

1556A ALTALK AMPLIFIER

OPERATING INSTRUCTIONS

SPECIFICATIONS

- Input:**
- Aux: Pin jack for AM/FAA radio tuner, tape machine, etc.
 - Phono: Pin jack for record player (ceramic pickup).
 - Microphone: Phone jack for high impedance microphone.
 - Speaker - Microphone for intercommunication.
- Input Sensitivity:**
- Aux: 600 mv
 - Phono: 600 mv
 - Mic: 8.2 mv
 - Call-In: 1.1 mv (1 kc)
- Power Output:** 14 watts per EIA Standard RS234
10 watts at less than 2% THD
- Load Impedance:** 50 ohms (Balanced).
- Frequency Response:** Intercommunication: Shaped for optimum articulation.

- Phono and Aux: +/- 1 db 20c. to 10 kc
Microphone: — 3 db at 50c. and 15 kc

- Controls:** Intercom-Standby; Input Selector; Program-Talk-Listen; Normal-Return Speech; Listen Volume; Talk Volume; AC switch.

- Power Supply:** 117 volts, 50-60 cps, 65 watts

- Tubes:** 2 - 12AX7, 1 - 6DZ7, 1 - 6AX5

- Dimensions:** 5¹/₄" H. 19" W. 6¹/₂" D.

- Color:** Dark Green

- Weight:** 13 lbs.

- Accessories:** Altec 1557A Speaker Selector Switch Panel; 1558A Program Selector Switch Panel; 13718 Call-in Switch Plate Assembly.

DESCRIPTION

The Altec 1556A ALTALK amplifier is a self contained unit incorporating a 14 watt power amplifier. The unit provides intercommunication facilities and program services for use in high power, high quality intercommunication installations. The amplifier operates from 117 volts, 50-60 cycles power supply and the power consumption from the primary source is 65 watts.

The 1556A intercommunication unit is compact in design, requiring only 5¹/₄" of rack space. It is designed for standard 19" rack mounting and is finished in Altec green.

APPLICATIONS

The 1556A ALTALK unit was designed with the intent to satisfy the requirement of transmitting and receiving conversations at a central point to and from other locations by use of remote speakers. The 1556A can be used to great advantage in warehouses, large automotive shops, manufacturing facilities, airports, and many other areas where intercommunication will increase the efficiency of operation.

OPERATIONS AND USE OF CONTROLS

In order to utilize the 1556A ALTALK to its greatest advantage, the function of each control should be completely understood. Therefore, it is essential that the instructions noted below are followed very carefully. The controls for the operation of the 1556A ALTALK amplifier are identified numerically in figure 1.

FUNCTIONS

The ON-OFF power switch, control 1, is located on the front panel of the 1556A ALTALK unit. Power for the ALTALK unit is obtained from any standard receptacle that supplies 105-125 volt, 50-60 cycles AC current.

Separate volume controls for TALK and LISTEN, controls 2 and 3 are located on the front panel of the 1556A ALTALK unit (Figure 1). Each control is operated individually in order to achieve the desired level of listening and talking for all intercommunications (in and out).

INTERCOMMUNICATIONS

For "Master" to speaker area function set Intercom-Standby switch in Intercom position; select area to be called by setting proper selector switches on 1557A panel and press Program-Listen-Talk bar, control 4. Adjust outgoing sound level with Talk Volume, control 2. Release talk-listen bar to hear reply.

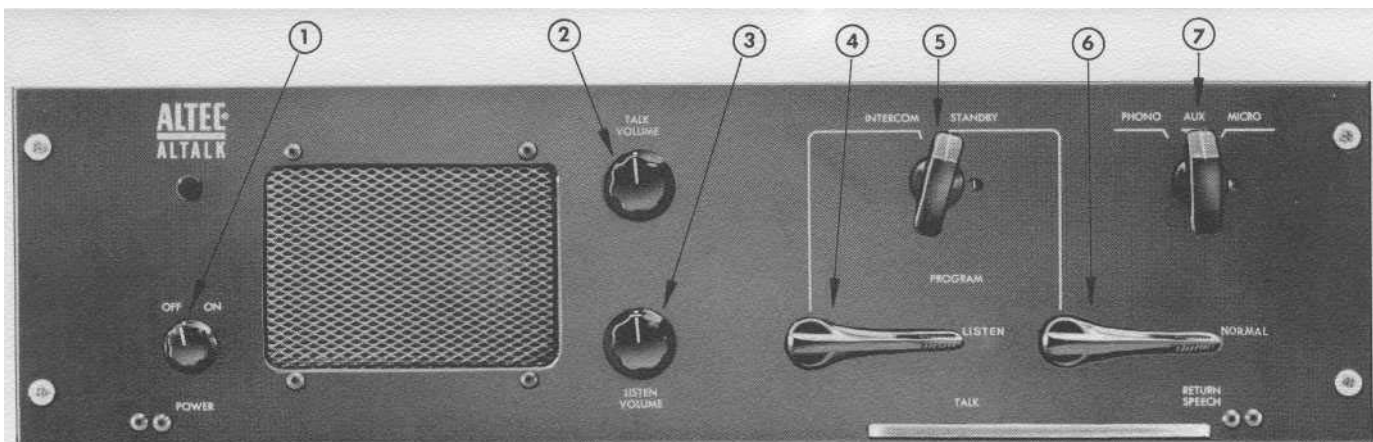
Note: After completion of call return Intercom-Standby switch to Standby position.

CALL-IN

For the "Master" to receive "call-in" from any remote area the Intercom-Standby switch must be in the Standby position and the Program-Listen-Talk bar, control 4 in the Listen position.

Simplicity of operation is achieved in answering the "call-in" by using the Normal-Return Speech bar, control 6. Simply press talk bar to answer and release to listen.





1. "ON-OFF" Switch

2. Talk Volume

3. Listen Volume

4. Program - Listen - Talk Bar

5. Intercom - Standby Switch

6. Normal - Return Speech Bar

7. Phono - Aux. - Micro Switch

Figure 1

Note: When this control is used the switch on 13718 Call-in unit must be held in "call" position.

PRIVACY CIRCUIT

One of the outstanding features of the Altec 1556A ALTALK unit is the incorporation of a Privacy Circuit. The use of the Privacy Circuit assures privacy (freedom from supervisory monitoring) in all remote areas. A more detailed description of this feature can be found on Instruction Sheet No. 13765, of 13718 Call-in Switch Plate Assembly.

ALL CALL

This facility is not furnished as part of the 1556A or 1557A units, however the I.C. - OFF - CHAN A and CHAN B switch positions on the 1557A are "bussed" and wired to the terminal panel for connection of relay or manual switching facilities.

PROGRAM

Set Intercom-Standby switch control 5, to Standby position; set Program-Listen-Talk bar, control 4 to Program. Any radio program material (AUX) or record player material (PHONO) will be heard thru the Speaker-Microphone on the "Master". Establish the sound level by adjusting Listen Volume, control 3.

Auxiliary and Phono input sources are connected to pin jacks on the rear of the 1556A ALTALK unit, and selection of desired input source is accomplished with Phono-Aux-Micro selector switch, control 7.

MICROPHONE

A high impedance microphone may be connected to the phone jack at the rear of the 1556A "Master". This microphone may be located remote from the "Master" for program pickup. When using microphone in this manner control 7 must be in the Micro position and the Program-Listen-Talk bar in the Program position.

Note: When Phono-Aux-Micro inputs are in use the "call-in" feature is inoperative. After use, return control 4 to Listen position and control 5 to Standby position.

SINGLE AND DUAL CHANNEL PROGRAM DISTRIBUTION

Program material may be distributed simultaneously with intercommunication facilities by adding separate program amplifiers (Altec amplifiers such as model 356A, 1568A, etc., are recommended). Block diagrams, figures 2 and 3 show typical single and dual channel systems.

In these systems program material is amplified separately, permitting intercommunication service thru the 1556A ALTALK to continue without program interruption.

WIRING

Connect 2 conductor #22 AWG or larger twisted pair between terminals 3 and 4 on 1556A terminal strip to "I.C." terminals on 1557A Speaker Selector Switch Panel.

Connect loudspeakers and 13718 Call-In Switch Plate Assembly to 1557A Speaker Selector Switch Panel using 2 conductor #22 AWG or larger twisted pair to numbered terminals. (In many installations shielded pair cable may not be required for this circuit.)

Call-in and Privacy circuit must be 2 conductor shielded #22 AWG or larger twisted pair. Connect conductors to terminals 1 and 2 and shield to terminal 8 on 1556A terminal strip.

Note: Installation may be simplified by looping "call-in" circuit wiring from one speaker location to another.

MAINTENANCE

Since the Altec 1556A ALTALK Amplifier utilizes high quality parts, that operate within their specified ratings, the need for routine maintenance is minimized.

In the event that the 1556A ALTALK fails to operate properly, all external wiring should be checked immediately, as loose wiring or inadequate connections will result in noisy and intermittent operation. Be extremely careful that no exposed wires come into contact with other wires, terminals, parts of the chassis or any other metal surfaces.

PARTS LIST

C1	0.001 mfd $\pm 20\%$,500 volt Disc.	R19	1,200 ohm $\pm 10\%$, $\frac{1}{2}$ watt
C2,3,10,11,12	.01 mfd GMV, Goodall Epoxy Disc.	R21, 22	47 ohm $\pm 10\%$, 1 watt
C4A, 4B, 4C	15-30-20 mfd, 400-300-250 Mallory PFP	R23, 24, 25, 26	1,000 ohm $\pm 10\%$, $\frac{1}{2}$ watt
C5, 6, 7	.047 mfd, 400 volt Micromold Tropicap	R27	62,000 ohm $\pm 5\%$, $\frac{1}{2}$ watt
C8	40 mfd, 450 volt, Mallory FP146	S1	On-Off Switch - Altec 12536
C9	50 mfd, 25 volt TC 29	S2A, 2B, 2C	Program - Listen - Talk Switch Altec 13612
R1, 6, 8, 20	47,000 ohm $\pm 10\%$, $\frac{1}{2}$ watt	S3	Phono - Auxiliary - Micro Switch Altec 13610
R2	3.3 megohm $\pm 10\%$, $\frac{1}{2}$ watt	S4	Intercom - Standby Switch Altec 13609
R3, 4, 9	330,000 ohm $\pm 10\%$, $\frac{1}{2}$ watt	S5	Normal - Return Speech Switch Altec 13611
R5	Potentiometer - Altec 12508	SR-1	Rectifier - Selenium - Carl Holmes S-3W5PL-HD7
R7	3,300 ohms $\pm 10\%$, $\frac{1}{2}$ watt	T1	Input Transformer - Altec 4782
R10	1 meg ohms $\pm 10\%$, $\frac{1}{2}$ watt	T2	Output Transformer - Altec 16612
R11, 12	100,000 ohms $\pm 10\%$, $\frac{1}{2}$ watt	T3	Power Transformer - Altec 6302
R13, 14	270,000 ohms $\pm 10\%$, $\frac{1}{2}$ watt	VI, 2	12AX7 Vacuum Tube
R15	18,000 ohms $\pm 10\%$, $\frac{1}{2}$ watt	V3	6DZ7 Vacuum Tube
R16	Potentiometer - Altec 13614	V4	6AX5 Vacuum Tube
R17	500 ohm, 5 watt Axial Lead		
R18	3,900 ohms $\pm 5\%$, 1 watt		

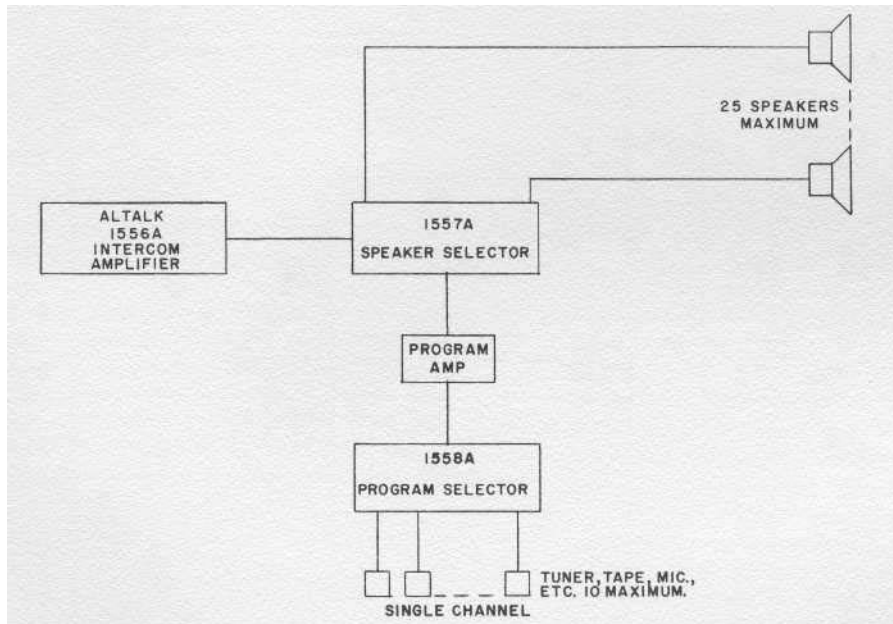


Figure 2

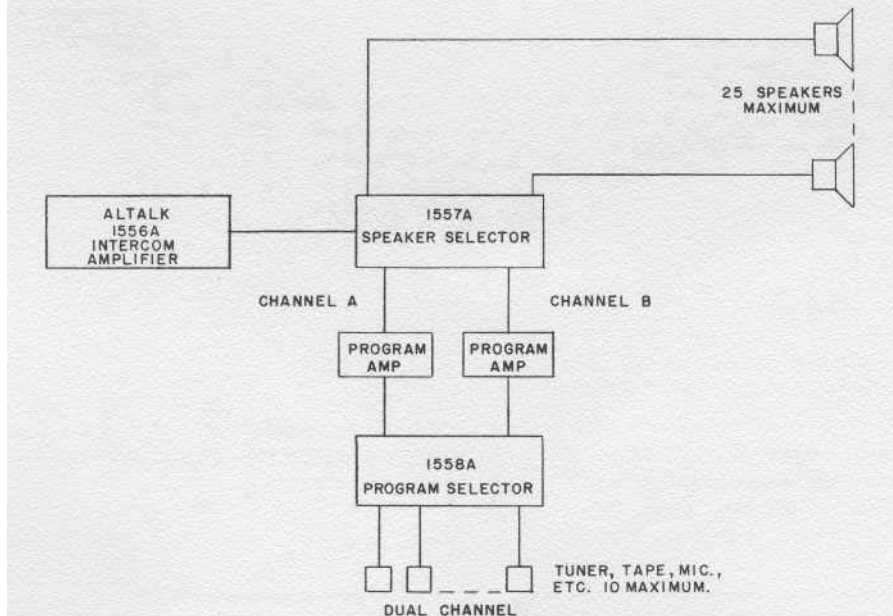
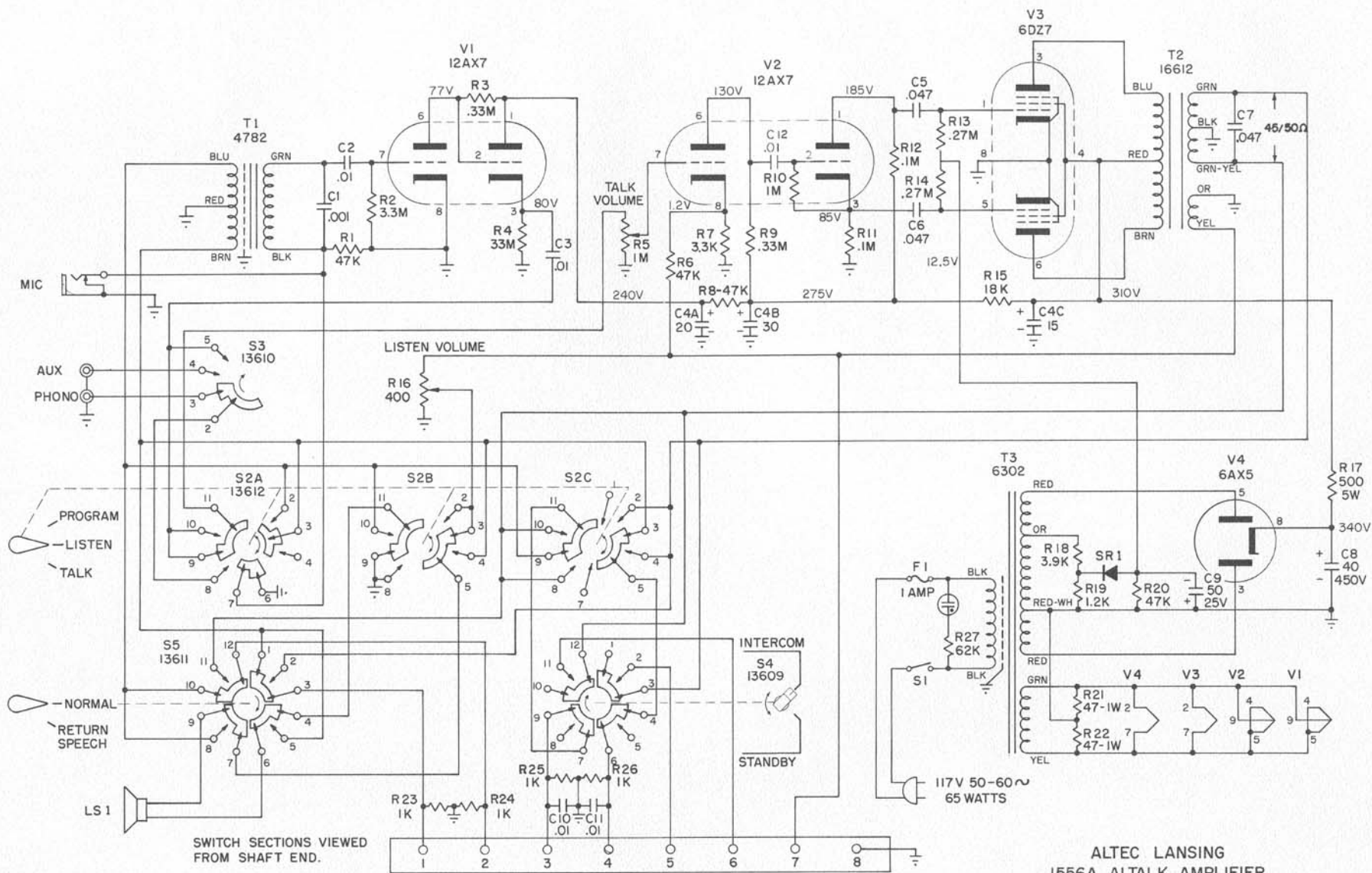


Figure 3



ALTEC LANSING
1556A ALTALK AMPLIFIER

LEGEND

Ω = OHMS
K = 1,000 Ω
M = 1,000,000 Ω
ALL CAPACITANCE IN MFD
UNLESS OTHERWISE INDICATED.

- NOTE 1: FOR CONNECTION TO ALTEC 15230 25 VOLT LINE MATCHING TRANSFORMER.
NOTE 2: FOR EXTERNAL AMPLIFICATION OF PROGRAM MATERIAL ONLY.
NOTE 3: FOR EXTERNAL AMPLIFICATION OF BOTH PROGRAM AND INTERCOM SIGNALS.

CALL IN
NORMAL I.C.
(NOTE 1)
CHANNEL OUTPUT
(NOTE 2)
DRIVER OUTPUT
(NOTE 3)

FIRST MADE FOR
TOLERANCES EXCEPT AS NOTED: FRACT. ± 1/64" DEC. ± .003" HOLE SIZES 0 TO 1/8" ± .001 OVER 1/8" ± .005 ANGULAR ± 1/2°

ISSUE	APPROVED	DATE	CHANGE
1		12-9-60	
2		5-4-61	ADDED C12
3		4-23-62	ALTALK WAS "TALK BACK", ADDED NOTES 1, 2, 3, 45/50 WPS 50
4		2-2-62	R15 12AX7, S1

ALTEC
ANALOG ELECTRONICS
ANAHEIM, CALIFORNIA

SCHEMATIC
1556A ALTALK
AMPLIFIER

DR. BY F.L.G. 7628-4