

TASCAM
TEAC Professional Division

SERVICE MANUAL

CD-RW2000

Professional
CD Rewritable Recorder

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INSTRUCTIONS FOR SERVICE PERSONNEL

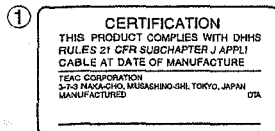
BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

1. SAFETY INFORMATION

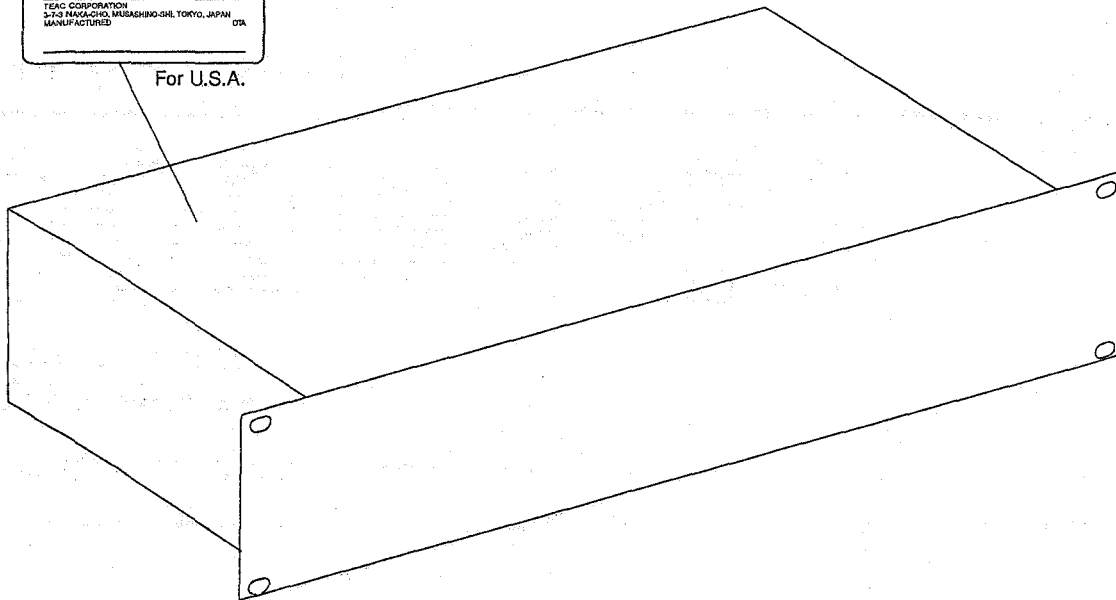
This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as a class 1 laser product. There is no hazardous invisible laser radiation during operation because 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.



For U.S.A.



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
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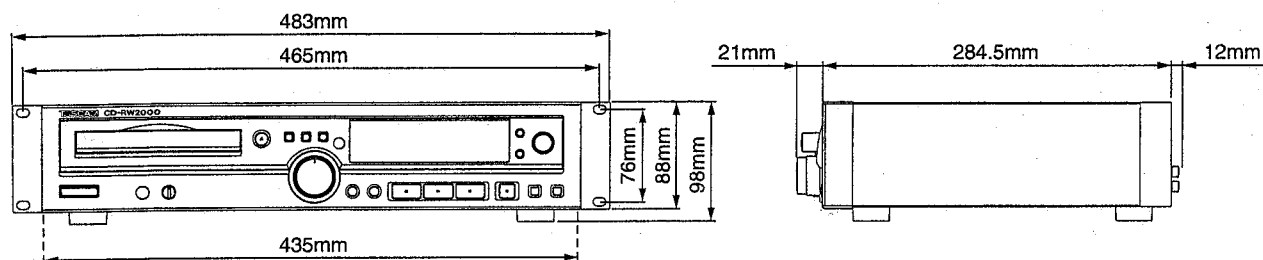
2. SPECIFICATIONS

仕様

Recording media type:	CD-R, CD-R-DA CD-RW, CD-RW-DA	記録ディスク:	CD-R, CD-R-DA CD-RW, CD-RW-DA
Recording resolution:	16-bit linear	量子化ビット数:	16 bit リニア
Recording sampling frequency:	44.1 kHz	サンプリング周波数:	44.1 kHz
Frequency convertor input:	32 kHz - 48 kHz	再生周波数特性:	20 Hz ~ 20 kHz ±0.5 dB (再生時)、±1.0 dB (記録時)
Frequency response:	20 Hz - 20 kHz (playback ±0.5 dB, recording ±1.0 dB)	S/N 比:	98 dB (再生時)、92 dB (記録時)
S/N ratio:	98 dB (playback), 92 dB (record- ing)	ダイナミックレンジ:	94 dB (再生時)、92 dB (記録時)
Dynamic range:	94 dB (playback), 92 dB (record- ing)	歪率:	0.004 % (再生時)、0.005 % (記録 時)
Total harmonic distortion:	0.004 % (playback), 0.005 % (recording)	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)
Channel separation:	90 dB (playback : 1 kHz), 80 dB (recording : 1 kHz)	ワウフラッター:	測定限界以下 (0.001% 以下)
Wow & flutter:	Unmeasurable (< 0.001 %)	アナログ入力	
Analog inputs:	Balanced XLR-type	バランス入力:	XLR-3-31 相当
Nominal input level:	+4 dBu (FS-16dB)	基準入力レベル:	+4 dBu (FS - 16 dB)
Maximum input level:	+20 dBu	最大入力レベル:	+20 dBu
Input impedance:	10 k Ω (balanced)	入力インピーダンス:	10 k Ω (平衡)
Analog inputs:	Unbalanced RCA	アンバランス入力:	RCA ピン
Nominal input level:	-10 dBV (FS-16dB)	基準入力レベル:	-10 dBV (FS - 16 dB)
Maximum input level:	+6 dBV	最大入力レベル:	+6 dBV
Input impedance:	33 k Ω (unbalanced)	入力インピーダンス:	33 k Ω (不平衡)
Analog outputs:	Balanced XLR-type	アナログ出力	
Nominal output level:	+4 dBu (FS-16dB)	バランス出力:	XLR-3-32 相当
Maximum output level:	+20 dBV	基準出力レベル:	+4 dBu (FS - 16 dB)
Output impedance:	75 Ω (balanced)	最大出力レベル:	+20 dBu
Analog outputs:	Unbalanced RCA	出力インピーダンス:	75 Ω (平衡)
Nominal output level:	-10 dBV (FS-16dB)	アンバランス出力:	RCA ピン
Maximum output level:	+6 dBV	基準出力レベル:	-10 dBV (FS - 16 dB)
Output impedance:	800 Ω (unbalanced)	最大出力レベル:	+6 dBV
Headphone output:	6 mm (1/4") stereo	出力インピーダンス:	800 Ω (不平衡)
Output level:	35 mW + 35 mW (into 32 Ω)	ヘッドホン出力:	6 ϕ ステレオ 35 mW+35 mW (32 Ω 負荷)
Digital input:		デジタル入力	
AES/EBU:	XLR-type, AES3-1992	AES/EBU:	XLR-3-31 相当、AES3-1992
COAXIAL:	RCA pin, IEC60958 TYPE II	COAXIAL:	RCA ピン、IEC60958 TYPE II
OPTICAL:	TOSLINK, IEC60958 TYPE II	OPTICAL:	TOSLINK、IEC60958 TYPE II
Digital output:		デジタル出力	
AES/EBU:	XLR-type, AES3-1992	AES/EBU:	XLR-3-32 相当、AES3-1992
COAXIAL:	RCA pin, IEC60958 TYPE II	COAXIAL:	RCA ピン、IEC60958 TYPE II
OPTICAL:	TOSLINK, 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“EEPROM 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 specified 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 $\pm$ 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 $\pm$ 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 response 再生周波数特性	MCD-111 : Tr. No. 3~6	20 Hz~20 kHz, 0 dB	0 $\pm$ 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 $\pm$ 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 μ m
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 μ m
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 time, the output level should be +20 dBu $\pm$ 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 +20 dBu $\pm$ 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 time, the output level should be +6 dBV $\pm$ 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 +6 dBV $\pm$ 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 response 録再周波数特性	20 Hz-20 kHz, +6 dBV	0 $\pm$ 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	32 Ω 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

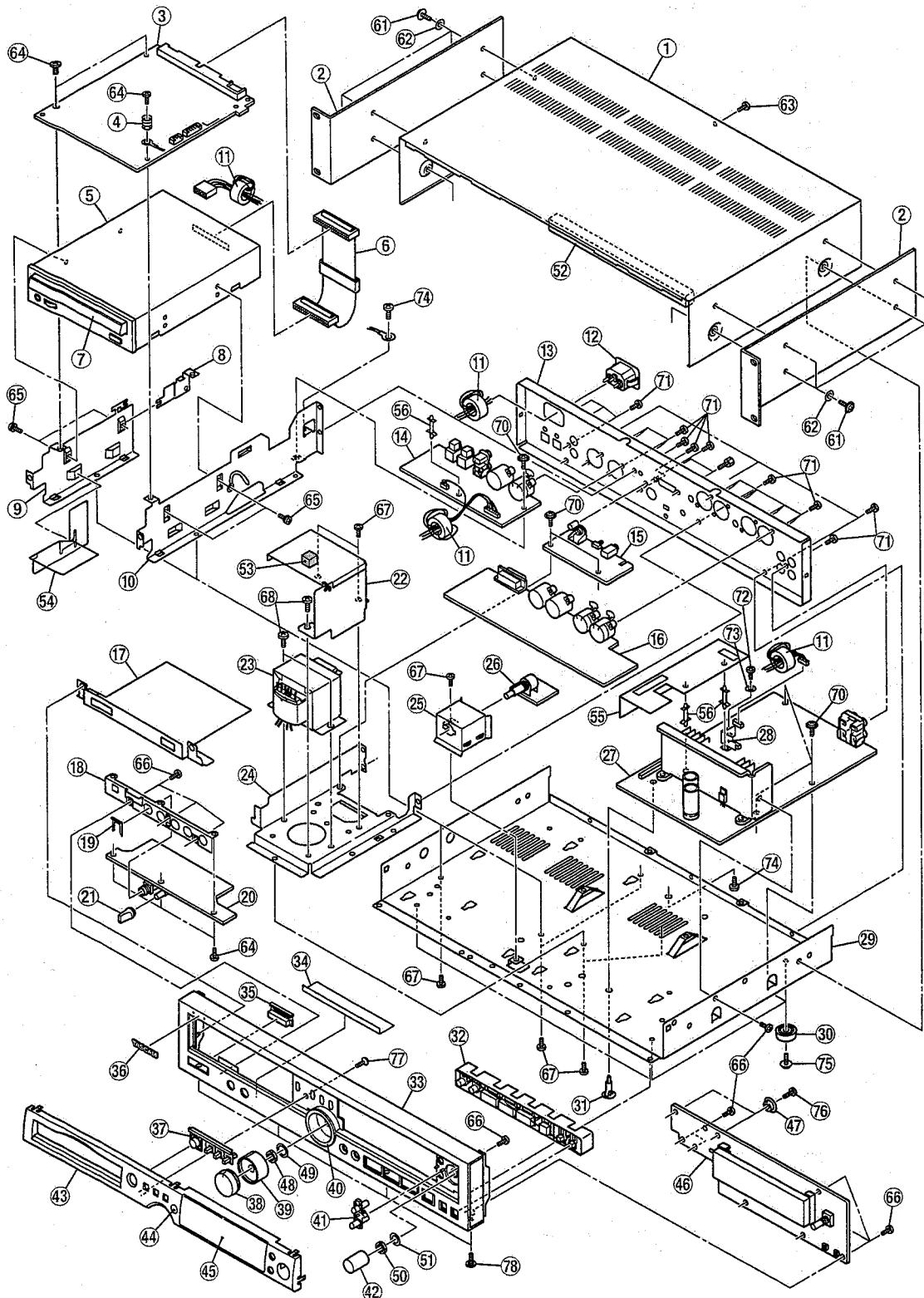
注 意

- 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	WIRE, 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, SHIELD 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	

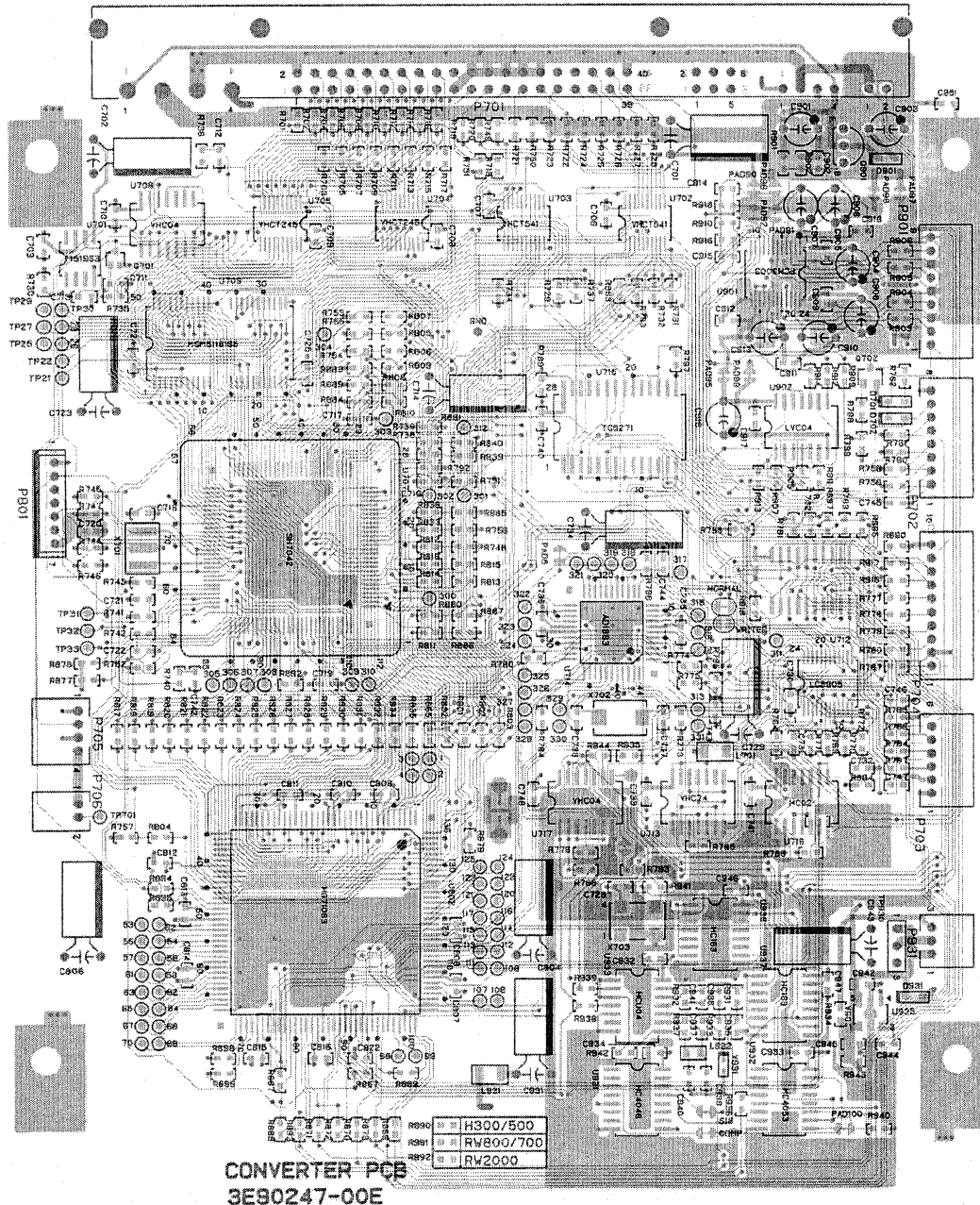
INCLUDED ACCESSORIES

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 CORD [E]	
	△ *3E014170	POWER CORD [UK]	
	△ *3E014180	POWER CORD [A]	

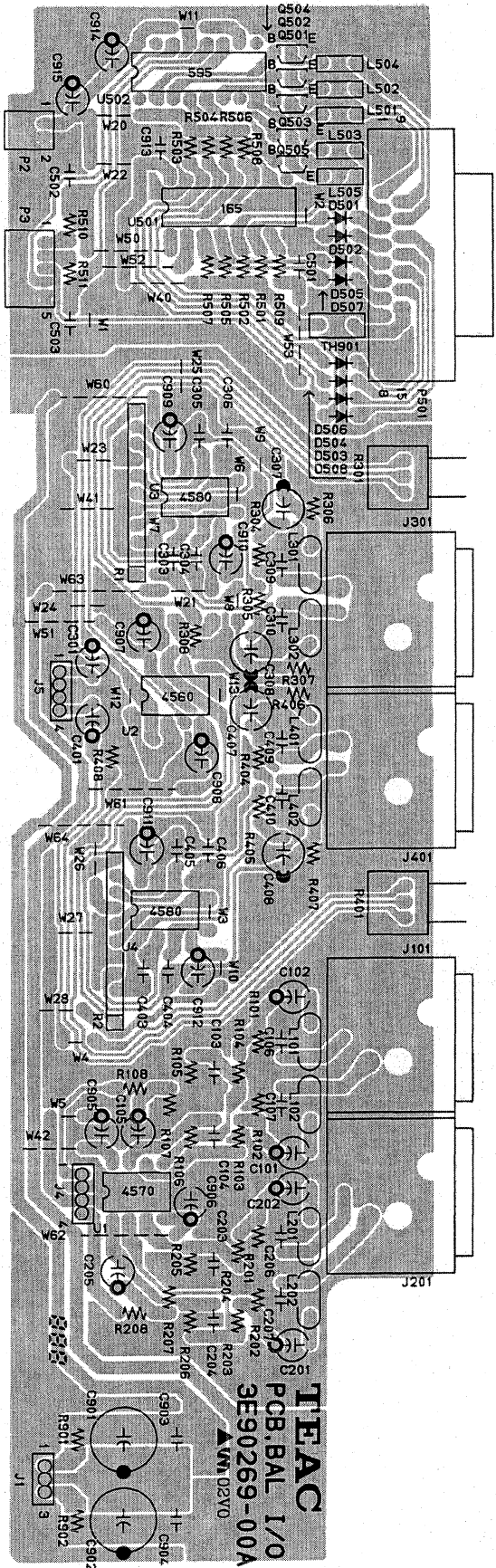
6. PC BOARDS AND PARTS LIST

基板図とパーツリスト

CONVERTER PCB



BAL I/O PCB



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	CONNECT, 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, L1M55A 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	CONNECTOR, 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 FK0B160MH16
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

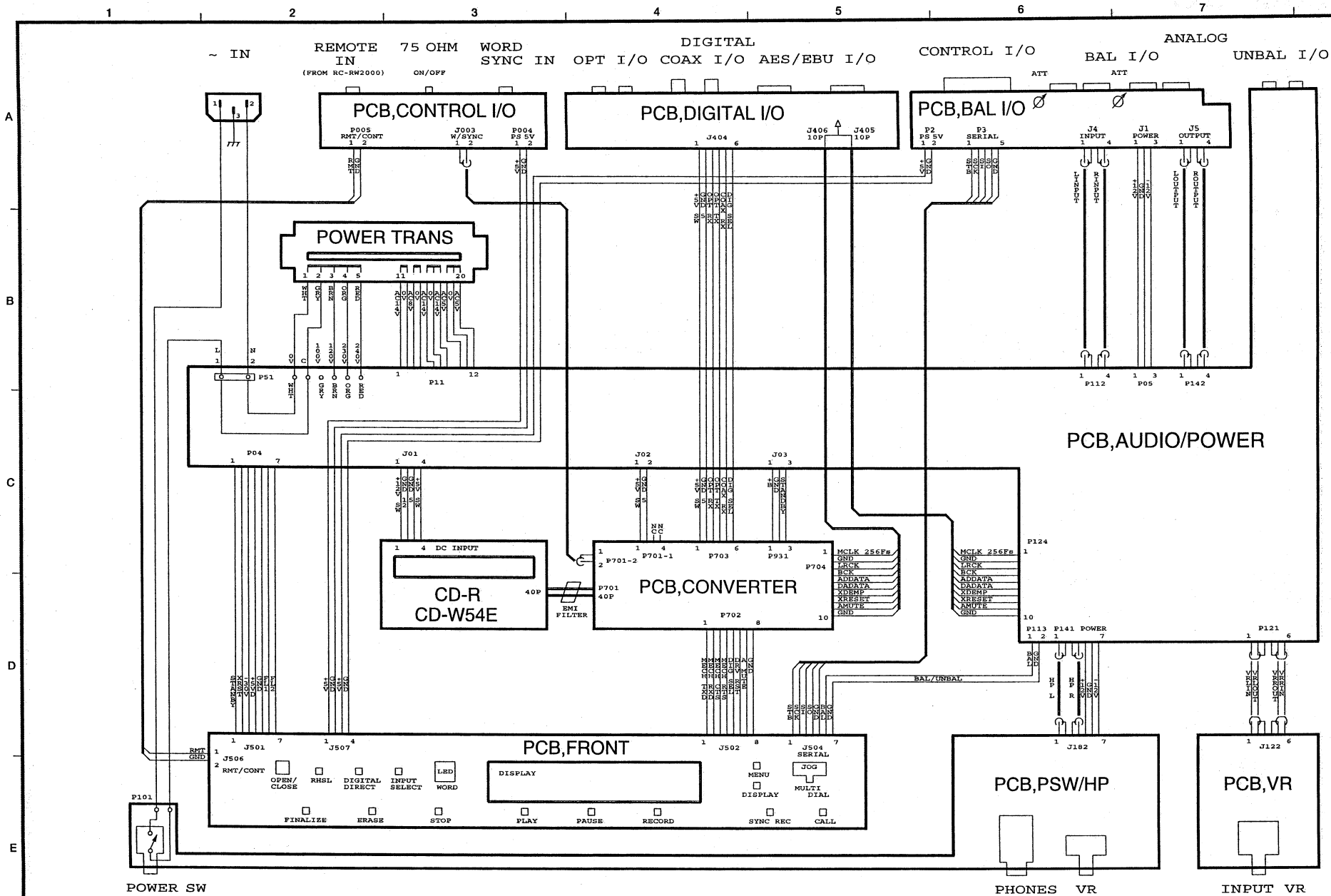
REF. NO.	PARTS NO.	DESCRIPTION
P51	3E002170	PIN, TERMINAL LAPPING 2P
P112	3E000680	PLUG, CONN. 4P B4B-PH-K
P113	3E014250	PLUG, CONN. S 8B-PH-K-S
P121	3E010380	PLUG, CONN. B 6B-PH-K-S
P124	3E010420	PLUG, CONN. B10B-PH-K-S
P141	3E010390	PLUG, CONN. B 7B-PH-K-S
P142	3E000680	PLUG, CONN. 4P B4B-PH-K
Q01, 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)**

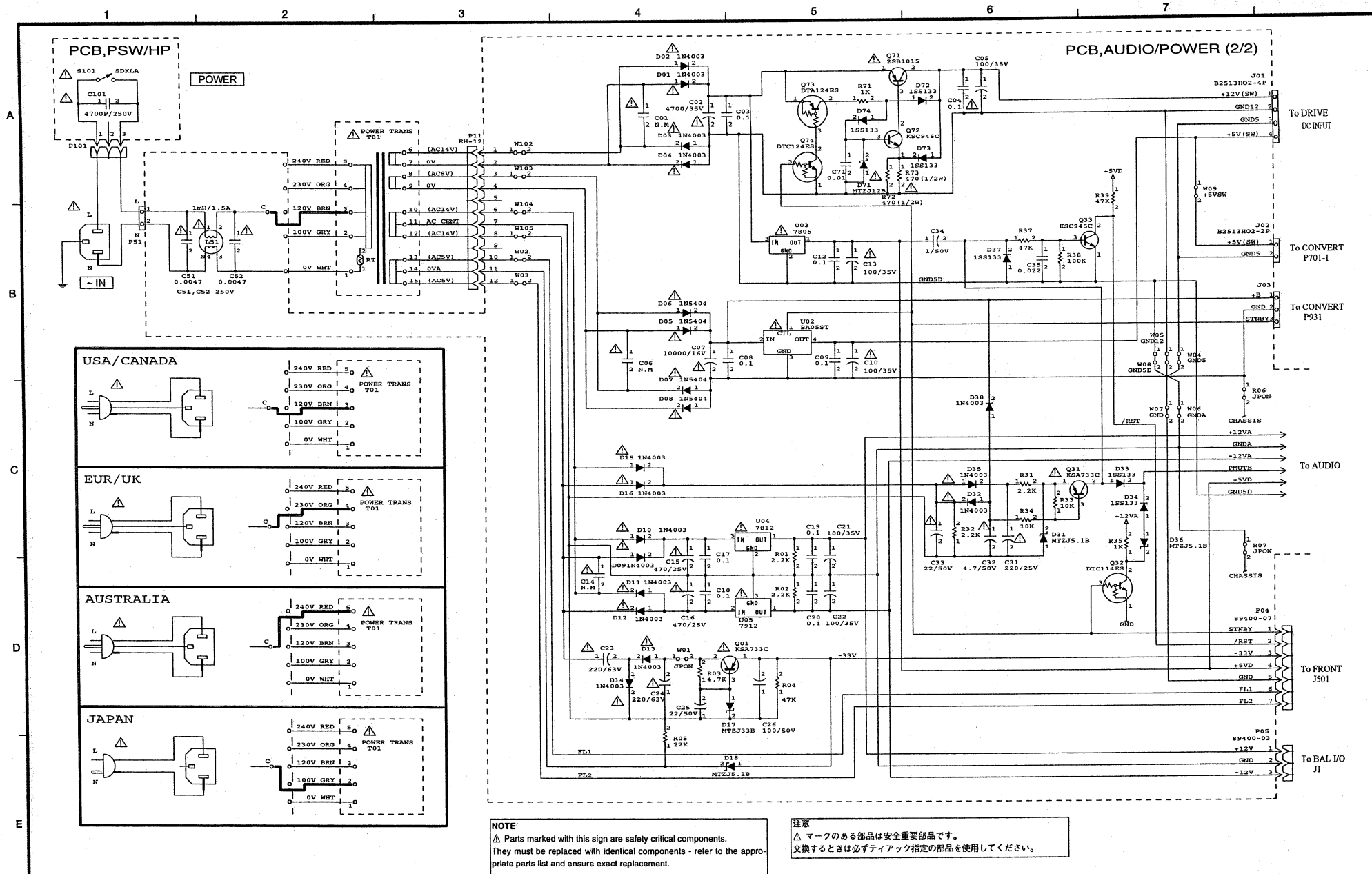
REF.NO.	PARTS NO.	DESCRIPTION
	*3E9527000A	PCB ASSY, GATHER DIGITAL I/O
		PCB ASSY, DIGITAL I/O
D401-408	3S002984	DIODE, 1SS355
J401	3E011850	JACK, RJ-1060A-31-0541A
J402	3E010320	JACK, XLR NC3FAH1
J403	3E010330	PLUG, XLR NC3MAH
J404	3E0140800A	WIREA, D I/O
J405	3E0141300A	WIREA, AUDIO-CON 10P
J406	3E0141310A	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 SK0SAB HMR-187
S500	3E007320	SW, ENCODER EC11B15244
U500	3S0035000A	IC, CXP82040-R00FR
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

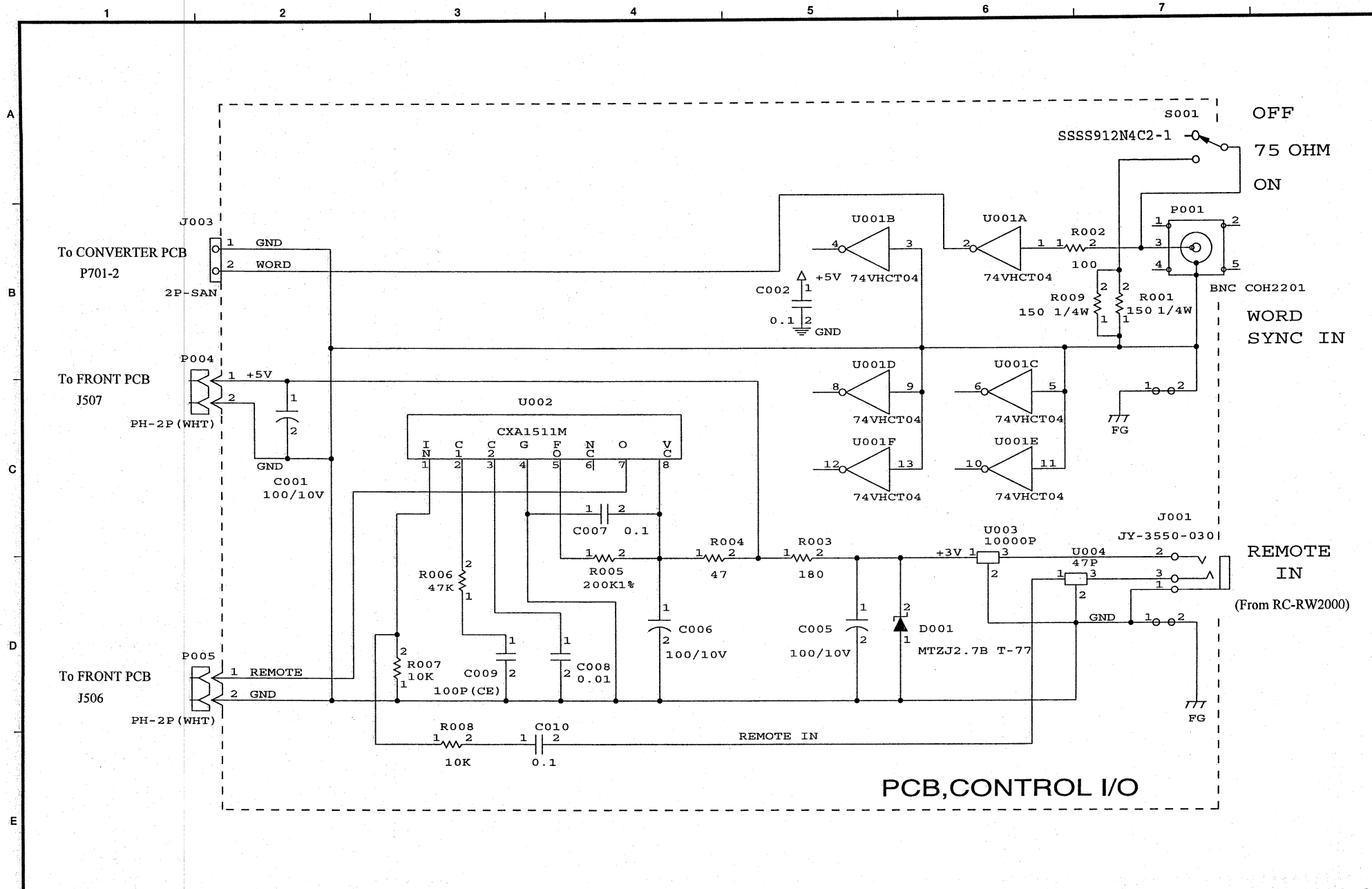


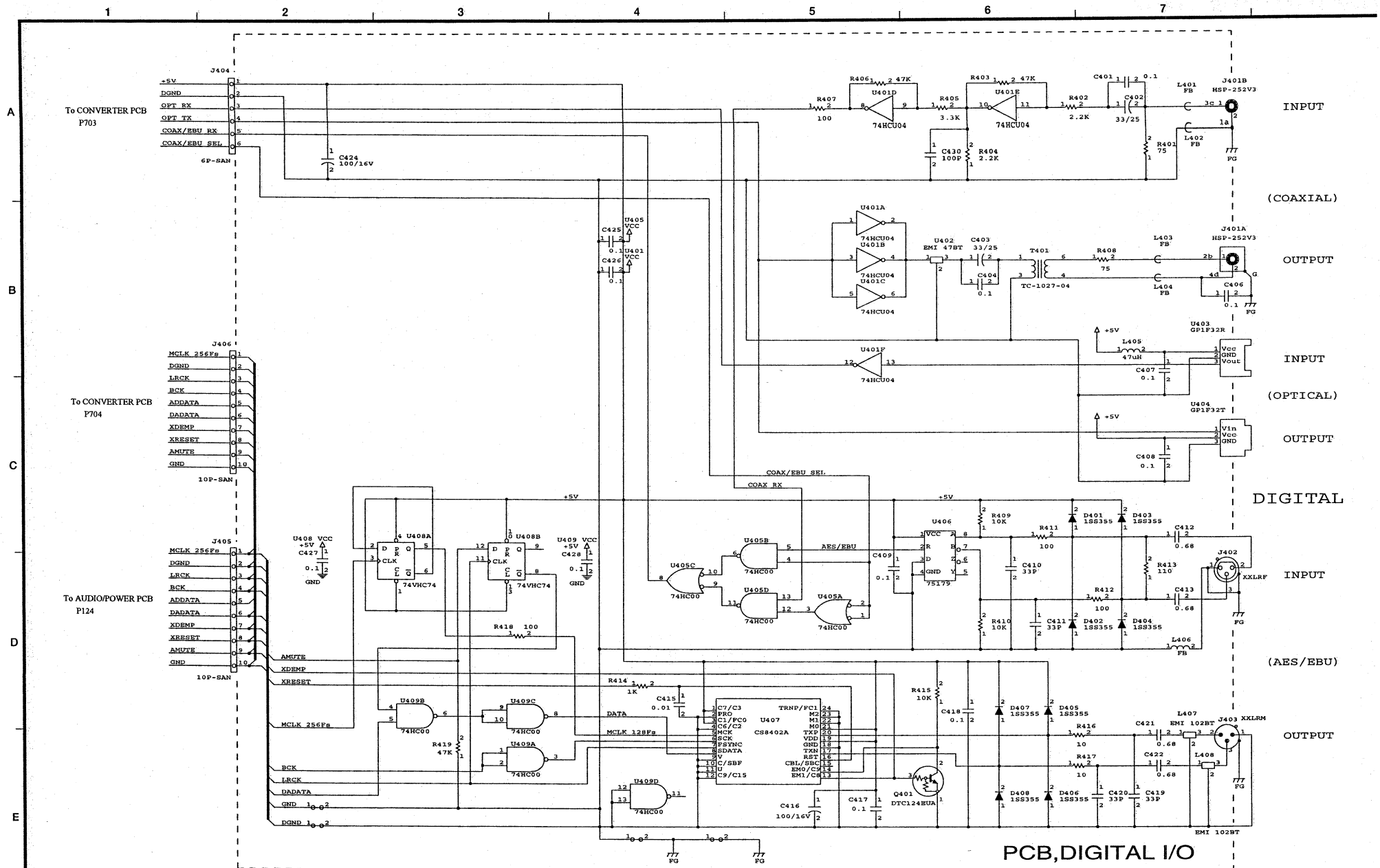


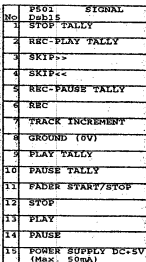


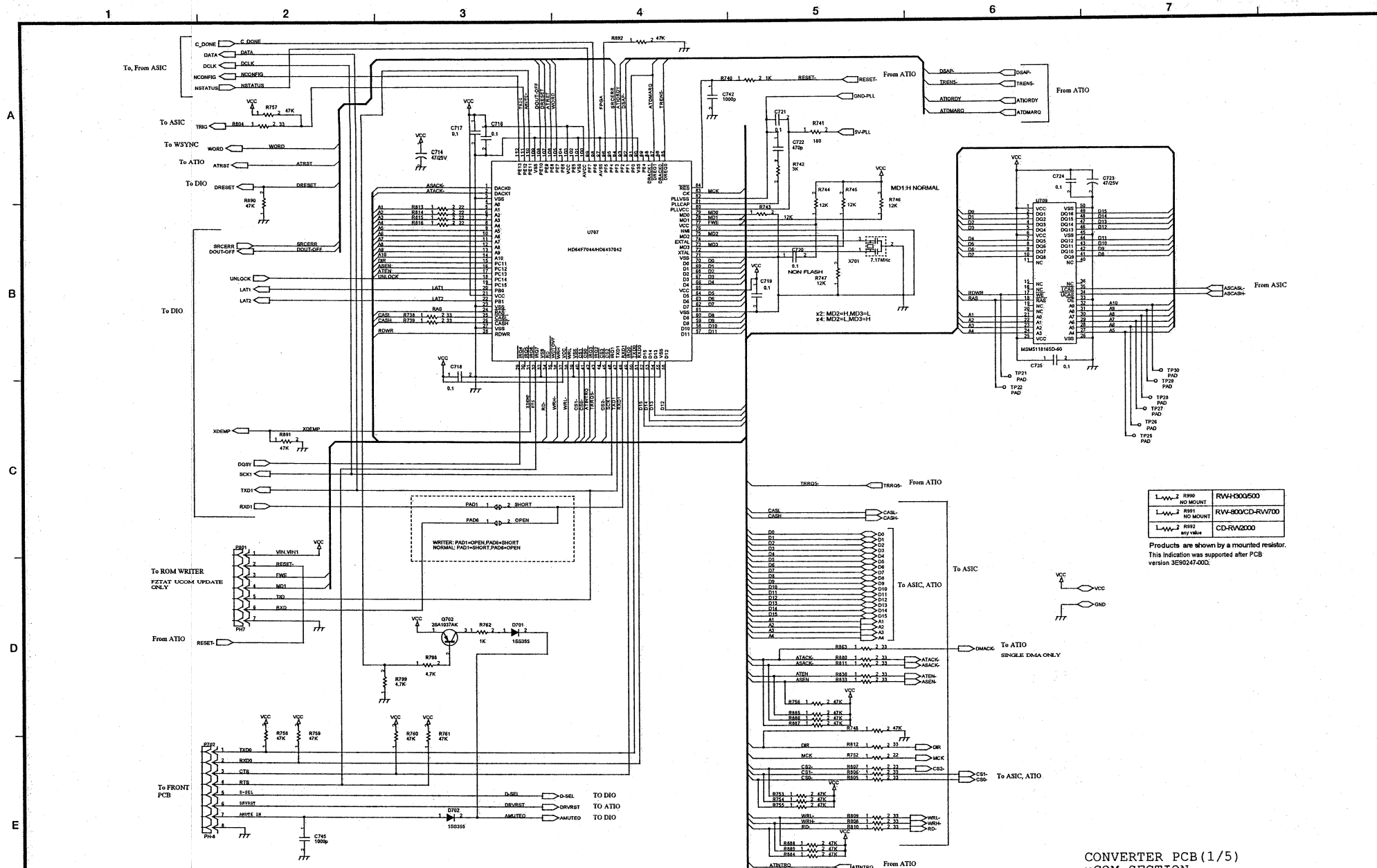






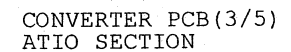


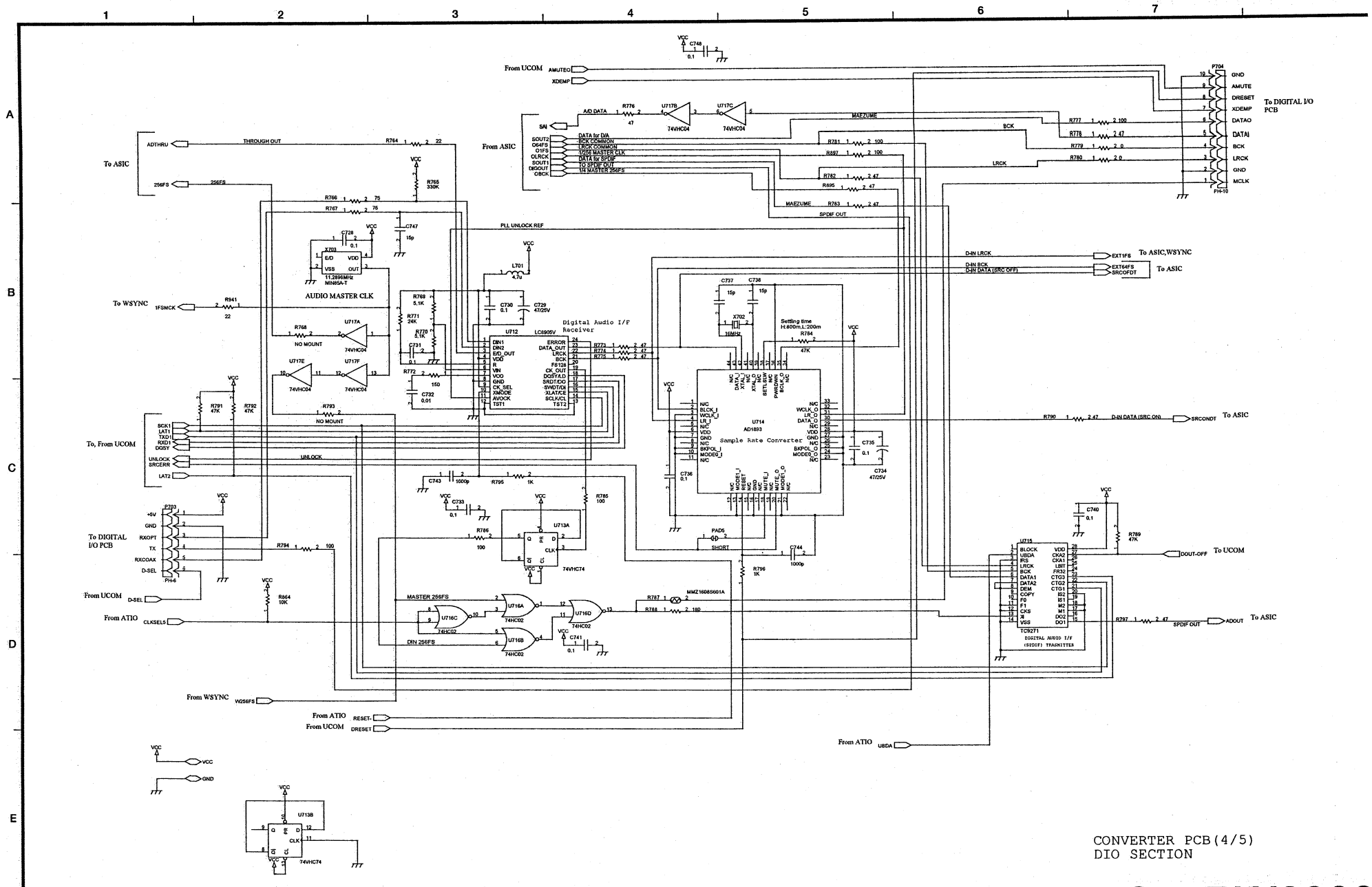


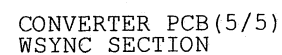


CONVERTER PCB (1/5)
uCOM SECTION









TASCAM

TEAC Professional Division

CD-RW2000V3

SERVICE MANUAL

SUPPLEMENT

追補版

The circuit diagrams here are applicable for CD-RW2000 S/No. 0390001 and higher.
Use this with the original CD-RW2000 Service Manual, Effective: June, 2000.

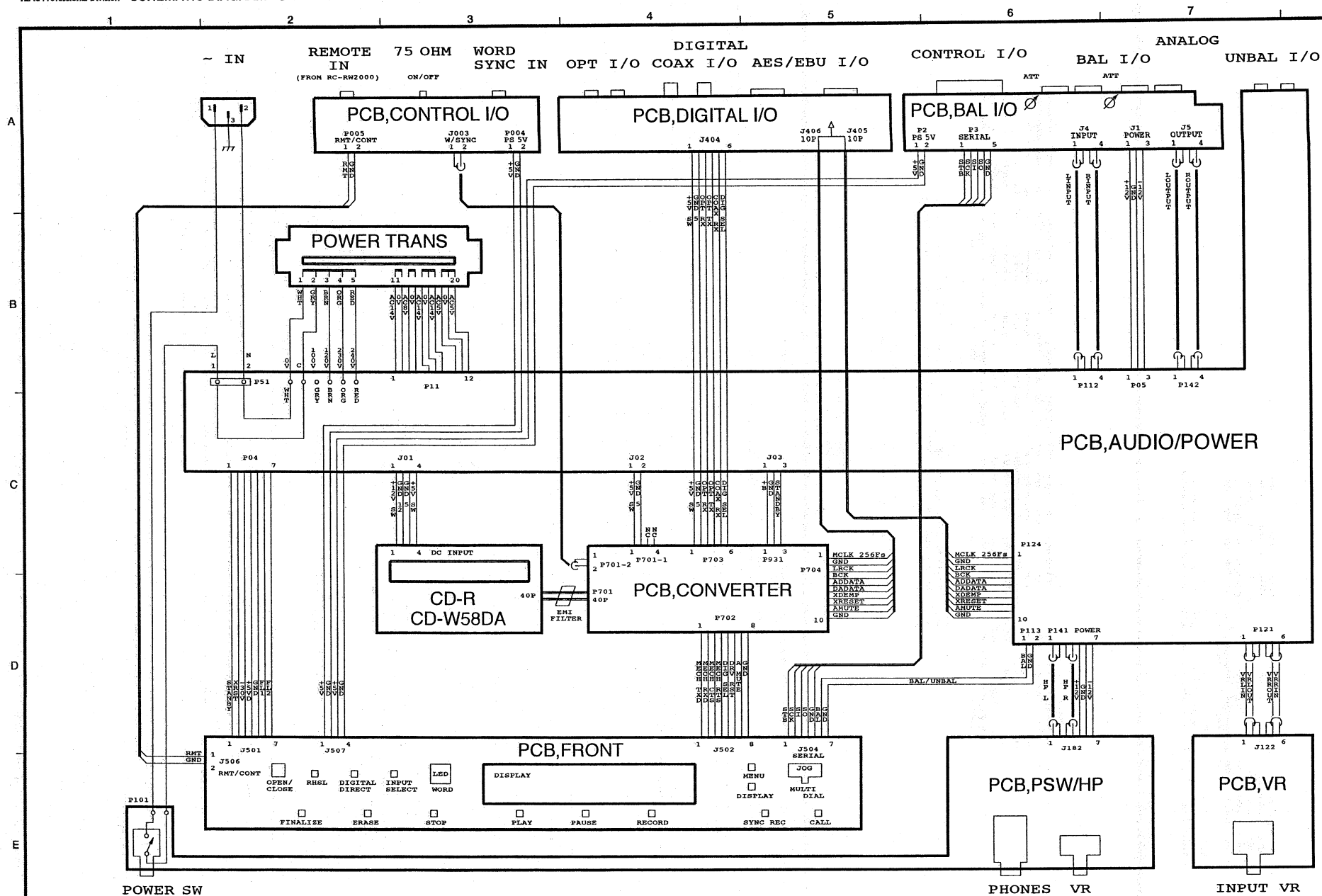
ここに記載されている回路図は、シリアル No. 0390001 以降の CD-RW2000 に適用されます。
CD-RW2000 のオリジナルサービスマニュアル、Effective: June, 2002 と共に使用してください。

Changes (変更内容)

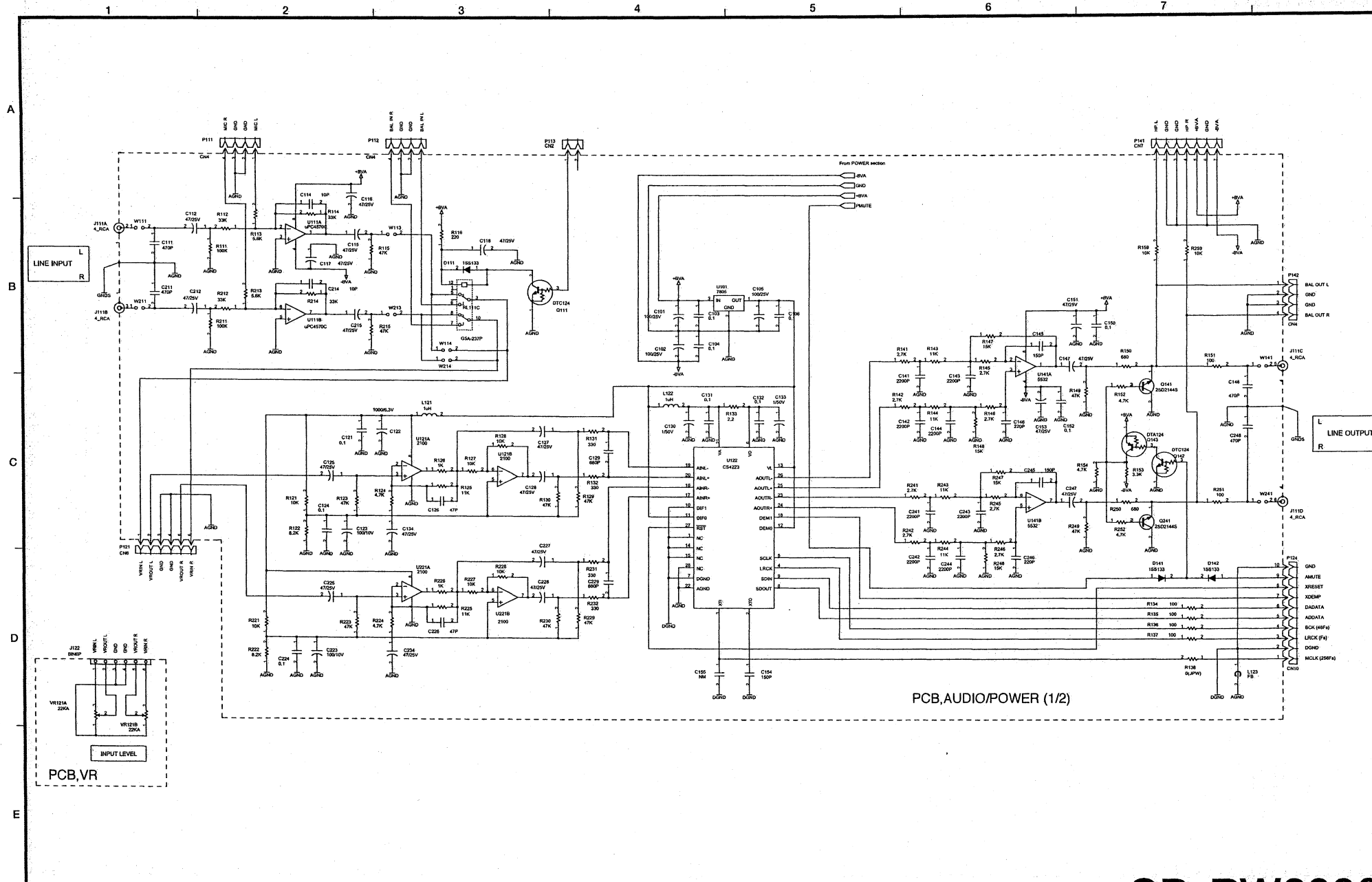
- 1..To adopt a new CD-RW DRIVE, related components have been changed with renewal of Converter MPU and Front MPU accordingly.
DRAM on Converter PCB Assy has been changed due to its availability.
CD-RW DRIVEを変更するとともに、関連部品を変更しました。
DRAM入手難の為にPCBA, CONVERTER RW2 U709を変更しました。
2. To cope with above, the major difference of parts are as follows:
上記による主要な差異部品は以下の通りです。

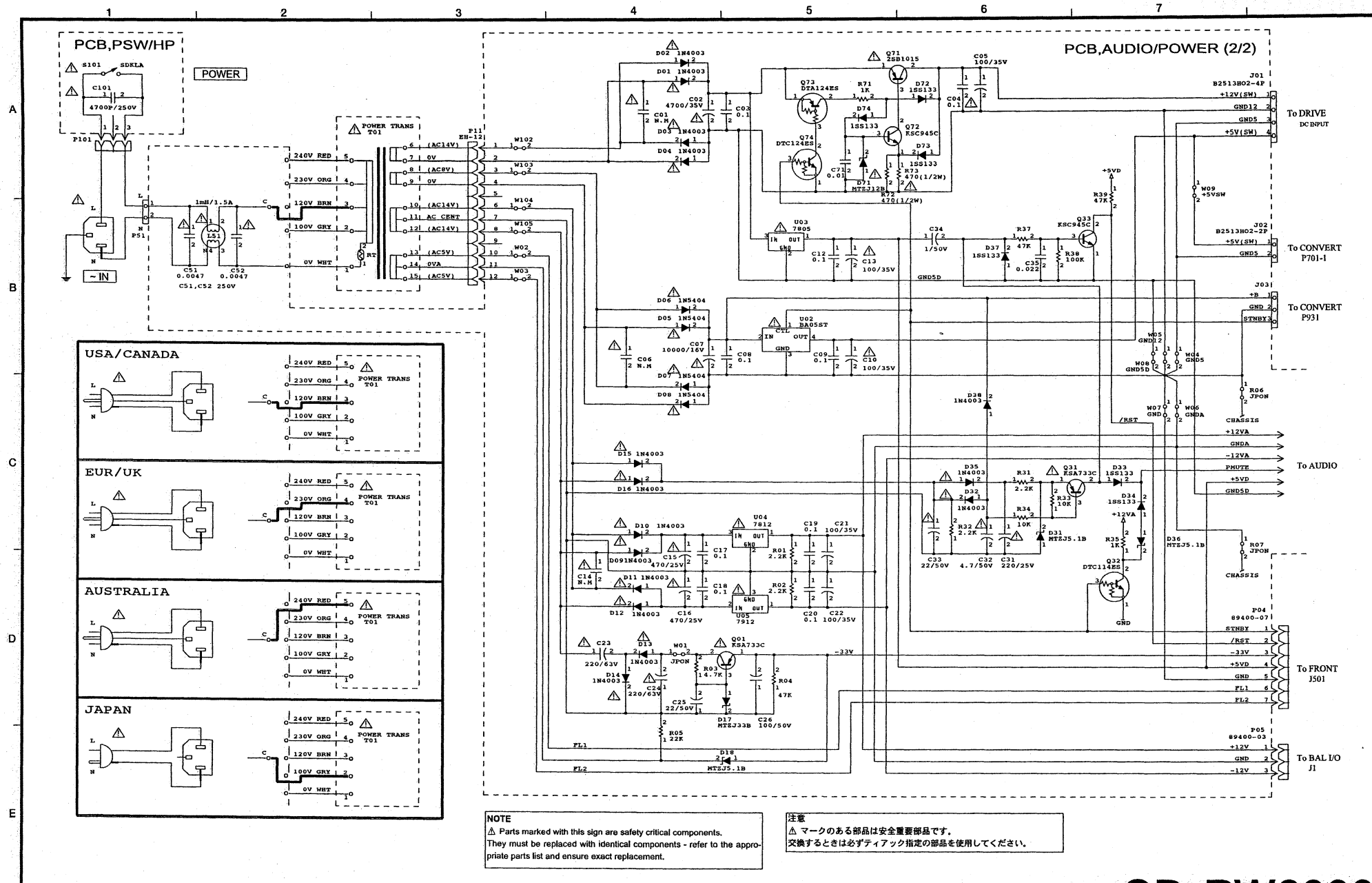
1- 5	V00089500A	DRIVE ASSY,CD-W54E-A90	→	V00140000A	CD-W58DA-T00	
1- 7	3M0089930B	PANEL,TRAY 700	→	M02038200A	PANEL,TRAY RW2000 (ASS)	
1- 9	3M0088400A	BRACKET MECH SIDE(L)	→	M02038600A	BRACKET MECH (L) RW2000	
1-10	3M0088500C	BRACKET MECH SIDE(R)	→	M02038700A	BRACKET MECH (R) RW2000	
1-43	3M0088830A	ESCUTCHEON F,N66	→	M02038400A	ESCUTCHEON,FRONT, RW2000	
1- 3	*V00140600A	PCB ASSY,CONVERTER	→	3E9527600A	PCB ASSY,CONVERTER 2000V3	
	S00386800A	HD64F7044-CONVT3	→	3S0048510A	UCOM Assy,HD64F7044 402V3IC	U707 MPU
	S0036813	IC,MSM5118165D	→	S0060813	IC,T2316162A-50SIC	U709 DRAM
1-46	3E9527600A	PCB ASSY GATHER,FRONT	→	3E9527600A	PCB ASSY GATHER,FRONT	(No change)
	3S0035000A	IC,CXP82040-ROQFR	→	S00598300A	IC,CXP82040-160Q Front3 G	IC, U500

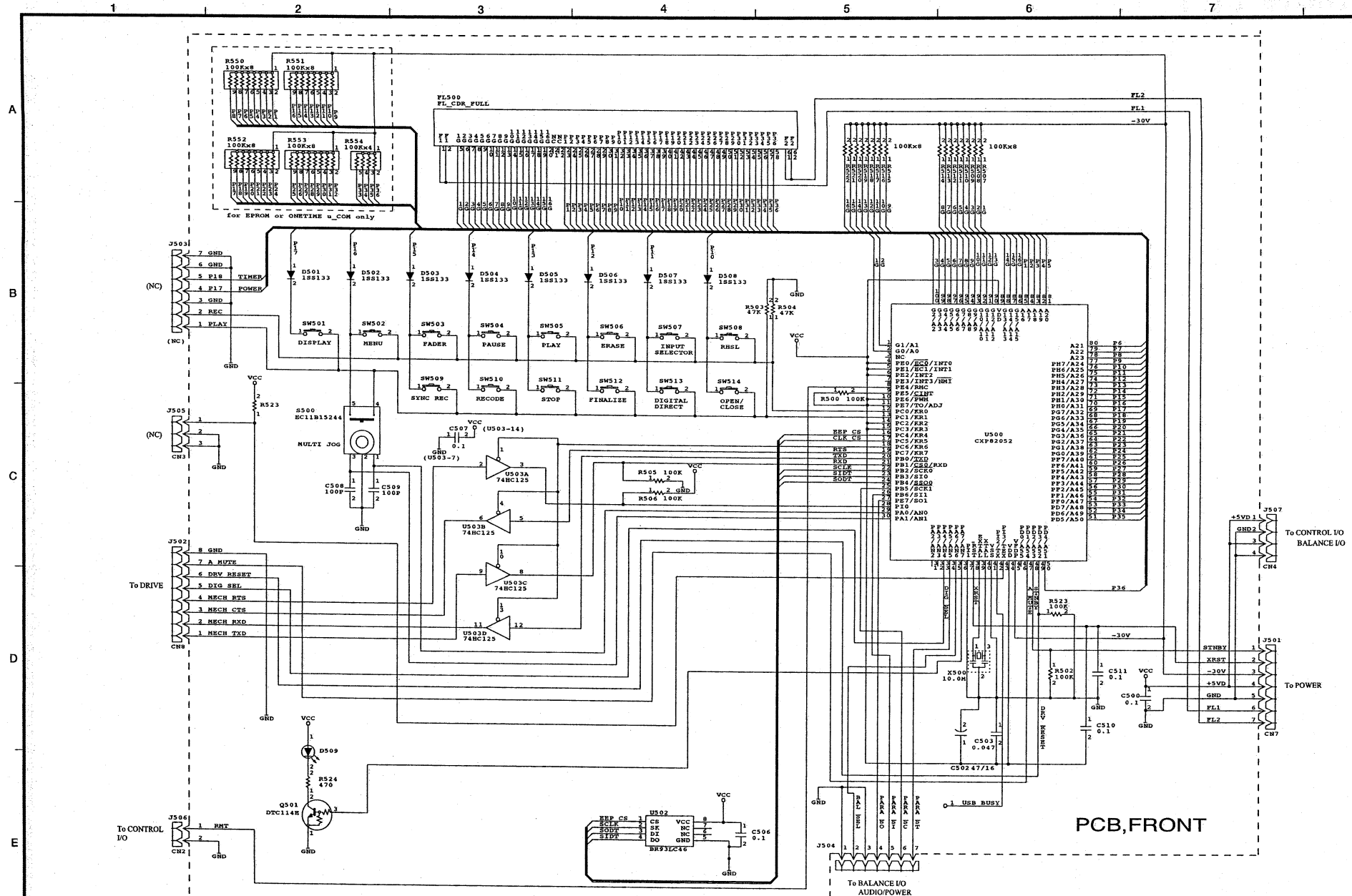
- * This is newly registered P/N since CD-RW2000V3 is produced with an identical P/N.
Ensure the P/N by confirming the S/No. of the unit being repaired upon ordering it.
- * CD-RW-2000V3は旧機と同一品番で生産されているため、新規に登録した品番です。
修理機の機番を確認のうえ、正しい品番で発注してください。

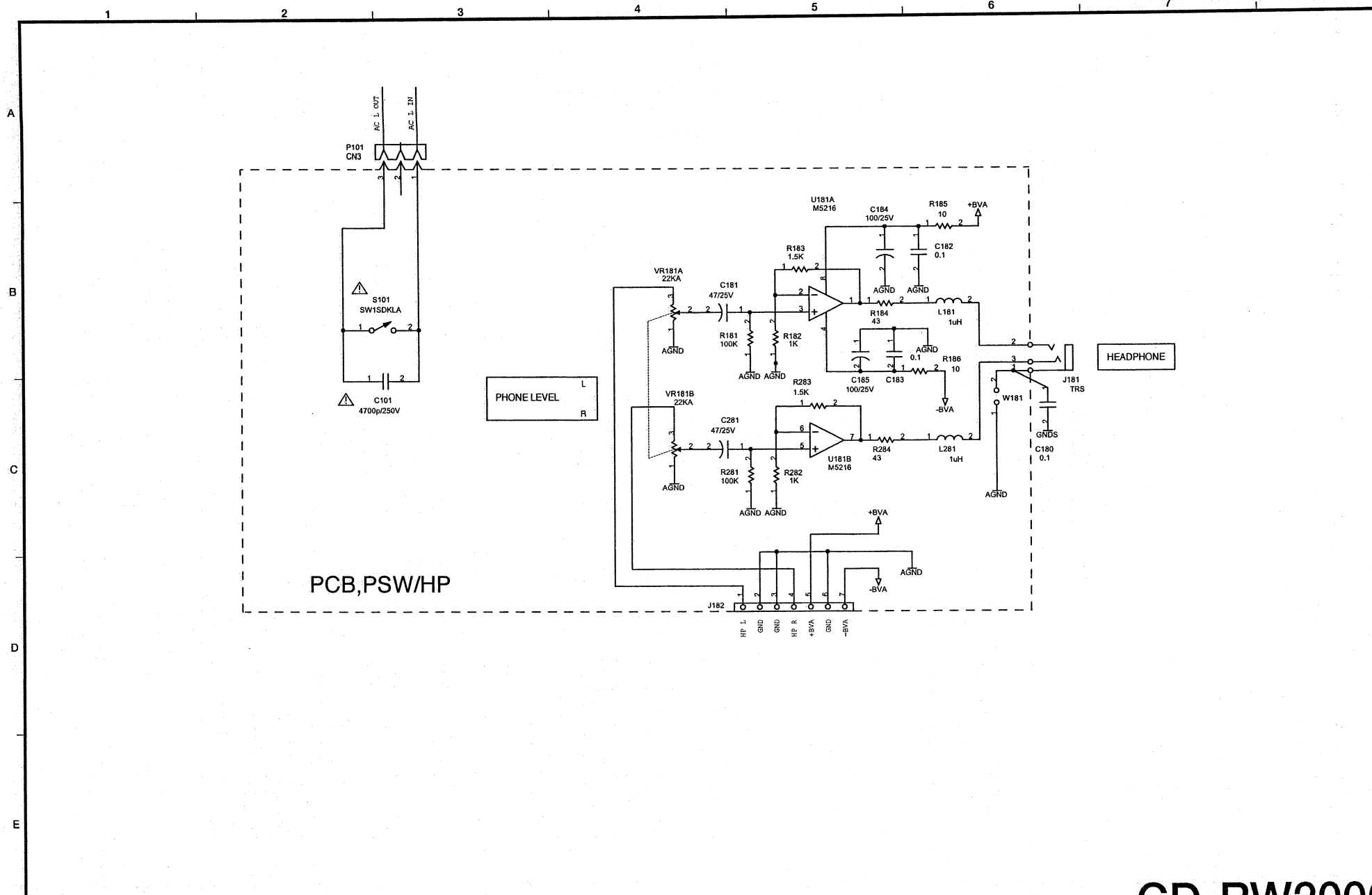


CD Rewritable Recorder **CD-RW2000**



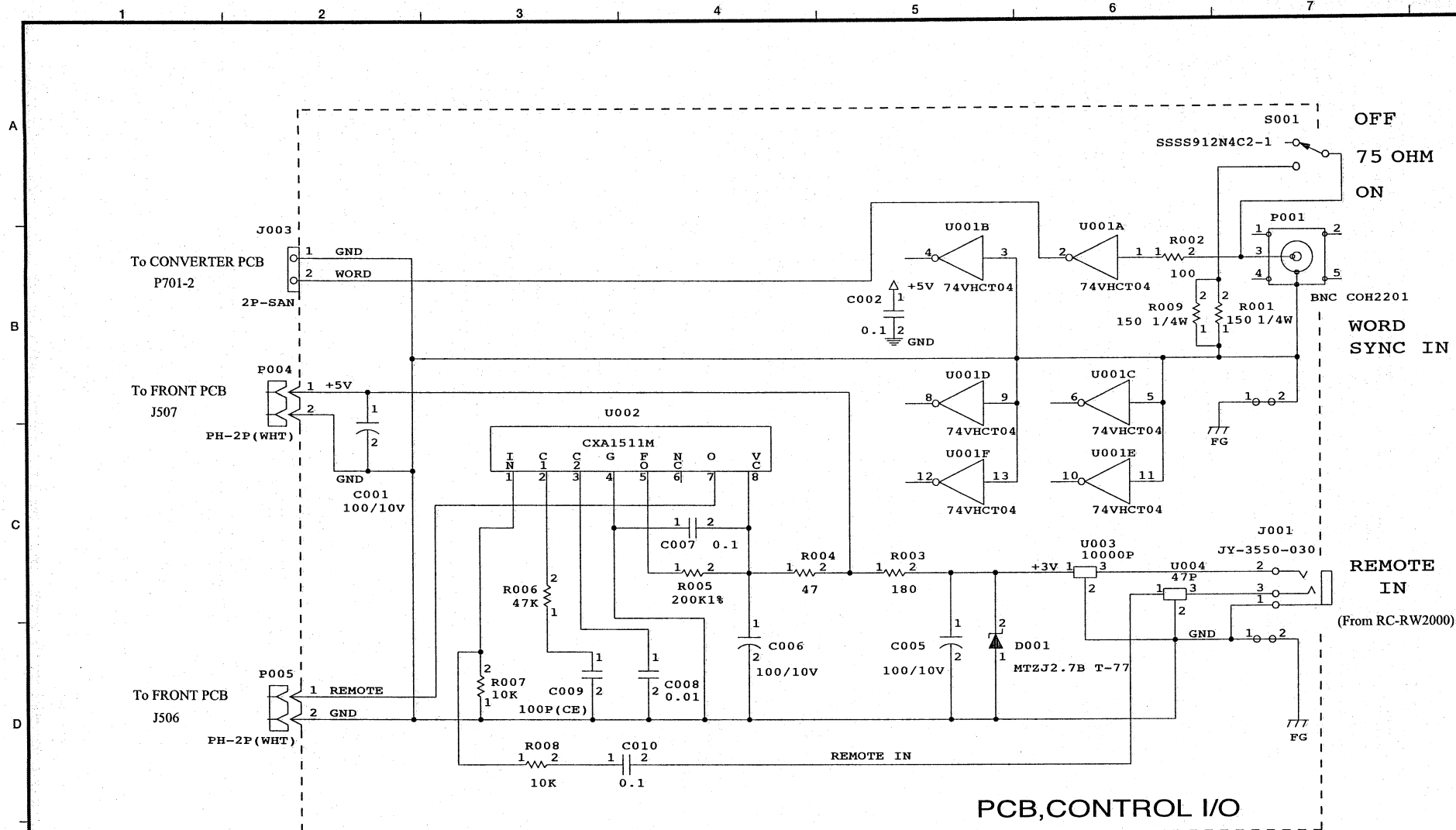


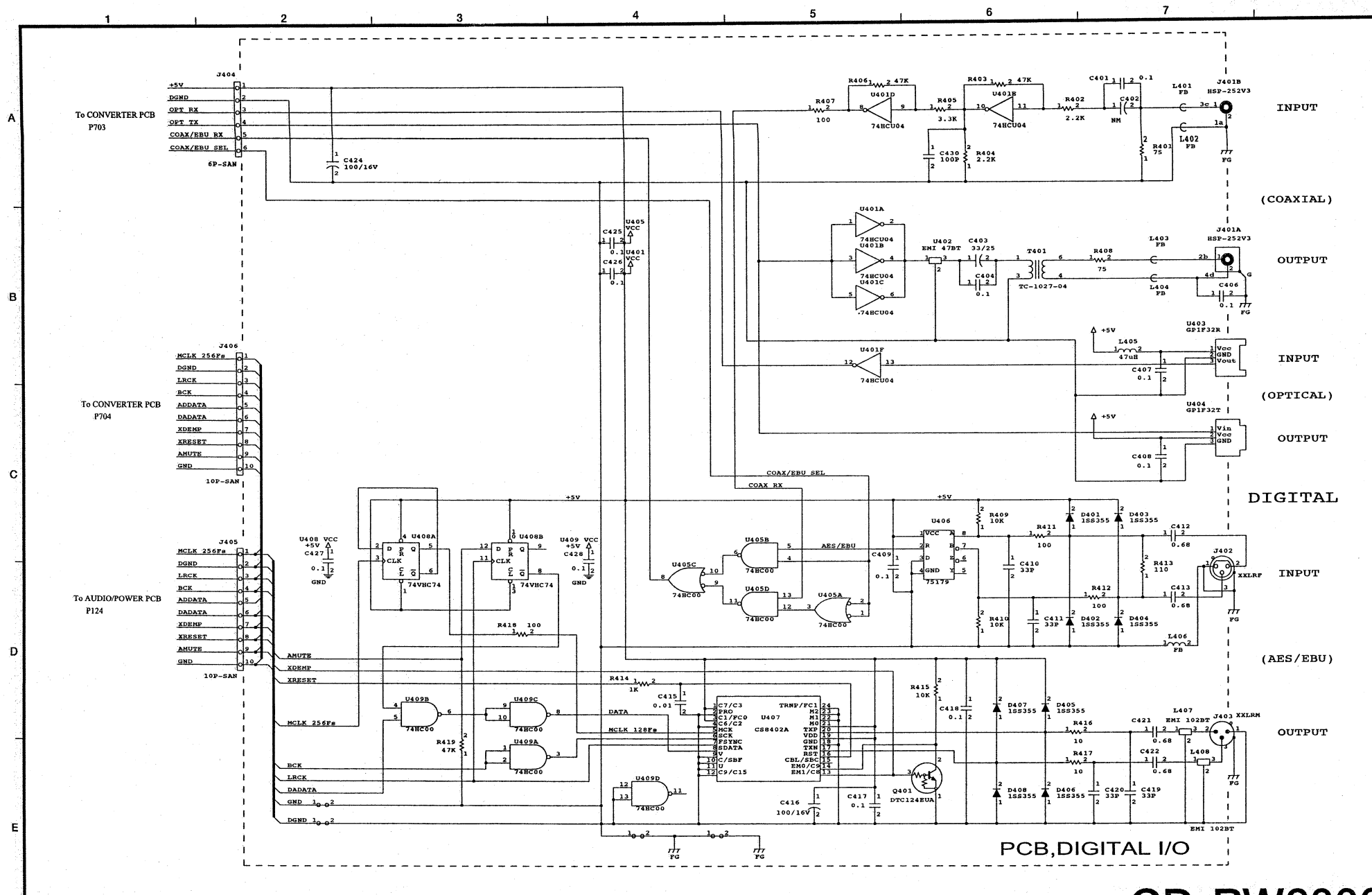


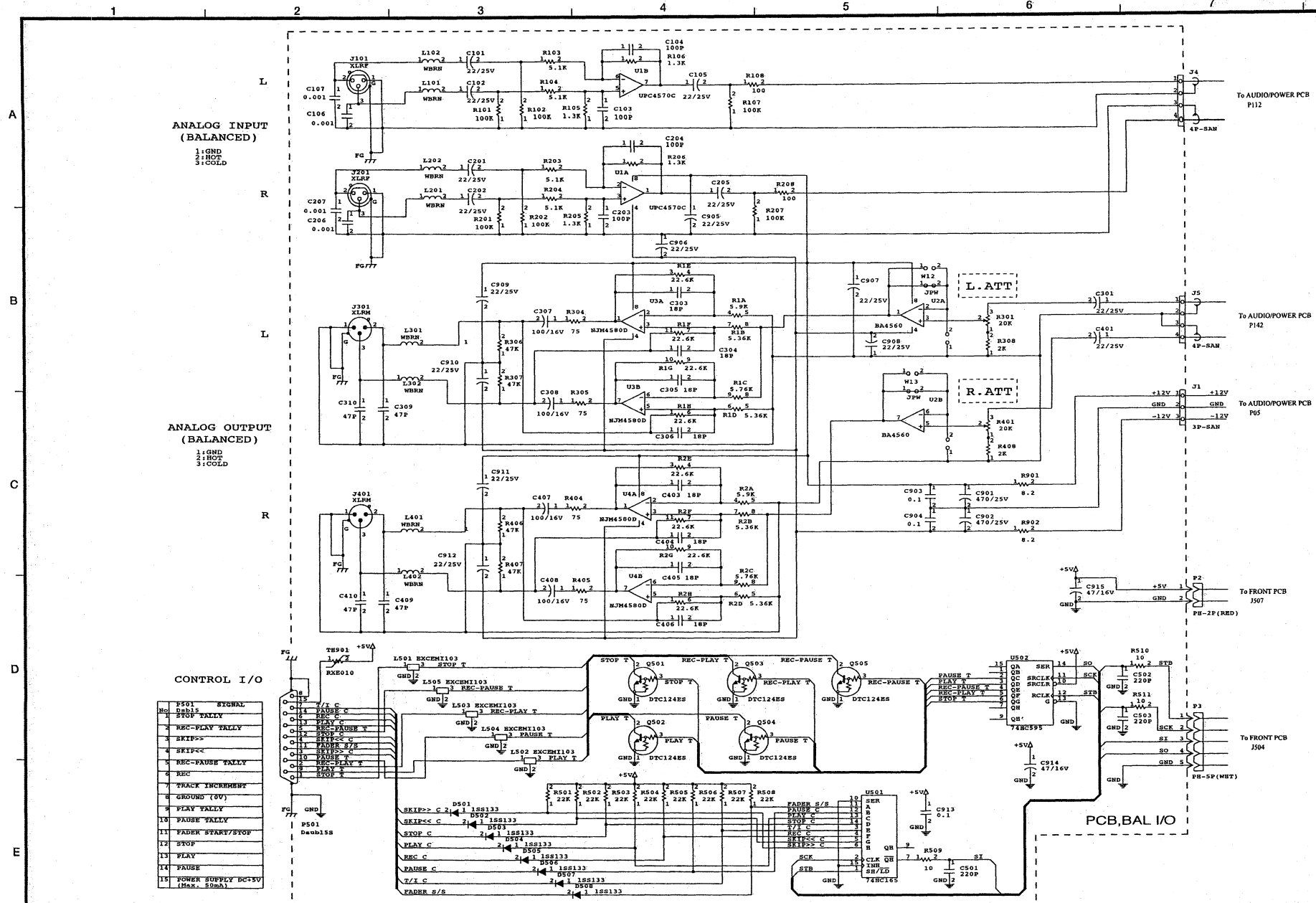


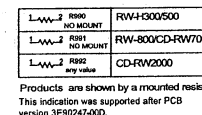
PCB,PSW/HP

HEADPHONE





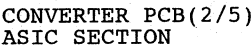


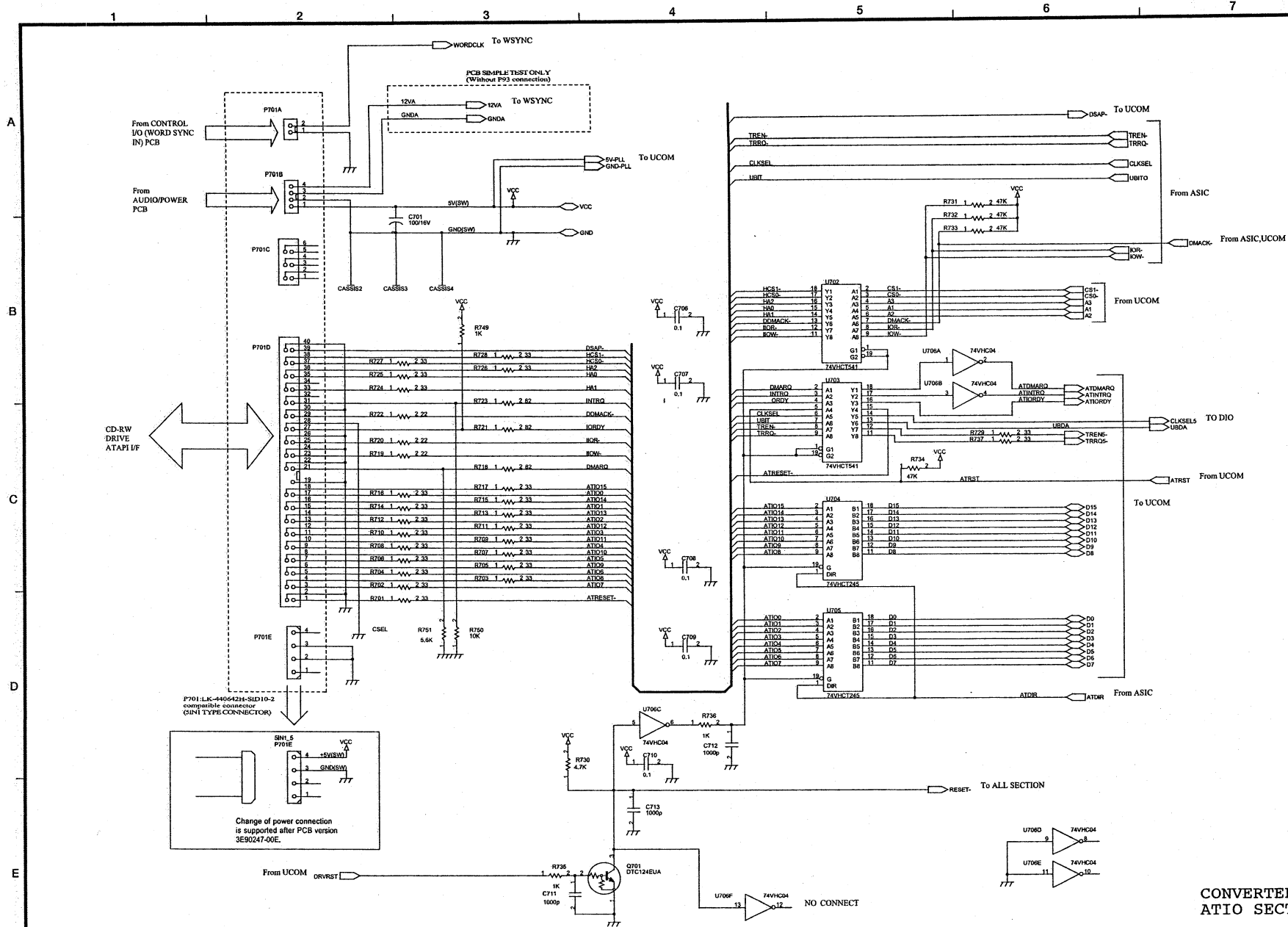


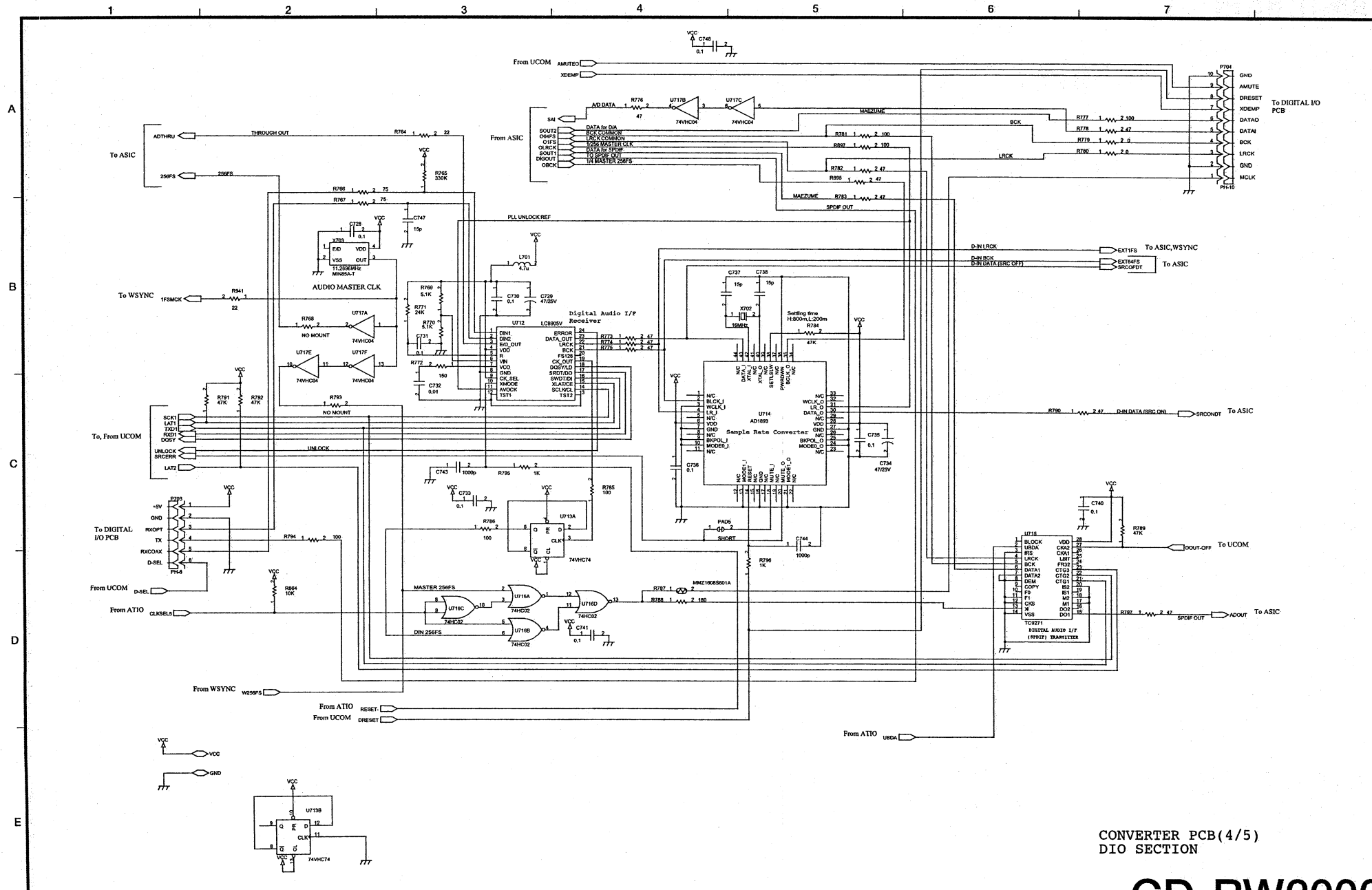
CONVERTER PCB (1/5)
uCOM SECTION

CD Rewritable Recorder **CD-RW2000**

2nd Issue: August 2005







CONVERTER PCB(4/5)
DIO SECTION

CD Rewritable Recorder **CD-RW2000**

2nd Issue; August 2005



CD Rewritable Recorder **CD-RW2000**

**TECHNICAL INFORMATION****CD-RW402(V3)/CD-RW2000(V3), Substitution of the Drive**No. **0701**

DATE 16th February 2007

This information relates to previous Tech-Info No. 0505R, 0506R, 0510 and 0511R.

The Drive (CD-W58DA) introduced in both info has been replaced with a RoHS conformity Drive (CD-W58DB) on the V3 products with the following S/Nos (month started production):

CD-RW402V3: S/N 0350001 and after (Nov/2005)

CD-RW2000V3: S/N 0500001 and after (Mar/2006)

Exception: T/C - S/N 0470076 to 047125 (Nov/2005)

All - S/N 0490116 to 049215 (Feb/2006)

Parts required

Item	Qty	P/No.	Description
New bare drive	1	V00141900A	CD-W58DB-T00 G
Drive update on CD-R			"W58db1td.abf" written
Drive update on Windows			"W58db1td.exe"

Visit the **ROM Data Library** on the SVHP to download the both firmware data and follow the update procedure on the previous Tech Info to read the following change:

"T58V1tf.abf" of CD-W58DA Drive => "W58db1td.abf" for CD-W58DB Drive.

"CDW58da1tf.exe" of CD-W58DA Drive => "W58db1td.exe" of CD-W58DB Drive.

Notice:

Do not attempt to write the former CD-W58DA firmware, "T58V1tf.abf" or "CDW58da1tf.exe" onto new CD-W58DB Drive otherwise new Drive becomes totally no response since type of Flash Rom fitted is quite different by the RoHS requirement. These firmware have no capability to identify type of Drive on which targeted to update therefore.

**TECHNICAL INFORMATION****CD-RW2000V3, Service Manual Supplement Correction**

No.	0705
DATE	20th March 2007

Correction is required on the service manual as shown below.

CD-RW2000V3, page 1 at right column of the parts list

Ref. No.	✕	○
1- 3	3E9527600A PCB ASSY, CONVERTER 2000V3	3E9524720B PCB ASSY, CONVERTER 2000V3
	3S0048510A UCOM Assy, HD64F7044 402V3IC U707 MPU	3S0048510B UCOM ASSY HD64F7044 402V3 U707 MPU

The service manual on the SVHP have been corrected on 14th/March/2007.



TECHNICAL INFORMATION

TASCAM CD-RW2000, Substitution of the Drive

No. 0505

DATE 3rd August 2005

Original drive (CD-W54E) has discontinued then new drive (CD-W58DA) for CD-RW2000 V3 is used for substitution. This info introduces how to mount CD-W58DA to original CD-RW2000.

Outline of work

- Replace Converter MPU
- Replace Front MPU
- Remove C402 on Digital I/O PCB
- Replace drive
- Update drive firmware
- Mount new tray panel
- Add an insertion owner's manual for CD-RW2000 V3

Note:

The production of CD-RW2000 V3 has been started from S/No. 0390001 and up.

Parts required

Item	Qty	P/No.	Description
Converter MPU	1	3S0048510A	UCOM Assy, HD64F7044 402C3
Front MPU	1	S00598300A	IC, CXP82040-160Q Front3 G
New drive	1	V00140000A	CD-W58DA-T00
New tray panel	1	M02038200A	Panel, Tray G RW2000 ASS
Insertion owner's manual (E)	1	(3D0046200A)	Sheet, ISKRC V3 CD-RW2000
Drive update CD-R			"T58V1td.abf" written

Actual work

1. Replace Converter MPU (U707 on Converter PCB A) with new.
2. Replace Front MPU (U500 on Front PCB A) with new.
3. Just remove C402 (Electrolytic Capacitor) on Digital I/O PCB.
4. Replace drive with new.
Note that new tray panel cannot be mounted at this stage as tray cannot be opened.
5. Update drive firmware
By replacing Converter MPU and Front MPU in the step 4 above, update capability of drive is added now. As new drive is supplied with basic PC condition, drive firmware should be updated. Refer to "Drive firmware update procedure".
6. Turn the power of unit on, open the tray then turn the power off. Mount new tray panel.
7. Add an insertion sheet for Version 3.0.

Drive firmware update procedure

There are two ways for drive update.

1. Update on CD-RW2000.
2. Update on Windows.

1. Update on CD-RW2000

Prepare update drive CD-R that has "T58V1td.abf" written in it.

Preparation:

1. Have a blank CD-R data disc available, as well as a system capable of creating data CDs.
2. Visit the **ROM Data Library** of the TASCAM Service HP website to download the firmware data image and write the firmware file on PC to the blank CD-R disc. (Use the "Disc at once" method that complies with ISO9660 Level 1: MS-DOS compatible)

Notice:

Be careful that the power supply to the unit is not interrupted during the update process otherwise firmware data of drive could be damaged and physical replacement of drive becomes unavoidable

Procedure:

1. Turn the power on while holding **CALL** and **MENU**.
2. Load update drive CD-R while display shows "RW2000 03.00"
If version above is less than 03.00, drive update function does not work.
Then replace Front MPU.
3. Confirm "CD" in display blinks. Then press **CALL** to check current version of drive.
Existing version is "V1.TA" and "V1.TB" (the latest) as of May/2005.
4. Press **MENU**. Then the display shows current version and new version to be updated.
5. Press **ENTER** then update will start.
"NOW UPDATE" is displayed and "." at the right most corner blinks.
6. "COMPLETE" is displayed to inform the update finished successfully.
7. Turn the power off.

2. Update on Windows

Prepare "CDW58DA_1TD.exe" data file.

Visit the **ROM Data Library** in the TASCAM Service HP website to download firmware data image of "CDW58DA_1TD.exe" into PC.

1. While PC is powered off, connect the CD-W58DA to PC and reboot.
No need to consider Primary/Secondary and Master/Slave.
2. Double-click on "CDW58DA_1TD.exe" to run.
3. Follow the messages that will appear.



TECHNICAL INFORMATION

TASCAM CD-RW2000V3, Converter MPU Upgrade

No. **0510**

DATE 20th October 2005

ROM of the Converter MPU, U707 on the Converter PCB Assy has been upgraded from Ver 3.01 to Ver 3.02 on the products of S/N 0440001 and up.

Item	P/No.	Description
Converter MPU U707	3S0048510A (Ver3.01)	3S0048510B (Ver3.02)

Problem corrected by V3.02

1. "COPY PROHIBIT" has been resulted at the first track of recorded CD even "COPY ID" was selected to "FREE" regardless of the input source.
2. LCD shows "NO DISC" when UNFINALIZE was operated against CD-RW media on that exactly 99 tracks have been recorded. Once open and close the Tray has been required to recover the 99 tracks read out.
3. "REC ERROR" has been occurred when a particular CD was tried to Copy from Drive 1.

Note: Drive firmware has been updated from Ver 1.TD to Ver 1.TF to solve the problems however updating the Converter firmware is recommended to be done at the same time for a future provision.

Converter MPU and Drive firmware update procedure

Prepare a "Converter update CD-R" that has "conv0302mot" written on it.
Prepare a "Drive update CD-R" that has "T58V1tf.abf" written on it.

Preparation:

1. Have two blank CD-R data discs available, as well as a system capable of creating data CDs.
2. Visit the **ROM Data Library** in the TASCAM Service HP website to download both firmware data images and write the firmware file on PC to the blank CD-R discs respectively.
(Use the "Disc at once" method that complies with ISO9660 Level 1: MS-DOS compatible)

Notice:

Be careful that the power supply to the unit is not interrupted during the update process otherwise firmware data of the Converter MPU or the drive could be damaged and physical replacement of related part becomes unavoidable.

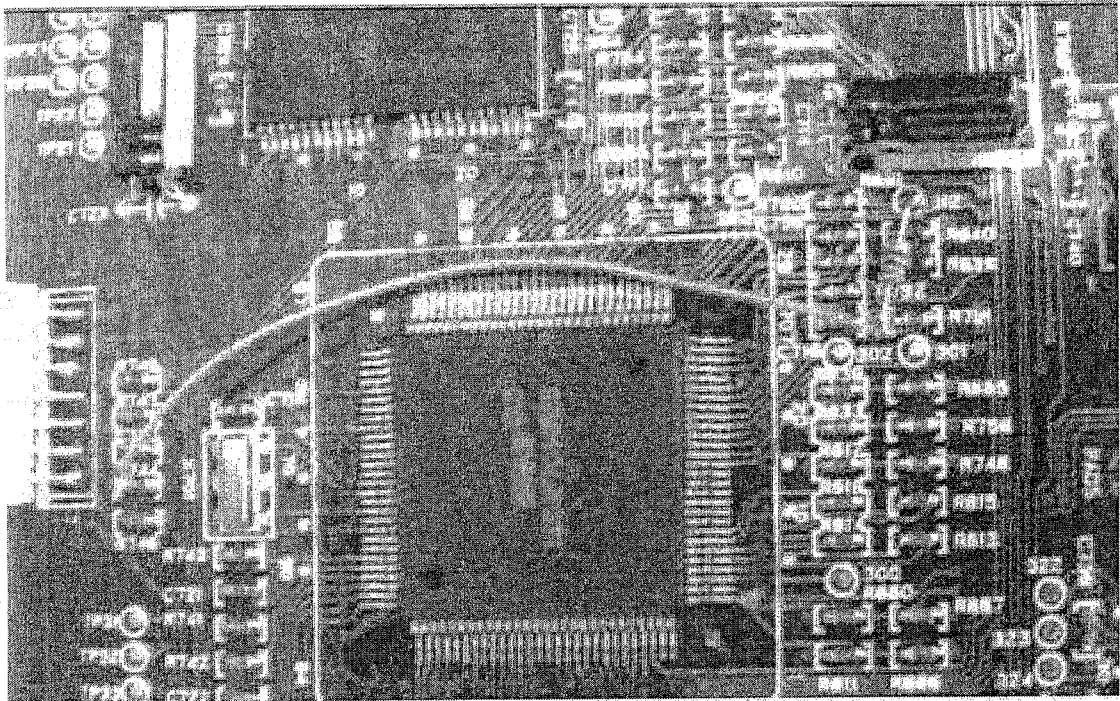
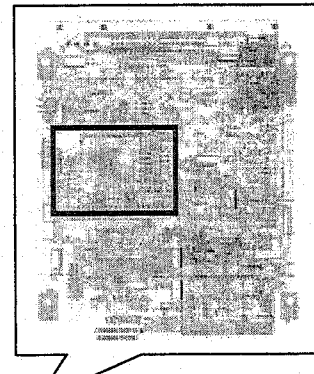
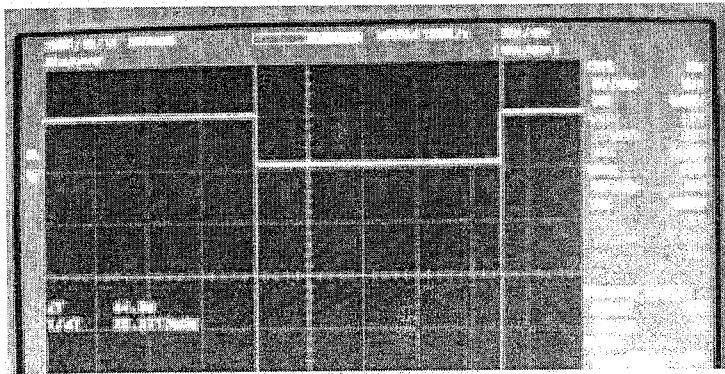
Converter MPU firmware update

Procedure:

1. Turn on power of the unit while holding **CALL** and **MENU**.
2. Load the "Converter update CD-R" while display shows "RW2000 03.00" that is version of the Front MPU.
3. Confirm "CD" in display blinks. Then press **CALL** to check current version of drive.
Existing version is "V1.TA", "V1.TB" (May/2005) and "V1.TD" as of August/2005.

4. Press **MENU** then the display shows current version and new version to be updated as "C03.0X→03.02".
5. Press **ENTER** then update will start.
6. Wait approximately 45 seconds or more to finish the update.
7. Turn off power of the unit.

A temporary work on the Converter PCB Assy to connect an oscilloscope is required to realize a successful completion. This is since the Converter PCB Assy of CD-RW2000V3 does not have necessary hardware to continue to show update sequence further. The waveform becomes Low when the **ENTER** key is pressed and goes to High approximately 45 seconds later upon end up the update as shown below:



The point to observe the waveform is a junction of additional 1kohm resistor and 60 mm wire that is connected across pin 30 (TP312) and pin 77 (R744) of the MPU (U707) as shown above.

Drive firmware update on CD-RW2000V3

1. Turn on power of the unit while holding **CALL** and **MENU**.
2. Load the "Drive update CD-R" while display shows "RW2000 03.00" that is version of the Front MPU.
3. Confirm "CD" in display blinks. Then press **CALL** to check current version of drive. Existing version is "V1.TA", "V1.TB" (May/2005) and "V1.TD" as of August/2005.
4. Press **MENU** then the display shows current version and new version to be updated as "D 1.TA→1.TF" for example.
5. Press **ENTER** then update will start.
"NOW UPDATE" is displayed and "." at the right most corner blinks.
6. "COMPLETE" appears to show end up of the update successfully.
7. Turn off power of the unit.

Drive firmware update on Windows

There is another way to update the drive firmware only by using PC.
Visit the **ROM Data Library** in the TASCAM Service HP website to download firmware data image of "CDW58DA_1TF.exe" into PC.

1. While PC is powered off, connect the CD-W58DA to PC and reboot.
No need to consider Primary/Secondary and Master/Slave.
2. Double-click on "CDW58DA_1TF.exe" to run.
3. Follow the messages that will appear.