



815 BROADHOLLOW RD., FARMINGDALE, NY 11735 USA

SERVICE BULLETIN

MD-80 SERIES

COMMUNICATIONS, PASSENGER ADDRESS SERVICE INTERPHONE CALL SYSTEM (PASICS), ELECTRONIC SWITCHING UNIT P/N 686-3000-001 & -002; MODIFICATION OF PA CHANNEL #1 OUTPUT IMPEDANCE

1. PLANNING INFORMATION:

- A. Effectivity: Electronic Switching Units P/N 686-3000-001 & -002 S/N's 0001 thru 0776, used in the PASICS equipment aboard MD-80 series aircraft are affected. This change will be incorporated during manufacture of S/N 0777 and subsequent units.
- B. Reason: Connection of an auxiliary microphone to the PA CH#1 output of the ESU will cause a decrease in the PA volume because of the increased loading.
- C. Description: Performance of this bulletin entails replacing two (2) resistors and one (1) capacitor on the ESU Audio Circuit Card Assy (A2). Handling procedures must be in accordance with requirements of DOD-STD-1686 for electro-static sensitive devices (ESD).
- D. Approval: This modification is in accordance with units of current manufacture. Performance does not require approval by FAA or other regulatory agency.
- E. Manpower: It is estimated that 0.5 man-hour will be required per unit, when performance is concurrent with repair.
- F. Material - Cost and Availability:
 - (1) Telephonics Performance: Telephonics will incorporate this bulletin, at the current Service Center labor rate, in units returned for repair.
 - (2) Operator Performance: Kits, P/N SBK686-3000-2, for field accomplishment, will be supplied at the current price listed in the Telephonics Spare Parts Catalog. For kit information, refer to Section 3 - MATERIAL INFORMATION.



G. Tooling - Cost and Availability: None

H. Weight and Balance: None

I. References:

(1) Component Maintenance Manual with Illustrated Parts List, Electronic Switching Unit
P/N's 686-3000-001 and 686-3000-002 (ATA 23-44-32).

J. Publications Affected: Reference (1) at the next revision, to include information contained in
this bulletin.



2. ACCOMPLISHMENT INSTRUCTIONS:

THIS UNIT CONTAINS ELECTROSTATIC SENSITIVE DEVICES, HANDLE IN ACCORDANCE WITH REQUIREMENTS OF DOD-STD-1686.

A. Disassembly: Item references are per Figure 1 of this bulletin.

- (1) Remove cover (2) by removing ten each pan head screws (9) and flat washers (11).
- (2) Remove three each pan head screws (8) and flat washers (11) which secure A2 card assembly (3) to side of chassis (1).
- (3) Release retainers and disconnect electrical harness (5) from connector receptacle of A2 circuit card assembly (3).
- (4) Remove six each pan head screws (10), flat washers (11) and lock washers (12).
- (5) Remove A2 card assembly from unit.

B. Modification:

- (1) Using wooden or plastic scraper, strip red potting compound from angle bracket of A2 card assembly (3) and from the mating surface of chassis (1).
- (2) Desolder and remove resistors R5 and R6, and capacitor C10 from A2 card assembly. For orientation, refer to Figure 2 of this bulletin.
- (3) Install and solder 33.2K, 1/8W, 1% resistor (P/N RLR05C3322FM) in R5 position, 150 ohm, 1/4W, 2% resistor (P/N RLR07C1500GM) in R6 position, and 120pf, 200VDC, 10% (P/N M39014/22-0978) in C10 position of A2 circuit card assembly. Clip excess lead length on dip side of card.
- (4) Using an acid brush and isopropyl alcohol, clean soldering flux and debris from newly soldered areas. Allow to dry before proceeding to next step.
- (5) Apply conformal coating (Humi Seal 1B31) over newly soldered areas. Allow to dry before continuing.



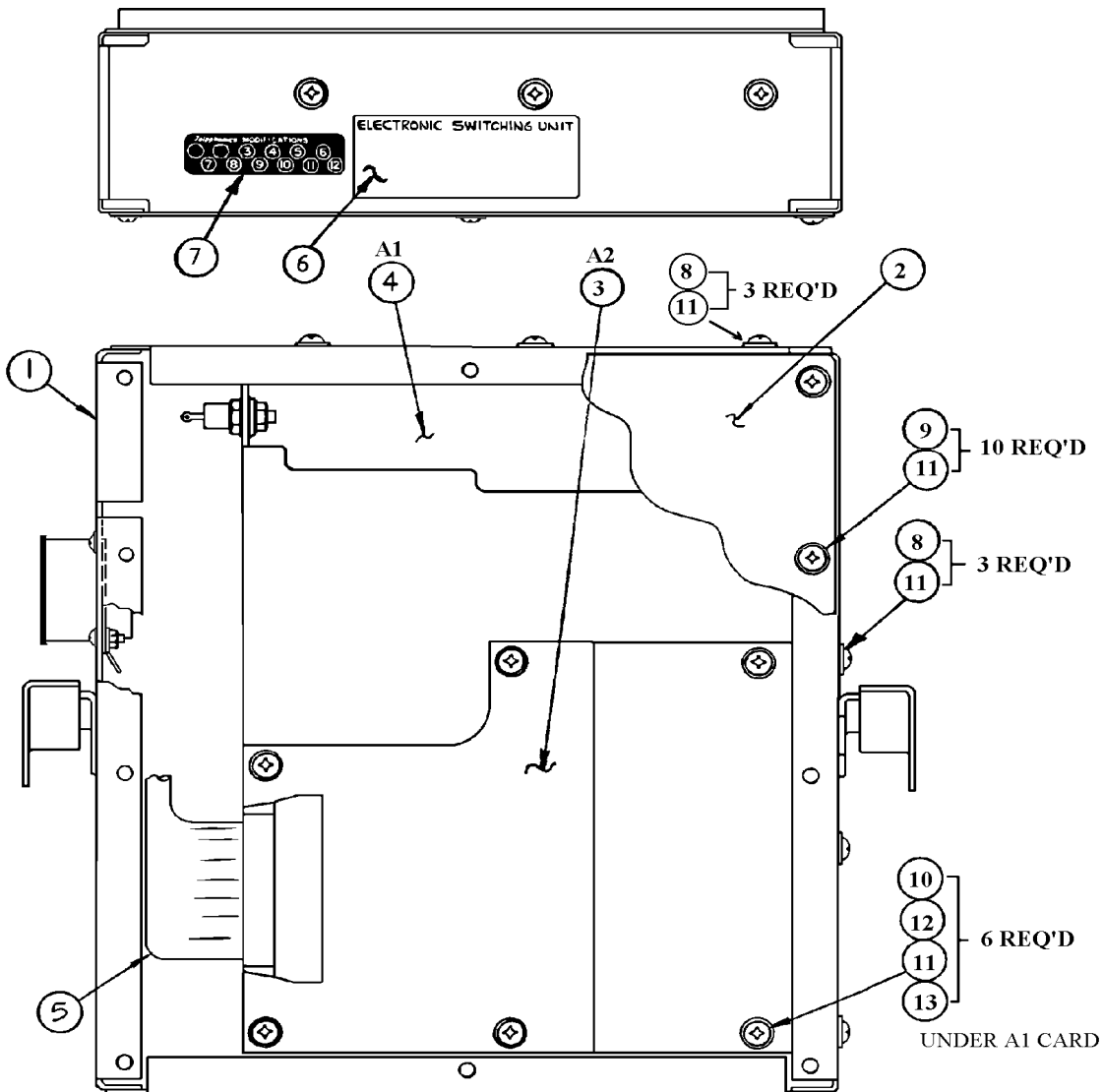
- (6) Identify incorporation of modification on card assembly as follows: On component side, in clear area to left of connector J1 and directly below the "MOD. 1" marking, print "MOD. 2" in 1/16 in. high characters. Use white epoxy ink.

C. Assembly, Test and Identification:

- (1) Mix a sufficient amount of thermally-conductive, silicone potting-compound (Emerson & Cuming Inc. STYCAST 4952), to replace that which was removed by step B. (1). (Mix thoroughly, and in proportions recommended by the manufacturer).
- (2) Apply a light, evenly spread coat of compound to surface of angle bracket of A2 card assembly. Without delay, seat A2 card assembly in unit and secure by installing three each pan head screws (8) and associated flat washers (11). Do not tighten screws at this time.
- (3) Install six each pan head screws (10), flat washers (11) and lock washers (12).
- (4) Tighten three screws (8) and six screws (10) in that order.
- (5) Connect harness assembly (5) to J1 receptacle of A2 card assembly (3).
- (6) Test unit in accordance with test procedure in Reference (1), except with the following changes to Test "L. Audio Test - Pilot PA Audio":

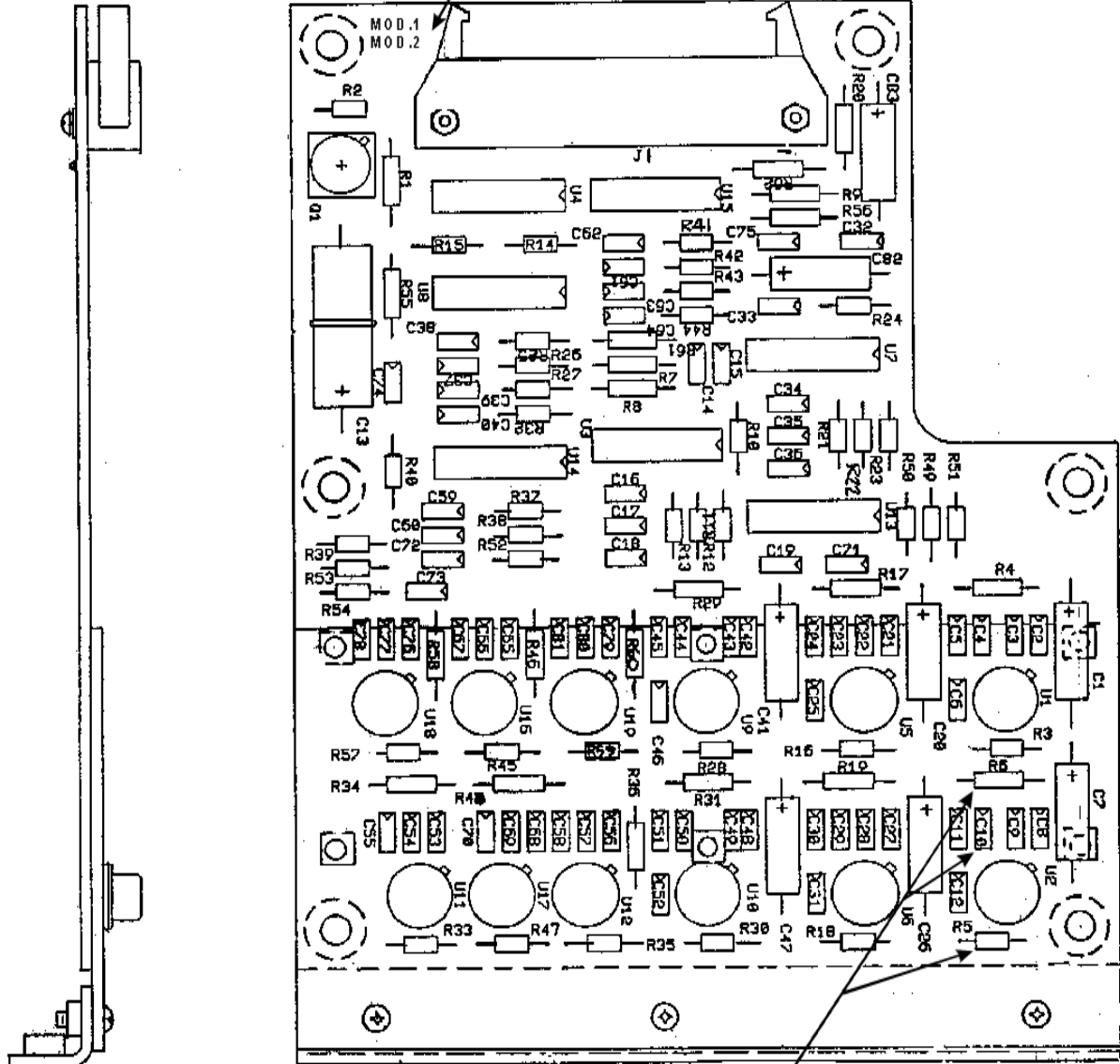
Step (6) - Output signal at DBP2 is 102mVp-p (35.5mVrms)
Step (8) - Output signal at DBP2 is 102mVp-p (35.5mVrms)
Step (10) - Output signal at DBP2 is 102mVp-p (35.5mVrms)
- (7) Install cover (2) and secure with ten each pan head screws (9) and flat washers (11).
- (8) Identify unit as follows:
 - (a) If not already installed, mount adhesive-backed modification record plate P/N 255B012 (7) one quarter inch to left of ID plate (6).
 - (b) Using black epoxy ink, obliterate circled numeral 2 of the plate (7), as shown in Figure 1.

ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	Chassis	8	Screw, Pan Hd. 8-32 x .38
2	Cover	9	Screw, Pan Hd. 8-32 x .50
3	ESU Audio Card (A2)	10	Screw, Pan Hd. 8-32 x 1.0
4	ESU Pwr Supply & Logic Card (A1)	11	Washer, Flat #8
5	Harness Assembly	12	Washer, Lock #8
6	Plate, Identification	13	Washer, Isolator
7	Plate, Mod. Record		



ESU ELECTRONIC ASSEMBLY, BASIC P/N 686-3000
FIGURE 1

PRINT IN WHITE EPOXY INK



APPLY THERMALLY-CONDUCTIVE
POTTING COMPOUND,
THIS SURFACE

CHANGE :	FROM	TO
R5	47.5K	33.2K
R6	10 Ohms	150 Ohms
C10	220pf	120pf

AUDIO CARD ASSEMBLY (A2) - COMPONENT LOCATION
FIGURE 2



3. MATERIAL INFORMATION: Material information is furnished on a unit basis.

A. Kits: Each kit, P/N SBK686-3000-2 consists of the following components.

<u>QTY</u>	<u>New P/N</u>	<u>Key Word</u>	<u>Old P/N</u>	<u>Dispo- sition</u>
1	RLR05C3322FM	Res., 33.2K, 1/8W, 1%	RLR05C4752FM	Scrap
1	RLR07C1500GM	Res., 150Ω, 1/4W, 2%	RLR07C10R0GM	Scrap
1	M39014/22-0978	Cap., 120pf, 200V, 10%	M39014/22-0987	Scrap
1	255B012	Plate, Mod Record	N/A	N/A

B. Material - Not Supplied: The following thermally conductive, silicone potting-compound is not supplied in kits:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>	<u>Source</u>
2cc	STYCAST 4952 Emerson & Cuming, Inc. Billerica, Mass.	Compound, Potting Silicone	*

* Find an Emerson & Cuming distributor on the Internet at: www.emersoncuming.com

C. Identification: Modified units are identified by obliteration of circled numeral 2 of a modification record plate affixed to the chassis, adjacent to the manufacturer's ID plate. Modified A2 circuit cards are identified by "Mod. 2" printed in white ink, on the component side.

D. Interchangeability: Modified and unmodified units are interchangeable.