

Service Manual

ELCASET Tape Deck

RS-7500US

Hi-Fi Front-Loading ELCASET Tape Deck
with Three-Head Stable Transport System



RS-7500U MECHANISM SERIES

Specifications (Catalog specifications for sales)

Power requirement:	AC; 110/125/220/240V, 50/60 Hz	Input:	MIC; sensitivity 0.25 mV/applicable microphone impedance 400 Ω ~20K Ω
	Power consumption; 45W		LINE; sensitivity 60mV, input impedance 100K Ω
Motor:	1-frequency generator servo controlled DC motor		DIN; sensitivity 0.25 mV, input impedance 2.2K Ω
Track system:	3-head, 4-track, 2-channel ELCASET system	Output:	LINE; output level 580 mV/load impedance 22K Ω over
Tape speed:	9.5 cm/s		DIN; output level 580 mV, output impedance 3.3K Ω
Wow and flutter:	0.06% (WRMS), \pm 0.15% (DIN)		HEADPHONE; output level 60 mV/load impedance 8 Ω
Frequency response:	25~20,000 Hz \pm 3 dB (tape type I)	Head:	Recording; super permalloy head
	20~22,000 Hz (DIN) (tape type I)		Playback; super permalloy head
	25~22,000 Hz \pm 3 dB (tape type II and III)		Erase; double-gap ferrite head
	20~25,000 Hz (DIN) (tape type II and III)	Dimensions:	48.3cm(W) \times 25.3cm(H) \times 35.0cm(D)
Signal-to-noise ratio:	60 dB (tape type I, 315 Hz peak level)	Weight:	14 kg
	63 dB (tape type II and III, 315 Hz peak level)		
Distortion:	0.8% (tape type III)		

Specifications are subject to change without notice.

 **Technics**

Matsushita Electric Trading Co., Ltd.

P.O. Box 288, Central Osaka Japan

LOCATION OF CONTROLS AND COMPONENTS

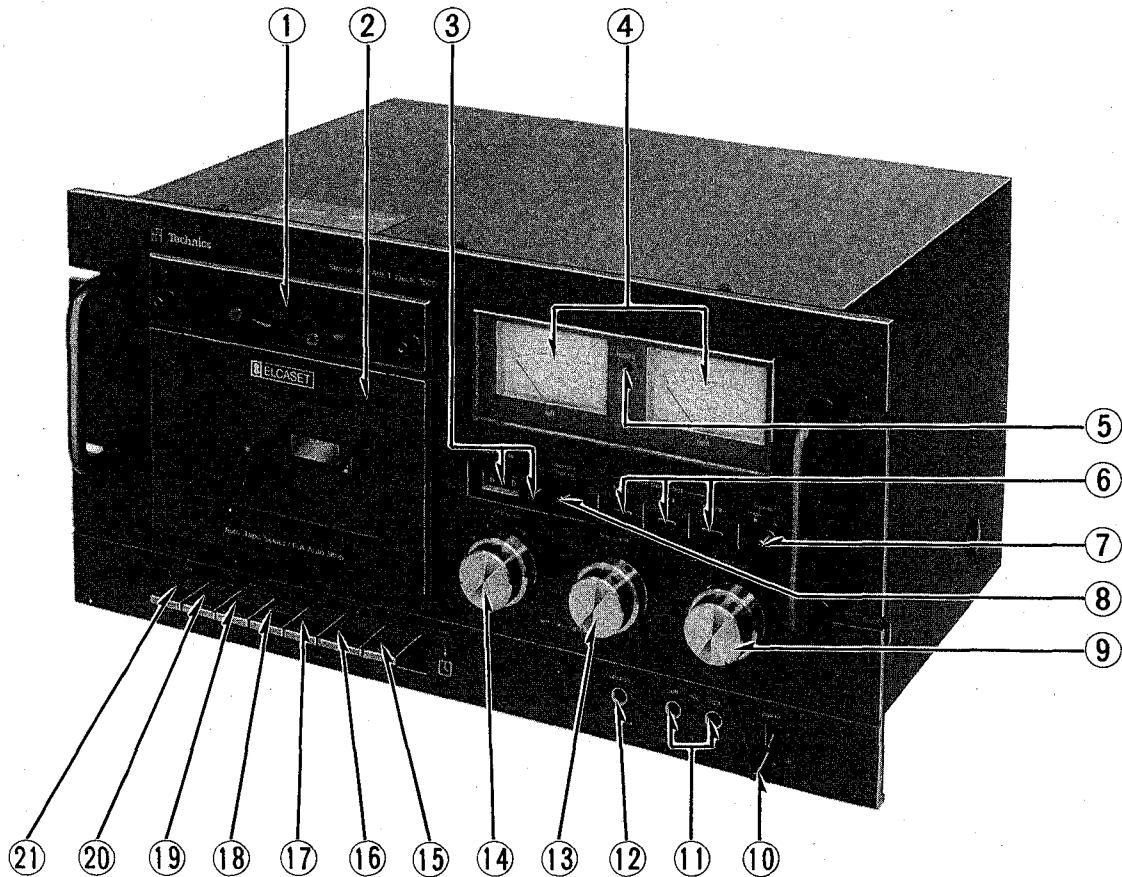
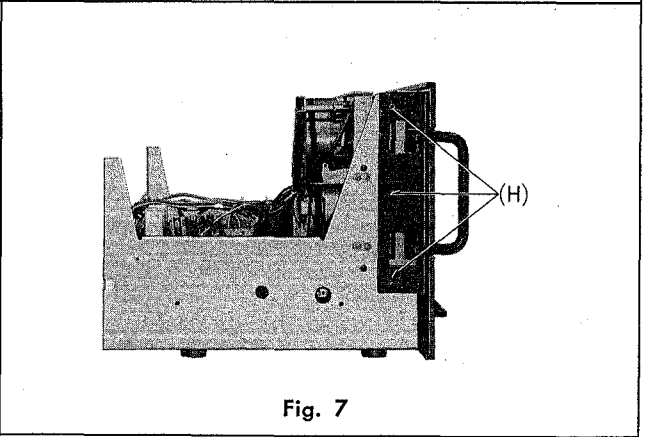
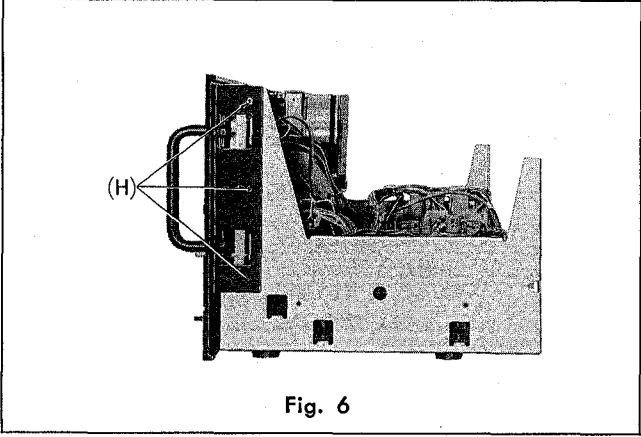
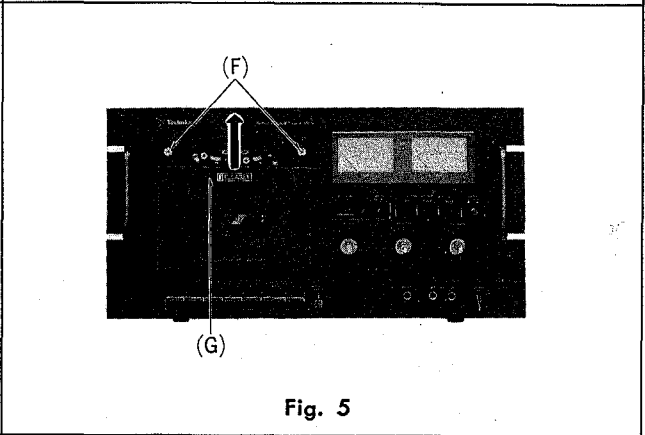
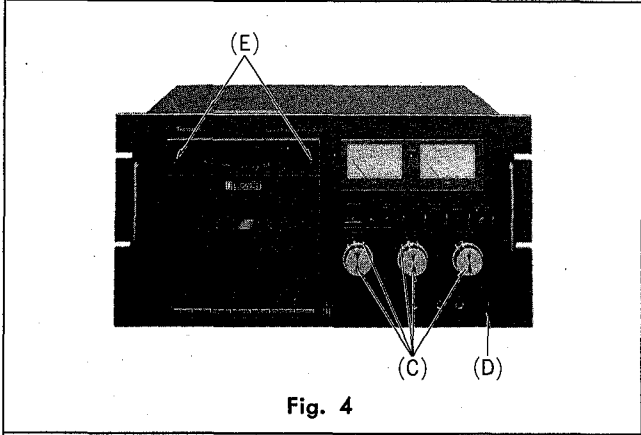
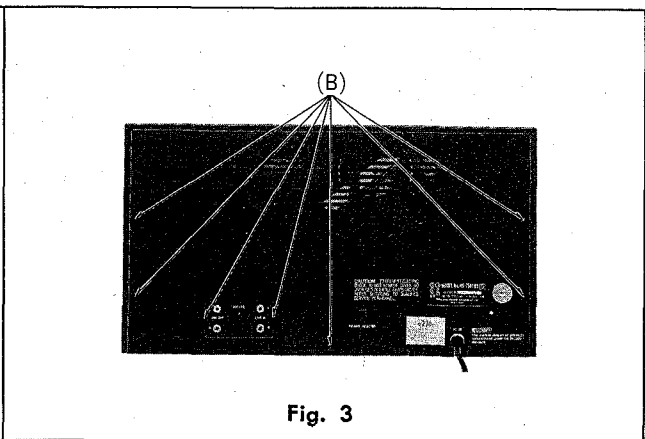
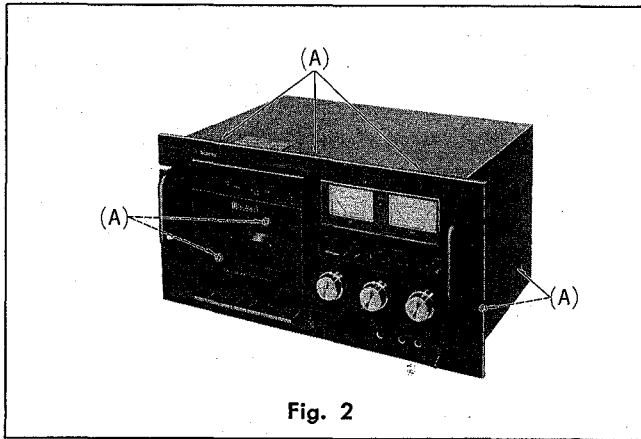


Fig. 1

- | | |
|---------------------------------|---------------------------------------|
| ① Head cover | ⑫ Headphones jack |
| ② Elcaset compartment cover | ⑬ Line input controls |
| ③ Tape counter and reset button | ⑭ Microphone/DIN input level controls |
| ④ Level meters | ⑮ Pause button |
| ⑤ Recording indicator lamp | ⑯ Stop button |
| ⑥ Tape-type indicator lamps | ⑰ Play button |
| ⑦ Tape monitor button | ⑱ Fast forward button |
| ⑧ Memory-rewind button | ⑲ Rewind button |
| ⑨ Output level control | ⑳ Record button |
| ⑩ Power switch | ㉑ Eject button |
| ⑪ Microphone jacks | |

DISASSEMBLY INSTRUCTIONS



Procedure	To remove —	Remove —	Shown in fig. —
1	Case cover	• 7 black screws (A)	2
2	Back plate	• 7 black screws (B)	3
3	Front panel	• 5 control knobs (C)	4
		• Power switch knob (D)	4
		• 2 dressing glass holder (E)	4
		• 2 dressing glass retainer (F)	5
		• Cassette lid (G) ※	5
		• 6 red screws (H)	6, 7

※ The cassette compartment cover can be removed by lifting it upward, in the direction of the arrow in fig. 5.

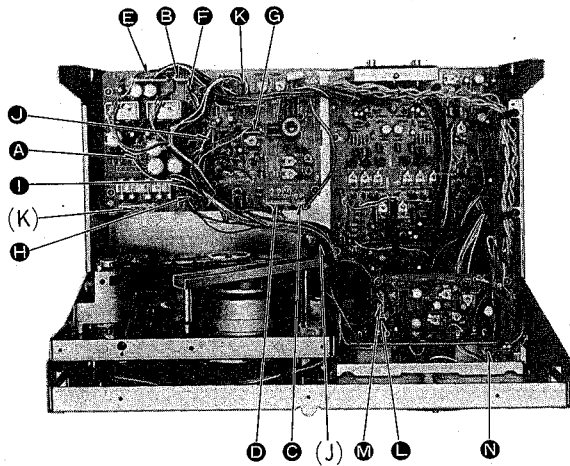


Fig. 8

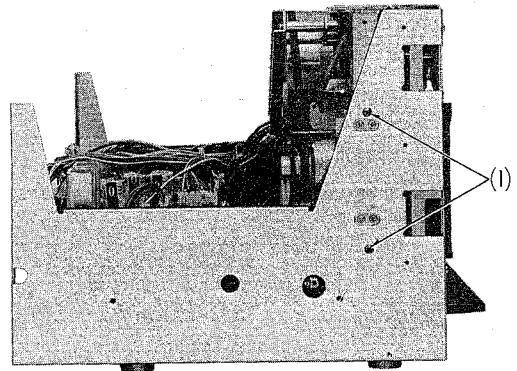


Fig. 9

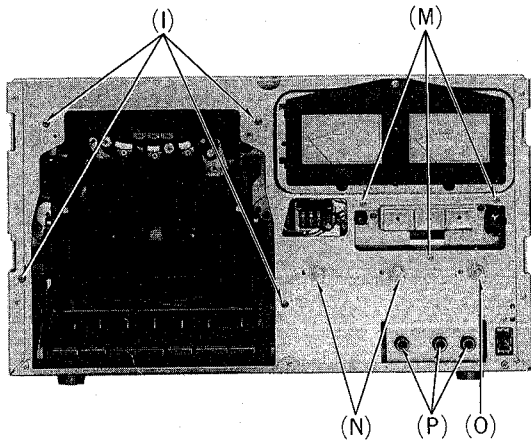


Fig. 10

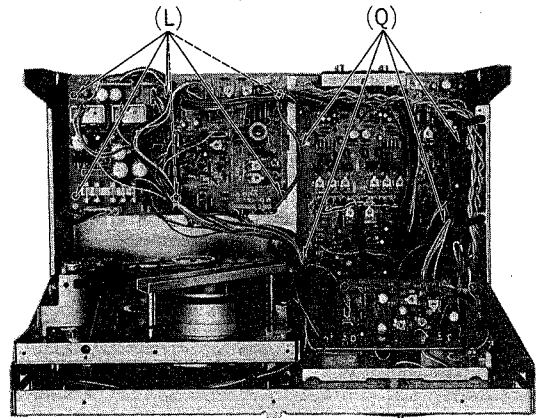


Fig. 11

Procedure	To remove ———.	Remove ———.	Shown in fig. ———.
4	Mechanism	<ul style="list-style-type: none"> • 9 connectors A D K G H • 6 red screws I J L M (I) • Mechanism holding screw (J) 	8 9, 10 8
4	Power circuit board	<ul style="list-style-type: none"> • 4 connectors B C E K • 6 pin socket (K) • 6 screws (L) 	8 8 11
4	Playback EQ circuit board	<ul style="list-style-type: none"> • 3 screws (M) 	10
4	Input VR circuit board	<ul style="list-style-type: none"> • 2 VR nuts (N) 	10
4	Output VR circuit board	<ul style="list-style-type: none"> • Output VR nut (O) 	10
4	Main circuit board	<ul style="list-style-type: none"> • 3 jack nuts (P) • 4 screws (Q) 	10 11

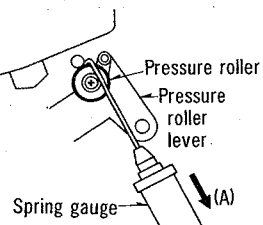
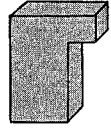
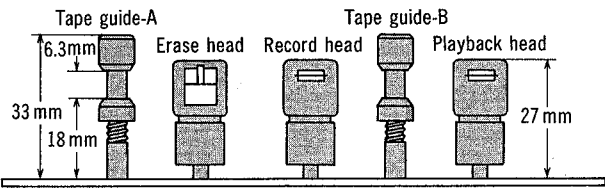
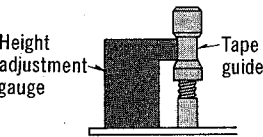
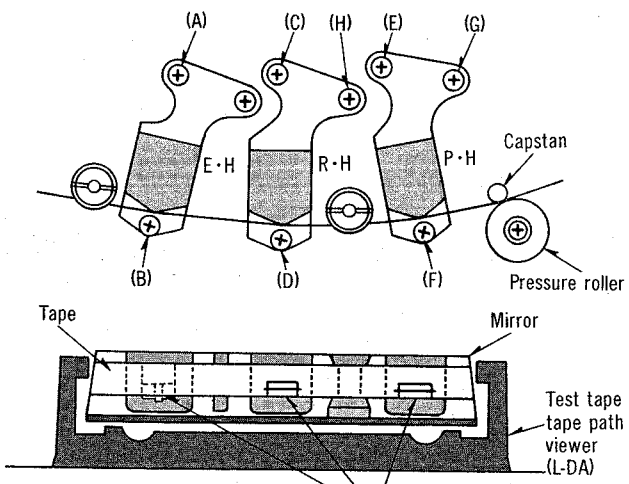
MEASUREMENT & ADJUSTMENT

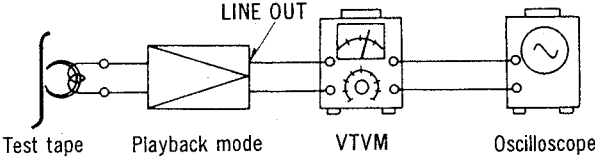
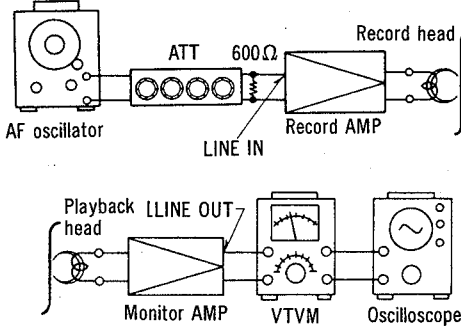
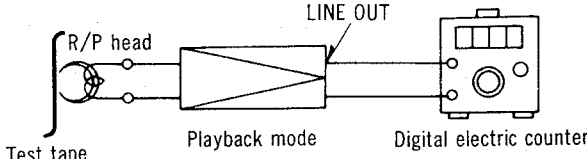
NOTE:

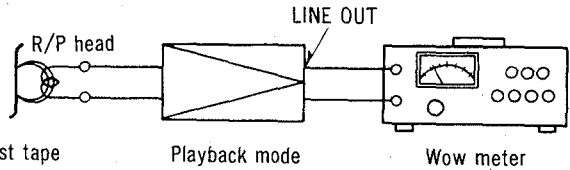
1. Make sure heads are clean.
2. Make sure capstan and pressure roller are clean.
3. Judgeable room temperature: $20 \pm 5^\circ\text{C}$ ($68 \pm 9^\circ\text{F}$)
4. Microphone input level control: Maximum.
5. Line input level control: Maximum.
6. Output level control: Maximum.
7. Monitor switch: Tape

ELCASET TYPE TEST TAPE

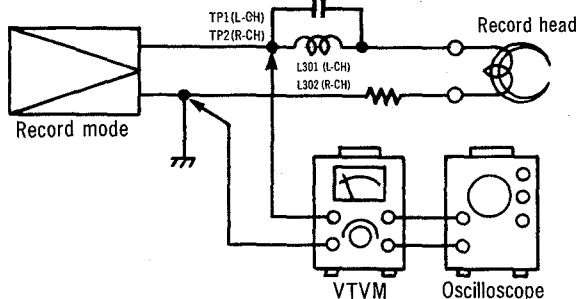
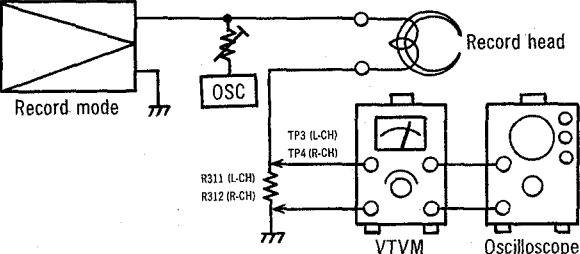
PART NO.	PURPOSES	FREQUENCY LEVEL	CONSTRUCTIONS	REC. TIME	APPEARANCE
1 QZZLFB	<ul style="list-style-type: none"> * Playback freq response * Playback standard level * Head azimuth adjustment 	31.5Hz ~ 16kHz -10 dB 315Hz 0 dB 12.5kHz -10 dB		Aprox. 9 min	
2 QZZLWB	<ul style="list-style-type: none"> * Wow and flutter * Tape speed 	3kHz 0 dB		15 min	
3 QZZLRA1	Reference blank tape (TYPE I tape)	—		15 min	
4 QZZLRA2	Reference blank tape (TYPE II tape)	—		15 min	
5 QZZLRA3	Reference blank tape (TYPE III tape)	—		15 min	
6 QZZLDB	* Tape-path viewer with mirror	—			

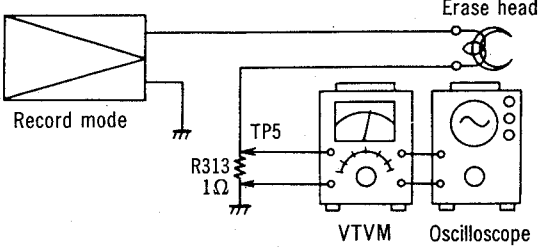
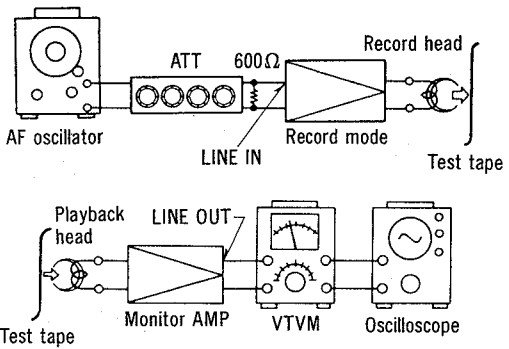
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
<p>Pressure of pressure roller Equipment: * Spring gauge (max. 2,000 gr)</p>	<p>1. Place UNIT into playback mode. 2. Hook the spring gauge to pressure roller and pull it in the direction of the arrow (A) as shown in fig. 12. 3. Measure the torque at the moment when the pressure roller moves away from the capstan.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Standard value: 1,000 ± 100 gr</p> </div>	<p>* Playback mode</p>  <p>Pressure roller Pressure roller lever Spring gauge (A)</p> <p>Fig. 12</p>
<p>Tape guide height adjustment Equipment: * Gauge for adjustment of tape guide height</p> 	<p>Tape guide height adjustment</p> <p>1. Using the gauge for adjustment of tape guide height, adjust the tape guide height as shown in fig. 13. 2. Adjust tape guides A and B. 3. If a gauge for adjustment of tape guide height is not available, adjust the height to the dimensions shown in fig. 14.</p>  <p>Tape guide-A Erase head Record head Tape guide-B Playback head</p> <p>6.3mm 33mm 18mm 27mm</p> <p>Fig. 14</p>	<p>* Playback mode</p>  <p>Height adjustment gauge Tape guide</p> <p>Fig. 13</p>
<p>Head height adjustment Equipment: * Test tape..... QZZLDB</p>	<p>Head height adjustment</p> <p>1. Playback the test tape (QZZLDB). 2. While the tape is playing back, adjust the head-height adjustment screws (A)~(F) so that the tape-to-head relationship, as seen in the mirror, is as shown in fig. 15.</p>  <p>(A) (C) (H) (E) (G) E-H R-H P-H Capstan Pressure roller Tape Mirror Test tape tape path viewer (L-DA)</p> <p>CHECK POINT Check to be sure that tape moves along adjustment line at lower side of the head.</p> <p>Fig. 15</p>	<p>* Playback mode</p>

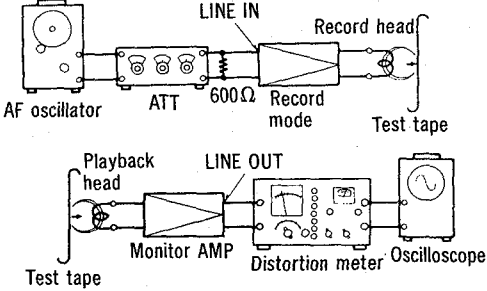
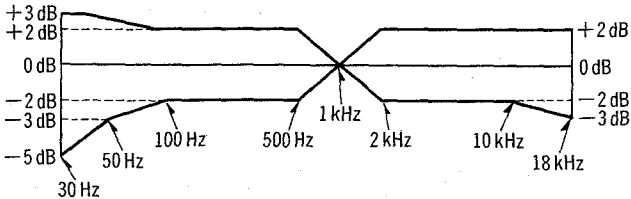
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
<p>Head azimuth adjustment</p> <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * Oscilloscope * Test tape (azimuth) ...QZZLFB 	<p>Playback head adjustment</p> <p>1. Test equipment connection is shown below.</p>  <p style="text-align: center;">Fig. 16</p> <p>2. Playback azimuth tape (QZZLFB 12.5kHz).</p> <p>3. Adjust playback head angle adjustment screw (G) in fig. 15 so that output level at LINE OUT becomes maximum.</p> <p>4. Measure both channels, and adjust levels for equal output.</p> <p>5. After adjustment lock head adjustment screw with lacquer.</p>	<p>* Playback mode</p>
<p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * Oscilloscope * AF oscillator * ATT * Test tape... QZZLRA1 (reference blank tape) 	<p>Record head adjustment</p> <p>1. Test equipment connection is shown in fig. 17.</p>  <p style="text-align: center;">Fig. 17</p> <p>2. Set the monitor switch to TAPE and supply 1kHz signal (-24dB) to LINE IN.</p> <p>3. Using test tape (QZZLRA1).</p> <p>4. Place UNIT into record mode and measure the monitor output level at LINE OUT jack on VTVM.</p> <p>5. Adjust head angle adjustment screw (H) in fig. 15 so that output level at LINE OUT becomes maximum.</p> <p>6. Measure both channels, and adjust levels for equal output.</p> <p>7. After adjustment lock head adjustment screw with lacquer.</p>	<p>* Record mode</p> <p>* Monitor switch.....tape</p>
<p>Tape speed</p> <p>Equipment:</p> <ul style="list-style-type: none"> * Digital electronic counter or frequency counter (RP8067) * Test tape... QZZLWB 	<p>Tape speed accuracy</p> <p>1. Test equipment connection is shown below.</p>  <p style="text-align: center;">Fig. 18</p>	<p>* Playback mode</p>

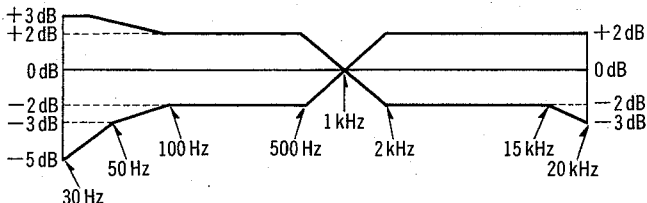
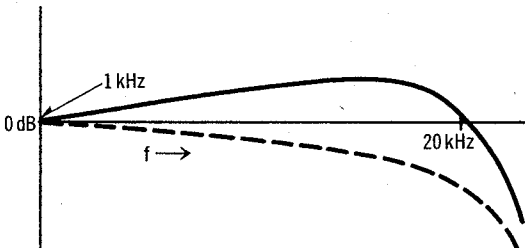
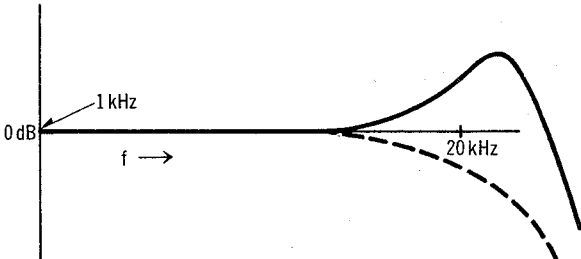
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	<p>2. Playback test tape (QZZLWB 3,000Hz), and supply playback signal to frequency counter.</p> <p>3. Measure this frequency.</p> <p>4. On the basis of 3,000Hz determine value by following formula: $\text{Tape speed accuracy} = \frac{f - 3,000}{3,000} \times 100(\%)$ where, f = measured value</p> <p>5. Take measurement at middle section of tape.</p> <p style="text-align: center; border: 1px solid black; padding: 2px;">Standard value: ±1.5%</p> <p>Adjustment method</p> <p>1. Playback the test tape (middle).</p> <p>2. Adjust the tape speed adjustment VR shown in fig. 33 so that frequency becomes 3,000Hz.</p> <p>Tape speed fluctuation</p> <p>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:</p> $\text{Tape speed fluctuation} = \frac{f_1 - f_2}{3,000} \times 100(\%)$ <p>f₁ = maximum value f₂ = minimum value</p> <p style="text-align: center; border: 1px solid black; padding: 2px;">Standard value: 1%</p>	
<p>Wow and flutter</p> <p>Equipment:</p> <ul style="list-style-type: none"> * Wow meter * Test tape... QZZLWB 	<p>1. Test equipment connection is shown below.</p> <div style="text-align: center;">  <p style="text-align: center;">Fig. 19</p> </div> <p>2. Use wow test tape (QZZLWB) and measure the playback signal on wow meter.</p> <p>3. Wow and flutter is expressed in percentage and that measurement can be weighted by JIS network (WRMS).</p> <p>4. Measure at middle section of test tape.</p> <p style="text-align: center; border: 1px solid black; padding: 2px;">Standard value: 0.08% (WRMS)</p>	<p>* Playback mode</p>
<p>Playback frequency response</p> <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * Oscilloscope * Test tape... QZZLFB 	<p>1. Test equipment connection is as same as "Head azimuth adjustment" but use the test tape (QZZLFB) instead of head azimuth tape (See fig. 16).</p> <p>2. Place UNIT into playback mode.</p> <p>3. Playback frequency response test tape (QZZLFB).</p> <p>4. Measure output level at 16kHz, 12.5kHz, 8kHz, 4kHz, 1kHz, 500Hz, 250Hz, 125Hz, 63Hz, 31.5Hz and compare each output level with standard frequency 315Hz, at LINE OUT.</p> <p>Note:</p> <p>The reference standard playback frequency response, 315Hz, has been recorded on the test tape for playback level measurement (QZZLFB) at 0dB.</p>	<p>* Playback mode</p>

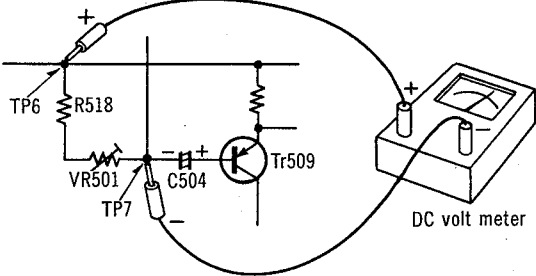
ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	<p>When measuring playback frequency response, therefore, compare with output values of other frequencies at a value 10 dB lower than the playback output value.</p> <p>5. Make measurement for both channels.</p> <p>6. Make sure that the measured value is within the range specified in the frequency response chart.</p> <div style="text-align: center;"> <p>Playback frequency response chart</p> </div> <p style="text-align: center;">Fig. 20</p> <p>7. If measured value is not in standard, adjust VR201 (L-CH), VR202 (R-CH) (See fig. 33).</p>	
<p>Playback gain</p> <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * Oscilloscope * Test tape ... QZZLFB 	<p>1. Test equipment connection is shown in fig. 16.</p> <p>2. Playback standard recording level portion on test tape (QZZLFB 333 Hz), and using VTVM measure the output level at LINE OUT jack.</p> <p>3. Make measurement for both channels.</p> <div style="text-align: center; border: 1px solid black; padding: 2px;"> <p>Standard value: $0.58 \pm 0.03 V$</p> </div> <p>Adjustment method</p> <p>1. If measured value is not in standard, adjust VR203 (L-CH), VR204 (R-CH) (See fig. 33).</p> <p>2. After adjustment, check "Playback frequency response" again.</p>	<ul style="list-style-type: none"> * Playback mode * Output level control...MAX
<p>Source monitor level</p> <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * AF oscillator * ATT * Oscilloscope 	<p>1. Test equipment connection is shown below.</p> <div style="text-align: center;"> </div> <p style="text-align: center;">Fig. 21</p> <p>2. Supply 1 kHz signal (-24 dB) from AF oscillator, through ATT to LINE IN jack.</p> <p>3. Set the monitor switch to source.</p> <p>4. Measure the output level on VTVM at LINE OUT jack.</p> <div style="text-align: center; border: 1px solid black; padding: 2px;"> <p>Standard value: $0.58 \pm 0.02 V$</p> </div> <p>5. If measured value is not within standard, adjust VR5 (L-CH), VR6 (R-CH) shown in fig. 33.</p>	<ul style="list-style-type: none"> * LINE IN level control <li style="padding-left: 20px;">..... MAX * Output level control...MAX * Monitor switch...SOURCE
<p>Level meter</p>	<p>1. After measurement and adjustment of source monitor level, check whether the level meter indicates 0 dB.</p> <p>2. If indication of level meter is not correct, adjust VR15 (L-CH), VR16 (R-CH) so that level meter indicates 0 dB.</p>	

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
Playback S/N ratio Equipment: * VTVM * Oscilloscope * Test tape... QZZLFB * Empty cassette	<ol style="list-style-type: none"> 1. Test equipment connection is shown in fig. 16. 2. Playback standard recording level test tape (QZZLFB 333Hz) and read output level on VTVM. Refer to "Playback gain adjustment" 3. Place UNIT into pause mode. 4. Measure noise level at this time using VTVM, and determine ratio of this level to test tape output signal voltage (333Hz). <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Standard value: Greater than 50dB </div>	* Playback mode * Output level control...MAX
Bias leak Equipment: * VTVM * Oscilloscope	<ol style="list-style-type: none"> 1. Test equipment connection is shown below.  <p style="text-align: center;">Fig. 22</p> <ol style="list-style-type: none"> 2. Place UNIT into record mode. 3. Adjust trap coil L301 (L-CH), L302 (R-CH), so that measured value become minimum. 4. Take adjustment for both channels. 	* Record mode
Bias current Equipment: * VTVM * Oscilloscope	<ol style="list-style-type: none"> 1. Test equipment connection is shown below.  <p style="text-align: center;">Fig. 23</p> <ol style="list-style-type: none"> 2. Mount cassette tape (type I) and place unit into record mode. 3. Read voltage on VTVM and calculate bias current by following formula: $\text{Bias current (A)} = \frac{\text{Value read on VTVM (V)}}{10(\Omega)}$ 4. Then change cassette tape to type II and type III, measure bias current as same as above. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Standard value: 2mA (type I) 2.3mA (type II) 3.0mA (type III) </div>	* Record mode

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	5. If measured values are not standard value, adjust the following VR. type I VR303 (L-CH) VR304 (R-CH) type II VR302 type III VR301	
Erase current Equipment: * VTVM * Oscilloscope	1. Test equipment connection is shown below.  <p style="text-align: center;">Fig. 24</p> 2. Place UNIT into record mode and, measure voltage across the 1Ω resistor. 3. Determine erase current with the following formula: $\text{Erase current (A)} = \frac{\text{Voltage across } 1\Omega \text{ resistor (V)}}{1 (\Omega)}$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;">Standard value: 50 ± 20 mA (type I) 80 ± 30 mA (type III)</p> </div>	* Record mode
Overall gain Equipment: * AF oscillator * VTVM * ATT * Oscilloscope * Test tape (reference blank tape) QZZLRA1 (for type I) QZZLRA2 (for type II) QZZLRA3 (for type III)	1. Test equipment connection is shown in fig. 25.  <p style="text-align: center;">Fig. 25</p> 2. Supply 1 kHz signal (-24 dB) from AF oscillator, through ATT, to LINE IN. 3. Set the monitor switch to tape. 4. Using test tape (QZZLRA1, QZZLRA2 and QZZLRA3), make recording. 5. Then measure the monitor output level at LINE OUT on VTVM. 6. If measured value is not 0.58V, adjust the following VR. type I VR7 (L-CH), VR8 (R-CH) type II VR9 (L-CH), VR10 (R-CH) type III VR11 (L-CH), VR12 (R-CH)	* Record/playback mode * line in level control ... MAX * Output level control ... MAX * Standard input level: MIC -72 ± 3 dB LINE IN ... -24 ± 3 dB * Monitor switch TAPE

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
<p>Overall distortion</p> <p>Equipment:</p> <ul style="list-style-type: none"> * Distortion meter * AF oscillator * ATT * Oscilloscope * Test tape (reference blank tape) QZZLRA1 (for type I) QZZLRA2 (for type II) QZZLRA3 (for type III) 	<p>1. Test equipment connection is shown in fig. 26.</p> <div style="text-align: center;">  </div> <p style="text-align: center;">Fig. 26</p> <ol style="list-style-type: none"> 2. Set the monitor switch to tape. 3. Supply 1 kHz signal to LINE IN and adjust ATT so that monitor output level at LINE OUT indicates 0.58 V. 4. 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". <div style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>Standard value: Less than 2%</p> </div>	<ul style="list-style-type: none"> * LINE IN level controlMAX * Output level control...MAX * Monitor switchTAPE
<p>Overall frequency response</p> <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * AF oscillator * ATT * Oscilloscope * Test tape (reference blank tape) QZZLRA1 (for type I) QZZLRA2 (for type II) QZZLRA3 (for type III) 	<p>Note: Before measuring and adjusting, make sure of the playback frequency response.</p> <ol style="list-style-type: none"> 1. Test equipment connection is shown in fig. 25. 2. Set the monitor switch to tape and supply 1 kHz signal (-44 dB) from AF oscillator, through ATT to LINE IN jack. 3. Using test tape (QZZLRA1, QZZLRA2 and QZZLRA3), and place unit into record mode. 4. Change frequency of input signal 30 Hz, 50 Hz, 100 Hz, 500 Hz, 2 kHz, 4 kHz, 8 kHz, 10 kHz, 15 kHz, 18 kHz. 5. At this time, measure the recording monitor level at LINE OUT jack on VTVM. 6. Then express in dB the difference between monitor output level of each frequency based on monitor output level of 1 kHz. 7. Make sure that the measured value is within the range specified in the overall frequency response chart. <p style="text-align: center;">Overall frequency response chart (type I)</p> <div style="text-align: center;">  </div> <p style="text-align: center;">Fig. 27</p>	<ul style="list-style-type: none"> * Record mode * LINE IN level controlMAX * Output level control...MAX * Monitor switchTAPE

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
	<p style="text-align: center;">Overall frequency response chart (type II, type III)</p>  <p style="text-align: center;">Fig. 28</p> <p style="text-align: center;">Adjustment-1 (Using bias current)</p>  <p style="text-align: center;">Fig. 29</p> <p>When the frequency response between the middle and high frequency range becomes higher or lower than the standard value as shown by the solid line or the dotted line in fig. 29. Adjust the bias current by turning the following VR.</p> <ul style="list-style-type: none"> type IVR303 (L-CH), VR304 (R-CH) type IIVR302 type III.....VR301 <p style="text-align: center;">Adjustment-2 (Using peaking coil)</p>  <p style="text-align: center;">Fig. 30</p> <p>When the frequency response is flat in the middle frequency range and makes a sharp rise or drop in the high frequency range as shown in fig. 30. Adjust by turning the following peaking coils.</p> <ul style="list-style-type: none"> type IL1 (L-CH), L2 (R-CH) type IIL3 (L-CH), L4 (R-CH) type III.....L5 (L-CH), L6 (R-CH) 	

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
<p>Overall S/N ratio</p> <p>Equipment:</p> <ul style="list-style-type: none"> * VTVM * AF oscillator * ATT * Oscilloscope * Test tape ... QZZLRA1 (reference blank tape) 	<ol style="list-style-type: none"> 1. Test equipment connection is shown in fig. 25. 2. Supply 1 kHz signal to LINE IN and adjust ATT so that output level at LINE OUT indicates 0.58 V. 3. Set the monitor switch to tape. 4. Make recording. 5. Make another recording without supplying signal (disconnect input plug to LINE IN). 6. Measure output signal level and no signal level (noise), and determine the ratio in decibels (dB). 7. The value is difference between "Playback S/N and overall S/N", but for decibel calculation refer to "Playback S/N measurement" on page 10. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;">Standard value: Greater than 47 dB (without NAB filter)</p> </div>	<ul style="list-style-type: none"> * Record mode * LINE IN level control MAX * Output level control... MAX * Monitor switch TAPE
<p>Auto-stop</p> <p>Equipment</p> <ul style="list-style-type: none"> * DC volt meter 	<ol style="list-style-type: none"> 1. Test equipment connection is shown in fig. 31. 2. Lock the FF button without cassette tape inserted. (FF button can be locked by pushing it down for about 5 seconds.) 3. Using DC volt meter, measure the voltage between TP6 and TP7 shown in fig. 32. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;">Standard value: $7 \pm 0.5V$</p> </div> <ol style="list-style-type: none"> 4. If measured value is not within standard, adjust VR501. <div style="text-align: center; margin-top: 20px;">  <p>The diagram shows a feedback loop containing a transistor Tr509 and a capacitor C504. A resistor R518 is connected to test point TP6. Another resistor is connected to test point TP7. A DC volt meter is connected across TP6 and TP7 to measure the voltage drop across R518.</p> </div> <p style="text-align: center;">Fig. 31</p>	

TEST POINTS LOCATION

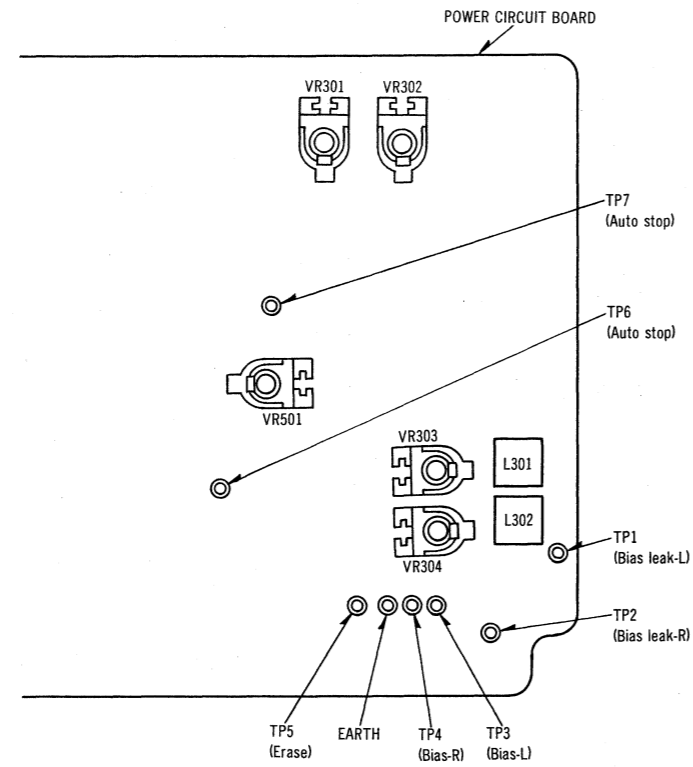


Fig. 32

ADJUSTMENT PARTS LOCATION

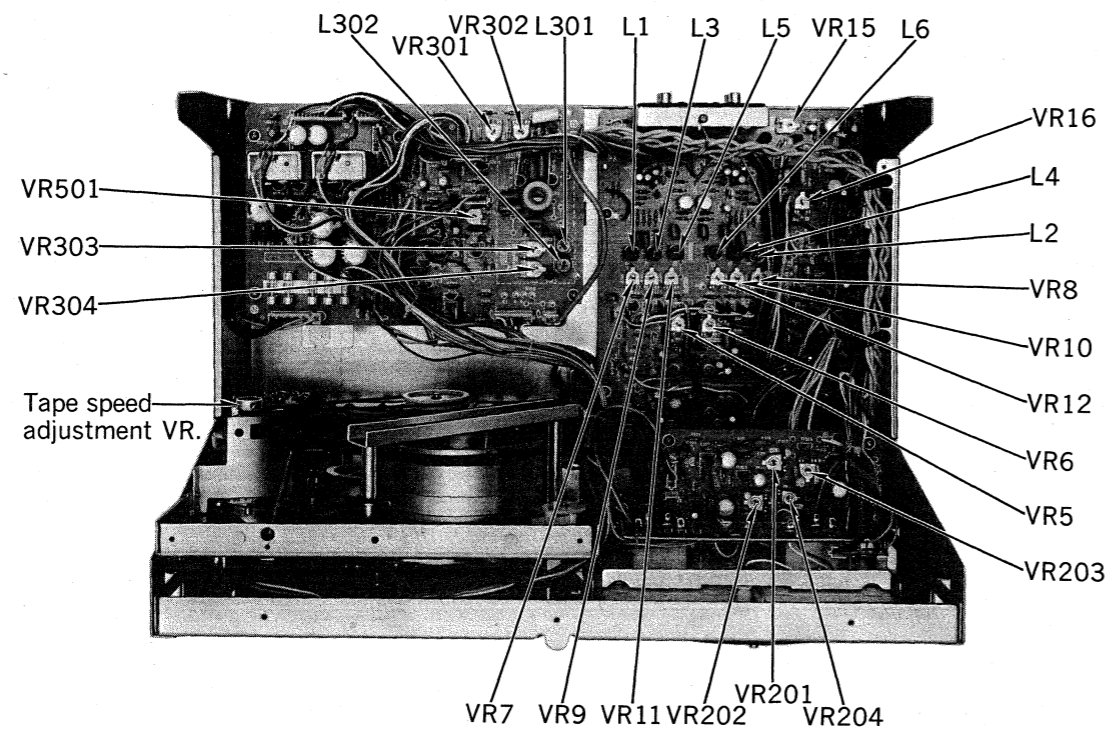
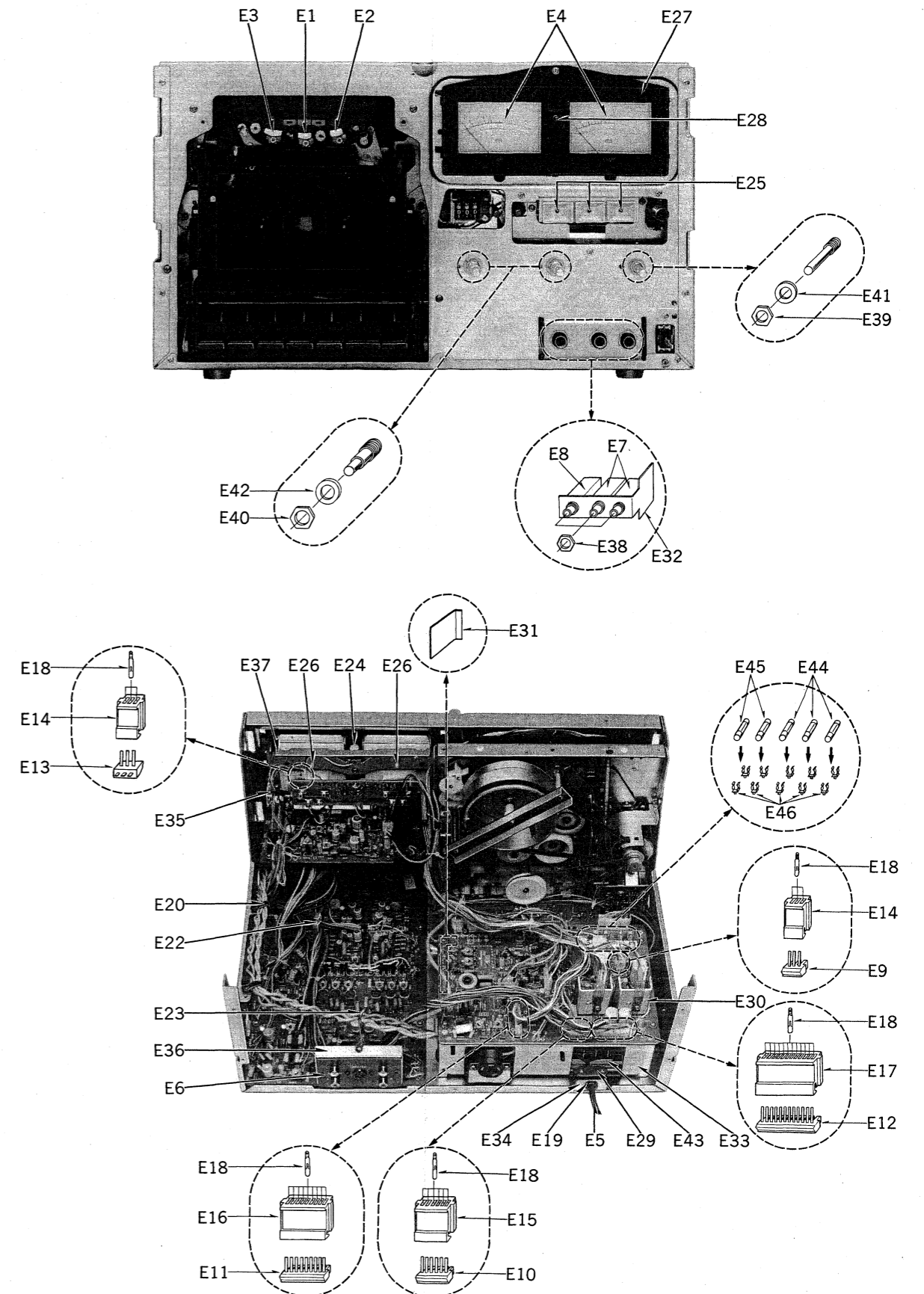
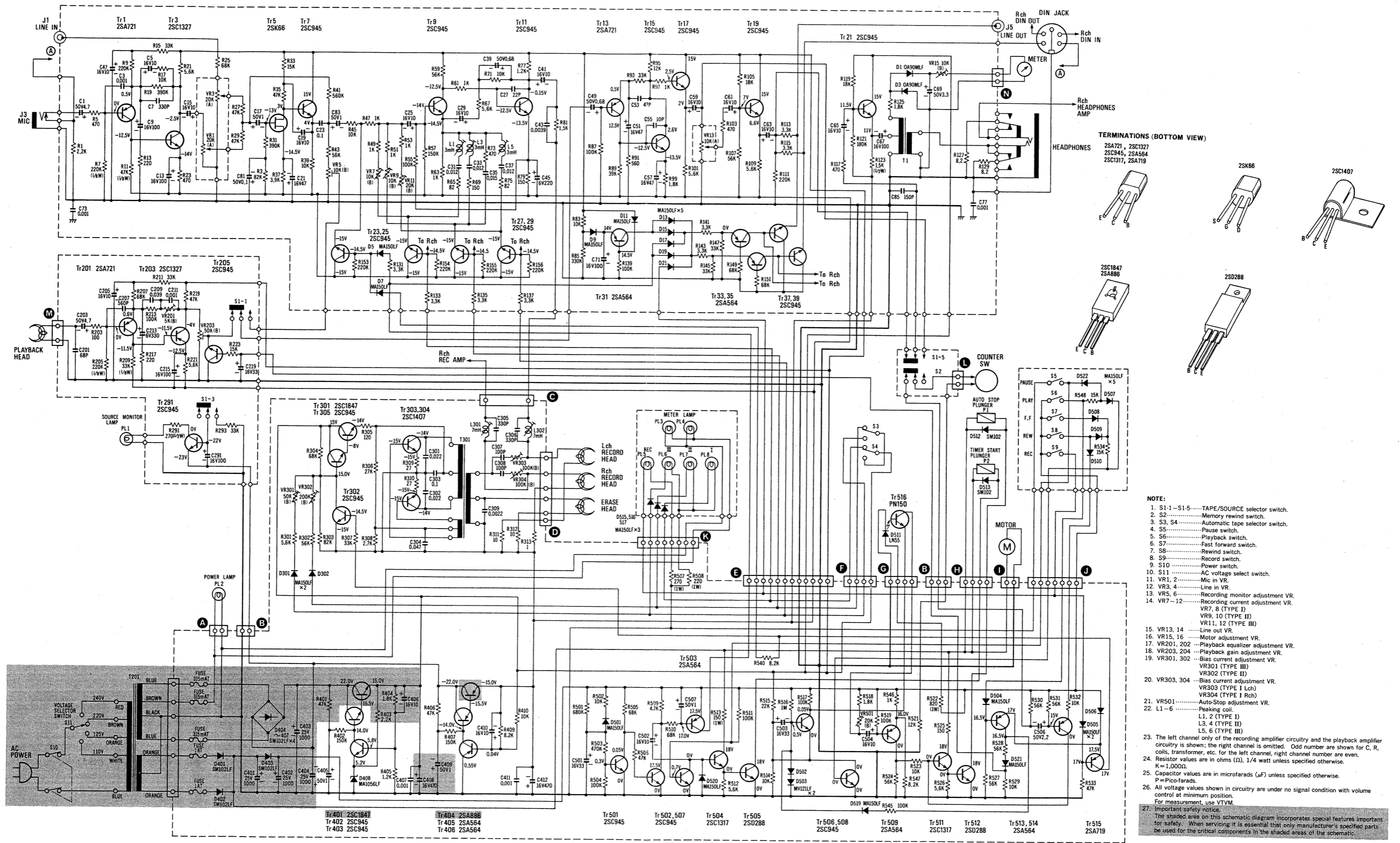


Fig. 33

ELECTRICAL PARTS LOCATION



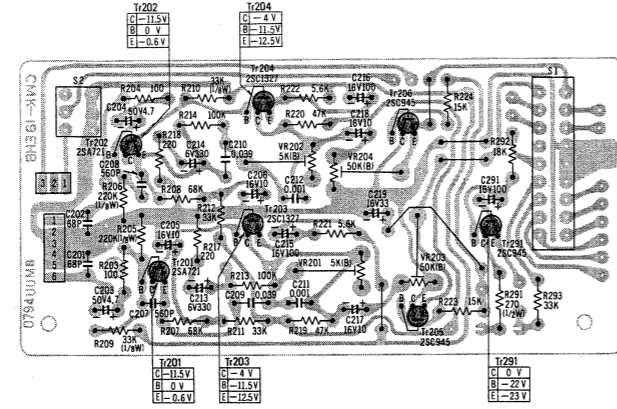
SCHEMATIC DIAGRAM MODEL RS-7500US



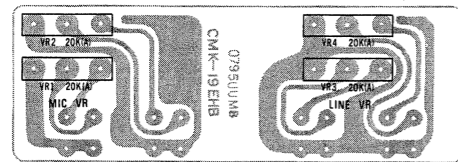
- NOTE:**
- S1-1-S1-5.....TAPE/SOURCE selector switch.
 - S2.....Memory rewind switch.
 - S3, S4.....Automatic tape selector switch.
 - S5.....Pause switch.
 - S6.....Playback switch.
 - S7.....Fast forward switch.
 - S8.....Rewind switch.
 - S9.....Record switch.
 - S10.....Power switch.
 - S11.....AC voltage select switch.
 - VR1, 2.....Mic in VR.
 - VR3, 4.....Line in VR.
 - VR5, 6.....Recording monitor adjustment VR.
 - VR7-12.....Recording current adjustment VR.
VR7, 8 (TYPE I)
VR9, 10 (TYPE II)
VR11, 12 (TYPE III)
 - VR13, 14.....Line out VR.
 - VR15, 16.....Motor adjustment VR.
 - VR201, 202.....Playback equalizer adjustment VR.
 - VR203, 204.....Playback gain adjustment VR.
 - VR301, 302.....Bias current adjustment VR.
VR301 (TYPE III)
VR302 (TYPE II)
 - VR303, 304.....Bias current adjustment VR.
VR303 (TYPE I Lch)
VR304 (TYPE I Rch)
 - VR501.....Auto Stop adjustment VR.
 - L1-6.....Paiking coil.
L1, 2 (TYPE I)
L3, 4 (TYPE II)
L5, 6 (TYPE III)
 - The left channel only of the recording amplifier circuitry and the playback amplifier circuitry is shown; the right channel is omitted. Odd number are shown for C, R, coils, transformer, etc. for the left channel, right channel number are even.
 - Resistor values are in ohms (Ω), 1/4 watt unless specified otherwise.
K=1,000G.
M=Microfarads.
P=Pico-farads.
 - All voltage values shown in circuitry are under no signal condition with volume control at minimum position.
 - For measurement, use VTVM.
 - Important safety notice:
The shaded area on this schematic diagram incorporates special features important for safety. When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

CIRCUIT BOARD

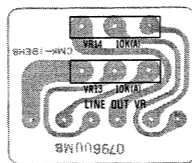
PLAYBACK EQUALIZER CIRCUIT BOARD



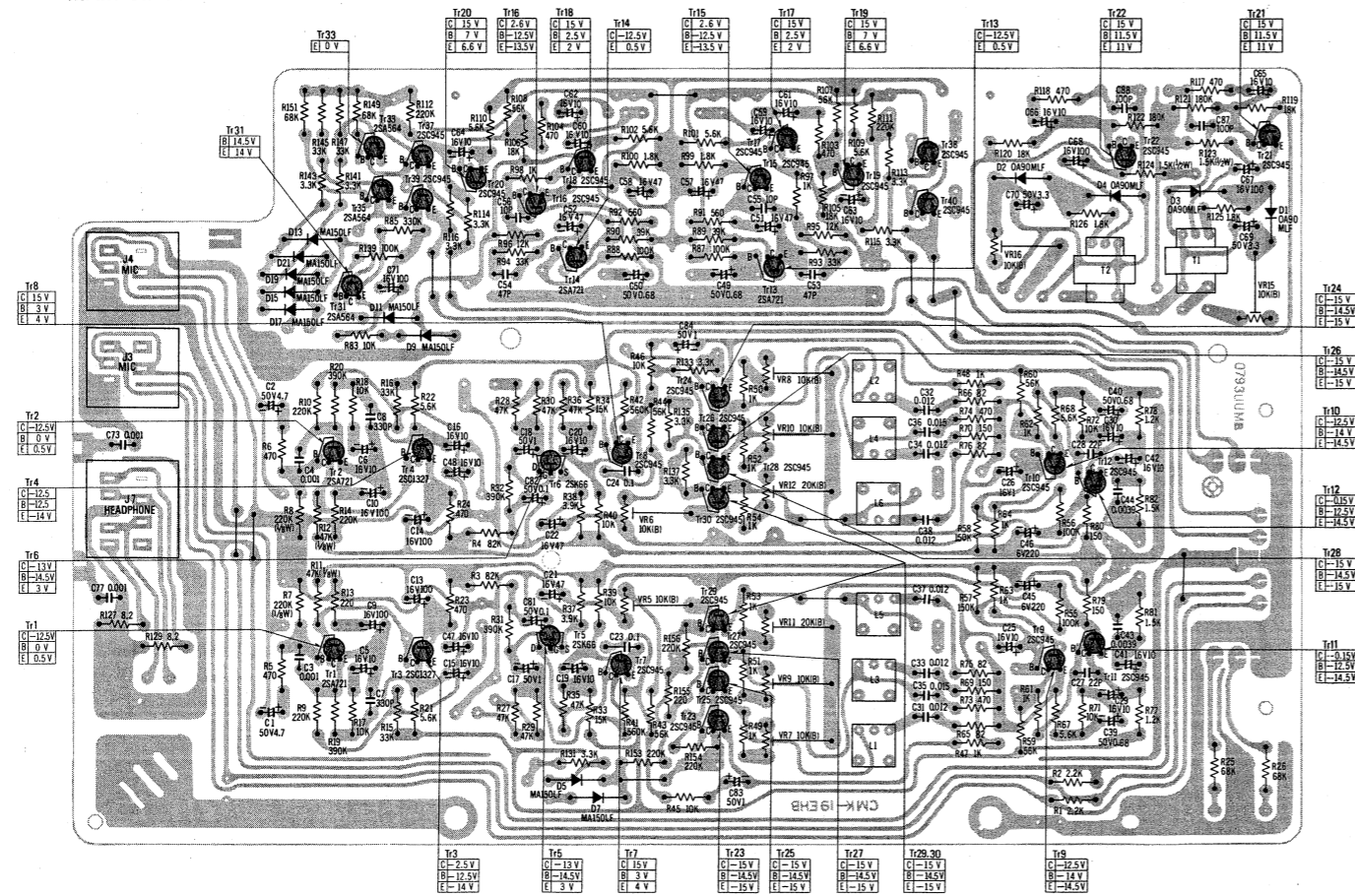
CONTROL CIRCUIT BOARD



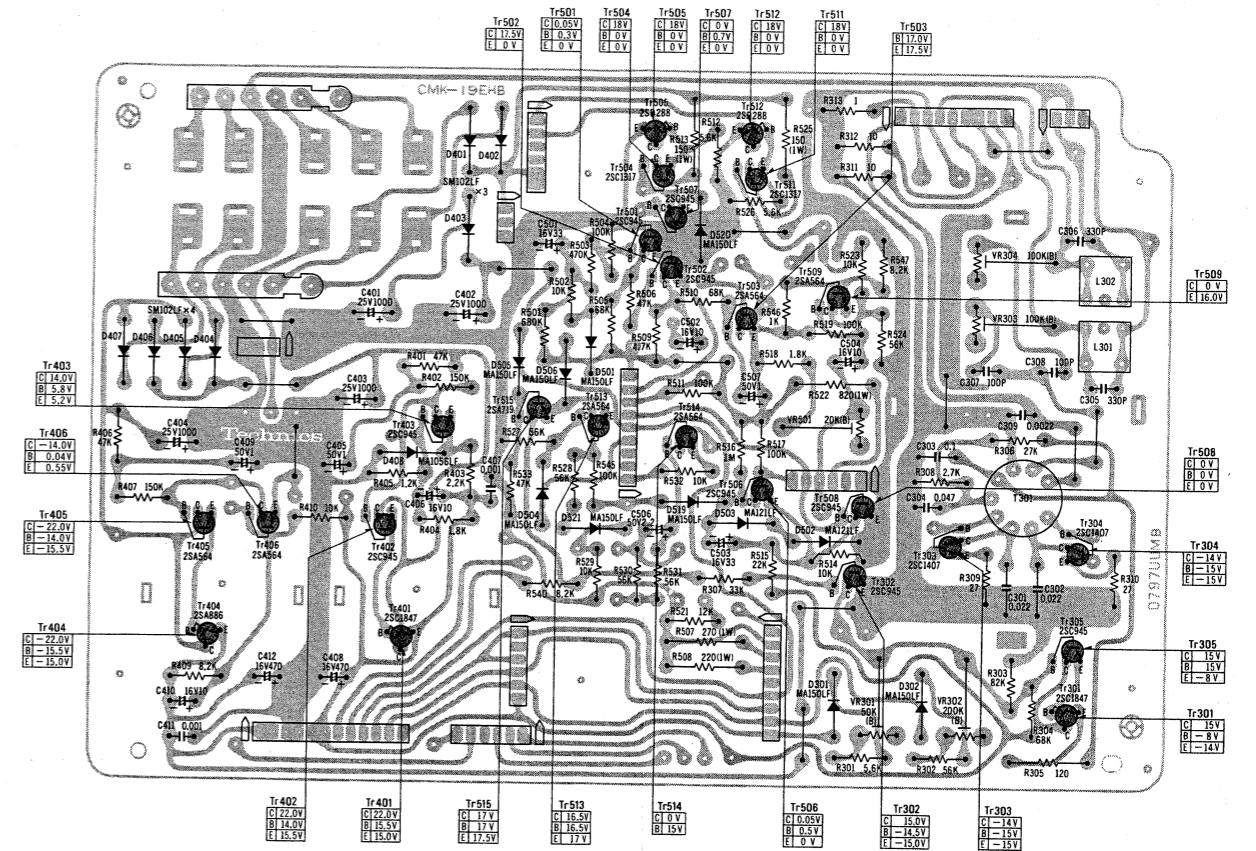
CONTROL CIRCUIT BOARD



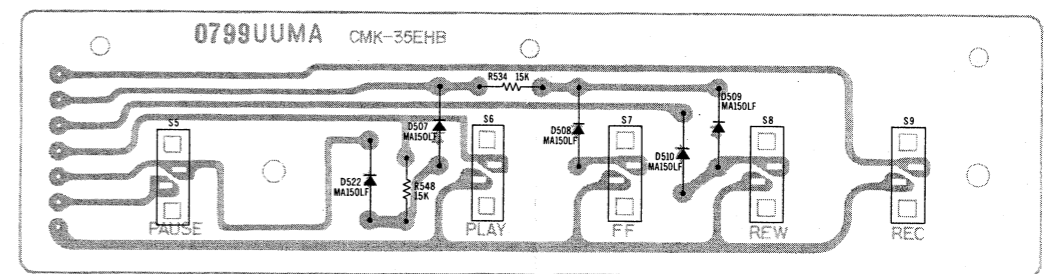
MAIN CIRCUIT BOARD



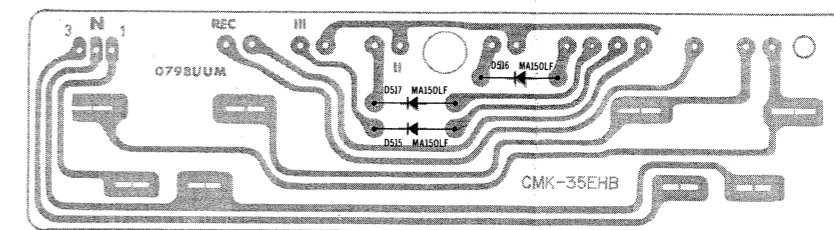
POWER CIRCUIT BOARD



PUSH BUTTON CONTROL CIRCUIT BOARD

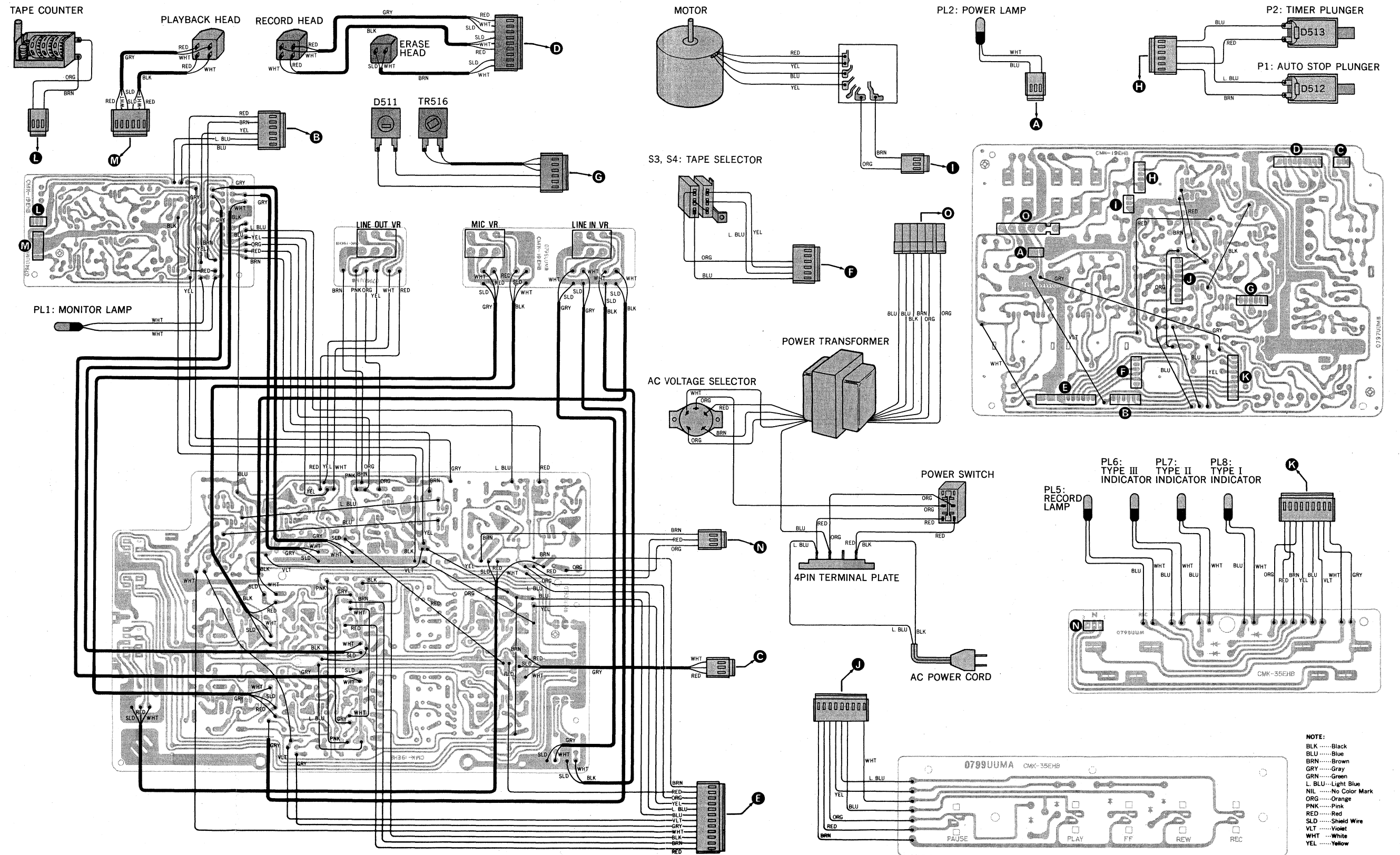


METER CIRCUIT BOARD

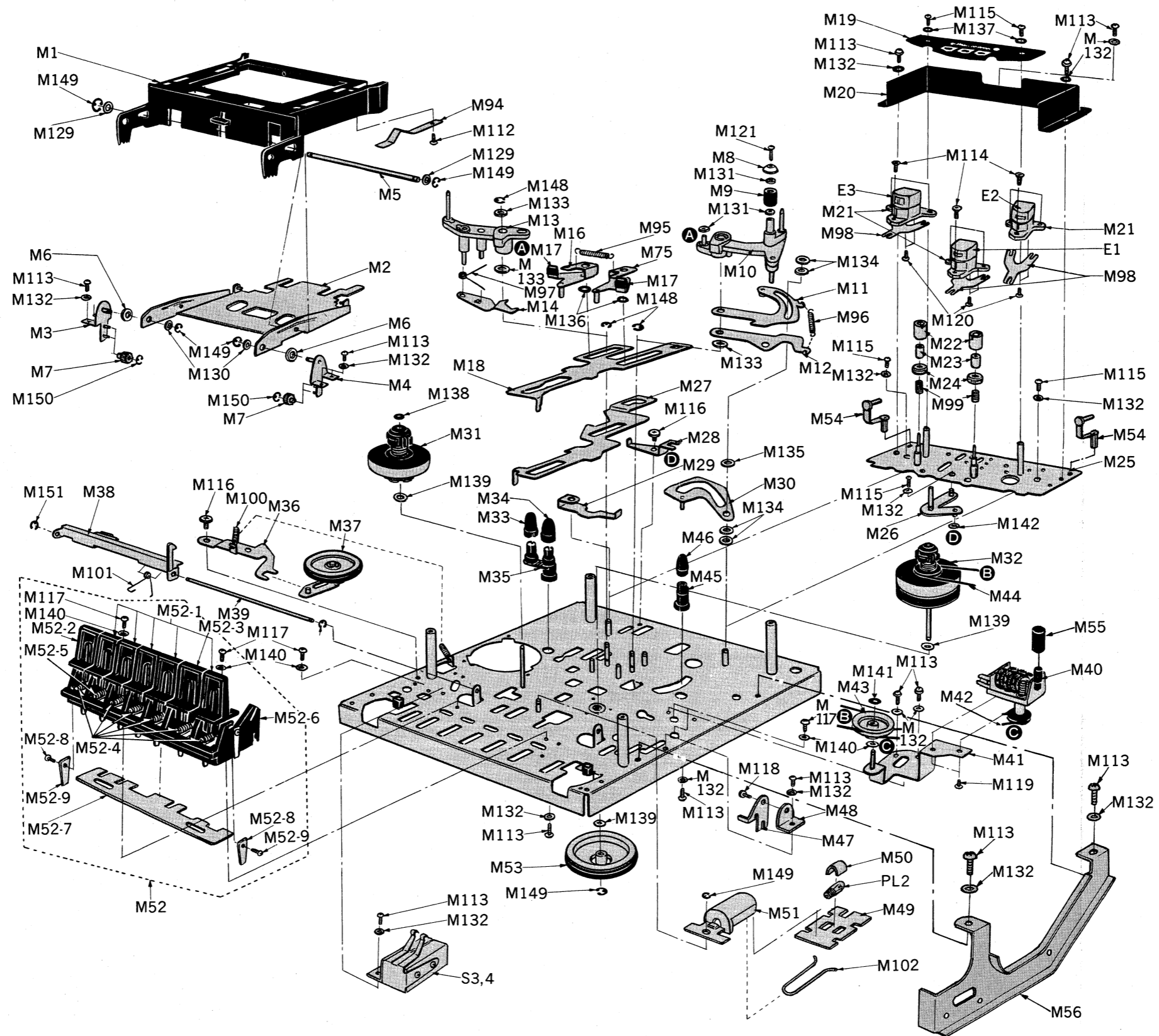


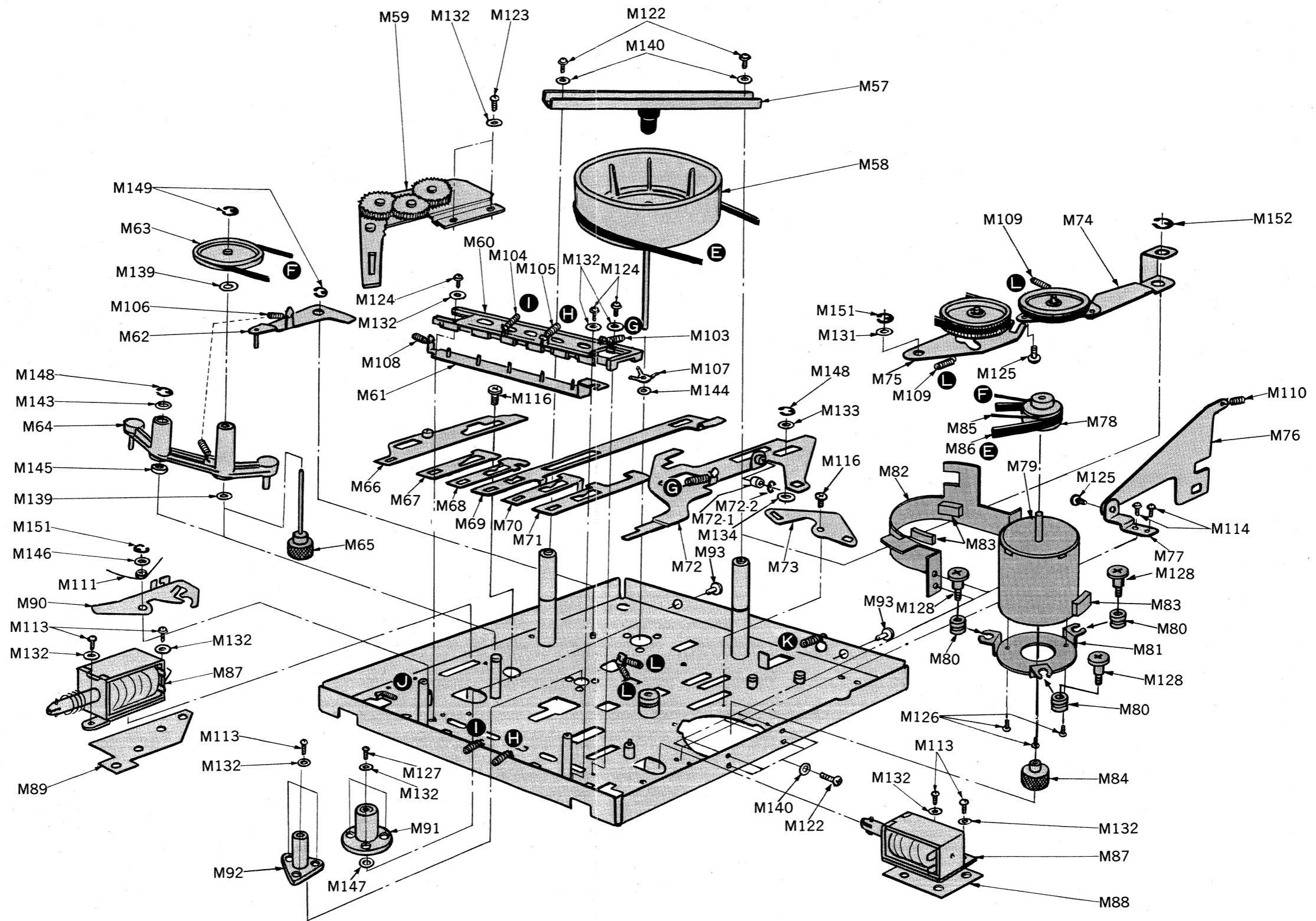
NOTE:
The circuit shown in red on the conductor is B circuit.
Values indicated in are DC voltages between the chassis and electrical parts.

WIRING CONNECTION DIAGRAM MODEL RS-7500US

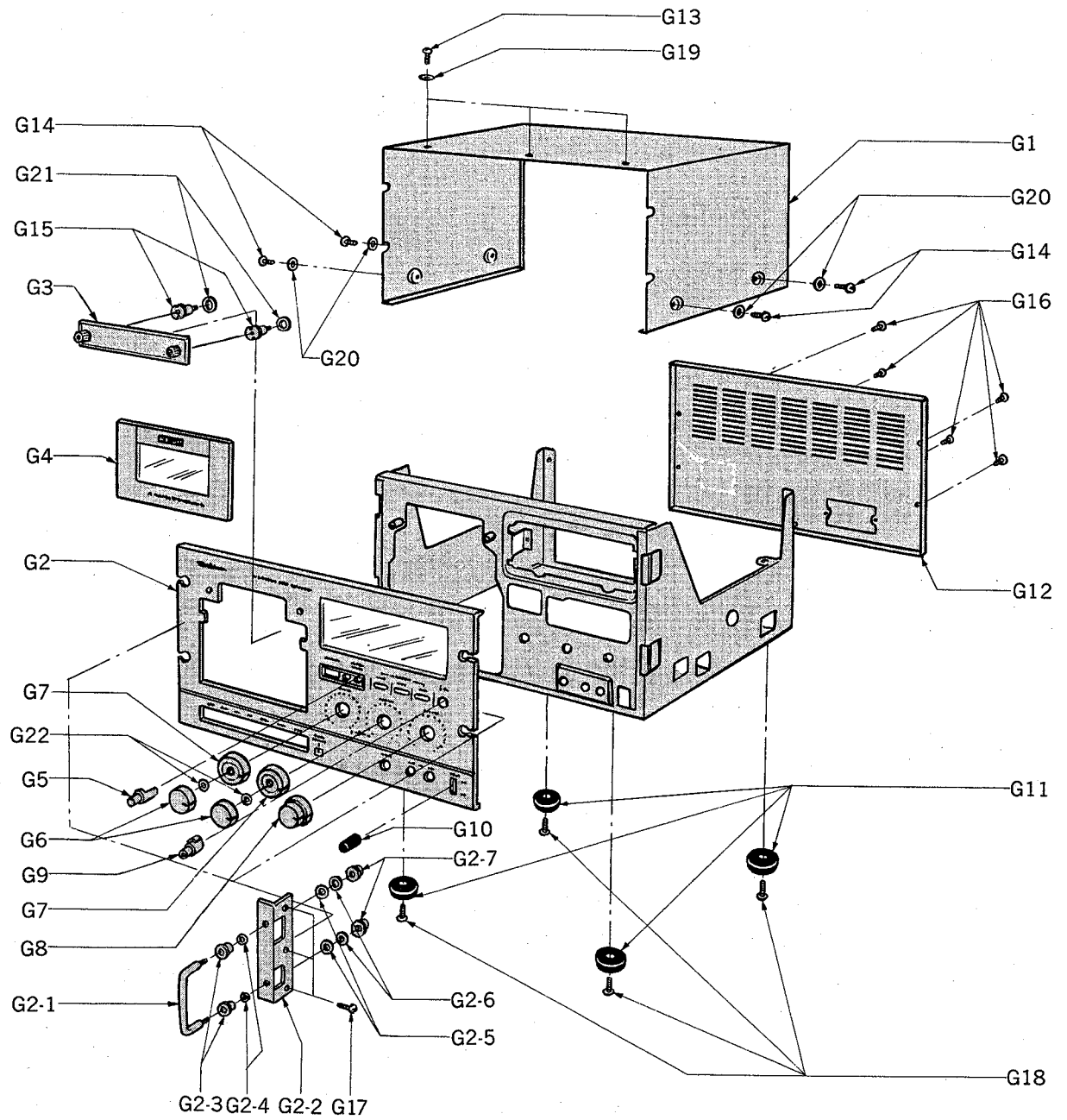


EXPLODED VIEWS



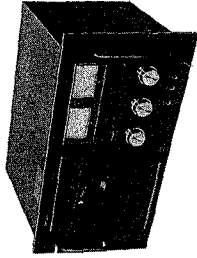


CABINET PARTS



REPLACEMENT PARTS LIST

MODEL RS-7500US (Technics)



ATTENTION:
Important safety notice:
Components identified by shaded area have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
		MECHANICAL PARTS		
M1	QMH2012A	Cassette Holder	1	
M2	QXH0245	Cassette Base Plate Assembly	1	
M3	QXA0581	Cassette Base Plate Holding Angle-L	1	
M4	QXA0582	Cassette Base Plate Holding Angle-R	1	
M5	QMN2166	Cassette Holder Shaft	1	
M6	QMC0062	Collar	2	
M7	QDG1102	Cassette Holder Gear	2	
M8	QK2692A	Cap	1	
M9	QXP0549A	Pressure Roller Assembly	1	
M10	QXL1041A	Pressure Roller Lever Assembly	1	
M11	QXL1061	Pressure Roller Guide Plate	1	
M12	QML3112	Pressure Roller Arm	1	
M13	QXL1042	Tape Shift Lever	1	
M14	QML3106	Pawl Lever	1	
M15	QXL1065	Takeup Brake Lever Assembly	1	
M16	QXL1067	Supply Brake Lever Assembly	1	
M17	QBG1572A	Brake Rubber	2	
M18	QMR1552A	Playback Rod	1	
M19	QMF1881	Head Cover-A	1	
M20	QMA3007	Head Cover-B	1	
M21	QMZ1192A	Head Holding Plate	3	
M22	QNQ1072A	Tape Limiter Holding Nut	2	
M23	QMC0058	Tape Limiter Collar	2	
M24	QMC0059	Tape Limiter	2	
M25	QXK1846	Head Base Plate Assembly	1	
M26	QXR0285	Shifter Rod Assembly	1	

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
M27	QMR1553A	Fast Wind Rod	1	
M28	QML3073	Shift Lever	1	
M29	QML3114	Release Lever	1	
M30	QXH0243	Cam Lever Assembly	1	
M31	QXD0072	Supply Reel Table Assembly	1	
M32	QXD0073	Takeup Reel Table Assembly	1	
M33	QGL1114	Illuminate Diode Cover	1	
M34	QGL1113	Transistor (Tr516) Cover	1	
M35	QMP1630A	Standard Pole-A	1	
M36	QML3069	Rewind Arm	1	
M37	QXA0577	Rewind Idler Lever Assembly	1	
M38	QXA0576	Record Lock Plate Assembly	1	
M39	QMN2165	Lock Plate Shaft	1	
M40	QDC0066	Tape Counter	1	
M41	QXA0579	Counter Angle Assembly	1	
M42	QDB0084	Counter Belt-A	1	
M43	QDP1721	Connection Pulley	1	
M44	QDB0207	Counter Belt-B	1	
M45	QMP1629A	Standard Pole-B	1	
M46	QGL1113	Cap	1	
M47	QML3105	Pause Button Release Lever	1	
M48	QMA2987	Release Lever Holding Angle	1	
M49	QMF1882	Reflection Plate	1	
M50	QMH2011	Lamp Holder	1	
M51	QGL1115A	Lamp Cover	1	
M52	QXB0452A	Push Button Assembly	1	
M52-1	QGO1317	Push Button	5	
M52-2	QGO1318	Push Button (Eject)	1	
M52-3	QGO1319	Push Button (Stop)	1	
M52-4	QBT1830DM	Pause Button Spring	6	
M52-5	QBT1582DM	Fast Forward Lever Spring	1	
M52-6	QMH2013	Push Button Frame	1	
M52-7	QMR1570	Operation Rod	1	
M52-8	QBP1734A	Rod Release Plate	2	
M52-9	XTN26+6B	Tapping Screw $\varnothing 2.6 \times 6$	2	

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
M53	QXI0097A	Fast Forward Idler Assembly	1	
M54	QTD1253	Wire Clamper	3	
M55	QKG9073	Tape Counter Button	1	
M56	QMA3031	Mechanism Holding Angle	1	
M57	QXH0240	Flywheel Retainer Assembly	1	
M58	QXF0124B	Flywheel Assembly	1	
M59	QXG1028	Gear Damper Assembly	1	
M60	QGG0087	Rod Guide	1	
M61	QXH0237	Lock Plate Assembly	1	
M62	QXL1062	Pause Lever Assembly	1	
M63	QDF1718A	Playback Connection Pulley	1	
M64	QXL1043	Playback Lever Assembly	1	
M65	QXS1083	Pulley Shaft	1	
M66	QXR0284	Pause Rod Assembly	1	
M67	QMR1557	Stop Rod	1	
M68	QMR1556A	Playback Rod	1	
M69	QMR1554	Fast Forward Rod	1	
M70	QMR1558A	Rewind Rod	1	
M71	QMR1559	Record Rod	1	
M72	QXR0282	Eject Rod Assembly	1	
M72-1	QDP1728A	Roller	1	
M72-2	XUC2FT	Stop Ring 2φ	1	
M73	QXH0244	Connection Lever	1	
M74	QXL1130	Fast Wind Arm-A Assembly	1	
M75	QXH0226	Fast Wind Arm-B Assembly	1	
M76	QML3071B	Eject Operation Lever	1	
M77	QMA2999A	Operation Lever Holding Angle	1	
M78	QXP0553	Motor Pulley-A Assembly	1	
M78-1	XXE26D5P	Set Screw	1	
M79	MAX15A2LA	Motor	1	
M80	QBG1431	Motor Rubber Cushion-A	3	
M81	QMA3162	Motor Holding Angle-A	1	
M82	QMA3161	Motor Holding Angle-B	1	
M83	QBG1593	Motor Rubber Cushion-B	3	
M84	QXP0554	Motor Pulley-B Assembly	1	

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
M84-1	XXE26D5P	Set Screw	1	
M85	QDB0231	Takeup Reel Table Belt	1	
M86	QDB0230	Capstan Belt	1	
M87	QME0145	Plunger	2	
M88	QMF1887	Plunger Holding Plate-A	1	
M89	QMF1888	Plunger Holding Plate-B	1	
M90	QML3068A	Lock Arm	1	
M91	QXM0153	Capstan Metal Assembly	1	
M92	QXM0154	Reel Table Metal Assembly	1	
M93	QBG1112A	Rubber Cushion	2	
M94	QBP1727B	Cassette Pressure Spring	2	
M95	QBT1604M	Eject Lever Spring	1	
M96	QBT1831DM	Pressure Roller Spring	1	
M97	QBN1521B	Shift Lever Spring	1	
M98	QBP1728	Head Pressure Spring	3	
M99	QBC1278A	Head Spring	2	
M100	QBT1583M	Record Lever Spring	1	
M101	QBN1525	Lock Plate Spring	1	
M102	QBN1526	Lamp Cover Spring	1	
M103	QBT1827C	Rod Release Spring	1	
M104	QBT1486DM	Record Lever Spring	1	
M105	QBT0008	Takeup Lever Spring	1	
M106	QBT1236M	Brake Spring	1	
M107	QBP1726	Thrust Spring	1	
M108	QBT1701M	Fast Forward Lever Spring	1	
M109	QBT1269	Push Button Rod Spring	2	
M110	QBT1435M	Release Lever Spring	1	
M111	QBN1522	Lock Arm Spring	1	
M112	XTN2+4B	Tapping Screw ⊕2×4	2	
M113	XSN26+6	Screw ⊕2.6×6	20	
M114	XSS26+10	Screw ⊕2.6×10	11	
M115	XSN26+6BV	Screw ⊕2.6×6	5	
M116	QHQ1168	Step Screw	4	
M117	XSN3+5S	Screw ⊕3×5	2	
M118	QHQ1161	Step Screw	1	

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Ref. No.	Part No.	Part Name & Description	Pcs/Set	Remarks
		RESISTORS		
R1, 2	ERD25TJ222	Carbon Resistor 2.2 KΩ 1/4W	2	
R3, 4	ERD25TJ823	" 82 KΩ 1/4W	2	
R5, 6	ERD25TJ471	" 470Ω 1/4W	2	
R7, 8	ERD18TJ224	" 220 KΩ 1/8W	2	
R9, 10	ERD25TJ224	" 220 KΩ 1/4W	2	
R11, 12	ERD18TJ473	" 47 KΩ 1/8W	2	
R13, 14	ERD25TJ221	" 220Ω 1/4W	2	
R15, 16	ERD25TJ333	" 33 KΩ 1/4W	2	
R17, 18	ERD25TJ103	" 10 KΩ 1/4W	2	
R19, 20	ERD25TJ394	" 390 KΩ 1/4W	2	
R21, 22	ERD25TJ562	" 5.6 KΩ 1/4W	2	
R23, 24	ERD25TJ471	" 470Ω 1/4W	2	
R25, 26	ERD25TJ683	" 68 KΩ 1/4W	2	
R27, 28, 29, 30	ERD25TJ473	" 47 KΩ 1/4W	4	
R31, 32	ERD25TJ394	" 390 KΩ 1/4W	2	
R33, 34	ERD25TJ153	" 15 KΩ 1/4W	2	
R35, 36	ERD25TJ473	" 47 KΩ 1/4W	2	
R37, 38	ERD25TJ392	" 3.9 KΩ 1/4W	2	
R39, 40	ERD25TJ103	" 10 KΩ 1/4W	2	
R41, 42	ERD25TJ564	" 560 KΩ 1/4W	2	
R43, 44	ERD25TJ563	" 56 KΩ 1/4W	2	
R45, 46	ERD25TJ103	" 10 KΩ 1/4W	2	
R47, 48, 49, 50, 51, 52, 53, 54				
	ERD25TJ102	" 1 KΩ 1/4W	8	
R55, 56	ERD25TJ104	" 100 KΩ 1/4W	2	
R57, 58	ERD25TJ154	" 150 KΩ 1/4W	2	
R59, 60	ERD25TJ563	" 56 KΩ 1/4W	2	
R61, 62, 63, 64	ERD25TJ102	" 1 KΩ 1/4W	4	
R65, 66	ERD25TJ820	" 82Ω 1/4W	2	
R67, 68	ERD25TJ562	" 5.6 KΩ 1/4W	2	
R69, 70	ERD25TJ151	" 150Ω 1/4W	2	
R71, 72	ERD25TJ103	" 10 KΩ 1/4W	2	
R73, 74	ERD25TJ471	" 470Ω 1/4W	2	

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Ref. No.	Part No.	Part Name & Description	Pcs/Set	Remarks
M119	XSS3+6S	Screw Ⓟ3×6	2	
M120	XQS2+8	Screw Ⓟ2×8	6	
M121	XSS2+10BN	Screw Ⓟ2×10	1	
M122	XSN3+6S	Screw Ⓟ3×6	6	
M123	XSN26+4	Screw Ⓟ2.6×4	2	
M124	XSN26+10	Screw Ⓟ2.6×10	3	
M125	XSNQ0004S	Screw	2	
M126	XSN3+4S	Screw Ⓟ3×4	3	
M127	XSN26+8	Screw Ⓟ2.6×8	3	
M128	QMS1833	Step Screw	3	
M129	QBK7143	Fiber Washer	2	
M130	QBK7005	"	2	
M131	QBW2016	Washer	4	
M132	XWA26B	Spring Washer 2.6φ	28	
M133	QBW2020	Washer	3	
M134	QBW2054	"	5	
M135	QBK7130	Fiber Washer	1	
M136	QBK7027	"	2	
M137	XWESFZ	Flat Washer	2	
M138	QBW2017	Washer	1	
M139	QBW2019	"	6	
M140	XWA3B	Spring Washer 3φ	9	
M141	QBW2046	Washer	1	
M142	QBK7123	Fiber Washer	1	
M143	QBW2021	Washer	1	
M144	QBW2018	"	1	
M145	QMC0057	Spacer	1	
M146	XWG3	Washer	1	
M147	QBW2056	"	1	
M148	XUC4FT	Stop Ring 4φ	4	
M149	XUC3FT	Stop Ring 3φ	8	
M150	XUC5FT	Stop Ring 5φ	2	
M151	XUC25FT	Stop Ring 2.5φ	5	
M152	XUC7FT	Stop Ring 7φ	1	

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R75, 76	ERD25TJ820	Carbon Resistor 82Ω 1/4W	2	
R77, 78	ERD25TJ122	" 1.2KΩ 1/4W	2	
R79, 80	ERD25TJ151	" 150Ω 1/4W	2	
R81, 82	ERD25TJ152	" 1.5KΩ 1/4W	2	
R83	ERD25TJ103	" 10KΩ 1/4W	1	
R85	ERD25TJ334	" 330KΩ 1/4W	1	
R87, 88	ERD25TJ104	" 100KΩ 1/4W	2	
R89, 90	ERD25TJ393	" 39KΩ 1/4W	2	
R91, 92	ERD25TJ561	" 560Ω 1/4W	2	
R93, 94	ERD25TJ333	" 33KΩ 1/4W	2	
R95, 96	ERD25TJ123	" 12KΩ 1/4W	2	
R97, 98	ERD25TJ102	" 1KΩ 1/4W	2	
R99, 100	ERD25TJ182	" 1.8KΩ 1/4W	2	
R101, 102	ERD25TJ562	" 56KΩ 1/4W	2	
R103, 104	ERD25TJ471	" 470Ω 1/4W	2	
R105, 106	ERD25TJ183	" 18KΩ 1/4W	2	
R107, 108	ERD25TJ563	" 56KΩ 1/4W	2	
R109, 110	ERD25TJ562	" 5.6KΩ 1/4W	2	
R111, 112	ERD25TJ224	" 220KΩ 1/4W	2	
R113, 114, 115, 116				
R117, 118	ERD25TJ332	" 3.3KΩ 1/4W	4	
R119, 120	ERD25TJ471	" 470Ω 1/4W	2	
R121, 122	ERD25TJ183	" 18KΩ 1/4W	2	
R123, 124	ERD25TJ184	" 180KΩ 1/4W	2	
R125, 126	ERG12ANJ152	Metal-oxide Resistor 1.5KΩ 1/2W	2	
R127, 129	ERD25TJ182	Carbon Resistor 1.8KΩ 1/4W	2	
R131, 133, 135, 137	ERD25TJ8R2	" 8.2Ω 1/4W	2	
R139	ERD25TJ332	" 3.3KΩ 1/4W	4	
R141, 143	ERD25TJ104	" 100KΩ 1/4W	1	
R145, 147	ERD25TJ332	" 3.3KΩ 1/4W	2	
R149, 151	ERD25TJ333	" 33KΩ 1/4W	2	
R153, 154, 155, 156	ERD25TJ683	" 68KΩ 1/4W	2	
	ERD25TJ224	" 220KΩ 1/4W	4	

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R203, 204	ERD25TJ101	Carbon Resistor 100Ω 1/4W	2	
R205, 206	ERD18TJSJ224	" 220KΩ 1/8W	2	
R207, 208	ERD25TJ683	" 68KΩ 1/4W	2	
R209, 210	ERD18TJSJ333	" 33KΩ 1/8W	2	
R211, 212	ERD25TJ333	" 33KΩ 1/4W	2	
R213, 214	ERD25TJ104	" 100KΩ 1/4W	2	
R217, 218	ERD25TJ221	" 220Ω 1/4W	2	
R219, 220	ERD25TJ473	" 47KΩ 1/4W	2	
R221, 222	ERD25TJ562	" 5.6KΩ 1/4W	2	
R223, 224	ERD25TJ153	" 15KΩ 1/4W	2	
R291	ERG12ANJ271	Metal-oxide Resistor 270Ω 1/2W	1	
R292	ERD25TJ183	Carbon Resistor 18KΩ 1/4W	1	
R293	ERD25TJ333	" 33KΩ 1/4W	1	
R301	ERD25TJ562	" 5.6KΩ 1/4W	1	
R302	ERD25TJ563	" 56KΩ 1/4W	1	
R303	ERD25TJ823	" 82KΩ 1/4W	1	
R304	ERD25TJ683	" 68KΩ 1/4W	1	
R305	ERD25TJ121	" 120Ω 1/4W	1	
R306	ERD25TJ273	" 27KΩ 1/4W	1	
R307	ERD25TJ333	" 33KΩ 1/4W	1	
R308	ERD25TJ272	" 2.7KΩ 1/4W	1	
R309, 310	ERD25TJ270	" 27Ω 1/4W	2	
R311, 312	ERD25TJ100	" 10Ω 1/4W	2	
R313	ERD25TJ1R0	" 1Ω 1/4W	1	
R401	ERD25TJ473	" 47KΩ 1/4W	1	
R402	ERD25TJ154	" 150KΩ 1/4W	1	
R403	ERD25TJ222	" 2.2KΩ 1/4W	1	
R404	ERD25TJ182	" 1.8KΩ 1/4W	1	
R405	ERD25TJ122	" 1.2KΩ 1/4W	1	
R406	ERD25TJ473	" 47KΩ 1/4W	1	
R407	ERD25TJ154	" 150KΩ 1/4W	1	
R409	ERD25TJ822	" 8.2KΩ 1/4W	1	
R410	ERD25TJ103	" 10KΩ 1/4W	1	
R501	ERD25TJ684	" 680KΩ 1/4W	1	
R502	ERD25TJ103	" 10KΩ 1/4W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
		VARIABLE RESISTORS		
VR1,2,3,4	EWFFWAR20A24	Variable Resistor	4	20 KΩ (A)
VR5,6,7,8,9,10				
	EVLS3AA00B14	Semi-fixed Variable Resistor	6	10 KΩ (B)
VR11,12	EVLS3AA00B24	"	2	20 KΩ (B)
VR13,14	EWFN3AR30A14	Variable Resistor	2	10 KΩ (A)
VR15,16	EVLS3AA00B14	Semi-fixed Variable Resistor	2	10 KΩ (B)
VR201,202	EVLS3AA00B53	"	2	5 KΩ (B)
VR203,204,301				
	EVLS3AA00B54	"	3	50 KΩ (B)
VR302	EVLS3AA00B25	"	1	200 KΩ (B)
VR303,304	EVLS3AA00B15	"	2	100 KΩ (B)
VR501	EVLS3AA00B24	"	1	20 KΩ (B)
		CAPACITORS		
C1,2	ECEA50M4R7	Electrolytic Capacitor	2	4.7μF
C3,4	ECKD1H102PF	Ceramic Capacitor	2	0.001μF
C5,6	ECEA16V10	Electrolytic Capacitor	2	10μF
C7,8	ECCD1H331K	Ceramic Capacitor	2	330pF
C9,10,13,14	ECEA16V100	Electrolytic Capacitor	4	100μF
C15,16	ECEA16V10	"	2	10μF
C17,18	ECEA50V1	"	2	1μF
C19,20	ECEA16V10	"	2	10μF
C21,22	ECEA16V47	"	2	47μF
C23,24	ECQM05104KZ	Mylar Capacitor	2	0.1μF
C25,26	ECEA16V10	Electrolytic Capacitor	2	10μF
C27,28	ECCD1H220KC	Ceramic Capacitor	2	22pF
C29,30	ECEA16V10	Electrolytic Capacitor	2	10μF
C31,32,33,34	ECQM05123KZ	Mylar Capacitor	4	0.012μF
C35,36	ECQM05153KZ	"	2	0.015μF
C37,38	ECQM05123KZ	"	2	0.012μF
C39,40	ECEA50ZR68	Electrolytic Capacitor	2	0.68μF
C41,42	ECEA16V10	"	2	10μF
C43,44	ECQM05392KZ	Mylar Capacitor	2	0.0039μF

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R503	ERD25TJ474	Carbon Resistor 470KΩ 1/4W	1	
R504	ERD25TJ104	" 100KΩ 1/4W	1	
R505	ERD25TJ683	" 68KΩ 1/4W	1	
R506	ERD25TJ473	" 47KΩ 1/4W	1	
R507	ERGIANJ271	Metal-oxide Resistor 270Ω 1W	1	
R508	ERGIANJ221	" 220Ω 1W	1	
R509	ERD25TJ472	Carbon Resistor 4.7KΩ 1/4W	1	
R510	ERD25TJ683	" 68KΩ 1/4W	1	
R511	ERD25TJ105	" 100KΩ 1/4W	1	
R512	ERD25TJ562	" 5.6KΩ 1/4W	1	
R513	ERGIANJ151	Metal-oxide Resistor 150Ω 1W	1	
R514	ERD25TJ103	Carbon Resistor 10KΩ 1/4W	1	
R515	ERD25TJ223	" 22KΩ 1/4W	1	
R516	ERD25TJ105	" 1MΩ 1/4W	1	
R517	ERD25TJ104	" 100KΩ 1/4W	1	
R518	ERD25TJ182	" 1.8KΩ 1/4W	1	
R519	ERD25TJ104	" 100KΩ 1/4W	1	
R521	ERD25TJ123	" 12KΩ 1/4W	1	
R522	ERGIANJ821	Metal-oxide Resistor 820Ω 1W	1	
R523	ERD25TJ103	Carbon Resistor 10KΩ 1/4W	1	
R524	ERD25TJ563	" 56KΩ 1/4W	1	
R525	ERGIANJ151	Metal-oxide Resistor 150Ω 1W	1	
R526	ERD25TJ562	Carbon Resistor 5.6KΩ 1/4W	1	
R527,528	ERD25TJ563	" 56KΩ 1/4W	2	
R529	ERD25TJ103	" 10KΩ 1/4W	1	
R530,531	ERD25TJ563	" 56KΩ 1/4W	2	
R532	ERD25TJ103	" 10KΩ 1/4W	1	
R533	ERD25TJ473	" 47KΩ 1/4W	1	
R534	ERD25TJ153	" 15KΩ 1/4W	1	
R540	ERD25TJ822	" 8.2KΩ 1/4W	1	
R545	ERD25TJ104	" 100KΩ 1/4W	1	
R546	ERD25TJ102	" 1KΩ 1/4W	1	
R547	ERD25TJ822	" 8.2KΩ 1/4W	1	
R548	ERD25TJ153	" 15KΩ 1/4W	1	

Ref. No.	Part No.	Part Name & Description	Part No.	Part Name & Description	Pcs/ Set	Remarks
C405	ECEA50V1	Electrolytic Capacitor		1.µF	1	
C406	ECEA16V10	"		10µF	1	
C407	ECKD1H102PF	Ceramic Capacitor		0.001µF	1	
C408	ECEA16V470	Electrolytic Capacitor		470µF	1	
C409	ECEA50V1	"		1µF	1	
C410	ECEA16V10	"		10µF	1	
C411	ECKD1H102PF	Ceramic Capacitor		0.001µF	1	
C412	ECEA16V470	Electrolytic Capacitor		470µF	1	
C413, 414	ECKD1H102PF	Ceramic Capacitor		0.001µF	2	
C501	ECEA16V33	Electrolytic Capacitor		33µF	1	
C502	ECEA16V10	"		10µF	1	
C503	ECEA16V33	"		33µF	1	
C504	ECEA16V10	"		10µF	1	
C506	ECEA50Z2R2	"		2.2µF	1	
C507	ECEA50V1	"		1µF	1	
TRANSISTORS						
Tr1, 2	2SA721	Transistor			2	
Tr3, 4	2SC1327	"			2	
Tr5, 6	2SK66	FET			2	
Tr7, 8, 9, 10, 11, 12						
	2SC945	Transistor			6	
Tr13, 14	2SA721	"			2	
Tr15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30						
	2SC945	"			16	
Tr31, 33, 35	2SA564	"			3	
Tr37, 38, 39, 40	2SC945	"			4	
Tr201, 202	2SA721	"			2	
Tr203, 204	2SC1327	"			2	
Tr205, 206, 291						
	2SC945	"			3	
Tr301	2SC1847	"			1	
Tr302	2SC945	"			1	
Tr303, 304	2SC1407	"			2	
Tr305	2SC945	"			1	

Ref. No.	Part No.	Part Name & Description	Part No.	Part Name & Description	Pcs/ Set	Remarks
C45, 46	ECEA6V220	Electrolytic Capacitor		220µF	2	
C47, 48	ECEA16V10	"		10µF	2	
C49, 50	ECEA50Zr68	"		0.68µF	2	
C51, 52	ECEA16V47	"		47µF	2	
C53, 54	ECCD1H470KC	Ceramic Capacitor		47 pF	2	
C55, 56	ECCD1H100FC	"		10 pF	2	
C57, 58	ECEA16V47	Electrolytic Capacitor		47µF	2	
C59, 60, 61, 62, 63, 64, 65, 66						
	ECEA16V10	"		10µF	8	
C67, 68	ECEA16V100	"		100µF	2	
C69, 70	ECEA50V3R3	"		3.3µF	2	
C71	ECEA16V100	"		100µF	1	
C73, 77	ECKD1H102PF	Ceramic Capacitor		0.001µF	2	
C81, 82	ECEA50ZR1	Electrolytic Capacitor		0.1µF	2	
C83, 84	ECEA50V1	"		1µF	2	
C87, 88	ECCD1H101KC	Ceramic Capacitor		100 pF	2	
C201, 202	ECCD1H680KC	"		68 pF	2	
C203, 204	ECEA50M4R7	Electrolytic Capacitor		4.7µF	2	
C205, 206	ECEA16V10	"		10µF	2	
C207, 208	ECKD1H561KB	Ceramic Capacitor		560 pF	2	
C209, 210	ECQM05393KZ	Mylar Capacitor		0.039µF	2	
C211, 212	ECQM05102KZ	"		0.001µF	2	
C213, 214	ECEA6V330	Electrolytic Capacitor		330µF	2	
C215, 216	ECEA16V100	"		100µF	2	
C217, 218	ECEA16V10	"		10µF	2	
C219	ECEA16V33	"		33µF	1	
C291	ECEA16V100	"		100µF	1	
C301, 302	ECQF4223KZH	Film Capacitor		0.022µF	2	
C303	ECQM05104KZ	Mylar Capacitor		0.1µF	1	
C304	ECQM05473KZ	"		0.047µF	1	
C305, 306	ECQS1331JZ	Styrol Capacitor		330 pF	2	
C307, 308	ECQS1101JZ	"		100 pF	2	
C309	ECQF622KZH	Film Capacitor		0.002µF	1	
C401, 402, 403, 404						
	ECEA25V1000	Electrolytic Capacitor		1000µF	4	

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
T401	25C1847	Transistor	1	
T402, 403	25C945	"	2	
T404	25A886	"	1	
T405	25A564	"	2	
T501, 502	25C945	"	2	
T503	25A564	"	1	
T504	25C1317	"	1	
T505	25D288	"	1	
T506, 507, 508				
	25C945	"	3	
T509	25A564	"	1	
T511	25C1317	"	1	
T512	25D288	"	1	
T513, 514	25A564	"	2	
T515	25A719	"	1	
T516	PN150	Photo Transistor	1	
		DIODES		
D1, 2, 3, 4	0A90MLF	Germanium Diode	4	
D5, 7, 9, 11, 13, 15, 17, 19, 21, 301, 302				
	MA150LF	Silicon Diode	11	
D401, 402, 403, 404, 405, 406, 407				
	SM102LF	"	7	
D408	MA1056LF	Zener Diode	1	
D501	MA150LF	Silicon Diode	1	
D502, 503	MV121LF	"	2	
D504, 505, 506, 507, 508, 509, 510				
	MA150LF	"	7	
D511	LN55	LED	1	
D512, 513	SM102LF	Silicon Diode	2	
D515, 516, 517, 519, 520, 521, 522				
	MA150LF	"	7	
		TRANSFORMERS		
T1, 2	QLA0349	Headphone Transformer	2	

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Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
T201	QLFD25EMX	Power Transformer	1	
T301	QLB0149	Oscillator Transformer	1	
		COILS		
L1, 2, 3, 4, 5, 6	QLX0331W	Peaking Coil	6	
L301, 302	QLX0731W	"	2	
		PILOT LAMPS		
PL1	XAMQ34S200W	Pilot Lamp (Monitor)	1	
PL2	XAMQ21P500N	Pilot Lamp (Power)	1	
PL3, 4	Refer to E4	Meter Lamp	(2)	
PL5, 6, 7, 8	XAMQ22P200N	Pilot Lamp (Record, Tape Selector)	4	
		SWITCHES		
S1	QSW6204A	Push Switch (Monitor)	1	
S2	QSW2212A	Push Switch (Memory Rewind)	1	
S3, 4	QES1361	Micro Switch (Auto Tape Selector)	1	
S5, 6, 7, 8, 9	QSB0234	Leaf Switch (Operation Switches)	5	
S10	QSF2218W	Lever Switch (Power ON/OFF)	1	
S11	QSR1407H	Rotary Switch (AC Voltage Selector)	1	
		ELECTRICAL PARTS		
E1	QWY4115Z	Record Head	1	
E2	QWY4114Z	Playback Head	1	
E3	QWY5101Z	Erase Head	1	
E4	QSL1082RNM	Level Meter	2	
E5	QFC1204M	Power Cord	1	
E6	QEJ5004S	Jack Board Assembly	1	
E7	QJA0250H	Microphone Jack	2	
E8	QJA0253H	Headphone Jack	1	
E9	QJP1908JO	3 Pin Plug	4	
E10	QJP1902JO	6 Pin Plug	5	
E11	QJP1903JO	9 Pin Plug	3	
E12	QJP1904JO	12 Pin Plug	1	
E13	QJP1914JN	3 Pin Plug	1	

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
		CABINET PARTS		
G1	QGC1070	Case Cover	1	
G2	QYP0682	Front Panel Assembly	1	
G2-1	QKH1128	Handle	2	
G2-2	QMA3034	Panel Angle	2	
G2-3	SGXA64	Ornamental Washer	4	
G2-4	QBK7056	Fiber Washer	4	
G2-5	XWG6FZ	Fiat Washer	4	
G2-6	XWAGBFZ	Spring Washer	4	
G2-7	XNAGFFZ	Hexagon Nut	4	
G3	QYR0161	Dressing Glass	1	
G4	QYF0269	Cassette Lid Assembly	1	
G5	QXB0455	Push Button	1	
G6	QYT0406A	Control Knob-C	2	
G7	QYT0438	Control Knob-B	2	
G8	QYT0437	Control Knob-A	1	
G9	QG01330	Button	1	
G10	SBLA4-3	Lever Knob	1	
G11	QKA1065	Rubber Foot	4	
G12	QYB0384	Back Board Assembly	1	
G13	XSB3+8BVS	Screw $\oplus 3 \times 8$	3	
G14	XSB4+8BVS	Screw $\oplus 4 \times 8$	4	
G15	QH01256	Screw	2	
G16	XTN3+8BFZ	Tapping Screw $\oplus 3 \times 8$	7	
G17	XSS3+6S	Screw $\oplus 3 \times 6$	6	
G18	XSN4+10S	Screw $\oplus 4 \times 10$	4	
G19	XWESFZ	Flat Washer 3 ϕ	3	
G20	XWG4FZ	Flat Washer 4 ϕ	4	
G21	QBW2022	Washer	2	
G22	QBJ3299	"	2	
		ACCESSORIES		
A1	RP050A	Connection Cord-G	1	
A2	QKJ0185	Taps Driver	1	

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
E14	QJS0784JN	3 Pin Socket	5	
E15	QJS0778JN	6 Pin Socket	5	
E16	QJS0779JN	9 Pin Socket	3	
E17	QJS0780JN	12 Pin Socket	1	
E18	QJT1042	Contact	79	
E19	QBJI425A	AC Power Cord Bushing	1	
E20	QTD1253	Cord Clamper-A	3	
E21	QTD1254	Cord Clamper-B	3	
E22	QTD1250XN	Cord Clamper-C	1	
E23	QTD1121	Cord Spring	1	
E24	QEG1222	Rubber Bushing	1	
E25	QBG1395	Lamp Cover	3	
E26	QBG1112A	Rubber Cushion	2	
E27	QGK2696	Meter Cover	1	
E28	QGL1112R	Lamp Ornament	1	
E29	QTD1164	Power Cord Clamper	2	
E30	QTH1088B	Heat Sink	2	
E31	QTS1402	Shield Plate-A	1	
E32	QTS1394	Shield Plate-B	1	
E33	QMA3030B	Angle	1	
E34	QMA3074A	Cord Angle	1	
E35	QMA3032A	Switch Angle	1	
E36	QMA3035	Jack Board Angle	1	
E37	QMA3033	Meter Angle	1	
E38	QHQ1070	Nut	3	
E39	QHQ1004	"	1	
E40	QHQ1039	"	2	
E41	QWQ2002	Washer	1	
E42	QWQ1133	"	2	
E43	QJT4017	4 Pin Terminal Plate	1	
E44	XBA0031525	Fuse (315 mA/T)	3	
E45	XBA0100027	Fuse (1AT)	2	
E46	QTF1054	Fuse Holder	30	

