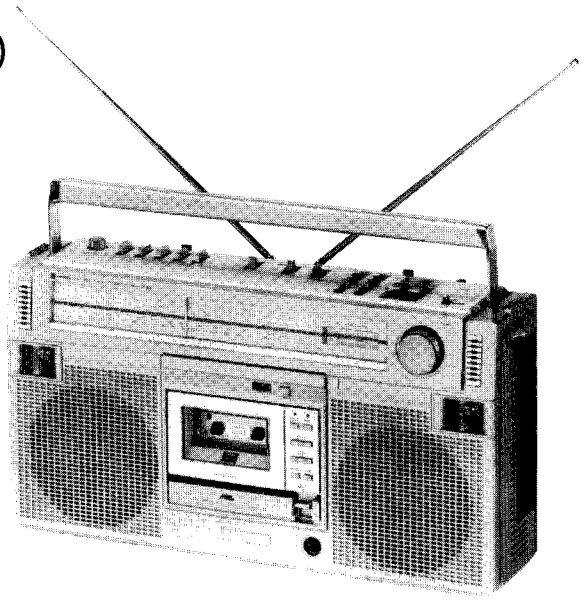
JVC

SERVICE MANUAL

MODEL

RC-M60L/LB

FM-MW-LW-SW1-SW2
5 BAND STEREO RADIO
CASSETTE RECORDER



No. 1416
July 1980

Contents

Specifications

Semiconductors : 11 ICs (including 2 for the microphone), 87 transistors (including 2 for the motor)
Speakers : 16cm (3.2Ω) x 2, 5cm (4Ω) x 2

Tuner section

Frequency ranges : FM 88 – 108MHz
MW 540 – 1600kHz
LW 150 – 350kHz
SW1 5.95 – 6.2MHz
SW2 6 – 18MHz
Antennas : Telescopic antennas for FM, SW
Ferrite core antenna for MW & LW

Tape recorder section

Track system : 4-Track 2-channel stereo
Frequency response : 30 – 16,000Hz (with metal tape)
30 – 15,000Hz (with chrome tape)
30 – 14,000Hz (with normal tape)
Heads : SA head for recording/playback
2 Gap SA head for erasure
Motors : Electronic governed DC motor for capstan DC motor for reel
Wow & flutter : 0.06% (WRMS)
S/N ratio : 50dB
Rewind time : Within 90 sec. (C-60 cassette)
Fast forward time : Within 90 sec. (C-60 cassette)

Amplifier section

Power output : 8W(4W+4W) (DC) at 10% THD
Max. 12W (6W+6W)
Input jacks : Mic x 2 (low impedance)
Remote jack x 1
Output jacks : Ext. speaker x 2 (load impedance 3.2 ~ 8Ω)
Headphones x 1
Input/output jack : DIN jack
Power supply : DC 12V (8 "R20" cells)
Car battery through a car battery adapter
AC 240/220/110V, 50/60Hz
Power consumption : 20W (RC-M60L)
18W (RC-M60LB)
Dimensions : 501(W) x 267(H) x 127(D)mm
Weight : 5.8kg (without batteries)
6.6kg (with batteries)

Design and specifications subject to change without notice.

Features

1. **Feather-light touch operation via two-motor full-logic tape transport**
- High performance backed up with an incredibly low wow and flutter of 0.06% (WRMS).
- Gear/oil-damped cassette door for smooth, quiet operation.
- Light-touch direct mode change from any given mode.
- Cue and review facilities even from the record mode.
- Assemble-recording capability due to direct mode from playback to record.

2. **Remote control capability**
- Optional remote control unit (R-15E).

3. **Metal tape compatibility**
- SA (Sen-Alloy) Record/Playback head and 2-Gap SA Erase head.
- Authentic recording equalizer circuit.
- Three-position tape select switch for normal, CrO_2 and metal tapes.
- ARL (Automatic Recording Level) selection switch allows automatic adjustment of reference level for different tapes.

4. **BIPHONIC*/Wide circuit for three-dimensional sound realism**

5. **High-performance tuner**
- 5-Band radio selection includes FM/MW/LW/SW1/SW2
- Quadrature detector.
- PLL (Phase-Locked Loop) IC in the FM multiplex circuit.
- Two telescopic antennas with upgraded sensitivity.

6. **High quality sound**
- Two-way/four-speaker system having two 16-cm woofers and two 5-cm tweeters.
- Separate bass and treble tone controls.

*BIPHONIC is a trademark of JVC.

Names of Parts

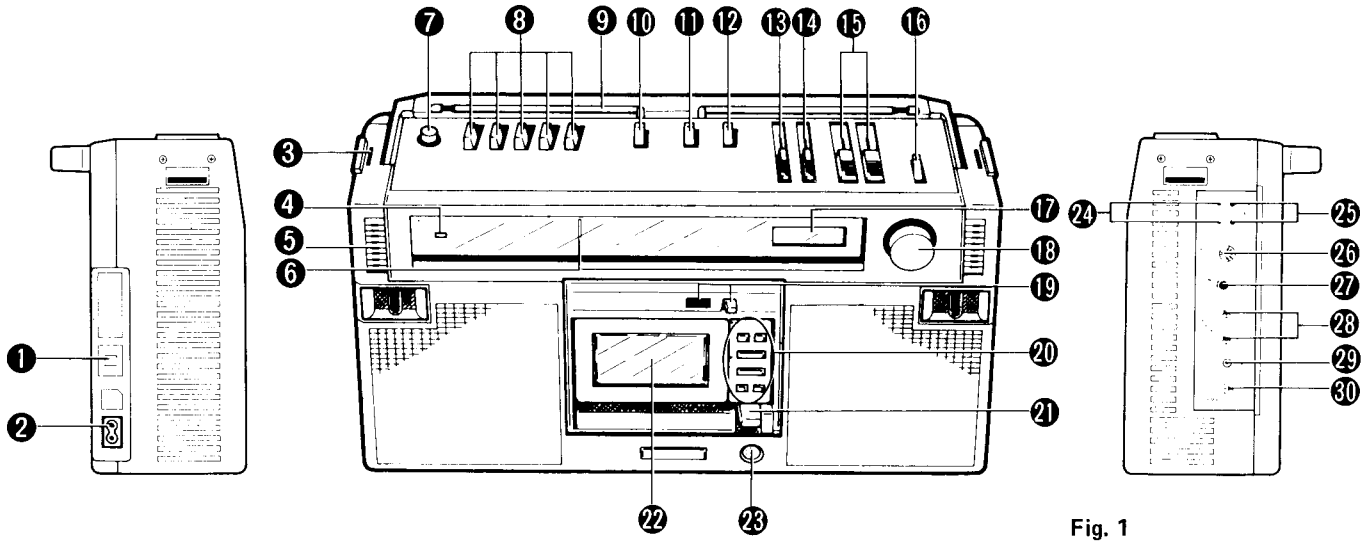


Fig. 1

❶ Voltage selector
❷ AC input jack
❸ Fasteners (L, R) for shoulder strap or holder for external microphone.
❹ FM stereo indicator
❺ Built-in microphones (L, R)
❻ Dial indicator
❼ FINE TUNING knob
❽ BAND SELECTOR buttons
❾ Telescopic antennas (L, R) for the reception of FM and short wave broadcasts.
❿ MODE switch
⓫ TAPE/ARL (Automatic Recording Level) selection switch
⓬ FUNCTION switch
⓭ BASS control
⓮ TREBLE control
⓯ VOLUME controls
⓰ FUNCTION STAND-BY switch
⓱ 3-Way meter
⓲ Tuning knob
⓳ Tape counter/Reset button
⓴ Cassette operation buttons
PAUSE button (⏸)
REC button (○)
PLAY button (▶)
STOP button (■)
REVIEW button (◀◀)
CUE button (▶▶)
㉑ EJECT button
㉒ Cassette door
㉓ REMOTE jack
㉔ Dummy holes for connecting microphones with remote control plugs.
㉕ Microphone jacks (MIC)
㉖ DIN-type jack (REC/PB)
㉗ Headphone jack (PHONES)
㉘ External speaker jacks (EXT SPKR 3.2~8Ω)
㉙ External DC input jack (DC 12V)
㉚ BEAT CUT switch

Operating Principle of Full-Logic Mechanism

This mechanism is a 2-motor, 1-solenoid full-logic system which has been developed mainly for low power consumption, and lightweight compactness.
During operation of the RC-M60, the solenoid serves only as the trigger for switching-over functions. Force for switching operations is derived from the flywheel gear coaxially fixed to the flywheel.
To ensure smooth, accurate operation, a small solenoid having low power consumption is used; additionally this solenoid has a pulling time set for short, middle and long periods (intermittent operation) which are the basis of all functions of the RC-M60.

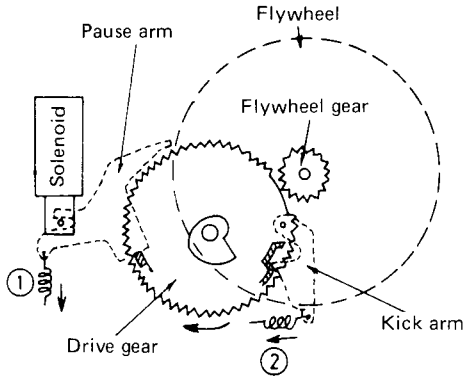


Fig. 2

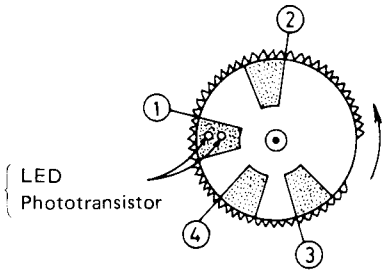


Fig. 3

1. When the mechanism operating button is pressed (power ON), the solenoid is energized, thus attracting the locked pause arm by spring ①.
2. When the drive gear is released from the pause arm it is slightly turned clockwise by spring ② . At this time, the drive and flywheel gears engage with each other to transmit the motive power for the switch-over operation.

NOTE: The flywheel gear, driven by the capstan motor by a belt, is already rotating when power is ON. Fig. 3 shows the rear side of the drive gear. Here, a change from black to silver zone is photoelectrically detected by a LED and phototransistor.

Solenoid Pulling Time (Energizing Time):

- Short (when point ① passes the photocoupler)
  ➡ Stop, Fast Forward, Rewind
  Stop: The reel motor is turned off.
  Fast Forward: The reel motor rotates forward.
  Rewind: The reel motor rotates reversely.
- Middle (when points ① and ②) pass the photocoupler)
  ➡ Pause, Cue, Review, Select
  Pause: The reel motor is turned off.
  Cue, Review, Select: The reel motor rotates forward or reversely.
- Long (when points ① , ② and ③ pass the photocoupler) ➡ Record, Playback
  Record, Playback: The reel motor is turned off.

NOTE: When points ① , ② , ③ and ④ pass the photocoupler ➡ Confirm that the switch-over operation has been completed.
Each swtich-over operation is completed at one rotation of the drive gear.

Solenoid pulling time		Reel motor	
		OFF	ON
Short	➡	Stop	Fast Forward, Rewind
Middle		Pause	Cue, Review, Select
Long		Playback (Record)	

■ Block Diagram of RC-M60 full-logic Mechanism Control Circuitry

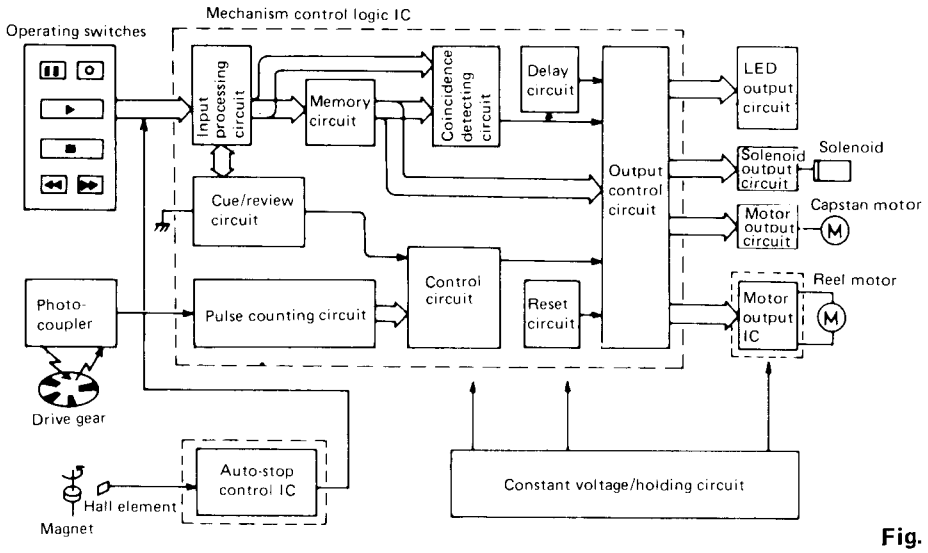


Fig. 4

Removal of Main Parts

1. Head cover

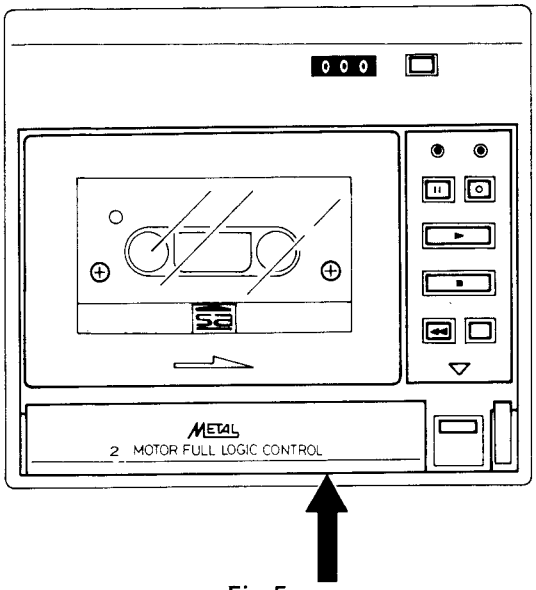


Fig. 5

(1) Pull up the head cover with finger at its right or left end.

Note: The replacement of the head cover or adjustment of the azimuth is possible with the head cover pulled up.

2. Cassette cover

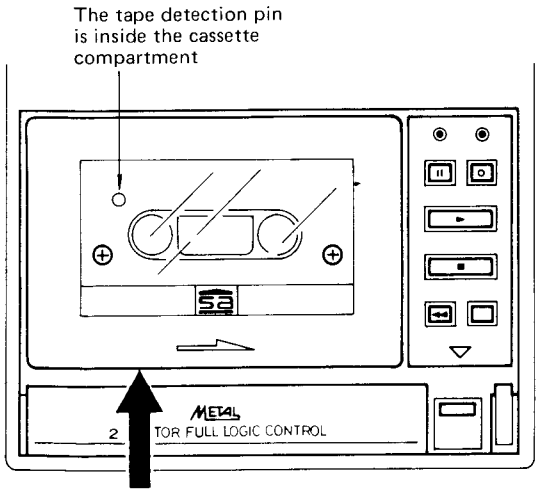


Fig. 6

(1) To open the cassette door, push the EJECT button.
(2) Pull up the cassette cover with fingers from the lower end.

Notes: 1. Cleaning of the head or the pinch roller is possible with the cassette cover pulled up. When the motor is to be rotated, press the PLAY-BACK button while pressing the cassette detecting pin.
2. During pause, the cassette door will not open should the EJECT button be pressed.
In this case, open the cassette door after pressing the STOP button.
3. Also when the power cord is unplugged or the battery power becomes low during pause, the cassette door does not open. In this case, turn the power on, then press the STOP button. After that, open the cassette door.

3. Rear cabinet

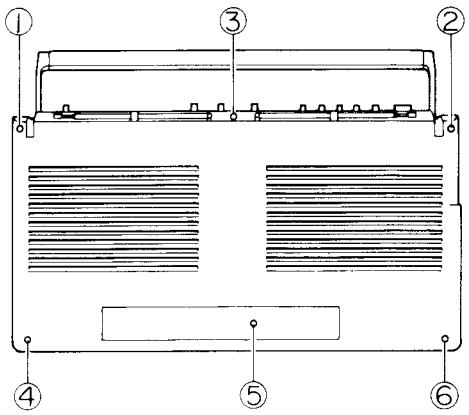


Fig. 7

(1) Remove 6 screws; screws ① and ② (SDSP3030RS) and screws ③ – ⑥ (SBSF3020R).
(2) Take out 2 rod antenna wires (white and orange) and 2 power wires (red and black). and then remove a wire of shield plate.

NOTE: When connecting the power wires, pay attention to the polarities to avoid faulty connection.
(According to circumstances, the mechanism control section may fail.)

4. Tuner circuit board

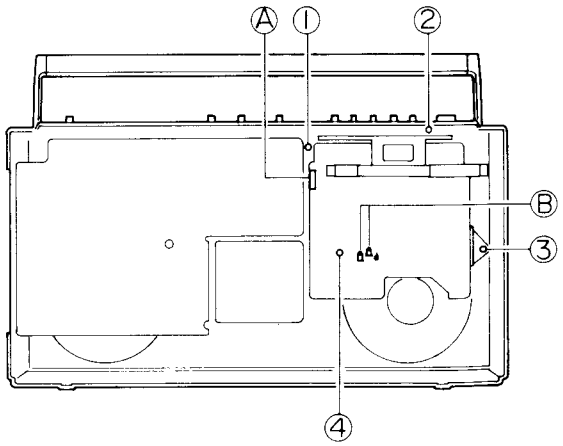


Fig. 8

(1) Set the dial pointer to the right or left end.
(2) Remove 4 screws; screws ① – ③ (SBSF3014C) and screw ④ (SBSF4010C).
(3) Remove 6-p connector Ⓐ connected to the amplifier circuit board.
(4) Take out 2 wires Ⓑ (red, black) connected to the LED board.

NOTE: In assembling, adjust the variable capacitor arm to the position of the dial drum.

5. Amplifier circuit board

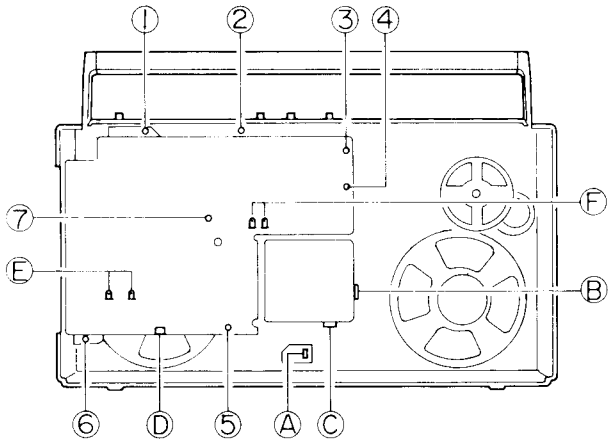


Fig. 9

(1) Remove the sound volume and sound tone knobs.
(2) Remove 7 screws and their associated fiber washers (QO3095-237); screws ① – ⑥ (SBSF3010C) and screw ⑦ (SBSF4010C).
(3) Remove 3-p connector Ⓐ connected to the microphone input relaying circuit board.
(4) Remove 6-p connector Ⓑ and 9-p connector Ⓒ connected respectively to the mechanism control board and the head input relaying cirucit board.
(5) Remove 4-p connector Ⓓ connected to the speaker.
(6) Take out 2 wires Ⓔ (red, brown) and 2 wires Ⓕ (red, black) connected respectively to the power switch and the meter.

NOTE: In assembling, adjust the vertical circuit board (volume regulator board) to the groove position of the cabinet (on both sides of the meter).

6. Cassette mechanism section

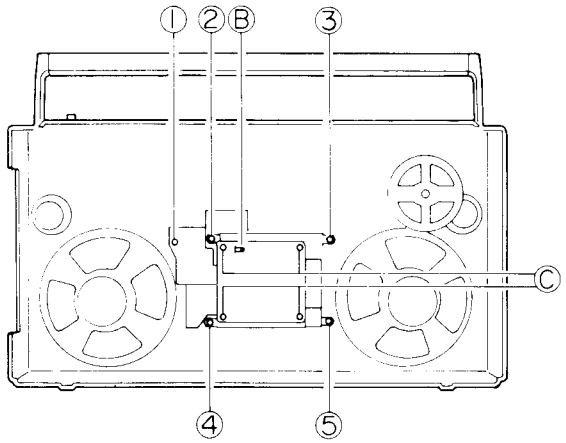


Fig. 10

(1) Remove 5 screws; screws ① – ⑤ (SBSF3010C).
(2) Take out wire (orange) Ⓑ connected to the power switch.

NOTES: 1. Turning over the mechanism control board is possible by removing 4 screws Ⓒ (LPSP 2606Z).
2. Without removal of the amplifier circuit board, and tuner circuit board it is possible to remove the cassette mechanism section.

Removal of Cassette Mecha Parts

(For proper removal, refer to "Mechanical Component Parts" on page 22.)

A. Pinch roller arm ass'y (96)
(1) Remove E-ring (98).

NOTE. Be careful not to lose pinch roller spring (97).

B. Erase head (47)
(1) Remove 2 screws (51).
(2) Remove the soldered wires.

C. Cassette plate (141)
(1) Remove 3 screws (143) and (144).

D. Capstan motor (53)
(1) Remove screw (58) and then rubber stopper (57).
(2) Take out the capstan motor by turning it clockwise.

NOTE: The mounting direction of the capstan motor must be as shown in Fig. 11.

E. Tape counter (59)
(1) Remove 2 screws (60)

F. Record/playback head (45)
(1) Remove 2 screws (49).
(2) Remove the soldered head circuit board.

G. Leaf switch (83)
(1) Remove the cassette plate. (Refer to item C.)
(2) Remove screw (84)

H. Take-up reel disk (4)
(1) Remove the cassette plate. (Refer to item C.)
(2) Remove counter belt (127).
(3) Remove reel stopper (7)

NOTES: 1. Once removed, this reel stopper cannot be used, so use a new reel stopper.
2. In mounting, be careful not to insert brake rubber (88).

I. Supply reel disk (3)
(1) Remove the cassette plate. (Refer to item C.)
(2) Remove reel stopper (7).

NOTES: 1. Once removed, this reel stopper cannot be used, so use a new reel stopper.
2. In mounting, be careful not to insert brake rubber (88).

J. Flywheel holder (124)
1. Remove 3 screws (126)
2. Remove a screw fastening the P.W.B. holder.

K. Reel motor (73)
(1) Remove the flywheel holder (Refer to item J.)
(2) Remove 2 screws (76).

NOTE: The mounting direction of the reel motor must be as shown in Fig. 14.

L. Flywheel ass'y (120)

(1) Remove the reel motor.
(Refer to item K.)
(2) Remove take-up belt (123)
(3) Remove capstan belt (122) .

NOTES: 1. Be careful not to lose washer (128) for oil cutting.
2. Be careful not to lose the 2 washers for thrust.

M. Reel disk ass'y unit (2)

(1) Remove the flywheel holder.
(Refer to item J.)
(2) Remove the reel motor.
(Refer to item K.)
(3) Remove the flywheel ass'y.
(Refer to item L.)
(4) Remove the cassette plate.
(Refer to item C.)
(5) Remove arm tension spring (118) of the safety lever.
(6) Remove 3 screws (77) .

N. Drive gear ass'y unit (16)

(1) Remove the flywheel holder.
(Refer to item J.)
(2) Remove the reel motor.
(Refer to item K.)
(3) Remove the flywheel ass'y.
(Refer to item L.)
(4) Remove 3 screws (86) .

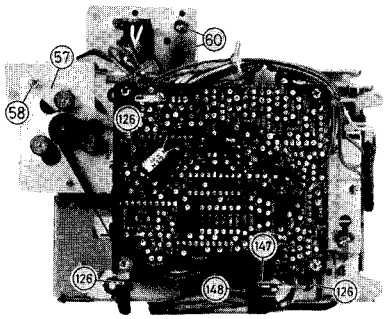


Fig. 13

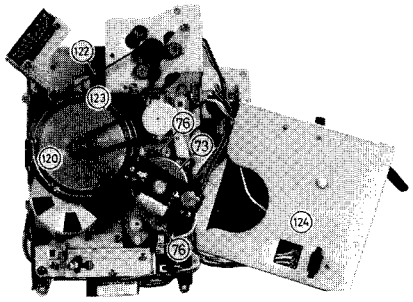


Fig. 14

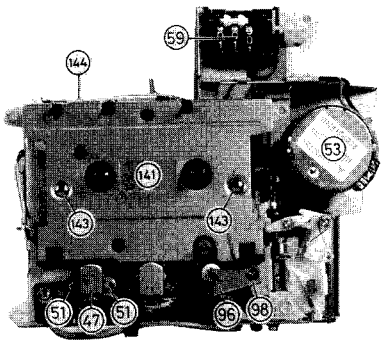


Fig. 11

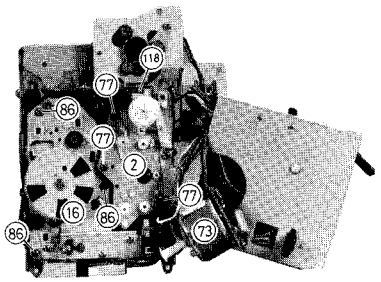


Fig. 15

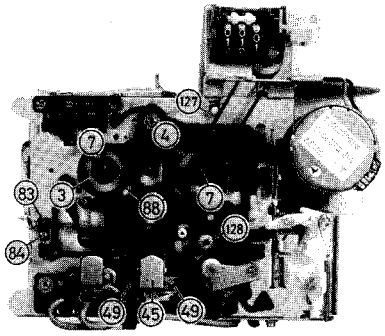
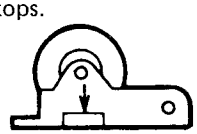
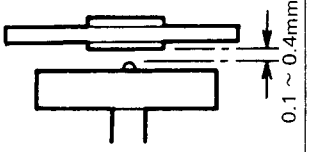
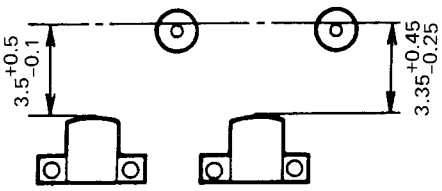
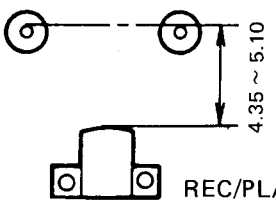


Fig. 12

Specifications of Cassette Mechanism

Check the following items after cassette mechanism parts are replaced.

Item	Requirement	Test equipment	Test tape
1. Source voltage	Rated voltage: 12V DC Motor operating voltage range: 7 – 15 V DC	Regulated power supply	———
2. Tape speed	4.75 cm/sec +2% (3,000 Hz) -2% Deviation 2%	Frequency counter (digital counter)	VTT-655
3. Wow & flutter	Less than 0.18% (RMS)	Wow meter	VTT-655
4. Take-up torque	PLAY 40 – 70 g.cm FF 75g.cm or more REW 75g.cm or more	During FF and rewind, the idlers, reels and flywheel should not slip against each other when the reels are locked. Torque dial gauge (Tonichi or equivalent)	———
5. Current consumption (of motor alone)	PLAY 150mA or less FF 300mA or less REW 300mA or less	DC ammeter	C-60 (Take-up torque should be normal when tape is used.)
6. Pinch roller pressure	350 – 500 g	Tension gauge Pull the pinch roller perpendicularly and read the gauge when the pinch roller just stops. 	———
7. Axial clearance of flywheel		Clearance gauge	———
8. Head position during PLAY and RECORD	 During PLAY (RECORD) the dimensional requirements given here must be met, and the heads must not contact the cassette case.		Any cassette tape
9. Head position during cueing			———
10. Auto-stop operation	The facility should operate with a reduced voltage of 6.5 V at the end of tape during PLAY/REC, FF, and REW. During REC, a load the same as that of the amplifier is applied.		Any cassette tape

Adjustment of Cassette Recorder Amplifier

Conditions

Source power:	12V DC
Measurement:	at LINE OUT terminals
Switch setting:	FUNCTION: TAPE
	MODE; STEREO
	TAPE: NORMAL or METAL
	BEAT CUT: "1 (NORMAL)"

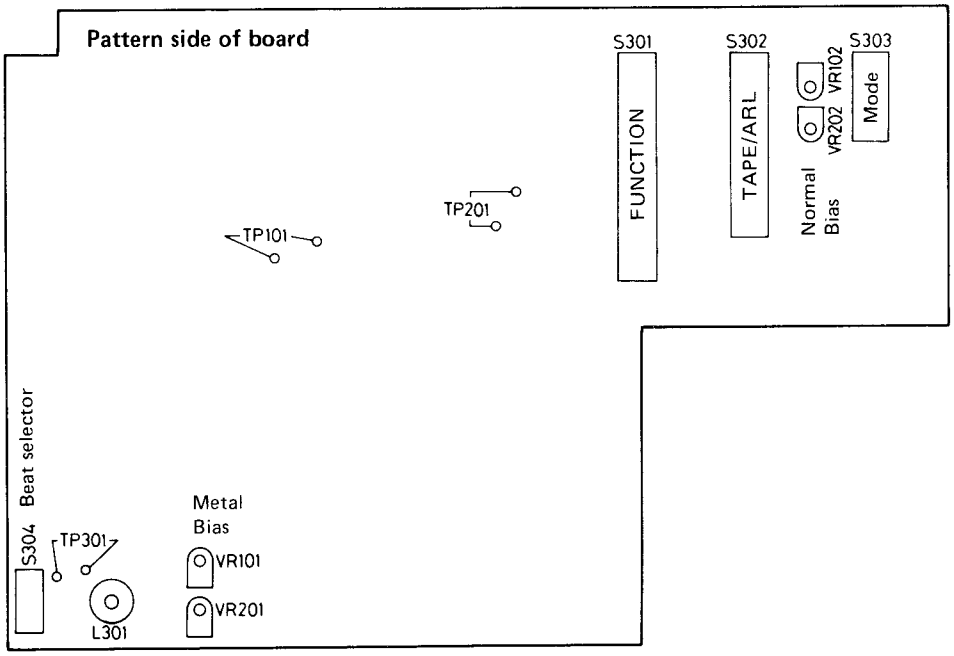
Adjust in the following sequence.

① Head azimuth
Connect an oscilloscope to the LINE OUT jacks. Using test tape VTT-658 (10 kHz, -15 dB), adjust so the phase difference between the L and R outputs is 0° and maximize the output level at the same time.

② Tape speed
Connect a frequency counter to the LINE OUT jacks. Playing back test tape VTT-656 (3,000 Hz), adjust the semi-fixed resistor in the motor so that the frequency counter reads 3,010 ± 10 Hz.

③ Bias frequency
Connect a frequency counter across TP101. Adjust L301 so that the counter reads 66.5 kHz.

④ Alignment of bias current and REC/PLAY frequency response
(1) METAL
Connect an electronic voltmeter across TP101(TP201) adjust VR101 and VR201 so that the voltmeter reads 5.4mV/10Ω (540μA).
(2) Normal
Adjust VR102,202 so that the voltmeter reads 2.7mV/10Ω (270μA).
(1)' METAL
Record and playback appling 1 kHz and 10 kHz (-35dBs) to the LINE IN jacks, and re-adjust VR101,201 so that the voltmeter connecting the LINE OUT jacks, indicates the output difference (10 kHz/1 kHz) $^{+1}_{0}$dB at the both test frequencies.
(2)' Normal
Record and playback as same as METAL alignment, and adjust VR102,202 so that the voltmeter indicates the output difference (10 kHz/1 kHz) $^{+1}_{0}$dB.



TP301 : Test Point for erasing current
METAL ..... 95 ~ 120mV/1Ω(95 ~ 120mA)

Fig. 16

How to Engage Dial Cord

1. Turn the dial drum fully counterclockwise (to the lowest frequency).
2. Use Kevlar cord (1,330 mm long and 0.5 mm in diameter).
3. Install the string in the sequence of the numbers.

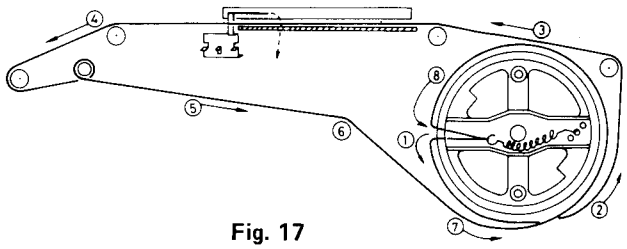


Fig. 17

Tuner Alignment

Output Measuring: Speaker terminal (Impedance = 3.2Ω), output level 50 mW (0.4V/3.2Ω)

AM IF & RF Alignment

Input (SSG) Modulation 400 Hz, Modulated to 30%

Step	Frequency Band	Input Signal		Place to be aligned	Set the V. Capacitor to
		Frequency	Given to		
1	MW (IF)	145kHz	Loop Antenna	T4, 5, 3	Minimum
2		Repeat the Step 1, and adjust for no further improvement.			
3	LW	145kHz	Loop Antenna	L14	Maximum
4		360kHz		TC8	Minimum
5		Repeat the Steps 3 & 4.			
6		160kHz	Loop Antenna	L8	160kHz Signal
7		350kHz		TC4	350kHz Signal
8		Repeat the Steps 6 & 7, and adjust for no further improvement.			
9	MW	520kHz	Loop Antenna	L13	Maximum
10		1650kHz		TC7	Minimum
11		Repeat the Steps 9 & 10			
12		620kHz	Loop Antenna	L9	620kHz Signal
13		1400kHz		TC3	1400kHz Signal
14		Repeat the Steps 12 & 13, and adjust for no further improvement.			
15	SW1	5.9MHz	Loop Antenna	L16	Maximum
16		6.3MHz		TC10	Minimum
17		Repeat the Steps 15 & 16			
18		5.9MHz	Loop Antenna	L12	5.9MHz Signal
19		6.3MHz		TC6	6.3MHz Signal
20		Repeat the Steps 18 & 19, and adjust for no further improvement.			
21	SW2	5.8MHz	Rod Antenna through Dummy Antenna	L15	Maximum
22		18.6MHz		TC9	Minimum
23		Repeat the Steps 21 & 22			
24		6.0MHz	Rod Antenna through Dummy Antenna	L10	6.0MHz Signal
25		18.0MHz		TC5	18.0MHz Signal
26		Repeat the Steps 24 & 25, and adjust for no further improvement.			

FM IF & Discriminator Alignment

Input (Sweep Generator): TP3 (hot) & TP2
Output (Oscilloscope) : 1F TP4(hot) & TP7
Discriminator TP6(hot) & TP7

Step	Mode	Place to be aligned	Wave form
1	IF	T1	Fig. 18
2	Discriminator	T2	Fig. 19

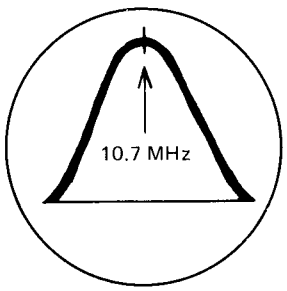


Fig. 18

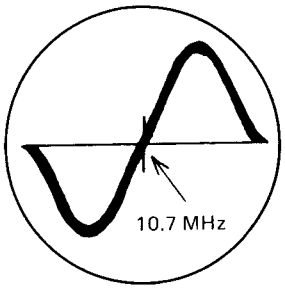


Fig. 19

FM RF Alignment

Input (SSG): Use 75Ω terminal, modulation 400 Hz modulated to 22.5 kHz deviation. Connect Hot side to TP1 and Cold side to TP2.

Step	Frequency Band	Input Signal		Place to be aligned	Set the V. Capacitor to
		Frequency	Given to		
1	FM	87.5 MHz	TP1 & TP2	L4	Maximum
2		109 MHz		TC2	Minimum
3		Repeat the Steps 1 & 2.			
4		90 MHz	TP1 & TP2	L1	90 MHz Signal
5		106 MHz		TC1	106 MHz Signal
6		Repeat the Steps 4 & 5, and adjust for no further improvement.			

FM MPX Alignment

A. 19 kHz Alignment (regular Method)
1. Connect a frequency counter to the test point TP5.
2. Adjust the variable resistor VR1 so that the frequency becomes 19 kHz.

B. 19 kHz Alignment (Simplified Method)
1. Tune to a FM stereo broadcast.
2. Set the variable resistor VR1 to the center position of the range in where the stereo indicator keeps lighting.

C. Separation Alignment
1. Connect a FM stereo signal generator across the test points TP1 & TP2. (98 MHz, 60 dB)
2. Connect a V.T.V.M. or oscilloscope across the test points TP6 & TP7.
3. Adjust the variable resistor VR2 to minimize the output of right channel signal.

Parts Arrangement for Alignment

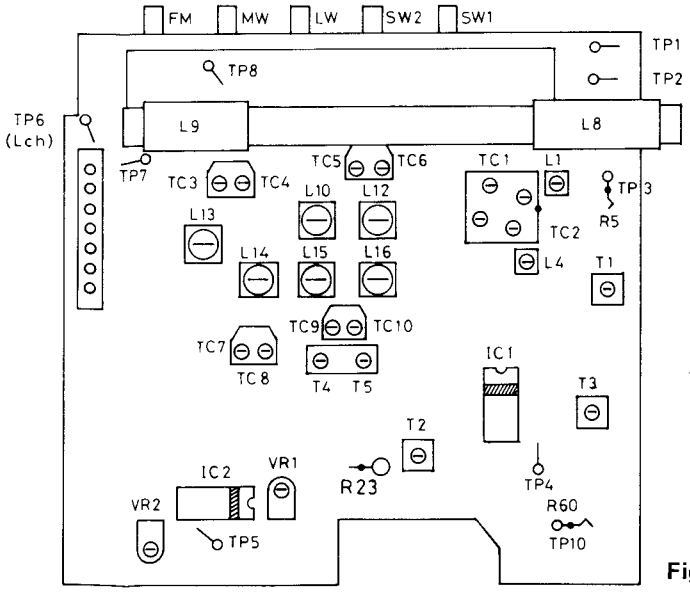
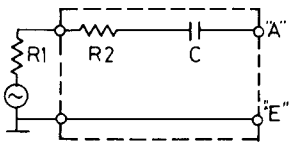


Fig. 20

Dummy Antenna



R1 + R2 = 80 Ω
C = 10 pF
R1: Output impedance of S.S.G.

Fig. 21

Block Diagrams

Amplifier circuit

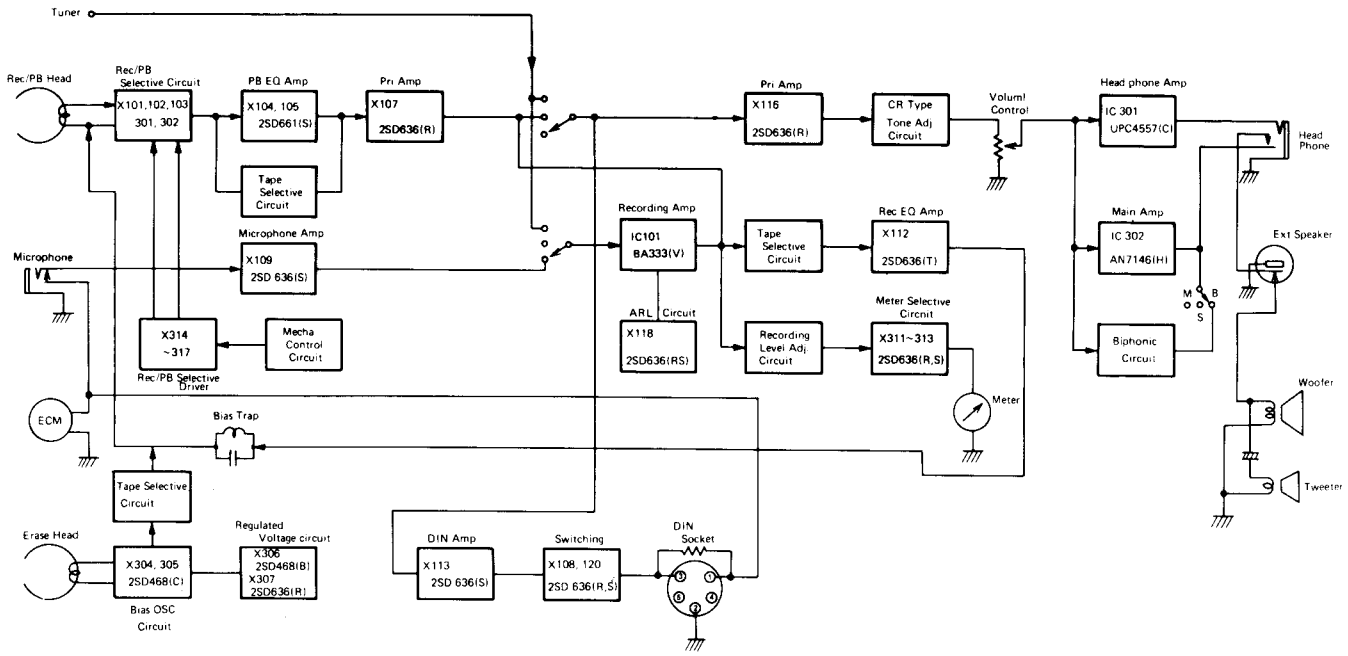


Fig. 22

Tuner circuit

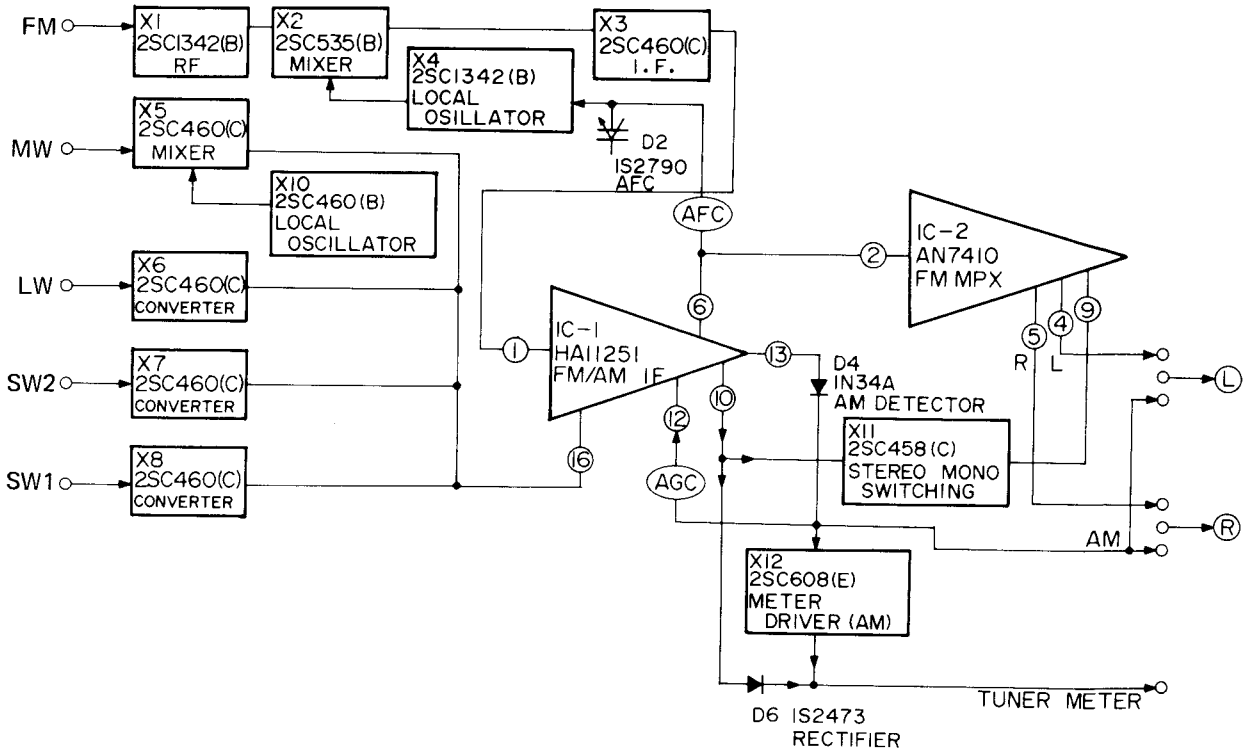


Fig. 23

Rear Cabinet Assembly Parts

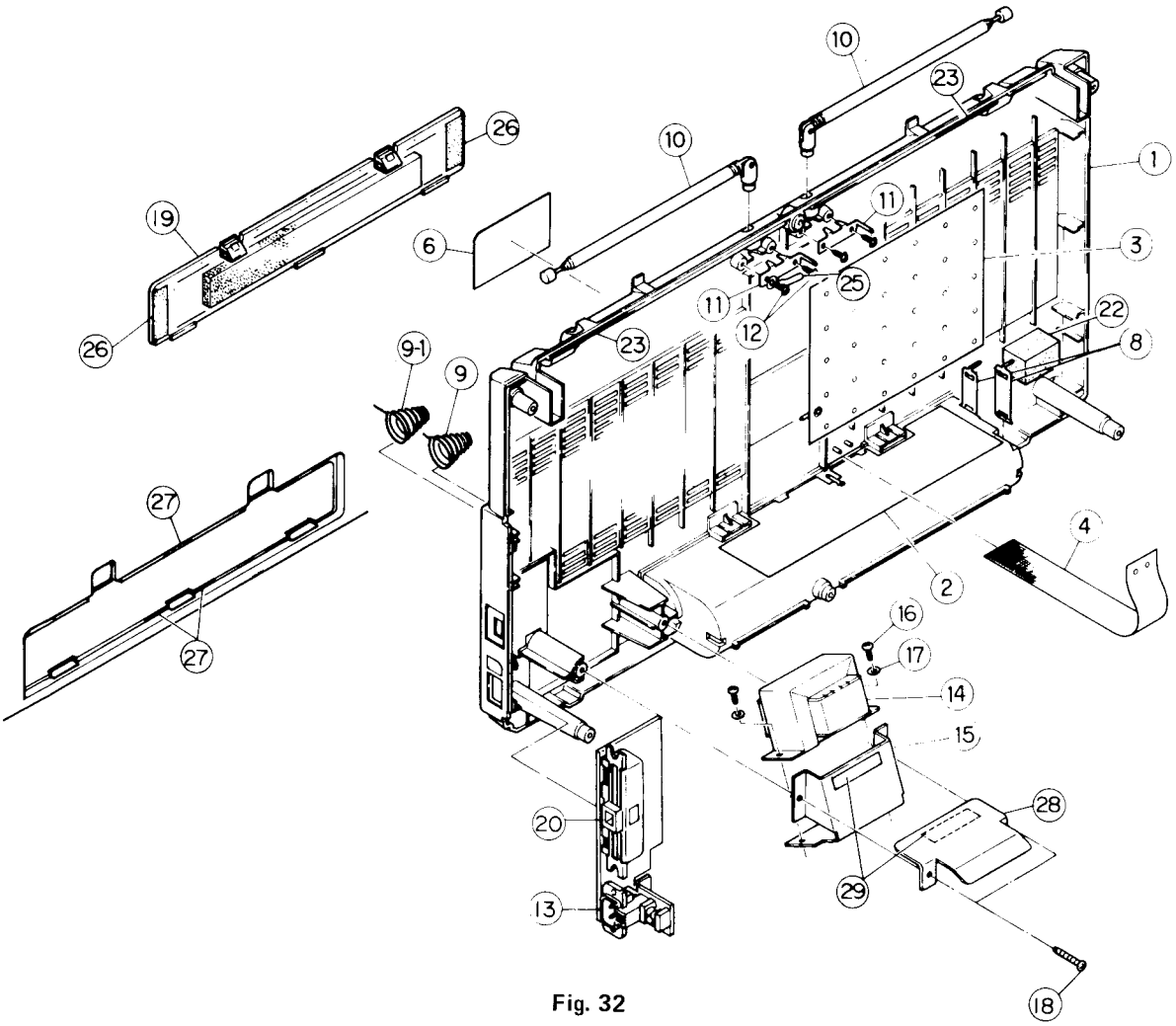


Fig. 32

Rear Cabinet Ass'y Parts List

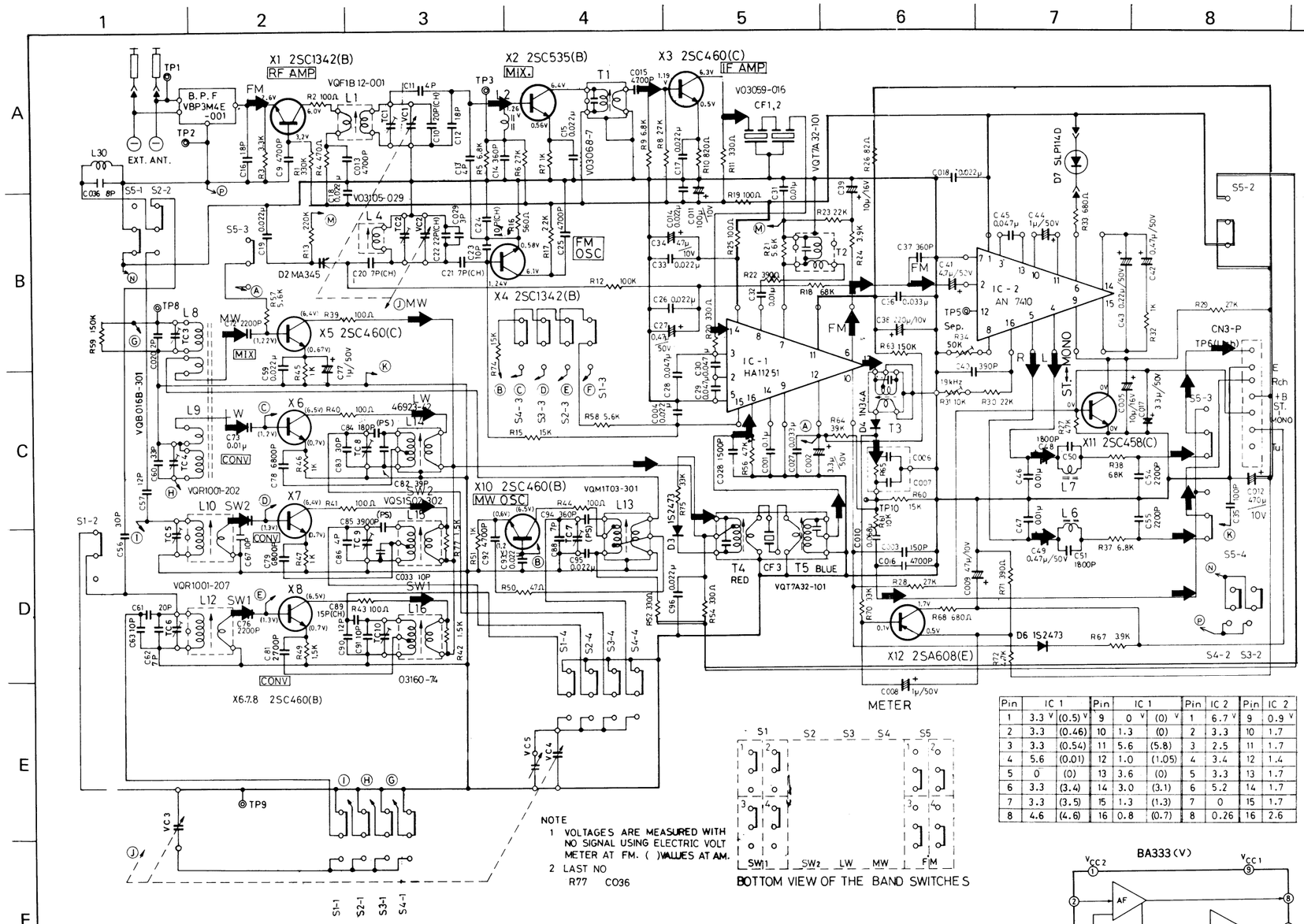
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1 ~ 6	ZCRCM60LB-CBR	Rear Cabinet Ass'y		1 set
1	VJC1096-004	Rear Cabinet		1
2	VYH4522-00A	Shield Ass'y		1
3	VYH4509-00B	Shield Ass'y		1
4	V41583-3	Tape		1
6	VYN5060-005C	Name Plate	RC-M60L	1
	VYN5060-004CBS	"	RC-M60LB	1
8	VYH4010-002	Battery Contact		2
9	53738-009	Battery Spring		1
9-1	V44686-002	"		1
10	QZR4147-001U	Rod Antenna		2
11	VYH4189-003	Antenna Holder (B)		2
12	SBSF3008Z	Tapping Screw		4
13	⚠ QMC0263-002	AC Socket Ass'y	J901, S901, RC-M60L	1
	⚠ QMC0263-002BS	"	J901, S901, RC-M60LB	1
14	⚠ VTP54N2-12D	Power Transformer	T901, RC-M60L	1
	⚠ VTP54N2-12DBS	"	T901, RC-M60LB	1
15	VYH4507-001	Trans Bracket		1
16	LPSP3006ZS	Screw		2
17	Q03091-105	Washer		2
18	SBSF4020C	Tapping Screw		2
19	ZCRCM60LB-BCA	Battery Cover Ass'y		1 set

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
20	QSS2325-109	Slide Switch	S902-1,2 RC-M60L	1
	QSS2325-109BS	"	" RC-M60LB	1
21	⚠ VYSR1R5-009	Spacer	for Shield Trans Bracket	2
22	VYSR112-005	Spacer		1
23	VYSA1R6-015	Spacer		2
25	VKZ4001-007	Wire Holder		1
26	VYSR1R5-004	Spacer		2
27	VYSA1R6-039	Spacer		3
28	VYH4576-001	Shield Bracket		1
29	VYSR1R5-001	Spacer		2

Front Cabinet Ass'y Parts List

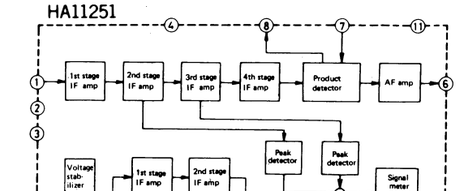
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1~9,11,12	ZCRCM60LB-CBF	Front Cabinet Ass'y		1 set
1	VJC1095-001	Front Cabinet		1
1-1	VYH4032-001	Roller		5
1-2	WNB2600N	Washer		5
2	VYTA449-002	Dust Cover	Binding Agent (Dia Bond 1600 MA)	2
3	VJD2149-002	Control Panel		1
4	VJD4390-001	Volume Plate		1
5	VJD4393-001	Plate		1
6	QXM2251-003	Mark	Binding Agent (Via Bond 1600 MA)	1
7	VJK2125-002	Dial Scale		1
8	VJK2126-001	Dial Lens		1
9	VJD2150-001	Front Cover	Binding Agent (Dia)	1
10	VJD4355-001	Side Cover		1
11	VJD4356-001	Mic Frame		1
12	VJD4356-002	"		1
13	VJD4354-001	Head Cover		1
14	VJT3051-00A	Door Ass'y		1
15	TJL271485-01	Head Mark		1
	VKY4195-001	Casstte Spring		1
16~17	ZERCM60JW-CCA	Cassette Lens Ass'y		1 set
16	VJK3151-002	Cassette Lens		1
17	VJD4352-001	Door Plate		1
18	VYH4506-001	Foot Supporter	(Right)	1
19	VYH4506-002	"	(Left)	1
20	SDSP2606Z	Screw		4
21	VJH3005-00L	Handle Ass'y		1

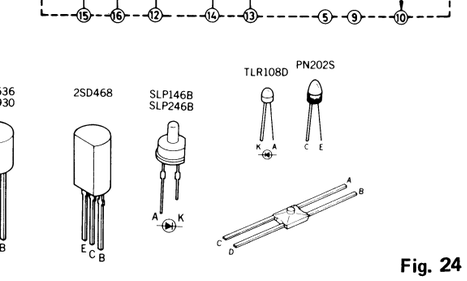
Schematic Diagram of RC-M60L/LB (Tuner circuit)

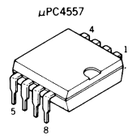


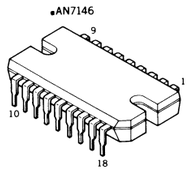
Pin	IC 1		Pin	IC 1		Pin	IC 2	Pin	IC 2
1	3.3 V	(0.5) V	9	0 V	(0) V	1	6.7 V	9	0.9 V
2	3.3	(0.46)	10	1.3	(0)	2	3.3	10	1.7
3	3.3	(0.54)	11	5.6	(5.8)	3	2.5	11	1.7
4	5.6	(0.01)	12	1.0	(1.05)	4	3.4	12	1.4
5	0	(0)	13	3.6	(0)	5	3.3	13	1.7
6	3.3	(3.4)	14	3.0	(3.1)	6	5.2	14	1.7
7	3.3	(3.5)	15	1.3	(1.3)	7	0	15	1.7
8	4.6	(4.6)	16	0.8	(0.7)	8	0.26	16	2.6

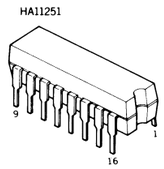
- Band switches (S1-1 – S1-6) are used for FM tuning.
- The voltage values are those of FM reception in the no signal state. However, the voltage values in ( ) are those of AM reception and the voltage values in ▭ are those of FM stereo reception.
- For the measuring instrument, a 20 kΩ/V tester is used.

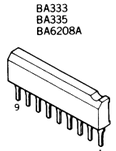


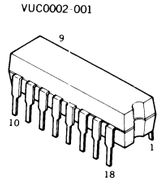


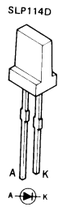


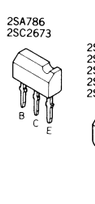


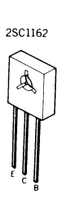


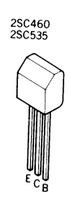












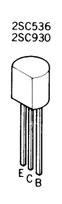
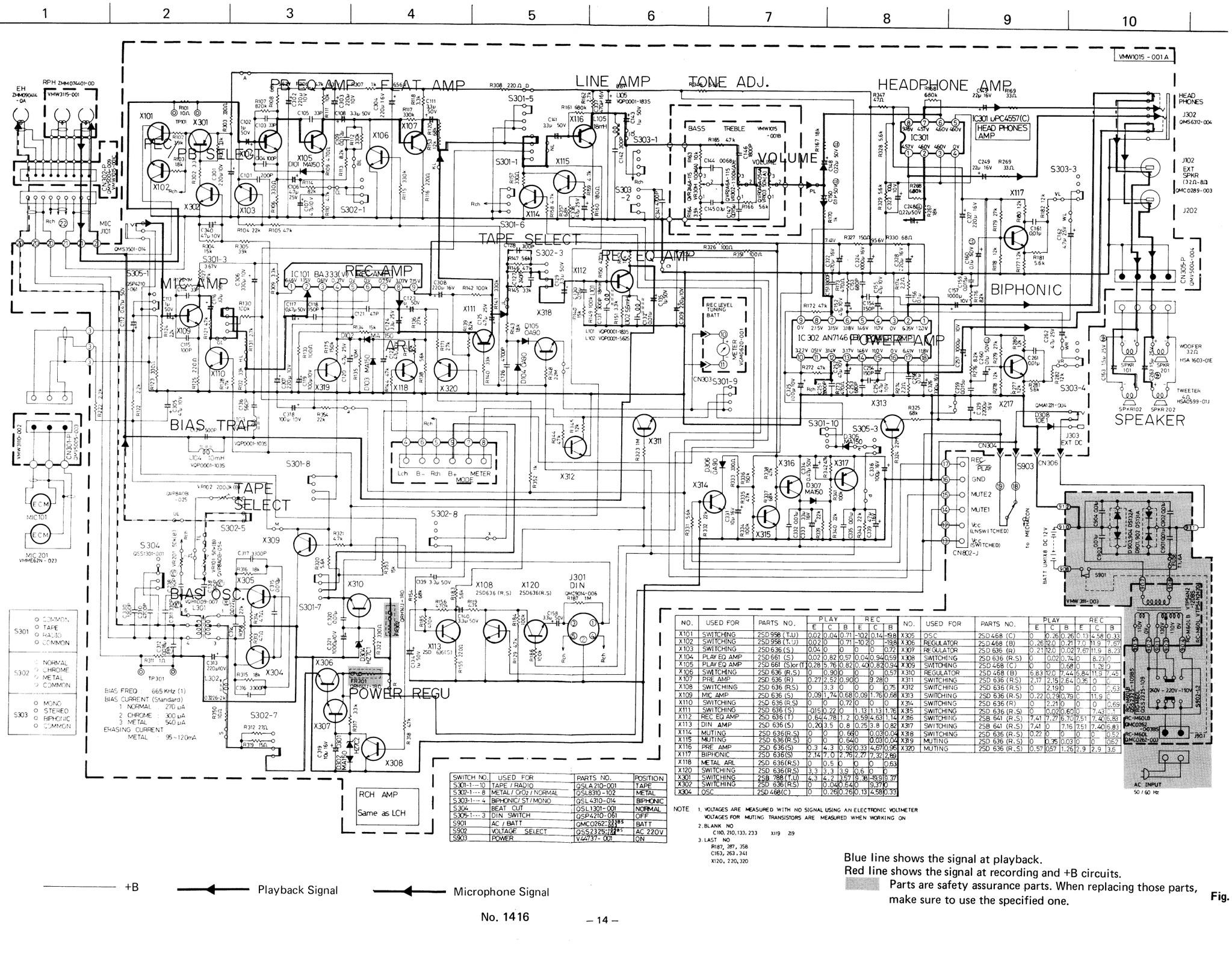


Fig. 24

Schematic Diagram of RC-M60L/LB (Amplifier circuit)



SWITCH NO.	USED FOR	PARTS NO.	POSITION
S301-1---10	TAPE / RADIO	QSLA210-001	TAPE
S302-1---8	METAL / CrO2 / NORMAL	QSL8310-102	METAL
S303-1---4	BIPHONIC / ST / MONO	QSL4310-014	BIPHONIC
S304	BEAT CUT	QSL1301-001	NORMAL
S305-1---3	DIN SWITCH	QSP4210-061	OFF
S901	AC / BATT	QMC0262-003BS	BATT
S902	VOLTAGE SELECT	QSS2325-109BS	AC 220V
S903	POWER	V44737-001	ON

NO.	USED FOR	PARTS NO.	PLAY E	PLAY C	PLAY B	REC E	REC C	REC B
X101	SWITCHING	2SD956 (T,U)	0.02	0.04	0.71	-10.2	0.14	-19.8
X102	SWITCHING	2SD956 (T,U)	0.02	0	0.71	-10.2	0	-19.8
X103	SWITCHING	2SD636 (S)	0.04	0	0	0	0	0.72
X104	PLAY EQ AMP	2SD661 (S)	0.02	0.82	0.57	0.04	0.94	0.59
X105	PLAY EQ AMP	2SD661 (S,or T)	0.28	5.76	0.82	0.40	0.82	0.94
X106	SWITCHING	2SD636 (R,S)	0	0.90	0	0	0	0.57
X107	PRE AMP	2SD636 (R)	0.27	2.52	0.90	0	9.28	0
X108	SWITCHING	2SD636 (R,S)	0	3.3	0	0	0	0.75
X109	MIC AMP	2SD636 (S)	0.09	1.74	0.68	0.09	1.76	0.68
X110	SWITCHING	2SD636 (R,S)	0	0	0.72	0	0	0
X111	SWITCHING	2SD636 (S)	-0.15	0.22	0	1.13	1.13	1.76
X112	REC EQ AMP	2SD636 (T)	0.64	4.78	1.2	0.59	4.63	1.14
X113	DIN AMP	2SD636 (S)	0.20	3.5	0.8	0.25	3.8	0.82
X114	MUTING	2SD636(R,S)	0	0	0.660	0	0.03	0.04
X115	MUTING	2SD636(R,S)	0	0	0.640	0	0.03	0.04
X116	PRE AMP	2SD636(S)	0.3	4.3	0.92	0.33	4.67	0.96
X117	BIPHONIC	2SD636(S)	2.14	7.0	2.76	2.27	7.32	2.89
X118	METAL ARL	2SD636(R,S)	0	0.5	0	0	0	0.63
X120	SWITCHING	2SD636(R,S)	3.3	3.3	3.9	0.6	0	0
X301	SWITCHING	2SB788(T,U)	4.3	4.2	3.67	9.48	9.9	9.37
X302	SWITCHING	2SD636(R,S)	0	0.040	0.640	0	9.370	0
X304	OSC	2SD468(C)	0	0.26	0.26	0.13	4.58	0.33

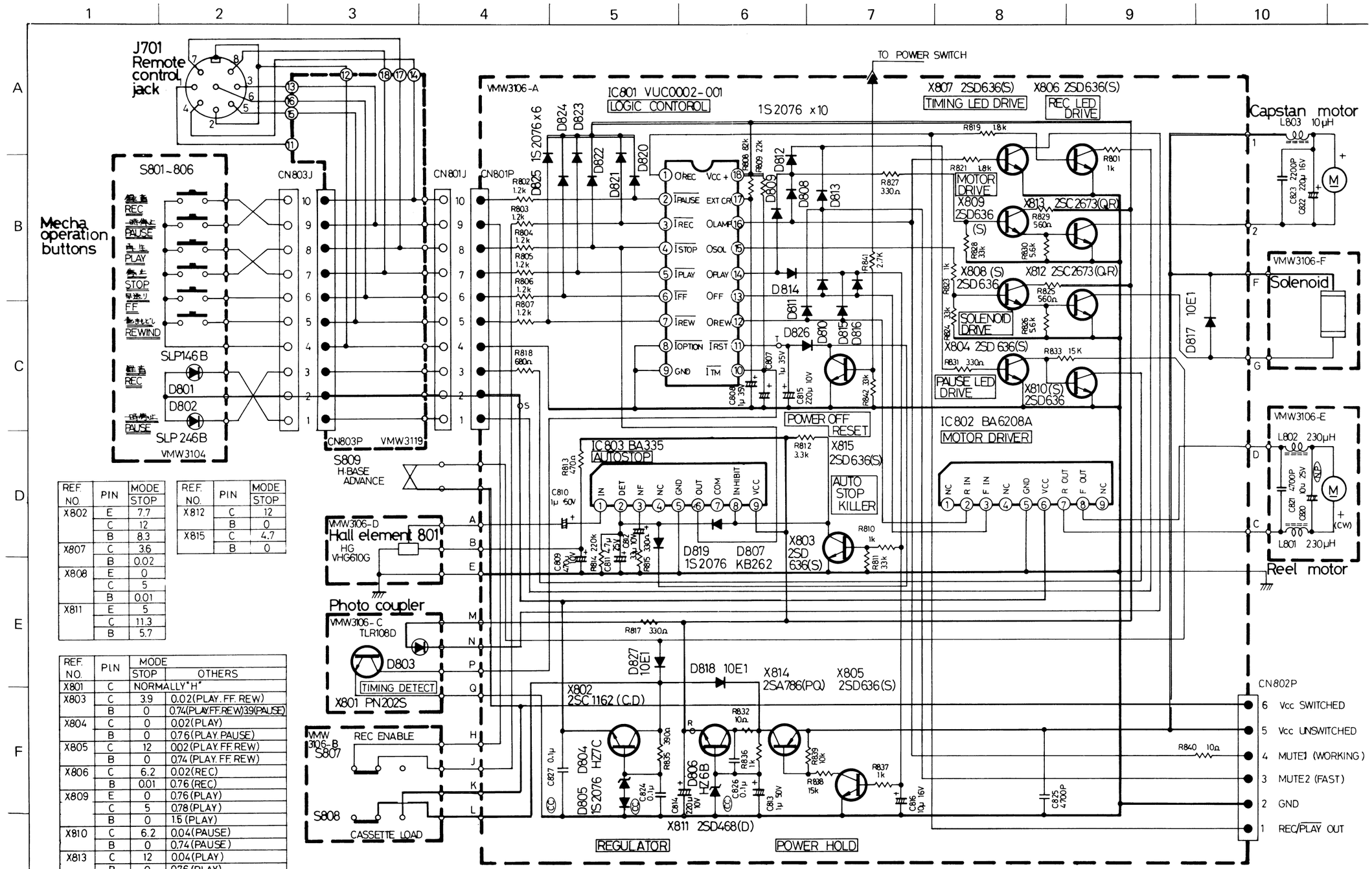
NO.	USED FOR	PARTS NO.	PLAY E	PLAY C	PLAY B	REC E	REC C	REC B
X305	OSC	2SD468 (C)	0	0.26	0.26	0.13	4.58	0.33
X306	REGULATOR	2SD468 (B)	0.26	12.0	0.21	7.0	11.9	7.67
X307	REGULATOR	2SD636 (R)	0.21	12.0	0.02	7.67	11.9	8.23
X308	SWITCHING	2SD 636 (R,S)	0	0.02	0.74	0	8.23	0
X309	SWITCHING	2SD468 (C)	0	0	0.68	0	1.29	0
X310	REGULATOR	2SD468 (B)	5.83	12.0	7.44	5.84	11.9	7.45
X311	SWITCHING	2SD 636 (R,S)	2.17	2.15	2.64	0.35	0	0
X312	SWITCHING	2SD 636 (R,S)	0	2.19	0	0	0	0.63
X313	SWITCHING	2SD 636 (R,S)	0.22	0.29	0.79	0	11.9	0
X314	SWITCHING	2SD 636 (R)	0	2.21	0	0	0	0.69
X315	SWITCHING	2SD 636 (R,S)	0	0.02	0.60	0	7.43	0.1
X316	SWITCHING	2SB 641 (R,S)	7.41	7.27	6.70	7.51	7.40	6.83
X317	SWITCHING	2SB 641 (R,S)	7.41	0	7.16	7.51	7.40	6.83
X318	SWITCHING	2SD 636 (R,S)	0.22	0	0	0	0	0.52
X319	MUTING	2SD 636 (R,S)	0	0.25	0.03	0	0	0.62
X320	MUTING	2SD 636 (R,S)	0.57	0.57	1.26	2.9	2.9	3.6

NOTE
1. VOLTAGES ARE MEASURED WITH NO SIGNAL USING AN ELECTRONIC VOLTMETER
VOLTAGES FOR MUTING TRANSISTORS ARE MEASURED WHEN WORKING ON
2. BLANK NO
C110, 210, 133, 233 X119 219
3. LAST NO
R187, 287, 358
C163, 263, 341
X120, 220, 320

Blue line shows the signal at playback.
Red line shows the signal at recording and +B circuits.
Parts are safety assurance parts. When replacing those parts, make sure to use the specified one.

Fig. 25

Schematic Diagram of RC-M60L/LB (Mecha control circuit)



REF. NO.	PIN	MODE STOP
X802	E	7.7
	C	12
	B	8.3
X807	C	3.6
	B	0.02
X808	E	0
	C	5
	B	0.01
X811	E	5
	C	11.3
	B	5.7

REF. NO.	PIN	MODE STOP
X812	C	12
	B	0
X815	C	4.7
	B	0

REF. NO.	PIN	MODE STOP	MODE OTHERS
X801	C	NORMALLY "H"	
X803	C	3.9	0.02 (PLAY. FF. REW)
	B	0	0.74 (PLAY.FF.REW) 3.9 (PAUSE)
X804	C	0	0.02 (PLAY)
	B	0	0.76 (PLAY. PAUSE)
X805	C	12	0.02 (PLAY. FF. REW)
	B	0	0.74 (PLAY. FF. REW)
X806	C	6.2	0.02 (REC)
	B	0.01	0.76 (REC)
X809	E	0	0.76 (PLAY)
	C	5	0.78 (PLAY)
	B	0	1.5 (PLAY)
X810	C	6.2	0.04 (PAUSE)
	B	0	0.74 (PAUSE)
X813	C	12	0.04 (PLAY)
	B	0	0.76 (PLAY)
X814	E	12	
	C	11.4	
	B	12	11.3 (PLAY. FF. REW)
IC802	2	L	H (REW)
	3	L	H (FF)
	6	7.7	
	7	0	6.7 (REW)
	8	0	6.7 (FF)

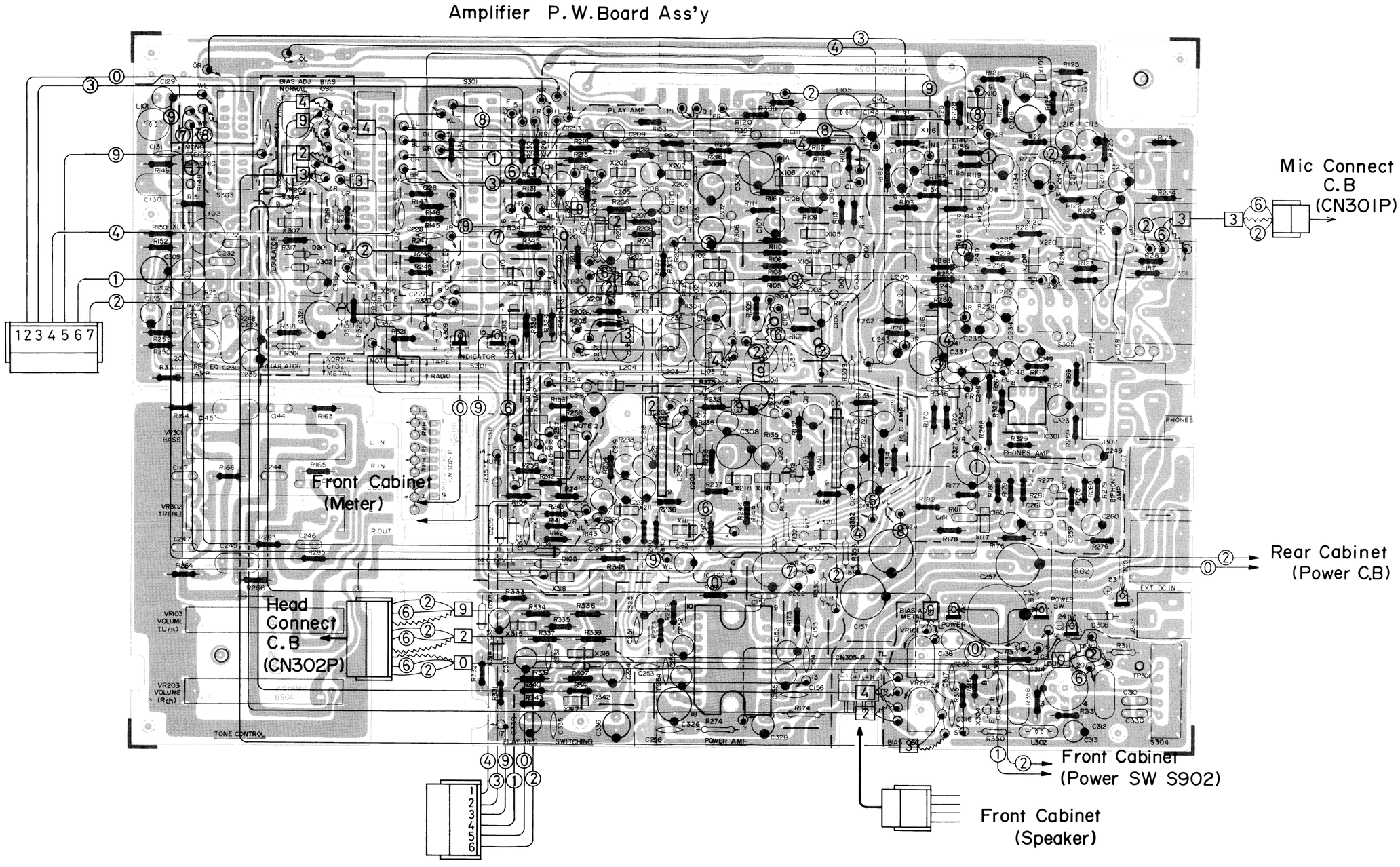
REF. NO.	PIN	MODE STOP	MODE OTHERS
IC803	1	1.9	
	2	3.1	4.4 (PLAY. FF. REW)
	3	2.0	
	6	H	
	8	3.9	0.02 (PLAY. FF. REW)
	9	5.0	

1. LAST NO. IC803 X815
   D827 R842
   C827 S809
2. BLANK NO. D820~825
   R802~807
   R820, 822, 834
   C817~819
3. VOLTAGES ARE MEASURED BY VTVM. SEE TABLE "H" MEANS 2.0V OR ABOVE "L" MEANS 0.8V OR BELOW.
4. VCC & GND OF IC701, 702 ARE PIN NO. 14 & 7 RESPECTVELY.
5. IC801 PIN NO. 2~7, 10, 11 IS NORMALLY "H" AND PIN NO. 12~17 IS "L" AT STOP MODE

Fig. 26

Wiring Connection (1) — Amplifier P.W. Board

Parts ass'y side view



Colour code are shown below

1 .....Brown	4 .....Yellow	7 ... ...Violet	0 .....Black
2 .....Red	5 .....Green	8 .....Grey	
3 .....Orange	6 .....Blue	9 ... ...White	

Fig. 27

Wiring Connection (2) — Front Cabinet Relation Parts

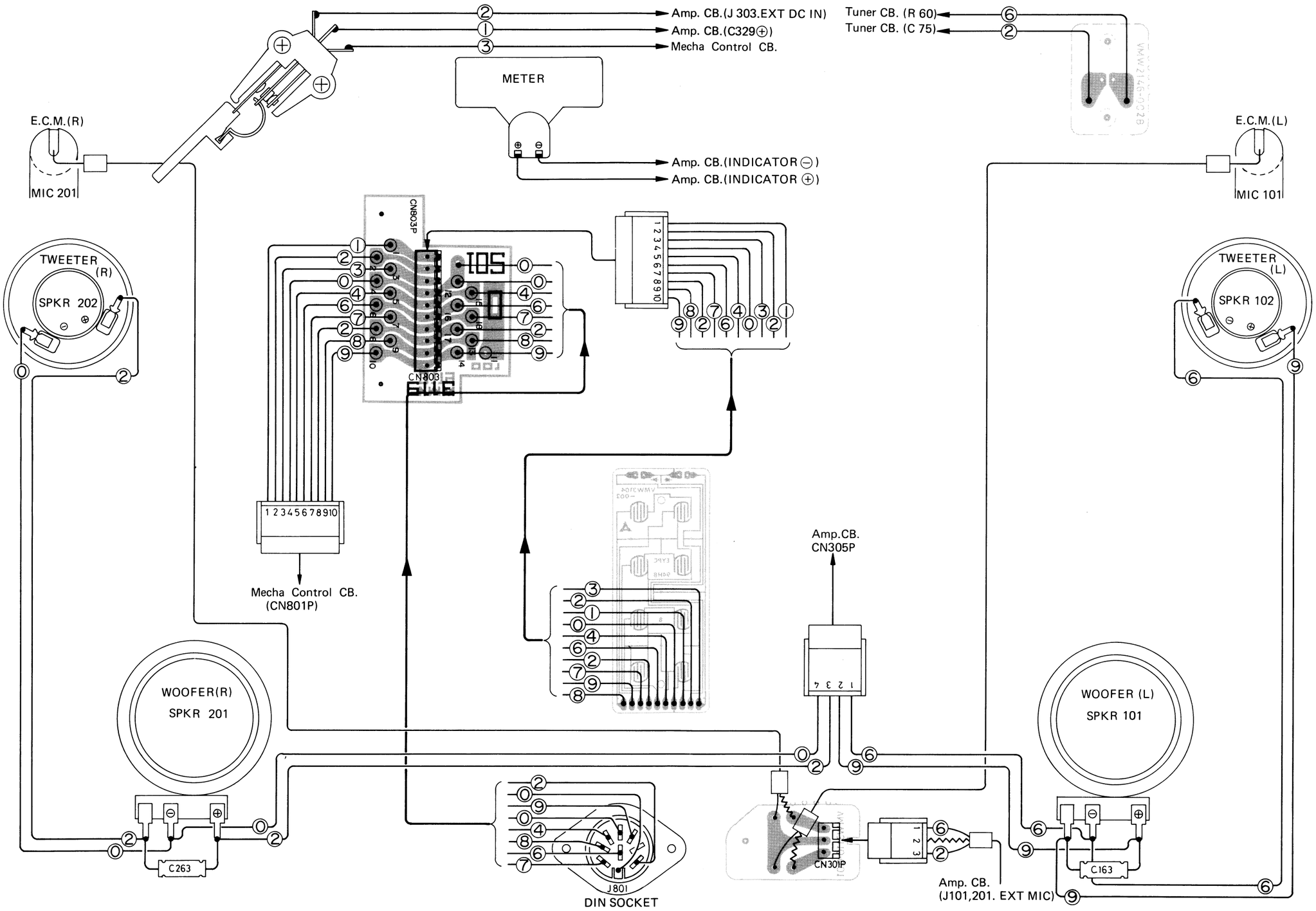


Fig. 28

Wiring Connection (3)

— Rear Cabinet Relation Parts

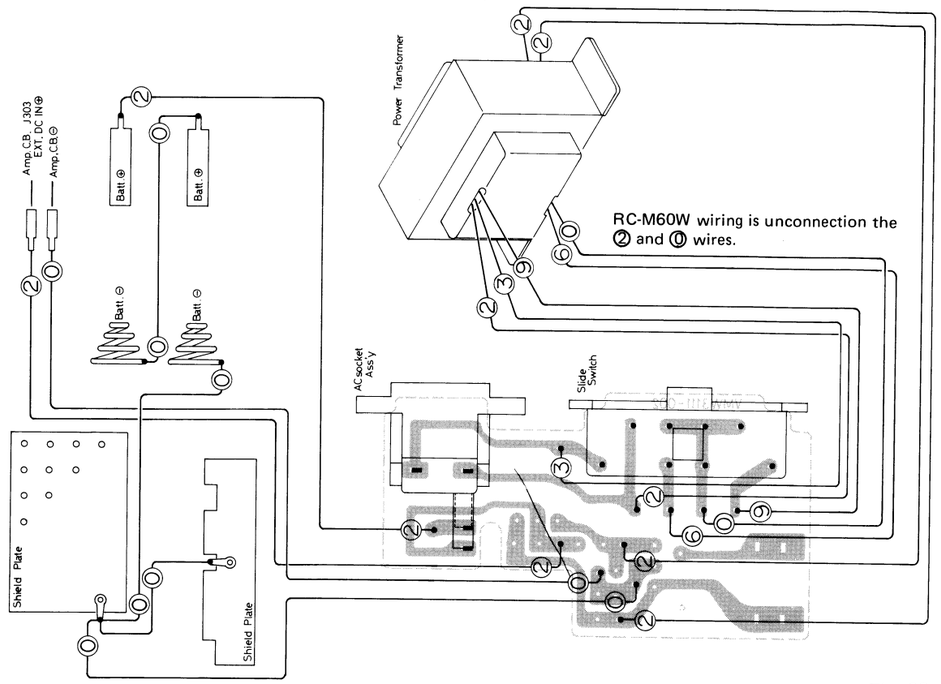


Fig. 29

— Cassette Mecha Relation Parts

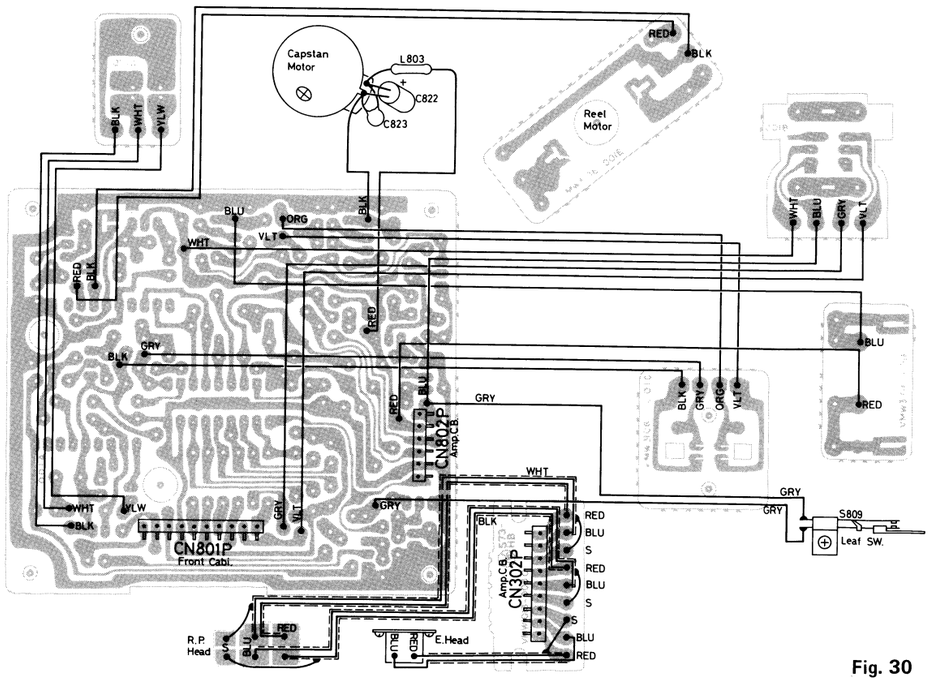
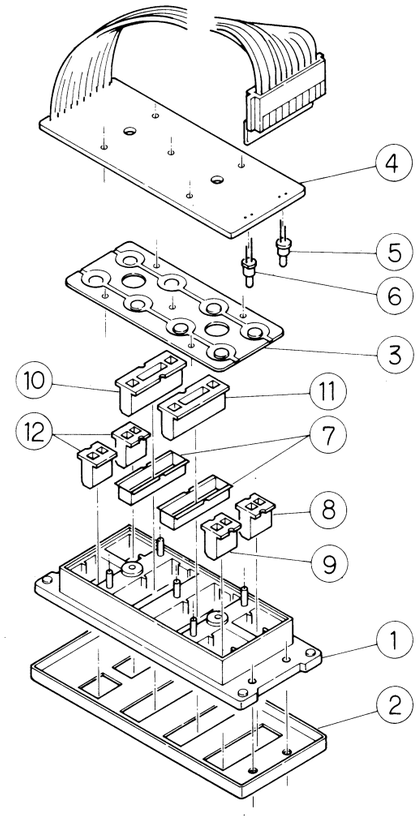


Fig. 30

Mecha Button Unit Parts



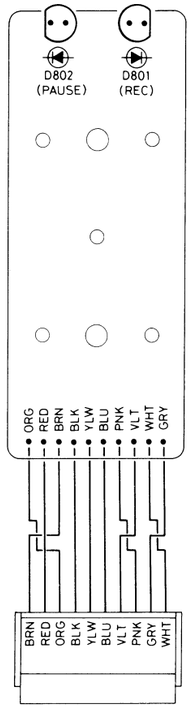


Fig. 31

Mecha Button Unit Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VYH3164-002	Button Frame		1
2	VJD4353-002	Panel		1
3	VYH4026-001	Rubber		1
4	VMW3104-003	P.W. Board		1
5	SLP146B	LED	for REC D801	1
6	SLP246B	LED	for PAUSE D802	1
7	VYH4493-001	Pipe	J14 Play, Stop	2
8	VXP4062-001	Mecha Button	REC	1
9	VXP4062-002	"	PAUSE	1
10	VXP4063-001	"	STOP	1
11	VXP4063-002	"	PLAY	1
12	VXP4062-003	"	REVIEW, CUE	2

Front Cabinet Assembly Parts

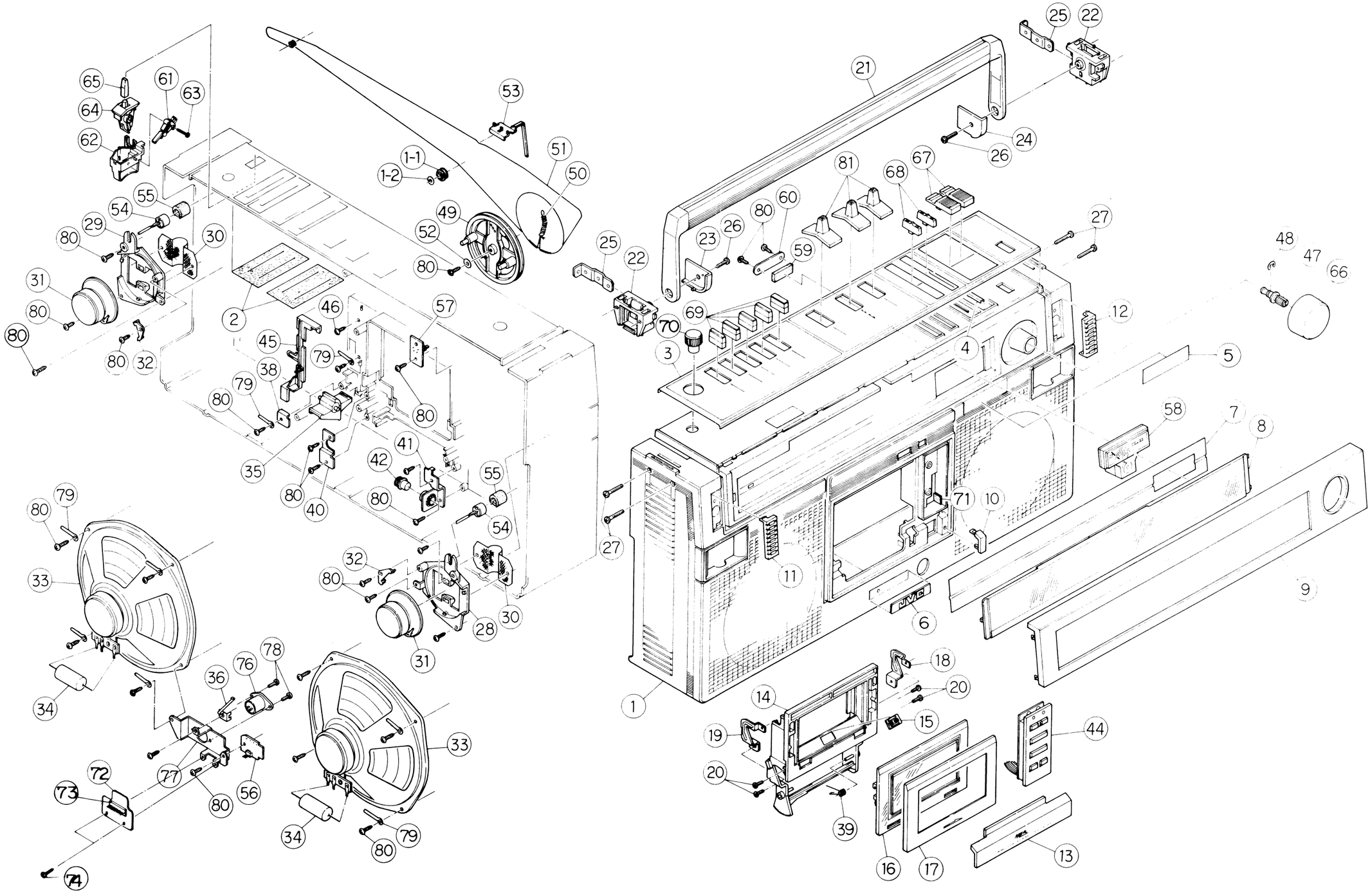


Fig. 33

Mechanical Component Parts

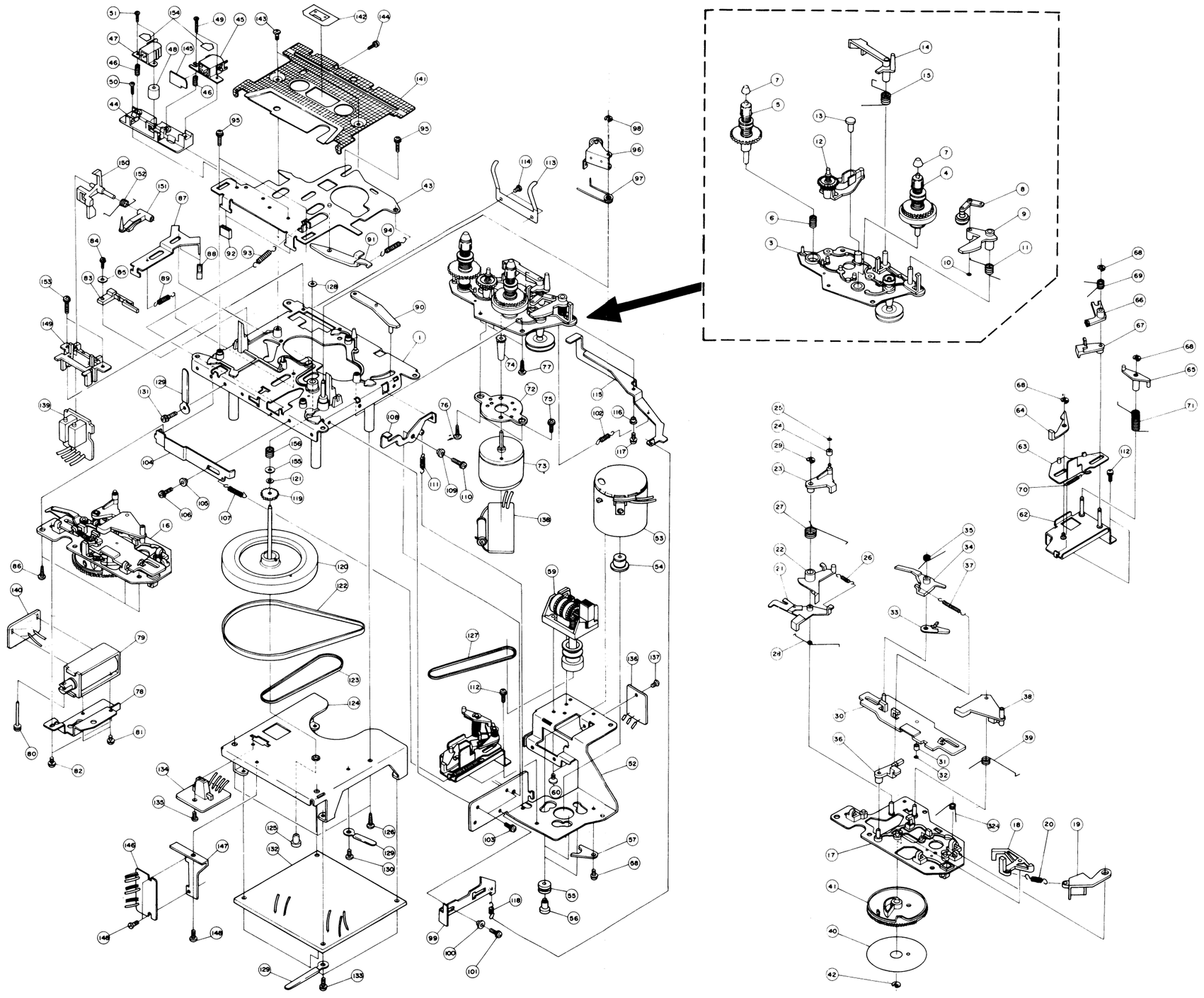


Fig. 34

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
22	V31131-002	Handle Supporter		2
23	V44943-001	Washer	(Left)	1
24	V44944-001	"	(Right)	1
25	V44883-001	Bracket		2
26	SPSP3014ZS	Screw		2
27	SDSP3018RS	"		4
28	VYH4453-001	Punching Holder	(Left)	1
29	VYH4453-002	"	(Right)	1
30	VJD4351-001	Punching Panel		2
31	HSA0599-01J	Speaker	Tweeter Speaker (5cm) 101, 201	2
32	VYH4352-002	Clamp		2
33	HSA1603-01E	Speaker	Woofer Speaker (16cm) 101, 201	2
34	QEN21EM-155	E. Capacitor	C163, 263	2
35	VXQ4031-001	Eject Lever	D34	1
36	VKY4175-001	Spring		1
38	VYH4454-001	Bracket		1
39	VKW4218-001	Door Spring		1
40	VYH4456-001	Holder		1
41	VYH4513-00A	Damp Ass'y		1
42	VYH4460-001	Gear		1
43			Blank No.	
44	————	Mecha Button Unit Ass'y	Refer to page 18	
45	VYH4455-002	Slider	* Eject	1
46	SBSF3014Z	Tap. Screw		2
47	VYH4027-002	Tuning Shaft		1
48	REE4000	E. Ring		1
49	VYH4465-001	Dial Drum		1
50	50153-3	Spring		1
51	VHR2TK9-05AT	Dial Rope	Kevlar 1335 mm	1
52	Q03091-138	Washer	Dial Drum	1
53	VJN4044-001	Needle		1
54	VMME62N-023	E.C. Mike	MIC101, MIC201	2
55	VYH4348-001	Mic Bushing		2
56	VMW3110-002	P.W. Board	Mic Connector	1
57	VMW2146-002B	P.W. Board	ST Indicator	1
58	VGM0620-001	Indicator	METER	1
59	VYSR1R5-006	Spacer		1
60	VYH4461-001	Bracket		1
61	V44737-001	Main Switch (or 6251804T)	Skeleton S902	1
62	V31167-002	Switch Holder		1
63	SBSA2010N	Tap. Screw		1
64	V31169-002	Toggle Knob		1
65	V44979-002	Lever Cap	Power	1
66	VXL4104-001	Tuning Knob		1
67	VXS4032-001	Slide Knob	Volume	2
68	VXS4033-001	"	Tone	2
69	VXP4054-001	Push Knob	Band	5
70	VXL4110-001	Fine Tune Knob		1
71	VYSH102-023	Spacer		1
72	VMW3119-001	P.W. Board		—
73	QMV5005-010	Connector		1
74	SBSB3006Z	Tapping Screw		2
75	SPSP2606Z	Screw		2
76	QMC0888-008	DIN Socket		1
77	VYH4517-002	Jack Bracket		1
78	SSSP2608M	Screw		2
79	VKZ4001-007	Wire Holder		7
80	SBSF3010Z	Screw		28
81	VXQ4032-001	Lever Cap		3

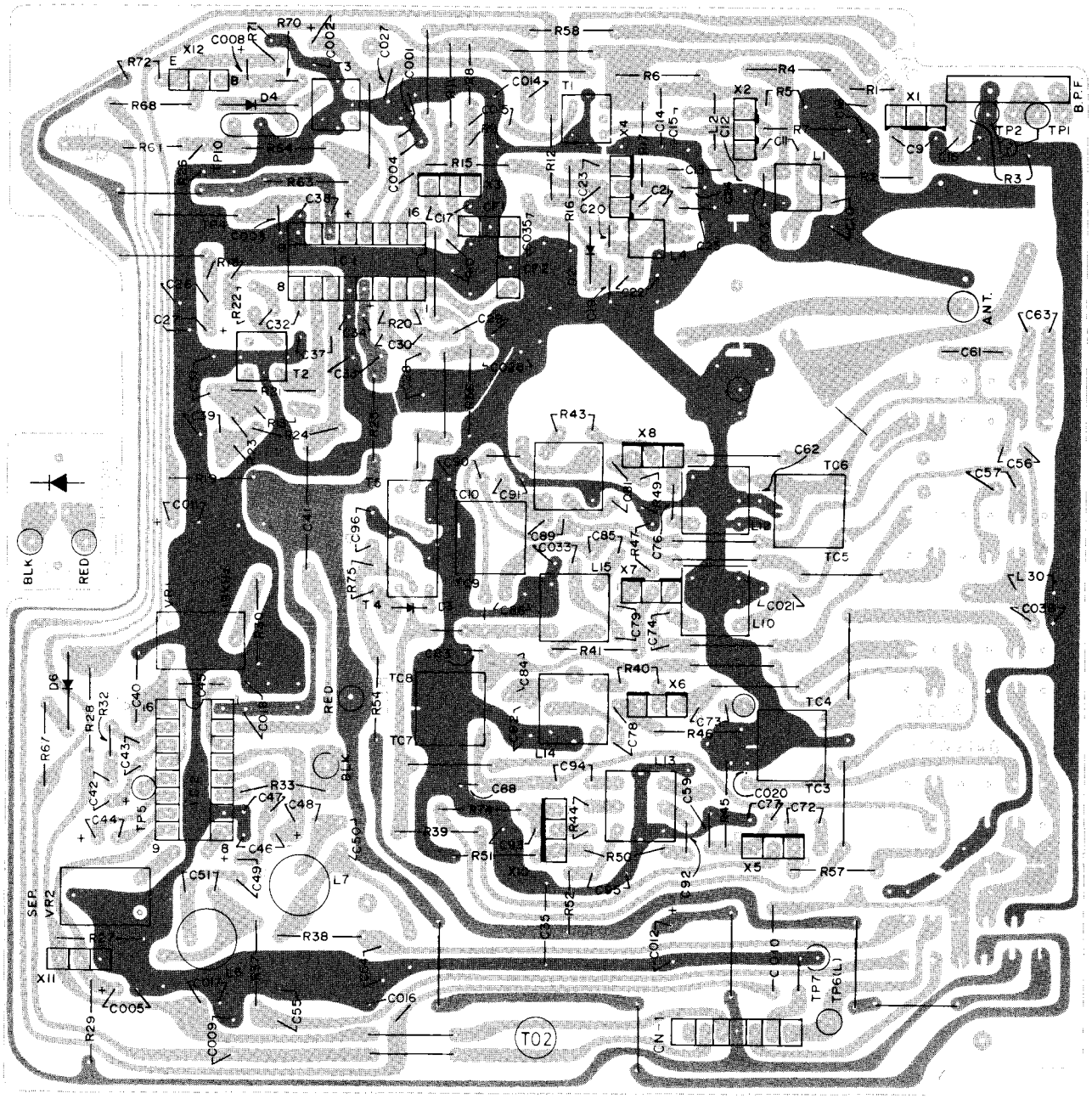
Mechanical Component Parts List

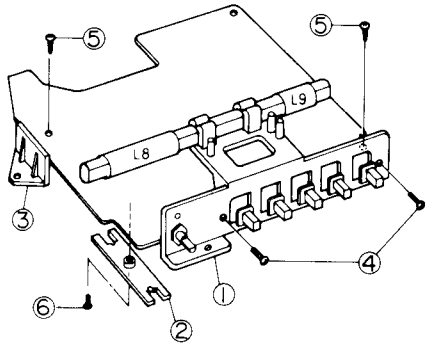
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKL1162-00B	Chassis Base Ass'y		1
3	VKL3215-00A	Reel Disk Bracket Ass'y		1
4	VKR4150-00B	Reel Disk Ass'y	Take Up	1
5	VKR4158-00B	"	Supply	1
6	THIS DWG	Comp. Spring	Back Tension	1
	VKS4247-001	Back Tension Base		1
7	VKR4160-001	Reel Stopper		2
8	VKS4240-00A	Idler Arm Ass't		1
9	VKS4170-001	Take up Lever		1
10	TEP357421-05	Special Washer	Take Up Arm	1
11	VKW4181-001	Take up Lever Spring		1
12	VKS4203-00A	FF. Rew Gear Ass'y		1
13	VKS4174-001	Lock Bush		1
14	VKS4175-001	Neutral Arm		1
15	VKW4182-001	Neutral Arm Spring		1
16	VKL3217-00B	Drive Gear Assy Unit		1
17	VKL3218-00A	Gear Holder Ass'y		1
18	VKS4176-001	Stop Arm		1
19	VKS4177-001	Kick Arm		1
20	VKW3002-046	Tension Spring		1
21	VKS4178-001	Pause Arm (3)		1
22	VKS4179-001	" (2)		1
23	VKS4180-00A	" (1) Ass'y		1
24	VKH3000-031	Collar		1
25	VKZ4004-001	Special Washer		1
26	VKW3000-014	Tension Spring		1
27	VKW4183-001	Pause Arm Spring	Pause Arm (1), (2)	1
28	VKW4184-001	"	Pause Arm (3)	1
29	REE 2500	E. Ring		1
30	VKS4182-00B	Slide Bar Ass'y		1
31	VKH3000-031	Collar		1
32	VKZ4004-001	Special Washer		1
32-1	VKW4185-001	Slide Bar Spring		1
33	VKS4184-001	Play Arm (2)		1
34	VKS4185-001	" (3)		1
35	VKW4186-001	Play Arm Spring		1
36	VKS4186-001	Brake Arm		1
37	VKW3002-022	Tension Spring	Play Arm (3), Brake Arm	1
38	VKS4187-001	Play Arm (1)		1
39	VKW4187-001	Play Arm (1) Spring		1
40	VKZ4134-001	Control Plate		1
41	VKS3114-001	Drive Gear		1
42	REE 2500	E. Ring		1
43	VKL3220-00A	Slide Base Ass'y		1
44	VKS2102-001	Head Mount Base		1
45	ZMM074401-0D	R.P. Head Ass'y		1
46	VKW3001-020	Comp. Spring		2
47	ZMM09014-0A	E. Head Ass'y		1
48	VKH4215-001	Head Collar		1
49	SPSX2010N	Screw		2
50	SPSP2008N	"		1
51	SPSX2008N	"		2
52	VKL3222-001	Motor Bracket		1
53	MHI-5E2RDPB	D.C. Motor		1
54	VKS4188-002	Motor Pulley		1
55	VKZ4130-001	Cushion Rubber		3
56	VKZ4109-001	Motor Screw		3
57	TFB345469-01	Rubber Stopper		1
58	LPSP2604Z	Screw		1
59	VKC5131-003S	Tape Counter		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
60	SSSP3006ZS	Screw		2
61	VKH4279-001	Collar		1
62	VKL4655-00A	Eject Bracket Ass'y		1
63	VKS4189-001	Eject Slide Bar		1
64	VKS4190-001	Eject Arm		1
65	VKS4191-001	Safety Arm (1)		1
66	VKS4234-001	" (2)		1
67	VKS4235-001	" (3)		1
68	REE 2500	E. Ring		3
69	VKW4220-001	Safety Arm Spring		1
70	VKW3002-038	Tension Spring		1
71	VKW4188-001	Safety Arm Spring		1
72	VKL4657-001	Reel Motor Bracket		1
73	MMN-6C2RKP	Reel Motor		1
74	VKS4193-002	Motor Gear		1
75	SPSP2603Z	Screw	Reel Motor	2
76	SBSB2608Z	"	Motor Bracket	2
77	SBSB2608Z	"	Reel Unit	3
78	VKL4658-001	Solenoid Bracket		1
79	VGP0401-001	D.C. Solenoid		1
80	VKH4251-001	Solenoid Pin		1
81	LPSP2604Z	Screw	Solenoid	2
82	LPSP2604Z	"	S. Bracket	2
83	VSH1108-001	Reef Switch		1
84	LPSP2004Z	Screw		1
85	WNS2000N	Washer		1
86	SBSB2608Z	Screw	Gear Ass'y Unit	3
87	VKL4659-001	Brake Bar		1
88	VKZ4129-001	Brake Rubber		2
89	VKW3002-054	Tension Spring	Brake Bar	1
90	VKS4194-00A	Take off Lever Ass'y		1
91	VKS4196-002	Slide Base Arm		1
92	T44341-001	Rubber Tire		2
93	VKW3002-042	Tension Spring	Slide Base	1
94	VKW3002-040	"	Slide Base Arm	1
95	DPSP2605Z	Screw	Slide Base	3
96	VKP4106-00A	Pinch Roller Arm Ass'y		1
97	VKW4189-001	Pinch Roller Spring		1
98	REE 2500	E. Ring		1
99	VKL4660-001	Eject Slide Bar		1
100	VKH3001-024	Flange Collar		1
101	LPSP2606Z	Screw	Flange Collar	1
102	VKW3002-011	Tension Screw	Safety Lever Arm	1
103	LPSP2604Z	Screw	Motor Bracket	4
104	VKL4661-001	Stop Slide Bar		1
105	VKH3001-024	Flange Collar		1
106	LPSP2606Z	Screw		1
107	VKW3002-020	Tension Spring	Stop Slide Base	1
108	VKL4663-001	Rec. Safety Stopper		1
109	VKH3001-024	Flange Collar		1
110	LPSP2606Z	Screw		1
111	VKW3002-039	Tension Spring	Rec. Safety Stopper	1
112	LPSP2604Z	Screw	Eject Bracket	2
113	VKY4171-001	Pack Spring		1
114	SPSP2603Z	Screw	Pack Spring	2
115	VKL4662-001	Safety Lever Arm		1
116	VKH3001-024	Flange Collar		1
117	SPSP2606Z	Screw	Safety Lever Arm	1
118	VKW3002-041	Tension Spring	Eject Slide Bracket Safety Lever Arm	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
119	VKS4199-001	Flywheel Gear		1
120	VKF3111-00B	Flywheel Ass'y		1
121	Q030903-827	Washer	Thrust	1
122	VKB3001-010H	Belt	Capstan	1
123	VKB3000-017H	"	Take up	1
124	VKL3223-001	Flywheel Holder		1
125	TEP357456-01	Thrust Bearing		1
126	SBSB2608Z	Screw	Flywheel Holder	3
127	VKB3000-020H	Belt	Counter	1
128	Q03093-522	Washer	Oill Cut	1
129	VKZ4001-010	Wire Holder	Oill Cut	3
130	SBSB2604Z	Screw		1
131	LPSP2604Z	"		1
133	LPSP2606Z	Screw	Mecha Control	4
134	—	Photo Coupler P.W.B.		—
135	LPSP2606Z	Screw	Photo Caplan	1
136	—	Hall Element P.W.B.		—
137	LPSP2604Z	Screw	for Hall element P.W.B.	1
138	—	Reel Motor P.W.B.		—
139	—	Push Switch P.W.B.		—
140	—	Solenoid P.W.B.		—
141	VJD4357-001	Cassette Plate		1
142	VJD4005-002	Reflection Plate		1
143	SDSF2605R	Screw		2
144	LPSP2604Z	Screw		2
145	—	Head P.W.B.		—
146	—	Head Wire Terminal P.W.B.		—
147	VYH4502-001	P.W.B. Holder		1
148	SPSP2606Z	Screw		3
149	VKS3115-001	Safety Lever Guide		1
150	VKS4197-001	Rec. Safety Lever		1
151	VKS4198-001	Push Arm		1
152	VKW4190-001	Safety Lever Spring		1
153	LPSP2604Z	Screw		1
154	THC037417-02	Head Plate		2
155	Q03093-628	Washer	Thrust	1
156	VKW3001-044	Compression Spring	Thrust	1

Tuner P.W. Board Parts





· Voltage values are measured by the circuit tester without input signal at FM mode.
( ) ; at AM mode.

IC1	HA11251		
1	3.9 (0.5)	9	0
2	3.9 (0.01)	10	0.05
3	3.9 (0.5)	11	6.8 (6.6)
4	6.4 (0)	12	0.74 (0.9)
5	0	13	0
6	4 (3.8)	14	3.5 (3.6)
7	4 (4.1)	15	1.4 (1.4)
8	5.6	16	0.75 (0.75)

IC2	HA11227		
1	6.8	9	0.7 (0)
2	1.2	10	0.7
3	1.8	11	1.5
4	1.3	12	1.1
5	1.3	13	1.5
6	0	14	1.5
7	0	15	1.5
8	0.08	16	1.9

+B

earth

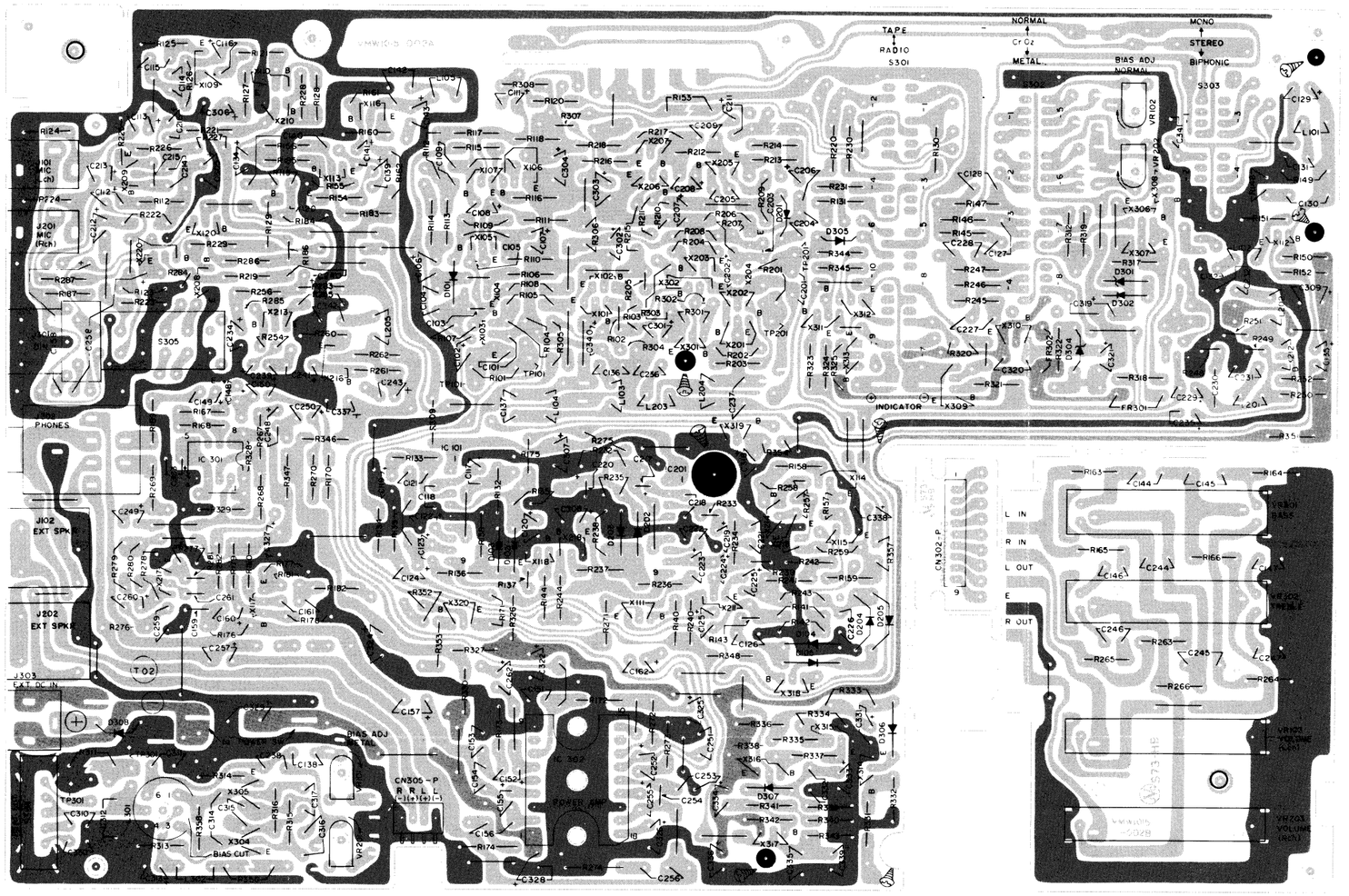
Tuner P.W. Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	VMW2146-002A	P.W. Board	Tuner	1
	VMW3116-001	"	Switch	1
X1,4	2SC1342(B)	Transistor		2
X2	2SC535(B)	"		1
X3,5	2SC460(C)	"		1
X6,7,8,10	2SC460(B)	"		4
X11	2SC458(C)	"		1
X12	2SA608(E)	"		1
IC1	HA11251	IC		1
IC2	AN7410	"		1
D2	MA345	Varicap		1
D3,6	IS2473	Si. Diode		2
D4	IN34A	Ge. Diode		1
	V44611-001	Formed Bus Wire		7
	V44611-002	"		2
	V44611-005	"		24
	VBP3M4E-001	B.P. Filter		1
	V03059-016	C. Filter	CF1,2	2
	03126-15	C.R. Block		1
	A74138-2	Test Pin		1
	VKL3143-001	Board in Tab		10
L1	VQF1B12-001	RF Coil	FM	1
L2	03226-1K	Inductor		1
L4	V03105-029	RF Coil	FM	1
L6,7	VQP0002-393	Inductor		2
L10	VQR1001-202	ANT Coil	SW2	1
L12	VQR1001-207	"	SW1	1
L13	VQMIT03-301	OSC Coil	MW	1
L14	46923-42	"	LW	1
L15	VQS1S02-302	OSC Coil	SW2	1
L16	03160-74	"	SW1	1
L30	VO3047-21	Inductor		1
T1	V03068-7	IFT		1
T2	VQT7F28-101	"		1
T3	VQT7A11-301	"		1
CFT	VQT7A32-101	"		1
	VYH4369-003	Shield		1
VR1	QVP8A0B-014	V. Resistor	10kΩ	1
VR2	QVP8A0B-054	"	50kΩ	1
R1	QRD143K-334	C. Resistor	330kΩ 1/4W	1
R2,19,25,39,41	QRD141K-101	"	100Ω "	5
R3	QRD141K-332	"	3.3kΩ "	1
R4	QRD141K-471	"	470Ω "	1
R5,37,38	QRD141K-682	"	6.8kΩ "	3
R6,28,29	QRD141K-273	"	27kΩ "	3
R7,45,46,51	QRD141K-102	"	1kΩ "	4
R8	QRD143K-273	"	27kΩ "	1
R9	QRD143K-682	"	6.8kΩ "	1
R10	QRD143K-821	"	820Ω "	1
R11, 54	QRD141K-331	"	330Ω "	2
R12	QRD141K-104	"	100kΩ "	1
R13	QRD143K-224	"	220kΩ "	1
R15,60,74	QRD141K-153	"	15kΩ "	3
R16	QRD141K-561	"	560Ω "	1
R17	QRD141K-222	"	2.2kΩ "	1
R18	QRD143K-683	"	68kΩ "	1
R20,52	QRD143K-331	"	330Ω "	2
R21,57,58	QRD141K-562	"	5.6kΩ "	3
R22,71	QRD143K-391	"	390Ω "	2
R23,30	QRD141K-223	"	22kΩ "	2
R24	QRD141K-272	C. Resistor	2.7kΩ "	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
R26	QRD141K-820	C. Resistor	82Ω 1/4W	1
R27,56	QRD141K-473	"	47kΩ "	2
R32,47	QRD143K-102	"	1kΩ "	2
R33,68	QRD141K-681	"	680Ω "	2
R40,43,44	QRD143K-101	"	100Ω "	3
R42,49,77	QRD143K-152	"	1.5kΩ "	3
R50	QRD141K-470	"	47Ω "	1
R59	QRD143K-154	"	150kΩ "	1
R61	QRD143K-103	"	10kΩ "	1
R63	QRD141K-154	"	150kΩ "	1
R64	QRD141K-393	"	39kΩ "	1
R67	QRD141K-392	"	3.9kΩ "	1
R70,75	QRD143K-333	"	33kΩ "	2
R72	QRD143K-472	"	4.7kΩ "	1
C9,25,013,015	QCF11HP-472	C. Capacitor	0.0047μF 50V	4
C10	QCT05CH-200	"	20pF 16V	1
C11,13,86	QCS11HJ-4R0	"	4pF 50V	3
C12,16	QCS11HJ-180	"	18pF "	2
C14	QFS21HJ-361	P. Capacitor	360pF "	1
C15,17,19,26,33,59 93,96,004,018	QCF11EZ-223	C. Capacitor	0.022μF 25V	10
C18,95,014	QFM41HM-223	Mylar Capacitor	0.022μF 50V	3
C20,21	QCT05CH-7R0	C. Capacitor	7pF 16V	2
C22	QCT05CH-220	"	22pF "	1
C23,67,033,	QCS11HJ-100	"	10pF 50V	3
C24,91	QCT05CH-100	"	10pF 16V	2
C27,48,49	QET41HR-474	E. Capacitor	0.47μF 50V	3
C28,29,30,45	QFM41HM-473	Mylar Capacitor	0.047μF "	4
C31,32,73	QCF11EZ-103	C. Capacitor	0.01μF 25V	3
C34,009	QET41AR-476	E. Capacitor	47μF 10V	2
C35	QCS11HJ-101	C. Capacitor	100pF 50V	1
C36,027	QFM41HM-333	Mylar Capacitor	0.033μF 50V	2
C37	QCS11HJ-361	C. capacitor	360pF 50V	1
C38	QET41AR-227	E. Capacitor	220μF 10V	1
C39,005	QET41CR-106	"	10μF 16V	2
C40	QFS21HJ-391	"	390pF 50V	1
C41	QEW21EA-475	"	4.7μF 25V	1
C42	QEC41HM-474	"	0.47μF 50V	1
C43	QEC41HM-224	"	0.22μF 50V	1
C44,008	QET41HR-105	"	1μF 50V	2
C46,47	QFM41HK-103	Mylar Capacitor	0.01μF 50V	2
C50,51	QCY41HK-182	C. Capacitor	0.0018μF 50V	2
C54,55,72,74,76	QCY41HK-222	"	0.0022μF "	5
C56,83	QCS11HJ-300	"	30pF "	2
C57,90	QCS11HJ-120	"	12pF "	2
C60	QCS11HJ-330	"	33pF "	1
C61,66	QCS11HJ-200	"	20pF "	2
C62,88	QCS11HJ-7R0	"	7pF "	2
C77	QEB41HM-105	E. Capacitor	1μF "	1
C78,79	QCY41HK-682	C. Capacitor	0.0068μF "	2
C81,92,016	QCY41HK-472	C. Capacitor	0.0047μF 50V	3
C82	QCS11HJ-390	"	39pF "	1
C84	QFS41HJ-181	P. Capacitor	180pF "	1
C85	QFS41HJ-392	"	0.0039μF "	1
C89	QCT05CH-150	C. Capacitor	15pF	1

Part No.	Parts No.	Parts Name	Remarks	Q'ty
C94	QFS41HJ-361	P. Capacitor	360pF 〃	1
C001	QCC11EM-104	C. Capacitor	0.1μF 25V	1
C002,017	QET41HR-335	E. Capacitor	3.3μF 50V	2
C003	QCS11HJ-151	C. Capacitor	150pF 50V	1
C010	QFM41HM-683	Mylar Capacitor	0.068μF 〃	1
C011	QET41AR-107	E. Capacitor	100μF 10V	1
C012	QET41AR-108	〃	1000μF 〃	1
C020	QCS11HJ-2R0	C. Capacitor	2pF 50V	1
C028	QFS41HJ-152	P. Capacitor	0.0015μF 〃	1
C029	QCS11HJ-3R0	C. Capacitor	3pF 〃	1
C036	QCS11HJ-8R0	〃	8pF 〃	1
VC1...4	QAP1224-511V	V. Capacitor		1
TC1...2				
TC3,4,5,6, 7,8,9,10	QAT2002-001	T. Capacitor		4
S1...5	QSP0250-011	Push Switch		1
CN3-P	QMV5005-007	Connector		1
	VMW2146-002	P.W. Board	for Tuner	
	VMW2146-002A	〃	for Main	1
	VMW2146-002B	〃	for LED	1
	VQB016B-302	Bar Antenna		1
	QAT5001-201	Midget V. Capacitor	VC5	1
①	VYH2119-002	Bar Ant Holder		1
②	VYH4221-001	Arm		1
③	VYH4028-001	Bridge		1
④	SPSP3006ZS	Screw		2
⑤	SBSF3010Z	Tap Screw		2
⑥	SDSP2606Z	Screw		1

Amp and VR P.W. Board Parts

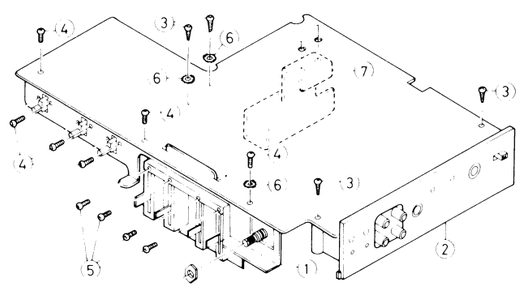


IC101	BA333 (V)
Pin No.	REC Amp.
1	6.4 (V)
2	0.26
3	0.61
4	0.13
5	0
6	0
7	0.74
8	3.0
9	7.0

IC301	μPC4557 (C)
Pin No.	Headphone Amp.
1	4.5 (V)
2	0.29
3	4.4
4	0
5	4.4
6	0.29
7	4.5
8	9.0

IC302	AN7146 (H)
Pin No.	Power Amp.
1	12 (V)
2	6.2
3	0
4	11.0
5	1.3
6	3.1
7	1.7
8	0.16
9	0

IC302	AN7146 (H)
Pin No.	Power Amp.
10	3.1 (V)
11	0.5
12	1.7
13	3.1
14	1.3
15	11.0
16	0
17	6.3
18	11.7



Ref. No.	Function	Parts No.	Playback mode (V)			Recording mode (V)		
			E	C	B	E	C	B
X101	Switching	2SD958(T, U)	0	0	0.7	−5.4	0	−10.8
X102	〃	〃	0	0	0.7	−5.4	0	−10.4
X103	〃	2SD636(S)	0	0	0	0	0	0.72
X104	PB EQ amp.	2SD661(S)	0.02	0.71	0.56	0.04	0.82	0.58
X105	〃	〃	0.28	5.4	0.71	0.39	7.8	0.82
X106	Switching	2SD636(R, S)	0	0.46	0	0	0	0.5
X107	PB Pri amp.	2SD636(R)	0.26	2.5	0.46	0	9.0	0
X108	Muting	2SD636(R, S)	0	0	0.63	0	0	0.63
X109	Mic Amp.	2SD636(S)	0.09	1.7	0.1	0.09	1.7	0.11
X110	Switching	2SD636(R, S)	0	0	0.72	0	0	0
X111	〃	2SD636(S)	0	0.18	0	0.94	0.94	1.6
X112	REC EQ amp.	2SD636(T)	0.61	4.6	0.28	0.56	4.4	0.26
X113	Muting	2SD636(R, S)	0	0	0.62	0	0	0.62
X114	〃	〃	0	0	0.66	0	0	0
X115	〃	〃	0	0	0.62	0	0	0
X116	LINE Amp.	2SD636(S)	0.29	4.2	0.3	0.32	4.6	0.33
X117	Biphonic	〃	2.1	7.0	2.4	2.25	7.2	2.55
X118	Metal ARL	2SD636(R, S)	0	0.28	0	0	0	0.61
X119	Switching	2SD468(C)	0	0	0.66	0	0	0.66
X301	Switching	2SB788(T, U)	4.3	4.2	3.5	9.3	−10.6	9.2
X302	〃	2SD636(R, S)	0	0.04	0.63	0	9.0	0
X303	Muting	2SD636(S)	0	0	0.72	0	0	0

Ref. No.	Function	Parts No.	Playback mode (V)			Recording mode (V)		
			E	C	B	E	C	B
X304	Bias OSC	2SD468(C)	0	0	0	0.13	4.5	0.28
X305	〃	〃	0	0	0	0.13	4.5	0.25
X306	Regulator	2SD468(B)	0	12.0	0	7.0	11.9	7.6
X307	〃	2SD636(R)	0	12.0	0	7.6	11.9	8.2
X308	Switching	2SD636(R, S)	0	0	0.73	0	8.2	0
X309	〃	2SD468(C)	0	0	0.67	0	1.25	0
X310	Regulator	2SD468(B)	6.7	12.0	7.4	6.7	11.9	7.4
X311	Switching	2SD636(R, S)	0.05	0.06	0.08	0	0	0
X312	〃	〃	0	0.06	0	0	0	0.62
X313	〃	〃	0.2	0.26	0.08	0	9.2	0
X314	〃	2SD636(R)	0	0.82	0	0	0	0.68
X315	〃	2SD636(R, S)	0	0	0.57	0	5.5	0.04
X316	〃	2SB641(R, S)	7.3	7.2	6.6	7.4	0	6.9
X317	〃	〃	7.3	0	6.2	7.4	7.3	6.7
X318	〃	2SD636(R, S)	0.2	0	0	0	0	0.08
X319	Muting	〃	0	0.04	0	0	0.05	0.02
X320	〃	〃	0.54	0.54	1.2	2.8	2.8	3.4
X321	Switching	2SD636(R)	0	5.0	0.58	0	5.6	0
X401	Mixing Amp.	〃	0.1	1.57	0.13	0.14	2.0	0.18
X402	Switching	2SD636(R, S)	0	0	0	0	0	0.62
X403	Mixing Amp.	2SD636(R)	0.14	2.25	0.1	0.15	3.2	0.2
X404	〃	〃	0.09	2.4	0.13	2.14	3.7	0.19

- Voltage values are measured by circuit tester (impedance = 20kΩ/V) without input signal at normal tape select position.
- Transistors voltage for muting show at muting operation.
- IC101 BA333 (V) voltage show at recording mode.

+B

Earth

Fig. 36

Amp and VR P.W. Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	VMW1015-002A	P.W.Board	for Main	1
S301-1~10	QSLA210-001	Lever Switch	RADIO-TAPE	1
S302-1~8	QSL8310-102	"	TAPE-SELECT	1
S303-1~4	QSL4310-014	"	MONO-ST	1
S304	QSS1301-001	Slide Switch	BEAT CUT	1
S305-1~4	QSP4210-061	Push Switch		1
J101,201	QMS3501-014	Jack	MIC	2
J102,202	QMC0289-003	DIN SP Socket	EXT SP	2
J301	QMC9014-006	DIN Jack		1
J302	QMS6312-004	Headphone Jack		1
J303	QMA1221-004	DC Jack		1
L101,201 105,205	VQP0001-183S	Inductor		4
L102,202	VQP0001-562S	"		2
L103,203 104,204	VQP0001-103S	"		4
L301	VQH1009-007	OSC Coil		1
L302	03226-2K	Inductor		1
VR101,201	QVP8AOB-054	V. Resistor	BIAS ADJ 50KΩ	2
VR102,202	QVP8AOB-025	"	200KΩ	2
VR103,203	QVR0A6A-054A	"	VOLUME, 50KΩ	2
VR301,302	QVR2A6A-115	"	TONE 100KΩ	2
IC101,201	BA333(V)	IC		2
IC301	μPC4557(C)	"		1
IC302	AN7146(H)	"		1
X101,201 102,202	2SD958(T,U)	Transistor		4
X103,203,109 209,111,211 116,216,117 217,113,213	2SD636(S)	"		12
X104,204	2SD661(S)	"		2
X105,205	2SD661(S,T)	Transistor		2
X106,206,108 208,110,210 120,220,114 214,115,215 118,218,302 308,311,312 313,315,318 319,320	2SD636(R,S)	"		23
X107,207 307,314	2SD636(R)	"		4
X112,212	2SD636(T)	"		2
X301	2SB788(T,U)	"		1
X304,305,309	2SD468(C)	"		3
X306,310	2SD468(B)	"		2
X316,317	2SB641(R,S)	"		2
D101,201,102 202,103,203 302,305,307	MA150	Si. Diode		9
D104,204,105 205,306	OA90	Ge. Diode		5
D301	HZ7C2	Zener Diode		1
D304	HZ7C1	"		1
D308	10EI	Si. Diode		1
	V44611-001	Formed Bus Wire		2
	V44611-002	"		5
	V44611-003	"		2
	V44611-005	"		3
	V44611-006	"		15
	QWY123-022	Bus Wire		31
R101,201	QRD141J-100SY	C.Resistor	10Ω 1/4W	2
R102	QRD143J-392S	"	3.9KΩ "	1
R103,143	QRD143J-182S	"	1.8KΩ "	2
R104,354	QRD143J-223S	"	22KΩ "	2
R105,110,219 121,221,127 128,228,129 229,165,265 158,258,159 259,318,321	QRD141J-472SY	"	4.7KΩ "	18
R106,206,123 223,303,322 333	QRD141J-331SY	"	330Ω "	7
R107,207	QRD143J-824S	"	820KΩ "	2
R108,208,120 220,154,325 337	QRD141J-683SY	"	68KΩ "	7
R109,209 173,273	QRD141J-471SY	"	470Ω "	4
R111,163,263	QRD141J-103SY	"	10KΩ "	3
R112,212,115 117,217,141 241	QRD141J-334SY	"	330KΩ "	7
R113,213,114 214,139,176 276	QRD141J-822SY	"	8.2KΩ "	7
R116,216,125 225,155,255 308	QRD141J-221SY	"	220Ω "	7
R118,218,151,317	QRD141J332SY	"	3.3KΩ "	4
R122,222 124,224,358	QRD141J-222SY	"	2.2KΩ "	5
R126,226 187,287,323	QRD141J-105SY	"	1MΩ "	5
R130,230,142 242,149,286 334,341,184	QRD141J-104SY	"	100KΩ "	9
R131,231,136 236,162,262 271	QRD141J-272SY	"	2.7KΩ "	7
R132,232,140 240,145,245	QRD141J-333SY	"	33KΩ "	6
R133,351	QRD141J-101SY	"	100Ω "	2
R134,234,	QRD141J-153SY	"	15KΩ "	2
R135,235	QRD121J-106	"	10MΩ 1/2W	2
R137	QRD143J-123S	"	12KΩ 1/4W	1
R138,238 147,247	QRD141J-563SY	"	56KΩ "	4
R144	QRD147J-473S	"	47KΩ "	1
R146,246,172 272,244,335 338,342,344	QRD141J-473SY	"	47KΩ "	9
R148,248,304	QRD143J-153S	"	15KΩ "	3
R150,250,156 256,185	QRD141J-474SY	"	470KΩ "	5

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
R152,252,153 253,178,278 182,282,237	QRD141J-123SY	C.Resistor	12KΩ 1/4W	9
R157,257	QRD143J-331S	"	330Ω "	2
R160,260	QRD141J-181SY	"	180Ω "	2
R161,261 168,268	QRD141J-684SY	"	680KΩ "	4
R164,264,202	QRD141J-392SY	"	3.9KΩ "	3
R166,266,183 283,328,329 331	QRD141J-562SY	"	5.6KΩ "	7
R167,267 315,316	QRD141J-183SY	"	18KΩ "	4
R169,269	QRD141J-330SY	"	33Ω "	2
R170,270	QRD141J-102SY	"	1KΩ "	2
R171	QRD143J-272S	"	2.7KΩ "	1
R174,274	QRD121J-2R2	"	2.2Ω 1/2W	2
R175	QRD143J-154S	"	150KΩ 1/4W	1
R177,180 280,345	QRD141J-122SY	"	1.2KΩ "	4
R179,279	QRD141J-273SY	"	27KΩ "	2
R181,281,320	QRD143J-562S	"	5.6KΩ "	3
R284,186 249	QRD143J-104S	"	100KΩ "	3
R203,243	QRD141J-182SY	"	1.8KΩ "	2
R204,332,339 340,343	QRD141J-223SY	"	22KΩ "	5
R205,210 306,227,119	QRD143J-472S	"	4.7KΩ "	5
R211	QRD143J-103S	"	10KΩ "	1
R215	QRD147J-334S	"	330KΩ "	1
R233	QRD143J-101S	"	100Ω "	1
R239	QRD143J-822S	"	8.2KΩ "	1
R251,301,302	QRD143J-332S	"	3.3KΩ "	3
R254	QRD143J-683S	"	68KΩ "	1
R275	QRD147J-154S	"	150KΩ "	1
R277	QRD143J-122S	"	1.2KΩ "	1
R285	QRD143J-474S	"	470KΩ "	1
R305	QRD147J-393S	"	39KΩ "	1
R307,352	QRD143J-102S	"	1KΩ "	2
R309	QRD147J-332S	"	3.3KΩ "	1
R311	QRD141J-1ROSY	"	1Ω "	1
R312	QRD147J-270S	"	27Ω "	1
R313,314	QRD141J-4R7SY	"	4.7Ω "	2
R319	QRD147J-150S	"	15Ω "	1
R324,348	QRD141J-225SY	"	2.2MΩ "	2
R326	QRD147J-101S	"	100Ω "	1
R327	QRD147J-151S	"	150Ω "	1
R330	QRD147J-680S	"	68Ω "	1
R336	QRD141J-154SY	"	150KΩ "	1
R346	QRD147J-560S	"	56Ω "	1
R347	QRD147J-470S	"	47Ω "	1
R350	QRD146J-100S	"	10Ω "	1
R353	QRD147J-153S	"	15KΩ "	1
R357	QRD143J-682S	"	6.8KΩ "	1
FR301,302	QRH141J-1RO	Fusible Resistor	1Ω "	2
C101,201	QCS11HJ-201	C.Capacitor	200pF 50V	2
C102,202,113 213,123,223	QET41HR-105	E.Capacitor	1μF "	6

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
C134,234,135 235,143,243	QET41HR-105	E. Capacitor	1 μF 50V	12
C103,203,105 205,114,214	QCS11HJ-330	C.Capacitor	33pF "	6
C104,204 115,215	QCS11HJ-101	"	100pF "	4
C106,206,120 220,125,225 162,262,338	QET41ER-475	E.Capacitor	4.7μF 25V	9
C107,207,122 222,152,252 155,255,305 340	QET41AR-476	"	47μF 10V	10
C108,208,111 211,116,216 124,224,129 229,240,141 241,139,239	QET41HR-335	"	3.3μF 50V	15
C109,209,315	QFM41HJ-123	Mylar Capacitor	0.012μF 50V	3
C112,212,117 217,334	QET41HR-474	E.Capacitor	0.47μF "	5
C118,218 154,254	QCS11HJ-151	C.Capacitor	150pF "	4
C119,219,318 323,325	QET41AR-107	E.Capacitor	100μF 10V	5
C121,221	QCS11HJ-470	C.Capacitor	47pF 50V	2
C126,226,341	QCY41HK-472	"	0.0047μF "	3
C127,227	QCS11HJ-241	"	240pF "	2
C128,228,131 231,142,242	QCS11HJ-301	"	300pF "	6
C130,230	QFM41HK-154	Mylar Capacitor	0.15μF "	2
C132,232 161,261	QFM41HJ-103	"	0.01μF "	4
C136,236	QCS11HJ-561	C.Capacitor	560pF "	2
C137,237	QCS11HJ-501	"	500pF "	2
C138,238	QFS32BJ-391	P.Capacitor	390pF 125V	2
C144,244	QFM41HJ-683	Mylar Capacitor	0.068μF 50V	2
C145,245	QFM41HK-104	"	0.1μF "	2
C146,246	QFM41HJ-182	"	0.0018μF "	2
C147,247 159,259	QFM41HJ-153	"	0.015μF "	4
C148,248	QEC41HM-224	E.Capacitor	0.22 μF "	2
C149,249	QET41CR-226	"	22μF 16V	2
C150,250	QEC41HM-104	"	0.1μF 50V	2
C151,251 316,317	QCY41HK-332	C.Capacitor	0.0033 μF "	4
C153,253	QCY41HK-681	"	680pF "	2
C156,256	QCC11EM-104	"	0.1μF 25V	2
C157,257,321	QET41AR-108	"	1000μF 10V	3
C158,258,140	QEW21HA-335	"	3.3μF 50V	3
C160,260	QEC41HM-104	E.Capacitor	0.1μF "	2
C301,302,303 307,313	QET41AR-227	"	220μF 10V	5
C304,308,309 327,328	QET41CR-227	"	220μF 16V	5
C306	QET41AR-337	"	330μF 10V	1
C310	QFM41HJ-472	Mylar Capacitor	0.0047μF 50V	1
C311	QFS32BJ-331	P.Capacitor	330pF 125V	1
C312	QFP42AJ-183	P.P.Capacitor	0.018μF 100V	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
C314	QFP42AJ-223	P.P.Capacitor	0.022μF 100V	1
C319,331	QET41CR-106	E.Capacitor	10μF 16V	2
C320,332,335	QCC11EM-103	C.Capacitor	0.01μF 25V	3
C322,337	QET41CR-477	E.Capacitor	470μF 16V	2
C324	QET41CR-108	"	1000μF "	1
C326	QET41CR-337	"	330μF "	1
C329	QET41CR-228	"	2200μF "	1
C330	QFM41HJ-122	Mylar Capacitor	0.0012μF 50V	1
C333	QET41CR-336	E.Capacitor	33μF 16V	1
C336	QET41CR-107	"	100μF "	1
C339	QET41CR-476	"	47μF "	1
	A74138-2	Test Pin		6
	V43895-1	Tab		6
	QMV5004-004	Connector	SPKR CN305-P	1
	VYH4204-001	Radiation Plate		1
	SBSF3014Z	Tap. Screw		2
	Q03095-206	Washer		1
①	VYH2117-001	Control Bracket		1
②	VJD3223-001	Jack Board		1
③	VYSA1R6-036	Spacer		1
④	SBSF3014Z	Tap. Screw		2
⑤	SPSP2006Z	Screw		4
⑥	WBS3000N	T. Lock Washer		2
⑦	VYH4619-00A	Master Shield Ass'y		1
⑧	VYSH125-001	Spacer		1

Power Supply P.W. Board Parts

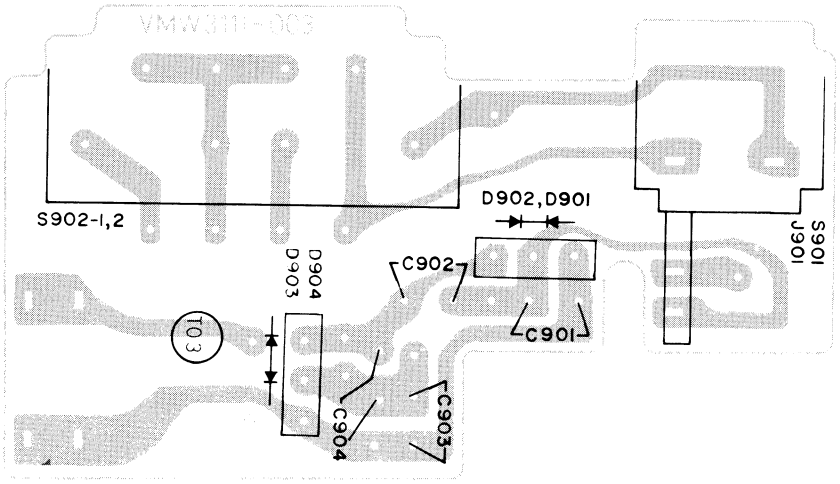


Fig. 37

Power Supply P.W. Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	VMW3111-003	P.W. Board	for Power	1
D901,902	DS131A	Si. Diode		1
D903,904	DS132A	Si. Diode		1
C901 ~ 904	QCF11EZ-103	C. Capacitor		4
	QMF51A2-1R6	Fuse	RC-M60L	1
	QMF51A2-1R6BS	Fuse	RC-M60LB	1
	A44594-001	Fuse Clip		2
	QSS2325-109	Slide Switch	RC-M60L	1
S902-1,2	QSS2325-109BS	Slide Switch		1
J901,S901	QMC0263-002	AC Socket Ass'y	RC-M60L	1
"	QMC0263-002BS	AC Socket Ass'y	RC-M60LB	1

Mecha Control P.W. Board Parts

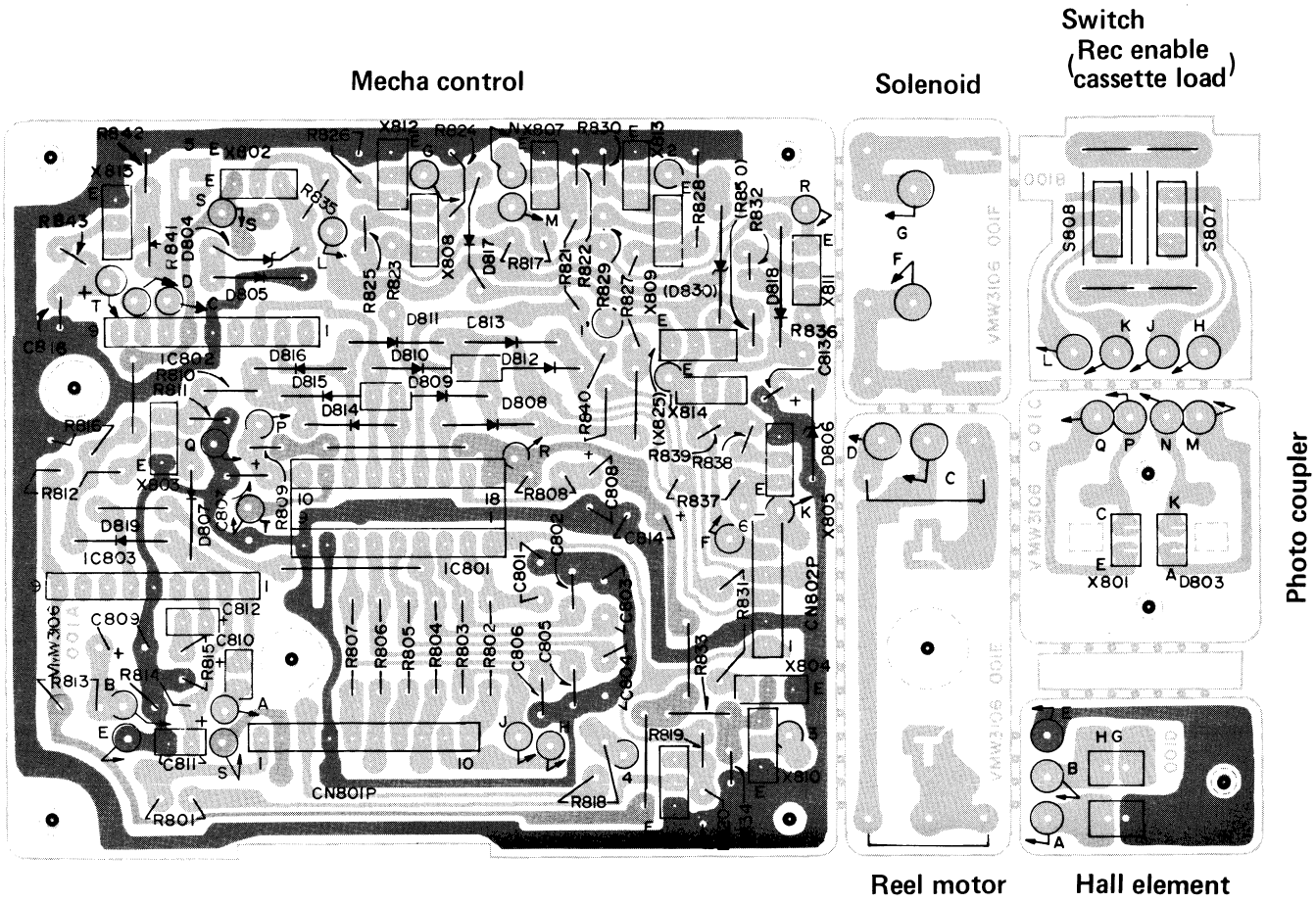


Fig. 38

Mecha Control P.W. Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	VMW3106-001A	P.W. Board		1
IC801	VUC0002-001	I.C	for Control	1
IC802	BA6208A	"	for MOTOR Control	1
IC803	BA335	"	for Auto. Stop	1
X802	2SC1162WT (C)	Transistor		1
X803,804,805 806,807,808 809,810,815	2SD636 (S)	"		9
X811	2SD468 (C)	"		1
X812,813	2SC2673 (Q,R)	"		2
X814	2SA786 (P,Q)	"		1
D804	HZ7C	Zener Diode		1
D805,808,809,810 811,812,813,814 815,816,819,820 821,822,823,824 825,826	1S2076	Si. Diode		18

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
D817,818,827	10E1	Si. Diode		3
R801,810,823 836,837	QRD143J-102S	C. Resistor	1kΩ 1/4W	5
R802,803,804 805,806,807	QRD141J-122S	"	1.2kΩ "	6
R808	QRD143J-823S	"	82kΩ "	1
R809	QRD143J-223S	"	22kΩ "	1
R811,824,842	QRD143J-333S	"	33kΩ "	1
R812	QRD143J-332S	"	3.3kΩ "	1
R813	QRD143J-471S	"	470Ω "	1
R814	QRD143J-224S	"	220kΩ "	1
R815,817	QRD143J-331S	"	330Ω "	2
R818	QRD143J-681S	"	680Ω "	1
R819	QRD143J-182S	"	1.8kΩ "	1
R821	QRD141J-182S	"	1.8kΩ "	1
R825,829	QRD143J-561S	"	560Ω "	2
R826,830	QRD143J-562S	"	5.6kΩ "	2
R827,831	QRD141J-331S	"	330Ω "	2
R828	QRD141J-333S	"	33kΩ "	1
R832	QRD146J-100S	"	10Ω "	1
R833,838	QRD143J-153S	"	15kΩ "	2
R835	QRD143J-391S	"	390Ω "	1
R837	QRD141J-102S	"	1kΩ "	1
R839	QRD143J-103S	"	10kΩ "	1
R840	QRD143J-100S	"	10Ω "	1
R841	QRD143J-272S	"	2.7kΩ "	1
C807,808	QEE41EM-105B	Tantal E. Capacitor	1μF 25V	2
C809	QET41AR-477	E. Capacitor	470μF 10V	1
C810,813	QET41HR-105	"	1μF 50V	2
C811	QET41ER-475	"	4.7μF 25V	1
C812	QET41AR-336	"	33μF 10V	1
C814,815	QET41AR-227	"	220μF "	2
C816	QET41CR-106	"	10μF 16V	1
C824,826,827	QCC11EM-104	C. Capacitor	0.1μF 25V	3
C825,821	QCY41HK-472	"	0.0047μF 50V	1
	V44611-006	Formed Bus Wire		2
	V44611-003	"		2
	V43895-1	Tab		1
CN801P	QMV5004-010	Connector		1
CN802P,L14	QMV5004-006	"		1
	VYSPIR3-006	Spacer		2
	VMW3106-001B	P.W. Board		—
S807,808	QSP0029-001	Push Switch		2
	VMW3106-001C	P.W. Board		—
X801	PN202S	Photo Transistor		1
D803	TLR108D	L.E.D		1
	VKZ4135-001	Spacer		1
	VYH4450-001	Photo Shell		1
	VMW3106-001D	P.W. Board		—
	VHE610G	Hall Element	HG	1
	VMW3106-001E	P.W. Board	for Reel Motor	—
C820	QEN21EM-106	N.P.E. Capacitor		1
L801,802	VQP0004-231	Inductor		2
	VMW3106-001F	P.W. Board	for Solenoid	—
L803	T41572-001	Inductor		
S809	VSH1108-001	Switch Ass'y		1

Packing

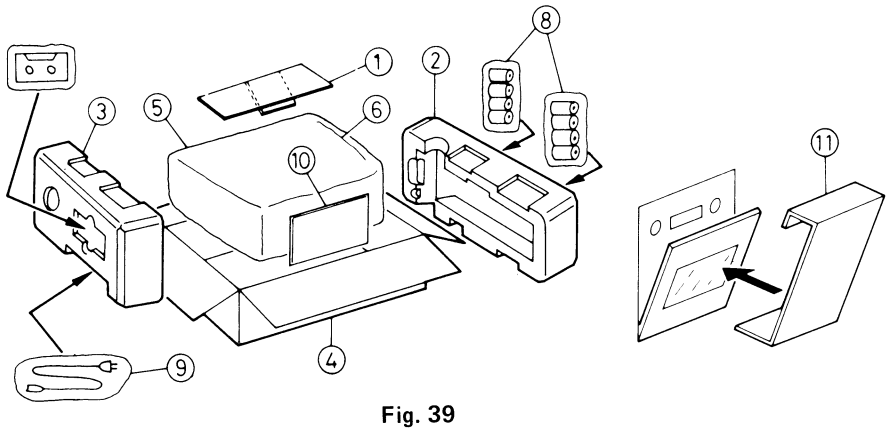


Fig. 39

Packing Material Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VPH4101-005	Door protector		1
2	VPH1201-001	Side cushion	(Left)	1
3	VPH1203-001	Side cushion	(Right)	1
4	VPD5060-J01	Carton	RC-M60LB	1
	" -J03	"	RC-M60L	1
5	QPGA065-05004	Poly bag	for set	1
6	VHPJ109-039	Wrapping paper		1
8	QPGA010-02003	Poly bag	for Batteries	1
9	QPGA012-01505	"	for Power cord	1
10	QPGB024-03404	"	for Instruction Book	1
11	VPK4136-002	Spacer		1

Accessories

Parts No.	Parts Name	Remarks	Q'ty
QMP9017-009BS	Power Cord	RC-M60LB	1
QMP3950-183	"	RC-M60L	1
QPGA012-02505	Poly Bag	for Power Cord	1
VNM0773-301	Instruction Book		1
QPGB024-03404	Poly Bag	for Instruction Book	1
VYA4002-001	Short Plug		2
VGT12S3-J04	Cassette Tape		1
53866-2	Label		1
VYA4001-00A	Head Cleaning Stick		1
VNF0777-001	Feature Sticker		1
VNC6305-001	Trouble Shooting		1
QZL1002-003BS	Warning Label	RC-M60LB	1
31465-18	Mark	RC-M60LB	1
BT20013C	Guarantee Certificate	RC-M60LB	1