

PM2-10 Instruction Manual



The PM2-10 is manufactured by:

Polar Focus®, Inc.
20 Industrial Dr. East, Unit 2.
South Deerfield, MA 01373 USA
413-586-4444
<http://www.polarfocus.com>

1.0 Introduction:

This patented product is designed for use as a tool for professional riggers, and for audio and video technicians trained in rigging for their specific applications. If you do not have this training and/or on the job experience, do not attempt to use this product. Protect the health and safety of yourself, your co-workers, your customers and safeguard your organization's liability by calling in qualified personnel to perform the rigging you require. To find professionals in your area with this expertise, look up Audio Contractors, Sound Contractors, or Riggers in your telephone directory yellow pages. For additional sources to find trained riggers in North America, you may also contact:

International Assoc. of Theatrical & Stage Employees (IATSE)
www.iatse.net

To find trained riggers outside of North America you may contact:

Professional Lighting and Sound Association (PLASA)
www.plasa.org

Both IATSE and PLASA can also provide information on rigging training courses in your region.

2.0 Important Safety Instructions

- 1: Read these Instructions
- 2: Heed all warnings
- 3: Follow all instructions
- 4: Only use attachments/hardware specified by the manufacturer.
- 5: Do not in any way modify or disassemble product unless instructed to do so by the manufacturer.

3.0 Important Safety Warning

- 3.1 The information in this section has been assembled from recognized engineering data and is intended for informational purposes only. None of the information in this manual should be used without first obtaining competent advice with respect to applicability to a given circumstance. None of the information presented herein is intended as a representation of warranty on the part of Polar Focus. Anyone making use of this information assumes all liability arising from such use.

4.0 Inspection and Maintenance

- 4.1 Before installing any hardware always inspect all components (enclosure, rigging frames/yokes, mounting brackets, Chain, etc.) for cracks, deformations, corrosion, missing, loose, or damaged parts that could reduce the strength and safety of the overall installation. Do not install product until the proper corrective action has been taken. If gear from Polar Focus is deemed damaged or defective, call us immediately at 413-586-4444 to determine appropriate corrective measures.
- 4.2 Suspension and pole mount systems are comprised of mechanical devices, and, as such, they require regular inspection and routine maintenance to ensure proper function ability. Installed systems should be inspected at least annually (or as required by local code). The inspection shall include a visual survey of all load-bearing surfaces for signs of corrosion, cracking, bending, or any other condition that may decrease the strength of the bracket, fastener, etc.
- 4.3 This product's structural tubes are made of zinc rich base coat and UV resistant top coat, and will resist corrosion.

- 4.4 Polar Focus is not responsible for the misuse of its products or the misuse of this information for any purpose. Furthermore, Polar Focus is not responsible for the abuse or misuse of its products caused by avoiding compliance with inspection and maintenance procedures or any other abuse.

5.0 PM2-10 Safety Rules:

- 5.1 Do not exceed working load limits (WLL). The PM2-10 pole mount will support 120 lbs. Mountings may consist of two yoke mounted loudspeakers at the end of the arm. The loudspeakers and yokes must be designed and engineered for suitable resistance to water damage, corrosion, and wind loads. Do not use indoor rated loudspeakers or yokes. If the loudspeaker manufacturer recommends, use a separate safety cable system.
- 5.2 Attachment to the PM2-10 arm shall be made with ½” stainless steel bolts, zinc-plated washers, and deformed thread locknuts (in most cases all are provided by Polar Focus). Rigging connections to the chain grasping the pole shall be made only with the integrated chain keepers. You must also be aware of the WLL of the supporting structure, and any other load bearing elements in the speaker system you are using or installing. A chain of rigging products is only as strong as its weakest link. Never exceed the WLL of any rigging component or device!

6.0 Installing a single PM2-10:

- 6.1 Tools you will need for installation: 5/32” Hex Key, Utility Knife, 3/4” Socket, Socket Wrench, 10” Extension, Torque Wench, Thread-Locker (recommended), Ratchet-strap, and Two(2) 3/4” Crescent Wrenches.
- 6.2 First ensure that the rubber tubing is centered on the pole mount's rear contact fins to prevent any metal from contacting the pole. Proper positioning can be seen in figure 1.



Figure 1. Rubber tube insulates Pole Mount from pole and prevents marring of the pole.

- 6.3 Hold the pole mount against the pole at the desired height and horizontal angle. Have a second person use a ratchet-strap strap to affix the pole mount to the pole temporarily as seen in figure 2 below.



Figure 2. Use a ratchet-strap to fixture the pole mount while installing, do not over tighten or mar the pole.

6.4 Insert 1 end of the chain into the circular opening, and lock in a single link as shown in figure 3.



Figure 3. Chain is fed through circular opening, chain can be locked in by sliding into key-way.

6.5 Bolt a chain keeper into the indented slot using the button head bolt and a 5/32" hex key. Using a removable thread locker such as Loctite Blue 242 is recommended on these bolts. This step can be seen in figure 4.

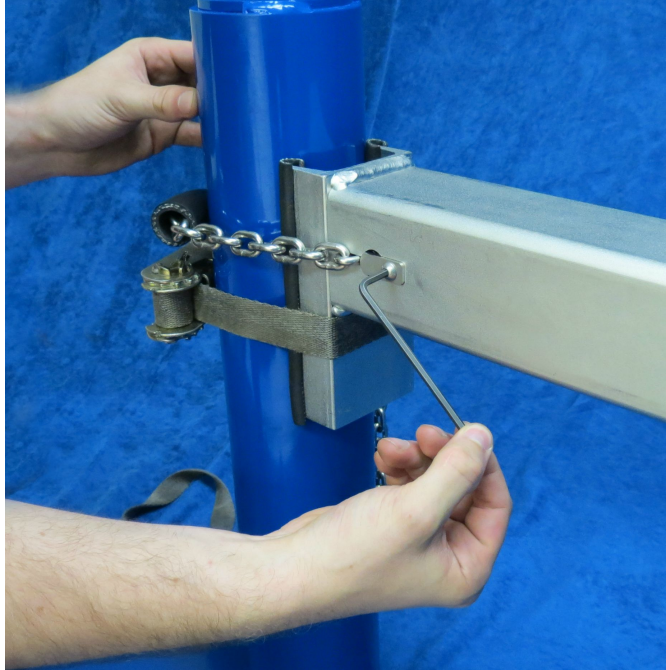


Figure 4. Installing the chain keeper prevents chain disengagement.

- 6.6 Wrap the chain and hose around the pole and mark the hose at the length that provides complete coverage of the pole and will not interfere with locking and tightening mechanisms (this is about 1” away from each side of the pole mount). Then using a utility knife cut the hose to length.
- 6.7 Apply a removable thread locker such as Loctite Blue 242 to the bolt carriage bolt's threads. Insert the bolt carriage into the cantilever arm ensuring that the chain key-way is facing the slot in the cantilever arm. Push in the bolt carriage in as far as it will go; ensuring that the bolt nests in the receiver tube in the center of the cantilever arm.
- 6.8 Insert the free end of the chain into the bolt carriage's circular opening as seen in figure 5. Insert as much chain as possible before locking into the key-way; this will ensure that the bolt carriage will have sufficient travel.



Figure 5. Excess chain is fed into bolt carriage and is stored inside the cantilever arm.

- 6.9 Bolt second chain keeper into bolt carriage using 5/32" hex key (application of thread locker is recommended). It can be seen in figure 6 that the chain keeper's movement is restricted by the cantilever arm slot.



Figure 6. The second chain keeper is installed on the bolt carriage.

- 6.10 Using a 3/4" socket, wrench, and 10" extension tighten the bolt carriage bolt until the chain is tight around the pole.
- 6.11 Using a 3/4" socket, torque wrench, and 10" extension, apply 40 ft-lbs as seen in figure 7.



Figure 7. A torque wrench is used to apply appropriate pre-tension, and prevent bolt loosening.

- 6.12 Double check all hardware is secured properly, and that no part of the chain strap assembly is binding and giving a false tight.
- 6.13 Yokes may be mounted in the upper, lower, or both mounting holes using the included hardware. For yokes provided by the loudspeaker manufacturer, refer to its user manual for proper installation. After yokes have been installed insert the tube plug in the end of the cantilever arm as seen in figure 8.



Figure 8. Speaker mounted in lower position with end plug installed.

Note: Wire may be run through the body of the cantilever arm and out the rear drain hole for a clean installation. Run the wire into the arm by drilling hole in plastic tube cap or in convenient location in arm. If putting hole in arm always apply cold-galvanize spray to hole. Any aftermarket holes in steel will void warranty.

7.0 **Installing two PM2-10 pole mounts on the same pole, at the same height:**

- 7.1 Follow steps 2-3 of single mounting instructions.
- 7.2 Follow steps 4-9 from single mount installation for each individual mounts.
- 7.3 Using a 3/4" socket, wrench, and 10" extension tighten each bolt carriage in small, even increments to ensure that when fully tightened they remain in the initial mounting location.
- 7.4 Follow steps 11 through 13 of single mount installation for each individual mount.

8.0 **Service and Replacement Parts:**

- 8.1 In case service is required, call 413-586-4444 to determine if parts are needed, or to get a return authorization number before sending your package.

9.0 **Warranty:**

- 9.1 Polar Focus® warrants for two years from the date of shipment that all our products are free from defects in craftsmanship or parts. Warranty repairs are made at our warehouse location in South Deerfield, Massachusetts, USA. This warranty covers only the cost of repair or replacement of those products, at our discretion. Damages to our products from impacts, abrasion, shock loads, or overloading are not covered under this warranty. Polar Focus is not responsible for incidental or consequential damages caused by misuse of our products.