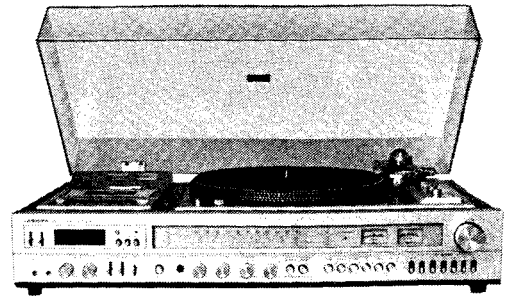


TOSHIBA

STEREO MUSIC CENTRE

SM-3750



SPECIFICATIONS

TUNER

Frequency Ranges: FM 88 – 108 MHz
LW 145 – 400 kHz
MW 525 – 1605 kHz
SW 5.9 – 18 MHz
Intermediate Frequencies: AM 455 kHz/460 kHz
FM 10.7 MHz

FM BAND

Aerial: External aerial (300 ohm and 75 ohm)
Usable Sensitivity: Mono: 4.0 μ V
Signal to Noise Ratio: Mono: 60 dB (40 kHz deviation at 1 kHz)
Distortion: 0.4% at 1 kHz
AM Suppression: 40 dB
Separation at 1 kHz: 35 dB

AM BAND

Aerial: Ferrite core aerial (Built-in)
Usable Sensitivities: LW: 400 μ V/m
MW: 200 μ V/m
SW: 100 μ V/m

AMPLIFIER

Continuous Power: 2 x 40W, 1% THD at 4 ohm (each channel driven)
2 x 28W, 1% THD at 8 ohm (each channel driven)
2 x 32W, 1% THD at 4 ohm (both channels driven)
2 x 24W, 1% THD at 8 ohm (both channels driven)
Frequency Response: 30 Hz – 20 kHz (-3 dB)
Difference Output: 2 dB
Crosstalk Attenuation: 45 dB at 1 kHz
Signal to Noise Ratio: 60 dB
Sensitivity at Rated Power Output: Moving magnet cartridge: 8.0 mV (10 cm/sec.) at 1 kHz
Tape in: 30 mV
Tape in: 100K ohm at 1 kHz
Recording Output: 30 mV 10K ohm
Tone Control: Bass: \pm 10 dB at 100 Hz
Treble: \pm 10 dB at 10 kHz

Headphones: Recommendable impedance: more than 8 ohms

TURNTABLE

Drive System: Belt drive/Full Auto
Motor: DC Servo motor
Turntable Platter: 31.5 cm with stroboscope
Speed: Two speeds 33 1/3 & 45 r.p.m.

Wow & Flutter: Less than 0.07 % (DIN)
Signal to Noise Ratio: More than 55 dB (DIN)
Cartridge: C-55M
Stylus: N-55D
Stylus Pressure: 2.0 g \pm 0.5 g

CASSETTE RECORDER

Usable Tape: Compact cassette
Tape Speed: 4.75 cm/s
Recording System: AC Bias
Erasing System: AC Erase
Track System: 4 Track/2 Channel stereophonic
Heads: Record/Playback head, Erase head
Frequency Response: 40 Hz – 10 kHz (\pm 3 dB)
Signal to Noise Ratio: 55 dB

GENERAL

Power Supplies: 220 V 50 Hz for Europe
240 V 50 Hz for United Kingdom & Australia
Power Consumption: 170 W
System Dimensions: W 692 x H 109 (210) x D 430 mm
System Weight: 20 kg

DIGITAL CLOCK

Display: 24 hours red LED, hour, minute
Auto/Sleep
Functions: Auto/Sleep
Clock Type (time standard): AC Line Frequency
Sleep Mode: Max. 59 min.

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CAUTION

Take care to avoid static electricity as it can easily damage the LSI (TMS1943NL) used in model SM-3750.

1. Never touch the terminal of LSI with bare fingers.
2. Never bring the terminal of LSI into contact with other materials.
3. Use the LSI getting in conductive foam rubber.
4. When using a soldering iron, it is recommendable to connect it to the ground.

*Noise Reduction System is manufactured under license from Dolby Laboratories Inc. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Inc.

1. OPERATING CONTROLS

1-1 RECEIVER SECTION

■ FRONT VIEW

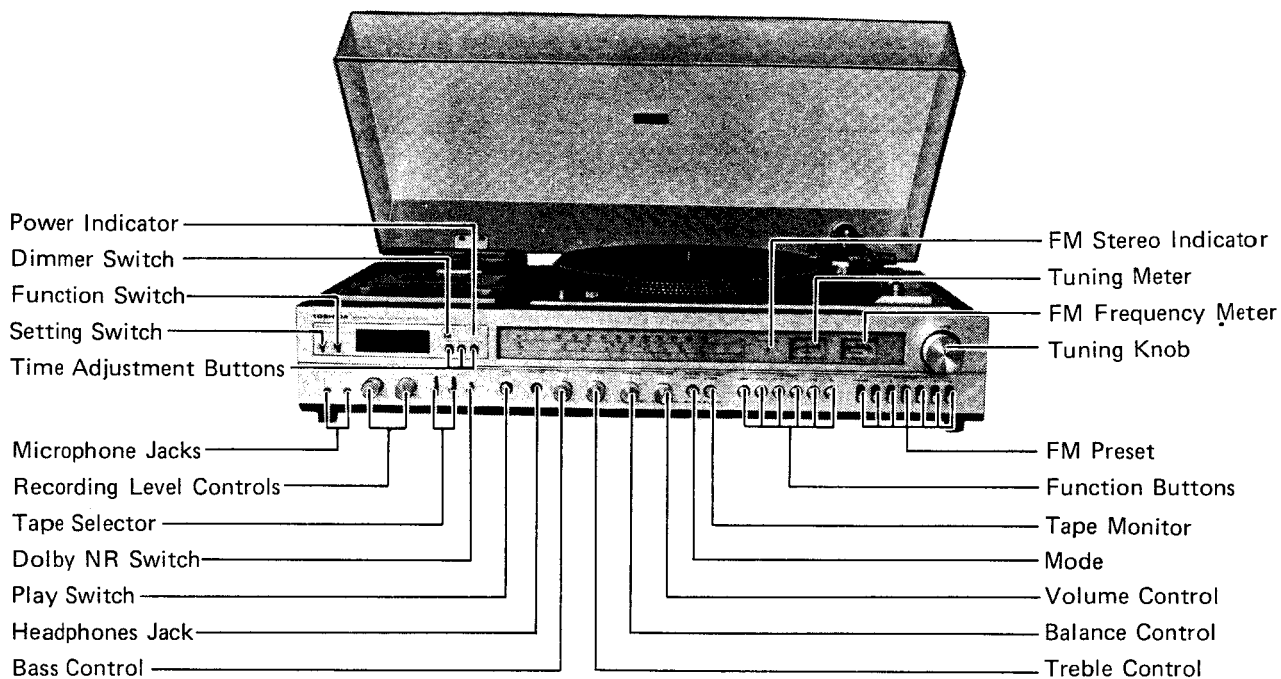


Figure 1.

■ REAR VIEW

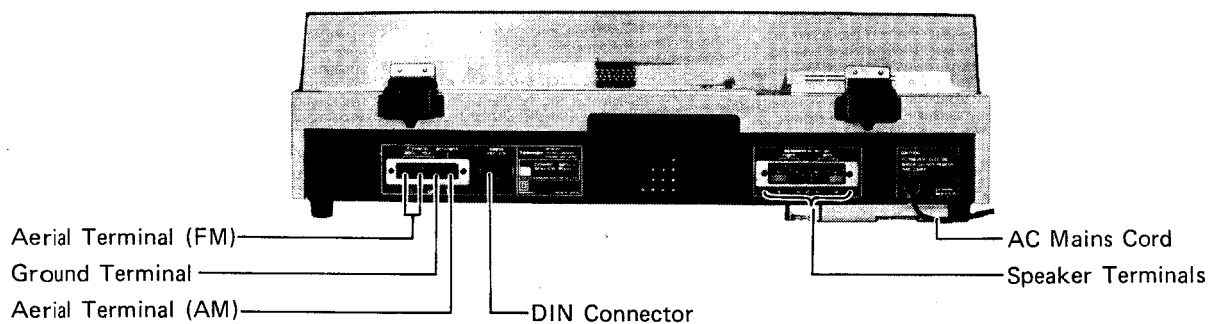


Figure 2.

■ RIGHT SIDE VIEW

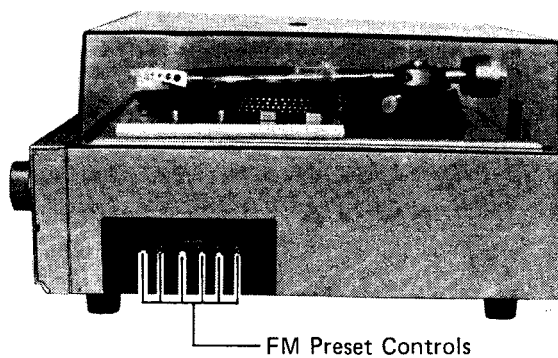


Figure 3.

1-2 CASSETTE RECORDER SECTION

■ TOP VIEW

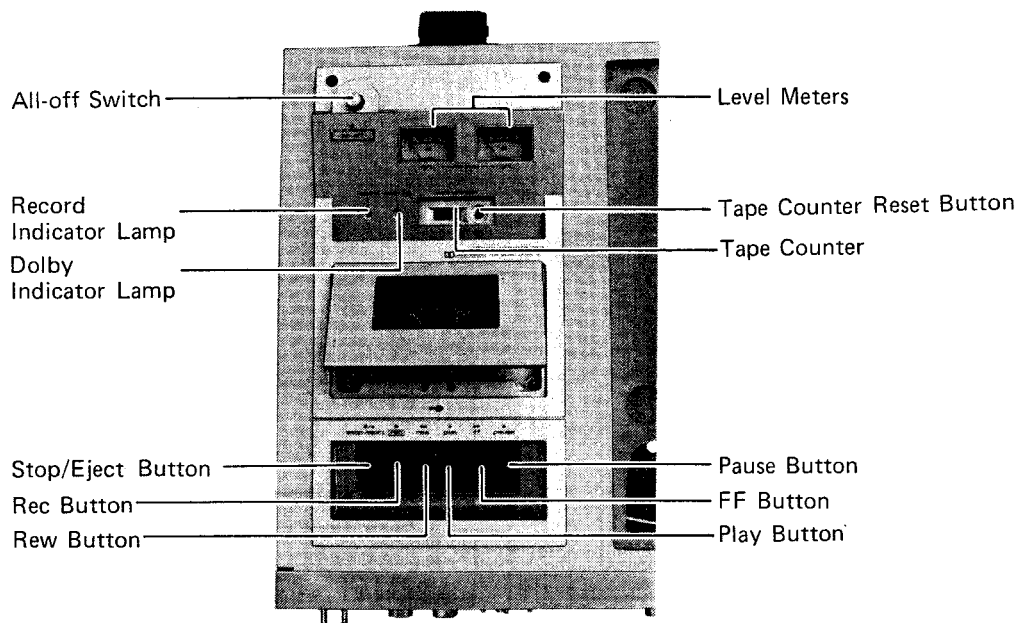


Figure 4.

1-3 TURNTABLE SECTION

■ TOP VIEW

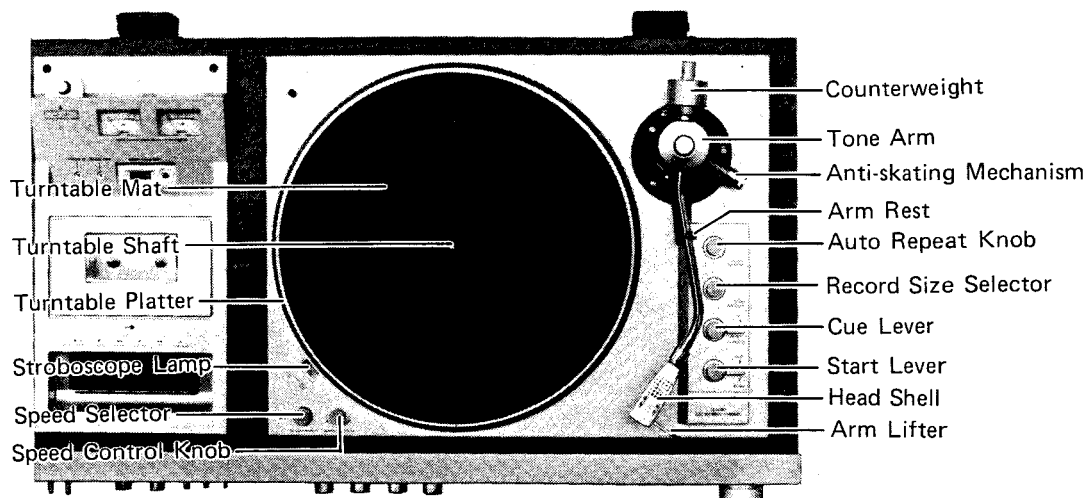


Figure 5.

2. DISASSEMBLY INSTRUCTIONS

2-1 TURNTABLE REMOVAL

1. Lift up the table mat.
2. Detach the drive belt from the motor pulley with your hands running through the holes of turntable platter and lift up the turntable.
3. Remove 2 transit screws ① and 1 screw ② from the Panel.
4. Lift up the Panel and disconnect the power line cord connector (4P) and PIN plugs cord for left and right channels.

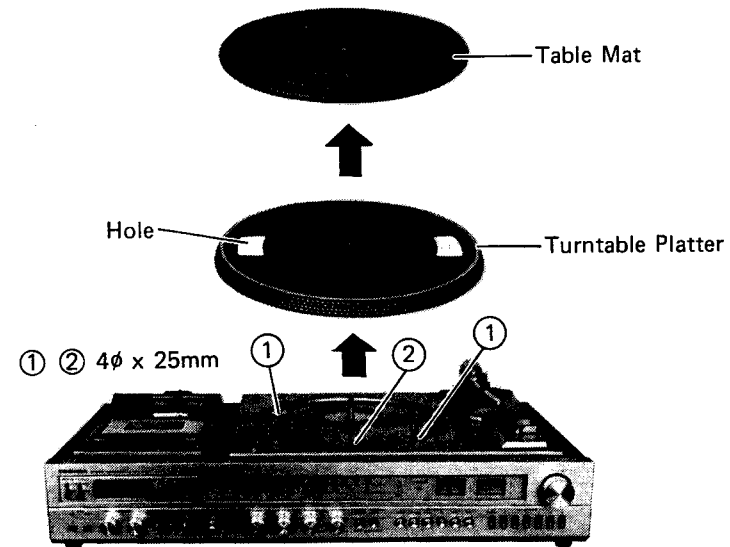


Figure 6.

2-2 CASSETTE RECORDER PANEL REMOVAL

1. Remove 4 screws ③ and ④. See figure 7.
2. Separate the Cassette recorder panel and loosen 1 screw for indicator lamp P.C. Board.

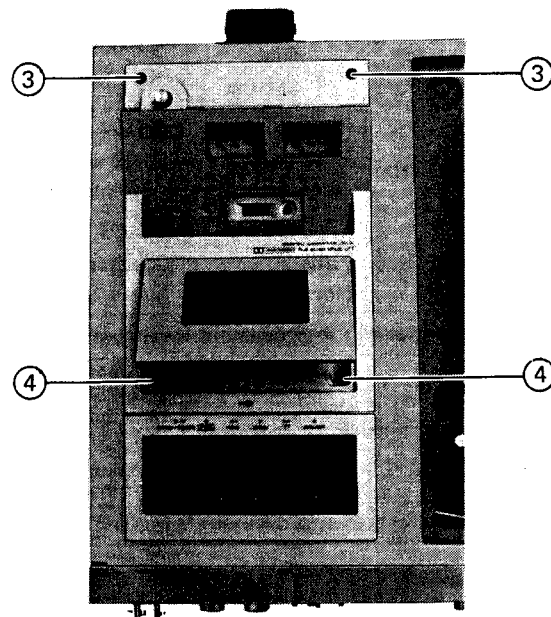


Figure 7.

2-3 CABINET REMOVAL

1. Remove 5 screws ⑤. See figure 8.
2. Separate the cabinet from the chassis.

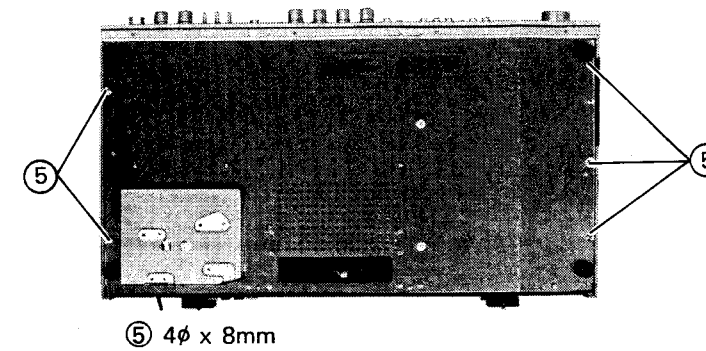


Figure 8.

2-4 FRONT PANEL REMOVAL

1. Remove the turntable, cassette recorder panel and cabinet. See figure 6, 7 and 8.
2. Remove 4 screws ⑥. See figure 9.
3. Remove 1 screws ⑦. See figure 10.
4. Remove the 12 knobs ⑧. See figure 11.
5. Remove 1 screw ⑨. See figure 12.

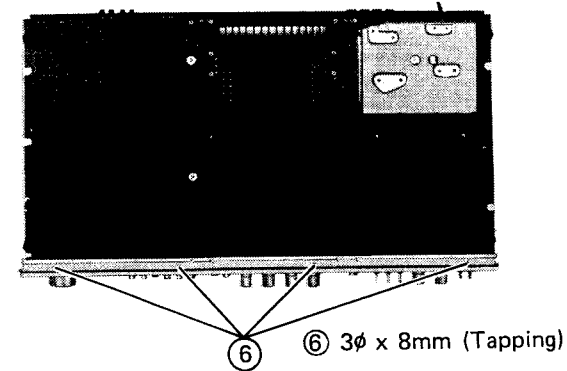


Figure 9.

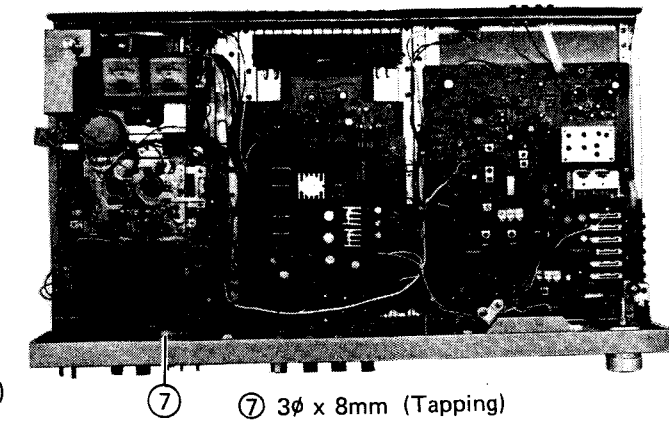


Figure 10.

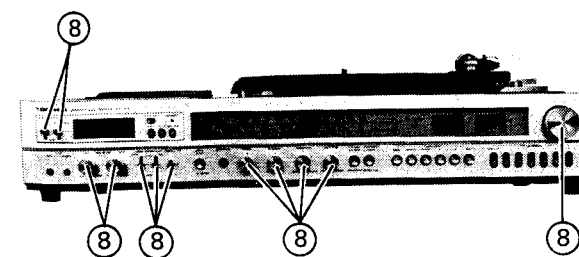


Figure 11.

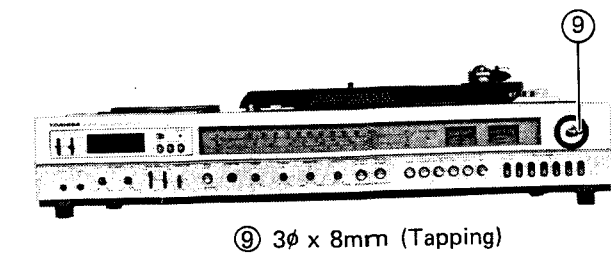


Figure 12.

3. ADJUSTMENTS INSTRUCTIONS

3-1 RECEIVER SECTION

■ ADJUSTING PARTS LOCATION

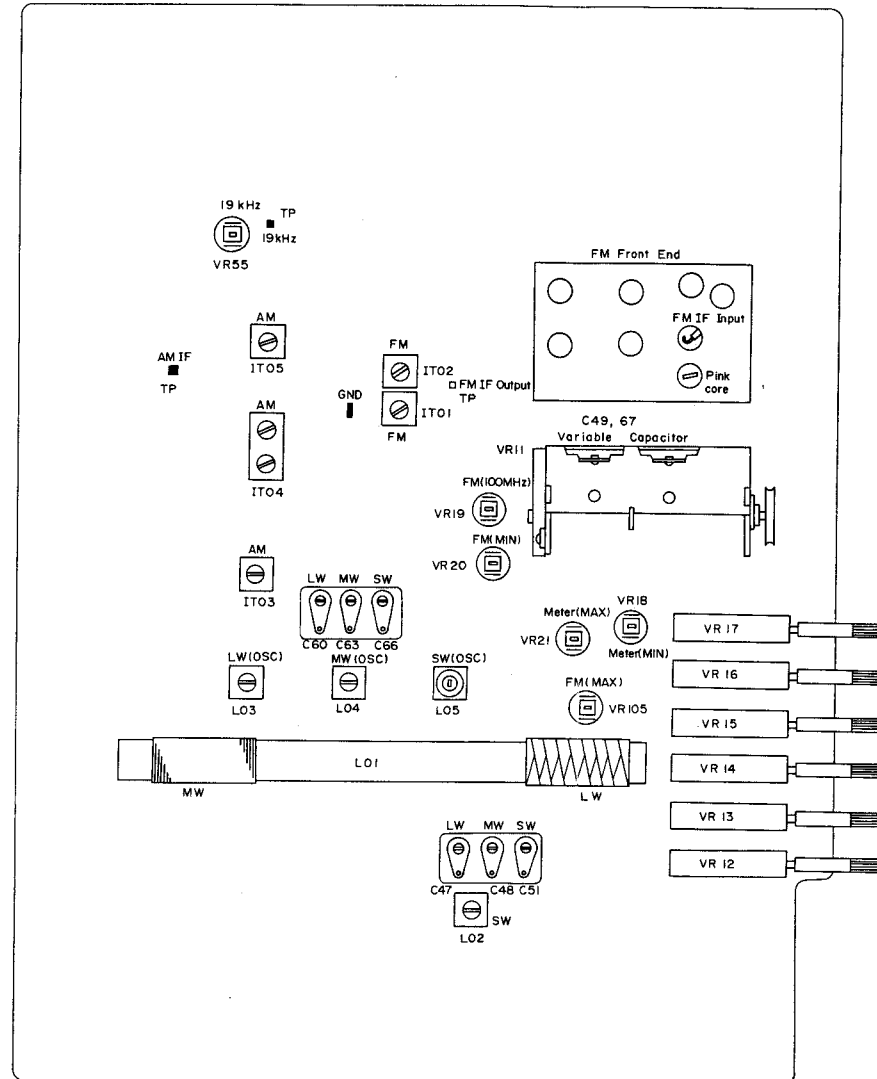


Figure 13. Top View of Tuner P.C. Board

■ TEST EQUIPMENTS/TOOLS REQUIRED

1. Sweep signal generator (Sweep range of at least 300 kHz, centre frequency of 10.7 MHz.)
2. Signal generator with a frequency range of at least from 400 kHz to 19 MHz for AM, from 87 MHz to 110 MHz and 10.7 MHz for FM.
3. Oscilloscope with a wide range amplifier of approximately 100 kHz.
4. Test loop — a coil of any size wire with one turn or more.
5. VTVM (Vacuum tube voltmeter)

NOTES: 1. During alignment keep the signal generator output at the lowest level where useable signal output from the set can be maintained.

2. Ground connection of signal generator To chassis ground.
3. Generator modulation 400 Hz, 30%.
4. For alignment points, see schematic diagram.

■ LW ADJUSTMENT

1. Set Function switch to LW.
2. Set signal generator frequency as listed in TABLE 1 LW ADJUSTMENT CHART.
3. Proceed as outlined in the TABLE 1 LW ADJUSTMENT CHART.

TABLE 1 LW ADJUSTMENT CHART (See Figure 14)

Step	Signal Generator Connection	Signal Generator Frequency	Radio Dial Setting	Connection (See fig. 14.)	Adjustment	Remarks
1	Test loop	460 kHz	Tuning gang fully counter-clockwise	VTVM across Speaker terminal	IT03 IT04 IT05	Adjust for Maximum
2	Test loop	142 kHz	Tuning gang fully counter-clockwise	VTVM across Speaker terminal	L03 LW OSC.	Adjust for Maximum
3	Test loop	410 kHz	Tuning gang fully clockwise	VTVM across Speaker terminal	C60 OSC. Trim.	Adjust for Maximum
4	Repeat steps 2 and 3 until no further improvement is noticed.					
5	Test loop	180 kHz	Tune to signal	VTVM across Speaker terminal	L01 (LW) Ant. coil	Adjust for Maximum
6	Test loop	380 kHz	Tune to signal	VTVM across Speaker terminal	C47 Ant. Trim.	Adjust for Maximum
7	Repeat steps 5 and 6 until no further improvement is noticed.					

■ MW ADJUSTMENT

1. Set Function switch to MW.
2. Set signal generator frequency as listed in TABLE 2 MW ADJUSTMENT CHART.
3. Proceed as outlined in the TABLE 2 MW ADJUSTMENT CHART.

TABLE 2 MW ADJUSTMENT CHART (See Figure 14.)

Step	Signal Generator Connection	Signal Generator Frequency	Radio Dial Setting	Connection (See fig. 14.)	Adjustment	Remarks
1	Test loop	455 kHz/ 460 kHz	Tuning gang fully counter-clockwise	VTVM across Speaker terminal	L04 MW OSC.	Adjust for Maximum
2	Test loop	1650 kHz	Tuning gang fully clockwise	VTVM across Speaker terminal	C63 MW Trim.	Adjust for Maximum
3	Repeat steps 1 and 2 until no further improvement is noticed.					
4	Test loop	600 kHz	Tune to signal	VTVM across Speaker terminal	L01 (MW) Ant. coil	Adjust for Maximum
5	Test loop	1400 kHz	Tune to signal	VTVM across Speaker terminal	C48 MW Trim.	Adjust for Maximum
6	Repeat steps 4 and 5 until no further improvement is noticed.					

■ SW ADJUSTMENT

1. Set Function switch to SW.
2. Set signal generator frequency as listed in TABLE 3 SW ADJUSTMENT CHART.
3. Proceed as outlined in the TABLE 3 SW ADJUSTMENT CHART.

TABLE 3 SW ADJUSTMENT CHART (See Figure 14.)

Step	Signal Generator Connection	Signal Generator Frequency	Radio Dial Setting	Connection (See fig. 14.)	Adjustment	Remarks
1	Test loop	5.75 MHz	Tuning gang fully counter-clockwise	VTVM across Speaker	L05 OSC. coil	Adjust for Maximum
2	Test loop	18.5 MHz	Tuning gang fully clockwise	VTVM across Speaker	C66 OSC. Trim.	Adjust for Maximum
3	Repeat steps 1 and 2 until no further improvement is noticed.					
4	Test loop	7 MHz	Tune to signal	VTVM across Speaker terminal	L02 Ant. coil	Adjust for Maximum
5	Test loop	17 MHz	Tune to signal	VTVM across Speaker terminal	C51 Ant. Trim.	Adjust for Maximum
6	Repeat steps 4 and 5 until no further improvement is noticed.					

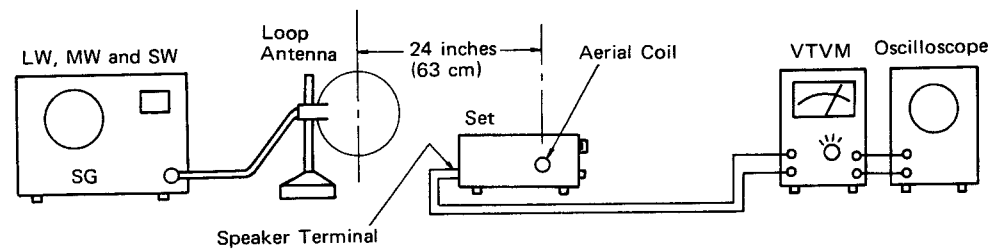


Figure 14.

■ FM IF ADJUSTMENT

TABLE 4 FM-IF ADJUSTMENT CHART

Step	Signal Generator Connection	Signal Generator Frequency	Radio Dial Setting	Meter or Oscilloscope Connection	Adjustment	Remarks
1	Sweep Generator through buffer to Front End Pack Input	10.7 MHz	Tuning gang fully counter-clockwise	Scope to TP1 as shown in Figure 15.	IT01 IT02	See "S curve" in Figure 16.

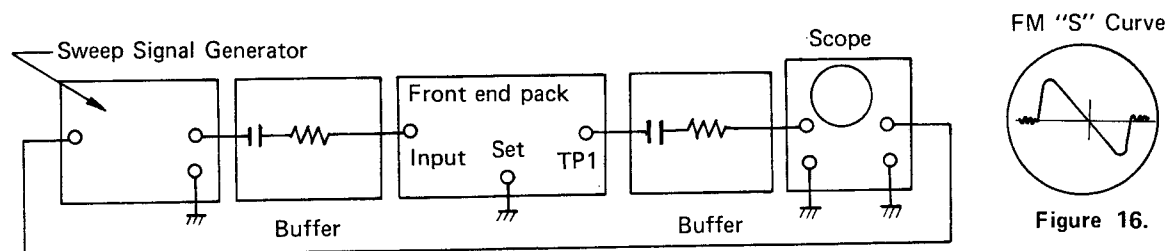


Figure 15.

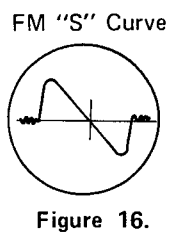


Figure 16.

■ FM FREQUENCY COVERAGE ALIGNMENT (MANUAL & PRESET)

1. Push the manual button.
2. Set the frequency pointer to 109 MHz (F max.).
3. Turning VR105, tune in 109 MHz (F max. adjustment).
4. Push the PRESET button of CH6. Turn the PRESET/VOLUME button fully clockwise until it clicks (F max.).
5. Adjust the VR21 so the pointer of the frequency meter indicates the position as illustrated.
6. Then turn the PRESET/VOLUME button fully counter-clockwise. Adjust VR18 so the pointer of the frequency meter indicates the position as illustrated.
7. Push the manual button.
8. Set the frequency pointer to 87.5 MHz (F min.).
9. Turning VR19, tune in 87.5 MHz.
10. Set the frequency pointer to 100 MHz and tune to 100 MHz with VR20.
11. Proceed adjustments repeating 8, 9 and 10 steps.

* Check F min. and F max. on PRESET CH 1 to CH 6 respectively.

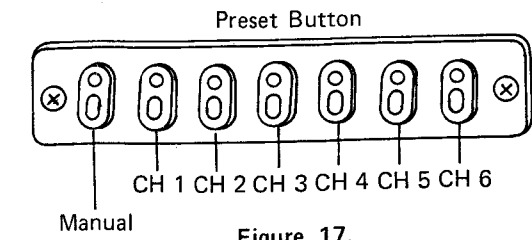


Figure 17.

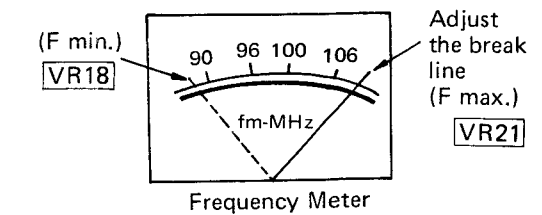


Figure 18.

■ 19 kHz ALIGNMENT

1. Connect the frequency counter to 19 kHz TP under no signal condition.
2. Adjust VR55 to obtain 19 kHz \pm 50 Hz.

■ DISTORTION ADJUSTMENT (MONO)

1. When the reference distortion ratio 0.6% is not obtained, turn the core IT01, and turn the pink core in FM Front End (Confirm stereo separation).

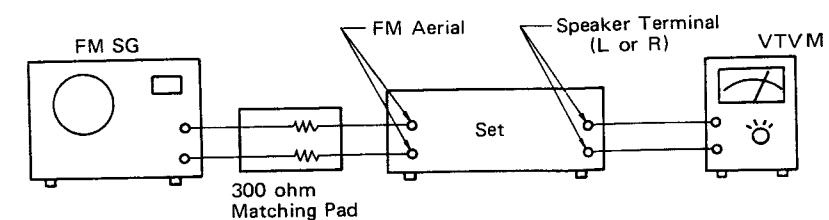


Figure 19.

CAUTION: When realigning the FM Receiving Frequency, the lower side of the frequency range must not be below 87.5 MHz in order to comply with FTZ regulations in West Germany.

3-2 CASSETTE RECORDER SECTION
 ■ ADJUSTING PARTS LOCATION

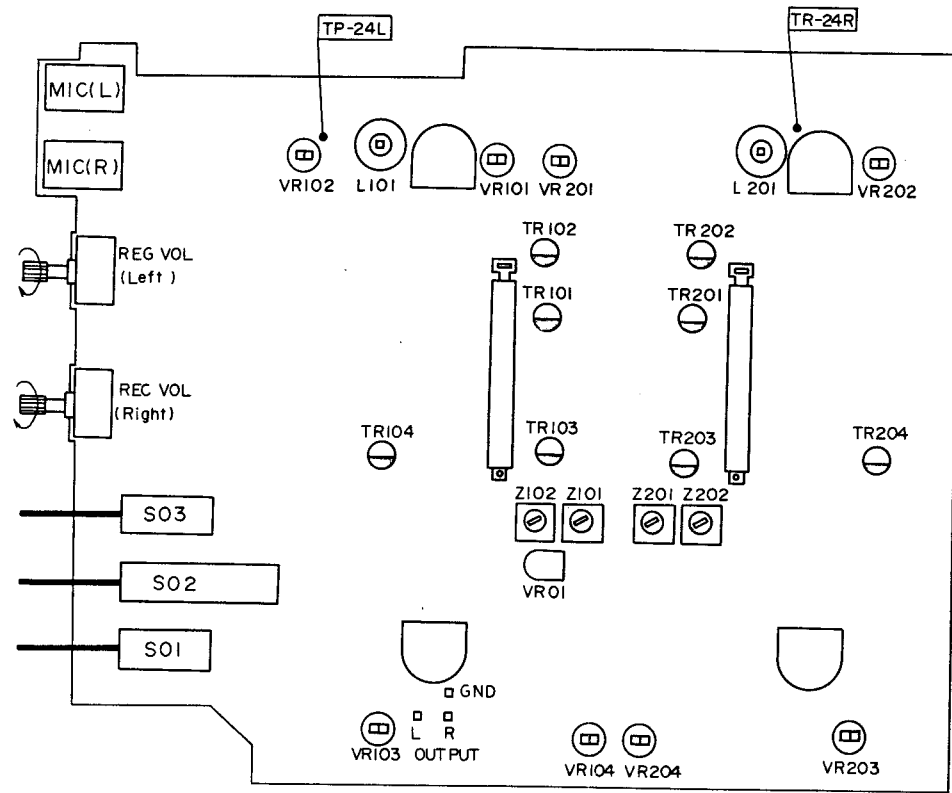


Figure 20. Top View of Cassette Recorder P.C. Board

■ TEST EQUIPMENTS

- | | |
|---------------------------------|------------------|
| 1. Signal Generator (SG) | 6. Test Tapes |
| 2. Oscilloscope | MTT-111 (3 kHz) |
| 3. Vacuum Tube Voltmeter (VTVM) | MTT-114 (10 kHz) |
| 4. Resistance Attenuator (ATT) | MTT-150 (400 Hz) |
| 5. Frequency Counter (FC) | MTT-502 (Blank) |

■ CONNECTIONS

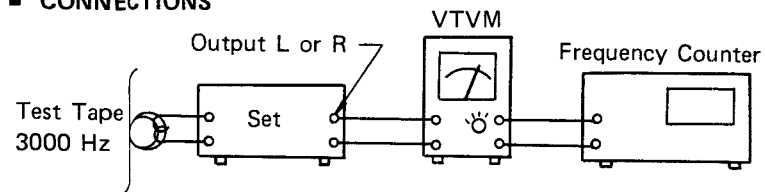


Figure 21.

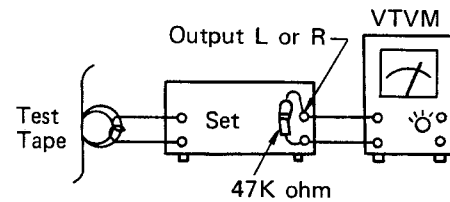


Figure 22.

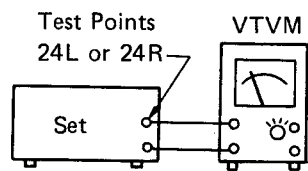


Figure 23.

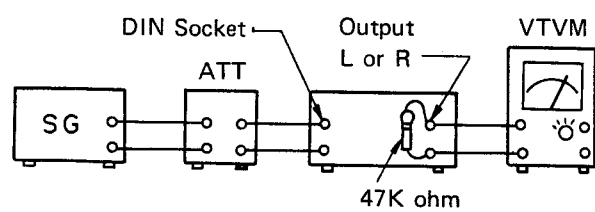


Figure 24.

■ ADJUSTMENTS CHART (CASSETTE RECORDER)

Adjusting Item	Switch Position			Rec. Level Control	Adjusting Parts	Connection	Remarks
	Bias	Eq.	Dolby				
Tape Speed Adjustment	Nor.	Nor.	Out		Semi-fixed Variable Resistor in the Motor.	See Fig. 21.	1. Playback the Test Tape (MTT-111). 2. Adjust so the Frequency Counter indicates 3000 ±35 Hz.
Head Azimuth Adjustment	Nor.	Nor.	Out		Head Adjusting Screw	See Fig. 22.	1. Playback the Test Tape (MTT-111). 2. Set to maximum reading of VTVM.
Playback Sensitivity Adjustment	Nor.	Nor.	Out		VR102 (L) VR202 (R)	See Fig. 22.	1. Playback the Test Tape (MTT-150) 2. Adjust so the VTVM indicates 775mV.
Bias Leak Adjustment	CrO ₂	CrO ₂	Out	Minimum	L101 (L) L201 (R)	See Fig. 23.	1. Set the Cassette Tape (Blank) on the Deck. 2. Set the Deck to recording mode. 3. Set to minimum reading of VTVM.
Level Meter Adjustment	Nor.	Nor.	Out		VR104 (L) VR204 (R)		1. Playback the Test Tape (MTT-150) 2. Adjust so the Level Meter indicates +3dB.
Record/Playback Sensitivity Adjustment	Nor.	Nor.	Out	Adjust so the Level Meter indicates +3dB.	VR103 (L) VR203 (R)	See Fig. 24.	1. Set the Test Tape (MTT-502) on the Deck. 2. SG Frequency – 333 Hz ATT ---- -15dB 3. Set the Deck to recording and playback mode. 4. Adjust so the Level Meter indicates +3dB.
Bias Current Adjustment	Nor.	Nor.	Out	Maximum	VR101 (L) VR201 (R)	See Fig. 24.	1. Set the Test Tape (MTT-502) on the Deck. 2. SG Frequency – 333 Hz/ 10 kHz ATT ---- -40dB 3. Set the Deck to recording and playback mode. 4. Adjust for Zero deviation between 333 Hz and 10 kHz.

4. DIGITAL CLOCK OPERATION

3-3 TURNTABLE SECTION

■ TRACKING FORCE AND ANTI-SKATING ADJUSTMENT

(Note: This adjustment is important. Refer to Figure 25.)

- (1) First remove the stylus cover. Refer to Figure 25.
- (2) Check that the cue lever is in the down position, and that the tone arm itself is free to move from the arm rest.
- (3) Set the anti-skating mechanism to "0".
- (4) Rotate the counter weight clockwise or counterclockwise until the tone arm is equally balanced. Set the tracking force scale to "0" (without moving the counter weight).
- (5) Rotate the counter weight so that the dial reads "2.0".
- (6) Set the anti-skating mechanism to "2.0".

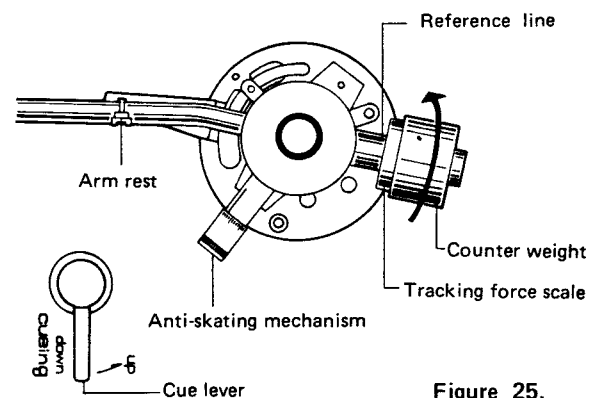


Figure 25.

■ TURNTABLE PLATTER SPEED ADJUSTMENT

- (1) Press the speed selector button 00 and perform fine adjustment of the turntable platter speed while watching the stroboscope 00. (Figure 26)
- (2) Rotation is speeded up by turning the speed control knob 00 in the "F" direction and slowed down when turned toward "S". Correct rotation is attained when the relevant stroboscope markings appear to be stationary.

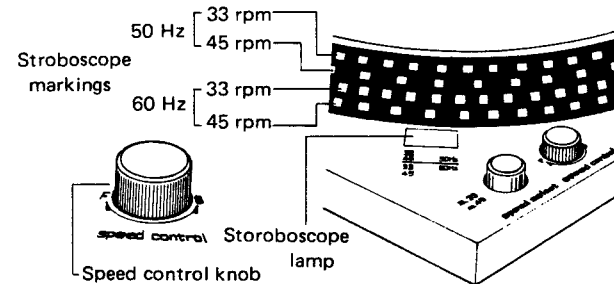


Figure 26.

■ OVERHANG ADJUSTMENT

When replacing a cartridge, it will be necessary to adjust the overhang. As has been indicated in Fig. 26, the distance from the stylus tip to the point of connection to the tone arm should be exactly 50mm. When mounting the new cartridge, this distance is adjusted by means of the screw which holds the cartridge in place in the head shell.

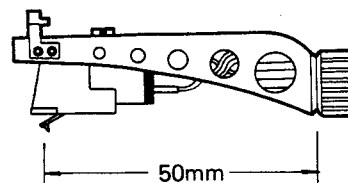


Figure 27.

4-1 DIGITAL CLOCK SECTION

Besides the function of the digital clock mechanism, Radio, Turntable and Cassette Deck can be operated automatically by setting the clock to the desired time.

4-2 DIGITAL CLOCK OPERATIONS (See figure 28.)

■ TIME ADJUSTMENT

For time adjustment, push the FAST or SLOW button with the SETTING switch placing to TIME position. It is better to begin with FAST, then adjust the time precisely with SLOW. There is no need to worry about the possible power suspension on the way of adjustment, since the sleep function still works in this case.

Push the SECOND ADJ. button to synchronize the second of the clock by the time signal of broadcasting etc. in the same way as the TIME ADJUSTMENT. This displays correct second but for hour and minute.

■ TIME SETTING FOR ALARM

Do the same as TIME ADJUSTMENT with the setting switch placing to START position. This will ensure the time when the set starts playing.

■ AUTOMATIC OPERATION OF CASSETTE RECORDER/TURNTABLE/RADIO

CASSETTE RECORDER

To operate the Cassette Deck automatically at desired time, proceed as follows:

1. Place the FUNCTION Switch to OFF and PLAY Switch to TIMER position.
2. Set the cassette tape.
3. Push the PLAY button in.
4. Place the FUNCTION Switch to AUTO position.
5. Cassette Recorder will start to play at preset time by proceeding the above steps in correct order.

TURNTABLE

1. Place the FUNCTION Switch to OFF and the PLAY Switch to TIMER position.
2. Set the disc on the turntable, rotate the platter 1/8 of a turn by hand if it is failed to do this, the turntable may not operate automatically at the chosen time.
3. Release the tone arm from arm-lock and pull the PLAY/CUT Lever toward you.
4. Keep the FUNCTION Switch in AUTO position.

RADIO

1. To listen to radio, proceed in the same manner as above after selecting the station with the Tuning Knob.

NOTE: Be sure to set the Selector Button and Volume level according to your desired play.

4-3 TIME ADJUSTMENT PROCEDURE

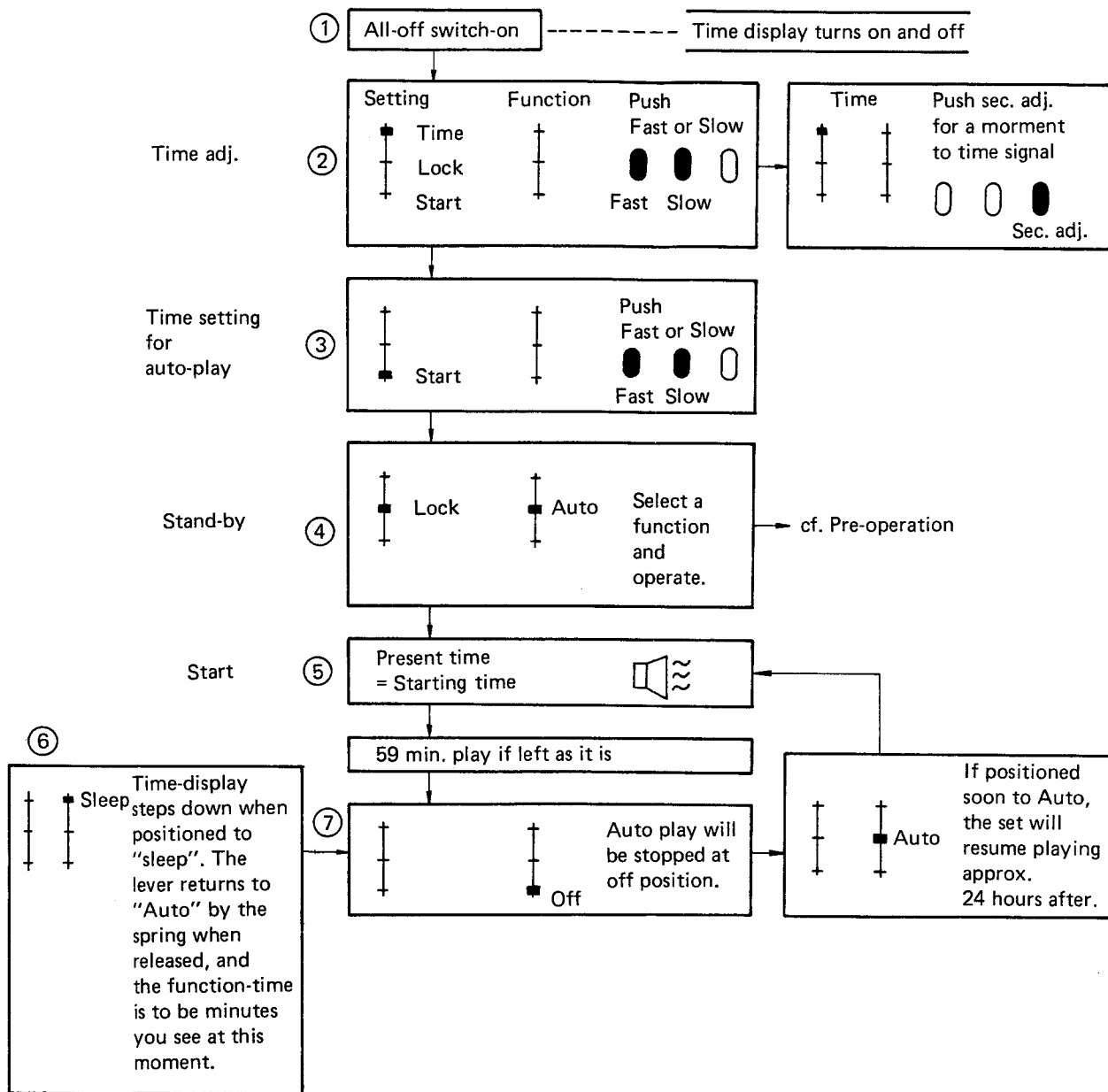


Figure 28.

4-4 SAFETY DEVICE

This is designed to let cassette tape reach to the end if it stops halfway, noticing that auto shut off works necessarily at tape-end. Even if function switch of timer is positioned to "off", auto rec./play mechanism will begin to work by Auto within 24 hours on the condition that any key of deck is pushed down and keep set in the same position as "Auto". In this case, auto rec./play keeps on working until auto shut off mechanism will function at tape end.

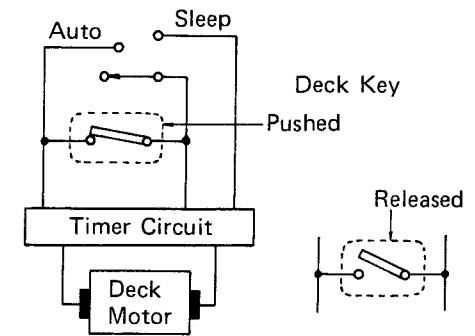


Figure 29.

This will result in sudden play of deck against owner's intention, however it may be accepted as a safety measure which ensure the life of mechanism. It will happen only once even using the longest tape of C-120 (60 min. one way), thus we think you will not be so troubled about this if the mechanism is well understood.

time function switch	tape play	Deck play key	Deck mechanism	after 24 hours						
				0	4	8	12	16	20	24
	fully played		pinch roller released by ASO	no function						
Auto	left a little	set to Off	pinch roller released	no function						
Off		keep On	pinch roller pressed	regardless of timer switch function						
Auto	suspended halfway	set auto rec. play	stand by	function						
Off				no function						

4-5 FUNCTION OF CLOCK AND IC VOLTAGE DISTRIBUTION

No.	Description	Voltages and IC Pin Numbers				
		30	31	32	33 (Slow)	34 (Fast)
1	Time Adjust	VSS	VSS	VSS	VDD	VSS
					VSS	VDD
2	Start Time Setting	VSS	VDD	VSS	VDD	VSS
					VSS	VDD
3	Sleep Time Setting	VDD	VSS	VSS	VDD	VSS
4	Sec. Adjust	VSS	VSS	VDD	VSS	VDD

VSS ---- Logical Low Level, (0.1V - 0.5V)
 VDD ---- Logical High Level, (10V - 17V)

5. DIAL CORD STRINGING

DIAL CORD STRINGING

- a) Set the tuning capacitor to the minimum capacitance (Fully Clockwise Position).
- b) Wind the dial cord in the numerical sequence as shown in figure 30.

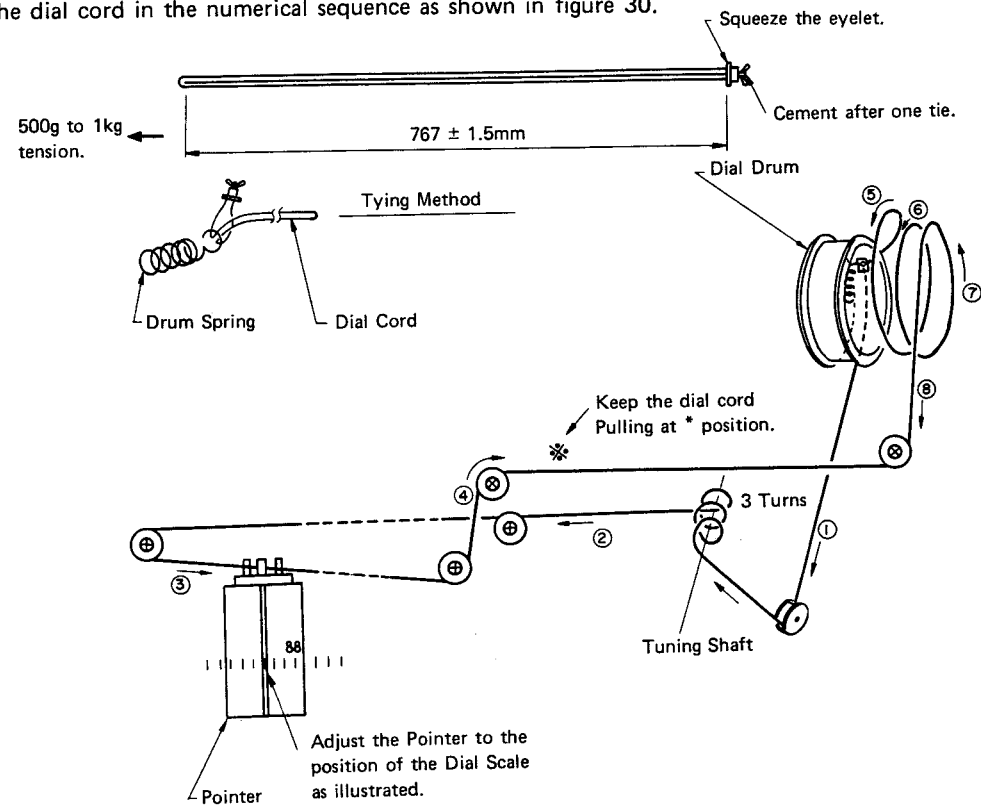
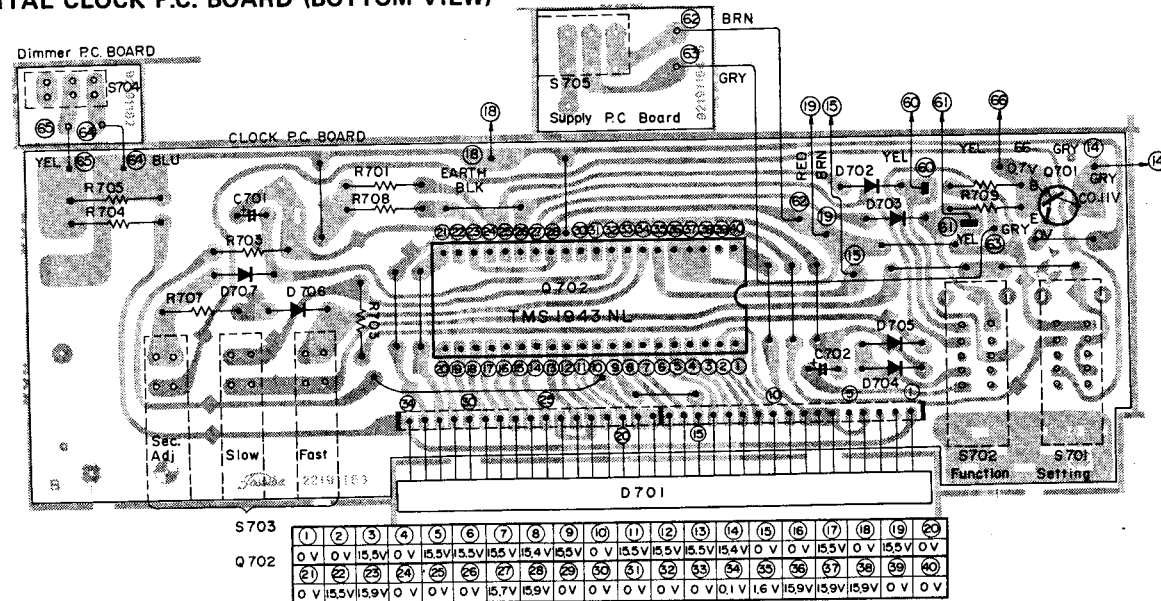


Figure 30.

- c) Keep the dial cord pulling at *, and hook the dial cord on the small pulley at 8.
- d) Hook the dial spring on the drum.

6. P.C. BOARD PARTS LOCATIONS AND SCHEMATIC DIAGRAMS

DIGITAL CLOCK P.C. BOARD (BOTTOM VIEW)



SCHEMATIC DIAGRAM (CLOCK SECTION)

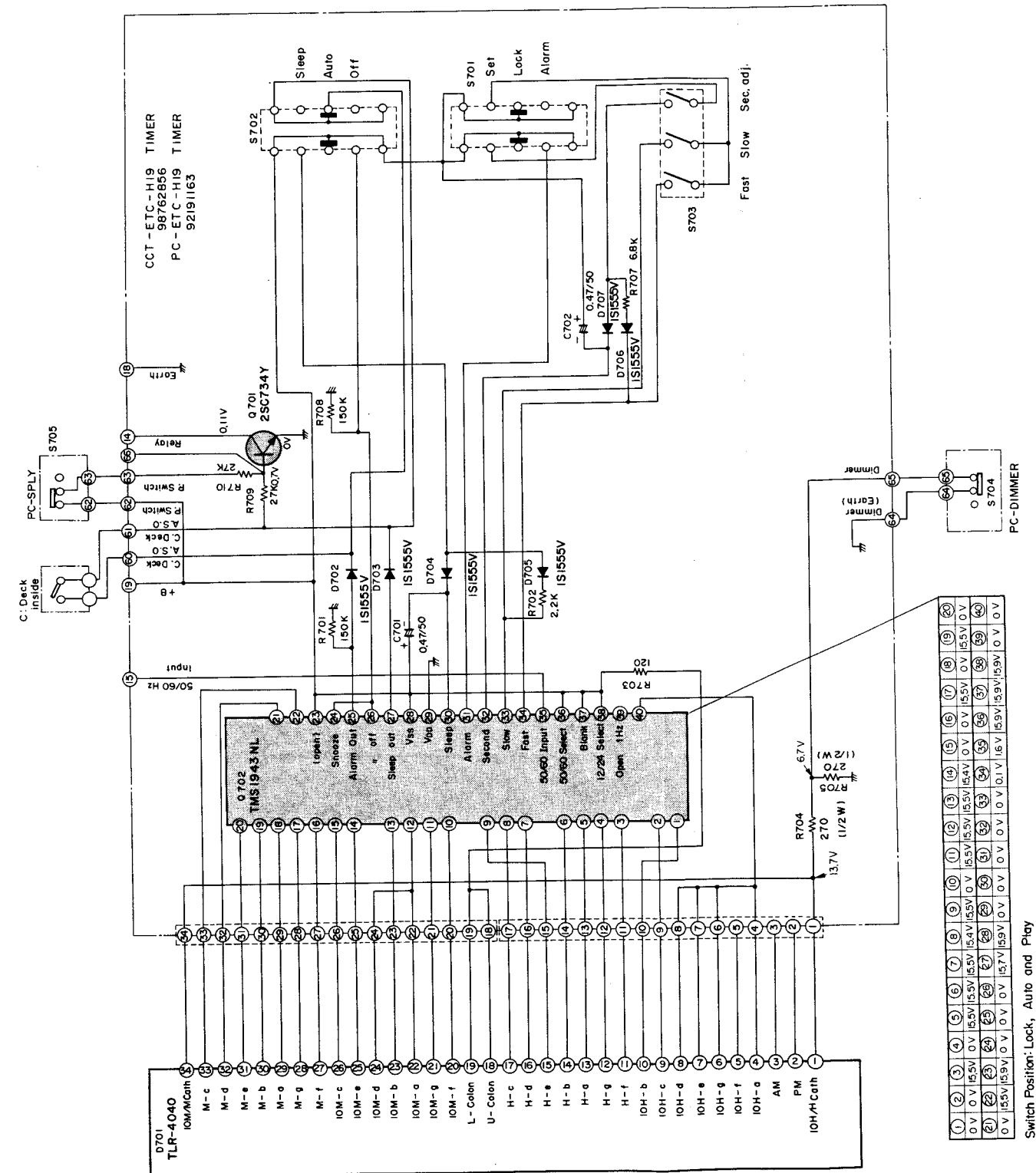


Figure 32.

CASSETTE RECORDER P.C. BOARD (BOTTOM VIEW)

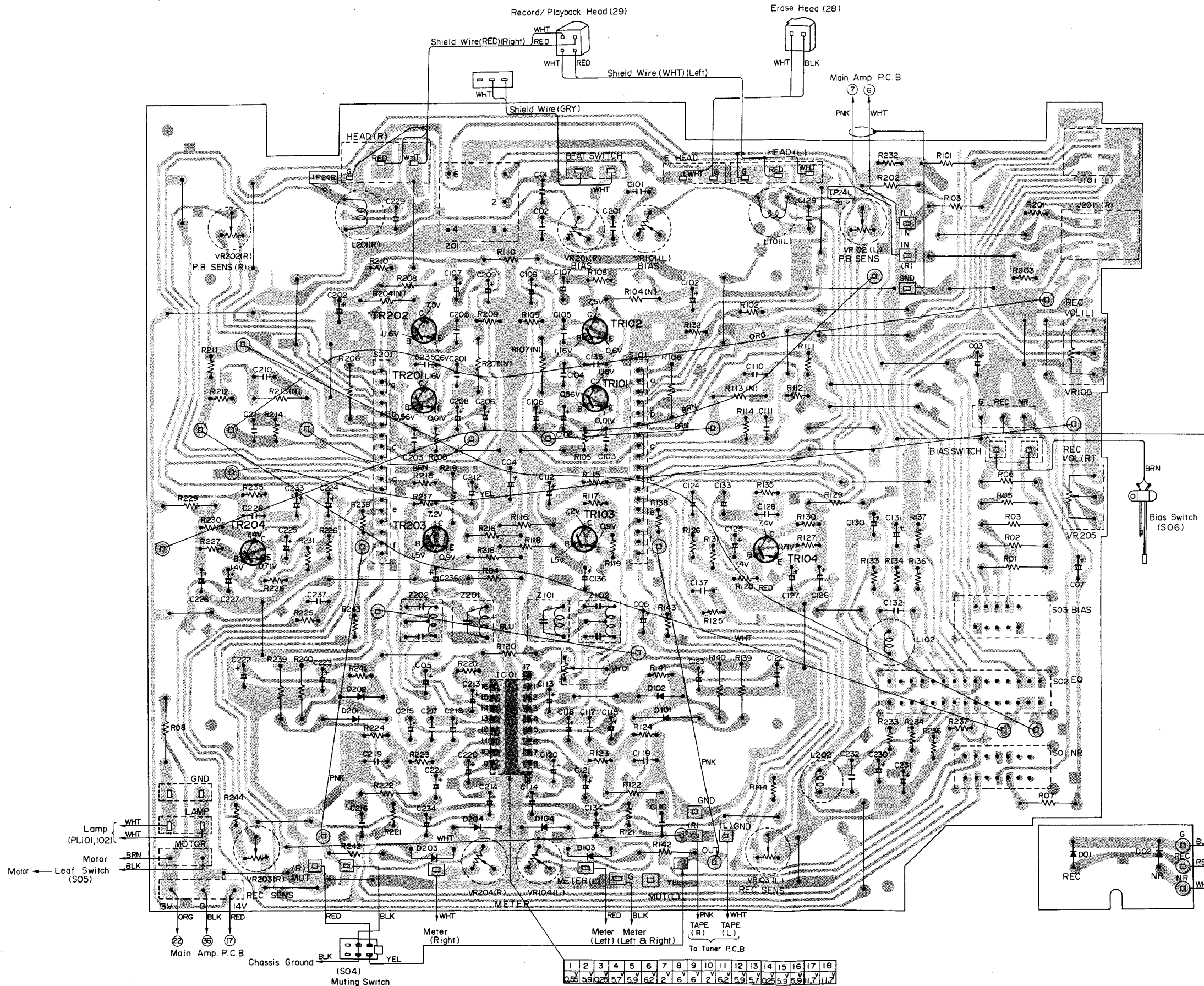


Figure 33.

SCHEMATIC DIAGRAM (CASSETTE RECORDER SECTION)

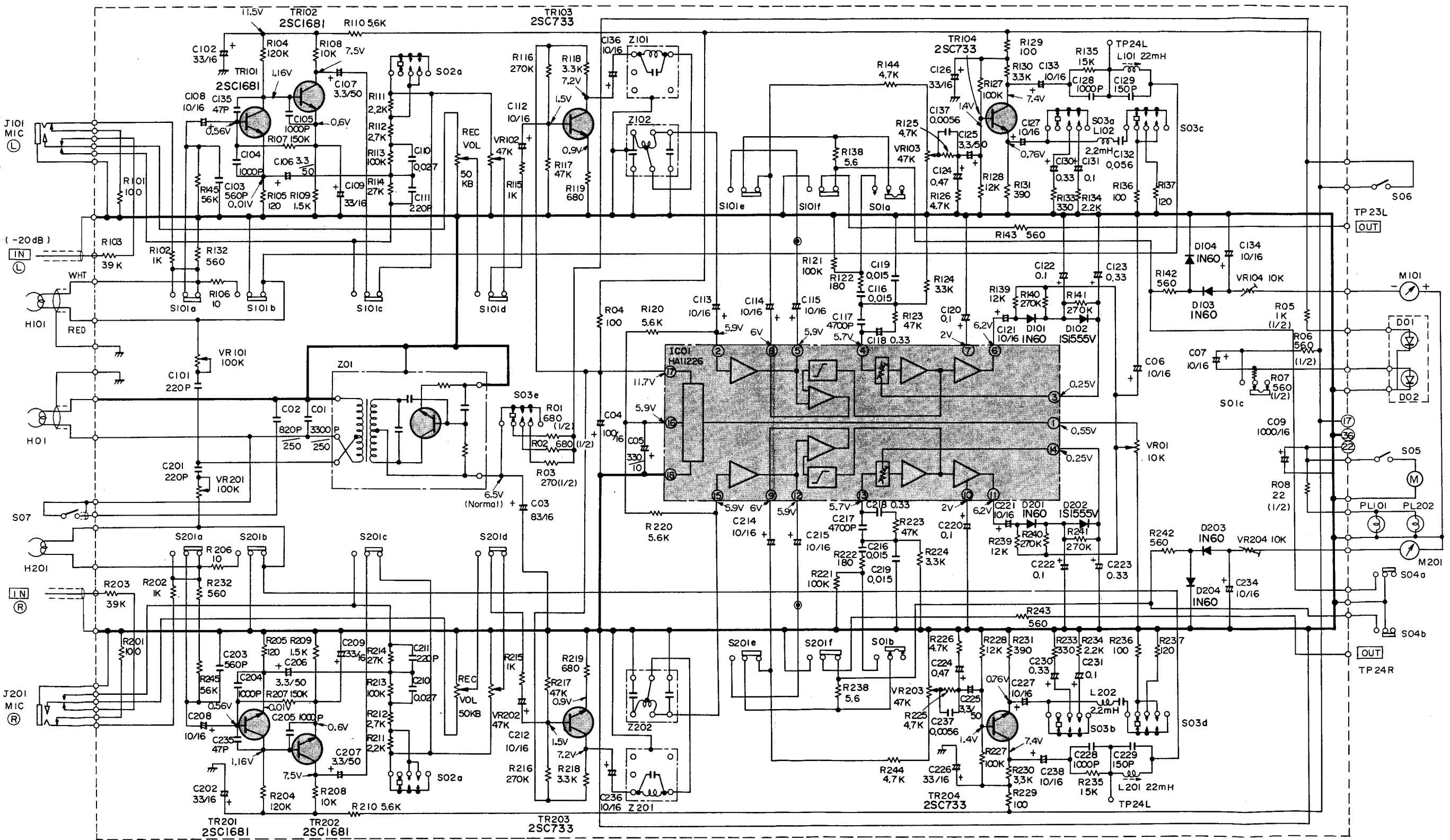
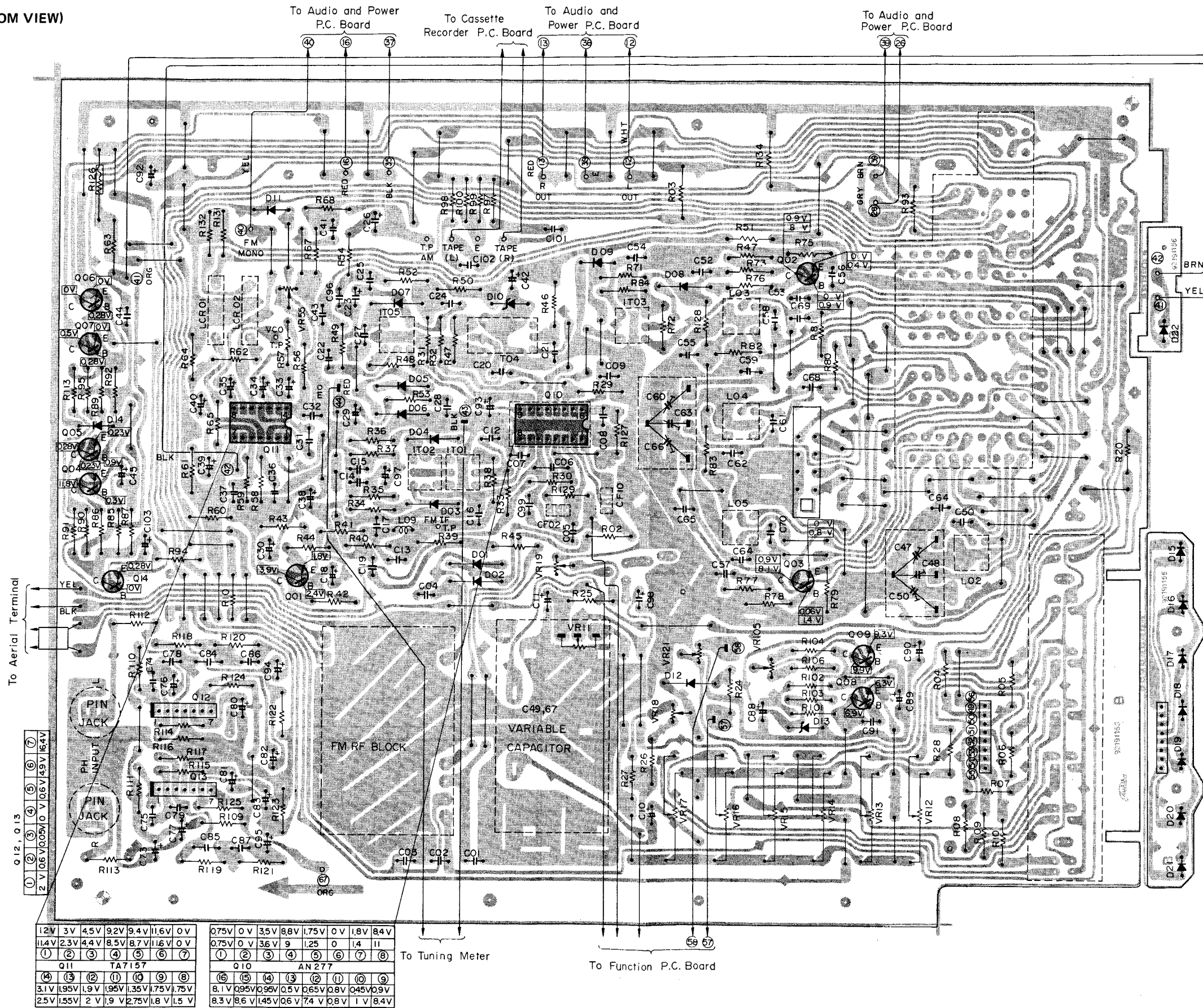


Figure 34.

■ TUNER P.C. BOARD (BOTTOM VIEW)



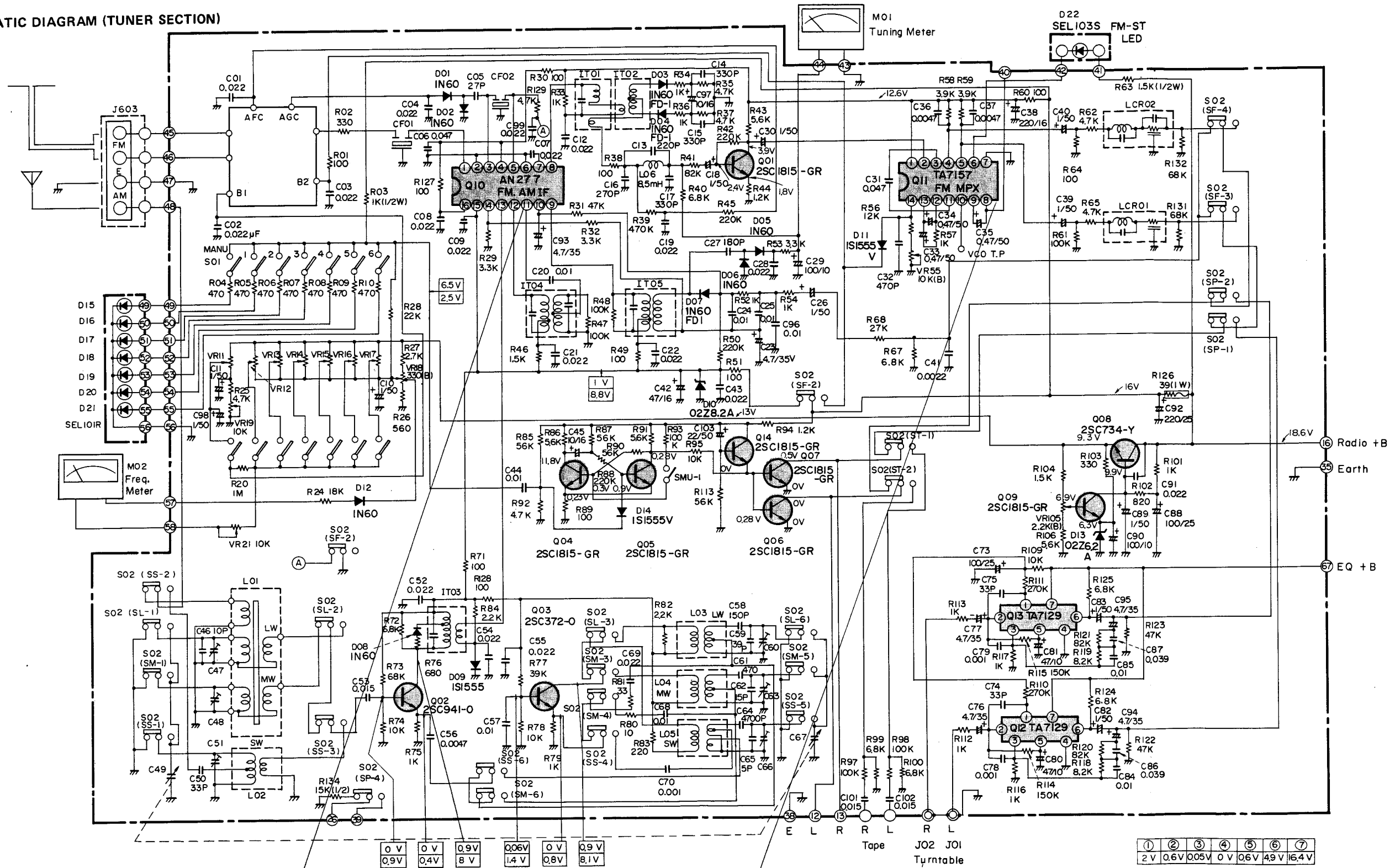
To Aerial Terminal
 YEL
 BLK
 Q12, Q13
 2 V 0.6V 0.05V 1.0V 0.6V 4.9V 16.4V

12V	3V	4.5V	9.2V	9.4V	11.6V	0V
11.4V	2.3V	4.4V	8.5V	8.7V	11.6V	0V
①	②	③	④	⑤	⑥	⑦
Q11 TA7157						
④	⑬	⑫	⑪	⑩	⑨	⑧
3.1V	1.95V	1.9V	1.95V	1.35V	1.75V	1.75V
2.5V	1.55V	2V	1.9V	2.75V	1.8V	1.5V

0.75V	0V	3.5V	8.8V	1.75V	0V	1.8V	8.4V
0.75V	0V	3.6V	9	1.25	0	1.4	11
①	②	③	④	⑤	⑥	⑦	⑧
Q10 AN277							
⑬	⑫	⑪	⑩	⑨	⑧	⑦	⑥
8.1V	0.95V	0.96V	0.5V	0.65V	0.8V	0.45V	0.9V
8.3V	8.6V	1.45V	0.6V	1.74V	0.8V	1V	8.4V

Figure 35.

■ SCHEMATIC DIAGRAM (TUNER SECTION)



0.75V	0V	3.5V	8.8V	1.75V	0V	1.8V	8.4V
0.75V	0V	3.6V	9V	1.25V	0V	1.4V	11V
①	②	③	④	⑤	⑥	⑦	⑧
⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
8.1V	0.95V	0.95V	0.5V	0.65V	0.8V	0.45V	0.9V
8.3V	8.6V	1.45V	0.6V	0.74V	0.8V	1V	8.4V

12V	3V	4.5V	9.2V	9.4V	11.6V	0V
11.4V	2.3V	4.4V	8.5V	8.7V	11.6V	0V
①	②	③	④	⑤	⑥	⑦
⑧	⑨	⑩	⑪	⑫	⑬	⑭
3.1V	1.95V	1.9V	1.95V	1.35V	1.75V	1.75V
2.5V	1.55V	2V	1.9V	2.75V	1.8V	1.5V

NOTE :
 Upper description indicates voltage on FM receiving.
 Lower description indicates voltage on MW receiving.

Figure 36.

AUDIO AND POWER P.C. BOARD (BOTTOM VIEW)

- 16 0.004V-0.02V
- 15 0.04V-0.02V
- 14 0 V
- 13 17V-24V
- 12 24V
- 11 26.5V-17V
- 10 26.5V
- 9 2.5V
- 8 0.02V-0.02V
- 7 2.5V
- 6 26.5V-17V
- 5 26.5V
- 4 0V-24V
- 3 0V
- 2 0.02V-0.04V
- 1 0.02V-0.04V

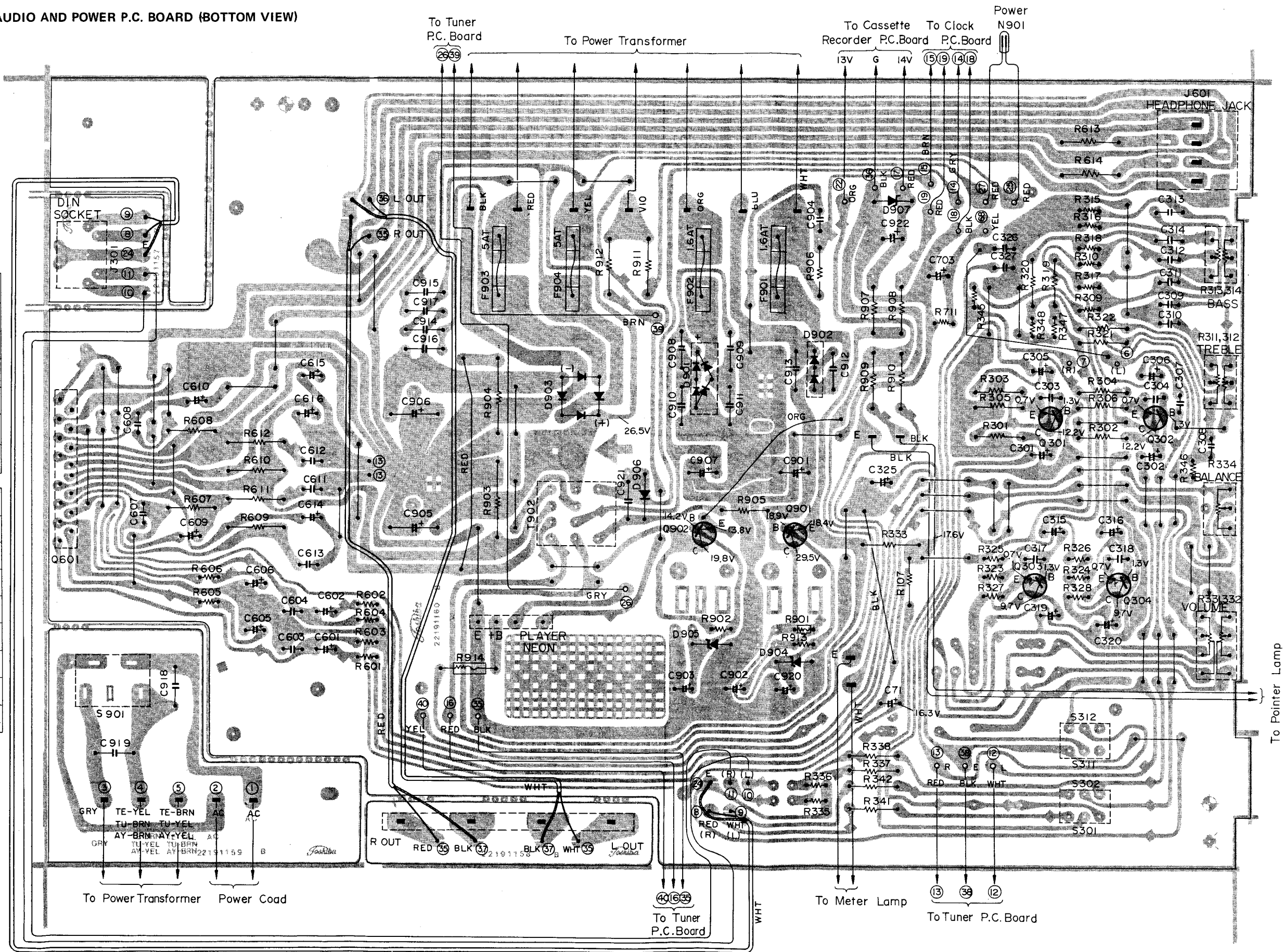


Figure 37.

■ SCHEMATIC DIAGRAM (AUDIO AND POWER SECTION)

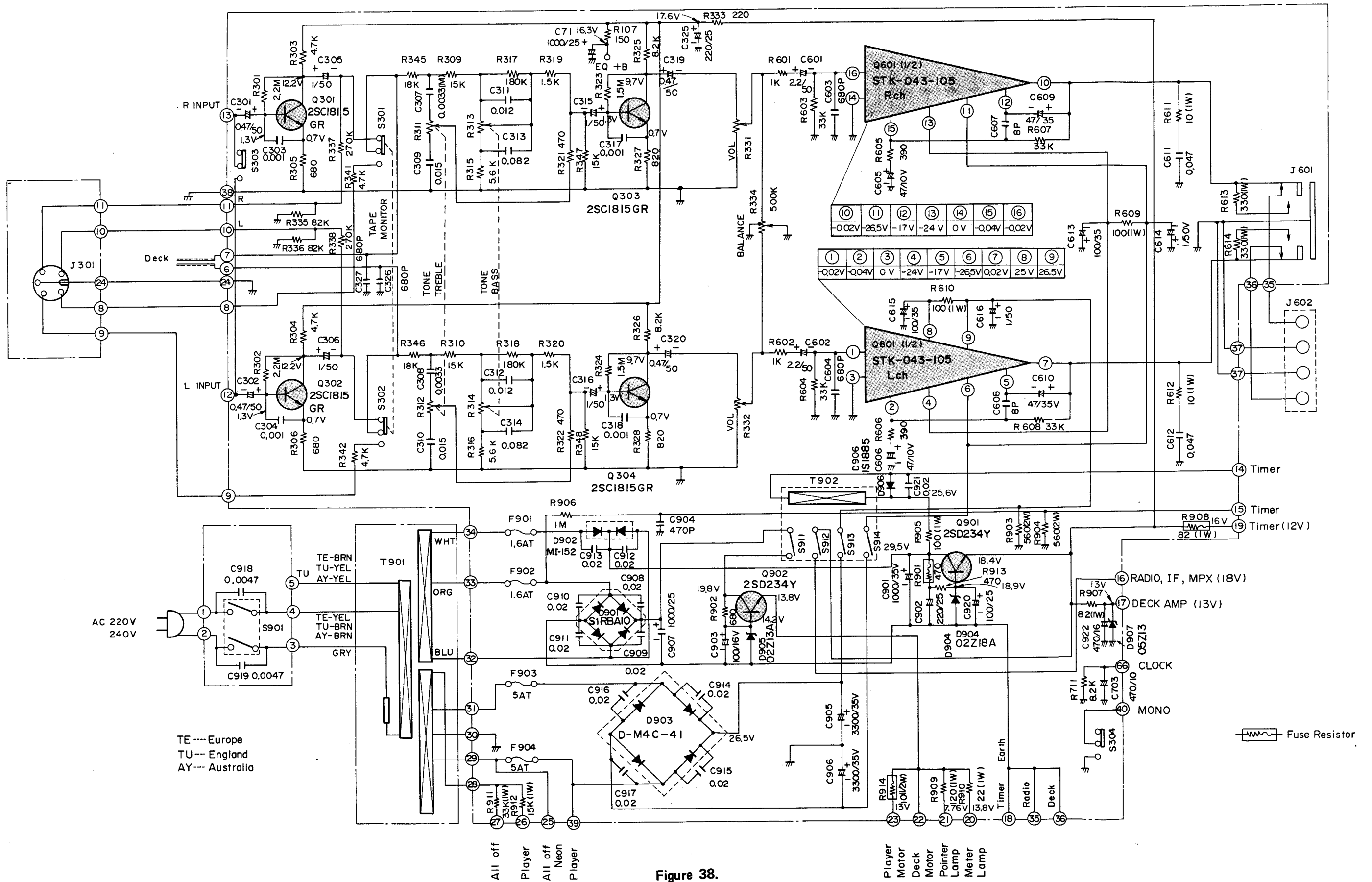


Figure 38.

7. SCHEMATIC DIAGRAM (OVERALL)

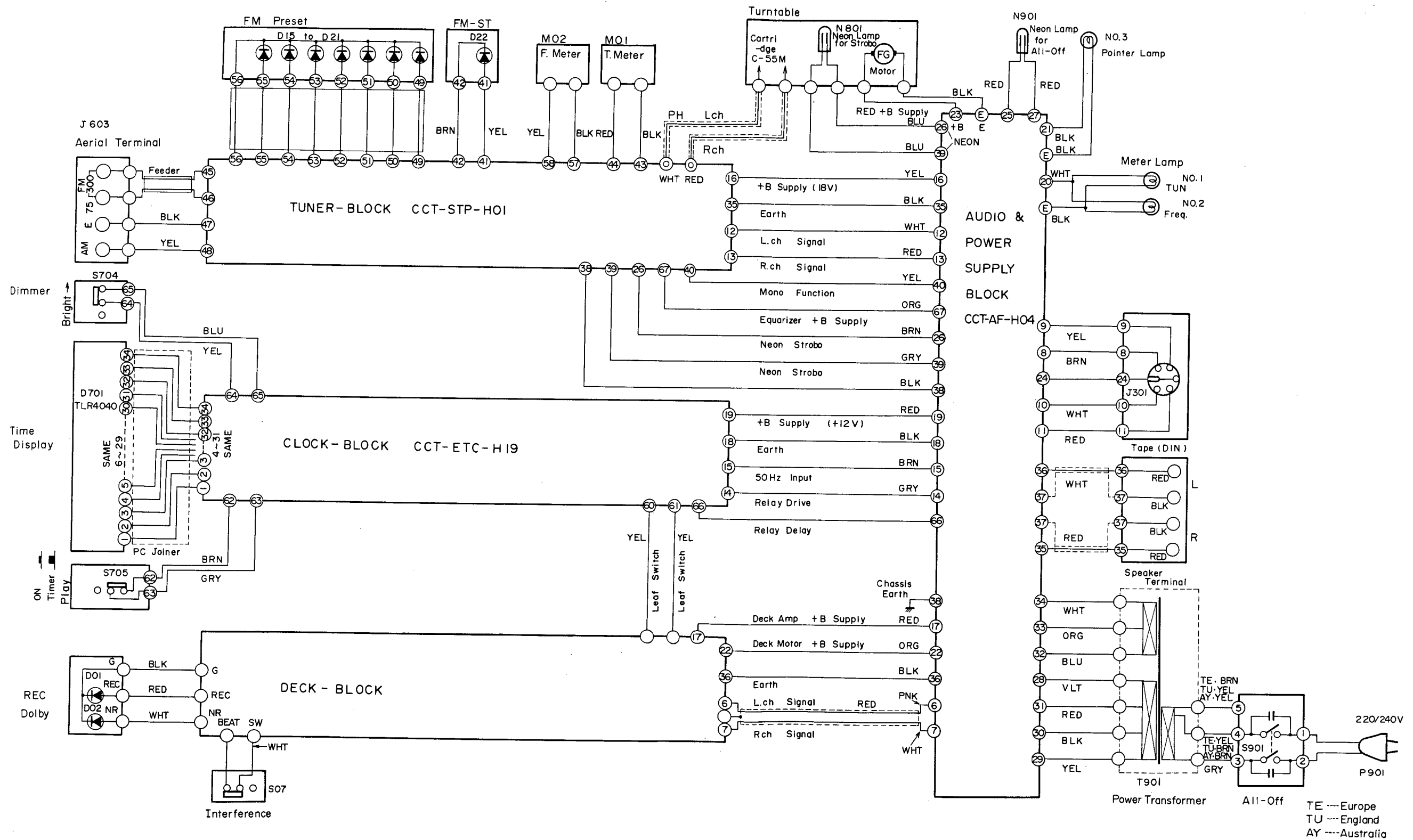


Figure 39.

8. WIRING AND SCHEMATIC DIAGRAM

TURNTABLE SECTION

WIRING

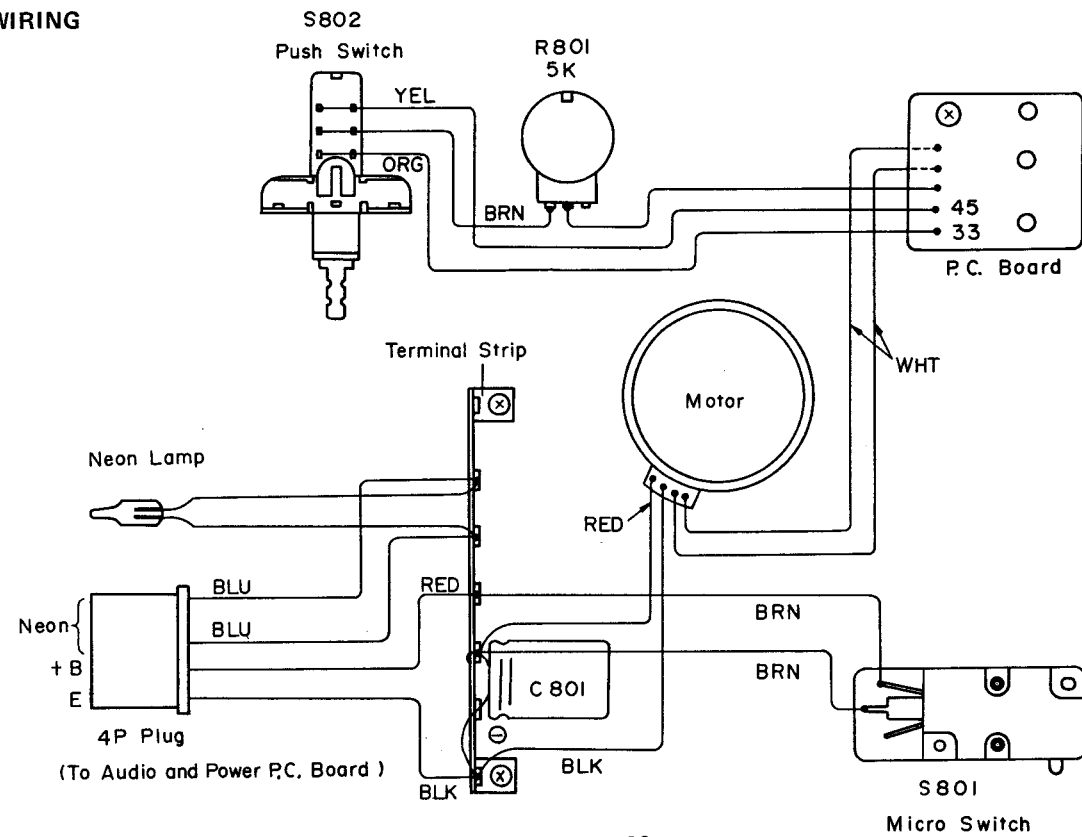


Figure 40.

SCHEMATIC DIAGRAM

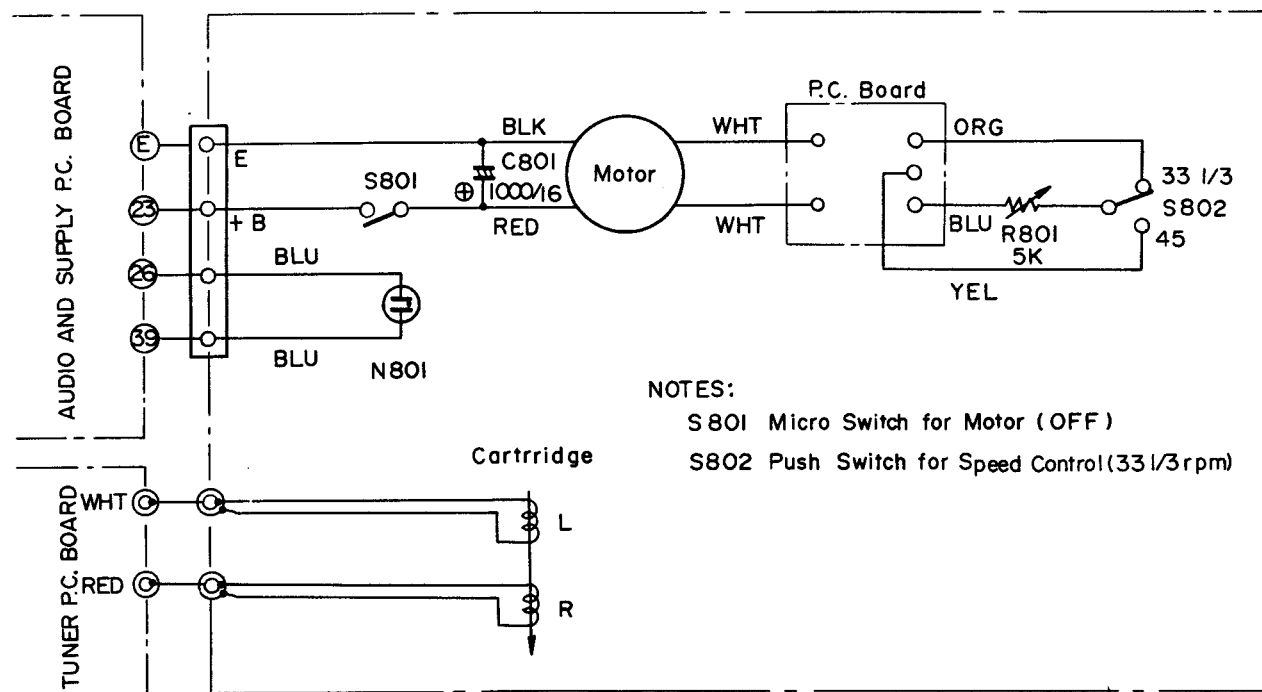


Figure 41.

9. EXPLODED VIEW

CABINET SECTION

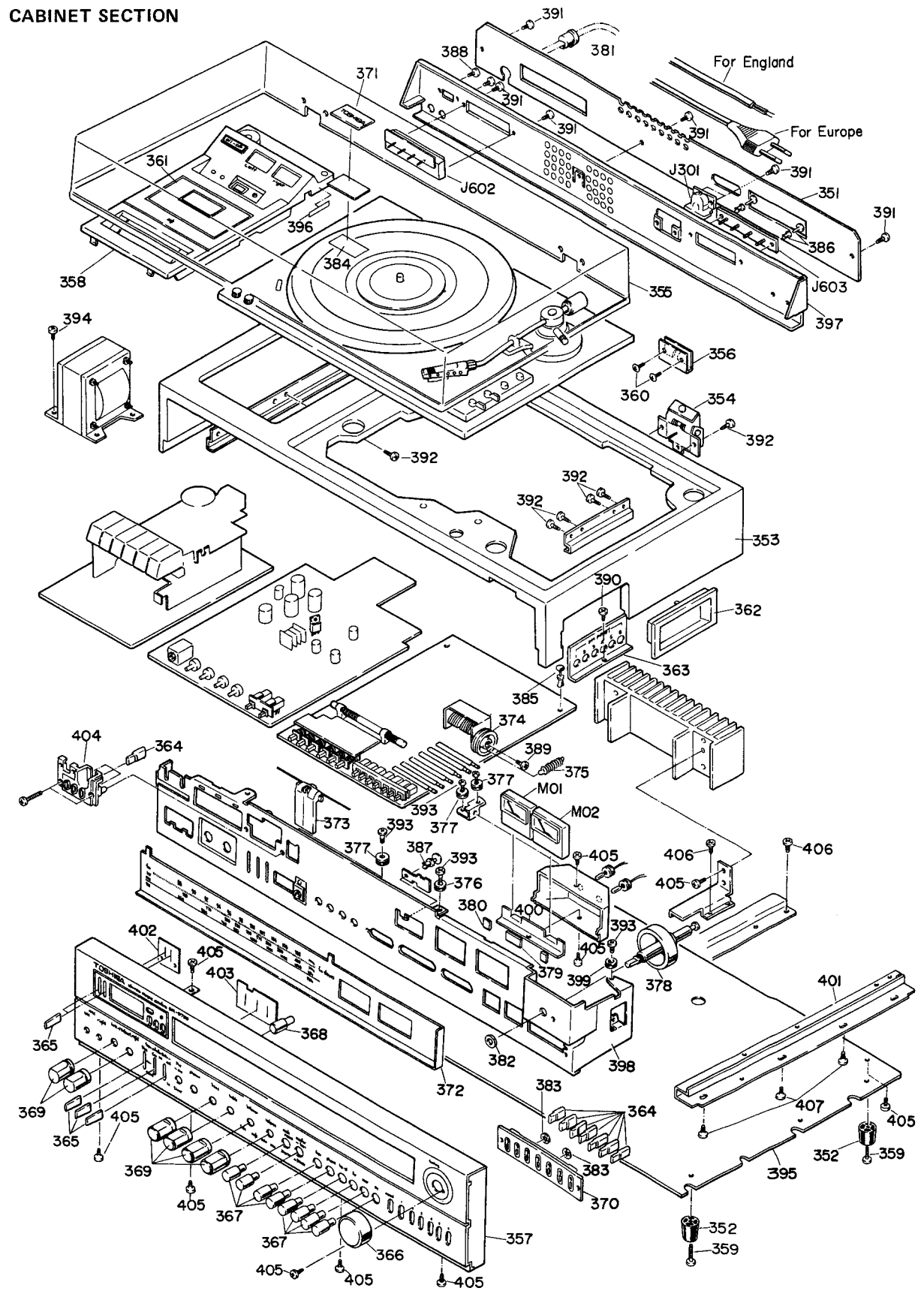


Figure 42.

■ TURNTABLE SECTION

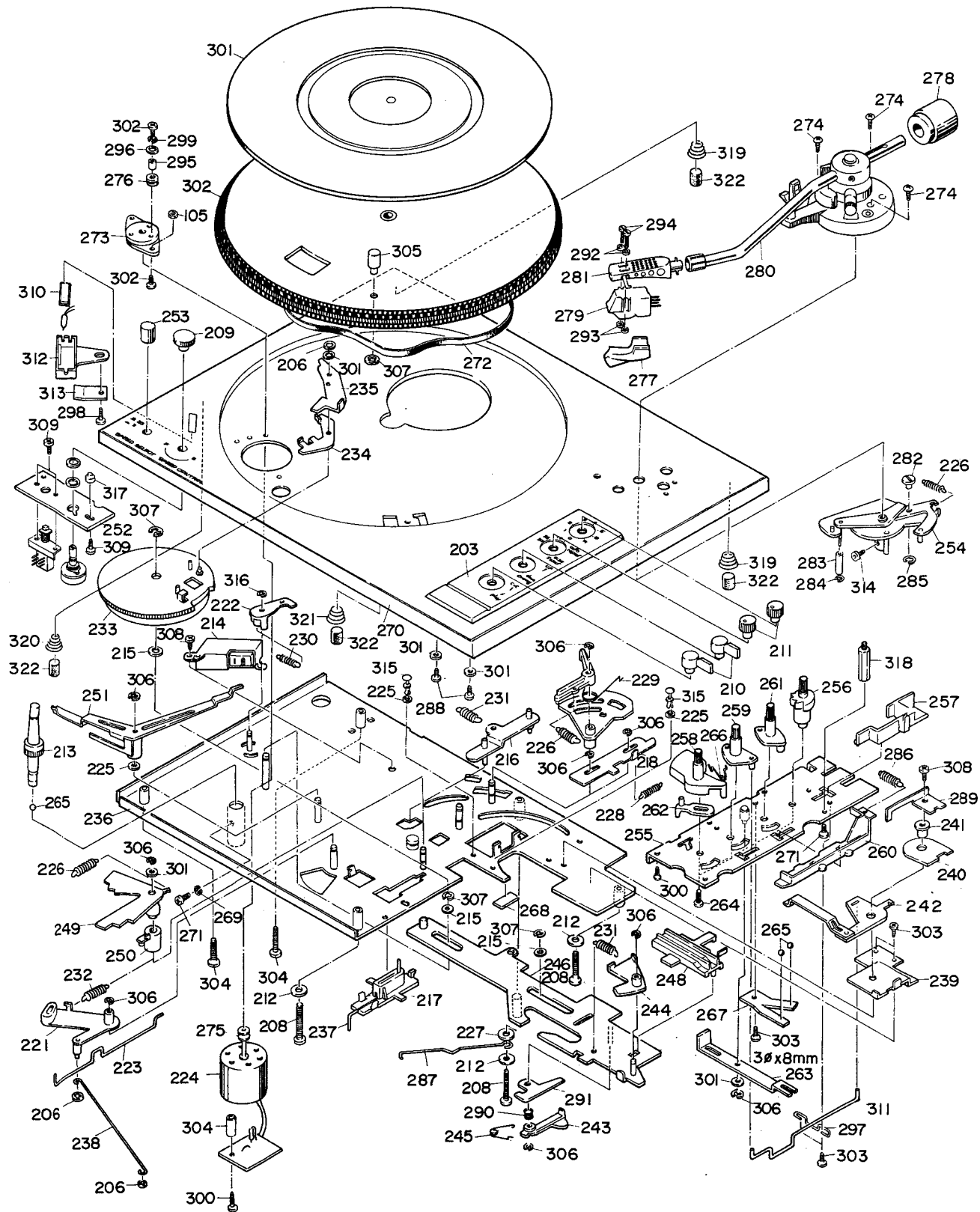


Figure 43.

■ CASSETTE RECORDER SECTION

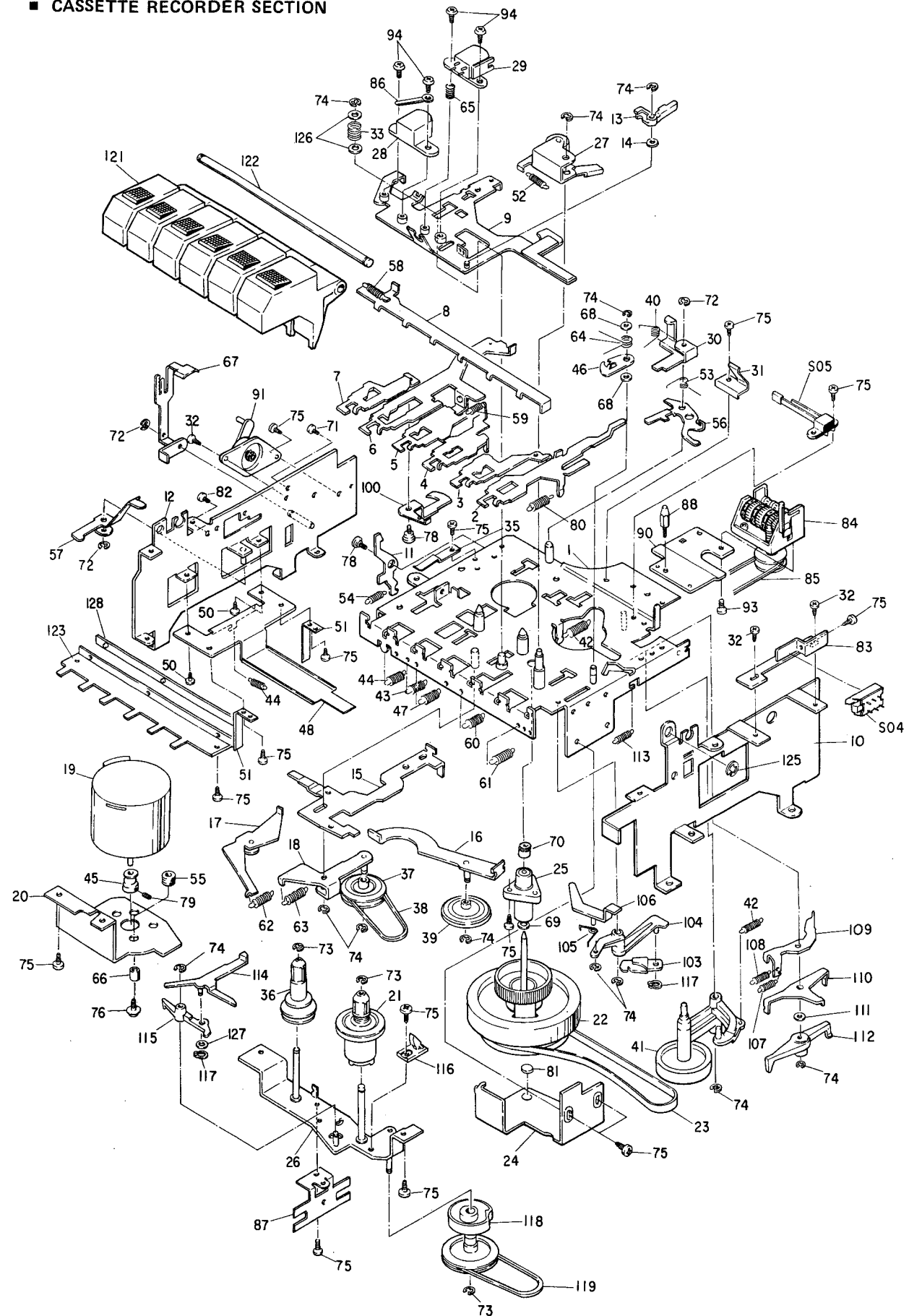


Figure 44.

10. PARTS LIST

CASSETTE RECORDER SECTION	30 ~ 32
TURNTABLE SECTION	32 ~ 33
RECEIVER SECTION	33 ~ 37
OTHERS	38

CASSETTE RECORDER SECTION

Symbol No.	Part No.	Description
MECHANICAL PARTS		
2	25719192	Operation Plate, Pause
3	25741463	Operation Plate, Fast-forward
4	25741461	Operation Plate, Play
5	25741474	Operation Plate, Rewind
6	25741464	Operation Plate, Record
7	25741465	Operation Plate, Stop/Eject
8	25741487	Slider, Lock
13	25782221	Lever, Waiting
14	25764476	Washer, Waiting Lever
17	25742594	Lever, Fast-forward
18	25713284	Lever Ass'y, Rewind
19	22125659	Motor, Cassette Recorder
21	25712287	Hub Plate, Take-up
22	25717382	Flywheel Ass'y
23	25755370	Belt, Drive
25	25718175	Holder, Capstan
27	25717379	Pressure Roller Ass'y
28	22218186	Head, Erase (HET-28)
29	22217317	Head, Record/Playback(HRPT-54)
30	25748097	Lever, Record Lock
31	25774533	Spring, Cassette Holder
32	22707170	Screw, 2.6 ϕ x 5mm
33	25772397	Spring, Head Chassis
34	25771759	Spring, Lock Lever
36	25712300	Hub Plate, Supply
37	25713455	Pulley Ass'y, Rewind
38	25755330	Belt, Rewind
39	25713400	Idler Ass'y, Fast-forward
40	25773259	Spring, Record Lock Lever
41	25713447	Lever Ass'y, Take-up
42	25771450	Spring, Take-up Lever
43	25771650	Spring, Eject
44	25771403	Spring, Record Slider
45	25751552	Pulley, Motor
46	25742576	Lever, Pause Lock
47	25771405	Spring, Operation Plate, Rewind
50	22707018	Screw, 2.6 ϕ x 6.8mm
52	25771704	Spring, Pressure Roller
53	25773260	Spring, Record Lock Lever
54	25771412	Spring, Cassette-up
55	25761238	Cushion, Motor
56	25748216	Lever, Record Lock
58	25771588	Spring, Lock Slider
59	25771672	Spring, Head Chassis

CASSETTE RECORDER SECTION

Symbol No.	Part No.	Description
60	25771671	Spring, Operation Plate, Play
61	25771407	Spring, Operation Plate, Fast-forward
62	25771578	Spring, Fast-forward Lever
63	25771451	Spring, Rewind Lever
64	25773295	Spring, Pause Lock
65	25772240	Spring, Head
66	25733463	Spacer, Motor
68	25764400	Washer, Pause Lock
69	25764398	Washer, Flywheel
70	25756143	Gear, Waiting
71	22701389	Screw, 2.6 ϕ x 3mm
73	25735159	E Ring, 1.5 ϕ
74	22703118	E Ring, 2 ϕ
75	70432605	Screw, 2.6 ϕ x 5mm
76	22707174	Screw, 2.6 ϕ x 6.3mm
78	22701472	Screw, 2.6 ϕ x 13mm
79	22701344	Screw, 2.6 ϕ x 4mm
80	25771585	Spring, Operation Plate, Pause
81	25764386	Washer, Flywheel
82	70432604	Screw, 2.6 ϕ x 4mm
84	25873180	Tape Counter
85	25755285	Belt, Tape Counter
91	25719392	Damper Ass'y
94	70432005	Screw, 2 ϕ x 5mm
103	25782184	Lever, ASO
104	25782186	Lever, Release
105	25773215	Spring, ASO Select
107	25771584	Spring, Pause Lever
108	25771617	Spring, Pause Lever
111	25764399	Washer, Stop Lever
112	25782185	Lever, Bias
113	25771586	Spring, ASO Lever
114	25782182	Lever, Detect
115	25782183	Lever, Push
116	25781173	Lever, Detect Guide
117	25735197	G Ring, 2.5 ϕ
118	25713401	Cam-wheel Ass'y
119	25755267	Belt, Cam
121	25837031	Button, Operation
124	25771518	Spring, Operation Button
126	25764360	Washer, Head Chassis
127	25761340	Spacer, Push Lever
128	25761268	Cushion, Operation Button

CASSETTE RECORDER SECTION

Symbol No.	Part No.	Description
TRANSISTORS, DIODES AND IC		
TR101, 201		Transistor, 2SC1681-BL.JA
TR102, 202		Transistor, 2SC1681-BL.JA
TR103, 203		Transistor, 2SC733-TM.GR.JA
TR104, 204		Transistor, 2SC733-TM.GR.JA
D01, 02	22115616	Diode, SEL101R
D101, 201		Diode, 1N60-FD1
D102, 202		Diode, 1S1555V
D103, 203		Diode, 1N60-FD1
D104, 204		Diode, 1N60-FD1
IC01	22114624	IC, HA11226
ELECTRICAL PARTS		
Z01	22132524	Oscillator Unit, Bias
Z101, 201	22135022	Filter Block
Z102, 202	22135023	Filter Block
L101, 201	22232203	Coil, Trap (22mH)
L102, 202	22232207	Coil, Trap (2.2mH)
J101, 201	22163508	Jack, Microphone (3.5 ϕ)
M101, 201	22104377	Meter, Level
PL101, 201	22113313	Lamp, 50mA, 14V
S01	22195035	Switch, Lever, Dolby NR
S02	22195034	Switch, Lever, EQ
S03	22195036	Switch, Lever, Bias
S04	22146265	Switch, Slide, Muting
S05	22145985	Switch, Leaf, Motor
S06	22145985	Switch, Leaf, Record/Playback
S07	22195048	Switch, Slide, Beat Cut
S101, 201	22195059	Switch, Slide, Record/Playback
CAPACITORS		
Note: J = $\pm 5\%$, K = $\pm 10\%$		
C01	22385332	Polystyrene, 3300pF, 250V, K
C02	22385821	Polystyrene, 820pF, 250V, K
C03	22445330	Electrolytic, 33mfd, 16V
C04	22445101	Electrolytic, 100mfd, 16V
C05	22443331	Electrolytic, 330mfd, 10V
C06	22445100	Electrolytic, 10mfd, 16V
C07	22445100	Electrolytic, 10mfd, 16V
C08	22445102	Electrolytic, 1000mfd, 16V
C09	22445102	Electrolytic, 1000mfd, 16V
C101, 201	22349221	Ceramic, 220pF, 50V, K
C102, 202	22445330	Electrolytic, 33mfd, 16V
C103, 203	22349561	Ceramic, 560pF, 50V, K
C104, 204	22349102	Ceramic, 1000pF, 50V, K
C105, 205	22349102	Ceramic, 1000pF, 50V, K
C106, 206	22448339	Electrolytic, 3.3mfd, 50V
C107, 207	22448339	Electrolytic, 3.3mfd, 50V
C108, 208	22445100	Electrolytic, 10mfd, 16V
C109, 209	22445330	Electrolytic, 33mfd, 16V

CASSETTE RECORDER SECTION

Symbol No.	Part No.	Description
C110, 210	22371273	Mylar, 0.027mfd, 50V, J
C111, 211	22349221	Ceramic, 220pF, 50V, K
C112, 212	22445100	Electrolytic, 10mfd, 16V
C113, 213	22445100	Electrolytic, 10mfd, 16V
C114, 214	22445100	Electrolytic, 10mfd, 16V
C115, 215	22445100	Electrolytic, 10mfd, 16V
C116, 216	22371153	Mylar, 0.015mfd, 50V, J
C117, 217	22371472	Mylar, 4700pF, 50V, J
C118, 218	22440208	Electrolytic, 0.33mfd, 50V
C119, 219	22371153	Mylar, 0.015mfd, 50V, J
C120, 220	22440207	Electrolytic, 0.1mfd, 50V
C121, 221	22445100	Electrolytic, 10mfd, 16V
C122, 222	22440207	Electrolytic, 0.1mfd, 50V
C123, 223	22440208	Electrolytic, 0.33mfd, 50V
C124, 224	22440209	Electrolytic, 0.47mfd, 50V
C125, 225	22448339	Electrolytic, 3.3mfd, 50V
C126, 226	22445330	Electrolytic, 33mfd, 16V
C127, 227	22445100	Electrolytic, 10mfd, 16V
C128, 228	22349102	Ceramic, 1000pF, 50V, K
C129, 229	22349151	Ceramic, 150pF, 50V, K
C130, 230	22440208	Electrolytic, 0.33mfd, 50V
C131, 231	22440207	Electrolytic, 0.1mfd, 50V
C132, 232	22372563	Mylar, 0.056mfd, 50V, K
C133, 233	22445100	Electrolytic, 10mfd, 16V
C134, 234	22445100	Electrolytic, 10mfd, 16V
C135, 235	22362470	Ceramic, 47pF, 50V, K
C136, 236	22445100	Electrolytic, 10mfd, 16V
C137, 237	22372562	Mylar, 0.0056mfd, 50V, K
RESISTORS AND VARIABLE RESISTORS		
All resistors are $\frac{1}{4}W$, $\pm 5\%$, carbon film unless otherwise noted. Note: K = $\pm 10\%$		
R01	22563681	Solid Carbon, 680 ohm, $\frac{1}{2}W$, K
R02	22563681	Solid Carbon, 680 ohm, $\frac{1}{2}W$, K
R03	22563271	Solid Carbon, 270 ohm, $\frac{1}{2}W$, K
R04	22545101	100 ohm
R05	22563102	Solid Carbon, 1K ohm, $\frac{1}{2}W$, K
R06	22563561	Solid Carbon, 560 ohm, $\frac{1}{2}W$, K
R07	22563561	Solid Carbon, 560 ohm, $\frac{1}{2}W$, K
R08	22563220	Solid Carbon, 22 ohm, $\frac{1}{2}W$, K
R101, 201	22545101	100 ohm
R102, 202	22555102	1K ohm
R103, 203	22555393	39K ohm
R104, 204	22541124	120K ohm, Noiseless Type
R105, 205	22555121	120 ohm
R106, 206	22545100	10 ohm
R107, 207	22541154	150K ohm, Noiseless Type
R108, 208	22545103	10K ohm
R109, 209	22555152	1.5K ohm
R110, 210	22555562	5.6K ohm
R111, 211	22555222	2.2K ohm

CASSETTE RECORDER SECTION

Symbol No.	Part No.	Description
R112, 212	22555272	2.7K ohm
R113, 213	22541104	100K ohm, Noiseless Type
R114, 214	22555273	27K ohm
R115, 215	22555102	1K ohm
R116, 216	22555274	270K ohm
R117, 217	22555473	47K ohm
R118, 218	22545332	3.3K ohm
R119, 219	22545681	680 ohm
R120, 220	22545562	5.6K ohm
R121, 221	22555104	100K ohm
R122, 222	22545181	180 ohm
R123, 223	22555473	47K ohm
R124, 224	22555332	3.3K ohm
R125, 225	22555472	4.7K ohm
R126, 226	22555472	4.7K ohm
R127, 227	22555104	100K ohm
R128, 228	22555123	12K ohm
R129, 229	22555101	100 ohm
R130, 230	22555332	3.3K ohm
R131, 231	22555391	390 ohm
R132, 232	22555561	560 ohm
R133, 233	22555331	330 ohm
R134, 234	22555222	2.2K ohm
R135, 235	22555153	15K ohm
R136, 236	22555101	100 ohm
R137, 237	22555121	120 ohm
R138, 238	22555569	5.6 ohm
R139, 239	22545123	12K ohm
R140, 240	22545274	270K ohm
R141, 241	22545274	270K ohm
R142, 242	22545561	560 ohm
R143, 243	22555561	560 ohm
R144, 244	22555472	4.7K ohm
R145, 245	22545563	56K ohm
VR01	22658129	Semi-fixed, 10K ohm
VR101, 201	22658394	Semi-fixed, 100K ohm
VR102, 202	22658293	Semi-fixed, 47K ohm
VR103, 203	22658293	Semi-fixed, 47K ohm
VR104, 204	22658257	Semi-fixed, 10K ohm
VR105, 205	22622019	Variable, 50K ohm, Record Level

TURNTABLE SECTION

Symbol No.	Part No.	Description
ELECTRICAL PARTS		
S801	22146033	Switch, Micro, Motor
S802	22146194	Switch, Push, Speed Select
N801	22113445	Lamp, Neon
	22164756	Cord, Pin Plug
CAPACITOR		
C801	22445102	Electrolytic, 1000mfd, 16V
VARIABLE RESISTOR		
R801	22622020	Variable, 5K ohm, Speed Control
MECHANICAL AND CABINET PARTS		
201	20723048	Mat, Turntable
202	20723046	Turntable
203	20778124	Cover, Decoration
205	20746088	Stay, 45 r.p.m. Adaptor
206	20798033	Ring, 3φ
207	20798020	Ring, 4φ
209	20871299	Knob, Speed Control
210	20871309	Knob, Play/Cueing
211	20871308	Knob, Size Select/Auto Repeat
212	25733451	Spacer
213	20721053	Shaft Ass'y, Turntable
214	20743073	Cover, Switch
215	20746204	Spacer, Return Lever
216	20753201	Lever, Start Switch
217	20743075	Guide Block
219	20753204	Arm, Micro Switch
220	20753205	Lever, Micro Switch
221	20753219	Lever, Cut
222	20753228	Lever, Gear Lock
223	20763217	Rod, Start Switch
224	25719492	Motor Ass'y, Turntable
225	25764399	Washer, Teflon
226	25771883	Spring, Repeat Nail
227	25735180	Washer, Steel
228	25771886	Spring
229	25773326	Spring, Torsion
230	25771934	Spring, Gear
231	25771934	Spring, Gear
232	25771885	Spring
233	20727037	Gear, Main
234	20753199	Lutch
235	20753200	Lutch
237	20763219	Rod, Size Select
238	20763221	Rod, Cut
239	20746202	Bracket, Cueing Lever
240	20753223	Plate, Cueing
241	20773209	Collar
242	20751155	Lever Ass'y, Cueing
243	20753212	Nail
244	20753213	Nail, Repeat
245	25773325	Spring, Nail

TURNTABLE SECTION

Symbol No.	Part No.	Description
247	20746203	Cushion, Return Lever
248	20753214	Block, Lift
249	20753215	Lever, Cam
250	20753216	Nail
251	20751163	Lever Ass'y, Cut
253	20871300	Knob, Speed Select
256	20753209	Latchet, Repeat
257	20753210	Slider
258	20753224	Cam, Start/Stop
259	20753225	Cam, Cueing
260	20753226	Slider, Repeat
261	20753227	Cam, Size Select
262	20753229	Slider, Start/Stop
264	20763218	Pin, Control Cam
265	20773077	Ball, Steel
266	25773332	Spring, Cueing
267	25774514	Spring, Control
270	20711086	Panel, Turntable
272	20728021	Belt, Drive
273	20778119	Cover, Motor
274	22707260	Screw, Tapping, 4φ x 12mm
275	20716073	Pulley, Motor
276	20881180	Cushion, Motor
277	20788077	Cover, Stylus
278	20788079	Weight, Tone Arm
279	22155049	Cartridge
280	20788084	Tone Arm Ass'y
281	20736033	Head Shell
282	20757026	Cam, Adjust
283	20746213	Spacer
284	25735159	E Ring, 1.5φ
285	25735222	E Ring, 4φ
286	25771902	Spring
287	25775170	Spring
290	25772456	Spring, Nail
291	20746209	Plate, Friction
292	20791077	Washer, Cartridge
293	22702141	Nut, Cartridge
294	22707049	Screw, Cartridge
295	20773190	Spacer
296	74001026	Washer, 2.6φ
306	74050020	E Ring, 2φ
310	20749063	Reflector
311	20763220	Rod, Cueing
314	22707016	Screw, 3φ x 6mm
315	22705021	Rivet, Plastic, 3φ x 3.5mm
319	25772460	Spring, Panel
320	25772461	Spring, Panel
321	25772469	Spring, Panel
322	20881063	Cushion, Panel Spring

RECEIVER SECTION

Symbol No.	Part No.	Description
TRANSISTORS, ICS AND DIODES		
TUNER SECTION		
Q01		Transistor, 2SC1815-GR
Q02		Transistor, 2SC941-TM.O.JA
Q03		Transistor, 2SC372-O.JA
Q04		Transistor, 2SC1815-GR
Q05		Transistor, 2SC1815-GR
Q06		Transistor, 2SC1815-GR
Q07		Transistor, 2SC1815-GR
Q08		Transistor, 2SC734-Y
Q09		Transistor, 2SC1815-GR
Q10	22114418	IC, AN277
Q11		IC, TA7157P
Q12		IC, TA7129P
Q13		IC, TA7129P
Q14		Transistor, 2SC1815-GR
D01		Diode, 1N60
D02		Diode, 1N60
D03		Diode, 1N60-FD1
D04		Diode, 1N60-FD1
D05		Diode, 1N60
D06		Diode, 1N60
D07		Diode, 1N60-FD1
D08		Diode, 1N60
D09		Diode, 1S1555V
D10		Diode, 02Z8.2A
D11		Diode, 1S1555V
D12		Diode, 1N60
D13		Diode, 02Z6.2A
D14		Diode, 1S1555V
D15, 16, 17, 18, 19, 20, 21	22115616	Diode, SEL101R
D22	22115383	Diode, SEL103S
D23		Diode, 02Z12A
AUDIO AND POWER SECTION		
Q301, 302		Transistor, 2SC1815-GR
Q303, 304		Transistor, 2SC1815-GR
Q601	22114615	IC, STK043-105
Q901, 902		Transistor, 2SD234-Y.JA
D901	22115342	Diode, S1RBA10
D902	22115427	Diode, MI-152
D903	22115460	Diode, M4C-41
D904		Diode, 02Z18A
D905		Diode, 02Z13A
D906		Diode, 1S1885
D907		Diode, 05Z13A
CLOCK SECTION		
Q701		Transistor, 2SC734-Y

RECEIVER SECTION

Symbol No.	Part No.	Description
Q702	22114667	IC (LSI), TMS1943NL
D701		Diode, TLR4040
D702, 703		Diode, 1S1555V
704, 705		
706, 707		
ELECTRICAL PARTS		
TUNER SECTION		
L01	22242704	Coil, Aerial, MW/LW
L02	22282162	Coil, Aerial, SW
L03	22205046	Coil, Oscillator, LW
L04	22245206	Coil, Oscillator, MW
L05	22285252	Coil, Oscillator, SW
L06	22211232	Coil, Choke (8.5mH)
IT01	22267337	Transformer, IF, FM
IT02	22267338	Transformer, IF, FM
IT03	22264626	Transformer, IF, AM
IT04	22264643	Transformer, IF, AM
IT05	22264617	Transformer, IF, AM
LCR01, 02	22134119	Filter, MPX
CF01, 02	22153065	Filter, Ceramic, SFE10.7
M01	22104373	Meter, Tuning
M02	22104372	Meter, Frequency
N01, 02	22113390	Lamp, Meter
J01	22163506	Pin Jack, White (L)
J02	22163529	Pin Jack, Red (R)
S01	22195019	Switch, Push, Preset Tuning
S02	22195157	Switch, Push, Function
	22131347	RF Block, FM
AUDIO AND POWER SECTION		
N03	22113438	Lamp, Pointer, 50mA, 8V
N901	22113446	Lamp, Neon, All Off
J301	22167806	Socket, DIN
J601	22163684	Jack, Headphone
J602	22162412	Terminal Speaker
J603	22162278	Terminal, Aerial
S301, 302	22195018	Switch, Push, Monitor/Mode
311, 312		
S901	22146295	Switch, Push, Power
F901, 902	22144293	Fuse, 1.6A/250V
F903, 904	22144285	Fuse, 5A/250V
T901	22223166	Transformer, Power (Europe)
	22223216	Transformer, Power (England)
T902	22148648	Relay (With S911 to S914)
	22176286	Cord, Power (Europe)
	22176536	Cord, Power (England)
CLOCK SECTION		
S701, 702	22195139	Switch, Lever, Setting/Function
S703	22195140	Switch, Push, Time Adjustment
S704	22195138	Switch, Slide, Dimmer
S705	22195141	Switch, Push, Play

RECEIVER SECTION

Symbol No.	Part No.	Description
CAPACITORS		
Note: C = ±0.25%, D = ±0.5pF, J = ±5%, K = ±10%, Z = -20 +80%		
TUNER SECTION		
C01	22342223	Ceramic, 0.022mfd, 50V, Z
C02	22342223	Ceramic, 0.022mfd, 50V, Z
C03	22342223	Ceramic, 0.022mfd, 50V, Z
C04	22342223	Ceramic, 0.022mfd, 50V, Z
C05	22362270	Ceramic, 27pF, 50V, K
C06	22342473	Ceramic, 0.047mfd, 50V, Z
C07	22342223	Ceramic, 0.022mfd, 50V, Z
C08	22342223	Ceramic, 0.022mfd, 50V, Z
C09	22342223	Ceramic, 0.022mfd, 50V, Z
C10	22448109	Electrolytic, 1mfd, 50V
C11	22448109	Electrolytic, 1mfd, 50V
C12	22342223	Ceramic, 0.022mfd, 50V, Z
C13	22362221	Ceramic, 220pF, 50V, K
C14	22362331	Ceramic, 330pF, 50V, K
C15	22362331	Ceramic, 330pF, 50V, K
C16	22362271	Ceramic, 270pF, 50V, K
C17	22362331	Ceramic, 330pF, 50V, K
C18	22448109	Electrolytic, 1mfd, 50V
C19	22342223	Ceramic, 0.022mfd, 50V, Z
C20	22372103	Mylar, 0.01mfd, 50V, K
C21	22342223	Ceramic, 0.022mfd, 50V, Z
C22	22342223	Ceramic, 0.022mfd, 50V, Z
C23	22447479	Electrolytic, 4.7mfd, 35V
C24	22372103	Mylar, 0.01mfd, 50V, K
C25	22372103	Mylar, 0.01mfd, 50V, K
C26	22448109	Electrolytic, 1mfd, 50V
C27	22362181	Ceramic, 180pF, 50V, K
C28	22342223	Ceramic, 0.022mfd, 50V, Z
C29	22443101	Electrolytic, 100mfd, 10V
C30	22448109	Electrolytic, 1mfd, 50V
C31	22372473	Mylar, 0.047mfd, 50V, K
C32	22321053	Polypropylene, 470pF, 50V, J
C33	22448478	Electrolytic, 0.47mfd, 50V
C34	22448478	Electrolytic, 0.47mfd, 50V
C35	22448478	Electrolytic, 0.47mfd, 50V
C36	22372472	Mylar, 0.0047mfd, 50V, K
C37	22372472	Mylar, 0.0047mfd, 50V, K
C38	22445221	Electrolytic, 220mfd, 16V
C39	22448109	Electrolytic, 1mfd, 50V
C40	22448109	Electrolytic, 1mfd, 50V
C41	22372222	Mylar, 0.0022mfd, 50V, K
C42	22445470	Electrolytic, 47mfd, 16V
C43	22342223	Ceramic, 0.022mfd, 50V, Z
C44	22372103	Mylar, 0.01mfd, 50V, K
C45	22445100	Electrolytic, 10mfd, 16V
C46	22361100	Ceramic, 10pF, 50V, D

RECEIVER SECTION

Symbol No.	Part No.	Description
C47, 48, 51	22309146	Trimmer
C49, 67	22307109	Variable (With VR11)
C50	22362330	Ceramic, 33pF, 50V, K
C52	22342223	Ceramic, 0.022mfd, 50V, Z
C53	22372153	Mylar, 0.015mfd, 50V, K
C54	22342223	Ceramic, 0.022mfd, 50V, Z
C55	22342223	Ceramic, 0.022mfd, 50V, Z
C56	22372472	Mylar, 0.0047mfd, 50V, K
C57	22372103	Mylar, 0.01mfd, 50V, K
C58	22321083	Polypropylene, 150pF, 50V, J
C59	22360137	Ceramic, 39pF, 50V, J
C60, 63, 66	22309146	Trimmer
C61	22321053	Polypropylene, 470pF, 50V, J
C62	22360158	Ceramic, 15pF, 50V, J
C64	22321065	Polypropylene, 4700pF, 50V, J
C65	22360287	Ceramic, 5pF, 50V, C
C68	22372103	Mylar, 0.01mfd, 50V, K
C69	22372223	Mylar, 0.022mfd, 50V, K
C70	22372102	Mylar, 0.001mfd, 50V, K
C73	22446101	Electrolytic, 100mfd, 25V
C74	22362330	Ceramic, 33pF, 50V, K
C75	22362330	Ceramic, 33pF, 50V, K
C76	22447479	Electrolytic, 4.7mfd, 35V
C77	22447479	Electrolytic, 4.7mfd, 35V
C78	22372102	Mylar, 0.001mfd, 50V, K
C79	22372102	Mylar, 0.001mfd, 50V, K
C80	22443470	Electrolytic, 47mfd, 10V
C81	22443470	Electrolytic, 47mfd, 10V
C82	22448109	Electrolytic, 1mfd, 50V
C83	22448109	Electrolytic, 1mfd, 50V
C84	22372103	Mylar, 0.01mfd, 50V, K
C85	22372103	Mylar, 0.01mfd, 50V, K
C86	22372393	Mylar, 0.039mfd, 50V, K
C87	22372393	Mylar, 0.039mfd, 50V, K
C88	22446101	Electrolytic, 100mfd, 25V
C89	22448109	Electrolytic, 1mfd, 50V
C90	22443101	Electrolytic, 100mfd, 10V
C91	22342223	Ceramic, 0.022mfd, 50V, Z
C92	22446221	Electrolytic, 220mfd, 25V
C93	22401015	Electrolytic, 4.7mfd, 35V
C94	22447479	Electrolytic, 4.7mfd, 35V
C95	22447479	Electrolytic, 4.7mfd, 35V
C96	22372103	Mylar, 0.01mfd, 50V, K
C97	22445100	Electrolytic, 10mfd, 16V
C98	22448109	Electrolytic, 1mfd, 50V
C99	22342223	Ceramic, 0.022mfd, 50V, Z
C101	22372153	Mylar, 0.015mfd, 50V, K
C102	22372153	Mylar, 0.015mfd, 50V, K
C103	22448229	Electrolytic, 2.2mfd, 50V

RECEIVER SECTION

Symbol No.	Part No.	Description
AUDIO AND POWER SECTION		
C71	22446102	Electrolytic, 1000mfd, 25V
C301, 302	22448478	Electrolytic, 0.47mfd, 50V
C303, 304	22349102	Ceramic, 0.001mfd, 50V, K
C305, 306	22448109	Electrolytic, 1mfd, 50V
C307, 308	22372332	Mylar, 0.0033mfd, 50V, K
C309, 310	22372153	Mylar, 0.015mfd, 50V, K
C311, 312	22372123	Mylar, 0.012mfd, 50V, K
C313, 314	22372823	Mylar, 0.082mfd, 50V, K
C315, 316	22448109	Electrolytic, 1mfd, 50V
C317, 318	22349102	Ceramic, 0.001mfd, 50V, K
C319, 320	22448478	Electrolytic, 0.47mfd, 50V
C321, 322	22349681	Ceramic, 680pF, 50V, K
C323, 324	22372183	Mylar, 0.018mfd, 50V, K
C325	22446221	Electrolytic, 220mfd, 25V
C326, 327	22349681	Ceramic, 680pF, 50V, K
C601, 602	22448229	Electrolytic, 2.2mfd, 50V
C603, 604	22349681	Ceramic, 680pF, 50V, K
C605, 606	22443470	Electrolytic, 47mfd, 10V
C607, 608	22361809	Ceramic, 8pF, 50V, D
C609, 610	22447470	Electrolytic, 47mfd, 35V
C611, 612	22372473	Mylar, 0.047mfd, 50V, K
C613	22447101	Electrolytic, 100mfd, 35V
C614	22448109	Electrolytic, 1mfd, 50V
C615	22447101	Electrolytic, 100mfd, 35V
C616	22448109	Electrolytic, 1mfd, 50V
C901	22460031	Electrolytic, 1000mfd, 35V
C902	22446221	Electrolytic, 220mfd, 25V
C903	22446101	Electrolytic, 100mfd, 25V
C904	22349471	Ceramic, 470pF, 50V, K
C905	22440205	Electrolytic, 4700mfd, 35V
C906	22440205	Electrolytic, 4700mfd, 35V
C907	22446102	Electrolytic, 1000mfd, 25V
C908	22340032	Ceramic, 0.02mfd, 500V, Z
C909	22340032	Ceramic, 0.02mfd, 500V, Z
C910	22340032	Ceramic, 0.02mfd, 500V, Z
C911	22340032	Ceramic, 0.02mfd, 500V, Z
C912	22340032	Ceramic, 0.02mfd, 500V, Z
C913	22340032	Ceramic, 0.02mfd, 500V, Z
C914, 915	22340032	Ceramic, 0.02mfd, 500V, Z
916, 917		
C918, 919	22340090	Ceramic, 0.047mfd, 250V, Z
C920	22446101	Electrolytic, 100mfd, 25V
C921	22340032	Ceramic, 0.02mfd, 500V, Z
C922	22445471	Electrolytic, 470mfd, 16V
CLOCK SECTION		
C701	22448478	Electrolytic, 0.47mfd, 50V
C702	22448478	Electrolytic, 0.47mfd, 50V
C703	22443471	Electrolytic, 470mfd, 10V

RECEIVER SECTION

Symbol No.	Part No.	Description
RESISTORS AND VARIABLE RESISTORS		
All resistors are $\frac{1}{4}W$, $\pm 5\%$, carbon film unless otherwise noted. Note: K = $\pm 10\%$		
TUNER SECTION		
R01	22545101	100 ohm
R02	22545331	330 ohm
R03	22563102	Solid Carbon, 1K ohm, $\frac{1}{2}W$, K
R04	22545471	470 ohm
R05	22545471	470 ohm
R06	22545471	470 ohm
R07	22545471	470 ohm
R08	22545471	470 ohm
R09	22545471	470 ohm
R10	22545471	470 ohm
VR11		See C49, 67 (Tuner Section)
VR12, 13, 14, 15, 16, 17	22650027	Variable, 20K ohm, Fine Tuning
VR18	22658152	Semi-fixed, 330 ohm
VR19	22658197	Semi-fixed, 10K ohm
VR20	22658197	Semi-fixed, 10K ohm
VR21	22658197	Semi-fixed, 10K ohm
R24	22545183	18K ohm
R25	22545472	4.7K ohm
R26	22545561	560 ohm
R27	22545272	2.7K ohm
R28	22545223	22K ohm
R29	22545332	3.3K ohm
R30	22545101	100 ohm
R31	22545473	47K ohm
R32	22545332	3.3K ohm
R33	22545102	1K ohm
R34	22545102	1K ohm
R35	22545472	4.7K ohm
R36	22545102	1K ohm
R37	22545472	4.7K ohm
R38	22545101	100 ohm
R39	22545474	470K ohm
R40	22545682	6.8K ohm
R41	22545823	82K ohm
R42	22545224	220K ohm
R43	22545562	5.6K ohm
R44	22545122	1.2K ohm
R45	22545224	220K ohm
R46	22545152	1.5K ohm
R47	22545104	100K ohm
R48	22545104	100K ohm
R49	22545101	100 ohm
R50	22545224	220K ohm
R51	22545101	100 ohm
R52	22545102	1K ohm

RECEIVER SECTION

Symbol No.	Part No.	Description
R53	22545332	3.3K ohm
R54	22545102	1K ohm
VR55	22658197	Semi-fixed, 10K ohm
R56	22545123	12K ohm
R57	22545102	1K ohm
R58	22545392	3.9K ohm
R59	22545392	3.9K ohm
R60	22545101	100 ohm
R61	22545104	100K ohm
R62	22545472	4.7K ohm
R63	22563152	Solid Carbon, 1.5K ohm, $\frac{1}{2}W$, K
R64	22545104	100K ohm
R65	22545472	4.7K ohm
R67	22545682	6.8K ohm
R68	22545273	27K ohm
R71	22545101	100 ohm
R72	22545682	6.8K ohm
R73	22545683	68K ohm
R74	22545103	10K ohm
R75	22545102	1K ohm
R76	22545681	680 ohm
R77	22545393	39K ohm
R78	22545103	10K ohm
R79	22545102	1K ohm
R80	22545100	10 ohm
R81	22545330	33 ohm
R82	22545222	2.2K ohm
R83	22545221	220 ohm
R84	22545222	2.2K ohm
R85	22545563	56K ohm
R86	22545562	5.6K ohm
R87	22545563	56K ohm
R88	22545224	220K ohm
R89	22545101	100 ohm
R90	22545563	56K ohm
R91	22545562	5.6K ohm
R92	22545472	4.7K ohm
R93	22545104	100K ohm
R94	22545122	1.2K ohm
R95	22545103	10K ohm
R97	22545104	100K ohm
R98	22545104	100K ohm
R99	22545682	6.8K ohm
R100	22545682	6.8K ohm
R101	22545102	1K ohm
R102	22545821	820 ohm
R103	22545331	330 ohm
R104	22545152	1.5K ohm
VR105	22658453	Semi-fixed, 2.2K ohm
R106	22545562	5.6K ohm
R109	22545103	10K ohm

RECEIVER SECTION

Symbol No.	Part No.	Description
R110	22545274	270K ohm
R111	22545274	270K ohm
R112	22545102	1K ohm
R113	22545102	1K ohm
R114	22545154	150K ohm
R115	22545154	150K ohm
R116	22545102	1K ohm
R117	22545102	1K ohm
R118	22545822	8.2K ohm
R119	22545822	8.2K ohm
R120	22545823	82K ohm
R121	22545823	82K ohm
R122	22545473	47K ohm
R123	22545473	47K ohm
R124	22545682	6.8K ohm
R125	22545682	6.8K ohm
R126	22570302	Metal Oxide Film, 39 ohm, 2W, J
R127	22545101	100 ohm
R128	22545101	100 ohm
R129	22545472	4.7K ohm
R131	22545683	68K ohm
R132	22545683	68K ohm
R133	22545563	56K ohm
R134	22563153	Solid Carbon, 15K ohm, ½W, K
R135	22545223	22K ohm
R136	22545223	22K ohm

AUDIO AND POWER SECTION

R107	22545151	150 ohm
R301, 302	22555225	2.2M ohm
R303, 304	22545472	4.7K ohm
R305, 306	22545681	680 ohm
R309, 310	22555153	15K ohm
R311, 312	22651463	Variable, 100K ohm, Treble
R313, 314	22651463	Variable, 100K ohm, Bass
R315, 316	22555562	5.6K ohm
R317, 318	22555184	180K ohm
R319, 320	22545152	1.5K ohm
R321, 322	22545471	470 ohm
R323, 324	22545155	1.5M ohm
R325, 326	22545822	8.2K ohm
R327, 328	22545821	820 ohm
R329, 330	22545333	33K ohm
R331, 332	22651462	Variable, 250K ohm, Volume
R333	22545221	220 ohm
R334	22628024	Variable, 500K ohm, Balance
R335, 336	22545823	82K ohm
R337, 338	22545274	270K ohm
R341, 342	22545472	4.7K ohm
R343, 344	22555274	270K ohm
R345, 346	22545183	18K ohm

RECEIVER SECTION

Symbol No.	Part No.	Description
R347, 348	22555153	15K ohm
R601, 602	22555102	1K ohm
R603, 604	22555333	33K ohm
R605, 606	22555391	390 ohm
R607, 608	22545333	33K ohm
R609, 610	22570262	Metal Oxide Film, 100 ohm, 1W, J
R611, 612	22570250	Metal Film, 10 ohm, 1W, J
R613, 614	22570268	Metal Oxide Film, 330 ohm, 1W, J
R901	22555471	470 ohm
R902	22555681	680 ohm
R903, 904	22570316	Metal Oxide Film, 560 ohm, 2W, J
R905	22570262	Metal Oxide Film, 100 ohm, 1W, J
R906	22545105	1M ohm
R907	22570261	Metal Oxide Film, 82 ohm, 1W, J
R908	22570261	Metal Oxide Film, 82 ohm, 1W, J
R909	22570263	Metal Oxide Film, 120 ohm, 1W, J
R910	22570254	Metal Film, 22 ohm, 1W, J
R911	22570292	Metal Oxide Film, 33K ohm, 1W, J
R912	22570288	Metal Oxide Film, 15K ohm, 1W, J
R913	22555471	470 ohm
R914	22570250	Metal Film, 10 ohm, 1W, J

CLOCK SECTION

R701	22545154	150K ohm
R702	22545222	2.2K ohm
R703	22545121	120 ohm
R704	22563271	Solid Carbon, 270 ohm, ½W, K
R705	22563271	Solid Carbon, 270 ohm, ½W, K
R707	22545682	6.8K ohm
R708	22545154	150K ohm
R709	22545273	27K ohm
R710	22545273	27K ohm
R711	22545822	8.2K ohm

OTHERS

Symbol No.	Part No.	Description
CABINET PARTS		
351	20826193	Board, Back (Europe)
	20826195	Board, Back (England)
352	20842103	Leg
353	20815173	Cabinet Ass'y (Europe)
	20815174	Cabinet Ass'y (England)
354	20861083	Hinge, Cabinet, Dust Cover
355	20847105	Dust Cover Ass'y
356	20861067	Hinge, Dust Cover
357	20017126	Panel Ass'y, Front
358	25817314	Panel Ass'y, Cassette Recorder
361	25817630	Cover Ass'y, Cassette
362	20031060	Cover, Preset
363	20022151	Plate, Preset
364	22824231	Knob, Push, Preset
365	22824232	Knob, Lever, Tape Selector/ Dolby
366	22824229	Knob, Tuning
367	22824230	Knob, Function/Mode/Monitor
368	22824233	Knob, Power
369	22826192	Knob, Volume/Balance/Treble/ Bass/Rec Level
370	20031057	Grill, Indicator
372	20019101	Plate, Dial
373	22749200	Pointer Ass'y
374	22742071	Drum, Dial
375	20866009	Spring, Drum
376	22742018	Pulley, Dial, Small
377	20042058	Pulley, Dial, Large
378	22749199	Shaft Ass'y, Tuning
379	20881204	Cushion, Meter, 30 x 16.5mm
380	20881205	Cushion, Meter, 16.5 x 9mm
381	25845528	Bush, Nylon, Power Cord
382	20801028	Nut, Tuning Shaft
383	22702125	Nut, Indicator Grille
385	22705020	Rivet, Plastic, 3 ϕ x 4.5mm
386	22705022	Rivet, Plastic, 3 ϕ x 5.5mm
387	22705023	Rivet, Plastic, 3.5 ϕ x 5.5mm
388	22701411	Screw, 2 ϕ x 4mm
389	70432608	Screw, Drum, 2.6 ϕ x 8mm
390	22701237	Screw, Tapping, 3 ϕ x 6mm
391	22701326	Screw, Tapping, 3 ϕ x 8mm
392	22707147	Screw, Tapping, 3 ϕ x 8mm
393	20794119	Screw, Dial Pulley, 3 ϕ x 9mm
394	22707040	Screw, 4 ϕ x 6mm
396	22950779	Label, Interference Eraser Switch
399	22942099	Pulley, Black
ACCESSORIES		
	20971046	Adaptor, 45 r.p.m.

OTHERS

Symbol No.	Part No.	Description
	22124461	Feeder Ass'y, Aerial
	22902024	Owner's Manual (Europe)
	22902038	Owner's Manual (England)
	22154189	Microphone (England)



MANUFACTURED BY
TOKYO SHIBAURA ELECTRIC CO., LTD.

2-1, GINZA 5-CHOME, CHUO-KU, TOKYO 104, JAPAN
CABLE: TOSHIBAGNZ TOKYO, TELEX NO.: J24681, J24682, J24683