

FILM-TECH

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REF. DESIGNATION	PART NUMBER	DESCRIPTION
AMPLIFIER ASSY, PHOTO DIODE (09920 REF. ONLY) (SERIAL NO. AV-92158 TO AU-99689)		
	NPN	AMPLIFIER ASSY, Projector (See Note *)
V1	22577	TUBE, 12AX7A or 7025
	31759	SOCKET, Tube V1
V2	22577	TUBE, 12AX7A or 7025
	31757	SOCKET, Tube V2
	31756	SHIELD, Tube V2
V3, V4, V5	31721	TUBE, 25C5
	31758	SOCKET, Tube w/clip, V3, V4, V5
	31715	TRANSFORMER, Output
	34810 or 34811	RECTIFIER, Silicon
	31719	COIL, Oscillator, (3.5V ±0.3V)
	09921	CONTROL ASSEMBLY, Volume and tone
	31722	. CONTROL (with DPST line switch P/N 70343)
	39515	. CONTROL (with SPST line switch P/N 70462)
	28019	TUBING (Lamp, Ne-2V)
NE-2V	31723	LAMP, Glow
R1, R4	31745	RESISTOR, Carbon, 47,000 ohm 1/2 W
R2	31746	RESISTOR, Carbon, 68,000 ohm 1/2 W
R3	31725	RESISTOR, Carbon, 150,000 ohm 1/2 W
R5, R10, R17	31740	RESISTOR, Carbon, 470,000 ohm 1/2 W
R18, R20		
R6, R8, R12	31739	RESISTOR, Carbon, 100,000 ohm 1/2 W
R14, R16		
R7, R11	31749	RESISTOR, Carbon, 3900 ohm, 1/2 W
R9, R13	31747	RESISTOR, Carbon, 1800 ohm, 1/2 W
R15	31741	RESISTOR, Carbon, 3300 ohm, 1/2 W
R19	31728	RESISTOR, Carbon, 100 ohm, 1/2 W
R21	31729	RESISTOR, Carbon, 820 ohm, 1 W
R22	31744	RESISTOR, Carbon, 22,000 ohm, 1/2 W
R23	31720	RESISTOR, Carbon, 1000 ohm, 1 W
R24	34891	RESISTOR, Wire wound, 700 ohm, 5 W
R25	31730	RESISTOR, Wire wound, 5 ohm, 5 W
R27, R28	17078	RESISTOR, Carbon, 220,000 ohm, 1/2 W
R29	31732	RESISTOR, Carbon, 1500 ohm, 1/2 W
C1, C12	31733	CAPACITOR, Mylar, 0.22 mfd
C2	33425	CAPACITOR, Ceramic disc, 0.0033 mfd
C3	31716	CAPACITOR, Electrolytic, 3 section 10/500, 80/200, 200/200
C4	31731	CAPACITOR, Electrolytic, 10 mfd
C5, C6, C8 C9, C10	31727	CAPACITOR, Ceramic disc, 0.01 mfd
C7	31735	CAPACITOR, Ceramic disc, 100 mmfd
C11	31718	CAPACITOR, Electrolytic, 35 mfd
C13	31734	CAPACITOR, Ceramic disc, 0.005 mfd
C14	33426	CAPACITOR, Ceramic disc, 220 mmfd
C15	31717	CAPACITOR, Electrolytic, 80 mfd
C16, C18	25824	CAPACITOR, Ceramic disc, 0.02 mfd
C17	27789	CAPACITOR, Ceramic disc, 0.002 mfd

NOTE Early model amplifiers less tubes and volume control (P/N 011164) are no longer available. If the amplifier requires replacement, the projector must be modified for silicon photocell operation and the current amplifier assembly installed (see Service Instructions, paragraph).

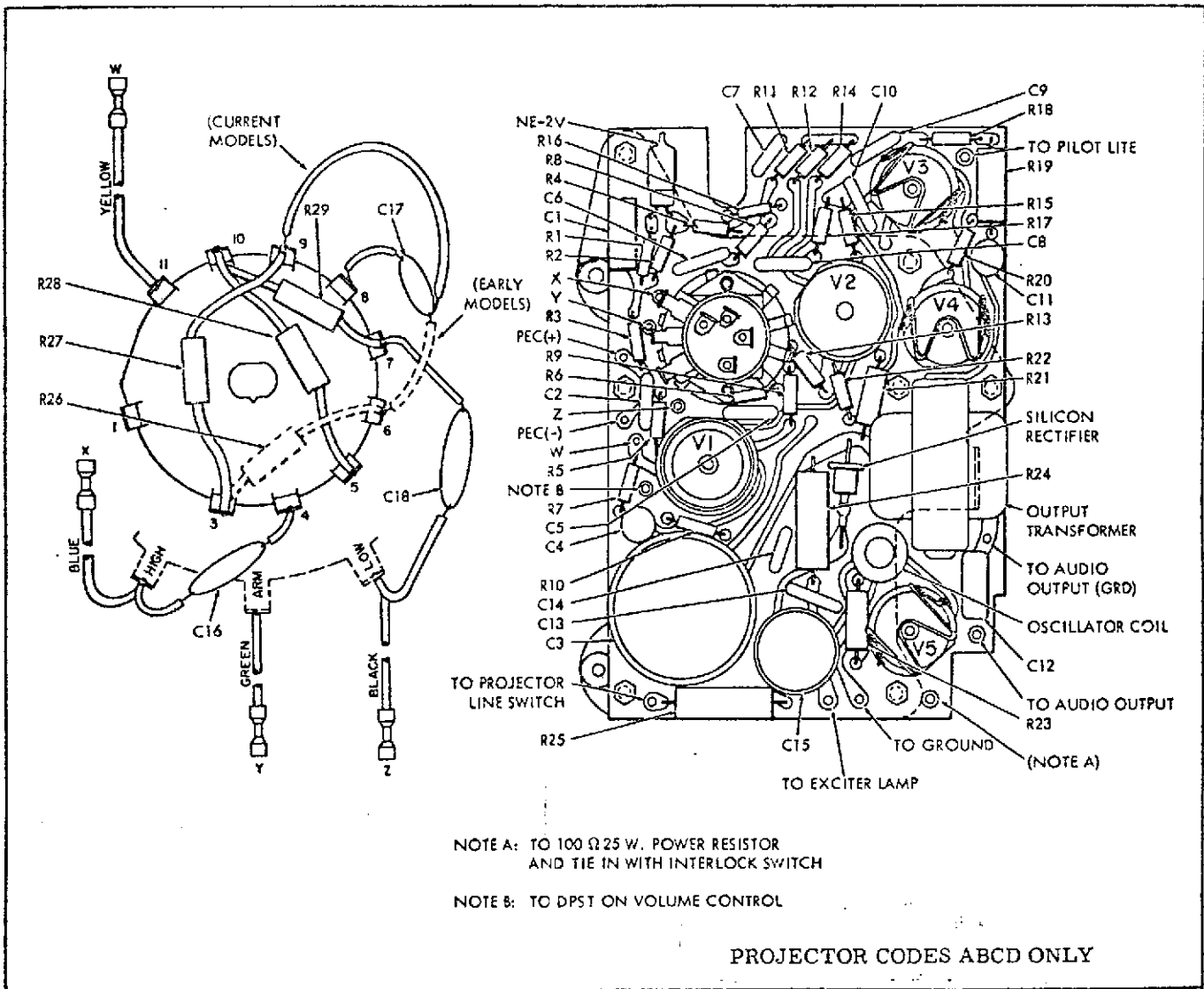


Figure 25. Amplifier Assembly, Photo Diode (Below Serial No. AU-99689)

REF. DESIGNATION	PART NUMBER	DESCRIPTION						
		1	2	3	4	5	6	7
(SERIAL NO. AT-27350 TO AV-92157, CIRCUIT VALUE 40V ± 5V)								
NE-2V	33297	COIL, Oscillator (8V ± 0.75 V)						
	31723	LAMP, Glow (was NE-2E)						
R1	31739	RESISTOR, Carbon, 100,000 ohm 1/2 W						
R2	31745	RESISTOR, Carbon, 47,000 ohm 1/2 W						
R3	34840	RESISTOR, Carbon, 220,000 ohm 1/2 W						
R24	33335	RESISTOR, Wire wound, 350 ohm 5W						
R26	Deleted							
C17	31737	(Current model wiring)						
(SERIAL NO. BELOW AT-27350)								
R13	31743	RESISTOR, Carbon, 2200 ohm, 1/2 W						
R26	31725	RESISTOR, Carbon, 150,000 ohm, 1/2 W						
R27	31726	RESISTOR, Carbon, 180,000 ohm, 1/2 W						
R28	31726	RESISTOR, Carbon, 180,000 ohm, 1/2 W						
C17	31737	(Early model wiring)						

REFERENCE DESIGNATION	PART NUMBER	DESCRIPTION						
		1	2	3	4	5	6	7
AMPLIFIER ASSEMBLY, SILICON CELL (012545 REFERENCE ONLY)								
V1, V2	No Number	AMPLIFIER ASSEMBLY, Projector (NOTE A)						
	22577	TUBE, 12AX7A or 7025						
	39576	SOCKET, Tube V1						
	39529	SOCKET, Tube V2						
	37954	SHIELD, Tube V2						
V3, V4, V5	31721	TUBE, 25C5						
	31758	SOCKET, Tube, with clip, V3, V4, V5						
	31715	TRANSFORMER, Output						
	39508 or 34811	RECTIFIER, Silicon						
	31719	COIL, Oscillator (3.5V ± 0.3V)						
	09921	CONTROL ASSEMBLY, VOL-TONE (early models)						
	31722	. CONTROL (With DPST line switch P/N 70343)						
	39515	. CONTROL (With SPST line switch P/N 70462)						
	012548	CONTROL ASSEMBLY, VOL-TONE (current models)						
	41327	. CONTROL, Molded (with DPST line switch P/N 70512)						
	41328	. CONTROL, Molded (with SPST line switch P/N 70513)						
R1, R7, R11	31749	RESISTOR, Carbon, 3900 ohms, 1/2w						
R2, R3 (early models)	31744	RESISTOR, Carbon, 22,000 ohms, 1/2w						
R2, R3 (current models)	36315	RESISTOR, Carbon, 18,000 ohms, 1/2w						
R5, R10, R17	31740	RESISTOR, Carbon, 470,000 ohms, 1/2w						
R6, R8, R12, R14, R16	31739	RESISTOR, Carbon 100,000 ohms, 1/2w						
R9, R13	31747	RESISTOR, Carbon, 1800 ohms, 1/2w						
R15	31741	RESISTOR, Carbon, 3300 ohms, 1/2w						
R18, R20 (early models)	31740	RESISTOR, Carbon, 470,000 ohms, 1/2w						
R18, R20 (current models)	34840	RESISTOR, Carbon, 220,000 ohms, 1/2w						
R19 (early models)	31728 or 36522	RESISTOR, Carbon, 100 ohms, 2w						
R19 (current models)	37323	RESISTOR, Carbon, 150 ohms, 2w						
R21	31729	RESISTOR, Carbon, 820 ohms, 1w						
R22	31744	RESISTOR, Carbon, 22,000 ohms, 1/2w						
R23	31720	RESISTOR, Carbon, 1000 ohms, 1w						
R24 (early models)	34891	RESISTOR, Wirewound, 700 ohms, 5w						
R24 (current models)	40273	RESISTOR, Wirewound, 700 ohms, 5w						
R25 (early models)	31730	RESISTOR, Wirewound, 5 ohms, 5w						
R25 (intermediate models)	37322	RESISTOR, Wirewound, 10 ohms, 5w						
R25 (current models)	40274 or 40290	RESISTOR, Fuse type, 10 ohms, 5w						
R27, R28	17078	RESISTOR, Carbon, 220,000 ohms, 1/2w						
R29	31732	RESISTOR, Carbon, 1500 ohms, 1/2w						
C1	35898	CAPACITOR, Electrolytic, 35 mfd, 16v						
C2	36011	CAPACITOR, Ceramic disc, 0.0039 mfd						
C3	31716	CAPACITOR, Electrolytic, 3 section 10.500, 80/200, 200/200						
C4	31731	CAPACITOR, Electrolytic, 10 mfd						
C5, C6, C8	31727	CAPACITOR, Ceramic disc, 0.01 mfd						
C7	31735	CAPACITOR, Ceramic disc, 100 mfd						
C9, C10 (early models)	31727	CAPACITOR, Ceramic disc, 0.01 mfd						
C9, C10 (current models)	37325	CAPACITOR, Ceramic disc, 0.02 mfd						
C11 (early models)	31718	CAPACITOR, Electrolytic, 35 mfd, 15v						
C11 (current models)	37324	CAPACITOR, Electrolytic, 35 mfd, 25v						
C12	31733	CAPACITOR, Mylar, 0.22 mfd						
C13	31734	CAPACITOR, Ceramic disc, 0.005 mfd						
C14	33426	CAPACITOR, Ceramic disc, 220 mfd						
C15	31717	CAPACITOR, Electrolytic, 80 mfd						
C16, C18	25824	CAPACITOR, Ceramic disc, 0.02 mfd						
C17	27789	CAPACITOR, Ceramic disc, 0.002 mfd						

N.L.A. →
USE 012548

NOTE A: For amplifier less tubes V1 through V5 and volume control P/N 012548, order P/N 011208. On amplifier assembly 011208 above serial number 25817, the leads to the volume and tone control connections are soldered directly to the amplifier (see appropriate schematic and wiring diagrams).

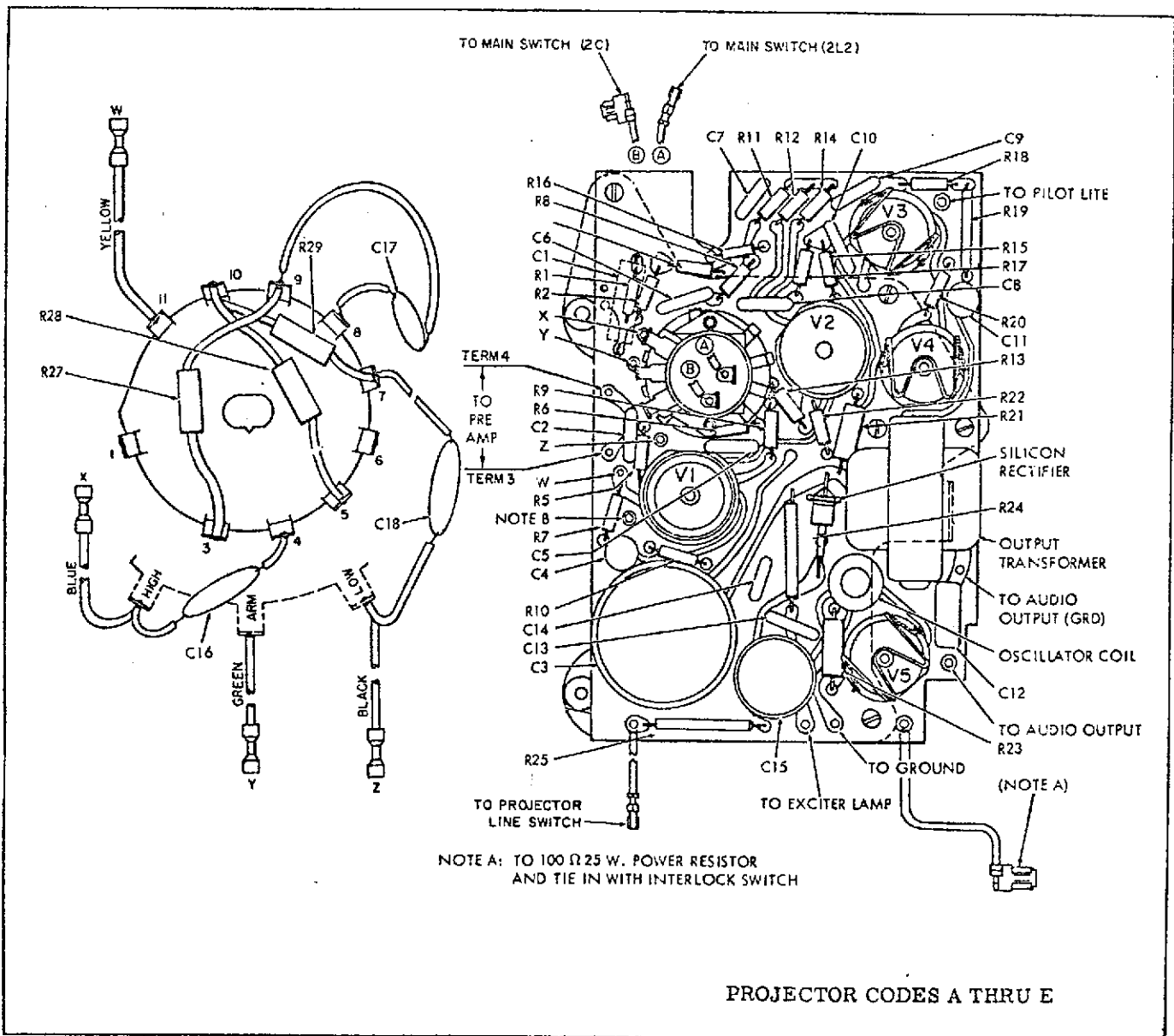
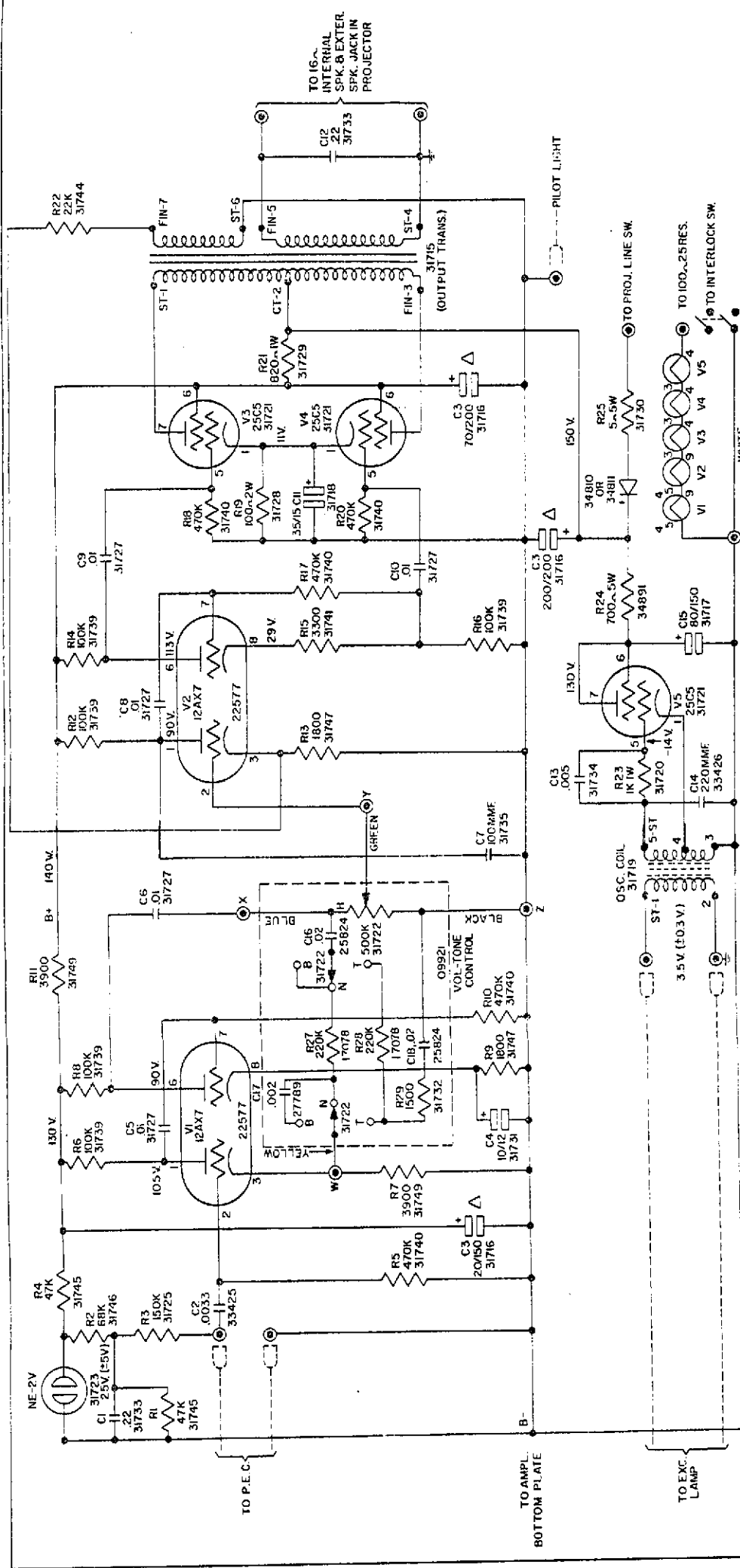


Figure 26. Amplifier Assembly (Silicon Cell)



BELL & HOWELL CO.-CHICAGO, U.S.A.
AMPLIFIER SCHEMATIC DIAGRAM
(PHOTODIODE)
DES. 500 SERIES FILMSOUNDS
BELOW SERIAL # AU99689

DATE: 11-20-53 SERVICE DATA: DRAWN L.A.D. APPROV. *[Signature]*

SERIAL NO. AT-27350 TO AV-92157
Oscillator Coil was 8 V. (+0.75 V) (P/N 33797)
NE-2V lamp was NE-2E (P/N 31723)
R1 was 100K ohms (P/N 31745)
R2 was 47K ohms (P/N 31745)
R3 was 220K ohms (P/N 34840)
R24 was 350 ohms 5 watt (P/N 33353)
R26 was DELETED
C17 Value changed and wired as shown
Circuit Value was 40 Vohs. (t. 5 V)

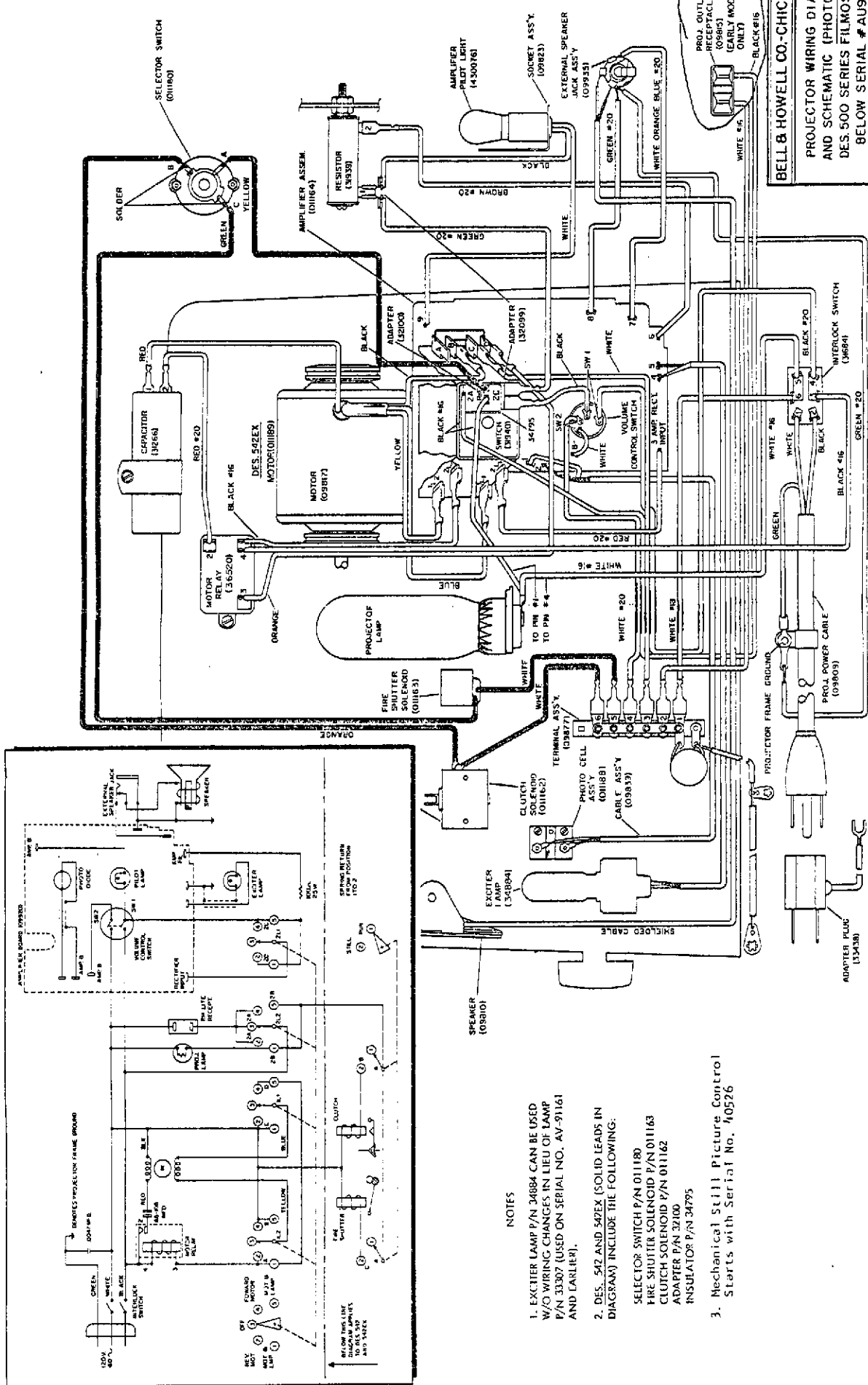
SERIAL NO. AV-92318 TO AU-99689 as shown above
SERIAL NO. AU-99690 AND UP. Silicon cell models.

BELOW SERIAL NO. AT-27349
R13 was 2200 ohms (P/N 31743)
R26 was 150K ohms (P/N 31726)
R27 was 150K ohms (P/N 31726)
R28 was 150K ohms (P/N 31726)
C17 was .0015 mfd (P/N 31737)

BELOW SERIAL NO. AT-27349
R13 was 2200 ohms (P/N 31743)
R26 was 150K ohms (P/N 31726)
R27 was 150K ohms (P/N 31726)
R28 was 150K ohms (P/N 31726)
C17 was .0015 mfd (P/N 31737)

B- IS NOT PROJECTOR GROUND.
+ DENOTES PROJECTOR GROUND.
VOLTAGE MEASURED TO B- NO SIGNAL INPUT 120 VOLTS 60 ~ LINE.
Δ DENOTES CAPACITOR COMPONENTS IN SAME CAN (31716)

Figure 27. Amplifier Schematic Wiring Diagram
(Photo Diode Cell, Serial No. AU-99689 and Below
(FIG. 27) 47-48



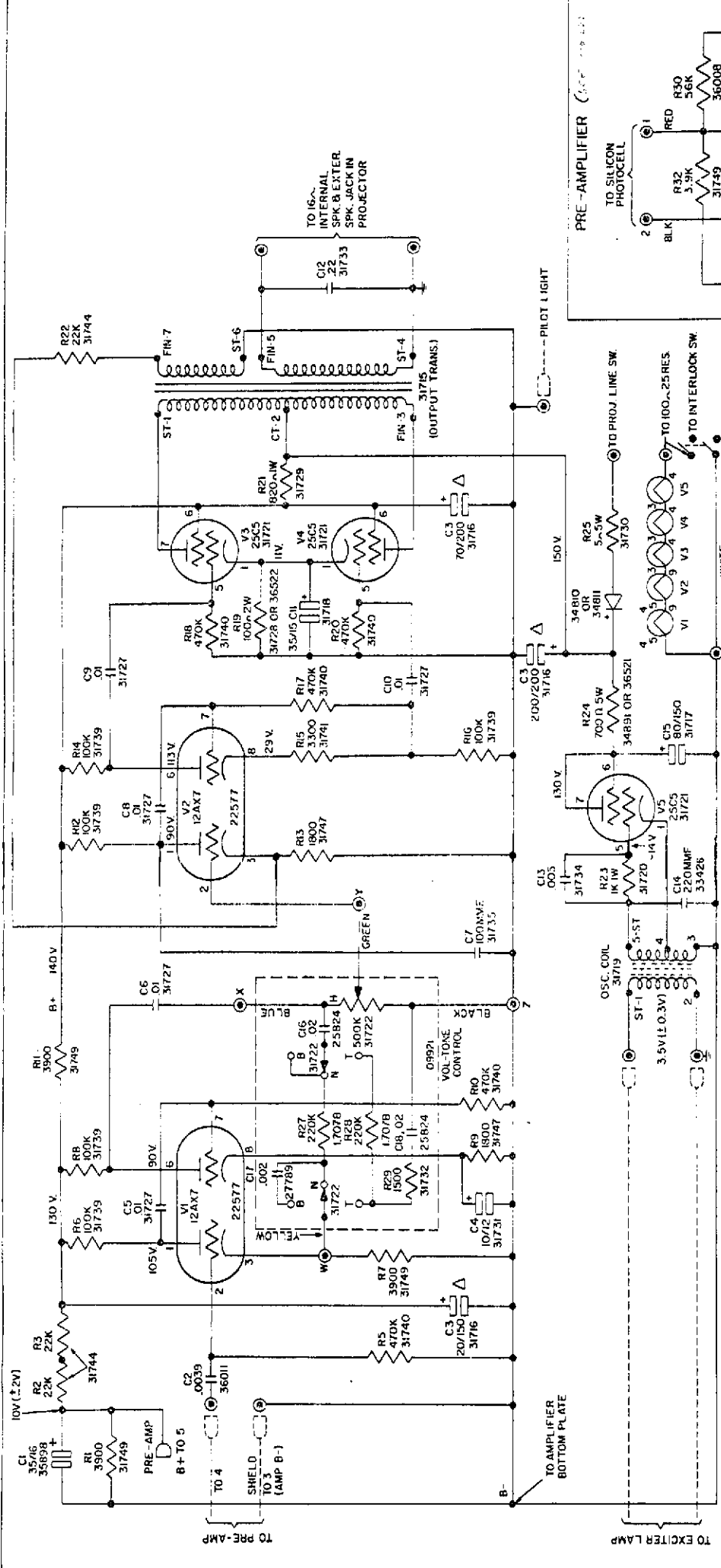
NOTES

1. EXCITER LAMP P/N 34884 CAN BE USED W/O WIRING CHANGES IN LIEU OF LAMP P/N 3307 (USED ON SERIAL NO. AV-91161 AND EARLIER).
2. DES. 542X AND 542EX (SOLID LEADS IN DIAGRAM) INCLUDE THE FOLLOWING:
 SELECTOR SWITCH P/N 011180
 FIRE SHUTTER SOLENOID P/N 011163
 CLUTCH SOLENOID P/N 011162
 ADAPTER P/N 32000
 INSULATOR P/N 34795
3. Mechanical Still Picture Control Starts with Serial No. 40526

BELL & HOWELL CO.-CHICAGO, U.S.A.
 PROJECTOR WIRING DIAGRAM
 AND SCHEMATIC (PHOTODIODE)
 DES. 500 SERIES FILMSOUNDS
 BELOW SERIAL # AU96889

DATE	SERVICE DATA	DRAWN L.A.D.
11-20-53		AS/PLD. 403

Figure 28. Projector Pictorial Wiring Diagram (Photo Diode Cell, Serial No. AU-996889 and Below)



B- IS NOT PROJECTOR GROUND.
 * DENOTES PROJECTOR GROUND.
 VOLTAGE MEASURED TO B- NO SIGNAL INPUT 120 VOLT 60~LINE.
 Δ DENOTES CAPACITOR COMPONENTS IN SAME CAN (31716)

NOTE: Resistor R24 is used to limit the gain of the transistor stage. If necessary to replace either the resistor or the transistor, use the following procedure to select a resistor of the proper value. Standard resistors available are 150-ohm (P/N 36073), 180-ohm (P/N 36007) and 270-ohm (P/N 36074).

1 - Thread projector with 400-cycle power output test film (90% modulation) and turn on the projector, adjusting applied line voltage to 105 volts.

2 - Adjust the volume control to produce approximately 4 volts output.

3 - If clipping (flattening) of either alternation is noted in output wave form, replace resistor R34 with one of the next higher value.

4 - If reserve gain is inadequate and no clipping is observed, replace resistor with one of the next lower value.

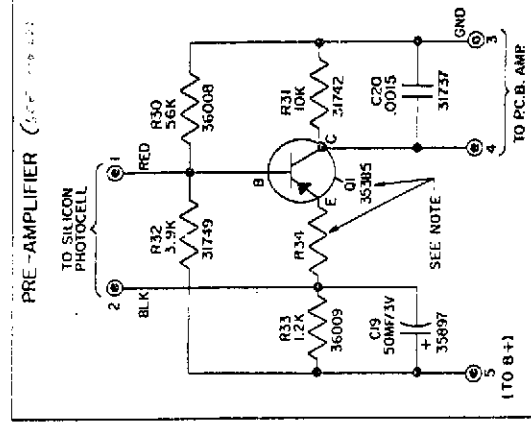
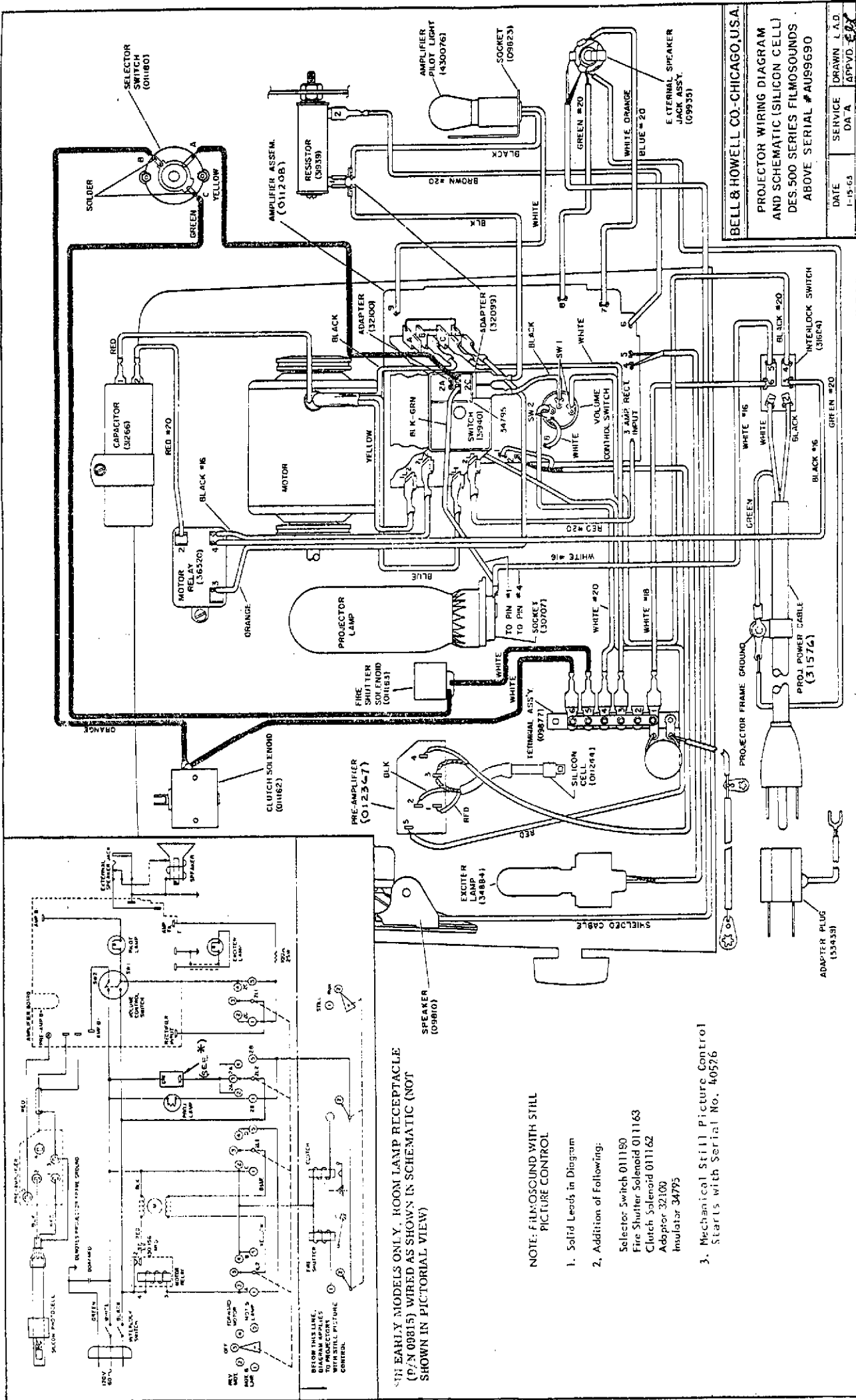


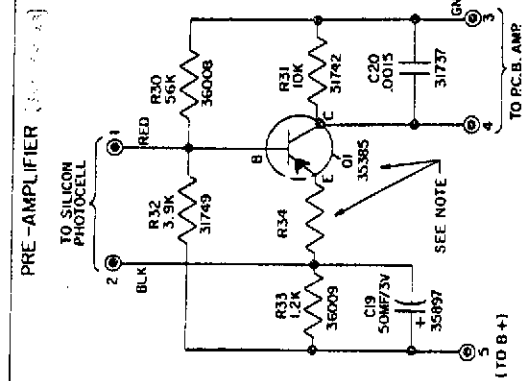
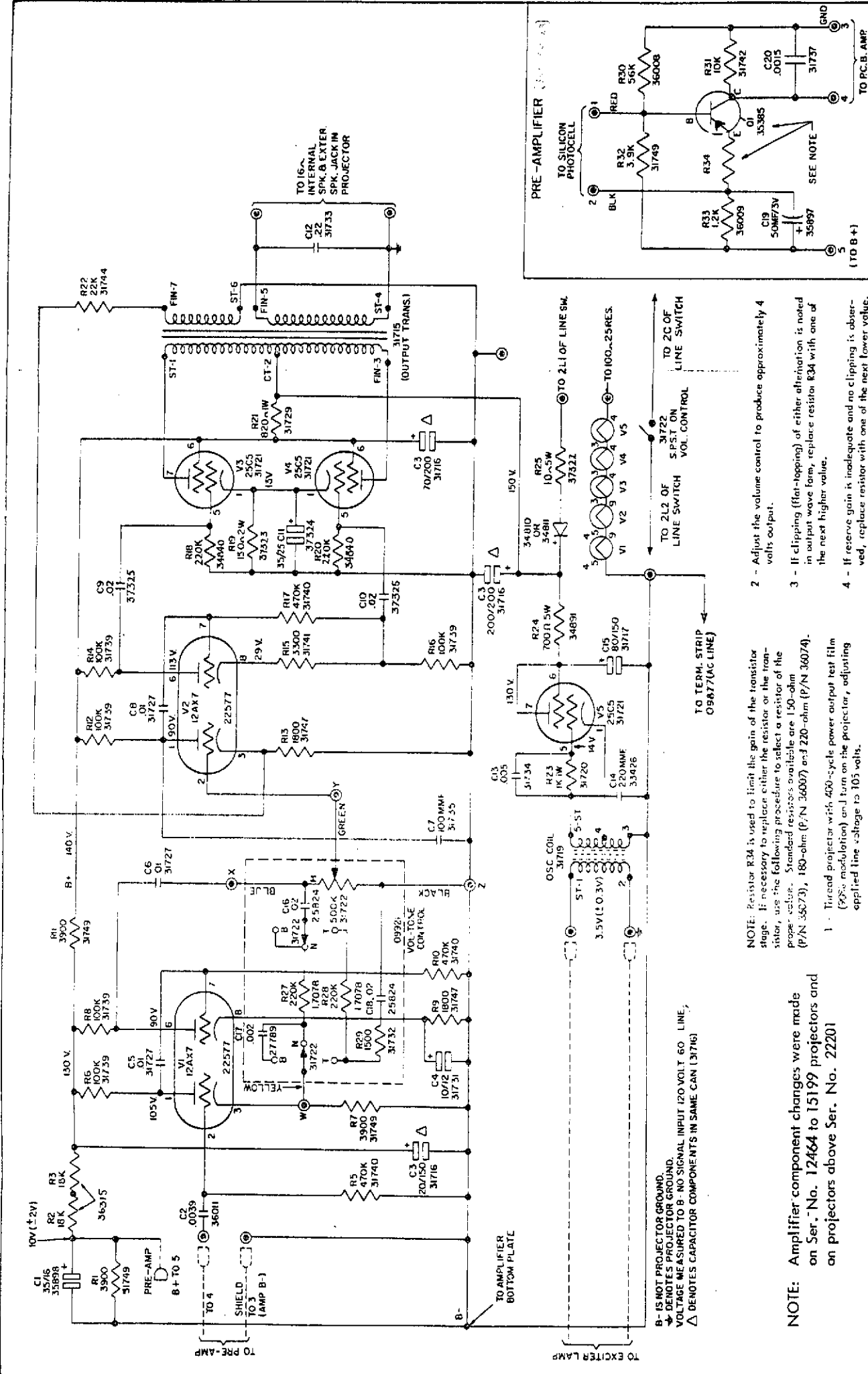
Figure 29. Amplifier Schematic Wiring Diagram (Early Silicon Cell, Serial No. AU-95690 and Above)



BELL & HOWELL CO.-CHICAGO, U.S.A.
 PROJECTOR WIRING DIAGRAM
 AND SCHEMATIC (SILICON CELL)
 DES. 500 SERIES FILMOSOUNDS
 ABOVE SERIAL #AUS9690

DATE	SERVICE	DRAWN	L.A.D.
1-15-63	DA A	APPVD.	EBT

Figure 30. Projector Pictorial Wiring Diagram (Early Silicon Cell, Serial No. AU-99690 and Above)



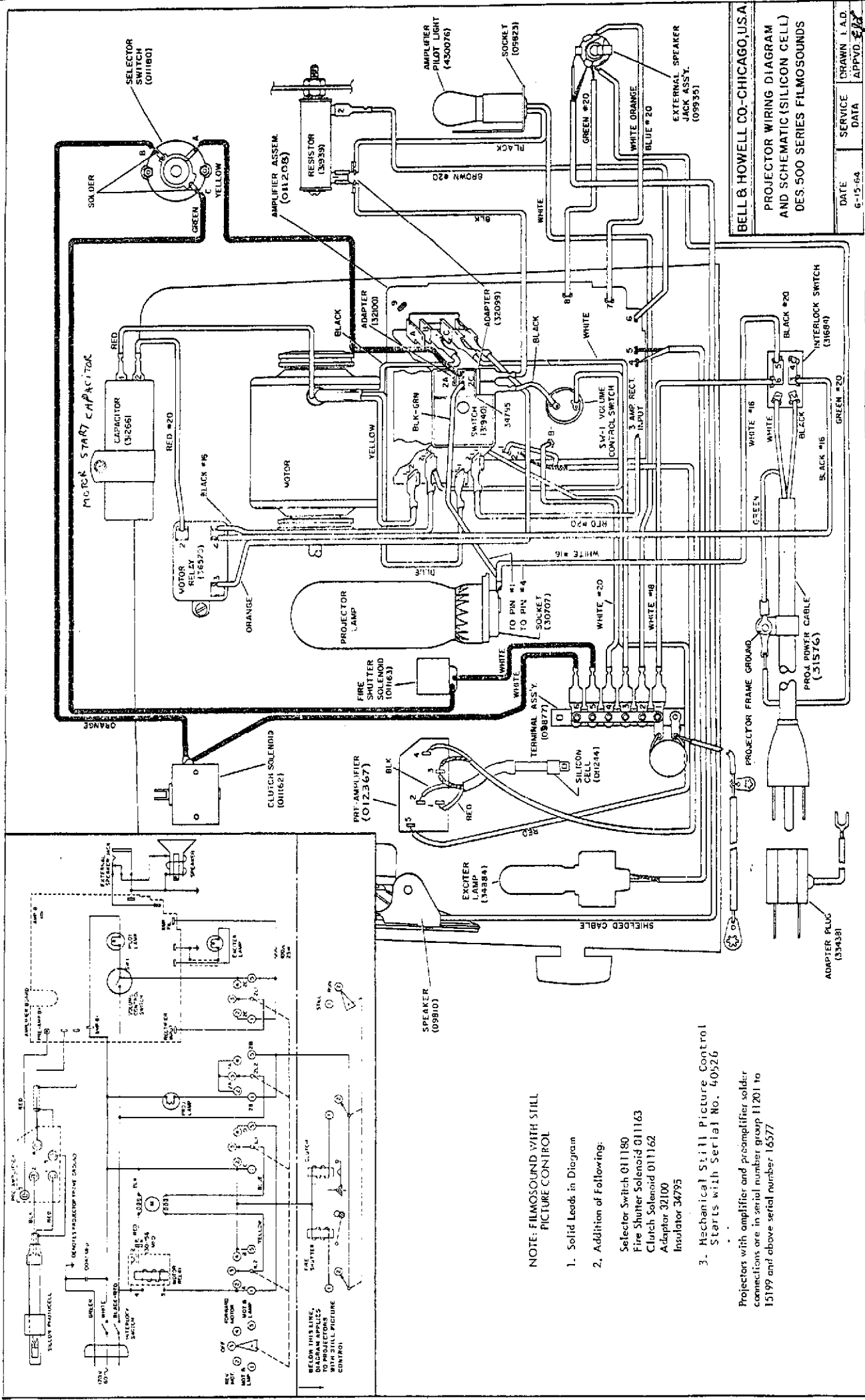
B- IS NOT PROJECTOR GROUND.
 ↳ DENOTES PROJECTOR GROUND.
 VOLTAGE MEASURED TO B- NO SIGNAL INPUT 120 VOLTS 60 LINE.
 △ DENOTES CAPACITOR COMPONENTS IN SAME CAN (31716)

- 1 - Turned projector with 400-cycle power output test film (95% modulation) and turn on the projector, adjusting applied line voltage to 105 volts.
- 2 - Adjust the volume control to produce approximately 4 volts output.
- 3 - If clipping (flat-topping) of either alternation is noted in output wave form, replace resistor R34 with one of the next higher value.
- 4 - If reserve gain is inadequate and no clipping is observed, replace resistor with one of the next lower value.

NOTE: Resistor R34 is used to limit the gain of the transistor stage. If necessary to replace either the resistor or the transistor, use the following procedure to select a resistor of the proper value. Standard resistors available are 150-ohm (P/N 35523), 180-ohm (P/N 36007) and 220-ohm (P/N 36074).

NOTE: Amplifier component changes were made on Ser. No. 12464 to 15199 projectors and on projectors above Ser. No. 22201

Figure 31. Amplifier Schematic Wiring Diagram (Interim Silicon Cell Models: See Note in Diagram)



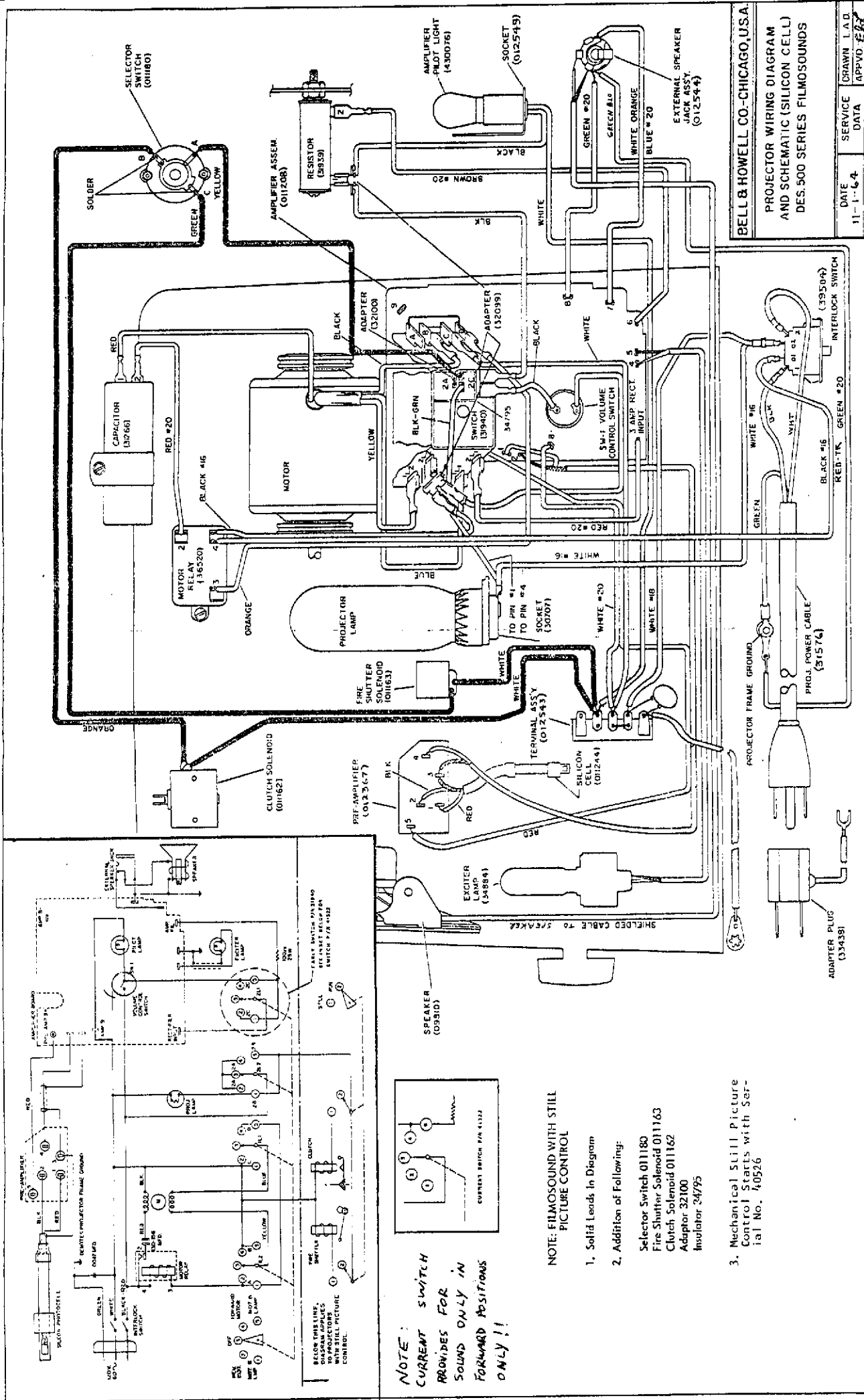
BELL & HOWELL CO.-CHICAGO, U.S.A.	
PROJECTOR WIRING DIAGRAM AND SCHEMATIC (SILICON CELL) DES. 500 SERIES FILMSOUNDS	
DATE	SERVICE DATA
6-15-64	
DRAWN I.A.D.	APPROV. <i>[Signature]</i>

NOTE: FILMSOUND WITH STILL PICTURE CONTROL

1. Solid Leads in Diagram
2. Addition of Following:
 Selector Switch 011180
 Fire Shutter Solenoid 011163
 Clutch Solenoid 011162
 Adaptor 32100
 Insulator 34795
3. Mechanical Still Picture Control Starts with Serial No. 40526

Projectors with amplifier and preamplifier solder connections are in serial number group 11201 to 15199 and above serial number 16577

Figure 22. Projector Pictorial Wiring Diagram (Interim Silicon Cell Models: See Note in Diagram)



NOTE:
 CURRENT SWITCH
 ARROWS FOR
 SOUND ONLY IN
 FORWARD POSITIONS
 ONLY !!

- NOTE: FILMSOUND WITH STILL PICTURE CONTROL**
1. Solid Leads in Diagram
 2. Addition of Following:
 Selector Switch 011180
 Fire Shutter Solenoid 011163
 Clutch Solenoid 011162
 Adaptor 321000
 Insulator 34795
 3. Mechanical Still Picture Control Starts with Serial No. 40526

Figure 34. Projector Pictorial Wiring Diagram (Current Silicon Cell and Interlock Switch)

FIG. & INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
INTEGRATED CIRCUIT AMPLIFIER (Projector Codes FGH only)				
35-	013850	AMPLIFIER ASSEMBLY, Integrated circuit	REF	FGH
-1	700008	. SCREW	1	FGH
-2	600735	. WASHER, Lock	1	FGH
-3	40814	. CLIP, Leadwire retaining SOUND PAWM SHAFT GROUNDING SPRING	1	FGH
-4	36848	. SCREW, SLOTTED PAN HEAD 8-32 X 3/8"	4	FGH
-5	35164	. NUT, Hex SEMS 8-32	4	FGH
-6	43204	. TRANSFORMER, Power	1	FGH
-7	36848	. SCREW	1	FGH
-8	014021	. BARRETT AND BRACKET ASSEMBLY	1	FGH
-9	19233	. NUT, Hex FOR CIRCUIT BREAKER 3/16-32	1	FGH
-10	19154	. WASHER, Lock	1	FGH
-11	43209	. CIRCUIT BREAKER	1	FGH
-12	621132	. SCREW SLOTTED PAN HEAD 4-40 X 1/4"	3	FGH
-13	34784	. WASHER, FLAT	3	FGH
-14	36848	. SCREW	3	FGH
-15	014020	. CIRCUIT BOARD, Amplifier (see Figure 34 for parts)	1	FGH
-16	013853	. CIRCUIT BOARD, Power supply (see Figure 34 for parts)	1	FGH
-17	31685	. JACK, Auxiliary speaker	1	FGH
-18	41130	. PLATE, Amplifier mounting	1	FGH

FIGURE 36
AMPLIFIER CIRCUIT BOARD COMPONENTS (014020)

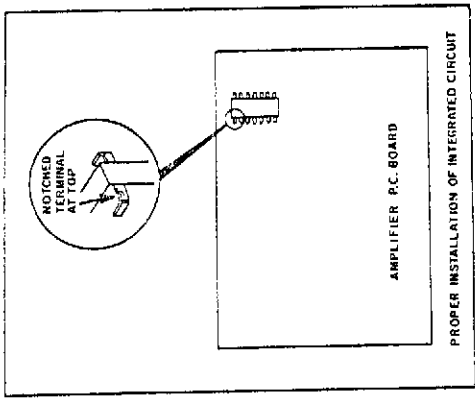
REFERENCE DESIGNATION	PART NO.	DESCRIPTION
C1	41398	CAPACITOR
C2, C3	88654	CAPACITOR
C5	41172	CAPACITOR
C6	41171	CAPACITOR
C7	41394	CAPACITOR
C8	29630	CAPACITOR
C9	41392	CAPACITOR
C10, C11	41393	CAPACITOR
C12	31733	CAPACITOR
D1, D2	43210	DIODE NTE 5076A
D3 to D6	41173	DIODE NTE 517
IC-1	41180	██████████ SK3590 INTEGRATED CIRCUIT ECG 909D
Q1	41175	TRANSISTOR ECG 123AP
Q2	41176	TRANSISTOR ECG 107
Q3	41177	TRANSISTOR ECG 159

REFERENCE DESIGNATION	PART NO.	DESCRIPTION
R1	41192	RESISTOR
R2	41191	RESISTOR
R3	41190	RESISTOR
R4	41189	RESISTOR
R5	31743	RESISTOR
R8	38187	RESISTOR
R9	41188	RESISTOR
R10	41186	RESISTOR
R11	31732	RESISTOR
R12	38182	RESISTOR
R13	41193	RESISTOR
R14, R15	36074	RESISTOR
R16, R17	765286	RESISTOR
R18, R19	36311	RESISTOR
R20, R21	43202	RESISTOR
R22	41194	RESISTOR
Q4	013950	TRANSISTOR ASSEMBLY
Q5, Q7	013955	TRANSISTOR ASSEMBLY

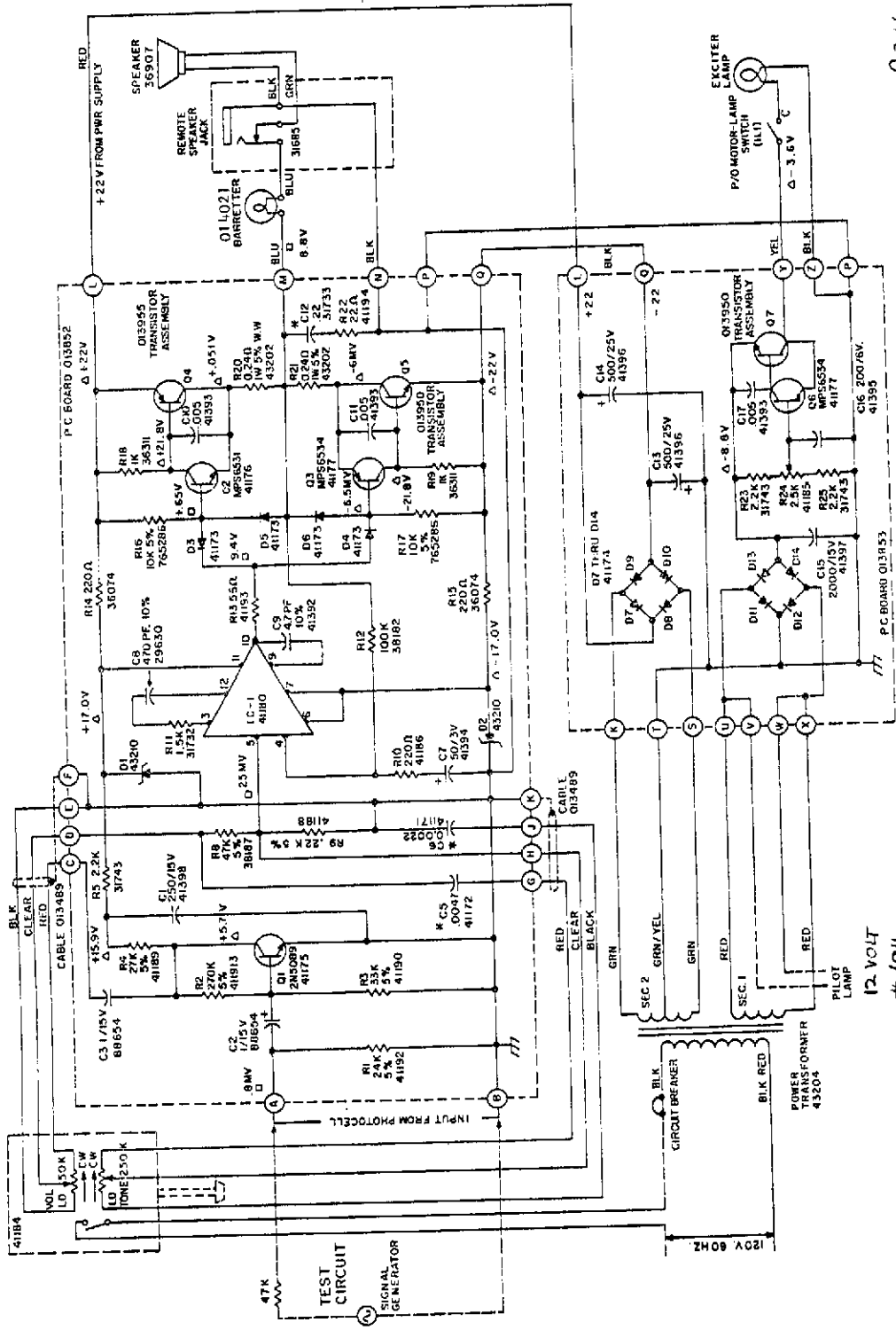
POWER SUPPLY CIRCUIT BOARD COMPONENTS (013853)

C13, C14	41396	CAPACITOR
C15	41397	CAPACITOR
C16	41395	CAPACITOR
C17	41393	CAPACITOR
D7 to D14	41174	DIODE

Q6	41177	TRANSISTOR ECG 159
R23, R25	31743	RESISTOR
R24	41185	RESISTOR
Q7	013950	TRANSISTOR ASSEMBLY



NOTES: ALL MEASUREMENTS MADE WITH 120V 60HZ LINE
 Δ = DC VOLTAGES MEASURED TO GROUND USING ELECTRONIC VOLTMETER WITHOUT SIGNAL, 1%
 □ = SIGNAL VOLTAGES MEASURED TO GROUND, USING ELECTRONIC VOLTMETER; VOLUPE CONTROL MAX. CW, 8 WATTS OUTPUT (8 VOLTS) INTO 8 OHM RESISTIVE LOAD AT 1000 Hz ± 10%
 EXCITER LAMP PART OF SOUNDHEAD ASSEMBLY.



R24 TRIMMOT ADJUSTS EXCITER
 LAMP VOLTAGE TO - 3.6 VOLTS

PROJECTOR CODES FGH ONLY

Figure 37. Schematic Diagram - Integrated Circuit Amplifier and Power Supply

FIG. & INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
		1 2 3 4 5 6 7		
DUAL AV SPEAKERS				
39-	011193	SPEAKER ASSY, Complete (black)	9	
39-	011194	SPEAKER ASSY, Complete (green)	2	
-1	33479	. SCREW, Front cover	2	
-2	33486	. SCREW, Front cover	1	
-3	33481	. NUT, Tinnerman, front cover	1	
-4	09939	. COVER ASSY, Front (black)	1	
39-	09942	. COVER ASSY, Front (green)	1	
39-	09940	. COVER ASSY, Rear, not shown (black)	4	
39-	09943	. COVER ASSY, Rear, not shown (green)	8	
-5	18086	. FOOT, Rubber	1	
-6	33482	. SCREW, Speaker attaching	1	
-7	34876	. SPEAKER, Woofer	4	
-8	33444	. SPEAKER, Tweeter	4	
-9	34485	. SCREW, Handle bracket	2	
-10	33483	. SPEEDNUT, Twin	4	
-11	33471	. BRACKET, Handle	1	
-12	33484	. SCREW, Handle attaching	1	
-13	33369	. STRAP, Handle	2	
-14	33368	. BODY, Handle	1	
-15	33391	. SCREW, Handle cap	1	
-16	33371	. CAP, Handle	1	
-17	33370	. GRIP, Handle	1	
-18	33470	. GROMMET, Rubber, speaker cable	1	
-19	34877	. CAPACITOR	1	
-20	19010	. NUT, Input jack	1	
-21	25368	. WASHER, Key	1	
-22	400449	. WASHER	1	
-23	28059	. INPUT JACK	1	
-24	28088	. PLUG, Phone-jack	1	

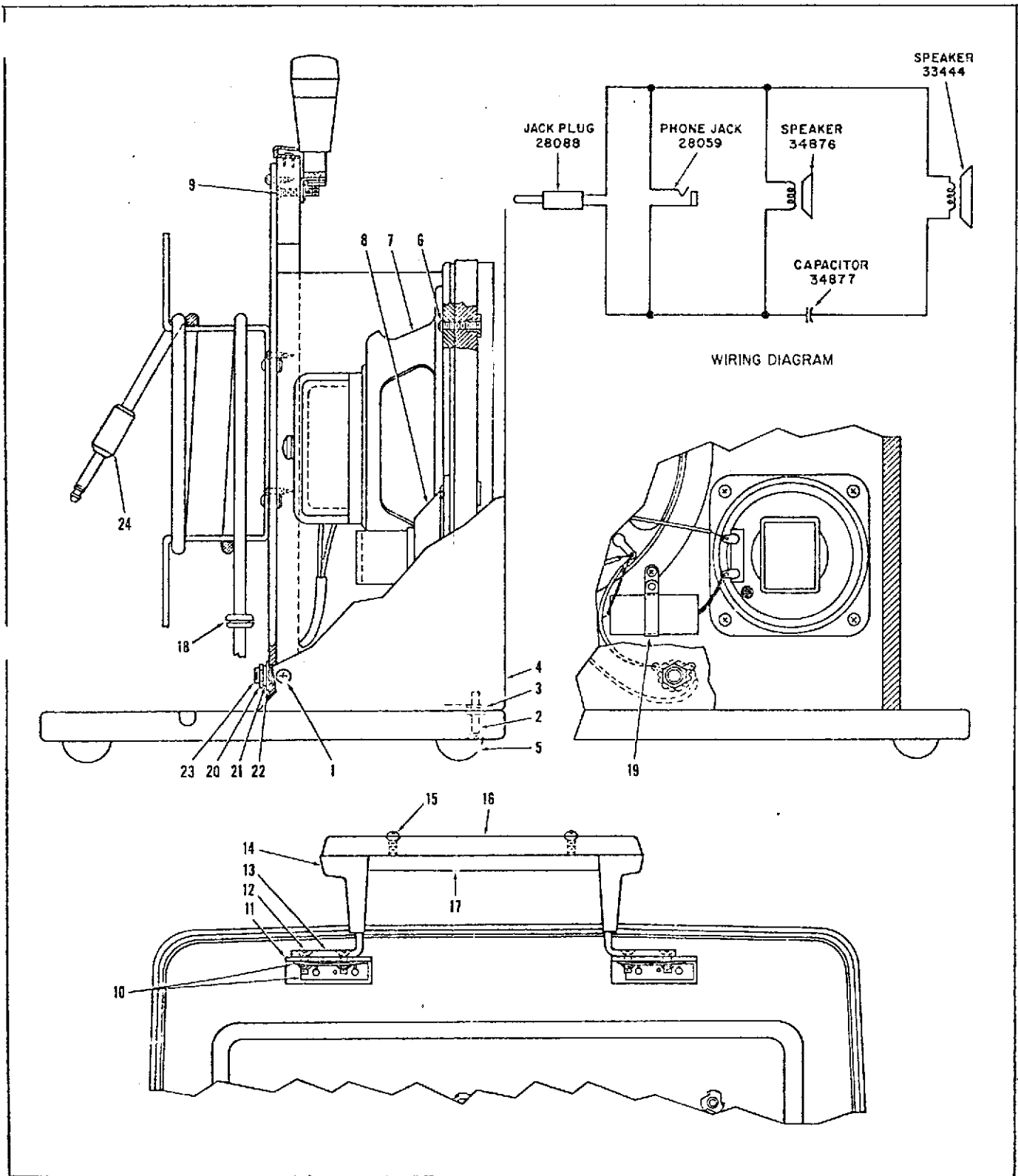


Figure 39. Dual AV Speaker Assembly

FIG. & INDEX NO.	PART NO.	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE		
		1	2	3	4	5	6	7				
25-WATT POWER SPEAKER												
40-	040322									POWER SPEAKER, 25-watt	1	
40-	01873									. REEL, 1600 foot (not shown)	1	
40-	08985									. CABLE ASSY, 50-foot (not shown)	1	
-1	82034									. SCREW, Amplifier cover	4	
-2	620004									. WASHER	4	
-3	22045									. NUT, Speed	4	
-4	23736									. COVER, Amplifier	1	
-5	08995									. AMPLIFIER ASSY	1	
-6	23336									. . KNOB, Volume control	1	
40-	040323									. CASE ASSY, Speaker	1	
-7	28037									. . SCREW, Speaker attaching	4	
-8	28035									. . SPEAKER	1	
-9	1973									. . SCREW, Wood	1	
-10	17455									. . CLAMP, Cable	1	
-11	09050									. . CABLE ASSY, 12-inch	1	
-12	23414									. . SCREW, Reel clip attaching	4	
-13	23619									. . CLIP, Reel	1	
-14	28048									. . RIVET, Tubular	20	
-15	400304									. . HINGE	1	
-16	28042									. . DRAWBOLT	2	
-17	28043									. . CATCH, Drawbolt	2	
-18	18086									. . FOOT, Rubber	4	
-19	18087									. . NUT, Tee	1	
-20	23414									. . SCREW, Wood, guide bracket	2	
-21	28026									. . BRACKET, Guide	1	
-22	430145									. . SCREW, Machine, handle top	2	
-23	24736									. . NUT, Tinnerman	2	
-24	430062									. . HANDLE, Top	1	
-25	21736									. . RING, Retaining	2	
-26	430142									. . WASHER, Flat	2	
-27	430144									. . CUSHION	2	
-28	430193									. . SPRING	2	
-29	430192									. . SLEEVE, Stop	2	
-30	430097									. . PIN, Roll	2	
-31	430189									. . POST, Handle	2	
-32	430037									. . CHANNEL, Handle	1	

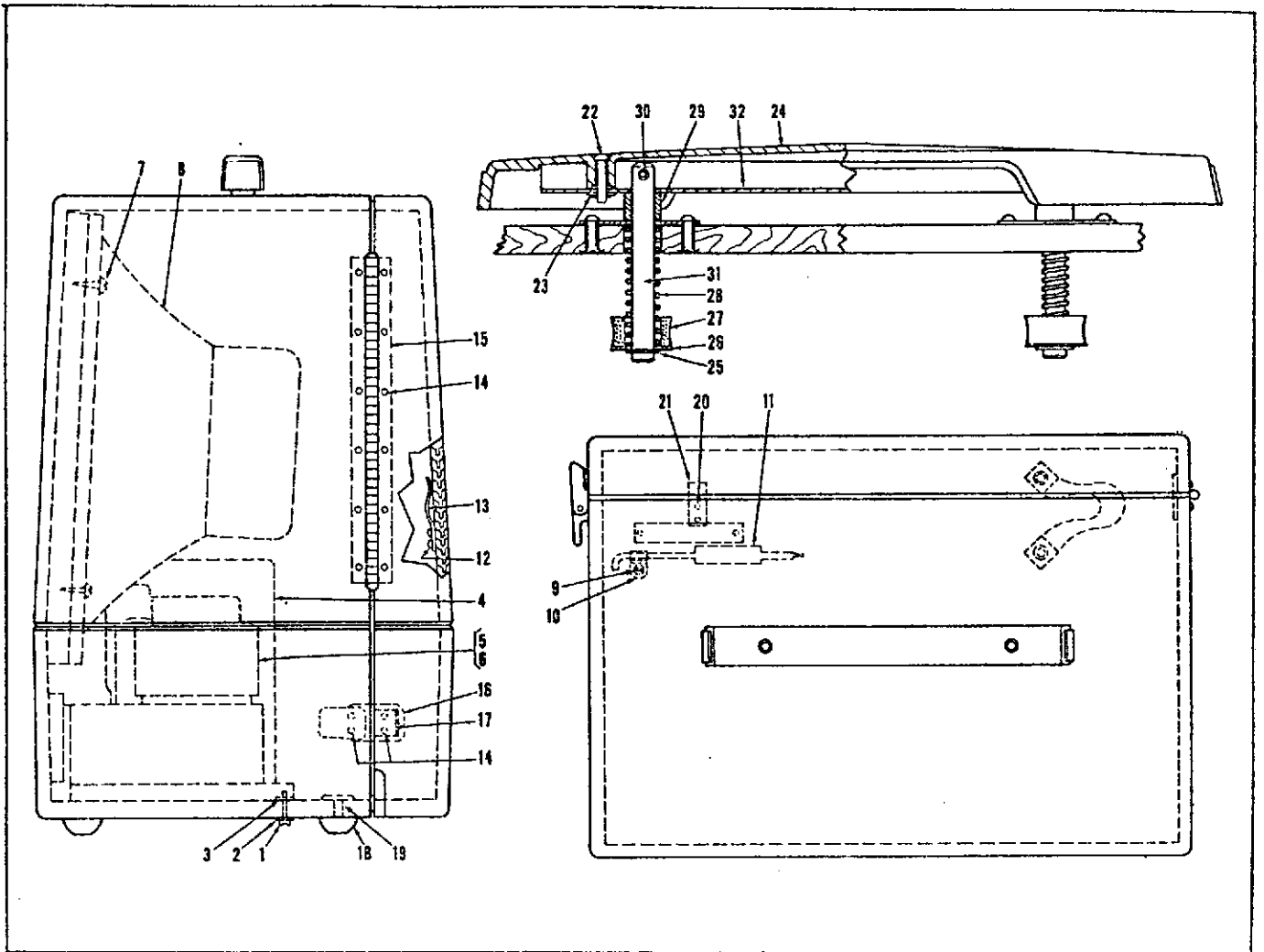


Figure 40. 25-Watt Power Speaker Assembly

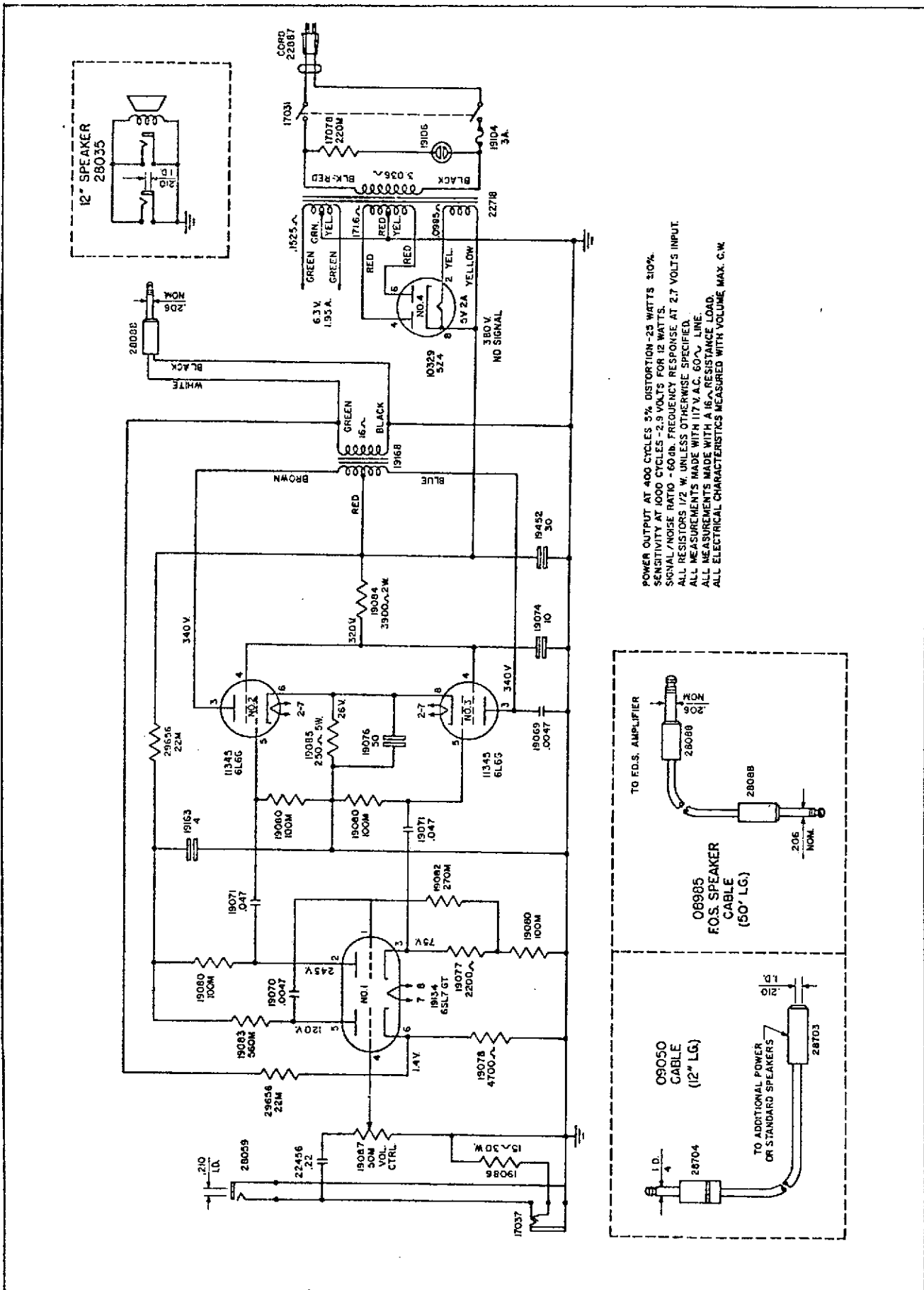


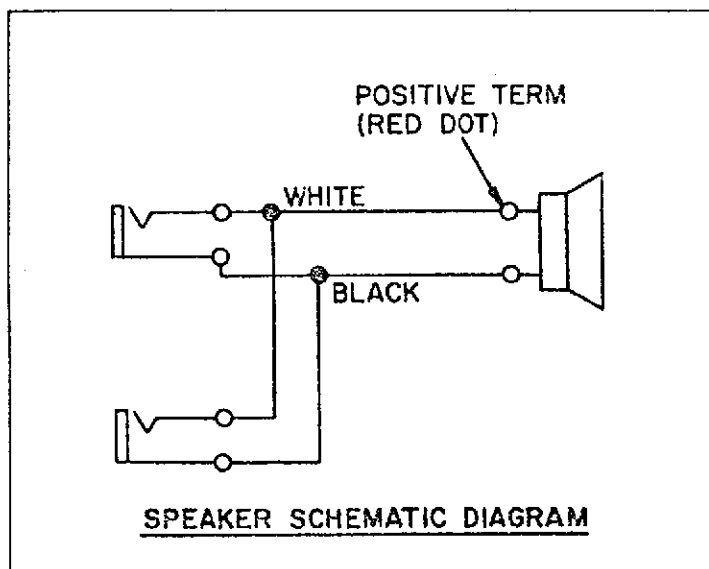
Figure 41. 25-Watt Power Speaker Schematic Diagram

FIG. & INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE		
					1	2

ORCHESTRICON II SPEAKER ASSEMBLY

42-	012568	SPEAKER ASSEMBLY, Orchestricon II	1	
-1	36293	. RIVET, Tubular	4	
-2	36291	. LATCH, Speaker Door	1	
-3	39190	. RIVET, Tubular	2	
-4	400541	. BUMPER, Recessed	2	
-5	700846	. RIVET, Tubular	10	
-6	39759	. HINGE, Speaker door	2	
-7	12087	. NUT, Hex	2	
-8	30404	. WASHER	2	
-9	39760	. HANDLE, Carrying, complete	1	
-10	012567	. CABLE AND CONNECTOR ASSEMBLY (NOTE A)	1	
-11	33464	. SCREW, Wood, flat head	9	
-12	012570	. REEL ASSEMBLY, Cable storage	1	
-13	012569	. STUD ASSEMBLY, Reel storage	1	
-14	37897	. WASHER	1	
-15	25617	. NUT, Special	1	
-16	38059	. RECEPTACLE, Jack plug	2	
-17	25368	. WASHER	2	
-18	012574	. BAFFLE ASSEMBLY, Speaker	1	
-19	39762	. GRILLE, Deflector (secure with staples 29062)	1	
-20	19037	. NUT, Hex	4	
-21	23382	. WASHER	4	
-22	40269	. SCREW, Special	4	
-23	39761	. SPEAKER	1	
-24	39765	. GRILLE, Speaker	1	
-25	40268	. TRIM, Decorative (cement in place)	1	
-26	18086	. FOOR, Rubber	4	
-27	25617	. WASHER, Flat	4	
-28	012571	. CASE AND DOOR ASSEMBLY, Speaker	1	
-29	40272	. PAD, (secured with grille p/n 39762)	1	
42-	39774	. NAMEPLATE, Bell & Howell	1	
42-	39775	. NAMEPLATE, Operating notice	1	

NOTE A: Molded cable and connector P/N 40291 may be furnished as an alternate for cable assembly P/N 012567.



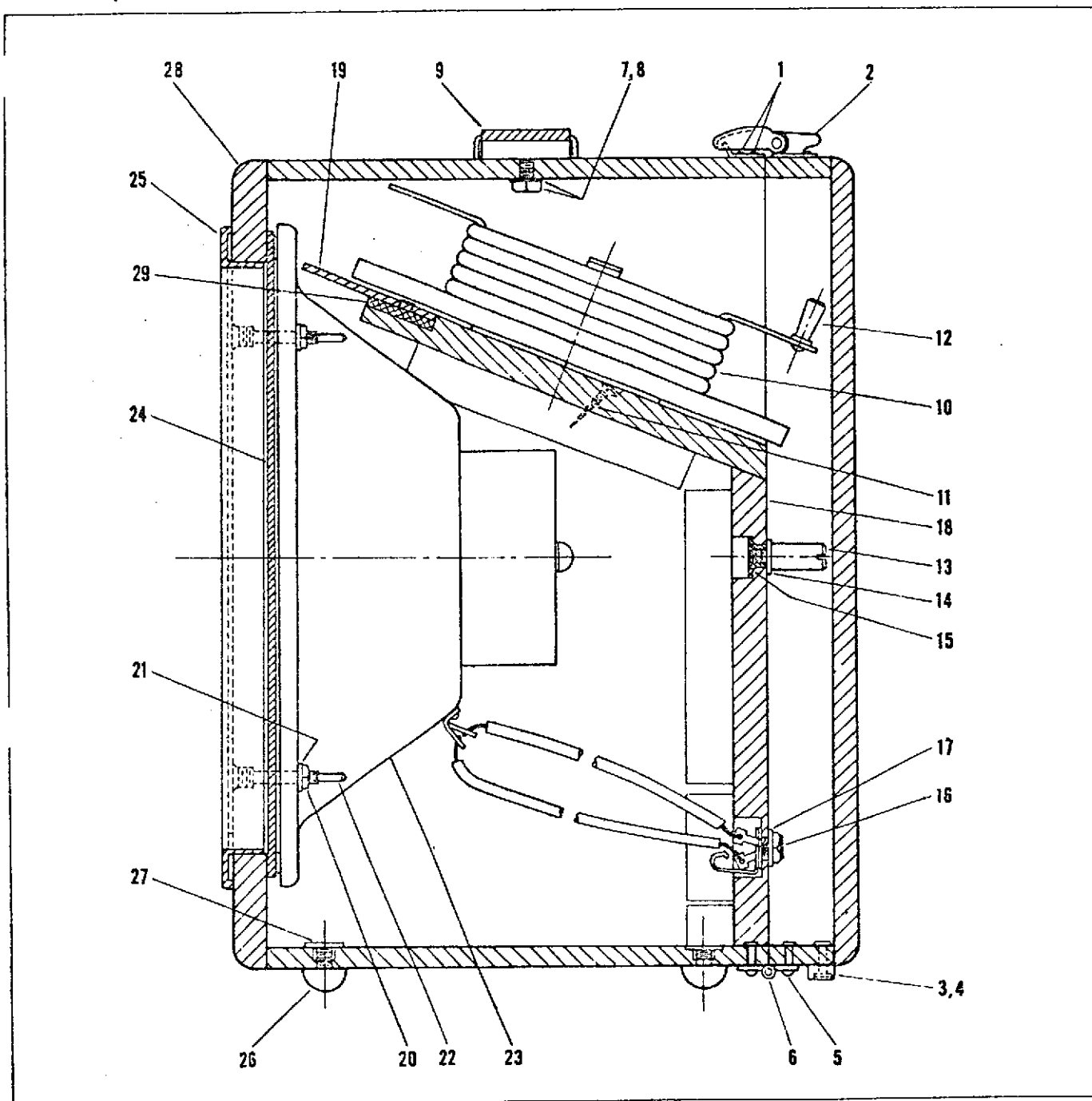


Figure 42. External (Orchestricon II) Speaker Assembly