

# DOR-O-MATIC<sup>®</sup>



INSTRUCTIONS FOR INSTALLING AND USING THE

70588-9XX MICRO COMPUTER CONTROL BOX  
FOR ASTRO-SLIDE

## DOR-O-MATIC<sup>®</sup>

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INSTRUCTIONS FOR INSTALLING THE #70588-9XX CONTROL BOX AND THE  
#72188-900 MOTOR AND GEAR BOX IN EXISTING ASTRO-SLIDE UNITS

A. GENERAL:

It has been a Dor-O-Matic policy to upgrade and improve our control box utilizing the latest computer technology. The #70588 is a continuation of this policy and has been designed to include all the logic required for the new #78000 series "Look-See" threshold sensor. It can be used as an exact replacement for all previous model control boxes installed on units using the #72188 motor gear box with the Hall Effect door position sensor.

- NOTE: 1. The #70588 control box can not be used as a replacement on the earlier model Astro-Slide units equipped with the rotary switch door position assembly.
2. For units with rotary switch assembly you must order Control Box #70587-400 and #72594 adapter cable.

This system can be used on any size single door opening from 15" to 8' and any size bi-parting pair door openings from 30" to 16'. For larger door sizes consult factory for special ordering information. The #70588 is furnished for operation on 115V 50/60 Hz  $\pm$  15% (Part #70588-900) or 230V 50/60 Hz  $\pm$  15% (Part #70588-991)

The #70588 control box has the following features:

1. Eliminates the resizing cycle when door or panel is broken away. Now when door or panel is broken out door stops. When door or panel recloses, door opens slowly then closes at normal speed and in normal operating mode.
2. Eliminates the requirement to turn off all power to reset the control box after the door has been jammed or activated when locked and safety shut down has occurred. Control box automatically resets when door is reactivated.
3. Eliminates the circuit breaker and the red and black wires from the control box to the circuit breaker.
4. Added a much smoother STOP AND REVERSE action when door is reactivated during the closing cycle. This is accomplished by automatically selecting the proper opening voltage depending on position of door.
5. Have added a 5 wire Molex connector for the new "Look-See" package.

B. INSTALLATION INSTRUCTIONS:

1. Turn off all power to operator.
2. Disconnect belt drive assembly and remove old control box and motor and gear box.

MOTOR

3. Install new #72188-900 motor and gear box exactly the same as the old #70120-900 being extra careful not to damage the wire cables.

CONTROL BOX

4. WARNING:

All activating controls should be installed, hooked up and checked out for operation before connecting to the two brown leads of the control box. Be sure that the two wires that connect to the control box do not have any power of any kind coming out of those two leads as this will permanently damage the #70588 control box. These activating contacts must be dry contacts.

5. Connect all remaining Molex connectors. All connectors are polarized so they can not be connected wrong. (See Fig. 3).
6. Reconnect belt drive assembly and move door to the closed position.
7. Set open speed switch to MED. and closing to SLOW.
8. Turn on power and activate door. Door should open fully and close at a very slow rate of speed. During the slow operation the computer is automatically setting the opening, back check, closing and latching positions. After the door has completed the slow cycle it automatically switches to the normal operation speed.
9. Set time delay as desired.
10. Door should now be operating normally with no further adjustment required.
11. If door is stalled during the opening cycle it will time out and reclose at normal closing speed. It can then be reactivated.

C. ADJUSTABLE AUTOMATIC REVERSING:

The #70588 features an adjustable automatic reversing control which permits proper door operation with various weights and sizes of doors. If the door is stalled during the closing cycle it will automatically reverse and reopen fully, then reclose at a very slow rate of speed looking for the obstruction. The door will continue to recycle at a slow speed until obstruction is removed.

NOTE: The closing force of the door must be adjusted to not exceed 30 lbs. to comply with the UL and ANSI safety codes.

D. SAFETY BEAM SHUT OFF:

The brown and white wires with the small Molex connection from the control box are connected to the brown and white wires from the safety beam as shown in Fig. #3, Page 5. These wires are wired to the safety beam receivers and automatically turn off the safety beam after the door is fully closed so that the door can not be reopened by breaking the safety beam. As soon as the door is reactivated the safety beam turns on and functions normally until door again closes fully.

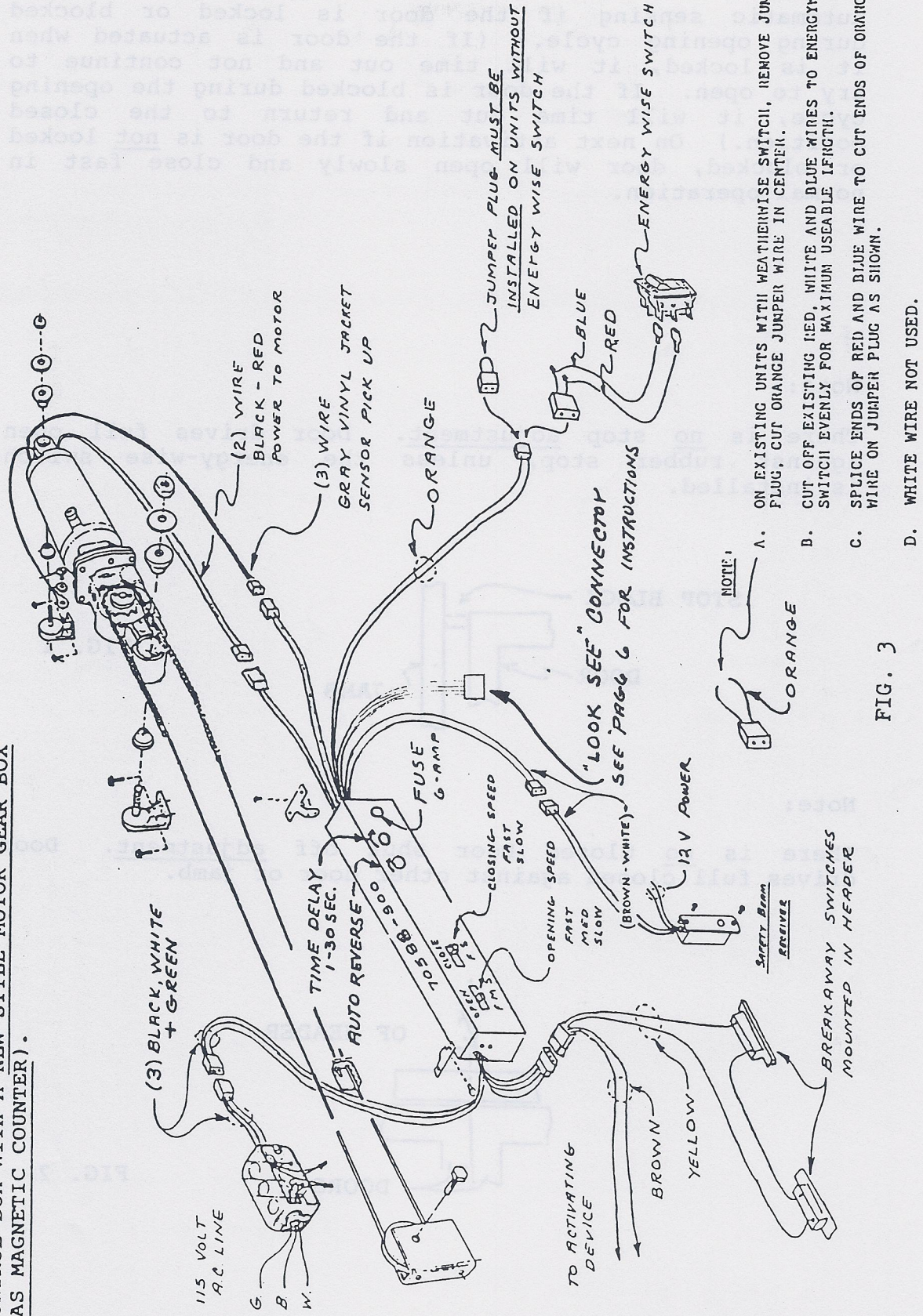
E. EASY MORNING ENTRY AND NIGHT EXIT:

If sliding door is to be used for morning opening and night time closing of the store it is recommended that only the activating circuit to the control box be turned "off" by means of the on/off hold open switch and that the AC power to the control box be left on at all times. If the power is left on to the control box the door can be unlocked with a key and then pushed open a few inches manually at which point the door will automatically open the rest of the way under normal opening power and speed. The owner can then enter or leave the store and the door will close automatically. When the on/off hold open switch is turned on the "on" position, the door will open normally by carpets, motion detector, etc.

F. ENERGY-WISE:

1. The energy-wise switch is an optional feature that permits the total door opening size to be reduced if desired.
2. When the energy-wise switch is activated the door will only open to 75% of the normal door opening position. If the traffic flow through the door increases to a point where the door can not get completely closed before the next opening it will gradually and automatically increase the size of the opening to the full 100% position to allow for the increased traffic flow. When the traffic flow decreases the door will automatically return to the 75% opening size.

**INSTRUCTIONS FOR INSTALLING THE #70588-9XX CONTROL BOX WITH A NEW STYLE MOTOR GEAR BOX (HAS MAGNETIC COUNTER).**



- A. ON EXISTING UNITS WITH WEATHERWISE SWITCHII, REMOVE JUMPER PLUG, CUT ORANGE JUMPER WIRE IN CENTER.
- B. CUT OFF EXISTING RED, WHITE AND BLUE WIRES TO ENERGYWISE SWITCHII EVENLY FOR MAXIMUM USEABLE LENGTH.
- C. SPLICE ENDS OF RED AND BLUE WIRE TO CUT ENDS OF ORANGE WIRE ON JUMPER PLUG AS SHOWN.
- D. WHITE WIRE NOT USED.

FIG. 3

G. SAFETY SENSING:

Automatic sensing if the door is locked or blocked during opening cycle. (If the door is actuated when it is locked, it will time out and not continue to try to open. If the door is blocked during the opening cycle, it will time out and return to the closed position.) On next activation if the door is not locked or blocked, door will open slowly and close fast in normal operation.

Note:

There is no stop adjustment. Door drives full open against rubber stop, unless the energy-wise switch is installed.

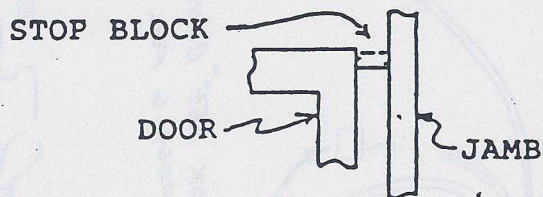


FIG. 1

Note:

There is no Closed Door shut off adjustment. Door drives full closed against other door or jamb.

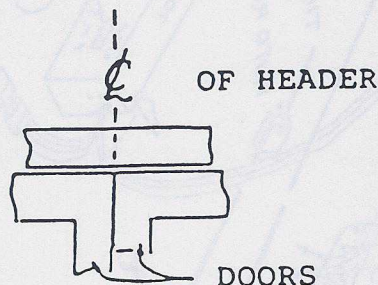


FIG. 2

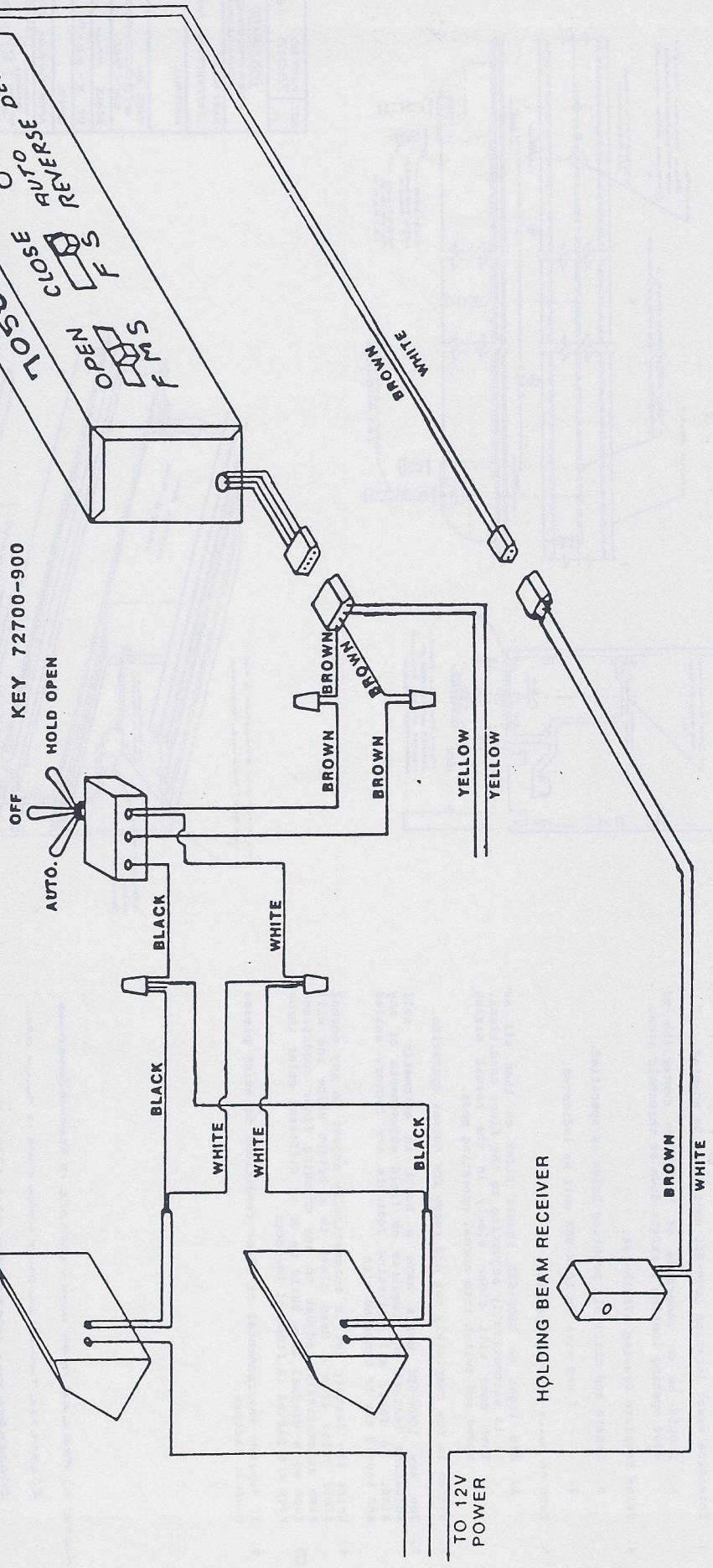


DETAIL FOR FIELD INSTALLING THE AUTOMATIC "ON OFF HOLD OPEN" SWITCH ON ASTRO-SLIDE OPERATOR.

ANY TYPE OF ACTUATION DEVICE M.D., MAT, PUSH PLATE, ETC. ANY TYPE OR QUANTITY CAN BE CONNECTED IN PARALLEL.

Switch May be EITHER

- TOGGELE 81890-800
- ROCKER 81895-900
- KEY 72700-900



WIRING DIAGRAM FOR USE WITH THE #70588-9XX CONTROL BOX



# TROUBLE SHOOTING GUIDE

CUSTOMER COMPLAINTS →

PROBABLE CAUSE

	DEAD	WILL NOT OPEN	WILL NOT OPEN FULLY	ERRATIC OPENING OR CLOSING	WILL NOT SIZE	RE-CYCLE	BLOWS FUSE OR CKT BREAKER	BLOWN PROGRAM
115V. POWER OFF	X							
IMPROPER WIRING	X						X	X
NOT CONNECTED	X							
OPEN CKT BREAKER	X							
BLOWN FUSE	X							
DOOR LOCKED	X							
LOW VOLTAGE	X							
OPEN SIDE PANEL	X							
OPEN SWITCH OFF POSITION	X							
INOPERATIVE ACTIVATING DEVICE	X							
DOORS, BINDING (SEE PG. 8)		X	X	X	X	X		
ENERGYWISE, JUMPER NOT INSTALLED			X	X	X			
LOOSE WIRES	X		X	X	X			
HALL UNIT NOT CONNECTED			X	X	X			
CLOSING SWITCH IN CENTER					X			
SAFETY BEAM ACTIVATED					X			
ACTIVATION DEVICE ACTIVATED					X			
AUTO. REVERSE SET TOO LOW						X		
PHANTOMING MOTION DETECTOR						X		
SHORTED WIRES	X	X			X	X	X	X
SHORTED MOTOR							X	X
LOOK SEE READING SOMETHING					X			

## COMMENTS ON DOORS BINDING

Approximately one half of all field problems are related to some type of binding condition of the sliding door which in many cases cause premature failure of other parts in the system or improper operation of the door (sluggish, slow, erratic, or "just not quite right").

Service personnel must take the necessary time to check for, and correct any binding conditions that exist, or door problems will continue. With automatic doors there is no such thing as "that is someone else's problem". The automatic door manufacturer and the service personnel always get the blame.

### Common causes of binding:

1. Additional sweeps or weather stripping added to door.
2. Rocks, glass or dirt build up in guide track.
3. Door partially broken away and sagging down on floor.
4. Door rubbing on panel or side light.
5. Door dragging on threshold due to:
  - A. Metal expansion due to heat.
  - B. Heaving floor due to freezing and thawing.
  - C. Installing doors over building expansion joints.
6. Loose screws in guide track.
7. Anti riser screw adjusted up too tight.
8. Belt drive adjusted too tight.
9. Bottom lock rods dragging on floor.
10. Uneven floor conditions.
11. Extra floor mats getting caught under door.
12. Ice or snow build up along bottom guide.
13. Carrier rollers not turning due to:
  - A. Frozen bearing.
  - B. Chips or dirt embedded in roller.
  - C. Bracket screw too long.
14. Belt roller binding.
15. Motor or gear box damaged and binding up.