

**SERVICE MANUAL**



**FISHER**

**CR-5115 (UM)**

**CASSETTE DECK**

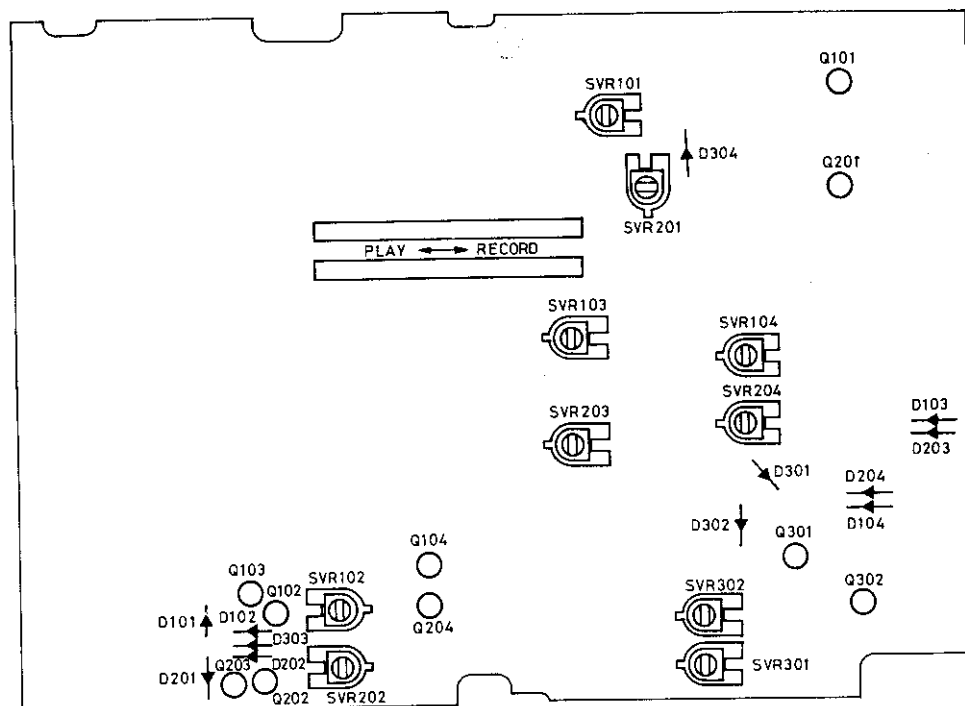


*THE FIRST NAME IN HIGH FIDELITY*

## SPECIFICATIONS

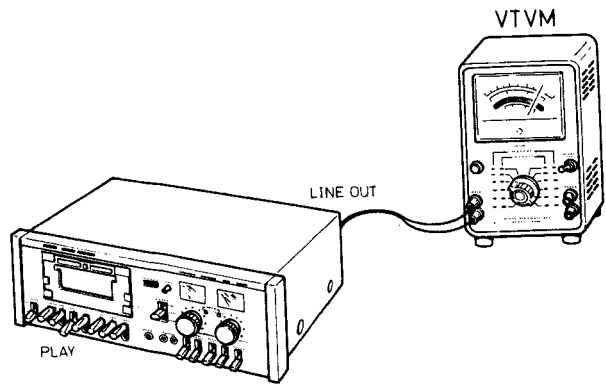
Tape	CrO <sub>2</sub> Tape, FeCr Tape and Normal Tape	IC	2
Recording System	AC Bias, 1/4 Track Stereo	Transistors	24
Erasing System	AC Erase 1/2 Track	Diodes	15
Monitor System	DC Monitor	Dimensions	414(W) x 300(D) x 154(H) mm
Tape Speed	1-7/8 ips. (4.75 cm/s)	Weight	Approx. 5.4 kg
Rewind & Fast Forward Time	90 sec. (C-60)	Power Source	AC 110, 125, 220V 50Hz
Speed Accuracy (PLAY)	±1% (Nominal) ±2% (Limit)		
Wow & Flutter	0.07% WRMS (Nominal)		
Frequency Response (PLAY)	MTT-116U (Normal) MTT-116K (CrO <sub>2</sub> , FeCr) ... Tape		
NORMAL	31.5 ~ 12.5KHz $\pm 5$ dB (Nominal) 100 ~ 6.3KHz $\pm 3$ dB (Limit)		
CrO <sub>2</sub> , FeCr	31.5 ~ 12.5KHz $\pm 5$ dB (Nominal) 100 ~ 6.3KHz $\pm 3$ dB (Limit)		
NORMAL	MONITOR 600~4KHz (Nominal) $\pm 2$ dB (Limit) $\pm 5$ dB 300~6KHz (Nominal) $\pm 3$ dB (Limit) $\pm 7$ dB		
Signal to Noise Ratio	DOLBY ON: 58dB (Nominal) 52dB (Limit) OFF: 50dB (Nominal) 44dB (Limit)		
Erase Ratio	70dB (Nominal) 60dB (Limit)		
Input	MIC: 1.2K ohms LINE IN: 80K ohms		
Output	LINE OUT: 3K ohms HEADPHONES: 8 ohms to 10K ohms		

## PARTS LOCATIONS

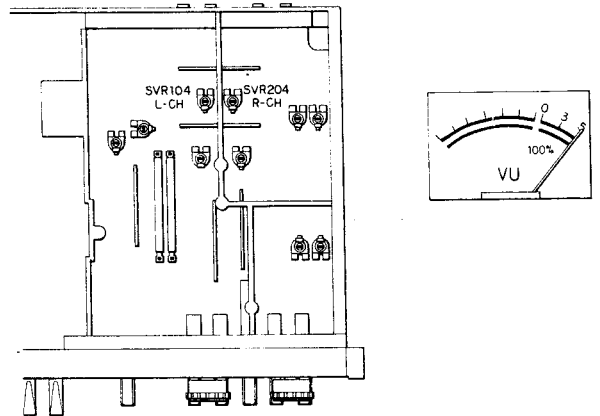


No.	Item	Test tape	Rec. Play	Tape SW	Monitor SW	Input select SW	Dolby FM SW	Dolby N.R. SW	Limiter SW	Rec. vol.	Dolby FM vol.	Input terminal	Input freq.	Input level	Output terminal	Adjustment & ratings
1	Head azimuth	VTT 658	Play	(CrO <sub>2</sub> ) (FeCr) NOR.	SOURCE	LINE IN	OFF	OFF	OFF	MAX.	MAX.	—	—	—	LINE OUT	Adjust azimuth screw to obtain a maximum output of 10 KHz for both L & R channels. After adjustment, set tape switch to Fe-Cr & CrO <sub>2</sub> . Make sure that at each switch position 10 KHz output drops by 4dB.
2	Playback gain	MTT-150 Dolby tape	Play	NOR.	SOURCE	LINE IN	OFF	OFF	OFF	MAX.	MAX.	—	—	—	LINE OUT	Adjust SVR101 & 201 to obtain an output of 1.1V ± 0.5dB.
3	Meter	MTT-150 Dolby tape	Play	NOR.	SOURCE	LINE IN	OFF	OFF	OFF	MAX.	MAX.	—	—	—	Meter	Following adjustment of playback gain, adjust SVR104 & 204 until meter stands at 5dB.
4	Rec. volume		Rec.	NOR.	SOURCE	LINE IN	OFF	OFF	OFF	Adj.	MAX.	LINE IN	1K	-20dB	Meter	Adjust REC VOL until meter reading becomes OVU (at an output level of 1.1V).
5	Bias	BASF L.H super	Rec. Play	NOR.	SOURCE	LINE IN	OFF	OFF	OFF	Same item 4	MAX.	LINE IN	1K, 10K	-44dB	LINE OUT	Record & then play back 1KHz & 10KHz signals. Adjust SVR301 & 302 until output difference becomes 0 ± 1.5dB.
6	Monitor Head azimuth	BASF L.H super	Rec.	NOR.	TAPE	LINE IN	OFF	OFF	OFF	Same item 4	MAX.	LINE IN	10K	-44dB	LINE OUT	Adjust azimuth screw for monitor head to obtain a maximum output of 10KHz for both L & R channels.
7	Recording current	BASF TP-18CrO <sub>2</sub>	Rec. Play	CrO <sub>2</sub>	SOURCE	LINE IN	OFF	OFF	OFF	Same item 4	MAX.	LINE IN	1K	-20dB	LINE OUT	Set input level to OVU when recording. Afterwards, adjust SVR102 & 202 to obtain an output of OVU during playback.
8	Monitor Amp. gain	BASF TP-18CrO <sub>2</sub>	Rec.	CrO <sub>2</sub>	TAPE	LINE IN	OFF	OFF	OFF	Same item 4	MAX.	LINE IN	1K	-20dB	LINE OUT	Adjust SVR103 & 203 to obtain an output of OVU when monitoring tape.

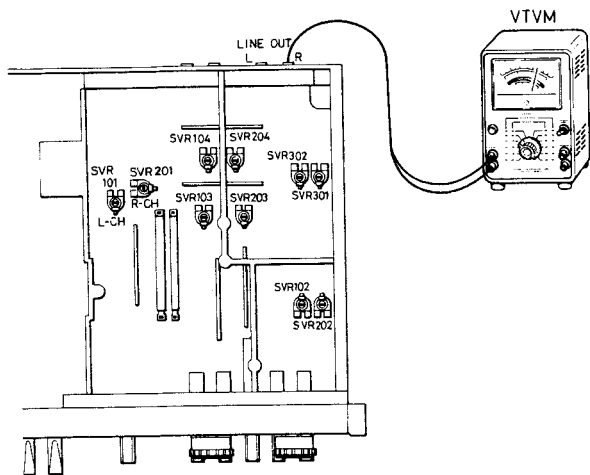
### HEAD AZIMUTH ADJUSTMENT



### METER ADJUSTMENT

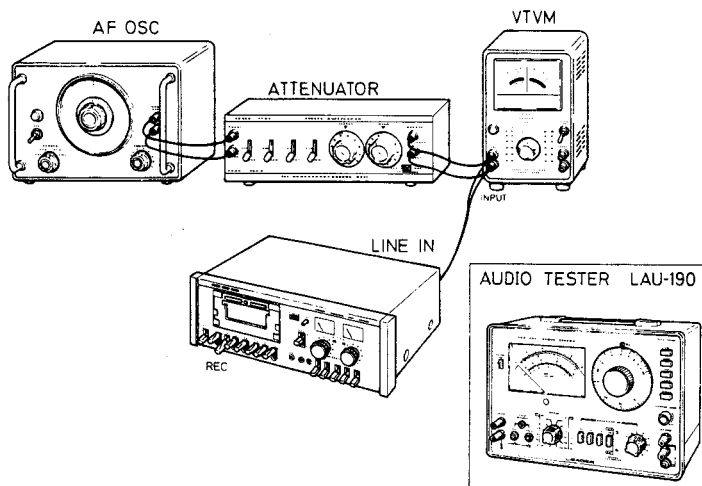


### PLAYBACK GAIN ADJUSTMENT

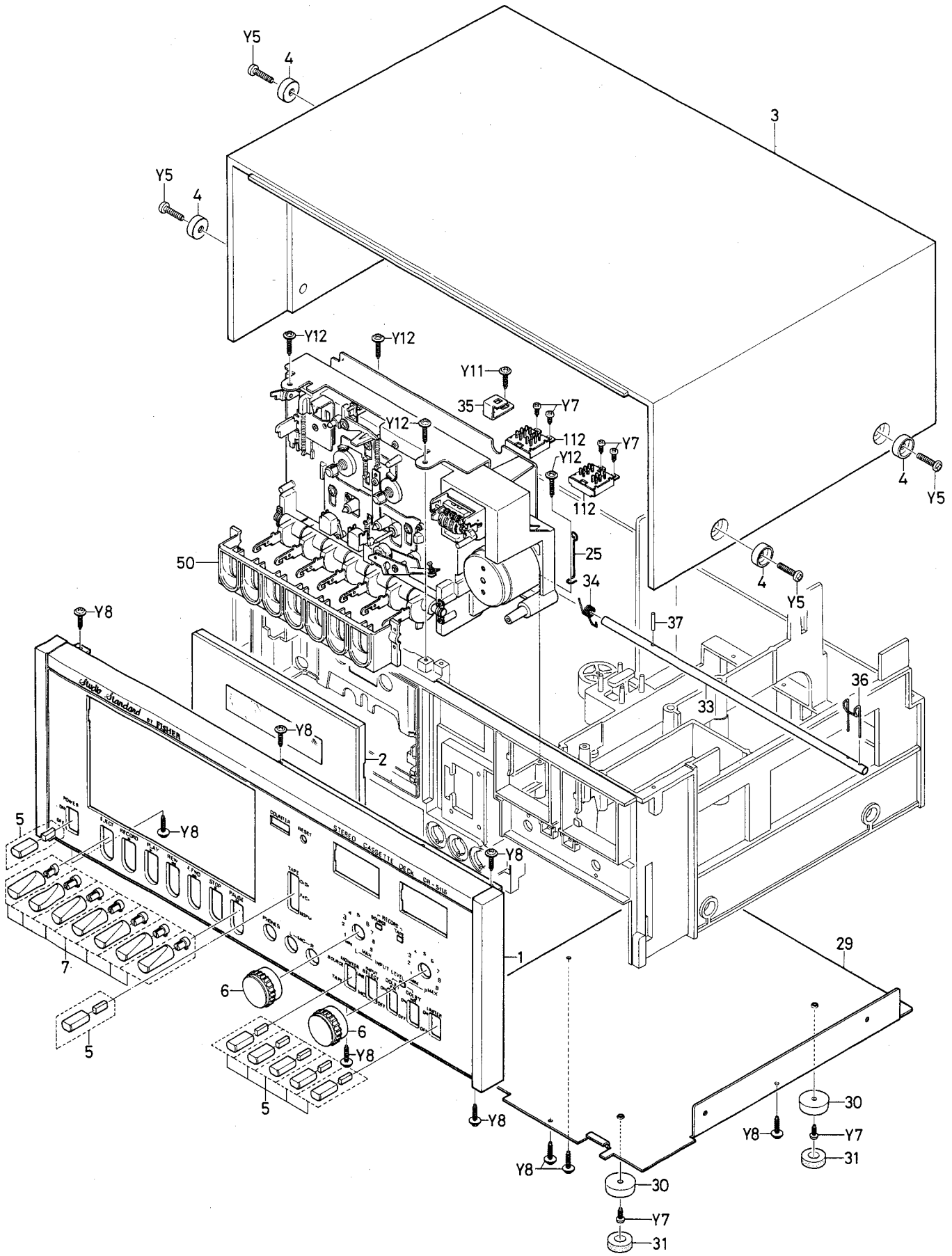


### REC VOL ADJUSTMENT

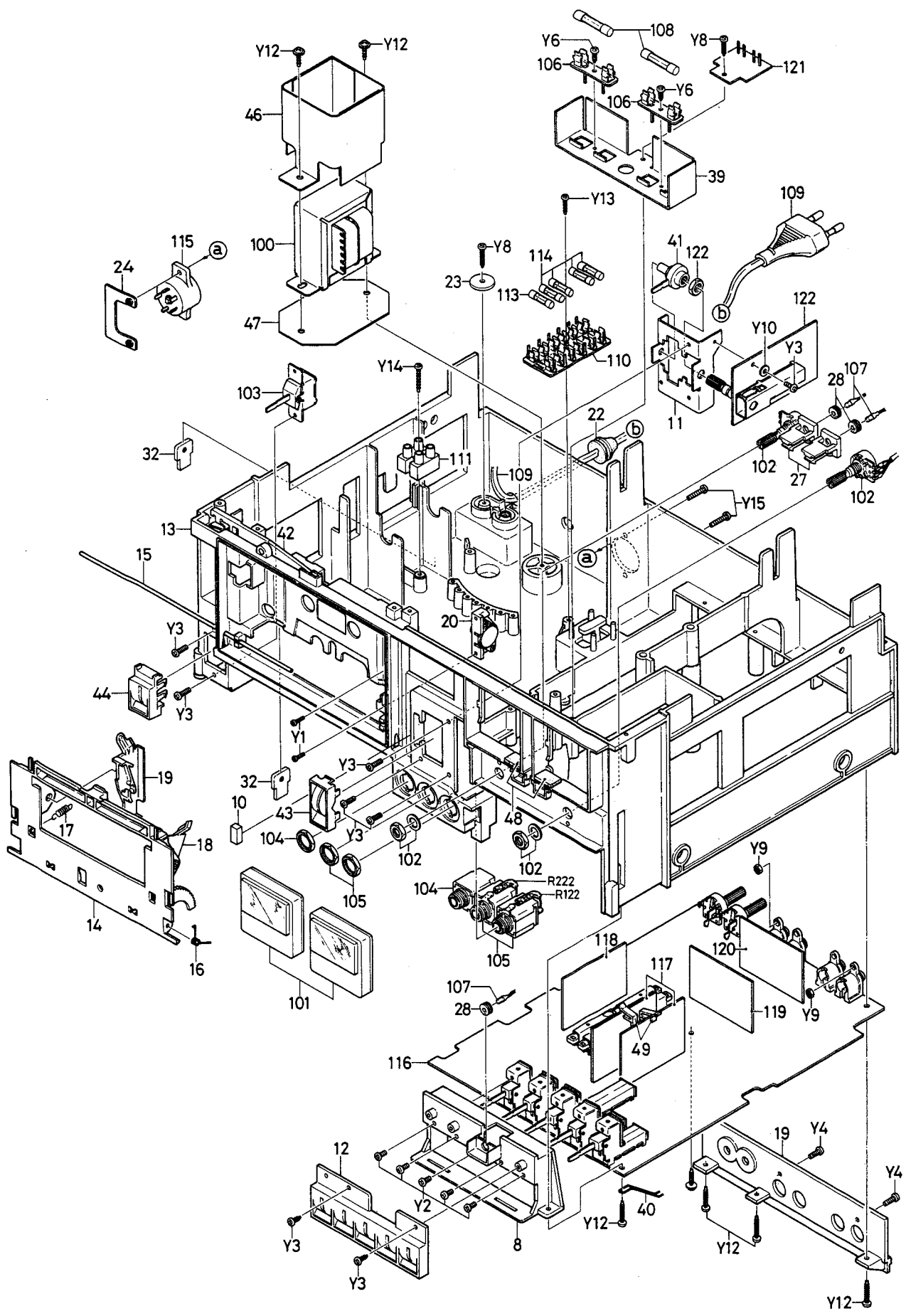
### MONITOR HEAD AZIMUTH ADJUSTMENT



EXPLODED VIEW



EXPLODED VIEW





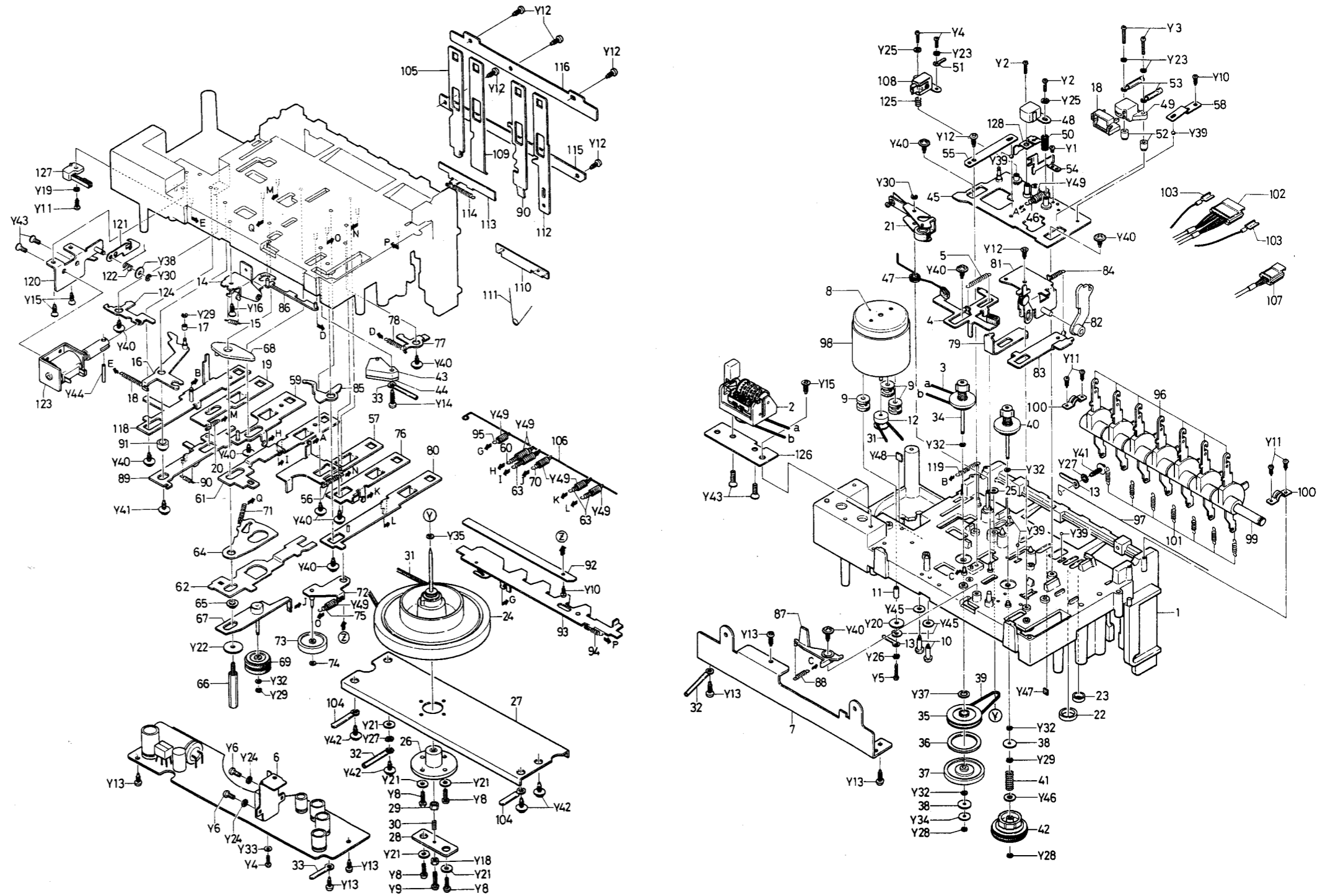




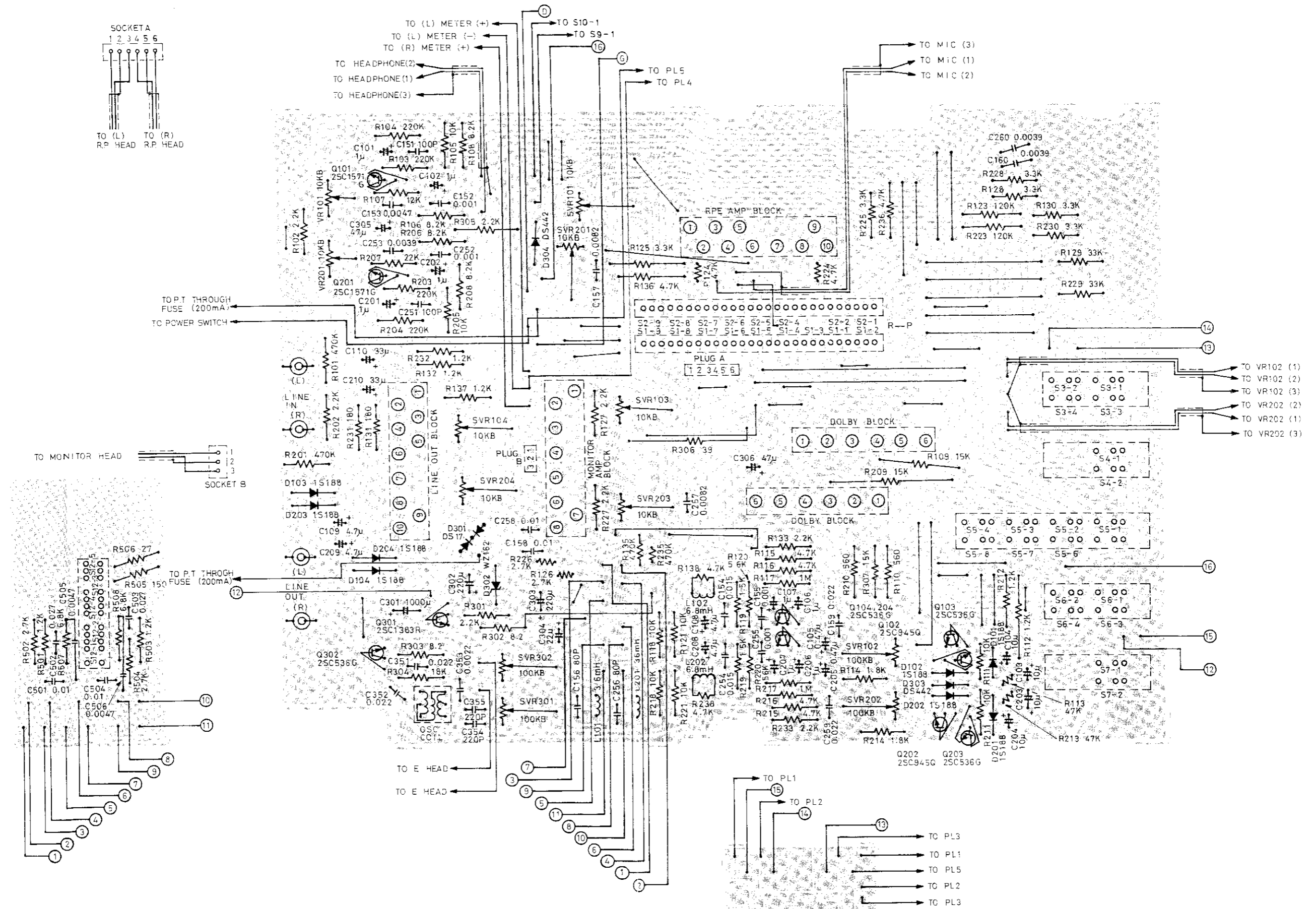
PARTS LIST

Key . No.	Part No.	Description	Q'ty
<b>CAPACITORS</b>			
C903		Electrolytic 10μF 16WV	1
C906		Electrolytic 33μF 16WV	1
C904		Electrolytic 47μF 16WV	1
C905		Electrolytic 100μF 10WV	1
C902		Electrolytic 100μF 16WV	1
C901		Electrolytic 470μF 25WV	1
<b>RESISTORS</b>			
All resistors are carbon P type ±10% ¼W unless otherwise noted.			
R912		1 00 ohm	1
R901		1 20 ohm	1
R911		Solid 390 ohm ±10% ¼W	1
R905		820 ohm	1
R902		Solid 820 ohm ±10% ¼W	1
R904		Solid 1.8K ohm ±10% ¼W	1
R907,914		2.7K ohm	2
R910		4.7K ohm	1
R913		10K ohm	1
R908		12K ohm	1
R903		18K ohm	1
R909		22K ohm	1
R906		100K ohm	1
<b>MECHANISM SCREWS</b>			
Y 1		Pan Head Screw 2x2mm	1
Y 2		Pan Head Screw 2x8mm	2
Y 3		Pan Head Screw 2x12mm	2
Y 4		Pan Head Screw 2x6mm	3
Y 5		Pan Head Screw 2.6x12mm	1
Y 6		Pan Head Screw 3x4mm	2
Y 8		Pan Head Screw 3x8mm	4
Y 9		Pan Head Screw 3x10mm	1
Y10		Tapping Screw 2.3x6mm	4
Y11		Tapping Screw 2.3x8mm	3
Y12		Tapping Screw 3x6mm	9
Y13		Tapping Screw 3x8mm	3
Y14		Tapping Screw 3x14mm	1
Y15		Flat Head Tapping Screw 3x6mm	2
Y16		Flat Head Tapping Screw 3x8mm	1
Y18		Nut 3mm	1
Y19		Washer 2.3x4.3x0.4mm	1
Y20		Washer 2.6x10x0.5mm	1
Y21		Washer 3x8x0.5mm	5
Y22		Washer 3x13x1mm	1
Y23		Spring Washer 2mm	4
Y24		Spring Washer 3mm	2
Y25		Internal Tooth Lock Washer 2.6mm	2
Y26		External Tooth Lock Washer 2.6mm	1
Y27		External Tooth Lock Washer 3mm	2
Y28		"E" Ring 1.2mm	2
Y29		"E" Ring 1.5mm	3
Y30		"E" Ring 2mm	2
Y32		Graphite Nylon Washer 2.1x4x0.25mm	6
Y33		Fiber Washer 2.1x5x0.3mm	1
Y34		Graphite Nylon Washer 2.1x8.5x0.25mm	1
Y35		Graphite Nylon Washer 2.6x4.7x0.5mm	1
Y37		Graphite Nylon Washer 5.2x8.5x0.25mm	1
Y38		Fiber Washer 3x8x0.5mm	1
Y39		Still Ball 2mm	5
Y40		Tapping Screw with Washer 3x6mm	12
Y41		Tapping Screw with Washer 3x8mm	2
Y42		Tapping Screw with Washer 3x10mm	4
Y43		Flat Head Screw 3x6mm	4
Y44		Spring Pin 2φx14mm	1
Y45		Washer 3x8x1mm	3
Y46		Graphite Nylon Washer 5.2x8x0.13mm	1
Y47		Rubber Cushion 3x4x1mm	1
Y48		Rubber Cushion 5.5x5.5x1mm	1
Y49		Vinyl Tube 4x12mm	8

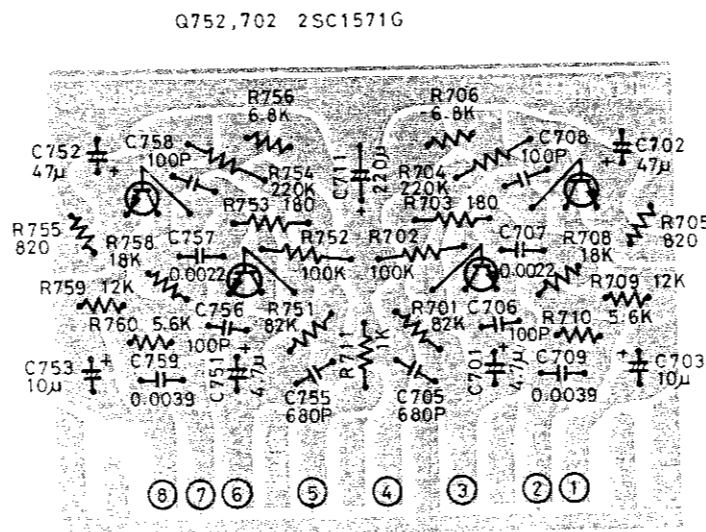
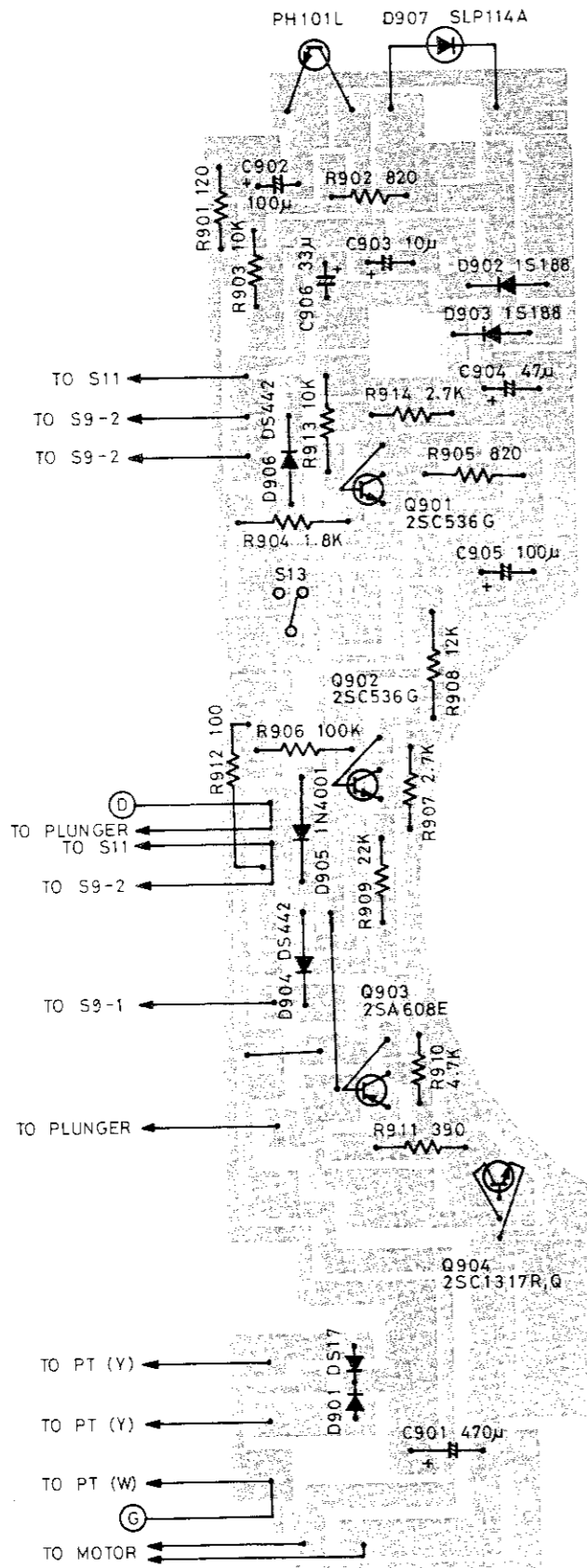
EXPLODED VIEW (MECHANISM)



WIRING DIAGRAM



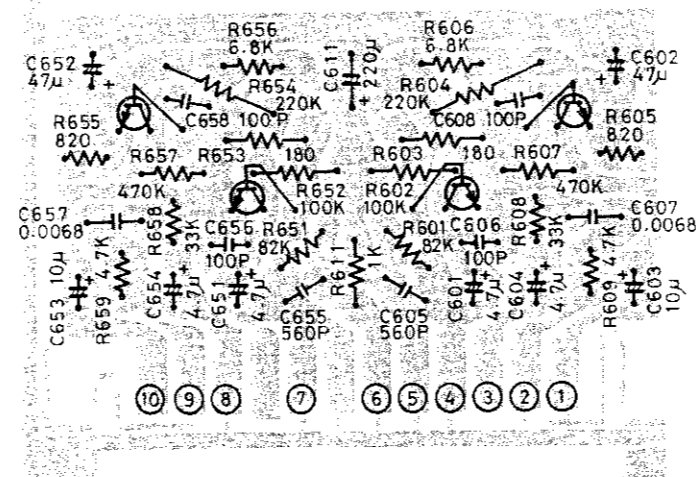
WIRING DIAGRAM



Q751,701 2SC1571G

MONITOR BLOCK

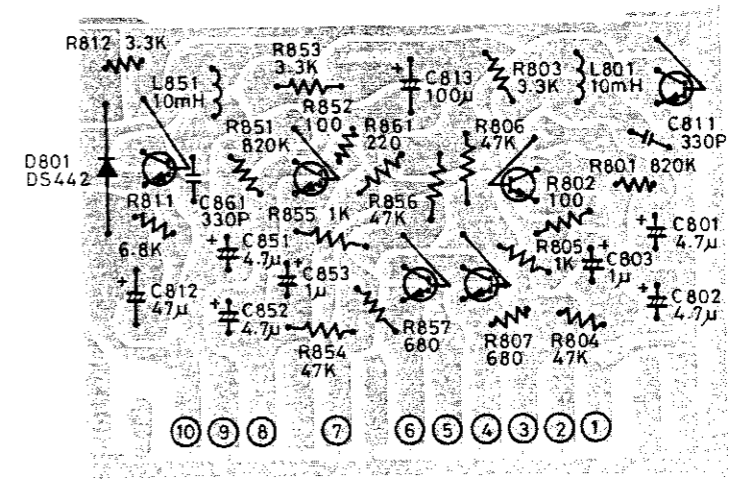
Q652,602 2SC1571G



Q651,601 2SC1571G

PRE AMP BLOCK

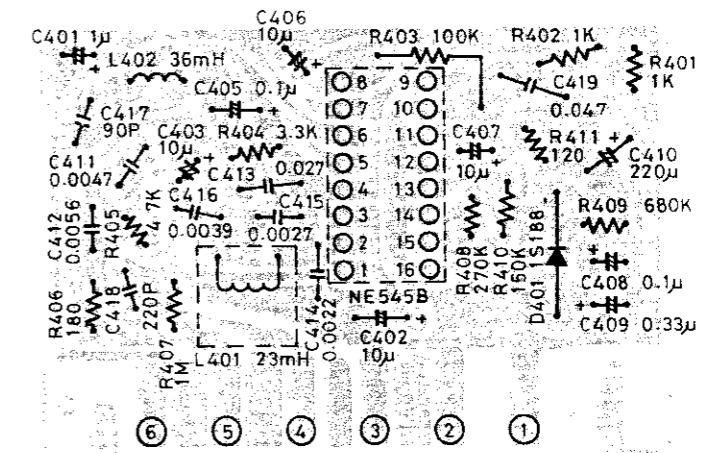
Q851,801 2SC945Q



Q852,802 2SC536G

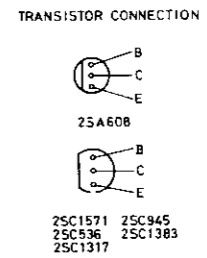
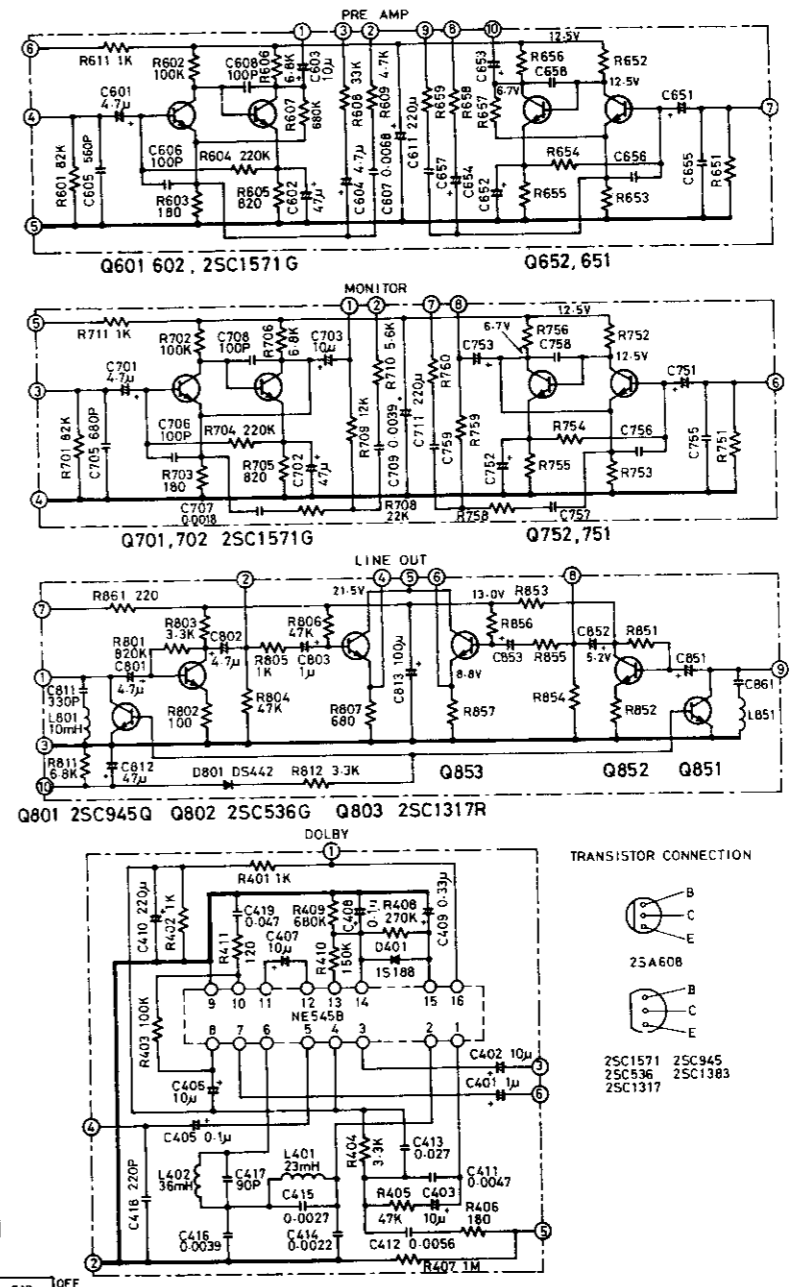
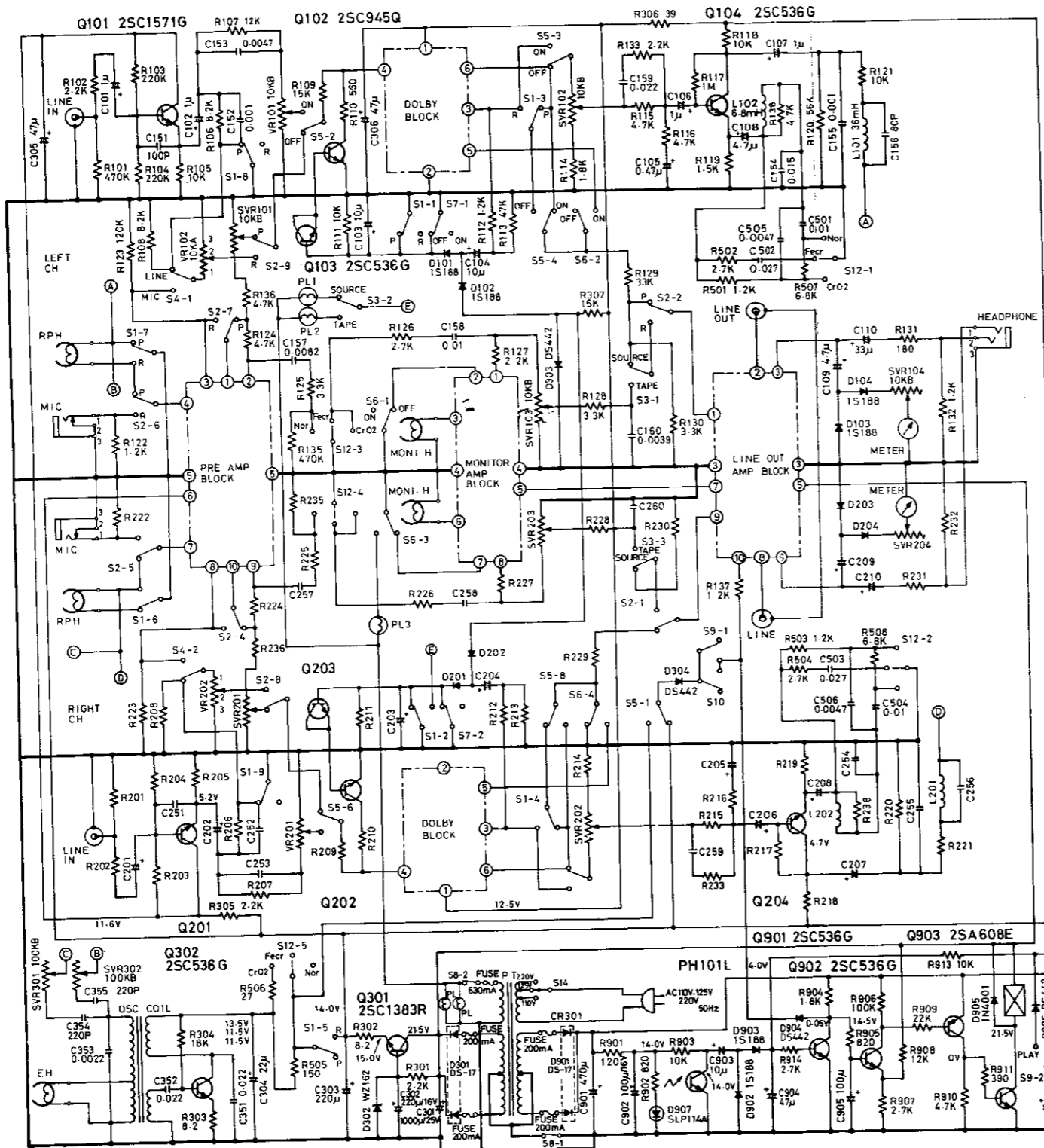
Q853,803 2SC1317R

LINE OUT BLOCK



DOLBY BLOCK

SCHEMATIC DIAGRAM



- S1-1-1-9.....RECORD/PLAY SWITCH (S2-3 NO USED)
- S2-1-2-3.....TAPE/SOURCE SWITCH (S3-4 NO USED)
- S4-1-4-2.....LINE/MIC SWITCH
- S5-1-5-8.....DOLBY FM SWITCH (S5-5 NO USED)
- S6-1-6-4.....DOLBY N-R SWITCH
- S7-1-7-2.....LIMITER SWITCH
- S8.....POWER SWITCH
- S9-1-9-2.....PLAY SWITCH
- S10-1-10-2.....STOP SWITCH (S10-2 NOUSE)
- S11.....PAUSE SWITCH
- S12-1-12-5.....TAPE SWITCH
- S13.....MECHANISM SWITCH
- S14.....VOLTAGE SELECT SWITCH



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