

CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

6850.5C
CHG 3

10/20/1999

SUBJ: MAINTENANCE OF LIGHTED NAVIGATIONAL AIDS

1. PURPOSE.

a. This change revises required equipment for the calibration of the output currents from the power and control assembly for the Visual Approach Slope Indicator (VASI) and the Precision Approach Path Indicator (PAPI). This directive implements Configuration Control Decision (CCD) No. N21550, 6850.5C VASI/PAPI True RMS.

b. This change has been reviewed and evaluated for impacts upon Y2K functionality and has no detrimental effect upon Y2K compliance issues.

2. DISTRIBUTION. This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: ALS, LDIN, MAL5, MALSR, ODALS, REIL, SALS, SSALR, SSALS, VASI, and PAPI.

3. DISPOSITION OF TRANSMITTAL. Retain this transmittal.

PAGE CONTROL CHART

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<u>Chapter 5</u>			
87 and 88	3/27/95	87 88	10/20/1999 3/27/95

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Distribution: Selected Airway Facilities Field
and Regional Offices, ZAF-603

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NOTE: Refer to the manufacturer's instructions for the specific location of measurement points.

- (a) Input voltage to the power and control assembly.
- (b) Input current to the power and control assembly.
- (c) Output currents, for each output of the power and control assembly or regulator, at all brightness levels.

* **NOTE:** This test requires the use of a true RMS multimeter such as a Fluke Model 87, Tektronix Model DMM914, or a Hewlett-Packard 973A. *

- (d) Elapsed time, if an elapsed time meter is installed.

(2) Compare all readings with previous readings and investigate the difference. A change may be an indication of impending failure. If readings are beyond tolerance, determine the cause and correct as required.

323. TILT SWITCH ADJUSTMENT.

a. Purpose. This check verifies that the tilt switches are properly adjusted and operate properly if a lamp housing assembly becomes misaligned.

b. Procedure.

(1) Refer to the manufacturer's instruction book for the detailed procedure for checking and adjusting the tilt switches.

(2) The tilt switch shall be adjusted to its normal operating position after the LHA has been aimed to the desired vertical angle.

NOTE: The VASI-2 and the PAPI systems require the use of tilt switches. The tilt switch deenergizes the lamps in the VASI-2 and PAPI systems when the optical pattern of the lamp housing is lowered between 0.25° and 0.5° , or raised

between 0.5° and 1° with respect to a preset position. The tilt switch features a 1-second delay in the opening of the normally closed switch contacts. A tilt switch closure of 10 seconds turns off the lamps in the system.

324. VERTICAL AND HORIZONTAL ALIGNMENT.

a. Purpose. These checks and adjustments insure that the vertical and horizontal alignment of the VASI/PAPI lamp housing assemblies (LHA) meets the operational requirements specified in chapter 3.

b. Discussion.

- (1) Vertical Aiming (Approach Path Angles).

(a) VASI. Aiming and obstruction clearance diagrams, figures 5-4 through 5-7, show the relationship between the effective visual glide paths, the aiming line of the upwind bar, the aiming line of the middle bar (where installed), and the aiming line of the downwind bar. Where an ILS and VASI (two-bar) serve the same runway, the glide slope angle and the effective visual glide path are the same. Therefore, if any change is made in the ILS glide slope angle, the VASI shall be adjusted immediately to conform with the new angle of the ILS glide slope. The box angle should be stenciled on the side of the box.

(b) PAPI. Aiming and obstruction clearance diagrams, figures 5-8 and 5-9, show the relationship between the effective visual glide paths, the aiming line of each light housing assembly. Where an ILS and PAPI serve the same runway, the glide slope angle and the effective visual glide path are the same. Therefore, if any change is made in the ILS glide slope angle, the PAPI shall be adjusted immediately to conform with the new angle of the ILS glide slope. The box angle should be stenciled on the side of the box.

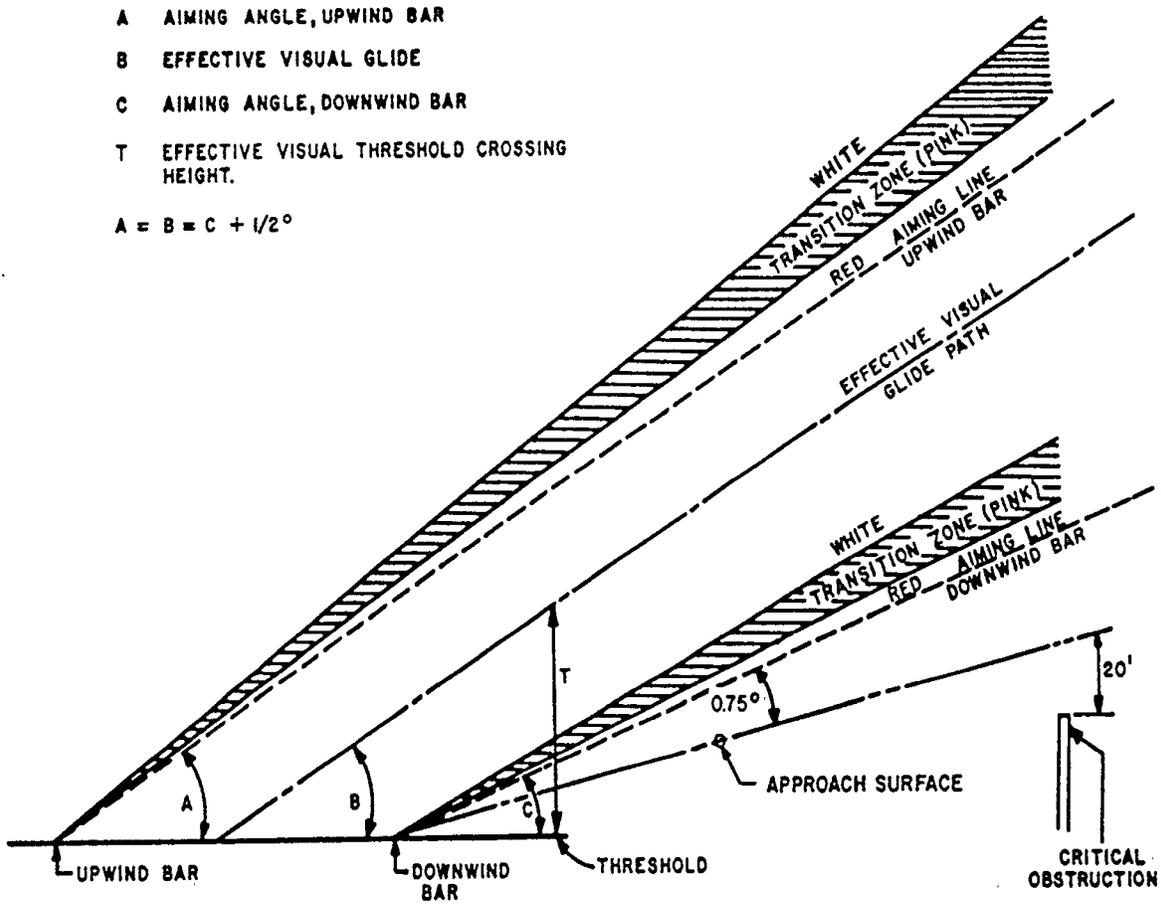


Figure 5-4. Aiming and Obstruction Clearance Diagram for Two-Bar VASI
 (Systems Installed Before March 18, 1974)