



Instructions for MB824 Manual Barrier ver.0311 **Read all the instructions before starting**

1. Securely bolt barrier base to a concrete pad using 1/2" X 12" J-Bolts or drill and place anchor bolts.
2. Plumb vertical legs in both directions, place washers or metal shims under base as necessary. Fill any voids with grout. Securely tighten base to pad.
3. Remove the three allen head bolts on each side of the Aluminum tube located at the beginning end of the arm tube. Do not remove the single allen head 20" from the end of the tube. This bolt holds the backing plate and is not removed.
(the fourth 20" allen head bolt is used arms over 18ft only)



The picture above illustrates the allen bolts and the position of the backing plate inside the aluminum tube.

4. Slide the Aluminum tube into the swing arm and line up the three holes on each side of the tube. Start all six allen bolts by hand before tightening, and tighten all bolts equally by making multiple tightening

passes. Remember the steel bolt backing strips go to the inside of the arm.



The picture above illustrates the arm bolted to the swing arm.

5. If the arm is over 16 ft arm it will use a two piece assembly consisting of a base tube with mounting holes pre-drilled and an extension tube.

6. Read all of step 6 before starting.

You will now carefully tap the aluminum extension tube (if supplied) over the splice attached to the base aluminum tube. Before tapping the extension tube on, line up the Phillips screws on the splice with the three allen head bolts so that the screws will be on the side of the aluminum arm when done. Use a soft wood block to cushion the blows from the hammer. Do not force the tube over the splice, it will tap on with light hammer taps. Finally before starting check for and file any aluminum burrs that might interfere with the installation. Remove the plastic End Cap while tapping tube on to avoid damage to it and then replace it.

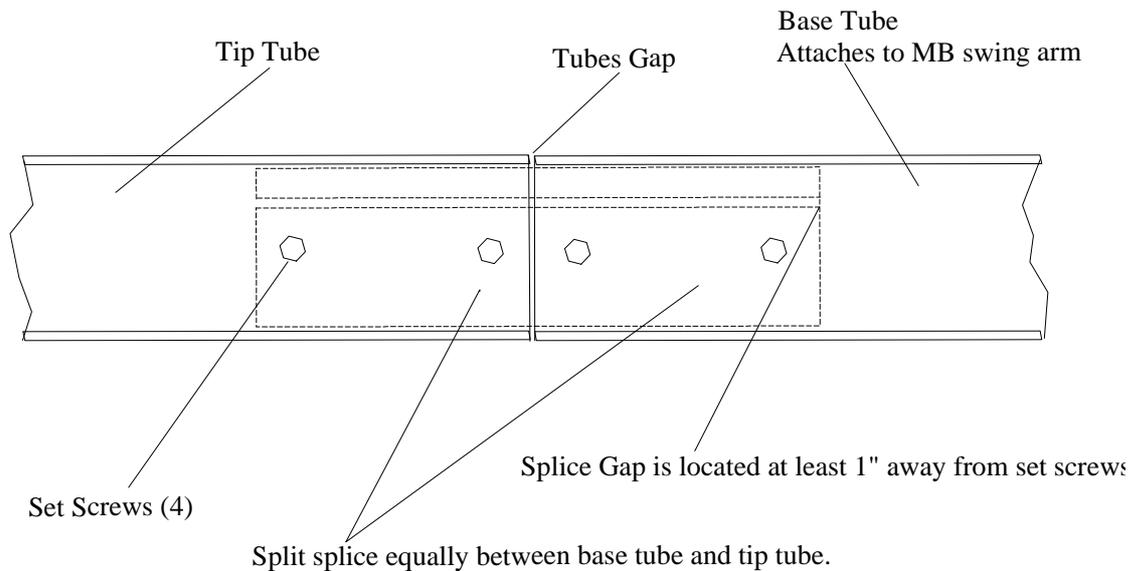
Use the supplied #8 or #10 self drilling/ tapping sheet metal screws to lock the extension arm to the sleeve through the four pre-drilled guide holes.

Make sure that splice is evenly divided between tubes.

See illustration below.

Details for Arm Splice (optional)

Detail for splicing MB832 Barrier Gate Arm



7. Add supplied self-stick reflector tape as desired- Stretch a string line down the arm to line up the reflective tape. Alternate the Red and Silver at 12" spacing.

Check the movement of the arm and counterbalance to make sure that it doesn't entrap person operating barrier or bystanders against any immovable objects.

Check all nuts and bolts monthly or any loosening and retighten.

Warning!!!:

Do not install any metal signage on barrier gate arm due to the sharp edges of metal signage may cause injury. Use only plastic signage.

Instructions for Bolt-Down Cradle

(optional)

1. After installing the barrier gate and arm measure the height that you want the arm supported.
2. Extend the cradle out until you have the desired height dimension.
3. Mark the cradle and tighten the two setting bolts.
4. The MB824 may be slightly rotated in its oblong base bolt holes to line up with the cradle.

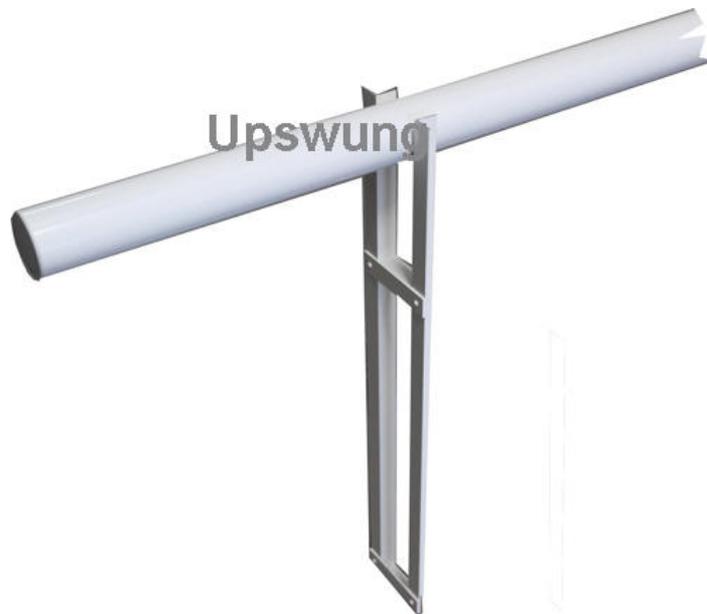


Reflective Tape Installation on Round Tube Barrier Arm

1. Warm the reflective tape between 75 to 100 degrees before applying
2. Wipe the aluminum tube rigorously with a paper towel that was dipped in lacquer thinner in the area where the reflective tape will be applied
3. Remove the reflective tape backing.
4. Apply reflective tape applying pressure from the center out.
5. Apply blue masking tape to the long sides of the reflective tape for 24-48 hrs if the sides of the tape lift.
6. If at later date the tape lifts along the edges wipe lacquer thinner under the reflective tape and aluminum tube and tape down with blue masking tape
7. You can also use 3M spray adhesive available at hardware stores to secure reflective tape – follow instructions on the can.

Drop Down Aluminum Prop Instructions (optional)

1. After barrier gate is installed, lower barrier arm to the desired down position by supporting the arm with a saw horse or other means at the point where the Prop will be installed.



2. Locate the Prop two thirds of the distance from the pivot point. Example: If your arm is 24ft, locate the prop at 16ft from the pivot point.
3. With the Prop in position, mark the Prop on each side at the centerline of the barrier tube and drill a 1/4" hole through the prop and the barrier tube on each side
4. The prop is made to be cut to size, once the prop is positioned and drilled, cut the excess Prop length 3/4 " from the center of the drilled hole on each leg of the Prop to remove excess Prop. Use a hacksaw or miter saw. WEAR EYE PROTECTION when cutting.
5. Use a file to round off the sharp edges and corners made from cutting.
6. Reinstall Prop and insert 1/4" supplied bolt and nut.
7. Tighten the nut to point just before it binds the Prop. The Prop should still swing freely.

Operation:

When barrier arm comes down the Prop will swing to the vertical position. Since the Prop swings, the position may not be exactly vertical. The arm can be raised slightly to allow gravity to plumb the Prop.

MB Series Barrier Gate Instructions

1. The MB series barrier gate is operated by pushing at the “Grab Point” located on the aluminum barrier gate about 12 inches from the steel swing arm assembly (see picture below) to raise or lower the arm. The part marked “handle” is not used in the normal operation of the MB series barrier gate it is an additional way to secure the arm only.

2. The SHADED AREAS in the picture below are possible pinch points in the operation of the barrier gate. Keep hands and other body parts clear of the shaded areas illustrated below. A safety label also identifies a pinch point in the smaller grey oval.



3. When the arm is up or down it must be secured at the locking loop with a padlock, bolt or carabineer. The arm will normally not move if left unsecured, but the arm can move unexpectedly if not secured from any external force. (see picture below for locking loops).

4. It is not recommended to operate the barrier gate in windy conditions; the arm could swing out of control from high wind loads.

5. It is recommended in high wind weather conditions that the arm is locked with a locking pin until weather passes.



5. Every 3 Months check all external bolts and tighten any loose bolts.
6. Every month check the pivot bolt, tighten as necessary until friction is felt when operating the arm and apply blue Locktite thread adhesive.
7. Commonly used arm locking devices available locally. In situations that require maximum holding power use the case hardened padlock or grade 8 bolt shown below.

<p>7/16-14 X 1-1/4" Grade 8 Bolt and Locknut</p>	<p>1 1/2" Padlock case hardened (high security)</p>	<p>"S" Hook 3 inch</p>
<p>Linch Pin 1/4"</p>		

MB Semi-Automatic Barrier Gate Instructions Factory Installed Patent Pending

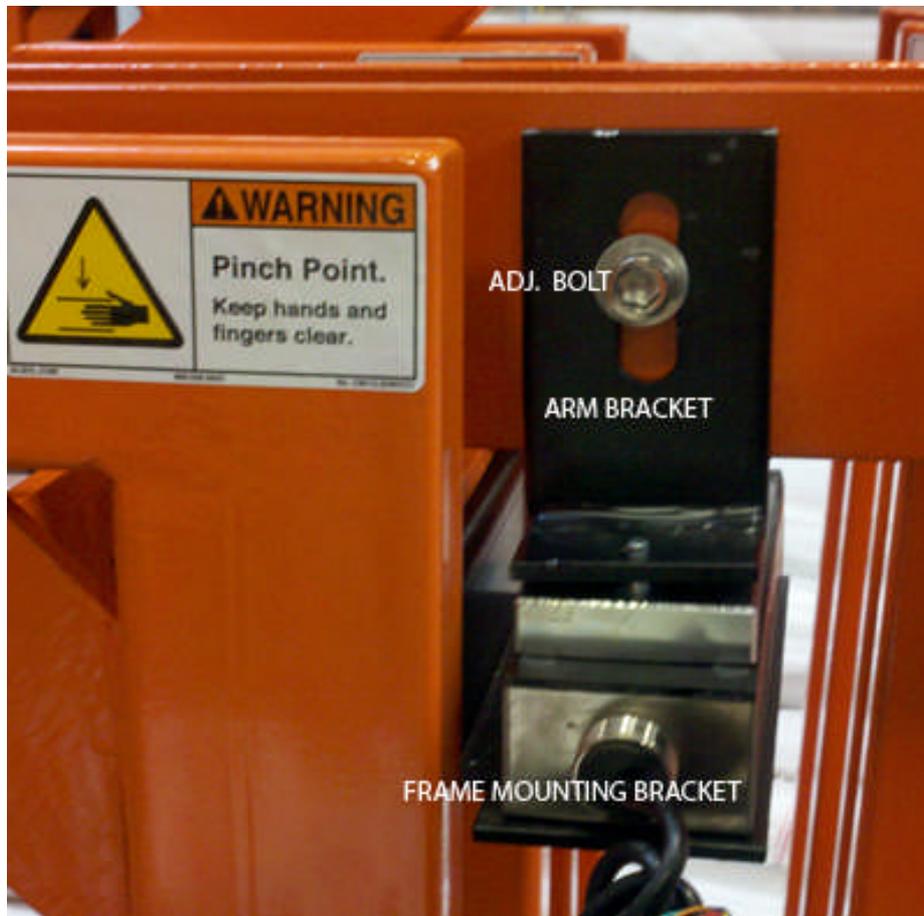
PART 1: OPTIONAL ARM-DOWN MAGNET LOCK ASSEMBLY

1. Pictured below is the optional Arm Bracket magnet assembly for the arm-down magnetic lock. The arm bracket is shipped bolted to the swing and must be removed before the aluminum arm is bolted into place. The nutplate inside the aluminum tube replaces the shipping nut that holds the arm bracket in place for shipping. *This is optional and may not apply to your MB832.*



2. Pictured below is the magnet assembly for the arm-down magnetic lock. It is possible to adjust the arm up and down by loosening the adjustment bolt on each side and sliding the arm bracket up and down. Always try to maintain flat contact of both parts of the magnet assembly. The frame mounting bracket can be slid in and out to help line up the magnetic plates horizontally.

3. Use ¾" elbow conduit fitting to start conduit run from magnet. Magnet can be field wired for 12 or 24 VDC. See supplied magnet instructions. Mount conduit to frame to relieve stress off the magnet fitting. During construction do not leave magnet lead wires exposed to the elements, cover with conduit fitting to protect against moisture.



4. The magnet will lock when DC voltage is applied and maintained. It will unlock when voltage is removed. Also magnet produces a small amount of heat when engaged and will operate in cold climates. **DO NOT USE AC VOLTAGE ON THIS UNIT.**

5. Test magnet by operating it, if the arm is locked and holding, the magnet is working. The locking system is a "fail-safe" system meaning that any failure in the system will release the arm for manual control.

6. Counterweights can be adjusted to change the speed that the arm moves once the magnet releases the arm. Unbolt the counterweight and move away from the pivot to increase upward speed or inward to decrease speed. Re-tighten bolt nuts to 40 ft-lbs.

PART 2: OPTIONAL ARM-UP MAGNET LOCK ASSEMBLY

1. Pictured below is the magnet assembly for the arm-up magnetic lock. It is possible to adjust the arm up position by loosening the adjustment bolt on each side and sliding the arm bracket sideways. Always try to maintain flat contact of both parts of the magnet assembly. The frame mounting bracket can be slid in and out to help line up the magnetic plates horizontally. The arm is factory adjusted to be set slightly off plum to the down position to facilitate automatic closure.

This is optional and may not apply to your MB832

2. Use ¾" elbow conduit fitting to start conduit run from magnet. Magnet can be field wired for 12 or 24 VDC. See supplied magnet instructions. Mount conduit to frame to relieve stress off the magnet fitting. During construction do not leave magnet lead wires exposed to the elements, cover with conduit fitting to protect against moisture.

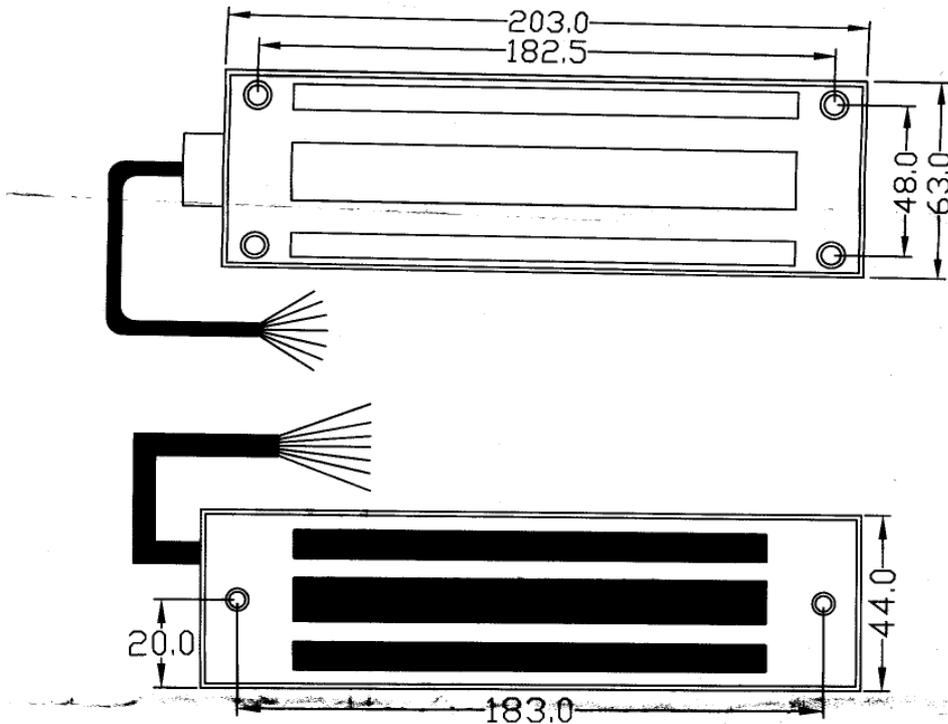


4. The magnet will lock when DC voltage is applied and maintained. It will unlock when voltage is removed. Also magnet produces a small amount of heat when engaged and will operate in cold climates. **DO NOT USE AC VOLTAGE ON THIS UNIT**

5. Test magnet by operating it, If the arm is locked and holding, the magnet is working. The locking system is a “fail-safe” system meaning that any failure in the system will release the arm for manual control.

6. Counterweights can be adjusted to change the speed that the arm moves once the magnet releases the arm. Unbolt the counterweight and move away from the pivot to decrease downward speed or inward to increase speed. Re-tighten bolt nuts to 40 ft-lbs.

Magnet Wiring Table 12/ 24 VDC



WIRING INSTRUCTION: READ CAREFULLY

- (1) For 12V: Connect the red/black wires, green/orange wires and connect 12V source.
- (2) For 24v: Short black/green wires and connect red and orange ones to 24V source.
- (3) Reed switch dry contacts are rated max 3W(max switching contact 0.25A) at 30VDC/AC for safe operation. Do not exceed this rating.
- (4) Lock status sensor: FAS-CE1200LSWR/FAS-CE600LSWR

12V	24V	LOOK STATUS SENSOR (REED. SW.)
+ — Red — Black	+ — Red — Black — Green — Orange	

MB Barrier Gate Arm Safety Tether OPTIONAL SAFETY TETHER ASSEMBLY FOR HIGH WIND CONDITIONS.

1. Remove plastic end cap and drill a 3/8" Dia. hole 2 3/8" inches O.C. from the tip of the aluminum arm and at the bottom of the arm as pictured below.



2. Start at the drilled shackle hole of step 1 thread the wire rope inside the tube through the length of the tube and around the swing arm (pictured below) and along the outside bottom of the arm, back to the drilled shackle hole on the outside of the arm.



3. Unscrew and remove the shackle pin and slip the shackle on to the tube with the inside and outside looped ends of the wire rope aligned with the shackle hole drilled at the bottom of the tube.



5. Screw the shackle pin through the inside and outside looped ends of the wire rope and tighten pin firmly.



6. Drill a 3/8" hole in the plastic end cap to accommodate the shackle and tap the end cap back into place. Glue in with adhesive silicone if needed to secure cap.



6. Secure the wire rope running along the outside bottom of the tube with supplied nylon ties to remove sagging and neaten up appearance. Also stainless steel wire ties can be purchased which are more durable.