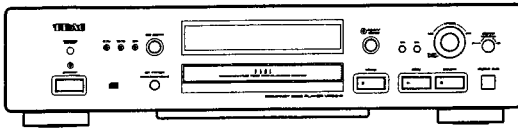


TEAC



SERVICE MANUAL

VRDS-8



Compact Disc Player

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NOTES

- PC boards shown are viewed from parts side.
- Parts marked with * require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- △ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [] mark can be used only with the version designated.
[J]:JAPAN [US]:U.S.A. [C]:CANADA [E]:EUROPE [UK]:U.K.
VRDS-8(N):Gold Version VRDS-8(B):Black Version

注 意

- プリント基板図は部品面を示しています。
- *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。
- 分解図に部番のない部品および品番のない部品は供給できません。
- 標準の抵抗、コンデンサーは省略してあります。
回路図を参照してください。
- △印は安全重要部品です。
交換する時は必ず指定の部品を使用してください。
- 仕向先
[J]:JAPAN [US]:U.S.A. [C]:CANADA [E]:EUROPE [UK]:U.K.
VRDS-8(N):Gold Version VRDS-8(B):Black Version

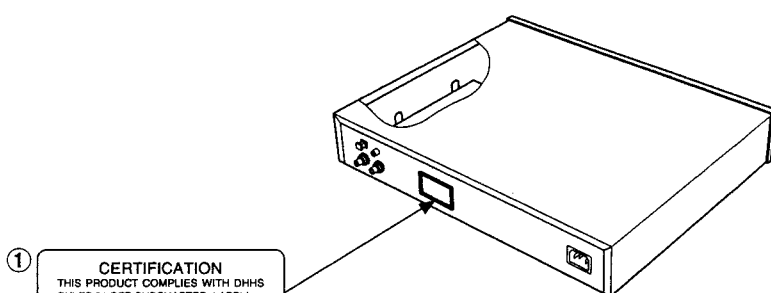
1 IMPORTANT SAFETY INSTRUCTIONS

SAFETY INFORMATION

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as a class 1 laser product. There is no hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings. The label required in this regulation is shown ①.

● CAUTION

USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

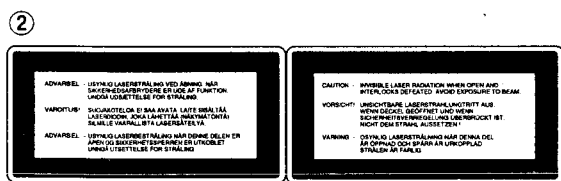


①
CERTIFICATION
 THIS PRODUCT COMPLIES WITH DHHS
 RULES 21 CFR SUBCHAPTER J APPLI-
 CABLE AT DATE OF MANUFACTURE
 SANYO CORPORATION
 3-7-3 NAKA-CHO, MUSASHINO-SHI, TOKYO, JAPAN
 MANUFACTURED

For U.S.A.

Optical pickup: Type : SF-161U
 Manufacturer : SANYO Electric co., ltd.
 Laser output : Less than 0.3 mW on the objective lens
 Wavelength : 760-810nm

● CAUTION ● ACHTUNG ● OBSERVERA ● ADVARSEL



②
ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING NÅR
 SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ
 UDSÆTTELSE FOR STRÅLING
VAROITUS: SUOJAKOTELOA EI SAA AVATA, LAITE SISÄLTÄÄ
 LASERDIODIN. JOKA LAHETTA (NÄKYMÄTÖNTÄ) SILMILLE
 VAARALLISTA LASERSÄTEILYÄ.
ADVARSEL: USYNLIG LASERSTRÅLING NÅR DENNE
 DELEN ER ÅBEN OG SIKKERHETSSPERREN ER UTKOBLET
 UNNGÅ UTSÆTTELSE FOR STRÅLING

CAUTION: INVISIBLE LASER RADIATION WHEN OPEN AND
 INTERLOCK DEFECTED. AVOID EXPOSURE TO BEAM.
VORSICHT: UNSICHTBARE LASERSTRALUNG WIRDT AUF
 WECHSELLOSIGKEIT UND AUSFALL DER SICHERHEITS-
 SPERRE FREIWEISE. VERMEIDEN SIE DEN STRAHLEN AN FÄHIG
VARNING: OVISYMLIG LASERSTRÅLING NÅR DENNA DEL
 ÄR ÖPPEN OCH SÄKERSPÄRRAN ÄR UTKOPPLAD
 FÖRSLÖJN AN FÄHIG

① THIS LABEL IS ATTACHED TO THE PLACE AS ILLUSTRATED TO INFORM THAT THE APPARATUS CONTAINS A LASER COMPONENT.

① DIESE AUFKLEBEMARKE IST AN DEM IN DER ABBILDUNG GEZEIGTEN ORT ANGEBRACHT UM DARAUF HINZUWEISEN, DASS IM INNEN DES GERÄTS EINE LASER-KOMPONENTE BEFINDET.

① PÅSKRIFTEN SITTER PÅ APPARATEN SOM VISAS SOM UPPMANING OM ATT APPARATEN OMFATTAR EN INBYGGD LASERKOMPONENT.

① DETTE MÆRKAT ER ANBRAGT SOM VIST I ILLUSTRATIONEN FOR AT ADVARE BRUGEREN OM AT APPARATET INDEHOLDER EN LASERKOMPONENT.

② DETTE MÆRKAT ER SOM VIST PÅ ILLUSTRATIONEN ANBRAGT PÅ INDERSIDEN AF TOPDÆKSLET FOR AT ADVARE BRUGEREN OM AT YDERLIGERE FREMTRÆNGEN VIL VÆRE FORBUNDET MED FARE FOR AT UDSÆTTE SIG FOR LASERSTRÅLING.

ADVARSEL — BETJENING AF ANDRE KONTROLLER OG REGULATORER, ELLER BENYTTETES AF ANDRE FREMGANGSMÅDER END BESKREVET HERI ER FORBUNDET MED FARE FOR UDSÆTTELSE FOR LASERSTRÅLING.

VARING: APPARATEN INNEHÅLLER LASER LOMONENT MED STRÅLING ÖVERSTIGANDE KLAS 1.

"ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING"

"VAROITUS! SUOJAKOTELOA EI SAA AVATA. LAITE SISÄLTÄÄ LASERDIODIN. JOKA LAHETTA (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ".

ADVARSEL: USYNLIG LASERBESTRÅLING NÅR DENNE DELEN ER ÅBEN OG SIKKERHETSSPERREN ER UTKOBLET UNNGÅ UTSÆTTELSE FOR STRÅLING.

①
CLASS 1 LASER PRODUCT
 LUOKAN 1 LASERLAITE
 KLAS 1 LASERAPPARAT

2 SPECIFICATIONS

仕 様

AUDIO

Number of Channels:	2
Frequency Response:	1-20,000Hz $\pm$ 0.3dB (RCA)
Signal to Noise Ratio:	Better than 110dB (1kHz)
Dynamic Range:	Better than 99dB (1kHz)
Harmonic Distortion:	0.0015% (1kHz)
Wow and Flutter:	Unmeasurable (Quartz accuracy)
Channel Separation:	Better than 110dB (1kHz)
Analog Output:	2.2Vrms (RCA)
Digital Output:	0.5Vp-p/75ohm (Coaxial) -15dBm - -21dBm (Optical)
D/A Converter:	Advanced sign magnitude 20 bit 4 DAC
Digital Filter:	8-times, 16-times, 12/24-times oversampling 25-bit digital filter
Analog Filter:	3rd order Butterworth filter

PICK UP

Type:	Objective lens drive, optical 3-beam laser pickup
Objective Lens:	2-dimensional parallel drive
Laser Type:	GaAlAs type semiconductor laser
Wave Length:	780nm

SIGNAL FORMAT

Sampling Frequency:	44.1kHz
Quantization Bit:	16-bit linear/channel
Channel Bit Rate:	4.3218Mb/sec
Channel Modulation Code:	EFM
Error Correction:	CIRC

GENERAL

Power Requirements:	120V AC, 60Hz (U.S.A./Canada Model) 230V AC, 50Hz (Europe/UK Model)
Power Consumption:	18 watts
Dimensions (W x H x D):	442 x 100 x 336mm
Weight:	9kg
Standard Accessories:	Wireless Remote Control Unit (RC-668) Battery (SUM-3, "AA", "R6" type) x 2 AC Power Cord x 1

- Improvements may result in specification or feature changes without notice.

〈オーディオ〉

オーディオチャンネル数	2チャンネル
周波数特性	1~20,000Hz $\pm$ 0.3dB
SN比	110dB以上 (EIAJ)
ダイナミックレンジ	99dB以上 (EIAJ)
高調波歪率	0.0015%以下 (EIAJ)
ワウ・フラッター	測定限界値以下(水晶発振精度)
チャンネルセパレーション	110dB以上 (EIAJ)
アナログ出力	2.2Vrms
デジタル出力	0.5Vp-p/75 Ω (COAXIAL) -15~-21dBm (OPTICAL)
D/Aコンバーター	アドバンスドサインマグニチュード方式20ビット4DAC
デジタルフィルター	8倍,16倍,12-24倍切替オーバーサンプリング25ビットデジタルフィルター
アナログフィルター	3次バターワースフィルター

〈ピックアップ〉

方式	光学式3ビーム
対物レンズ駆動方式	2次元平行駆動
光源	半導体レーザー
波長	780nm

〈信号フォーマット〉

標準化周波数	44.1kHz
量子化ビット数	16ビット・リニア/チャンネル
伝送レート	4.3218Mb/sec
変調方式	EFM
エラー訂正方式	CIRC

〈一般〉

電源	100V AC 50-60Hz
消費電力	20W
外形寸法	442×100×336mm (W×H×D)
質量	9.0kg

〈付属品〉

- ワイヤレスリモコン (RC-668) ×1
- 乾電池 (単3、SUM-3) ×2
- 電源コード ×1

*EIAJは日本電子機械工業会規格に定められた測定法によるものです。

*仕様および外観は、改善のため予告なく変更することがあります。

3 ADJUSTMENTS AND CHECKS

調整と確認

1. Handling the pickup assembly

- Before servicing the pickup assembly be sure to prevent electrostatic-inducer destruction by grounding not only test equipment in use but also yourself.
*Electrostatic charge drastically shortens the operating life of the laser diode or possibly results in its destruction.
- LD terminals are factory-strapped before shipment to protect LD from electrostatic discharges during transportation. (Fig. 3-1) After connector insertion, unstrap the LD terminal with a soldering iron.
The temperature of the soldering iron tip must be 320°C or below (30W) and the unstrapping should be performed quickly.
- Don't disassemble the pickup ass'y.
- Don't apply shock to the pickup ass'y.
- Don't place the assembly in a place subject to excessive dust, heat or moisture.

1. ピックアップASSYの取扱

- ピックアップASSYを取り扱う場合は、測定器などに確実なアースを取ると共に、人体アースを行ない、静電破壊を十分防止してください。
*レーザーダイオードは、静電気が加わると寿命が著しく低下したり、または破損しますので十分注意してください。
- LDの端子は、出荷時に輸送による静電破壊防止のためショートされています。(Fig. 3-1)ショートの解放はコネクターを差し込んだ後、半田ゴテで行なってください。
半田ゴテは、コテ先温度が320°C以下(30W)のものを使用し、すみやかに行ってください。
- ピックアップASSY本体の調整および分解などはしないでください。
- ピックアップASSYに落下・衝撃は加えないでください。
- ゴミ・ホコリなどの発生する場所、高温・多湿の場所は避けてください。

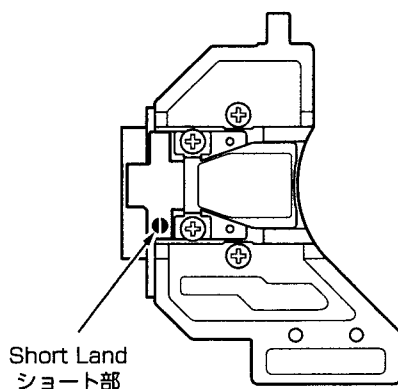


Fig. 3-1

2. Objective

- Never look directly into the LD or observe the laser beam through another lens or mirror.
- Don't touch the objective with fingers.
- If objective becomes dirty, playback will deteriorate.
To clean the objective, moisten a good cleaning tissue, such as made by KODAK, in isopropyl alcohol and wipe the objective gently. Wipe off and excess fluid with a dry cleaning tissue.

2. 対物レンズについて

- 動作中のLDを直視したり、あるいは他のレンズやミラーを介して光束を観察すると危険ですから絶対に行わないでください。
- レンズには手を触れないでください。
- レンズに汚れが付くと再生能力が低下しますので、次のように清掃してください。
レンズクリーニングペーパー (KODAK社製など) に、イソプロピルアルコール (I.P.A) を浸して清掃をし、液が残らないように必ず拭きとってください。

3-1 SERVO ADJUSTMENT

3-1 サーボ調整

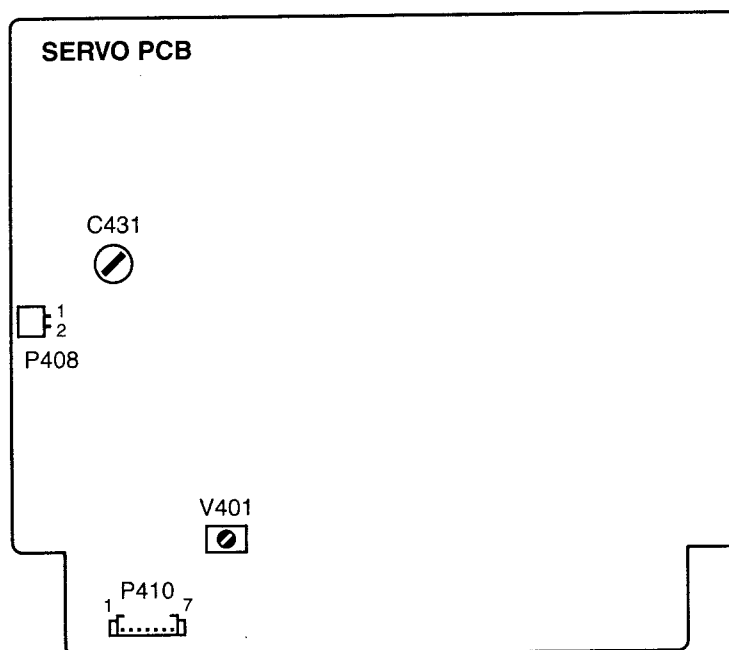


Fig. 3-2

3-1-1 Clock frequency adjustment

1. Connect the frequency counter to P408.
2. Adjust C431 so that the clock frequency is $16.9344\text{MHz} \pm 50\text{ppm}$ ($16.9336\text{MHz} \sim 16.9352\text{MHz}$) at the stop mode.

3-1-1 クロック周波数調整

1. 周波数カウンタをP408に接続する。
2. 停止状態での周波数が $16.9344\text{MHz} \pm 50\text{ppm}$ ($16.9336\text{MHz} \sim 16.9352\text{MHz}$)になるようにC431を調整する。

3-1-2 Tracking balance adjustment

1. Connect the oscilloscope between P410 pin 5 (TE1) and P410 pin 2 (VC), and press the SEARCH (◀ or ▶) button.
2. Adjust V401 so that the upper and lower amplitudes of the tracking error signal waveform become equal above and below 0V.

3-1-2 トラッキングバランス調整

1. P410の5番ピン (TE1) とP410の2番ピン (VC) 間にオシロスコップを接続し、SEARCHボタン (◀または▶) を押す。
2. トラッキングエラー信号の波形が0Vを中心に振れるようV401を調整する。

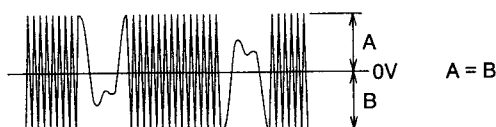


Fig. 3-3

3-2 AUDIO ADJUSTMENT

3-2 オーディオ調整

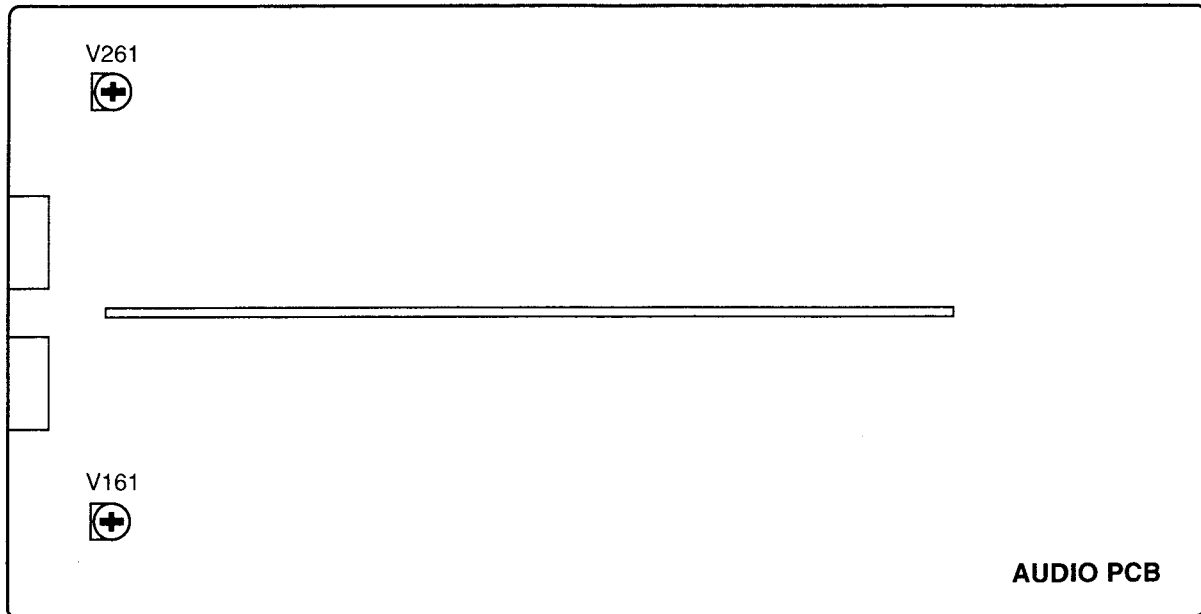


Fig. 3-4

3-2-1 Output DC offset adjustment

1. Connect the DC voltmeter to the LINE OUT.
2. Play the track 17 (1kHz, -60dB) of the MCD-111, and adjust V161 (Lch) / V261 (Rch) so that the offset voltage becomes within $0 \pm 10\text{mV}$.

3-2-1 出力DCオフセット調整

1. LINE OUT端子にDCボルトメーターを接続する。
2. MCD-111の17曲目 (1kHz, -60dB) を再生し、オフセット電圧が $0 \pm 10\text{mV}$ になるよう V161 (Lch) / V261 (Rch) を調整する。

3-2-2 Output level check

1. Connect the AC voltmeter to the LINE OUT.
2. Play the track 2 (1kHz, 0dB) of the MCD-111, and check the output level.
Specification: $2.2 \pm 0.5\text{Vrms}$ (50k Ω load)

3-2-2 出力レベルチェック

1. LINE OUT端子にACボルトメーターを接続する。
2. MCD-111の2曲目 (1kHz, 0dB) を再生し、出力レベルを確認する。
規格: $2.2 \pm 0.5\text{Vrms}$ (50k Ω 負荷)

3-2-3 Distortion check

1. Connect the distortion meter to the LINE OUT.
2. Play the track 2 (1kHz, 0dB) of the MCD-111, and check the distortion.
Specification: 0.006% or less
(400Hz HPF + A weight + 20kHz LPF)

3-2-3 歪率チェック

1. LINE OUT端子に歪率計を接続する。
2. MCD-111の2曲目 (1kHz, 0dB) を再生し、歪率を確認する。
規格: 0.006%以下
(400Hz HPF + A weight + 20kHz LPF)

3-2-4 Frequency response check

1. Play the track 3-6 (20Hz-20kHz, 0dB) of the MCD-111, and check that output level are within the specified values with respect to the 1kHz reference level.
Specification: within $\pm 0.5\text{dB}$

3-2-4 周波数特性チェック

1. MCD-111の3～6曲目 (20Hz～20kHz, 0dB) を再生し、基準レベル (1kHz, 0dB) に対し規格内にあることを確認する。
規格: $\pm 0.5\text{dB}$ 以内

3-2-5 S/N check

1. Play the track 7 (non-signal) of the MCD-111, and check that noise level are within the specified values with respect to the 1kHz reference level.

Specification: 100dB or more (DIN AUDIO)

3-2-6 Channel separation check

1. Play the track 8 (L:1kHz / R:non-signal) of the MCD-111, and check the leakage from Lch to Rch.
2. In the same way, play the track 10 (R:1kHz / L:non-signal) of the MCD-111, and check the leakage from Rch to Lch.

Specification: 100dB or more (DIN AUDIO)

3-2-7 Check of over sampling operation

1. Connect the distortion meter to the LINE OUT.
2. Play the track 6 (20kHz, 0dB) of the MCD-111.
3. Check that distortion will be improved by changing OS point in order of 8fs, 16fs, and sin.

3-2-8 Check of digital filtering operation

1. Connect the AC voltmeter to the LINE OUT.
2. Play the track 6 (20kHz, 0dB) of the MCD-111.
3. Check that the output level will decrease by approx. 1.2dB by switching DF range from "standard" to "wide".

3-2-5 S/Nチェック

1. MCD-111の7曲目(無信号)を再生し、ノイズレベルが基準レベルに対し規格内であることを確認する。
規格: 100dB以上 (DIN AUDIO)

3-2-6 チャンネルセパレーションチェック

1. MCD-111の8曲目 (L: 1kHz / R: 無信号)を再生し、Rchへの漏れを確認する。
2. 同様に10曲目 (R: 1kHz / L: 無信号)を再生し、Lchへの漏れを確認する。
規格: 100dB以上 (DIN AUDIO)

3-2-7 オーバーサンプリング動作チェック

1. LINE OUT端子に歪率計を接続する。
2. MCD-111の6曲目 (20kHz, 0dB)を再生する。
3. OS pointを8fs → 16fs → sinの順に切り替えたとき、歪率が良くなることを確認する。

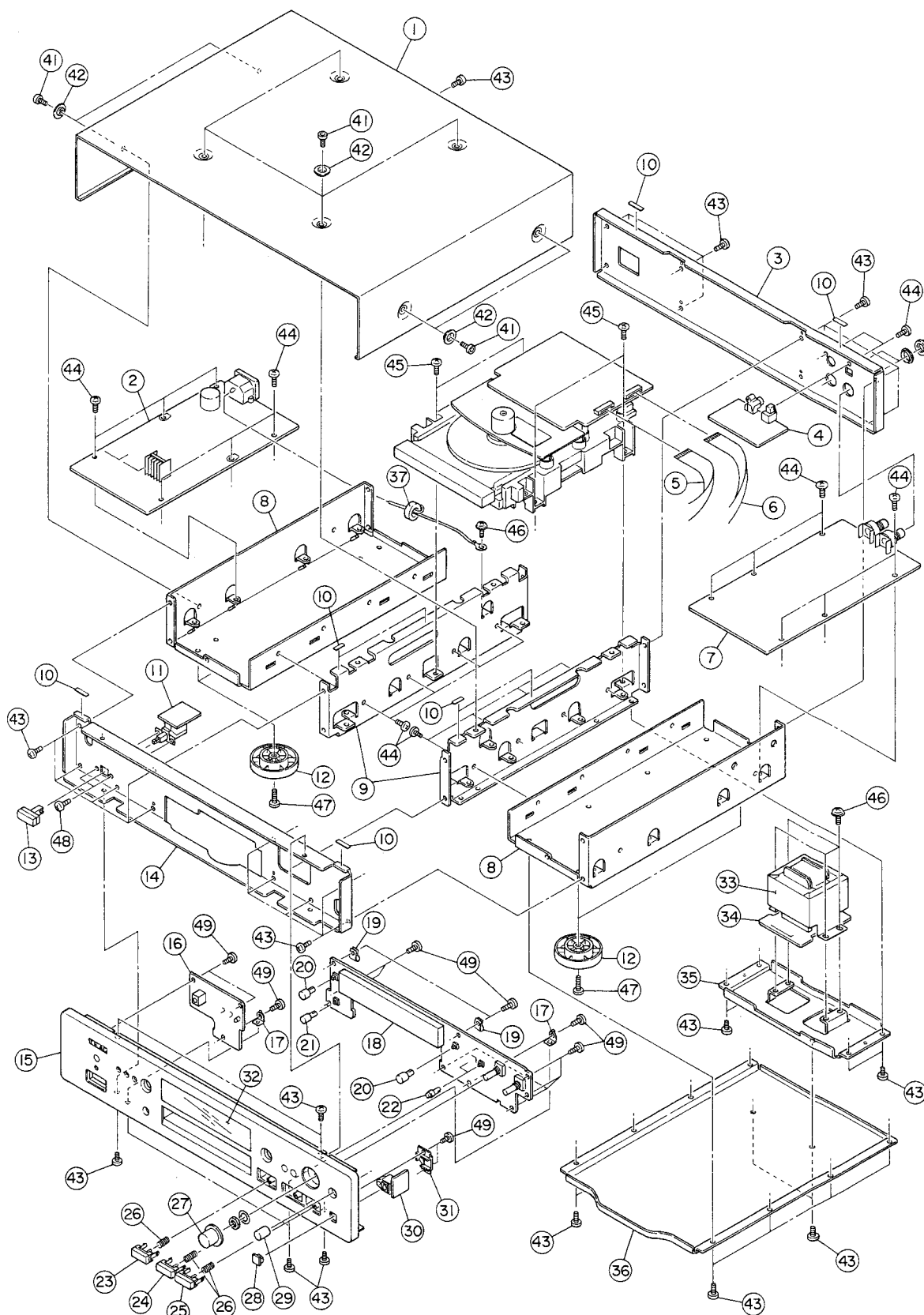
3-2-8 デジタルフィルタ動作チェック

1. LINE OUT端子にACボルトメーターを接続する。
2. MCD-111の6曲目 (20kHz, 0dB)を再生する。
3. DF rangeをstandardからwideに切り替えたとき、約1.2dBレベルが下がることを確認する。

4 EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

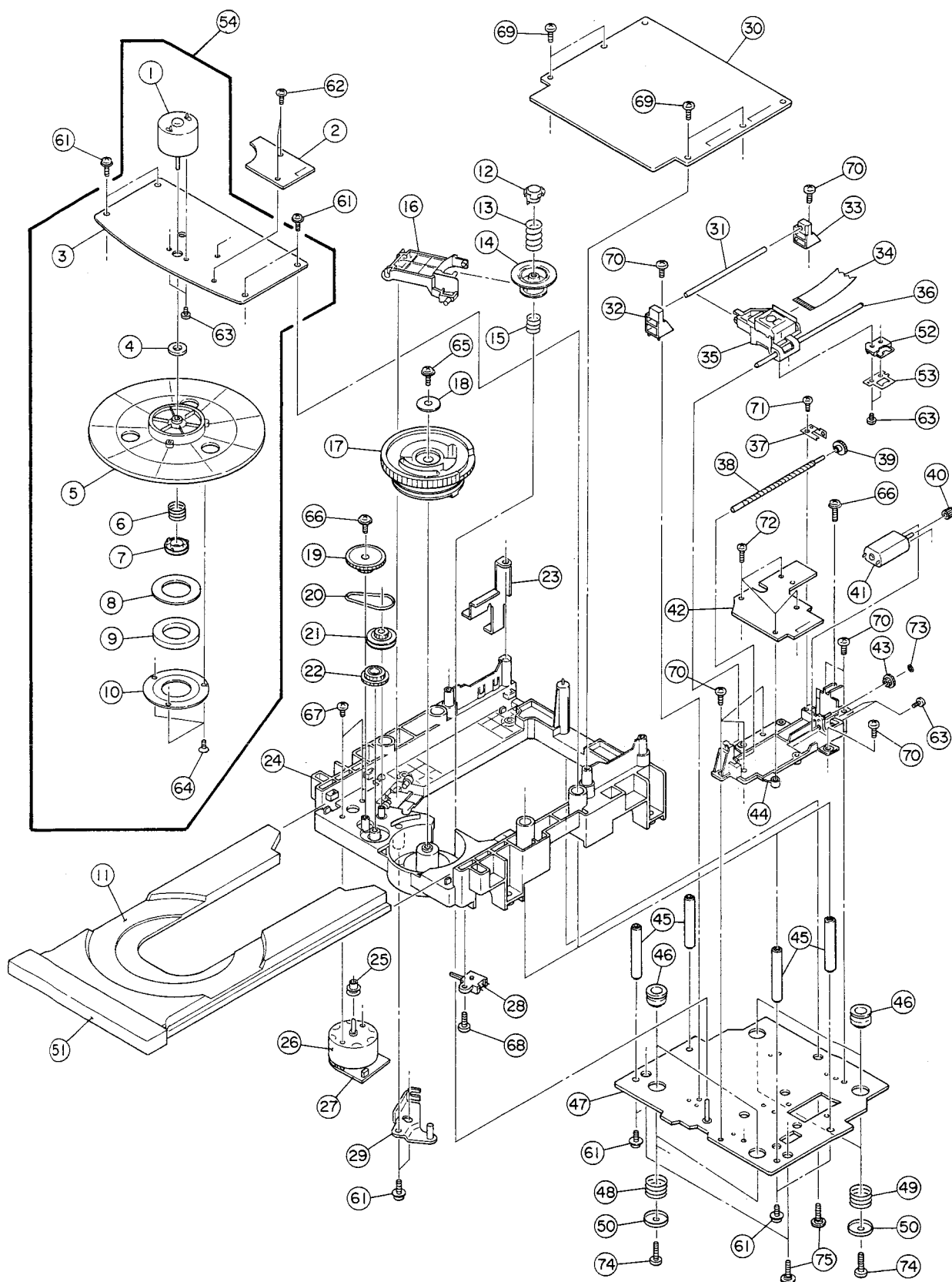
EXPLODED VIEW-1



EXPLODED VIEW-1

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	*M00655200A	BONNET	VRDS-8 (N)
	*M00655201A	BONNET (B)	VRDS-8 (B)
1- 2	*E95062200A	PCB ASSY, POWER [J]	
	*E95062211A	PCB ASSY, POWER [US, C]	
	*E95062240A	PCB ASSY, POWER [E, UK]	
1- 3	*M00655700A	REAR PANEL	
1- 4	*E95062500A	PCB ASSY, D-OUT	
1- 5	*E00368900A	FLAT CABLE, SV-KY A 21P	
1- 6	*E00369000A	FLAT CABLE, SV-KY B 21P	
1- 7	*E95061400A	PCB ASSY, AUDIO	
1- 8	*M00655400A	CHASSIS, SIDE	
1- 9	*M00655500A	FRAME, MECH	
1-10	*5801096900	SHEET, RUBBER	
1-11	*E95062000A	PCB ASSY, PWR SW	
1-12	M00521200A	FOOT ASSY, D50	
1-13	M00654700A	BUTTON ASSY, POWER (N)	VRDS-8 (N)
	M00654701A	BUTTON ASSY, POWER (B)	VRDS-8 (B)
1-14	*M00655600A	CHASSIS, FRONT	
1-15	*M00654000A	FRONT PNL ASSY (N)	VRDS-8 (N)
	*M00654001A	FRONT PNL ASSY (B)	VRDS-8 (B)
1-16	*E95062400A	PCB ASSY, KEY2	
1-17	*M00656000A	PLATE, EARTH	
1-18	*E95062300A	PCB ASSY, KEY1	
1-19	*16342680	CLAMPER, 5	
1-20	M00654900A	BUTTON, D9.5 (N)	VRDS-8 (N)
	M00654901A	BUTTON, D9.5 (B)	VRDS-8 (B)
1-21	M00526800A	BUTTON, D7.5 (N)	VRDS-8 (N)
	M00526801A	BUTTON, D7.5 (B)	VRDS-8 (B)
1-22	M00526901A	BUTTON, D5 (M)	
1-23	M00534100A	BUTTON ASSY, PAUSE (N)	VRDS-8 (N)
	M00574800A	BUTTON ASSY, STOP (B)	VRDS-8 (B)
1-24	M00533900A	BUTTON ASSY, PLAY (N)	VRDS-8 (N)
	M00574900A	BUTTON ASSY, PLAY (B)	VRDS-8 (B)
1-25	M00534100A	BUTTON ASSY, PAUSE (N)	VRDS-8 (N)
	M00575000A	BUTTON ASSY, PAUSE (B)	VRDS-8 (B)
1-26	5801070100	SPRING, KNOB	
1-27	M00530800A	KNOB, D15 (N)	VRDS-8 (N)
	M00575200A	KNOB, D15 (B)	VRDS-8 (B)
1-28	M00581100A	COVER, JACK (N)	VRDS-8 (N)
	M00581101A	COVER, JACK (B)	VRDS-8 (B)
1-29	M00655000A	KNOB, D10 (N)	VRDS-8 (N)
	M00655001A	KNOB, D10 (B)	VRDS-8 (B)
1-30	*E95062600A	PCB ASSY, FRONT D-OUT	
1-31	*M00656100A	BRACKET, JACK	
1-32	*M00655100A	WINDOW, DISPLAY	
1-33	△ E00274200B	POWER TRANSFORMER	
1-34	*E95062100A	PCB ASSY, TRANS	
1-35	*M00655900A	BASE, TRANS	
1-36	*M00655800A	COVER, BOTTOM	
1-37	*E0040940	CORE, E04RA190120080 [US, C]	
1-41	*5801539500	SCREW, HEXAGON SOCKET B (BLK)	
1-42	*5801532910	COLLAR, SCREW (B)	
1-43	*B00050600A	SCREW, BPBC 3X8FCU	
1-44	*5783763008	SCREW, B-TITE BIND M3X8 (CU)	
1-45	*5783533012	SCREW, B-TITE BIND M3X12 (N1-BLK)	
1-46	*B00052000A	SCREW, BPSF 4X8FCU [US, C, E, UK]	
1-47	*5783034014	SCREW, S-TITE BIND M4X14	
1-48	*5780003006	SCREW, BIND M3X6	
1-49	*5783603008	SCREW, P-TITE BIND M3X8	

EXPLODED VIEW-2



EXPLODED VIEW-2

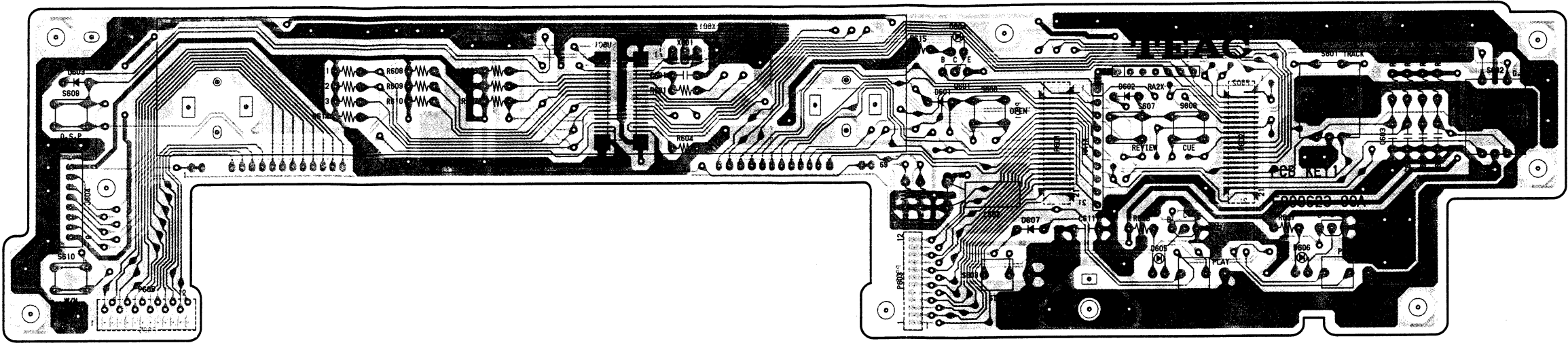
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	-----	DC MOTOR, RF-310T	
2- 2	*E95061800A	PCB ASSY, SPINDLE	
2- 3	-----	BRACKET, SP MOTOR	
2- 4	-----	MAGNET, REC-26A 12X5X1.5	
2- 5	-----	TURNTABLE (GRN)	
2- 6	-----	SPRING	
2- 7	-----	CENTER RING	
2- 8	-----	MAGNET YOKE	
2- 9	-----	MAGNET, FB3G DH32X18X4.5	
2-10	-----	HOLDER, MAGNET	
2-11	*M00657800B	TRAY	
2-12	M00658900A	RING, GUID	
2-13	M00659000A	CPRSN SPRING, C	
2-14	*M00658800A	CLAMPER	
2-15	M00753600A	CPRSN SPRING, D	
2-16	*M00657900A	ARM, CLAMPER	
2-17	M00658000C	GEAR, MAIN	
2-18	*M00659300A	HOLDER, SPRING	
2-19	M00658100A	GEAR, TRAY (A)	
2-20	M00658500A	SQ BELT	
2-21	M00658300A	PULLEY, GEAR	
2-22	M00658200A	GEAR, TRAY (B)	
2-23	*M00658700A	PLATE, E	
2-24	*M00657700B	CHASSIS, MECH (TRAY)	
2-25	M00658400A	PULLEY	
2-26	5370009200	DC MOTOR, RF-500TB	
2-27	*E95061700A	PCB ASSY, TRAY	
2-28	E0038180	SW, 1-2 N SSCF21R-1	
2-29	*M00658600A	HOLDER, MECH	
2-30	*E95061500A	PCB ASSY, SERVO	
2-31	*M00657000A	SHAFT, GUIDE (SUB)	
2-32	*M00656700A	HOLDER, GUIDE (F)	
2-33	*M00656800A	HOLDER, GUIDE (R)	
2-34	*E00368800A	FLAT CABLE, PICKUP 16P	
2-35	K00003000A	OPT PU ASSY, SUB	
2-36	*5801570100	SHAFT, GUIDE	
2-37	*M00665000A	LEAF SPRING, SCREW	
2-38	*M00656900A	SCREW, LEAD	
2-39	M00665200A	GEAR (C)	
2-40	M00517200A	GEAR (A)	
2-41	E00294400B	DC MOTOR, SLED	
2-42	*E95061600A	PCB ASSY, MECH	
2-43	M00751800A	GEAR (B)	
2-44	*M00656400A	HOLDER, SLD MOTOR	
2-45	*M00656600A	POST, MECH	
2-46	*M00659400A	BUSHING, RUBBER	
2-47	*M00656300A	CHASSIS, MECH (PU)	
2-48	M00659100A	CPRSN SPRING, F (A)	
2-49	M00659200A	CPRSN SPRING, F (B)	
2-50	*M00659300A	HOLDER, SPRING	
2-51	*M00655300A	PANEL, TRAY (N)	VRDS-8 (N)
	*M00655301A	PANEL, TRAY (NB)	VRDS-8 (B)
2-52	*M00657300B	TEETH	
2-53	*M00665100A	LEAF SPRING, TEETH	
2-54	*Y00080900A	SP MOTOR ASSY	

EXPLODED VIEW-2

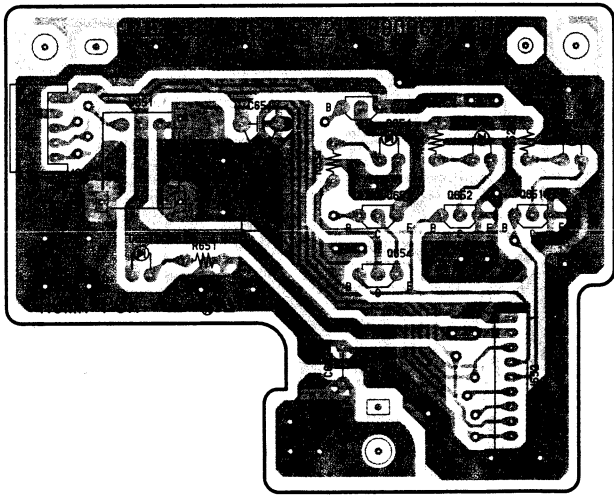
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2-61	*5780142606	SCREW, PAN SEMS-B M2.6X6	
2-62	*5780022604	SCREW, BIND M2.6X4 (NI-BLK)	
2-63	*16502022	SCREW, PAN 2X3.5	
2-64	*5781212005	SCREW, FLAT TAPPING M2X5	
2-65	*B0006610	SCREW, PPPT 3X10 FZB	
2-66	*B0006620	SCREW, PPPT 2X8 FZB	
2-67	*5780022604	SCREW, BIND M2.6X4 (NI-BLK)	
2-68	*5783542608	SCREW, P-TITE BIND M2.6X8 (NI-BLK)	
2-69	*5783543008	SCREW, P-TITE BIND M3X8 (NI-BLK)	
2-70	*5780022606	SCREW, BIND M2.6X6 (NI-BLK)	
2-71	*5783542005	SCREW, P-TITE BIND M2X5 (NI-BLK)	
2-72	*5783672006	SCREW, P-TITE PAN M2X6 (NI-BLK)	
2-73	*M00053100A	WASHER, PS GEAR	
2-74	*5783543012	SCREW, P-TITE BIND M3X12 (NI-BLK)	
2-75	*5801276700	SCREW, STEP	

5 PC BOARDS AND PARTS LIST
基板図とパーツリスト

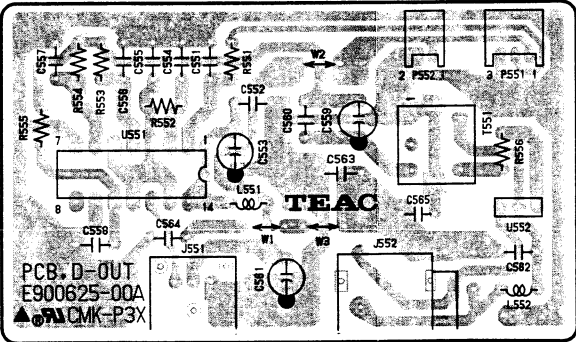
KEY 1 PCB



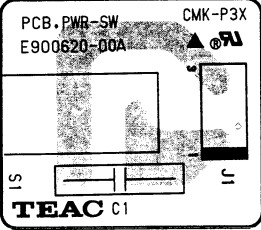
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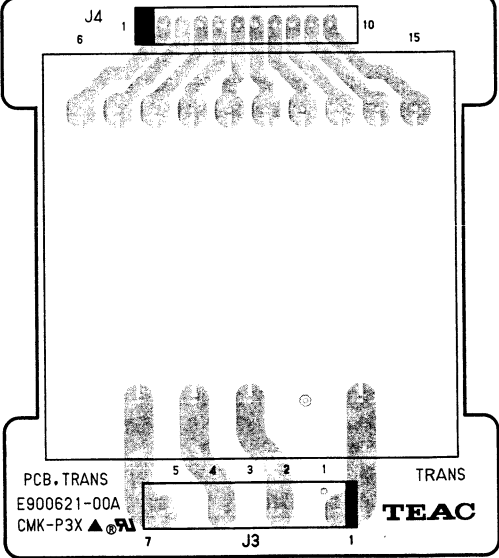
D-OUT PCB



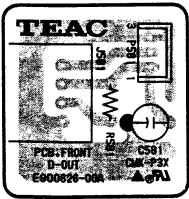
POWER SW PCB



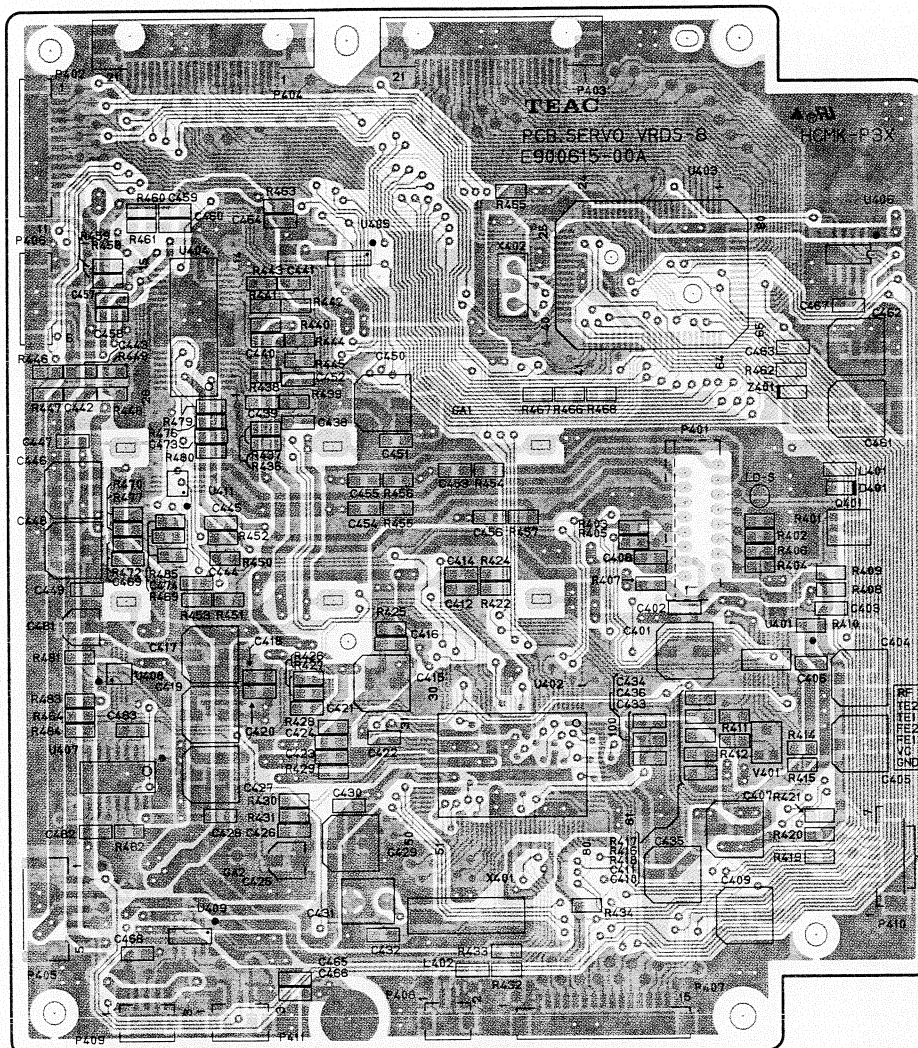
TRANS PCB



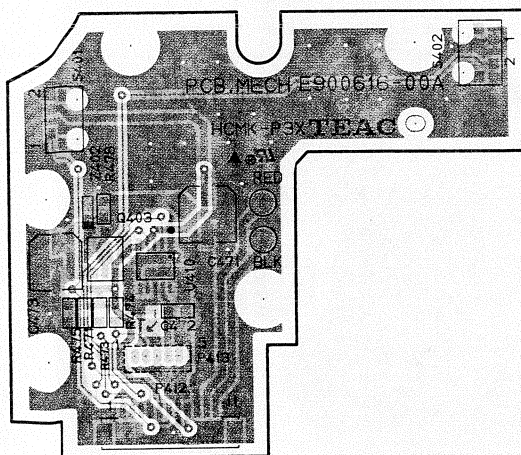
FRONT D-OUT PCB



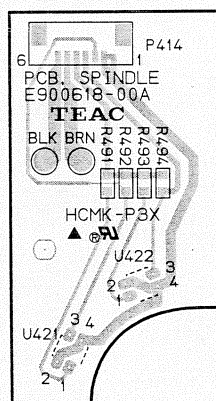
SERVO PCB



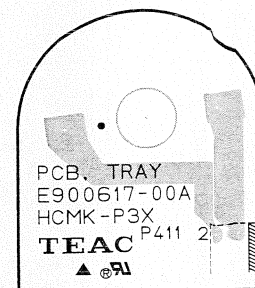
MECH PCB



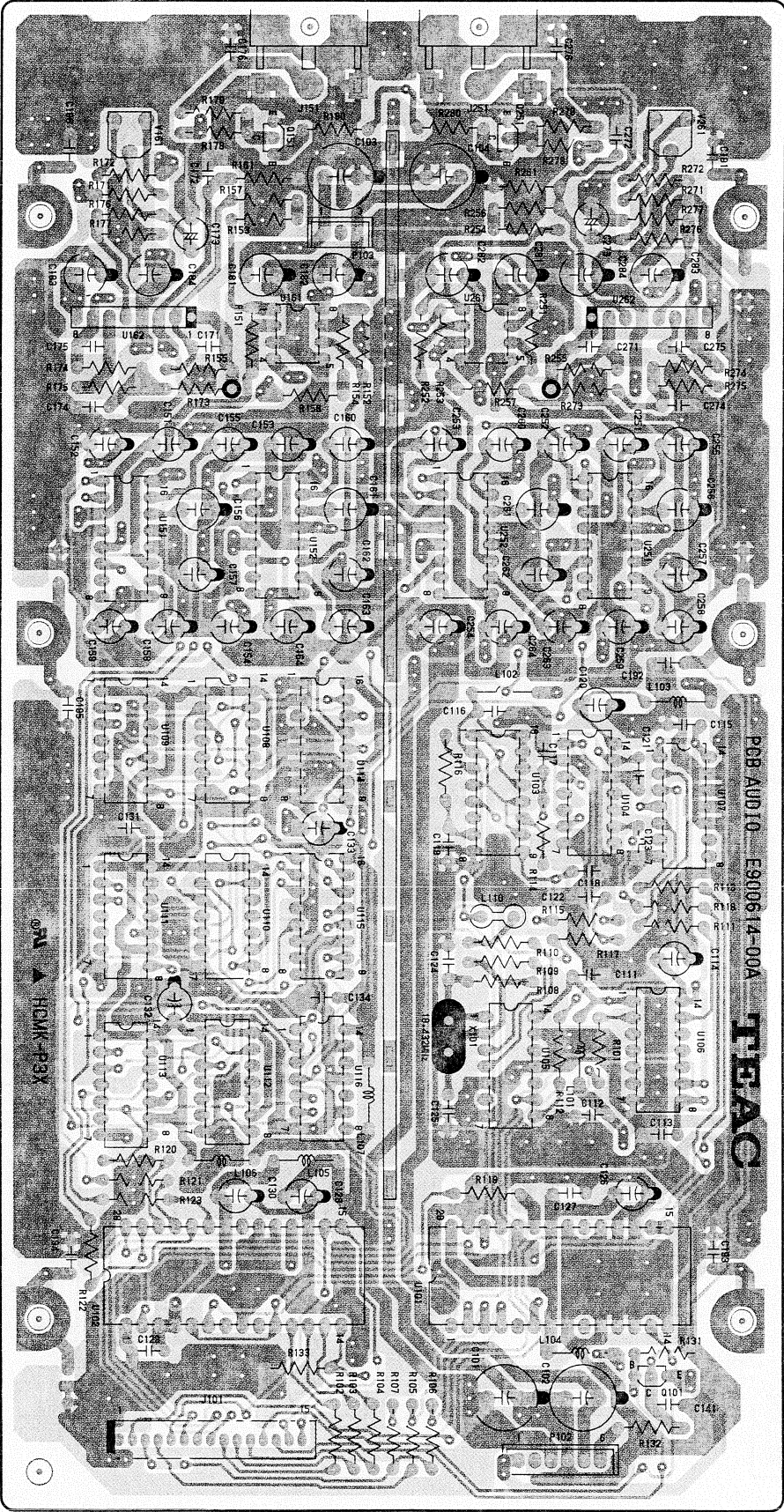
SPINDLE PCB



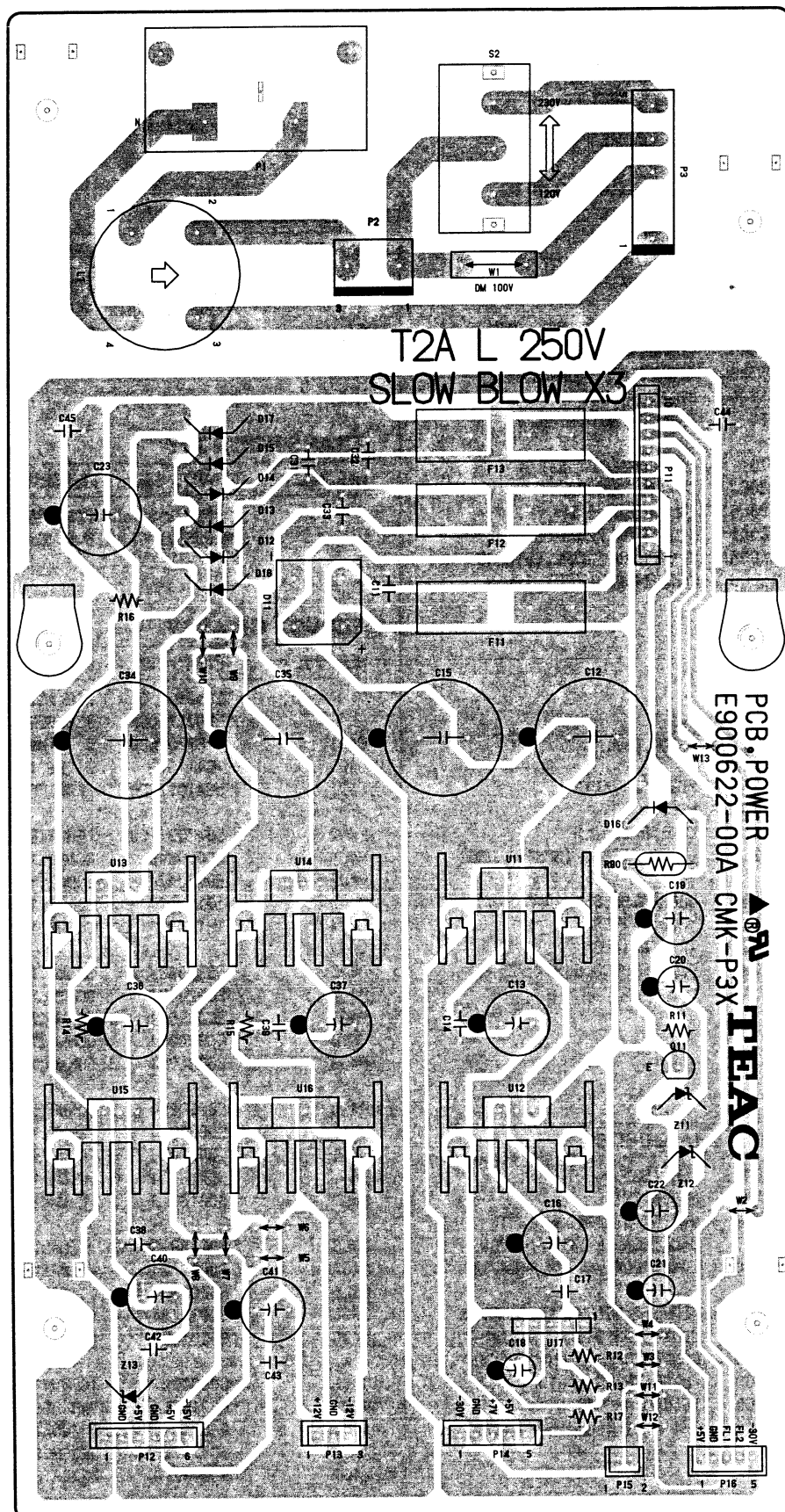
TRAY PCB



AUDIO PCB



POWER PCB



KEY1 PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95062300A	PCB ASSY, KEY1
	*E90062300A	PCB, KEY1
	*M00531400A	HOLDER ASSY, FL
	M00471101A	SPACER, LED LH-5-13
	16362837	LED SPACER, L6
D601-D603	5224017820	DIODE, MA165P-(TA5)
D604	S0016502	LED, GL3HS8(C) (SUNSET ORG)
D605	5225020600	LED, SLH38 MC3F(GRN)
D606	S0016502	LED, GL3HS8(C) (SUNSET ORG)
D607	5224017820	DIODE, MA165P-(TA5)
P601, P602	E0030393	CONNECTOR, SMT6232-21P
P603	5334083900	CONNECTOR, B12B-ZR(WHT)
P605	5334085100	CONNECTOR, S12B-ZR(WHT)
Q601-Q603	5232255620	TR, DTC114ESA
S601	E0030150	ENCODER, ROTARY EC11
S602	E0037970	ENCODER, EC11 NON SW
S603-S605	5302108600	SW, TACT SKHVBE
S606-S610	5302109800	SW, TACT SKHHDA
U601	S00262800A	IC, UPD754302GS-060
U602	E00379400A	ELCTRN RAY DSPL, CM1594D
X601	5347012000	OSC, CERAMIC CST4, 19MGW

KEY2 PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95062400A	PCB ASSY, KEY2
	*E90062400A	PCB, KEY2
	16362837	LED SPACER, L6
D651-D654	S0016502	LED, GL3HS8(C) (SUNSET ORG)
P651	5336287500	CONNECTOR, S5B-PH-K-S(WHT)
Q651, Q652	5232255620	TR, DTC114ESA
Q653-Q655	5232254720	TR, DTA114ESA
U651	5292211000	REMOTE MODULE, SBX1785-52

D-OUT PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95062500A	PCB ASSY, D-OUT
	*E90062500A	PCB, D-OUT
J551	5292210100	OPT. DATA LINK, GP1F32T
J552	E0027800	JACK, RCA 1P YKC-21-3250
L551	5286033520	COIL, CHOKE 4.7UH K(LAP2T)
L552	5347022720	FERRITE BEADS, EXC ELDR35V
P551	5336287300	CONNECTOR, S3B-PH-K-S(WHT)
P552	5336287200	CONNECTOR, S2B-PH-K-S(WHT)
T551	5320046300	PULSE TRANS, TC-1027-04
U551	5220040700	IC, UPD74HC04C
U552	5292808020	EMI FILTER, EMC EMT 100PFT

FRONT D-OUT PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95062600A	PCB ASSY, FRONT D-OUT
	*E90062600A	PCB, FRONT D-OUT
J581	E0009090	OPT CONNECTOR, TOTX-176
P581	5336249300	CONNECTOR, B03B-PH-K-S(WHT)

PWR SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95062000A	PCB ASSY, PWR SW
	*E90062000A	PCB, PWR SW
C1	△ E0022570	SPK KILLER, 0.0047UF 250V
S1	△ 5300046200	SW, PUSH SDDL1083A

TRANS PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95062100A	PCB ASSY, TRANS
	*E90062100A	PCB, TRANS

SERVO PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95061500A	PCB ASSY, SERVO
	*E90061500A	PCB, SERVO
C431	5267207000	C, TRIMMER VCT51F 30P
D401	13411644	DIODE, 1SS355 TE-17
L401	5347027700	FERRITE BEADS, BK2125HS121
L402	5347027700	FERRITE BEADS, BK2125HS121
P401	E0030640	CONNECTOR, 52089-1620
P402	E0020474	CONNECTOR, 53261-1190
P403	13153077	CONNECTOR, 21P
P404	13153077	CONNECTOR, 21P
P405	5336380300	CONNECTOR, 5P S5BPHSM3TB
P406	E0020424	CONNECTOR, 53261-0690
P407	E0020514	CONNECTOR, 53261-1590
P408	E0034054	CONNECTOR, S2BZRSM3ATF
P409	E0034064	CONNECTOR, S3BZRSM3ATF
P410	E0020294	CONNECTOR, 53398-0790
P411	E0034064	CONNECTOR, S3BZRSM3ATF
Q401	13427450	TR, 2SA1369-G
U401	S0018314	IC, CXA1571N-T4
U402	S0018323	IC, CXD2545Q
U403	S00289900A	IC, UPD78044FGF-117-3B9
U404	S0022424	IC, BA6297AFP-E2
U405	S0001324	IC, TC7W04F
U406	S0020434	IC, ST93C46CM1TR
U409	S0001324	IC, TC7W04F
U411	S0000984	IC, NJM3404AV-TE1
V401	R0014764	VAR RES, 20K EVN5ESX50B24
X401	E0021644	RESONATOR, 16.9344MHZ SD3
X402	5347017700	OSC, EFO-EC4194A4
Z401	S0018374	ZENER DIODE, UD29.1B

MECH PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95061600A	PCB ASSY, MECH
	*E90061600A	PCB, MECH
P412	E0020474	CONNECTOR, 53261-1190
P413	5334083200	CONNECTOR, B05B-ZR(WHT)
Q403	S0022974	TR, 2SC5053
S401, S402	E0003244	SW, SPPB-63
U410	5220451100	IC, LB1638M
Z402	S0020834	ZENER DIODE, UDZ6.8B

SPINDLE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95061800A	PCB ASSY, SPINDLE
	*E90061800A	PCB, SPINDLE
P414	E0020424	CONNECTOR, 53261-0690
U421, U422	5228017700	PHOTO-INTERRUPTER, GP2S24

TRAY PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95061700A	PCB ASSY, TRAY
	*E90061700A	PCB, TRAY
P411	5336287200	CONNECTOR, S2B-PH-K-S(WHT)

AUDIO PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95061400A	PCB ASSY, AUDIO
	*E90061400A	PCB, AUDIO
	5801062000	EARTH PLATE E
	*5780002605	SCREW, BIND M2.6X5
J151	E00353700A	JACK, RCA 1P(WHITE)
J251	E00353800A	JACK, RCA 1P(RED)
L101-107	5286033520	COIL, CHOKE 4.7UH K(LAP2T)
L110	5347022720	FERRITE BEADS, EXC ELDR35V
P102	5336303600	CONNECTOR, B6B-EH(WHT)
P103	5336303300	CONNECTOR, B3B-EH(WHT)
Q101	5232254720	TR, DTA114ESA
Q151, Q251	5231762520	TR, 2SD1915TA
R101-107	5241620620	R, METAL MRS25 220 F
R108	5241629420	R, METAL MRS25 1.0M F
R109	5241619820	R, METAL MRS25 100 F
R110	5241603620	R, METAL MRS25 33 F
R111-123	5241620620	R, METAL MRS25 220 F
R131	5241624620	R, METAL MRS25 10K F
R132	5241627020	R, METAL MRS25 100K F
R133	5241624620	R, METAL MRS25 10K F

AUDIO PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
R151, R251	5241622820	R, METAL MRS25 1.8K F
R152, R252	5241622820	R, METAL MRS25 1.8K F
R153, R253	5241624620	R, METAL MRS25 10K F
R154, R254	5241624620	R, METAL MRS25 10K F
R155, R255	5241624420	R, METAL MRS25 8.2K F
R156, R256	5241622220	R, METAL MRS25 1.0K F
R157, R257	5241622220	R, METAL MRS25 1.0K F
R161, R261	5241624420	R, METAL MRS25 8.2K F
R171, R271	5241624620	R, METAL MRS25 10K F
R172, R272	5241624620	R, METAL MRS25 10K F
R173, R273	5241621620	R, METAL MRS25 560 F
R174, R274	5241621620	R, METAL MRS25 560 F
R175, R275	5241622620	R, METAL MRS25 1.5K F
R176, R276	5241627020	R, METAL MRS25 100K F
R177, R277	5241624620	R, METAL MRS25 10K F
R178, R278	5241622220	R, METAL MRS25 1.0K F
R179, R279	5241619820	R, METAL MRS25 100 F
R180, R280	5241623820	R, METAL MRS25 4.7K F
U101	S0018180	IC, AD1893
U102	5220123800	IC, SM5843AP (DF)
U103	5220068900	IC, HD74HC112P
U104	5220074400	IC, HD74HC393P
U105	5220040900	IC, UPD74HCU04C
U106	5220059900	IC, TC74HC164AP
U107	5220040800	IC, TC74HC74AP
U108-U113	5220059900	IC, TC74HC164AP
U114, U115	13445477	IC, TC74HC4052AP
U116	5220051800	IC, TC74HC04AP
U151, U251	S0019360	IC, PCM1702P
U152, U252	S0019360	IC, PCM1702P
U161, U261	13443452	IC, M5238AP
U162, U262	5220448100	IC, NJM2114L
V161, V261	5280181302	VR, SEMI-FIXED 2.2KB
X101	E0018190	RESONATOR, 18.432MHZ HC-49

POWER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*E95062200A	PCB ASSY, POWER [J]
	*E95062211A	PCB ASSY, POWER [US, C]
	*E95062240A	PCB ASSY, POWER [E, UK]
	*E90062200A	PCB, POWER
	E0034560	CLIP FUSE, H0446
	5730039200	HEAT SINK, OSH-2425-SPL
	*5783743008	SCREW, S-TITE BIND M3X8(CU)
	5555590000	EARTH PLATE A
C12	△ C0000000	CE, 4700UF 25V ASF
C15	△ C0000000	CE, 4700UF 25V ASF
C19	△ 5260424320	CE, 100UF 50V M AS
C34, C35	△ C0000000	CE, 4700UF 25V ASF
D11	△ 5228010800	SILICON STACK, S2VB20
D12-D15	△ S0023340	DIODE, EU2Z
D16-D18	△ 5224016420	DIODE, S5688G

POWER PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
F11-F13	△	5307050200	FUSE, 2A SLOW BLOW [J, US, C]
F11-F13	△	5307053100	FUSE, 2.0A TIME LAG [E, UK]
L1	△	5292806300	NOISE FILTER, FKOB16MH13
P1	△	E0021120	CONNECTOR, AC INLET
P2		5336376200	CONNECTOR, B2P3-VH
P3		E0037950	CONNECTOR, B4P5-VB-2
P11		5336304000	CONNECTOR, B10B-EH(WHT)
P12		5336303600	CONNECTOR, B6B-EH(WHT)
P13		5336303300	CONNECTOR, B3B-EH(WHT)
P14		5336303500	CONNECTOR, B5B-EH(WHT)
P15		5336241200	CONNECTOR, B02B-PH
P16		5336249500	CONNECTOR, B05B-PH-K-S(WHT)
Q11		5230509100	TR, 2SB562C
R90	△	R0030211	FSBL RN, 1/4W 10 OHM J
S2	△	E0029810	V SEL, SDKHA2 [US, C, E, UK]
U11	△	5220434500	IC, M5F7807L
U12	△	13447943	IC, NJM78M05FA
U13	△	13447956	IC, NJM7812FA
U14	△	13447973	IC, NJM7912FA
U15	△	13447943	IC, NJM78M05FA
U16	△	13447961	IC, NJM79M05FA
U17		13442902	IC, M51957BL
Z11		5224592821	DIODE, ZENER RD 33ESB1
Z12		5224585621	DIODE, ZENER RD6.2ESB1
Z13		5224584921	DIODE, ZENER RD5.1ESB2

A

B

C

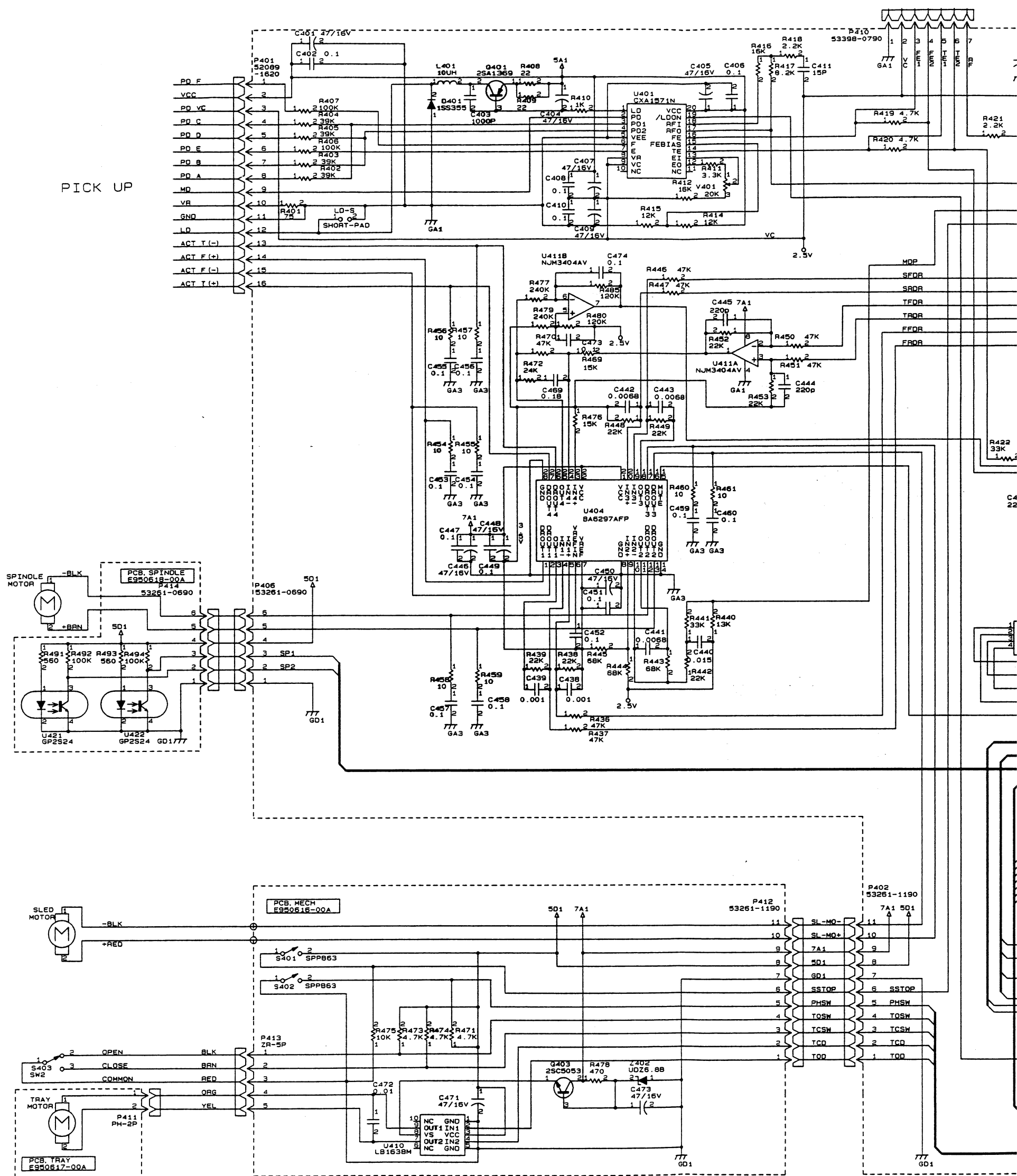
D

E

F

G

H



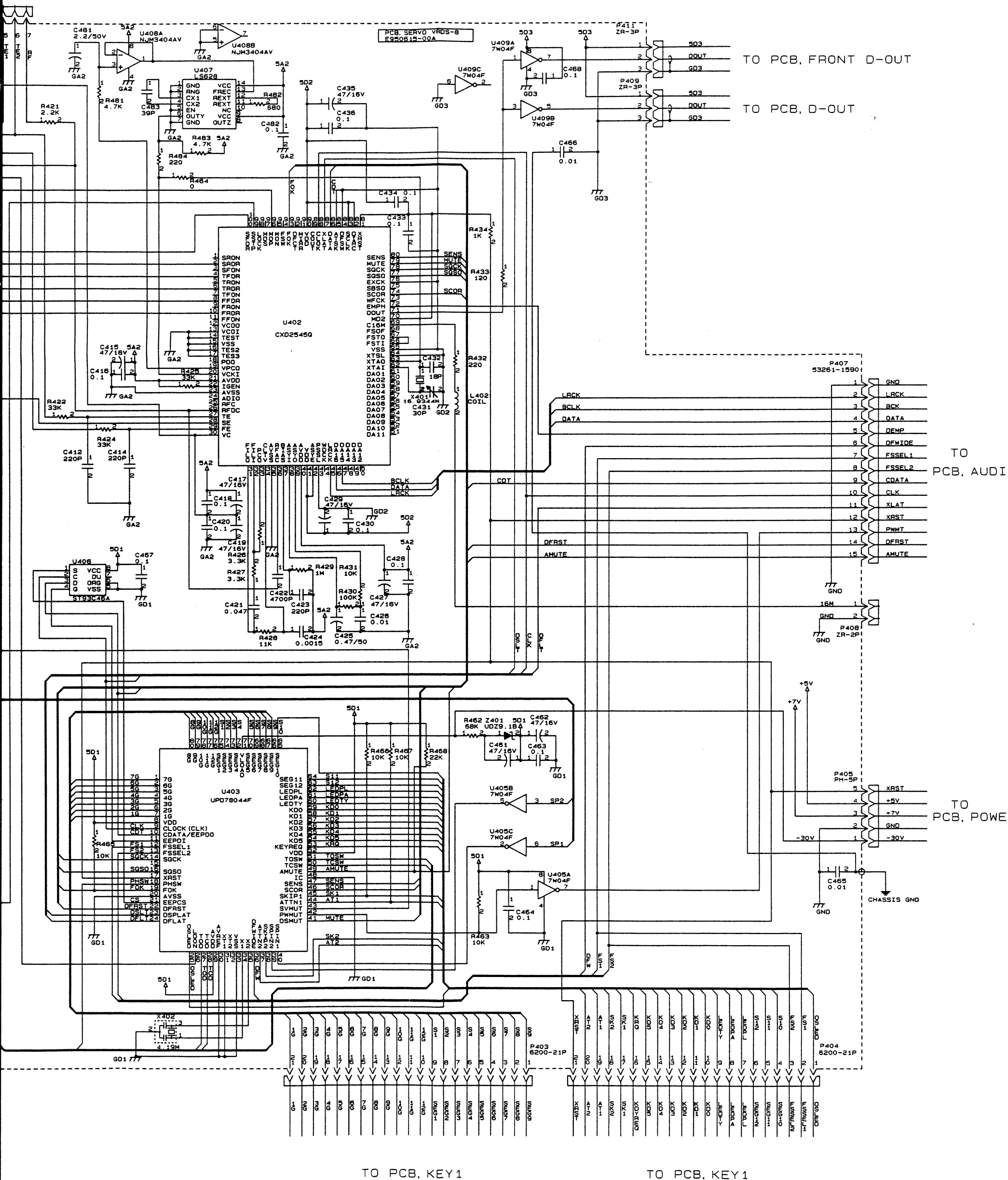
INSTRUCTIONS FOR SERVICE PERSONNEL
BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

NOTES:

1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3. Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

注意

1. 抵抗の単位はΩ(k=kΩ, M=MΩ)です。
2. コンデンサの単位はμF(p=pF)です。
3. △マークのある部品は安全規格重要部品です。交換するときは必ずテック指定の部品を使用してください。



TO PCB, KEY1

TO PCB, KEY1

VRDS-8

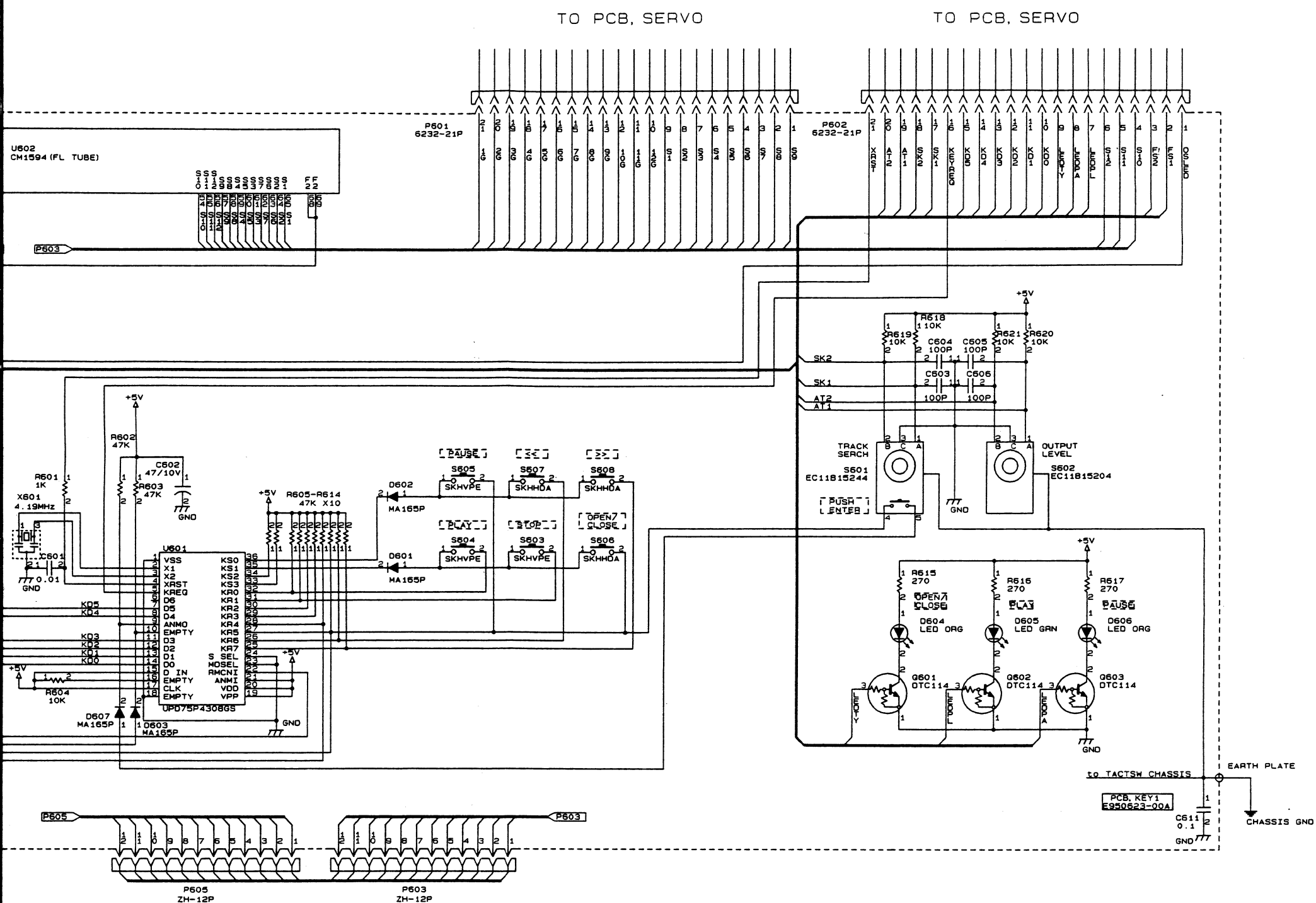
Compact Disc Player

1 st Issue; August 1998



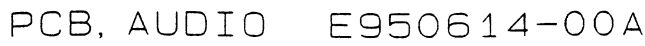
NOTES:

1. Resistor values are in ohms (K=kilo-ohms, M=megohms).
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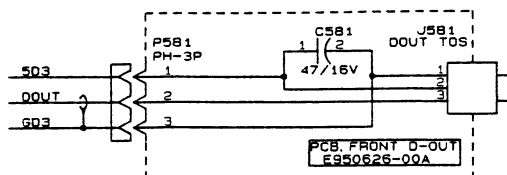




1. 抵抗の単位は Ω ($k = k\Omega$, $M = M\Omega$)です。
2. コンデンサの単位は μF ($p = pF$)です。
3. Δ マークのある部品は安全規格重要部品です。交換するときは必ずティアック指定の部品を使用してください。

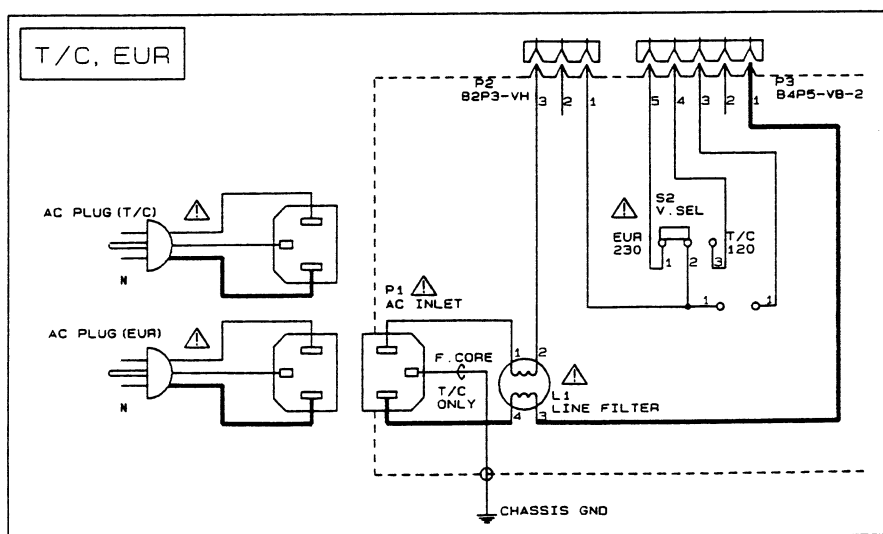
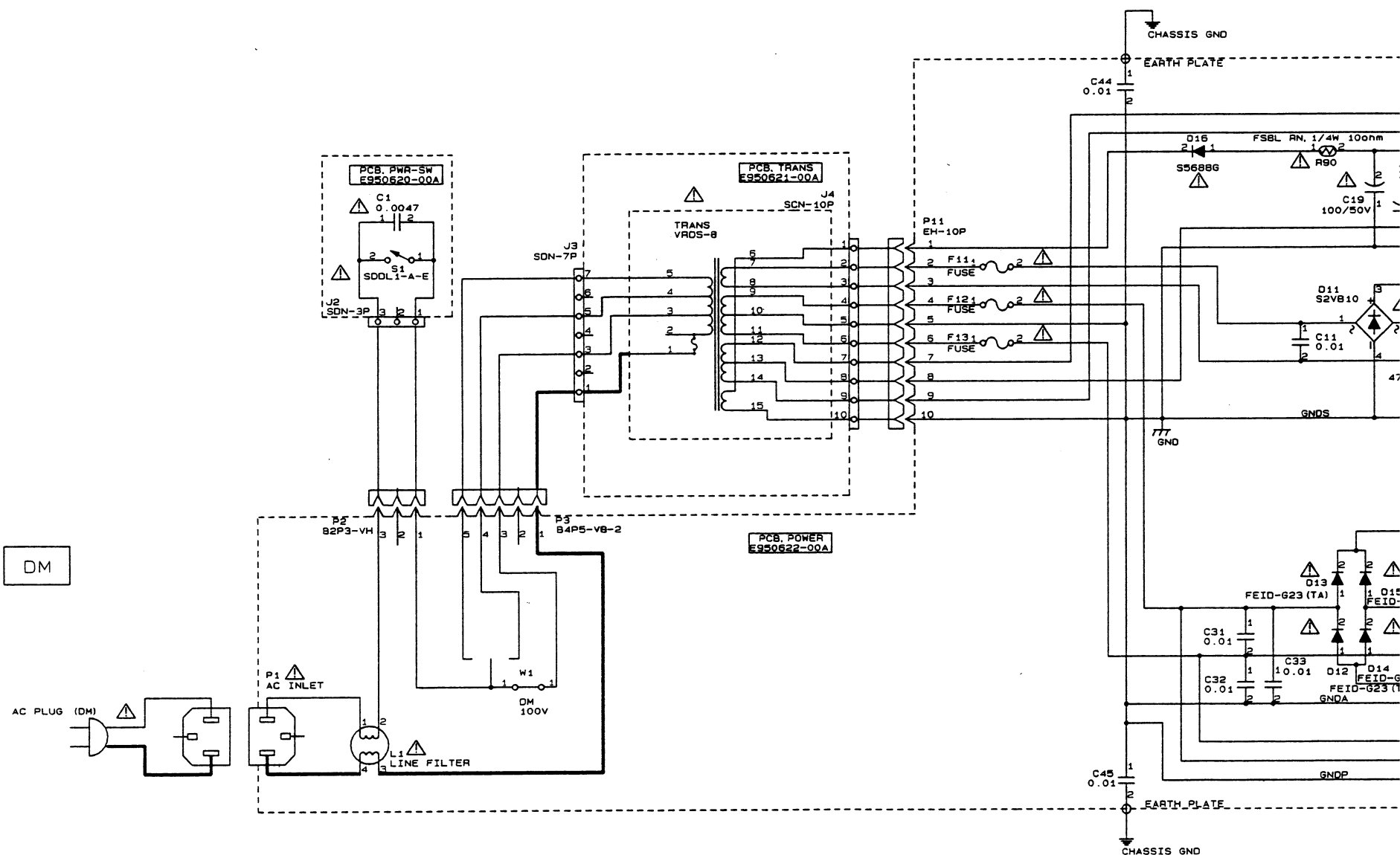


TO PCB, SERVO



OPTICAL

TO PCB, SERVO

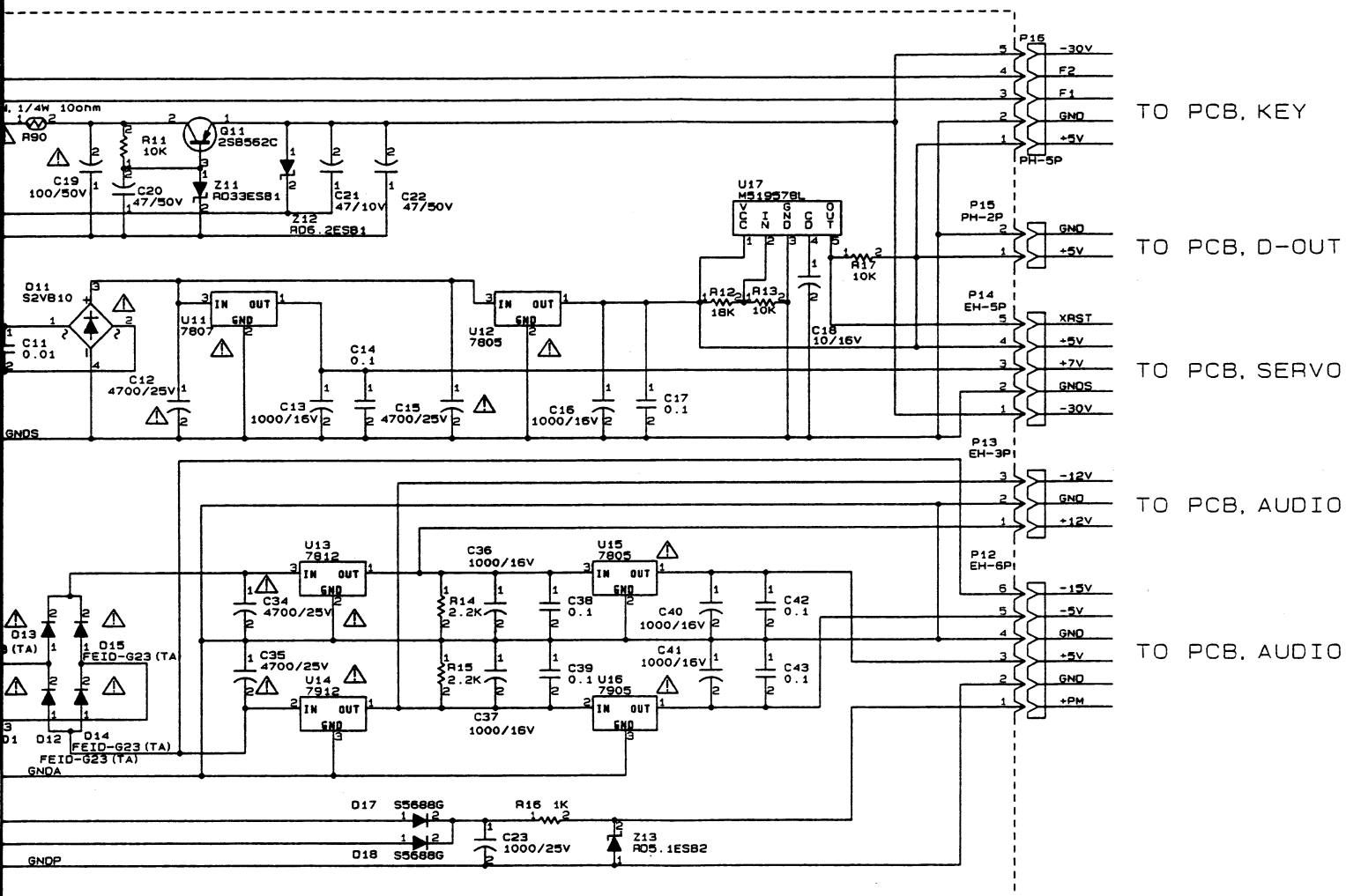
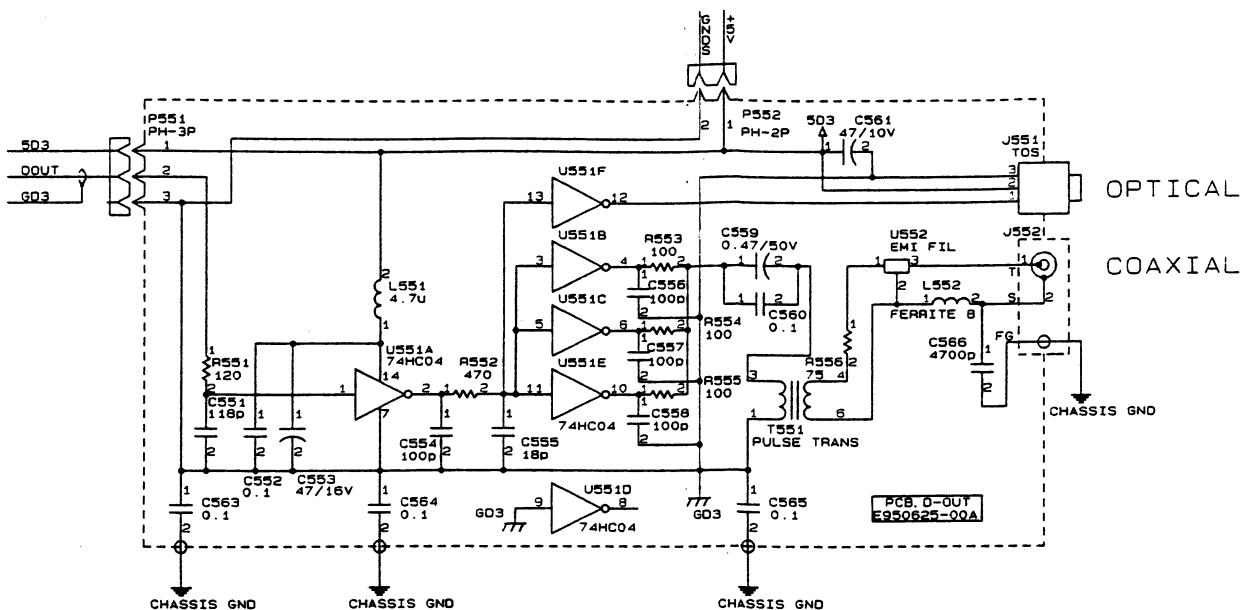


INSTRUCTIONS FOR SERVICE PERSONNEL
BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

注意
1. 抵抗の単位はΩ (k=kΩ, M=MΩ)です。
2. コンデンサの単位はμF (p=pF)です。
3. △マークのある部品は安全規格重要部品です。交換するときは必ずテック指定の部品を使用してください。

NOTES:
1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3. △Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

TO PCB. POWER



6 INCLUDED ACCESSORIES

付属品

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	*D00343800A	OWNER'S MANUAL, DM [J]	
	*D00343900A	OWNER'S MANUAL, MULTI [US, C, E, UK]	
	*E00380000A	REMOTE CONTROL UNIT, RC-668	
	*5347006900	BATTERY (UM-3), JAPANESE [J]	
	*5347007000	BATTERY (UM-3), ENGLISH [US, C, E, UK]	
	△ E00371100B	POWER CORD, YC13 [J]	
	△ 5350017700	3-WIRE AC CORD SET [US, C]	
	△ 15922303	3-WIRE CORD SET [E]	
	△ 5350018500	3-WIRE CORD SET (13A FUSE) [UK]	