

TASCAM
TEAC Professional Division

SERVICE MANUAL

CD-RW2000

Professional
CD Rewritable Recorder

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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.

Effective : June, 2000

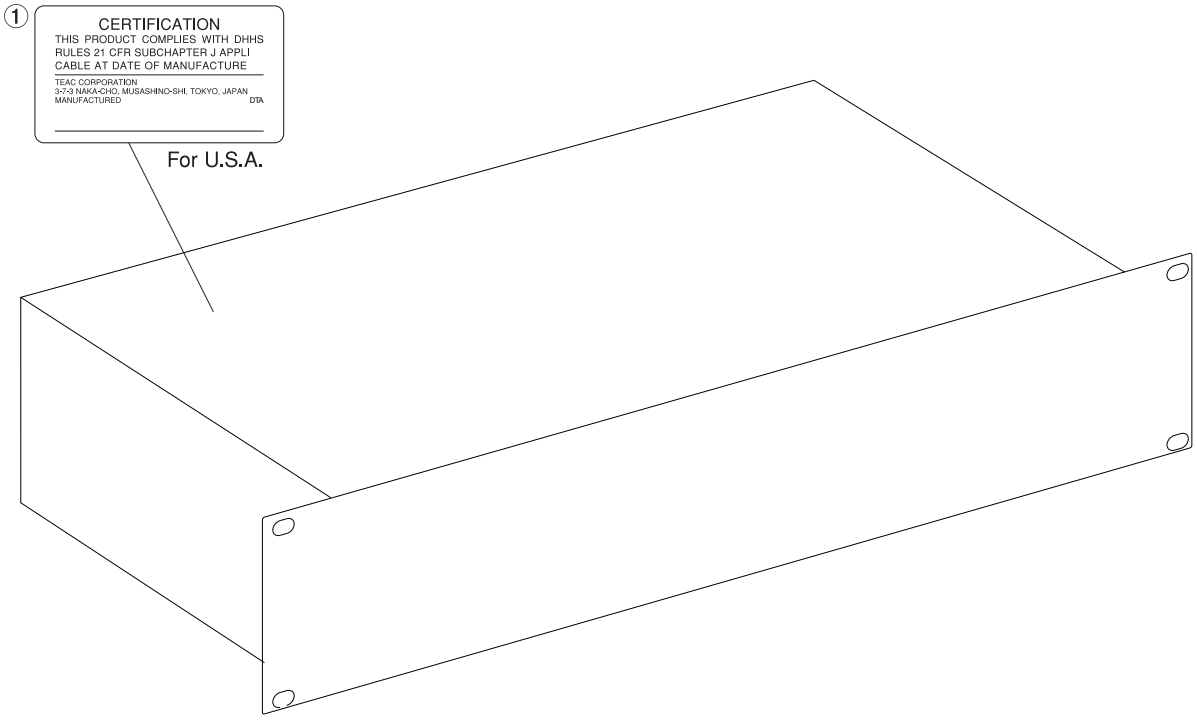
S-0026A

1. 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.



Optical pickup:	Type	: KRS-202A or KRS-220B
	Manufacturer	: SONY Corporation
	Laser output	: Less than 0.1 mW (Play) and 32 mW (Record) on the objective lens
	Wavelength	: 777–787 nm

2. SPECIFICATIONS

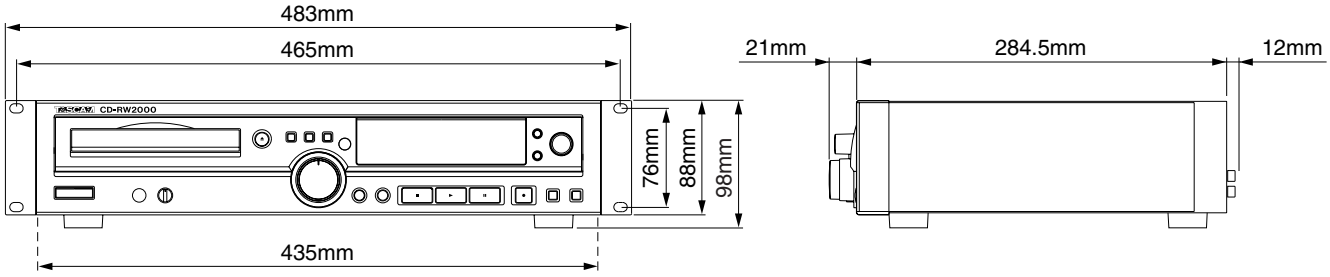
仕様

Recording media type:	CD-R, CD-R-DA CD-RW, CD-RW-DA
Recording resolution:	16-bit linear
Recording sampling frequency:	44.1 kHz
Frequency convertor input:	32 kHz - 48 kHz
Frequency response:	20 Hz - 20 kHz (playback ±0.5 dB, recording ±1.0 dB)
S/N ratio:	98 dB (playback), 92 dB (recording)
Dynamic range:	94 dB (playback), 92 dB (recording)
Total harmonic distortion:	0.004 % (playback), 0.005 % (recording)
Channel separation:	90 dB (playback : 1 kHz), 80 dB (recording : 1 kHz)
Wow & flutter:	Unmeasurable (< 0.001 %)
Analog inputs:	Balanced XLR-type
Nominal input level:	+4 dBu (FS-16dB)
Maximum input level:	+20 dBu
Input impedance:	10 kΩ (balanced)
Analog inputs:	Unbalanced RCA
Nominal input level:	-10 dBV (FS-16dB)
Maximum input level:	+6 dBV
Input impedance:	33 kΩ (unbalanced)
Analog outputs:	Balanced XLR-type
Nominal output level:	+4 dBu (FS-16dB)
Maximum output level:	+20 dBV
Ouput impedance:	75 Ω (balanced)
Analog outputs:	Unbalanced RCA
Nominal output level:	-10 dBV (FS-16dB)
Maximum output level:	+6 dBV
Ouput impedance:	800 Ω (unbalanced)
Headphone output:	6 mm (1/4") stereo
Ouput level:	35 mW + 35 mW (into 32 Ω)
Digital input:	
AES/EBU:	XLR-type, AES3-1992
COAXIAL:	RCA pin, IEC60958 TYPE II
OPTICAL:	TOSLINK, IEC60958 TYPE II
Digital output:	
AES/EBU:	XLR-type, AES3-1992
COAXIAL:	RCA pin, IEC60958 TYPE II
OPTICAL:	TOSLINK, IEC60958 TYPE II

記録ディスク：	CD-R, CD-R-DA CD-RW, CD-RW-DA
量子化ビット数：	16 bit リニア
サンプリング周波数：	44.1 kHz
再生周波数特性：	20 Hz ～20 kHz ±0.5 dB（再生時）、±1.0 dB（記録時）
S/N 比：	98 dB（再生時）、92 dB（記録時）
ダイナミックレンジ：	94 dB（再生時）、92 dB（記録時）
歪率：	0.004 %（再生時）、0.005 %（記録時）
チャンネルセパレーション：	90 dB（再生時、1 kHz） 80 dB（記録時、1 kHz）
ワウフラッター：	測定限界以下（0.001% 以下）
アナログ入力	
バランス入力：	XLR-3-31 相当
基準入力レベル：	+4 dBu（FS − 16 dB)
最大入力レベル：	+20 dBu
入力インピーダンス：	10 kΩ（平衡）
アンバランス入力：	RCA ピン
基準入力レベル：	−10 dBV（FS − 16 dB)
最大入力レベル：	+6 dBV
入力インピーダンス：	33 kΩ（不平衡）
アナログ出力	
バランス出力：	XLR-3-32 相当
基準出力レベル：	+4 dBu（FS − 16 dB)
最大出力レベル：	+20 dBu
出力インピーダンス：	75 Ω（平衡）
アンバランス出力：	RCA ピン
基準出力レベル：	−10 dBV（FS − 16 dB)
最大出力レベル：	+6 dBV
出力インピーダンス：	800 Ω（不平衡）
ヘッドホン出力：	6φステレオ 35 mW+35 mW（32 Ω 負荷）
デジタル入力	
AES/EBU：	XLR-3-31 相当、AES3-1992
COAXIAL：	RCA ピン、IEC60958 TYPE II
OPTICAL：	TOSLINK 、IEC60958 TYPE II
デジタル出力	
AES/EBU：	XLR-3-32 相当、AES3-1992
COAXIAL：	RCA ピン、IEC60958 TYPE II
OPTICAL：	TOSLINK、IEC60958 TYPE II

Voltage requirements:	USA/Canada 120 VAC, 60 Hz U.K./Europe 230 VAC, 50 Hz Australia 240 VAC, 50 Hz
Power consumption:	30 W
Applicable electromagnetic environment:	E4
Peak inrush current:	1.8 A
Dimensions w x h x d:	483 x 98 x 317.5 (mm) 19 x 3.9 x 12.5 (in)
Weight:	7 kg (15.4 lbs)
Operating temperature:	5°C to 35°C (41°F to 95°F)
Supplied accessories:	RC-RW2000 remote control unit 2 m (6 ft.) AC cord Rack mount screw kit

電源：	100 VAC, 50-60 Hz
消費電力：	30 W
重量：	7.0 kg
外形寸法（W ×H ×D）：	483 ×98 ×317.5 mm
付属品：	RC-RW2000 リモコン 電源コード（2m） ラックマウントビスキット



3. TEST MODE
テストモード

3-1. How to enter test mode

1. Turn power on while pressing and holding the MENU and CALL keys simultaneously. The display will show the model name and the system controller's version number, and the test mode is initiated.
2. Press the STOP key to exit from the test mode and return to the normal mode.

3-2. Operations in test mode

3-2-1. Front key check

1. Press the PLAY key to enter the front key check mode.
2. The display shows the name of each key to be checked; press the corresponding key.
   When the check result of the key is OK, the display shows another key name. When the result is No Good, the display continues to show the same key name.
3. The display finally shows "dial". Check the MULTI DIAL so that the displayed figure increases when the dial is rotated clockwise and decreases when it is rotated counterclockwise.
4. Press the PLAY key to exit from the front key check mode and return to the Version number display mode.

3-2-2. Display check

1. Press the DISPLAY key to enter the display check mode.
2. Press DISPLAY key a few times and ensure that each press lights the display blocks one after another.
3. When all the indicators are lit, press the DISPLAY key to exit from the display check mode and return to the Version number display mode.

3-2-3. EEPROM default setting

The following operation writes the default values in the EEPROM and checks the write data automatically.

1. Press the ERASE key.
   When the default data is written correctly, the display shows "EEPROM OK !!". If not, it shows "EEPROM NG !!".
2. Press the ERASE key again to return to the Version number display mode.

3-2-4. Converter MPU Version No. display

1. When the PAUSE key is pressed, the display shows the converter MPU version number.
2. Press the PAUSE key again to return the system controller's version number display mode.

3-2-5. Total recording time display

1. When the REC key is pressed, the display shows the time in which the pickup outputs the recording power (in the unit of hour).
2. Press the REC key again to return to the Version number display mode.

3-1. テストモードに入る方法

1. MENUキーとCALLキー押しながらPOWER ONすると、表示部に 機種名とシスコンのVersion No. が表示されテストモードに入る。
2. STOPキーを押すと、テストモードは終了し通常モードに戻る。

3-2. テストモードにおける動作

3-2-1. フロントキーチェック

1. PLAYキーを押し、フロントキーチェックモードに入る。
2. 表示部にチェックするキーの名称が表示されるので、そのキーを押す。
   チェックOKなら次のキーの名称が表示され、NGなら表示は変化しない。
3. 最後に、"dial"の表示が出るので、MULTI DIALを回して確認する。表示の数字が、右回しで増加、左回しで減少すること。
4. PLAYキーを押すと、フロントキーチェックモードを終了し Version No. 表示に戻る。

3-2-2. ディスプレイチェック

1. DISPLAYキーを押し、ディスプレイチェックモードに入る。
2. DISPLAYキーを押すたびに、表示部がブロックごとに点灯して行くことを確認する。
3. 表示部が全点灯した状態からDISPLAYキーを押すと、ディスプレイチェックモードを終了し Version No. 表示に戻る。

3-2-3. EEPROM デフォルト設定

EEPROMにデフォルト値を書き込み、自動的に書き込みチェックを行う。

1. ERASEキーを押す。
   このとき、正しく書き込めていれば、表示部に"EEROM OK !!"と表示され、不良の場合は"EEPROM NG !!"と表示される。
2. 再度 ERASEキーを押すと、Version No. 表示に戻る。

3-2-4. コンバータマイコン Version No. 表示

1. PAUSEキーを押すと、コンバータマイコンのVersion No.を表示する。
2. 再度 PAUSEキーを押すと、シスコンVersion No. 表示に戻る。

3-2-5. 記録積算時間表示

1. RECキーを押すと、ピックアップが記録パワーを出力した時間を表示する。(単位：hour)
2. 再度 RECキーを押すと、Version No. 表示に戻る。

4. AUDIO CHECKS
オーディオ確認

4-1. Playback performance　再生系

Mode: Play
Measurement point: ANALOG OUTPUT (UNBALANCED) [unless otherwise spesified　特に指示のある場合を除く]

ITEM 項　目	TEST DISC/ TRACK No.	PLAYBACK SIGNAL	SPECIFICATIONS 規　格	REMARKS 備　考
1. **Playback level** 再生レベル (BALANCE)	MCD-111 : Tr. No. 2	1 kHz, 0 dB	＋20 dBu ± 2 dB	Output terminal: ANALOG OUTPUT (BALANCED)
2. **Playback level** 再生レベル (UNBALANCE)	MCD-111 : Tr. No. 2	1 kHz, 0 dB	＋6 dBV ± 2 dB	
3. **Playback distortion** 再生歪率	MCD-111 :Tr. No. 2	1 kHz, 0 dB	0.005 % or less	400 Hz HPF in 22 kHz LPF in
4. **Playback frequency responce** 再生周波数特性	MCD-111 : Tr. No. 3～6	20 Hz～20 kHz, 0 dB	0 ± 1 dB	Reference level: 1 kHz
5. **SN ratio** SN比	MCD-111 : Tr. No. 7		94 dB or better	22 kHz LPF in IEC-A
6. **Playback channel separation** 再生チャンネル セパレーション	MCD-111 : Tr. No. 8（L→R）, Tr. No. 10（R→L）	1 kHz, 0 dB	80 dB or better	22 kHz LPF in IEC-A
7. **Emphasis effect** エンファシス効果	MCD-111 : Tr. No. 13	16 kHz, －20 dB	－20 dB ± 1 dB	
8. **Interruption** インタラプション	MCD-131 : Tr. No. 3		No sound skipping. 音飛びが無いこと。	Interruption 700 μm
9. **Black band** ブラックバンド	MCD-131 : Tr. No. 10		No sound skipping. 音飛びが無いこと。	Black band 600 μm
10. **Finger print** フィンガー プリント	MCD-131 : Tr. No. 13		No sound skipping. 音飛びが無いこと。	

4-2. Recording performance　録音系

Mode: REC Monitor
INPUT SELECT: Un Bal [unless otherwise spesified　特に指示のある場合を除く]
Input terminal: ANALOG INPUT (UNBALANCED) [unless otherwise spesified　特に指示のある場合を除く]
Measurement point: ANALOG OUTPUT (UNBALANCED) [unless otherwise spesified　特に指示のある場合を除く]

ITEM 項　目	**INPUT SIGNAL** 入力信号	**SPECIFICATIONS** 規　格	**REMARKS** 備　考
1. **Record level** 録音レベル (BALANCE)	ANALOG INPUT (BALANCED): 1 kHz, +20 dBu	Rotate the INPUT (L, R) controls to positions at which the "OVER" segments of the level meter is just about to light. AT this tine, the output level should be +20 dBu ±2 dB. INPUT (L,R)つまみを回して、レベルメータの“OVER”が点灯する直前になるようにセットする。 このとき、出力は 十20 dBu ± 2 dBであること。	INPUT SELECT: Balance Output terminal: ANALOG OUTPUT (BALANCED)
2. **Record level** 録音レベル (UNBALANCE)	1 kHz, +6 dBV	Rotate the INPUT (L, R) controls to positions at which the "OVER" segments of the level meter is just about to light. AT this tine, the output level should be +6 dBV ±2 dB. INPUT (L,R)つまみを回して、レベルメータの“OVER”が点灯する直前になるようにセットする。 このとき、出力は 十6 dBV ± 2 dBであること。	Do not vary the INPUT control positions after the adjustment. (These are their specified positions.) 調整後、INPUTつまみは動かさないこと。(規定位置)
3. **Total harmonic distortion** 総合歪率	1 kHz, +6 dBV	0.01 % or less	22 kHz LPF in 400 Hz HPF in
4. **Overall frequency responce** 録再周波数特性	20 Hz-20 kHz, +6 dBV	0 ± 1 dB	Reference level: 1 kHz
5. **Overall SN ratio** 録再SN比		88 dB min.	22 kHz LPF in IEC-A
6. **Channel separation** チャンネル セパレーション	Lch: 1 kHz, +6 dBV Rch: No signal	Ratio between the L CH and R CH outputs: 75 dB min. Also check the channel separation of L CH from R CH. Lchの出力とRchの出力の比： 75 dB 以上 Rch→Lchも同様に確認すること。	22 kHz LPF in IEC-A
7. **PHONES output level** PHONES出力 レベル	1 kHz, +6 dBV	Phones output level when the PHONE level control is set to the maximum position: 1.1 V or more. PHONESレベルつまみを最大にしたときのPHONES出力：1.1 V 以上	32Ω load

PARTS LIST SECTION

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 the 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/C]: U.S.A./CANADA [K]: KOREA [E]: EUROPE
  [UK]: U.K. [A]: AUSTRALIA

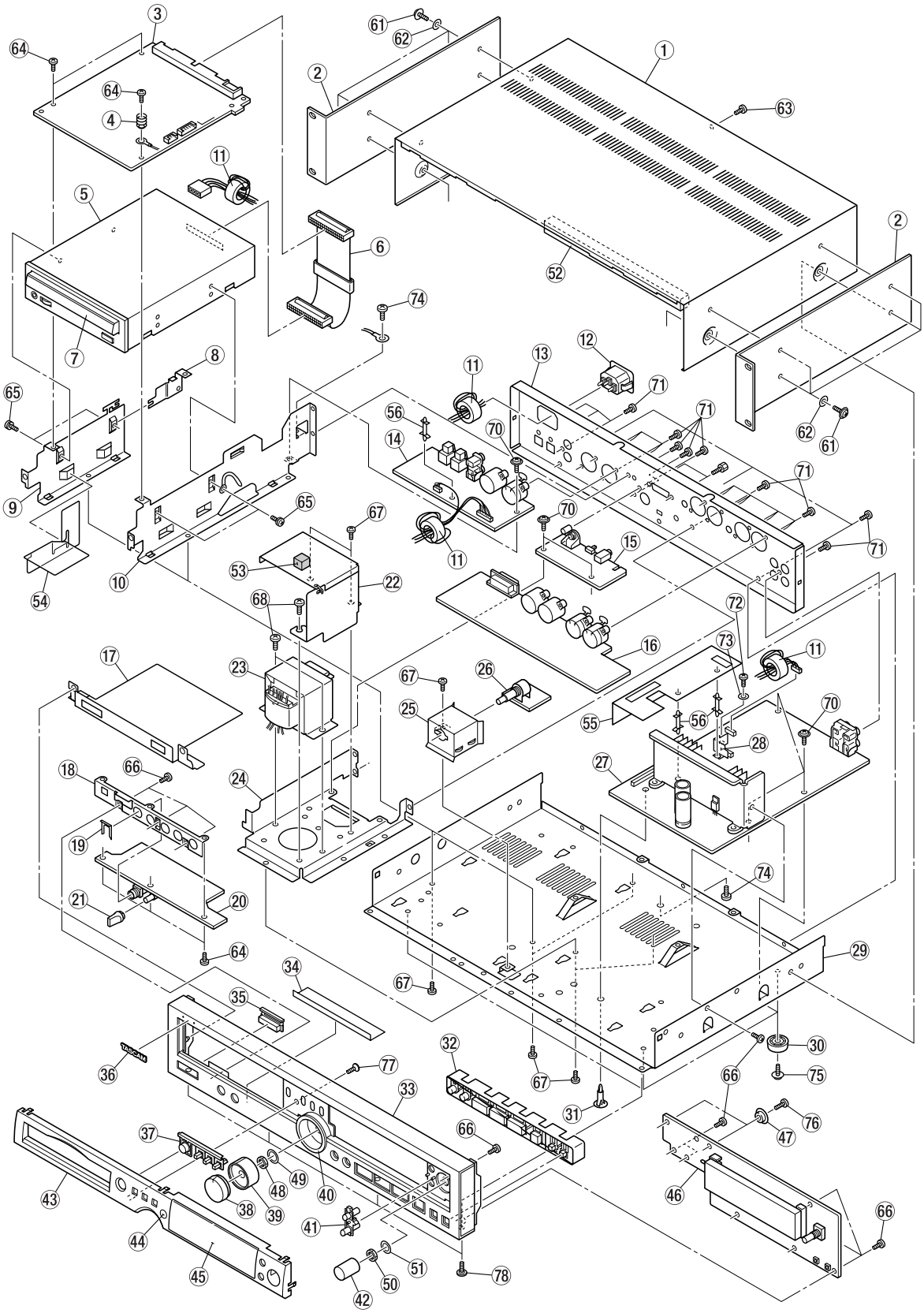
注 意

- プリント基板は部品面が示されています。
- ∗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及び品番のない部品は供給しません。
- 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。
- ⚠は安全重要部品です。
  交換する時は必ずティアック指定の部品を使用してください。
- 仕向先
  [J]: JAPAN [US/C]: U.S.A./CANADA [K]: KOREA [E]: EUROPE
  [UK]: U.K. [A]: AUSTRALIA

5. EXPLODED VIEW 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	*3M0058120A	BONNET	
1- 2	*3M0073210B	RACK MOUNT ANGLE,N64	
1- 3	*3E9524720B	PCB ASSY,CONVERTER	
1- 4	*3M0101500A	SPRING,EARTH BONNET	
1- 5	V00089500A	CD-W54E-A90	
1- 6	*3E0117100A	WIREA,DRIVE-CONVERT 40P	
1- 7	*3M0089930B	PANEL,TRAY 700	
1- 8	*3M0101300A	BRACKET,EARTH CVT PCB	
1- 9	*3M0088400A	BRACKET MECHA SIDE(L)	
1-10	*3M0088500C	BRACKET MECHA SIDE(R)	
1-11	*3E010000	FERRITE CORE,B18T 25X12X15	
1-12	⚠ 5332030400	AC INLET,M1816	
1-13	*3M0111000A	PANEL,REAR	
1-14		PCB ASSY,DIGITAL I/O ·····	GATHER DIGITAL I/O PCB ASSY
1-15		PCB ASSY,CONTROL I/O ·····	GATHER DIGITAL I/O PCB ASSY
1-16		PCB ASSY,BAL I/O ·····	GATHER BAL I/O PCB ASSY
1-17	*3M0100410A	SHEET,SHILD PH PCB	
1-18	*3M0088600C	BRACKET,JACK	
1-19	*3E011630	MOUNT PLATE,JACK	
1-20		PCB ASSY,PSW/HP·····	GATHER AUDIO PCB ASSY
1-21	3M0024830A	KNOB,PHONE VOLUM N66	
1-22	*3M0112300A	CASE,TRANS SHIELD	
1-23	⚠ 3E0117710A	TRANS	
1-24	*3M0110900A	BRACKET,TRANS	
1-25	*3M0096600A	CASE,SHIELD VR	
1-26		PCB ASSY,VR ·····	GATHER FRONT PCB ASSY
1-27		PCB ASSY,AUDIO ·····	GATHER AUDIO PCB ASSY
1-28	*3M0101600B	SHEET,BARRIER CONECT	
1-29	*3M0057910B	CHASSIS,MAIN	
1-30	3M001950	FOOT,21MM	
1-31	*3M0062600A	SUPPORT,PCB SCD-12	
1-32	3M0089430A	BUTTON,UNT OPE N63	
1-33	3M0088730B	PANEL,FRONT N64	
1-34	*3M0100500B	SHEET,EARTH	
1-35	3M0111200A	BUTTON,POWER N66	
1-36	5720254101	NAME PLATE,TASCAM(S)	
1-37	3M0089330A	BUTTON,UNT O/C N63	
1-38	3M0090130A	KNOB,REC(R) N66	
1-39	3M0089730A	KNOB,REC(L) N66	
1-40	3M0089130A	RING,REC KNOB N66	
1-41	3M0089230A	BUTTON,MENU N66	
1-42	3M0089830A	KNOB,D15 JOG N66	
1-43	*3M0088830A	ESCUTCHEON F,N66	
1-44	*3M0089010B	LENS,LED	
1-45	*3M0088910B	WINDOW,FL	
1-46		PCB ASSY,FRONT ·····	GATHER FRONT PCB ASSY
1-47	*3M0097400B	STOPPER,BONNET	
1-48	*3M001340	NUT,VR M9	
1-49	*3M001350	WASHER,PLAIN VR M9.1	
1-50	*3M0096900A	NUT,M7	
1-51	*3M0096800A	WASHER,PLAIN M7	

EXPLODED VIEW-1

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1-52	*3M0112800A	CUSHION,WIRE PROTECT	
1-53	*3M0112500A	CUSHION,SHIELD CASE	
1-54	*3M0110800A	SHEET,BARRIER PSW	
1-55	*3M0099200B	SHEET,BARRIER E.PWR [K,E,UK,A]	
1-56	*3M0099100A	SUPPORT,PCB CBS-15	
1-61	*3B0001812A	SCREW,J,S M3X12 (BLK)	
1-62	3M002020	WASHER,FIBER 3X8X0.3T BLK	
1-63	*3B0003808A	SCREW,VPC M3X8 BLK	
1-64	*3B0005305A	SCREW,BPB M3X5	
1-65	3B0007400A	SCREW,BPAA M3X6	
1-66	*3B0000808A	SCREW,BPP M3X8	
1-67	*3B0005708A	SCREW,BPB M3X8 (BLK)	
1-68	*3B0001908A	SCREW,J,S M4X8 (BLK)	
1-69	Vacant		
1-70	*3B0001306A	SCREW,J,S M3X6	
1-71	*3B0005708A	SCREW,BPB M3X8 (BLK)	
1-72	*3B0000106A	SCREW,BPS M3X6	
1-73	*3M0102400A	PLAIN WASHER,3.5X10X1	
1-74	*3B0005408A	SCREW,BPB M4X8	
1-75	*3B0001308A	SCREW,J,S M3X8	
1-76	*3B0000810A	SCREW,BPP M3X10	
1-77	*3B0007008A	SCREW,FPP M3X8	
1-78	*3B0007300A	SCREW,FPS TITE M3X6	

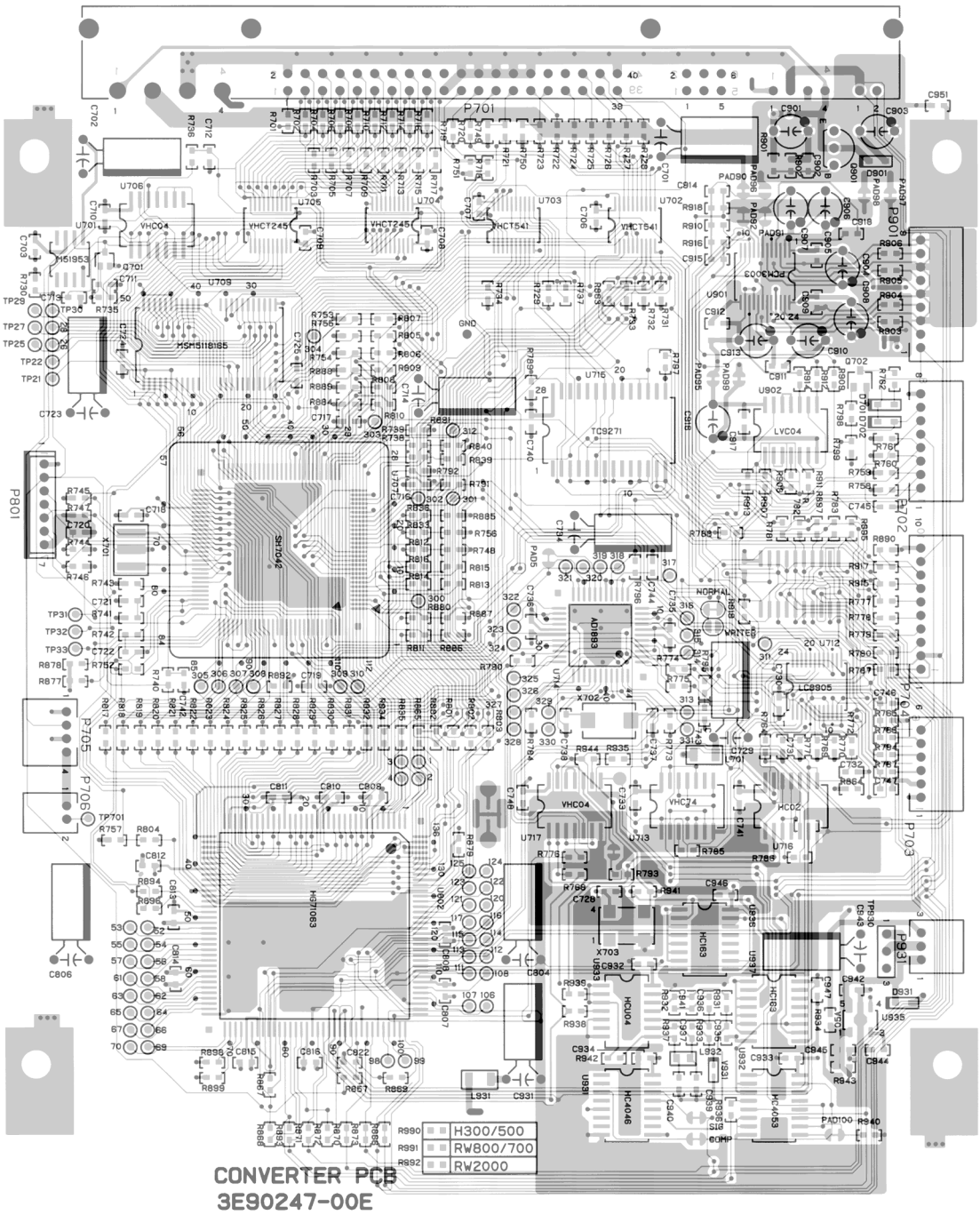
INCLUDED ACCESSORIES

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	*3D0038700A	OWNER'S MANUAL,JAPANESE [J]	
	*3D0038800A	OWNER'S MANUAL,ENGLISH [EXCEPT J]	
	*3E0137100A	REMOTE CONTROL UNIT,RC-RW2000	
	*3M0028300A	RACK MOUNT SCREW KIT	
⚠	*3E014140	POWER CORD [J]	
⚠	*3E014150	POWER CORD [US/C]	
⚠	*3E014160	POWER DORD [E]	
⚠	*3E014170	POWER CORD [UK]	
⚠	*3E014180	POWER CORD [A]	

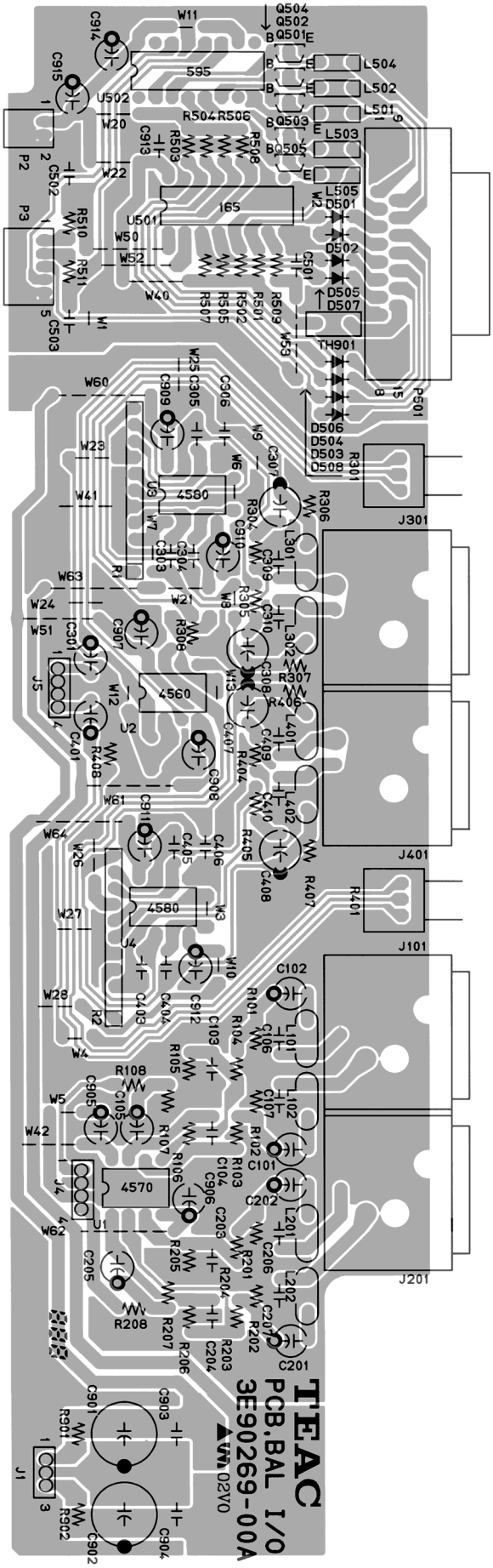
6. PC BOARDS AND PARTS LIST

基板図とパーツリスト

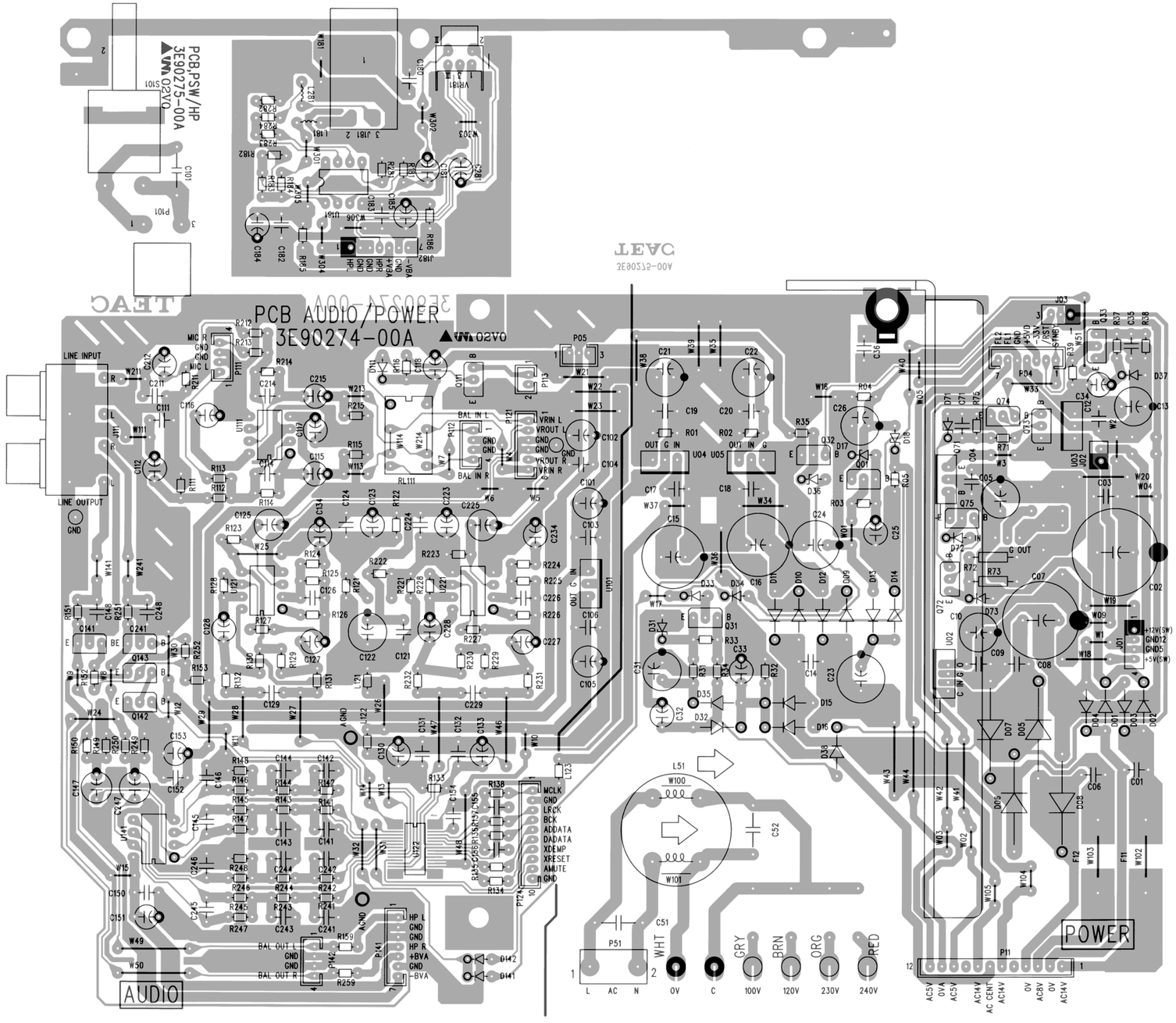
CONVERTER PCB



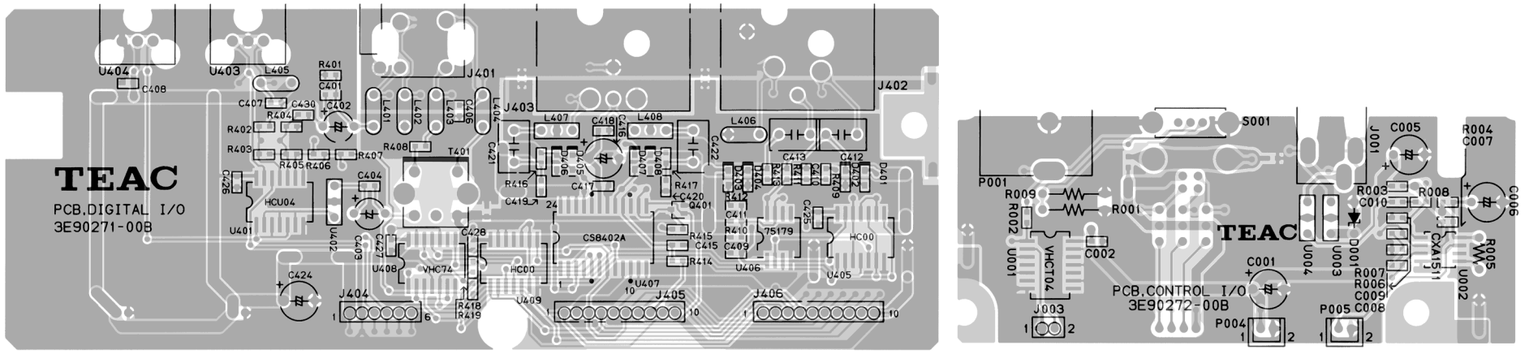
BAL I/O PCB



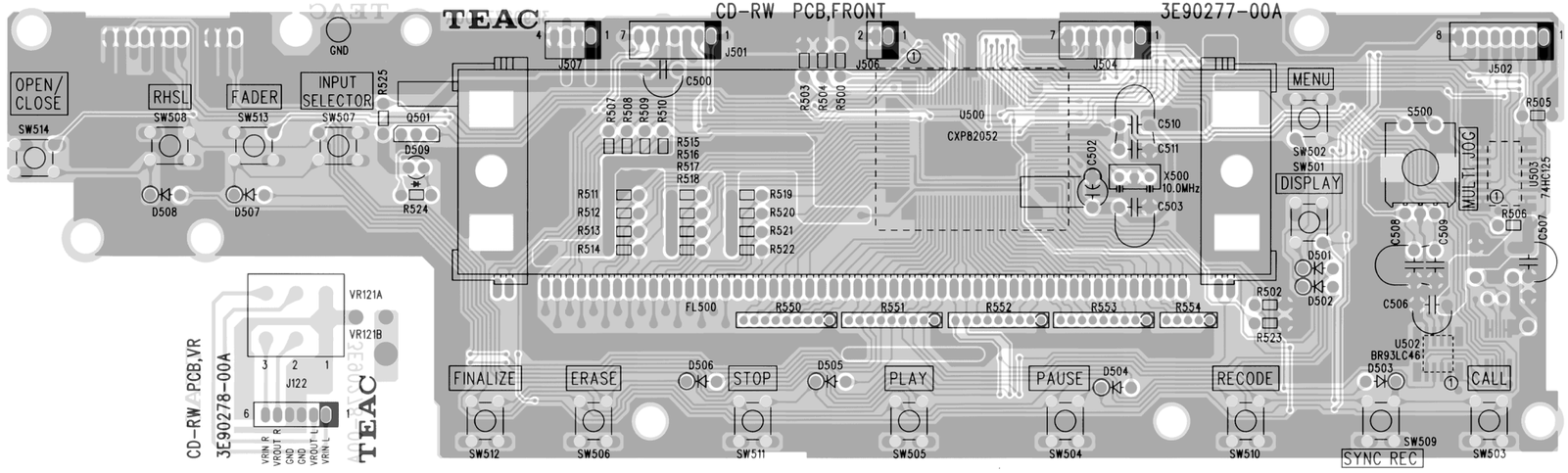
GATHER AUDIO PCB (AUDIO/POWER PCB, PSW/HP PCB)



GATHER DIGITAL I/O PCB (DIGITAL I/O PCB, CONTROL I/O PCB)



GATHER FRONT PCB (FRONT PCB, VR PCB)



CONVERTER PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*3E9524720B	PCB ASSY,CONVERTER
D701,702	3S002984	DIODE,1SS355
D931	3S002984	DIODE,1SS355
L701,931	3E014354	COIL,LQH3N 4.7UH
L932	3E014354	COIL,4.7UHLK2125
P701	3E011730	CONECT,NS-TECH CD-51 CDRW
P702	3E001340	PLUG,CONN. 8P S8B-PH-K
P703	3E001320	PLUG,CONN. S 6B-PH-K-S
P704	3E006020	PLUG,CONN. S10B-PHK (RED)
P801	3E010390	PLUG,CONN. B 7B-PH-K-S
P931	3E001290	PLUG,CONN. S 3B-PH-K-S
Q701	3S002994	TR,DTC124EUA
Q702	3S003004	TR,2SA1037AK
U702,703	S0037164	IC,TC74VHCT541AFT(EL)
U704,705	S0037174	IC,TC74VHCT245AFT(EL)
U706	3S002924	IC,TC74VHC04F(EL)SMT.TA
U707	S00386800A	IC,HD64F7044 CONVERT3
U709	S0036813	IC,MSM5118165D
U712	3S002954	IC,LC8905V
U713	3S002914	IC,TC74VHC74F(EL)SMT.TA
U714	3S002963	IC,AD1893JST
U715	3S002944	IC,TC9271F(ELP)SMT.TA
U716	3S002934	IC,TC74HC02AF(EL)SMT.TA
U717	3S002924	IC,TC74VHC04F(EL)SMT.TA
U802	S00361900A	IC,AUDIO CONVERTE CDRW
U931	3S003414	IC,TC74HC163AF(EL)
U932	3S003394	IC,TC74HC4053AF(EL)
U933	3S001344	IC,74HCU04AF
U935	3S003424	IC,NJM2370U05
U936 U937	3S003434	IC,TC74HC163AF(EL)
X701	3E011994	RES,CSTCC 7.17MG0H6-TC
X702	3E011984	X'TAL,LIM55A 16MHZ
X703	3E011974	X'TAL,11.289MHZ

GATHER BAL I/O PCB ASSY (BAL I/O PCB ASSY)

REF.NO.	PARTS NO.	DESCRIPTION
	*3E9526800A	PCB ASSY,GATHER BAL I/O
		PCB ASSY,BAL I/O
D501-507	3S000241	DIODE,1SS133 T-77
J1	3E0141100A	WIREA,POWER
J4,5	3E0141000A	WIREA,BAL I/O
J101,201	3E010320	JACK,XLR NC3FAH1
J301,401	3E010330	PLUG,XLR NC3MAH
L101,201	3E011820	FB,FBR07HA850SB-00
L102,202	3E011820	FB,FBR07HA850SB-00
L301,401	3E011820	FB,FBR07HA850SB-00
L302,402	3E011820	FB,FBR07HA850SB-00
L501-505	3E013130	FILTER,EMT103BT
P2	3E014250	PLUG,CONN. S 8B-PH-K-S
P3	3E010370	PLUG,CONN. B 5B-PH-K-S
P501	3E010920	CONECTOR,D-SUB 15P
Q501-505	3S000291	TR,DTC124ES TP
R1,2	3R0053000A	RES ARRAY,EXBF11L668FP
R301,401	3R007430	VAR RES,RK09K1110-20KB
U1	3S000280	IC,UPC4570C
U2	3S000840	IC,BA4560
U3,4	3S001700	IC,NJM4580D
U501	3S003340	IC,TC74HC165AP
U502	3S003350	IC,TC74HC595AP

GATHER AUDIO PCB ASSY
(AUDIO/POWER PCB ASSY, PSW/HP PCB)

REF.NO.		PARTS NO.	DESCRIPTION
		*3E9527300A	PCB ASSY,GATHER AUDIO
			PCB ASSY,AUDIO/POWER
		*3M0097300B	HEAT SINK
		*3M0112400A	HEAT SINK ADD
		*3E0043200A	TERMINAL,EARTH PLATE B
		*3M0101600B	SHEET,BARRIER CONNECT
		*3B0005308A	SCREW,BPB M3X8
C01	⚠	3C011640	CC,YF 50V 0.1UF Z
C02	⚠	3C012790	CE,35V 4700UF GS
C04	⚠	3C011640	CC,YF 50V 0.1UF Z
C06	⚠	3C011640	CC,YF 50V 0.1UF Z
C10	⚠	3C009700	CE,35V 100UF GS
C13	⚠	3C009700	CE,35V 100UF GS
C14	⚠	3C011640	CC,YF 50V 0.1UF Z
C15,16	⚠	3C009820	CE,25V 470PF GS
C23,24	⚠	3C009750	CE,50V 220UF GS
C31	⚠	3C009730	CE,25V 220UF GS
C32	⚠	3C000270	CE,50V 4.7UF M
C33	⚠	3C009640	CE,50V 22UF GS
C51,52	⚠	3E004300	S.KILLER,CS12-F2GA472MYAS
D01-04	⚠	3S000031	DIODE,1N4003-TR
D05-08	⚠	3S003540	DIODE,1N5404
D09-16	⚠	3S000031	DIODE,1N4003-TR
D17		3S001750	ZDI,MTZJ33B T-77
D18		3S000681	ZDI,MTZJ5.1B T-77
D31		3S002060	ZDI,MTZJ6.8B T-77
D32,35	⚠	3S000031	DIODE,1N4003-TR
D33,34		3S000241	DIODE,1SS133 T-77
D36		3S000681	ZDI,MTZJ5.1B T-77
D37		3S000241	DIODE,1SS133 T-77
D38		3S000031	DIODE,1N4003-TR
D71		3S003201	ZDI,MTZJ12B T-77
D72,73		3S000241	DIODE,1SS133 T-77
D111		3S000241	DIODE,1SS133 T-77
D141,142		3S000241	DIODE,1SS133 T-77
J01		3E0118600A	WIREA,POWER-DRIVE 4P
J02		3E0118700A	WIREA,POWER-CONVERT 4P
J03		3E0141200A	WIREA,WORD POWER
J111		3E010590	JACK,RJ-1073B-09-0320A
L51	⚠	3E004290	COIL,1MH/1.5A FKOB160MH16
L121		3E011800	COIL,1.0 UH K
L122		3E011810	COIL,47UH K
L123		3E011820	FB,FBR07HA850SB-00
P04		3E000710	PLUG,CONN. 7P B7B-PH-K
P05		3E000670	PLUG,CONN. 3P B3B-PH-K
P11		3E001240	PLUG,CONN. 12P B12B-EH-A

REF.NO.		PARTS NO.	DESCRIPTION
P51		3E002170	PIN,TERMINAL LAPPING 2P
P112		3E000680	PLUG,CONN. 4P B4B-PH-K
P113		3E014250	PLUG,CONN. S 8B-PH-K-S
P121		3E010380	PLUG,CONN. B 6B-PH-K-S
P124		3E010420	PLUG,CONN. B10B-PH-K-S
P141		3E010390	PLUG,CONN. B 7B-PH-K-S
P142		3E000680	PLUG,CONN. 4P B4B-PH-K
Q01,31	⚠	3S002300	TR,KSA733C-GTA
Q32		3S002450	TR,DTC114ESTP
Q33		3S002310	TR,KSC945C-GTA
Q71	⚠	3S000400	TR,2SB1015Y
Q72		3S002310	TR,KSC945C-GTA
Q73		3S000301	TR,DTA124ES TP
Q74		3S000291	TR,DTC124ES TP
Q75		3S002300	TR,KSA733C-GTA
Q111		3S000291	TR,DTC124ES TP
Q141,241		3S000731	TR,2SD2144S TP
Q142		3S000291	TR,DTC124ES TP
Q143		3S000301	TR,DTA124ES TP
R72,73	⚠	3R007100	RD,1/2W 470 OHM J
U02	⚠	3S003040	IC,BA05ST
U03	⚠	3S000650	IC,NJM7805FA
U04	⚠	3S002170	IC,NJM7812FA
U03,04		3M0016000A	HEAT SINK
U05	⚠	3S003030	IC,NJM7912FA
U101		3S000650	IC,NJM7805FA
U111		3S001700	IC,NJM4580D
U121,221		3S003010	IC,NJM2100D
U122		S0035883	IC,CS4223-KS
U141		3S001700	IC,NJM4580D
			PCB ASSY,PSW/HP
C101	⚠	3E004300	S.KILLER,CS12-F2GA472MYAS
J181		3E002160	JACK,JY-6313-01-030
J182		3E0116900A	WIREA,AUDIO HP 7P
L181,281		3E011800	COIL,1.0 UH K
P101		3E013990	CONNECTOR,B 3PS-VH
S101	⚠	3E013970	SW,SDKLA1-BP1
U181		3S000850	IC,NJM4560D
VR181		3R005560	VAR RES,RK09K12A-20KA

GATHER DIGITAL I/O PCB ASSY (DIGITAL I/O PCB ASSY, CONTROL I/O PCB ASSY)

REF.NO.	PARTS NO.	DESCRIPTION
	*3E9527000A	PCB ASSY,GATHER DIGITAL I/O
		PCB ASSY,DIGITAL I/O
D401-408	3S002984	DIODE,1SS355
J401	3E011850	JACK,RJ-1060A-31-0541A
J402	3E010320	JACK,XLR NC3FAH1
J403	3E010330	PLUG,XLR NC3MAH
J404	3E0140800A	WIREA,D I/O
J405	3E0141300A	WIREA,AUDIO-CON 10P
J406	3E0141310A	WIREA,AUDIO-CON
L401-L404	3E011820	FB,FBR07HA850SB-00
L405	3E011810	COIL,47UH K
L406	3E011820	COIL,FBR07HA850SB-00
L407,408	3E013950	FILTER,EMT102BT
Q401	3S002994	TR,DTC124EUA
T401	3E0132300A	PULS TRANS,S-701-001
U401	3S001344	IC,74HCU04AF
U402	3E011830	FILTER,EMT 47BT
U403	3S001680	IC,GP1F32R
U404	3S002290	IC,GP1F32T
U405	3S001624	IC,74HC00 SOP
U406	3S003364	IC,SN75179BPS
U407	3S003374	IC,CS8402A
U408	3S002914	IC,TC74VHC74F(EL)SMT.TA
		PCB ASSY,CONTROL I/O
D001	3S003451	ZDI,MTZJ2.7B T-77
J001	3E002130	JACK,MINI JY-3550A-010
J003	3E0140600A	WIREA,W/SYNC
P001	5334079700	PLUG,CONN. BNC 1P
P004	3E003810	PLUG,CONN. B2B-PH (RED)
P005	3E014250	PLUG,CONN. S 8B-PH-K-S
U001	3S003464	IC,TC74VHCT04A(EL)
U002	3S003384	IC,CXA1511M
U003	3E013130	FILTER,EMT103BT
U004	3E011830	FILTER,EMT 47BT
S001	3E013980	SW,SSSS912N-4C2-1

GATHER FRONT PCB ASSY (FRONT PCB ASSY, VR PCB ASSY)

REF.NO.	PARTS NO.	DESCRIPTION
	*3E9527600A	PCB ASSY,GATHER FRONT
		PCB ASSY,FRONT
	*3M0090000B	HOLDER,FL
D501-508	3S000241	DIODE,1SS133 T-77
FL500	3E0117500A	DISPLAY,HNA-16MM23 RW(L)
J501	3E0118800A	WIREA,POWER-FRONT 7P
J502	3E0119000B	WIREA,FRONT-CONVERT 8P
J504	3E0140900A	WIREA,FRONT
J506	3E0140500A	WIREA,RMT/CONT
Q501	3S002450	TR,DTC114ESTP
SW501-514	3E002070	SW,TACT SKQSAB HMR-187
S500	3E007320	SW,ENCODER EC11B15244
U500	3S0035000A	IC,CXP82040-ROQFR
U502	3S003254	IC,BR93LC46RF-WE2 SMT TAP
U503	3S003074	IC,TC74HC125AF(EL)SMT.TA
X500	3E011740	RESONATOR,CST 10.00MTW
		PCB ASSY,VR
J122	3E0119200A	WIREA,AUDIO VR 6P
VR121	3R005550	VAR RES,RK1612220-20KA