

RS-2500 Residential Crank Swing Arm Gate Operator

Installation & User Manual

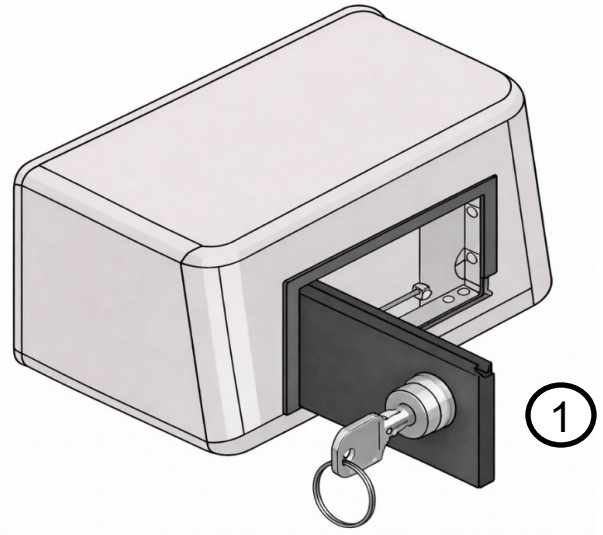
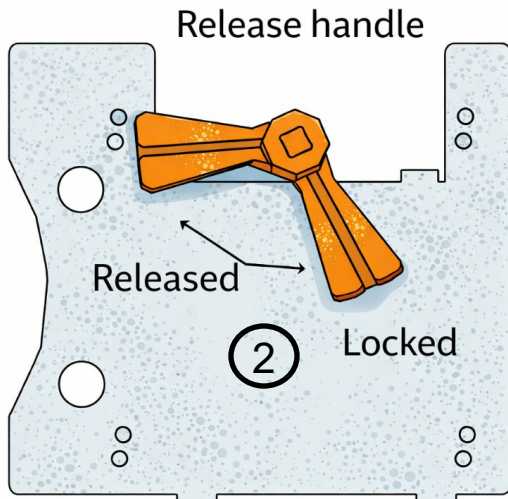


Model: D36 Smart Control Board **Application:** Dual Swing Gate Operator
Gate Access... Just Got Easier!

EMERGENCY RELEASE

First, **Turn Off Power**, then

- ① Open Operator Door
- ② Turn Release Handle



Release the clutch by rotating the clutch handle 90°
Gate should be released and move freely, now pull the gate open or push the gate open, as pictured.



Attention!!! Release the clutch ONLY when power is shut off.

After pushing gate open or closed turn handle back to locked position. When power is turned back on gate will return to its original settings, no need to reset limits. Not sure, call your installer.

Installer Information

The contents of this manual may be "changed at any time and without notice"

PRODUCT OVERVIEW

Specification	Details	Specification	Details
Model	RS-2500	Max Gate Length (Single)	11.5 ft
Power Input	AC 110V / 60Hz or 220V / 50Hz	Max Gate Weight	880 lbs
Motor Type	DC Swing Gate Operator	Protection Rating	IP54
Opening Time	Approx. 15 seconds	Operating Temperature	-58°F to 122°F
Maximum Torque	236 lb-ft (320 Nm)	Usage Class	Residential / Light Commercial

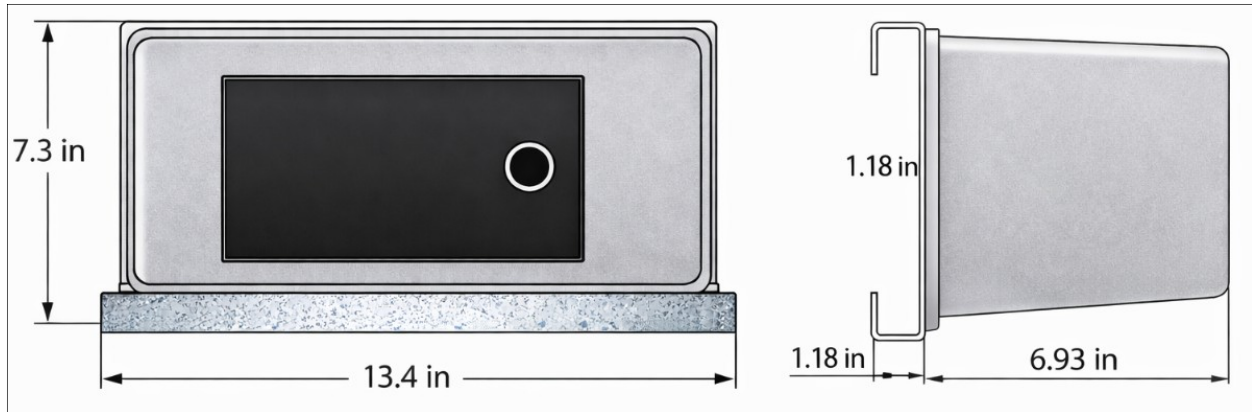


TABLE OF CONTENTS

Emergency Release.....	2
Warnings and Precautions.....	4/5
Mandatory Safety.....	6
Before Installation.....	7
Mounting the Motor.....	8
Attaching the Arm.....	9
Setting the Limits.....	10
Control Board Overview.....	11
Control Board Instructions.....	12
Control Board Instructions.....	13
Control Board Instructions.....	14
Parts Identification	15



HOMEOWNERS ATTENTION

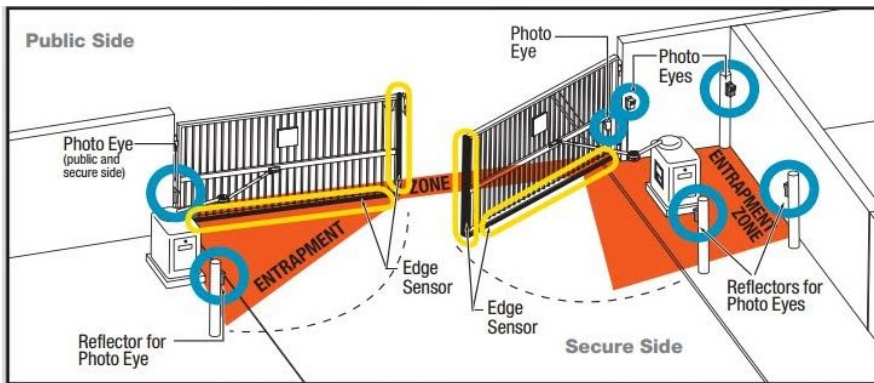
*All items above in **RED** are not suggestions they are **MANADORY!***

All operations indicated in this manual must be carried out exclusively by skilled and Qualified Authorized Service Technician and in full compliance with the regulations in Local Laws.

The contents of this manual may be "changed at any time and without notice"

WARNINGS & PRECAUTIONS

7. Keypads, Push Buttons and any other controls must be 15 ft. away from the gate to prevent someone coming in contact with gate while operating such a device.
8. The manufacturer cannot be held liable for any damage caused by improper, unreasonable or erroneous use.
9. The device must be installed, wired, connected and tested according to good professional practice, in compliance with the standards and laws in force.
10. Make sure the mains power supply is off or disconnected during all installation procedures.
11. Check that the temperature ranges given are suitable for the installation site.
12. Do not install the operator on surfaces that could yield and bend. If necessary, add suitable reinforcements to the anchoring points.
13. Make sure that no direct jets of water can wet the product at the installation site (sprinklers, water cleaners, etc.).
14. Make sure you have set up a suitable GFI cut-off device along the power supply that is compliant with the installation rules.
It should completely cut off the power supply.
15. Use suitable protection to prevent any mechanical hazards due to persons loitering within the operating range of the operator. (see page 17)



Safety is **NOT** a suggestion it is Mandatory. Please email us at info@sgcaccess.com if you have any questions on safety requirements. Its protection that can save property damages, bodily injuries or even death if not followed correctly.

16. The electrical cables must pass through conduit pipes in order to guarantee adequate protection against mechanical damage.
 17. The electrical cables **must be of the right gauge** and amperage to prevent any parts that may overheat during use (such as the motor and transformer).
 18. Before installation, check that the guided part is in good mechanical condition, covered with protective covers and that it opens and closes correctly and smoothly.
- **The product cannot be used to automate any gate or part that includes a pedestrian gate.**
 - Make sure that **nobody can become trapped between the gate and fixed parts** (see image above), when the gate part is set in motion.
 - All fixed controls must be clearly visible after installation, in a position that allows the gate or part to be directly visible, but far away from moving parts. In the case of a hold-to-run control, this must be installed at a minimum height of 4ft from the ground and must not be accessible to the public.
 - Make sure that the operator has been properly adjusted and that the safety and protection devices and the manual release are working properly.
 - Any residual risks must be indicated clearly with proper signage affixed in visible areas, and explained to end users.
 - Put the machine's ID plate in a visible place when the installation is complete.
 - If the power supply cable is damaged, it must be immediately replaced by an authorized dealer, or in any case, by qualified licensed contractor, to prevent any risk.
 - **If the product malfunctions, stop using it and contact your installing dealer.**
- See Gate Operators Safety Guidelines @ [TDS353.pdf](#)

MANDATORY SAFETY



Separate Pedestrian Access



Access Controls Placement



NEVER ALLOW CHILDREN TO PLAY near the gate.

Property Owners must never allow anyone to hang on or ride the gate!

! Mandatory Safety Requirements

Separate Pedestrian Access: UL 325 and ASTM F2200 require that pedestrians be directed to a **separate entrance and exit** that is not used by vehicular traffic.

Location of Pedestrian Gates: The walk gate must be positioned so that individuals do not come into contact with the moving vehicular gate.

Signage Requirements: Clearly visible **warning signs** must be posted on both sides of the gate, instructing pedestrians to use the separate walk-through entrance.

Access Controls Placement: Activation devices (like key-pads or buttons) must be installed at least **6 feet** away from moving parts to prevent anyone from reaching through the gate while it is in motion.

Liability & Compliance

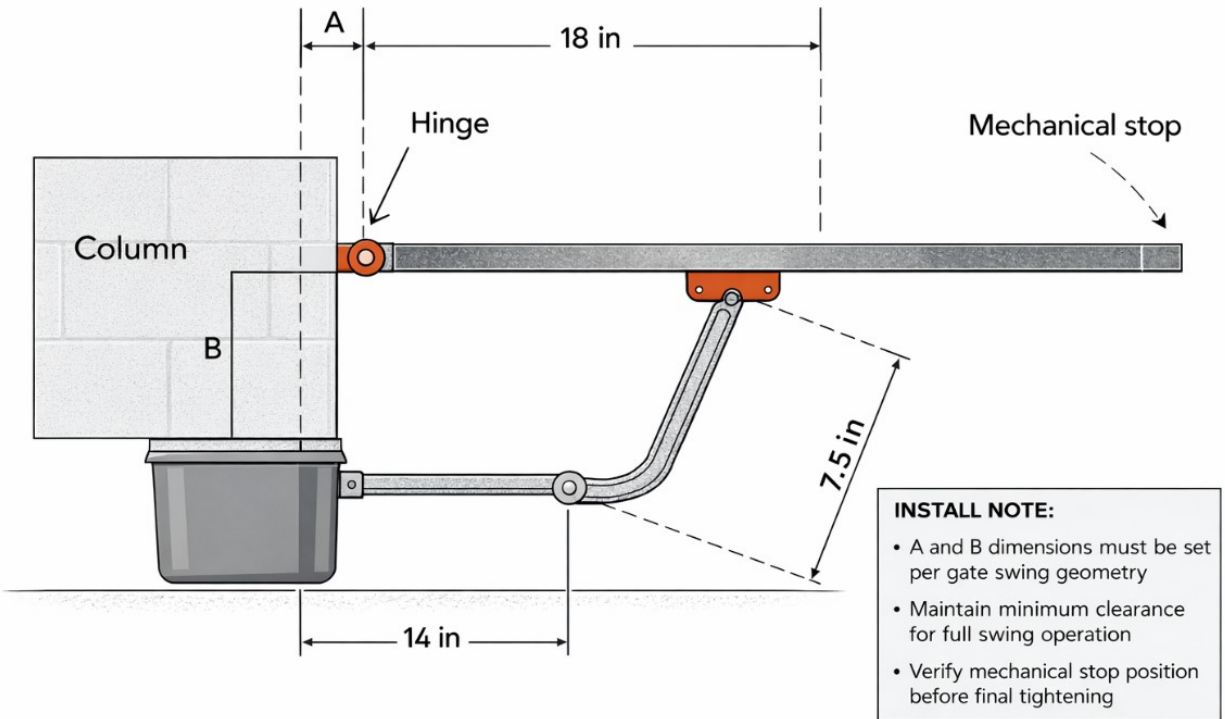
Property Owner Responsibility: Property owners are responsible for ensuring their gate systems meet these standards to avoid **liability** in the event of an accident.

! Safety Devices: Automated gates must have at least **two independent entrapment protection devices** (e.g., photo eyes and safety edges) to stop or reverse the gate if an obstruction is detected.

The contents of this manual may be "changed at any time and without notice"

BEFORE INSTALLATION

Gate Arm Mounting Geometry



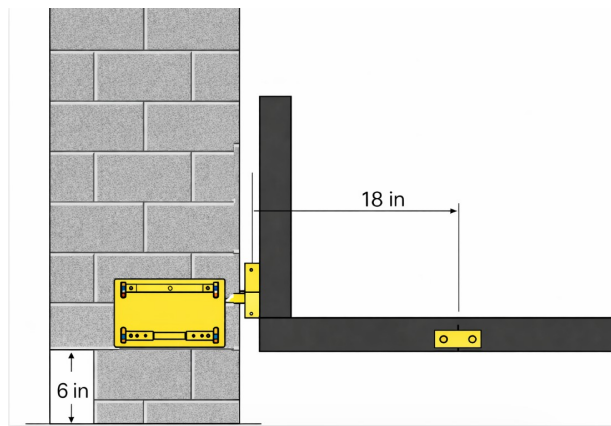
If dimension of **B** is 0–11.8 inches, the dimension of **A** must be not less than **4.5** inches.
If dimension of **B** is 11.8–14.75 inches, the dimension of **A** must be not less than **6** inches.



Mounting Base Plate

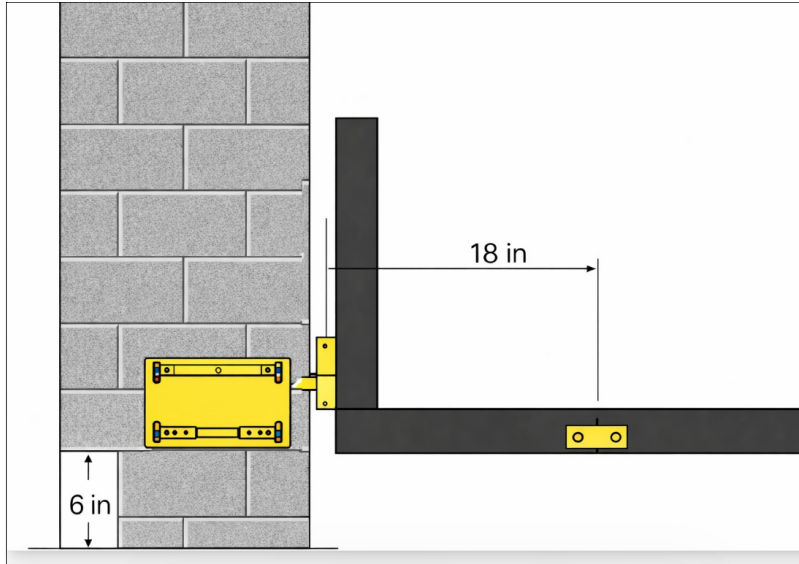
The mounting of Motor Base Plate has different factors involved,

1. Attachment point to the gate.
2. The mounting base plate should be at least **6"** above ground level.



The contents of this manual may be "changed at any time and without notice"

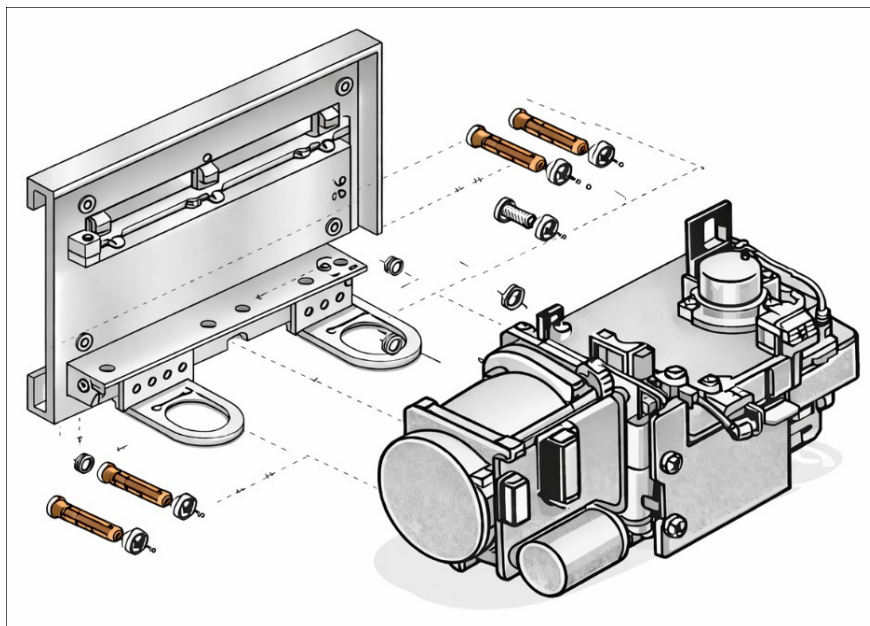
MOUNTING THE MOTOR



- Use **5/16" bolts** and **9/16" anchors** to install the mounting base plate to the column.
- The mounting base plate should be at least **6" above ground level**.
- Secure **Clamp** to the gate using **5/16" bolts** or by welding.

Position Clamp as follows:

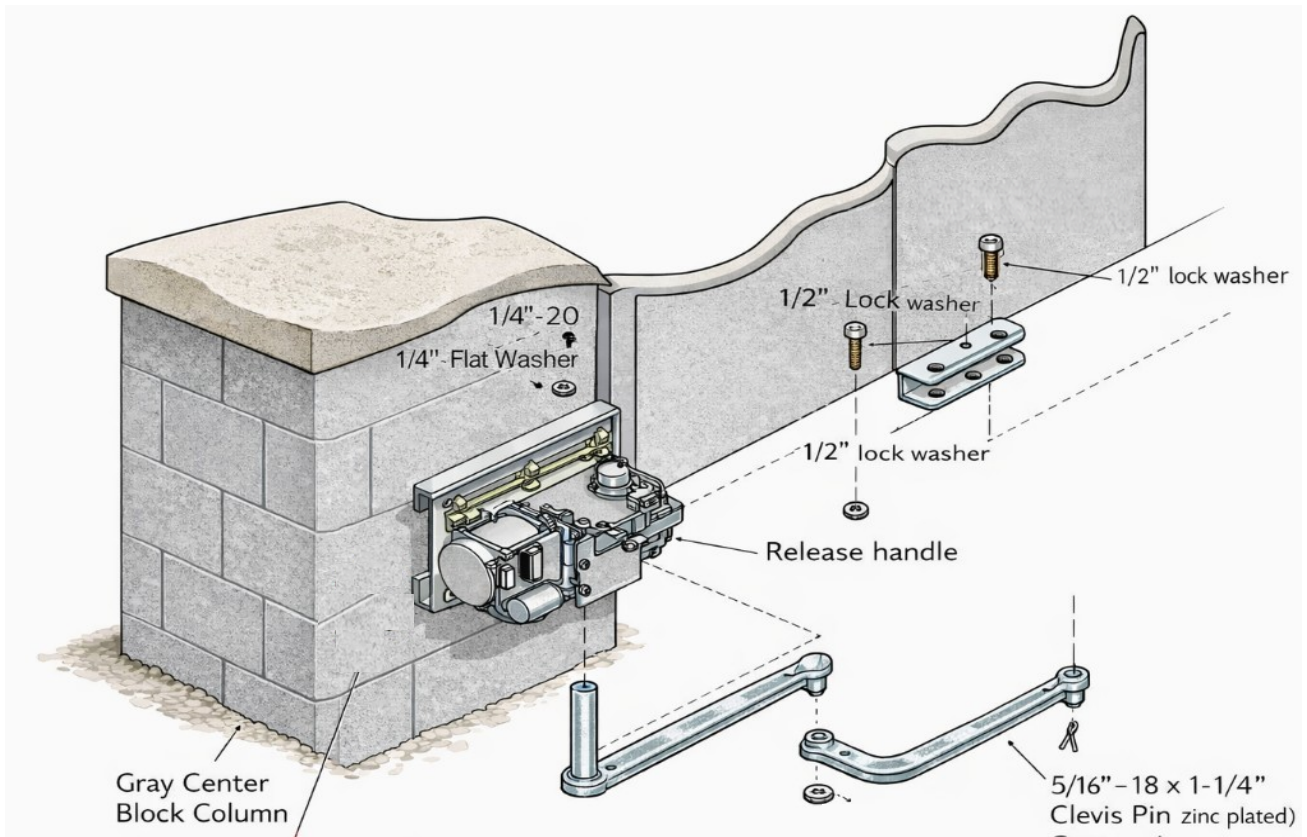
- Maintain a **horizontal distance of 18"** from the hinge
- Maintain a **vertical distance of 3/4"** from the mounting base plate
(See above diagram for reference)



Install the motor on the mounting base plate: Alignment of 4 holes, fixing two of the hole with 5/16" x 4-1/4" bolt inch bolt, install the motor to the right gate, adjust position of the motor, then fixing the other two holes.

The contents of this manual may be "changed at any time and without notice"

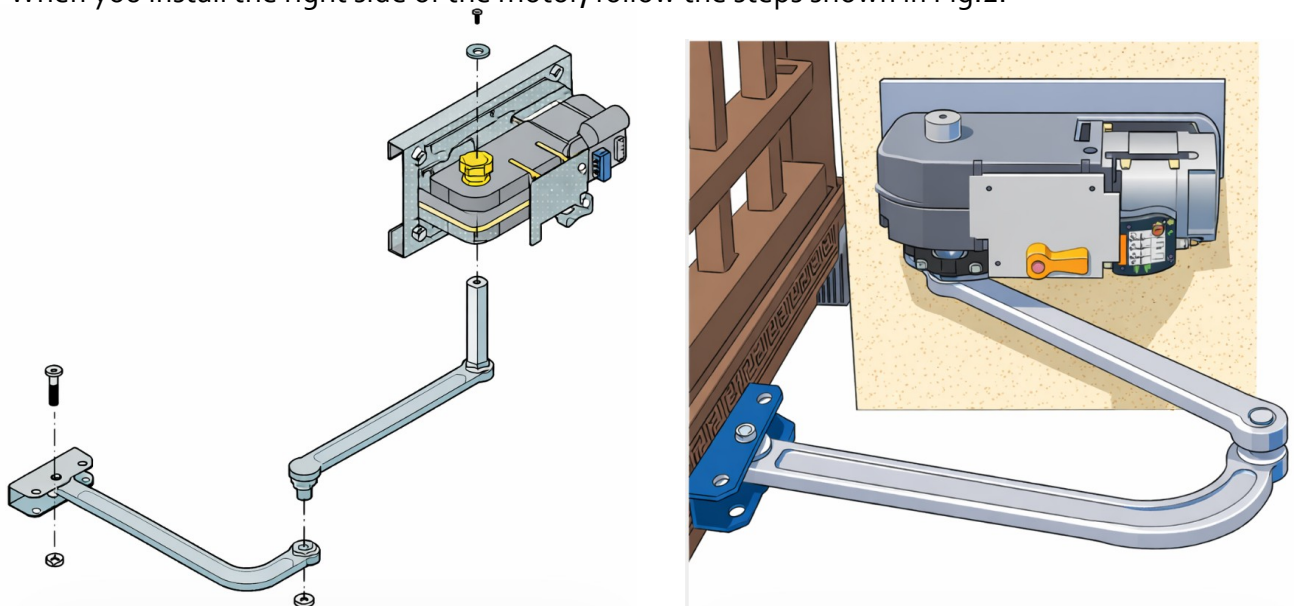
ATTACHING THE ARM



The straight arm is inserted into the output shaft of the motor, until the end of the shaft and the end of the straight arm in the same plane, fixing the washer by screw, fixing the shaft of the straight arm by two pairs of screws.

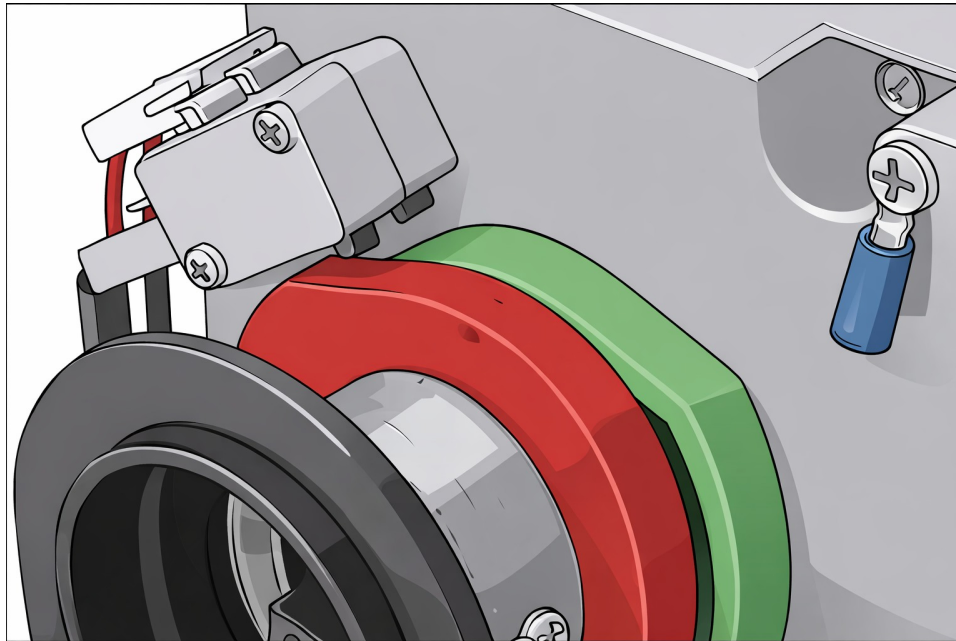
Using screws and washers to connect the two arms. Open the clutch by clockwise rotation of the release handle.

When you install the right side of the motor, follow the steps shown in Fig.2.



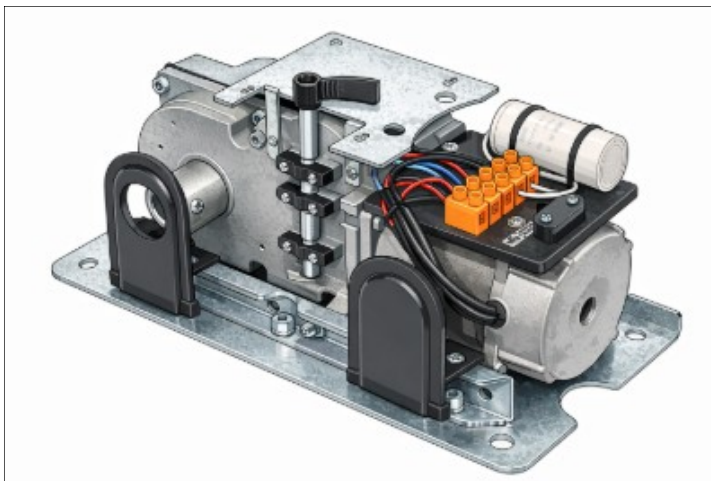
The contents of this manual may be "changed at any time and without notice"

SETTING THE LIMITS

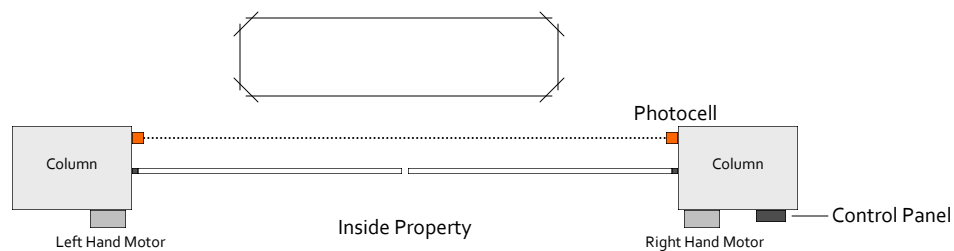


1. Release the motor clutch, and push the gate to the desired OPEN position manually.
2. Rotating the upper cam of the shaft to the touch (cut off) micro switches.
3. Now push the gate to the desired CLOSE position manually rotate the bottom cam of the motor to touch (cut off) micro switches.

After complete installation, connect all the lines, and regulate the motor, and then fix the plastic cover on the motor by with 4 screws.

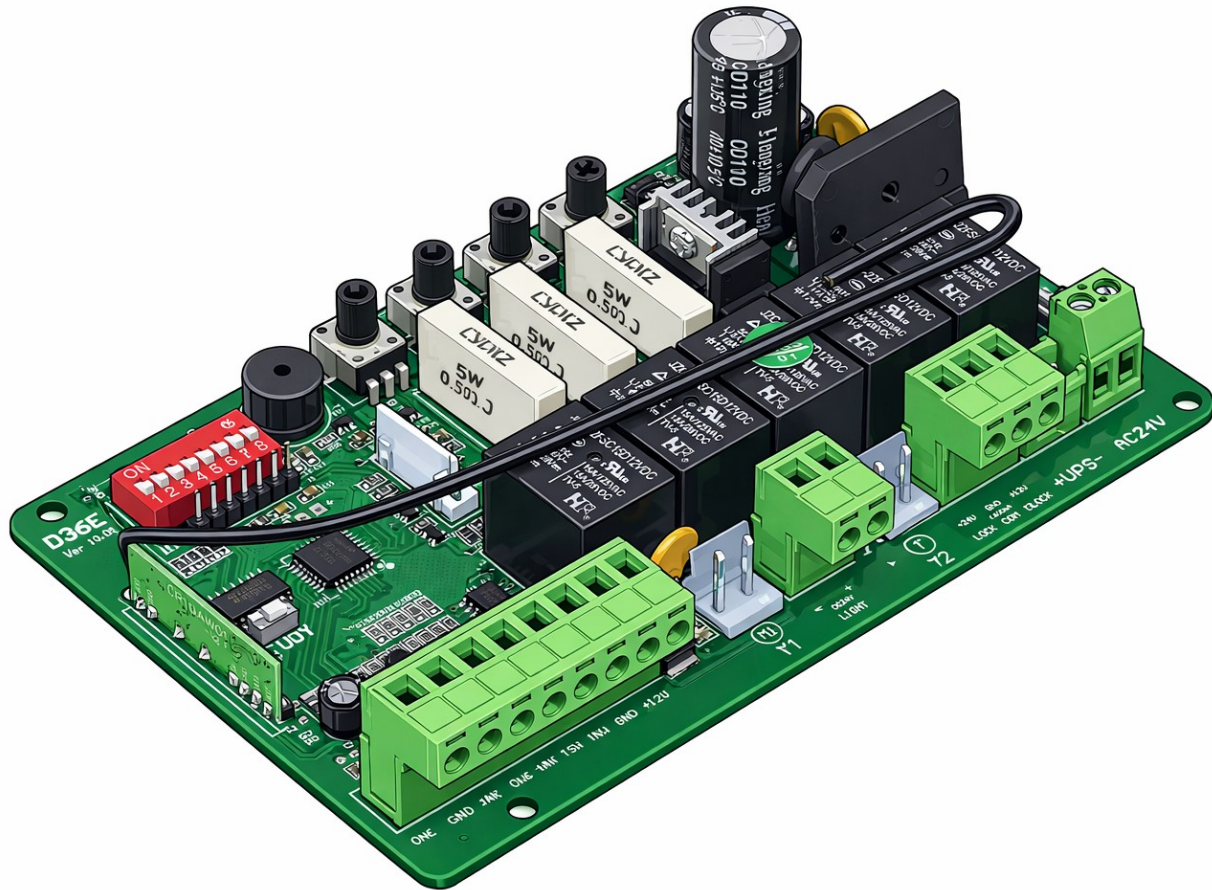


Pictured above is a Blue terminal connector, add ground wire. Wire connections for the motor at the Orange terminal block. The motor pictured is a Right Hand Motor, see diagram below, arm shaft should always be installed near the gate hinge point.

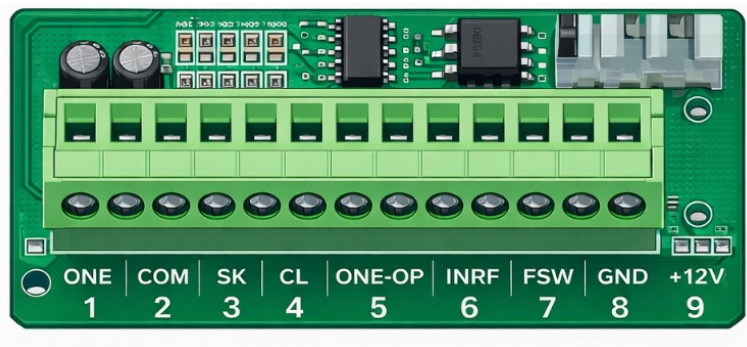


The contents of this manual may be "changed at any time and without notice"

CONTROL BOARD OVERVIEW



- 1** ONE: Open-Close-Stop cycle input
- 2** COM: Common
- 3** SK: Open Command (Keypad)
- 4** CL: Close Command
- 5** ONE-OP: Open (Single Leaf)
- 6** INRF: Photocell / Safety Input
- 7** FSW: Loop Detector Input
- 8** GND: Ground
- 9** +12V: Power Output



The contents of this manual may be “changed at any time and without notice”

CONTROL BOARD INSTRUCTIONS

Soft Start / Soft Stop Intelligent Control System

1. FUNCTIONS & FEATURES	Page 12	7. Motor Direction Verification	Page 14
2. RED DIP SWITCH SETTINGS	Page 12	8. ADDING SYSTEM COMPONENTS	Page 14
3. SOFT START SETUP	Page 13	KEYPAD, CARD READER, INTERCOM	Page 14
4. REMOTE CONTROL PROGRAMING	Page 13	PUSH BUTTON, ELECTRIC LOCK	Page 14
5. AUTO CLOSE FUNCTION	Page 14	LOOP DETECTOR, PHOTO EYE	Page 14
6. AUTO CLOSE SETUP	Page 14	9. TROUBLESHOOTING	Page 14

Important Notice

Please read this manual carefully before installation and operation.

Product Overview

The SGC D36 Intelligent Control Board is designed for two-wire, dual swing gate operators with *soft start* and *soft stop* functionality.

System Description

Power Input AC 110V / DC 24V

Rated Power 180W

Frequency 433.92 MHz Rolling Code

Remote Range Up to 500 ft

Wiring Distance Up to 1000 ft

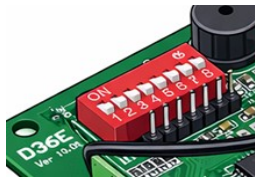
1. FUNCTIONS & FEATURES

Anti-Collision Protection

After the gate completes travel, pressing the reverse command allows the motor to reverse direction and prevents over-travel damage.

- **Motor Run-Time Protection**
Prevents excessive motor operation during faults. Adjustable run time: 2 - 240 seconds
- **Auto Close Function**
Adjustable automatic closing delay: 1 - 240 SECONDS
- **Adjustable Motor Force**
Motor torque can be independently adjusted.
If an obstruction is detected, the gate will stop or reverse to prevent injury or damage.
- **Soft Start / Soft Stop (Low-Speed Mode)**
Provides smooth operation and reduces mechanical wear by slowing gate travel near limits.
- **Anti-Clamp Safety Function**
During closing, if an obstacle interrupts the infrared beam: → Gate will **stop and reverse automatically**
- **LED Display Interface**
User-friendly LED display for:
 1. Programming
 2. Diagnostics
 3. Maintenance

2. RED DIP SWITCH SETTINGS



General Note:

All DIP switches are located on the control board.

Power **OFF** before making changes.

RED DIP switch 1 Remote Control Mode

OFF (Factory Default) Multi-Button Control

ON: Single-Button Cycle Mode

Each press cycles through:

OPEN → STOP → CLOSE → STOP → OPEN

✓ One button controls full gate cycle

✓ Ideal for standard residential setups

RED DIP switch 2 Dual Gate Opening Sequence

OFF: Gate 1 and Gate 2 open simultaneously

ON: Gate 2 opens 5 seconds before Gate 1

✓ Used for Maglock or staggered dual gate systems

RED DIP switch 3 Auto Close Function

OFF: Auto close disabled

ON: Auto close enabled

Operation Notes:

Gate opens to limit

Delay timer begins (LED flashes during countdown)

Gate closes automatically after set time

Auto Close Time Programming:

1. Set DIP 3 = ON

2. Set DIP 8 = ON

3. Press F Button

4. Each press = 1 second delay

5. Press F multiple times to set total delay

6. Turn DIP 8 = OFF to save

RED DIP switch 4 - Low-Speed Close Function

OFF: Low-speed function disabled

ON: Low-speed function enabled

Function Behavior:

The contents of this manual may be "changed at any time and without notice"

CONTROL BOARD INSTRUCTIONS

Function Behavior:

Gate slows down approximately 3 ft before full close.
Provides smoother stopping and reduces impact stress.

RED DIP switch 5 - Resistance bounce function

OFF: The motor will automatically stop when meet obstructions during opening or closing.

ON: if meet obstructions during opening the motor will automatically stop. During closing, if meet obstructions the motor will stop first, and then open the gate to open limit in case of clip person or vehicle.

RED DIP switch 6 - Lock function

OFF: No voltage during opening.

ON: During opening, motor will close and reverse 1 second, electric lock get electric and start action 2 seconds, motor start opening. Electric lock will hold electric 3 seconds and release when the motor start opening.

RED DIP switch 7 - Single Gate (Leaf) Open via Remote Lock Button

OFF: Remote LOCK button opens Door 2 only (single leaf operation)

ON: Remote LOCK button disabled for single leaf opening

RED DIP switch 8 - SET / Programming Mode

OFF: Normal operation mode

ON: Enter function setting/programming mode

P7 JUMPER – LOCK FUNCTION ENABLE

- Install jumper on LOCK pins to enable function
- Press STOP + LOCK to lock/unlock system

3. SOFT START SETUP

1. Soft Start / Soft Stop (Low-Speed) Adjustment

Mode 1 – Automatic Learning (Recommended)

A. Ensure gate is fully closed before starting (*critical*).

B. Turn:

- RED DIP 8 = ON
- RED DIP 4 = ON

C. Press OPEN (control panel or remote).

D. System will:

- Run full open/close cycle
- Automatically learn slow-down points

F. After both leaves fully close:

- Set RED DIP 8 = OFF
- Buzzer will sound → Learning complete

✓ System will automatically slow down approx. 3 ft before full open/close.

Mode 2—Manual Learning (Advanced)

A. Start with gate fully closed.

B. Turn:

- RED DIP 8 = ON
- RED DIP 4 = ON

C. Press OPEN.

Setting Slow Speed Points

- Opening
 - Gate 1 opens first
 - Press STOP at desired slow-down position
 - Repeat for Gate 2
- Closing
 - Gate 2 closes first
 - Press STOP at desired slow-down position
 - Repeat for Gate 1

D. After full close:

- Set RED DIP 8 = OFF
- Buzzer confirms completion

✓ User-defined slow speed zones are now stored.

Adjustment Controls

- CL-L (Close Delay):
Adjust motor closing delay → 0–10 seconds
- TORQUE 1 / TORQUE 2:
Clockwise = Increase force
Counter-clockwise = Decrease force
- MT-V (Low-Speed Torque):
Adjust force during slow speed closing

4. REMOTE CONTROL PROGRAMING

Add Remote

1. Press SN2 (White Learn Button)
 2. LED turns OFF
 3. Press LOCK button on remote twice quickly
 4. Buzzer "DI" confirms learning
- ✓ Repeat for additional remotes

Important Notes

- Keep remote away from board when programming
- Press remote within 1 second of learn mode
- Do NOT press learn button again after programming
- ✓ Max capacity: 298 remotes
- ✓ Oldest remote is overwritten when full

Delete All Remotes

1. Press and hold SN2 button (~8 seconds)
 2. Buzzer sounds
 3. LED changes state
 4. Release button
- ✓ All remotes erased

The contents of this manual may be "changed at any time and without notice"

CONTROL BOARD INSTRUCTIONS

5. AUTO CLOSE FUNCTION

Enable / Disable

DIP 3 = ON → Auto Close ENABLED

DIP 3 = OFF → Auto Close DISABLED

6. AUTO CLOSE SETUP

Turn DIP 8 = ON

Turn DIP 3 = ON

Press F button

Each press = 1 second delay

After setting:

Turn DIP 8 = OFF

Leave DIP 3 unchanged

✓ LED flashes during countdown (1 Hz)

✓ Gate closes automatically after delay

7. MOTOR DIRECTION (Verification CRITICAL)

After wiring and powering system:

Press OPEN → Gate must open

Press CLOSE → Gate must close

If Direction Is Incorrect

Reverse motor wiring:

Swap RED & BLACK wires

Motor 1 wrong Reverse Motor 1 wires

Motor 2 wrong Reverse Motor 2 wires

Both wrong Reverse both motors

8. ADDING SYSTEM COMPONENTS

Access Control Devices

Keypad KP-900/950 OR (Card Reader / Intercom)

Wiring Connections:

Keypad +12V → Control Board Terminal # 9

Keypad GND → Control Board Terminal # 8

Keypad NO → Control Board Terminal # 3

Keypad COM → Control Board Terminal # 2

Important Notes: Device must provide a low-voltage negative trigger output. Use only compatible access control devices

External Push Button PB-800

Wiring Connections:

Keypad +12V → Control Board Terminal # 9

Keypad GND → Control Board Terminal # 8

Keypad NO → Control Board Terminal # 3

Keypad COM → Control Board Terminal # 2

Important Notes: Device must provide a low-voltage negative trigger output. Use only compatible access control devices

12V Electric Lock Output

Prevents forced gate opening when gate is closed.

Activation Requirement:

Set RED DIP Switch 6 = ON

Operation Sequence:

Motor briefly closes then reverses (1 sec)

Lock energizes for ~2 seconds (unlock action)

Gate begins opening

Lock remains powered for ~3 seconds, then releases

Ground Loop Detector

Provides automatic closing after vehicle passes.

Recommended Use:

- Vehicle detection → Ground Loop Detector

Wiring Connections:

Detector +12V → Board Terminal # 9 - 12V

Detector GND → Board Terminal # 8 - GND

Detector NO → Board Terminal # 6 - INRF

Detector COM → Board Terminal # 2 - COM

Photocell / Safety Input

Provides automatic closing after vehicle or person passes.

Recommended Use:

- Vehicle detection → Safety Edge Kit
- Pedestrian detection → Infrared Sensor

Wiring Connections:

Photocell +12V → Board Terminal # 9 - 12V

Photocell GND → Board Terminal # 8 - GND

Photocell NO → Board Terminal # 7 - FSW

Photocell COM → Board Terminal # 2 - COM

Function:

- ✓ Stops gate during closing
- ✓ Reverses to open position

Verify all safety devices (photo eyes, edges) before operation. Improper setup may result in injury or equipment damage

IMPORTANT INSTALLATION NOTES

Use minimum 18AWG stranded wire for connections

Keep control board close to motors

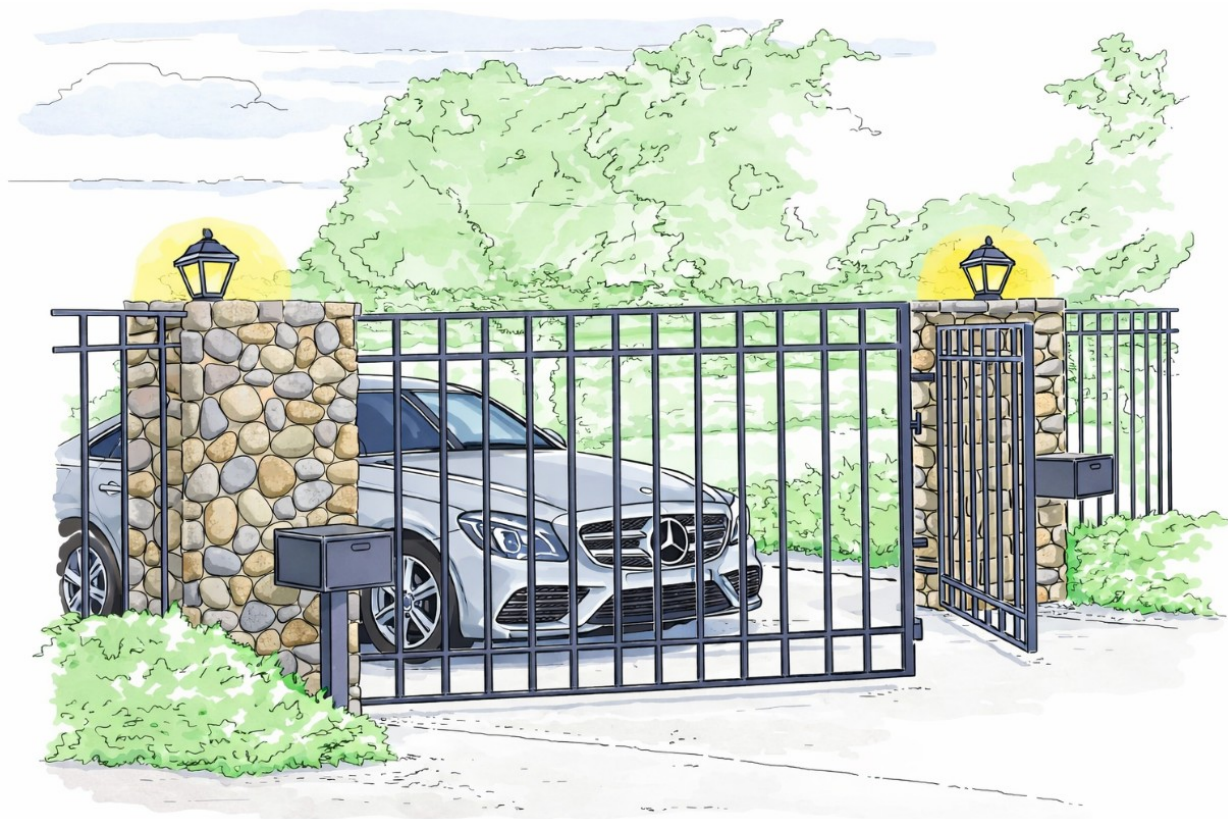
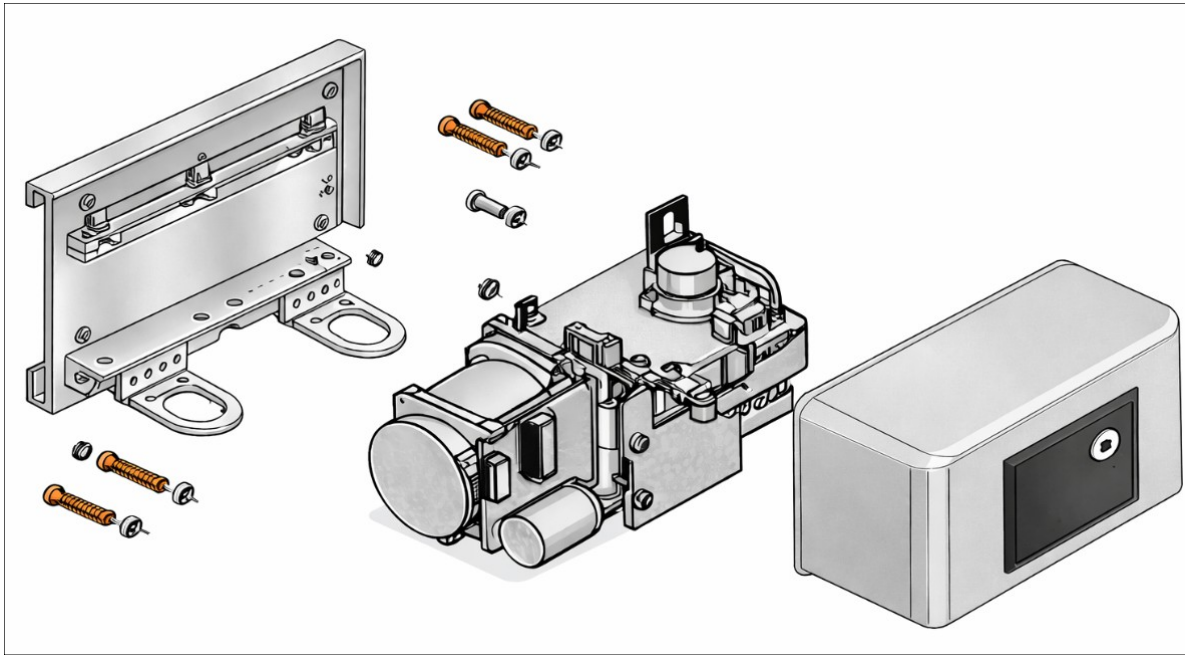
Ensure proper grounding with grounding rod.

9. TROUBLESHOOTING

Issue	Possible Cause	Solution
Gate runs backwards	Motor polarity reversed	Swap red/black wires
Short remote range	Signal obstruction	Relocate antenna
Gate won't auto close	DIP 3 OFF or timer not set	Enable + program time
Lock not working	DIP 6 OFF	Turn ON

The contents of this manual may be "changed at any time and without notice"

PARTS IDENTIFICATION



The contents of this manual may be "changed at any time and without notice"

