Use this manual for circuit board 1473-010.

For Pre-2016 Convenience Open Models: 1600, 1602, 1603, 6100, 6300, 6500, 9150 and 9310 Operators ONLY

Replacement Board for 2340-010 Convenience Open Board

Date Installed: ________________________________

Installer/Company Name: _______________________

Phone Number: _______________________________

Operator Circuit Board Serial Number and Revision Letter: ________________________________

Leave Manual with Owner

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1473 CONVENIENCE OPEN BOARD INTRODUCTION

Use this manual when replacing a 2340-010 convenience open board on an existing PRE-2106 gate/barrier operator ONLY. The 2340-010 control board is obsolete and cannot be replaced.

IMPORTANT

- The 1473 convenience open board is a REPLACEMENT board for an existing 2340 convenience open board ONLY.
- The convenience open system cannot provide continuous gate operation during a power outage.
- Operation of this system is limited to cycling the gate to the open (up) position ONE TIME ONLY.
- The convenience open system requires testing on a monthly basis to insure the batteries are fully charged and that the system is operational.
- The convenience open system uses two 12-volt, 3.0 amp-hour gel-cell batteries. These batteries should be replaced every two years on average, or sooner if required. A reminder beeper has been designed in the 1473 board, see below.
- Batteries are affected by temperature. Cold temperatures will reduce the effectiveness of the batteries and the backup system. High temperatures will result in a shortened battery life.
- Batteries are not covered under warranty.
- This system cannot be used with SLIDE gate operators that are configured in the Fail-SECURE mode.
- If your access control system requires 100% power backup and continuous operation when primary (AC) power has failed, a power inverter / backup system, such as DoorKing’s Model 1000 can be purchased separately.

1473 Board Overview

115 VAC Input (J1)
Connect to gate operator’s terminal inputs as shown on following pages, REQUIRED. DO NOT connect to 208/230 VAC input.

10-Pin Terminal (P4)
Common for open, radio receiver or open limit switch. Note: Radio receiver cannot be connected when the 1473 is installed in a 1601, 1602, 1603, 6500 or 9310 gate operator.
OPEN INPUT (LIMIT)-2
Open input. (Open limit switch for 1601, 1602, 1603, 6500, 9310).
RADIO POWER-3
24-Volt power for radio receiver (9150 and 6100/6300 gate operators only). Radio gets powered by operator batteries during power outage.
ACTIVATION OUTPUT-4
Radio relay activation or switch closure across terminals 1 and 2 will send an activation signal out of this terminal to the gate operator single-button activation input.

Note: See pages 4-13 for your specific gate operator(s) terminal connection.
**1473 DIP-Switches**

<table>
<thead>
<tr>
<th>Switch</th>
<th>Function</th>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Auto Open Operation After Power Outage</td>
<td>OFF (Manual Mode) or ON (Auto Mode)</td>
<td>For Residential application: Gate will remain closed after a power outage. A receiver input or switch closure device across terminals 1 and 2 will run the operator’s “Run Time” set on the 1473 to the open position. (1601, 1602, 1603, 6500 or 9310 models will NOT function in this mode). For Apartment complexes, gated communities, etc.: Gate will run automatically. (After Power Outage) Use the 1473 to set the operator’s limits to the open position. This switch MUST be set for 1601, 1602, 1603, 6500 and 9310 operators.</td>
</tr>
<tr>
<td>2</td>
<td>Motor Dir (Motor Direction)</td>
<td>OFF or ON</td>
<td>Sets the opening direction (Up) of the gate. If the gate won’t open after a power outage, reverse this switch.</td>
</tr>
<tr>
<td>3</td>
<td>AC on ACT Restore Power Operation</td>
<td>OFF or ON</td>
<td>Physical Input Required: An input (push button, loop, radio receiver, etc.) is required to return the gate to normal operation.</td>
</tr>
<tr>
<td>4</td>
<td>Timer-OFF Limit-ON Operator Type</td>
<td>Timer-OFF or Limit-ON</td>
<td>1473 “run timer” is used and must be adjusted. For 9150 or 6100/6300 gate operators ONLY. Operator limits are used to stop gate at open/up position. For 1601, 1602, 1603, 6500 and 9310 operators ONLY.</td>
</tr>
</tbody>
</table>

**Switch 1 OFF: Manual Mode - Residential ONLY**

Manual mode is designed for residential applications only, for 6100/6300 or 9150 operators ONLY. (1601, 1602, 1603, 6500 or 9310 models will NOT function in this mode).

DIP-Switch 1 OFF: The 1473 will not open the gate if a power failure occurs until a manual input is received, either from a wired push button or RF transmitter. This allows the gate to remain closed upon a loss of AC power, but provides a method to open the gate when desired. In manual mode, the STAND-ALONE RF receiver is connected directly to the 1473 control board and is powered by this board. During normal operation, when the relay in the radio receiver closes (a valid transmitter code has been received), this “signal” is passed through the 1473 control board’s terminal 4 that has been wired to the gate operator’s main control board terminal open input. If a power failure occurs, the radio receiver is powered from the operator batteries maintaining its operation. When a valid RF transmitter code is received under these conditions, the 1473 control board signals the operator DC motor to run for the set “Run Time.” A push button device wired to terminals 1 and 2 on the 1473 control board will also open the gate after a power outage has occurred.

**Note:** The RF transmitter will open the gate when using a stand-alone type receiver. If the gate system uses a receiver that outputs the transmitter code in weigand format to a phone entry system (such as DoorKing’s 1833, 1835, 1837 or 1838), then opening the gate from the RF transmitter under power outage conditions will NOT be possible when the system has been set up this way.

**Switch 1 ON: Auto Mode - Apartment Complexes, Gated Communities, Etc.**

DIP-Switch 1 ON: The 1473 will automatically open the gate or raise the barrier arm approximately 2-3 seconds after loss of AC power occurs. Automatic mode is always used for gates in general access applications such as gated communities, apartment complexes, etc. Automatic mode MUST be used with 1601, 1602, 1603, 6500 and 9310 operators.

**Switch 2: Operator Opening Direction**

The operator MUST open (Barrier arm goes UP) when power outage occurs. If the operator doesn’t open during a power outage, reverse this switch’s position.

**Switch 3: Restarting Operator AFTER AC Power Has Been Restored**

DIP-Switch 3 ON: Automatically “re-keys” the gate operator to establish normal operation again.

DIP-Switch 3 OFF: Requires a “physical input” (push button, loop, radio receiver, etc.) before the gate operator will resume normal operation again.

**Switch 4: Using 1473 “Run Timer” or Operator’s Limits for Open Position**

DIP-Switch 4 ON: Uses the gate operator limits to stop the gate/arm at the open position. For 1601, 1602, 1603, 6500 and 9310 operators ONLY. Not for use on 6100/6300 or 9150 operators.

DIP-Switch 4 OFF: Uses the 1473 run timer setting (4 to 41 seconds) to stop the gate at the open position. For 6100/6300 or 9150 operators ONLY. Not for use on 1601, 1602, 1603, 6500 and 9310 operators.

**1473 “Run Timer” Description**

Used for 6100/6300 or 9150 gate operators ONLY. The “run timer” sets the amount of time that the operator’s DC motor will run after it gets activated by the 1473 circuit board. Adjust the run timer so that the gate opens to approximately six inches shy of the full open position and stops. DO NOT allow the DC motor to run beyond the full open position and slip the operator clutch or stall the DC motor. Damage to the circuit board may result from this. Clockwise adjustment increases the run time, counter-clockwise adjustment decreases the run time.

**Note:** The run timer is not used when the 1473 circuit board is installed in the 1601, 1602, 1603, 6500 or 9310 operators.
Select **YOUR** specific gate operator(s) installation on this page or the following pages.

**6100, 6300 Single Swing Gate Operator**

**2340 Board Replacement Note:** When replacing a 2340 board with a 1473 board, **DO NOT** connect the #7 main terminal “PURPLE” wire to the #5 1473 terminal.

**1473 Control Board**

- **Operator DC Motor**
- **Operator DC ON/OFF Power Switch**
- **Operator Batteries**

**Operator** will function in either **manual** or **auto open** mode (1473 DIP-Switch 1).
- **1473 DIP-Switch 4** MUST be **OFF** (Timer) and run timer MUST be adjusted.

**Stand-Alone 3-Wire Radio Receiver Manual Mode**

This radio receiver will work during normal daily operation as well as during a power outage. The radio receiver will be powered from the operator’s batteries during a power outage.

**Connect a normally open device to terminals 1-2.**

This allows another method to open the gate when a power outage occurs if the auto-open mode is **NOT** used (1473 DIP-Switch 1 is **OFF**).
6100, 6300 Bi-Parting Swing Gate Operators

2340 Board Replacement Note: When replacing a 2340 board with a 1473 board, **DO NOT** connect the #7 main terminal "PURPLE" wire to the #5 1473 terminal.

- **Operator will function in either manual or auto open mode (1473 DIP-Switch 1).**
- 1473 DIP-Switch 4 **MUST** be OFF (Timer) and run timer **MUST** be adjusted.

Stand-Alone 3-Wire Radio Receiver Manual Mode

This radio receiver will work during normal daily operation as well as during a power outage. The radio receiver will be powered from the operator's batteries during a power outage.

Connect a normally open device to terminals 1-2 of the PRIMARY 1473 ONLY. This allows another method to open the gate when a power outage occurs if the auto-open mode is **NOT** used (1473 DIP-Switch 1 is **OFF**).}

2340 Board Replacement Note: When replacing a 2340 board with a 1473 board, **DO NOT** connect the #4 secondary terminal "PURPLE" wire to the #5 1473 terminal.
6500 Single Swing Gate Operator

- Operator will **ONLY** function in auto open mode (1473 DIP-Switch 1 **ON**).
- 1473 DIP-Switch 4 **MUST** be **ON** (Limit). This allows the 1473 to use the 6500’s magnetic limit for the gate OPEN position.

**Limit Sensors Plug**

**Single Operator Control Board**

**2340 Board Replacement**

*Note:* When replacing a 2340 board with a 1473 board, **DO NOT** connect the #3 main terminal “PURPLE” wire to the #5 1473 terminal.
6500 Bi-Parting Swing Gate Operators

Primary Operator Control Board

Limit Sensors Plug

Main Terminal

Primary Operator 8-Pin Secondary Interface Terminal

DoorKing Interconnection Cable
Sold Separately

Secondary 1473 Control Board

Secondary DC ON/OFF Power Switch

Secondary Batteries

Secondary Operator Terminal

Secondary DC ON/OFF Power Switch

Secondary Batteries

Primary Batteries

115 VAC Input

2240 Board Replacement Note:
When replacing a 2240 board with a 1473 board, DO NOT connect the #7 main terminal "PURPLE" wire to the #5 1473 terminal.

2340 Board Replacement Note:
When replacing a 2340 board with a 1473 board, DO NOT connect the #4 secondary terminal "PURPLE" wire to the #5 1473 terminal.

Secondary Operator Terminal

Secondary Battery

Primary Battery

Primary DC Motor

Secondary DC Motor

Primary DC ON/OFF Power Switch

Do Not Use Run Timer

DANGER HIGH VOLTAGE!

• Operator will ONLY function in auto open mode (1473 DIP-Switch 1 ON).
• 1473 DIP-Switch 4 MUST be ON (Limit). This allows the 1473 to use the 6500's magnetic limit for the gate OPEN position.

SECONDARY operator's 1473 board's 115VAC Input MUST interconnect to PRIMARY main terminals #19-Blue & #20-White.

SECONDARY operator's 1473 board's 115VAC Input MUST interconnect to PRIMARY main terminals #19-Blue & #20-White.

Primary Operator Control Board

1473-010

Operator will ONLY function in auto open mode (1473 DIP-Switch 1 ON).
1473 DIP-Switch 4 MUST be ON (Limit). This allows the 1473 to use the 6500's magnetic limit for the gate OPEN position.

DoorKing Interconnection Cable
Sold Separately

Secondary Operator Terminal

Secondary Battery

Primary Battery

Primary DC Motor

Secondary DC Motor

Primary DC ON/OFF Power Switch

Do Not Use Run Timer

DANGER HIGH VOLTAGE!

• Operator will ONLY function in auto open mode (1473 DIP-Switch 1 ON).
• 1473 DIP-Switch 4 MUST be ON (Limit). This allows the 1473 to use the 6500's magnetic limit for the gate OPEN position.

SECONDARY operator's 1473 board's 115VAC Input MUST interconnect to PRIMARY main terminals #19-Blue & #20-White.

SECONDARY operator's 1473 board's 115VAC Input MUST interconnect to PRIMARY main terminals #19-Blue & #20-White.
2340 Board Replacement Note: When replacing a 2340 board with a 1473 board, **DO NOT** connect the #3 main terminal "PURPLE" wire to the #5 1473 terminal.

- Operator **will** function in either **manual** or **auto open** mode (1473 DIP-Switch 1).
- 1473 DIP-Switch 4 **MUST** be **OFF** and run timer **MUST** be adjusted.
- Operator will function in either manual or auto open mode (1473 DIP-Switch 1).
- 1473 DIP-Switch 4 MUST be OFF and run timer MUST be adjusted.
9310 Single Slide Gate Operator

- Operator will ONLY function in auto open mode (1473 DIP-Switch 1 ON).
- 1473 DIP-Switch 4 MUST be ON (Limit). This allows the 1473 to use the 9310's magnetic limit for the gate OPEN position.

Connects to "OPEN" limit Blue or Yellow wire, depending on mounting position (open left/open right) of the operator.

Limit Sensor Plug

Single Operator Control Board

Operator DC Motor

Operator Batteries

1473 Control Board

Operator DC ON/OFF Power Switch

Limit Sensor Plug

- Blue Wire Limit
- Yellow Wire Limit

PRT Com

Com

White

Red

Black

–

+ 12 V 3 Amp/Hr

115 VAC INPUT

J1

RESET

CLEAR

STAT

AUTO OPEN

MOTOR DIR

AC ON ACT

LIMIT TIMER

BATT STAT

RUN

TIME

HEART BEAT

TRICKLE CHARGE

STAT SW2

ON

1473-010 DO NOT use Run Timer

1473-065-H-5-19
9310 Bi-Parting Slide Gate Operators

Connects to “OPEN” limit Blue or Yellow wire, depending on mounting position (open left/open right) of the operator.

Limit Sensor Plug

Primary Operator Control Board

- Operator will ONLY function in auto open mode (1473 DIP-Switch 1 ON).
- 1473 DIP-Switch 4 MUST be ON (Limit). This allows the 1473 to use the 9310’s magnetic limit for the gate OPEN position.

Connects to “OPEN” limit Blue or Yellow wire, depending on mounting position (open left/open right) of the operator.

Limit Sensor Plug

Secondary Operator Control Board

DANGER HIGH VOLTAGE!

Primary DC Motor

DO NOT use Run Timer

Primary DC ON/OFF Power Switch

Primary Batteries

1473 Control Board

DANGER HIGH VOLTAGE!

Secondary DC Motor

DO NOT use Run Timer

Secondary DC ON/OFF Power Switch

Secondary Batteries

2340 Board Replacement Note:
When replacing a 2340 board with a 1473 board, DO NOT connect the #3 mainterminal “PURPLE” wire to the #5 1473 terminal.

2340 Board Replacement Note:
When replacing a 2340 board with a 1473 board, DO NOT connect the #3 mainterminal “PURPLE” wire to the #5 1473 terminal.

DoorKing Interconnection Cable Sold Separately

DANGER HIGH VOLTAGE!

Red/White Black/White

Blue Wire Limit

Yellow Wire Limit

PRT Com

PRT Com

115 VAC INPUT J1

P1

RESET

CLEAR

STAT

AUTO OPEN

MOTOR DIR

AC ON ACT

LIMIT TIMER

BATT STAT

RUN

TIME

HEARTBEAT

TRICKLE CHARGE

STAT

SW2

ON

1473-010

DO NOT use Run Timer

Secondary 1473 Control Board
• Operator will **ONLY** function in **auto open** mode (1473 DIP-Switch 1 **ON**).
• 1473 DIP-Switch 4 **MUST** be **ON** (Limit). This allows the 1473 to use the 1600's magnetic limit for the arm UP position.
1601, 1602, 1603 Bi-Parting Barrier Gate Operators

Primary Control Board

- Operator will **ONLY** function in **auto open** mode (1473 DIP-Switch 1 ON).
- 1473 DIP-Switch 4 **MUST** be **ON** (Limit). This allows the 1473 to use the 1600’s magnetic limit for the arm UP position.

Secondary Control Board

2340 Board Replacement Note: When replacing a 2340 board with a 1473 board, **DO NOT** connect the #5 main terminal “PURPLE” wire to the #5 1473 terminal.

- **DANGER** HIGH VOLTAGE!

Factory Installed DC Magnetic Up Limit Sensor

Operator Chassis Ground

Interconnection Cable Sold Separately

2340 Board Replacement Note: When replacing a 2340 board with a 1473 board, **DO NOT** connect the #5 main terminal “PURPLE” wire to the #5 1473 terminal.

DoorKing

1473-065-H-5-19
Replacement Parts for Convenience Open System

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Quantity</th>
<th>Description</th>
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</thead>
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<tr>
<td>1473-010</td>
<td>1</td>
<td>Control Board</td>
</tr>
<tr>
<td>1801-009</td>
<td>2</td>
<td>Battery, 12 Volt, 3.0 Amp Hour</td>
</tr>
<tr>
<td>1601-041</td>
<td>1</td>
<td>Toggle Switch</td>
</tr>
<tr>
<td>2600-196</td>
<td>1</td>
<td>DC Motor Assembly</td>
</tr>
<tr>
<td>1601-253</td>
<td>1</td>
<td>Magnetic Sensor Switch, Barrier Operators Only</td>
</tr>
<tr>
<td>2600-817</td>
<td>1</td>
<td>Magnet, Barrier Operators Only</td>
</tr>
<tr>
<td>2600-688</td>
<td>1</td>
<td>V-Belt</td>
</tr>
<tr>
<td>7082-010</td>
<td>1</td>
<td>115 VAC Cable Harness</td>
</tr>
</tbody>
</table>

Battery
12 Volt 3 Amp/Hr
P/N 1801-009
Two (2) required.

Toggle Switch
P/N 1601-041

DC Motor Assembly
P/N 2600-196

Magnetic Sensor Switch
P/N 1601-253
Barrier Operators Only

Magnet
P/N 2600-817
Barrier Operators Only

115 VAC Cable Harness
P/N 7082-010

1473 Control Board
P/N 1473-010

Control board, wire harness and installation manual

1473 Control Board Kit
P/N 1473-121
Use this manual for circuit board 1473-010.

For Pre-2016 Convenience Open Models:
1600, 1602, 1603, 6100, 6300, 6500, 9150 and 9310 Operators ONLY

Replacement Board for 2340-010 Convenience Open Board