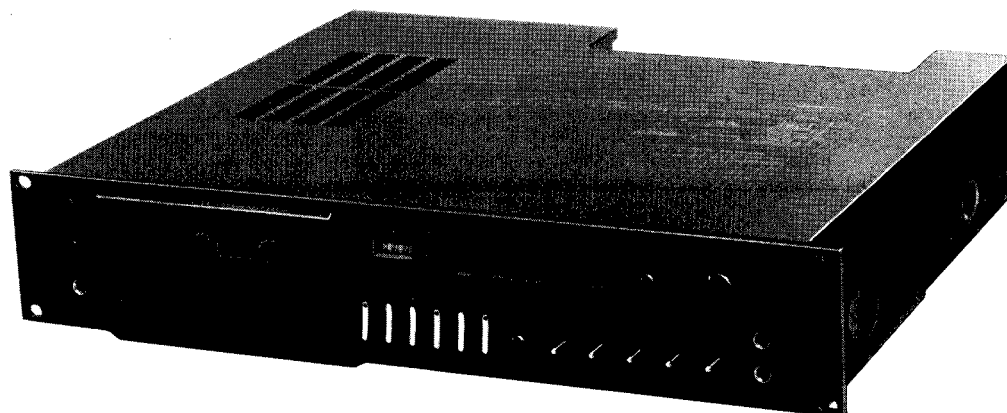


Service Manual

Cassette Deck
RS-M85

Quartz-Locked Direct-Drive Cassette Deck



Professional Series

This is the Service Manual of Model RS-M85 for PX.

RS-M85 MECHANISM SERIES

Specifications (Catalog specifications for sales)

Power requirement:	AC; 110/125/220/240V, 50/60Hz Preset power voltage; 220V for Europe 125V for Asia	Fast forward and rewind time:	Approx. 80 seconds with C-60 cassette tape
Motor:	Power consumption; 35W 2-motor system Capstan; 1-quartz control phase-locked DC brush- less direct-drive motor Reel table; 1-DC coreless motor	Input:	MIC; sensitivity 0.25mV, applicable microphone impedance 400Ω ~ 10 KΩ LINE; sensitivity 60mV, input impedance 68 KΩ DIN; sensitivity 0.25 mV, input impedance 6.4 KΩ
Track system:	4-track 2-channel stereo recording and playback	Output:	LINE; output level 700mV, load impedance 22 KΩ over DIN; output level 700mV, output impedance 1.5 KΩ
Tape speed:	4.8cm/s (1-7/8 ips.)	HEADPHONE;	output level 140mV, load imped- ance 8Ω
Wow and flutter:	0.035% (WRMS), ±0.12% (DIN)	Rec/pb connection:	5 P DIN type
Frequency response:	CrO ₂ /FeCr tape; 20 ~ 18,000Hz 30 ~ 17,000Hz (DIN) 30 ~ 16,000Hz ± 3 dB Normal tape; 20 ~ 16,000Hz 30 ~ 15,000Hz (DIN) 30 ~ 14,000Hz ± 3 dB	Head:	2-head system; 1-SX (Sendust Extra) head for record/playback 1-double-gap ferrite head for erasure
Signal-to-noise ratio:	Dolby* NR in; 69 dB (above 5kHz) Dolby* NR out; 59 dB (signal level = = max. recording level, CrO ₂ type tape)	Bias frequency:	85 kHz
	*"Dolby" and the double-D symbol are trademarks of Dolby Laboratories.	Dimensions:	48.3cm(W) × 9.7cm(H) × 40.3cm(D) [17-3/4" (W) × 3-7/8" (H) × 15-7/8" (D)]
		Weight:	10.5 kg (23 lbs. 1 oz)

Specifications are subject to change without notice.

Technics

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Matsushita Electric Industrial Co., Ltd.
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Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

LOCATION OF CONTROLS AND COMPONENTS

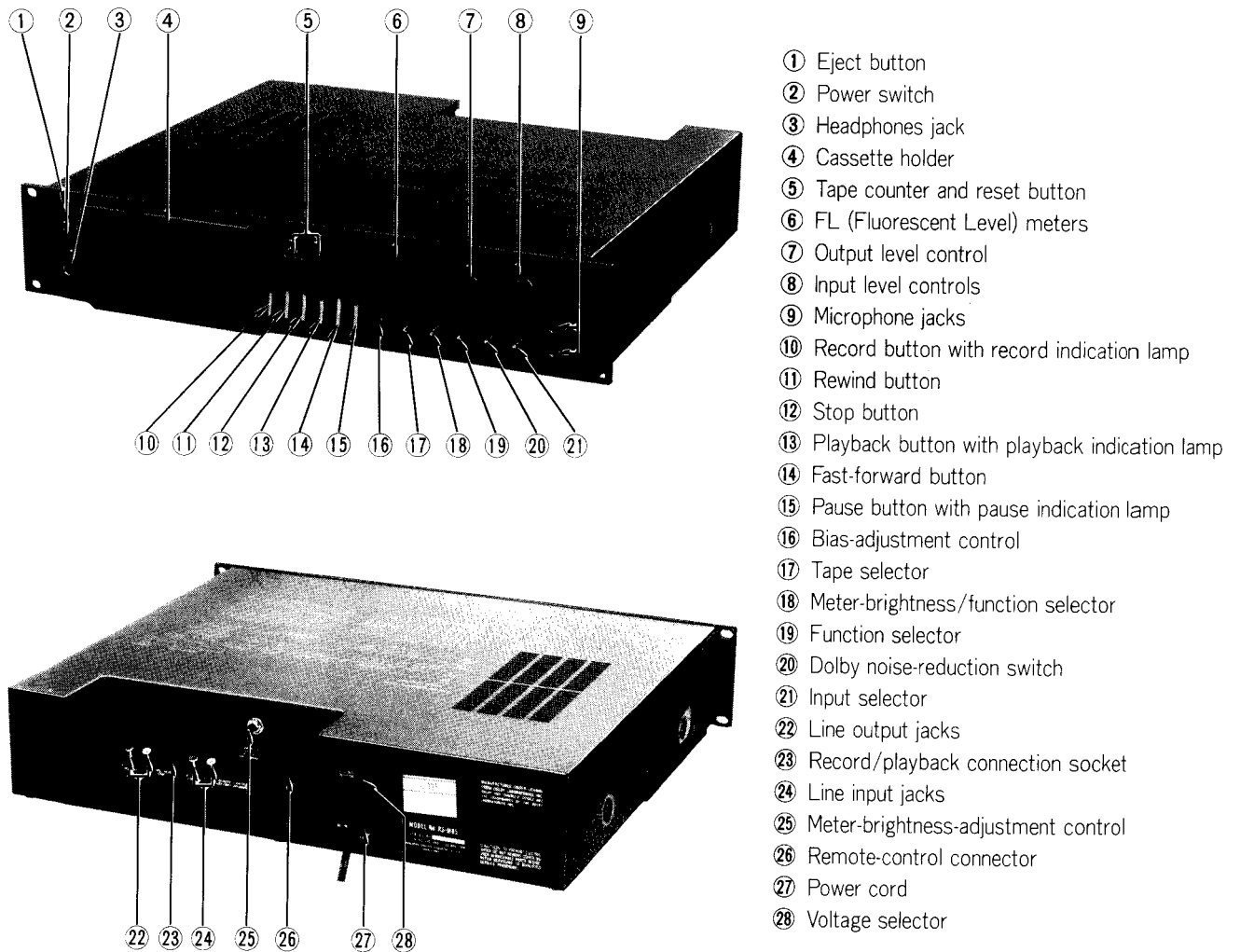


Fig. 1

DISASSEMBLY INSTRUCTIONS

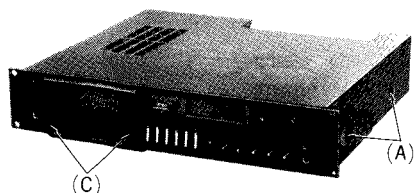


Fig. 2

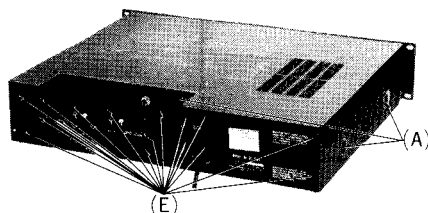


Fig. 3

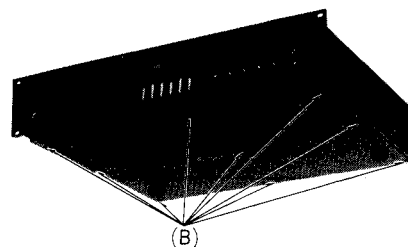


Fig. 4

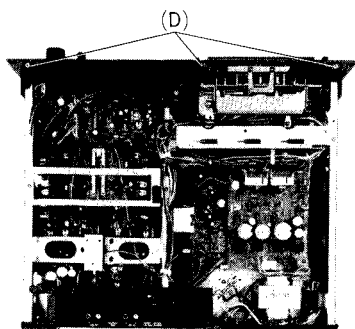


Fig. 5

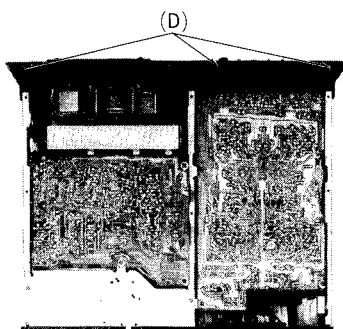


Fig. 6

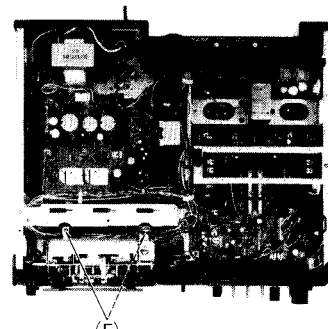


Fig. 7



Fig. 8

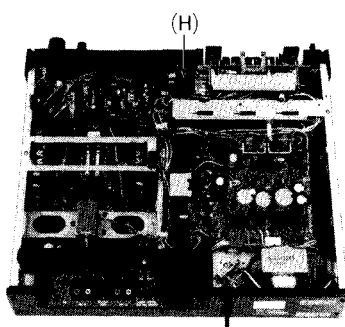


Fig. 9

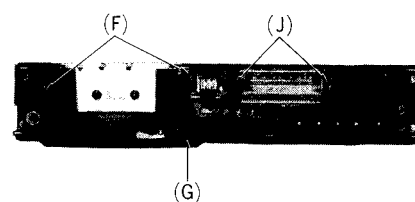


Fig. 10

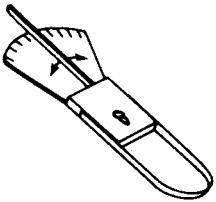
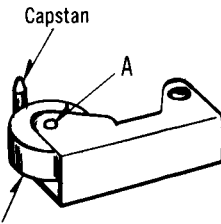
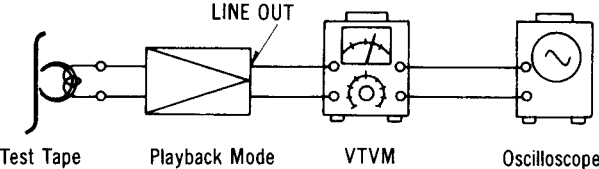
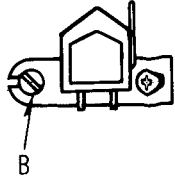
Procedure	To remove —	Remove —	Shown in fig. —
1	Case cover	• 5 black screws(A)	2, 3
2	Bottom cover	• 9 red screws(B)	4
3	Front panel	• 2 cassette lid holding screws...(C), ※ • 6 red screws(D)	2 5, 6
4	Back cover	• 16 black screws(E)	3
5	Mechanism	• 4 red screws(F) • 1 black screw(G) • Tape counter belt(H)	7, 10 10 9
6	FL level meter	• Meter cover(I) • 2 meter holders.....(J)	8 10

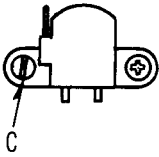
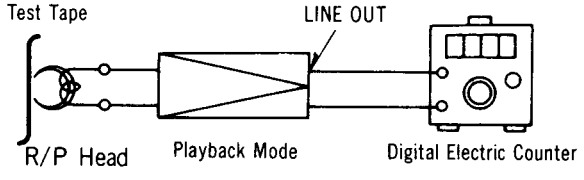
※ The head azimuth can be adjusted by removing the cassette lid.

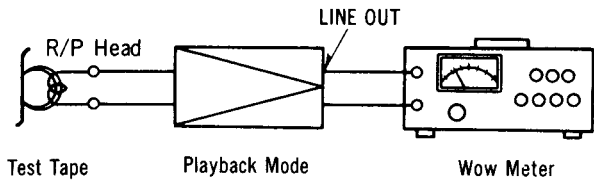
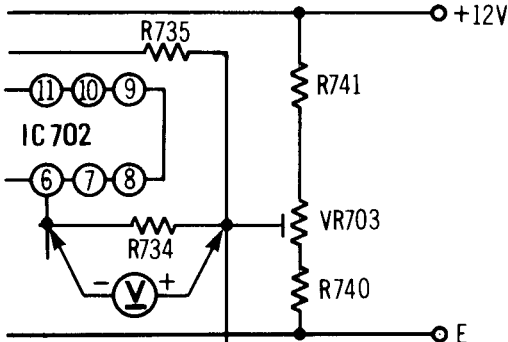
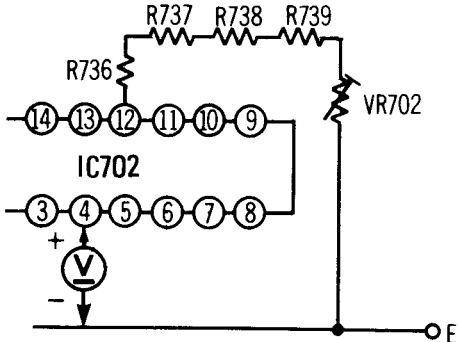
MEASUREMENT AND ADJUSTMENT METHODS

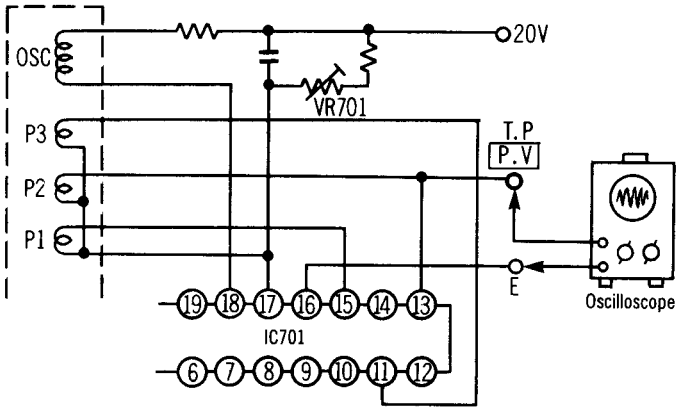
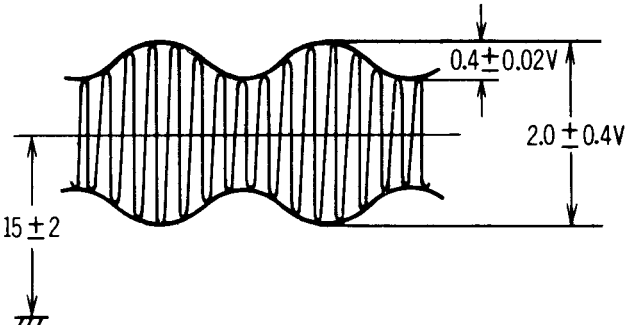
NOTE:

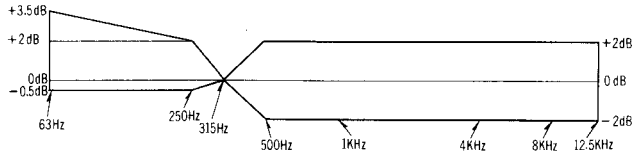
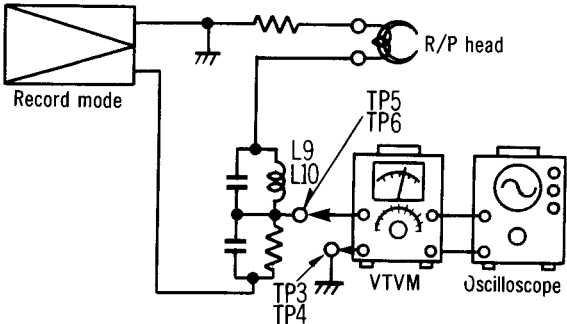
1. Make sure heads are clean.
2. Make sure capstan and pressure roller are clean.
3. Judgeable room temperature: $20 \pm 5^{\circ}\text{C}$ ($68 \pm 9^{\circ}\text{F}$)
4. Meter selector: peak, dim
5. Dolby NR switch: OUT
6. Tape selector: normal
7. Input selector: line in
8. Bias adjustment control: center
9. Output level control: Maximum
10. Input level control: Maximum

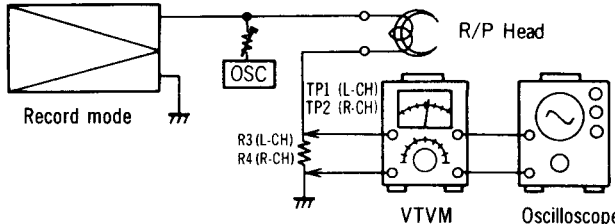
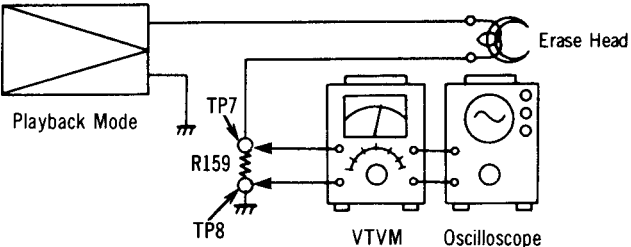
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Power supply adjustment	+20V adjustment - Connect voltmeter to the test point  on the power circuit board and read voltage. Standard value: $+20 \pm 0.5\text{V}$ - If measured value is not in standard, adjust VR401 as shown in fig. 31. +5V adjustment - Connect DC voltmeter to the test point  on the power circuit board and read voltage. Standard value: $+5 \pm 0.4\text{V}$ - If measured value is not in standard, connect the point  on the power circuit board as shown on page 18.	
Pressure of pressure roller Equipment: * Tension gauge (max. 500 gr) 	- Place UNIT into playback mode. - Hook tension gauge to pressure roller shaft top (A), and pull gauge in direction opposite to pressure of pressure roller against capstan (See fig. 11). - Read pressure indicated on gauge immediately when pressure roller moves away from capstan and stops rotating. Standard value: $400 \pm 30\text{ gr}$	* Playback mode  Capstan A Pressure roller Fig. 11
Takeup tension Equipment: * Cassette torque meter (QZZSRKCT)	- Mount cassette torque meter on UNIT. - Place UNIT into playback mode and read takeup torque. - Measure several times and determine the mean value. Standard value: $45 \pm 15\text{ gr-cm}$	* Playback mode
Head azimuth adjustment Equipment: * VTVM * Oscilloscope * Test tape (azimuth) ...QZZCFM * Tape path viewer ...QZZCRD	Record/playback head adjustment Test equipment connection is shown below.  Test Tape Playback Mode LINE OUT VTVM Oscilloscope Fig. 12	* Playback mode R/P head  B Fig. 13

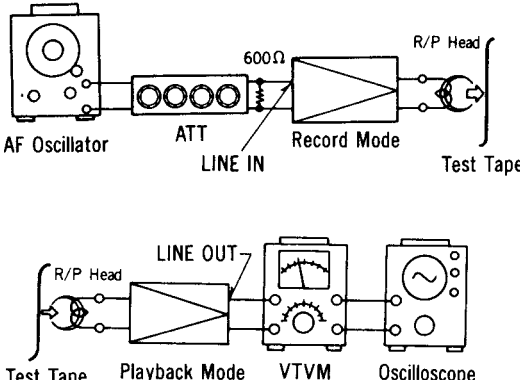
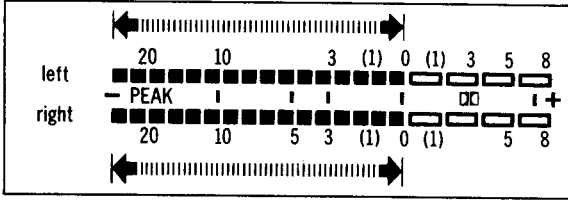
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	2. Play azimuth tape (QZZCFM 8kHz). 3. Adjust record/playback head angle adjustment screw (B) in fig. 13 so that output level at LINE OUT becomes maximum. 4. Measure both channels, and adjust levels for equal output. 5. After adjustment, lock head adjustment screw with lacquer. Erase head adjustment 1. Test equipments connection is the same above but use the tape path viewer (QZZCRD) instead of test tape (QZZCFM). 2. Play this tape. 3. Adjust screw (C) shown in fig. 14 so that the tape may not get curled or malformed by tape guide of the erase head. 4. After adjustment, lock head adjust screw with lacquer.	Erase head  Fig. 14
Tape speed Equipment: * Digital electronic counter * Test tape...QZZCWAT	Tape speed accuracy 1. Test equipment connection is shown below.  Fig. 15 2. Play test tape (QZZCWAT 3,000Hz), and supply playback signal to frequency counter. 3. Measure this frequency. 4. On the basis of 3,000Hz, determine value by following formula: $\text{Tape speed accuracy} = \frac{f - 3,000}{3,000} \times 100 (\%)$ f = measured value 5. Take measurement at middle section of tape. Standard value: $\pm 0.4\%$ Tape speed fluctuation Make measurements in same manner as above (beginning, middle and end of tape), and determine difference between maximum and minimum values and calculate as follows: $\text{Tape speed fluctuation} = \frac{f_1 - f_2}{3,000} \times 100 (\%)$ f₁ = maximum value f₂ = minimum value Standard value: Less than 0.3%	* Playback mode

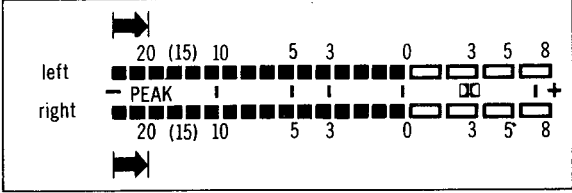
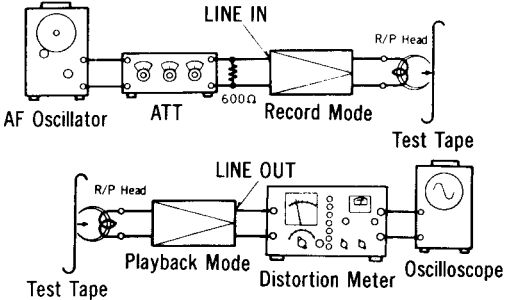
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Wow and flutter Equipment: * Wow meter * Test tape...QZZCWAT	1. Test equipment connection is shown below.  Fig. 16 2. Use wow test tape (3,000Hz) and measure its playback signal on wow meter. 3. Wow and flutter is expressed in percentage and that measurement can be weighted by JIS network (WRMS). 4. Measure at middle section of test tape. Standard value: 0.04% (WRMS)	* Playback mode
Capstan motor circuit adjustment	A. Standard DC power supply voltage adjustment 1. Measure the DC voltage between central point of VR703 and ⑥ terminal of IC702 as shown below.  Fig. 17 Standard voltage: 0V ± 0.05V 2. If measured voltage is not within standard, adjust VR703. B. Phase lock point adjustment 1. Measure the DC voltage between ④ terminal of IC702 and ground as shown below.  Fig. 18	

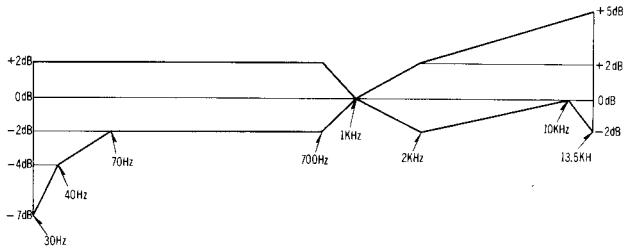
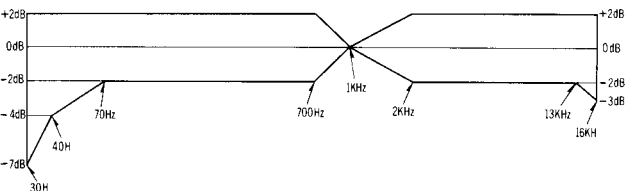
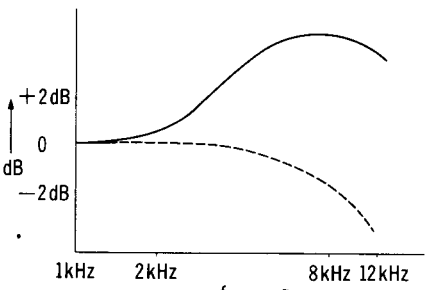
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	Standard voltage: $5.2 \pm 0.1 \text{ V}$ 2. If measured voltage is not within standard, adjust VR702. C. Position detecting signal output level adjustment 1. Connect oscilloscope to test point (T.P. P.V)  Fig. 19 2. Measure the peak-to-peak voltage of position detection signal of test point with the oscilloscope. 3. If the measured signal voltage is markedly different from the voltage shown below, make the necessary adjustment with VR701.  Fig. 20	
Playback frequency response Equipment: • VTVM • Oscilloscope • Test tape...QZZCFM	- Test equipments connection is as same as "Head azimuth adjustment" but use the test tape (QZZCFM) instead of head azimuth tape (See fig. 12). - Place UNIT into playback mode. - Play frequency response test tape (QZZCFM). - Measure output level at 12.5kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz and 63Hz and compare output level with standard frequency 315Hz, at LINE OUT. - Make measurement for both channels. - Make sure that the measured value is within the range specified in the frequency response chart.	• Playback mode • Output level control ...MAX.

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	Playback frequency response chart  Fig. 21 7. If measured value is not in standard, adjust VR1 (L-CH), VR2 (R-CH) (See fig. 31 on page 12).	
Playback gain Equipment : * VTVM * Oscilloscope * Test tape...QZZCFM	1. Test equipment connection is shown in fig. 12. 2. Play standard recording level portion on test tape (QZZCFM 315Hz) and, using VTVM, measure the output level at LINE OUT jack. 3. Make measurement for both channels. Standard value: $0.66 \pm 0.05 V$ Adjustment 1. If measured value is not standard, adjust VR3 (L-CH), VR4 (R-CH) (See fig. 31 on page 12). 2. After adjustment, check "Playback frequency response" again.	* Playback mode * Output level control ... MAX.
Playback S/N ratio Equipment : * VTVM * Oscilloscope * Test tape...QZZCFM * Empty cassette	1. Test equipment connection is shown in fig. 12. 2. Play standard recording level test tape (QZZCFM 315Hz) and read output level on VTVM. Refer to "Playback gain adjustment". 3. Place empty cassette (which has been cut) and play again. 4. Measure noise level at this time using VTVM, and determine ratio of this level to test tape output signal voltage (315Hz). Standard value: Greater than 47dB	* Playback mode * Output level control ... MAX.
Bias leak Equipment : * VTVM * Oscilloscope	1. Test equipment connection is shown below (See AMP circuit board on page 14).  Fig. 22 2. Place UNIT into record mode. 3. Adjust trap coils L9 (L-CH), L10 (R-CH), so that measured value become minimum (See adjustment parts location on page 12). 4. Make adjustment for both channels.	* Record mode * Input level control ... MAX.

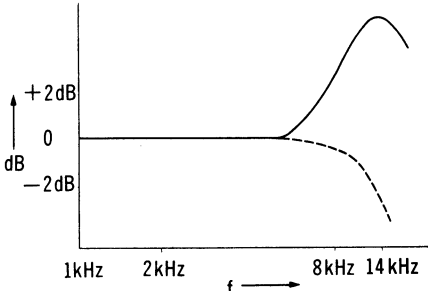
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Bias current Equipment: * VTVM * Oscilloscope	- Test equipment connection is shown below.  Fig. 23 - Place UNIT into record mode, and set the tape selector to normal position. - Read voltage on VTVM and calculate bias current by following formula. $\text{Bias current (A)} = \frac{\text{Value read on VTVM (V)}}{10 (\Omega)}$ Standard value: $0.38 \pm 0.04 \text{ mA}$ - Adjust VR13 (L-CH), and VR14 (R-CH) (See adjustment part location on page 00). - Then changing the tape selector to FeCr position measure the bias current. Standard value: $0.42 \pm 0.04 \text{ mA}$ - If measured value is not in standard, adjust VR15. - Change the tape selector to CrO₂ position, measure the bias current. Standard value: $0.51 \pm 0.5 \text{ mA}$ - If measured value is not in standard, adjust VR16.	* Record mode * Bias adjustment control ...center
Erase current Equipment: * VTVM * Oscilloscope * Resistor (1Ω)	- Test equipment connection is shown below.  Fig. 24 - Place UNIT into record mode and measure voltage at test point 7. - Determine erase current with the following formula. $\text{Erase current (A)} = \frac{\text{Voltage across both ends of R159}}{1 (\Omega)}$ Standard value: $55 \pm 10 \text{ mA}$ (bias selector...low) - If measured value is not within standard, adjust VR12.	* Record mode * Bias adjustment control ...center

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Overall gain * AF oscillator * VTVM * ATT * Oscilloscope * Test tape (reference blank tape) QZZCRA for Normal QZZCRX for CrO₂ QZZCRY for FeCr	1. Test equipment connection is shown in fig. 25.  Fig. 25 2. Place UNIT into record mode. 3. Supply 1 kHz signal (−24 dB) from AF oscillator, through ATT, to LINE IN. 4. Adjust ATT until monitor level at LINE OUT becomes 0.66 V. 5. Using test tape, make recording. 6. Playback recorded tape, and measure the output level at LINE OUT on VTVM. Standard value: 0.66 ± 0.05 V 7. If measured value is not within standard, adjust the following VR. Normal.....VR9 (L-CH), VR10 (R-CH) FeCr.....VR7 (L-CH), VR8 (R-CH) CrO₂VR5 (L-CH), VR6 (R-CH)	* Record/playback mode * Input level control ... MAX. * Standard input level: - MIC.....−72 ± 3 dB - LINE IN ...−24 ± 3 dB - DIN.....−34 ± 3 dB * Bias adjustment control ... center * Output level control ... MAX.
Fluorescent meter Equipment: * VTVM * AF oscillator * ATT	1. Test equipment connection is shown in fig. 25. 2. Set the meter function selector to the "bright" position. 3. Supply 1 kHz signal (−24 dB) to the LINE IN jack, then press the record button. 4. Adjust the ATT so that the output level at LINE OUT jack becomes 0.66 V. (=standard input level). 5. Adjustment at "0 dB".  A. Adjust VR303 (L-CH) and VR304 (R-CH) so that the Fluorescent meters show an illuminated indication up to "0 dB" when the input signal level is 0.9 dB higher than the standard input level. B. Then confirm that the Fluorescent meters show an illuminated indication up to "+1 dB" when the input signal level is 1.0 dB higher than the standard input level.	* Record mode * Input level control ... MAX. * Output level control ... MAX. * Tape selectors ... normal position

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	6. Adjustment at "−20 dB"  A. Adjust VR301 (L-CH) and VR302 (R-CH) so that the Fluorescent meters show an illuminated indication up to "−20 dB" when the input signal level is 15.1 dB lower than the standard input level. B. Then confirm that the Fluorescent meters show an illuminated indication up to "−15 dB" when the input signal level is 15.0 dB lower than the standard input level. 7. Repeat twice between step 3 and 6 above.	
Overall distortion Equipment: * Distortion meter * AF oscillator * ATT * Oscilloscope * Test tape... QZZCRA (reference blank tape)	1. Test equipment connection is shown in fig. 26. 2. Supply 1 kHz signal to LINE IN and adjust ATT so that output level at LINE OUT indicates 0.66 V (−4 dB). 3. Make recording. 4. Play back, and measure distortion factor of output signal. 5. When the distortion factor does not satisfy the standard, check the bias current. When the bias current is lower than standard, distortion will increase. Care should be exercised in the adjustment because the bias current also has an influence on the overall frequency response. Refer to "The overall frequency response" and "The bias current adjustment".  Fig. 26 Standard value: Less than 4%	* Input level control ... MAX. * Output level control ... MAX. * Bias adjustment control ... center
Overall frequency response Equipment: * VTVM * AF oscillator * ATT * Test tape (reference blank tape) ...QZZCRA for Normal ...QZZCRX for CrO₂ ...QZZCRY for FeCr	Note: Before measuring and adjusting, make sure of the playback frequency response (For the method of measurement, please refer to the playback frequency response). 1. Test equipment connection is shown in fig. 25. 2. Load reference blank test tape and place UNIT into record mode. 3. Supply 1 kHz signal from AF oscillator through ATT to LINE IN. 4. Adjust ATT so that input level is −20 dB below standard recording level (standard recording level=0 VU). 5. At this time, LINE OUT level indicates 0.066 V. 6. Record each frequency 30Hz, 40Hz, 70Hz, 700Hz, 1kHz, 2kHz, 7kHz, 10kHz and 13.5kHz (16kHz for CrO₂ and FeCr) at the same level. 7. Play back and express in dB the difference between playback output level of each frequency based on playback output level of 1 kHz. 8. Make sure that the measured value is within the range specified in the overall frequency response chart.	* Record/playback mode * Input level control ... MAX. * Output level control ... MAX. * Bias adjustment control ... center

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Adjustment-1	Overall frequency response chart 	
	Fig. 27 Overall frequency response chart (CrO₂, FeCr) 	
	Fig. 28 Adjustment 1-Using bias current 	
	Fig. 29 - When the frequency response between the middle-and high-frequency range becomes higher than the standard value, as shown by the solid line in fig. 25 increase the bias current by turning the following VR. Normal.....VR13 (L-CH), VR14 (L-CH) FeCr.....VR15 CrO₂.....VR16 - When it becomes lower, as shown by dotted line, reduce the bias current by turning in the direction opposite to arrow indication. Note: - For adjustment when the bias current is lower than the standard value use the procedure indicated in adjustment 2, because reducing the bias current beyond this point may worsen the distortion factor. - For the method of bias current measurement, refer to "Bias current adjustment" on page 8.	

ADJUSTMENT PARTS LOCATION

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Adjustment-2	Adjustment 2-Using the peaking coil for recording equalization  Fig. 30 When the frequency response is flat in the middle-frequency range and makes a sharp rise or drop in the highfrequency range, as shown in fig. 30, adjust by turning the following peaking coils. Normal.....L3 (L-CH), L4 (R-CH) FeCr.....L5 (L-CH), L6 (R-CH) CrO₂.....L7 (L-CH), L8 (R-CH)	
Dolby NR circuit Equipment: * VTVM * AF oscillator * ATT * Oscilloscope	- Place UNIT into record mode, set the Dolby NR switch to OUT position and supply to LINE IN to obtain -34.5 dB at TP9 (L-CH), TP10 (R-CH) (frequency 5 kHz). - Confirm that the value at IN position is 8 dB greater than the value at OUT position of Dolby NR switch. - When it is not in condition above, adjust as follows. - Set VR201 to maximum. - Set the Dolby NR switch to IN position. - At this time adjust VR202 so that the reading of VTVM become 10 dB greater than the value in step (1) above. - Adjusting VR201 make the reading of VTVM become 2 dB smaller than the value obtained through the adjustment in step (6) above.	* Record mode * Input level control ... MAX.
Overall S/N ratio Equipment: * VTVM * AF oscillator * ATT * Oscilloscope * Test tape...QZZCRA (reference blank tape)	- Test equipments connection is shown in fig.25. - Supply 1 kHz signal to LINE IN and adjust ATT so that output level at LINE OUT indicates 0.66 V. - Make recording. - Make another recording without supplying signal (disconnect input plug to LINE IN). - Rewind to recorded part and playback. - Measure output signal level and no signal level (noise), and determine the ratio in decibels (dB). - The value is difference between "playback S/N and overall S/N", but for decibel calculation refer to "Playback S/N measurement" on page 9. Standard value: Greater than 45 dB (without NAB filter)	* Record/playback mode * Input level control ... MAX. * Erase the tape with a bulk tape eraser. * Output level control ... MAX. * Bias adjustment control ... center

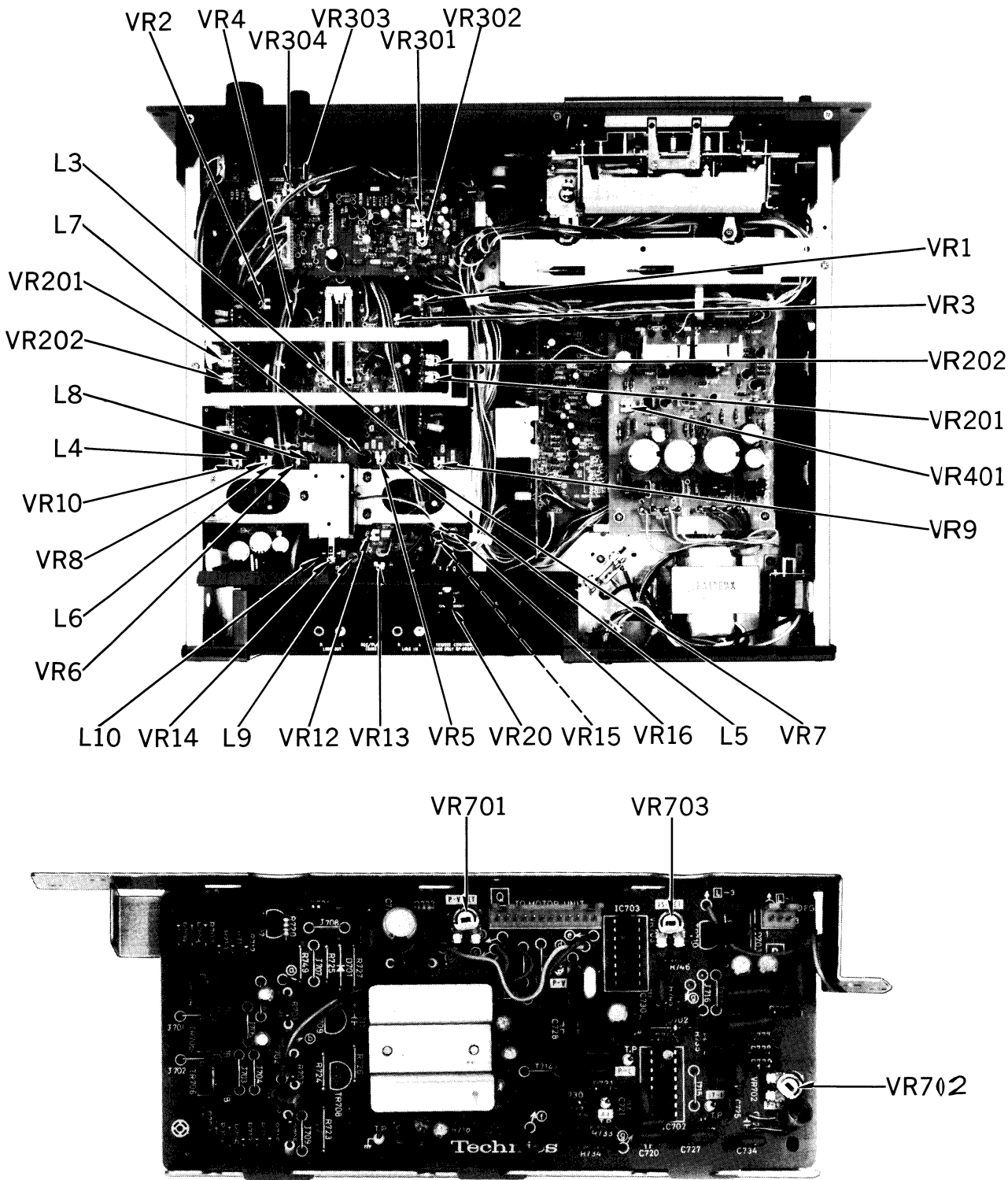


Fig. 31

Main Amp Section



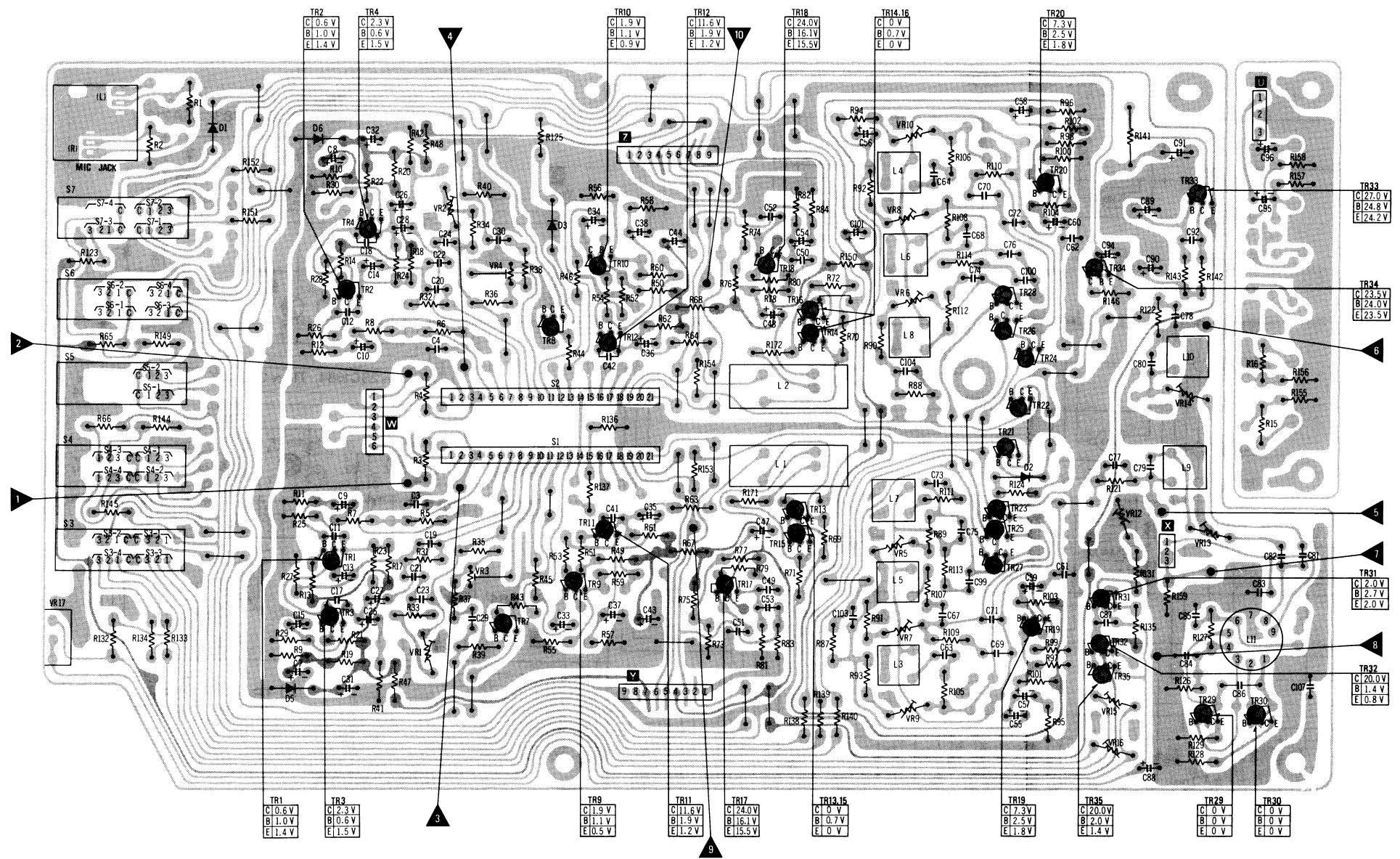
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|-----|----------------------------|---|
| 1. | S1-1~S1-7, S2-1~S2-7 | Record/playback select switch (shown in playback position). |
| 2. | S3-1~S3-4 | Tape select switch (shown in "normal" position). |
| 3. | S4-1~S4-4 | Meter select switch (shown in "peak/bright" position). |
| 4. | S5-1, S5-2 | Function switch (shown in "memory rew" position). |
| 5. | S6-1~S6-4 | Dolby NR select switch (shown in "out" position). |
| 6. | S7-1~S7-4 | Input select switch (shown in "mic" position). |
| 7. | VR1, 2 | Playback equalizer adjustment VR. |
| 8. | VR3, 4 | Playback level adjustment VR. |
| 9. | VR5, 6 | Standard recording level adjustment VR (for CrO2 tape). |
| 10. | VR7, 8 | Standard recording level adjustment VR (for FeCr tape). |

- | | |
|----------------|---|
| 11. VR9, 10 | Standard recording level adjustment VR (for normal tape). |
| 12. VR11 | Erase current adjustment VR. |
| 13. VR13, 14 | Bias current adjustment VR (for normal tape). |
| 14. VR15 | Bias current adjustment VR (for FeCr tape). |
| 15. VR16 | Bias current adjustment VR (for CrO ₂ tape). |
| 16. VR17 | Bias current adjustment control. |
| 17. VR18, 19 | Input level control. |
| 18. VR20 | Meter brightness adjustment control. |
| 19. VR201, 202 | Dolby NR adjustment VR. |
| 20. VR301, 302 | Fluorescent level meter adjustment VR (for -20dB indication). |

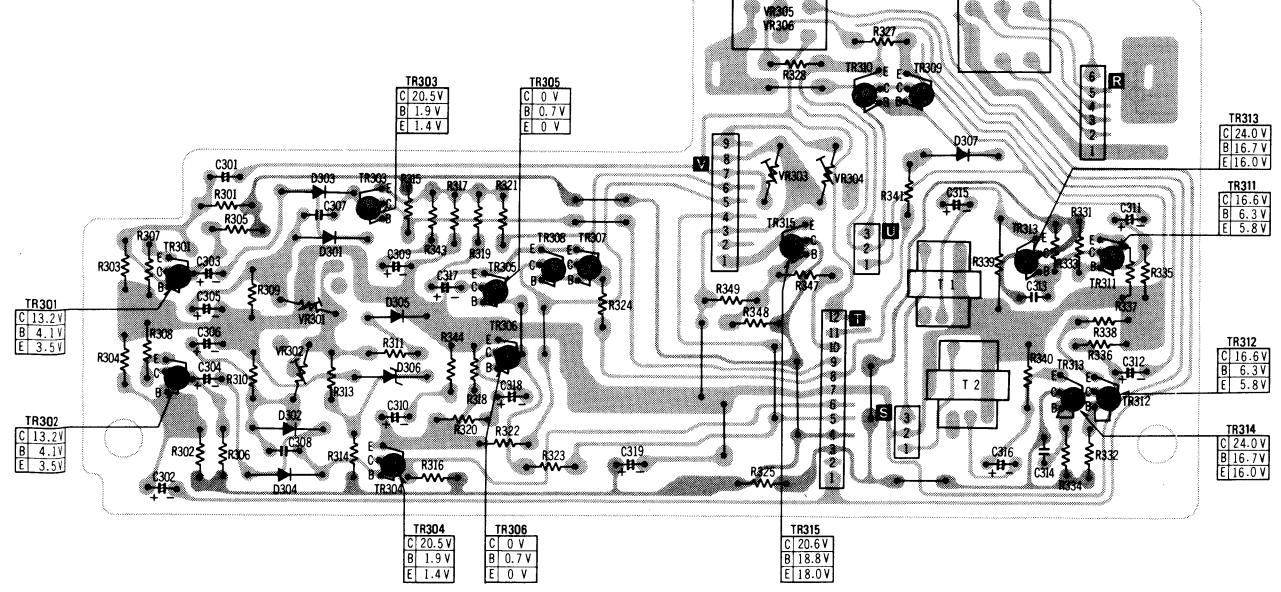
21. VR303, 304..... Fluorescent level meter adjustment VR (for 0dB indication).
22. VR305, 306..... Output level control.
23. Resistor values are in ohms (Ω), 1/4 watt unless specified otherwise.
K = 1,000 Ω .
24. Capacitor values are in microfarads (μF) unless specified otherwise.
P = Pico-farads.
25. All voltage values shown in circuitry under no signal condition with volume control at minimum position.
For measurement, use VTVM.

CIRCUIT BOARD

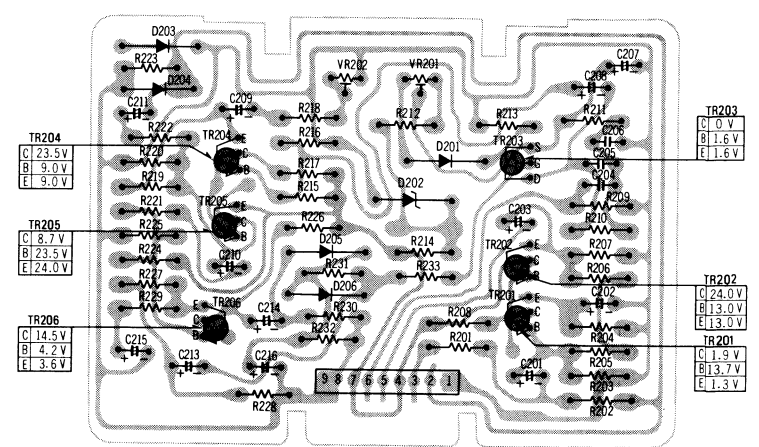
Main Amp



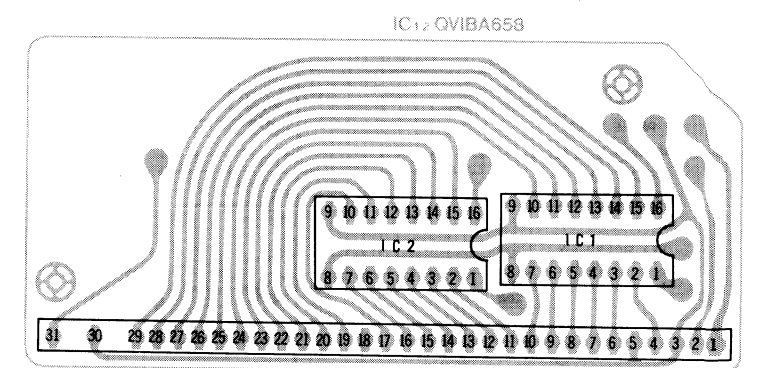
Output



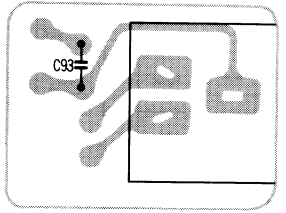
Dolby



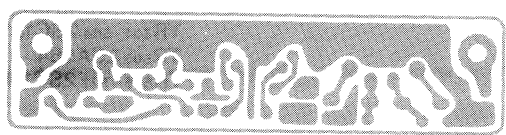
FL Meter



Headphones Jack



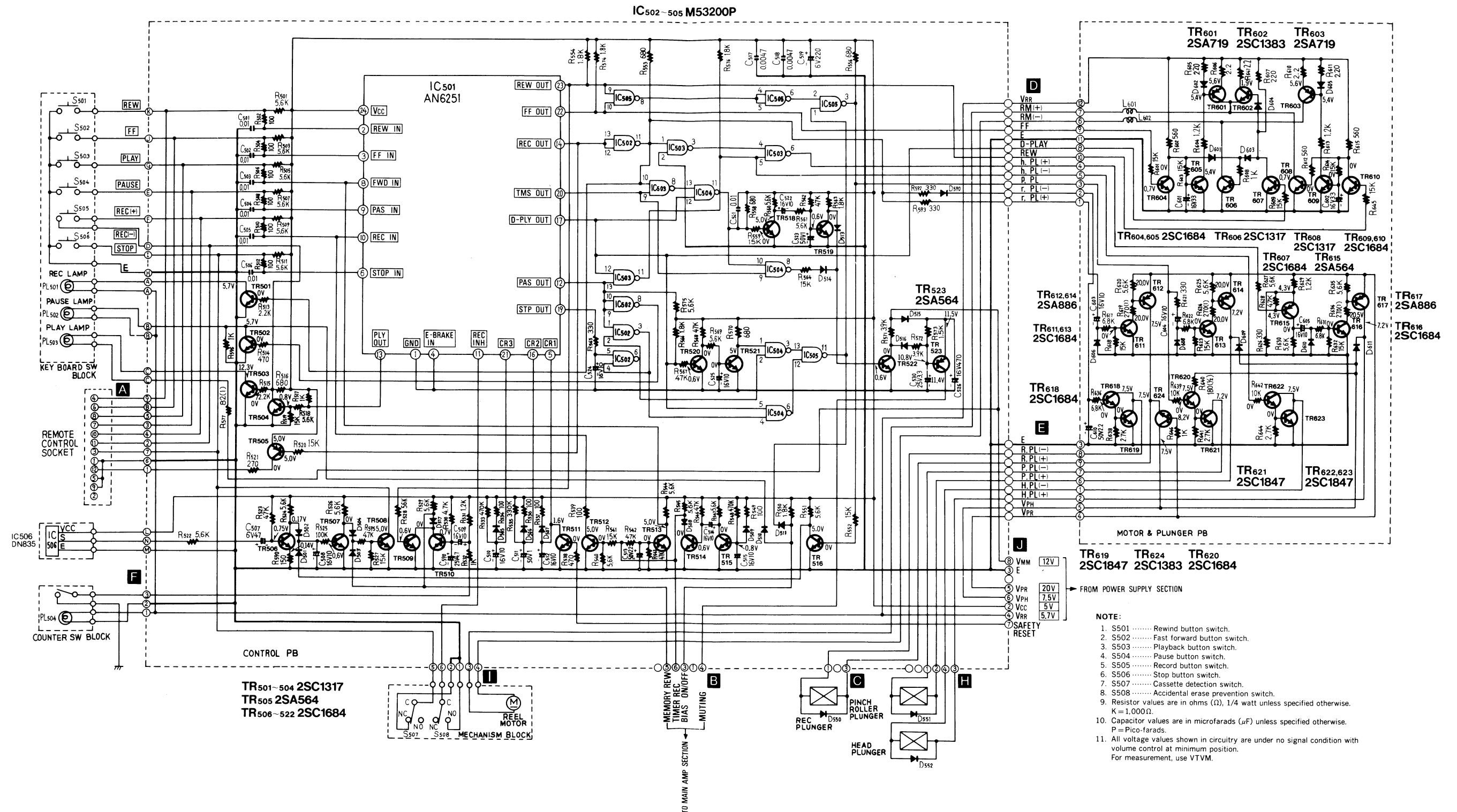
Jack



NOTE:
The circuit shown in red on the conductor is B circuit.
Values indicated in [] are DC voltage between the chassis and electrical parts.

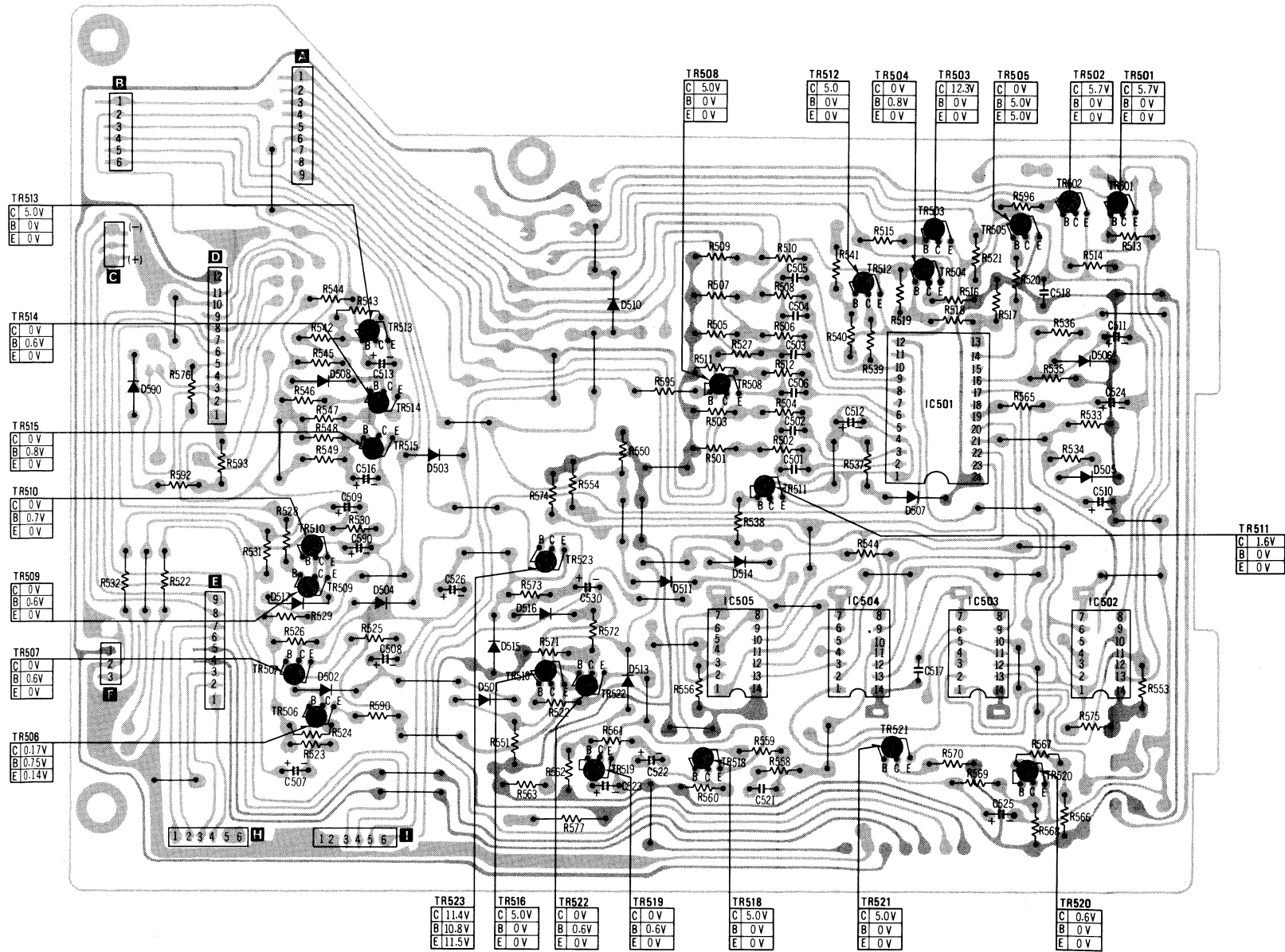
SCHEMATIC DIAGRAM MODEL RS-M85

Main Control Section

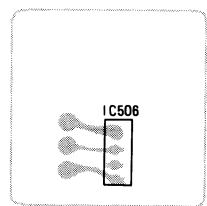


CIRCUIT BOARD

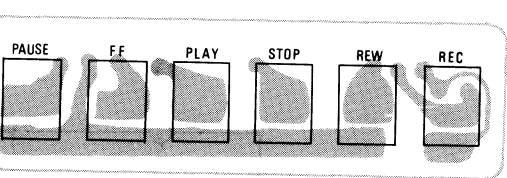
Main Control



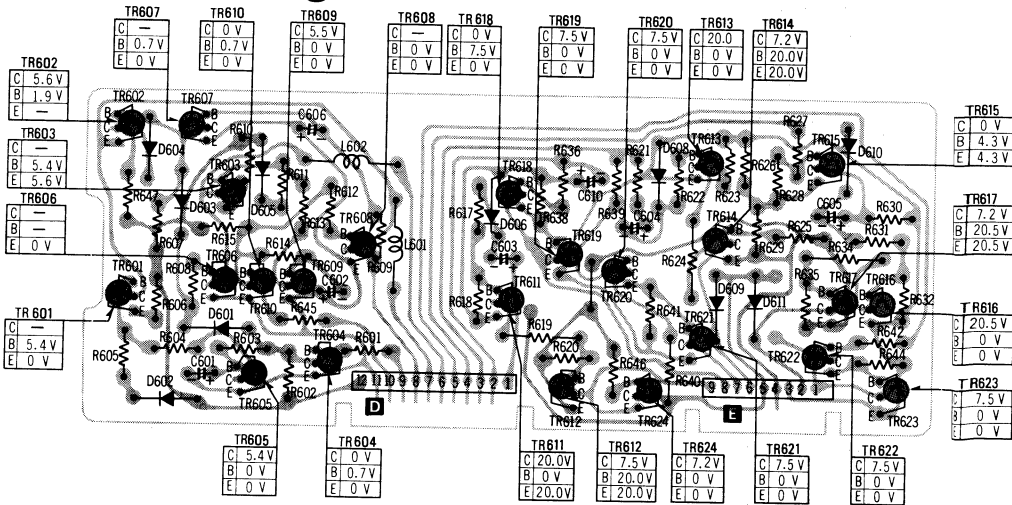
Hole IC



Control Key Switch



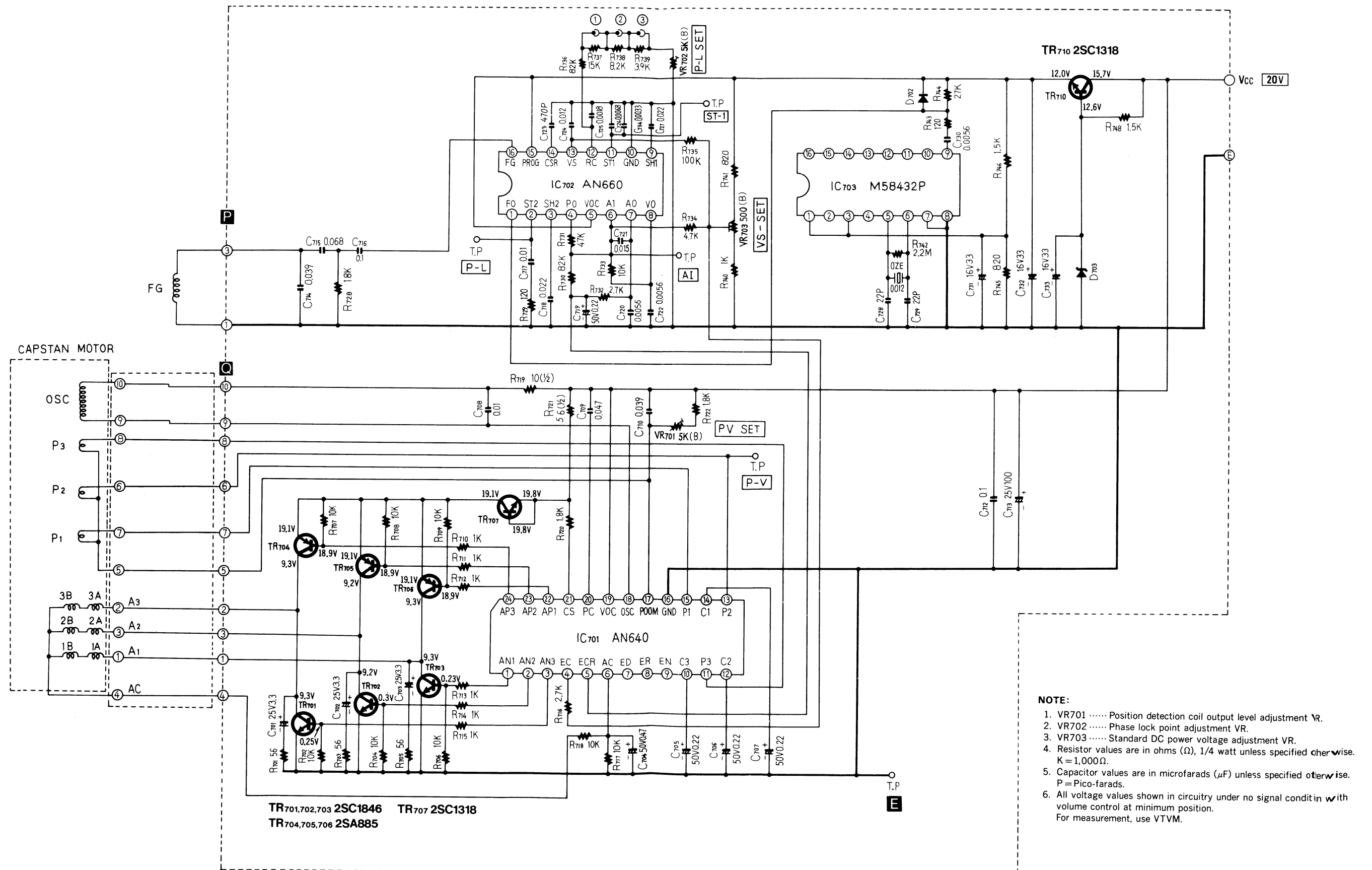
Plunger Driving



NOTE:
The circuit shown in red on the conductor is B circuit.
Values indicated in are DC voltage between the chassis and electrical parts.

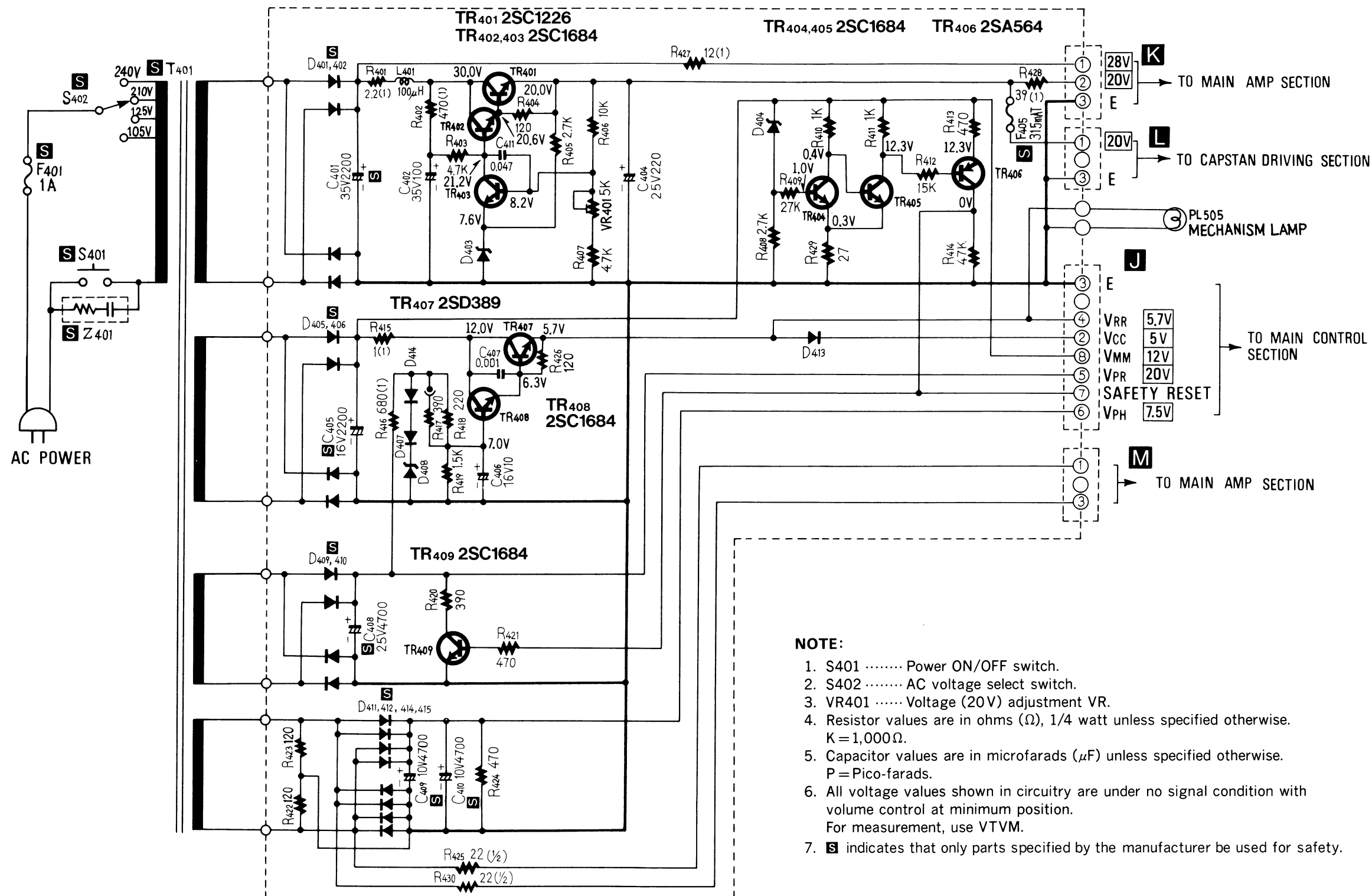
SCHEMATIC DIAGRAM MODEL RS-M85

Capstan Driving Section



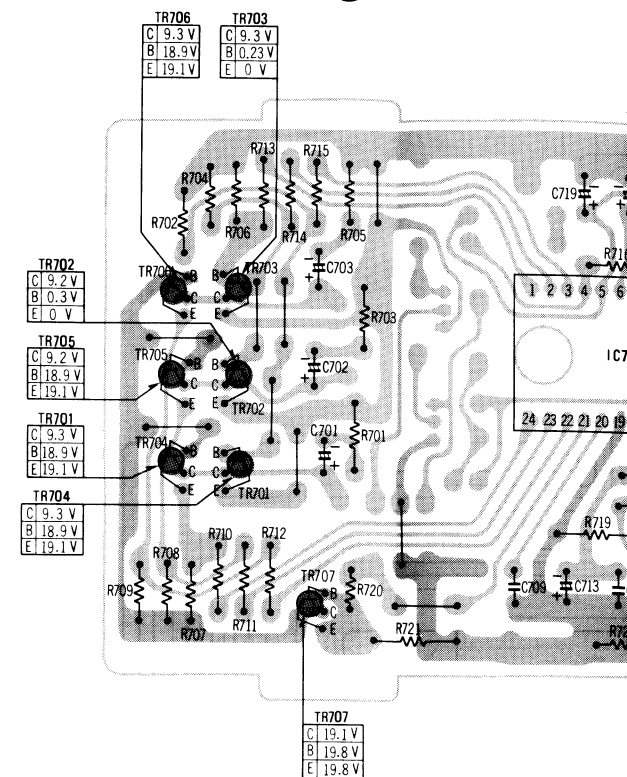
SCHEMATIC DIAGRAM MODEL RS-M85

Power Supply Section

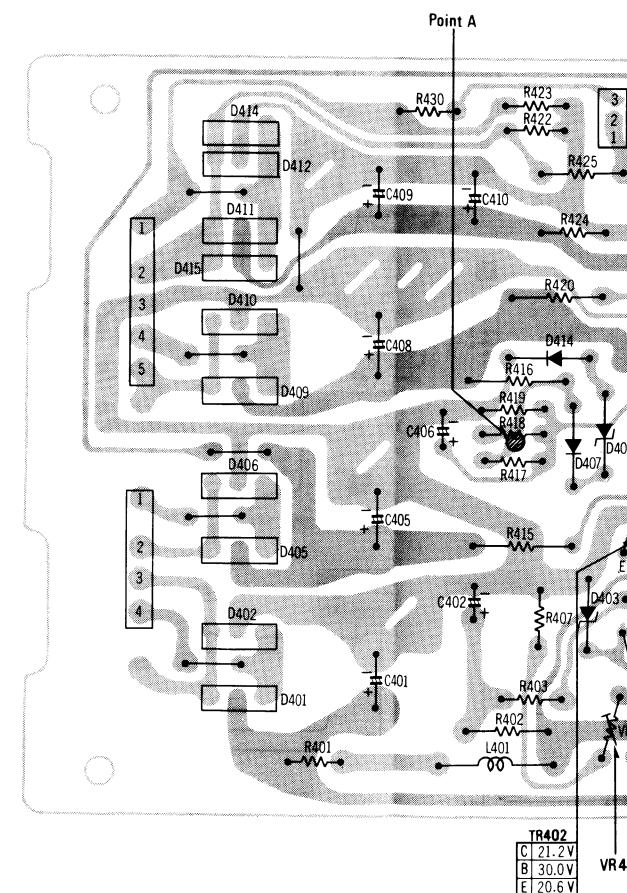


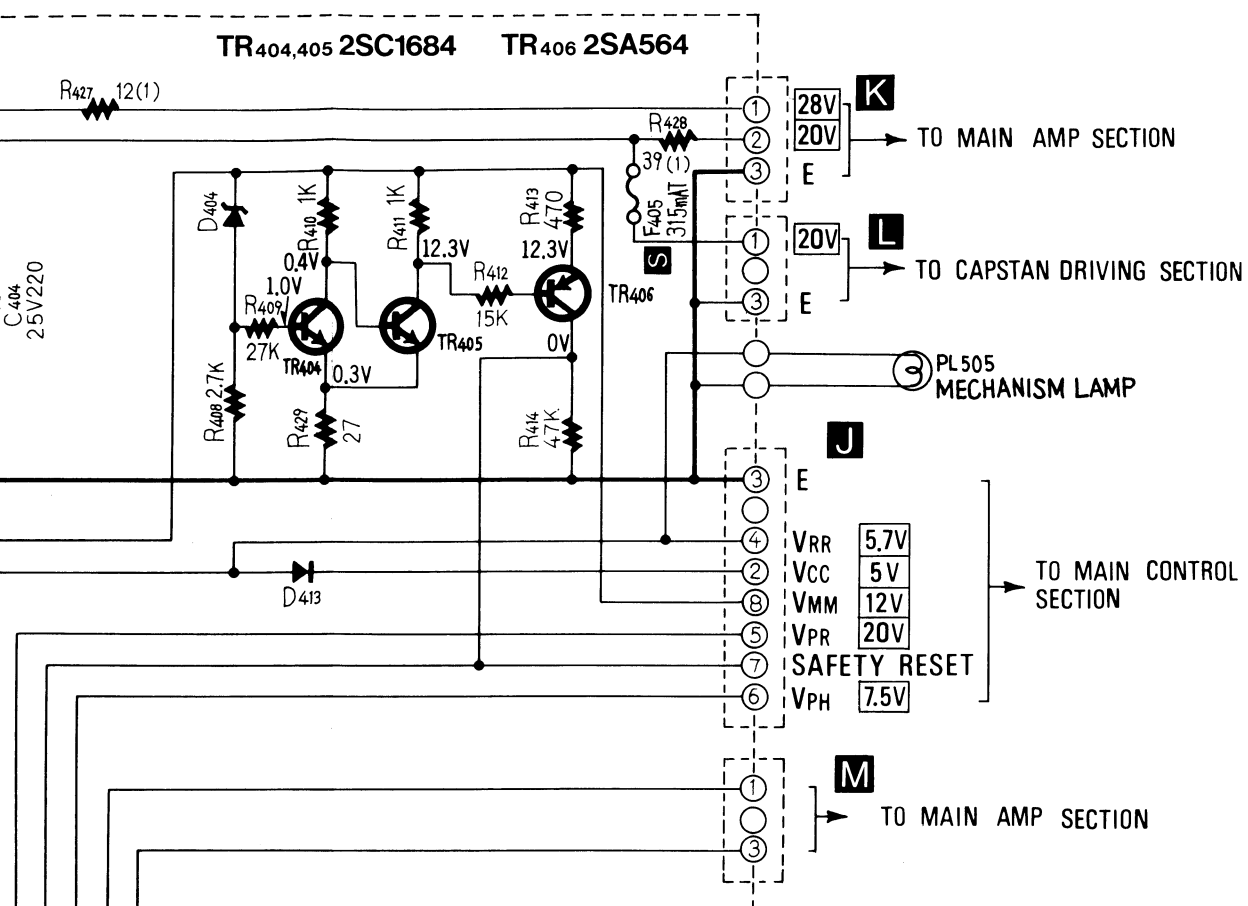
CIRCUIT BOARD

Capstan Driving

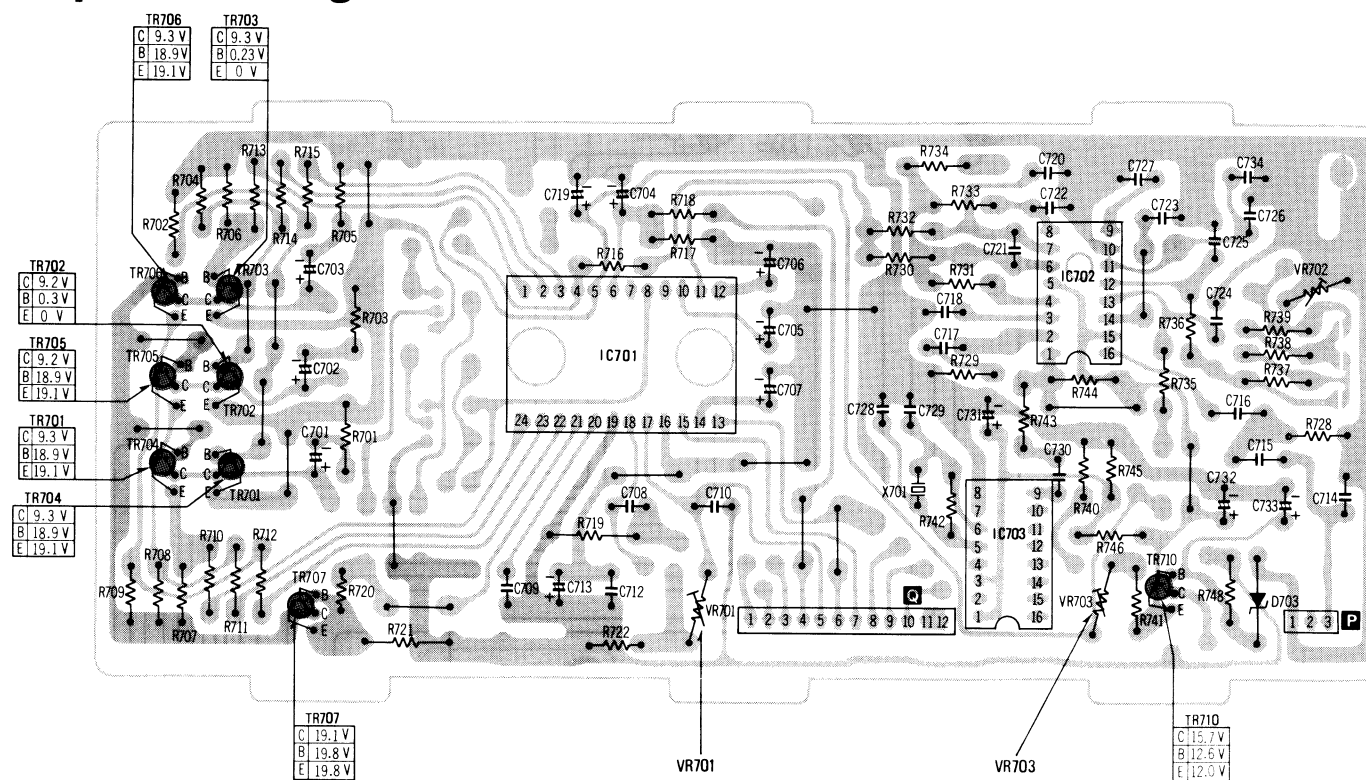
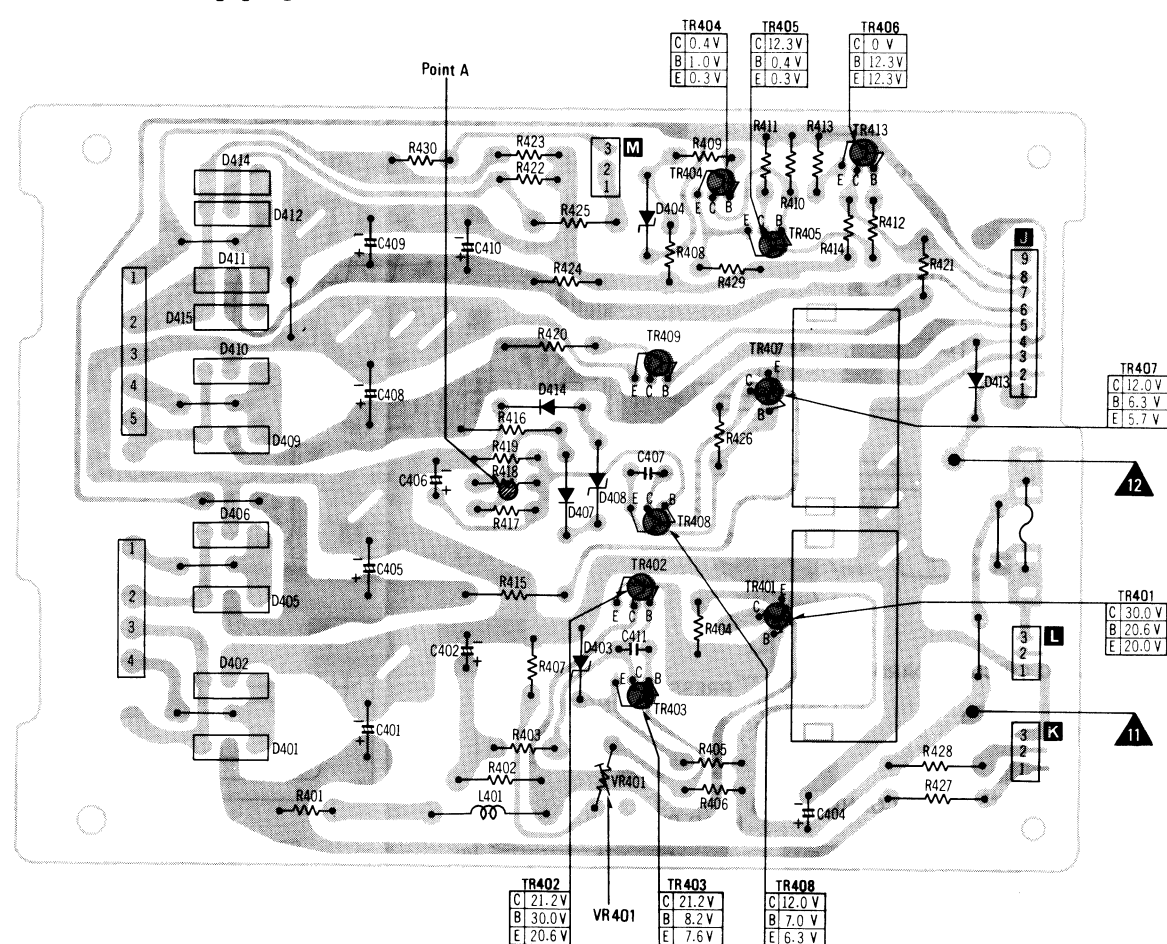


Power Supply



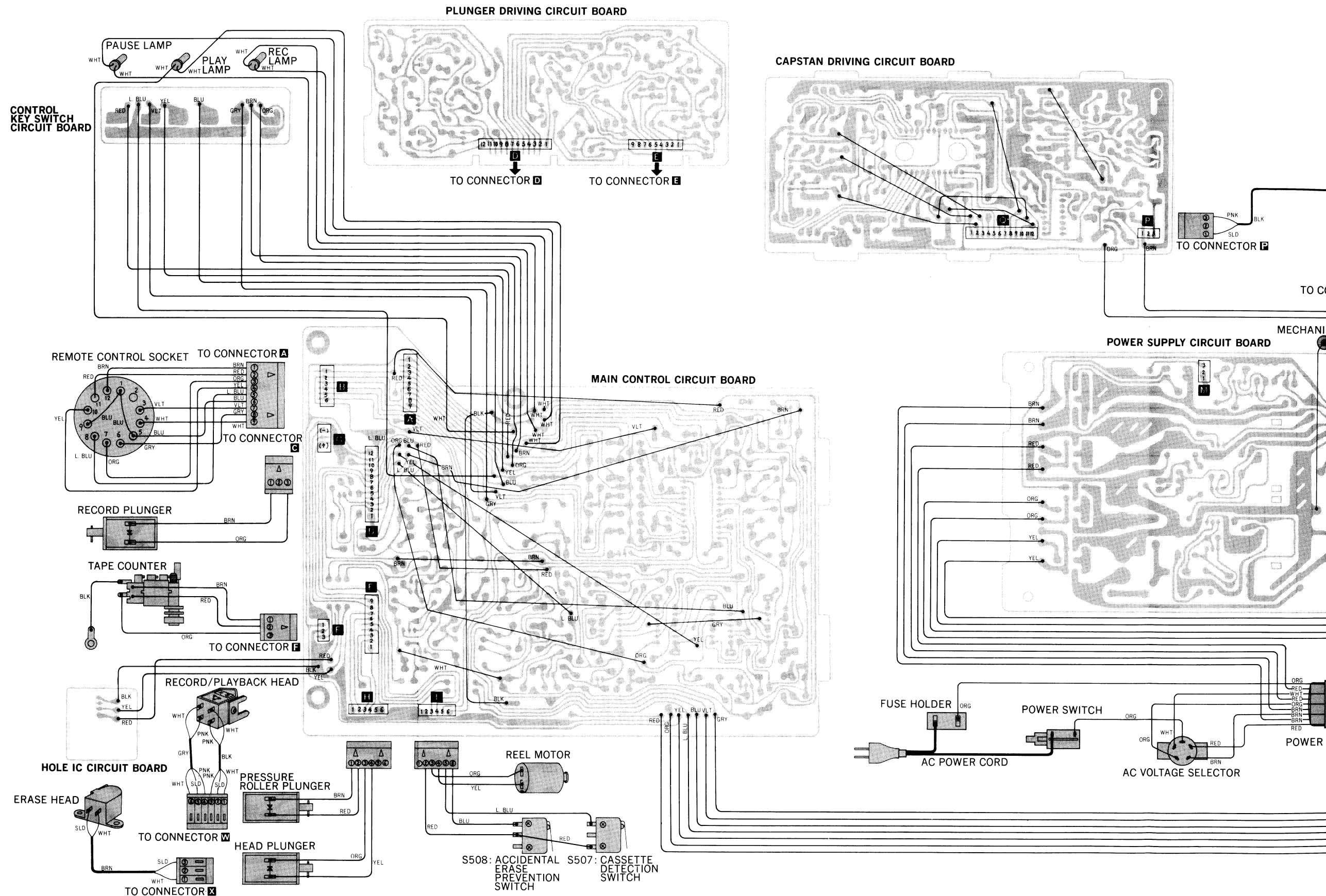
**NOTE:**

1. S401 Power ON/OFF switch.
2. S402 AC voltage select switch.
3. VR401 Voltage (20V) adjustment VR.
4. Resistor values are in ohms (Ω), 1/4 watt unless specified otherwise.
K = 1,000 Ω .
5. Capacitor values are in microfarads (μ F) unless specified otherwise.
P = Pico-farads.
6. All voltage values shown in circuitry are under no signal condition with volume control at minimum position.
For measurement, use VTVM.
7. **S** indicates that only parts specified by the manufacturer be used for safety.

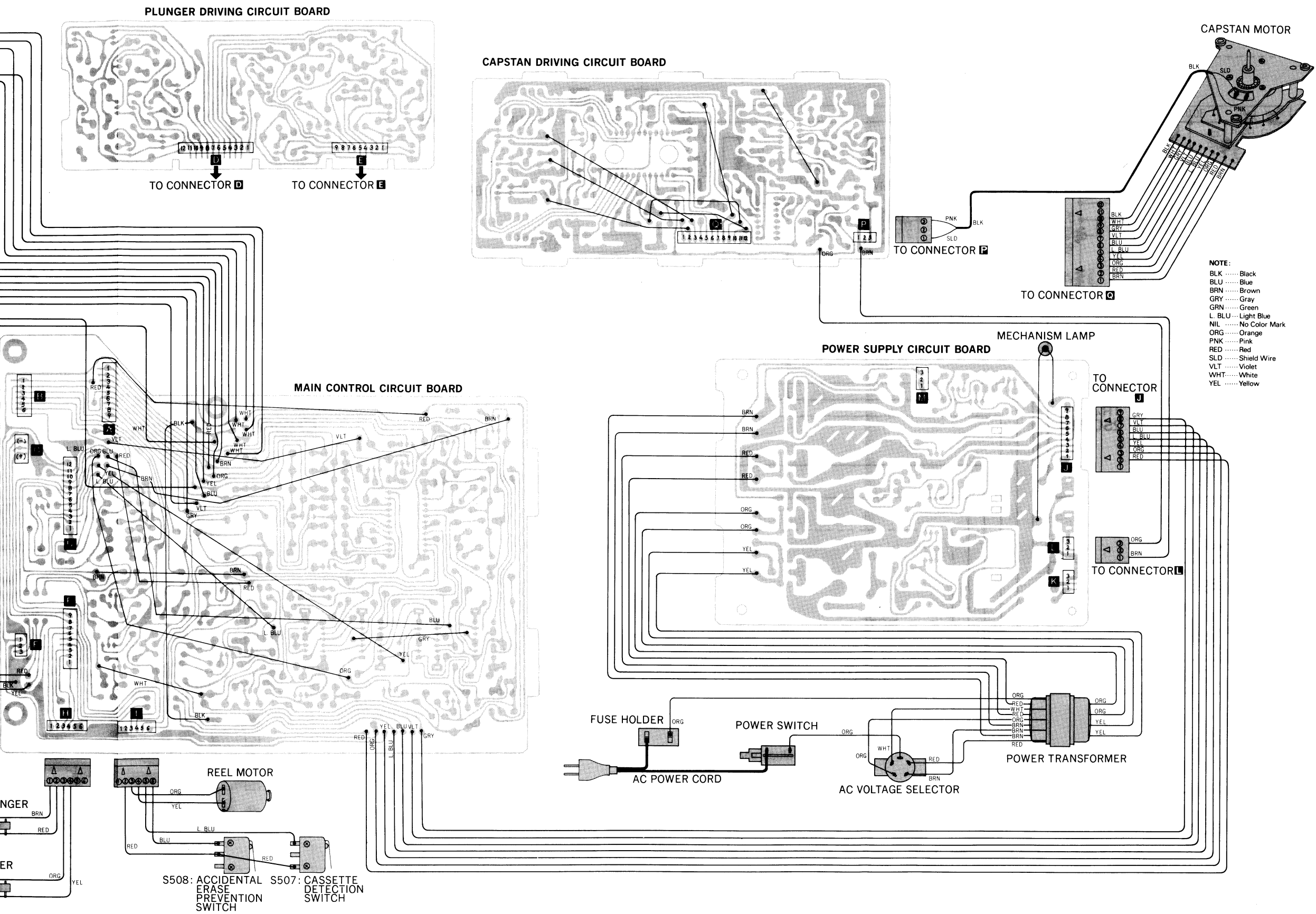
CIRCUIT BOARD**Capstan Driving****Power Supply****NOTE:**

The circuit shown in red on the conductor is B circuit.
Values indicated in are DC voltage between the chassis and electrical parts.

Controls Section



ON DIAGRAM MODEL RS-M85

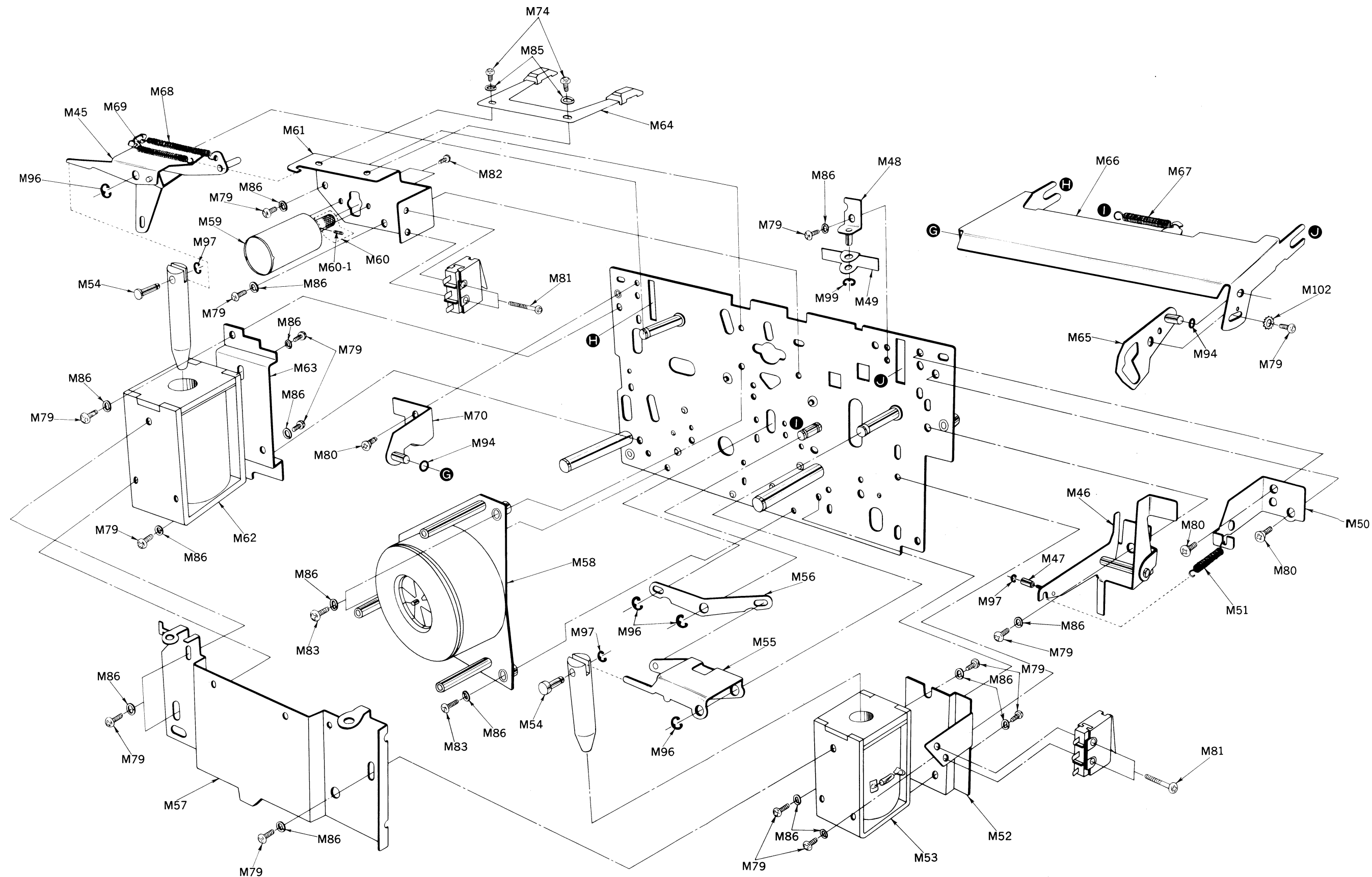


Amp Section

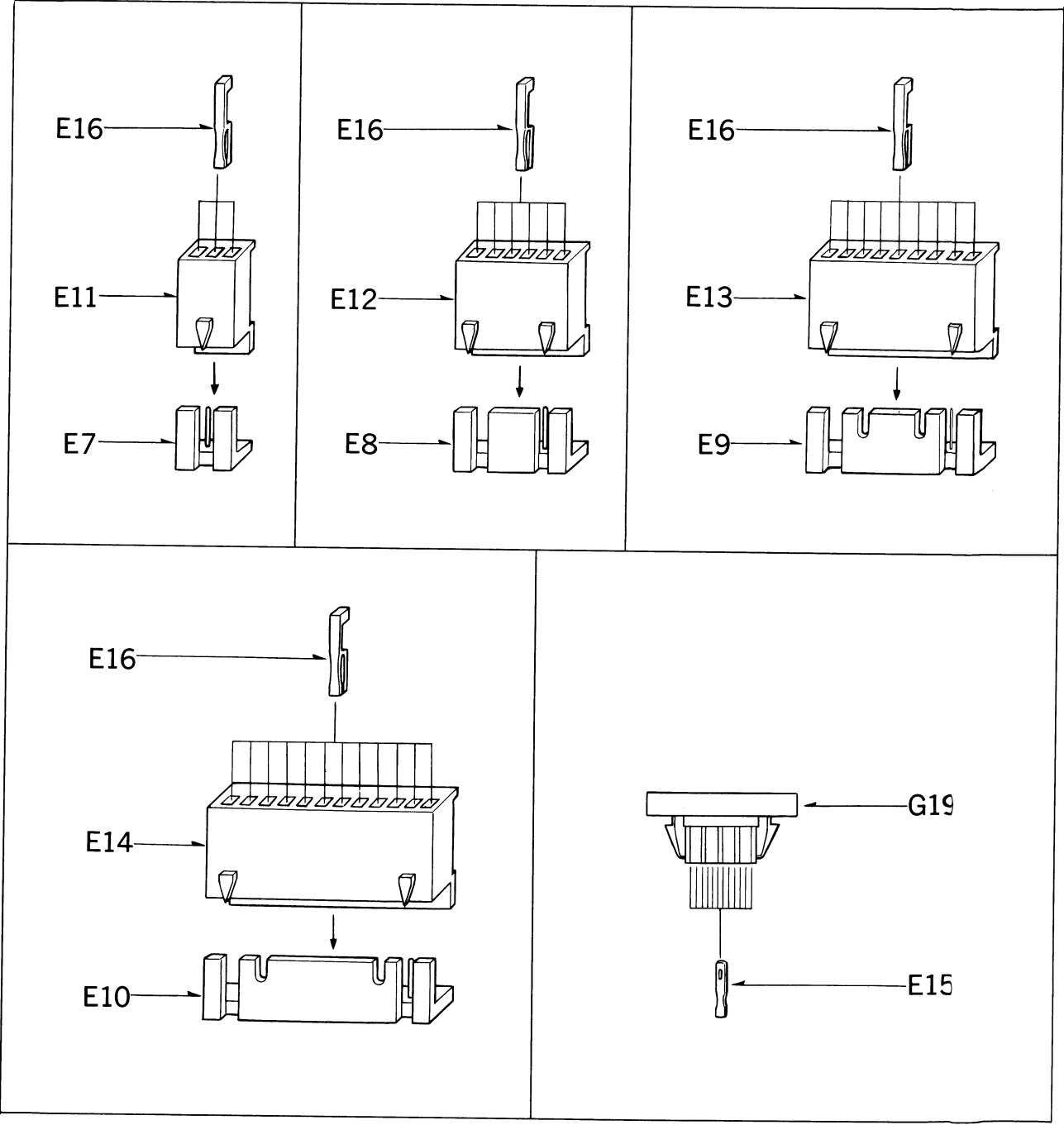
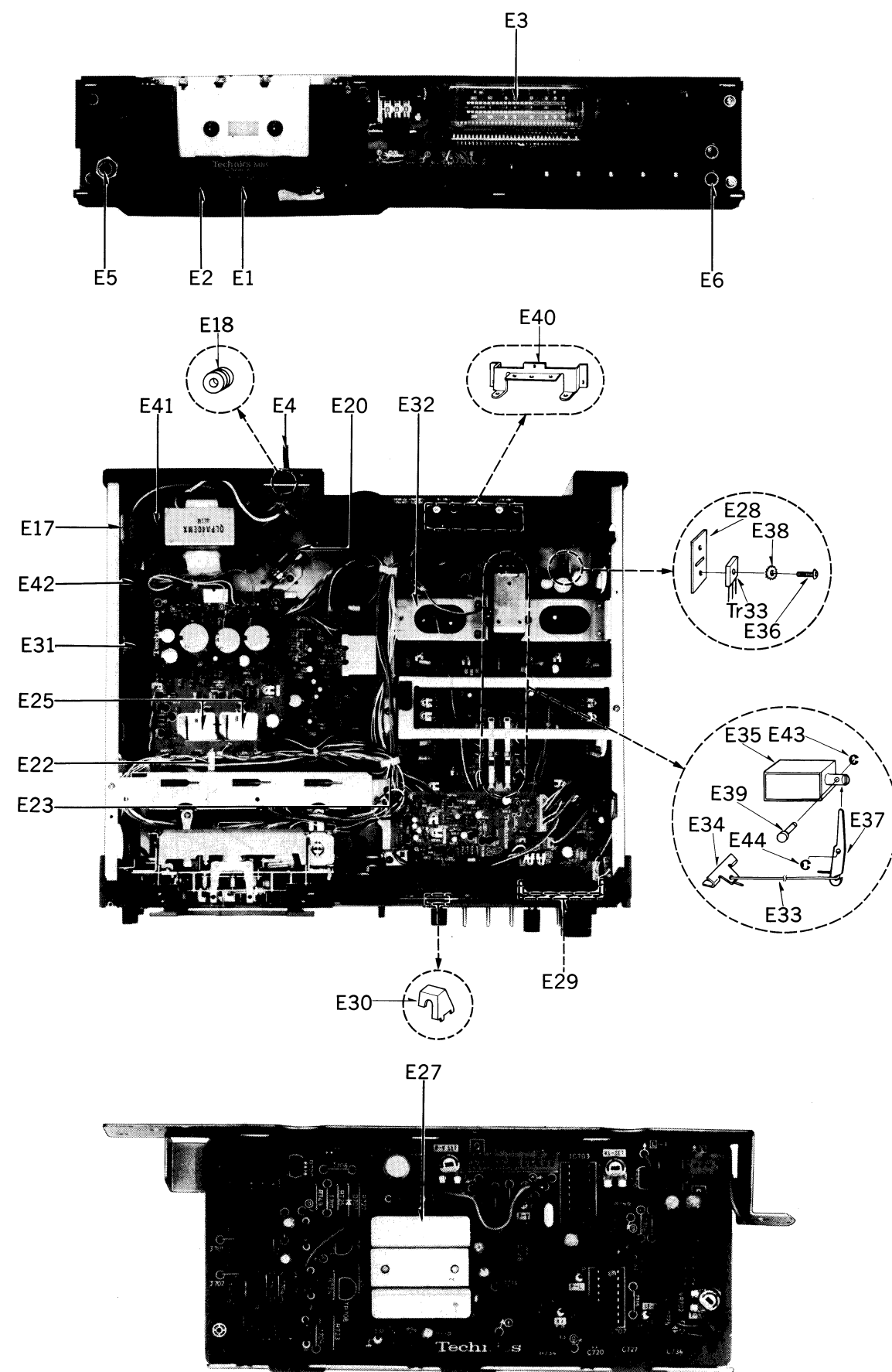


[illegible]

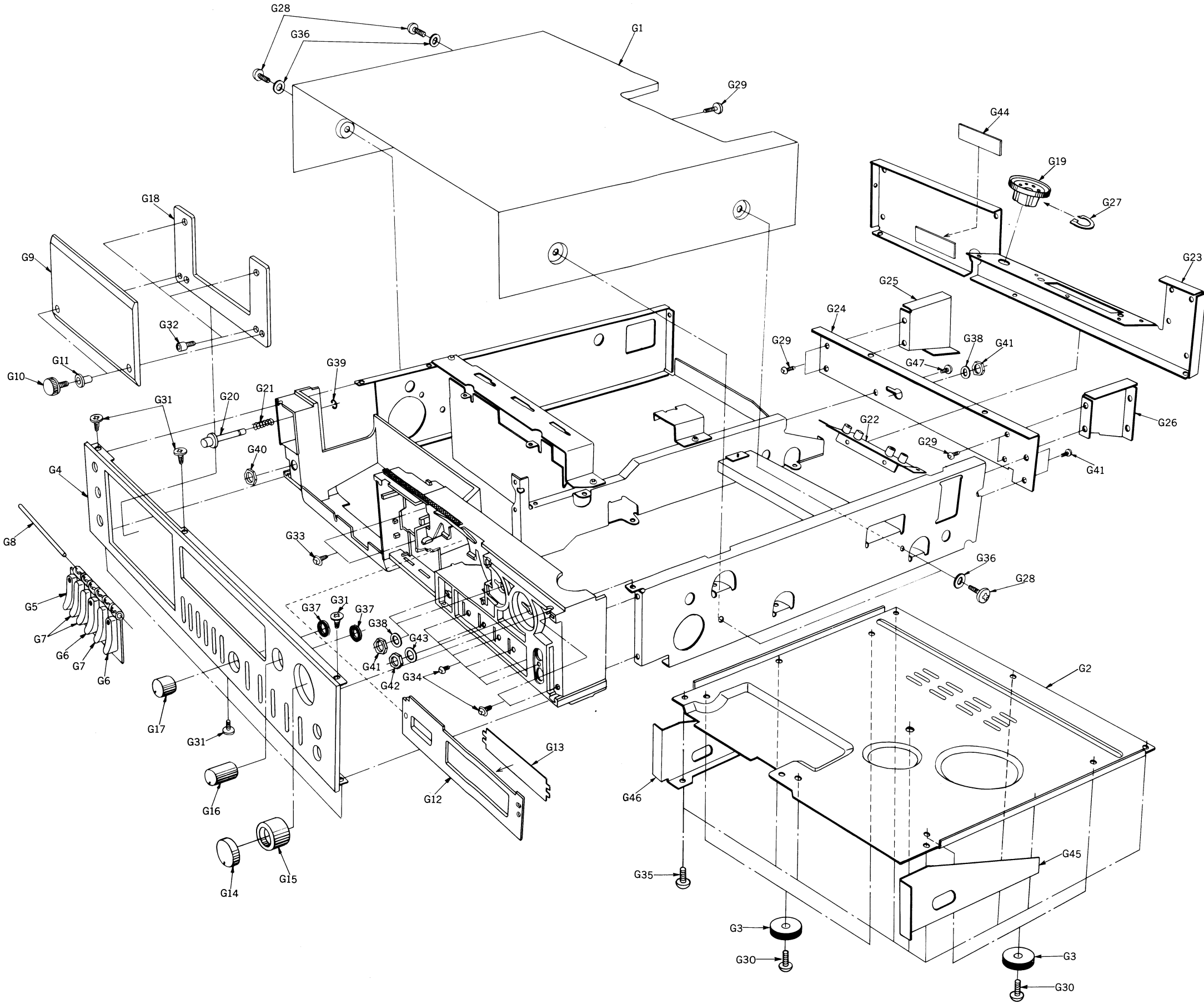
EXPLODED VIEWS



ELECTRICAL PARTS LOCATION



CABINET PARTS



REPLACEMENT PARTS LIST MODEL RS-M85 (Technics)

This is the Parts List for PX.

NOTE:  indicated that only parts specified by the manufacturer be used for safety.

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
MECHANICAL PARTS					M31	QXC0021	Tape Counter Assembly	1	
M1	QXK2029	Head Base Plate Assembly	1		M32	QXA0703	Angle-L Assembly	1	
M2	QBCA0008	Head Spring	2		M33	QXL1191	Link Lever-A Assembly	1	
M3	QTD1261	Head Wires Clamper	1		M34	QXL1190	Link Lever-B Assembly	1	
M4	QBP1733	Steel Ball Holder-A	2		M35	QXA0706	Holder Angle-L Assembly	1	
M5	QDK1012	Steel Ball 2.5φ	2		M36	QMH2027	Cassette Holder-L	1	
M6	QMA3321	Lamp Cover	1		M37	QXA0705	Holder Angle-R Assembly	1	
M7	QXL1168	Pressure Roller Lever Assembly	1		M38	QMH2028	Cassette Holder-R	1	
M8	QBT1490	Eject Lever Spring	1		M39	QXA0704	Angle-R Assembly	1	
M9	QBT1441	Pressure Roller Spring	1		M40	QKJ0245	Spacer-A	2	
M10	QXL1166	Pressure Roller Assembly	1		M41	QXH0277	Mechanism Cover	1	
M11	QML3267	Pressure Roller Lever-1	1		M42	QMZ1213	Spacer-B	4	
M12	QXD0087	Reel Table	2		M43	QBP1135	Spring Washer	2	
M13	QBC1272	Back Tension Spring	2		M44	QDP1753	Connection Pulley	1	
M14	QMG0054	Cassette Guide	2		M45	QXL1165	Lever-B Assembly	1	
M15	QMH2009	Steel Ball Holder-B	3		M46	QXL1188	Eject Lever Assembly	1	
M16	QDK1006	Steel Ball 3φ	3		M47	QDP1758	Roller	1	
M17	QXL1189	Idler Lever Assembly	1		M48	QXA0713	Angle Assembly	1	
M18	QBF1260	Idler Felt	1		M49	QML3284	Release Lever	1	
M19	QXI0101	Idler Assembly	1		M50	QMA3314	Connector Angle	1	
M20	QBC1308	Idler Spring	1		M51	QBT1753	Playback Lever Spring	1	
M21	QXL1164	Brake Lever Assembly	1		M52	QMA3311	Plunger Angle-L	1	
M22	QML3273	Brake	1		M53	QME0141	Plunger	1	
M23	QBG1132	Stopper Rubber	2		M54	QMN2095	Plunger Pin	2	
M24	QXA0714	Detection Angle Assembly	1		M55	QXL1171	Plunger Lever-L Assembly	1	
M25	QBN1573	Detection Lever Spring	1		M56	QML3276	Plunger Lever	1	
M26	QML3285	Detection Lever	1		M57	QMA3322	Reinforcement Angle	1	
M27	QXL1172	Lever-A Assembly	1		M58	QXK2010	Capstan Motor Assembly	1	
M28	QXA0712	Pulley Angle Assembly	1		M59	MKCN22AE5	Reel Motor	1	
M29	QDB0218	Counter Belt-A	1		M60	QXP0574	Motor Pulley Assembly	1	
M30	QDB0234	Counter Belt-B	1		M60-1	XXE26D3FZ	Set Screw	1	

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
M61	QMA3313	Motor Angle	1		M93	QBW2016	Poly Washer	2	
M62	QXE0243	Plunger	1		M94	QBW2019	"	2	
M63	QMA3312	Plunger Angle-R	1		M95	QBK7123	Fiber Washer	1	
M64	QXH0276	Cassette Holding Cushion	1		M96	XUC3FT	Stop Ring 3φ	10	
M65	QXL1173	Lock Lever Assembly	1		M97	XUC25FT	Stop Ring 2.5φ	9	
M66	QML3282	Connector Lever	1		M98	XUC5FT	Stop Ring 5φ	1	
M67	QBT1553	Holder Spring-R	1		M99	XUC2FT	Stop Ring 2φ	4	
M68	QBT1405	Lever Spring	1		M100	XSN26+6	Screw $\oplus 2.6 \times 6$	2	
M69	QBT1713	Record Spring	1		M101	XWG26	Flat Washer	2	
M70	QXA0702	Connector Angle-R Assembly	1		RESISTORS				
M71	XSN2+6	Screw $\oplus 2 \times 6$	2		R1, 2	ERD25TJ682	Carbon Resistor	2	SD SUPPLY
M72	QH1211	Head Adjustment Screw	1		R3, 4	ERD25TJ100	"	2	"
M73	QH1230	"	1		R5, 6	ERD25TJ104	"	2	"
M74	XSN26+4	Screw $\oplus 2.6 \times 4$	7		R7, 8	ERD25TJ181	"	2	"
M75	XSN26+4BVS	Screw $\oplus 2.6 \times 4$	4		R9, 10	ERD25TJ562	"	2	"
M76	XSS2+4	Screw $\oplus 2 \times 4$	2		R11, 12	ERD25TJ224	"	2	"
M77	XSS3+4S	Screw $\oplus 3 \times 4$	1		R13, 14	ERD25TJ154	"	2	"
M78	QH1185	Step Screw	4		R15, 16	ERD25TJ683	"	2	"
M79	XSN3+5S	Screw $\oplus 3 \times 5$	17		R17, 18	ERD25TJ183	"	2	"
M80	XSS3+6S	Screw $\oplus 3 \times 6$	3		R19, 20	ERD25TJ822	"	2	"
M81	QH1182	Step Screw	4		R21, 22	ERD25TJ123	"	2	"
M82	XSN2+3	Screw $\oplus 2 \times 3$	2		R23, 24	ERD25TJ154	"	2	"
M83	XSN3+8S	Screw $\oplus 3 \times 8$	3		R25, 26	ERD25TJ183	"	2	"
M84	XWA2	Spring Washer 2φ	2		R27, 28	ERD25TJ121	"	2	"
M85	XWA26	Spring Washer 2.6φ	5		R29, 30	ERD25TJ182	"	2	"
M86	XWA3	Spring Washer 3φ	20		R31, 32	ERD25TJ472	"	2	"
M87	QBW2016	Poly Washer	1		R33, 34	ERD25TJ182	"	2	"
M88	QBW2012	"	6		R35, 36	ERD25TJ472	"	2	"
M89	QBW2008	"	2		R37, 38	ERD25TJ562	"	2	"
M90	QBW2015	"	2		R39, 40	ERD25TJ224	"	2	"
M91	QBW2017	"	1		R41, 42	ERD25TJ333	"	2	"
M92	QBW2018	"	1						

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R43, 44	ERD25TJ182	Carbon Resistor	2	SD SUPPLY	R111, 112	ERD25TJ390	Carbon Resistor	2	SD SUPPLY
R45, 46	ERD25TJ331	"	2	"	R113, 114	ERD25TJ562	"	2	"
R47, 48	ERD25TJ821	"	2	"	R121, 122	ERD25TJ472	"	2	"
R49, 50	ERD25TJ683	"	2	"	R123, 124	ERD25TJ152	"	2	"
R51, 52	ERD25TJ821	"	2	"	R125	ERD25TJ821	"	1	"
R53, 54	ERD25TJ104	"	2	"	R126	ERD25TJ272	"	1	"
R55, 56	ERD25TJ182	"	2	"	R127	ERD25TJ562	"	1	"
R57, 58	ERD25TJ271	"	2	"	R128, 129	ERD25TJ220	"	2	"
R59, 60	ERD25TJ184	"	2	"					
					R130	ERD25TJ271	"	1	"
R61, 62	ERD25TJ272	"	2	"	R131	ERD25TJ153	"	1	"
R63, 64	ERD25TJ221	"	2	"	R132	ERD25TJ333	"	1	"
R65	ERD25TJ222	"	1	"	R133	ERD25TJ153	"	1	"
R66	ERD25TJ561	"	1	"	R134	ERD25TJ822	"	1	"
R67, 68	ERD25TJ271	"	2	"	R135	ERD25TJ272	"	1	"
R69, 70, 71, 72	ERD25TJ224	"	4	"	R138, 139, 140				
R73, 74	ERD25TJ273	"	2	"		ERD25TJ472	"	3	"
R75, 76	ERD25TJ123	"	2	"	R141	ERX1ANJ8R2	Metal-oxide Resistor	1	"
R77, 78	ERD25TJ562	"	2	"	R142	ERD25TJ222	Carbon Resistor	1	"
R79, 80	ERD25TJ153	"	2	"	R143	ERD25TJ561	"	1	"
R81, 82	ERD25TJ332	"	2	"	R144	ERD25TJ272	"	1	"
R83, 84	ERD25TJ333	"	2	"	R145	ERD25TJ392	"	1	"
R87, 88	ERD25TJ682	"	2	"	R146	ERD25TJ472	"	1	"
R89, 90, 91, 92	ERD25TJ121	"	4	"	R149	ERD25TJ151	"	1	"
R93, 94	ERD25TJ331	"	2	"	R150	ERD25TJ821	"	1	"
R95, 96	ERD25TJ332	"	2	"	R151, 152	ERD25TJ153	"	2	"
R97, 98	ERD25TJ333	"	2	"	R153, 154	ERD25TJ682	"	2	"
R99, 100	ERD25TJ821	"	2	"	R155, 156	ERD25TJ333	"	2	"
R101, 102	ERD25TJ224	"	2	"	R157, 158	ERD25TJ104	"	2	"
R103, 104	ERD25TJ562	"	2	"	R159	ERD25TJ1R0	"	1	"
R105, 106, 107, 108					R171, 172	ERD25TJ331	"	2	"
	ERD25TJ390	"	4	"	R201x2	ERD25TJ154	"	2	"
R109, 110	ERD25TJ152	"	2	"	R202x2	ERD25TJ104	"	2	"

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R203×2	ERD25TJ273	Carbon Resistor	2	SD SUPPLY	R307, 308	ERD25TJ102	Carbon Resistor	2	SD SUPPLY
R204×2	ERD25TJ272	"	2	"	R309, 310	ERD25TJ154	"	2	"
R205×2	ERD25TJ154	"	2	"	R311	ERD25TJ681	"	1	"
R206×2	ERD25TJ822	"	2	"	R313	ERD25TJ272	"	1	"
R207×2	ERD25TJ222	"	2	"	R314	ERD25TJ392	"	1	"
R208×2	ERD25TJ223	"	2	"					
R209×2	ERD25TJ274	"	2	"	R315, 316	ERD25TJ154	"	2	"
					R317, 318	ERD25TJ823	"	2	"
R210×2	ERD25TJ473	"	2	"	R319, 320	ERD25TJ330	"	2	"
R211×2	ERD25TJ332	"	2	"	R321, 322	ERD25TJ222	"	2	"
R212×2	ERD25TJ822	"	2	"	R323	ERD25TJ682	"	1	"
R213×2	ERD25TJ102	"	2	"	R324	ERD25TJ152	"	1	"
R214×2	ERD25TJ392	"	2	"	R325	ERD25TJ560	"	1	"
R215×2	ERD25TJ185	"	2	"	R327, 328	ERD25TJ152	"	2	"
R216×2	ERD25TJ105	"	2	"	R331, 332	ERD25TJ184	"	2	"
R217×2	ERD25TJ153	"	2	"	R333, 334	ERD25TJ332	"	2	"
R218×2	ERD25TJ101	"	2	"					
R219×2	ERD25TJ472	"	2	"	R335, 336	ERD25TJ563	"	2	"
					R337, 338	ERD25TJ522	"	2	"
R220×2	ERD25TJ103	"	2	"	R339, 340	ERG1ANJ821	Metal-oxide Resistor	2	"
R221×2, 222×2	ERD25TJ822	"	4	"	R341	ERD25TJ122	Carbon Resistor	1	"
R223×2	ERD25TJ333	"	2	"	R343, 344	ERD25TJ330	"	2	"
R224×2	ERD25TJ154	"	2	"	R347	ERD25TJ101	"	1	"
R225×2	ERD25TJ333	"	2	"	R348	ERD25TJ332	"	1	"
R226×2	ERD25TJ272	"	2	"	R349	ERD25TJ682	"	1	"
R227×2	ERD25TJ102	"	2	"	R401	ERX1ANJ2R2	Metal-oxide Resistor	1	"
R228×2	ERD25TJ560	"	2	"	R402	ERG1ANJ471	"	1	"
R229×2	ERD25TJ820	"	2	"					
R230×2	ERD25TJ153	"	2	"	R403	ERD25TJ472	Carbon Resistor	1	"
					R404	ERD25TJ121	"	1	"
R231×2, 232×2	ERD25TJ274	"	4	"	R405	ERD25TJ272	"	1	"
R233×2	ERD25TJ224	"	2	"	R406	ERD25TJ103	"	1	"
R301, 302	ERD25TJ823	"	2	"	R407	ERD25TJ472	"	1	"
R303, 304	ERD25TJ333	"	2	"	R408	ERD25TJ272	"	1	"
R305, 306	ERD25TJ122	"	2	"	R409	ERD25TJ273	"	1	"

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R410, 411	ERD25TJ102	Carbon Resistor	2	SD SUPPLY	R514	ERD25TJ471	Carbon Resistor	1	SD SUPPLY
R412	ERD25TJ153	"	1	"	R515	ERD25TJ222	"	1	"
R413	ERD25TJ471	"	1	"	R516	ERD25TJ681	"	1	"
R414	ERD25TJ473	"	1	"	R517	ERD25TJ102	"	1	"
R415	ERX1ANJ1R0	Metal-oxide Resistor	1	"	R518	ERD25TJ562	"	1	"
R416	ERG1ANJ681	"	1	"	R519, 520	ERD25TJ153	"	2	"
R417	ERD25TJ391	Carbon Resistor	1	"	R521	ERD25TJ271	"	1	"
R418	ERD25TJ221	"	1	"	R522	ERD25TJ562	"	1	"
R419	ERD25TJ152	"	1	"	R523	ERD25TJ473	"	1	"
R420	ERD25TJ391	"	1	"	R524	ERD25TJ562	"	1	"
R421	ERD25TJ471	"	1	"	R525	ERD25TJ104	"	1	"
R422, 423	ERD25TJ121	"	2	"	R526	ERD25TJ562	"	1	"
R424	ERD25TJ471	"	1	"	R527	ERD25TJ153	"	1	"
R425	ERG12ANJ220	Metal-oxide Resistor	1	"	R528	ERD25TJ563	"	1	"
R426	ERD25TJ121	Carbon Resistor	1	"	R529	ERD25TJ562	"	1	"
R427	ERX1ANJ120	Metal-oxide Resistor	1	"	R530	ERD25TJ472	"	1	"
R428	ERG1ANJ120	"	1	"	R531	ERD25TJ122	"	1	"
R429	ERD25TJ270	Carbon Resistor	1	"	R632	ERD25TJ102	"	1	"
R430	ERG12ANJ220	Metal-oxide Resistor	1	"	R533	ERD25TJ474	"	1	"
R501	ERD25TJ562	Carbon Resistor	1	"	R534	ERD25TJ101	"	1	"
R502	ERD25TJ101	"	1	"	R535	ERD25TJ334	"	1	"
R503	ERD25TJ562	"	1	"	R536, 537	ERD25TJ101	"	2	"
R504	ERD25TJ101	"	1	"	R538	ERD25TJ471	"	1	"
R505	ERD25TJ562	"	1	"	R539	ERD25TJ101	"	1	"
R506	ERD25TJ101	"	1	"	R540	ERD25TJ562	"	1	"
R507	ERD25TJ562	"	1	"	R541	ERD25TJ153	"	1	"
R508	ERD25TJ101	"	1	"	R542, 543	ERD25TJ473	"	2	"
R509	ERD25TJ562	"	1	"	R544, 545	ERD25TJ562	"	2	"
R510	ERD25TJ101	"	1	"	R546	ERD25TJ473	"	1	"
R511	ERD25TJ562	"	1	"	R547	ERD25TJ562	"	1	"
R512	ERD25TJ101	"	1	"	R548	ERD25TJ474	"	1	"
R513	ERD25TJ222	"	1	"					

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R549	ERD25TJ101	Carbon Resistor	1	SD SUPPLY	R606	ERD25TJ2R2	Carbon Resistor	1	SD SUPPLY
R550	ERD25TJ182	"	1	"	R607	ERD25TJ221	"	1	"
R551	ERD25TJ562	"	1	"	R608	ERD25TJ102	"	1	"
R552	ERD25TJ153	"	1	"	R609	ERD25TJ153	"	1	"
R553	ERD25TJ681	"	1	"	R610	ERD25TJ2R2	"	1	"
R554	ERD25TJ182	"	1	"	R611	ERD25TJ221	"	1	"
R556, 558	ERD25TJ681	"	2	"	R612	ERD25TJ561	"	1	"
R559	ERD25TJ153	"	1	"	R613	ERD25TJ122	"	1	"
R560, 561	ERD25TJ562	"	2	"					
R562	ERD25TJ473	"	1	"	R614	ERD25TJ153	"	1	"
					R615	ERD25TJ561	"	1	"
R563	ERD25TJ182	"	1	"	R617	ERD25TJ682	"	1	"
R564	ERD25TJ153	"	1	"	R618	ERD25TJ153	"	1	"
R565	ERD25TJ331	"	1	"	R619	ERG1ANJ271	Metal-oxide Resistor	1	"
R566	ERD25TJ182	"	1	"	R620	ERD25TJ562	Carbon Resistor	1	"
R567, 568	ERD25TJ473	"	2	"	R621	ERD25TJ331	"	1	"
R569	ERD25TJ562	"	1	"	R622	ERD25TJ682	"	1	"
R570	ERD25TJ681	"	1	"	R623	ERD25TJ153	"	1	"
R571, 572	ERD25TJ392	"	2	"	R624	ERG1ANJ271	Metal-oxide Resistor	1	"
R573	ERD25TJ152	"	1	"					
R574	ERD25TJ182	"	1	"	R625	ERD25TJ562	Carbon Resistor	1	"
					R626	ERD25TJ331	"	1	"
R575	ERD25TJ562	"	1	"	R627	ERD25TJ562	"	1	"
R576	ERD25TJ182	"	1	"	R628	ERD25TJ473	"	1	"
R577	ERG1ANJ820	Metal-oxide Resistor	1	"	R629	ERD25TJ122	"	1	"
R590	ERD25TJ151	Carbon Resistor	1	"	R630	ERD25TJ562	"	1	"
R592, 593	ERD25TJ331	"	2	"	R631	ERD25TJ682	"	1	"
R595	ERD25TJ473	"	1	"	R632	ERD25TJ153	"	1	"
R596	ERD25TJ102	"	1	"	R634	ERG1ANJ271	Metal-oxide Resistor	1	"
R601	ERD25TJ153	"	1	"	R635	ERD25TJ562	Carbon Resistor	1	"
R602	ERD25TJ561	"	1	"					
R603	ERD25TJ153	"	1	"	R636	ERD25TJ682	"	1	"
					R638	ERD25TJ272	"	1	"
R604	ERD25TJ122	"	1	"	R639	ERD25TJ103	"	1	"
R605	ERD25TJ221	"	1	"	R640	ERG12ANJ181	Metal-oxide Resistor	1	"

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R641	ERD25TJ272	Carbon Resistor	1	SD SUPPLY	R739	ERD25TJ392	Carbon Resistor	1	SD SUPPLY
R642	ERD25TJ103	"	1	"	R740	ERD25TJ102	"	1	"
R644	ERD25TJ272	"	1	"	R741	ERD25TJ821	"	1	"
R645	ERD25TJ153	"	1	"	R742	ERD25TJ225	"	1	"
R646	ERD25TJ102	"	1	"	R743	ERD25TJ121	"	1	"
R647	ERD25TJ2R2	"	1	"	R744	ERD25TJ273	"	1	"
R701	ERD25TJ560	"	1	"	R745	ERD25TJ821	"	1	"
R702	ERD25TJ103	"	1	"	R746	ERD25TJ152	"	1	"
R703	ERD25TJ560	"	1	"	R747	ERG12ANJ181	Metal-oxide Resistor	1	"
R704	ERD25TJ103	"	1	"	R748	ERD25TJ152	Carbon Resistor	1	"
R705	ERD25TJ560	"	1	"	VARIABLE RESISTORS				
R706, 707, 708, 709	ERD25TJ103	"	4	"	VR1, 2	EVNK4AA00B53	Semi-fixed Variable Resistor	2	
R710, 711, 712, 713, 714, 715	ERD25TJ102	"	6	"	VR3, 4	EVNK4AA00B24	"	2	
R716	ERD25TJ272	"	1	"	VR5, 6	EVNK4AA00B14	"	2	
R717, 718	ERD25TJ103	"	2	"	VR7, 8, 9, 10	EVNK4AA00B53	"	4	
R719	ERG12ANJ100	Metal-oxide Resistor	1	"	VR12	EVNK4AA00B54	"	1	
R720	ERD25TJ182	Carbon Resistor	1	"	VR13, 14	EVNK4AA00B15	"	2	
R721	ERX12ANJ5R6	Metal-oxide Resistor	1	"	VR15, 16	EVNK4AA00B24	"	2	
R722	ERD25TJ182	Carbon Resistor	1	"	VR17	EVH1RA084B24	Variable Resistor	1	
R728	ERD25TJ183	"	1	"	VR18	EWKNXAF22A54	"	1	
R729	ERD25TJ121	"	1	"	VR20	EVHG3AS15B24	"	1	
R730	ERD25TJ823	"	1	"	VR201 x2	EVNK0AA00B14	Semi-fixed Variable Resistor	2	
R731	ERD25TJ473	"	1	"	VR202 x2	EVNK0AA00B52	"	2	
R732	ERD25TJ272	"	1	"	VR301, 302	EVNK4AA00B54	"	2	
R733	ERD25TJ103	"	1	"	VR303, 304	EVNK4AA00B14	"	2	
R734	ERD25TJ472	"	1	"	VR305	EWKEUA033A14	"	1	
R735	ERD25TJ104	"	1	"	VR401, 701, 702	EVNK4AA00B53	"	3	
R736	ERO25CKF8202	Metal-oxide Resistor	1		VR703	EVNK4AA00B52	"	1	
R737	ERD25TJ153	Carbon Resistor	1	SD SUPPLY	CAPACITORS				
R738	ERD25TJ822	"	1	"	C3, 4	ECCD1H181K	Ceramic Capacitor	2	

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
C5, 6	ECKD1H471K	Ceramic Capacitor	2		C77, 78	ECQM05102KZ	Mylar Capacitor	2	
C7, 8	ECEA1HS100	Electrolytic Capacitor	2	SD SUPPLY	C79, 80	ECQF4103KZH	Polypropylene Capacitor	2	
C9, 10	ECEA25M4R7	"	2	"	C81, 82	ECQS1181JZ	Styrol Capacitor	2	
C11, 12	ECQM05102KZ	Mylar Capacitor	2		C83	ECQF4183KZH	Polypropylene Capacitor	1	
C13, 14	ECEA1AS101	Electrolytic Capacitor	2	SD SUPPLY	C84	ECQM05473KZ	Mylar Capacitor	1	
C15, 16	ECEA1AS470	"	2	"	C85	ECQM05104KZ	"	1	
C17, 18	ECCD1H470K	Ceramic Capacitor	2		C86	ECQF4103KZH	Polypropylene Capacitor	1	
C19, 20	ECQM05102KZ	Mylar Capacitor	2						
C21, 22	ECQM05223KZ	"	2		C87	ECKD1H471K	Ceramic Capacitor	1	
					C88	ECEA1JS4R7	Electrolytic Capacitor	1	SD SUPPLY
C23, 24	ECKD1H471K	Ceramic Capacitor	2		C89	ECEA1VS471	"	1	"
C25, 26	ECEA50MR47	Electrolytic Capacitor	2	SD SUPPLY	C90	ECEA1VS221	"	1	"
C27, 28	ECEA1HS100	"	2	"	C91	ECEA1VS471	"	1	"
C29, 30	ECQM05123KZ	Mylar Capacitor	2		C92	ECCD1H101K	Ceramic Capacitor	1	
C31, 32	ECEA1ES470	Electrolytic Capacitor	2	SD SUPPLY	C93	ECKD1H102KB	"	1	
C33, 34	ECEA50MR1	"	2	"	C94	ECEA25Z3R3	Electrolytic Capacitor	1	
C35, 36	ECEA50ZR1	"	2	"	C95, 96	ECEA2AS010	"	2	SD SUPPLY
C37, 38	ECEA1AS221	"	2	"	C97, 98	ECCD1H101K	Ceramic Capacitor	2	
C41, 42	ECCD1H220K	Ceramic Capacitor	2						
C43, 44	ECEA1VS330	Electrolytic Capacitor	2	SD SUPPLY	C99, 100	ECQM05333KZ	Mylar Capacitor	2	
					C101	ECEA1ES470	Electrolytic Capacitor	1	SD SUPPLY
C47, 48	ECEA1HS100	"	2	"	C103, 104	ECQM05472KZ	Mylar Capacitor	2	
C49, 50	ECQM05102KZ	Mylar Capacitor	2		C107, 108	ECKD1H102K	Ceramic Capacitor	2	
C51, 52	ECCD1H271K	Ceramic Capacitor	2		C201×2	ECEA1JS4R7	Electrolytic Capacitor	2	SD SUPPLY
C53, 54	ECEA1JS4R7	Electrolytic Capacitor	2	SD SUPPLY	C202×2	ECEA1HS100	"	2	"
C55, 56	ECEA1HS100	"	2	"	C203×2	ECEA1JS4R7	"	2	"
C57, 58	ECEA50ZR68	"	2	"	C204×2	ECQM05562KZ	Mylar Capacitor	2	
C59, 60	ECEA25M4R7	"	2	"	C205×2	ECQM05472KZ	"	2	
C61, 62	ECKD1H102K	Ceramic Capacitor	2		C206×2	ECQM05273KZ	"	2	
C63, 64	ECQM05393KZ	Mylar Capacitor	2						
C67, 68	ECQM05273KZ	"	2		C207×2	ECEA1HS100	Electrolytic Capacitor	2	SD SUPPLY
C69, 70	ECQM05663KZ	"	2		C208×2	ECEA50MR1	"	2	"
C71, 72, 73, 74	ECQM05273KZ	"	4		C209×2	ECEA1ES470	"	2	"
C75, 76	ECQM05123KZ	"	2		C210×2	ECEA50ZR1	"	2	"
					C211×2	ECEA1HS100	"	2	"

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
C212×2	ECCD1H270KC	Ceramic Capacitor	2		C513	ECEA2AS2R2	Electrolytic Capacitor	1	SD SUPPLY
C213×2	ECEA50ZR33	Electrolytic Capacitor	2	SD SUPPLY	C514	ECEA16N10	"	1	"
C214×2	ECEA1HS100	"	2	"	C515	ECEA1HS100	"	1	"
C215×2	ECEA50ZR1	"	2	"	C517, 518	ECKD1H472KB	Ceramic Capacitor	2	
C216×2	ECEA50Z1	"	2	"	C519	ECEA1AS221	Electrolytic Capacitor	1	SD SUPPLY
C301, 302	ECEA1HS100	"	2	"	C521	ECKD1H103ZF	Ceramic Capacitor	1	
C303, 304	ECEA50ZR33	"	2	"	C522	ECEA16Z10	Electrolytic Capacitor	1	SD SUPPLY
C305, 306	ECEA1HS100	"	2	"	C523	ECEA2AS010	"	1	"
C307, 308	ECQM05104KZ	Mylar Capacitor	2		C524, 525	ECEA1HS100	"	2	"
C309, 310	ECEA25Z4R7	Electrolytic Capacitor	2	SD SUPPLY	C526	ECEA1CS471	"	1	"
C311, 312	ECEA1HS100	"	2	"	C530	ECEA2AS3R3	"	1	"
C313, 314	ECCD1H101K	Ceramic Capacitor	2		C590	ECEA1JS4R7	"	1	"
C315, 316	ECEA1ES470	Electrolytic Capacitor	2	SD SUPPLY	C601, 602	ECEA1CS330	"	2	"
C317, 318	ECEA1HS100	"	2	"	C603, 604, 605				
C319	ECEA1ES331	"	1	"		ECEA16Z10	"	3	"
C401	ECET35R2200S	"	1		C610	ECEA50Z2R2	"	1	"
C402	ECEA1VS101	"	1	SD SUPPLY	C701, 702, 703				
C404	ECEA1ES221	"	1	"		ECEA25Z3R3	"	3	"
C405	ECET16R2200S	"	1		C704	ECEA50ZR47	"	1	"
C406	ECEA1HS100	"	1	SD SUPPLY	C705, 706, 707				
C407	ECKD1H102KB	Ceramic Capacitor	1			ECEA50ZR22	"	3	"
C408	ECET25R4700S	Electrolytic Capacitor	1		C708	ECQM05103KZ	Mylar Capacitor	1	
C409, 410	ECEA1AS472	"	1	SD SUPPLY	C709	ECQM05473KZ	"	1	
C411	ECQM05473KZ	Mylar Capacitor	1		C710	ECQM05393KZ	"	1	
C501, 502, 503, 504, 505, 506					C712	ECQM05104KZ	"	1	
	ECKD1H103ZF	Ceramic Capacitor	6		C713	ECEA25Z100	Electrolytic Capacitor	1	SD SUPPLY
C507	ECEA1AS470	Electrolytic Capacitor	1	SD SUPPLY	C714	ECQM05393KZ	Mylar Capacitor	1	
C508	ECEA16Z10	"	1	"	C715	ECQM05683KZ	"	1	
C509	ECEA1HS100	"	1	"	C716	ECQM05104KZ	"	1	
C510	ECEA16Z10	"	1	"	C717	ECQM05103KZ	"	1	
C511	ECEA50Z1	"	1	"	C718	ECQM05223KZ	"	1	
C512	ECEA16Z10	"	1	"	C719	ECEA50ZR22	Electrolytic Capacitor	1	SD SUPPLY

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	
C720	ECQM05562KZ	Mylar Capacitor	1	SD SUPPLY	Tr35, 201×2, 202×2					
C721	ECQM05153KZ	"	1		2SC945	Transistor	5			
C722	ECQM05562KZ	"	1		Tr203×2	2SK30AD	"	2		
C723	ECKD1H471KB	Ceramic Capacitor	1		Tr204×2	2SC945	"	2		
C724	ECQM05123KZ	Mylar Capacitor	1		Tr205×2	2SA564	"	2		
C725	ECQM05182KZ	"	1		Tr206×2, 301, 302, 303, 304, 305, 306, 307, 308					
C726	ECQS1682JZ	Styrol Capacitor	1		2SC945	"	10			
C727	ECQM05223KZ	Mylar Capacitor	1		Tr309, 310	2SC1383	"	2		
C728, 729	ECCD1H220KC	Ceramic Capacitor	2		Tr311, 312	2SC945	"	2		
C730	ECQM05562KZ	Mylar Capacitor	1		Tr313, 314, 315					
C731, 732, 733	ECEA1CS330	Electrolytic Capacitor	3		2SC1383	"	3			
C734	ECQM05332KZ	Mylar Capacitor	1		Tr401	2SC1226	"	1		
COMBINATION PART					Tr402, 403, 404, 405					
Z401	QCR0008T	Spark Killer	1		2SC1684	"	4			
TRANSISTORS					Tr406	2SA564	"	1		
Tr1, 2	2SA721	Transistor	2		Tr407	2SD389	"	1		
Tr3, 4	2SC1327	"	2		Tr408, 409	2SC1684	"	2		
Tr7, 8	2SC945	"	2		Tr501, 502, 503					
Tr9, 10, 11, 12	2SC644	"	4		2SC1317	"	3			
Tr13, 14, 15, 16, 17, 18, 19, 20	2SC945	"	8		Tr504	2SC1684	"	1		
Tr21, 22	2SC1383	"	2		Tr505	2SA564	"	1		
Tr23, 24, 25, 26, 27, 28	2SC945	"	6		Tr506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 518, 519, 520, 521, 522					
Tr29, 30	2SC1383	"	2		2SC1684	"	16			
Tr31	2SC945	"	1		Tr523	2SA564	"	1		
Tr32	2SC1383	"	1		Tr601	2SA719	"	1		
Tr33	2SC1846	"	1		Tr602	2SC1383	"	1		
Tr34	2SA564	"	1		Tr603	2SA719	"	1		
					Tr604, 605	2SC1684	"	2		
					Tr606	2SC1317	"	1		
					Tr607	2SC1684	"	1		
					Tr608	2SC1317	"	1		
					Tr609, 610, 611					
					2SC1684	"	3			

COMBINATION PART

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
Tr612	2SA886	Transistor	1		D201×2	OA90M	Diode	2	
Tr613	2SC1684	"	1		D202×2	MA1082	Zenner Diode	2	
					D203×2, 204×2	MA150	Diode	4	
Tr614	2SA886	"	1		D205×2	OA90	"	2	
Tr615	2SA564	"	1		D206×2	MA150	"	2	
Tr616	2SC1684	"	1		D301, 302, 303, 304				
Tr617	2SA886	"	1			OA91	"	4	
Tr618	2SC1684	"	1		D305	MV121	Varistor	1	
Tr619	2SC1847	"	1		D306	MA1068	Zenner Diode	1	
Tr620	2SC1684	"	1						
Tr621	2SC1847	"	1		D307	MA150	Diode	1	
Tr622	2SC1684	"	1		D401	S RVD10DC2	"	1	
Tr623	2SC1847	"	1		D402	S RVD10DC2R	"	1	
					D403	MA1075	"	1	
Tr624	2SC1383	"	1		D404	MA1051	Zenner Diode	1	
Tr701, 702, 703					D405	S RVD10DC2	Diode	1	
	2SC1846	"	3		D406	S RVD10DC2R	"	1	
Tr704, 705, 706					D407	MA150	"	1	
	2SA885	"	3		D408	MA1056	Zenner Diode	1	
Tr707	2SC1318	"	1		D409	S RVD10DC2	Diode	1	
Tr710	2SC1383	"	1						
INTEGRATED CIRCUITS					D410	S RVD10DC2R	"	1	
IC1, 2	QVIBA658	Integrated Circuit	2		D411	S RVD10DC2	"	1	
IC501	AN6251	"	1		D412	S RVD10DC2R	"	1	
IC502, 503, 504, 505					D413	SM102	"	1	
	M53200P	"	4		D414	S RVD10DC2R	"	1	
IC506	DN835	"	1		D415	MV121	"	1	
IC701	AN640F	"	1		D416	S RVD10DC2	"	1	
IC702	AN660	"	1		D501, 502, 503, 504, 505, 506, 507, 508				
IC703	M58432P	"	1			MA150	"	8	
DIODES					D509	OA91	"	1	
D1, 2, 3	MA150	Diode	3		D510, 511, 513, 514				
D5, 6	MA1190	Zenner Diode	2			MA150	"	4	
					D515	SM102	"	1	

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
D516	MV121	Diode	1						
D517	MA150	"	1						
D550, 551, 552									
	SM102	"	3						
D590, 601, 602, 603, 604, 605									
	MA150	"	6						
D606, 608	OA90M	"	2						
D609	SM102	"	1						
D610	OA90M	"	1						
D611	SM102	"	1						
D702	MA150	"	1						
D703	MA1120	"	1						
		<u>TRANSFORMERS</u>							
T1, 2	QLT2D26X	Headphone Transformer	2						
T401	QLPA40EMX	Power Transformer	1						
		<u>COILS</u>							
L1, 2	QLM9Z4K	MPX Filter	2						
L3, 4, 5, 6, 7, 8	QLQX0331W	3mH Coil	6						
L9, 10	QLQX0731W	7mH Coil	2						
L11	QLB0184	Bias Oscillator Coil	1						
L12	QLQX2421Y	Choke Coil	1						
L401, 601, 602									
	QLQZ1014D	"	3						
		<u>SWITCHES</u>							
S1, 2	QSS7203	Slide Switch (Record/Playback Selector)	2						
S3, 4, 5, 6, 7	QST4311	Lever Switch	5						
S401	QSW1206A	Push Switch (Power ON/OFF)	1						
S402	QSR1407	Voltage Select Switch	1						
S501, 502, 503, 504, 505, 506									
	QSW1111H	Control Key Switch	6						
S507, 508	QSM0067	Micro Switch	2						
		<u>PILOT LAMPS</u>							
PL501, 502, 503									
	XAMQ34S600W	Pilot Lamp	3						
PL505	XAMQ41S400	"	1						
		<u>FUSE</u>							
F401	XBA1E10NR3	Mini Fuse (1AT)	1						
		<u>ELECTRICAL PARTS</u>							
E1	WY1402Z	Record/Playback Head	1						
E2	QWY2122ZA	Erase Head	1						
E3	QSL5001RFA	Fluorescent Level Meter	1						
E4	QFC1203M	AC Power Cord	1						
E5	QJA0249H	Headphones Jack	1						
E6	QJA0444H	Microphone Jack	1						
E7	QJP1921TN	3 Pin Plug	7						
E8	QJP1922TN	6 Pin Plug	2						
E9	QJP1923TN	9 Pin Plug	4						
E10	QJP1924TN	12 Pin Plug	2						
E11	QJS1921TN	3 Pin Socket	9						
E12	QJS1922TN	6 Pin Socket	5						
E13	QJS1923TNL	9 Pin Socket	5						
E14	QJS1924TNL	12 Pin Socket	2						
E15	QJT1053	Contact-A	12						
E16	QJT1054	Contact-B	92						
E17	QTW1118	Spark Killer Cover	1						
E18	QTD1129	AC Cord Bushing	1						
E20	QTF1033	Fuse Holder	1						
E22	QTD1244XN	Wire Clamper-R	2						
E23	QTD1250XN	Wire Clamper-L	1						
E25	QTH1088	Heat Sink	2						
E27	QTH1136	"	1						

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
E28	QTH1118	Heat Sink	1		G12	QKJ0246	Meter Cover-A	1	
E29	QTS1423	Shield Plate	1		G13	QGL1130	Meter Cover-B	1	
E30	QTS1424	"	1		G14	QYT0465	Volume Knob-A Assembly	1	
E31	QXR0385	Power Switch Rod Assembly	1		G15	QYT0466	Volume Knob-B Assembly	1	
E32	QXA0661	Record/Playback Angle Assembly	1		G16	QYT0456	Volume Knob Assembly	1	
E33	QBS1116	Record/Playback Rod	1		G17	QYT0467	Volume Knob-C Assembly	1	
E34	QML3283	Record/Playback Lever	1		G18	Q GK2828	Cassette Lid Holding Plate	1	
					G19	QJS0803X	Remote Control Socket	1	
E35	QME0141C	Record Plunger	1		G20	QXB0527	Eject Button Assembly	1	
E36	XSN26+8	Screw $\oplus 2.6 \times 8$	1						
E37	QML3281	Record Lever	1		G21	QBC1216	Eject Button Spring	1	
E38	XWC26	Lock Washer	1		G22	QEJ5002HA	Jack Board Assembly	1	
E39	QMN2095	Plunger Pin	1		G23	QMK1725	Back Cover-A	1	
E40	QMA3300	Jack Angle	1		G24	QMA3305	Back Cover-B	1	
E41	QMA3297	Power Switch Angle	1		G25	QMA3306	Back Cover Holder-R	1	
E42	QKJ0242	Cap	1		G26	QMA3307	Back Cover Holder-L	1	
E43	XUC25FT	Stop Ring 2.5 ϕ	1		G27	QMA3445	Socket Angle	1	
E44	XUC3FT	Stop Ring 3 ϕ	1		G28	XSB4+8BVS	Screw $\oplus 4 \times 8$	4	
					G29	XTN3+8B	Tapping Screw $\oplus 3 \times 8$	1	
					G30	XSN4+6S	Screw $\oplus 4 \times 6$	4	
					G31	XSS3+8S	Screw $\oplus 3 \times 8$	6	
					G32	XVE26C4FZ	Screw	4	
G1	QGC1102	Case Cover	1		G33	XTN3+6B	Tapping Screw $\oplus 3 \times 6$	5	
G2	QGC1089	Bottom Cover	1		G34	XSN3+6BVS	Screw $\oplus 3 \times 6$	6	
G3	QKA1076	Rubber Foot	4		G35	XTN4+8B	Tapping Screw $\oplus 4 \times 8$	9	
G4	QYP0763	Front Panel Assembly	1		G36	XWG4FZ	Flat Washer 4 ϕ	4	
G5	QXB0528	Control Button (REC)	1		G37	QBJT0017	Bottom Cover	2	
G6	QXB0529	Control Button (PLAY, PAUSE)	2		G38	XWS8AW	Washer 8 ϕ	3	
G7	QGO1416	Control Button (FF, REW, STOP)	3		G39	XUC25FT	Stop Ring 2.5 ϕ	1	
G8	QMN2266	Button Shaft	1		G40	QNQ1051	Nut	1	
G9	Q GK2804	Cassette Lid	1						
G10	QH Q1272	Cassette Lid Holder	2		G41	QNQ1004	"	3	
					G42	QNQ1039	"	1	
G11	QBG1551	Rubber Cushion	2		G43	XWS9AW	Washer 9 ϕ	1	



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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
G44	QGS2552	Name Plate	1	
G45	QMA3501	Rack Angle-R	1	
G46	QMA3502	Rack Angle-L	1	
<u>ACCESSORIES</u>				
A1	RP023A	Connection Cord	2	
A2	QFT1TCCPTRJZ	Demonstration Tape	1	
A3	XBA1E10NR3	Fuse (1AT)	2	
A4	QQT2293	Instruction Book	1	
<u>PACKINGS</u>				
P1	QPN3713	Inside Carton	1	
P2	QPA0376	Inner Cushion-A (Left)	1	
P3	QPA0377	Inner Cushion-A (Right)	1	
P4	QPA0378	Inner Cushion-B (Left)	1	
P5	QPA0379	Inner Cushion-B (Right)	1	
P6	QPA0380	Spacer (Bottom Side)	1	
P7	QPA0381	Spacer (Top Side)	1	
P8	XZB50X65A04	Poly Bag	1	