DOR-O-MATIC®

INSTALLATION AND HOOK UP PROCEDURE

FOR THE

#85300-900 PENCIL SAFETY BEAM SYSTEM

DOR-O-MATIC

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#85300-900 PENCIL SAFETY BEAM SYSTEM
INSTALLATION AND HOOK UP PROCEDURE

General:

The #85300-900 Pencil Safety Beam System includes 4 transmitter/ Receiver Cells and a Safety Beam Control Box. The four (4) cells are identical and can be used as either a transmitter or Receiver cell.

On new installations the installer is required to make all the final connections to the Safety Beam Control Box. This requires cutting off excess cable length, re-stripping the wire ends and properly identifying wires before cutting. Extreme care must be taken to do it properly as most of the problems experienced originate with improper field wiring.

Note

If Beam Cell Cables or Safety Beam Control Box is not factory installed refer to #85310-084 installation instructions for added information.

INSTALLATION CHECK LIST

1. Make sure all wire connections are made exactly as shown on #85310-084 field wiring diagram attached.

(Continued)

2. Control Box must be connected to a good earth ground by a separate green wire back to the A.C. line input at Junction Box.

3. The beam cables may be cut and shortened to any length required - but before cutting be sure and properly identify the wires. The top beam cables are marked with a "T" label and are the longest.

4. If cable is field cut THE BLACK WIRE IS NOT USED CUT OFF EXPOSED BLACK WIRE.

5. Keep stripped ends as short as possible. This eliminates noise pick up and prevents shorts.

6. The upper transmitter cell must line up with the upper receiver cell and the same for the lower beam.

7. The white wire - must go to terminal marked white.
   The bare wire - must go to terminal marked bare.

8. The bare wire must not short to anything. (door will hold open.)

(Continued)

9. All FOUR CELLS MUST BE CONNECTED to CONTROL BOX. (System will not operate otherwise).

10. Relay Output - Connect white wire to "C" and brown wire to "N.C." terminal.

11. Make certain all connections are tight and that wire insulation is not pinched under wiring terminals.

12. In RARE CASES a cell will not operate as a receiver but will operate fine on a transmitter; if a problem exists, try reversing cells from receiver to transmitter side.

13. If you have a Dor-O-Matic "Snooper" for sensor rails you can use it to check the operation of the transmitter cells only: because all BEAM cells are the same, all can be checked for operation if each one is connected up as a transmitter and checked individually.

(Continued)

14. If one beam will not cause door to reverse or hold open, we probably have a noise pick-up problem. Try moving the wires away from the motor or transformer. You can also try reversing the operation of the in-operative beam by making the transmitter cell the receiver and the receiver cell the transmitter.

15. Do not attempt to cut and splice beam cables together; if a cell is bad you must knock out the old cell replace the entire cable and cell assembly.

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FIELD TROUBLESHOOTING GUIDE FOR DUAL PENCIL BEAM SYSTEM

WITH INDICATOR LIGHTS

STEP #1. Check for proper power supply. Make sure that 12 V. AC power is connected to the proper terminals.

STEP #2. Check for proper grounding. Make sure that green wire is connected to the ground terminal of the Dual Beam Control. The green wire which is the equipment ground should be connected to the system ground which is the green wire coming from the electrical power panel.

STEP #3. Check the indicator lights on the control box. The indicator light will light when a beam is blocked or when a channel has failed.

STEP #4. Checking failed channel. A snooper unit, P/N 77181-900, will be required to test the beams. Place the snooper unit in front of the detector with the receiving hole of the snooper facing the transmitter on the opposite jamb. The indicator light of the snooper should turn off. This indicates that the transmitter is transmitting.

STEP #5. Next, go to the control box and move the cable from the detector terminals to the transmitters terminals and move the cable from the transmitter terminals to the detector terminals. Repeat STEP #4.

STEP #6. Replace any units that are unable to transmit.

NOTE:

When you are finished return the cables to their original terminal location.

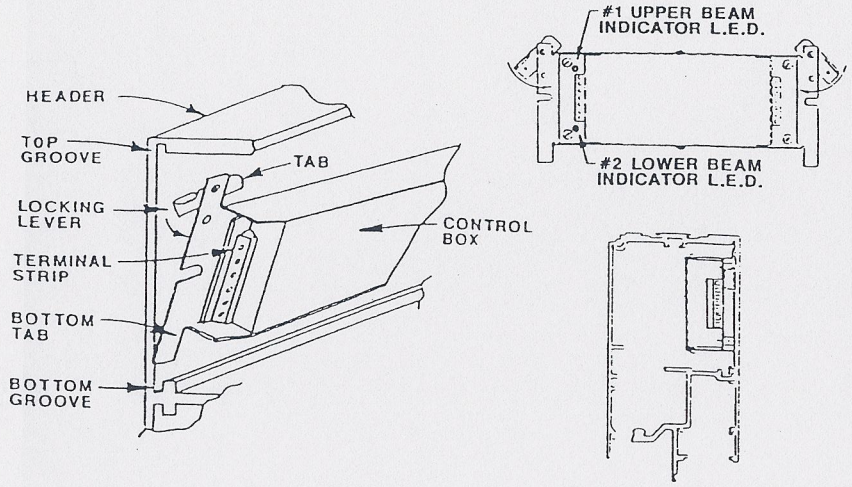


FIG. #1.

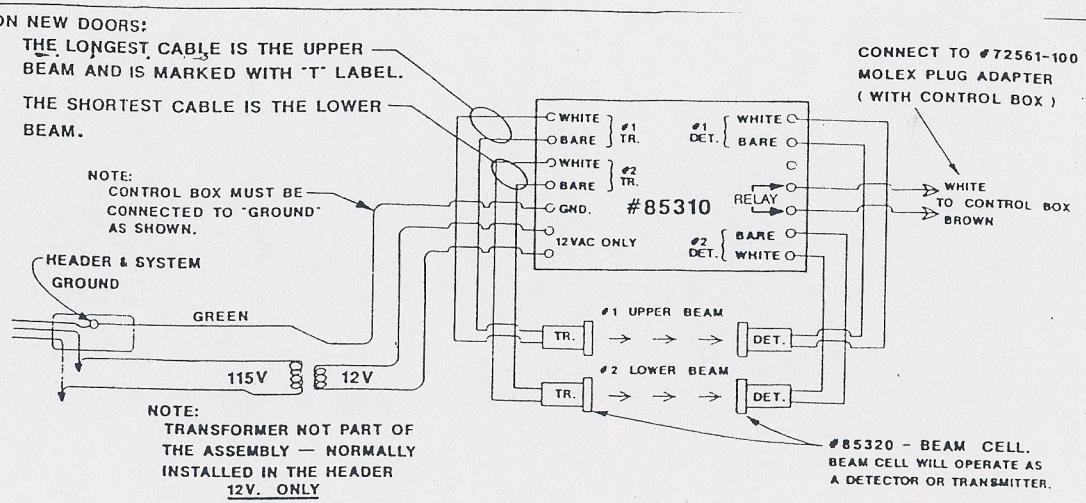
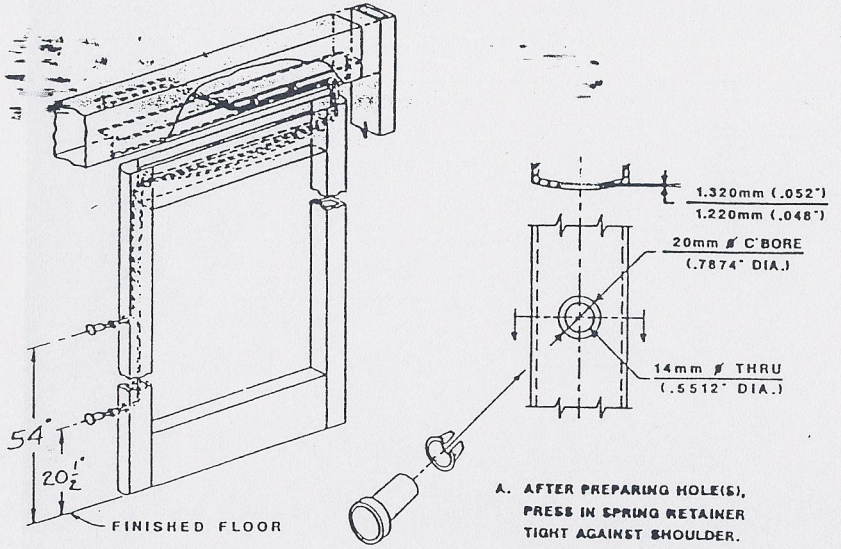


FIG. #3.



A. AFTER PREPARING HOLE(S), PRESS IN SPRING RETAINER TIGHT AGAINST SHOULDER.

B. INSTALL BEAM CELL AS SHOWN BY PRESSING INTO SPRING RETAINER AND TIGHT AGAINST SHOULDER.

FIG. #2

INSTALLATION INSTRUCTIONS

1. DETERMINE MOUNTING POSITION OF CONTROL BOX IN HEADER.
2. SEE FIG. #1 SWING OUT LOCATING LEVERS TO 90°.
3. TILT CONTROL BOX SO BOTTOM TABS SLIP DOWN INTO BOTTOM GROOVE.
4. PUSH CONTROL BOX BACK AGAINST HEADER AND ROTATE THE LOCKING LEVER DOWN, MAKING SURE END OF LEVER TAB IS IN TOP GROOVE, SNAP LEVER INTO LOCKING POSITION.
5. IF BEAM CELLS ARE NOT FACTORY INSTALLED, LOCATE AND INSTALL BEAMS AS INDICATED IN FIG. #2.
6. ROUTE ALL WIRES THROUGH DOOR UP INTO HEADER AS SHOWN.
7. MAKE ALL WIRE CONNECTIONS AS SHOWN IN FIG. #3.
8. WHEN BEAM CELL WIRES ARE CUT TO REDUCE LENGTH–BLACK WIRE IS NOT USED.
9. DO NOT CUT AND SPLICE BEAM CELL WIRES TOGETHER.
10. BE SURE #85310-BOX IS GROUNDED.
11. ALL FOUR CELLS MUST BE CONNECTED FOR PROPER OPERATION.

DOR-O-MATIC®
HARWOOD HEIGHTS, ILL. 60656

FOR #85300-900 PENCIL SAFETY BEAM SYSTEM
INSTALLATION INSTRUCTIONS
DUAL BEAMS

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