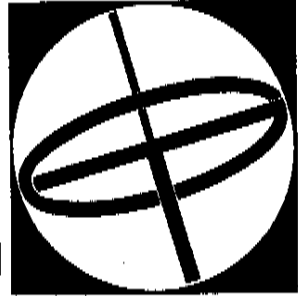


**SYSTEM**

**1100**

**GYRO  
TECH** inc



**INSTALLATION  
AND  
SERVICE MANUAL**

**FOR**

***SLIDING DOOR UNIT***

***“GYRO-SLIDE”***

**Automatic Door Operators**

## SPECIAL GLOSSARY OF TERMS

- 1) JAMB TUBE -- Vertical tube, support tube, strike tube or any other vertical supporting tube which is bolted to the slide unit at its ends.
- 2) SYNC -- When a door is in "SYNC" it will open at a fast speed, slow down, stop in the full open position, move closed at a fast speed, slow down and stop in the fully closed position. A door that is out of "SYNC" will open and close slow, then fast, then slow, or any other combination of speeds.
- 3) HEADER -- 6-1/2" x 6-1/2" square casing which houses the operator, control and the belt drive system.
- 4) TRANSOM -- Any horizontal tube above the header but still attached to the vertical jamb tubes.
- 5) MOTOR -- Permanent magnet motor 1/8 h.p., 2350 r.p.m., 115 v. d.c..
- 6) ACTIVATING DEVICES -- Any electrical device other than mat switches used to activate this equipment must be of the momentary type switch as opposed to a hold open switch type and must be so mounted within eyesight of door.

I) RECOMMENDED TOOLS:

- A) #2 Phillips Screw Driver
- B) #3 Phillips Screw Driver
- C) Small Flat Blade Screw Driver
- D) 3/16" Hex Key
- E) 7/16" Box Wrench
- F) 5/64" Hex Key
- G) 1/2" Combination Wrench
- H) 7/16" Combination Wrench
- I) 9/16" Combination Wrench

II) PARTS CHECKS:

Within seven (7) days of receipt of material used in the fabrication of a slide unit, all boxes should be opened and checked to assure that no parts are missing. On orders where more than one slider has been shipped, all boxes for a particular slider are coded alike. (ie: 1 of 2, 2 of 2, etc.) Each slider is assembled and packed as a unit, care should be taken to assemble each slide unit from parts removed from the boxes marked specifically for that unit. Failure to follow this strict rule may result in less than satisfactory operation of the slide unit.

- A) Header Package-Operator, Control Box, Soft Start, Tape Switch, Belt Assembly, Drive Idler Assembly, Belt Tensioner Sprocket Assembly, Electrical Wiring, Header Weather Extrusion (2 pieces), Decal Package, and Instruction Manual. In some isolated instances, the header can be "crushed" in shipment. See Figure #21 for the minimum dimension between header base rail and fixed header.

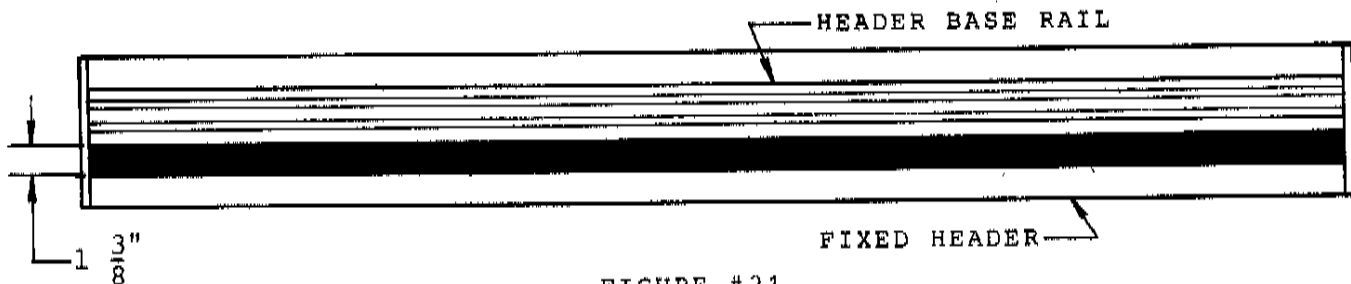


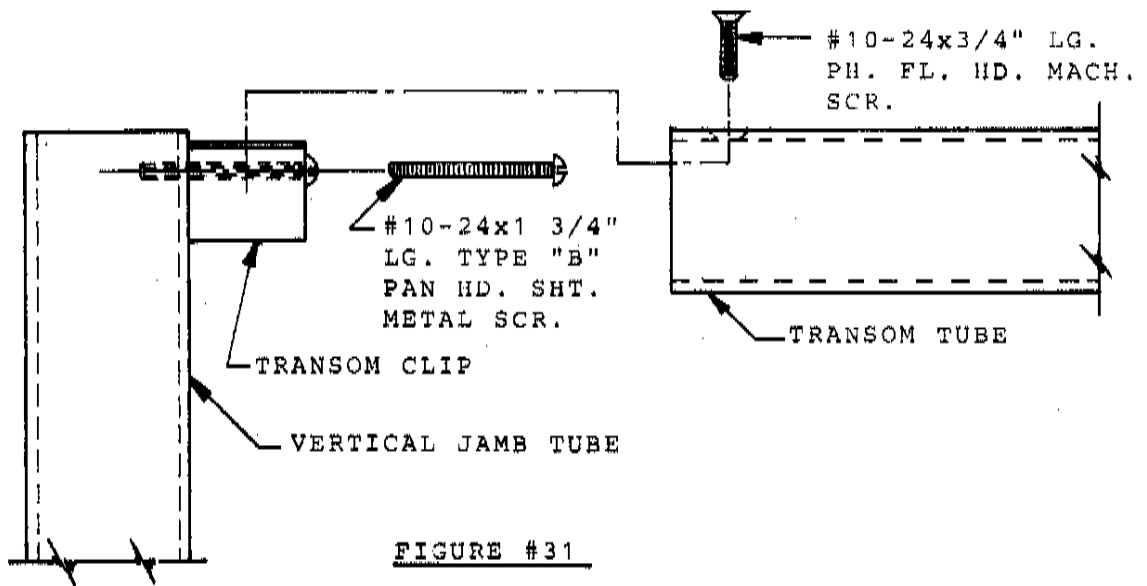
FIGURE #21

- B) Two (2) jamb tubes - 1 3/4" x 4 1/2"
- C) Vertical Mullion - One per single slider, two per bi-part slider.
- D) Sidelight Screw Assembly Box - Each box contains all screws, brackets, washers and bolts to assemble a single slider. Two boxes are sent with each bi-part.

- E) Sidelite Base Rail - One per single slider, two per bi-part slider.
- F) Glass Stop and Vinyl - Enough vinyl to insert in all the glass stop for the entire frame assembly.
- G) Door(s) - One per single slider, two per bi-part slider. Inclusive - glass stop and vinyl, screws, bottom door roller and one complete anti-riser assembly (white box), two hanger rollers (white box) and one drive bar (identified in Figure #41 and drawing #414354 found in Chapter IV).

TIGHTEN ALL SCREWS THAT MAY HAVE LOOSENED DURING SHIPPING

- III) Frame Assembly - See attached exploded view of typical slide unit; page 7.
  - A) Remove cover (drawing #414353, item #5) from header proper by removing the 10-24 x 1/2" flat head phillips machine screws. At this point, all factory installed screws, brackets, etc., should be checked to confirm that they are tight. The vibration of shipment can cause even the tightest screws to loosen. Mount each jamb tube (1-3/4" x 4-1/2") with (4) 1/4-20 x 1" hex bolts and (4) 1/4" star washers. A 7/16" box wrench will allow you to reach around any tight spots. If your slide unit is equipped with a transom, when mounting transom tube to vertical tubes, refer to Figure #31.



B) Sidelite Assembly (Refer to Drawing #414353 and Figure #32)

1. Fasten sidelite base rail(s), item #10, to jamb tube item #9 sidelite assembly clip item #14 with (1) #1/4-20 x 3/4" lg. ph. fl. hd. mach. screw item #20.
2. Mount the mullion base clip item #15. Locate the clips two mounting holes 1 5/16" from edge of base rail. Drill (2) 1/4" dia. holes x 1" deep to accept hi-red screw anchors, item #18. In instances where the finished floor is not flush, use spacer shims item #16 to shim base clip. This will keep entire unit square. (If an air gap appears along the bottom of sidelite base, caulk along the exterior edge of the sidelite base).
3. Fasten the fixed sidelite muntin bar item #11 to jamb tube item #9 - sidelite assembly clip item #14 with (1) #1/4-20 x 3/4" lg. ph. fl. hd. machine screw item #20.

4. Slide the 3/4" wide, 84" long nylon thermal brush into the internal vertical mullion weathering groove.
5. Fasten vertical mullion item #12 to fixed rail item #2 - sidelite assembly clip item #14 with (1) #1/4-20 x 3/4" lg. ph. fl. hd. mach. screw item #20.
6. Fasten the fixed sidelite muntin bar item #11 and sidelite base rail item #10 to vertical mullion item #12 - sidelite assembly clip item #14 with (1) 1/4-20 x 3/4" lg. ph. fl. hd. mach. screw item #20.
7. Slide entire unit over mullion base clip item #15 and fasten vertical mullion item #12 to mullion base clip, item #15 with (1) #1/4-20 x 3/4" lg. ph. fl. hd. mach. screw, item #20.

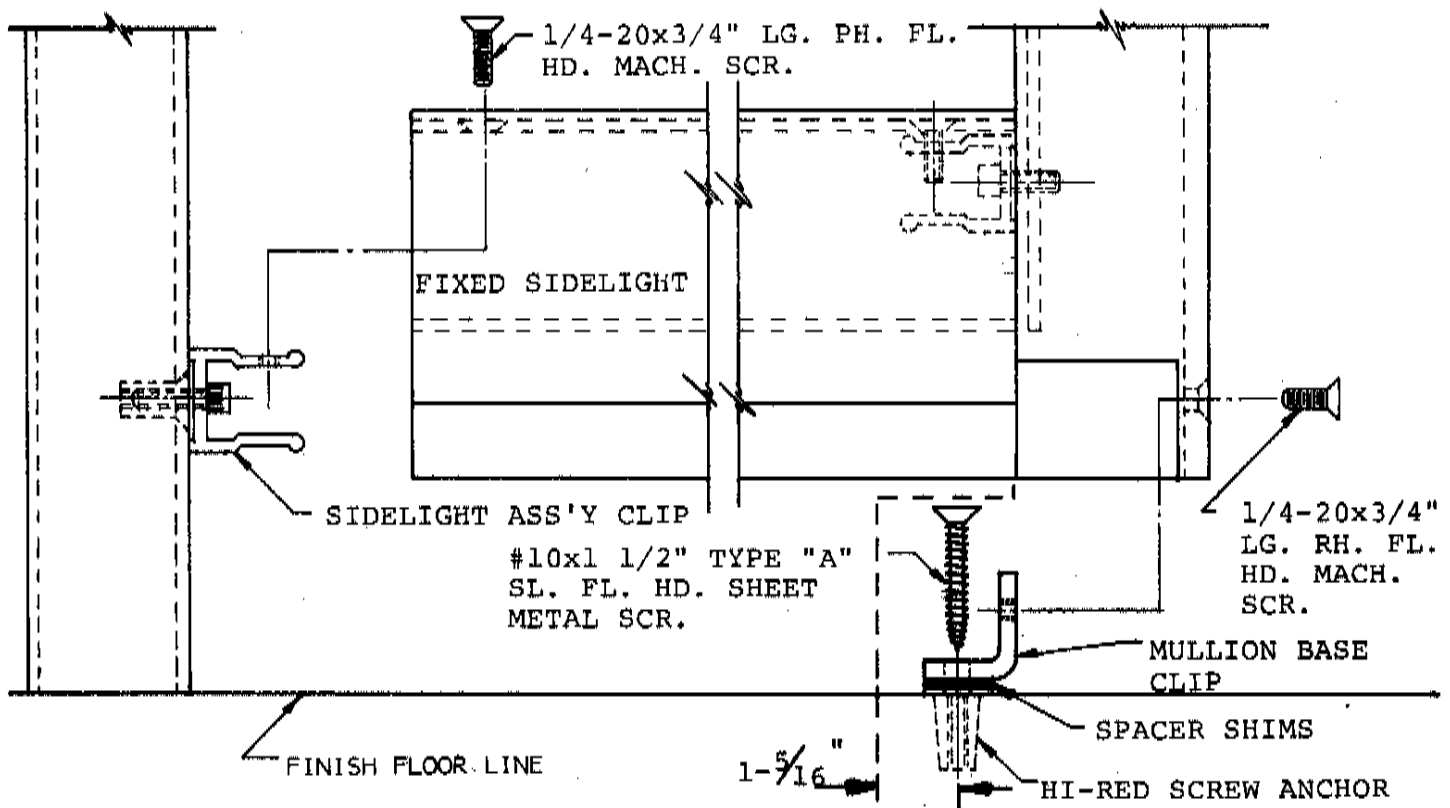
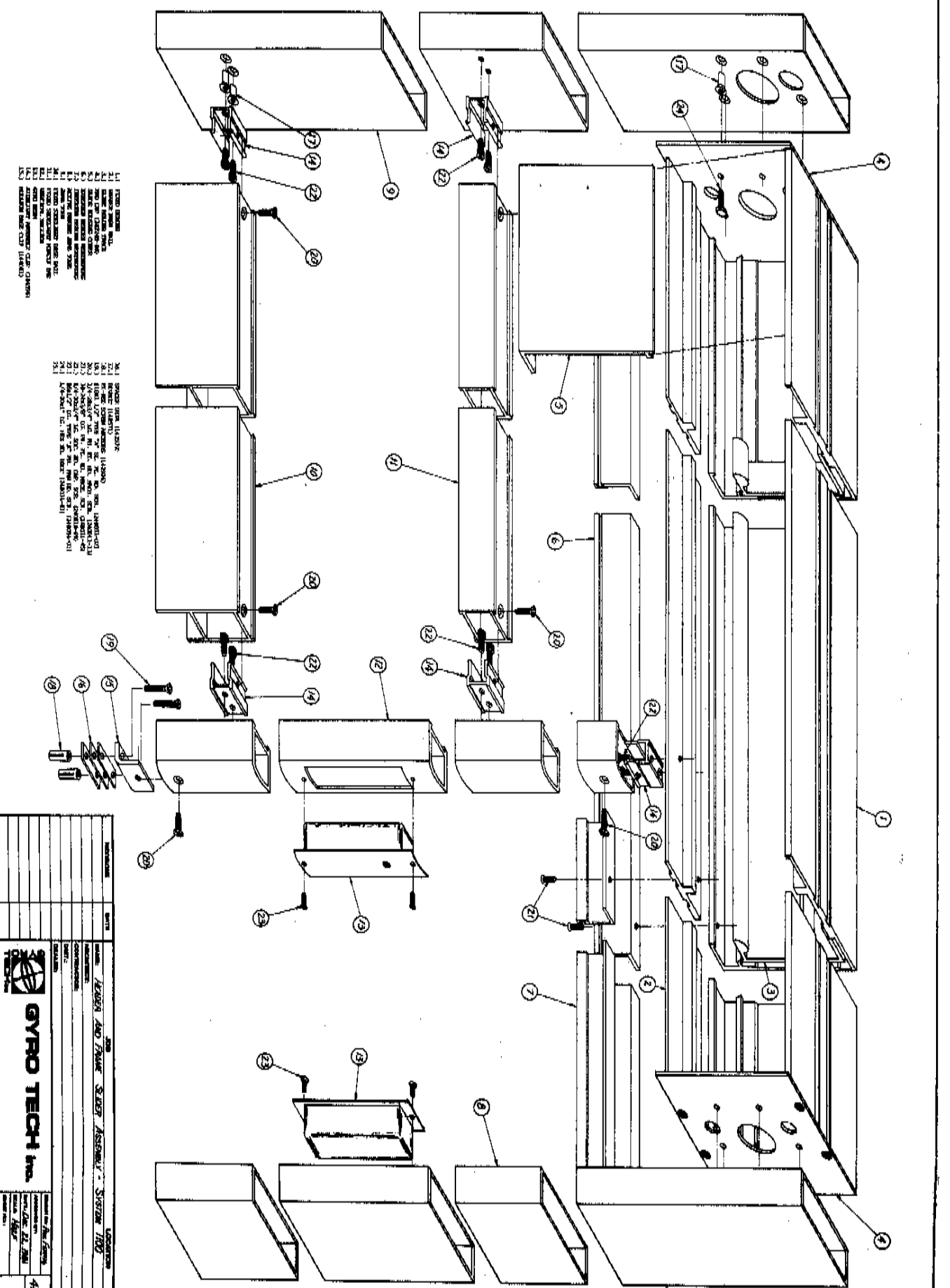



FIGURE # 32



- 11 FRONT HOUSING
- 12 HOUSING RING
- 13 HOUSING FRONT RING
- 14 HOUSING REAR RING
- 15 HOUSING SIDE RING
- 16 HOUSING TOP RING
- 17 HOUSING BOTTOM RING
- 18 HOUSING CENTRAL RING
- 19 HOUSING INLET RING
- 20 HOUSING OUTLET RING
- 21 HOUSING COVER
- 22 HOUSING END PLATE
- 23 HOUSING MOUNTING BRACKET
- 24 HOUSING MOUNTING BRACKET
- 25 HOUSING MOUNTING BRACKET
- 26 HOUSING MOUNTING BRACKET
- 27 HOUSING MOUNTING BRACKET
- 28 HOUSING MOUNTING BRACKET
- 29 HOUSING MOUNTING BRACKET
- 30 HOUSING MOUNTING BRACKET
- 31 HOUSING MOUNTING BRACKET

- 32 SPACER RING
- 33 SPACER RING
- 34 SPACER RING
- 35 SPACER RING
- 36 SPACER RING
- 37 SPACER RING
- 38 SPACER RING
- 39 SPACER RING
- 40 SPACER RING
- 41 SPACER RING
- 42 SPACER RING
- 43 SPACER RING
- 44 SPACER RING
- 45 SPACER RING
- 46 SPACER RING
- 47 SPACER RING
- 48 SPACER RING
- 49 SPACER RING
- 50 SPACER RING
- 51 SPACER RING

REVISIONS	DATE	BY	REASON

 <b>GYRO TECH INC.</b>		44-1333 2000
44-1333 2000		44-1333 2000



IV) Installation of doors in frame and mechanical hook-up;

Before installing door:

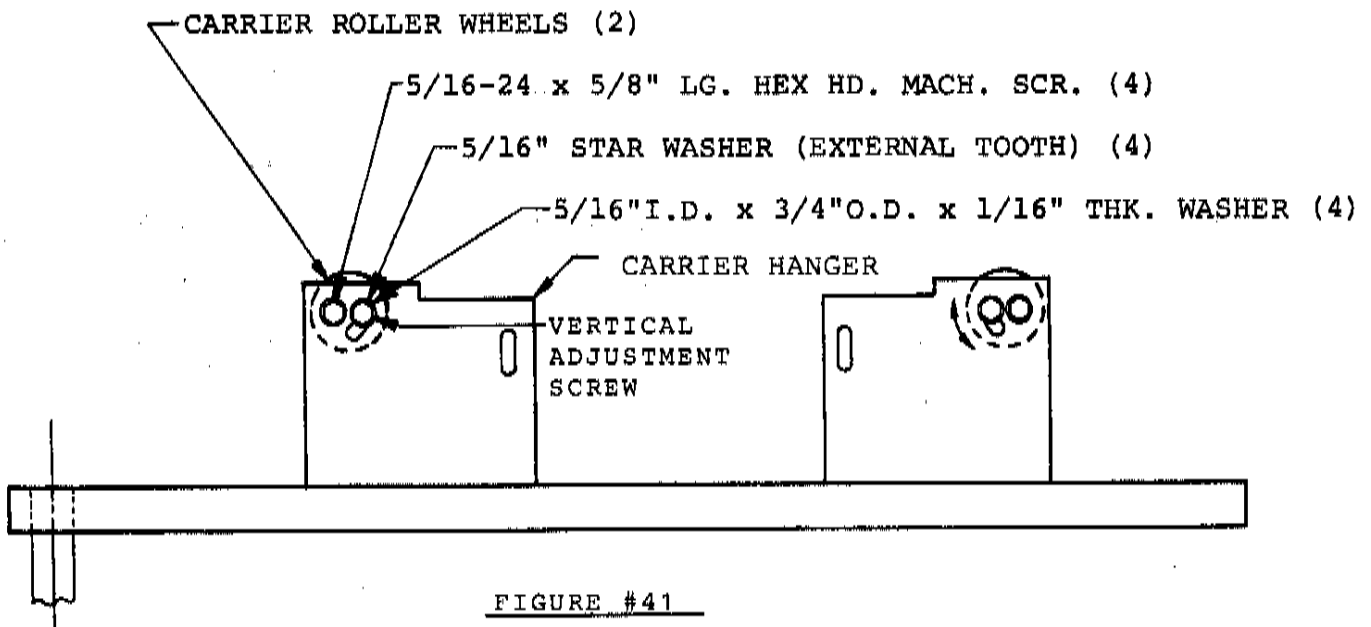
- 1) Remove the adjustable spring loaded sweep positioned in the bottom of each sliding door rail. Slide springs over the studs then brush holder and fasten with nuts to allow brush to be fully exposed.
- 2) Insert bottom guide assembly into the pivot style of the door as illustrated on drawing #414354 item #18 and associated hardware. Leave this loose to be fine tuned later.
- 3) Stand up door so that it is parallel with the header and tilt to insert the hanger ears on the carrier bar between the base rail and the main part of the header extrusion.
- 4) Work door up and into the opening so that it is parallel with the sidelite.

Note: Be careful to avoid damaging power down assembly located near strike stile of door leaf.

- 5) Prop up door on both ends with one inch thick wood. Attach carrier roller wheels with the two 5/16 - 24 hexhead machine screws to the carrier ears and locate so that the door is at the highest point, refer to figure 41.

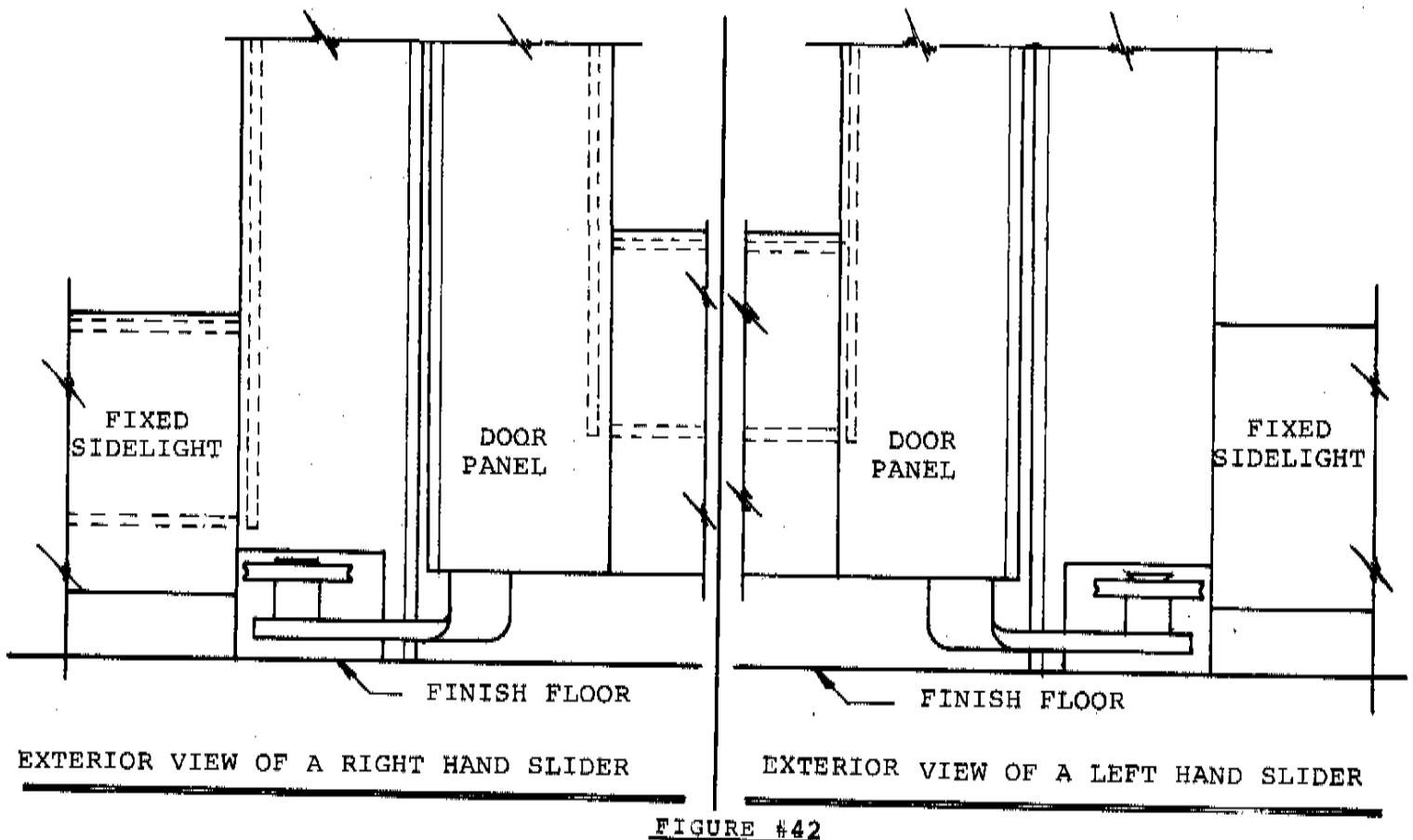
Note: Remove wooden blocks

- 6) Now that the door is hung on the rollers, panic the door and slide the bottom guide roller into



cont. 6) the sidelite base rail through the cutout on the bottom of the vertical mullion, refer to figure 42.

Note: At this time do not tighten bottom guide roller screws.



- 7) Align the doors using the carrier roller adjustment so the door hangs parallel with the sidelite, and in the case of a bi-part both dress channels are parallel. If unit has muntin bars these can also serve as alignment references.
- 8) Install drive bar using a #10-24 socket head cap screws and internal tooth washers as supplied, see figures 43 and 44 for proper attachment.
- 9) See drawing 414354 and 254464. Assemble items #14, #15, and #16 so that item #16 the #10-24 screw, is through the sheet metal channel and screwed halfway into the block item #15.
- 10) Locate item #3, the anti riser bracket and roller assembly and locate in position over ear so that the roller is restrained from falling away from the ears.
- 11) Install the channel assembly, items #14, #15, and #16 over the ears so that the large hole is towards the back of the header.
- 10) ■ | | | || | | | | | | | | ■ | |  
 || | | | | | | | | | | | | | |  
 adjuster. Slant item #3, the anti riser bracket and roller assembly so that you may insert item #12 which is the anti riser pivot post through item #3 and thread onto item #13,

- 13) Swing item #3 (anti-riser bracket and roller assembly) into position so that it can be attached to the drive bar item #2 using items #8 and #9. Secure tightly.
- 14) Thread adjuster screw item #16 to bear against carrier bar ear item #1 to adjust roller item #5 to within 1/32" (.031") from bottom of track.

Note: Two thicknesses of matchbook cover is approximately .030. Do this on both ends maintaining drive bar parallel to header. Tighten pivot post item #12 to 15 ft. lbs. of torque.

At this time the following conditions must exist:

- A) Door must be fully closed (on singles).  
Doors must be closed on center line of door opening (on bi-parts).
- B) Drive bar item #2 must be parallel with header.
- C) Anti-riser brackets and roller assembly item #3 must be of equal angle relative to drive bar.

If the above mentioned conditions don't exist perform the following steps:

- A) Single Slide
  - 1) Loosen belt tension

Note: Spring close operator; place a 1/8" pin into the lovejoy coupling per figure #51 before removing belt tension.

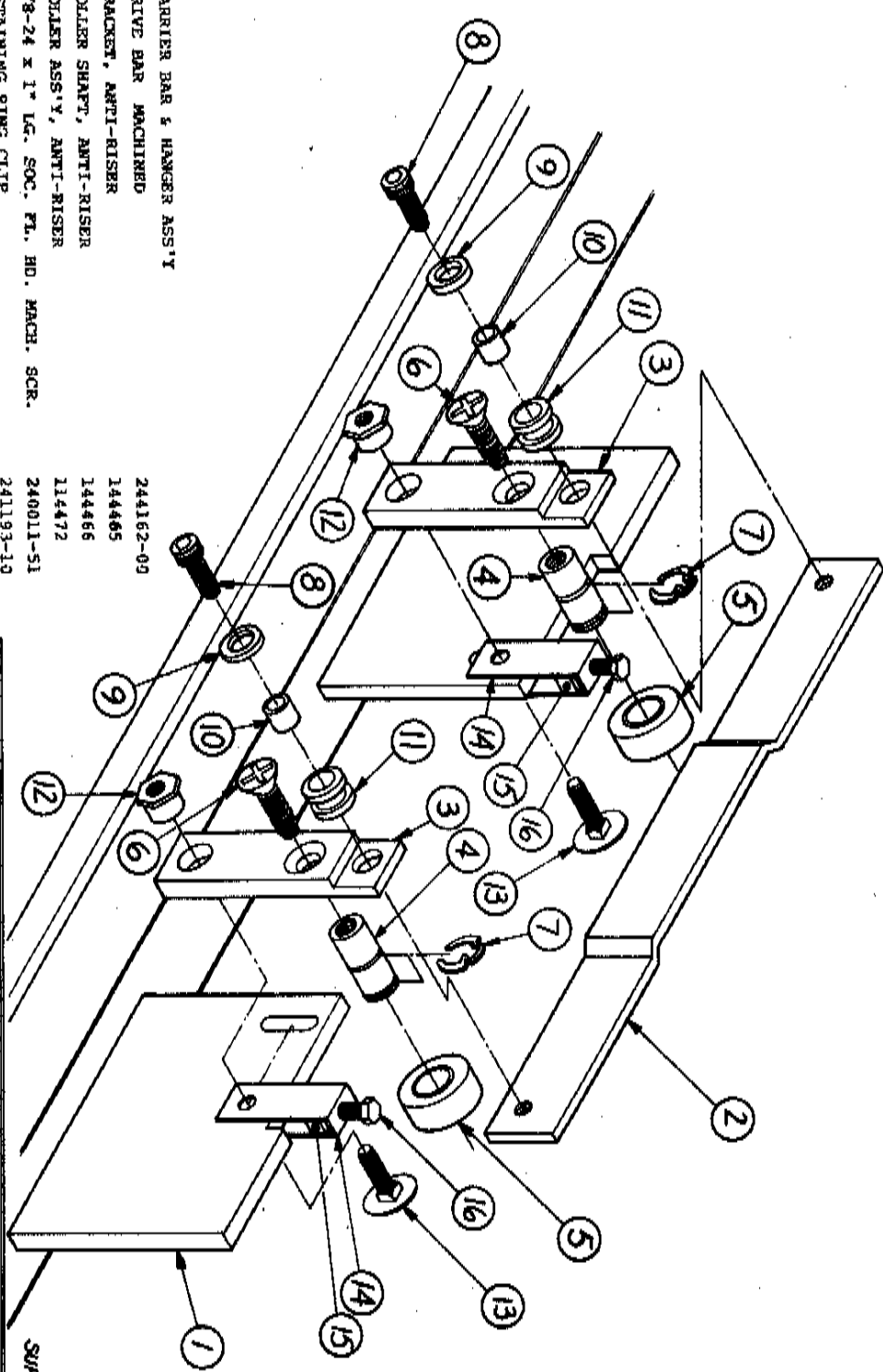
- 2) With door closed loosen item #12 and #16 (see drawing 414354). Reposition belt so that drive bar and carrier bar ears are centered relative to each other.
  - 3) Readjust per step 14
  - 4) Remove 1/8" pin
- B) Bi-Parting Slide
- 1) Remove drive bars from both doors and detach from belt clips.
  - 2) Locate belt clip that serves as END SPLICE (usually the lower clip). This is the independent door leaf.
  - 3) Close both doors so that they meet at the center line of the door opening and secure so that they don't shift.
  - 4) Check to make sure that the belt clip (splice end) is centered between the carrier bar ears. If not, loosen belt and reposition belt clip as close to center as possible.
- Note: Spring close operator, place a 1/8" pin into the lovejoy coupling per figure #51 before removing belt tension.
- 5) Reattach drive bar and realign anti-riser per step #14.
  - 6) Check the dependent belt clip so that it is centered between the carrier bar ears, if not, disassemble clip and move the clip to center.

Note: Exact center may not be obtained because adjustment increments are in 1/2" steps.

- 7) Reattach drive bar and adjust anti-riser per step #14
- 8) Remove 1/8" pin
- 15) With door in the closed position, adjust brush holder with a 7/16" socket so that brush just touches the floor.

Note: Excessive contact force may cause floor marring.

- 16) Check roller location in sidelite base rail. Panic door and tighten screws to secure bottom guide roller.
- 17) Cycle door for smooth and quiet operation.
- 18) Adjust door stop (Located in header by adding or removing washers) so that the doors open flush with the sidelite.



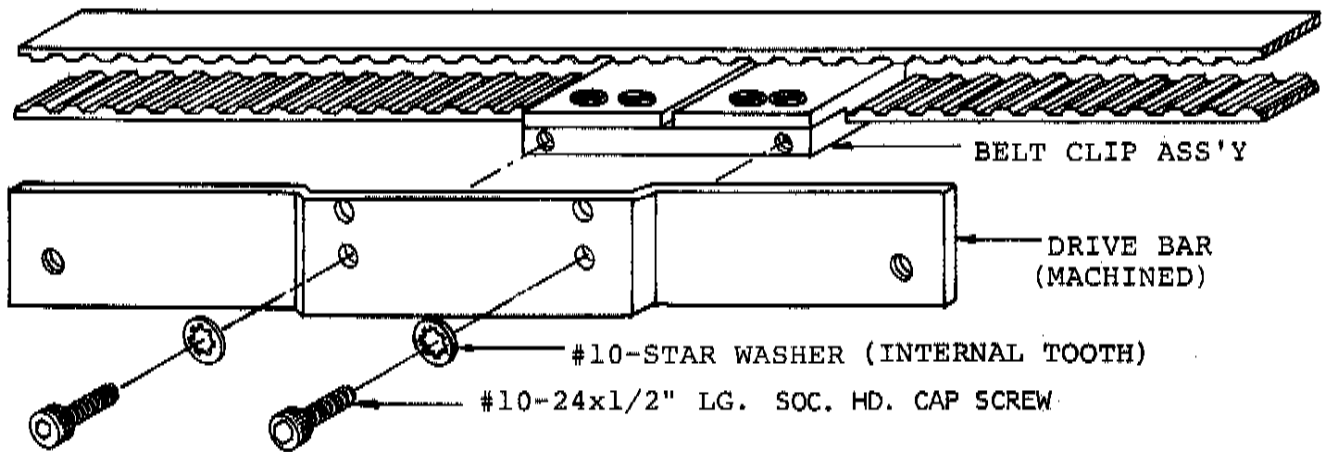
- 1.1 CARRIER BAR & HANGER ASS'Y 244162-09
- 2.1 DRIVE BAR MACHINED 144465
- 3.1 BRACKET, ANTI-RISER 144466
- 4.1 ROLLER SHAFT, ANTI-RISER 114472
- 5.1 ROLLER ASS'Y, ANTI-RISER 240011-51
- 6.1 3/8-24 x 1" LG. SOC. FL. HD. MACH. SCR. 241193-10
- 7.1 RETAINING RING CLIP 240010-99
- 8.1 1/4-20 x 5/8" LG. SOC. HD. CAP SCR. 240017-33
- 9.1 1/4" I.D. x 3/4" O.D. x 1/16" THR. STU. WASHER 240017-33
- 10.1 MOUNTING SPACER, ANTI-RISER 144168
- 11.1 MOUNTING GRONNET, ANTI-RISER 144169
- 12.1 PIVOT POST, ANTI-RISER 144468
- 13.1 5/16-18 x 3/4" LG. STEP BOLT 243235-05
- 14.1 CHAMFEL ADJUSTER, ANTI-RISER 144469
- 15.1 ADJUSTER BLOCK, ANTI-RISER 144470
- 16.1 #10-32 x 3/4" LG. HEX HD. MACH. SCR. 240014-13

SUPERCEDES PW 254301

REV. #	DATE	DATE	SCALE	PART NAME
245	7-12-81	7-11-83	HALF	ANTI-RISER AND DRIVE BAR ASSY ASSEMBLY
DESIGNER	DATE	SCALE	MATERIAL	
W. J. P. / J. P. C.	7/11/83	HALF		
DRAWN BY	DATE	SCALE	SPECIFICATIONS	
J. P. C.	7/11/83	HALF	SYS 1100 SLIDERS	
APPROVED BY				
TOLERANCES (UNLESS NOTED) FRACTIONAL ... 1/32 DEC ... 0.005 ANG ... 30° DIMENSIONS ... 3"				
			<b>GYRO TECH INC.</b>	
DRAWING NO.			PART NO.	
254464			254464	

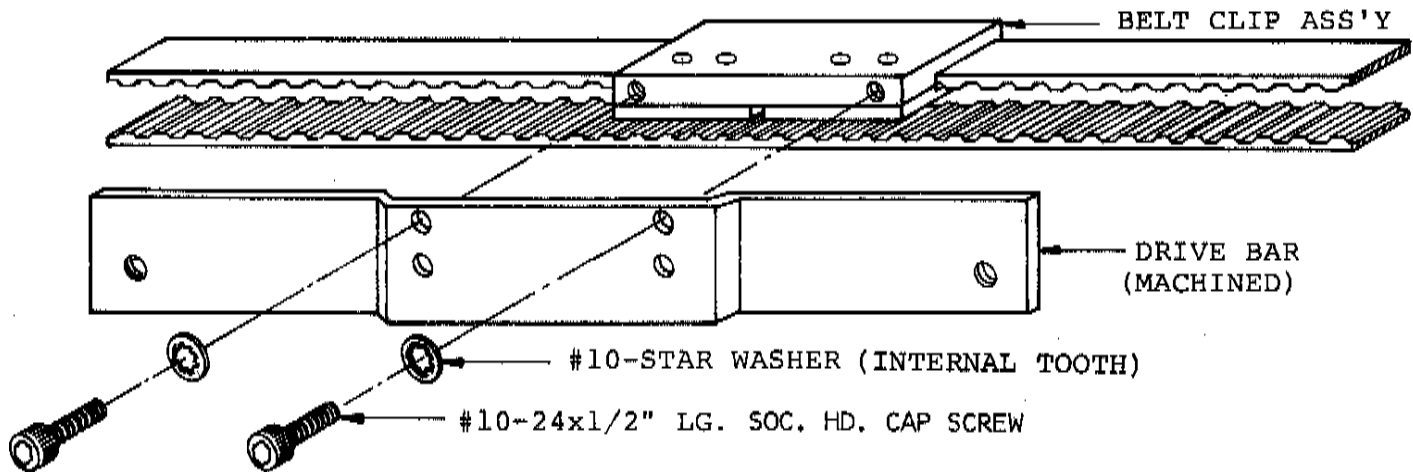






BI-PART - LEFT HAND SLIDING DOOR DRIVE ATTACHMENT

FIGURE #43



SINGLE - RIGHT HAND AND LEFT HAND SLIDING DOOR DRIVE ATTACHMENT

BI-PART - RIGHT HAND SLIDING DOOR DRIVE ATTACHMENT

FIGURE #44

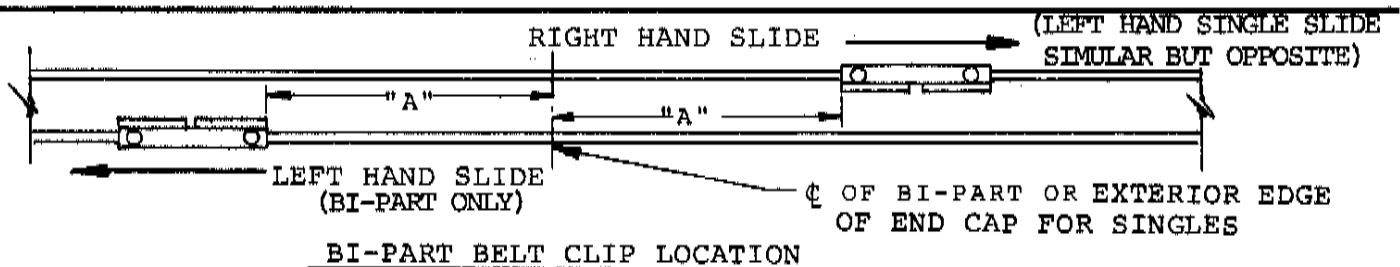


FIGURE #45

D.O.W.		DIM. "A"
SINGLE	BI-PART	
	48"	12 3/16"
	60"	12 3/16"
36"	72"	15 3/16"
42"	84"	18 3/16"
48"	96"	21 3/16"

SPRING CLOSE OPERATOR (follow steps VA-F)

POWER CLOSE OPERATOR (follow steps VB-F)

V) Final Assembly Adjustments and Fine Tuning:

- A) Remove 1/8" pin from operator (see figure #51)  
and allow spring pressure to close door.

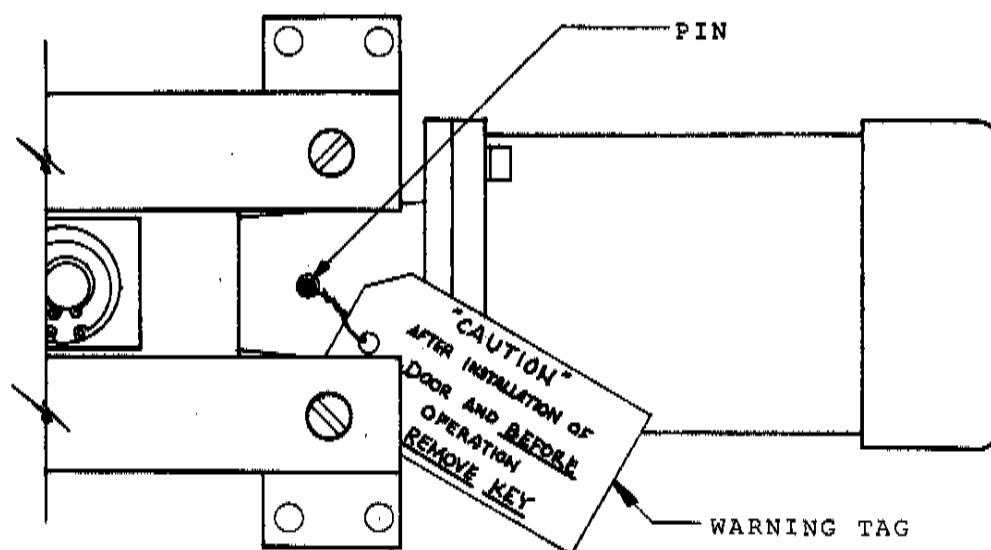


Fig. #51

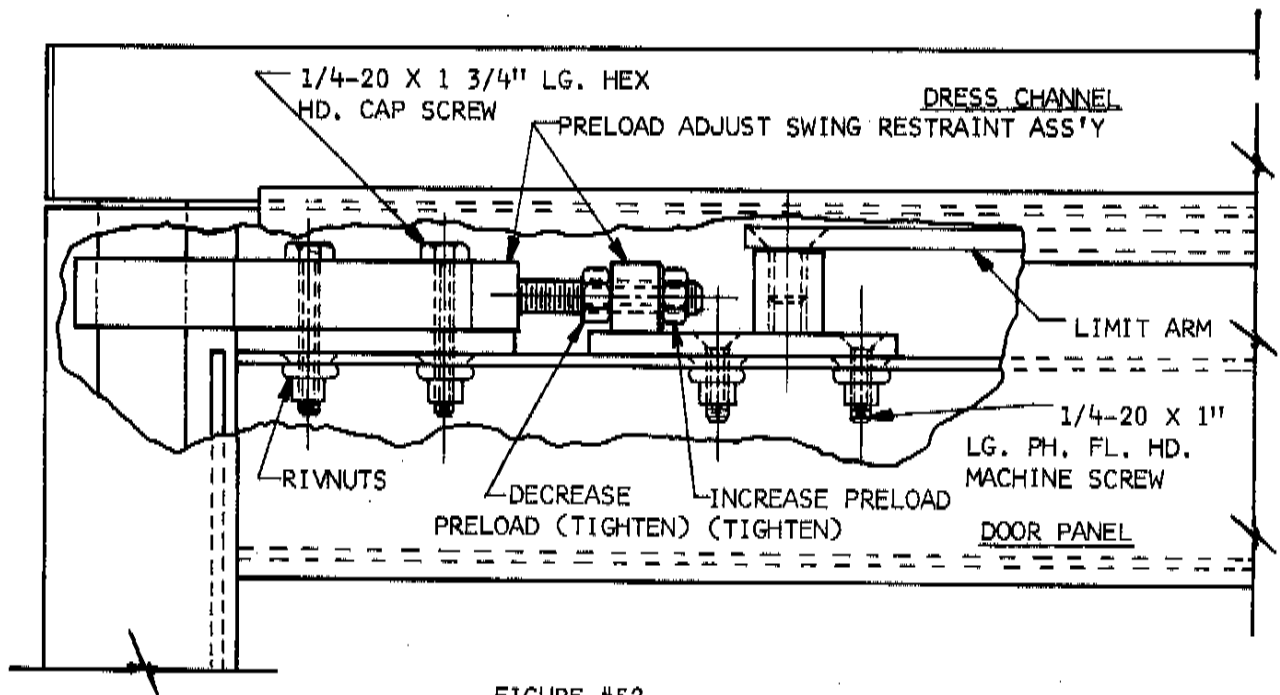
Door should be opened manually and allowed to close under spring pressure several times to be assured that no obstructions, etc. exist. If a drag occurs on the closing cycle readjust the anti-rise assembly (see page 9 and ref. dwg #414354).

(B) Slide Door-Preload Adjustments (recommended after glazing the door) When and how to INCREASE the preload (refer to Figure #52). Panic the door, then reengage the door, if the door has to be lifted up to be reengaged, you must increase the preload. Loosen, (2) 1/4"-20 x 1 3/4" lg. hex hd. cap screws and the decrease preload nut and tighten the increase preload nut until desired result.

\*\* Door is at proper preload when the door is panicked and re-engaged without pulling down or lifting up the door to re-engage it.

When and how to DECREASE the preload (refer to Figure #52). Panic the door, then reengage the door, if door has to be pulled down to be reengaged you must decrease the preload. Loosen, (2) 1/4"-20 x 1 3/4" lg. hex hd. cap screws and the increase preload nut and tighten the decrease preload nut until desired result.

\*\* Door is at proper preload when the door is panicked and re-engaged without pulling down or lifting up the door to reengage it.



POWER DOWN ASSY ADJUSTMENT PROCEDURE

- C) Rotate the (2) hex head nuts item #1 to adjust item #2 so that the roller that contacts the tape switch doesn't rub on the lip of the header extrusion and that it is centered over the tape switch. Manually, cycle the door to check for interference with the lip on the header extrusion. Tighten the hex head nuts securely.

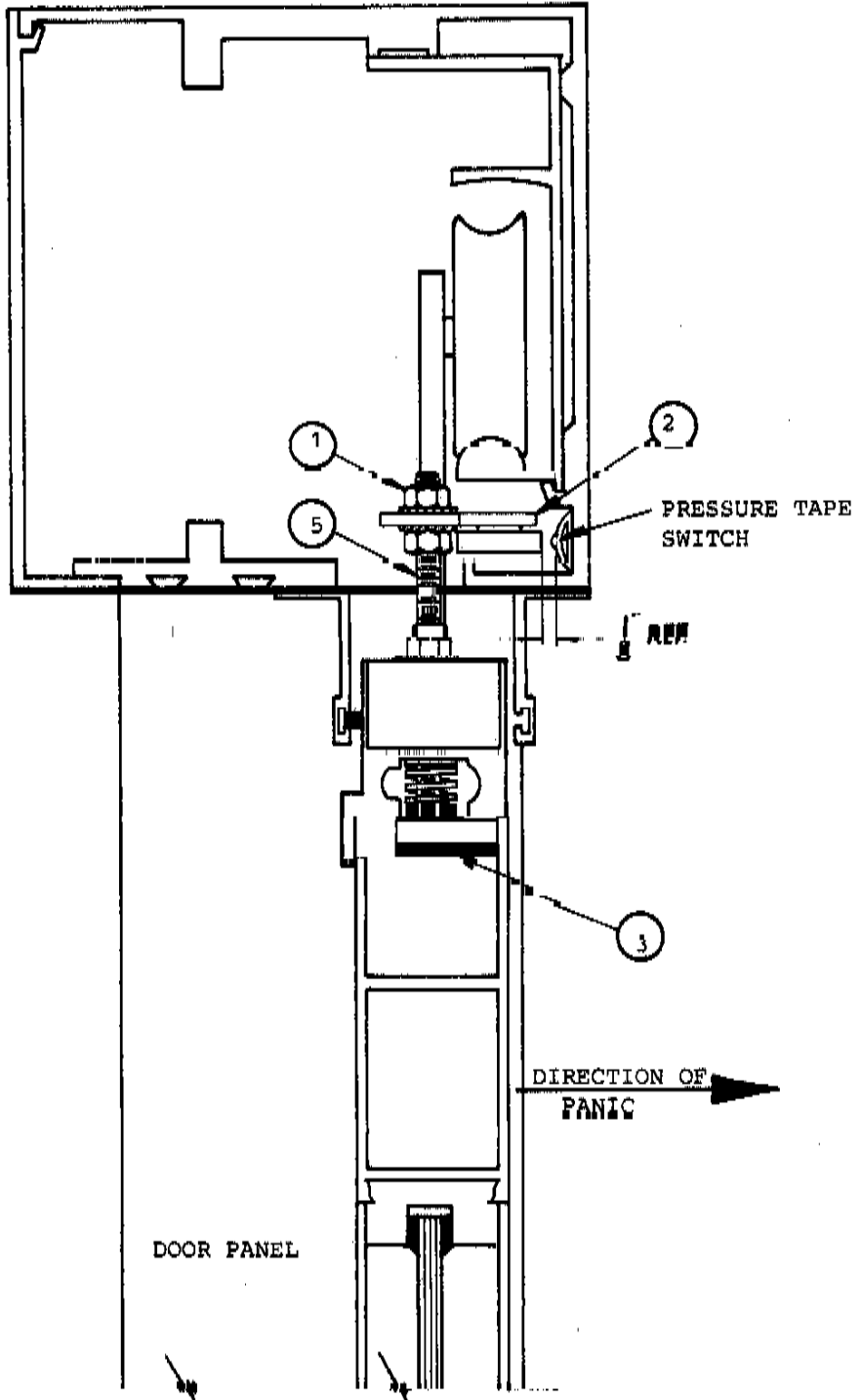


FIGURE #53

(D) Fasten internal and external header weathering as per Figure #54.

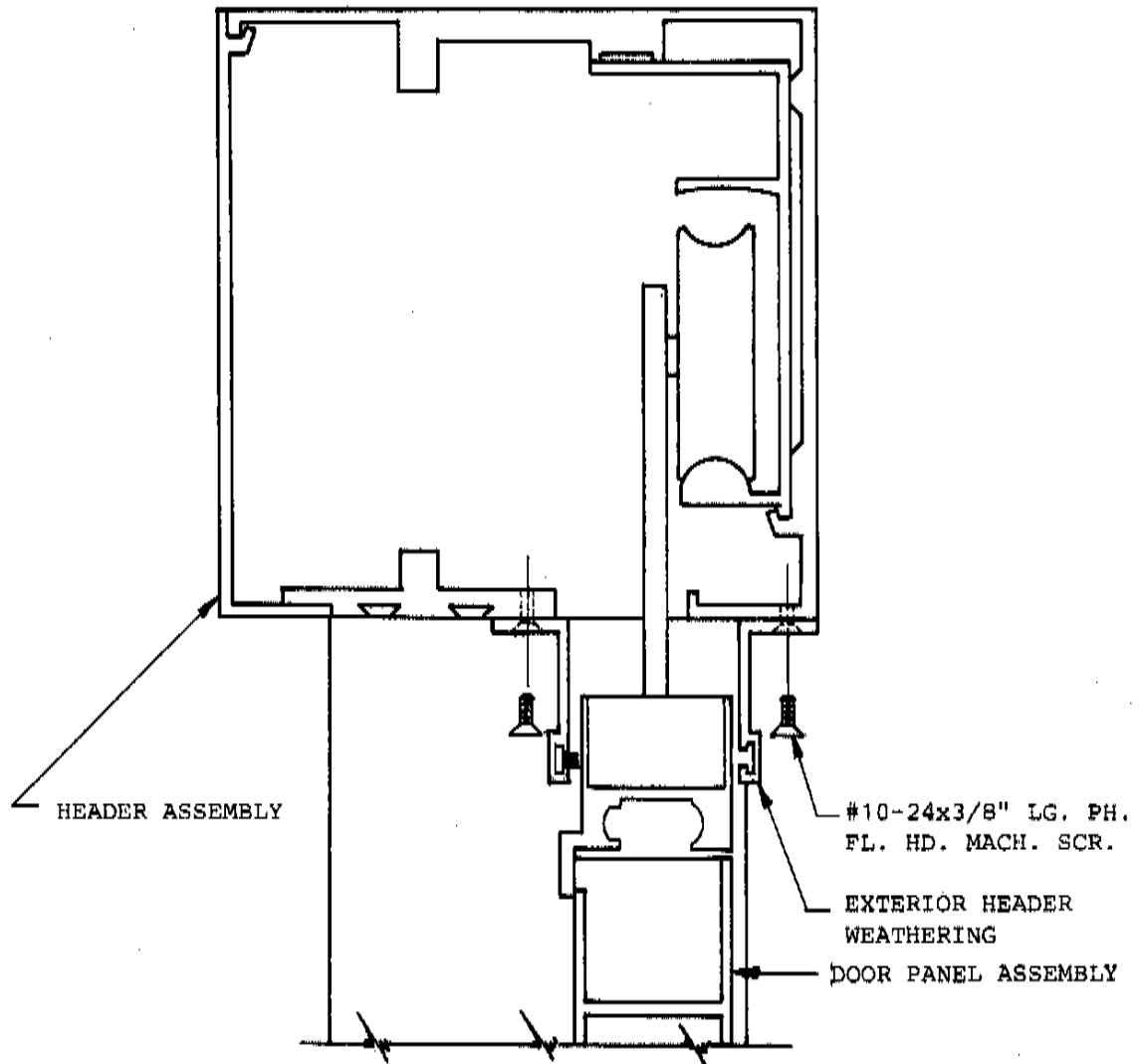
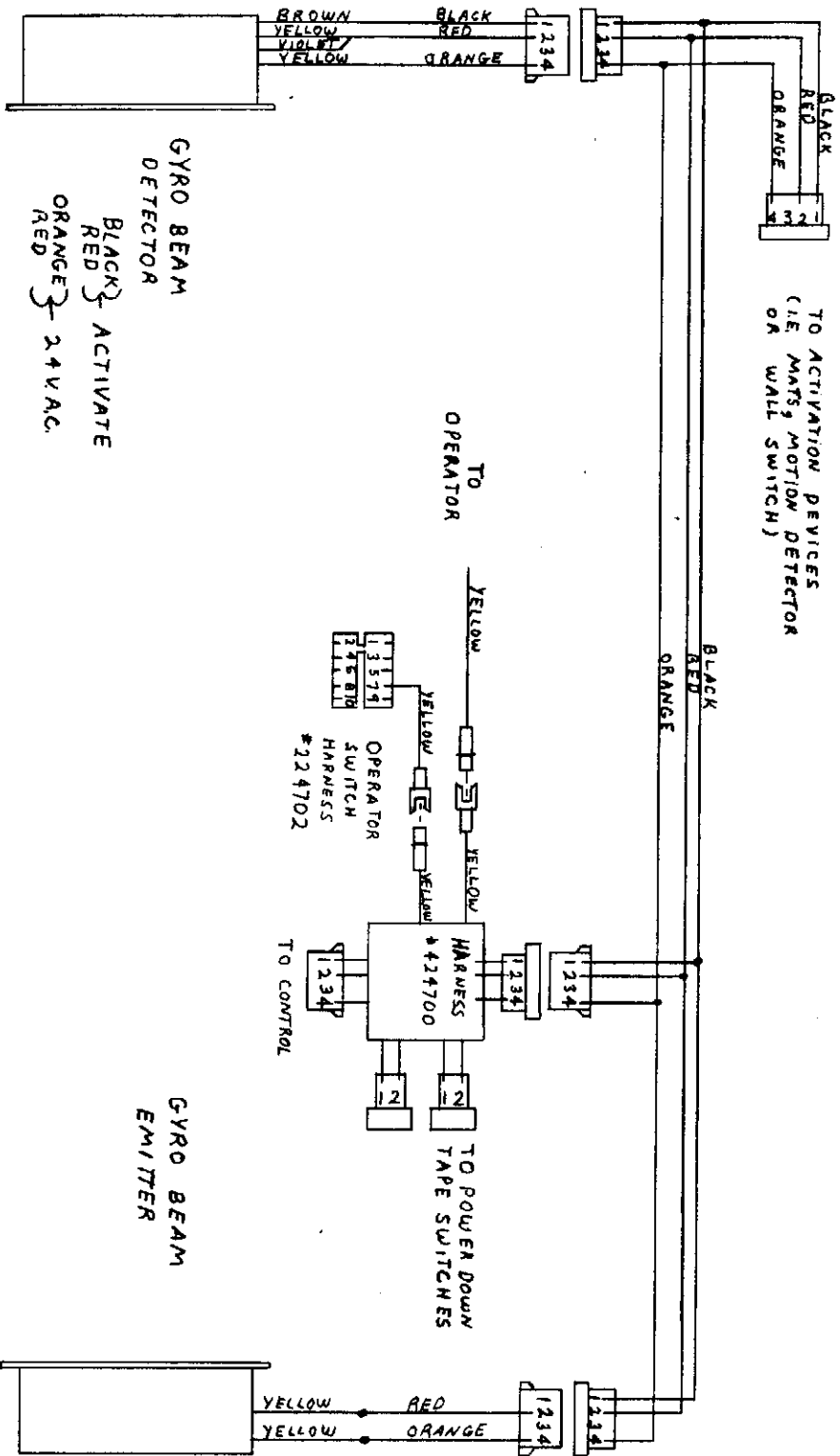


FIGURE #54

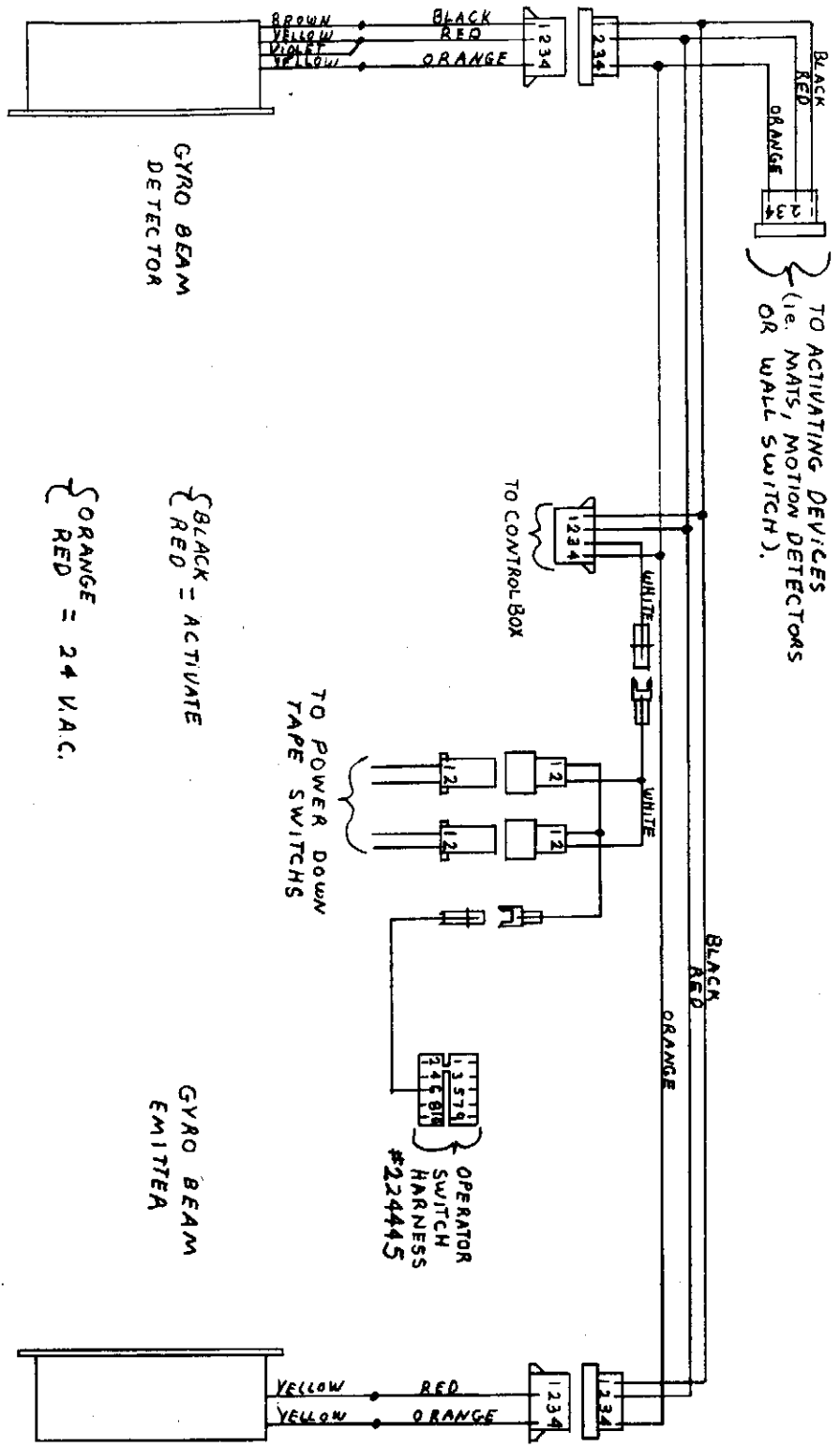
(E) Connect 120 volts AC 60 cycles power source to power harness that is installed in header (see Figure #55). Touch the two mat wires together and the door(s) should open. If door(s) bounce upon recycling, the anti-riser roller should be raised slightly-refer back to page 9 and drawing #254464 for instructions.



**POWER OPEN/SPRING CLOSE OPERATOR**

HEADER WIRING HARNESS - SINGLE PART # 214446  
 - BI PART PART # 214447  
 SIDE LITE SAFETY BEAM WIRE HARNESS PART # 214448

REV	DATE	DATE	SCALE	DRAWN BY	APPROVED BY	TOLERANCES (UNLESS NOTED)	FRAC TIONAL	DEC	ANGLES
REL 271	8/15/83	8/8/83	NONE	C.N		± 1/64	± 0.010	± 0.008	± W
PART NAME: P.O.S.C. HEADER WIRING - COMPLETE MATERIAL: W/ELECTRIC LOCK SEE 234740 SPECIFICATIONS: SYS 1100 SIGLES & BI-PARTS									
DRAWING NO. 234703 PART NO. 234703									



GYRO BEAM  
DETECTOR

GYRO BEAM  
EMITTER

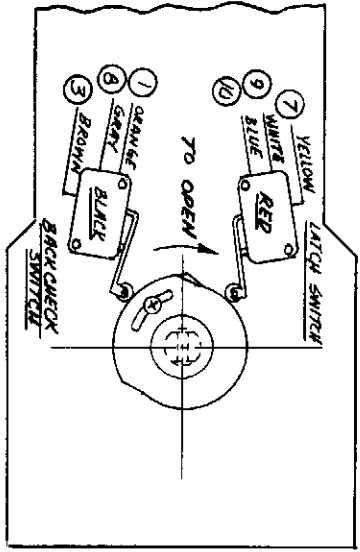
{ BLACK = ACTIVATE  
RED = 24 V.A.C.

HEADER WIRING HARNESS - SINGLE PART # 214446  
 81-PART PART # 214447  
 SIDELIGHT SAFETY BEAM WIRE HARNESS PART # 214448

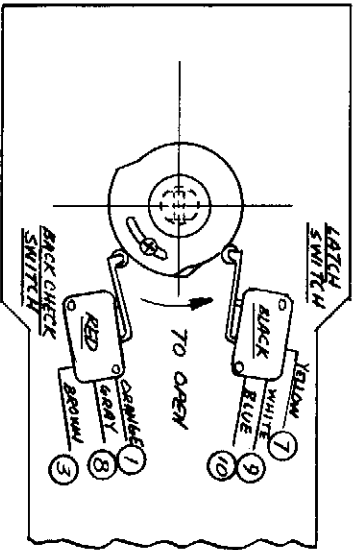
REVISIONS	DATE	DATE: 11/22/82	PART NAME: P.O.R.C. HEADER WIRING
		SCALE: NDN/E	MATERIAL:
		DRAWN BY: GN	SPECIFICATIONS: SYS. 1100 SINGLE 4A1-PART
		APPROVED BY:	
		TOLERANCES (UNLESS NOTED)	TE.SI.OEA HAS ELECTRICAL SEE # 234450
		FRACTIONAL . . . 2 / 32	
		IN . . . . . 2.010	
		ANGLES . . . . . 2 M	
			DRAWING NO.
			PART NO.
			234444



OPERATOR FOR R.H. & BI-PART SLIDERS



OPERATOR FOR L.H. SLIDERS



MOTOR LEADS MUST BE REVERSED FOR L.H. SLIDERS (MISMATCHING)

NOTES:

- ① THE P.O.P.C. SWITCH HARNESS WIRE COLORS DIFFER FROM THOSE OF THE SPRING CLOSE SWITCH HARNESS.
- ② ALL SINGLE SLIDERS (L.H. & R.H.) SHOULD HAVE THE BELT CLIP LOCATED ON THE UPPER PORTION OF BELT.

Instructions for Power Open/Power Closed control box. P/N 413800

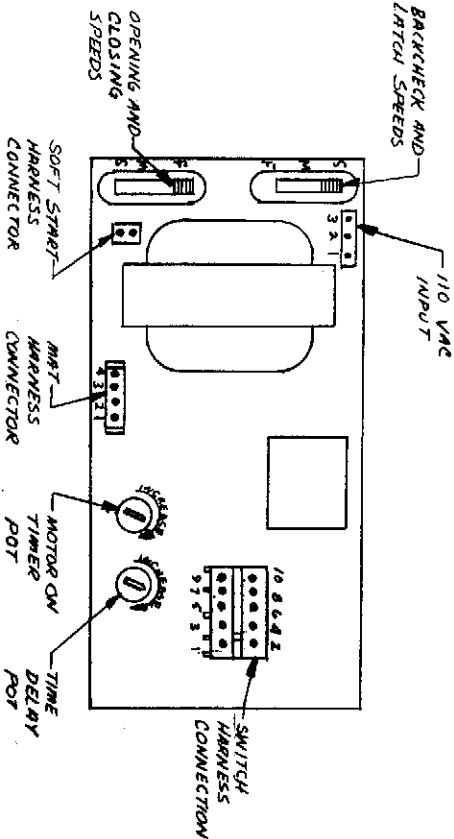
With doors closed, slot in cam shaft should be in line with the horizontal axis of the operator, as with a spring closed operator.

Upper cam is adjusted to locate backcheck point.

Opening and closing speeds are controlled by a slide switch in control box, backcheck and latch speeds are controlled by the other slide switch.

NOTES:  
A swinger soft start (30 mF) must be used with this control box. Kit# 113799

On the P.O.P.C. use a double pole single throw switch to cut the power to the control box and break one of the motor leads. Use a switch rated at 5 amps. This will make the door easier to slide open manually and eliminate the possibility of jumping time.



MOTOR ON TIMER POT : ADJUSTS TIME THAT MOTOR STAYS ON DURING OPENING AND CLOSING PARTS OF CYCLE.  
TIME DELAY POT : ADJUSTS TIME THAT DOOR STAYS OPEN

REVISIONS	DATE	DATE: 10-7-82	SCALE: NONE	PART NAME: P.O.P.C. CONTROL & CAM INSTRUCTIONS.
1	EQN 1/21	8-31-82		MATERIAL:
2	EQN 1/22	4-10-84		SPECIFICATIONS: MODEL # ZG00-2 P/N 413800
DRAWN BY: P.D.E.				DRAWING NO.
APPROVED BY:				PART NO. 253817
TOLERANCES (UNLESS NOTED)				
FRACTIONAL ± 1/64				
XXX ± .010				
ANGLES ± .1°				



GYRO TECH INC.

- NOTE:
- 1) Before proceeding any further, tighten every screw, bolt, etc. possible to ensure trouble free running.
  - 2) When placing slide unit into opening you should allow a minimum of 1/4" around entire unit. This unit will support itself and any glass which must be installed, but is not meant as a structural member of the building. If roof deflection is in excess of 1/4" the excess should be added to the 1/4" clearance allowance.
- F) Finally, replace header cover with 10-24 x 1/2" flat head machine screw.

## SECTION VI

### SWITCH MAT INSTALLATION

1. Surface where mat is to be installed must be clean, flat and free of foreign material. This surface must be level or slightly pitched away from threshold. Do not lay mat over expansion joint without proper filling.
2. Position mat in door opening using loose threshold as guide. CAUTION: Do not bend mat.
3. Remove loose threshold and panic door to check for adequate clearance between door and mat.
4. Notch lower end of vertical mullion in area covered by threshold to allow entry of mat leads. Feed mat lead wires up through vertical mullion and into header for connection to mat harness. Use care when pulling wire through vertical mullion to prevent damage to insulation. Reinforce insulation at possible chafing points with tape. NOTE: Never make connections at floor line.
5. Layout screw hole location of threshold using threshold as template. Using carbide tipped masonry drill, drill holes into concrete to accomodate anchors. Remove debris and insert anchors. Place threshold in position, mark the threshold to accomodate the overall width of mat, notch out threshold at the die mark to accept mat. Thus allowing threshold to lie flat. Then fasten in place with No. 14 X 1 1/2" lg. screws supplied. CAUTION: Do not damage lead wires.
6. Lay trim around perimeter of mat and use the various trim pieces as a template to layout hole location. Drill holes for anchors. Remove debris and insert anchors. Secure trim using supplied screws in anchors. See Figure #61 for recommended sequence to tighten screws.

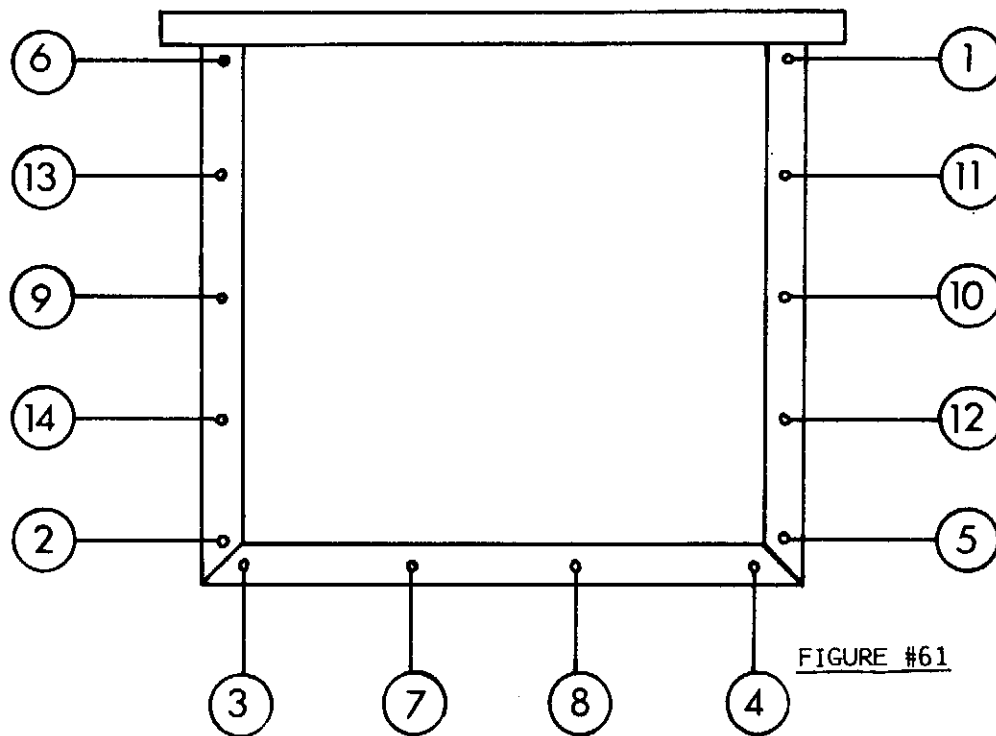


FIGURE #61

7. Make electrical connection per Figure #62. Plug into control and turn on power.

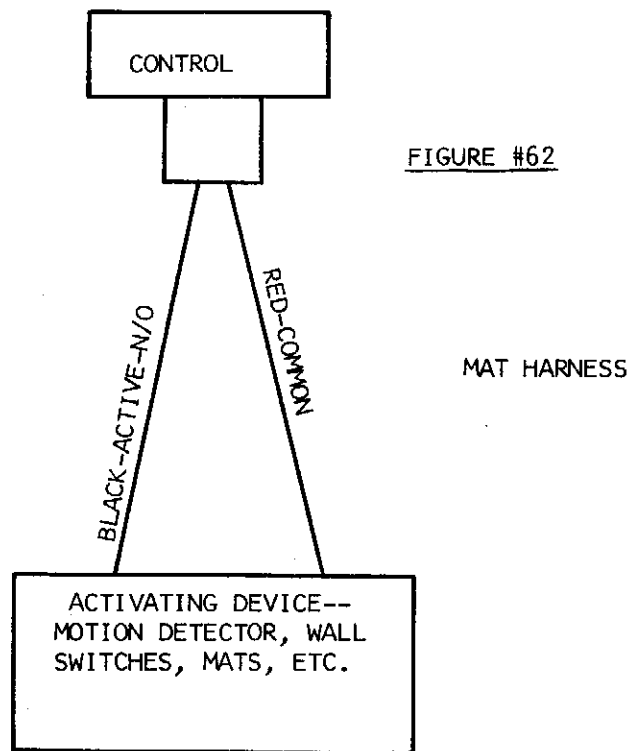


FIGURE #62

MAT HARNESS

NOTE: MOTION DETECTORS REQUIRE A SEPARATE 24 VAC TRANSFORMER

8. To install adjoining mats (butted) remove solid vinyl lip and first rib as shown in Figure #63. Use sharp knife CAREFULLY to avoid exposing switch plates.

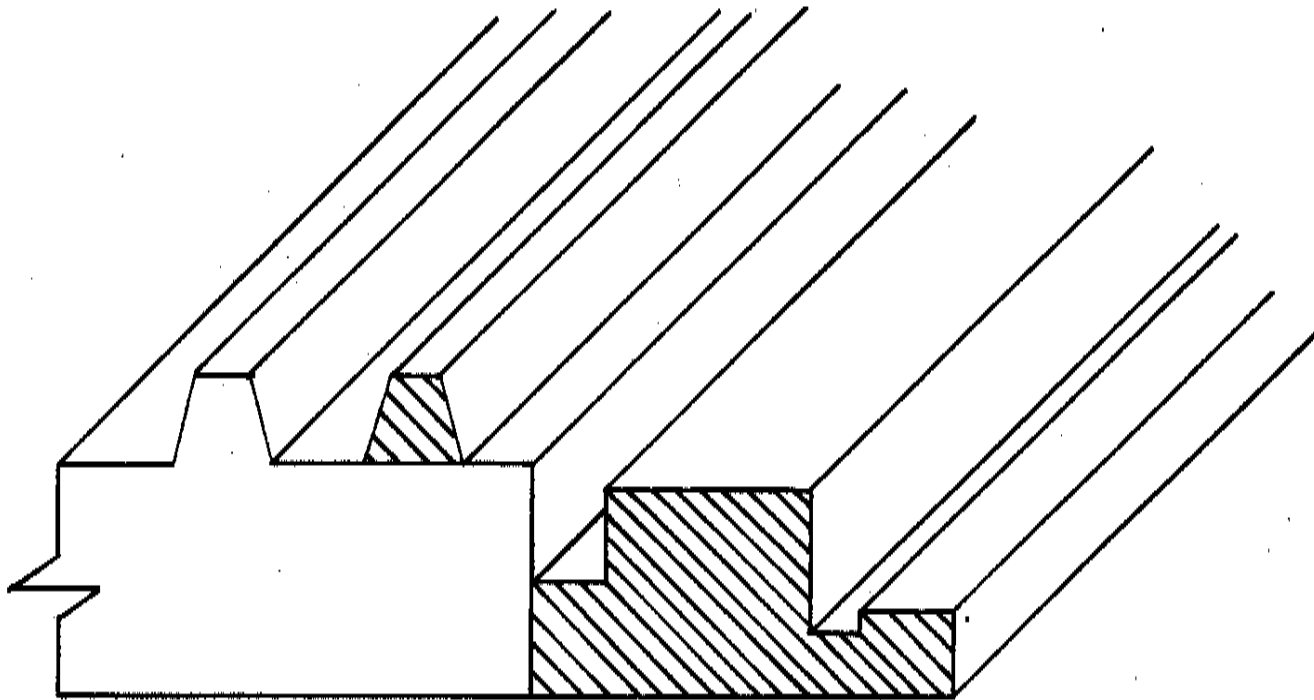


FIGURE #63

9. Slip uniting strip onto edge of one mat and place into position. Carefully insert second mat edge into other side of uniting strip and adjust mat into position. Refer to Figure #65.
10. Off-On-Switch--Should be added in mat circuit (24v) to turn unit off prior to locking door.

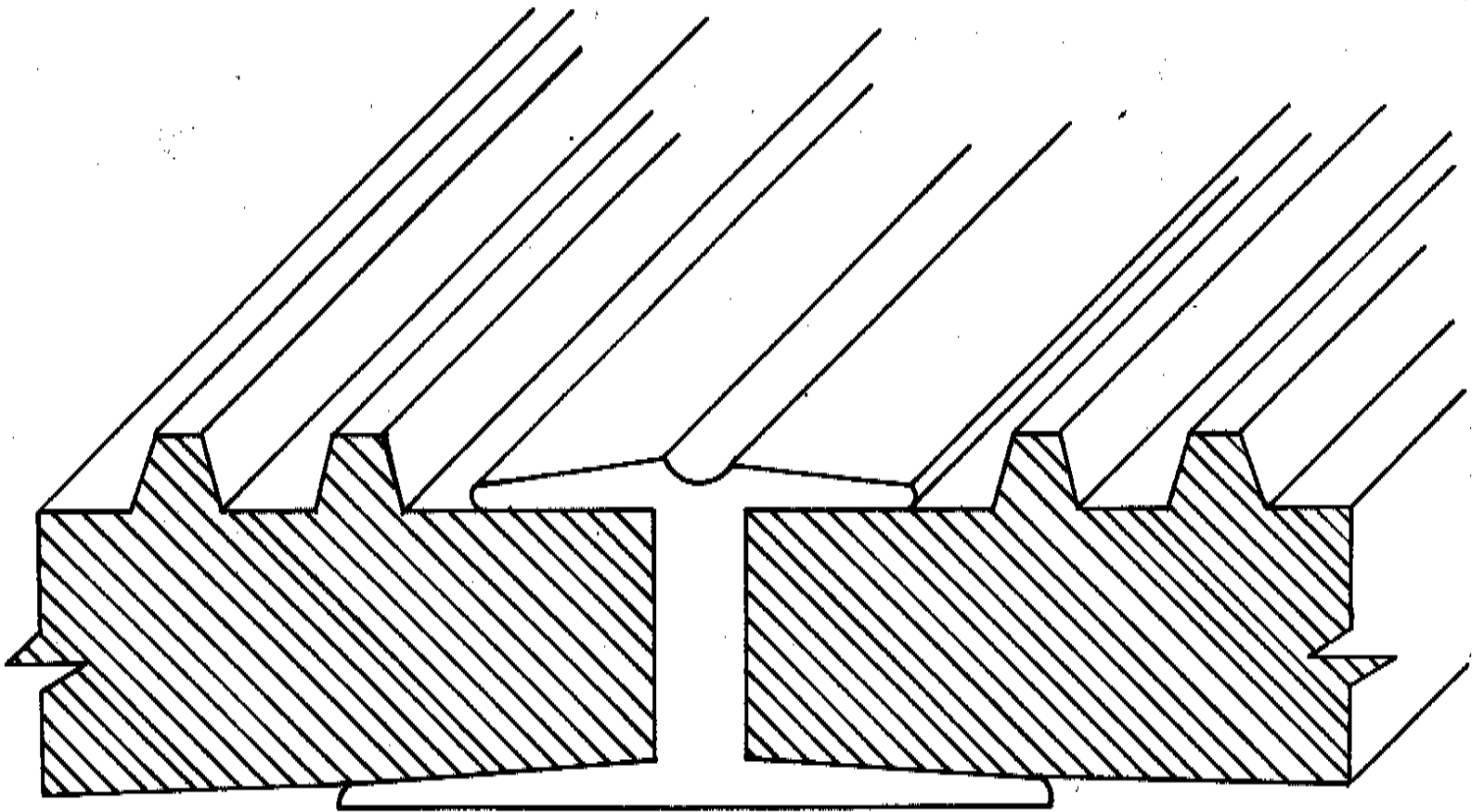


FIGURE #65

FOR BEST RESULTS: Grind concrete smooth and fill before step #1. Apply latex to concrete before securing and installing trim.

MAT MAINTENANCE AND TROUBLE SHOOTING PROCEDURE

1. Surface must be kept clean and free of sharp objects. Daily cleaning is recommended if needed.
2. Avoid pressure from very heavy objects. Do not roll heavy objects over the mats without protecting with 1/2" plywood minimum. (Not to exceed 1000 lb. per square inch)
3. If door does not open automatically:
  - A. Be sure power is turned on.
  - B. Check for burned out fuses.
  - C. Inspect wiring harness for shorts or scraped wires.
  - D. Connect ohm meter to the two mat lead wires. When mat is free of any object which would activate it the ohm meter should read infinite ohms, if a 0 to 100 ohm reading is obtained the mat is shorted. When the mat is activated or pressure is applied to the mat surface the ohm meter should read 0 to 100 ohms.

VII) Repair and Service

A) Operator Exchange - Spring Close

- Power Close (same except do not place 1/8" pin into Lovejoy coupling)

1) A. Place a 1/8" pin into the Lovejoy coupling per figure #51, with door(s) in a closed position. Remove belt tension by loosening 5/16-18 nut (figure #71) as far as possible with a 1/2" open end wrench.

B. Remove operator

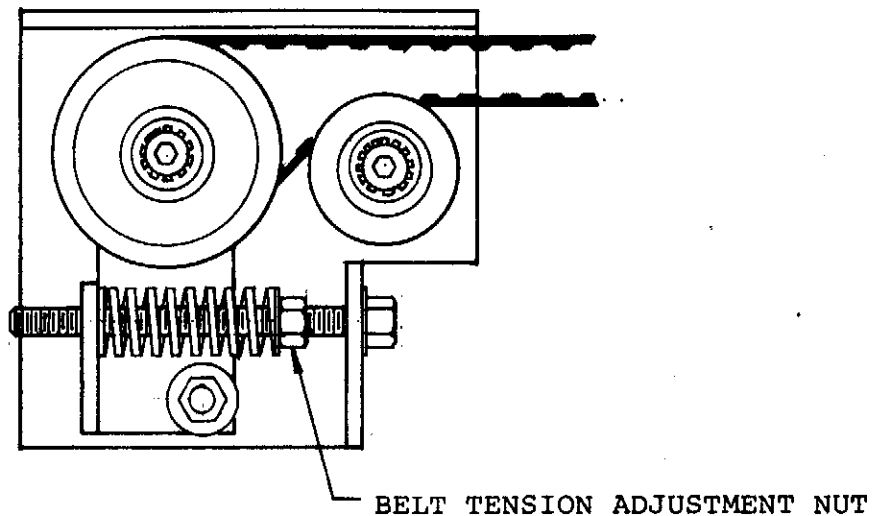


FIGURE #71

2. New Replacement Operator:

Remove switch cover from rear of operator to expose cams and micro switches. Remove cams and cam hold down. A slotted shaft will come into view. Turn the sprocket on the underside of the operator until the slot in the shaft is in line with the axis of the operator. Take the 1/8" pin out of the first operator and place it in the love-joy coupling per Figure #51. When correct, the slot will appear like #72. (Spring close and power close)

SPRING CLOSE WIRING ARRANGEMENT SEE P. (24) FOR POWER CLOSE

WIRING ARRANGEMENT

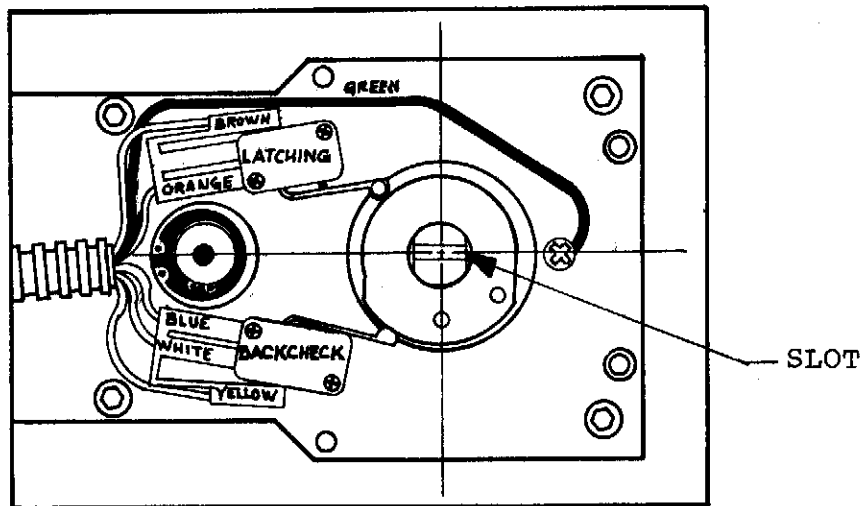


FIGURE #72

- 3) Make sure the doors are in the center of the header and locked in the case of a bi-part or in the fully closed position and locked in the case of a single. Place operator into header making sure that the belt is around operator drive sprocket. Secure in place with the (6) 1/4-20 x 3/4" socket head cap screws that were removed previously. With the assurance that the door(s) are in their fully closed position and locked, tighten the 5/16-18 nut until desired belt tension (Figure #71). Finally, remove 1/8" pin from operator love-joy and unlock door(s).

B) Control Box Exchange:

- 1) Turn off power supply.
- 2) Remove all harness plugs from control box.
- 3) With 3/8" wrench remove (2) 10-24 hex nuts which secure the control box to the control box mounting bracket.

NOTE: To install a new control box reverse above procedure.

1/8" DIA. holes through the stile and steel back up plate.

8) Reinforce the opposite side of the swing panel stile and press the 1/8" roll pins in place, premanently anchoring the inter-locks. ( pins should be flush with the surface of the inter-lock to avoid rail scratching)

#### OPTIONAL DOOR PREPERATION

Refer to figure # 15

If it is your option to use a door leaf other than the one supplied by the Factory, Use this Drawing to mouunt the Whisper Slide Ears to your door.

\*\*\*\*\*

#### ELECTRICAL SYSTEM

\*\*\*\*\*

Refer to figure # 17

The electrical wiring of the system 1100WS may look complicated but once you understand the principals it becomes very simple.

An Electrician should connect 115 VAC Single Phase with a minimum of 5 Amps, power to the harness that exteneds beyond the operator. This harness will be color coded Black, White and Green. These will supply power and Ground to the (POPC) box and the Auxillary control.

P.O.P.C

Power Open Power Close

The POPC box will have several connections to and from it.

- 1) J1 plug- Power Harness
- 2) J2 plug- Header Harness
- 3) J3 plug- Switching Harness
- 4) J4 plug- Soft Start



The removal of these screws and washers on each hanger will permit easy removal of belt assembly.

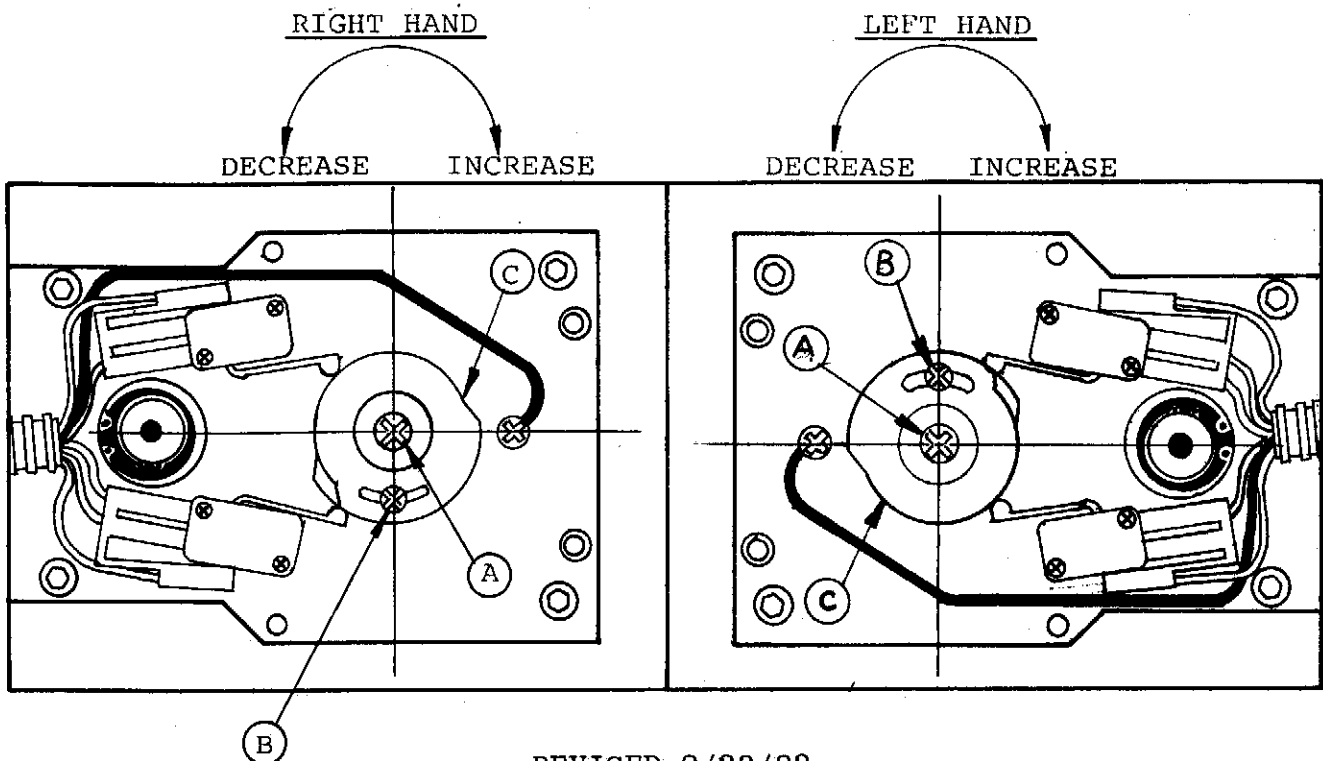
- 3) Making sure door(s) are centered and locked complete Chapter VII, Section #5. (Refer to Figure #45 for proper belt clip location.)

E) Roller Exchange:

- 1) Follow door mounting procedure, paying special attention to Chapter IV, and Figure #41.

F) Cam Adjustment:

- 1) A left hand and a right hand cam assembly is pictured in Figure #73. The cams are shown in their preliminary position before preloading. After preload, the left hand and right hand cam will move about 10° clockwise. To increase or decrease the length of time the doors will be under full opening power, move to Section F-2, except in the case of a 4' bi-part. If you need to shorten the opening on a 4' bi-part, move to Section F-3.
- 2) Loosen screws ("A" & "B" 10-24 x 1" flat head machine screw) slightly and rotate cams per the rotation guide in Figure #73. When the required adjustment has been obtained, retighten screws "A" and "B".
- 3) If the doors on a 4' bi-part slam open, the cams should be adjusted for maximum back check in the opening cycle. The control box should be switched to slow opening and slow back check. In emergency cases, the cam shall be ground back on the sides marked "C" in Figure #73.



REVISED 9/23/82

FIGURE #73

**C A U T I O N !**

**DO NOT ALLOW CHILDREN TO PLAY WITH OR RIDE ON ANY AUTOMATIC DOOR AT ANY TIME.**

TROUBLE SHOOTING

(VIII)

Item:

- A) Door will not open.
  - 1) Check power line switch to make sure it is ON and line power is entering control box, Figure #55.
  - 2) Check activating circuit, low voltage switch, make sure it is in the ON position.

- 3) Check fuse in control box to make sure it is good.
- 4) Check all plug-in relays and plug-in harnesses to be sure of good electrical contact.
- 5) Remove mat harness plug from control box and insert a dummy mat lead test harness. (This harness will allow you to test the slider unit in lieu of a mat or other activating devices.)
- 6) Check anti-riser assembly making sure that it is not binding.

Note 1: If unit operates properly when energized with test harness, activating problem will be found in activating device or harness between activating device and control box.

Note 2: If unit does not operate when energized with the test harness, then check:

- a. Control box
- b. Operator harness wires
- c. Possible micro switch contact problem under switch cover.
- d. D.C. Motor

Item:

- B) Door stays open with no power to spring close operator.
  - 1) Check to see that door(s) are free of debris etc.
  - 2) See if door can be closed by applying a small amount of hand pressure.
  - 3) Check bottom guide to insure it is not binding.

Note 1: If door can be closed by applying a small amount of hand pressure, assume that you have an internal problem with the operator. Replace it.

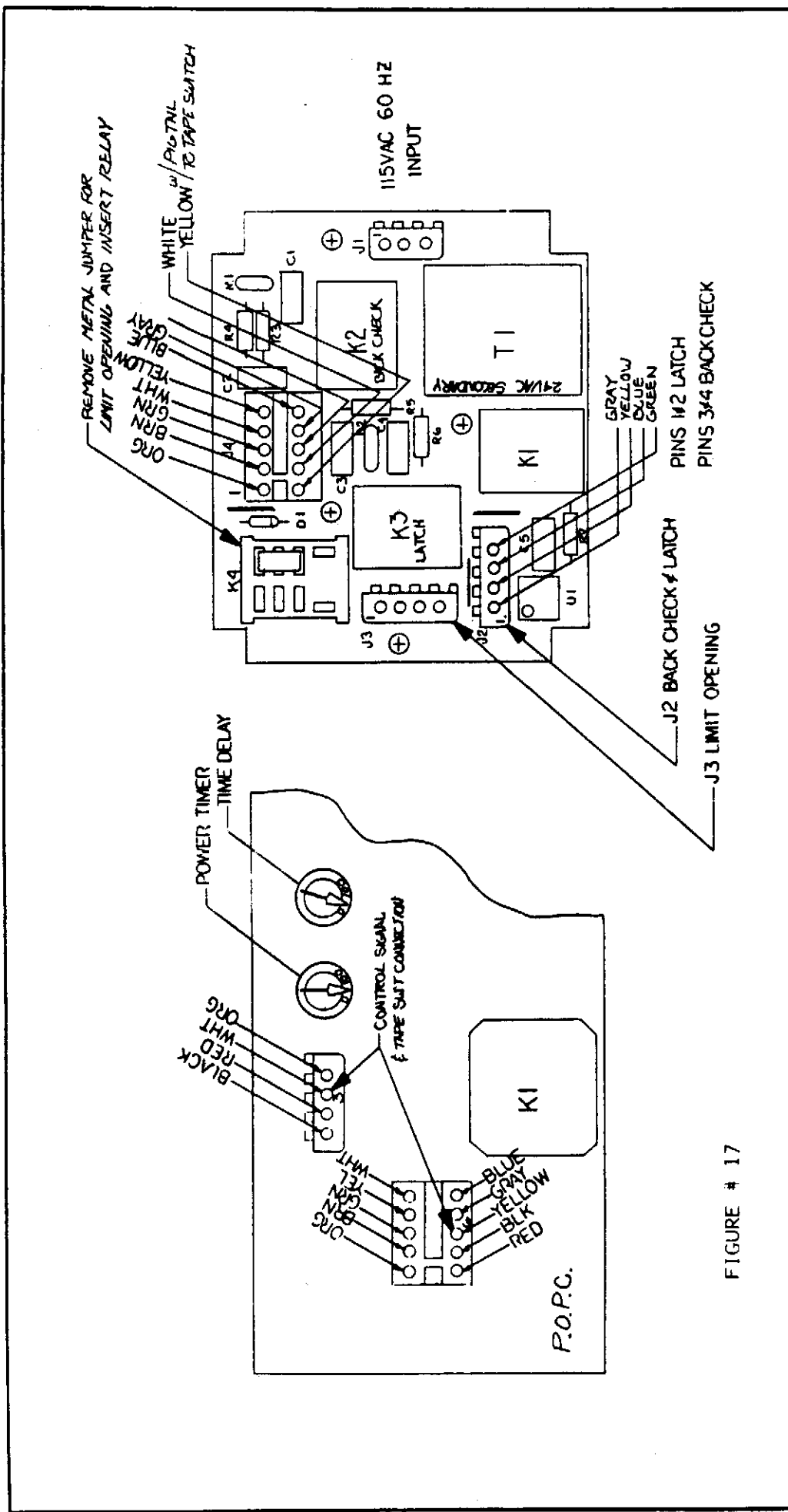



FIGURE # 17

REVISIONS	DATE	DATE	7-15-85	PART NAME: CONTROL SYS	1100 WS
	SCALE:			MATERIAL:	
	DRAWN BY: LABJIE			SPECIFICATIONS:	
	APPROVED BY:				
TOLERANCES (UNLESS NOTED)					
FRACTIONAL			2 1/64		
DECIMAL			2 0.005		
ANGLES			2 1/2°		
				<b>GYRO TECH INC.</b>	DRAWING NO.
					PART NO.

Bill of MATERIALS

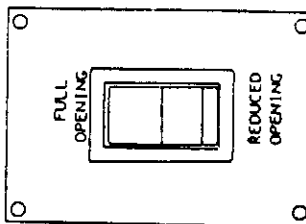
ITEM	PART NO.	QTY	DESCRIPTION
1	114443	1	SWITCH ASSY
2	218238	1	LIMIT OPEN HARNESS
3	148051	1	PROX. SWITCH
4	141833	1	RELAY
5	218239	1	INSTRUCTIONS
6	140828-02	1	PLASTIC BAG
7			
8			

THIS SWITCH WILL WORK FOR EITHER SYS. 1100 OR SYS. 1100 WS. BECAUSE THE SWITCH IS A SIMPLE ON/OFF DEVICE, YOU MAY NEED TO "ROTATE" THE SWITCH 180° TO HAVE IT MATCH UP WITH THE FACE PLATE.

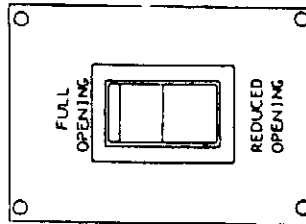
LOOSEN THE PLASTIC NUT HOLDING THE SWITCH SECURE TO THE FACE PLATE AND AFTER TRYING THE SWITCH TO DETERMINE IT'S POSITION, RESECURE THE PLASTIC NUT.

- 1) SYS. 1100 - NEEDS TO HAVE THE SWITCH OPEN FOR LIMITED OPENING.
- 2) SYS. 1100 WS - NEEDS TO HAVE THE SWITCH CLOSE FOR LIMITED OPENING.

SYS 1100



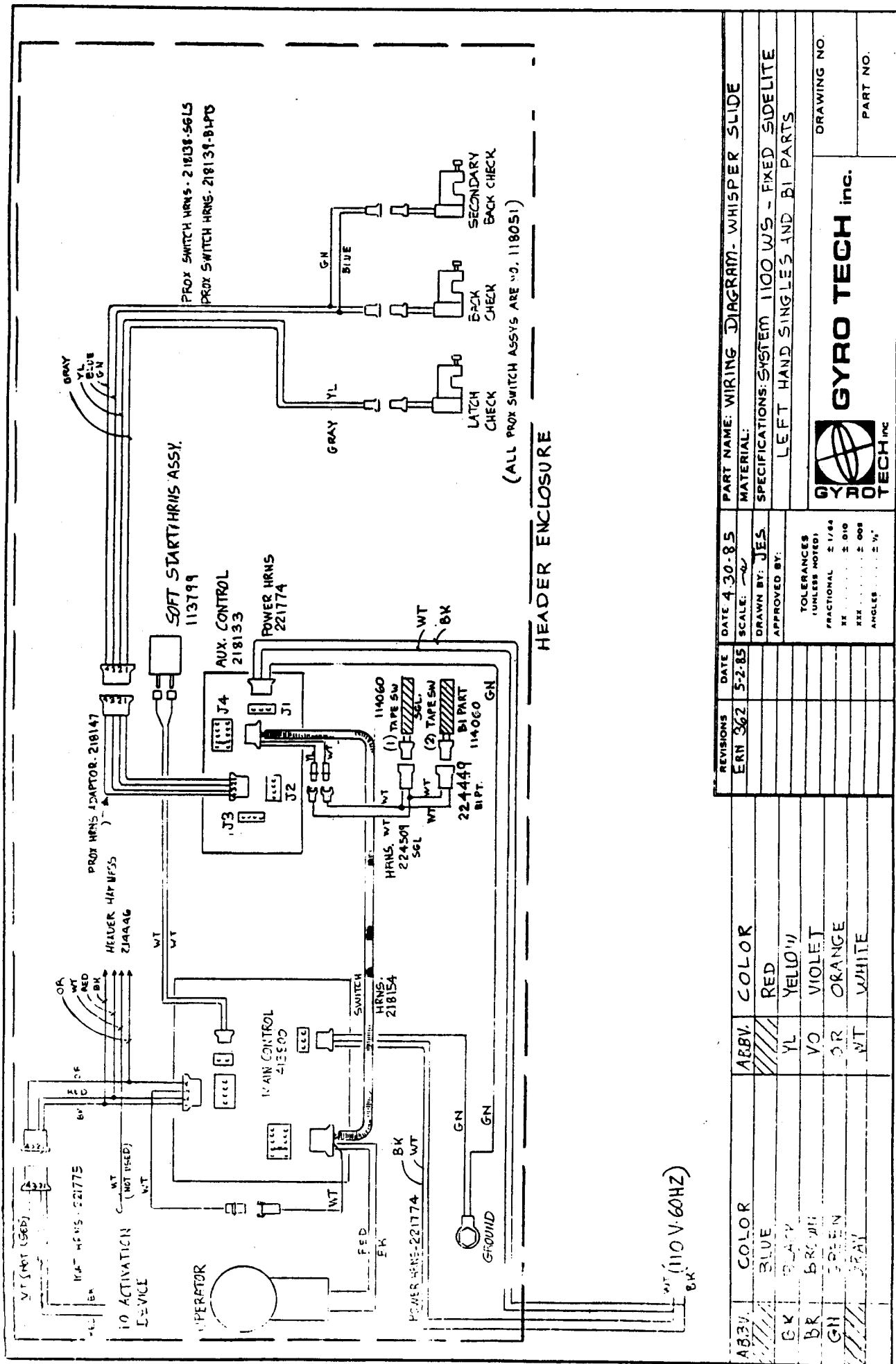
SYS 1100WS



INSTRUCTIONS FOR 1100 WS

REMOVE METAL JUMPER FROM RELAY SOCKET, LOCATED UNDER THE ELECTRICAL TAPE IN THE AUXILIARY CONTROL BOX, AND REPLACE IT WITH THE PLUG IN RELAY. PLACE THE LIMITED OPENING PROXIMITY SWITCH AT THE DESIRED LOCATION. PLUG THE HARNESS INTO THE J3 HOUSING. RUN THE RED WIRES ALONG THE HEADER AND CONNECT THEM TO THE PROXIMITY SWITCH. RUN THE BROWN WIRES TO THE SWITCH LOCATION AND WIRE NUT THEM TO THE SWITCH.

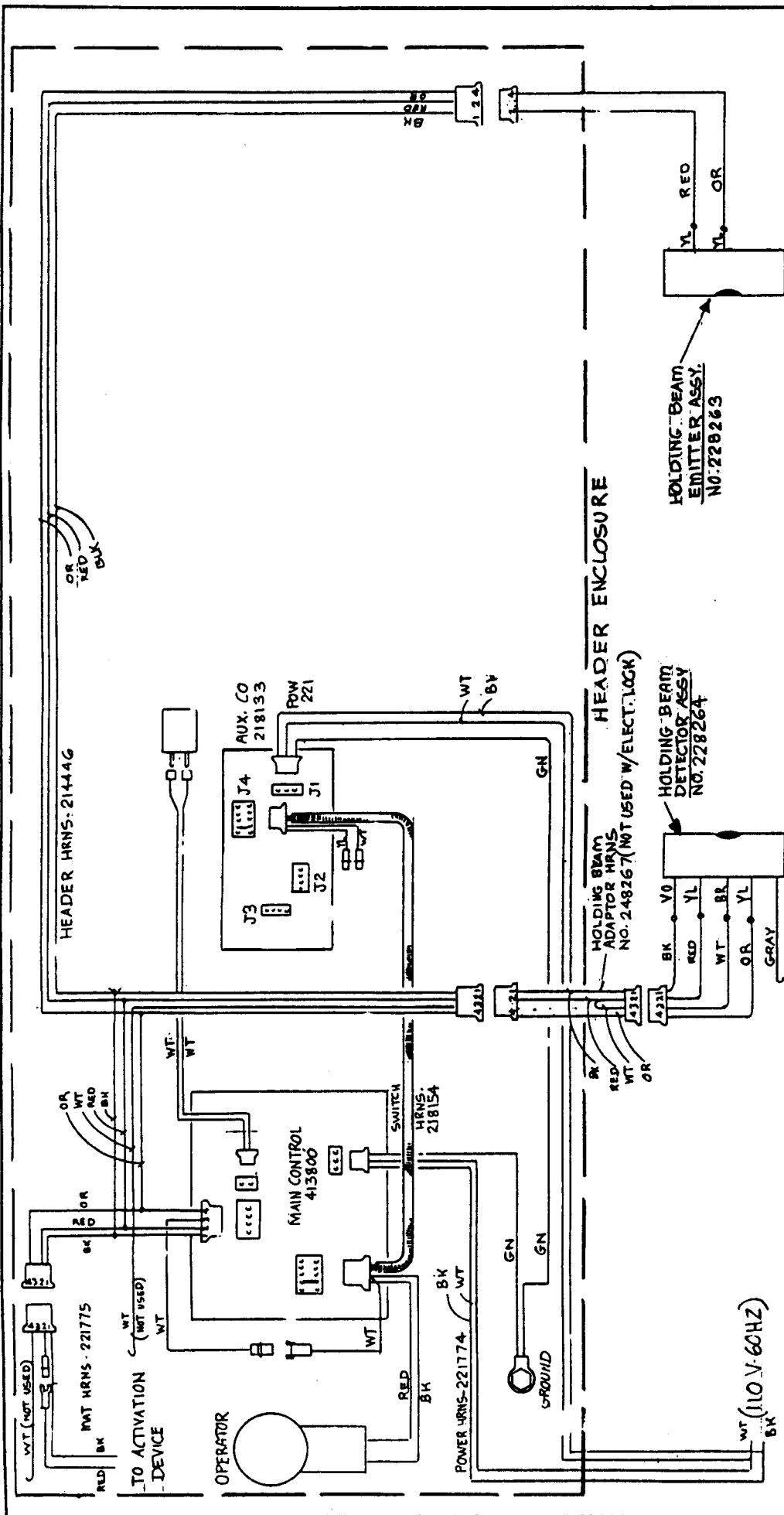
REVISIONS	DATE	DATE: 4-15-85	PART NAME: LIMIT OPENING BOMB INSTRUCTIONS
ERN# 357	4-15-85	SCALE: NONE	MATERIAL:
CON# 1142	5-6-85	DRAWN BY: LIME	SPECIFICATIONS: USE WITH AUX. CR. ONLY
ECAP# 2037	11-22-85	APPROVED BY:	
TOLERANCES UNLESS NOTED:			
FRACTIONAL: 2 1/16			
DECIMAL: 0.010			
HOLE: 0.015			
ANGLE: 45°			
DRAWING NO.			PART NO.
GYRO TECH inc.			258239
GYRO TECH inc.			



HEADER ENCLOSURE

(ALL PROX SWITCH ASSYS ARE NO. 118051)

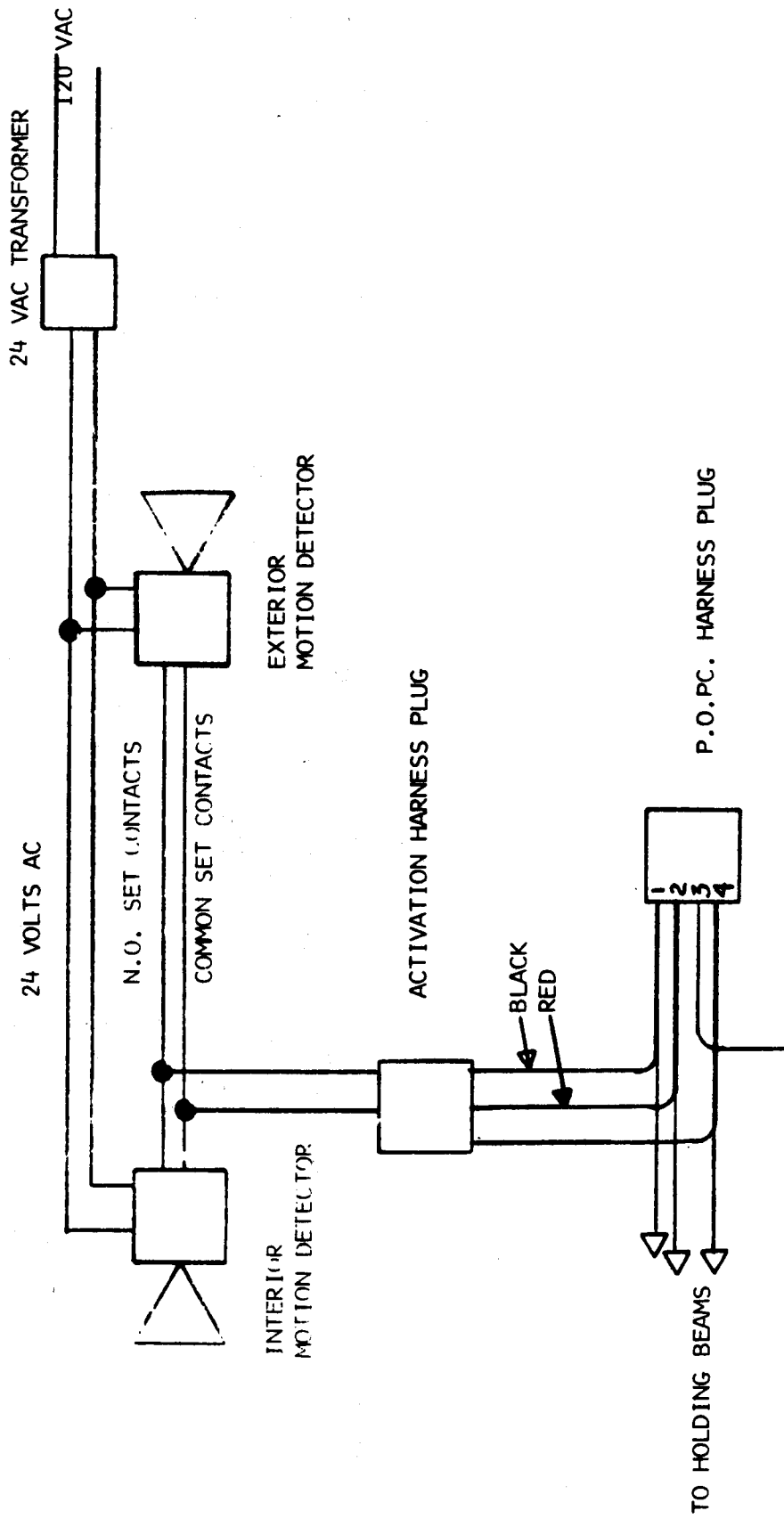
ABBV.	COLOR	ABBV.	COLOR
WT	WHITE	WT	WHITE
GN	GREEN	GN	GREEN
BR	BROWN	BR	BROWN
BK	BLACK	BK	BLACK
YL	YELLOW	YL	YELLOW
RD	RED	RD	RED



REVISIONS	DATE	DATE: 4-30-85	PART NAME: WIRING DIAGRAM- WHISPER SLIDE
ERN 362	5-2-85	SCALE: 1/2"	MATERIAL:
			SPECIFICATIONS: SYSTEM 1100 WS - FKED SIDELITE
			LEFT HAND SINGLES AND BI PARTS
			APPROVED BY:
			TOLERANCES (UNLESS NOTED)
			FRACTIONAL . . . 2 / 64
			DEC . . . . . 2 010
			DEC . . . . . 2 008
			ANGLES . . . . . 2 N'
			DRAWING NO.
			PART NO. 258252



DESIGN PRODUCTS CO -

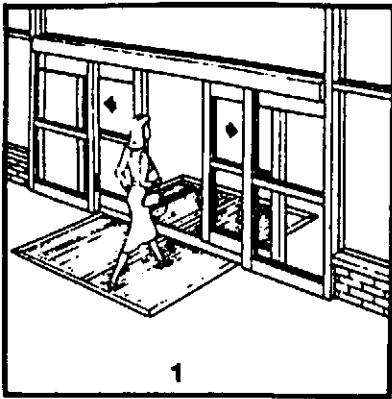


ACTIVATION SCHEMATIC  
TYPICAL APPLICATION



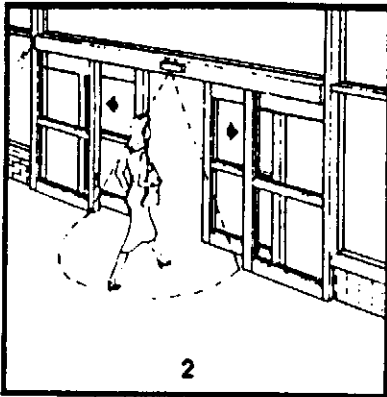
# DAILY SAFETY CHECK

For Your Customers' Safety and Your Own Protection  
Perform This Safety Check DAILY on Each Automatic Sliding Door

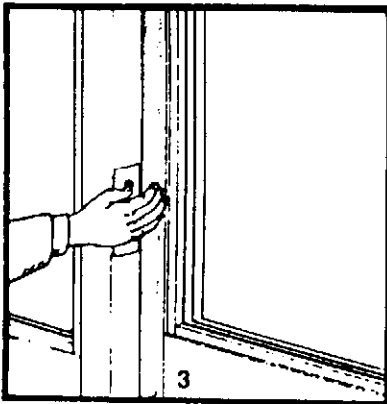


- Figure 1
1. Step on the "opening" mat. Door should slide open smoothly and stop without impact.
  2. Step through the doorway onto the mat on the other side. Door should remain open without interruption.
- NOTE: If there is more than one mat on each side, each mat should be tested.
3. Check the mat molding and threshold. It should be complete and secured with all screws required.
  4. Step off the mat; after a brief time delay, the door should close smoothly and fully without impact.

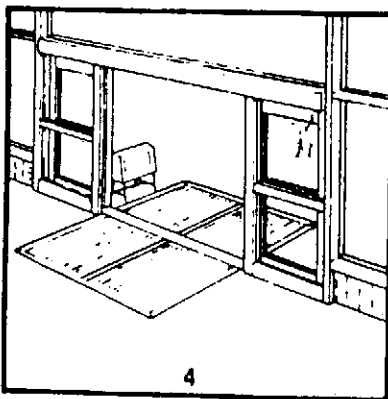
—or if sensors are used—



- Figure 2
5. Check electronic sensor by walking towards door opening. Door should start opening when you are about five feet from the door, should slide open smoothly, and stop without impact. Repeat on other side of opening.
  6. Step out of the sensor zone. After a brief time delay, the door should slide closed smoothly and should close fully without impact.



- Figure 3
7. Cover the doorway holding beam with your hand. The door should open fully if closed; if open, it should remain open.



- Figure 4
8. Check the door area for tripping or slipping hazards.
  9. Check all door panels for broken or cracked glass. There should be no bulletin boards, literature racks, merchandise displays, or other attractions in the door area where people could be hit by the door.
  10. Door should have decals properly displayed.
  11. IF YOU HAVE A PROBLEM YOU CANNOT CORRECT, TURN OFF THE DOOR OPERATING EQUIPMENT AND CALL YOUR SERVICE REPRESENTATIVE.

## TROUBLE SHOOTING

All GT System 1100 Whisper Slides are thoroughly tested before leaving the Factory. The system that you have should need no "Debugging".

However should a problem develop, follow these simple steps in Trouble Shooting the condition.

### TECHNIQUE-----

When testing the system for opening and closing, ALWAYS leave the Header Harness plugged into the POPC Control Box. This harness supplies the signals for the Auxilliary Control. Unit will SLAM open and closed with this harness removed.

Test using the "mat harness" leads.

To eliminate your activating devices, simply touch the Black and Red lead wires together, this will go directly to the main control. If the Slider functions properly, it is a safe bet that the Motion Detectors or Detector is bad.

To test the Holding Beams, Remove them from the circuit by disconnecting them at the Side Lite Verticles (mullions).

NOTE: When trouble shooting Electrical problems, you will find a VOLT METER, OHM meter, jumper wires and a spare magnet essential. When testing a proximity switch, place the ohm meter across the leads and pass a magnet in front of the switch. When the magnet is close proximity of the switch you will observe a change in the meter reading which will indicate the switch closing. When the Magnet is pulled away you will notice a change in the meter indicating that the switch has opened.

Problem A) Doors will not open.

1) First, check to see if it is a binding problem. Check All rollers and bottom guide.

A) If there is binding adjust to remove this condition.

2) Check to see that the Relay in the POPC box activates when a open signal is sent to the control. (ie. relay contacts close or "snap in"). Refer to figure #17

A) If it does not, make sure that it has not come loose

in shipping. If it is firmly in place and still does not, Remove and Replace control box.

Problem B) Doors open and close, NO back catch or latching.

1) Check to see if Magnet needs to be adjusted closer to the Proximity switches

A) The closer the Magnet to the proximity switch, the less chance that the proximity switches will not activate.

2) Tilt the proximity switches on an angle, this will help make maximum use of the switches.

3) Remove and Replace the Auxillary control.

4) Check All proximity switches, making sure they open and close with the Magnet. Follow the procedure for checking the proximity switches as described above.

Problem C) Doors open but will not close.

1) Check holding beams, as previously described.

A) If holding beam is bad replace.

2) Check for obstruction or binding of doors.

3) Check the Power Down roller switch to make sure it has not released prematurely.

4) If the system is a FULL OPEN, check for obstructions in the security latches.

Problem D) Doors only open part of the way.

1) Make sure motor timer has been adjusted to allow door(s) to open fully. Refer to figure #17

2) Make sure limited opening switch is in the off position, If the system is so equipped.

Problem E) Motion Detector does not activate door.

Isolating Detector problems:

Using a Volt Meter, place the meter setting to the AC mode and select a scale that will read higher than 24 Volts AC. Place the meter leads, one on each secondary terminal of the Transformer used to supply power to the Motion Detector. With the power ON, you do not read approximately 24 Volts AC, Replace the transformer.

Remove the MAT harness. Refer to page 37 and 38, place a jumper across the Black and Red terminals, If the door functions normally, one or more of the motion detectors may be bad. Remove and Replace.

Problem F) Holding Beam does not function.

Isolating Holding Beam problems:

Disconnect beams from the header harness, located at each mullion or strike jamb. If the holding beam has been holding the door open, disconnecting shall allow the doors to close. If the beam was not opening the doors, then replace the beam.