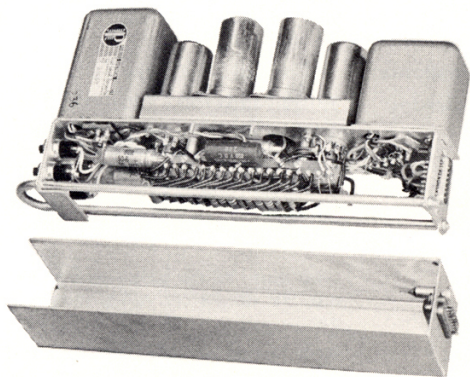
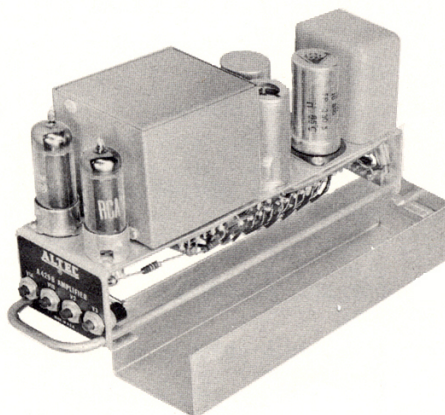


428B and 429B Preamplifiers

428B
429B



428B with 11301 Cover Tray
shown separately



429B with 11302 Cover Tray
shown separately



Full broadcast quality
 ± 1 db, 20-20,000 cps
Plug-in
Tube testing facility
Compact
Low noise
Low distortion
Flexible
Stable circuits

Designed to meet the full FCC requirements for quality broadcasting, these two outstanding miniature units are invaluable in the design and assembly of elaborate recording, public address and sound distribution systems. They are of the plug-in type and have gold plated contacts to assure perfect continuity when inserted in their accessory cover trays and mating receptacles. This plug-in facility allows rapid replacement of the entire unit in case of tube failure or other malfunction. In addition, push buttons are provided on the end of the units for use in testing individual tubes.

The Altec 428B is a straight-forward preamplifier having either 40 db or 34 db of gain to accommodate the highest microphone levels without distortion and the lowest levels at the ultimate signal-to-noise ratio. Its compact size makes it easy to install in custom consoles in whatever numbers are required. Its ± 1 db from 20 to 20,000 cps frequency response, low distortion and noise level and stable circuitry are compatible with the finest audio system.

The Altec 429B is a line or monitor amplifier of the same quality as the 428B. As a line amplifier it can be used for feeding program distribution lines, remote amplifiers or other comparable applications. Installed as a system monitor amplifier, it will deliver 8 watts of audio power with less than 1% harmonic distortion and when associated with an adequate speaker system will permit checking the content and quality of the program material.

Power for these units is obtained from the companion Altec 522B Power Supply which is of the same miniature size for compatible mounting. The reliable circuitry, stability of operation and rugged construction of these units virtually eliminates "down time" in broadcasting and recording and gives the same operational assurance when used in public address and sound systems.

ALTEC[®]
LANSING CORPORATION

1515 S. Manchester Ave., Anaheim, Calif.

New York, Los Angeles

428B SPECIFICATIONS

Gain:	40 db normal. May be connected for 34 db
Power Output:	+ 20 dbm at less than 1/2% thd, 50-15,000 cps + 20 dbm at less than 1% thd, 30-15,000 cps
Frequency Response:	± 1 db, 20-20,000 cps
Source Impedance:	30/50, 125/150, 250/300, 500/600 ohms. Center tap available for 125/150 and 500/600 ohm connections.
Load Impedance:	30/50, 125/150, 250/300, 500/600 ohms. Center tap available for 250/300 and 500/600 ohm connections.
Noise Level:	Output noise —80 dbm: 100 db below rated output Equivalent input noise —120 dbm
Controls:	Push button switches for testing tube currents using external meter (meter not supplied)
Power Supply:	260 vdc at 10 ma, 6.3 vac at 0.6 a.
Tubes:	Two 12AY7
Dimensions:	4 3/4" H, 1 1/2" W, 10" D
Color:	Cadmium plate
Weight:	3 lbs.
Accessories:	11301 cover tray and mating receptacle. Must be ordered separately.

429B SPECIFICATIONS

Gain:	50 db
Power Output:	Line amplifier connection, + 30 dbm at less than 1/2% thd, 30-15,000 cps. Monitor amplifier connection, + 39 dbm (8 watts) at less than 1% thd, 50-15,000 cps
Frequency Response:	± 1 db, 20-20,000 cps
Source Impedance:	30/50, 125/150, 250/300, 500/600 ohms. Center tap available for 125/150 and 500/600 ohm connections.
Load Impedance:	125/150 and 500/600 ohms. Center tap available for 500/600 ohm connection.
Noise Level:	—60 dbm: 90 db below rated line output, 99 db below rated monitor output
Controls:	Push button switches for testing tube currents using external meter (meter not supplied)
Power Supply:	270 vdc at 35 ma, 6.3 vac at 1.2 a. (line amplifier connection) 270 vdc at 70 ma, 6.3 vac at 1.2 a. (monitor amplifier connection)
Tubes:	One 12AY7, two 6AQ5
Dimensions:	4 3/8" H, 2 1/4" W, 10" D
Color:	Cadmium plate
Weight:	4 1/2 lbs.
Accessories:	11302 cover tray and receptacle. Must be ordered separately.

428B ARCHITECTS AND ENGINEERS SPECIFICATIONS

The power supply shall be of the plug-in type having provisions for mounting in a rack unit or frame which rack unit shall have a hinged front for rapid removal or insertion of the preamplifier into the circuit. Any preamplifier not including these features shall not be acceptable under these specifications.

Power output shall be + 20 dbm at less than 1/2% total harmonic distortion over the range from 50 to 15,000 cycles and + 20 dbm at less than 1% total harmonic distortion over the range of 30 to 15,000 cycles. The distortion shall not exceed these values with an input signal of —20 dbm.

The frequency response shall be ± 1 db from 20 to 20,000 cycles. The input transformer shall not have less than 90 db magnetic shielding. The noise level shall be —80 dbm: 100 db below rated output. The over-all gain of this preamplifier shall be 40 db normal with connections for 34 db gain. Source impedance shall be 30/50, 125/150, 250/300, 500/600 ohms. There shall be a center tap available for 125/150 and 500/600 ohm connections. The load impedance shall be 30/50, 125/150, 250/300, 500/600 ohms with a center tap available for 250/300 and 500/600 ohm connections.

Equivalent input noise shall be —120 dbm. There shall be push-button switches for testing tube currents by a separate external meter. The power requirements for this preamplifier are 260 vdc at 10 ma, 6.3 vac at 0.6 a. The power supply used in connection with this preamplifier shall be one having similar plug-in connections and shall have the same depth as the preamplifier. The tube complement shall be one 12AY7 and two 6AQ5. The unit shall be finished with cadmium plating and shall weigh in the order of 3 lbs.

This preamplifier shall be Altec Lansing Model 428B.

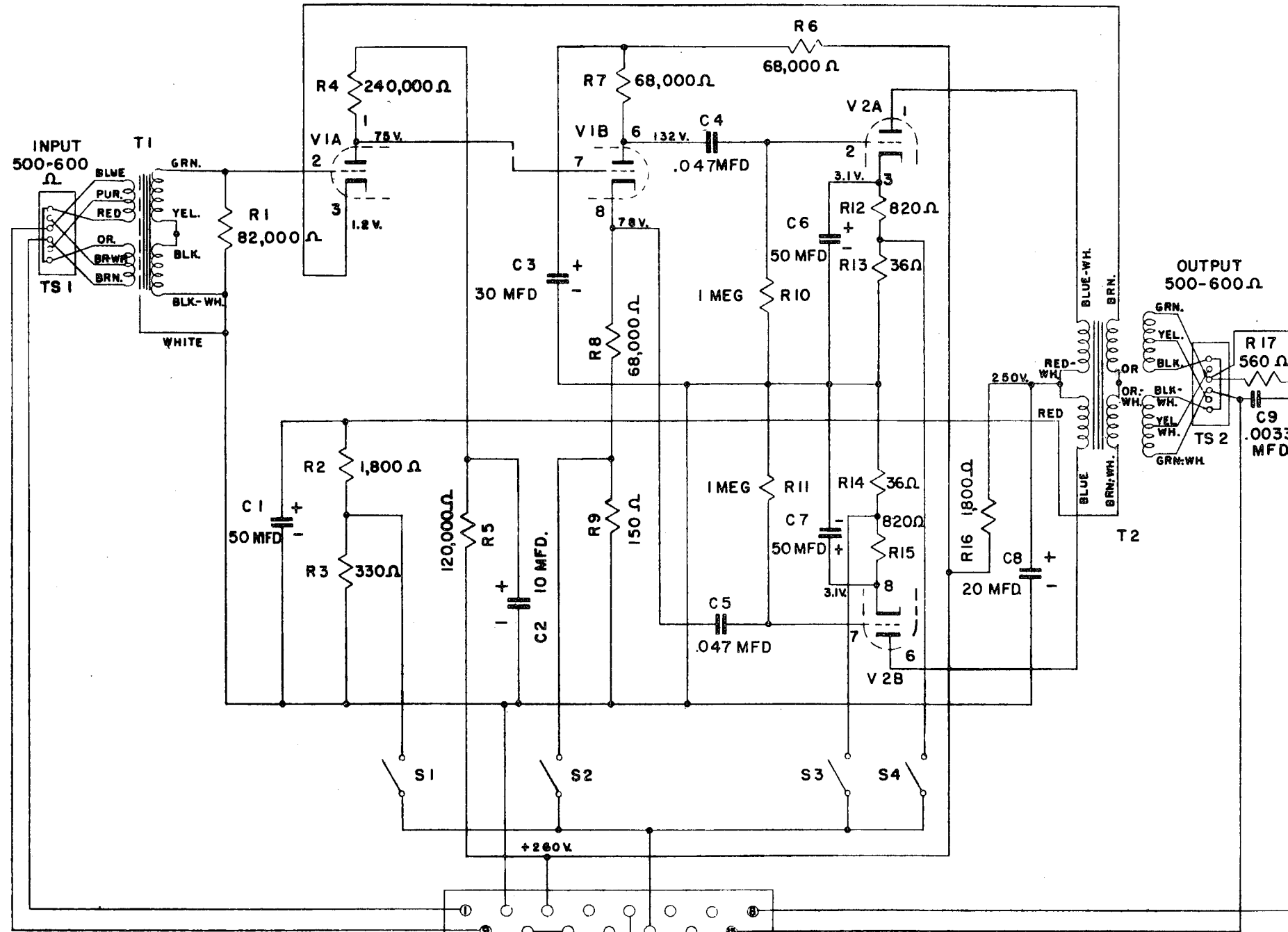
429B ARCHITECTS AND ENGINEERS SPECIFICATIONS

This (choose one) (A) line amplifier, or (B) monitor amplifier shall be of the plug-in type designed for use with a rack mounting assembly. The amplifier shall measure 4 3/8" H, 2 1/4" W, and 10" D, and the associated rack mounting assembly (where required) shall measure 7" H, 19" W, and 12 3/8" D. This rack assembly shall have a hinged front cover or mat to permit instantaneous removal or installation of this amplifier from the circuit. The amplifier shall be designed to mount in an associated cover and mating receptacle, and the amplifier shall include push-button switches for testing tube condition by use of an external meter. Any amplifier not including these features shall not be acceptable under these specifications.

The amplifier shall have a power output (choose one) (A) as line amplifier, + 30 dbm at less than 1/2% total harmonic distortion over the range of 30 to 15,000 cycles or (B) as monitor amplifier, + 39 dbm (8 watts) at less than 1% total harmonic distortion over the range of 50 to 15,000 cycles. The frequency response shall be ± 1 db from 20 to 20,000 cycles. The input transformer shall not have less than 90 db magnetic shielding. The noise level (choose one) (A) as line amplifier, —60 dbm, 90 db below rated line output, or (B) as monitor amplifier, 99 db below rated monitor output. The source impedance shall be 30/50, 125/150, 250/300, 500/600 ohms. There shall be a center tap available for 125/150 and 500/600 ohm connections. The load impedance shall be 125/150 and 500/600 ohms, with a center tap available for 500/600 ohm connections.

The power supply requirements for this amplifier shall be (choose one) (A) as line amplifier, 270 vdc at 35 ma, 6.3 vac at 1.2 a.; or (B) as monitor amplifier, 270 vdc at 70 ma, 6.3 vac at 1.2 a. furnished by a separate power supply. The tube complement shall consist of one 12AY7 and two 6AQ5. The unit shall be finished in cadmium plate and shall weigh in the order of 4 1/2 lbs.

The amplifier shall be Altec Lansing Model 429B.



PARTS LIST	
V1,2	12 AY7
T1	PEERLESS 4629
T2	18267
C1,6,7 50MFD.6V C.D.BRM 50-8	
C2,5,8 (2) 10-10-10 MFD.350V ASTRON EY	
C4,9 .047 MFD. 400V MICAMOLD	
C9 .0033 MFD. 500V ERIE GP2M3300±660	
R1	82,000 Ω 1/2 W. ± 10%
R2	1800 Ω " " ± 5%
R3	330 Ω " " ± 5%
R4	240,000 Ω 1 W. ± 10%
R5	120,000 Ω " " ± 10%
R6	68,000 Ω " " ± 5%
R7,8	" " " " ± 5%
R9	150 Ω 1/2 W. ± 5%
R10,11	1 MEG. " " ± 10%
R12,15	820 Ω " " ± 5%
R13,14	36 Ω " " ± 5%
R16	1,800 Ω 1 W. ± 10%
R17	560 Ω 1/2 W. ± 10%
J1	CANNON DA-15-34P
S1,2,3,4	GRAYHILL 6000 SWITCH

OPERATING DATA	
GAIN	40 DB (OR 34DB WITH SERIES CONNECTION OF FEEDBACK COIL)
FREQ. RESPONSE	± 1DB 20-20,000 Hz
POWER OUTPUT AT 1/2% T.H.D.	+20DBM 50-15,000 Hz
AT 1% T.H.D.	+20DBM 30-15,000 Hz
NOISE LEVEL	LOWER THAN -120DBM EQUIVALENT INPUT NOISE LEVEL (20,000 Hz BANDWIDTH)
POWER REQ'D.	0.60 AMP. AT 6.3V.A.C. & 10M.A. AT 250 V.D.C.

- J1 PIN CONNECTIONS
- 1,9 INPUT (BALANCED)
 - 2 B- (CIRCUIT COMMON)
 - 3 B+ (250V.)
 - 10,11 CHASSIS GROUND
 - 5,12 HEATERS
 - 6,15 OUTPUT (BALANCED)
 - 13 METERING BUS FOR COMMON METER CIRCUIT

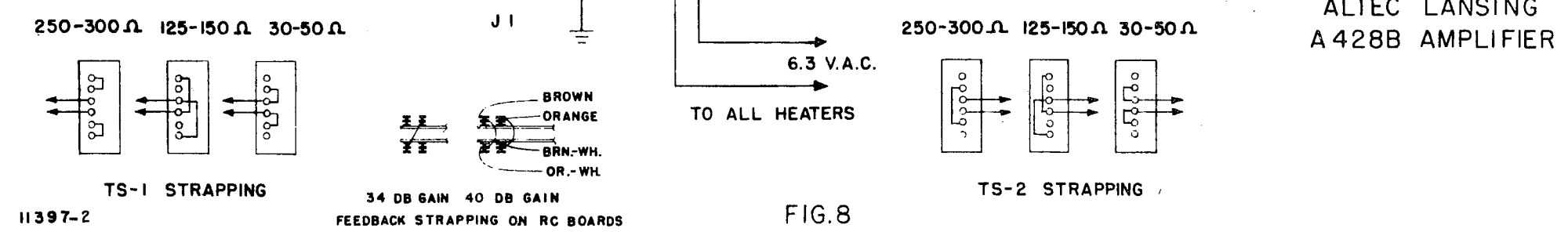


FIG.8

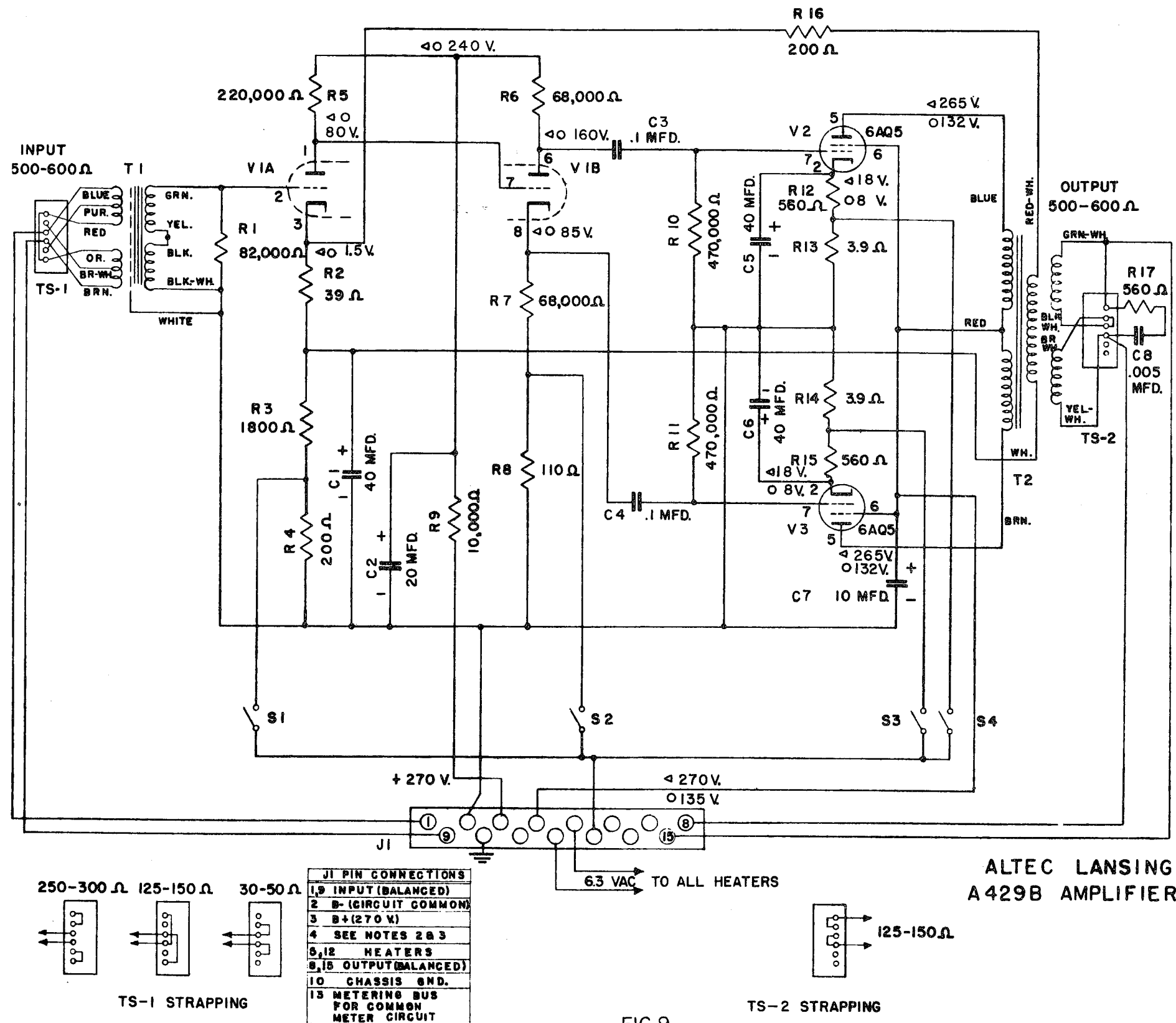


FIG.9

PARTS LIST	
V 1	12 AY7
V 2,3	6 AQ5
T 1	PEERLESS 4629
T 2	16266
C 1,5,6	(1) 40-40-40 MFD. 25V. ASTRON F.Y.
C 2,7	(1) 10-10-10 MFD. 350V. " "
C 3,4	1 MFD. 400V. MICAMOLD
C 8	.005 MFD. 500V. ERIE GP2N 5000 \pm 1000
R 1	82,000 Ω 1/2 WATT \pm 10 %
R 2	39 Ω " " \pm 5 %
R 3	1,800 Ω " " \pm 10 %
R 4,16	200 Ω " " \pm 5 %
R 5	220,000 Ω 1 " "
R 6,7	68,000 Ω " " "
R 8	110 Ω 1/2 " "
R 9	10,000 Ω 1 " "
R 10,11	470,000 Ω 1/2 " \pm 10 %
R 12,18	560 Ω 1 " \pm 5 %
R 13,14	3.9 Ω 1/2 " "
R 17	560 Ω " " \pm 10 %
J 1	CANNON DA-18-34 P
S 1,2,3,4	GRAYHILL 6000

OPERATING DATA	
GAIN	50 DB.
FREQ. RESPONSE	\pm 1 DB. 20 TO 20,000 \sim
POWER OUTPUT	AT 1% T.H.D. +39 DBM. 50 TO 15,000 \sim (AS MONITOR AMPLIFIER) AT 1/2% T.H.D. 30 DBM. 30-15,000 \sim (AS LINE OR MONITOR AMP.)
NOISE LEVEL	(20,000 \sim BANDWIDTH) LOWER THAN -110 DBM. EQUIVALENT INPUT NOISE LEVEL
POWER REQUIREMENT	1.2A, 6.3V.A.C. & 35 M.A., 270V.D.C. (LINE AMPLIFIER) 1.2A, 6.3V.A.C. & 70 M.A., 270V.D.C. (MON. AMPLIFIER)

NOTES.

1. WHEN USED AS LINE AMPLIFIER, ADD 4500 Ω 10W. RESISTOR BETWEEN TERMINALS 3 & 4 OF MATING RECEPTACLE FOR J1 (LOCATED IN COVER OF AMPLIFIER)
2. WHEN USED AS MONITOR AMPLIFIER STRAP TERMINALS 3 & 4 OF RECEPTACLE.
3. Δ D.C. VOLTAGE WITH TERMINALS 3 & 4 CONNECTED. (NOTE 2).
4. 0 D.C. VOLTAGE WITH 4500 Ω RESISTOR BETWEEN TERMINALS 3 & 4 (NOTE 1).