

Figure 4-2. Play, Record, and Edit Control Circuitry, Simplified Schematic (Sheet 1 of 2)

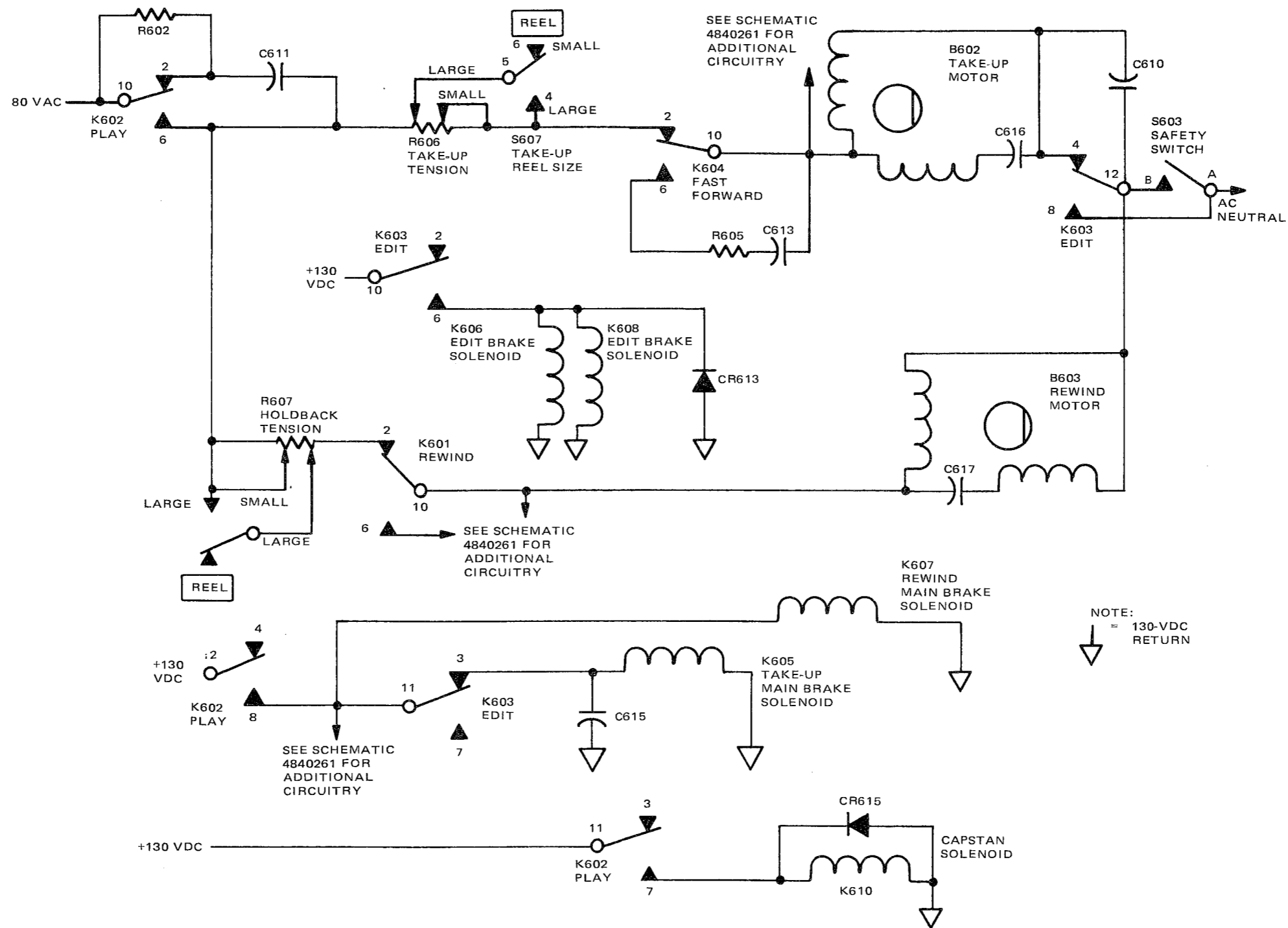
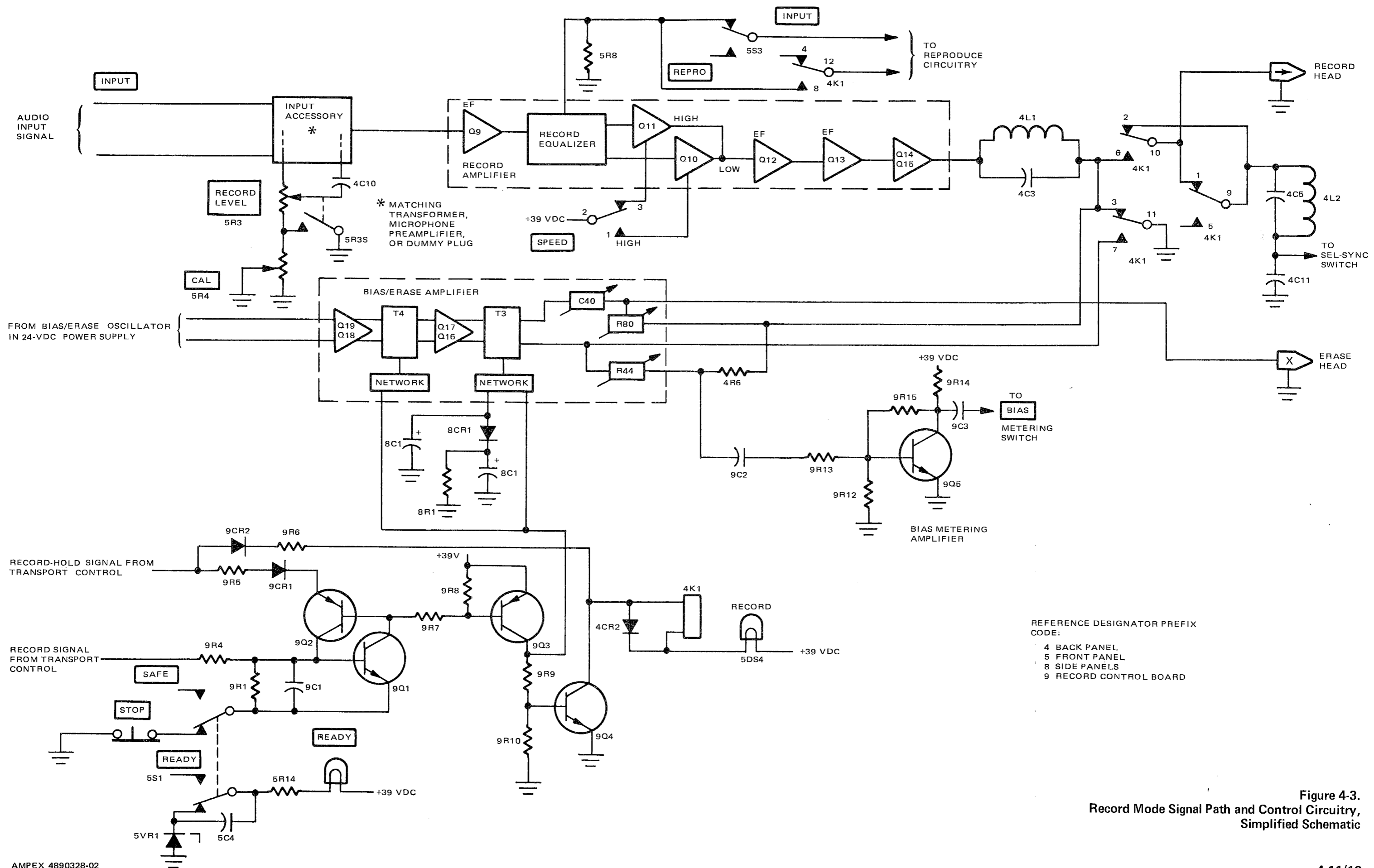


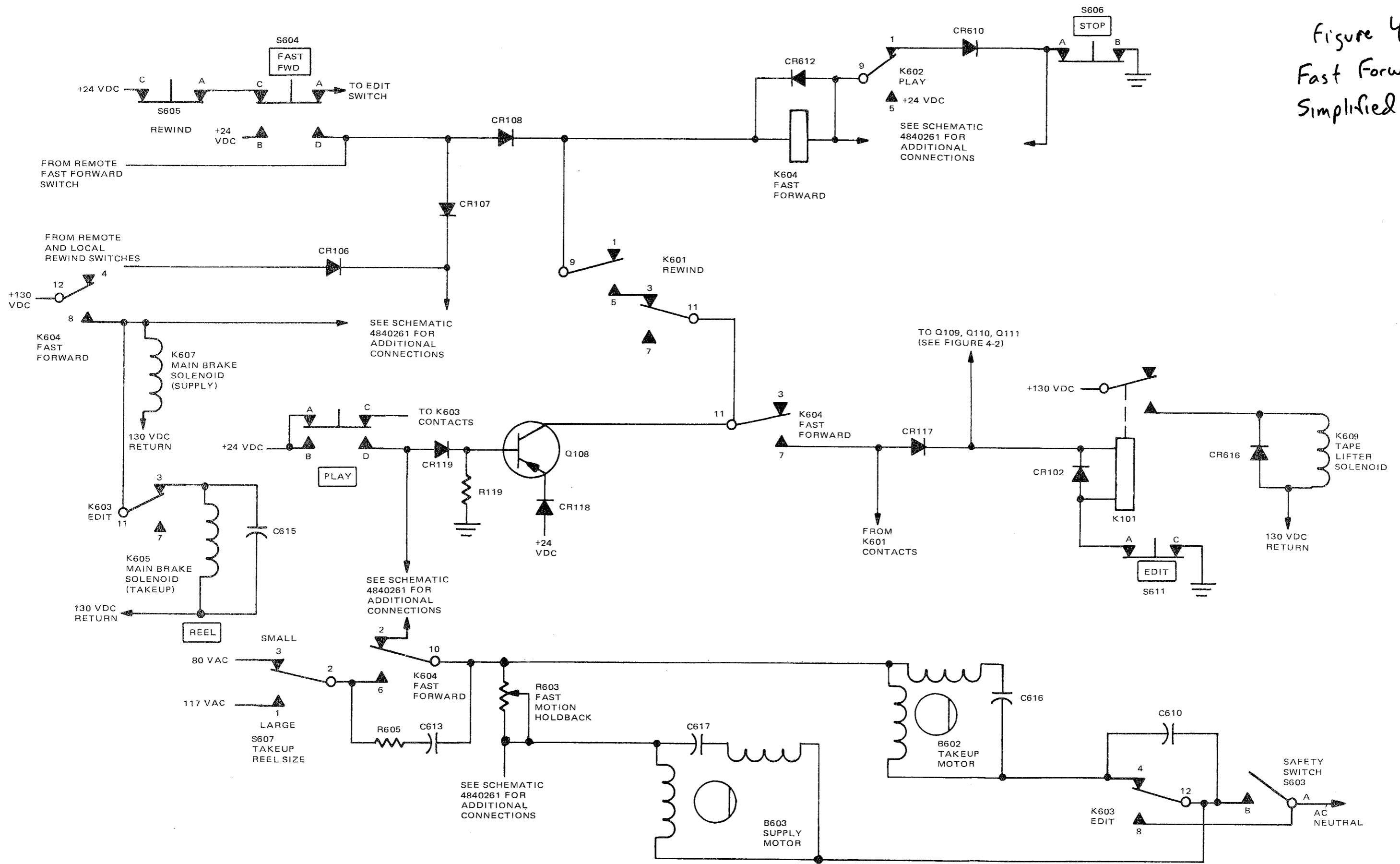
Figure 4-2.
Play, Record, and Edit Control Circuitry,
Simplified Schematic (Sheet 2 of 2)

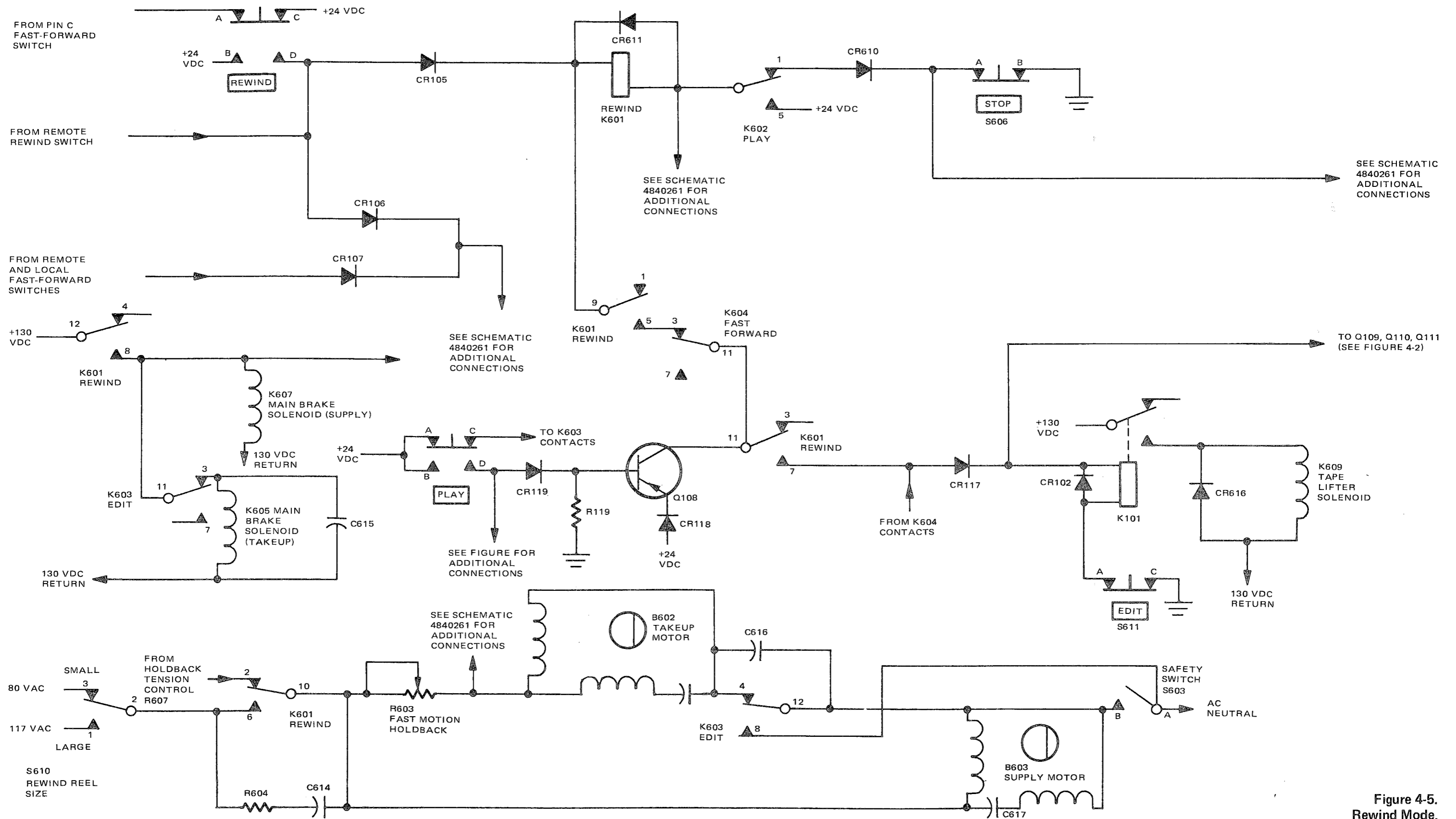


REFERENCE DESIGNATOR PREFIX CODE:
 4 BACK PANEL
 5 FRONT PANEL
 8 SIDE PANELS
 9 RECORD CONTROL BOARD

Figure 4-3.
 Record Mode Signal Path and Control Circuitry,
 Simplified Schematic

Figure 4-4
Fast Forward Mode,
Simplified schematic





SEE SCHEMATIC 4840261 FOR ADDITIONAL CONNECTIONS

TO Q109, Q110, Q111 (SEE FIGURE 4-2)

Figure 4-5.
Rewind Mode,
Simplified Schematic

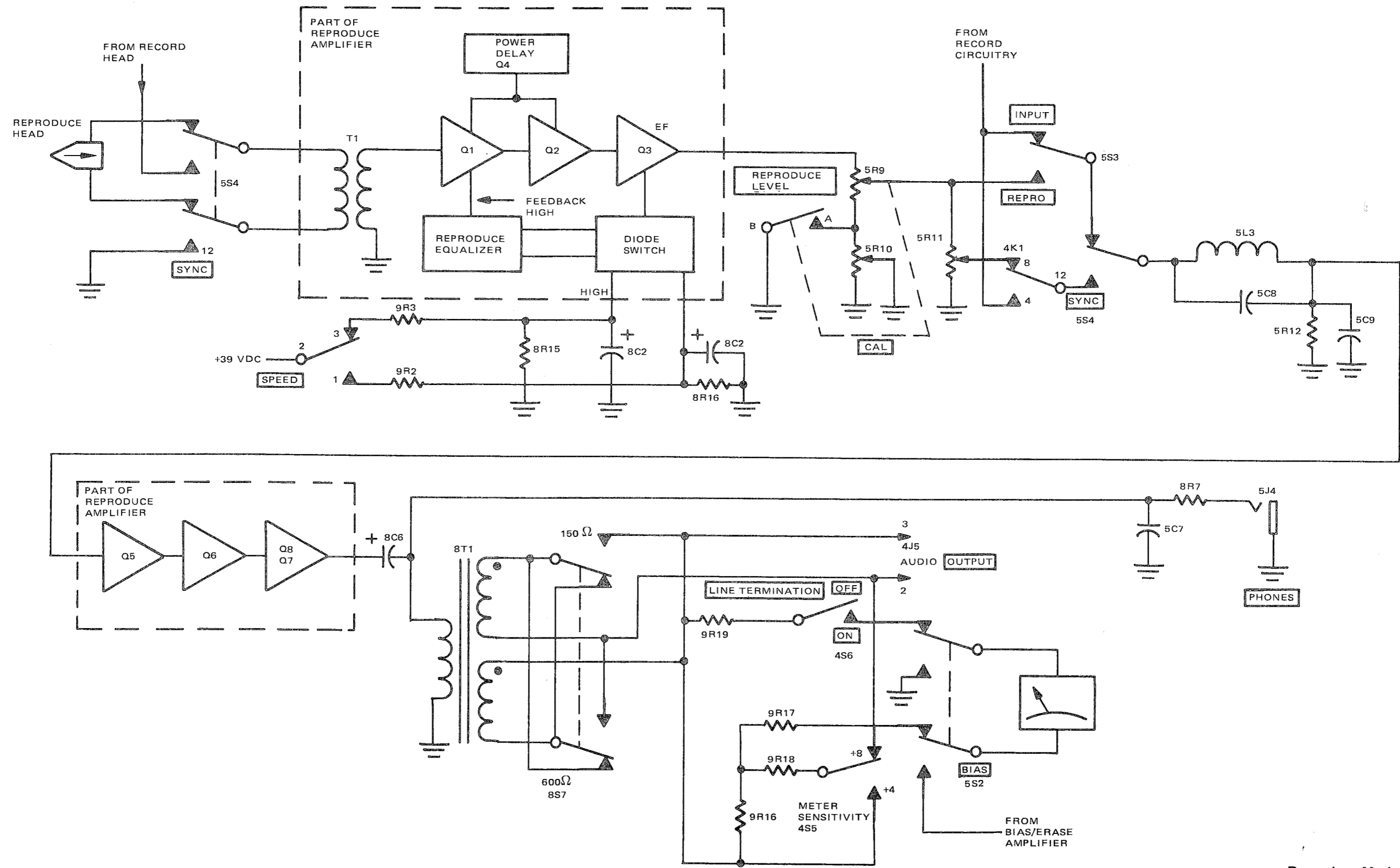
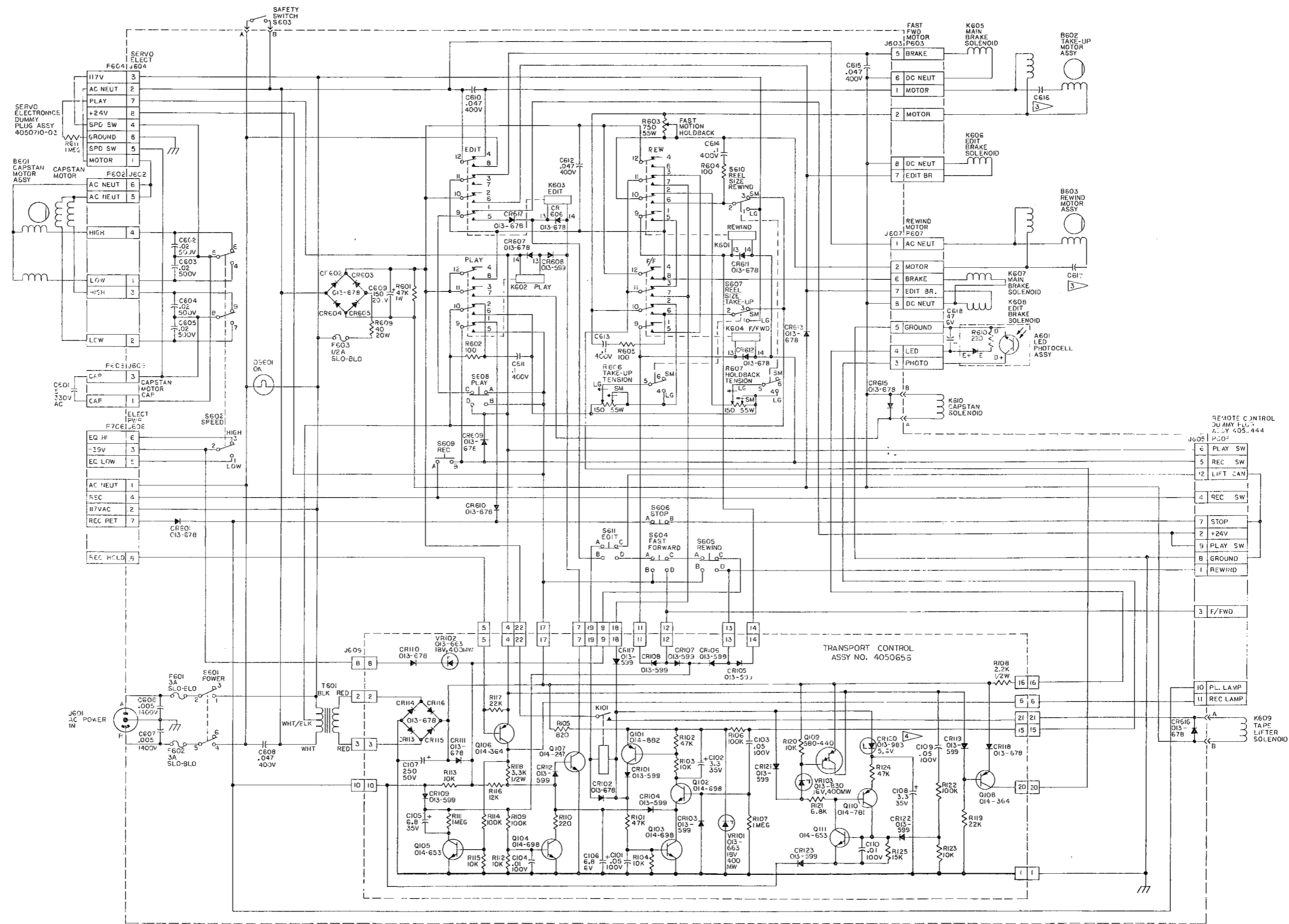


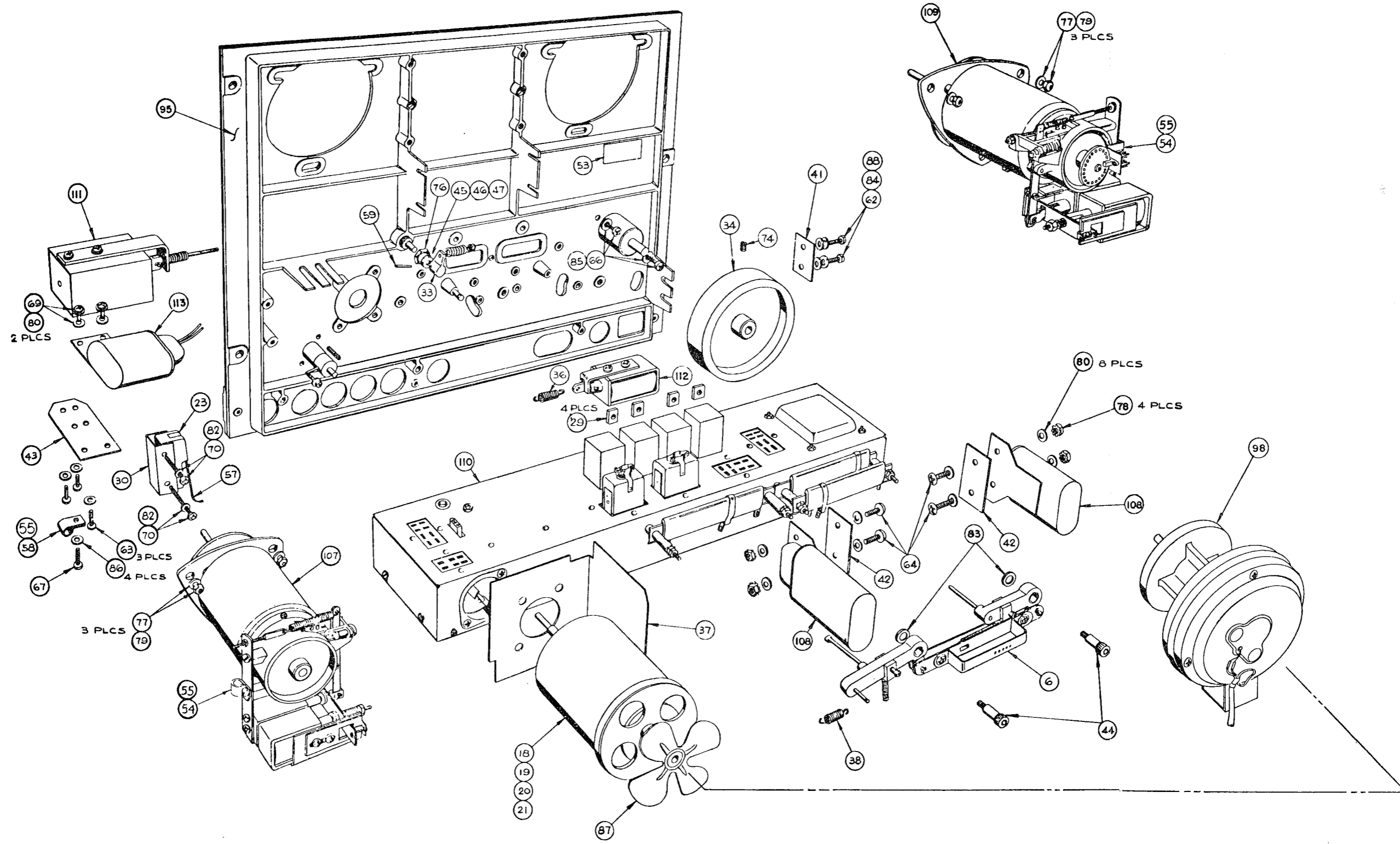
Figure 4-7.
Reproduce Mode Signal Path,
Simplified Block Diagram



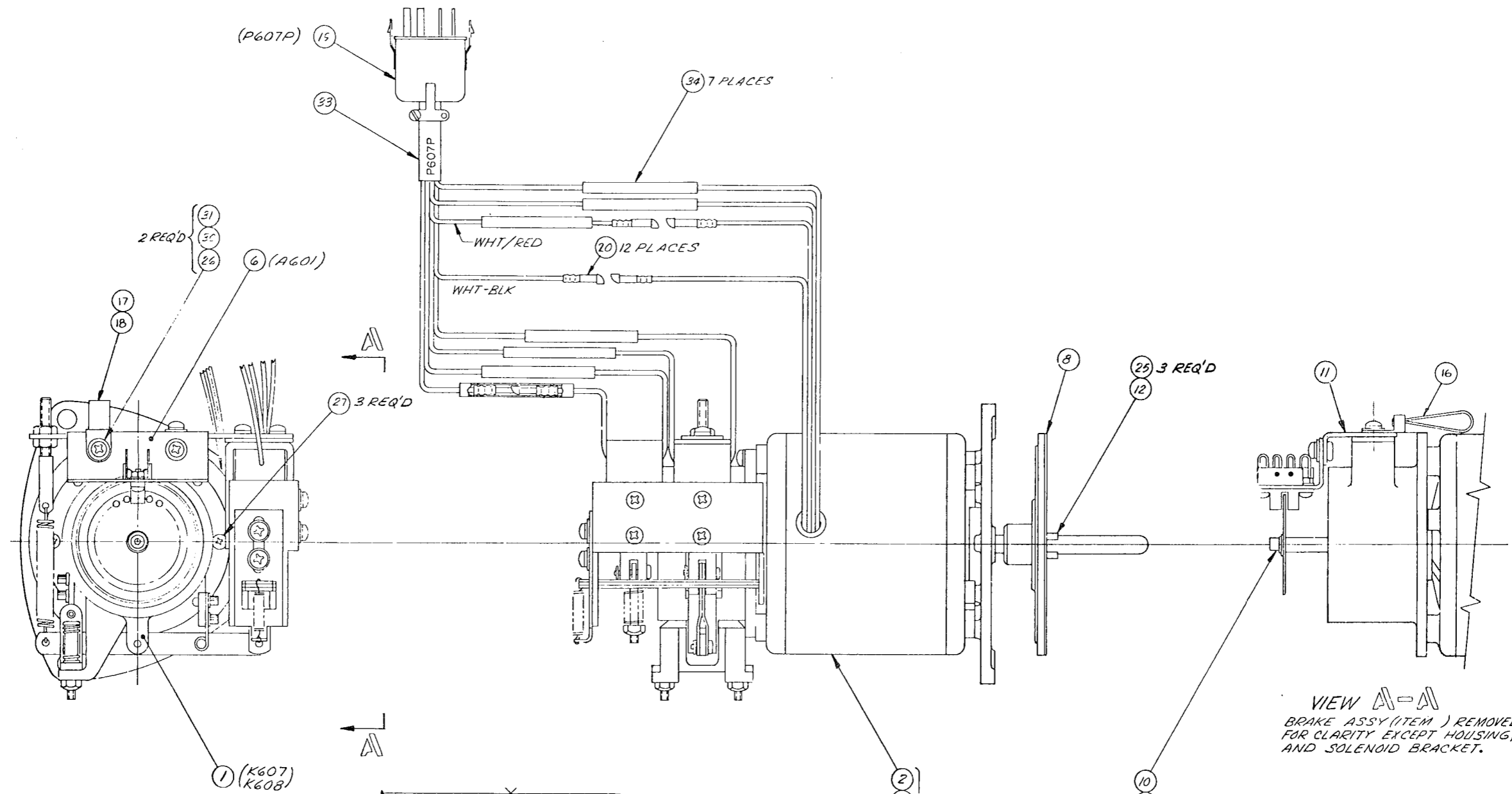
NOTES: UNLESS OTHERWISE SPECIFIED
 1 ALL RESISTOR VALUES ARE IN OHMS, 1/4W.
 2 ALL CAPACITOR VALUES ARE IN MICROFARADS.
 3 10MFD 250VAC EXCEPT 5MFD 300VAC WITH 4590107-30 MOTOR.
 4 FUNCTIONS AS A FORWARD BIASED DIODE

AMPEX P/N	NEAREST COML EQUIV	REF. DES. NOT USED	LAST REFERENCE DES. USED
014-781	MPS 6518	R608	CR123
014-247	2N219	CR614	R124
014-364	2N2905A	P601, 6	CR110
014-653	2N3904	P701-5	J609
014-698	2N3565		S611
014-882	2N3638A		C618
013-678	IN 4385		DS601
013-663	IN 967B		T601
013-599	IN 914		F603
013-883	IN 752		R611
013-830	IN 956B		R610
380-440	MPS-A65		A601
			P706

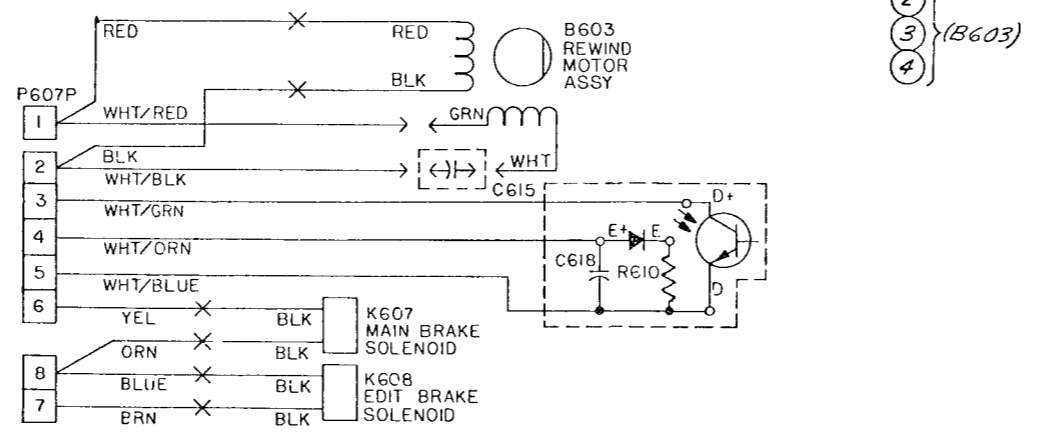
Schematic No. 4840261
 Tape Transport Assembly



Assembly No. 402071 (2 of 2)
Tape Transport Assembly

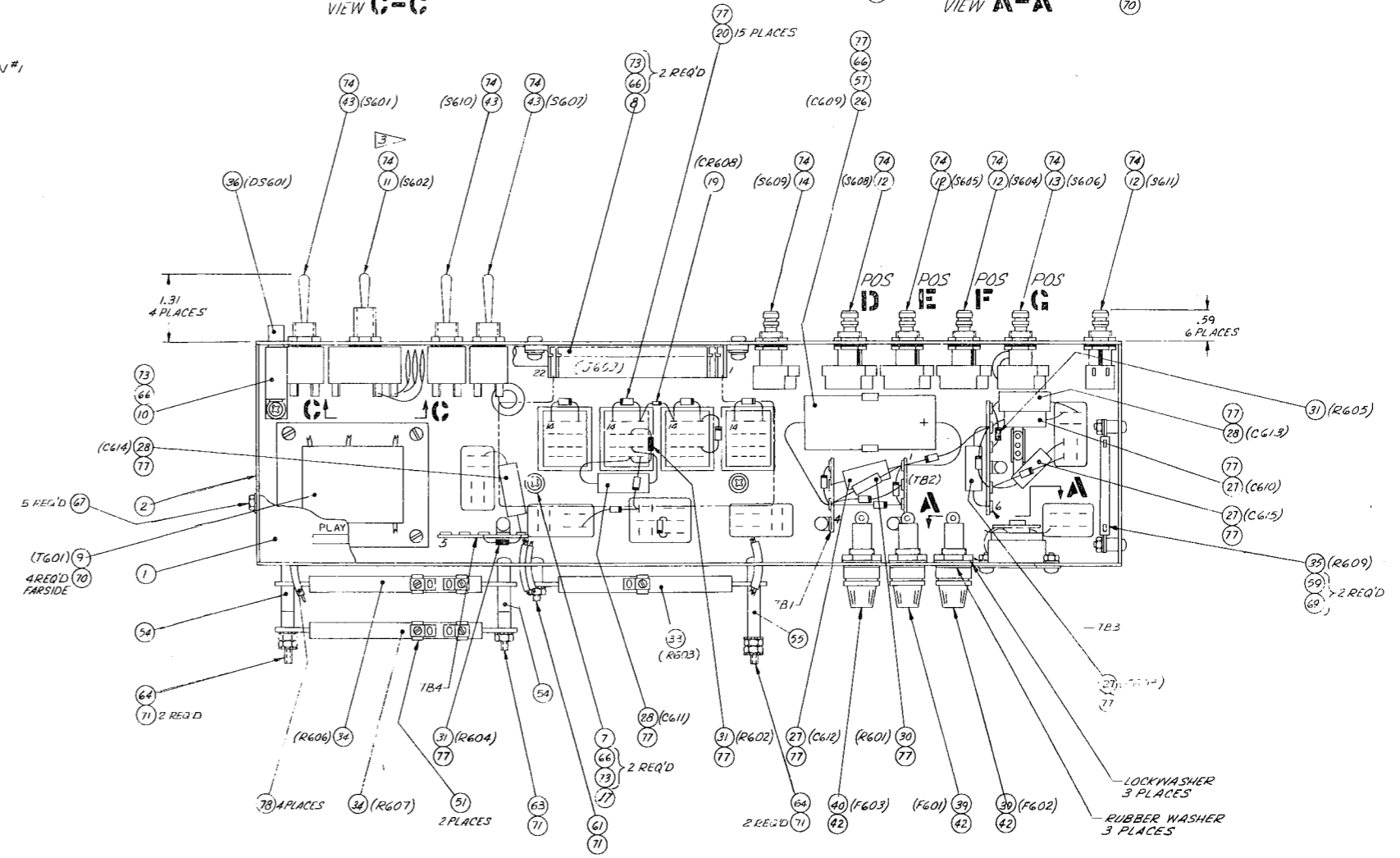
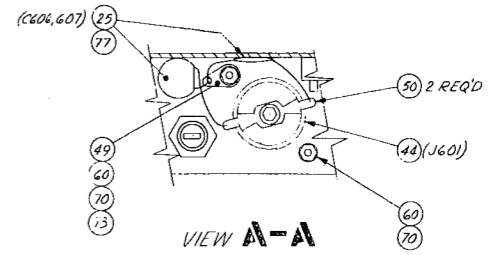
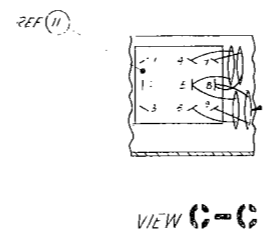
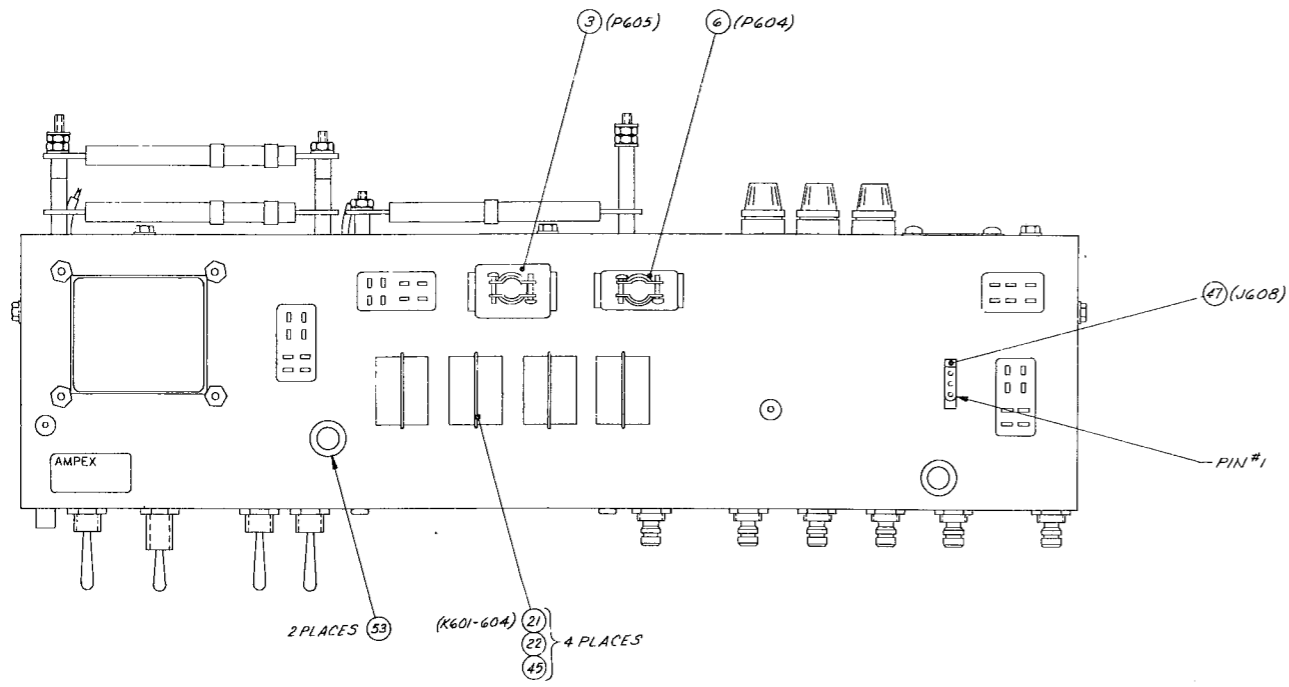


VIEW A-A
 BRAKE ASSY (ITEM) REMOVED
 FOR CLARITY EXCEPT HOUSING,
 AND SOLENOID BRACKET.

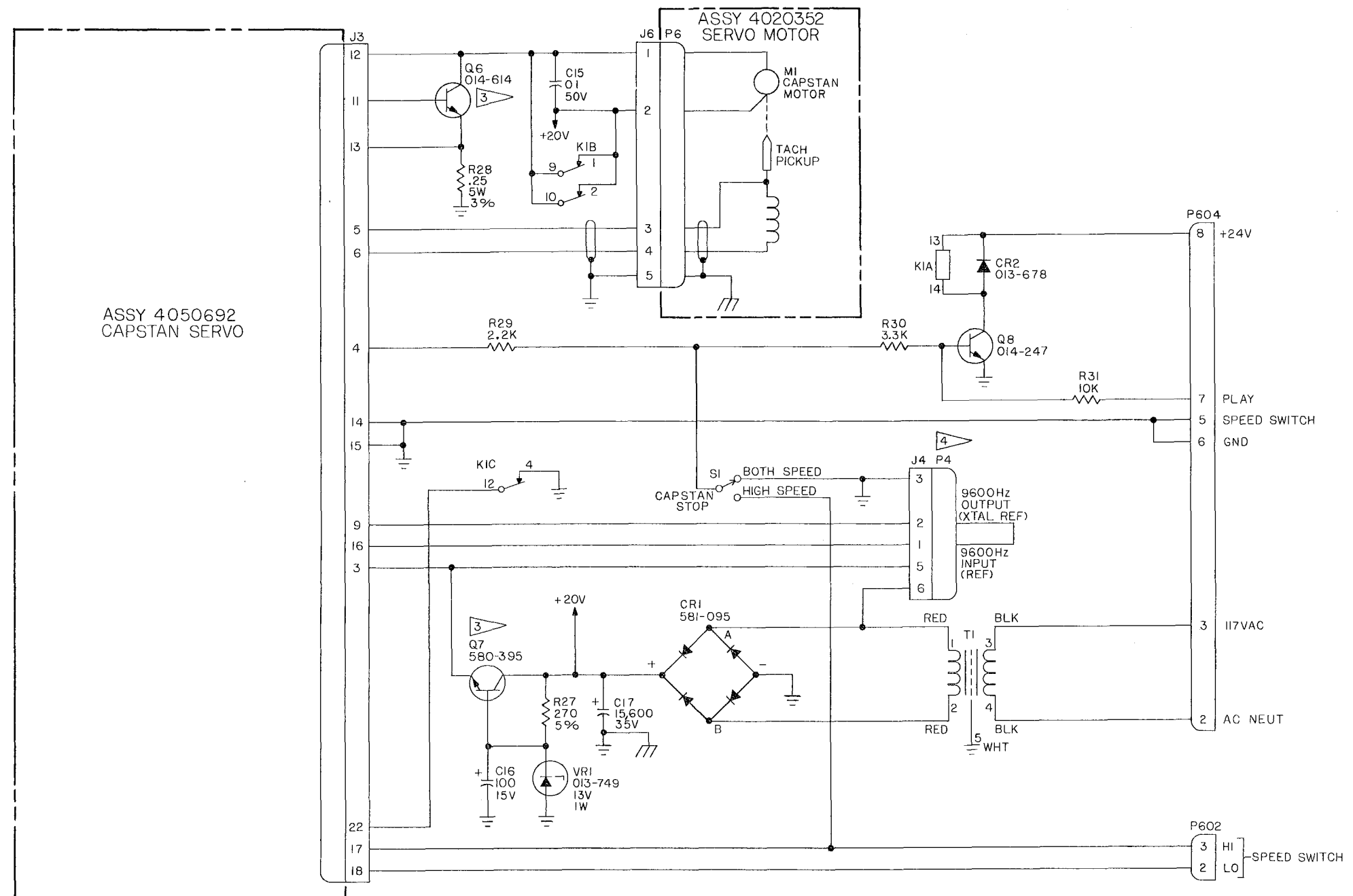


WIRING DIAGRAM

Assembly No. 4030333
 Rewind Assembly



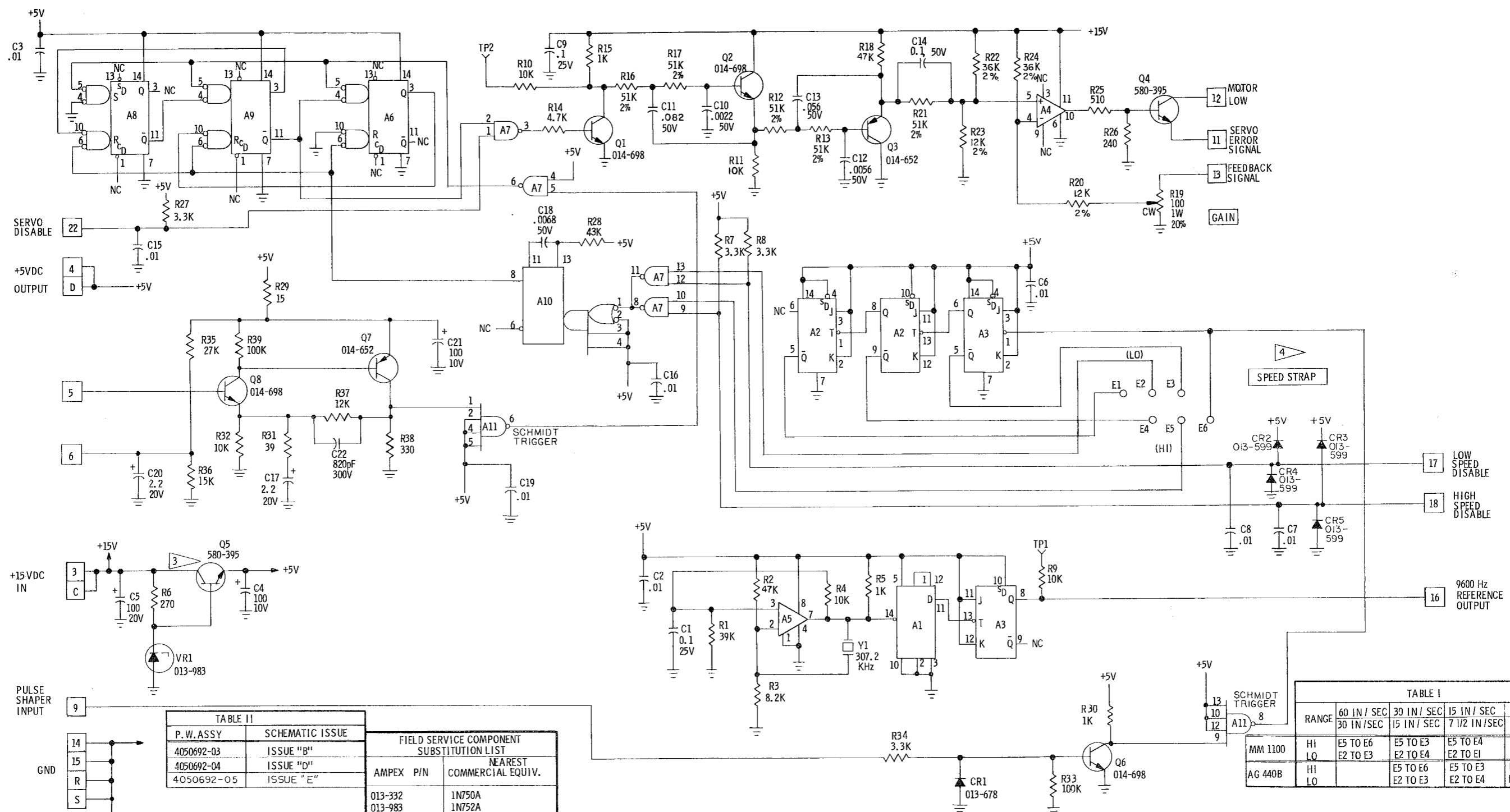
Assembly No. 4020338
 Transport Control Box Assembly



- NOTES: UNLESS OTHERWISE SPECIFIED.
- 1 CAPACITANCE VALUES ARE IN MICROFARADS.
 - 2 RESISTANCE VALUES ARE IN OHMS 1/4W, 10%.
 - 3 HEATSINK REQUIRED.
 - 4 DUMMY PLUG ASSY 4050710-01.
 - 5 TO KEEP CAPSTAN RUNNING AT BOTH SPEEDS DURING STANDBY REMOVE KI.

FIELD SERVICE COMPONENT SUBSTITUTION LIST		
AMPEX	P/N	COML. NEAREST EQUIVALENT
014-614		2N3055
580-395		2N5190
581-095		SCBA2(SEMTECH)
013-749		1N4743
014-247		2N2219A

Schematic No. 4840279
Capstan Servo Chassis



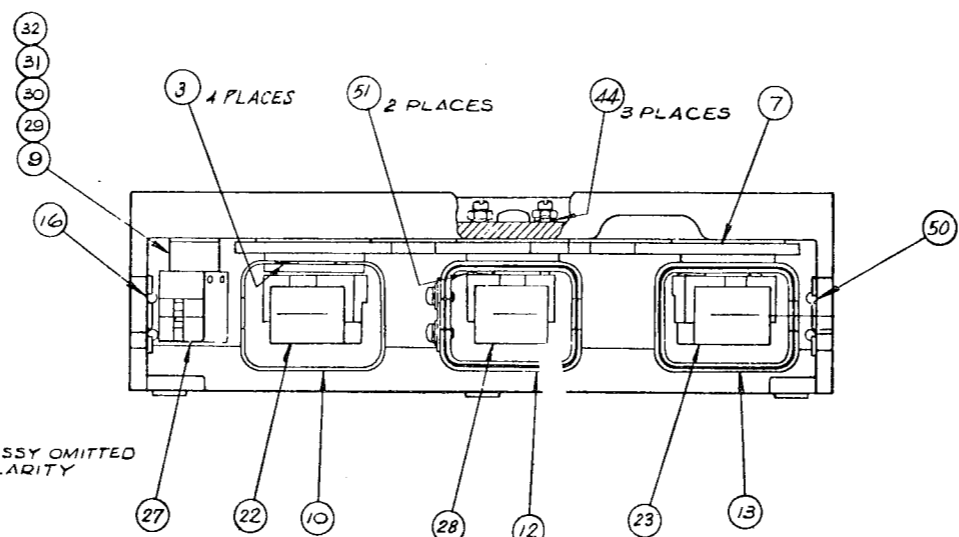
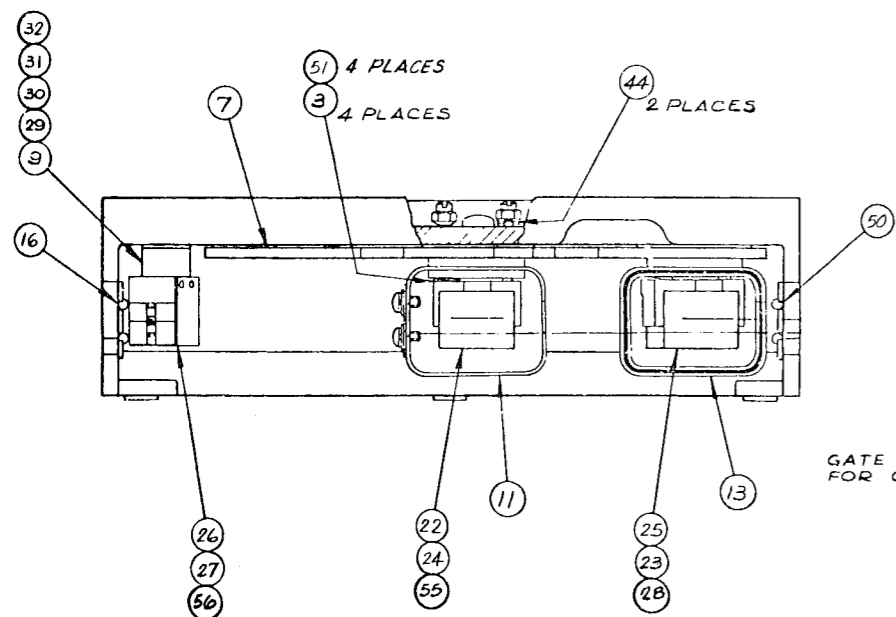
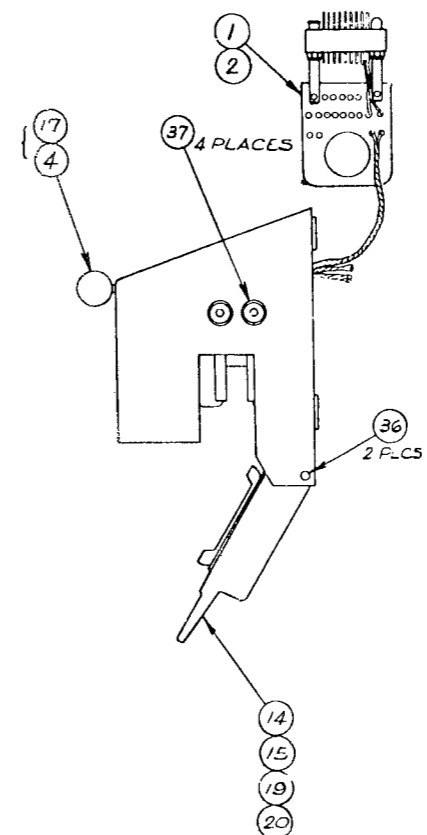
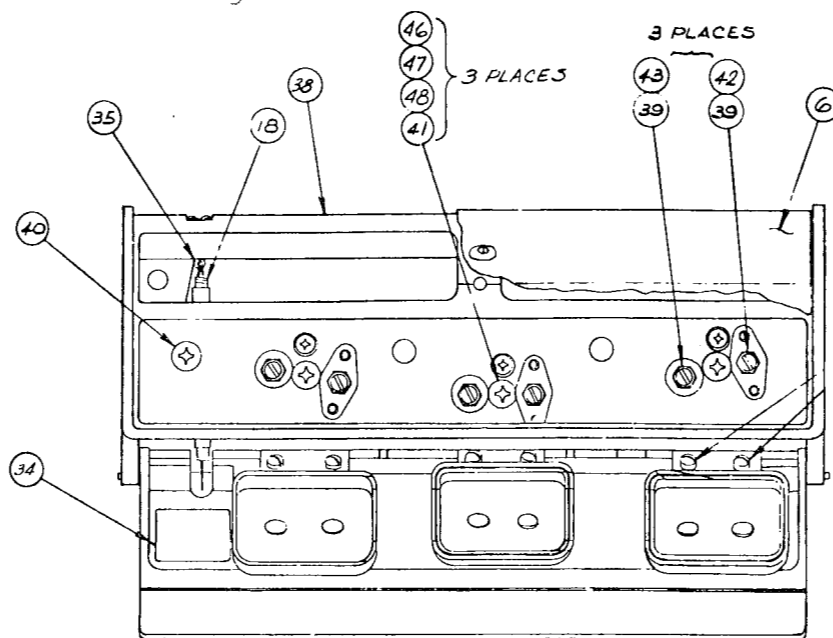
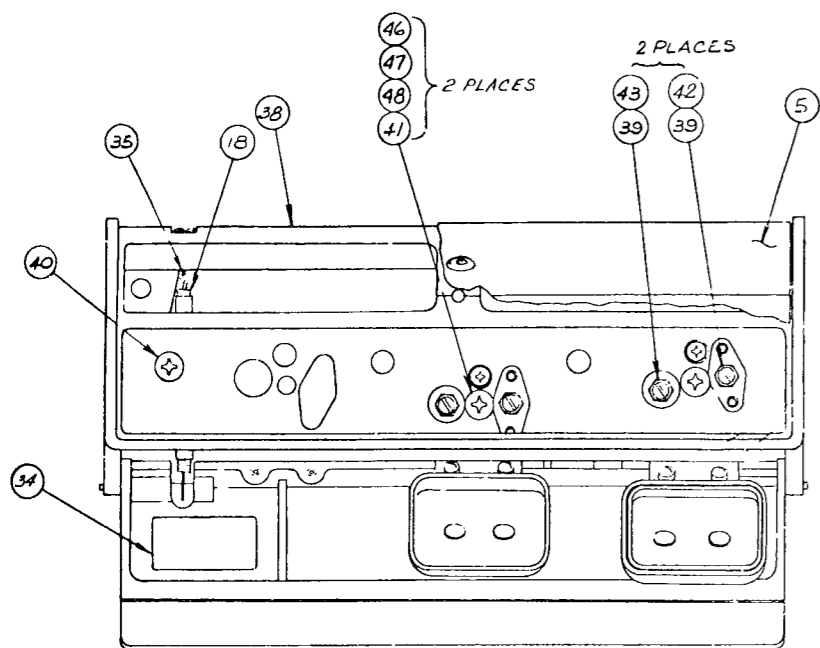
- NOTES: UNLESS OTHERWISE SPECIFIED
1. CAPACITANCE VALUES ARE IN MICROFARADS, 100V.
 2. RESISTANCE VALUES ARE IN OHMS 1/4W, 5%.
 3. HEATSINK REQUIRED.
 4. SEE TABLE 1 FOR SPEED STRAPPING.

TABLE II		FIELD SERVICE COMPONENT SUBSTITUTION LIST	
P.W. ASSY	SCHEMATIC ISSUE	AMPEX P/N	NEAREST COMMERCIAL EQUIV.
4050692-03	ISSUE "B"	013-332	1N750A
4050692-04	ISSUE "D"	013-983	1N752A
4050692-05	ISSUE "E"	014-652	2N3906
		580-395	2N5190
		014-698	NONE
		013-678	1N4385

RANGE	60 IN / SEC	30 IN / SEC	15 IN / SEC	7 1/2 IN / SEC
MM 1100	H1 E5 TO E6	E5 TO E3	E5 TO E4	
AG 440B	H1 E2 TO E3	E5 TO E6	E5 TO E3 E2 TO E4	E5 TO E4 E2 TO E1

REFERENCE DESIGNATION		I.C. LIST								
LAST USED	NOT USED	REFERENCE DESIGNATION	A11	A6, 8, 9	A7	A4	A1	A2, 3	A5	A10
A11	Q8	AMPEX P/N	586-680	586-698	586-153	586-268	586-283	586-425	587-086	586-309
C22	Y1	VENDOR P/N	SN7413J	U6A 9950	MC 846P	UA 741C	SN7493N	MC 853P	LM-311N	U6 A9601
R39	CR5	VOLTAGE PIN	14	14	14	11	5	14	8	14
TP2	E6	GROUND PIN	7	7	7	6	10	7	4, 1	7

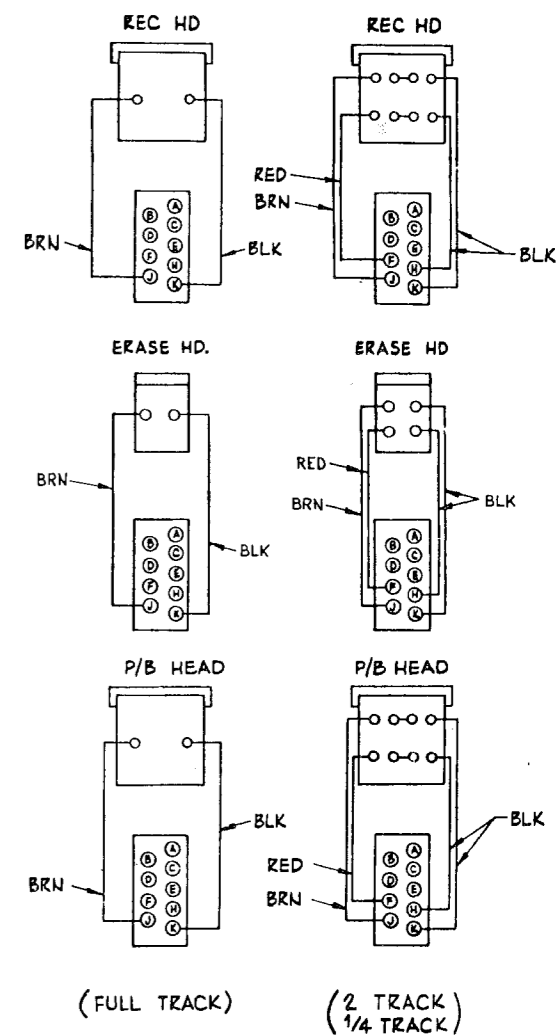
Schematic No. 4840356
Capstan Servo PWA



GATE ASSY OMITTED FOR CLARITY

FULL TRACK & 2 TRACK

2-4 TRACK



WIZING DIAGRAM

Assembly No. 4020355
1 Track, 2 Track, 2-4 Track Head Assembly
for 1/4-Inch Tape

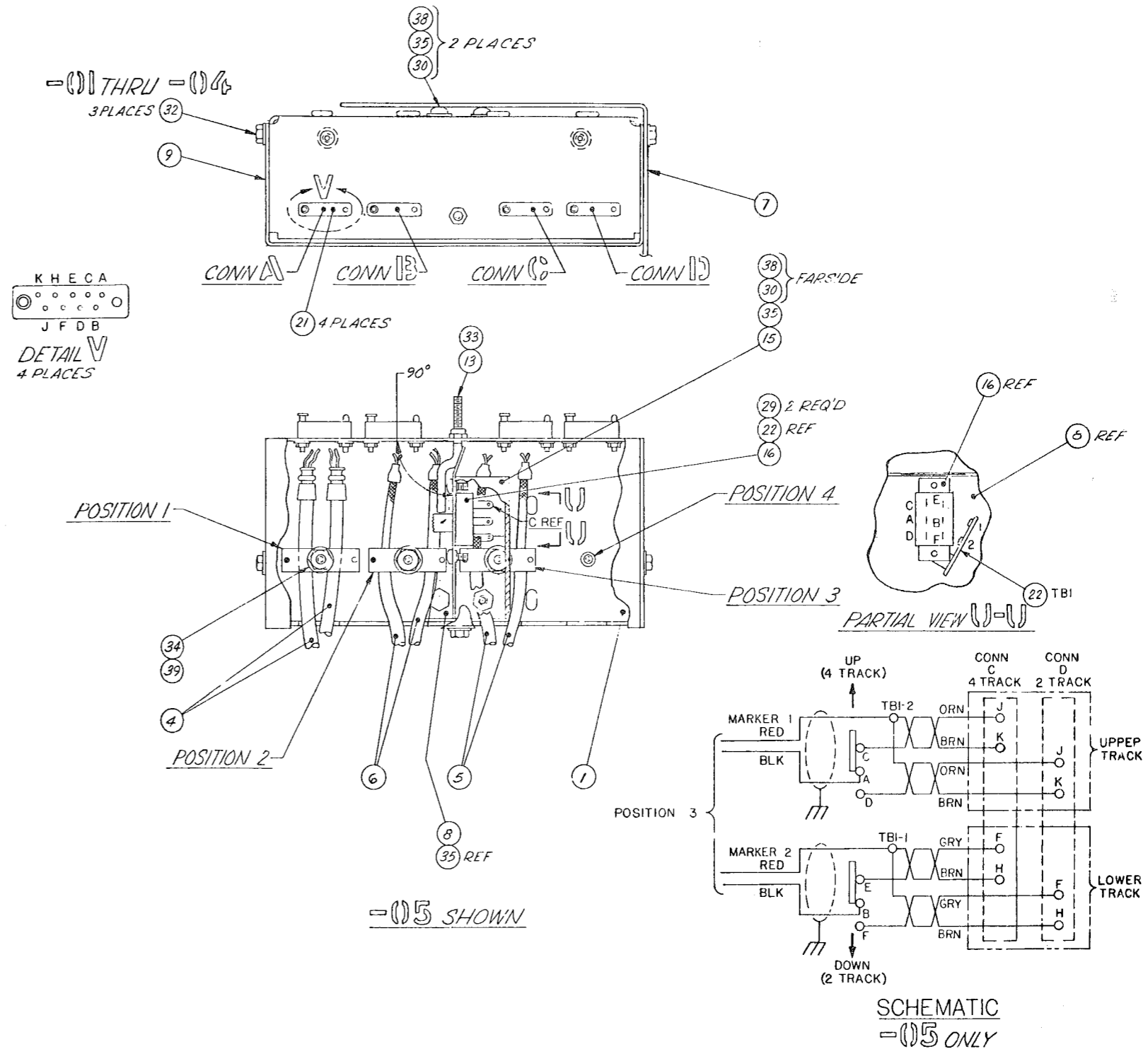
ARRANGEMENT OF CLAMPS, CABLES, AND MARKING				
	POSITION 1	POSITION 2	POSITION 3	POSITION 4
- (1) 1 OR - (1) 2	2 2 REQ'D 	2 	_____	2
- (1) 3 OR - (1) 4	2 4 REQ'D 	2 2 REQ'D 	_____	2 2 REQ'D
- (1) 5	2 2 REQ'D 	2 	2 	_____

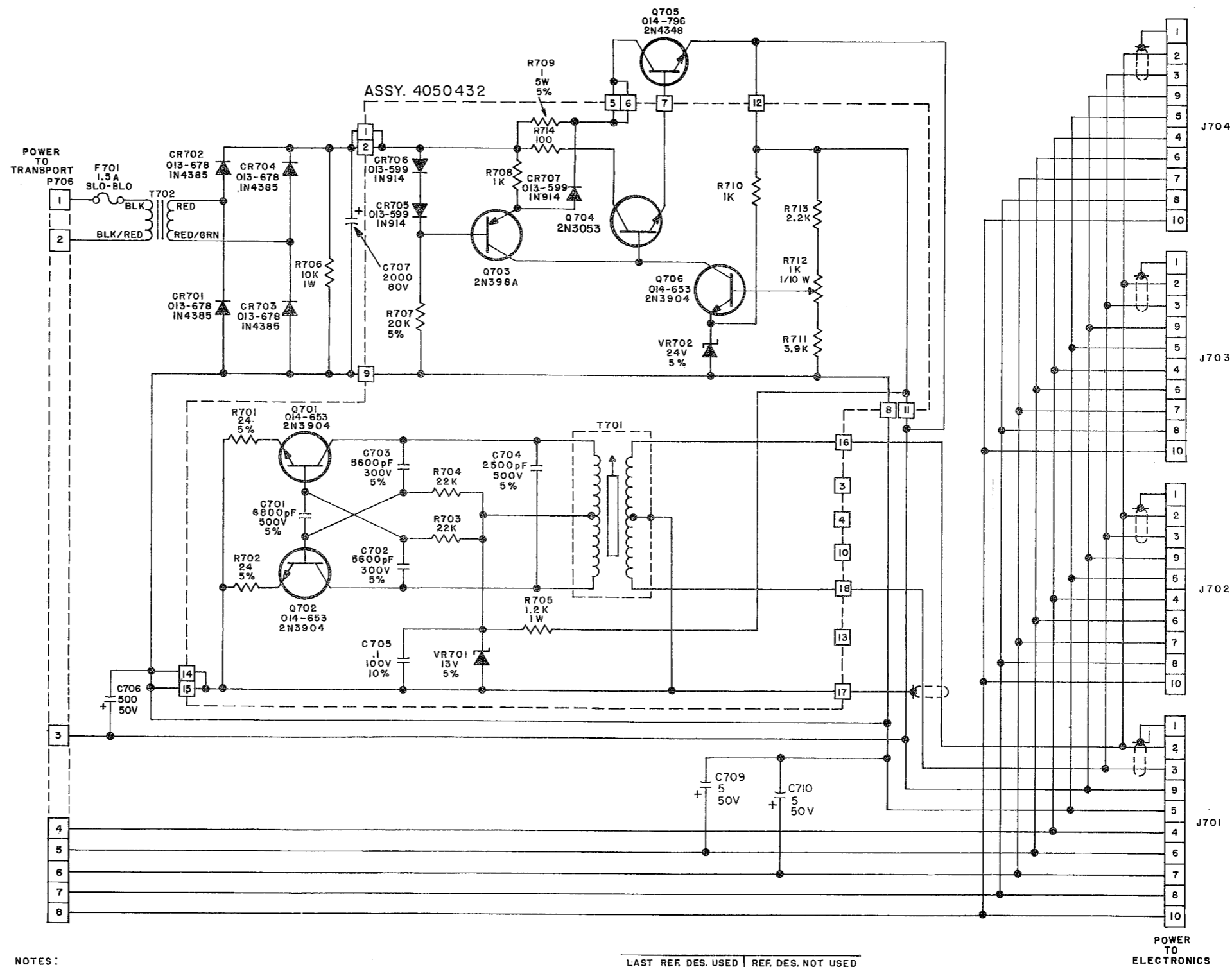
CONN A			
ITEM NO.	MARKER NO.	WIRE COLOR	PIN LETTER
④ (ERASE)	1	WHT	J
		BLK	K
	2	WHT	F
		BLK	H
3	WHT	D	
	BLK	E	
4	WHT	B	
	BLK	C	

CONN D			
ITEM NO.	MARKER NO.	WIRE COLOR	PIN LETTER
⑤ (REP)	1	RED	J
		BLK	K
	2	RED	F
		BLK	H
3	RED	D	
	BLK	E	
4	RED	B	
	BLK	C	

CONN B			
ITEM NO.	MARKER NO.	WIRE COLOR	PIN LETTER
⑥ (REC)	1	RED	J
		BLK	K
	2	RED	F
		BLK	H
3	RED	D	
	BLK	E	
4	RED	B	
	BLK	C	

- (1) 5 ONLY
 FOR HOOKUP TO
 CONNECTORS C & D
 SEE SCHEMATIC

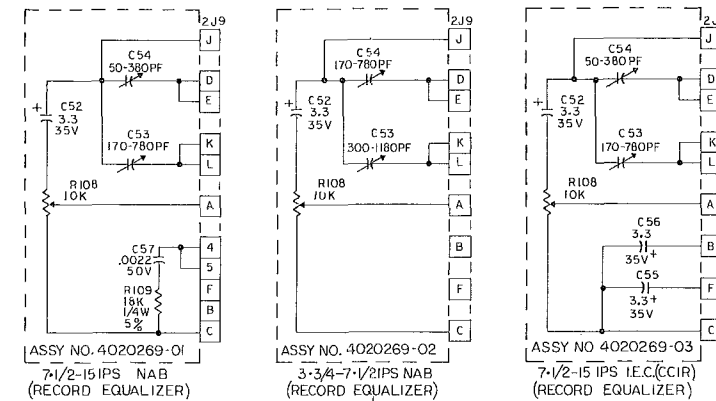
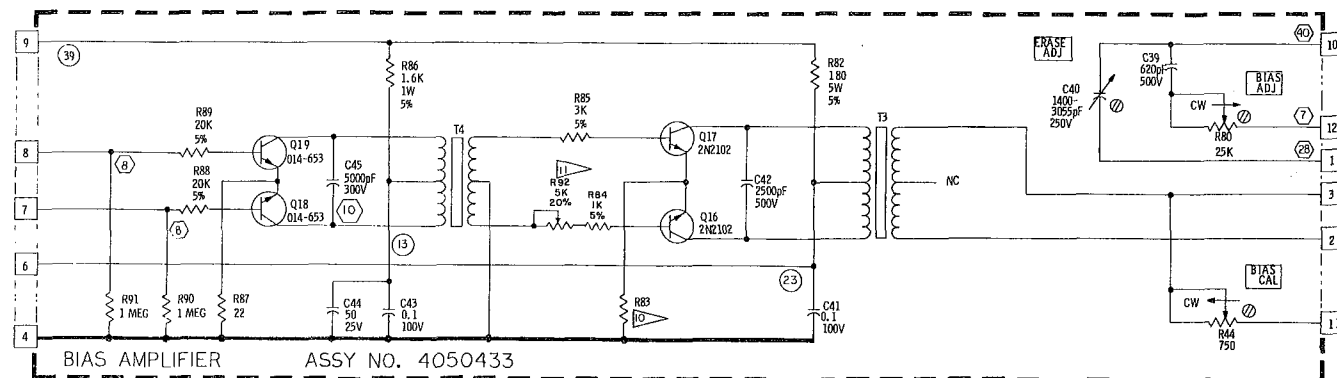
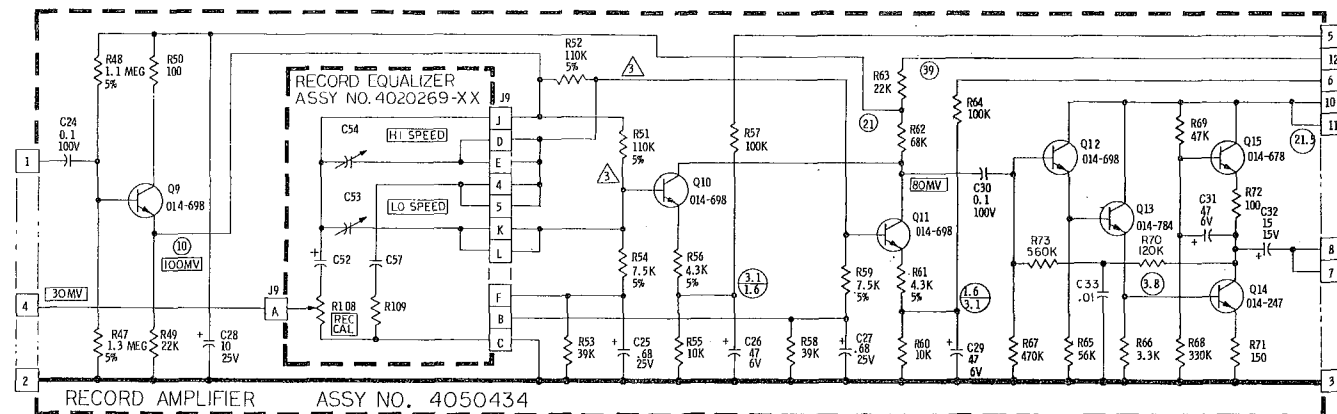
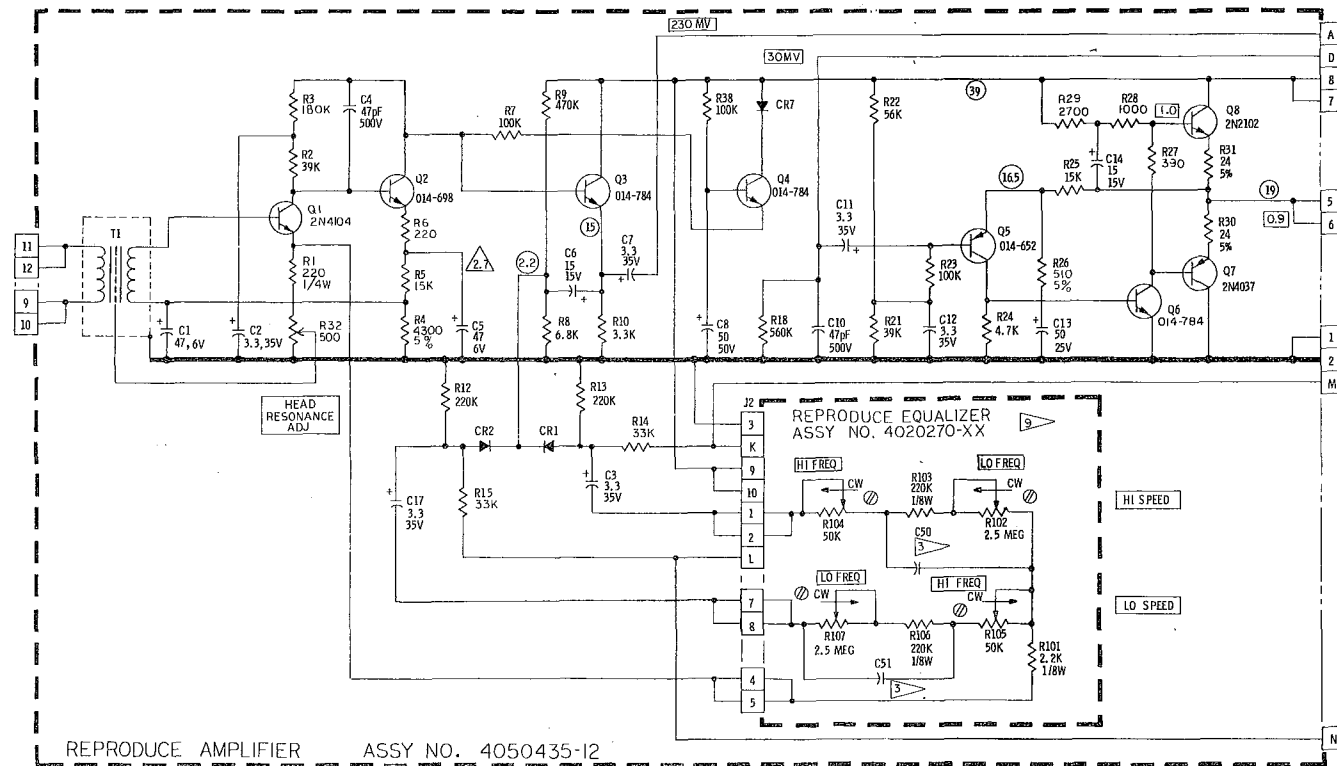




NOTES:
 UNLESS OTHERWISE SPECIFIED
 1. ALL CAPACITOR VALUES ARE IN MICROFARADS, RATINGS AS INDICATED.
 2. ALL RESISTORS VALUES ARE IN OHMS, 1/2 WATT, 10%.

LAST REF. DES. USED	REF. DES. NOT USED
C710	C708
CR707	
Q706	
VR702	
T702	
R714	

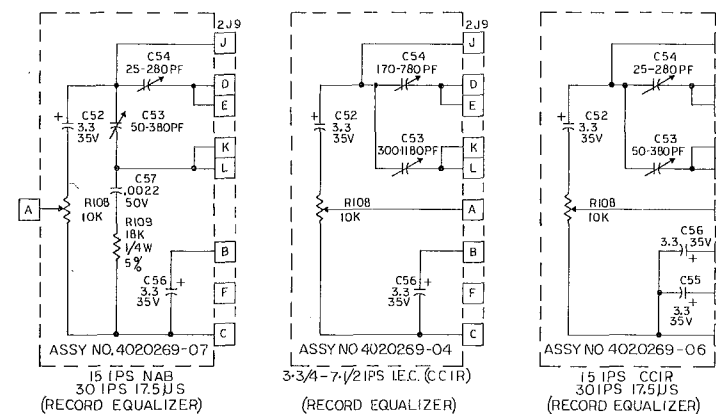
Schematic No. 4840168
 Power Supply

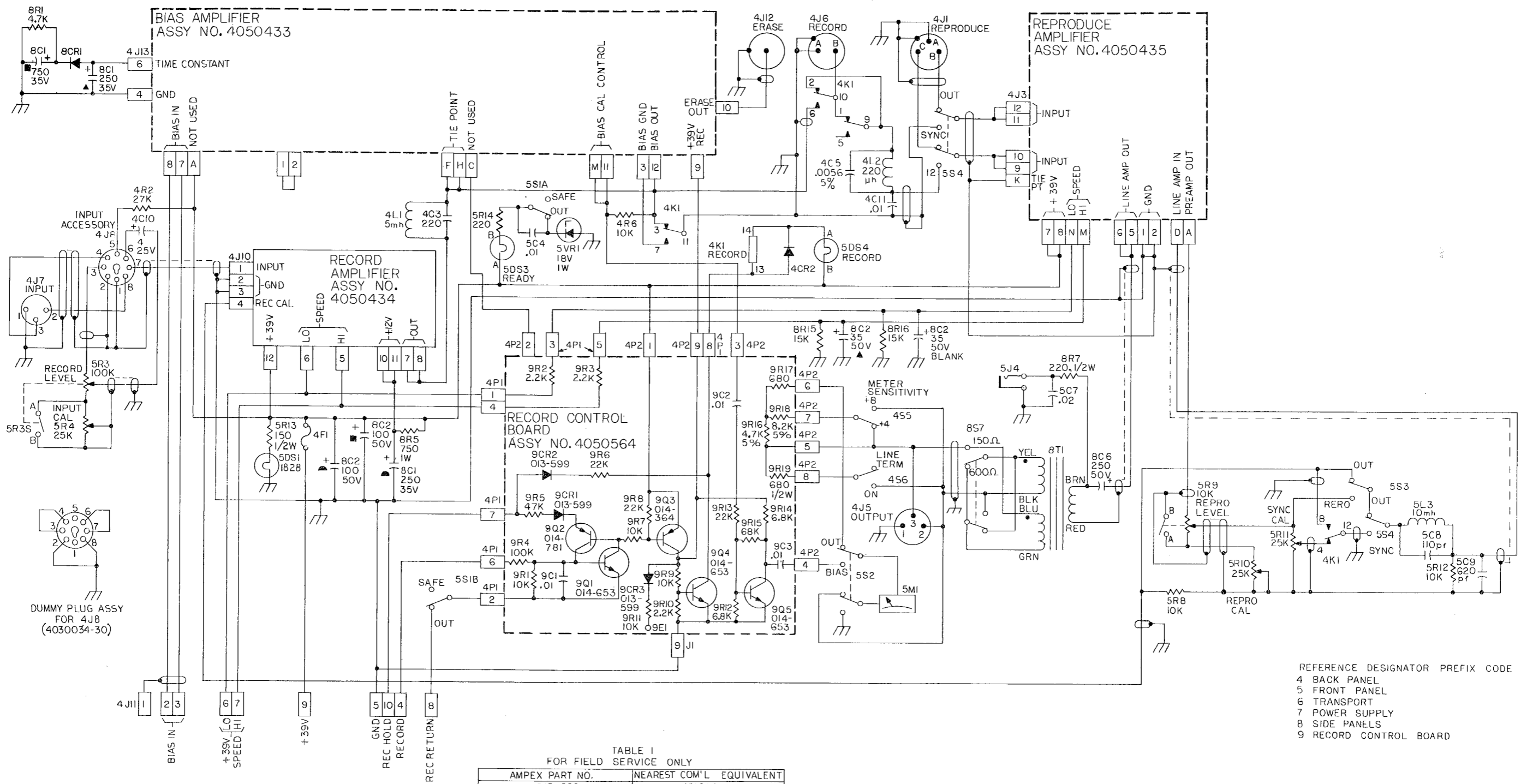


- NOTES: UNLESS OTHERWISE SPECIFIED
- CAPACITANCE VALUES ARE IN MICROFARADS
 - DIODES ARE TYPE 013-599.
 - .0047 FOR 4020270-01 EQUALIZER, .0033 FOR 4020270-02
 - RESISTANCE VALUES ARE IN OHMS 1/2W, 10K.
 - INDICATES VOLTS D.C. MEASURED WITH A 20,000 OHM VOLT METER.
 - INDICATES VOLTS D.C. MEASURED WITH A HIGH IMPEDANCE VTVM.
 - INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT OPERATING LEVEL OF 700 Hz., +8VU OUT, 75 MIL TRACK HEADS.
 - INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT BIAS FREQUENCY.
 - EQUALIZER 4020270-01 CAN BE ADJUSTED FOR 3 3/4 THRU 15 IPS, NAB OR CCIR. EQUALIZER 4020270-02 CAN BE ADJUSTED FOR 7 1/2 THRU 30 IPS, NAB OR CCIR.

REF. DES.	AMPEX PIN	NEAREST COM. EQUIVALENT
CR1, CR2, CR7	013-599	1N934
Q14	014-247	2N2219
Q5	014-652	2N2906
Q18, Q19	014-653	2N904
Q15	014-676	2N2219A
Q2, Q9-12	014-692	2N3117 OR 2N5088
Q3, 4, 13, 6	014-787	2N4946

- 51Ω, 5% EXCEPT 180Ω, 10% FOR USE WITH 1/4 TRACK ERASE HEADS.
- ADJUST R92 FOR MINIMUM NOISE FROM TAPE. IF NOISE NULL CAN NOT BE FOUND, CHECK COMPONENTS FOR IMBALANCE OR HEADS FOR MAGNETIZATION.





NOTES UNLESS OTHERWISE SPECIFIED
 1 ALL RESISTOR VALUES ARE IN OHMS, 1/4W, 10%
 2 ALL CAPACITOR VALUES ARE IN MICROFARADS AT INDICATED VOLTAGE
 3 ALL DIODES ARE TYPE 013-678
 4 SEE TABLE I FOR FIELD SERVICE TRANSISTOR

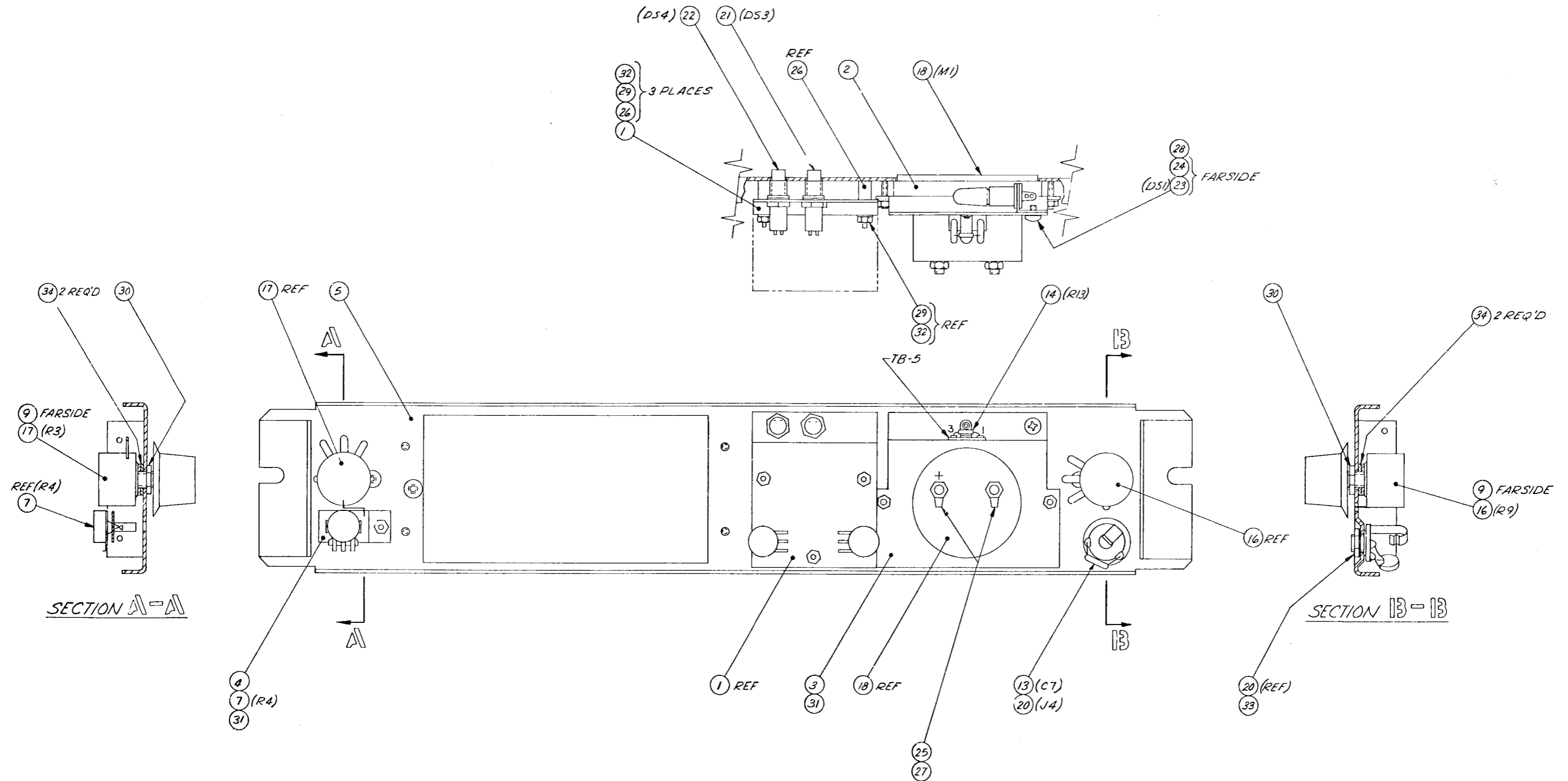
TABLE I
FOR FIELD SERVICE ONLY

AMPEX PART NO.	NEAREST COM'L EQUIVALENT
013-599	1N914
014-364	2N2905A
014-653	2N3904
014-781	MP5651B
013-678	1N4365

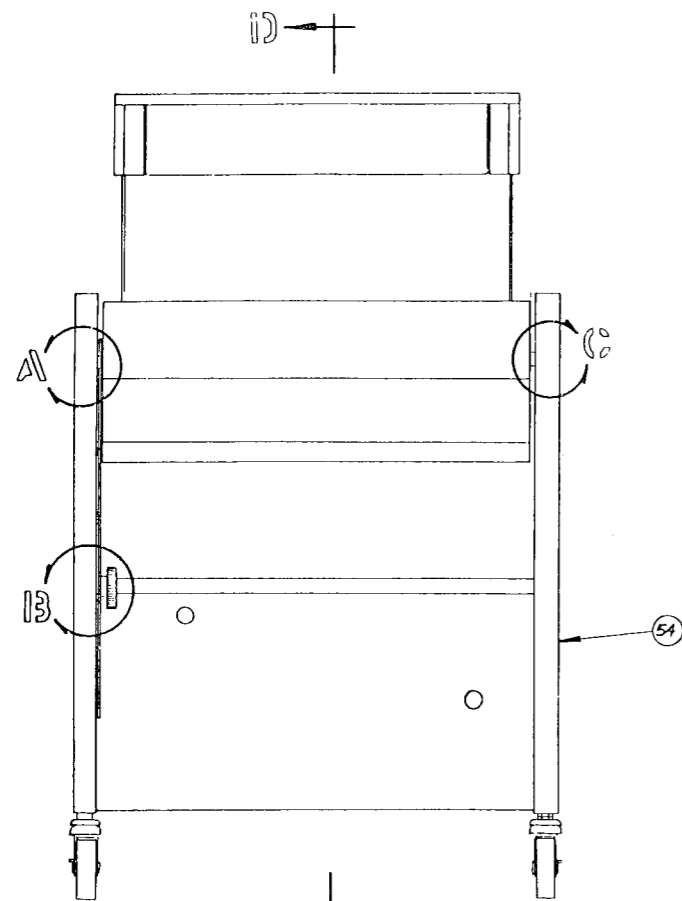
LAST REF DES USED		REF DES NOT USED	
R16	P2	DS2	
C11	CR2		
DS4	VR1		
L5	F1		
TI	K1		
MI	S7		
J13			

REFERENCE DESIGNATOR PREFIX CODE
 4 BACK PANEL
 5 FRONT PANEL
 6 TRANSPORT
 7 POWER SUPPLY
 8 SIDE PANELS
 9 RECORD CONTROL BOARD

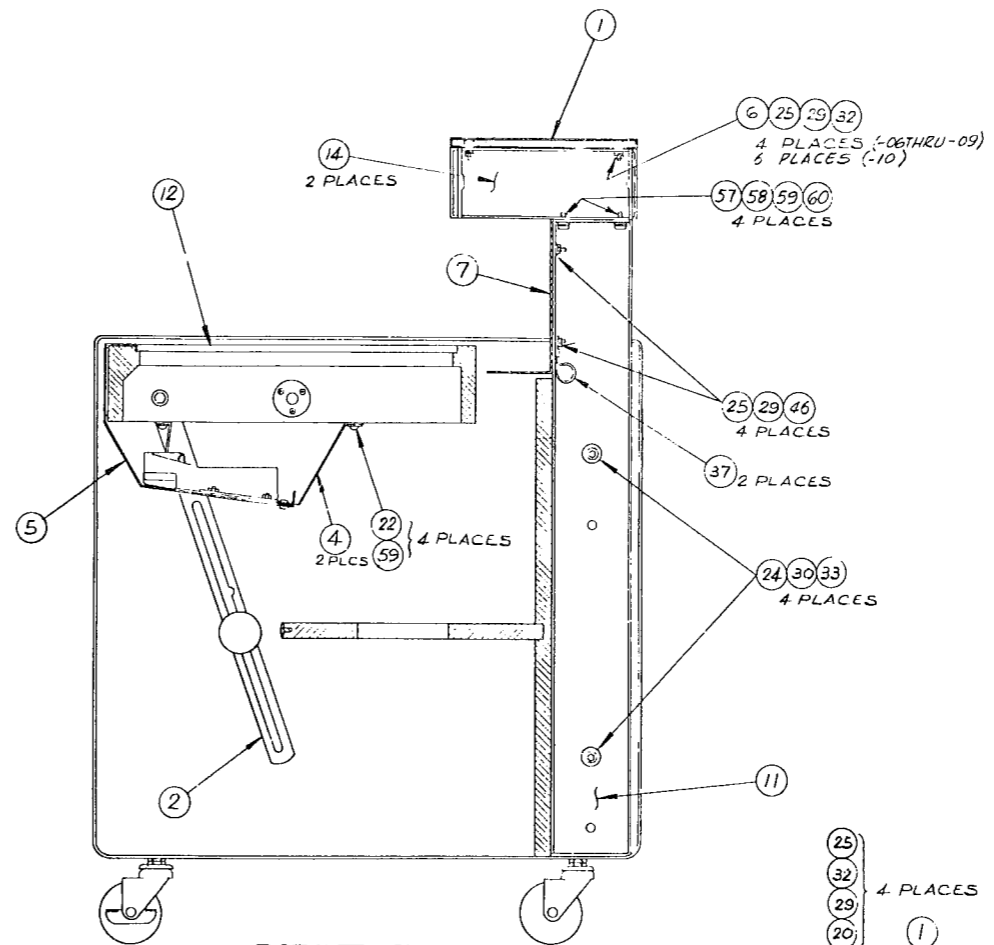
Schematic No. 4840248
 Record/Reproduce Electronics and
 Record Control PWA



Assembly No. 4050616
 Front Panel Assembly

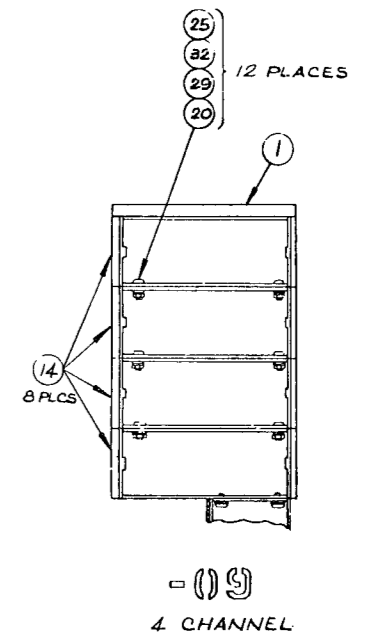
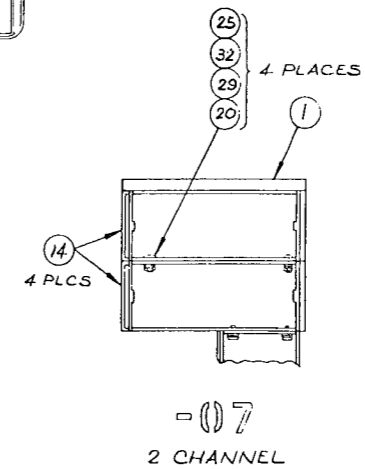
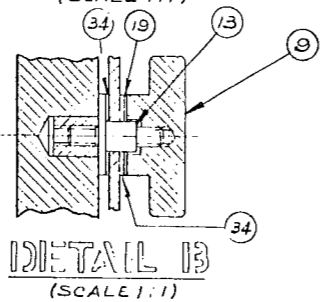
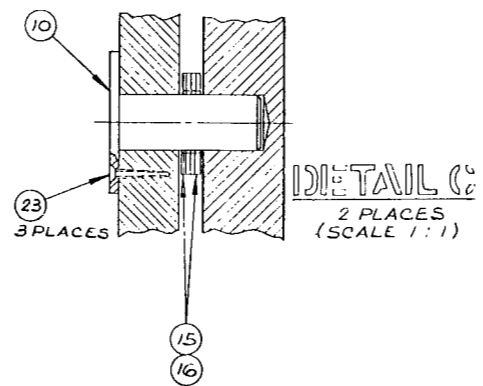
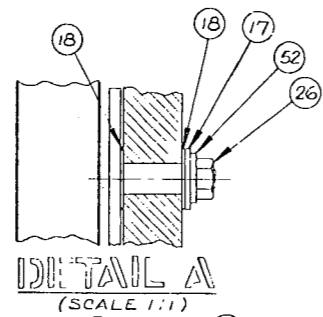


- (1) SHOWN

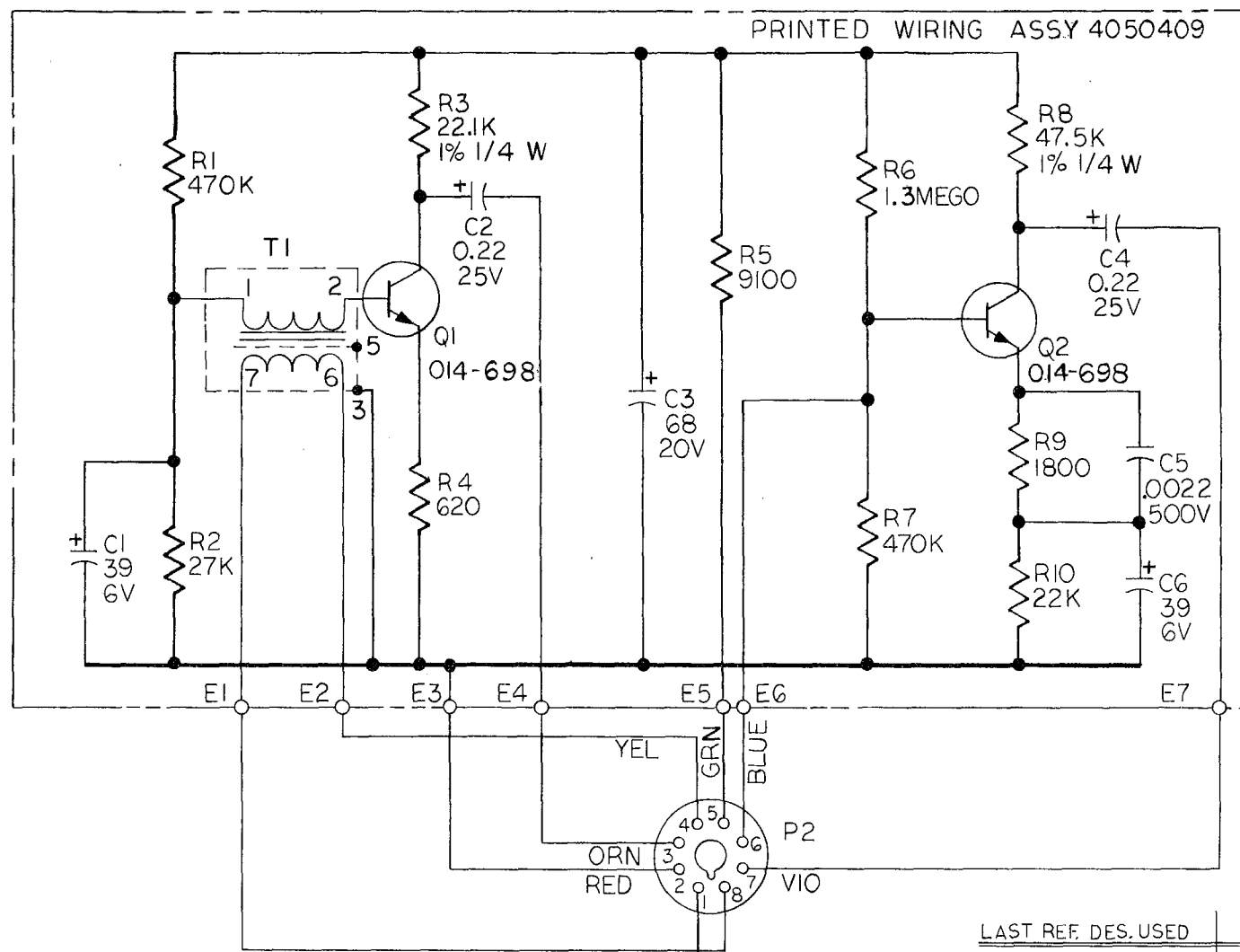


SECT. D-D

D-D



Assembly No. 4020084
Console Assembly



NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL CAPACITOR VALUES ARE IN MICROFARADS.
2. ALL RESISTOR VALUES ARE IN OHMS, 1/2W, 5%.
3. TRANSISTORS 2N3117 OR 2N3565 MAY BE USED INSTEAD OF 014-698 FOR SERVICE USE ONLY.

LAST REF. DES. USED	REF. DES. NOT USED
R10	PI
C6	
Q2	
E7	
P2	
T1	

Schematic No. 4840153
Transistor Microphone Preamplifier PWA