

**DOR-O-MATIC®**

# Astro-Swing Universal Control Box

Instruction Manual for the 84580-900 Control Box

## Factory Authorized Door Leaf Size & Weight:

| Type        | Width per Leaf | Max. Weight per Leaf |
|-------------|----------------|----------------------|
| Single Door | 36" to 48"     | 200 lb.              |
| Sim. Pair   | 30" to 48"     | 200 lb.              |

**DOR - O - MATIC®**

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Booklet No.

84580-984

Price: \$25.00

Printed in U.S.A.

1/10/94



## Converting from the old Astro-Swing control boxes to the new 84580-900 Universal Control Box:

| Reference # | Type of System                       | Old Part # | New Part # | Function Dial |
|-------------|--------------------------------------|------------|------------|---------------|
| 1           | Super Nova Safety Slow               | 84555-900  | 84580-900  | 0             |
| 2           | Super Nova Safety Stop               | 84557-900  | 84580-900  | 1             |
| 3           | Alternate Action                     | 84542-900  | 84580-900  | 3             |
| 4           | Sensor Rail Safety Slow              | 84540-900  | 84580-900  | 4             |
| 5           | Sensor Rail Safety Stop              | 84551-900  | 84580-900  | 5             |
| 6           | Power-Boost 5 seconds, then shut off | 84556-900  | 84580-900  | 7             |
| 7           | Dor-O-Matic Electric Lock            | 84541-900  | 84580-900  | 8             |
| 8           | Carpets                              | 84540-900  | 84580-900  | 9             |
| 9           | Limit Switches                       | 81540-900  | 84580-900  | F             |
| 10          | Original Nova Safety Slow            | 84540-900  | 84540-900  | N/A           |
| 11          | Original Nova Safety Stop            | 84551-900  | 84551-900  | N/A           |
| 12          | Spring Open Power Close              | 84543-900  | 84580-988  | A             |
| 13          | Handle Switch Operation              | 84544-900  | 84580-988  | A             |
| 14          | 180 Degree Swing                     | 84547-900  | 84580-988  | A             |
| 15          | All Other Special Operations         | Various    | 84580-988  | A             |

| Reference # | Type of System                  | Old Part #                           | New Part # | Latch Dial                                    |
|-------------|---------------------------------|--------------------------------------|------------|---|
| 16          | Most Special Latch Applications | 84571-900<br>84572-900<br>and others | 84580-900  | Adjust Latch<br>Selector Dial<br>as Necessary |

- Note that all Universal Boxes have 15 pin logic plugs. If you are replacing a box with a 9-pin logic plug and you have switches or other devices that plug into the 9-pin logic plug, those switches must also be replaced.
- When power is lost, the Universal Box will close under spring power at the normal closing speed (which is set by the installer through the closing speed adjustment on the box) with no latching action. Previously, only the 84571 & 84572 functioned this way.
- The replacements for numbers 1-9 and #16 above are simply the normal Astro-Swing Universal Box using the settings indicated.
- Numbers 10-11 (original Nova Safety Slow and Safety Stop) cannot be used with the Universal Box. You must continue to order and use the 84540-900 and 84551-900 control boxes.
- Numbers 12-15 are Universal Boxes, but they must be ordered as specials and placed in position 'A' which is reserved for special controls.
- As indicated in number 16, most special latching applications can now be accomplished through the **Latch** Selector Dial on the Universal Box.
- The Universal Boxes contain some new applications that were not covered by the old style 845XX series. These are shown on the control box label and explained later in this manual.
- If you have another application that is not covered here or in the rest of this manual, consult with the factory to see if a special box can be programmed for you.
- If you have any questions, please call the factory and consult with Sales or Engineering.



# ASTRO-SWING UNIVERSAL CONTROL BOX

## PART #84580-XXX

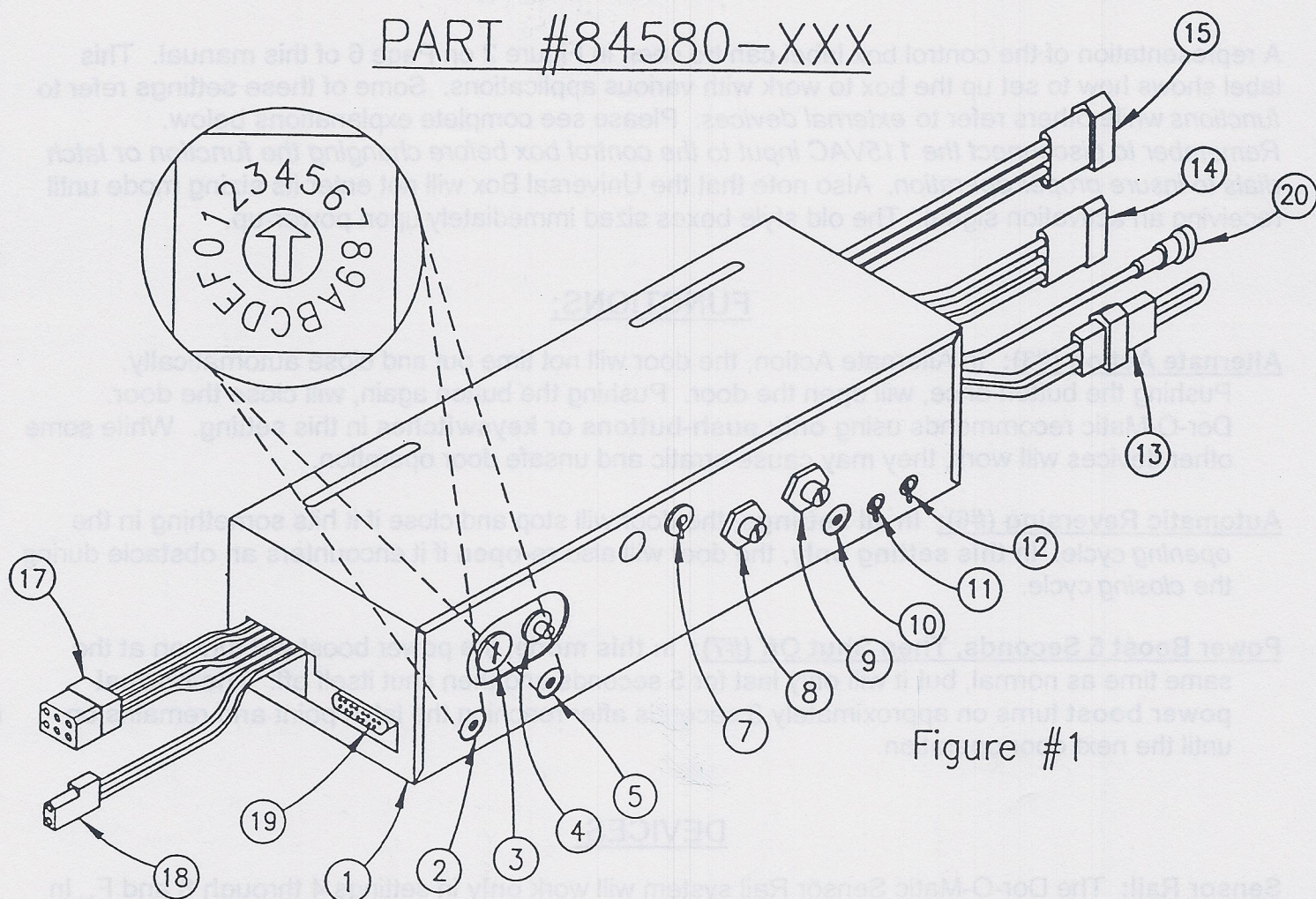


Figure #1

- |   |  |
|---|--|
| <p>① CONTROL BOX # 84580-900 115 Volt<br/>CONTROL BOX # 84580-991 230 Volt</p> <p>② FUNCTION SELECTOR DIAL</p> <p>③ FUSE, 6 Amp I.B. for 115 Volt<br/>FUSE, 3 Amp I.B. for 230 Volt</p> <p>④ CIRCUIT BREAKER, 2 Amp</p> <p>⑤ LATCH SELECTOR DIAL</p> <p>⑥ (INTENTIONALLY LEFT OUT)</p> <p>⑦ POWER BOOST ON/OFF SWITCH</p> <p>⑧ CLOSING SPEED ADJUSTMENT - FOR MASTER UNIT</p> <p>⑨ CLOSING SPEED ADJUSTMENT - FOR SLAVE UNIT</p> <p>⑩ TIME DELAY ADJUSTMENT: 1-1/2 to 30 sec.</p> | <p>⑪ OPENING SPEED ADJUSTMENT<br/>(#1-FAST, #2-MEDIUM, #3-SLOW)</p> <p>⑫ BACKCHECK SPEED ADJUSTMENT<br/>(#1-ONE DOOR, #2-TWO DOORS)</p> <p>⑬ 2 PIN FEMALE, FOR BREAKAWAY SWITCH</p> <p>⑭ 3 PIN FEMALE, ACTIVATION</p> <p>⑮ 4 PIN MALE, POWER INPUT</p> <p>⑯ MOUNTING CLIPS (NOT SHOWN)</p> <p>⑰ 6 PIN FEMALE, TO MASTER OPERATOR</p> <p>⑱ 2 PIN FEMALE, TO SLAVE OPERATOR</p> <p>⑲ 15 PIN LOGIC TERMINAL FOR HEADER/JAMB SWITCHES, SUPER NOVA CONNECTIONS, ETC.</p> <p>⑳ 1 PIN MALE - SAFETY SLOW/STOP</p> |
|---|--|



## Astro-Swing Universal Control Box:

A representation of the control box label can be seen in Figure 2 on Page 6 of this manual. This label shows how to set up the box to work with various applications. Some of these settings refer to *functions* while others refer to *external devices*. Please see complete explanations below.

*Remember to disconnect the 115VAC input to the control box before changing the function or latch dials to insure proper operation.* Also note that the Universal Box will not enter its sizing mode until receiving an activation signal. The old style boxes sized immediately upon power-up.

### FUNCTIONS:

**Alternate Action (#3):** In Alternate Action, the door will not time out and close automatically.

Pushing the button once, will open the door. Pushing the button again, will close the door.

Dor-O-Matic recommends using **only push-buttons or keyswitches** in this setting. While some other devices will work, they may cause erratic and unsafe door operation.

**Automatic Reversing (#6):** In all settings, the door will stop and close if it hits something in the opening cycle. In this setting only, the door will also re-open if it encounters an obstacle during the closing cycle.

**Power Boost 5 Seconds, Then Shut Off (#7):** In this mode, the power boost will turn on at the same time as normal, but it will only last for 5 seconds and then shut itself off. The **normal power boost** turns on approximately 3 seconds after reaching the latch point and remains on until the next door operation.

### DEVICES:

**Sensor Rail:** The Dor-O-Matic Sensor Rail system will work **only** in settings 4 through 8 and F. In Safety-Slow mode, the door will slow down when someone crosses the number 8 beam during the opening cycle. In Safety-Stop mode, the door will come to a complete stop when this condition occurs. Sensor Rail with Safety-Stop mode is *only* available in position #5.

**Note:** Dor-O-Matic recommends always using a motion detector or carpet as activation in conjunction with safety rails. Using other activation devices could result in unsafe door operation.

**Super Nova:** Super Novas will work **only** in positions 0 through 2. The Super Nova will prevent a fully closed door from opening or prevent a fully open door from closing if someone is in the swing path. The Super Novas will also function after the door has started to open. In Safety-Slow mode, the door will slow down when someone enters the swing path of the door after it has started opening. In Safety-Stop mode, the door will come to a complete halt under this condition. Safety-Stop mode is available *only* in position #1.



**Push Buttons:** Push buttons are the most basic of activating devices. Actually this can be any normally open dry contact. This can include push buttons, push plates, card readers, keypads, relays, etc. as long as it is a normally open dry contact. No voltage can be applied to the activating wires of the control box! These devices are usually momentary contacts although sustained contacts may be used if necessary. The Astro-Swing unit is designed to hold the door open under a sustained activation without damaging itself.

**Carpets:** Carpets (or mats) can be used on the activating or safety side. When someone stands on the activating carpet, the door will open and hold as long as someone is standing on it. When the mat is clear, the door will time out and close. The safety mat will (1) Keep a fully closed door from opening, or (2) Keep a fully open door from closing. There are no safety stop or safety slow features on a carpet. The safety carpet always takes precedence over the activating carpet. While sensing carpets or mats can technically be used in any position, certain guidelines must be followed.

**With Sensor Rails or Super Novas:** Safety mats can be used with Sensor Rails or Super Novas although they would provide little if any additional safety. Activating mats could be used if necessary.

**With Alternate Action:** Activating mats must **not** be used with the Alternate Action setting as they can be very dangerous. Safety mats may be used if necessary.

**With other applications:** Normally mats are used in one of two ways. (1) On both the activating and safety side. (2) On the safety side only, in conjunction with a motion detector on the activating side.

**Dor-O-Matic Electric Lock:** Settings #2 and #8 will work with the Dor-O-Matic Electric Lock. Setting #2 is for use with a Super Nova. Setting #8 is for use with the Sensor Rail. Either setting may be used with motion detectors, mats, and push-buttons. This setting is for use **only** with Dor-O-Matic electric locks. No other locks will work. Also note that only the 4-position keyswitch will operate in this position. The 3-position keyswitches will not work properly in this position. Please consult the Electric Lock manual for more information.

**Limit Switches:** This setting is only used for replacement purposes when the operator is of the old type that has micro switches instead of hall-effect counters. Super Novas and Electric Locks will *not* operate in this position.

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**Note:** If you require a function which is not listed here, please consult with the factory. Depending on your requirements, a special control box *may* be made to fulfill your needs. Remember that if you order a special box, it will be more difficult and time-consuming to obtain replacements in the future. In some cases, it may be advisable to order future replacements at the same time as the original.



## ASTRO-SWING UNIVERSAL CONTROL BOX

| Setting | Function Selector Dial                  | Settings 0-F On the Left Work With: |                 |                 |         |  | El. Lock<br>by D-O-M | LATCH SELECTOR DIAL  |
|---------|---|-------------------------------------|-----------------|-----------------|---------|--|----------------------|----------------------|
|         |   | Super Nova                          | Sensor Rail     | Buttons<br>Etc. | Carpets |  |                      |                      |
| *0      | Super-Nova Safety Slow                  | Yes-Safety Slow                     | NO              | YES             | NO      |  | NO                   | Zero Latch           |
| 1       | Super-Nova Safety Stop                  | Yes-Safety Stop                     | NO              | YES             | NO      |  | NO                   | 3° Latch             |
| 2       | Dor-O-Matic Electric Lock / Super Nova  | Yes-Safety Slow                     | NO              | YES             | YES     |  | YES                  | 7° Latch             |
| 3       | Alternate Action                        | NO                                  | NO              | YES             | NO      |  | NO                   | 10° Latch            |
| 4       | Sensor Rail Safety Slow                 | NO                                  | Yes-Safety Slow | YES             | NO      |  | NO                   |                      |
| 5       | Sensor Rail Safety Stop                 | NO                                  | Yes-Safety Stop | YES             | NO      |  | NO                   |                      |
| 6       | Automatic Reversing                     | NO                                  | Yes-Safety Slow | YES             | YES     |  | NO                   | Standard Latch (13°) |
| 7       | Power-Boost 5 Seconds, then Shut-Off    | NO                                  | Yes-Safety Slow | YES             | YES     |  | NO                   |                      |
| 8       | Dor-O-Matic Electric Lock / Sensor Rail | NO                                  | Yes-Safety Slow | YES             | YES     |  | YES                  | 17° Latch            |
| 9       | Carpets                                 | NO                                  | NO              | YES             | YES     |  | NO                   | 20° Latch            |
| A       | Special Control                         | N/A                                 | N/A             | N/A             | N/A     |  | N/A                  | 23° Latch            |
| B-E     | Unassigned                              | N/A                                 | N/A             | N/A             | N/A     |  | N/A                  | Unassigned           |
| F       | Reads Limit Switches                    | NO                                  | Yes-Safety Slow | YES             | YES     |  | NO                   | Unassigned           |

\* - Boxes shipped with selector switches in these positions.

If installer or service man has any questions, they should: (a) Consult the complete instruction manual for the Astro-Swing Universal Control Box or (b) Call the Dor-O-Matic factory at 1-800-543-4635

Dec. 1993

**Figure 2: Astro-Swing Universal Control Box 84580-900 Label**