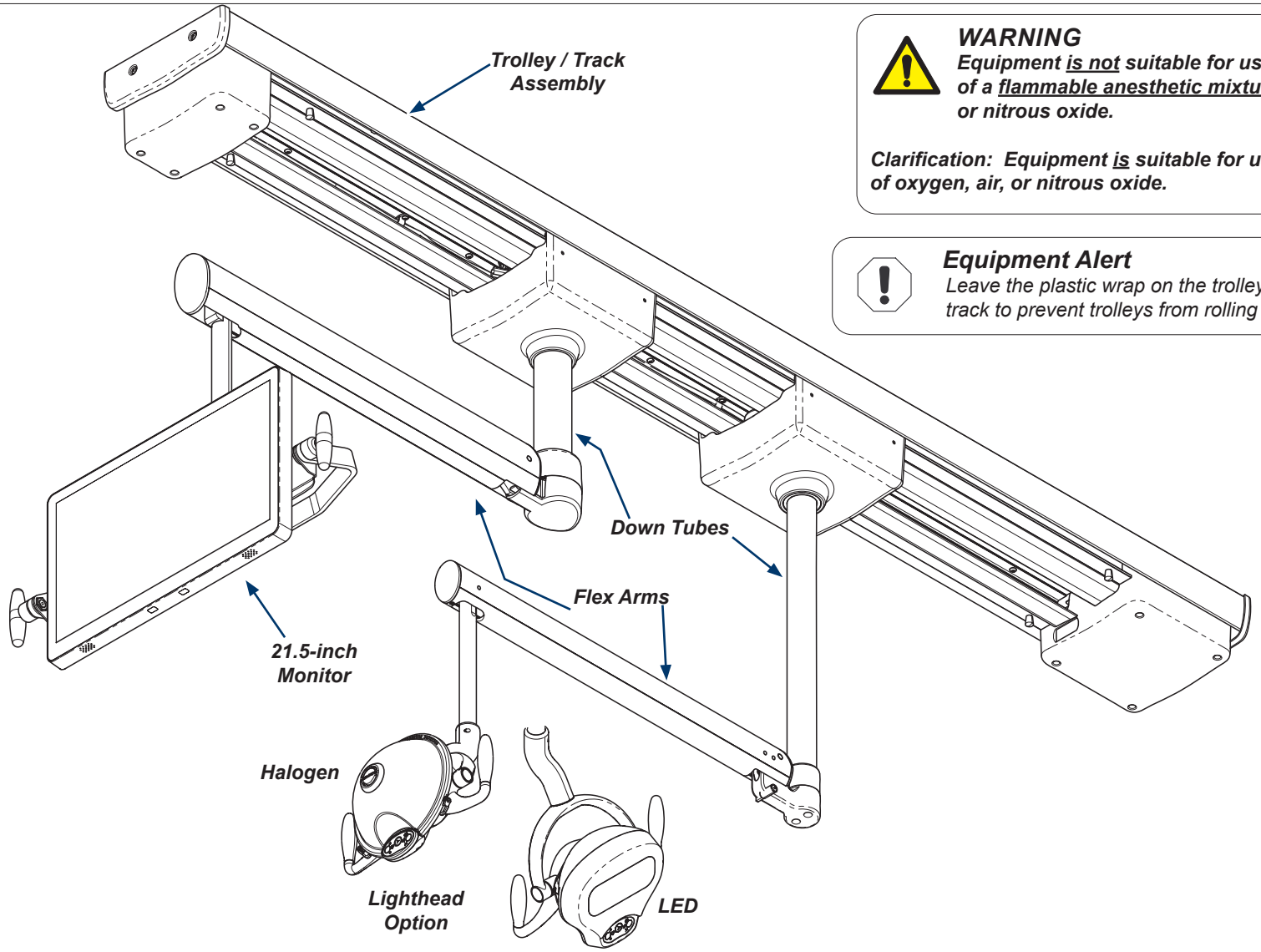
Track Light with Monitor Installation Guide

Applies to Models:
1531017 (-000 thru -008)
1531018 (-010 thru -018)
153963 (-000 thru -008)
153964 (-010 thru -018)
153829 (000 thru - 008)
153906 (-010 thru - 018)
153830 (-000 thru -008)
153907 (-010 thru -018)

Equipment Alert
This installation requires at least two service technicians.
Track with light and monitor weight is (max.) 157 Lbs. (71 kgs).



WARNING
Equipment <u>is not</u> suitable for use in the presence of a <u>flammable anesthetic mixture</u> with oxygen, air, or nitrous oxide.

Clarification: Equipment <u>is</u> suitable for use in the presence of oxygen, air, or nitrous oxide.

Equipment Alert
Leave the plastic wrap on the trolleys while mounting the track to prevent trolleys from rolling up and down the track.

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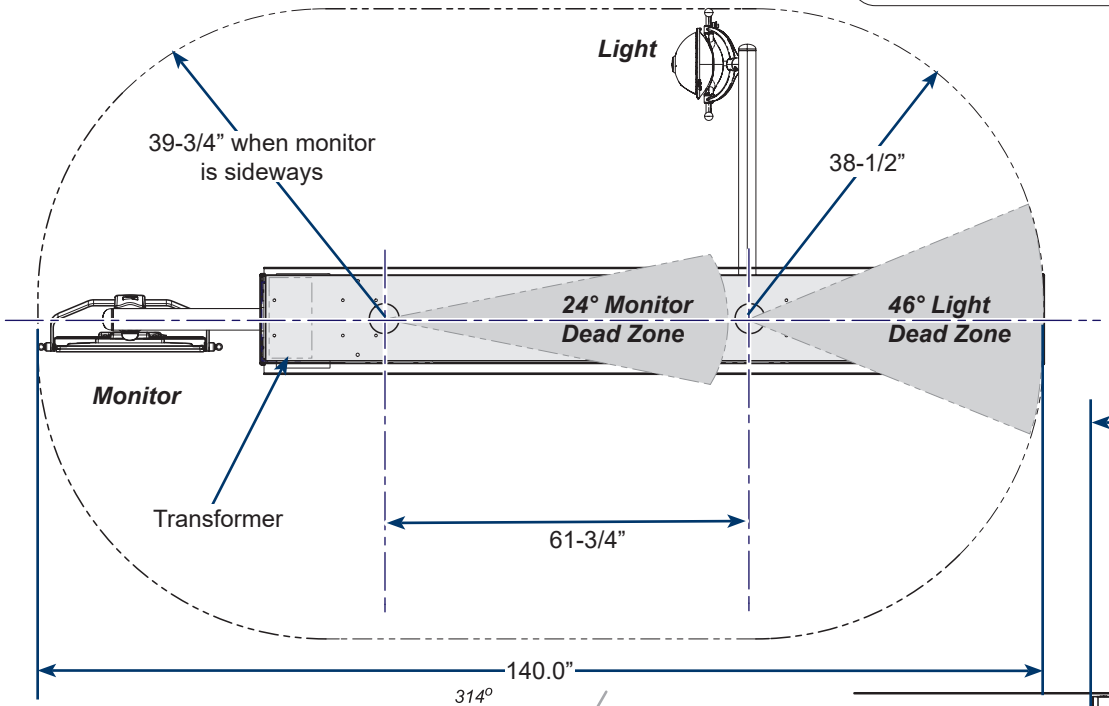
Range of Motion

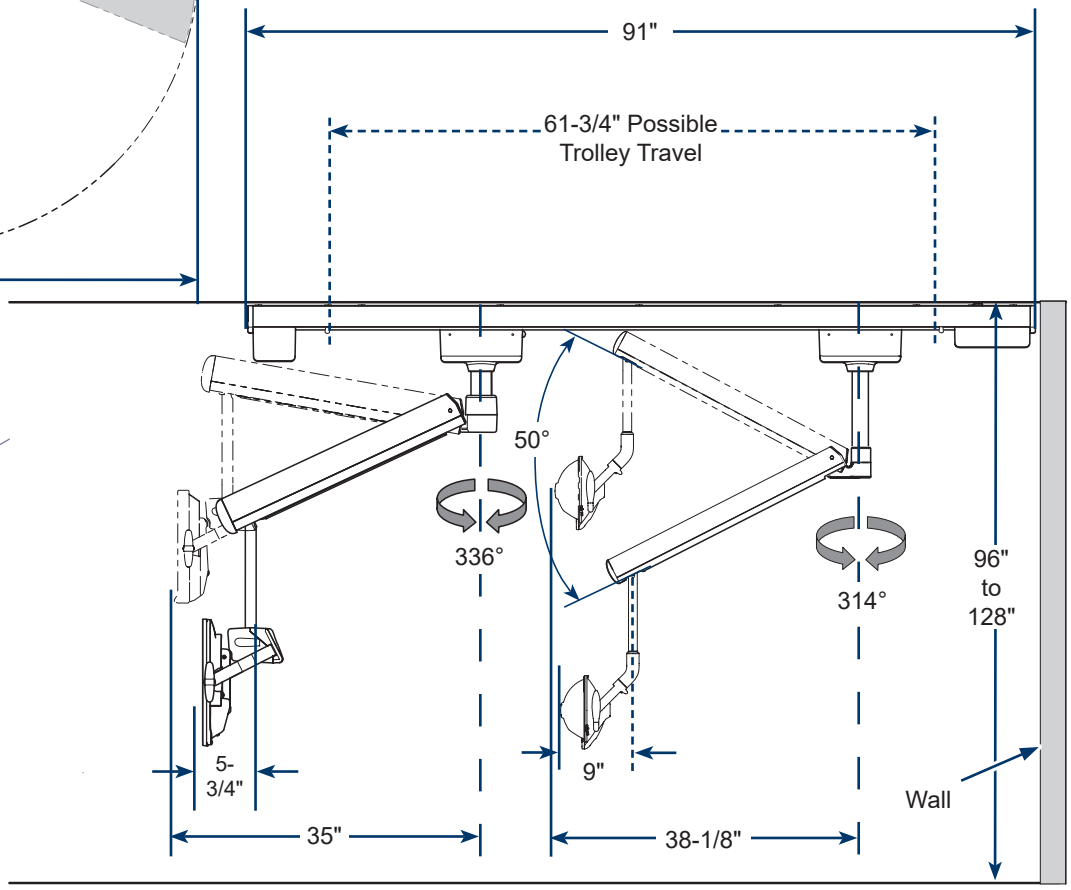
Equipment Alert
This installation requires at least ***two*** service technicians.

Equipment Alert
The Light and Monitor Flex Arms can come into contact with one another.

Note
The Light has a 46° Dead Zone at the foot end of the track.
The Monitor also has a 24° Dead Zone as shown here.

The Dead Zones move along the track length with each trolley.





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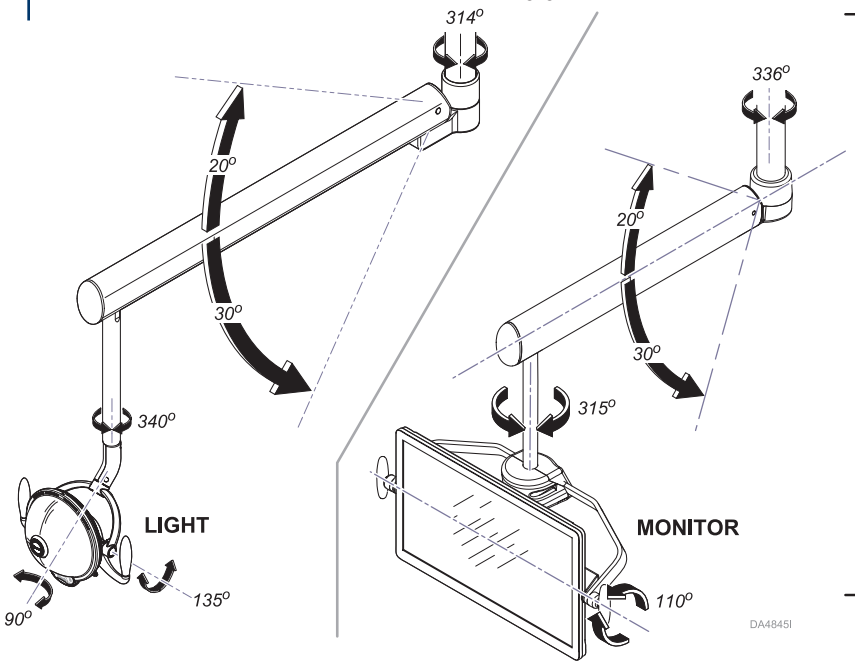

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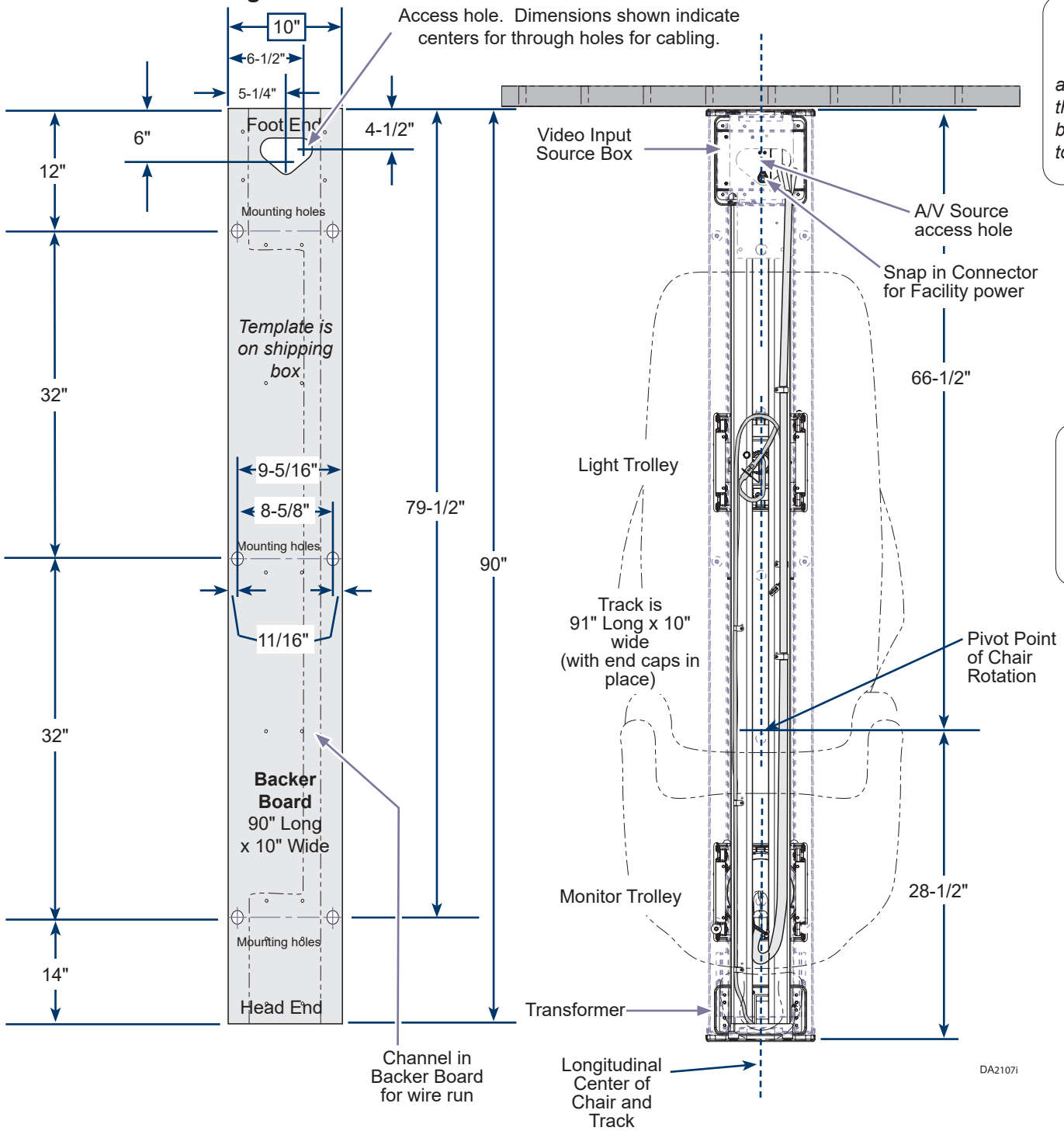
Recommended Mounting Locations



Equipment Alert

The A/V Cable and Facility Power line require two 2-1/2" minimum diameter access holes thru the ceiling. Visually confirm that you will have room to feed the cables thru the backer board access hole before mounting the track to the ceiling.

Note:

Consult a professional to verify installation complies to all local building codes.

Equipment Alert

Remove the Video Input Source Box Cover and Power Source Cover while the track is still in the box so you can see the Facility Power and A/V Cable input access holes as you mount the track on the ceiling.

Equipment Alert

The orientation and position of the track mounted light and monitor in relation to the chair is critical!

Recommended Ceiling Support Structure

WARNING

Use only the Lag Bolts (3 1/2" x 5/16") supplied with the track assembly. Do not substitute a lower grade. All 6 Lag Bolts and Washers must be used to secure track to support structure and they each must be anchored in a supporting stud. Pre-drill pilot holes in structure with a 7/32" diameter drill bit to prevent cracking the support structure. Drill holes 2 3/8" deep.

Equipment Alert

The A/V Cable and Facility Power line require two 2-1/2" minimum diameter access holes thru the ceiling. Visually confirm that you will have room to feed the cables through the backer board access hole before mounting the track to the ceiling.

Equipment Alert

Midmark does not supply the ceiling support structure; these illustrations show suggestions only. Consult a qualified professional to install the appropriate support structure. The weights listed apply only to the track system, not the ceiling support. To prevent the flex arms from drifting, the track assembly must be level and not deflect more than 1/16" over a 12" span ceiling.

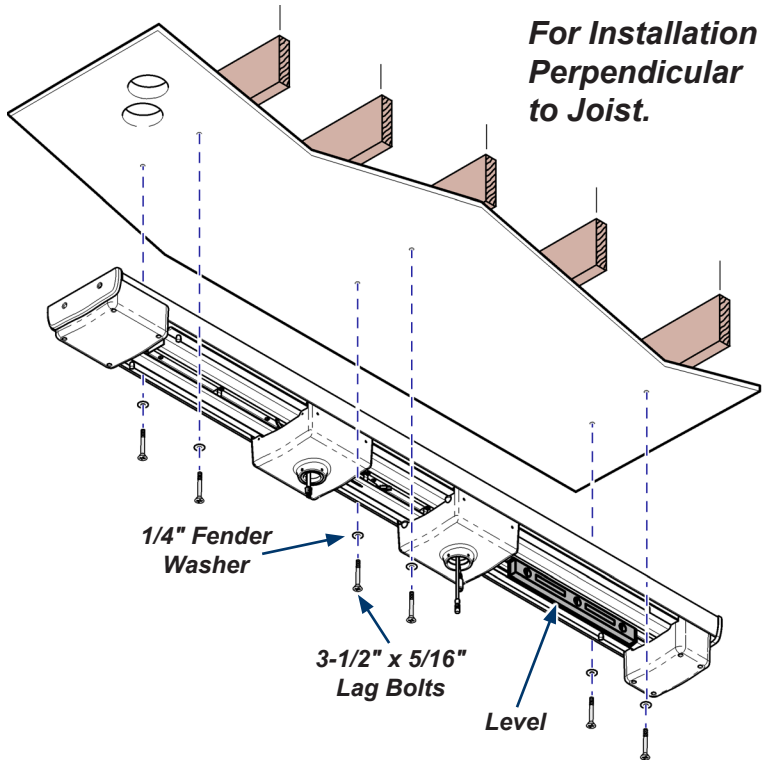
Equipment Alert

Leave the plastic wrap on the Trolleys while mounting the track to prevent them from rolling up and down the track.

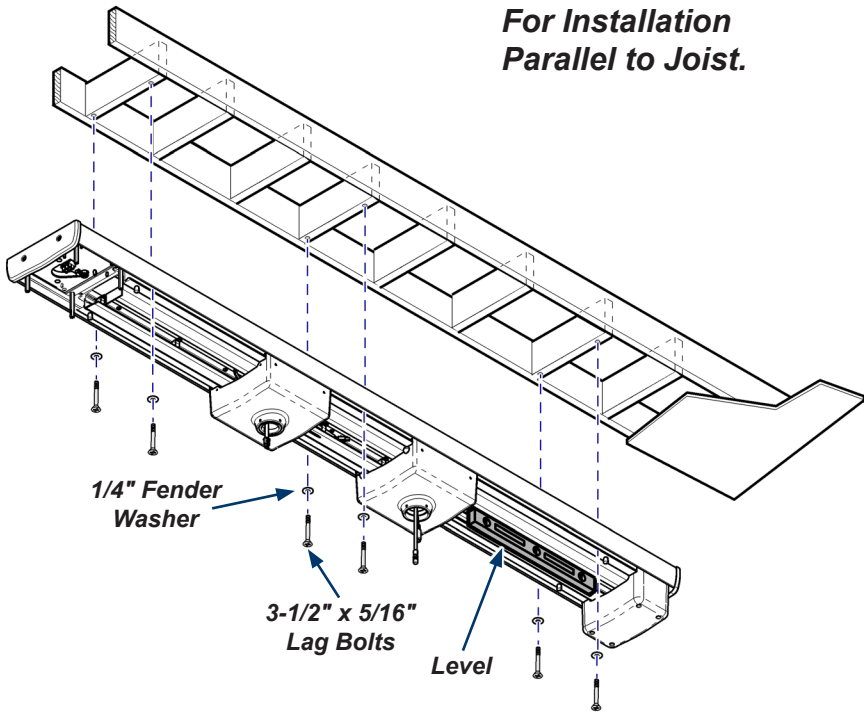
Equipment Alert

Track with Light and Monitor
Weight (Max.).....157 Lbs. (71 kgs)

For Installation Perpendicular to Joist.



For Installation Parallel to Joist.



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Note

Midmark does not supply the ceiling support structure; these illustrations show suggestions only. Consult a qualified professional to install the appropriate support structure. The weights listed apply only to the track system, not the ceiling support. To prevent the suspension arms from drifting, the track assembly must be level and not deflect more than 1/16" over a 12" span.

Equipment Alert

The A/V Cable and Facility Power line require two 2-1/2" minimum diameter access holes thru the ceiling. Visually confirm that you will have room to feed the cables thru the backer board access hole before mounting the track to the ceiling.

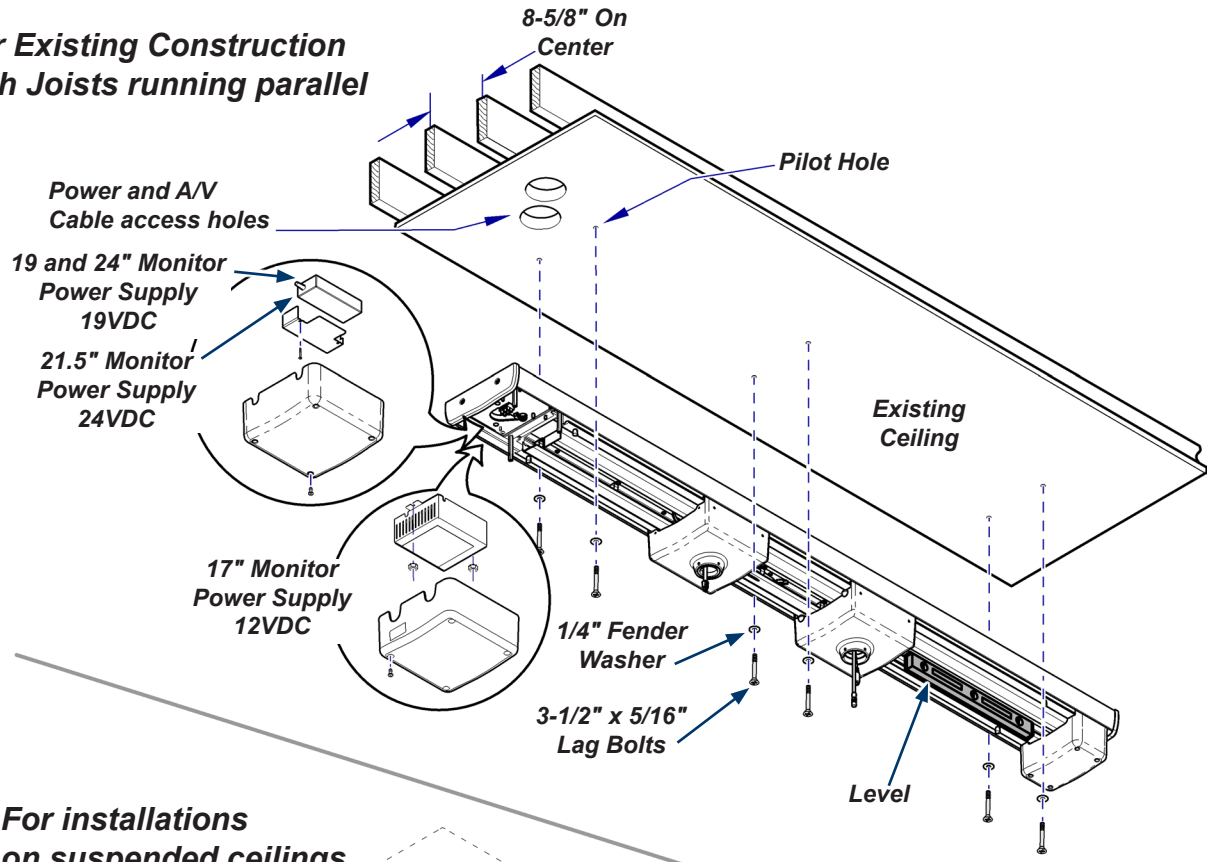
Equipment Alert

Track with Light and Monitor
Weight (Max.).....157 Lbs. (71 kgs)

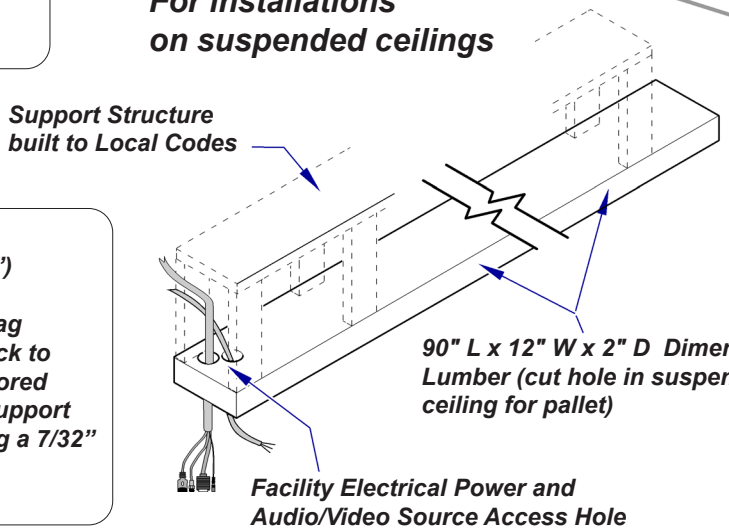
WARNING

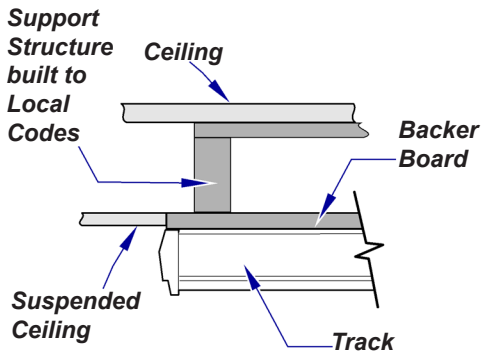
Use only the Lag Bolts (3-1/2" x 5/16") supplied with the track assembly. Do not substitute a lower grade. All 6 Lag Bolts and Washers must be used to secure track to support structure and they each must be anchored in a supporting stud. To prevent cracking of support structure, pre-drill pilot holes in structure using a 7/32" diameter drill bit. Drill holes 2-3/8" deep.

For Existing Construction with Joists running parallel



For installations on suspended ceilings





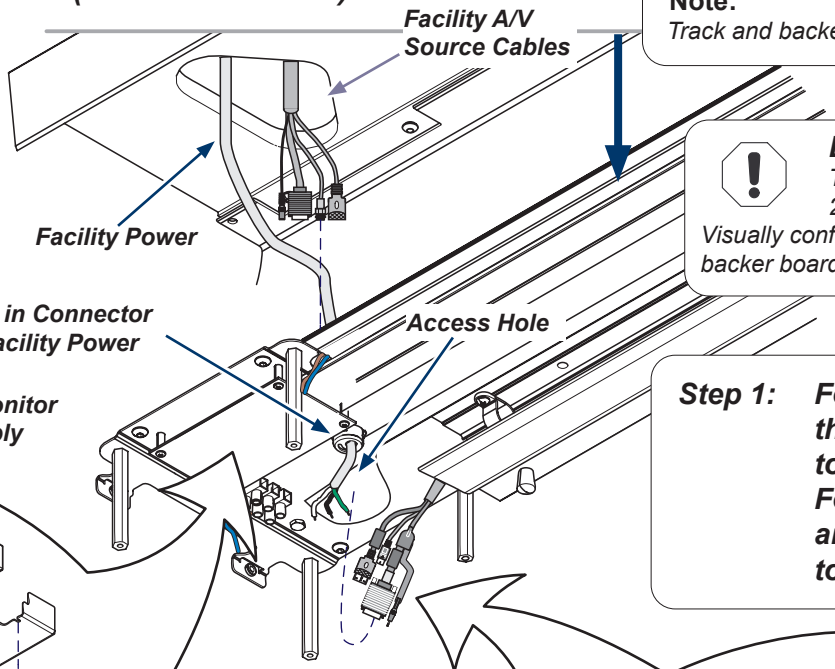
Connections at the Video Control End (Foot of the Chair)

WARNING
Turn off the Facility power to this circuit at the Electrical Control Panel before wiring the power to this unit, connecting video cables or performing any maintenance.

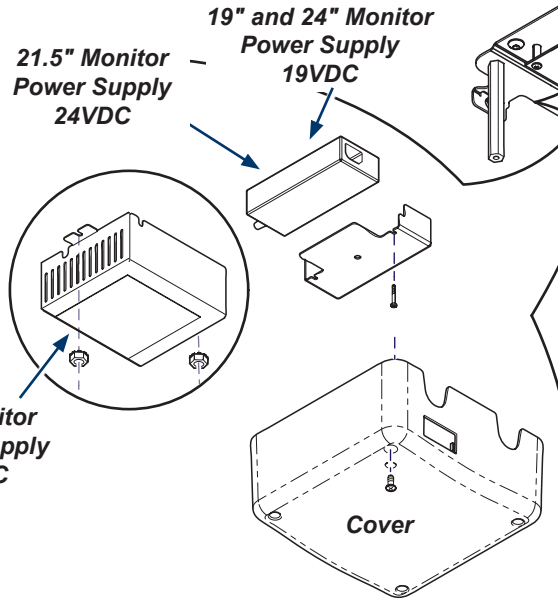
Caution
Do not pinch wiring.

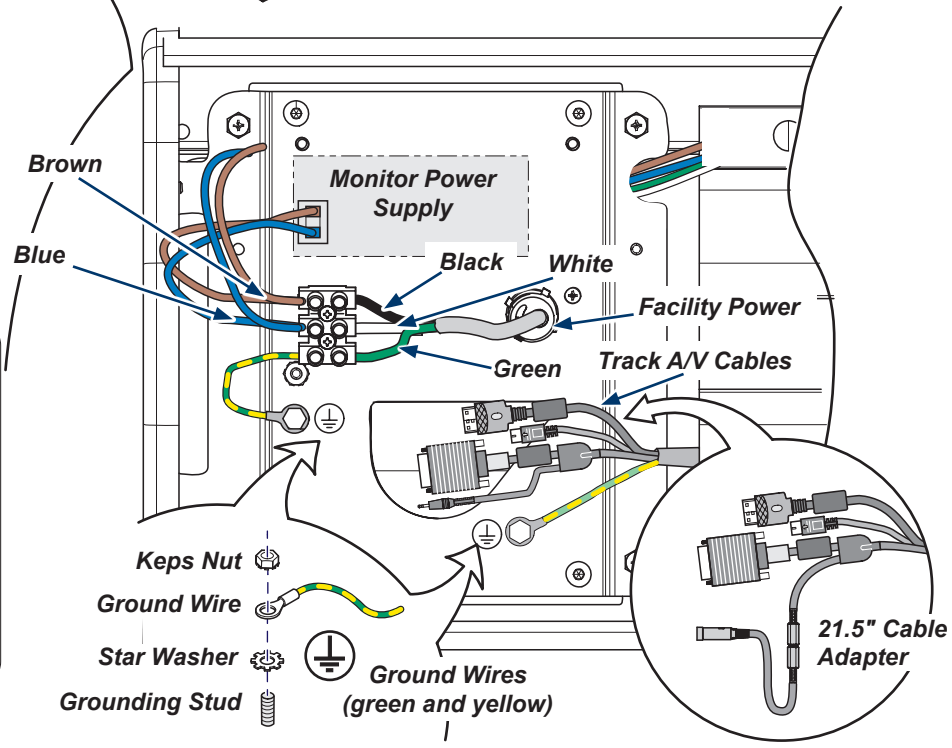
Note:
Track and backer board are shown separated here for visual clarity.

Equipment Alert
The A/V Cable and Facility Power line require two 2-1/2" minimum diameter access holes thru the ceiling. Visually confirm that you will have room to feed the cables thru the backer board access hole before mounting the track to the ceiling.



Step 1: ***Feed the facility A/V source cables through the access hole and connect them to the mating track A/V cables. Feed facility power through the clamp hole and connect black, white and green wires to the terminal block.***





WARNING
Connect ground wires to ensure system ground continuity. Failure to do so may result in electric shock.

Step 2: ***Secure the Monitor Power Supply to the track and connect blue and brown wires to the terminal block. Plug the power connector into the other end.***

Note: To assure proper grounding, keep the star washer on the painted surface of the mounting plate, place the ground wire on top of it and tighten down both with the Keps nut.

Recommendations - Multiple Track Light Monitors to a Single Cable Input Connections

Equipment Alert - Wall Mounted Light Switch Used to Power Multiple Track Light Monitors

Do not use a wall mounted light switch for powering the TLMs.

If a wall monitor light switch must be installed for service reasons, then contain the switch inside of a locked cover. Turning ON the TLMs using a wall mounted light switch may cause issues with display settings on the computer. While power is still being applied to the TLMs, the PC has the ability to detect and communicate with the monitor. Communication between the PC and the TLM monitors can occur even if the monitor has been placed in Standby Mode using the power button on the monitor or the remote control. Turning OFF the TLMs using a wall mounted light switch may cause the PC to revert back to the default display settings of a single monitor.

Equipment Alert

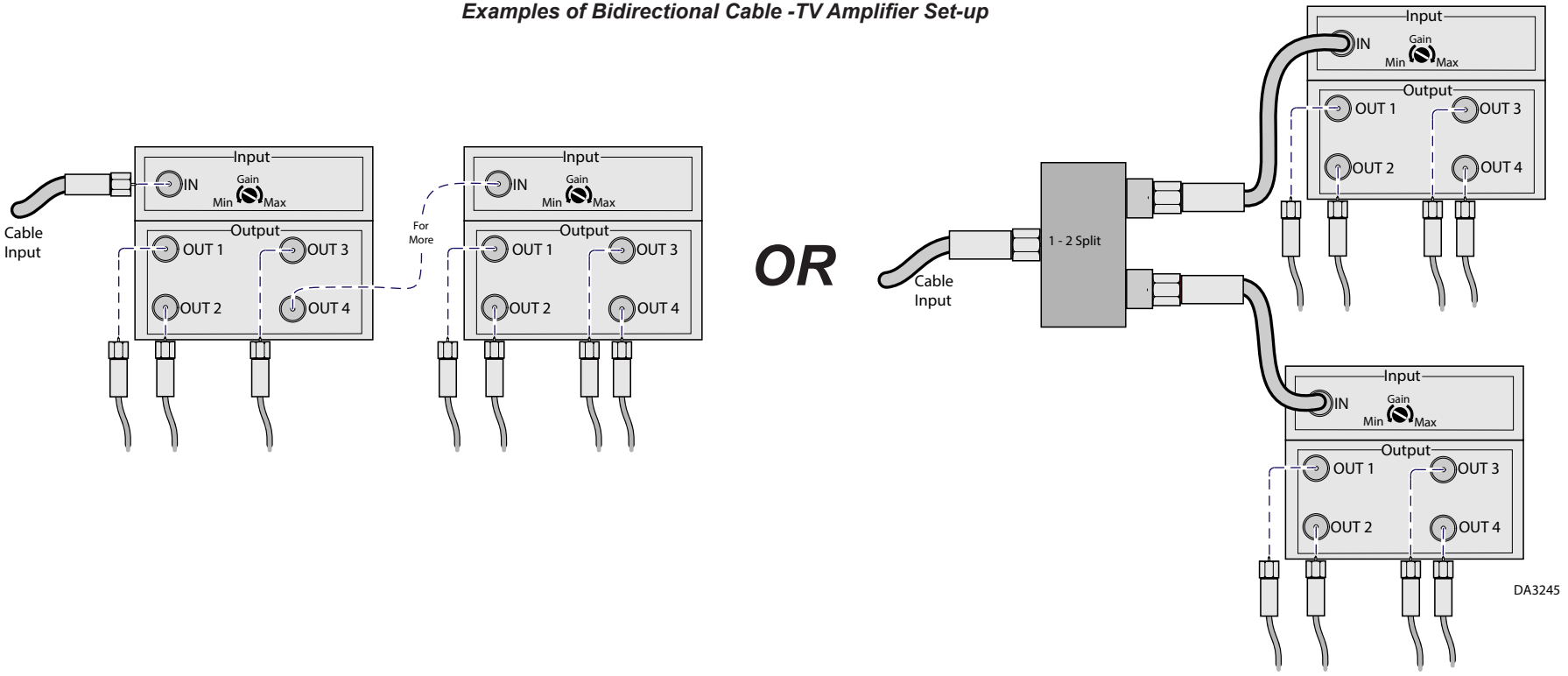
Follow these recommendations to properly connect multiple Track Light Monitors together on one coax cable connection:

- *Use an Bidirectional Cable TV Amplifier that comes with an adjustable gain control knob for properly adjusting the TLM signal. Also, use this Amplifier type to split and amplify the cable signal power up so that each output is as strong as or stronger than the original signal. Amplifying the signal helps the signal propagate down a long cable and still maintain enough power at the monitor or TV to display an ideal picture.*

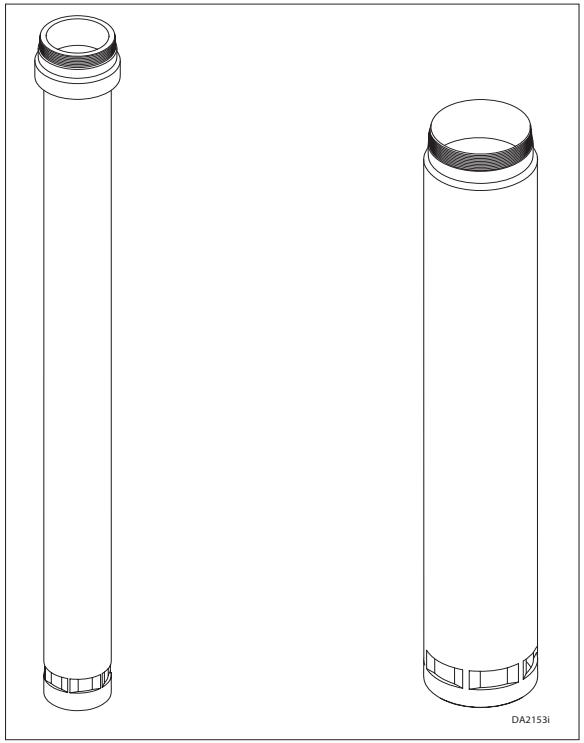
- *Do not use a splitter to connect multiple TLMs together without an amplifier. Adding splitters decreases the signal power, plus long runs of coax cable further increases the power losses.*

- *Proper connection of splitters and amplifiers should occur as follows: SPLITTER → AMPLIFIER → SPLITTER → AMPLIFIER.*
  Do not connect a TLM directly from a splitter output. Best performance is achieved when the TLM's are directly connected to the output of an amplifier.

Examples of Bidirectional Cable -TV Amplifier Set-up



Monitor and Light Down Tubes



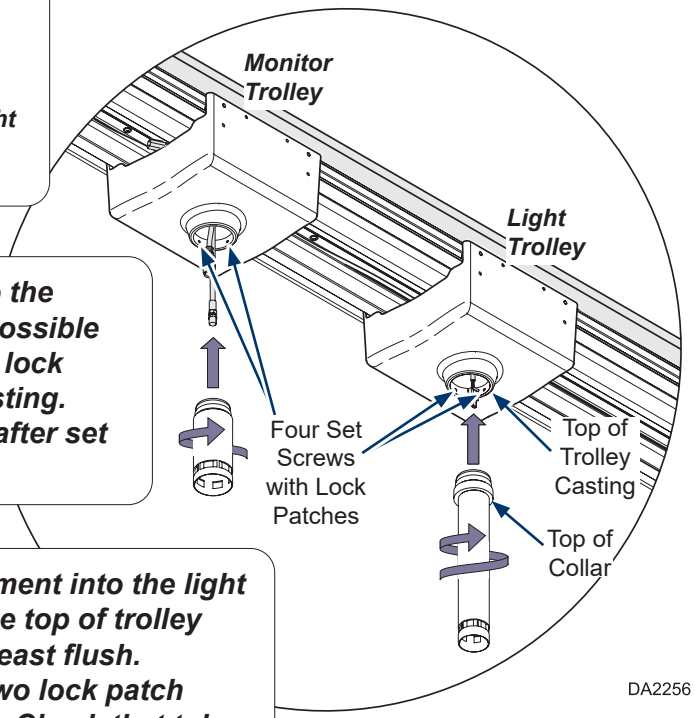
Light Down Tube Weldment ***Monitor Down Tube***

Installing the Monitor and Light Down Tubes

WARNING
These are easily cross-threaded. Ensure down tubes are fully threaded in to castings and all set screws are installed in place and securely tightened. Failure to do so could allow monitor or light tubes to separate from trolley castings, resulting in serious personal injury to patient or staff.

Step 3: ***Screw the monitor down tube into the monitor trolley casting as far as possible then secure by tightening the two lock patch set screws in the trolley casting. Check that tube will not unscrew after set screws are tightened.***

Step 4: ***Screw the light down tube weldment into the light trolley casting until tight, and the top of trolley casting and top of collar are at least flush. Then secure by tightening the two lock patch set screws in the trolley casting. Check that tube will not unscrew after set screws are tightened.***



Ceiling Height inches (cm)	Tape Color (See Note)	Coiler Bowl Assembly 029-7240-***0X***	Monitor Suspension Tube 029-11855-***0X***-216		Light Suspension Tube 029-11856-***0X***-216	
		Dash No.	Dash No.	Tube Length	Dash No.	Tube Length
96*/98 in. (244/249 cm)	Red	-00	-00	5.69 in. (15 cm)	-00	11.71 in. (30 cm)
99/102 in. (251/259 cm)	Orange	-01	-01	8.69 in. (22 cm)	-01	15.71 in. (40 cm)
103/106 in. (262/269 cm)	Yellow	-02	-02	9.69 in. (25 cm)	-02	19.71 in. (50 cm)
107/110 in. (272/279 cm)	Green	-03	-03	10.69 in. (27 cm)	-03	23.71 in. (60 cm)
111/114 in. (282/290 cm)	Blue	-04	-04	14.69 in. (37 cm)	-04	27.71 in. (70 cm)
115/118 in. (292/300 cm)	Violet	-05	-05	18.69 in. (47 cm)	-05	31.71 in. (80 cm)
119/122 in. (302/310 cm)	Grey	-06	-06	22.69 in. (58 cm)	-06	35.71 in. (90 cm)
123/126 in. (312/320 cm)	Brown	-07	-07	26.69 in. (68 cm)	-07	39.71 in. (101 cm)
>126 in. (320 cm)	Black	-08	-08	30.69 in. (78 cm)	-08	43.71 in. (111 cm)

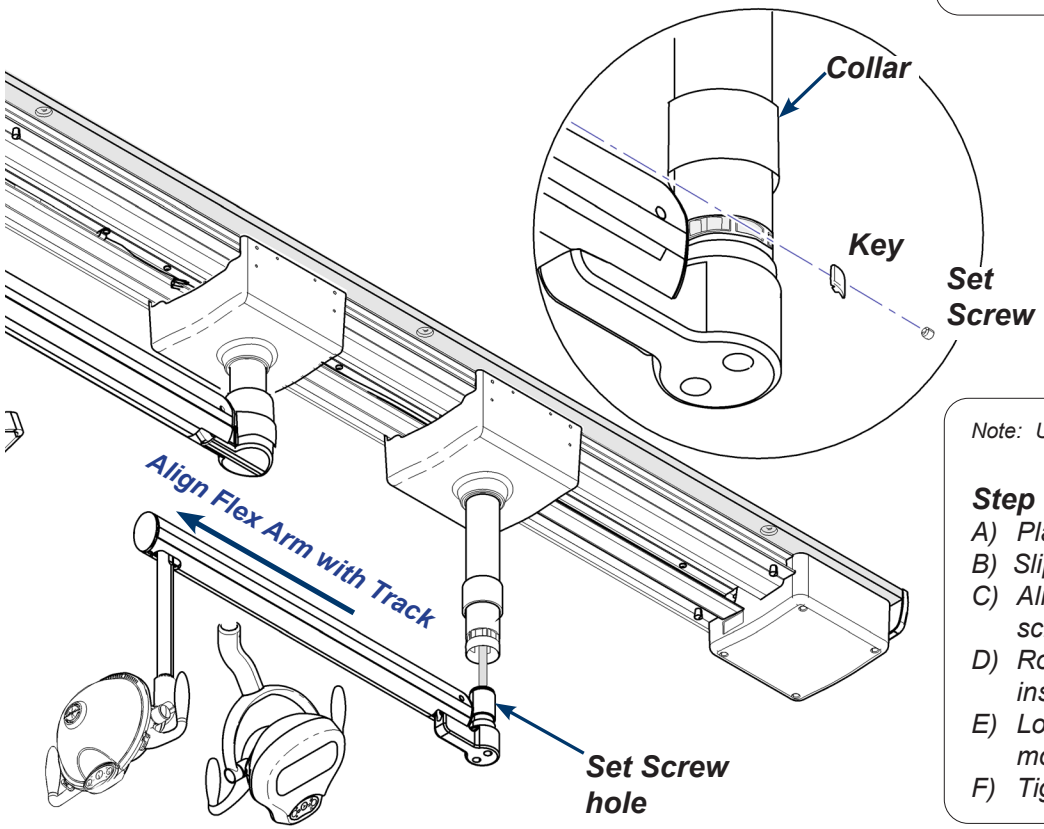
Note:
The "Tape Color" Column corresponds to the correct tape color on the VGA and Coax Harnesses for a specific suspension tube. That color will be exposed directly beneath the coiler bowl assembly. If you should ever move this unit to another location with a different ceiling height, you will need different down tubes and the harness will have to be retracted or extended in the coiler bowl until the correct tape color is exposed.

Light Flex Arm Connections and Installation

Note
Have an assistant support the Flex Arm as you make the connections necessary for installation.

Step 5: Connect Light Flex Arm
A) Connect the light cable connector to the pivot arm.
B) Position any excess cables into the down tube.

Equipment Alert
To ensure quiet operation, apply a thin coat of lubricant to the inside of the light down tube and to the outer surface of the bearing shaft.



Note: Use only the 10-32 x 3/16 Set Screw with lock patch supplied with the Flex Arm.

Step 6: Install Light Flex Arm
A) Place collar on down tube.
B) Slip the flex arm into down tube.
C) Align the flex arm with the track, light facing the head end (set screw hole will be 180° across from flex arm).
D) Rotate flex arm as needed to align nearest two mating slots and insert the key.
E) Lower collar over key. Assure collar is flush against suspension mount assy.
F) Tighten set screw.

Monitor Flex Arm Installation

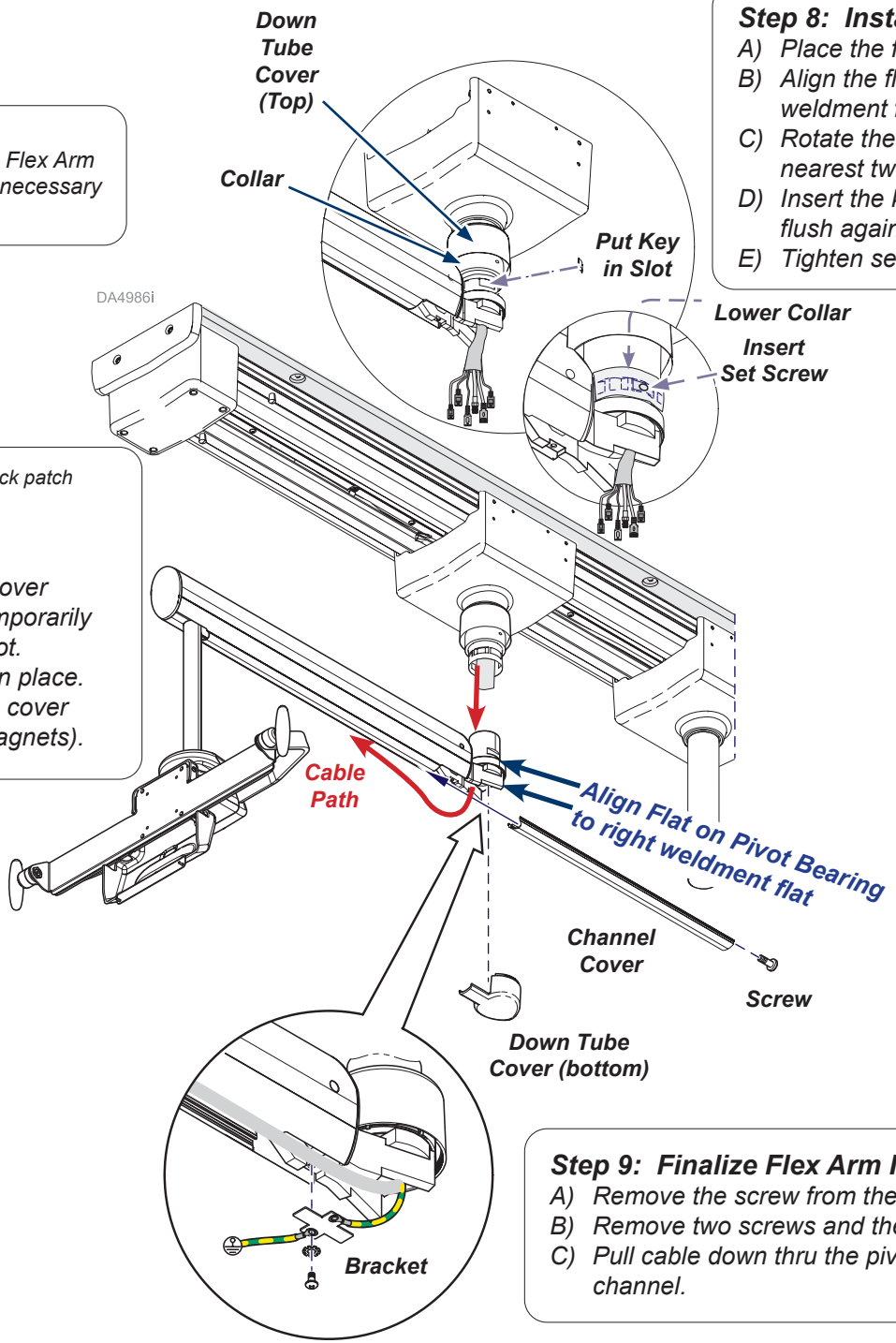
Equipment Alert
Have an assistant support the Flex Arm as you make the connections necessary for installation.

Caution
Do not pinch wiring.

Note: Use only the 10-32 x 3/16 Set Screw with lock patch supplied with the flex arm.

Step 7: Prepare Monitor Flex Arm.

A) Place the top half of the down tube cover (from flex arm box) and the collar temporarily onto the down tube above the key slot.
B) Lightly tighten the set screw to hold in place.
C) Pull the bottom half of the down tube cover off the flex arm (held in place with magnets).



Step 8: Install Arm Pivot Bearing in Down Tube.

A) Place the flex arm pivot bearing into the down tube.
B) Align the flat on the pivot arm with the right weldment flat.
C) Rotate the flex arm assembly as needed to bring the nearest two slots into alignment.
D) Insert the key and lower the collar. Assure collar is flush against suspension mount assy.
E) Tighten set screw.

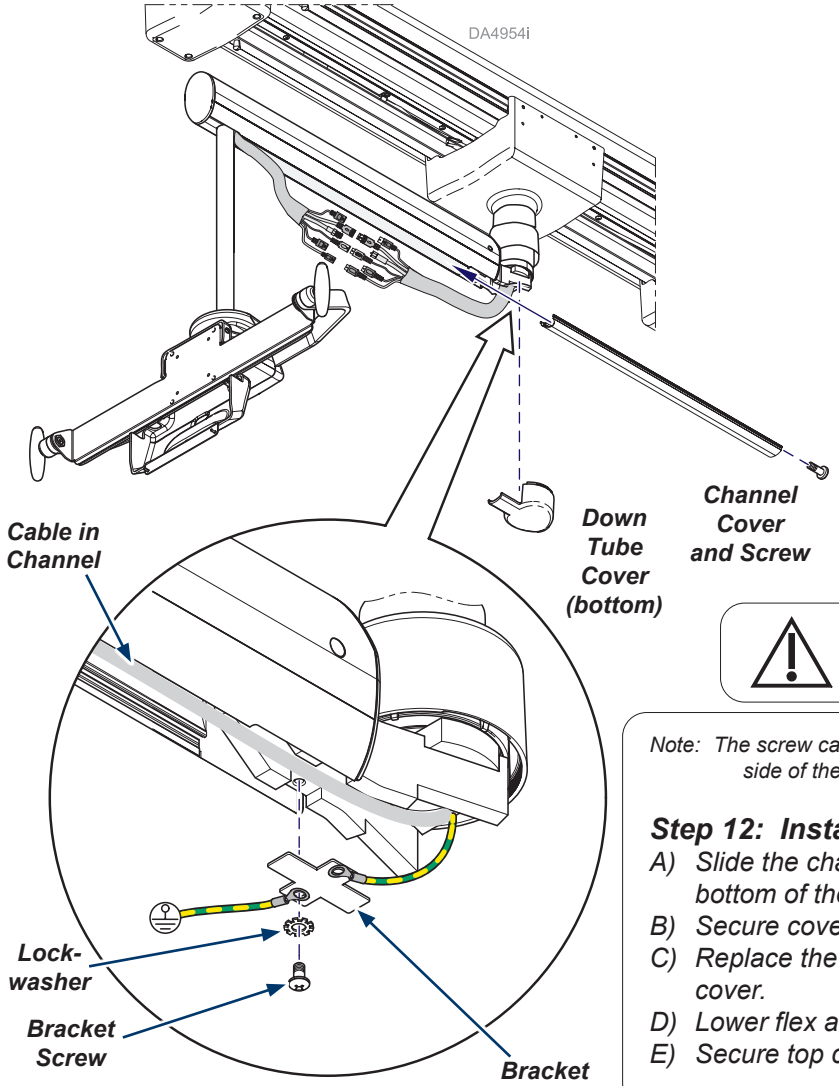
Step 9: Finalize Flex Arm Installation.

A) Remove the screw from the end and slide the channel cover off.
B) Remove two screws and the bracket from flex arm channel.
C) Pull cable down thru the pivot bearing and route it into the flex arm channel.

Flex Arm Cable Connections

Note: Cable connections are staggered for a better fit along the length of the channel.

Step 10: Route the A/V cable into the flex arm channel as shown.



Caution
Do not pinch wiring.

Note: The screw can be installed on either side of the channel.

Step 12: Install Covers.

A) Slide the channel cover into the bottom of the flex arm.
B) Secure cover with screw.
C) Replace the bottom down tube cover.
D) Lower flex arm.
E) Secure top cover with screw.

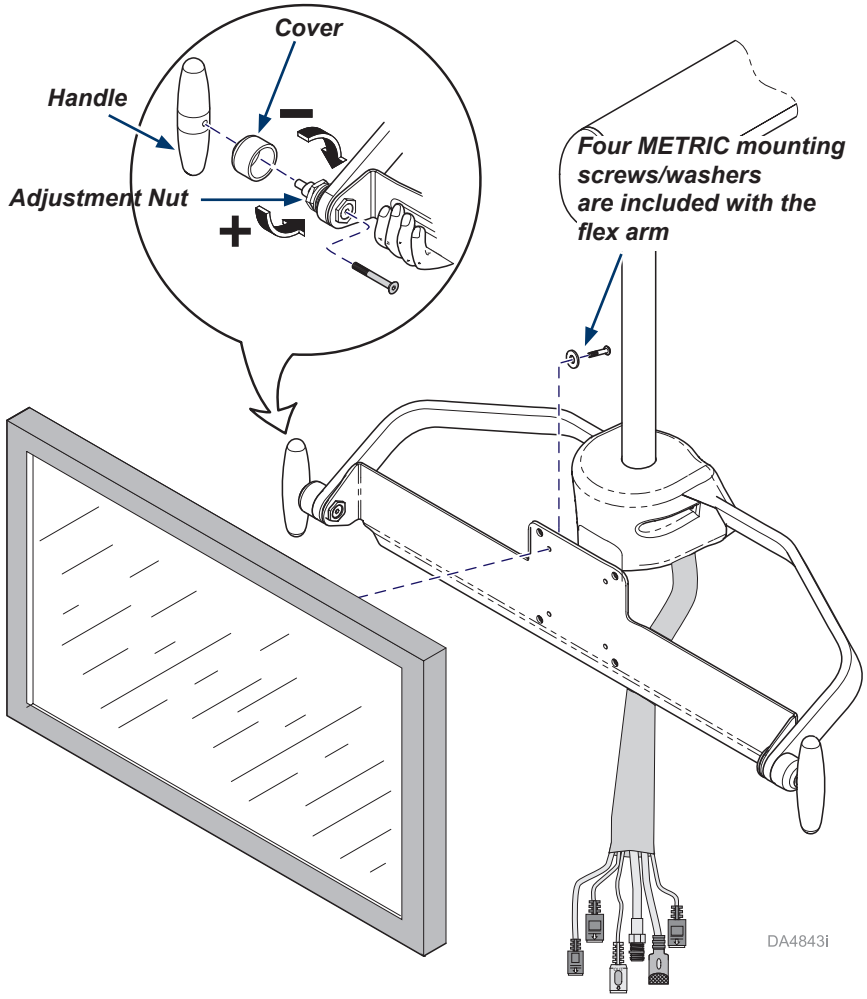
Step 11: Install Bracket.

A) Install two lockwashers and screws in bracket, securing the cable in place.

Monitor Mounting and Tension Adjustment

To adjust tension on monitor mount...
Remove screw, handle and cover. While holding mount, turn adjustment nut to increase or decrease the tension.

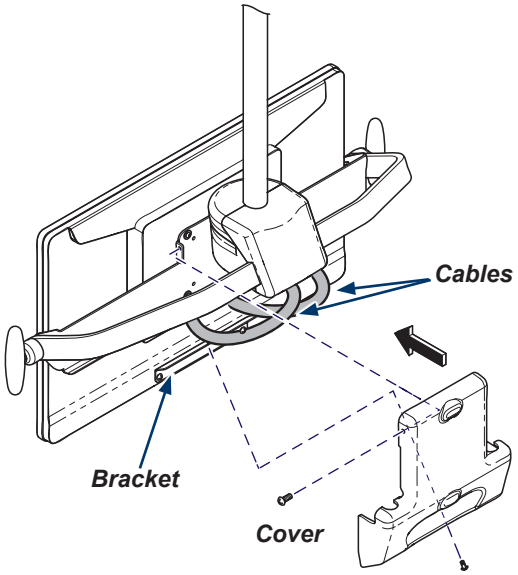
Note: Remove monitor from mount before adjusting tension.



Step 13: Mount the monitor on the arm assembly.

A) Insert the four screws included with the monitor thru the hoop arm assembly mounting plate and into the back of the monitor as shown.

Monitor A/V Connections (17 inch, 19 inch and 24 inch)

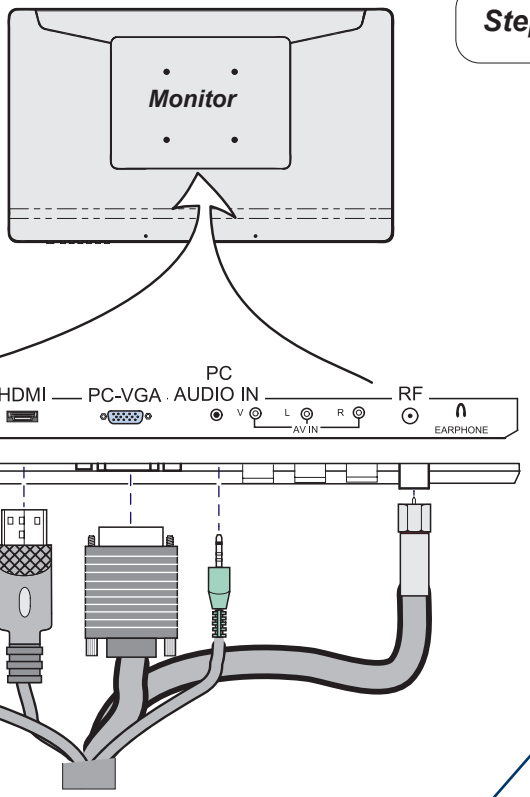


Equipment Alert
If installing a non-Midmark monitor, refer to that product's manual to ensure equipment functions safely including proper input voltage and is in proper working condition before use.

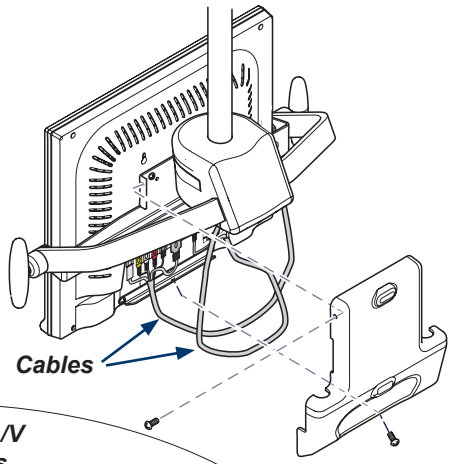
Step 14: Install screws to attach bracket to monitor back.

Step 15: Connect cables into the back of the monitor.

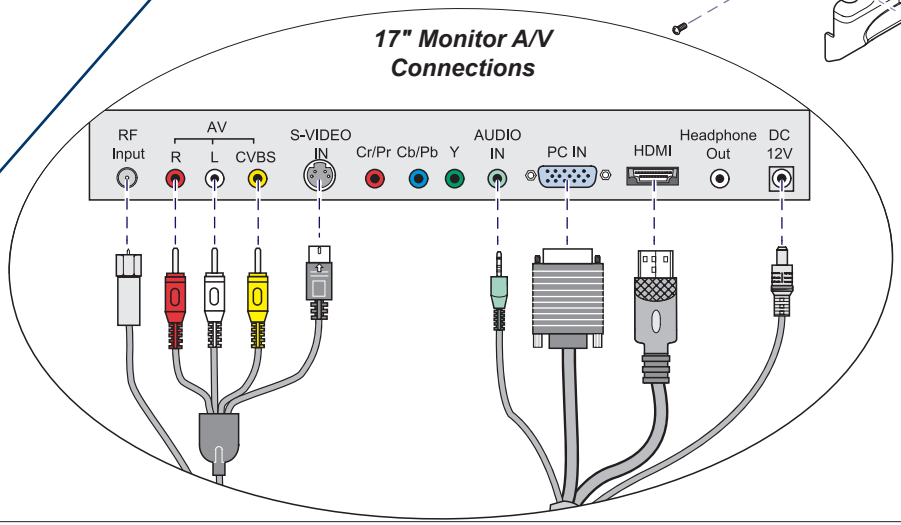
Note: For a clean appearance, attach all connectors to the monitor even though some may not connect to a source.



19" and 24" Monitor A/V Connections



17" Monitor A/V Connections

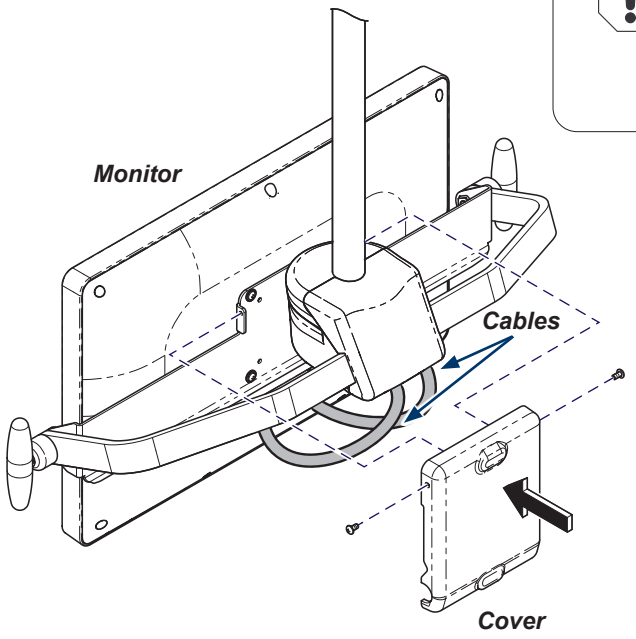


Step 16: Position cables clear from cover while installing cover to monitor using screws as shown.

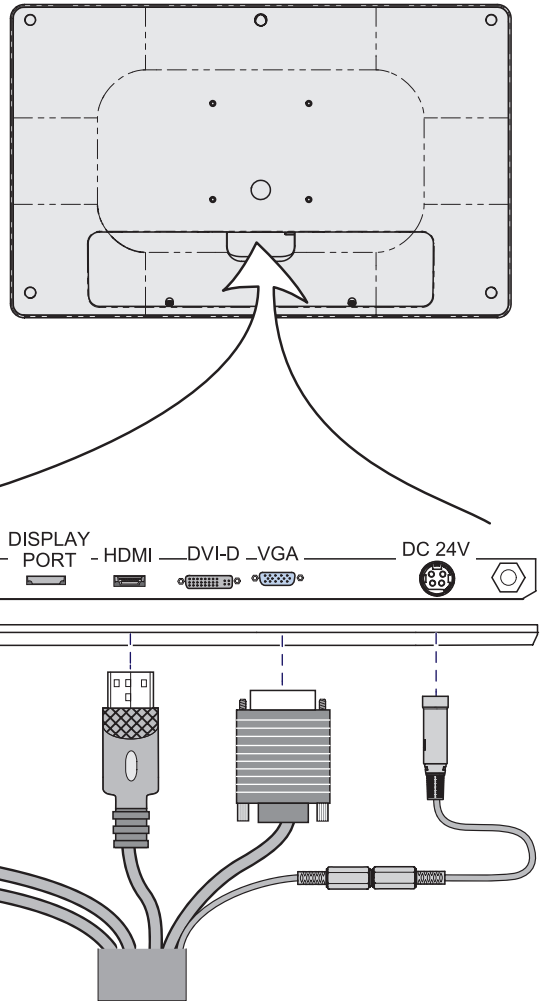
Caution
Do not pinch wiring when installing cover.

Monitor A/V Connections (21.5 inch)

Equipment Alert
If installing a non-Midmark monitor, refer to that product's manual to ensure equipment functions safely including proper input voltage and is in proper working condition before use.



Step 17: Connect cables into the back of the monitor.



Step 18: Position cables clear from cover while installing cover to monitor using screws as shown.

Equipment Alert
RF cable not used secure undercover to keep clean apperance.

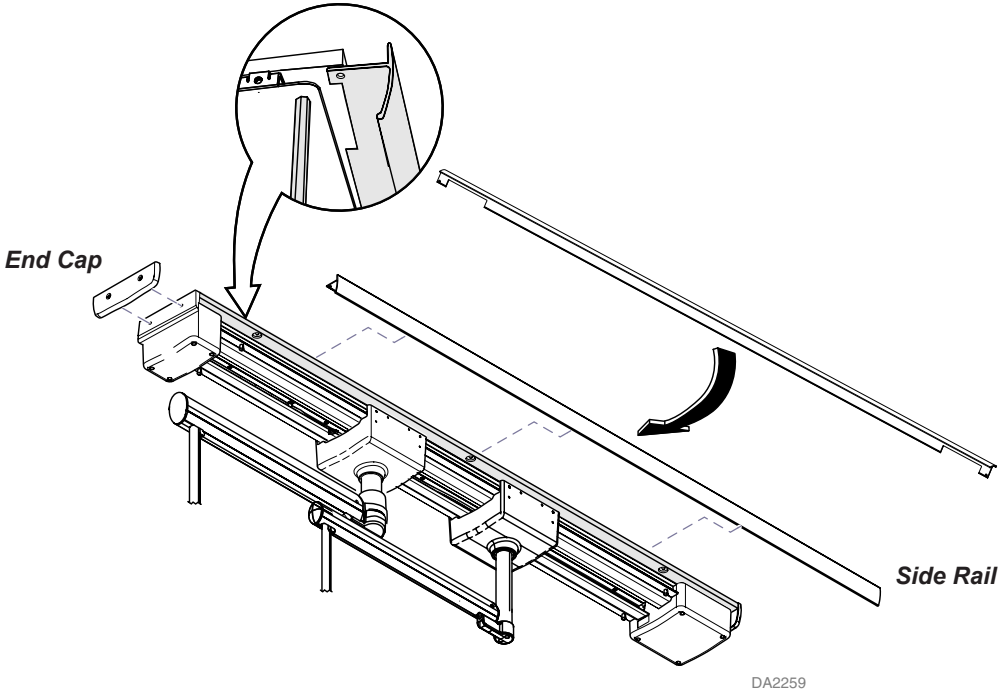
Caution
Do not pinch wiring when installing cover.

Side Rail Installation

Note: The side rails are notched at each end to prevent them from hitting the mounting brackets on the track.

Step 19: Remove the two screws and the end cap from the front end of the track.

Step 20: Use a rubber mallet to lightly tap the side rails into the space between the track extrusion and the backer board.



Step 21: Secure the end cap on the front end of the track with two screws.

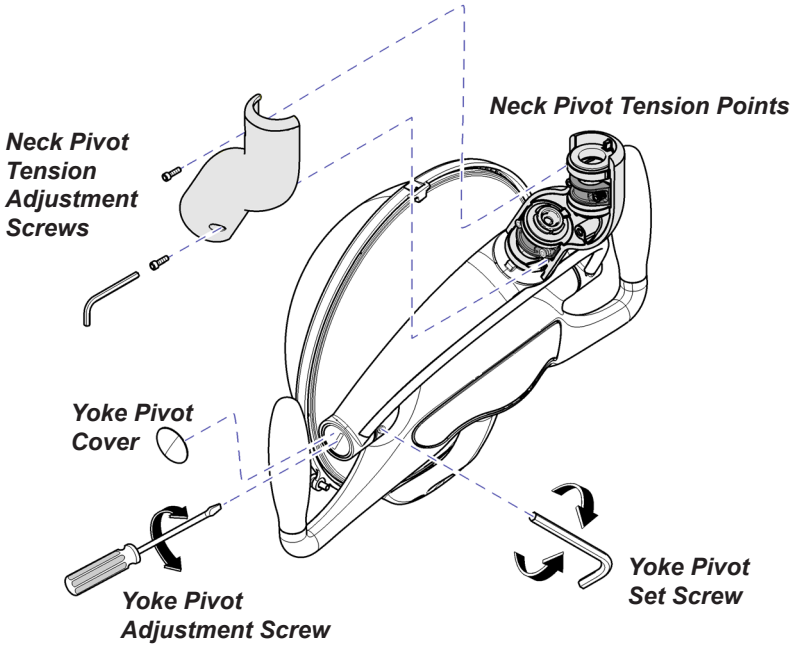
Tension Adjustments

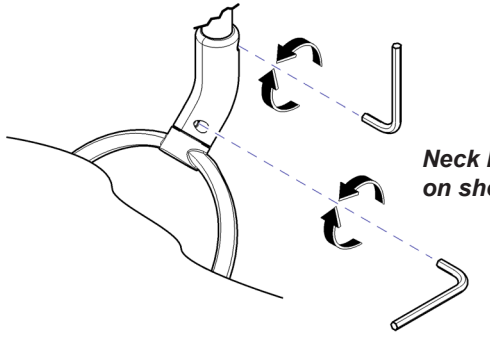
To adjust the Neck Pivot tensions...

A) Insert Allen wrench into the neck as shown (cover is removed in illustration so you can see the tension points inside.)
B) Loosen or tighten appropriate screws to adjust tension.

To adjust Yoke Pivot tension...

A) Remove Yoke Pivot cover.
B) Loosen set screw.
C) Loosen or tighten tension adjustment screw.
D) Tighten set screw
E) Replace the Yoke Pivot cover.





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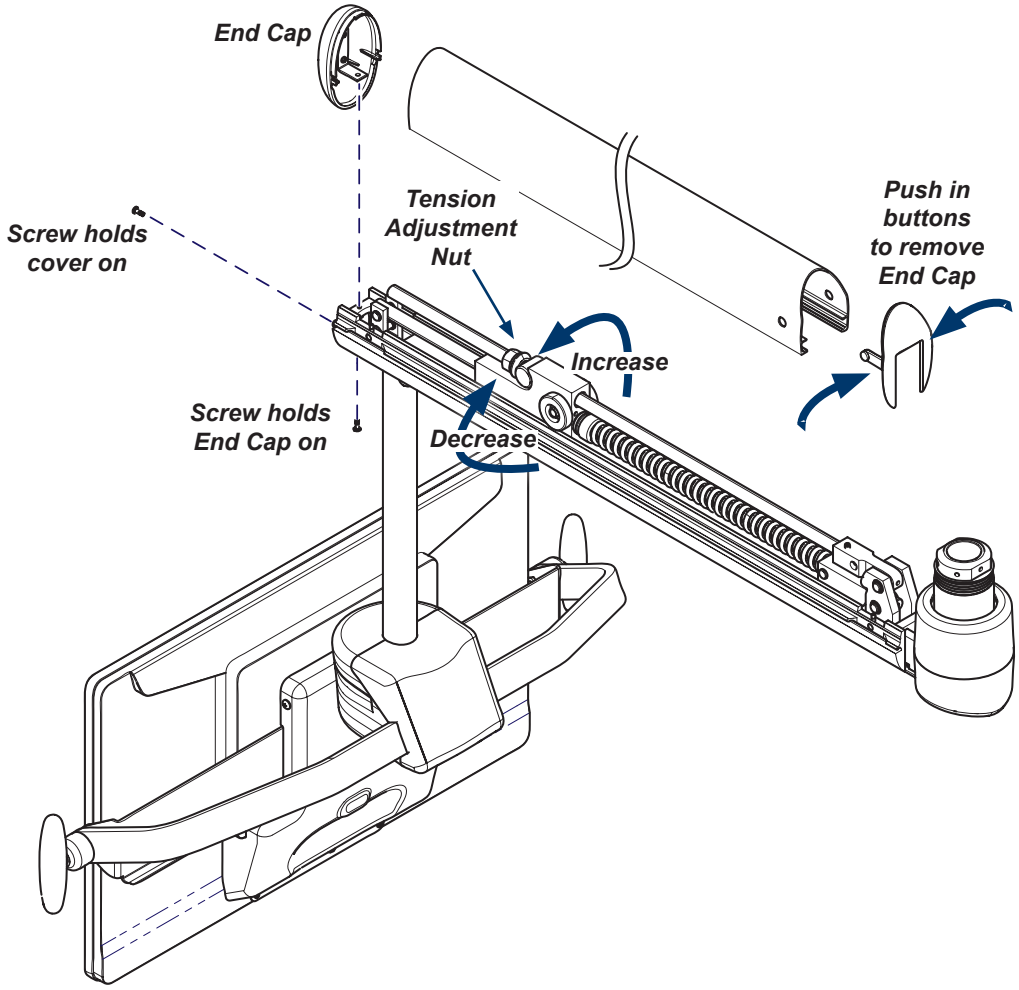
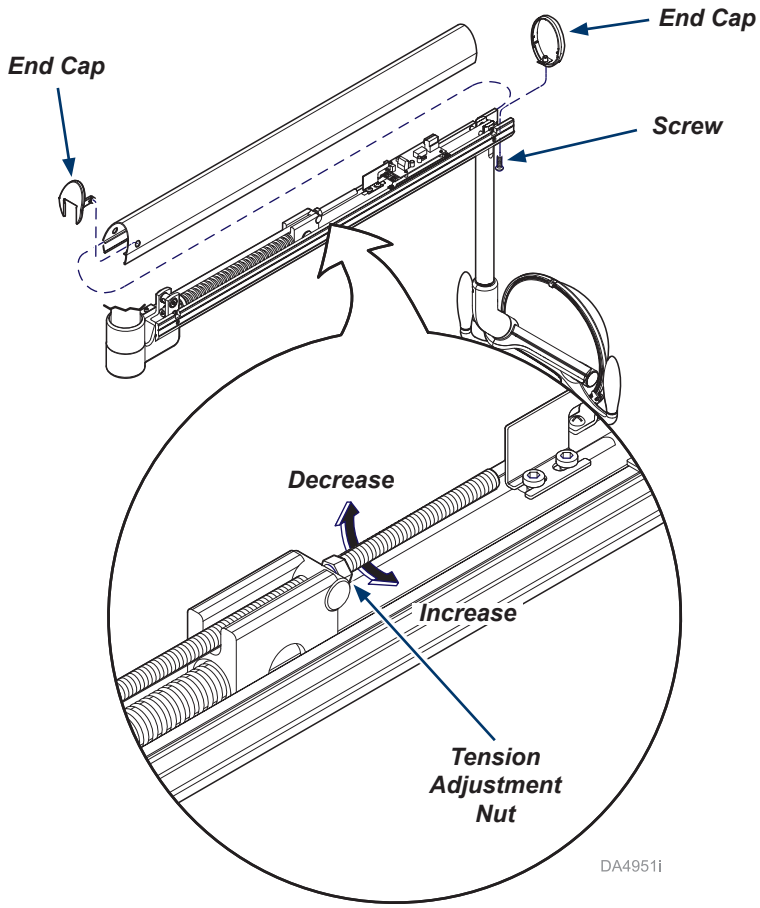
Monitor and Light Flex Arm Tension Adjustments

Monitor Flex Arm Tension Adjustments



Light Flex Arm Tension Adjustments



To adjust Flex Arm tension...

A) Remove end cap and top cover as shown.
B) Loosen or tighten adjustment nut as desired.

Note

Refer to manufacturer's manual for monitor specifications/ information on service and warranty for the monitor and remote control. The model and serial number will be required.

Step 22: Connect facility power and verify operation.