



Installation Manual

**Masking Unit/Lanescape
Video Masking Unit**

December 2013 / 53-900452-000

Brunswick 
CUSTOMER SERVICE
A tradition in excellence.

Masking Unit/Lanescape Video Masking Unit Installation Manual

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Reorder Part No. 53-900452-000

Notice: If available, updates to this manual can be found on-line at www.brunswickbowling.com.

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SAFETY!

NOTES & WARNINGS

Throughout this publication, “Warnings”, and “Cautions” (accompanied by one of the International HAZARD Symbols) are used to alert the mechanic to special instructions concerning a particular service or operation that may be hazardous if performed incorrectly or carelessly. They are defined below. OBSERVE AND READ THEM CAREFULLY!

These “Safety Alerts” alone cannot eliminate the hazards that they signal. Strict compliance to these special instructions when performing the service, plus training and “Common Sense” operation are major accident prevention measures.

 **NOTE or IMPORTANT!** Will designate significant informational notes.

 **WARNING!** Will designate a mechanical or nonelectrical alert which could potentially cause personal injury or death.

 **WARNING!** Will designate electrical alerts which could potentially cause personal injury or death.

 **CAUTION!** Will designate an alert which could potentially cause product damage.

 Will designate grounding alerts.

SAFETY NOTICE TO USERS OF THIS MANUAL

This manual has been written and published by the Service Department of Brunswick Bowling and Billiards to aid the reader when servicing or installing the products described.

It is assumed that these personnel are familiar with, and have been trained in, the servicing or installation procedures of these products, which includes the use of common mechanic's hand tools and any special Brunswick or recommended tools from other suppliers.

We could not possibly know of and advise the reader of all conceivable procedures by which a service might be performed and of the possible hazards and/or results of each method. We have not attempted any such wide evaluation. Therefore, anyone who uses a service procedure and/or tool, which is not recommended by Brunswick, must first completely satisfy himself that neither his nor the product's safety will be endangered by the service procedure selected.

All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication.

It should be kept in mind, while working on the product, that the electrical system is capable of violent and damaging short circuits or severe electrical shocks. When performing any work where electrical terminals could possibly be grounded or touched by the mechanic, the power to the product should be disconnected prior to servicing and remain disconnected until servicing is complete.

WARRANTY AND SERVICE POLICY

If any defects in material or workmanship appear during the first three months after installation, the defective part will be repaired or replaced, at Brunswick's option, with no charge to the Customer.

If any defects in material appear during the nine months following the initial three month warranty period, the defective part will be repaired or replaced, at Brunswick's option, with no charge to the Customer for parts. The Customer must assume all other costs in making the repair or replacement.

All service calls during the first three months of the warranty period, resulting from the inability of the Customer's mechanics to perform required adjustments or maintenance, will be billed directly to the Customer.

Brunswick reserves the right to change the design of any product, but assumes no responsibility to incorporate such design changes on products already sold.

The warranty applies only to new products installed by Brunswick and extends only to the original purchaser. Repairs or replacements made by anyone not approved by Brunswick void the warranty.

Under no circumstances shall the Seller or Manufacturer be liable for loss of profits or other direct or indirect costs, expenses, losses, or damages arising out of defects in or failure of parts.

Replacement Parts Under the Warranty

All service parts are F.O.B. the installation site both during and after the warranty period. The price of parts includes delivery by standard means, such as United Parcel Service (UPS). Any expense resulting from expedited delivery, such as air freight, will be billed to the Customer.

During the one year period, parts which are faulty due to material or workmanship will be replaced or repaired free of charge only if the old part is properly identified and turned in for credit. Identify the defective part by attaching a tag containing the part name and part number. Light bulbs are not covered by the warranty.

Service parts are ordered through the Brunswick Bowling and Billiards Corporation toll free number: 1-800-937-2695. Refer to the "General Information" section of the *Bowling Service Parts Catalog* for address and order information. When ordering service parts, specify part numbers and descriptions to simplify handling. ***Use only Genuine Brunswick Replacement Parts.***

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Packaging For Masking Unit

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Drawing Number:		M4-010038-000	Rev. No:	C
DESCRIPTION: MNC - FRAMEWORX MASKING UNIT FULL SET 10'				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00*	11-112131-000	TOOL – SPRING PULLER	
	1.00*	53-861084-000	PKG. – 10' END SUPPORT KIT	
	1.00	53-861086-000	PKG. – UPPER GRAPHIC CHANNEL, LANE PAIR	
	2.00	53-861664-000	PKG - BALL LIGHT ASSY, LED 1998 - PRESENT	
	2.00	53-861666-000	PKG - CABLE, 1ST AND 2ND BALL LIGHT, LED	
	1.00	53-861668-000	PKG -LOWER CROSS LANE KIT, MU (LANE PAIR), LED	
	2.00*	53-862205-000	PKG. – LOWER VERTICAL SUPPORT W/FOOT	
	1.00*	53-900452-000	MANUAL – INSTALLATION, MASKING UNIT	
* = PER CENTER				

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Drawing Number:		M4-010039-000	Rev. No:	C
DESCRIPTION: MNC - FRAMEWORX MASKING UNIT LOWER SET ONLY 6'				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00*	11-112131-000	TOOL – SPRING PULLER	
	1.00*	53-861081-000	PKG. – 6' END SUPPORT KIT	
	2.00	53-861664-000	PKG - BALL LIGHT ASSY, LED 1998 - PRESENT	
	2.00	53-861666-000	PKG - CABLE, 1ST AND 2ND BALL LIGHT, LED	
	1.00	53-861668-000	PKG -LOWER CROSS LANE KIT, MU (LANE PAIR), LED	
	2.00*	53-862205-000	PKG. – LOWER VERTICAL SUPPORT W/FOOT	
	1.00*	53-900452-000	MANUAL – INSTALLATION, MASKING UNIT	
* = PER CENTER				

Drawing Number:		M4-010040-000	Rev. No:	A
DESCRIPTION: MNC - MASKING UNIT ARCH SUPPORT, INTERMEDIATE				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-862205-000	PKG. – LOWER VERTICAL SUPPORT W/FOOT	

Model Number:		M4-010041-000	Rev. No:	A
DESCRIPTION: MNC - FULL SET UPPER GRAPHICS SUPPORT – FULL SET MASKING UNITS ONLY				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-861083-000	PKG. – UPPER GRAPHIC PANEL SUPPORT	

Drawing Number:		M4-010042-000	Rev. No:	C
DESCRIPTION: MNC - 6 FT. LANE BREAK KIT				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-861089-000	PKG. - 6 FT. LANE BREAK KIT	
	2.00	53-862205-000	PKG. – LOWER VERTICAL SUPPORT W/FOOT	

Drawing Number:		M4-010045-000	Rev. No:	B
DESCRIPTION: MNC - ODD LANE CROSS LANE SUPPORT				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-861664-000	PKG - BALL LIGHT ASSY, LED 1998 - PRESENT	
	1.00	53-861666-000	PKG - CABLE, 1ST AND 2ND BALL LIGHT, LED	
	1.00	53-861667-000	PKG - LOWER CROSS LANE KIT, MU (SINGLE LANE), LED	

Model Number:		M4-010046-000	Rev. No:	N/C
DESCRIPTION: MNC - MTG. BRACKET & HDWE. FOR ADDING NEW FX MASKING UNIT TO OLD				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-861091-000	PKG. – MTG. BRACKET & HDWE.	

Drawing Number:		M4-010047-000	Rev. No:	A
DESCRIPTION: MNC - FULL SET UPPER GRAPHICS SUPPORT – CONVERSION OF 6' TO 10'				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-861083-000	PKG. – UPPER GRAPHIC PANEL SUPPORT	
	1.00*	53-861084-000	PKG. – 10' END SUPPORT KIT	
	1.00	53-861086-000	PKG. – UPPER GRAPHIC CHANNEL, LANE PAIR	

Model Number:		M4-020003-000	Rev. No:	N/C
DESCRIPTION: MNC - LAMP FOR ACTION SETS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	10.00	11-675582-000	LAMP FOR ACTION SETS	

Model Number:		M4-020008-000	Rev. No:	N/C
DESCRIPTION: MNC - ADAPTER KIT FOR AMF 8270SS PINSPOTTER TO ACTION SET MASKING UNIT				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-860248-000	PKG. - ADAPTER KIT FOR AMF 8270SS PINSPOTTER TO USE WITH ACTION SET MASKING UNIT	

Model Number: M4-020009-000		Rev. No: N/C	
DESCRIPTION: MNC - ADAPTER KIT FOR AMF 8270 PINSPOTTER TO ACTION SET MASKING UNIT			
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE
	1.00	53-860247-000	PKG. - ADAPTER KIT FOR AMF 8270 PINSPOTTER TO USE WITH ACTION SET MASKING UNIT

Model Number: M4-020010-000		Rev. No: N/C	
DESCRIPTION: MNC - ADAPTER KIT FOR AMF 8230 PINSPOTTER TO ACTION SET MASKING UNIT			
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE
	1.00	53-860246-000	PKG. - ADAPTER KIT FOR AMF 8230 PINSPOTTER TO USE WITH ACTION SET MASKING UNIT

Model Number: M4-020013-000		Rev. No: N/C	
DESCRIPTION: MNC - ADAPTER CABLE MASKING UNIT TO AMF W/ROUND PLUG			
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE
	1.00	53-860849-000	PKG. - ADAPTER CABLE MASKING UNIT TO AMF W/ROUND PLUG

Packaging for Lanescape Video Masking Unit

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Model Number:		M4-010048-000		Rev. No:		N/C	
DESCRIPTION: MNC - PROJECTOR MOUNTING COMPONENTS FOR SUSPENDED CEILING							
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE				
	1.00	53-862216-000	PKG. - SUSPENDED CEILING KIT				
	1.00	53-862217-000	PKG. - ADJUSTABLE LENGTH EXTENSION COLUMN				
	1.00	53-862218-000	PKG. - PROJECTOR MOUNT				

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Model Number:		M4-010049-000		Rev. No:		N/C	
DESCRIPTION: MNC - PROJECTOR MOUNTING COMPONENTS FOR OPEN CEILING							
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE				
	1.00	53-862217-000	PKG. - ADJUSTABLE LENGTH EXTENSION COLUMN				
	1.00	53-862218-000	PKG. - PROJECTOR MOUNT				
	1.00	53-862299-000	PKG. - THREADED PIPE COUPLER				

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Model Number:		M4-010051-115		Rev. No:		N/C	
DESCRIPTION: MNC - PROJECTION SCREEN AND COMPONENTS, 115V							
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE				
	1.00	53-300406-000	ASSY - CABLE, DATA, 60" LG.				
	1.00	53-862203-000	PKG. - CONNECTORS, RJ11				
	1.00	53-862355-115	PKG. - PROJ. SCREEN 115V WITH COMPONENTS AND H.W.				
	1.00	53-862356-000	PKG. - BRACKET, CONTROLLER MC1 AND HARDWARE				
	1.00	53-862362-000	PKG. - BRACKETS, MOUNTING, PROJ. SCREEN, L.H./R.H., HW.				

Model Number:		M4-010051-230	Rev. No:	N/C
DESCRIPTION: MNC - PROJECTION SCREEN AND COMPONENTS, 230V				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-300406-000	ASSY - CABLE, DATA, 60" LG.	
	1.00	53-862203-000	PKG. - CONNECTORS, RJ11	
	1.00	53-862355-230	PKG. - PROJ. SCREEN 230V WITH COMPONENTS AND HW.	
	1.00	53-862356-000	PKG. - BRACKET, CONTROLLER MC1 AND HARDWARE	
	1.00	53-862362-000	PKG. - BRACKETS, MOUNTING, PROJ. SCREEN, L.H./R.H., HW	

MODEL NUMBER CONFIGURATION				
<i>BRUNSWICK BOWLING & BILLIARDS CORPORATION</i>				
Model Number:		M4-010052-000	Rev. No:	N/C
MNC - PROJECTION SCREEN CONTROLS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	27-619066-000	CABLE - 4 COND., 26 AWG, 150V, 500 FT. ROLL	
	1.00	53-300406-000	ASSY. - CABLE, DATA, 60" LG.	
	1.00	53-862357-000	PKG. - PROJECTION SCREEN, CONTROLS	

Model Number:		M4-010053-000	Rev. No:	N/C
MNC - PROJECTION SCREEN CONTROLS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	2.00	27-619066-000	CABLE - 4 COND., 26 AWG, 150V, 500 FT. ROLL	
	1.00	53-300406-000	ASSY. - CABLE, DATA, 60" LG.	
	1.00	53-862357-000	PKG. - PROJECTION SCREEN, CONTROLS	

Model Number:		M4-010054-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR SINGLE SCREEN				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	2.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	2.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010055-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (2) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	3.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	3.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010056-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (3) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	1.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	1.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	4.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	4.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010057-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (4) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	2.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	1.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	5.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	5.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010058-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (5) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	2.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	2.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	6.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	6.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010059-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (6) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	3.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	2.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	7.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	7.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010060-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (7) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	3.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	3.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	8.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	8.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010061-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (8) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	4.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	3.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	9.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	9.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010062-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (9) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	4.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	4.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	10.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	10.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010063-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (10) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	5.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	4.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	11.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	11.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010064-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (11) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	5.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	5.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	12.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	12.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010066-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (13) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	6.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	6.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	14.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	14.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010067-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (14) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	7.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	6.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	15.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	15.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010068-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (15) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	7.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	7.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	16.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	16.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010069-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (16) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	8.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	7.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	17.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	17.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010070-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (17) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	8.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	8.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	18.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	18.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010071-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (18) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	9.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	8.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	19.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	19.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010072-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (19) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	9.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	9.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	20.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	20.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010073-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (20) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	10.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	9.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	21.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	21.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010074-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (21) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	10.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	10.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	22.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	22.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Drawing Number:		M4-010075-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (22) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	11.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	10.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	23.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	23.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010076-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (23) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	11.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	11.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300404-000	BRACKET - 'B', MOUNTING, PROJECTION SCREEN	
	24.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	24.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Model Number:		M4-010077-000	Rev. No:	N/C
MNC - PROJECTION SCREEN MOUNTING COMPONENTS FOR (24) CONSECUTIVE SCREENS				
REV.	QTY.	PART NUMBER	DESCRIPTION OF PACKAGE	
	12.00	53-300398-000	BRACKET - 'C', MOUNTING, PROJECTION SCREEN	
	11.00	53-300399-000	BRACKET - 'D', MOUNTING, PROJECTION SCREEN	
	1.00	53-300403-000	BRACKET - 'A', MOUNTING, PROJECTION SCREEN	
	1.00	53-300405-000	BRACKET - 'E', MOUNTING, PROJECTION SCREEN	
	25.00	53-862354-000	PKG. - GUSSET AND FOOT SUPPORT, WITH HARDWARE	
	25.00	53-862363-000	PKG. - VERTICAL SUPPORT AND HARDWARE	

Masking Unit Installation

MARK GUSSET LOCATIONS

Mark the gusset locations ("A") on the capping by snapping a chalk line. Refer to *Figure 1*.

A-2 Pinsetters

1. Snap a line 74" (1880 mm) from the zero line. Refer to *Figure 1*.

GS Pinsetters

1. Snap a line 107-1/2" (2730 mm) from the zero line. Refer to *Figure 1*.

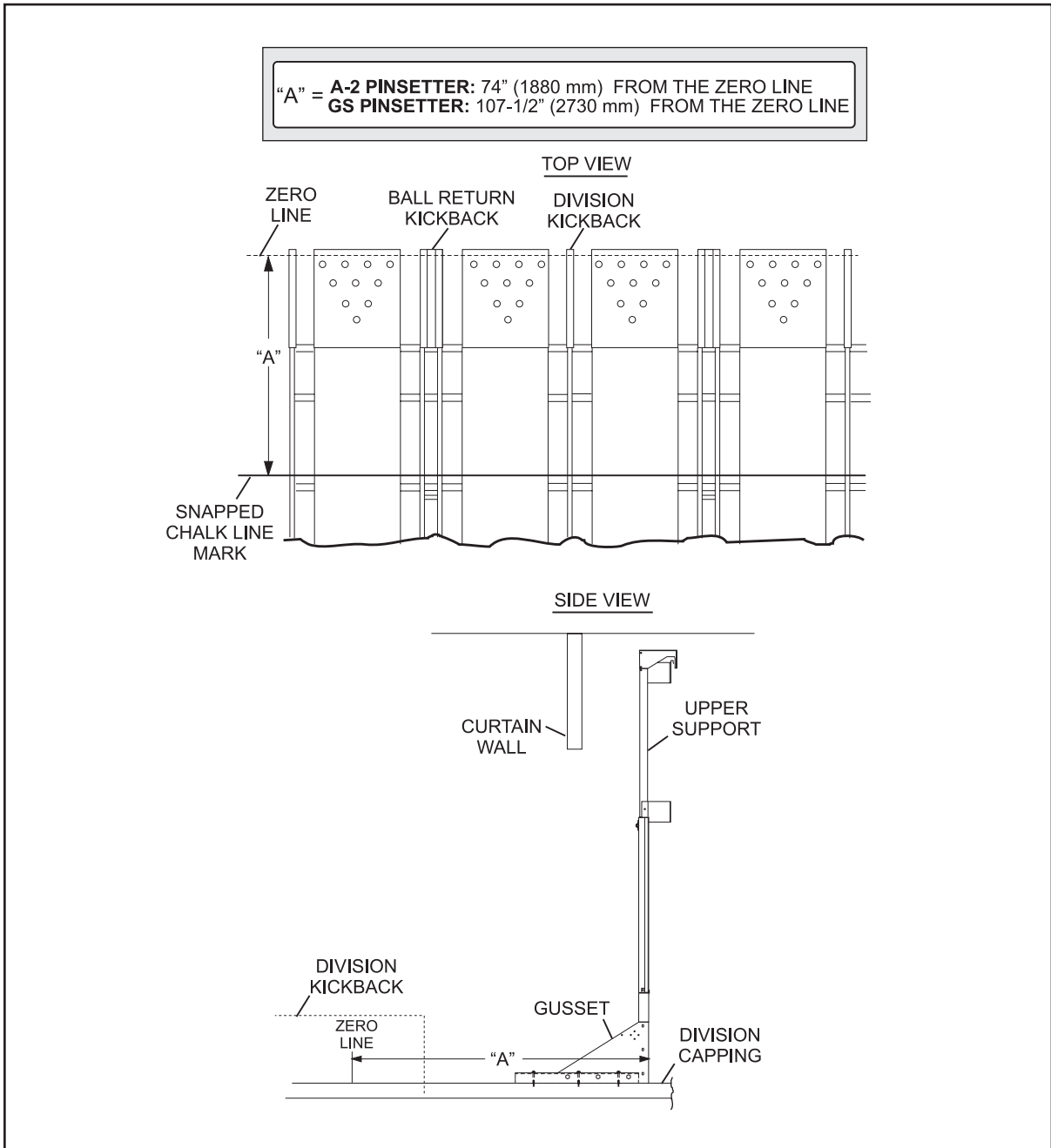


Figure 1

GUSSET ASSEMBLY

1. Assemble the support gusset to the foot support with 1/4-14 self tapping screws (P/N 11-010812-001). Refer *Figure 2*.

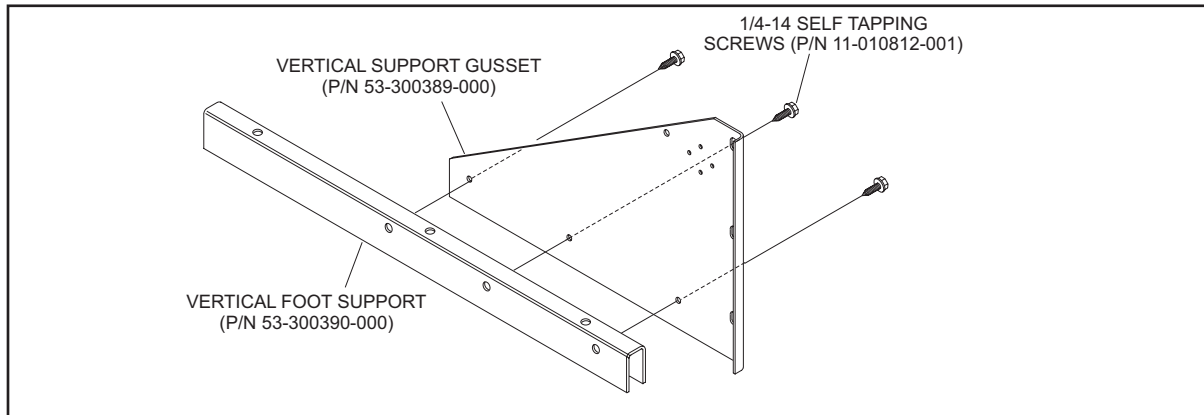


Figure 2

GUSSET INSTALLATION

The gusset fits inside the division capping with no cutting of the capping.

1. Align assembled gusset with previously snapped chalk line on division capping. Refer to *Figure 3*.

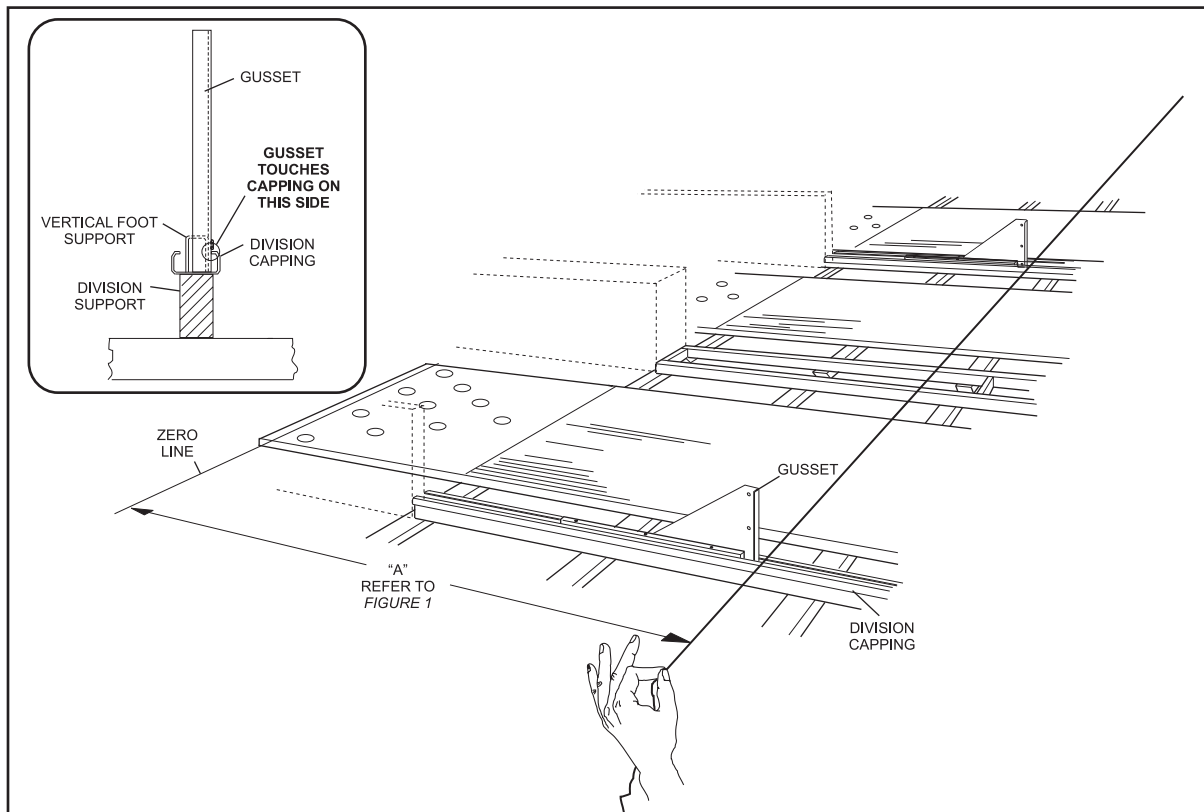


Figure 3

2. Butt right side of gusset up to the inside edge of the capping. Refer to *Figure 3*.

3. Use gusset assembly as a template to mark hole locations on the capping. Refer to *Figure 4*.

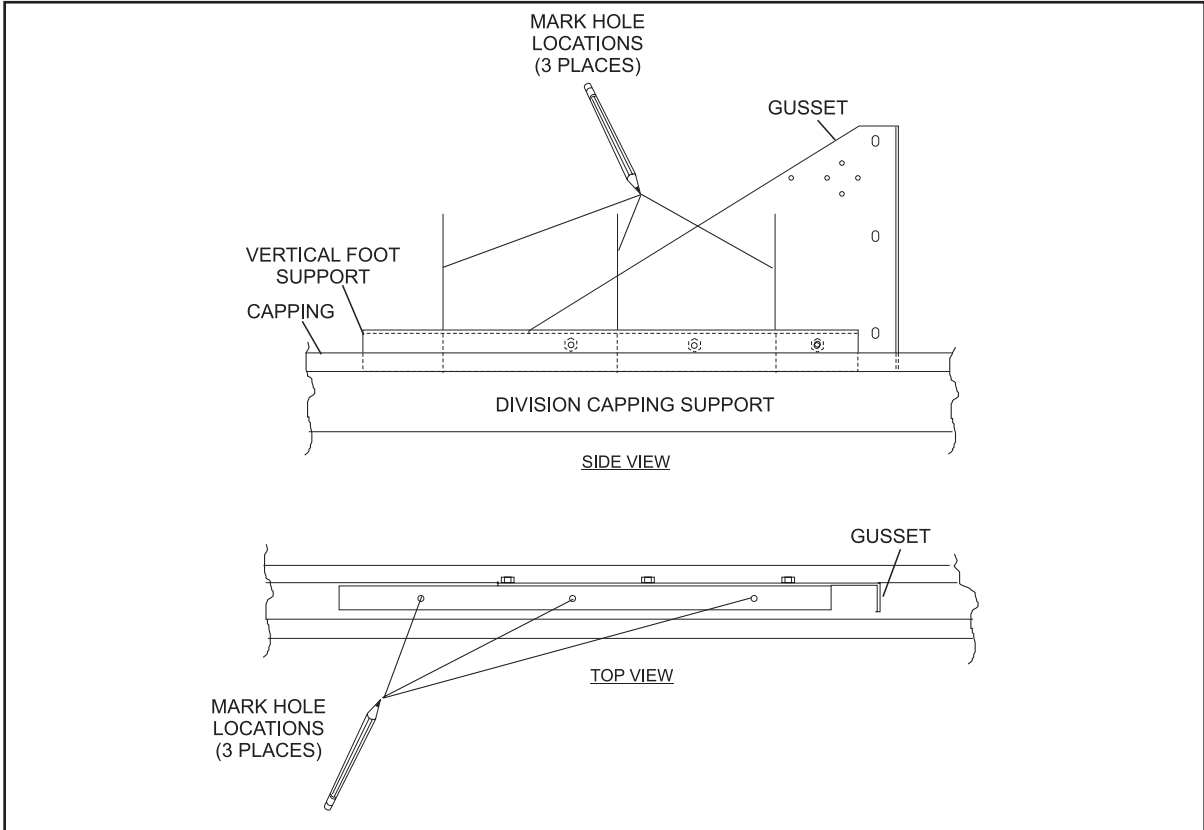


Figure 4

4. Drill two 1/8" (3 mm) pilot holes and one 5/16" (8 mm) thru-hole at marked locations as shown in *Figure 5*.

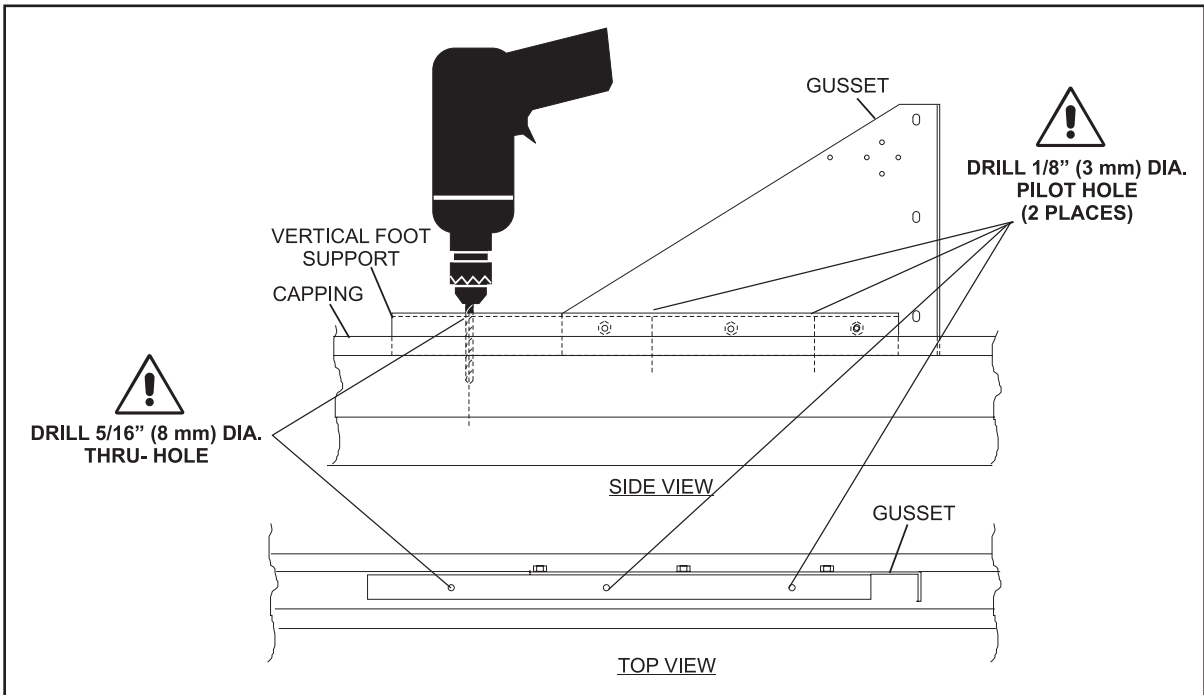


Figure 5

5. Install 5/16-16 x 6-1/2" carriage screw through capping support from bottom and secure with one 5/16 washer and two 5/16-16 hex nuts. Refer to *Figure 6*.

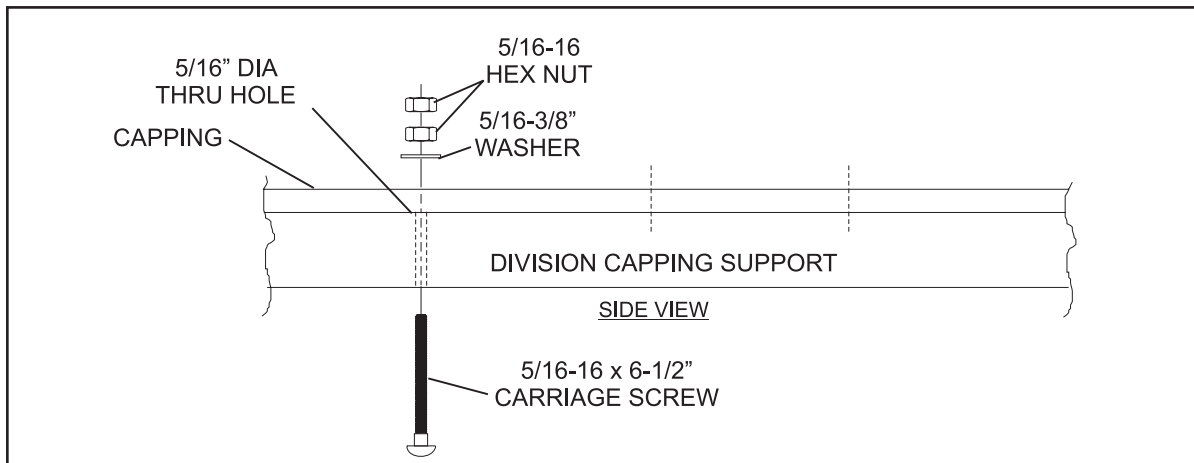


Figure 6

6. Secure the gusset assembly to the division capping using the 5/16-16 x 6-1/2" carriage screw. Refer to *Figure 7*.

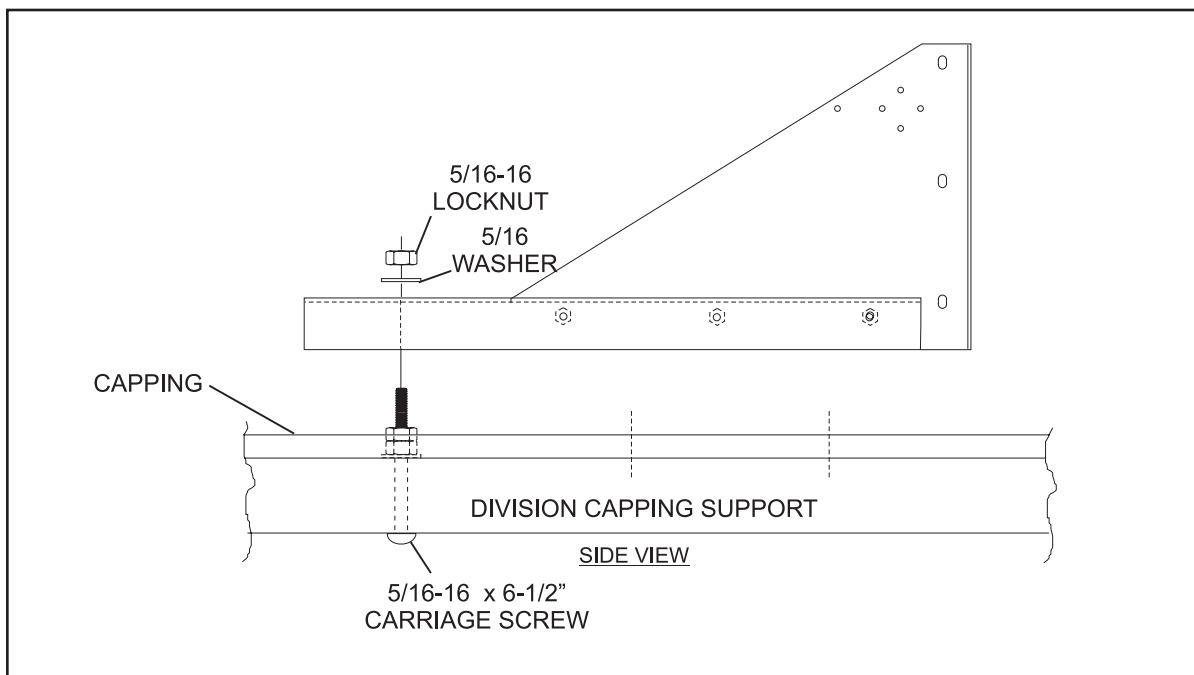


Figure 7



Warning! 1/8" pilot holes must be drilled before screwing gusset to division support.

7. Install two 4" Robertson Screws through gusset assembly into 1/8" pilot holes in capping support.

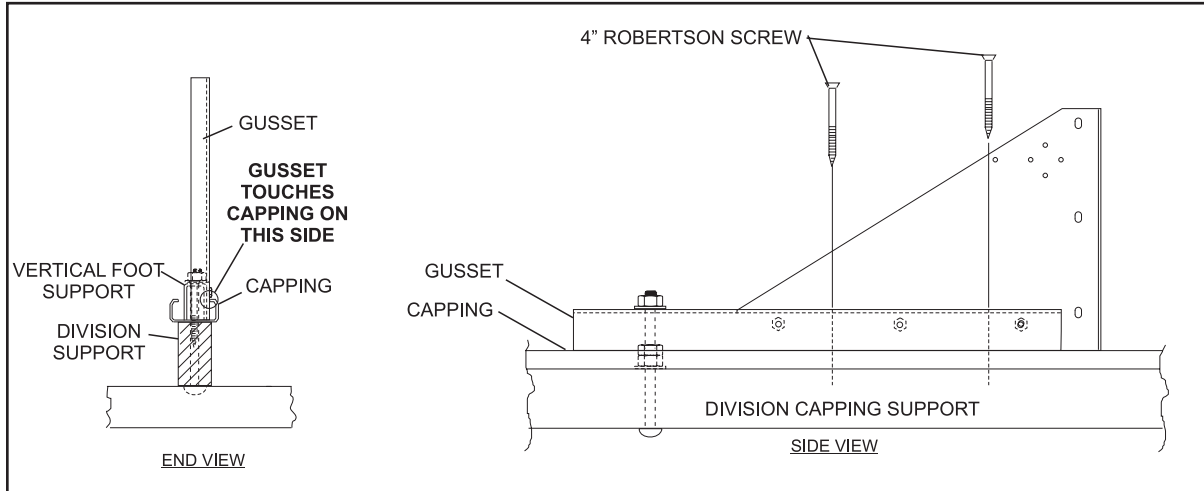


Figure 8

SCREEN SUPPORT ASSEMBLY

NOTE: For Lanescape Video Masking Unit skip pages 28-30. Go to page 31 to “Screen Support Assembly for Lanescape Video Masking Units” section.

Secure Upper Support to Support Assembly

It will be necessary to partially disassemble the support assembly to attach the upper support.

1. Remove cross tube clamp and retain for reinstallation during the “Intermediate Support Installation” further along in the installation. Refer to *Figure 9*.

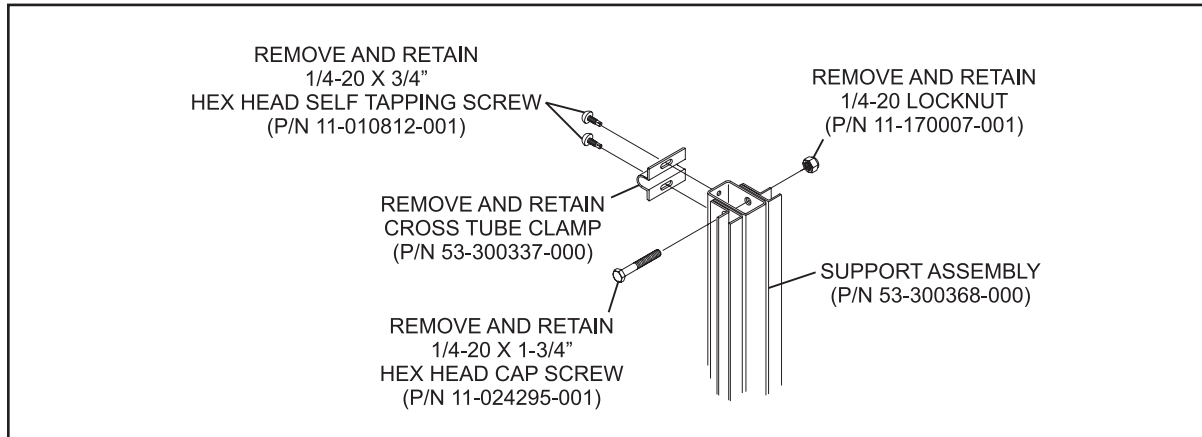


Figure 9

2. Remove 1/4-20 x 1-3/4" hex head cap screw and locknut and retain for step 4.

i **NOTE:** If installing projector screens **DO NOT** install upper support, 53-300328-000. Install upper support, 53-300401-000.

3. Insert upper support into support assembly. Refer to *Figure 10*.

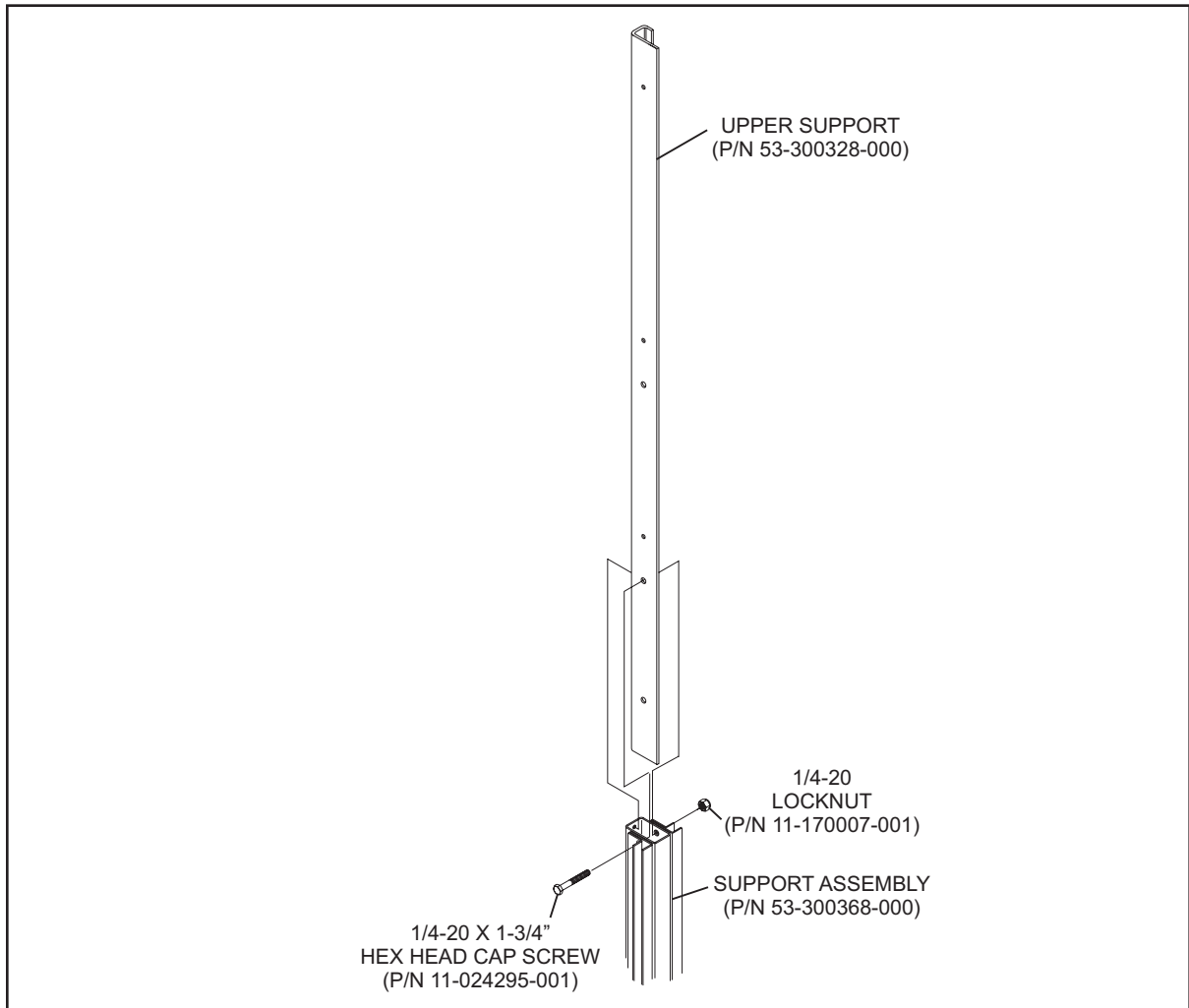


Figure 10

4. Secure upper support to support assembly with 1/4-20 x 1-3/4" hex head cap screw removed in step 2. Refer to *Figure 10*.

i **NOTE:** This assembly must be complete before attaching to gusset because ceiling height could obstruct assembly.

Secure Upper Graphic Panel Standoffs and Supports to Support Assembly



NOTE: This is the non-projector screen configuration.

1. Position upper graphic support standoffs making sure the notched in the standoff is facing downward. Refer to *Figure 11*.

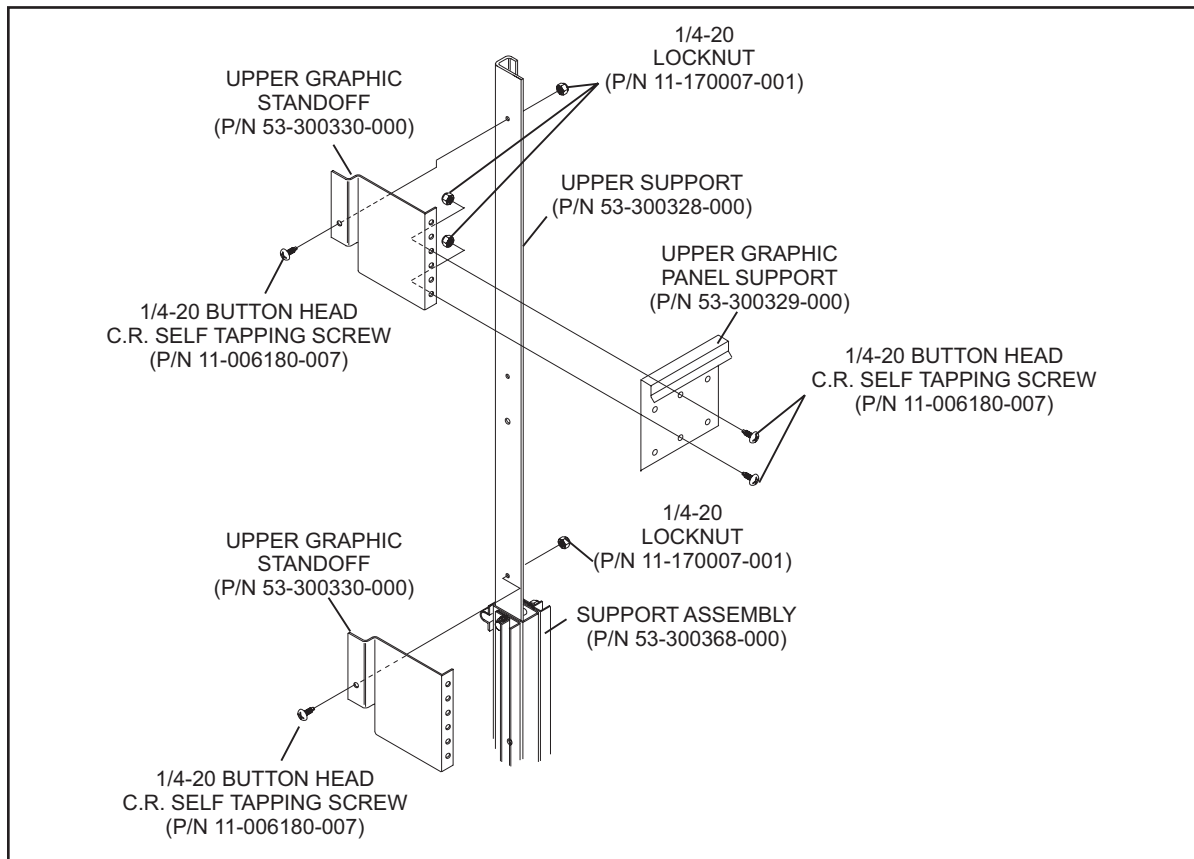


Figure 11

2. Attach upper graphic support standoffs with provided hardware. Refer to *Figure 11*.
3. Align upper graphic panel supports with standoffs and secure with provided hardware. Refer to *Figure 11*.



NOTE: After Completing “Upper Support Assembly” skip pages 31-45 and go to page 46 to “Install First Lane and Last Lane Support Assemblies” section.

Landscape Video Masking Units Installation

SCREEN SUPPORT ASSEMBLY



NOTE: For masking units with ceiling/cable installed screens or without Landscape Video - After Completing upper support assembly skip pages 31-45 and go to page 46 to “Install First Lane and Last Lane Support Assemblies” Section.

Secure Upper Support to Support Assembly

It will be necessary to partially disassemble the support assembly to attach the upper support.

1. Remove cross tube clamp and retain for reinstallation during the “Intermediate Support Installation” further along in the installation. Refer to *Figure 12*.

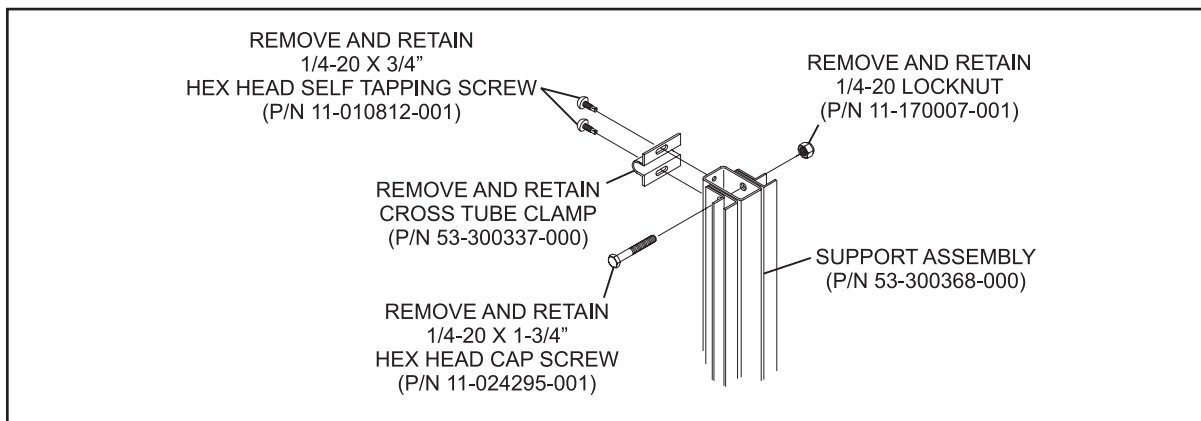


Figure 12

2. Remove 1/4-20 x 1-3/4” hex head cap screw and locknut and retain for step 4.

3. Install the coupler in the lower support. Refer to *Figure 13*.

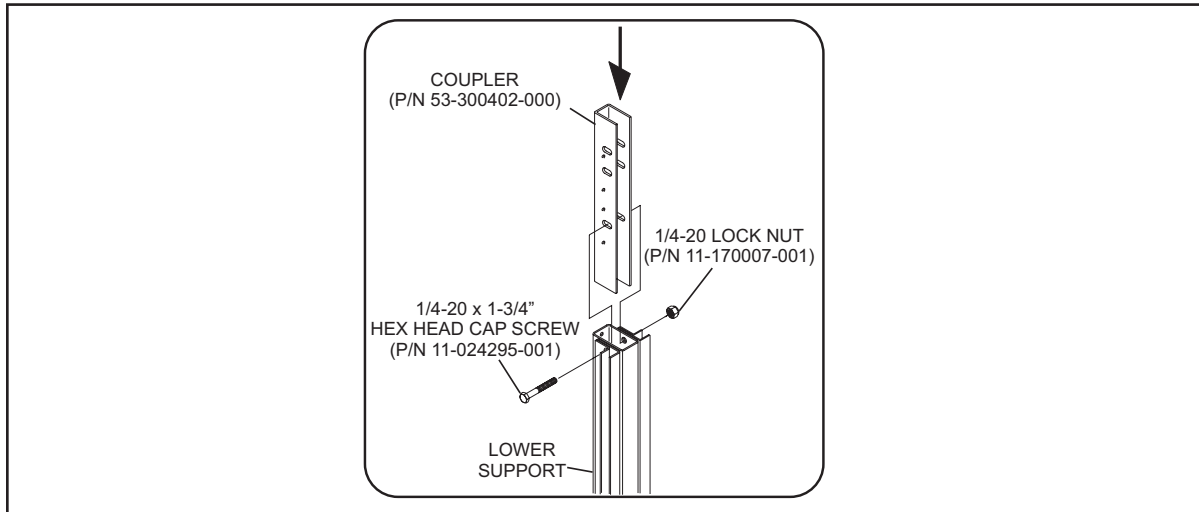


Figure 13

4. Secure coupler to support assembly with 1/4-20 x 1-3/4" hex head cap screw removed in step 2. Refer to *Figure 10*.
5. Install the upper support and one of the upper graphic standoffs to the lower support. Refer to *Figure 14*.

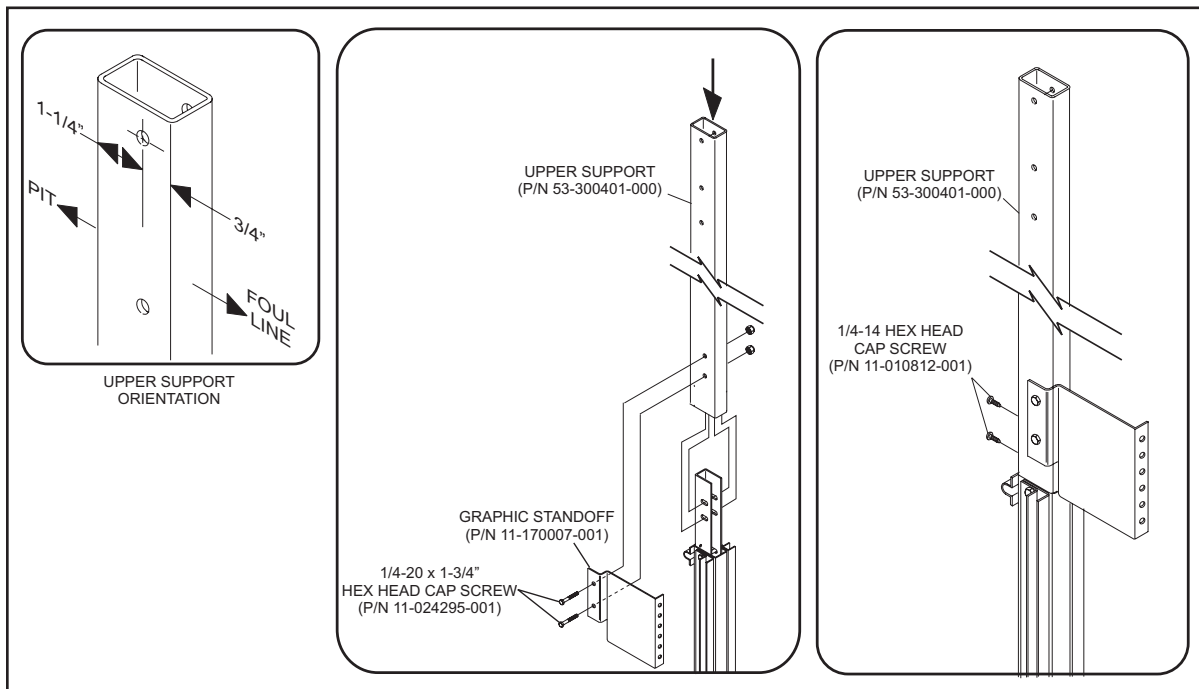


Figure 14



NOTE: The Upper Support is required to be orientated the correct way before installation.

IDENTIFYING PROJECTION SCREEN BRACKETS

An identifying letter stamp can be found on each bracket. Refer to *Figure 15*.

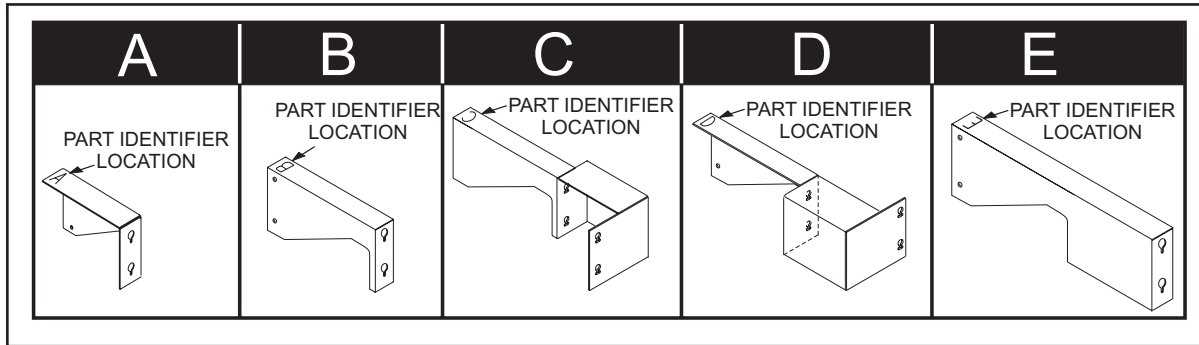


Figure 15

ASSEMBLE ONE SCREEN - SUPPORT ASSEMBLIES



NOTE: The assembly of the first and last support assembly - screen mounting bracketry is different.

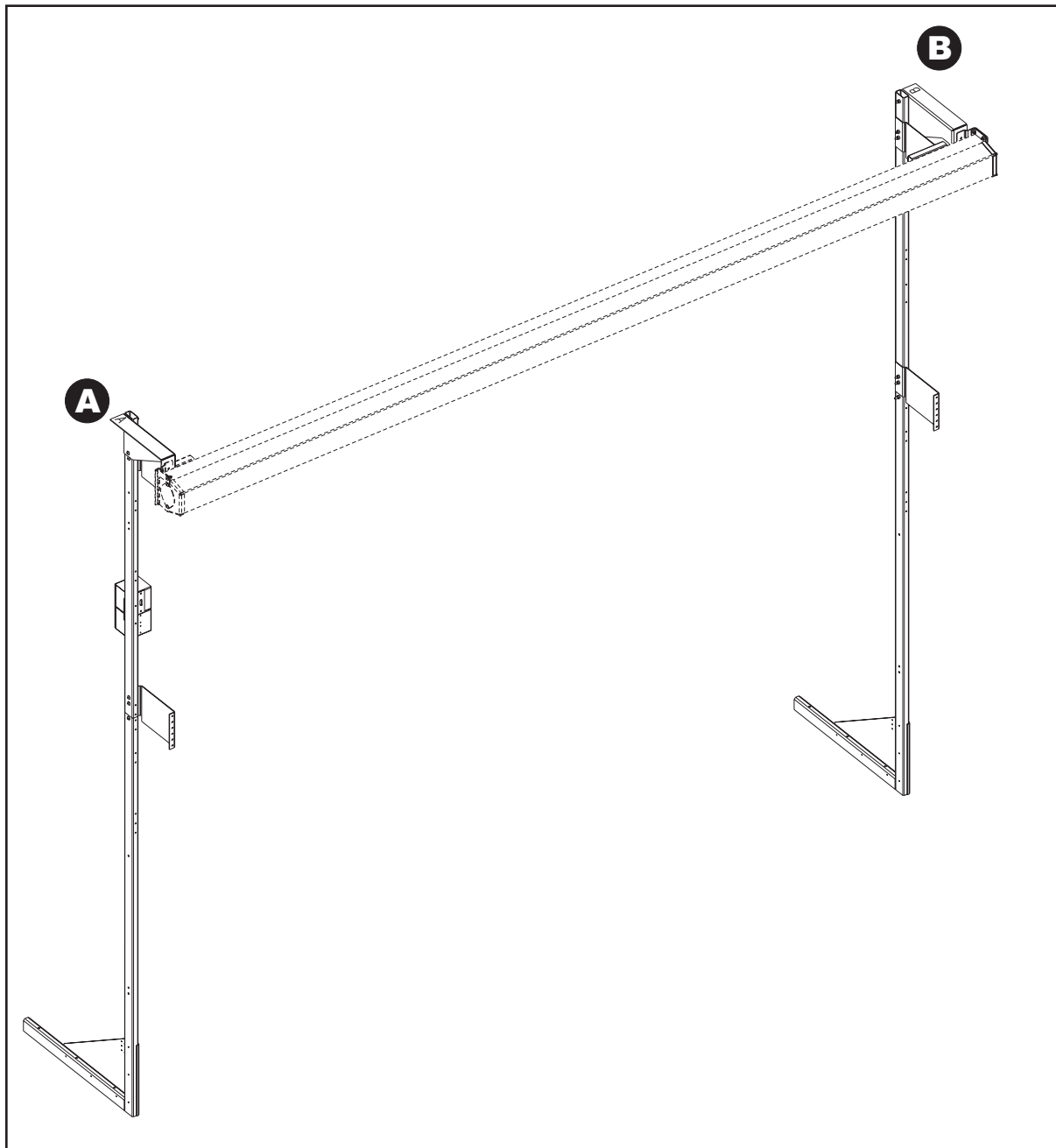


Figure 16

First Support Assembly “A” Bracket

1. Install the first support assembly “A” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 17*.

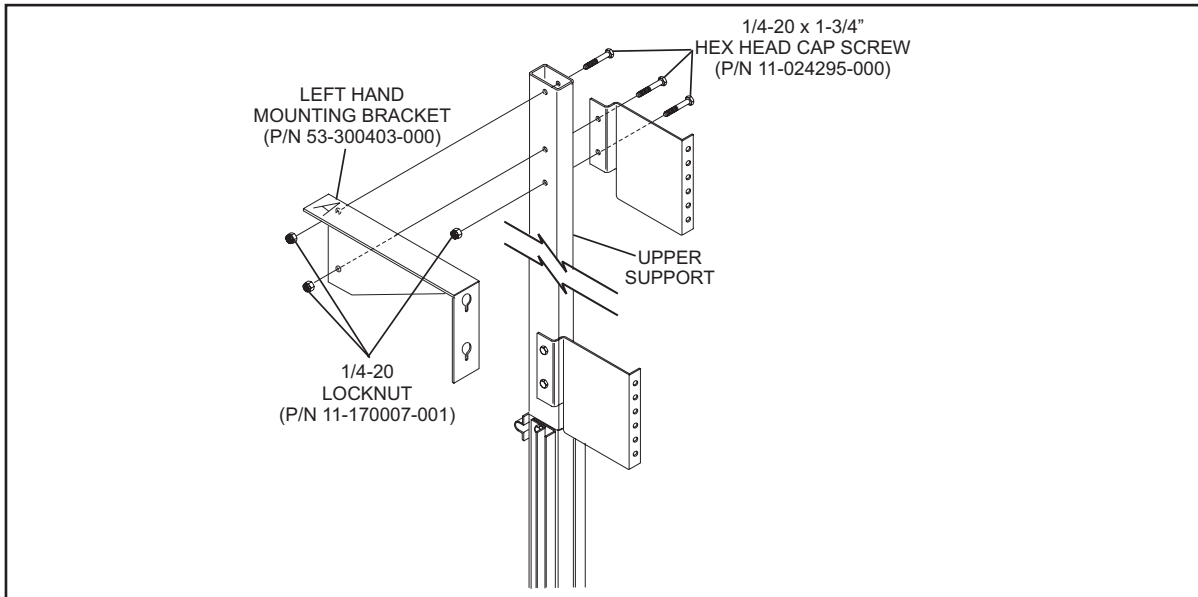


Figure 17



NOTE: The upper graphic standoff is turned 180 degrees for the left side installation.

Last Support Assembly “B” Bracket

1. Install the last support assembly “B” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 18*.

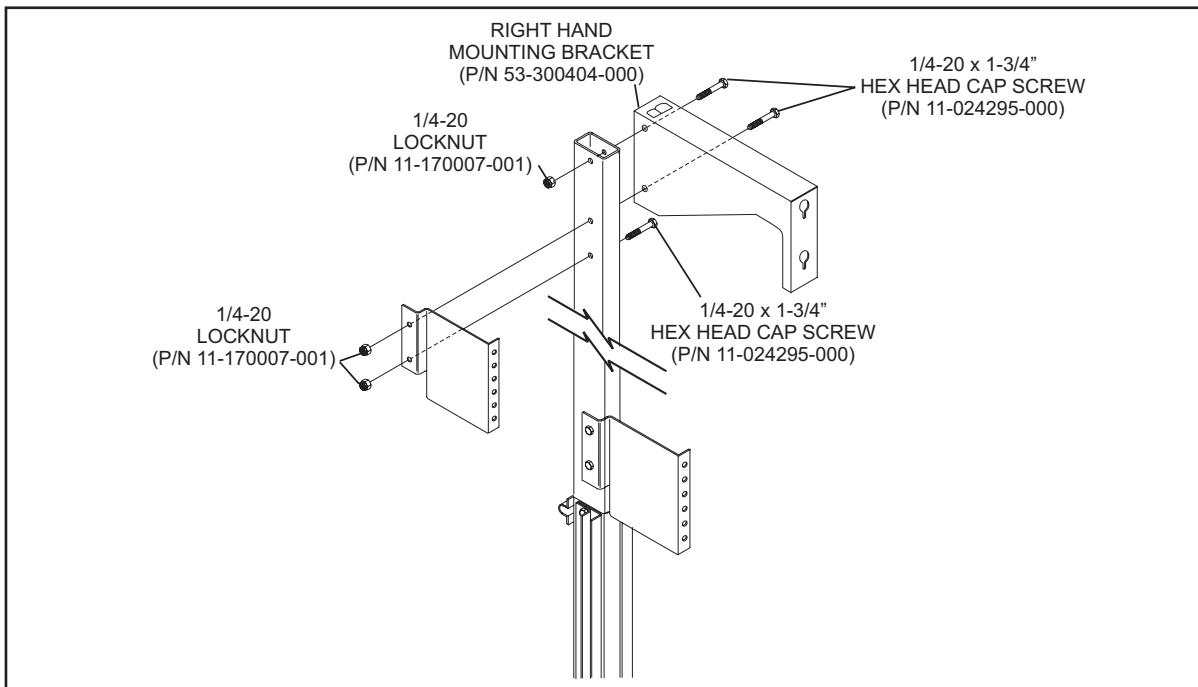


Figure 18

ASSEMBLE FOUR SCREEN - SUPPORT ASSEMBLIES

The assembly of the first, last and intermediate support assembly - projector mounting bracketry is different. Refer to *Figures 19 & 20*.

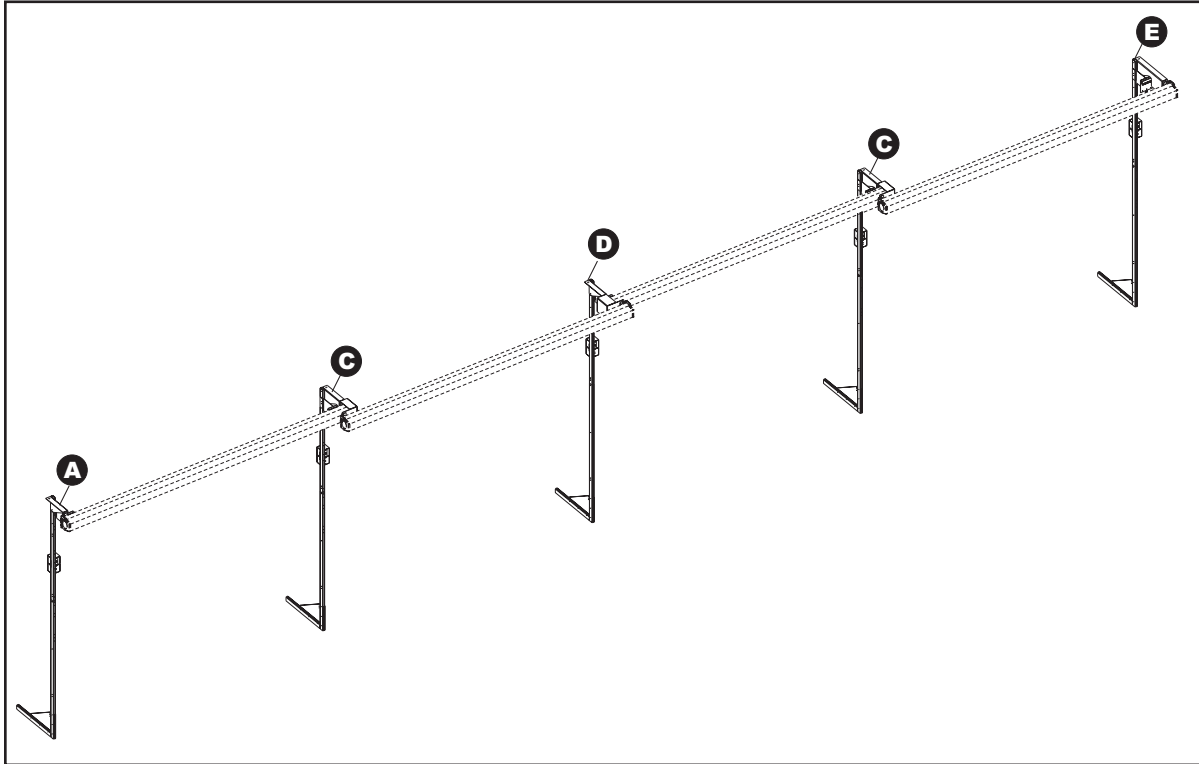


Figure 19



NOTE: When installing an even number of screens end with an "E" bracket.

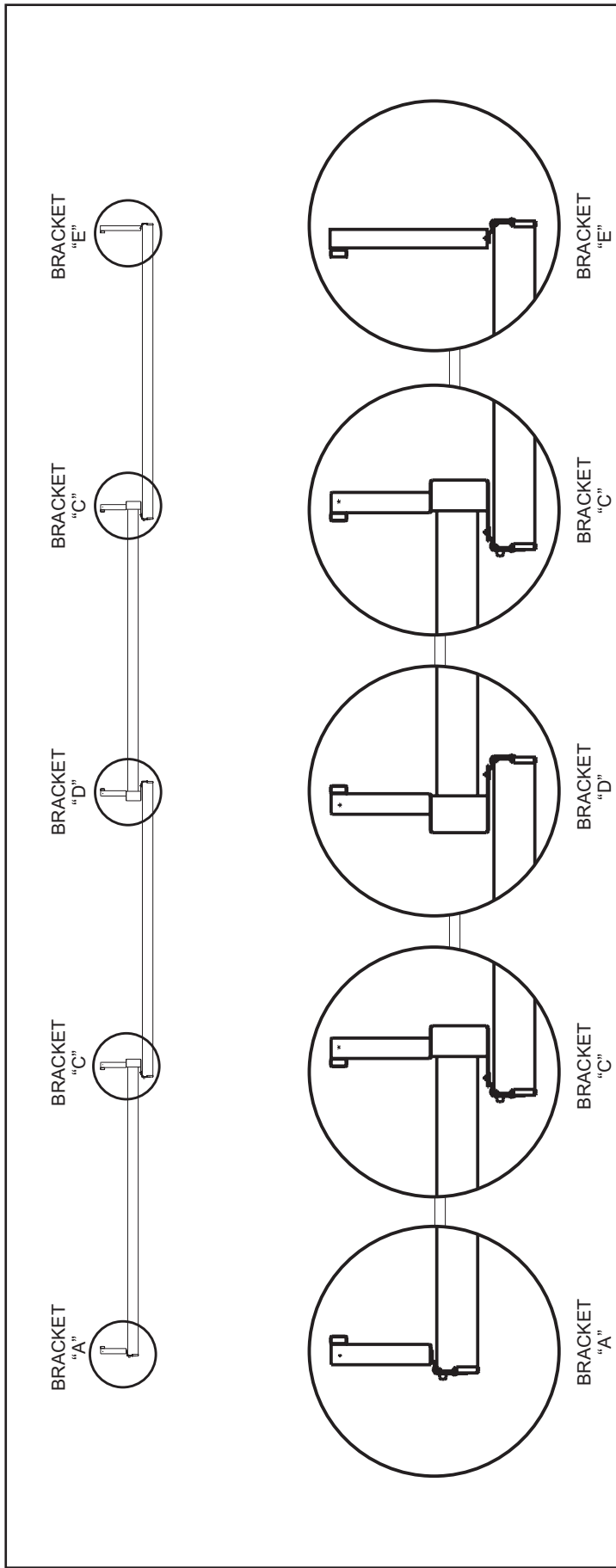


Figure 20

First Support Assembly "A" Bracket

1. Install the first support assembly "A" projection screen mounting bracket and upper graphic standoff. Refer to *Figure 21*.

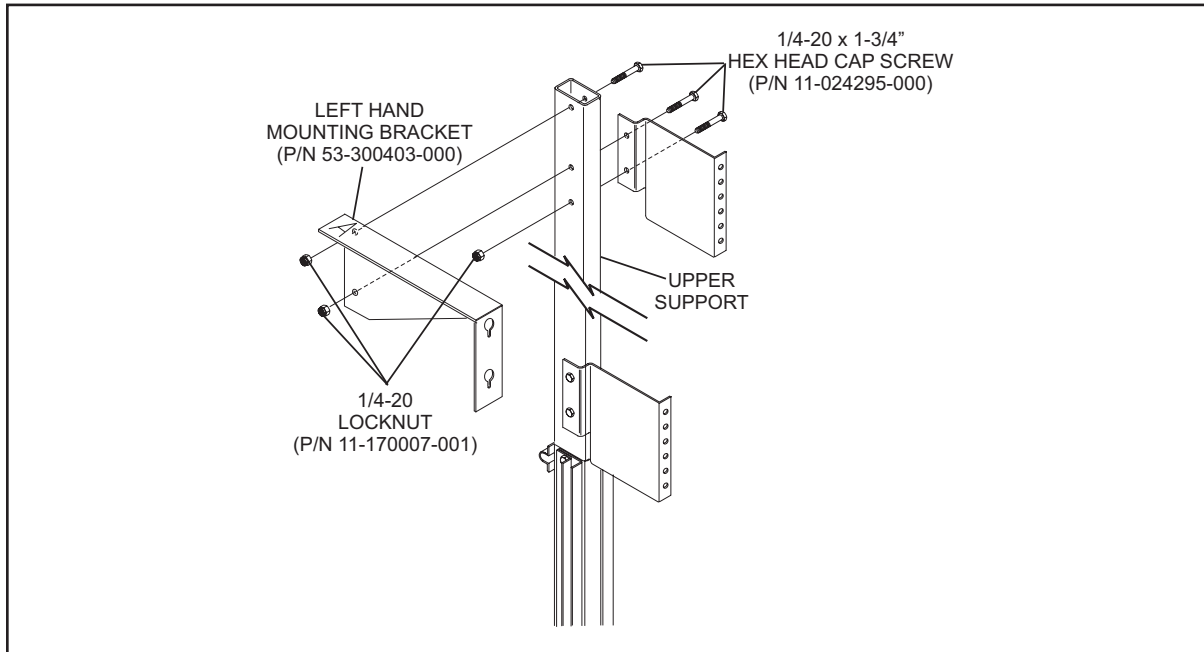


Figure 21



NOTE: The upper graphic standoff is turned 180 degrees for the left side installation.

Intermediate Support Assembly “C” Bracket

1. Install the intermediate support assembly “C” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 22*.

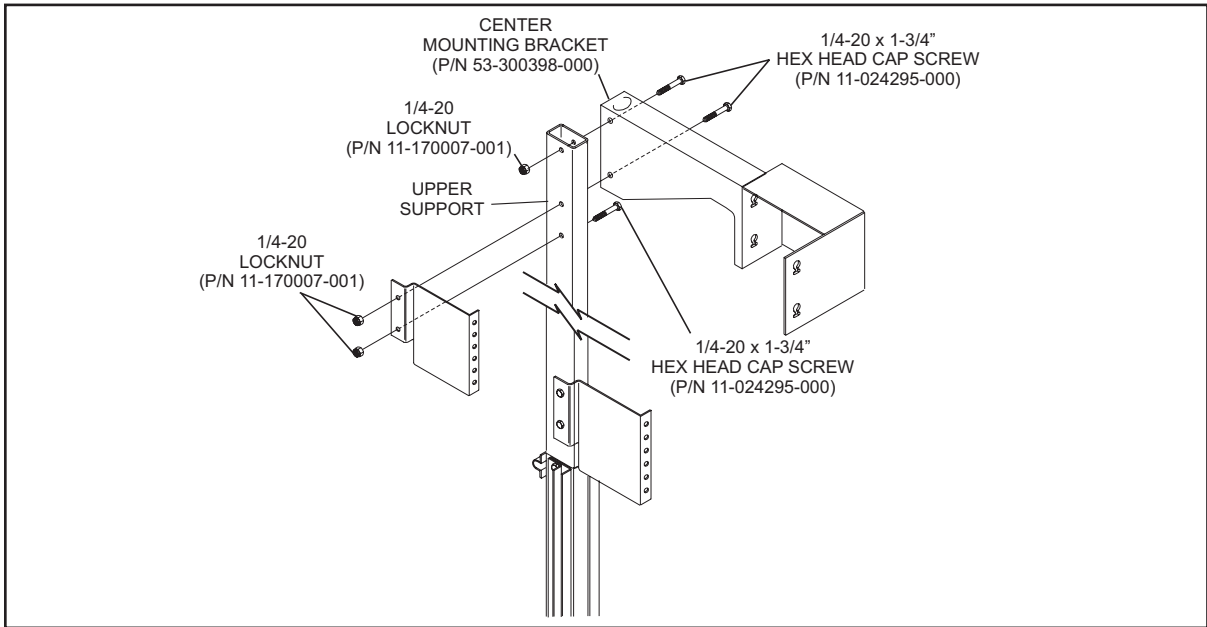


Figure 22

Intermediate Support Assembly Center “D” Bracket

1. Install the intermediate support assembly “D” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 23*.

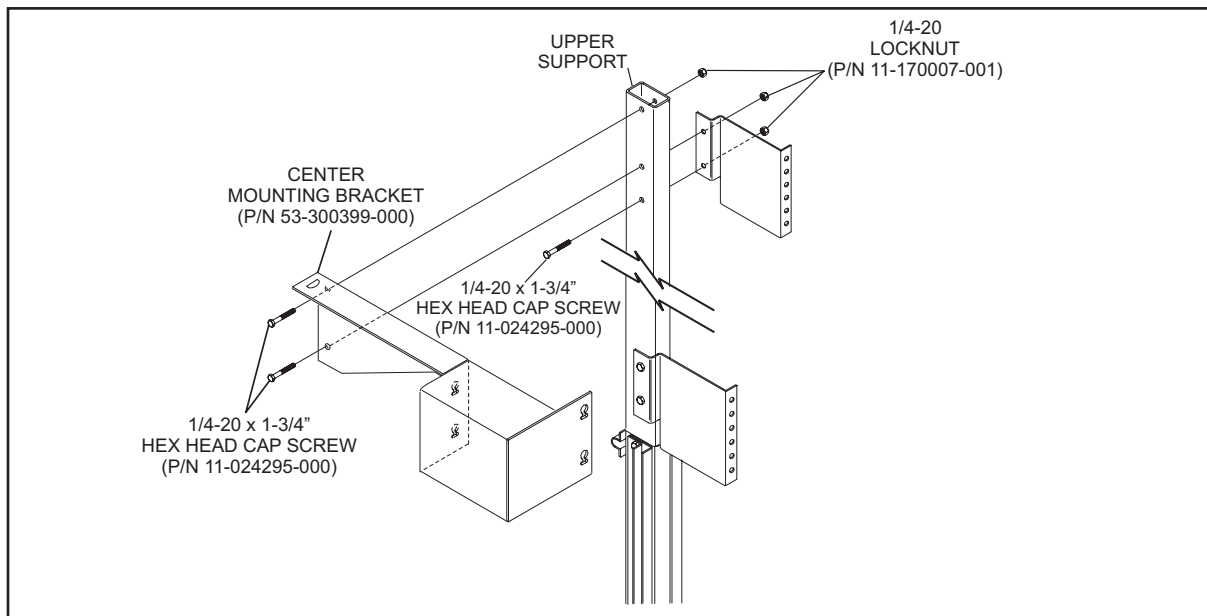


Figure 23



NOTE: Repeat center “C” bracket and center “D” bracket installations for assemblies with more than 3 screens.

Intermediate Support Assembly “C” Bracket

1. Install the intermediate support assembly “C” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 24*.

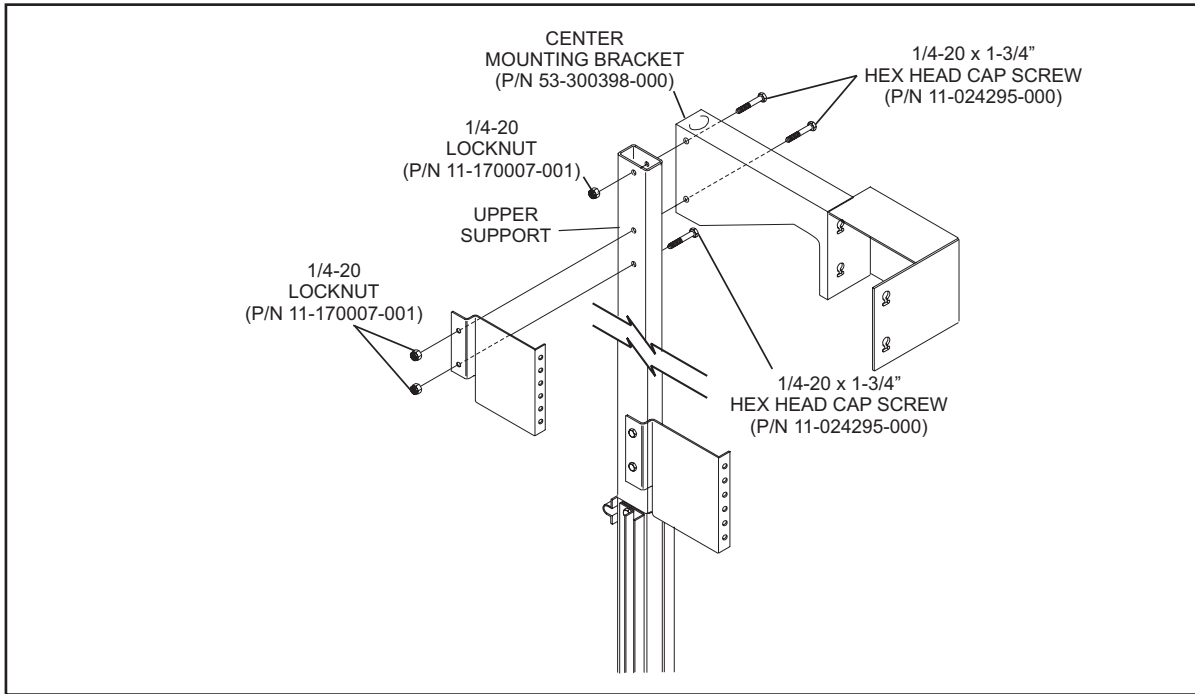


Figure 24

Last Support Assembly “E” Bracket

1. Install the last support assembly “E” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 25*.

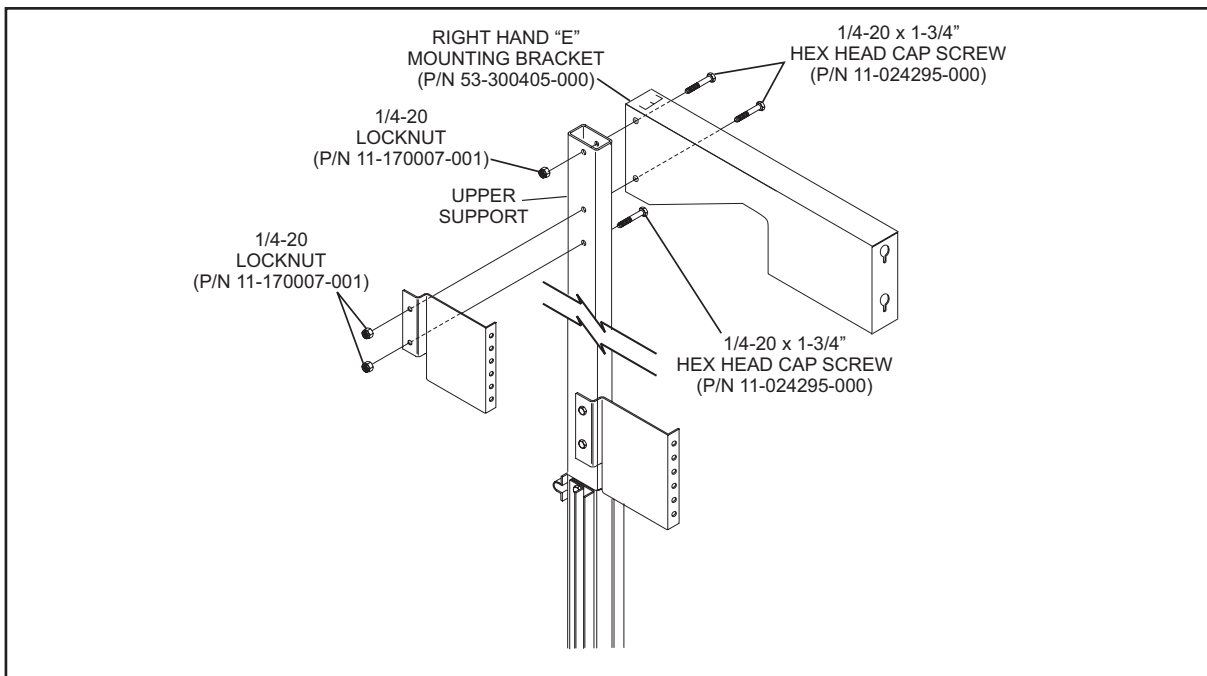


Figure 25

ASSEMBLE 5 SCREEN - SUPPORT ASSEMBLIES

The assembly of the first, intermediate and last support assemblies - projector mounting brackets is different. Refer to *Figures 26 & 27*.

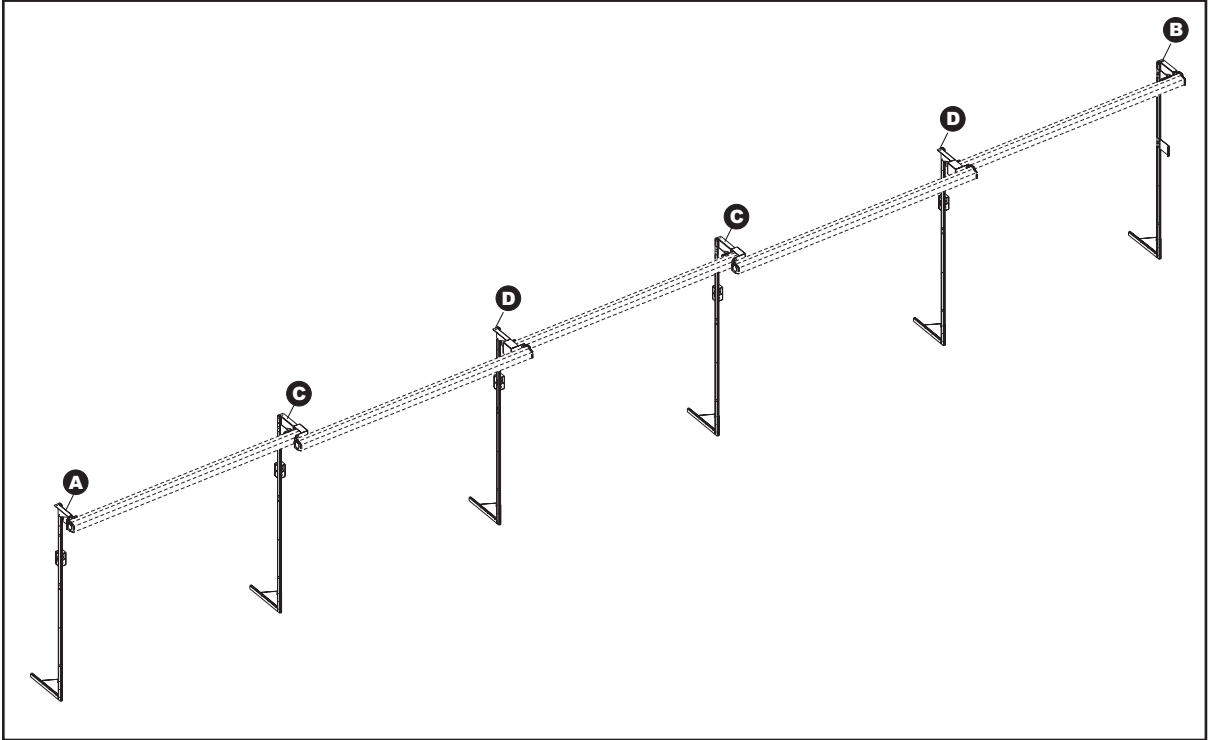


Figure 26



NOTE: When installing an odd number of screens end with a "B" bracket.

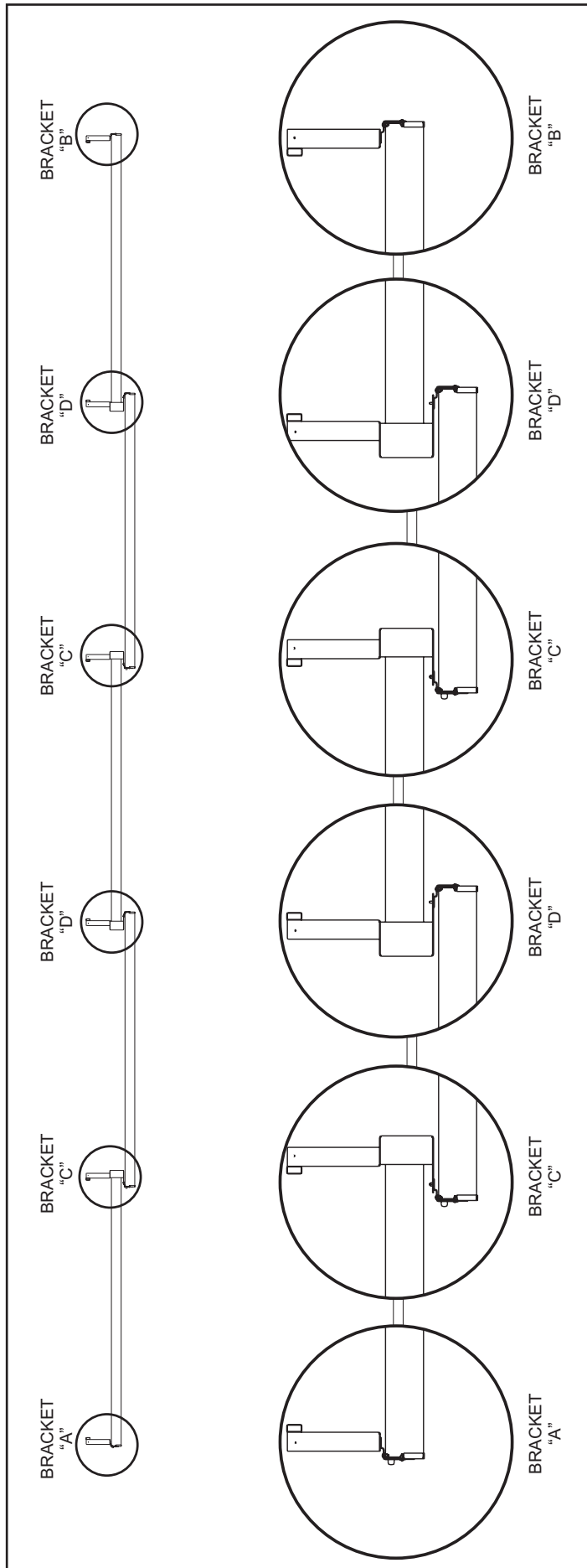


Figure 27

FIRST SUPPORT ASSEMBLY “A” BRACKET

1. Install the first support assembly “A” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 28*

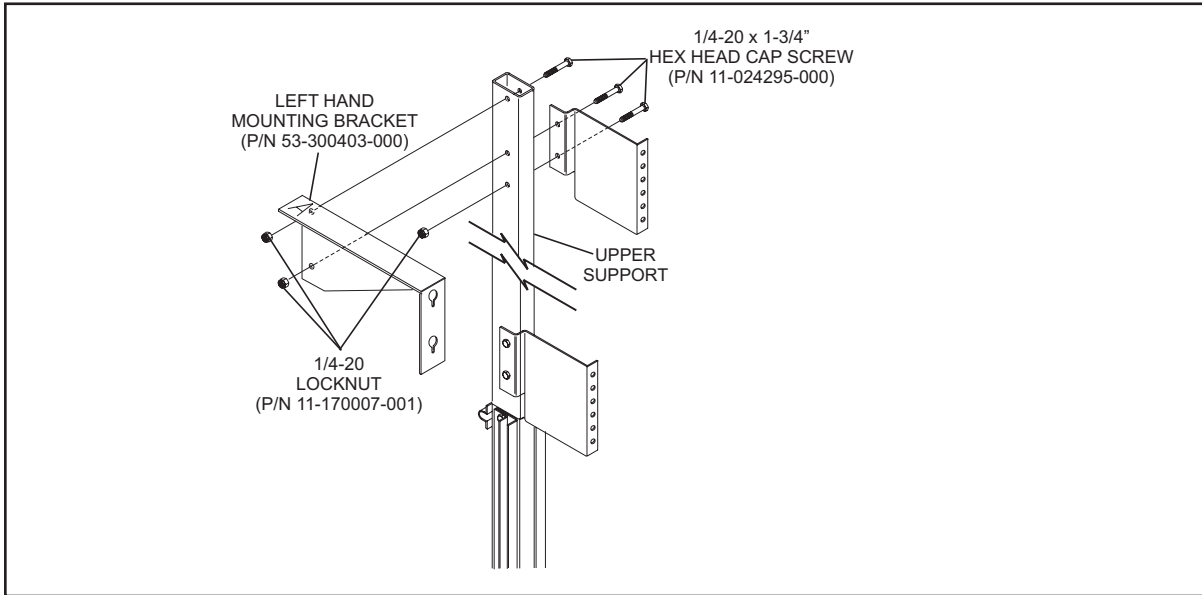


Figure 28



NOTE: The upper graphic standoff is turned 180 degrees for the left side installation.

Intermediate Support Assembly “C” Bracket

1. Install the intermediate support assembly “C” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 29*.

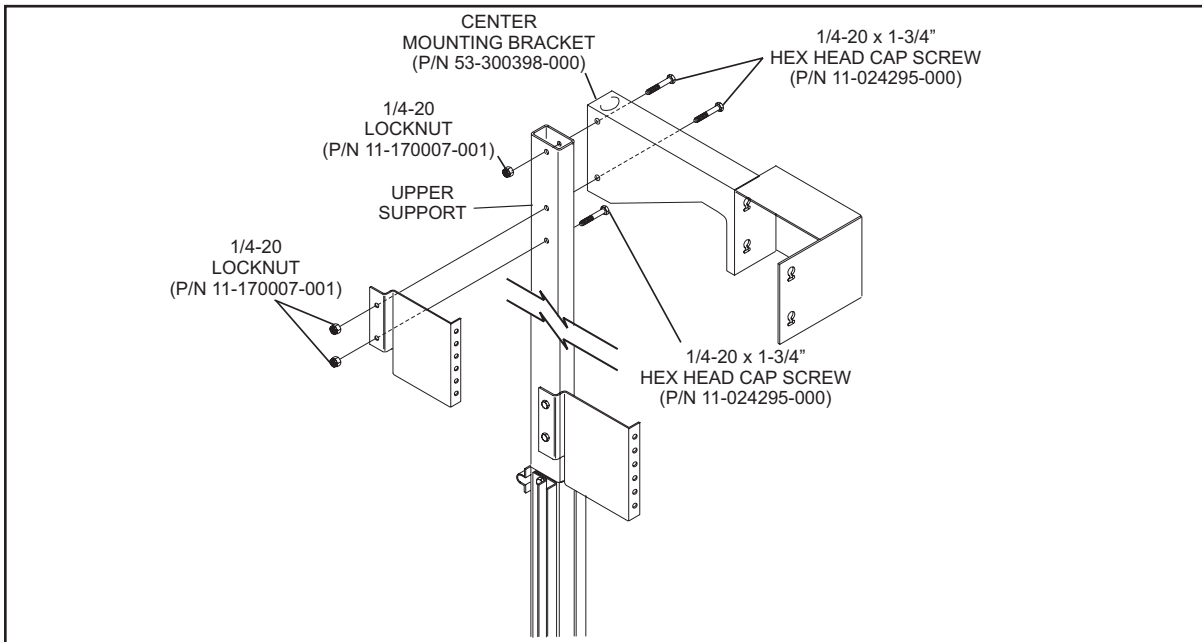


Figure 29

Intermediate Support Assembly “D” Bracket

1. Install the intermediate support assembly “D” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 30*.

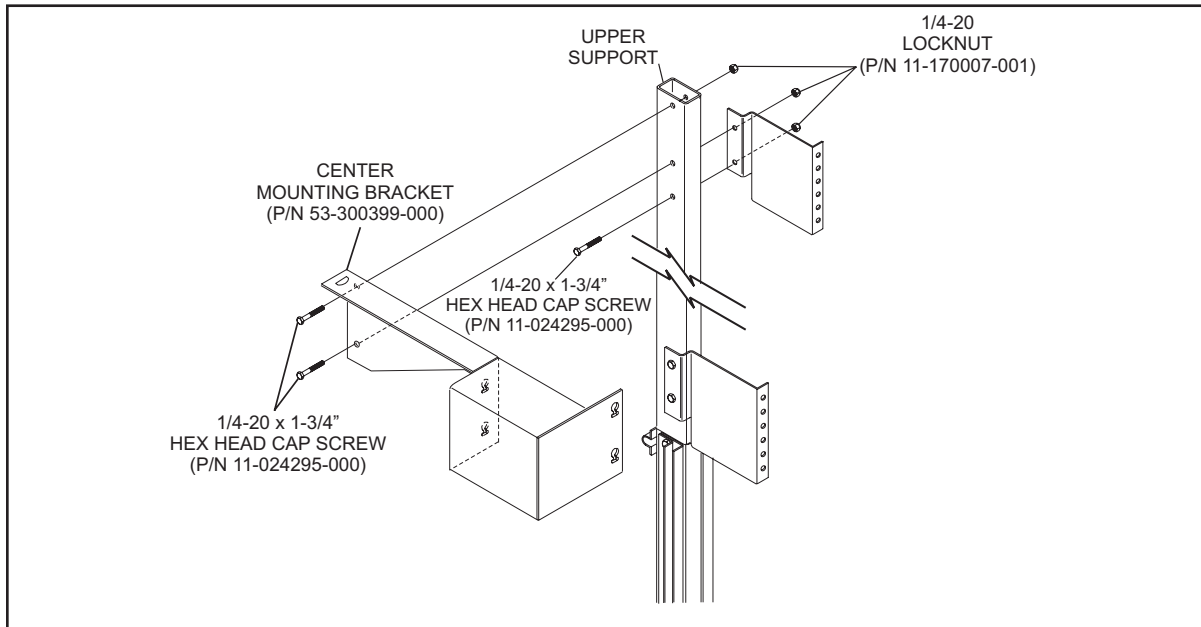


Figure 30



NOTE: Repeat center “C” bracket and center “D” bracket installations for assemblies with more than 3 screens.

Intermediate Support Assembly “C” Bracket

1. Install the intermediate support assembly “C” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 31*.

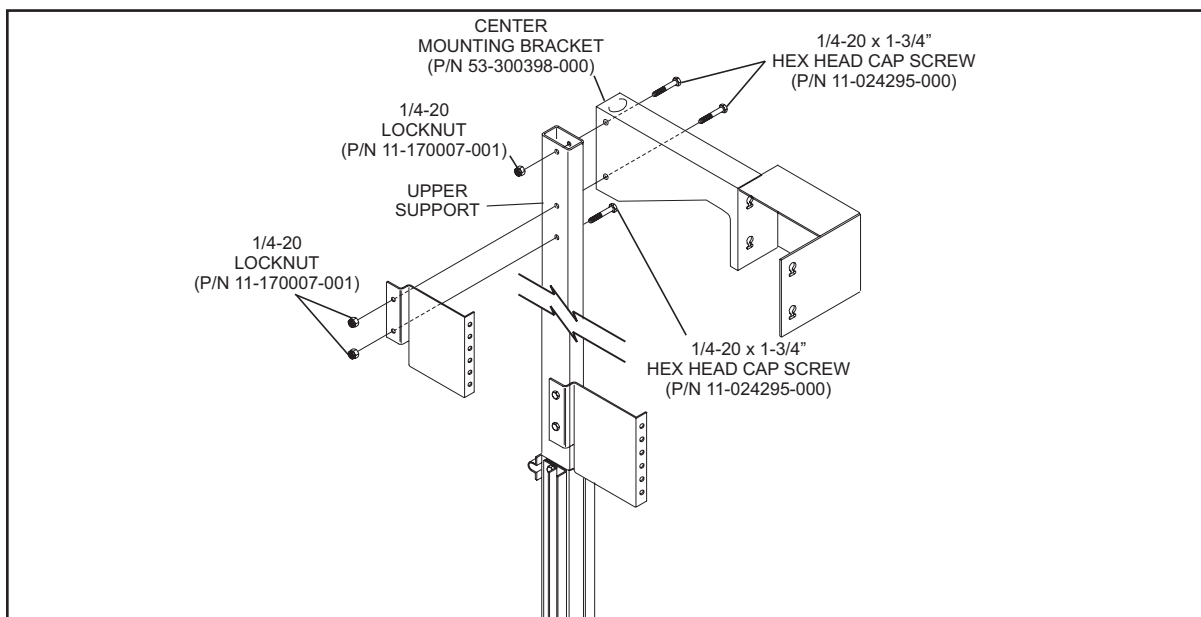


Figure 31

Intermediate Support Assembly “D” Bracket

1. Install the intermediate support assembly “D” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 32*.

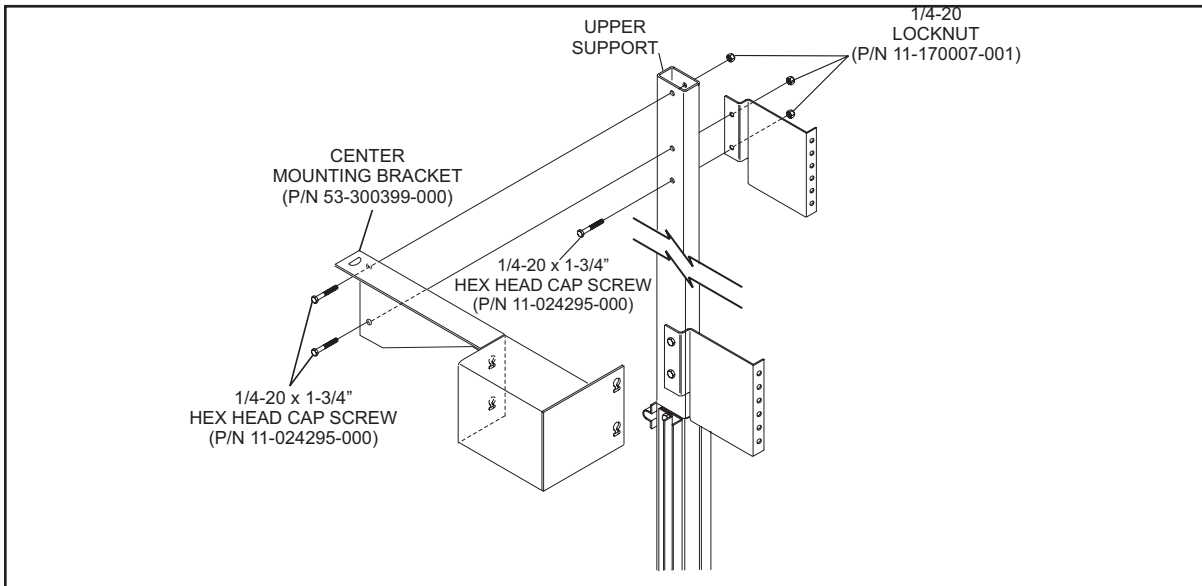


Figure 32



NOTE: Repeat center “C” bracket and center “D” bracket installations for assemblies with more than 5 screens.

Last Support Assembly “B” Bracket

1. Install the last support assembly “B” projection screen mounting bracket and upper graphic standoff. Refer to *Figure 33*.

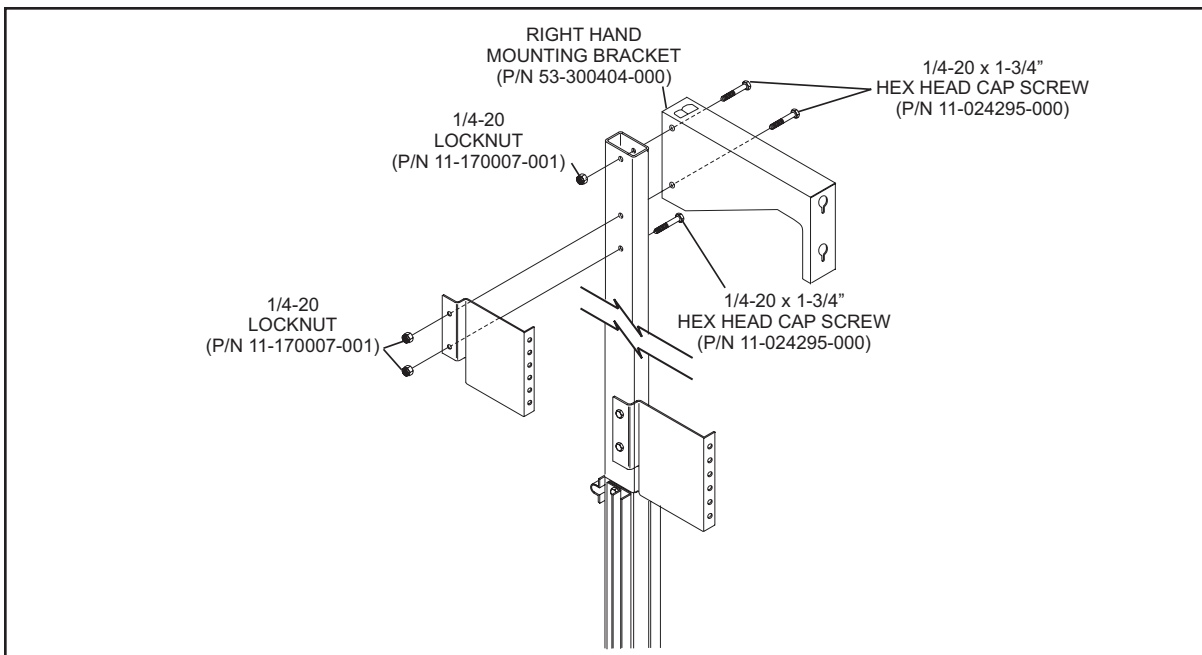


Figure 33

Support Assembly Installation (Masking Unit/Landscape Video Masking Unit)

INSTALL FIRST AND LAST SUPPORT ASSEMBLIES

1. Position support assemblies on the mounting gussets with hardware provided. Refer to *Figure 34*.
2. Make plumb and tighten. Refer to *Figure 34*.
3. Stretch a line from left end wall to right end wall so it just touches the face of the plumbed support assemblies. Refer to *Figure 34*.
4. Mark end walls where string meets them and extend vertically plumbed line up wall to position of end wall support mounting bracket. Refer to *Figure 34*.

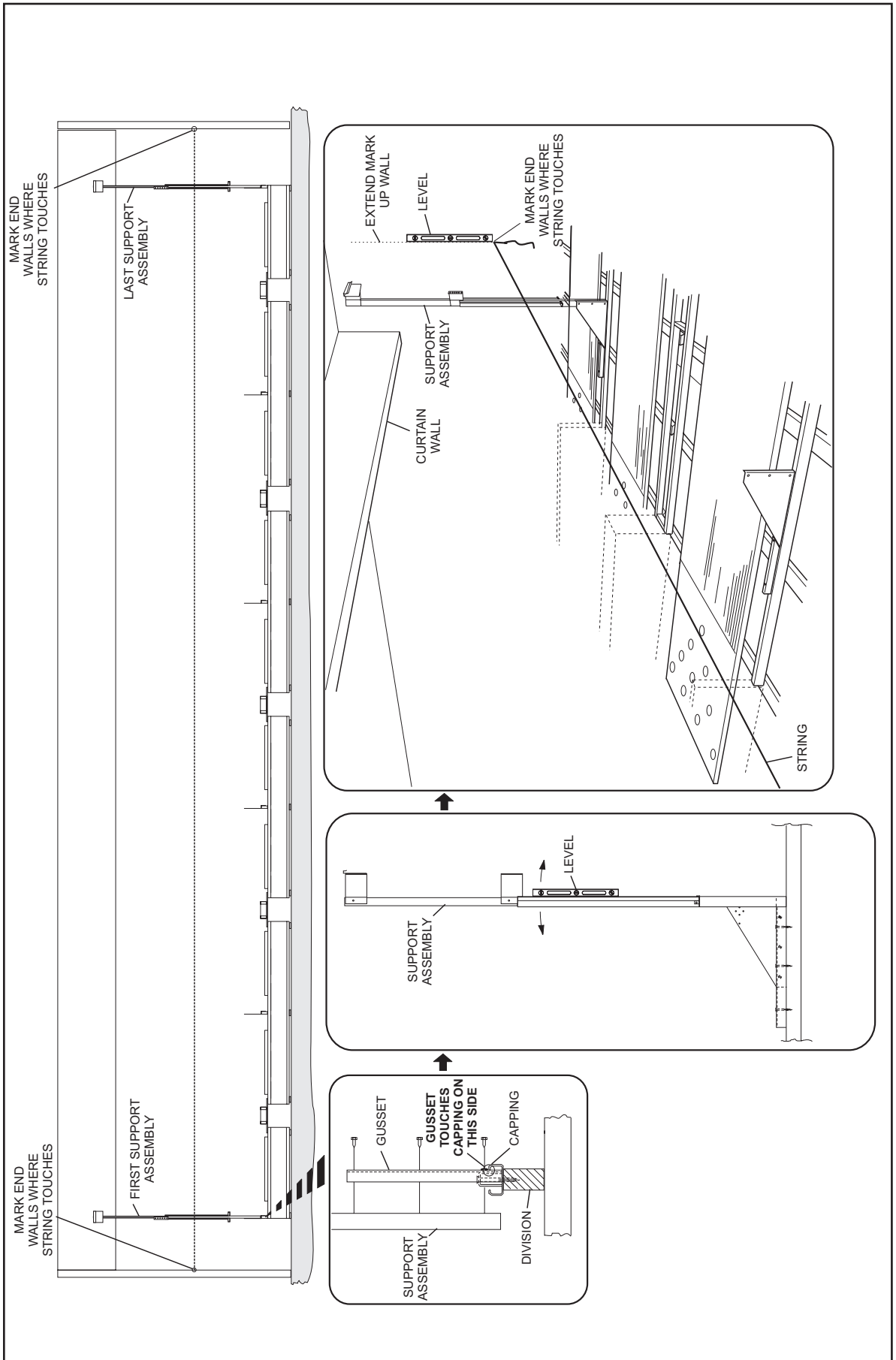


Figure 34

LEFT-HAND AND RIGHT-HAND END WALL KITS

Mount Wall Kits

1. Attach horizontal tubing from end wall bracket to first and last vertical support assembly.
2. Tighten tube clamps.



WARNING!: Failure to install end wall kits will designate a mechanical alert which could potentially cause personal injury.

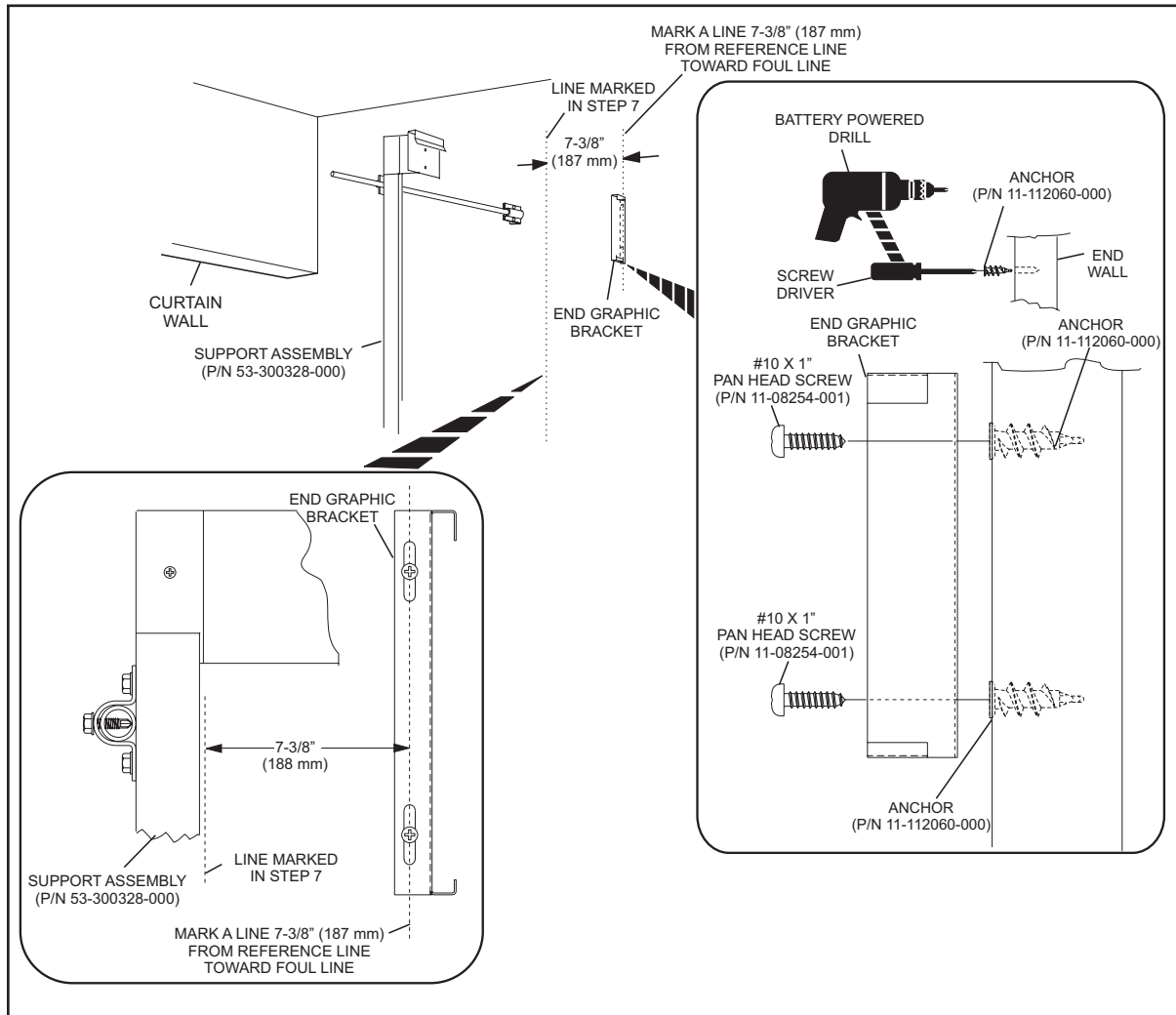


Figure 35

3. Attach end graphic bracket with provided hardware. Refer to *Figure 36*.

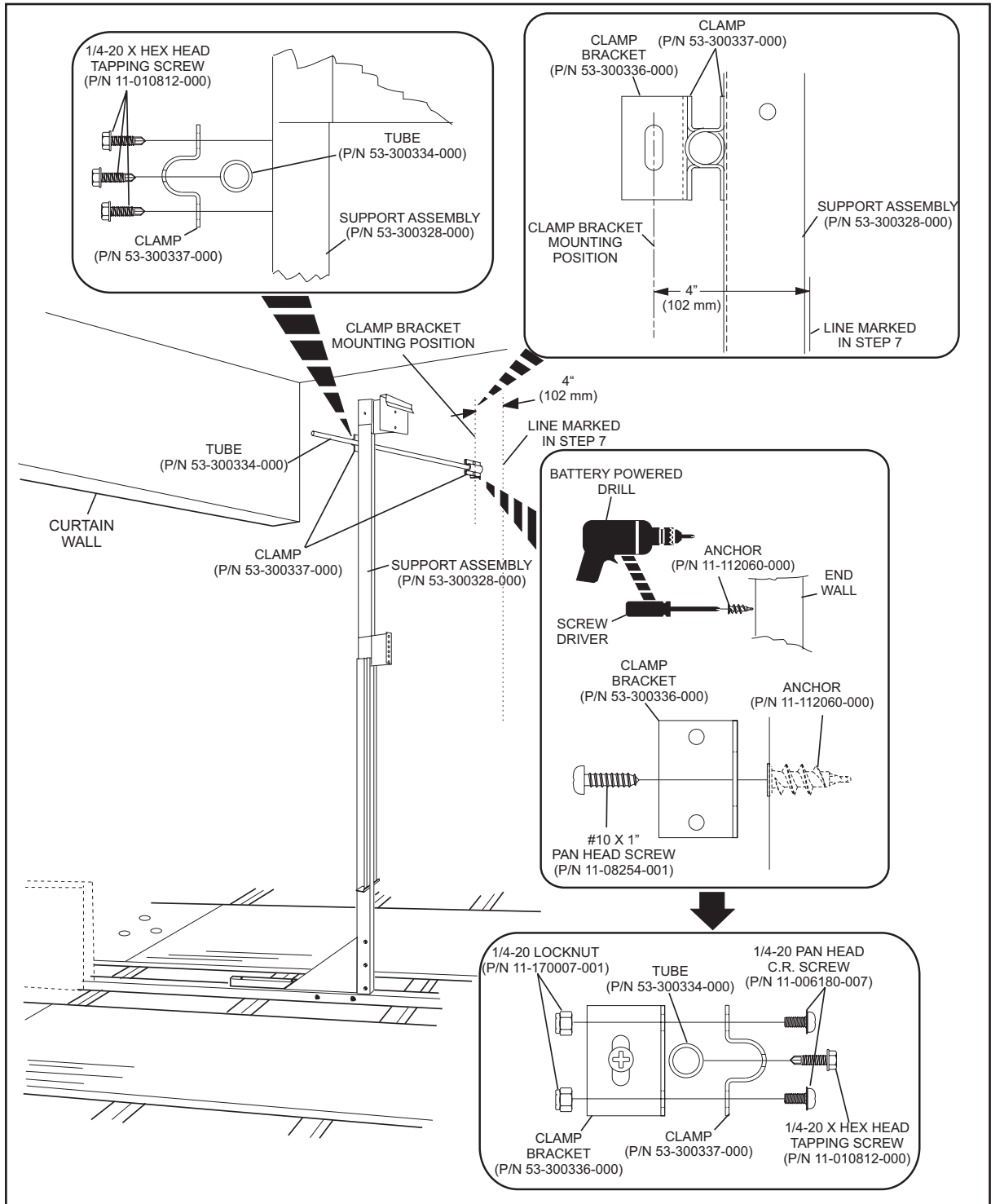


Figure 36

Install Intermediate Support Assemblies

1. Stretch string between installed end support assemblies and position intermediate support assemblies on the mounting gussets with hardware provided.

2. Make plumb to string and tighten. Install cross support tubing with provided hardware. Refer to Figure 36.

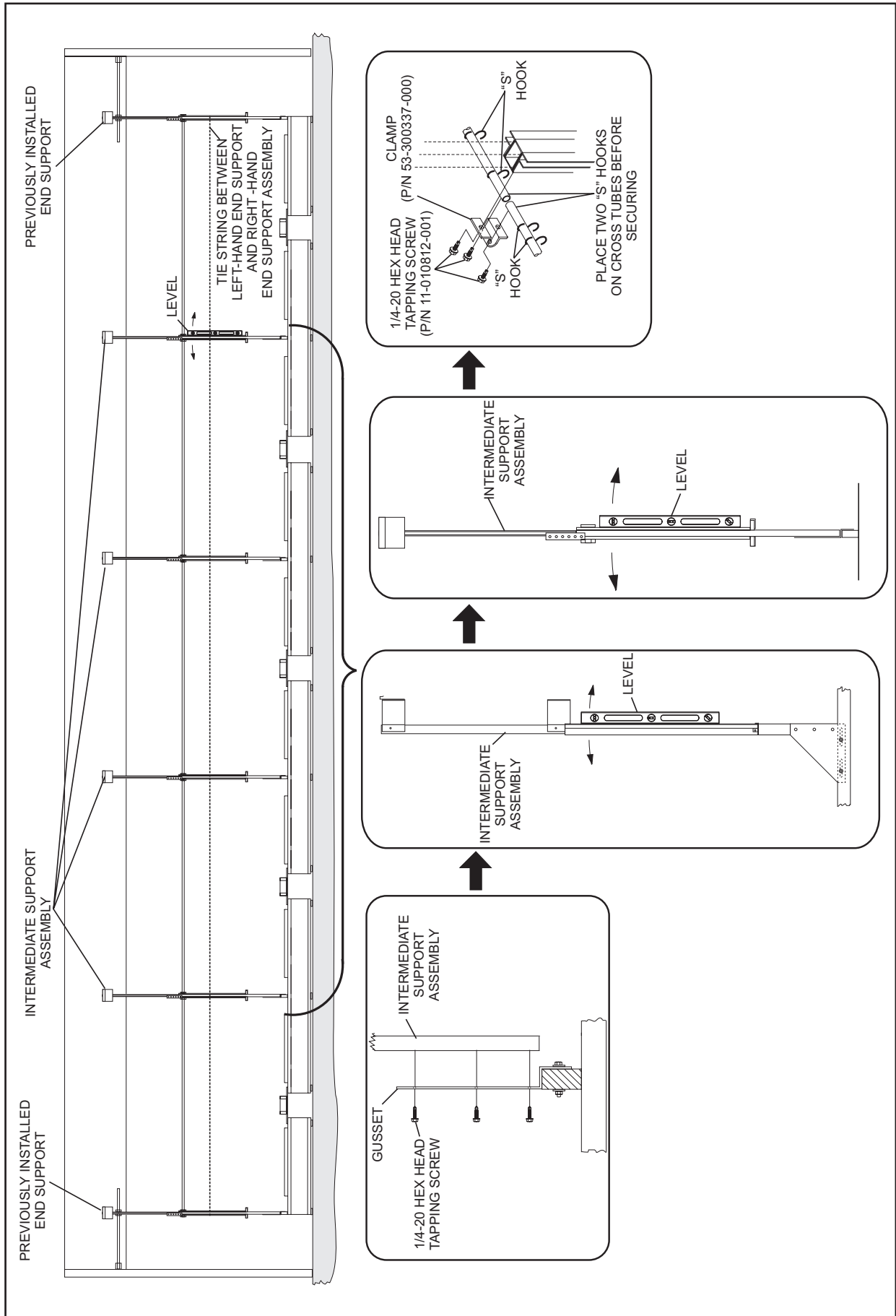


Figure 37

INSTALL Z-BAR AND CROSS CHANNEL

Illustration is as viewed from pinsetter.

1. Tie or tape Z-bar assemblies to support assemblies secure cross channel to Z-bar with provided hardware.
2. Check for level, squareness and maintain 1/8" (3 mm) spacing between Z-bar assemblies.

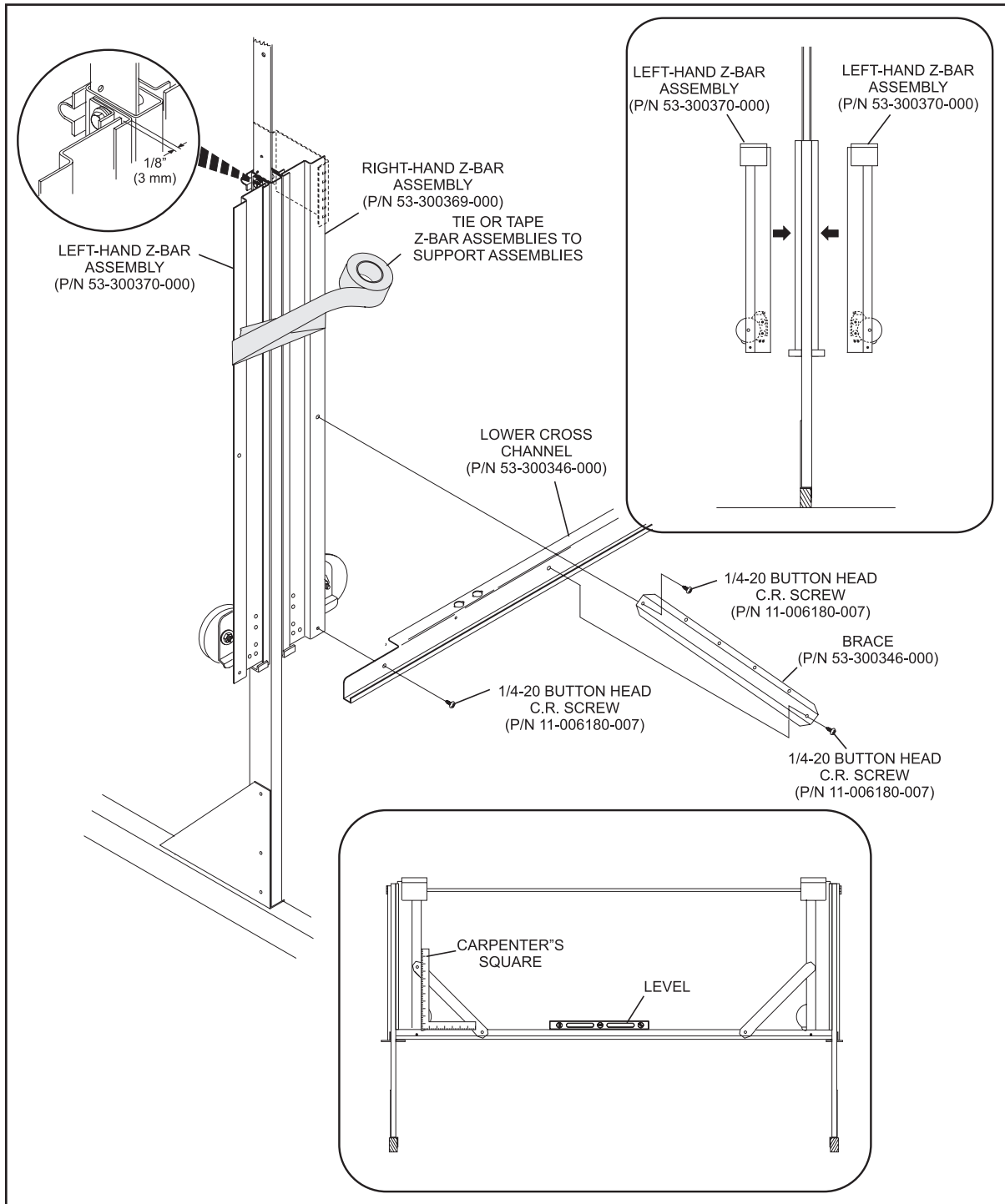


Figure 38

INSTALL UPPER CROSS CHANNEL

1. Install upper cross channels with hardware provided. Refer to *Figure 39*.

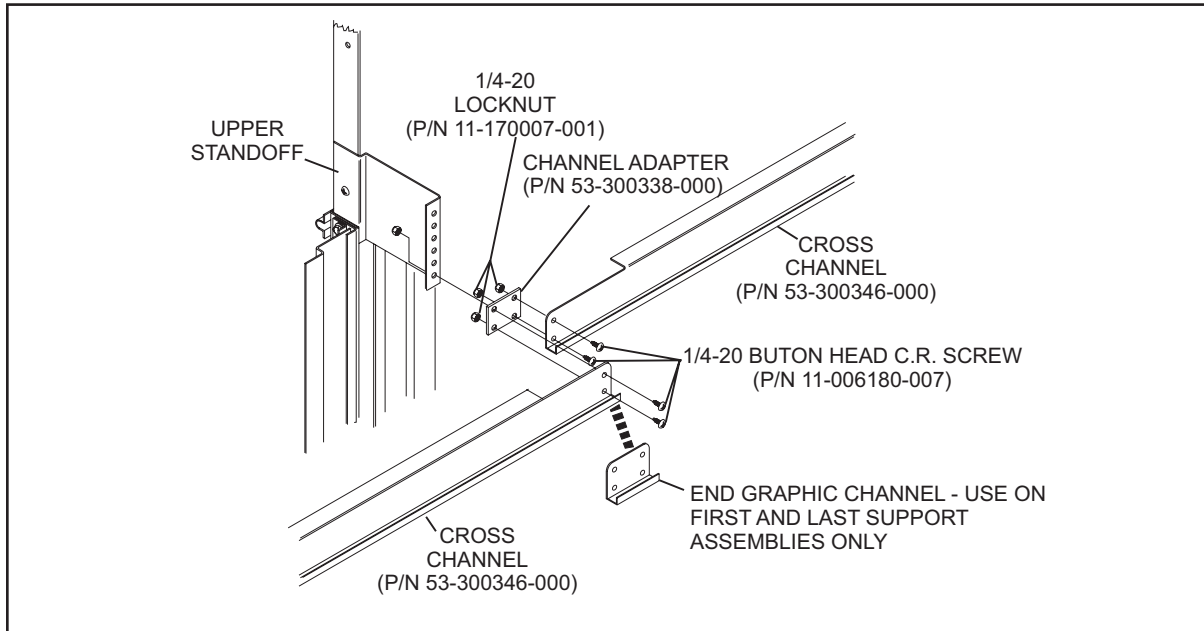


Figure 39

Install Long and Short Pulley Cables and Tension Springs

Follow steps “A” - “F” to install long and short pulley cables, and springs. Refer to *Figure 40*.

- (A) Start with short cable and using provided hardware, connect short cable to upper anchor point.
- (B) Route short cable through pulley area.
- (C) Connect long cable to lower anchor point.
- (D) Route long cable through pulley area.
- (E) Connect loose end of Long cable to spring.
- (F) Holding Short cable in hand stretch SPRING with spring tool and connect the short cable to it.



IMPORTANT! Do not stretch spring by hand.

Repeat Steps (A) - (F) to install opposite side cables and spring. Refer to *Figure 40*.

SPRING LOAD CORD WHEEL

1. Grasp cord and turn cord wheel 5-6 revolutions.
2. Stretch cord upward and attach to “S” hook.

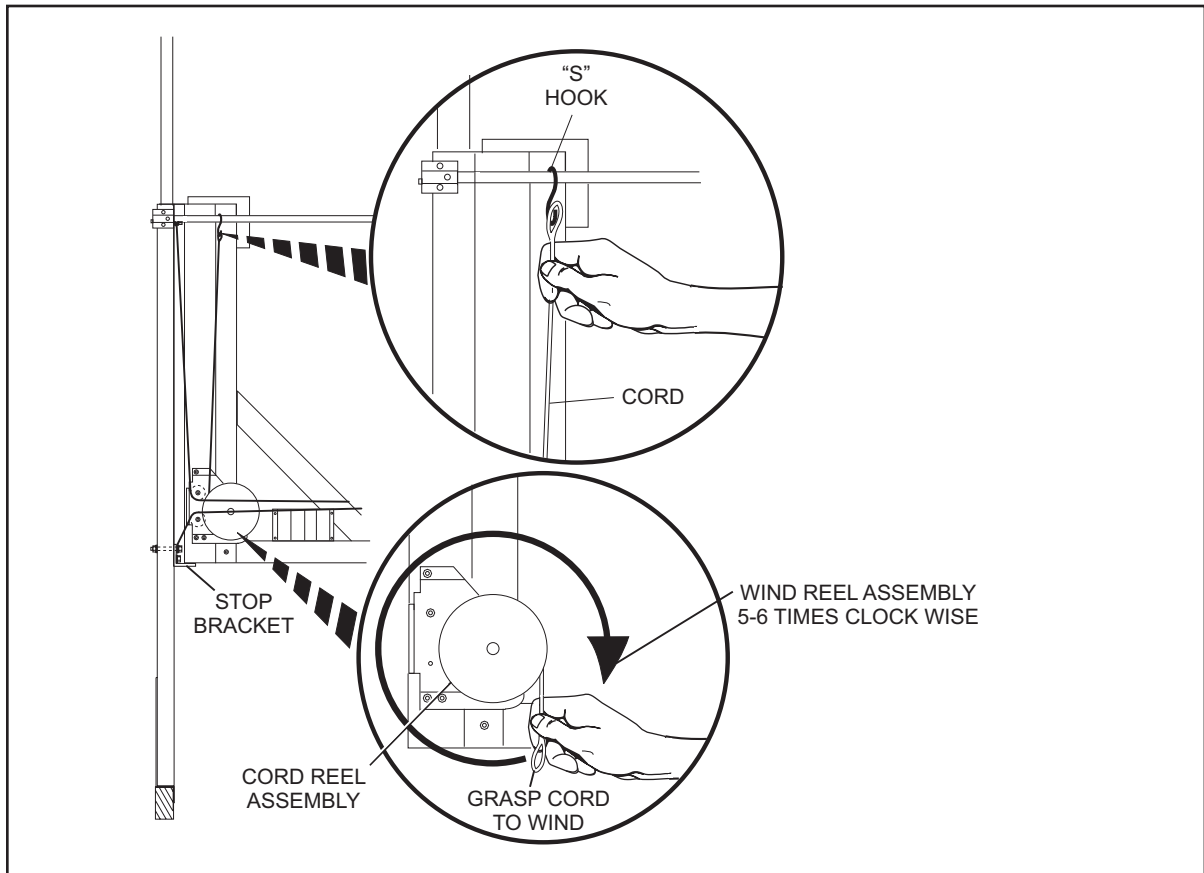


Figure 41

INSTALL LATCH

1. Remove shipping nut.
2. Make sure spacer sleeve is in position.
3. Secure latch assembly to support Assembly. Refer to *Figure 42*.

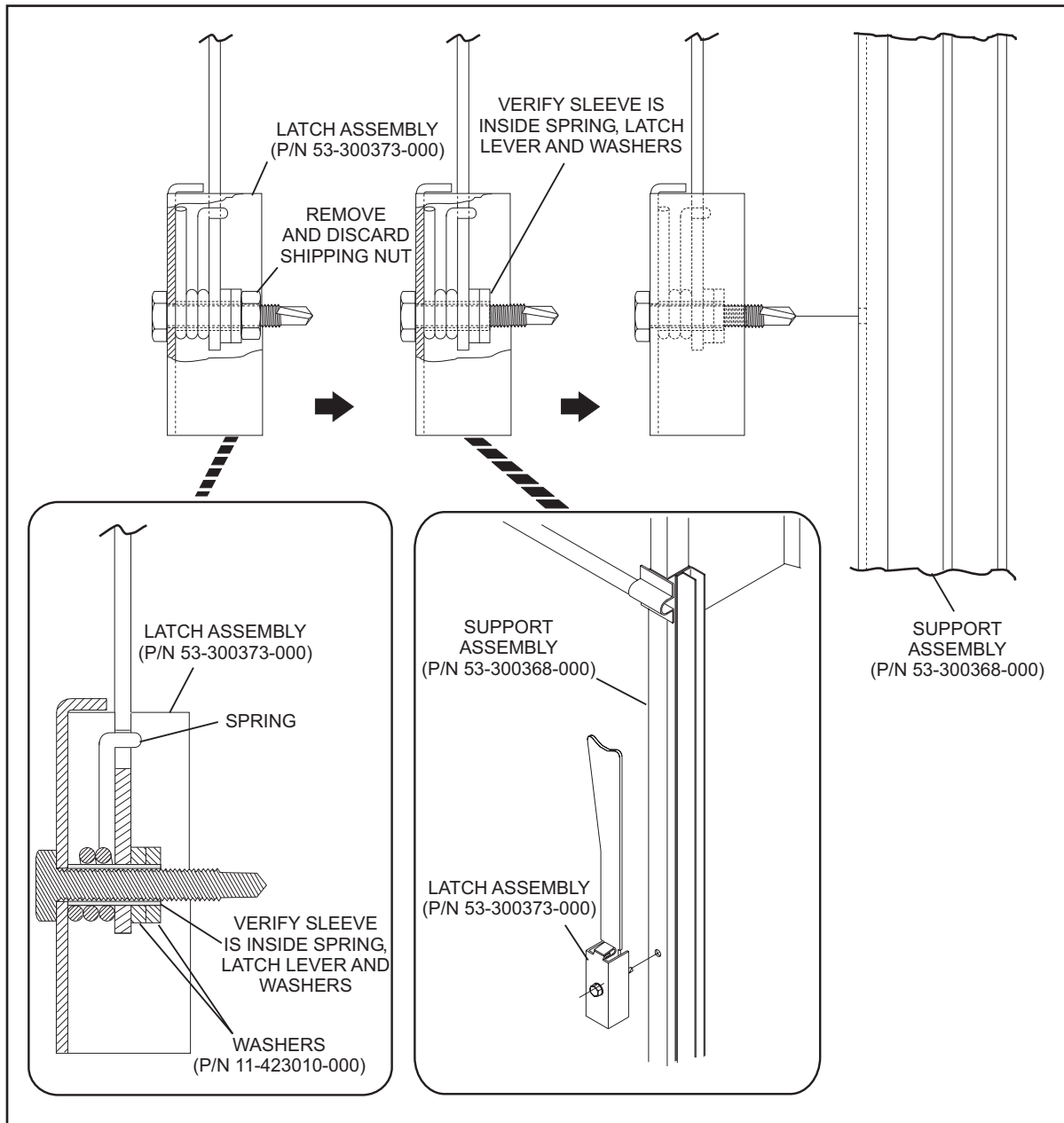


Figure 42

CROSS CHANNEL INSTALLATION FOR LANE BREAKS

Measure "A" and "B". Cutoff cross channels to dimensions "A" and "B". Notch cutoff ends. Drill appropriate holes and secure with hardware provided.

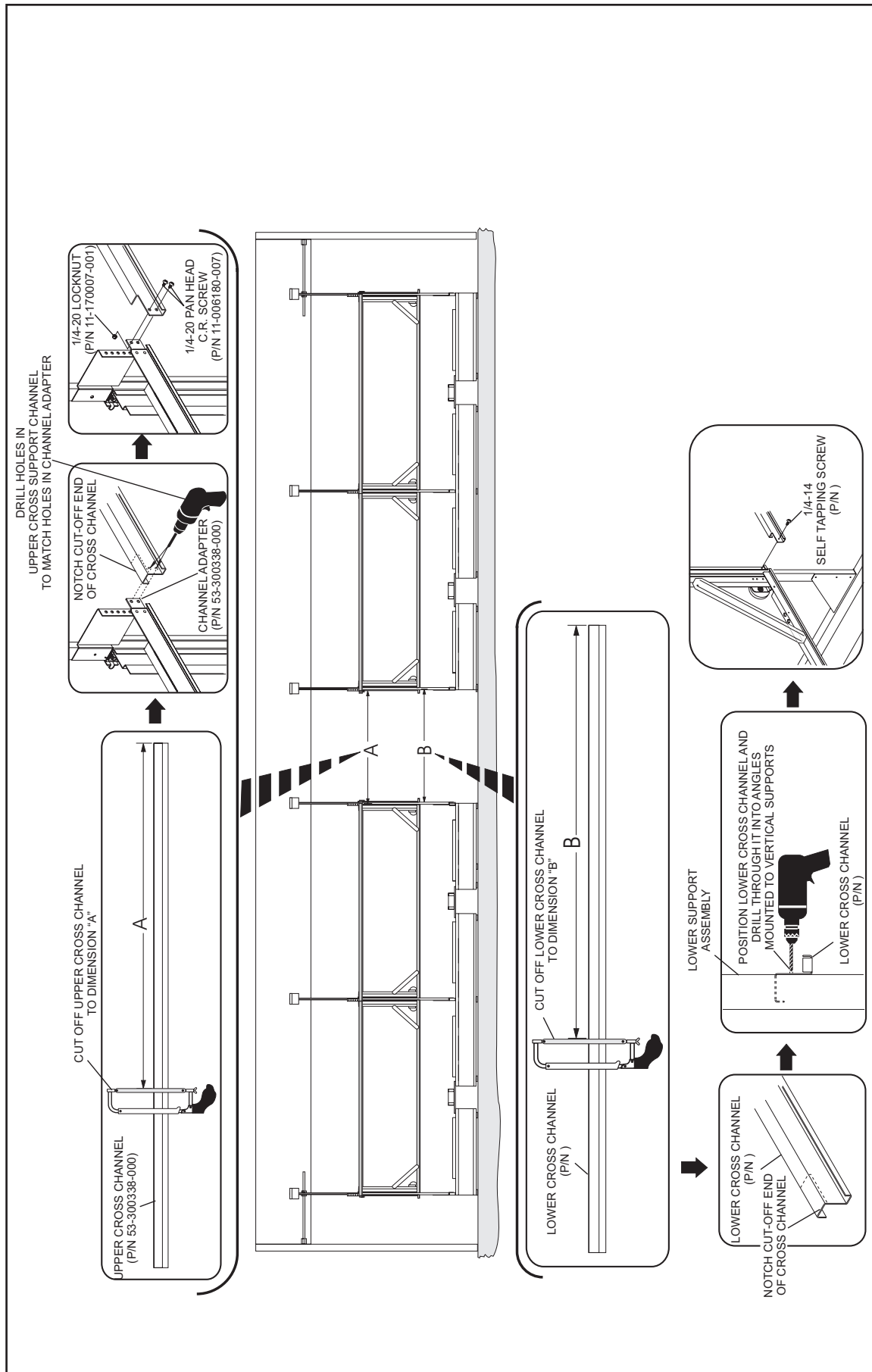


Figure 43

INSTALL BALL LIGHTS

1. Insert the tree rivets on the 1st/2nd ball light assembly into the holes on the masking unit frame. Refer to *Figure 44*.

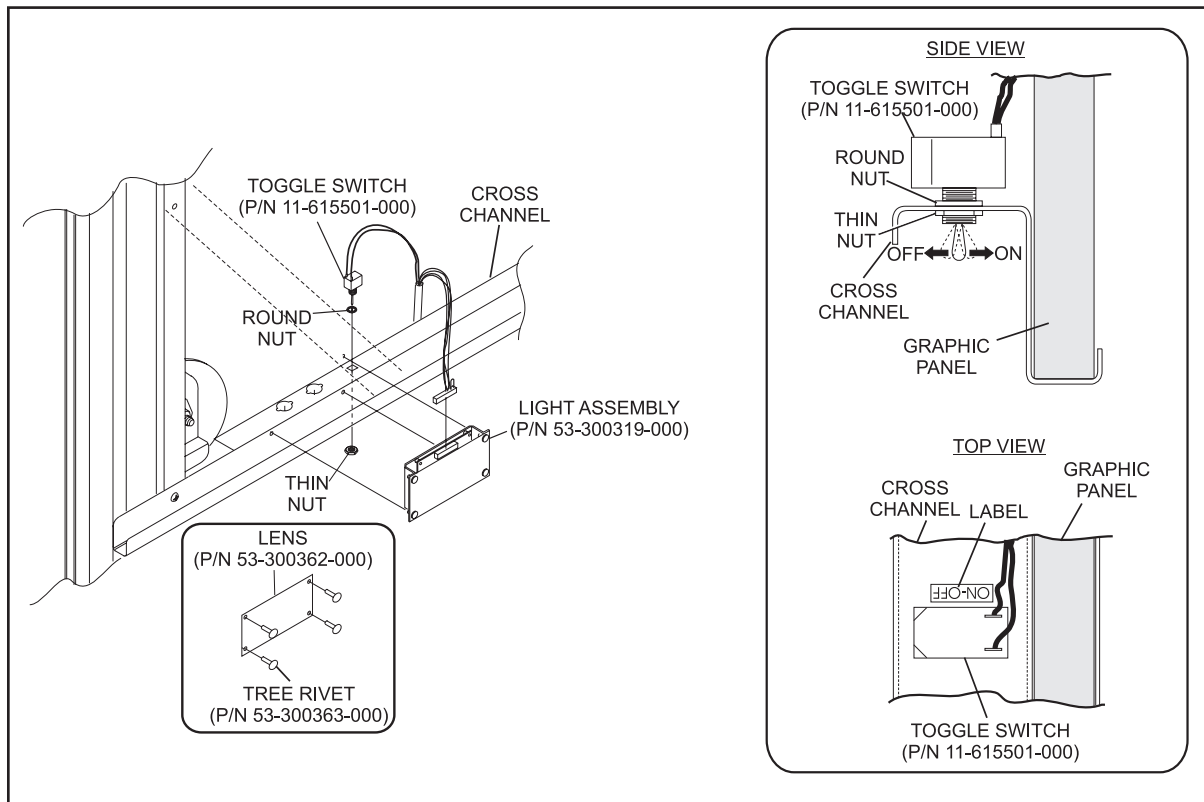


Figure 44

2. Thread round nut halfway on toggle switch then insert into hole in cross channel, secure with thin nut. Refer to *Figure 44*.
3. Check switch for position and install “On-Off” decal. Route cable to pinsetter. Refer to *Figure 44*.



WARNING! Masking Units connecting to GS-Series pinsetters with Nexgen electronics or AMF 8290XI/8800 upgraded pinspotters do not need the ON/OFF switch. Either install the toggle switch as described below for possible future use OR cut the wires to the switch and discard switch. For all installations on AMF pinspotters the cable assembly must be rewired to configure the cable for 12V use. Refer to the cable schematic, Figure 4 for Proper wiring.

Route Ball Light Cable

1. Use the four holes in the brace to secure the light cable with cable ties. Refer to *Figure 45*.

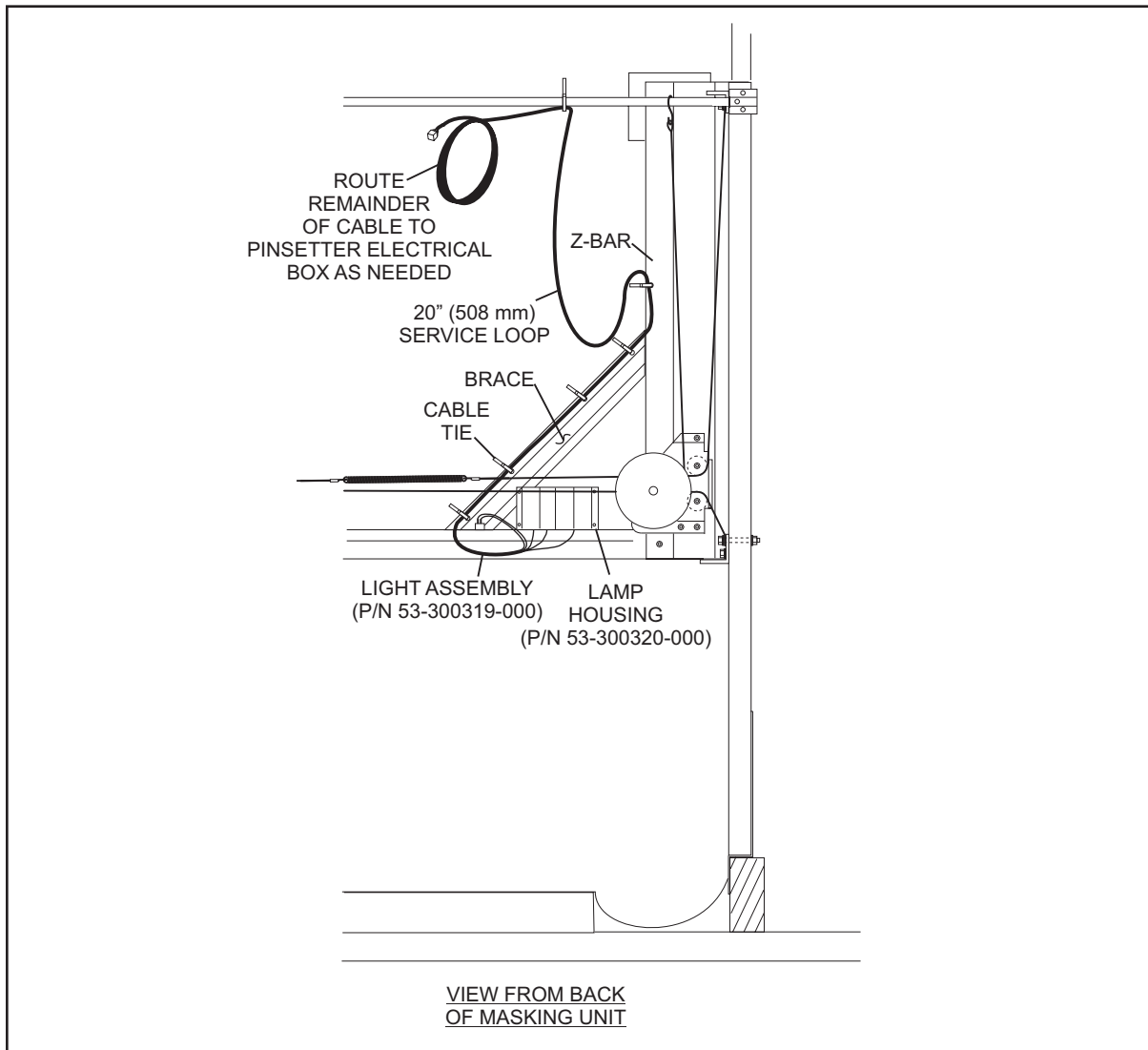


Figure 45

2. Use one hole in Z-bar to secure cable. Refer to Figure 39.
3. Secure cable to cross tube with one cable tie, making sure to leave a 20" (508 mm) service loop. Refer to *Figure 45*.
4. Route cable the rest of the way to pinsetter as needed.



NOTE: Make sure enough cable is left in the service loop to accommodate the upward travel of Z-bar assembly.

Connect Light Cable to Pinsetter

Terminate connection at GS electronics box or A-2 controller box depending upon pinsetter type. Refer to *Figure 46*.

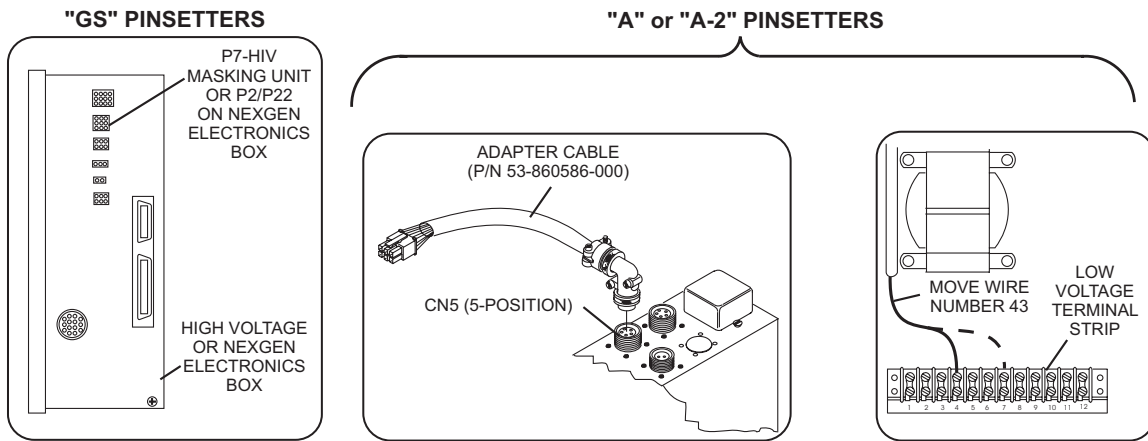


Figure 46

AMF Installations

Make Electrical Connections (AMF)

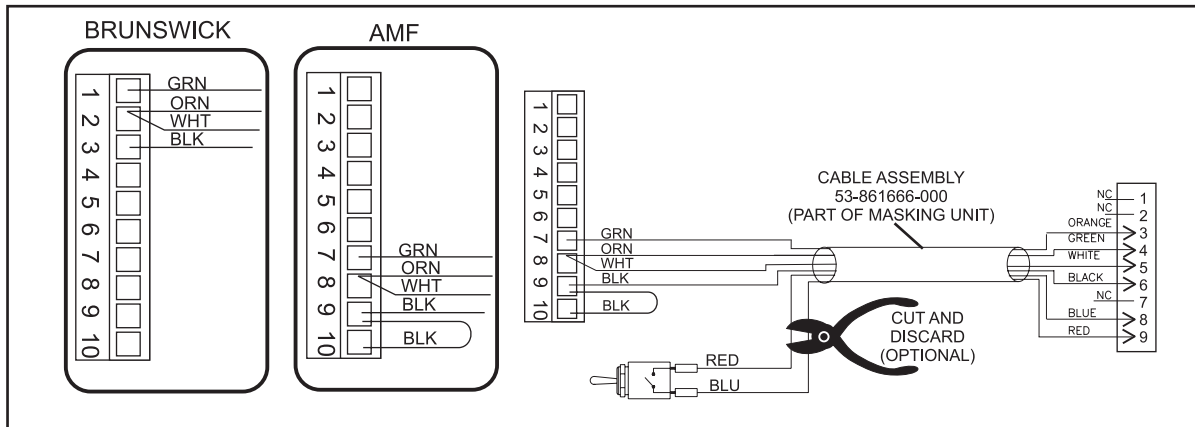


Figure 47



NOTE: First ball light must always be on.

82-30 Forward Chassis (earlier type)

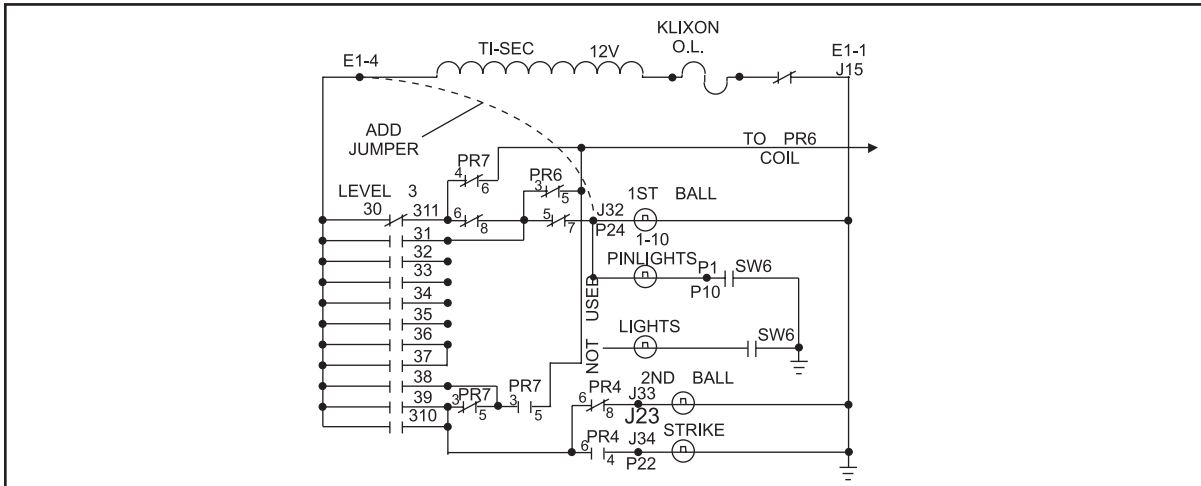


Figure 48

82-30 Rear Chassis

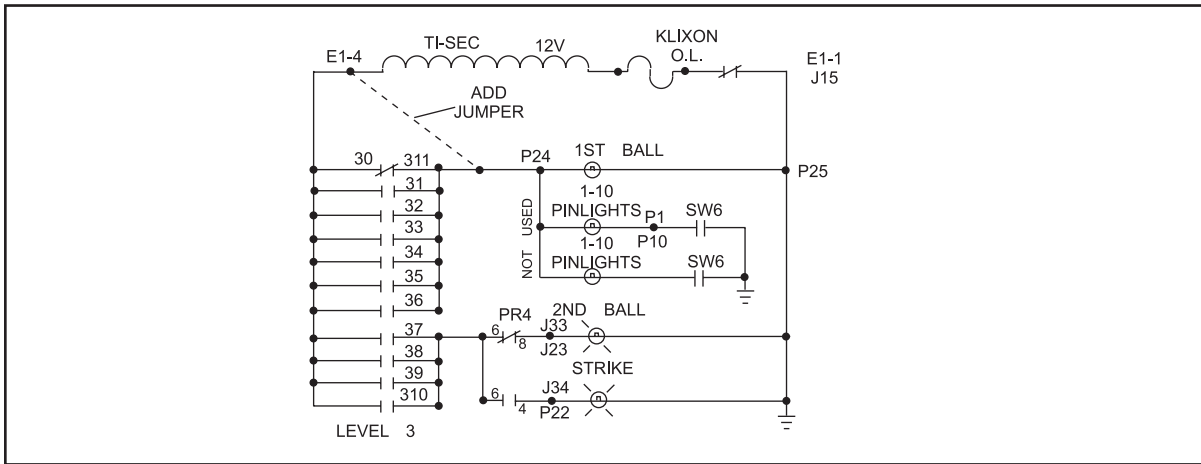


Figure 49

82-30 4400 Series Stepper Chassis

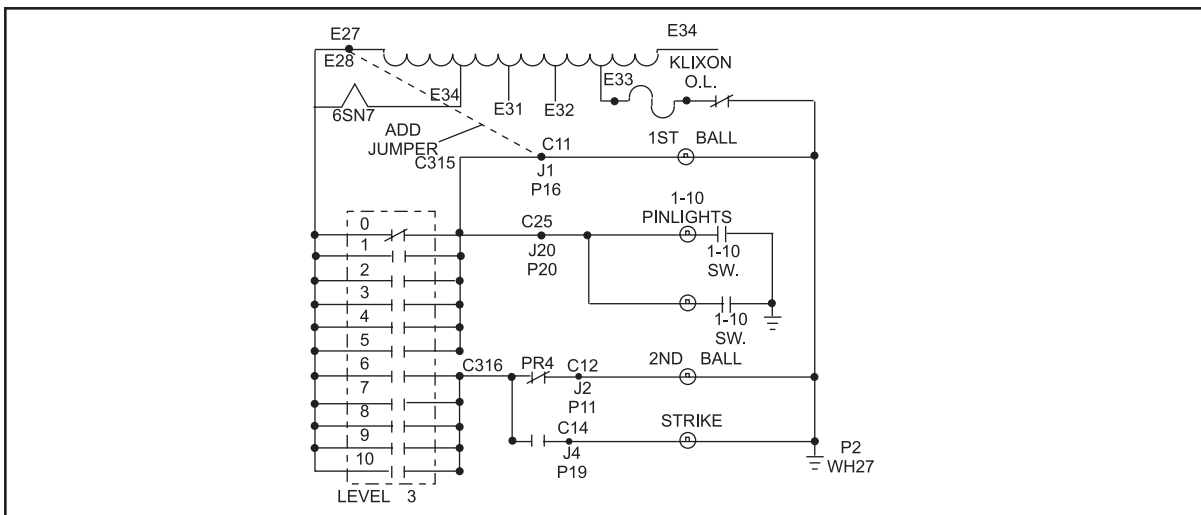


Figure 50

82-70 SS

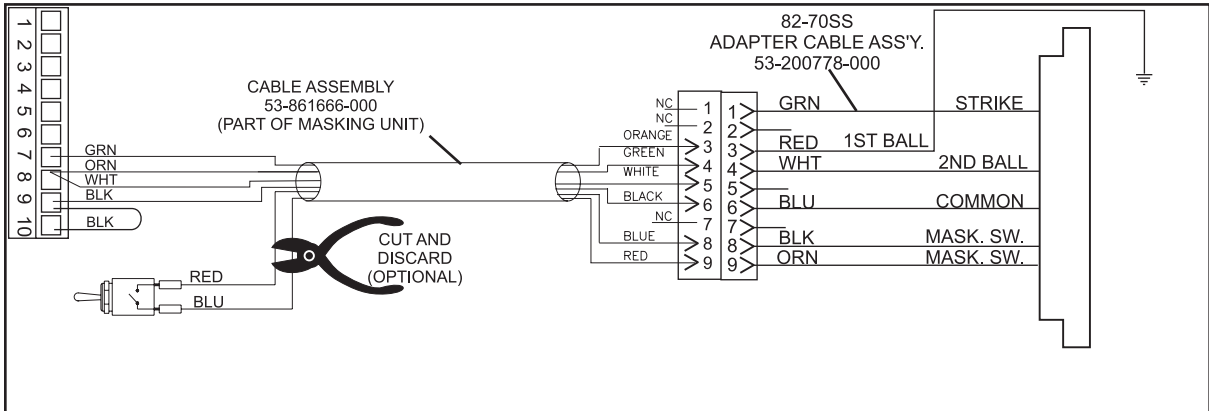


Figure 54

82-70 MP/8270 SSw/Round Masking Unit Plug

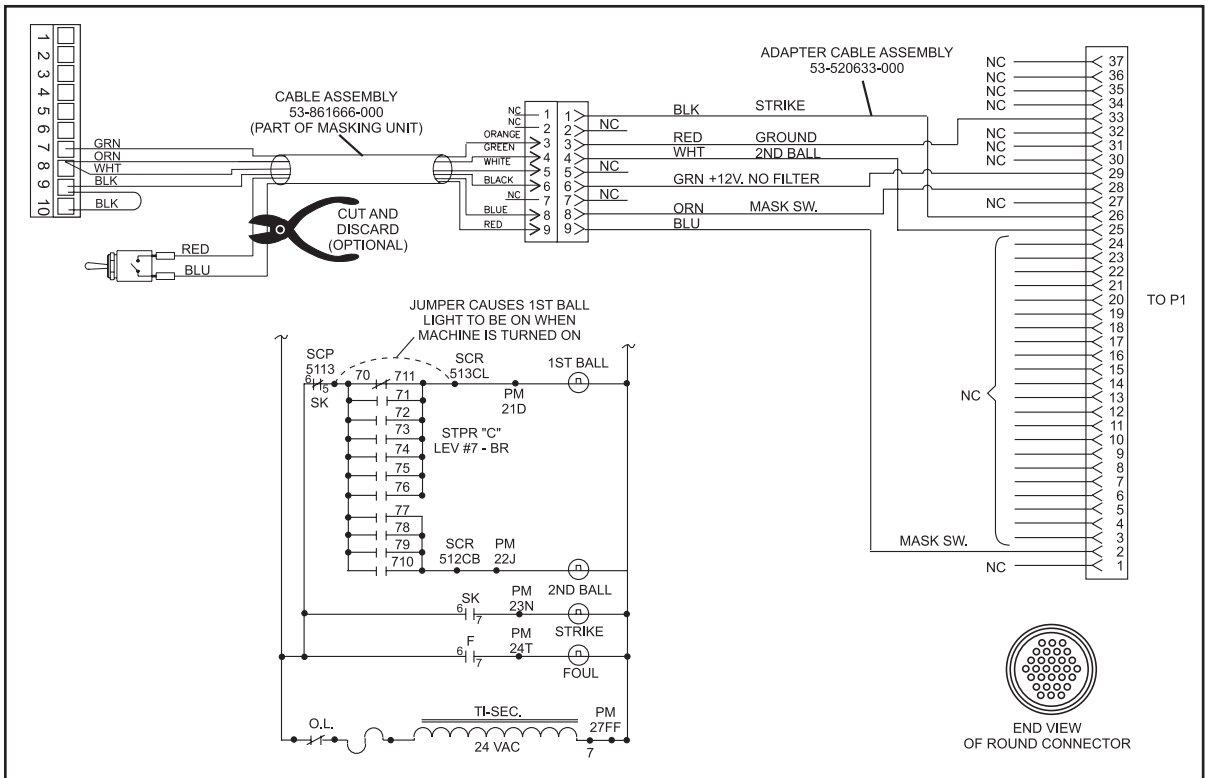


Figure 55

82-90XL/8800 Upgrade

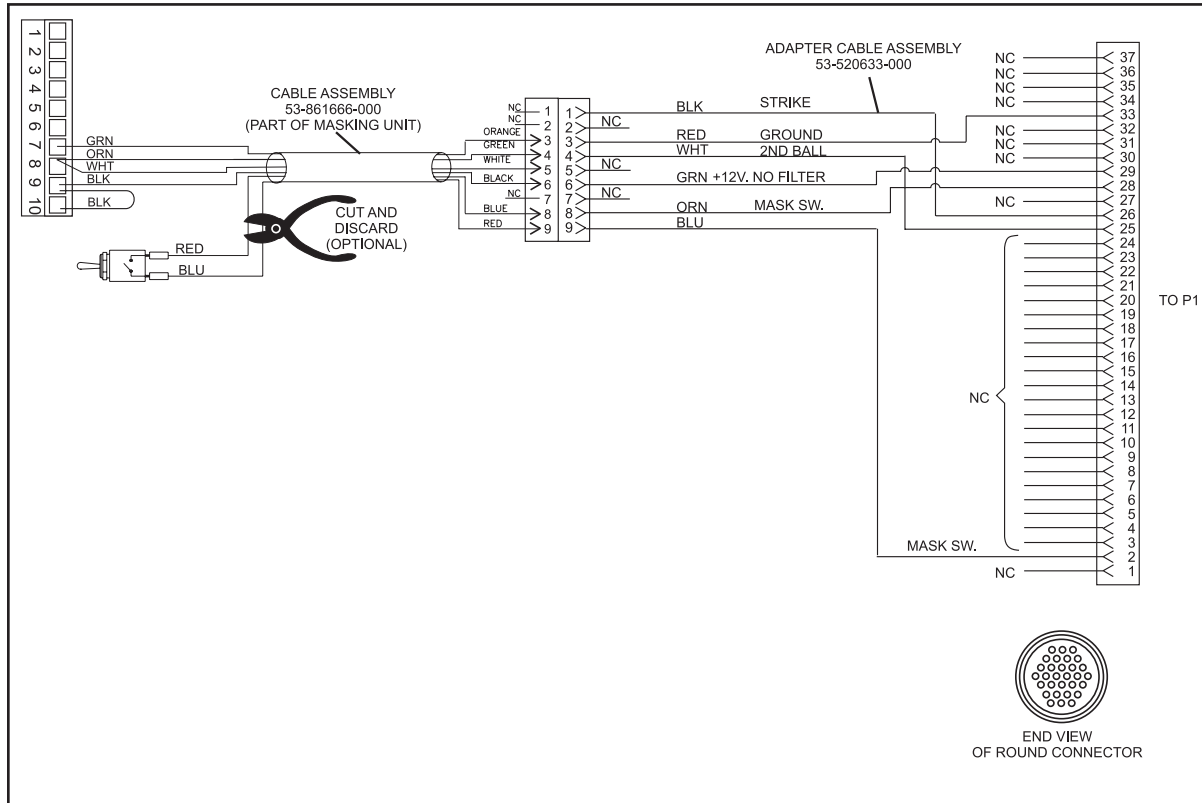


Figure 56

8290XL Silver and Black Chassis

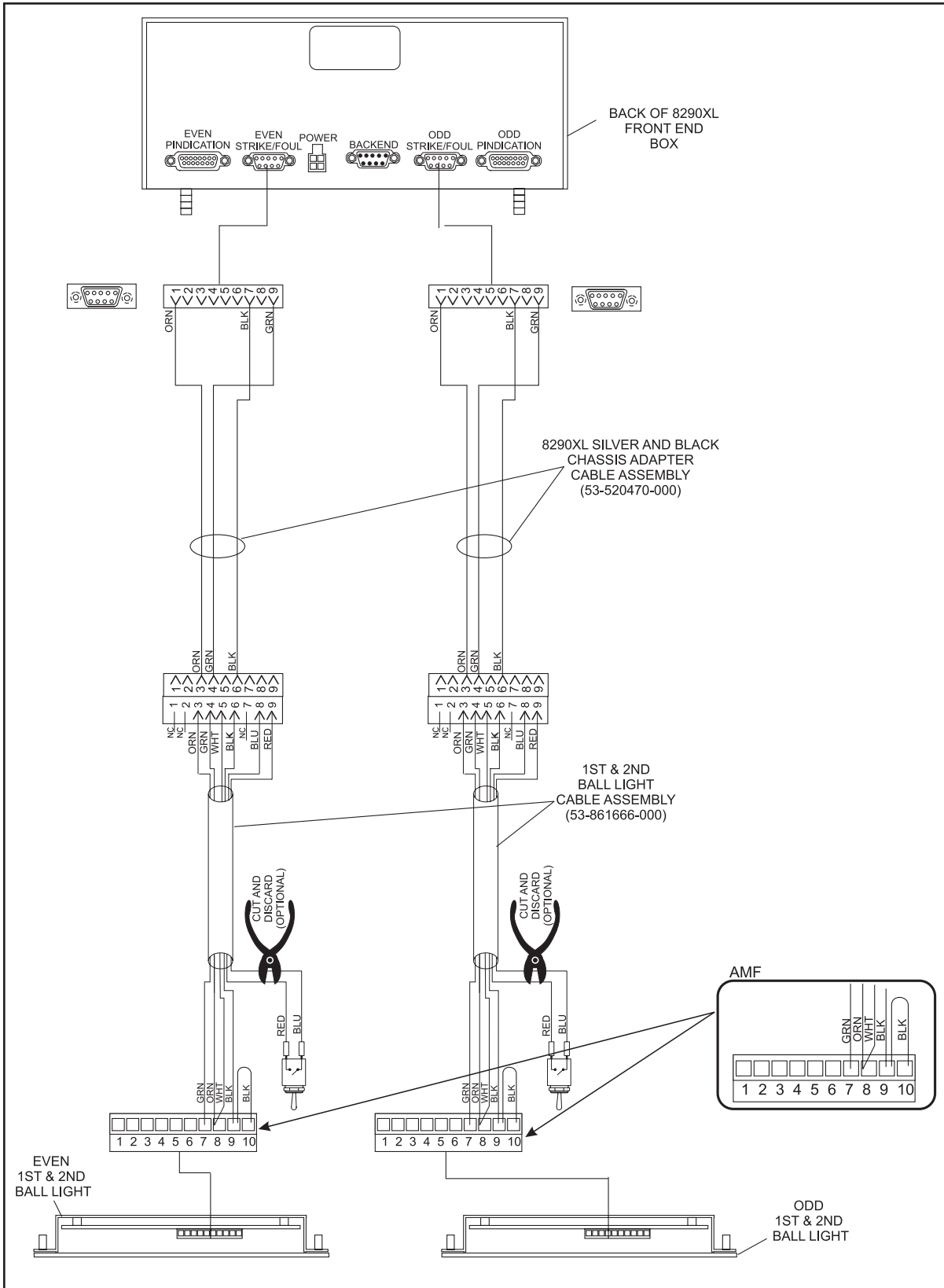


Figure 57

GRAPHIC PANELS

Lane Panel Installation

Lane Panel Locations

Reference panel codes.



NOTE: Some graphic scenes are contained entirely on one panel while others require two panels to complete a scene. Care must be taken to properly arrange panels prior to adhering lane numerals to panels. Graphic panels should be handled with clean white gloves to prevent transfer of oil or dirt from hands to the graphic panels. Refer to Figure 58.

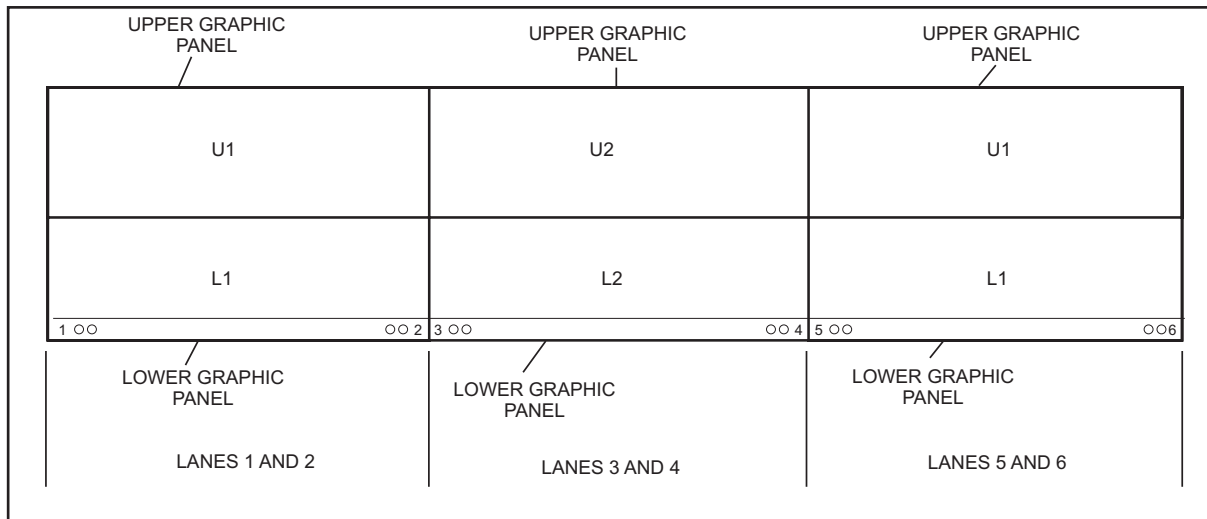


Figure 58

Aisle Panels

Measure to determine if both aisle graphic panels can be cut from one panel (if aisle measures less than 22" see step 22)

1. Measure "A" and "B" for aisle graphic panels. Refer to *Figure 59*.

If $A + B < 133$ " (3.38 m) both aisle graphic panels can be cut from one lane graphic panel. If $A + B > 133$ " (3.38 m) each aisle graphic panel will be cut from one lane panel (requires two lane panels).

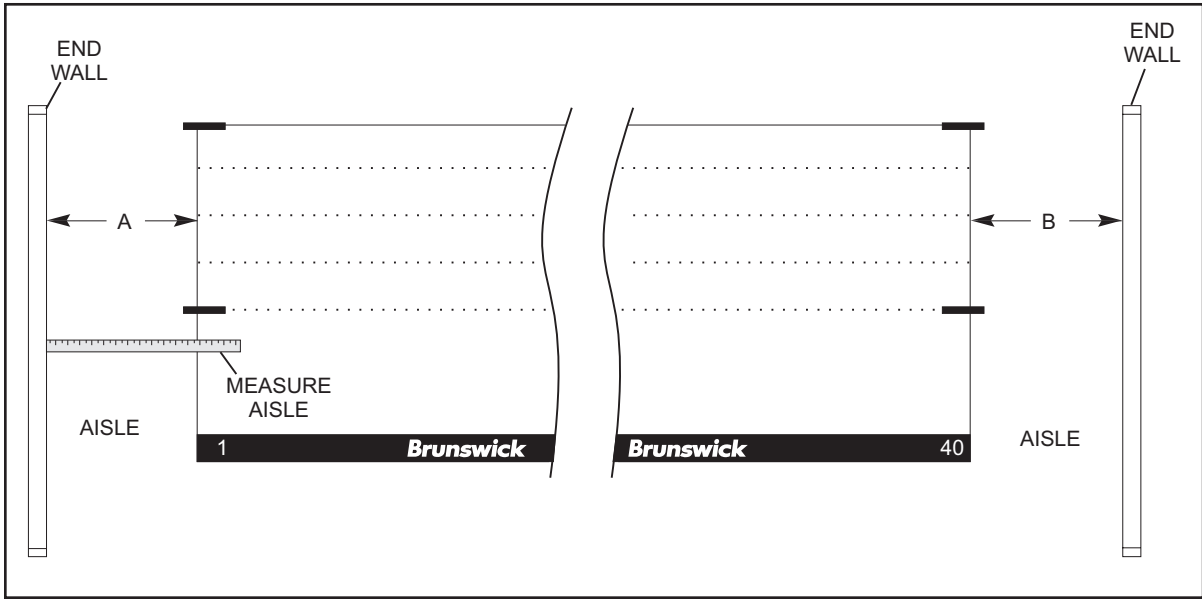


Figure 59

Cut Panels to Dimensions "A" and "B"

Refer to *Figure 60* to ensure a factory edge where aisle graphic panels meet lane graphic panels.

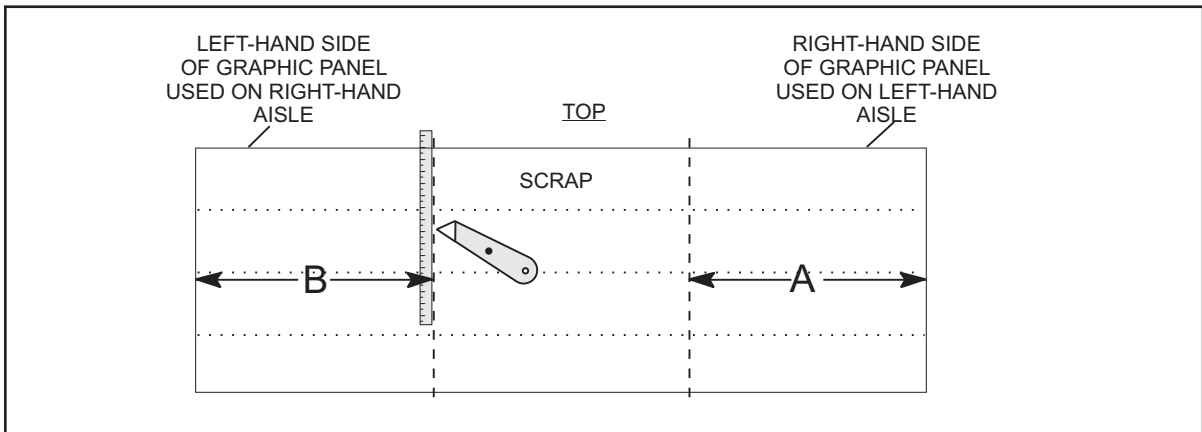


Figure 60

Projection Screen Installation (Cable Install)

DETERMINE AND MARK SCREEN LOCATION

NOTE: It is the customer's responsibility to supply the necessary materials for supporting the projection screens. The support structure can be heavy gauge water pipe, wood beams, unistrut, or other suitable material.

The projector screen is to be located 10' 12" (3353 mm) from the masking unit toward the foul line.

1. Determine what lanes the projector screens are going to be installed.
2. Determine screen location, and mark center line of screen on the support structure. From the mark on the structure measure 70-5/8" (1794 mm) in both directions and mark for projection screen cables. Refer to *Figure 61*.

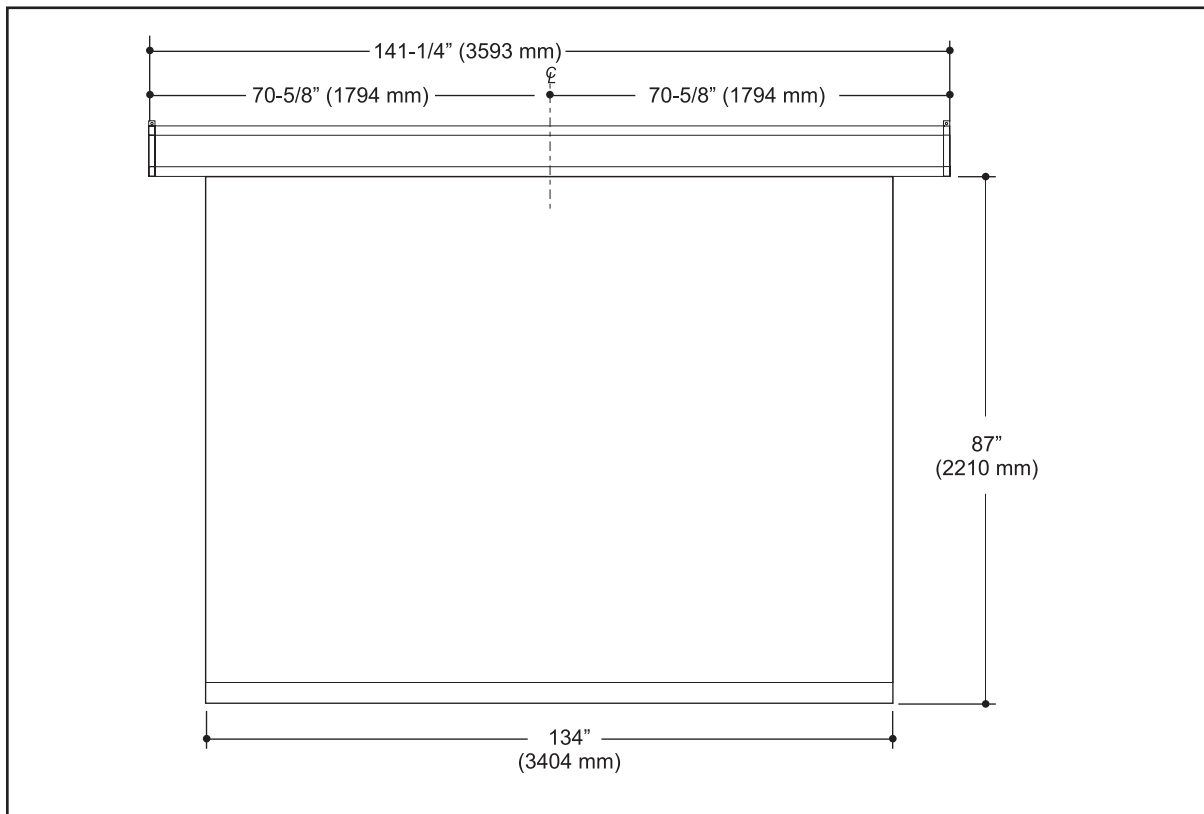


Figure 61



NOTE: The projection screen should be installed as close to the ceiling as possible. When the screen is extended the bowler's view of the first and second ball lights should not be obstructed.

3. Form a loop on one end of the cable and install crimp sleeve (part of package 57-860925-000). Repeat until all air craft cables are crimped on one end. Refer to *Figure 62*.

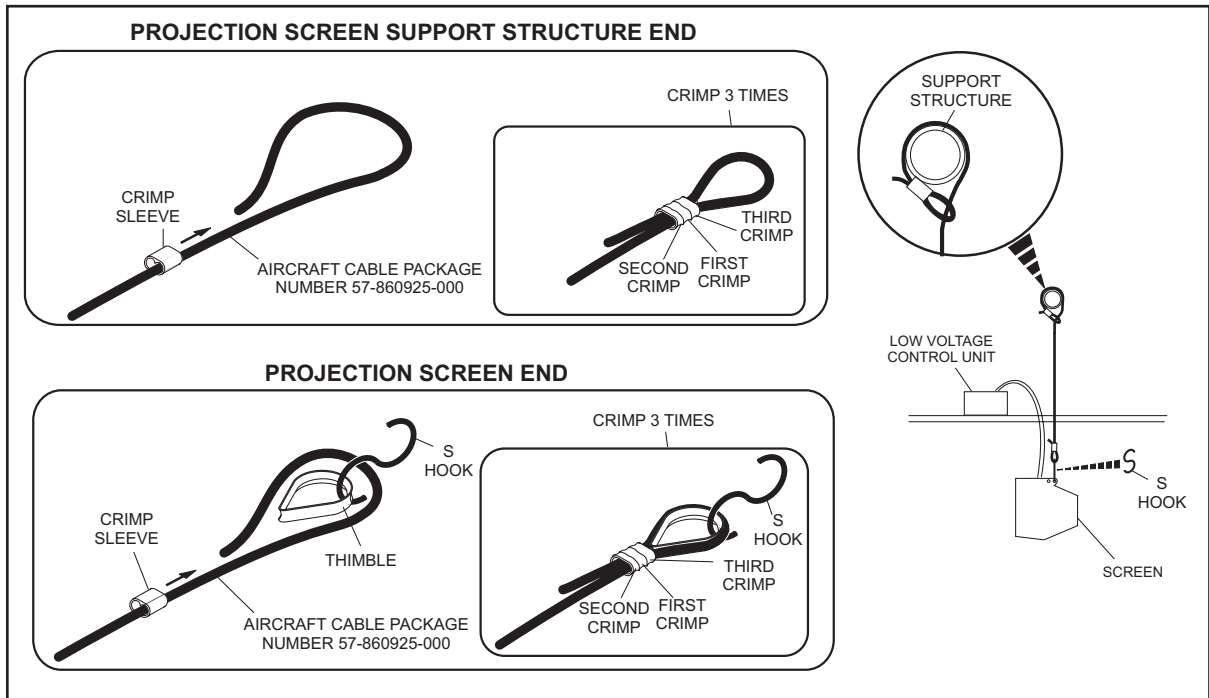


Figure 62

4. Wrap crimped cable end around structure at marked locations and insert straight end thru the loop of cable. Refer to *Figure 62*.
5. Drill a 1/4" hole in ceiling tile and feed straight cable end through tile. Using pliers, grasp cable and pull down on cable until taunt to remove any slack from support structure end. Form a bend in the cable to mark location of crimp.
6. Loop end of cable and install thimble and crimp (part of package number 57-860925-000) onto cable. Install "S" hook supplied with projection screen to cable and to projection screen. Refer *Figure 62*.
7. Repeat steps 6 and 7 for remaining cables.

Projection Screen Installation (Masking Unit Support Mounting)

INSTALL SCREEN BRACKETS

Install Flanged Nuts

1. Thread flanged nut partially onto screen mounting bracket studs.

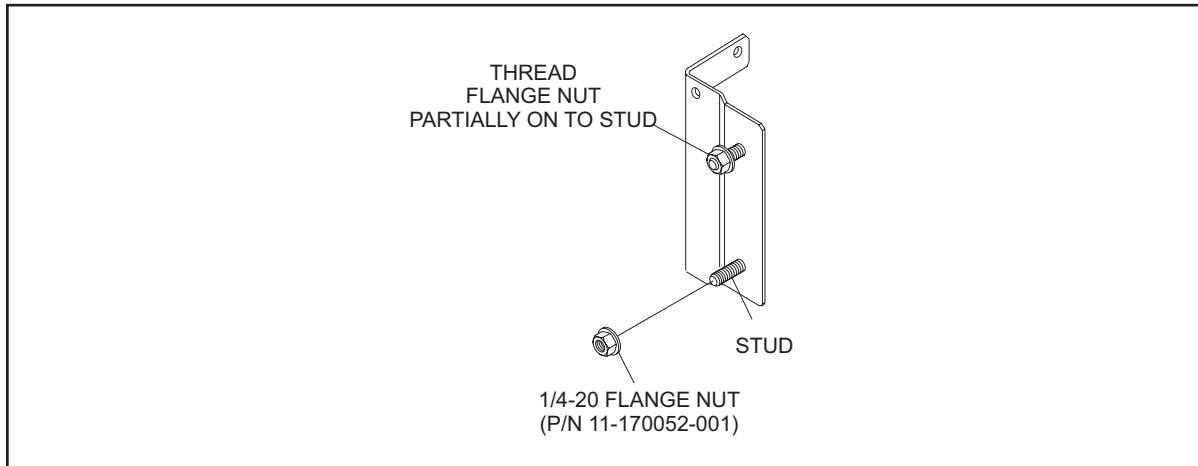


Figure 63

Secure Brackets to Screen

1. Secure Bracket to screen. Refer to *Figure 64*.

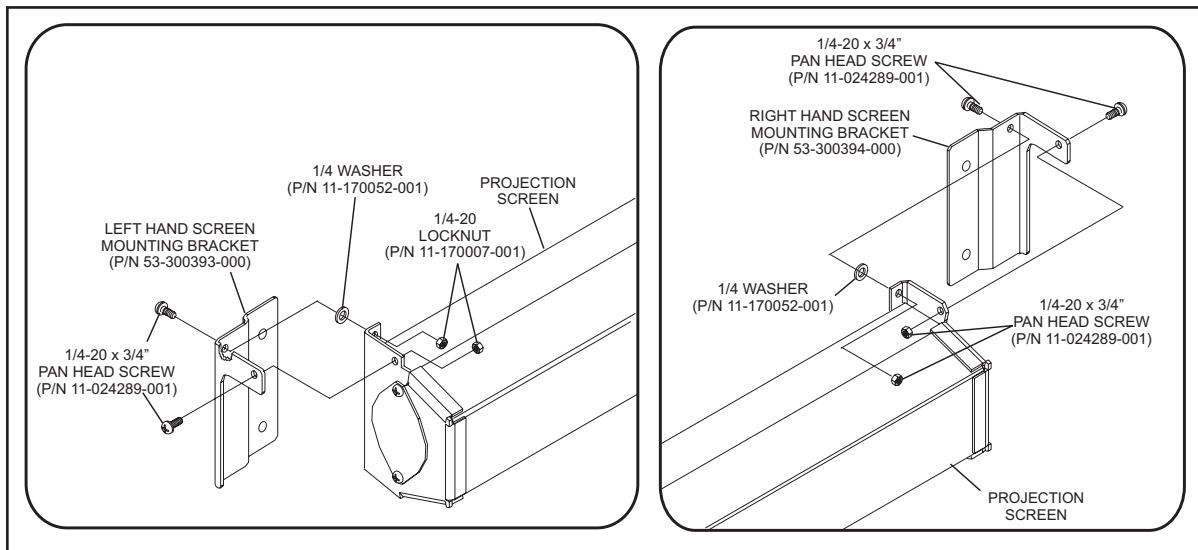


Figure 64

INSTALL SCREENS

One Screen Installation

1. Insert studs with flange nuts into key slot holes in support bracket.

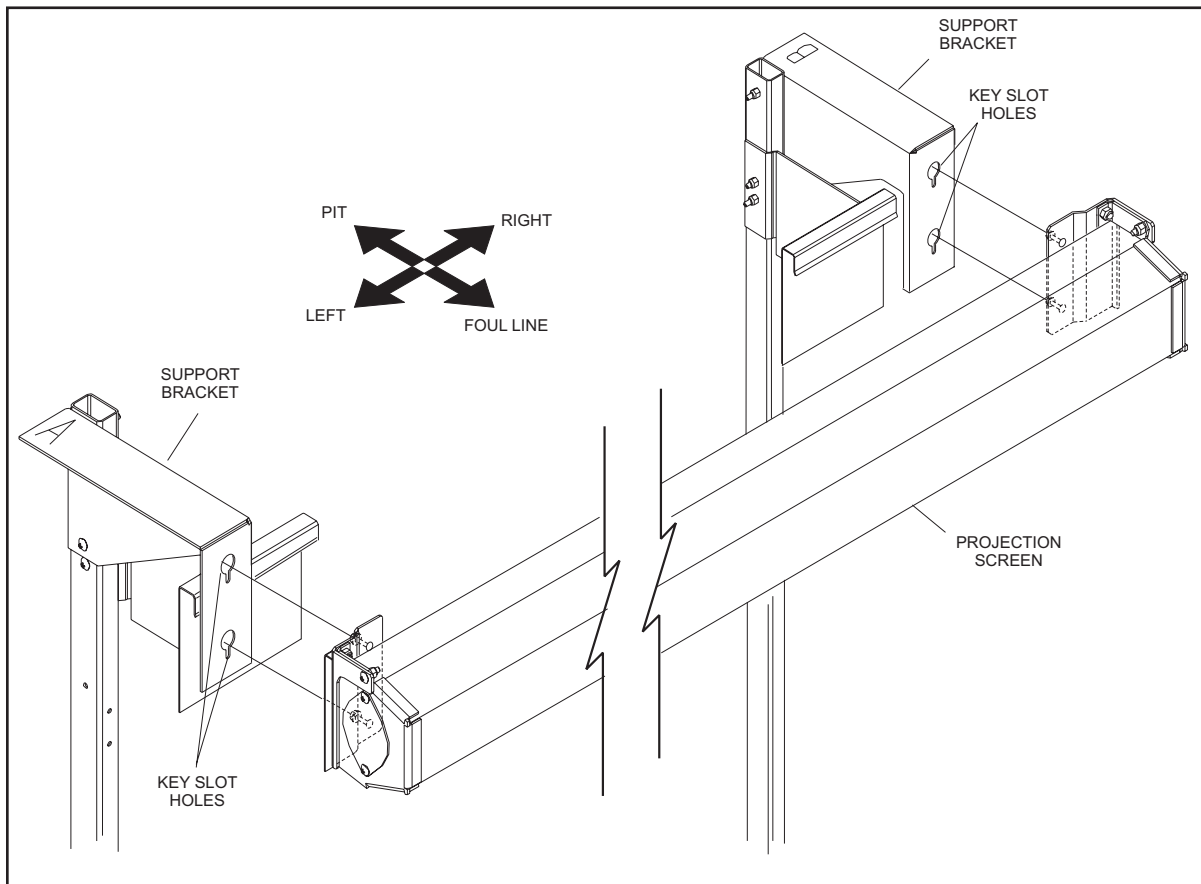


Figure 65

2. Confirm studs are securely installed into the key slot holes
3. Tighten flange nuts.

Two Screen Installation

Install First Screen

1. Insert studs with flange nuts into key slot holes in support bracket.

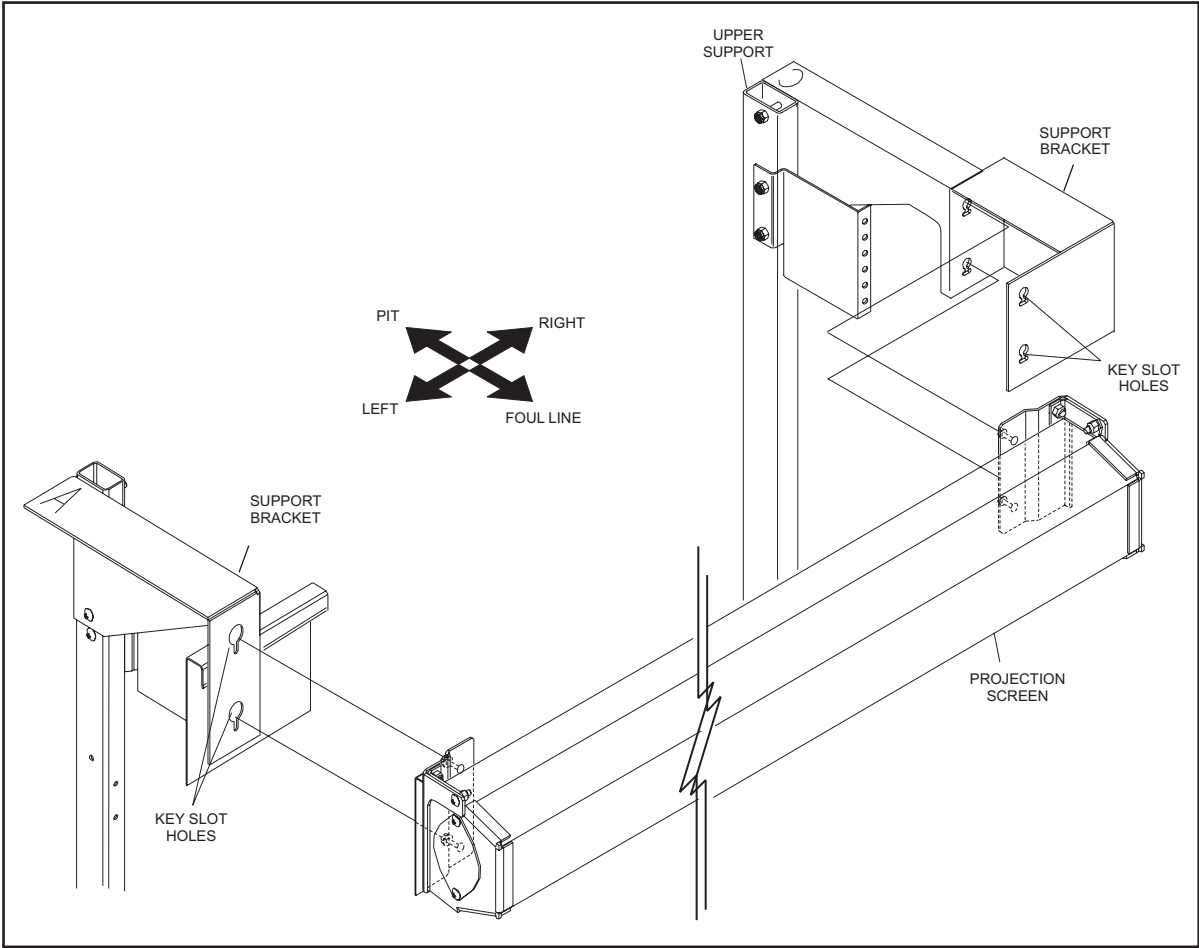


Figure 66

2. Confirm studs are securely installed into the key slot holes
3. Tighten flange nuts.

Install Second Screen

1. Insert studs with flange nuts into key slot holes in support bracket.

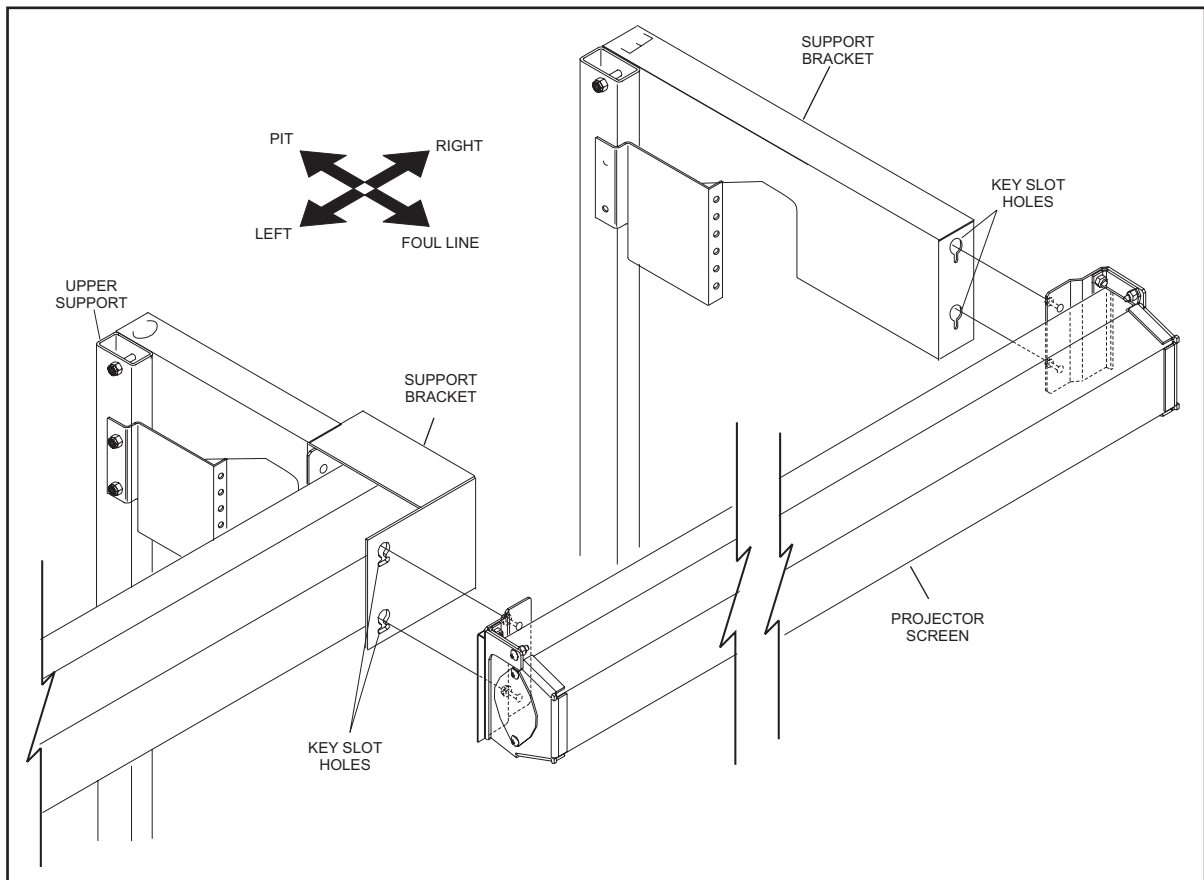


Figure 66

2. Confirm studs are securely installed into the key slot holes
3. Tighten flange nuts.

Multi Screen Installation

Install First Screen

1. Insert the studs of the screen bracket, into key slot holes in support bracket.

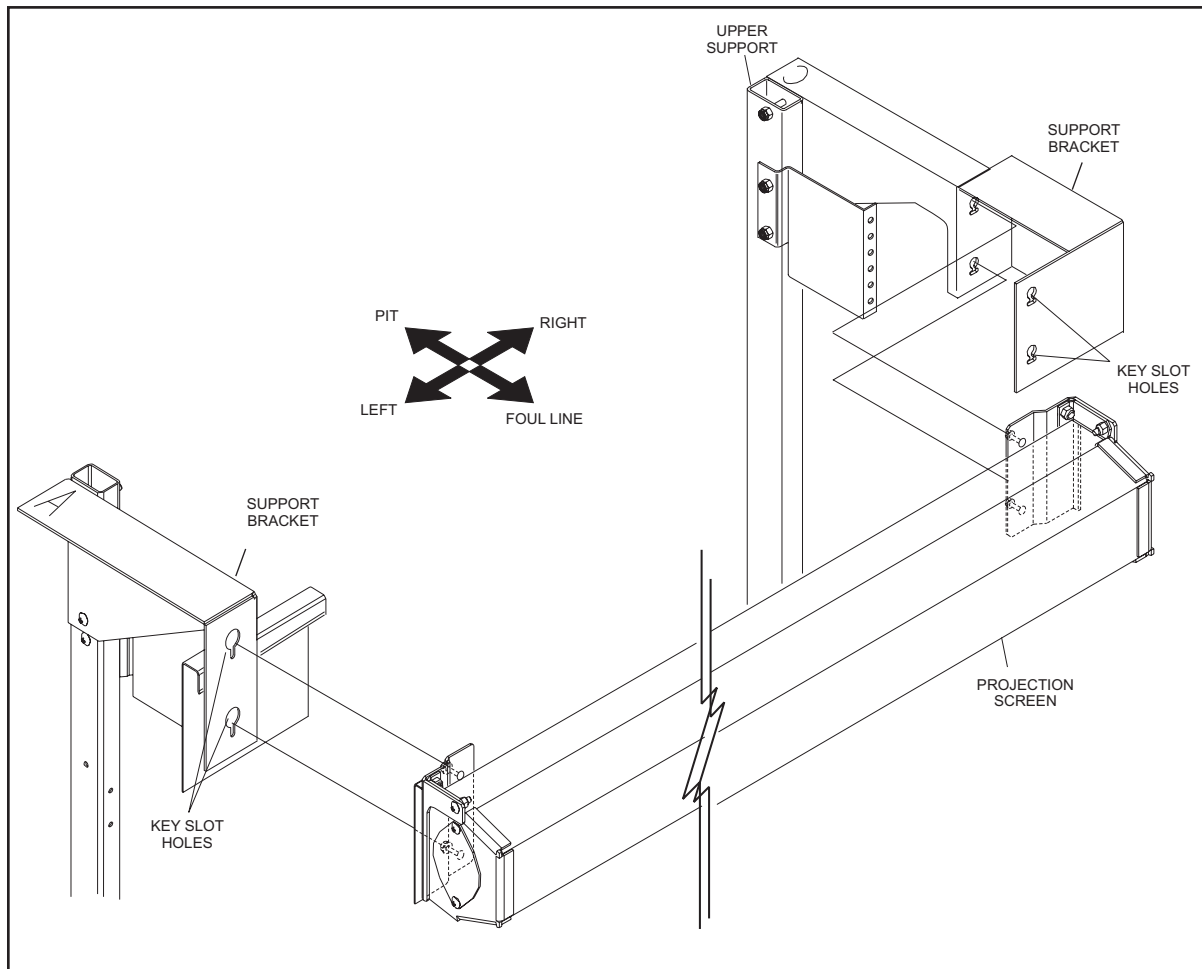


Figure 67

2. Confirm studs are securely installed into the key slot holes
3. Tighten flange nuts.

Install Second Screen

1. Insert the studs of the screen bracket, into key slot holes in support bracket.

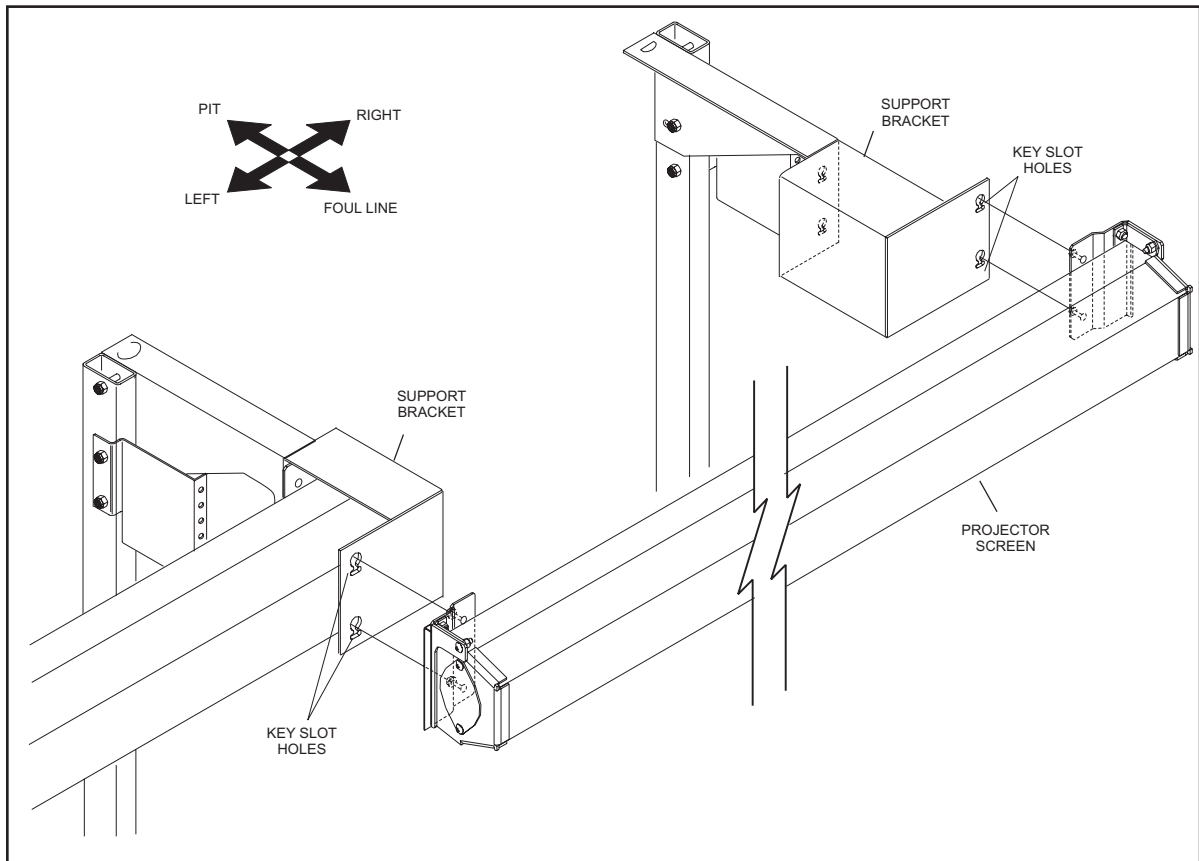


Figure 69

2. Confirm studs are securely installed into the key slot holes
3. Tighten flange nuts.



NOTE: If there are more than three consecutive screens, repeat the “Install Second Screen” step until all screens are installed except the last screen, then proceed to step “Install Third Screen” for the last screen installation.

Install Third Screen

1. Insert the studs of the screen bracket, into key slot holes in support bracket.

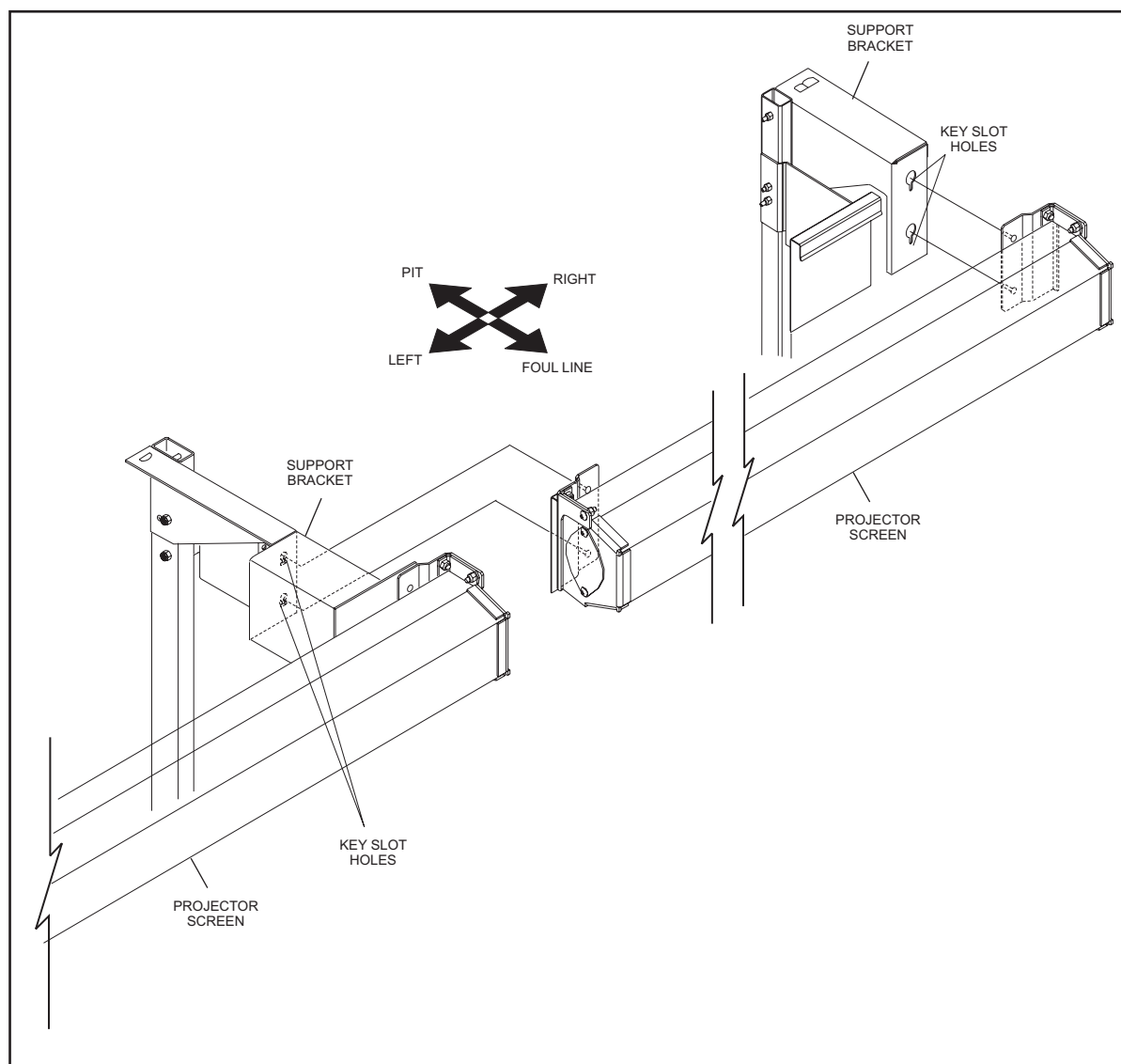


Figure 70

2. Confirm studs are securely installed into the key slot holes
3. Tighten flange nuts.

Install Controller for Projection Screen

INSTALL CONTROLLER MOUNTING BRACKET

1. Secure the controller mounting bracket to the controller using the #10-24 x 1/2" screws. Refer to *Figure 71*.

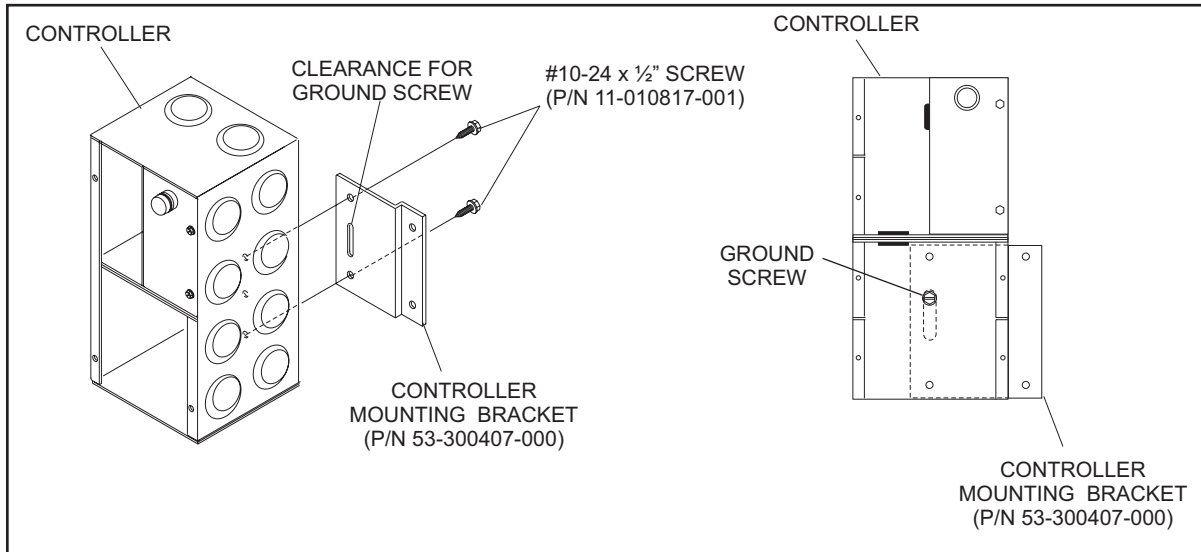


Figure 71

INSTALLING CONTROLLER ON MASKING UNIT SUPPORT (OPTION 1)

The projection screen controller is secured to the masking unit upper support. Refer to *Figure 72*.

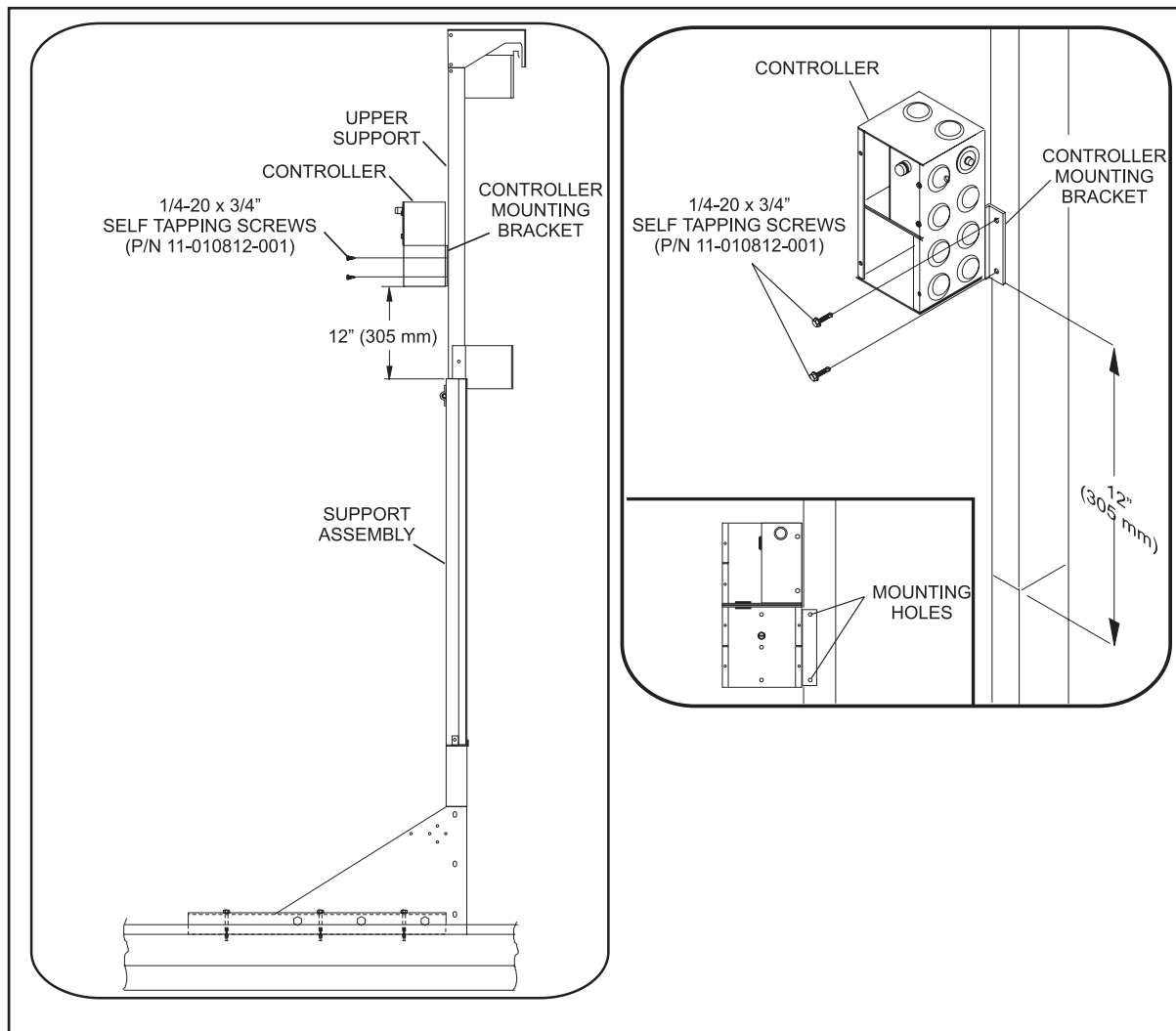


Figure 72



NOTE: Install controller 12" (305 mm) above seam of upper and lower supports to avoid hitting coupler with self tapping screws.

Cabling

OVERVIEW OF COMMUNICATION AND POWER CABLING

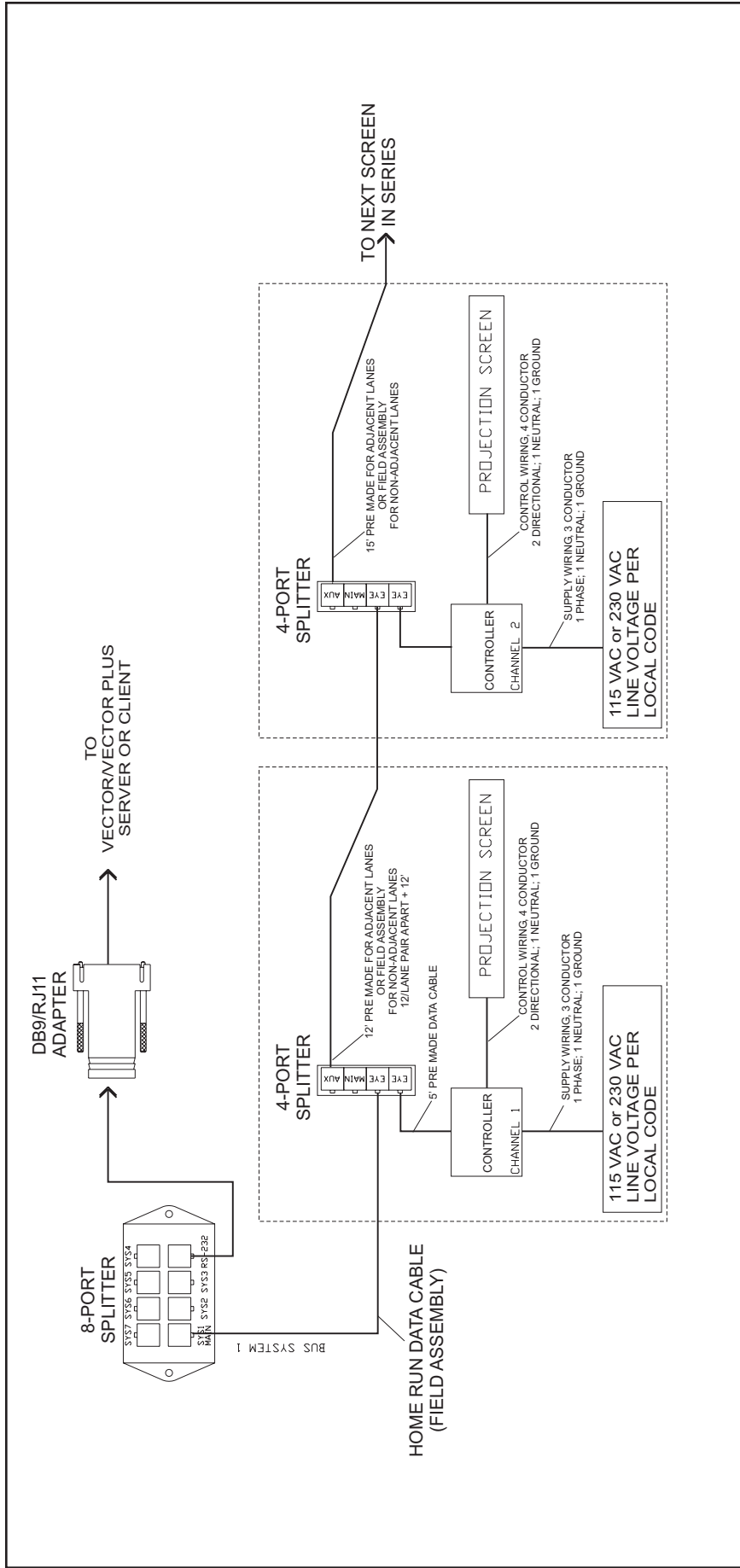


Figure 74

COMMUNICATION CABLING DIAGRAM

Standard Setup

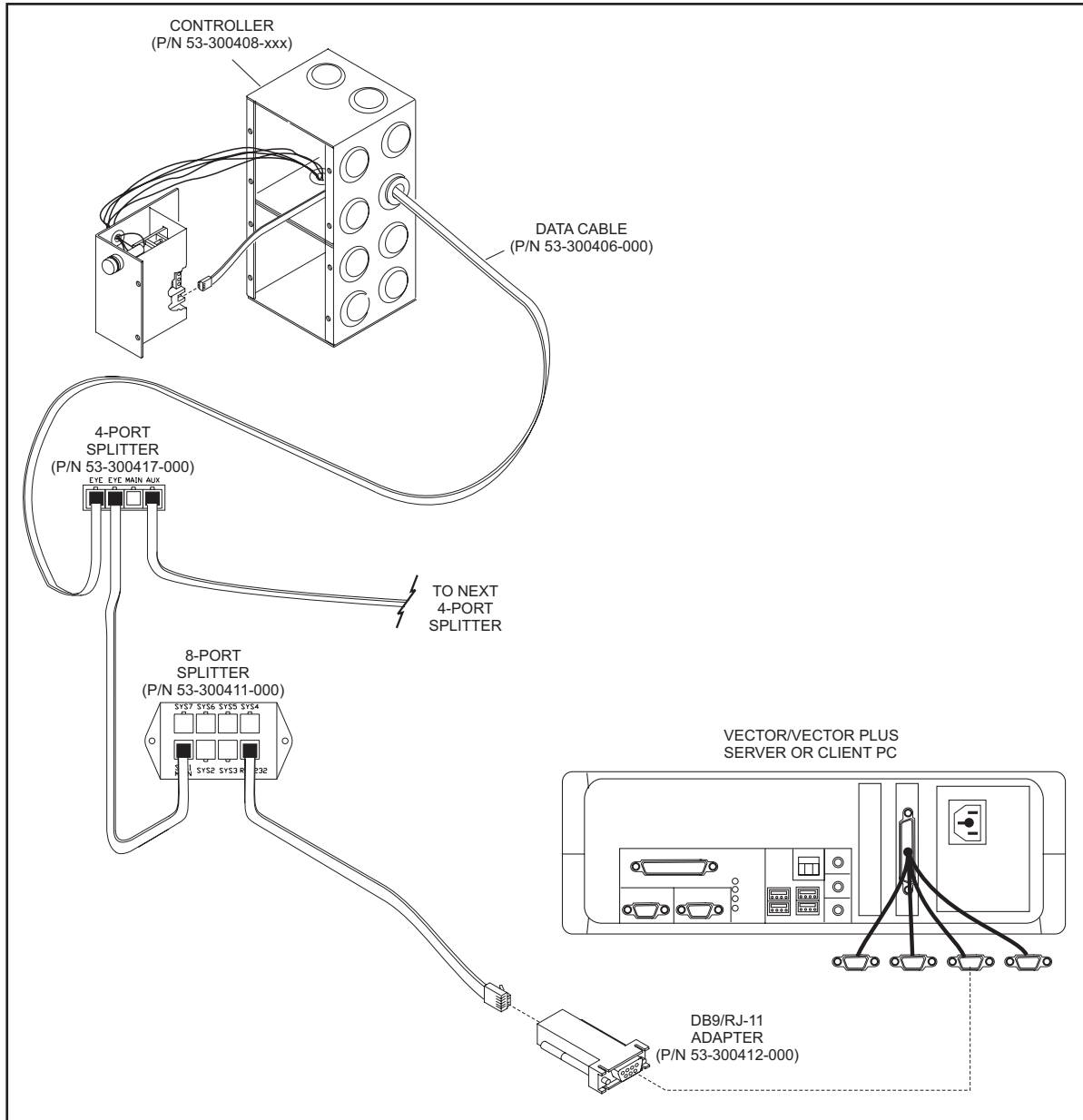


Figure 75

Split House Setup

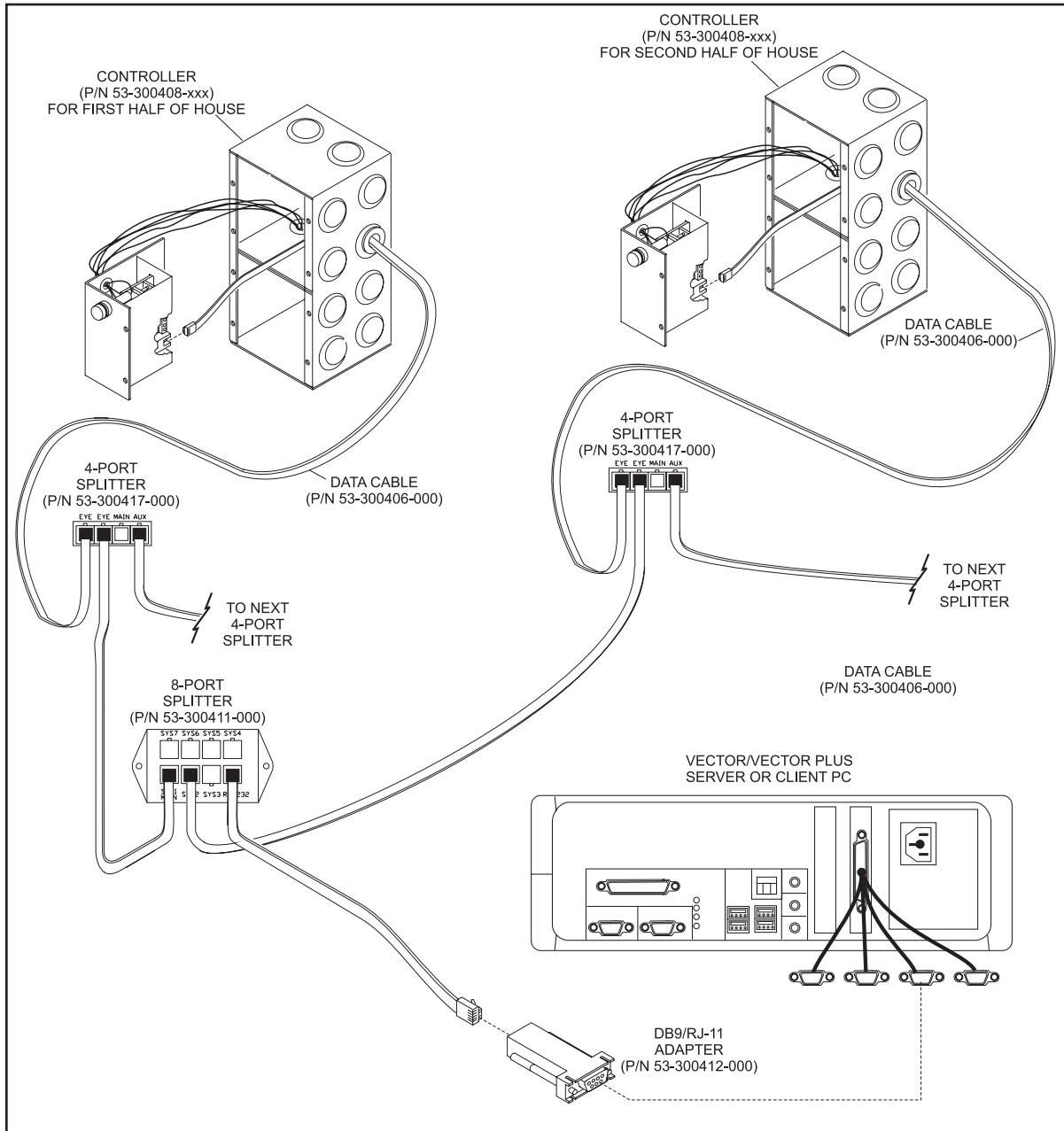


Figure 76

COMMUNICATION CABLE CONNECTIONS

1. Connect the DB9/RJ-11 adapter (P/N 53-300412-000) to the communication port on the Vector/ Vector Plus server or client computer. Refer to *Figure 76*.

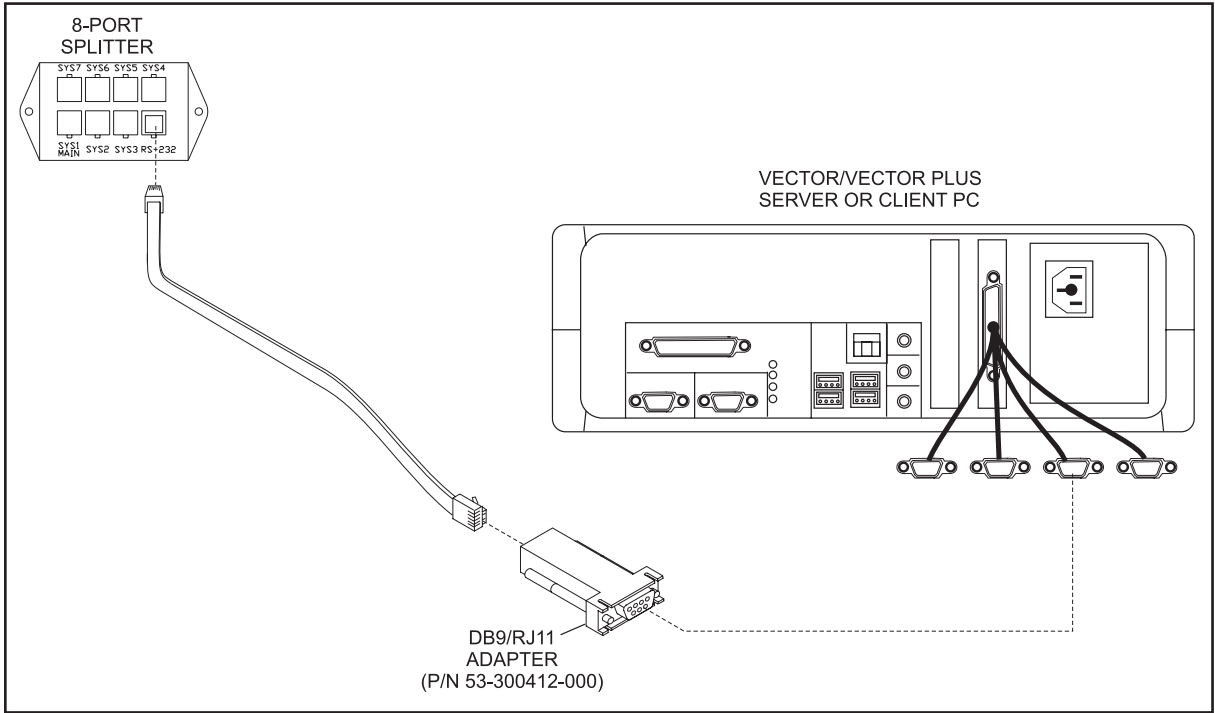


Figure 77

2. The maximum length of any of the 4-conductor RJ-11 communication cables is 1000 feet. Refer to *Figure 77*. The home run cable is a 4-conductor cable with 6-conductor connectors.

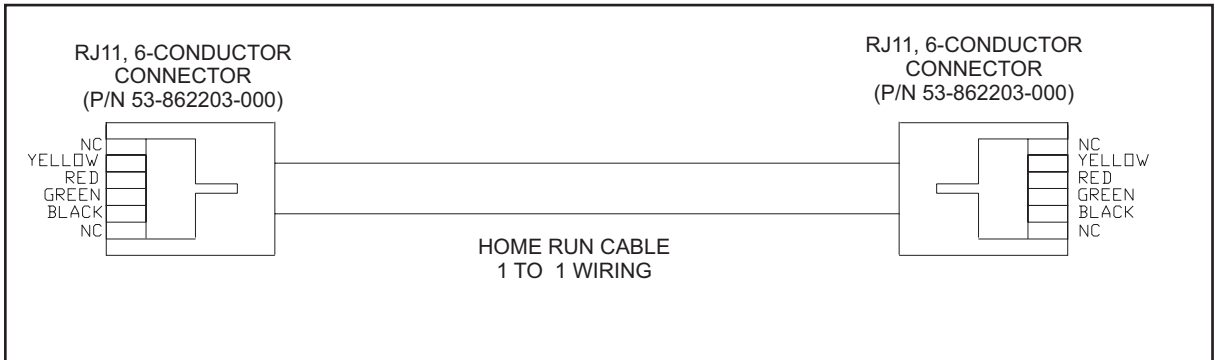


Figure 78

3. Connect the communication cable to the controller. Refer to *Figure 79*.

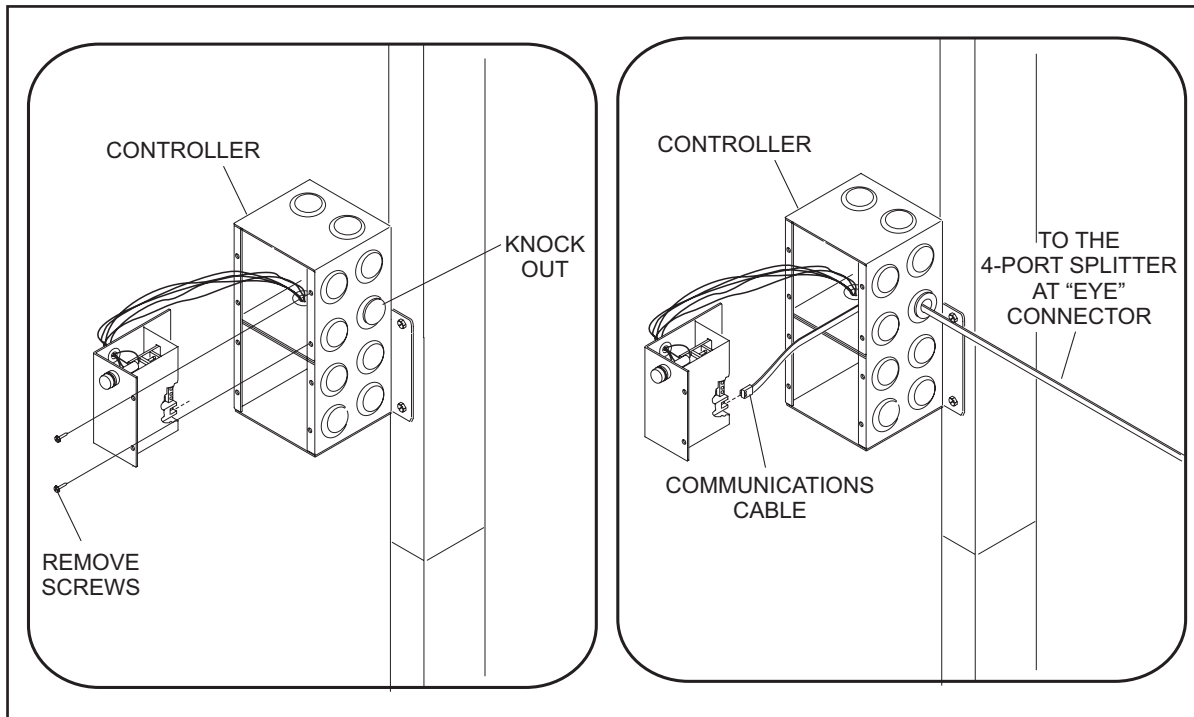


Figure 79

4. Connect the communication cable from the controller to the to the 4-port splitter at the “EYE” connector. Refer to *Figure 79*.

POWER WIRING

The projection screen controller is rated for 3.8 amps at 115 volts, 1.9 amps at 230 volts. One controller per screen. Refer to *Figures 79 & 80*.

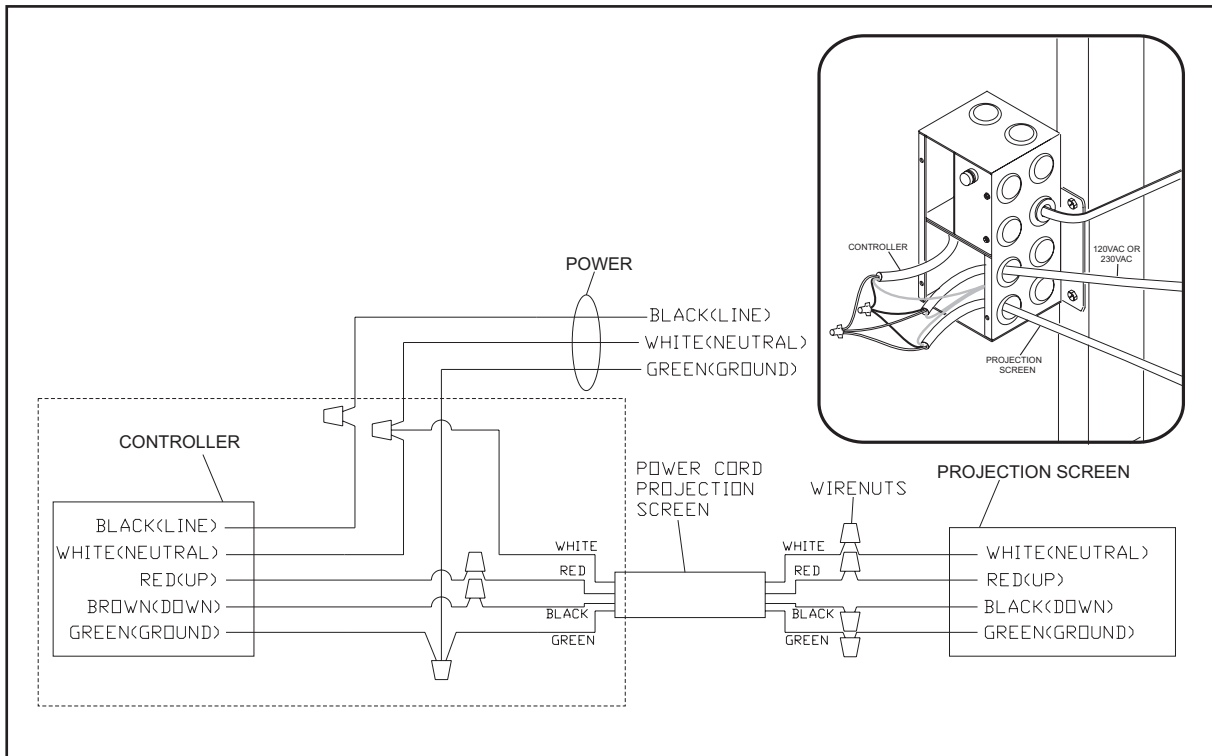


Figure 80

SCREEN ADJUSTMENTS

Following are screen adjustment procedures. However the screen has been factory set and normally no further adjustment is required.



CAUTION! *Be sure all switches are in the “off” position before adjusting limit switches. Always be prepared to shut screen off manually when new adjustment is being tested. Screen may be severely damaged if viewing surface is allowed to run too far up or down.*

Adjusting “Fully Up’ Position



NOTE: *Generally speaking the “full up” limit switch should never need adjusting.*

Yellow Limit Switch

The yellow limit switch adjustment socket is located on the left end of the screen roller and can be adjusted using a screwdriver/Allen wrench (4 mm or 5/32”).

Turning the adjustment socket counterclockwise will cause the view surface to retract into the case.

Turning the adjustment socket clockwise will cause the view surface to stop farther out of the case.

One full revolution of the adjusting socket will alter the stopping position of the viewing area approximately 1-1/2” (38 mm)

Adjusting “Fully Down’ Position

White Limit Switch

The white limit switch adjustment socket is located on the left end of the screen roller and can be adjusted using a screwdriver/Allen wrench (4 mm or 5/32”).

Turning the adjustment socket counterclockwise will cause the viewing surface to extend farther down.

Turning the adjustment socket clockwise will shorten the viewing surface causing it to stop in a less extended position.



NOTE: *At no time should viewing surface be unrolled enough to expose any part of screen roller, or lower than the 1st and 2nd ball lights.*

Landscape Video Masking Unit Software Overview

PRE-INSTALLATION PLANNING

Before beginning the hardware installation, be sure to discuss the overall system configuration with the bowling center manager (or another decision-maker). Up to 24 screens (or groups of screens) can be connected to the same daisy-chained system cable. It is necessary to determine the total number of channels needed (maximum=24) for each System.

eg **Example 1:** If the bowling center has 10 screens, they will need to assign channels 1-10 for these screens. They might also choose to assign the following channels:

- Channel 11 – Screens 1-5
- Channel 12 – Screens 6-10

In this example, the bowling center only requires 12 channels and one system. Also note, each screen will be assigned to 2 channel numbers, one for the screen itself (acting alone) and another channel for its group (either 1-5 or 6-10)

eg **Example 2:** If the bowling center has 20 screens, they will need to assign channels 1-20 for these screens. They will only have 4 remaining channels. They might choose to use the following configuration:

- Channel 21 – Screens 1-4
- Channel 22 – Screens 5-8
- Channel 23 – Screens 9-12
- Channel 24 – Screens 13-16

However, they will not have enough channels to assign the last group (screens 17-20) In this case, it is necessary to install a 2nd System and run a separate, daisy-changed cable from the junction box at the control desk. They will need to run two cables (two systems) from the 8-port junction box. The first cable (system) may control screens 1-10, and the second cable (system) may control screens 11-20. Or, another combination is possible, so long as there are no more than 24 channels per system.

Also, keep in mind that each screen will be assigned two channel numbers, one for the screen itself (acting alone) and another for the screen acting in a group.

eg **Example 3:** If a 40 lane bowling center has 10 screens (every other lane pair), each screen will be assigned a channel number - Channels 1 through 10. Also, the center would like to raise/lower groups of screens in unison. They may need the following, additional channels:

- Channel 11 – Screens Lower half of the house (screens 1-5)
- Channel 12 – Lower half of the house (screens 6-10)
- Channel 13 – Every odd numbered screen (screens 1, 3, 5, 7, 9)
- Channel 14 – Every even numbered screen (screens 2, 4, 6, 8, 10)

In this case, the bowling center only requires 14 channels and one system. Also note, each screen will be assigned to 3 channel numbers, one for the screen itself (acting alone) and two other channels (based on upper/lower half of the house and odd/even screen numbers)



Example 4: In this case, the bowling center is a “SPLIT HOUSE”. There are screens in a separate VIP area and screens on the main floor. In this case, the center needs two systems. Run separate cables to each location, leaving the center with the following configuration:

- System 1, Channel 1 – main room, screens 1
- System 1, Channel 2 – main room, screens 2
- System 2, Channel 1 – VIP room, screens 1
- System 2, Channel 2 – VIP room, screens 2



NOTE: *The “all” function raises/lowers all screens at the same time. There is no separate channel needed.*

As these examples show, it is very important to discuss the different permutations of screens and groups of screens with bowling center management. If there’s a chance that 24 channels might be exceeded, proceed carefully. It is better to add an additional system and install the cable up-front, rather than waiting until the end of the installation.

Also, because bowling center configurations will vary, it may be helpful to roughly sketch the screen configuration in the bowling center. Creating a sketch beforehand will make it much easier to configure the MC Boxes and Control Desk software.

DEFINITION OF TERMS

Projection Screen - This is a single screen that mounts on the masking unit. There is one screen per lane pair.

Control Desk - This is a standard desktop computer a Vector/Vector Plus server or client computer that is loaded with special software to control the projection screens.

Video Mask Controller Application - This software application is running on the Control Desk computer, where it's used to raise or lower projection screens throughout the bowling center.

Systems - Each system has 24 channels. All installations will have at least one system, and larger installations will have multiple systems, up to a maximum of 7. Each system uses a separate cable to connect its screens to the control desk location via the 8-port junction box.

8-Port Splitter - All system cables are connected to the 8-port splitter which is connected to the control desk (by way of a serial port).

Home Run Cable - Each system has its own cable which connects the first controller in a system to an 8-port splitter.

Daisy Chain Cables - 4-conductor cable used to connect in-series all 4-port splitters in a system

Channel - All screens and groups of screens are assigned a channel number (1-24) which functions as an address for that screen (or group of screens).

Controller - Each screen has an controller which raises or lowers the screen. Each controller is programmed with at least one channel number (1-24). For each system installed, the controllers are daisy-chained together using standard, 4-conductor cabling.

Group (of screens) - Multiple screens that are raised or lowered in unison must be configured as a group. This will allow the control desk software to control groups of screens with a single command. For example: the bowling center may request that screens 1-4 get assigned to "group A." This will allow those 4 screens to move in perfect unison.

4-Port Splitter - This is a junction used to daisy chain all the controllers together.

CONFIGURATION OF CONTROLLERS

Each controller must be separately programmed using a remote control device. Refer to “Using the Remote” section.

Getting Started:

Each controller is connected to a 4 port splitter located on the curtain wall. Before programming can begin:

1. Unplug the input/output cables on curtain wall splitter (the cables connected to other controllers in the daisy-chain). Refer to *Figure 81*.

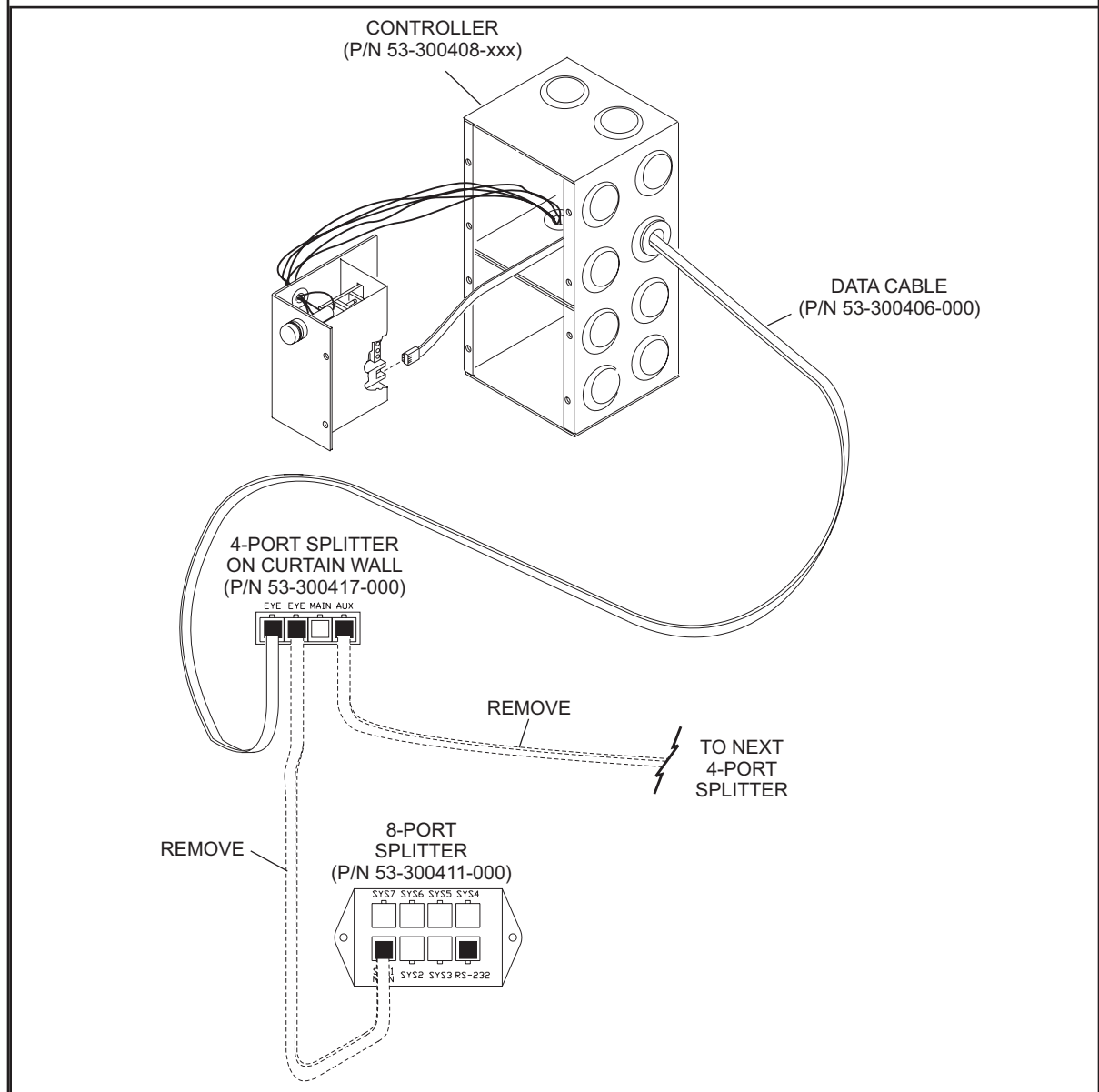


Figure 81

2. Then plug the infrared receiver into the “EYE” port on the splitter. Refer to **Figure 82**.



NOTE: Be aware: The data cable connects directly to the controller. Leave this cable plugged in.

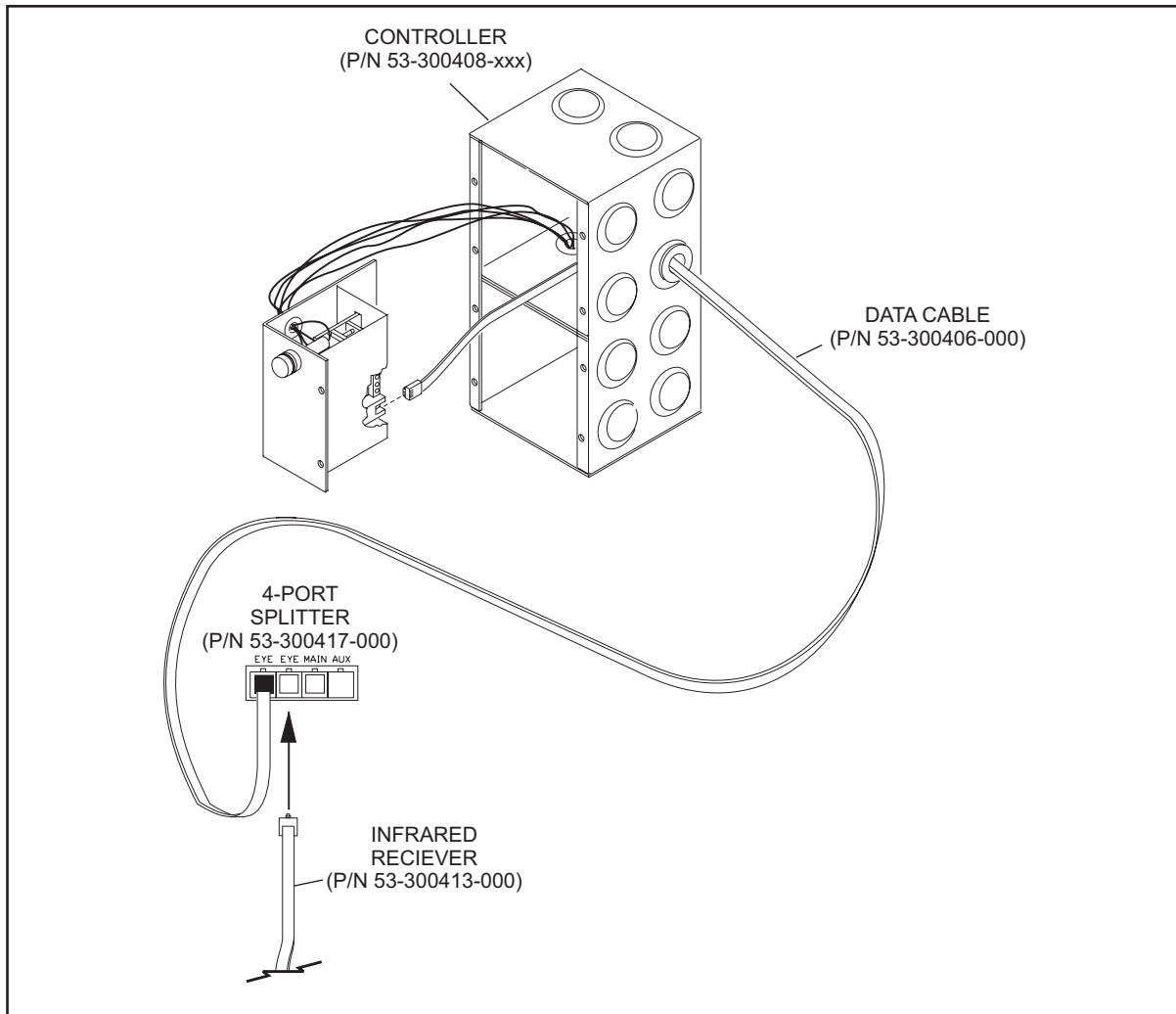


Figure 82

Controller Modes

The controller is capable of operating in two modes:

Operational Mode

Controller receives open/close commands.

Programming Mode

Controller receives basic programming information.

While performing “Controller Programming Instructions”, place the controller in programming mode by pressing and holding the “STOP”, “Open 7”, and “Close 7” buttons at the same time. If done correctly, the LED will begin blinking on the remote.

USING THE REMOTE TO PROGRAM CONTROLLER

How to Read Controller Programming Instructions

The programming instructions are written in the following way:

- The + symbol indicates that multiple buttons must be pressed at the same time. For example, “press SHIFT + STOP” should be read as “Hold down the SHIFT and STOP buttons at the same time.”
- The remote control unit is capable of programming up to 24 channels, but there are only 12 numeric buttons. Use the SHIFT button to select numbers 13-24. For example, you will see a button labeled 1/13. Pressing 1/13 will select the number one, and pressing SHIFT + 1/13 will select the number thirteen.



***NOTE:** All controllers are factory programmed to Primary Channel 1 and Group Channel 1.*

Controller Programming Instructions

Below are instructions to program the controller. All controllers will need to have the Primary Channel programmed, the Group Channel may or may not need to be programmed depending on the number of screens.



NOTE: Batteries are not included. Remote requires 2 - AAA batteries.



NOTE: The Primary Channel and the Group Channel cannot be the same number.

Reset Everything to Factory Default

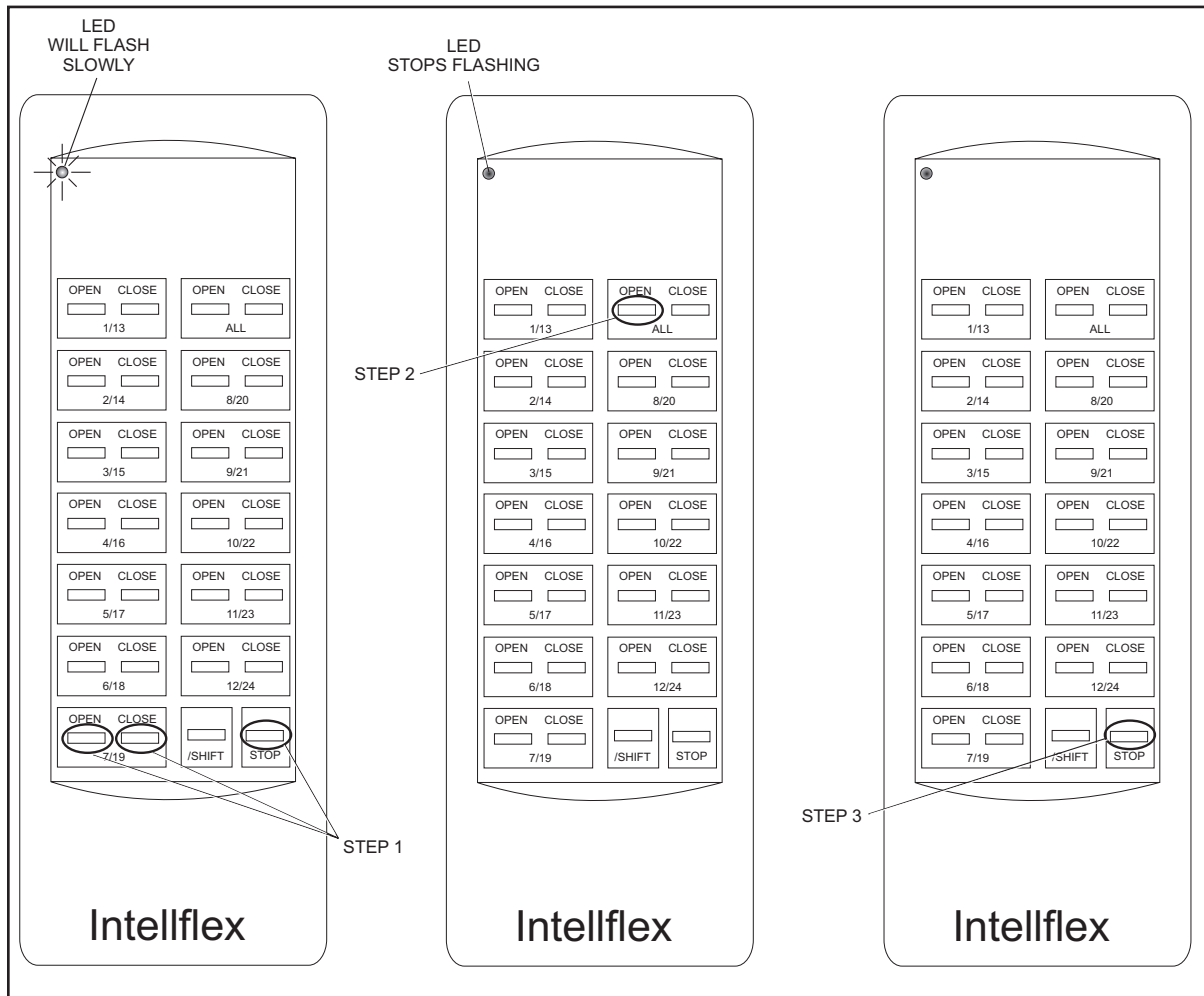


Figure 83

1. STOP + OPEN 7 + CLOSE 7. The LED on the remote will flash slowly.
2. OPEN ALL, hold until the LED stops flashing. The LED will flashes faster then in step 1.
3. STOP

Reset the Group Channel Number to Default

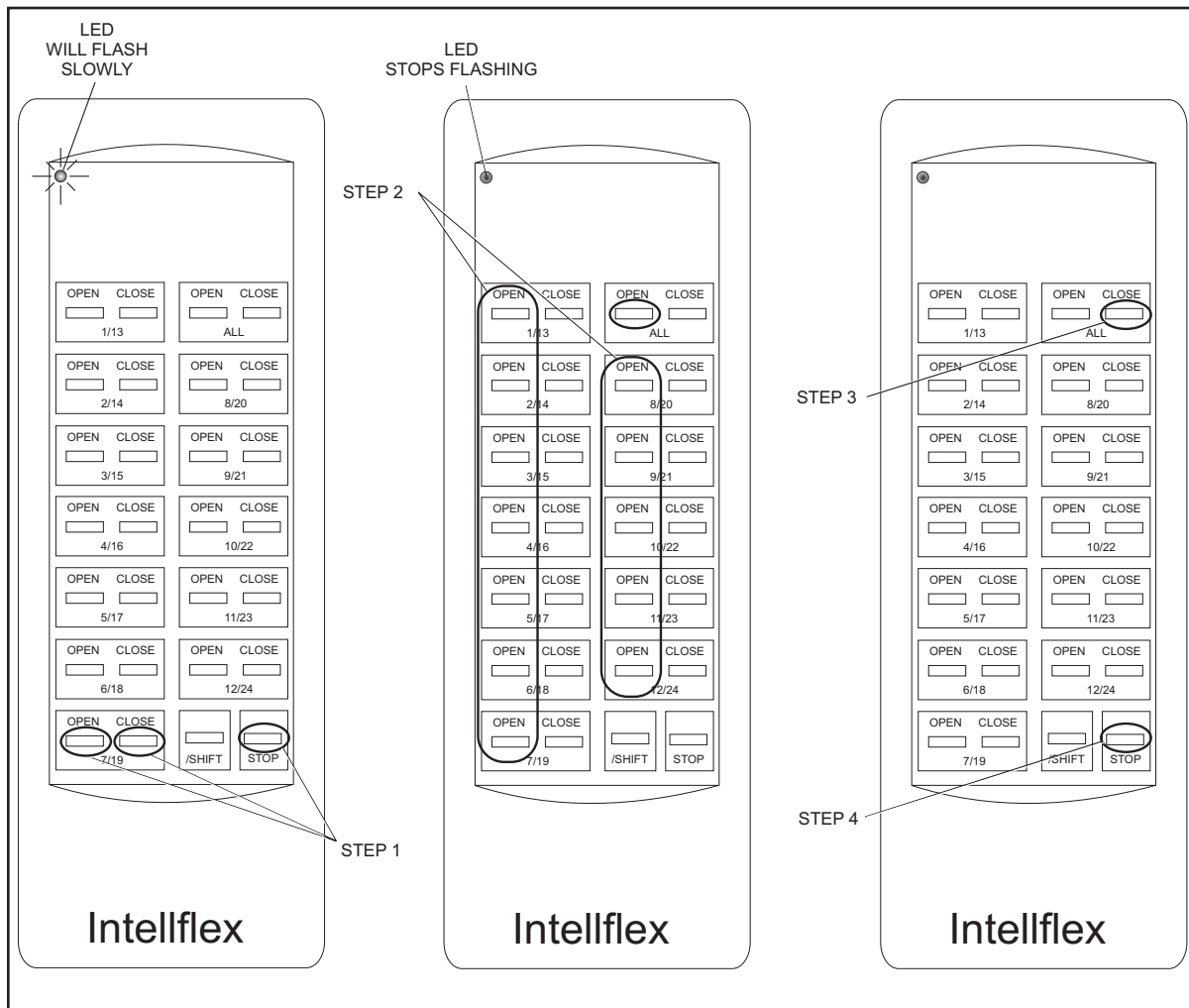


Figure 84

1. STOP + OPEN 7 + CLOSE 7. The LED on the remote will flash slowly.
2. OPEN #, # is the number of the existing primary number, 1,2,3, etc.
3. CLOSE ALL
4. STOP

Assign the Primary Channel Number

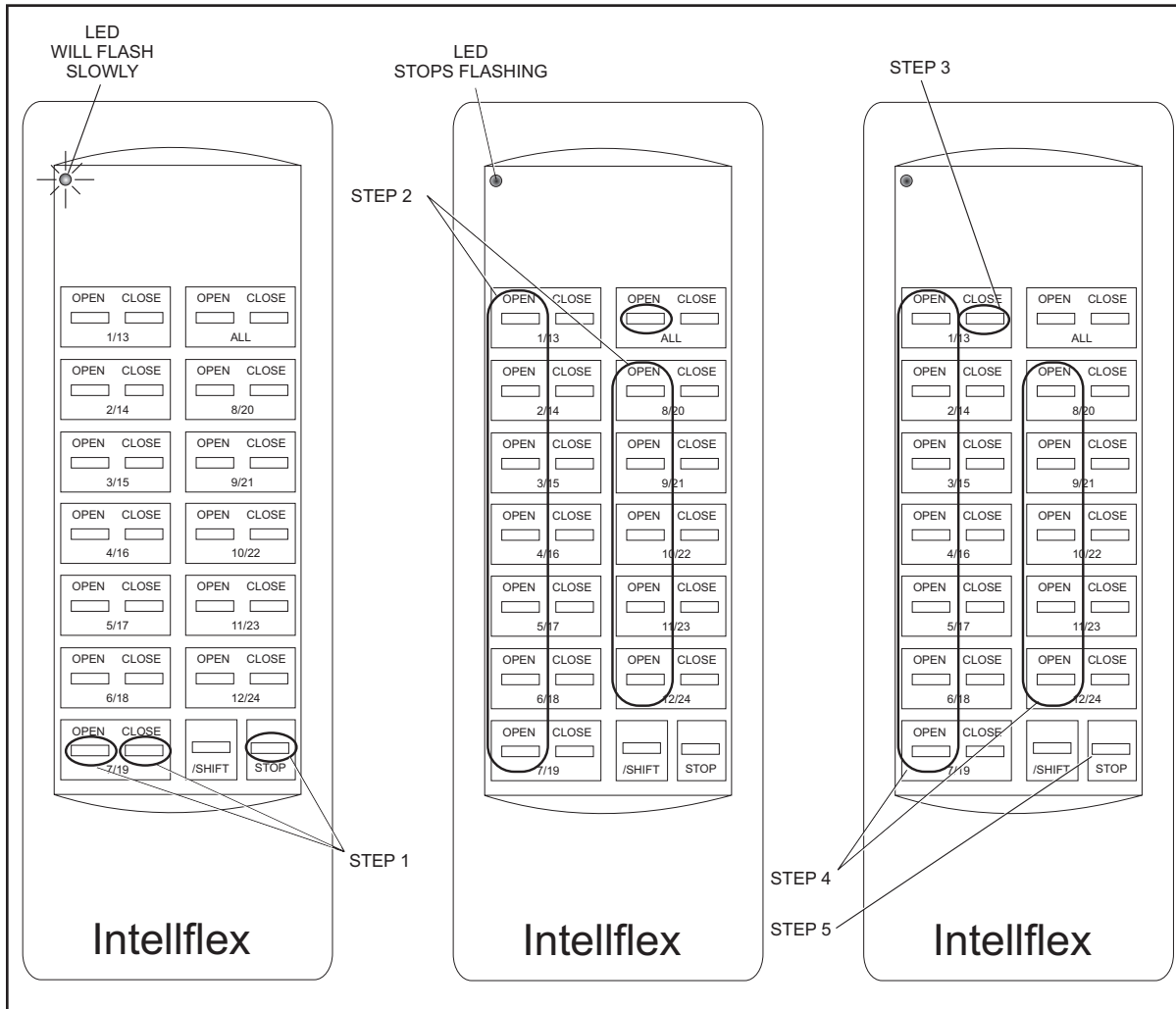


Figure 85

1. STOP + OPEN 7 + CLOSE 7. The LED on the remote will flash slowly.
2. OPEN #, # is the number of the existing primary number, 1,2,3, etc.



NOTE: If this is the first time programming the controller the # will be 1.

3. CLOSE 1
4. OPEN “N”, “N” is the new primary channel number.



NOTE: If the “N” is 13 to 24 the /SHIFT will need to be pressed.

5. STOP

Assign the 1st Group Channel Number

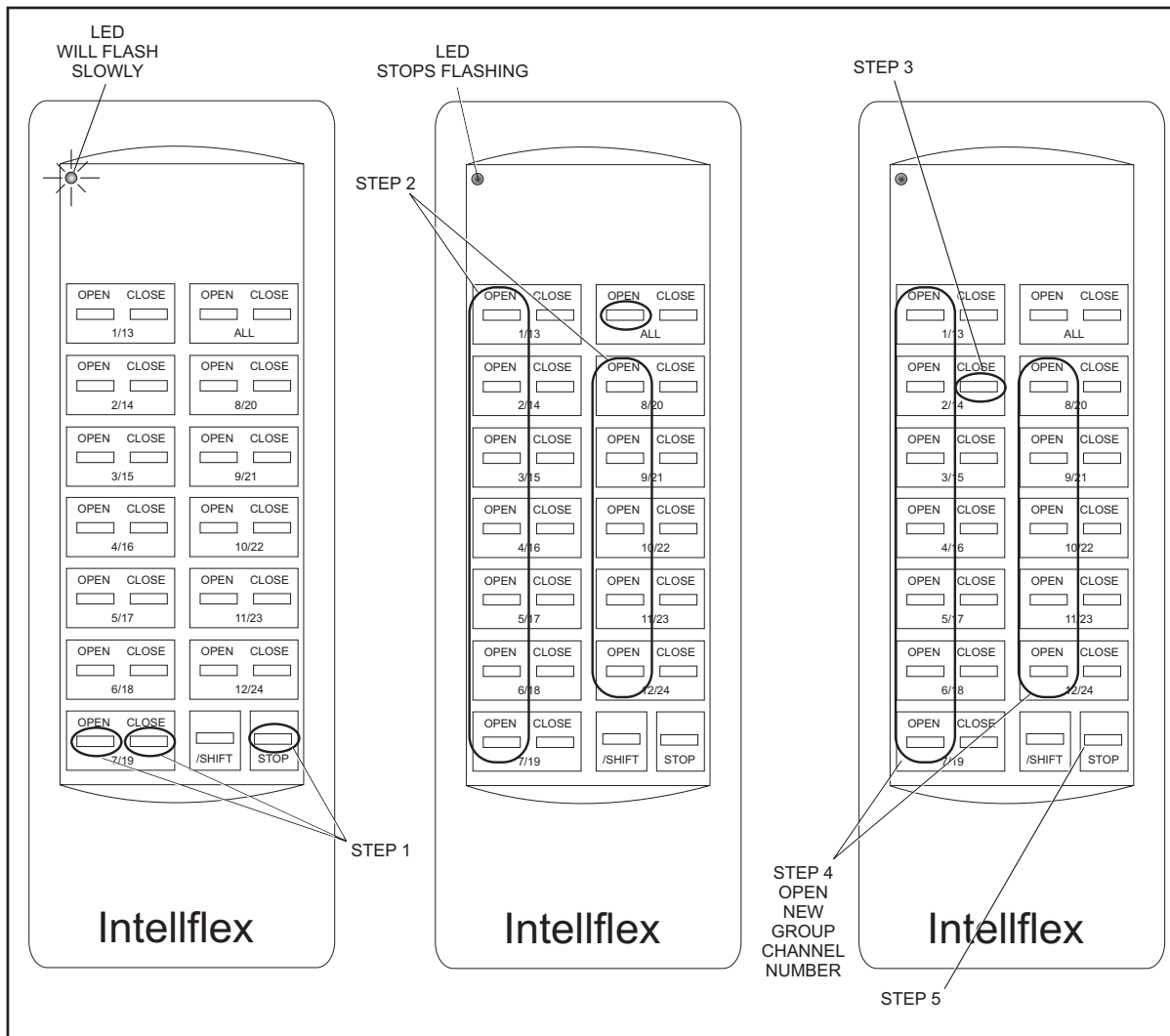


Figure 86

1. STOP + OPEN 7 + CLOSE 7. The LED on the remote will flash slowly.
2. OPEN #, # is the number of the existing primary number, 1,2,3, etc.

i **NOTE:** If this is the first time programming the controller the # will be 1

3. CLOSE 2
4. OPEN "N", "N" is the new group channel number.

i **NOTE:** If the "N" is 13 to 24 the /SHIFT will need to be pressed.

5. STOP

Assign the 2nd Group Channel Number

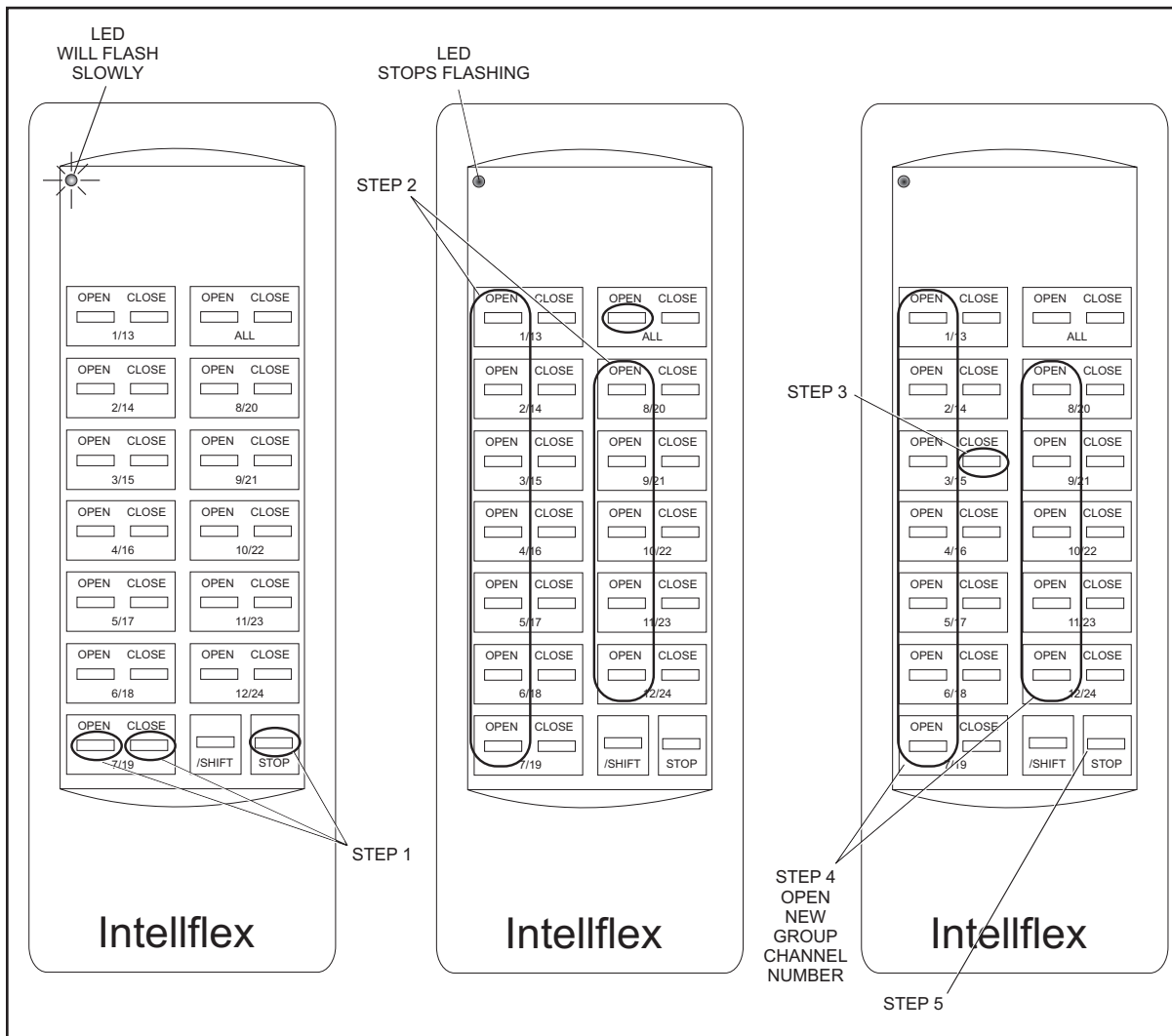


Figure 87

1. STOP + OPEN 7 + CLOSE 7. The LED on the remote will flash slowly.
2. OPEN #, # is the number of the existing primary number, 1,2,3, etc.



NOTE: If this is the first time programming the controller the # will be 1

3. CLOSE 3
4. OPEN “N”, “N” is the new group channel number.



NOTE: If the “N” is 13 to 24 the /SHIFT will need to be pressed.

5. STOP

Assign 3rd Group Channel Number

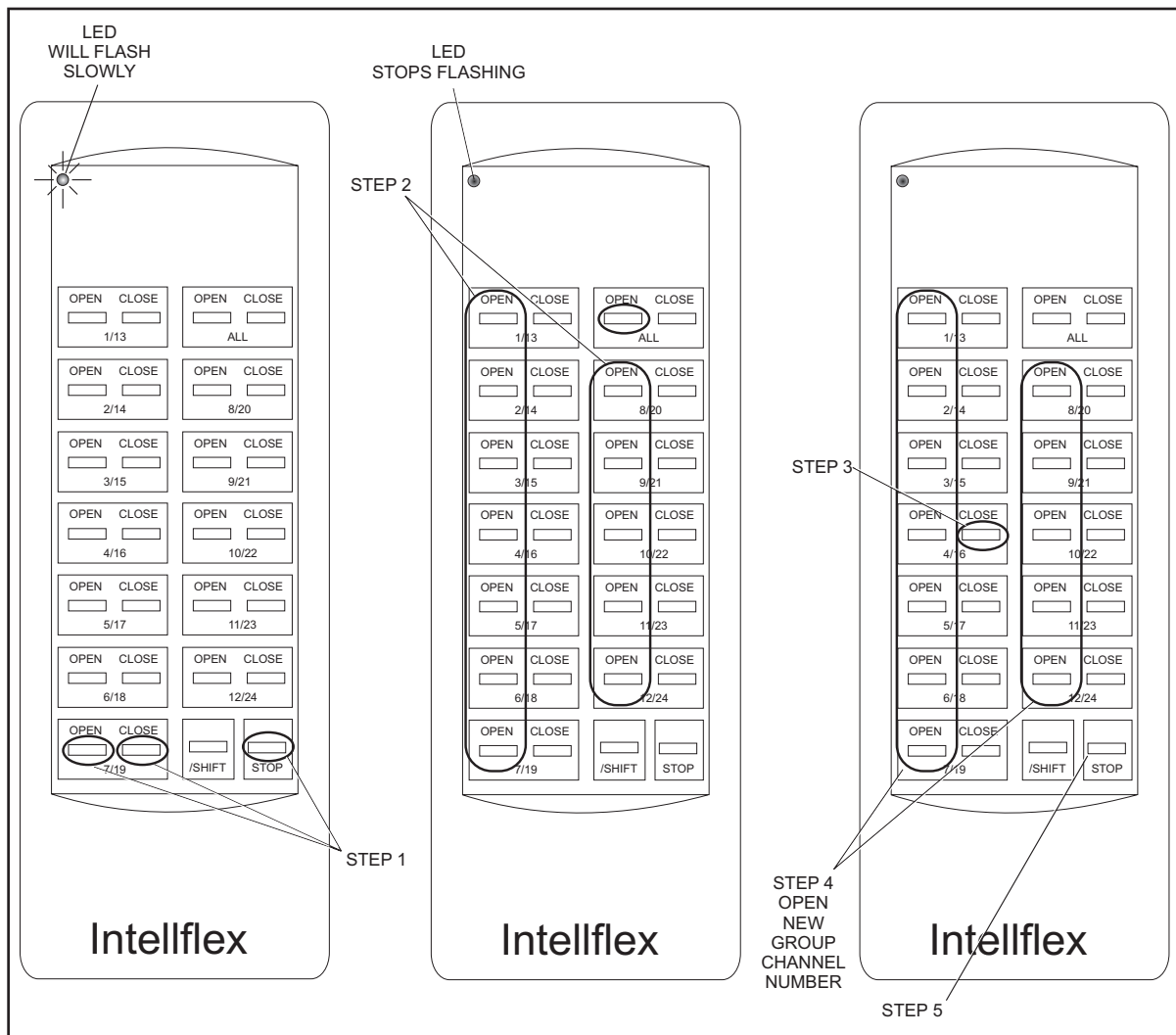


Figure 88

1. STOP + OPEN 7 + CLOSE 7. The LED on the remote will flash slowly.
2. OPEN #, # is the number of the existing primary number, 1,2,3, etc.



NOTE: If this is the first time programming the controller the # will be 1

3. CLOSE 4
4. OPEN "N", "N" is the new group channel number.



NOTE: If the "N" is 13 to 24 the /SHIFT will need to be pressed.

5. STOP

Assign the 4th Group Channel Number

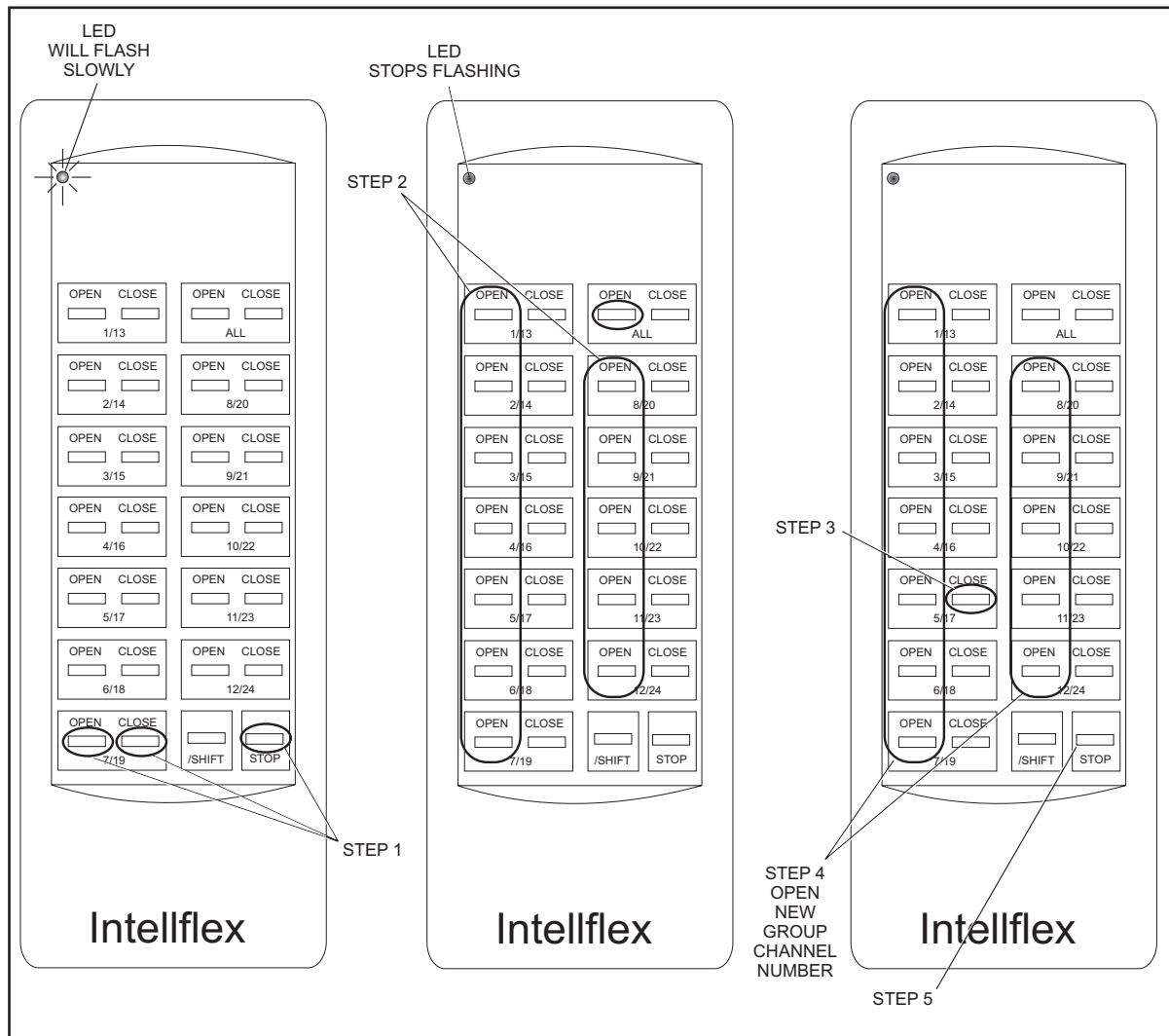


Figure 89

1. STOP + OPEN 7 + CLOSE 7. The LED on the remote will flash slowly.
2. OPEN #, # is the number of the existing primary number, 1,2,3, etc.



NOTE: If this is the first time programming the controller the # will be 1

3. CLOSE 5
4. OPEN "N", "N" is the new group channel number.



NOTE: If the "N" is 13 to 24 the /SHIFT will need to be pressed.

5. STOP

Assign the 5th Group Channel Number

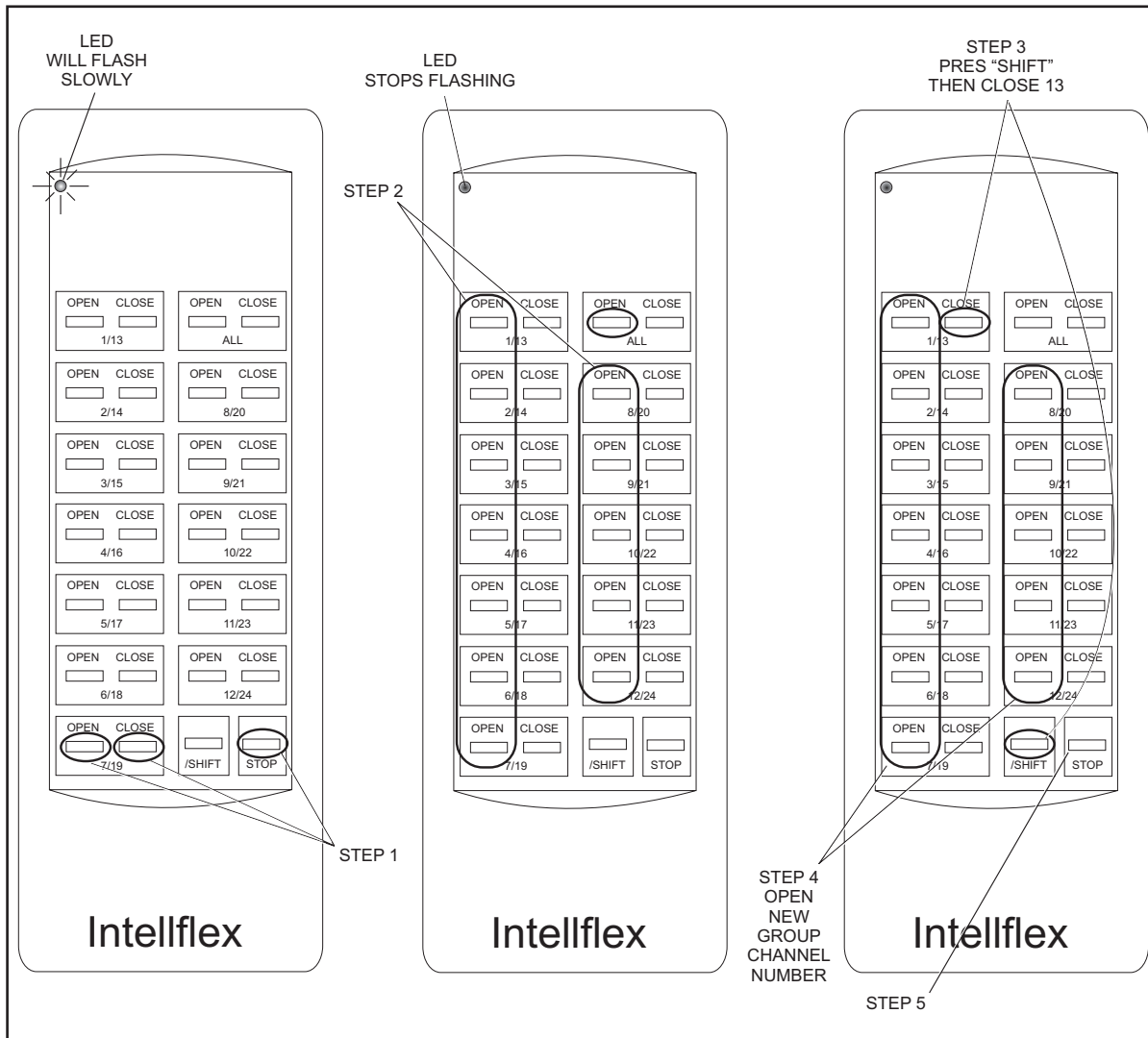


Figure 90

1. STOP + OPEN 7 + CLOSE 7. The LED on the remote will flash slowly.
2. OPEN #, # is the number of the existing primary number, 1,2,3, etc.



NOTE: If this is the first time programming the controller the # will be 1

3. Press /SHIFT then CLOSE 13
4. OPEN “N”, “N” is the new group channel number.



NOTE: If the “N” is 13 to 24 the /SHIFT will need to be pressed.

5. STOP

SOFTWARE INSTALLATION/SETUP

Prerequisites

- Install the Lanescape Video application on any available desktop computer that has an available serial port.
- Determine the port number of the serial port. This information will be used later in configuring the Video Masking Unit Control Software.
- Ensure the computer is running Windows 2000, XP or Vista.
- Ensure the computer is physically connected to the R2D7
- Sketch the physical layout of the screens in the bowling center, and take note of the channels assigned for each screen. This will make it easier to customize the software. First, start at the R2D7. You will see one cable that connects to the control computer and one or more System Cables. Count the number of System Cables, and count the number of screens for each cable. Then identify the primary (and any secondary) channel number(s) for each projection screen.

Installing Software

1. Locate the computer that is physically connected to the R2D7. Place the installation CD in the computer.
2. The installation will start automatically and the following window will appear.

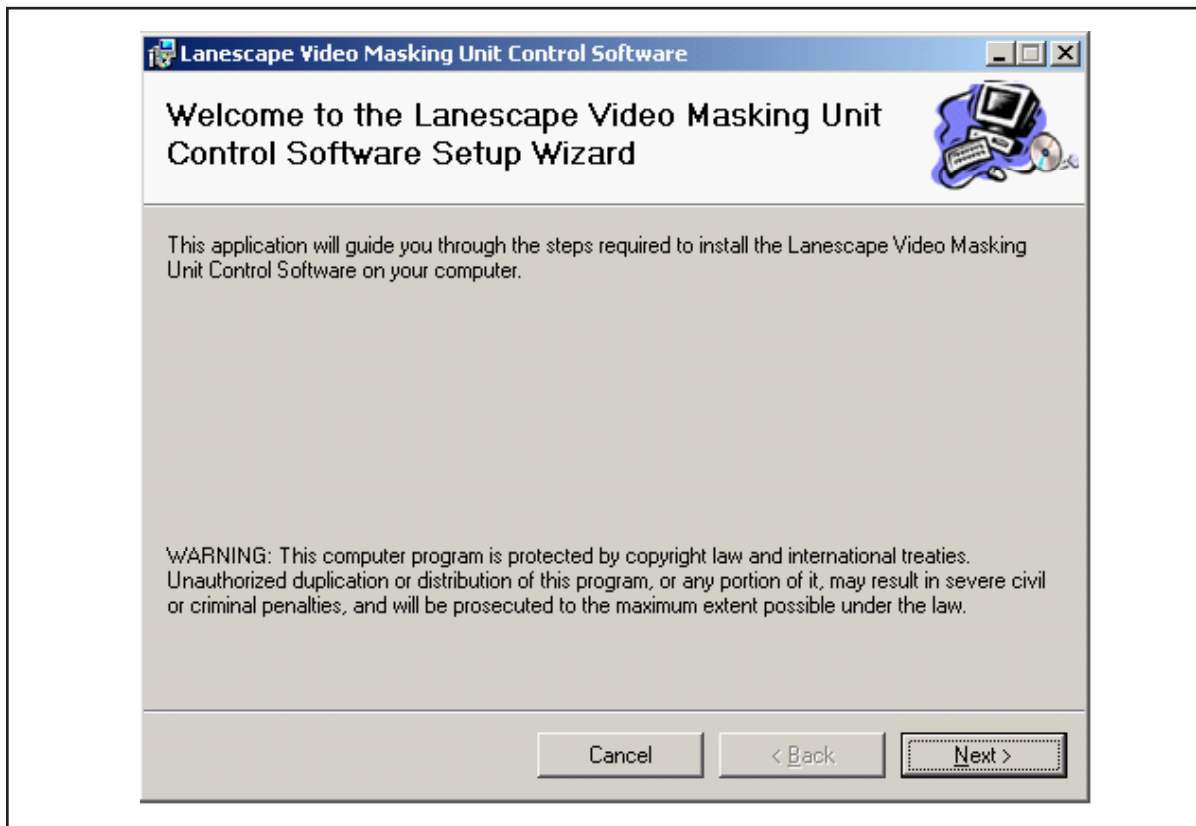


Figure 91



NOTE: If the installation does not start automatically, manually run the file “VideoMaskControllerInstaller.msi” (Double click on My Computer, double click on the drive letter of the CD Rom, and then double click on the file name “VideoMaskControllerInstaller.msi”)

3. Click “Next.”
4. Accept the default selections, and click “Next.”
5. Click “Next” again, and wait while the installation runs.
6. After less than a minute, you should see the message “Installation Complete.” Refer *Figure 92*.

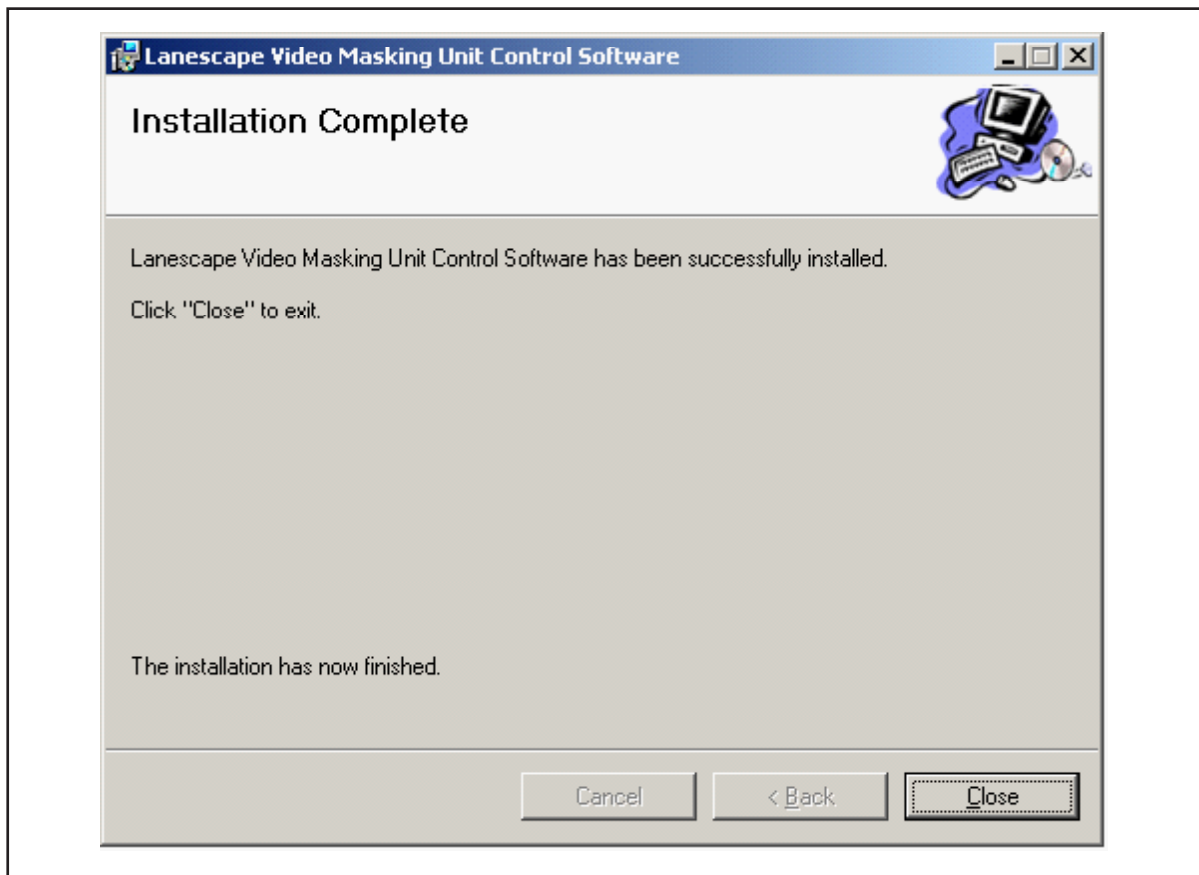


Figure 92

7. Click “Close” to complete the installation.

8. From the Windows desktop, double click on the “Video Mask Controller” icon.

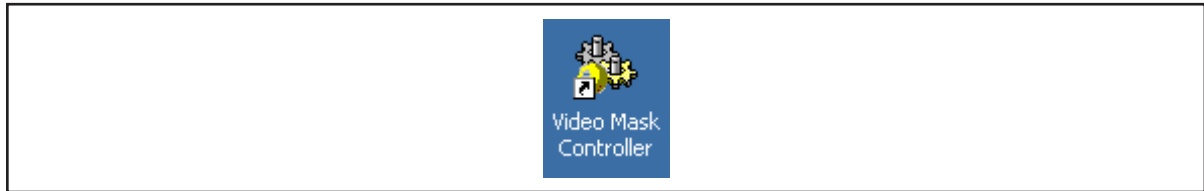


Figure 93

9. Verify that the program opens successfully. At this point, the program will open in “default” mode, and the screen should look something like the figure that follows.

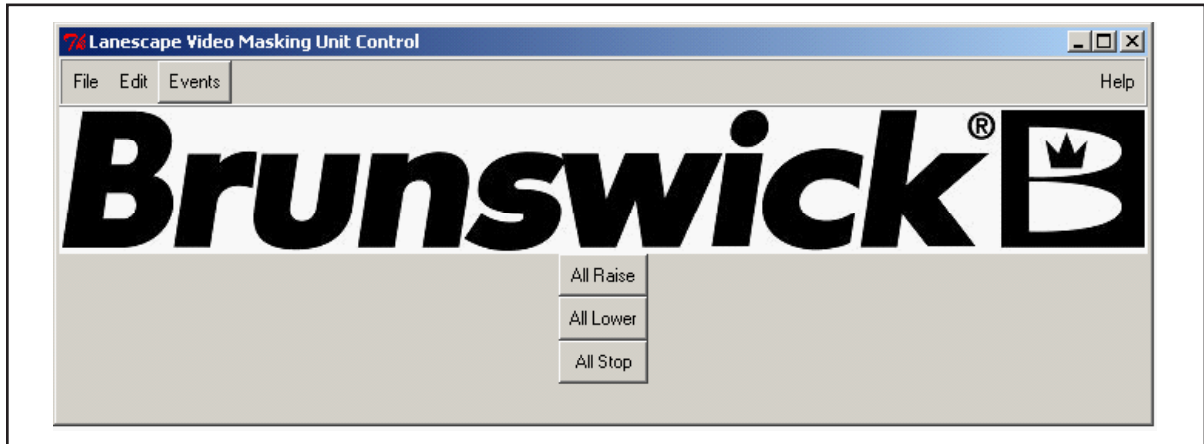


Figure 94



NOTE: When opening the application, if there is an error message that refers to “.Net ...,” then you will need to install the .Net Framework 2.0. Go to the Windows Desktop, double click on the “My Computer” icon, double click on the drive letter for the CD Rom drive, and then double click on the file “dotnetfx2_0.exe.” Follow the screen prompts to install the software. After running the installation, verify that the Video Screen Control application opens properly.

10. Return to the “File” menu and select “Exit” to close the application. Or simply click the X at the top right corner of the window.

Customize the Layout of the Application

The buttons on the Video Masking Unit Control application can be easily customized to meet the requirements of the bowling center.

Basic Customization

1. Go to the Windows Start button (lower left corner of desktop) and select “All Programs.”

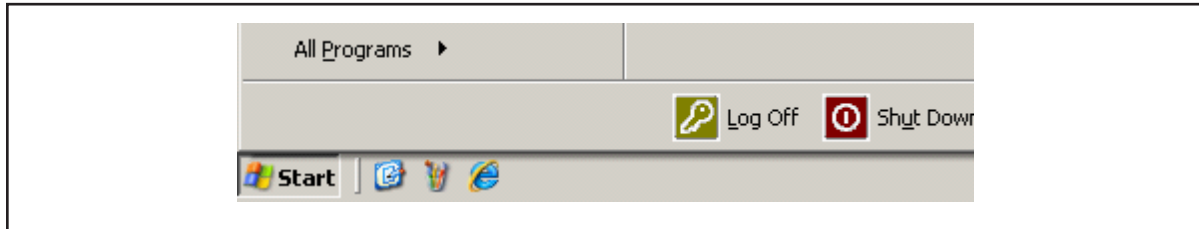


Figure 95

2. Click on “Landscape Video Masking Unit Control Software,” and then click the “Video Masking Unit Layout” shortcut.

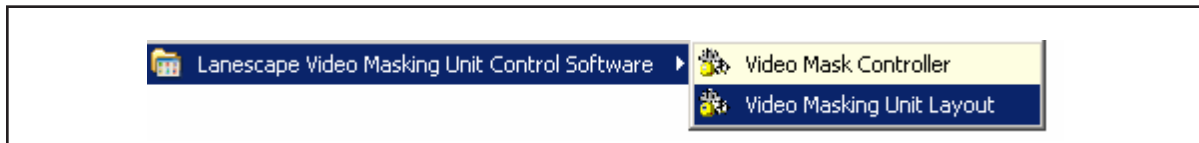


Figure 96

3. The following window will appear.

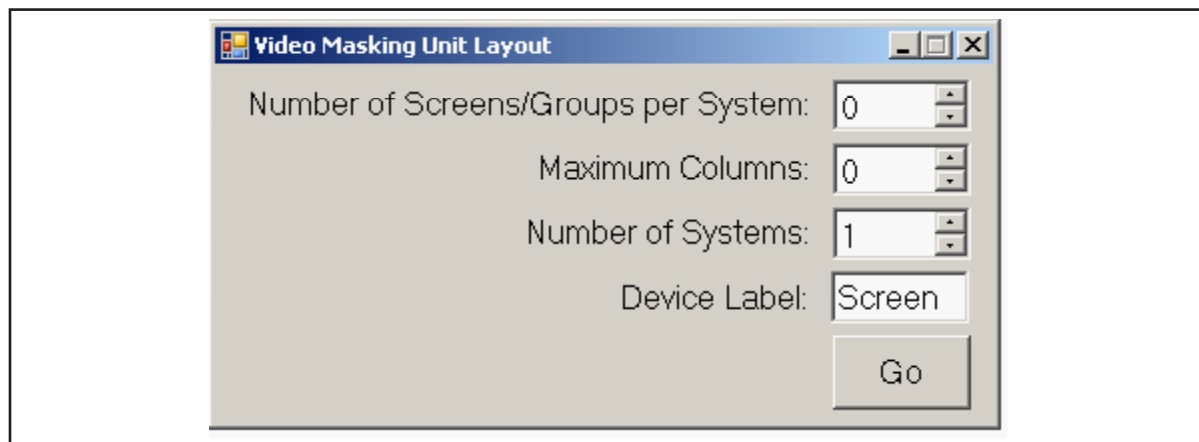


Figure 97

4. Enter the number of Screens/Groups per System – Enter the maximum number of channels per System. If multiple Systems are installed, enter the number of channels used by the largest system. If you are uncertain, enter “24.”
5. Enter the Maximum Columns – If desired, enter the number of columns that will appear in the Video Mask Controller application. This is an optional step, and it’s used simply to control the button layout on the screen. If you are uncertain, leave the default setting, “0.”

6. Enter Number of Systems – Enter the number (1-7) of Systems for this center (typically there is one system per center unless it is a split house).



NOTE: One home run cable per system (i.e. If there is a split house there will be 2 systems and two home run cables).

7. Enter Device Label – Leave the default (screen) or type another description if desired. This label will be used to identify the button in the software application. For example, using the default, the buttons will read “raise screen” and “lower screen.”
8. Click the “Go” button.
9. Select the “default.esi” file and click “Save.” Refer to the following Figure 98.

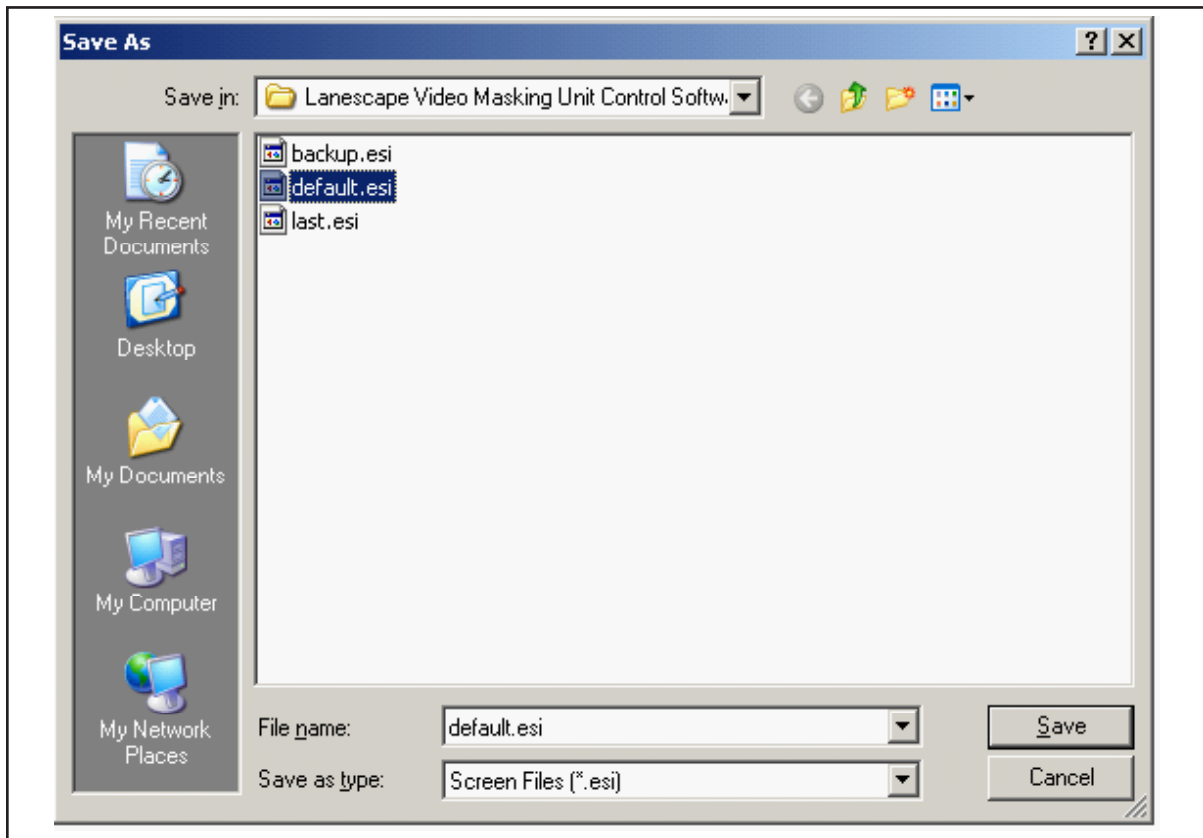


Figure 98

10. Click “Yes” to confirm that you want to replace the file.

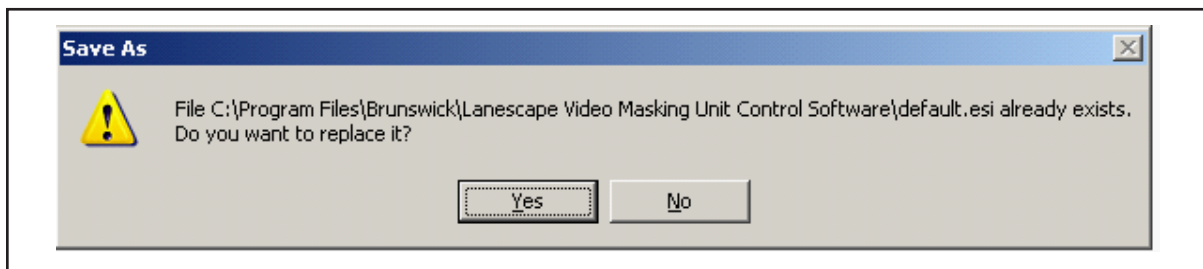


Figure 99

11. Click “Yes” to verify the message.
12. You will see a verification message. Click “OK,” and then close the “Screen File Builder” application by clicking on the X at the top right corner of the window.
13. Open the Video Mask Controller application by double clicking on the desktop icon.
14. Verify that you see the proper grid display on the main view of the application.

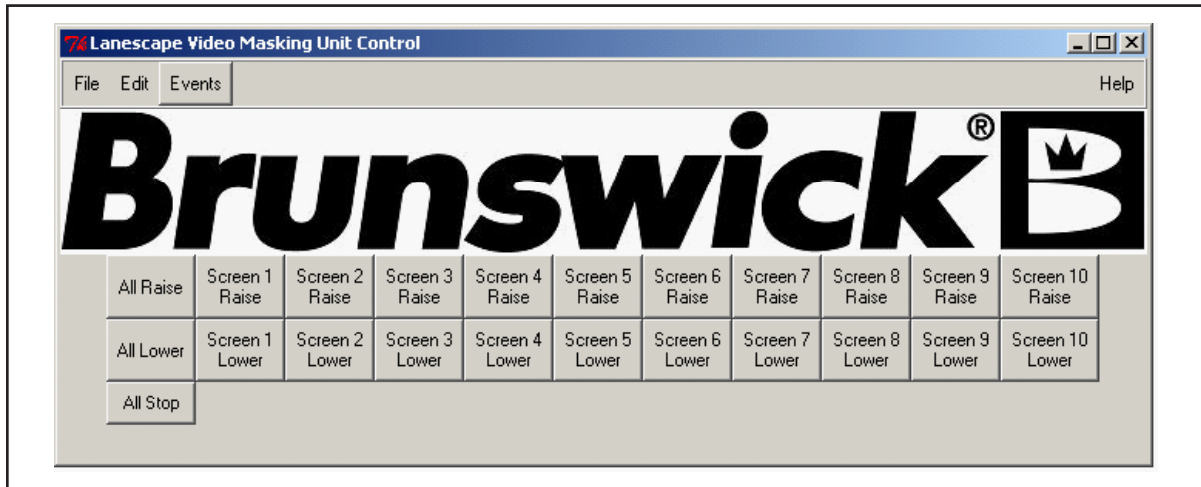


Figure 100

15. Go to the “Edit” menu, select “Com Port,” and select the port where the R2D7 is installed. In the example below, the R2D7 is connected to Com 5.

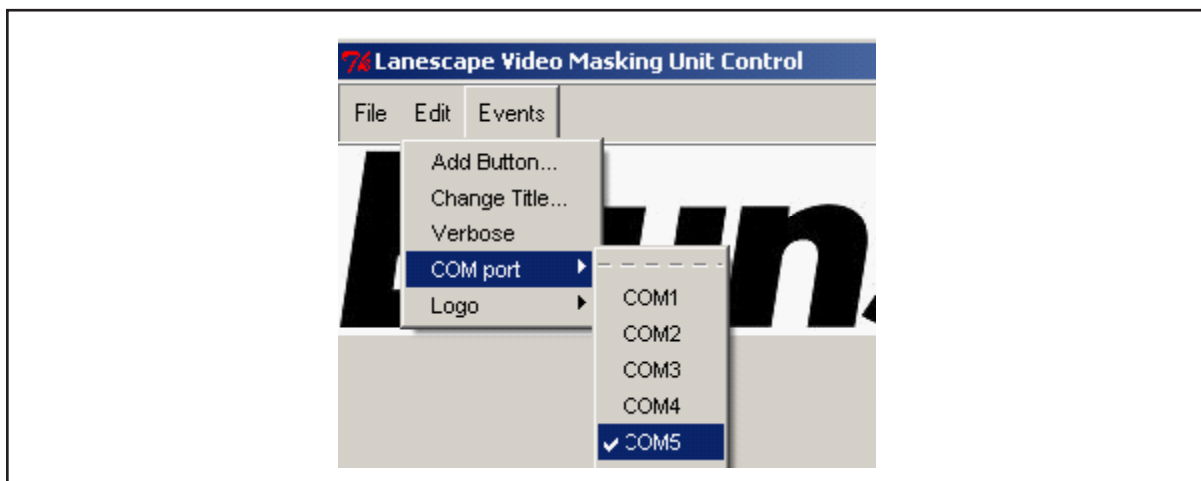


Figure 101

16. Go to the “File” menu and select “Save” to save the Com Port setting.

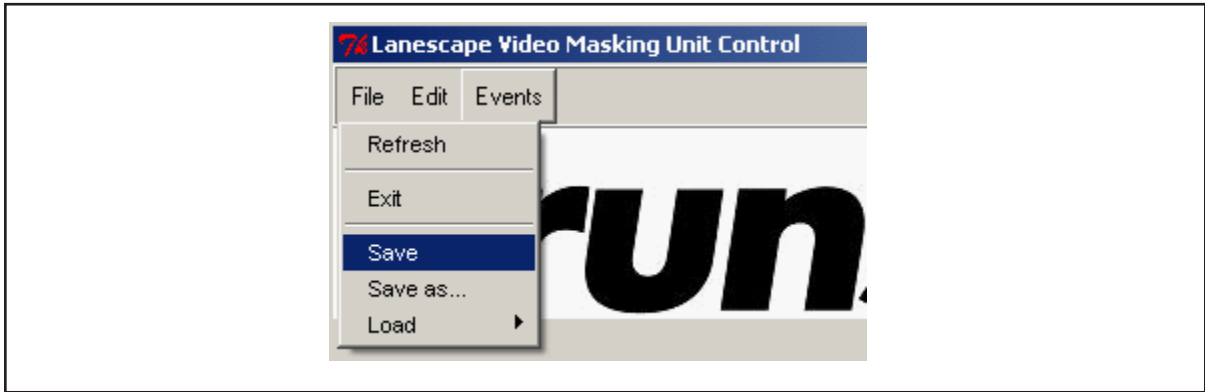


Figure 102



NOTE: *If the results are not what you expected, repeat steps 1-14 to recreate the grid.*

Advanced Customization

By default, each button is named “screen #” (or whatever word you selected by default in the “Video Masking Unit Layout” program). The # symbol corresponds to the channel number that is controlled by that button. It is possible to rename buttons, move buttons, delete buttons, and perform other functions. All of these are optional procedures. After making changes, be sure to save the settings by going to the “File” menu and selecting “Save.”

1. Verify that all buttons correspond to actual screens. If necessary, delete the buttons that are not needed.
 - a. Right click on the button.
 - b. Select “delete” from the drop down list.
2. If desired, rename the buttons. For example, identify the projection screens by lane pair.
 - a. Right click on the button.
 - b. Select “Button Properties.”
 - c. Change the label to read “Lanes 1-2” (or some other description that describes the location of the screen).
 - d. Click “Done.”
 - e. Repeat these steps as needed.

3. Identify which channel #s correspond to groups. Although the button label might read “screen 10,” the button actually controls Channel 10. Therefore, you should rename the button to describe the group of screens that are programmed with channel 10. For example, you may use one of the following descriptions:
 - a. Lanes 1-20
 - b. VIP room
 - c. Lower half
4. Move or swap buttons
 - a. Right click on the button.
 - b. Select one of the “swap” or “shove” options to move the button.
5. Create new buttons
 - a. Go to the “Edit” menu and select “Add Button.”
 - b. Type the button label.
 - c. Type the command for that button.
 - i. Enter *, followed by the system #.
 - ii. Then type a command
 - C – to Raise (or close) the screen
 - O– to Lower (or open) the screen
 - S – to Stop the screen
 - iii. Then type the two digit channel # (include a leading zero, if appropriate)
 - d. Finish by clicking “Done.”



NOTE: If you get stuck, go to an existing button and view its command line. Simply right click on the button and choose “button properties.” In the figure that follows, the command line reads “*1c05;” (* = start of command line; 1 = System #1; c = Close; 05 = Channel #5)

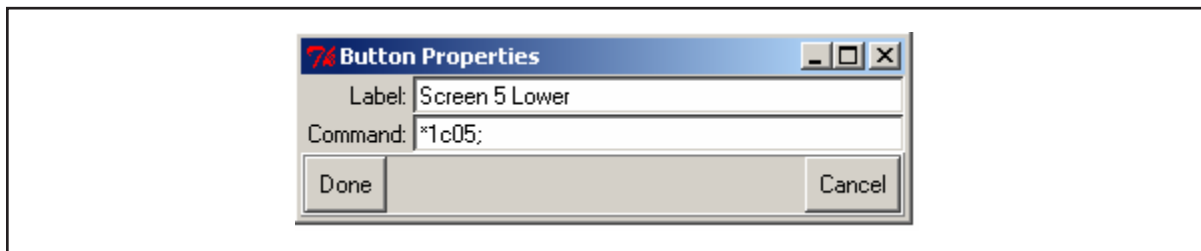


Figure 103



Warning: Be sure to save any changes by going to the “File” menu (to left corner of screen) and clicking “Save.”

Projector Installation

CLOSED CEILING FOR STANDARD AND HIGH OUTPUT PROJECTORS

Customer is responsible for providing support structure to which the aircraft cables attach, usually a metal bar or wood beam, that will support the weight load of the projector. Refer to the system overview graphic below and the projector mounting detail on the following page.



NOTE: Customer Responsible for all video cabling and video equipment to projector.

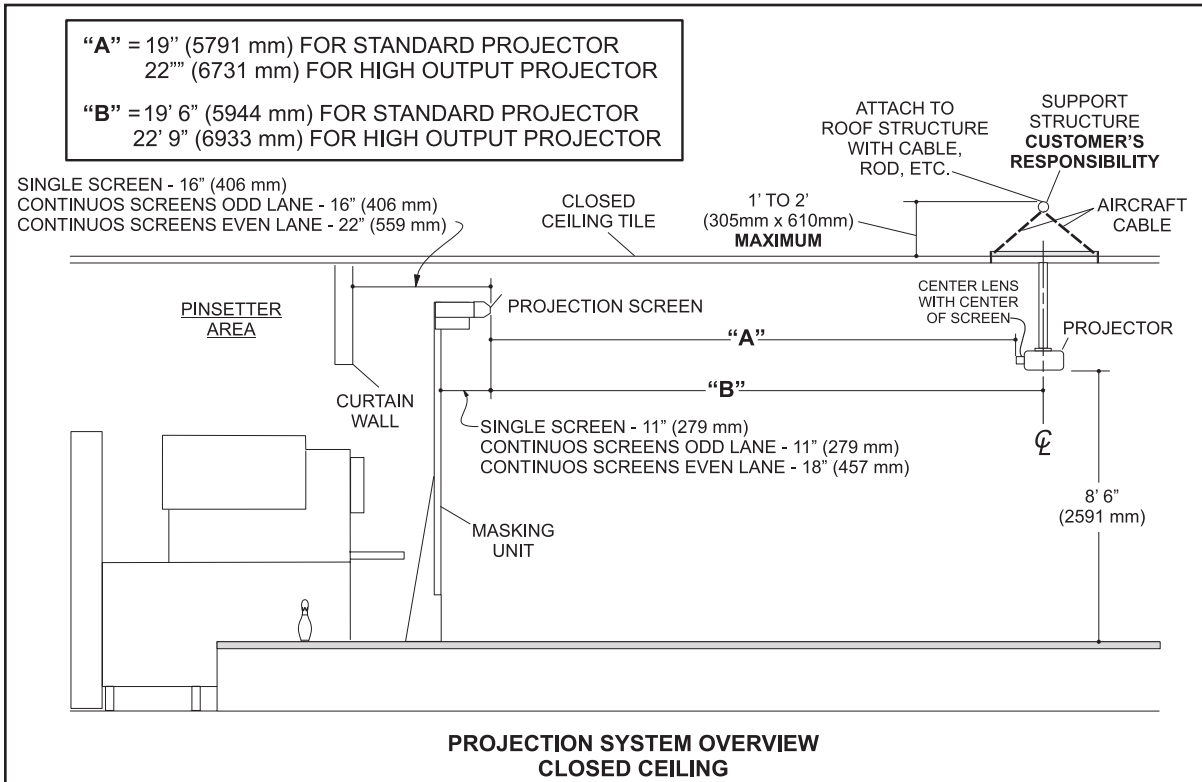


Figure 104

Projector Mount Bracket Assembly

Refer to projector manufacturer's instructions to attach mount bracket to projector.

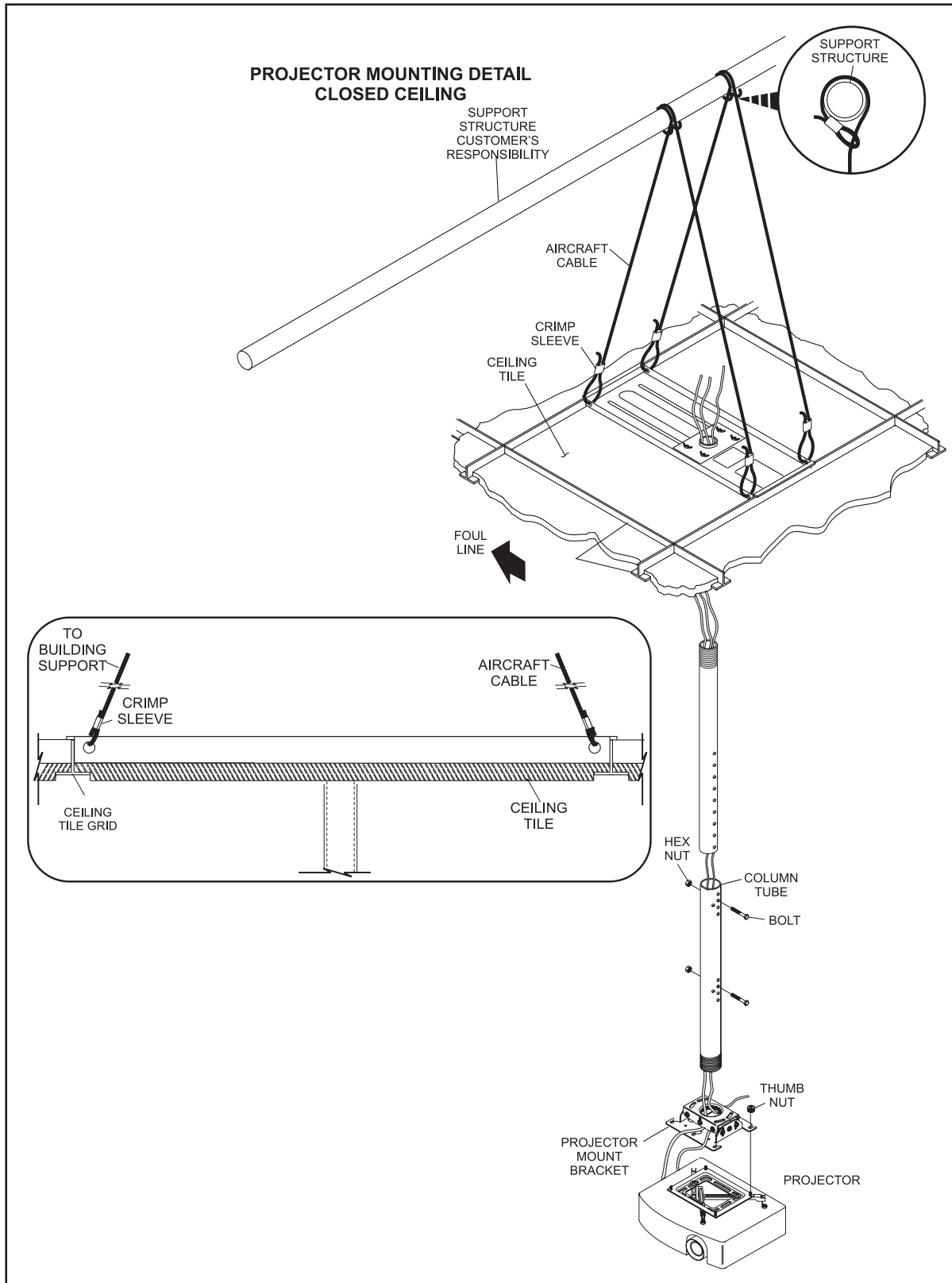


Figure 105

OPEN CEILING FOR STANDARD AND HIGH OUTPUT PROJECTORS

Customer is responsible for providing 1-1/2" pipe male NTP. Refer to the system overview graphic below and the projector mounting detail on the following page.

The bottom of the pipe should be located 12' (3.66 m) above the lane and distance "B" from the projection screen, toward the foul line.



NOTE: Customer Responsible for all video cabling and video equipment to projector.

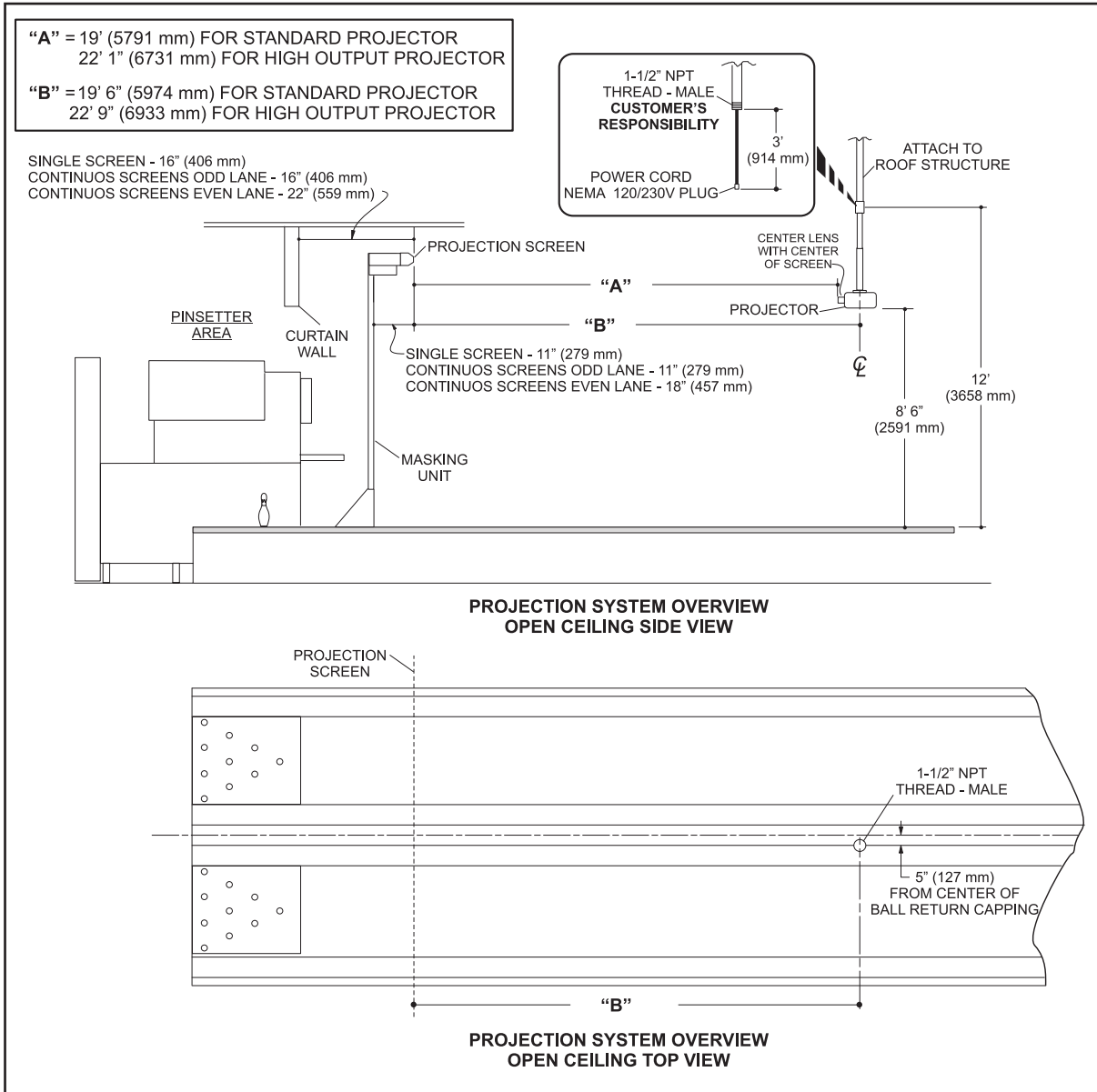


Figure 106

Projector Mount Bracket Assembly

Refer to projector manufacturer's instructions to attach mount bracket to projector.

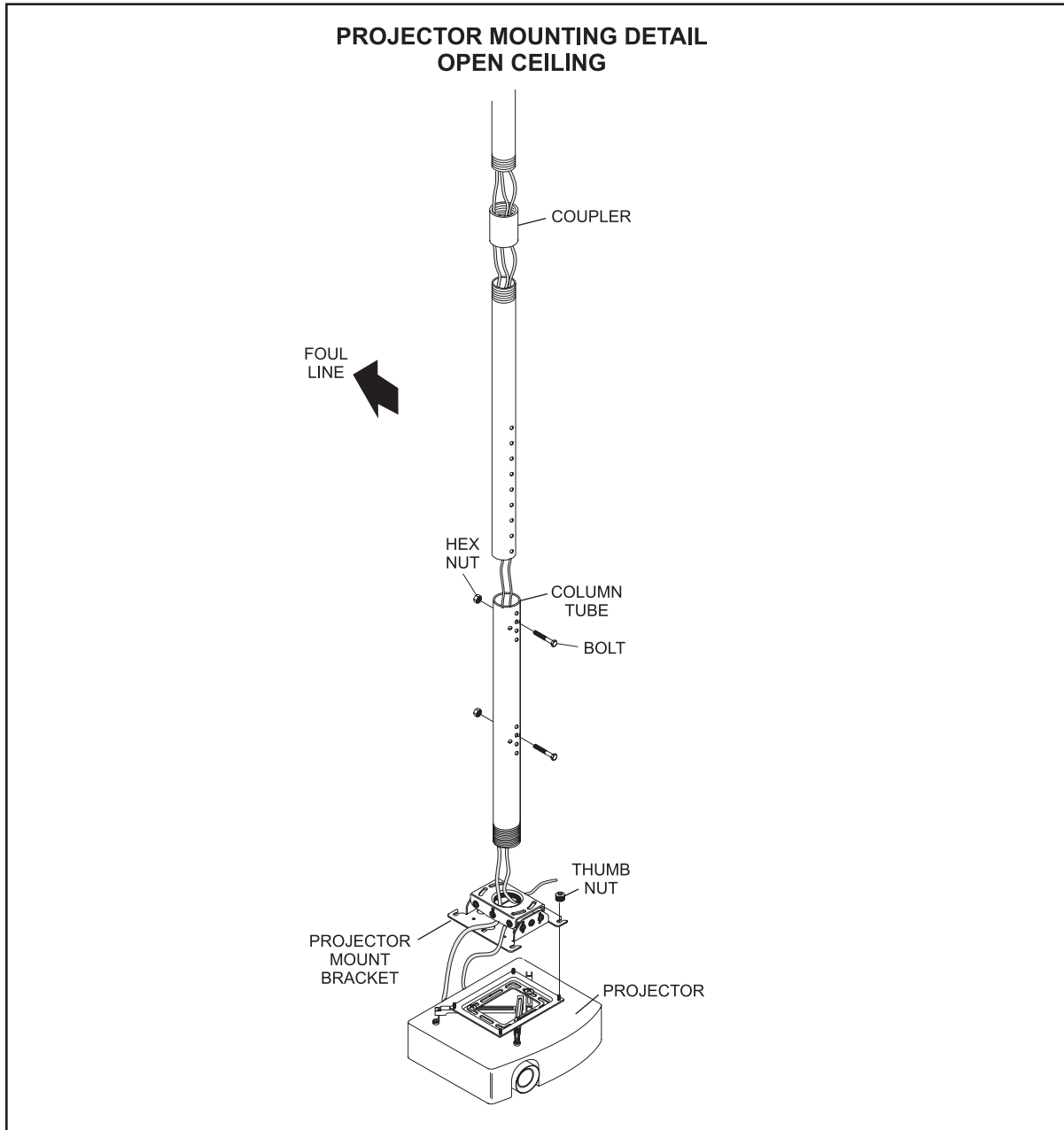


Figure 107

Masking Unit ADD-ON KIT ONLY

The following section to be used for installing new style Frameworkx masking units next to original style Frameworkx masking units.

FRAMEWORX MASKING UNIT ADD-ON KIT 53-861091-000

The Frameworkx Masking Unit Add-On Kit 53-861091-000 contains the necessary materials to adapt a new Frameworkx masking unit to an existing Frameworkx single-panel upper masking unit or a Frameworkx 4-panel upper masking unit. This may be necessary when adding new lanes to an existing center. This kit allows you to make the transition from old to new. Add-on kit must be ordered separately.



NOTE: *If adding on to an existing Frameworkx 4-panel upper masking unit, it will be necessary to reconstruct the upper part of the masking unit (per the following instructions) and replace the 4 upper graphic panels with a single graphic panel.*

PACKAGING - FRAMEWORX MASKING UNIT ADD-ON KIT

53-861091-000

1 53-861091-000 Frameworkx Masking Unit Add-On Kit

Qty.	Part Number	Description
3	53-300375-000	Bracket
1	11-610700-000	Bracket, "L", 2" x 2"
2	11-024288-001	Screw, Truss Head, 1/4" x 5/8"
1	11-001184-001	Screw, Hex Head, 1/4" x 1"
3	11-170007-001	Nut, Nylok, 1/4-20
9	11-010812-001	Screw, Drill Point, Hex Washer Head, 1/4 x 3/4"
2	11-040097-001	Screw, Flat Head C.R., #10 x 1-1/2"
1	53-861079-000	Package, Cable, 1st to 2nd Ball Light

DISASSEMBLY OF EXISTING MASKING UNIT END SUPPORT ASSEMBLY (ADD-ON END ONLY)

1. Remove lower graphic panel and retain for reinstallation. Refer to *Figure 108*.

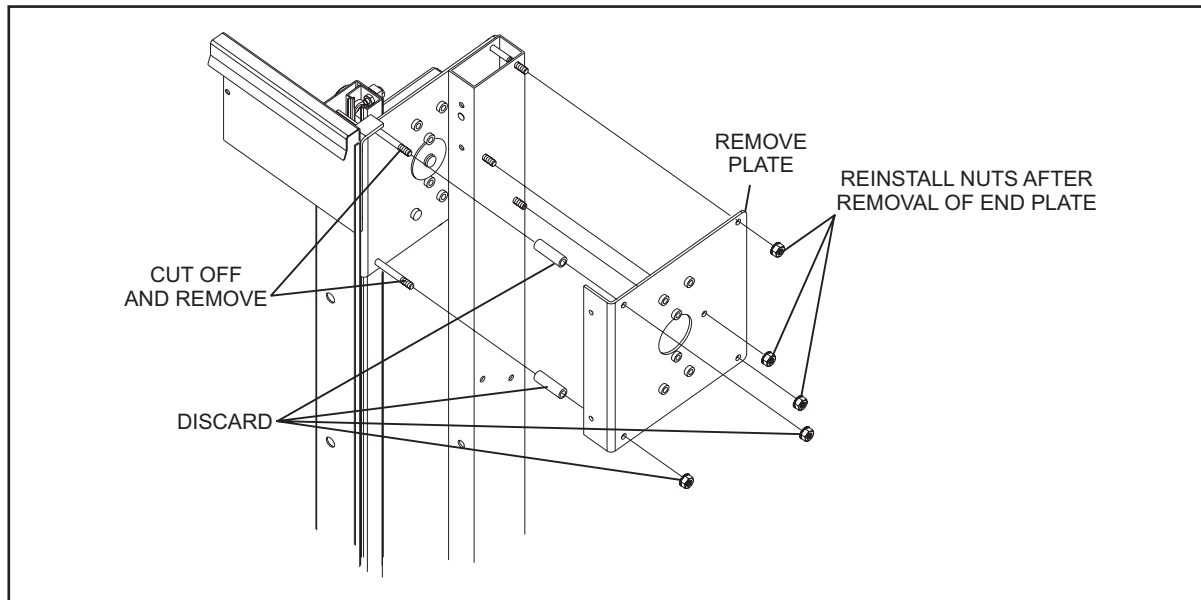


Figure 108

2. Remove division capping and retain for reinstallation. Refer to *Figure 108*.
3. Remove five nuts from end plate and remove end plate. Refer to *Figure 108*.
4. Leave three screw through the vertical support tube and replace nuts, cut remaining two screws and discard. Refer to *Figure 108*.

RE-ASSEMBLE A LOWER VERTICAL SUPPORT FROM PACKAGE 53-861091-000

1. Remove appropriate left or right side channels and stop from side of masking unit that the kit is to be added to. Refer to *Figure 109*.
2. Using existing hardware and hardware contained in package 53-861091-000 secure the three brackets from kit. Refer to *Figure 109*.



IMPORTANT: For clearance reasons, place all nuts on channel side of support as shown.

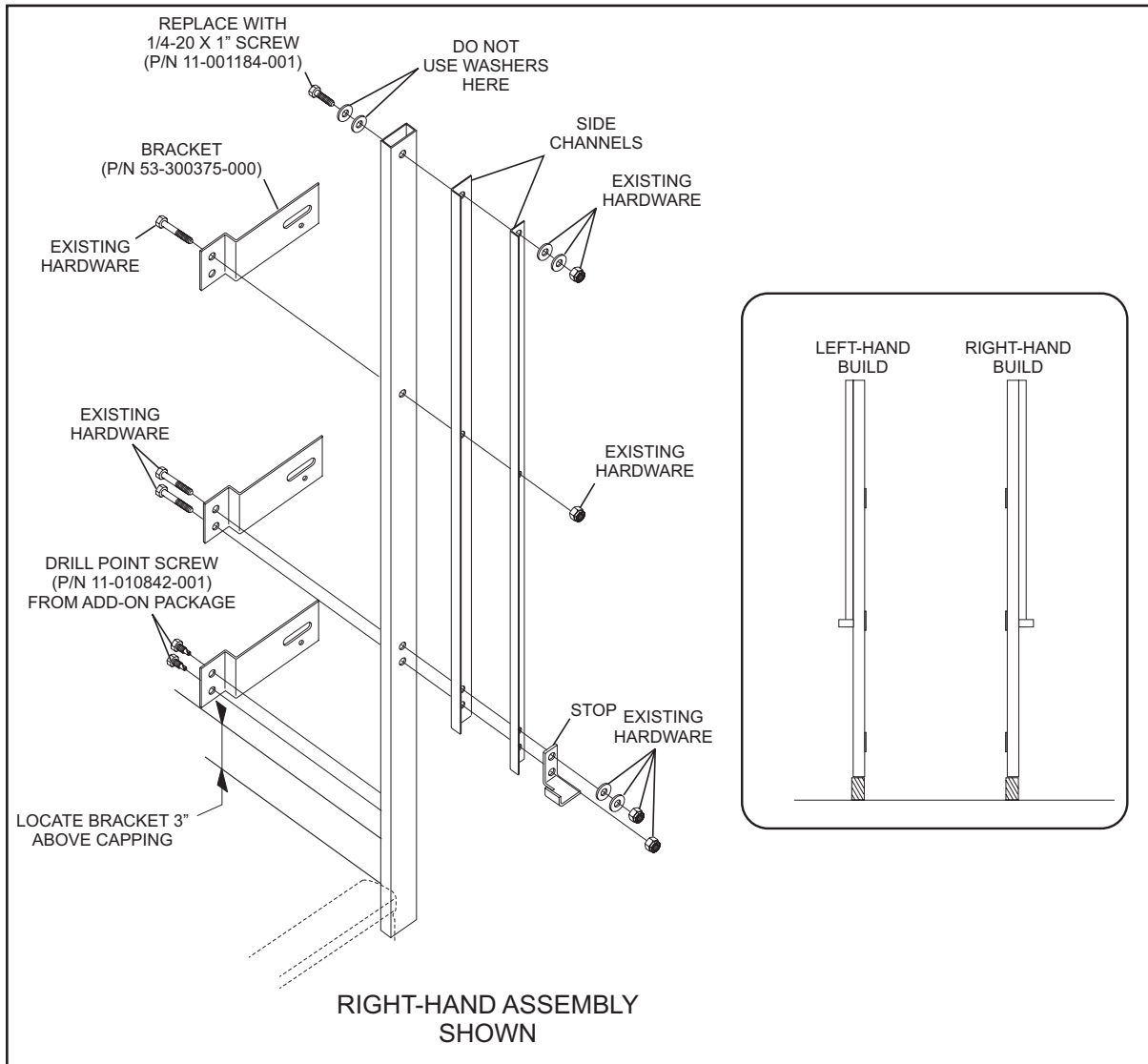


Figure 109

MOUNTING ADD-ON VERTICAL SUPPORT ASSEMBLY

1. Place modified lower vertical on support and clamp in place, make sure it is level with existing masking unit.
2. Add shims as required.
3. Center punch and drill with 3/16" bit at center of each brackets slot.
4. Add "L" bracket at bottom front of new vertical support with self tapping screws.
5. Attach brackets to old support with self tapping screws.
6. Complete installation of masking units.

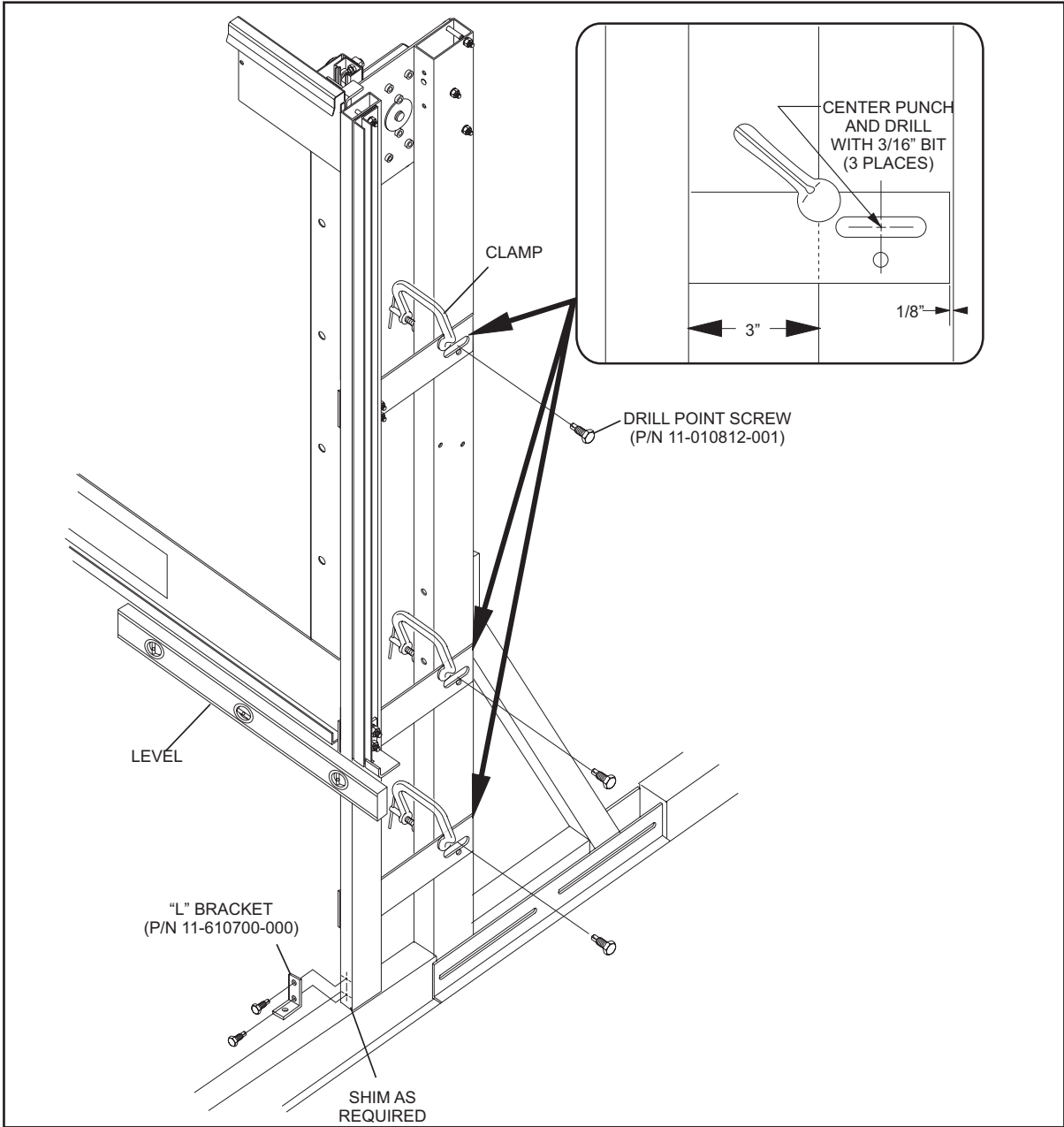


Figure 110

INSTALL ADD-ON UPPER GRAPHIC CHANNEL TO EXISTING SINGLE TIER UPPER

1. Align new upper graphic channel with vertical support.
2. Slide opposite end of upper graphic channel over existing bracket.
3. Drill clearance hole for 1/4-20 pan head screw and install.

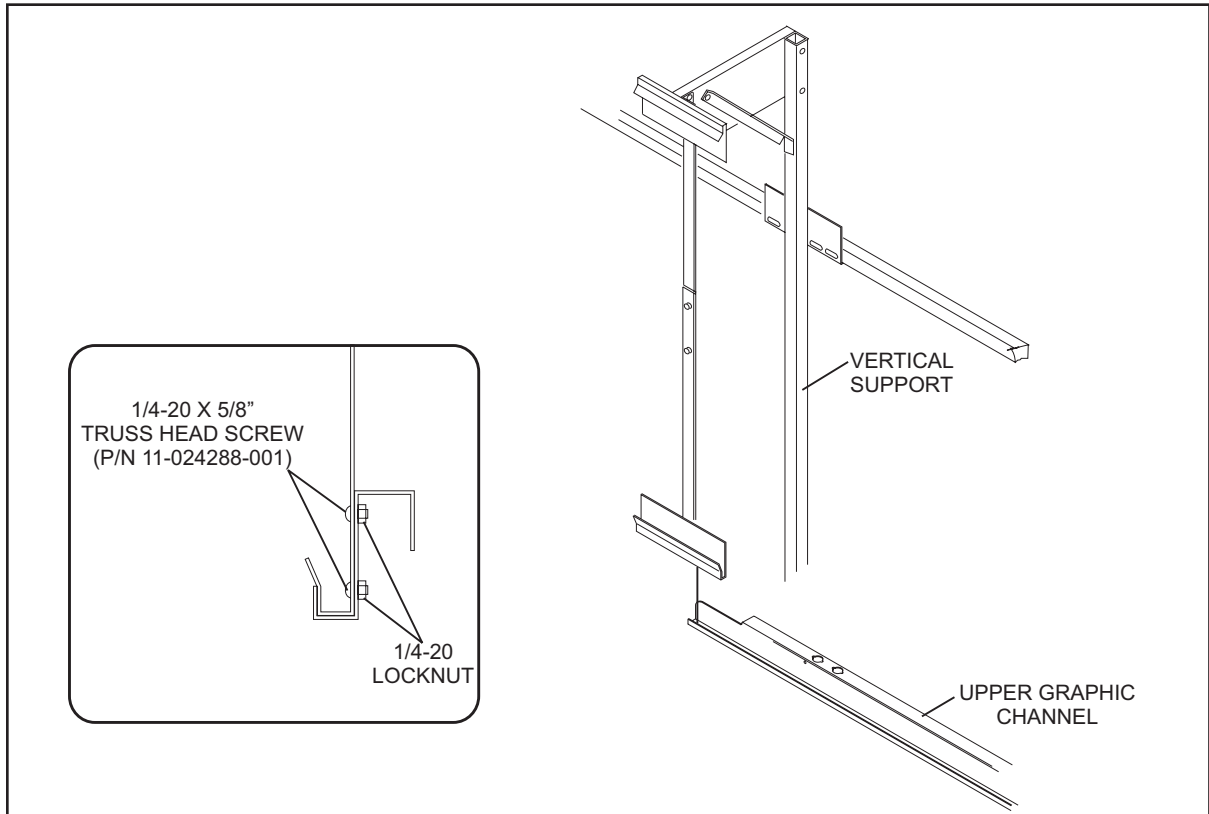


Figure 111

INSTALL ADD-ON UPPER GRAPHIC CHANNEL TO EXISTING FOUR TIER UPPER

1. Cut off horizontal extension after first graphic support hanger.
2. Drill out upper graphic bracket. Reposition upper graphic bracket and use as template to drill new mounting holes.
3. Remount upper graphic bracket.
4. Attach graphic support to new style masking unit as shown in manual.
5. Slide other end of graphic support over existing old style masking unit and clamp in place.
6. Drill clearance hole and install screws.

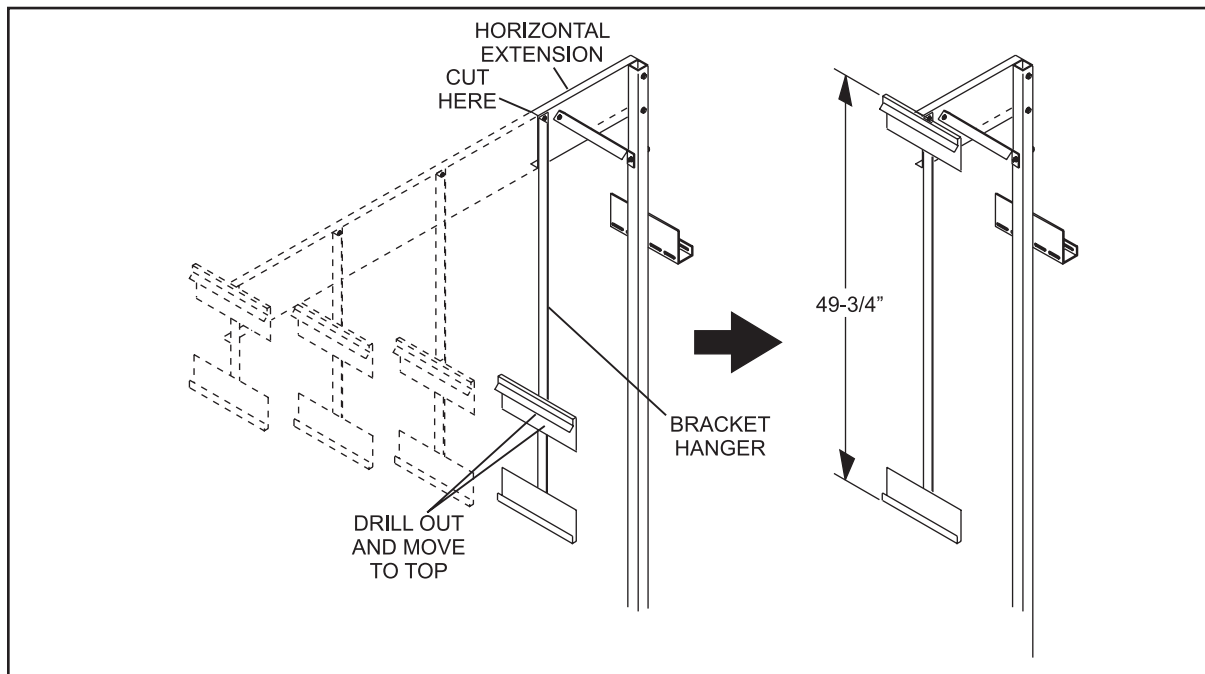


Figure 112

ALIGNMENT AND LOCKING IN POSITION

Install all graphic panels and align. Adjust position of add-on mounting brackets if required. Using mounting bracket as template drill 3/16" hole in support and secure bracket in position. Install lag screws in "L" brackets. Cut retained division capping to fit around new vertical support and reinstall.

