

DOR-O-MATIC™

Astro-Swing Universal Control Box

Instruction Manual 85425-900 Universal 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.

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Single Door	36" to 48"	200 lb.
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85425-900 Universal Control Box

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GENERAL

The NEW Astro-Swing Universal Control Box 85425-900 is the replacement for the Astro-Swing Universal Control Box 84420-900. The 85425-900 physically looks exactly the same as the 85420-900, and operates almost identically to the 85420-900. The main differences are as follows:

1. The original red and black wires and 2 pin molex plug for the slave door have been removed.
2. We have added an additional 9 pin Logic plug connector on the input end of the control box. This is for the new #85398-600 slave cable.

Note: **DO NOT** connect anything else to this connector

To provide a more reliable control of the slave door on simultaneous pairs, we are now reading the position of the slave door with the hall effect counter. This requires the use of a new #85398-600 slave cable. IT MUST BE USED when replacing existing control boxes on simultaneous pairs of doors.

The #85425-900 is the most universal control box we have ever offered, and may be used to replace almost all previous control boxes.

Note 1: We do have some systems we designate as specials. These are programs that are very seldom used or are for obsolete applications. These programs are available on request from the factory.

See function setting "E" unassigned specials on page 5 and the explanation on page 7.

SPECIAL SYSTEMS AVAILABLE ON REQUEST

1. For Dor-O-Matic #83001-900 electric lock
2. For Spring open / power closed
3. For 180° Swing
4. All other special applications

Note 2: For the original "Nova" safety slow, you must use control box #84540-900
For the original "Nova" safety stop, you must use control box #84551-900

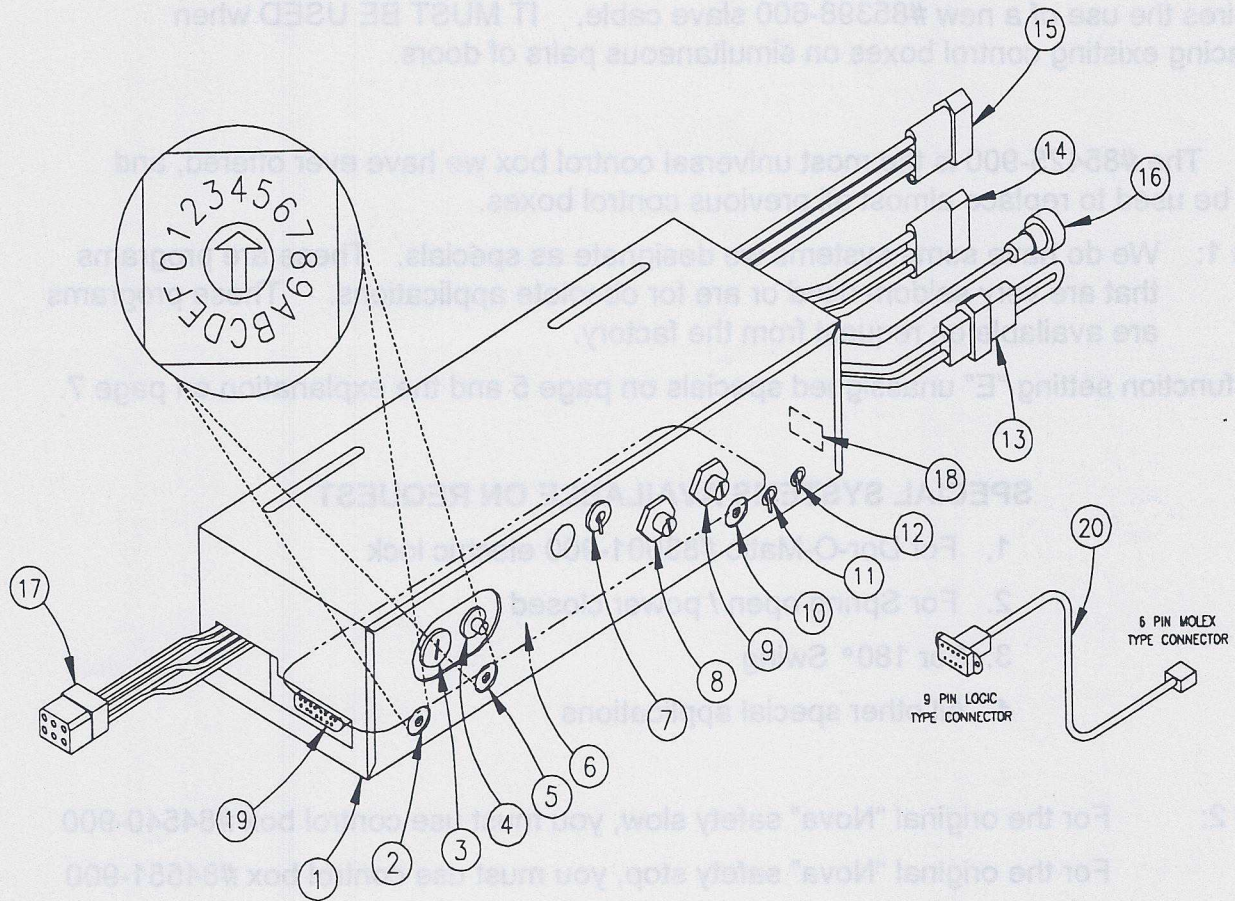
IMPORTANT INFORMATION

- **Note: #85425-900 "Universal" control boxes have a 15 pin logic terminal and a 9 pin logic plug. If you are replacing a box with a 9-pin logic terminal and you have switches or other devices that plug into the 9-pin logic terminal, those switches or devices must also be replaced. Refer to the "DEVICES" section on page 8 for the appropriate switch to use. Do not plug any accessory switches into the 9 pin slave plug on the #85425-900 control box.**

Automatic Reversing in CLOSING Cycle

Function setting 4 "Automatic Reversing in Closing Cycle" is explained in the "FUNCTIONS" section on page 6.

PART IDENTIFICATION



- | | |
|--|---|
| ① CONTROL BOX # 85425-900/-400 115 Volt
CONTROL BOX # 85425-991/-491 230 Volt | ⑩ TIME DELAY ADJUSTMENT (1 1/2 sec. to 30 sec.) |
| ② FUNCTION SELECTOR DIAL | ⑪ OPENING SPEED ADJUSTMENT
(#1 FAST, #2 MEDIUM, #3 SLOW) |
| ③ FUSE, 6 Amp I.B. for 115 Volt
FUSE, 3 Amp I.B. for 230 Volt | ⑫ BACKCHECK SPEED ADJUSTMENT
(#1 - ONE DOOR, #2 - TWO DOORS) |
| ④ CIRCUIT BREAKER, 2 Amp / 115 Volt
.7 Amp / 230 Volt | ⑬ 2 PIN FEMALE FOR BREAKAWAY SWITCH |
| ⑤ LATCH SELECTOR DIAL | ⑭ 3 PIN FEMALE, ACTIVATION |
| ⑥ LABEL FOR FUNCTION & LATCH SELECTOR DIALS
(LOCATED ON BOTTOM OF BOX) | ⑮ 4 PIN MALE, POWER INPUT |
| ⑦ POWER BOOST ON/OFF SWITCH | ⑯ 1 PIN MALE, SAFETY SLOW/STOP |
| ⑧ CLOSING SPEED ADJUSTMENT (FOR MASTER UNIT) | ⑰ 6 PIN FEMALE, TO MASTER OPERATOR |
| ⑨ CLOSING SPEED ADJUSTMENT (FOR SLAVE UNIT) | ⑱ 9 PIN FEMALE, TO SLAVE OPERATOR (NEW) |
| | ⑲ LOGIC TERMINAL - USED FOR ACCESSORIES (15 PIN) |
| | ⑳ SLAVE CABLE #85398-600 |

Figure 1: Astro-Swing Universal Control Box

FUNCTION AND LATCH LABEL

ASTRO-SWING UNIVERSAL CONTROL BOX

Settings 0-F On the Left Work With:

SETTING	FUNCTION SELECTOR DIAL	SWING-12	Super Nova	Sensor Rail	Buttons Etc.	Carpets
*0	SWING-12 Safety Slow	Yes-Safety Slow	NO	NO	YES	NO
1	SWING-12 Safety Stop	Yes-Safety Stop	NO	NO	YES	NO
2	SWING-12 Delayed Activation	Yes-Safety Slow	NO	NO	YES	NO
3	Power-Boost 5 Seconds, then Shut-Off	Yes-Safety Slow	NO	NO	YES	YES
4	Automatic Reversing in Closing Cycle	Yes-Safety Slow	NO	NO	YES	YES
5	Super-Nova Safety Slow	NO	Yes-Safety Slow	NO	YES	NO
6	Super-Nova Safety Stop	NO	Yes-Safety Stop	NO	YES	NO
7	Super-Nova Delayed Activation	NO	Yes-Safety Slow	NO	YES	NO
8	Sensor Rail Safety Slow	NO	NO	Yes-Safety Slow	YES	NO
9	Sensor Rail Safety Stop	NO	NO	Yes-Safety Stop	YES	NO
A	Power-Boost 5 Seconds, then Shut-Off	NO	NO	Yes-Safety Slow	YES	NO
B	Carpets	NO	NO	NO	YES	YES
C	Alternate Action	NO	NO	NO	YES	NO
D	Swing-12 Trained Traffic - No Beam	Yes	NO	NO	YES	NO
E	Unassigned / Special	N/A	N/A	N/A	N/A	N/A
F	Reads Limit Switches	NO	NO	Yes-Safety Slow	YES	YES

If installer or service man has any questions, they should: (a) Consult the complete instruction manual for the Astro-Swing Universal Control

or (b) Call the Dor-O-Matic factory at 1-800-543-4635

SETTING	LATCH SELECTOR DIAL
0	Zero Latch
1	3° Latch
2	7° Latch
3	10° Latch
*4	Standard Latch (13°)
5	17° Latch
6	20° Latch
7	23° Latch
8-9	Unassigned
A-F	Unassigned

* - Boxes shipped with selector switches in these positions.

Figure 2: Astro-Swing Universal Control Box Label

FUNCTION AND LATCH LABEL DESCRIPTION

A representation of the control box function and latch label can be seen in Figure 2. This label shows how to set up the box to work in various applications. Some of the 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 at power-up a universal style control box will not begin its sizing mode until receiving an activation signal. Some older style boxes begin sizing immediately upon power-up.

FUNCTIONS

SWING-12 Safety Slow (function 0): This setting is for use with the SWING-12 Safety System. Once the door has begun opening, any person or object entering the swing area will cause the door to go into a safety slow speed. All 85425-900 are shipped with the function switch in this position.

SWING-12 Safety Stop (function 1): This setting is similar to function 0 except that the door will stop, hold for a few seconds, then continue opening at safety slow speed.

SWING-12 Delayed Activation (function 2): This setting is based on function 0. When the door is at the fully closed position, there is approximately a 1 second delay between reception of the activation signal and the actual opening of the door. This delayed activation allows most electric strikes, electric panics, or magnetic locks ample time to retract before the door opens.

Power-Boost 5 Seconds, then Shut-Off (function 3): This setting is based on function 0. In this setting the duration of the Power Boost is reduced to 5 seconds. Power Boost turns on after the set latch position has been reached. After 5 seconds the Power Boost shuts off. Normally, Power Boost stays on continuously even when the door is closed. This function setting is primarily used with the SWING-12 Safety System.

Automatic Reversing in Closing Cycle (function 4): This setting is based on function 0. In this setting, the door will re-open if it encounters an obstacle during the *closing* cycle.

Super-Nova Safety Slow (function 5): This setting is for use with the Super-Nova Safety System. Once the door has begun opening, any person or object entering the swing area will cause the door to go into a safety slow speed.

Super-Nova Safety Stop (function 6): This setting is similar to function 5 except that the door will stop, hold for a few seconds, then continue opening at safety slow speed.

Super-Nova Delayed Activation (function 7): This setting is similar to function 2 except that it is for the Super-Nova Safety System, not the SWING-12 Safety System.

Sensor Rail Safety Slow (function 8): This setting is for use with the Sensor Rail System. Once the door has begun opening, any person or object entering the swing area will cause the door to go into a safety slow speed.

Sensor Rail Safety Stop (function 9): This setting is similar to function 8 except that the door will stop, hold for a few seconds, then continue opening at safety slow speed.

Power-Boost 5 Seconds, then Shut-Off (function A): This setting is similar to function 3 except that it is for the Sensor Rail Safety System, not the SWING-12 Safety System.

Carpets (function B): This setting is for swing door systems that use carpets/mats.

Alternate Action (function C): When the door is fully closed (or closing), an activation signal will open (or re-open) the door. Once the door is at the fully open position, it will stay there. When the door is fully open, an activation signal will allow the door to close. 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.

SWING-12 Trained Traffic - No Beam (function D): This setting is for use on trained traffic installations where the safety logic beam component of the SWING-12 Safety System is not used. *When the door is given an activation signal during the closing cycle, the door will re-open at safety slow speed.*

Unassigned / Special (function E): On a standard 85425-900 control box, this position is empty. On a specially requested 85425-988 control box, this position is where the special system program will be placed. (See Note 1 on page 3.)

Reads Limit Switches (function F): This setting is mostly for replacing existing swing door systems that used limit switch operators.

DEVICES

SWING-12: Function settings 0-4 & D are intended for use with the Dor-O-Matic SWING-12 Safety System. SWING-12 Systems should only be used with the toggle switch (87385-900), rocker switch (87390-900), or keyswitch (87395-900).

Super Nova: Function settings 5-7 are intended for use with the Dor-O-Matic Super Nova Safety System. The Super Nova Safety System consists of presence sensors mounted on both sides of the door. Super Nova Systems should only be used with the toggle switch (87385-900), rocker switch (87390-900), or keyswitch (87395-900).

Sensor Rail: Function settings 8, 9, & A are intended for use with the Dor-O-Matic Sensor Rail Safety System. The Sensor Rail Safety System consists of infra-red beams mounted in the guide rails. Sensor Rail Systems should only be used with the toggle switch (83185-900), rocker switch (83190-900), or keyswitch (83195-900).

Buttons Etc.: 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 and/or safety side. When someone stands on the activating carpet and the safety mat is unoccupied, the door will open and stay open as long as someone is standing on the activating carpet. When the activating carpet is clear and the safety mat is unoccupied, the door will time out and close. Someone on a 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.

LATCH

The latch selector dial allows the latch point to be set at the desired angle. The standard latch position is 13° (setting 4). This is the latch setting that all 85425-900 control boxes are shipped in.

