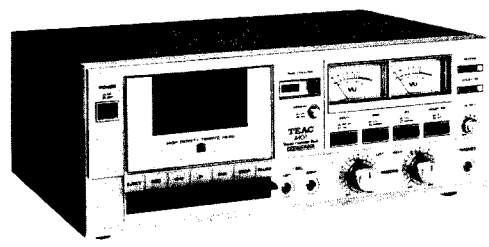


# TEAC

# SERVICE MANUAL



## A-107 / A-106 A-105 / A-103

Stereo Cassette Deck with Dolby System

### GENERAL INTRODUCTION

This Service Manual is written for the TEAC A-103, A-105, A-106 and A-107. All of these models are very similar and the mechanical and electrical adjustment procedures are the same unless specifically noted.

The chart below shows the differences in the various models. As can be seen, these differences are primarily in outer appearance of the models and feature changes.

If any of the adjustments or repairs seem too complicated or are difficult to accomplish, please contact the nearest TEAC factory service department or write directly to a TEAC office, the address of which is printed on the back cover of this manual.

NOTE: When ordering replacement parts, please refer to the PARTS LIST which is printed separately from this manual.

Model Difference Table

Model	Head	OUTPUT Control	MEMORY Device	Meter Scale Color
A-103	Permaflux	Not included	Not included	Green
A-105	Ferrite	Not included	Not included	Yellow
A-106	Ferrite	Included	Included	Green
A-107	Ferrite	Included	Included	Yellow

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TEAC CORPORATION

51032120

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# 1. TEST EQUIPMENT REQUIRED

1. **Cassette Torque Meter:** For take-up check: 0 ~ 100 g·cm (0 ~ 1.4 oz·inch)  
For fast forward & rewind torque checks: 0 ~ 160 g·cm (0 ~ 2.2 oz·inch)  
\* When ordering Cassette Torque Meter, allow for longer delivery time that is required for it.
2. **Spring scale:** For Pinch Roller pressure check: 0 ~ 500g (1.1 lbs)
3. **Wow/flutter meter:** MEGURO DENPA SOKKI K.K., Model MK-668A
4. **Frequency counter:** Digital type, capable of 10 Hz to 100 kHz indication.
5. **AF oscillator:** 10 Hz ~ 100 kHz
6. **AC Voltmeter:** 0.1 mV ~ 300V
7. **Attenuator:** General Purpose
8. **Distortion analyzer:** Basic frequency 400 Hz/1 kHz
9. **Oscilloscope:** General Purpose
10. **Band-pass filter:** 1 kHz narrow band-pass type
11. **Test load resistor:** Non inductive type 8 ohm/1 W
12. **Plastic alignment tool:**
13. **Head demagnetizer:** TEAC E-3 or equivalent
14. **Cleaner:** TEAC TZ-261 Tape Recorder Cleaner kit or pure alcohol
15. **Oil:** TEAC TZ-255 Oil kit or equivalent



Fig. 1-1 Cassette Torque Meter

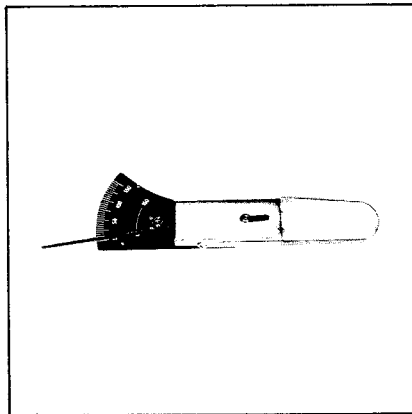


Fig. 1-2 Spring Scale

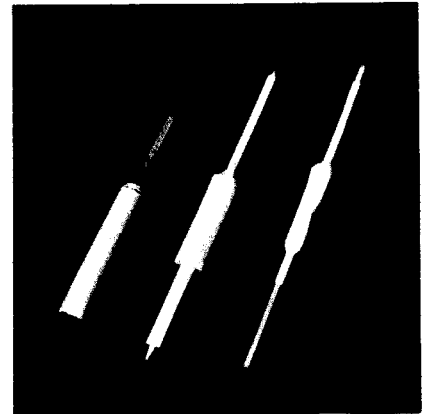


Fig. 1-3 Plastic Alignment Tool

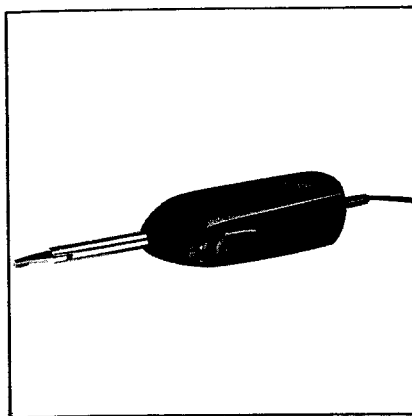


Fig. 1-4 E-3 Head Demagnetizer



Fig. 1-5 TZ-261 Tape Recorder Cleaner Kit

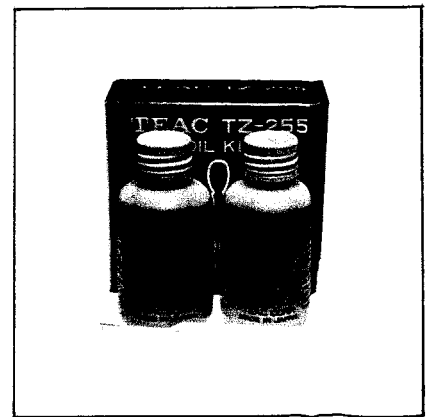


Fig. 1-6 TZ-255 Oil Kit

## 2. SPECIFICATIONS & SERVICE DATA

### SPECIFICATIONS

Track System	1/4-track, 2-channel stereo
Heads	Two: Erase and Record/Playback
Type of Tape	Cassette tape, C-60 and C-90 (Philips type)
Tape Speed	4.8 cm/s (1-7/8 ips)
Inputs	Microphones: Min. input level: -67 dB (345 $\mu$ V)/10 kohms
(level and impedance)	Line: Specified input level: -9 dB (274 mV)/50 kohms Min. input level: -19 dB (86 mV)
	DIN*: Min. input level: -35 dB (13.7 mV)
Outputs	Line out: Specified output level: -5 dB (435 mV)/50 kohms
(level and load impedance)	Max. output level: -2 dB (615 mV)/50 kohms (A-106/A-107)
	Headphones: Specified output level: -21 dB (69 mV)/8 ohms
Equalization	CrO <sub>2</sub> : 3,180 $\mu$ s $\pm$ 70 $\mu$ s
	NORMAL: 3,180 $\mu$ s $\pm$ 120 $\mu$ s
Head Configuration	1/2-track, 1-channel Erase Head
	1/4-track, 2-channel Record/Playback Head
Motor	DC servo motor (FG type)
Bias Frequency	100 kHz
Power Requirements	117V AC, 60 Hz (USA/Canada Models)
	100/117/220/240 V AC, 50/60 Hz (General Export Models)
	220V AC, 50 Hz (Europe Model)
	240V AC, 50 Hz (U.K./Australia Models)
Power Consumption	13W (A-103/A-106 USA/Canada Models)
	12W (A-103/A106 All except USA/Canada Models)
	11W (A-105/A-107 USA/Canada Models)
	10W (A-105/A-107 All except USA/Canada Models)
Weight	7.0 kg (15.4 lbs) net (A-103, A-106)
	7.5 kg (16.5 lbs) net (A-105, A-107)

\* Pursuant to DIN Standards

#### TEAC TEST TAPE

REMARKS: 0 dB = DIN Reference level (333 Hz)

#### For tape speed & wow/flutter test

- MTT-111: • For Playback method  
• 3,000 Hz/-10 dB
- MTT-501: • For record/Playback method (blank tape)

#### For playback performance alignment

- MTT-150: • For Dolby level calibration  
• Dolby B-type tone (400 Hz tone),  
200 nWb/m
- MTT-316: • For frequency response test for EQ: CrO<sub>2</sub>  
• 3,180  $\mu$ s  $\pm$  70  $\mu$ s  
• 315 Hz/-4 dB, 31.5 Hz ~ 14 kHz/-24 dB
- MTT-216: • For frequency response test for  
EQ: NORMAL  
• 3,180  $\mu$ s  $\pm$  120  $\mu$ s  
• 315 Hz/-4 dB, 31.5 Hz ~ 14 kHz/-24 dB

#### For record performance alignment (blank tape)

- MTT-505B or equivalent: For BIAS & EQ: CrO<sub>2</sub>
- MTT-501 or equivalent: For BIAS & EQ: NORMAL

NOTE: The TEAC test tapes require longer delivery time than normal parts.

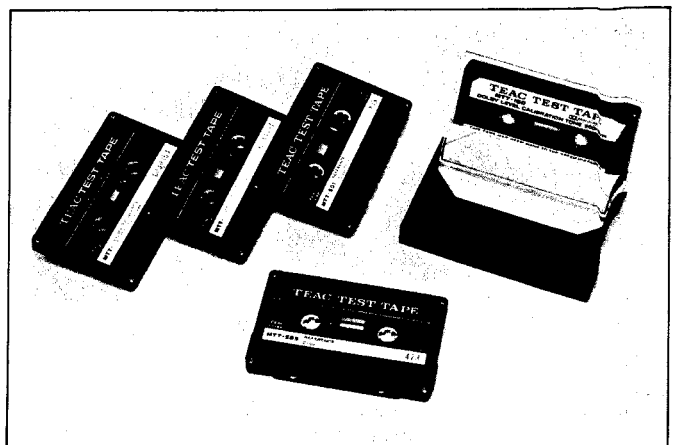


Fig. 2-1 TEAC Test Tape

## SERVICE DATA

### Mechanical

Tape Speed Deviation	3,000 Hz $\pm$ 45 Hz
Tape Speed Drift	45 Hz
Wow and Flutter	Playback: 0.10% (WRMS) Record/Playback: 0.25% (RMS)
Pinch Roller Pressure	400 g $\pm$ 50 g (12.3 ~ 15.9 oz)
Reel Torque	Take Up: 40 ~ 60 g·cm (0.6 ~ 0.8 oz·inch) Fast Forward: 80 to 150 g·cm (1.1 to 2.1 oz·inch) Rewind: 100 to 150 g·cm (1.4 to 2.1 oz·inch)
Fast Winding Time	90 seconds for C-60
End-stop Activate Time	4 seconds $\pm$ 2 sec.
PAUSE Activate Time	0.5 seconds

### Electrical

Frequency Response	Refer to frequency response limits charts on page 15 and 19.	
Signal to Noise Ratio	Playback method: 47 dB min.	
	Record/Playback method: BIAS/EQ, CrO <sub>2</sub>	45 dB min.
	BIAS/EQ, NORMAL	44 dB min.
	With Dolby Noise Reduction used for recording and playback, S/N ratio is improved by up to 5 dB at 1 kHz and up to 10 dB at frequencies over 5 kHz.	
Erase Efficiency	65 dB min.	
Channel Separation	30 dB min. (at 1 kHz)	
Crosstalk between Adjacent Tracks	40 dB min. (at 125 kHz)	
Total Harmonic Distortion	BIAS/EQ, CrO <sub>2</sub> :	3.0% (max.)
	BIAS/EQ, NORMAL:	2.5% (max.)

- NOTE: • Improvements may result in Specifications and Service Data changes.  
• dB values in the Specifications and Service Data are based on 0 dB = 0.775 V. In case the AC Voltmeter being used is calibrated to some other standard such as 0 dB = 1 V etc, please use the voltage values given in parentheses as the test values.

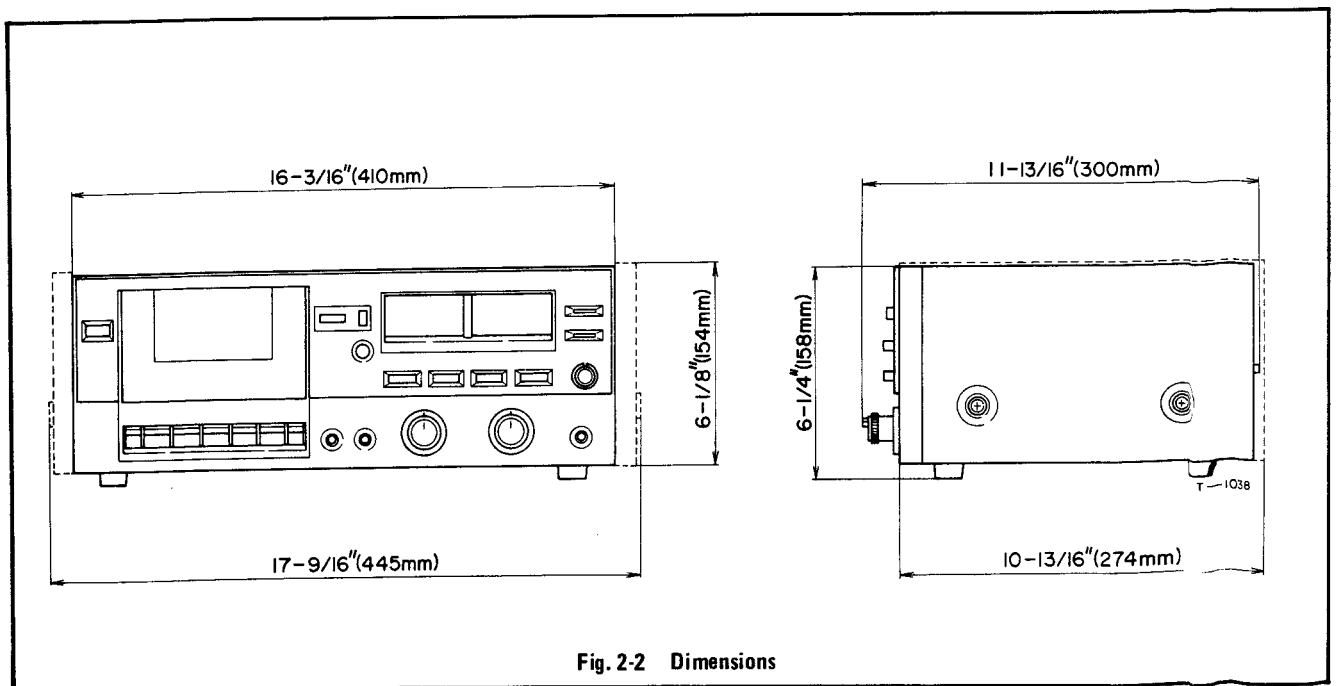
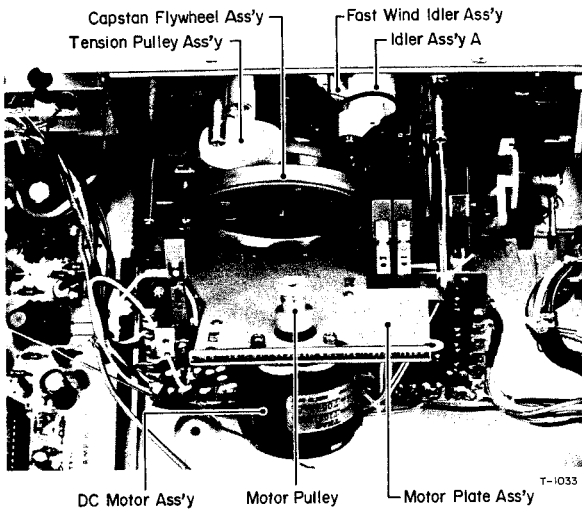


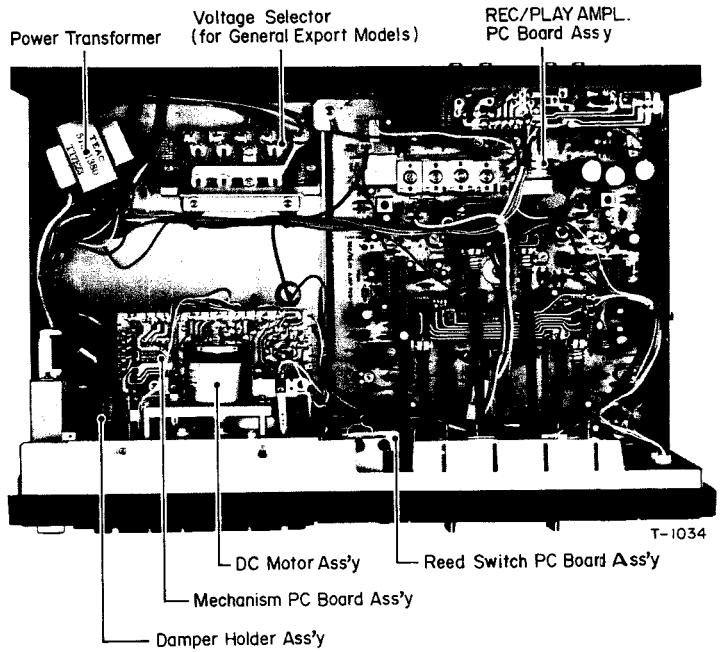
Fig. 2-2 Dimensions

### 3. PARTS LOCATION

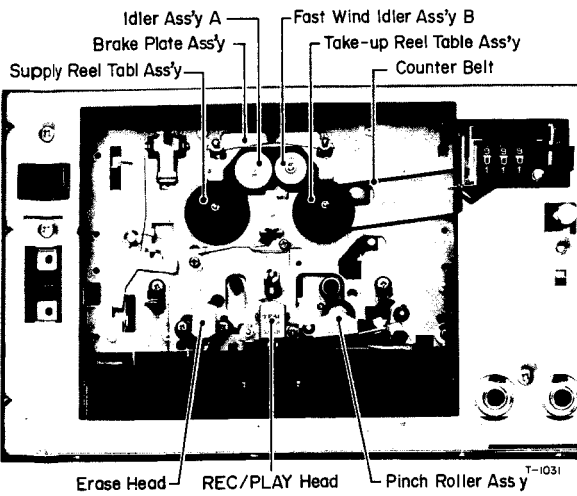
Viewed from Rear of Tape Transport Chassis



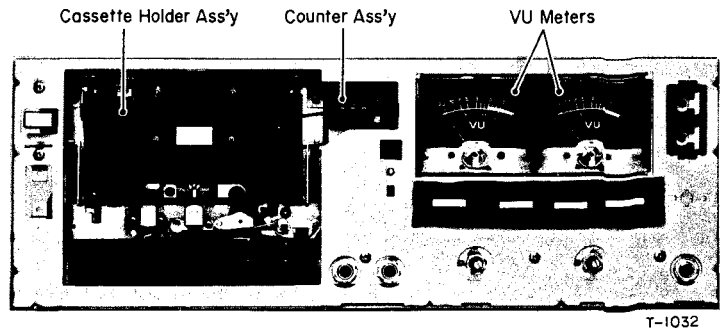
**Fig. 3-1 Enlarged View of Driving Parts (w. Motor Removed)**



**Fig. 3-2 Top View**



**Fig. 3-3 Left Front View (Front Panel and Cassette Holder Ass'y Removed)**



**Fig. 3-4 Front View**

## 4. PARTIAL DISASSEMBLY OF MAIN PARTS

NOTE: 1. Use the proper tools. Demagnetize the tools before use.  
2. When mounting or removing a spring, pay heed to the position (direction) of the anchor or hook. The wrong position may result in a change in the tension.

3. When reassembling, don't forget to reinstall all hardware such as springs and washers, etc.  
4. For assembling hardware shape identification, see ASSEMBLING HARDWARE CONDING LIST in the Parts List.

### 4-1. EXTERNAL PARTS

1. Remove four mounting screws (A) and four Washers (B) and remove Top Cover.
2. Remove Cassette Cover by doing the following.
  - a. Depress EJECT Lever.
  - b. Grasp Cover with both hands and lift up to remove.
  - c. To replace Cover, first depress EJECT Lever to open Cassette Door, then set bottom set of clips on cover in cut-outs near bottom of Door and push Cover in slightly and down until Cover clips into Door.
3. Remove two Var. Res. Knobs by pulling them.
4. Remove four mounting screws (C) and remove Panel Ass'y B leaving two Marked Knobs mounted in Panel Ass'y B.
5. If necessary, remove five mounting screws (D) and remove REC/PLAY PC Board Cover.

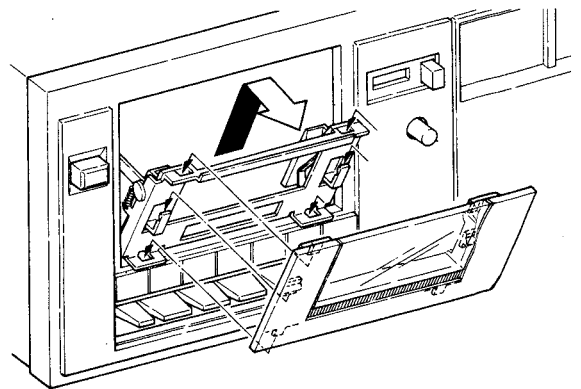


Fig. 4-1 Cassette Cover Removal

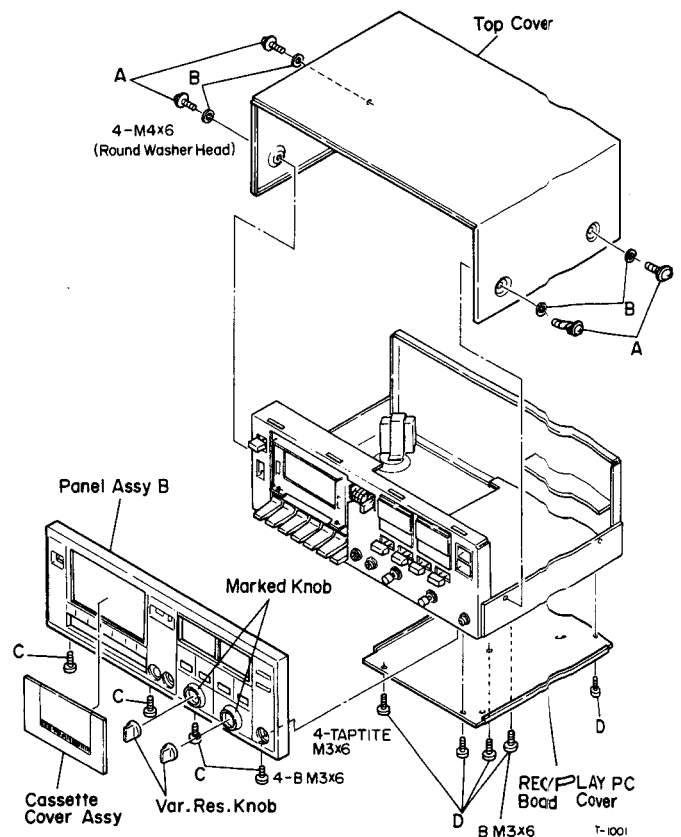


Fig. 4-2 External Parts

## 4-2. CASSETTE DAMPER (DAMPER CORD STRINGING)

First remove Top Cover referring to paragraph 4-1.

1. Remove the end of Cord String from hook pin encoded B on Cassette Holder Ass'y. This is necessary prior to Cassette Holder Ass'y removal. See next paragraph 4-3.
2. Remove Damper Spring in contact with Cord String, from spring hook located in Spring Angle Plate and keep them for remounting.
3. Remove two mounting screws (A) and remove Damper Holder Ass'y B from Damper Bracket.

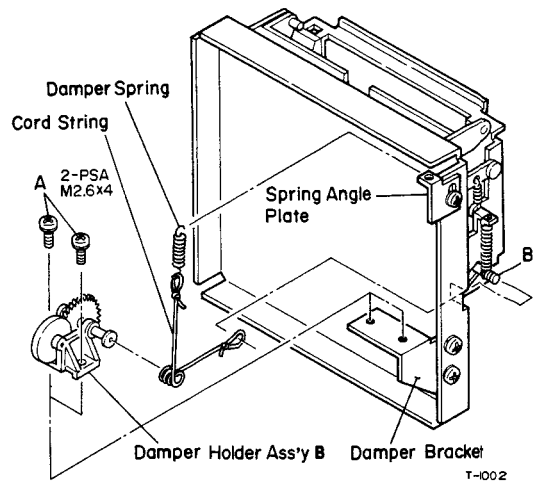


Fig. 4-3 Cassette Damper

## 4-3. CASSETTE HOLDER ASS'Y

First remove the following parts:

- a. Top Cover, Cassette Cover Ass'y, two Var. Res. Knobs and Panel Ass'y B (See paragraph 4-1.)
- b. Cord String from hook pin on Cassette Holder Ass'y (See paragraph 4-2.)

1. Remove mounting screw (A) and remove Stopper Collar.
2. Remove left and right EJECT Springs from lower left and right mounting pins on Cassette Holder Ass'y leaving each Spring connected to its upper mounting point.
3. Remove two mounting screws (B) and remove Holder Guide Plate B with Eject Spring.
4. Disconnect Holder Guide Plates A and B by removing mounting screws C and B, respectively.
5. Disconnect Holder Bracket Ass'y A and B by removing mounting screws E and D, respectively.

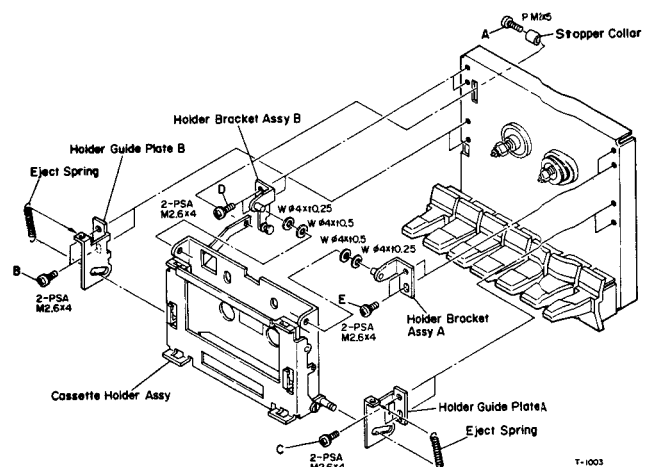


Fig. 4-4 Cassette Holder Ass'y

6. Remove Cassette Holder Ass'y from Tape Transport Chassis.

## 4-4. REEL TABLES

First remove the following parts:

- a. Top Cover, Cassette Cover Ass'y, two Var. Res. Knobs and Panel Ass'y B (See paragraph 4-1.)
- b. Cassette Holder Ass'y (See paragraph 4-3.)

1. If Take-up Reel Table removal is required, remove Counter Belt from Take-up Reel Table.
2. Detach E-ring (A and/or B) retaining Reel Table(s) which require replacement, and then lift out Reel Table Ass'y (Take-up and/or Supply).
3. If necessary, remove Friction Plate Spring and Friction Plate.

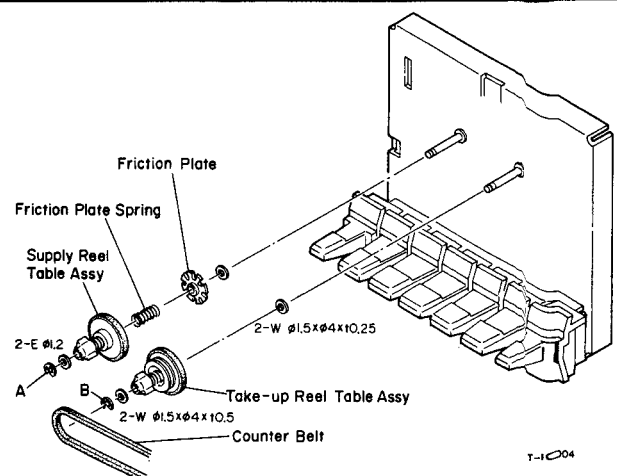


Fig. 4-5 Reel Tables



## 4-5. BRAKE PLATE ASS'Y

First remove the following parts:

- a. Top Cover, Cassette Cover Ass'y, two Var. Res. Knobs and Panel Ass'y B (See paragraph 4-1.)
- b. Cassette Holder Ass'y (See paragraph 4-3.)

1. Detach E-ring (A) and then take off Brake Actuating Rod from mounting pin on Brake Plate Ass'y.
2. Brake Spring can be removed by bending down and pulling out on the spring arms.
3. Brake Plate Ass'y is readily removable by doing the step 2.

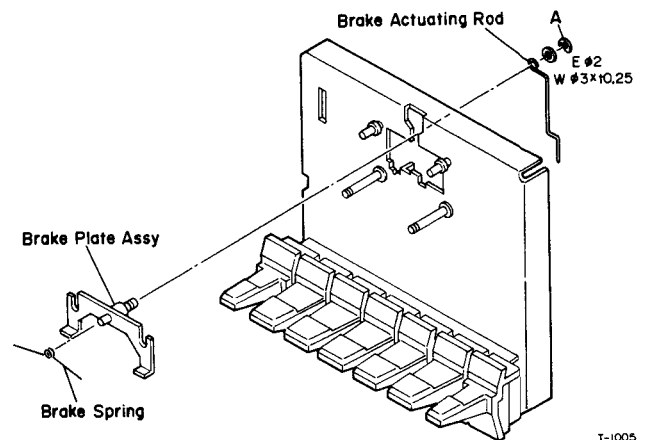


Fig. 4-6 Brake Plate Ass'y

## 4-6. HEAD

First remove Top Cover, Cassette Cover Ass'y, two Var. Res. Knobs and Panel Ass'y B. (See paragraph 4-1.)

1. Unsolder each lead wire from the terminal pins of the heads to facilitate replacement.
2. Remove Erase Head by removing two mounting screws (A).
3. Remove REC/PLAY Head together with R/P Head Spring by removing mounting screw (C) and nut (B).

- NOTE: 1. After replacing the head, always adjust the head alignment, especially the Record/Playback Head's azimuth and then secure the screws and/or the nut with a drop of locking paint.
2. Connect the wires to the head terminal pins quickly to prevent breaking of internal wires of the head due to overheating.

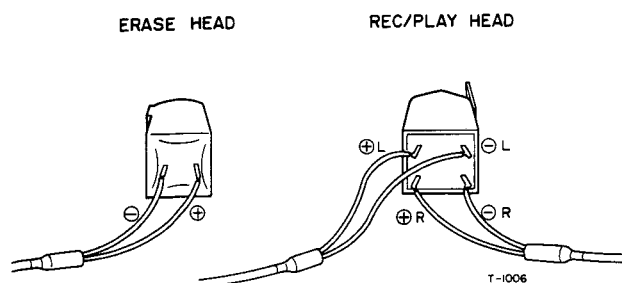


Fig. 4-7 Head Wiring Diagram

## 4-7. PINCH ROLLER

First remove Top Cover, Cassette Cover Ass'y, two Var. Res. Knobs and Panel Ass'y B. (See paragraph 4-1.)

1. Remove E-ring (D) and Pinch Roller Ass'y together with Pinch Roller Spring successively.

NOTE: After replacement, always clean the driving surfaces of the Pinch Roller with the TEAC TZ-261B Rubber Cleaner or with pure alcohol, then proceed directly to the PINCH ROLLER PRESSURE adjustment section.

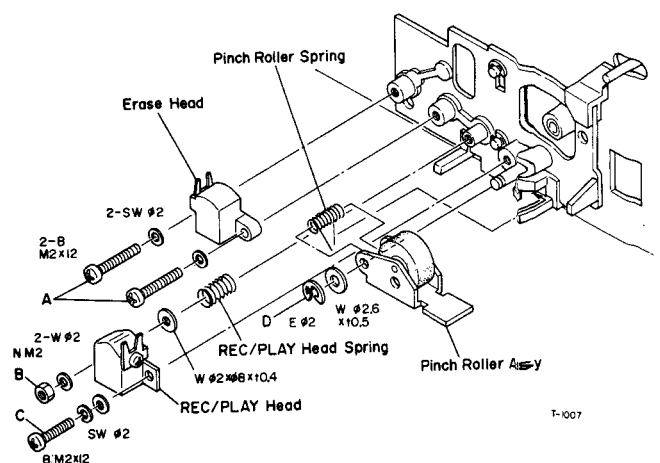


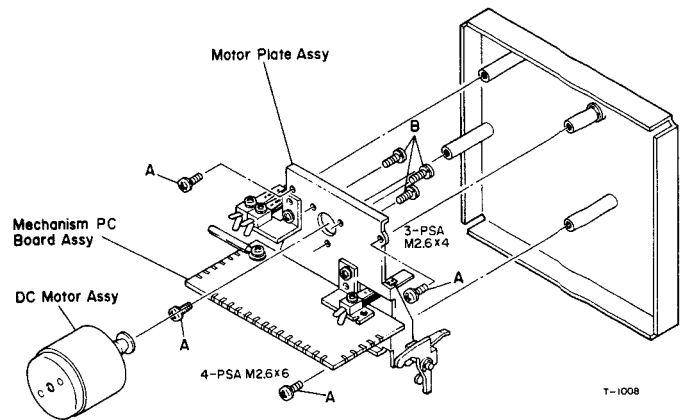
Fig. 4-8 Head/Pinch Roller

## 4-8. MOTOR

First remove Top Cover. (See paragraph 4-1.)

1. Release Drive Belt from Motor Pulley.
2. Unsolder the two wires to the Motor Ass'y from the PC Board. Note the color code and the position of each wire prior to unsoldering the Motor leads.
3. Remove four mounting screws (A) and remove Motor Plate Ass'y with Motor body and Mechanism PC Board Ass'y from the chassis.
4. Further remove DC Motor Ass'y from Motor Plate by removing three mounting screws (B).

- NOTE: 1. When re-assembling, clean the pulley and the Belt with TEAC TZ-261 Cleaner kit ("A" for the Pulley, "B" for the Belt) or with pure alcohol.
2. Take off or remount the Motor Ass'y taking care not to scratch or otherwise damage the Motor Pulley.
  3. When re-attaching the Drive Belt to the Pulley do not twist or stretch the belt.



## 4-9. CAPSTAN DRIVE ASS'Y

First remove Top Cover and Cassette Cover. (See paragraph 4-1.)

1. Unsolder two white wires that go to the Cassette Holder Illumination Lamp from the Mechanism PC Board to facilitate removal of Motor Plate Ass'y. Note the position of each wire prior to unsoldering the wires.
2. Remove Motor Plate Ass'y with Motor body and Mechanism PC Board Ass'y referring paragraph 4-8.

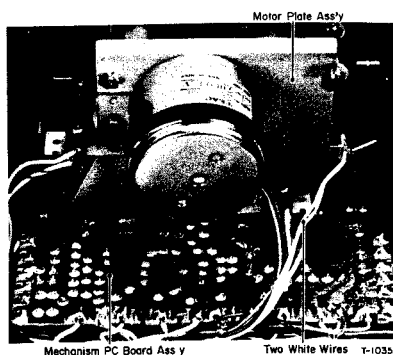


Fig. 4-10 Location of White Wires

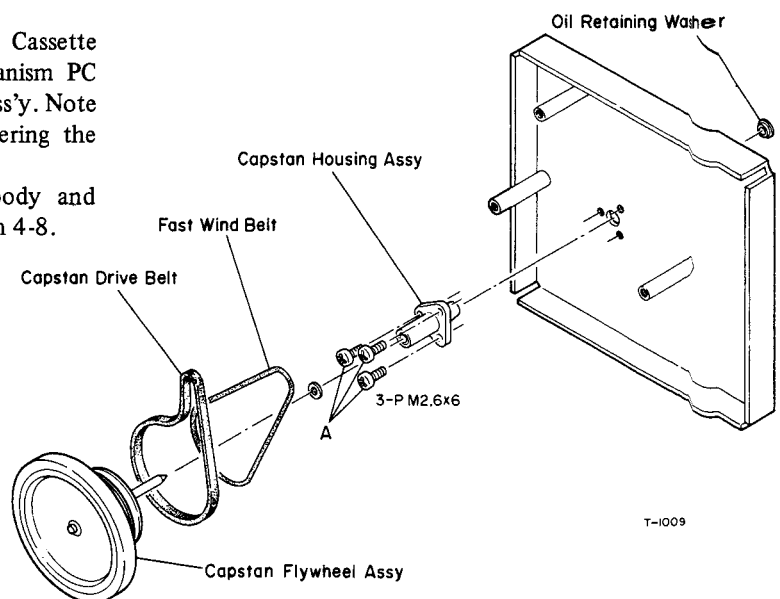


Fig. 4-11 Capstan Drive Ass'y

3. Remove Drive Belt together with Fast Wind Belt from Flywheel, Motor Pulley and Idler Ass'y A.
4. Remove Oil Retaining Washer from the shaft of Flywheel.
5. Carefully remove Flywheel Ass'y from Capstan Housing.
6. Remove three mounting screws (A) and remove Capstan Housing from the chassis.

- NOTE:
1. Clean all driving surfaces of the Flywheel and the Drive Belt with TEAC TZ-261 Cleaner kit ("A" for Flywheel. "B" for Belt) or with pure alcohol.
  2. Do not bend the Capstan Shaft as this will increase wow/flutter or speed deviation.
  3. During re-assembly, re-attach the Drive Belt without twisting or stretching it.

#### 4-10. LUBRICATION

Refer to Fig. 4-11.

Lubrication should be generally done at about every 1,000 hours of operating time of the tape deck. Use high quality oil for this purpose.

For efficient oiling, it is recommended that lubrication be done after nearly 1 hour of idling of the deck and while it is still warm.

Normally, it is necessary to lubricate only the areas described below.

1. Apply a drop of a light machine oil of good quality (e.g.: TEAC TZ-255) with an oil applicator to the shaft of the Flywheel and spread oil evenly over the shaft with a flannel cloth. After installing the Flywheel, be sure to clean the tape moving portion of shaft with TEAC TZ-261 A Head Cleaner or with pure alcohol.
2. Apply a drop of the proper oil in the same way as above to the innermost area of capstan shaft (next to the Flywheel).
3. Apply a film of light grease to the well of the Flywheel Bearing (See Fig. 4-11.)

#### 4-11. IDLER

First remove the following parts:

- a. Top Cover (See paragraph 4-1.)
- b. Motor Plate Ass'y with Motor body and Mechanism PC Board Ass'y (See paragraph 4-8.)
- c. Flywheel Ass'y, Drive Belt and Fast Wind Belt (See paragraph 4-9.)
- d. Brack Actuating Rod (See paragraph 4-5.)

1. Remove E-ring (B) and remove Idler Ass'y A.
2. Release Idler Ass'y Spring from Hook (C) and remove Fast Wind Ass'y B.

#### 4-12. TENSION PULLEY ASS'Y

First remove the following parts:

- a. Top Cover (See paragraph 4-1.)
- b. Motor Plate Ass'y with Motor body and Mechanism PC Board Ass'y (See paragraph 4-8.)
- c. Flywheel Ass'y, Drive Belt and Fast Wind-Belt (See paragraph 4-9.)

1. Release Tension Spring from Tension Pulley Arm.
2. Remove E-ring (A) and remove Tension Pulley Ass'y together with Tension Spring.

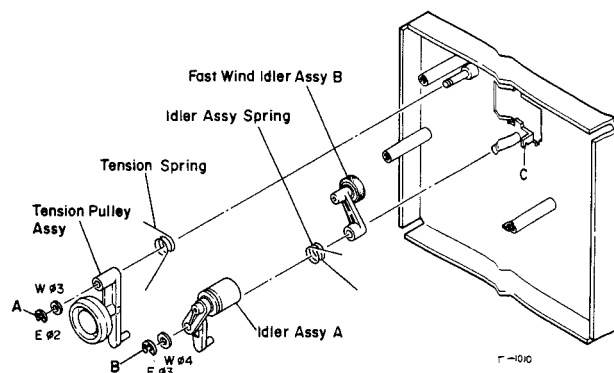


Fig. 4-12 Idler/Tension Pulley Ass'y

## 5. MECHANICAL CHECKS AND ADJUSTMENTS

### 5-1. TAKE-UP TORQUE

Specification: 40 to 60 g·cm (0.6 to 0.8 oz·inch)

1. Depress POWER Switch ON to apply AC power.
2. Load the Cassette Torque Meter (for take-up: 0 to 100 g·cm or 1.4 oz·inch).
3. Place the deck in the PLAY mode and read the pointer indication on the dial scale.
4. The Meter should indicate a torque of 40 to 60 g·cm (0.6 to 0.8 oz·inch).
5. If the reading is out of specified range, clean the driving surfaces of the Reel Table Ass'y and all other driving parts relative to the take up torque function with the TEAC TZ-261B Rubber Cleaner or with pure alcohol.
6. If the above cleaning is ineffective for torque correction, replace the Reel Table Ass'y.

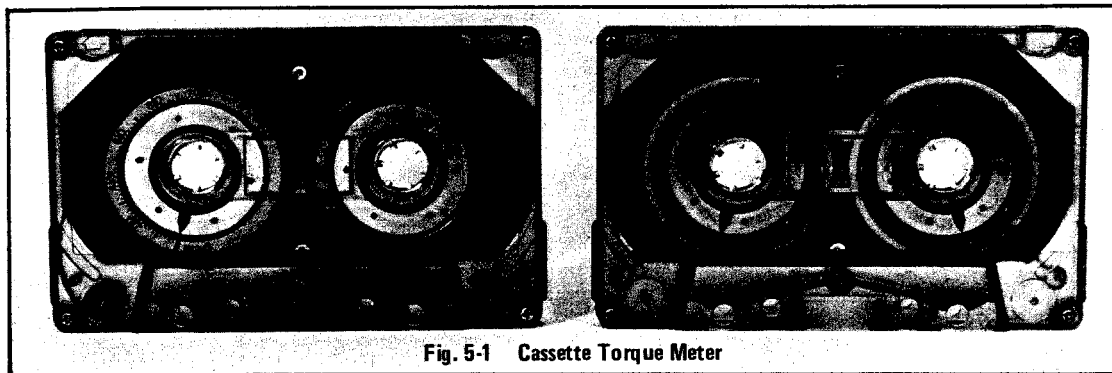
### 5-2. FAST FORWARD & REWIND TORQUE

Specification:

Fast Forward torque: 80 to 150 g·cm  
(1.1 to 2.1 oz·inch)

Rewind torque: 100 to 150 g·cm (1.4 to 2.1 oz·inch)

1. Depress POWER Switch ON to apply AC power.
2. Load the Cassette Torque Meter (for fast forward and rewind torque: 0 to 160 g·cm or 0 to 2.2 oz·inch).
3. Place the deck in the FF or REW mode and read the pointer indication on the dial scale.
4. The Meter should indicate a torque of 80 to 150 g·cm (1.1 to 2.1 oz·inch) as Fast Forward Torque and 100 to 150 g·cm (1.4 to 2.1 oz·inch) as Rewind Torque.
5. If the indication is out of specified range, clean the driving surfaces of the Reel Table Ass'y and all other driving parts relative to the Fast Forward & Rewind torque function with the TEAC TZ-261B Rubber Cleaner or with pure alcohol.
6. If the above cleaning is ineffective for the torque correction, replace the driving parts relative to these torques.



### 5-3. PINCH ROLLER PRESSURE

Specification: 400 g ± 50 g (12.3 to 15.9 oz)

1. Remove Front Panel, then Cassette Holder Ass'y.
2. Depress POWER Switch ON to apply AC power.
3. Place the deck in the PLAY mode with no tape loaded.
4. Attach the spring scale to the Pinch Roller shaft as shown.
5. Gently draw the Pinch Roller away from the Capstan shaft in a directly downward direction until the Capstan shaft and the Pinch Roller are completely separated.
6. Gradually return the scale back until the Pinch Roller just begins to rotate. The scale should then be reading approximately 400 g ± 50 g (12.3 to 15.9 oz).
7. If the reading is out of specified range, replace the Pinch Roller Ass'y or the Pressure Spring or adjust the Spring Arm as shown.

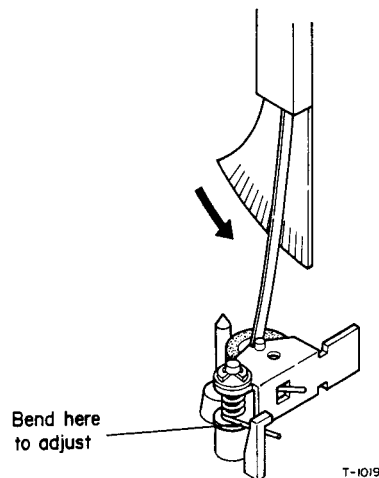


Fig. 5-2 Pinch Roller Pressure Measurement

## 5-4. TAPE SPEED/WOW AND FLUTTER

### Specification:

Tape Speed Deviation:	3,000 Hz $\pm$ 45 Hz
Tape Speed Drift:	45 Hz
Wow and Flutter:	Playback: 0.10% (WRMS)
	Record/Playback: 0.25% (RMS)

- NOTE: 1. Before performing this adjustment, clean all parts in the tape path, particularly the Capstan, the Pinch Roller and the Heads with the appropriate liquid from the TEAC TZ-261 Cleaner Kit or with pure alcohol.
2. Wow and flutter should be checked in two ways; Playback only and Record/Playback methods. First correct tape speed and wow and flutter using the playback only method. Then measure wow and flutter using record and playback method.
3. As the measured results may vary with respect to location on tape at which it was taken, three points – at beginning, middle and near the end of the tape – should be measured.

### 5-4-1. TAPE SPEED

1. Connect test equipment to the deck, except the AF oscillator, as shown in Fig. 5-3.
2. Set the EQ switch to NORMAL position, and then load and play a TEAC MTT-111 test tape (3,000 Hz signal is recorded).
3. Adjust the control located at the center of the Motor for reading of 3,000 Hz  $\pm$  10 Hz on the frequency counter.  
(NOTE: This tape speed setting should be done after approx. 30 seconds of operating time of the deck).
4. Then, verify the reading on the frequency counter as within the specified range of 3,000 Hz  $\pm$  45 Hz, and the tape speed drift is within 45 Hz at any portion of the tape run.
5. If the tape speed is extremely out of the specification, check the Pinch Roller pressure and the tape driving function for correction, and make sure the tape path is clean.

### 5-4-2. WOW AND FLUTTER

After making the tape speed measurement, perform the wow and flutter test using the Playback Method and the Record/Playback Method successively.

#### PLAYBACK METHOD

1. Play the MTT-111 test tape.
2. Read the indication on the wow and flutter meter.
3. The wow and flutter value should be 0.10% WRMS, max.

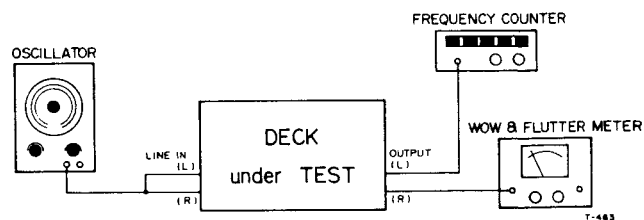


Fig. 5-3 Tape Speed/Wow & Flutter Measurement Setup

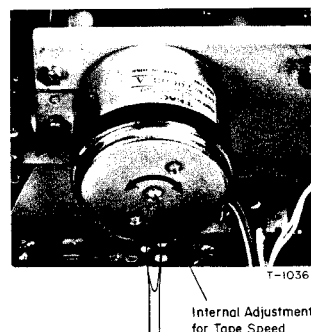


Fig. 5-4 Tape Speed Adjustment Location

4. If the wow and flutter is out of specification, check the Pinch Roller pressure and the take-up torque, see that the tape path is clean, and that the Capstan Belt is not stretched or oily.
5. If the above checks are ineffective for excessive wow and flutter correction, repair or replace the Pinch Roller, the Capstan Belt and/or any other defective parts.

#### RECORD/PLAYBACK METHOD

NOTE: When using this method, adopt the maximum wow and flutter value obtained by repeated play and stop modes of operation. This operation is necessary to make sure wow and flutter content between record and playback will not be in phase to create a false reading.

1. Connect test equipment to the deck as shown in Fig. 5-3.
2. Set LINE or RECORD controls on the deck to obtain convenient input levels.
3. Load a TEAC MTT-501 test tape (blank) and set the BIAS/EQ switches in the NORMAL position.
4. Apply and record a 3,000 Hz signal.
5. Rewind and play this recorded section.
6. Read the indication on the wow and flutter meter.
7. The wow and flutter value should be 0.25% RMS max.
8. If the measured value is out of specification, repair using the same methods as stated in steps 4 – 5 in the Playback Method procedure.

# 6. ELECTRICAL CHECKS AND ADJUSTMENTS

## GENERAL NOTES

- Before performing adjustments on the amplifier section of this deck, thoroughly clean and demagnetize the entire tape path, particularly erase head, record/playback head, capstan shaft and pinch roller.
- Make sure the deck is set for the proper voltage and frequency for your locality.
- In general, checks and adjustments for other than specified items, are done in the sequence of left channel then right channel. Double designated REF. NO. indicates left channel/right channel (example: VR101/201).
- dB values in this test procedure are based on 0 dB = 0.775 V. In case the AC Voltmeter being used is calibrated to some other standard such as 0 dB = 1 V etc, please use the voltage values given in parentheses as the test values.
- The AC Voltmeter used in the procedures, including the measurement at Dolby test points, must have load impedance of 1M ohm or more.
- To correctly complete these performance checks, keep the order as explained in this chapter.

### NOTES CONCERNING PREPARATIONS

To fully understand the contents of the Preparations in the boxed-in area, note these points.

- For each procedure, make the initial equipment test set up, connections and switch/control settings as shown in the associated illustrations, then follow the steps in the procedure.
- Each of the switch settings marked with hyphen (-) in the Switch Setting chart have no effect on the procedures.

## 6-1. PLAYBACK PERFORMANCE

**NOTE:** All alignments in the PLAYBACK PERFORMANCE only have to be done with the EQ switch set to CrO<sub>2</sub> position unless there is a special reason which requires that other positions also be checked.

### 6-1-1. RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENTS

- Load and play a TEAC MTT-150 test tape.
- Make sure the phase relationship between the 2 signals (left channel and right channel) is within 45° on the oscilloscope.
- Load a TEAC MTT-316 test tape.
- Play the 10 kHz signal section of the tape.
- Adjust the azimuth adjusting nut for the greatest output level.
- After adjustment is made, apply a drop of locking paint to the adjustment nut.

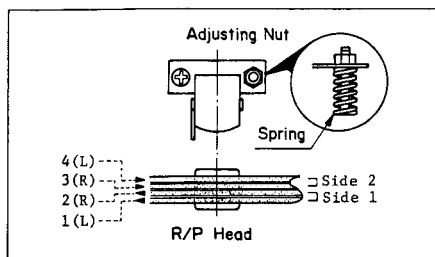


Fig. 6-2 Head Azimuth Adjustment Location

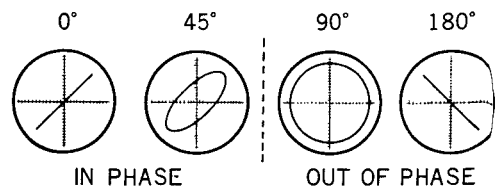
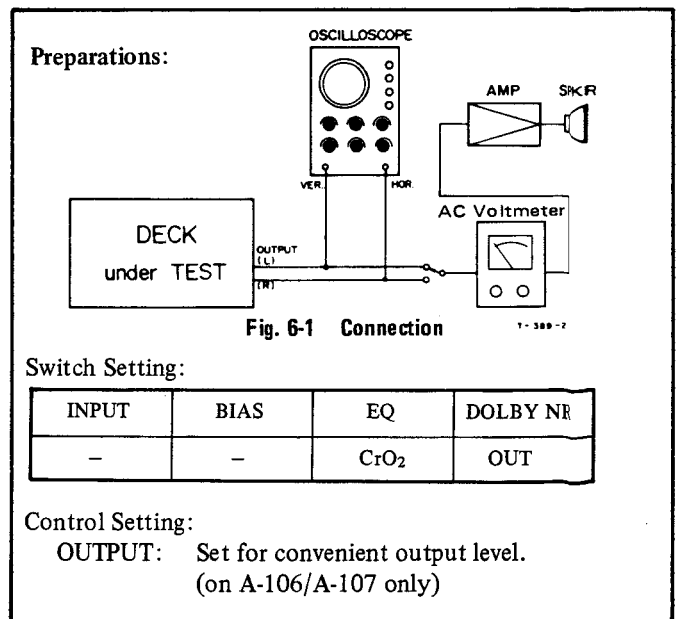


Fig. 6-3 Confirming Phase Relationship

## 6-1-2. SPECIFIED OUTPUT LEVEL SETTING

### Specification:

Specified output level:  $-5 \text{ dB}$  (435 mV)  
for A-103/A-105,  $-5 \text{ dB} \pm 2 \text{ dB}$   
(345 mV to 548 mV)  
for A-106/A-107

Maximum output level:  $-2 \text{ dB} \pm 2 \text{ dB}$   
(488 mV to 0.775 V) for A-106/  
A-107

1. Load and play a TEAC MTT-150 test tape.
2. Adjust R180/R280 for 580 mV ( $-2.5 \text{ dB}$ ) on AC Voltmeter connected to the Dolby test points. (Fig. 6-4)
3. Change the AC Voltmeter connection to the OUTPUT jacks as shown in Fig. 6-5.
  - a. A-103/A-105  
After the above steps 1~3 are completed, confirm that the output level is  $-5 \text{ dB} \pm 2 \text{ dB}$  (345 mV to 548 mV).
  - b. A-106/A-107  
Set the OUTPUT controls to maximum and confirm that  $-2 \text{ dB} \pm 2 \text{ dB}$  (488 mV to 0.775 V) is obtained at OUTPUT jacks.
5. Set OUTPUT controls again for  $-5 \text{ dB}$  (435 mV) specified level.  
The position of the OUTPUT controls will now be set to the specified output level setting. Do not change the setting of these controls for the remainder of this procedure unless otherwise indicated.

## 6-1-3. VU METER CALIBRATION

Specification: +3 VU

6. With the specified setting in paragraph 6-1-2, play the MTT-150 test tape and adjust R182/R282 for +3 VU indication on the VU Meters.

## 6-1-4. FREQUENCY RESPONSE – PLAYBACK –

7. Load and play the MTT-316 test tape.
8. Play the 315 Hz section of the test tape to get a reference level on the AC Voltmeter. Then play the required test signals for comparison with the playback Frequency Response Limits chart. (Fig. 6-6)
9. Check that the readings obtained on the AC Voltmeter are within the response limits.

NOTE: If the response does not meet the specified response limits, the head should be checked for accumulated oxide or dirt. Then, if no dirt is found, the head azimuth should be readjusted.

### Preparations:

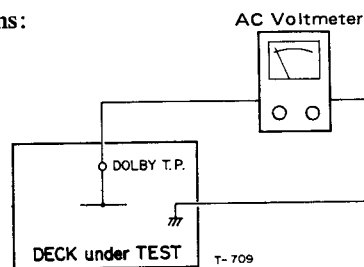


Fig. 6-4 Connection

### Switch Setting:

INPUT	BIAS	EQ	DOLBY NR
—	—	CrO <sub>2</sub>	OUT

### Control Setting:

OUTPUT: Set for convenient output level.  
(on A-106/A-107 only)

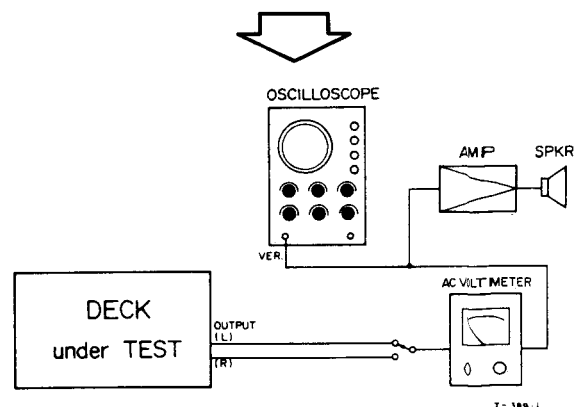


Fig. 6-5 Connection

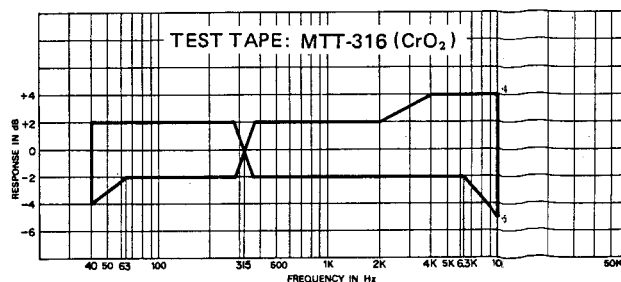


Fig. 6-6 Playback Frequency Response Limits

### 6-1-5. SIGNAL TO NOISE RATIO – PLAYBACK –

Specification: 47 dB (min.)

1. Place the deck in the PLAY PAUSE mode with no tape loaded.
2. Read the indication on the AC Voltmeter.
3. Compare this reading to the specified output level of -5 dB (435 mV). The difference shall be 47 dB or more.

Preparations:

Connection: See Fig. 6-5 on page 15.

Switch Setting:

INPUT	BIAS	EQ	DOLBY NR
—	—	NORMAL	OUT

Control Setting:

OUTPUT: Specified Setting (See 6-1-2)  
(on A-106/A-107 only)

### 6-1-6. HEADPHONE OUTPUT LEVEL CHECKS

Specification: -21 dB ± 3 dB (48.8 mV to 97 mV)

NOTE: An 8 ohm non-inductive resistor should be used as the test load resistor.

1. Load and play a TEAC MTT-150 test tape.
2. Measure the level across the test load resistor.
3. Level shall be -21 dB ± 3 dB (48.8 mV to 97 mV).

Preparations:

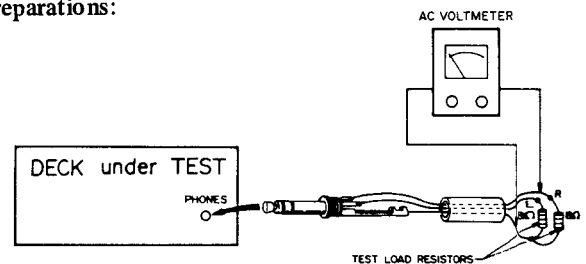


Fig. 6-7 Connection

Switch Setting:

INPUT	BIAS	EQ	DOLBY NR
—	—	NORMAL	OUT

Control Setting:

OUTPUT: Specified Setting (See 6-1-2)  
(on A-106/A-107 only)

## 6-2. MONITOR PERFORMANCE

### 6-2-1. MINIMUM INPUT LEVEL CHECKS

Specification:

- LINE: -19 dB ± 2 dB (69 mV to 109 mV)
- MIC: -67 dB ± 3 dB (244 μV to 488 μV)
- DIN: -35 dB ± 3 dB (9.75 mV to 19.4 mV)

NOTE: To prevent mis-measurements for the following procedures, any connection cords other than these for the respective input check must be removed. For example: Do not connect the Microphone and the DIN cords to respective input jacks when checking for the LINE inputs.

1. Load any recordable tape.
2. Place the deck in the REC PAUSE mode.
3. Set the RECORD controls to maximum.
4. Apply a 400 Hz signal at -19 dB (86 mV) to the LINE IN jacks and check for -5 dB ± 3 dB (308 mV to 615 mV).

Preparations:

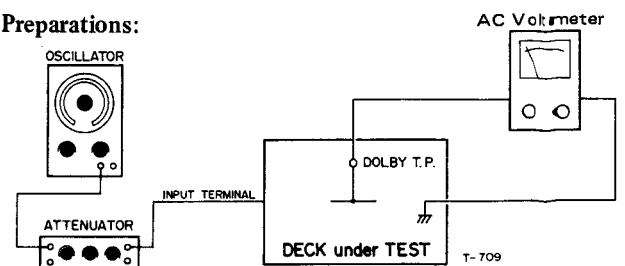


Fig. 6-8 Connection

Switch Setting:

INPUT	BIAS	EQ	DOLBY NR
LINE	—	—	OUT

Control Setting:

OUTPUT: Specified Setting (6-1-2)  
(on A-106/A-107 only)

RECORD: Minimum Setting



5. Then if the level difference between channels is more than 2 dB, adjust R120 and/or R220 so that the level difference become less than 2 dB between channels. (Minimum Input Level adjustments for the LINE inputs).
6. Set the INPUT switch to MIC/DIN.
7. Apply a 400 Hz signal at  $-67$  dB ( $345 \mu\text{V}$ ) to the MIC jacks and check for  $-5$  dB  $\pm$  3 dB. (Minimum Input Level checks for the MIC jack).
8. Remove the MIC input and apply a 400 Hz signal at  $-35$  dB ( $13.7$  mV) to the input terminals of the DIN connector and check for  $-5$  dB  $\pm$  3 dB. (Minimum Input Level checks for the DIN inputs).
9. For the following tests, set the INPUT switch to LINE. At this time, of course, remove the DIN connector and then connect input signal to the LINE IN jacks.

### 6-2-2. SPECIFIED RECORD CONTROL SETTING

Specification: Specified input level:  $-9$  dB (274 mV)

10. Apply a 400 Hz signal at  $-9$  dB (274 mV) to the LINE IN jacks.

## 6-3. RECORDING PERFORMANCE

- NOTE: 1. Before making any adjustments of the recording circuit, be sure that all tests in the preceding performance sections have been accomplished. The preceding performance should be properly adjusted, otherwise record calibration will be inaccurate.
2. The adjustments and checks for FeCr and NORMAL tapes usually may be omitted unless the technician wishes to confirm that they also are within specifications except for the sections where these tape are designated.

### 6-3-1. BIAS TRAP ADJUSTMENTS

NOTE: The AC Voltmeter used in this procedure must have load impedance of 1M ohm or more.

1. Connect the AC Voltmeter to the BIAS TRAP test point.
2. Load any recordable tape.
3. Place the deck in the REC PAUSE mode with no signal applied.
4. Adjust L101/201 for a minimum reading.

11. Set the RECORD controls to obtain the reading of 580 mV ( $-2.5$  dB) on the AC Voltmeter. Then check that OUTPUT level on the deck is  $-5$  dB  $\pm$  1 dB (388 mV to 488 mV). At this time, the physical position of the RECORD controls indicates the Specified RECORD Control Setting referred to in subsequent procedures.

NOTE: After this setting is done, do not disturb the Specified Control Setting of the RECORD controls until the remaining checks and adjustments are completed.

### 6-2-3. VU METER CALIBRATION CHECKS

Specification:  $+3$  VU  $\pm$  1 VU

12. Make certain that indication on the VU Meter on the deck is  $+3$  VU  $\pm$  1 VU.

#### Preparations:

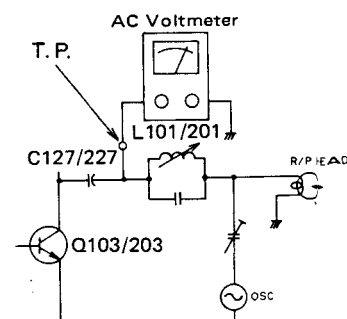


Fig. 6-9 Connection

#### Switch Setting:

INPUT	BIAS	EQ	DOLBY NR
-	-	-	-

#### Control Setting:

OUTPUT: Specified Setting (See 6-1-2)  
(on A-106/A-107 only)

RECORD: Specified Setting (See 6-2-2)

### 6-3-2. RECORD BIAS SETTING

#### CrO<sub>2</sub>

1. Load a TEAC MTT-505B test tape.
2. Place the deck in the record mode.
3. Apply 2 tone signals, in turn; a 400 Hz tone at -42 dB (6.15 mV) and a 6.3 kHz tone at -42 dB.
4. Rewind and play this recorded section.
5. Compare the difference between the output level of the 400 Hz signals and that of the 6.3 kHz signal on the AC Voltmeter.
6. The output level of the 400 Hz signal and that of the 6.3 kHz signal must be the same value.
7. Adjust PC301/303, if necessary, to achieve this.
8. Continue the process of the recording-rewinding-playing-adjusting until the 400 Hz and 6.3 kHz signals produce the same output level.

#### NORMAL

9. Set the BIAS/EQ switches to NORMAL position and the DOLBY NR switch to IN position.
10. Load an MTT-501 test tape and repeat the above steps 2 to 8 except adjust PC302/304 until the 6.3 kHz signal level is +2 dB above the 400 Hz signal.

### 6-3-3. RECORD LEVEL SETTING

#### CrO<sub>2</sub>

11. Load a TEAC MTT-505B test tape, set the BIAS/EQ Switches to the CrO<sub>2</sub> position and DOLBY NR switch OUT.
12. Apply and record a 400 Hz test signal at -12 dB (194 mV).
13. Rewind and play this recorded section.
14. Adjust R181/281 to obtain -8 dB (308 mV) OUTPUT Level.
15. Continue the process of the recording-rewinding-playing-adjusting until this -8 dB is obtained.

#### NORMAL

16. Repeat the above "CrO<sub>2</sub>" procedure, with the following exceptions.
  - BIAS/EQ switches: NORMAL
  - Test tape: MTT-501
  - Adjustments: R135/235

#### Preparations:

Connection: See Fig. 6-8 on page 16.

#### Switch Setting:

INPUT	BIAS	EQ	DOLBY NR
LINE	CrO <sub>2</sub>	CrO <sub>2</sub>	OUT

#### Control Setting:

- OUTPUT: Specified Setting (See 6-1-2)  
(on A-106/A-107 only)
- RECORD: Specified Setting (See 6-2-2)

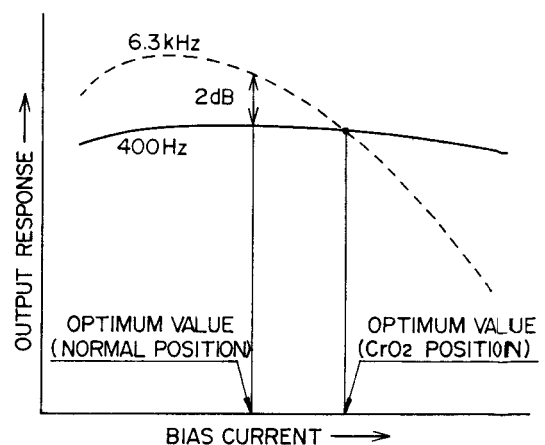


Fig. 6-10 Bias Adjustment

### 6-3.4. DISTORTION CHECKS

#### Specifications:

- CrO<sub>2</sub>: 3.0% or less
- NORMAL: 2.5% or less

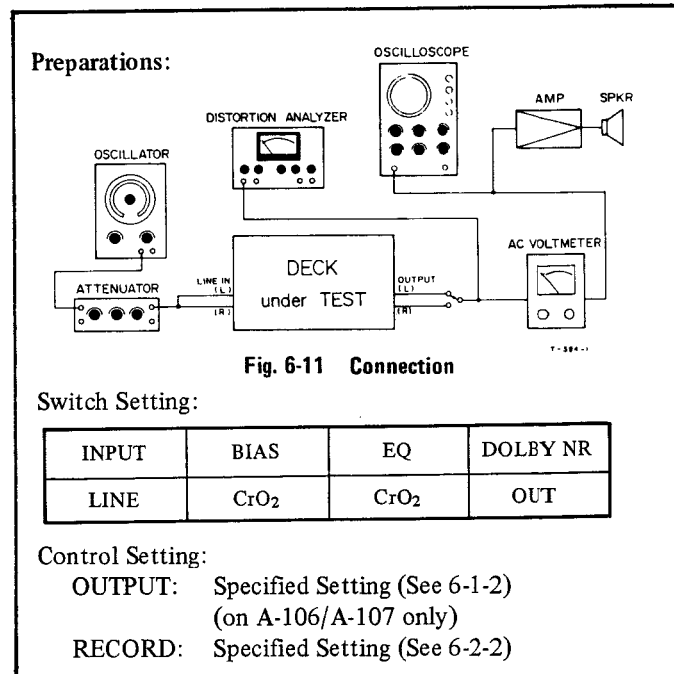
#### CrO<sub>2</sub>

1. Load a TEAC MTT-505B test tape.
2. Apply and record a 400 Hz tone at -12 dB (194 mV).
3. Rewind and play this recorded section.
4. Read the indicated value on the distortion analyzer.

#### NORMAL

5. Repeat the "CrO<sub>2</sub>" procedure, with the following exceptions.

BIAS/EQ switches: NORMAL  
 Test tape: MTT-501



### 6-3.5. FREQUENCY RESPONSE – OVERALL –

#### CrO<sub>2</sub>

1. Load a TEAC MTT-505B test tape.
2. Apply and record a test signal, containing the necessary frequencies for comparison with applicable Overall Frequency Response Limits chart, at -42 dB (6.15 mV).
3. Rewind and play this recorded section.
4. Make sure the readings on the AC Voltmeter are within the response limits.
5. In case of any deviation in the high frequency range of the response limits, clean the heads.
6. If this cleaning is ineffective, recheck whether the recording bias setting is correct or not. If wrong, readjust this and then recheck and correct affected procedures.

#### NORMAL

7. Repeat the "CrO<sub>2</sub>" procedure, with the following exceptions.

BIAS/EQ switches: "NORMAL" position  
 Test tape: MTT-501

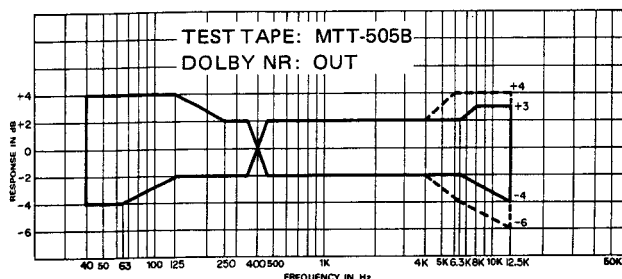
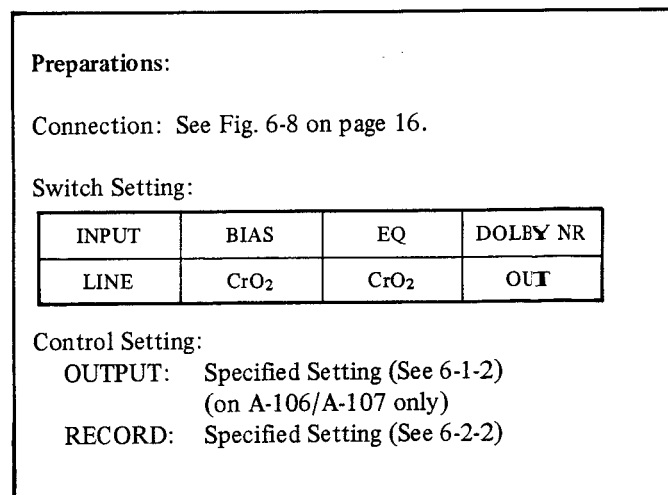


Fig. 6-12 Overall Frequency Response Limits (for BIAS/EQ: CrO<sub>2</sub>)

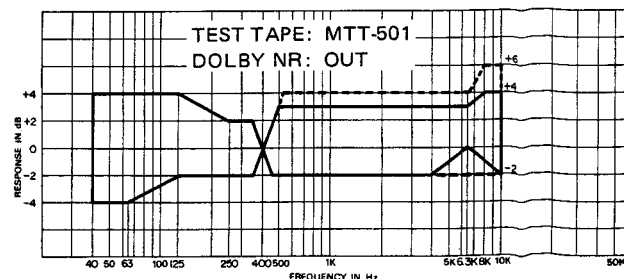


Fig. 6-13 Overall Frequency Response Limits (for BIAS/EQ: NORMAL)

### 6-3-6. SIGNAL TO NOISE RATIO – OVERALL –

**Specifications:**

- CrO<sub>2</sub>: 45 dB (min.)
- NORMAL: 44 dB (min.)

**CrO<sub>2</sub>**

1. Load a TEAC MTT-505B test tape.
2. Place the deck in the record mode for a few seconds with no signal applied.
3. Rewind and play this recorded (erased) section.
4. Read the indication on the AC Voltmeter.
5. Compare the output reading to the specified output level (-5 dB or 435 mV).
6. A difference of 45 dB or more is required.

**NORMAL**

7. Repeat the "CrO<sub>2</sub>" procedure, except use the TEAC MTT-501 test tape and set BIAS/EQ switches to NORMAL position.
8. A difference of 44 dB or more is required.

**Preparations:**

Connection: See Fig. 6-5 on page 15.

**Switch Setting:**

INPUT	BIAS	EQ	DOLBY NR
LINE	CrO <sub>2</sub>	CrO <sub>2</sub>	OUT

**Control Setting:**

- OUTPUT: Specified Setting (See 6-1-2)  
(on A-106/A-107 only)
- RECORD: Specified Setting (See 6-2-2)

### 6-3-7. ERASE EFFICIENCY

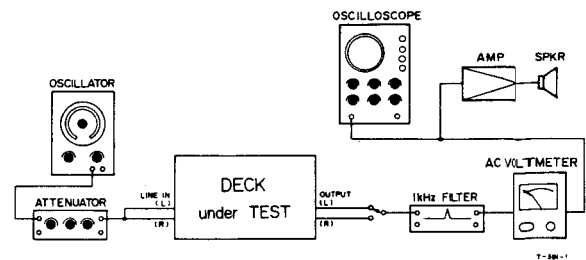
**Specification:** 65 dB (min.)

**NOTE:** To measure erase efficiency, a 1 kHz narrow band-pass filter should be used. The test signal delivered from the AF oscillator should be tuned to the filter used.

Numbers in parentheses correspond to steps in Fig. 6-15.

1. Load a TEAC MTT-505B test tape.
2. Apply and record a 1 kHz signal at +1 dB (0.869 V) for several seconds. . . . . (1)
3. Rewind the tape to the mid-point of the recording and remove the signal from the LINE IN jacks. . . . . (2)
4. Place the deck in the record mode and record through this previously recorded portion with no input signal applied . . . . . (3)
5. Rewind the tape to the starting point of the 1 kHz signal recorded portion . . . . . (4)
6. Play the tape and read the indication on the AC Voltmeter to obtain the output level of both the unerased portion and the erased portion of the recorded section . . . . . (5)
7. Measure the output level differences between the 2 portions.
8. A 65 dB difference or more is required.

**Preparations:**



**Fig. 6-14 Connection**

**Switch Setting:**

INPUT	BIAS	EQ	DOLBY NR
LINE	CrO <sub>2</sub>	CrO <sub>2</sub>	OUT

**Control Setting:**

- OUTPUT: Specified Setting (See 6-1-2)  
(on A-106/A-107 only)
- RECORD: Specified Setting (See 6-2-2)

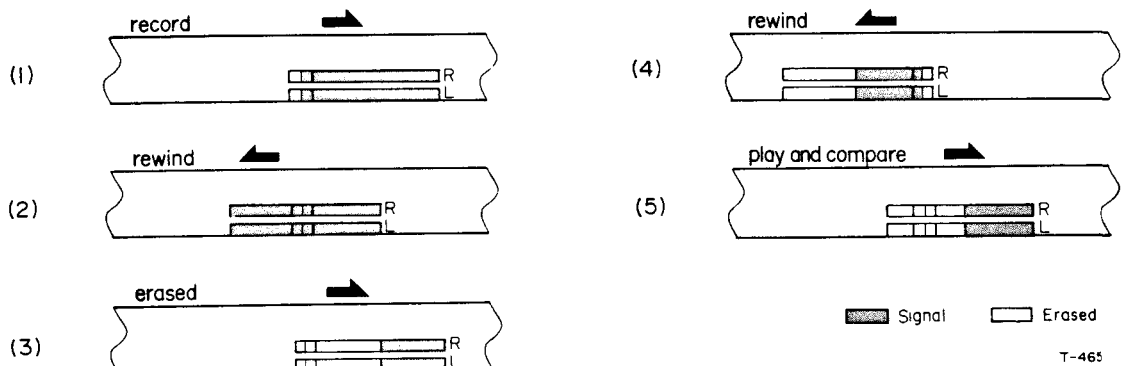


Fig. 6-15 Erase Efficiency Check Procedure

### 6-3-8. CHANNEL SEPARATION

Specification: 30 dB (min.)

NOTE: To check channel separation (cross talk between channels), a 1 kHz narrow bandpass filter should be used. The test signal delivered from an AF oscillator should be tuned to the filter used.

Numbers in parentheses correspond to steps in Fig. 6-17.

1. Load a TEAC MTT-505B test tape. (1)
2. Apply a 1 kHz test tone at -9 dB (274 mV) into the left channel. (2)
3. Place the deck in the record mode for about 30 seconds. (3)
4. Rewind the tape to the starting point of recording. (4)
5. Play the tape and measure the output level differences between the left and right channels. (5)
6. A 30 dB difference or more is required. (6)

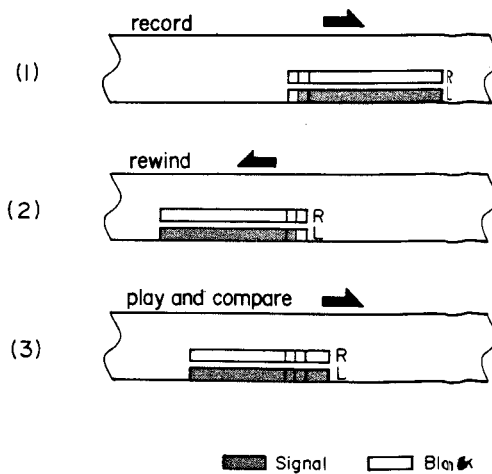
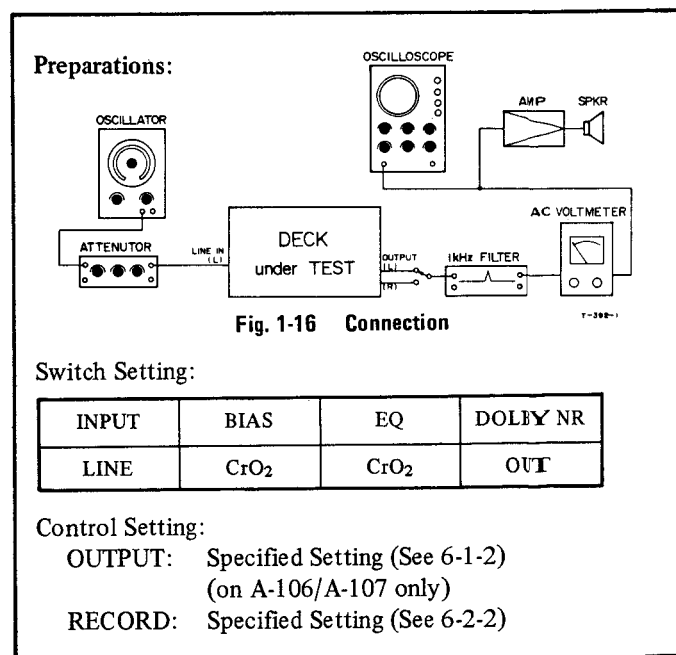


Fig. 6-17 Channel Separation Check Procedure

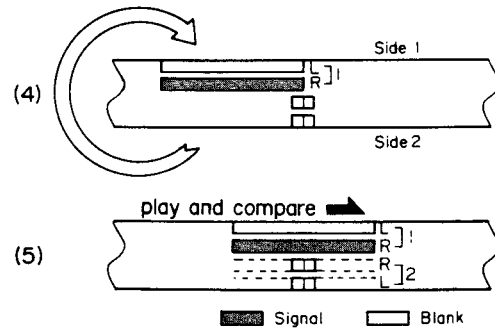
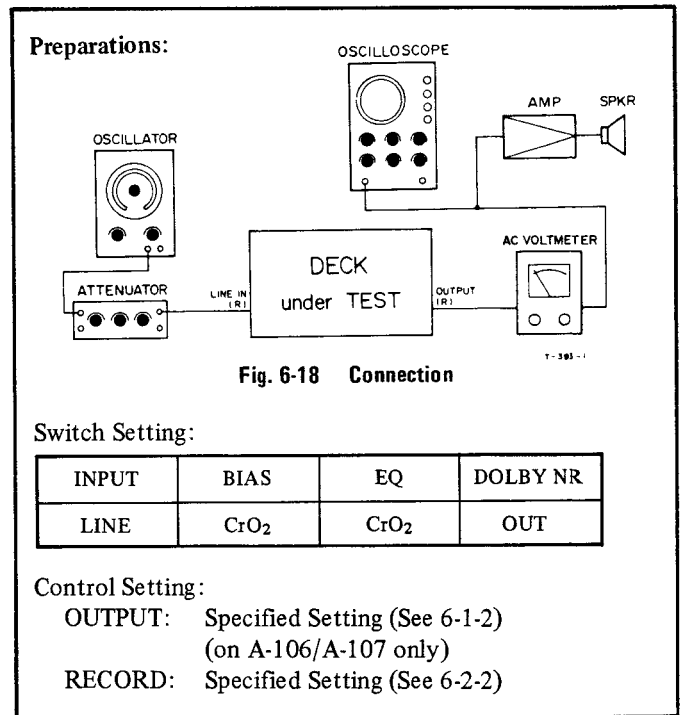
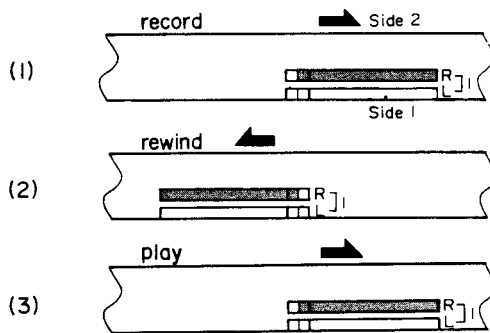
### 6-3-9. ADJACENT TRACK CROSSTALK MEASUREMENT

**Specification:** 40 dB (min.)

**NOTE:** The tape must be completely erased or demagnetized prior to this procedure.

Numbers in parentheses correspond to steps in Fig. 6-19.

1. Load a TEAC MTT-505B test tape.
2. Apply a 125 Hz test signal at  $-9$  dB (274 mV).
3. Place the deck in the record mode for about 30 seconds. . . . . (1)
4. Rewind the tape to the starting point of recording. (2)
5. Play the tape and measure the output level of the recorded portion. Note this reading for temporary reference level for the following measurements. . . . . (3)
6. Remove the test tape, turn it over and replace it in the deck. . . . . (4)
7. Play the tape back and read the output level. . . . . (5)
8. Get the difference between this reading and the reading previously measured for the 125 Hz signal.
9. A 40 dB difference or more is required.



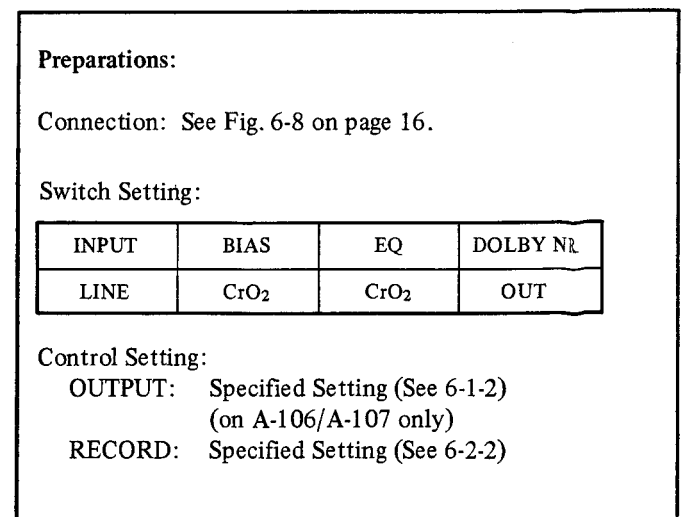
**Fig. 6-19 Adjacent Track Crosstalk Measurement Procedure**

### 6-3-10. DOLBY NR EFFECT MEASUREMENT

**Specifications:**

Variation from reference at 1 kHz: 3 dB to 8 dB  
Variation from reference at 10 kHz: 8 dB to 12 dB

1. Load a TEAC MTT-505B test tape.
2. Apply and record a 1 kHz signal at  $-32$  dB (19.4 mV).
3. Rewind and play this recorded section.
4. During playback, read the indication on the AC Voltmeter and note it for temporary reference level for the following measurement.
5. Set the DOLBY NR switch to IN.
6. Ensure the reading reduces 3 dB to 8 dB from the reference level.
7. Apply and record a 10 kHz signal at  $-42$  dB (6.15 mV) with DOLBY NR to OUT.
8. In the same manner as step 3 to 6, ensure the reading reduces 8 dB to 12 dB when the DOLBY NR Switch is set to IN.



## 6-4. ADJUSTMENT LOCATION

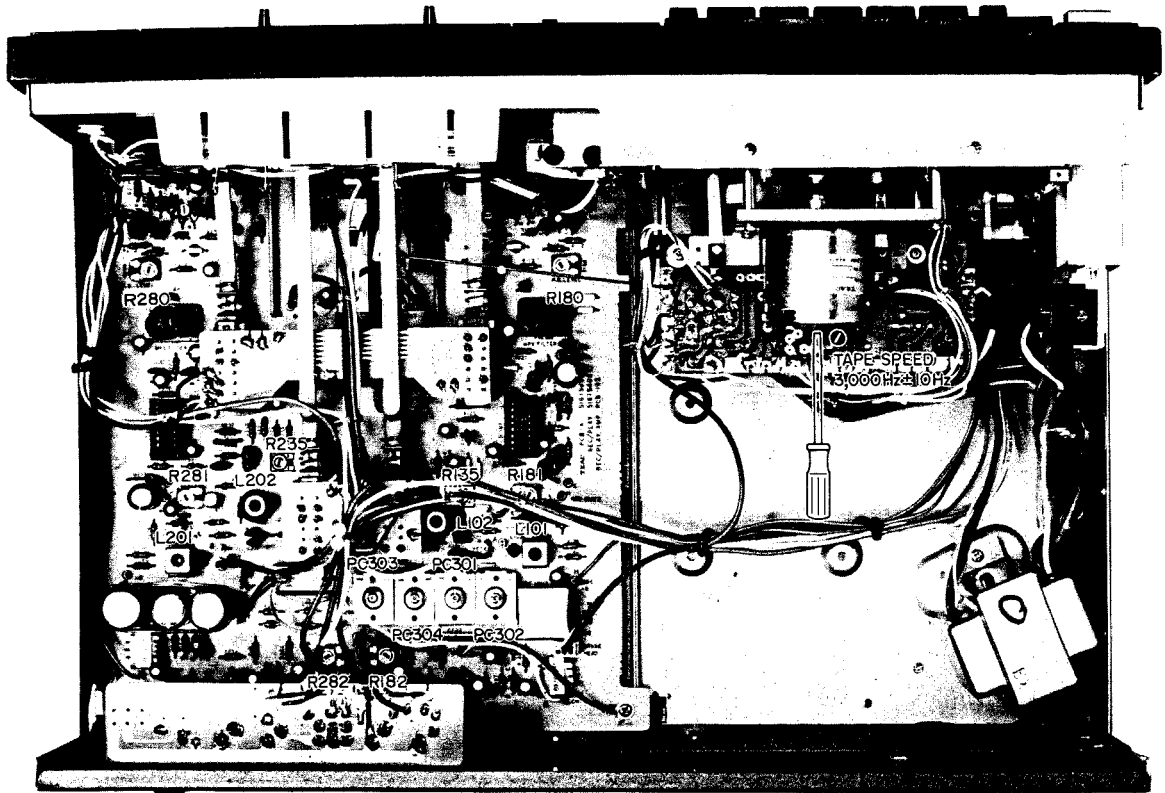


Fig. 6-20 Adjustment Location

T-892

R180/280	Playback Level
R182/282	Meter Calibration
R181/281	Record Level (CrO <sub>2</sub> )
R135/235	Record Level (NORMAL)
PC301/303	Bias Adjustment (CrO <sub>2</sub> )
PC302/304	Bias Adjustment (NORMAL)
L101/201	Bias Trap
L102/202	Record EQ

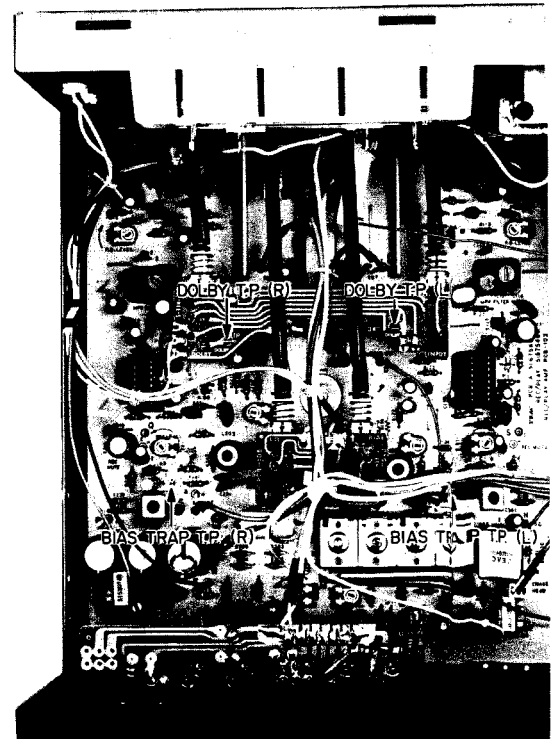


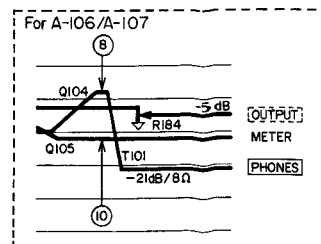
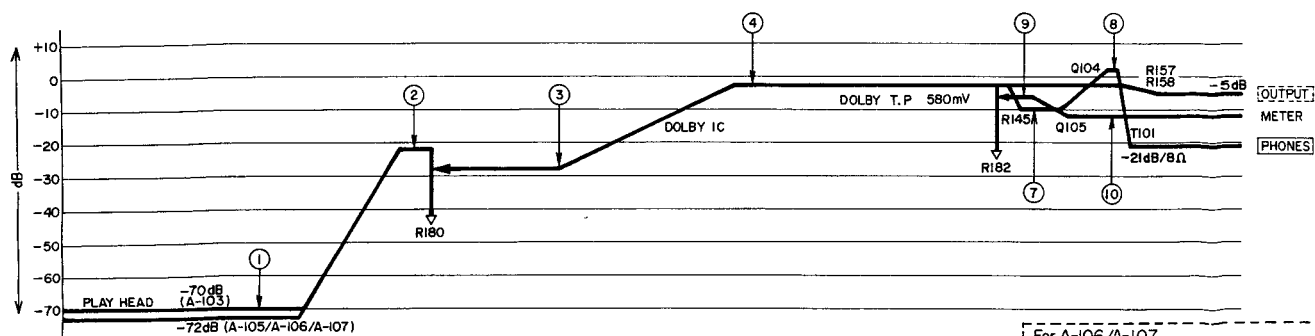
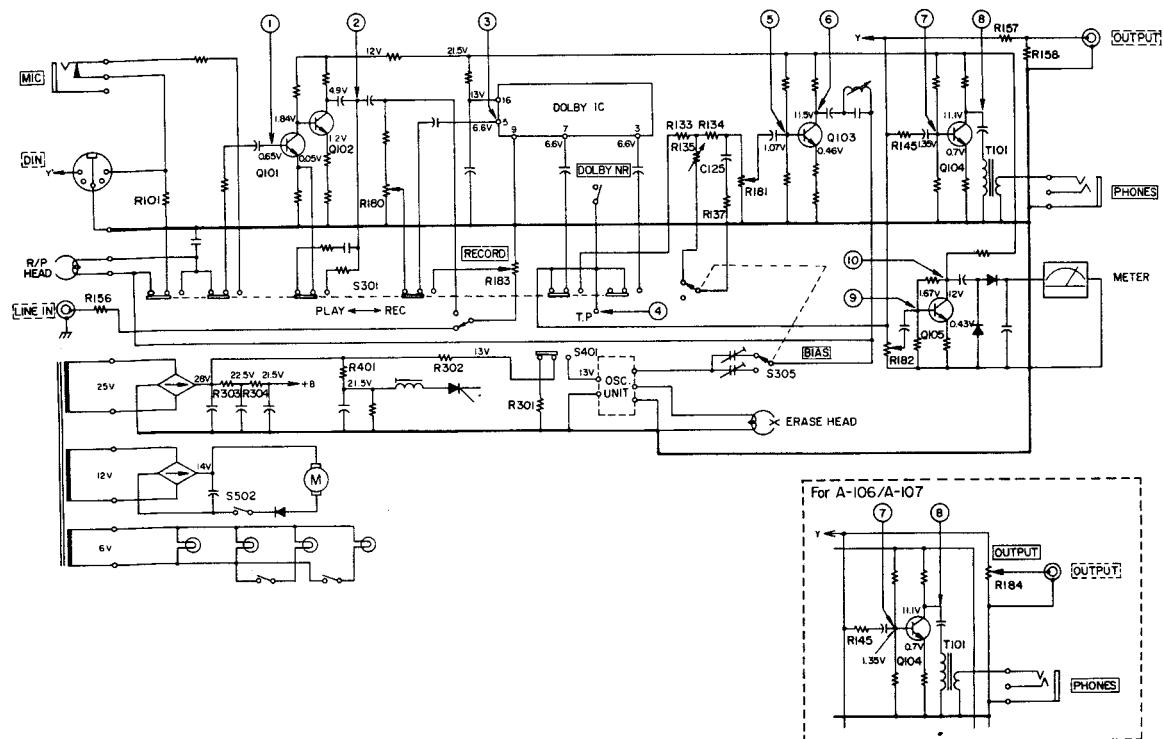
Fig. 6-21 Test Point Location

T-981

# 7. LEVEL DIAGRAM

NOTE: Models A-103 and A-105 have no OUTPUT Control as shown in this Simplified Circuit Diagram and these Level Diagrams. Models A-106 and A-107 are similar except they use an OUTPUT Control.

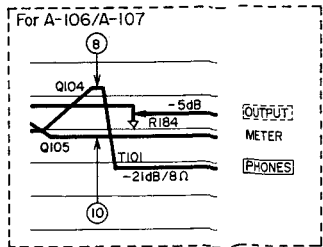
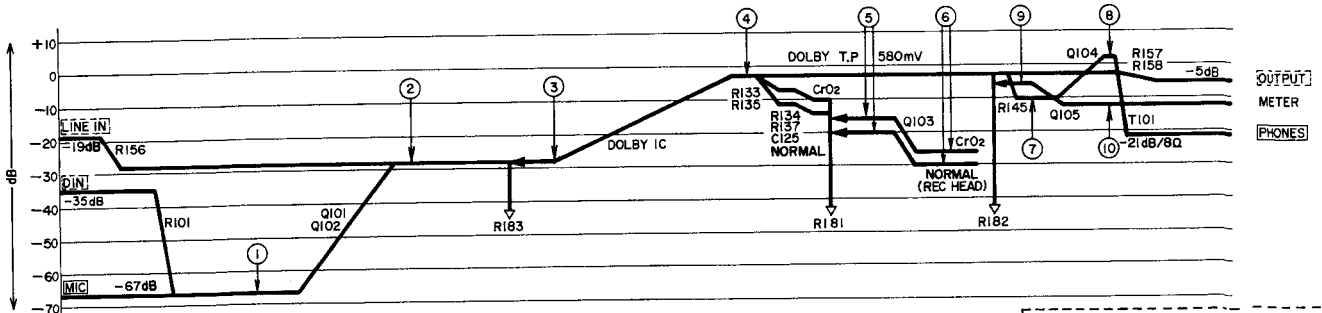
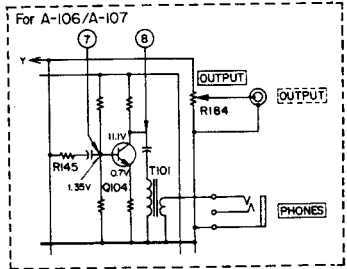
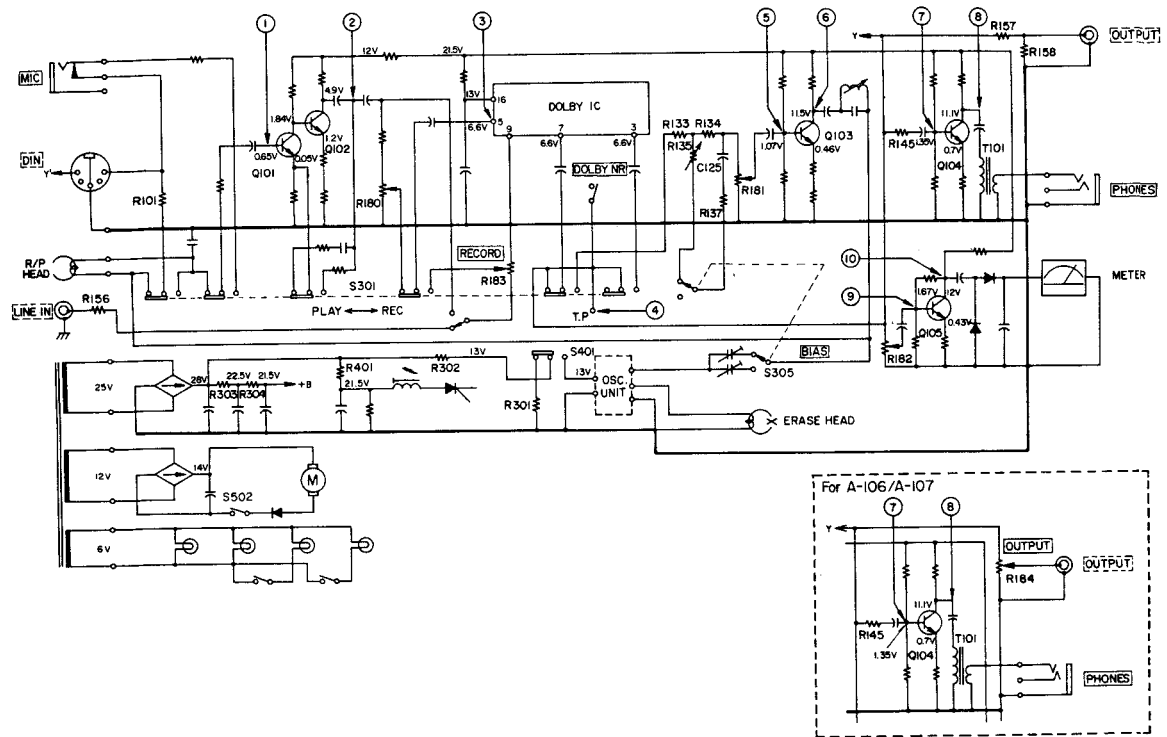
## PLAYBACK SECTION



NOTE: • REF. Nos. shown in the diagram relate only to the left channel.  
 • 0 dB = 0.775 V  
 • OUTPUT control (R184) for A-106/A-107 are positioned at Specified Output Level.  
 • Each level given in the diagram shows values during playback with MTT-150 Test Tape (Dolby tone).

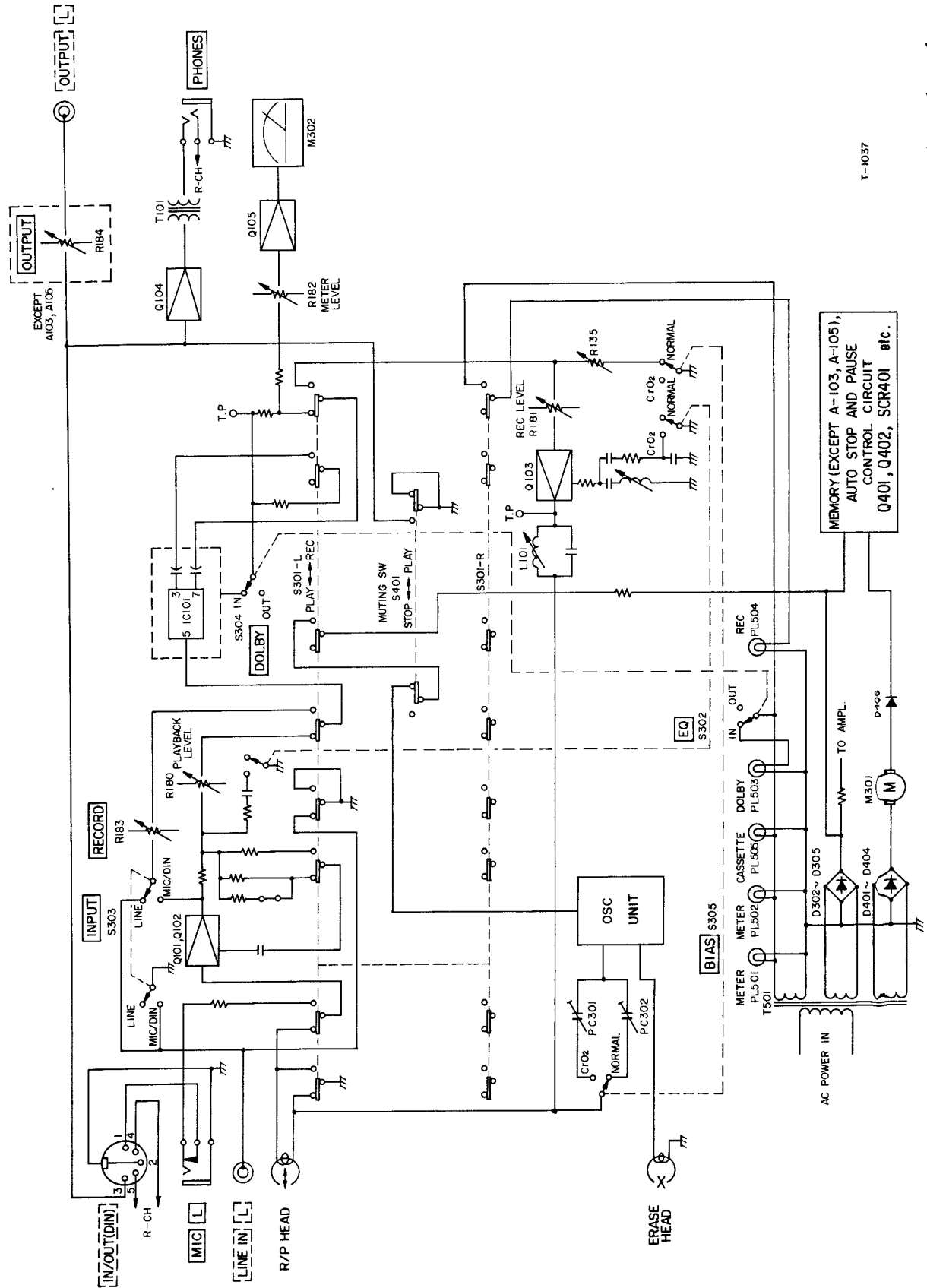


# RECORDING SECTION



NOTE: • REF. NOS. shown in the diagram relate only to the left channel.  
 • 0 dB = 0.775 V  
 • OUTPUT control (R184) for A-106/A-107 are positioned at Specified Output Level.  
 • RECORD control (R183) is positioned at Minimum Input Level.  
 • Each level given in the diagram shows values when a 400 Hz Specified Input Level is applied.

# 8. BLOCK DIAGRAM



T-1037

Fig. 8-1

## VOLTAGE AND FREQUENCY SETTING

### a. VOLTAGE SELECTOR SETTING PROCEDURE (FOR GENERAL EXPORT MODELS)

First make sure the AC power cord is disconnected from the AC outlet or power source.

1. Remove the top cover of the deck by removing 2 screws from each side of the deck and lifting off the cover.
2. Locate the voltage selector (shown in the Figure) at the right side of the power transformer.
3. Loosen the 2 screws in the shorting bar and move the bar so that it shorts across the terminals marked with the desired AC voltage (100, 117, 220, or 240).
4. After the bar is set to the desired position, tighten the screws.
5. Replace the top cover of the deck.

NOTE: The voltage selection setting can be visually checked without removing the top cover by looking through the cut out slits in the bottom cover of the deck.

### b. AC POWER LINE FREQUENCY ADAPTATION

Since the A-103/A-105/A-106/A-107 employ a DC Servo Motor, 50 Hz or 60 Hz operation is permitted without power line frequency adaptation.

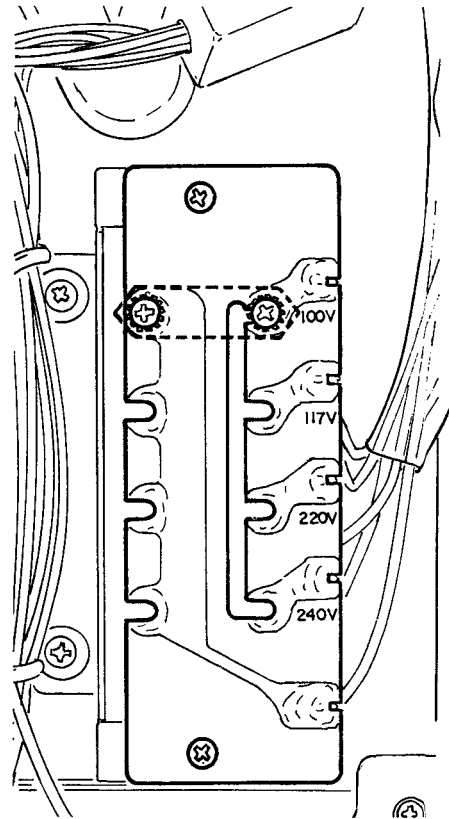


Fig. 8-2 Voltage Selector Setting

**A-107/A-106/A-105/A-103** Stereo Cassette Deck with Dolby System

**TEAC**

**TEAC CORPORATION** 3-7-3, NAKA-CHO, MUSASHINO, TOKYO PHONE: (0422) 53-1111

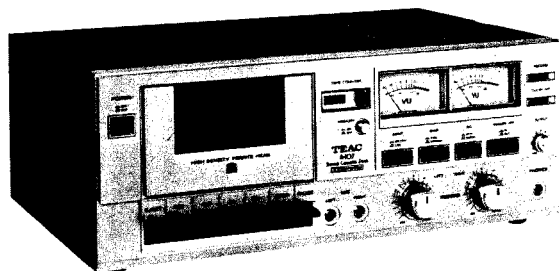
TEAC CORPORATION OF AMERICA 7733 TELEGRAPH ROAD, MONTEBELLO, CALIFORNIA 90640 PHONE: (213) 726-0303

# TEAC®

# PARTS LIST

## A-107/A-106 A-105/A-103

Stereo Cassette Deck with Dolby System



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### PARTS ORDERING INFORMATION

Spare parts are available through your nearest TEAC Authorized Service Center or directly from the TEAC office, the address of which is written on the back cover. When ordering parts, always include the following information:

- |              |                    |
|--------------|--------------------|
| 1. MODEL     | 4. DESCRIPTION     |
| 2. REF. NO.  | 5. UNIT SERIAL NO. |
| 3. PARTS NO. | 6. MANUAL CODE NO. |

#### NOTICE REGARDING PARTS ORDERS

1. Do not order by only REF. NO.
2. In some instances, individual minor parts are not available. In such a case, the entire assembly including the part requested will be sent to you.
3. Parts are identical between the different models with the exceptions as coded by the designations in the REMARKS column.
4. PC Boards shown viewed from foil side.
5. Parts marked with \*require longer delivery time than regular parts.



REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1 - 1	*55522020	Cover, Top	
1 - 2	*55800050	Washer	
1 - 3	*55522010	Cover, REC/PLAY PC Board	
1 - 4	*55522700	Cover, REC/PLAY PC Board	A-107, A-105 LIMITED AREAS
1 - 5	*55344320	Foot	A-103
1 - 5	*55021601	Panel Assy, A	A-106
1 - 5	*55021820	Panel Assy, D	
1 - 6	*55344270	Lens, Orange	
1 - 7	*55344260	Lens, Red	A-106, A-103
1 - 8	55344710	Marked Knob	A-107, A-105
1 - 8	55344530	Marked Knob, B	A-106, A-103
1 - 9	*55344290	Knob, Var. Res.	A-107, A-105
1 - 9	*55045011	Knob Assy, Var. Res.; A	A-103
1 - 10	55045121	Cover Assy, Cassette	A-107, A-105
1 - 10	55031270	Cover Assy, Cassette; B	A-106
1 - 10	55045220	Cover Assy, Cassette; C	A-107, A-105
1 - 11	*55241240	Spring, Earth	A-107, A-105
1 - 12	*55010250	Panel Assy, C	A-107
1 - 13	*55522330	Panel, E	A-105
1 - 13	*55522290	Panel, C	A-107, A-106
1 - 14	55045021	Knob, Var. Res.; C	
1 - 15	*55131920	Board, Side	A-107, A-105 LIMITED AREAS
1 - 16	*55045490	Screw Assy, C	A-107, A-105 LIMITED AREAS

## INCLUDED ACCESSORIES

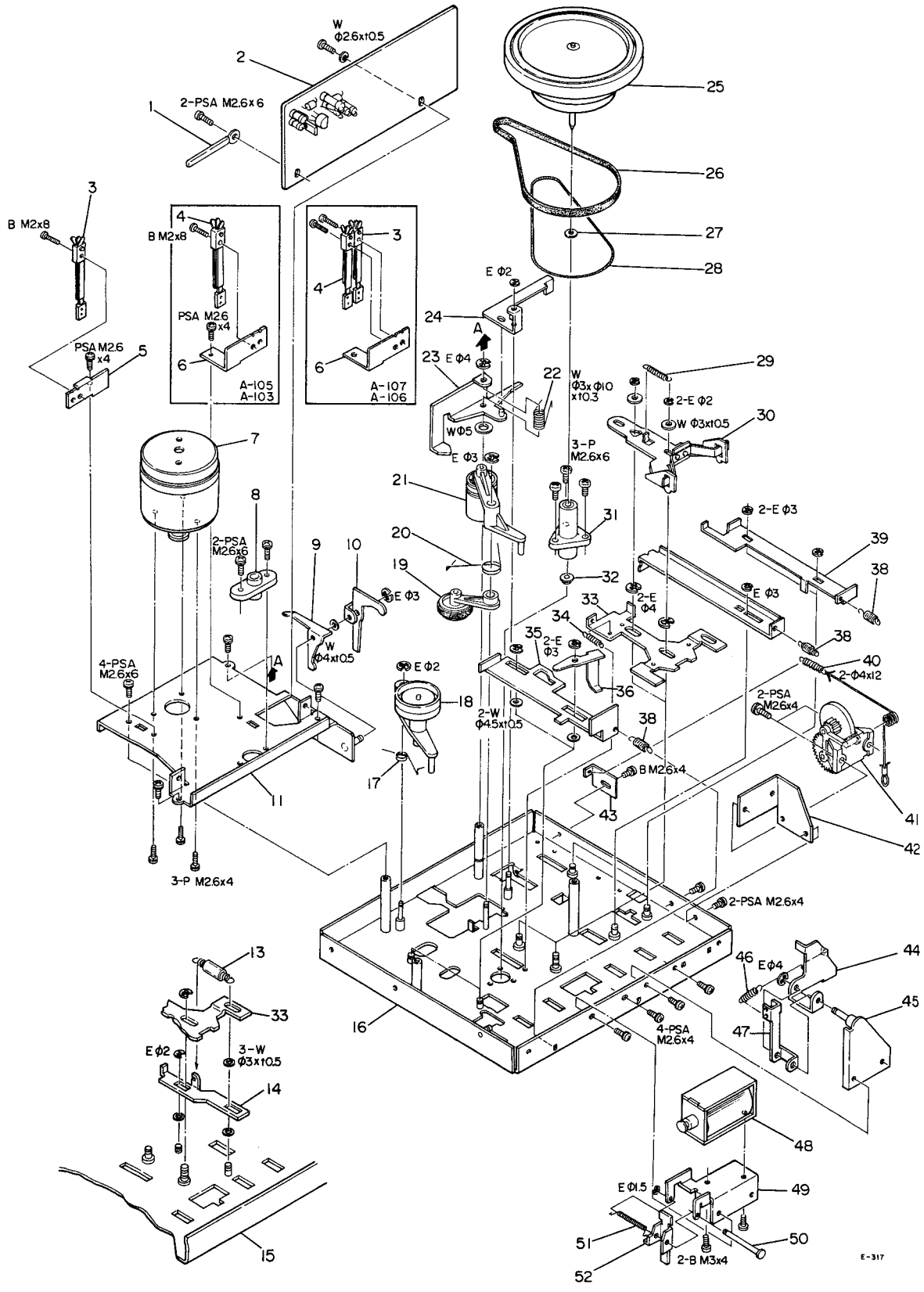
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	51280650	Cord Assy, Input-output Connection	
	57100410	Cleaning Stick	
	51013450	Information Supplement, Cassette	U.S.A., CANADA
	51014950	Information Supplement, Cassette	All except U.S.A., CANADA
	51014800	A-107 Owner's Manual	U.S.A., CANADA
	51015000	A-107 Owner's Manual	All except U.S.A., CANADA
	51015170	A-106 Owner's Manual	U.S.A., CANADA
	51015180	A-106 Owner's Manual	All except U.S.A., CANADA
	51014780	A-105 Owner's Manual	U.S.A., CANADA
	51014960	A-105 Owner's Manual	All except U.S.A., CANADA
	51014750	A-103 Owner's Manual	U.S.A., CANADA
	51014760	A-103 Owner's Manual	All except U.S.A., CANADA





REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2 - 1	*55203380	Spring	
2 - 2	*55444790	Screw, Cassette Holder	
2 - 3	*55044761	Holder Assy, Cassette; A	
2 - 4	55550870	Spring, Plate	
2 - 5	55344511	Cassette Guide, Left	
2 - 6	55344501	Cassette Guide, Right	
2 - 7	*55044780	Bracket Assy, Holder; B	
2 - 8	*55531770	Holder, Cassette; B	
2 - 9	*55550880	Tape, Adhesive	
2 - 10	*55344430	Cover, Lamp	
2 - 11	*55044770	Bracket Assy, Holder; A	
2 - 12	*55203370	Spring, Eject	
2 - 13	*55550920	Guide Plate, Holder; B	
2 - 14	*55550910	Guide Plate, Holder; A	
2 - 15	*55203350	Spring, Arm	
2 - 16	*55550830	Arm, Preventing	
2 - 17	55344440	Guide, Cassette	
2 - 18	*55446980	Collar, Stopper	
2 - 19	55021641	Button Assy	
2 - 20	55031632	Chassis Assy, Mechanism	A-105, A-103
	55021740	Chassis Assy, Mechanism	A-107, A-106
2 - 21	*55203340	Rod, Brake Actuating	
2 - 22	*55810380	Retainer, Cord; A	
2 - 23	*55203490	Spring, Preventing; A	
2 - 24	*55550811	Lever, Safety; C	
2 - 25	*55446560	Shaft, Safety Lever	
2 - 26	*50846432	Plate, Pause Lock	
2 - 27	*50845502	Spring, Pause Lock	
2 - 28	*55044720	Plate Assy, Brake	
2 - 29	*55203330	Spring, Brake	
2 - 30	*51685490	PC Board Assy, Reed Switch	Part of 2 - 30
	*51675490	PC Board, Reed Switch	Part of 2 - 30
	50447350	Reed Switch	
2 - 31	*55344480	Cushion, Rubber	
2 - 32	*55550710	Bracket, Counter	
2 - 33	55030250	Counter Assy	A-105, A-103
	55031300	Counter Assy	A-107, A-106
2 - 34	*55550930	Bracket, Lamp	
2 - 35	*55551970	Retainer, Lamp Cord	
2 - 36	51422010	Lamp	
2 - 37	*55343040	Plate, Friction	
2 - 38	*55241150	Spring, Friction Plate	
2 - 39	55044650	Reel Table Assy, Supply	
2 - 40	55044640	Reel Table Assy, Take-up	
2 - 41	55344470	Belt, Counter	
2 - 42	55203260	Spring, Lever A	
2 - 43	55021780	Plate Assy, Head Base	
2 - 44	55696010	Head, Erase	
2 - 45	55044590	Pinch Roller Assy	
2 - 46	55203271	Spring, Pinch Roller	
2 - 47	*55241200	Spring, REC/PLAY Head	
2 - 48	50660211	Head, REC/PLAY	A-107, A-106, A-105
	55696020	Head, REC/PLAY	A-103

# EXPLODED VIEW-3



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REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3 - 1	*55810380	Retainer, Cord; A	
3 - 2	51685450	PC Board Assy, Mechanism	
3 - 3	51350020	Switch, Leaf; 1A	
3 - 4	51350010	Switch, Leaf; 2A	
3 - 5	*55550690	Bracket, Switch; A	
3 - 6	*55550700	Bracket, Switch; B	
3 - 7	71051260	DC Motor Assy	
3 - 8	*55342770	Bearing, Flywheel	
3 - 9	*55550670	Lever, Slide Switch	
3 - 10	*55550680	Arm, Record	
3 - 11	*55044630	Plate Assy, Motor	
3 - 12		(Not used)	
3 - 13	55203460	Spring, Lever; C	A-107, A-106
3 - 14	55551630	Lever, FF; C	A-107, A-106
3 - 15	55021740	Chassis Assy, Mechanism	A-107, A-106
3 - 16	*55021632	Chassis Assy, Mechanism	A-105, A-103
3 - 17	55203300	Spring, Tension	
3 - 18	55044660	Pulley Assy, Tension	
3 - 19	55044690	Idler Assy, Fast Wind; B	
3 - 20	55203310	Spring, Idler Assy	
3 - 21	55044670	Idler Assy, A	
3 - 22	*55203360	Spring, Pressure	
3 - 23	*55044751	Arm Assy, Cassette Pressure; A	
3 - 24	*55550850	Arm, Cassette Pressure; B	
3 - 25	55044610	Flywheel Assy, Capstan	
3 - 26	55344460	Belt, Capstan Drive	
3 - 27	*55500310	Washer, Thrust	
3 - 28	55344160	Belt, Fast Wind	
3 - 29	*55203480	Spring, Lever; D	
3 - 30	*55044710	Lever Assy, Fast Wind	
3 - 31	*55040910	Housing Assy, Capstan	
3 - 32	*55341330	Washer, Oil Retaining	
3 - 33	*55550740	Plate, Brake Actuating	
3 - 34	*55203320	Spring, Lever; B	
3 - 35	*55044730	Lever Assy, Pause	
3 - 36	*55550770	Arm, Pause	
3 - 37	*55550800	Lever, Record	
3 - 38	*55203260	Spring, Lever; A	
3 - 39	*55550820	Lever, Eject	
3 - 40	*55203390	Spring, Damper	
3 - 41	*55044940	Holder Assy, Damper; B	
3 - 42	*55550940	Bracket, Damper	
3 - 43	*55550950	Angle Plate, Spring	
3 - 44	*55550790	Arm, Record; B	
3 - 45	*55044740	Holder Assy, Record Arm	
3 - 46	*55203511	Spring, Record	
3 - 47	*55551990	Arm, Record; C	
3 - 48	55044811	Solenoid	
3 - 49	*55551001	Bracket, Solenoid	
3 - 50	*55446650	Shaft, Release Arm; A	
3 - 51	*55203430	Spring, Release Arm	
3 - 52	*55551020	Arm, Release; B	

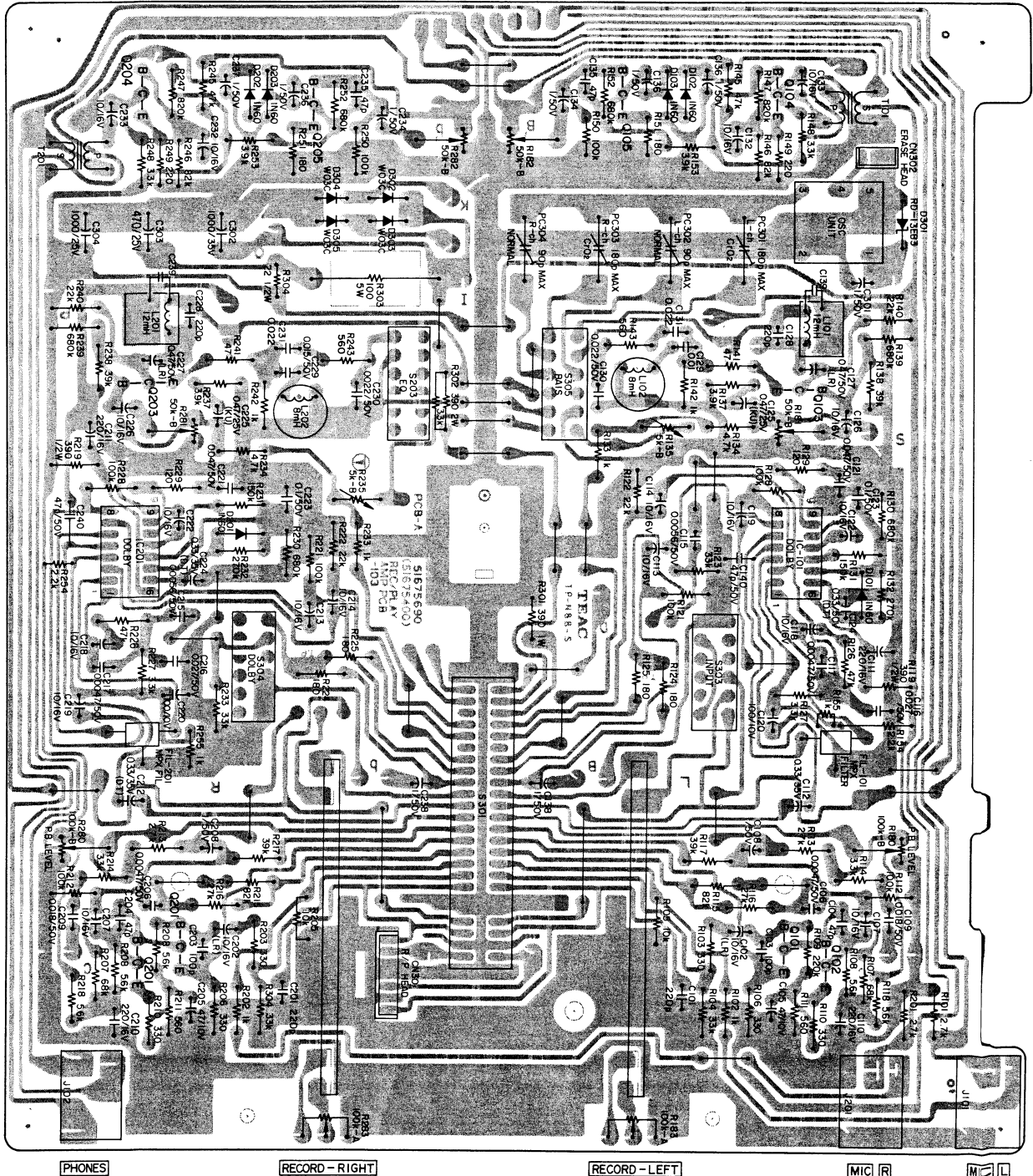


REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4 - 1	51521320	Transformer, Power	U.S.A.
	51521330	Transformer, Power	CANADA
	51521340	Transformer, Power	EUROPE
	51521350	Transformer, Power	AUSTRALIA
	51521360	Transformer, Power	GENERAL EXPORT
4 - 2	*55550550	Cushion	
4 - 3	*55810380	Retainer, Cord; A	
4 - 4	*55521990	Chassis, Bottom	
	*55522690	Chassis, Bottom	A-107, A-105 LIMITED AREAS
4 - 5	*55344320	Foot	A-105, A-103
4 - 6	*55551950	Shield Paper	A-106, A-103
4 - 7	*55044970	Holder Assy, Meter Lamp	A-106, A-103
4 - 8	51420220	Lamp, 6.3V 250mA	A-106, A-103
4 - 9	51340360	Switch, Power	GENERAL EXPORT, AUSTRALIA
	51340370	Switch, Power	U.S.A., CANADA
	51340440	Switch, Power	EUROPE, U.K.
4 - 10	50529060	Spark Killer, 0.033 mfd + 120 ohm 125V AC	U.S.A.
	50529110	Spark Killer, 0.033 mfd + 120 ohm 250V AC	CANADA
	50529070	Spark Killer, 0.01 mfd + 300 ohm 400V AC	GENERAL EXPORT, AUSTRALIA
	51890010	Spark Killer, 4700 pfd MAX PME271M547	EUROPE, U.K.
4 - 11	51502000	Var. Res., 20k ohm-A x 2	A-107, A-106 Part of 4 - 38
4 - 12	*55550611	Bracket, Power Switch	
4 - 13	*55344221	Link, Power Switch	
4 - 14	*55510190	Chassis, Front	
4 - 15	55344620	Button, D	A-107, A-105
	55344310	Button, B	A-106, A-103
4 - 16	*55551470	Bracket, Var. Res.	A-107, A-106
4 - 17	51650490	Meter, VU	A-107, A-105
	51650480	Meter, VU	A-106, A-103
4 - 18	55344610	Button, C	A-107, A-105
	55344300	Button, A	A-106, A-103
4 - 19	*55447100	Collar, Var. Res.	A-107, A-106
4 - 20	*55531710	Chassis, Right	
4 - 21	51420860	Lamp, w/Holder	
4 - 22	*55344230	Holder, Lamp	
4 - 23	*55446270	Shaft, Record Lever	
4 - 24	*55531720	Bracket, Record Lever	
4 - 25	*55203520	Link, Record Lever	
4 - 26	*55344240	Lever, Record	
4 - 27	*55550591	Bracket, REC/PLAY PC Board	
4 - 28	*55800070	Washer	
4 - 29	*55800060	Washer	
4 - 30	51685401	PC Board Assy, REC/PLAY	
4 - 31	*55344210	Link, B	
4 - 32	*55344200	Link, A	
4 - 33	*50438480	Connector Socket, 6P	
4 - 34	*51221010	Connector Socket, 3P	
4 - 35	*50333130	Clamper, Cord	
4 - 36	*51272160	Ribbon, Wire	
4 - 37	*55522001	Panel, Rear	
4 - 38	*51685470	Terminal Assy, Input-output	A-105, A-103
	51685640	Terminal Assy, Input-output	A-107, A-106
	51675470	PC Board, Input-output	Part of 4 - 38
	51260301	Terminal, Input-output	Part of 4 - 38
	50571260	Carbon Res., 68k ohm 1/4W 5% (R156, R256)	Part of 4 - 38
	50570960	Carbon Res., 3.9k ohm 1/4W 5% (R157, R257)	Part of 4 - 38
	50571100	Carbon Res., 15k ohm 1/4W 5% (R158, R258)	Part of 4 - 38
	50570820	Carbon Res., 1k ohm 1/4W 5% (R159, R259)	A-107, A-106 Part of 4 - 38
4 - 39	*55550630	Washer, GND	U.S.A., CANADA, GENERAL EXPORT
4 - 40	*55341180	Push Rivet	
4 - 41	*55300470	Strain Relief, AC Power Cord	U.S.A., CANADA, GENERAL EXPORT
	*55342690	Strain Relief, AC Power Cord	AUSTRALIA

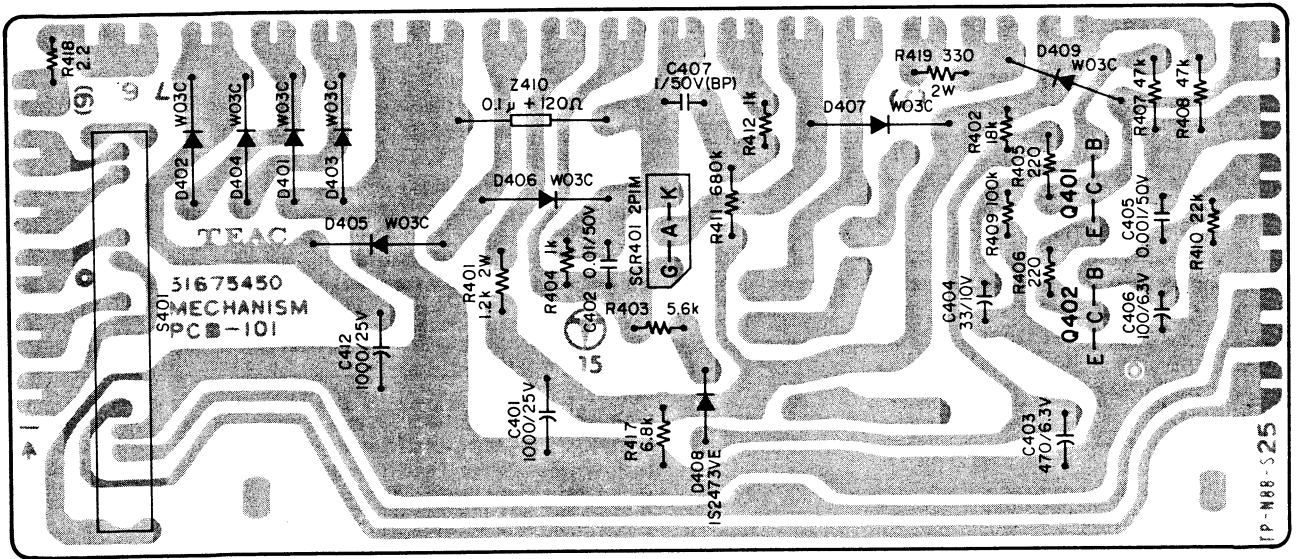
(Continued on page-14)

## 2. PC BOARD SECTION (Diagram)

### 1. RECORD/PLAYBACK AMPLIFIER



## 2. POWER SUPPLY



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# PC BOARD SECTION(Parts List)

## 1. RECORD/PLAYBACK AMPLIFIER

REF. NO.	PARTS NO.	DESCRIPTION	REF. NO.	PARTS NO.	DESCRIPTION
	51685401	PC Board Assy (All except A-103)	R133/R233	51830820	1k ohm
	51686480	PC Board Assy (A-103)	R134/R234	51830980	4.7k ohm
	51675400	PC Board	R137/R237	51830960	3.9k ohm
	<b>IC's</b>		R138/R238	51831200	39k ohm
IC101/IC201	50427280	NE545B, Dolby	R139/R239	51831500	680k ohm
	<b>TRANSISTORS</b>		R140/R240	51831140	22k ohm
			R141/R241	51830500	47 ohm
			R142/R242	51830820	1k ohm (A-107, A-106)
				51814820	1k ohm (A-105)
				51830840	1.2k ohm (A-103)
			R143/R243	51830760	560 ohm (A-107, A-106)
				51814760	560 ohm (A-105)
				51830660	220 ohm (A-103)
Q101/Q201	50423590	2SC900UA	R145/R245	51831220	47k ohm
Q102/Q202	50423590	2SC900UA	R146/R246	51831280	82k ohm
Q103/Q203	50424860	2SC536G	R147/R247	51831520	820k ohm
Q104/Q204	50424860	2SC536G	R148/R248	51830940	3.3k ohm
Q105/Q205	50424860	2SC536G	R149/R249	51830660	220 ohm
	<b>DIODES</b>		R150/R250	51831300	100k ohm
D101/D201	50422130	1N60	R151/R251	51830640	180 ohm
D102/D202	50422130	1N60	R152/R252	51831500	680k ohm
D103/D203	50422130	1N60	R153/R253	51830960	3.9k ohm
D301	51431080	Zener, RD-13EB3	R154/R254	51814900	2.2k ohm (A-105)
D302~D305	51430890	W03C		51812900	2.2k ohm (All except A-105)
	<b>RESISTORS</b>		R155/R255	51814820	1k ohm (A-105)
	<b>All resistors are rated ±5% tolerance, 1/4 watt and of carbon type unless otherwise noted.</b>			51812820	1k ohm (All except A-105)
			R301	50527370	390 ohm 1W Metal Film
R101/R201	51830920	2.7k ohm	R302	50527400	350 ohm 2W Incombustible
R102/R202	51830820	1k ohm	R303	50520290	100 ohm 5W
R103/R203	51830700	330 ohm	R304	50574420	22 ohm 1/2W
R104/R204	51831180	33k ohm	R305	50572940	3.3k ohm
R105/R205	51831050	10k ohm		<b>CAPACITORS</b>	
R106/R206	51830700	330 ohm	C101/C201	50598270	Polyst. 680 pfd 50V 10% (A-103)
R107/R207	51831260	68k ohm		50598150	Polyst. 220 pfd 50V 10% (All except A-103)
R108/R208	51831000	5.6k ohm	C102/C202	51700770	Elec. 10 mfd 16V
R109/R209	51831380	220k ohm	C103/C203	50547440	Dip. Mica 100 pfd 50V
R110/R210	51830700	330 ohm	C104/C204	50547420	Dip. Mica 47 pfd 50V
R111/R211	51830760	560 ohm	C105/C205	50555540	Elec. 47 mfd 50V
R112/R212	51831300	100k ohm	C106/C206	50548910	Mylar 0.0047 mfd 50V 5%
R113/R213	51830920	2.7k ohm	C107/C207	50554050	Elec. 10 mfd 16V
R114/R214	51830940	3.3k ohm	C108/C208	50554540	Elec. 1 mfd 50V
R115/R215	51831280	82k ohm	C109/C209	50548970	Mylar 0.018 mfd 50V 5%
R116/R216	51831160	27k ohm (A-107, A-106)	C110/C210	50554390	Elec. 220 mfd 16V
	51815160	27k ohm (A-105)	C111/C211	50554390	Elec. 220 mfd 16V
	51831180	33k ohm (A-103)	C112/C212	51703000	Dip. Tant. 0.33 mfd 35V
R117/R217	51831200	39k ohm	C113/C213	50554050	Elec. 10 mfd 16V
R118/R218	51831000	5.6k ohm	C114/C214	50554050	Elec. 10 mfd 16V
R119/R219	50516290	390 ohm 1/2W	C115/C215	50548920	Mylar 0.0056 mfd 50V 5%
R120/R220	50573360	180k ohm	C116/C216	50548990	Mylar 0.027 mfd 50V 5%
R121/R221	51831300	100k ohm	C117/C217	50548910	Mylar 0.0047 mfd 50V 5%
R122/R222	51831140	22k ohm	C118/C218	50554050	Elec. 10 mfd 16V
R123/R223	51831180	33k ohm	C119/C219	50554050	Elec. 10 mfd 16V
R124/R224	51830640	180 ohm	C120/C220	50554570	Elec. 100 mfd 10V
R125/R225	51830640	180 ohm	C121/C221	50547380	Mylar 0.047 mfd 50V 5%
R126/R226	51831220	47k ohm	C122/C222	50554050	Elec. 10 mfd 16V
R127/R227	51830940	3.3k ohm	C123/C223	50548040	Mylar 0.1 mfd 50V 10%
R128/R228	51831300	100k ohm	C124/C224	51703000	Dip. Tant. 0.33 mfd 35V
R129/R229	51830600	120 ohm	C125/C225	50549650	Elec. 0.47 mfd 25V (KU)
R130/R230	51831500	680k ohm	C126/C226	50554050	Elec. 10 mfd 16V
R131/R231	51831340	150k ohm	C127/C227	51700850	Elec. 0.47 mfd 50V (LR)
R132/R232	51831400	270k ohm			



## 2. POWER SUPPLY

REF. NO.	PARTS NO.	DESCRIPTION
C128/C228	50598150	Polyst. 220 pfd 50V 10%
C129/C229	50548870	Mylar 0.015 mfd 50V 5%
C130/C230	50548980	Mylar 0.022 mfd 50V 5%
C131/C231	50548870	Mylar 0.015 mfd 50V 5%
	50548980	(A-103) Mylar 0.022 mfd 50V 5% (All except A-103)
C132/C232	50554050	Elec. 10 mfd 16V
C133/C233	50554050	Elec. 10 mfd 16V
C134/C234	50554540	Elec. 1 mfd 50V
C135/C235	50547420	Dip. Mica 47 pfd 50V
C136/C236	50554540	Elec. 1 mfd 50V
C137/C237	50554540	Elec. 1 mfd 50V
C138/C238	50554540	Elec. 1 mfd 50V
C139/C239	50547420	Dip. Mica 47 pfd 50V
C140/C240	50547420	Dip. Mica 47 pfd 50V
C301	50554540	Elec. 1 mfd 50V
C302	51700110	Elec. 1000 mfd 35V
C303	50554420	Elec. 470 mfd 25V
C304	50555580	Elec. 1000 mfd 25V

### VARIABLE RESISTORS

R135/R235	51500970	Semi-fixed, 5k ohm - B
R180/R280	51501060	Semi-fixed, 100k ohm - B
R181/R281	51500570	Semi-fixed, 50k ohm
R182/R282	51500570	Semi-fixed, 50k ohm - B
R183/R283	51501980	100k ohm - A

### TRIMMER CAPACITORS

PC301	51700390	180 pfd max.
PC302	51700450	90 pfd max.
PC303	51700390	180 pfd max.
PC304	51700450	90 pfd max.

### COILS

L101/L201	50566550	Trap, 12 mH
L102/L202	50566350	Record EQ, 8 mH

### TRANSFORMERS

T101/T201	51520740	Output, 3k ohm : 8 ohm
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### MISCELLANEOUS

S301	51310290	Switch, Slide 16PDT
S302	51340400	Switch, Push 4PDT
S303	51340410	Switch, Push 4PDT
S304, S305	51340400	Switch, Push 4PDT
J101/J201	51240390	Jack, Mic
J102	51240400	Jack, Phone
FIL101/FIL201	51600400	Filter, Low-pass; 19 kHz
CN301	51220100	Connector, Plug 6P
CN302	51222790	Connector, Plug 3P
	50400910	OSC Unit, 100 kHz
	51817670	Jumper (2 used)
	51817630	Jumper (27 used)
	57240420	Pin, F3 type (4 used)
	51675430	PC Board, Shield
	51675440	PC Board, Jumper (2 used)

REF. NO.	PARTS NO.	DESCRIPTION
	51685451	PC Board Assy (A-105, A-103)
	51685630	PC Board Assy (A-107, A-106)
	51675450	PC Board

### TRANSISTORS

Q401/Q402	50424860	2SC536G
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### SCR

SCR401	51430900	2P1M
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### DIODES

D401~D407	51430890	W03C
D408	50425170	1S2473VE
D409	51430890	W03C

### RESISTORS

All resistors are rated  $\pm 5\%$  tolerance, 1/4 watt and of carbon type unless otherwise noted.

R401	50527340	1.2k ohm 2W Metal Film
R402	50571120	18k ohm
R403	50571000	5.6k ohm
R404	50570820	1k ohm
R405, R406	50570660	220 ohm
R407, R408	50571220	47k ohm
R409	50571300	100k ohm
R410	50571140	22k ohm
R411	50571500	680k ohm (A-107, A-106)
R412	50570820	1k ohm (A-107, A-106)
R417	50571020	6.8k ohm
R418	51818080	2.2 ohm Incombustible (A-107, A-105)
R419	50527130	330 ohm 2W Metal Film

### CAPACITORS

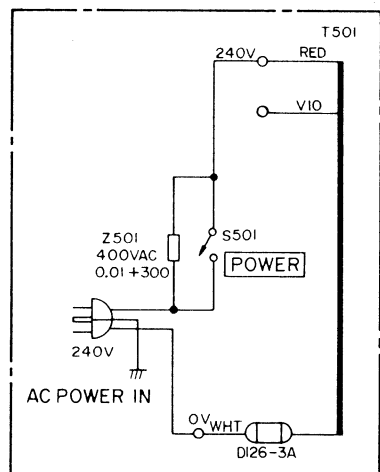
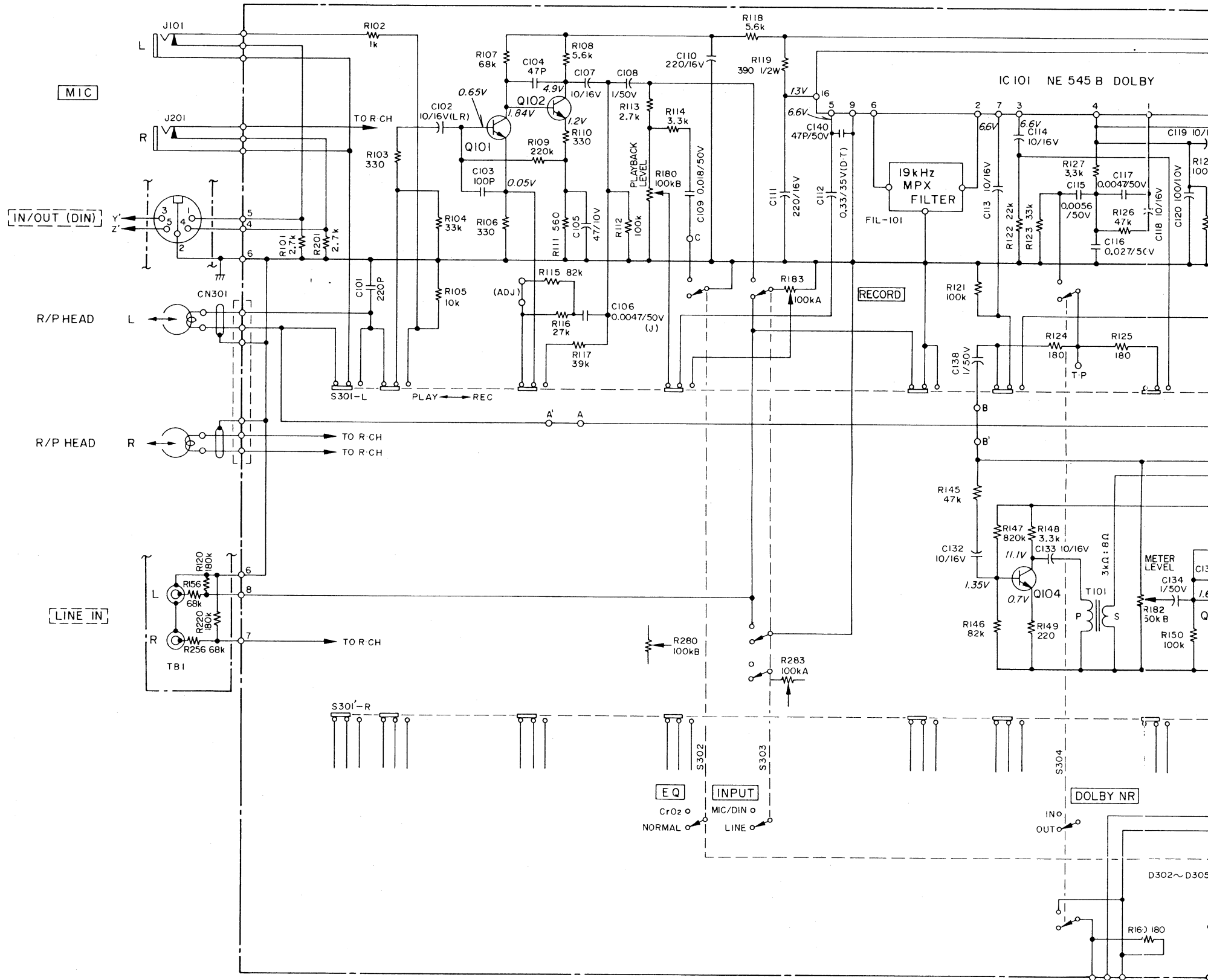
C401	50555580	Elec. 1000 mfd 25V
C402	50548020	Mylar 0.01 mfd 50V 10%
C403	50554600	Elec. 470 mfd 6.3V
C404	50554240	Elec. 33 mfd 10V
C405	50548320	Mylar 0.001 mfd 50V 10%
C406	50554230	Elec. 100 mfd 6.3V
C407	50559420	Elec. 1 mfd 50V (BP) (A-107, A-106)
C412	50555580	Elec. 1000 mfd 25V
Z410	50529050	Spark Killer 0.1 mfd+ 120 ohm 400V AC

### MISCELLANEOUS

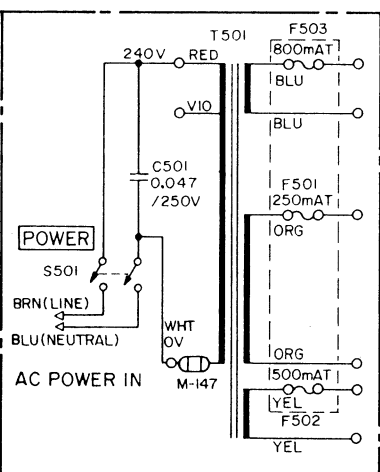
S401	51310300	Switch, Slide 6PDT
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(Continued on page- 9 )

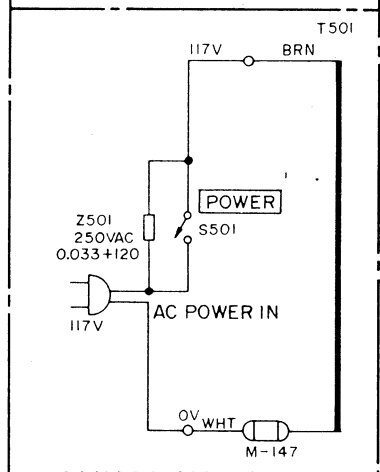
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4 - 42	*51280340	Cord, AC Power	GENERAL EXPORT
	*51280170	Cord, AC Power	EUROPE
	*51280360	Cord, AC Power	U.K.
	*51280310	Cord, AC Power	AUSTRALIA
4 - 43	*55800040	Washer, Aluminum	
4 - 44	51675410	PC Board, A	Part of 4 - 30
4 - 45	51675420	PC Board, B	Part of 4 - 30
4 - 46	*55446870	Shaft, Var. Res.	A-107, A-106
4 - 47	*55344520	Adapter, Shaft	A-107, A-106
4 - 48	51340740	Switch, Push	A-107, A-106
4 - 49	*55551481	Bracket, Push Switch	A-107, A-106
4 - 50	*55342960	Button, Push Switch	A-107, A-106
4 - 51	*55340841	Clamper, Power Cord	EUROPE, U.K.
4 - 52	*55550640	Bracket, Clamper	EUROPE, U.K.
4 - 53	*55550600	Bracket, B	GENERAL EXPORT, EUROPE, U.K.
4 - 54	*55550620	Plate, Selector; A	GENERAL EXPORT
4 - 55	*51675480	PC Board, Voltage Selector	GENERAL EXPORT
4 - 56	*51685460	PC Board Assy, Fuse	EUROPE, U.K.
	*51675460	PC Board, Fuse	EUROPE, U.K.
	*51420870	Holder, Fuse	EUROPE, U.K.
	*51420880	Fuse, 250 mA T	EUROPE, U.K.
	*50411380	Fuse, 500 mA T	EUROPE, U.K.
	*51421860	Fuse, 800 mA T	EUROPE, U.K.
4 - 57	*55800030	Washer, Fiber	A-107, A-105



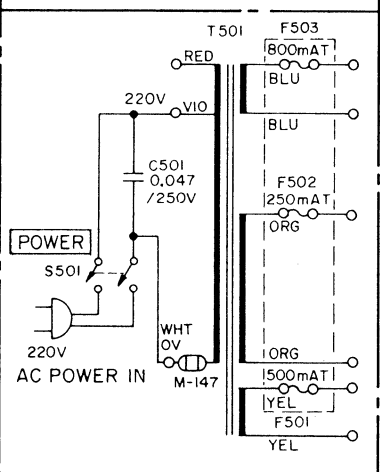
AUSTRALIA MODEL



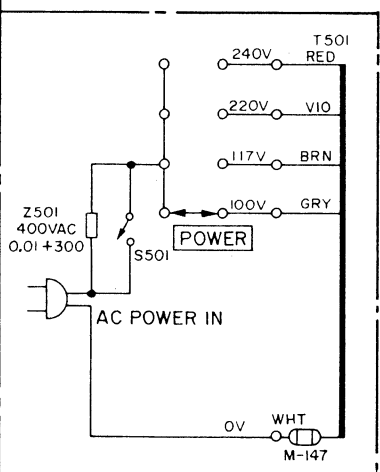
U.K. MODEL



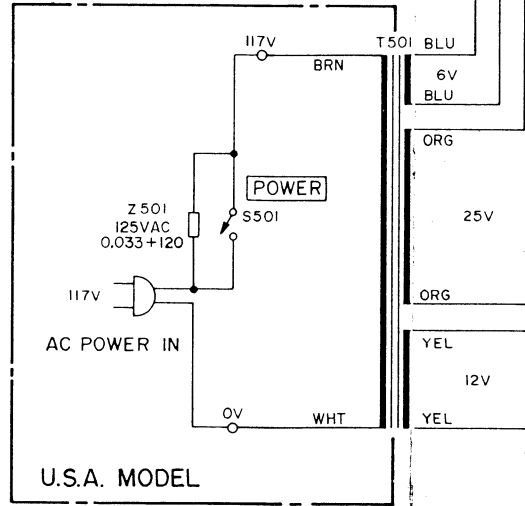
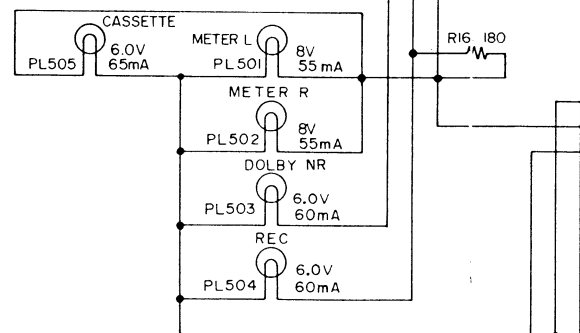
CANADA MODEL



EUROPE MODEL

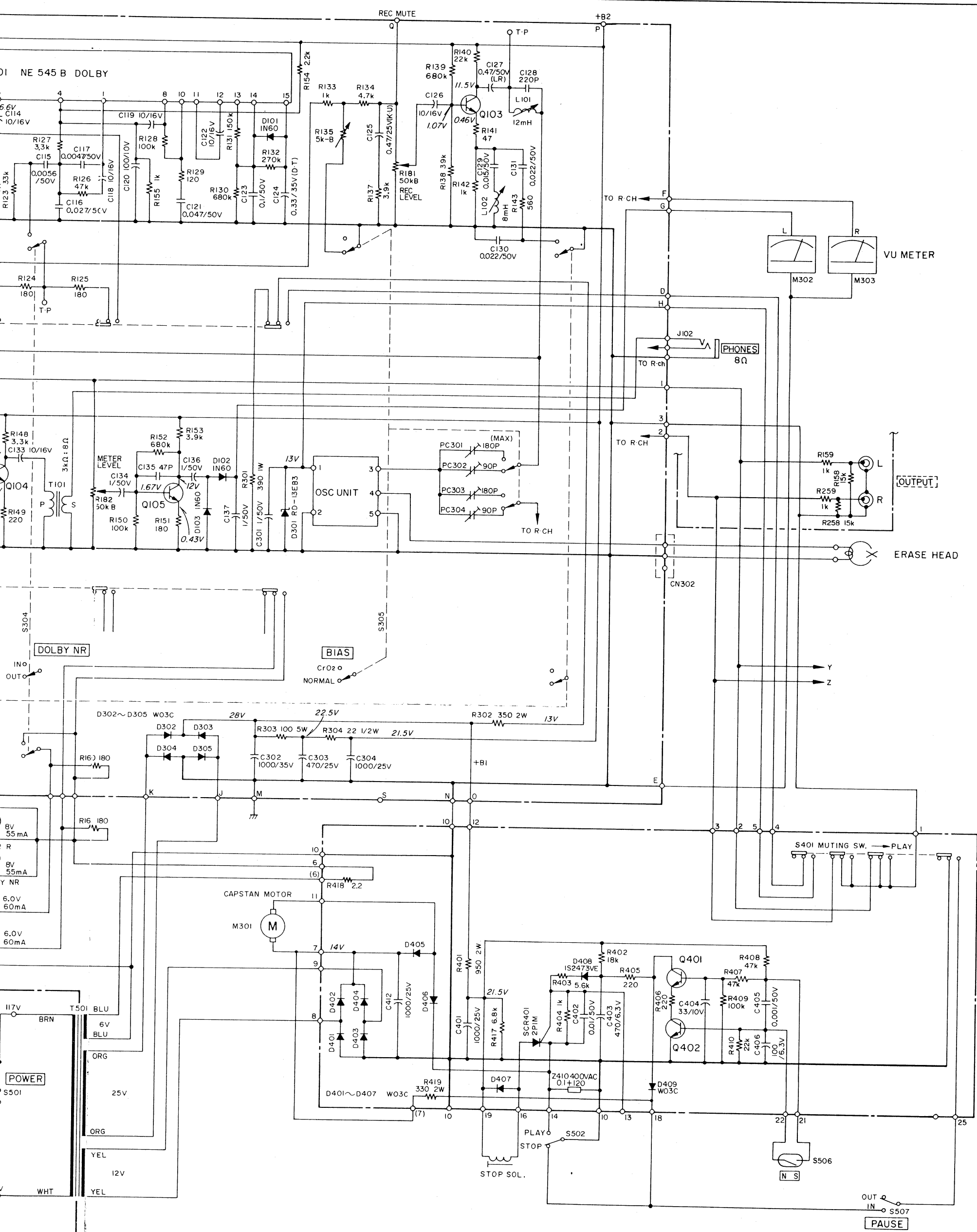


GENERAL EXPORT MODEL



U.S.A. MODEL

REF. NO.  
 Q101 / Q2  
 Q102 / Q2  
 Q103 / Q2  
 Q104 / Q2  
 Q105 / Q2  
 Q401 / Q4



REF.NO.	DESCRIPTION
Q101 / Q201	2SC900UA
Q102 / Q202	2SC900UA
Q103 / Q203	2SC945LK or 2SC536G
Q104 / Q204	2SC945LK or 2SC536G
Q105 / Q205	2SC945LK or 2SC536G
Q401 / Q402	2SC945LK or 2SC536G

NOTES

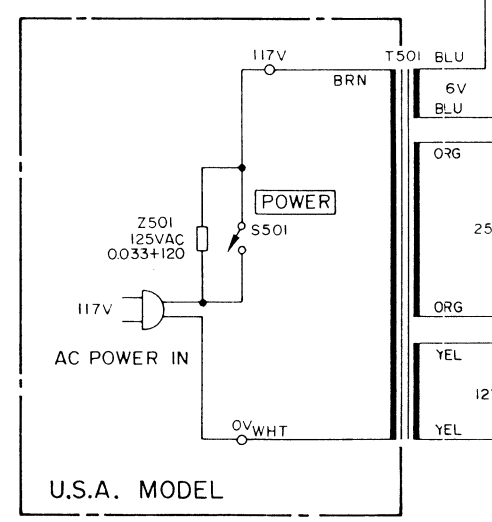
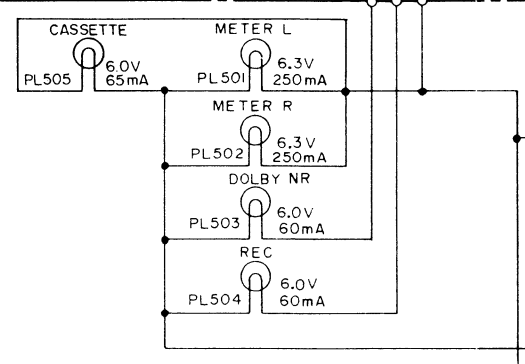
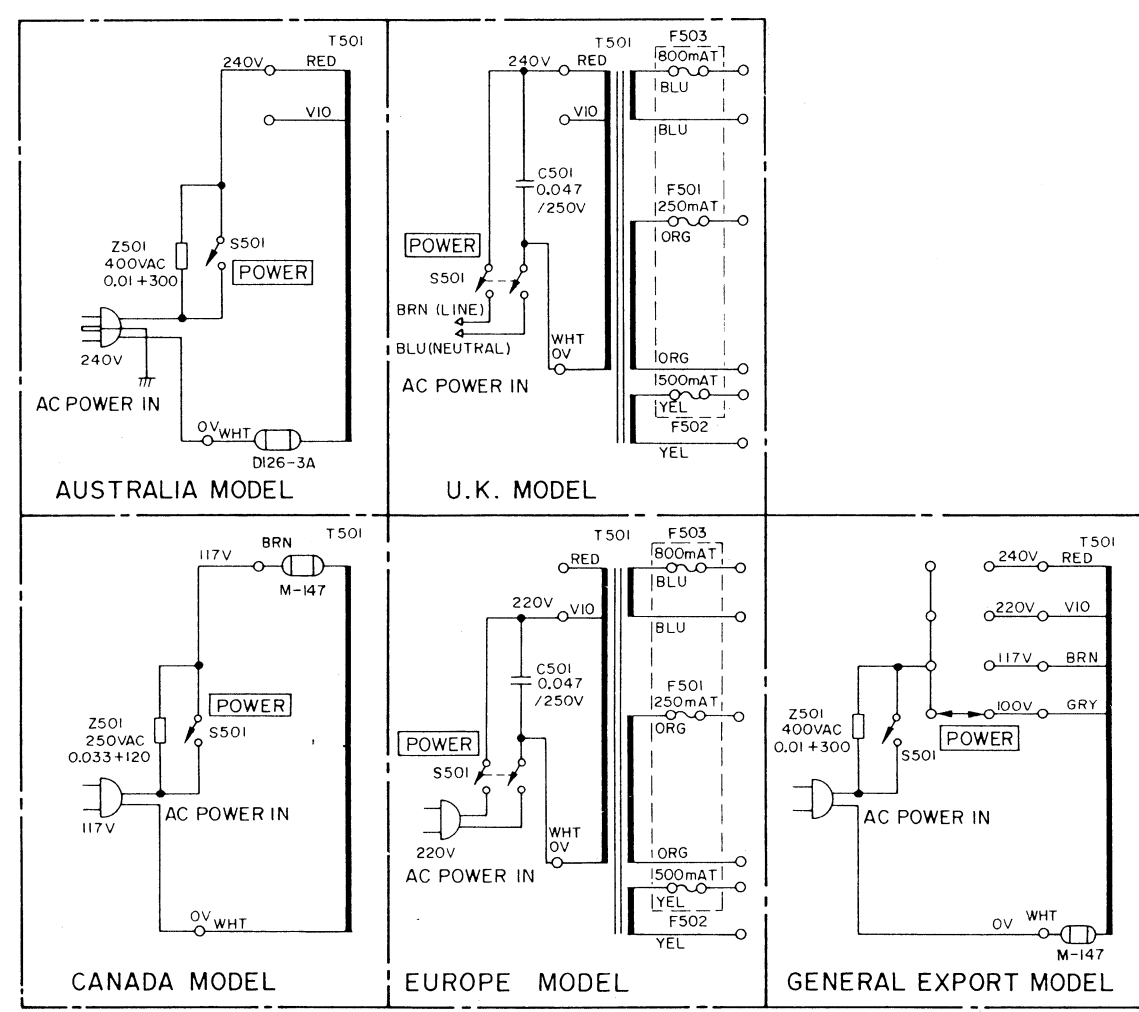
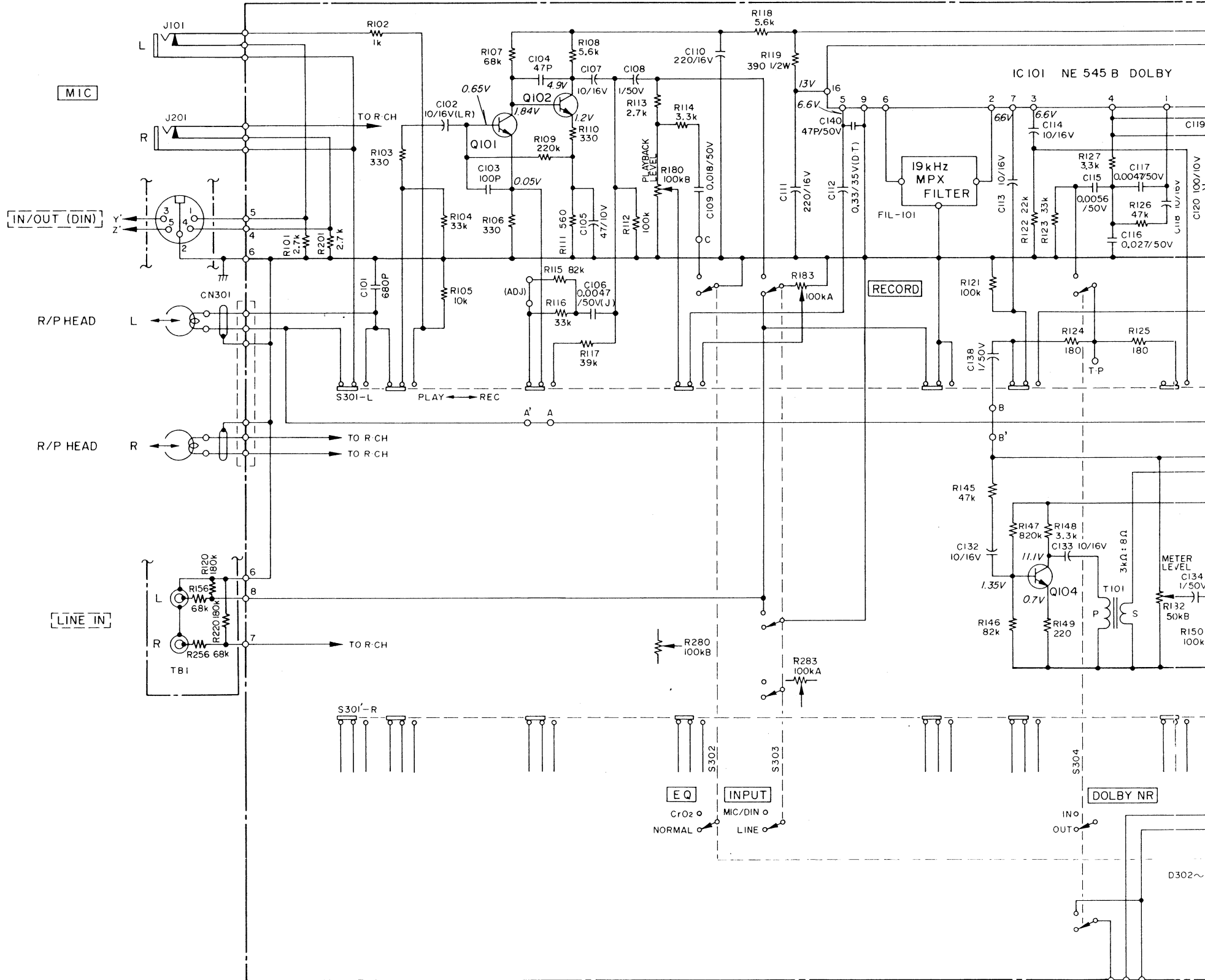
- ALL RESISTORS ARE 1/4 WATT, 5%, UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K=1,000 OHMS, M=1,000,000 OHMS).
- ALL CAPACITOR VALUES ARE IN MICROFARADS (P=PICOFARADS).
- SCHEMATIC DIAGRAM SHOWN FOR LEFT CHANNEL EXCEPT FOR SOME OF THE COMPONENTS.
- DC VOLTAGES WERE MEASURED DURING RECORD PAUSE MODE.

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1	09-77	CB-046
REVISION	DATE	CHANGE NO.

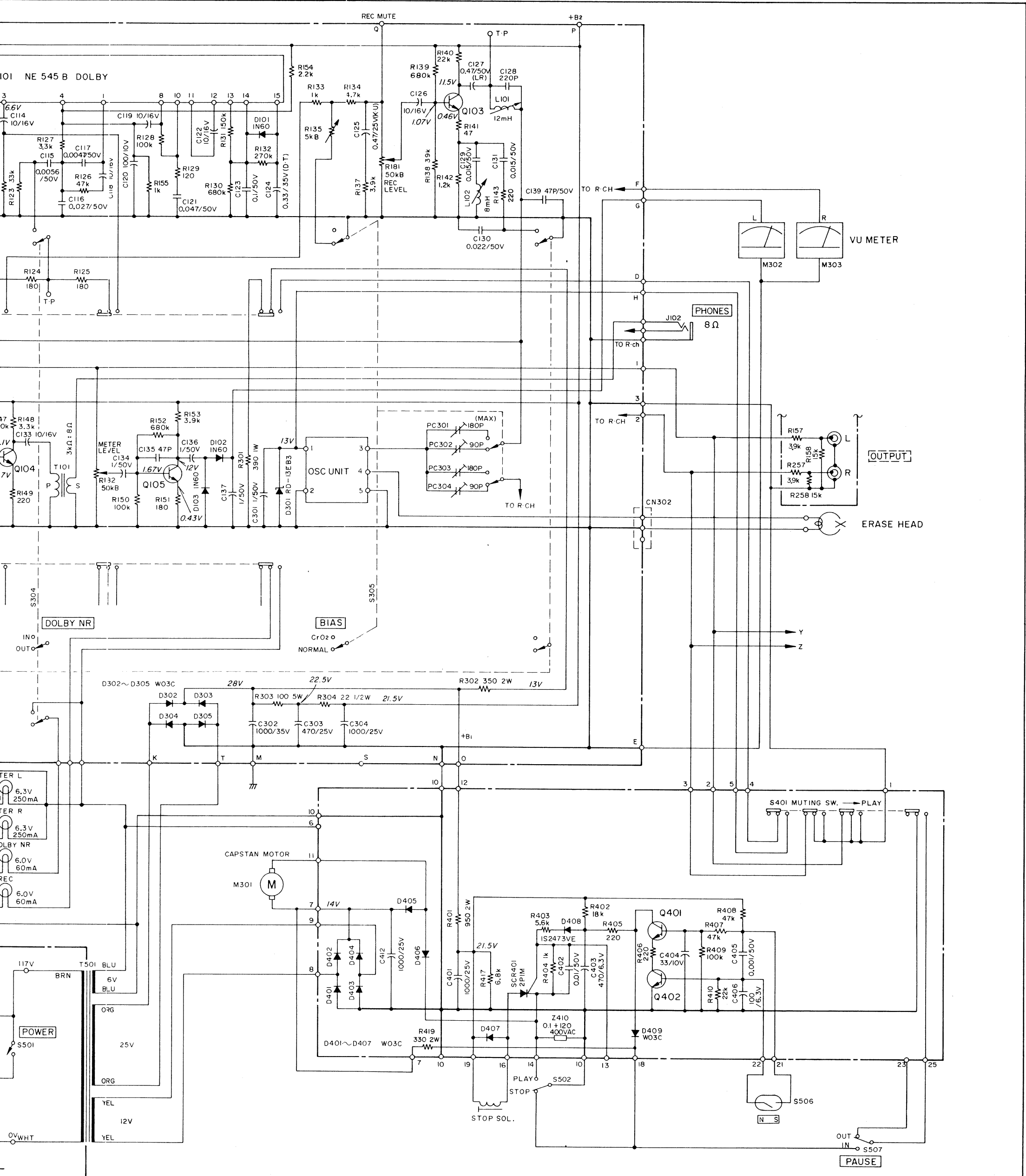
S-191

**STEREO CASSETTE DECK**  
MODEL NO. **A-105** SHEET NO. 1

**TEAC CORPORATION**



R.F. NO.  
 Q101 / Q2  
 Q102 / Q2  
 Q103 / Q2  
 Q104 / Q2  
 Q105 / Q2  
 Q101 / Q4



REF.NO.	DESCRIPTION
Q101 / Q201	2SC900UA
Q102 / Q202	2SC900UA
Q103 / Q203	2SC945LK or 2SC5366
Q104 / Q204	2SC945LK or 2SC5366
Q105 / Q205	2SC945LK or 2SC5366
Q101 / Q402	2SC945LK or 2SC5366

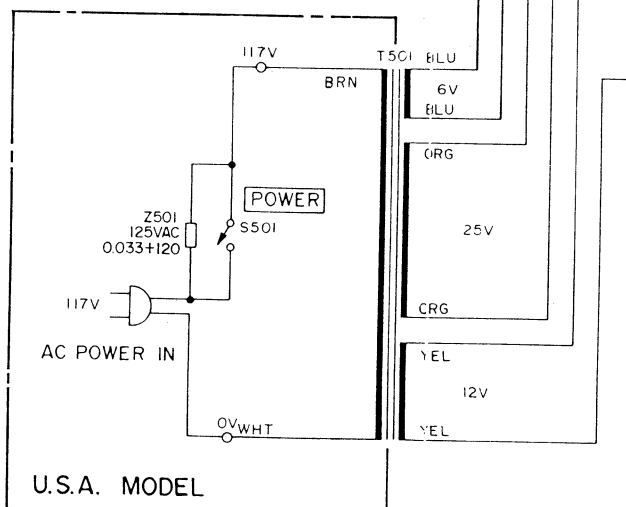
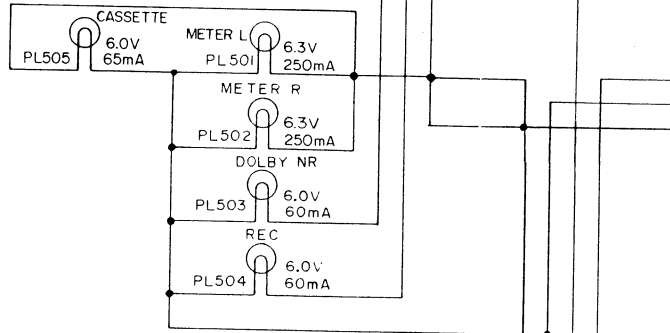
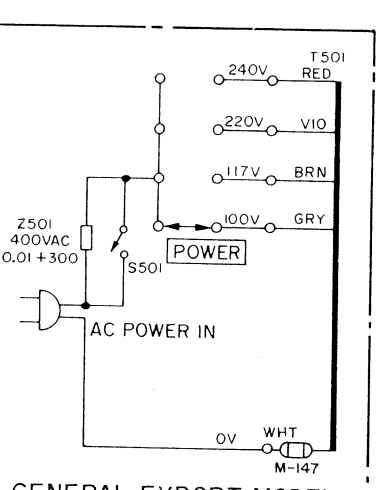
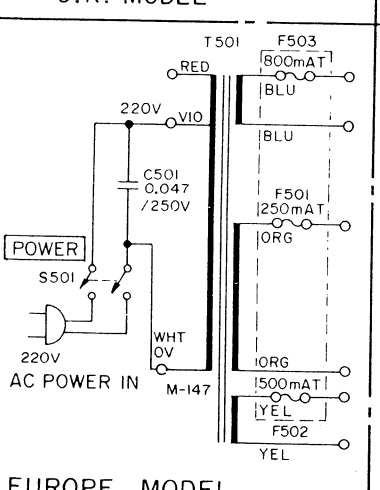
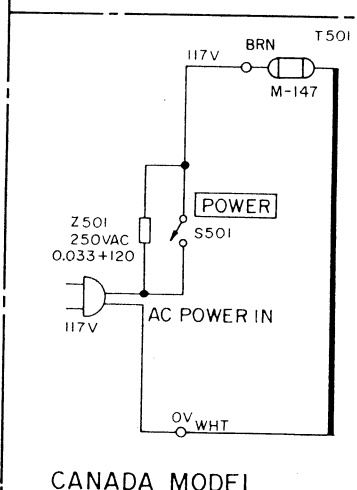
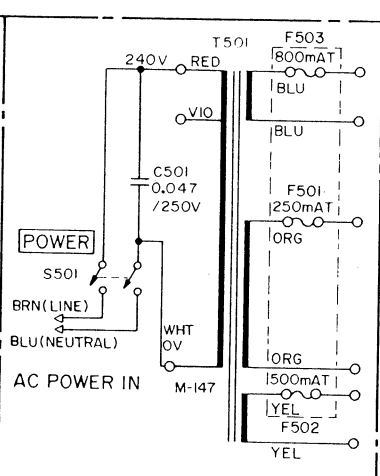
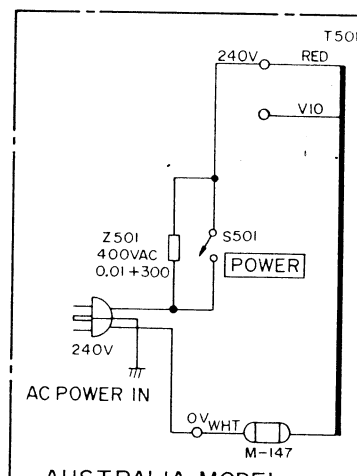
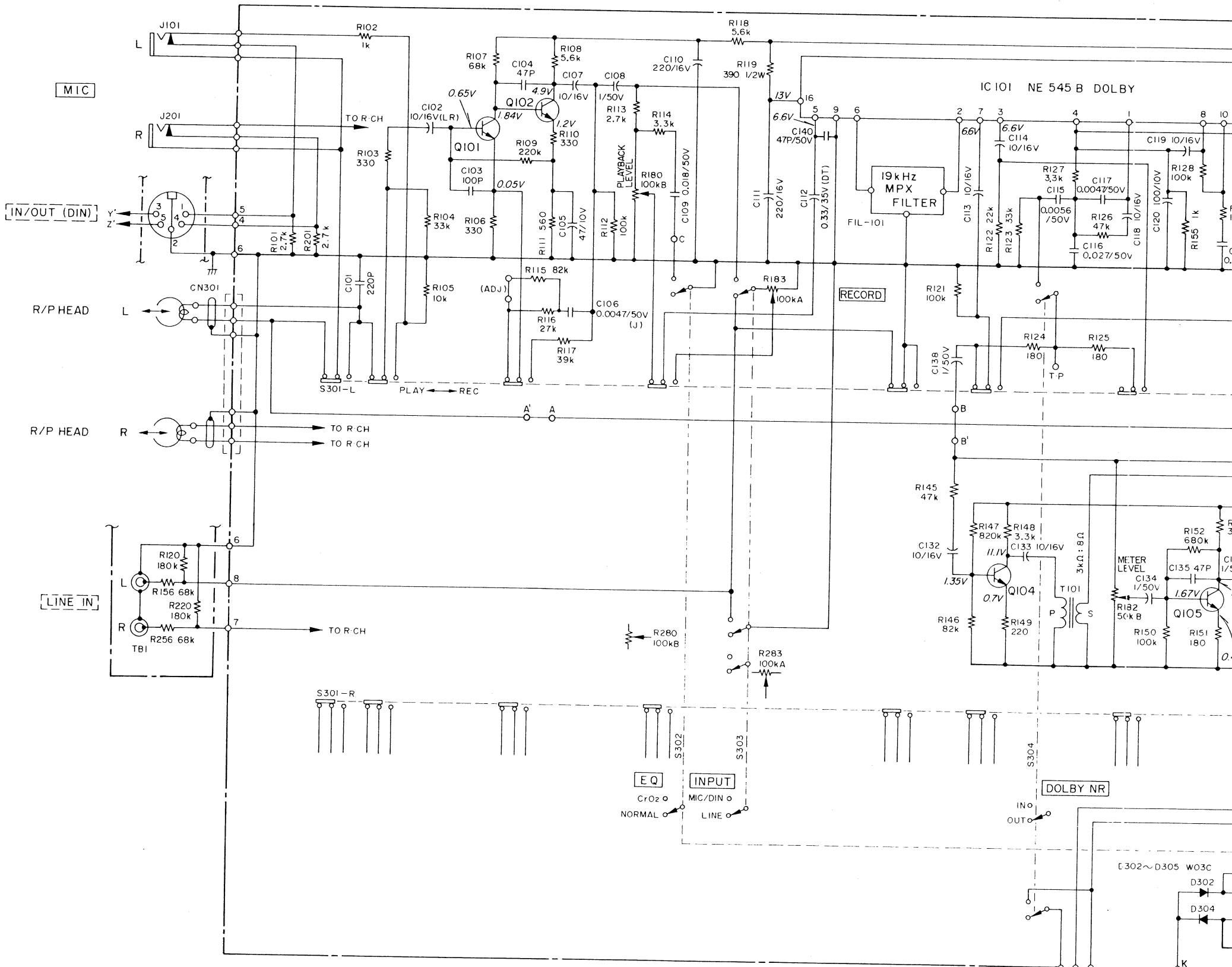
- NOTES
- ALL RESISTORS ARE 1/4 WATT, 5% UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K=1,000 OHMS, M=1,000,000 OHMS).
  - ALL CAPACITOR VALUES ARE IN MICROFARADS (P=PICOFARADS).
  - SCHEMATIC DIAGRAM SHOWN FOR LEFT CHANNEL EXCEPT FOR SOME OF THE COMPONENTS.
  - DC VOLTAGES WERE MEASURED DURING RECORD PAUSE MODE.

S-192

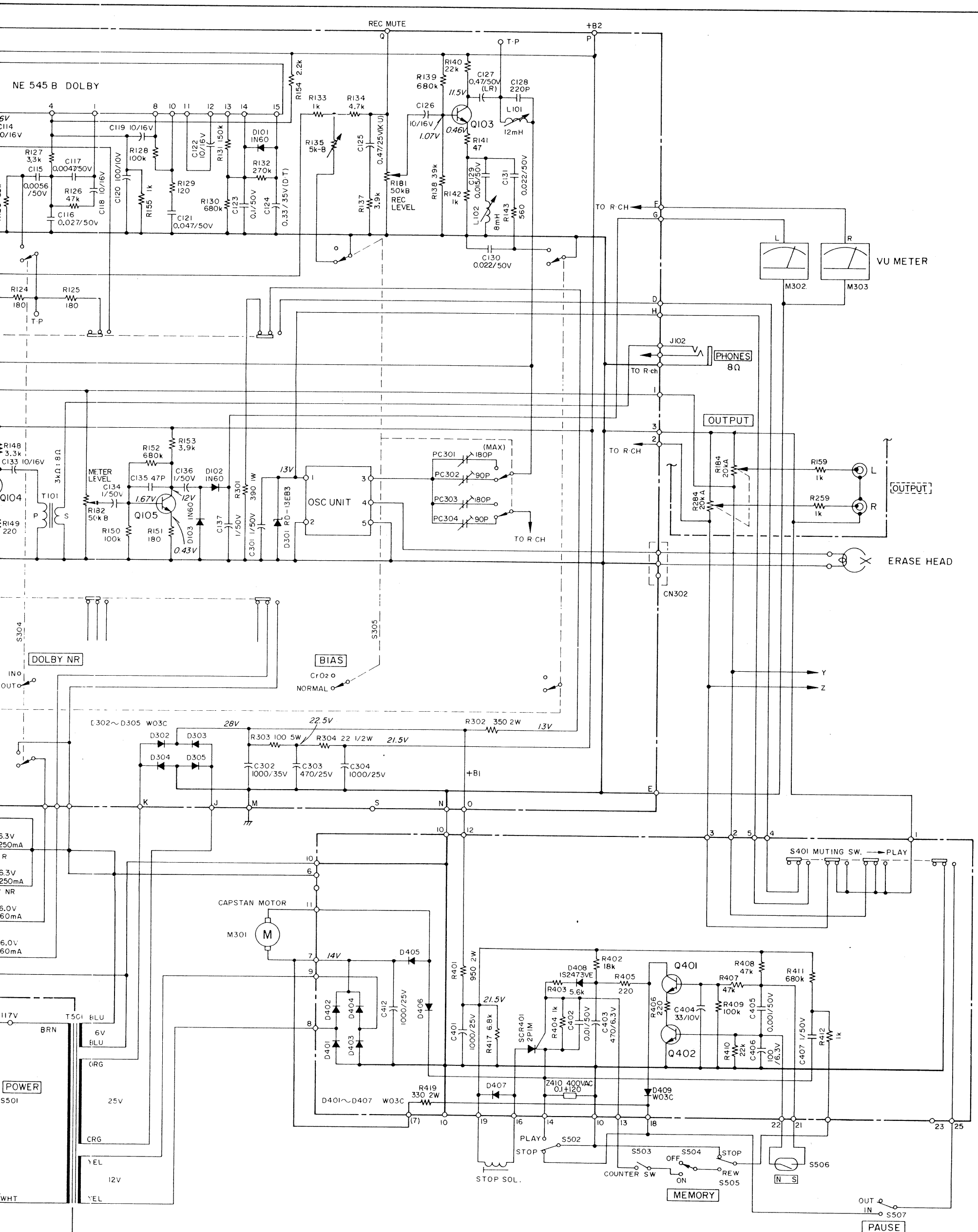
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1	05-77	

**STEREO CASSETTE DECK**  
 MODEL NO. **A-103**  
 SHEET NO. 1

**TEAC CORPORATION**



REF. NO.	DESC
Q101/Q201	2SC900
Q102/Q202	2SC900
Q103/Q203	2SC945
Q104/Q204	2SC945
Q105/Q205	2SC945
Q401/Q402	2SC945



REF. NO.	DESCRIPTION
Q101 / Q201	2SC900UA
Q102 / Q202	2SC900UA
Q103 / Q203	2SC945LK or 2SC536G
Q104 / Q204	2SC945LK or 2SC536G
Q105 / Q205	2SC945LK or 2SC536G
Q401 / Q402	2SC945LK or 2SC536G

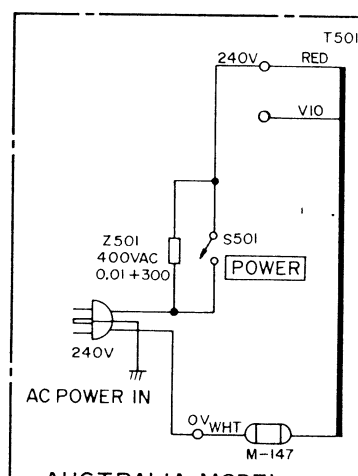
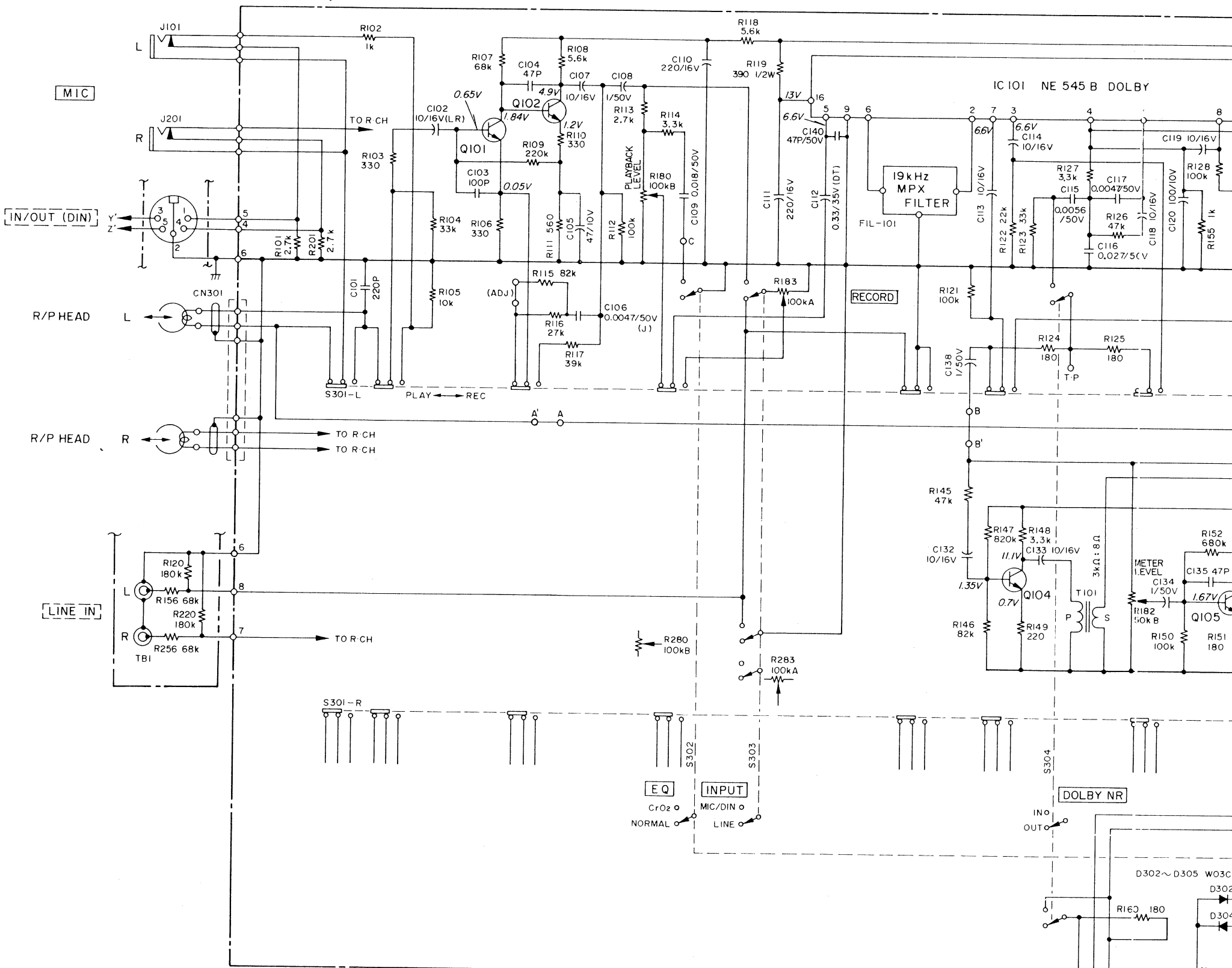
- NOTES**
- ALL RESISTORS ARE 1/4 WATT, 5%, UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (k=1,000 OHMS, M=1,000,000 OHMS).
  - ALL CAPACITOR VALUES ARE IN MICROFARADS (p=PICOFARADS).
  - SCHEMATIC DIAGRAM SHOWN FOR LEFT CHANNEL EXCEPT FOR SOME OF THE COMPONENTS.
  - DC VOLTAGES WERE MEASURED DURING RECORD PAUSE MODE.

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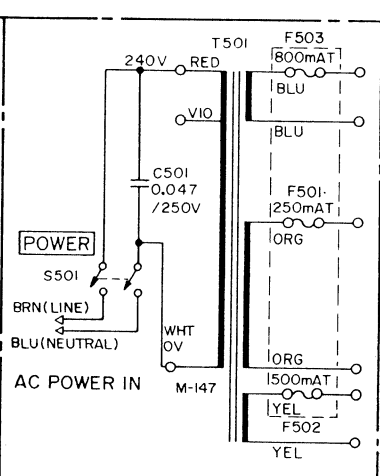
**STEREO CASSETTE DECK**  
 MODEL NO. **A-106**  
 SHEET NO.

**TEAC CORPORATION**

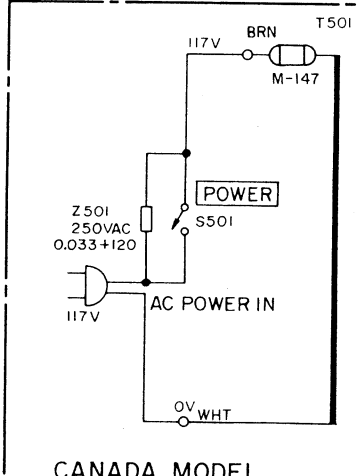




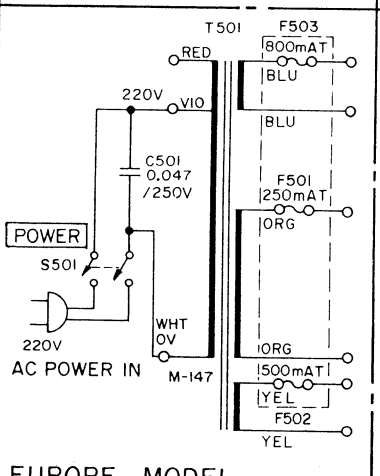
AUSTRALIA MODEL



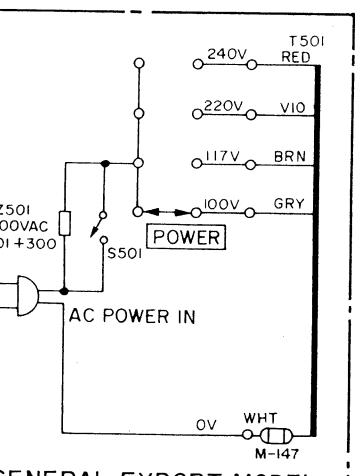
U.K. MODEL



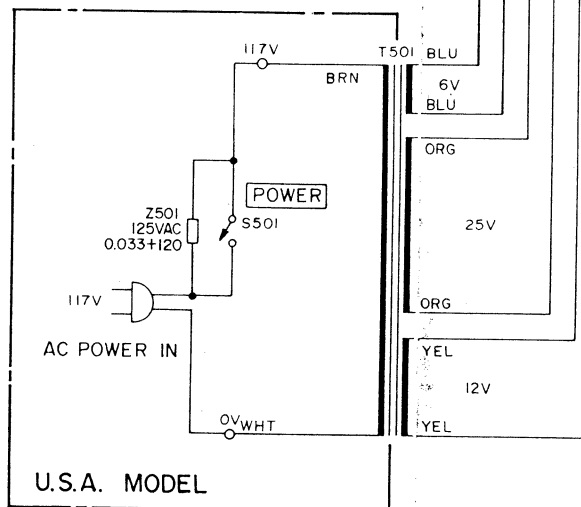
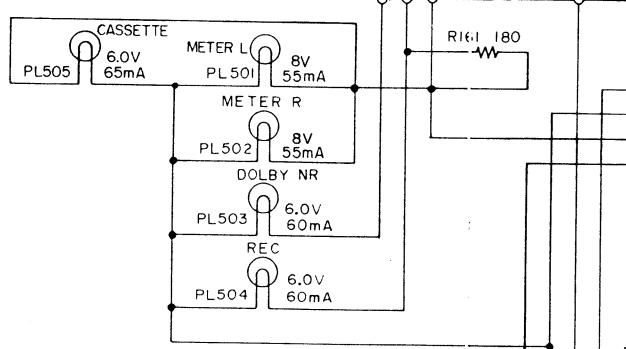
CANADA MODEL



EUROPE MODEL

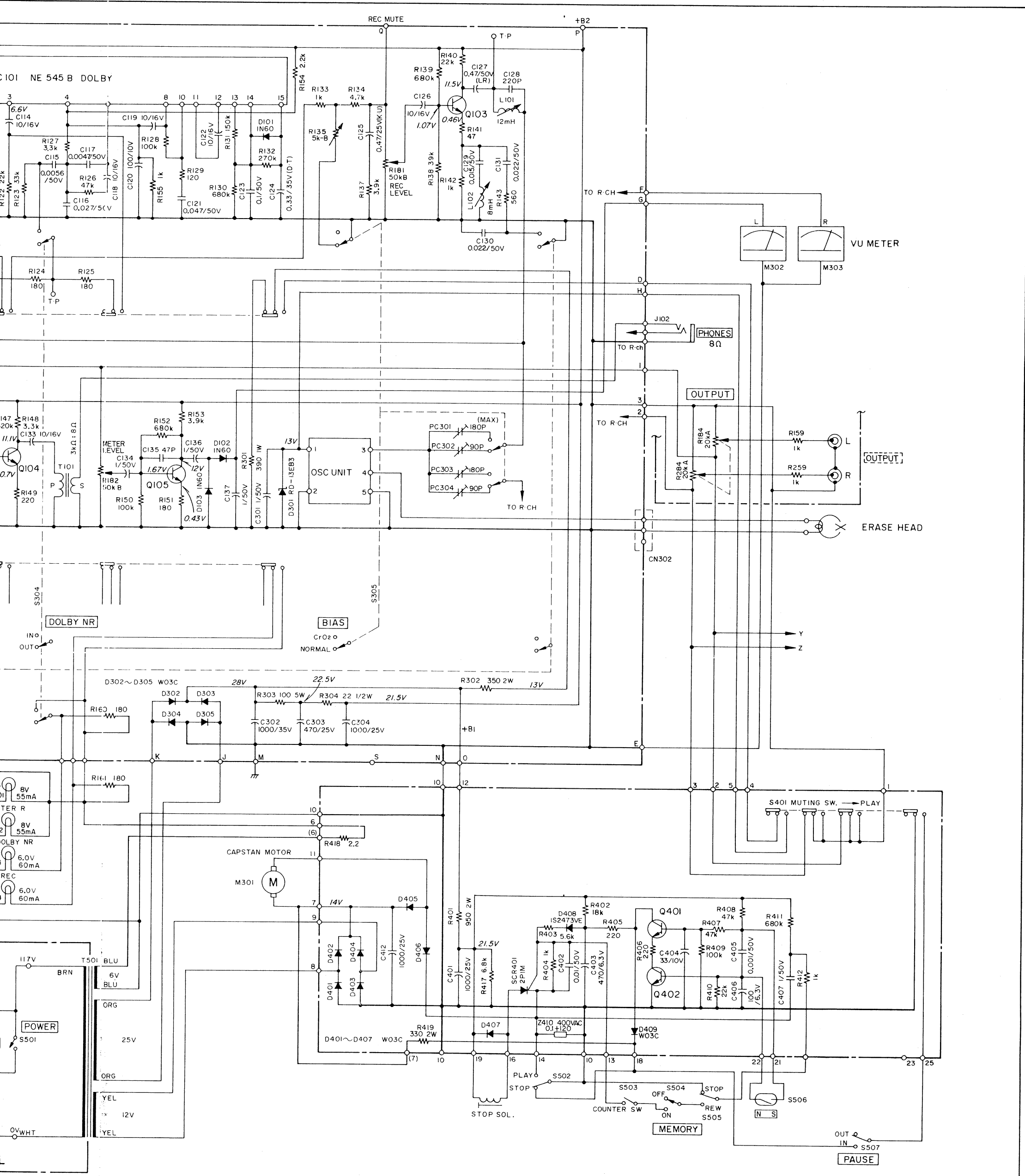


GENERAL EXPORT MODEL



U.S.A. MODEL

REF. NO.	Value
Q101 / Q201	2S
Q102 / Q202	2S
Q103 / Q203	2S
Q104 / Q204	2S
Q105 / Q205	2S
Q401 / Q402	2S



REF. NO.	DESCRIPTION
Q101 / Q201	2SC900UA
Q102 / Q202	2SC900UA
Q103 / Q203	2SC945LK or 2SC536G
Q104 / Q204	2SC945LK or 2SC536G
Q105 / Q205	2SC945LK or 2SC536G
Q401 / Q402	2SC945LK or 2SC536G

- NOTES
- ALL RESISTORS ARE 1/4 WATT, 5%, UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (k=1,000 OHMS, M=1,000,000 OHMS).
  - ALL CAPACITOR VALUES ARE IN MICROFARADS (p=PICOFARADS).
  - SCHEMATIC DIAGRAM SHOWN FOR LEFT CHANNEL EXCEPT FOR SOME OF THE COMPONENTS.
  - DC VOLTAGES WERE MEASURED DURING RECORD PAUSE MODE.

REVISION	DATE	CHANGE NO.
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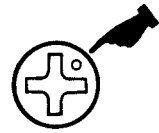
S-190

**STEREO CASSETTE DECK**  
MODEL NO. **A-107** SHEET NO. 1

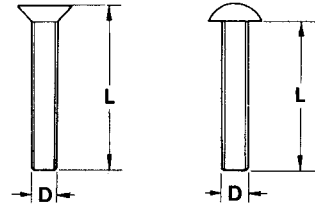
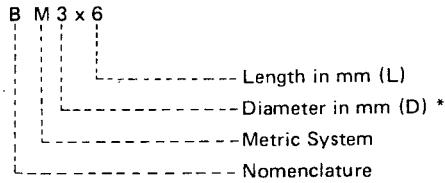
**TEAC CORPORATION**

# ASSEMBLING HARDWARE CODING LIST

All screws conform to ISO standards, and have crossrecessed heads, unless otherwise noted. ISO screws have the head inscribed with a point as in the figure to the right.



FOR EXAMPLE:



\* Inner dia. for washers and nuts

	Code	Name	Type		Code	Name	Type
MACHINE SCREW	<b>R</b>	Round Head Screw		TAPPING SCREW	<b>BTA</b>	Binding Head Tapping Screw(A Type)	
	<b>P</b>	Pan Head Screw			<b>BTB</b>	Binding Head Tapping Screw(B Type)	
	<b>T</b>	Stove Head Screw (Truss)			<b>RTA</b>	Round Head Tapping Screw(A Type)	
	<b>B</b>	Binding Head Screw			<b>RTB</b>	Round Head Tapping Screw(B Type)	
	<b>F</b>	Flat Countersunk Head Screw		SETSCREW	<b>SF</b>	Hex Socket Setscrew(Flat Point)	
	<b>O</b>	Oval Countersunk Head Screw			<b>SC</b>	Hex Socket Setscrew(Cup Point)	
WOOD SCREW	<b>RW</b>	Round Head Wood Screw			<b>SS</b>	Slotted Socket Setscrew(Flat Point)	
	<b>FW</b>	Flat Countersunk Wood Screw		WASHER	<b>E</b>	E-Ring (Retaining Washer)	
	<b>OW</b>	Oval Countersunk Wood Screw			<b>W</b>	Flat Washer (Plain)	
SEMS SCREW	<b>BSA</b>	Binding Head SEMS Screw(A Type)			<b>SW</b>	Lock Washer (Spring)	
	<b>BSB</b>	Binding Head SEMS Screw(B Type)			<b>LWI</b>	Lock Washer (Internal Teeth)	
	<b>BSF</b>	Binding Head SEMS Screw(F Type)			<b>LWE</b>	Lock Washer (External Teeth)	
	<b>PSA</b>	Pan Head SEMS Screw(A Type)		<b>TW</b>	Trim Washer (Countersunk)		
	<b>PSB</b>	Pan Head SEMS Screw(B Type)		NUT	<b>N</b>	Hex Nut	

**A-107/A-106/A-105/A-103** Stereo Cassette Deck with Dolby System

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**TEAC.**

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