

PAPI Baffle Field Installation

Type L-880/L-881

Instruction Manual

Revision 1.0

01/22/2020

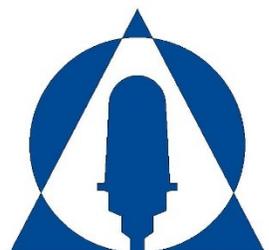
PAPI Baffle

In accordance with:

FAA

Advisory Circular AC-150/5345-5H

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Airport Lighting Company

PAPI Field Adjustable Baffles

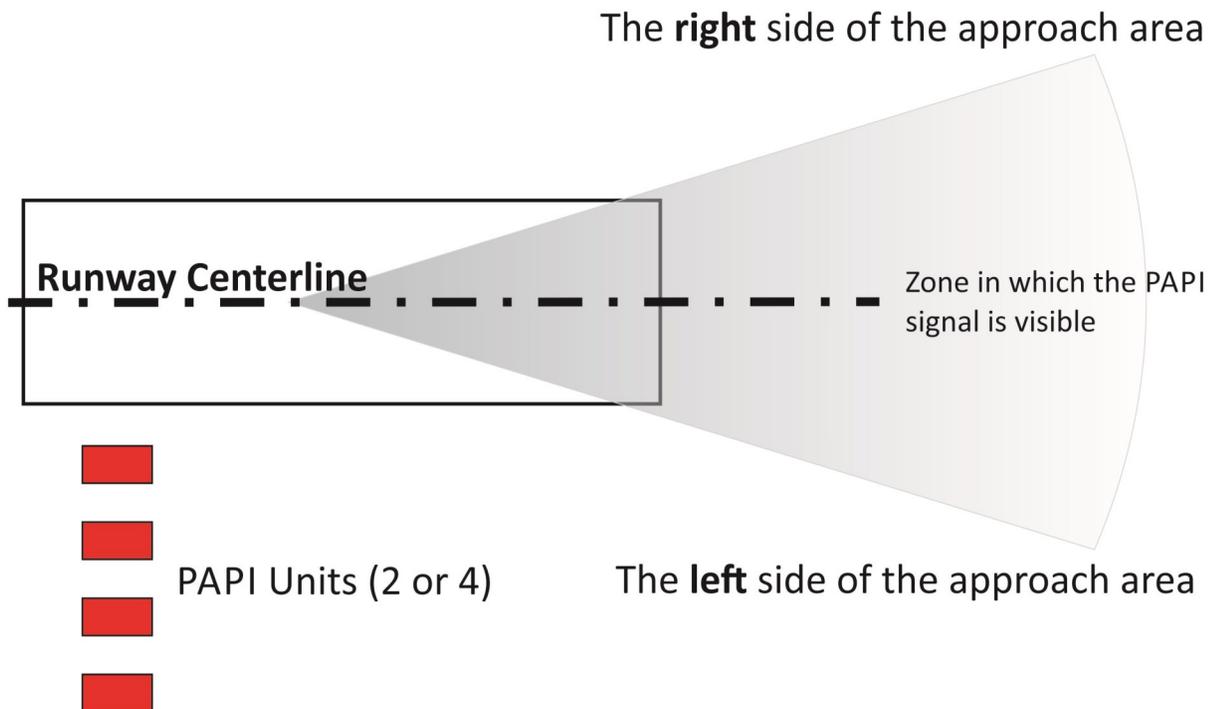
For use with series 880 and 881 PAPI units

Important: Baffles are shipped in the full open position and must be adjusted in the field to provide for any desired light blockage. It is the responsibility of the user to verify that any settings made are the correct ones for the application.

Description of the baffle system

The Airport Lighting Company Field Adjustable PAPI Baffle System is designed to provide the user with a baffle system that can be adjusted in the field to limit the horizontal light distribution. The system consists of 2 baffles which can be adjusted independently, one for each side of the approach path. Each baffle can block the light in a fully adjustable range from no blockage to full blockage of light on its side of the light signal centerline. The inboard baffle (the one closest to the lamps) can alter the right portion of the approach, and the outboard baffle (the one further from the lamps) can alter the left portion of the approach.

**If both sides of the approach will be limited,
adjust the right side first by positioning the inner baffle.**



This diagram is not drawn to scale

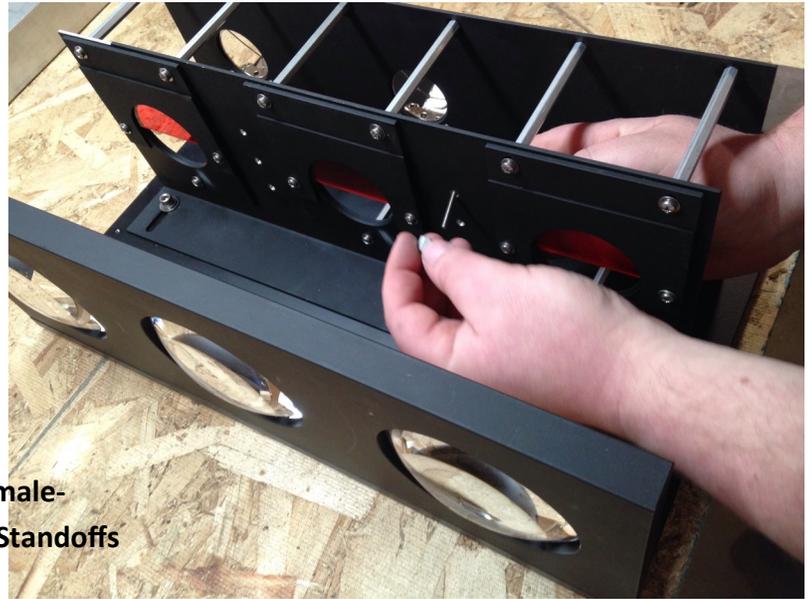
1) Acquire (6) 6-32 x 1 phillip pan head screws part # **99-00069**, (6) 6-32 lock washers part # **99-00088**, and (6) 6-32 x 5/16 hex female-female aluminum standoffs part # **99-00085**. Add (1) lock washer to each screw, then insert into the baffle holes so that the end of the screw protrudes toward the lens holder. Add (1) hex standoff to each screw (see below). Hand tighten to secure hex standoffs.



6-32 x 1 Phillip Pan MS

6-32 x 5/16 Hex Female-Female Aluminum Standoffs

#6 Lock Washers



2) Tighten each hex standoff with a 1/4" wrench and Phillips Head ratchet.

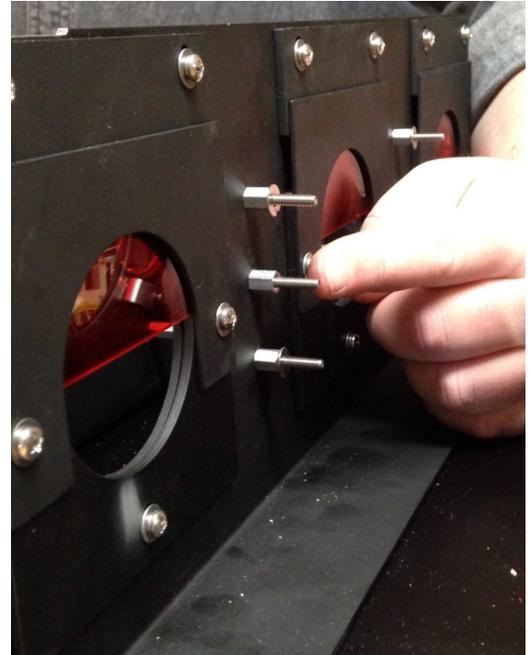
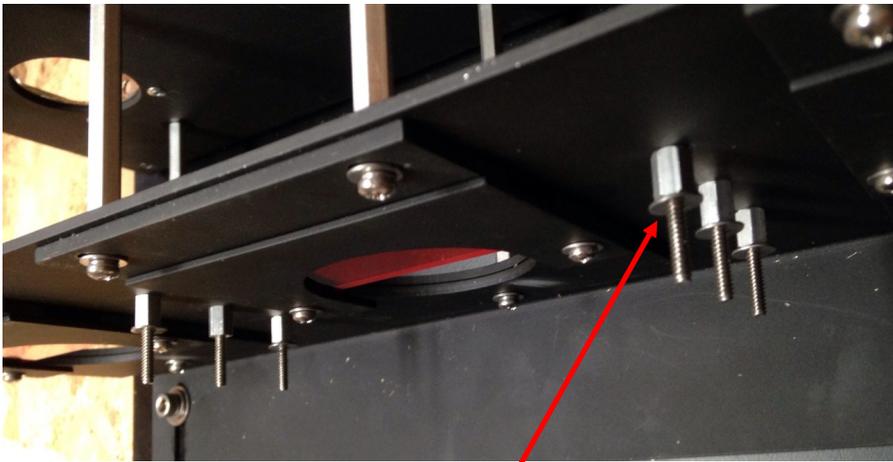


Phillips Head Ratchet

1/4" Wrench

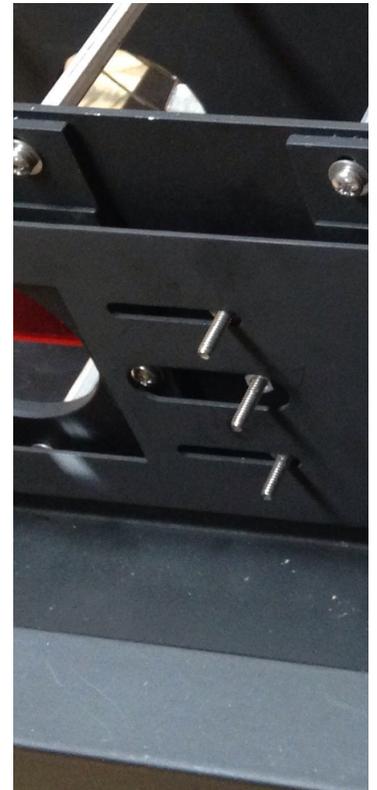
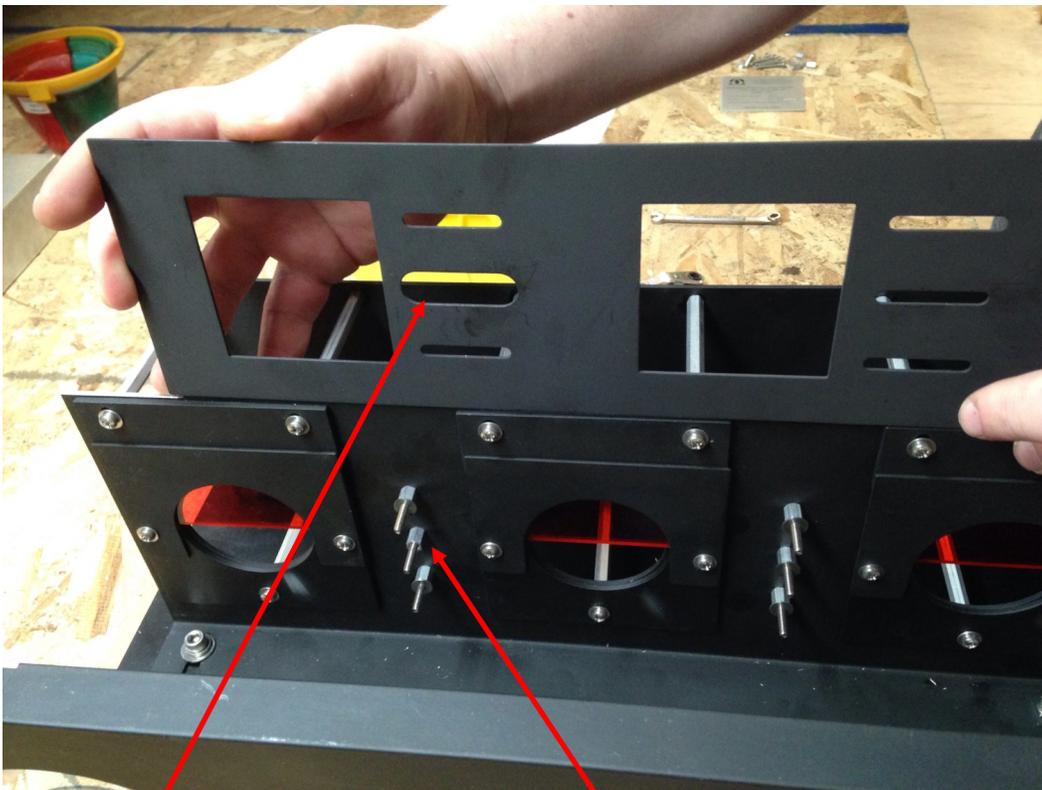


3) Add (1) #6 Washer part # 99-00090 to all screws except the center, left screw (pointed out below).



#6 Flat Washer

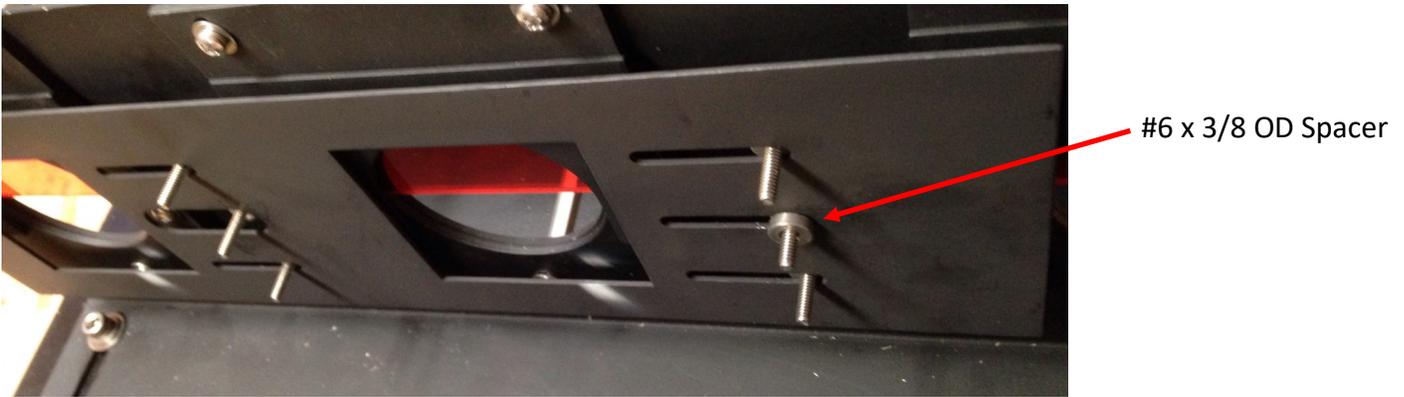
4) Install interior baffle with the large hole on baffle corresponding with the screw without a #6 Washer.



Large hole on baffle

Screw without #6 Washer

5) Install a #6 x 3/8OD spacer part # **99-00071** on right, center screw.



6) Install exterior baffle so that the large hole on baffle fits around the #6 x 3/8 OD spacer.



7) Install (1) #6 washer part # **99-00090** on all screws except the one that already has a #6 x 3/8 OD spacer. Next, add (1) #6 lock washer part # **99-00088** and (1) 6-32 hex nut part # **99-00061** to all six screws. **DO NOT TIGHTEN HARDWARE YET.**



#6 Lock Washer
(add to all screws)

#6 Washer

6-32 Hex Nut
(add to all screws)

#6 x 3/8 OD Spacer
(do not add #6 washer)

8) Ensure that baffles are in full/open position. To make sure that the baffles are in full/open position for shipping, slide interior baffle all the way to the left, and the exterior baffle all the way to the right. It will look as shown below.



9) At this point the baffles are ready for field adjustment.



How to adjust the light baffles

It is advisable to adjust the baffles before setting the final position of the light beam elevation. This will eliminate the possibility of having to again precisely set the final elevation if the elevation must be varied during the baffle adjustment process to make it possible to see the light signal at a particular vertical position(s) during the baffle adjustment.



It is most convenient to have the tilt switch function disabled so the unit(s) will not shut down because of unusual elevation angles which may be required during the setting process. This is accomplished by jumpering the tilt terminals in the power and control cabinet of the voltage powered PAPI (see Photo 1) or by jumpering each light unit of a current powered system (see Photo 2).

Remove jumpers before returning units to service

Photo 1 (Voltage Powered PAPI)

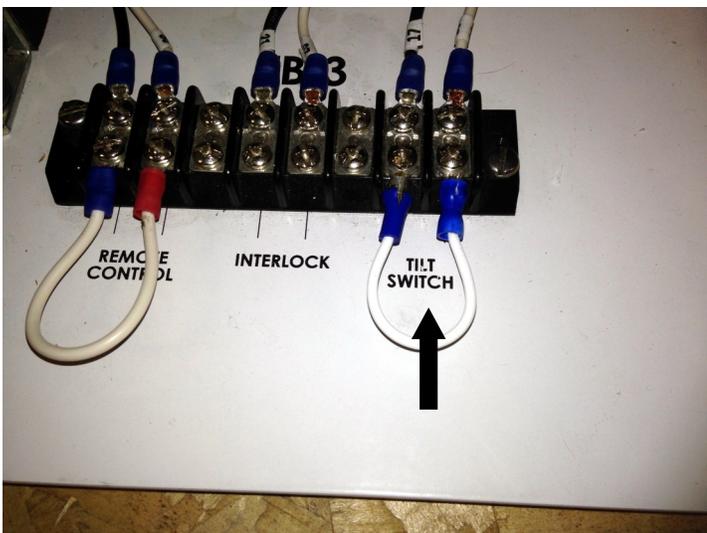


Photo 2 (Current Powered PAPI)



The Baffle System consists of 2 baffles per light unit, with the inboard baffle (the one closest to the lamps) able to alter the right portion of the approach. This placement, and the use of a special setting nut on the right baffle, allows the outboard baffle, which can alter the left portion of the approach, to remain fully adjustable after the right baffle has been adjusted and secured in position by its setting nut (see photo A.) This means that if the right portion of the approach needs adjustment, it should be adjusted first. Adjusting the right baffle after the left baffle has been adjusted will require that both baffles be adjusted. If the right baffle needs adjustment, loosen all 6 setting/securing nuts, adjust the baffle, and tighten the right baffle setting nut (see photo A.) Repeat for each light unit. If the right approach does not need to be adjusted, leave the right baffle setting nut undisturbed, checking that it is tight and that its baffle remains full open as shipped. With the 5 other nuts loosened, adjust the left baffle as required and tighten its setting nut (see photo B). Repeat for all light units.

When both setting nuts in all light units are secured recheck the light signal on both sides. The light signal of all PAPI light units should be performing in a similar fashion. Tighten both setting nuts and all four securing nuts on each light unit. The light signal should be checked during the PAPI Flight Check and adjusted if necessary. Once the user is satisfied with the position of the baffles, begin with one light unit and remove one of each of the 6 nuts in turn, apply a drop of Loctite 242 or equal thread locking compound, reinstall, and tighten. Repeat for all other light units. Proceed to set the aiming angle of the light units per instructions in the manual.

All field adjustment and verification of the horizontal cutoff produced by the baffles and its conformance to any FAA requirements are the responsibility of the user. Airport Lighting Company is not responsible for adjustments made at the airfield.



Photo A

Photo B

