

## TO HOLDERS OF 500T MICROPHONE MANUAL

REVISION NO. 8 DATED SEPTEMBER 1994

HIGHLIGHTS

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

Chapter / Section and Page No.	Description of Change
Title	Updated
Record of Revisions, Page i	Revised to reflect this revision.
List of Effective Pages, Page ii	Revised to reflect this revision.
List of Illustrations, Page iii	Update figure numbers and labels.
Microphone Parts List, Page 5	Updated items 10, 19, and 25 and added **note.
Figure 4, Page 6	Changed title data.
Figure 5, Page 7	Added single switch wiring diagram.

### MODEL 500-T SERIES MICROPHONE

#### MAINTENANCE AND OVERHAUL MANUAL FOR MICROPHONE MODEL 500T

TELEX PART NO'S 63333-000

-001

-002

-004

-005

-007

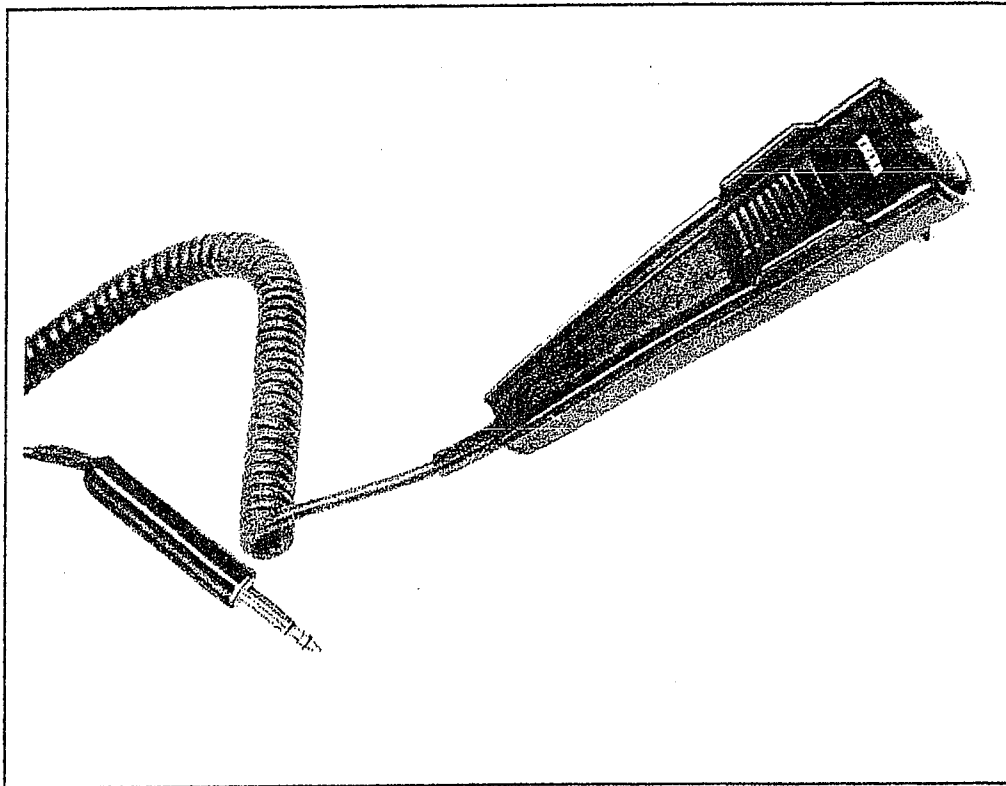


Figure 1  
MODEL 500-T MICROPHONE

# ATA 23-50-01

**MODEL 500-T SERIES MICROPHONE****RECORD OF REVISIONS**

REV NO.	REVISION DATE	INSERTION DATE	PAGES EFFECTED	INSERTED BY
1	Dec. 1975	Dec. 1975	1 thru 5	Telex
2	Oct. 1976	Oct. 1976	i thru 6	
3	June 1977		Cover,i,1,2	
4	July 1986	July 1986	All	Telex
5	Sept. 1988	Sept. 1988	i,ii,5 and 6	
6	May 1989	May 1989	Cover,i,ii,iii, 2,4,5 and 7	Telex
7	July 1989	July 1989	Cover,i,ii, 4 and 5	Telex
8	September 1994	September 1994	Cover,i,ii,iii,5,6 and 7	Telex



MODEL 500-T SERIES MICROPHONE

LIST OF EFFECTIVE PAGES

SUBJECT	PAGE	DATE
Title Page	-	September 1994
Record of Revisions	i	September 1994
List of Effective Pages	ii	September 1994
List of Illustrations/Table of Contents	iii	September 1994
Description and Operation	1	July 1986
Specifications and Operation	2	May 1989
Disassembly/Assembly	3	July 1986
Microphone Exploded View	4	July 1989
Microphone Parts List	5	September 1994
Wiring Diagrams(Dual switch version)	6	September 1994
Wiring Diagrams(Single switch version)	7	September 1994
Screen Cleaning Procedure/Gain Adjustment/Troubleshooting Chart	8	May 1989

**MODEL 500-T SERIES MICROPHONE****LIST OF ILLUSTRATIONS**

<b>FIGURE NO.</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
1	MODEL 500T MICROPHONE . . . . .	Cover
2	MICROPHONE OUTLINE DIMENSIONS . . . . .	1
3	MICROPHONE EXPLODED VIEW . . . . .	4
4	WIRING DIAGRAM (Dual Switch Version Pre 8/91) . . . . .	6
5	WIRING DIAGRAM (Single Switch Version Post 8/91) . . . . .	7
6	TEST CIRCUIT . . . . .	8

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2.0 DISASSEMBLY/ASSEMBLY . . . . .	3
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### MODEL 500-T SERIES MICROPHONE

#### 1.0 DESCRIPTION AND OPERATION

##### General

The Telex Model 500T is a noise-canceling, hand-held electret microphone designed for use in aircraft communications. The microphone assembly, push-to-talk switch, and solid-state amplifier are all contained within the high-impact plastic housing. It is approved for aircraft use under the Federal Aviation Agency TSO C-58. An outline diagram is shown in Figure .

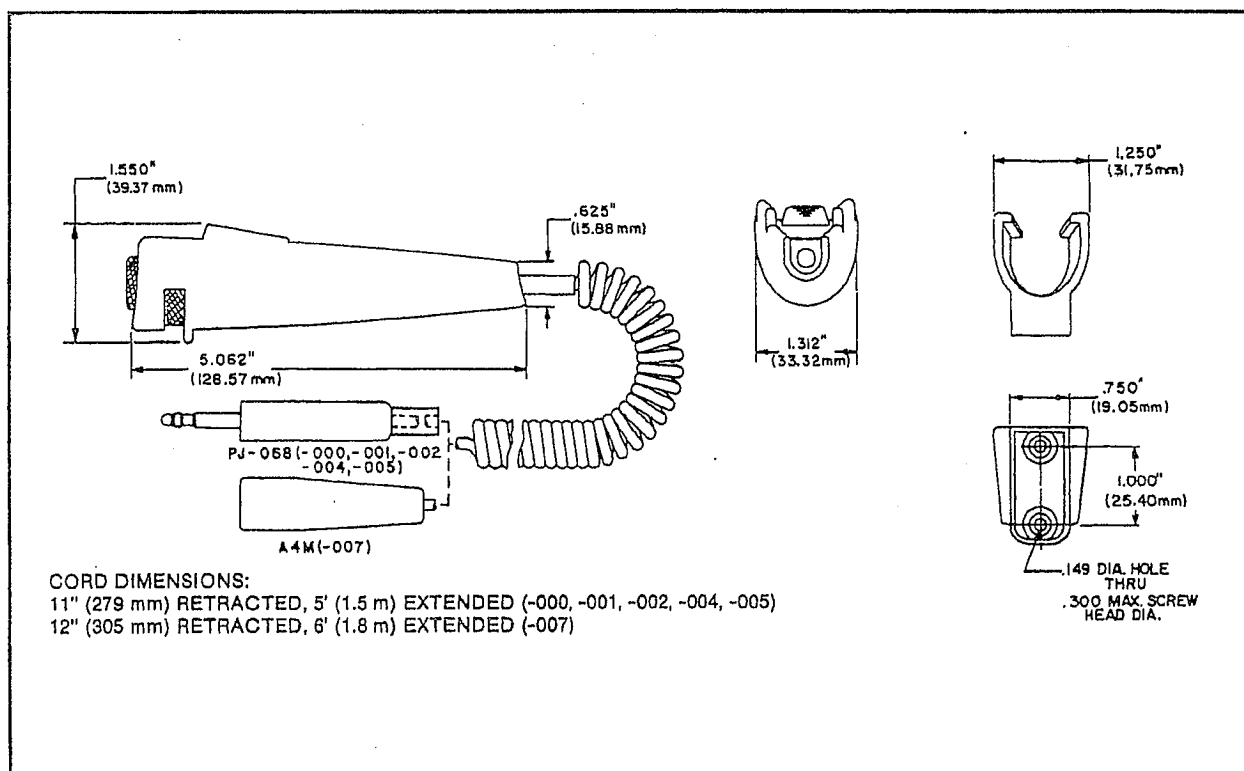


Figure 2  
MICROPHONE OUTLINE DIMENSIONS

### MODEL 500-T SERIES MICROPHONE

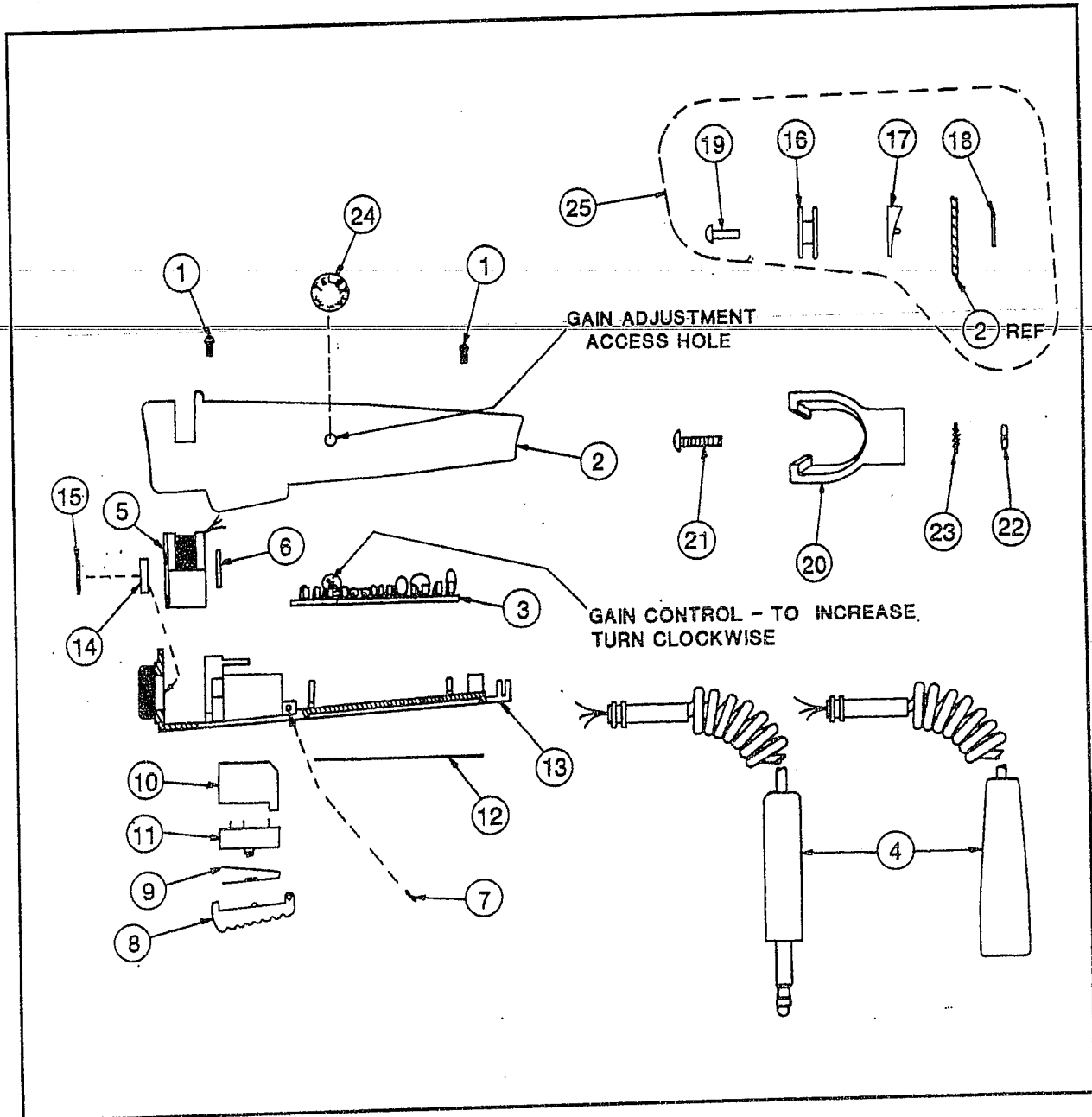


Figure 3  
MICROPHONE EXPLODED VIEW

### MODEL 500-T SERIES MICROPHONE

#### Microphone Parts List (Ref Figure 3)

Item No.	Part No.	Description	Qty Reqd
1	51856-000	Screw, Plastite, No. 2-28 x 1/4	2
2	62771-002	Housing (-002)	1
**	62771-003	Housing (-005)	1
	62771-004	Housing (-000, -001, -004, -007)	1
3	63337-000	Circuit Board Assy (-004)	1
	63337-002	Circuit Board Assy (-000, -001, -002, -005, -007)	1
4	62767-007	Cord Unit (-000, -001, -002, -004, -005)	1
	62767-023	Cord Unit (-007)	1
5	63334-000	Microphone Subassy (-004)	1
	63334-002	Microphone Subassy (-000, -001, -002, -005, -007)	1
6	35716-000	Cushion	1
7	70675-000	Pivot Pin	1
8	62768-000	Switch Button	1
9	63262-000	Spring, Tension/Actuator	1
10	63263-001	Housing, Switch	1
11	54591-008	Switch, SPDT	1
12	62786-000	Cover, Vinyl	1
13*	63335-000	Cover Assy (-004)	1
	63335-001	Cover Assy (-000, -001, -002, -005, -007)	1
14	63124-004	Foam	1
15	60904-017	Damping Cloth	1
16	63925-000	Hanger Button (-005)	1
17	63904-000	Spacer (-005)	1
18	52186-006	Washer, No. 4 (-005)	1
19	Ref	Rivet (-005) 1/8" x 0.50	1
20	62802-000	Bracket (-000, -001, -002, -004, -007)	1
21	51845-079	Screw, No. 6-32 x 0.75 (-000, -001, -002, -004, -007)	2
22	52188-008	Nut, No. 6-32 x 0.75 (-000, -001, -002, -004, -007)	2
23	50014-001	Lockwasher, Int Tooth, No. 6, (-000, -001, -002, -004, -007)	2
24	19587-002	Cover, Gain Adjustment Access, (-000, -001, -002, -004, -007)	1
25**	70690-000	Housing Assy (-005) w/Hanger Bracket	1

63333, Rev AN

63335, Rev A[1]

70675, Rev A

\* Items 14 and 15 supplied with item 13.

\*\* Item 25 includes Items 2, 16, 17, 18, 19 (assembled)

### MODEL 500-T SERIES MICROPHONE

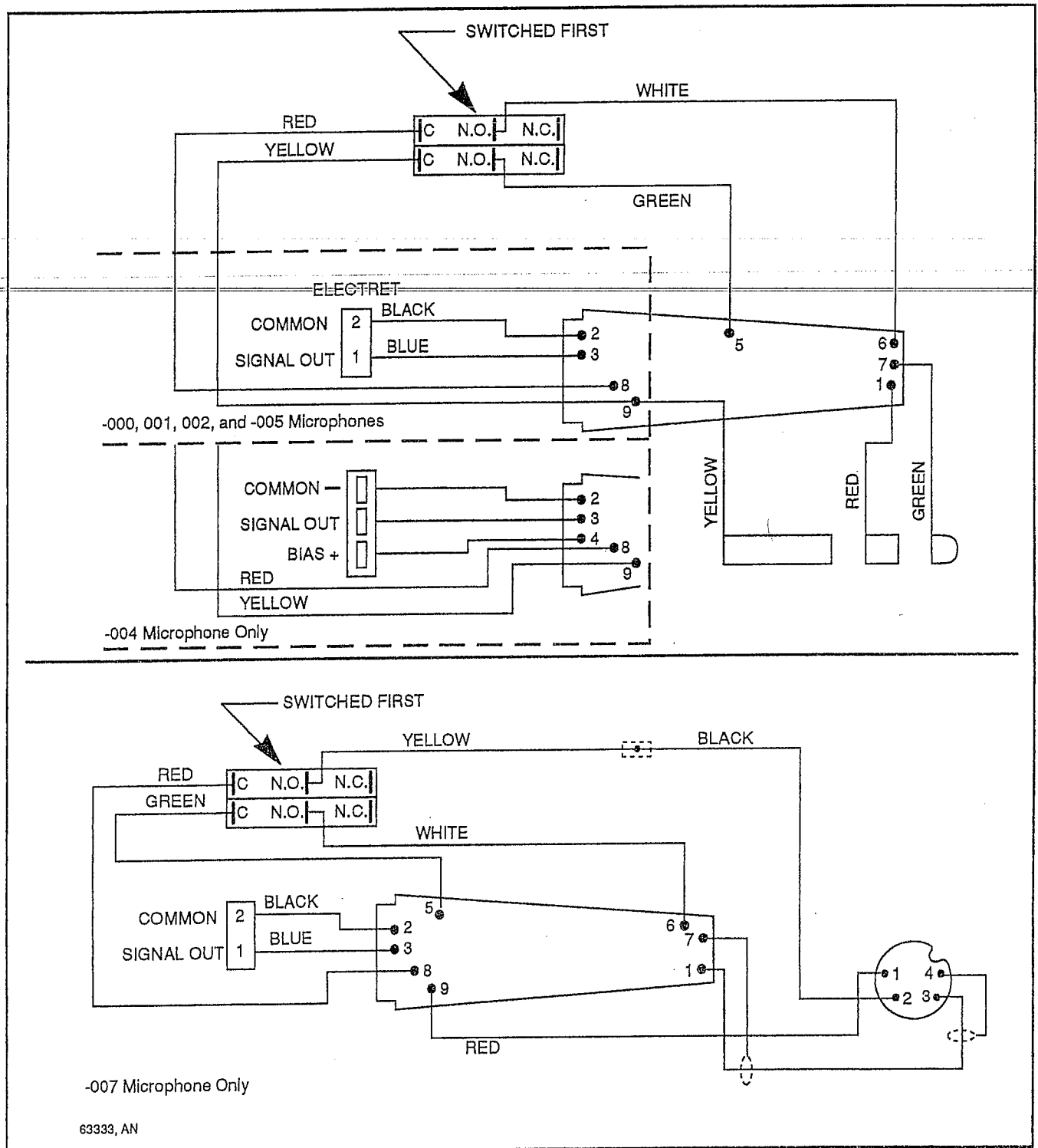


Figure 4  
WIRING DIAGRAM  
(Dual Switch Version Pre 8/91)

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### MODEL 500-T SERIES MICROPHONE

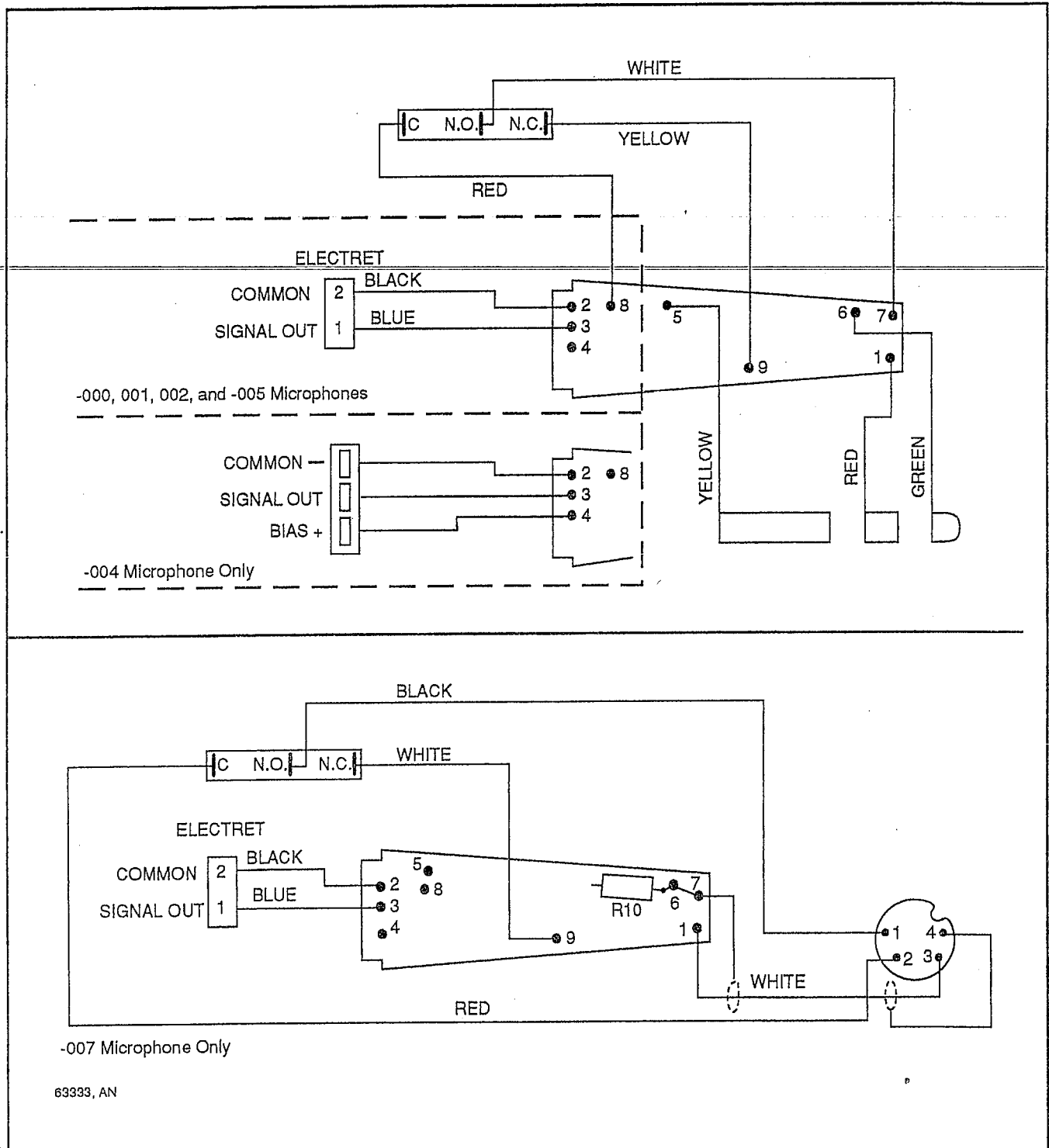


Figure 5  
WIRING DIAGRAM  
(Single Switch Version Post 8/91)

### MODEL 500-T SERIES MICROPHONE

#### 3.0 SCREEN CLEANING PROCEDURE

1. Recommended cleaning agent, isopropyl alcohol.
2. The microphone screen can be cleaned without disassembling the Microphone assembly. The screen should not be removed for cleaning.
3. Using a small brush saturated with the cleaning solution, brush the screen until clean. Do not submerge the assembly in the cleaning solution.

#### 4.0 GAIN ADJUSTMENT

1. Construct test circuit as shown in Figure .
2. Remove gain adjustment access cover (Figure 3, item 24).
3. Adjust gain through access hole using a small, flat-blade screwdriver or alignment tool to achieve specified output.
4. Replace gain adjustment access cover.

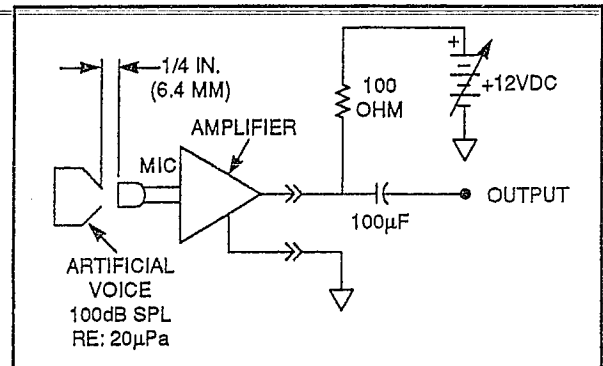


Figure 6  
TEST CIRCUIT

#### 5.0 TROUBLESHOOTING CHART

	CHECK PLUG	CHECK AMPLIFIER	CHECK CORD	CHECK MIC ASSEMBLY	ADJUST GAIN CONT
MICROPHONE INOPERATIVE	X	X	X	X	
MICROPHONE INTERMITTENT	X	X	X	X	
DISTORTED SIGNAL		X		X	X
MICROPHONE LEVEL TOO HIGH OR TOO LOW					X





**MODEL 500-T SERIES MICROPHONE****CORD DIMENSIONS:**

11" (279 mm) RETRACTED, 5' (1.5 m) EXTENDED (-000, -001, -002, -004, -005)

12" (305 mm) RETRACTED, 6' (1.8 m) EXTENDED (-007)

**Specifications**

Model: 500T

Frequency Response: 100-10,000 Hz

Sensitivity: -48  $\pm$ 3 dB re: 1V/ $\mu$ bar with test circuit (microphone part numbers 63333-000, -001, -002, -004)  
-51  $\pm$ 1 dB re: 1V/ $\mu$ bar with test circuit (microphone part numbers 63333-005, -007)

Impedance: Matches 50-600 ohms

Plug: PJ-068 (-000, -001, -002, -004, -005); A4M (-007)

Amplifier: Solid state, output adjustable approximately  $\pm$ 5 dB, 8-30 Vdc supply voltage required.

Amplifier: Current 15 mA at 12 Vdc, 100-ohm load.

Weight: 0.4 lbs (181 grams)

Switch: Microphone and relay contacts normally open.

Cord: Coiled, three-conductor black, retracted length 11 inches (279 mm), extended length 5 feet Cord: (1.5 m) (-000, -001, -002, -004, -005). Cord: Coiled, three-conductor black, retracted length 12 inches (305 mm), extended length 6 feet Cord: (1.8 m) (-007)

**1.0. Operation**

The solid state amplifier of the 500T Microphone operates from the current normally supplied to a carbon microphone transmitter. Output voltages are equivalent to carbon microphone levels. The output voltage is adjustable over a 10 dB range.