad. Whenever both electric cylinders are operating, the "Channel On" GREEN LEDS will light, indicating normal operation. The Receiver is equipped with an 8-position switch used to set the user security code. The security code is provided to prevent unwanted operation of the Receiver by other devices. Only a Transmitter with identical switch settings will be able to "talk" to this Receiver. When the switches are set identically and the transmitter "talks" to the Receiver, the "Receive Data" YELLOW light will come on. This indicates that valid data with a matching security code has been received. Position these switches to any desired On/Off pattern for your own security code. REMEMBER: The 8-position switch on the Transmitter must be set IDENTICALLY. The security code switch on the Receiver is inside the front panel (See page 8).

For electrical protection the Receiver has two automatically resetting fuses on the circuit board. Fuse F1 is intended to protect the RF receiver and data circuitry, and Fuse F2 is intended to protect the relays from overload. These fuses will automatically reset when cooled.

## INTERCOM SYSTEM (Option)

An intercom allows for communication from the access gate to the residence.

### **AC Intercom (Option): Appendix A**

Simply plug the base unit into any standard AC outlet and it is ready to communicate with the gate. Press "Talk" to talk and release to listen. The intercom also includes a "Lock" button for hands-free 1-way communication or monitoring, and a "Call" button to signal other station. To cancel "Lock" mode press "Talk". There is an On/Off volume control for the speaker on each unit.

### **FRS Intercom (Option): Appendix B**

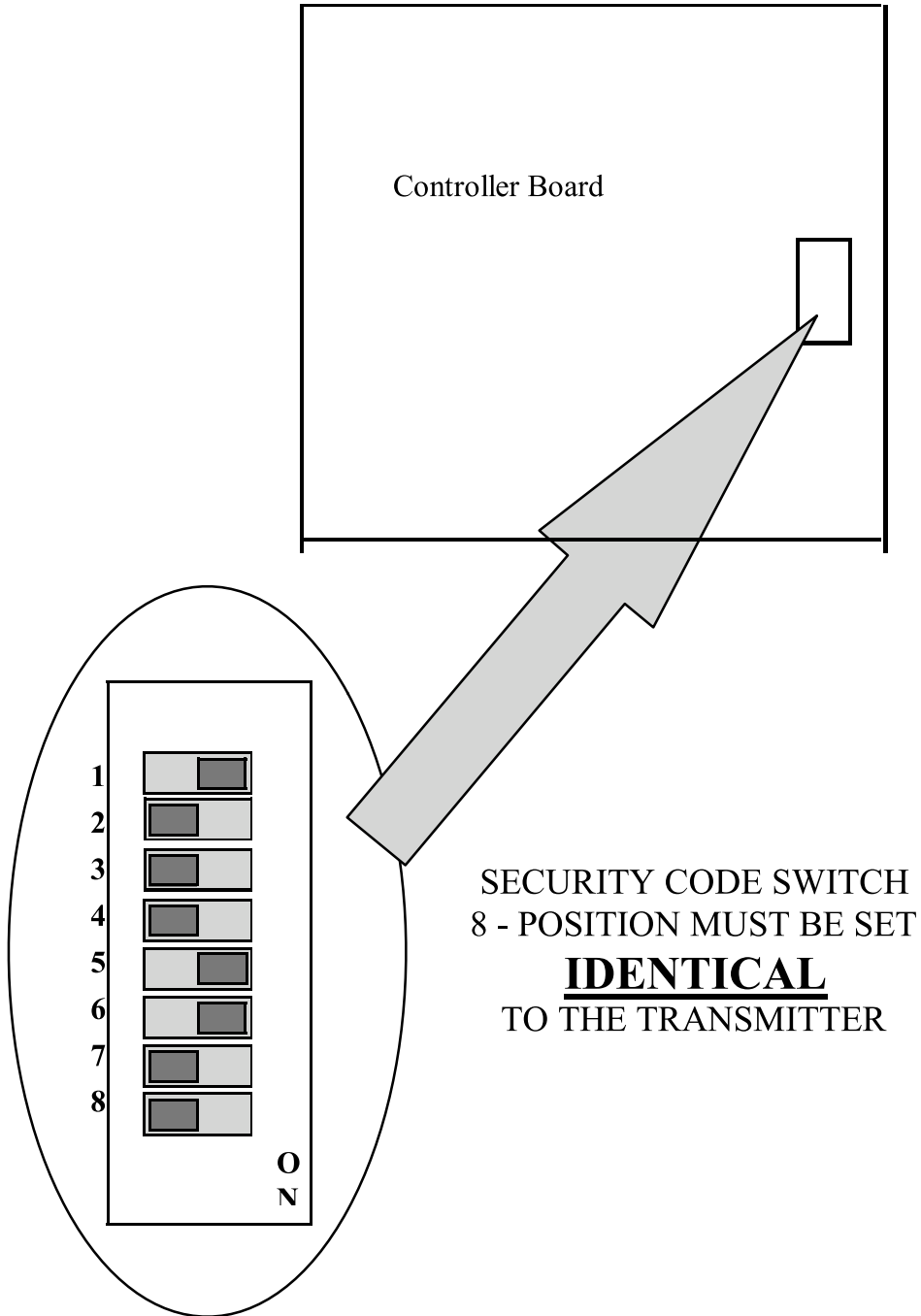
The FRS (Family Radio Service) intercom option utilizes common existing technology to provide communication for solar powered units where true wireless radio communication is required. See page 12 of this Manual for manufacturer's instructions to set and operate this feature.

## KEYPAD

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The keypad allows user to open and close the gates by entering a valid 1 to 8-digit code. The keypad has 6 user codes which may be changed or deleted at any time. This allows for operation of the gates without the use of the hand-held transmitter. Entry of a valid keypad code operates the gate “alternately” which means the first time the code is entered the gates move in one direction, and the next time the gates move in the opposite direction. The gates operate to their fully open or close position when the keypad is activated (see page 9) or will stop with any additional keypress.

## **Gate Command Security Code Switches (Receiver)**



## Gate Command Keypad Operation:

The user gets the unit's attention and synchronizes the program by pressing the CLR key. The CLR (CLear) key is handled special, and ANY time the CLR key is hit, it will cause the program to synchronize and begin regular entry.

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To indicate that a key is being pressed, the normally-on RED LED will go off for the duration of any key-press. When the CLR key is released the GREEN LED will flash once to indicate that the program is synchronized and ready for regular input.

The user can now enter any one of seven valid entry code sets. Each entry code may consist of from 1 to 8 digits, though the factory “Mastercode” will always be an 8-digit code. The user may use the digits 0-9 and the SET, A and B keys as part of the entry code. The CLR, GO and PGM keys may \*not\* be used as part of the entry code, as they have a special meaning.

After entering the user-code, the user will normally press the GO key. If the code entered was a valid code, then the red and green LEDs will flash back and forth for 30 seconds. During this time the gate will attempt to open or close depending on the previous requested operation. If the gate does not operate at this time, press CLR, re-enter the code and press GO to operate the gate in the opposite direction.

### **Security Codes:**

The User Mastercode can be changed by the user. It is currently set to 1,2,3,4,5,6,7,8

Whenever the user enters the mastercode, he can hit the GO key to activate the output, or they can hit the PGM key to enter the special MASTERCODE MODE. In Mastercode Mode the user can change or delete any one of 6 user-codes, and change or delete the User Mastercode.

After entering the mastercode and the PGM key, the user should then enter a single digit from 0-6, followed by SET and then the 1 to 8 digit code desired, and finally the GO key to store. If SET is followed immediately by GO, then the desired code set will be deleted instead of entered.

The code sets are 0-6. 1-6 represent regular user code sets. Code set 0 is special. This will actually load in the User Mastercode.

7	8	9	A
4	5	6	B
1	2	3	PGM
SET	0	CLR	GO

## **TRANSMITTER:**

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The Transmitter is powered by a 9v battery which, when installed, should light the red "power" light when a switch is pressed. If the battery does not exceed 7 volts the Power light will not come On, indicating battery replacement is required.

Set the 8-position switch to your own security code, which matches the code on the Receiver to which it is to "talk". Note that any number of Transmitters can "talk" to the same Receiver as long as they have the security code, which matches the receiver.

To access the Transmitter security code switch, remove the battery cover and remove the battery. Remove the two retainer screws. Grasp the front and back of the case and gently slide the top downwards (away from the antenna) approximately ¼" until it unclips from the bottom, and then gently separate.

**Think Safety:**  
**Do Not install or operate where**  
**damage to property or persons may occur.**

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## **SETTING LIMIT SWITCHES**

### **AD76-24” Electric Cylinder**

**CAUTION:** If you want to test this actuator on a bench, make sure to hold the inner tube with your hand or with a screwdriver through the rod end when the inner tube is moving in and out. Otherwise the inner tube may turn freely and destroy the factory preset mechanical lower and upper limits.

#### **A. RESET LOWER LIMIT**

The factory preset mechanical lower limit on this unit is ¼” to ½” from the retracting end of the actuator.

**MAKE SURE THE ACTUATOR IS PROTECTED AT ITS LOWER MECHANICAL LIMITS WHEN YOU ATTACH IT TO THE MOUNT.** Otherwise, please reset lower limit as following procedures:

- 1) If the inner tube has been connected to the gate, detach it first.
- 2) Use the Receiver to retract the actuator until the motor stops by itself. Important not to hold the tube now. Allow it to retract freely.
- 3) Hand turn (or use a screwdriver through the rod end to help) the actuator to retract it further until you cannot turn it any more. Now the lower limit is set on Zero Inches.
- 4) Hand turn the inner tube to extend it until it reaches your desired mechanical lower limit. We recommend a minimum of 2 to 4 turns out (1/4” to ¾”)

#### **B. RESET UPPER LIMIT**

- 1) Extend the actuator to where you want to set the upper limit.
- 2) Open the back cover of the actuator locating two plastic cams located one on top of the other. The upper one is for the upper limit adjustment.
- 3) Loosen the two limit cam screws.
- 4) Turn the upper cam clockwise until you hear (you can also feel) a “CLICK” sound from the limit switch.
- 5) Retighten the two limit switch cam screws. (Use two fingers to hold the lower limit cam steady when you fasten the two screws otherwise the cams driving gear may be destroyed by high torque force generating when tightening these screws.)
- 6) Test the limit switch setting to ensure it is correct and replace the back cover.

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