

SECTION VIII

SCHEMATIC DIAGRAMS

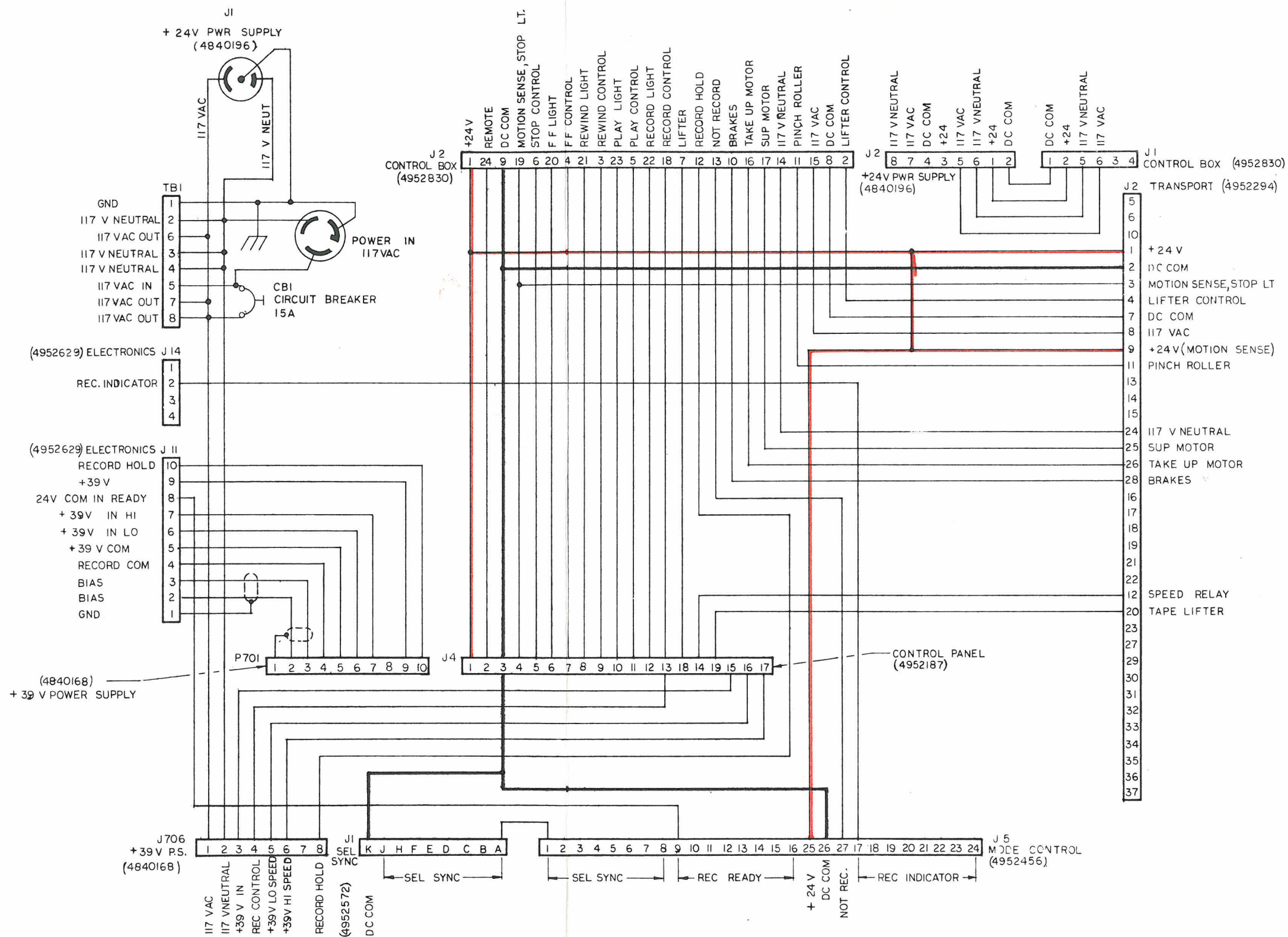
ALPHABETICAL INDEX TO SCHEMATICS

<u>Title</u>	<u>Drawing No.</u>	<u>Figure No.</u>	<u>Page</u>
Control Box Schematic	4952830	8-3	8-9
Control Panel Schematic	4952187	8-4	8-11
Control Unit Schematic	4952162	8-2	8-7
Electronics Schematic, -01 Version	4952276	8-7	8-17
Electronics Schematic, -02 Version	4952629	8-8	8-21
Electronics Schematic, -03 Version	4952765	8-9	8-25
Mode Control Schematic, Channels 1-8	4952456	8-5	8-13
Mode Control Schematic, Channels 9-16	4952284	8-6	8-15
Power Supply, 24 VDC, Schematic	4840196	8-16	8-41
Power Supply, 39 VDC, Schematic, -03 Version	4840168	8-11	8-31
Power Supply, 39 VDC, Schematic, -04 Version	4840039	8-12	8-33
Remote Sel-Sync Schematic, -01 Version	4952281	8-14	8-37
Remote Sel-Sync Schematic, -02 Version	4952346	8-15	8-39
Sel-Sync Schematic	4952224	8-10	8-29
System Control Schematic	4952426	8-1	8-5
System Schematic MM-1000	4840200	8-17	8-43
Transport Schematic	4952294	8-13	8-35

NUMERICAL INDEX TO SCHEMATICS

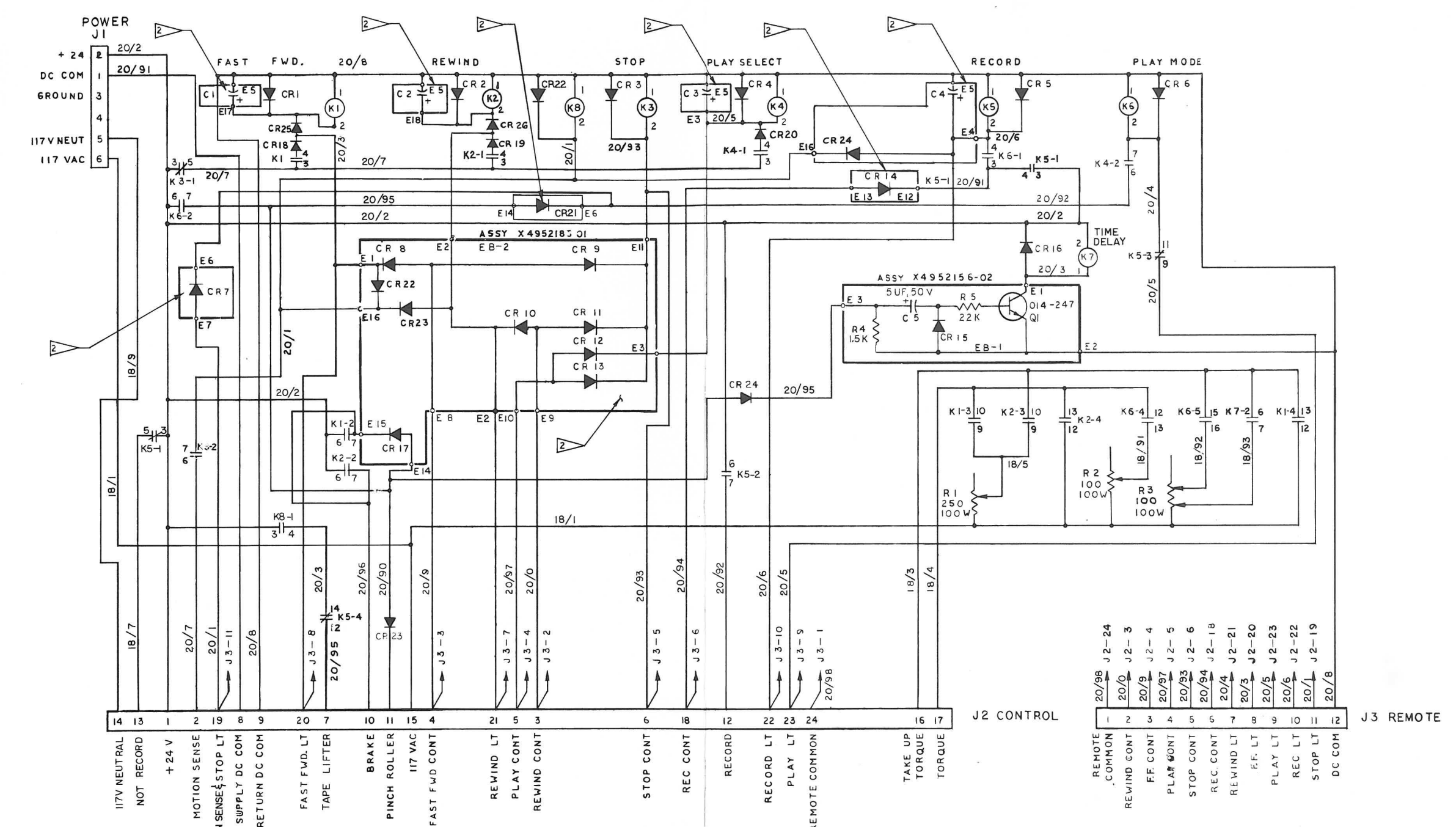
<u>Drawing No.</u>	<u>Title</u>	<u>Figure No.</u>	<u>Page</u>
4840039	Power Supply, 39 VDC, Schematic, -04 Version	8-12	8-33
4840168	Power Supply, 39 VDC, Schematic, -03 Version	8-11	8-31
4840200	Ssystems Schematic MM-1000	8-17	8-43
4952161	Control Unit Schematic	8-2	8-7
4952187	Control Panel Schematic	8-4	8-11
4952224	Sel-Sync Schematic	8-10	8-29
4952276	Electronics Schematic, -01 Version	8-7	8-17
4952281	Remote Sel-Sync Schematic, -01 Version	8-14	8-37
4952284	Mode Control Schematic, Channels 9-16	8-6	8-15
4952294	Transport Schematic	8-13	8-35
4952346	Remote Sel-Sync Schematic, -02 Version	8-15	8-39
4952426	System Control Schematic	8-1	8-5
4952456	Mode Control Schematic, Channels 1-8	8-5	8-13
4952629	Electronics Schematic, -02 Version	8-8	8-21
4952765	Electronics Schematic, -03 Version	8-9	8-25
4952830	Control Box Schematic	8-3	8-9
4952890	Power Supply, 24 VDC, Schematic	8-16	8-41

AMPEX



Schematic No. 4952426
 Ref. Assy. No. 4940139

Figure 8-1. System Control Schematic



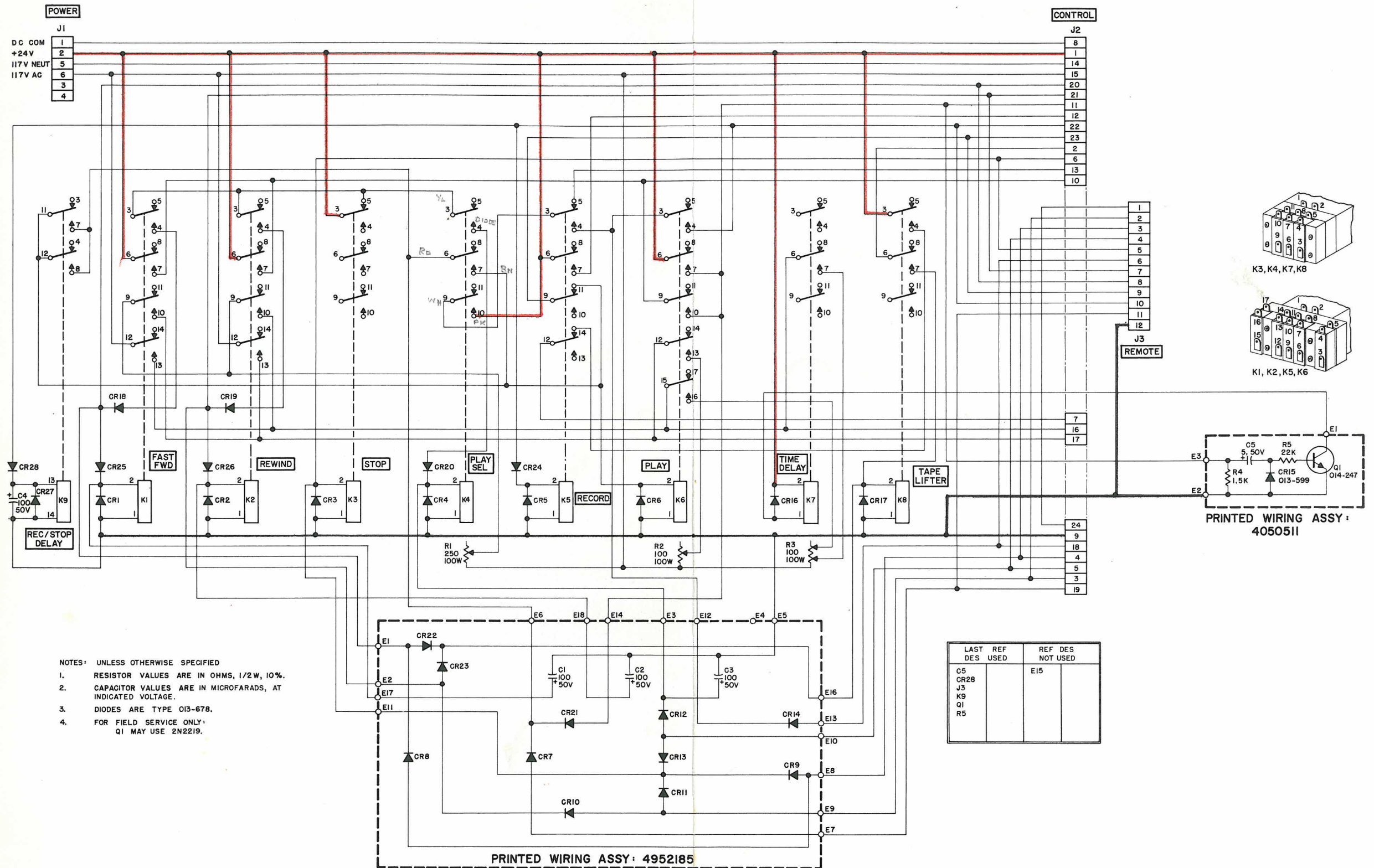
NOTES: UNLESS OTHERWISE SPECIFIED.
 1. ALL DIODES ARE 013-678.
 ALL CAPACITOR VALUES ARE 100 UF, 50V.
 ALL RESISTOR VALUES ARE IN OHMS, 1/2 W, 50 %

- 2 PART OF 4952185-01 ASSEMBLY
- 3 GAGE WIRE AND COLOR ARE SHOWN AS EXAMPLE: 18/0 PER CODE.

LAST REF DES USED	REF DES NOT USED
CR 2-	
C 5	
K 8	
R 5	
L 3	
Q 1	

Schematic No. 4952162
 Ref. Assy. No. 4952161

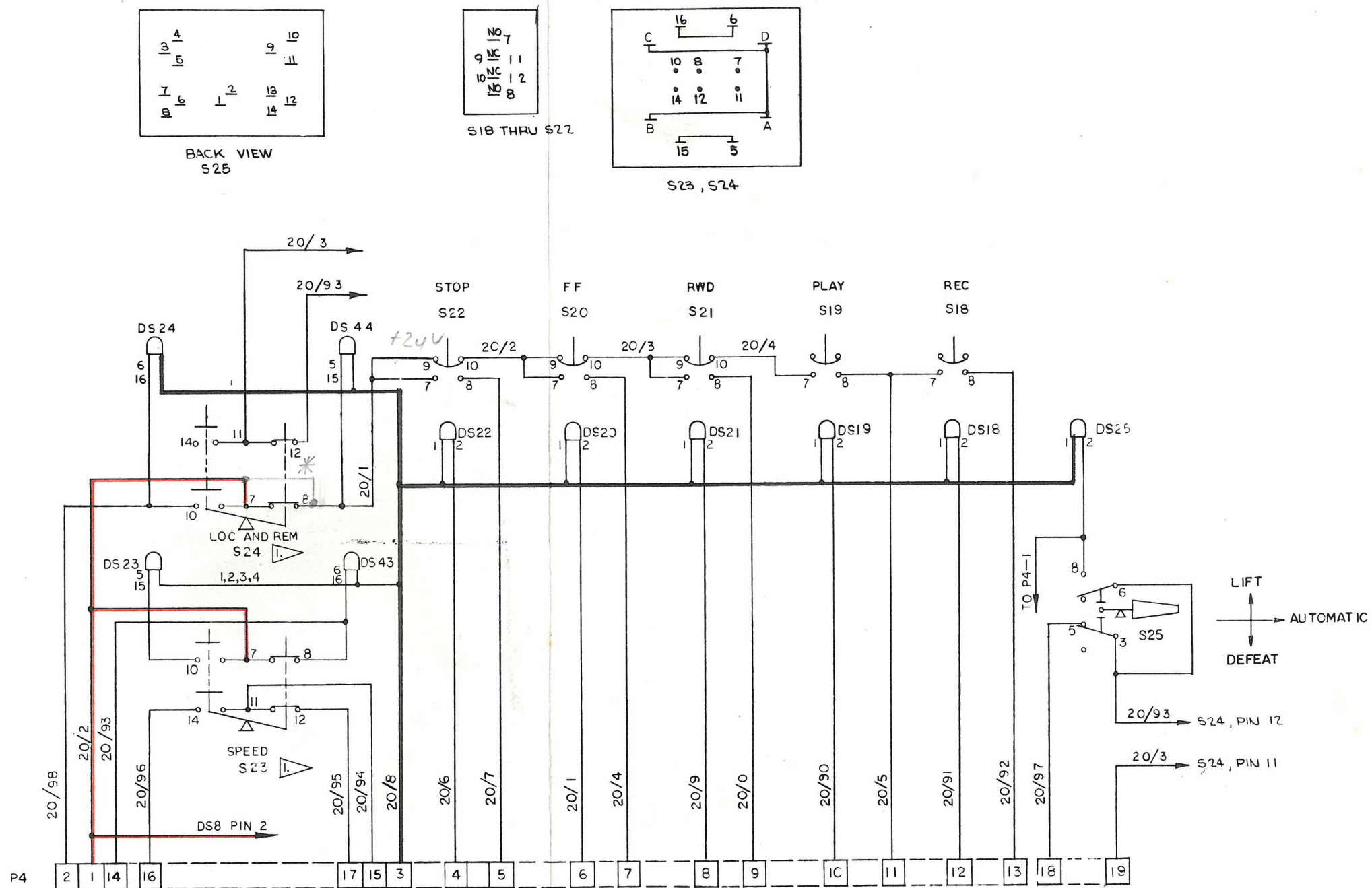
Figure 8-2. Control Unit Schematic



- NOTES: UNLESS OTHERWISE SPECIFIED
1. RESISTOR VALUES ARE IN OHMS, 1/2W, 10%.
 2. CAPACITOR VALUES ARE IN MICROFARADS, AT INDICATED VOLTAGE.
 3. DIODES ARE TYPE O13-678.
 4. FOR FIELD SERVICE ONLY: Q1 MAY USE 2N2219.

Schematic No. 4952830
Ref. Assy. No. 4952161

Figure 8-3. Control Box Schematic



NOTES
 △ S24 SHOWN IN LOCAL.
 S23 SHOWN IN HI.

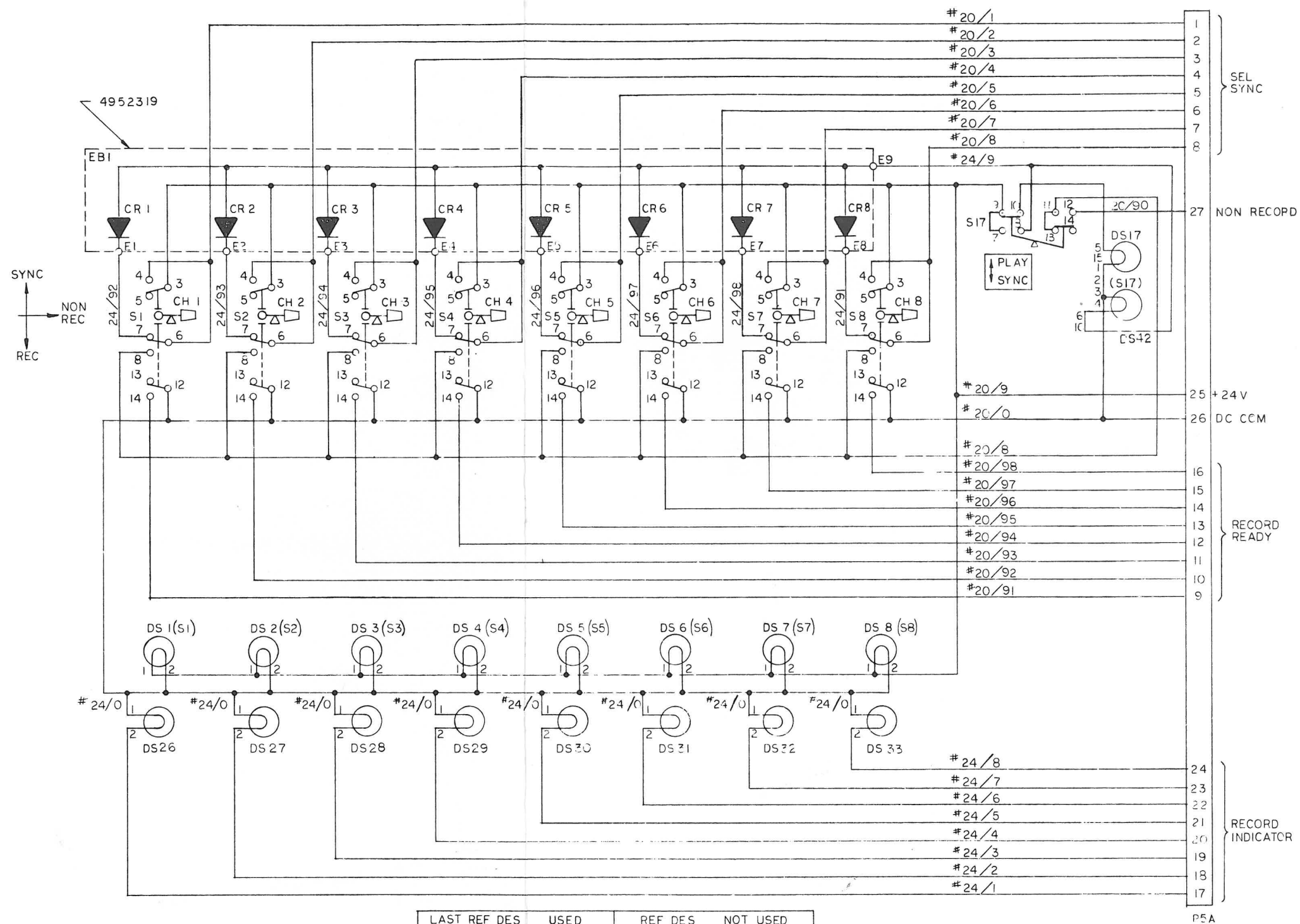
LAST REF DES USED	REF DES NOT USED
DS 44 P4 S25	

* This enables machine to be operated locally when in "remote"

Schematic No. 4952187
 Ref. Assy. No. 4952183

Figure 8-4. Control Panel Schematic

AMPEX

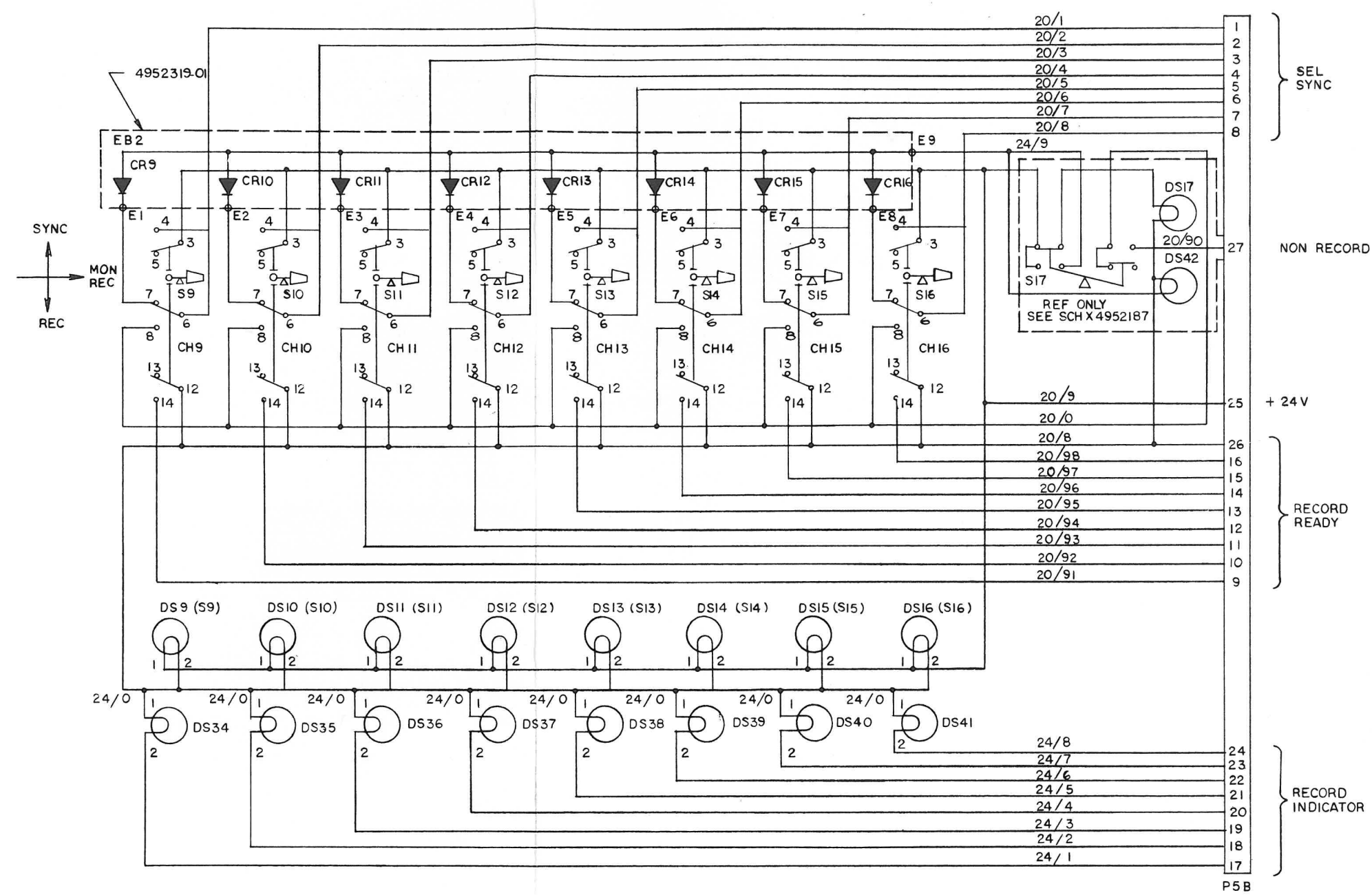


NOTES
UNLESS OTHERWISE SPECIFIED
1. ALL DIODES ARE 013-678

Schematic No. 4952456
Ref. Assy. No. 4952406

Figure 8-5. Mode Control Schematic,
Channels 1-8

AMPEX

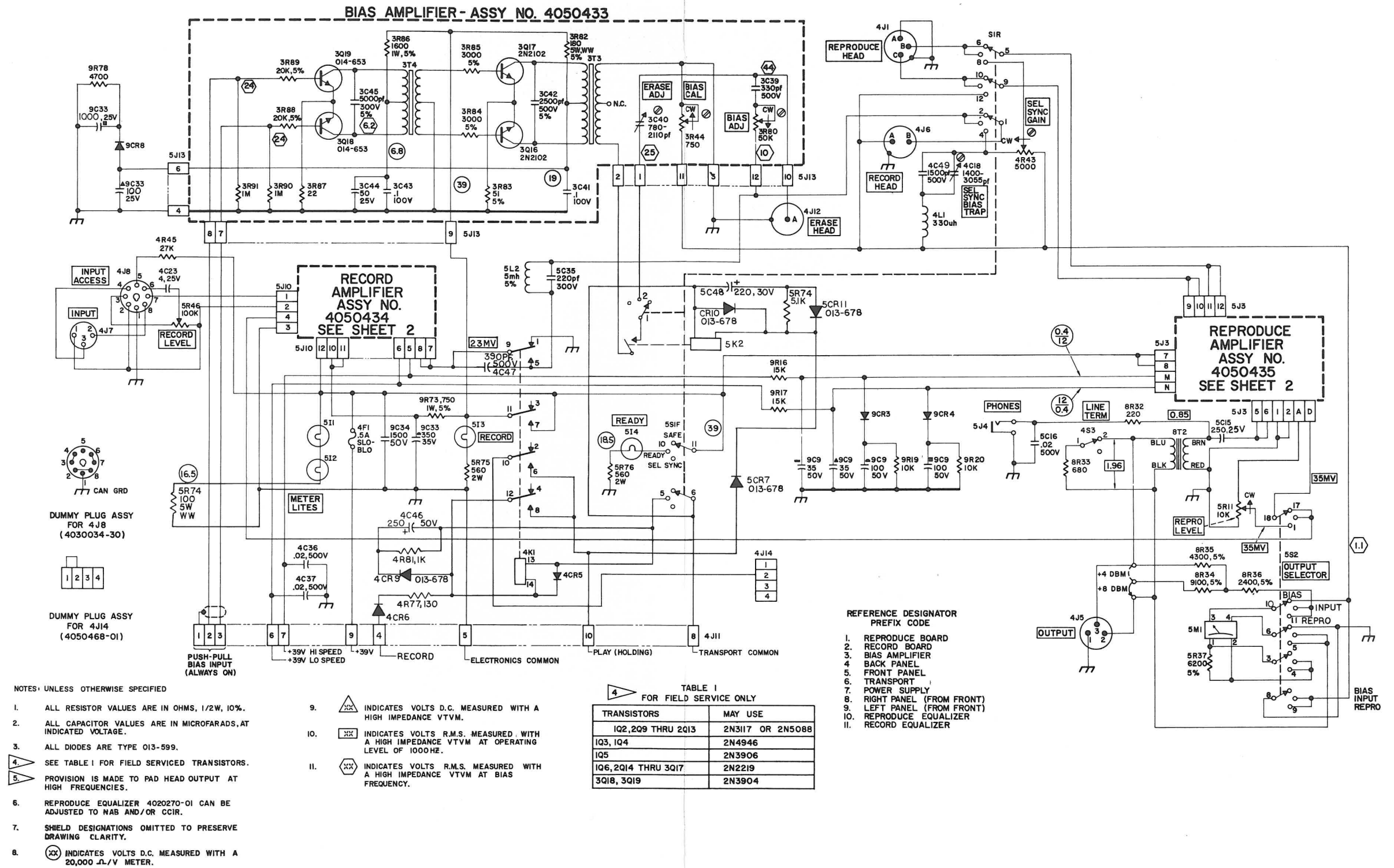


NOTES: UNLESS OTHERWISE SPECIFIED
 1 ALL DIODES ARE PART NO. 013-678

LAST REF DES USED	REF DES NOT USED
CR 16 DS 44 S 25 P 5B EB 2	P 1, P 2, P 3

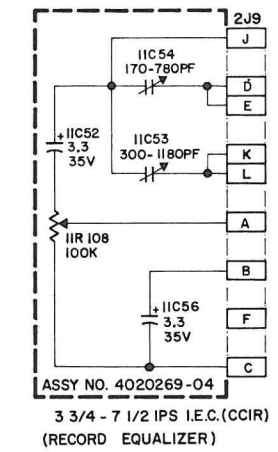
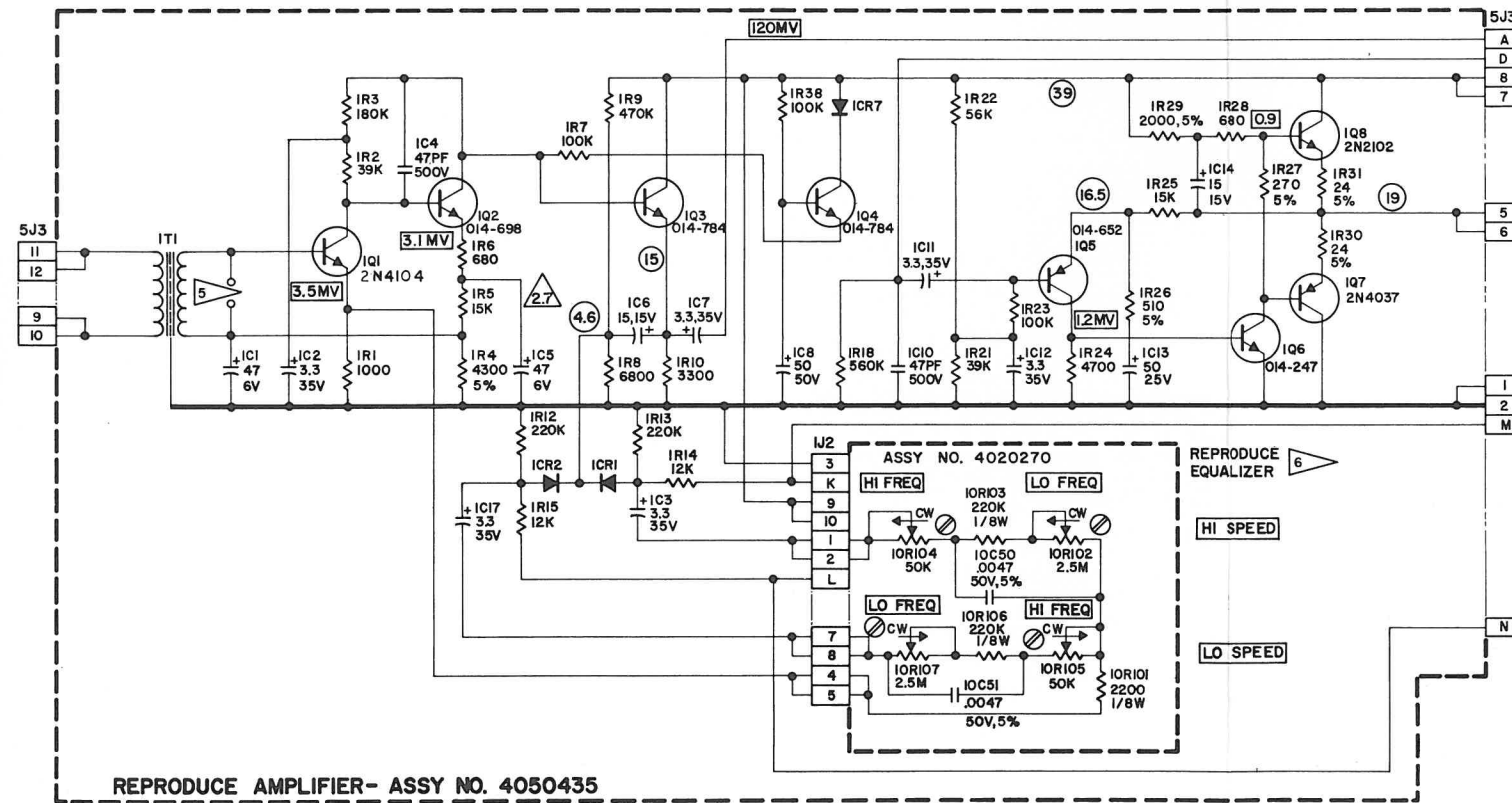
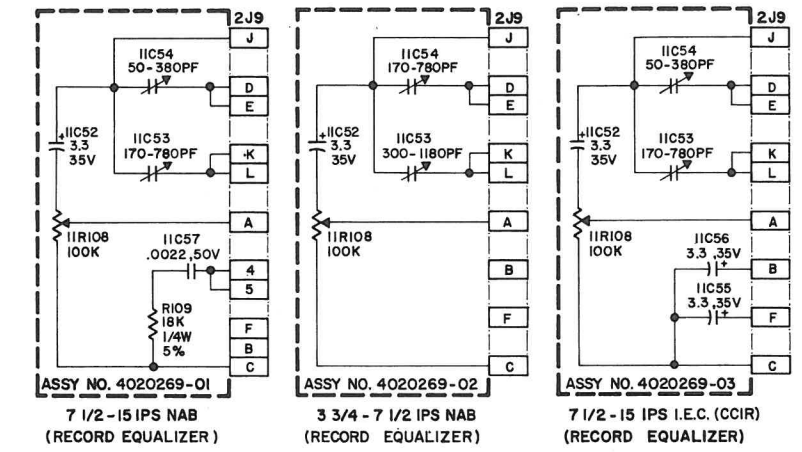
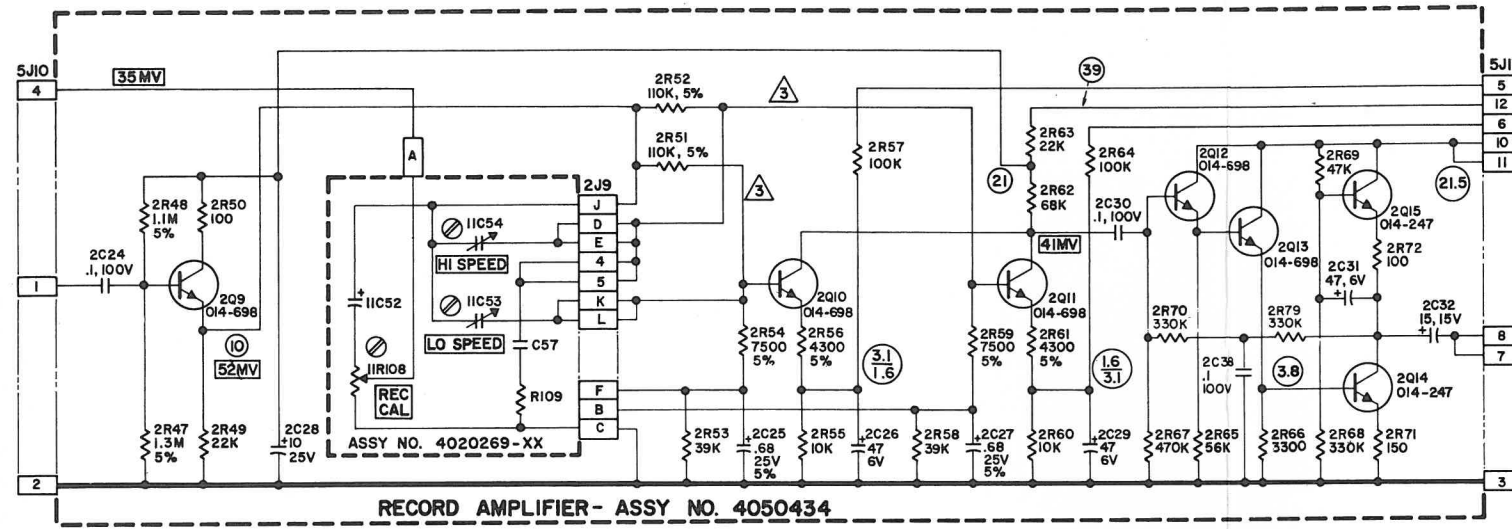
Schematic No. 4952284
 Ref. Assy. No. 4952406

Figure 8-6. Mode Control Schematic,
 Channels 9-16



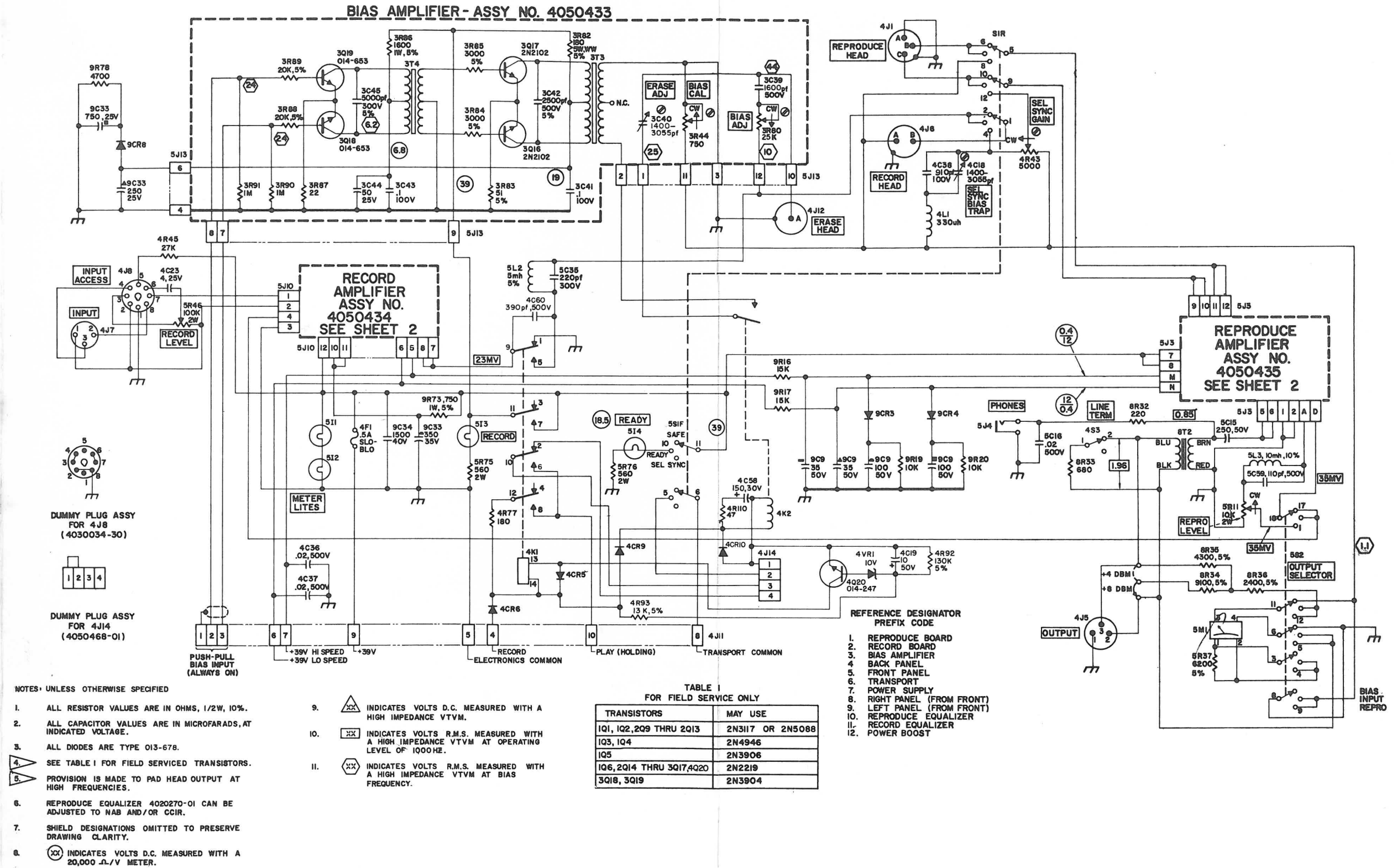
Schematic No. 4952276
Ref. Assy. No. 4952201

Figure 8-7. Electronics Schematic,
-01 Version (Sheet 1 of 2)



Schematic No. 4952276
Ref. Assy. No. 4952201

Figure 8-7. Electronics Schematic,
-01 Version (Sheet 2 of 2)



NOTES - UNLESS OTHERWISE SPECIFIED

1. ALL RESISTOR VALUES ARE IN OHMS, 1/2W, 10%.
2. ALL CAPACITOR VALUES ARE IN MICROFARADS, AT INDICATED VOLTAGE.
3. ALL DIODES ARE TYPE 013-678.
4. SEE TABLE I FOR FIELD SERVICED TRANSISTORS.
5. PROVISION IS MADE TO PAD HEAD OUTPUT AT HIGH FREQUENCIES.
6. REPRODUCE EQUALIZER 4020270-01 CAN BE ADJUSTED TO NAB AND/OR CCIR.
7. SHIELD DESIGNATIONS OMITTED TO PRESERVE DRAWING CLARITY.
8. (XX) INDICATES VOLTS D.C. MEASURED WITH A 20,000 Ω/V METER.

9. (XX) INDICATES VOLTS D.C. MEASURED WITH A HIGH IMPEDANCE VTVM.
10. (XX) INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT OPERATING LEVEL OF 1000HZ.
11. (XX) INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT BIAS FREQUENCY.

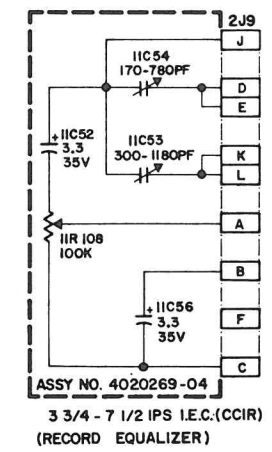
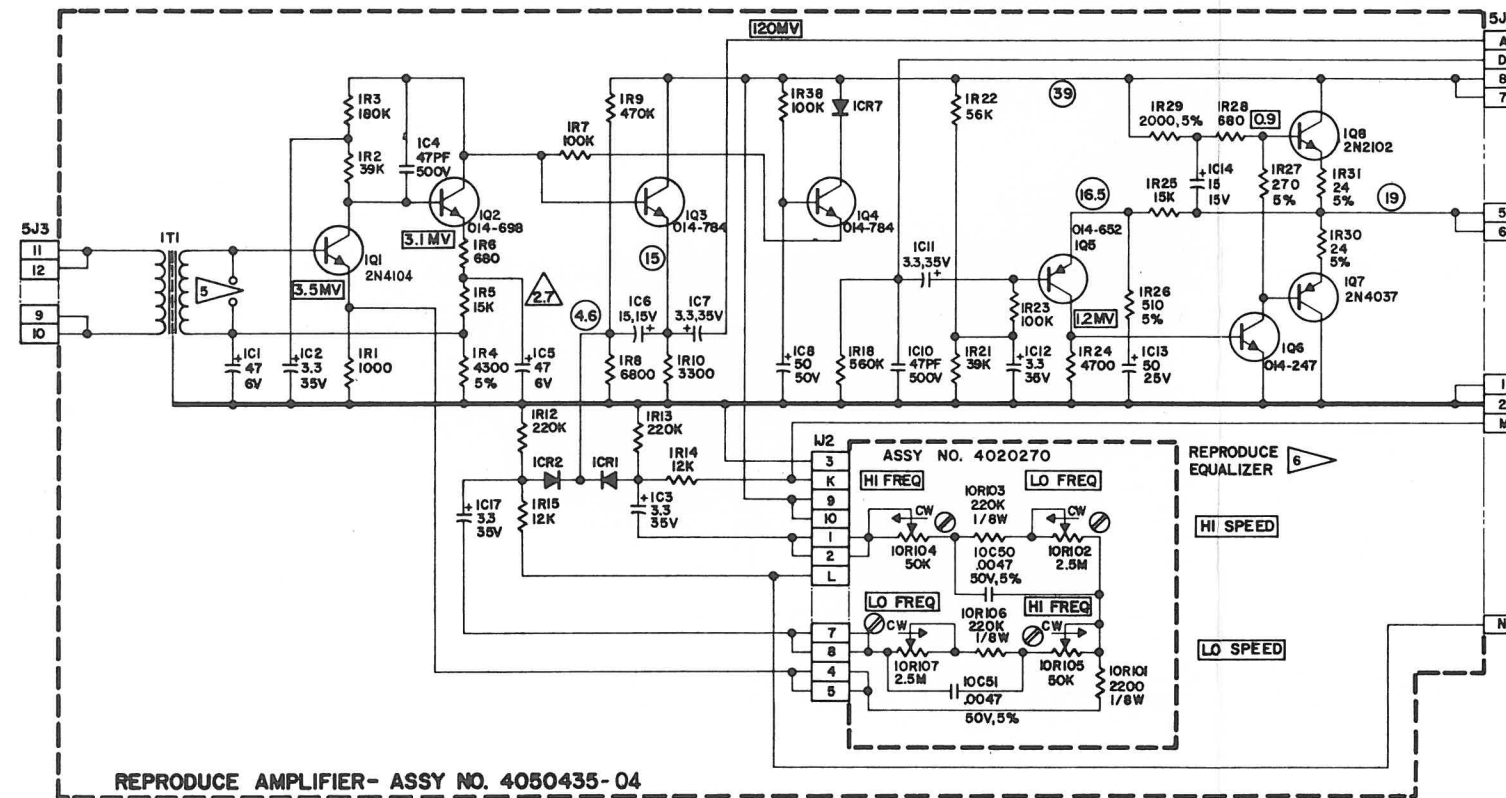
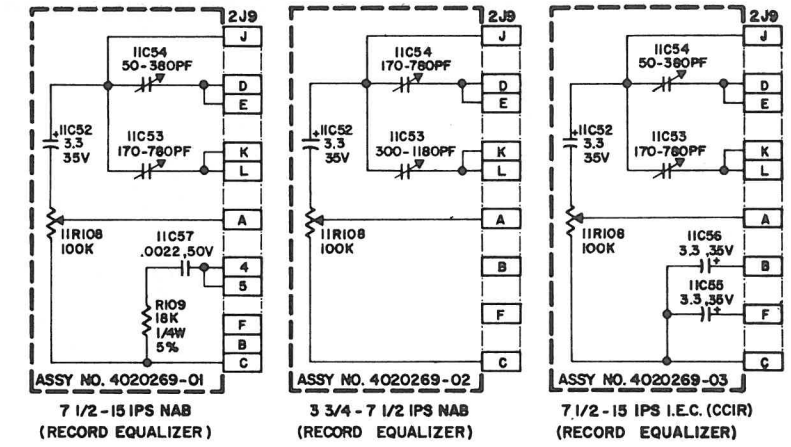
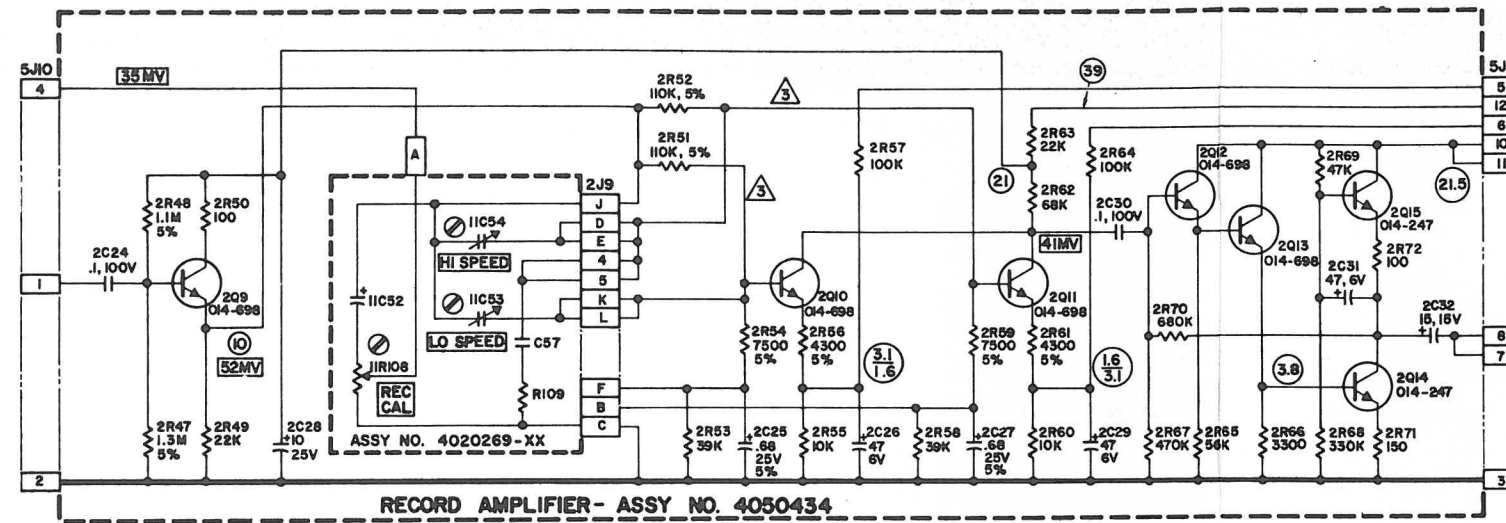
TABLE I
FOR FIELD SERVICE ONLY

TRANSISTORS	MAY USE
1Q1, 1Q2, 2Q9 THRU 2Q13	2N3117 OR 2N5088
1Q3, 1Q4	2N4946
1Q5	2N3906
1Q6, 2Q14 THRU 3Q17, 4Q20	2N2219
3Q18, 3Q19	2N3904

- REFERENCE DESIGNATOR PREFIX CODE
1. REPRODUCE BOARD
 2. RECORD BOARD
 3. BIAS AMPLIFIER
 4. BACK PANEL
 5. FRONT PANEL
 6. TRANSPORT
 7. POWER SUPPLY
 8. RIGHT PANEL (FROM FRONT)
 9. LEFT PANEL (FROM FRONT)
 10. REPRODUCE EQUALIZER
 11. RECORD EQUALIZER
 12. POWER BOOST

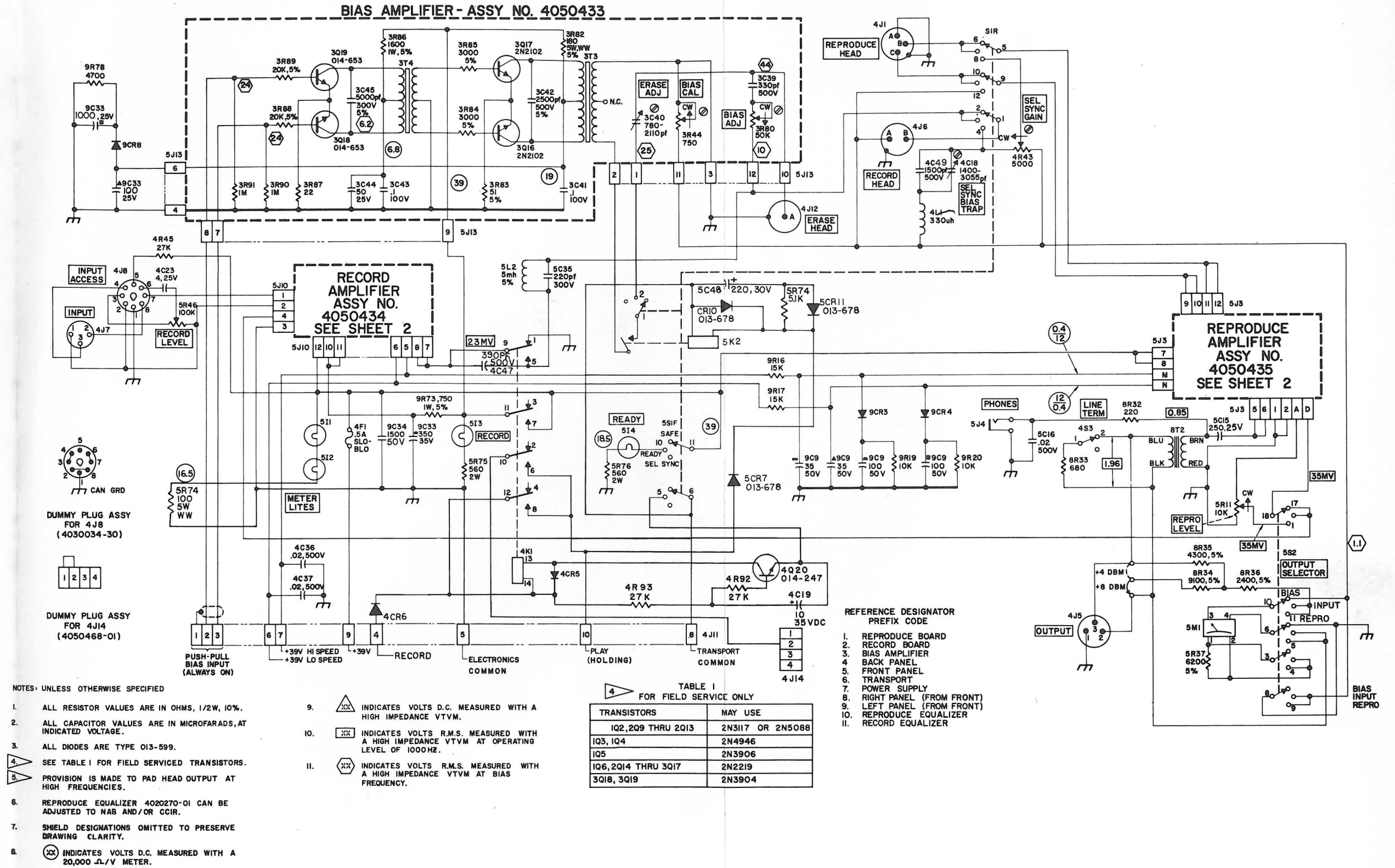
Schematic No. 4952629
Ref. Assy. No. 4020260

Figure 8-8. Electronics Schematic,
-02 Version (Sheet 1 of 2)



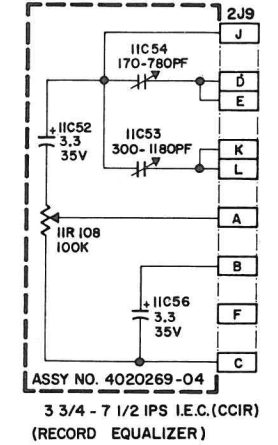
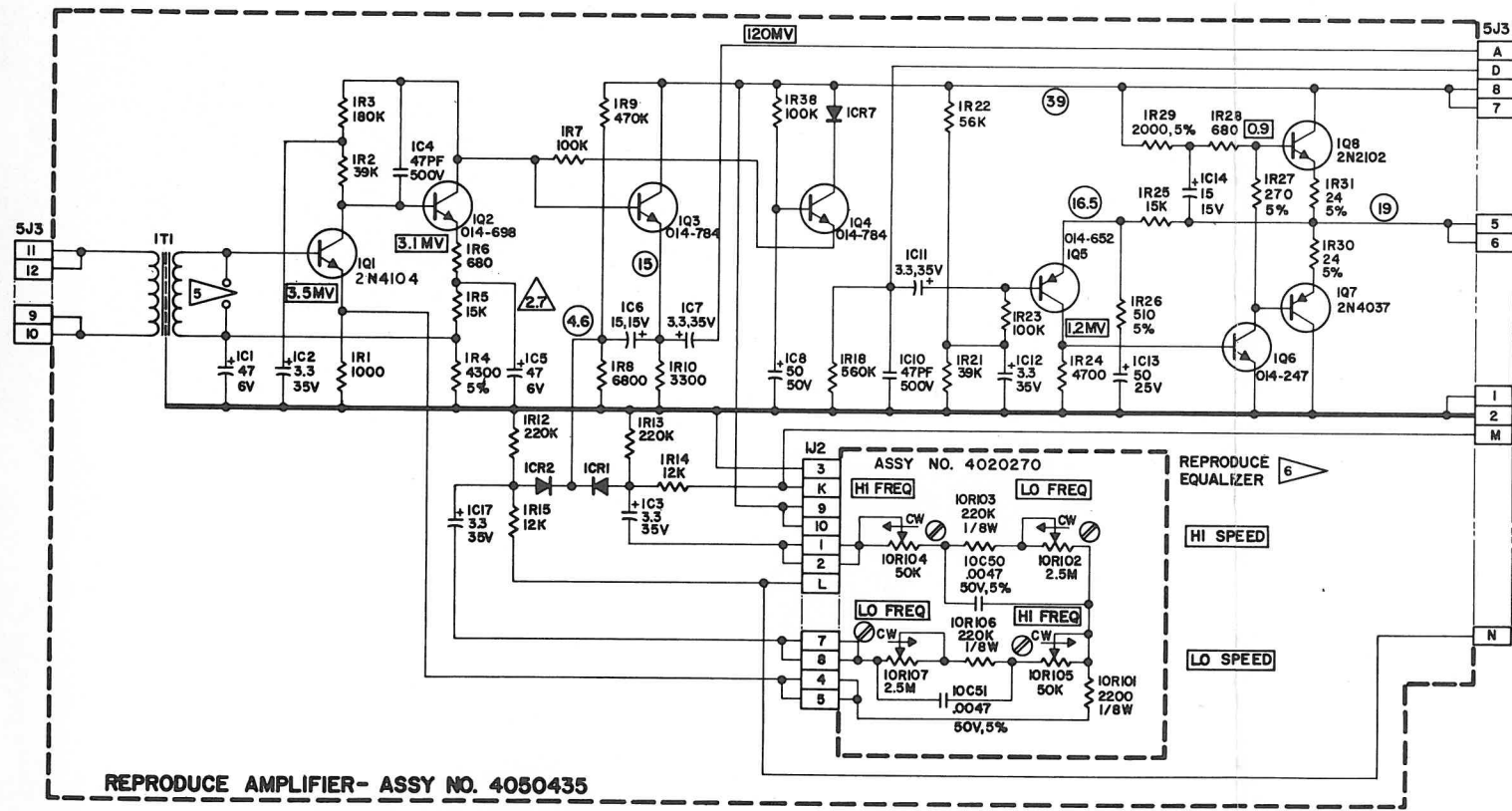
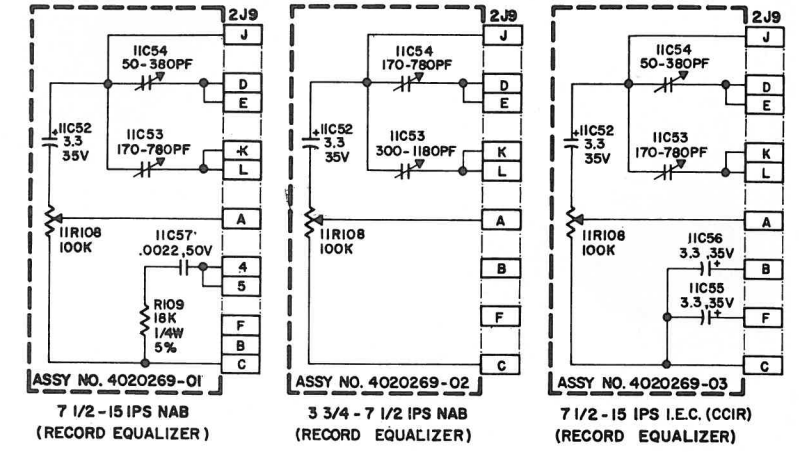
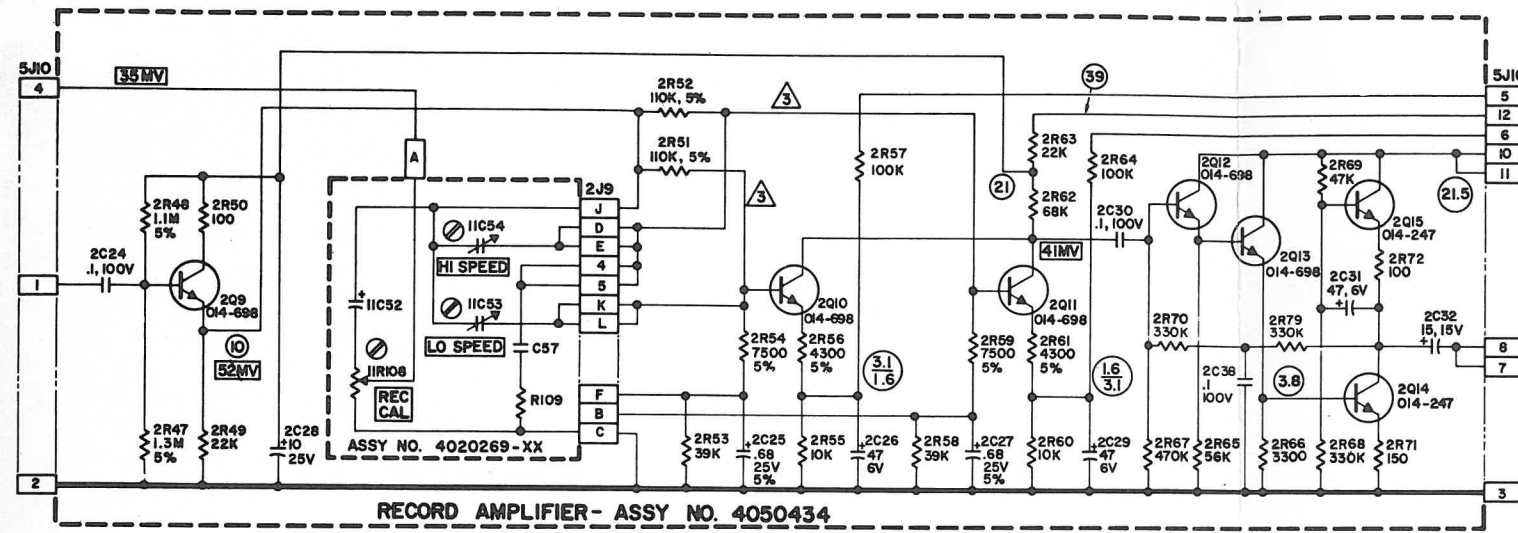
Schematic No. 4952629
Ref. Assy. No. 4020260

Figure 8-8. Electronics Schematic,
-02 Version (Sheet 2 of 2)



Schematic No. 4952765
Ref. Assy. No. 4952201

Figure 8-9. Electronics Schematic,
-03 Version (Sheet 1 of 2)



Schematic No. 4952765
Ref. Assy. No. 4952201

Figure 8-9. Electronics Schematic,
-03 Version (Sheet 2 of 2)

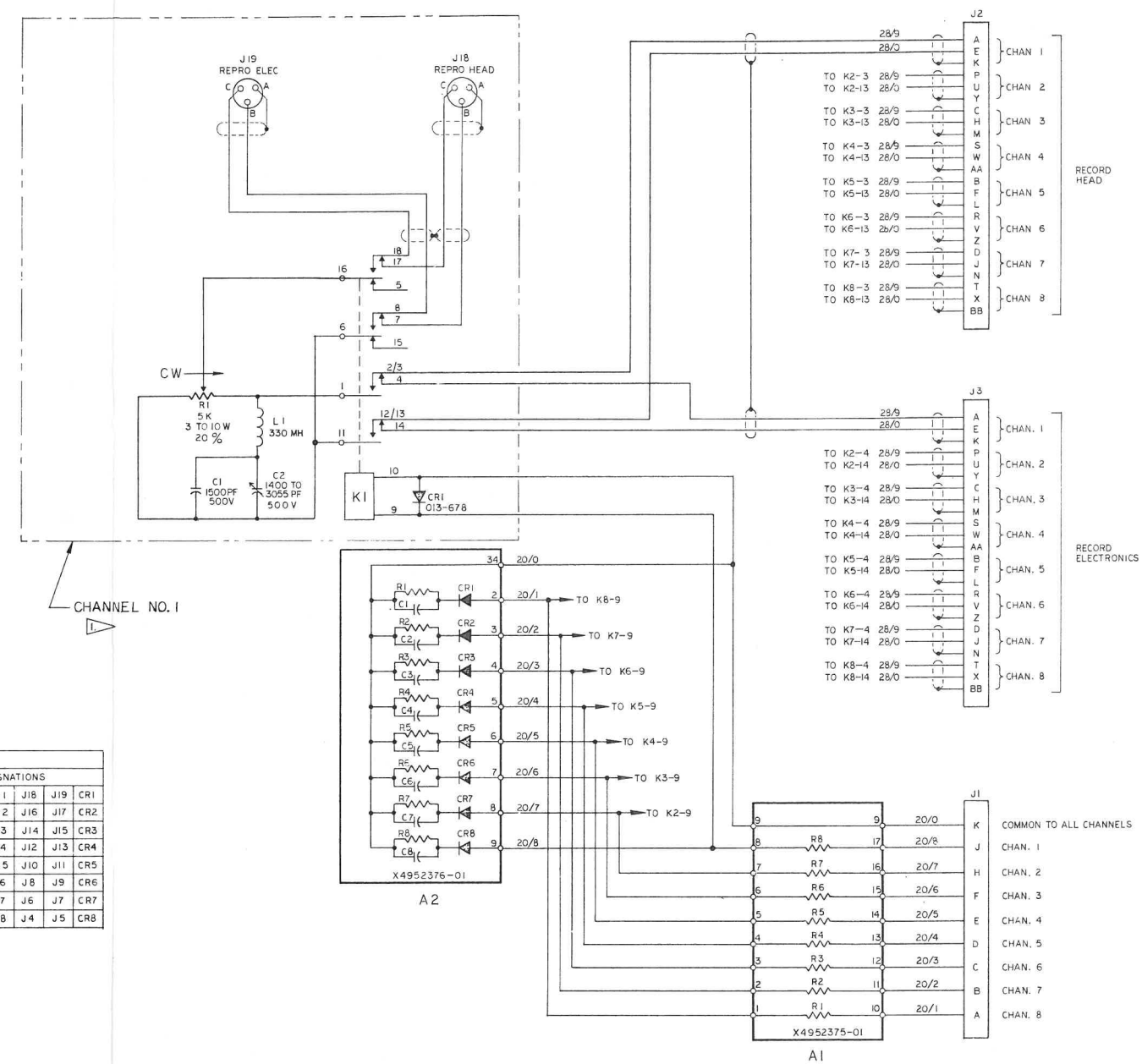


TABLE I
REFERENCE DESIGNATIONS

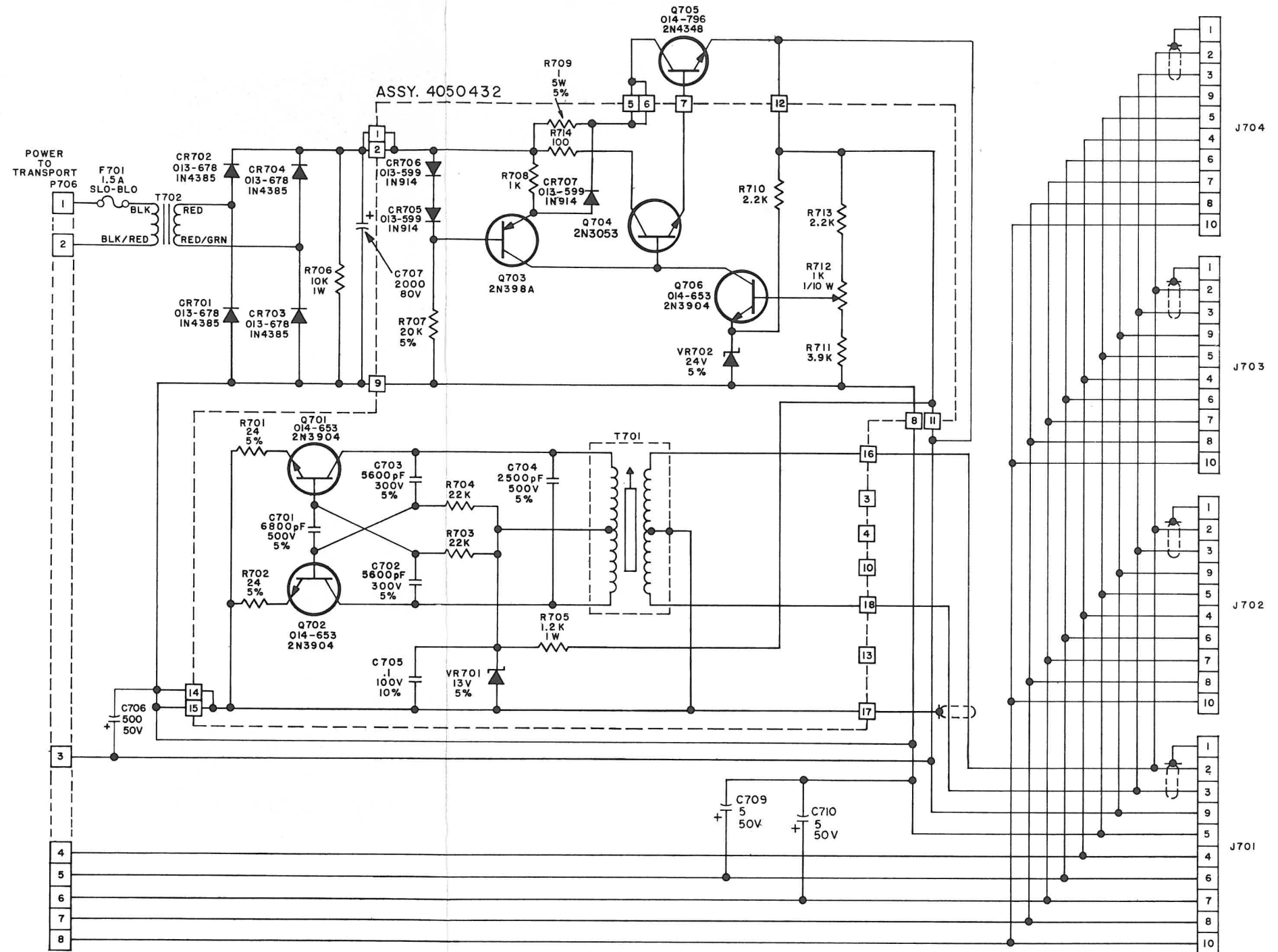
CHAN NO.	R1	C1	C2	L1	K1	J18	J19	CR1
1	R1	C1	C2	L1	K1	J18	J19	CR1
2	R2	C3	C4	L2	K2	J16	J17	CR2
3	R3	C5	C6	L3	K3	J14	J15	CR3
4	R4	C7	C8	L4	K4	J12	J13	CR4
5	R5	C9	C10	L5	K5	J10	J11	CR5
6	R6	C11	C12	L6	K6	J8	J9	CR6
7	R7	C13	C14	L7	K7	J6	J7	CR7
8	R8	C15	C16	L8	K8	J4	J5	CR8

NOTES
 ▽ FOR APPROPRIATE REFERENCE DESIGNATIONS OF COMPONENTS FOR CHANNELS 2 THRU 8 SEE TABLE I

Schematic No. 4952224
 Ref. Assy. No. 4952222

Figure 8-10. Sel-Sync Schematic

AMPEX

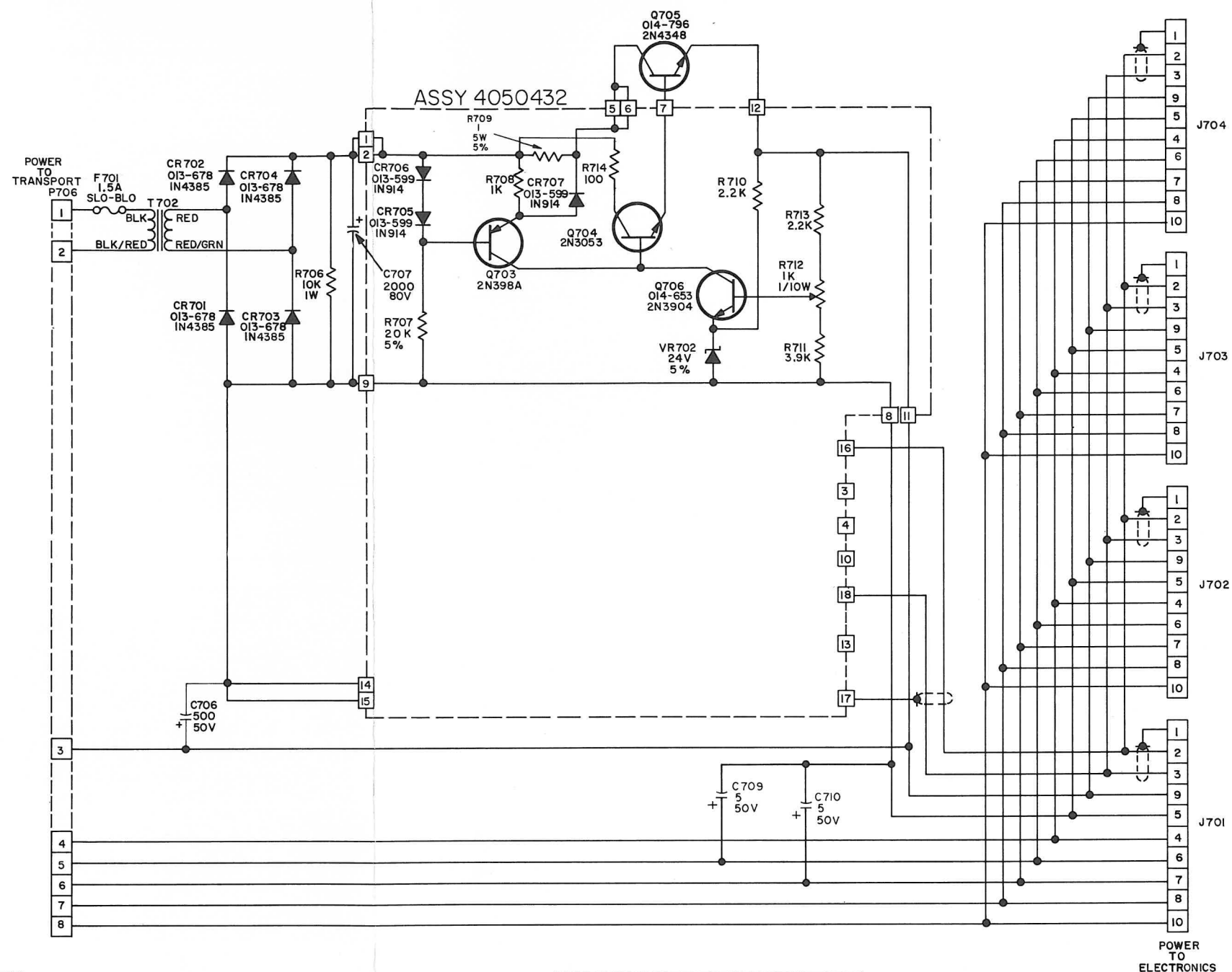


- NOTES:
 UNLESS OTHERWISE SPECIFIED
 1. ALL CAPACITOR VALUES ARE IN MICROFARADS, RATINGS AS INDICATED.
 2. ALL RESISTORS VALUES ARE IN OHMS, 1/2 WATT, 10%.

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

Schematic No. 4840168
 Ref. Assy. No. 4020274

Figure 8-11. Power Supply 39 VDC Schematic,
 -03 Version

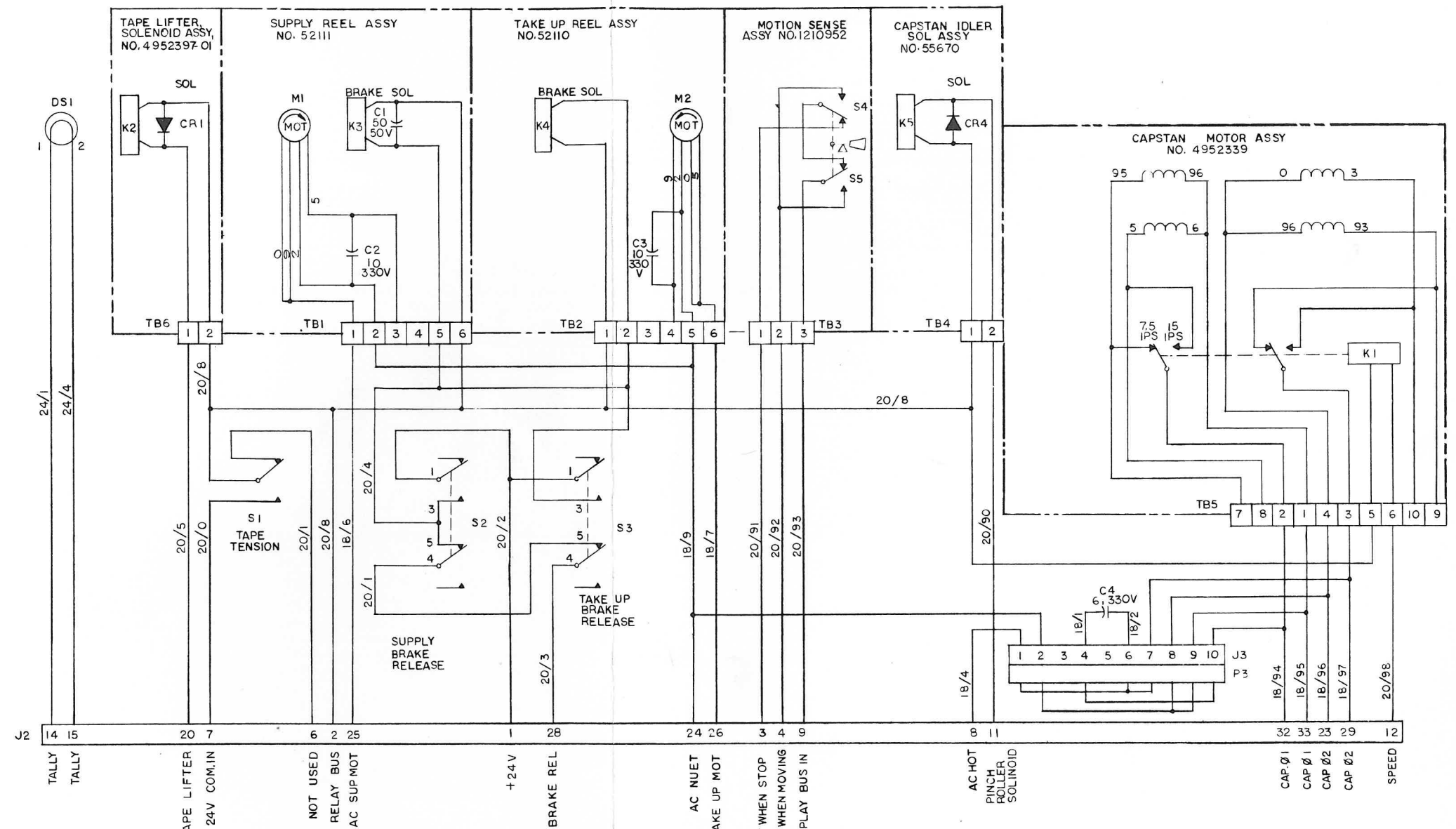


NOTES:
 1. UNLESS OTHERWISE SPECIFIED
 ALL CAPACITOR VALUES ARE IN MICROFARADS, RATINGS AS INDICATED.
 ALL RESISTOR VALUES ARE IN OHMS, 1/2WATT, 10%

LAST REF. DES. USED	REF. DES. NOT USED
C710	C701 TO C705
CR707	C708
Q706	Q701,702
VR702	VR701
T702	T701
R714	R701 TO R705

Schematic No. 4840039
 Ref. Assy. No. 4020274

Figure 8-12. Power Supply 39 VDC Schematic,
 -04 Version



NOTES UNLESS OTHERWISE SPECIFIED

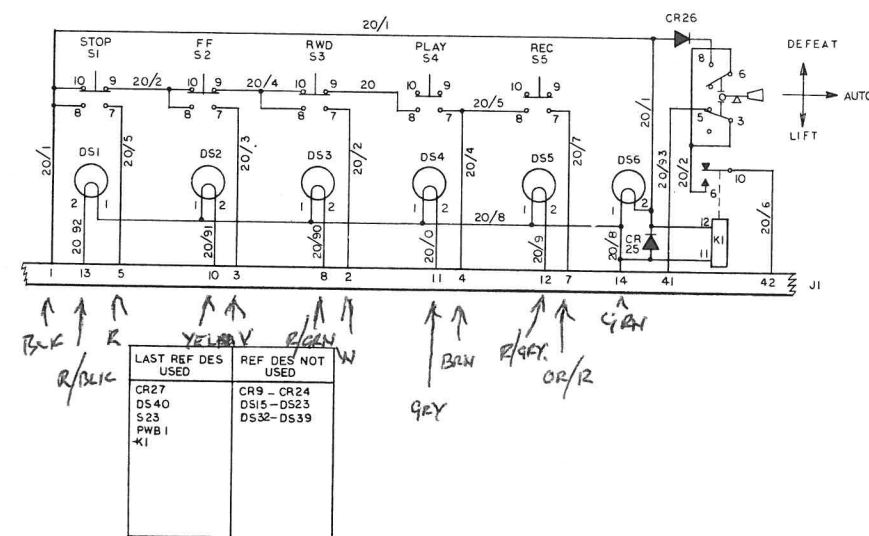
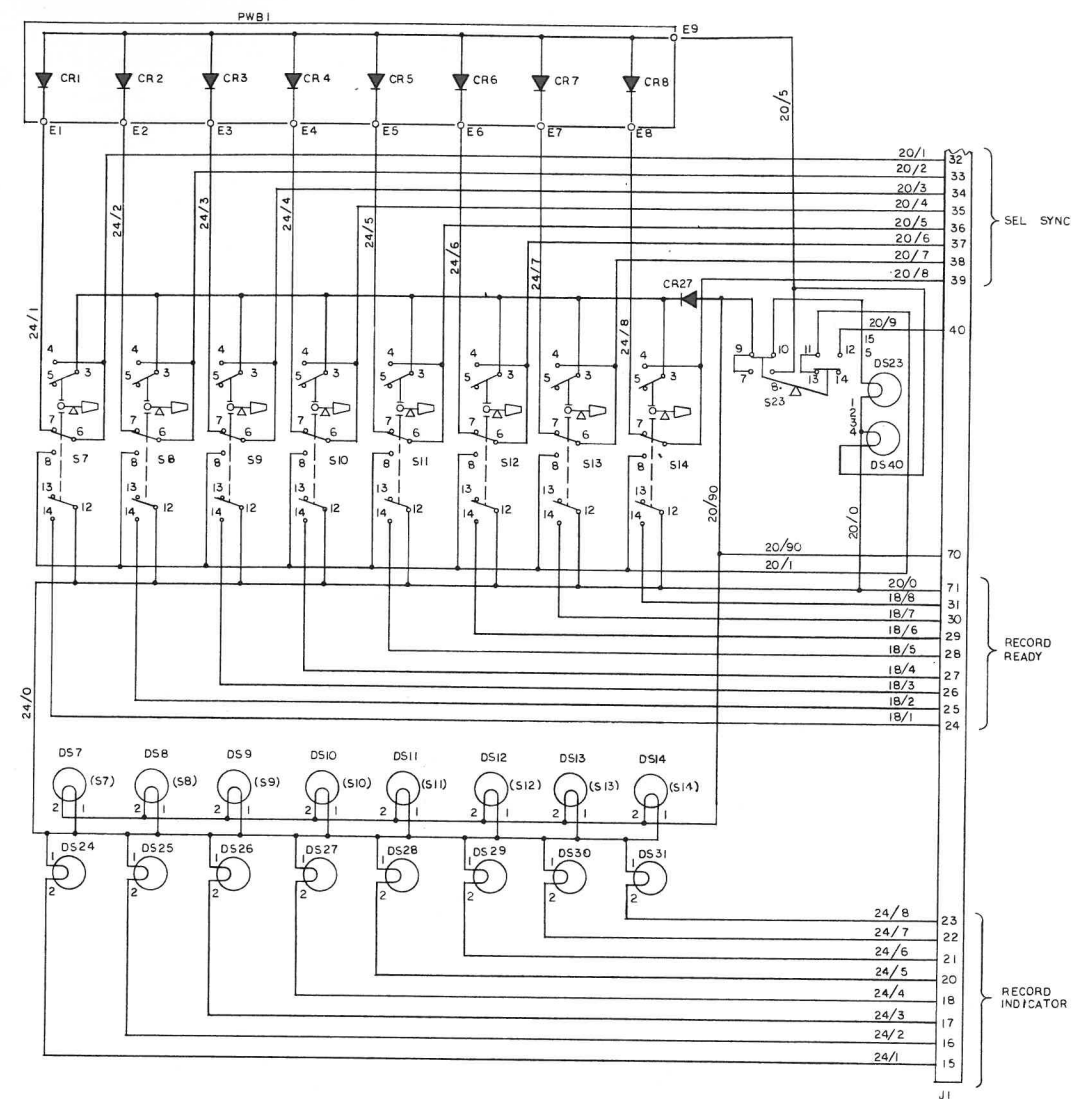
1. ALL CAPACITOR VALUES ARE IN MICROFARADS.
2. ALL DIODES ARE PART NO. 013-678.
3. S1 SHOWN WITH NO TAPE THREADED.
4. S2 AND S3 SHOWN IN NORMAL TENSION ARM POSITION.
5. S4-S5 SHOWN WITH NO MOTION

LAST REF DES USED	REF DES NOT USED
K5	P1, P2
S5	J1
CR4	CR2, CR3
C4	
TB6	
J3	
P3	
DS1	

Schematic No. 4952294
Ref. Assy. No. 4952583

Figure 8-13. Transport Schematic

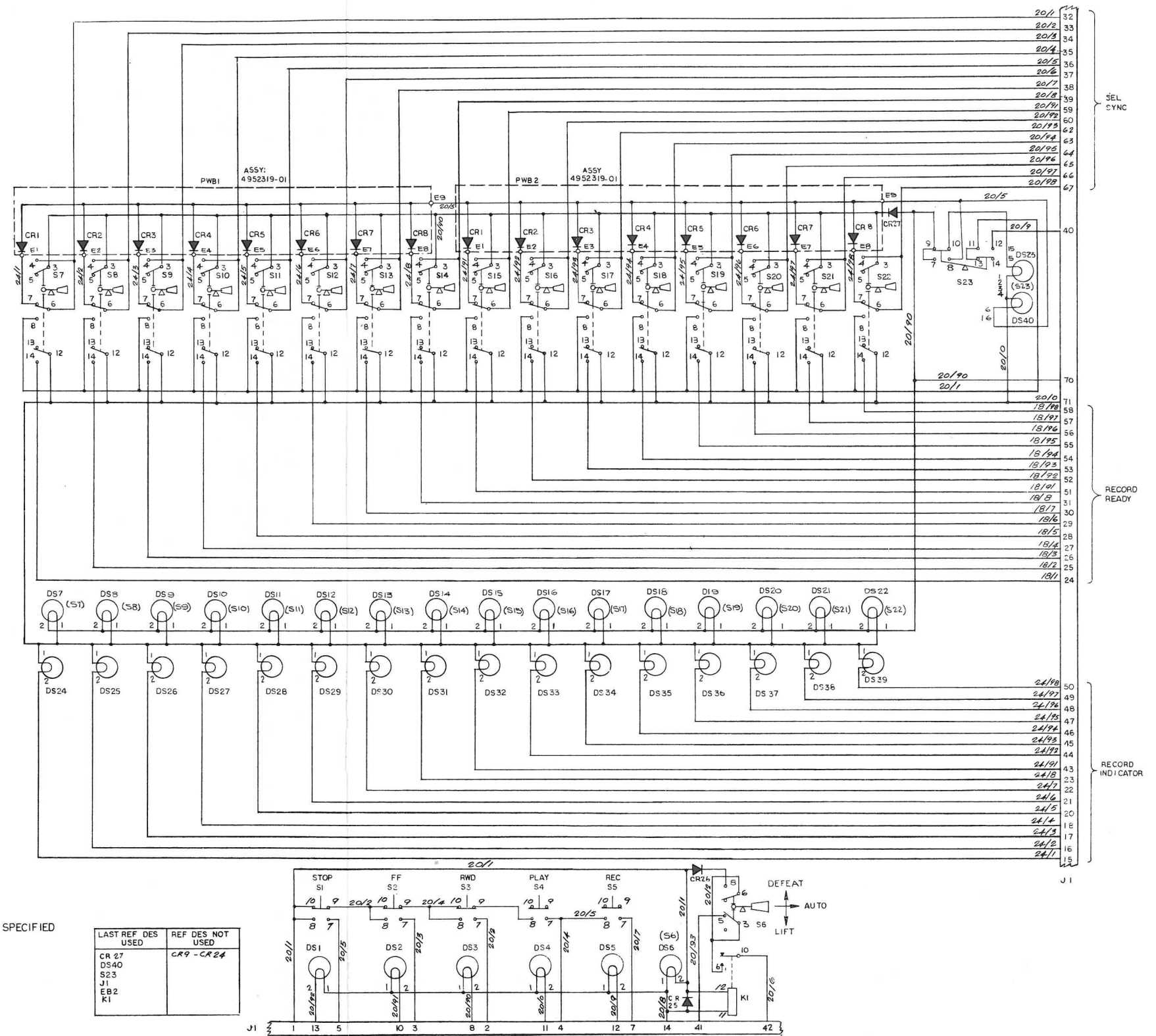
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NOTES: UNLESS OTHERWISE SPECIFIED
1. DIODES ARE PART NO. O13-678

Schematic No. 4952281
Ref. Assy. No. 4940148

Figure 8-14. Remote Sel-Sync Schematic,
-01 Version

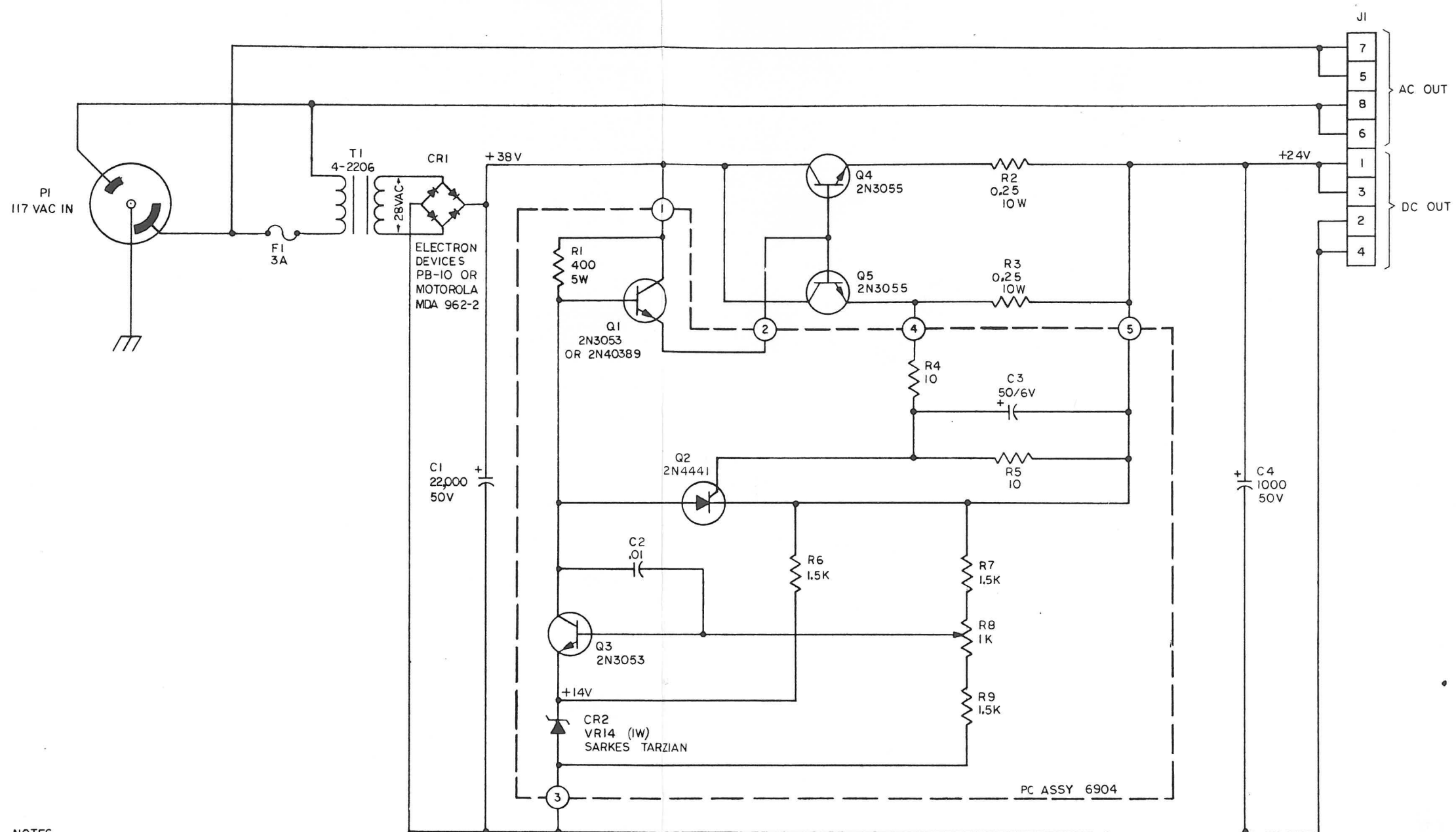


NOTES: UNLESS OTHERWISE SPECIFIED
 1 ALL DIODES ARE 013-678

LAST REF DES USED	REF DES NOT USED
CR 27	CR 9 - CR 24
DS 40	
S 23	
J 1	
EB 2	
K 1	

Schematic No. 4952346
 Ref. Assy. No. 4940149

Figure 8-15. Remote Sel-Sync Schematic,
 -02 Version

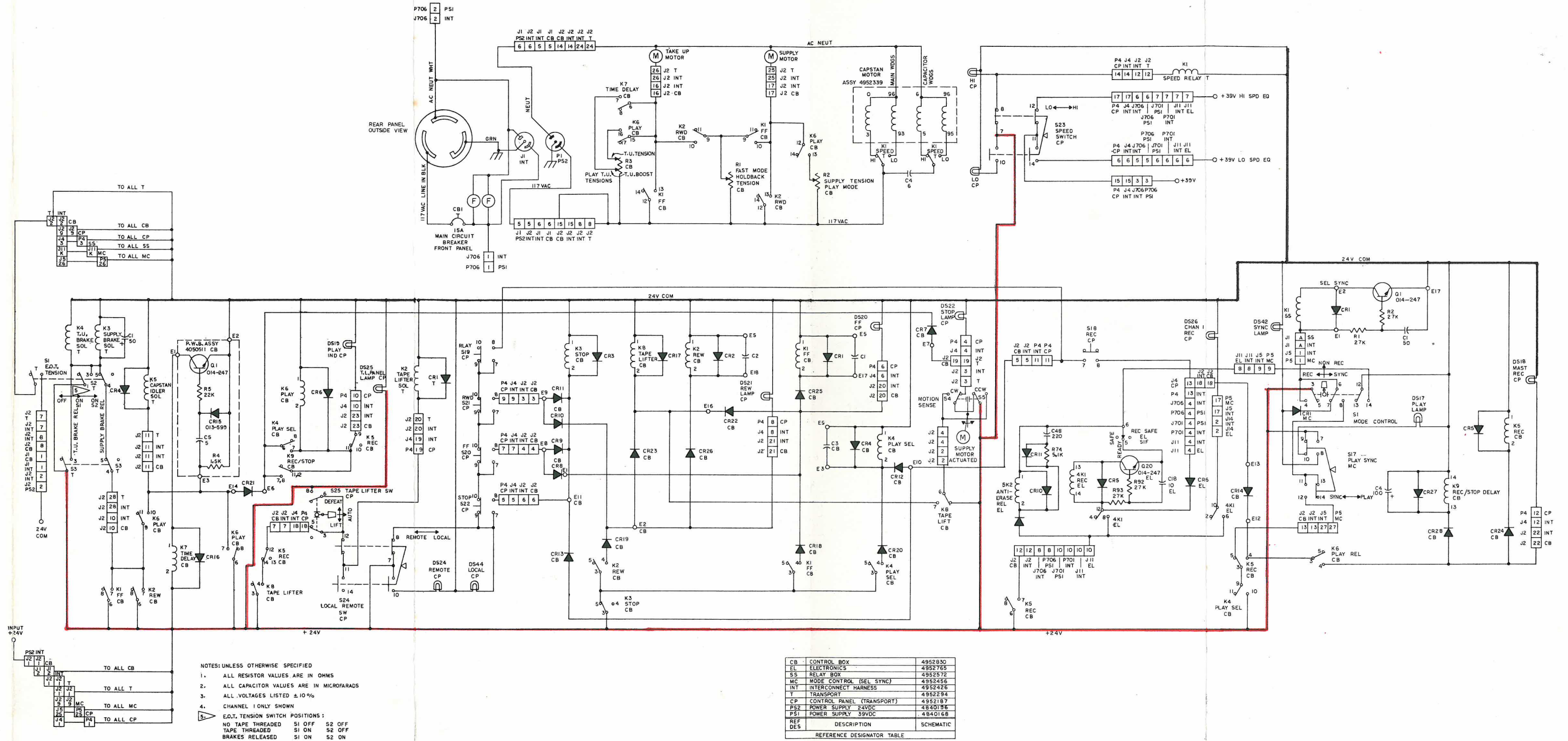


NOTES

1. THE CURRENT LIMIT CIRCUIT IS A LATCHING TYPE. TO RESET, THE POWER MUST BE INTERRUPTED LONG ENOUGH FOR C1 TO DISCHARGE BELOW A VOLTAGE SUFFICIENT TO MAINTAIN SUSTAINING CURRENT IN Q2 (APPROX 20 SECONDS).
2. UNLESS OTHERWISE STATED ALL RESISTANCES ARE IN OHMS, ALL CAPACITANCE IS IN MICROFARADS.
3. VOLTAGES LISTED ARE WITH NO LOAD ON THE OUTPUT & 20K/V VOM, UNLESS OTHERWISE NOTED, VOLTAGES ARE REFERENCED TO C1 MINUS.
4. POWER SUPPLY MANUFACTURED BY CONSOLTRONICS ASSOC., INC PART NO. 6902

Schematic No. 4840196
 Ref. Assy. No. 4952890

Figure 8-16. Power Supply 24 VDC Schematic



Schematic No. 4840200
Rev. Assy. No. 4940139

Figure 8-17. System Schematic MM-1000