SERVICE MANUAL 4025/MCR425

marantz

model 4025/MCR425

Stereophonic Recording Receiver

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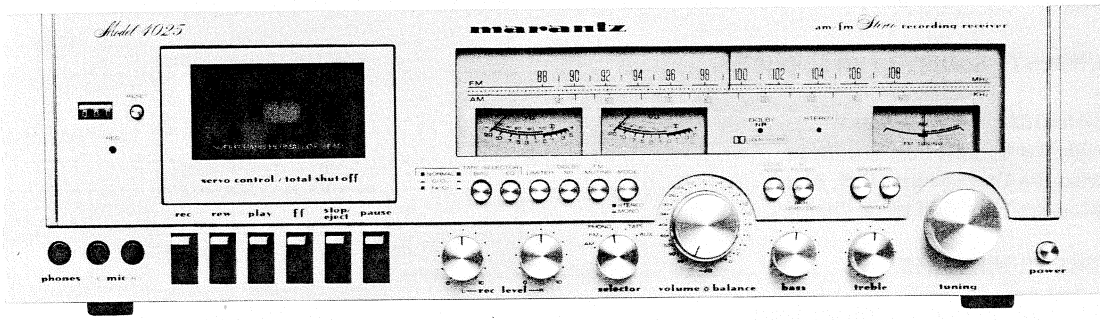
MARANTZ MODEL 4025/MCR425 STEREO RECORDING RECEIVER



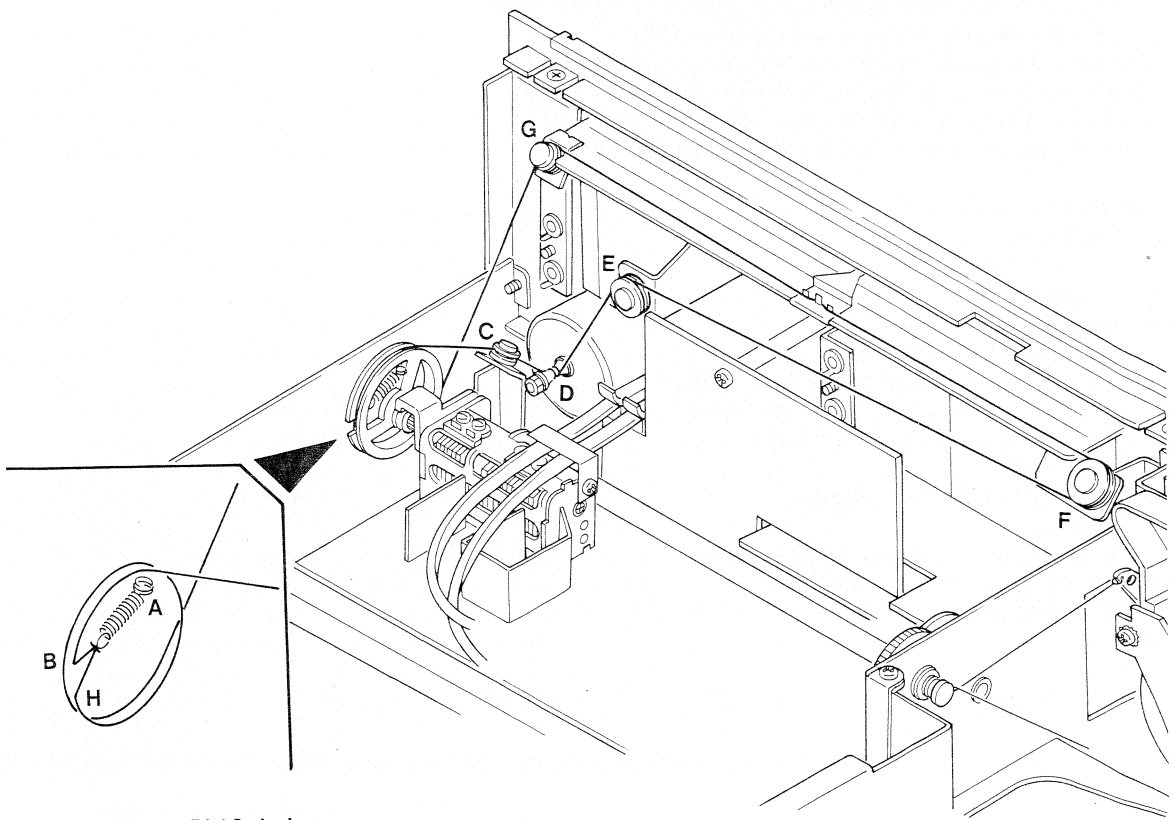


Figure 1. Dial Stringing

INTRODUCTION

This service manual are prepared for use by Authorized Warranty Station and contains service information for Marantz Model 4025/MCR425 Stereo Recording Receiver.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operation of the Recording Receiver.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can be usually obtained through local suppliers.

1. P.W. BOARDS

As can be seen from the circuit diagram, the chassis of Model 4025/MCR425 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Tuner . . . . . mounted on P.W. Board P100
2. Main Amp & Power Supply . . . . mounted on P.W. Board P700
3. Antenna Input . . . . . mounted on P.W. Board PC00
4. Tone Amp . . mounted on P.W. Board PE01
5. Tone Control . . . . . mounted on P.W. Board PF01
6. Tape Pre Amp . . . . . mounted on P.W. Board PJ00
7. Fuse . . . . . mounted on P.W. Board PP00
8. Volume/Switches . . . . . mounted on P.W. Board PS00
9. ISS . . . . . mounted on P.W. Board PS50
10. Rotary Switch . . . . . mounted on P.W. Board PT01
11. Speaker Switch . . . . . mounted on P.W. Board PU00
12. LED . . . . . mounted on P.W. Board PY00
13. Rec. LED . . mounted on P.W. Board PY50

2. TEST EQUIPMENT REQUIRED FOR SERVICING

For measuring or checking the Model 4025/MCR425, the following instruments and materials are necessary.

- AM/FM Signal Generator
- VTVM (AC/DC)
- Audio Oscillator (af OSC)
- Attenuator (600 Ω)
- Oscilloscope
- Bandpass Filter (1 kHz)
- IEC A-Curve Filter
- Wow and Flutter Meter
- Torque Meter (Cassette Type)
- Digital Frequency Counter
- Distortion Meter
- Blank Tapes (Completely erased with bulk eraser)
  TDK AC-211 (Normal)
  TDK AC-511 (CrO_2)
  SONY CS-30 (Fe-Cr)

NOTE: If any doubt is noted in a measured value, use new tape.

- Test Tapes (New Tape)
  MTT-111 Wow and Flutter Tape Speed
  MTT-112 Measurement of Output Level Signal-to-Noise Ratio
  MTT-150 Adjustment of Output Level
  MTT-116U Frequency Response (for Normal)
  MTT-116K Frequency Response (for CrO_2, Fe-Cr)
  MTT-121 Cross Talk
  MTT-141 Channel Separation

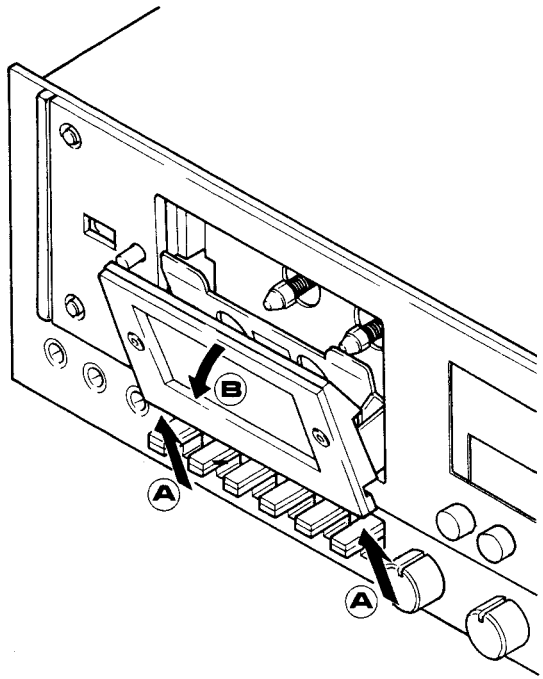
BIAS and EQ switches setting in accordance with tape used are as follows:

Tape	Switch Position	
	BIAS Switch	EQ Switch
AC-211	■	■
AC-511	▬	▬
CS-30	■	▬

3. TAPE MECHANICAL DISASSEMBLY

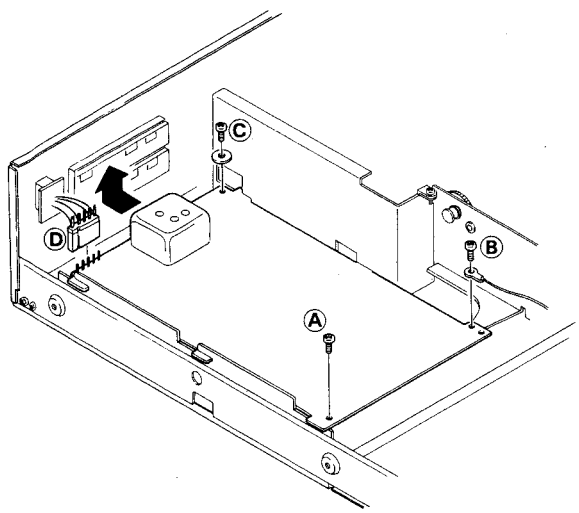
3.1 REMOVING THE CASSETTE CASE ESCUTCHEON

Push the cassette case escutcheon at the two positions upward in the arrow A direction. As it will be detached, take it out in the arrow B direction.



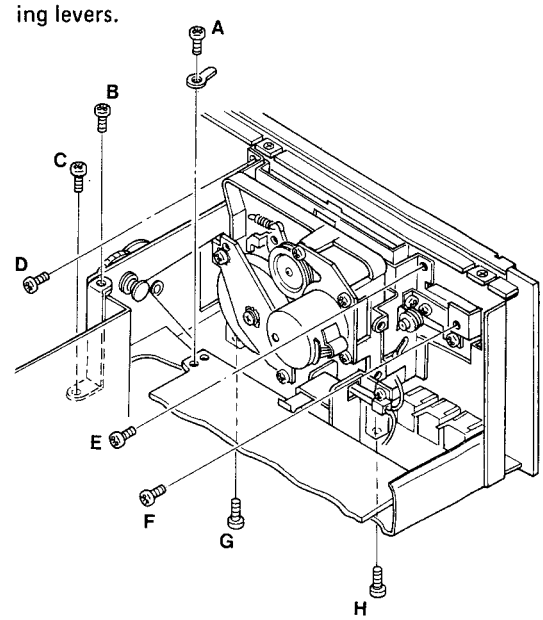
3.2 REMOVING THE TAPE PRE AMP P.W. BOARD

Remove the three screws A, B and C. Unplug the connector D. Move the P.W. Board in the arrow direction and pull up it toward as shown.



3.3 REMOVING THE TAPE MECHANICAL CHASSIS

Remove the five screws A, B, C, D, and E holding the mechanical chassis. Remove the record lever spring assembly F. Then, draw the chassis out with taking care of the tape counter and operating levers.

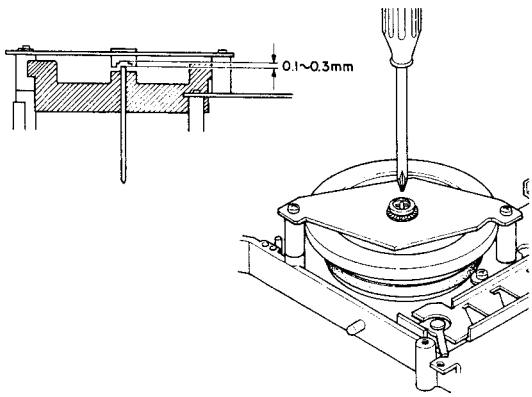


4. ADJUSTMENT PROCEDURES

4.1 MECHANICAL ADJUSTMENTS

4.1.1 Adjusting the Flywheel Thrust

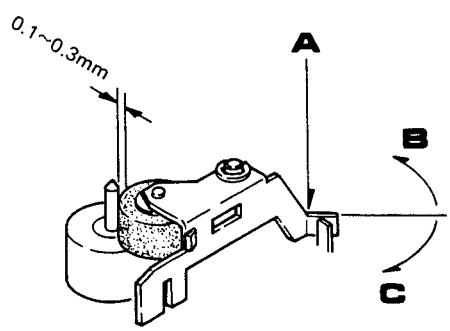
Adjust the thrust screw at the flywheel bracket until the clearance between the capstan tail end and thrust bearing is 0.1 to 0.3 mm as shown, using a phillips screw driver. For adjusting, feel of axial dropping of the flywheel for proper clearance as this cannot been seen through. Then paint the screw to lock.



4.1.2 Adjusting Pause Timing

Set the unit in the play mode of operation. Then, adjust the bend angle of the pinch roller bracket arm (point A in the line drawing) until the clearance between the pinch roller and capstan is 0.1 to 0.3 mm at the time when the take-up reel is stopped by slowly pressing the PAUSE push-button down.

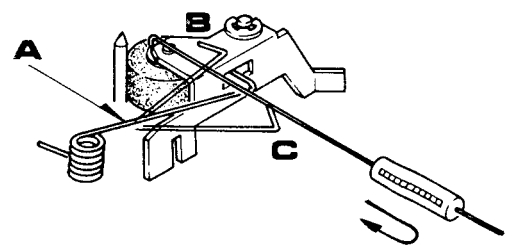
NOTE: **To widen the clearance, make the bend angle smaller (in the direction C). To make the clearance narrower, widen the bend angle (in the direction B).**



4.1.3 Adjusting the Pinch Roller Pressure

Measure the pressure of the pinch roller using a gauge as shown. For measurement, draw the pinch roller in the arrow direction in which it is detached from the capstan shaft and gradually return it toward the capstan. Read the gauge at the time when the pinch roller starts turning. The standard pressure is 300±50 g. If the pressure is out of the range, bend the pinch roller spring around the point A in the direction B or C.

NOTE: **To make the pressure strong, bend in the direction B. To make the pressure weak, bend in the direction C.**



4.1.4 Adjusting the Play Timing

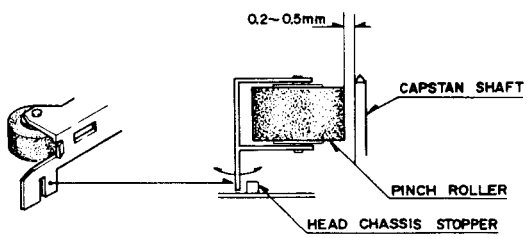
It is normal that when the PLAY pushbutton is depressed, the take-up reel table turns first, then the pinch roller is rotated. The reel table and pinch roller must not start turning at the same time.

NOTE: **Make certain that such a subsequent operation is made irrespective of locking state is depressed slowly without loading the tape.**

(1) Checking for adjustment
Check whether or not the clearance between the pinch roller and capstan is 0.2 to 0.5 mm when the take-up reel table starts turning with the PLAY pushbutton depressed slowly.

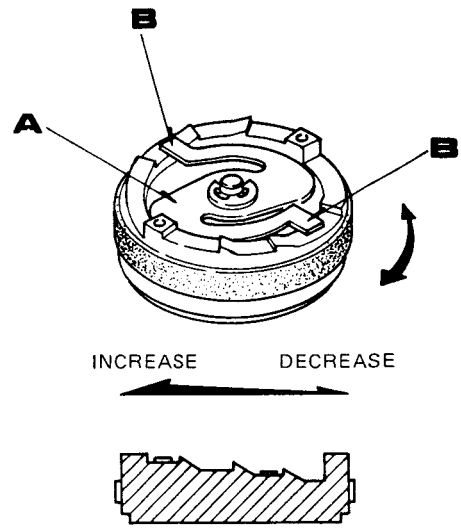
(2) Adjustment
Bend the pinch roller bracket at the point that touches the head chassis stopper. In the line drawing, bending left reduces the clearance between the capstan and pinch roller.

NOTE: **Make certain that the pinch roller bracket does not leave touching the head chassis stopper in the play mode of operation as a result of excessive bending.**



4.1.6 Adjusting the Fast Forward and Rewind Torque

The fast forward and rewind idler has a torque adjust plate spring (part A in the line drawing), which has two pawls (part B) at its ends. Set the pawls in proper one of the three steps. To make the torque high, set the pawls in the shallowest step. For lower torque, set in the deepest step.

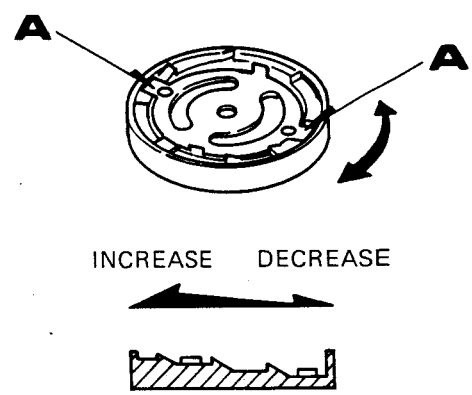


4.1.5 Adjusting the Play Torque

Put the two pawls of the circular plate spring on proper stepped position of the reel rest. The adjustable torque range is 40 to 70 g·cm.

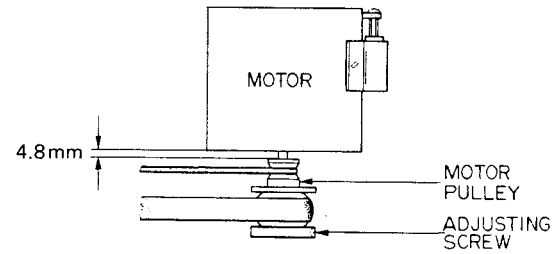
To make the torque high, put the pawls on a shallow step. For lower torque, put them on a deeper step.

- **Checking the take-up clutch for sliding**
  Make certain that the flywheel rotates freely when the reel table is locked. The flywheel that revolves irregularly or stops is not acceptable.



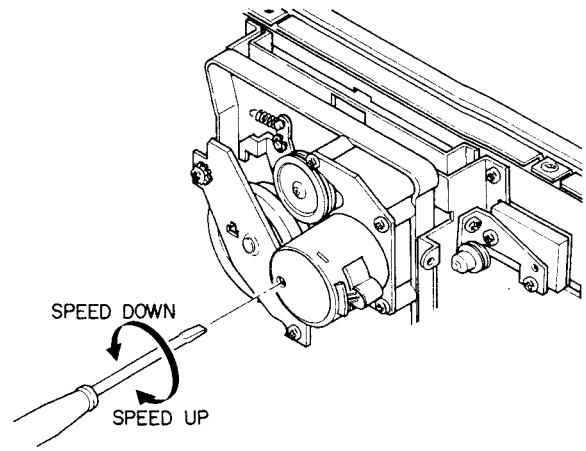
4.1.7 Positioning the Motor Pulley

Loosen the set screw and adjust the motor pulley position until the clearance between the pulley and motor is 4.8 mm as shown. Tighten the set screw.



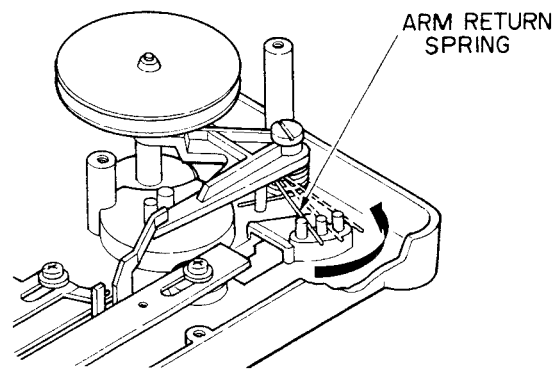
4.1.8 Adjusting the Tape Speed

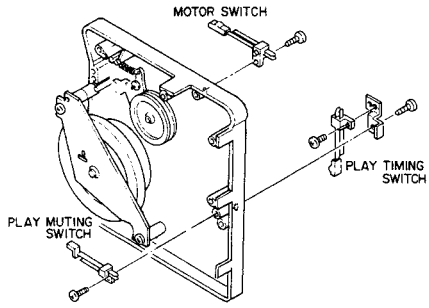
Adjust the semi-fixed resistor inside the motor until the tape speed is 2985±5Hz, using a screw driver or flat blade screw driver.



4.1.9 Adjusting the Rewind Idler Side Pressure

Make certain that in the rewind mode of operation, the rewind idler does not slip on the supply reel table when this is held by hand. If it slips, change the hanging position of the rewind idler arm return spring on the chassis in the arrow direction step by step until it does not slip.

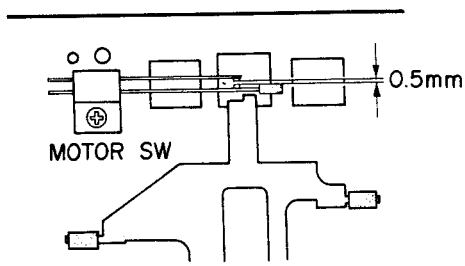




4.1.10 Positioning the Switches

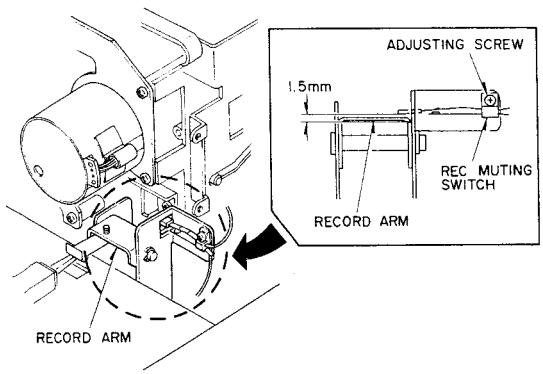
(1) Motor switch

Turn the motor switch in the arrow direction until it is screwed tightly. Make certain that the contact gap is wider than 0.5 mm.



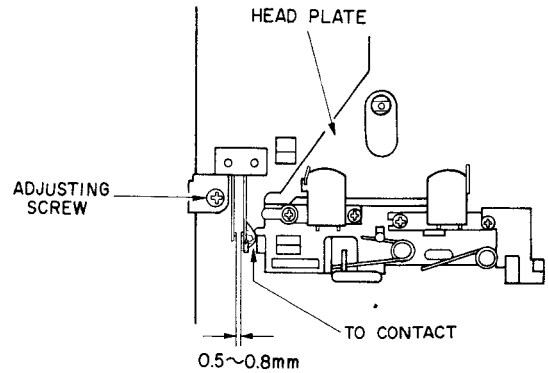
(2) Record muting switch

In the stop state, loosen the screw holding the record muting switch and position this so that the clearance between its end mold tip and mounting bracket may be 6 mm. Tighten the screw. Make certain that when the record lever is pressed in, the record muting switch contact A is made close and the contact B is broken out securely.



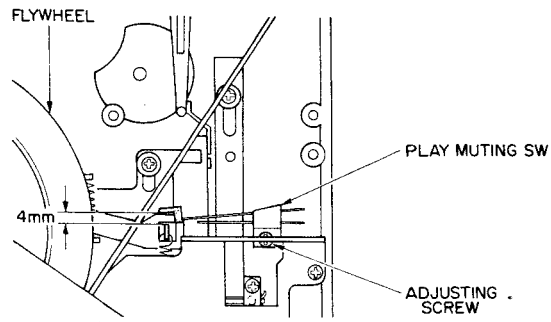
(3) Start muting switch

In the stop state, loosen the screw holding the start muting switch and position this so that its contact clearance may be 0.5 to 0.8 mm with leaving the contact tip in contact with the head plate. Tighten the screw.



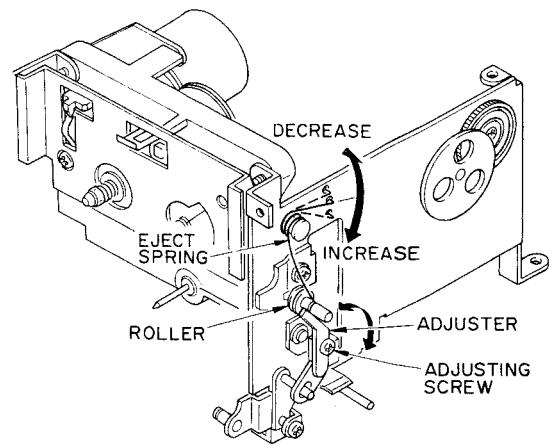
(4) Play muting switch

In the stop state, loosen the screw holding the play muting switch and position this so that the clearance between its end tip and play lever may be 4 mm.



4.1.11 Setting the Eject Spring

Hang the eject spring at proper one of the three holes so that the cassette lid can be opened well. After setting, bond the spring to lock.



4.1.12 Adjusting the Interlocking Mechanism

IMPORTANT: In aligning the mechanical assembly, place it alone.

1. Lay the mechanical assembly by its side as shown in Figure 1.
2. Loosen the screw E holding the adjuster C a little until this moves freely.
3. Adjust the interlock cam B by finger until the clearance between the interlock cam B and the lock cam release arm A is 0.1 to 0.5 mm.
4. Keeping this clearance, tighten the screw E to fix the adjuster C, which will be in light contact with the cassette guide shaft D.
5. After completion of Steps 1 through 4, perform checking by proceeding as follows.
   a. Open the cassette door by pressing the STOP/EJECT pushbutton.
   b. Close the cassette door slowly by hand. Make certain that the PLAY pushbutton will not move in the range of the position A to B in Figure 2 while the cassette door is closed.
   NOTE: The cassette door is locked at the position C.

CAUTION

If the PLAY pushbutton is locked in that range, replace the following parts as these may be defective.

REF. DESIG.	PART NO	DESCRIPTION
811N	438305402-0	Cam
L	438005140-0	Guide ass'y

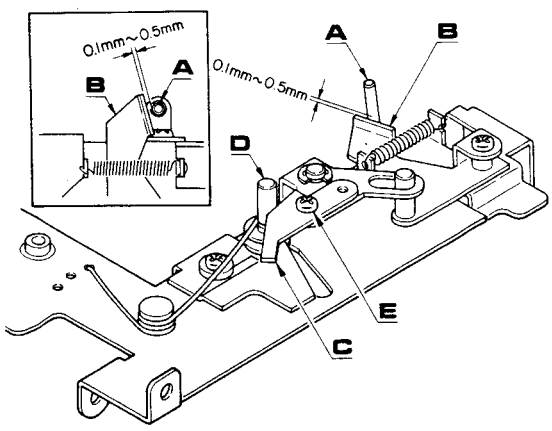


Fig. 1

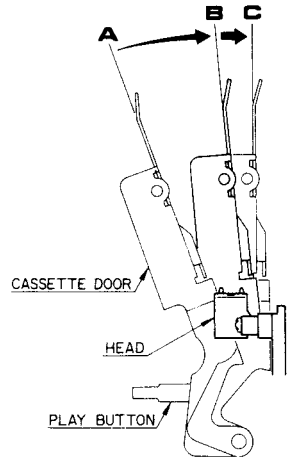


Fig. 2

4.2 ELECTRICAL ADJUSTMENTS AND MEASUREMENTS

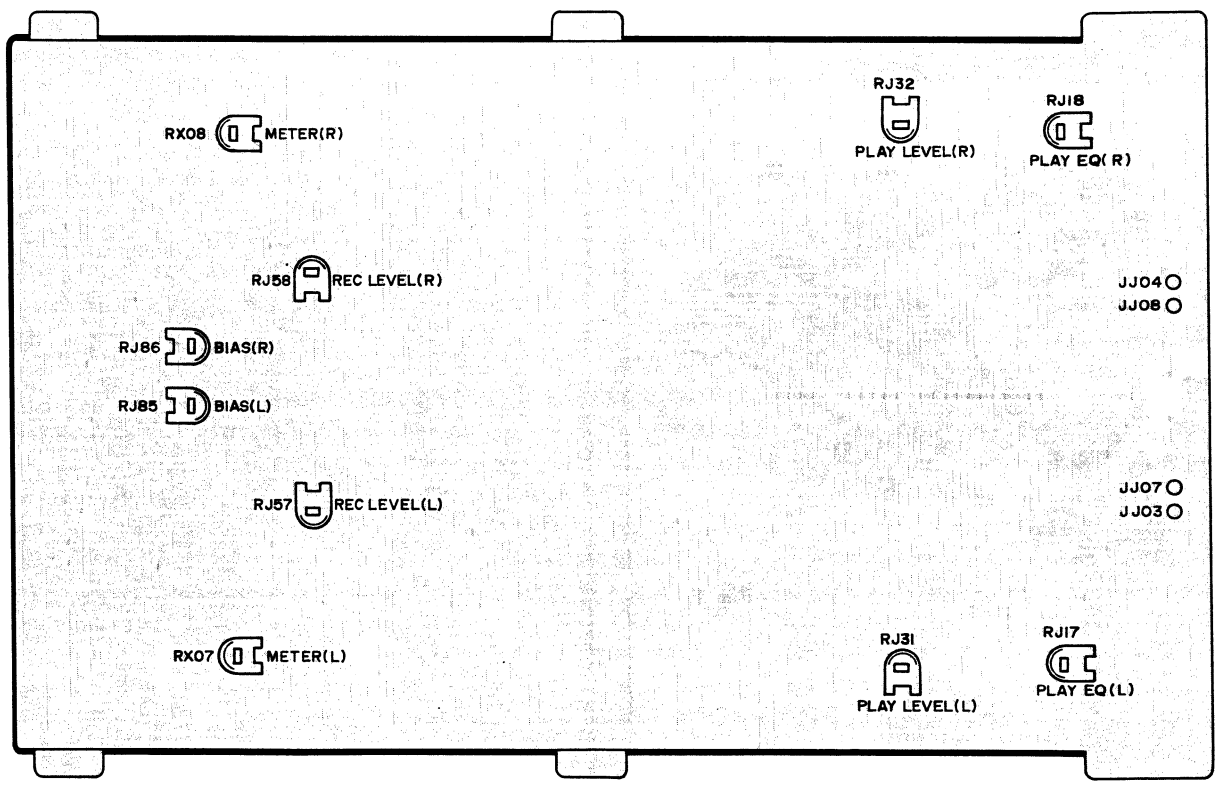
Precautions before Adjustment and Measurement

1. Before playing the test tape back, thoroughly demagnetize the heads, capstan and similar metal parts using an eraser as the test tape-recorded tone is easily erased.
2. Do not place the test tape on any measuring instrument.
3. Do not put the test tape near a place where the eraser is used.
4. Method of Demagnetization:—Turn the eraser power switch on at a remote position far away from the heads. Bring the eraser close to the heads, capstan and other parts to be demagnetized, and move it up and down four or five times to demagnetize. Slowly separate the eraser far away from the parts, and turn the power switch off.
5. Do not use any magnetized adjusting tool. When using it, demagnetize it from time to time in the course of each adjustment.
6. Do not turn semi-fixed resistor more than needed.
7. If measuring the tape speed wow and flutter, operate the tape deck in the normal operating condition.
8. Do not apply locking bond excessively.

Definitions

1. The "normal playback state" is an operating state of the tape deck which plays back the MTT-150 test tape and is adjusted so as to produce a 580mV output at the Pre Amp Board (PJ00) JJ41, JJ42 with the load assuming the measuring instrument input impedance of greater than 100kΩ and with the TAPE selector switch set at the NORMAL position.

2. The "normal recording state" is an operating state of the tape deck which records a 1kHz signal to a specified recording level for which the recording level control is adjusted with the 1kHz signal applied at a specified input level to the MIC input terminal.
   In the normal recording state, therefore, this tape deck is set up with the level control to the state that the level meter pointer may deflect to the 100% mark as 0VU with a 1kHz, 1mV input signal applied.



1. Head Azimuth Adjustment

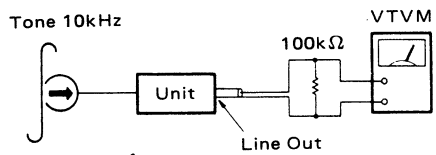
SET UP

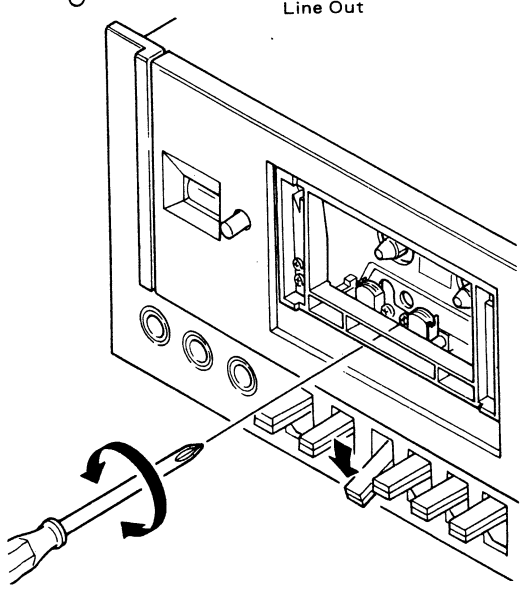
1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch position:- NORMAL.
3. Load:- Measuring instrument input impedance.
4. Output terminal used:- LINE OUT.
5. Test tape used:- MTT-116U (31.5Hz to 14kHz).

PROCEDURES

1. Play the 10kHz portion of the test tape MTT-116U back. Adjust the head azimuth adjusting screw for maximum VTVM read.
2. If the peak output reads of the right and left channels are different, set the screws to obtain the mechanical center between the peaks.
3. After adjustment, lock the screw with bond.

Mode: playback





CAUTION

After adjustment, repeat the playback and stop setting a few times to make certain of no head azimuth deviation.

2. Tape Speed Adjustment

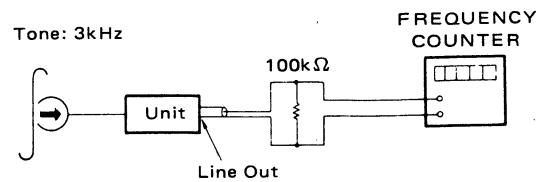
SET UP

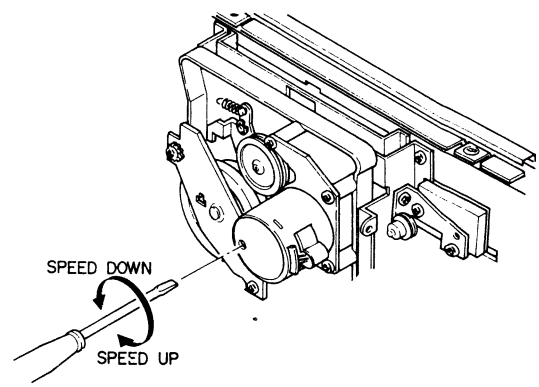
1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. Output terminal:- LINE OUT.
3. Test tape used:- MTT-111.
4. Unit position:- Horizontal.

PROCEDURES

1. Play the mid portion of the test tape MTT—111 back. Adjust the tape speed adjusting semi-fixed resistor for 2990 to 3010Hz counter indication.

Mode: playback





CAUTIONS

1. For adjustment, the tape deck should be set up in the normal operating condition.
2. Do not adjust the semi-fixed resistor more turns than needed.
3. Do not proceed with adjustment after the tape deck temperature has changed.
4. If a strong shock or similar vibration is applied to the tape deck after adjustment, make certain that the measured tape speed had not changed.
5. If the tape speed deviation occurs, perform the adjustment again.
6. Be careful that the counter may indicate a wrong value because of too low counter input level.
7. Before adjustment, allow for 30 seconds or more after depressing of the PLAY push-button.

3. Playback Equalizer Adjustment

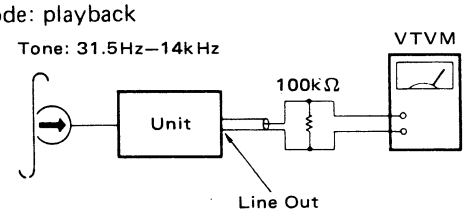
SET UP

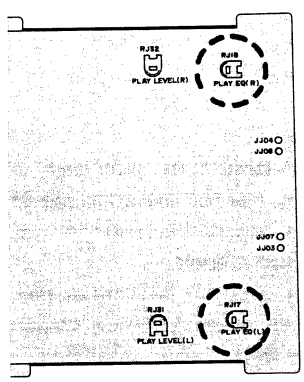
1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch position:- NORMAL.
3. Load:- Measuring instrument input impedance.
4. output terminal:- LINE OUT.
5. Test tape used:- MTT-116U (31.5Hz to 14kHz).

PROCEDURES

1. Play the test tape MTT-116U. Let the 315Hz signal level be reference as 0dB.
2. Adjust RJ17 and RJ18 (2kΩ each) for 10 kHz frequency response of 0 to −1dB in reference to the 315Hz signal level (0dB).
3. Proceed both for the right and left channels in the same manner.
4. Note that clockwise turning of RJ17 and RJ18 will increase the 10kHz signal output level.

Mode: playback





4. Playback Output Adjustment

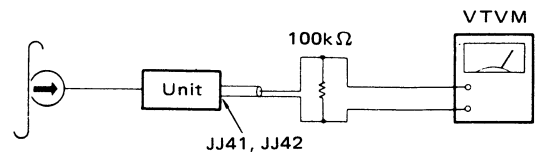
SET UP

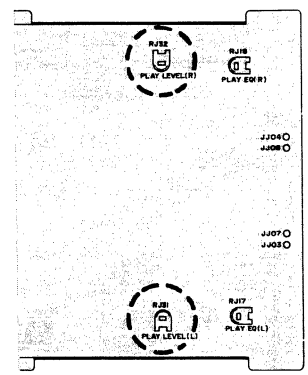
1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch position:- NORMAL.
3. Load:- Measuring instrument input impedance.
4. Output terminal:- Pre Amp Board (PJ00) JJ41 and JJ42.
5. Test tape used:- MTT-150.

PROCEDURES

1. Play the test tape MTT-150 back. Adjust RJ31 and RJ32 (50kΩ each) for 580mV playback output level.
2. Proceed both for the right and left channels in the same manner.

Mode: playback





CAUTION

1. This adjustment should be performed after the one for the playback equalizer. If the playback equalizer is adjusted after the playback output adjustment, the playback output should be readjusted.

5. VU Meter Adjustment

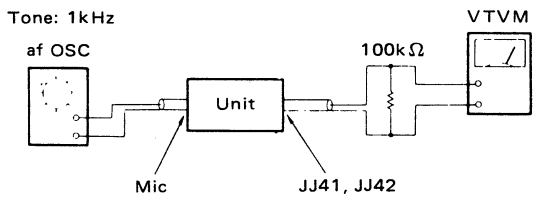
SET UP

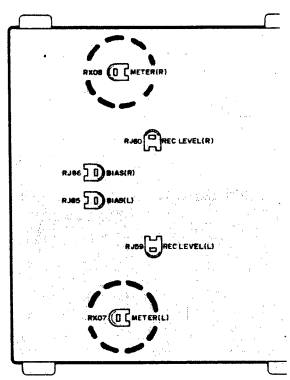
1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch position:- NORMAL.
3. Load:- Measuring instrument input impedance.
4. Output terminal used:- Pre Amp Board (PJ00) JJ41 and JJ42.
5. Input terminal:- MIC.

PROCEDURES

1. Connect a 1kHz, –60dBV input signal to the MIC terminal. Set up the tape deck for the recording mode of operation.
2. Adjust the REC control for 580mV output level at MONI. OUT of the Pre Amp Board (PJ00) JJ41 and JJ42.
3. Adjust RX07 and RX08 (2kΩ each) until the VU meter pointer deflects to the DOLBY mark (DD) on the VU meter.

Mode: record





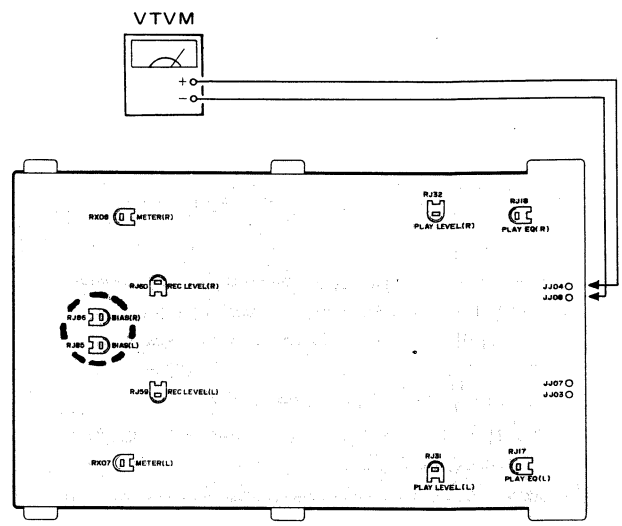
6. Recording Bias Current Adjustment (Temporal)

SET UP

1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch:- NORMAL.

PROCEDURES

1. Set up the tape deck in the recording mode of operation. Connect the VTVM to JJ03, JJ07 (Lch) and JJ04, JJ08 (Rch). Adjust the semifixed resistor RJ85 and RJ86 for 3.5mV VTVM read.
2. Proceed both for the right and left channels in the same manner.
3. For the tape deck equipped with the TAPE selector switch, make certain that the VTVM reads approximately 4.5mV with it set to the CrO_2 position.



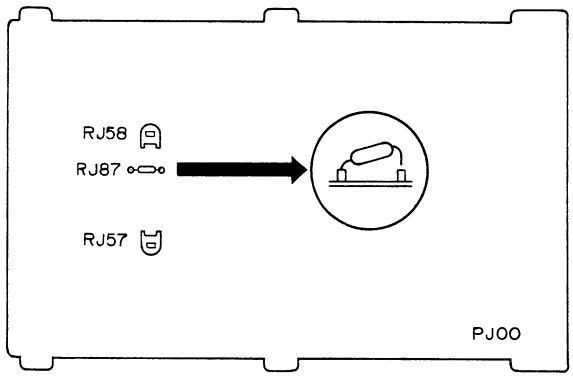
7. Recording Current Adjustment (Temporal)

SET UP

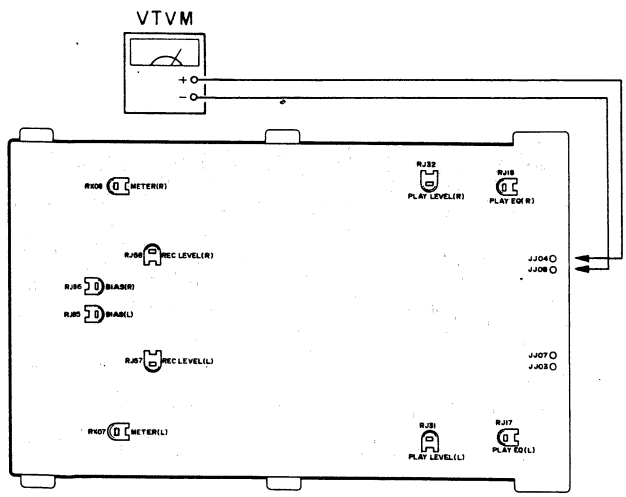
1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. Input signal:- 1kHz, −60dB signal.
3. TAPE selector switch positions:- NORMAL.
4. Load:- Measuring instrument input impedance.

PROCEDURES

1. Stop the recording bias current oscillation by disconnecting the bias circuit +B resistor (RJ87).



2. Set up the tape deck to the normal recording state. Connect the VTVM to JJ03, JJ07 (L ch) and JJ04, JJ08 (R ch). Adjust the semifixed resistors RJ57 and RJ58 until the VTVM reads 0.5mV, respectively.
3. Proceed both for the right and left channels in the same manner.
4. After adjustment, release the recording bias current.



8. Reocrd-Playback Frequency Response Adjustment

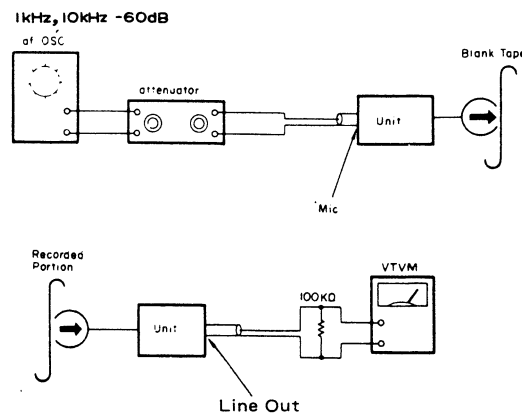
SET UP

1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. Input signal:- 1kHz, −60dB with −20dB referenced as 0VU.
3. TAPE selector switch:- Fe-Cr.
4. Output terminal:- LINE OUT.
5. Load:- Measuring instrument input impedance.
6. Test tape used:- SONY CS-30.

PROCEDURES

1. Connect the input signal to the MIC terminal. Set up the tape deck to the normal recording state.
2. In turn, reduce the input level by 20dB with the use of the attenuator. Record the 1 and 10kHz tones.
3. Play the 1kHz, 20dB-down recorded tone back as 0dB. Adjust the recording bias current until the 10kHz response is within ±1dB as referenced to the 1kHz, 0dB response.
4. Proceed both for the right and left channels in the same manner.
5. If the recording bias current is reduced in the above adjustment, be sure to measure the distortion.

Mode: record



9. Record-Playback Output Level Adjustment

SET UP

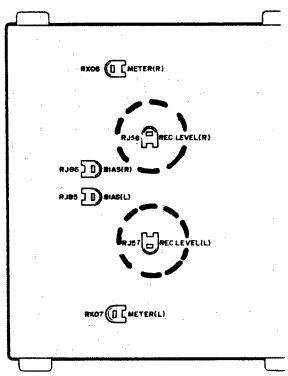
1. Power voltage:- 50 or 60Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1kHz, −60dB signal.
3. TAPE selector switch position:- NORMAL.
4. Output terminal:- Pre Amp Board (PJ00) JJ41 and JJ42.
5. Load:- Measuring instrument input impedance.
6. Test tape used:- TDK AC-211.

PROCEDURES

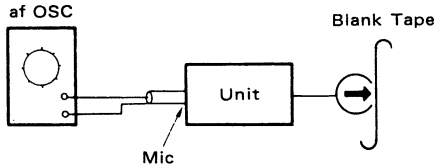
1. Connect the 1kHz, −60dB input signal to the MIC terminal. Set up the tape deck to the normal recording state.
2. Adjust the REC LEVEL semi-fixed resistors RJ57 and RJ58 until the recorded signal is reproduced at 460mV ±0.5dB.

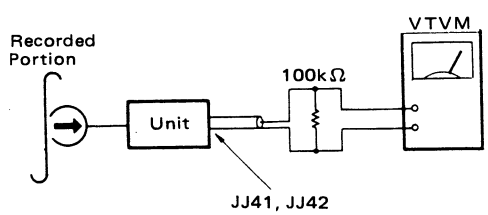
CAUTION

1. If the bias current is changed, be sure to perform the above adjustment.



Mode: record
1kHz, −60dB
af OSC





4.3 TUNER ALIGNMENT PROCEDURES

* A dummy resistor of 47 kohms must be connected across the tape output terminals before alignment.

4.3.1 FM Alignment Procedures

(Selector switch in the "FM" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set Dial Pointer to:	Adjust:
FM IF ALIGNMENT					
1	Sweep generator to point Ⓑ through 5pF capacitor	10.7 MHz market at 10.6, 10.7 and 10.8 MHz	Oscilloscope to point Ⓒ	Quiet point on band.	L104 for maximum and symmetric response.
2			Oscilloscope to point Ⓓ		L201 for straight and symmetric "S" curve response.
3	Repeat steps 1 and 2.				
FM RF ALIGNMENT					
1	RF generator to FM antenna terminals Ⓐ through matching network (300 ohms, balanced) Maintain RF level below limit.)	87.4 MHz	VTVM to L or R channel output (W002)	87.4 MHz with tuning gang closed.	L103 for maximum output.
2		100 MHz		109 MHz with tuning gang open.	C119 for maximum output.
3		90 MHz		90 MHz	L101, L102 for maximum output.
4		106 MHz		106 MHz	Ant. RF trimmer for maximum output.
5	Repeat steps 1 to 4.				
6	Check overall response curve and repeat above steps as necessary to obtain maximum sensitivity.				
7	No connection	No signal	DC VTVM 1-volt range to Ⓓ	–	L201 primary core (bottom) for "0" voltage reading.
8	RF generator 1 mV output to FM antenna terminals Ⓐ through matching network (300 ohms, balanced)	98 MHz	Distortion meter to Ⓓ	98 MHz	L201 secondary core (upper) for minimum distortion.
9			–		R232 so that signal strength meter M001 may read 85%.
MUTING CIRCUIT ALIGNMENT					
1	RF generator 12.5μV output to FM antenna terminals Ⓐ through matching network (300 ohms, balanced)	98 MHz	VTVM to R or L channel output (W002)	98 MHz	R233 for 12.5μV threshold level. (During the adjustment turn the muting pushswitch "ON").

4.3.2 Multiplex Alignment Procedures
(Selector switch in the "FM" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set Dial Pointer to:	Adjust:
1	RF generator to FM antenna terminals Ⓐ through matching network (300 ohms, balanced), with 1mV FM stereo simulator RF level and 100% modulation (pilot 9%)	No modulation	Frequency counter to point Ⓔ (J140)	98 MHz	R326 so that frequency counter may precisely read 19 kHz.
2		Stereo, left (1,000 Hz)	VTVM to right channel output (W002, White)		R316 for maximum output and same separation in both channels.
3		Stereo, right (1,000 Hz)	VTVM to left channel output terminal Ⓗ (J123) (W002, Red)		
4	Repeat steps 2 and 3.				

4.3.3 AM Alignment Procedures
(Selector switch in the "AM" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set Dial Pointer to:	Adjust:
AM IF ALIGNMENT					
1	No connection	No signal	–	–	R228 to that signal strength meter M001 may read 0.
2	Sweep generator to point Ⓕ	455 kHz marker	Oscilloscope to point Ⓖ (J141)	Quiet point on band.	L154 for maximum and symmetric response.
AM RF ALIGNMENT					
1	RF generator to AM antenna terminals through IHF dummy	515 kHz	VTVM to L or R channel output (W002)	515 kHz with tuning gang closed.	L153 for maximum output.
2		1,650 kHz		1,650 kHz with tuning gang open.	OSC. trimmer for maximum output.
3		600 kHz		600 kHz	L001 for maximum output.
4		1,400 kHz		1,400 kHz	Ant. trimmer for maximum output.
5	Repeat steps 1 to 4 as necessary to obtain maximum sensitivity.				

4.4 AUDIO ALIGNMENT PROCEDURES

(Selector switch in the "AUX" position)

	Signal Source Connection	Signal	Indicator Connection	Adjustment
Distortion meter used	AF oscillator to AUX jack	20 kHz	Distortion meter to SPK OUT terminals with 4Ω load.	Wait 2 min. after power has been on. Adjust R717 and R718 until distortion for 0.25W output is minimum. CAUTION: After adjustment, disconnect input signal, and make certain that current flowing from R741 to R744 is 10 to 30 mA.
Voltmeter used	–	–	DC voltmeter in 100 mV or 50 mV range to R741 (R743) and R742 (R744).	Adjust R717 and R718 until current is 10 mA.

5. VOLTAGE CONVERSION FOR EUROPEAN MODEL

The European version of the 4025/MCR425 is equipped with a universal power transformer that may be adjusted operate at 110 V, 120 V, 220 V, or 240 V AC at 50 to 60 Hz. To convert the unit to a different power source voltage, reposition conversion plug as illustrated in the drawing below.

CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

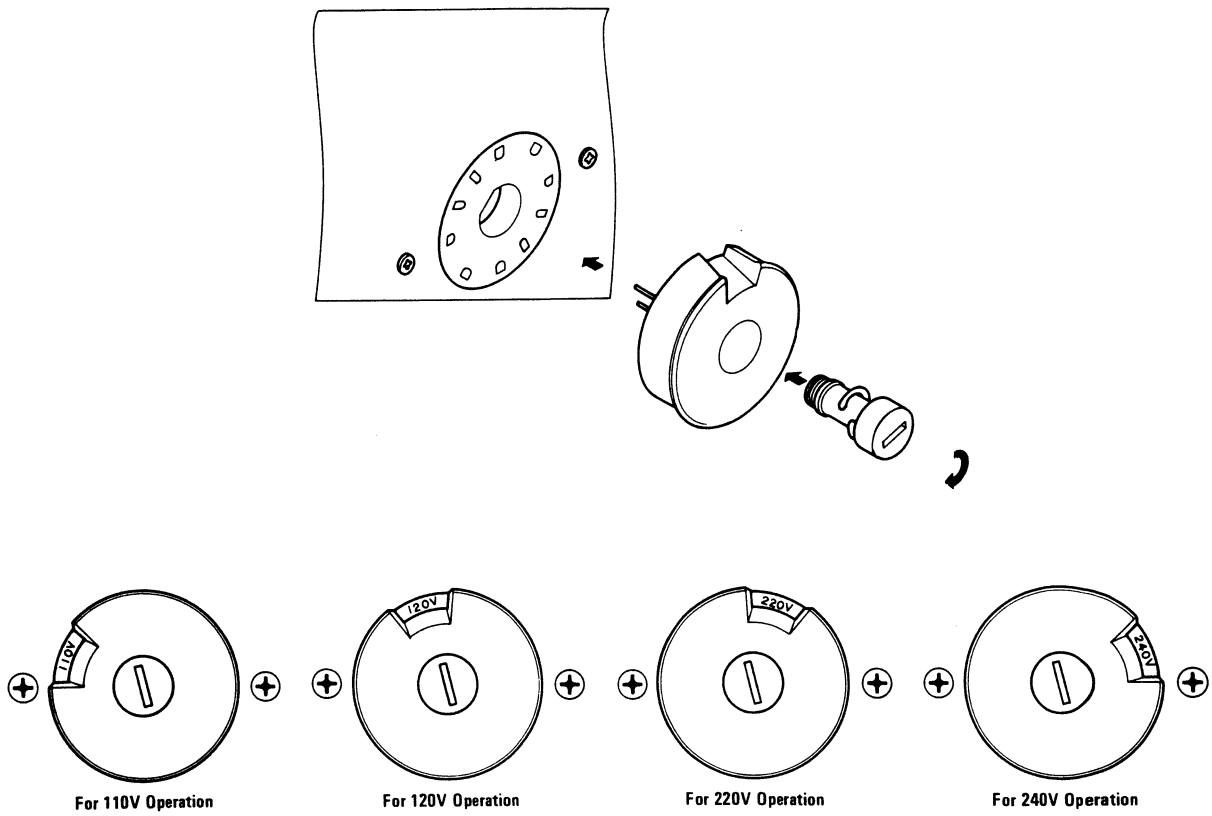


Figure 2. Voltage Conversion Chart

FTZ REGULATION

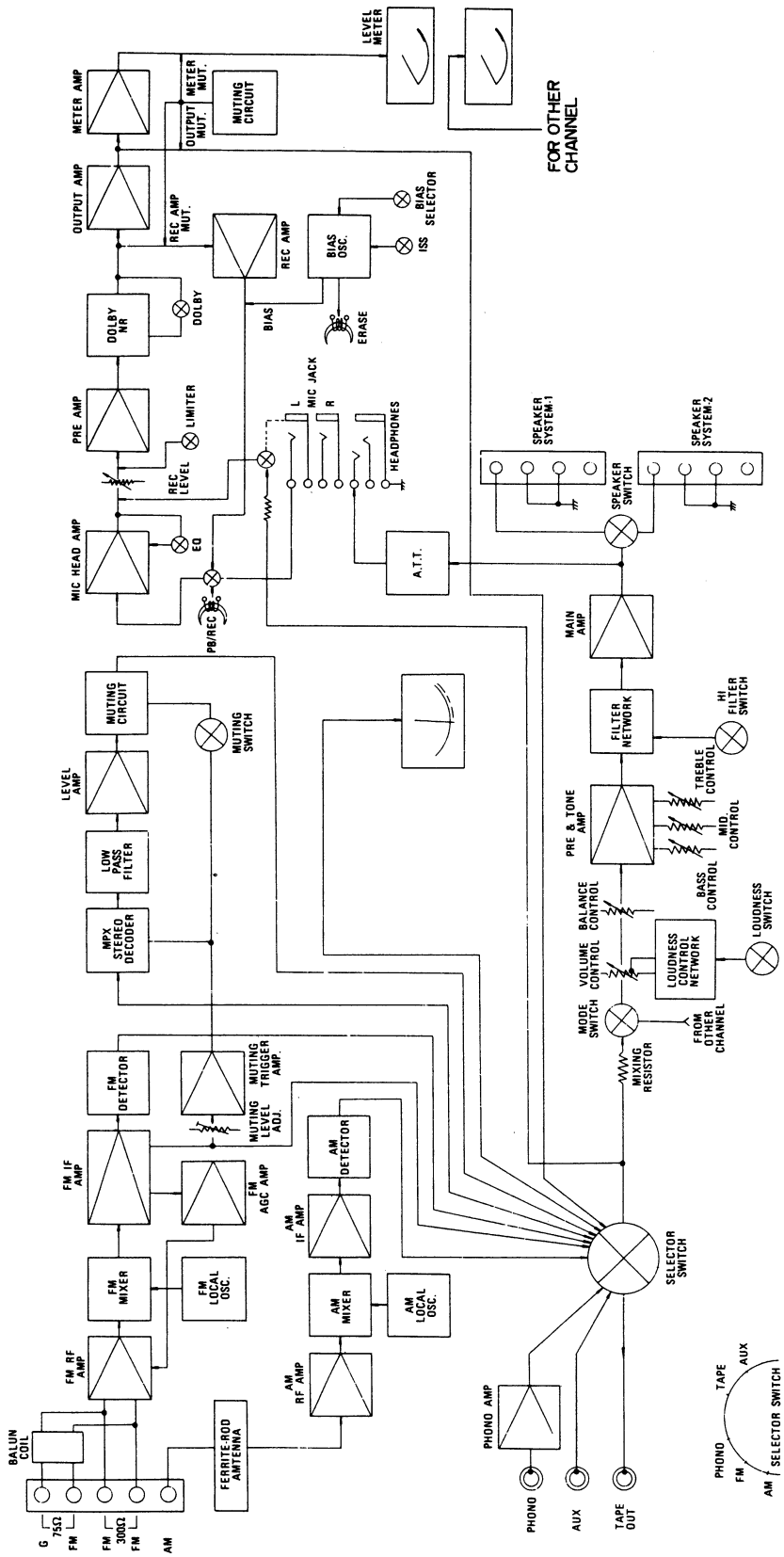
Instruction for the use in the range other than specified in FTZ codes.

Achtung für die Leute, die in dem Gebiet wohnen, wo die FTZ-Bestimmungen vorherrschend sind.

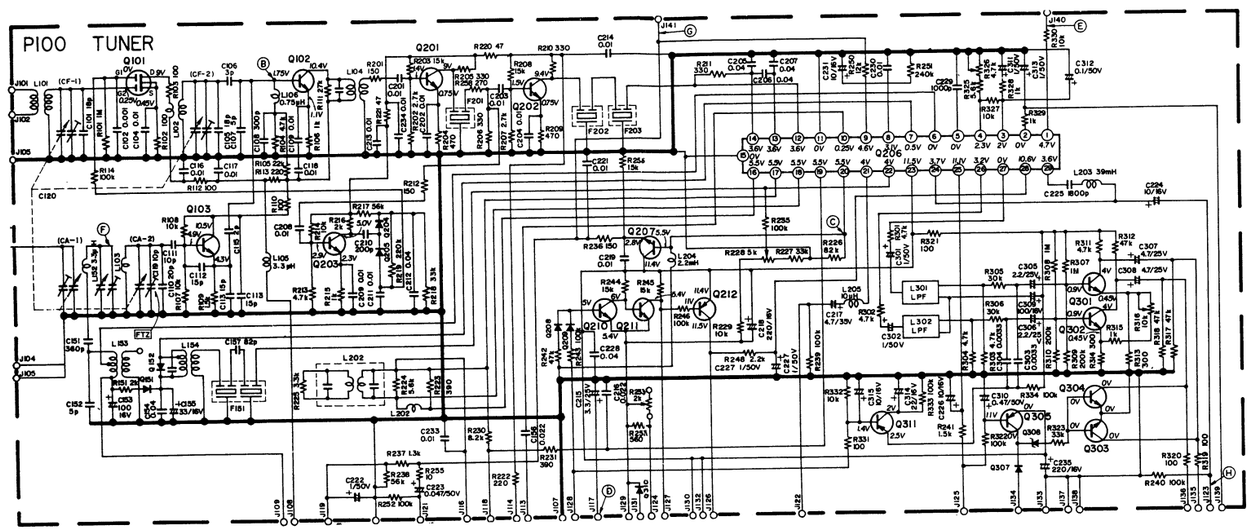
Sollte das Gerät auch für Frequenzen auszerhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfangebereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorspule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.

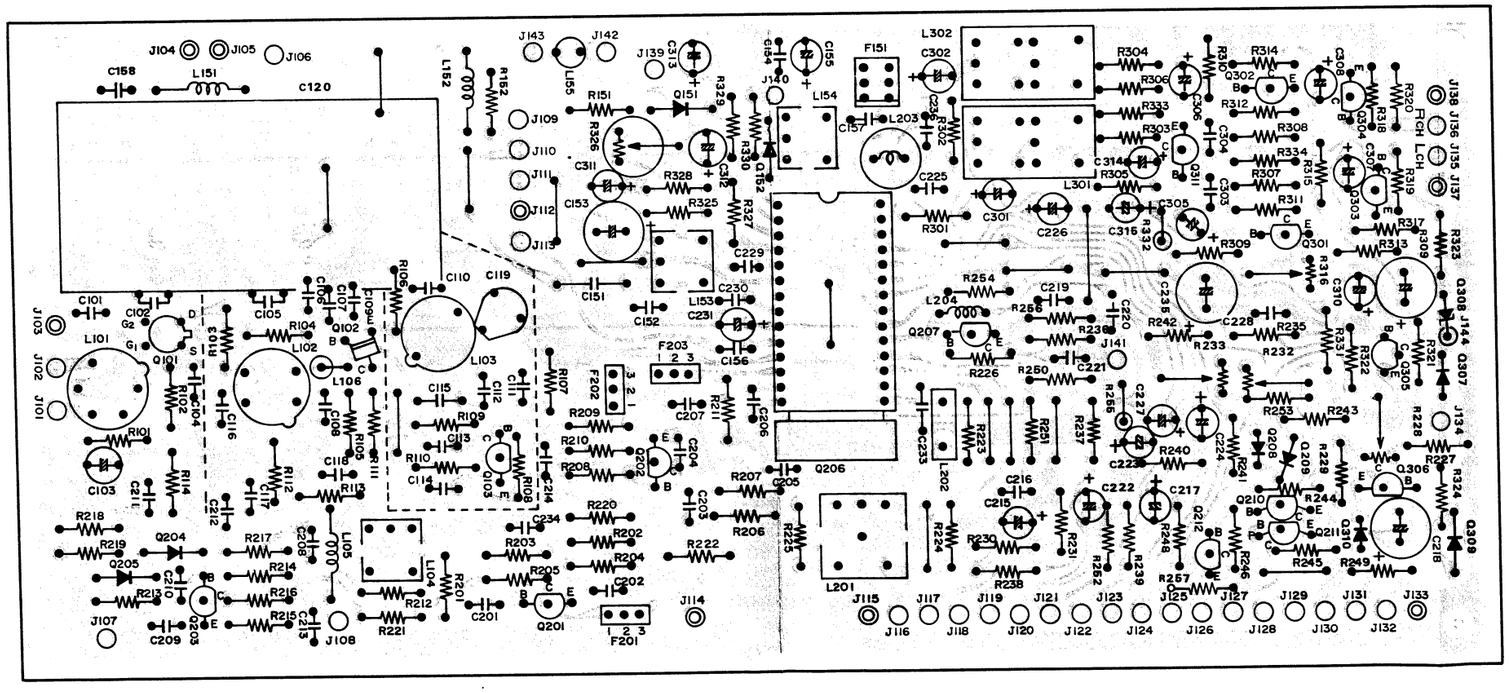
6. DIAGRAMS

6.1 BLOCK DIAGRAM



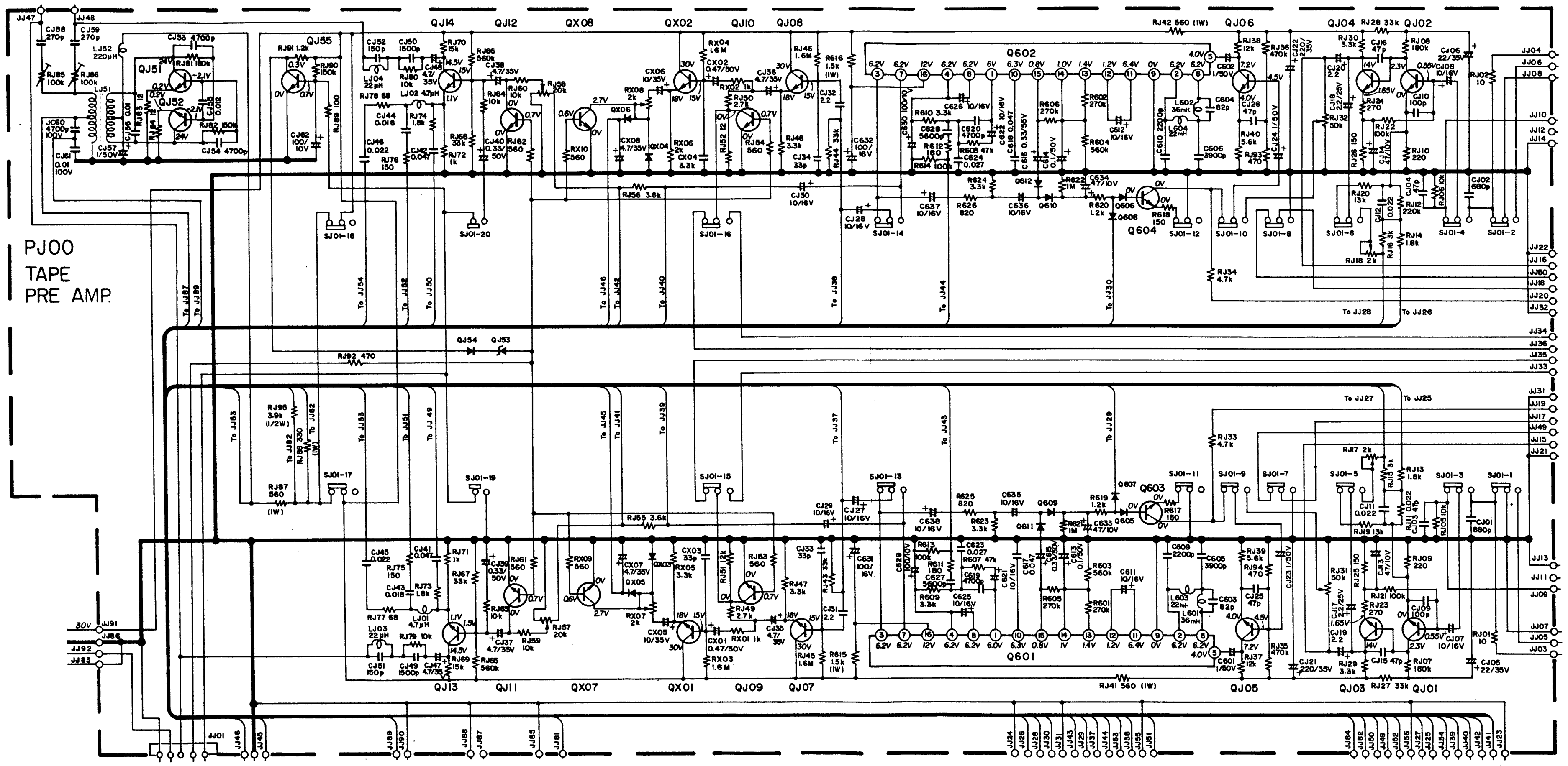
6.2 TUNER BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P100

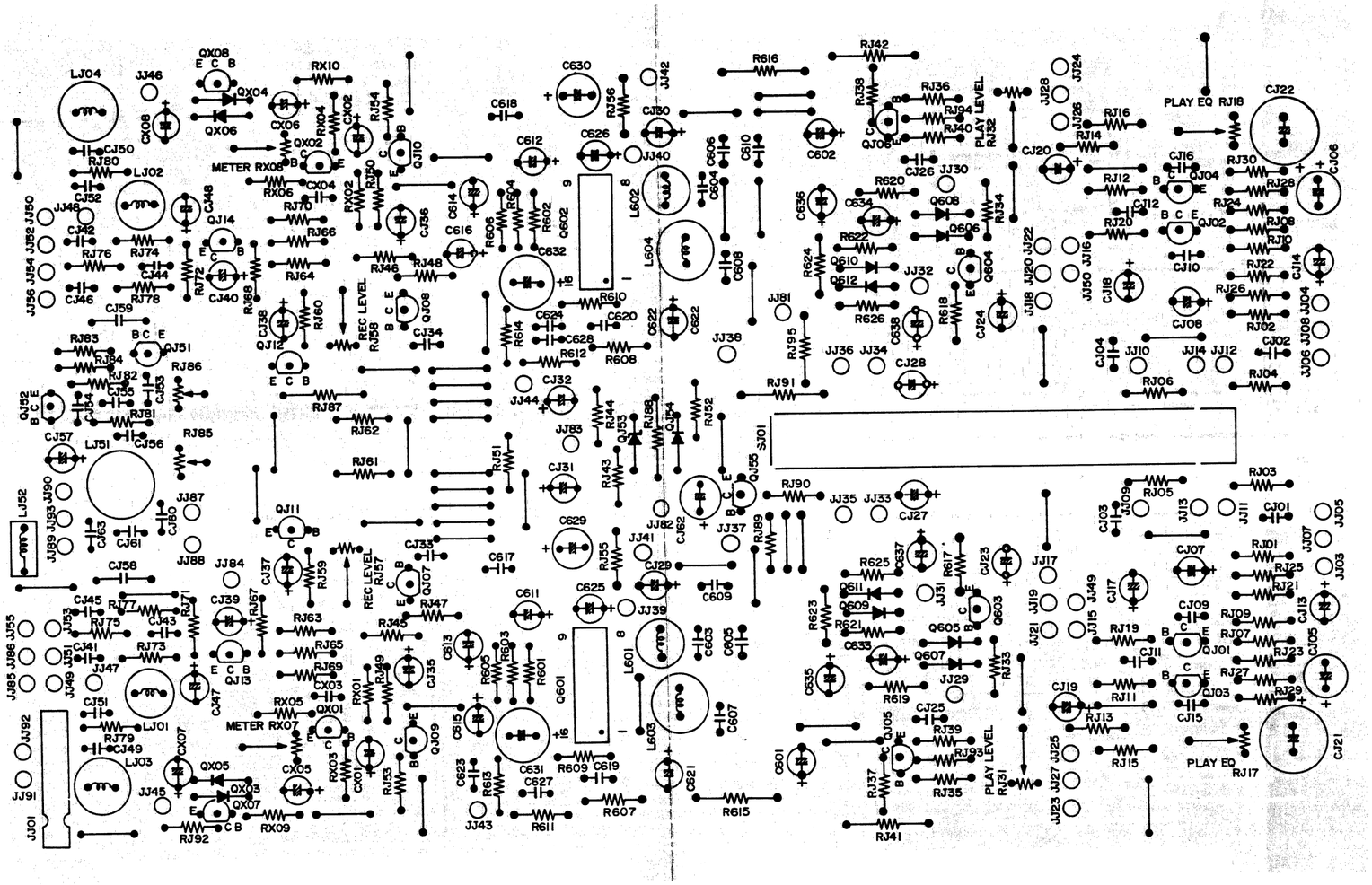




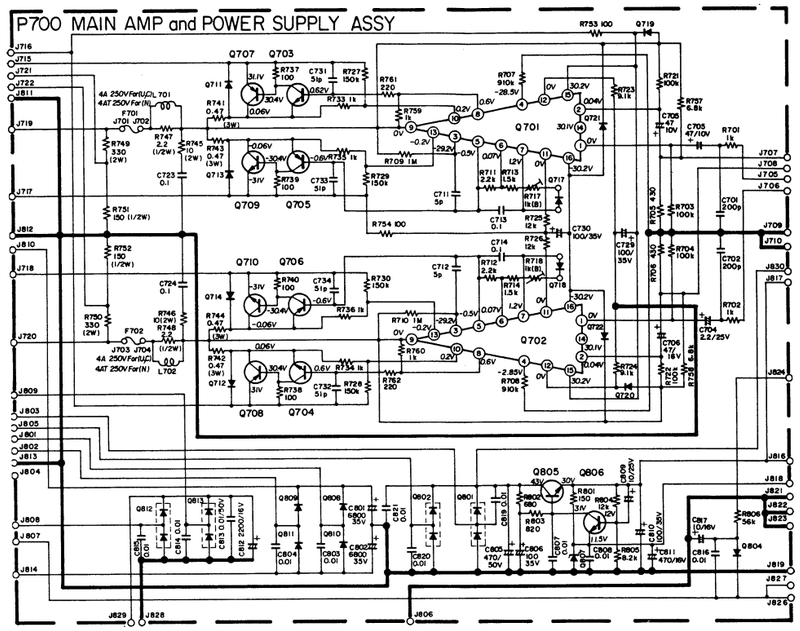
marantz

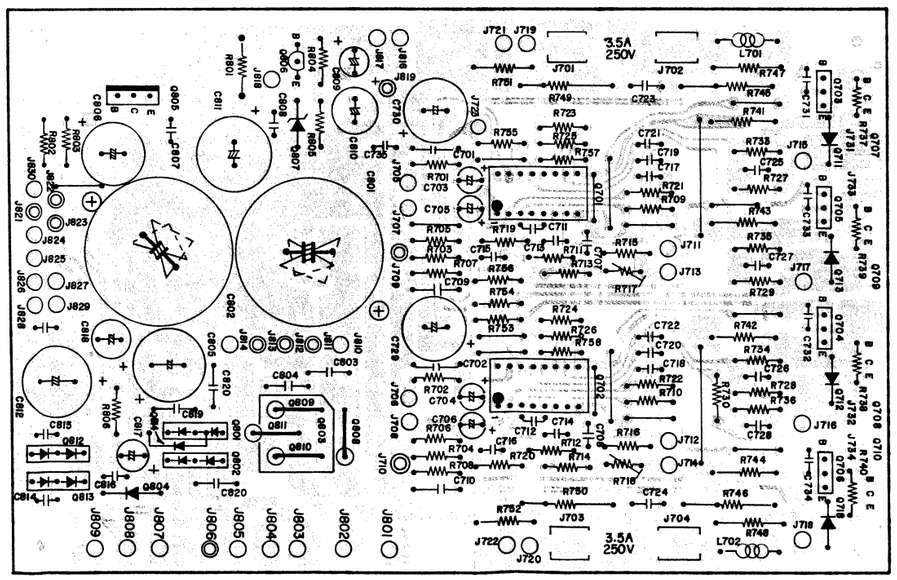
6.3 TAPE PRE AMP BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PJ00




PLAY EQ
PLAY LEVEL
REC LEVEL
METER RX06
METER RX07
PLAY EQ

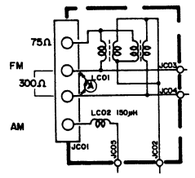
6.4 MAIN AMP/POWER SUPPLY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P700

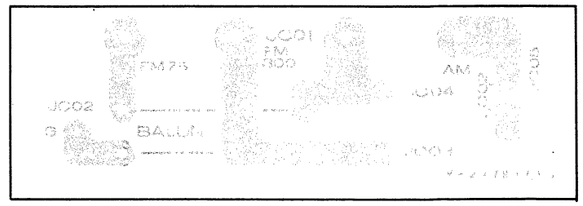




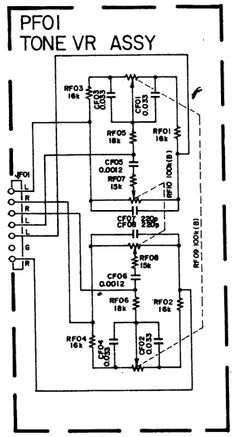
marantz

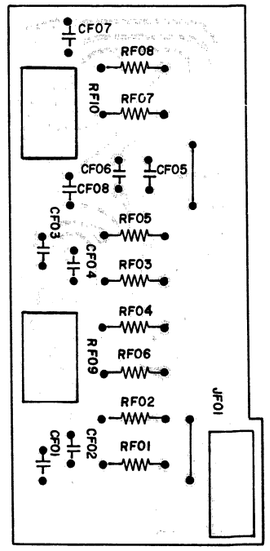
6.5 ANTENNA INPUT BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PC00



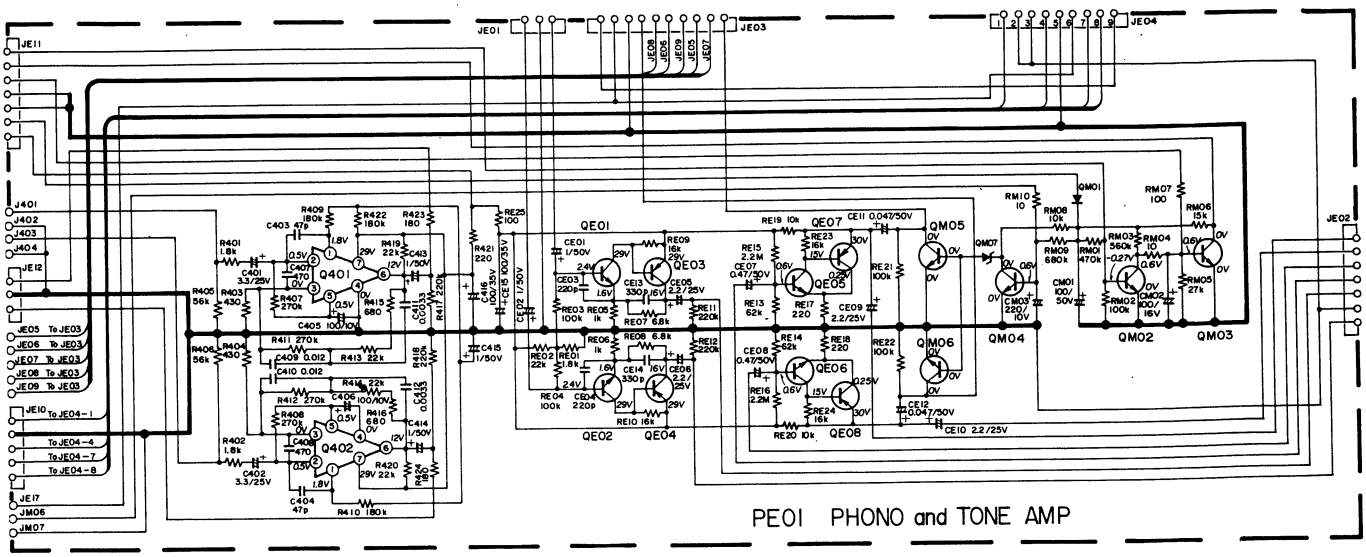


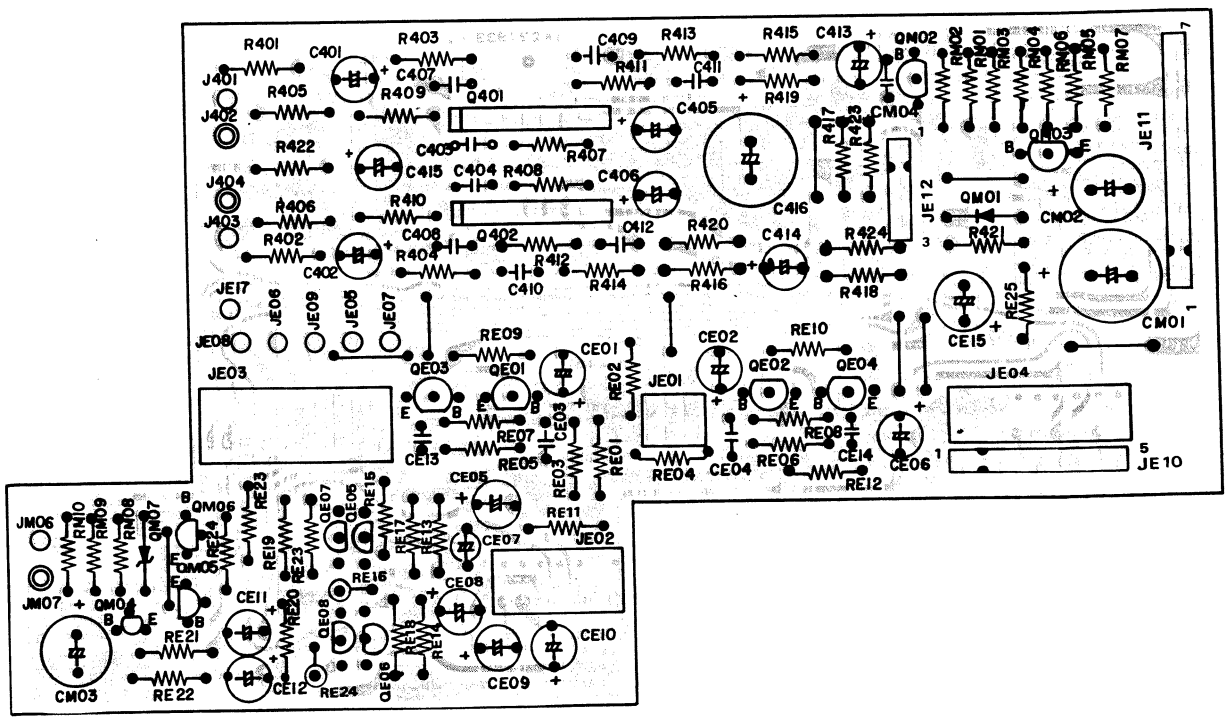
6.6 TONE CONTROL BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PF01



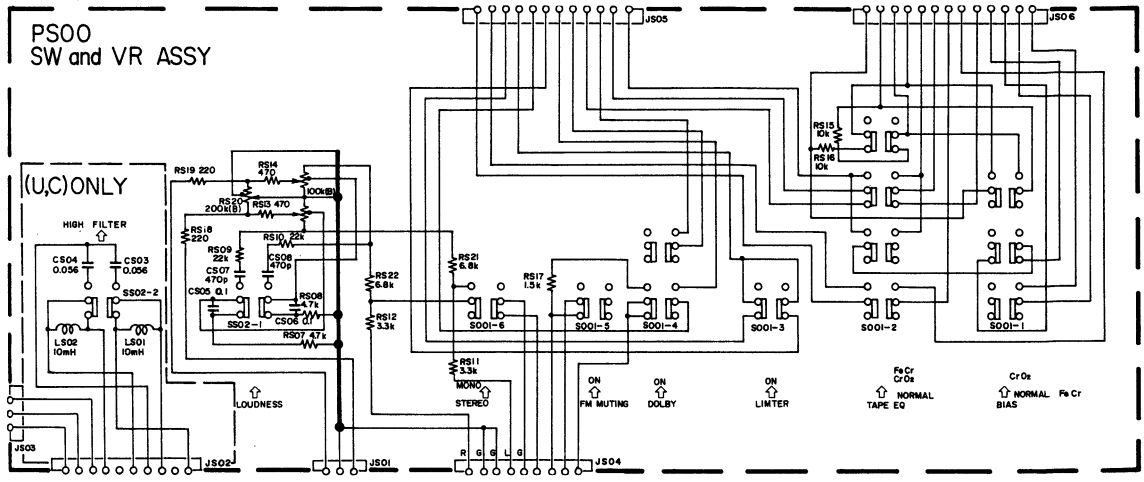


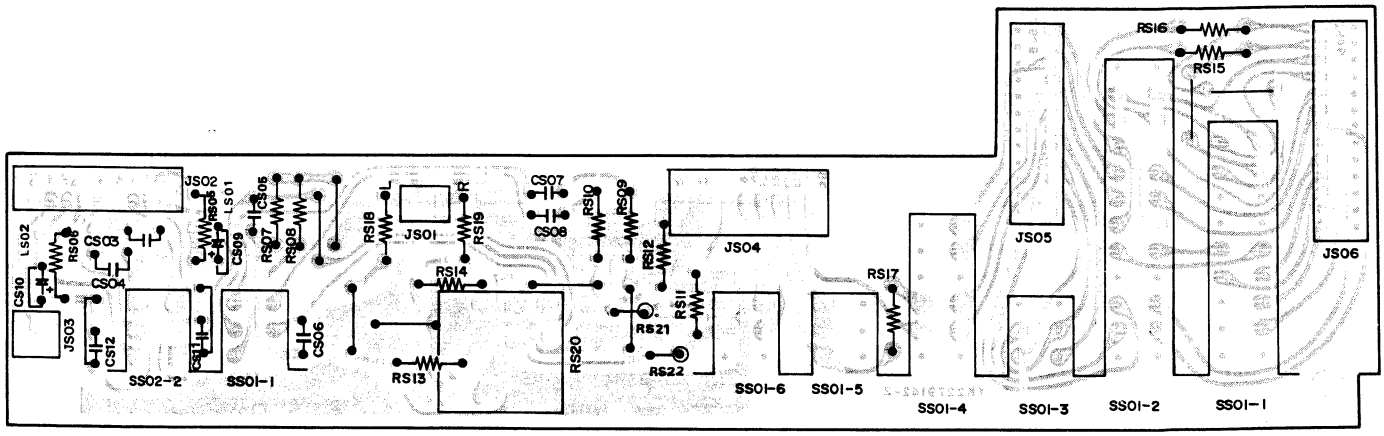
6.7 TONE AMP BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PE01



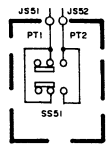


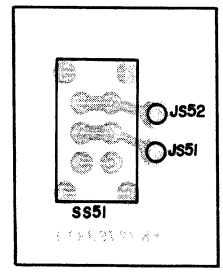
6.8 VOLUME/SWITCHES BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PS00



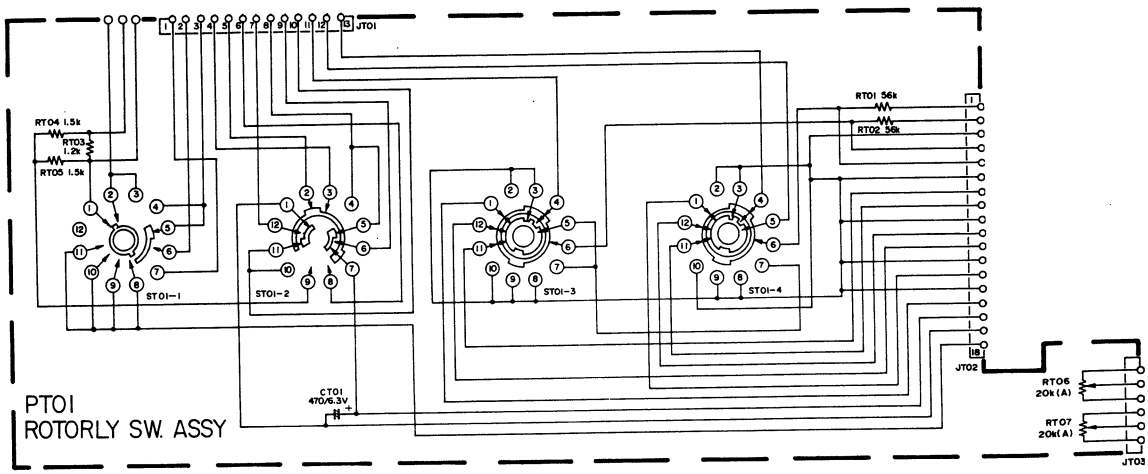


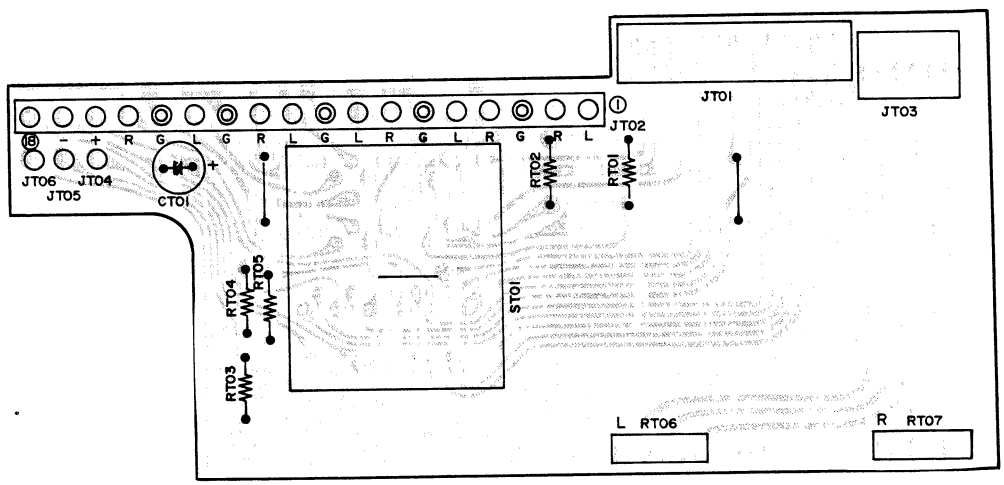
6.9 ISS BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PS50



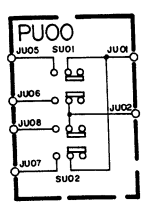


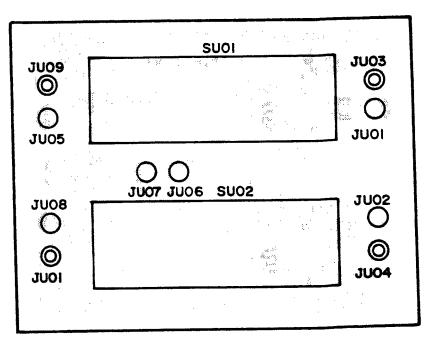
6.10 ROTARY SWITCH BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PT01



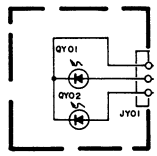


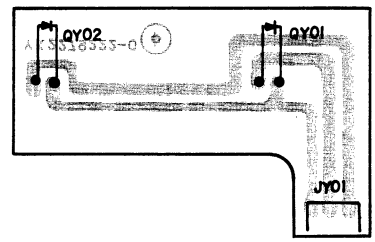
6.11 SPEAKER SWITCH BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PU00



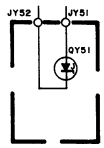


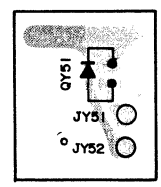
6.12 LED BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PY00





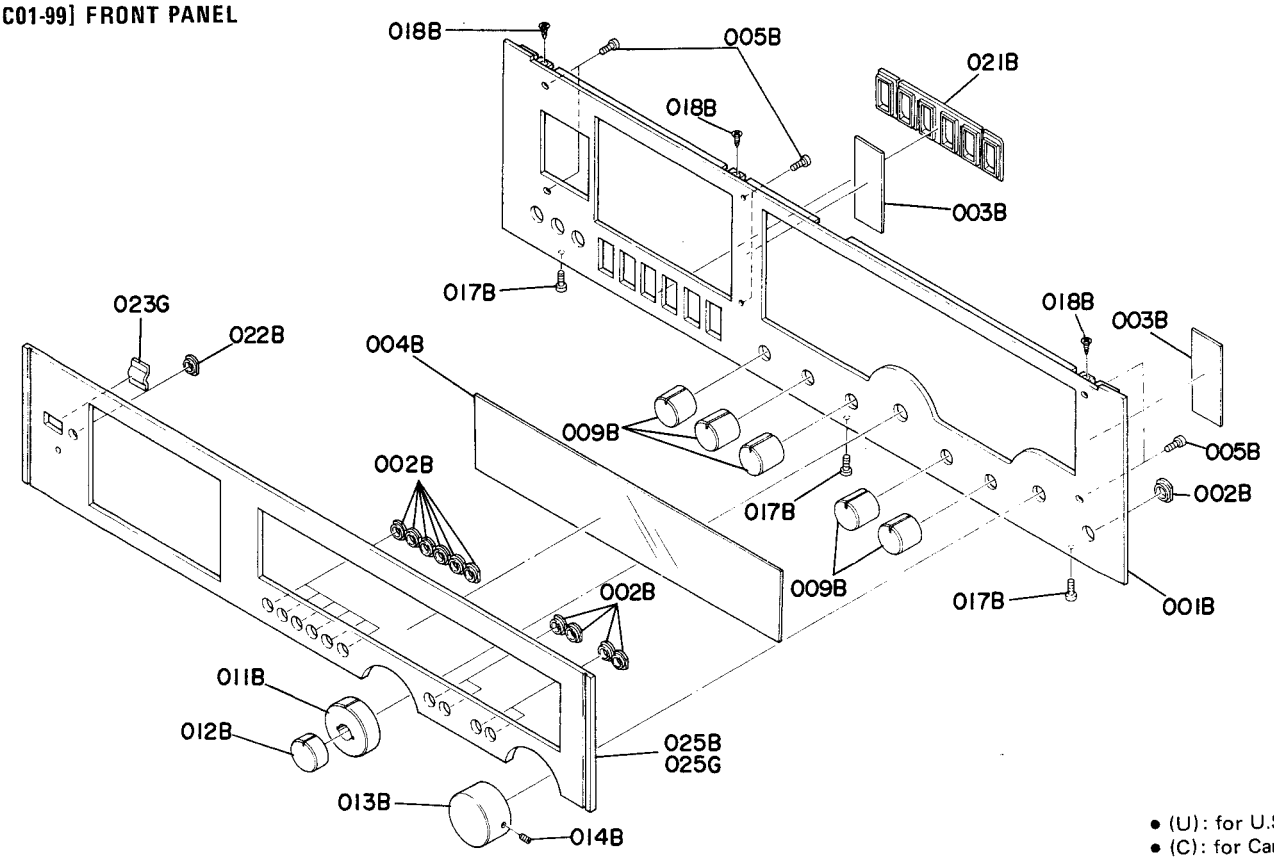
6.13 REC. LED BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PY50





7. EXPLODED VIEWS AND PARTS LIST

7.1 [C01-99] FRONT PANEL



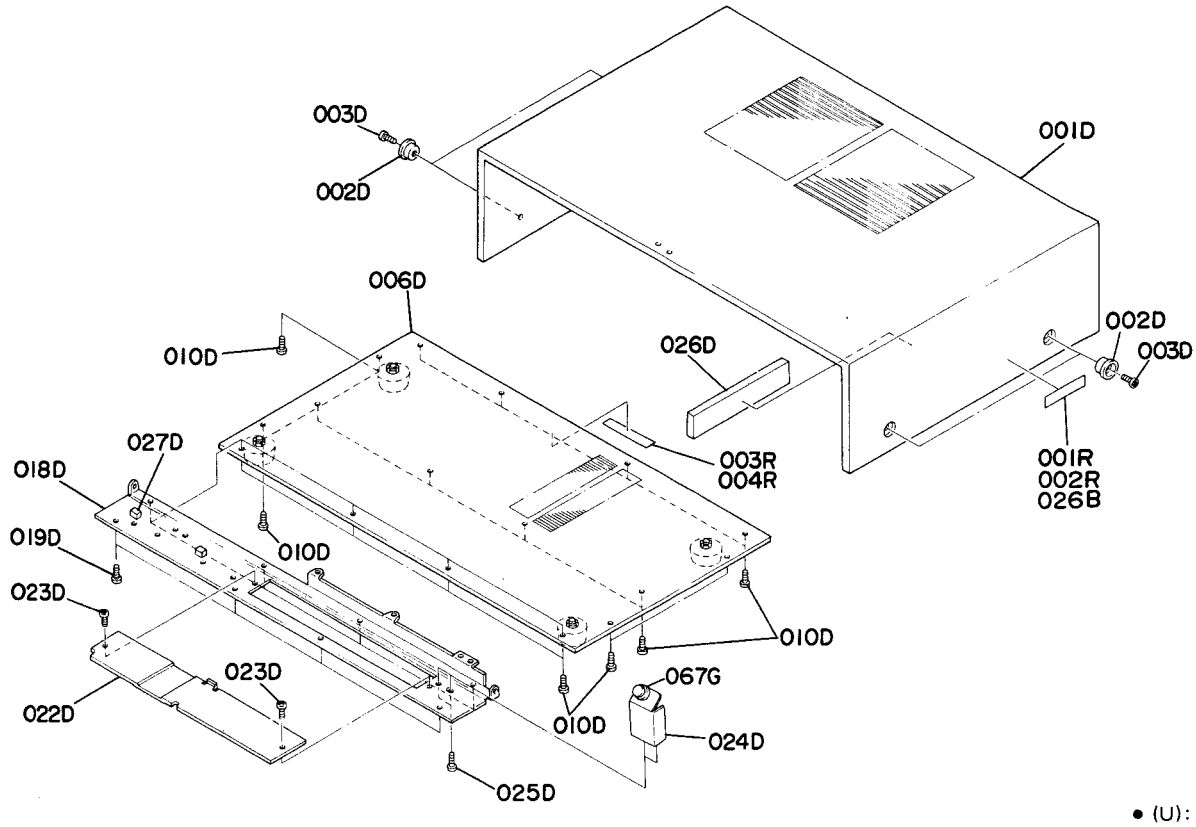
- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					M4025, ONLY
A	1	1		2279063400	Front Panel Assembly (Hi)
A1			1	2279063410	Front Panel Assembly (Low)
001B	1	1	1	2279063110	Escutcheon, Main
002B	11	11	11	2978259010	Bushing
003B	2	2	2	2279056010	Buffer
004B	1	1	1	2279158010	Window
005B	6	6	6	51100305A9	B.H.M. Screw B3 x 5
021B	1	1	1	4214259010	Bushing
022B	1	1	1	3448259100	Bushing
023G	1	1	1	4123158030	Window
025G	1	1		2279063210	Escutcheon, Sub (Hi Filter)
025G			1	2279063310	Escutcheon, Sub (Low Filter)
					MCR425, ONLY
A	1			2279063420	Front Panel Assembly
001B	1			2279063110	Escutcheon, Main
002B	11			2978259010	Bushing
003B	2			2279056010	Buffer
004B	1			2279158010	Window
005B	6			51100305A9	B.H.M. Screw B3 x 5
021B	1			4214259010	Bushing
022B	1			3448259100	Bushing
025B	1			2279063130	Escutcheon, Sub
023G	1			4123158030	Window

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
009B	5	5	5	2279154010	Knob
011B	1	1	1	2279154020	Knob
012B	1	1	1	2279154030	Knob
013B	1	1	1	2279154040	Knob
014B	1	1	1	5169306Q9	Socket Screw, HP 3 x 6
017B	3	3	3	51280306A0	B.H.M. Screw B3 x 6
018B	3	3	3	51340306B0	F.H. Tapped Screw F3 x 6

M4025 (U.C.N)
MCR425 (U) ONLY

7.2 [C02-99] LID (TOP COVER)



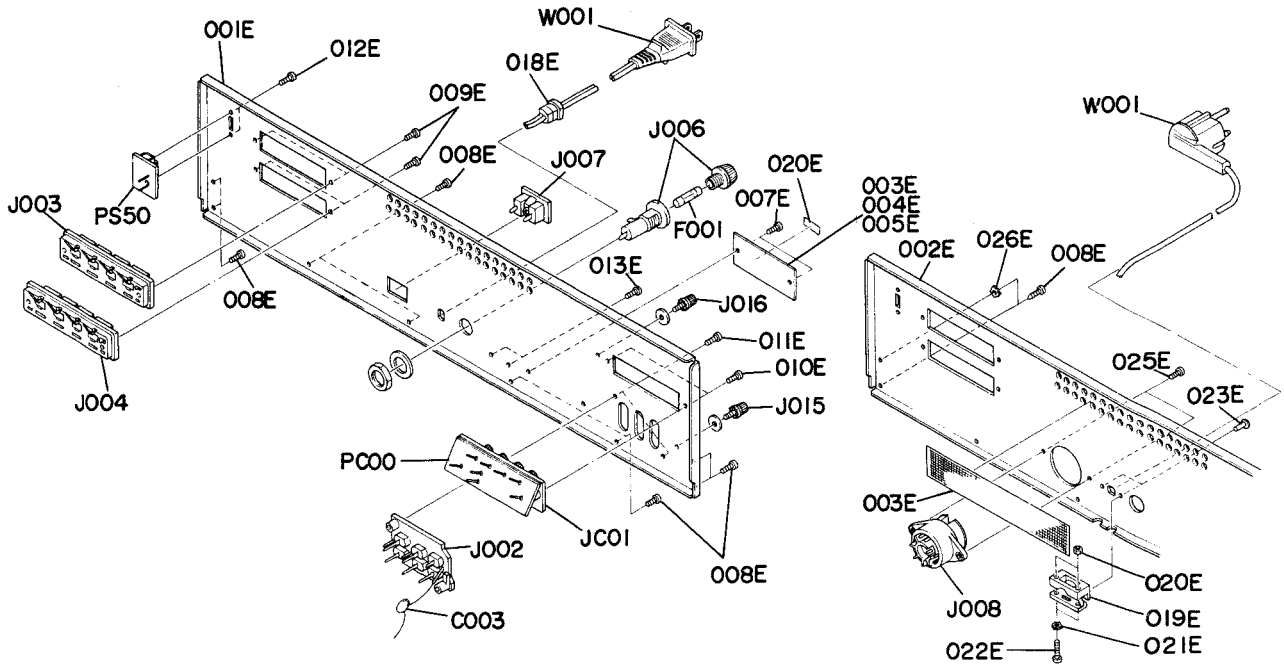
- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
C	1	1	1	2279064400	Case Assembly
001D	1	1	1	2279064010	Case Wood
026D	1	1	1	3910118010	Spacer
002D	4	4	4	3906259010	Bushing
003D	4	4	4	51280412U0	B.H. Tapped Screw B4 x 12
006D	1	1	1	2279257500	Lid
010D	16	16	16	51260410U0	B.H. Tapped Screw B4 x 10
018D	1	1	1	2279257020	Lid
019D	4	4	4	51280308U0	B.H. Tapped Screw B3 x 8
022D	1	1	1	2279257030	Lid
023D	2	2	2	51280306U0	B.H. Tapped Screw B3 x 6
024D	1	1	1	2279160070	Bracket
025D	2	2	2	51100306S9	B.H.M. Screw B3 x 6
026D	1	1	1	3910118010	Spacer
027D	2	2	2	2818056030	Buffer

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
067G	1	1	1	2259262520	Pulley
001R	1		1	2932861010	Label
002R		1		2911861140	Label
003R	1		1	2578861010	Label
004R		1		2911861110	Label
026B	1			2818861010	Label (MCR425, ONLY)

M4025 (U.C.N)
MCR425 (U) ONLY

7.3 [C03-99] REAR PANEL

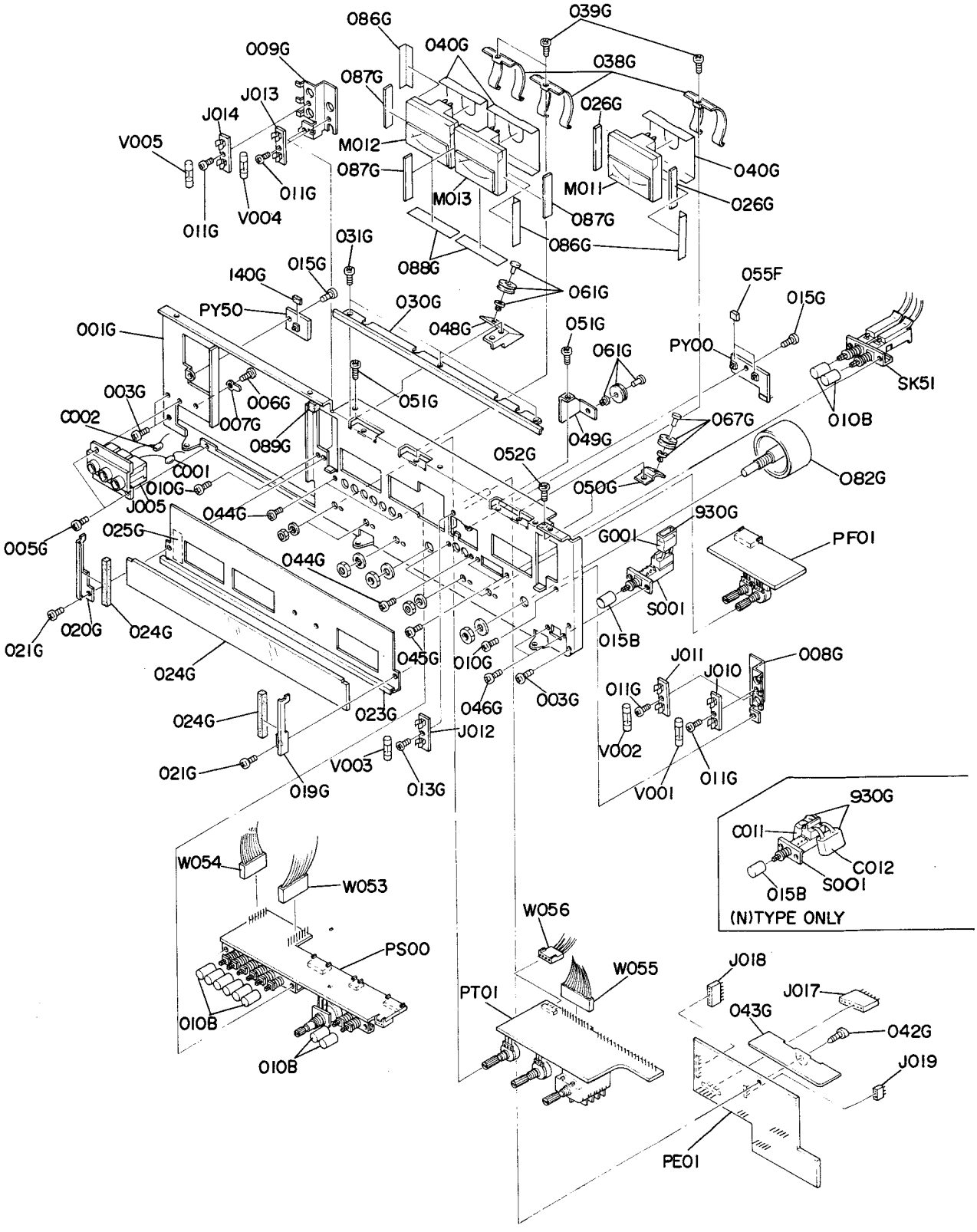


- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
D			1	2279160400	Rear Panel Assembly
002E			1	2279160220	Bracket
019E			1	2821259010	Bushing
021E			2	54050300R0	T.L. Washer
023E			2	55060305S0	T.R. Rivet
001E	1	1		2279160210	Bracket
003E	1			2279265010	Indicator
003E			1	2279202010	Net
004E		1		2279265020	Indicator
005E			1	2279265030	Indicator
007E	2	2	2	51760306B0	OS Tapped Screw 3 x 6
008E	8	8	8	51280308U0	B.H. Tapped Screw B3 x 8
009E	4	4	4	51280308U0	B.H. Tapped Screw B3 x 8
010E	2	2	2	51280308U0	B.H. Tapped Screw B3 x 8
011E	2	2	2	51280308U0	B.H. Tapped Screw B3 x 8
012E	2	2	2	51102604S0	B.H. Tapped Screw B2.6 x 4
013E	2	2	2	51280308U0	B.H. Tapped Screw B3 x 8
018E	1	1		1455259030	Bushing
020E		1		2214861010	Label
020E	1			2818861010	Label
020E			2	53110303A9	Hexagon Nut
022E			2	51060316A9	P.H.M. Screw P3 x 16
025E			2	51100308S9	B.H.M. Screw B3 x 8
026E			1	54050300R0	T.L. Washer OR

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
J002	1	1	1	YT02060090	Terminal
J003	1	1	1	YT03040160	Terminal
J004	1	1	1	YT03040160	Terminal
J006	1			YJ08000120	Jack, Fuse Holder
J006		1		YJ08000230	Jack, Fuse Holder
J006			1	YJ08000220	Jack, Fuse Holder
J007	1	1		YJ04000560	Jack, AC Outlet
J008			1	BY03110010	Plug, Voltage Selector
J009			1	YL09030010	Terminal
J015	1	1	1	YL03010240	Terminal
J016	1	1	1	YL03010240	Terminal
W001	1	1		YC02000150	A.C. Power Cord
W001			1	YC01900030	A.C. Power Cord
C003	1	1	1	DK18103300	Ceramic Cap. 0.001μF +100%—0
F001	1	1		FS10400050	Fuse 4A 250V
F001			1	FS10200800	Fuse 2AT 250V
PC00	1	1	1	YH22790210	P.W. Board ANT. Input
	1	1	1	ZZ22790210	P.W. Board Assembly
JC01	1	1	1	YL01040180	Terminal
PS50	1	1	1	YK22793320	P.W. Board Issue
	1	1	1	ZZ22793320	P.W. Board Assembly

7.4 [P01-99] FRONT BRACKET AND GENERAL PARTS

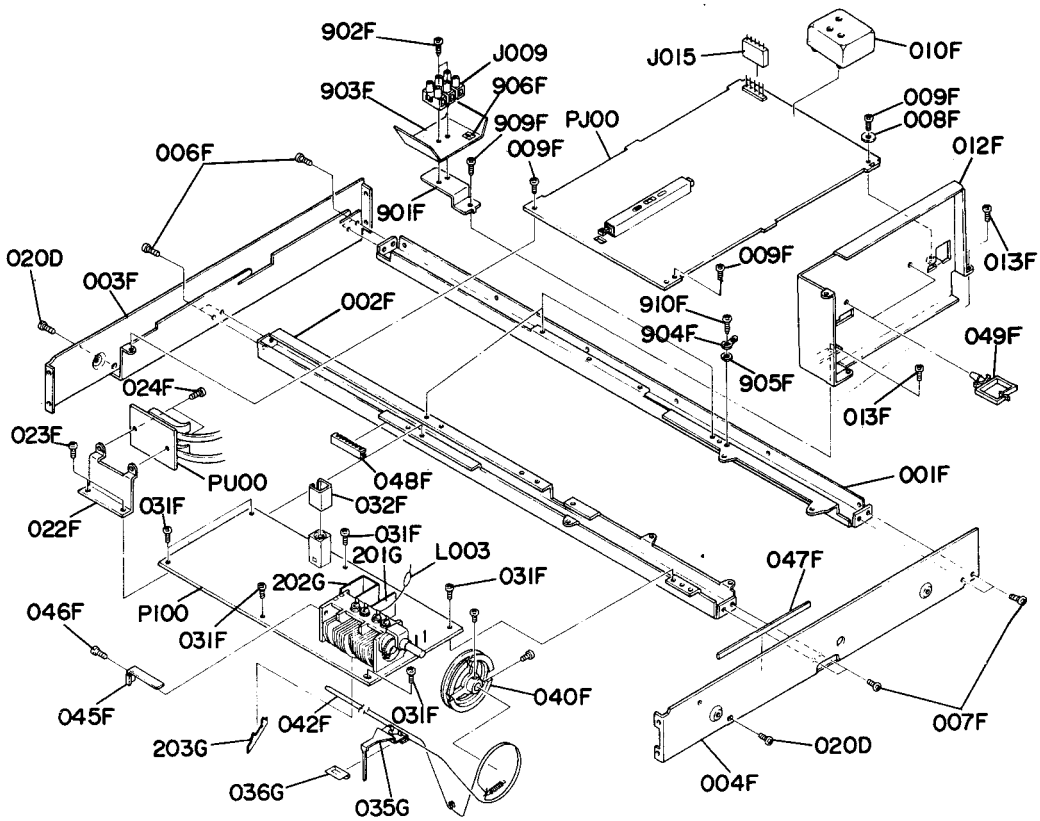


- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
010B	10	10	10	2276154120	Knob, Push Switch
015B	1	1	1	2276154040	Knob, Power
055F	2	2	2	2481118020	Spacer
001G	1	1	1	2279160020	Bracket, Front
003G	4	4	4	51280306B0	B.H. Tapped Screw B3 x 6
005G	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
006G	1	1	1	51280308B0	B.H. Tapped Screw B3 x 8
007G	1	1	1	62030049W0	Lug
008G	1	1	1	2279271010	Holder
009G	1	1	1	2279271020	Holder
010G	2	2	2	51100306A9	B.H. Tapped Screw B3 x 6
011G	4	4	4	51280306B0	B.H. Tapped Screw B3 x 6
013G	1	1	1	51280306B0	B.H. Tapped Screw B3 x 6
015G	2	2	2	51280306B0	B.H. Tapped Screw B3 x 6
019G	1	1	1	2279269020	Protector
020G	1	1	1	2279269010	Protector
021G	2	2	2	51280310B0	B.H. Tapped Screw B3 x 10
023G	1	1	1	2279274010	Reflector
024G	2	2	2	3295056300	Buffer
024G	1	1	1	2279302010	Dial
025G	1	1	1	2279056020	Buffer
026G	2	2	2	2291118020	Spacer
030G	1	1	1	2279005020	Clamper
031G	3	3	3	51280306U0	B.H. Tapped Screw B3 x 6
038G	3	3	3	2279115020	Spring
039G	3	3	3	51280306B0	B.H. Tapped Screw B3 x 6
040G	3	3	3	2259274020	Reflector
042G	1	1	1	51100306A9	B.H.M. Screw B3 x 6
043G	1	1	1	2291109010	Shield
044G	4	4	4	51100306A9	B.H.M. Screw B3 x 6
045G	2	2	2	51100306A9	B.H.M. Screw B3 x 6
046G	2	2	2	51100306A9	B.H.M. Screw B3 x 6
048G	1	1	1	2279160110	Bracket
049G	1	1	1	2279160060	Bracket
050G	1	1	1	2279160080	Bracket
051G	3	3	3	51100306A9	B.H. Tapped Screw B3 x 6
052G	1	1	1	51280306B0	B.H. Tapped Screw B3 x 6
061G	2	2	2	2259262500	Puller
067G	1	1	1	2259262520	Puller
082G	1	1	1	2279273500	Flywheel
086G	3	3	3	3956107010	Sheet
087G	3	3	3	2965118010	Spacer
088G	2	2	2	2279120020	Insulator
089G	1	1	1	2291118010	Spacer
140G	1	1	1	2279118010	Spacer
930G	1	1		2219120010	Insulator
930G			2	3926120010	Insulator

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
C001	1	1	1	DK17102010	Ceramic Cap. 0.001μF ±20%
C002	1	1	1	DK17102010	Ceramic Cap. 0.001μF ±20%
G001	1			BF10400030	Cap. Comp. Spark Killer
G001		1		BF10400050	Cap. Comp. Spark Killer
C011			1	DF17223800	Film Cap. 0.022μF ±20% 1000V
C012			1	DF17223800	Film Cap. 0.022μF ±20% 1000V
J005	1	1	1	YJ01001190	Jack, Heaphone/Mic
J010 ≀ J014	5	5	5	YJ08000190	Jack, Lamp Socket
J017	1	1	1	YJ06001250	Jack
J018	1	1	1	YJ06001060	Jack
J019	1	1	1	YJ06001040	Jack
M011	1	1	1	IM11055160	D.C. Meter, Tuning
M012	1	1	1	IM11055170	D.C. Meter, VU
M013	1	1	1	IM11055170	D.C. Meter, VU
S001	1	1		SP04010280	Push Switch, Power
S001			1	SP04010290	Push Switch, Power
SK51	1	1	1	SP02020400	Push Switch, Speaker
V001	1	1	1	IN10080420	Lamp 8V 200mA
V002	1	1	1	IN10080420	Lamp 8V 200mA
V003	1	1	1	IN10080420	Lamp 8V 200mA
V004	1	1	1	IN10080420	Lamp 8V 200mA
V005	1	1	1	IN10080420	Lamp 8V 200mA
W053	1	1	1	YJ06001780	Jack
W054	1	1	1	YJ06001790	Jack
W055	1	1	1	YJ06001800	Jack
W056	1	1	1	YJ06001810	Jack
PE01	1	1	1	YK22793310	P.W. Board, Tone Phono Muting
	1	1	1	ZZ22793310	P.W. Board Assembly
PF01	1	1	1	YK22792210	P.W. Board, Tone Volume
				ZZ22792210	P.W. Board Assembly
PS00	1	1	1	YK22791420	P.W. Board, Volume/Push Switch
	1	1		ZZ22791420	P.W. Board Assembly
			1	ZZ22798420	P.W. Board Assembly
PT01	1	1	1	YK22791410	P.W. Board, Rotary Switch
	1	1	1	ZZ22791410	P.W. Board Assembly
PY00	1	1	1	YK22792220	P.W. Board, LED
	1	1	1	ZZ22792220	P.W. Board Assembly
RY50	1	1	1	YK22791440	P.W. Board, Rec LED
	1	1	1	ZZ22791440	P.W. Board Assembly

7.5 [P02-99] P.W. BOARDS AND GENERAL PARTS

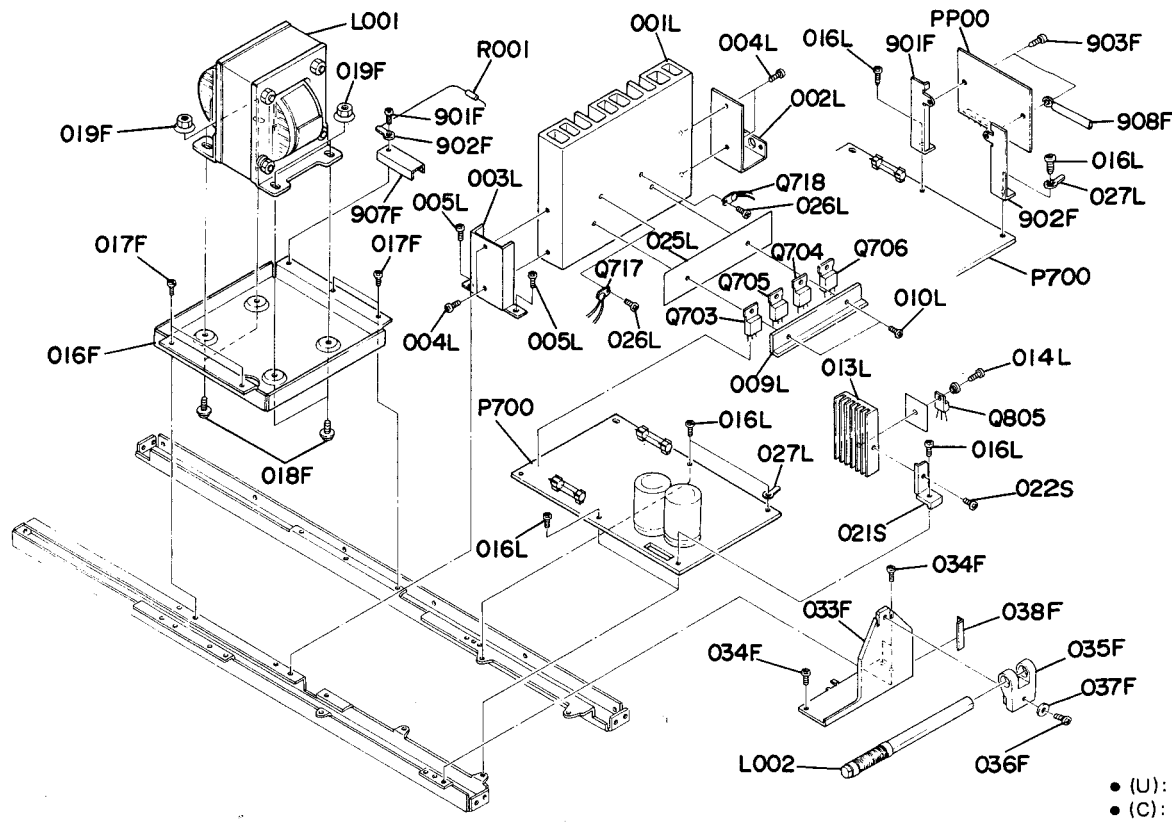


- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
E	1	1	1	2279103400	Pointer Assembly	
035G	1	1	1	2279103012	Pointer	
036G	1	1	1	2259118010	Spacer	
020D	2	2	2	51280306U0	B.H. Tapped Screw	B3 x 6
001F	1	1	1	2279126010	Stay, Rear	
002F	1	1	1	2279126023	Stay, Center	
003F	1	1	1	2279126030	Stay, (L)	
004F	1	1	1	2279126040	Stay, (R)	
006F	4	4	4	51280306B0	B.H. Tapped Screw	B3 x 6
007F	4	4	4	51280306B0	B.H. Tapped Screw	B3 x 6
008F	1	1	1	54110149A0	Flat Washer, L.	
009F	3	3	3	51100306A9	B.H.M. Screw	B3 x 6
010F	1	1	1	2279109010	Shield	
012F	1	1	1	2279160092	Bracket	
013F	2	2	2	51280306B0	B.H. Tapped Screw	B3 x 6
022F	1	1	1	2279160120	Bracket	
023F	2	2	2	51280306B0	B.H. Tapped Screw	B3 x 6
024F	2	2	2	51280306B0	B.H. Tapped Screw	B3 x 6
031F	6	6	6	51280306B0	B.H. Tapped Screw	B3 x 6
032F	1	1	1	3918109010	Shield	
040F	1	1	1	2259159012	Drum	
042F	1	1	1	72071605A0	String (150)	
045F	1	1	1	2279005050	Clamper	
046F	1	1	1	51100304A9	B.H.M. Screw	B3 x 4

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
047F	1	1	1	2279259010	Bushing	
048F	1	1	1	4679259010	Bushing	
049F	2	2	2	2886005020	Clamper	
901F			1	2279160040	Bracket	
902F			2	51280314B0	B.H. Tapped Screw	B3 x 14
903F			1	3953120030	Insulator	
904F			1	62030049W0	Lug	
905F			1	54040302A0	Spring Washer	
906F			1	2882861020	Label	
909F			1	51280306B0	B.H. Tapped Screw	B3 x 6
910F			1	51280306B0	B.H. Tapped Screw	B3 x 6
201G	1	1	1	2259109040	Shield	
202G	1	1	1	2259109053	Shield	
203G	1	1	1	2259109062	Shield	
J009			1	YL09030010	Terminal	
J015	1	1	1	YJ06001050	Jack	
L003	1	1	1	LC13320020	Choke Coil	3.3μH
P100	1	1	1	YG22590012	P.W. Board Tuner	
	1	1		ZZ22793010	P.W. Board Assembly	
			1	ZZ22798010	P.W. Board Assembly	
PJ00	1	1	1	YG22790010	P.W. Board Tape Dre Amp.	
	1	1	1	ZZ22792010	P.W. Board Assembly	
PU00	1	1	1	YK22791430	P.W. Board Speaker Switch	
	1	1	1	ZZ22791430	P.W. Board Assembly	

7.6 [P03-99] MAIN AMP/POWER SUPPLY P.W. BOARD AND HEATSINK

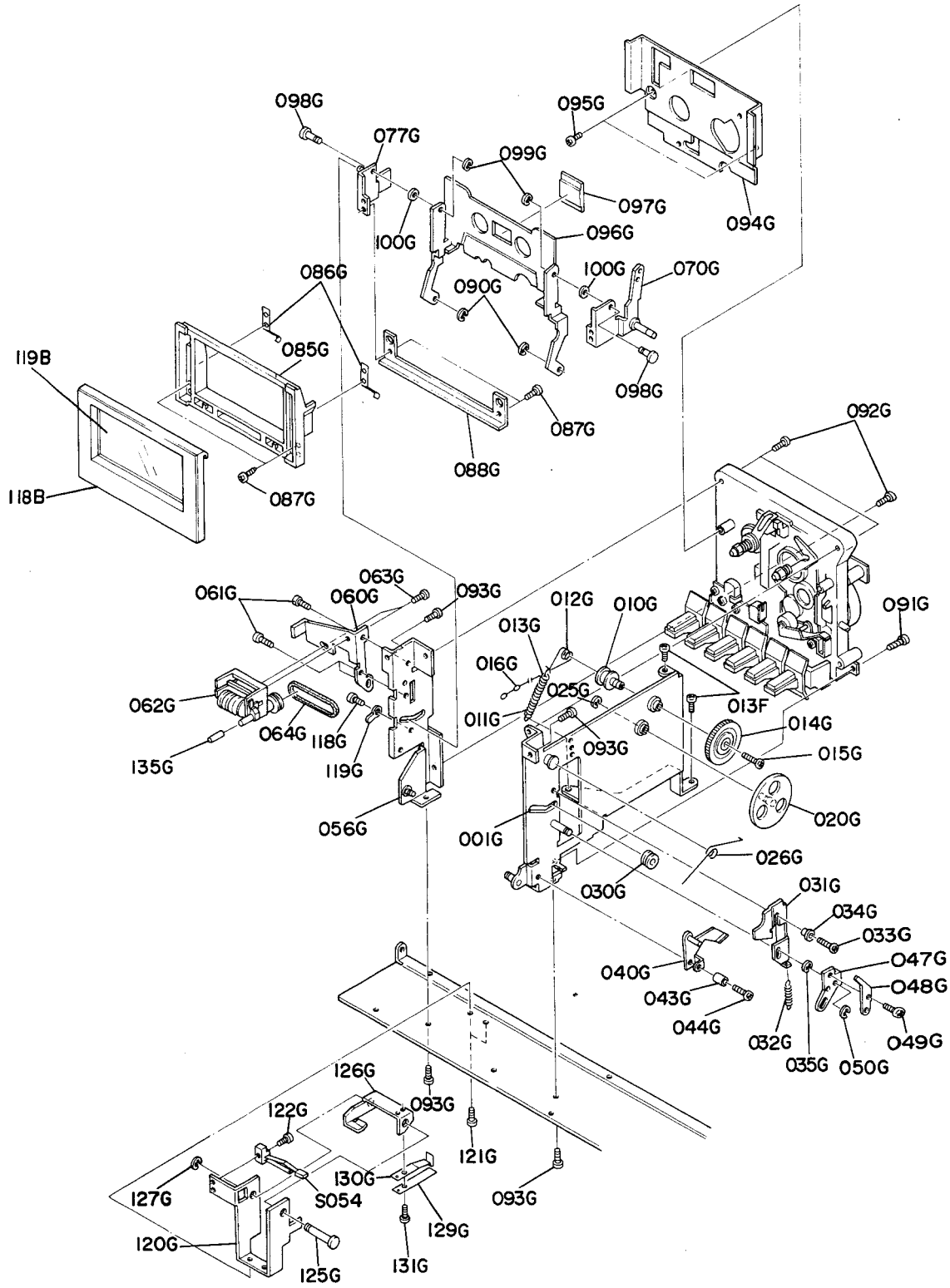


- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
016F	1	1	1	2279004010	Table	
017F	4	4	4	51280306B0	B.H. Tapped Screw	B3 x 6
018F	4	4	4	51490410A9	L. Washer Screw	L4 x 10
019F	4	4	4	53250401A0	Special Nut	
033F	1	1	1	2279160050	Bracket	
034F	3	3	3	51280306B0	B.H. Tapped Screw	B3 x 6
035F	1	1	1	4170271010	Holder	
036F	1	1	1	51102608A0	B.H.M. Screw	B2.6 x 8
037F	1	1	1	54020401A0	Flat Washer, P.	
038F	1	1	1	2947259030	Bushing	
901F	1	1		51280306B0	B.H. Tapped Screw	B3 x 6
902F	1	1		62030039W0	Lug	
901F		1	1	2276160070	Bracket	
902F		1	1	2276160080	Bracket	
903F		1	1	51280306B0	B.H. Tapped Screw	B3 x 6
907F			1	2279120010	Insulater	
908F			1	2871005010	Clamper	
001L	1	1	1	2279267010	Heatsink	
002L	1	1	1	2279160100	Bracket	
003L	1	1	1	2279160030	Bracket	
004L	4	4	4	5128030B0	B.H. Tapped Screw	B3 x 8
005L	2	2	2	51280306B0	B.H. Tapped Screw	B3 x 6
009L	1	1	1	2276005040	Clamper	
010L	2	2	2	51280314B0	B.H. Tapped Screw	B3 x 14
013L	1	1	1	2276267020	Heatsink	
014L	1	1	1	51280308A9	B.H. Tapped Screw	B3 x 8
016L	4	4	4	51280306B0	B.H. Tapped Screw	B3 x 6

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
025L	1	1	1	2276118020	Spacer	
026L	2	2	2	51280306B0	B.H. Tapped Screw	B3 x 6
027L	1	1	1	62031650W0	Lug	
021S	1	1	1	2276160090	Bracket	
022S	1	1	1	51280306B0	B.H. Tapped Screw	B3 x 6
L001	1			TS18609010	Power Transformer	
L001		1		TS18609020	Power Transformer	
L001			1	TS18609030	Power Transformer	
L002	1	1	1	LF11400780	Antenna Coil	
R001	1	1		RC10225120	Resistor	2.2MΩ 0.5W
P700	1	1	1	YG22760010	P.W. Board	Main/Power
	1	1		ZZ22791010	P.W. Board	Assembly
			1	ZZ22798110	P.W. Board	Assembly
Q703	1	1	1	HT404152B0	Transistor	2SD415 (Q or R)
Q704	1	1	1	HT404152B0	Transistor	2SD415 (Q or R)
Q705	1	1	1	HT205492B0	Transistor	2SD549 (Q or R)
Q706	1	1	1	HT205492B0	Transistor	2SD549 (Q or R)
Q717	1	1	1	HV00008120	Varistor	MV-1Y
Q718	1	1	1	HD20008120	Varistor	MV-1Y
Q805	1	1	1	HT403131Q0	Transistor	2SD313 (E)
PP00			1	YK24710010	P.W. Board, Fuse	
			1	ZZ22798010	P.W. Board	Assembly

7.7 [P04-99] ASSOCIATED MECHANISM FOR CASSETTE TAPE OPERATION



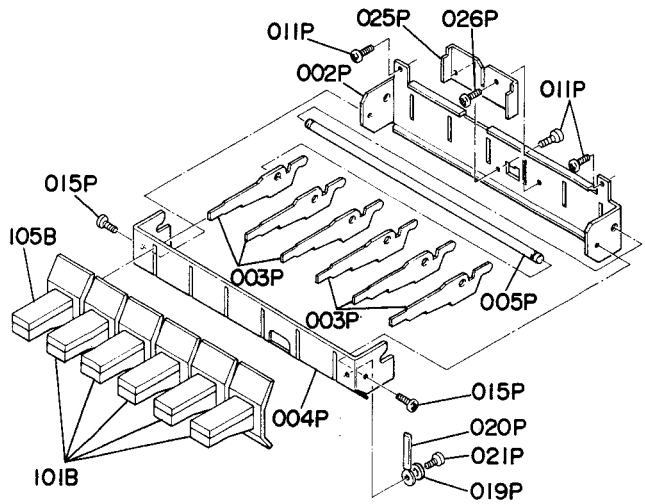
- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
F	1	1	1	4197258400	String Assembly
011G	1	1	1	4197115020	Spring
012G	1	1	1	72071604A0	String (30)
013G	1	1	1	56382540G0	Eyelect
016G	1	1	1	4197258030	Hook
G	1	1	1	4197271410	Cassette Holder Assembly
085G	1	1	1	4197271010	Holder
086G	2	2	2	4197115050	Spring
H	1	1	1	4197104400	Cassette Retainer Assembly
096G	1	1	1	4171040100	Retainer
097G	1	1	1	4197158010	Window
I	1	1	1	4197052400	Counter Assembly
062G	1	1	1	4197052010	Counter
135G	1	1	1	3448067062	Cap
118B	1	1	1	4197063030	Escutcheon
119B	1	1	1	4197257010	Lid
001G	1	1	1	2279160500	Bracket (K)
010G	1	1	1	4214112020	Shaft
014G	1	1	1	4214058010	Gear
015G	1	1	1	51100206A0	B.H.M. Screw B2 x 6
020G	1	1	1	4214273500	Flywheel
025G	1	1	1	64000200R0	RG Ring, E Type
026G	1	1	1	4197115030	Spring
030G	1	1	1	4197262020	Pulley
031G	1	1	1	4197258020	Hook
032G	1	1	1	4197115040	Spring
033G	1	1	1	51102606A0	B.H.M. Screw B2.6 x 6
034G	1	1	1	4197055010	Collar
035G	1	1	1	64000300R0	RG Ring E Type
040G	1	1	1	4197002500	Arm
043G	1	1	1	4197055030	Collar
044G	1	1	1	51102610A0	B.H.M. Screw B2.6 x 10
047G	1	1	1	4197002020	Arm
048G	1	1	1	4197164010	Adjuster
049G	1	1	1	51102604A0	B.H.M. Screw B2.6 x 4
050G	1	1	1	64000300R0	RG Ring, E Type
056G	1	1	1	4197160510	Bracket (K)
060G	1	1	1	4263160010	Bracket
061G	2	2	2	51100306A9	B.H.M. Screw B3 x 6
063G	2	2	2	51100306A9	B.H.M. Screw B3 x 6
064G	1	1	1	4197264010	Belt
070G	1	1	1	4197051500	Guide
077G	1	1	1	4197051510	Guide
087G	4	4	4	51102605S0	B.H.M. Screw B2.6 x 5
088G	1	1	1	4197104030	Retainer
090G	2	2	2	64000200R0	RG Ring, E Type

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
091G	2	2	2	51060306A9	P.H.M. Screw P3 x 6
092G	2	2	2	51100308A9	B.H.M. Screw B3 x 8
093G	4	4	4	51100306A9	B.H.M. Screw B3 x 6
094G	1	1	1	4197053040	Cover
095G	2	2	2	51382606T0	P.H. Tapped Screw P2.6 x 6
098G	2	2	2	4197112090	Shaft
099G	2	2	2	64000200R0	RG Ring E Type
100G	2	2	2	59035402G9	Washer
118G	1	1	1	51100306A9	B.H.M. Screw B3 x 6
119G	1	1	1	62031650W0	Lug
120G	1	1	1	2279104010	Retainer
121G	2	2	2	51100306S9	B.H.M. Screw B3 x 6
122G	1	1	1	51100205A0	B.H.M. Screw B2 x 5
125G	1	1	1	2279112010	Shaft
126G	1	1	1	2279002010	Arm
127G	1	1	1	64000300R0	RG Ring, E Type
129G	1	1	1	2291115020	Spring
130G	1	1	1	2279115010	Spring
131G	1	1	1	51100204A0	B.H.M. Screw B2 x 4
013F	2	2	2	51280306B0	B.H. Tapped Screw B3 x 6
S054	1	1	1	SM01010500	Mini Switch, Rec, Muting

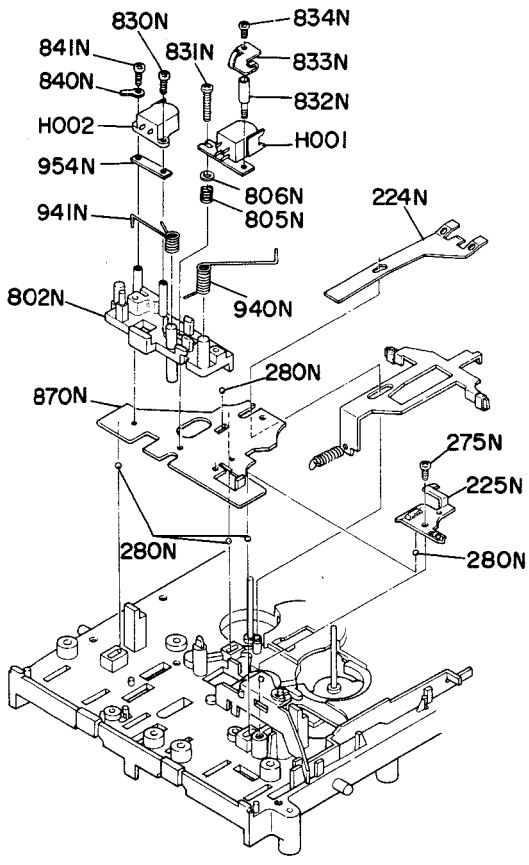
7.8 [P05-99] BUTTONS FOR TAPE MECHANISM OPERATION

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe



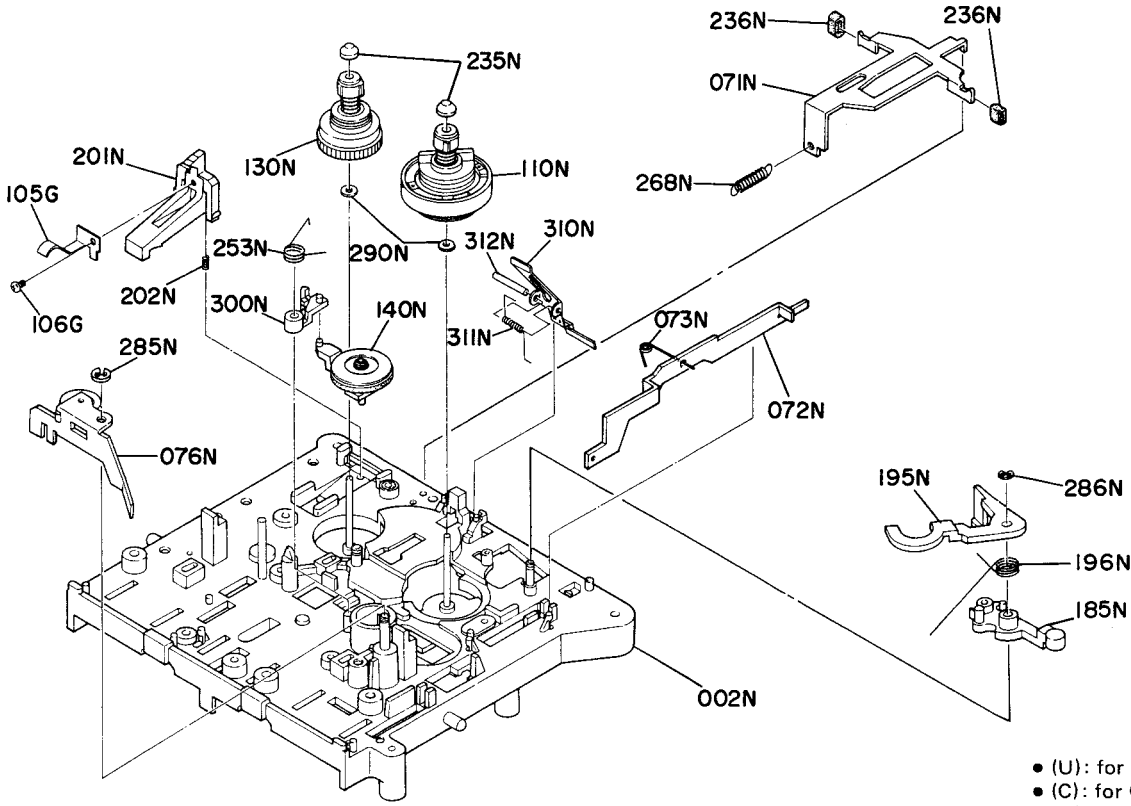
REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
101B	5	5	5	4214270502	Button (K)
105B	1	1	1	4214270512	Button (K)
002P	1	1	1	4380160013	Bracket
003P	6	6	6	4380354070	Lever
004P	1	1	1	4380051013	Guide
005P	1	1	1	4380112030	Shaft
011P	3	3	3	51300310B0	P.H. Tapped Screw P3 x 10
015P	2	2	2	51062603A0	P.H.M. Screw P2.6 x 3
019P	1	1	1	54052600R0	Washer
020P	1	1	1	1210005010	Clamper
021P	1	1	1	51062603A0	P.H.M. Screw P2.6 x 3
025P	1	1	1	4383104040	Retainer
026P	1	1	1	51062605A0	P.H.M. Screw P2.6 x 5

7.9 [P06-99] HEAD CHASSIS



REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
224N	1	1	1	4380115010	Spring
225N	1	1	1	4367115172	Spring
275N	1	1	1	51300308B0	P.H. Tapped Screw P3 x 8
280N	5	5	5	61020010T0	Ball
802N	1	1	1	4367160015	Bracket
805N	1	1	1	4380115090	Spring
806N	1	1	1	3444118070	Spacer
830N	1	1	1	51100212A0	B.H.M. Screw B2 x 12
831N	1	1	1	51100210A0	B.H.M. Screw B2 x 10
832N	1	1	1	4380101032	Support
833N	1	1	1	4380005010	Clamper
834N	1	1	1	51100203A0	B.H.M. Screw B2 x 3
840N	1	1	1	62021030W0	Lug
841N	1	1	1	51100212A0	B.H.M. Screw B2 x 12
870N	1	1	1	4380105030	Chassis
940N	1	1	1	4367115042	Spring
941N	1	1	1	4367115053	Spring
954N	1	1	1	4367118070	Spacer
H001	1	1	1	LH42851030	Rec/Play Head
H002	1	1	1	LH31000450	Erase Head

7.10 [P07-99] PARTS ASSEMBLED ON THE TOP CHASSIS



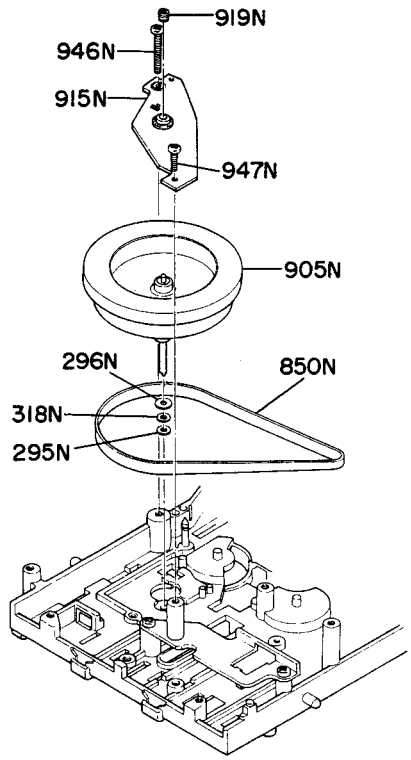
- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
002N	1	1	1	4380105700	Chassis Assembly
071N	1	1	1	4367354092	Lever
072N	1	1	1	4380354090	Lever
073N	1	1	1	4380115120	Spring
076N	1	1	1	4367002702	Arm, Pinch Roller S
110N	1	1	1	4367004705	Table
130N	1	1	1	4367004713	Table
140N	1	1	1	4367002712	Arm Assembly
185N	1	1	1	4367354773	Lever
195N	1	1	1	4367002054	Arm
196N	1	1	1	4367115130	Spring
201N	1	1	1	4367354084	Lever
202N	1	1	1	4380115060	Spring
235N	2	2	2	4367067010	Cap
236N	2	2	2	4367263010	Brake
253N	1	1	1	4367115100	Spring
268N	1	1	1	4367115210	Spring
285N	1	1	1	64002500R0	RG Ring, E Type
286N	1	1	1	64001500R0	RG Ring, E Type

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
290N	2	2	2	59020402G9	Washer
300N	1	1	1	4367354110	Lever
310N	1	1	1	4383115010	Spring
311N	1	1	1	4380115033	Spring
312N	1	1	1	4380112010	Shaft
105G	1	1	1	4197115062	Spring
106G	1	1	1	51382606T0	P.H. Tapped Screw P2.6 x 6

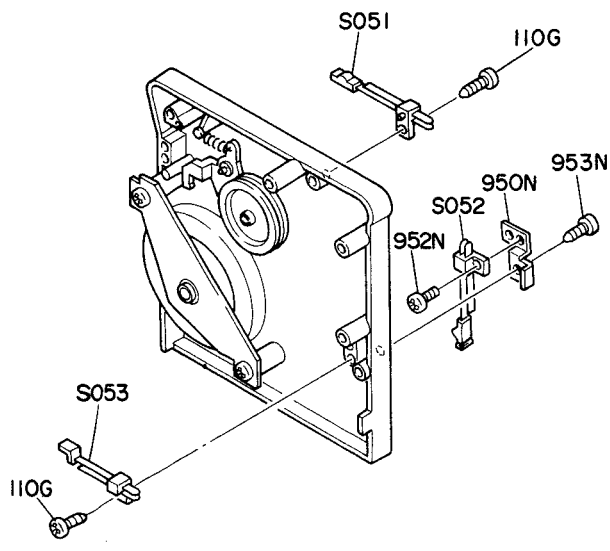
7.11 [P08-99] FLYWHEEL

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe



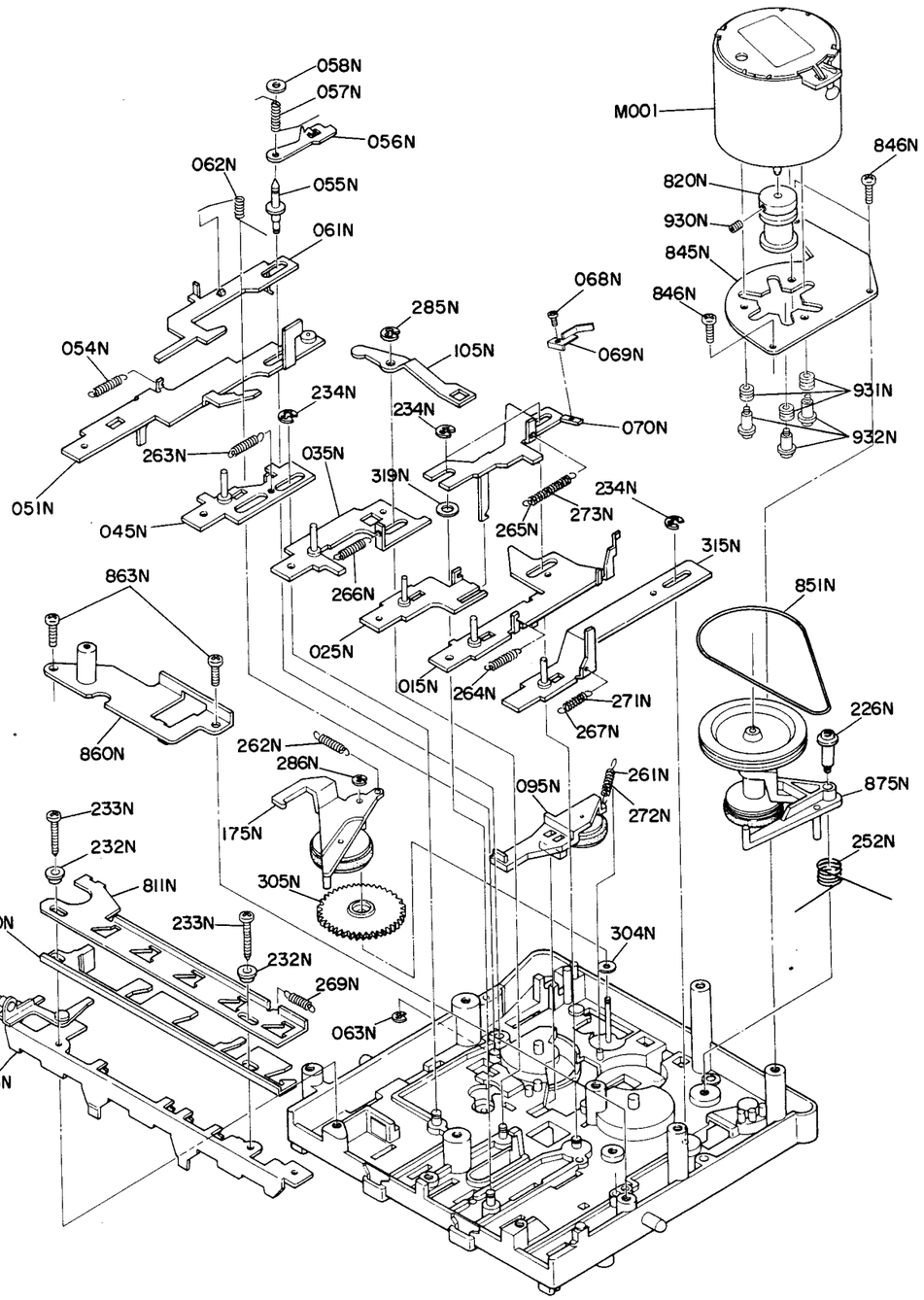
REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
295N	1	1	1	59264702G9	Washer
296N	1	1	1	59260702G9	Washer
318N	1	1	1	59264705G9	Washer
850N	1	1	1	4380264032	Belt
905N	1	1	1	4380273502	Flywheel
915N	1	1	1	4380104704	Retainer Assembly, Flywheel
919N	1	1	1	3483164020	Adjuster
946N	1	1	1	51300325B0	P.H. Tapped Screw P3 x 25
947N	1	1	1	51100308A9	B.H.M. Screw B3 x 8

7.12 [P09-99] SWITCH LOCATION FOR TAPE MECHANISM OPERATION



REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
110G	2	2	2	51380206P0	P.H. Tapped Screw P2 x 6
950N	1	1	1	4383160040	Bracket
952N	1	1	1	51060205A0	P.H.M. Screw P3 x 8
953N	1	1	1	51300308B0	P.H. Tapped Screw P3 x 8
S051	1	1	1	SM01010680	Mini Switch, Motor
S052	1	1	1	SM01010580	Mini Switch, Play Timing
S053	1	1	1	SM01010660	Mini Switch, Play Muting

7.13 [P10-99] PARTS ASSEMBLED ON THE REVERSE CHASSIS

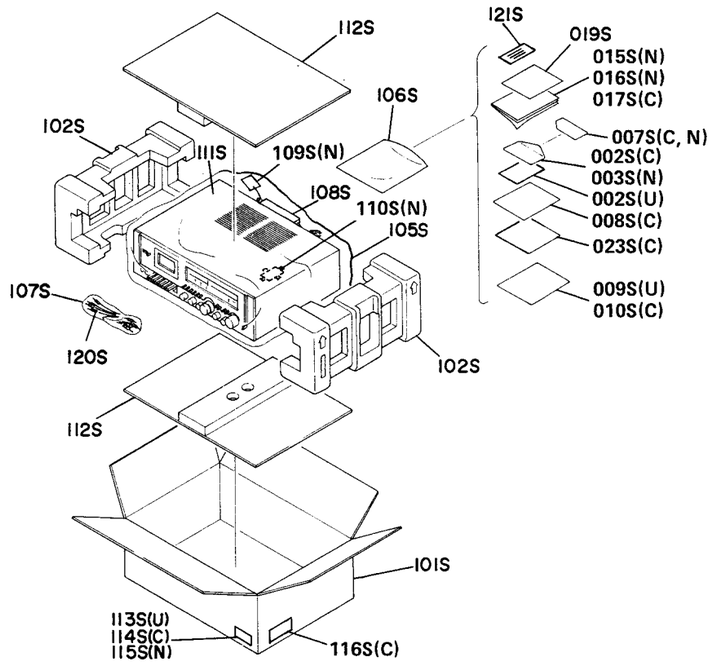


- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
015N	1	1	1	4380354704	Lever Assembly, Rew
025N	1	1	1	4380354723	Lever Assembly, Play
035N	1	1	1	4380354734	Lever Assembly, F.F.
045N	1	1	1	4380354743	Lever Assembly, Stop
051N	1	1	1	4380354754	Lever Assembly, Pause
085N	1	1	1	4380051703	Guide Assembly, Push Lever
315N	1	1	1	4380354714	Lever Assembly, Rec
860N	1	1	1	4380160700	Bracket Assembly, Switch
875N	1	1	1	4380001703	Idler Assembly
054N	1	1	1	4367115210	Spring
055N	1	1	1	4367112134	Shaft
056N	1	1	1	4367054032	Cam Pause Lock
057N	1	1	1	4367115142	Spring
058N	1	1	1	59020805G9	Washer
061N	1	1	1	4367354070	Lever, Eject
062N	1	1	1	4380115082	Spring
063N	1	1	1	64001500R0	RG Ring, E Type
068N	1	1	1	51820202S0	P.H.M. Screw P2 x 2
069N	1	1	1	4380354080	Lever

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
070N	1	1	1	4367354162	Lever, Head Chassis
095N	1	1	1	4367354760	Lever, FF
105N	1	1	1	4383002020	Arm, FF Idler Lever Look
175N	1	1	1	4367002726	Arm, Tms Idler
226N	1	1	1	4367112180	Shaft
232N	2	2	2	4380055010	Collar, Lock Cam
233N	2	2	2	51300314B0	P.H. Tapped Screw P3 x 14
234N	4	4	4	64000300R0	RG Ring, E Type
252N	1	1	1	4380115052	Spring
261N	1	1	1	4367115090	Spring
262N	1	1	1	4367115120	Spring
263N	1	1	1	4367115252	Spring
264N	1	1	1	4367115340	Spring
265N	1	1	1	4367115270	Spring
266N	1	1	1	4367115282	Spring
267N	1	1	1	4380115070	Spring
269N	1	1	1	4380115100	Spring
271N	1	1	1	4367056020	Buffer
272N	1	1	1	4367056030	Buffer
273N	1	1	1	4367056020	Buffer
285N	1	1	1	64002500R0	RG Ring, E Type
286N	1	1	1	64001500R0	RG Ring, E Type
304N	1	1	1	4367118060	Spacer
305N	1	1	1	4367058012	Gear
319N	1	1	1	59046501G9	Washer
810N	1	1	1	4383054030	Cam, Stop/Eject
811N	1	1	1	4383054020	Cam, Lock
820N	1	1	1	4380262020	Pulley
845N	1	1	1	4380160033	Bracket, DC Motor
846N	3	3	3	51300308B0	P.H. Tapped Screw P3 x 8
851N	1	1	1	4380264052	Belt, TMS
863N	2	2	2	51300308B0	P.H. Tapped Screw P3 x 8
930N			1	51690305Q9	Socket Screw H.P.
931N			3	4383259010	Bushing
932N			3	4367112150	Shaft
M001	1	1	1	MM11200100	D.C. Motor V. Servo 12V 2400 rpm CCW

7.14 [H01-99] PACKING MATERIALS



- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
002S	1			2225813010	Envelope	
002S		1		2918813010	Envelope	
003S			1	2818813010	Envelope	
007S		1	1	9630000180	Guarantee Card	
008S		1		9650000050	S. Station Card	
009S	1			2818854020	Guarantee Card	
010S		1		2818854040	Guarantee Card	
015S	1			2279851010	Instructions	
016S			1	2279851310	Instructions	
017S		1		2279851010	Instructions	
019S	1	1		2279851020	Instructions	
019S			1	2279851030	Instructions	
023S		1		2886851100	Instructions	
101S	1		1	2279801010	Packing Case	(M4025, ONLY)
101S	1			2279801020	Packing Case	(MCR425, ONLY)
101S		1		2279801150	Packing Case	
102S	2	2	2	2279809010	Cushion	
105S	1	1	1	9015940400	Polyethy Bag	
106S	1	1	1	9013025010	Polyethy Bag	
107S	1	1	1	9011325010	Polyethy Bag	

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
108S	1	1	1	2864804010	Sleeve
109S			1	9560000040	Hang Tag
110S			1	2731821010	Silicagel
111S	1	1	1	2918107200	Sheet
112S	2	2	2	2279807010	Reinforcing
113S	3			9526019010	Serial No Card
114S		3		9526019020	Serial No Card
115S			3	9526019060	Serial No Card
116S		2		9510901020	Label
120S	1	1	1	ZA02000070	EXT. Antenna
121S	1	1	1	4136071010	Cleaner

M4025 (U.C.N)
MCR425 (U) ONLY

marantz

7.15 ELECTRICAL PARTS

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION		
					P100-TUNER CIRCUIT BOARD		
P100	1	1	1	YG22590012	P.W. Board, Tuner		
	1	1		ZZ22793010	P.W. Board Assembly		
			1	ZZ22798010	P.W. Board Assembly		
					P100-CAPACITORS		
C101	1	1	1	DD15180370	Ceramic	18pF	±5%
C102	1	1	1	DK16102300	Ceramic	0.001μF	±10%
C104	1	1	1	DD15180370	Ceramic	0.01μF	±20%
C105	1	1	1	DD15180370	Ceramic	18pF	±5%
C106	1	1	1	DD10030370	Ceramic	3pF	±0.5pF
C107	1	1	1	DD10050370	Ceramic	5pF	±0.25pF
C108	1	1	1	DD15301360	Ceramic	300pF	±5%
C109	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C110	1	1	1	DD15200330	Ceramic	20pF	±5%
C111	1	1	1	DD11100300	Ceramic	10pF	±0.5pF
C112	1	1	1	DD15150300	Ceramic	15pF	±5%
C113	1	1	1	DD15150300	Ceramic	15pF	±5%
C114	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C115	1	1	1	DD10020370	Ceramic	2pF	±0.25pF
C116	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C117	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C118	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C119	1	1	1	CT11000080	Trimming	10pF	±0.5pF
C120	1	1	1	CA32400090	Variable		C752J
C151	1	1	1	DF55361090	Film	360pF	±5%
C152	1	1	1	DD10050370	Ceramic	5pF	±5%
C153	1	1	1	EA10701690	Elect	100μF	16V
C154	1	1	1	DK18403320	Ceramic	0.04μF	+80%–20%
C155	1	1	1	EA33601690	Elect	33μF	16V
C156	1	1	1	DK18223310	Ceramic	0.022μF	+80%–20%
C157	1	1	1	DD15820370	Ceramic	82pF	±5%
C201	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C202	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C203	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C204	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C205	1	1	1	DK18403320	Ceramic	0.04μF	+80%–20%
C206	1	1	1	DK18403320	Ceramic	0.04μF	+80%–20%
C207	1	1	1	DK18403320	Ceramic	0.04μF	+80%–20%
C208	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C209	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C210	1	1	1	DK15201360	Ceramic	200pF	±5%
C211	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C212	1	1	1	DK18403320	Ceramic	0.04μF	+80%–20%
C213	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C214	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C215	1	1	1	EA33502590	Elect	3.3μF	25V
C216	1	1	1	DK18223310	Ceramic	0.022μF	+80%–20%
C217	1	1	1	EA47503590	Elect	4.7μF	35V
C218	1	1	1	EA22701690	Elect	220μF	16V
C219	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C220	1	1	1	DK18104020	Ceramic	0.01μF	±20%
C221	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C222	1	1	1	EA10505090	Elect	1μF	50V
C223	1	1	1	EA47405090	Elect	0.47μF	50V
C224	1	1	1	EA10601690	Elect	10μF	16V

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION		
C225	1	1	1	DF15182300	Film	1800pF	±5%
C226	1	1	1	EA10601690	Elect	10μF	16V
C227	1	1	1	EA10505090	Elect	1μF	50V
C228	1	1	1	DK18403320	Ceramic	0.04μF	+80%–20%
C229	1	1	1	DF55102090	Film	1000pF	±5%
C230	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C231	1	1	1	EA10601690	Elect	10μF	16V
C233	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C234	1	1	1	DK17103300	Ceramic	0.01μF	±20%
C235	1	1	1	EA22701690	Elect	220μF	16V
C301	1	1	1	EE10505050	Elect	1μF	50V
C302	1	1	1	EE10505050	Elect	1μF	50V
C303	1	1	1	DF15332300	Film	0.0033μF	±5%
C304	1	1	1	DF15332300	Film	0.0033μF	±5%
C305	1	1	1	EA22502590	Elect	2.2μF	25V
C306	1	1	1	EA22502590	Elect	2.2μF	25V
C307	1	1	1	EE47502550	Elect	4.7μF	25V
C308	1	1	1	EE47502550	Elect	4.7μF	25V
C309	1	1	1	EA10701690	Elect	100μF	16V
C310	1	1	1	EA47405090	Elect	0.47μF	50V
C311	1	1	1	EE10505050	Elect	1μF	50V
C312	1	1	1	EE10405050	Elect	0.1μF	50V
C313	1	1	1	EA10505090	Elect	0.1μF	50V
C314	1	1	1	EA22601690	Elect	22μF	16V
C315	1	1	1	EA10601690	Elect	10μF	16V
					P100-RESISTORS (All Resistors are ±5% and ¼W)		
R101	1	1	1	GD05105140	1MΩ		
R102	1	1	1	GD05101140	100Ω		
R103	1	1	1	GD05101140	100Ω		
R104	1	1	1	GD05472140	4.7KΩ		
R105	1	1	1	GD05223140	22KΩ		
R106	1	1	1	GD05102140	1KΩ		
R107	1	1	1	GD05103140	10KΩ		
R108	1	1	1	GD05103140	10KΩ		
R109	1	1	1	GD05152140	1.5KΩ		
R110	1	1	1	GD05101140	100Ω		
R111	1	1	1	GD05273140	27KΩ		
R112	1	1	1	GG05101140	100Ω		
R113	1	1	1	GD05221140	220Ω		
R114	1	1	1	GD05104140	100KΩ		
R151	1	1	1	GD05202140	2KΩ		
R201	1	1	1	GD05151140	150Ω		
R202	1	1	1	GD05272140	2.7KΩ		
R203	1	1	1	GD05153140	15KΩ		
R204	1	1	1	GD05471140	470Ω		
R205	1	1	1	GD05331140	330Ω		
R206	1	1	1	GD05331140	330Ω		
R207	1	1	1	GD05272140	2.7KΩ		
R208	1	1	1	GD05153140	15KΩ		
R209	1	1	1	GD05471140	470Ω		
R210	1	1	1	GD05331140	330Ω		
R211	1	1	1	GD05331140	330Ω		
R212	1	1	1	GD05151140	150Ω		
R213	1	1	1	GD05472140	4.7KΩ		
R214	1	1	1	GD05103140	10KΩ		
R215	1	1	1	GD05102140	1KΩ		

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
R216	1	1	1	GD05202140	2KΩ	
R217	1	1	1	GD05563140	56KΩ	
R218	1	1	1	GD05333140	33KΩ	
R219	1	1	1	GD05224140	220KΩ	
R220	1	1	1	GD05470140	47Ω	
R221	1	1	1	GD05470140	47Ω	
R222	1	1	1	GD05221140	220Ω	
R223	1	1	1	GD05391140	390Ω	
R224	1	1	1	GD05562140	5.6KΩ	
R225	1	1	1	GD05332140	3.3KΩ	
R226	1	1	1	GD05823140	82KΩ	
R227	1	1	1	GD05333140	33KΩ	
R228	1	1	1	RA02030060	Trimming	20KΩ
R229	1	1	1	GD05472140	4.7KΩ	
R230	1	1	1	GD05822140	8.2KΩ	
R231	1	1	1	GD05391140	390Ω	
R233	1	1	1	RA05020160	Trimming	5KΩ
R235	1	1	1	GD05473140	47KΩ	
R236	1	1	1	GD05151140	150Ω	
R237	1	1	1	GD05132140	1.3KΩ	
R238	1	1	1	GD05563140	56KΩ	
R239	1	1	1	GD05104140	100KΩ	
R240	1	1	1	GD05104140	100KΩ	
R241	1	1	1	GD05152140	1.5KΩ	
R242	1	1	1	GD05473140	47Ω	
R243	1	1	1	GD05104140	100KΩ	
R244	1	1	1	GD05153140	15KΩ	
R245	1	1	1	GD05153140	15KΩ	
R246	1	1	1	GD05104140	100KΩ	
R248	1	1	1	GD05222140	2.2KΩ	
R250	1	1	1	GD05123140	12KΩ	
R251	1	1	1	GD05244140	240KΩ	
R252	1	1	1	GD05104140	100KΩ	
R253	1	1	1	GD05561140	560Ω	
R255	1	1	1	GD05100140	10Ω	
R256	1	1	1	GD05153140	15KΩ	
R257	1	1	1	GD05103140	10KΩ	
R258	1	1	1	GD05271140	270Ω	
R301	1	1	1	GD05472140	4.7KΩ	
R302	1	1	1	GD05472140	4.7KΩ	
R303	1	1	1	GD05472140	4.7KΩ	
R304	1	1	1	GD05472140	4.7KΩ	
R305	1	1		GD05303140	30KΩ	
R305			1	GD05183140	18KΩ	
R306	1	1		GD05303140	30KΩ	
R306			1	GD05183140	18KΩ	
R307	1	1	1	GD05105140	1MΩ	
R308	1	1	1	GD05105140	1MΩ	
R309	1	1		GD05204140	200KΩ	
R309			1	GD05154140	150KΩ	
R310	1	1		GD05204140	200KΩ	
R310			1	GD05154140	150KΩ	
R311	1	1	1	GD05472140	4.7KΩ	
R312	1	1	1	GD05472140	4.7KΩ	
R313	1	1		GD05301140	300Ω	

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
R313			1	GD05241140	240Ω	
R314	1	1		GD05301140	300Ω	
R314			1	GD05241140	240Ω	
R315	1	1	1	GD05102140	1KΩ	
R316	1	1	1	RA01030260	Trimming	10KΩ
R317	1	1	1	GD05473140	47KΩ	
R318	1	1	1	GD05473140	47KΩ	
R319	1	1	1	GD05101140	100Ω	
R320	1	1	1	GD05101140	100Ω	
R321	1	1	1	GD05101140	100Ω	
R322	1	1	1	GD05104140	100KΩ	
R323	1	1	1	GD05333140	33KΩ	
R325	1	1	1	GD05562140	5.6KΩ	
R326	1	1	1	RA04720050	Trimming	4.7KΩ
R327	1	1	1	GD05103140	10KΩ	
R328	1	1	1	GD05102140	1KΩ	
R329	1	1	1	GD05102140	1KΩ	
R330	1	1	1	GD05103140	10KΩ	
R331	1	1	1	GD05101140	100Ω	
R332	1	1	1	GD05103140	10KΩ	
R333	1	1	1	GD05104140	100KΩ	
R334	1	1	1	GD05104140	100KΩ	
					P100-SEMICONDUCTORS	
Q101	1	1	1	HF400451B0	F.E.T.	3SK45 (B)
Q102	1	1	1	HT305352B0	Transistor	2SC535 (B or C)
Q103	1	1	1	HT308291C0	Transistor	2SC829 (C)
Q151	1	1	1	HD20001210	Diode	1S2473 (C)
Q152	1	1	1	HD20001210	Diode	1S2473 (C)
Q201	1	1	1	HT308291C0	Transistor	2SC829 (C)
Q202	1	1	1	HT308291C0	Transistor	2SC829 (C)
Q203	1	1	1	HT308291C0	Transistor	2SC829 (C)
Q204	1	1	1	HD10003020	Diode	2OA90M
Q205	1	1	1	HD10003020	Diode	2OA90M
Q206	1	1	1	HC10009020	IC	AN7000
Q207	1	1	1	HT308291C0	Transistor	2SC829 (C)
Q208	1	1	1	HD10003020	Diode	2OA90M
Q209	1	1	1	HD20001210	Diode	1S2473 (C)
Q210	1	1	1	HT308281D0	Transistor	2SC828 (S)
Q211	1	1	1	HT308281D0	Transistor	2SC828 (S)
Q212	1	1	1	HT107222A0	Transistor	2SA722 (S or T)
Q214	1	1	1	HD10003020	Diode	2OA90M
Q301	1	1	1	HT308281D0	Transistor	2SC828 (S)
Q302	1	1	1	HT308281D0	Transistor	2SC828 (S)
Q303	1	1	1	HT308281D0	Transistor	2SC828 (S)
Q304	1	1	1	HT308281D0	Transistor	2SC828 (S)
Q305	1	1	1	HT107222A0	Transistor	2SA722 (S or T)
Q307	1	1	1	HD20001210	Diode	1S2473 (C)
Q308	1	1	1	HD30023090	Zener	WZ-071
Q310	1	1	1	HD10003020	Diode	2OA90M
Q311	1	1	1	HT107222A0	Transistor	2SA722 (S or T)

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					P100-FILTERS
F151	1	1	1	FF10045180	Ceramic Filter, AM
F201	1	1	1	FF11070050	Ceramic Filter, FM
F202	1	1	1	FF11070050	Ceramic Filter, FM
F203	1	1	1	FF11070050	Ceramic Filter, FM
					P100-COILS
L101	1	1	1	LA12026170	ANT Coil, FM
L102	1	1	1	LA12026180	ANT Coil, FM
L103	1	1	1	LO12036010	OSC Coil, FM
L104	1	1	1	LI10016010	I.F.T. FM
L105	1	1	1	LC13320020	Choke Coil 3.3μH
L106	1	1	1	LC17510010	Choke Coil 0.75μH
L151	1	1		LC13320020	Choke Coil 3.3μH
L152	1	1	1	LC13320020	Choke Coil 3.3μH
L153	1	1	1	LO10010530	OSC Coil
L154	1	1	1	LI10010710	I.F.T. AM
L201	1	1	1	LI14016240	I.F.T. FM
L202	1	1	1	LC11830020	Choke Coil 18μH
L203	1	1	1	LC23960020	Choke Coil 39mH
L204	1	1	1	LC12250030	Choke Coil 2200μH
L205	1	1	1	LC11030020	Choke Coil 10μH
L301	1	1	1	LS20010010	M.P.X. Coil
L302	1	1	1	LS20010010	M.P.X. Coil
					P700-MAIN/POWER CIRCUIT BOARD
P700	1	1	1	YG22760010	P.W. Board, Main/Power
	1	1		ZZ22791010	P.W. Board Assembly
			1	ZZ22798110	P.W. Board Assembly
					P700-CAPACITORS
C701	1	1	1	DK16102300	Ceramic 0.001μF ±10%
C702	1	1	1	DK16102300	Ceramic 0.001μF ±10%
C703	1	1	1	EE22502550	Elect 2.2μF 25V
C704	1	1	1	EE22502550	Elect 2.2μF 25V
C705	1	1	1	EE47601050	Elect 47μF 10V
C706	1	1	1	EE47601050	Elect 47μF 10V
C711	1	1	1	DD10050360	Ceramic 5pF ±0.25pF
C712	1	1	1	DD10050360	Ceramic 5pF ±0.25pF
C713	1	1	1	DF17104300	Film 0.1μF ±20%
C714	1	1	1	DF17104300	Film 0.1μF ±20%
C723	1	1	1	DF17104540	Film 0.1μF ±20% 100V
C724	1	1	1	DF17104540	Film 0.1μF ±20% 100V
C729	1	1	1	EA10703590	Elect 100μF 35V
C730	1	1	1	EA10703590	Elect 100μF 35V
C731	1	1	1	DD15500500	Ceramic 50pF ±5% 200V
C732	1	1	1	DD15500500	Ceramic 50pF ±5% 200V
C735	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C801	1	1	1	EB68803550	Elect 6800μF 35V
C802	1	1	1	EB68803550	Elect 6800μF 35V
C803	1	1	1	DK18103510	Ceramic 0.01μF +80%—20%
C804	1	1	1	DK18103510	Ceramic 0.01μF +80%—20%
C805	1	1	1	EA47705090	Elect 470μF 50V
C806	1	1	1	EA10703590	Elect 100μF 35V
C807	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C808	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C809	1	1	1	EA10602590	Elect 10μF 25V
C810	1	1	1	EA10703590	Elect 100μF 35V
C811	1	1	1	EA47701690	Elect 470μF 16V
C812	1	1	1	EA22801690	Elect 2200μF 16V
C813	1	1	1	DK17103300	Ceramic 0.01μF ±20%

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
C814	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C815	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C816	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C817	1	1	1	EA10601690	Elect 10μF 16V
C819	1	1	1	DK18103510	Ceramic 0.01μF +80%—20%
C820	1	1	1	DK18103510	Ceramic 0.01μF +80%—20%
C821	1	1	1	DK18103510	Ceramic 0.01μF +80%—20%
					P700-RESISTORS (All Resistors are ±5% and ¼W)
R701	1	1	1	GD05102140	1KΩ
R702	1	1	1	GD05102140	1KΩ
R703	1	1	1	GD05104140	100KΩ
R704	1	1	1	GD05104140	100KΩ
R705	1	1		GD05431140	430Ω
R705			1	GD05682140	6.8KΩ
R706	1	1		GD05431140	430Ω
R706			1	GD05682140	6.8KΩ
R707	1	1	1	GD05914140	910KΩ
R708	1	1	1	GD05914140	910KΩ
R709	1	1	1	GD05105140	1MΩ
R710	1	1	1	GD05105140	1MΩ
R711	1	1	1	GD05222140	2.2KΩ
R712	1	1	1	GD05222140	2.2KΩ
R713	1	1	1	GD05152140	1.5KΩ
R714	1	1	1	GD05152140	1.5KΩ
R717	1	1	1	RA01020250	Trimming 1KΩ (B)
R718	1	1	1	RA01020250	Trimming 1KΩ (B)
R721	1	1	1	GD05104140	100KΩ
R722	1	1	1	GD05104140	100KΩ
R723	1	1	1	GD05912140	9.1KΩ
R724	1	1	1	GD05912140	9.1KΩ
R725	1	1	1	GD05103140	10KΩ
R726	1	1	1	GD05103140	10KΩ
R727	1	1	1	GD05154140	150KΩ
R728	1	1	1	GD05154140	150KΩ
R729	1	1	1	GD05154140	150KΩ
R730	1	1	1	GD05154140	150KΩ
R733	1	1	1	GG05102140	1KΩ
R734	1	1	1	GG05102140	1KΩ
R735	1	1	1	GG05102140	1KΩ
R736	1	1	1	GG05102140	1KΩ
R737	1	1	1	GG05101140	100Ω
R738	1	1	1	GG05101140	100Ω
R739	1	1	1	GG05101140	100Ω
R740	1	1	1	GG05101140	100Ω
R741	1	1	1	GN10472030	0.47Ω 3W
R742	1	1	1	GN10472030	0.47Ω 3W
R743	1	1	1	GN10472030	0.47Ω 3W
R744	1	1	1	GN10472030	0.47Ω 3W
R745	1	1	1	GA05100020	10Ω 2W
R746	1	1	1	GA05100020	10Ω 2W
R747	1	1	1	RC10022120	2.2Ω ½W
R748	1	1	1	RC10022120	2.2Ω ½W
R749	1	1	1	GA05331020	330Ω 2W
R750	1	1	1	GA05331020	330Ω 2W
R751	1	1	1	GG05151120	150Ω ½W
R752	1	1	1	GG05151120	150Ω ½W
R753	1	1	1	GG05101140	100Ω

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
R754	1	1	1	GG05101140	100Ω
R757	1	1		GD05682140	6.8KΩ
R758	1	1		GD05682140	6.8KΩ
R759	1	1	1	GD05102140	1KΩ
R760	1	1	1	GD05102140	1KΩ
R761	1	1	1	GG05221140	220Ω
R762	1	1	1	GG05221140	220Ω
R801	1	1	1	GP05151030	150Ω 3W
R802	1	1	1	GG05681140	680Ω
R803	1	1	1	GG05821140	820Ω
R804	1	1	1	GD05123140	12KΩ
R805	1	1	1	GD05822140	8.2KΩ
R806	1	1	1	GD05563140	56KΩ
					P700-SEMICONDUCTORS
Q701	1	1	1	HC10003360	IC LM391-80
Q702	1	1	1	HC10003360	IC LM391-80
Q703	1	1	1	HT404152B0	Transistor 2SD415 (Q or R)
Q704	1	1	1	HT404152B0	Transistor 2SD415 (Q or R)
Q705	1	1	1	HT205492B0	Transistor 2SB549 (Q or R)
Q706	1	1	1	HT205492B0	Transistor 2SB549 (Q or R)
Q707	1	1	1	HT110602B0	Transistor 2SA1060 (Q or R)
Q708	1	1	1	HT110602B0	Transistor 2SA1060 (Q or R)
Q709	1	1	1	HT324842B0	Transistor 2SC2484 (Q or R)
Q710	1	1	1	HT324842B0	Transistor 2SC2484 (Q or R)
Q711	1	1	1	HD20005010	Diode W06B
Q712	1	1	1	HD20005010	Diode W06B
Q713	1	1	1	HD20005010	Diode W06B
Q714	1	1	1	HD20005010	Diode W06B
Q717	1	1	1	HV00008120	Varistor MV-1Y
Q718	1	1	1	HV00008120	Varistor MV-1Y
Q719	1	1	1	HD20003210	Diode 1S2471
Q720	1	1	1	HD20003210	Diode 1S2471
Q721	1	1	1	HD20003210	Diode 1S2471
Q722	1	1	1	HD20003210	Diode 1S2471
Q801	1	1	1	HE10001030	Diode DS133B
Q802	1	1	1	HE10001030	Diode DS133B
Q804	1	1	1	HD20022100	Diode 10E1
Q805	1	1	1	HT403131Q0	Transistor 2SD313 (E)
Q806	1	1	1	HT309452A0	Transistor 2SC945 (Q or R)
Q807	1	1	1	HD30022090	Zener BZ-120
Q808	1	1	1	HD20010290	Diode S3V-20
Q809	1	1	1	HD20010290	Diode S3V-20
Q810	1	1	1	HD20010290	Diode S3V-20
Q811	1	1	1	HD20010290	Diode S3V-20
Q812	1	1	1	HE10001030	Diode DS133B
Q813	1	1	1	HE10001030	Diode DS133B

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					P700-MISCELLANEOUS
F701	1	1		FS10400050	Fuse 4A 250V
F702	1	1		FS10400050	Fuse 4A 250V
F701			1	FS10400800	Fuse 4A 250V
F702			1	FS10400800	Fuse 4A 250V
J701	1	1		YJ08000170	Jack
J701			1	YJ08000270	Jack
J702	1	1		YJ08000170	Jack
J702			1	YJ08000270	Jack
J703	1	1		YJ08000170	Jack
J703			1	YJ08001270	Jack
J704	1	1		YJ08000170	Jack
J704			1	YJ08000270	Jack
L701	1	1	1	LL23915120	Choke Coil
L702	1	1	1	LL23915120	Choke Coil
					PC00-ANT./INPUT CIRCUIT BOARD
PC00	1	1	1	YH22790210	P.W. Board, ANT./INPUT
	1	1	1	ZZ22790210	P.W. Board Assembly
JC01	1	1	1	YT01040182	Terminal, Antenna
LC01	1	1	1	LB30075260	Balun Coil
LC02	1	1	1	LC11540020	Choke Coil 150μH
					PE01-TONE/PHONO MUTING CIRCUIT BOARD
PE01	1	1	1	YK22793310	P.W. Board, Tone/Phone Muting
	1	1	1	ZZ22793310	P.W. Board Assembly
					PE01-CAPACITORS
CE01	1	1	1	EE10505050	Elect 1μF 50V
CE02	1	1	1	EE10505050	Elect 1μF 50V
CE05	1	1	1	EE22502550	Elect 2.2μF 25V
CE06	1	1	1	EE22502550	Elect 2.2μF 25V
CE07	1	1	1	EE47405040	Elect 0.47μF 50V
CE08	1	1	1	EE47405040	Elect 0.47μF 50V
CE09	1	1	1	EE22502550	Elect 2.2μF 25V
CE10	1	1	1	EE22502550	Elect 2.2μF 25V
CE11	1	1	1	EE47405040	Elect 0.47μF 50V
CE12	1	1	1	EE47405040	Elect 0.47μF 50V
CE15	1	1	1	EE10703590	Elect 100μF 35V
CM01	1	1	1	EA10705090	Elect 100μF 50V
CM02	1	1	1	EA10701690	Elect 100μF 16V
CM03	1	1	1	EA22701090	Elect 220μF 10V
CM04	1	1	1	DK18102300	Ceramic 0.001μF ±20%
C401	1	1	1	EE33502550	Elect 3.3μF 25V
C402	1	1	1	EE33502550	Elect 3.3μF 25V
C403	1	1	1	DD15470360	Ceramic 47pF ±5%
C404	1	1	1	DD15470360	Ceramic 47pF ±5%
C405	1	1	1	EA10701090	Elect 100μF 10V
C406	1	1	1	EA10701090	Elect 100μF 10V
C407	1	1	1	DK16221300	Ceramic 220pF ±10%
C408	1	1	1	DK16221300	Ceramic 220pF ±10%
C409	1	1	1	DF15123300	Film 0.012μF ±5%
C410	1	1	1	DF15123300	Film 0.012μF ±5%

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
C411	1	1	1	DF15332300	Film 0.0033μF ±5%
C412	1	1	1	DF15332300	Film 0.0033μF ±5%
C413	1	1	1	EE10505050	Elect 1μF 50V
C414	1	1	1	EE10505050	Elect 1μF 50V
C415	1	1	1	EA10505090	Elect 1μF 50V
C416	1	1	1	EA10703590	Elect 100μF 35V
C417	1	1	1	DD15220360	Ceramic 22pF ±5%
C418	1	1	1	DD15220360	Ceramic 22pF ±5%
C419	1	1	1	DK16332300	Ceramic 0.033μF ±10%
C420	1	1	1	DK16332300	Ceramic 0.033μF ±10%
					PE01-RESISTORS
					(All Resistors are ±5% and ¼W)
RE01	1	1	1	GD05102140	1KΩ
RE02	1	1	1	GD05123140	12KΩ
RE03	1	1	1	GD05104140	100KΩ
RE04	1	1	1	GD05104140	100KΩ
RE05	1	1	1	GD05102140	1KΩ
RE06	1	1	1	GD05102140	1KΩ
RE07	1	1	1	GD05822140	8.2KΩ
RE08	1	1	1	GD05822140	8.2KΩ
RE09	1	1	1	GD05163140	16KΩ
RE10	1	1	1	GD05163140	16KΩ
RE11	1	1	1	GD05224140	220KΩ
RE12	1	1	1	GD05224140	220KΩ
RE13	1	1	1	GD05623140	62KΩ
RE14	1	1	1	GD05623140	62KΩ
RE15	1	1	1	GD05225140	2.2MΩ
RE16	1	1	1	GD05225140	2.2MΩ
RE17	1	1	1	GD05221140	220Ω
RE18	1	1	1	GD05221140	220Ω
RE19	1	1	1	GD05103140	10KΩ
RE20	1	1	1	GD05103140	10KΩ
RE21	1	1	1	GD05104140	100KΩ
RE22	1	1	1	GD05104140	100KΩ
RE23	1	1	1	GD05163140	16KΩ
RE24	1	1	1	GD05163140	16KΩ
RE25	1	1	1	GD05101140	100Ω
RM01	1	1	1	GD05474140	470KΩ
RM02	1	1	1	GD05104140	100KΩ
RM03	1	1	1	GD05564140	560KΩ
RM04	1	1	1	GD05010140	10Ω
RM05	1	1	1	GD05273140	27KΩ
RM06	1	1	1	GD05153140	15KΩ
RM07	1	1	1	GD05101140	100Ω
RM08	1	1	1	GD05103140	10KΩ
RM09	1	1	1	GD05684140	680KΩ
RM10	1	1	1	GD05100140	10Ω
R401	1	1	1	GD05182140	1.8KΩ
R402	1	1	1	GD05182140	1.8KΩ
R403	1	1	1	GD05431140	430Ω
R404	1	1	1	GD05431140	430Ω
R405	1	1	1	GD05563140	56KΩ
R406	1	1	1	GD05563140	56KΩ
R407	1	1	1	GD05274140	270KΩ
R408	1	1	1	GD05274140	270KΩ
R409	1	1	1	GD05184140	180KΩ
R410	1	1	1	GD05184140	180KΩ

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
R411	1	1	1	GD05274140	270KΩ
R412	1	1	1	GD05274140	270KΩ
R413	1	1	1	GD05223140	22KΩ
R414	1	1	1	GD05223140	22KΩ
R415	1	1	1	GD05681140	680Ω
R416	1	1	1	GD05681140	680Ω
R417	1	1	1	GD05224140	220KΩ
R418	1	1	1	GD05224140	220KΩ
R419	1	1	1	GD05223140	22KΩ
R420	1	1	1	GD05223140	22KΩ
R421	1	1	1	GG05181140	180Ω
R422	1	1	1	GD05184140	180KΩ
R423	1	1	1	GD05181140	180Ω
R424	1	1	1	GD05181140	180Ω
					PE01-SEMICONDUCTORS
Q401	1	1	1	HC10012060	IC μPC1024H
Q402	1	1	1	HC10012060	IC μPC1024H
QE01	1	1	1	HT312222B0	Transistor 2SC1222 (E or U)
QE02	1	1	1	HT312222B0	Transistor 2SC1222 (E or U)
QE03	1	1	1	HT107501E0	Transistor 2SA750 (E)
QE04	1	1	1	HT107501E0	Transistor 2SA750 (E)
QE05	1	1	1	HT312221E0	Transistor 2SC1222 (E)
QE06	1	1	1	HT312221E0	Transistor 2SC1222 (E)
QE07	1	1	1	HT107501E0	Transistor 2SA750E
QE08	1	1	1	HT107501E0	Transistor 2SA750E
QM01	1	1	1	HD20011050	Diode 1S1555
QM02	1	1	1	HT308281D0	Transistor 2SC828 (S)
QM03	1	1	1	HT308281D0	Transistor 2SC828 (S)
QM04	1	1	1	HT309452C0	Transistor 2SC945 (P or K)
QM05	1	1	1	HT309452C0	Transistor 2SC945 (P or K)
QM06	1	1	1	HT309452C0	Transistor 2SC945 (P or K)
QM07	1	1	1	HT30024090	Zener WZ-120
					PE01-PLUGS
JE01	1	1	1	YP06001500	Plug
JE02	1	1	1	YP06001510	Plug
JE03	1	1	1	YP06001530	Plug
JE04	1	1	1	YP06001210	Plug
JE10	1	1	1	YP06001050	Plug (5P)
JE11	1	1	1	YP06001060	Plug (7P)
JE12	1	1	1	YP06001040	Plug (3P)

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					PF01-TONE VOLUME CIRCUIT BOARD
PF01	1	1	1	YK22792210	P.W. Board, Tone Volume
	1	1	1	ZZ22792210	P.W. Board Assembly
					PF01-CAPACITORS
CF01	1	1	1	DF16333300	Film 0.033μF ±10%
CF02	1	1	1	DF16333300	Film 0.033μF ±10%
CF03	1	1	1	DF16333300	Film 0.033μF ±10%
CF04	1	1	1	DF16333300	Film 0.033μF ±10%
CF05	1	1	1	DF16122300	Film 0.0012μF ±10%
CF06	1	1	1	DF16122300	Film 0.0012μF ±10%
CF07	1	1	1	DD15221360	Ceramic 220pF ±5%
CF08	1	1	1	DD15221360	Ceramic 220pF ±5%
					PF01-RESISTORS
					(All resistors are ±5% and ¼W)
RF01	1	1	1	GD05163140	16KΩ
RF02	1	1	1	GD05163140	16KΩ
RF03	1	1	1	GD05163140	16KΩ
RF04	1	1	1	GD05163140	16KΩ
RF05	1	1	1	GD05183140	18KΩ
RF06	1	1	1	GD05183140	18KΩ
RF07	1	1	1	GD05153140	15KΩ
RF08	1	1	1	GD05153140	15KΩ
RF09	1	1	1	RM01040210	Variable 100KΩ (B)
RF10	1	1	1	RM01040210	Variable 100KΩ (B)
					PF01-JACK
JF01	1	1	1	YJ06001660	Jack
					PJ00-TAPE PRE AMP. CIRCUIT BOARD
PJ00	1	1	1	YG22790010	P.W. Board, Tape Pre Amp.
	1	1	1	ZZ22792010	P.W. Board Assembly
					PJ00-CAPACITORS
CJ01	1	1	1	DK16681300	Ceramic 680pF ±10%
CJ02	1	1	1	DK16681300	Ceramic 680pF ±10%
CJ03	1	1	1	DD15470370	Ceramic 47pF ±5%
CJ04	1	1	1	DD15470370	Ceramic 47pF ±5%
CJ05	1	1	1	EA22603590	Elect 22μF 35V
CJ06	1	1	1	EA22603590	Elect 22μF 35V
CJ07	1	1	1	EE10601650	Elect 10μF 16V
CJ08	1	1	1	EE10601650	Elect 10μF 16V
CJ09	1	1	1	DD15101370	Ceramic 100pF ±5%
CJ10	1	1	1	DD15101370	Ceramic 100pF ±5%
CJ11	1	1	1	DF15223300	Film 0.022μF ±5%
CJ12	1	1	1	DF15223300	Film 0.022μF ±5%
CJ13	1	1	1	EA47601090	Elect 47μF 10V
CJ14	1	1	1	EA47601090	Elect 47μF 10V
CJ15	1	1	1	DD15470370	Ceramic 47pF ±5%
CJ16	1	1	1	DD15470370	Ceramic 47pF ±5%
CJ17	1	1	1	EA22502590	Elect 2.2μF 25V
CJ18	1	1	1	EA22502590	Elect 2.2μF 25V
CJ19	1	1	1	EA22502590	Elect 2.2μF 25V
CJ20	1	1	1	EA22502590	Elect 2.2μF 25V

REF. DESIG.	Q'TY U	C	N	PART NO.	DECRIPTION
CJ21	1	1	1	EA22703590	Elect 220μF 35V
CJ22	1	1	1	EA22703590	Elect 220μF 35V
CJ23	1	1	1	EE10505050	Elect 1μF 50V
CJ24	1	1	1	EE10505050	Elect 1μF 50V
CJ25	1	1	1	DD15470370	Ceramic 47pF ±5%
CJ26	1	1	1	DD15470370	Ceramic 47pF ±5%
CJ27	1	1	1	EA10601690	Elect 10μF 16V
CJ28	1	1	1	EA10601690	Elect 10μF 16V
CJ29	1	1	1	EA10601690	Elect 10μF 16V
CJ30	1	1	1	EA10601690	Elect 10μF 16V
CJ31	1	1	1	EA22502590	Elect 2.2μF 25V
CJ32	1	1	1	EA22502590	Elect 2.2μF 25V
CJ33	1	1	1	DF15102300	Film 0.001μF ±5%
CJ34	1	1	1	DF15102300	Film 0.001μF ±5%
CJ35	1	1	1	EA47503590	Elect 4.7μF 35V
CJ36	1	1	1	EA47503590	Elect 4.7μF 35V
CJ37	1	1	1	EA47503590	Elect 4.7μF 35V
CJ38	1	1	1	EA47503590	Elect 4.7μF 35V
CJ39	1	1	1	EE33405040	Elect 0.33μF 50V
CJ40	1	1	1	EE33405040	Elect 0.33μF 50V
CJ41	1	1	1	DF15473300	Film 0.047μF ±5%
CJ42	1	1	1	DF15473300	Film 0.047μF ±5%
CJ43	1	1	1	DF15183300	Film 0.018μF ±5%
CJ44	1	1	1	DF15183300	Film 0.018μF ±5%
CJ45	1	1	1	DF15223300	Film 0.022μF ±5%
CJ46	1	1	1	DF15223300	Film 0.022μF ±5%
CJ47	1	1	1	EA47503590	Elect 4.7μF 35V
CJ48	1	1	1	EA47503590	Elect 4.7μF 35V
CJ49	1	1	1	DF15152300	Film 1500pF ±5%
CJ50	1	1	1	DF15152300	Film 1500pF ±5%
CJ51	1	1	1	DF55151510	Film 150pF ±5% 125V
CJ52	1	1	1	DF55151510	Film 150pF ±5% 125V
CJ53	1	1	1	DF16472510	Film 4700pF ±10% 200V
CJ54	1	1	1	DF16472510	Film 4700pF ±10% 200V
CJ55	1	1	1	DF15123050	Film 0.012μF ±5%
CJ56	1	1	1	DF16103520	Film 0.01μF ±10% 100V
CJ57	1	1	1	EE10505050	Elect 1μF 50V
CJ58	1	1	1	DF55271510	Film 270pF ±5%
CJ59	1	1	1	DF55271510	Film 270pF ±5%
CJ60	1	1	1	DF16472530	Film 0.0047μF ±10% 100V
CJ61	1	1	1	DF16103520	Film 0.01μF ±10% 100V
CJ62	1	1	1	EA10701090	Elect 100μF 10V
CX01	1	1	1	EA47405090	Elect 0.47μF 50V
CX02	1	1	1	EA47405090	Elect 0.47μF 50V
CX03	1	1	1	DD15330370	Ceramic 33pF ±5%
CX04	1	1	1	DD15330370	Ceramic 33pF ±5%
CX05	1	1	1	EA10603590	Elect 10μF 35V
CX06	1	1	1	EA10603590	Elect 10μF 35V
CX07	1	1	1	EA47503590	Elect 4.7μF 35V
CX08	1	1	1	EA47503590	Elect 4.7μF 35V

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
C601	1	1	1	EE10505050	Elect 1μF 50V
C602	1	1	1	EE10505050	Elect 1μF 50V
C603	1	1	1	DD15820370	Ceramic 82pF ±5%
C604	1	1	1	DD15820370	Ceramic 82pF ±5%
C605	1	1	1	DF15392300	Film 3900pF ±5%
C606	1	1	1	DF15392300	Film 3900pF ±5%
C609	1	1	1	DF15222300	Film 2200pF ±5%
C610	1	1	1	DF15222300	Film 2200pF ±5%
C611	1	1	1	EA10601690	Elect 10μF 16V
C612	1	1	1	EA10601690	Elect 10μF 16V
C613	1	1	1	EE10405040	Elect 0.1μF 50V
C614	1	1	1	EE10405040	Elect 0.1μF 50V
C615	1	1	1	EE33405040	Elect 0.33μF 50V
C616	1	1	1	EE33405040	Elect 0.33μF 50V
C617	1	1	1	DF15473300	Film 0.47μF ±5%
C618	1	1	1	DF15473300	Film 0.47μF ±5%
C619	1	1	1	DF15472300	Film 4700pF ±5%
C620	1	1	1	DF15472300	Film 4700pF ±5%
C621	1	1	1	EA10601690	Elect 10μF 16V
C622	1	1	1	EA10601690	Elect 10μF 16V
C623	1	1	1	DF15273300	Film 0.027μF ±5%
C624	1	1	1	DF15273300	Film 0.027μF ±5%
C625	1	1	1	EA10601690	Elect 10μF 16V
C626	1	1	1	EA10601690	Elect 10μF 16V
C627	1	1	1	DF15562300	Film 5600pF ±5%
C628	1	1	1	DF15562300	Film 5600pF ±5%
C629	1	1	1	EA10701090	Elect 100μF 10V
C630	1	1	1	EA10701090	Elect 100μF 10V
C631	1	1	1	EA10701690	Elect 100μF 16V
C632	1	1	1	EA10701690	Elect 100μF 16V
C633	1	1	1	EA47601090	Elect 47μF 10V
C634	1	1	1	EA47601090	Elect 47μF 10V
C635	1	1	1	EA10601690	Elect 10μF 16V
C636	1	1	1	EA10601690	Elect 10μF 16V
C637	1	1	1	EA10601690	Elect 10μF 16V
C638	1	1	1	EA10601690	Elect 10μF 16V
					PJ00-RESISTORS (All resistors are ±5% and ¼W)
RJ01	1	1	1	GD05100140	10Ω
RJ02	1	1	1	GD05100140	10Ω
RJ05	1	1	1	GD05103140	10KΩ
RJ06	1	1	1	GD05103140	10KΩ
RJ07	1	1	1	RN05184140	180KΩ
RJ08	1	1	1	RN05184140	180KΩ
RJ09	1	1	1	GD05221140	220Ω
RJ10	1	1	1	GD05221140	220Ω
RJ11	1	1	1	GD05224140	220KΩ
RJ12	1	1	1	GD05224140	220KΩ

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
RJ13	1	1	1	GD05182140	1.8KΩ
RJ14	1	1	1	GD05182140	1.8KΩ
RJ15	1	1	1	GD05302140	3KΩ
RJ16	1	1	1	GD05302140	3KΩ
RJ17	1	1	1	RA02020180	Trimming 2KΩ
RJ18	1	1	1	RA02020180	Trimming 2KΩ
RJ19	1	1	1	GD05133140	13KΩ
RJ20	1	1	1	GD05133140	13KΩ
RJ21	1	1	1	GD05104140	100KΩ
RJ22	1	1	1	GD05104141	100KΩ
RJ23	1	1	1	GD05271140	270Ω
RJ24	1	1	1	GD05271140	270Ω
RJ25	1	1	1	GD05151140	150Ω
RJ26	1	1	1	GD05151140	150Ω
RJ27	1	1	1	GD05333140	33KΩ
RJ28	1	1	1	GD05333140	33KΩ
RJ29	1	1	1	GD05332140	3.3KΩ
RJ30	1	1	1	GD05332140	3.3KΩ
RJ31	1	1	1	RA05030090	Trimming 50KΩ
RJ32	1	1	1	RA05030090	Trimming 50KΩ
RJ33	1	1	1	GD05472140	4.7KΩ
RJ34	1	1	1	GD05472140	4.7KΩ
RJ35	1	1	1	GD05474140	470KΩ
RJ36	1	1	1	GD05474140	470KΩ
RJ37	1	1	1	GD05123140	12KΩ
RJ38	1	1	1	GD05123140	12KΩ
RJ39	1	1	1	GD05562140	5.6KΩ
RJ40	1	1	1	GD05562140	5.6KΩ
RJ41	1	1	1	GA05561010	560Ω 1W
RJ42	1	1	1	GA05561010	560Ω 1W
RJ43	1	1	1	GD05333140	33KΩ
RJ44	1	1	1	GD05333140	33KΩ
RJ45	1	1	1	GD05165140	1.6MΩ
RJ46	1	1	1	GD05165140	1.6MΩ
RJ47	1	1	1	GD05332140	3.3KΩ
RJ48	1	1	1	GD05332140	3.3KΩ
RJ49	1	1	1	GD05272140	2.7KΩ
RJ50	1	1	1	GD05272140	2.7KΩ
RJ51	1	1	1	GD05123140	12KΩ
RJ52	1	1	1	GD05123140	12KΩ
RJ53	1	1	1	GD05561140	560Ω
RJ54	1	1	1	GD05561140	560Ω
RJ55	1	1	1	GD05362140	3.6KΩ
RJ56	1	1	1	GD05362140	3.6KΩ
RJ57	1	1	1	RA02030060	Trimming 20KΩ
RJ58	1	1	1	RA02030060	Trimming 20KΩ
RJ59	1	1	1	GD05103140	10KΩ
RJ60	1	1	1	GD05103140	10KΩ
RJ61	1	1	1	GD05561140	560Ω
RJ62	1	1	1	GD05561140	560Ω

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
RJ63	1	1	1	GD05103140	10KΩ	
RJ64	1	1	1	GD05103140	10KΩ	
RJ65	1	1	1	GD05564140	560KΩ	
RJ66	1	1	1	GD05564140	560KΩ	
RJ67	1	1	1	GD05333140	33KΩ	
RJ68	1	1	1	GD05333140	33KΩ	
RJ69	1	1	1	GD05153140	15KΩ	
RJ70	1	1	1	GD05153140	15KΩ	
RJ71	1	1	1	GD05102140	1KΩ	
RJ72	1	1	1	GD05102140	1KΩ	
RJ73	1	1	1	GD05182140	1.8KΩ	
RJ74	1	1	1	GD05182140	1.8KΩ	
RJ75	1	1	1	GD05151140	150Ω	
RJ76	1	1	1	GD05151140	150Ω	
RJ77	1	1	1	GD05680140	68Ω	
RJ78	1	1	1	GD05680140	68Ω	
RJ79	1	1	1	GD05103140	10KΩ	
RJ80	1	1	1	GD05103140	10KΩ	
RJ81	1	1	1	GD05154140	150KΩ	
RJ82	1	1	1	GD05154140	150KΩ	
RJ83	1	1	1	GD05120140	12Ω	
RJ84	1	1	1	GD05120140	12Ω	
RJ85	1	1	1	RA01040180	Trimming	100KΩ
RJ86	1	1	1	RA01040180	Trimming	100KΩ
RJ87	1	1	1	GA05561010	560Ω	1W
RJ88	1	1	1	GA05331010	330Ω	1W
RJ89	1	1	1	GD05101140	100Ω	
RJ90	1	1	1	GD05154140	150KΩ	
RJ91	1	1	1	GA05122010	1.2KΩ	1W
RJ92	1	1	1	GD05471140	470Ω	
RJ93	1	1	1	GD05104140	100KΩ	
RJ94	1	1	1	GD05104140	100KΩ	
RJ95	1	1	1	RC10392120	3.9KΩ	½W
RX01	1	1	1	GD05102140	1KΩ	
RX02	1	1	1	GD05102140	1KΩ	
RX03	1	1	1	GD05165140	1.6MΩ	
RX04	1	1	1	GD05165140	1.6MΩ	
RX05	1	1	1	GD05332140	3.3KΩ	
RX06	1	1	1	GD05332140	3.3KΩ	
RX07	1	1	1	RA02020180	Trimming	2KΩ
RX08	1	1	1	RA02020180	Trimming	2KΩ
RX09	1	1	1	GD05561140	560Ω	
RX10	1	1	1	GD05561140	560Ω	
R601	1	1	1	GD05274140	270KΩ	
R602	1	1	1	GD05274140	270KΩ	
R603	1	1	1	GD05564140	560KΩ	
R604	1	1	1	GD05564140	560KΩ	
R605	1	1	1	GD05274140	270KΩ	
R606	1	1	1	GD05274140	270KΩ	
R607	1	1	1	GD05473140	47KΩ	
R608	1	1	1	GD05473140	47KΩ	
R609	1	1	1	GD05332140	3.3KΩ	
R610	1	1	1	GD05332140	3.3KΩ	

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
R611	1	1	1	GD05181140	180Ω	
R612	1	1	1	DG05181140	180Ω	
R613	1	1	1	GD05104140	100KΩ	
R614	1	1	1	GD05104140	100KΩ	
R615	1	1	1	GA05152010	1.5KΩ	1W
R616	1	1	1	GA05152010	1.5KΩ	1W
R617	1	1	1	GD05151140	150Ω	
R618	1	1	1	GD05151140	150Ω	
R619	1	1	1	GD05122140	1.2KΩ	
R620	1	1	1	GD05122140	1.2KΩ	
R621	1	1	1	GD05105140	1MΩ	
R622	1	1	1	GD05105140	1MΩ	
R623	1	1	1	GD05332140	3.3KΩ	
R624	1	1	1	GD05332140	3.3KΩ	
R625	1	1	1	GD05821140	820Ω	
R626	1	1	1	GD05821140	820Ω	
					PJ00-SEMICONDUCTORS	
QJ01	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ02	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ03	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ04	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ05	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ06	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ07	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ08	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ09	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ10	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ11	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ12	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ13	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ14	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QJ51	1	1	1	HT313181R0	Transistor	2SC1318 (R)
QJ52	1	1	1	HT313181R0	Transistor	2SC1318 (R)
QJ53	1	1	1	HD30023090	Zener	WZ071
QJ54	1	1	1	HD20011050	Diode	1S1555
QJ55	1	1	1	HT309451Q0	Transistor	2SC945 (Q)
QX01	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QX02	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QX03	1	1	1	HD10003020	Diode	2OA90
QX04	1	1	1	HD10003020	Diode	2OA90
QX05	1	1	1	HD10003020	Diode	2OA90
QX06	1	1	1	HD10003020	Diode	2OA90
QX07	1	1	1	HT317400S0	Transistor	2SC1740LN (S)
QX08	1	1	1	HT317400S0	Transistor	2SC1740LN (S)

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	QTY U	QTY C	QTY N	PART NO.	DESCRIPTION
Q601	1	1	1	HC10001360	IC LM 1011AN
Q602	1	1	1	HC10001360	IC LM 1011AN
Q603	1	1	1	HT402272A0	Transistor 2SD227 (Q or V)
Q604	1	1	1	HT402272A0	Transistor 2SD227 (Q or V)
Q605	1	1	1	HD20011050	Diode 1S1555
Q606	1	1	1	HD20011050	Diode 1S1555
Q607	1	1	1	HD20011050	Diode 1S1555
Q608	1	1	1	HD20011050	Diode 1S1555
Q609	1	1	1	HD20011050	Diode 1S1555
Q610	1	1	1	HD20011050	Diode 1S1555
Q611	1	1	1	HD10003020	Diode 2OA90
Q612	1	1	1	HD10003020	Diode 2OA90
					PJ00-COILS
LJ01	1	1	1	LC24750040	Choke Coil 4.7mH
LJ02	1	1	1	LC24750040	Choke Coil 4.7mH
LJ03	1	1	1	LC22260040	Choke Coil 22mH
LJ04	1	1	1	LC22260040	Choke Coil 22mH
LJ51	1	1	1	TC10140060	OSC Transformer
LJ52	1	1	1	LC12240050	Choke Coil 220μH
L601	1	1	1	LC23660030	Choke Coil 36mH
L602	1	1	1	LC23660030	Choke Coil 36mH
L603	1	1	1	LS70305010	Choke Coil 22mH
L604	1	1	1	LS70305010	Choke Coil 22mH
					PJ00-MISCELLANEOUS
J001	1	1	1	YP06001050	Plug
SJ01	1	1	1	SS20020010	Slide Switch, Rec/Play
					PP00-FUSE CIRCUIT BOARD
PP00		1		YF22790010	P.W. Board, Fuse
		1		ZZ22790010	P.W. Board Assembly
PP00			1	YF24710010	P.W. Board, Fuse
			1	ZZ22798010	P.W. Board Assembly
					PP00-FUSE
FP01		1		FS10600900	Fuse 6A 250V
FP01			1	FS10315800	Fuse 3.15AT 250V
FP02		1		FS10600900	Fuse 6A 250V
FP02			1	FS10315800	Fuse 3.15AT 250V
FP03		1		FS10100900	Fuse 1A 250V
FP03			1	FS10100800	Fuse 1AT 250V
FP04		1		FS10150900	Fuse 1.5A 250V
FP04			1	FS10140800	Fuse 1.4AT 250V
FP05		1		FS10100900	Fuse 1A 250V
FP05			1	FS10100800	Fuse 1AT 250V
					PP00-JACK
JP01 ~ JP10		10	10	YJ08000200	Jack, Fuse Holder
JP11		1	1	YP06001560	Plug, AC Input

REF. DESIG.	QTY U	QTY C	QTY N	PART NO.	DESCRIPTION
					PS00-VOLUME/PUSH SWITCH CIRCUIT BOARD
PS00	1	1	1	YK22791420	P.W. Board, Volume/Push Switch
	1	1		ZZ22791420	P.W. Board Assembly
			1	ZZ22798420	P.W. Board Assembly
					PS00-CAPACITORS
CS03	1	1		DF16563300	Film 0.056μF ±10%
CS04	1	1		DF16563300	Film 0.056μF ±10%
CS05	1	1	1	DF16104300	Film 0.1μF ±10%
CS06	1	1	1	DF16104300	Film 0.1μF
CS07	1	1	1	DK16471300	Ceramic 470pF ±10%
CS08	1	1	1	DK16471300	Ceramic 470pF ±10%
CS09			1	EE33405040	Elect 0.33μH 50V
CS10			1	EE33405040	Elect 0.33μH 50V
CS11			1	DF16104300	Film 0.1μF ±10%
CS12			1	DF16104300	Film 0.1μF ±10%
					PS00-RESISTORS (All resistors are ±5% and ¼W)
RS05			1	GD05363140	36KΩ
RS06			1	GD05363140	36KΩ
RS07	1	1	1	GD05472140	4.7KΩ
RS08	1	1	1	GD05472140	4.7KΩ
RS09	1	1	1	GD05223140	22KΩ
RS10	1	1	1	GD05223140	22KΩ
RS11	1	1	1	GD05332140	3.3KΩ
RS12	1	1	1	GD05332140	3.3KΩ
RS13	1	1	1	GD05471140	470Ω
RS14	1	1	1	GD05471140	470Ω
RS15	1	1	1	GD05103140	10KΩ
RS16	1	1	1	GD05103140	10KΩ
RS17	1	1	1	GD05152140	1.5KΩ
RS18	1	1	1	GD05221140	220Ω
RS19	1	1	1	GD05221140	220Ω
RS20	1	1	1	RQ02040012	Variable 100KΩ (A) x 2200KΩ (B)
RS21	1	1	1	GD05682140	6.8KΩ
RS22	1	1	1	GD05682140	6.8KΩ
					PS00-MISCELLANEOUS
JS01	1	1	1	YJ06001530	Jack
JS02	1	1	1	YJ06001830	Jack
JS03	1	1	1	YJ06001530	Jack
JS04	1	1	1	YJ06001880	Jack
JS05	1	1	1	YP06001580	Plug
JS06	1	1	1	YP06001540	Plug
SS01	1	1	1	SP08060070	Push Switch, Tape Selector
SS02	1	1	1	SP02020390	Push Switch, Filter
LS01	1	1		LC21060500	Choke Coil 10mH
LS02	1	1		LC21060500	Choke Coil 10mH

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					PS50-ISS. CIRCUIT BOARD
PS50	1	1	1	YK22793320	P.W. Board, ISS
	1	1	1	ZZ22793320	P.W. Board Assembly
SS51	1	1	1	SS02020420	Slide Switch
					PT01-ROTARY SW CIRCUIT BOARD
PT01	1	1	1	YK22791410	P.W. Board, Rotary SW
	1	1	1	ZZ22791410	P.W. Board Assembly
CT01	1	1	1	EA47700690	Elect Cap 470μF 6.3V
					PT01-RESISTORS (All resistors are ±5% and ¼W)
RT01	1	1	1	GD05563140	56KΩ
RT02	1	1	1	GD05563140	56KΩ
RT03	1	1	1	GD05122140	1.2KΩ
RT04	1	1	1	GD05152140	1.5KΩ
RT05	1	1	1	GD05152140	1.5KΩ
RT06	1	1	1	RK02030510	Variable 20KΩ (A)
RT07	1	1	1	RK02030510	Variable 20KΩ (A)
					PT01-MISCELLANEOUS
JT01	1	1	1	YP06001540	Plug
JT02	1	1	1	YP06001550	Plug (18P)
JT03	1	1	1	YP06001810	Plug
ST01	1	1	1	SR08050380	Rotary Switch, Selector
					PU00-SPERKER SWITCH CIRCUIT BOARD
PU00	1	1	1	YK22791430	P.W. Board, Sperker Switch
	1	1	1	ZZ22791430	P.W. Board Assembly
SU01	1	1	1	SS02020530	Slide Switch, System 1
SU02	1	1	1	SS02020530	Slide Switch, System 2

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					PY00-LED CIRCUIT BOARD
PY00	1	1	1	YK22792220	P.W. Board, LED
	1	1	1	ZZ22792220	P.W. Board Assembly
QY01	1	1	1	HI10009020	L.E.D. LN26RPLCF
QY02	1	1	1	HI10009020	L.E.D. LN26RPLCF
JY01	1	1	1	YP06001500	Plug
					PY50-REC LED CIRCUIT BOARD
PY50	1	1	1	YK22791440	P.W. Board, Rec LED
	1	1	1	ZZ22791414	P.W. Board Assembly
QY51	1	1	1	HI10009020	L.E.D. LN26RPLCF
					M4025 (U.C.N) MCR425 (U) ONLY

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

8. TECHNICAL SPECIFICATIONS
[U.S.A. & CANADIAN MODELS ONLY]

AMPLIFIER SECTION:

Minimum Continuous Watts per Channel, both Channels driven
- into 8 ohms . . . . . 25 W
- into 4 ohms . . . . . 28 W

Power Band
- at 8 ohms . . . . . 20 Hz ~ 20 kHz
- at 4 ohms . . . . . 20 Hz ~ 20 kHz

Total Harmonic Distortion
- at 8 ohms 0.1%
- at 4 ohms 0.2%

I.M.Distortion
- (IHF method, 20 Hz and 7 kHz mixed 4:1 at rated power output)
- at 8 ohms 0.1%

Damping Factor at 20 Hz 25

PREAMPLIFIER SECTION:

Phono
- Input Overload at 1 kHz . . . . . 120 mV
- Equivalent Input Noise, "A" weighted . . . . . 3.0 μV
- Input Sensitivity (Input Impedance, 47 kohms) . . . . . 2.8 mV
- Frequency Response, RIAA 20 Hz to 20 kHz . . . . . ±1.0 dB

High Level Inputs (Aux and Tape)
- Input Sensitivity . . . . . 180 mV
- Input Impedance . . . . . 20 kohms

AM/FM TUNER SECTION:

Sensitivity
- IHF Usable (Mono) . . . . . 10.8 dBf (1.9 μV)
- IHF 50 dB Quieting
  - Mono . . . . . 14.5 dBf (2.9 μV)
  - Stereo . . . . . 37.7 dBf (42 μV)

Distortion, Mono and (Stereo) at 65 dBf
- 1000 Hz 0.2% (0.4%)

Hum and Noise at 65 dBf (1000 μV)
- Mono . . . . . −70 dB

Capture Ratio at 65 dBf (1000 μV) . . . . . 1.0 dB
Alternate Channel Selectivity . . . . . 60 dB
Spurious Response Rejection . . . . . 90 dB
Image Response Rejection . . . . . 50 dB
IF Rejection (Balanced) . . . . . 90 dB
AM Suppression . . . . . 50 dB
Stereo Separation 1000 Hz . . . . . 42 dB
AM Usable Sensitivity (IHF) . . . . . 20 μV
AM Distortion (THD) at 30% Modulation 1.0%
AM Signal-to-Noise Ratio . . . . . 50 dB

TAPE SECTION:

Tape Speed . . . . . 1-7/8 ips (4.8 cm/sec.)
Wow and Flutter (WRMS) 0.1%

Frequency Response
- (Overall; ref. level −20 below 0 VU)
- Fe-Cr Tape . . . . . 35 Hz ~ 16 kHz ±3 dB
- CrO_2 Tape . . . . . 35 Hz ~ 15 kHz ±3 dB
- Ferric Oxide Tape . . . . . 35 Hz ~ 14 kHz ±3 dB

Signal-to-Noise Ratio
- Playback . . . . . 52 dB
- Overall, Dolby off . . . . . 55 dB
- Overall, Dolby on . . . . . 63 dB

MIC Input Impedance
- Sensitivity . . . . . –72 dB V
- Overload Level . . . . . –25 dB V

GENERAL:

Power Requirements . . . . . 120 V AC, 60 Hz
Power Consumption at rated output, both channels operating . . . . . 130 W
Idling Power (Volume Control at zero) . . . . . 28 W
Dimensions
- Panel Width . . . . . 570 mm (22-7/16 inches)
- Panel Height . . . . . 146 mm (5-3/4 inches)
- Depth . . . . . 380 mm (14-15/16 inches)

Weight
- Unit alone . . . . . 13.0 kg (28.6 lbs)
- Packed for Shipment . . . . . 15.0 kg (33.0 lbs)

[EUROPEAN MODEL ONLY]

AUDIO SECTION:

POWER OUTPUT, DIN, 4 OHM, PER CHANNEL	**51 W**
POWER OUTPUT, FTC AMERICAN STANDARDS, 4 OHM, PER CHANNEL	**30 W**
TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT	**0.2%**
I.M. DISTORTION AT RATED POWER OUTPUT (250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1)	**0.2%**
POWER OUTPUT, DIN, 8 OHM, PER CHANNEL	**40 W**
POWER OUTPUT, FTC AMERICAN STANDARDS, 8 OHM, PER CHANNEL	**25 W**
TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT	**0.1%**
I.M. DISTORTION AT RATED POWER OUTPUT (250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1)	**0.1%**
POWER BANDWIDTH	**16 Hz ~ 24 kHz**
DAMPING FACTOR 8 OHM	**30**
Frequency Response	
Phono (RIAA)	±2 dB
Aux (±1 dB)	18 Hz ~ 30 kHz
Signal-to-Noise Ratio	
Phono	72 dB
Aux	80 dB
Input Terminals	
Phono: Input Impedance	47 kohms
Input Sensitivity	2.7 mV
Overload Margin	31 dB
Aux: Input Impedance	20 kohms
Input Sensitivity	180 mV
Phono Equivalent Input Noise	1 μV
Phono Dynamic Range (Ratio of input overload to equivalent input noise)	10.1 dB
Channel Balance (0 to –40 dB/40 Hz ~ 16 kHz)	
Phono	1.5 dB
Aux	1.5 dB
Interchannel Crosstalk	
Phono 1 kHz	45 dB
Aux 1 kHz	47 dB
Intersource Crosstalk (Worst Point)	
1 kHz	42 dB
Output Voltage, 1 kHz	
Tape Out	500 mV
Output Impedance, 1 kHz	
Tape Out	220 ohms
Headphone Jack Load Impedance	8 ohms

FM TUNER SECTION:

Frequency Range	87.4 ~109 MHz
Usable Sensitivity 40 kHz Deviation, 98 MHz	
Mono, S/N 26 dB	1.7 μV
Stereo, S/N 46 dB	60 μV
Alternate Channel Selectivity, 98 MHz ±300 kHz	65 dB
Image Response Rejection, 98 MHz	50 dB
IF Rejection, 98 MHz	90 dB
Spurious Response Rejection, 98 MHz	90 dB
AM Suppression, 98 MHz	50 dB
Signal-to-Noise Ratio, 98 MHz	
Unweighted: Mono	65 dB
Stereo	58 dB
Weighted: Mono	68 dB
Stereo	62 dB

Pilot Signal & Subcarrier Rejection	
19 kHz	58 dB
38 kHz	58 dB
Total Harmonic Distortion, 98 MHz	
Mono	0.2%
Stereo	0.3%
Frequency Response	
30 Hz ~ 15 kHz	+0.5 dB, −2.0 dB
Separation	
Stereo	42 dB
Channel Balance	1.0 dB
Output Voltage, 1 kHz	600 mV
Output Impedance, 1 kHz	4.4 kohms
Antenna Terminals	
Balanced	300 ohms
Unbalanced	75 ohms

AM TUNER SECTION:

Frequency Range	525 ~ 1620 kHz
Usable Sensitivity (26 dB S/N 30% Mod., 1 MHz)	20 μV
Selectivity, 1 MHz ±9 kHz	20 dB
Image Rejection, 1 MHz	41 dB
IF Rejection, 1 MHz	55 dB
Spurious Response Rejection, 1 MHz	38 dB
Signal-to-Noise Ratio, 1 MHz	43 dB
Frequency Response, 1 MHz ±6 dB	40 Hz ~ 2.2 kHz
Total Harmonic Distortion, 1 MHz	1.0%

CASSETTE DECK SECTION:

Style	Front Load
Tape Drive System	Single Capstan Drive
Motor	DC Motor x 1
Cartridge	Philips Type Compact Cassette
Track System	Compatible Stereo 4 Track 2 Channel
Tape Speed	1-7/8 ips (4.75 cm/sec)
Head	R/P: Super Hard Parmalloy, Erase: Ferrite
Recording System	AC Bias
Erasing System	AC Erase
Meters	VU Type
Overall Frequency Response (Dolby off)	
Ferric Oxide Tape	40 Hz ~ 12.5 kHz +2.5, −3.5 dB
CrO_2 Tape	40 Hz ~ 13.5 kHz +2.5, −3.5 dB
Fe-Cr Tape	40 Hz ~ 14 kHz +2.5, −3.5 dB
Total Harmonic Distortion	
Ferric Oxide Tape	2.2%
CrO_2 Tape	3.0%
Fe-Cr Tape	3.0%
Signal-to-Noise Ratio (WTD)	
Playback	52 dB
Overall (Dolby off)	50 dB
Overall (Dolby on)	58 dB
Wow and Flutter	0.18%
Line Input	
Level	22 dB
Impedance	20 kohms
Mic Input	
Level	72 dB
Impedance	10 kohms

Line Output
- Level . . . . . 500 mV
- Impedance . . . . . 2 kohms

Fast Rewind Time (C-60) . . . . . 105 sec
Fast Forward Time (C-60) . . . . . 105 sec

GENERAL:

Power Requirements . . . . . 220 V AC 50 Hz
(N versions are featuring an external voltage selector for use on 110/120/240 V.
Other versions can be converted by a qualified technician to operate on 110/120/240 V.)
Power Consumption at Rated Output, Both Channels Operating . . . . . 130 W
Idling Power . . . . . 28 W
Semiconductor Complement
- Integrated Circuits 7
- Transistors 61
- Diodes 43
- Field Effect Transistor 1

Dimensions
- Panel Width . . . . . 22-7/16" (570 mm)
- Panel Height . . . . . 5-3/4" (146 mm)
- Depth . . . . . 14-15/16" (380 mm)

Weight
- Unit alone . . . . . 28.6 lbs (13.0 kg)
- Packed for shipment . . . . . 33.0 lbs (15.0 kg)

SCHEMATIC DIAGRAM

Q101 2SK45B | Q102 2SC535(B.C) | Q103, Q207 Q201~Q203 2SC829(C) | Q151, Q152 Q209, Q307 IS2473(C) | Q301~Q304 Q210, Q211 2SC828(S) | Q212, Q305 Q311 2SA722(S.T) | Q204, Q205 Q208, Q310 20A90M | Q308 WZ071 | Q206 AN7000 | Q701, Q702 LM391-80 | Q703, 2SD41

P100 TUNER

JC00 ANT. INPUT ASSY

PT01 ROTORLY SW. ASSY

PU00 SPK SW. ASSY

PP00

For (N) TYPE

For (C) TYPE

FP01 4A 125V
FP02 4A 125V
FP03 1A 250V
FP04 1.5A 250V
FP05 1A 250V

P700 MAIN AMP and POWER SUPPLY AS

212, Q305
311
SA722 (S.T)

Q204, Q205
Q208, Q310
20A90M

Q308
WZ071

Q206
AN7000

Q701, Q702
LM391-80

Q703, Q704
2SD415 Q, R

Q705, Q706
2SB549 Q, R

Q707, Q708
2SA1060 Q, R

Q709, Q710
2SC2484 Q, R

Q711~Q714
W06B

Q717, Q718
MV-1Y

Q719~Q722
1S1555

Q801, Q802
Q812, Q813
DS133B

Q804
10E1

Q805
2SD313

Q806
2SC945 Q, R

Q807
BZ120

AM. TP

Vco ADJ 19kHz

PJ00
TAPE
PRE AMP.

PHONO
FM
TEPE
AM
AUX
ST01-1~4 SELECTOR SWITCH

P700 MAIN AMP and POWER SUPPLY ASSY

MO11
Signal/Tuning

MO01

MO13 (Rch)

MO12 (Lch)

TAPE OUT
AUX
PHONO

S001-2

Q711~Q714	Q717, Q718	Q719~Q722	Q801, Q802 Q812, Q813	Q804	Q805	Q806	Q807	Q808~Q811	QE01, QE02	QE03, QE04 QE07, QE08	QE05, QE06	QM01	QM02, QM03	QM04~QM06	QM07	Q401, Q4
W06B	MV-1Y	IS1555	DS133B	10E1	2SD313	2SC945 Q, R	BZ120	S3V-20	2SC1222E,U	2SA750E	2SC1222E	IS1555	2SC828 S	2SC945 P, K	WZ-120	μPC1024

PJ00
TAPE
PRE AMP.

PS50
ISS ASSY

PY50
LED ASSY

PS00
SW and VR ASSY

PY00 LED ASSY

PE01 PHONO and TONE AMP

MODE

811	QE01, QE02 2SC1222E,U	QE03, QE04 QE07, QE08 2SA750E	QE05, QE06 2SC1222E	QM01 1S1555	QM02, QM03 2SC828 S	QM04 ~ QM06 2SC945P,K	QM07 WZ-120	Q401, Q402 μPC1024H	QJ01 ~ QJ14 QX01, QX02 QX07, QX08 2SC1740LN (S)	QJ51, QJ52 2SC1318(R)	QJ53 WZ071	QJ54, Q605~Q610 1S1555	QJ55 2SC945(Q)	Q601, Q602 LM1011AN	Q603, Q604 2SD227(Q,

QJ14 QJ12 QX08 QX02 QJ10 QJ08 Q602 RJ42 560 (1W) QJ06 QJ04 RJ28 33k QJ02

QJ13 QJ11 QX07 QX01 QJ09 QJ07 Q601 RJ41 560 (1W) QJ05 QJ03 RJ27 33k QJ01

REC/PB H001

REC/PB H001

To JT02 To JT03 To JT03 To JT02 To JT02 To JT03 To JT03

To JJ52 To JJ50 To JJ46 To JJ42 To JJ40 To JJ38 To JJ44 To JJ30 To JJ28 To JJ26

To JJ51 To JJ49 To JJ45 To JJ41 To JJ39 To JJ37 To JJ43 To JJ29 To JJ27 To JJ25

SJ01-20 SJ01-16 SJ01-14 SJ01-12 SJ01-10 SJ01-8 SJ01-6 SJ01-4 SJ01-2

SJ01-19 SJ01-15 SJ01-13 SJ01-11 SJ01-9 SJ01-7 SJ01-5 SJ01-3 SJ01-1

JJ04 JJ06 JJ08 JJ10 JJ12 JJ14 JJ22 JJ16 JJ50 JJ18 JJ20 JJ32 JJ34 JJ36 JJ35 JJ33 JJ31 JJ19 JJ17 JJ49 JJ15 JJ21 JJ13 JJ11 JJ09 JJ07 JJ05 JJ03

J005-2 J005-3

C002 0.001 C001 0.001

JJ88 JJ87 JJ85 JJ81 JJ24 JJ26 JJ28 JJ30 JJ43 JJ37 JJ44 JJ53 JJ38 JJ55 JJ51 JJ84 JJ82 JJ50 JJ49 JJ52 JJ56 JJ27 JJ25 JJ54 JJ39 JJ40 JJ42 JJ41 JJ23

JS52 PT2 JY52 JY51 QY51 H002 ERACE PY50 LED ASSY

PS00
SW and VR ASSY

W053 JS05 W054 JS06

(N) ONLY LOW FILTER JS03 JS02

(U,C) ONLY HIGH FILTER LOUDNESS

QY01 QY02 JY01 JS03 JS02 JS01 JS04 PY00 LED ASSY

JE01 JE03 JE04 JE08 JE06 JE09 JE05 JE07

S001-6 S001-5 S001-4 S001-3 S001-2 S001-1

MONO STEREO ON FM MUTING ON DOLBY ON LIMTER Fe Cr Cr O2 NORMAL TAPE EQ Cr O2 NORMAL Fe Cr BIAS

PF01
TONE VR ASSY

JE02 JF01 L R L L G R

PE01 PHONO and TONE AMP

QE01 QE02 QE03 QE04 QE05 QE06 QE07 QE08 QM01 QM02 QM03 QM04 QM05 QM06 QM07

SJ01-1 ~ 20 Rec/PB SW
SS01-1 BIAS
SS01-2 TAPE EQ
SS01-3 LIMITER
SS01-4 DOLBY
SS01-5 FM MUTIN
SS01-6 MONO/ST
SS02-1 LOUDNESS
SS02-2 HIGHT FI
SS51 ISS · POSI

BOTTOM VIEW

Q703~Q706 Q

Other Transistor

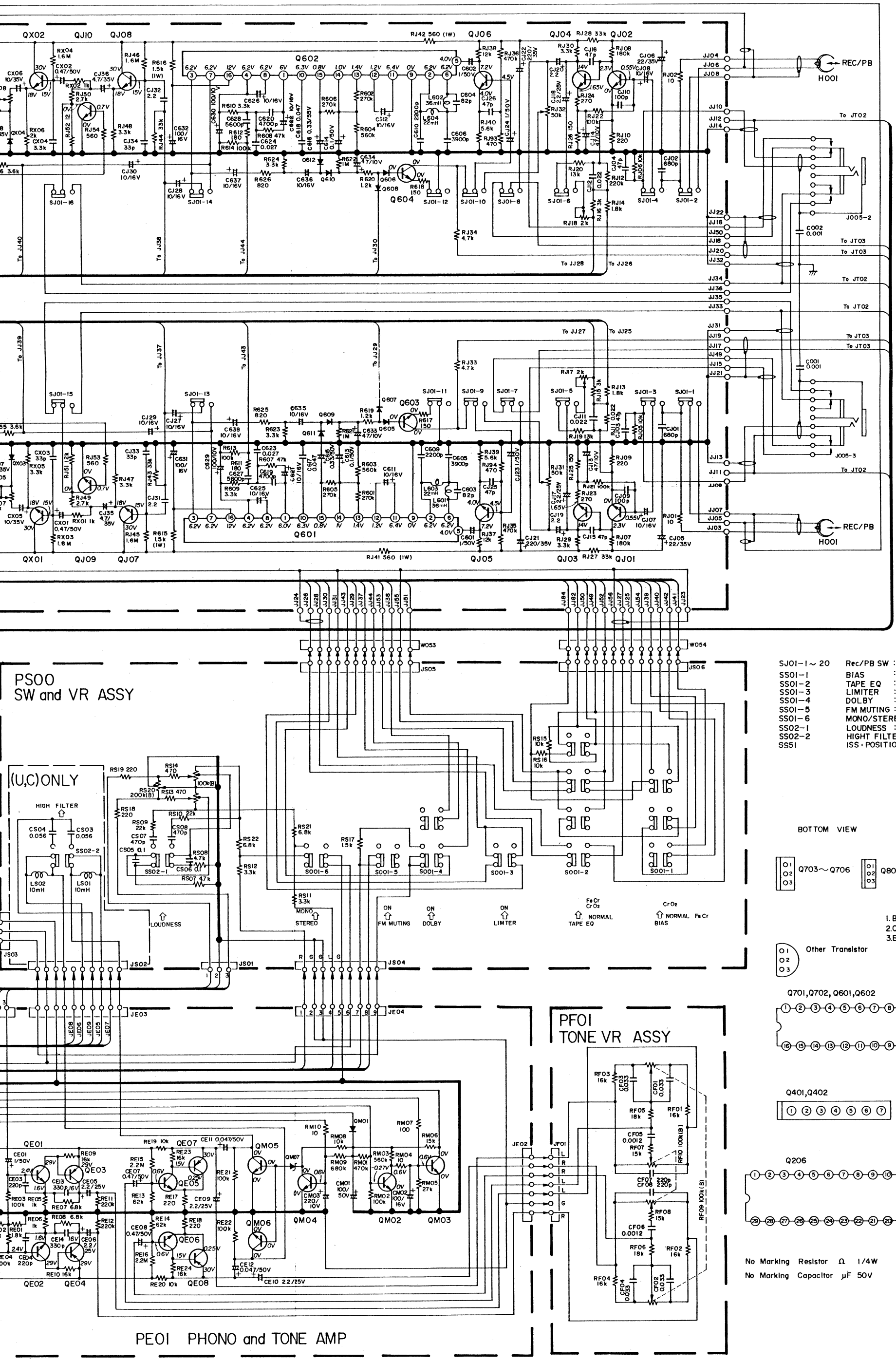
Q701,Q702, Q601,Q602

Q401,Q402

Q206

No Marking Resistor Ω 1/4W
No Marking Capacitor μF 50V

5, QE06 222E	QM01 IS1555	QM02, QM03 2SC828 S	QM04 ~ QM06 2SC945P,K	QM07 WZ-120	Q401, Q402 μPC1024H	QJ01 ~ QJ14 QX01, QX02 QX07, QX08 2SC1740LN (S)	QJ51, QJ52 2SC1318 (R)	QJ53 WZ071	QJ54, Q605 ~ Q610 IS1555	QJ55 2SC945 (Q)	Q601, Q602 LM1011AN	Q603, Q604 2SD227 (Q,V)	QX03 ~ QX06 Q611, Q612 20A90



SJ01-1 ~ 20	Rec/PB SW	: Rec Position
SS01-1	BIAS	: NORMAL
SS01-2	TAPE EQ	: 120μS
SS01-3	LIMITER	: OFF
SS01-4	DOLBY	: OFF
SS01-5	FM MUTING	: OFF
SS01-6	MONO/STEREO	: STEREO
SS02-1	LOUDNESS	: OFF
SS02-2	HIGHT FILTER	: OFF
SS51	ISS	: POSITION

BOTTOM VIEW

Q703 ~ Q706

Q805

1. Base
2. Collector
3. Emitter

Other Transistor

Q701, Q702, Q601, Q602

Q401, Q402

Q206

No Marking Resistor Ω 1/4W

No Marking Capacitor μF 50V