



TASCAM

TEAC Professional Division

*Note: If the fuse for
P.C. B. 2 blows (4amps)
the spooling - will act strange
machine will go to pause when
you press play etc;*

3030

Stereo Tape Deck

NOTES

As regards the resistors and capacitors, refer to the circuit diagrams and the PCB ass'y drawings contained in this manual.

- * Parts marked with * require longer delivery time.
- * Resistor values are in ohms (k = 1,000 ohms, M = 1,000,000 ohms).
- * All capacitor values are in microfarads (p = picofarads).
- * $\triangle$ Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the TEAC Parts List and ensure exact replacement.
- * 0 dB is referenced to 1V in this manual unless otherwise specified.
- * PC boards shown viewed from foil side.
- * Parts not shown in the parts lists or parts, through listed, having no parts numbers are not general "ready-to-supply" parts.

- dbx Noise Reduction system made under license from dbx, Incorporated. The name "dbx" and the dbx symbol are trademarks of dbx, Incorporated.

注意

標準の抵抗：コンデンサーは省略してあります。回路図及び基板図を参照してください。

1. プリント基板図はパターン面が示されています。
2. *印の部品は納期が若干かかります。あらかじめご了承ください。
3. $\triangle$ 印は安全規格重要部品です。交換するときは必ずティアック指定の部品を使用して下さい。
4. レベルは0dB = 1Vを基準にしています。
5. コンデンサの単位は μF , pF ($1\mu F = 1,000,000pF$)
6. 製品が改善されているために、製品と回路図が一部異っている場合があります。
7. リストされていない部品は原則としてサービス供給部品として取扱っていません。

- dbxおよびdbxマークはdbxインコーポレーテッドの登録商標です。
- dbxシステムはdbxインコーポレーテッドの実施権に基づいて製造されています。

1 SPECIFICATIONS AND SERVICE DATA

仕様とサービス・データ

MECHANICAL CHARACTERISTICS

Tape Format 2-track, 2-channel recording/
reproduce

4-track, 2-channel reproduce

Max. Reel Size 10-1/2", NAB hub

Tape Speed 38 cm/s (15 ips) and 19 cm/s
(7.5 ips)

Speed Accuracy ± 0.5 % deviation

Pitch Control ± 6 %

Wow and Flutter ± 0.07 % peak weighted

(DIN 45507) at 15 ips,

± 0.08 % peak weighted

(DIN 45507) at 7.5 ips

Fast Wind Time approx. 100 sec. for
1,800 ft.

Motors

Capstan FG servo DC motor

Reel 2 DC slotless motors

Head Configuration 4 heads; 2-track

2-channel erase, record, reproduce
and 4-track 2-channel reproduce

Dimensions 432 x 456 x 268 mm (17" x
17-5/16" x 10-9/16")

Weight (net) 21 kg (46-5/16 lbs)

ELECTRICAL CHARACTERISTICS

Mic Input

Input Impedance 10 kohms, balanced

Applicable Mic Impedance 200 ohms or
more

Minimum Input Level -72 dBV
(0.25 mV)

Line Input

Balanced / Unbalanced

Input Impedance

10 kohms/ 50 kohms

Maximum Source Impedance

2 kohms/10 kohms

Nominal Input Level

+4 dBm (1.23 V)/ -10 dBV (0.3 V)

Maximum Input Level

+28 dBm (19.5 V)/ +18 dBV (8.0 V)

Line Output

Balanced / Unbalanced

Output Impedance

100 ohms/ 500 ohms

Minimum Load Impedance

600 ohms/ 3 kohms

Nominal Load Impedance

10 kohms/ 10 kohms

Nominal Output Level

+4 dBm (1.23 V)/ -10 dBV (0.3 V)

Maximum Output Level

+28 dBm (19.5 V)/ +18 dBV (8.0 V)

Headphone Output Level

(where applicable)

50 mW max. into 8 ohms

Bias Frequency 150 kHz

Equalization 3,180 + 50 μ s at 15 ips and
7.5 ips

Operating Level 320 nWb/m or 250 nWb/m
switchable

Power Requirements

USA/CANADA 120 V AC, 60 Hz

U.K./AUSTRALLIA 240 V AC, 50 Hz

EUROPE 220 V AC, 50 Hz

GENERAL EXPORT 100/120/220/240

V AC, 50/60 Hz

Power Consumption 120 Watts

TYPICAL PERFORMANCE

Frequency Response

(Record/Reproduce) 40 Hz - 22 kHz

± 2 dB (0 VU, 15 ips)

30 Hz - 20 kHz ± 2 dB

(-10 VU, 7.5 ips)

Total Harmonic Distortion (THD)

0.6 % at 0 VU, 1 kHz

Signal-to-Noise Ratio (overall) (Referenced

3 % THD at 1 kHz)

dbx-in 98 dB (NAB A Weighted) at 15
and 7.5 ips

dBx-out 68 dB (NAB A Weighted) at
15 and 7.5 ips

Adjacent Channel Crosstalk better than
55 dB (1 kHz)

Erase better than 70 dB (1 kHz, +10 VU)

In these specifications, 0 dBm is referenced
to 0.775 Volt. 0 dBV is referenced to
1.0 Volt. Actual voltage levels are also given
in parentheses.

Changes in specifications and features may
be made without notice or obligation.

dbx is a trademark of dbx Incorporated.

- この仕様中の 0 dBV は 1.0 V, 0 dBm は 0.775 V を基準としています。
実際の電圧も () で示しています。
- 仕様及び外観は改善のため予告なく変更
することがあります。

2 MECHANICAL ADJUSTMENTS AND CHECKS

機構部の調整と確認

2-1 ROTATING PART THRUST CLEARANCE CHECKS

Reference values

Capstan shaft:	0.1mm to 0.25mm (magnefloat type)
Inertia roller:	0.05mm to 0.3mm
Tension arm guide roller:	0.05mm to 0.3mm
Reel motor:	0 (spring type)
Tension arm:	0 (spring type)

NOTE: Since the capstan shaft is a magnefloat type, check that it is forced towards the rear of the deck while rotating.

2-2 CAPSTAN MOTOR REPLACEMENT

1. When the capstan motor is replaced, install it with its lead wires and washers as shown.
2. Check that, when the deck is operated by repeating the forward and reverse play modes, the capstan drive belt changes position on the flywheels smoothly.

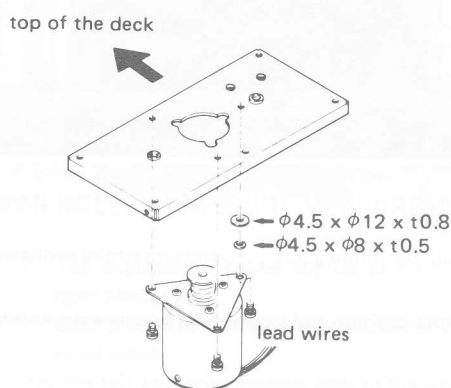


Fig. 2-1 Capstan motor replacement

2-3 BRAKE ADJUSTMENT

NOTE: The explanation and figure in this paragraph are for the left side brake, similar checks and adjustment are applicable for the right side one.

1. With brake applied (brake solenoid off), move brake band bracket in directions (A) so that brake arm comes in parallel with reel motor chassis.
2. Adjust the mounting position of brake solenoid in directions (D) so that when brake solenoid switches on and off the stroke of the solenoid plunger is about 2mm.
3. Adjust band ass'y retaining plate in directions (B), (C) and (E) so that brake felt does not touch brake drum when brake solenoid switches off.
4. Upon completion of adjustments, check that tape tension does not drop in any tape transport modes and there is not any tape winding troubles.

2-1 回転部のスラスト・クリアランス・チェック

以下は参考値(無調整)

キャプスタン・シャフト	: 0.1~0.25mm (マグネフロート・タイプ)
ガイド・ローラ	: 0.05~0.3mm
テンション・アーム・ガイド・ローラ	: 0.05~0.3mm
リール・モータ	: 0 (スプリング・タイプ)
テンション・アーム	: 0 (スプリング・タイプ)

注. キャプスタン・シャフトはマグネフロートタイプの為、定常回転中はスラスト受け方向(デッキ後面方向)に押されている事を確認すること。

2-2 キャプスタン・モータの交換

1. キャプスタン・モータを交換する場合は、図2-1の矢印が示すワッシャの取付け位置に注意すること。
2. 取付後FWD, REVを繰返したとき、キャプスタン・ベルトの走行位置がスムーズに切換ることを確認すること。

2-3 ブレーキ調整

1. ブレーキがかかった状態(ブレーキ・ソレノイドOFF)で、ブレーキ・アームとリール・モータ・シャーシのスキマが平行になるようブレーキ・バンド・ブラケット取付位置をA方向に調整する。
2. 次に、ブレーキ・ソレノイドをON・OFFしたときのプランジヤのストロークが約2mmになるように、ブレーキ・ソレノイドの取付け位置をD方向に調整する。
3. ブレーキ・ソレノイドON状態の時、ブレーキ・ドラムとブレーキ・フェルトとが接触しないように、ブレーキ・バンド受けの取付け位置をB, C, E方向に調整する。
4. 調整後、すべてのテープ操作に於て、テンション落ち、テープ巻込み等が生じないことを確認する。

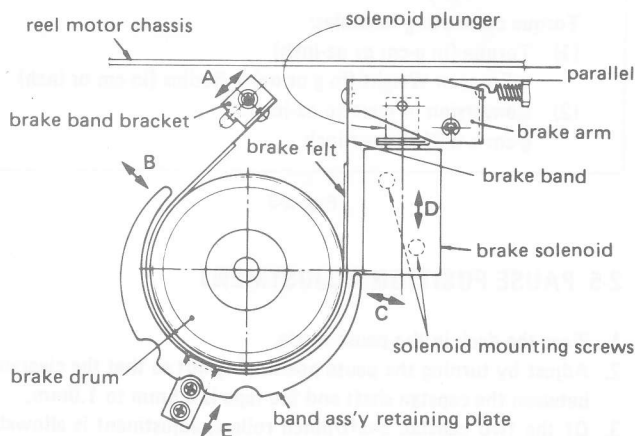
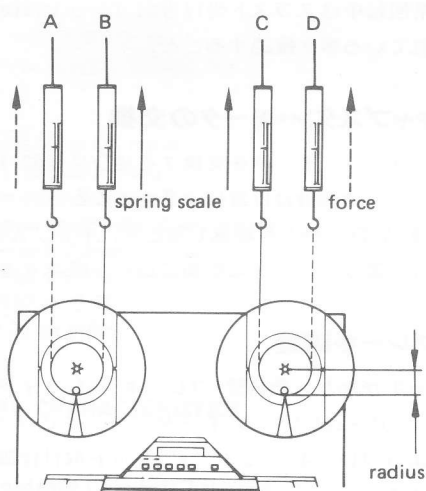


Fig. 2-2 Brake adjustment

2-4 BRAKE TORQUE MEASUREMENT

1. Place an empty 7" reel, connected to a spring scale by a string, on the reel table.
2. Pull the scale away from the reel and read the scale indication only when the reel table is steady motion.
3. Do steps 1 and 2 for each measuring condition, (A) through (D) in Fig. 2-3.
4. The values are as chart in Fig. 2-3.



↑ Forward direction (B) (C)	1.2 to 1.9kg-cm (17 to 26oz-inch)
↑ Reverse direction (A) (D)	0.7kg-cm (9.7oz-inch) or less
Left/right deviation	0.2kg-cm (2.8oz-inch) or less

NOTES: 1. The reverse direction values are reference.
2. The specification of left/right deviation only applies for forward direction torques.

Torque calculating formulas:

- (1) Torque (in g-cm or oz-inch)
= Force or Weight (in g or oz) x Radius (in cm or inch)
- (2) Conversion of g-cm to oz-inch:
 $\text{g-cm} \times 0.0139 = \text{oz-inch}$

Fig. 2-3

2-5 PAUSE POSITION ADJUSTMENT

1. Place the deck in the pause mode.
2. Adjust by turning the pause positioning nut so that the clearance between the capstan shaft and the tape is 0.5mm to 1.0mm.
3. Of the two capstan shaft/pinch rollers, adjustment is allowable only for the side having the narrower clearance.
4. Check that, by repetition of play mode to pause mode and stop mode to pause mode, there is clearance at both sides.

2-4 ブレーキ・トルク測定

	正方向	負方向	左右差
右リール	1.2~1.9	0.7	0.2以下
左リール	1.2~1.9	0.7	

単位：kg・cm（トルクは参考値）

2-5 ピンチ・ローラ・ポーズ位置調整

デッキをポーズ状態にし、ポーズ位置調整ナットにより、キャプスタンとピンチローラ間のすき間を0.5~1.0mmに調整する。キャプスタンとピンチローラのすき間は、左右で差を生ずるが、調整はすき間の少ない側のみ行なう。調整後PLAY→PAUSE, STOP→PAUSEを何回か行ない、すき間を確認すること。

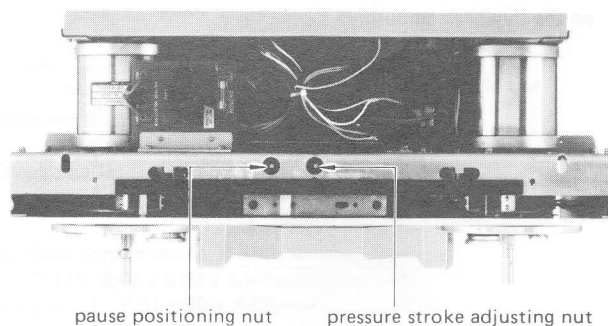


Fig. 2-4 Pause position and pinch roller pressure stroke adjustments

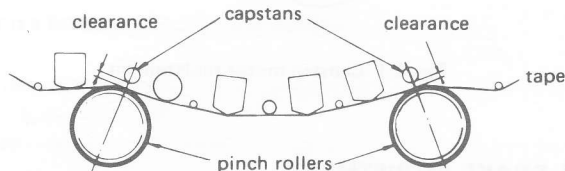
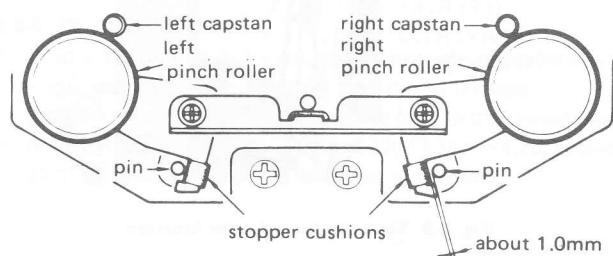


Fig. 2-5 Pause position adjustment

2-6 PINCH ROLLER PRESSURE STROKE ADJUSTMENT

1. Set the deck in the forward or reverse play mode.
2. Adjust by turning the pressure stroke adj. nut (Fig. 2-4) so that the clearance between the pin and the stopper cushion is about 1.0mm.
3. Since the clearance is produced at one side (left or right), adjustment for this side only is permissible.



Either the left or right should have a clearance of about 1.0mm.
スキマ1mm程度 (左右どちらか)

Fig. 2-6

2-7 PINCH ROLLER PRESSURE MEASUREMENT

- NOTES:**
1. The explanation below applies to both the left and right pinch rollers.
 2. Both pinch roller pressures are automatically set with equal value.

1. Hold both the left and right tension arms in the upper positions using rubber bands, string etc.
2. Set the deck in either play mode with no tape loaded.
3. Attach the spring scale to the pinch roller as shown in the figure.
4. Draw the pinch roller away from the capstan shaft (in the direction of a line intersecting the centers of the capstan shaft and the pinch roller) until the capstan shaft and the pinch roller are separated.
5. Return the scale back until the pinch roller just begins to turn. The scale should then be reading as follow.
Reference value: 1.35kg to 1.9kg (3.0 lbs to 4.2 lbs)
6. If the reading is out of specification, replace defective part(s).
There are no adjustable parts.

2-6 ピンチローラ圧着ストローク調整

1. 調整時のデッキの作動モード……………PLAY
2. 図2-4に示す圧着ストローク調整ナットにより、図2-6に示すようにピンとストッパー・クッションのすき間を約1mmに調整する(ピンとストッパー・クッションが離れていて、すき間が確認出来れば良い)。
3. このすき間は、圧着スプリングのバラツキにより、左右いずれか一方にしか出来ないが、すき間の出来た側のみ調整すれば良い。

2-7 ピンチローラ圧着力測定

圧着力：1.35～1.9kg (戻し法)

注. 左右ピンチローラ圧着力は自動的にセットされ、また無調整方式なので上記規格を満足しない場合は部品交換が必要です。

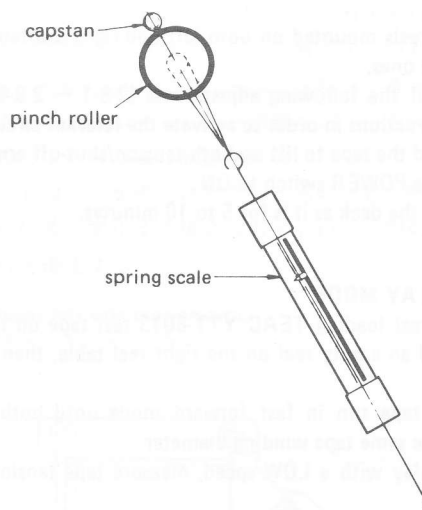


Fig. 2-7

2-8 TAPE TENSION ADJUSTMENT

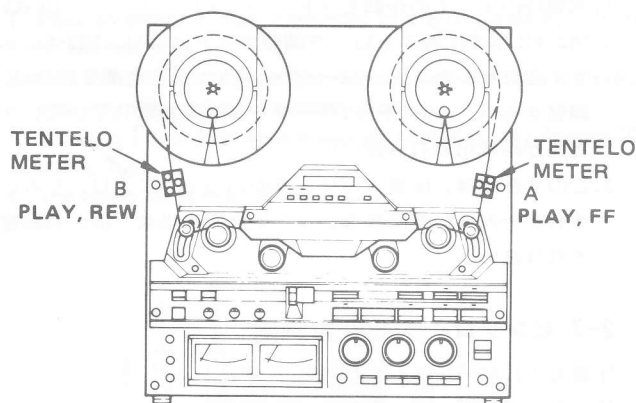


Fig. 2-8 Tape tension measuring points

NOTES

1. Since these settings are precisely factory adjusted, in general, they should not be re-adjusted. If it is specifically required, a special meter is needed.
Tentele meter: Model T2-H20-1 or T2-H15-UM.
2. To facilitate adjustment, the deck should be placed in a vertical position.
3. For the reels mounted on both left and right reel tables, use the same size ones.
4. Before all the following adjustments (2-8-1 ~ 2-8-4), perform next instructions in order to activate the relevant circuit.
 - a. Thread the tape to lift up both tension/shut-off arms.
 - b. Set the POWER switch to ON.
 - c. Leave the deck as it is for 5 to 10 minutes.

2-8-1 IN PLAY MODE

1. Place a reel loading TEAC YTT-8013 test tape on the left reel table and an empty reel on the right reel table, then thread the tape.
2. Let the tape run in fast forward mode until both reels have nearly the same tape winding diameter.
3. During play with a LOW speed, measure tape tension at points A and B.
4. Adjust R122 and R222 so that the specified tape tension of $50g \pm 10g$ (1.4oz ~ 2.1 oz) is obtained.
(Obtain a 50g or 1.8oz value as far as possible).

2-8 テープ・テンション調整

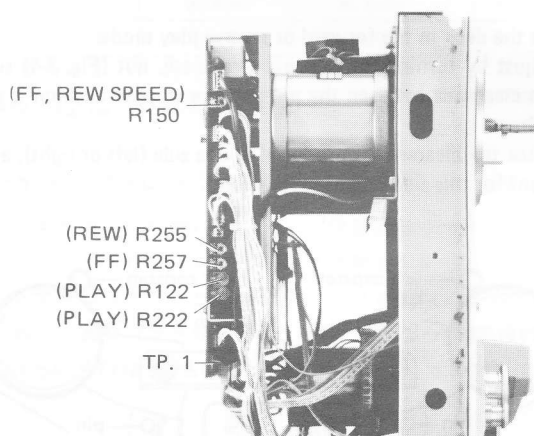


Fig. 2-9 Tape tension adjuster location

注意

1. テープ・テンションの測定には次のテンション・メータが必要です。
テンテロ・メータ (米国, テンテル社製)
モデル T2-H20-1又はT2-H15-UM
2. 測定及び調整は、デッキを垂直位置にして行なってください。
3. 左右同サイズのリールを使用してください。
4. デッキの電源オン後5~10分以上経過してから測定・調整を行なってください。

2-8-1 PLAYテンション調整

1. テープ(7号リール, 10号リールどちらでもよい)をかけ, 左右同程度の巻径にする。
2. テープをLOW SPEED, PLAYモードで走行させる。
3. AおよびBの位置にテンテロ・メータを当て, R122, R222をまわしてテンションを $50g \pm 10g$ (できるだけ50gに近い値)に調整する。

2-8-3 IN FAST FORWARD MODE

1. Load a TEAC YTT-8013 test tape on the left reel table and an empty reel on the right reel table, then thread the tape.
2. Stop the left reel by hand and set the deck in fast forward mode.
3. Adjust R257 to obtain a 100g to 120g (3.5oz ~ 4.2oz) value at point A (Obtain a 110g or 3.9 oz value as far as possible).

REMARK: Back tension in fast forward (or fast rewind) is automatically set when tape speed is adjusted as in paragraph 2-12-2.

2-8-4 IN REWIND MODE

1. Load a TEAC YTT-8013 test tape on the right reel table and the empty reel on the left reel table, then thread the tape.
2. Stop the right reel by hand and set the deck in the rewind mode.
3. Adjust R255 to obtain a 100g to 120g (3.5oz ~ 4.2oz) value at point B (Obtain a 100g or 3.9oz as far as possible).

2-9 TENSION ARM HEIGHT ADJUSTMENT

1. Thread any standard tape on the deck using a standard empty reels such as TEAC RE-1002.
2. Set the deck in the play mode.
3. Stop left (right) inertia roller's rotation by hand.
Adjust by turning the left (right) tension arm height adjusting screw (refer to Fig. 2-10) so that the tape moves in the center of the inertia roller.

NOTE: When adjusting, pay special attention to the relationship between position-detecting shutter and the opening of photo-interrupter to prevent, for example, the shutter from being caught.

4. Release the inertia roller. Fine-adjust the adjusting nut again until there is no tape curling on the tape guide pin between the erase head and the left (right) inertia roller.
5. After Adjusting the height of both left and right tension arms, check that the tape running condition is good by switching between fast forward and rewind modes.
6. If the tape running position is different when the inertia roller stops and when it turns, the condition when the inertia roller is rotating has priority.

2-8-3 FFテンション調整

1. サプライ側のリール(左リール)を固定してFFモードにする(テープを走行させない状態に保つ)。
2. Aの位置にテンテロ・メータを当て、R257をまわしてテンションを $110\text{g} \pm 10\text{g}$ (できるだけ110gに近い値)に調整する。

参考：FF(REW)時のサプライ側テープ・テンション(バック・テンション)は、2-12-2項に述べるFF REW)テープ・スピード調整により自動的にセットされます。

2-8-4 REWテンション調整

1. サプライ側のリール(右リール)を固定してREWモードにする(テープを走行させない状態に保つ)。
 2. Bの位置にテンテロ・メータを当て、R255をまわしてテンションを $110\text{g} \pm 10\text{g}$ (できるだけ110gに近い値)に調整する。
- 注：FFとREWのテンションはできるかぎり等しくする。

2-9 テンションアーム高さ調整

1. デッキのモード：PLAY。
2. 調整しようとする側のガイドローラの回転を手で止め、ガイドローラのセンターをテープが走行するようにテンションアーム高さ調整ナット(図2-10参照)を調整する。
3. 手で停止させたガイドローラを放し、ガイドローラと消去ヘッドの間のテープガイドピンの所でテープがカールしないように再度テンションアーム高さ調整ネジを微調整する。
4. 左右のテンションアーム高さ調整後、FF、REWの繰返し動作を行ってテープ走行状態を見る。

注：ガイドローラを停止させた時と回転させた時とでテープ走行位置が変化する場合はガイドローラ回転中のテープ走行を優先する。

Figure shows left side tension arm.
図は左側テンション・アームを示す。

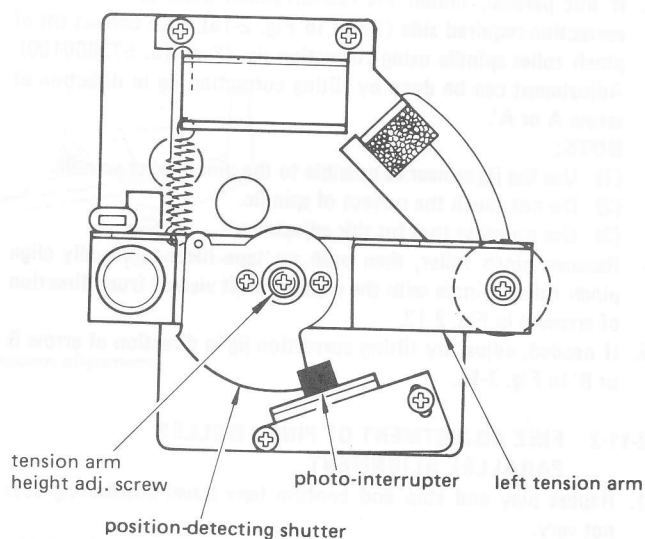


Fig. 2-10

2-10 REEL TABLE HEIGHT ADJUSTMENT

1. Adjust the tension arm height beforehand (See 2-9).
2. Check each reel table height using a TEAC RE-1002 empty reel and letting the tape run in each tape operating mode.
3. If the tape rubs against the reel flanges, adjust the reel table height by means of the two reel table mounting screws.

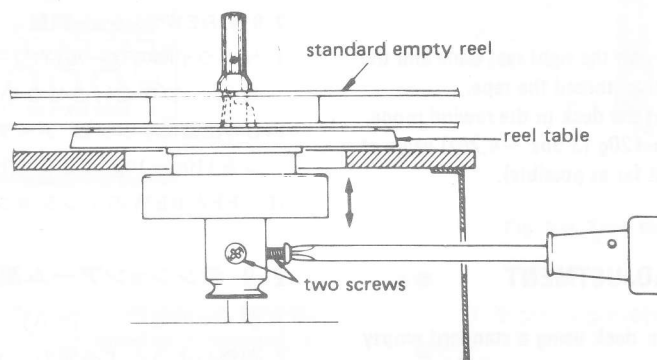


Fig. 2-11

2-10 リール台高さ調整

1. 前項のテンション・アーム高さ調整後に本調整を行ってください。
2. TEAC RE-1002リールを使用し、各テープ動作でテープがリール・フランジに接触するかどうかをチェックする。
3. もし接触する場合はリール台を固定している2本のネジをゆるめ、リール台取付位置を動かして調整する。

2-11 TAPE PATH ALIGNMENTS

The following procedure is for parallelism adjustment of left pinch roller. A similar procedure is also applied for the right pinch roller.

2-11-1 COARSE ADJUSTMENT OF PINCH ROLLER PARALLELISM

1. Let pinch roller draw near toward capstan shaft by manually lifting up tape lifter shown in Fig. 2-12.
2. Check pinch roller/capstan shaft parallelism viewed from direction of arrow A shown in Fig. 2-12. (Refer to Fig. 2-13, 14.)
3. If not parallel, loosen the reinforcement plate screw near the correction-required side (Refer to Fig. 2-15), then correct tilt of pinch roller spindle using correction jig. (Part No. 573600100). Adjustment can be done by tilting correction jig in direction of arrow A or A'.

NOTE:

- (1) Use the jig as near as possible to the pinch roller spindle.
- (2) Do not touch the surface of spindle.
- (3) Use no other tool for this adjustment!
4. Remove pinch roller, then push up tape lifter to visually align pinch roller spindle with the capstan shaft viewed from direction of arrow B in Fig. 2-12.
5. If needed, adjust by tilting correction jig in direction of arrow B or B' in Fig. 2-15.

2-11-2 FINE ADJUSTMENT OF PINCH ROLLER PARALLEL ALIGNMENT

1. Repeat play and stop and confirm tape travel positioning does not vary.
2. If necessary, adjust pinch roller alignment as shown in Fig. 2-15.

2-11 テープ走行調整

ピンチ・ローラとキャプスタン・シャフトとの平行度は、テープ走行の安定に最も重要な事項です。

以下に左ピンチ・ローラの平行度調整の手順を述べますが、右ピンチ・ローラについても同様に調整して下さい。

2-11-1 ピンチ・ローラ平行度の仮調整

1. 図2-12に示すテープ・リフタを手で押し上げ、ピンチ・ローラをキャプスタン・シフトに近づける。
2. 図2-12に示すA方向から見て、ピンチ・ローラとキャプスタン・シャフトの平行度をチェックする。
3. 平行でない場合は、調整棒を使用して図2-15に示す、A又はA'方向にピンチ・ローラ軸の傾きを修正する。(調整棒は出来るだけピンチ・ローラ軸に近い位置にセットして下さい)。(調整棒 品番5736000100)
4. 次にピンチ・ローラを外し、テープ・リフタを上げ、図2-12のB方向から見てピンチ・ローラとキャプスタン・シャフトの平行度をチェックする。
平行でない場合は、調整棒を使用して図2-15に示すB又はB'方向にピンチ・ローラ軸の傾きを修正する。

2-11-2 ピンチ・ローラ平行度微調整

1. PLAY STOPを繰返しテープ走行位置が変化しないことを確認する。
2. もし変化する場合は図2-15の方法でピンチ・ローラ軸の傾きを微調整する。

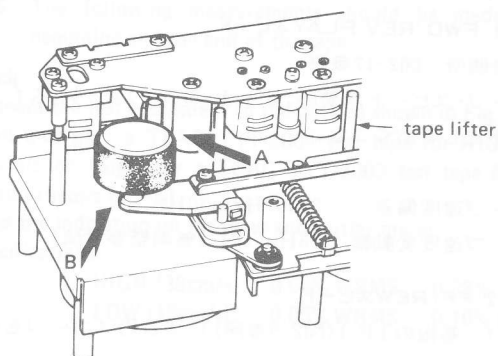


Fig. 2-12 Directions for pinch roller parallelism check

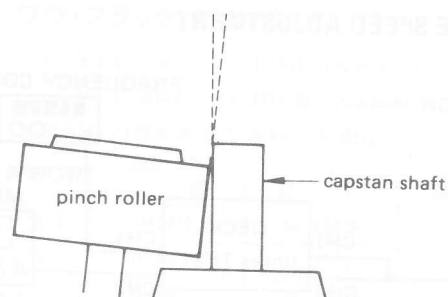


Fig. 2-13 View in direction A (example of non-parallelism)

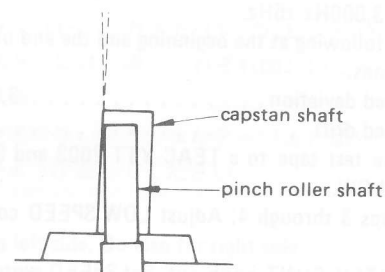


Fig. 2-14 View in direction B (example of non-parallelism)

correction jig (TEAC P/N 5736000100)

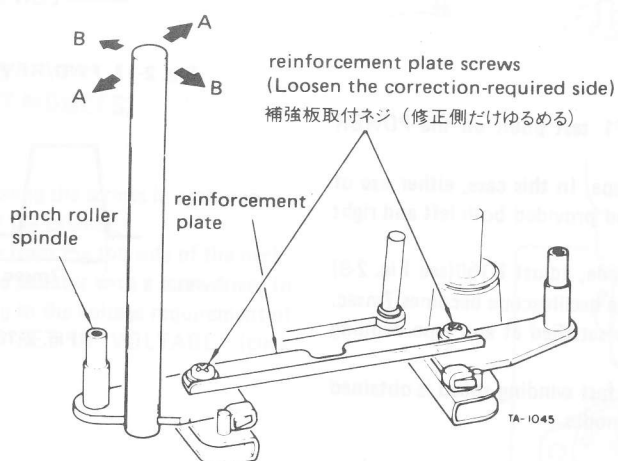


Fig. 2-15 Pinch roller/capstan alignment

2-12 TAPE SPEED ADJUSTMENT

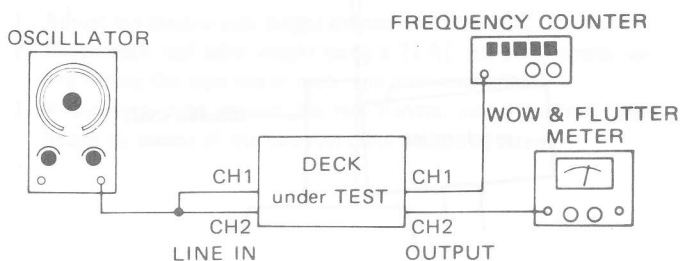


Fig. 2-16

2-12-1 PLAY SPEED

1. Connect a frequency counter to either OUTPUT terminal.
2. Load TEAC YTT-2004 test tape. Set the SPEED switch—HIGH, and PITCH CONT knob—OFF.
3. Play the tape. Adjust HIGH SPEED control (see Fig. 2-17) for a reading of 3,000Hz $\pm$ 5Hz.
4. Check the following at the beginning and the end of the tape.
Specifications:
Tape speed deviation 3,000Hz $\pm$ 30Hz
Tape speed drift 15Hz
5. Change the test tape to a TEAC YTT-2003 and SPEED switch setting to LOW.
6. Repeat steps 3 through 4. Adjust LOW SPEED control if necessary.
7. Pull the PITCH CONT knob out. Set SPEED switch HIGH. Play a YTT-2004.
8. Check if the speed variation of at least 3,000Hz $\pm$ 180Hz is obtained when the PITCH CONT knob is rotated fully in both directions.
9. Change the test tape to YTT-2003 SPEED switch setting to LOW. Repeat step 8.

FAST WINDING SPEED

1. Set the deck in vertical position.
2. Connect oscilloscope between TP1 test point on the POWER PCB and ground.
3. Thread a TEAC YTT-8013 test tape. In this case, either use of 7inch reels or 10inch are permitted provided both left and right reels are the same size.
4. During fast forward or rewind mode, adjust R150(see Fig. 2-9) so that wavelength displayed on the oscilloscope becomes 7msec. (Fig. 2-18). Adjustment should be satisfied at any tape winding position.
5. Check that almost equal value of fast winding speed is obtained between fast forward and rewind modes.

2-12 テープ・スピード調整

2-12-1 FWD/REV PLAYスピード

1. 調整箇所 図2-17参照
2. テープ・スピード調整時、ピッチ・コントロール・スイッチはOFFにしておくこと。
3. 規格
テープ速度偏差 3,000Hz $\pm$ 30Hz
テープ速度変動幅 15Hz以内 (無調整参考値)

2-12-2 FF/REWスピード

1. パワー基板のTP. 1(図2-9参照) にオシロスコープを接続する。
2. デッキをFFモード又はREWモードにする。
3. TP. 1の波形の波長が7m secになるようにR150(図2-9参照)を調整する……図2-18
4. FFとREWで大きな差がないことを確認する。

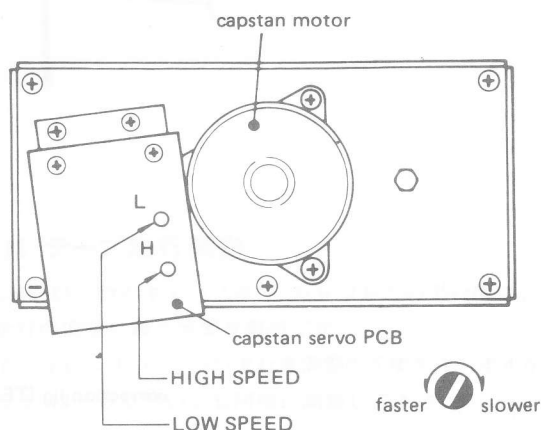


Fig. 2-17 FWD/REV play speed adjustment points

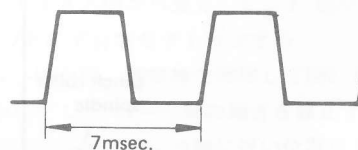


Fig. 2-18 Waveform at TP1

2-13 WOW AND FLUTTER CHECKS

NOTES: The following measurements should be made at the beginning and the end of the tape.

Playback

1. Connect the test equipment to the deck as shown in Fig. 2-16.
2. Load and play a TEAC YTT-2004 test tape for HIGH speed (38cm/s or 15ips), or a TEAC YTT-2003 test tape for LOW speed (19cm/s or 7½).
3. Read the indication on the wow and flutter meter.

Specifications:

HIGH (38cm/s): 0.04% WRMS 0.08% RMS
LOW (19cm/s): 0.05% WRMS 0.10% RMS

Overall

4. Load a TEAC YTT-8013 test tape (blank). Apply and record a 3,000Hz signal.
5. During simultaneous tape monitoring (playing) the recorded signal, read the wow and flutter meter display.

Specifications:

HIGH: 0.10% RMS LOW: 0.12% RMS

2-14 LUBRICATION

Oiling is needed after every 1,000 hours of operation or once a year if the deck is infrequently used. For this purpose, TEAC spindle oil (from TEAC TZ-255 oil kit), Mobil D.T.E. Oil Light, etc. are recommended. Lubrication is normally not necessary except at the points shown.

1. Place the deck in the horizontal position.
2. Apply a few drops of oil to the respective spindles shown, excluding capstans, then spread the oil evenly on the spindle surfaces using a cotton cloth, etc.
3. For capstans, apply a few drops to the indicated position.
4. After oiling all the points, leave the deck for 1 to 2 hours until the oil is thoroughly absorbed.

2-15 VOLTAGE CONVERSION (FOR GENERAL EXPORT MODELS)

Voltage Conversion

1. First remove the two feet by removing the screws in each one.
2. Unscrew the left and right sides of the cabinet.
3. Locate the voltage selector as seen from the top side of the deck.
4. Turn the slotted center post of the selector with a screwdriver to match the numerals corresponding to the voltage requirement of your area to the point marked "SET UP VOLTAGE" (click sound is heard).
5. Replace the cabinet and feet.

2-13 ワウ・フラッタ・チェック

使用テープ YTT-2003……………LOW (19cm/sec)

YTT-2004……………HIGH (38cm/sec)

7号リール使用時の巻始め及び巻終りを測定。

テープ速度	再生法		録再法
	RMS	WRMS	RMS
19cm/s	0.10%	0.05%	0.12%
38cm/s	0.08%	0.04%	0.10%

2-14 注油

デッキの回転部分には1000時間使用毎或いは1年に1回程度注油が必要です。

オイルは、TEACスピンドル・オイル(TEAC TZ-255オイル・キット)又はMobil D.T.E.オイル・ライト等を使用してください。

1. デッキを水平位置に置く。
2. テンション・ローラ、ガイド・ローラ、ピンチ・ローラには数滴、キャプスタンには一滴、それぞれ図2-19に矢印で示す個所に注油する。
3. 注油は多過ぎないように、またテープ走行部分にオイルが付着しないよう注意してください。

Figure shows left side. Do also for right side.

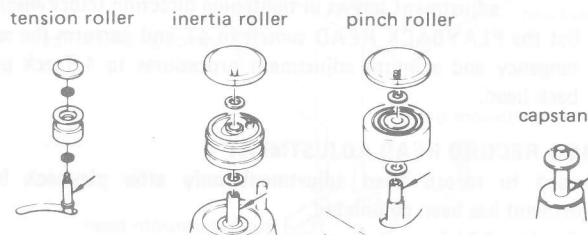


Fig. 2-19

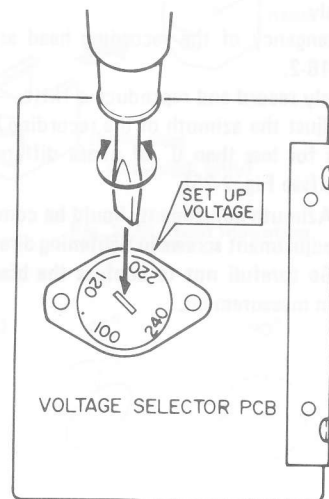


Fig. 2-20

2-16 HEAD ALIGNMENT

There is no need for head height and tilt adjustments because the record and playback heads of 3030 are a semi-fixed type (erase head fully-fixed).

2-16-1 HEAD MOUNTING (RECORD AND PLAYBACK HEADS)

1. Refer to Fig. 2-23.
2. With head mounting screws, mount heads to head mounting plate. Attach shield case to the playback head.
3. Mount head ass'y to head base using mounting screw and mount tangency adjustment screw.
4. Mount azimuth adjustment screws.

2-16-2 PLAYBACK HEAD ADJUSTMENT

1. See Fig. 2-24 for necessary connections.
2. Set the OUTPUT switch to REPRO.
3. Run the test tape TEAC YTT-1003 in play mode to reproduce the 400Hz signal on the tape.
4. Slightly loosen the mounting screws which hold playback head in place and adjust the tangency using adjustment screws, for maximum output. When the maximum output is attained, retighten both mounting screws.
5. Play the 16kHz signal on the tape and adjust the azimuth of the playback head using adjustment screws for less than 45° of phase difference between the two channels (see Fig. 2-25).

NOTE: Azimuth adjustment should be completed by turning adjustment screws in tightening direction (clockwise).

6. Set the PLAYBACK HEAD switch to 4T and perform the same tangency and azimuth adjustment procedures to 4 Track playback head.

2-16-3 RECORD HEAD ADJUSTMENT

Proceed to record head adjustment only after playback head adjustment has been completed.

1. See Fig. 2-24 for necessary connections.
2. Set the OUTPUT switch to REPRO.
3. Load the blank test tape AMPEX 456 and record a 400Hz -10dBV (316mV) signal in recording mode to reproduce it simultaneously.
4. Adjust the tangency of the recording head as in step 4 under paragraph 2-16-2.
5. Simultaneously record and reproduce a 1kHz, -20dBV (100mV) signal and adjust the azimuth of the recording head using adjustment screws for less than 0° of phase difference between the two channels (see Fig. 2-25).

NOTES:

- Azimuth adjustment should be completed by turning adjustment screws in tightening direction (clockwise).
- Be carefull not to confuse the bias signal (150kHz) in measurement.

2-16 ヘッド調整

3030の録音ヘッドと再生ヘッドは準固定式(消去ヘッドは完全固定式)になっています。このためヘッドの高さ調整とチルト調整は不要です。

2-16-1 ヘッド取付(録音ヘッド, 再生ヘッド)

1. Fig.2-23参照
2. ヘッド取付ネジでヘッドをヘッド取付板に固定する(ヘッド Ass'y)。このとき再生ヘッドにはシールド・ケースをセットする。
3. ヘッド Ass'yをヘッド固定ネジとヘッド首振りネジでヘッド・ベースに取付ける。
4. アジマス調整ネジを取付ける。

2-16-2 再生ヘッド調整

1. 接続 Fig.2-24
 2. OUTPUTスイッチ: REPRO
 3. TEAC YTT-1003テープ・テストをPLAYモードで走行させ、400Hz区分を再生する。
 4. 再生ヘッドのヘッド固定ネジをやや緩め、ヘッド首振りネジを左右に動かして400Hz再生出力が最大になるようヘッドの首振り角度を調整する。調整終了後両ネジを締める。
 5. 次にYTT-1003の16kHz区分を再生し、CH1とCH2の位相差が45°以内になるようアジマス調整ネジを調整する。(Fig. 2-25)
- 注. アジマス調整ネジは締める方向(右回し)で調整を終ること。

6. 次にPLAYBACK HEADを4Tにし、上記と同様の手順で、4T再生ヘッドのヘッド首振りとアジマスの調整を行なう。

2-16-3 録音ヘッド調整

録音ヘッド調整の前に再生ヘッド調整が終っていること。

1. 接続 Fig.2-24
 2. OUTPUTスイッチ: REPRO
 3. AMPEX 456テープをセットし、400Hz/-10dBV(316mV)信号を録音しながら同時再生する。
 4. 再生ヘッド調整と同様に録音ヘッドの首振り角度を調整する。
 5. 次に1kHz/-20dBV(100mV)信号を録音再生しCH1とCH2の位相差が0°以内になるようアジマス調整する。(Fig.2-25)。
- 注. ・アジマス調整ネジは締める方向(右回し)で調整を終ること。
・バイアス信号(150kHz)を測定しないよう注意すること。

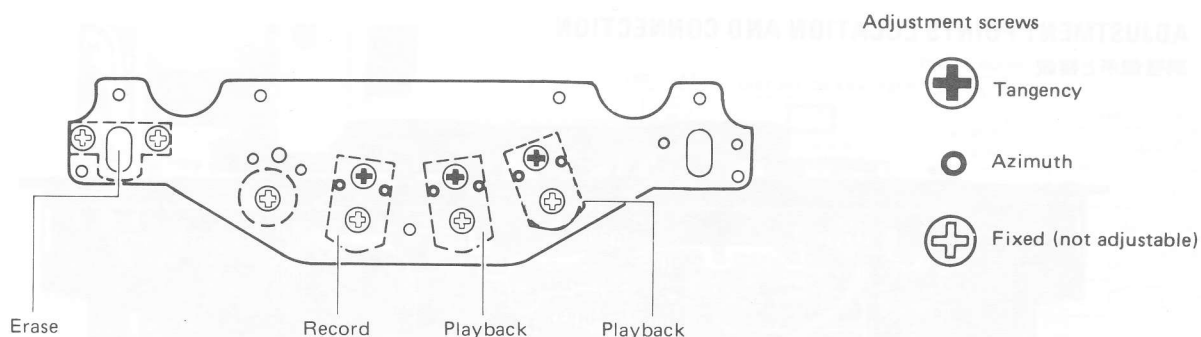


Fig. 2-21 Head arrangement

AZIMUTH アジマス The gap of the head core should be perpendicular to the tape travel. ヘッド・コアのギャップがテープ走行方向に対して垂直であること。	
TANGENCY 首振り The dotted line should be perpendicular to the surface of the tape. ヘッドの中心線（点線）がテープに垂直であること。	

Fig. 2-22 Head regulation elements

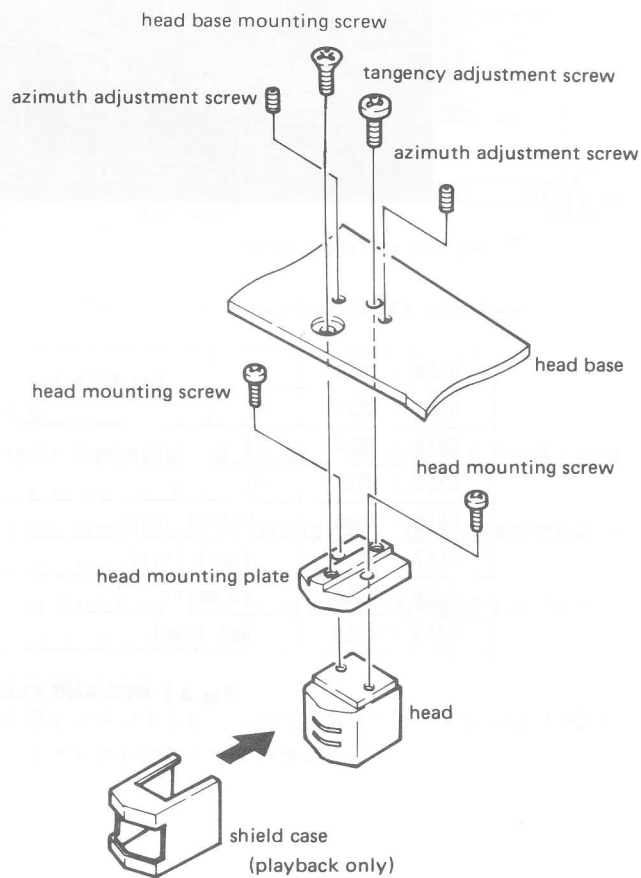


Fig. 2-23 Head mounting

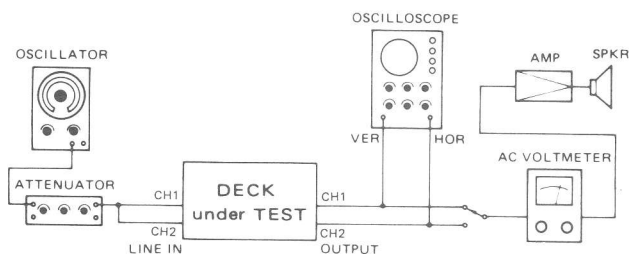


Fig. 2-24 Connection for phase check

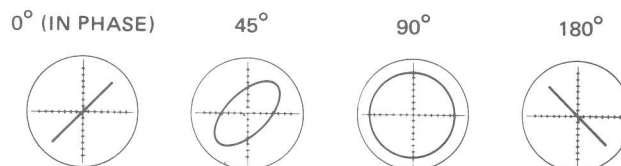


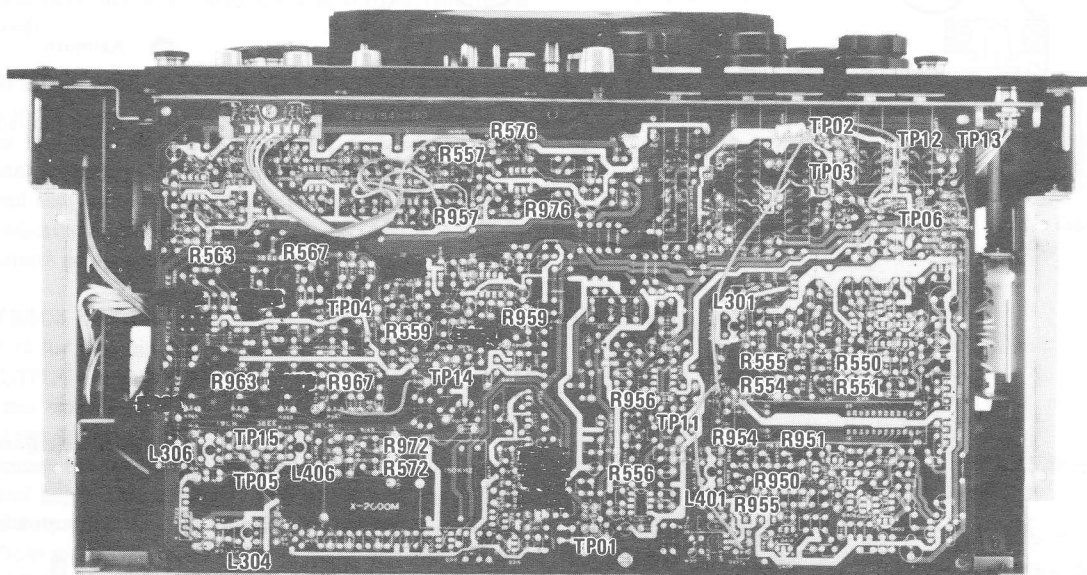
Fig. 2-25 Confirming phase relationship

3 ELECTRICAL ADJUSTMENTS AND CHECKS

アンプ部の調整と確認

3-1 ADJUSTMENT POINTS LOCATION AND CONNECTION

調整箇所と接続



R550 / R950	2T	Playback EQ	R563 / R963	Low speed Rec EQ
R551 / R951	4T		R567 / R967	High speed Rec EQ
R554 / R954	2T	Playback level	R572 / R972	Rec bias
R555 / R955	4T		R576 / R976	Phase shift
R556 / R956	Output level		L301 / L401	Bias trap (playback)
R557 / R957	Input level		L304	Monaural Rec EQ
R558 / R958	VU meter		L306 / L406	Bias trap (record)
R559 / R959	Rec level			

Fig. 3-1 REC AND PLAYPCB adjustment and test points

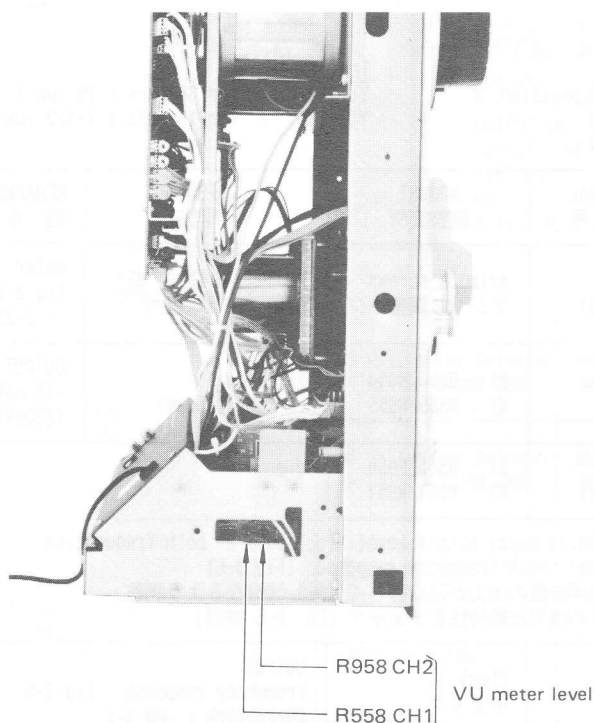


Fig. 3-2 Headphone PCB adjustment points

NOTES :

1. Before performing adjustments and checks, clean and demagnetize the entire tape path.
2. In general, adjustments and checks are done in the order of CH-1 then CH-2. Double REF. Nos. indicate CH-1/CH-2. (Example : R550/R950)
3. 0 dBV = 1.0 V
4. The AC voltmeter used in the procedures must have an input impedance of 1M-ohms or more.

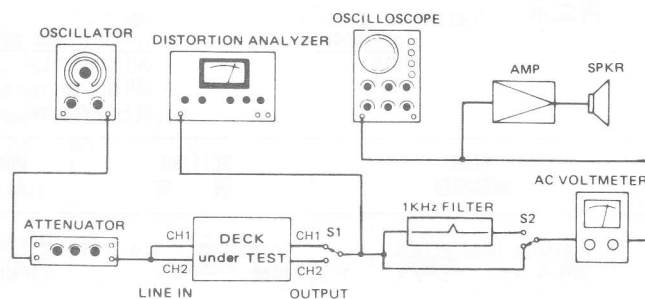


Fig. 3-3 Basic connection

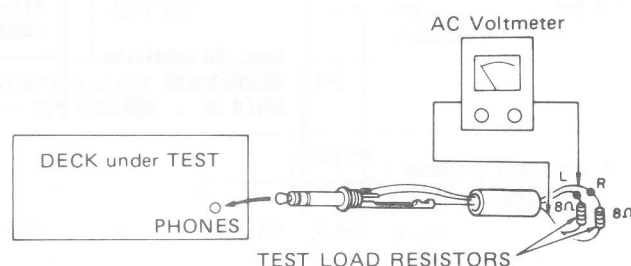


Fig. 3-4 Connection for PHONES level check

注意

1. アンプ部の調整・確認の前に、テープ走行系の消磁と清掃を行ってください。
2. 特に指定の無い限り、調整は CH-1, CH-2 の順序で行なってください。
尚 R550/R950 のように記されている回路番号は CH-1/CH-2 を示します。
3. 0 dBV = 1.0 V
4. 測定に使用するレベル計の入力インピーダンスは 1 MΩ 以上のものを使用してください。

3 ELECTRICAL ADJUSTMENTS AND CHECKS

3-2 PLAYBACK PERFORMANCE

再生系

Test mode
PLAYInitial deck settings
OUTPUT cont. : Scale position "7"
OUTPUT sw : REPRO
REF LEVEL sw : 250nWTest tapes
YTT-1004 : For 38 cm/s (15 ips)
YTT-1003 : For 19 cm/s (7-1/2 ips)

ITEM 調整項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUST 調整箇所	RESULT 調整値	REMARKS 備考
1. Playback head azimuth 再生ヘッド・アジマス	1-1 Connection : Fig.2-24 接続	YTT-1003 (16kHz/-10dB)	Azimuth screws アジマス調整ネジ	Phase : within 45° 位相 : 45° 以内	Refer to Fig.2-21 ~ 2-25
2. Play back level 再生レベル	2-1 AC voltmeter to REC and PLAY PCB TP.01/ TP.11 and GND	YTT-1003 (400Hz/0dB)	2T : R554/R954 4T : R555/R955	TP.01/TP.11 -6.8dBV (450mV)	OUTPUT : -12.6dBV (230mV)
3. Frequency response 周波数特性	3-1 Spec. PB condition 規定再生状態 SPEED sw : LOW	YTT-1003 (400Hz/16kHz)	2T : R550/R950 4T : R551/R951	OUTPUT : Nearly equal output level (± 1.5 dB) at both frequencies. Then check frequency response. (Fig.3-6) 両周波数の出力がほぼ等しく (± 1.5 dB) なるよう調整。 その後周波数特性をチェック (図 3-6 参照)	
	3-2 SPEED sw : HIGH	YTT-1004	Check チェック	OUTPUT : Frequency response : Fig.3-5 周波数特性 : 図 3-5	
	If the high frequency level doesn't satisfy specification with 15 ips. readjust it with 7.5 ips. And be sure that whole frequency satisfy specification with both speeds. 38 cm/s で高域の特性が入らない場合は 19 cm/s で再調整を行い、両スピード共規格に入れる。				

3-3 MONITOR PERFORMANCE

モニター系

Deck settings

LINE cont. : Scale position "7"
OUTPUT cont. : Scale position "7"
MIC cont. sw : MIN (unless otherwise specified 特に指定のある場合を除く)
OUTPUT sw : INPUT

ITEM 調整項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUST 調整箇所	RESULT 調整値	REMARKS 備考
4. Specified LINE INPUT LEVEL LINE 規定入力レベル	4-1 AC voltmeter to REC and PLAY PCB TP.03/ TP.13 and GND	LINE IN : 1kHz / -10dB (316mV)	R557/R957	TP.03/TP.13 -4.2dBV (615mV)	
	4-2 Connection : Fig.3-3		R556/R956	OUTPUT : -10dBV (316mV)	
5. VU meter メータ指示	5-1 LINE spec. input condition LINE 規定入力状態	Same as above 同上	R558/R958	VU meter : 0 VU	Refer to Fig.3-2
6. PHONES INPUT LEVEL ヘッドホン出力レベル	6-1 Same as above 同上	Same as above 同上	Check チェック	PHONES jack : -11dBV ± 2 dB (224mV~354mV)	8 Ω load 8 Ω 負荷 Fig.3-4
7. Min.MIC input level MIC 最小入力レベル	7-1 MIC cont. : MAX	MIC IN : 1kHz/-72dBV (251 μ V)	Check チェック	OUTPUT : -10dBV ± 3 dB (224mV~447mV)	

3-4 RECORDING PERFORMANCE

録音系

Test mode
REC/PLAY

Deck settings

REC FUNCTION sw : CH 1, 2 both ON

DBX sw : OUT

REF LEVEL sw : 250mV

OUTPUT sw : REPRO

OUTPUT cont. : Spec. PB condition

LINE cont. : Spec. input condition

MIC cont. : MIN

BIAS FINE cont. : Center

Test tape

AMPEX 456 : Blank tape

ITEM 調整項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUST 調整箇所	RESULT 調整値	REMARKS 備考
8. Bias trap バイアス トラップ	8-1	AC volt meter between TP.05/TP.15 and GND	No signal 無信号	L306/L406	TP.05/TP.15 Min. reading バイアス漏れ最小
	8-2	AC volt meter between TP.01/TP.11 and GND	No signal 無信号	L301/L401	TP.01/TP.11 Min. reading バイアス漏れ最小
9. Record bias 録音バイアス	First set adjuster fully CCW (←), then adjust. 最初に半固定抵抗を左一杯に回してから調整を始める。				
	9-1	SPEED sw : LOW	LINE IN : 10kHz/-20dBV (100mV)	R572/R972	OUTPUT : Over-bias value オーバー・バイアス値 7dB ±0.5dB
10. Record level 録音レベル	10-1	SPEED sw : HIGH	LINE IN : 1kHz/-10dBV (316mV)	R559/R959	OUTPUT : -10dBV (316mV)
	10-2			Check チェック	VU meter : 0 VU ± 0.5 VU
	10-3	Same as above 同上 DBX sw : IN		Check チェック	OUTPUT : -10 dBV ±1.5dB (266mV ~376mV)
	10-4	Same as above 同上 DBX sw : OUT OUTPUT sw : REPRO/INPUT	No signal 無信号	Check チェック	OUTPUT : Bias leak : バイアス漏れ : less than -50dBV (3.16mV)
After adjusting overall frequency response (item 12 and 13), re-do this item's checks and adjustment. 本確認・調整は録再周波数特性調整(12, 13 項)後、再度行うこと。					
11. Record head azimuth 録音ヘッド・アジマス	11-1	SPEED sw : LOW DBX sw : OUT	LINE IN : 1kHz/-20dBV (100mV)	Record head azimuth screws 録音ヘッド アジマス調整ネジ	Phase : 0° 位相 : 0°
			If you adjust azimuth screws, check paragraph 10-1~3 again. アジマス調整ネジを動かした場合は、10-1~3 項を再チェックすること。		
12. Frequency response 周波数特性 (SPEED : HIGH)	12-1	SPEED sw : HIGH DBX sw : OUT	LINE IN : 400Hz & 22kHz /-20dBV(100mV)	R567/R967	OUTPUT : Equal level at both frequency 両周波数の出力が等しくなるよう 調整
	12-2		LINE IN : -10dBV(316mV)	Check チェック	Frequency response : Fig.3-7 周波数特性 : 図 3-7
	12-3	Same as above 同上 DBX sw : IN	Same as above 同上	Check チェック	Same as above 同上

ITEM 調整項目		SETTING 設 定	INPUT SIGNAL 入 力 信 号	ADJUST 調整箇所	RESULT 調整値	REMARKS 備 考
13. Frequency response 周波数特性 (SPEED : LOW)	13-1	SPEED sw : LOW DBX sw : OUT	LINE IN : 400Hz & 20kHz /-30dBV(31.6mV)	R563/R963	OUTPUT : Equal level at both frequency 両周波数の出力が等しくなるよう 調整	
	13-2		LINE IN : -20dB (100mV)	Check チェック	Frequency response : Fig.3-8 周波数特性 : 図 3-8	
	13-3	Same as above 同上 DBX sw : IN	Same as above 同上	Check チェック	Same as above 同上	
14. Monaural recording モノラル録音	14-1	SPEED sw : LOW DBX sw : OUT REC FUNC. sw : CH1 : ON, CH2 : OFF	LINE IN : -30dBV(31.6mV)	L304	Frequency response : Fig.3-8 周波数特性 : 図 3-8	
	14-2	Same as above 同上 REC FUNC. sw : CH1 : OFF, CH2 : ON		Check チェック		
15. BIAS FINE バイアス・ファイン	15-1	SPEED sw : LOW DBX sw : OUT	LINE IN : 1 kHz/-10dBV (316mV)	Assume on output reference level obtained when the BIAS FINE button is set to center. Turn BIAS FINE completely to left and right and check that output level varies between -2.5 dB and +1.5 dB or higher against the reference level. BIAS FINE つまみがセンタ位置の時の出力を基準レベルとする。BIAS FINE つまみを左右一杯に回した時の出力レベルが基準レベルに対し -2.5dB, +1.5dB 以上変化することをチェックする。		
			After checking, be sure to set BIAS FINE BACK to the center position. チェック後 BIAS FINE つまみをセンタ位置に戻しておくこと。			
16. Distortion 歪率	16-1	Same as above 同上 SPEED sw : HIGH	LINE IN : 1 kHz/-10dBV (316mV)	Check チェック	DBX sw : both IN & OUT Total harmonic distortion 全高調波歪 less than 0.8 %	
17. Signal to noise ratio S/N 比	17-1	SPEED sw : HIGH & LOW	No signal 無信号	Check チェック	Each speed 各速度 : better than 52 dB	
18. Erase efficiency 消去効果	18-1	• Record a 1 kHz signal, rewind and erase portion of the recording. Playback the tape to compare the output level from the original 1 kHz recording with the level from the erased portion. 1 kHz 信号を録音後巻戻して一部を消去。未消去部分と消去部分の 1 kHz 出力レベル差を測定。 • Connection is same as in Fig.3-3, but engage 1 kHz filter. 1 kHz B.P.F. 使用。 • The worst value should be within spec. 最悪値が仕様を満足すること。 • Specifications should be met even when BIAS FINE is turned down to its minimum setting. BIAS FINE つまみ最小でも仕様を満足すること。				
		SPEED sw : HIGH	LINE IN : 1 kHz/0dBV (1V)	Check チェック	Better than 68 dB	
19. Channel separation チャネル・セパレーション	19-1	• Connection : Fig.3-3, but do not connect LINE IN (CH2), and engage 1 kHz filter. 1 kHz B.P.F. 使用 • Set the deck to record mode. Find the difference between the 1 kHz recorded portion (CH1) and check reverse portion. 1 kHz 録音部分 (CH1) と無信号録音部分 (CH2) の 1 kHz 再生出力レベルの差を測定。CH1, CH2 を入れ替えた場合 についてもチェック。				
		SPEED sw : HIGH	LINE IN : CH 1 : 1kHz/ -10dBV(316mV) CH 2 : No signal	Check チェック	Better than 50 dB	

ITEM 調整項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUST 調整箇所	RESULT 調整値	REMARKS 備考
20. REC MUTE function REC MUTE 効果	20-1	• Connection : Fig.3-3, but engage 1 kHz filter. 1 kHz B.P.F. 使用. • Record a 1 kHz signal. Push REC MUTE button for several seconds. (At this time, make sure LED on the button lights). Rewind and play the tape. Find the difference between the 1 kHz portion and "rec-mute" portion. 1 kHz 信号を録音し、途中で REC MUTE 釦を押して無信号部分を作る。このテープを再生し録音部分と無信号部分との出力レベル差を測定する。			
		SPEED SW : HIGH	LINE IN : 1 kHz/10dBV (316mV)	Check チェック	Better than 65 dB
21. Phase shift フェーズ・シフト	21-1	SPEED SW : HIGH & LOW	LINE IN : 4kHz sawtooth 矩形波 /-30dBV(31.6mV)	R576/R976	Correct waveform 良  Incorrect waveform 不良 

3-5 FREQUENCY RESPONSE

周波数特性

3-5-1 PLAYBACK

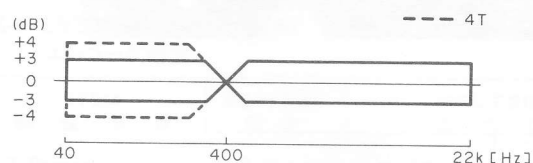


Fig. 3-5 Playback frequency response (38 cm/s)

3-5-2 OVERALL

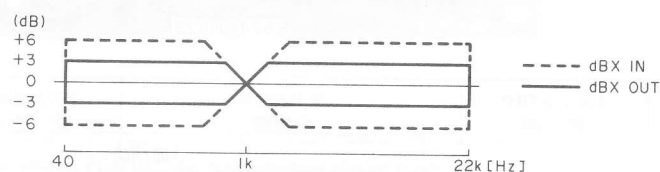


Fig. 3-7 Overall frequency response (38 cm/s)

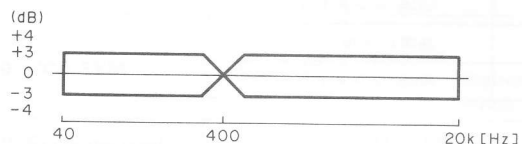


Fig. 3-6 Playback frequency response (19 cm/s)

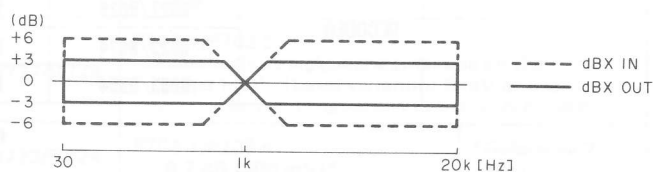


Fig. 3-8 Overall frequency response (19 cm/s)

20

3-6-3 DECODER ADJUSTMENT デコーダ調整

ITEM 調整項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUST 調整箇所	RESULT 調整値	REMARKS 備考
1. Preparation 準備	Preset each of the trimmers of the decoder section on the PCB to their approximate center positions. 各半固定抵抗をセンター位置にする。				
2. RMS SYM	Fig. 3-12	P601-1/P601-4 100 Hz/-8.2 dB (300 mV)	R653/R654	TP.1/TP.2: Clean 200 Hz sine-wave 出力波形が200Hzの正弦波になるよう調整。	Refer to Figs. 3-10 and 3-11.
3. VCA SYM	Fig. 3-13	TP.1/TP.2 Staircase waveform 階段波	R627/R628	P603-1/P603-4 A relatively straight horizontal line on the 'scope face'. (Level variation: 5 mV or less) モニタ波形がほぼ一直線(5mV以下)になるよう調整。	
4. Decoding level 基準レベル調整	Fig. 3-14	P601-1/P601-4 1 kHz/-8.2 dB (300 mV)	R623/R624	P603-1/P603-4 -8.2 dB (300 mV)*	*Reference 1 基準レベル1
5. Operation level デコード効果チェック	Fig. 3-14	P601-1/P601-4 1 kHz/-18.2 dB (95.4 mV)	Check チェック	P603-1/P603-4 -20 dB $\pm$ 1 dB against Ref. 1 (26.9 mV $\sim$ 33.8 mV)	基準レベル1か らの変化。
		P601-1/P601-4 1 kHz/+1.8 dB (95.4 mV)	Check チェック	P603-1/P603-4 +20 dB $\pm$ 1 dB against Ref. 1 (2.67 V $\sim$ 3.38 V)	
6. Frequency response 周波数特性	Fig. 3-14	P601-1/P601-4 100 Hz/-8.2 dB (300 mV)	Check チェック	P603-1/P603-4 +5 dB $\pm$ 1 dB against Ref. 1 (477 mV $\sim$ 602 mV)	基準レベル1か らの変化。
		P601-1/P601-4 10 kHz/-8.2 dB (300 mV)	Check チェック	P603-1/P603-4 +9.4 dB $\pm$ 1 dB against Ref. 1 (793 mV $\sim$ 997 mV)	

3-6-4 ENCODER ADJUSTMENT エンコーダ調整

ITEM 調整項目	SETTING 設定	INPUT SIGNAL 入力信号	ADJUST 調整箇所	RESULT 調整値	REMARKS 備考
7. Preparation 準備	Preset each of the trimmers of the encoder section on the PCB to their approximate center positions. 各半固定抵抗をセンター位置にする。				
8. RMS SYM	Fig. 3-15	P701-1/P701-5 100 Hz/-8.2 dB (300 mV)	R753/R754	TP.3/TP.4 Clean 200 Hz sine-wave 出力波形が200Hzの正弦波になるよう調整。	Refer to Figs. 3-10 and 3-11.
9. VCA SYM	Fig. 3-16	TP.3/TP.4 Staircase waveform 階段波	R727/R728	P703-1/P703-5 A relatively straight horizontal line on the 'scope face'. (Level variation: 5 mV or less) モニタ波形がほぼ一直線(5mV以下)になるよう調整。	
10. Encoding level 基準レベル調整	Fig. 3-17	P701-1/P701-5 1 kHz/-8.2 dB (300 mV)	R723/R724	P703-1/P703-5 -8.2 dB (300 mV)*	*Reference 2 基準レベル2
11. Operation level エンコード効果チェック	Fig. 3-17	P701-1/P701-5 1 kHz/-68.2 dB (3 mV)	Check チェック	P703-1/P703-5 -30 dB $\pm$ 0.5 dB against Ref. 2 (9.54 mV $\sim$ 10.1 mV)	基準レベル2か らの変化。
		P701-1/P701-5 1 kHz/+11.2 dB (3 V)	Check チェック	P703-1/P703-5 +10 dB $\pm$ 0.5 dB against Ref. 2 (900 mV $\sim$ 1.01 V)	
12. Frequency response 周波数特性	Fig. 3-17	P701-1/P701-5 100 Hz/-8.2 dB (300 mV)	Check チェック	P703-1/P703-5 -2.5 dB $\pm$ 0.5 dB against Ref.2 (213 mV $\sim$ 240 mV)	基準レベル2か らの変化。
		P701-1/P701-5 10 kHz/-8.2 dB (300 mV)	Check チェック	P703-1/P703-5 -4.7 dB $\pm$ 0.5 dB against Ref. 2 (166 mV $\sim$ 186 mV)	

3-6-5 CONNECTIONS

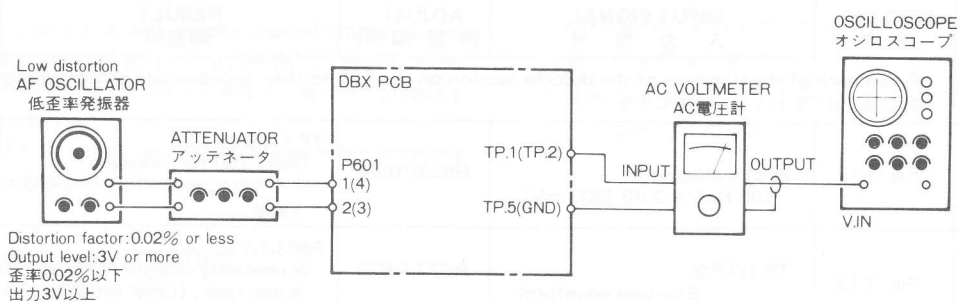


Fig. 3-12 RMS symmetry adjustment setup (decoder)

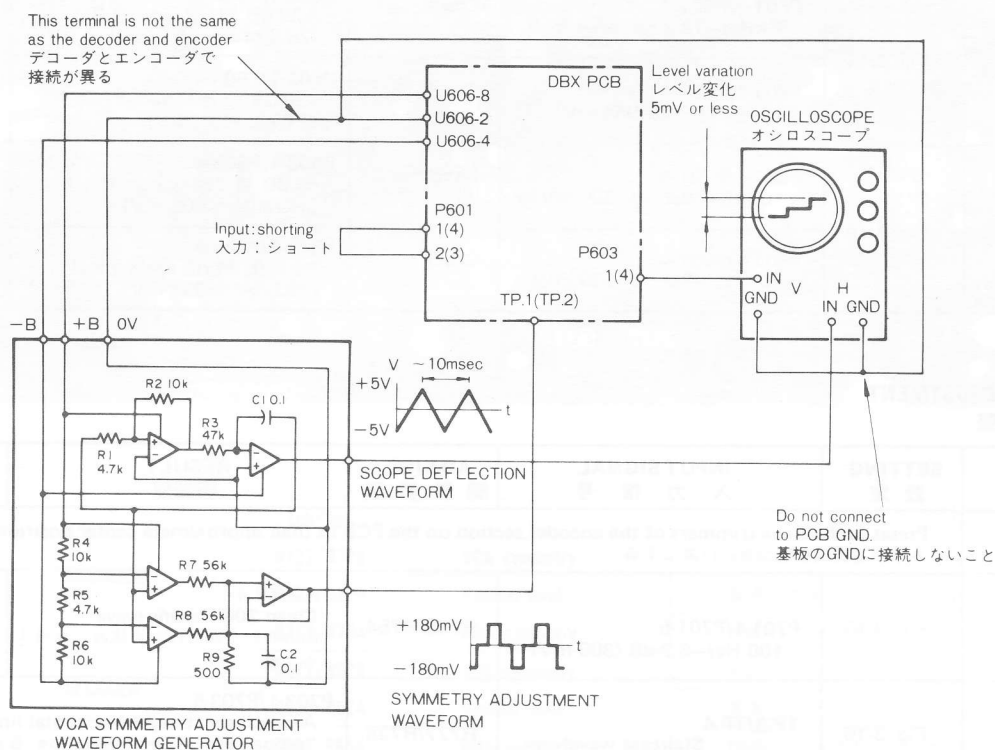


Fig. 3-13 VCA symmetry adjustment setup (decoder)

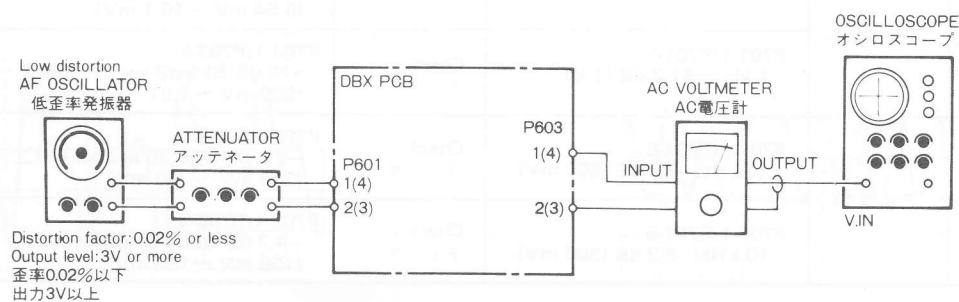


Fig. 3-14 Decoding level adjustment setup (decoder)

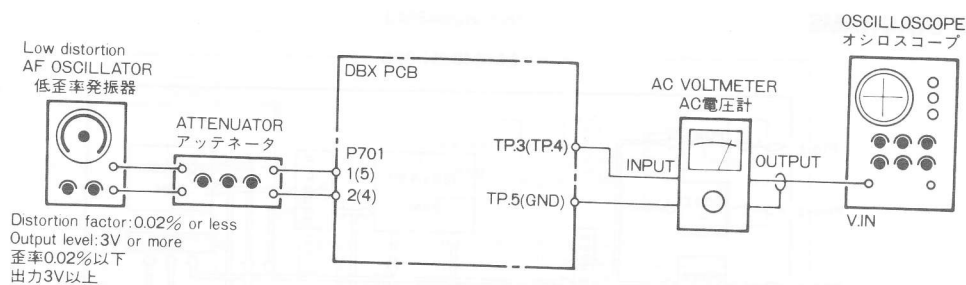


Fig. 3-15 RMS symmetry adjustment setup (encoder)

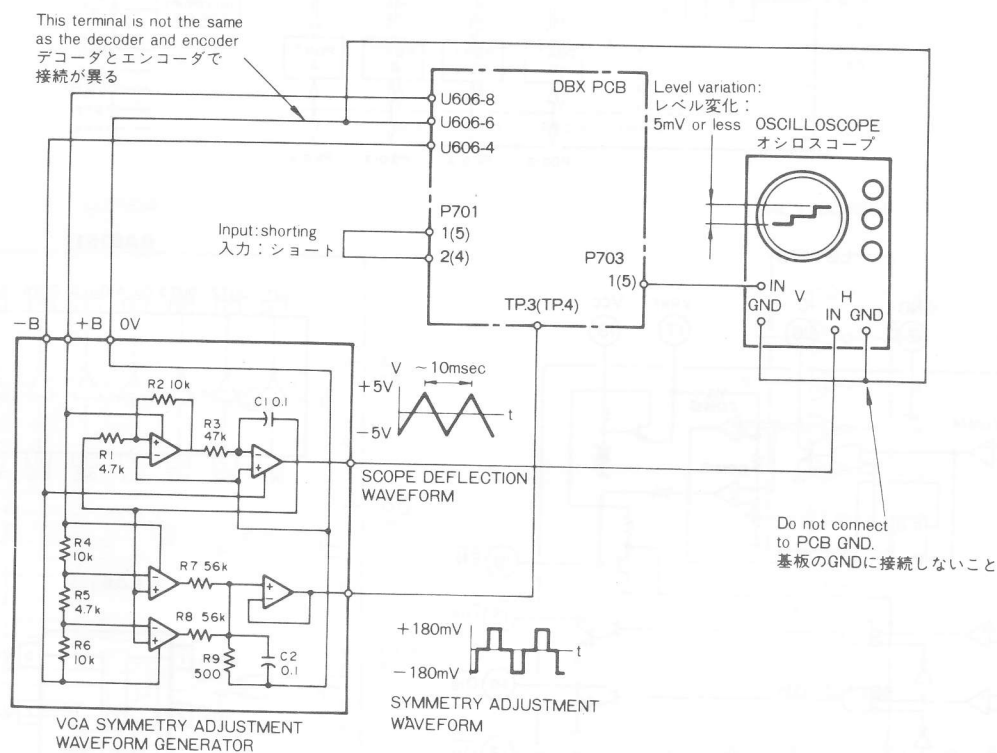


Fig. 3-16 VCA symmetry adjustment setup (encoder)

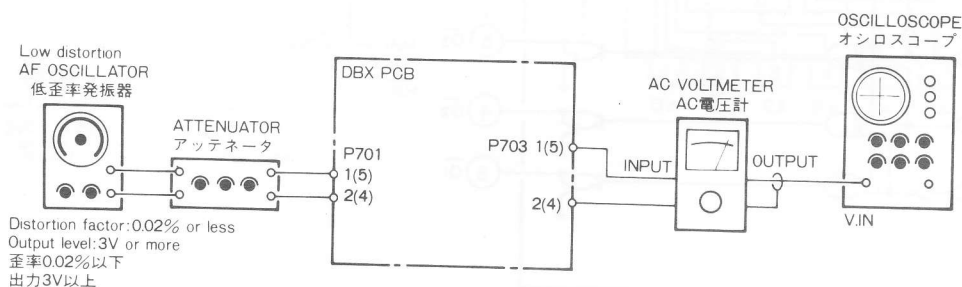
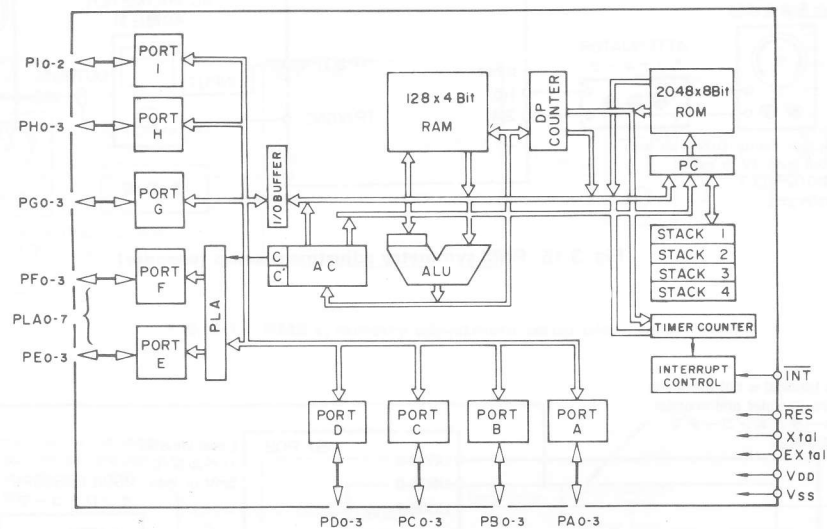


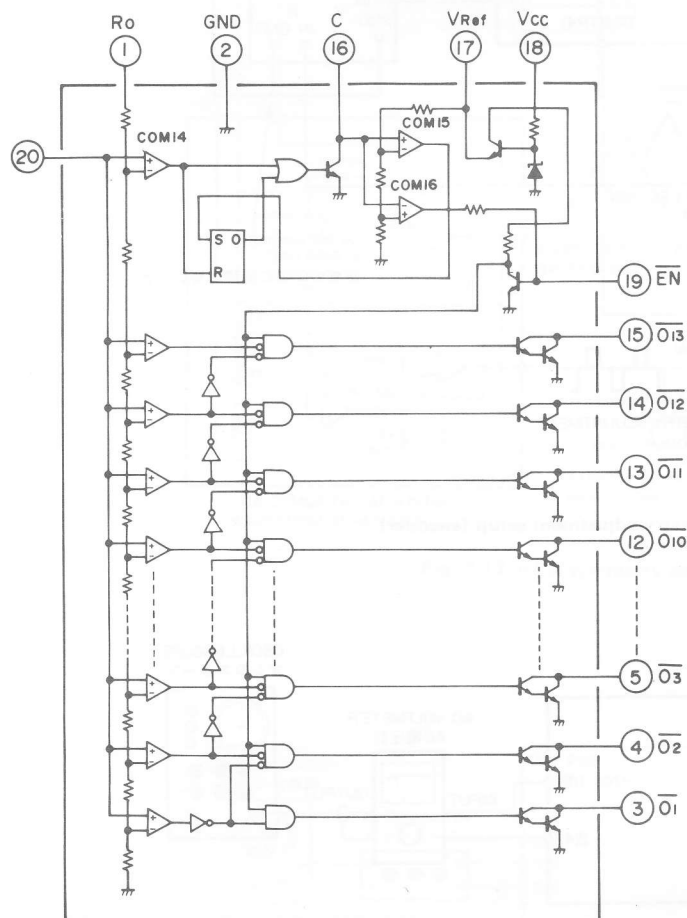
Fig. 3-17 Decoding level adjustment setup (encoder)

3-7 IC BLOCK DIAGRAMS

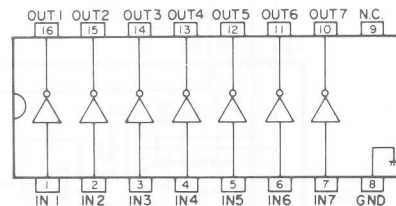
LM6402H-325



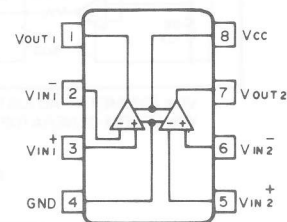
LB1475



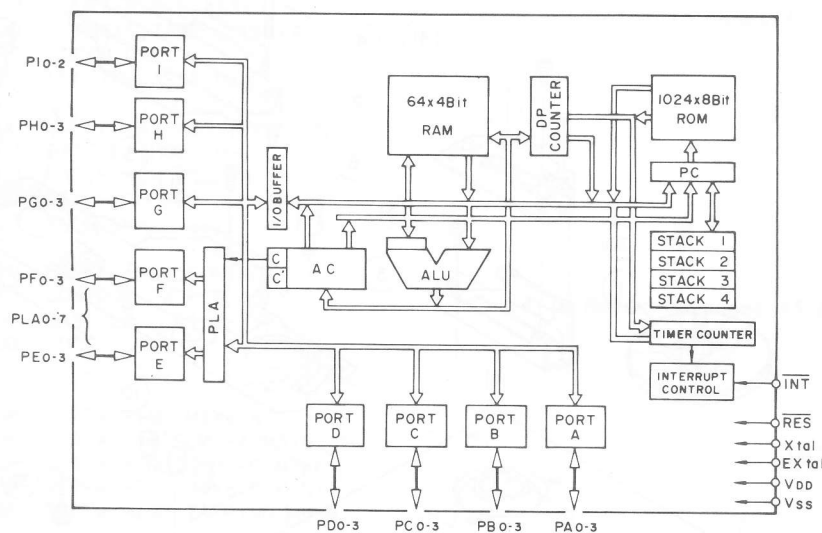
BA6251



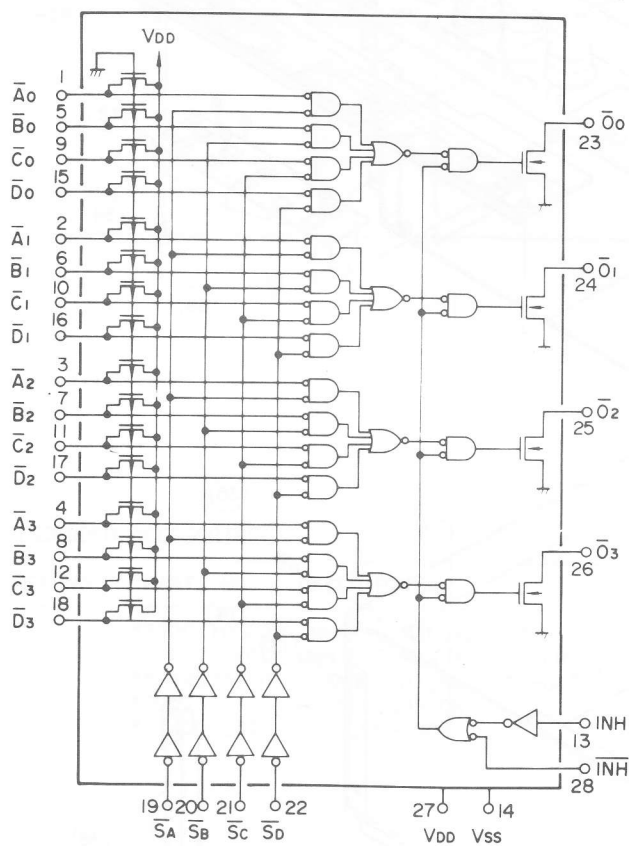
LA6358



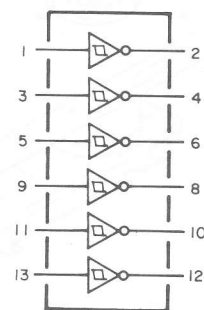
LM6405H-320



LC7800

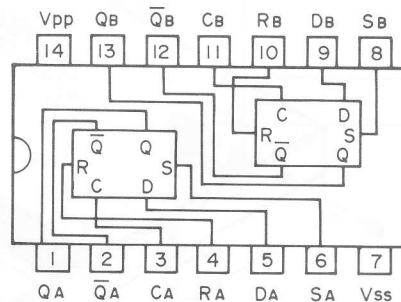


MC14584BCP



VDD = Pin 14
VSS = Pin 7

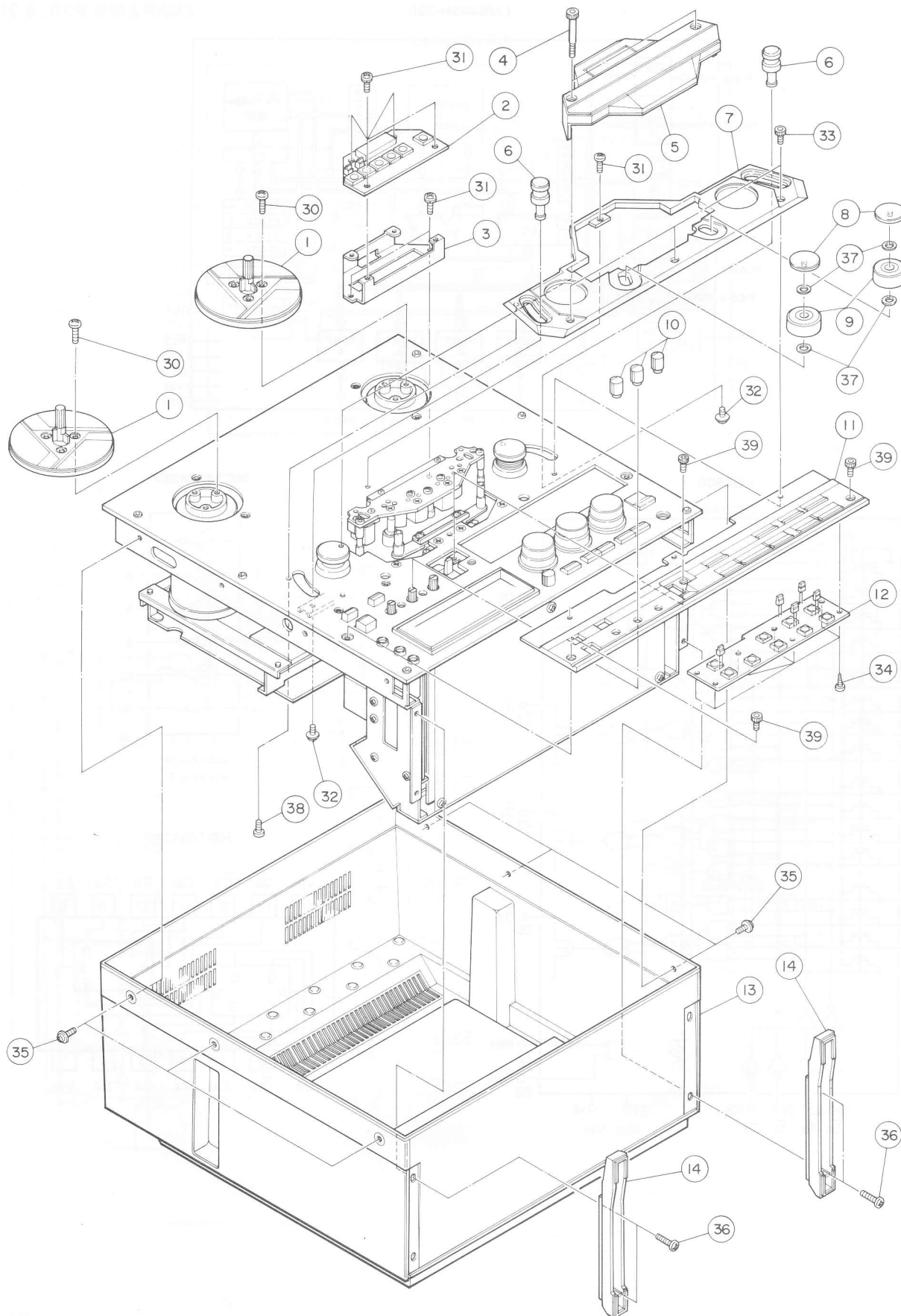
HD14013BP



4 EXPLODED VIEWS AND PARTS LIST

分解図とパーツ・リスト

EXPLODED VIEW-1



EXPLODED VIEW-I

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
I- 1	5504744000	TABLE ASSY, REEL	Refer to pages 45 & 50
I- 2	*5200136000	COUNTER PCB ASSY	
I- 3	*5800553500	CHASSIS, TAPE COUNTER	
I- 4	5800323400	SCREW, CAP	
I- 5	*5801183400	HOUSING ASSY, HEAD	
I- 6	5800549900	ROLLER(S) ASSY, TENSION	
I- 7	*5800544700	BASE(B), HOUSING	
I- 8	5801182200	CAP, PINCH ROLLER	
I- 9	5014175100	PINCH ROLLER	
I-10	5801183500	KNOB, SMALL SIZE	
I-11	*5801184400	PANEL ASSY, CONTROL	Refer to pages 43 & 50
I-12	*5200135910	CONTROL SW PCB ASSY	
I-13	*5800556100	CASE, LB	
I-14	*5533190000	FOOT	
I-30	*5780014008	SCREW, BIND M4X8(NI)	
I-31	*5780133006	SCREW, PAN SEMS-A M3X6	
I-32	*5780043008	SCREW, BIND SEMS-B M3X8	
I-33	*5781713008	SCREW, HEX. M3X8(BLK NI)	
I-34	*5781103008	SCREW, BIND TAPPING M3X8	
I-35	*5783114006	SCREW, FLANGE M4X6(BLK NI)	
I-36	*5780004020	SCREW, BIND M4X20	
I-37	*5785315000	WASHER, POLIS. 5X8X0.5T	
I-38	*5781123010	SCREW, BIND TAPPING M3X10	
I-39	*5781713010	SCREW, HEX. M3X10(BLK NI)	

INCLUDED ACCESSORIES

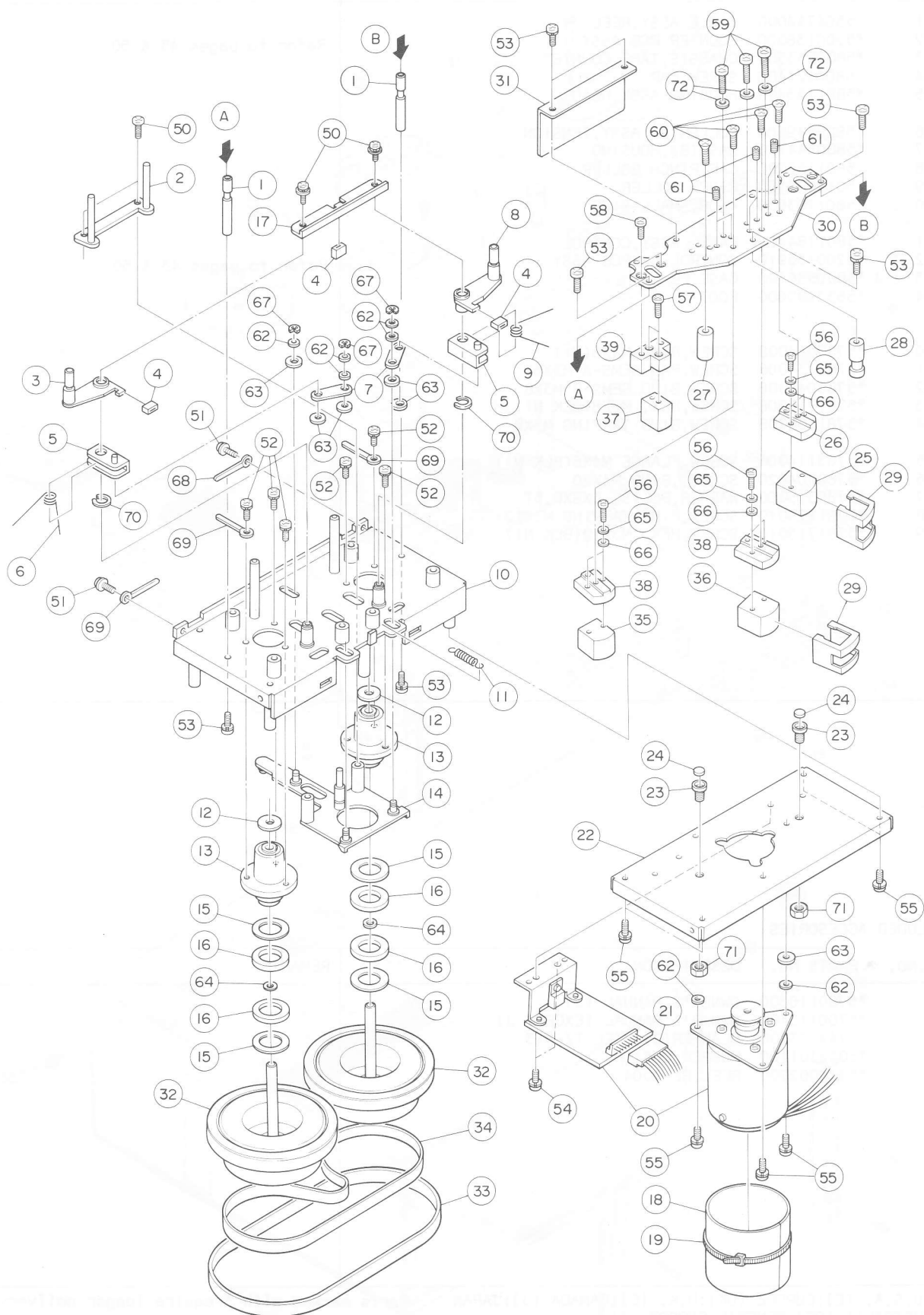
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	*5700110300	OWNER'S MANUAL [J]	
	*5700110400	OWNER'S MANUAL [EXCEPT J]	
	*5744023200	CLAMPER(B), REEL TZ-613	
	*5032301100	RUBBER, CUSHION	
	*5740002700	REEL, RE-1004	

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 [A]:AUSTRALIA [GE]:GENERAL EXPORT

Parts marked with *require longer delivery time.

4 EXPLODED VIEWS AND PARTS LIST

EXPLODED VIEW-2



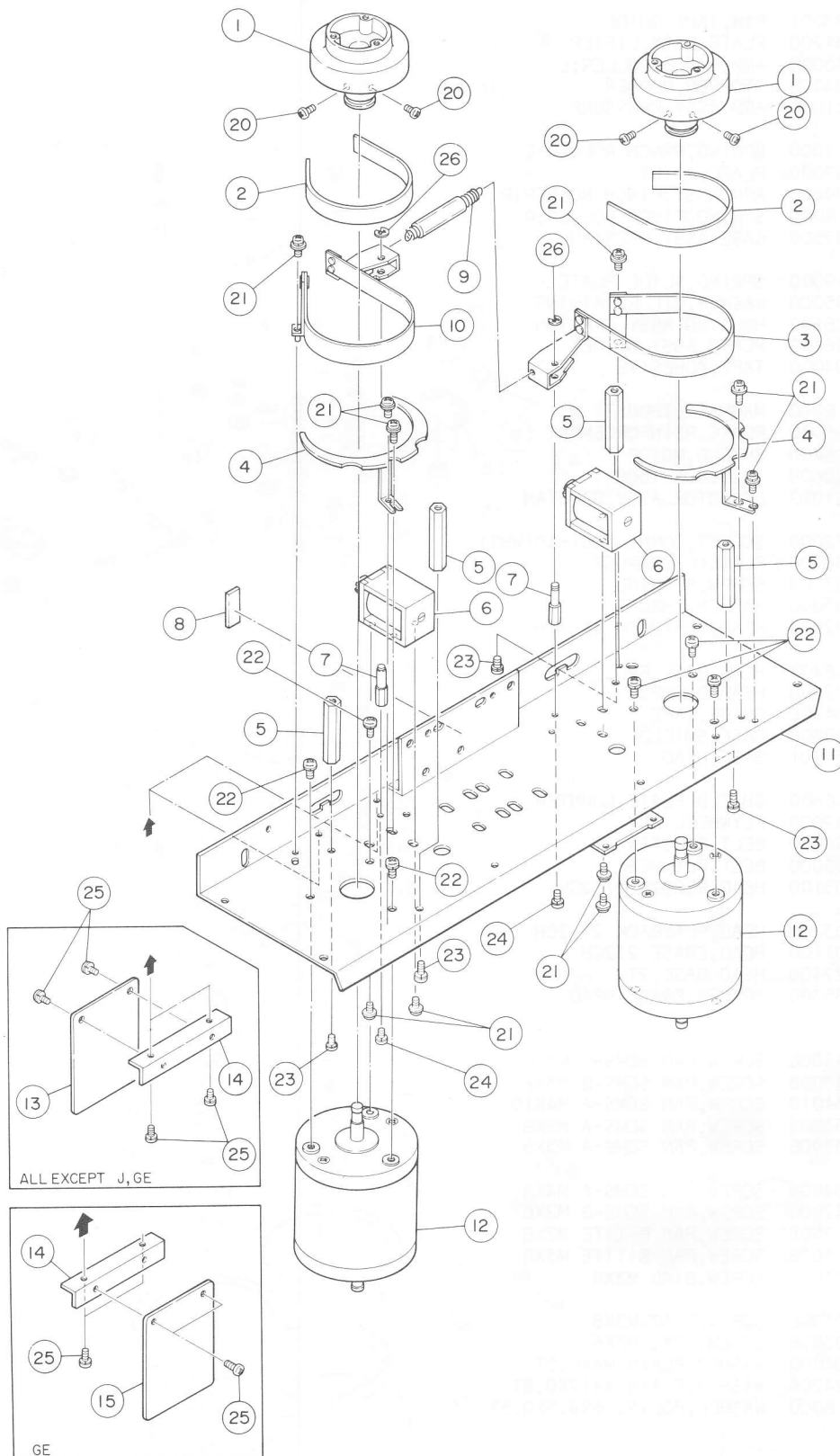
EXPLODED VIEW-2

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	*5545023001	PIN, TAPE GUIDE	
2- 2	*5800554200	PLATE ASSY, LIFTER	
2- 3	*5504730000	ARM, PINCH ROLLER;L	
2- 4	*5534694000	STOPPER, RUBBER	
2- 5	*5504731000	ARM ASSY, PRESSURE	
2- 6	*5524217000	SPRING, PINCH ROLLER;L	
2- 7	*5555667000	PLATE, JOINT	
2- 8	*5504729000	ARM ASSY, PINCH ROLLER;R	
2- 9	*5524216000	SPRING, PINCH ROLLER;R	
2-10	*5800527500	BASE ASSY, CAPSTAN	
2-11	*5524219000	SPRING, SLIDE PLATE	
2-12	*5534695000	WASHER, OIL RETAINING	
2-13	5504726100	HOUSING ASSY, CAPSTAN	
2-14	*5800526400	PLATE ASSY, SLIDE	
2-15	*5555704000	TAPE, ADHESIVE	
2-16	5534715000	MAGNET, THRUST	
2-17	*5555666000	PLATE, REINFORCEMENT	
2-18	*5801196400	SHIELD, MOTOR	
2-19	*5786720600	INSULOCK T60R	
2-20	7105021002	DC MOTOR ASSY, CAPSTAN	
2-21	*5122172000	SOCKET, CONN. 5051-10(WHT)	
2-22	*5800138000	PLATE(F), THRUST	
2-23	*5544003000	SCREW, BEARING	
2-24	*5555703000	WASHER, THRUST	
2-25	5378302900	HEAD, PLAYBACK 4T 2CH	
2-26	*5800568401	HEAD BASE, FWD.	
2-27	*5800622500	HEAD, DUMMEY	
2-28	*5800554100	GUIDE, TAPE	
2-29	*5800568600	CASE, SHIELD	
2-30	*5800554001	BASE, HEAD	
2-31	*5800566600	SHIELD PLATE, COUNTER	
2-32	5504749000	FLYWHEEL ASY	
2-33	5534690000	BELT, CAPSTAN 2T	
2-34	5534693000	BELT, FLYWHEEL	
2-35	5378303100	HEAD, RECORD 2T 2CH	
2-36	5378303200	HEAD, PLAYBACK 2T 2CH	
2-37	5378301100	HEAD, ERASE 2T2CH	
2-38	*5800622400	HEAD BASE, 2T	
2-39	*5800285300	SPACER, ERASE HEAD	
2-50	*5780143006	SCREW, PAN SEMS-B M3X6	
2-51	*5780143008	SCREW, PAN SEMS-B M3X8	
2-52	*5780134010	SCREW, PAN SEMS-A M4X10	
2-53	*5780133008	SCREW, PAN SEMS-A M3X8	
2-54	*5780133006	SCREW, PAN SEMS-A M3X6	
2-55	*5780134008	SCREW, PAN SEMS-A M4X8	
2-56	*5780142006	SCREW, PAN SEMS-B M2X6	
2-57	*5783012008	SCREW, PAN B-TITE M2X8	
2-58	*5783013008	SCREW, PAN B-TITE M3X8	
2-59	*5780003008	SCREW, BIND M3X8	
2-60	*5780203008	SCREW, FLAT M3X8	
2-61	*5782003006	SCREW, HEX. M3X6	
2-62	*5785004000	WASHER, PLAIN M4X0.5T	
2-63	*5785024200	WASHER, PLAIN 4X12X0.8T	
2-64	*5785316000	WASHER, POLIS. 6X9.5X0.5T	

(Continued on page 38)

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EXPLODED VIEW-3



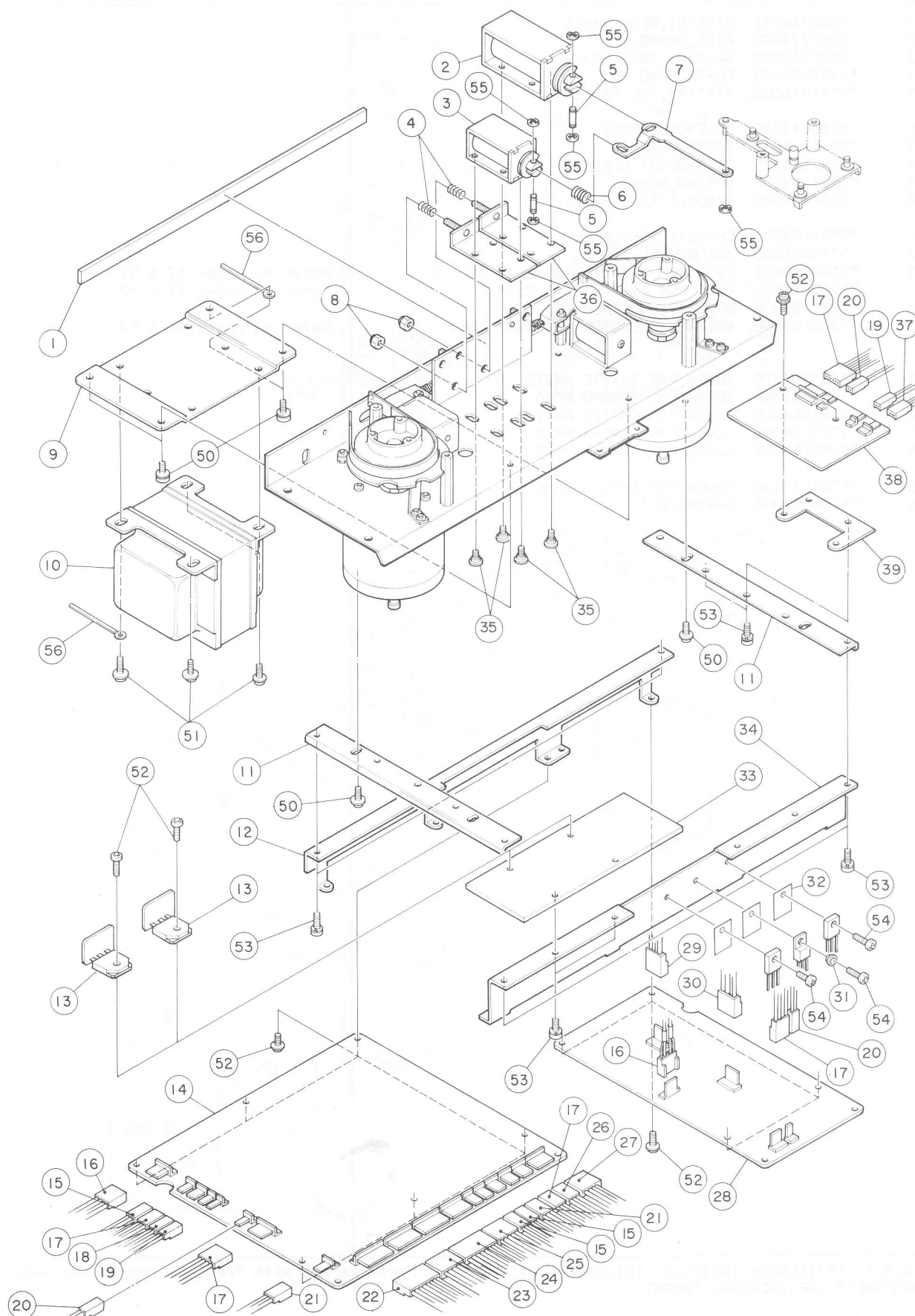
EXPLODED VIEW-3

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
3- 1	5800346201	BASE(B),REEL TABLE	
3- 2	5555274000	FELT,BRAKE	
3- 3	5504736000	BAND(R) ASSY,BRAKE	
3- 4	*5555685000	PLATE,BAND	
3- 5	*5544916000	STAY(A),TOP PANEL	
3- 6	5163044000	SOLENOID,BRAKE	
3- 7	*5545033000	SHAFT,BRAKE	
3- 8	*5555570000	CUSHION(B),BONNET	
3- 9	*5524294000	SPRING,BRAKE	
3-10	5504735000	BAND(L) ASSY,BRAKE	
3-11	*5503194002	CHASSIS ASSY,REEL	
3-12	5370004800	MOTOR,REEL DC	
3-13	*5200140401	FUSE PCB ASSY(1) [E,UK,A]	Refer to pages 47 & 52
	*5200140501	FUSE PCB ASSY(2) [US,C,J]	Refer to pages 47 & 52
3-14	*5555789000	BRACKET,FUSE PCB	
3-15	*5200140600	VOLTAGE SELECTOR PCB ASSY [GE]	Refer to pages 47 & 52
3-20	*5783004010	SCREW,PAN S-TITE M4X10	
3-21	*5780143006	SCREW,PAN SEMS-B M3X6	
3-22	*5783564010	SCREW,PAN C-TITE M4X10	
3-23	*5780134008	SCREW,PAN SEMS-A M4X8	
3-24	*5780133008	SCREW,PAN SEMS-A M3X8	
3-25	*5780133006	SCREW,PAN SEMS-A M3X6	
3-26	*5786003000	E-RING,E-3	

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 [A]:AUSTRALIA [GE]:GENERAL EXPORT

Parts marked with *require longer delivery time.

EXPLODED VIEW 4



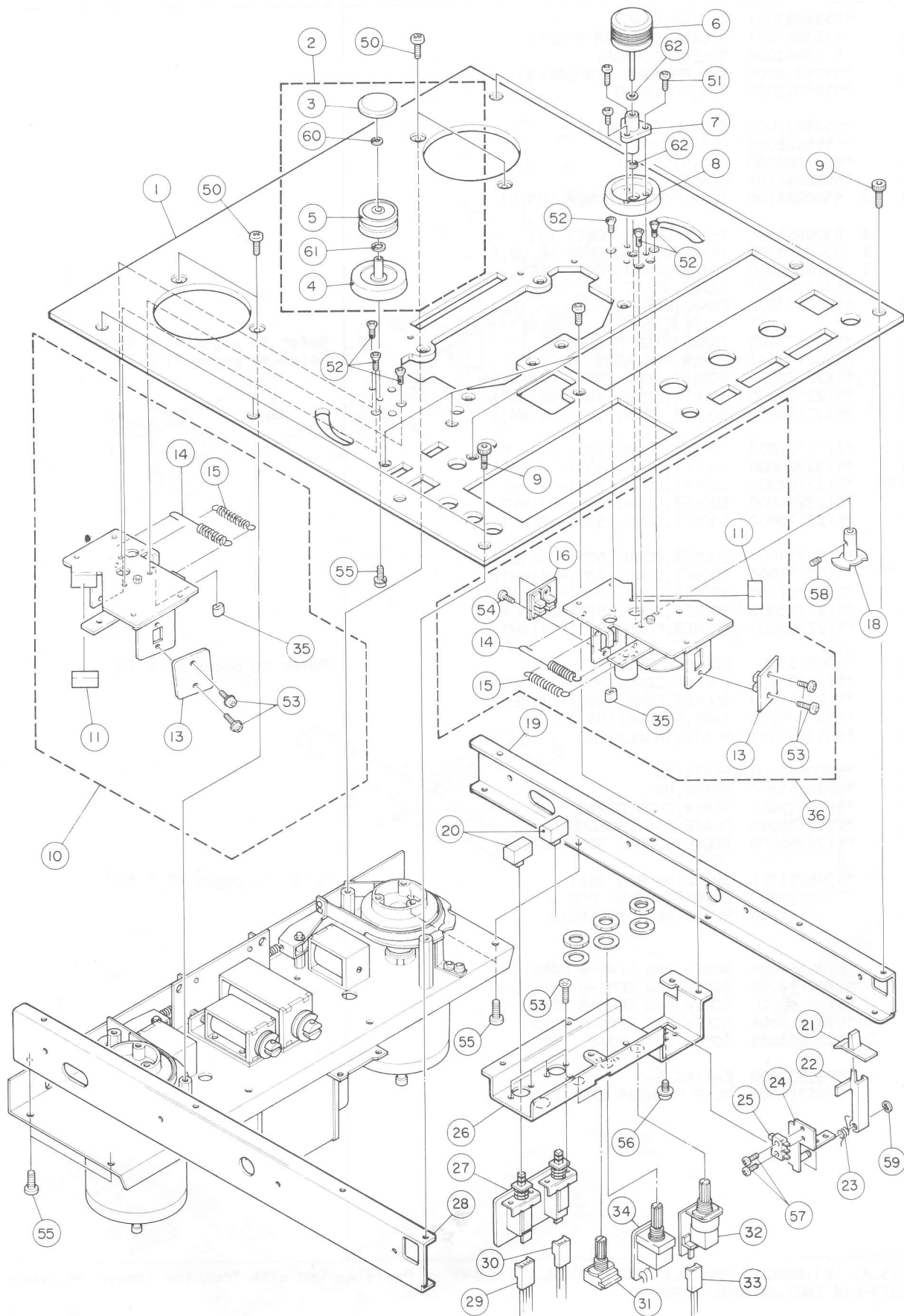
EXPLODED VIEW-4

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
4- 1	*5555887001	CUSION,CASE	
4- 2	5163041001	SOLENOID,PINCH ROLLER	
4- 3	5163042000	SOLENOID,PAUSE	
4- 4	*5524218000	SPG,PRESSUR REGULATION	
4- 5	*5545022000	PIN,SOLENOID	
4- 6	*5524071000	SPRING,SOLENOID	
4- 7	*5555668000	PLATE,C	
4- 8	*5581066000	NUT,NYLON M4	
4- 9	*5555681101	BRACKET,TRANS.	
4-10	△ 5320034100	TRANSFORMER,POWER [US,C]	
	△ 5320055600	TRANSFORMER,POWER [J]	
	△ 5320055700	TRANSFORMER,POWER [E,UK,A]	
	△ 5320055800	TRANSFORMER,POWER [GE]	
4-11	*5553296001	FRAME,JOINT	
4-12	*5800553200	FRAME,PCB	
4-13	*5200073100	TRANSISTOR PCB ASSY	Refer to pages 45 & 51
4-14	*5200135421	POWER PCB ASSY	Refer to pages 41 & 48
4-15	*5122222000	SOCKET,CONN. 5051-03A(BLK)	
4-16	*5122167000	SOCKET,CONN. 5051-05(WHT)	
4-17	*5122166000	SOCKET,CONN. 5051-04(WHT)	
4-18	*5122221000	SOCKET,CONN. 5051-02(BLK)	
4-19	*5122280000	SOCKET,CONN. 5051-02(RED)	
4-20	*5122164000	SOCKET,CONN. 5051-02(WHT)	
4-21	*5122281000	SOCKET,CONN. 5051-03(RED)	
4-22	*5122172000	SOCKET,CONN. 5051-10(WHT)	
4-23	*5122227000	SOCKET,CONN. 5051-08A(BLK)	
4-24	*5122176000	SOCKET,CONN. 5051-14(WHT)	
4-25	*5122287000	SOCKET,CONN. 5051-09(RED)	
4-26	*5122223000	SOCKET,CONN. 5051-04(BLK)	
4-27	*5122168000	SOCKET,CONN. 5051-06(WHT)	
4-28	*5200135600	DBX PCB ASSY	Refer to pages 43 & 49
4-29	*5122283000	SOCKET,CONN. 5051-05(RED)	
4-30	*5122282000	SOCKET,CONN. 5051-04(RED)	
4-31	*5033295000	TUBE,INSULATING	
4-32	*5033291000	PLATE,INSULATING	
4-33	*5800553800	HEATSINK	
4-34	*5800553300	FRAME,HS	
4-35	*5800022600	SCREW,SHOULDER(G)	
4-36	*5504732000	PLATE ASSY,SOLENOID	
4-37	*5122165000	SOCKET,CONN. 5051-03(WHT)	
4-38	*5200154311	SPOOLING PCB ASSY	Refer to pages 45 & 50
4-39	*5800525400	BRACKET,POWER PCB	
4-46	*5504732000	PLATE ASSY,SOLENOID	
4-50	*5780134008	SCREW,PAN SEMS-A M4X8	
4-51	*5780144008	SCREW,PAN SEMS-B M4X8	
4-52	*5780143006	SCREW,PAN SEMS-B M3X6	
4-53	*5780133006	SCREW,PAN SEMS-A M3X6	
4-54	*5780003008	SCREW,BIND M3X8	
4-55	*5786003000	E-RING,E-3	
4-56	*5786714000	CLIP,HARNESS 2X9.1X50	

[US]:U.S.A. [E]:EUROPE [UK]:U.K. [C]:CANADA [J]:JAPAN
[A]:AUSTRALIA [GE]:GENERAL EXPORT

Parts marked with *require longer delivery time.

EXPLODED VIEW-5

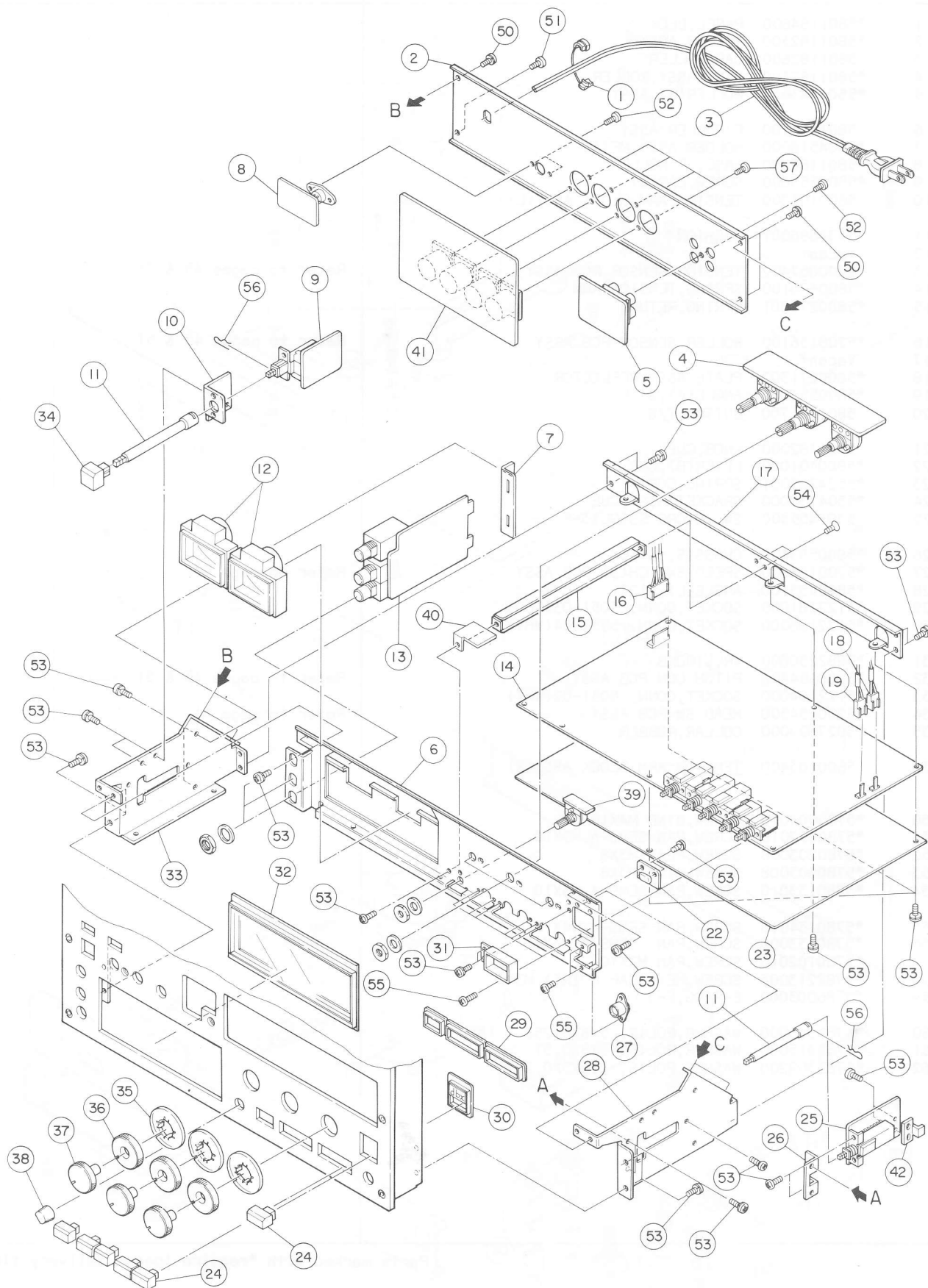


EXPLODED VIEW-5

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
5- 1	*5801184600	PANEL,DECK	
5- 2	*5801182300	ROLLER ASSY	
5- 3	5801182600	CAP,ROLLER	
5- 4	*5801182400	BASE ASSY,ROLLER	
5- 5	*5504743004	ROLLER(B) ASSY	
5- 6	5801182700	F ROLLER ASSY	
5- 7	*5504516000	HOLDER ASSY,METAL	
5- 8	*5801182900	BASE, F ROLLER	
5- 9	*5800553600	SCREW,CAP(B)	
5-10	5600103300	TENSION ARM BLOCK ASSY(L)	
5-11	*5534686001	CUSHION	
5-12	Vacant		
5-13	*5200067402	TENSION SENSOR PCB ASSY	Refer to pages 45 & 51
5-14	*5800676100	SPRING,TENSION ARM	
5-15	*5800270801	SPRING,RETURN	
5-16	*5200136100	ROLLER SENSOR PCB ASSY	Refer to pages 45 & 51
5-17	Vacant		
5-18	*5800271302	PLATE ASSY,REFLECTOR	
5-19	*5800553000	ANGLE(R),SIDE	
5-20	5801181700	BUTTON,T/S	
5-21	5801182000	KNOB,CUE	
5-22	*5800401000	LEVER(B),CUE	
5-23	*5524223001	SPRING,CUE	
5-24	*5504737000	BRACKET ASSY,CUE	
5-25	5301455500	SW.,MICRO SS5GL13-F	
5-26	*5800553400	CHASSIS,SWITCH	
5-27	*5200154600	SPEED SWITCH(3) PCB ASSY	Refer to page 51
5-28	*5800553100	ANGLE(L),SIDE	
5-29	*5122281000	SOCKET,CONN. 5051-03(RED)	
5-30	*5122166000	SOCKET,CONN. 5051-04(WHT)	
5-31	*5282250600	VR.,100KB	
5-32	*5200154400	PITCH CON PCB ASSY	Refer to pages 45 & 51
5-33	*5122164000	SOCKET,CONN. 5051-02(WHT)	
5-34	*5200154500	HEAD SW PCB ASSY	Refer to page 51
5-35	*5027699000	COLLAR,RUBBER	
5-36	5600103400	TENSION ARM BLOCK ASSY(R)	
5-50	*5780004010	SCREW,BIND M4X10	
5-51	*5780033010	SCREW,PAN SEMS-A M3X10	
5-52	*5780203008	SCREW,FLAT M3X8	
5-53	*5780003008	SCREW,BIND M3X8	
5-54	*5780133010	SCREW,PAN SEMS-A M3X10	
5-55	*5780134010	SCREW,PAN SEMS-A M4X10	
5-56	*5780133006	SCREW,PAN SEMS-A M3X6	
5-57	*5780102010	SCREW,PAN M2X10	
5-58	*5782213003	SCREW,HEX.(CAP POINT) M3X3	
5-59	*5786003000	E-RING,E-3	
5-60	*5785305000	WASHER,POLIS. 5X8X0.25T	
5-61	*5785315000	WASHER,POLIS. 5X8X0.5T	
5-62	*5785302200	WASHER,POLIS. 2.6X5X0.25T	

Parts marked with *require longer delivery time.

EXPLODED VIEW-6



EXPLODED VIEW-6

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
6- 1	△ *5317001700	BUSHING, CORD 4N-5 [US,C,UK]	
	△ *5534660000	BUSHING, CORD 4N-4 [E,A,J,GE]	
6- 2	*5801184200	PANEL, REAR	
6- 3	△ *5128027000	CORD, AC [J]	
	△ *5350010700	CORD, AC [US,C]	
	△ *5350010800	CORD, AC [GE]	
	△ *5350008200	CORD, AC [E]	
	△ *5128047000	CORD, AC [UK]	
	△ *5350008300	CORD, AC [A]	
6- 4	*5200135800	VR PCB ASSY	Refer to pages 46 & 51
6- 5	*5200136400	IN/OUTPUT PCB ASSY	Refer to pages 45 & 51
6- 6	*5800551800	CHASSIS ASSY, AMP.	
6- 7	*5800552400	ANGLE, PCB	
6- 8	*5200142310	DUPLI SYNC PCB ASSY	Refer to pages 46 & 51
6- 9	*5200113100	POWER SW PCB ASSY [J,GE]	Refer to pages 47 & 52
	*5200113110	POWER SW PCB ASSY [US]	Refer to pages 47 & 52
	*5200113120	POWER SW PCB ASSY [C]	Refer to pages 47 & 52
	*5200141901	POWER SW PCB ASSY [E,UK,A]	Refer to pages 47 & 52
6-10	*5800552500	BRACKET, POWER SW	
6-11	*5534712000	LINK, B	
6-12	5296006900	METER, VU	
6-13	*5200135700	HEADPHONE PCB ASSY	Refer to pages 44 & 50
6-14	*5200272500	R/P AMP. PCB ASSY	Refer to pages 39 & 48
6-15	*5800552600	ANGLE, PCB	
6-16	*5122166000	SOCKET, CONN. 5051-04(WHT)	
6-17	*5800552700	FLAME, AMP. BACK	
6-18	*5122280000	SOCKET, CONN. 5051-02(RED)	
6-19	*5122164000	SOCKET, CONN. 5051-02(WHT)	
6-20	Vacant		
6-21	Vacant		
6-22	*5200136600	DBX LAMP PCB ASSY	Refer to pages 47 & 51
6-23	*5800552900	PLATE, SHIELD	
6-24	5801181900	BUTTON, AMP.	
6-25	*5200136700	DBX SW PCB ASSY	Refer to pages 47 & 51
6-26	*5800552300	BRACKET, SW	
6-27	*5334027500	SOCKET, CONNECTOR 4P	
6-28	*5800552201	FLAME(R), AMP.	
6-29	*5800548400	ESCUTCHEON(B)	
6-30	*5800547100	LENS(B) ASSY, DBX	
6-31	*5800556400	FOOD, LAMP	
6-32	*5800548600	ESCUTCHEON(B) ASSY, METER	
6-33	*5800552101	FLAME(L), AMP.	
6-34	5801181800	BUTTON, POWER	
6-35	5800548300	KNOB, MARKER	
6-36	5800548100	KNOB(B), LOWER	
6-37	5800547900	KNOB(B), UPPER	
6-38	5801183500	KNOB, SMALL SIZE	
6-39	*5200136510	BIAS VR PCB ASSY	Refer to pages 46 & 51
6-40	*5801184700	SHIELD PLATE, BIAS VR	
6-41	*5200272600	IN/OUT AMP. PCB ASSY	Refer to pages 46 & 50
6-42	*5800598000	SUPPORT, PCB	

[US]:U.S.A. [E]:EUROPE [UK]:U.K. [C]:CANADA [J]:JAPAN
[A]:AUSTRALIA [GE]:GENERAL EXPORT

EXPLODED VIEW-6

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
6-50	*5780103006	SCREW,PAN M3X6	
6-51	*5780163006	SCREW,PAN SEMS-C M3X6	
6-52	*5780013006	SCREW,BIND M3X6(NI)	
6-53	*5780133006	SCREW,PAN SEMS-A M3X6	
6-54	*5780203006	SCREW,FLAT M3X6	
6-55	*5780102604	SCREW,PAN M2.6X4	
6-56	*5786360500	PIN,SPLIT M5	
6-57	*5780012604	SCREW,BIND M2.6X4(NI)	

EXPLODED VIEW-2 (Continued from page 29)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2-65	*5785002000	WASHER,FLAT	
2-66	*5785102000	WASHER,SPRING 2T	
2-67	*5786003000	E-RING,E-3	
2-68	*5786713000	CLIP,HARNESS 3.0X9.1X50	
2-69	*5786714000	CLIP,HARNESS 4.2X9.1X50	
2-70	*5786118000	RING,E TIPE	
2-71	*5781836000	NUT,M6	
2-72	*5785013000	WASHER,FLAT M3 (0.5T)	

Parts marked with *require longer delivery time.

5 PC BOARD AND PARTS

基板図とパーツ・リスト

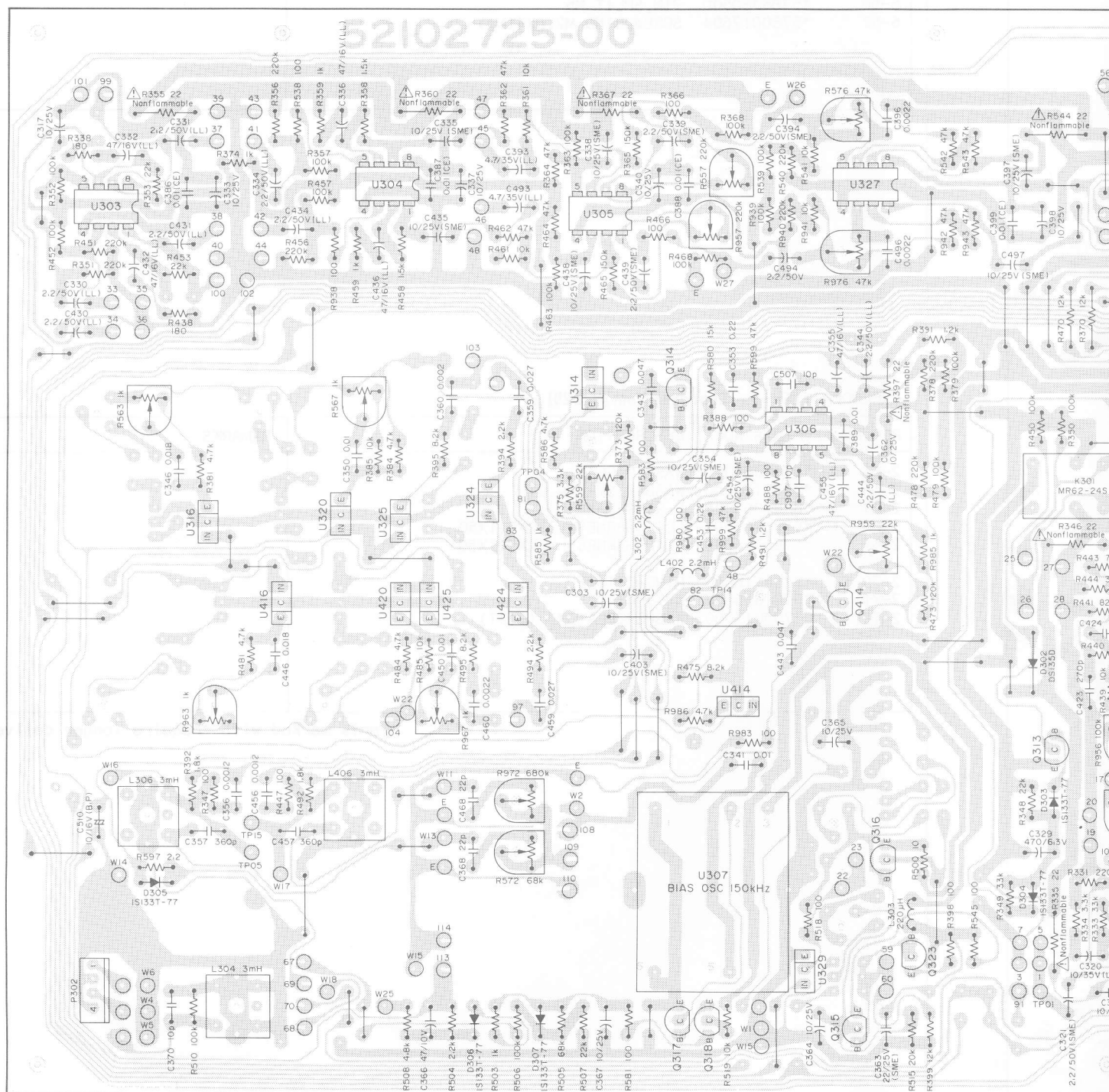
R/P AMP. PCB ASSY

U301~U306, U327 : μ PC4570C
 U307 : BIAS OSC 150kHz
 U308 : M5231L
 U331 : 2SC3400

U311, U313, U314, U316
 U320, U324, U325, U329, U330
 U411, U413, U414, U416
 U420, U424, U425, U430
 : DTC143TF

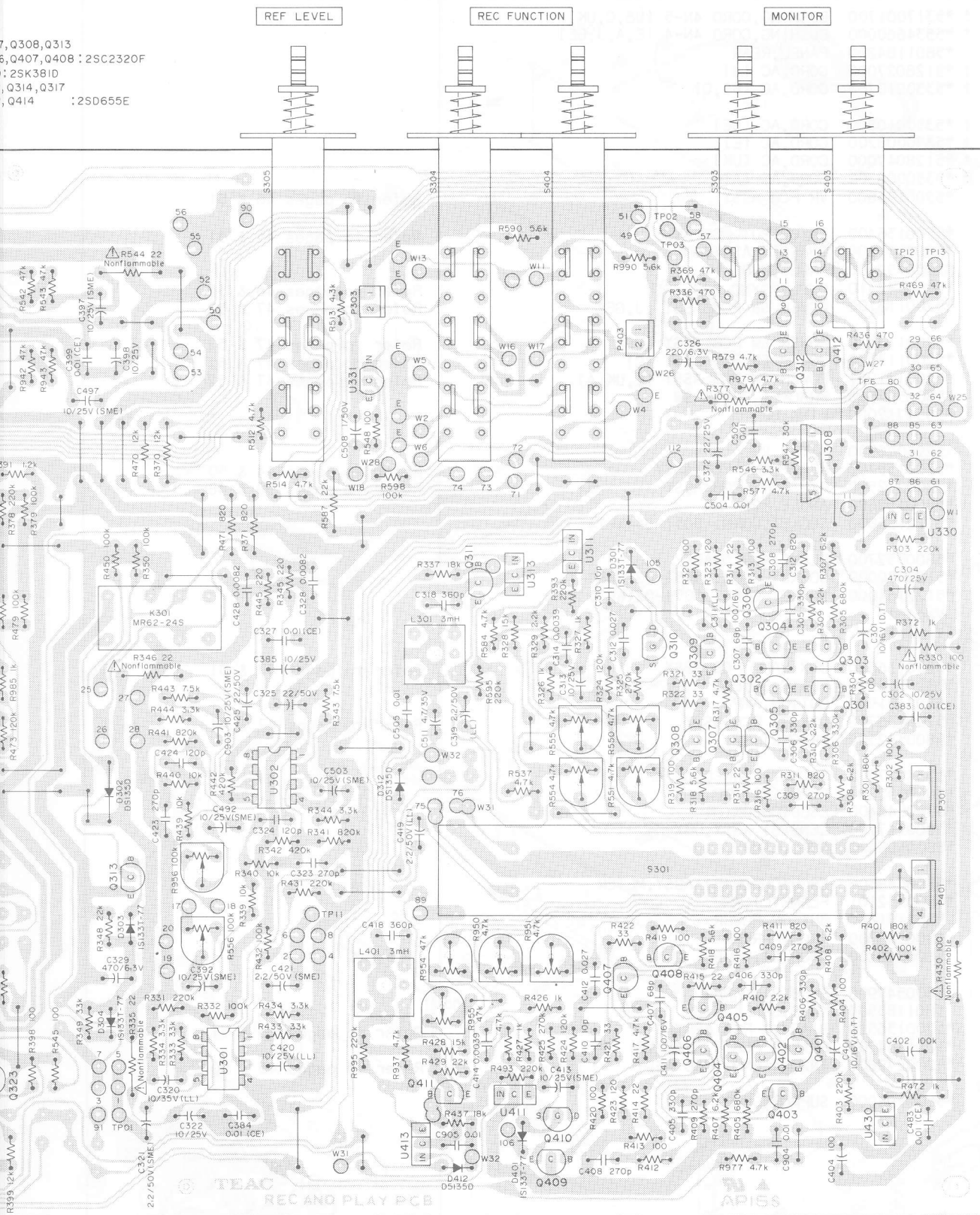
Q301, Q302, Q401, Q402 : 2SC945L-K
 Q303, Q304, Q403, Q404 : 2SA733K
 Q305, Q309, Q315, Q323
 Q405, Q409 : 2SA999F
 Q316 : 2SD1140

Q306, Q307, Q308, Q313
 Q318, Q406, Q407, Q408 : 2SC2320F
 Q310, Q410 : 2SK381D
 Q311, Q312, Q314, Q317
 Q411, Q412, Q414 : 2SD655E

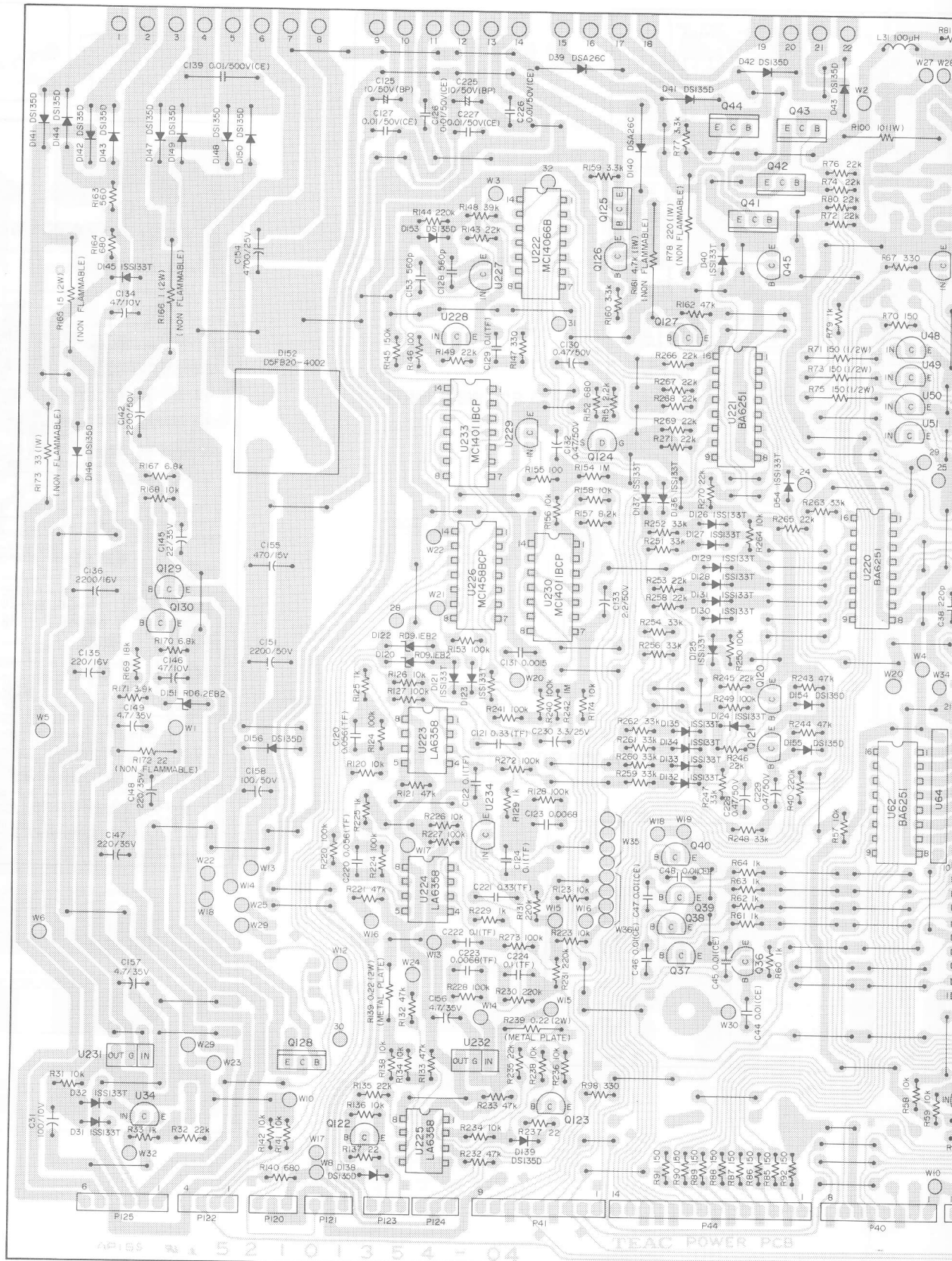


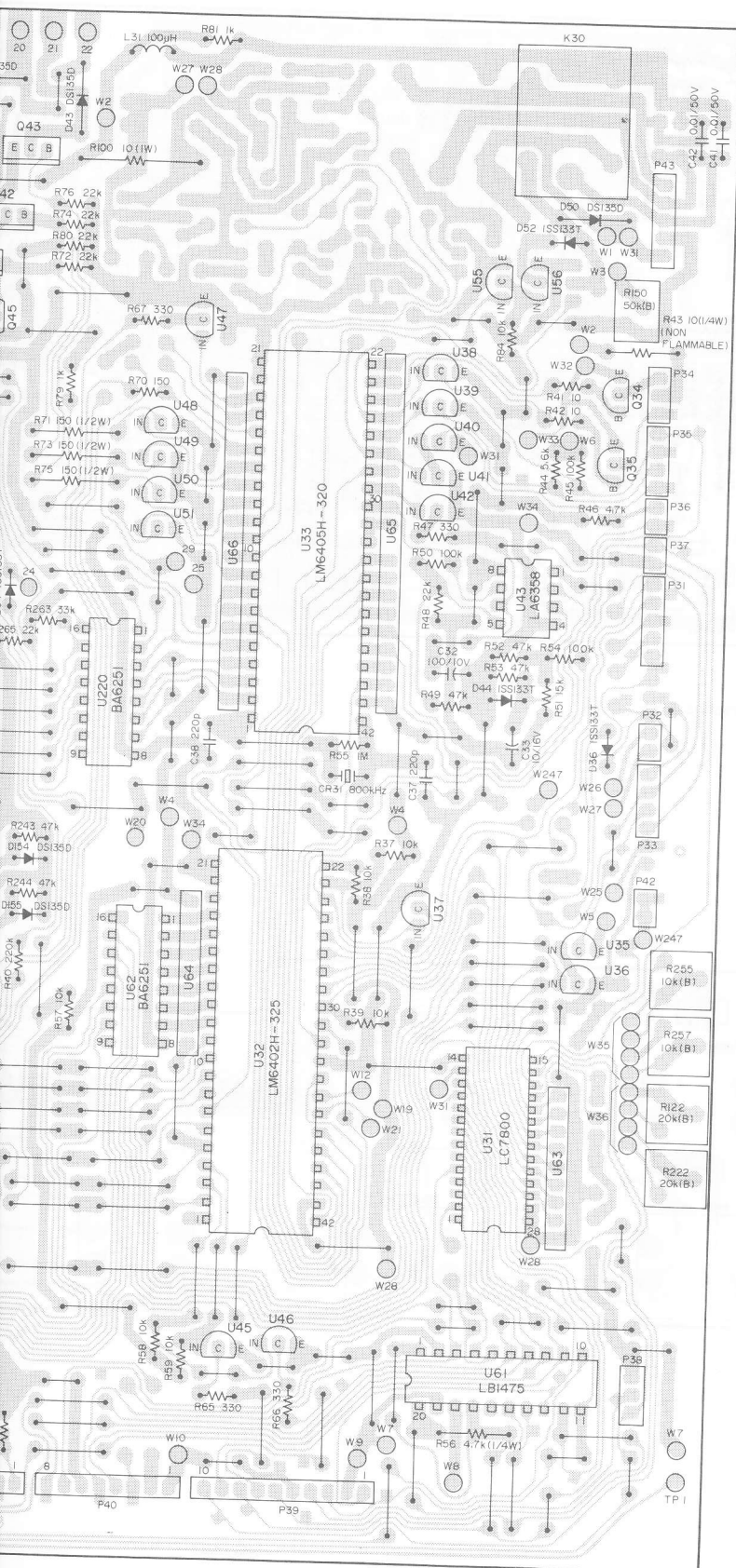
AND PARTS LIST

図とパーツ・リスト



POWER PCB ASSY





U34, U35
U37, U41
U42, U45~U47
U55, U56
U227, U229

2SC3400

U36, U38~U40
U48~U51, U228

2SA1346

U231

L78N05

U232

L78N15

Q34, Q35
Q45, Q127
Q130

2SC945(K)

Q36~Q40
Q120, Q121

2SA733P

Q41~Q43

2SD794Q

Q44, Q125

2SB507(E)

Q122, Q123

2SC2320(F)

Q124

2SK68(A)

Q126

2SA1015(GR)

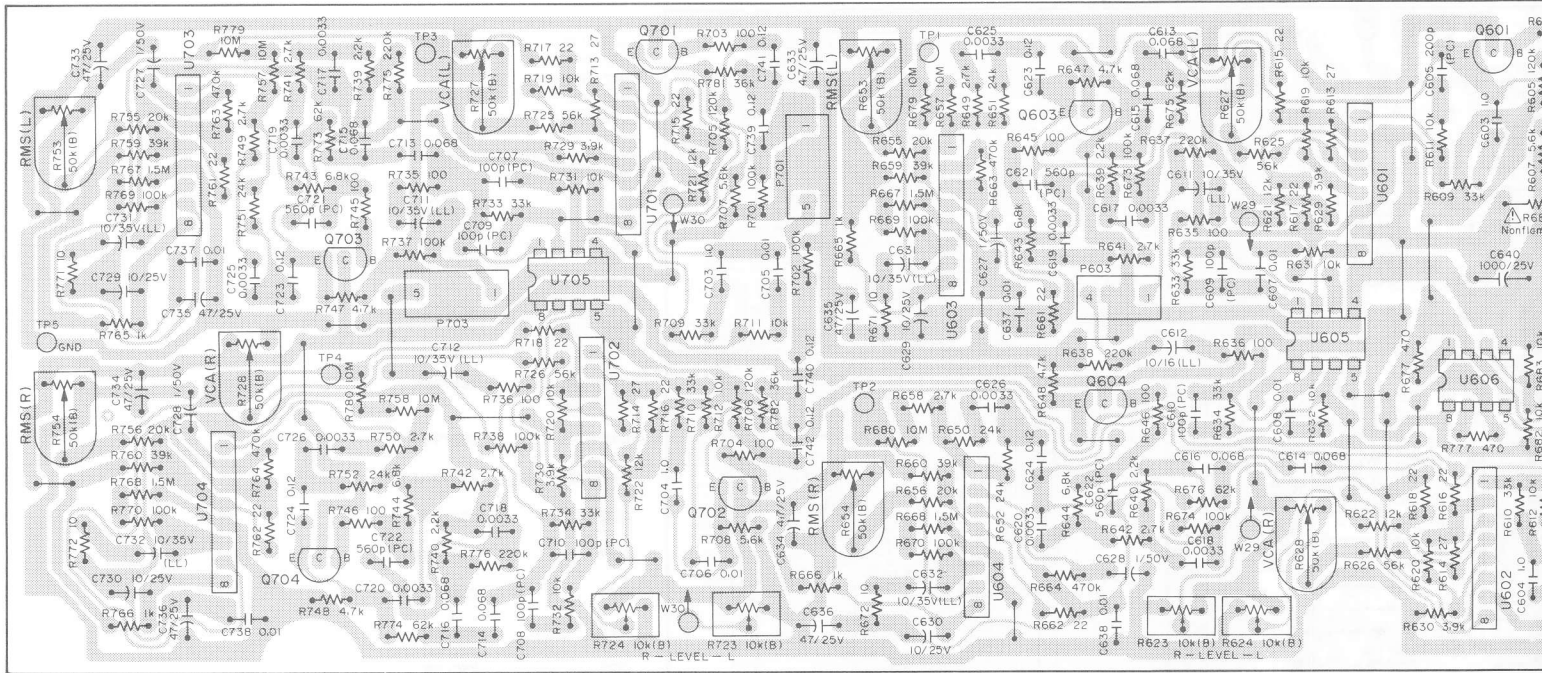
Q128

2SD313E

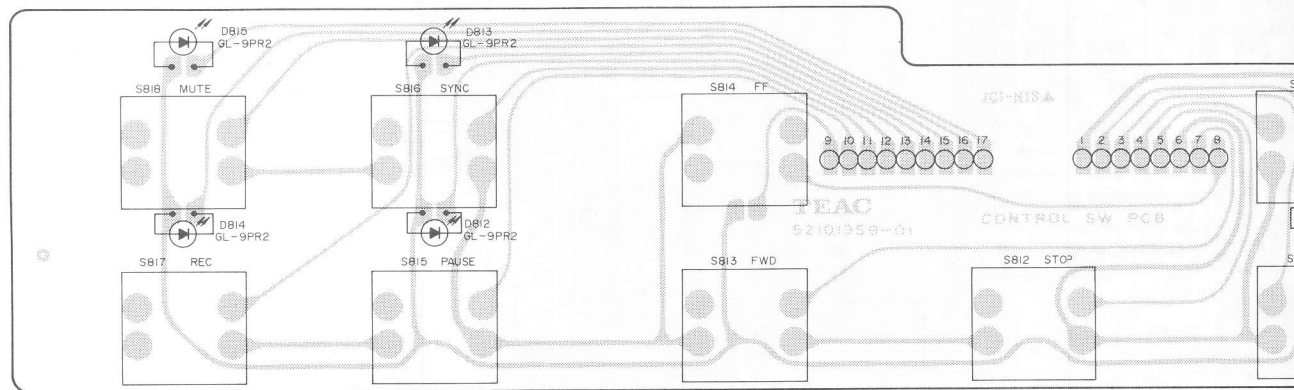
Q129

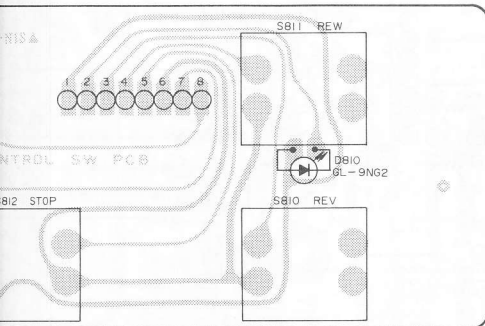
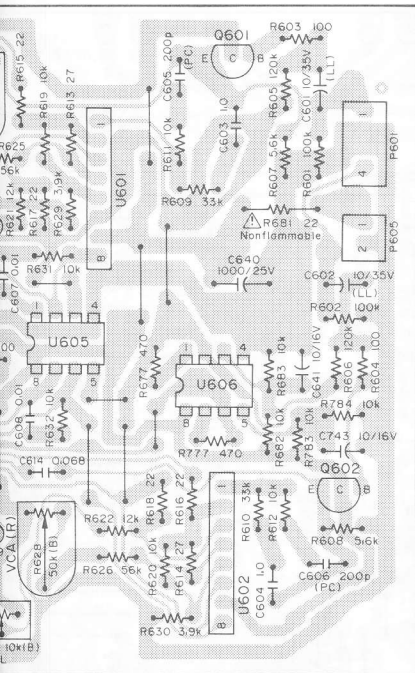
2SC1318

DBX PCB ASSY

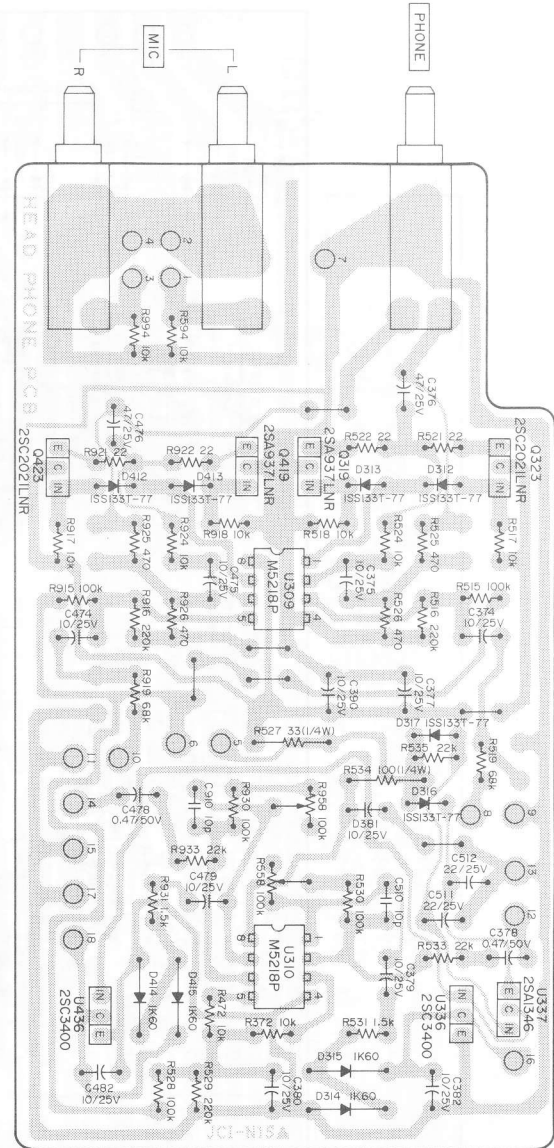


CONTROL SW PCB ASSY

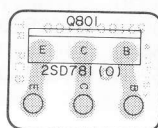




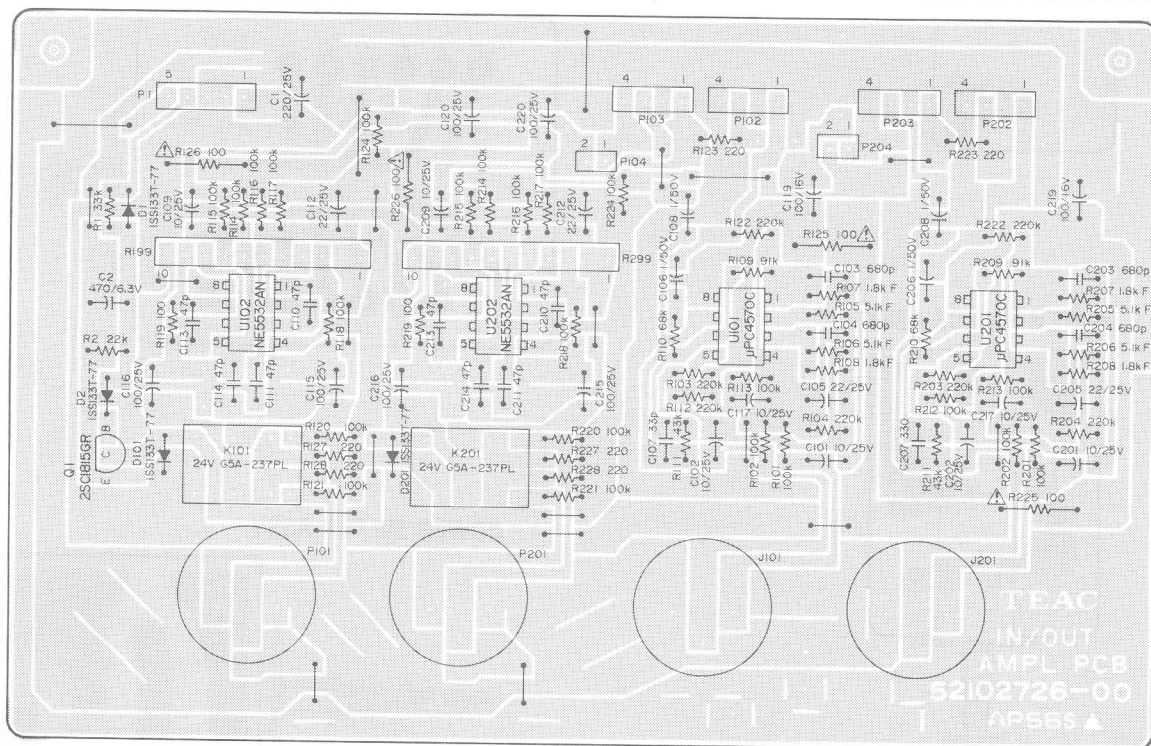
HEADPHONE PCB ASSY



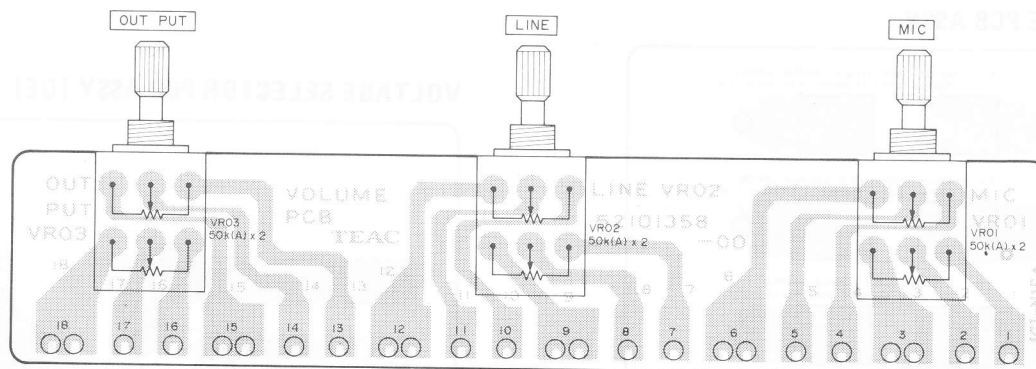
TRANSISTOR PCB ASSY



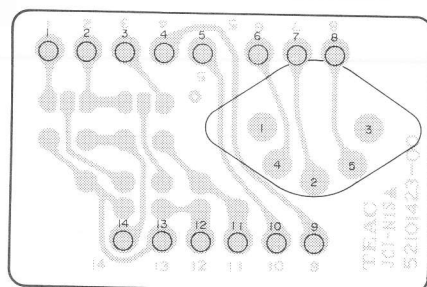
IN/OUT AMP. PCB ASSY



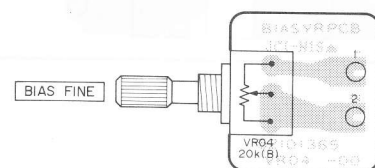
VR PCB ASSY



DUPLI SINC PCB ASSY

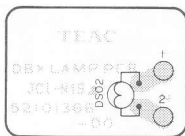


BIAS VR PCB ASSY

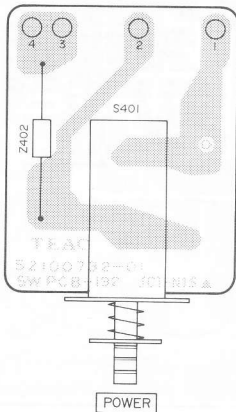


R/P AMP. P

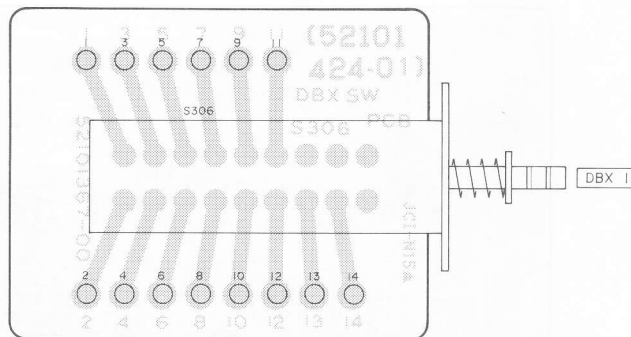
DBX LAMP PCB ASSY



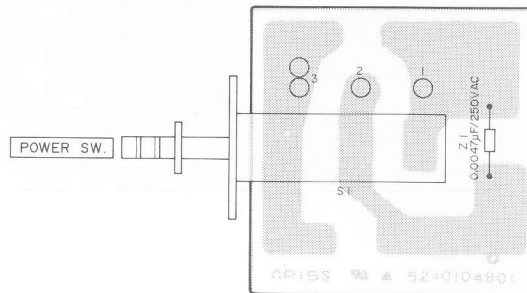
POWER SW PCB ASSY



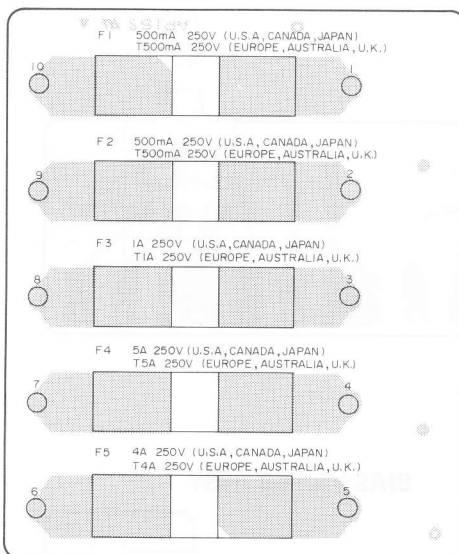
DBX SW PCB ASSY



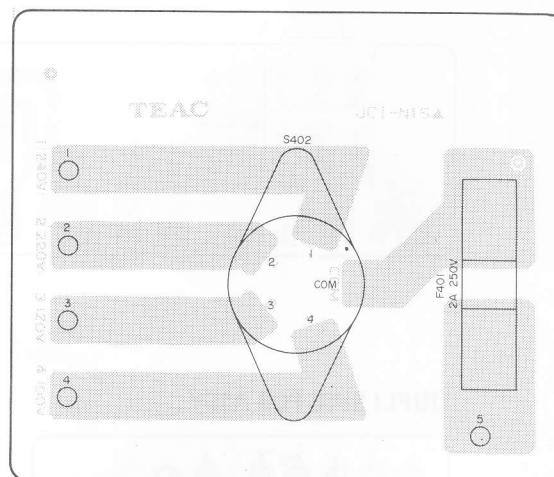
POWER SW PCB ASSY



FUSE PCB ASSY



VOLTAGE SELECTOR PCB ASSY [GE]



REF.NO.

D301, 401

D302
D303-307
D312, 412
K301
L301, 401

L302, 402
L303
L304
L306, 406
P301, 302

P303
P401
P403
Q301, 401
Q302, 402

Q303, 403
Q304, 404
Q305, 405
Q306, 406
Q307, 407

Q308, 408
Q309, 409
Q310, 410
Q311, 411
Q312, 412

Q313
Q314, 414
Q315
Q316
Q317

Q318
Q323
R330, 430
R335
R346

R355
R360
R367
R377
R397

R544
R550, 950
R551, 951
R554, 954
R555, 955

R556, 956
R557, 957
R559, 959
R563, 963
R567, 967

R/P AMP. PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200272500	R/P AMP. PCB ASSY
	*5210272501	R/P AMP. PCB
	*5181763000	JUMPER, P=10.0
	*5242117400	JUMPER, JPW-L5
D301, 401	5224015020	DIODE, ISS133T-77
D302	5224013210	DIODE, DS135D FA4
D303-307	5224015020	DIODE, ISS133T-77
D312, 412	5224013210	DIODE, DS135D FA4
K301	5290010400	RELAY, MR62-24S 24V
L301, 401	5056659000	COIL, TRAP 3MH 20%
L302, 402	5286007300	COIL, CHOKE 2.2MH J
L303	5286020220	COIL, CHOKE 220UH K
L304	5056658100	COIL, DUMMY 3MH 20%
L306, 406	5056659000	COIL, TRAP 3MH 20%
P301, 302	5122128000	PLUG, CONN. 5045-04A (WHT)
P303	5122126000	PLUG, CONN. 5045-02F (WHT)
P401	5122301000	PLUG, CONN. 5045-04A (RED)
P403	5122183000	PLUG, CONN. 5045-02F (BLK)
Q301, 401	5145036000	TR., 2SC-945LK
Q302, 402	5145036000	TR., 2SC-945LK
Q303, 403	5230018700	TR., 2SA733A KB
Q304, 404	5230018700	TR., 2SA733A KB
Q305, 405	5230016600	TR., 2SA999F
Q306, 406	5230778300	TR., 2SC2320-F
Q307, 407	5230778300	TR., 2SC2320-F
Q308, 408	5230778300	TR., 2SC2320-F
Q309, 409	5230016600	TR., 2SA999F
Q310, 410	5232008420	FET., 2SK381D
Q311, 411	5230779520	TR., 2SC1815GR
Q312, 412	5145185000	TR., 2SD-655E
Q313	5230778300	TR., 2SC2320-F
Q314, 414	5145185000	TR., 2SD-655E
Q315	5230016600	TR., 2SA999F
Q316	5231758500	TR., 2SD1140
Q317	5145185000	TR., 2SD-655E
Q318	5230778300	TR., 2SC2320-F
Q323	5230016600	TR., 2SA999F
R330, 430	Δ 5183578000	R., INCOMB. 100 1/4W
R335	Δ 5183562000	R., INCOMB. 22 1/4W
R346	Δ 5183562000	R., INCOMB. 22 1/4W
R355	Δ 5183562000	R., INCOMB. 22 1/4W
R360	Δ 5183562000	R., INCOMB. 22 1/4W
R367	Δ 5183562000	R., INCOMB. 22 1/4W
R377	Δ 5183578000	R., INCOMB. 100 1/4W
R397	Δ 5183562000	R., INCOMB. 22 1/4W
R544	Δ 5183562000	R., INCOMB. 22 1/4W
R550, 950	5280021100	R., TRIMMER 4.7KB
R551, 951	5280021100	R., TRIMMER 4.7KB
R554, 954	5280021700	R., TRIMMER 47KB
R555, 955	5280021700	R., TRIMMER 47KB
R556, 956	5280021900	R., TRIMMER 100KB
R557, 957	5280022100	R., TRIMMER 220KB
R559, 959	5280021500	R., TRIMMER 22KB
R563, 963	5280020700	R., TRIMMER 1KB
R567, 967	5280020700	R., TRIMMER 1KB

R/P AMP. PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
R572, 972	5280022400	R., TRIMMER 680KB
R576, 976	5280021700	R., TRIMMER 47KB
S301	5302102500	SW., REMOTE
S303, 403	5300038400	SW., PUSH
S304, 404	5300035800	SW., PUSH
S305	5300035900	SW., PUSH 6-6
TP01-06	5544750000	PIN, COMBINATION
TP11-15	5544750000	PIN, COMBINATION
U301-306	5220439600	IC., UPC4570C
U307	5292203000	MODULE, OSC
U308	Δ 5220442700	IC., M523ITL
U311, 411	5232251400	TR., DIGITAL DTC-143F
U313, 413	5232251400	TR., DIGITAL DTC-143F
U314, 414	5232251400	TR., DIGITAL DTC-143F
U316, 416	5232251400	TR., DIGITAL DTC-143F
U320, 420	5232251400	TR., DIGITAL DTC-143F
U324, 424	5232251400	TR., DIGITAL DTC-143F
U325, 425	5232251400	TR., DIGITAL DTC-143F
U327	5220439600	IC., UPC4570C
U329	5232251400	TR., DIGITAL DTC-143F
U330, 430	5232251400	TR., DIGITAL DTC-143F
U331	5232252020	TR., DIG. 2SC3400

POWER PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200135421	POWER PCB ASSY
	*5210135404	POWER PCB
	*5242117400	JUMPER, JPW-L5
	*5181761000	JUMPER, P=5.0
	*5181763000	JUMPER, P=10.0
	*5242117500	JUMPER, JPW-L10
	*5730032000	HEATSINK, PH-0125-S
C136	Δ 5173088000	C., ELEC. 2200UF/16V
C142, 151	Δ 5260271810	C., ELEC. 2200UF/50V
C154	Δ 5262008900	C., ELEC. 4700UF/25V
C155	Δ 5173075000	C., ELEC. 470UF/50V
CR31	5347000900	OSC, CERAMIC KBR-800H
D31, 32	5224015020	DIODE, ISS133T-77
D36	5224015020	DIODE, ISS133T-77
D39	5224013000	DIODE, DSA26C
D40	5224015020	DIODE, ISS133T-77
D41-43	5224013210	DIODE, DS135D FA4 FF
D44	5224015020	DIODE, ISS133T-77
D50	5224013210	DIODE, DS135D FA4 FF
D52, 54	5224015020	DIODE, ISS133T-77
D122	5224542101	DIODE, ZENER RD9.1EB2
D123-137	5224015020	DIODE, ISS133T-77
D138, 139	5224013200	DIODE, DS135D
D140	5224013000	DIODE, DSA26C
D141-144	5224013210	DIODE, DS135D FA4

Parts marked with *require longer delivery time.

POWER PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
D145	5224015020	DIODE,ISSI33T-77
D146-150	△ 5224013210	DIODE,DSI35D FA4
D151	5224540901	DIODE,ZENER RD6.2EB2
D152	△ 5228013200	SILICON STACK,D5FB20
D153-155	5224015020	DIODE,ISSI33T-77
D156	△ 5224013210	DIODE,DSI35D FA4
K30	5290008500	RELAY,G2U-12P DC24V
L31	5286016500	COIL,CHOKE 100MH
P32	5122145000	PLUG,CONN. 5046-02A(WHT)
P33	5122147000	PLUG,CONN. 5046-04A(WHT)
P34	5122203000	PLUG,CONN. 5046-03A(BLK)
P35	5122147000	PLUG,CONN. 5046-04A(WHT)
P36	5122202000	PLUG,CONN. 5046-02A(BLK)
P37	5122453000	PLUG,CONN. 5046-02A(RED)
P38	5122454000	PLUG,CONN. 5046-03A(RED)
P39	5122153000	PLUG,CONN. 5046-10A(WHT)
P40	5122208000	PLUG,CONN. 5046-08A(BLK)
P41	5122460000	PLUG,CONN. 5046-09A(RED)
P43	5122148000	PLUG,CONN. 5046-05A(WHT)
P44	5122157000	PLUG,CONN. 5046-14A(WHT)
P120	5122146000	PLUG,CONN. 5046-03A(WHT)
P121	5122454000	PLUG,CONN. 5046-03A(RED)
P122	5122204000	PLUG,CONN. 5046-04A(BLK)
P123,124	5122203000	PLUG,CONN. 5046-03A(BLK)
P125	5122149000	PLUG,CONN. 5046-06A(WHT)
Q34,35	5230779720	TR.,2SC945A KA
Q36-40	5230017920	TR.,2SA733A
Q41-43	5231755400	TR.,2SD794Q
Q44	5145129000	TR.,2SB-507
Q45	5230779720	TR.,2SC945A KA
Q120,121	5230017920	TR.,2SA733A
Q122,123	5230778320	TR.,2SC2320F
Q124	5145102000	FET,2SK-68A-L
Q125	5145129000	TR.,2SB-507 E
Q126	5145150000	TR.,2SA-1015GR
Q127	5230779720	TR.,2SC945A KA
Q128	△ 5145087000	TR.,2SD-313E
Q129	5042625000	TR.,2SC-1318S
Q130	5230779720	TR.,2SC945A KA
R43	△ 5183554000	R.,INCOMB. 1/4 10 OHM
R78	△ 5184594000	R.,INCOMB. 1W 220 OHM
R100	△ 5241230000	R.,INCOMB. 1W 10 OHM
R122,222	5280132302	R.,TRIMMER 20KB METAL
R139,239	5185190000	R.,METAL PLATE 0.22 2W
R150	5150156000	VR,50KB
R161	△ 5241206600	R.,INCOMB. 4.7K/1W
R165	△ 5241240400	R.,INCOMB. 15/2W
R166	△ 5184550000	R.,INCOMB. 2W 1.0 OHM
R172	△ 5183562000	R.,INCOMB. 22 1/4W
R173	△ 5241231200	R.,INCOMB. 33 1W
R255	5150154000	R.,TRIMMER 10KB
R257	5150154000	R.,TRIMMER 10KB
TPI	5544750000	PIN,COMBINATION
U220,221	5232250900	TR.,ARRAY BA6251
U222	6048968000	IC,MC14066BCP

POWER PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
U223-225	5220419500	IC.,LA6358
U226	5220021900	IC.,MC14584BCP
U227	5232252020	TR.,DIG. 2SC3400
U228	5232251620	TR.,DIG. 2SA1346
U229	5232252020	TR.,DIG. 2SC3400
U230	6048932000	IC,MC14011BCP
U231	△ 5220418900	IC,LM78N05
U232	△ 5220420900	IC.,L78N15
U233	6048932000	IC,MC14011BCP
U234	5232252020	TR.,DIG. 2SC3400
U31	5220019700	IC.,LC7800
U32	5220804900	IC.,6402H-325
U33	5220805000	IC.,LM6405H-320
U34,35	5232252020	TR.,DIG. 2SC3400
U36	5232251620	TR.,DIG. 2SA1346
U37	5232252020	TR.,DIG. 2SC3400
U38-40	5232251620	TR.,DIG. 2SA1346
U41,42	5232252020	TR.,DIG. 2SC3400
U43	5220419500	IC.,LA6358
U45-47	5232252020	TR.,DIG. 2SC3400
U48-51	5232251620	TR.,DIG. 2SA1346
U55,56	5232252020	TR.,DIG. 2SC3400
U61	5220020500	IC.,LB1475
U62	5232250900	TR.,ARRAY BA6251
U63,64	5242111700	R.,ARRAY 10KX8 FRE8P-103J
U65	5293002700	R.,ARRAY 01-0397
U66	5293002600	R.,ARRAY 01-0396

DBX PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200135600	DBX PCB ASSY
	*5210135600	DBX PCB
	*5788101700	TUBE,UL AWG17
P601	5122128000	PLUG,CONN. 5045-04A(WHT)
P603	5122301000	PLUG,CONN. 5045-04A(RED)
P605	5122299000	PLUG,CONN. 5045-02A(RED)
P701	5122129000	PLUG,CONN. 5045-03A(RED)
P703	5122302000	PLUG,CONN. 5045-05A(RED)
Q601-604	5230779720	TR.,2SC945A KA
Q701-704	5230779720	TR.,2SC945A KA
R623,624	5150154000	R.,TRIMMER 10KB
R627,628	5150094000	R.,TRIMMER 50KB
R653,654	5150094000	R.,TRIMMER 50KB
R681	△ 5183562000	R.,INCOMB. 22 1/4W
R723,724	5150154000	R.,TRIMMER 10KB
R727,728	5150094000	R.,TRIMMER 50KB
R753,754	5150094000	R.,TRIMMER 50KB
TPI,2	5544750000	PIN,COMBINATION
TP3,4	5544750000	PIN,COMBINATION
TP5	5544750000	PIN,COMBINATION

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DBX PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
U601,602	5220414501	IC.,UPC1252H-2
U603,604	5220414601	IC.,UPC1253H-2
U605,606	5220418800	IC,M5218P
U701,702	5220414501	IC.,UPC1252H-2
U703,704	5220414601	IC.,UPC1253H-2
U705	5220418800	IC,M5218P

HEADPHONE PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200135700	HEADPHONE PCB ASSY
	*5210135700	HEADPHONE PCB
	*5330009000	JACK,PIN 3P PHONE
	*5330010800	JACK,SINGLE
	*5317003300	NUT
	*5788101700	TUBE,UL AWG17
C510,910	5054740000	C.,DIP,MICA 10P/50V
D312,412	5224015010	DIODE,ISS133HV
D313,413	5224015010	DIODE,ISS133HV
D314,414	5224015400	DIODE,1K60
D315,415	5224015400	DIODE,1K60
D316,317	5224015010	DIODE,ISS133HV
Q319,419	5230016300	TR.,2SA937LNF R
Q323,423	5230780300	TR.,2SC-2021LNR
R527	△ 5183566000	R.,INCOMB. 33 1/4W
R534	△ 5183578000	R.,INCOMB. 100 1/4W
R558,958	5280021900	R.,TRIMMER 100KB
U309,310	5220418800	IC,M5218P
U336,436	5232252020	TR.,DIG. 2SC3400
U337	5232251620	TR.,DIG. 2SA1346

CONTROL SW PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200135910	CONTROL SW PCB ASSY
	*5210135901	CONTROL SW PCB
D810	5225007100	LED,GL-9NG2(GRN)
D812-815	5225007900	LED,GL-9PR2(RED)
S810-818	6051083000	SW.,TACT AKC85

COUNTER PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200136000	COUNTER PCB ASSY
	*5210136000	COUNTER PCB
D816,817	5225013200	LED,GL-9PR24(RED)
S819-824	5138011000	SW.,PUSH(TACT)
U800	5225013000	LED,GL-3E508A

SPOOLING PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200154311	SPOOLING PCB ASSY
	*5210154301	SPOOLING PCB
	*5181761000	JUMPER,P=5.0
	*5181763000	JUMPER,P=10.0
D1-3	5224015020	DIODE,ISS133T-77
D4-11	5224013210	DIODE,DS135D FA4
D12	5224015020	DIODE,ISS133T-77
P1	5122149000	PLUG,CONN. 5046-06A(WHT)
P2	5122453000	PLUG,CONN. 5046-02A(RED)
P3	5122145000	PLUG,CONN. 5046-02A(WHT)
P4	5122146000	PLUG,CONN. 5046-03A(WHT)
P5	5122147000	PLUG,CONN. 5046-04A(WHT)
Q1	5230779720	TR.,2SC945A KA
Q2	5230014000	TR.,2SA1020-Y
Q3	5230773800	TR.,2SC2655-Y
Q4	5230014000	TR.,2SA1020-Y
Q5	5230773800	TR.,2SC2655-Y
Q6	5230779720	TR.,2SC945A KA
U1	5220016100	IC.,HD14013BP
U2	5232251620	TR.,DIG. 2SA1346
U3	5232252020	TR.,DIG. 2SC3400
U4	5232251620	TR.,DIG. 2SA1346
U5-7	5232252020	TR.,DIG. 2SC3400
U8,9	5232251620	TR.,DIG. 2SA1346
U10-12	5232252020	TR.,DIG. 2SC3400

IN/OUT AMP. PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200272600	IN/OUT AMP. PCB ASSY
	*5210272600	IN/OUT AMP. PCB
D1,2	5224015020	DIODE,ISS133T-77
D101,201	5224015020	DIODE,ISS133T-77
J101,201	5334042300	SOCKET,CANNON XLB3-31
K101,201	5290012800	RELAY,DC 24V G5A-237PL
P1	5336126500	PLUG,CONN. 8263-0512(WHT)
P101,201	5334041900	SOCKET,CANNON XLB3-32
P102	5336126400	PLUG,CONN. 8263-0412(WHT)
P103	5336145400	PLUG,CONN. 8263-0412(YEL)
P104	5336126200	PLUG,CONN. 8263-0212(WHT)
P202	5336135400	PLUG,CONN. 8263-0412(RED)
P203	5336137400	PLUG,CONN. 8263-0412(BLK)
P204	5336135200	PLUG,CONN. 8263-0212(RED)
Q1	5230779520	TR.,2SC1815GR
R105,205	5241459920	R.,METAL FILM 5.1K
R106,206	5241459920	R.,METAL FILM 5.1K
R107,207	5241458820	R.,METAL FILM 1.8K
R108,208	5241458820	R.,METAL FILM 1.8K
R125,225	△ 5184249000	R.,INCOMB. 100 OHM
R126,226	△ 5184249000	R.,INCOMB. 100 OHM
U101,201	5220439600	IC.,UPC4570C
U102,202	5220431800	IC.,NE5532AN
U103,203	5242117800	R.,ARRAY RMN Z8178

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TENSION SENSOR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200067402	TENSION SENSOR PCB ASSY
	*5210067402	TENSION SENSOR PCB
	*6048807000	PHOTO, INTERRUPTER ON1102
R810	5241426602	R., METAL FILM LT 1/8 5.1K
R811	5241426602	R., METAL FILM LT 1/8 5.1K

ROLLER SENSOR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200136100	ROLLER SENSOR PCB ASSY
	*5210136100	ROLLER SENSOR PCB
U801,802	5228009600	PHOTO INTERRUPTER, SPI-208

PITCH CON PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200154400	PITCH CON PCB ASSY
	*5210154400	PITCH CON PCB
P803	5122145000	PLUG, CONN. 5046-02A(WHT)
R801	5282250700	VR., 5KB WITH SW

HEAD SW PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200154500	HEAD SW PCB ASSY
	*5210154500	HEAD SW PCB
S803	5301205201	SW., ROTARY 2-2 SRU1022N

TRANSISTOR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200073100	TRANSISTOR PCB ASSY
	*5210073100	TRANSISTOR PCB
	5145171000	TR., 2SD-7180

IN/OUTPUT PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200136400	IN/OUTPUT PCB ASSY
	*5210136400	IN/OUTPUT PCB
	*5330508500	JACK, PIN 4P

SPEED SWITCH PCB(3) ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200154600	SPEED SWITCH PCB(3) ASSY
	*5210154600	SPEED SWITCH PCB(3)
P801	5122454000	PLUG, CONN. 5046-03A(RED)
P802	5122147000	PLUG, CONN. 5046-04A(WHT)
S801	5300036100	SW., PUSH 4-4 N
S802	5300036200	SW., PUSH 2-1 N

DUPLI SYNC PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200142310	DUPLI SYNC PCB ASSY
	*5210142300	DUPLI SYNC PCB
J805	5334025000	SOCKET, DIN 5P

VR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200135800	VR PCB ASSY
	*5210135800	VR PCB
VR01-03	5282707200	VR., 50KAX2 2S2UVR 16

BIAS VR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200136510	BIAS VR PCB ASSY
	*5210136500	BIAS VR PCB
VR04	5282014000	VR., 20KB 1SIUVR 12

DBX LAMP PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200136600	DBX LAMP PCB ASSY
	*5210136600	DBX LAMP PCB
DS02	5310006900	LAMP

DBX SW PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200136700	DBX SW PCB ASSY
	*5210136700	DBX SW PCB
S306	5300036000	SW., PUSH 6-6 N

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POWER SW PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200113100	POWER SW PCB ASSY [J,GE]
	*5200113110	POWER SW PCB ASSY [US]
	*5200113120	POWER SW PCB ASSY [C]
	*5200141901	POWER SW PCB ASSY [E,UK,A]
	*5210073201	POWER SW PCB [US,C,J,GE]
	*5210104801	POWER SW PCB [E,UK,A]
	5327007200	TERMINAL, 2P [E,UK,A]
	5730007500	COVER, CAPASITOR [E,UK,A]
S401	5300030800	SW., PUSH SDL-IP
Z402	5052907000	C., SPARK KILLER 0.01uF+300/300V [J,GE]
	5052910000	C., SPARK KILLER 0.033uF+120/125V [US]
	5292002600	C., SPARK KILLER 0.033uF+120/125V [C]
	5267703800	C., SPARK KILLER 4700PF/400V [E,UK,A]

FUSE PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200140401	FUSE PCB ASSY(1) [E,UK,A]
	*5200140501	FUSE PCB ASSY(2) [US,C,J]
	*5210140401	FUSE PCB(1) [E,UK,A]
	*5210140501	FUSE PCB(2) [US,C,J]
	*5142087000	HOLDER, FUSE; PCB [E,UK,A]
	*5041237000	HOLDER, FUSE; PCB [US,C,J]
F1,2	5041138000	FUSE, 0.5A-250V(T) [E,UK,A]
F3	5041140000	FUSE, 1A-250V(T) [E,UK,A]
F4	5142193000	FUSE, 5A-250V(T) [E,UK,A]
F5	5142192000	FUSE, 4A-200V(T) [E,UK,A]
F6,7	5307019900	FUSE, 0.5A-250V(T) [US,C,J]
F8	5307020400	FUSE, 1A-250V(T) [US,C,J]
F9	5307021700	FUSE, 5A-250V(T) [US,C,J]
F10	5307021600	FUSE, 4A-250V(T) [US,C,J]

VOLTAGE SELECTOR PCB ASSY [GE]

REF.NO.	PARTS NO.	DESCRIPTION
	*5200140600	VOLTAGE SELECTOR PCB ASSY
	*5210140601	VOLTAGE SELECTOR PCB
	*5142087000	HOLDER, FUSE; PCB
F401	5041155000	FUSE, MINI. 2A 250V
S402	5302101700	SW., VOLTAGE SELECT FS907G

[US]:U.S.A. [E]:EUROPE [UK]:U.K. [C]:CANADA [J]:JAPAN
[A]:AUSTRALIA [GE]:GENERAL EXPORT

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TASCAM

TEAC Professional Division

ティアック株式会社

営業部 ☎ (0422)45-7731代 〒181 東京都三鷹市下連雀4-15-30

技術的なお問合わせ

AV技術相談室 ☎ (0425)60-7761 〒180-12 東京都武蔵村山市伊奈平2-11-1

サービスに関するお問合わせは、最寄りの営業所等へご連絡ください。
営業所にはサービス・センターが併設されています。

札幌営業所 ☎ (011)521-4101代	〒064 札幌市中央区南7条西2-2 くぼたビル
仙台営業所 ☎ (022)227-1501代	〒980 仙台市1番町2-5-5 中央ビル
新潟サービス ☎ (025)245-0103	〒950 新潟県新潟市本馬越1-4-11 黒井ハイツ
大宮サービス ☎ (048)642-4551代	〒330 大宮市三橋2-846
三鷹出張所 ☎ (0422)45-7721代	〒181 東京都三鷹市下連雀4-15-30
多摩サービス ☎ (0425)60-8918	〒180-12 東京都武蔵村山市伊奈平2-11-1
東京営業所 ☎ (03)592-1827代	〒100 東京都千代田区永田町2-10-7 星ガ岡会館
東京タスカム営業所 ☎ (03)592-2051代	〒100 東京都千代田区永田町2-10-7 星ガ岡会館
千葉サービス ☎ (0472)55-1281	〒260 千葉市椿森1-21-13 清水ビル
横浜営業所 ☎ (045)312-3270代	〒221 横浜市神奈川区沢渡1-1 高島台第一ビル
静岡出張所 ☎ (0542)81-6561代	〒422 静岡市中島大割2861-1
名古屋営業所 ☎ (052)782-4581代	〒464 名古屋市千種区東山通り3-2-3
京都サービス ☎ (075)871-8730代	〒616 京都市右京区常盤窪町19 西垣ビル
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岡山サービス ☎ (0862)25-8601	〒700 岡山市新保1142-6
広島営業所 ☎ (082)294-4751代	〒730 広島市中区西川口町13-19
福岡営業所 ☎ (092)431-5781代	〒812 福岡市博多区東光2-2-24
沖縄サービス ☎ (09889)2-2020代	〒900-22 沖縄県宜野湾市字喜友名229
サービス課 ☎ (0425)60-8918	〒180-12 東京都武蔵村山市伊奈平2-11-1

TEAC CORPORATION

MAIN OFFICE: 3-7, Nakacho 3-chome, Musashino, Tokyo, Japan Phone (0422) 53-1111
SALES OFFICE: 15-30, Shimorenjaku 4-chome, Mitaka, Tokyo, Japan Phone (0422) 45-7741

TEAC AMERICA, INC.

7733 Telegraph Road, Montebello, California 90640 Phone: (213) 726-0303

TEAC UK LIMITED

5 Marlin House, Marlins Meadow, The Croxley Centre, Watford, Herts., WD1 8YA, U.K.
Phone: 0923-225235

TEAC DEUTSCHLAND GmbH

Bahnstraße 12, 6200 Wiesbaden-Erbenheim, West Germany Tel.: 06121-71580

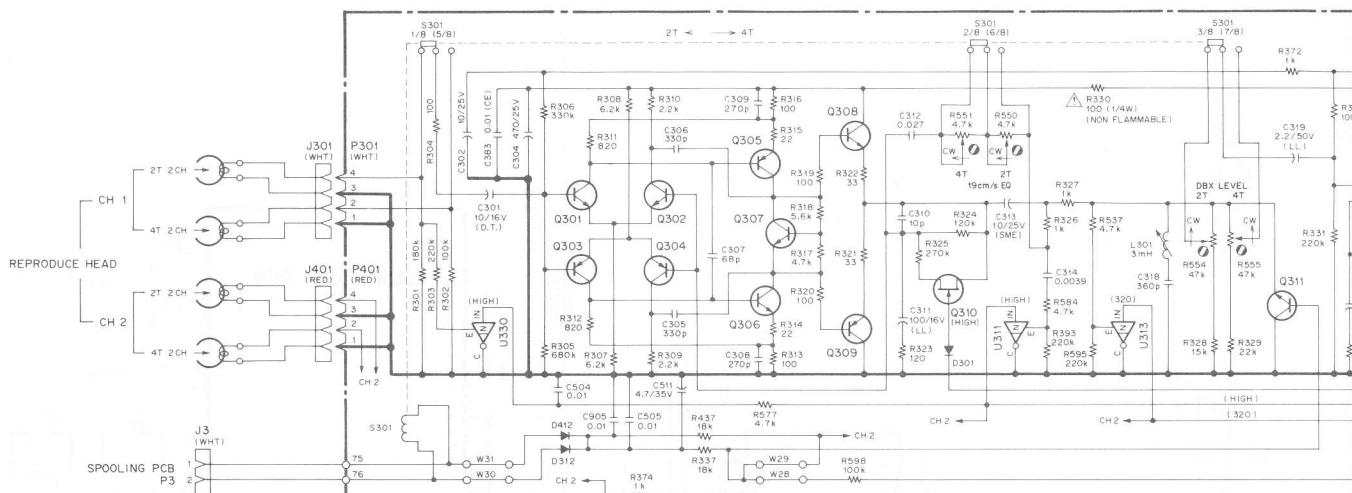
TEAC CANADA LTD.

340 Brunel Road Mississauga, Ontario L4Z 2C2, Canada Phone: 416-890-8008

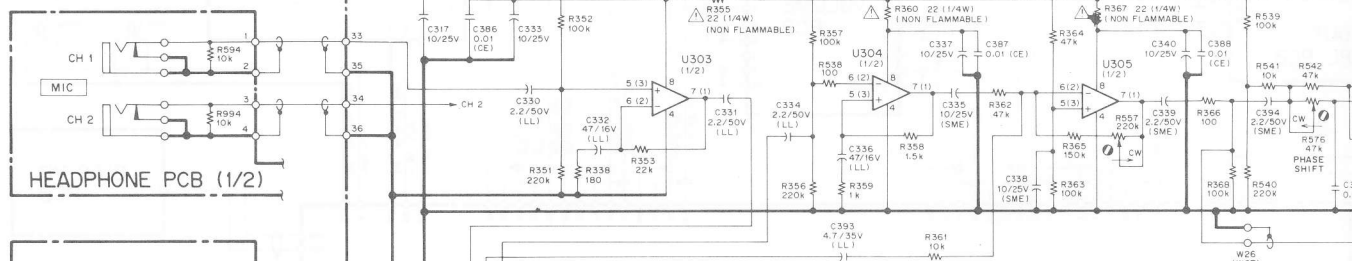
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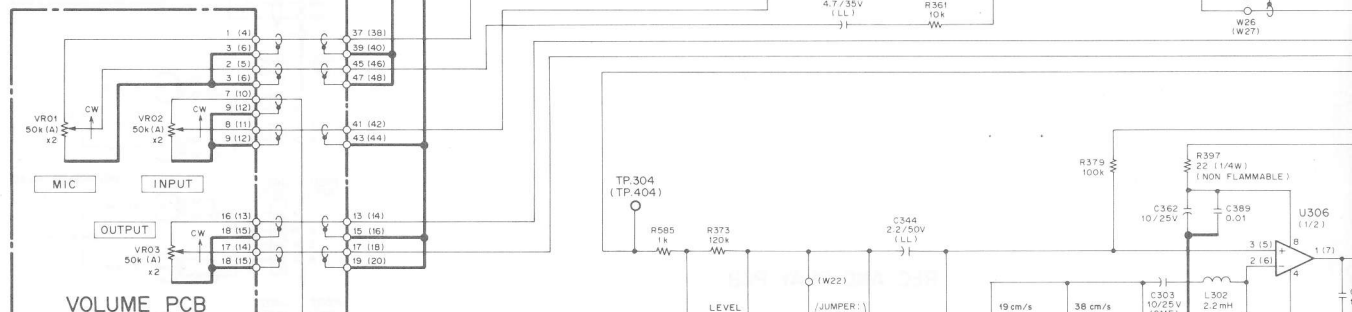
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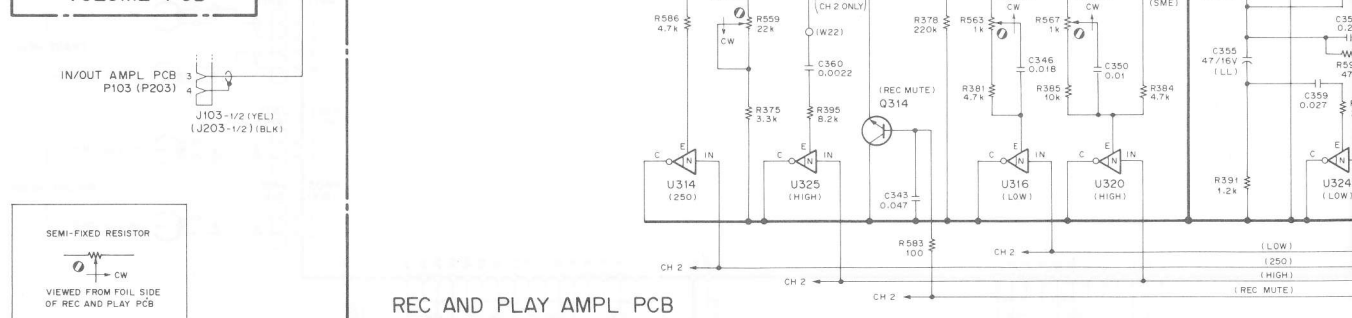
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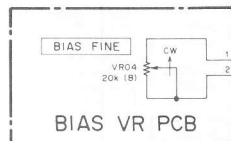
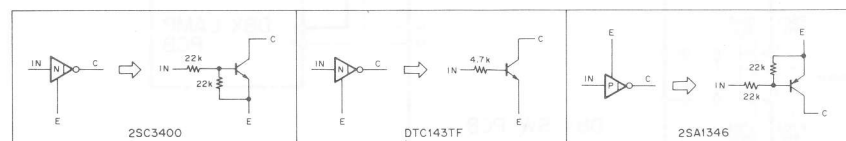
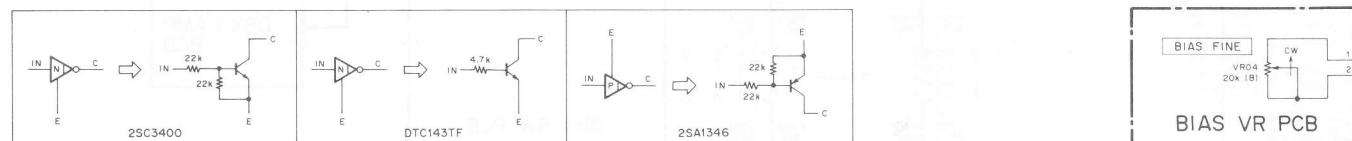
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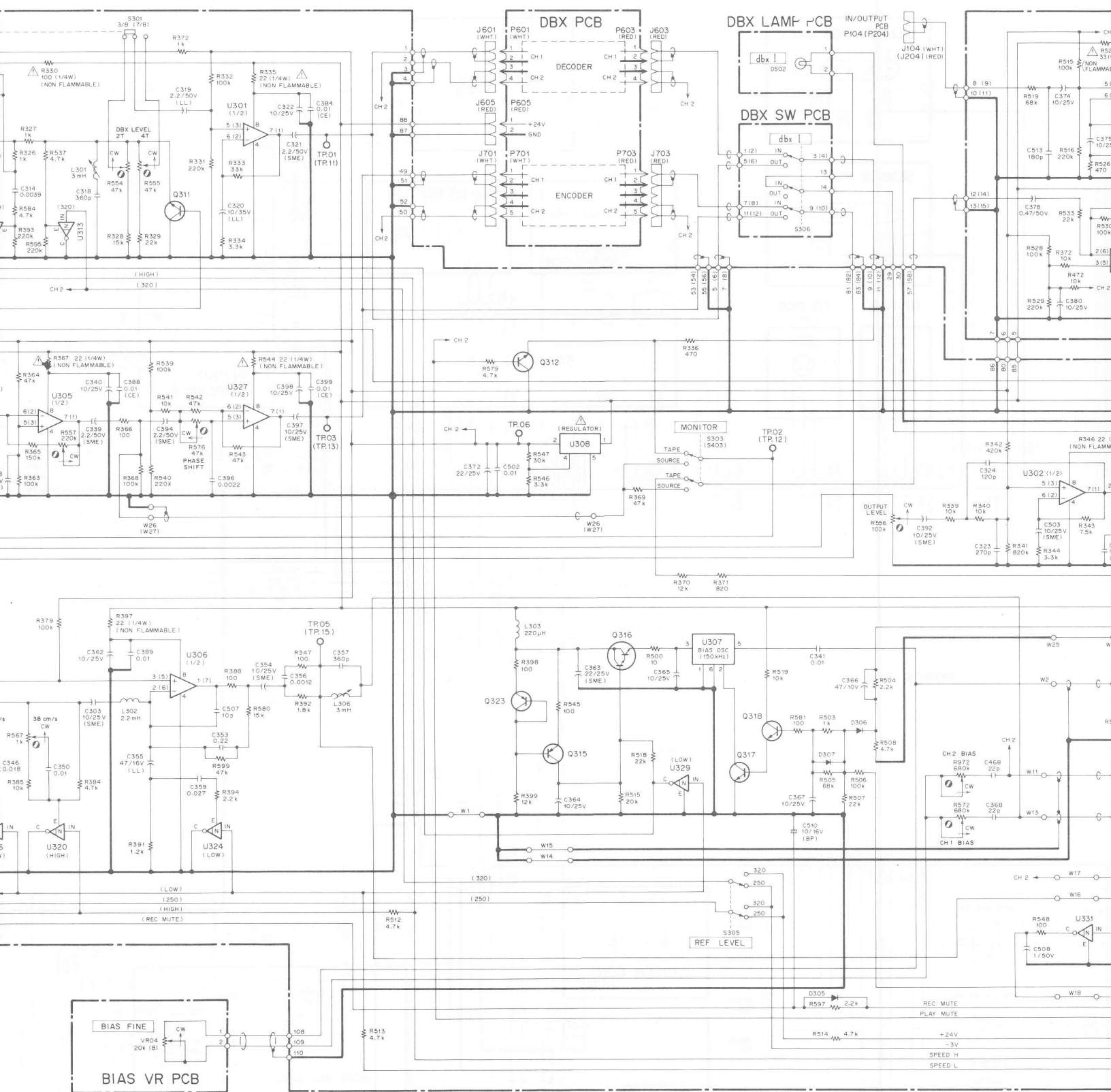


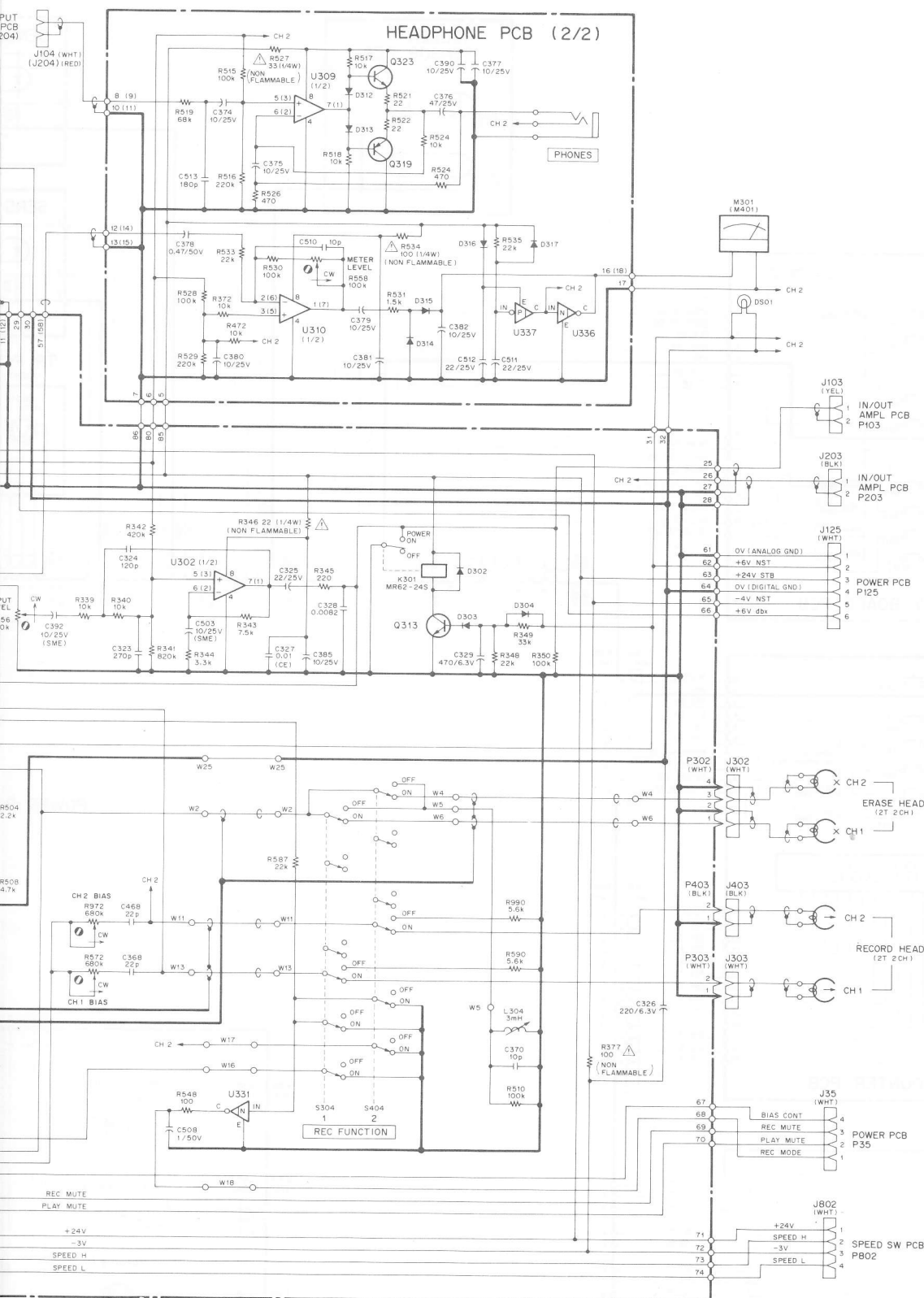
D



E







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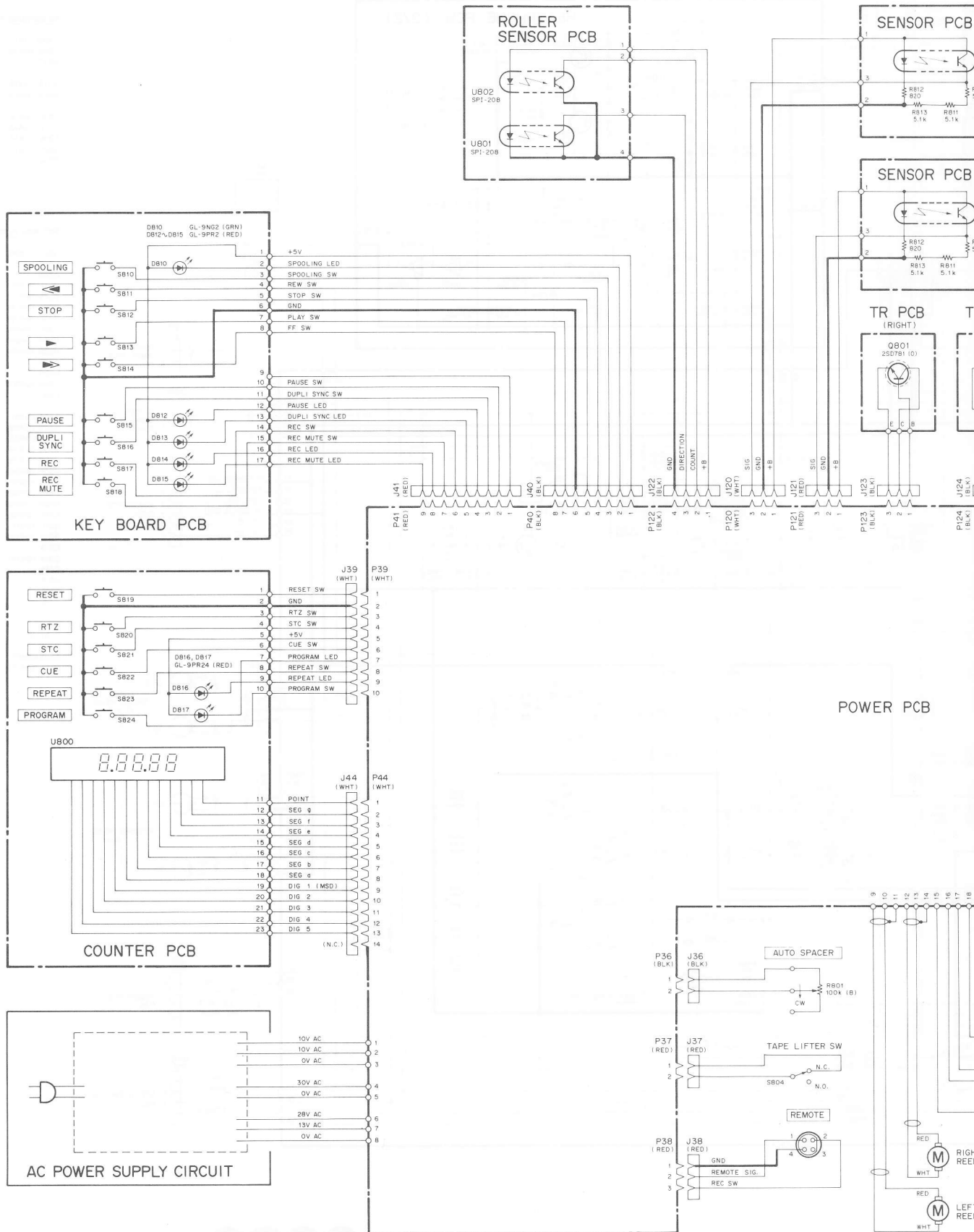
A

B

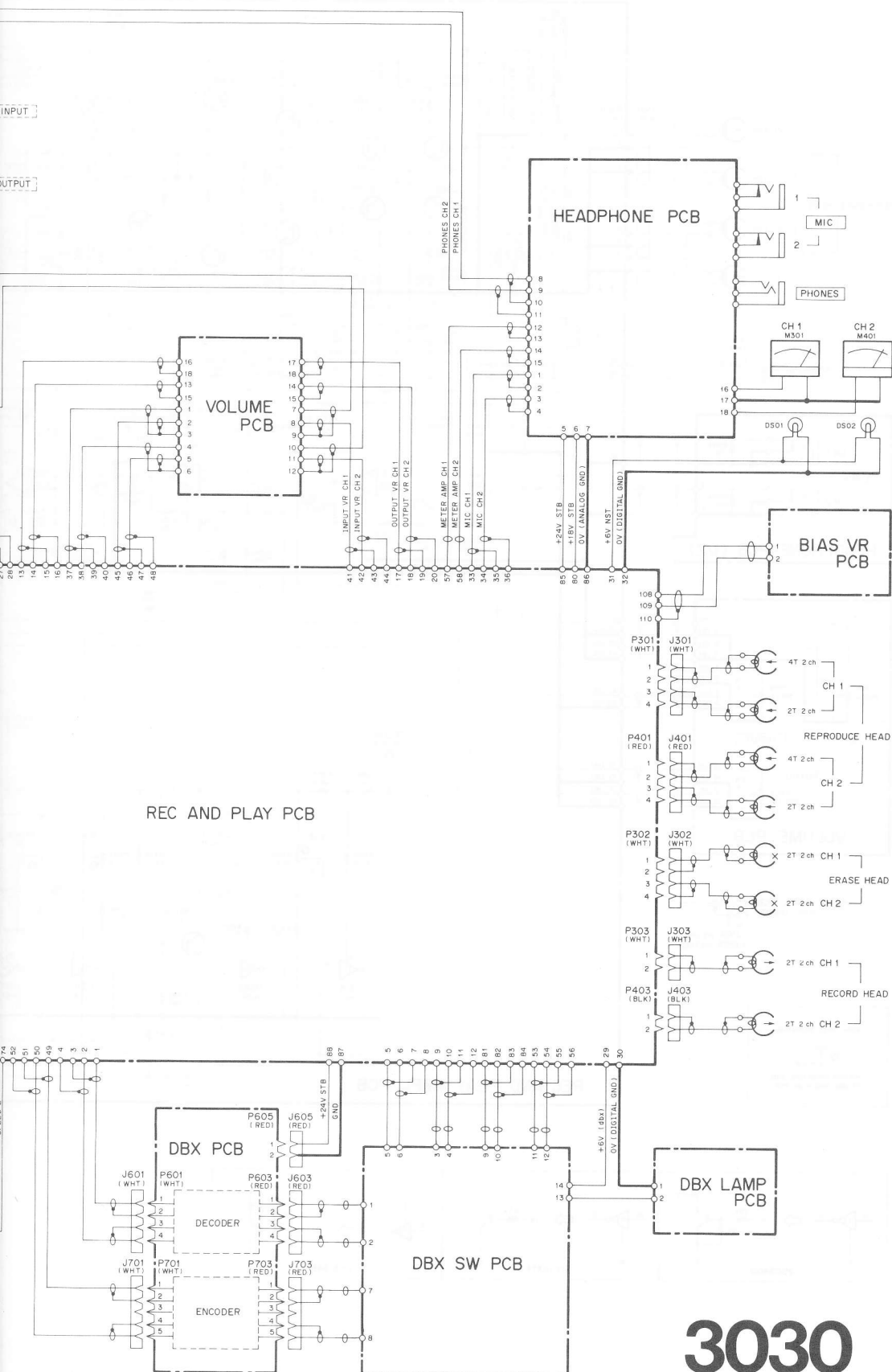
C

D

E



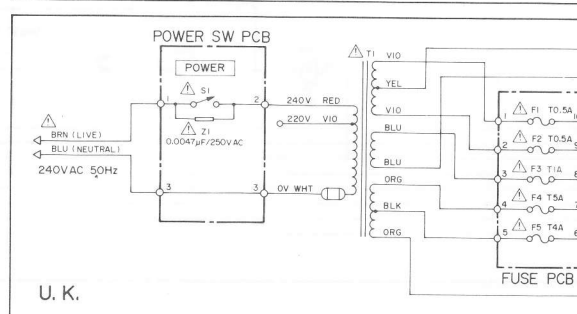


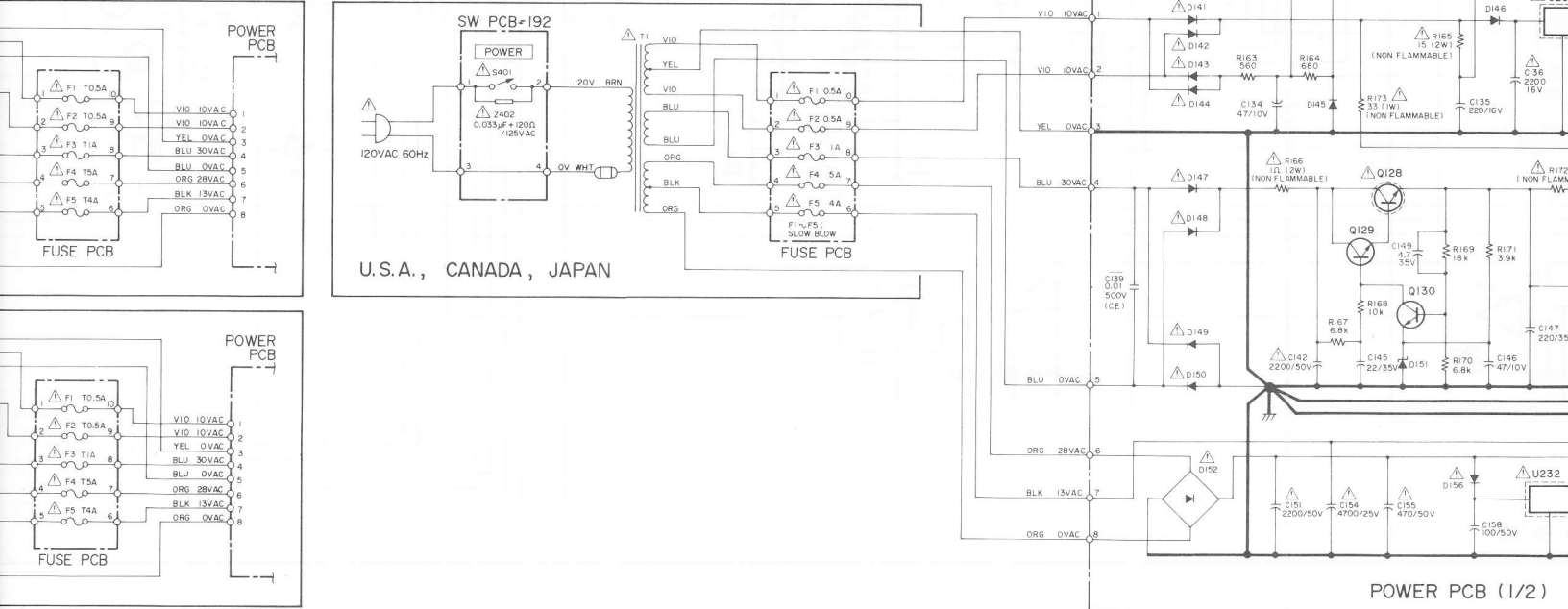
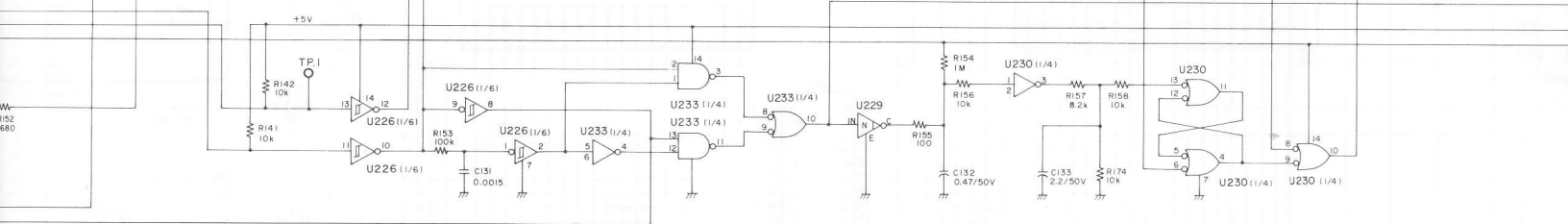
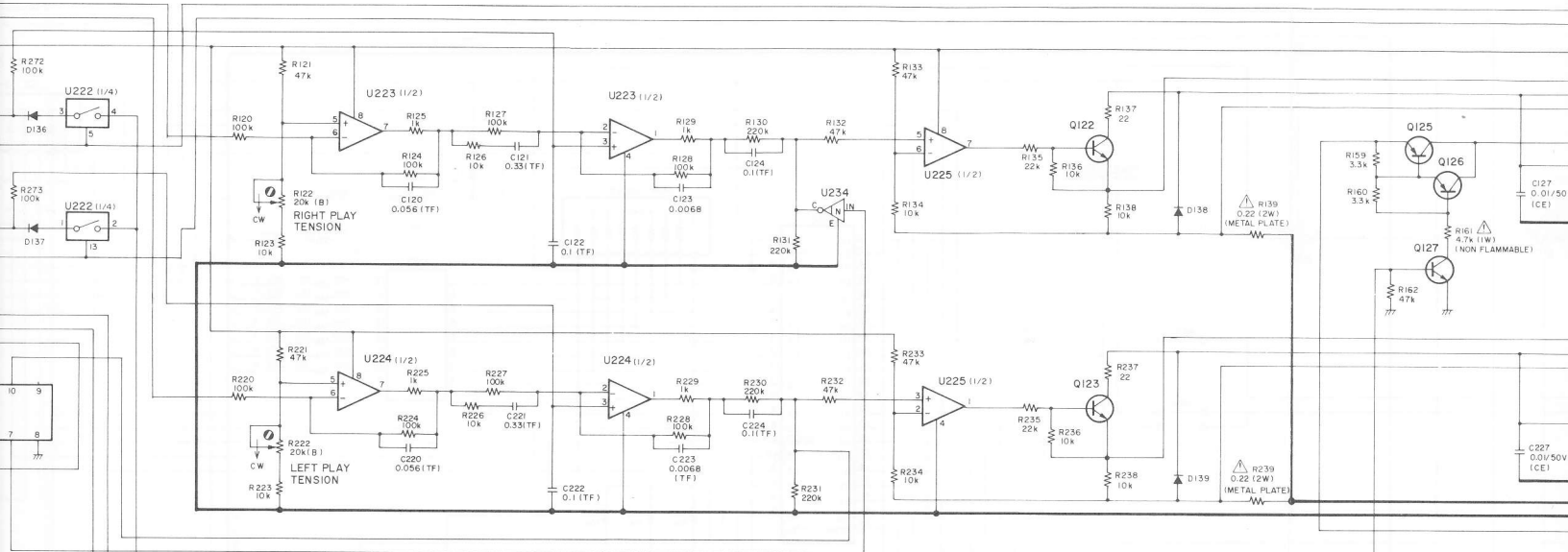


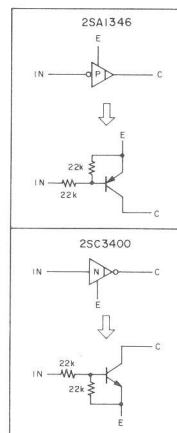
3030

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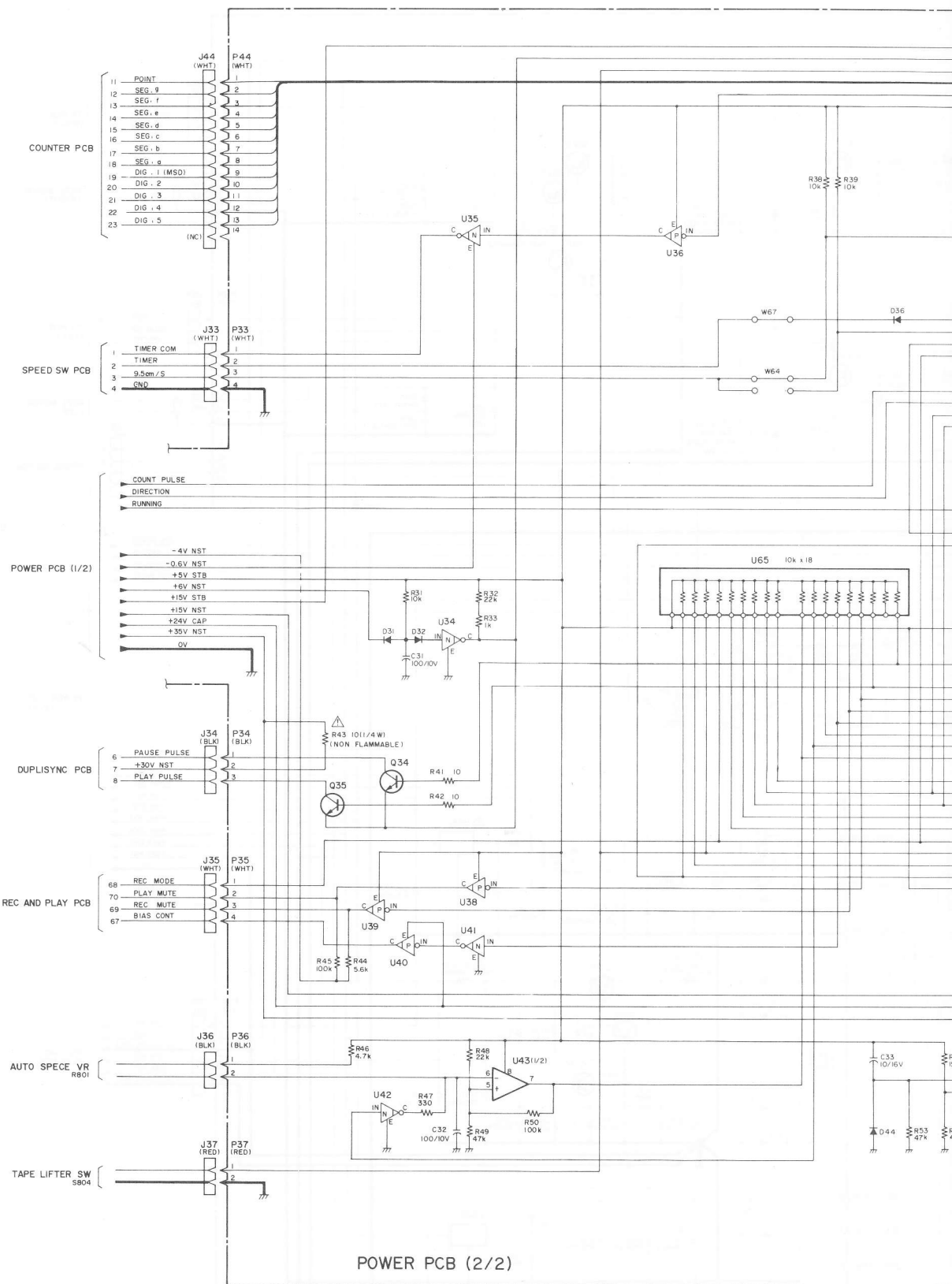
A

B

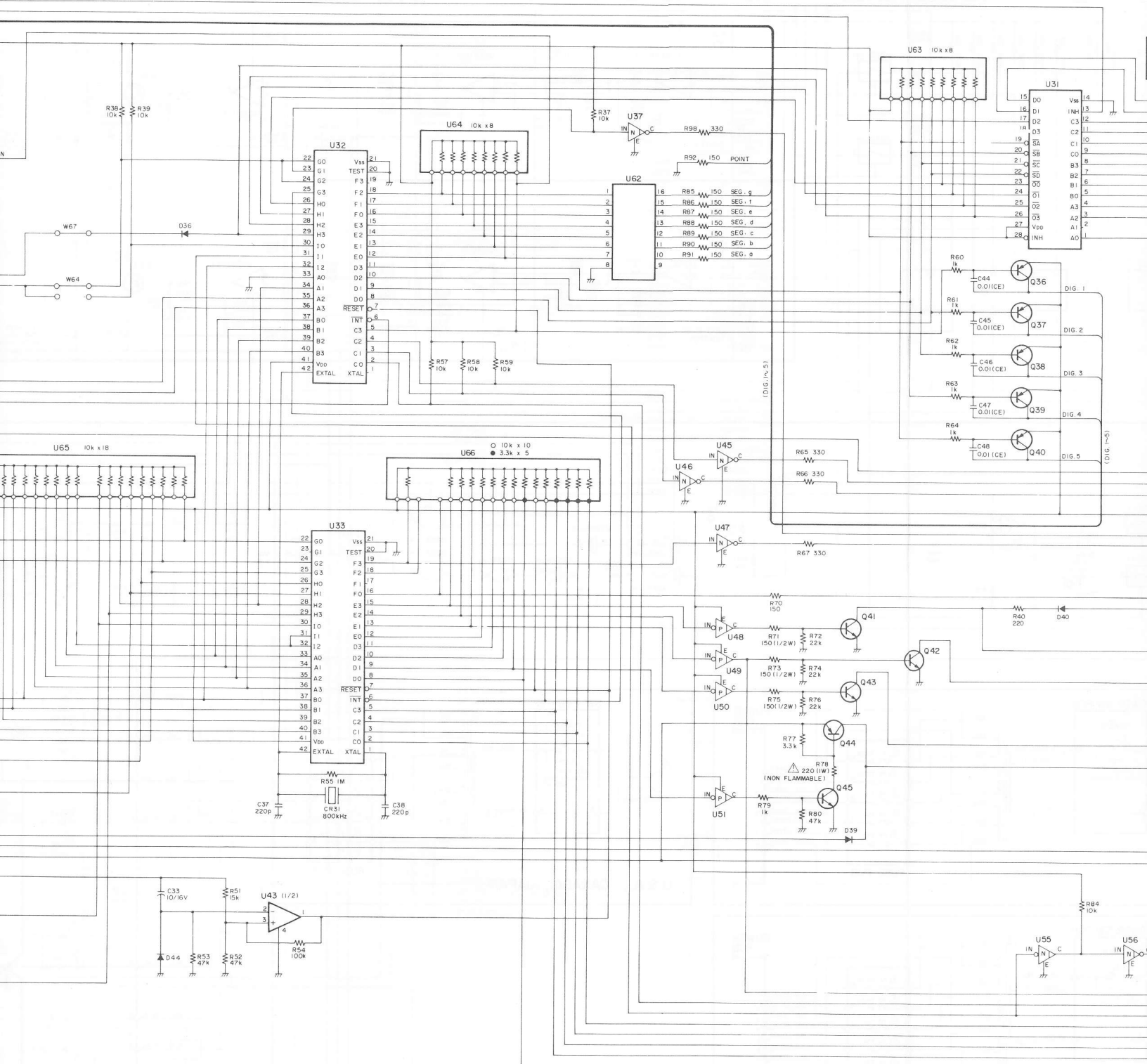
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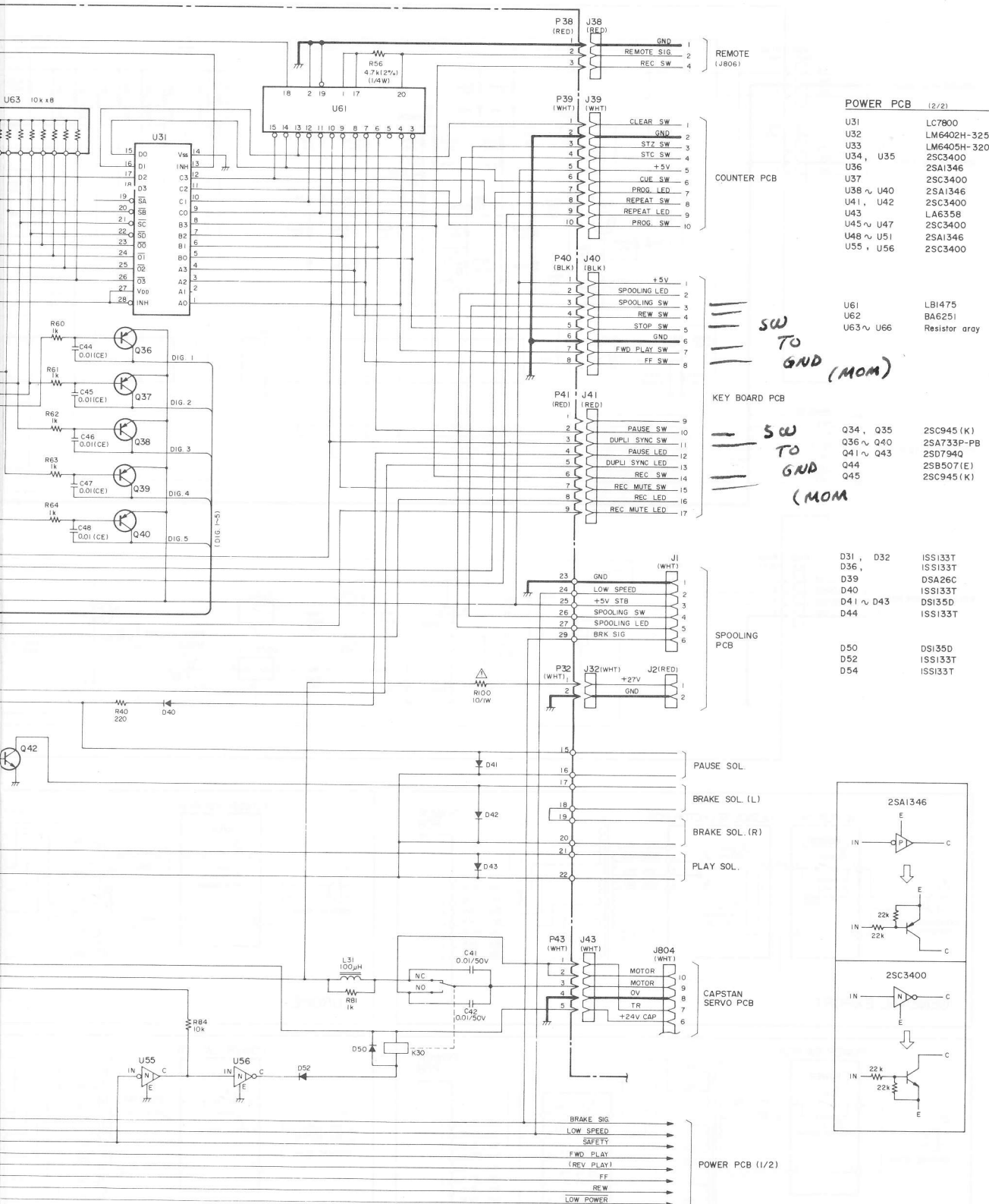
D

E



POWER PCB (2/2)





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SCHEMATIC DIAGRAMS

TASCAM

TEAC Professional Division

3030

INSTRUCTIONS FOR SERVICE PERSONNEL

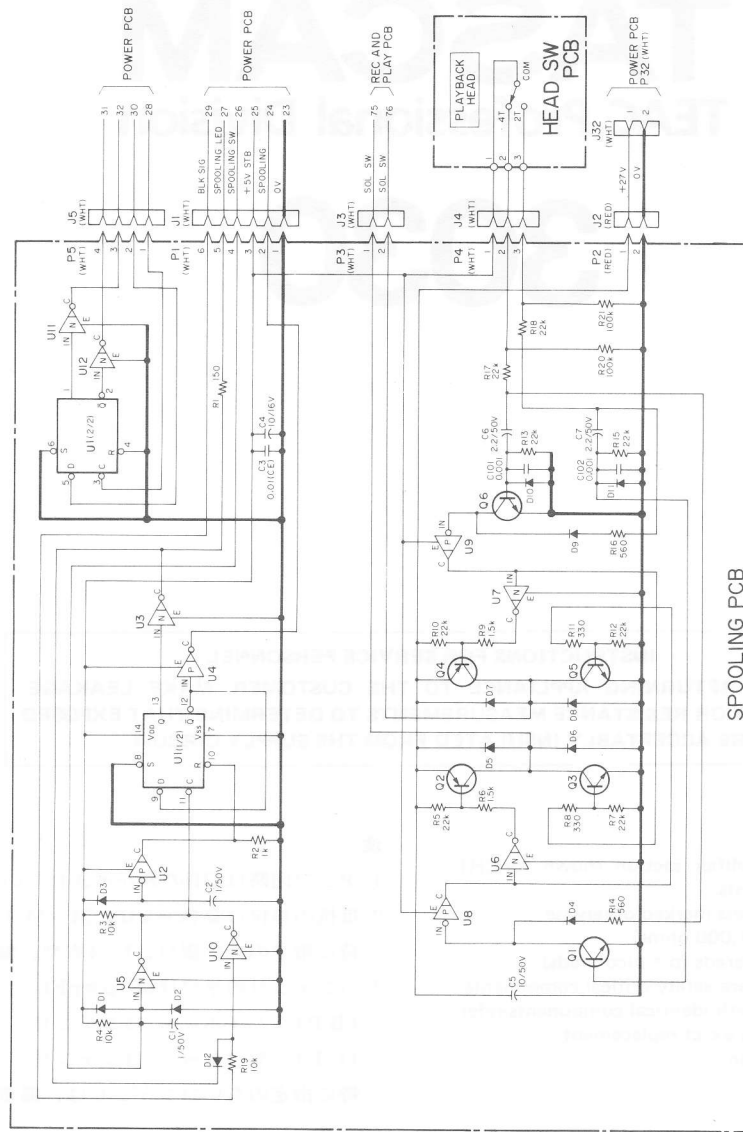
BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

NOTES

1. Schematic diagram of the amplifier section shown for CH1 except for some of the components.
2. All resistors are $\frac{1}{4}$ watt, $\pm 5\%$, unless marked otherwise. Resistor values are in ohms ($k = 1,000$ ohms).
3. All capacitor values are in microfarads ($p = \text{picofarads}$).
4. Δ Parts marked with this sign are safety critical components. They must always be replaced with identical components—refer to the TEAC parts list and ensure exact replacement.
5. : front panel indication
6. : rear panel indication

注.

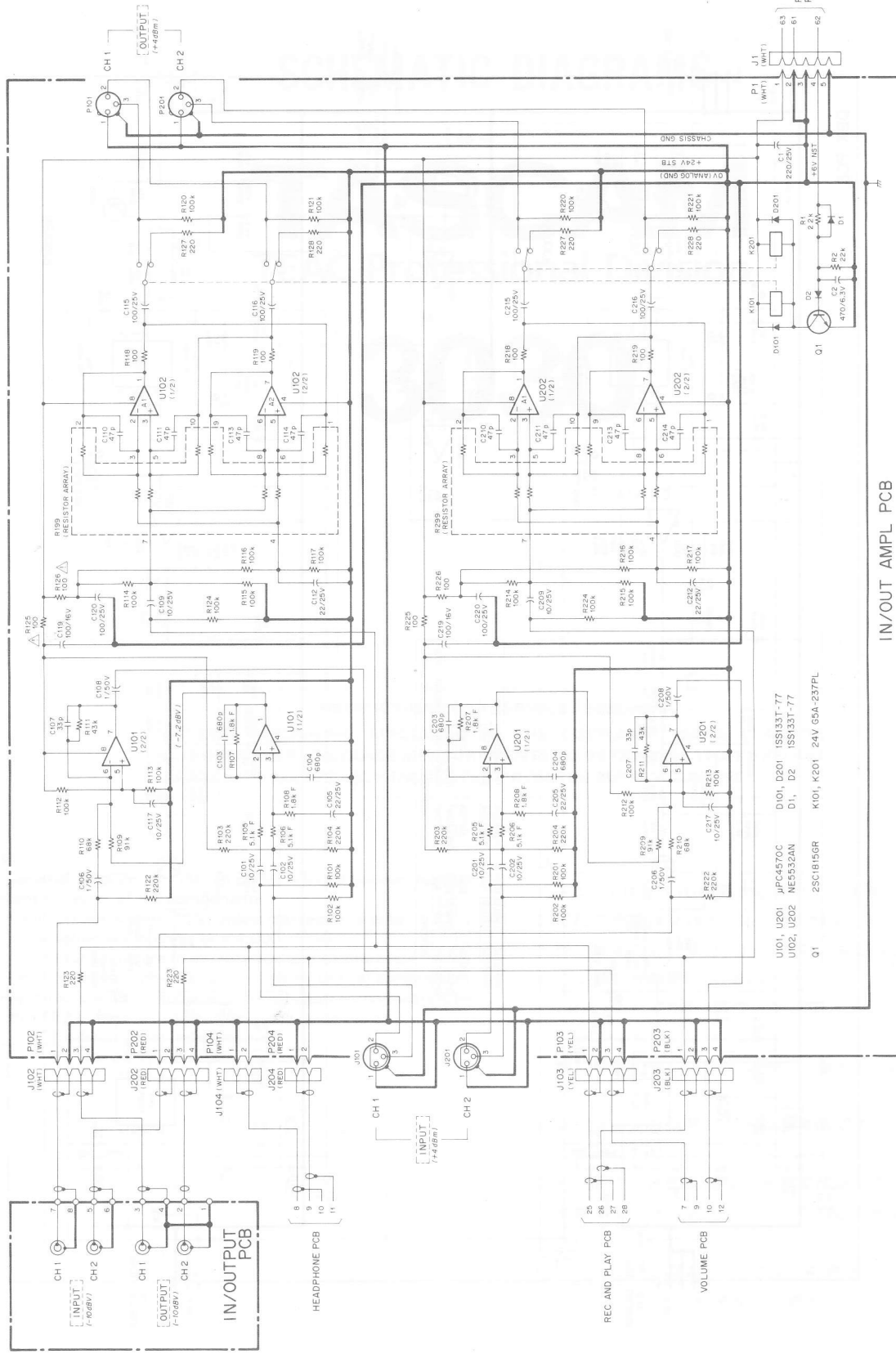
1. アンプ回路はCH1のみが示されています。
2. 抵抗の単位は Ω ($k = k\Omega$, $M = M\Omega$).
特に指定のない限り、 $1/4W$ 型、偏差は $\pm 5\%$.
3. コンデンサの単位は μF ($p = pF$).
(BP): バイポーラ・コンデンサ
(CE): セラミック・コンデンサ
特に指定のないコンデンサは、偏差 $\pm 5\%$ のマイラ・コンデンサ。
4. 電圧値および信号レベルは参考値です。
 $0dB = 0.775V$
5. Δ マークのある部品は安全重要部品です。
交換するときは必ずティアック指定の部品を使用してください。
6. : フロント・パネル上の表示
7. : リア・パネル上の表示



U1 : HD4013BP
U2, U4, U8, U9 : 2SA1346
U3, U6, U7, U10, U12 : 2SC3400
Q1, Q6 : 2SC945(K)
Q2, Q4 : 2SA1020(Y)
Q3, Q5 : 2SC2655(Y)
D1, D3, D12 : 1SS133
D4, D11 : DS1350

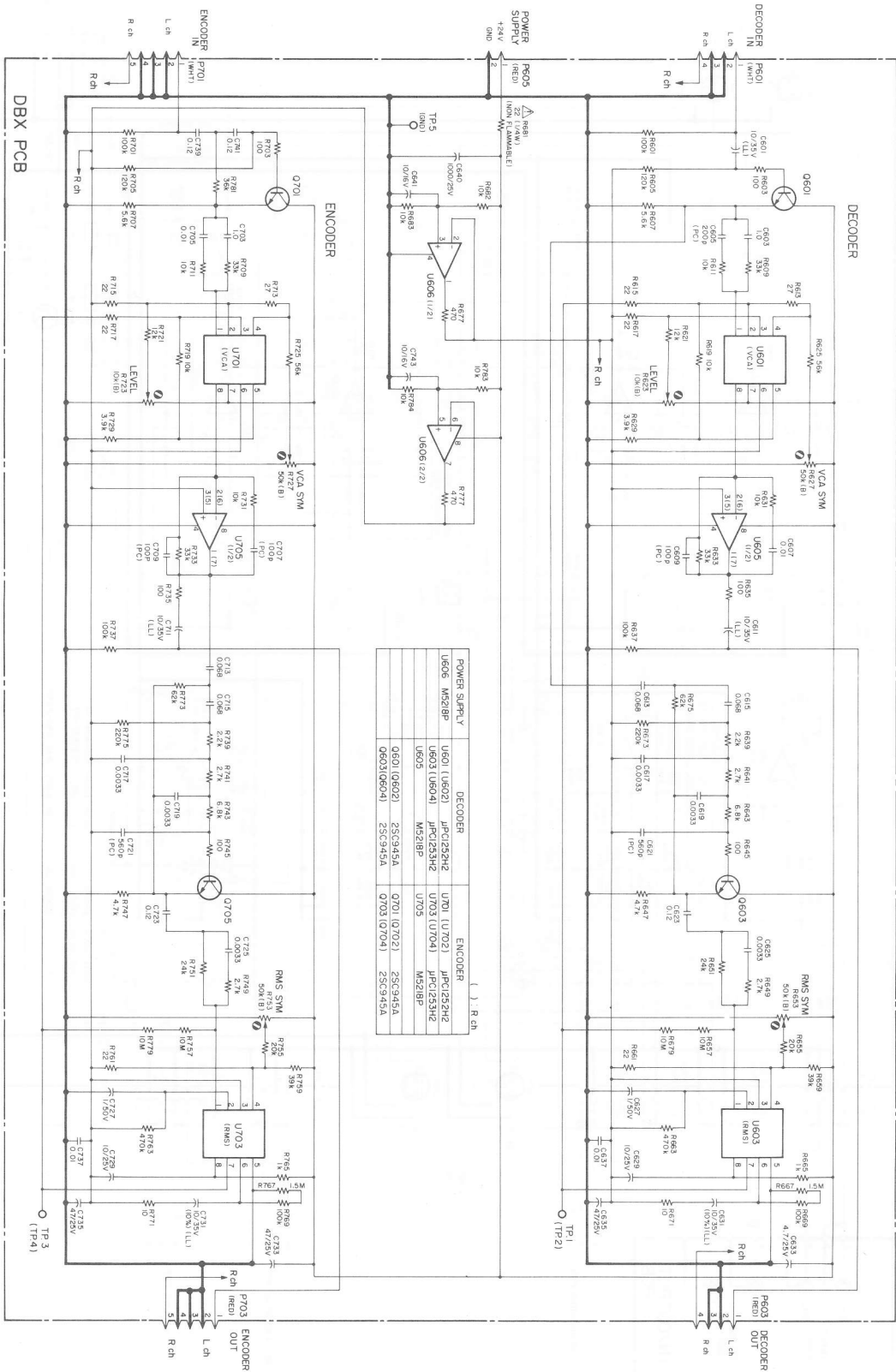
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