

TO HOLDERS OF 38T MICROPHONE MANUAL

REVISION NO. 4 DATED OCTOBER 1988

HIGHLIGHTS

Pages which have been revised are outlined below together with the highlights of each change.

<u>Chapter/Section and Page No.</u>	<u>Description of Change</u>
All Pages	Non-technical style/format changes.
Title	Updated
Record of Revisions Page i	Revised to reflect this revision
List of Effective Pages Page ii	Revised to reflect this revision.
Contents Page iii	Revised to reflect this revision.
Description and Operation Pages 1 & 2	Switch specification: Changed "Push-to-talk sequential switching." to "Push-to-talk sequential switching (microphone part numbers 63999-001, -003, -004 and -005). Single switching (microphone part numbers 63999-000, -002 and -006)." Deleted "The push-to-talk switch is sequentially operated." from Operating Procedures.
Disassembly/Reassembly Page 3	Revised exploded view to reflect changes to microphone element and associated parts. Reference Service Bulletin AC-Mic-003 dated October 1988. Added notes to exploded view. Deleted note "Reassembly is the reversal of above procedures."
Page 4	Added "Reassembly is the reversal of the disassembly procedures."



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HIGHLIGHTS (Continued)

Chapter/Section and Page No.

Description of Change

Parts List
Page 4

Added quantity columns for the respective microphone part numbers. Revised part numbers to reflect changes to microphone element and associated parts: Item 5 was part no. 63919-000, item 8 was part no. 70391-000, item 9 was part no. 64244-000, item 13 was part no. 60904-033, item 14 was part no. 63928-000, item 15 was part no. 63913-004, item 16 was part no. 63928-001. Reference Service Bulletin AC-Mic-003 dated October 1988.

Wiring Diagrams
Page 5

Deleted contents of page 5. Changed wiring diagrams on page 5a to reflect microphone element change, and moved contents of page 5a to page 5. Deleted page 5a. Reference Service Bulletin AC-Mic-003 dated October 1988.

Test Circuit
Page 6

Modified test circuit for use with changed microphone element: 100 microfarad capacitor was 25 microfarad. Reference Service Bulletin AC-Mic-003 dated October 1988.

Troubleshooting Chart
Page 6

Changed "CHECK MICROPHONE ASSEMBLY" to "CHECK MICROPHONE ELEMENT".

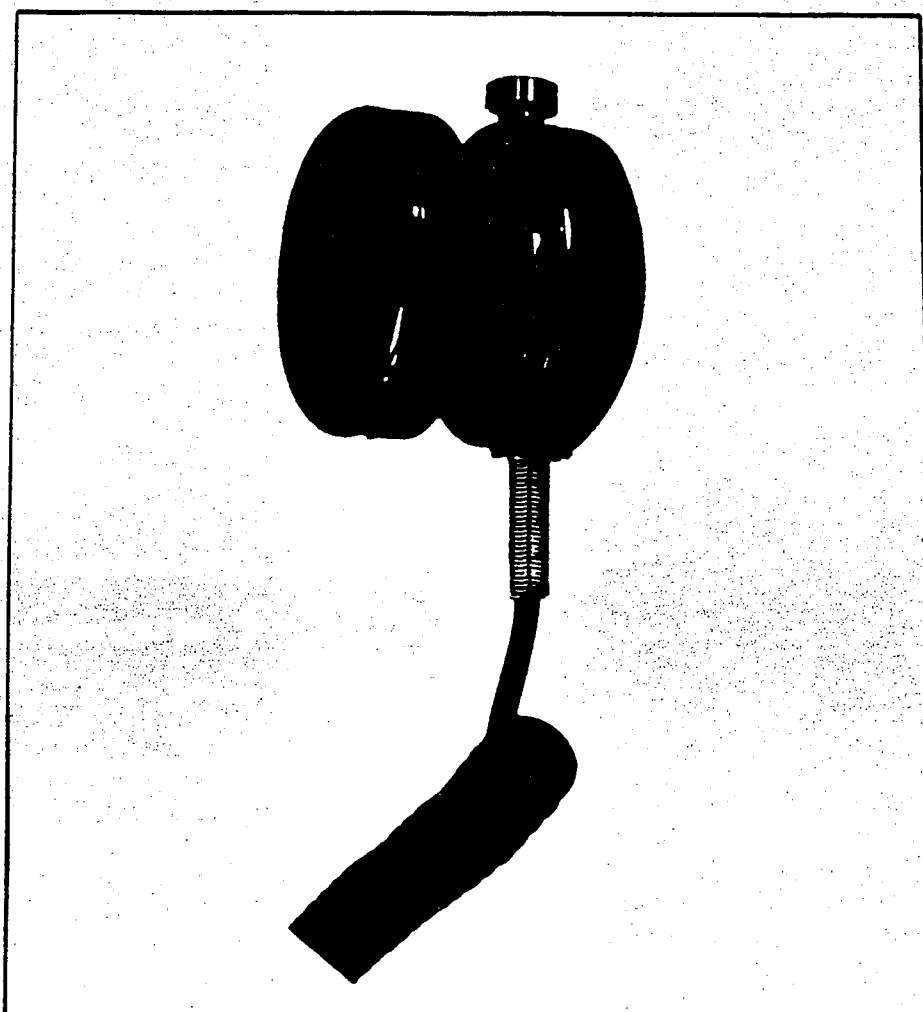
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**MAINTENANCE AND
OVERHAUL MANUAL**

MODEL 38T MICROPHONE

**MAINTENANCE AND
OVERHAUL MANUAL
FOR THE
MODEL 38T MICROPHONE**

**TELEX PART NUMBER 63999-000
THROUGH
TELEX PART NUMBER 63999-006**



MODEL 38T MICROPHONE

Figure 1

ATA 23-50-07



MODEL 38T MICROPHONE

RECORD OF REVISIONS

REV NO.	REVISION DATE	INSERTION DATE	PAGES EFFECTED	INSERTED BY
1	July 1986	July 1986	Cover, i, iii, 2, 3, 4, 5	Telex
2	Jan. 1987	Jan. 1987	Cover, i, iii, 3, 4, 5, 5a	Telex
3	July 1987	July 1987	Cover, i, ii, 2	Telex
4	Oct. 1988	Oct. 1988	All	Telex



MODEL 38T MICROPHONE

LIST OF EFFECTIVE PAGES

SUBJECT	PAGE	DATE
Title Page	—	Oct. 1988
Record of Revisions	i	Oct. 1988
List of Effective Pages	ii	Oct. 1988
Table of Contents, List of Illustrations	iii	Oct. 1988
Description and Operation	1, 2	Oct. 1988
Disassembly / Reassembly	3	Oct. 1988
Microphone Parts List	4	Oct. 1988
Wiring Diagrams	5	Oct. 1988
Test Circuit and Troubleshooting Chart	6	Oct. 1988

MODEL 38T MICROPHONE

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LIST OF ILLUSTRATIONS

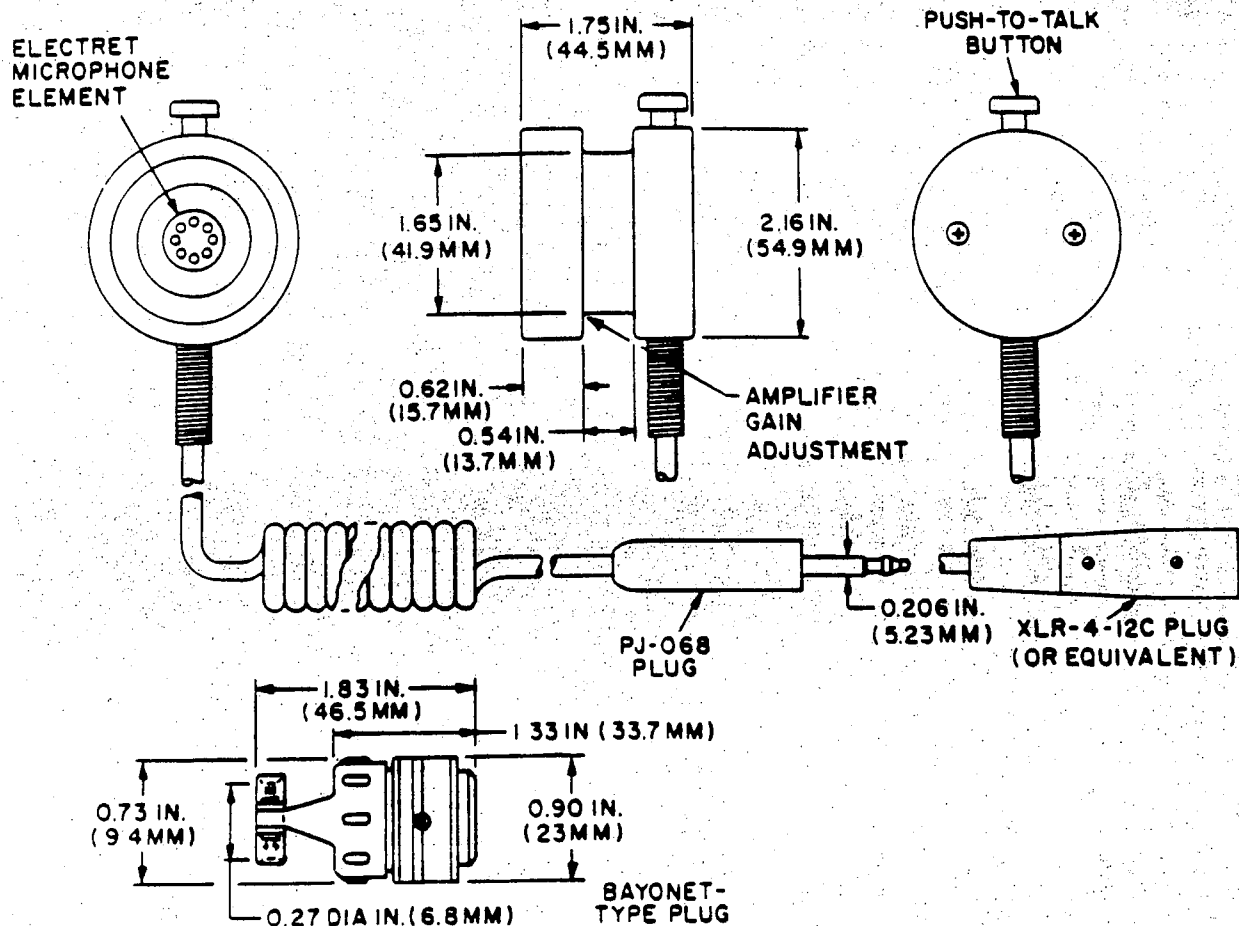
FIGURE NO.	DESCRIPTION	PAGE
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MODEL 38T MICROPHONE

1. DESCRIPTION AND OPERATION

A. General Description

The Telex Model 38T Microphone is designed for aircraft voice communications. The 38T is resistant to interference, hum and squealing induced by 400 Hz power systems. It contains an electret noise-cancelling microphone element. The solid-state amplifier is contained inside a high-impact-resistant plastic housing. The Model 38T is approved by the Federal Aviation Agency TSO-C58. Figure 2 shows an outline view and dimensions.



MICROPHONE OUTLINE DIMENSIONS
Figure 2

MODEL 38T MICROPHONE

1. DESCRIPTION AND OPERATION (CONT)

B. Specifications

Microphone Element: Electret.

Frequency Response: 300-3000 Hz (shaped for intelligibility).

Sensitivity: -54 ± 3 dB ref: $1V/\mu\text{bar}$ with test circuit (microphone part numbers 63999-000, -001, -002, -004, -005, -006).
 -48 ± 3 dB ref: $1V/\mu\text{bar}$ with test circuit (-003).

Impedance: 50-600 ohms.

Amplifier: Solid-state with output adjustable over approximate +5 dB range, 8-30 Vdc supply voltage required. Current drain, 12 mA with test circuit.

Switch: Microphone and relay contacts normally open. Push-to-talk sequential switching (microphone part numbers 63999-001, -003, -004 and -005). Single switching (microphone part numbers 63999-000, -002 and -006).

Cord: Coiled, four-conductor, 6 ft (1.8 m) extended.

Color: Black.

Plug: PJ-068 (M642/5-1), XLR-4-12C, or bayonet-type.

Weight: 8 oz (227 g).

C. Operating Procedures

- (1) Always talk close to the microphone. Operating performance is best when the top edge of the microphone is touching the upper lip.
- (2) The amplifier gain adjustment control is accessible through the side of the housing. Turning the control clockwise with a small screwdriver increases the output. The amplifier should always be adjusted by a qualified technician.

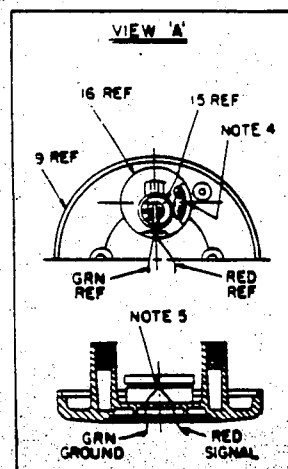
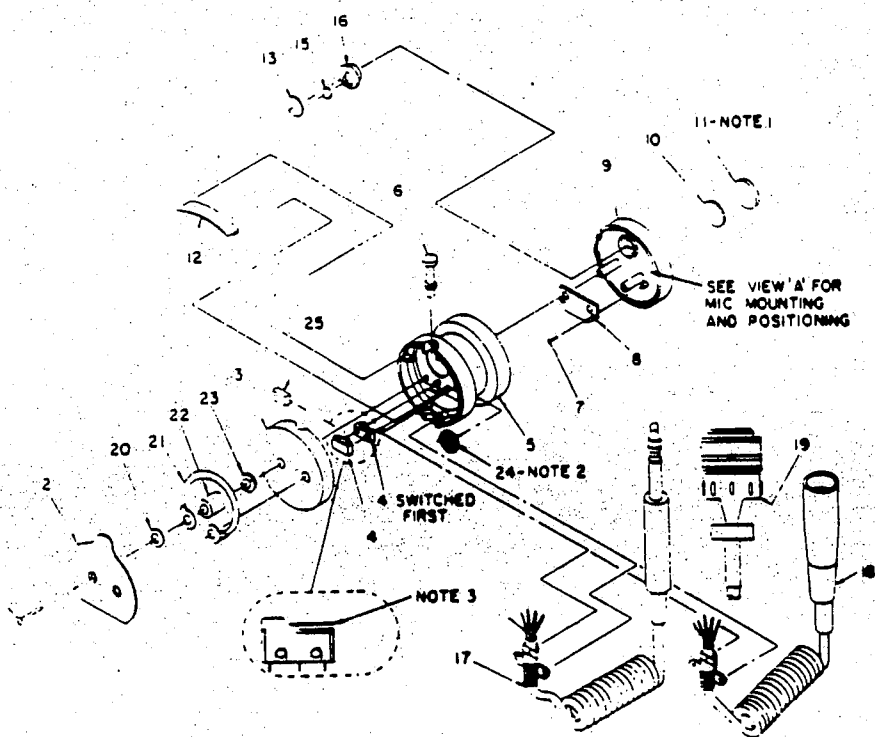
MODEL 38T MICROPHONE

2. DISASSEMBLY/REASSEMBLY

Reference Figure 3.

A. Disassembly

- (1) Remove screws (1) from the rear housing cover (3).
- (2) Remove the button (6) and tension spring (12) from the microphone housing (5).
- (3) Pull apart the front housing assembly (9) from the microphone housing (5).
- (4) Disconnect the two lead wires from the circuit board assembly (8).
- (5) Record the point of termination for both wires.



NOTES:

1. Cement item 11 to item 9 with methylene chloride.
2. Install item 24 over access hole after gain adjustment.
3. Cut switch lever flush with body.
4. Position notch in microphone mount at this location.
5. Seal at notch with solvent cement (MEK or acetone).

MICROPHONE EXPLODED VIEW
Figure 3

MODEL 38T MICROPHONE

2. DISASSEMBLY/REASSEMBLY (CONT)

B. Reassembly

Reassembly is the reversal of the disassembly procedures.

3. MICROPHONE PARTS LIST

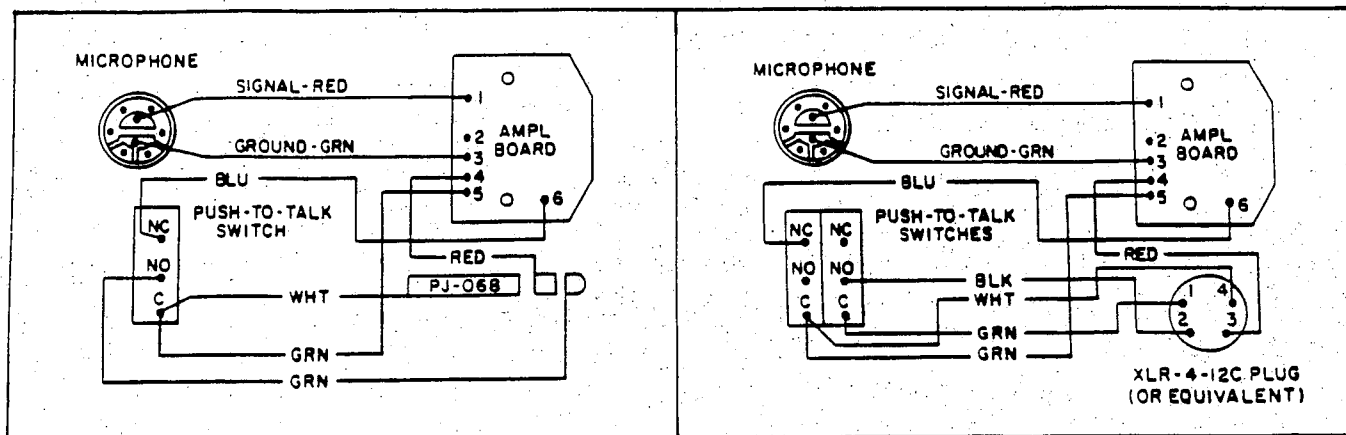
Reference Figure 3.

Item No.	Part No.	Description	Quantity						
			63999-000	63999-001	63999-002	63999-003	63999-004	63999-005	63999-006
1	51847-019	Screw, No. 4-40 x 1.250	-	-	2	2	-	-	-
	51845-046	Screw, No. 4-40 x 1.125	2	2	-	-	2	2	2
2	64245-000	Button Guard	-	-	1	1	-	-	-
3	63918-000	Rear Housing Cover	1	1	1	1	1	1	1
4	54591-001	Switch	1	2	1	2	2	2	1
R	63919-001	Microphone Housing	1	1	1	1	1	1	1
6	63915-000	Button	1	1	1	1	1	1	1
7	51856-000	Plastite Screw, No. 2-28 x 0.25	2	2	2	2	2	2	2
R	70391-001	Circuit Board Assy	1	1	1	1	1	1	1
R	64244-001	Front Housing Assy	1	1	1	1	1	1	1
10	63277-012	Foam Support	1	1	1	1	1	1	1
11	63927-000	Housing Cover	1	1	1	1	1	1	1
12	63953-000	Tension Spring	1	1	1	1	1	1	1
R	63124-018	Foam Disk	1	1	1	1	1	1	1
R	NA	Deleted	-	-	-	-	-	-	-
R	59807-000	Microphone Element	1	1	1	1	1	1	1
R	70399-000	Microphone Mount	1	1	1	1	1	1	1
17	62767-025	Cord Unit	1	-	1	-	-	-	1
18	62767-030	Cord Unit	-	1	-	1	-	1	-
19	62767-029	Cord Unit	-	-	-	-	1	-	-
20	52186-008	Internal Tooth Lock Washer	-	-	-	-	-	2	2
21	63412-001	Strap Assy	-	-	-	-	-	1	1
22	63410-001	Strap Spacer	-	-	-	-	-	2	2
23	50086-004	Split Washer	-	-	-	-	-	2	2
24	59798-003	Quick-dot Marker, Gray	1	1	1	1	1	1	1
25	30051-001	Foam Pad	1	-	1	-	-	-	1

63999 AD

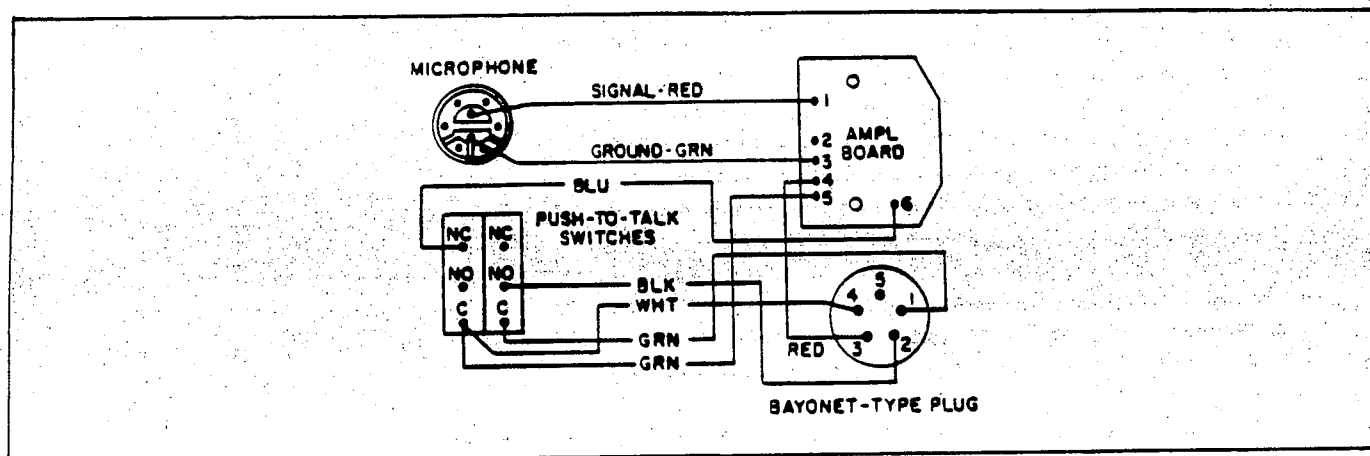
MODEL 38T MICROPHONE

4. WIRING DIAGRAMS



PART NUMBERS 63999-000, -002, -006
Figure 4

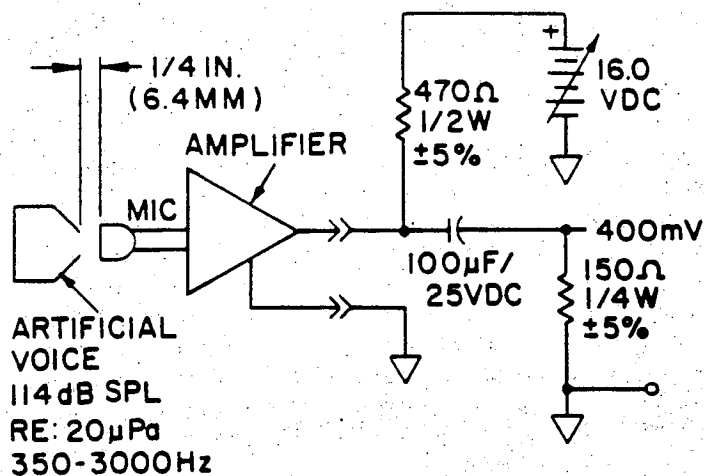
PART NUMBERS 63999-001, -003, -005
Figure 5



PART NUMBER 63999-004
Figure 6

MODEL 38T MICROPHONE

5. TEST CIRCUIT



TEST CIRCUIT
Figure 7

6. TROUBLESHOOTING CHART

	CHECK PLUG	CHECK AMPLIFIER	CHECK CORD	CHECK MICROPHONE ELEMENT	CHECK AMPL GAIN ADJUSTMENT
MICROPHONE INOPERATIVE	X	X	X	X	
MICROPHONE INTERMITTENT	X	X	X	X	
DISTORTED MICROPHONE SIGNAL		X		X	X
MICROPHONE LEVEL CANNOT BE ADJUSTED PROPERLY		X		X	X