

HEAD ASSEMBLIES  
 4020191 (Ref. B), 4020192 (Ref. B)  
 4020194 (Ref. B)

Item	1 ch FT	2 ch HT	2 ch 2T	2 ch QT	DESCRIPTION	Ampex Part No.
	X				Head Assembly, Single-channel, Full-track (see Fig. 7-11)	4020191-03
		X			Head Assembly, Single-channel, Full-track (see Fig. 7-12)	4020191-04
			X		Head Assembly, Dual-channel, Two-track (see Fig. 7-13)	4020192-02
				X	Head Assembly, Dual-channel, Quarter-track (see Fig. 7-14)	4020194-02
1	1	1	1	1	Base Assembly, Head-housing	4030088-01
2	1	1	1	1	Cap, Tape-guide	4100063-01
3	1	1	1	1	Sleeve, Tape-guide	4200055-01
4	9	9	9	9	Spring, Head-mounting	4270024-20
5	1	1	1	1	Spring, Tape-guide	4270114-01
6	2	2	2	2	Washer, Tape-guide	4440137-01
9	1	1	1	1	Cover, Cable-bracket	1232344-01
10	1	1			Bracket and Cable Assembly	1232346-01
10			1	1	Bracket and Cable Assembly	1232346-04
11	1				Head Stack, Erase, Full-track	1232357-01
11			1		Head Stack, Erase, Two-track	1232360-01
11				1	Head Stack, Reproduce, Quarter-track	1232363-01
12	1				Head Stack, Record, Full-track	1232358-01
12			1		Head Stack, Record, Two-track	1232361-01
12				1	Head Stack, Record, Quarter-track	1232363-02
13	1				Head Stack, Reproduce, Full-track	1232359-01
13			1		Head Stack, Reproduce, Two-track	1232362-01
13				1	Head Stack, Erase, Quarter-track	1232363-03
14		1			Head Stack, Erase, Half-track	1232360-01
15		1			Head Stack, Record, Half-track	1232361-01
16		1			Head Stack, Reproduce, Half-track	1232362-01

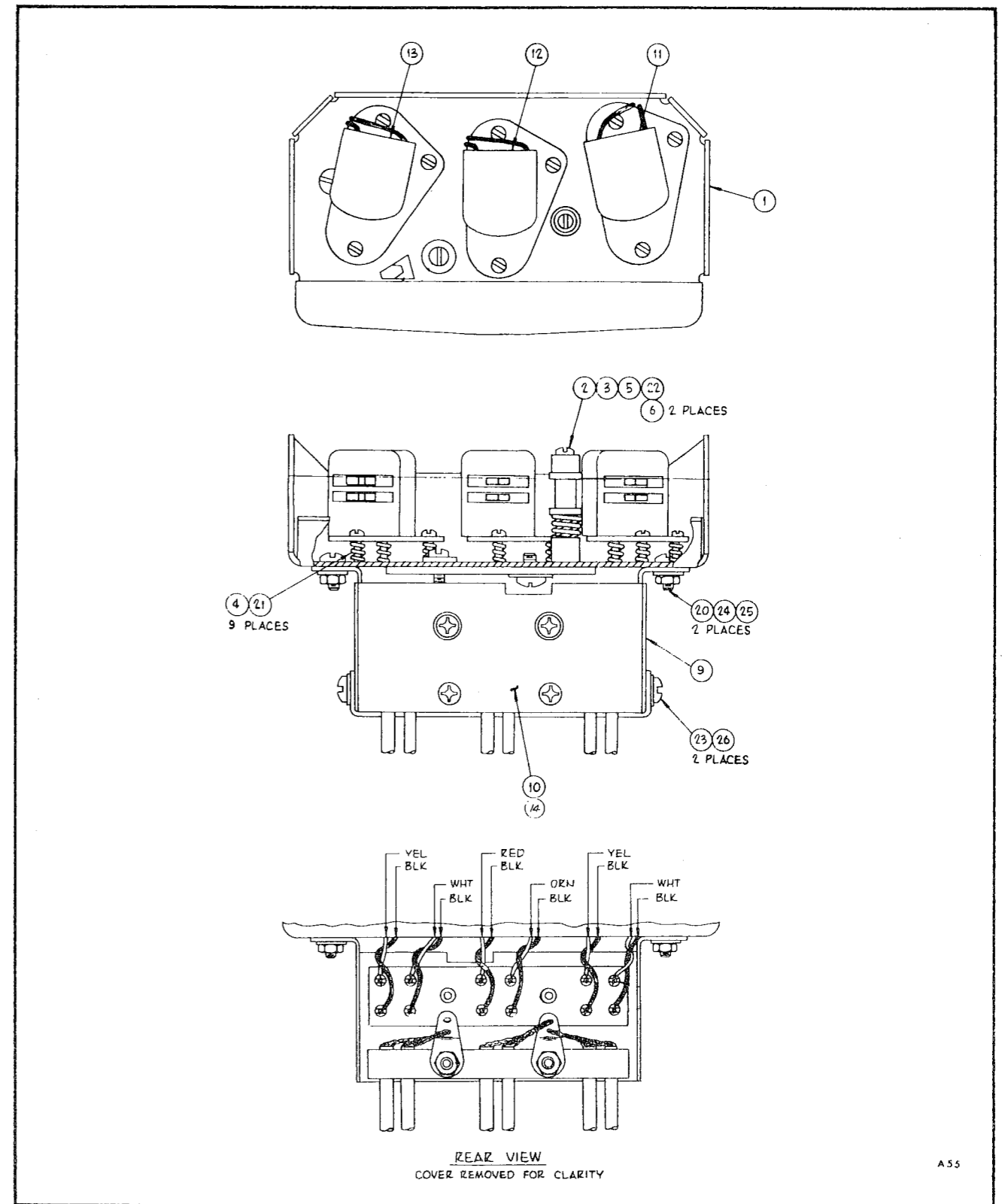
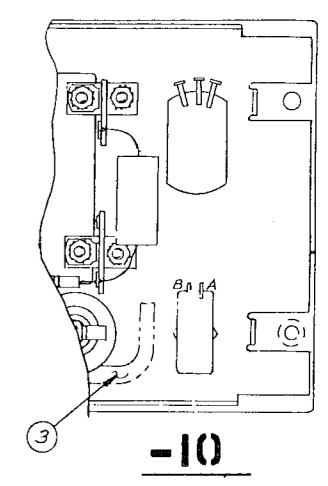
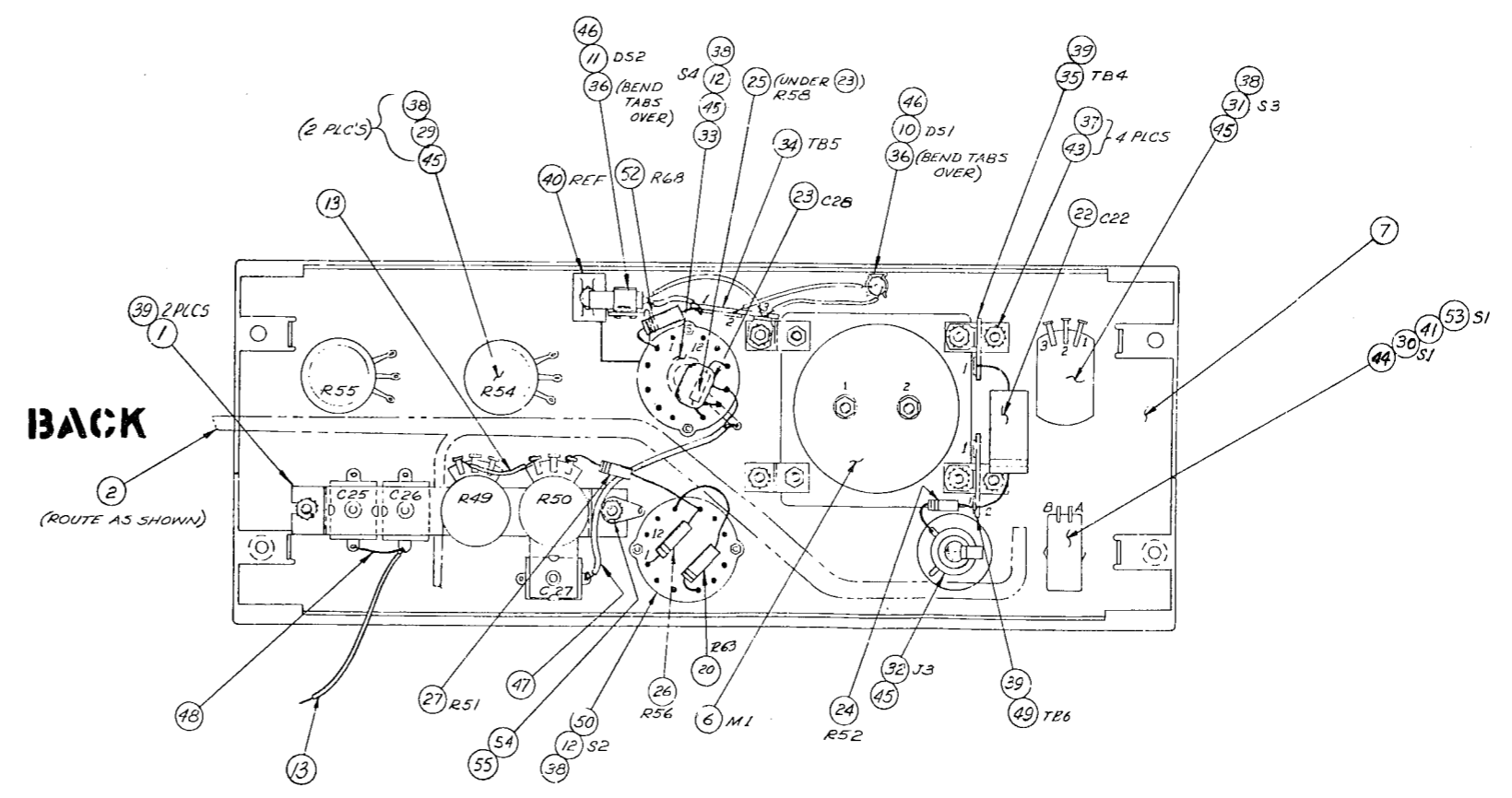
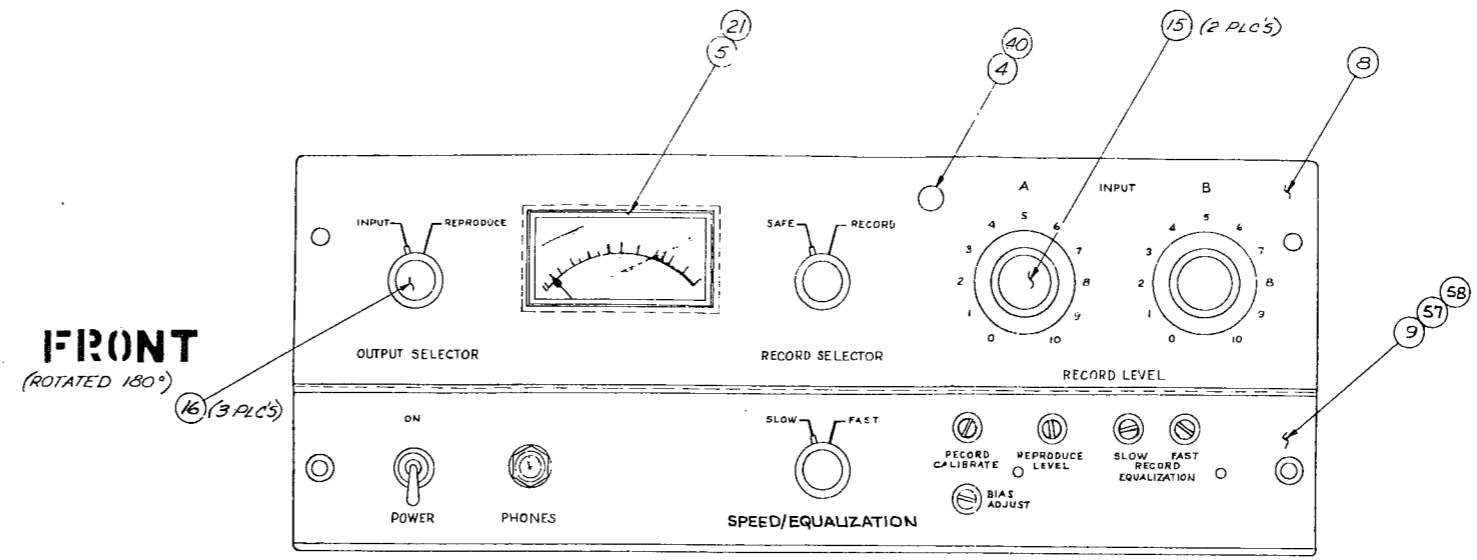


Figure 7-14. Head Assembly, Quarter-Track

PANEL ASSEMBLY, FRONT (DOMESTIC)  
4050400 (Ref. M)

See 4050400 LM and Front Panel Assembly, Ref. M

MST	SLV	DESCRIPTION	Ampex Part No.
11	12		
1	1	Bracket Assembly, Equalization	4050402-01
1	-	Harness Assembly, Front Panel, Master	4050428-01
-	1	Harness Assembly, Front Panel, Slave	4050428-04
1	1	Jewel, Pilot Lamp, Red	4110258-02
1	1	Escutcheon, Meter Window	4110261-01
1	1	Meter, VU (M1)	4140019-01
1	1	Panel, Backing	4290623-01
1	1	Panel, Front Top	4290625-01
-	-	Panel Assembly, Front	4041038-01
1	1	Lamp, Meter (DS1)	4610081-01
1	1	Lamp, Record (DS2)	4610082-01
2	2	Switch, Selector (S2, S4)	4620196-02
2	2	Knob, Skirted, Pointer	6000009-20
3	3	Knob, Pointer	6000005-20
1	-	Resistor, Composition, 120 ohm, 1W, 10% (R63)	041-578
1	1	Capacitor, Electrolytic, 500UF, 15V (C22)	031-297
1	1	Capacitor, Mica, 0.0025UF, 5%, 500V (C28)	034-994
1	1	Resistor, Composition, 220 ohm, 10%, 1/2W (R52)	041-040
1	1	Resistor, Composition, 470 ohm, 10%, 1/2W (R58)	041-044
1	1	Resistor, Composition, 18k ohm, 10%, 1/2W (R56)	041-063
1	1	Resistor, Composition, 33k ohm, 10%, 1/2W (R51)	041-066
2	2	Resistor, Variable, 100k ohm, 2W, 10% (R54, 55)	044-015
-	-	Switch, Toggle (S1)	120-999
1	1	Switch, Selector (S3)	122-323
1	1	Jack, Phone (with mounting hardware) (J2)	148-015
1	1	Terminal Strip A1, A1, G (TB5)	180-024
1	1	Terminal Strip, D, A1 (TB4)	180-027
1	1	Terminal Strip, A1, D, A1 (TB6)	180-023
1	1	Resistor, Composition, 22 ohm, 1/2W, 10% (R68)	041-033
1	-	Switch, Toggle	119-217
1	-	Panel Assembly, Front	4041038-02
-	1	Panel Assembly, Front	4041038-03



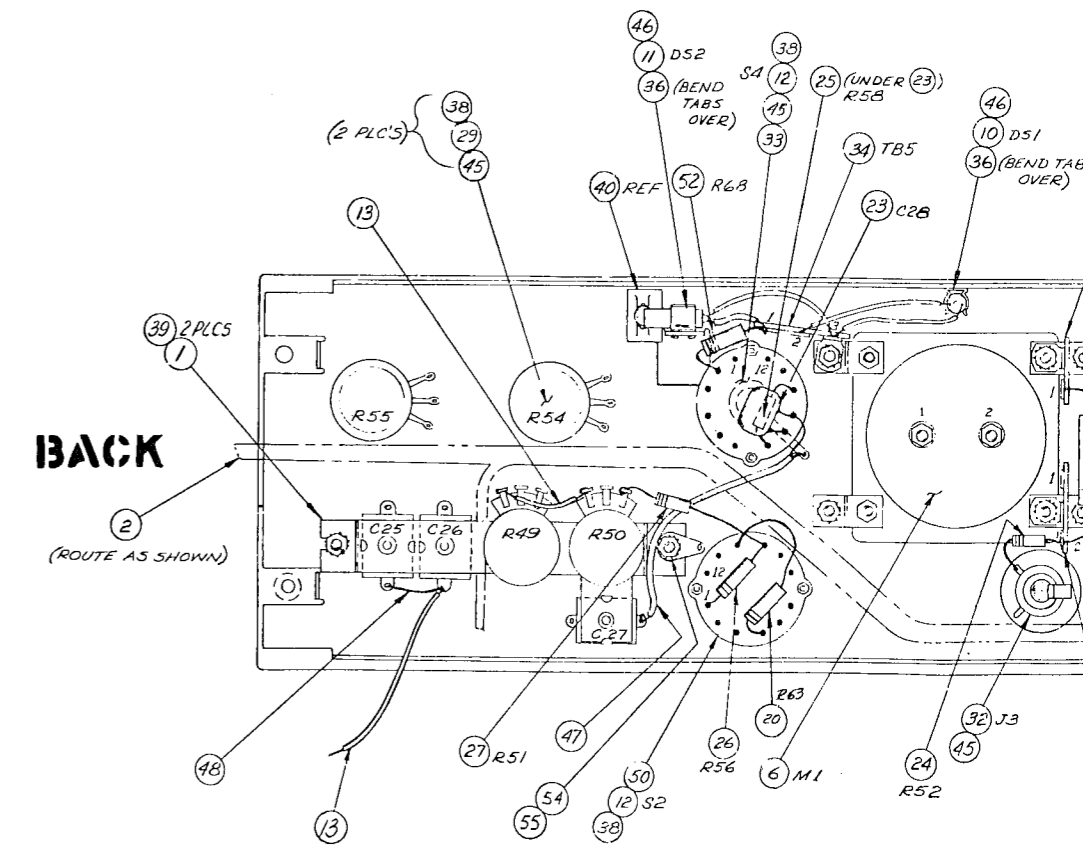
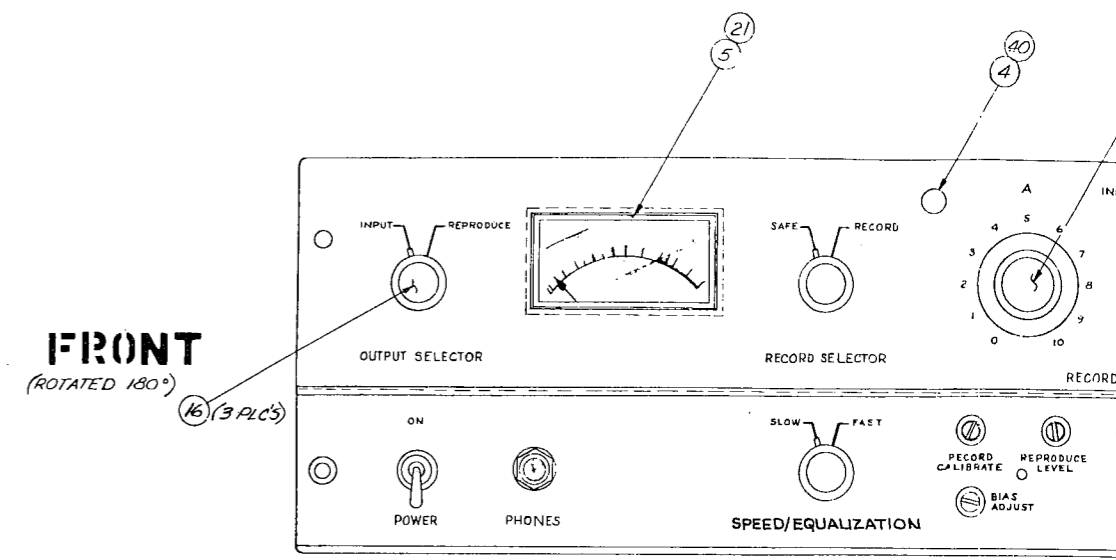
**-09**

Figure 7-15. Electronics, Front Panel Assy

PANEL ASSEMBLY, FRONT (DOMESTIC)  
4050400 (Ref. M)

See 4050400 LM and Front Panel Assembly, Ref. M

Item	MST -09	SLV -10	MST 11	SLV 12	DESCRIPTION	Ampex Part No.
1	1	1	1	1	Bracket Assembly, Equalization	40 50402-01
2	1	1	1	-	Harness Assembly, Front Panel, Master	4050428-01
3	1	1	-	1	Harness Assembly, Front Panel, Slave	4050428-04
4	1	1	1	1	Jewel, Pilot Lamp, Red	4110258-02
5	1	1	1	1	Escutcheon, Meter Window	4110261-01
6	1	1	1	1	Meter, VU (M1)	4140019-01
7	1	1	1	1	Panel, Backing	4290623-01
8	1	1	1	1	Panel, Front Top	4290625-01
9	1	1	-	-	Panel Assembly, Front	4041038-01
10	1	1	1	1	Lamp, Meter (DS1)	4610081-01
11	1	1	1	1	Lamp, Record (DS2)	4610082-01
12	2	2	2	2	Switch, Selector (S2, S4)	4620196-02
15	2	2	2	2	Knob, Skirted, Pointer	6000009-20
16	3	3	3	3	Knob, Pointer	6000005-20
20	1	1	1	-	Resistor, Composition, 120 ohm, 1W, 10% (R63)	041-578
22	1	1	1	1	Capacitor, Electrolytic, 500UF, 15V (C22)	031-297
23	1	1	1	1	Capacitor, Mica, 0.0025UF, 5%, 500V (C28)	034-994
24	1	1	1	1	Resistor, Composition, 220 ohm, 10%, 1/2W (R52)	041-040
25	1	1	1	1	Resistor, Composition, 470 ohm, 10%, 1/2W (R58)	041-044
26	1	1	1	1	Resistor, Composition, 18k ohm, 10%, 1/2W (R56)	041-063
27	1	1	1	1	Resistor, Composition, 33k ohm, 10%, 1/2W (R51)	041-066
29	2	2	2	2	Resistor, Variable, 100k ohm, 2W, 10% (R54, 55)	044-015
30	1	1	-	-	Switch, Toggle (S1)	120-999
31	1	1	1	1	Switch, Selector (S3)	122-323
32	1	1	1	1	Jack, Phone (with mounting hardware) (J2)	148-015
34	1	1	1	1	Terminal Strip A1, A1, G (TB5)	180-024
35	1	1	1	1	Terminal Strip, D, A1 (TB4)	180-027
49	1	1	1	1	Terminal Strip, A1, D, A1 (TB6)	180-023
52	1	1	1	1	Resistor, Composition, 22 ohm, 1/2W, 10% (R68)	041-033
53	-	-	1	-	Switch, Toggle	119-217
57	-	-	1	-	Panel Assembly, Front	4041038-02
58	-	-	-	1	Panel Assembly, Front	4041038-03



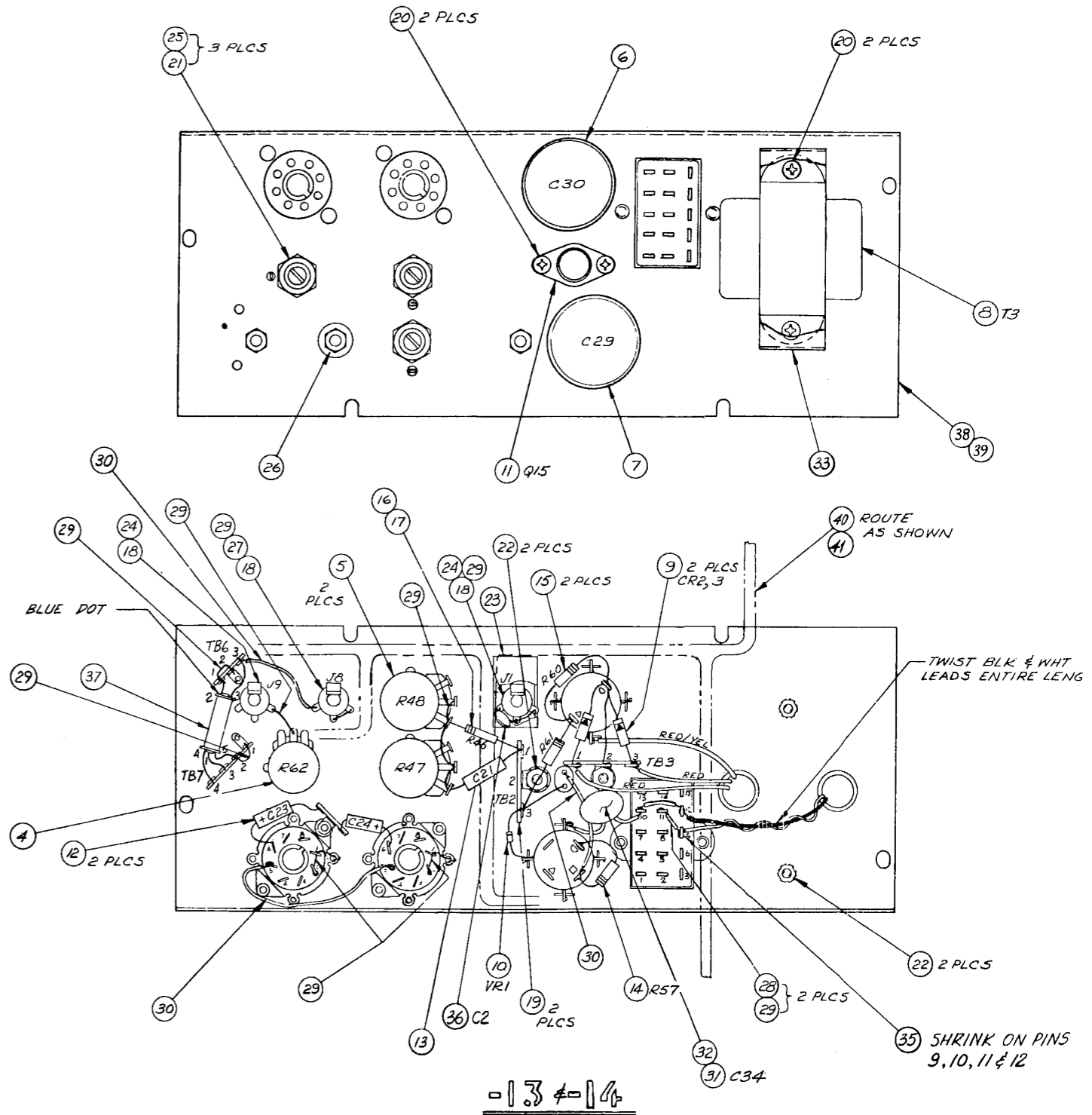
AG-600

AG-600B

PANEL ASSEMBLY, REAR (DOMESTIC)  
4050251 (Ref. J)

See Ref. J, 4050251 for Complete LM and Back Panel

Item	NAB		NAB		Slave		DESCRIPTION	Ampex Part No.
	CCIR Slave	-12	CCIR Master	-13	NAB	CCIR		
1	-	-	1	1	-15	-16	Rear Panel Subassembly	4040933-05
2	1	1	-	-	1	1	Rear Panel Subassembly	4040933-04
3	1	1	-	-	-	-	Harness Assembly	4050427-03
4	1	1	1	1	1	1	Potentiometer, 25 ohm (R62)	4520149-10
5	2	2	2	2	1	1	Potentiometer, 50k ohm (R47, 48)	4520151-01
6	1	1	1	1	1	1	Capacitor, 500-500-200-200UF, 25V (C30)	4550147-01
7	1	1	1	1	1	1	Capacitor, 1000-500UF, 35V (C29)	4550147-02
8	1	1	1	1	1	1	Transformer, Power (T3)	4580194-02
9	2	2	2	2	1	1	Diode, Rectifier, CD451 (CR2, 3)	013-678
10	1	1	1	1	1	1	Diode, Zener, 24V, 5% (VR1)	013-712
11	1	1	1	1	1	1	Transistor, (with insulating hardware) (Q15)	014-587
12	2	2	2	2	1	1	Capacitor, Electrolytic, 1UF, 25V (C23, 24)	031-294
13	1	1	1	1	1	1	Capacitor, Mylar, 0.01UF, 5%, 100V (C21)	035-732
14	1	1	1	1	1	1	Resistor, Composition, 120 ohm, 10%, 1/2W (R57)	041-039
15	2	2	2	2	1	1	Resistor, Composition, 220 ohm, 10%, 1/2W (R60, 61)	041-040
16	1	1	1	1	1	1	Resistor, Composition, 360k ohm, 5%, 1/2W (R46)	041-590
17	-	-	-	-	1	1	Resistor, Composition, 2.2M ohm, 10%, 1/2W (R46)	041-086
18	3	3	3	3	1	1	Connector, Telephone-Jack(with mounting hardware) (J1, 8, 9)	148-142
23	1	1	1	1	1	1	Shield, Reproduce Head Jack	4600059-01
31	1	1	1	1	1	1	Capacitor, Ceramic, 0.005 UF, 1400V (C34)	030-465
33	1	1	1	1	1	1	Shield, Power Transformer	4600060-01
34	-	-	1	1	-	-	Harness Assembly	4050427-06
36	1	1	1	1	1	1	Capacitor, 390pF, 500V, 5%, Mica (C2)	034-288
37	1	1	1	1	1	1	Relay SPDT	020-642
42	-	-	-	-	1	1	Harness Assembly	4050427-07



ANEL ASSEMBLY, REAR (DOMESTIC)  
4050251 (Ref. J)  
Complete LM and Back Panel

	Ampex Part No.
	4040933-05
	4040933-04
	4050427-03
	4520149-10
162)	4520151-01
(R47, 48)	4550147-01
200UF, 25V (C30)	4550147-02
35V (C29)	4580194-02
)	013-678
(CR2, 3)	013-712
VR1)	014-587
ing hardware) (Q15)	031-294
1UF, 25V (C23, 24)	035-732
F, 5%, 100V (C21)	041-039
.20 ohm, 10%, 1/2W (R57)	041-040
.20 ohm, 10%, 1/2W (R60, 61)	041-590
100k ohm, 5%, 1/2W (R46)	041-086
1.2M ohm, 10%, 1/2W (R46)	148-142
ck(with mounting hardware) (J1, 8, 9)	4600059-01
ack	030-465
05 UF, 1400V (C34)	4600060-01
er	4050427-06
	034-288
	020-642
	4050427-07

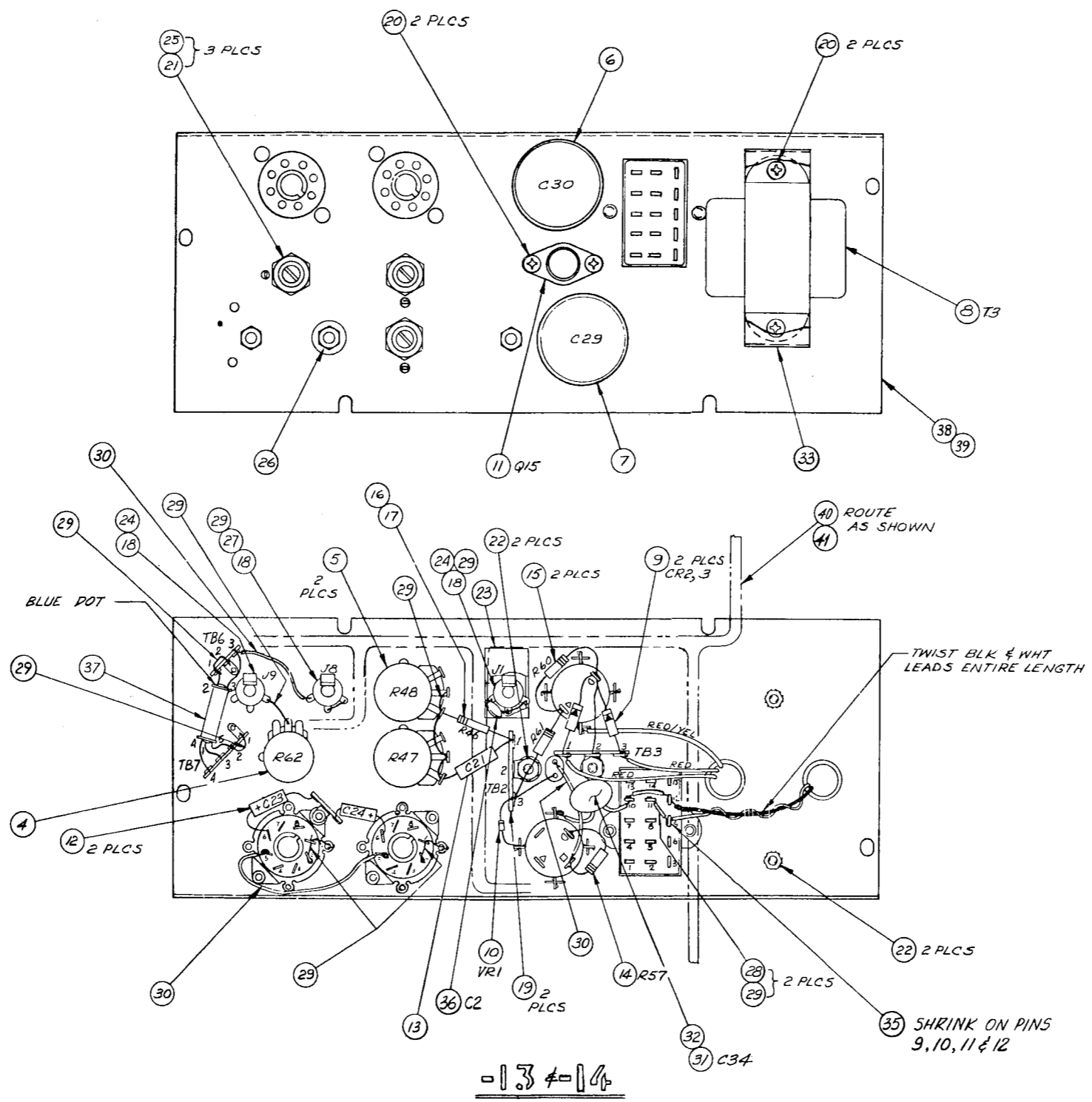


TABLE I

ASSY NO.	DESCRIPTION
4050251-13	MASTER NAB
4050251-11	SLAVE NAB
4050251-14	MASTER CCIR
4050251-12	SLAVE CCIR
4050251-15	SLAVE, NAB (600B)
4050251-16	SLAVE, CCIR (600B)

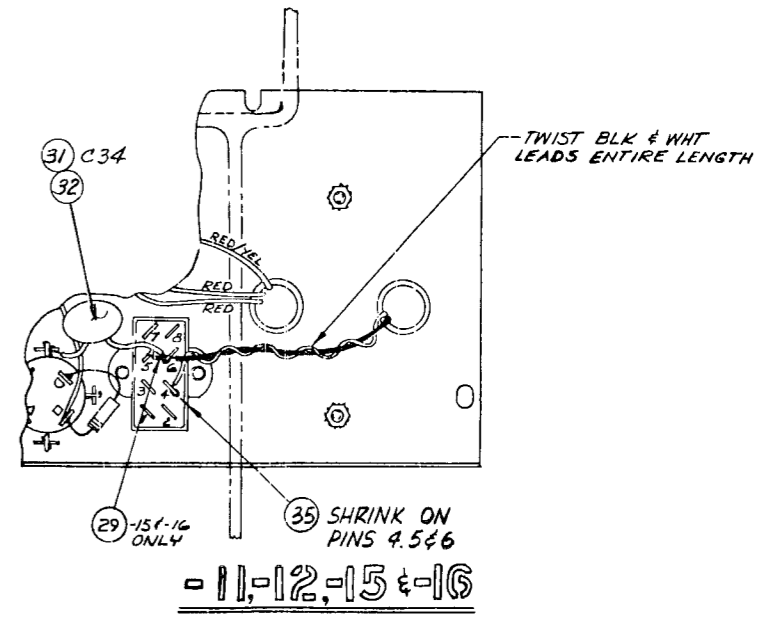
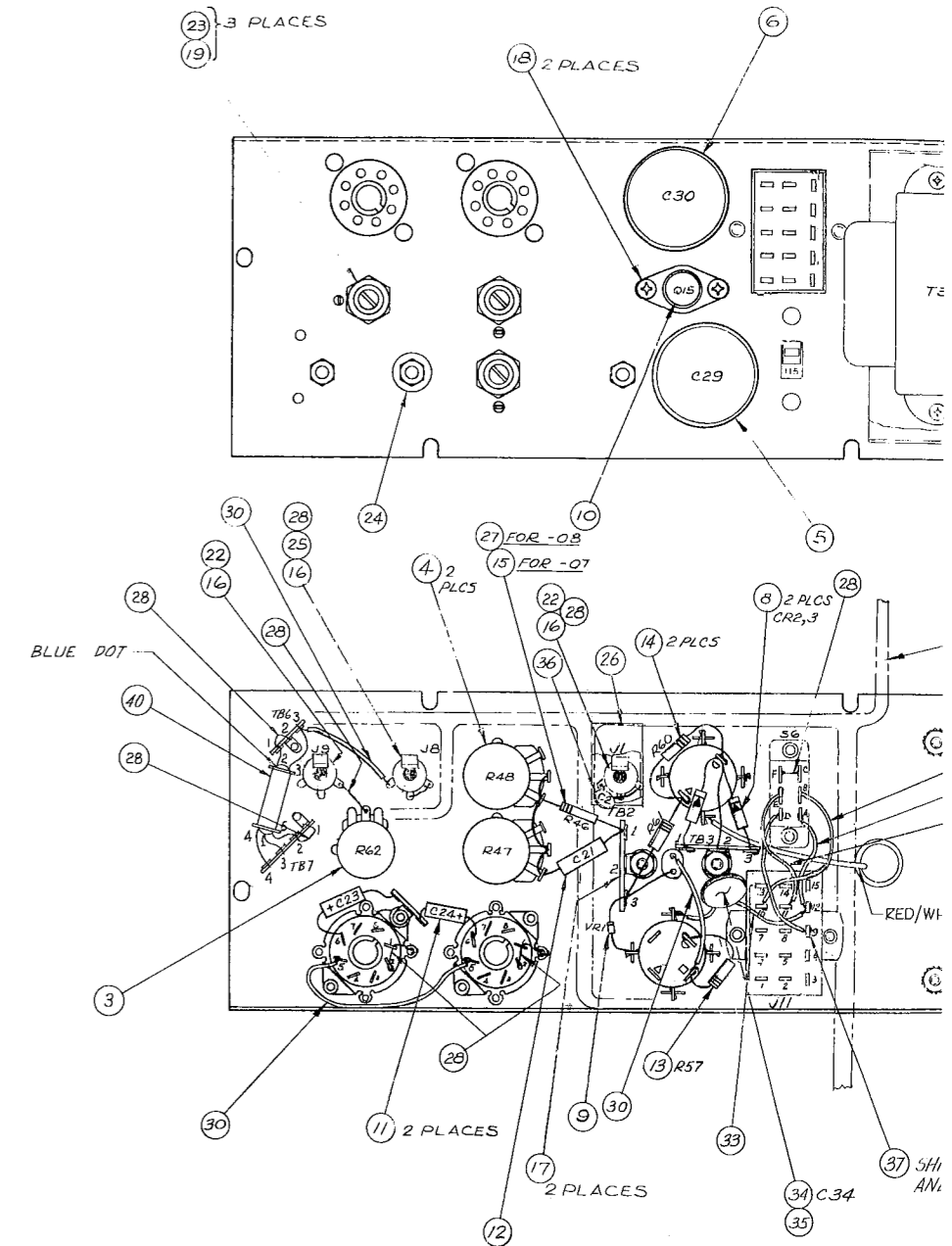


Figure 7-16. Electronics, Back Panel Assembly (Domestic)

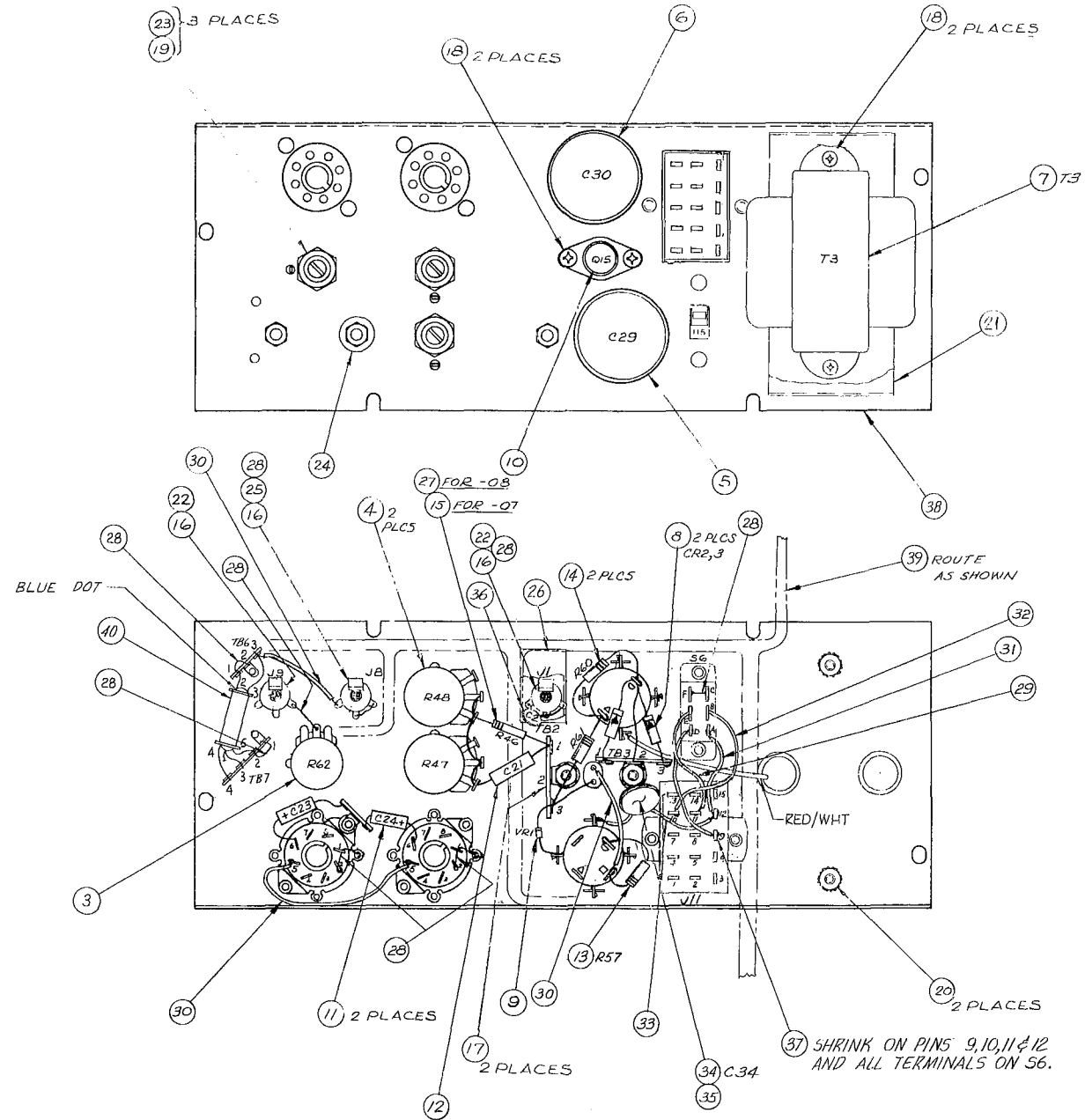
AG-600B  
 PANEL ASSEMBLY, REAR (INTERNATIONAL)  
 4050405(Ref.H)

Item	NAB -09	CCIR -10	DESCRIPTION	Ampex Part No.
3	1	1	Potentiometer, 25 ohm (R62)	4520149-10
4	2	2	Potentiometer, 50k (R47, 48)	4520151-01
5	1	1	Capacitor, 500-500-200-200UF, 25V (C30)	4550147-01
6	1	1	Capacitor, 1000-500UF, 35V (C29)	4550147-02
7	1	1	Transformer, Power (International) (T3)	4580195-01
8	2	2	Diode, Rectifier, CD451 (CR2, 3)	013-678
9	1	1	Diode, Zener, 24V, 5% (VR1)	013-712
10	1	1	Transistor (with mounting hardware) (Q15)	014-587
11	2	2	Capacitor, Electrolytic, 1UF, 25V (C23, 24)	031-294
12	1	1	Capacitor, Mylar, 0.01UF, 5%, 100V (C21)	035-732
13	1	1	Resistor, Composition, 120 ohm, 10%, 1/2W (R57)	041-039
14	2	2	Resistor, Composition, 220 ohm, 10%, 1/2W (R60, 61)	041-040
15	1	-	Resistor, Composition, 360k, 5%, 1/2W (R46)	041-590
16	3	3	Connector, Telephone-Jack (with mounting hardware) (J1, 8, 9)	148-142
21	1	1	Shield, Transformer	4600056-01
26	1	1	Shield, Head-Jack, Reproduce	4600059-01
27	-	1	Resistor, Composition, 2.2M ohm, 10%, 1/2W (R46)	041-086
34	1	1	Capacitor, Ceramic, 0.005UF, 1400V (C34)	030-465
36	1	1	Capacitor, Mica, 390pF, 500V, 5% (C2)	034-288
38	1	1	Rear Panel Subassembly (International)	4040934-03
39	1	1	Harness Assembly	4050427-06
40	1	1	Relay, Single-Pole, Double-Throw	020-642



AG-600B  
 PANEL ASSEMBLY, REAR (INTERNATIONAL)  
 4050405(Ref.H)

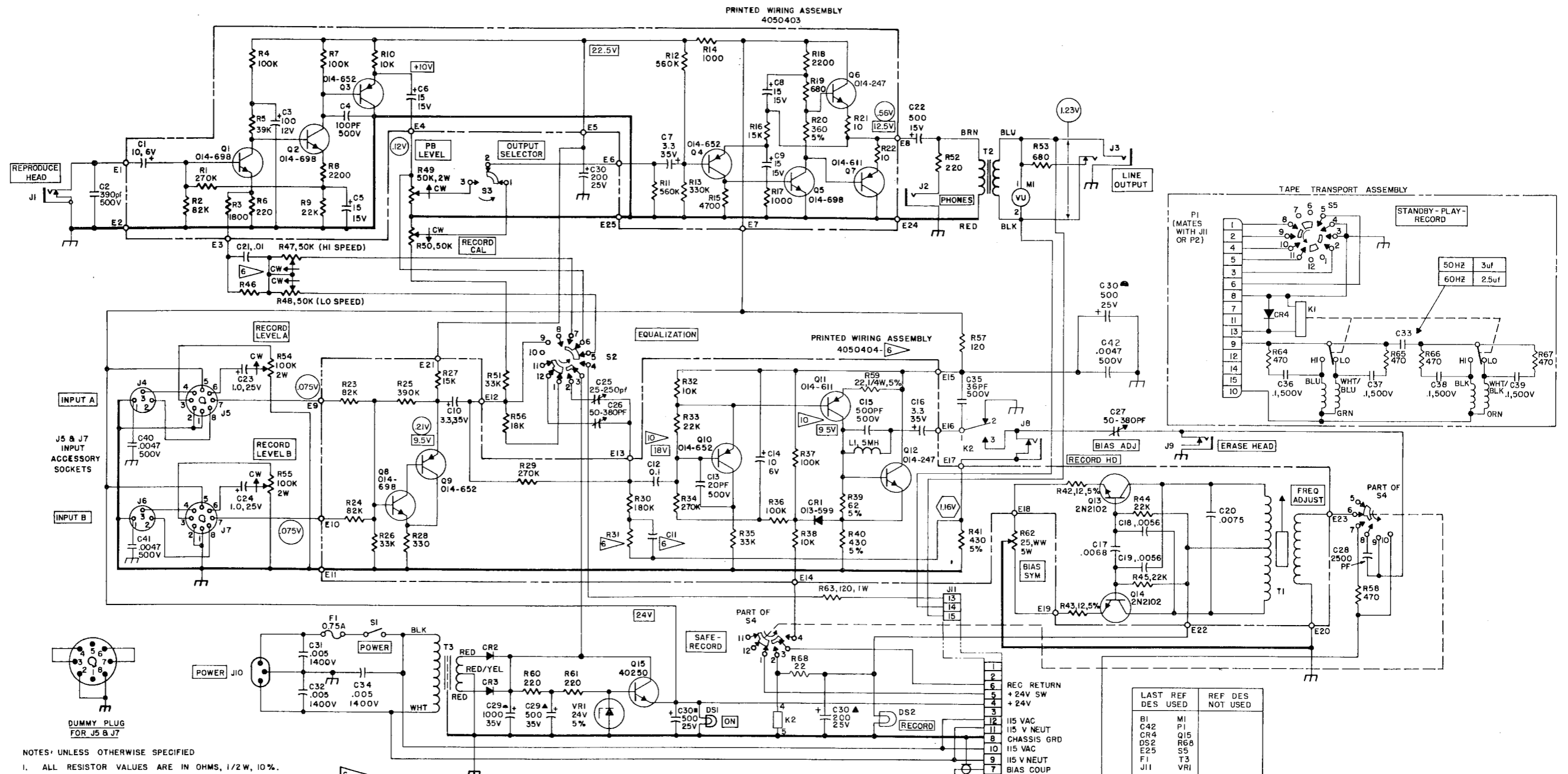
	Ampex Part No.
	4520149-10
	4520151-01
1) JF, 25V (C30)	4550147-01
(C29)	4550147-02
ational) (T3)	4580195-01
2, 3)	013-678
)	013-712
rdware) (Q15)	014-587
, 25V (C23, 24)	031-294
5%, 100V (C21)	035-732
ohm, 10%, 1/2W (R57)	041-039
ohm, 10%, 1/2W (R60, 61)	041-040
, 5%, 1/2W (R46)	041-590
with mounting hardware) (J1, 8, 9)	148-142
se	4600056-01
1 ohm, 10%, 1/2W (R46)	4600059-01
F, 1400V (C34)	041-086
V, 5% (C2)	030-465
arnational)	034-288
Throw	4040934-03
	4050427-06
	020-642



T3 CONNECTIONS	
COLOR	TERMINATION
RED	TB3-1
RED	TB3-3
RED/WHT	CHASSIS GND (AS SHOWN)
WHT	S6-A
GRN	S6-B
GRN/YEL	S6-D
BLK	S6-E

TABLE I	
ASSY NO.	DESCRIPTION
4050405-09	N A B
4050405-10	CCIR

Figure 7-17. Electronics, Back Panel Assembly (International)



- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTOR VALUES ARE IN OHMS, 1/2W, 10%.
  2. ALL CAPACITOR VALUES ARE IN MICROFARADS, 100V.
  3. ALL DIODES ARE TYPE O13-67B.
  4. ALL SWITCHES ARE IN COW OR OFF POSITION.
  5. FOR FIELD SERVICE ONLY:
    - Q1, Q2, Q5, Q8 MAY BE 2N3565 OR 2N3117.
    - Q3, Q4, Q9, Q10 MAY BE 2N3906.
    - Q7, Q11 MAY BE 2N3638.
    - Q6 & Q12 MAY BE 2N2219.

FOR NAB EQUALIZATION		
REF DES	DESCRIPTION	ASSEMBLY
R31	180K	4050404
R46	360K, 5%	4050251
C11	.018	4050404

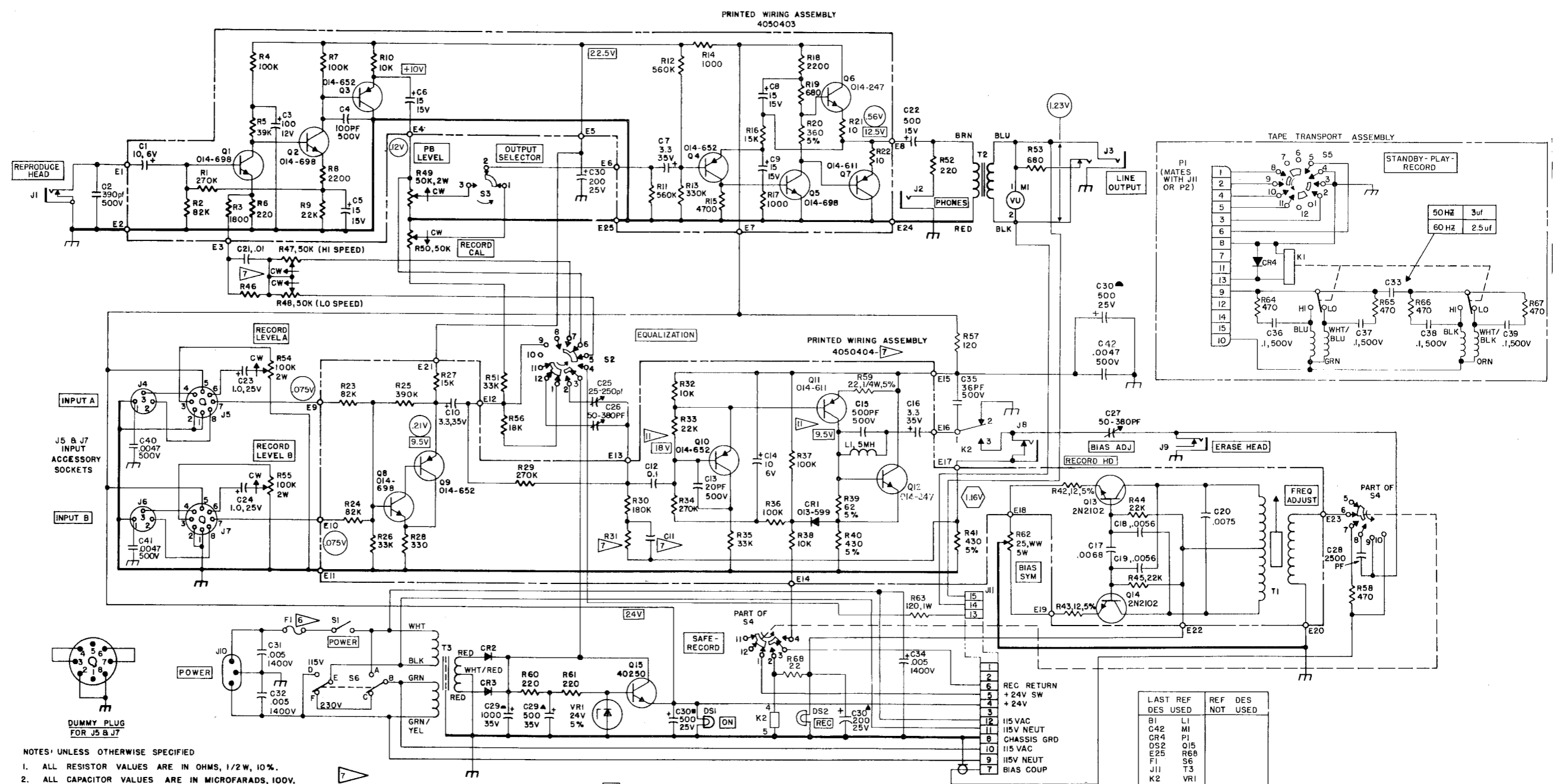
FOR CCIR EQUALIZATION		
REF DES	DESCRIPTION	ASSEMBLY
R31	0	4050404
R46	2.2meg	4050251
C11	OPEN	4050404

7. [XX] INDICATES VOLTS D.C. MEASURED WITH A 20,000Ω/V METER.
  8. [XX] INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT OPERATING LEVEL OF 1000HZ.
  9. [XX] INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT BIAS FREQUENCY WITH ELECTRONICS IN RECORD MODE.
10. [∇] MEASURED WITH ELECTRONICS IN RECORD MODE.

LAST DES	REF USED	REF DES NOT USED
B1	M1	
C42	P1	
CR4	Q15	
DS2	R68	
E25	S5	
F1	T3	
J11	VRI	
L1	K2	

Figure 7-18. Schematic Diagram, Master Electronics (Domestic)





- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTOR VALUES ARE IN OHMS, 1/2W, 10%.
  2. ALL CAPACITOR VALUES ARE IN MICROFARADS, 100V.
  3. ALL DIODES ARE TYPE 013-678.
  4. ALL SWITCHES ARE IN CCW OR OFF POSITION.
  5. FOR FIELD SERVICE ONLY:
    - Q1, Q2, Q3, Q8 MAY BE 2N3565 OR 2N3117.
    - Q3, Q4, Q9, Q10 MAY BE 2N3906.
    - Q7, Q11 MAY BE 2N3638.
    - Q6 & Q12 MAY BE 2N2219.
  6. FOR 115V LINE USE 0.75 AMP FUSE. FOR 230V LINE USE 0.5 AMP FUSE.

FOR NAB EQUALIZATION		
REF DES	DESCRIPTION	ASSEMBLY
R31	180K	4050404
R46	360K, 5%	4050405
C11	.018	4050404

FOR CCIR EQUALIZATION		
REF DES	DESCRIPTION	ASSEMBLY
R31	0	4050404
R46	2.2 meg	4050405
C11	OPEN	4050404

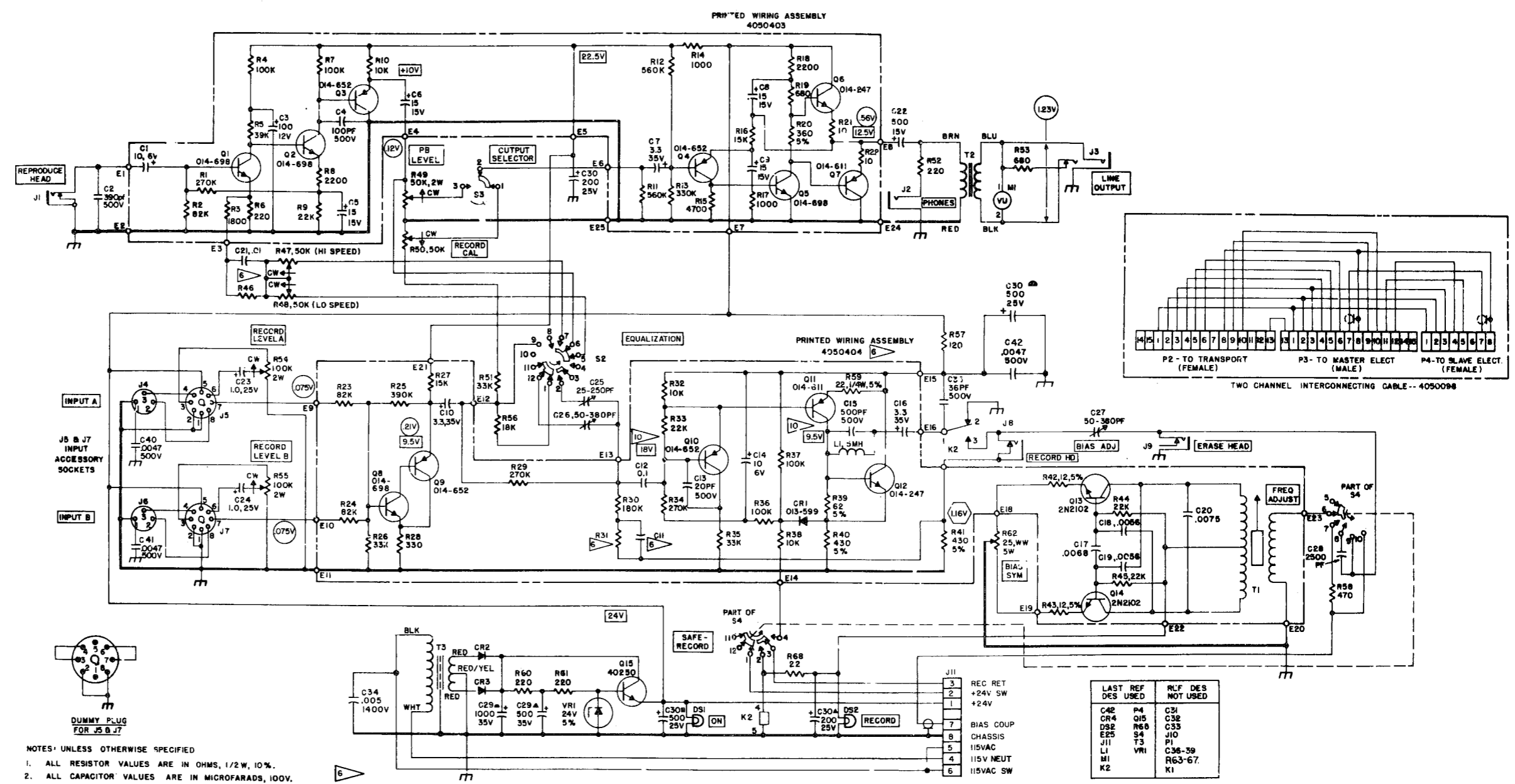
8.  $\otimes\otimes$  INDICATES VOLTS D.C. MEASURED WITH A 20,000Ω / V METER.
  9.  $\otimes$  INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT OPERATING LEVEL OF 1000 HZ.
  10.  $\otimes\otimes$  INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT BIAS FREQUENCY WITH ELECTRONICS IN RECORD MODE.
- II MEASURED WITH ELECTRONICS IN RECORD MODE.

LAST REF DES USED	REF DES NOT USED
B1	L1
C42	M1
CR4	P1
DS2	Q15
E25	R68
F1	S6
J11	T3
K2	VRI

Figure 7-19. Schematic Diagram, Master Electronics (International)

TERCONNECTING  
ent)

Ampex Part No.	4050098-03 144-008 143-823 145-446
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- NOTES: UNLESS OTHERWISE SPECIFIED
- ALL RESISTOR VALUES ARE IN OHMS, 1/2W, 10%.
  - ALL CAPACITOR VALUES ARE IN MICROFARADS, 100V.
  - ALL DIODES ARE TYPE O13-678.
  - ALL SWITCHES ARE IN CCW OR OFF POSITION.
  - FOR FIELD SERVICE ONLY:
    - Q1, Q2, Q5, Q8 MAY BE 2N3565 OR 2N3117.
    - Q3, Q4, Q9, Q10 MAY BE 2N3906.
    - Q7, Q11 MAY BE 2N3638.
    - Q6 & Q12 MAY BE 2N2219.

FOR NAB EQUALIZATION		
REF DES	DESCRIPTION	ASSEMBLY
R31	180K	4050404
R46	360K, 5%	4050251
C11	.01B	4050404

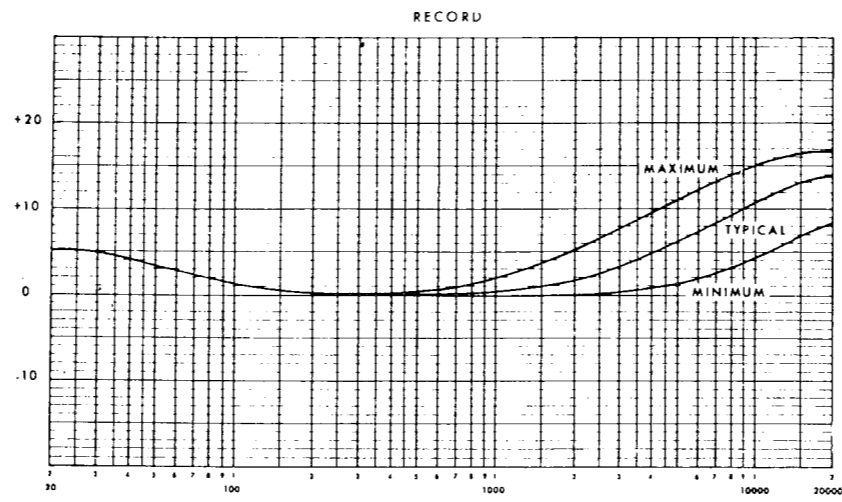
  

FOR CCR EQUALIZATION		
REF DES	DESCRIPTION	ASSEMBLY
R31	0	4050404
R46	2.2 meg	4050251
C11	OPEN	4050404

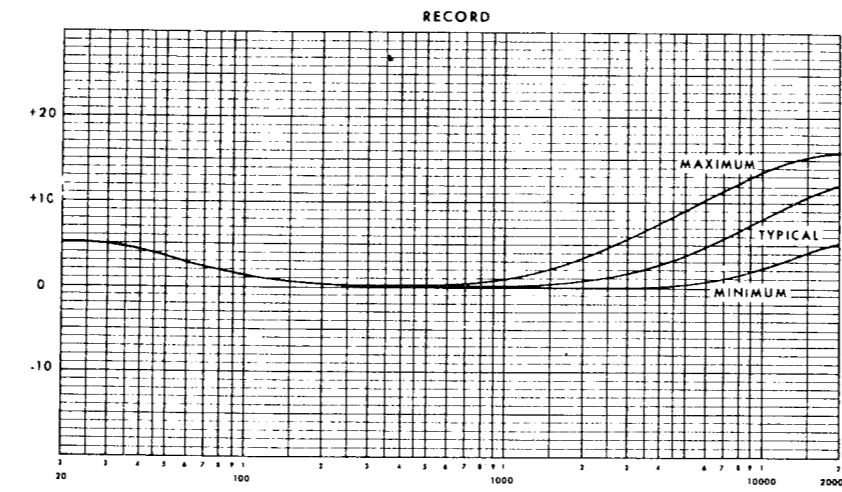
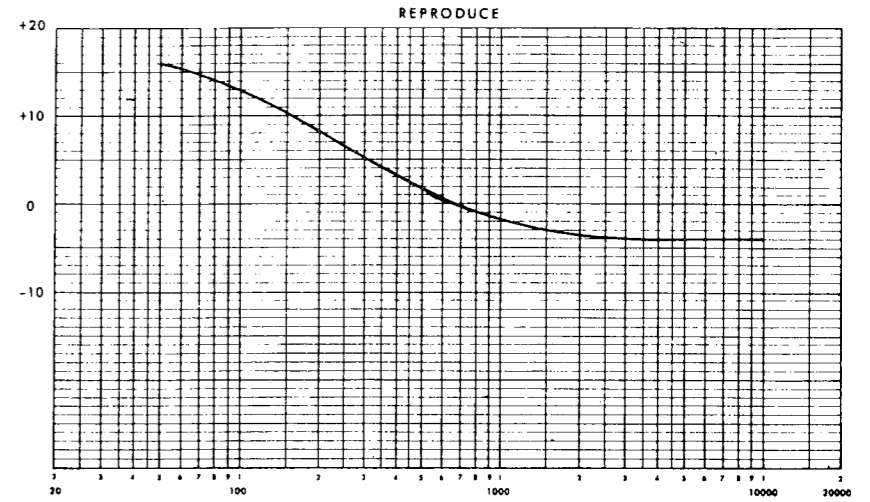
- ⊗⊗ INDICATES VOLTS D.C. MEASURED WITH A 20,000Ω/V METER.
- ⊗⊗ INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT OPERATING LEVEL OF 1 DO HZ.
- ⊗⊗ INDICATES VOLTS R.M.S. MEASURED WITH A HIGH IMPEDANCE VTVM AT BIAS FREQUENCY WITH ELECTRONICS IN RECORD MODE.
- ⊗ MEASURED WITH ELECTRONICS IN RECORD MODE.

LAST DES USED	REF DES	LAST DES USED	REF DES NOT USED
C42	P4	C31	
CR4	Q15	C32	
DS2	R66	C33	
E25	S4	J10	
J11	T3	P1	
L1	VR1	C36-39	
M1		R63-67	
K2		K1	

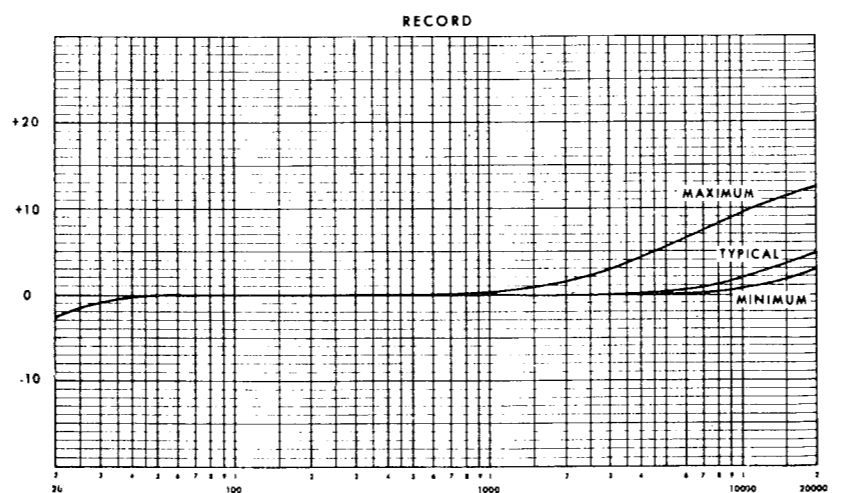
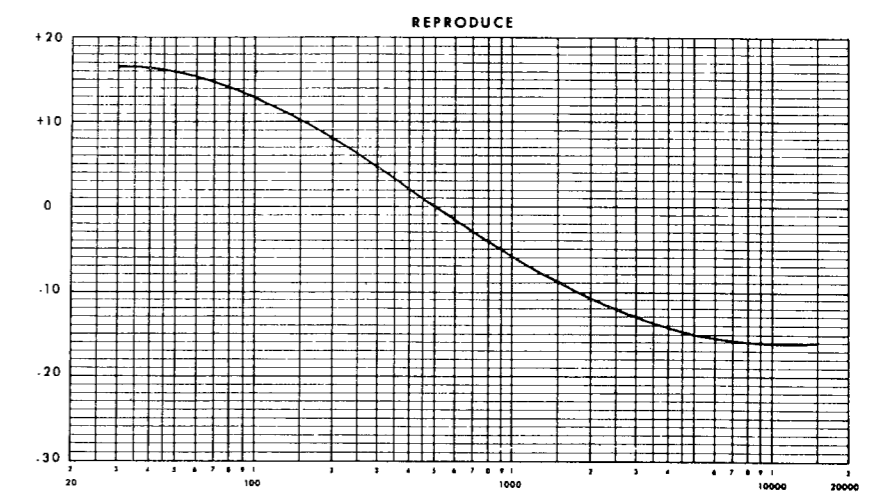
Figure 7-20. Schematic Diagram, Slave Electronics Dwg. No. 4840361



3 1/2 ips (200 usec)



7 1/2 ips NAB



7 1/2 ips CCIR

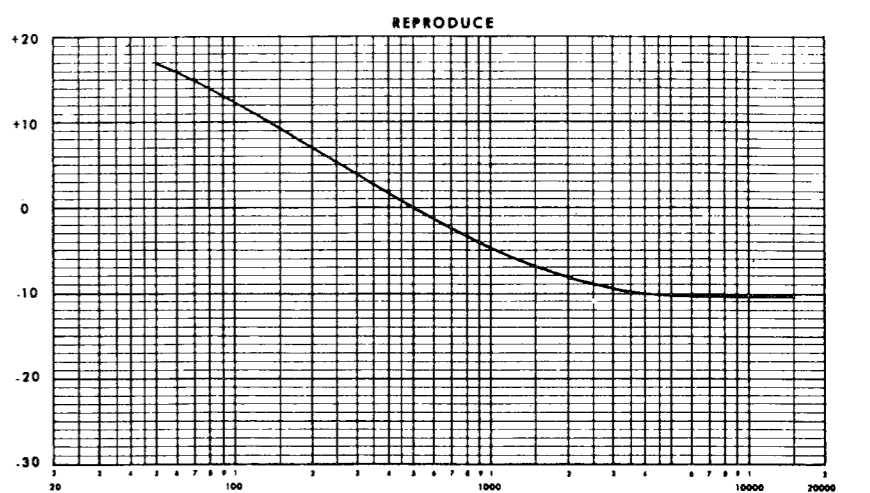


Figure 7-21. Response Curves