



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 (CrO₂)
 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 CrO₂, Fe-Cr)
 MTT-121 Cross Talk
 MTT-141 Channel Separation

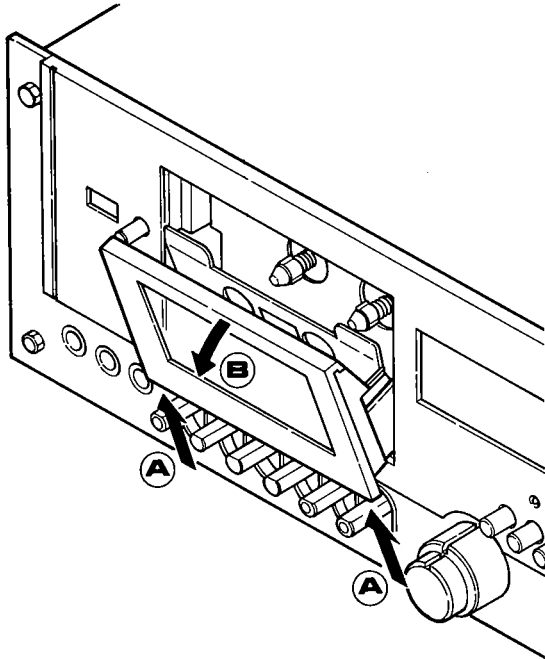
BIAS and EQ switches setting in accordance with tape used are as follows:

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

3. DISASSEMBLY

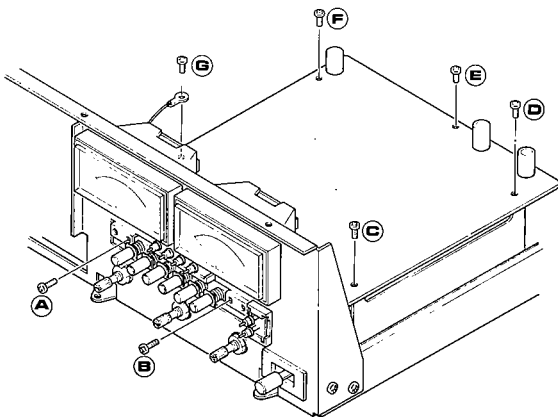
3.1 REMOVING THE CASSETTE CASE ESCUTCHEON

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.



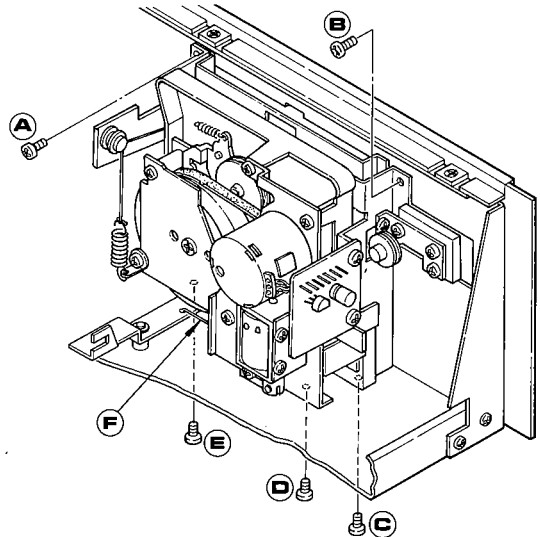
3.2 REMOVING THE MAIN P.W. BOARD

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.

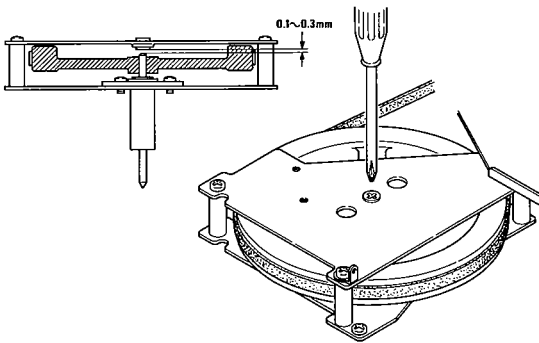


4. ADJUSTMENT PROCEDURES

4.1 MECHANICAL ADJUSTMENTS

4.1.1 Adjusting the Flywheel Thrust

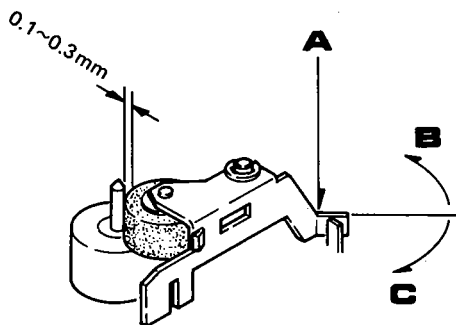
Adjust the thrust screw at the flywheel bracket until the clearance between the capstan tail end and thrust bearing is 0.1 to 0.3 mm as shown, using a phillips screw driver. For adjusting, feel of axial dropping of the flywheel for proper clearance as this cannot be seen through. Then paint the screw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



4.1.2 Adjusting Pause Timing

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

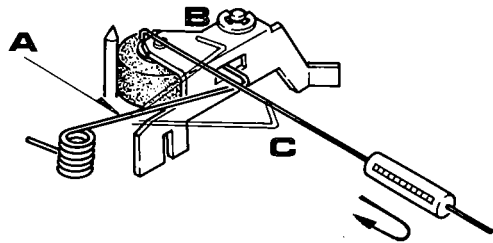
NOTE: To widen the clearance, make the bend angle smaller (in the direction C). To make the clearance narrower, widen the bend angle (in the direction B).



4.1.3 Adjusting the Pinch Roller Pressure

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

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



4.1.4 Adjusting the Play Timing

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

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

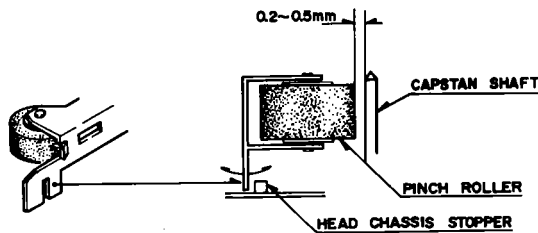
(1) Checking for adjustment

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

(2) Adjustment

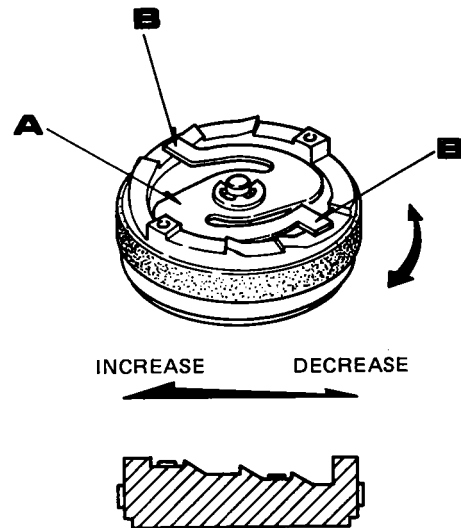
Bend the pinch roller bracket at the point that touches the head chassis stopper. In the line drawing, bending left reduces the clearance between the capstan and pinch roller.

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



4.1.6 Adjusting the Fast Forward and Rewind Torque

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



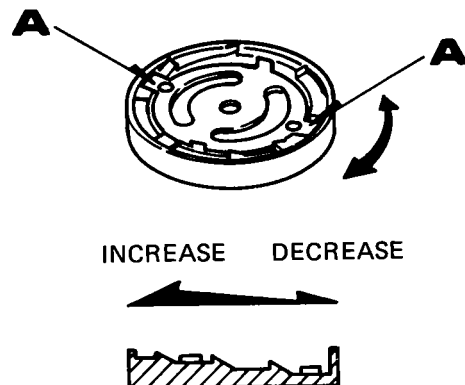
4.1.5 Adjusting the Play Torque

Put the two pawls of the circular plate spring on proper stepped position of the reel 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.

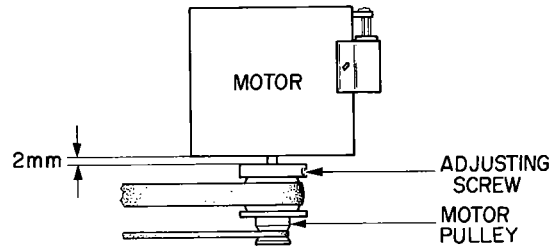
• Checking the take-up clutch for sliding

Make certain that the flywheel rotates freely when the reel table is locked. The flywheel that revolves irregularly or stops is not acceptable.



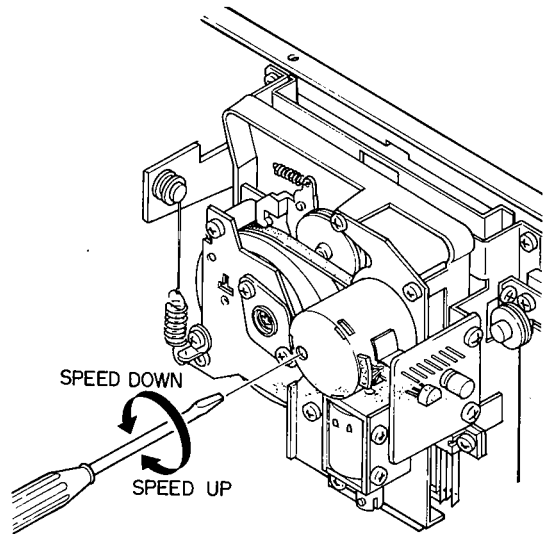
4.1.7 Positioning the Motor Pulley

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.



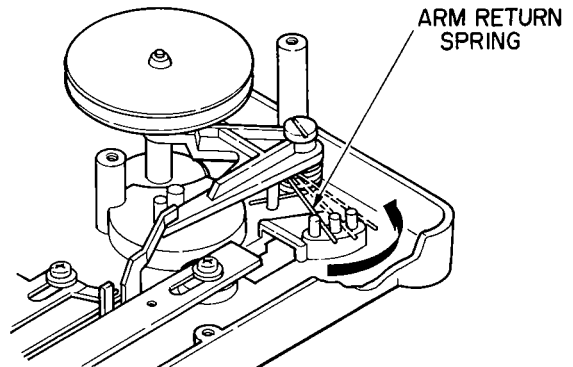
4.1.8 Adjusting the Tape Speed

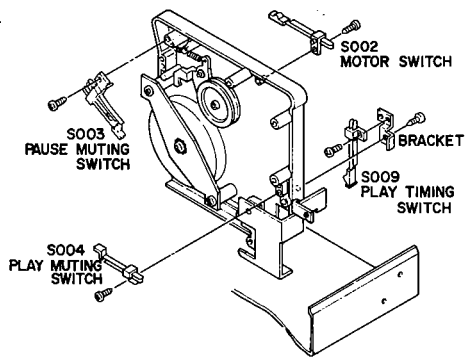
Adjust the semi-fixed resistor inside the motor until the tape speed is 2985 ± 5 Hz, using a screw driver.



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.

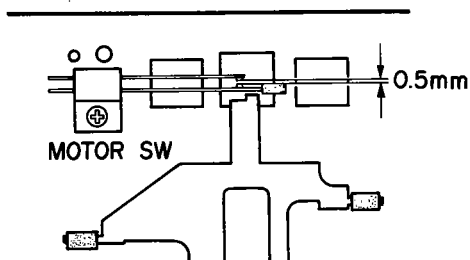




4.1.10 Positioning the Switches

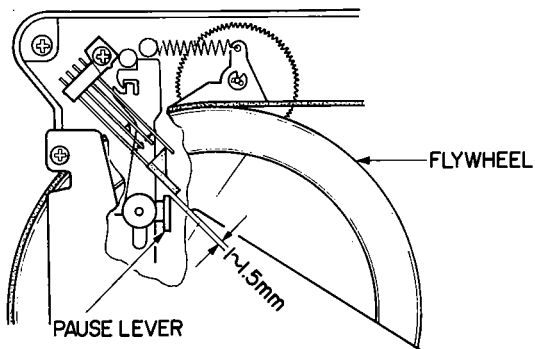
(1) Motor switch

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.



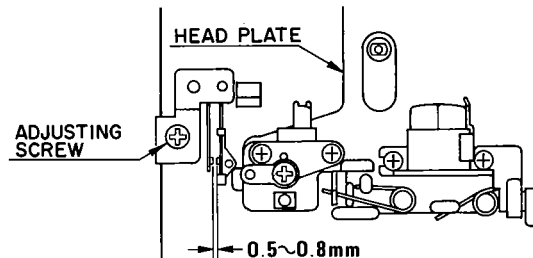
(2) Pause muting switch

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.



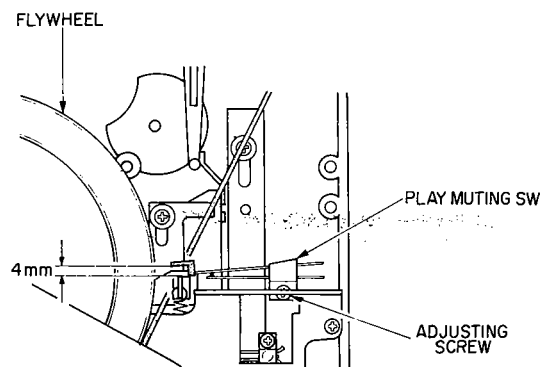
(3) Start muting switch

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.



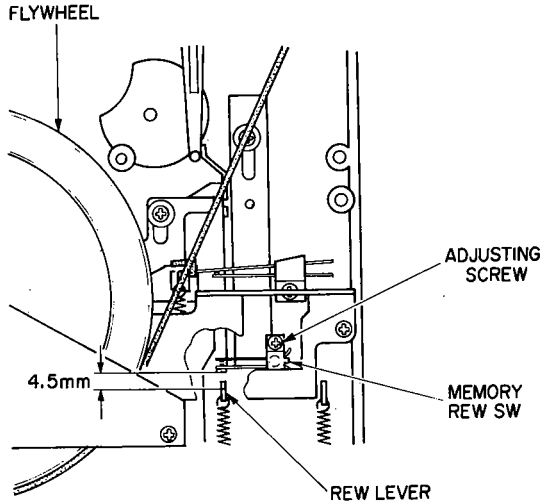
(4) Play muting switch

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.



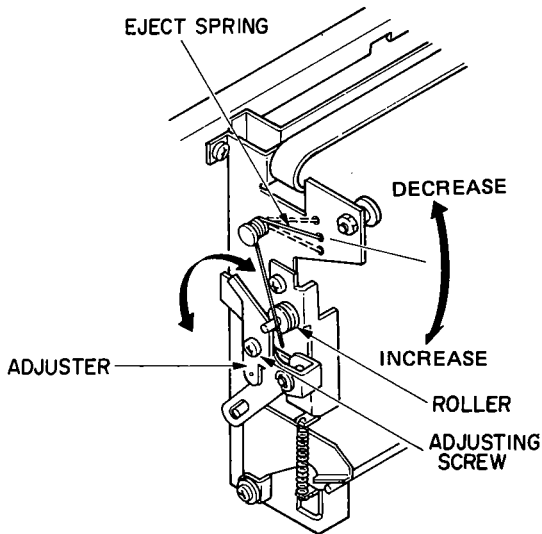
(5) Memory rewind switch

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

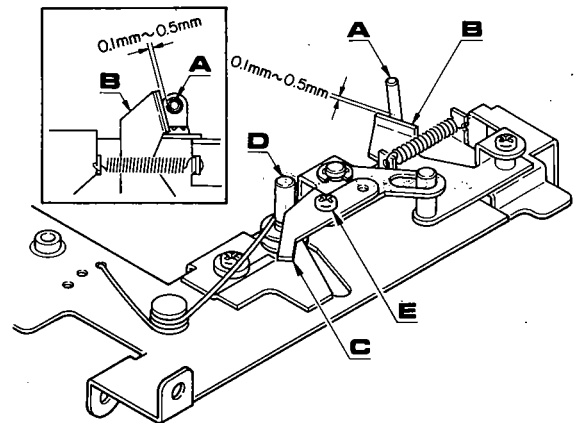


Fig. 1

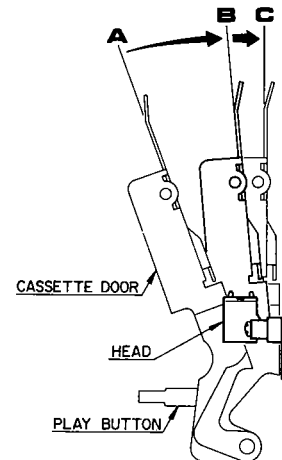


Fig. 2

4.2 ELECTRICAL ADJUSTMENTS AND MEASUREMENTS

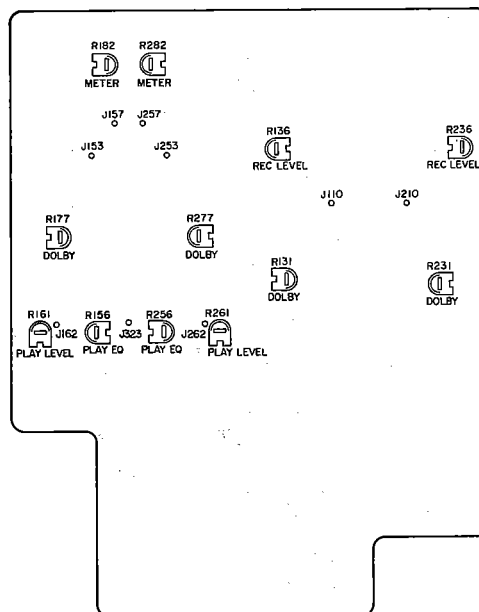
Precautions Before Adjustment and Measurement

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

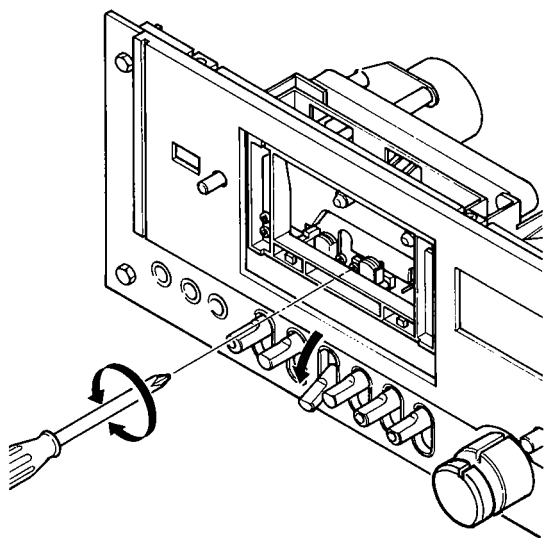
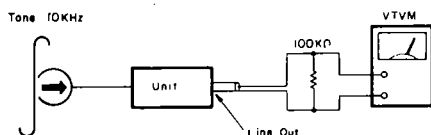
SET UP

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

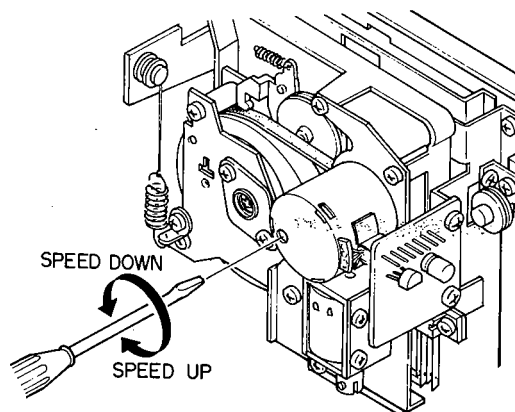
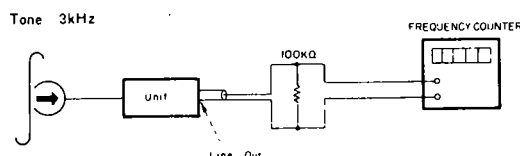
SET UP

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

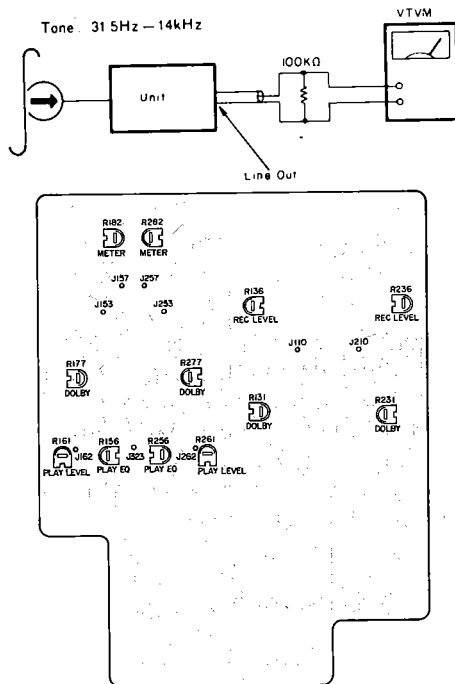
SET UP

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

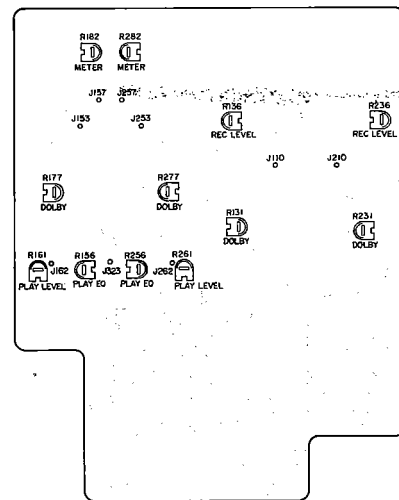
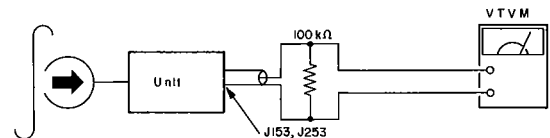
SET UP

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 kΩ 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

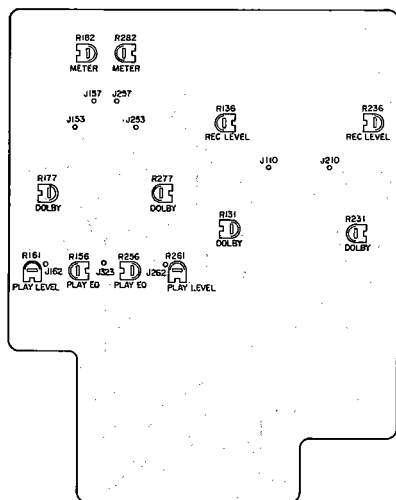
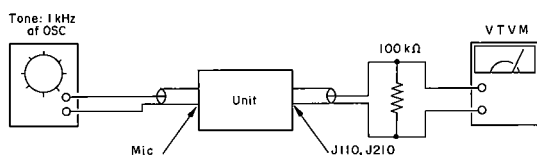
SET UP

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



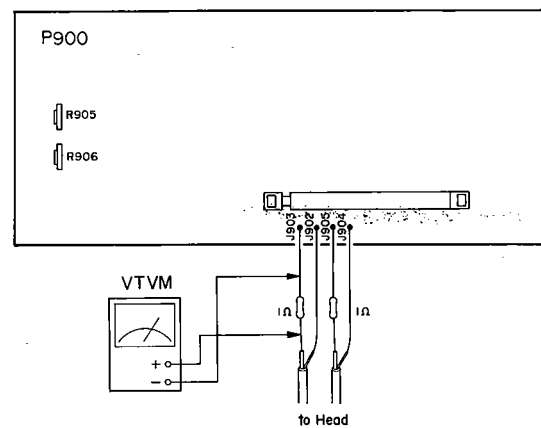
6. Recording Bias Current Adjustment (Temporal)

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 Ω 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 CrO₂ (Fe-Cr) position.



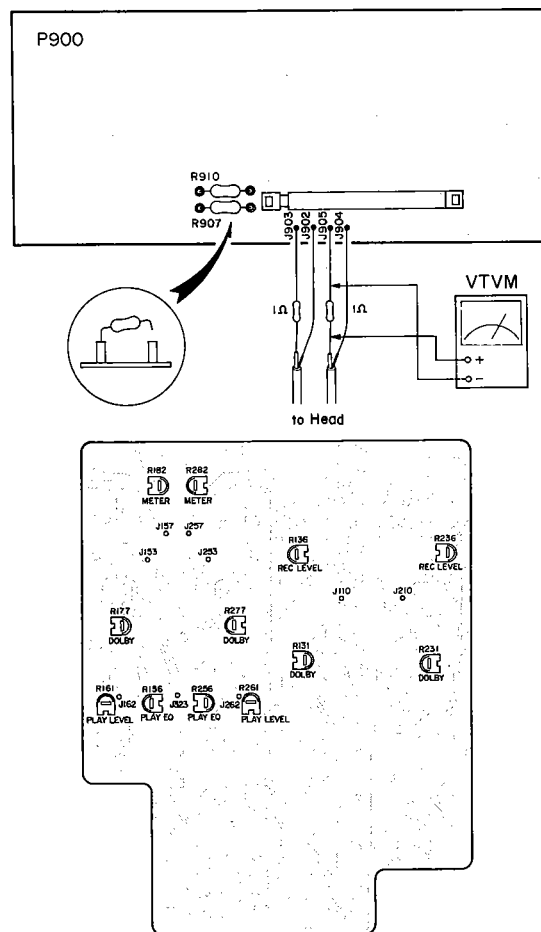
7. Recording Current Adjustment (Temporal)

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

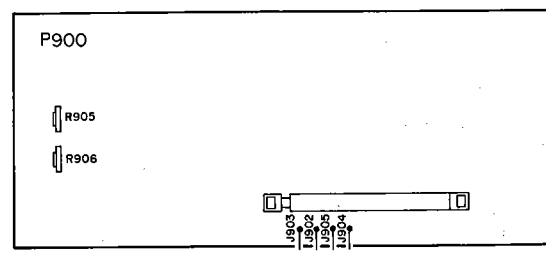
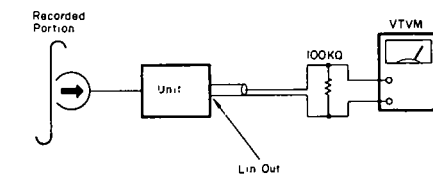
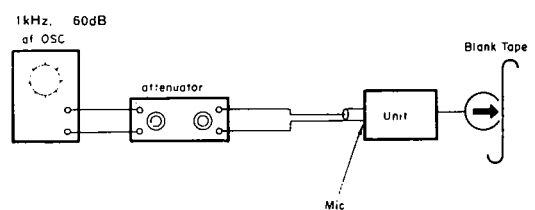
SET UP

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 ± 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

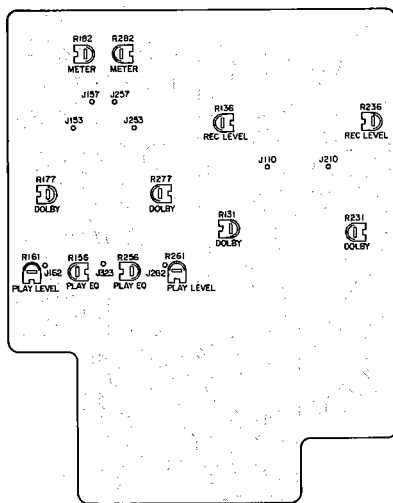
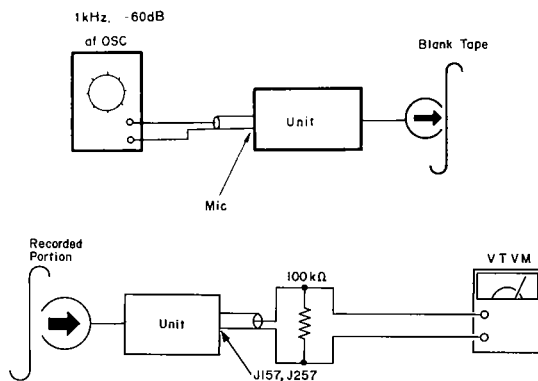
1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1 kHz, -60 dB signal.
3. TAPE selector switch position:- NORMAL.
4. MONITOR switch position:- SOURCE (at recording mode), TAPE (at playback mode).
5. Output terminal:- MAIN P.W. Board (P100) J157 and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

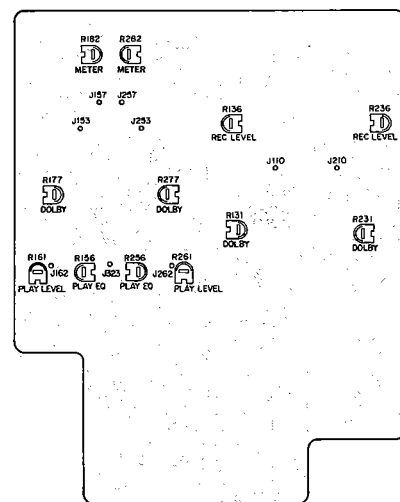
1. Set the 5030 in the SOURCE MONITOR.
2. Set the DOLBY NR switch to the OFF position.
3. Connect a 5 kHz signal to the MIC input jack.
4. Adjust the input signal level until the output voltage at J110 or J210 is 23.5 mV.
5. In that state, measure the output level at the REC OUT jack J114 or J214 provided 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 ± 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 ± 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

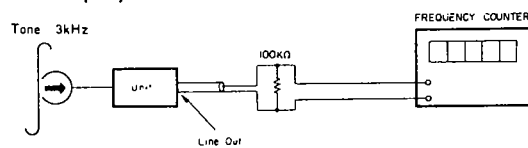
SET UP

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

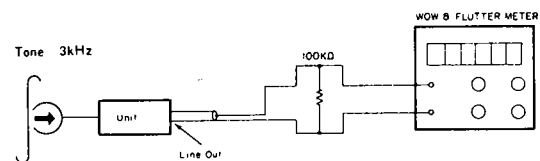
SET UP

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)

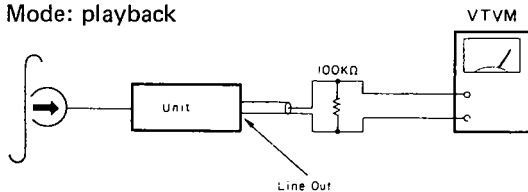
SET UP

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

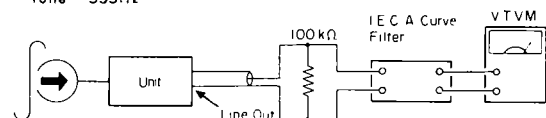
1. Power voltage:- 50 or 60 Hz AC voltage rated for the unit to be used in a market country.
2. Load:- Measuring instrument input impedance.
3. Measuring output terminal:- LINE OUT.
4. Test tape used:- MTT-112 (333 Hz tone).
5. TAPE selector switch position:- NORMAL, CrO₂ and Fe-Cr.
6. MONITOR switch 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

Tone 333Hz



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

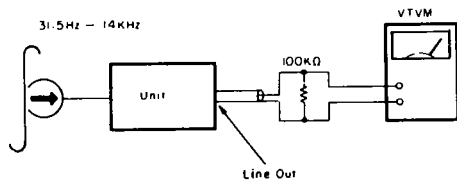
SET UP

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 CrO₂ 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 CrO₂ 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 CrO₂ or Fe-Cr.

Mode: playback



STANDARD

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

40 Hz - 6.3 kHz	±2.5 dB
40 Hz - 10 kHz	+2.5, -3 dB
14 kHz	±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)

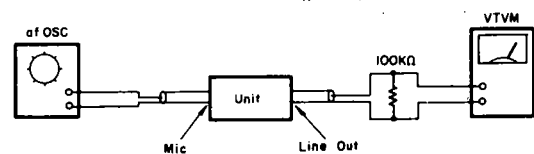
SET UP

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, CrO₂ 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, CrO₂ 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 ±2 dB
2. CrO₂ position: 560 mV ±2 dB
3. Fe-Cr position: 560 mV ±2 dB

17. Record-Playback, Harmonic Distortion Measurement

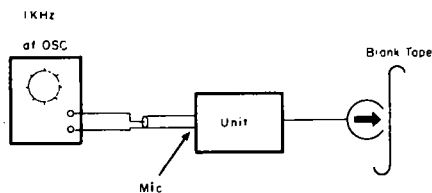
SET UP

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).

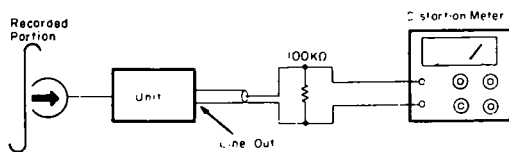
PROCEDURES

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, CrO₂ and Fe-Cr positions each in the same manner.

Mode: record



Mode: playback



STANDARDS

1. Less than 2.5% for the NORMAL and CrO₂ 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

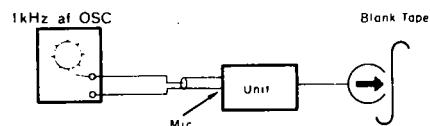
SET UP

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).

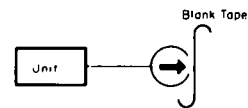
PROCEDURES

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.

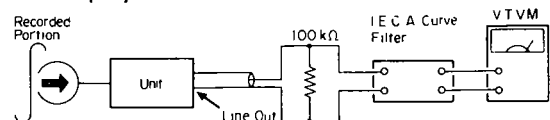
Mode: record



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

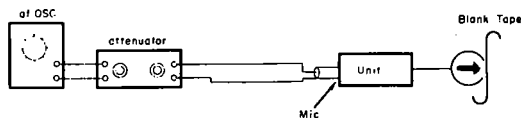
1. Power voltage:- 50 to 60 Hz AC voltage rated for the unit to be used in a market country.
2. Input:- 1 kHz, -60 dB signal with -20 dB as 0 VU.
3. Playback output level:- Same as the recorded signal level.
4. Load:- Measuring instrument input impedance.
5. Measuring output terminal:- LINE OUT.
6. Cassette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

PROCEDURES

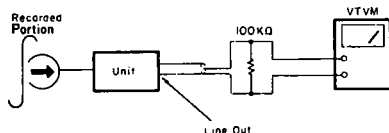
1. Record the 1 kHz signal in the normal recording state. In turn, reduce the input level by 20 dB with an attenuator. Then, record the 1 kHz, 40 Hz, 10 kHz, 13 kHz, 14 kHz and 15 kHz signals.
2. Play the recorded 1 kHz signal back in the normal playback state. Set the MONITOR switch to the TAPE position.
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, CrO₂ 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. CrO₂ 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 CrO₂ 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

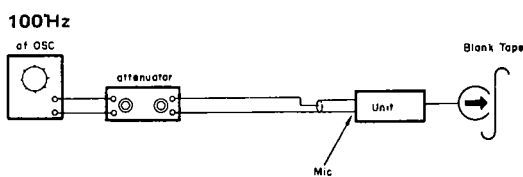
SET UP

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, CrO₂ 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.

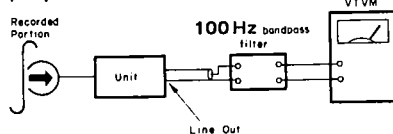
Mode: record



Mode: record



Mode: playback



STANDARD

Greater than 55 dB.

21. Leak Bias Measurement

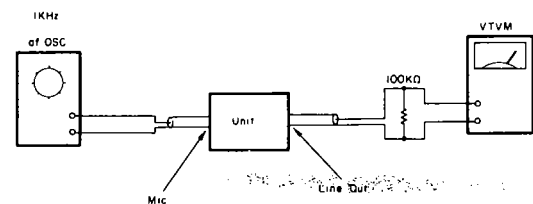
SET UP

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 CrO₂ 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

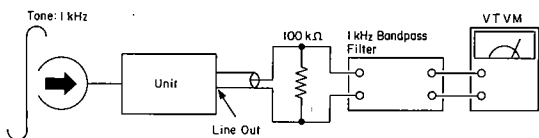
SET UP

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. Assume 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

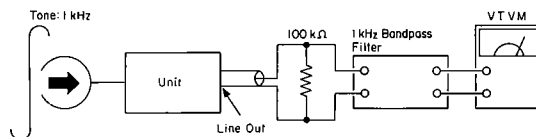
SET UP

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 R channel. Read the output level from the 0 dB reference level.

Mode: playback



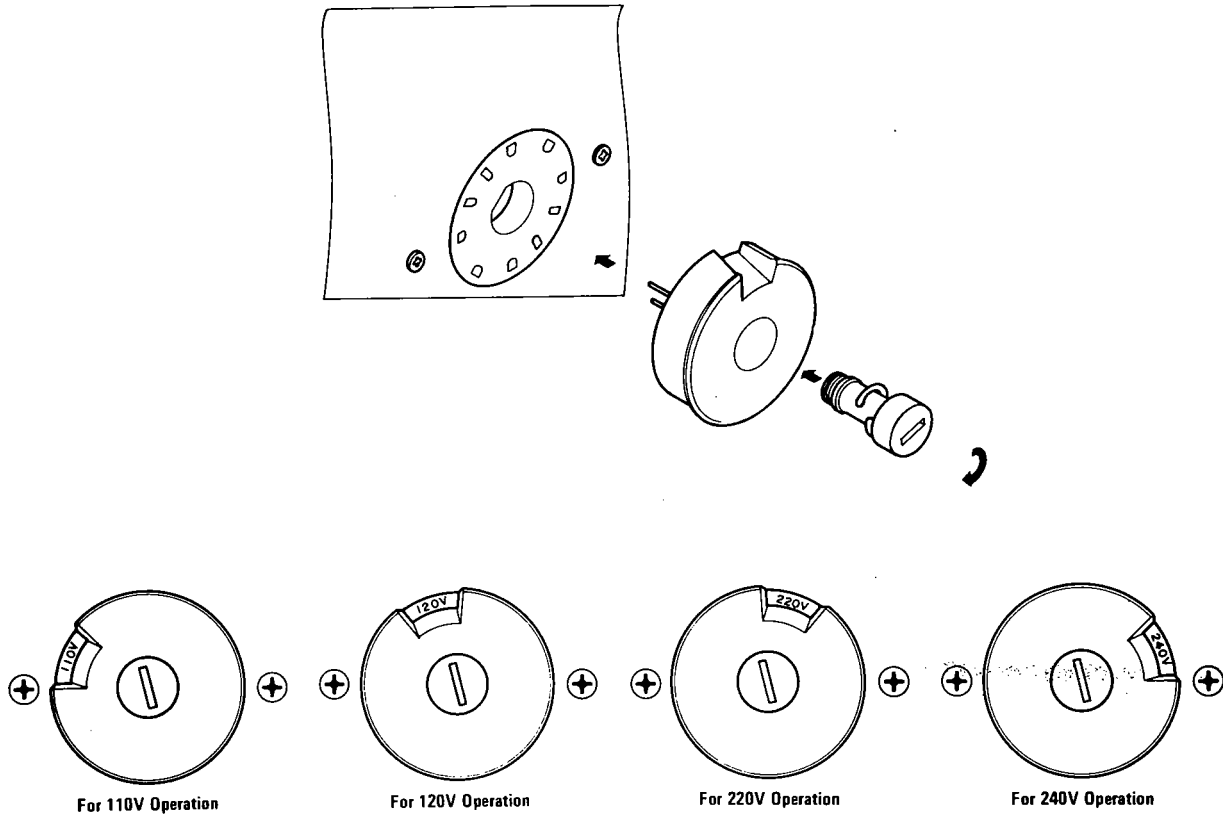
STANDARD

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.

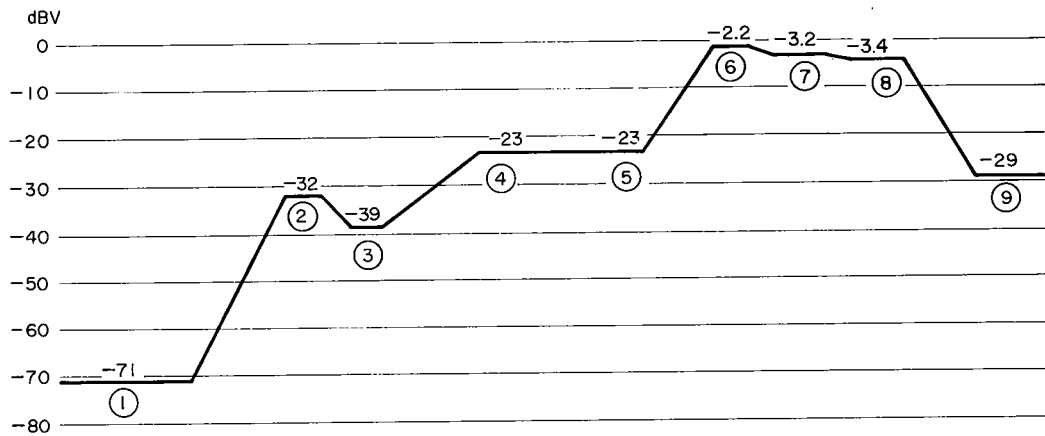
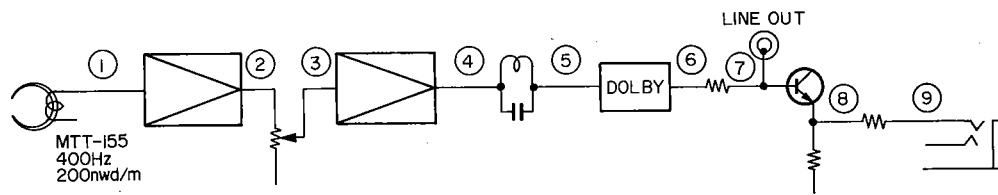
CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.



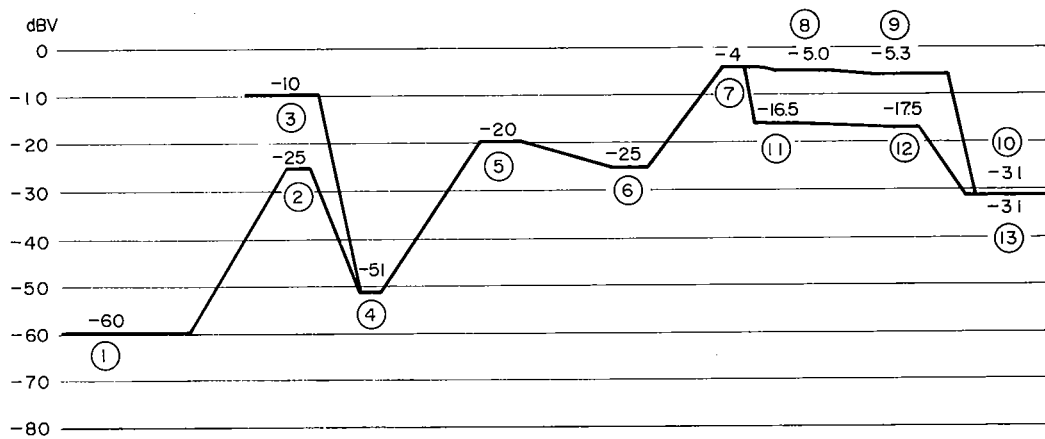
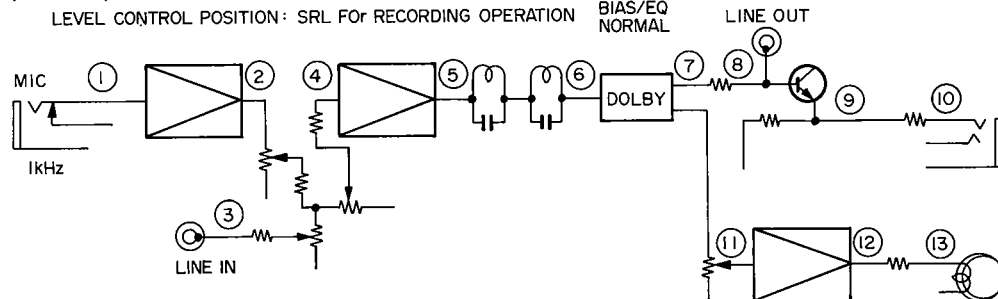
6. DIAGRAMS

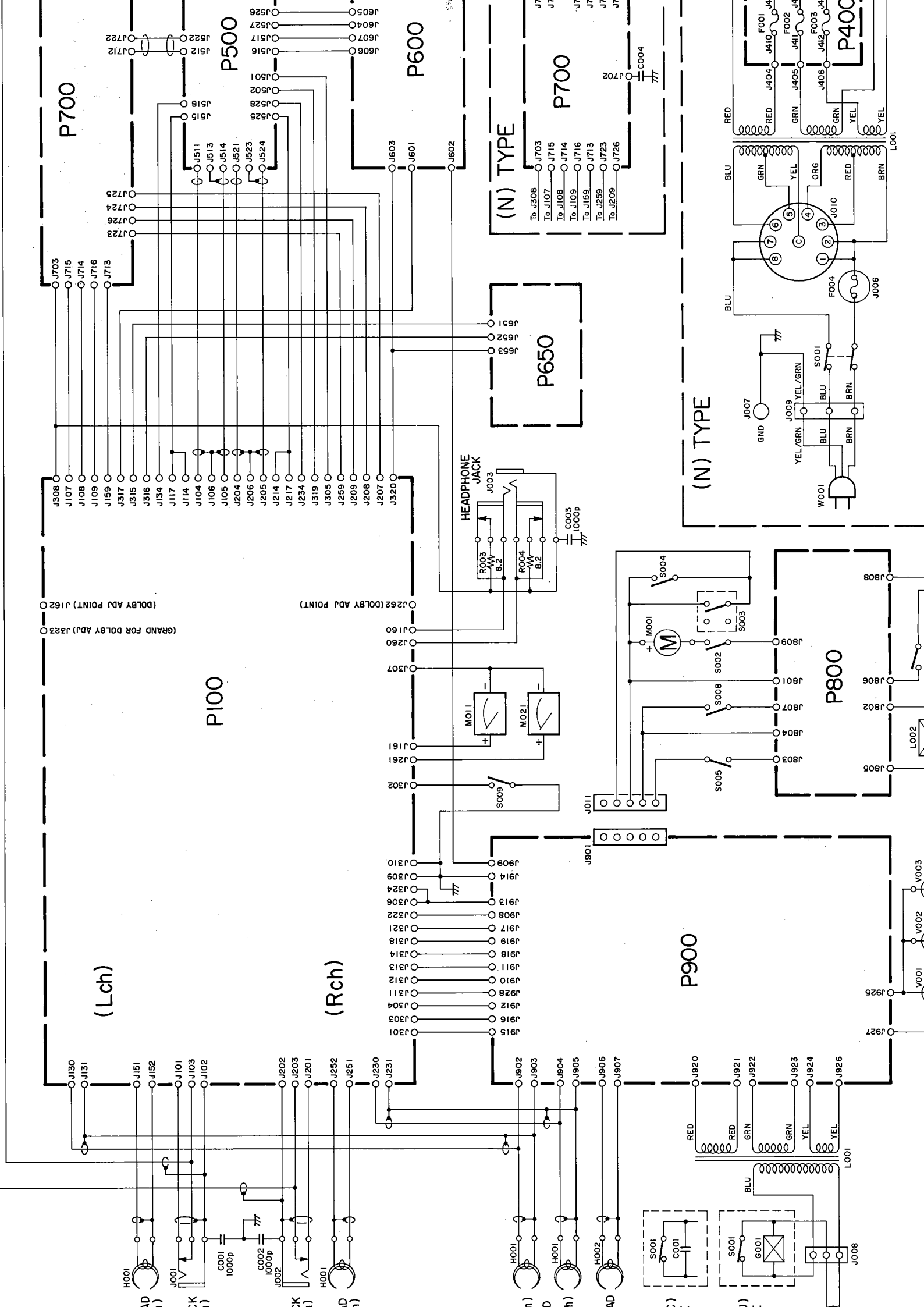
6.1 LEVEL DIAGRAM

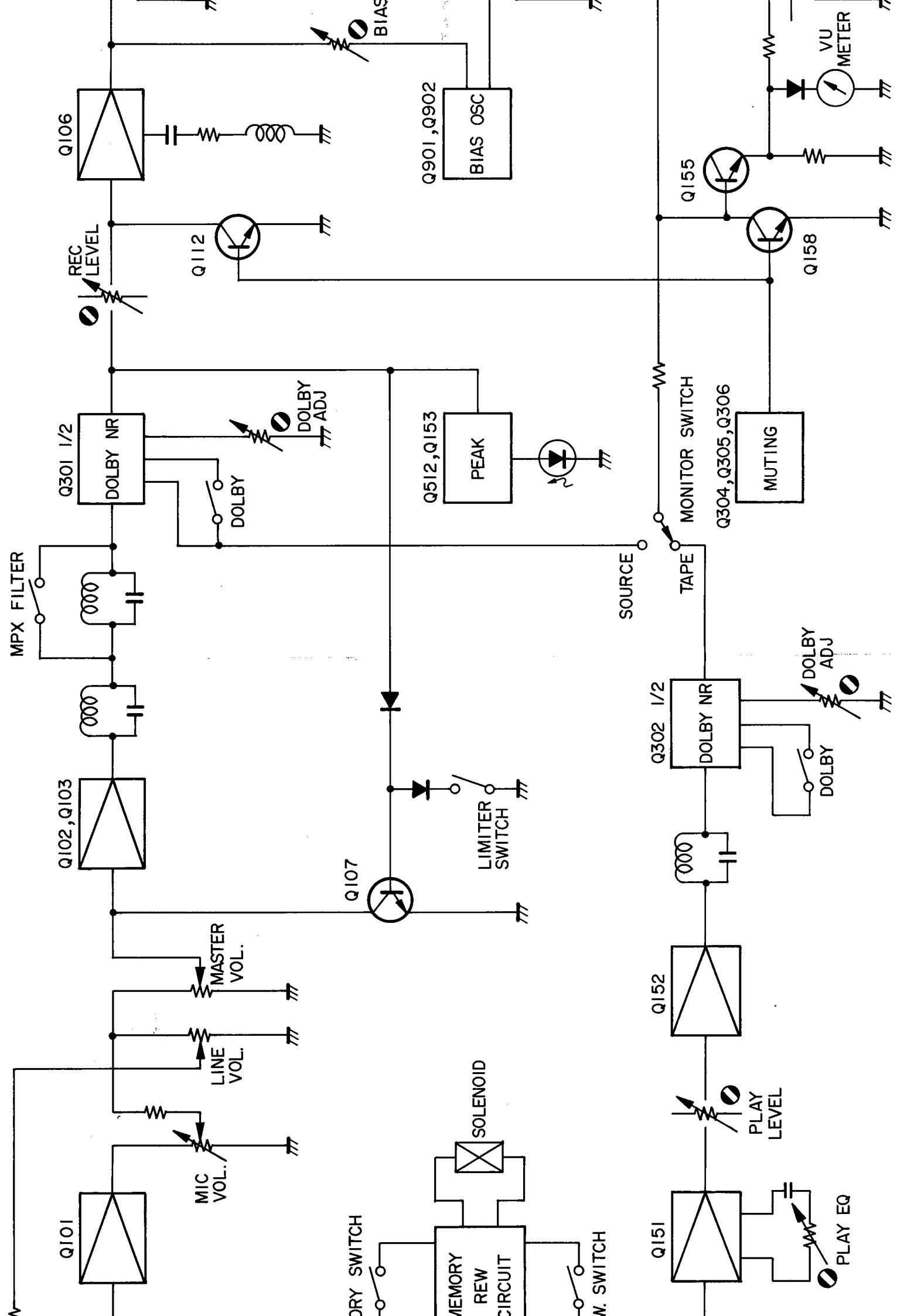
(PLAYBACK)

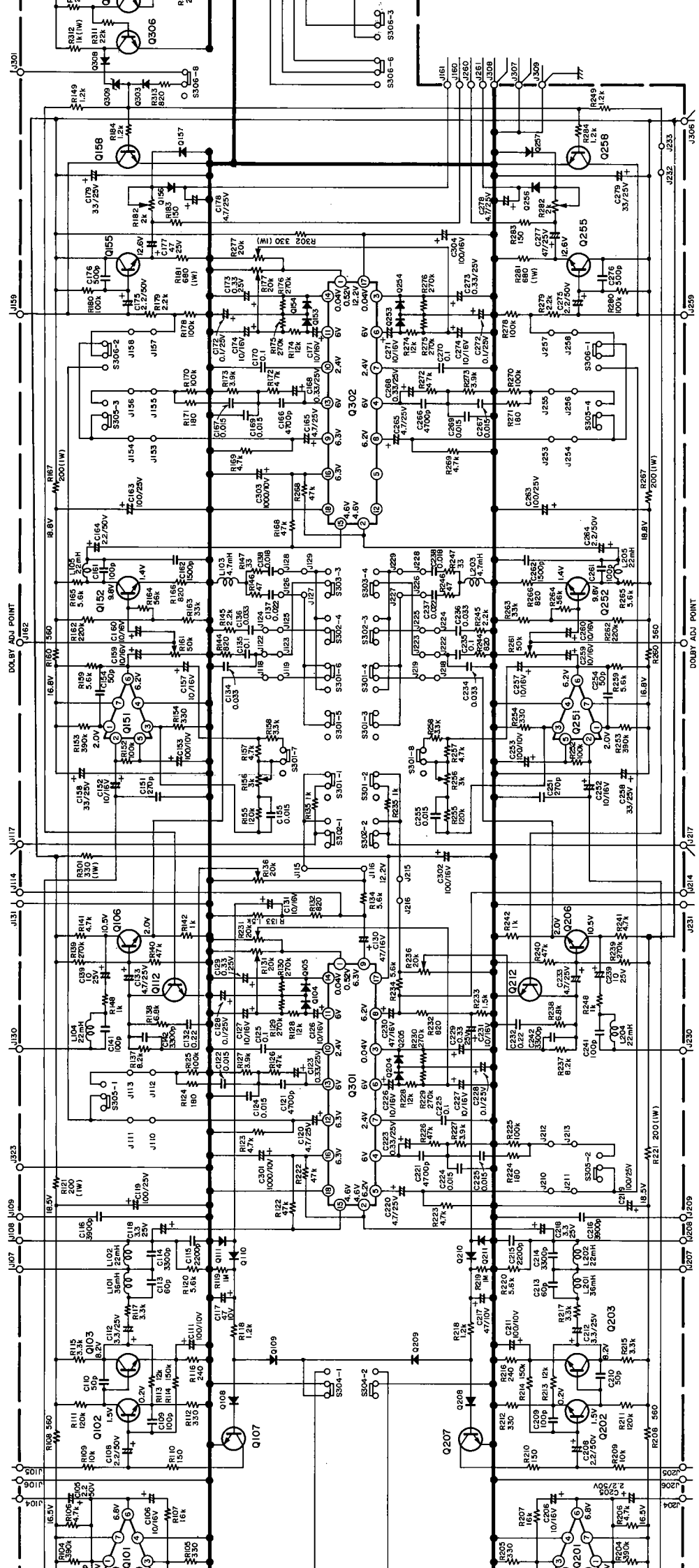


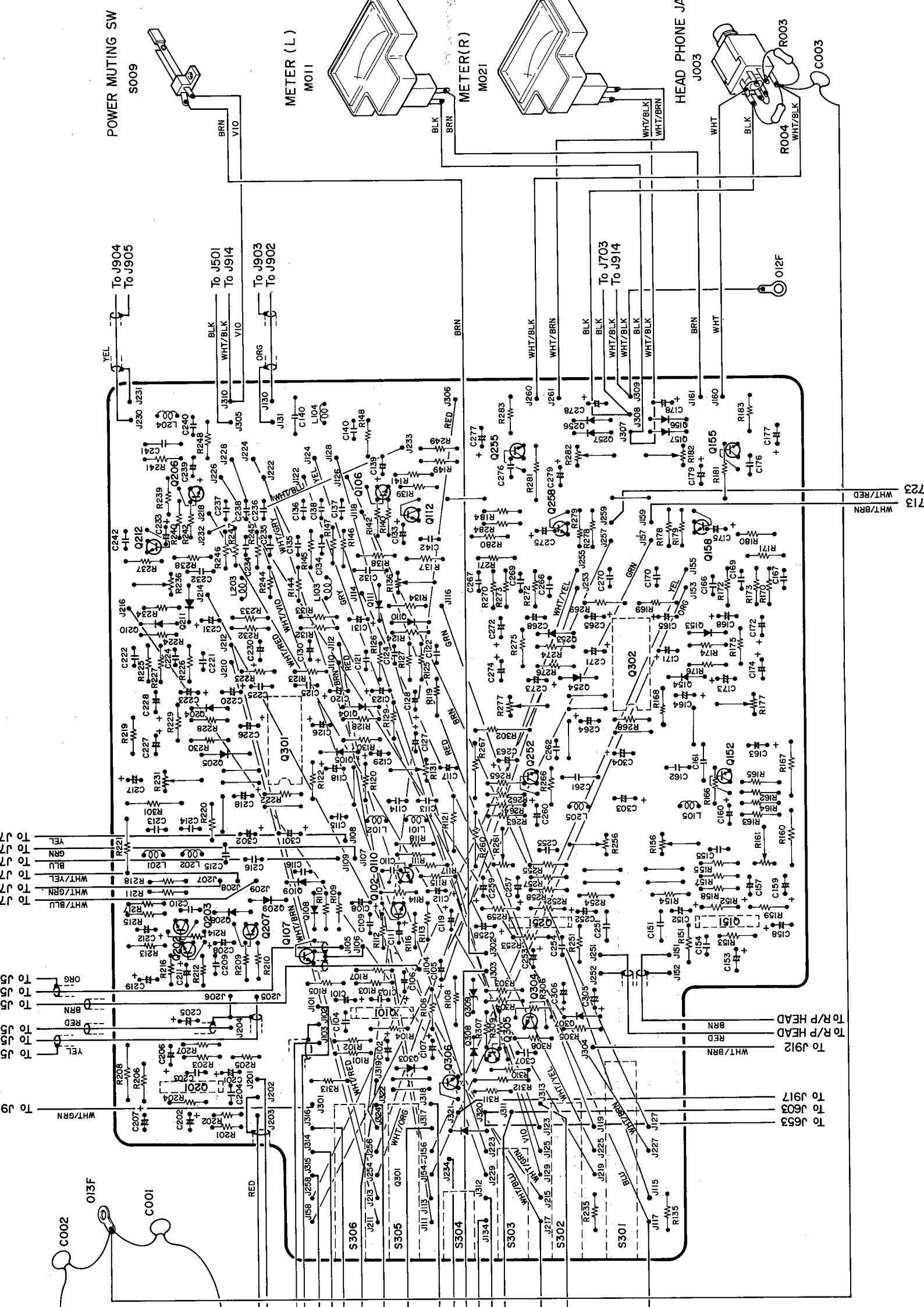
(RECORD)











POWER MUTING SW
S009

METER (L)
MO11

METER (R)
MO21

HEAD PHONE JACK
J003

HEAD PHONE JACK
J003

To J904
To J905

To J501
To J914

To J903
To J902

To J703
To J914

O12F

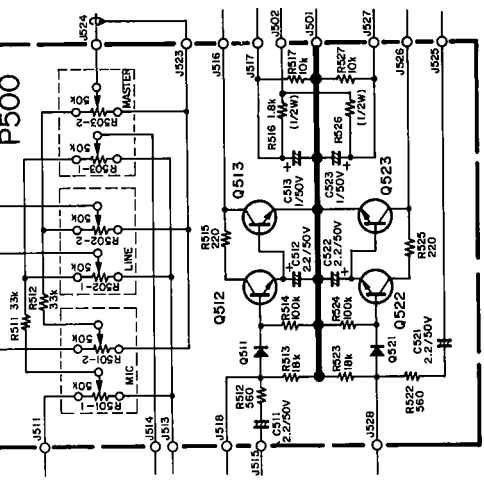
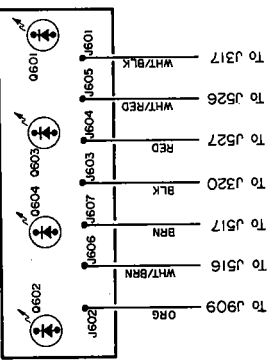
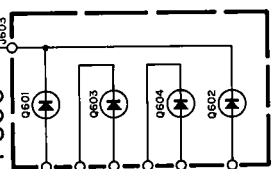
To J904
To J905
To J903
To J902
To J501
To J914
To J703
To J914

To J917
To J603
To J653

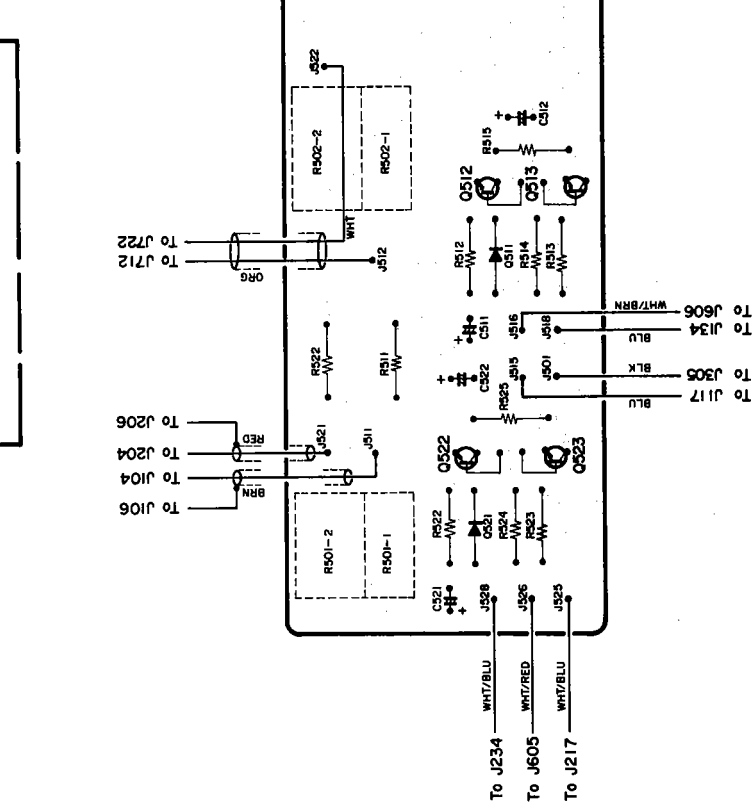
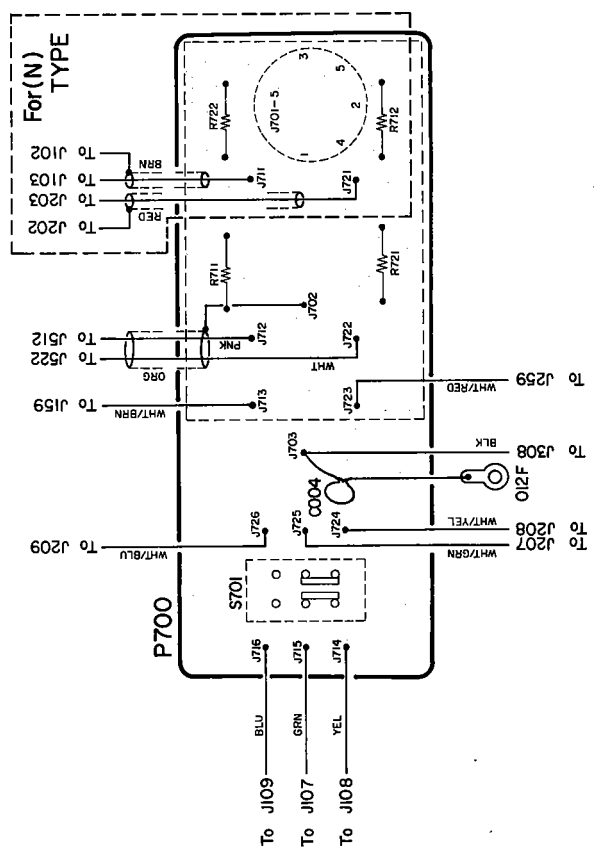
To R/P HEAD
To J912
To J912
To J912

WHT/BRN
713

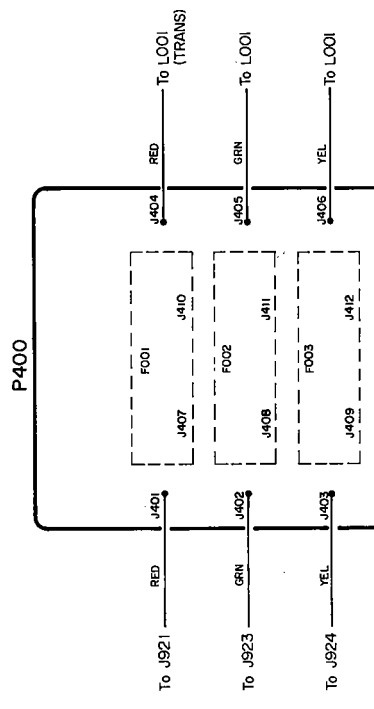
WHT/RED
723



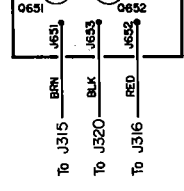
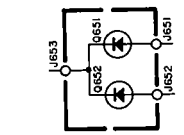
6.10 MONITOR BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P700



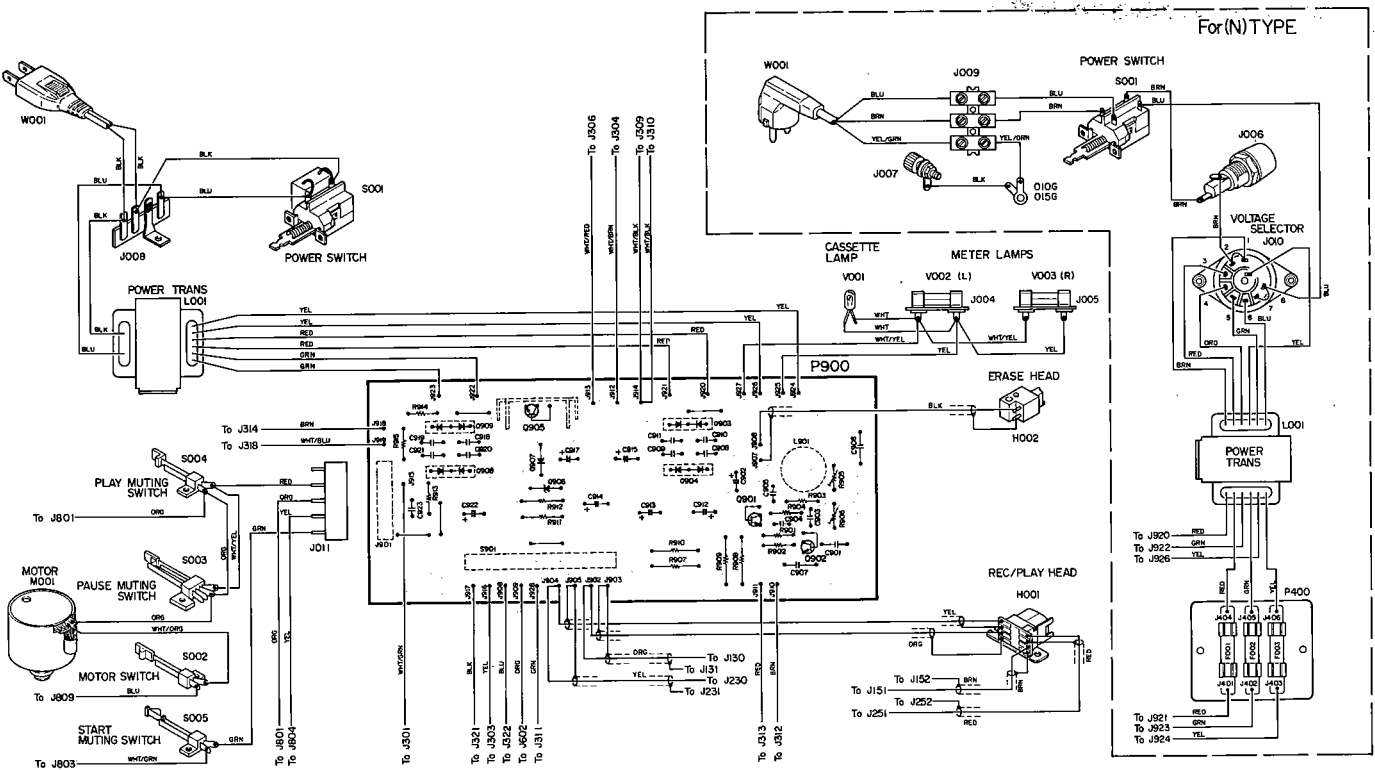
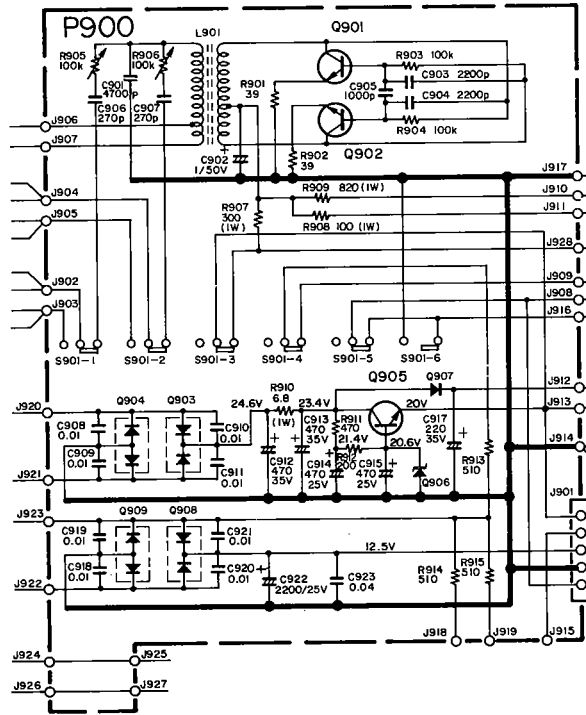
6.10 MONITOR BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P400



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

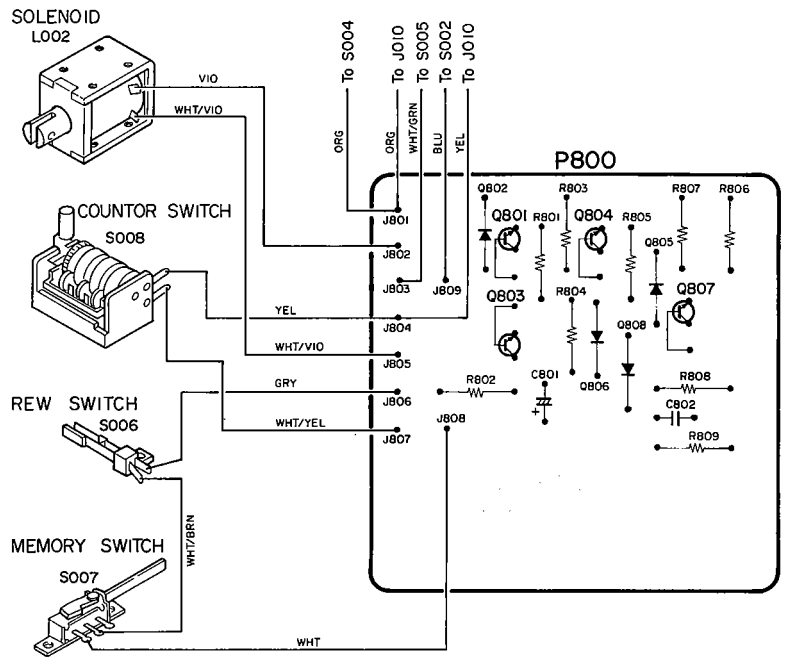
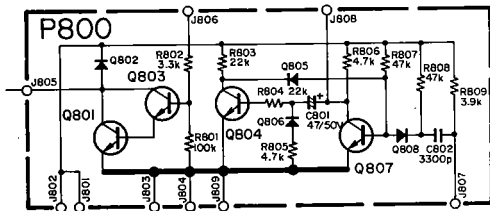
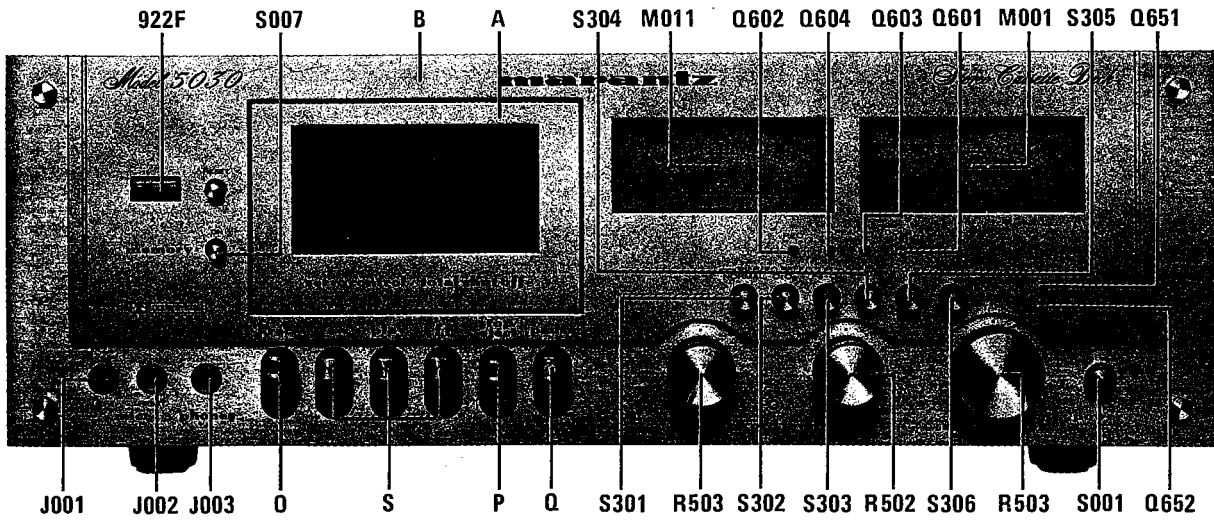


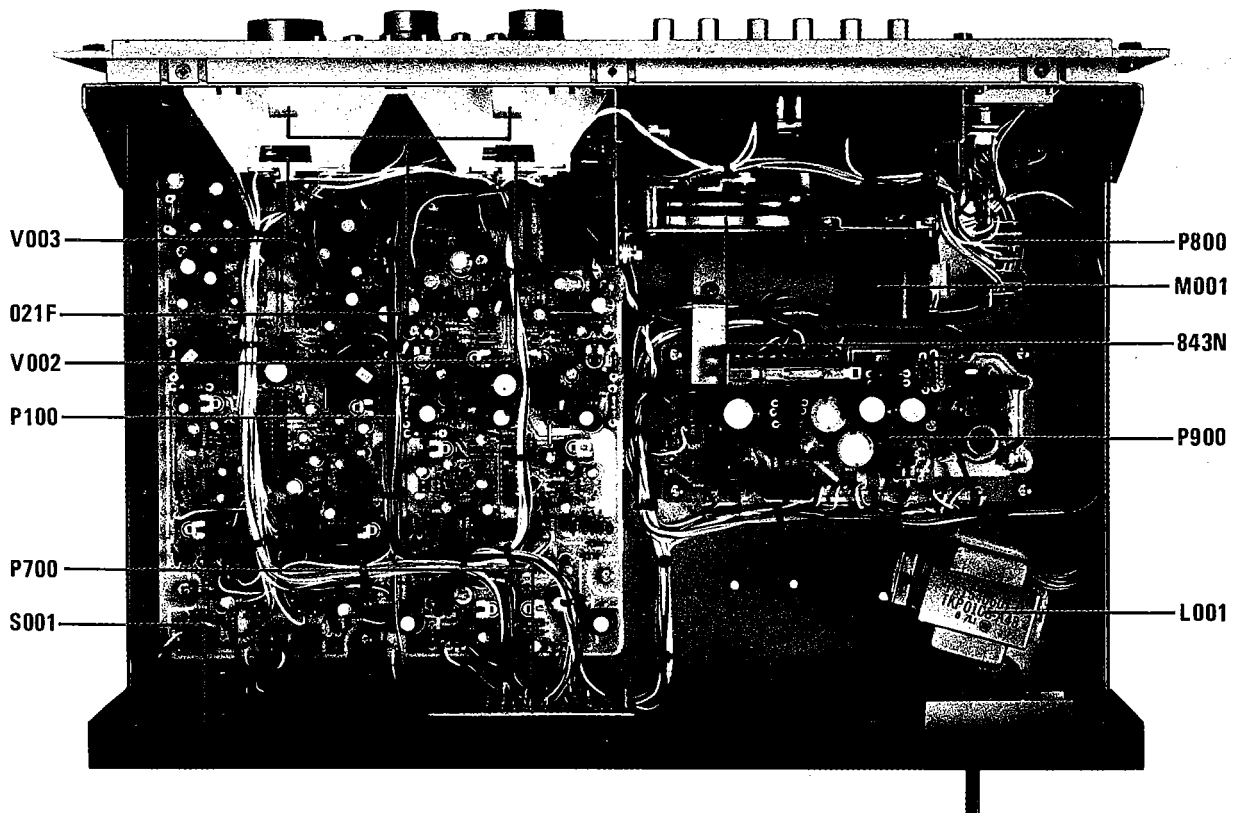
FIG. 6-12 MEMORY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P800

7. MAJOR COMPONENT LOCATIONS

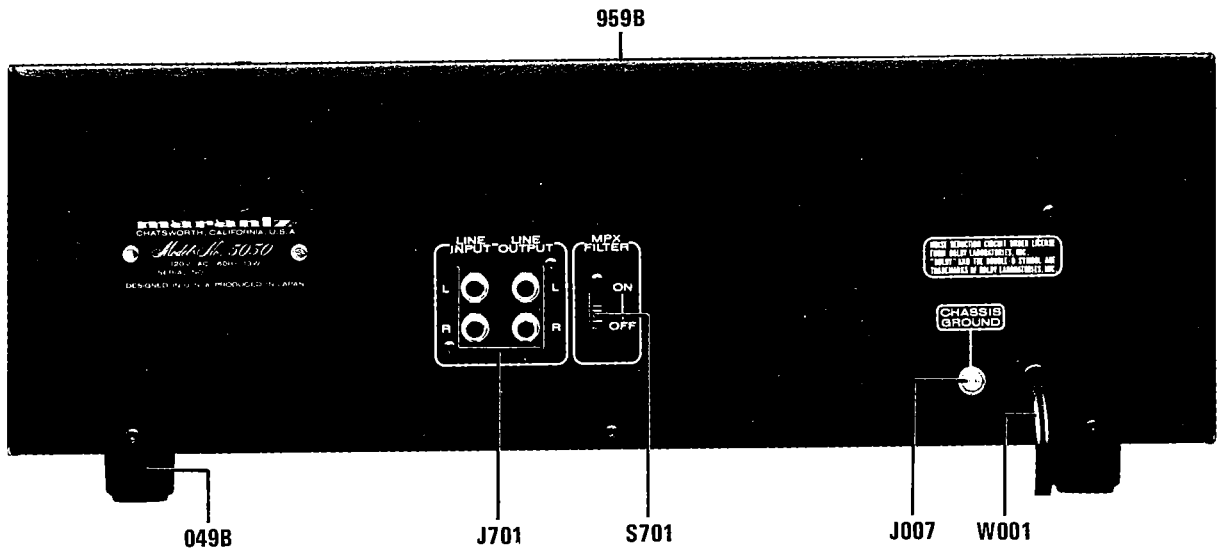
7.1 CABINET - FRONT VIEW



7.2 CHASSIS - TOP VIEW

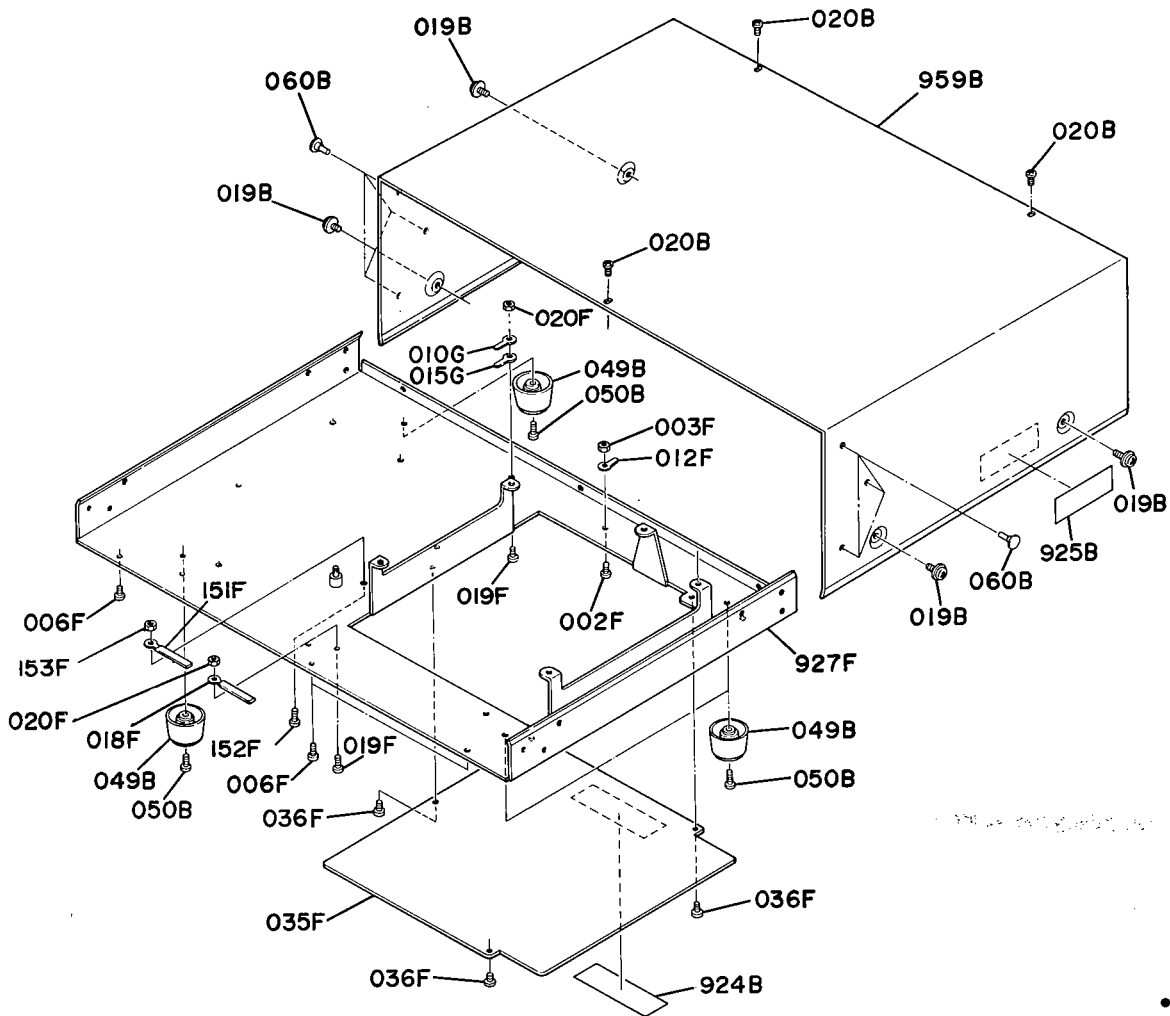


7.3 CABINET - REAR VIEW



8. EXPLODED VIEWS AND PARTS LIST

8.1 [P01-00] TOP COVER AND MAIN CHASSIS

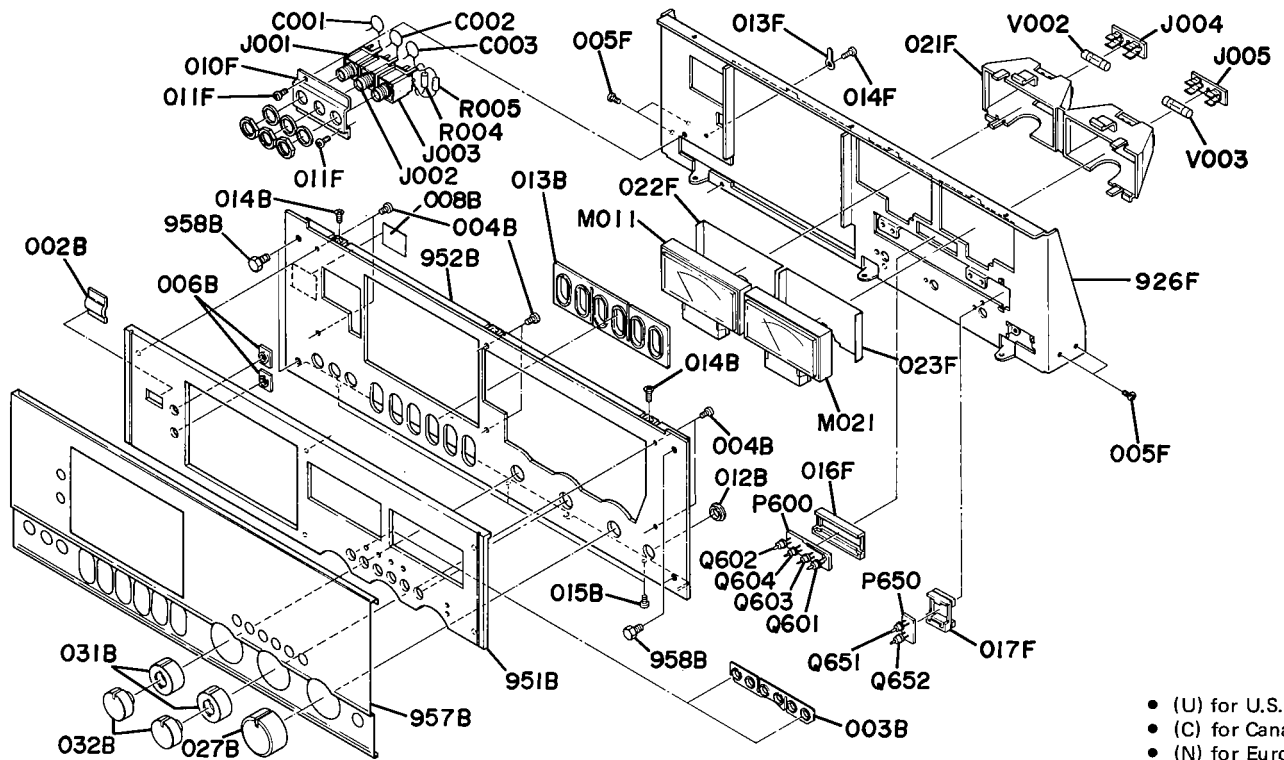


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
959B	1	1	1	4197257022	Lid, Top Cover
019B	4	4	4	51480406S9	F. Washer Screw F4 x 6
020B	3	3	3	51100306S9	B.H.M. Screw B3 x 6
049B	4	4	4	2932057010	Leg
050B	4	4	4	51570410S0	P. TAP. Screw P4 x 10
060B	6	6	6	4197259020	Bushing
924B	1		1	3889861010	Label
924B		1		4113861020	Label
925B	1		1	2932861012	Label
925B		1		2911861143	Label

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
002F	1	1	1	51100306A9'	B.H.M. Screw B3 x 6
003F	1	1	1	53110030A9	Hexagon Nut
006F	3	3	3	51100306A9	B.H.M. Screw B3 x 6
012F	1	1	1	62030049W0	Lug
018F	1	1	1	2871005010	Clamper
019F	2	2	2	51100306A9	B.H.M. Screw B3 x 6
020F	2	2	2	53110303A9	Hexagon Nut
035F	1	1	1	4197257030	Lid
036F	3	3	3	51280306B0	B.H. TAP. Screw B3 x 6
151F	1	1	1	2821005010	Clamper
152F	1	1	1	51100406A9	B.H.M. Screw B4 x 6
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

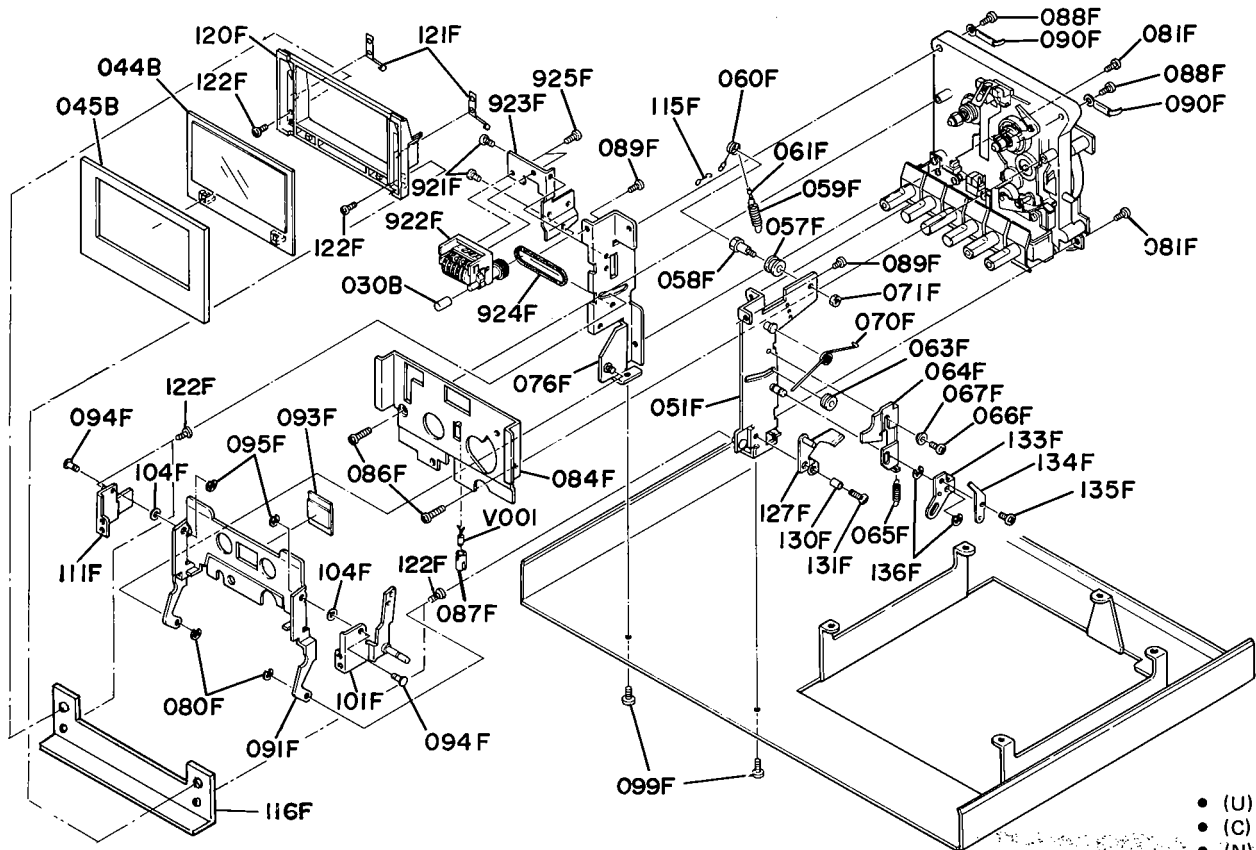


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

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	P600-LED CIRCUIT BOARD P.W. Board, Led
	1	1	1	ZZ41901420	P.W. Board Assembly
Q601	1	1	1	H110004030	L.E.D. SPL-132B Dolby
Q602	1	1	1	H110004030	L.E.D. SPL-132B Rec.
Q603	1	1	1	H110004030	L.E.D. SPL-132B Peak
Q604	1	1	1	H110004030	L.E.D. SPL-132B Peak
J601	7	7	7	YP10001200	Plug
J607	7	7	7	YP10001200	Plug
P650	1	1	1	YK41901440	P650-MONITOR CIRCUIT BOARD P.W. Board, Monitor
	1	1	1	ZZ41901440	P.W. Board, Assembly
Q651	1	1	1	H110004030	L.E.D. SPL-132B Source
Q652	1	1	1	H110004030	L.E.D. SPL-132B Tape

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

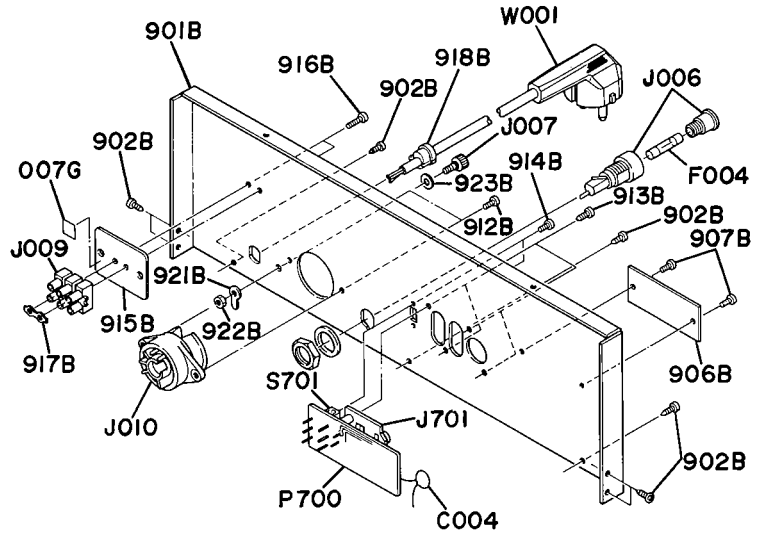
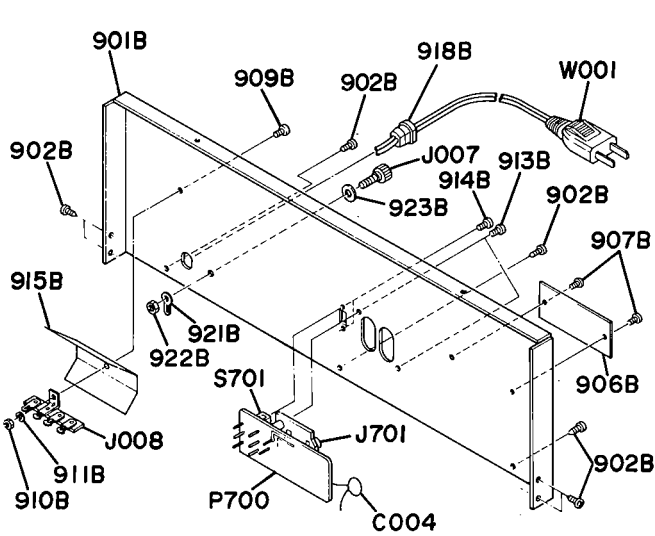


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
B	1	1	1	4190063410	Escutcheon Assembly, Cassette
044B	1	1	1	4197257042	Lid
045B	1	1	1	4197063033	Escutcheon
C	1	1	1	4197271400	Holder Assembly, Cassette
120F	1	1	1	4197271013	Holder
121F	2	2	2	4197115052	Spring
122F	4	4	4	51102605S0	P.H.M. Screw P2.6 x 5
030B	1	1	1	3448067060	Cap
051F	1	1	1	4197160502	Bracket
057F	1	1	1	4197262010	Pulley
058F	1	1	1	4197112040	Shaft
059F	1	1	1	4197115020	Spring
060F	1	1	1	72081604A0	String
061F	1	1	1	56382540G0	Eyelet
063F	1	1	1	4197262020	Pulley
064F	1	1	1	4197258020	Hook
065F	1	1	1	4197115040	Spring
066F	1	1	1	51102606A0	P.H.M. Screw P2.6 x 6
067F	1	1	1	4197055010	Collar
070F	1	1	1	4197115030	Spring
071F	1	1	1	53110303A9	Hexagon Nut
076F	1	1	1	4197160513	Bracket
080F	2	2	2	64000200R0	RG Ring, E Type
081F	2	2	2	51060306A9	P.H.M. Screw P3 x 6
084F	1	1	1	4197053013	Cover
086F	2	2	2	51382606T0	P.H. TAP. Screw P2.6 x 6

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

8.4 [P04-99] REAR PANEL



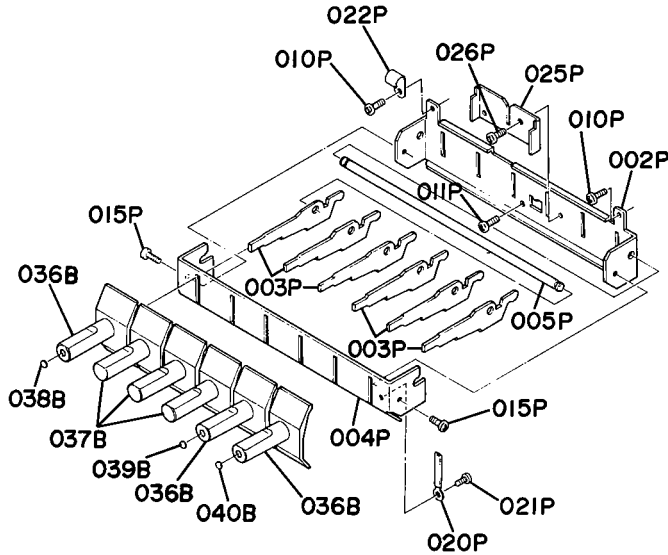
- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
901B	1	1		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		51100306S9	B.H.M. Screw B3 x 6
910B	1	1		53110303A9	Hexagon Nut
911B	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		4114120010	Insulator
915B			1	4114120010	Insulator
916B	2			5110316S9	B.H.M. Screw B3 x 16
917B			1	2970005010	Clamper
918B	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 Fuse Holder
J007	1	1	1	YL03010210	Terminal, Grand
J008	1	1		YL01040160	Terminal
J009			1	YL09030010	Terminal
J010			1	BY03110010	Plug
W001	1	1		YC02400220	AC Power Cord
W001			1	YC01900030	AC Power Cord
F004			1	FS10012800	Fuse 125mAT
C004	1	1	1	DK18102010	Ceramic Cap. 1000pF

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
P700-REAR CIRCUIT BOARD					
P700	1	1	1	YF41980020	P.W. Board Terminal
	1	1		ZZ41980020	P.W. Board Assembly
				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		YT02040150	Terminal Rca
J701			1	BY01050060	Jack Din, Rca
J702	1	1	1	YP10001200	Plug
J703	1	1	1	YP10001200	Plug
J711			6	YP10001200	Plug
J716			6	YP10001200	Plug
J721			6	YP10001200	Plug
J726			6	YP10001200	Plug
S701	1	1	1	SS02020420	Slide Switch

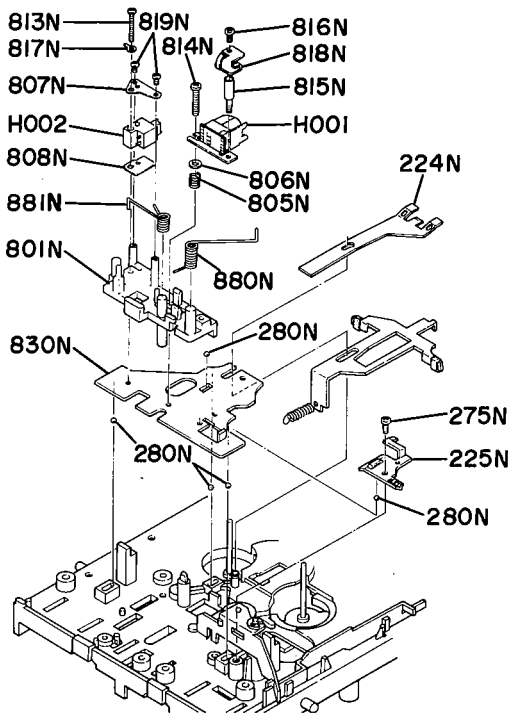
8.5 [P05-00] BUTTONS FOR TAPE MECHANISM OPERATION

- (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

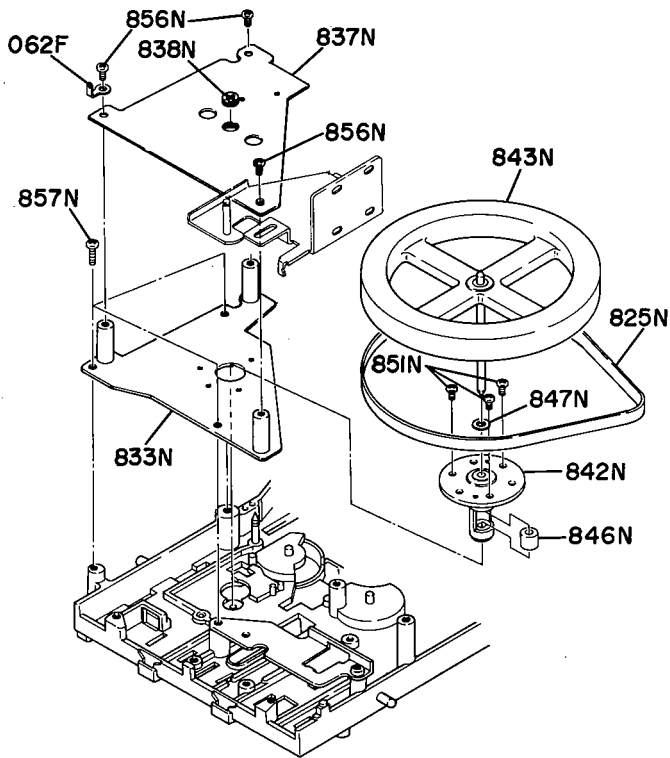
8.6 [P06-99] HEAD CHASSIS



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

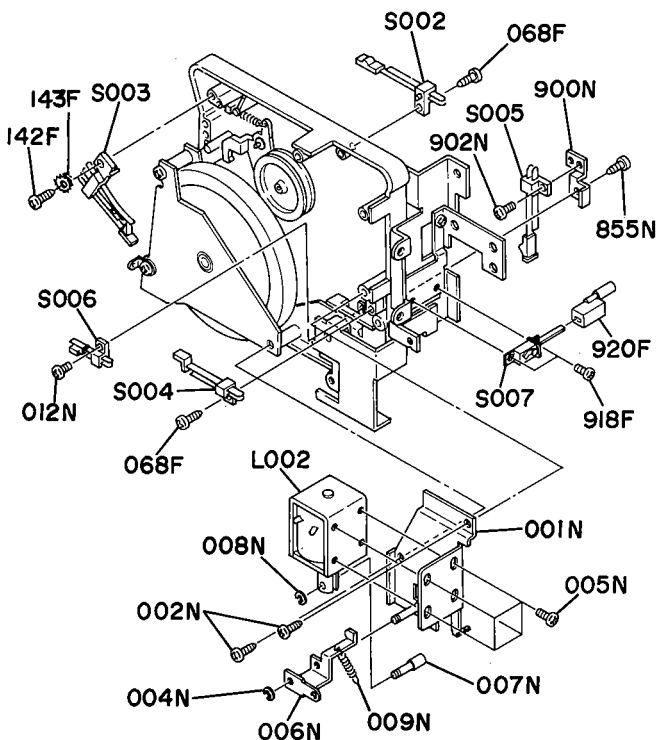
8.7 [P07-99] FLYWHEEL

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



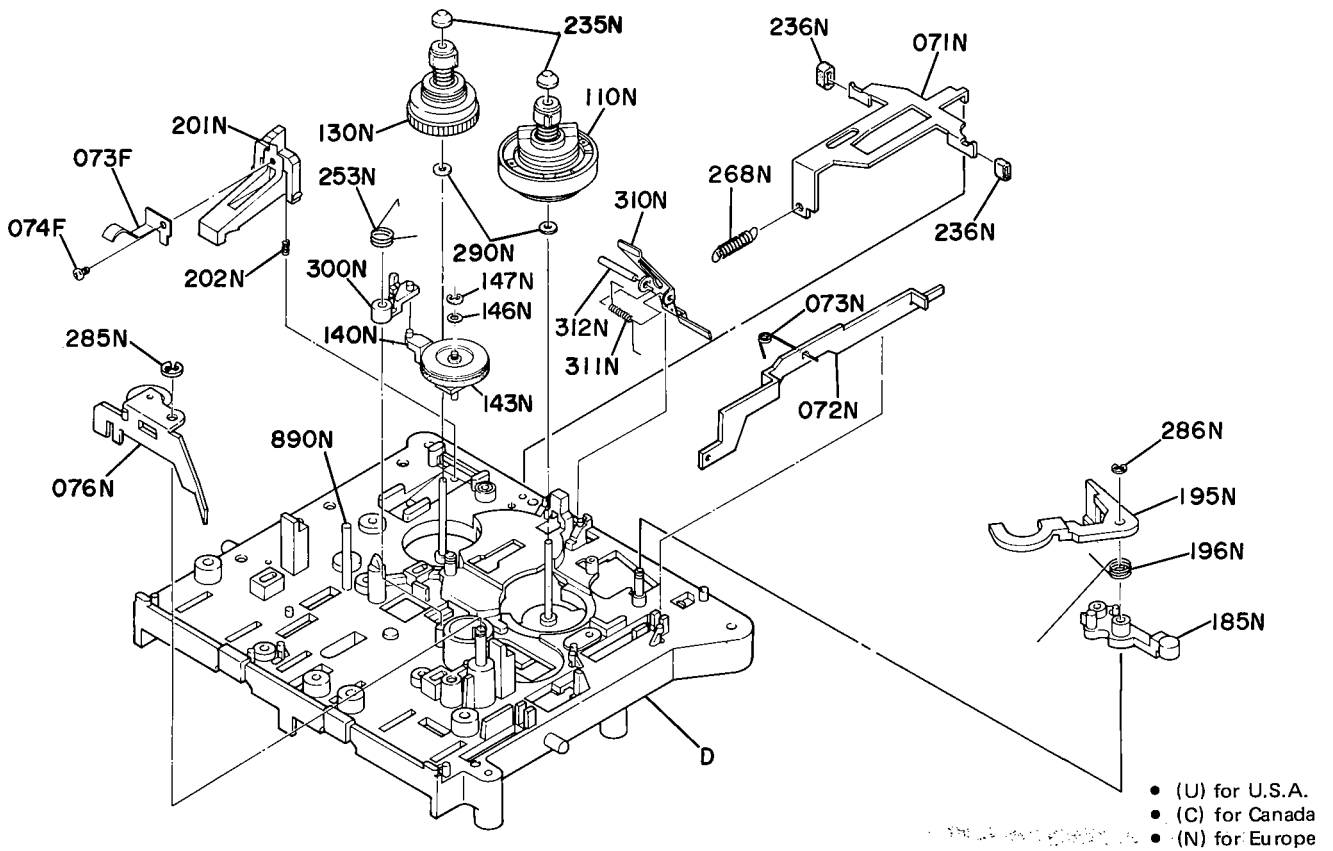
REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
825N	1	1	1	4383264020	Belt
833N	1	1	1	4383104700	Retainer
837N	1	1	1	4383104010	Retainer
838N	1	1	1	3483164020	Adjuster
842N	1	1	1	4383106020	Sustainer
843N	1	1	1	4383273510	Flywheel
846N	1	1	1	4383262020	Pulley
847N	1	1	1	59264702G9	Washer
851N	3	3	3	51440306A9	L. Washer Screw
856N	3	3	3	51060308A9	P.H.M. Screw P3 x 8
857N	3	3	3	51300312B0	P.H. TAP Screw P3 x 12
062F	1	1	1	62031650W0	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 B3 x 4
004N	1	1	1	64002500R0	RG Ring, B Type
005N	4	4	4	51100305A9	B.H.M. Screw B3 x 5
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 P2.6 x 4
068F	2	2	2	51380206P0	P.H. TAP, Screw P2 x 6
142F	1	1	1	51382608P0	P.H. TAP Screw P2.6 x 8
143F	1	1	1	54052600A0	T.L. Washer, OR
855N	1	1	1	51300308B0	P.H. TAP, Screw P3 x 8
900N	1	1	1	4383160040	Bracket
902N	1	1	1	51060205A0	P.H.M. Screw P2 x 5
918F	2	2	2	51100204A0	B.H.M. Screw B2 x 4
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

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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
E	1	1	1	4380354400	Lever Assembly, Rew
F	1	1	1	4380354410	Lever Assembly, Play
G	1	1	1	4380354420	Lever Assembly, F.F.
H	1	1	1	4380354430	Lever Assembly, Stop
I	1	1	1	4380354440	Lever Assembly, Pause
J	1	1	1	4380354450	Lever Assembly, Rec
K	1	1	1	4383051400	Guide Assembly, Push Lever
N	1	1	1	4383001400	Idler Assembly,

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
054N	1	1	1	4367115210	Spring
055N	1	1	1	4367112130	Shaft
056N	1	1	1	4367054030	Cam, Pause Lock
057N	1	1	1	4367115140	Spring
058N	1	1	1	59030805G9	Washer
061N	1	1	1	4367354070	Lever, Eject
062N	1	1	1	4380115080	Spring
063N	1	1	1	64001500R0	RG Ring, E Type
068N	1	1	1	51820202S0	P.H.M. Screw P2 x 2
069N	1	1	1	4380354080	Lever
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.

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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
P100	1	1	1	YK41901410	P100-PRE-AMP. CIRCUIT BOARD
	1	1	1	ZZ41901410	P.W. Board, Pre-Amp. P.W. Board Assembly
P100-CAPACITORS					
C101	1	1	1	EE10601640	Elect 10 μ F 16V
C102	1	1	1	EA10601690	Elect 100 μ F 10V
C103	1	1	1	DD16101010	Ceramic 100pF \pm 10%
C104	1	1	1	DD16500010	Ceramic 50pF \pm 10%
C105	1	1	1	EA22505090	Elect 2.2 μ F 50V
C106	1	1	1	EA10601690	Elect 10 μ F 16V
C107	1	1	1	EA33602590	Elect 33 μ F 25V
C108	1	1	1	EA22505090	Elect 2.2 μ F 50V
C109	1	1	1	DD16101010	Ceramic 100pF \pm 10%
C110	1	1	1	DD16500010	Ceramic 50pF \pm 10%
C111	1	1	1	EA10701090	Elect 100 μ F 10V
C112	1	1	1	EA33502590	Elect 3.3 μ F 25V
C113	1	1	1	DD15600010	Ceramic 60pF \pm 5%
C114	1	1	1	DF15332010	Film 3300pF \pm 5%
C115	1	1	1	DF15222010	Film 2200pF \pm 5%
C116	1	1	1	DF15392010	Film 3900pF \pm 5%
C117	1	1	1	EA47601090	Elect 47 μ F 10V
C118	1	1	1	EA33502590	Elect 3.3 μ F 25V
C119	1	1	1	EA10702590	Elect 100 μ F 25V
C120	1	1	1	EA47502590	Elect 4.7 μ F 25V
C121	1	1	1	DF15472010	Film 4700pF \pm 5%
C122	1	1	1	DF15153010	Film 0.015 μ F \pm 5%
C123	1	1	1	EM33402510	Elect 0.33 μ F 25V
C124	1	1	1	DF15153010	Film 0.015 μ F \pm 5%
C125	1	1	1	DF15104010	Film 0.1 μ F \pm 5%
C126	1	1	1	EA10601690	Elect 10 μ F 16V
C127	1	1	1	EA10601690	Elect 10 μ F 16V
C128	1	1	1	EM10402510	Elect 0.1 μ F 25V
C129	1	1	1	EM33402510	Elect 0.33 μ F 25V
C130	1	1	1	EA47601690	Elect 47 μ F 16V
C131	1	1	1	EA10601690	Elect 10 μ F 16V
C132	1	1	1	DF15224010	Film 0.22 μ F \pm 5%
C133	1	1	1	EA47502590	Elect 4.7 μ F 25V
C134	1	1	1	DF15333010	Film 0.033 μ F \pm 5%
C135	1	1	1	DF15104010	Film 0.1 μ F \pm 5%
C136	1	1	1	DF15333010	Film 0.033 μ F \pm 5%
C137	1	1	1	DF15223010	Film 0.022 μ F \pm 5%
C138	1	1	1	DF15183010	Film 0.018 μ F \pm 5%
C139	1	1	1	EE10602540	Elect 10 μ F 25V
C140	1	1	1	DF15153010	Film 0.015 μ F \pm 5%
C141	1	1	1	DF65101010	Film 100pF \pm 5%
C142	1	1	1	DF15822010	Film 8200pF \pm 5%
C151	1	1	1	DF65271010	Film 270pF \pm 5%
C152	1	1	1	EE10601640	Elect 10 μ F 16V
C153	1	1	1	EA10701090	Elect 100 μ F 10V
C154	1	1	1	DD16500010	Ceramic 50pF \pm 10%
C155	1	1	1	DF15153010	Film 0.015 μ F \pm 5%
C157	1	1	1	EA10601690	Elect 10 μ F 16V
C158	1	1	1	EA33602590	Elect 33 μ F 25V
C159	1	1	1	EA10601690	Elect 10 μ F 16V

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
C160	1	1	1	EA10601690	Elect 10 μ F 16V
C161	1	1	1	DF65101010	Film 100pF \pm 5%
C162	1	1	1	DF15152010	Film 1500pF \pm 5%
C163	1	1	1	EA10702590	Elect 100 μ F 25V
C164	1	1	1	EA22505090	Elect 2.2 μ F 50V
C165	1	1	1	EA47502590	Elect 4.7 μ F 25V
C166	1	1	1	DF15472010	Film 4700pF \pm 5%
C167	1	1	1	DF15153010	Film 0.015 μ F \pm 5%
C168	1	1	1	EM33402510	Elect 0.33 μ F 25V
C169	1	1	1	DF15153010	Film 0.015 μ F \pm 5%
C170	1	1	1	DF15104010	Film 0.1 μ F \pm 5%
C171	1	1	1	EA10601690	Elect 10 μ F 16V
C172	1	1	1	EM10402510	Elect 0.1 μ F 25V
C173	1	1	1	EM33402510	Elect 0.33 μ F 25V
C174	1	1	1	EA10601690	Elect 10 μ F 16V
C175	1	1	1	EA22505090	Elect 2.2 μ F 50V
C176	1	1	1	DK16501010	Ceramic 500pF \pm 10%
C177	1	1	1	EA47602590	Elect 47 μ F 25V
C178	1	1	1	EA47502590	Elect 4.7 μ F 25V
C179	1	1	1	EA33602590	Elect 33 μ F 25V
C201	1	1	1	EE10601640	Elect 10 μ F 16V
C202	1	1	1	EA10701090	Elect 100 μ F 10V
C203	1	1	1	DD16101010	Ceramic 100pF \pm 10%
C204	1	1	1	DD16500010	Ceramic 50pF \pm 10%
C205	1	1	1	EA22505090	Elect 2.2 μ F 50V
C206	1	1	1	EA10601690	Elect 10 μ F 16V
C207	1	1	1	EA33602590	Elect 33 μ F 25V
C208	1	1	1	EA22505090	Elect 2.2 μ F 50V
C209	1	1	1	DD16101010	Ceramic 100pF \pm 10%
C210	1	1	1	DD16500010	Ceramic 50pF \pm 10%
C211	1	1	1	EA10701090	Elect 100 μ F 10V
C212	1	1	1	EA33502590	Elect 3.3 μ F 25V
C213	1	1	1	DD15600010	Ceramic 60pF \pm 5%
C214	1	1	1	DF15332010	Film 3300pF \pm 5%
C215	1	1	1	DF15222010	Film 2200pF \pm 5%
C216	1	1	1	DF15392010	Film 3900pF \pm 5%
C217	1	1	1	EA47601090	Elect 47 μ F 10V
C218	1	1	1	EA33502590	Elect 3.3 μ F 25V
C219	1	1	1	EA10702590	Elect 100 μ F 25V
C220	1	1	1	EA47502590	Elect 4.7 μ F 25V
C221	1	1	1	DF15472010	Film 4700pF \pm 5%
C222	1	1	1	DF15153010	Film 0.015 μ F \pm 5%
C223	1	1	1	EM33402510	Elect 0.33 μ F 25V
C224	1	1	1	DF15153010	Film 0.015 μ F \pm 5%
C225	1	1	1	DF15104010	Film 0.1 μ F \pm 5%
C226	1	1	1	EA10601690	Elect 10 μ F 16V
C227	1	1	1	EA10601690	Elect 10 μ F 16V
C228	1	1	1	EM10402510	Elect 0.1 μ F 25V
C229	1	1	1	EM33402510	Elect 0.33 μ F 25V
C230	1	1	1	EA47601690	Elect 47 μ F 16V
C231	1	1	1	EA10601690	Elect 10 μ F 16V
C232	1	1	1	DF15224010	Film 0.22 μ F \pm 5%
C233	1	1	1	EA47502590	Elect 4.7 μ F 25V
C234	1	1	1	DF15333010	Film 0.033 μ F \pm 5%
C235	1	1	1	DF15104010	Film 0.1 μ F \pm 5%

- (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	0.033 μ F	\pm 5%
C237	1	1	1	DF15223010	Film	0.022 μ F	\pm 5%
C238	1	1	1	DF15183010	Film	0.018 μ F	\pm 5%
C239	1	1	1	EE10602540	Elect	10 μ F	25V
C240	1	1	1	DF15153010	Film	0.015 μ F	\pm 5%
C241	1	1	1	DF65101010	Film	100pF	\pm 5%
C242	1	1	1	DF15822010	Film	8200pF	\pm 5%
C251	1	1	1	DF65271010	Film	270pF	\pm 5%
C252	1	1	1	EE10601640	Elect	10 μ F	16V
C253	1	1	1	EA10701090	Elect	100 μ F	10V
C254	1	1	1	DD16500010	Ceramic	50pF	\pm 10%
C255	1	1	1	DF15153010	Film	0.015 μ F	\pm 5%
C257	1	1	1	EA10601690	Elect	10 μ F	16V
C258	1	1	1	EA33602590	Elect	33 μ F	25V
C259	1	1	1	EA10601690	Elect	10 μ F	16V
C260	1	1	1	EA10601690	Elect	10 μ F	16V
C261	1	1	1	DF65101010	Film	100pF	\pm 5%
C262	1	1	1	DF15152010	Film	1500pF	\pm 5%
C263	1	1	1	EA10702590	Elect	100 μ F	25V
C264	1	1	1	EA22505090	Elect	2.2 μ F	50V
C265	1	1	1	EA47502590	Elect	4.7 μ F	25V
C266	1	1	1	DF15472010	Film	4700pF	\pm 5%
C267	1	1	1	DF15153010	Film	0.015 μ F	\pm 5%
C268	1	1	1	EM33402510	Elect	0.33 μ F	25V
C269	1	1	1	DF15153010	Film	0.015 μ F	\pm 5%
C270	1	1	1	DF15104010	Film	0.01 μ F	\pm 5%
C271	1	1	1	EA10601690	Elect	10 μ F	16V
C272	1	1	1	EM10402510	Elect	0.1 μ F	25V
C273	1	1	1	EM33402510	Elect	0.33 μ F	25V
C274	1	1	1	EA10601690	Elect	10 μ F	16V
C275	1	1	1	EA22505090	Elect	2.2 μ F	50V
C276	1	1	1	DK16501010	Ceramic	500pF	\pm 10%
C277	1	1	1	EA47602590	Elect	47 μ F	25V
C278	1	1	1	EA47502590	Elect	4.7 μ F	25V
C279	1	1	1	EA33602590	Elect	33 μ F	25V
C301	1	1	1	EA10801090	Elect	1000 μ F	10V
C302	1	1	1	EA10701690	Elect	100 μ F	16V
C303	1	1	1	EA10801090	Elect	1000 μ F	10V
C304	1	1	1	EA10701690	Elect	100 μ F	16V
C305	1	1	1	EE22601050	Elect	22 μ F	10V
C306	1	1	1	EA22701090	Elect	220 μ F	10V
C307	1	1	1	DD16151010	Ceramic	150pF	

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION		
	U	C	N				
P100-RESISTORS (All resistors are \pm 5% and 1/4W.)							
R101	1	1	1	GD05561140		560 Ω	
R102	1	1	1	GD05123140		12K Ω	
R103	1	1	1	GD05104140		100K Ω	
R104	1	1	1	GD05394140		390K Ω	
R105	1	1	1	GD05331140		330 Ω	
R106	1	1	1	GD05472140		4.7K Ω	
R107	1	1	1	GD05163140		16K Ω	
R108	1	1	1	GF05561140		560 Ω	
R109	1	1	1	GD05103140		10K Ω	
R110	1	1	1	GD05151140		150 Ω	
R111	1	1	1	GD05124140		120K Ω	
R112	1	1	1	GD05331140		330 Ω	
R113	1	1	1	GD05123140		12K Ω	
R114	1	1	1	GD05154140		150K Ω	
R115	1	1	1	GD05332140		3.3K Ω	
R116	1	1	1	GD05241140		240 Ω	
R117	1	1	1	GD05332140		3.3K Ω	
R118	1	1	1	GD05122140		1.2K Ω	
R119	1	1	1	GD05105140		1M Ω	
R120	1	1	1	GD05562140		5.6K Ω	
R121	1	1	1	GJ05201010		200 Ω	1W
R122	1	1	1	GD05473140		47K Ω	
R123	1	1	1	GD05472140		4.7K Ω	
R124	1	1	1	GD05181140		180 Ω	
R125	1	1	1	GD05104140		100K Ω	
R126	1	1	1	GD05473140		47K Ω	
R127	1	1	1	GD05392140		3.9K Ω	
R128	1	1	1	GD05123140		12K Ω	
R129	1	1	1	GD05274140		270K Ω	
R130	1	1	1	GD05274140		270K Ω	
R131	1	1	1	RA02030060	Trimming	20K Ω	Dolby ADJ
R132	1	1	1	GD05821140		820 Ω	
R133	1	1	1	GD05152140		1.5K Ω	
R134	1	1	1	GD05562140		5.6K Ω	
R135	1	1	1	GD05272140		2.7K Ω	
R136	1	1	1	RA02030060	Trimming	20K Ω	Rec Level
R137	1	1	1	GD05822140		8.2K Ω	
R138	1	1	1	GD05103140		10K Ω	
R139	1	1	1	GD05274140		270K Ω	
R140	1	1	1	GD05473140		47K Ω	
R141	1	1	1	GD05472140		4.7K Ω	
R142	1	1	1	GD05102140		1K Ω	
R144	1	1	1	GD05821140		820 Ω	
R145	1	1	1	GD05222140		2.2K Ω	
R146	1	1	1	GD05470140		47 Ω	
R147	1	1	1	GD05101140		100 Ω	
R148	1	1	1	GD05102140		1K Ω	
R149	1	1	1	GD05122140		1.2K Ω	
R151	1	1	1	GD05823140		82K Ω	
R152	1	1	1	GD05104140		100K Ω	
R153	1	1	1	GD05394140		390K Ω	
R154	1	1	1	GD05331140		330 Ω	
R155	1	1	1	GD05124140		120K Ω	
R156	1	1	1	RA03020030	Trimming	3K Ω	Play EQ
R157	1	1	1	GD05472140		4.7K Ω	

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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
R158	1	1	1	GD05332140	3.3KΩ
R159	1	1	1	GD05562140	5.6KΩ
R160	1	1	1	GF05561140	560Ω
R161	1	1	1	RA05030090	Trimming 50KΩ Play Level
R162	1	1	1	GD05224140	220KΩ
R163	1	1	1	GD05333140	33KΩ
R164	1	1	1	GD05563140	56KΩ
R165	1	1	1	GD05562140	5.6KΩ
R166	1	1	1	GD05821140	820Ω
R167	1	1	1	GJ05201010	200Ω 1W
R168	1	1	1	GD05473140	47KΩ
R169	1	1	1	GD05472140	4.7KΩ
R170	1	1	1	GD05104140	100KΩ
R171	1	1	1	GD05181140	180Ω
R172	1	1	1	GD05473140	47KΩ
R173	1	1	1	GD05392140	3.9KΩ
R174	1	1	1	GD05123140	12KΩ
R175	1	1	1	GD05274140	270KΩ
R176	1	1	1	GD05274140	270KΩ
R177	1	1	1	RA02030060	Trimming 20KΩ Dolby ADJ
R178	1	1	1	GD05104140	100KΩ
R179	1	1	1	GD05222140	2.2KΩ
R180	1	1	1	GD05104140	100KΩ
R181	1	1	1	GJ05681010	680Ω 1W
R182	1	1	1	RA02020180	Trimming 2KΩ Meter ADJ
R183	1	1	1	GD05151140	150Ω
R184	1	1	1	GD05122140	1.2KΩ
R201	1	1	1	GD05561140	560Ω
R202	1	1	1	GD05123140	12KΩ
R203	1	1	1	GD05104140	100KΩ
R204	1	1	1	GD05394140	390KΩ
R205	1	1	1	GD05331140	330Ω
R206	1	1	1	GD05472140	4.7KΩ
R207	1	1	1	GD05163140	16KΩ
R208	1	1	1	GF05561140	560Ω
R209	1	1	1	GD05103140	10KΩ
R210	1	1	1	GD05151140	150Ω
R211	1	1	1	GD05124140	120KΩ
R212	1	1	1	GD05331140	330Ω
R213	1	1	1	GD05123140	12KΩ
R214	1	1	1	GD05154140	150KΩ
R215	1	1	1	GD05332140	3.3KΩ
R216	1	1	1	GD05241140	240Ω
R217	1	1	1	GD05332140	3.3KΩ
R218	1	1	1	GD05122140	1.2KΩ
R219	1	1	1	GD05105140	1MΩ
R220	1	1	1	GD05562140	5.6KΩ
R221	1	1	1	GJ05201010	200Ω 1W
R222	1	1	1	GD05473140	47KΩ
R223	1	1	1	GD05472140	4.7KΩ
R224	1	1	1	GD05181140	180Ω
R225	1	1	1	GD05104140	100KΩ
R226	1	1	1	GD05473140	47KΩ
R227	1	1	1	GD05392140	3.9KΩ
R228	1	1	1	GD05123140	12KΩ
R229	1	1	1	GD05274140	270KΩ

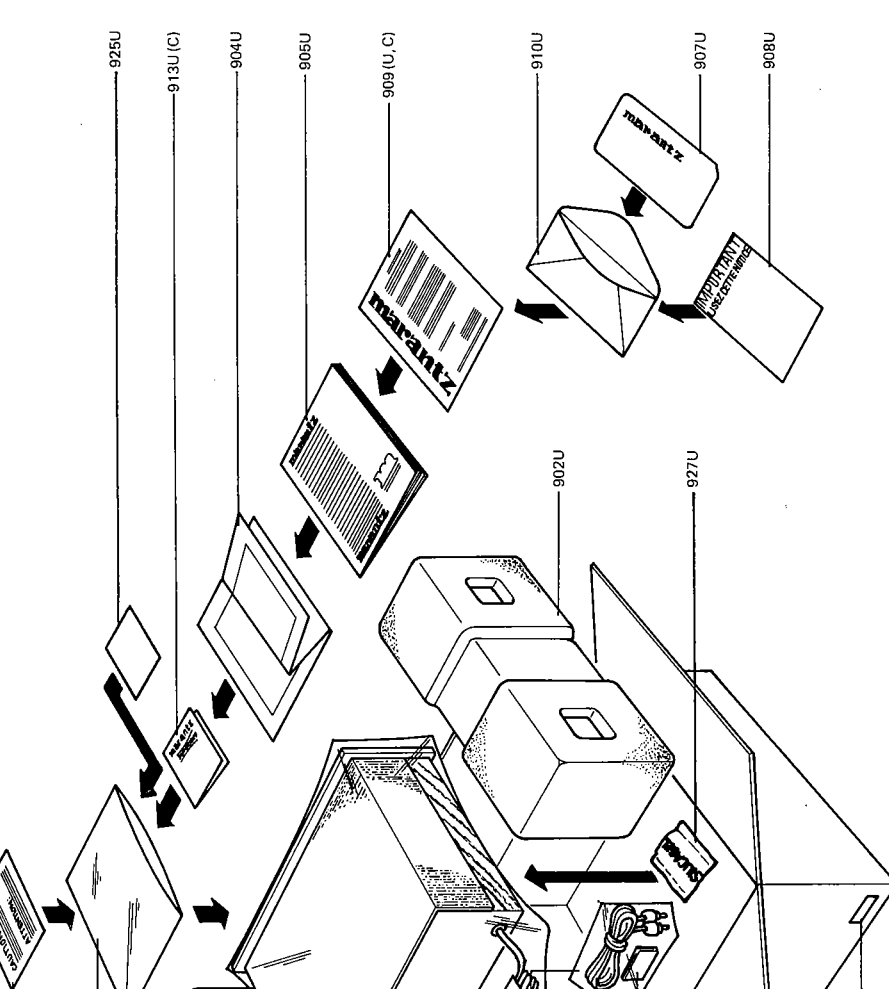
REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
R230	1	1	1	GD05274140	270KΩ
R231	1	1	1	RA02030060	Trimming 20KΩ Dolby ADJ
R232	1	1	1	GD05821140	820Ω
R233	1	1	1	GD05152140	1.5KΩ
R234	1	1	1	GD05562140	5.6KΩ
R235	1	1	1	GD05272140	2.7KΩ
R236	1	1	1	RA02030060	Trimming 20KΩ Rec Level
R237	1	1	1	GD05822140	8.2KΩ
R238	1	1	1	GD05103140	10KΩ
R239	1	1	1	GD05274140	270KΩ
R240	1	1	1	GD05473140	47KΩ
R241	1	1	1	GD05472140	4.7KΩ
R242	1	1	1	GD05102140	1KΩ
R244	1	1	1	GD05821140	820Ω
R245	1	1	1	GD05222140	2.2KΩ
R246	1	1	1	GD05470140	47Ω
R247	1	1	1	GD05101140	100Ω
R248	1	1	1	GD05102140	1KΩ
R249	1	1	1	GD05122140	1.2KΩ
R251	1	1	1	GD05823140	82KΩ
R252	1	1	1	GD05104140	100KΩ
R253	1	1	1	GD05394140	390KΩ
R254	1	1	1	GD05331140	330Ω
R255	1	1	1	GD05124140	120KΩ
R256	1	1	1	RA03020030	Trimming 3KΩ Play EQ
R257	1	1	1	GD05472140	4.7KΩ
R258	1	1	1	GD05332140	3.3KΩ
R259	1	1	1	GD05562140	5.6KΩ
R260	1	1	1	GF05561140	560Ω
R261	1	1	1	RA05030090	Trimming 50KΩ Play Level
R262	1	1	1	GD05224140	220KΩ
R263	1	1	1	GD05333140	33KΩ
R264	1	1	1	GD05563140	56KΩ
R265	1	1	1	GD05562140	5.6KΩ
R266	1	1	1	GD05821140	820Ω
R267	1	1	1	GJ05201010	200Ω 1W
R268	1	1	1	GD05473140	47KΩ
R269	1	1	1	GD05472140	4.7KΩ
R270	1	1	1	GD05104140	100KΩ
R271	1	1	1	GD05181140	180Ω
R272	1	1	1	GD05473140	47KΩ
R273	1	1	1	GD05392140	3.9KΩ
R274	1	1	1	GD05123140	12KΩ
R275	1	1	1	GD05274140	270KΩ
R276	1	1	1	GD05274140	270KΩ
R277	1	1	1	RA02030060	Trimming 20KΩ Dolby ADJ
R278	1	1	1	GD05104140	100KΩ
R279	1	1	1	GD05222140	2.2KΩ
R280	1	1	1	GD05104140	100KΩ
R281	1	1	1	GJ05681010	680Ω 1W
R282	1	1	1	RA02020180	Trimming 2KΩ Meter ADJ
R283	1	1	1	GD05151140	150Ω
R284	1	1	1	GD05122140	1.2KΩ
R301	1	1	1	GJ05331010	330Ω 1W

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

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
R302	1	1	1	GJ05331010	330Ω 1W
R303	1	1	1	GD05100140	10Ω
R304	1	1	1	GD05100140	10Ω
R305	1	1	1	GD05624140	620KΩ
R306	1	1	1	GD05223140	22KΩ
R307	1	1	1	GD05221140	220Ω
R308	1	1	1	GD05563140	56KΩ
R309	1	1	1	GD05223140	22KΩ
R310	1	1	1	GD05223140	22KΩ
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
Q102	1	1	1	HT317400S0	Transistor 2SC1740LN(S)
Q103	1	1	1	HT317400S0	Transistor 2SC1740LN(S)
Q104	1	1	1	HD10003020	Diode 20A90
Q105	1	1	1	HD20011050	Diode 1S1555
Q106	1	1	1	HT309451Q0	Transistor 2SC945(Q)
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 20A90
Q112	1	1	1	HT309451P0	Transistor 2SC945(P)
Q151	1	1	1	HC10012060	IC UPC1024H
Q152	1	1	1	HT309451Q0	Transistor 2SC945(Q)
Q153	1	1	1	HD10003020	Diode 20A90
Q154	1	1	1	HD20011050	Diode 1S1555
Q155	1	1	1	HT309451Q0	Transistor 2SC945(Q)
Q156	1	1	1	HD10003020	Diode 20A90
Q157	1	1	1	HD10003020	Diode 20A90
Q158	1	1	1	HT309451P0	Transistor 2SC945(P)
Q201	1	1	1	HC10012060	IC UPC1024H
Q202	1	1	1	HT317400S0	Transistor 2SC1740LN(S)
Q203	1	1	1	HT317400S0	Transistor 2SC1740LN(S)
Q204	1	1	1	HD10003020	Diode 20A90
Q205	1	1	1	HD20011050	Diode 1S1555
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 20A90
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 20A90
Q254	1	1	1	HD20011050	Diode 1S1555
Q255	1	1	1	HT309451Q0	Transistor 2SC945(Q)
Q256	1	1	1	HD10003020	Diode 20A90
Q257	1	1	1	HD10003020	Diode 20A90
Q258	1	1	1	HT309451P0	Transistor 2SC945(P)

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
Q301	1	1	1	HC10026010	IC HA11226
Q302	1	1	1	HC10026010	IC HA11226
Q303	1	1	1	HD20011050	Diode 1S1555
Q304	1	1	1	HT308281J0	Transistor 2SC828A(R)
Q305	1	1	1	HT308281J0	Transistor 2SC828A(R)
Q306	1	1	1	HT308281J0	Transistor 2SC828A(R)
Q307	1	1	1	HD20011050	Diode 1S1555
Q308	1	1	1	HD20011050	Diode 1S1555
Q309	1	1	1	HD30033090	Zener WZ052
P100-SWITCHES					
S301	1	1	1	SP08060050	Push Normal
S302	1	1	1	SP08060050	Push CR02
S303	1	1	1	SP08060050	Push Fe-Cr
S304	1	1	1	SP08060050	Push Limiter
S305	1	1	1	SP08060050	Push Dolby
S306	1	1	1	SP08060050	Push Monitor
P100-COILS					
L101	1	1	1	LC23660030	Choke 36mH
L102	1	1	1	LC22260040	Choke 22mH
L103	1	1	1	LC24750030	Choke 4.7mH Rec EQ
L104	1	1	1	LC22260040	Choke 22mH Bias Trap
L105	1	1	1	LC22260040	Choke 22mH Bias Trap
L201	1	1	1	LC23660030	Choke 36mH
L202	1	1	1	LC22260040	Choke 22mH
L203	1	1	1	LC24750030	Choke 4.7mH Rec EQ
L204	1	1	1	LC22260040	Choke 22mH Bias Trap
L205	1	1	1	LC22260040	Choke 22mH Bias Trap
P400-FUSE CIRCUIT BOARD					
				YK41901430	P.W. Board, Fuse
				ZZ41908430	P.W. Board Assembly
J401					
J406			6	YP10001130	Plug Plug Wire Wrad
J407					
J412			6	YJ08000200	Jack Fuse Clip

Compatible	.....	DC Se
Tracking System	.....	Rec, Play-Superhar
Tape Speed	.....
Heads	.....
Composition	.....
Motor	.....
Meters	.....
Recording System	.....
Erasing System	.....
Semiconductor Complement	.....
Amplifier:		
Transistors	.....
Diodes	.....
IC's	.....
LED's	.....
Motor:		
Transistors	.....
Diodes	.....
Overall Frequency Response (Dolby off):		
Ferric Oxide Tape	.....
CrO ₂ Tape	.....
Fe-Cr Tape	.....
Signal-to-Noise Ratio (A Wtd.):		
Playback	.....
Overall (Dolby off)	.....
Overall (Dolby on) (5 kHz High Path Filter, OVU + 5 dB)	.....
Line Output:		
Level	.....
Impedance	.....
Line Input Sensitivity:		
Level	.....
Impedance	.....
Headphone Output:		
Level	.....
Impedance	.....
Mic. Input Sensitivity:		
Level	.....
Impedance	.....
Wow and Flutter (NAB weighted)	.....
Fast Rewind time	.....
Fast Forward time	.....
AC Line Voltage	.....	120 V AC, 60 H
		110/120/220 V or 240 V
Power Consumption	.....	17-3
Dimensions (W x H x D)	.....
Weight	.....



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

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	U	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	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	Slitcage
Z001	2	2	ZD01200062	Connective Cord
Z001	1	1	ZD02000070	Connective Cord

DESCRIPTION
ny Bag
ny Bag
ny Bag
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marantz

MARANTZ CO., INC. • P.O. BOX 577 • CHATSWORTH, CALIFORNIA • 91311



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