



V - 2

Installation & Service Manual for
TX9200/TX9500 SERIES SLIDING
DOOR
CONCEALED MOUNT
SURFACE MOUNT
FLUSH MOUNT
&
POCKET GLAZING

TORMAX TECHNOLOGIES, INC.

11803 Starcrest Dr.

San Antonio, TX 78247

210-494-3551

210-494-5930 (FAX)

888-685-3707

WWW.TORMAXUSA.COM

INFO@TORMAXUSA.COM

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THIS SYMBOL WILL BE USED THROUGHOUT THIS TEXT TO INDICATE A SHOCK HAZARD. SHOCK HAZARDS CAN RESULT IN SERIOUS INJURY OR DEATH.



THIS SYMBOL WILL BE USED THROUGHOUT THIS TEXT TO INDICATE A POINT OF EXTRA IMPORTANCE.

ANY AND ALL TORMAX EQUIPMENT MUST BE INSTALLED AND SERVICED BY AN AAADM CERTIFIED TECHNICIAN, TO MEET THE CURRENT ANSI A156.10 STANDARD AND ANY LOCAL OR STATE BUILDING CODES.

NOTE: TORMAX AUTOMATIC RECOMMENDS THE USE OF A WATER LEVEL AND A PLUMB BOB TO PROPERLY INSTALL ANY DOOR PACKAGE PROVIDED. AN IMPROPER INSTALLATION COULD LEAD TO PREMATURE WEAR OF MOVING PARTS, AN UNPLEASING APPEARANCE, AND/OR SERVICE ISSUES FOR THE CUSTOMER.

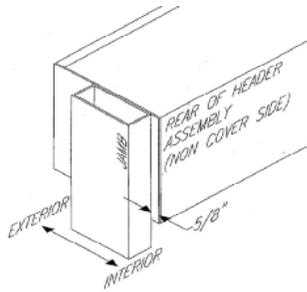
NOTE: ALL PRIMARY ELECTRICAL CONNECTIONS SHOULD BE COMPLETED BY A LICENSED ELECTRICIAN!

THE HEADER AND JAMBS SHOULD BE ASSEMBLED ON THE FLOOR AND LIFTED INTO PLACE. IT IS ADVISED TO USE A LIFT ON LARGER ASSEMBLIES. CARE SHOULD BE TAKEN TO PROTECT THE FINISH ON THE UNIT AT ALL TIMES.

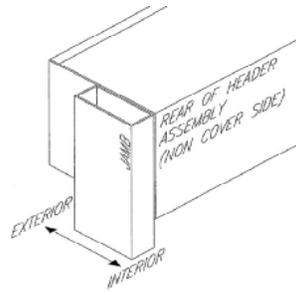
INSTALLATION OF A TX9000 SERIES UNIT SHOULD NEVER BE ATTEMPTED BY ONE INDIVIDUAL.

1. HEADER AND JAMB ASSEMBLY

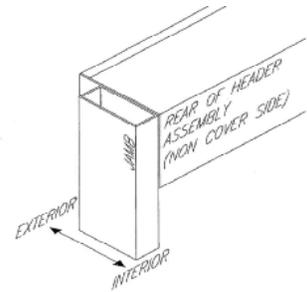
Mount the jambs to the header using the supplied hardware as shown (see illustration).



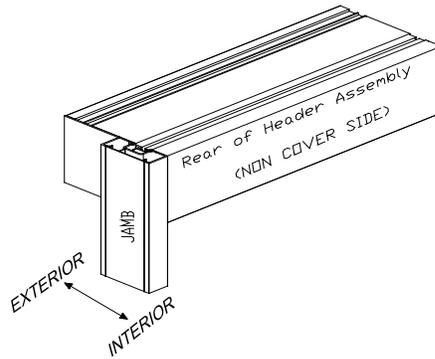
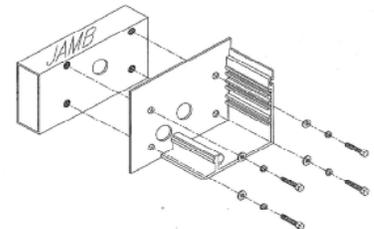
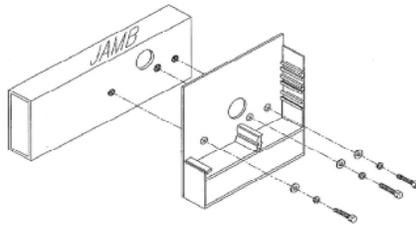
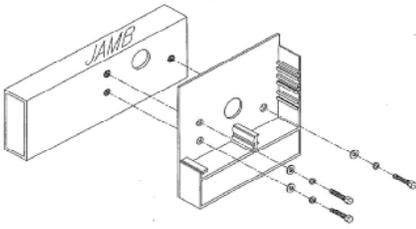
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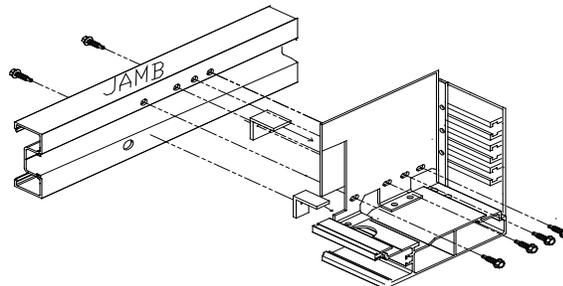
SURFACE MOUNT



FLUSH MOUNT

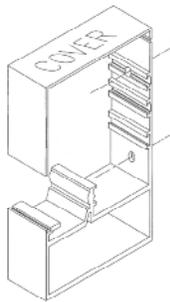


POCKET GLAZING CONCEALED
(SEE PAGES 7 & 8 FOR TRANSOM ASSEMBLY)

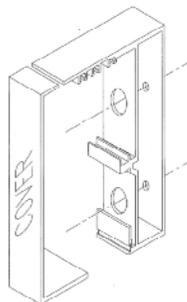


2. HEADER AND JAMB ASSEMBLY PREPARATION

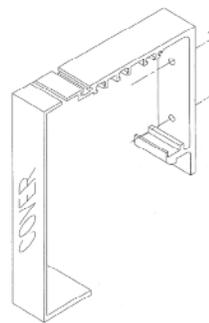
Pre-drill the header prior to lifting the unit into place. The thru hole locations in the header will depend on whether the unit is concealed, surface mount, flush mount or pocket glazing (see illustrations for approximate hole locations). A minimum of 6 fasteners should be installed thru the header located at both the ends and at the center of unit.



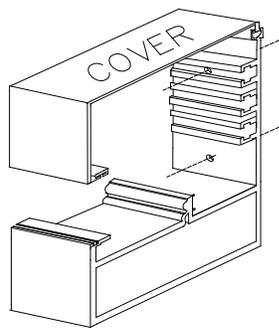
CONCEALED MOUNT



SURFACE MOUNT



FLUSH MOUNT



POCKET GLAZING CONCEALED

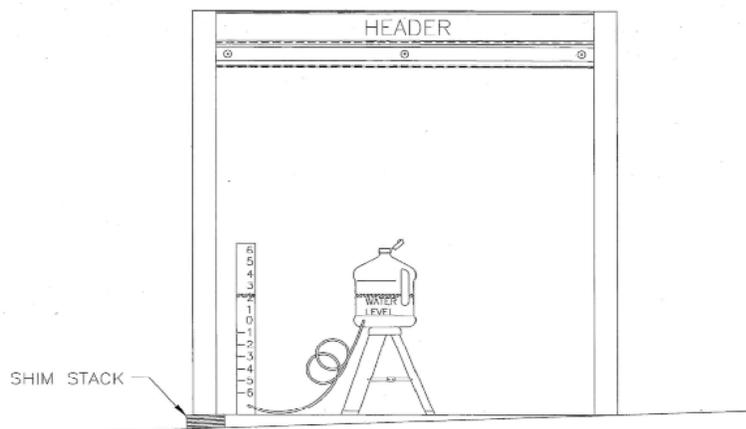
3. HEADER/JAMB ASSEMBLY INSTALLATION

DETERMINE THE HIGHEST POINT OF YOUR FLOOR BY USING THE WATER LEVEL (SEE EXAMPLE BELOW).

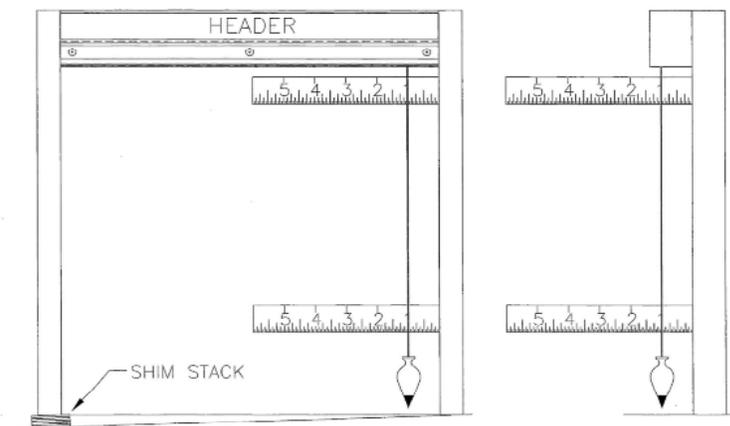
Lift the header/jamb assembly into place, level and secure the unit with the appropriate fasteners. Plumb and secure each jamb tube as shown. Reference illustrations below.

Securing the jambs will depend on the possibilities provided by the work environment. It is suggested that the jambs be secured at both ends and at the center. Also, that fasteners be selected and located to limit visibility on the final assembly.

In the event there is nothing to mount the jamb to vertically, an L-bracket can be installed at the bottom of the jamb. L-brackets should be installed to provide the most support in the least visible location possible.



NOTE: WHEN LEVELING THE UNIT, A TRIP HAZARD MAY BE CREATED. THE HAZARD MUST BE ELIMINATED BY EASING THE TRANSITION TO THE THRESHOLD.

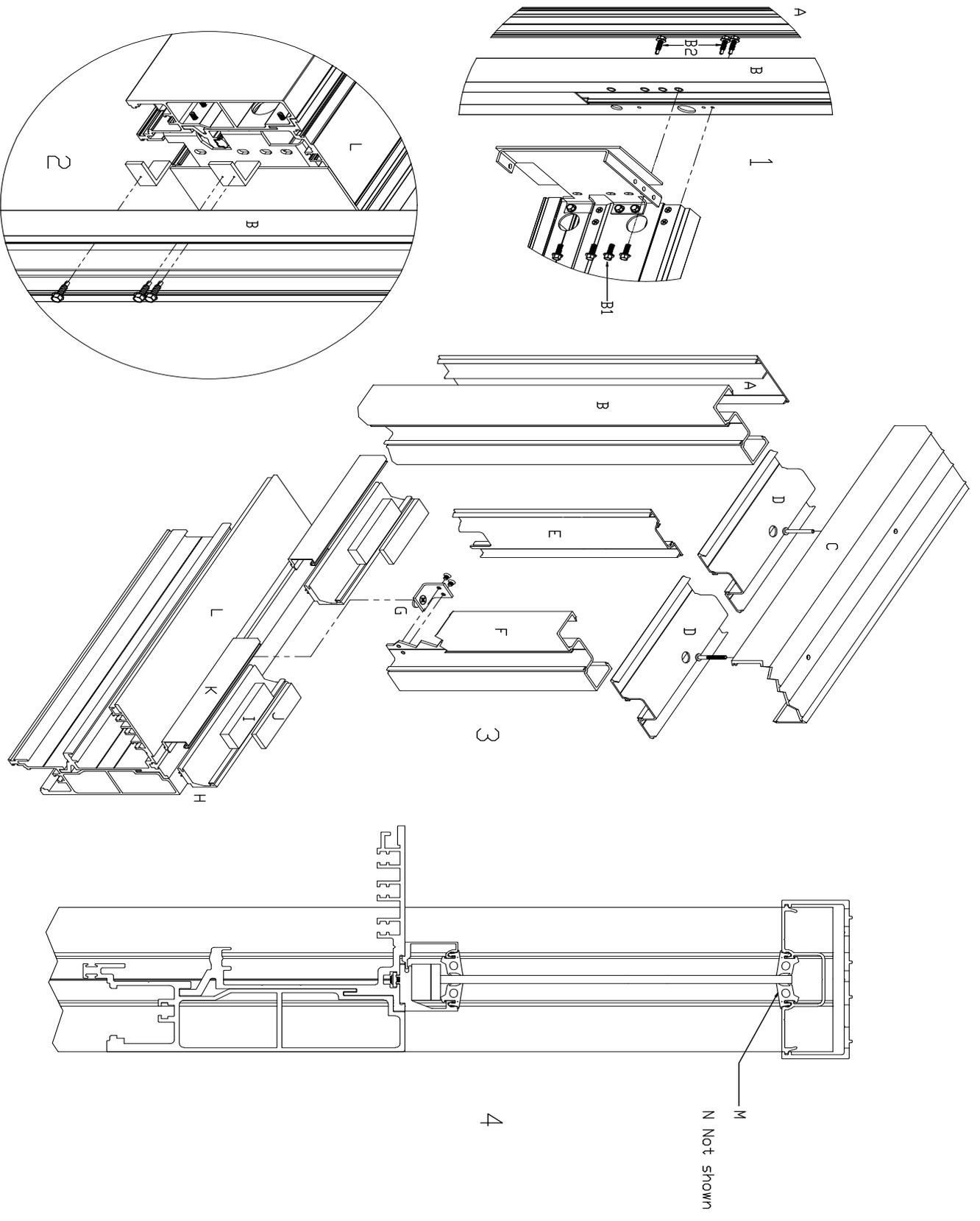


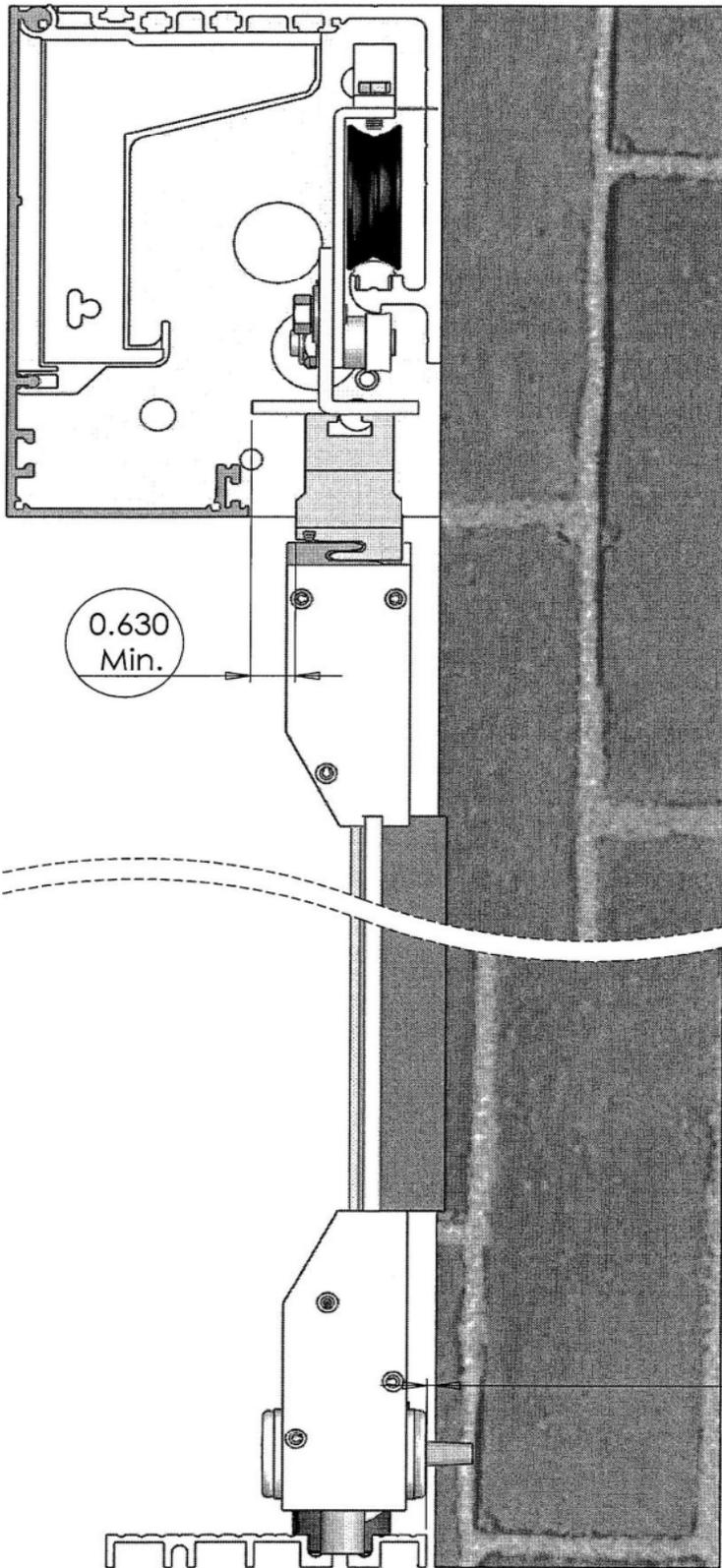
4. Header and Transom Assembly (POCKET GLAZING)

- 1) Attach B to header with hardware provided as shown on illustrations 1 and 2.
Snap A into B only after all fasteners are tight. Make appropriate clearance holes for electrical.
 - 2) If equipment has transom assemble as shown in illustration 3.
D will be factory installed into C, note the suggested installation holes. Do not over tighten your fasteners or distortion may occur.
If your unit has a vertical in the transom E will be factory installed into F. Use C and D to locate the proper distance of vertical on header top, use G to secure bottom of vertical.
Important note: you should never have 2 E (shallow to shallow) extrusions facing each other.
 - 3) After equipment is secure install H and use the appropriate glazing blocks, J or I or both.
Install the glass, install K and finish with appropriate vinyl N or M. It may be helpful to use glass cleaner as lubricant.
-
- A) US800958 Snap in back plate for jamb tube.
 - B) US800956 Jamb tube.
 - C) US800829 Horizontal header pocket.
 - D) US800828 Horizontal header insert.
 - E) US800957 Snap in gutter.
 - F) US800956 Transom vertical, same extrusion as jamb tube.
 - G) US801048 Transom vertical transom bracket.
 - H) US801041 Transom gutter, top of header.
 - I) US801844 Glazing block ½"
 - J) US801043 Glazing block ¼"
 - K) US801042 Transom face, top of header.
 - L) US800813 Header.
 - M) US801051 Transom vinyl, ¼" glass.
 - N) US800822 Transom vinyl, ½" glass.

See page 8 for Illustrations

HEADER AND TRANSOM





**TX9500
THRESHOLD
INSTALLATION**

The Threshold will need to be shimmed out 1/8" (as shown) and the panel will need to be adjusted 3/4" (as shown) from the mounting surface in order that the door be able to break out to the 90° position.

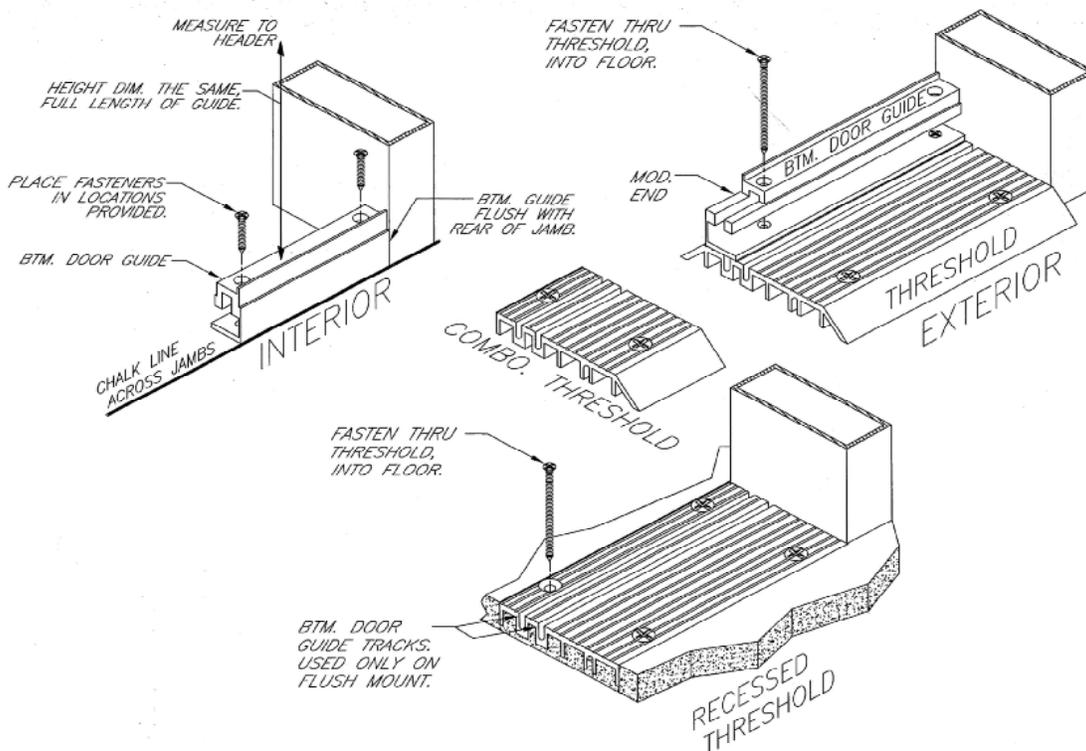
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5. BOTTOM DOOR GUIDE PROFILE INSTALLATION

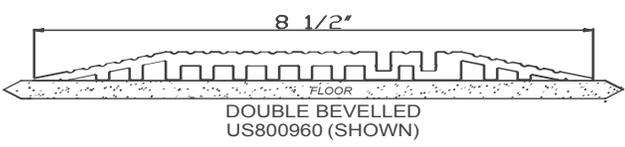
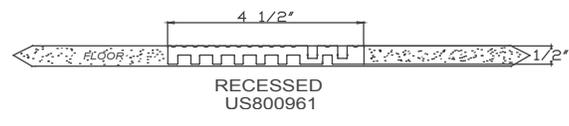
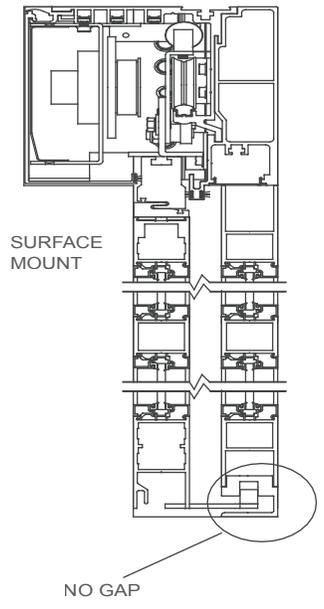
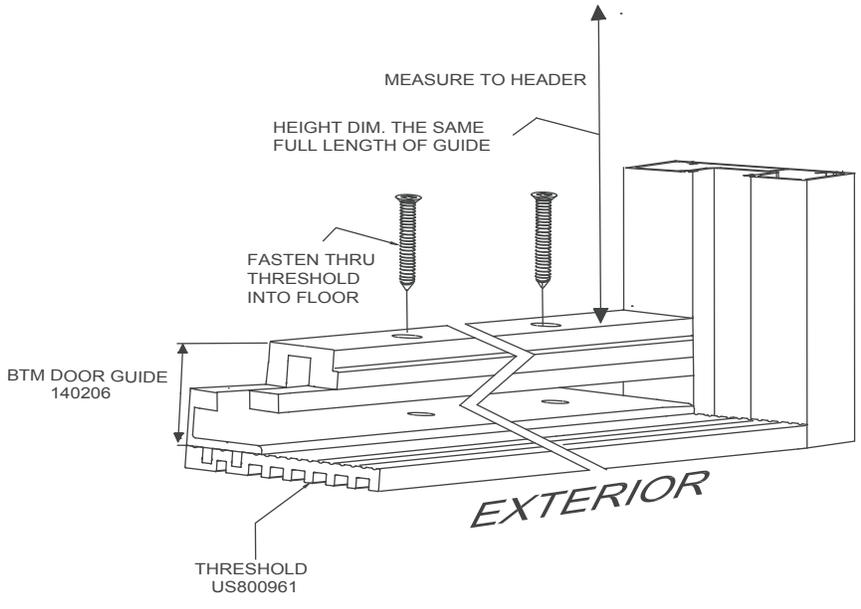
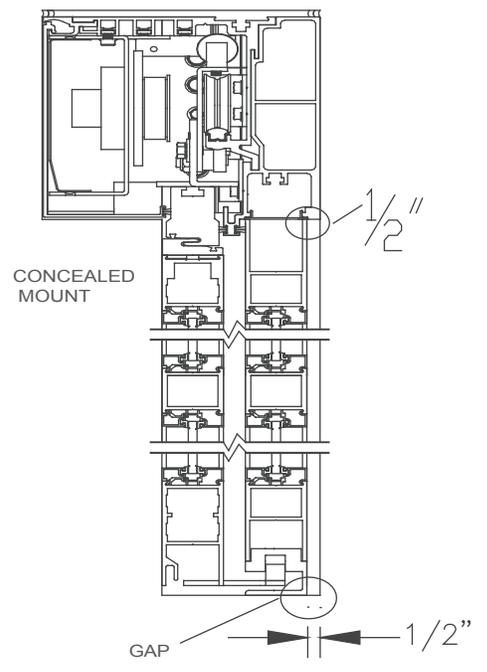
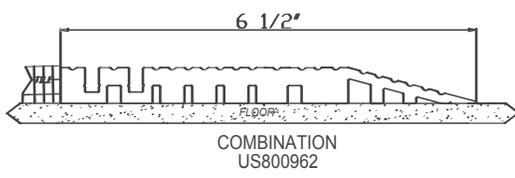
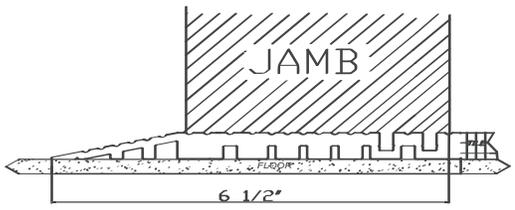
The bottom door guide profile is to be located to the rear of the jamb tube(s) nearest the wall. It must run parallel with the header and in line with the jambs. To locate linearly with the jambs, a chalk line can be used. To insure the bottom door guide profile is running parallel to the header, several measurements should be taken from the top of the guide to the bottom of the header. The guide must be supported thru its entire length (see illustrations). NOTE: Flush mount models use Bottom Guide P/N 2-29-0026. This guide runs in the two grooves in the threshold; see arrows on recessed version below.

ⓘ Proper installation of the guide is critical. If improperly installed, the guide could cause the panels to operate incorrectly. Premature wear and incorrect operation will result from an improperly installed guide.

NOTE: On some models the bottom guide will be machined across the top of one end. This machined surface must be located towards the door opening (see illustration).



BOTTOM DOOR GUIDE PROFILE INSTALLATION (POCKET GLAZING)

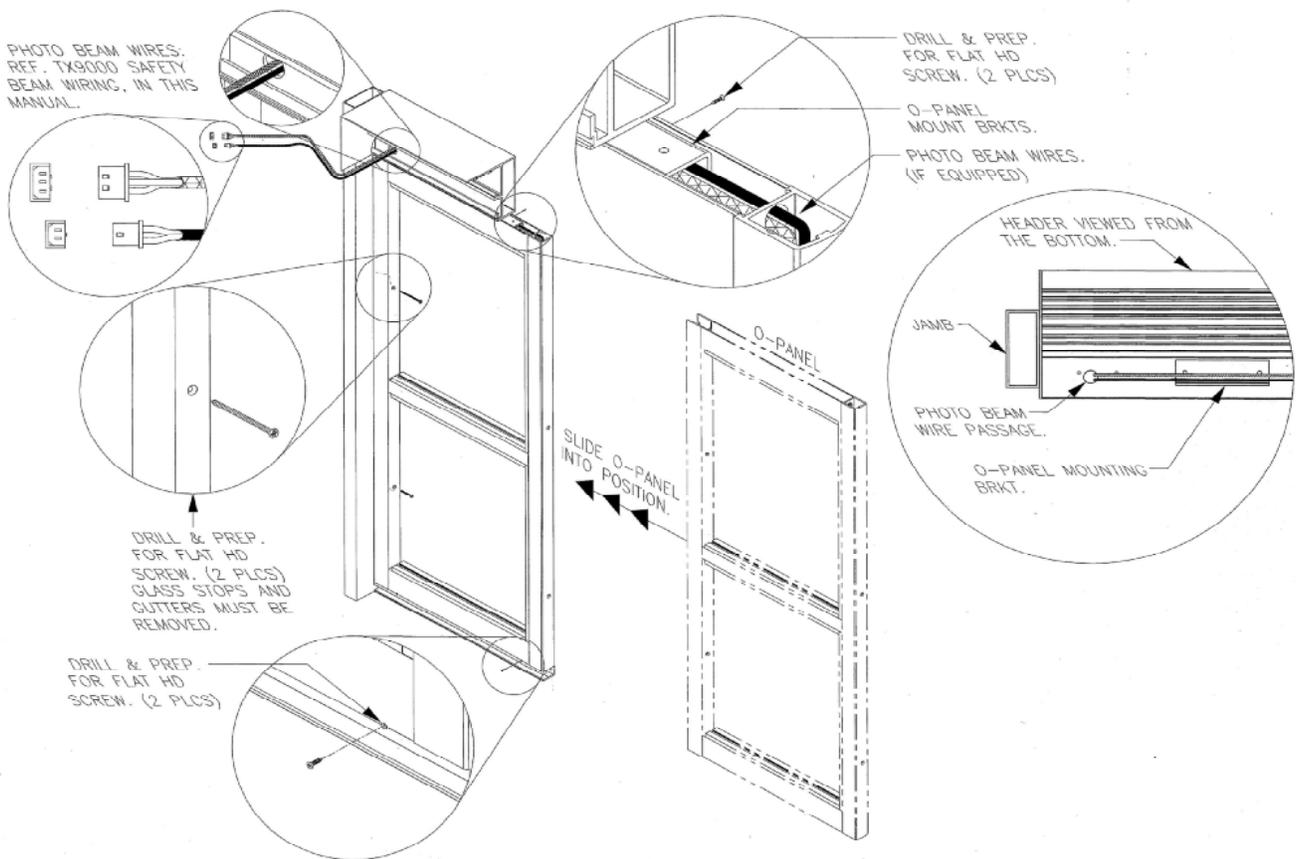


6. O-PANEL INSTALLATION TX9200

Install the mounting brackets in the pre-drilled locations on the header, using the supplied hardware. The clips should be staggered, one shown and one opposite (see illustration).

If equipped with photo electric beams, the wires should be laid out at this time. Be careful not to pinch or break any of the wires while sliding the panel into place. For wiring instructions refer to the TX9000 safety beam wiring diagram in the appendix of this manual.

Align the O-Panel with the bottom door guide and mounting brackets, and slide the panel into place. NOTE: It may be necessary to loosen and lift the header slightly to install the O-Panel. Lubrication can be used on the bottom guide during this step. Secure the panel by choosing the appropriate fastener location (see illustration). The fasteners must not break thru into the guide track. NOTE: A fastener in the guide track could damage the bottom door guide.

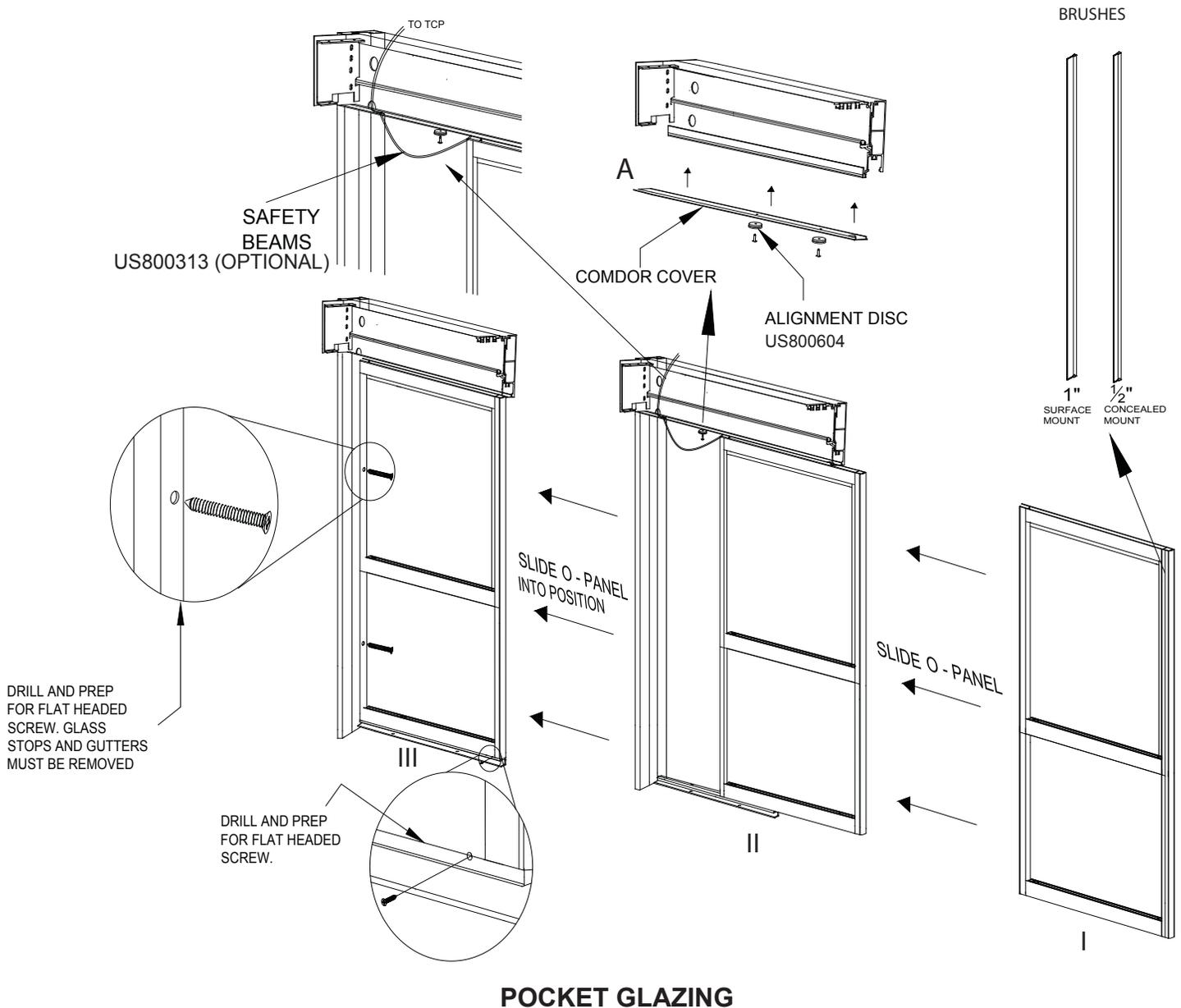


O - PANEL INSTALLATION (POCKET GLAZING)

Slide brush into O - panel before installing as shown in step I. Align the O - panel and slide it onto bottom door guide and in center of alignment disc as shown in step II. Lubrication can be used on the bottom guide during this step. If equipped with safety beams route the wire through comdor cover and use access hole in the header to run the wires to TCP. Secure the panel by choosing the appropriate fastener location as shown in step III

Note :

- 1) Comdor cover and O-panel alignment disc will be factory installed as shown in figure A
- 2) A fastener must not break thru into guide track as it could damage the bottom door guide.

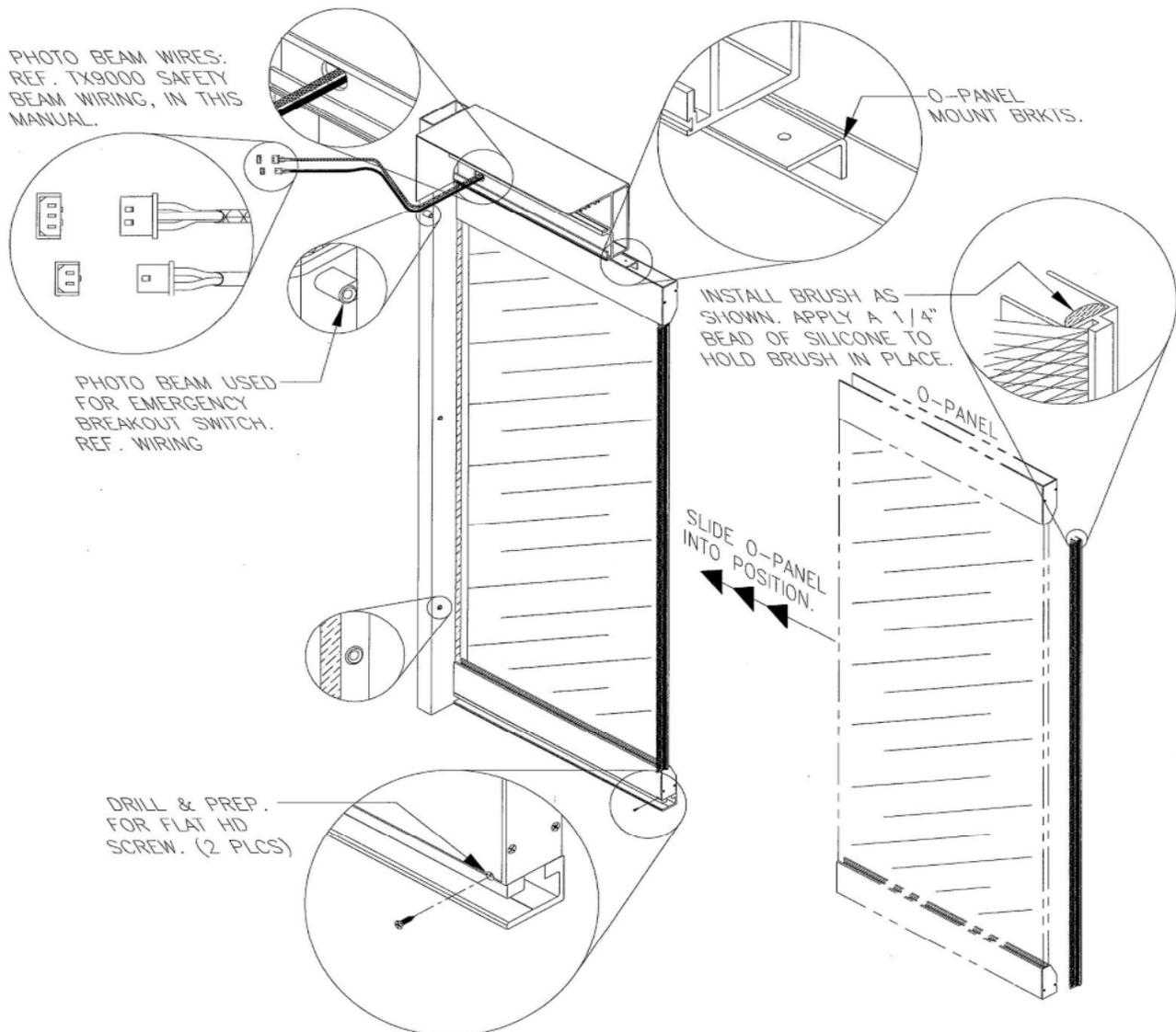


O-PANEL INSTALLATION TX9500

Install the mounting brackets in the pre-drilled locations on the header, using the supplied hardware. The clips should be staggered, one shown and one opposite (see illustration).

Align the O-Panel with the bottom door guide and mounting brackets, and slide the panel into place. NOTE: It may be necessary to loosen and lift the header slightly to install the O-Panel. Lubrication can be used on the bottom guide during this step. Secure the panel by choosing the appropriate fastener location (see illustration). The fasteners must not break thru into the guide track. NOTE: A fastener in the guide track could damage the bottom door guide.

Install weather stripping (P/N 140491) as shown. Be sure to apply a 1/4 bead of clear silicone to hold brush holder in place.



7. P-PANEL INSTALLATION

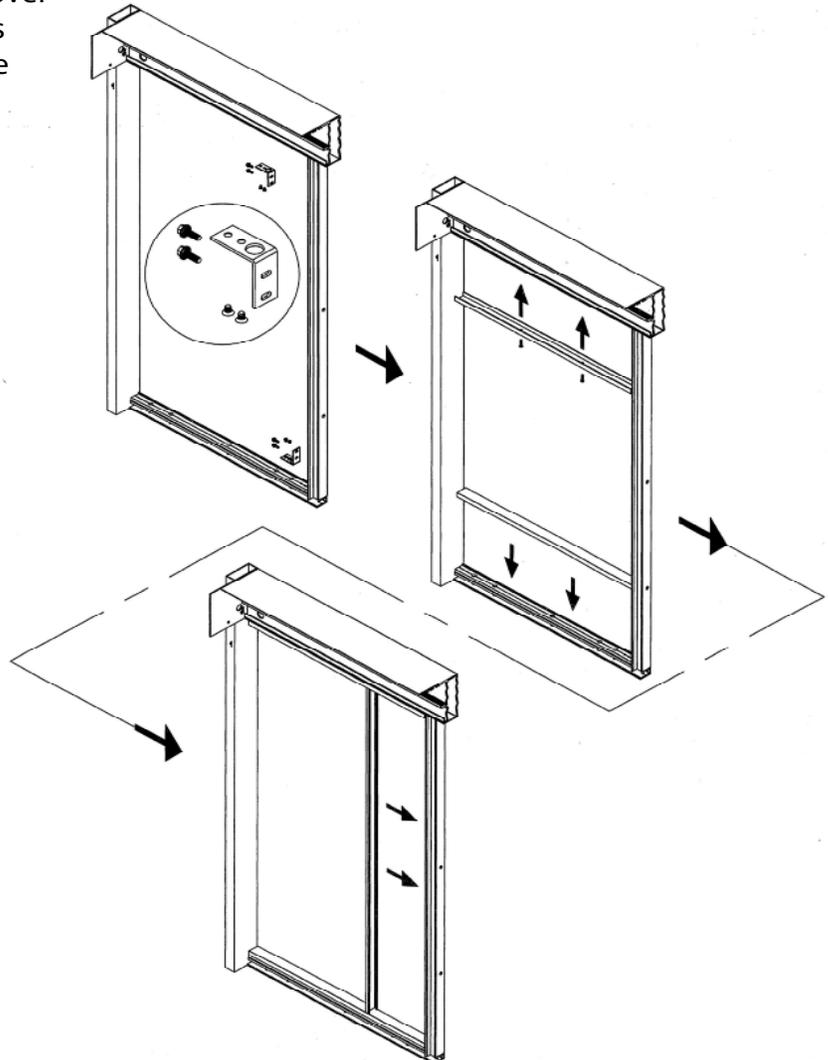
This design consists of the P-Panel Stile with brush, mounting brackets and hardware, bottom profile cover, top cover and hardware and P-Stile cover. Install as follows.

Slide brush into P-stile groove before installing between the header and bottom profile. Install both brackets, as shown, slotted sides to the P-Stile, with provided $\frac{1}{4}$ -20 x $\frac{3}{4}$ lg, hex head screws, (2 per bracket). Install all screws and position P-Stile before tightening. Install $\frac{1}{4}$ -20 x $\frac{3}{8}$ lg, flat Phillips head screws as shown, into the header and Bottom Profile (2 per bracket).

If equipped install Photo Holding Beams (Ref. Pg. 29 of this manual).

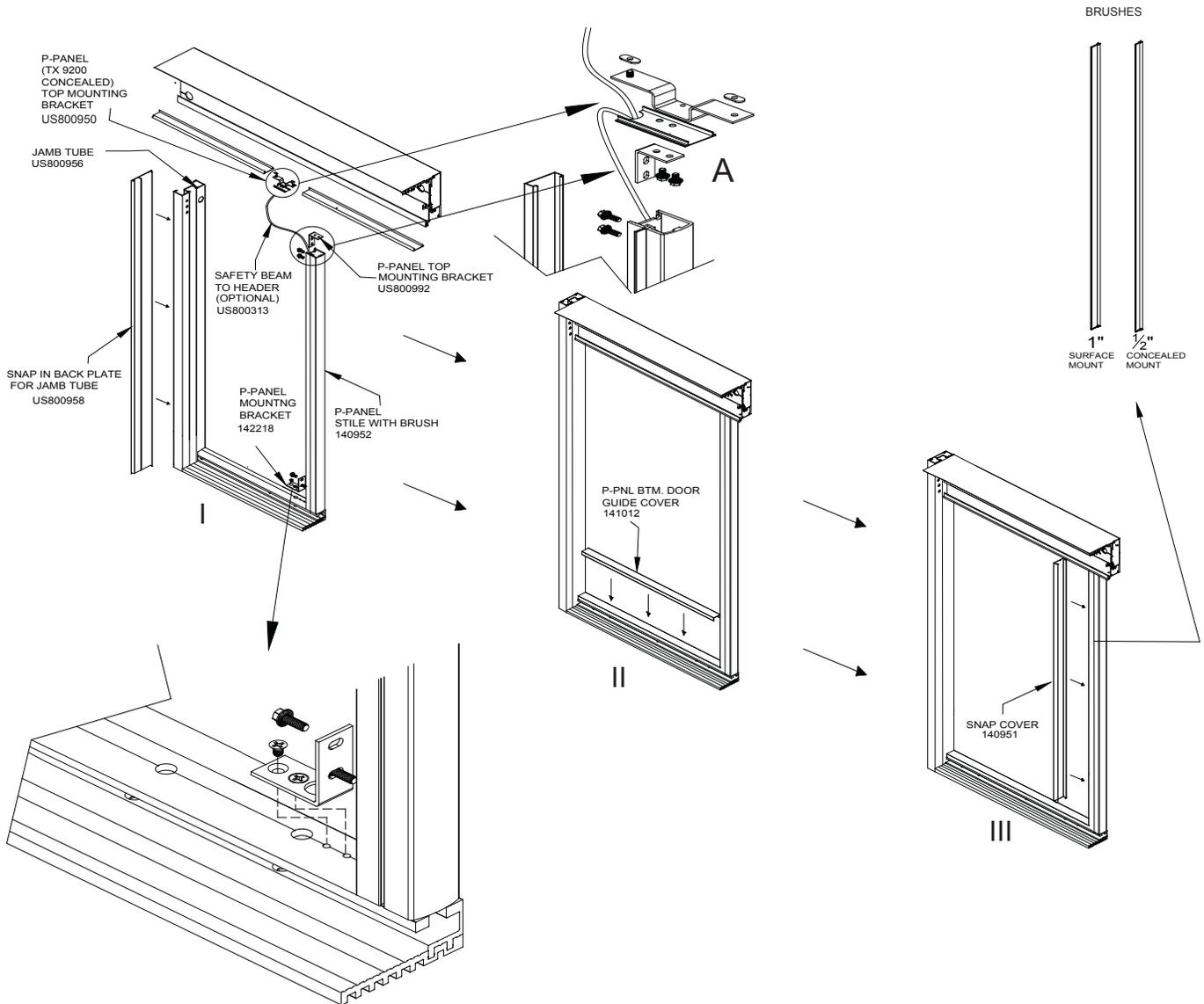
NOTE: Photo Beam wires should be routed inside the covers.

Install the top cover with the provided $\frac{1}{4}$ -20 x 1-1/4 lg, flat head Phillips screws (2). The bottom cover rest atop the profile and is held in place by the P-Stile cover. Snap P-Stile cover into place. Do not pinch wires.



P - PANEL INSTALLATION (POCKET GLAZING)

Slide brush into P-panel stile before installing between header and bottom door guide profile. Install top and bottom mounting brackets as shown in step -I with supplied hardware to p-panel stile. Install all screws and position p- stile before tightening. If equipped with safety beams route the wire through bracket and use header as shown in figure A. Attach Bottom guide cover as shown in step - II. Snap cover to P-stile as shown in step -III

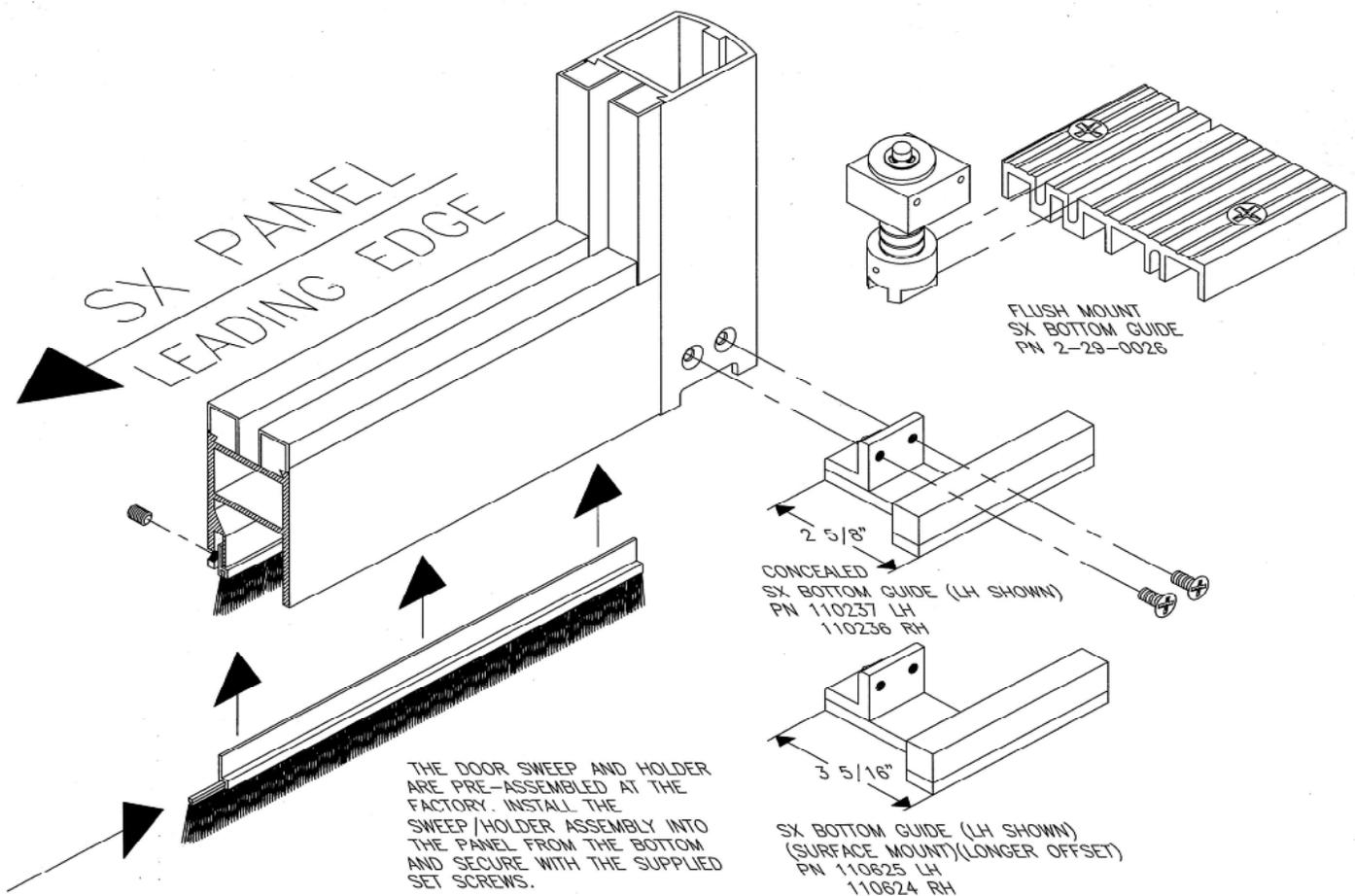


POCKET GLAZING

8. SX PANEL PREPARATION TX9200

Install the bottom door guide/pivot and the door sweep (if equipped) onto the SX-Panel with the supplied hardware (see illustration). To set the door sweep height, slide the panel(s) to the closed position and loosen the set screws; allowing the sweep to slide to the floor.

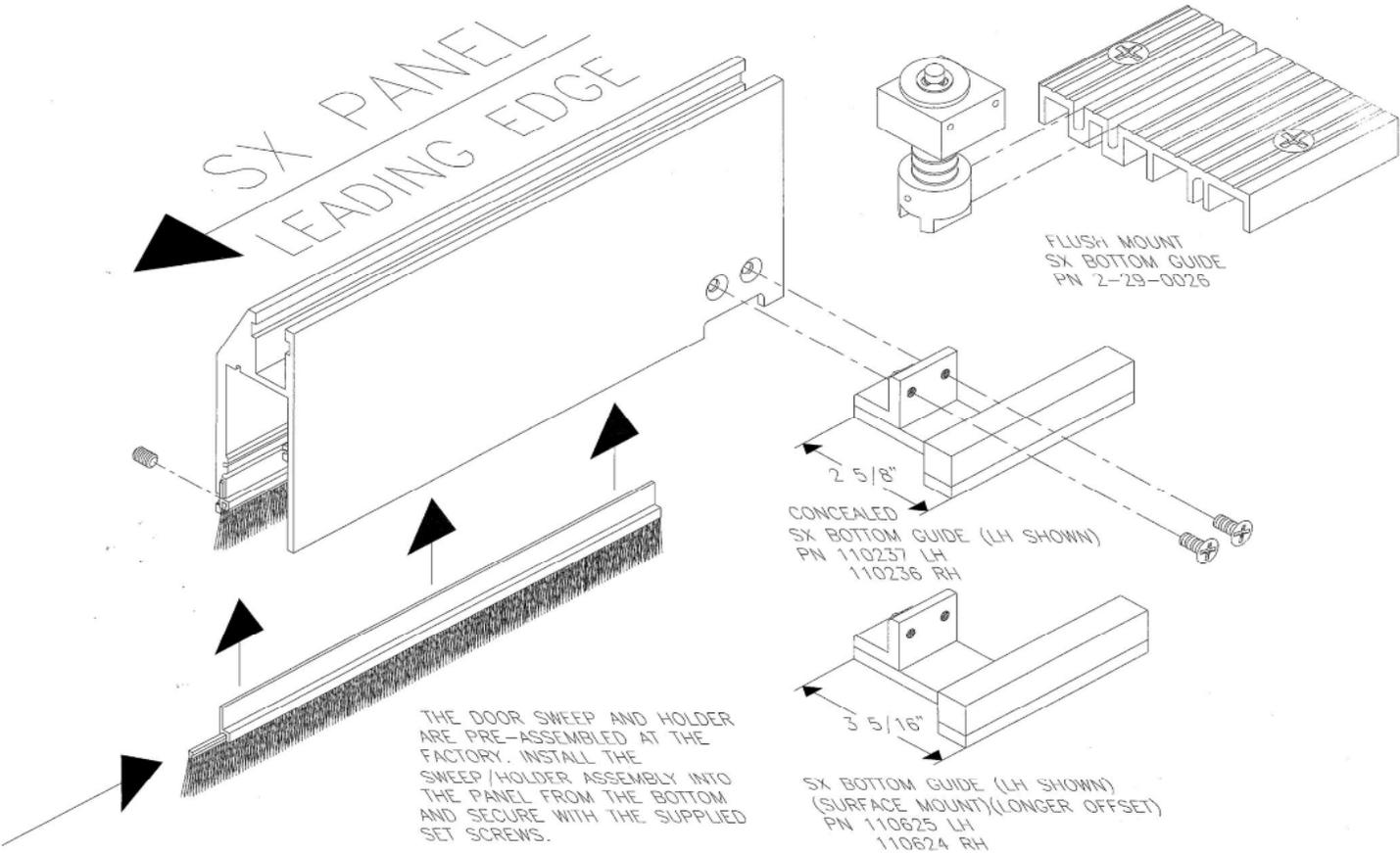
NOTE: Be sure to select the appropriate bottom door guide. The door sweep may differ from that shown or may not be used at all, depending on the application.



SX PANEL PREPARATION TX9500

Install the bottom door guide/pivot and the door sweep (if equipped) onto the SX-Panel with the supplied hardware (see illustration). To set the door sweep height, slide the panel(s) to the closed position and loosen the set screws; allowing the sweep to slide to the floor.

NOTE: Be sure to select the appropriate bottom door guide. The door sweep may differ from that shown or may not be used at all, depending on the application.



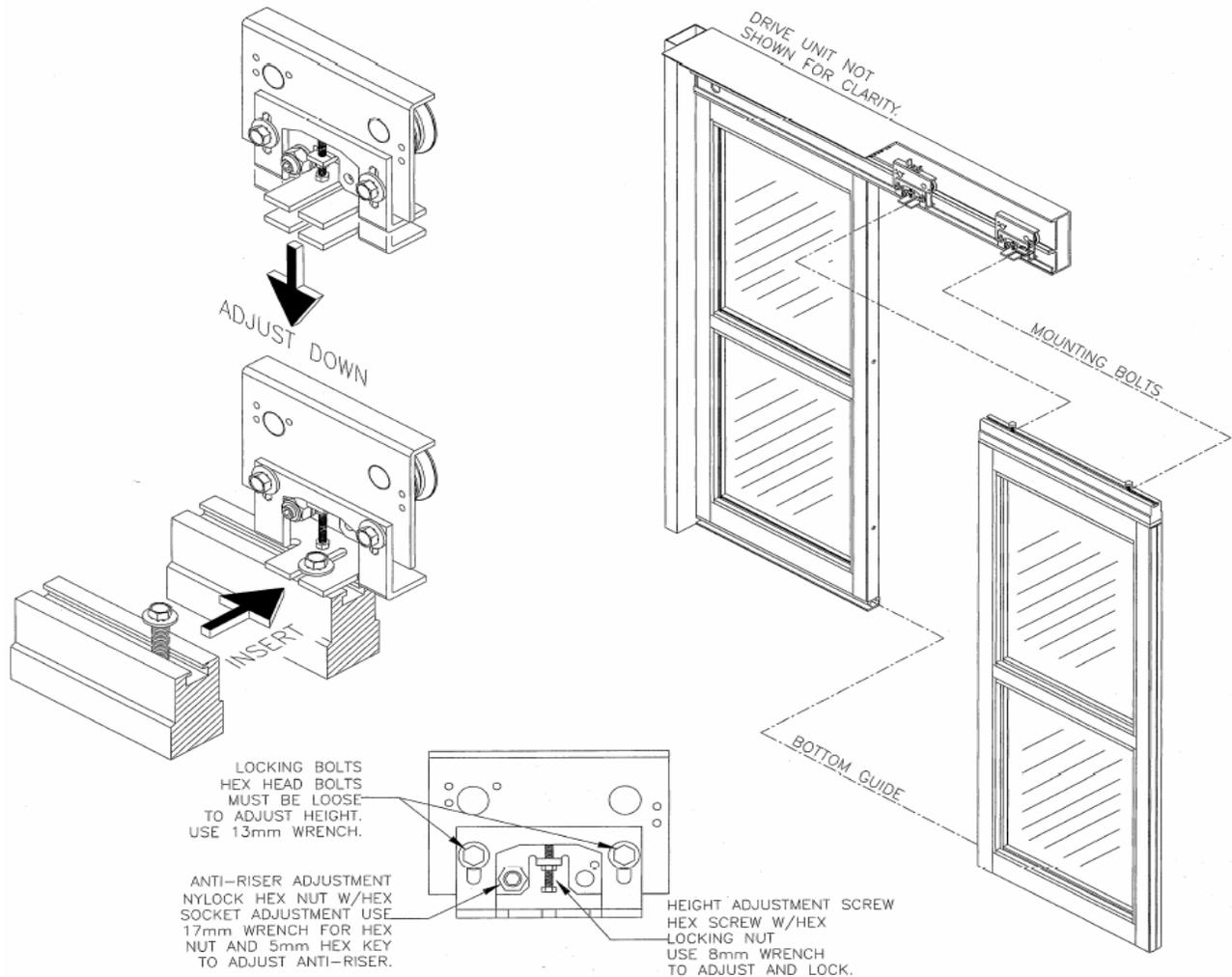
10. SX PANEL INSTALLATION TX9200

Position the trolleys “approximately” to accept the SX-Panel.

NOTE: The trolleys are shipped with the anti-risers tight against the track to prevent damage in shipment. The anti-risers must be loosened to re-position the trolleys.

Loosen the two panel mounting bolts (on top of the SX-Panel) until only two full threads are engaged. Position the SX-Panel so that it will slide behind the drive unit while aligning the bottom door guide/pivot and guide channel. Align the trolleys and bolts and slide the two together.

HINT: Adjusting the trolley height lower can be helpful if the panel is too heavy to lift.



SX PANEL INSTALLATION TX9500

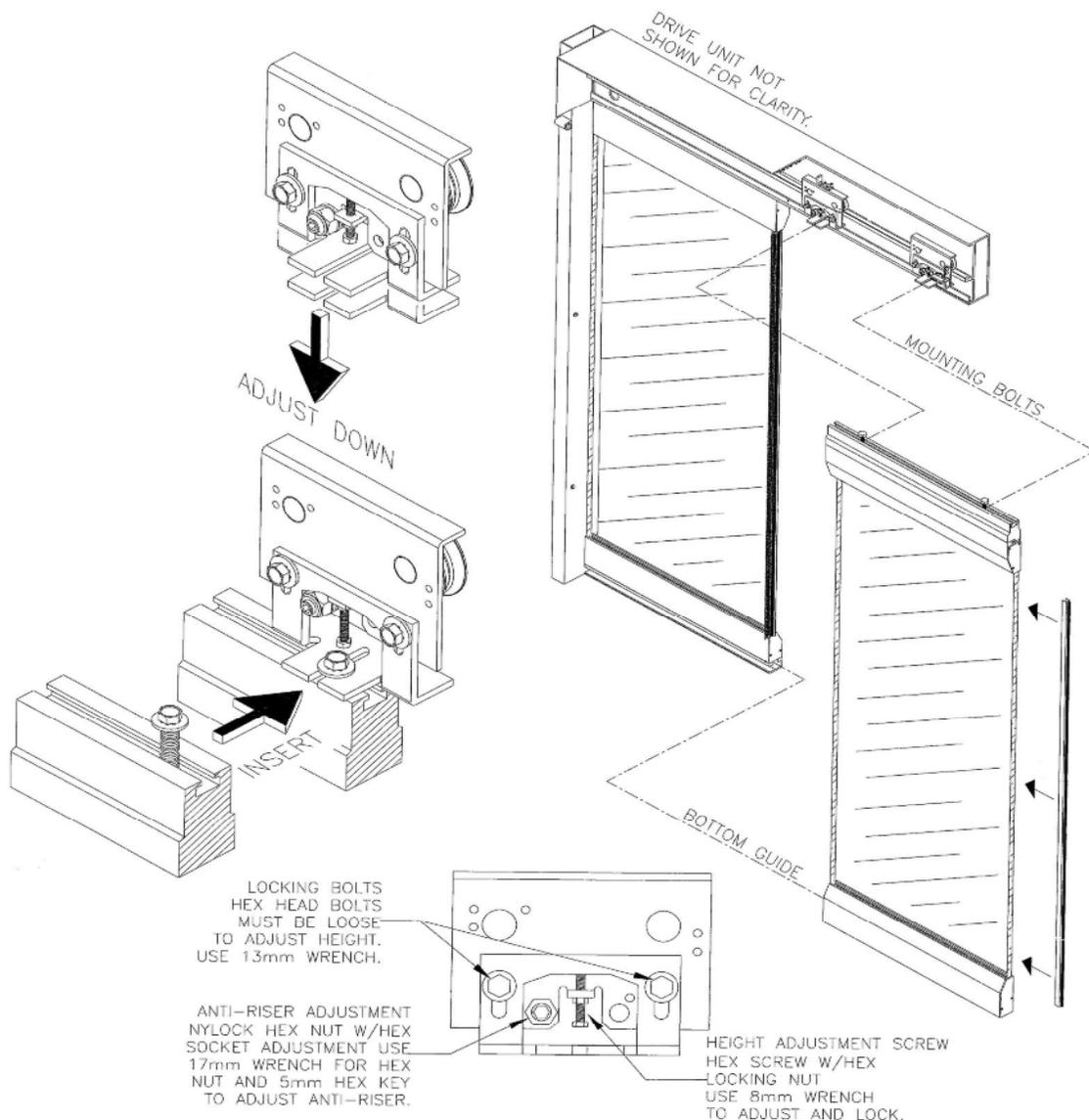
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HINT: Adjusting the trolley height lower can be helpful if the panel is too heavy to lift.

Once the SX-Panel(s) are installed and adjusted, install the lead brush P/N 140488 ½” Pile Seal. It may be necessary to trim the brush to fit.



11. SX PANEL ALIGNMENT

The alignment of the SX-Panel is very important to the functionality of the TX9000 series sliding door(s). Adjustments to the panel must be done with the 13mm bolts slightly loose. After all adjustments are completed, the 13mm bolts can be re-tightened and all the anti-risers must be adjusted to have a gap of .020" (approx. the thickness of a credit card).

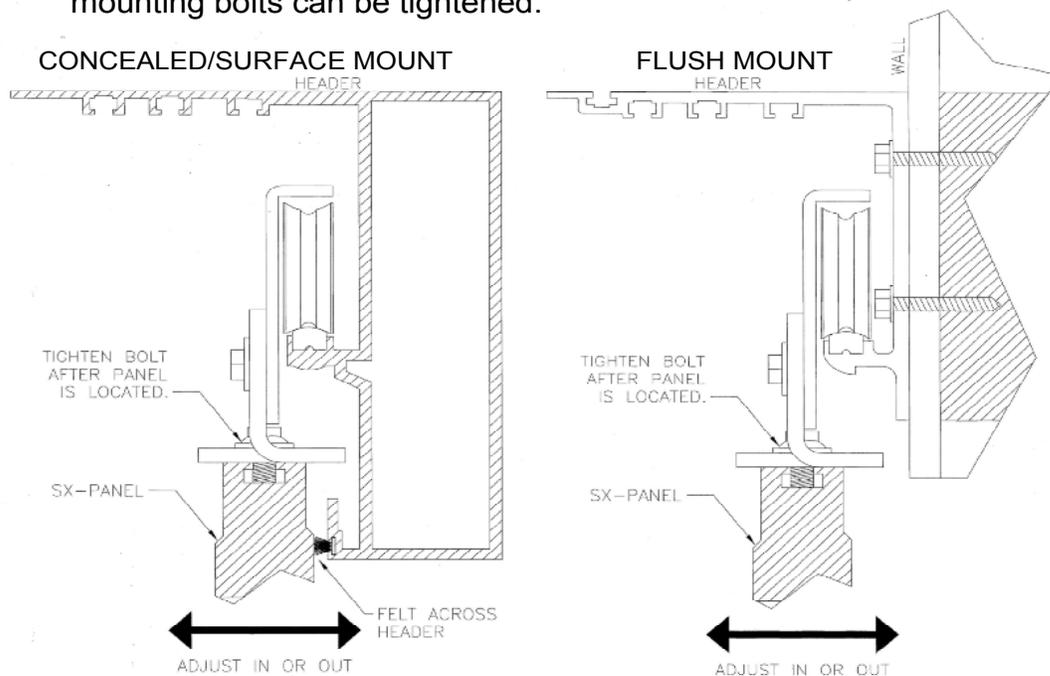
NOTE: Try to mount the panel as close as possible to the final hanging position, to minimize the adjustments.

! The moving panels should contact the seals and/or felts only slightly in order to minimize drag.

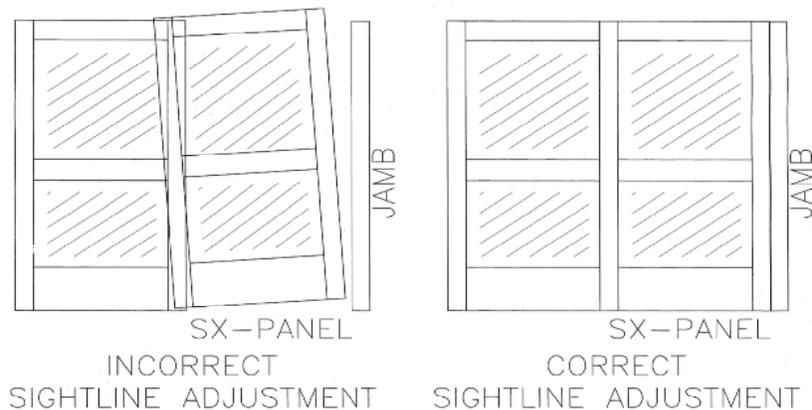
Use the following steps to align the moving panels:

The first adjustment should be to lift the panel to the proper operating height. There should be even contact between the door sweep and threshold or finished floor.

The second adjustment is to position the panel the proper distance away from the header. The panel should contact the felt only slightly and evenly thru its length. Adjust this by sliding the panel towards or away from the felt brush on the header. When the panel is correct the panel mounting bolts can be tightened.



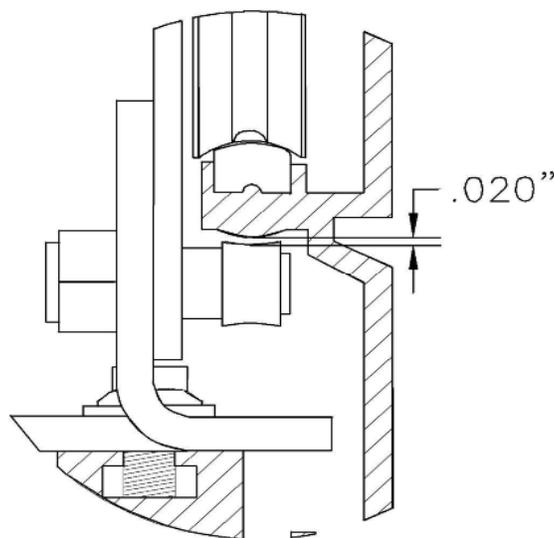
The third adjustment is to line up the sight lines on the panels and jambs. These are fine adjustments and should be done carefully.

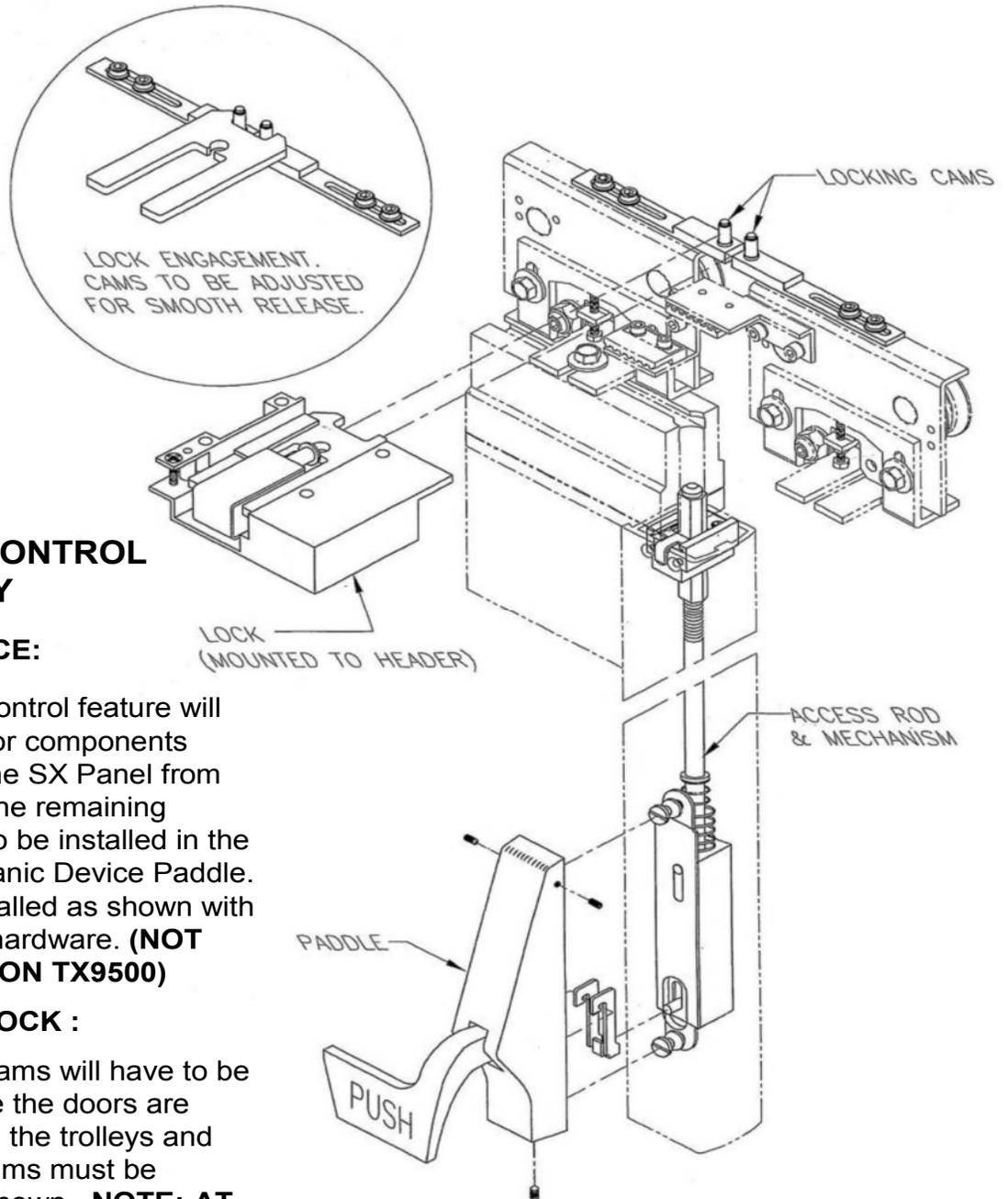


Once the panels have been properly adjusted the 13mm locking bolts can be tightened.

The final adjustment is the anti-riser. There should be a .020" gap between the roller and the track. The roller is mounted to an eccentric cam that uses a nut to secure its location.

Adjustments to the anti-riser require a 5mm hex key and a 17mm wrench. While holding the roller in position with the hex key, loosen the nut. Adjust the anti-riser with the hex key and tighten the nut using a 17mm wrench.





12. ACCESS CONTROL ASSEMBLY

PANIC DEVICE:

The access control feature will have the major components installed on the SX Panel from the factory. The remaining component, to be installed in the field, is the Panic Device Paddle. It is to be installed as shown with the supplied hardware. **(NOT AVAILABLE ON TX9500)**

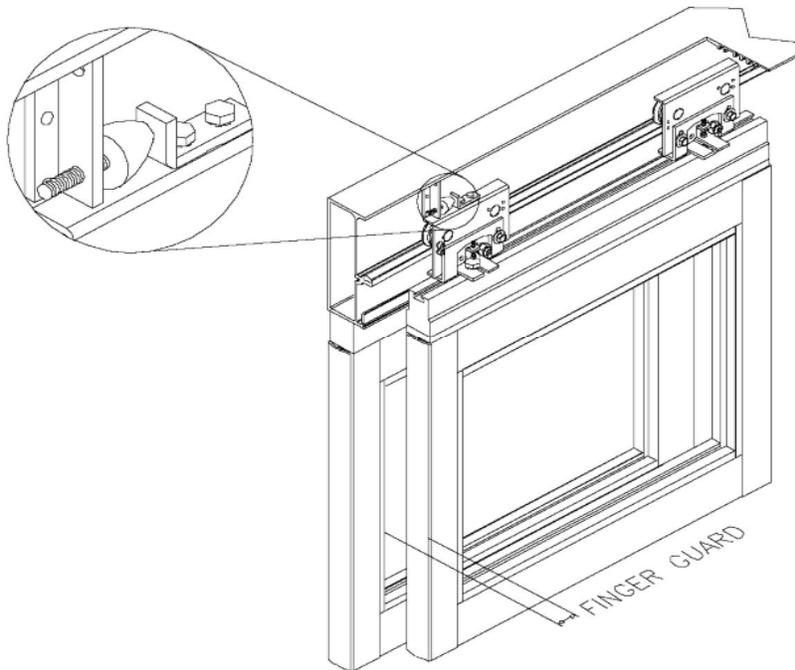
ELECTRIC LOCK :

The locking cams will have to be adjusted once the doors are aligned. Both the trolleys and the locking cams must be adjusted as shown. **NOTE: AT NO POINT SHOULD THE CAMS COME IN CONTACT WITH EACH OTHER OR THE LOCK BOLT.**

13. BUMPER ADJUSTMENT

The bumper, used to stop the SX-Panel, should be adjusted to provide a 1" gap between the O-Panel and the SX-Panel in the open position.

To increase the finger guard distance, move the bumper towards the door opening. To decrease the distance, move the bumper away from the door opening.

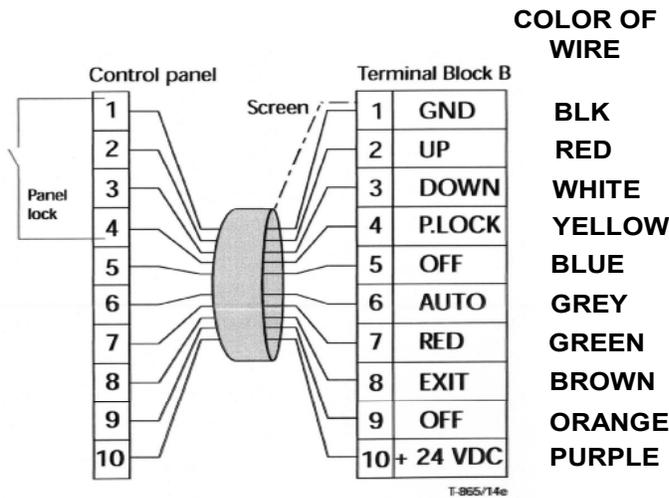


14. FUNCTION CONTROL PANEL INSTALLATION/OPERATION

The Function Control Panel (FCP) is the interface between the TX9200 and the end user/ technician. Besides selecting current door mode, the FCP is also used to determine fault codes, reset door, change door parameters and place the door into free wheel mode.

The FCP will be factory installed on the non-cover side of the header or field installed in a remote location dependent on customer requirements.

The FCP will come with all electrical connections made from the factory. In the event that the connections become undone, the diagram provided can be used to determine proper wire location.



OPERATING MODES

OFF – Used to de-activate the unit (sensors are turned off). The unit can still be operated via Key Switch inputs.

To use – Select OFF mode, move out of sensor detection zone and allow door(s) to close fully. Once closed, it is possible to approach and lock door(s). If opened manually the door(s) will cycle to the full open position and remain open until the detection zone is cleared. **Under no circumstance are the doors to be forced closed! Forcing doors will damage the drive belts!**

AUTO – Used when the door is intended to be fully automated (sensor activation/safety).

REDUCED OPENING – Used to minimize the loss of the inside environment. The door will operate normally, with the exception of the reduced opening, which can be set to your liking.

ONE WAY – Used to limit egress to one direction. The outside sensor inputs are de-activated. Upon activation from the inside sensor, both inside and outside sensors become active. The outside sensor will remain active until the door comes fully closed.

HOLD OPEN – Used for extended egress. The door will remain open until another mode is selected.

The Function Control Pad (FCP) is the most important interface on the unit. It can be used to adjust various characteristics of the doors operation and put the unit into free wheel, but most importantly as a diagnostic tool. Whenever the unit has experienced an error a fault code will be displayed on the FCP with a series of blinking lights. See the following pages for further instructions on the FCP and explanations of fault codes.

FREE WHEELING MODE (MANUAL OPERATION)

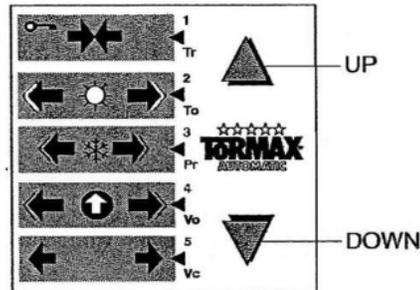
To enter free wheel mode press and hold either arrow for 10 seconds and release. The FCP will count by scrolling the LED in 1 second intervals. DO NOT COUNT THE FIRST LIGHT. The unit can be moved by hand, and fault code 43 (Free wheel mode) will flash on FCP.

To reset the door press and hold either arrow for 5 sec. and release. A calibration run will begin automatically and fault code 2 (Calibration run – wait until door is closed) will flash on FCP.

ADJUSTING DOOR PARAMETERS

The following parameters can be customized with the FCP:

- Tr Hold-open time (reduced opening)
- To Hold-open time (full Opening)
- Pr Reduced opening width
- Vo Opening speed
- Vc Closing speed



To adjust use the following steps:

-Select the parameter you wish to adjust by pressing the UP or DOWN key to move the LED to the desired location.

-Press both UP and DOWN arrows simultaneously until LED begins to flash. Once flashing the parameter can be changed.

-Use UP/DOWN arrows to adjust desired setting. The flash frequency denotes time to complete operation. Fast flash = min. time, Slow flash = max. time.

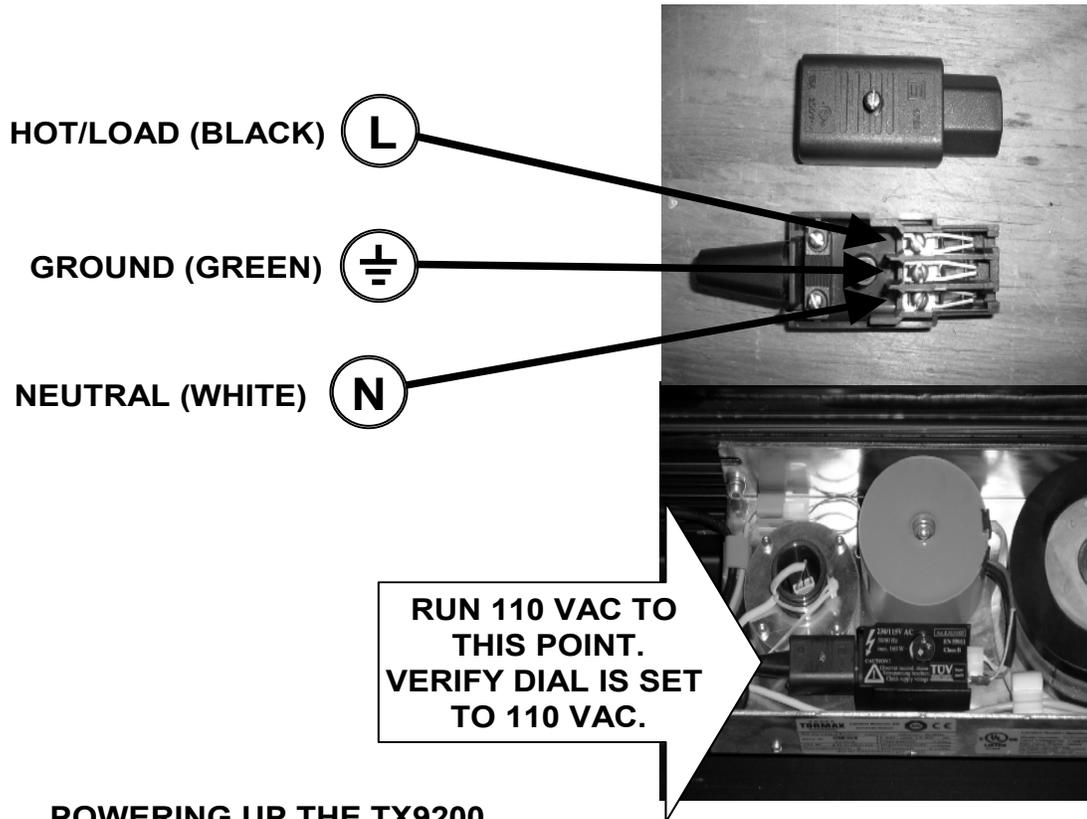
-To save the setting press and release both the UP and DOWN keys simultaneously.

15. I-ONE SENSOR INSTALLATION/QUICK SETUP GUIDE

Install and wire the I-ONE sensors as instructed by the quick setup guide provided on pg. 26 of this manual. The quick setup guide can also be found in the sensor packaging. **A complete walk test of the sensor patterns must be performed and should comply with ANSI Standard A156.10 and any local or state building codes.**

16. SIGNAGE

Place all appropriate signage on the completed unit, in accordance with ANSI Standard A156.10. Also, observe all state and local safety/fire regulations pertaining to this installation.



17. POWERING UP THE TX9200

ALL PRIMARY ELECTRICAL CONNECTIONS SHOULD BE COMPLETED BY A LICENSED ELECTRICIAN!

DO NOT INSERT THE POWER PLUG INTO THE UNIT, UNTIL IT IS READY TO BE COMMISSIONED. AN OVERALL CHECK SHOULD BE PERFORMED.

The unit requires 110vac, make connections as shown above.

18. INITIAL START UP

At this point a complete check of all fasteners, wire connections and routing, mechanical operation of both SX-panels and breakout panels, signage, and overall appearance should be performed.

Apply power to the unit, switch function pad to automatic mode (position 2). The unit will begin a calibration run. If equipped with photo electric beams, be sure not to interrupt them while calibration run is being performed.

If a battery back up is supplied, be sure to connect the two pin connector from the batteries to the module. This connector is disconnected during shipment to prevent damage to the unit. The batteries will require time to charge fully. The unit will automatically charge the batteries while 110v is being supplied.

If access control is supplied, check for proper function of panic hardware. If an electro-mechanical lock is supplied, check for proper function. This will depend on customer preference, i.e. fail safe or fail secure, locking in off and exit modes or all modes. NOTE: If a battery backup is being used in conjunction with a lock, the main power must be removed first, then battery backup removed in order to test the fail characteristics of the lock.

A complete walk test of the sensors must be performed and should comply with ANSI A156.10 and any local or state building codes

FINAL CHECKLIST

JOB NAME _____ . **LOCATION** _____ .

DOOR TYPE

TX9200	CON	FM	SM	TX9420
TX9300	CON	FM	UT	TX9430

Y N N/A

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Do the doors slide freely, no binding/dragging? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are all wires clear from moving parts? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are all adjustment bolts tight including anti-risers? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Do the break out panels function properly with no obstructions? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is the breakout switch functioning? (TX9300 & TX9430) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are there any fault codes flashing on the FCP? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are all modes on the FCP operating correctly (Off, Auto, Red Open, Exit, Hold)? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are the holding beams operating correctly (if equipped)? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is the lock (electrical or mechanical) functioning properly? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Has an ANSI A156.10 inspection been completed? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are the Door# decal, Service decal, Daily Safety Check decal all present and in proper location? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Has the Daily Safety Check been reviewed with the Manager? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Have all the FCP functions been reviewed with the Manager? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Was the Owners manual given to the Manager? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Did the Manager sign the work order/service ticket? |

Installer signature/date _____

TX9000 Trouble Shooting Tips

Trouble	Possible Cause	Solution
Door will not open	Unit in OFF mode, activating device not functioning properly, breakout circuit is open, unit is in freewheel mode.	Select mode other than OFF, check activating devices for proper wiring and function, check break out panel for proper engagement, check break out circuit for short or bad connections, take unit out of freewheel mode.
Door will not close	Unit is receiving a maintained activation signal, object in sensor activation zone, door binding, break out circuit is open, unit is in freewheel, motor rotation incorrect.	Check activating device for proper wiring and function, remove object from within activation zone, remove debris from door guide track, check for proper panel alignment or drag, remove unit from freewheel, perform auto configuration.
Door begins to open and comes closed	Door in reduced opening, object in track stopping door, anti-riser out of adjustment.	Select mode other than Reduced Opening, remove object from track and reset door, check anti-riser adjustment.
Door begins to close and re-opens	Door binding, sensors reactivating.	Check doors for proper alignment, check for objects placed in sensor detection zone, check sensor for proper adjustment it could be seeing the door.
Door opens normally but closes slowly	Faulty door holding beam(s), door dragging.	Check holding beams for proper function and cleanliness, check door for proper alignment.
Unit will not power up	Main power loss, bad power transformer, blown fuse on TCP controller.	Check for 115vAC @ main power plug, blown fuse on TCP controller, 24vDC @ two (2) pin connector on TCP controller.
No LEDs on the FCP will light up	Faulty electrical connection.	Check all electrical connections on B block and on the rear of the FCP.

For further fault code descriptions ref. pg. 21 of this manual.

FAULT CODE DIAGNOSIS/DESCRIPTION

When a fault is detected one or more LEDs will flash simultaneously on the FCP next to a corresponding number, use the table below to determine the code number and match it to its description on the following page.

EXAMPLE: Both the 4th and 5th LEDs are simultaneously flashing, using the table tells us the code is #24, Safety beam 1 interrupted for more than 1 min.

The table shows the LED combinations (code) of the individual faults.

● flashing LED

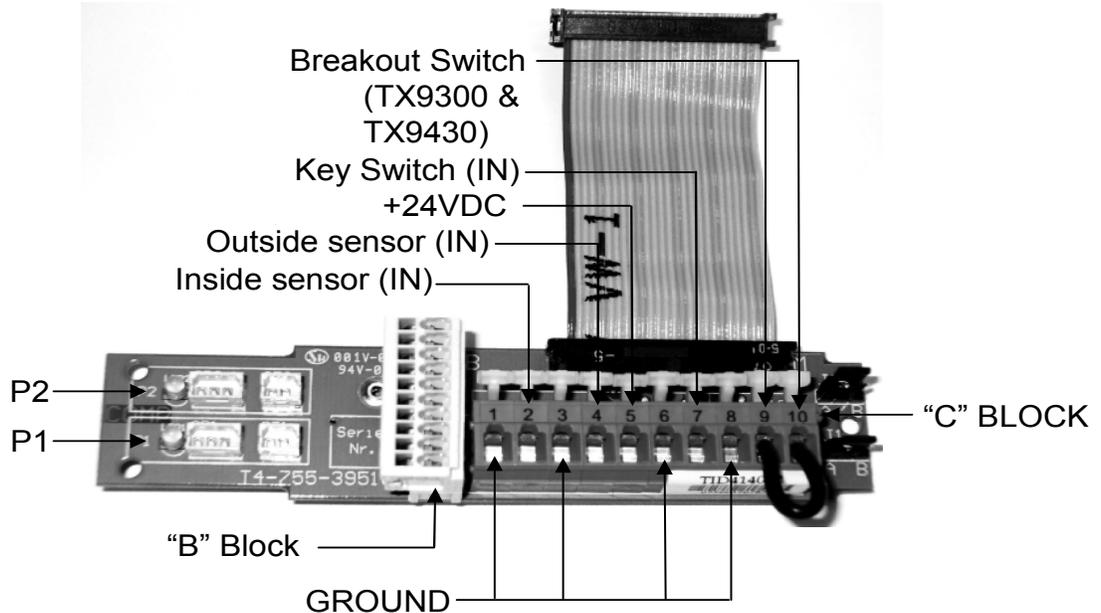
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	●																													
2		●																												
3			●																											
4				●																										
5					●																									
6						●																								
7							●																							
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30																														●

T-787/9e

Explanation of Fault Code and Trouble Shooting

- 1 Door lock faulty → possibly intervene by manual lock disengagement
- 2 Calibration run → wait until door is closed
- 3 Battery operation; mains failed
- 4 Light beam 1 faulty:
- 5 Light beam 2 faulty:
- 6 Light beam 3 faulty:
- 7 Light beam 4 faulty:
possible reasons:
 - transmitter, receiver, cable or power module faulty
 - safety beam not properly aligned
 - cable not properly shielded
- 8 In operating mode OFF: safety beam interrupted longer than 10 sec.
- 9 Operator type not defined or processor failure
- 10 "Emergency-off" is activated → reset push-button and select operating mode OFF
- 11 Motor overheated → call for assistance
- 12 Power module faulty or shut down
- 13 No movement: encoder, cable, motor or belt faulty; possibly door blocked
- 14 Battery failure or signalling device faulty
- 15 Failure of night duty lock → possibly intervene by manual lock disengagement
- 16 Door in reversing mode: door encountered an obstacle → wait until door is closed
- 17 Panel key UP gives contact longer than 1 min: panel or cable faulty
- 18 Panel key DOWN gives contact longer than 1 min: panel or cable faulty
- 19 Burglary alarm → reset by means of key switch or system reset
- 20 Activator 1 gives contact longer than 1 min.
- 21 Activator 2 gives contact longer than 1 min.
- 22 Activator 3 gives contact longer than 1 min.
- 23 Activator 4 gives contact longer than 1 min.
possible reason:
 - activator or cable faulty
- 24 Safety beam 1 interrupted for more than 1 min.
- 25 Safety beam 2 interrupted for more than 1 min.
- 26 Safety beam 3 interrupted for more than 1 min.
- 27 Safety beam 4 interrupted for more than 1 min.
possible reasons:
 - safety beam or cable faulty
 - optical components possibly dirty
- 28 Key switch gives contact longer than 1 min: possibly key turned
- 29 External closing reversing
- 30 External opening reversing
- 43 Free wheeling mode
- 45 Support request: system needs maintenance → call for assistance
- 49 System is ready for automatic system configuration

TCP-51LC INTERFACE BOARD



"C" Terminal Block connections used with the TCP-51LC control box.

Terminals 1, 3, 6, & 8 are all common grounds.

Input 2 (NO) Inside sensor.

Input 4 (NO) Outside sensor. In EXIT mode, outside sensor will not activate door, however if activation from the inside is given, the outside sensor will become active and remain active until the door comes fully closed.

Output 5 +24vDC

Input 7 (NO) Key Switch used to over-ride the OFF mode (door will open when activated).

Terminals 9 & 10 (NC) Breakout Switch. Will have jumper wire installed from the factory on TX9200, TX9420 & TX9500.

"B" Block is used to connect the Function Control Pad to the TCP unit.

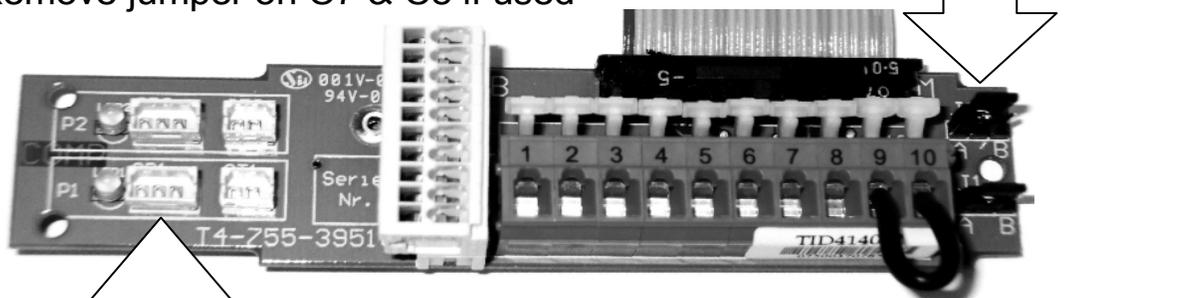
P1 & P2 Monitored Holding Beams.

TCP-51LC Self (Auto) Configuration

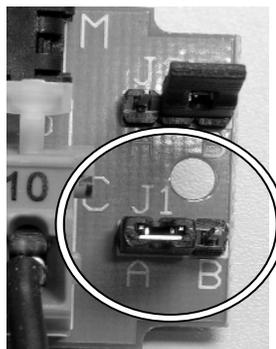
⚠ Warning when performing an Auto Configuration, existing programming may be lost, contact Tormax Technical Support for assistance before attempting. (888) 685-3707

The auto configuration can be used to set up beam configuration, add or remove a lock, set lock function as Fail Safe or Fail Secure, set up handing (motor rotation) and add a battery back-up.

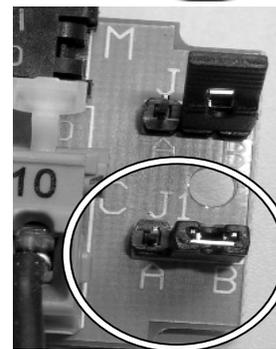
1. Disconnect power
2. Move jumper J1 to position A
3. Connect wiring for safety beams, lock, battery backup, etc.
 - a. Jumper C7 & C8 for lock to be fail safe
 - b. Without jumper on C7 & C8, lock will be fail secure
 - c. Jumper C9 & C10 for bi-part, TX9200 RH & TX9300LH
 - d. Remove jumper on C9 & C10 for TX9200 LH & TX9300 RH
 - e. Battery backup: Y or N (J2)
 - f. Safety beams: 0, 1 or 2
4. Connect power
5. Move jumper J1 to position B
- * Make sure safety beams are not interrupted
6. Operator will make a self (auto) configuration run
7. Reconnect jumper on C9 & C10 if used
8. Remove jumper on C7 & C8 if used



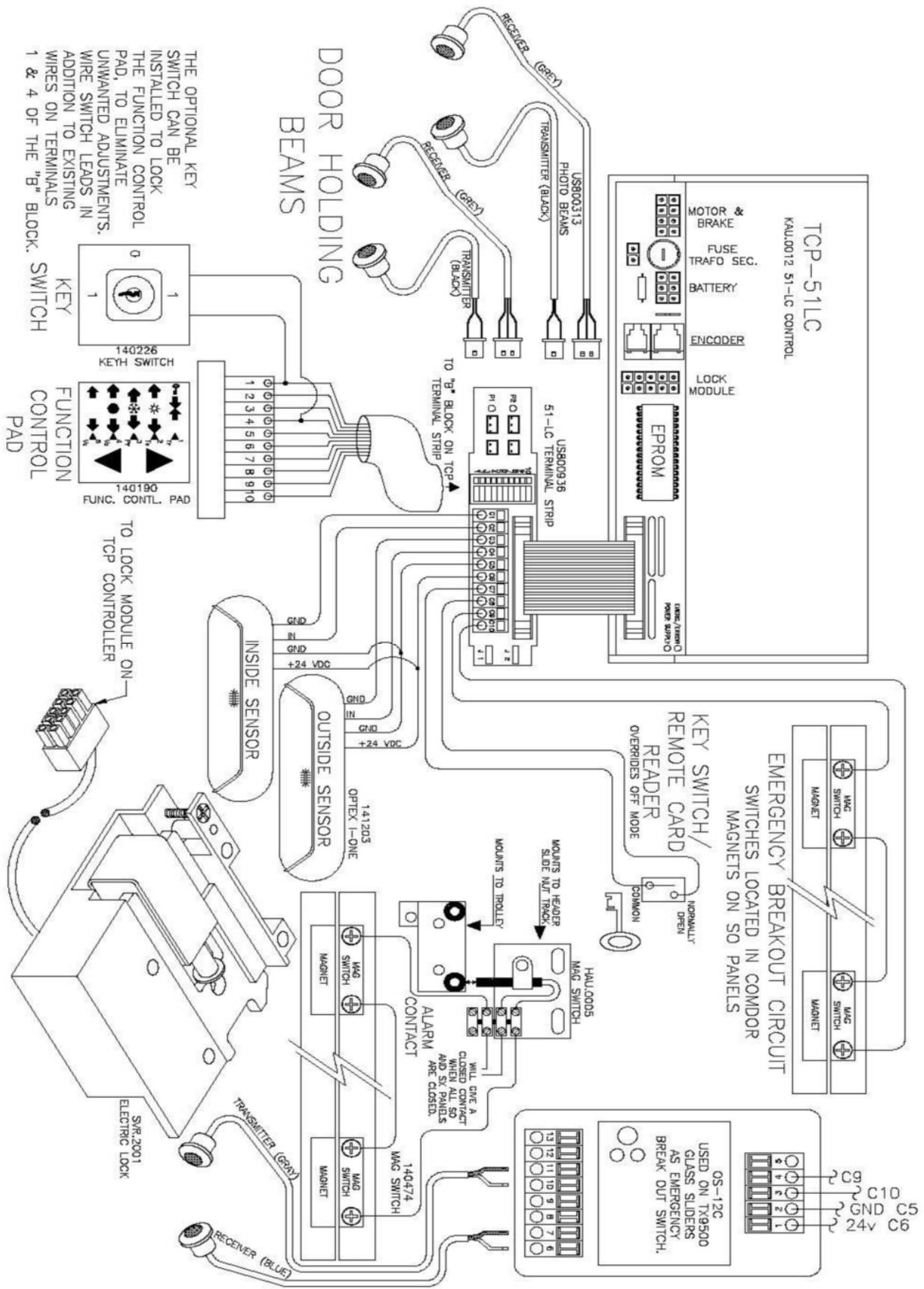
SAFETY BEAMS



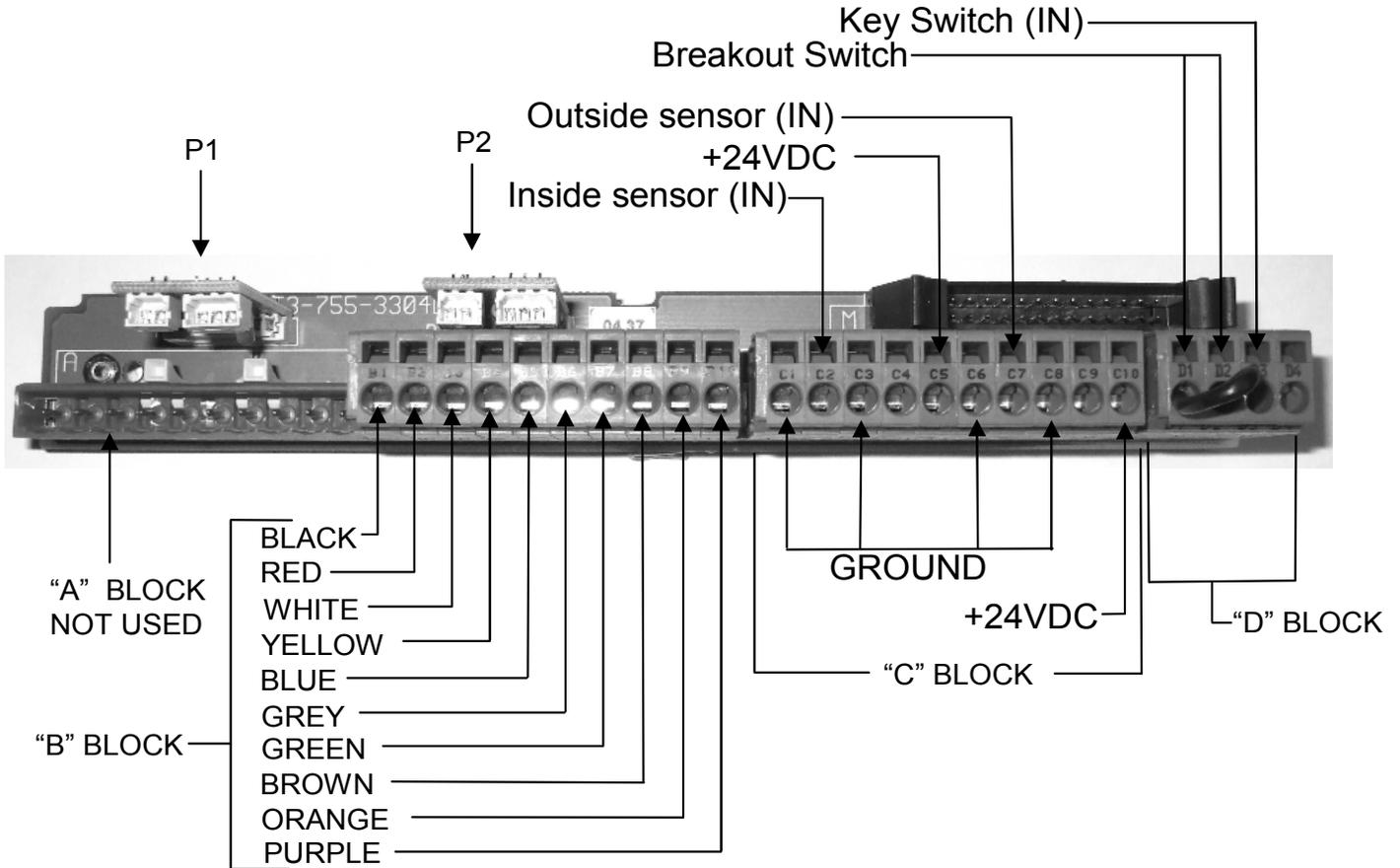
J1 POS. A



J1 POS. B



TCP-51 & 101 INTERFACE BOARD



“C” Terminal Block connections used with the TCP-51/101 control box.

Terminals 1, 3, 6, & 8 are all common grounds.

Input 2 (NO) Inside sensor.

Input 7 (NO) Outside sensor. In EXIT mode outside sensor will not activate door, however if activation from the inside is given, the outside sensor will become active and remain active until door comes fully closed.

Outputs 5 & 10 +24vDC.

Inputs 4 & 9 Programmable per customer request.

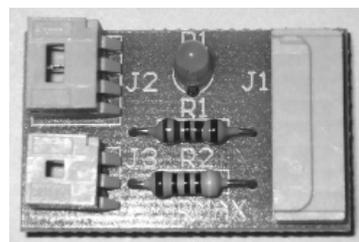
“B” Block is used to connect the Function Control Pad to the TCP unit (connect as shown).

“D” Block

Terminals 1 & 2 (NC) Break out Switch. Will have jumper wire installed from the factory on TX9200, TX9500 & TX9420.

Terminals 3 & 4 (NO) Key Switch Function.

P1 & P2 Monitored Holding Beams (Interface Board P/N 414136 must be used).



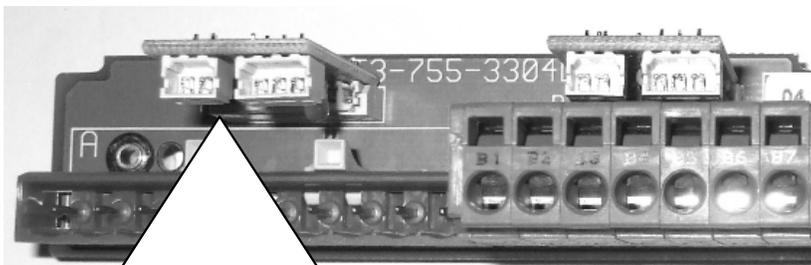
TCP-51 & 101 Self (Auto) Configuration



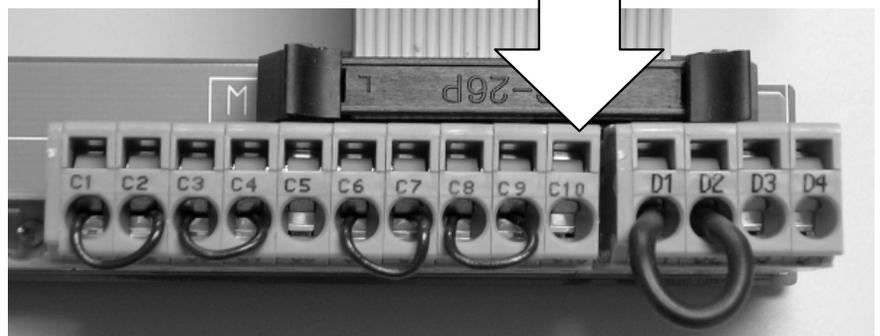
Warning when performing an Auto Configuration, existing programming may be lost, contact Tormax Technical Support for assistance before attempting. (888) 685-3707

The auto configuration can be used to set up beam configuration, add or remove a lock, set lock function as Fail Safe or Fail Secure, set up handing (motor rotation) and add a battery back-up.

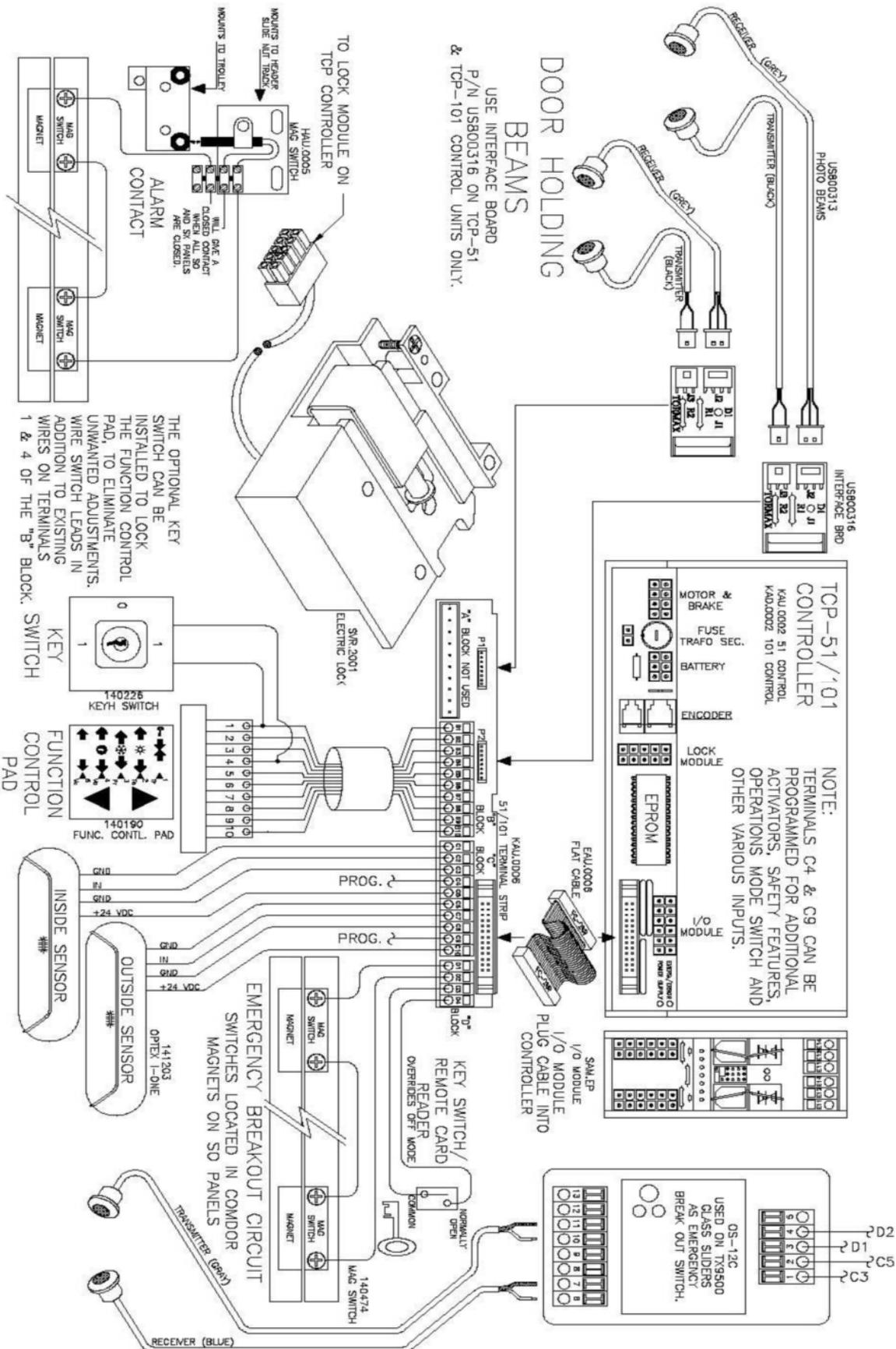
1. Disconnect power
2. Jumper C1 & C2, C3 & C4, C6 & C7 AND C8 & C9
3. Connect wiring for safety beams, lock, etc.
 - a. Jumper D1 & D2 for bi-part, TX9200 RH & TX9300 LH (clockwise motor direction)
 - b. Remove jumper on D1 & D2 for TX9200 LH & TX9300 RH (counter-clockwise motor direction)
 - c. Safety beams: 0, 1 or 2
4. Connect power
5. Disconnect jumpers from Step 2
 - * Make sure safety beams are not interrupted
6. Reinstall jumper on D1 & D2 if removed in Step 3.b.
7. Operator will make a self (auto) configuration run



SAFETY
BEAMS (IF
EQUIPPED)



JUMPERS



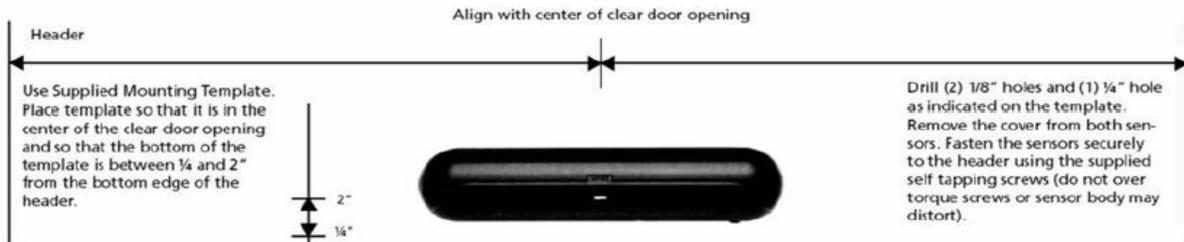


i-Sensor Quick Setup Guide for Tormax Automatic Door Installation



The following sheet is a simplified quick reference guide for installing the Optex i-One Sensor on the Tormax Automatic Sliding Door Package. Please reference the installation manual supplied with each sensor for complete details.

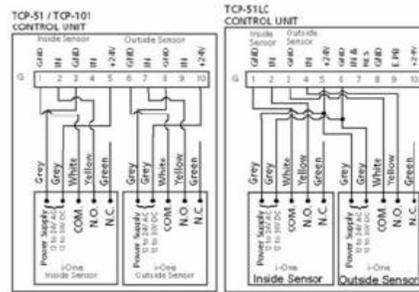
Standard sensor mounting location for Tormax Automatic Sliding Doors



Wiring Connections

1. Feed wiring harness thru 1/4" pass thru hole. Securely fasten wiring out of the path of moving parts. Manually slide doors open and closed to verify no binding from wiring. Use 26 gauge wire strippers to strip the necessary wire ends. The green wire is not used. Connect the wires to the Tormax control unit as illustrated.

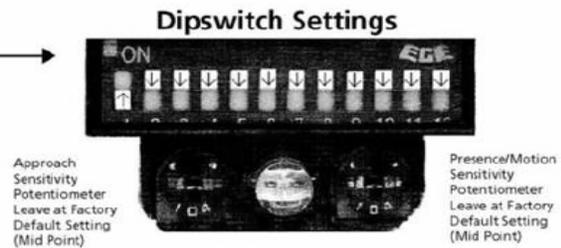
2. Do not connect sensor to wiring at this time. Connect the plug once you have selected all of your initial settings.



Initial Settings

Dip Switch and Sensitivity Settings Adjust as per diagram at right

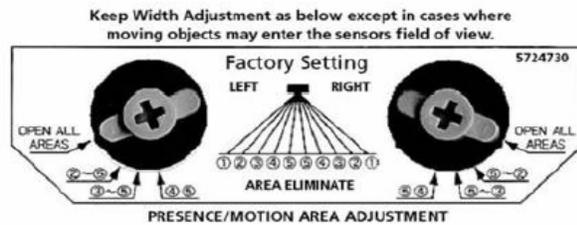
Start with adjustment as per diagram at right. When performing walk test, adjust if necessary for deeper or shallower detection pattern.



Presence/Motion Area Adjustment

Left and Right Shutters - Open All Areas

Open all areas = approximately 15.5 feet wide Presence/Motion detection area (8 feet left and right of center). This offers the greatest protection to the users. Some environments may dictate decreasing the width (example: merchandise stacked in front of side-lights, single slides with perpendicular walls in close proximity to the clear door opening).



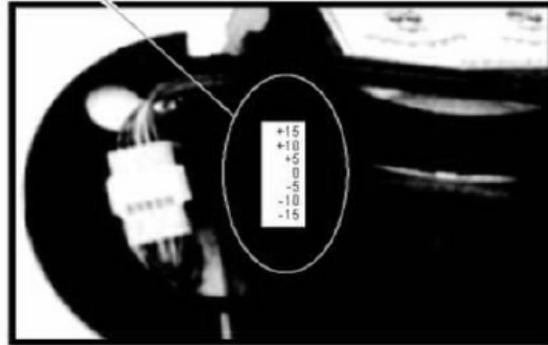
★★★★★
TORMAX
AUTOMATIC

Approach Area Angle Adjustment

Start with adjustment as per diagram at right. When performing walk test, adjust if necessary for deeper or shallower detection pattern.

Keep the default setting of "0"

Approach Area Angle Adjustment



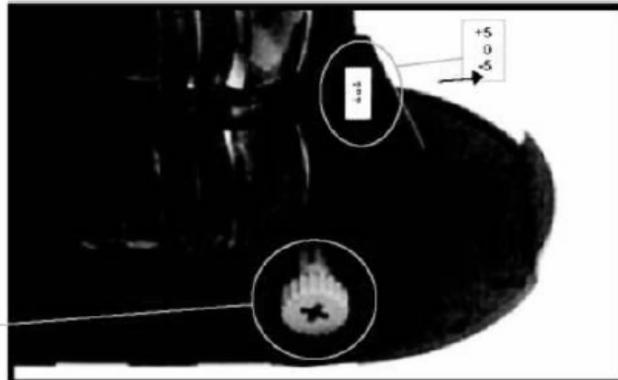
Presence Area Angle Adjustment

Note: It is imperative that you start your presence area angle adjustment with the sensor adjusted to the full -8 degree setting. In some versions, a -8 degree may not be marked on the sensor.

IMPORTANT

This -8 degree angle can be achieved by turning the Presence Area Angle Adjustment screw counter-clockwise a full four turns or until the adjuster screw makes a clicking sound. This is the -8 degree setting.

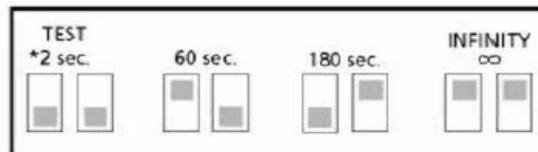
Fine Adjustment Screw
Fully Counter Clockwise



Walk Test Mode

Walk-Test Mode: For setup only: move dipswitch 1 and 2 to the off position (2 second learn).

WARNING! After setup, dipswitch 1 and 2 **MUST** be set to 60 seconds, 180 seconds, or infinity to comply with the ANSI Standard A156.10.



USE PAGE 3 OF THIS DOCUMENT AS YOUR GUIDE FOR PROPER ADJUSTMENT.

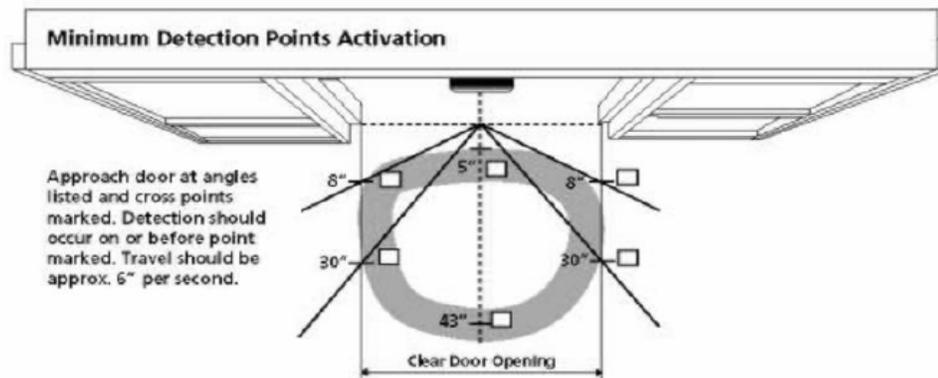
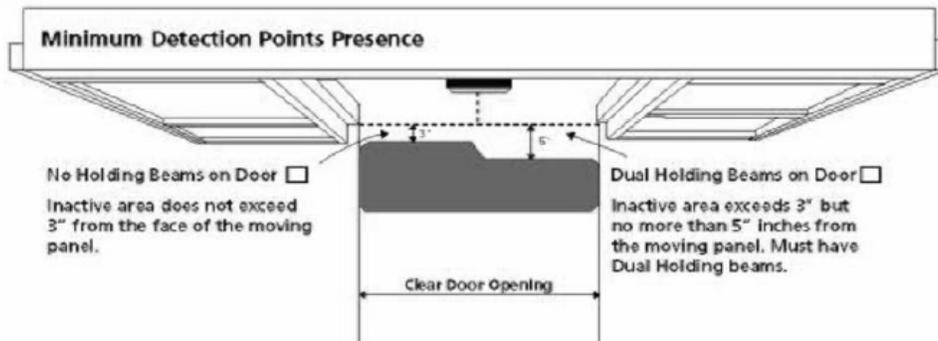


Important! Make sure the presence adjustment angle is at the full -8 degree setting before continuing.

I-One Sensor Presence/Motion Area Adjustment

Connect the sensor on the header cover side. Cycle the door open and closed several times. If ghosting occurs, adjust the Presence/Motion angle adjustment screw ¼ turn clockwise and cycle the door open and closed. Continue this process until ghosting stops.

Connect the sensor on the non-cover side of header and repeat the process described above. Once all adjustments are performed, disconnect 5-pin sensor connector and set dipswitches 1 and 2 for appropriate learn time (60, 180, infinite). Reconnect the 5-pin connector, immediately place the cover on the sensor and clear the area for 5 seconds.



Passed Failed Initially failed, then passed after adjustment

Note: Drawings not to Scale

Walk test sensor pattern to ensure conformance with the ANSI standard A156.10. It is imperative that sensors comply with the above detection zones.

For additional information, see the supplied installation manual or call Optex Technologies Inc. at 800-877-6656.