



Field Installation of Adjustable Single Channel PAPI Baffle Kit

Service Bulletin

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1.0 Field Installation of Adjustable PAPI Baffles

1.1 Introduction

This service bulletin provides instructions for modifying the horizontal light beam coverage of the PAPI unit for obstacle avoidance in the approach area for the ADB Airfield Solutions' 1-lamp Single Channel PAPI.

1.2 References

Refer to Table 1 for references.

Table 1.1. References

Reference Description	ADB Airfield Solutions's Part Number
USER MANUAL: Single-Channel PAPI, Precision Approach Path Indicator Type L-880 & L-881, Style A (Voltage-Powered) & B(Current-Powered)	96A0379

1.3 Special Tools and Equipment Required

Refer to Table 2 for the special tools and equipment. This equipment is not supplied.

Table 1.2. Table 2. Required Equipment Not Supplied

Description	Quantity
Walkie-talkies or other form of communication	2
Small Phillips screwdriver	1
Combination square or machinist's square	1
Instruction manual for PAPI <i>part number 96A0379</i>	1

1.4 Items Included in PAPI Baffle Retrofit Kits

This subsection provides the PAPI Baffle Retrofit Kit ordering code, and a parts list for 2-box and 4-box baffle kits.

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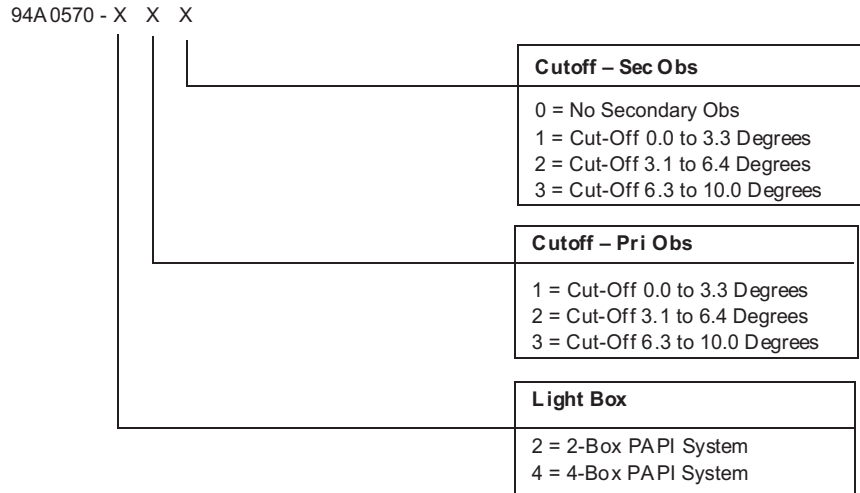
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Baffle Kit Parts List for 2/4-Box PAPI

1.4.1 PAPI Baffle Retrofit Kit Ordering Code

See Figure 1.1 to determine the part number for a particular PAPI Baffle Retrofit Kit.

Figure 1.1. PAPI Baffle Retrofit Kit Part Ordering Code



1.5 Baffle Kit Parts List for 2/4-Box PAPI

Refer to Table 1.3 for the Baffle Kit parts list.

Table 1.3. Baffle Kit 94A0570-XXX, Parts per Unit

	Part Number	One Obstruction	Two Obstructions
Baffle Mounting Plate	60C1672	1	1
Baffle (0.0 -3.3)	60B1673-1		
Baffle (3.1 – 6.4)	60B1673-2	1	2
Baffle (6.3 – 10)	60B1673-3		
Pan head screws, 6-32 x 0.75 long	64A0198-12	2	4
Lockwasher, Split #6	66A0026-11	2	4
Hex Nut, 6-32	65A0015-11	2	4
Pan head screws, 8-32 x 0.38 long	64A0966/06	2	4

1.6 Modification Procedure

Note: One baffle is required for EACH PAPI Light Box. Each set of baffles are to be the same cut-off range. More than one baffle type (cut-off range) can be ordered depending upon the application. Contact ADB Airfield Solutions if you are not sure about the cut-offs required for your particular application.

Note: The estimated time required is 60 minutes per PAPI Light Box.

Note: **WARNING:** Only personnel authorized to work on high voltage equipment should make the modifications described in this service bulletin.

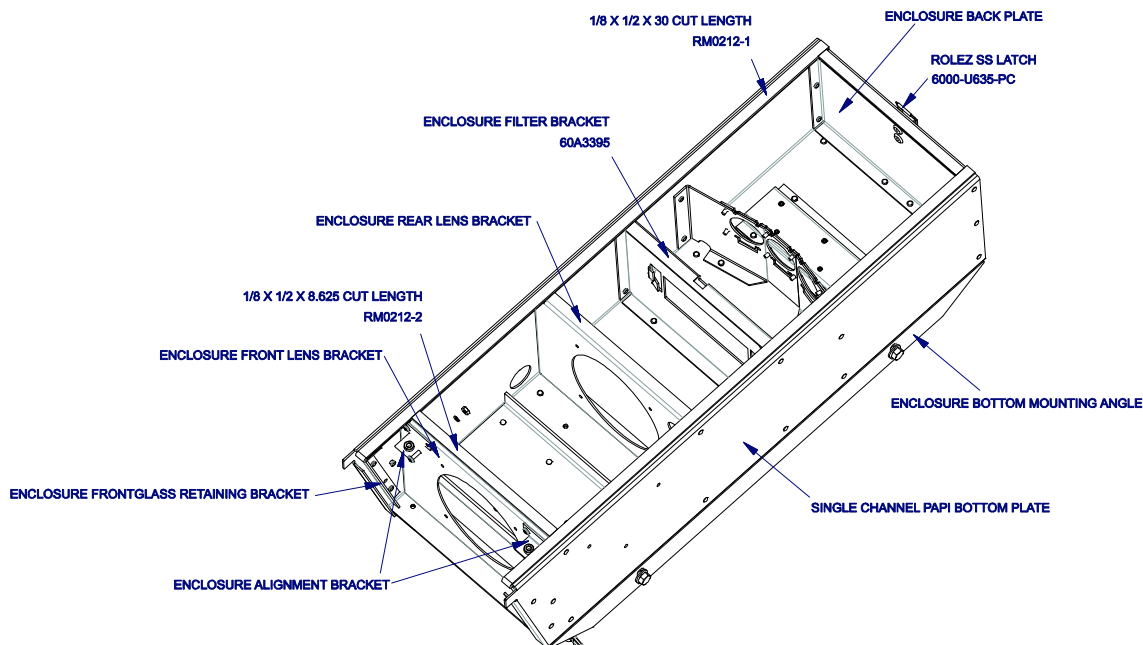
Note: **WARNING:** Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage.

Note: Coordinate a power outage for the PAPI system with Air Traffic personnel.

To modify the horizontal light beam coverage of the PAPI unit, perform the following procedure:

1. De-energize the PAPI system.
Depending on the location of the obstruction in the approach area (right or left side), attach the baffle mounting plate on the back side of the enclosure filter bracket.

Figure 1.2. Single Channel PAPI Box Assembly



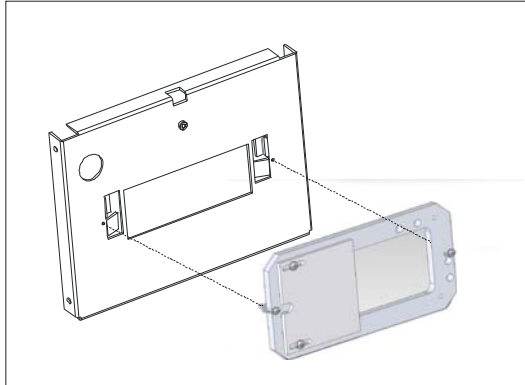
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Note: The baffle mounting plate is mounted on either the left or right side of the enclosure filter bracket by flipping the plate over.

2. Fasten the Baffle Mounting Plate to the enclosure filter bracket by using the #6-32 x 0.75 long pan head screws, hex nuts, and split lock washers provided.
3. Insert the #6 screws through the plate and the mating slots in the enclosure filter bracket located at the end of the filter slot.

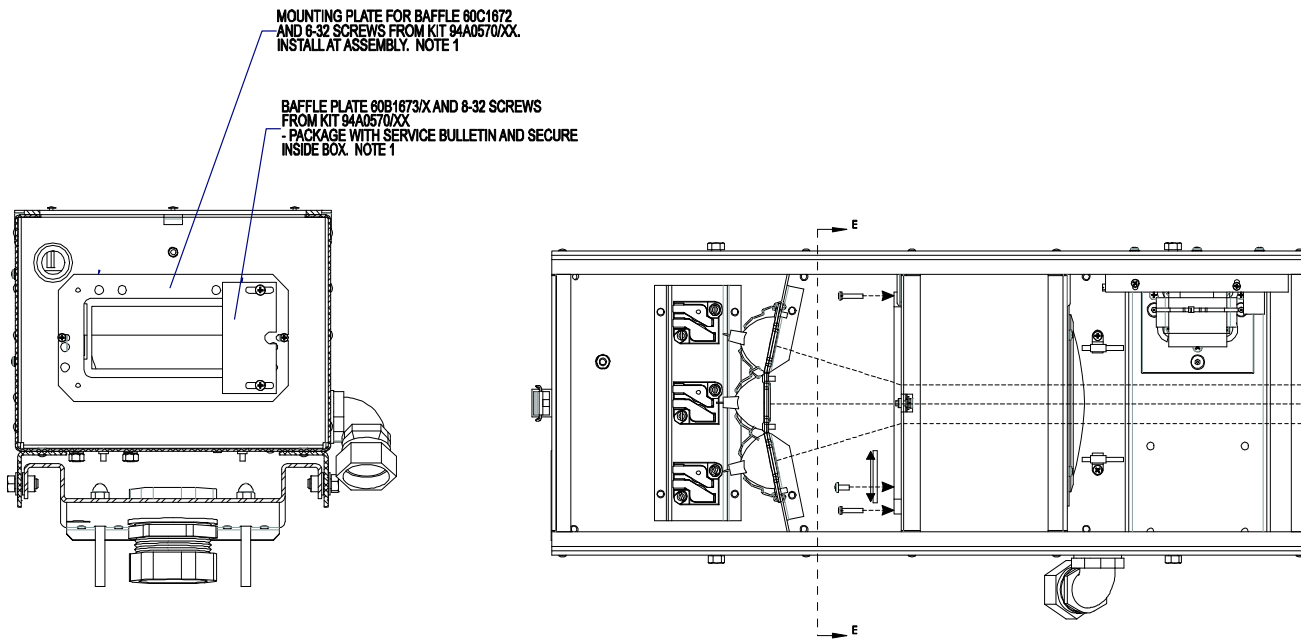


4. IF the obstacle is on the LEFT side of the approach area, then install the baffle over the filter slot on the RIGHT side. See Figure 1.3.

-OR-

IF the obstacle is on the RIGHT side of the approach area, then install the baffle over the filter slot on the LEFT side. See Figure 1.4.

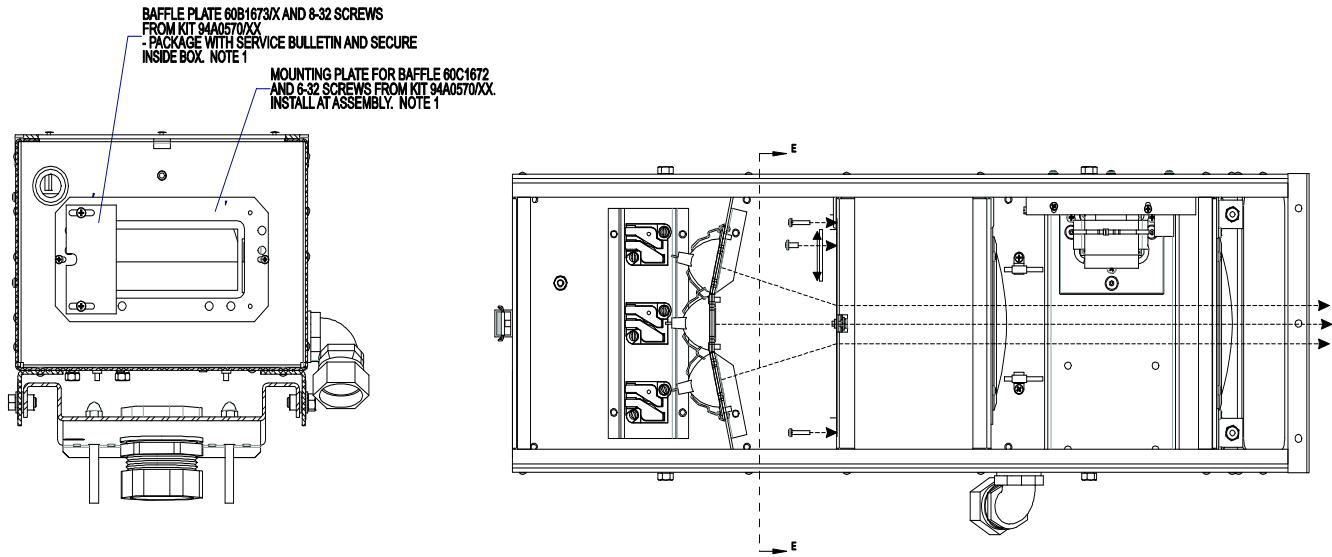
Figure 1.3. Baffle Located on Right Side of Enclosure Filter Bracket for Obstacle Located on Left Side



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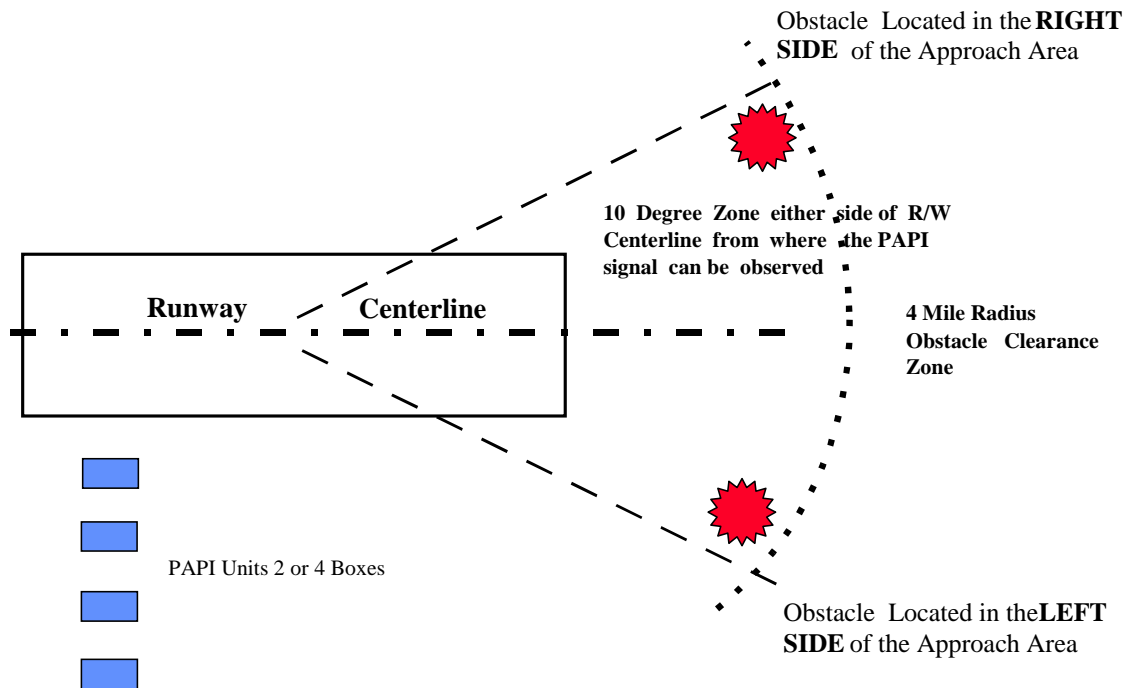
Modification Procedure

Figure 1.4. Baffle Located on Left Side of Enclosure Filter Bracket for Obstacle Located on the Right Side



Note: If both sides are obstructed, complete one side at a time.

Figure 1.5. PAPI Signal Viewing Zone



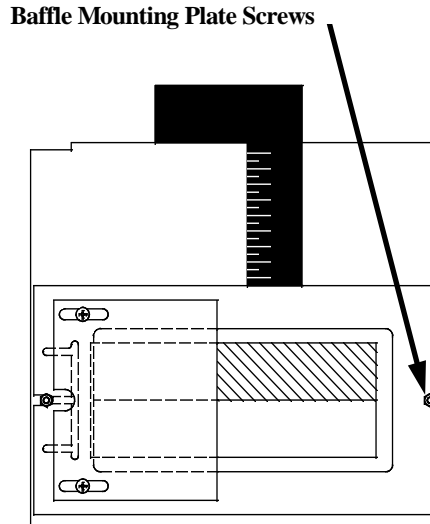
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5. Take a combination square or machinists' square of appropriate length, and square the Baffle Mounting Plate with the top edge of the filter Enclosure Filter Bracket. See Figure 1.6.

Figure 1.6. Squaring Top Edge of Baffle Mounting Plate



6. Using the #10-32 x 0.38 large screws, and hex nuts supplied with the baffle, install baffle as required for the application. Two #10-32 tapped holes are located in the Baffle Mounting Plate.

Note: Until the cutoff has been confirmed, the two screws should only be finger tight.

7. Apply power to the lamp.

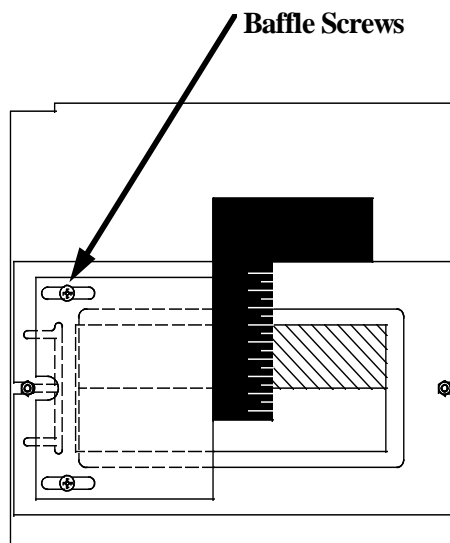
Note: It may be necessary to lower the PAPI unit in elevation for the individual to see the light beam. See manual 96A0379 for any required alignment adjustment.

8. Position someone equipped with a walkie-talkie at the edge of the obstacle or as far out from the edge the beam where cutoff is desired. Move the baffle along the aperture of the baffle mounting plate until the light beam cut-off is seen by the individual who is standing in front of the obstacle. Use a combination square to make sure the machined edge on the baffle is perpendicular to the top edge of the Baffle Mounting Plate. Tighten the two screws on the baffle. See Figure 1.7.

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Figure 1.7. Squaring Baffle Plate with Top Edge of Baffle Mounting Plate



9. Energize the lamp in the PAPI unit, and verify that the light beam cannot be seen by the individual stationed at the obstacle. If the light beam is visible, repeat Step 8.
10. Disconnect power from the PAPI unit, remove the jumper from tilt switch (if installed), and reinstall the red filter. The red filter's **ground edge must be installed facing down**. If the filter is dirty, use a soft cotton cloth moistened with alcohol to clean the filter.
After the filter has been reinstalled, recheck the cutoff to make sure it is correct for each PAPI Light Box. If the settings are correct, remove ONE SCREW AT A TIME AND PLACE A DROP OF LOCTITE 242, or equal, thread locking compound on the threads. Retighten the screws. Repeat this process for each screw used to secure the baffle.
11. Repeat Steps 1 through 13 for the remaining PAPI units in the system. The individual observing the horizontal cutoff for the PAPI units should remain at the same position for all observations.
12. If the PAPI units were lowered in elevation, the units will require realignment and the tilt switches will need to be leveled. Consult the subsection *Aligning Units* in the *Installation* sections of instruction manual 96A0379 for instructions to align the PAPI and level the tilt switches. Before putting the PAPI system into service, a flight check of the PAPI system is required to determine if all horizontal cutoffs of the PAPI beams are properly located relative to the obstacle(s).
13. **After the cut-off angle has been verified, remove jumpers** from the Tilt Switch by reversing the procedure as outlined in Step 8. In addition, see instruction manual 96A0379 to verify that the Tilt Switch is wired correctly **BEFORE PLACING PAPI IN SERVICE**.

Note: **CAUTION:** These adjustable baffles have been designed to be used in ADB Airfield Solutions' PAPI light boxes to alter the horizontal cut-off angle avoidance of obstacles. **The customer is responsible for the proper installation and verification that the horizontal cutoff produced by the baffles meets the requirements set by the FAA for obstacle avoidance.** Therefore ADB Airfield Solutions asserts that it be held harmless for the end use of the ADB Airfield Solutions PAPI in this special baffle application.

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