



SERVICE  
MANUAL **5030**

**marantz**

**model 5030**

*Stereo Cassette Deck*



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## INTRODUCTION

This service manual is prepared for use by Authorized Warranty Station and contains service information for Marantz Model 5030 Stereo Cassette Deck.

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 Cassette Deck.

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 5030 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. Pre-Amp & Dolby . . . . . mounted on P.W. Board, P100
2. LED . . . . . mounted on P.W. Board, P600
3. Monitor . . . . . mounted on P.W. Board, P650
4. Terminals . . . . . mounted on P.W. Board, P700
5. Volume & Peak . . . . . mounted on P.W. Board, P500
6. Fuse (N&P versions only) . . . . . mounted on P.W. Board, P400
7. Memory . . . . . mounted on P.W. Board, P800
8. Power Supply & Bias Oscillator . . . . . mounted on P.W. Board, P900

### 2. TEST EQUIPMENT REQUIRED FOR SERVICING

For measuring or checking the Model 5030, the following instruments and materials are necessary.

- VTVM
- 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<sub>2</sub>)

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<sub>2</sub>, Fe-Cr)

MTT-121 Cross Talk

MTT-141 Channel Separation

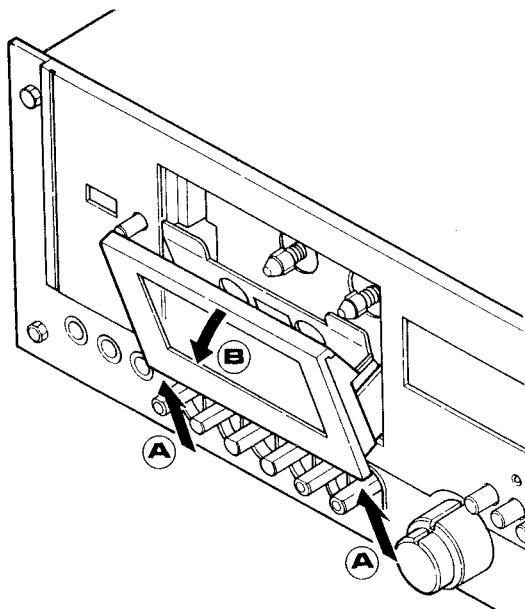
BIAS and EQ switches setting in accordance with tape used are as follows:

Tape	Switch Position		
	BIAS/EQ Switch		
Normal			
CrO <sub>2</sub>			
Fe-Cr			

### 3. DISASSEMBLY

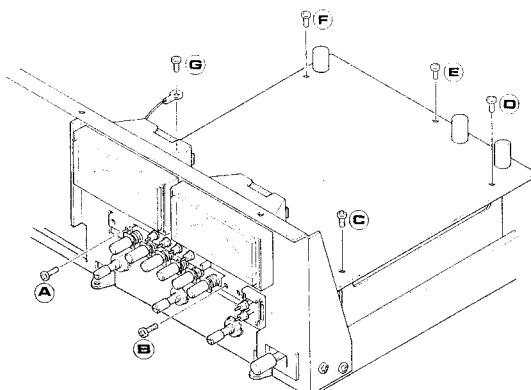
#### 3.1 REMOVING THE CASSETTE CASE ESCUTCHEON

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.



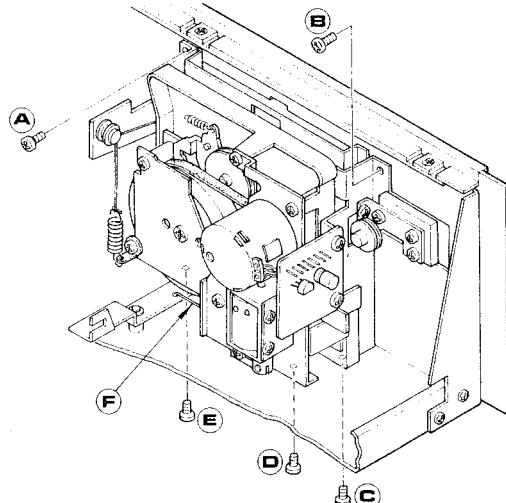
#### 3.2 REMOVING THE MAIN P.W. BOARD

Remove the seven screws A, B, C, D, E, F and G holding the Main P.W. board. Then, draw it out with taking care of not applying excessive force to any lead wire.



#### 3.3 REMOVING THE 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.

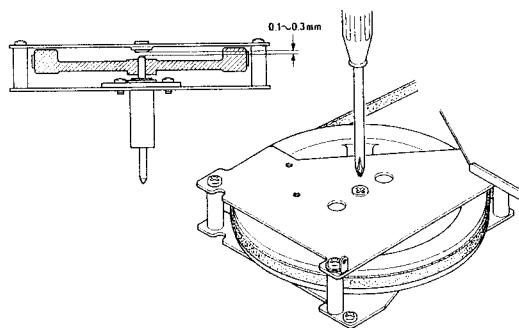


## 4. ADJUSTMENT PROCEDURES

### 4.1 MECHANICAL ADJUSTMENTS

#### 4.1.1 Adjusting the Flywheel Thrust

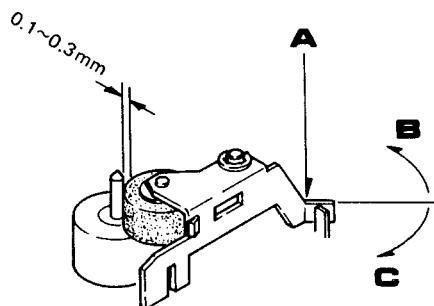
Adjust the thrust screw at the flywheel bracket until the clearance between the capstan tail end and thrust bearing is 0.1 to 0.3 mm as shown, using a phillips screw driver. For adjusting, feel of axial dropping of the flywheel for proper clearance as this cannot been seen through. Then paint the screw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

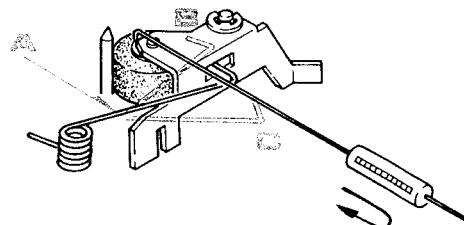
**NOTE:** To widen the clearance, make the bend angle smaller (in the direction C). To make the clearance narrower, widen the bend angle (in the direction B).



#### 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  $300\pm50$  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.

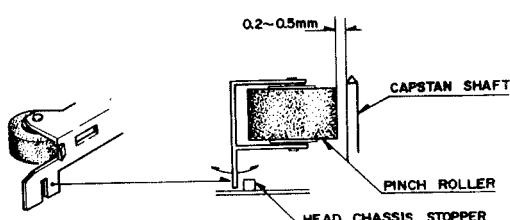
##### (1) Checking for adjustment

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.



#### 4.1.5 Adjusting the Play Torque

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

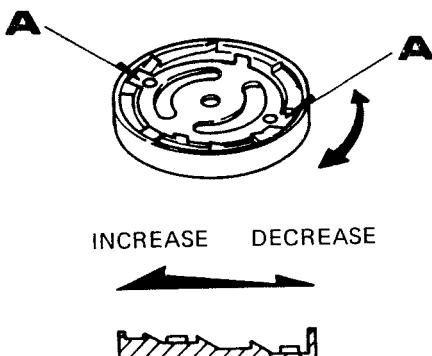
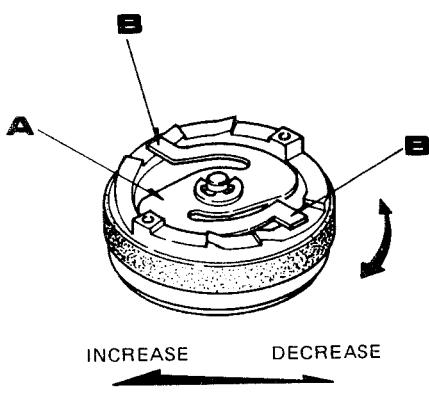
To make the torque high, put the pawls on a shallow step. For lower torque, put them on a deeper step.

- **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.

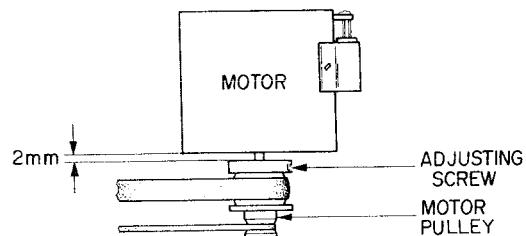
#### 4.1.6 Adjusting the Fast Forward and Rewind Torque

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.



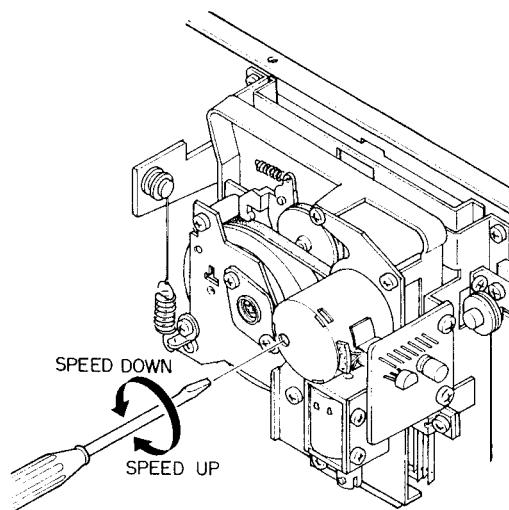
#### **4.1.7 Positioning the Motor Pulley**

Loosen the set screw and adjust the motor pulley position until the clearance between the pulley and motor is 2 mm as shown. Tighten the set screw.



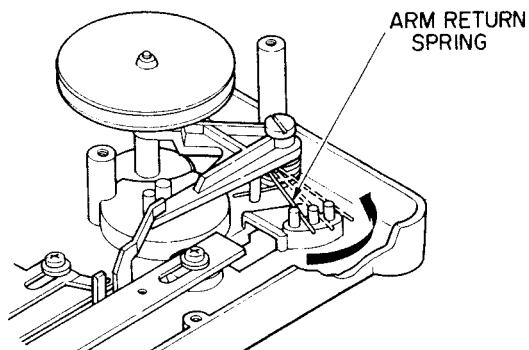
#### **4.1.8 Adjusting the Tape Speed**

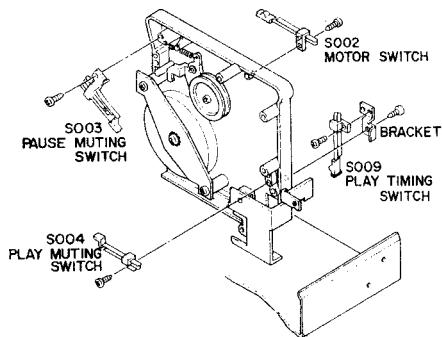
Adjust the semi-fixed resistor inside the motor until the tape speed is  $2985 \pm 5$  Hz, using a screw driver.



#### **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.

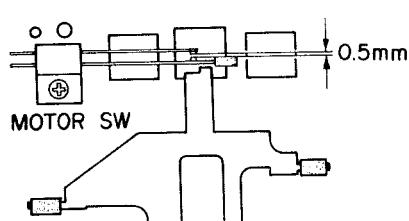




#### 4.1.10 Positioning the Switches

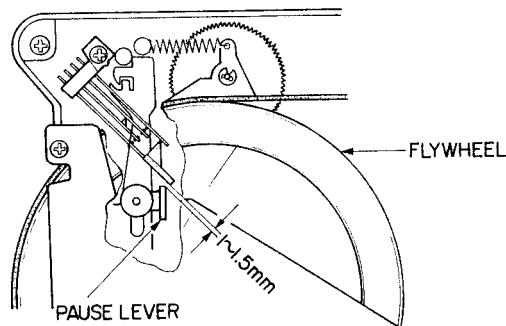
##### (1) Motor switch

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.



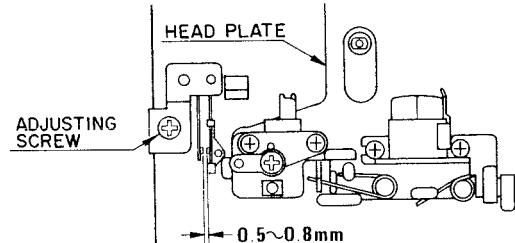
##### (2) Pause muting switch

In the stop state, loosen the screw holding the pause muting switch and position this so that the clearance between its end tip and pause arm may be 1 to 1.5 mm.



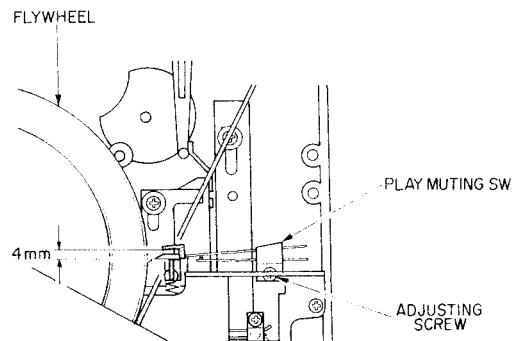
##### (3) Start muting switch

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.



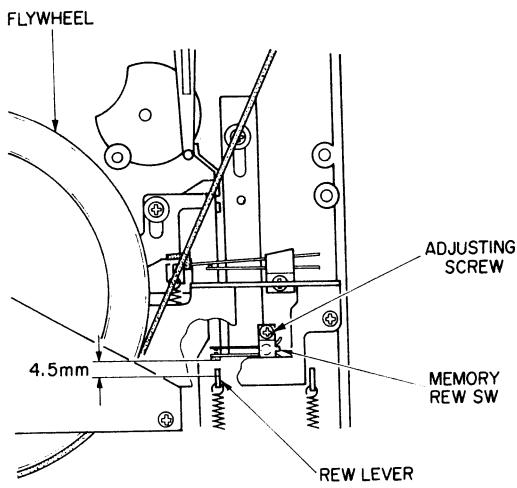
##### (4) Play muting switch

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.



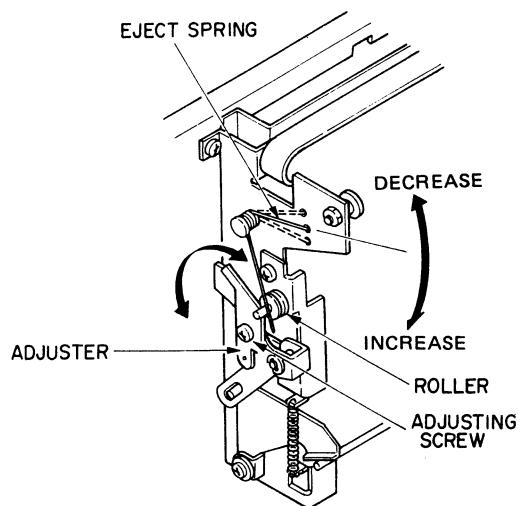
(5) Memory rewind switch

In the stop state, loosen the screw holding the memory rewind switch and position this so that the clearance between it and rewind lever may be 4.5 mm. Tighten the screw.



**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 L	438305402-0 438005140-0	Cam Guide ass'y

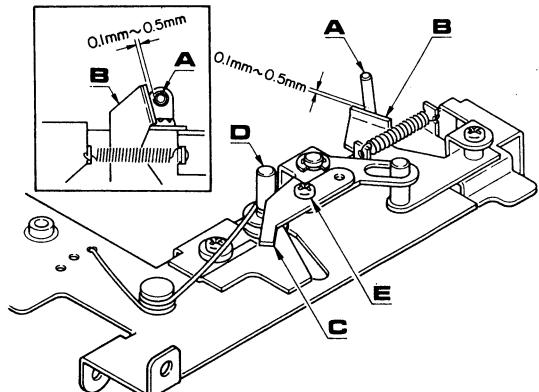


Fig. 1

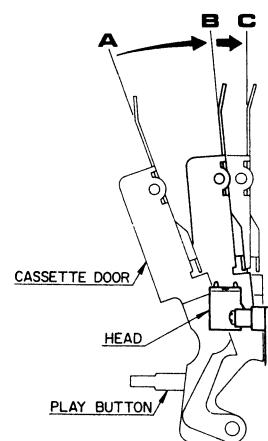


Fig. 2

## 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, capacitor, and inductor adjusting screws 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.
9. The Model 5030 is of three-head type. It, therefore, has a recording circuit and playback circuit arranged independently. In operating the 5030, the MONITOR switch should be set as follows.
  - SOURCE position at which the record signal appears at the LINE OUT jack.
  - TAPE position at which the playback signal appears at the LINE OUT jack.

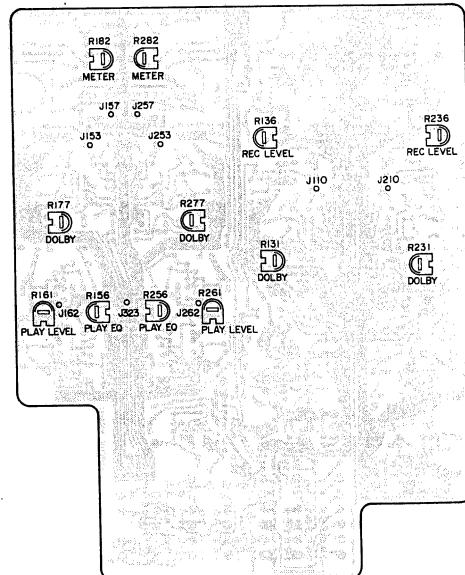
In playback, no signal comes to the LINE OUT jack when the switch is at the SOURCE position. In recording, on the other hand, the record signal appears to the jack with it at the SOURCE position; and, the signal recorded on the tape is played back to the jack at the TAPE position.

### 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 775 mV output at the MAIN P.W. Board (P100) J153, J253 with the load assuming the measuring instrument input impedance of greater than 100 kΩ 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 1 kHz signal to a specified recording level for which the recording level control is adjusted with the 1 kHz 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 0 VU with a 1 kHz, 1 mV input signal applied.



## 1. Head Azimuth Adjustment

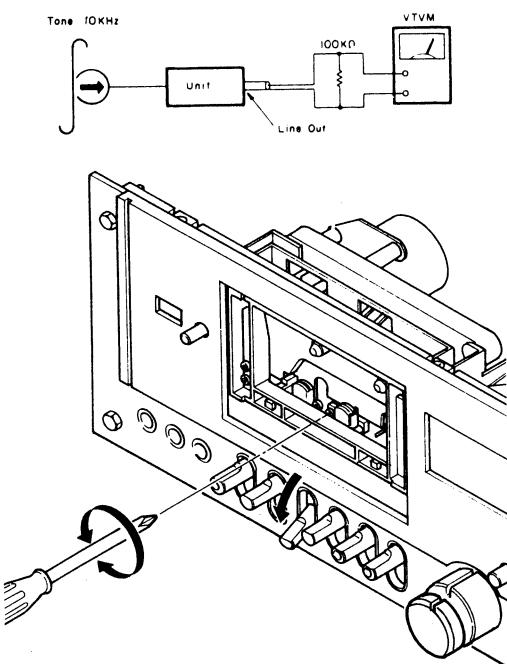
### SET UP

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

### PROCEDURES

1. Play the 10 kHz 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

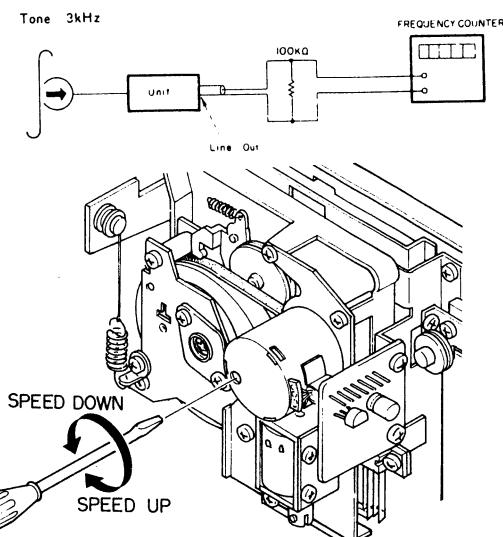
### SET UP

1. Power voltage:- 50 or 60 Hz 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.
5. MONITOR switch position:- TAPE.

### PROCEDURES

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

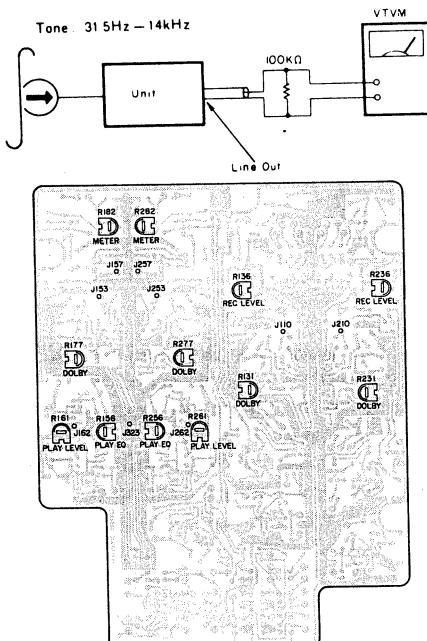
## **SET UP**

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

## **PROCEDURES**

1. Play the test tape MTT-116U. Let the 315 Hz signal level be reference as 0 dB.
  2. Adjust R156 and R256 (3 kΩ each) for 10 kHz frequency response of 0 to -1 dB in reference to the 315 Hz signal level (0 dB).
  3. Proceed both for the right and left channels in the same manner.
  4. Note that clockwise turning of R156 and R256 will increase the 10 kHz signal output level.

Mode: playback



#### **4. Playback Output Adjustment**

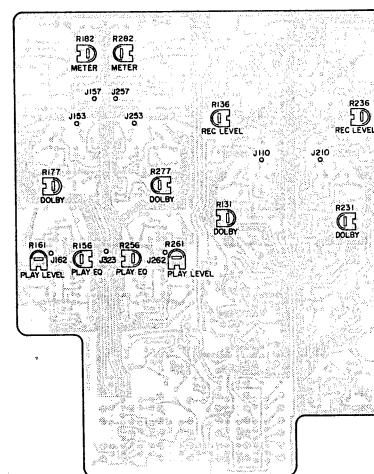
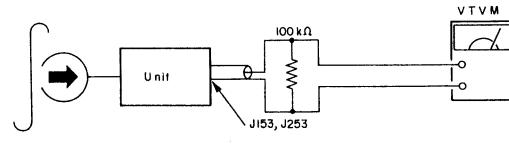
## **SET UP**

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
  2. TAPE selector switch position:- NORMAL.
  3. MONITOR switch position:- TAPE.
  4. Load:- Measuring instrument input impedance.
  5. Output terminal:- MAIN P.W. Board (P100) J153 and J253.
  6. Test tape used:- MTT-150.

## **PROCEDURES**

1. Play the test tape MTT-150 back. Adjust R161 and R261 (50 k $\Omega$  each) for 775 mV playback output level.
  2. Proceed both for the right and left channels in the same manner.

Mode: playback



## **CAUTION**

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 re-adjusted.

## **5. VU Meter Adjustment**

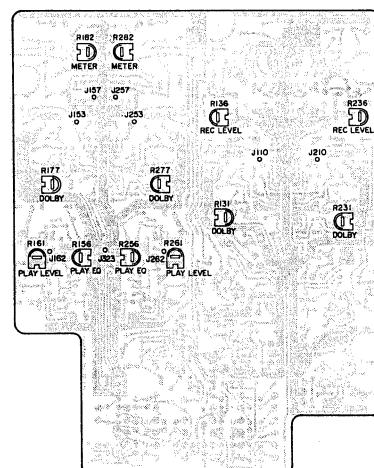
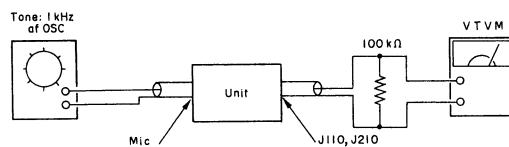
## **SET UP**

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
  2. TAPE selector switch position:- NORMAL.
  3. MONITOR switch position:- SOURCE.
  4. Load:- Measuring instrument input impedance.
  5. Output terminal used:- MAIN P.W. Board (P100) J110 and J210.
  6. Input terminal:- MIC.

## **PROCEDURES**

1. Connect a 1 kHz, -60 dBV input signal to the MIC terminal. Set up the tape deck for the recording mode of operation.
  2. Adjust the REC control for 775 mV output level at MONI. OUT of the MAIN P.W. Board (P100) J110 and J210.
  3. Adjust R182 and R282 (2 kΩ each) until the VU meter pointer deflects to the DOLBY mark (D) on the VU meter.

Mode: record



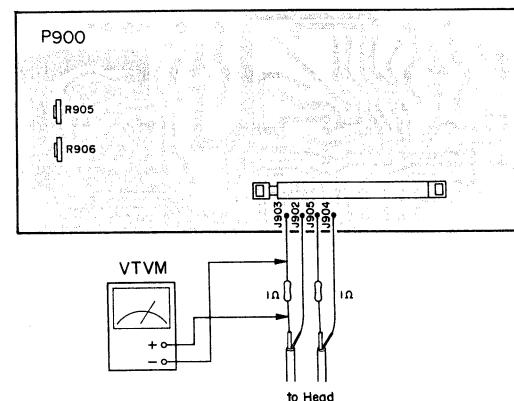
## **6. Recording Bias Current Adjustment (Temporal)**

## **SET UP**

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

## **PROCEDURES**

1. Disconnect the recording head shielding leads (grounding leads) at J903 (L channel) and J905 (R channel). Insert a  $1\Omega$  resistor between the respective leads and terminals. Connect a VTVM across each resistor. Set the tape deck in the recording mode of operation. Adjust the semi-fixed resistors R905 (L channel) and R906 (R channel) until the VTVM reads 0.85 mV in each channel.
  2. For the tape deck equipped with the TAPE selector switch, make certain that the VTVM reads approximately 1.4 mV (1.0 mV) with it set to the CrO<sub>2</sub> (Fe-Cr) position.



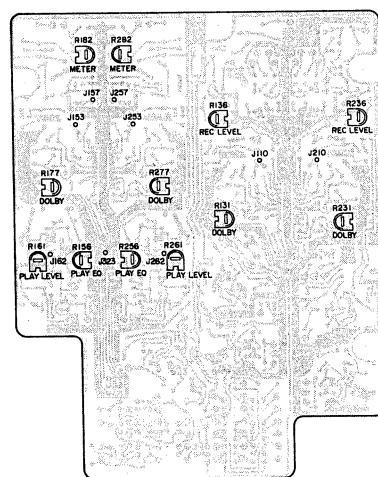
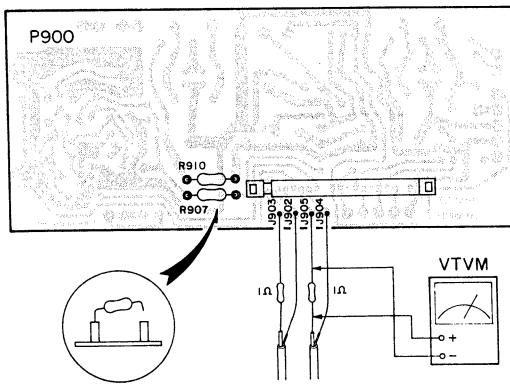
## 7. Recording Current Adjustment (Temporal)

### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input signal:- 1 kHz, -60 dB 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 (R907).
2. Disconnect the recording head shielding leads (grounding leads) at J903 (L channel) and J905 (R channel). Insert a  $1\Omega$  resistor between the respective leads and terminals. Connect a VTVM across each resistor. Set the tape deck in the recording mode of operation. Adjust the semi-fixed resistors R136 (L channel) and R236 (R channel) until the VTVM reads 0.18 mV each channel.
3. Proceed both for the right and left channels in the same manner.
4. After adjustment, release the recording bias current.



## 8. Record-Playback Frequency Response Adjustment

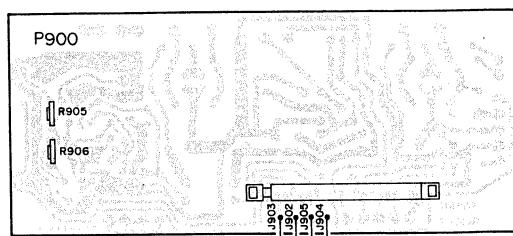
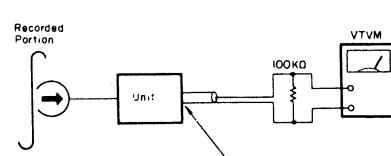
### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input signal:- 1 kHz, -60 dB with -20 dB referenced as 0 VU.
3. TAPE selector switch:- Fe-Cr.
4. MONITOR switch position:- SOURCE (at recording mode), TAPE (at playback mode).
5. Output terminal:- LINE OUT.
6. Load:- Measuring instrument input impedance.
7. 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 20 dB with the use of the attenuator. Record the 1 and 10 kHz tones. Set the MONITOR switch to the TAPE position.
3. Play back the 1 kHz, 20 dB-down recorded tone as 0 dB. Adjust the semi-fixed resistors R905 (L channel) and R906 (R channel) until the response at 10 kHz is within  $\pm 1$  dB as referenced to 0 dB (the response at 1 kHz).
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

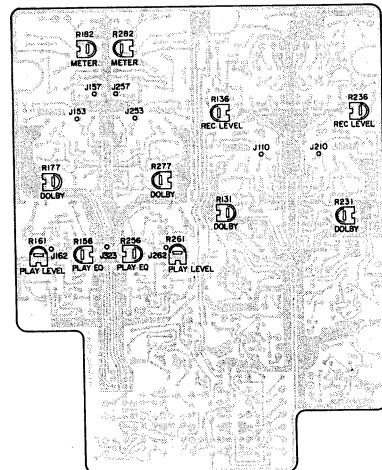
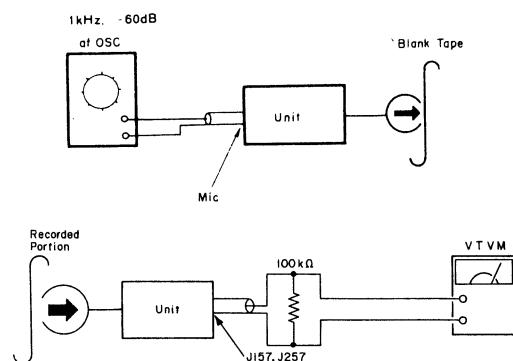
1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1 kHz, -60 dB signal.
3. TAPE selector switch position:- NORMAL.
4. MONITOR switch position:- SOURCE (at recording mode), TAPE (at playback mode).
5. Output terminal:- MAIN P.W. Board (P100) J157 and J257.
6. Load:- Measuring instrument input impedance.
7. Test tape used:- TDK AC-211.

### PROCEDURES

1. Connect the 1 kHz, -60 dB input signal to the MIC terminal. Set up the tape deck to the normal recording state. Set the MONITOR switch to the TAPE position.
2. Adjust the REC LEVEL semi-fixed resistors R136 and R236 until the recorded signal is reproduced at 623 mV  $\pm 0.5$  dB.

### CAUTION

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



## 10. Adjusting the Dolby Circuit

### (1) Encoder circuit

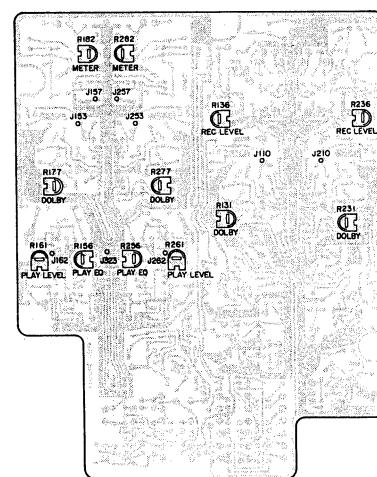
1. Set the 5030 in the SOURCE MONITOR.
2. Set the DOLBY NR switch to the OFF position.
3. Connect a 5 kHz signal to the MIC input jack.
4. Adjust the input signal level until the output voltage at J110 or J210 is 23.5 mV.
5. In that state, measure the output level at the REC OUT jack J114 or J214 provided for the DOLBY NR switch.
6. Turn the DOLBY NR switch to the ON position.
7. Adjust the LAW CONT semi-fixed resistor R131 or R231 until the output level at J114 or J214 is  $8 \pm 0.25$  dB higher than the one obtained in Step 5 above.

### (2) Decoder circuit

1. Set the 5030 in the SOURCE MONITOR.
2. Set the DOLBY NR switch to the OFF position.
3. Connect a 5 kHz signal to J162 or J262.
4. Adjust the input signal level until the output voltage at J153 or J253 is 59 mV.
5. Turn the DOLBY NR switch to the ON position.
6. Adjust the LAW CONT semi-fixed resistor R177 or R277 until the output level at J153 or J253 is  $8 \pm 0.5$  dB lower than the one obtained in Step 4 above.

### CAUTION

The Dolby system is full process type that has an independent encoder and decoder. It is therefore necessary to adjust both encoding and decoding characteristics.



## 11. Tape Speed Measurement

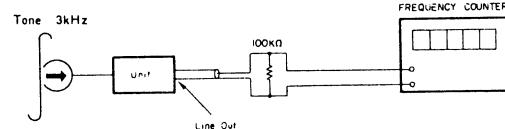
### SET UP

1. Power voltage:- 50 or 60 Hz 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. Set position:- Horizontal.
5. MONITOR switch position:- TAPE.

### PROCEDURES

1. Play the wound-up end of the test tape MTT-111 back. Read the frequency counter indication.

#### Mode: playback



#### STANDARD

Tape speed:- 4.8 cm/sec  $\pm 1.5\%$ .  
Frequency:- 2955 to 3045 Hz.

#### CAUTION

The tape deck should be leveled as specified for this measurement.

## 12. Wow and Flutter Measurement

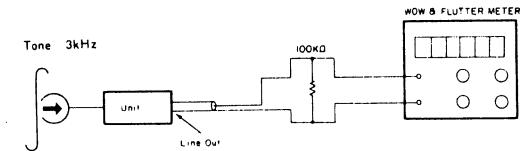
### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Output terminal:- LINE OUT.
3. Load:- Measuring instrument input impedance.
4. Test tape used:- MTT-111.
5. Set position:- Horizontal.
6. Wow & flutter meter function switch:- NAB WTD- for U and C, DIN WTD- for N.
7. MONITOR switch position:- TAPE.

### PROCEDURES

1. Play the test tape MTT-111 back. Read the wow & flutter meter indication.

#### Mode: playback



#### STANDARD

Less than NAB WTD 0.09% in rms (for U and C).  
Less than DIN WTD 45511B4 0.12% in rms (for N).

#### CAUTION

The measurement should be performed at the wound-up end of the test tape.

### 13. Playback Output Level Measurement (at LINE OUT)

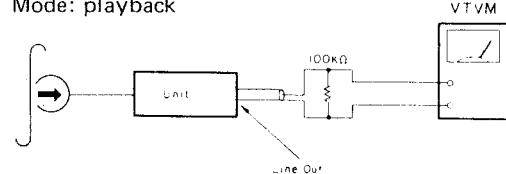
#### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch position:- NORMAL.
3. MONITOR switch position:- TAPE.
4. Load:- Measuring instrument input impedance.
5. Output terminal:- LINE OUT.
6. Test tape used:- MTT-112.

#### PROCEDURES

1. Play the test tape back in the normal playback state. Read the VTVM indication.
2. Proceed both for the right and left channels in the same manner.

Mode: playback



#### STANDARD

Within 800 mV  $\pm 3$  dB.

### 14. Playback Signal-to-Noise Ratio Measurement

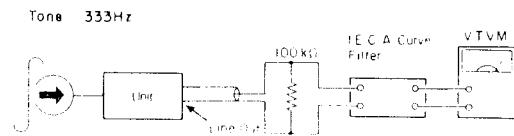
#### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Load:- Measuring instrument input impedance.
3. Measuring output terminal:- LINE OUT.
4. Test tape used:- MTT-112 (333 Hz tone).
5. TAPE selector switch position:- NORMAL, Cr<sub>2</sub>O and Fe-Cr.
6. MONITOR switch position:- TAPE.

#### PROCEDURES

1. Load the test tape MTT-112. Set up the tape deck to the normal playback state.
2. Read playback output as a 0 dB reference with the use of the I.E.C.A-Curve Filter.
3. Proceed both for the right and left channels in the same manner.
4. Repeat the above measurement for each TAPE selector switch position.

Mode: playback



#### STANDARD

Greater than 51 dB.

#### CAUTIONS

1. Arrange the tape deck power cord for minimum hum component.
2. Effect by induction noises should be minimized for the measurement.
3. When playing the standard reference level tape MTT-112 back, the VU meter indication is close to +2.5 VU and is used as the reference level for the signal-to-noise ratio measurement.

### 15. Playback Frequency Response Measurement

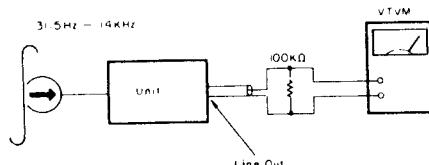
#### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch position:- NORMAL and CrO<sub>2</sub> or Fe-Cr.
3. MONITOR switch position:- TAPE.
4. Load:- Measuring instrument input impedance.
5. Measuring output terminal:- LINE OUT.
6. Test tape used:-  
MTT-116U (for NORMAL)  
MTT-116K (for CrO<sub>2</sub> or Fe-Cr).

#### PROCEDURES

1. Play the test tape MTT-116U and MTT-116K back. Let the 315 Hz output level be 0 dB as reference level.
2. Read the 40 Hz and 10 kHz output level differences from the 315 Hz, 0 dB reference level.
3. Proceed both for the right and left channels in the same manner.
4. For the above measurement, use the test tape MTT-116U for the NORMAL position and MTT-116K for the CrO<sub>2</sub> or Fe-Cr.

Mode: playback



#### STANDARD

In reference to the 315 Hz, 0 dB signal output level,

- |                           |               |
|---------------------------|---------------|
| 40 Hz - 6.3 kHz . . . . . | $\pm 2.5$ dB  |
| 40 Hz - 10 kHz . . . . .  | $+2.5, -3$ dB |
| 14 kHz . . . . .          | $\pm 4$ dB    |

#### CAUTION

Since the test tapes used may involve some head azimuth difference, the head azimuth should be corrected at the highest frequency of each test tape before measurement.

### 16. Record-Playback Output Level Measurement (at LINE OUT)

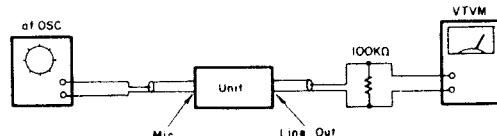
#### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1 kHz, -60 dB signal.
3. Load:- Measuring instrument input impedance.
4. Level control position:- SRL for recording operation.
5. TAPE selector switch position:- NORMAL, CrO<sub>2</sub> and Fe-Cr.
6. MONITOR switch position:- SOURCE.
7. Measuring output terminal:- LINE OUT.
8. Cassette tape used:- TDK AC-211, AC-511 and SONY CS-30.

#### PROCEDURES

1. Record the 1 kHz, -60 dB signal in the normal recording state.
2. Set the MONITOR switch to the TAPE position while recording on the tape. Read the VTVM indication.
3. Proceed for the NORMAL, CrO<sub>2</sub> and Fe-Cr positions each in the same manner.
4. Proceed both for the right and left channels in the same manner.

Mode: record



#### STANDARDS

- |                               |                   |
|-------------------------------|-------------------|
| 1. NORMAL position:           | 560 mV $\pm 2$ dB |
| 2. CrO <sub>2</sub> position: | 560 mV $\pm 2$ dB |
| 3. Fe-Cr position:            | 560 mV $\pm 2$ dB |

## 17. Record-Playback, Harmonic Distortion Measurement

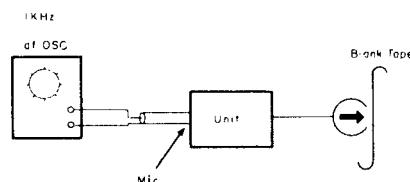
### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1 kHz, -60 dB signal.
3. Playback output level:- Same as the recorded signal level.
4. Load:- Measuring instrument input impedance.
5. Measuring output terminal:- LINE OUT.
6. Cassette tape used:- TDK AC-211, AC-511 and SONY CS-30.
7. MONITOR switch position:- SOURCE (at recording mode), TAPE (at playback mode).

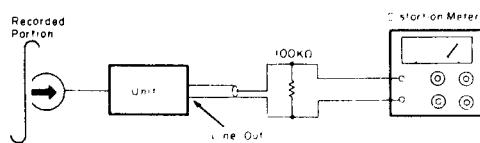
### PROCEDURES

1. Record the 1 kHz signal in the normal recording state. Set the MONITOR switch to the TAPE position.
2. Play the recorded signal back in the normal playback state. Calibrate the harmonic distortion meter to 100% at the INPUT CONT. Adjust the adjusting knob for minimum meter pointer deflection, and read the harmonic distortion.
3. Proceed both for the right and left channels in the same manner.
4. Proceed for the NORMAL, CrO<sub>2</sub> and Fe-Cr positions each in the same manner.

Mode: record



Mode: playback



### STANDARDS

1. Less than 2.5% for the NORMAL and CrO<sub>2</sub> positions.
2. Less than 3.5% for the Fe-Cr position.

### CAUTIONS

1. Be sure to demagnetize the heads as the measured values may deviate from the accurate values.
2. Note that excessive wow and flutter also causes deviation of the measured values.

## 18. Record-Playback Signal-to-Noise Ratio Measurement

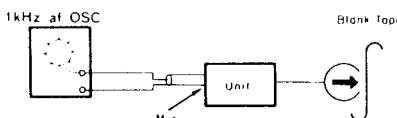
### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1 kHz, -60 dB signal.
3. Playback output level:- Same as the recorded signal level.
4. Load:- Measuring instrument input impedance.
5. Measuring output terminal:- LINE OUT.
6. Cassette tape used:- TDK AC-211, AC-511 and SONY CS-30.
7. MONITOR switch position:- SOURCE (at recording mode), TAPE (at playback mode).

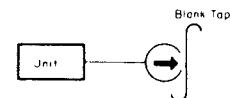
### PROCEDURES

1. Record the 1 kHz signal in 3 dB above the normal recording state.
2. Disconnect the input signal from the microphone jack. In this state, record no signal.
3. Play the 1 kHz signal back in the normal playback state with the use of the I.E.C. A-Curve Filter. Let the output level be 0 dB as reference level. Set the MONITOR switch to the TAPE position.
4. Read difference between the recorded 0 dB reference output and no-signal output levels.
5. Proceed both for the right and left channels in the same manner.
6. Set the DOLBY switch to the ON position, and proceed with similar measurement.

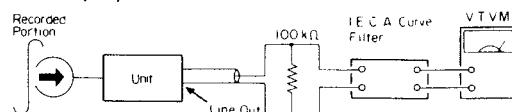
Mode: record



Mode: record



Mode: playback



### STANDARDS

1. Greater than 57 dB for the ON position of the DOLBY switch.
2. Greater than 51 dB for the OFF position of the DOLBY switch.

### CAUTION

Arrange the tape deck power cord for minimum hum component.

## 19. Record-Playback Frequency Response Measurement

### SET UP

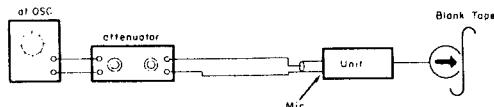
1. Power voltage:- 50 to 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1 kHz, -60 dB signal with -20 dB as 0 VU.
3. Playback output level:- Same as the recorded signal level.
4. Load:- Measuring instrument input impedance.
5. Measuring output terminal:- LINE OUT.
6. Cassette tape used:- TDK AC-211, AC-511 and SONY CS-30.
7. MONITOR switch position:- SOURCE recording mode), TAPE (at playback mode).

### PROCEDURES

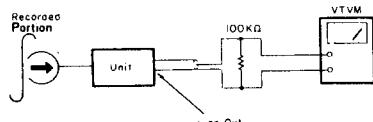
1. Record the 1 kHz signal in the normal recording state. In turn, reduce the input level by 20 dB with an attenuator. Then, record the 1 kHz, 40 Hz, 10 kHz, 13 kHz, 14 kHz and 15 kHz signals.
2. Play the recorded 1 kHz signal back in the normal playback state. Set the MONITOR switch to the TAPE position.
3. Let the 1 kHz, -20 dB-down signal level be 0 dB as reference level. Read difference of the 40 Hz, 10 kHz, 13 kHz, 14 kHz and 15 kHz signal output levels from the 1 kHz signal 0 dB reference level.
4. Proceed for the NORMAL, CrO<sub>2</sub> and Fe-Cr positions each in the same manner.
5. Proceed both for the right and left channels in the same manner.

Mode: record

1K, 40, 10K, 12.5KHz



Mode: playback



### STANDARDS

1. NORMAL position:  
250 Hz - 6.3 kHz . . . . . ±2.5 dB  
40 Hz - 13.5 kHz . . . . . +3, -4 dB  
with DOLBY switch at OFF.
2. CrO<sub>2</sub> position:  
250 Hz - 6.3 kHz . . . . . ±2.5 dB  
40 Hz - 15 kHz . . . . . +3, -4 dB  
with DOLBY switch at OFF.
3. Fe-Cr position:  
250 Hz - 6.3 kHz . . . . . ±2.5 dB  
40 Hz - 16 kHz . . . . . +3, -4 dB  
with DOLBY switch at OFF.
4. NORMAL CrO<sub>2</sub> and Fe-Cr positions:  
250 Hz - 6.3 kHz . . . . . ±4 dB  
40 Hz - 10 kHz . . . . . +4, -6 dB  
with DOLBY switch at ON.

## 20. Erasing Effect Measurement

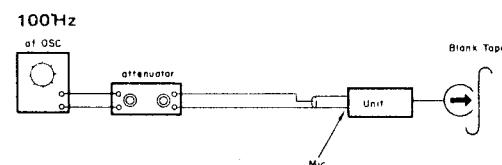
### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 100 Hz, -60 dB signal with +10 dB as 0 VU.
3. Playback output level:- Same as the recorded signal level.
4. Load:- Measuring instrument input impedance.
5. TAPE selector switch position:- NORMAL, CrO<sub>2</sub> and Fe-Cr.
6. MONITOR switch position:- SOURCE (at recording mode), TAPE (at playback mode).
7. Cassette tape used:- TDK AC-211, AC-511 and SONY CS-30.
8. Filter used:- 100 Hz band-pass filter.

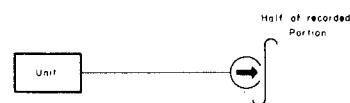
### PROCEDURES

1. Record the 100 Hz input signal in the normal recording state.
2. In turn, increase the input level by 10 dB with the attenuator, and record it.
3. Rewind a half portion of the 10 dB-up tape and record in no-signal state, or erase, on the portion with the input signal disconnected from the microphone jack.
4. Play back in the normal playback state the input signal recorded in the normal recording state. Set the MONITOR switch to the TAPE position.
5. In turn, let the 10 dB-up recorded signal level be 0 dB as reference level. Read difference of the level at the erased portion from the 0 dB reference level.

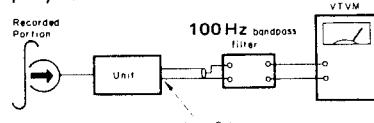
#### Mode: record



#### Mode: record



#### Mode: playback



#### STANDARD

Greater than 55 dB.

## 21. Leak Bias Measurement

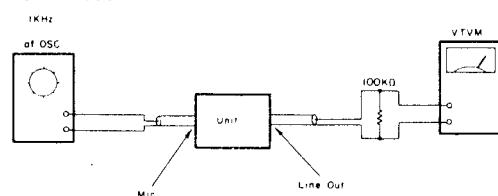
### SET UP

1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1 kHz, -60 dB signal.
3. Load: Measuring instrument input impedance.
4. Level control position:- SRL.
5. TAPE selector switch position:- NORMAL CrO<sub>2</sub> and Fe-Cr.
6. MONITOR switch position:- SOURCE.

### PROCEDURES

1. Record the 1 kHz input signal in the normal recording state. Let the monitor output level at the LINE OUT terminal be 0 dB as reference level. Read difference of the output level having the input signal disconnected from the 0 dB reference level.
2. Proceed both for the right and left channels in the same manner.

#### Mode: record



#### STANDARD

Lower than -45 dB.

## 22. Cross Talk Measurement

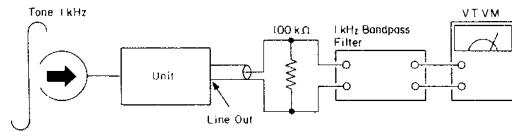
### SET UP

1. Power voltage:- -50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch position:- NORMAL.
3. MONITOR switch position:- TAPE.
4. Load:- Measuring instrument input impedance.
5. Measuring output terminal:- LINE OUT.
6. Test tape used:- MTT-121.

### PROCEDURES

1. Play back the R channel on the side A of the test tape MTT-121. Assure that the output response at 1 kHz be 0 dB as reference level.
2. In turn, play back the R channel on the side B of the test tape MTT-121. Read the output level deviated from the 0 dB reference level.

Mode: playback



### STANDARD

Less than 50 dB.

## 23. Channel Separation Measurement

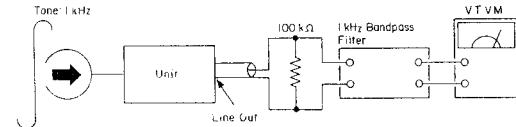
### SET UP

1. Power voltage:- 50 to 60 Hz AC voltage rated for the unit to be used in a market country.
2. TAPE selector switch position:- NORMAL.
3. MONITOR switch position:- TAPE.
4. Load:- Measuring instrument input impedance.
5. Measuring output terminal:- LINE OUT.
6. Test tape used:- MTT-141.

### PROCEDURES

1. Play back the L channel of the test tape MTT-141. Assume that the output reference at 1 kHz be 0 dB as reference level.
2. In turn, play back the L channel. Read the output level from the 0 dB reference level.

Mode: playback



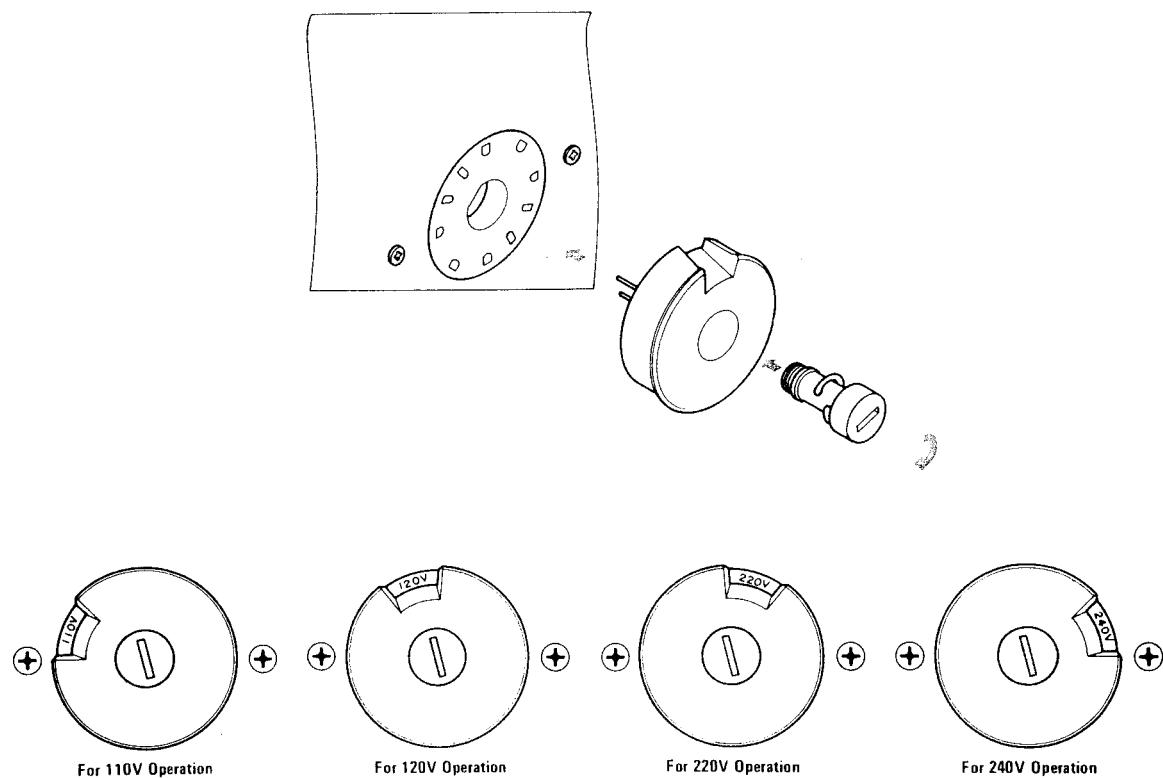
### STANDARD

Less than 35 dB.

## 5. VOLTAGE CONVERSION FOR EUROPEAN MODEL

The European version of the Model 5030 is equipped with a universal power transformer that may be adjusted to 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.**

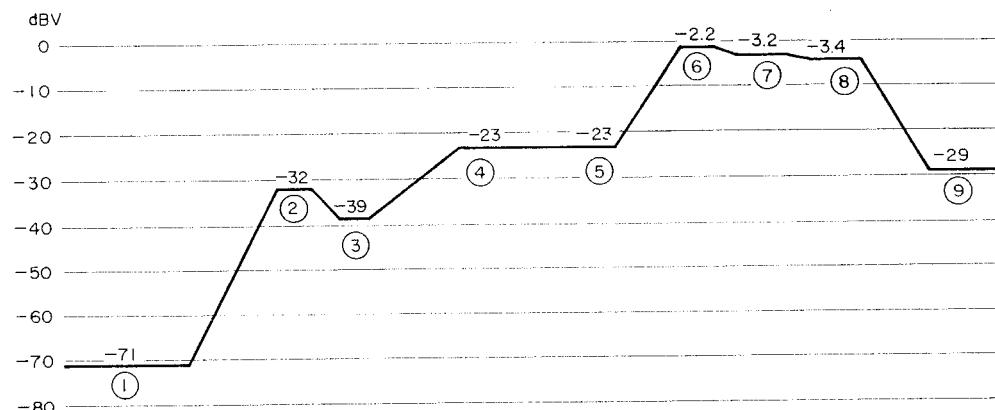
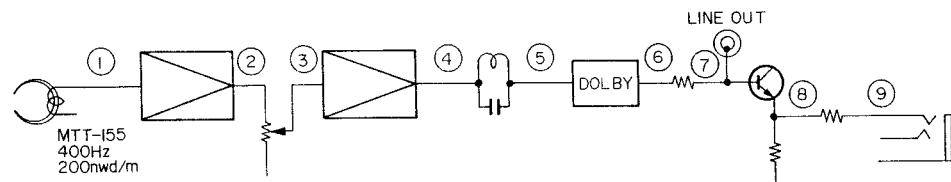


**marantz**

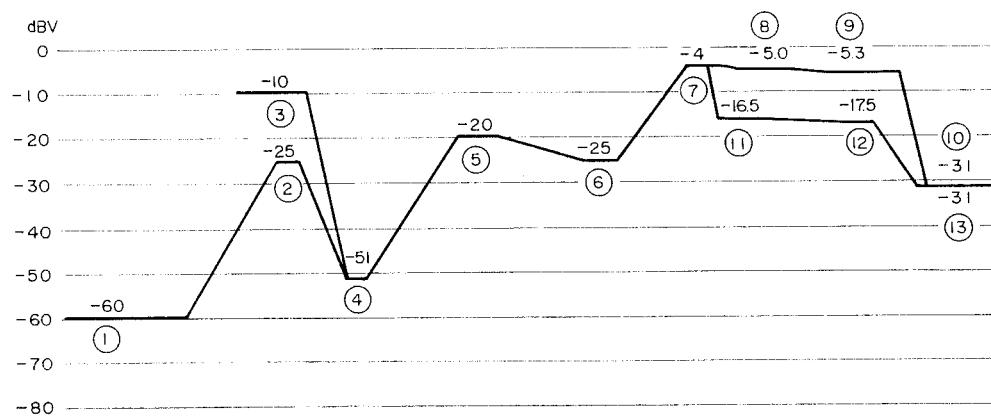
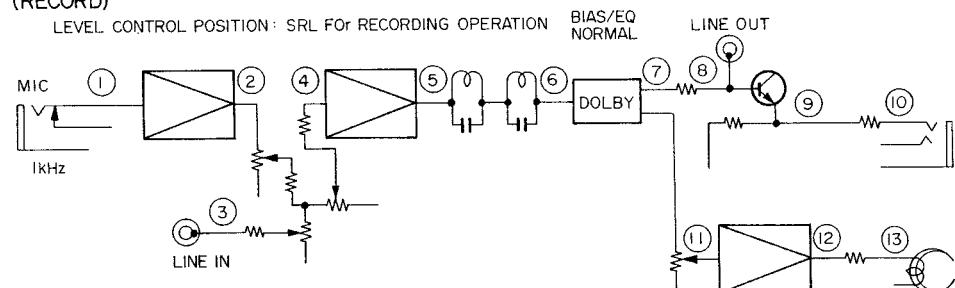
## 6. DIAGRAMS

### 6.1 LEVEL DIAGRAM

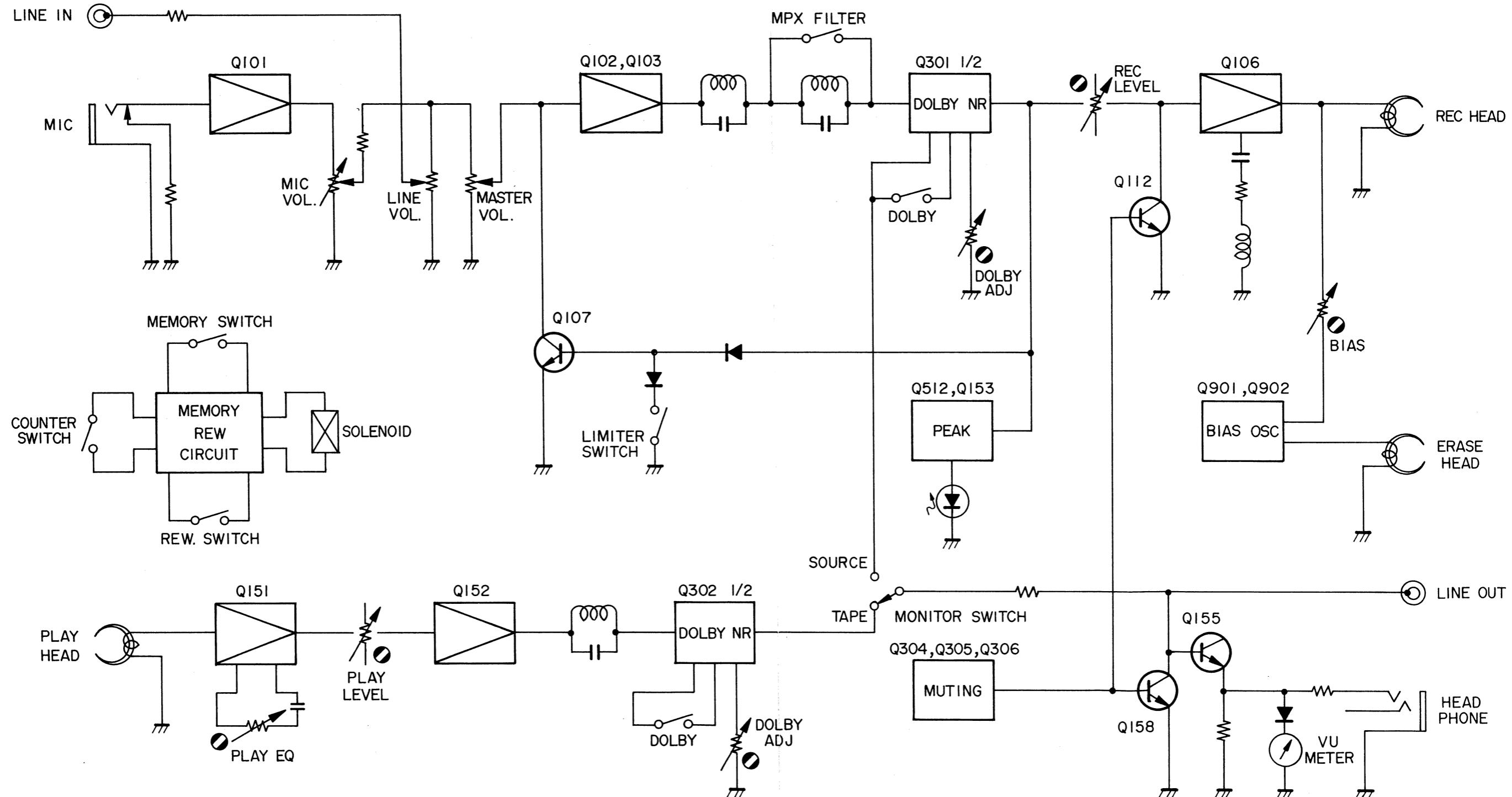
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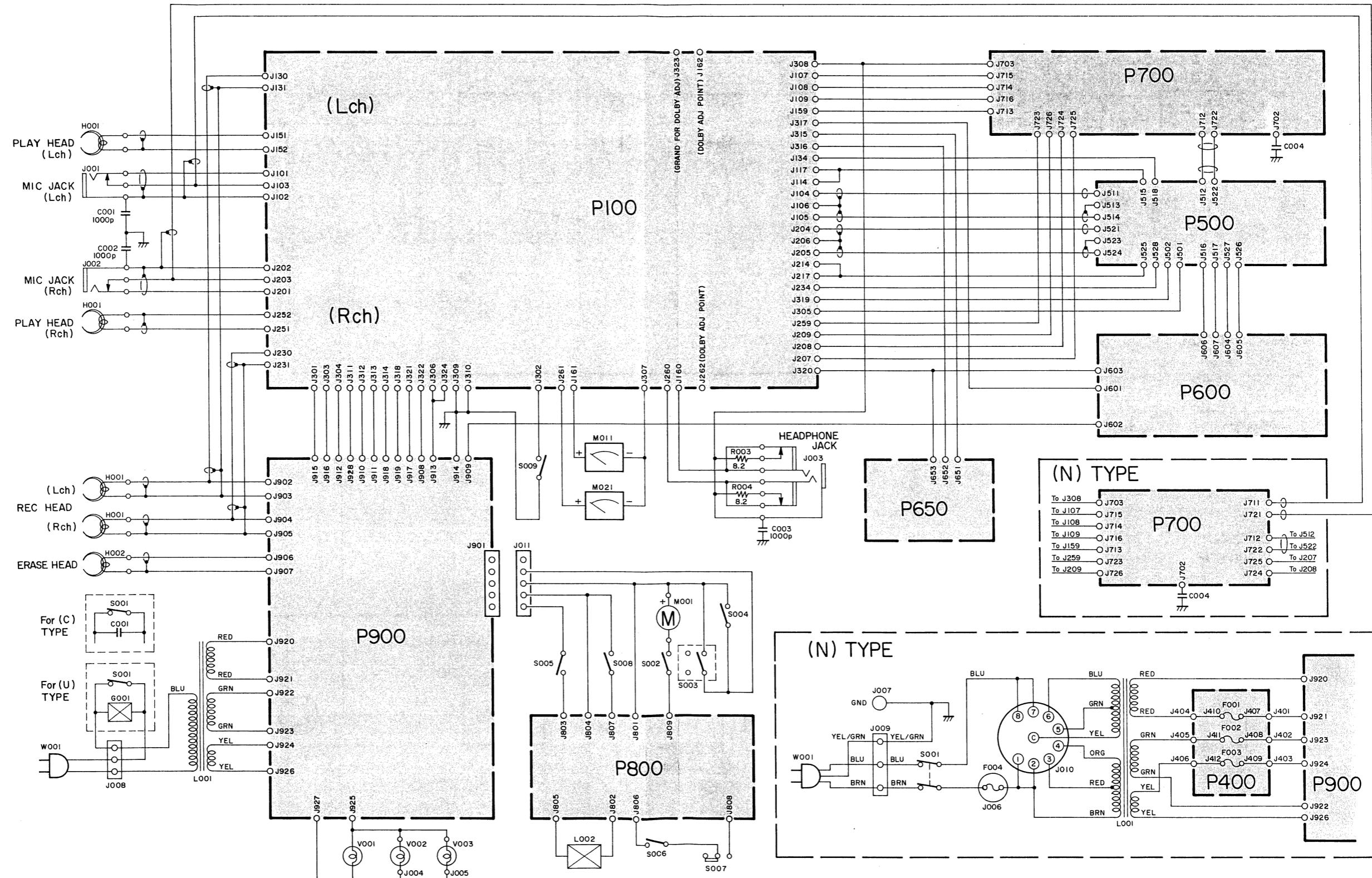
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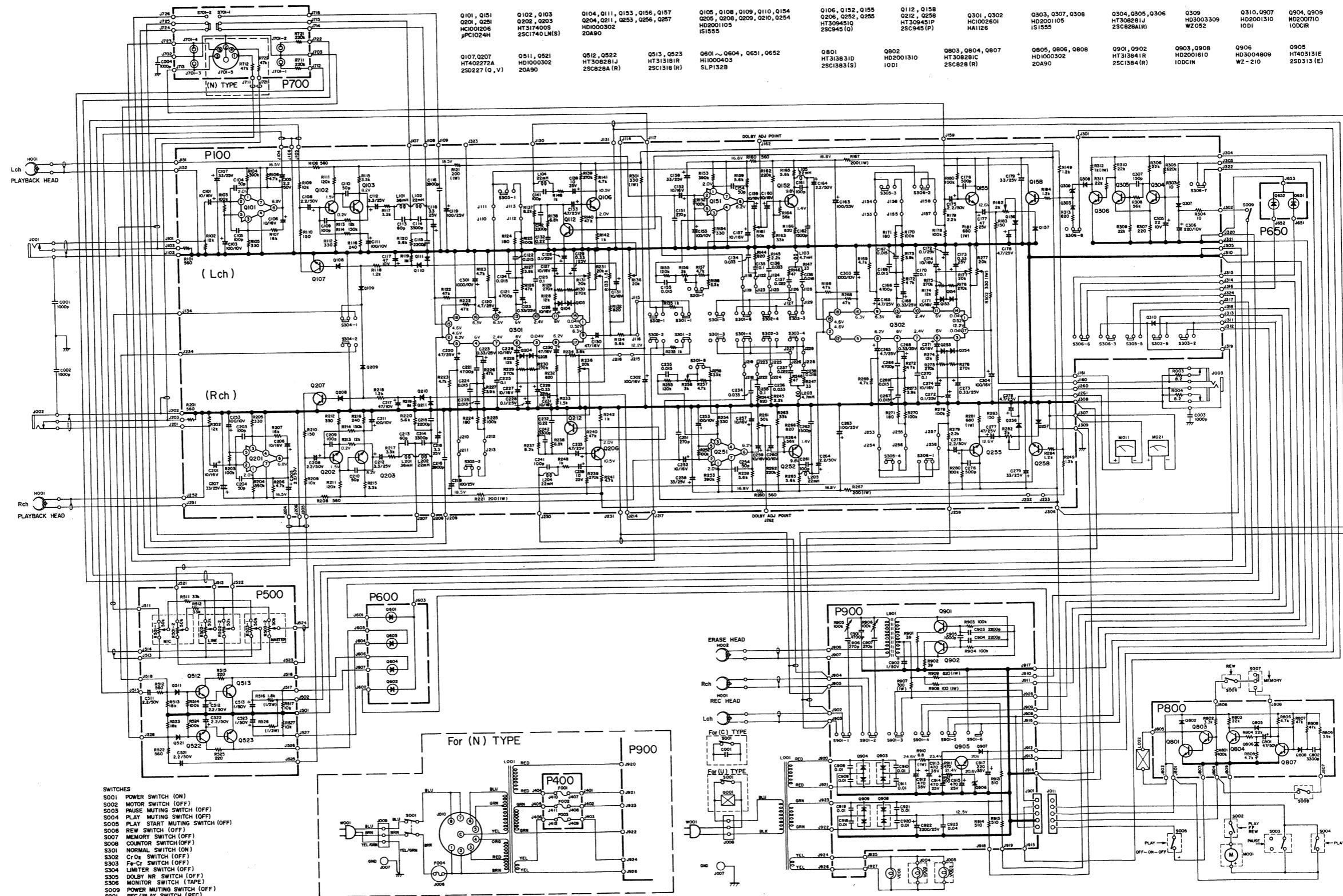
6.2 BLOCK DIAGRAM



## 6.3 CONNECTION DIAGRAM



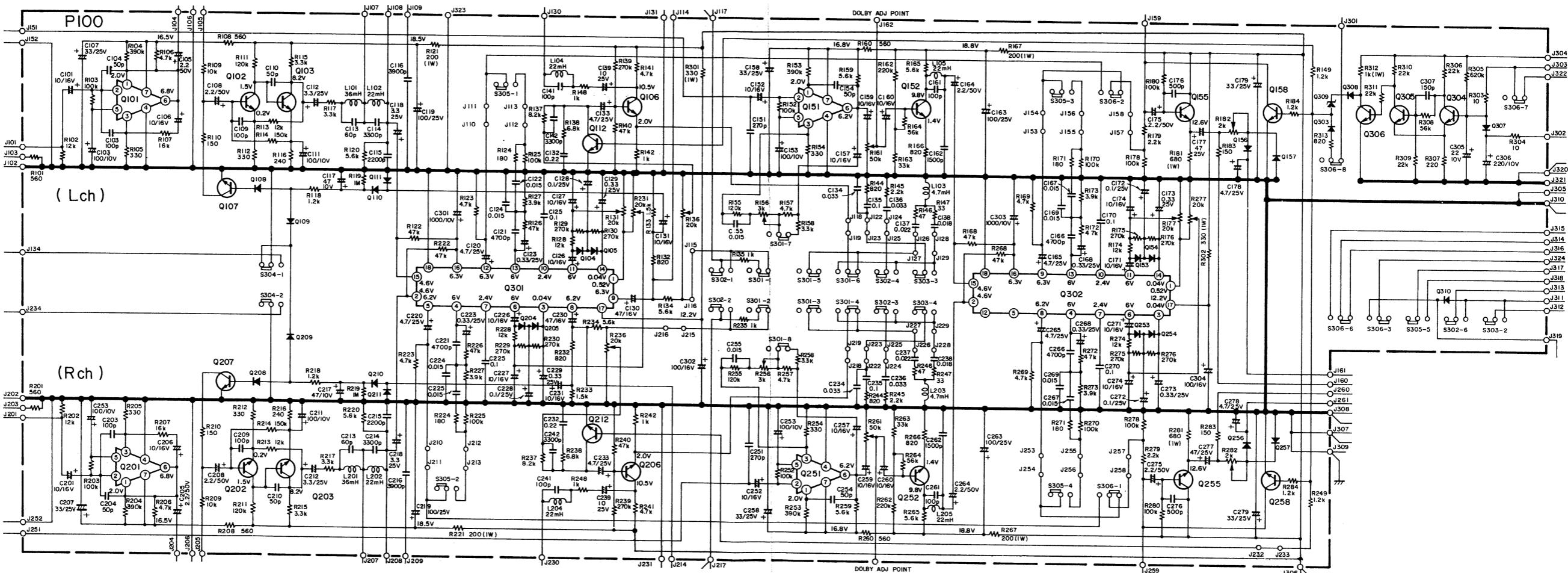
#### 6.4 SCHEMATIC DIAGRAM

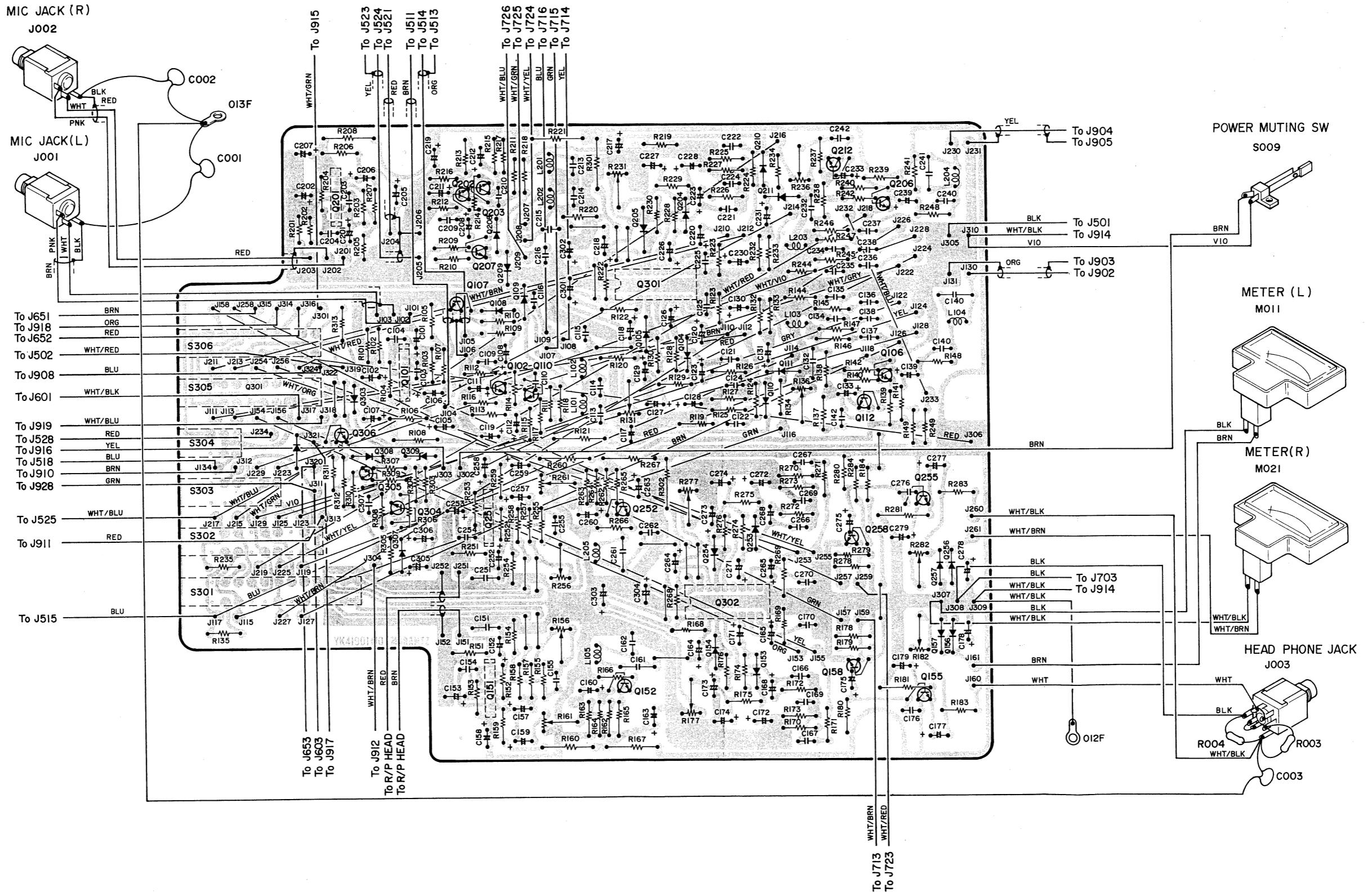


**marantz**

**marantz**

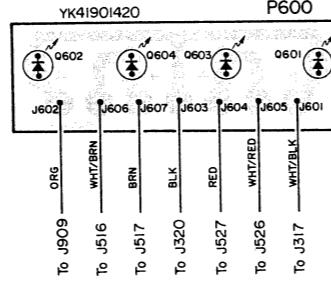
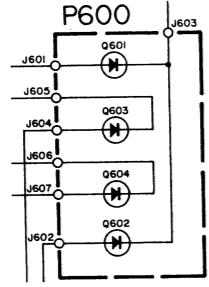
**6.5 PRE-AMP, POWER SUPPLY, DOLBY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P10**



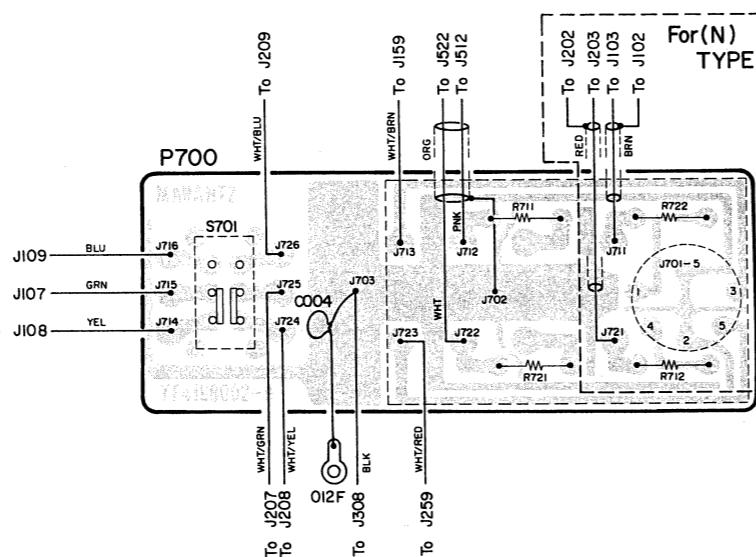
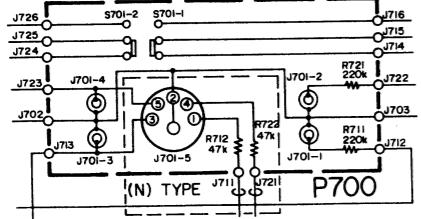


**marantz**

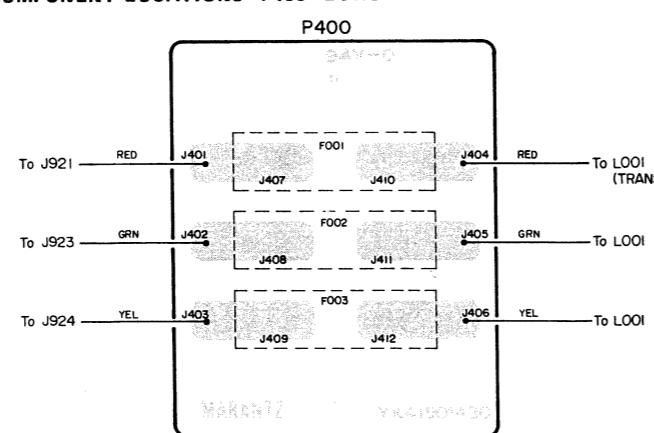
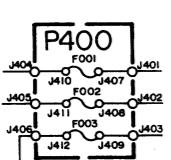
#### 6.6 LED BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P600



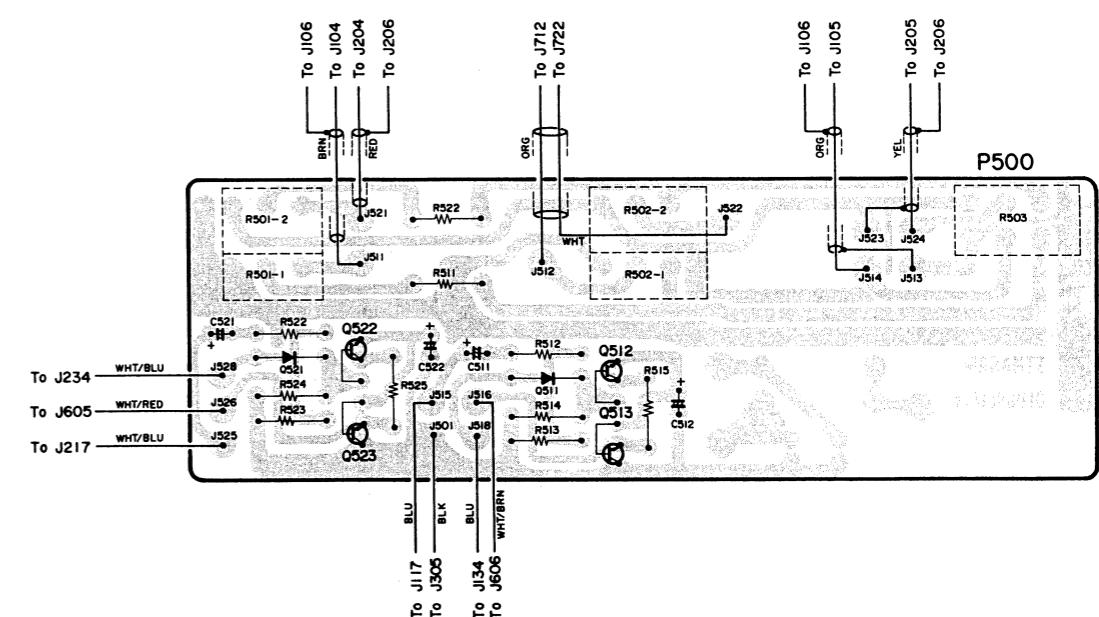
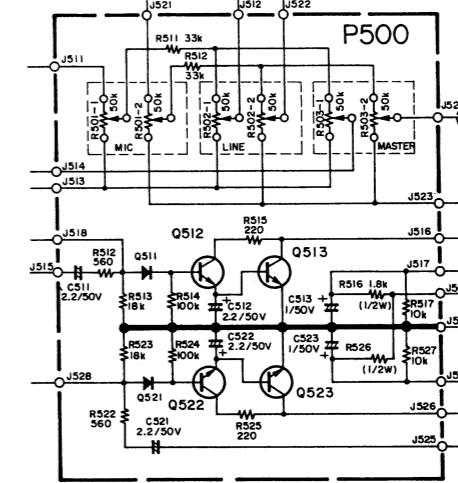
#### 6.7 TERMINALS BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P700



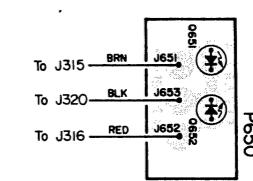
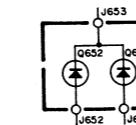
#### 6.8 FUSE BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P400 - EUROPE



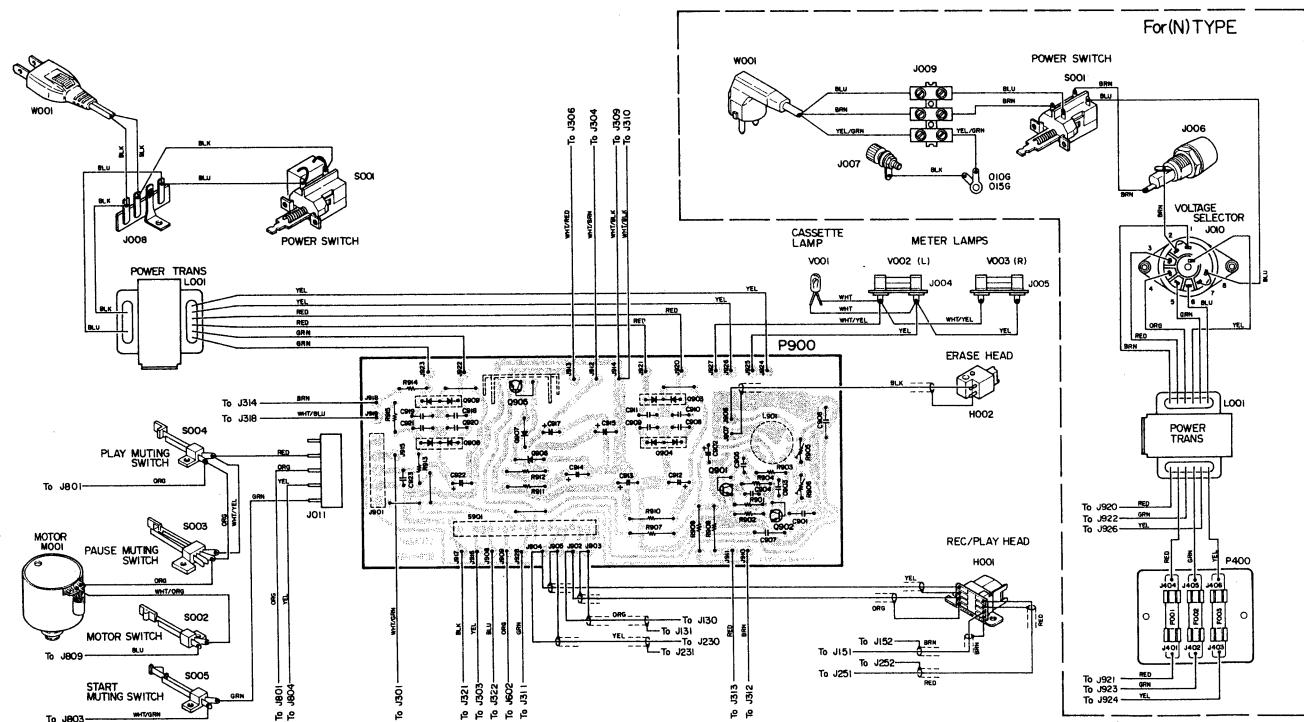
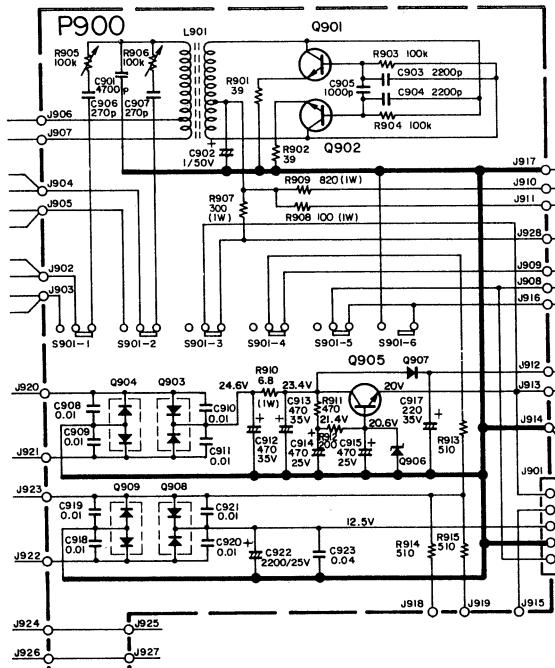
#### 6.9 VOLUME, PEAK BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P500



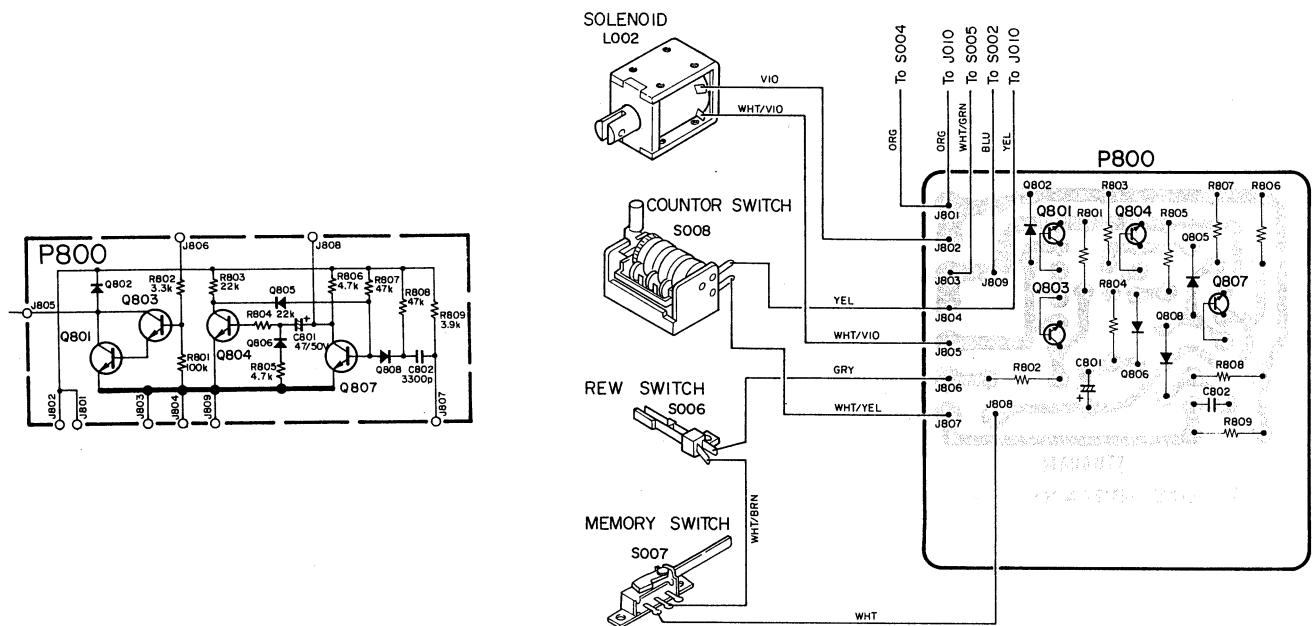
#### 6.10 MONITOR BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P650



6.11 POWER SUPPLY, BIAS OSCILLATOR BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P900

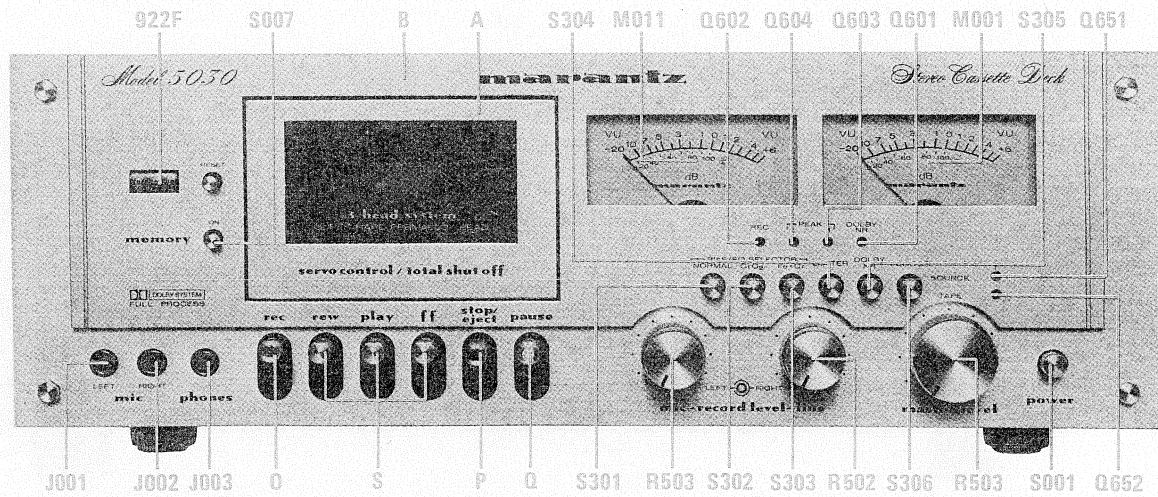


**6.12 MEMORY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P800**

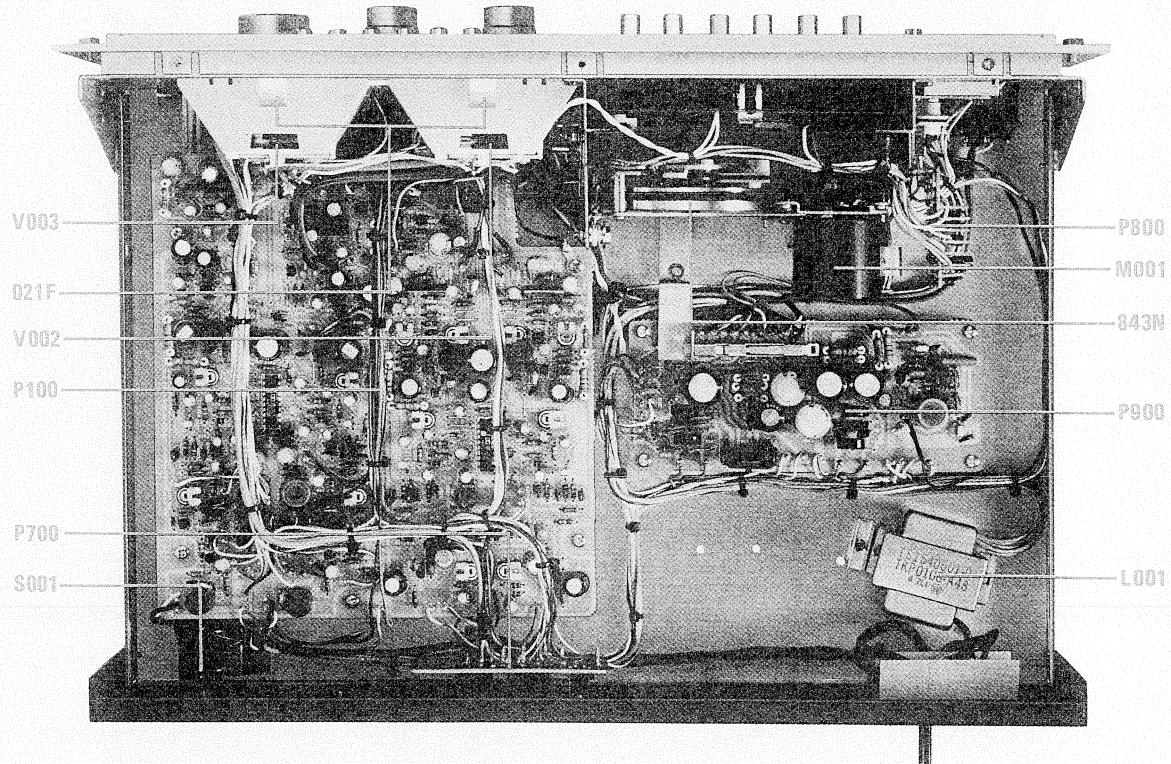


## 7. MAJOR COMPONENT LOCATIONS

### 7.1 CABINET - FRONT VIEW

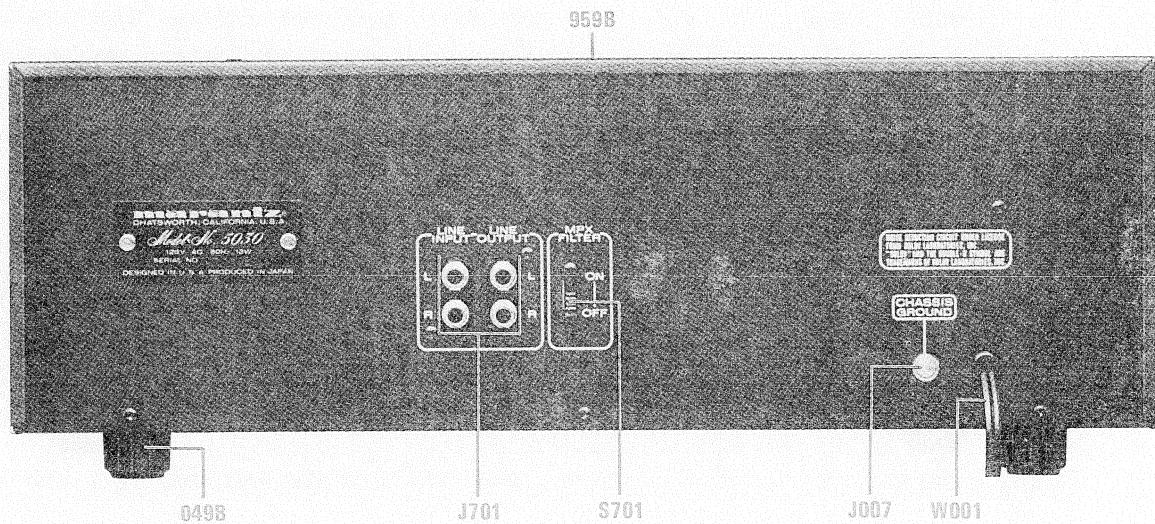


### 7.2 CHASSIS - TOP VIEW



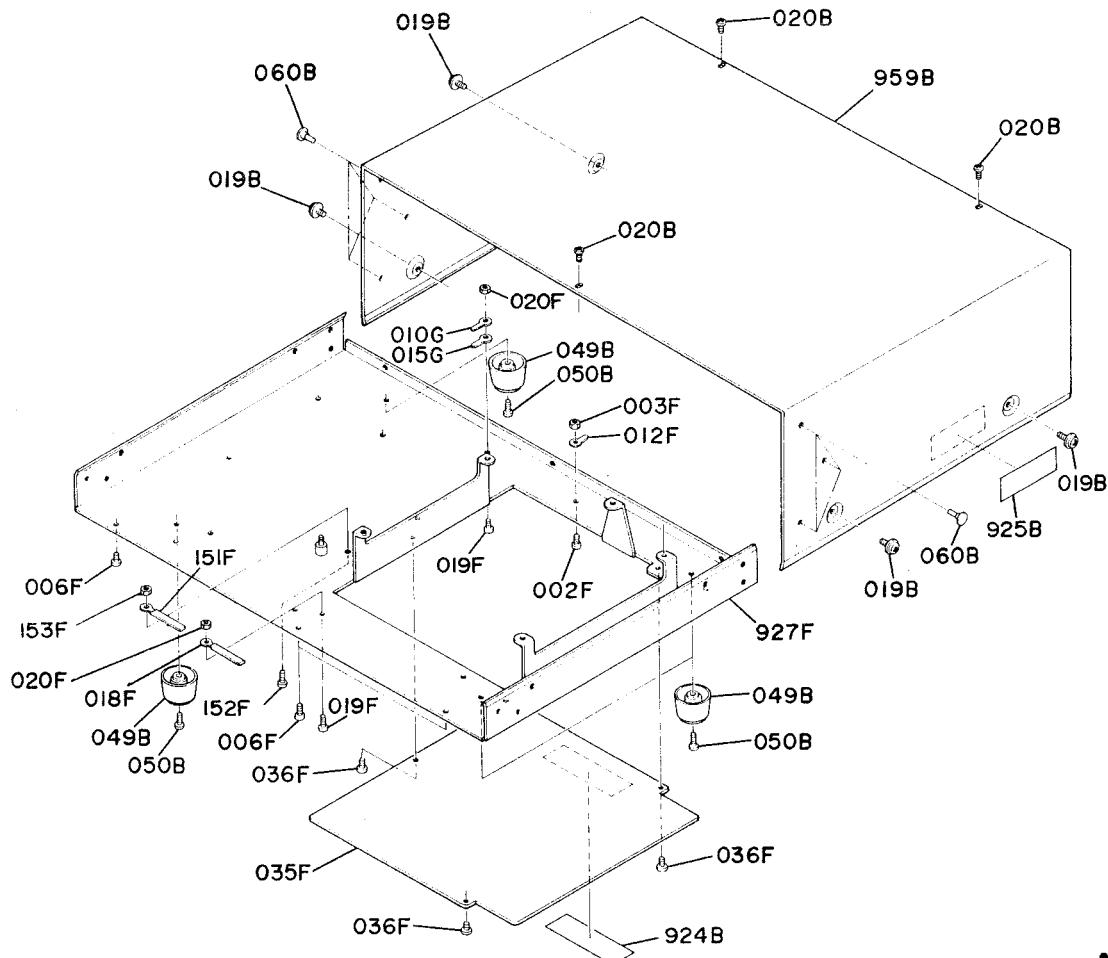
**marantz**

7.3 CABINET - REAR VIEW



## 8. EXPLODED VIEWS AND PARTS LIST

### 8.1 [P01-00] TOP COVER AND MAIN CHASSIS

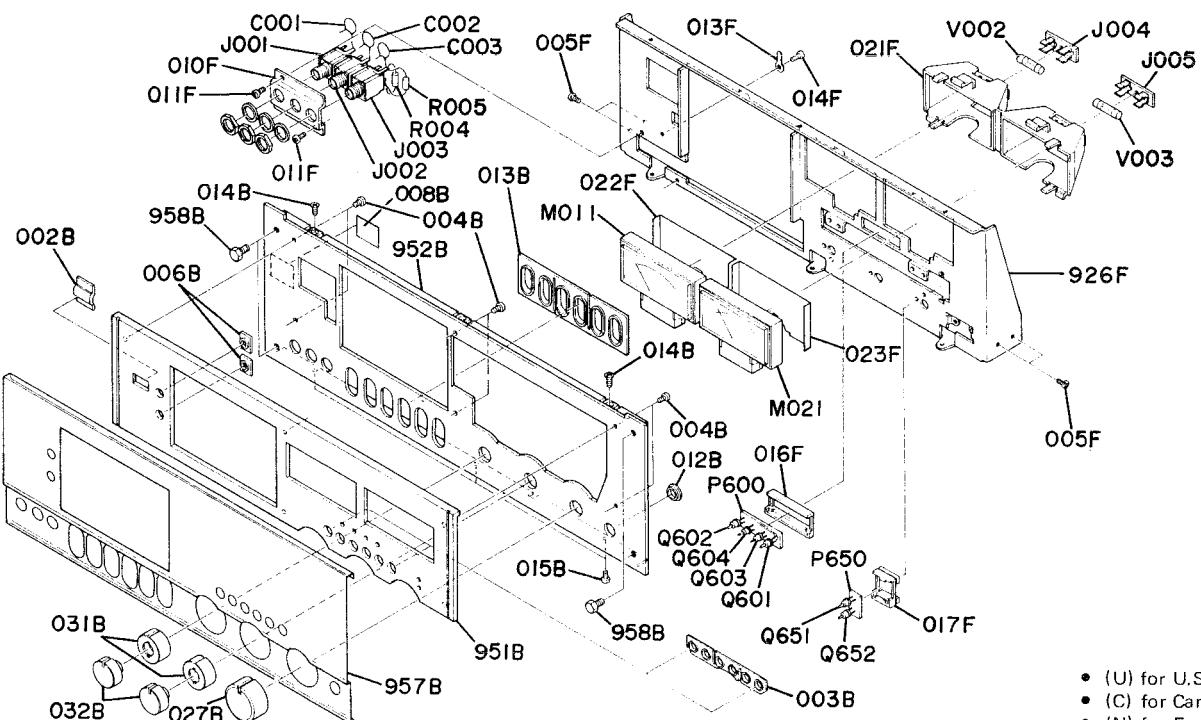


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
959B	1	1	1	4197257022	Lid, Top Cover
019B	4	4	4	5148040659	F. Washer Screw F4 x 6
020B	3	3	3	5110030659	B.H.M. Screw B3 x 6
049B	4	4	4	2932057010	Leg
050B	4	4	4	5157041050	P. TAP. Screw P4 x 10
060B	6	6	6	4197259020	Bushing
924B	1	1	1	3889861010	Label
924B				4113861020	Label
925B	1	1	1	2932861012	Label
925B				2911861143	Label

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
002F	1	1	1	51100306A9'	B.H.M. Screw
003F	1	1	1	53110030A9	Hexagon Nut
006F	3	3	3	51100306A9	B.H.M. Screw
012F	1	1	1	62030049W0	Lug
018F	1	1	1	2871005010	Clamper
019F	2	2	2	51100306A9	B.H.M. Screw
020F	2	2	2	53110303A9	Hexagon Nut
035F	1	1	1	4197257030	Lid
036F	3	3	3	51280306B0	B.H. TAP. Screw
151F	1	1	1	2821005010	Clamper
152F	1	1	1	51100406A9	B.H.M. Screw
153F	1	1	1	53110403A9	Hexagon Nut
927F	1	1	1	4197105516	Chassis
010G			1	62031650W0	Lug
015G			1	62031650W0	Lug

**8.2 [P02-99] FRONT PANEL AND CHASSIS**

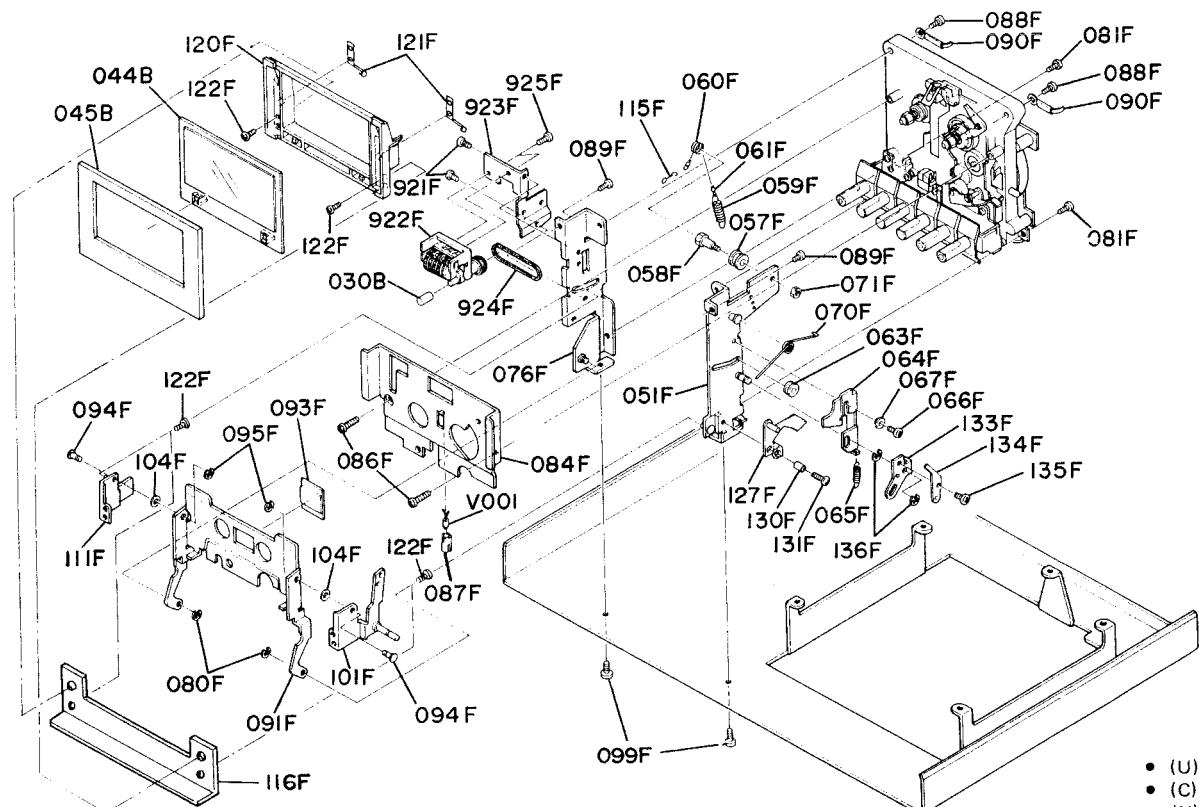


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
A	1	1	1	4190063400	Front Panel Assembly
951B	1	1	1	4190063013	Escutcheon
002B	1	1	1	4123158032	Window
003B	1	1	1	4190259010	Bushing
004B	6	6	6	51100305A9	B.H.M. Screw B3 x 5
006B	2	2	2	3448259100	Bushing
008B	1	1	1	4198120010	Insulator
952B	1	1	1	4198063022	Escutcheon
957B	1	1	1	4190053012	Cover
958B	4	4	4	52017069J0	H. Head Bolt
012B	1	1	1	2221259013	Bushing
013B	1	1	1	4197259010	Bushing
014B	2	2	2	51040306A9	F.H.M. Screw F3 x 6
015B	3	3	3	51100306A9	B.H.M. Screw B3 x 6
027B	1	1	1	4197154010	Knob, Master Level
031B	2	2	2	4198154010	Knob, Rec Level
032B	2	2	2	4198154020	Knob, Rec Level
926F	1	1	1	4197160014	Bracket
005F	4	4	4	51280306B0	B.H. TAP. Screw B3 x 6
010F	1	1	1	4197160060	Bracket
011F	2	2	2	51100306A9	B.H.M. Screw B3 x 6
013F	1	1	1	62030049W0	Lug, GND
014F	1	1	1	51100306A9	B.H.M. Screw B3 x 6
016F	1	1	1	4197271020	Holder
017F	1	1	1	4190271010	Holder
021F	1	1	1	4197274012	Reflector
022F	1	1	1	4197107010	Sheet
023F	1	1	1	4197107010	Sheet

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION		
	U	C	N				
C001	1	1	1	DK18102010	Ceramic Cap. 1000pF		
C002	1	1	1	DK18102010	Ceramic Cap. 1000pF		
C003	1	1	1	DK18102010	Ceramic Cap. 1000pF		
J001	1	1	1	YJ01001110	Jack, Mic		
J002	1	1	1	YJ01001110	Jack, Mic		
J003	1	1	1	YJ01001120	Jack, Headphone		
J004	1	1	1	YJ08000130	Jack, Lamp Holder		
J005	1	1	1	YJ08000130	Jack, Lamp Holder		
R004	1	1	1	GD05082140	Resistor 8.2Ω ±5% 1/4W		
R005	1	1	1	GD05082140	Resistor 8.2Ω ±5% 1/4W		
V002	1	1	1	IN10080430	Lamp, 8V 300mA		
V003	1	1	1	IN10080430	Lamp, 8V 300mA		
M011	1	1	1	IM11080042	D.C. Meter		
M021	1	1	1	IM11080042	D.C. Meter		
P600	1	1	1	YK41901420	<b>P600-LED CIRCUIT BOARD</b>		
				ZZ41901420	P.W. Board, Led		
					P.W. Board Assembly		
Q601	1	1	1	HI10004030	L.E.D. SPL-132B Dolby		
Q602	1	1	1	HI10004030	L.E.D. SPL-132B Rec.		
Q603	1	1	1	HI10004030	L.E.D. SPL-132B Peak		
Q604	1	1	1	HI10004030	L.E.D. SPL-132B Peak		
J601	7	7	7	YP10001200	Plug		
J607					<b>P650-MONITER CIRCUIT BOARD</b>		
P650	1	1	1	YK41901440	P.W. Board, Monitor		
				ZZ41901440	P.W. Board, Assembly		
Q651	1	1	1	HI10004030	L.E.D. SLP-132B Source		
Q652	1	1	1	HI10004030	L.E.D. SLP-132B Tape		

### 8.3 [P03-99] ASSOCIATED MECHANISM FOR CASSETTE TAPE OPERATION

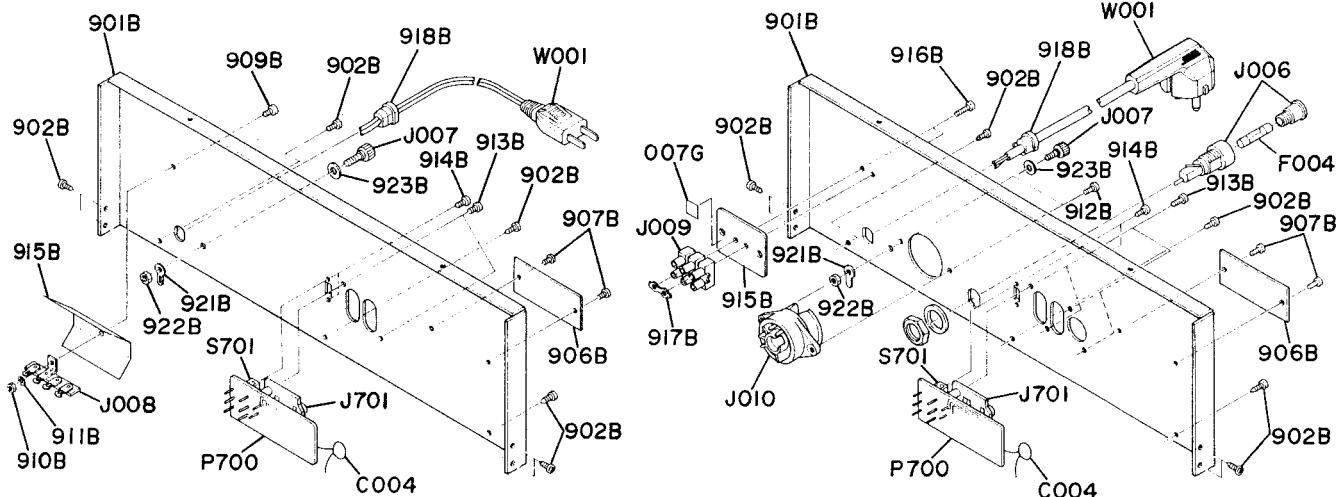


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
B 044B 045B	1	1	1	4190063410 4197257042 4197063033	Escutcheon Assembly, Cassette Lid Escutcheon
C 120F 121F 122F	1	1	1	4197271400 4197271013 4197115052	Holder Assembly, Cassette Holder Spring
	2	2	2	5110260550	P.H.M. Screw P2.6 x 5
030B 051F 057F 058F 059F 060F 061F	1	1	1	3448067060 4197160502 4197262010 4197112040 4197115020 72081604A0 56382540G0	Cap Bracket Pulley Shaft Spring String Eyelet
063F 064F 065F	1	1	1	4197262020 4197258020 4197115040	Pulley Hook Spring
066F 067F 070F 071F 076F 080F 081F 084F 086F	1	1	1	51102606A0 4197055010 4197115030 53110303A9 4197160513 64000200R0 51060306A9 4197053013 51382606T0	P.H.M. Screw P2.6 x 6 Collar Spring Hexagon Nut Bracket RG Ring, E Type P.H.M. Screw P3 x 6 Cover P.H.TAP.Screw P2.6 x 6

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
087F 088F 089F 090F 091F 093F 094F 095F 099F 101F 104F	1	1	1	4197271030 51100308A9 51100306A9 1382005030 4197104013 4197158010 4197112092 64000200R0 51470306A9 4197051502 59035402G9	Holder B.H.M. Screw B3 x 8 B.H.M. Screw B3 x 6 Clamper Retainer Window Shaft RG Ring, E Type Washer Screw Guide Washer
111F 115F 116F 127F 130F 131F 133F 134F 135F 136F	1	1	1	4197051510 4197258030 4197104032 4197002500 4197055030 51102610A0 4197002020 4197164010 51102604A0 64000300R0	Guide Hook Retainer Arm Collar B.H.M. Screw B2.6 x 10 Arm Adjuster B.H.M. Screw B2.6 x 4 RG Ring, E Type
921F 922F 923F 924F 925F V001	2	2	2	51100306A9 4198052010 4198160020 4197264012 51100306A9 IN10080440	B.H.M. Screw B3 x 6 Counter Bracket Belt B.H.M. Screw B3 x 6 Lamp 8V 0.05A

**8.4 [P04-99] REAR PANEL**

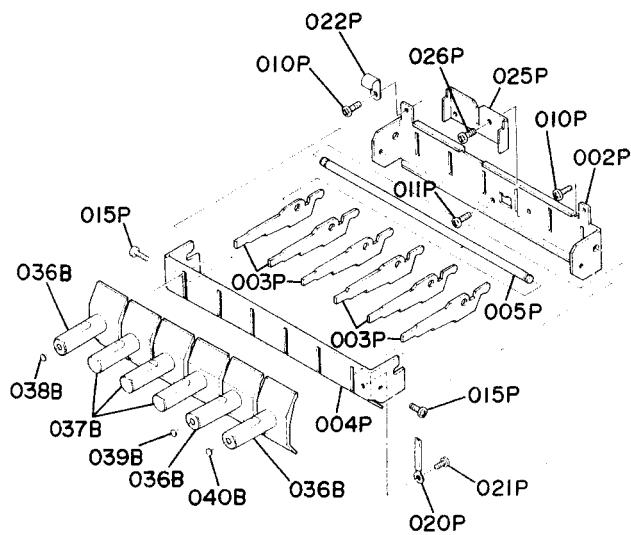


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
901B	1	1	1	4197160020	Bracket
901B			1	4190160010	Bracket
902B	7	7	7	51280306U0	B.H. TAP. Screw B3 x 6
906B	1			4190265010	Indicator
906B	1			4190265020	Indicator
906B	1			4190265030	Indicator
907B	2	2	2	51750306B9	OS Screw
909B	1	1	2	51100306S9	B.H.M. Screw B3 x 6
910B	1	1	1	53110303A9	Hexagon Nut
911B	1	1	1	54040302A0	Spring Washer
912B			2	51100308S9	B.H.M. Screw B3 x 8
913B	2	2	4	51280308U0	B.H. TAP. Screw B3 x 8
914B	2	2	2	51102604S0	B.H.M. Screw B2.6 x 4
915B	1	1	1	4114120010	Insulator
915B	1		1	4114120010	Insulator
916B	2		2	5110216S9	B.H.M. Screw B3 x 16
917B			1	2970005010	Clamper
918B	1	1	1	1455259030	Bushing
918B			1	1455259040	Bushing
921B	1	1	1	62040029W0	Lug
922B	1	1	1	53110403A9	Hexagon Nut
923B	1	1	1	54020401E0	Flat Washer, P
007G			1	2882861020	Label
J006			1	YJ08000220	Jack Fase Holder
J007	1	1	1	YL03010210	Terminal, Grand
J008	1	1		YL01040160	Terminal
J009			1	YL09030010	Terminal
J010			1	BY03110010	Plug
W001	1	1	1	YC02400220	AC Power Cord
W001			1	YC01900030	AC Power Cord
F004			1	FS10012800	Fuse 125mA
C004	1	1	1	DK18102010	Ceramic Cap. 1000pF

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
P700			1	YF41980020	<b>P700-REAR CIRCUIT BOARD</b>
			1	ZZ41980020	P.W. Board Terminal
			1	ZZ41988020	P.W. Board Assembly
R711	1	1	1	GD05224140	Resistor, 220KΩ ±5% 1/4W
R712			1	GD05473140	Resistor, 47KΩ ±5% 1/4W
R721	1	1	1	GD05224140	Resistor, 220KΩ ±5% 1/4W
R722			1	GD05473140	Resistor, 47KΩ ±5% 1/4W
J701	1	1	1	YT02040150	Terminal Rca
J701			1	BY01050060	Din, Rca
J702	1	1	1	YP10001200	Jack Plug
J703	1	1	1	YP10001200	Plug
J711		6	6	YP10001200	Plug
J716		6	6	YP10001200	Plug
J721		6	6	YP10001200	Plug
J726		6	6	YP10001200	Plug
S701	1	1	1	SS02020420	Slide Switch

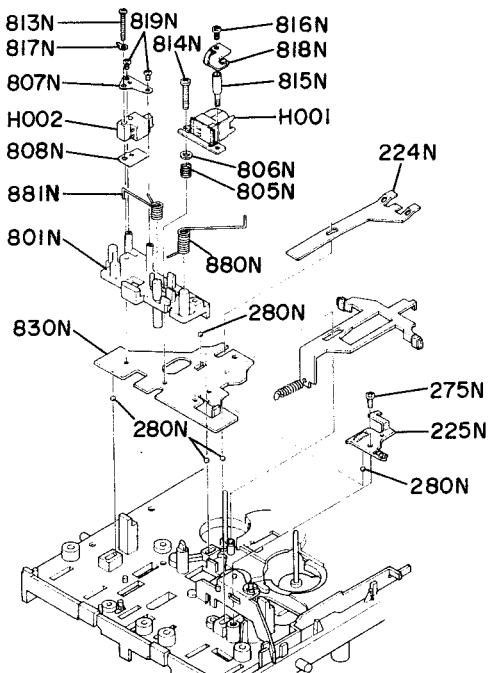
### 8.5 [P05-00] BUTTONS FOR TAPE MECHANISM OPERATION



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

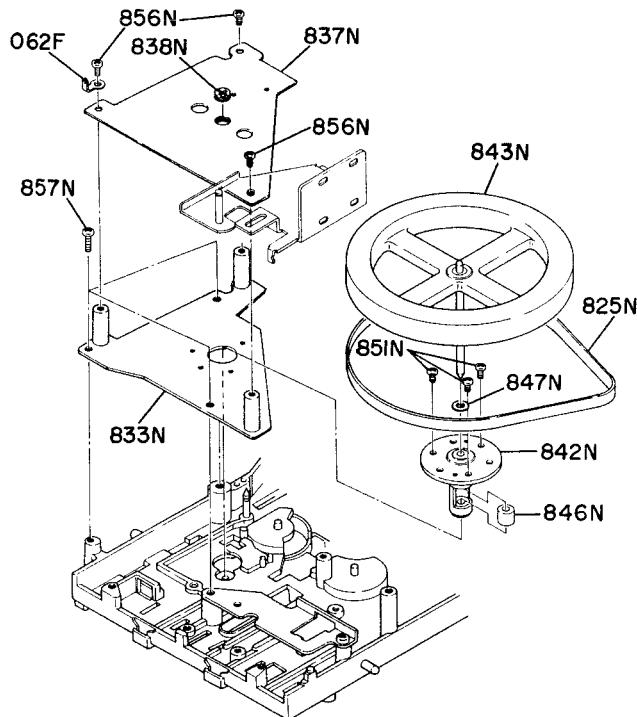
REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
O	1	1	1	4197270400	Button Assembly, Rec
003P	1	1	1	4380354070	Lever
036B	1	1	1	4197270010	Button
038B	1	1	1	3411108030	Seal
P	1	1	1	4197270410	Button Assembly, Stop
003P	1	1	1	4380354070	Lever
036B	1	1	1	4197270010	Button
039B	1	1	1	3411108020	Seal
Q	1	1	1	4197270420	Button Assembly, Pause
003P	1	1	1	4380354070	Lever
036B	1	1	1	4197270010	Button
040B	1	1	1	3411108010	Seal
S	3	3	3	4197270430	Button Assembly, Play, FF, Rew
003P	3	3	3	4380354070	Lever
037B	3	3	3	4197270022	Button
002P	1	1	1	4380160013	Bracket
004P	1	1	1	4380051013	Guide
005P	1	1	1	4380112030	Shaft
010P	2	2	2	51300208B0	P.H. TAP. Screw P2 x 8
011P	1	1	1	51300310B0	P.H. TAP. Screw P3 x 10
015P	2	2	2	51062605A0	P.H.M. Screw P2.6 x 5
020P	1	1	1	1210005010	Clamper
021P	1	1	1	51062603A0	P.H.M. Screw P2.6 x 3
022P	1	1	1	1126005010	Clamper
025P	1	1	1	4383104040	Retainer
026P	1	1	1	51062605A0	P.H.M. Screw P2.6 x 5

### 8.6 [P06-99] HEAD CHASSIS



REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
224N	1	1	1	4380115010	Spring
225N	1	1	1	4367115170	Spring
275N	1	1	1	51300308B0	P.H. TAP. Screw P3 x 8
280N	5	5	5	61020010T0	Ball
801N	1	1	1	4383160032	Bracket
805N	1	1	1	4380115090	Spring
806N	1	1	1	3444118070	Spacer
807N	1	1	1	4383005010	Clamper
808N	1	1	1	4383118010	Spacer
813N	1	1	1	51102620A0	B.H.M. Screw B2.6 x 20
814N	1	1	1	51100210A0	B.H.M. Screw B2 x 10
815N	1	1	1	4380101030	Support
816N	1	1	1	51100203A0	B.H.M. Screw B2 x 3
817N	1	1	1	62261240W0	Lug
818N	1	1	1	4380005010	Clamper
819N	2	2	2	51832608S9	P.H. TAP. Screw P2.6 x 8
830N	1	1	1	4383105010	Chassis
880N	1	1	1	4383115020	Spring
881N	1	1	1	4367115053	Spring
H001	1	1	1	LH82102010	Rec./Play Head
H002	1	1	1	LH31000420	Erase Head

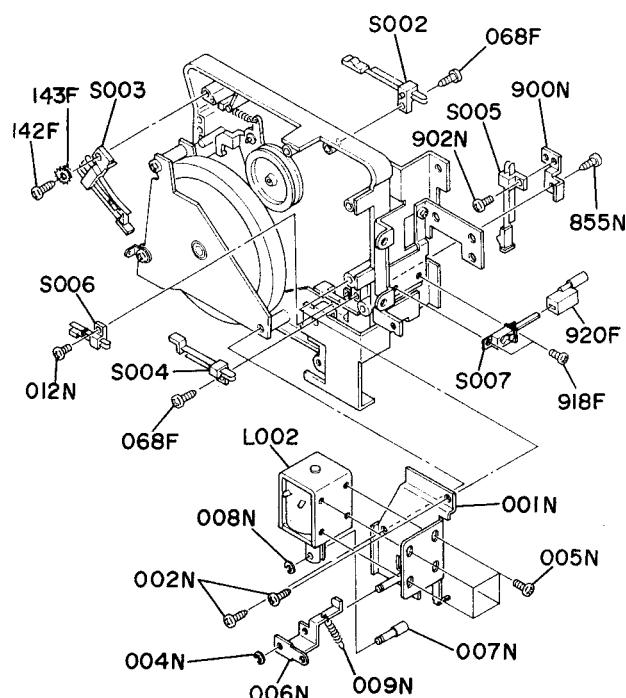
**8.7 [P07-99] FLYWHEEL**



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

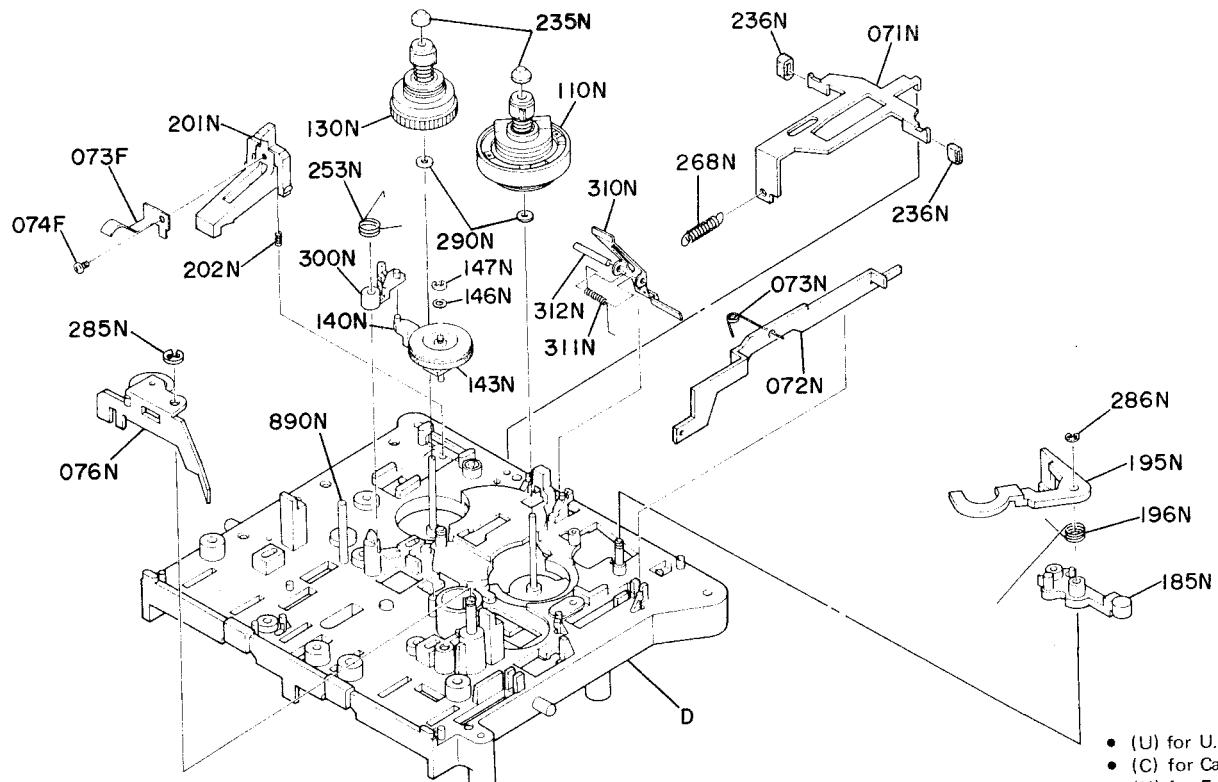
REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
825N	1	1	1	4383264020	Belt
833N	1	1	1	4383104700	Retainer
837N	1	1	1	4383104010	Retainer
838N	1	1	1	3483164020	Adjuster
842N	1	1	1	4383106020	Sustainer
843N	1	1	1	4383273510	Flywheel
846N	1	1	1	4383262020	Pulley
847N	1	1	1	59264702G9	Washer
851N	3	3	3	51440306A9	L. Washer Screw
856N	3	3	3	51060308A9	P.H.M. Screw
857N	3	3	3	51300312B0	P.H. TAP Screw
062F	1	1	1	62031650W0	P3 x 8 P3 x 12 Lug

**8.8 [P08-99] SWITCH LOCATION FOR THE TAPE MECHANISM OPERATION**



REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
001N	1	1	1	4198160500	Bracket
002N	2	2	2	51100304A9	B.H.M. Screw
004N	1	1	1	64002500R0	RG Ring, B Type
005N	4	4	4	51100305A9	B.H.M. Screw
006N	1	1	1	4198002010	Arm
007N	1	1	1	4198254020	Pin
008N	1	1	1	64001500R0	RG Ring, E Type
009N	1	1	1	4198115010	Spring
012N	1	1	1	51062604A0	P.H.M. Screw
068F	2	2	2	51380206P0	P.H. TAP. Screw
142F	1	1	1	51382608P0	P.H. TAP Screw
143F	1	1	1	54052600A0	T.L. Washer, OR
855N	1	1	1	51300308B0	P.H. TAP. Screw
900N	1	1	1	4383160040	Bracket
902N	1	1	1	51060205A0	P.H.M. Screw
918F	2	2	2	51100204A0	B.H.M. Screw
920F	1	1	1	3448270050	Button, Memory Switch
L002	1	1	1	ME10530040	Solenoid Coil
S002	1	1	1	SM01010680	Mini Switch, Motor
S003	1	1	1	SM02010120	Mini Switch, Pause Muting
S004	1	1	1	SM01010660	Mini Switch, Play Muting
S005	1	1	1	SM01010580	Mini Switch Play Start Muting
S006	1	1	1	SM01010390	Mini Switch, Rew
S007	1	1	1	SP01020020	Push Switch, Memory Rew

8.9 [P09-99] PARTS ASSEMBLED ON THE TOP CHASSIS

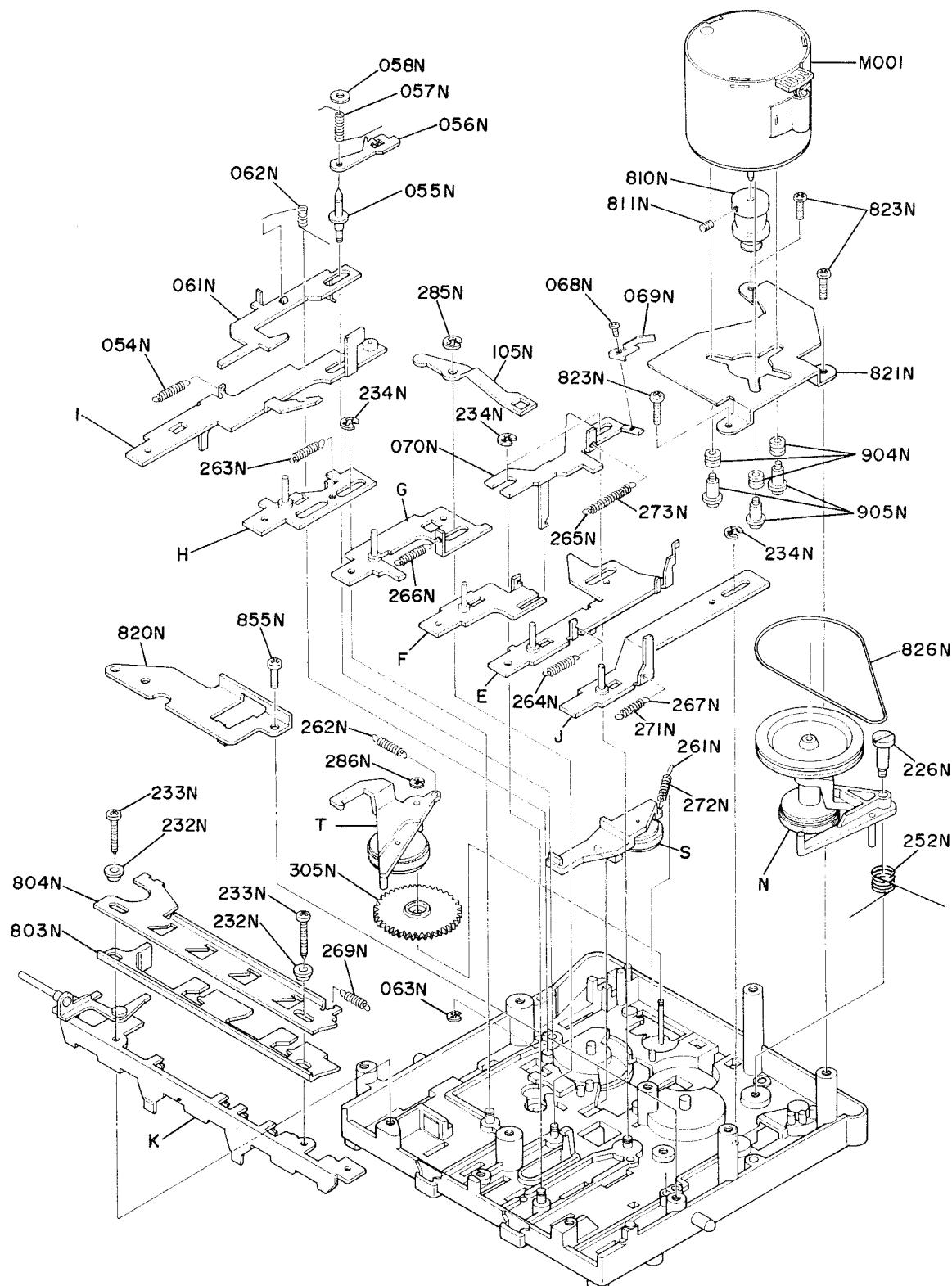


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
D	1	1	1	4380105400	Chassis Assembly
071N	1	1	1	4367354090	Lever
072N	1	1	1	4367354123	Lever
073N	1	1	1	4380115112	Spring
076N	1	1	1	4367002700	Arm, Pinch Roller S
110N	1	1	1	4367004704	Table
130N	1	1	1	4367004713	Table
140N	1	1	1	4367002710	Arm Assembly
143N	1	1	1	4367001510	Idler
146N	1	1	1	59163202G9	Washer
147N	1	1	1	64001200R0	RG Ring, E Type
185N	1	1	1	4367354772	Lever
195N	1	1	1	4367002054	Arm
196N	1	1	1	4367115130	Spring
201N	1	1	1	4367354080	Lever
202N	1	1	1	4380115060	Spring
235N	2	2	2	4367067010	Cap
236N	2	2	2	4367263010	Brake
253N	1	1	1	4367115110	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			PART NO.	DESCRIPTION
	U	C	N		
290N	2	2	2	59020402G9	Washer
300N	1	1	1	4367354110	Lever
310N	1	1	1	4383115010	Spring
311N	1	1	1	4380115030	Spring
312N	1	1	1	4380112010	Shaft
073F	1	1	1	4197115060	Spring
074F	1	1	1	51382606U0	P.H. TAP. Screw P2.6 x 6
890N	1	1	1	4383112030	Shaft

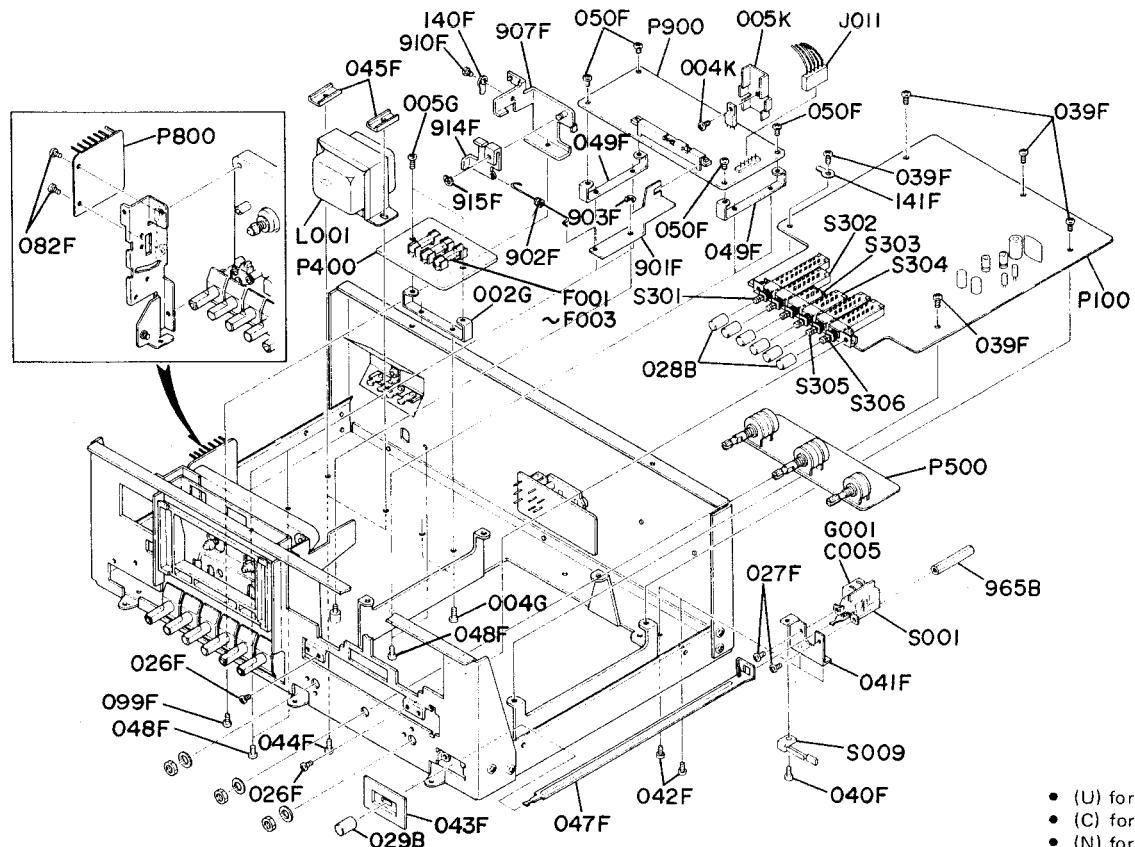
8.10 [P10-99] PARTS ASSEMBLED ON THE REVERSE CHASSIS



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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N				U	C	N		
E	1	1	1	4380354400	Lever Assembly, Rew	054N	1	1	1	4367115210	Spring
F	1	1	1	4380354410	Lever Assembly, Play	055N	1	1	1	4367112130	Shaft
G	1	1	1	4380354420	Lever Assembly, F.F.	056N	1	1	1	4367054030	Cam, Pause Lock
H	1	1	1	4380354430	Lever Assembly, Stop	057N	1	1	1	4367115140	Spring
I	1	1	1	4380354440	Lever Assembly, Pause	058N	1	1	1	59030805G9	Washer
J	1	1	1	4380354450	Lever Assembly, Rec	061N	1	1	1	4367354070	Lever, Eject
K	1	1	1	4383051400	Guide Assembly, Push Lever	062N	1	1	1	4380115080	Spring
N	1	1	1	4383001400	Idler Assembly,	063N	1	1	1	64001500R0	RG Ring, E Type
						068N	1	1	1	5182020250	P.H. Screw P2 x 2
						069N	1	1	1	4380354080	Lever
						070N	1	1	1	4367354160	Lever, Head Chassis
						S	1	1	1	4367354400	Lever Assembly, FF
						105N	1	1	1	4383002020	Arm, FF Idler Lever Lock
						T	1	1	1	4367002420	Arm, Assembly, T.M.S. Idler
						226N	1	1	1	4367112180	Shaft
						232N	2	2	2	4367055020	Collar, Lock Cam
						233N	2	2	2	51300312B0	P.H. TAP. Screw P3 x 12
						234N	4	4	4	64000300R0	RG Ring, E Type
						252N	1	1	1	4380115050	Spring
						261N	1	1	1	4367115090	Spring
						262N	1	1	1	4367115120	Spring
						263N	1	1	1	4367115250	Spring
						264N	1	1	1	4367115260	Spring
						265N	1	1	1	4367115270	Spring
						266N	1	1	1	4367115280	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
						305N	1	1	1	4367058010	Gear
						803N	1	1	1	4383054030	Cam, Stop/Eject
						804N	1	1	1	4383054020	Cam, Lock
						810N	1	1	1	4383262012	Pulley
						811N	1	1	1	51610205A0	Set Screw, F.P.
						820N	1	1	1	4383160020	Bracket
						821N	1	1	1	4383160010	Bracket, DC Motor
						823N	3	3	3	51300308B0	P.H. TAP. Screw P3 x 8
						826N	1	1	1	4380264040	Belt, TMS
						855N	1	1	1	51300308B0	P.H. TAP. Screw P3 x 8
						904N	3	3	3	4383259010	Bushing
						905N	3	3	3	4367112150	Shaft
						M001	1	1	1	MM01200030	D.C. Motor V. Servo 12V 2000rpm CCW.

#### **8.11 [M01-99] P.W. BOARDS AND GENERAL PARTS**



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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	
	U	C	N			
026F	2	2	2	51100306A9	B.H.M. Screw	B3 x 6
027F	2	2	2	51100306A9	B.H.M. Screw	B3 x 6
028B	6	6	6	3448154060	Knob	
029B	1	1	1	2963154220	Knob	
039F	5	5	5	51100306A9	B.H.M. Screw	B3 x 6
040F	1	1	1	51100205A9	B.H.M. Screw	B2 x 5
041F	1	1	1	4190160030	Bracket	
042F	2	2	2	51100306A9	B.H.M. Screw	B3 x 6
043F	1	1	1	4198259013	Bushing	
044F	2	2	2	51100408A0	B.H.M. Screw	B3 x 8
045F	2	2	2	2922005010	Clamper	
047F	1	1	1	4198121012	Link	
048F	4	4	4	51100306A9	B.H.M. Screw	
082F	2	2	2	51100306A9	B.H.M. Screw	B3 x 6
099F	1	1	1	51470306A9	Washer Screw	
140F	1	1	1	62031650W0	Lug	
141F	1	1	1	62031650W0	Lug	
901F	1	1	1	4197002012	Arm	
902F	1	1	1	4190115013	Spring	
903F	1	1	1	64000300R0	RG Ring, E Type	
907F	1	1	1	4197104502	Retainer	
965B		1		4190101010	Support	

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	
	U	C	N			
910F	1	1	1	51100306A9	B.H.M. Screw	B3 x 6
914F	1	1	1	4197354010	Lever	
915F	1	1	1	64000300R0	RG Ring, E Type	
004K	1	1	1	51100306S9	B.H.M. Screw	B3 x 6
005K	1	1	1	3444267013	Heatsink	
002G			1	3889160110	Bracket	
004G			2	51100306A9	B.H.M. Screw	B3 x 6
005G			2	51100306A9	B.H.M. Screw	B3 x 6
F001			1	FS10050800	Fuse 500mAT	
F002			1	FS10080800	Fuse 800mAT	
F003			1	FS10140800	Fuse 1.4AT	
L001	1	1		TS15406010	Power Transf.	
L001			1	TS15406020	Power Transf.	
C005			1	DF17473590	Film Cap., Spark Killer Csa	
G001	1			BF10400040	Cap. Comp., Spark Killer	
S001	1	1		SP01010210	Push Switch, Power	
S001			1	SP02010300	Push Switch, Power	
S009	1	1	1	SM01010500	Mini Switch Power Muting	
J011	1	1	1	YJ06001060	Jack, Tape Mechanism Connector	

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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N				U	C	N		
P100	1	1	1	YK41901410	P100-PRE-AMP. CIRCUIT BOARD	C160	1	1	1	EA10601690	Elect 10μF 16V
	1	1	1	ZZ41901410	P.W. Board, Pre-Amp. P.W. Board Assembly	C161	1	1	1	DF65101010	Film 100pF ±5%
C101	1	1	1	EE10601640	P100-CAPACITORS	C162	1	1	1	DF15152010	Film 1500pF ±5%
C102	1	1	1	EA10701090	Elect 10μF 16V	C163	1	1	1	EA10702590	Elect 100μF 25V
C103	1	1	1	DD16101010	Ceramic 100pF ±10%	C164	1	1	1	EA22505090	Elect 2.2μF 50V
C104	1	1	1	DD16500010	Ceramic 50pF ±10%	C165	1	1	1	EA47502590	Elect 4.7μF 25V
C105	1	1	1	EA22505090	Elect 2.2μF 50V	C166	1	1	1	DF15472010	Film 4700pF ±5%
C106	1	1	1	EA10601690	Elect 10μF 16V	C167	1	1	1	DF15153010	Film 0.015μF ±5%
C107	1	1	1	EA33602590	Elect 33μF 25V	C168	1	1	1	EM33402510	Elect 0.33μF 25V
C108	1	1	1	EA22505090	Elect 2.2μF 50V	C169	1	1	1	DF15153010	Film 0.015μF ±5%
C109	1	1	1	DD16101010	Ceramic 100pF ±10%	C170	1	1	1	DF15104010	Film 0.1μF ±5%
C110	1	1	1	DD16500010	Ceramic 50pF ±10%	C171	1	1	1	EA10601690	Elect 10μF 16V
C111	1	1	1	EA10701090	Elect 100μF 10V	C172	1	1	1	EM10402510	Elect 0.1μF 25V
C112	1	1	1	EA33502590	Elect 3.3μF 25V	C173	1	1	1	EM33402510	Elect 0.33μF 25V
C113	1	1	1	DD15600010	Ceramic 60pF ±5%	C174	1	1	1	EA10601690	Elect 10μF 16V
C114	1	1	1	DF15332010	Film 3300pF ±5%	C175	1	1	1	EA22505090	Elect 2.2μF 50V
C115	1	1	1	DF15222010	Film 2200pF ±5%	C176	1	1	1	DK16501010	Ceramic 500pF ±10%
C116	1	1	1	DF15392010	Film 3900pF ±5%	C177	1	1	1	EA47602590	Elect 47μF 25V
C117	1	1	1	EA47601090	Elect 47μF 10V	C178	1	1	1	EA47502590	Elect 4.7μF 25V
C118	1	1	1	EA33502590	Elect 3.3μF 25V	C179	1	1	1	EA33602590	Elect 33μF 25V
C119	1	1	1	EA10702590	Elect 100μF 25V	C201	1	1	1	EE10601640	Elect 10μF 16V
C120	1	1	1	EA47502590	Elect 4.7μF 25V	C202	1	1	1	EA10701090	Elect 100μF 10V
C121	1	1	1	DF15472010	Film 4700pF ±5%	C203	1	1	1	DD16101010	Ceramic 100pF ±10%
C122	1	1	1	DF15153010	Film 0.015μF ±5%	C204	1	1	1	DD16500010	Ceramic 50pF ±10%
C123	1	1	1	EM33402510	Elect 0.33μF 25V	C205	1	1	1	EA22505090	Elect 2.2μF 50V
C124	1	1	1	DF15153010	Film 0.015μF ±5%	C206	1	1	1	EA10601690	Elect 10μF 16V
C125	1	1	1	DF15104010	Film 0.1μF ±5%	C207	1	1	1	EA33602590	Elect 33μF 25V
C126	1	1	1	EA10601690	Elect 10μF 16V	C208	1	1	1	EA22505090	Elect 2.2μF 50V
C127	1	1	1	EA10601690	Elect 10μF 16V	C209	1	1	1	DD16101010	Ceramic 100pF ±10%
C128	1	1	1	EM10402510	Elect 0.1μF 25V	C210	1	1	1	DD16500010	Ceramic 50pF ±10%
C129	1	1	1	EM33402510	Elect 0.33μF 25V	C211	1	1	1	EA10701090	Elect 100μF 10V
C130	1	1	1	EA47601690	Elect 47μF 16V	C212	1	1	1	EA33502590	Elect 3.3μF 25V
C131	1	1	1	EA10601690	Elect 10μF 16V	C213	1	1	1	DD15600010	Ceramic 60pF ±5%
C132	1	1	1	DF15224010	Film 0.22μF ±5%	C214	1	1	1	DF15332010	Film 3300pF ±5%
C133	1	1	1	EA47502590	Elect 4.7μF 25V	C215	1	1	1	DF15222010	Film 2200pF ±5%
C134	1	1	1	DF15333010	Film 0.033μF ±5%	C216	1	1	1	DF15392010	Film 3900pF ±5%
C135	1	1	1	DF15104010	Film 0.1μF ±5%	C217	1	1	1	EA47601090	Elect 47μF 10V
C136	1	1	1	DF15333010	Film 0.033μF ±5%	C218	1	1	1	EA33502590	Elect 3.3μF 25V
C137	1	1	1	DF15223010	Film 0.022μF ±5%	C219	1	1	1	EA10702590	Elect 100μF 25V
C138	1	1	1	DF15183010	Film 0.018μF ±5%	C220	1	1	1	EA47502590	Elect 4.7μF 25V
C139	1	1	1	EE10602540	Elect 10μF 25V	C221	1	1	1	DF15472010	Film 4700pF ±5%
C140	1	1	1	DF15153010	Film 0.015μF ±5%	C222	1	1	1	DF15153010	Film 0.015μF ±5%
C141	1	1	1	DF65101010	Film 100pF ±5%	C223	1	1	1	EM33402510	Elect 0.33μF 25V
C142	1	1	1	DF15822010	Film 8200pF ±5%	C224	1	1	1	DF15153010	Film 0.015μF ±5%
C151	1	1	1	DF65271010	Film 270pF ±5%	C225	1	1	1	DF15104010	Film 0.1μF ±5%
C152	1	1	1	EE10601640	Elect 10μF 16V	C226	1	1	1	EA10601690	Elect 10μF 16V
C153	1	1	1	EA10701090	Elect 100μF 10V	C227	1	1	1	EA10601690	Elect 10μF 16V
C154	1	1	1	DD16500010	Ceramic 50pF ±10%	C228	1	1	1	EM10402510	Elect 0.1μF 25V
C155	1	1	1	DF15153010	Film 0.015μF ±5%	C229	1	1	1	EM33402510	Elect 0.33μF 25V
C157	1	1	1	EA10601690	Elect 10μF 16V	C230	1	1	1	EA47601690	Elect 47μF 16V
C158	1	1	1	EA33602590	Elect 33μF 25V	C231	1	1	1	EA10601690	Elect 10μF 16V
C159	1	1	1	EA10601690	Elect 10μF 16V	C232	1	1	1	DF15224010	Film 0.22μF ±5%
						C233	1	1	1	EA47502590	Elect 4.7μF 25V
						C234	1	1	1	DF15333010	Film 0.033μF ±5%
						C235	1	1	1	DF15104010	Film 0.1μF ±5%

**marantz**

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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION		
	U	C	N				
C236	1	1	1	DF15333010	Film	0.033μF	±5%
C237	1	1	1	DF15223010	Film	0.022μF	±5%
C238	1	1	1	DF15183010	Film	0.018μF	±5%
C239	1	1	1	EE10602540	Elect	10μF	25V
C240	1	1	1	DF15153010	Film	0.015μF	±5%
C241	1	1	1	DF65101010	Film	100pF	±5%
C242	1	1	1	DF15822010	Film	8200pF	±5%
C251	1	1	1	DF65271010	Film	270pF	±5%
C252	1	1	1	EE10601640	Elect	10μF	16V
C253	1	1	1	EA10701090	Elect	100μF	10V
C254	1	1	1	DD16500010	Ceramic	50pF	±10%
C255	1	1	1	DF15153010	Film	0.015μF	±5%
C257	1	1	1	EA10601690	Elect	10μF	16V
C258	1	1	1	EA33602590	Elect	33μF	25V
C259	1	1	1	EA10601690	Elect	10μF	16V
C260	1	1	1	EA10601690	Elect	10μF	16V
C261	1	1	1	DF65101010	Film	100pF	±5%
C262	1	1	1	DF15152010	Film	1500pF	±5%
C263	1	1	1	EA10702590	Elect	100μF	25V
C264	1	1	1	EA22505090	Elect	2.2μF	50V
C265	1	1	1	EA47502590	Elect	4.7μF	25V
C266	1	1	1	DF15472010	Film	4700pF	±5%
C267	1	1	1	DF15153010	Film	0.015μF	±5%
C268	1	1	1	EM33402510	Elect	0.33μF	25V
C269	1	1	1	DF15153010	Film	0.015μF	±5%
C270	1	1	1	DF15104010	Film	0.01μF	±5%
C271	1	1	1	EA10601690	Elect	10μF	16V
C272	1	1	1	EM10402510	Elect	0.1μF	25V
C273	1	1	1	EM33402510	Elect	0.33μF	25V
C274	1	1	1	EA10601690	Elect	10μF	16V
C275	1	1	1	EA22505090	Elect	2.2μF	50V
C276	1	1	1	DK16501010	Ceramic	500pF	±10%
C277	1	1	1	EA47602590	Elect	47μF	25V
C278	1	1	1	EA47502590	Elect	4.7μF	25V
C279	1	1	1	EA33602590	Elect	33μF	25V
C301	1	1	1	EA10801090	Elect	1000μF	10V
C302	1	1	1	EA10701690	Elect	100μF	16V
C303	1	1	1	EA10801090	Elect	1000μF	10V
C304	1	1	1	EA10701690	Elect	100μF	16V
C305	1	1	1	EE22601050	Elect	22μF	10V
C306	1	1	1	EA22701090	Elect	220μF	10V
C307	1	1	1	DD16151010	Ceramic	150pF	

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION		
	U	C	N				
R101	1	1	1	GD05561140	P100-RESISTORS (All resistors are ±5% and 1/4W.)	560Ω	
R102	1	1	1	GD05123140		12KΩ	
R103	1	1	1	GD05104140		100KΩ	
R104	1	1	1	GD05394140		390KΩ	
R105	1	1	1	GD05331140		330Ω	
R106	1	1	1	GD05472140		4.7KΩ	
R107	1	1	1	GD05163140		16KΩ	
R108	1	1	1	GD05561140		560Ω	
R109	1	1	1	GD05103140		10KΩ	
R110	1	1	1	GD05151140		150Ω	
R111	1	1	1	GD05124140		120KΩ	
R112	1	1	1	GD05331140		330Ω	
R113	1	1	1	GD05123140		12KΩ	
R114	1	1	1	GD05154140		150KΩ	
R115	1	1	1	GD05332140		3.3KΩ	
R116	1	1	1	GD05241140		240Ω	
R117	1	1	1	GD05332140		3.3KΩ	
R118	1	1	1	GD05122140		1.2KΩ	
R119	1	1	1	GD05105140		1MΩ	
R120	1	1	1	GD05562140		5.6KΩ	
R121	1	1	1	GJ05201010		200Ω	1W
R122	1	1	1	GD05473140		47KΩ	
R123	1	1	1	GD05472140		4.7KΩ	
R124	1	1	1	GD05181140		180Ω	
R125	1	1	1	GD05104140		100KΩ	
R126	1	1	1	GD05473140		47KΩ	
R127	1	1	1	GD05392140		3.9KΩ	
R128	1	1	1	GD05123140		12KΩ	
R129	1	1	1	GD05274140		270KΩ	
R130	1	1	1	GD05274140		270KΩ	
R131	1	1	1	RA02030060	Trimming	20KΩ Dolby ADJ	
R132	1	1	1	GD05821140		820Ω	
R133	1	1	1	GD05152140		1.5KΩ	
R134	1	1	1	GD05562140		5.6KΩ	
R135	1	1	1	GD05272140		2.7KΩ	
R136	1	1	1	RA02030060	Trimming	20KΩ Rec Level	
R137	1	1	1	GD05822140		8.2KΩ	
R138	1	1	1	GD05103140		10KΩ	
R139	1	1	1	GD05274140		270KΩ	
R140	1	1	1	GD05473140		47KΩ	
R141	1	1	1	GD05472140		4.7KΩ	
R142	1	1	1	GD05102140		1KΩ	
R144	1	1	1	GD05821140		820Ω	
R145	1	1	1	GD05222140		2.2KΩ	
R146	1	1	1	GD05470140		47Ω	
R147	1	1	1	GD05101140		100Ω	
R148	1	1	1	GD05102140		1KΩ	
R149	1	1	1	GD05122140		1.2KΩ	
R151	1	1	1	GD05823140		82KΩ	
R152	1	1	1	GD05104140		100KΩ	
R153	1	1	1	GD05394140		390KΩ	
R154	1	1	1	GD05331140		330Ω	
R155	1	1	1	GD05124140		120KΩ	
R156	1	1	1	RA03020030	Trimming	3KΩ Play EQ	
R157	1	1	1	GD05472140		4.7KΩ	

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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N				U	C	N		
R158	1	1	1	GD05332140	3.3KΩ	R230	1	1	1	GD05274140	270KΩ
R159	1	1	1	GD05562140	5.6KΩ	R231	1	1	1	RA02030060	Trimming 20KΩ Dolby ADJ
R160	1	1	1	GF05561140	560Ω	R232	1	1	1	GD05821140	820Ω
R161	1	1	1	RA05030090	Trimming 50KΩ Play Level	R233	1	1	1	GD05152140	1.5KΩ
R162	1	1	1	GD05224140	220KΩ	R234	1	1	1	GD05562140	5.6KΩ
R163	1	1	1	GD05331140	33KΩ	R235	1	1	1	GD05272140	2.7KΩ
R164	1	1	1	GD05563140	56KΩ	R236	1	1	1	RA02030060	Trimming 20KΩ Rec Level
R165	1	1	1	GD05562140	5.6KΩ	R237	1	1	1	GD05822140	8.2KΩ
R166	1	1	1	GD05821140	820Ω	R238	1	1	1	GD05103140	10KΩ
R167	1	1	1	GJ05201010	200Ω 1W	R239	1	1	1	GD05274140	270KΩ
R168	1	1	1	GD05473140	47KΩ	R240	1	1	1	GD05473140	47KΩ
R169	1	1	1	GD05472140	4.7KΩ	R241	1	1	1	GD05472140	4.7KΩ
R170	1	1	1	GD05104140	100KΩ	R242	1	1	1	GD05102140	1KΩ
R171	1	1	1	GD05181140	180Ω	R244	1	1	1	GD05821140	820Ω
R172	1	1	1	GD05473140	47KΩ	R245	1	1	1	GD05222140	2.2KΩ
R173	1	1	1	GD05392140	3.9KΩ	R246	1	1	1	GD05470140	47Ω
R174	1	1	1	GD05123140	12KΩ	R247	1	1	1	GD05101140	100Ω
R175	1	1	1	GD05274140	270KΩ	R248	1	1	1	GD05102140	1KΩ
R176	1	1	1	GD05274140	270KΩ	R249	1	1	1	GD05122140	1.2KΩ
R177	1	1	1	RA02030060	Trimming 20KΩ Dolby ADJ	R251	1	1	1	GD05823140	82KΩ
R178	1	1	1	GD05104140	100KΩ	R252	1	1	1	GD05104140	100KΩ
R179	1	1	1	GD05222140	2.2KΩ	R253	1	1	1	GD05394140	390KΩ
R180	1	1	1	GD05104140	100KΩ	R254	1	1	1	GD05331140	330Ω
R181	1	1	1	GJ05681010	680Ω 1W	R255	1	1	1	GD05124140	120KΩ
R182	1	1	1	RA02020180	Trimming 2KΩ Meter ADJ	R256	1	1	1	RA03020030	Trimming 3KΩ Play EQ
R183	1	1	1	GD05151140	150Ω	R257	1	1	1	GD05472140	4.7KΩ
R184	1	1	1	GD05122140	1.2KΩ	R258	1	1	1	GD053312140	3.3KΩ
R201	1	1	1	GD05561140	560Ω	R259	1	1	1	GD05562140	5.6KΩ
R202	1	1	1	GD05123140	12KΩ	R260	1	1	1	GF05561140	560Ω
R203	1	1	1	GD05104140	100KΩ	R261	1	1	1	RA05030090	Trimming 50KΩ Play Level
R204	1	1	1	GD05394140	390KΩ	R262	1	1	1	GD05224140	220KΩ
R205	1	1	1	GD05331140	330Ω	R263	1	1	1	GD05333140	33KΩ
R206	1	1	1	GD05472140	4.7KΩ	R264	1	1	1	GD05563140	56KΩ
R207	1	1	1	GD05163140	16KΩ	R265	1	1	1	GD05562140	5.6KΩ
R208	1	1	1	GF05561140	560Ω	R266	1	1	1	GD05821140	820Ω
R209	1	1	1	GD05103140	10KΩ	R267	1	1	1	GJ05201010	200Ω 1W
R210	1	1	1	GD05151140	150Ω	R268	1	1	1	GD05473140	47KΩ
R211	1	1	1	GD05124140	120KΩ	R269	1	1	1	GD05472140	4.7KΩ
R212	1	1	1	GD05331140	330Ω	R270	1	1	1	GD05104140	100KΩ
R213	1	1	1	GD05123140	12KΩ	R271	1	1	1	GD05181140	180Ω
R214	1	1	1	GD05154140	150KΩ	R272	1	1	1	GD05473140	47KΩ
R215	1	1	1	GD05332140	3.3KΩ	R273	1	1	1	GD05392140	3.9KΩ
R216	1	1	1	GD05241140	240Ω	R274	1	1	1	GD05123140	12KΩ
R217	1	1	1	GD05332140	3.3KΩ	R275	1	1	1	GD05274140	270KΩ
R218	1	1	1	GD05122140	1.2KΩ	R276	1	1	1	GD05274140	270KΩ
R219	1	1	1	GD05105140	1MΩ	R277	1	1	1	RA02030060	Trimming 20KΩ Dolby ADJ
R220	1	1	1	GD05562140	5.6KΩ	R278	1	1	1	GD05104140	100KΩ
R221	1	1	1	GJ05201010	200Ω 1W	R279	1	1	1	GD05222140	2.2KΩ
R222	1	1	1	GD05473140	47KΩ	R280	1	1	1	GD05104140	100KΩ
R223	1	1	1	GD05472140	4.7KΩ	R281	1	1	1	GJ05681010	680Ω 1W
R224	1	1	1	GD05181140	180Ω	R282	1	1	1	RA02020180	Trimming 2KΩ Meter ADJ
R225	1	1	1	GD05104140	100KΩ	R283	1	1	1	GD05151140	150Ω
R226	1	1	1	GD05473140	47KΩ	R284	1	1	1	GD05122140	1.2KΩ
R227	1	1	1	GD05392140	3.9KΩ	R301	1	1	1	GJ05331010	330Ω 1W
R228	1	1	1	GD05123140	12KΩ						
R229	1	1	1	GD05274140	270KΩ						

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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N				U	C	N		
R302	1	1	1	GJ05331010	330Ω 1W	Q301	1	1	1	HC10026010	IC HA11226
R303	1	1	1	GD05100140	10Ω	Q302	1	1	1	HC10026010	IC HA11226
R304	1	1	1	GD05100140	10Ω	Q303	1	1	1	HD20011050	Diode 1S1555
R305	1	1	1	GD05624140	620KΩ	Q304	1	1	1	HT308281J0	Transistor 2SC828A(R)
R306	1	1	1	GD05223140	22KΩ	Q305	1	1	1	HT308281J0	Transistor 2SC828A(R)
R307	1	1	1	GD05221140	220Ω	Q306	1	1	1	HT308281J0	Transistor 2SC828A(R)
R308	1	1	1	GD05563140	56KΩ	Q307	1	1	1	HD20011050	Diode 1S1555
R309	1	1	1	GD05223140	22KΩ	Q308	1	1	1	HD20011050	Diode 1S1555
R310	1	1	1	GD05223140	22KΩ	Q309	1	1	1	HD30033090	Zener WZ052
R311	1	1	1	GD05223140	22KΩ						
R312	1	1	1	GJ05102010	1KΩ 1W						
R313	1	1	1	GD05821140	820Ω						
					P100-SEMICONDUCTORS						
Q101	1	1	1	HC10012060	IC UPC1024H	S301	1	1	1	SP08060050	P100-SWITCHES Push Normal
Q102	1	1	1	HT317400S0	Transistor 2SC1740LN(S)	S302	1	1	1	SP08060050	Push CR02
Q103	1	1	1	HT317400S0	Transistor 2SC1740LN(S)	S303	1	1	1	SP08060050	Push Fe-Cr
Q104	1	1	1	HD10003020	Diode 2OA90	S304	1	1	1	SP08060050	Push Limiter
Q105	1	1	1	HD20011050	Diode 1S1555	S305	1	1	1	SP08060050	Push Dolby
Q106	1	1	1	HT309451Q0	Transistor 2SC945(Q)	S306	1	1	1	SP08060050	Push Monitor
Q107	1	1	1	HT402272A0	Transistor 2SD227(Q or V)						
Q108	1	1	1	HD20011050	Diode 1S1555						
Q109	1	1	1	HD20011050	Diode 1S1555						
Q110	1	1	1	HD20011050	Diode 1S1555						
Q111	1	1	1	HD10003020	Diode 2OA90	L101	1	1	1	LC23660030	P100-COILS Choke 36mH
Q112	1	1	1	HT309451P0	Transistor 2SC945(P)	L102	1	1	1	LC22260040	Choke 22mH
Q151	1	1	1	HC10012060	IC UPC1024H	L103	1	1	1	LC24750030	Choke 4.7mH Rec EQ
Q152	1	1	1	HT309451Q0	Transistor 2SC945(Q)	L104	1	1	1	LC22260040	Choke 22mH Bias Trap
Q153	1	1	1	HD10003020	Diode 2OA90	L105	1	1	1	LC22260040	Choke 22mH Bias Trap
Q154	1	1	1	HD20011050	Diode 1S1555	L201	1	1	1	LC23660030	Choke 36mH
Q155	1	1	1	HT309451Q0	Transistor 2SC945(Q)	L202	1	1	1	LC22260040	Choke 22mH
Q156	1	1	1	HD10003020	Diode 2OA90	L203	1	1	1	LC24750030	Choke 4.7mH Rec EQ
Q157	1	1	1	HD10003020	Diode 2OA90	L204	1	1	1	LC22260040	Choke 22mH Bias Trap
Q158	1	1	1	HT309451P0	Transistor 2SC945(P)	L205	1	1	1	LC22260040	Choke 22mH Bias Trap
Q201	1	1	1	HC10012060	IC UPC1024H						
Q202	1	1	1	HT317400S0	Transistor 2SC1740LN(S)	J401	~	6		YK41901430	P400-FUSE CIRCUIT BOARD P.W. Board, Fuse
Q203	1	1	1	HT317400S0	Transistor 2SC1740LN(S)	J406	~	6		ZZ41908430	P.W. Board Assembly
Q204	1	1	1	HD10003020	Diode 2OA90	J407	~	6		YJ08000200	Plug Wire Wrd
Q205	1	1	1	HD20011050	Diode 1S1555	J412	~	6			Fuse Clip
Q206	1	1	1	HT309451Q0	Transistor 2SC945(Q)						
Q207	1	1	1	HT402272A0	Transistor 2SD227(Q or V)						
Q208	1	1	1	HD20011050	Diode 1S1555						
Q209	1	1	1	HD20011050	Diode 1S1555						
Q210	1	1	1	HD20011050	Diode 1S1555						
Q211	1	1	1	HD10003020	Diode 2OA90						
Q212	1	1	1	HT309451P0	Transistor 2SC945(P)						
Q251	1	1	1	HC10012060	IC UPC1024H						
Q252	1	1	1	HT309451Q0	Transistor 2SC945(Q)						
Q253	1	1	1	HD10003020	Diode 2OA90						
Q254	1	1	1	HD20011050	Diode 1S1555						
Q255	1	1	1	HT309451Q0	Transistor 2SC945(Q)						
Q256	1	1	1	HD10003020	Diode 2OA90						
Q257	1	1	1	HD10003020	Diode 2OA90						
Q258	1	1	1	HT309451P0	Transistor 2SC945(P)						

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

- (U) for U.S.A.
- (C) for Canada
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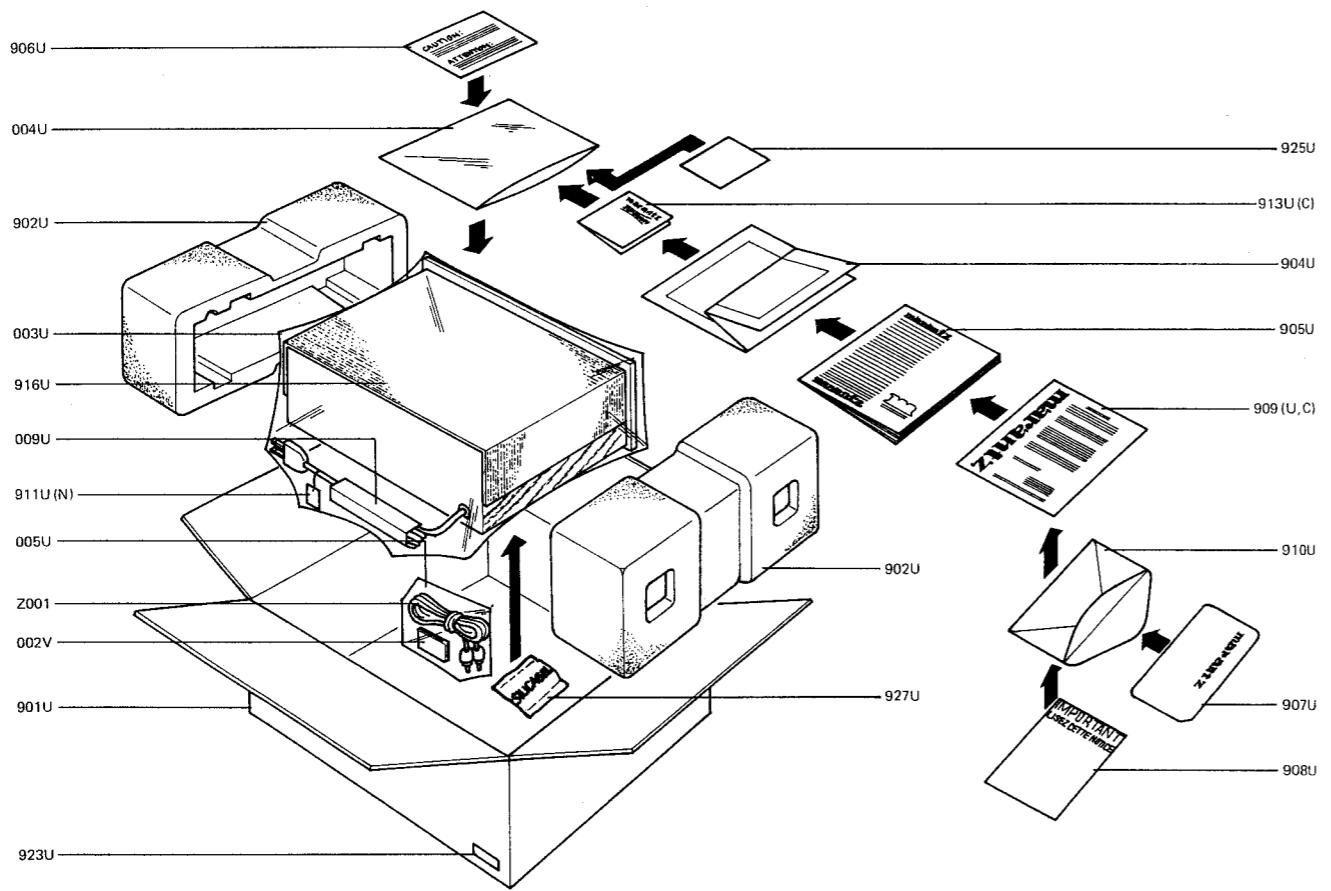
REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
P500	1	1	1	YF41980010	P500-LEVEL PEAK CIRCUIT BOARD
	1	1	1	ZZ41901010	P.W. Board Level Control P.W. Board Assembly
C511	1	1	1	EA22505090	P500-CAPACITORS
C512	1	1	1	EA22505090	Elect 2.2μF 50V
C513	1	1	1	EA10602590	Elect 2.2μF 50V
C521	1	1	1	EA22505090	Elect 10μF 25V
C522	1	1	1	EA22505090	Elect 2.2μF 50V
C523	1	1	1	EA10602590	Elect 2.2μF 50V
					P500-RESISTORS (All resistors ±5% and 1/4W)
R501	1	1	1	RD05030090	Variable Mic
R502	1	1	1	RD05030090	Variable Line
R503	1	1	1	RM05030750	Variable Master
R511	1	1	1	GD0533140	33KΩ
R512	1	1	1	GD05561140	560Ω
R513	1	1	1	GD05183140	18KΩ
R514	1	1	1	GD05104140	100KΩ
R515	1	1	1	GD05221140	220Ω
R516	1	1	1	GF05182120	1.8KΩ
					P500-SEMICONDUCTORS
R521	1	1	1	GD0533140	Transistor 2SC1383 (S)
R522	1	1	1	GD05561140	Diode 10D1
R523	1	1	1	GD05183140	Transistor 2SC828 (R)
R524	1	1	1	GD05104140	Transistor 2SC828 (R)
R525	1	1	1	GD05221140	Diode 20A90
R526	1	1	1	GF05182120	1.8KΩ 0.5W
					P500-PLUGS
Q511	1	1	1	HD10003020	J801
Q512	1	1	1	HT308281J0	9 9 9 YP10001130
Q513	1	1	1	HT313181R0	Wire Wrap
Q521	1	1	1	HD10003020	J809
Q522	1	1	1	HT308281J0	
Q523	1	1	1	HT313181R0	
					P500-PLUGS
J501	1	1	1	YP10001130	
J502	1	1	1	YP10001130	
J511	8	8	8	YP10001130	Wire Wrap
J518	8	8	8	YP10001130	Wire Wrap
J521	8	8	8	YP10001130	Wire Wrap
J528					

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
P800	1	1	1	YK41980610	P800-MEMORY REW CIRCUIT BOARD
	1	1	1	ZZ41900210	P.W. Board, Memory Rew
					P.W. Board, Assembly
C801	1	1	1	EA47505090	P800-CAPACITORS
				DF16332010	Elect 4.7μF 50V
C802	1	1	1	GD05104140	Film 3300pF ±10%
					P800-RESISTORS
R801	1	1	1	GD05332140	(All resistors ±5% and 1/4W)
				100KΩ	100KΩ
R802	1	1	1	GD05223140	3.3KΩ
				22KΩ	22KΩ
R803	1	1	1	GD05223140	22KΩ
				4.7KΩ	4.7KΩ
R804	1	1	1	GD05472140	4.7KΩ
				47KΩ	47KΩ
R805	1	1	1	GD05472140	47KΩ
				47KΩ	47KΩ
R806	1	1	1	GD05473140	47KΩ
				3.9KΩ	3.9KΩ
R807	1	1	1	GD05473140	P800-SEMICONDUCTORS
				100KΩ	Transistor 2SC1383 (S)
R808	1	1	1	GD05473140	Diode 10D1
				560Ω	Transistor 2SC828 (R)
R809	1	1	1	GD05392140	Transistor 2SC828 (R)
				18KΩ	Diode 20A90
				1.8KΩ	Transistor 2SC828 (R)
Q801	1	1	1	HT313831D0	R804
				HT308281C0	Transistor 2SC828 (R)
Q802	1	1	1	HD20013100	Q805
				HT308281C0	Diode 20A90
Q803	1	1	1	HT308281C0	Q806
				HD10003020	Transistor 2SC828 (R)
Q804	1	1	1	HD10003020	Q807
				HT308281C0	Diode 20A90
Q805	1	1	1	HD10003020	Q808
				HD10003020	Transistor 2SC828 (R)
Q806	1	1	1	HD10003020	
					P800-PLUGS
Q807	1	1	1	HT308281C0	
Q808	1	1	1	HD10003020	

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
P900	1	1	1	YK41900210	P900-POWER SUPPLY AND BIAS OSC CIRCUIT BOARD
	1	1	1	ZZ41900210	P.W. Board, Power
					P.W. Board Assembly
C901	1	1	1	DF75472510	P900-CAPACITORS
				EE10505040	Film 4700pF ±5% 630V
C902	1	1	1	DF16222500	Elect 1μF 50V
				DF16222500	Film 2200pF ±10% 200V
C903	1	1	1	DF16102510	Film 2200pF ±10% 200V
				DF65271510	Film 1000pF ±10% 200V
C904	1	1	1	DF65271510	Film 270pF ±5%
				DF65271510	Film 270pF ±5%
C905	1	1	1	DF17103500	S901
				EA47702590	Film 0.01μF 200V
C906	1	1	1	EA47702590	Film 0.01μF 200V
				EA47702590	Film 0.01μF 200V
C907	1	1	1	EA47702590	Film 0.01μF 200V
				EA47702590	Film 0.01μF 200V
C908	1	1	1	EA47702590	Film 0.01μF 200V
				EA47702590	Film 0.01μF 200V
C909	1	1	1	EA47702590	Film 0.01μF 200V
				EA47702590	Film 0.01μF 200V
C910	1	1	1	EA47702590	P900-RESISTORS
				EA47702590	(All resistors ±5% and 1/4W)
C911	1	1	1	DF17103500	R901
				EA47703590	Film 0.01μF 200V
C912	1	1	1	EA47703590	Diode 470μF 35V
				EA47703590	Transistor 470μF 35V
C913	1	1	1	EA47703590	Transistor 470μF 35V
				EA47702590	Transistor 470μF 25V
C914	1	1	1	EA47702590	Transistor 470μF 25V
				EA47702590	Transistor 220μF 35V
C915	1	1	1	EA47702590	C918
				DK17103010	Ceramic 0.01μF 50V
C916	1	1	1	DK17103010	C919
				DK17103010	Ceramic 0.01μF 50V
C917	1	1	1	DK17103010	C920
				DK17103010	Ceramic 0.01μF 50V
C918	1	1	1	DK17103010	C921
				DK17103010	Ceramic 0.01μF 50V
C919	1	1	1	DK17103010	C922
				DK18403010	Transistor 2200μF 25V
C920	1	1	1	DK17103010	C923

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#### 8.12 [H01-99] PACKING MATERIALS



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

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#### 9. GENERAL SPECIFICATIONS

Style	Front load
Tape Drive System	Single Capstan Drive
Cartridge	Philips type compact cassette
Tracking System	Compatible Stereo 4-track 2-channel
Tape Speed	1-7/8 ips (4.8 cm/sec.)
Heads	3 Head System
Composition	Rec, Play-Superhard Permalloy, Erase-Ferrite
Motor	DC Servo Controlled Motor x 1
Meters	VU type x 2
Recording System	AC Bias
Erasing System	AC Erase
Semiconductor Complement	
Amplifier:	
Transistors	30
Diodes	36
IC's	6
LED's	6
Motor:	
Transistors	3
Diodes	5
Overall Frequency Response (Dolby off):	
Ferric Oxide Tape	35 Hz to 14 kHz ±3 dB
CrO <sub>2</sub> Tape	35 Hz to 17 kHz ±3 dB
Fe-Cr Tape	35 Hz to 17 kHz ±3 dB
Signal-to-Noise Ratio (A Wtd.):	
Playback	54 dB
Overall (Dolby off)	58 dB
Overall (Dolby on) (5 kHz High Path Filter, OVU + 5 dB)	64 dB
Line Output:	
Level	800 mV
Impedance	2.2 kohms
Line Input Sensitivity:	
Level	-26 dBV
Impedance	220 kohms
Headphone Output:	
Level	.43 mV
Impedance	150 ohms
Mic. Input Sensitivity:	
Level	-76 dBV
Impedance	12 kohms
Wow and Flutter (NAB weighted)	.05%
Fast Rewind time	105 sec.
Fast Forward time	105 sec.
AC Line Voltage	120 V AC, 60 Hz (for U.S.A. and Canada) 110/120/220 V or 240 V AC, 50/60 Hz (for Europe)
Power Consumption	13 Watts
Dimensions (W x H x D)	17-3/8" x 5-3/4" x 11-11/16"
Weight	14 lbs. 12 oz

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
003U	1	1	1	9014538350	Polyethy Bag
004U	1	1	1	9013025010	Polyethy Bag
005U	1	1	1	9011325010	Polyethy Bag
009U	1	1	1	2864804010	Sleeve
901U	1	1	1	4190801010	Packing Case
902U	2	2	2	4197809012	Cushion
904U	1			4190851022	Instructions
904U	1			4190851052	Instructions
904U	1			4190851030	Instructions
905U	1			4190851010	Instructions
905U	1	1	1	4190851310	Instructions
906U	1			2818851040	Instructions
906U	1	1	1	2818851140	Instructions
907U	1			2577854012	Guarantee Card
907U	1	1	1	9630000180	Guarantee Card
908U	1			2577581020	Instructions
908U	1	1	1	2818851120	Instructions
909U	1			2818854023	Guarantee Card
909U	1	1	1	2818854042	Guarantee Card
910U	1			2577813010	Envelope

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
910U		1		2918813012	Envelope
910U		1		2818813010	Envelope
911U		1		9560000043	Hang Tag
912U	2			9510901020	Label
913U	1			9650000052	S. Station Card
916U	1	1	1	4197107020	Sheet
919U	1			9511101050	Label
919U	1			2457861040	Label
920U	1			9510911020	Label
920U	1			9510911010	Label
923U	3			9522815010	Serial No. Card
923U	3			9523015120	Serial No. Card
923U	3			9523015130	Serial No. Card
925U	1			2225813010	Envelope
927U		1		2731821010	Silicagel
Z001	2	2		ZD01200062	Connective Cord
Z001		1		ZD02000070	Connective Cord
002V	1	1	1	4136071010	Cleaner