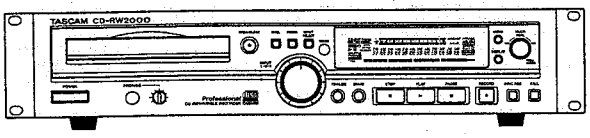


TASCAM
TEAC Professional Division

SERVICE MANUAL

CD-RW2000

Professional

CD Rewritable Recorder

CONTENTS

目次

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.

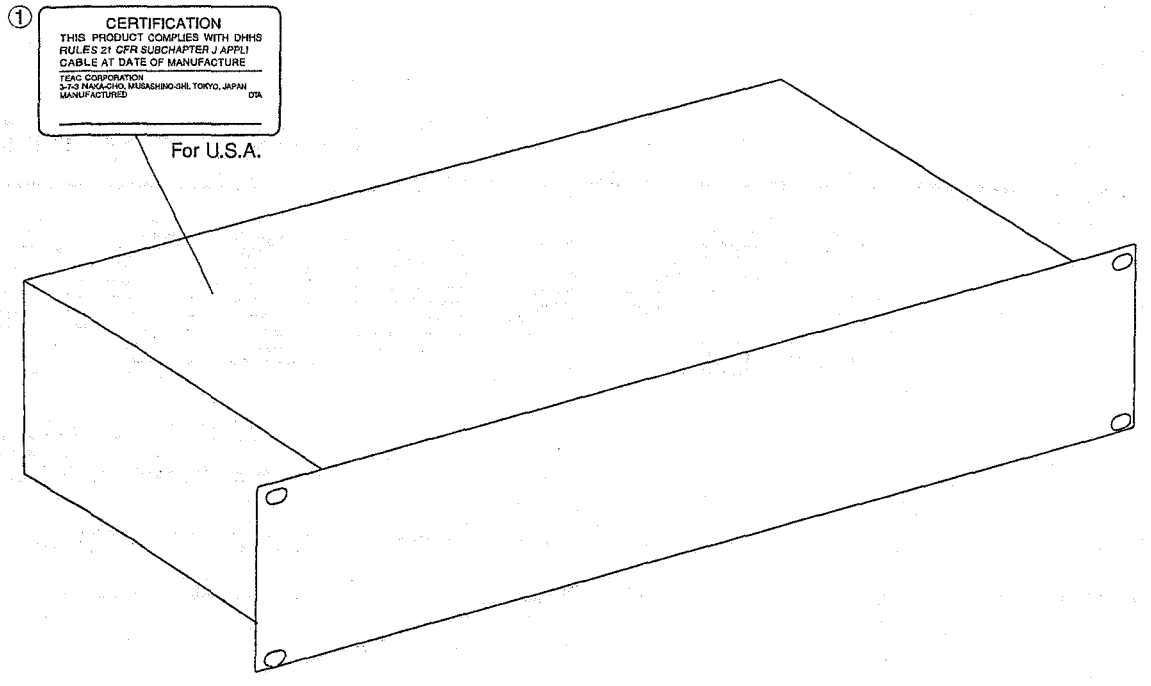
S-0026A

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

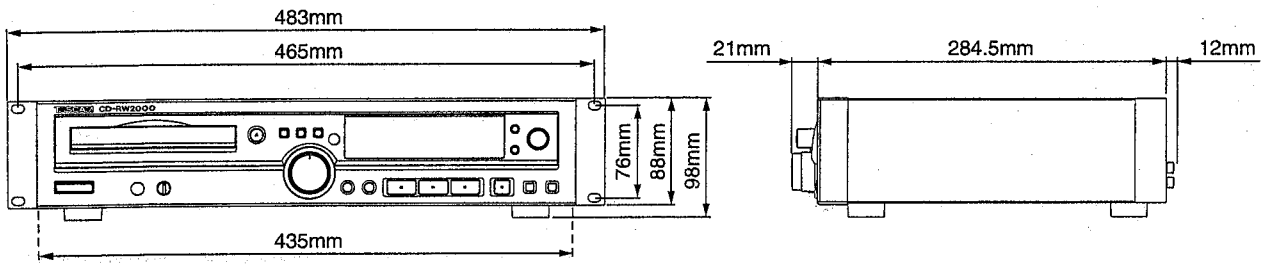
2. SPECIFICATIONS
仕様

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 (record-ing)
Dynamic range:	94 dB (playback), 92 dB (record-ing)
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 +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 +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

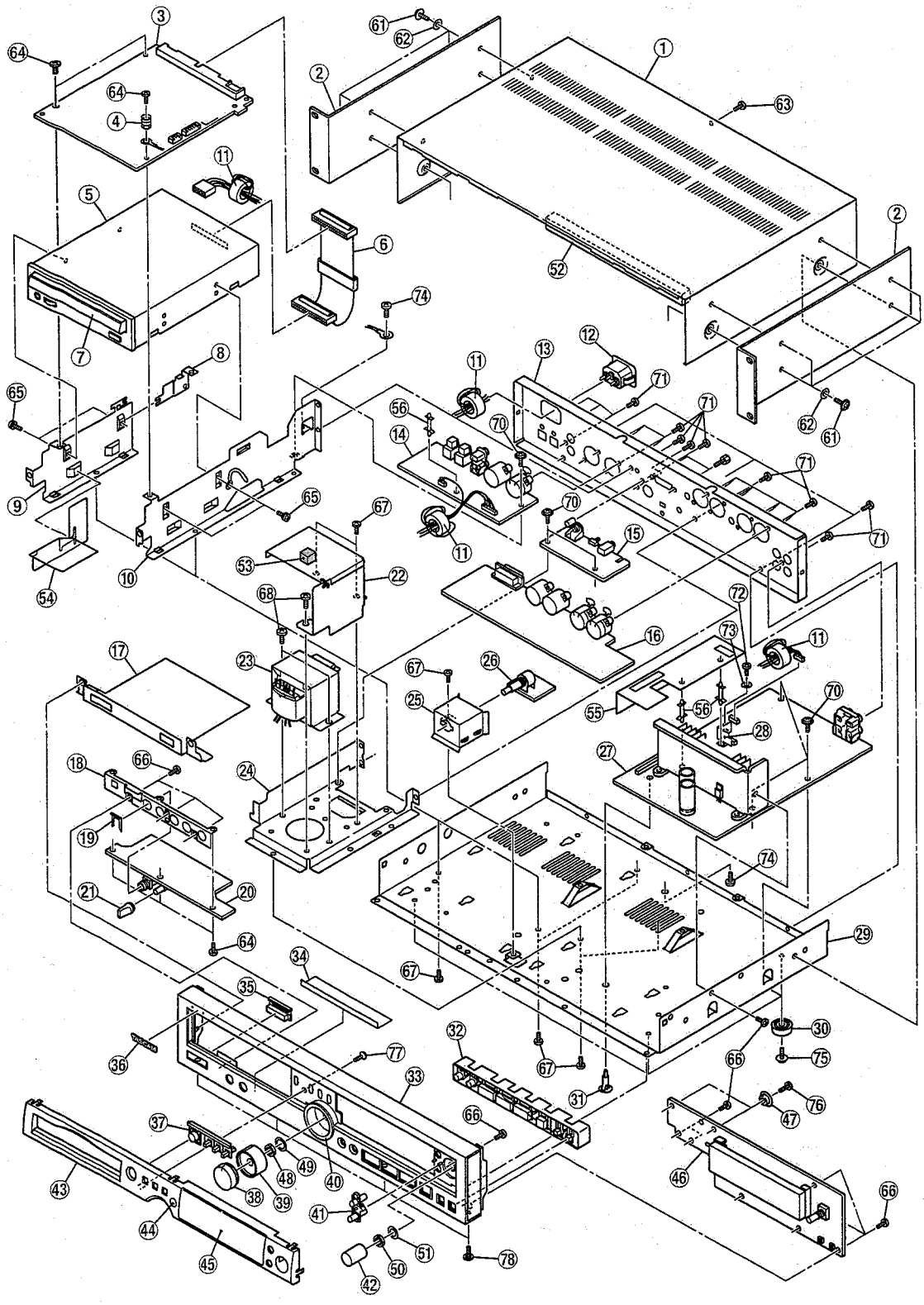
注 意

- 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

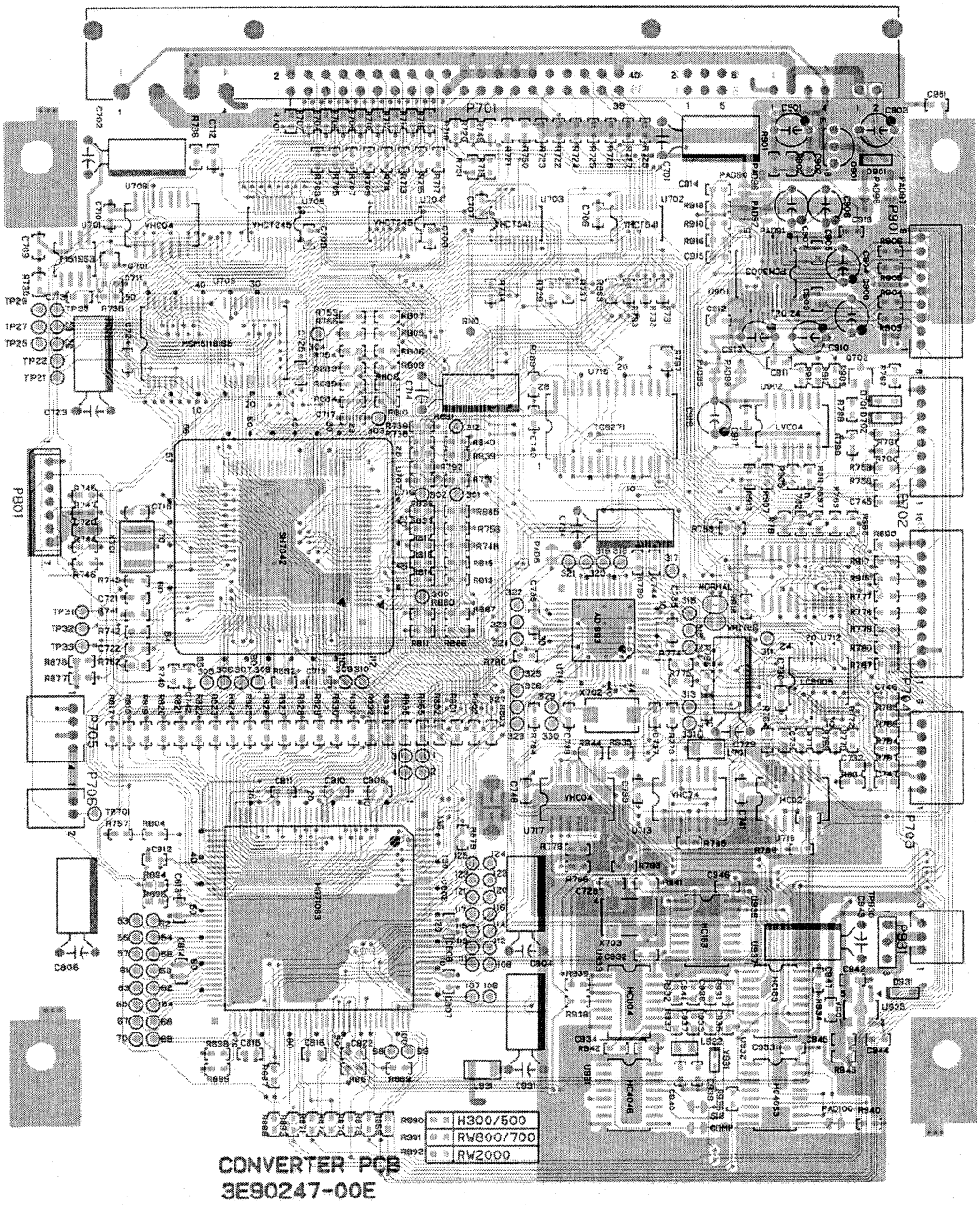
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1-52	*3M0112800A	CUSHION, WIRE PROTECT	
1-53	*3M0112500A	CUSHION, SHIELD CASE	
1-54	*3M0110800A	SHEET, BARRIER PSW	
1-55	*3M0099200B	SHEET, BARRIER E.PWR [K, E, UK, A]	
1-56	*3M0099100A	SUPPORT, PCB CBS-15	
1-61	*3B0001812A	SCREW, J, S M3X12 (BLK)	
1-62	3M002020	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

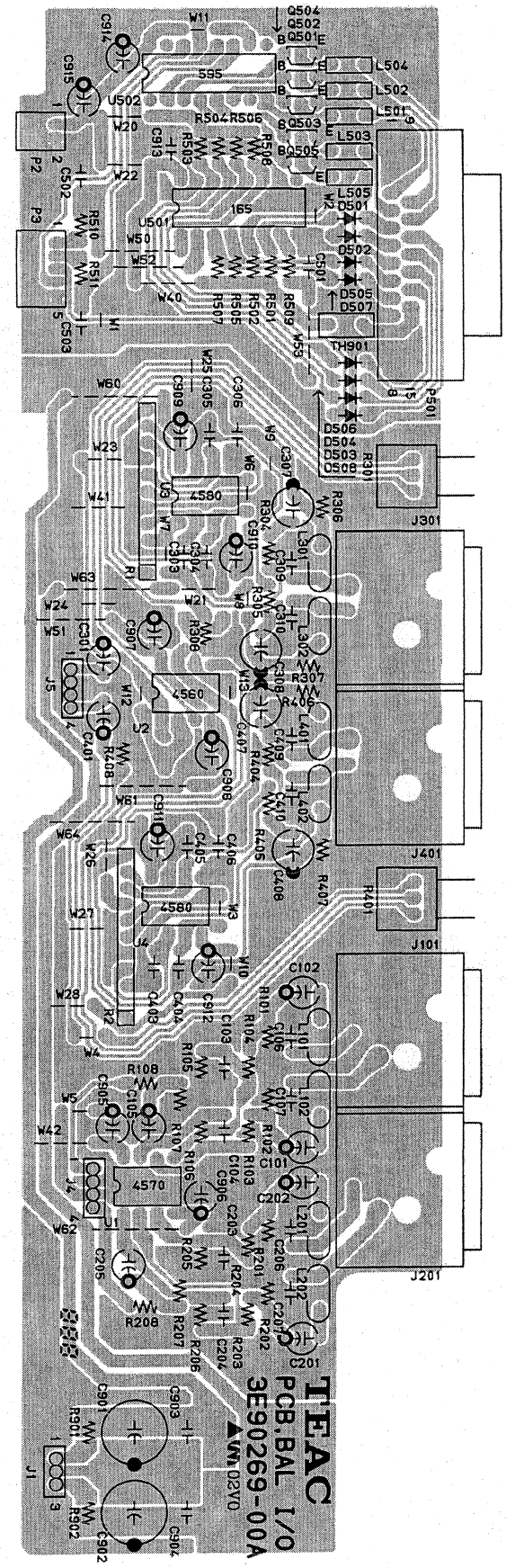
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	*3D0038700A	OWNER'S MANUAL, JAPANESE [J]	
	*3D0038800A	OWNER'S MANUAL, ENGLISH [EXCEPT J]	
	*3E0137100A	REMOTE CONTROL UNIT, RC-RW2000	
	*3M0028300A	RACK MOUNT SCREW KIT	
⚠	*3E014140	POWER CORD [J]	
⚠	*3E014150	POWER CORD [US/C]	
⚠	*3E014160	POWER DORD [E]	
⚠	*3E014170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

6. PC BOARDS AND PARTS LIST
基板図とパーツリスト

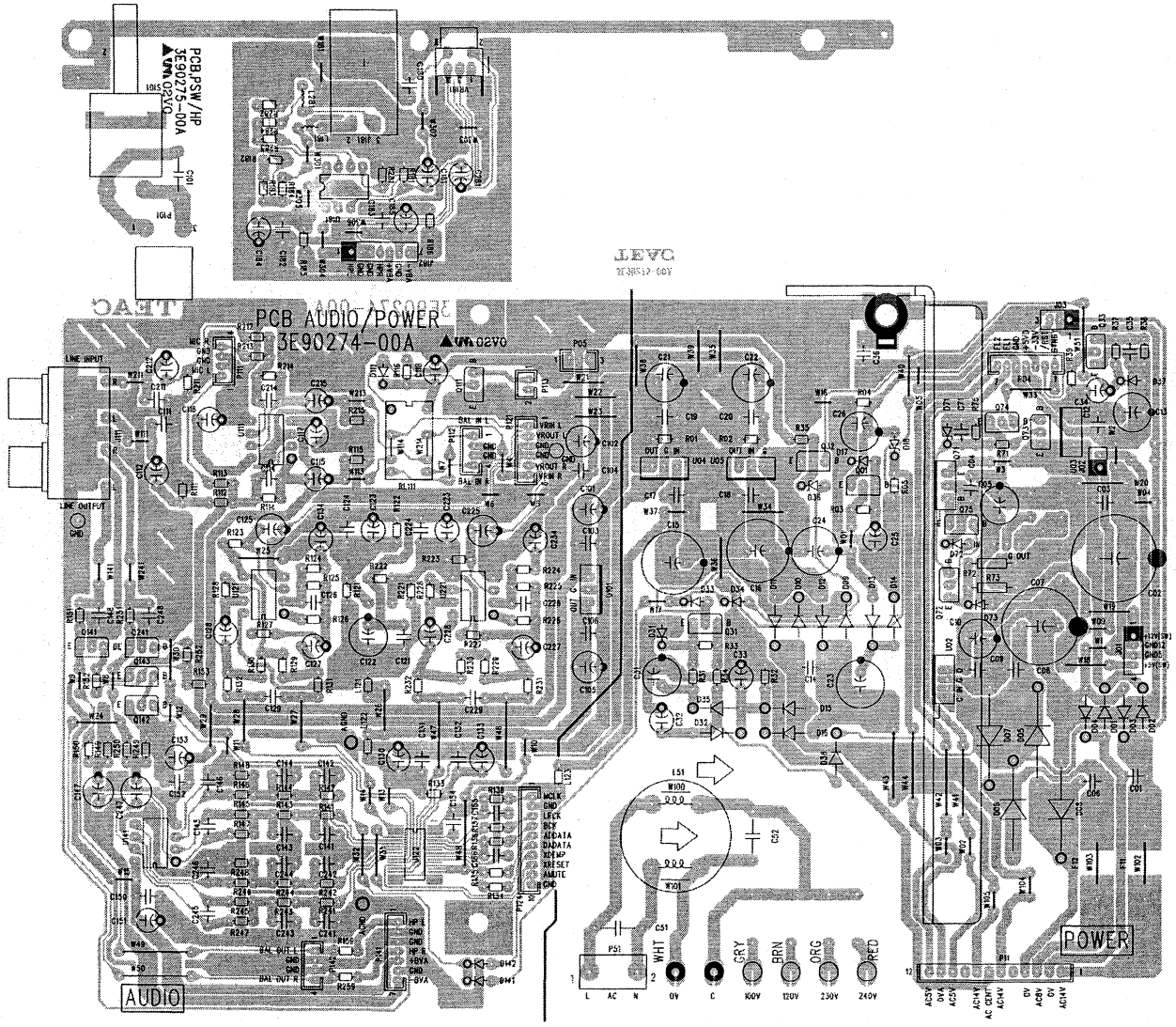
CONVERTER PCB



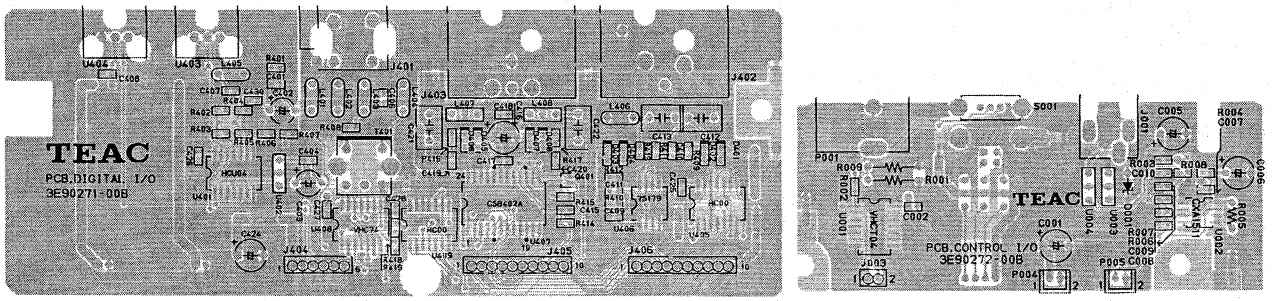
BAL I/O PCB


TEAC
PCB.BAL I/O
3E90269-00A
J301
J401
J101
J201
J1
J5
J7
P2
P3
U501
U502
U3
U2
4580
4560
4570
595
165
TH901

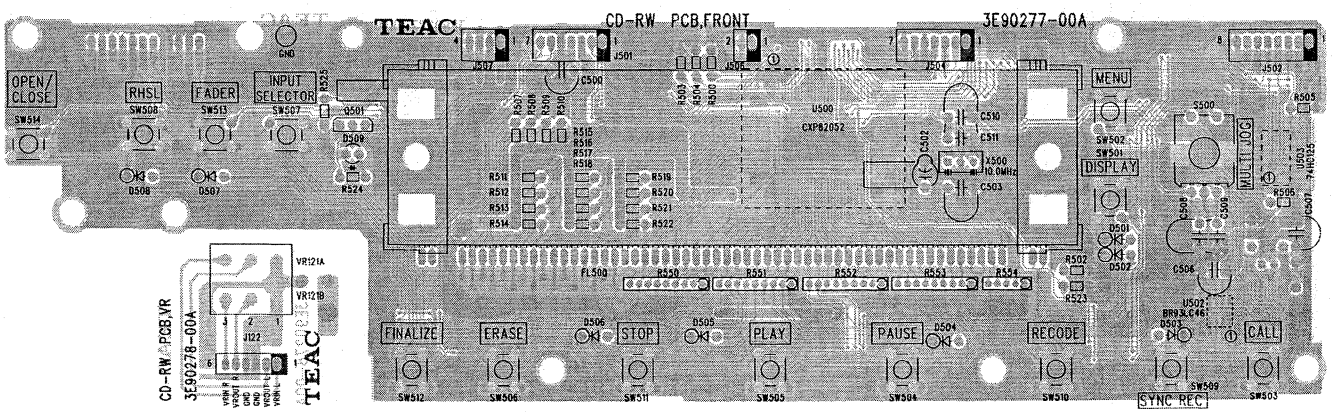
GATHER AUDIO PCB (AUDIO/POWER PCB, PSW/HP PCB)



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 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

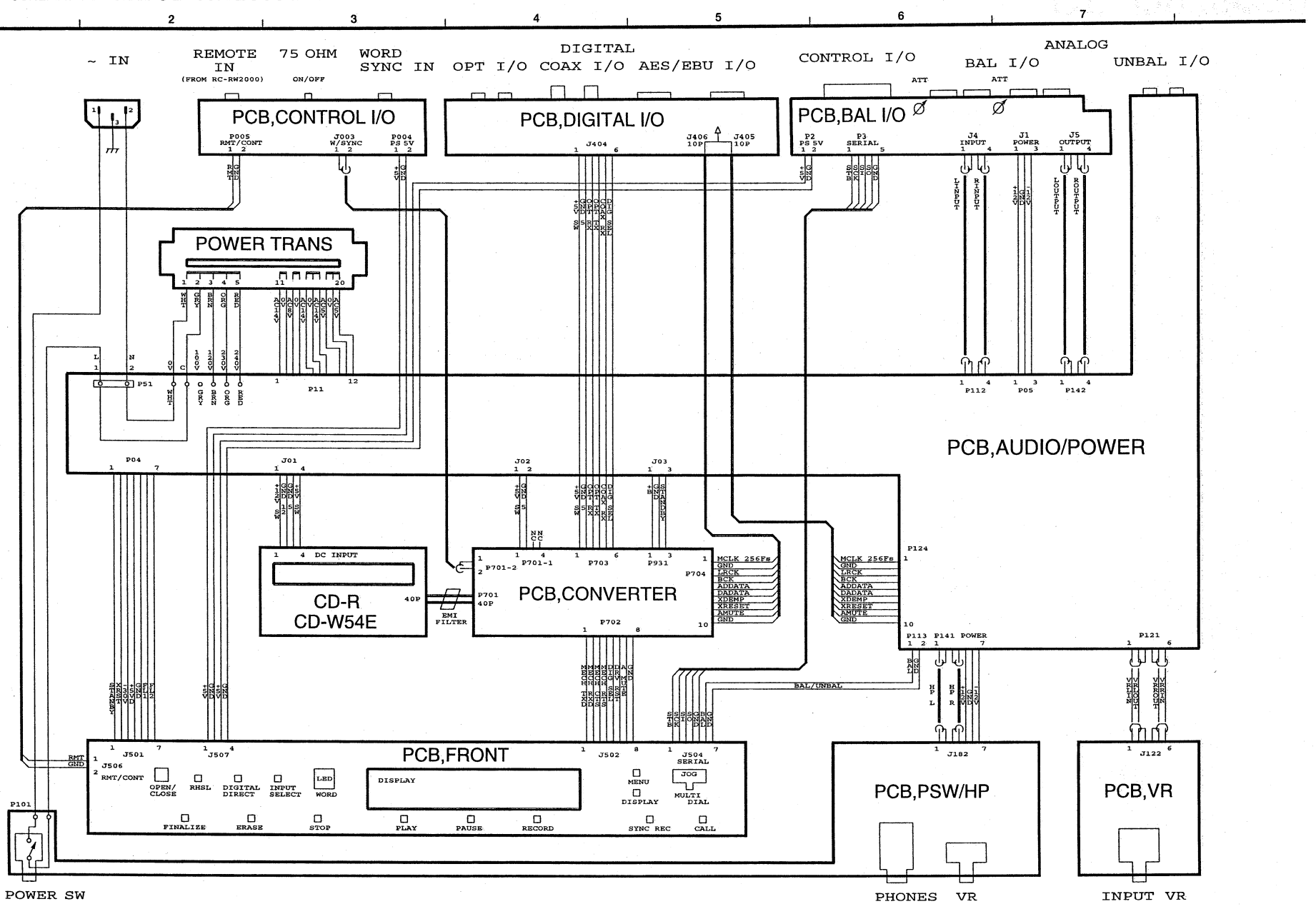
REF. NO.		PARTS NO.	DESCRIPTION
P51		3E002170	PIN, TERMINAL LAPPING 2P
P112		3E000680	PLUG, CONN. 4P B4B-PH-K
P113		3E014250	PLUG, CONN. S 8B-PH-K-S
P121		3E010380	PLUG, CONN. B 6B-PH-K-S
P124		3E010420	PLUG, CONN. B10B-PH-K-S
P141		3E010390	PLUG, CONN. B 7B-PH-K-S
P142		3E000680	PLUG, CONN. 4P B4B-PH-K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

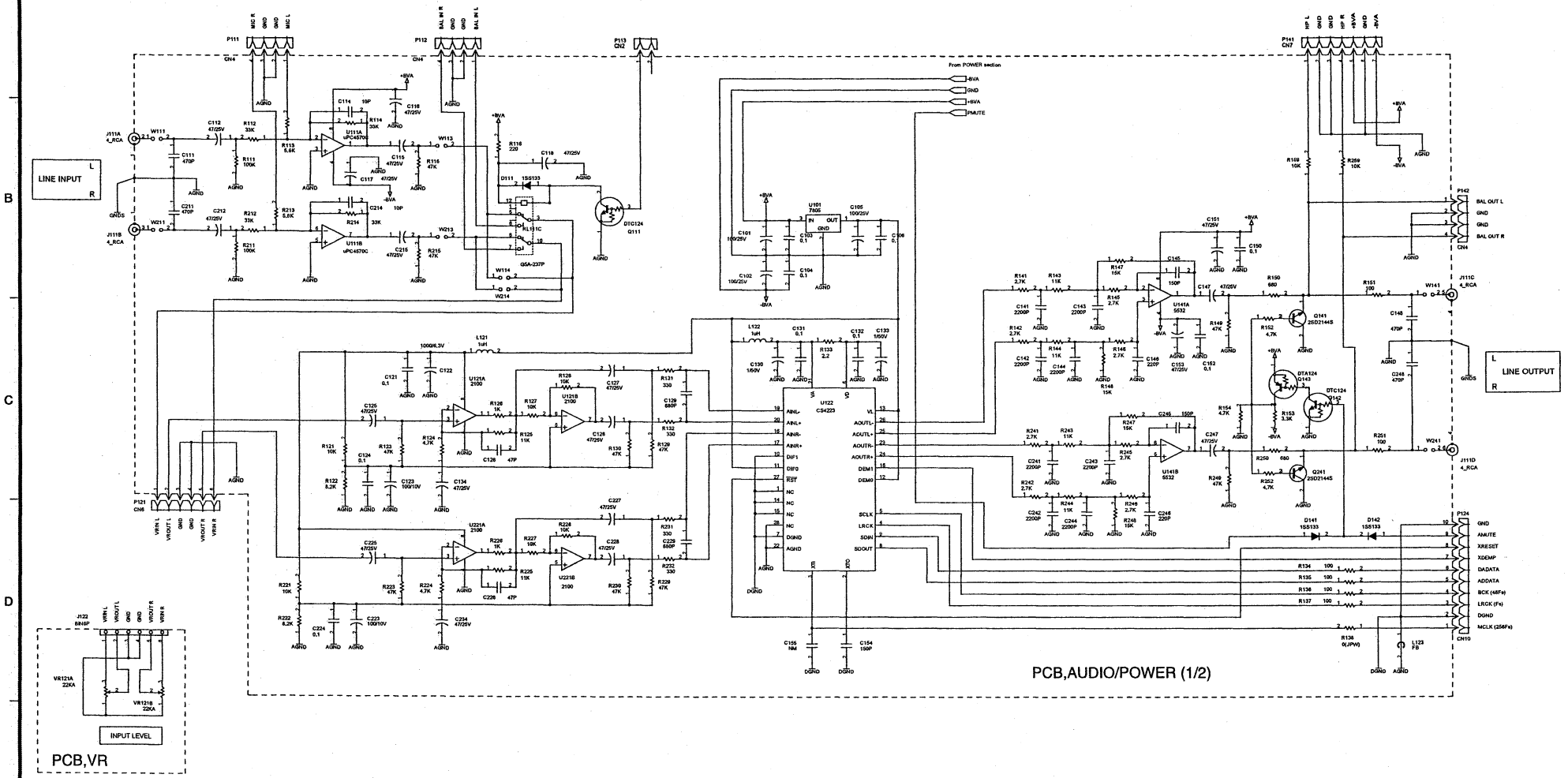
REF. NO.	PARTS NO.	DESCRIPTION
	* 3E9527000A	PCB ASSY, GATHER DIGITAL I/O
		PCB ASSY, DIGITAL I/O
D401-408	3S002984	DIODE, 1SS355
J401	3E011850	JACK, RJ-1060A-31-0541A
J402	3E010320	JACK, XLR NC3FAH1
J403	3E010330	PLUG, XLR NC3MAH
J404	3E0140800A	WIREA, D I/O
J405	3E0141300A	WIREA, AUDIO-CON 10P
J406	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

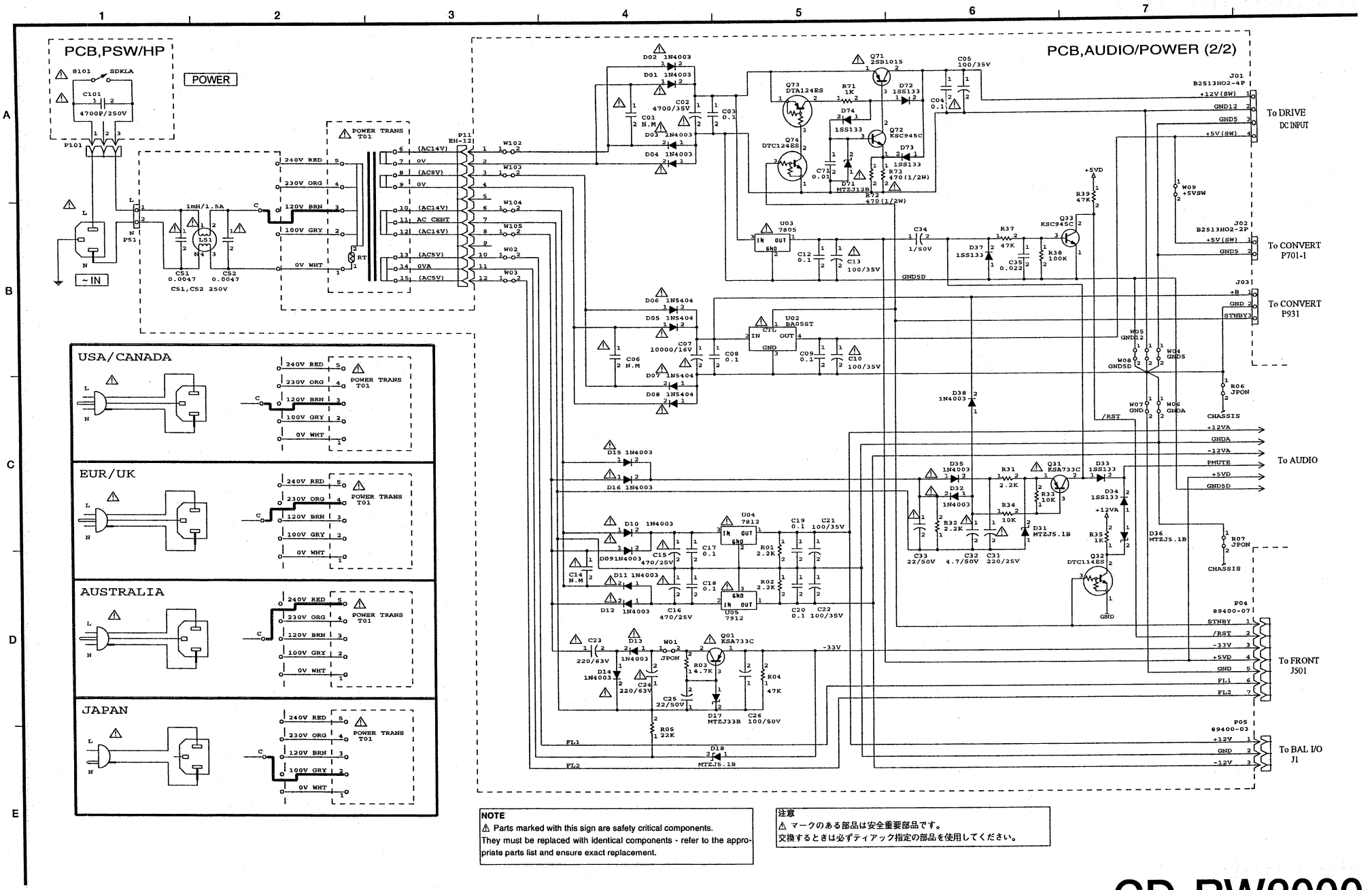
GATHER FRONT PCB ASSY (FRONT PCB ASSY, VR PCB ASSY)

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 SKQSAB HMR-187
S500	3E007320	SW, ENCODER EC11B15244
U500	3S0035000A	IC, CXP82040-R0QFR
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



CD Rewritable Recoder **CD-RW2000**

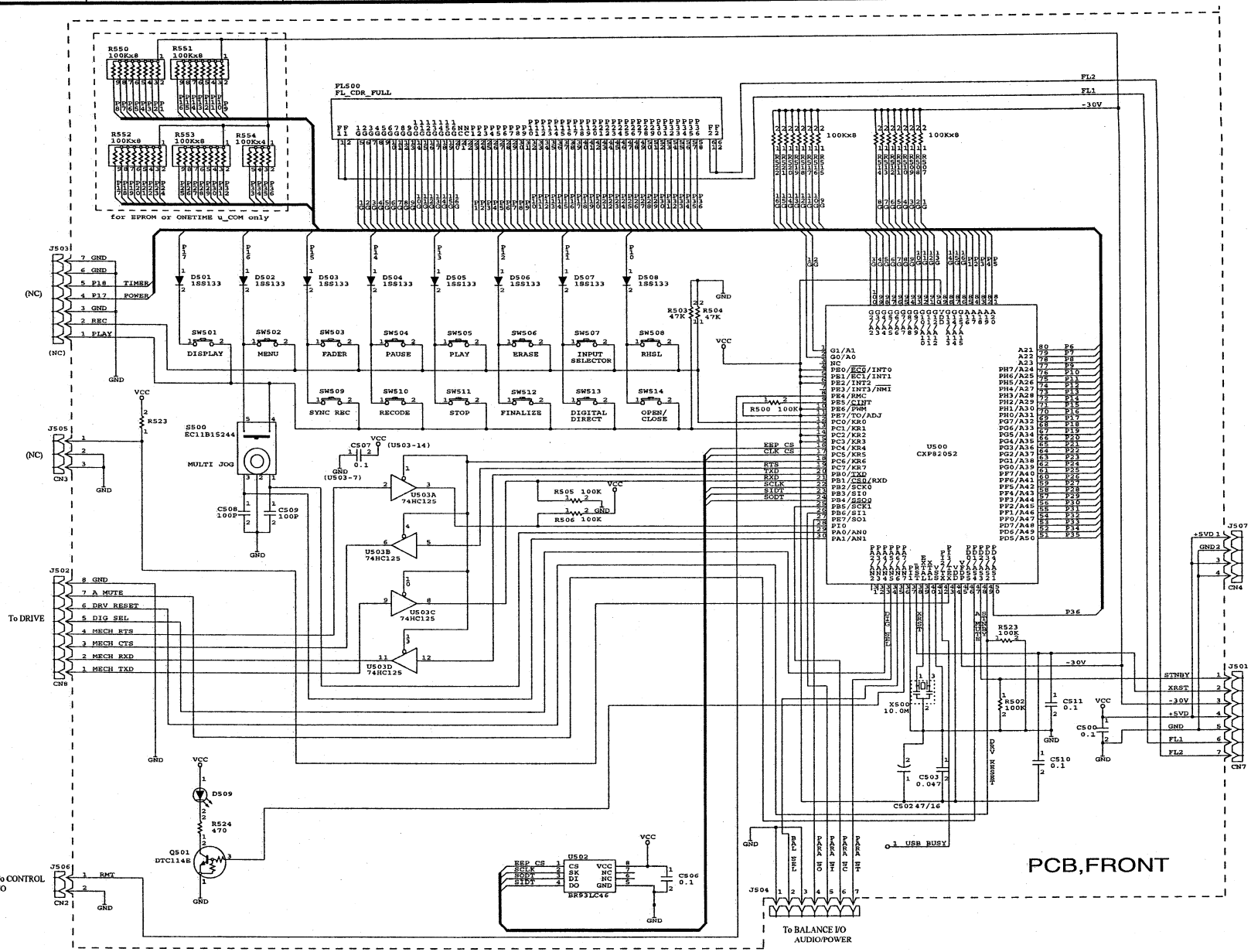

LINE INPUT
LINE OUTPUT
PCB,AUDIO/POWER (1/2)
PCB,VR
INPUT LEVEL

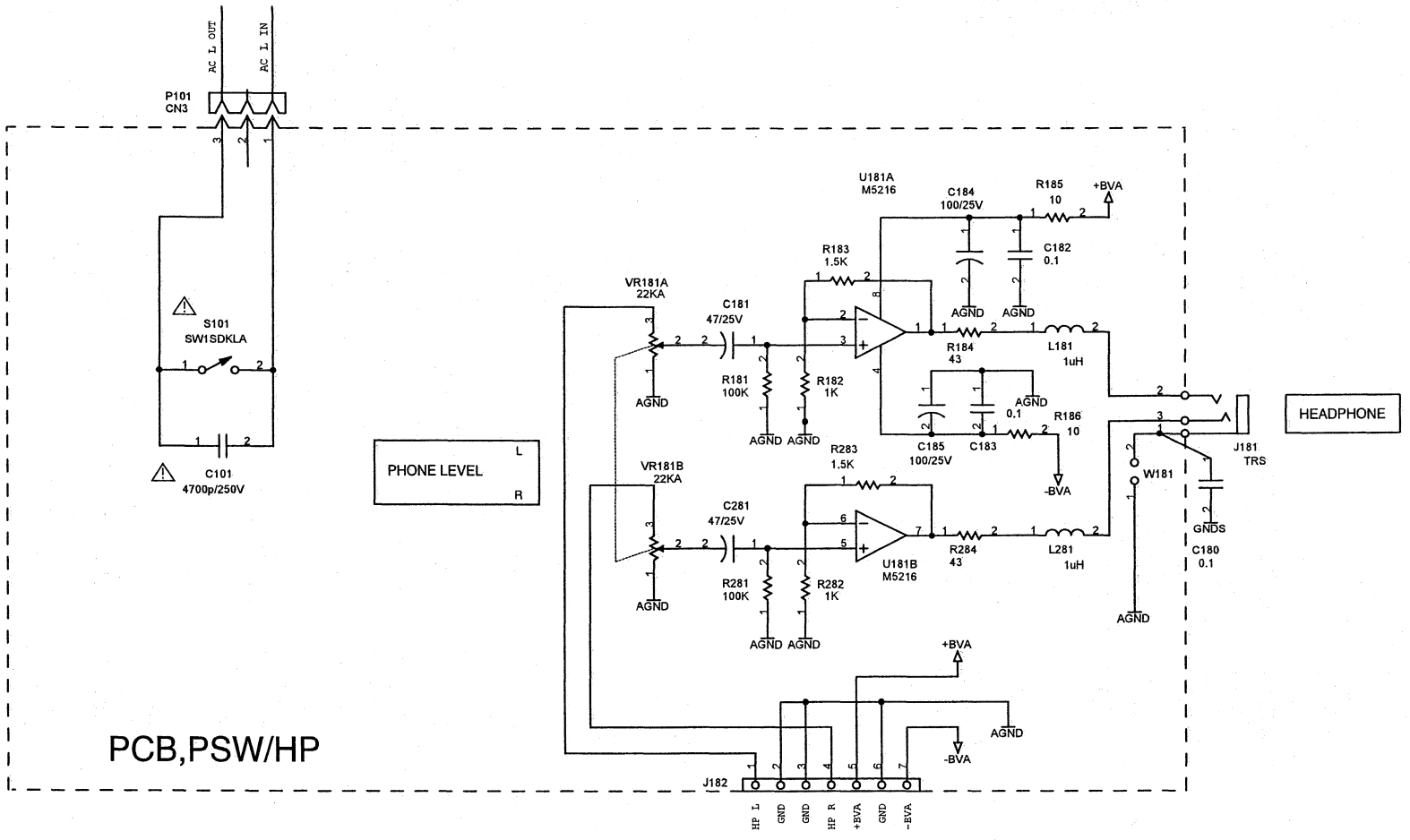


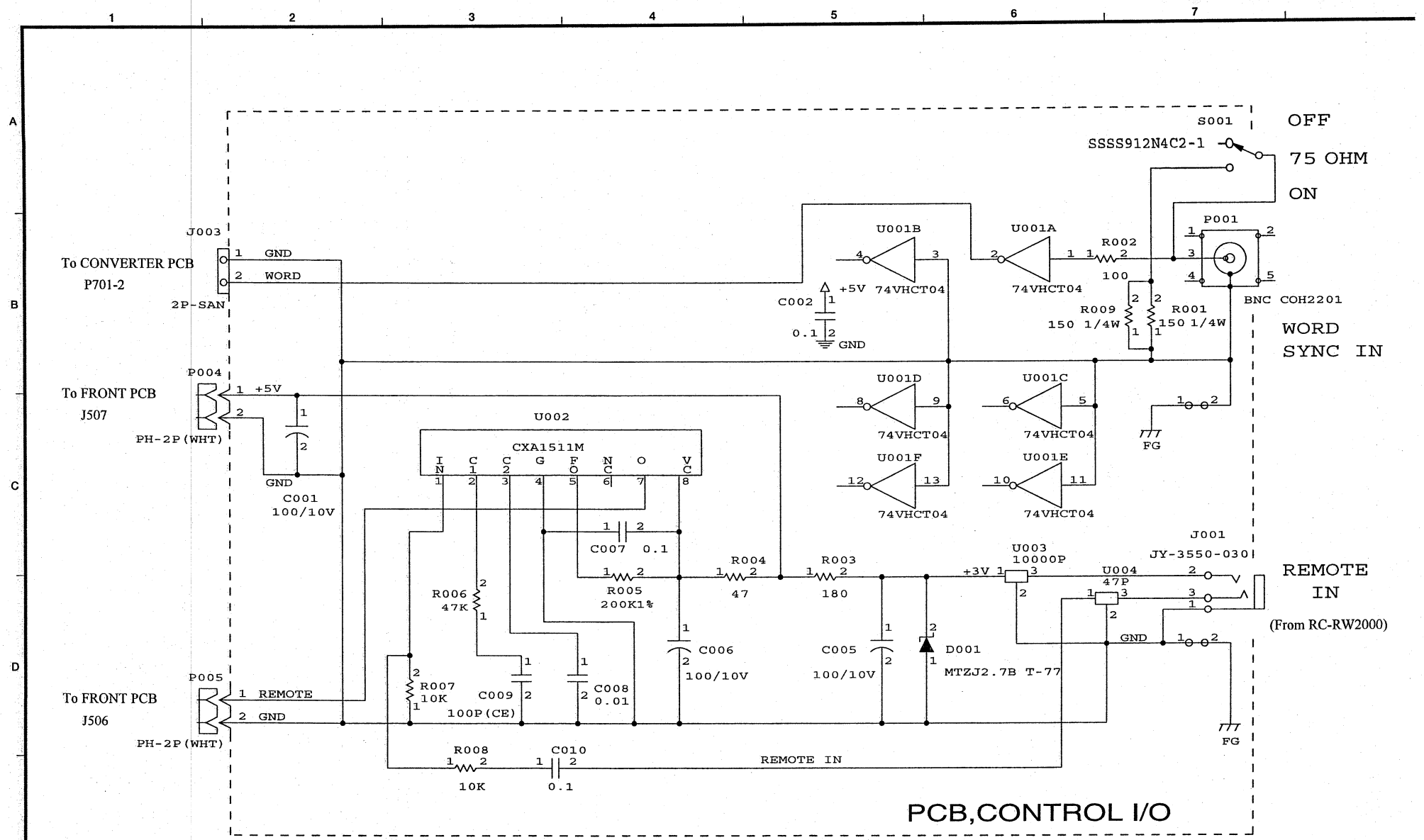
NOTE
⚠ Parts marked with this sign are safety critical components.
They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

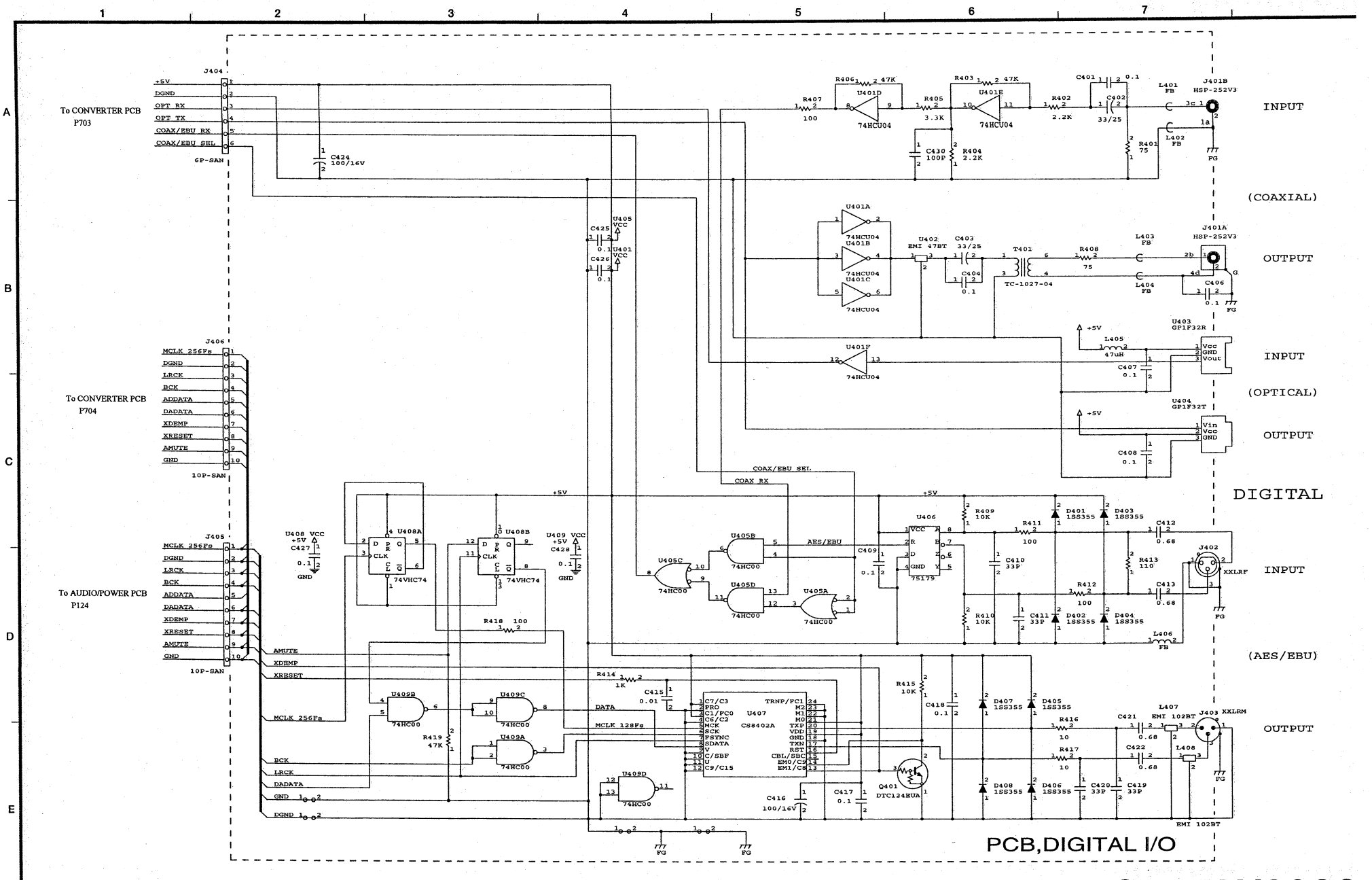
注意
⚠ マークのある部品は安全重要部品です。
交換するときは必ずティアック指定の部品を使用してください。

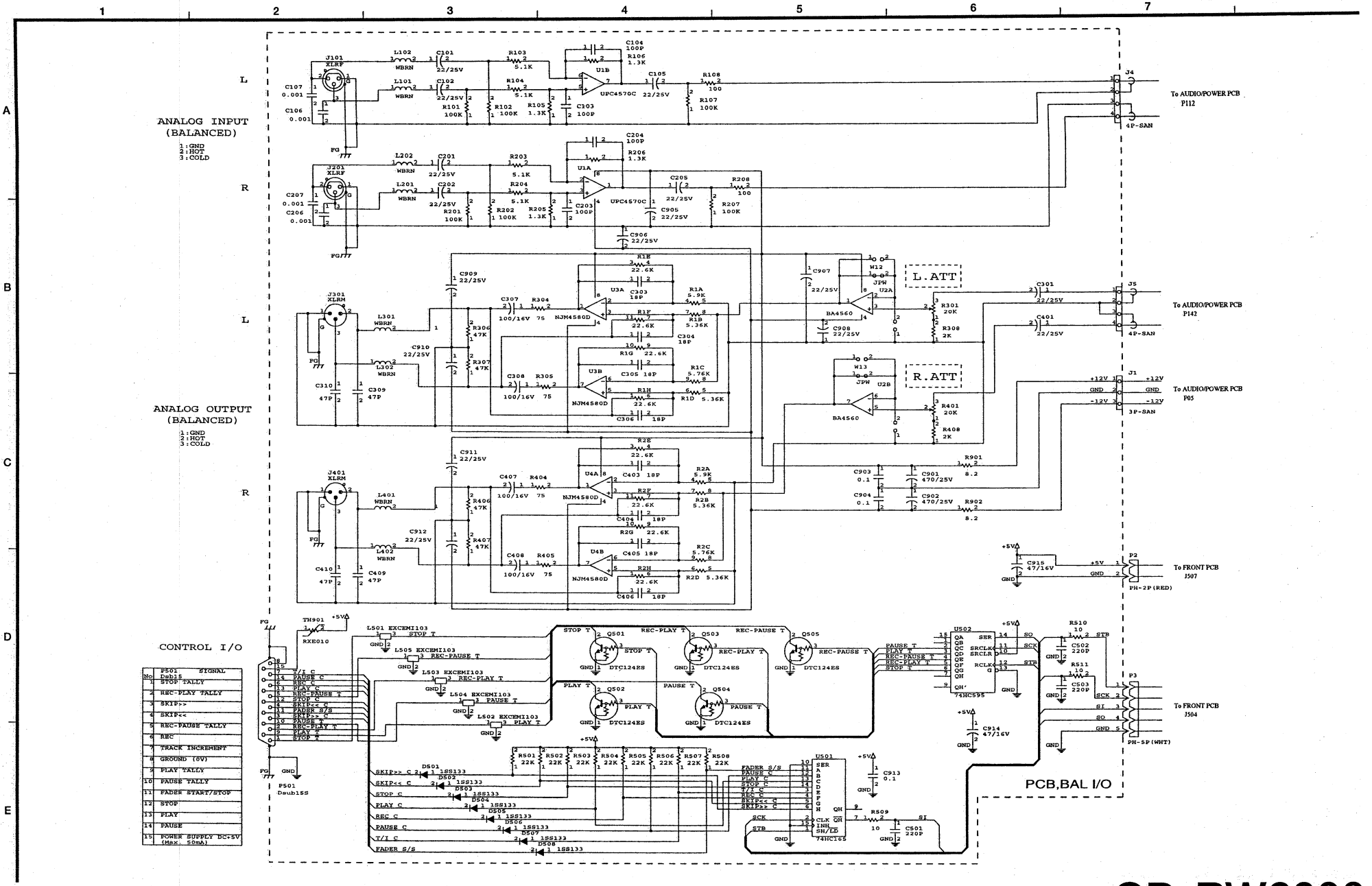
CD Rewritable Recorder **CD-RW2000**


PCB,FRONT
for EPROM or ONETIME u_COM only
To DRIVE
To CONTROL I/O
To BALANCE I/O AUDIO/POWER
To CONTROL I/O BALANCE I/O
To POWER
DISPLAY
MENU
FADER
PAUSE
PLAY
ERASE
INPUT SELECTOR
RHSL
SYNC REC
RECODE
STOP
FINALIZE
DIGITAL DIRECT
OPEN/ CLOSE
MULTI JOG
CXP82052
BR93LC46
74HC125
DTC114E
10.0M

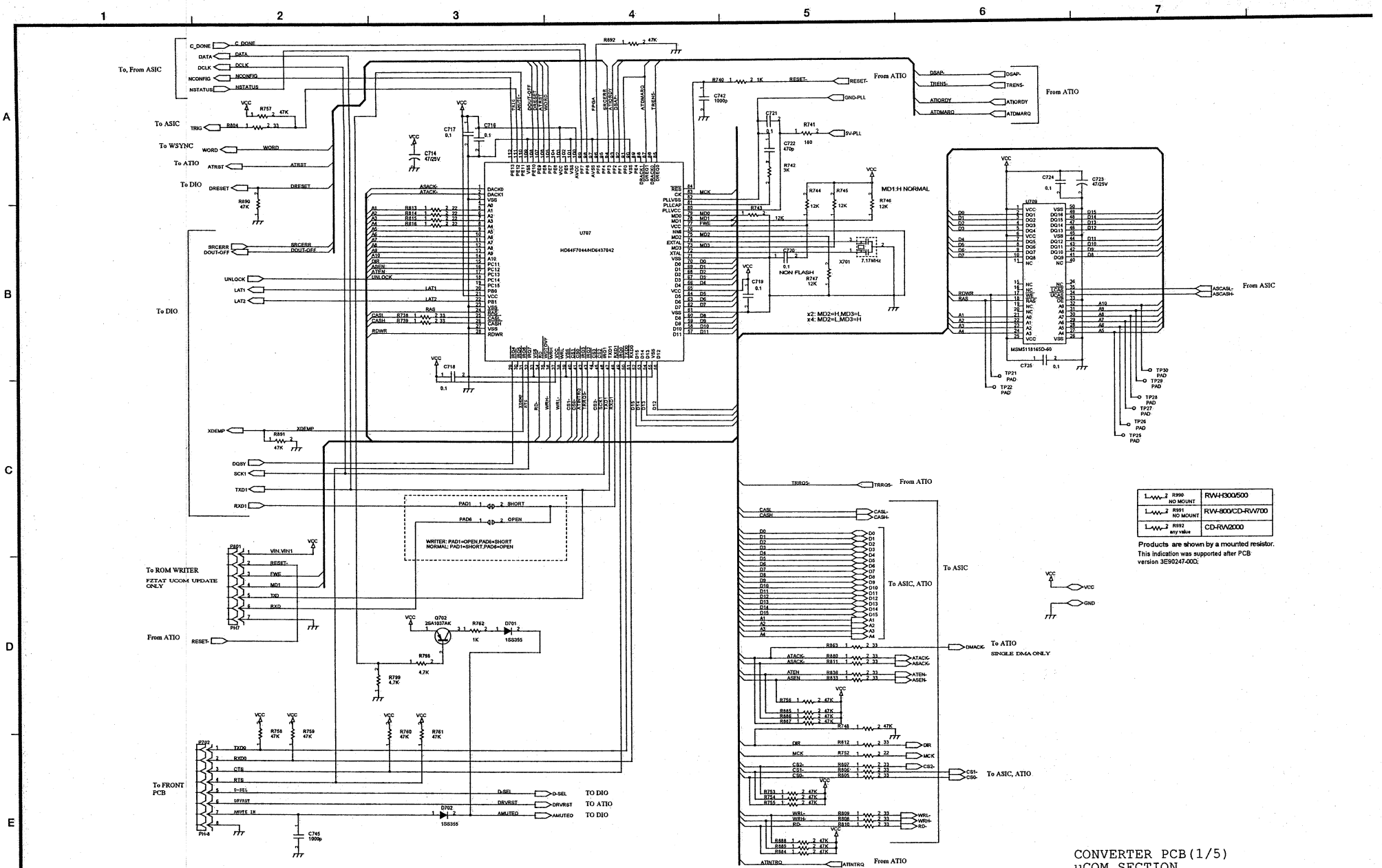

P101
CN3
AC L OUT
AC L IN
S101
SW1SDKLA
C101
4700p/250V
PHONE LEVEL
L
R
PCB,PSW/HP
U181A
M5216
U181B
M5216
VR181A
22KA
VR181B
22KA
C181
47/25V
C281
47/25V
R181
100K
R281
100K
R182
1K
R282
1K
R183
1.5K
R283
1.5K
R184
43
R284
43
L181
1uH
L281
1uH
C184
100/25V
C185
100/25V
C182
0.1
C183
0.1
C180
0.1
R185
10
R186
10
+BVA
-BVA
AGND
GNDS
W181
J181
TRS
HEADPHONE
J182
HP L
GND
GND
HP R
+BVA
GND
-BVA


S001
SSSS912N4C2-1
OFF
75 OHM
ON
P001
BNC COH2201
WORD SYNC IN
J003
To CONVERTER PCB
P701-2
2P-SAN
1 GND
2 WORD
U001B
U001A
74VHCT04
R002
100
R009
150 1/4W
R001
150 1/4W
C002
0.1
+5V
GND
P004
To FRONT PCB
J507
PH-2P(WHT)
1 +5V
2
GND
C001
100/10V
U002
CXA1511M
IN C1 C2 G FO NC O VC
1 2 3 4 5 6 7 8
U001D
U001C
U001F
U001E
FG
C007 0.1
R004
47
R003
180
R005
200K1%
R006
47K
C006
100/10V
C005
100/10V
D001
MTZJ2.7B T-77
U003
10000P
U004
47P
+3V
J001
JY-3550-030
REMOTE IN
(From RC-RW2000)
GND
P005
To FRONT PCB
J506
PH-2P(WHT)
1 REMOTE
2 GND
R007
10K
C009
100P(CE)
C008
0.01
R008
10K
C010
0.1
REMOTE IN
PCB,CONTROL I/O

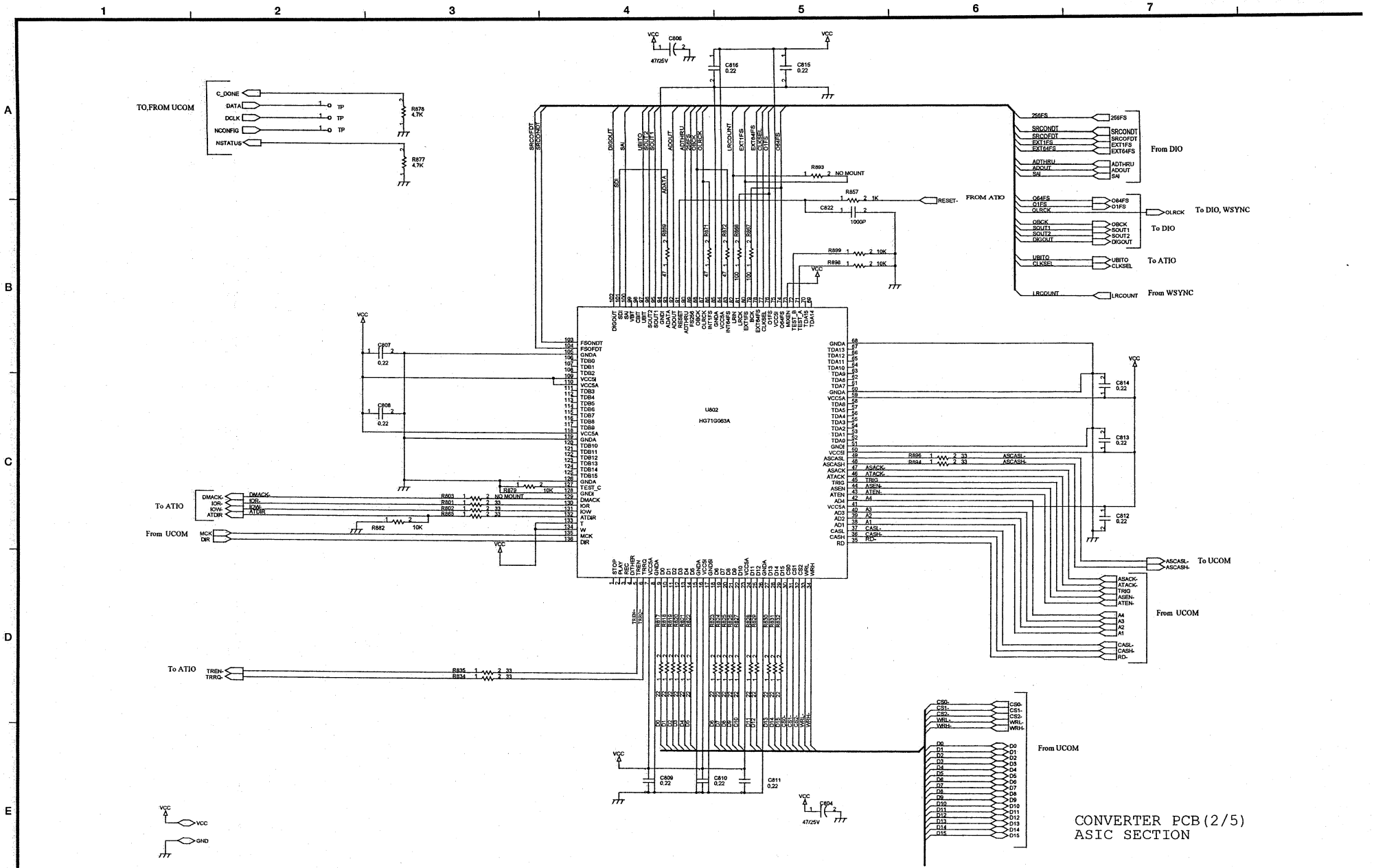

To CONVERTER PCB P703
To CONVERTER PCB P704
To AUDIO/POWER PCB P124
INPUT (COAXIAL)
OUTPUT
INPUT (OPTICAL)
OUTPUT
INPUT (AES/EBU)
OUTPUT
DIGITAL
PCB,DIGITAL I/O

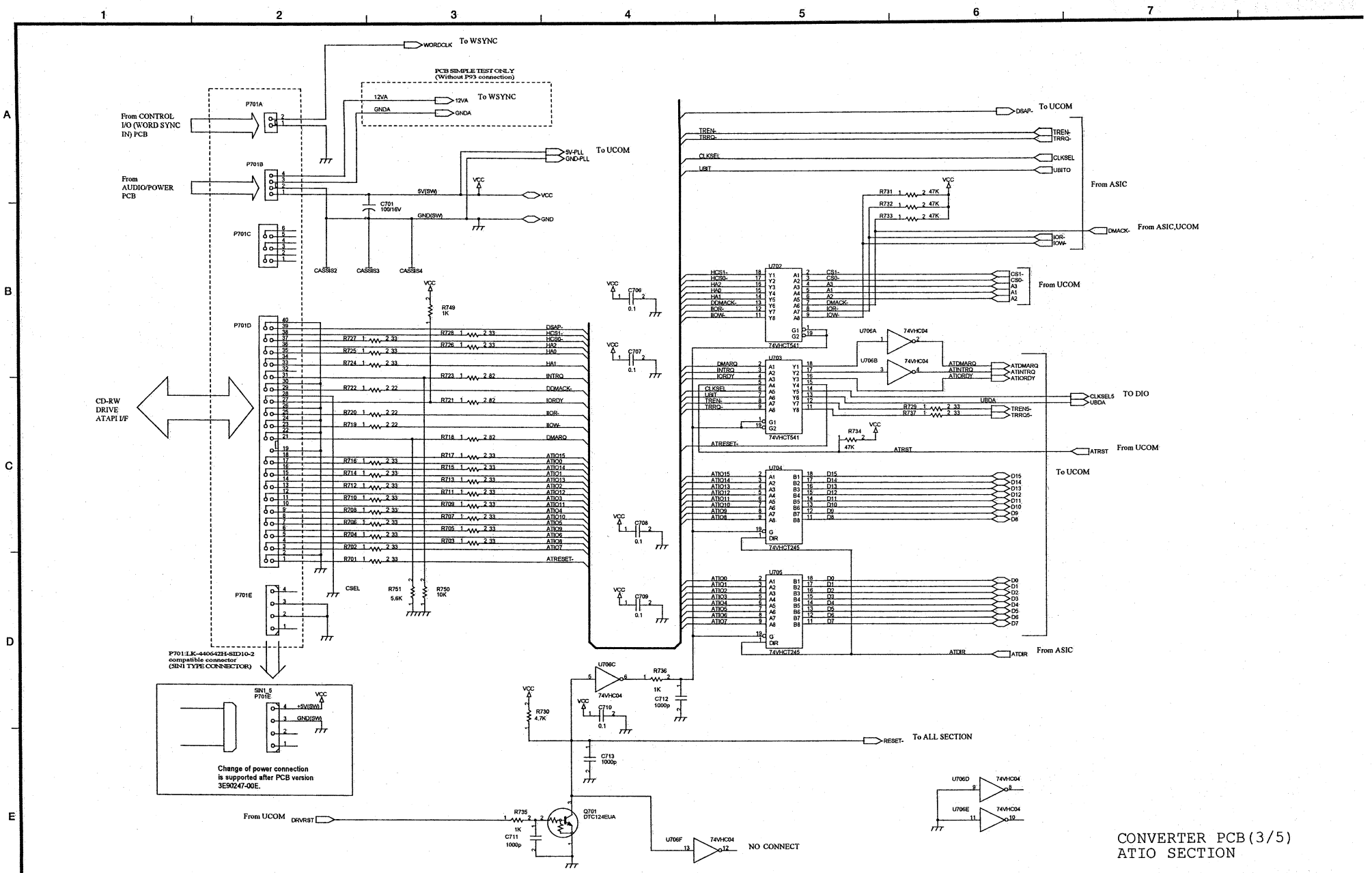


CD Rewritable Recoder CD-RW2000

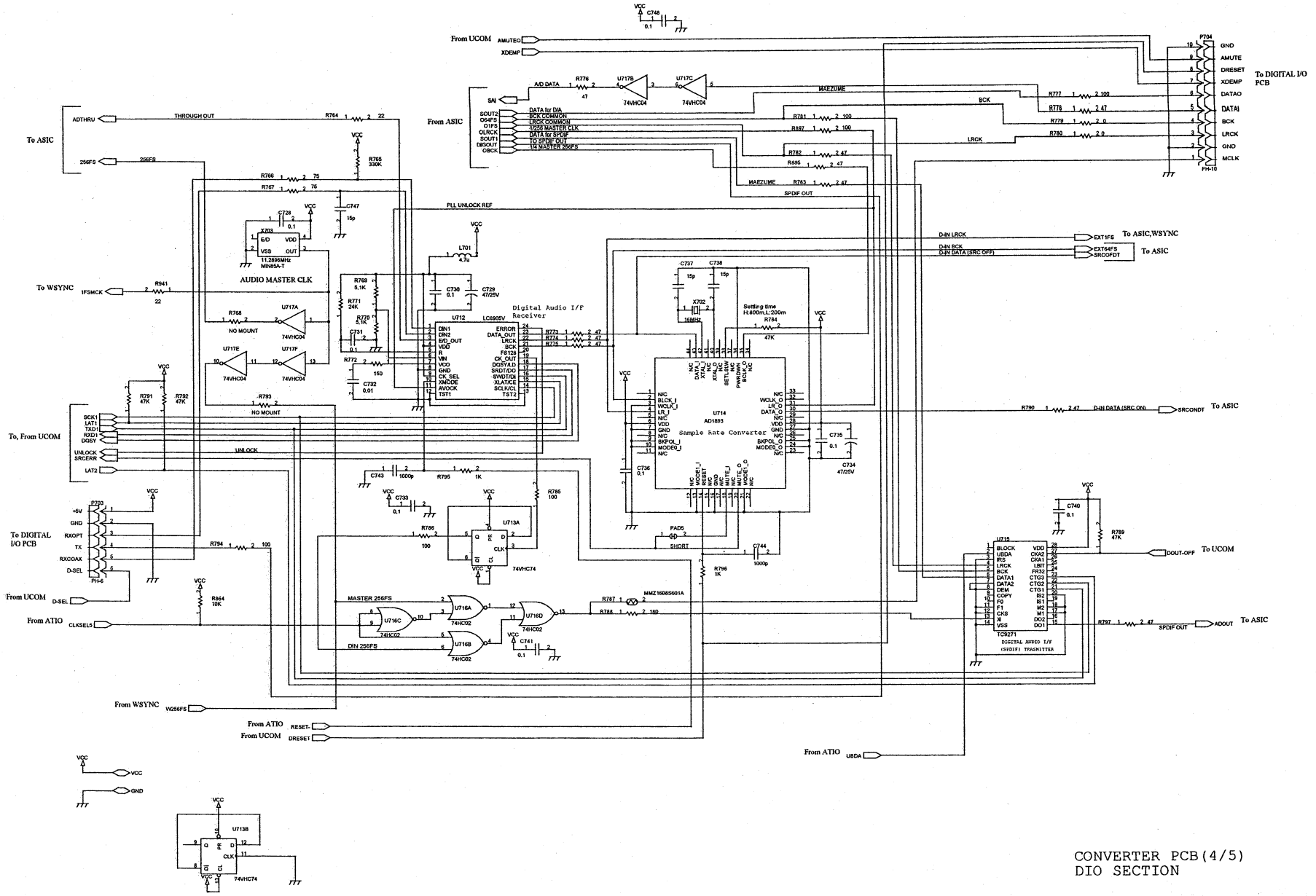


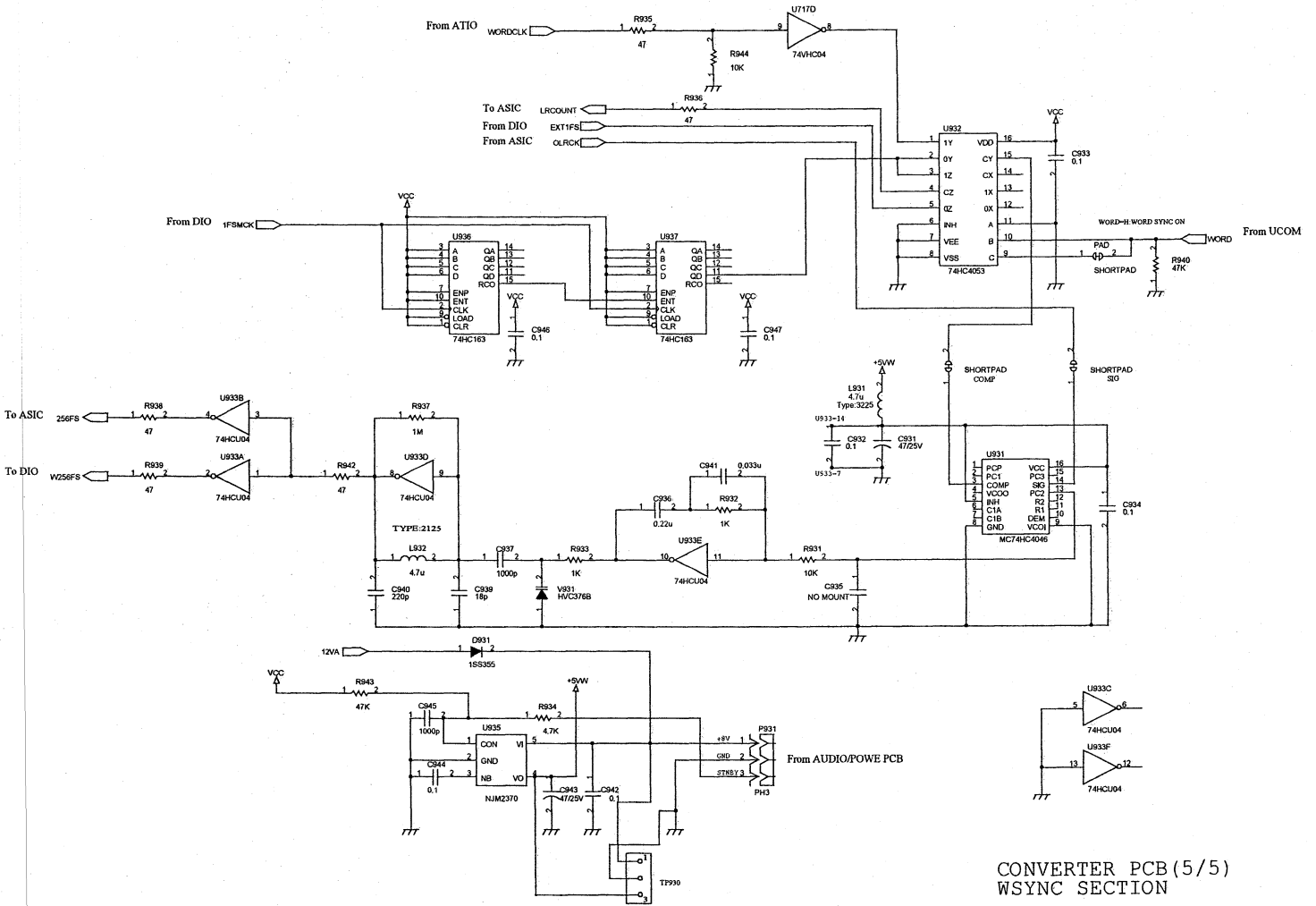
CONVERTER PCB(1/5)
uCOM SECTION


TO,FROM UCOM
C_DONE
DATA
DCLK
NCONFIG
NSTATUS
TP
R878 4.7K
R877 4.7K
VCC
C806 47/25V
C816 0.22
C815 0.22
From DIO
To DIO, WSYNC
To DIO
To ATIO
From WSYNC
R893 NO MOUNT
R857 1K
RESET-
FROM ATIO
C822 1000P
R899 10K
R898 10K
U802
HG71G063A
C807 0.22
C808 0.22
C814 0.22
C813 0.22
C812 0.22
R879 10K
R882 10K
R896 33
R894 33
ASCASL-
ASCASH-
To UCOM
From UCOM
To ATIO
From UCOM
R835 33
R834 33
C809 0.22
C810 0.22
C811 0.22
C804 47/25V
From UCOM
CONVERTER PCB(2/5)
ASIC SECTION



CONVERTER PCB(3/5)
ATIO SECTION


From UCOM
AMUTEO
XDEMP
To DIGITAL I/O PCB
From ASIC
To ASIC
To WSYNC
To, From UCOM
To DIGITAL I/O PCB
From UCOM
From ATIO
From WSYNC
From ATIO
From UCOM
From ATIO
AUDIO MASTER CLK
Digital Audio I/F Receiver
Sample Rate Converter
To ASIC,WSYNC
To ASIC
To ASIC
To UCOM
To ASIC
CONVERTER PCB(4/5)
DIO SECTION



CONVERTER PCB(5/5)
WSYNC 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）

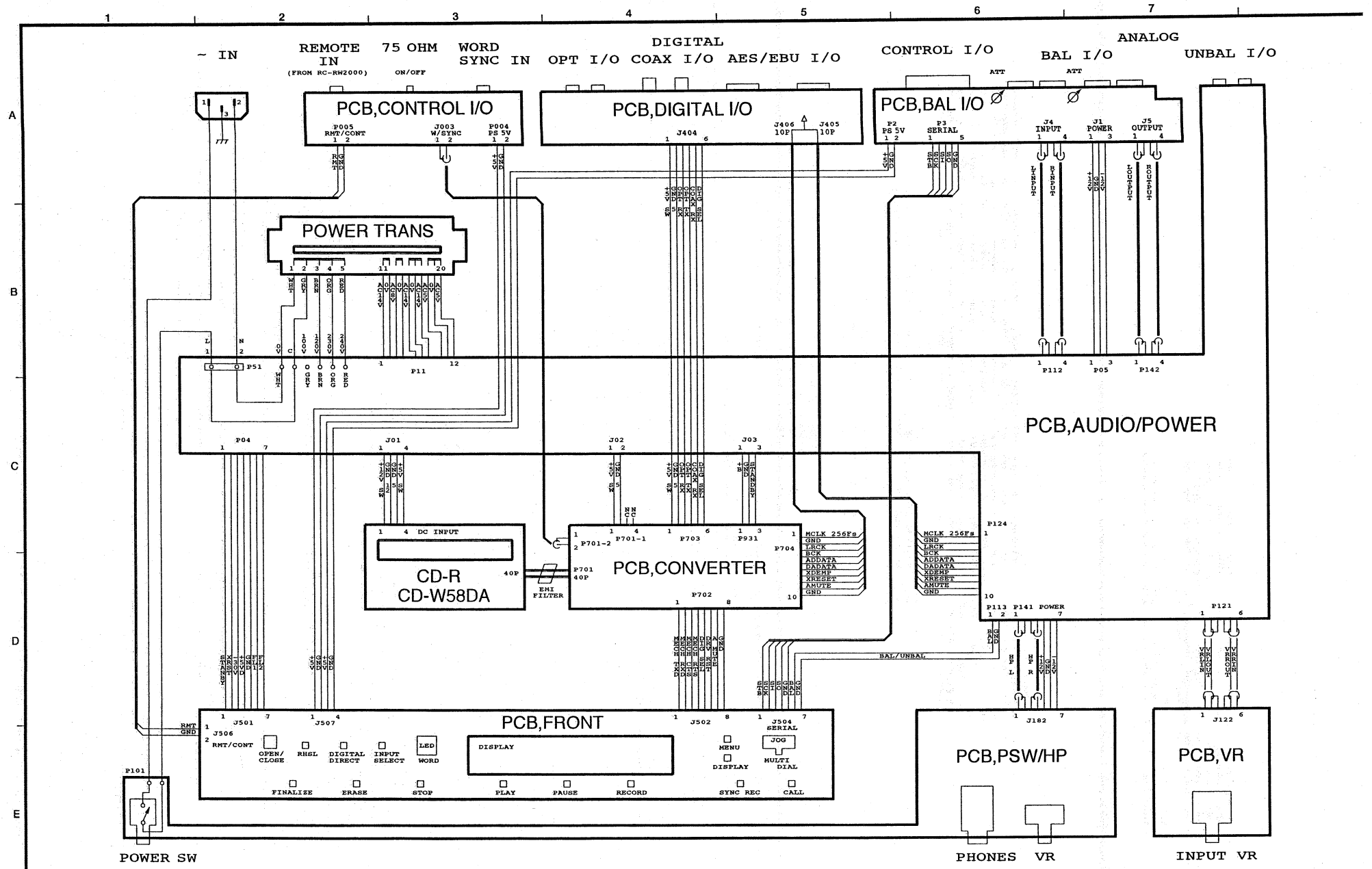
1..To adopt a new CD-RW DRIVE, related components have been changed with renewal of Converter MPU and Front MPU accordingly.
DRAM on Converter PCB Assy has been changed due to its availability.
CD-RW DRIVEを変更するとともに、関連部品を変更しました。
DRAM入手難の為にPCBA,CONVERTER RW2 U709を変更しました。

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

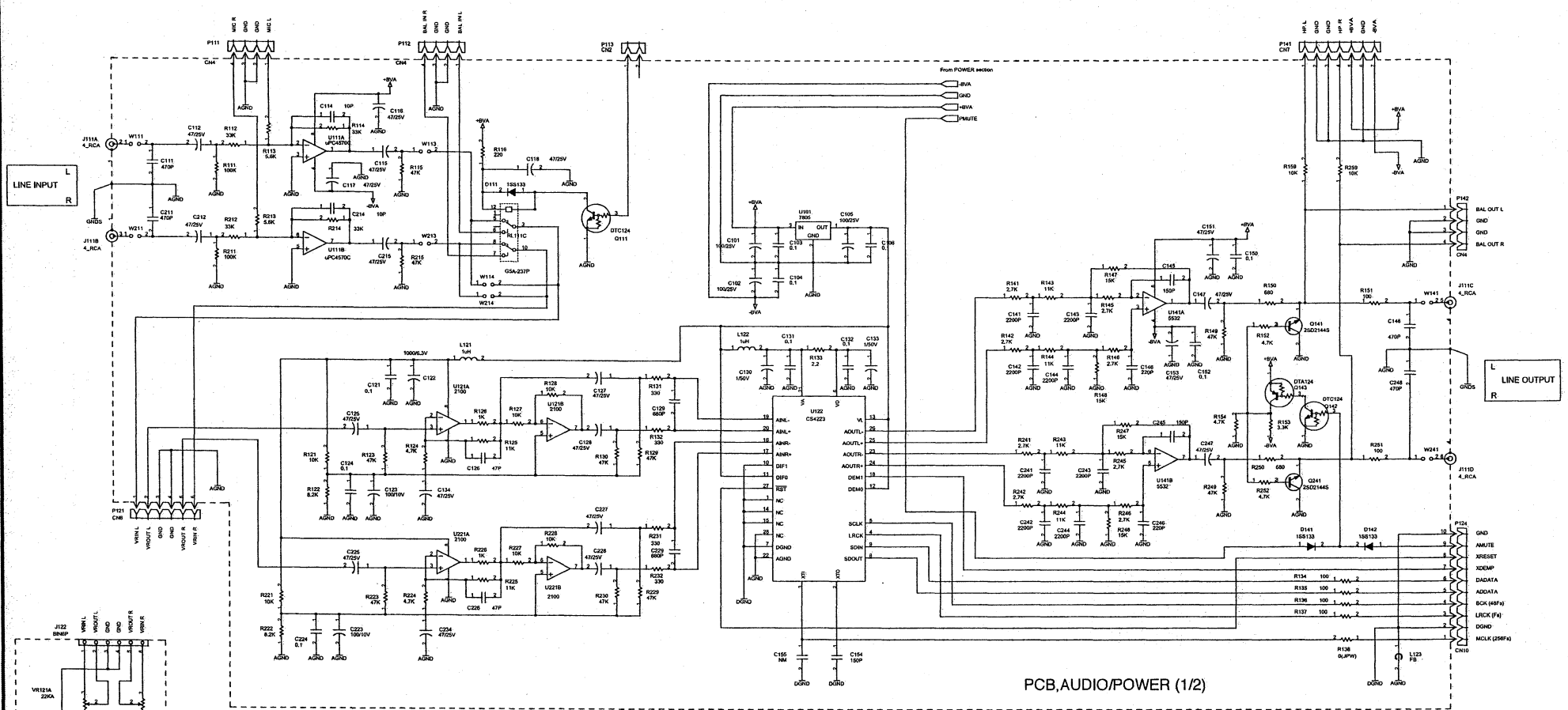
* This is newly registered P/N since CD-RW2000V3 is produced with an identical P/N.
Ensure the P/N by confirming the S/No. of the unit being repaired upon ordering it.
* CD-RW-2000V3は旧機と同一品番で生産されているため、新規に登録した品番です。
修理機の機番を確認のうえ、正しい品番で発注してください。

Effective: August, 2005



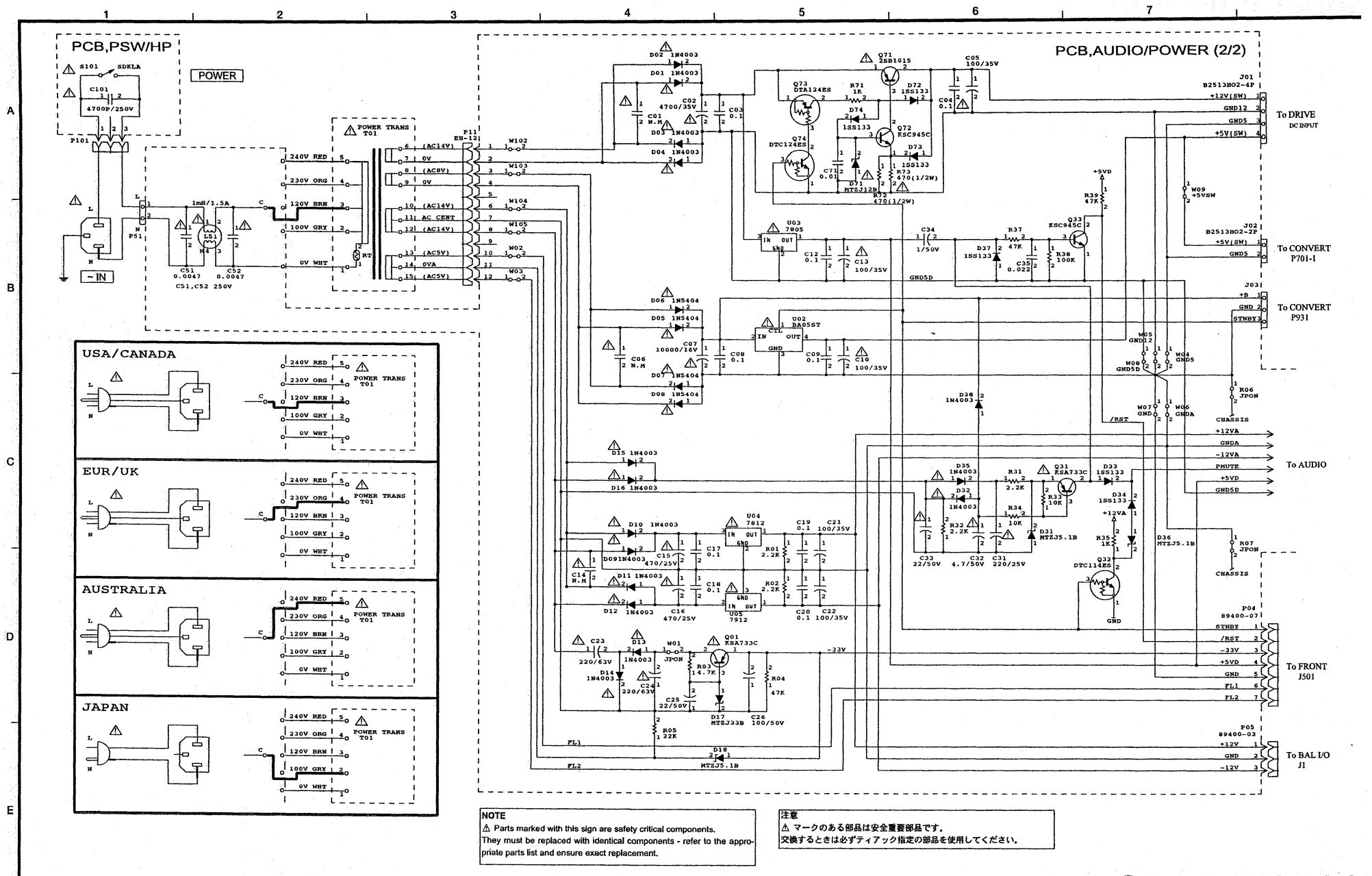
CD Rewritable Recorder **CD-RW2000**

2 nd Issue; August 2005



CD Rewritable Recorder **CD-RW2000**

2 nd Issue; August 2005



NOTE

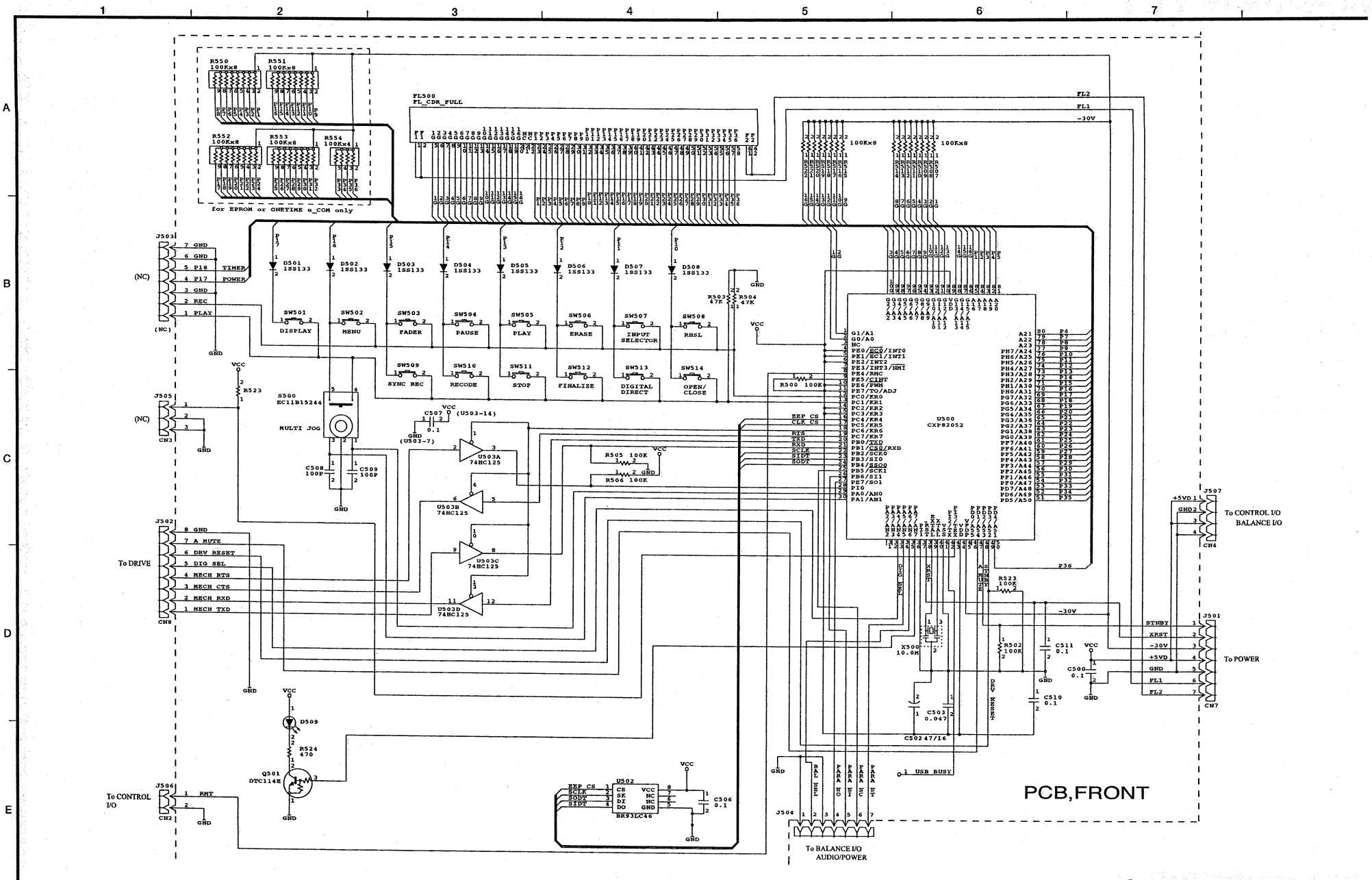
⚠ Parts marked with this sign are safety critical components.
They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

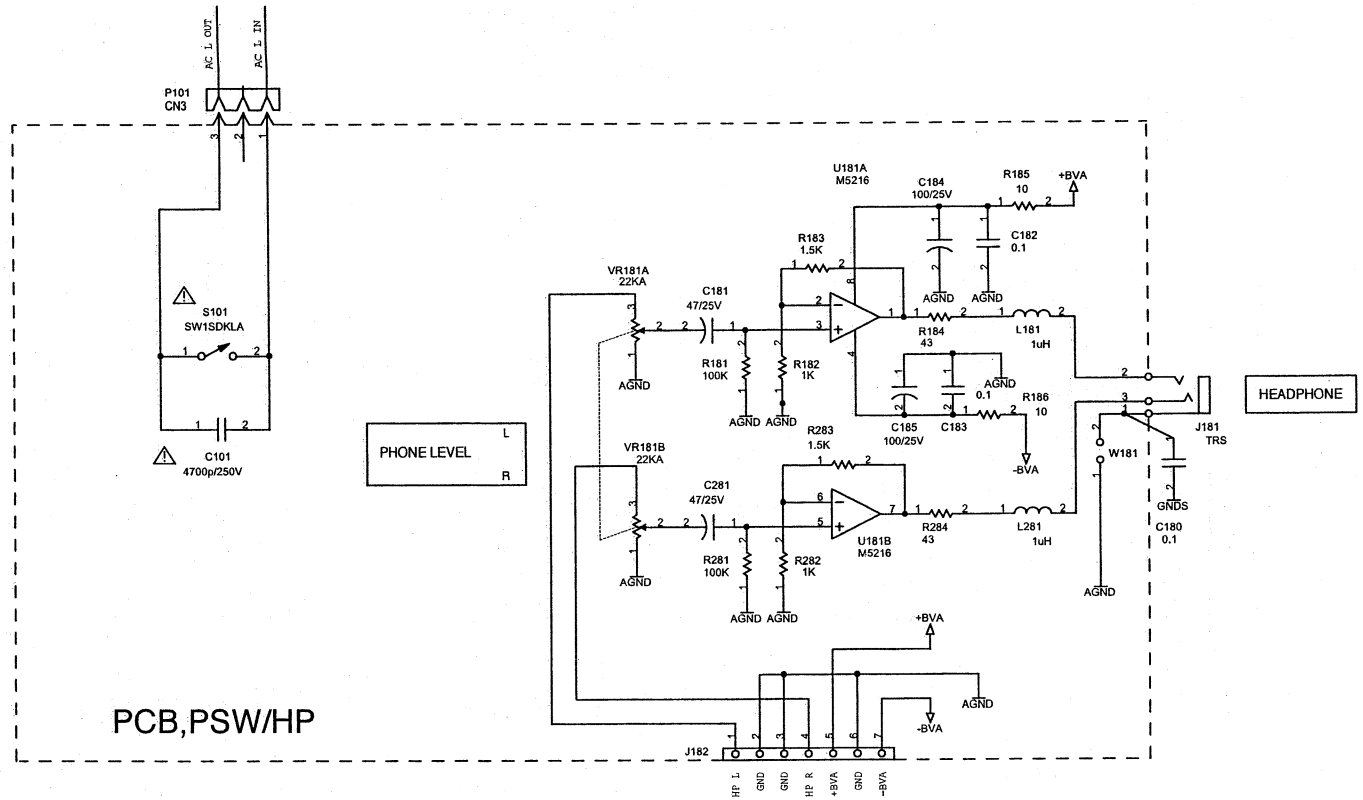
注意

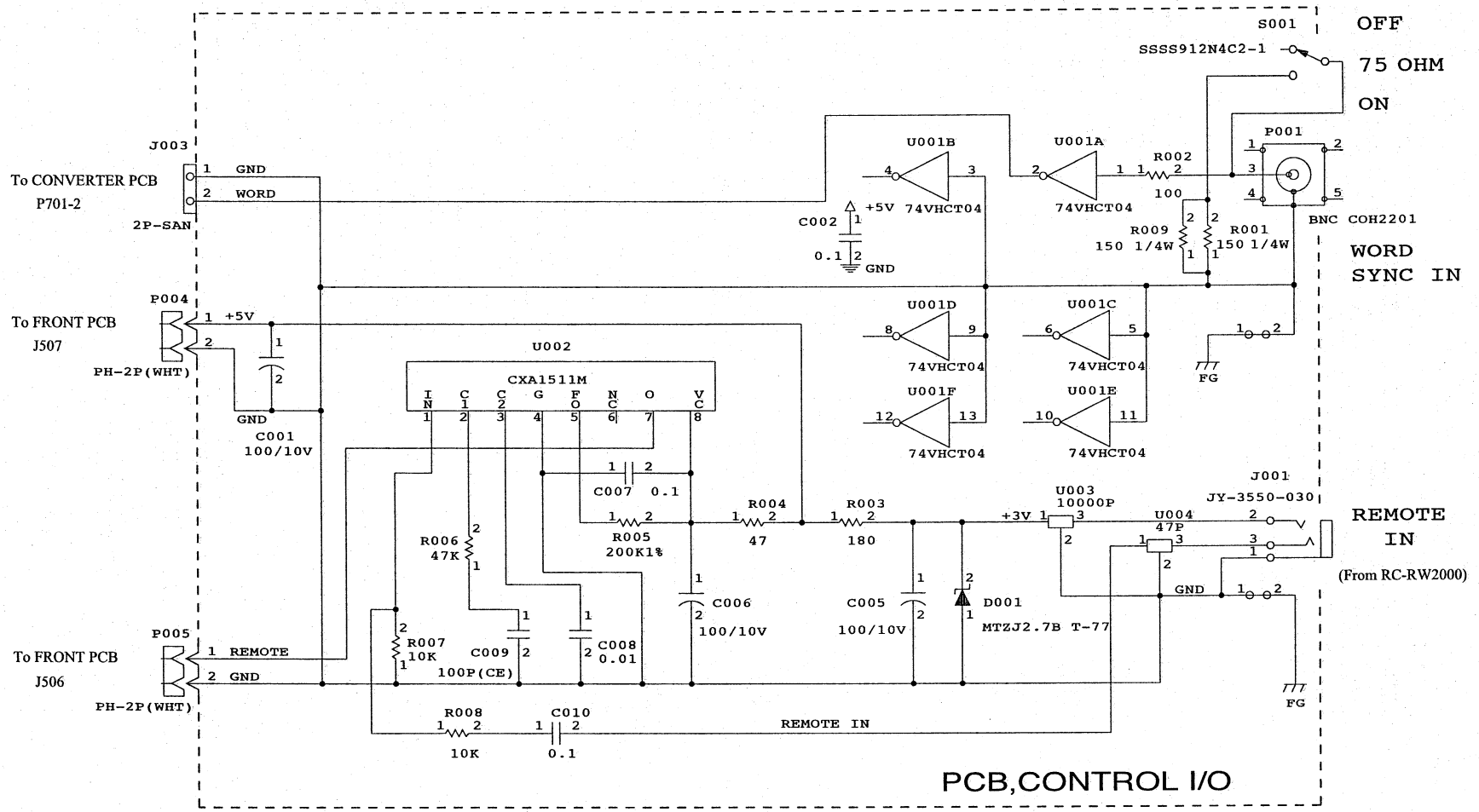
⚠ マークのある部品は安全重要部品です。
交換するときは必ずティアック指定の部品を使用してください。

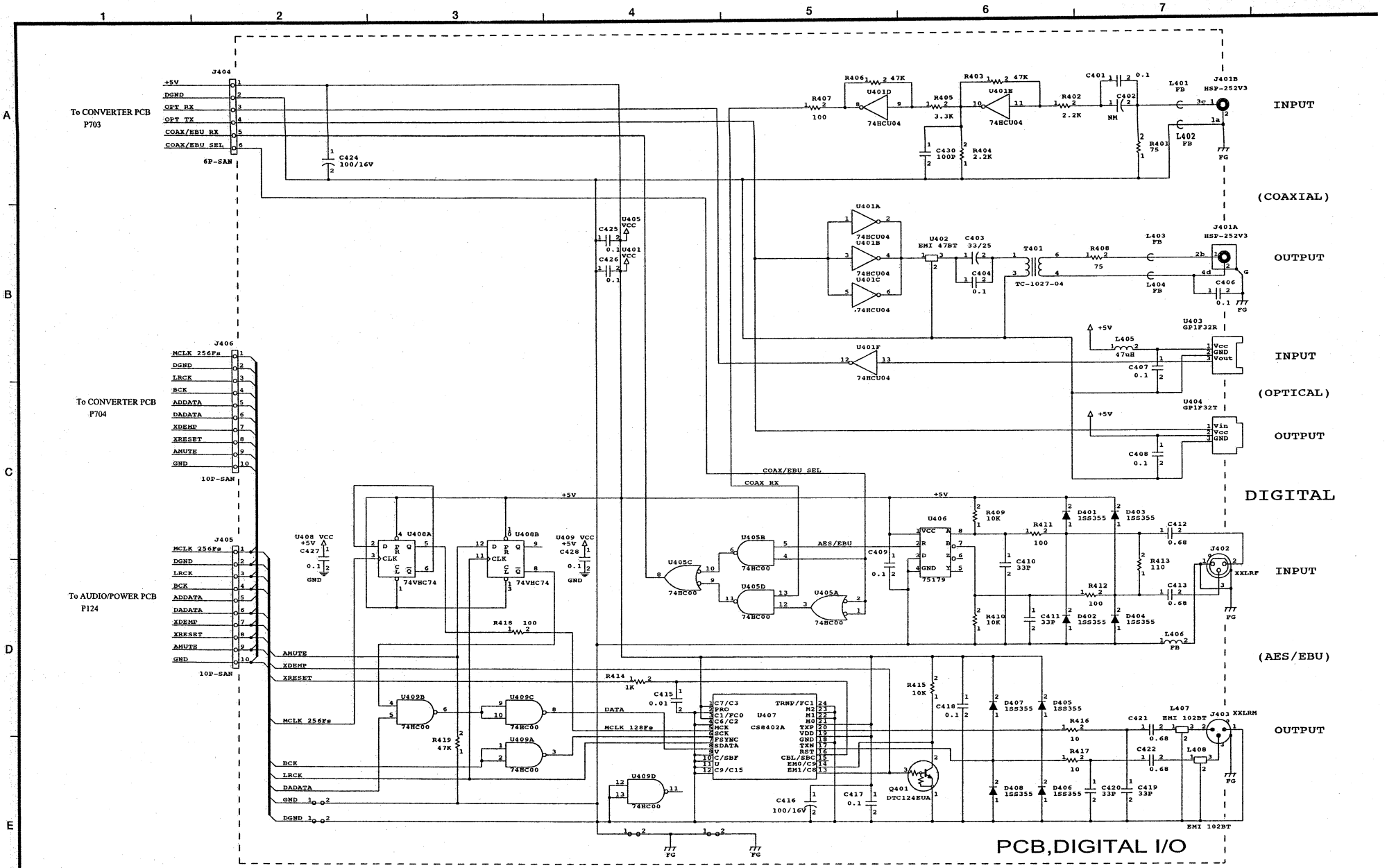
CD Rewritable Recorder **CD-RW2000**

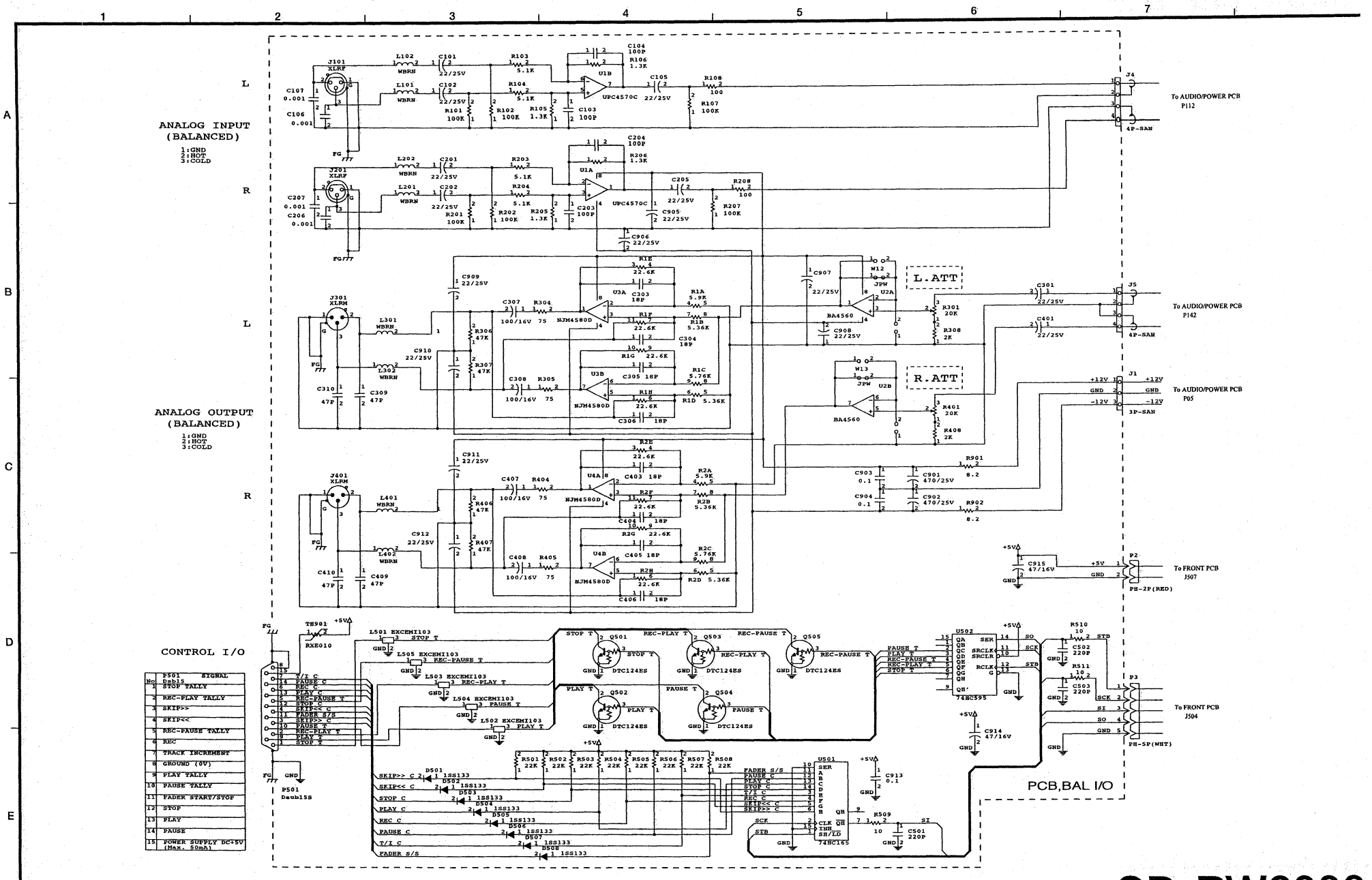
2 nd Issue; August 2005


PCB,FRONT
for EPROM or ONETIME u_COM only
FL500
FL_CDR_FULL
FL2
FL1
-30V
J503
(NC)
TIMER
POWER
REC
PLAY
SW501
DISPLAY
SW502
MENU
SW503
FADER
SW504
PAUSE
SW505
PLAY
SW506
ERASE
SW507
INPUT SELECTOR
SW508
RHSL
SW509
SYNC REC
SW510
RECODE
SW511
STOP
SW512
FINALIZE
SW513
DIGITAL DIRECT
SW514
OPEN/ CLOSE
D501 1SS133
D502 1SS133
D503 1SS133
D504 1SS133
D505 1SS133
D506 1SS133
D507 1SS133
D508 1SS133
R503 47K
R504 47K
R500 100K
U500
CXP82052
S500
EC11B15244
MULTI JOG
J505
CN3
R523
C507 0.1
C508 100P
C509 100P
U503A 74HC125
U503B 74HC125
U503C 74HC125
U503D 74HC125
R505 100K
R506 100K
J502
To DRIVE
A MUTE
DRV RESET
DIG SEL
MECH RTS
MECH CTS
MECH RXD
MECH TXD
CN9
D509
R524 470
Q501 DTC114E
J506
To CONTROL I/O
RMT
CN2
U502
BR93LC46
C506 0.1
X500 10.0M
R502 100K
C511 0.1
C500 0.1
C510 0.1
C503 0.047
C502 47/16
J507
+5VD
To CONTROL I/O BALANCE I/O
CN4
J501
STNBY
XRST
-30V
+5VD
GND
FL1
FL2
To POWER
CN7
USB BUSY
J504
To BALANCE I/O AUDIO/POWER

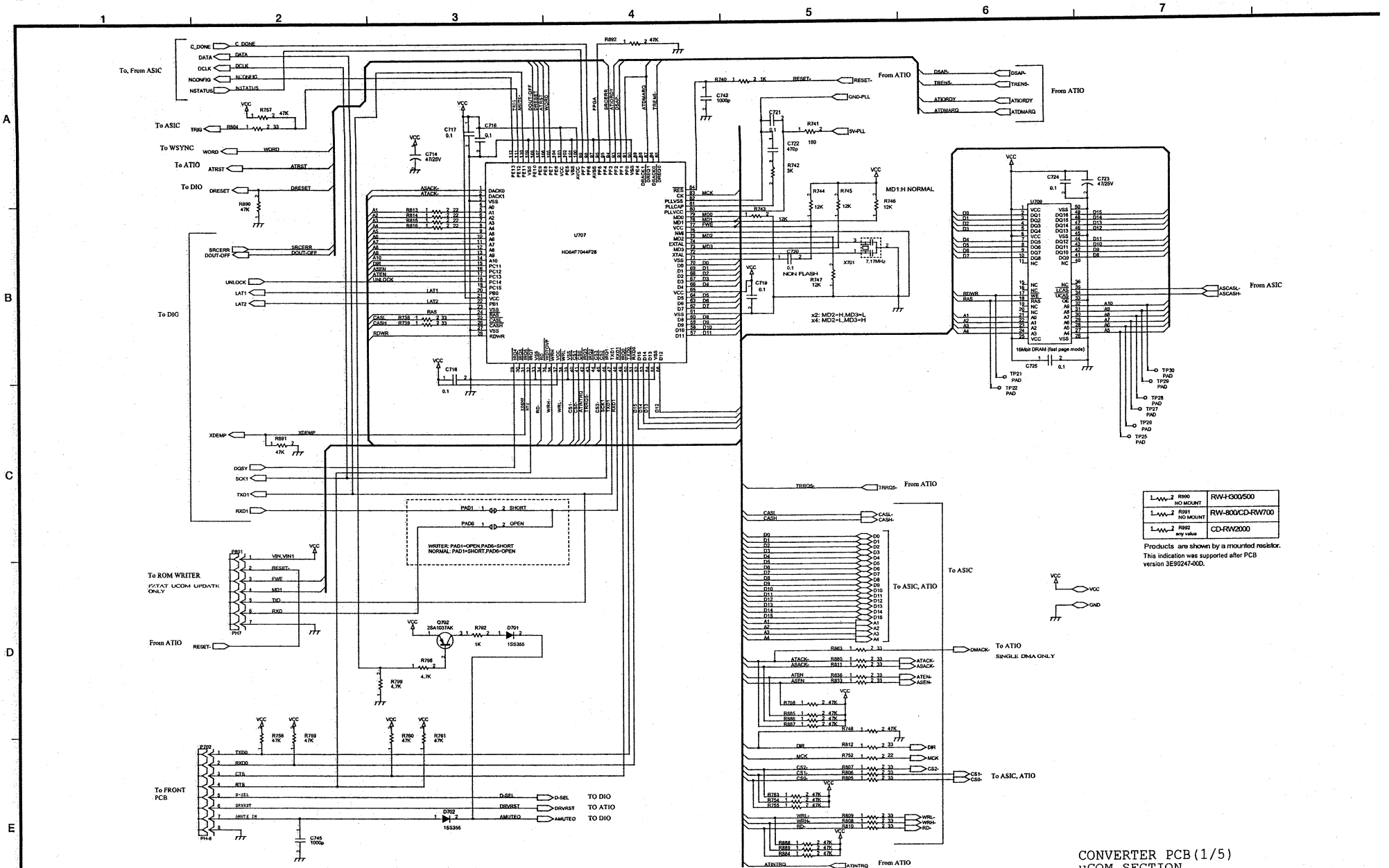

P101
CN3
AC 1 OUT
AC 1 IN
S101
SW1SDKLA
C101
4700p/250V
PHONE LEVEL
L
R
PCB,PSW/HP
U181A
M5216
U181B
M5216
VR181A
22KA
VR181B
22KA
C181
47/25V
C281
47/25V
R181
100K
R281
100K
R182
1K
R282
1K
R183
1.5K
R283
1.5K
R184
43
R284
43
L181
1uH
L281
1uH
C184
100/25V
C182
0.1
C185
100/25V
C183
0.1
C180
0.1
R185
10
R186
10
+BVA
-BVA
AGND
GNDS
W181
J181
TRS
HEADPHONE
J182
HP L
GND
GND
HP R
+BVA
GND
-BVA


S001
SSSS912N4C2-1
OFF
75 OHM
ON
P001
BNC COH2201
WORD SYNC IN
J003
To CONVERTER PCB
P701-2
2P-SAN
GND
WORD
U001B
U001A
74VHCT04
R002
100
R009
150 1/4W
R001
150 1/4W
C002
0.1
+5V
GND
P004
To FRONT PCB
J507
PH-2P(WHT)
+5V
GND
C001
100/10V
U001D
U001C
U001F
U001E
FG
U002
CXA1511M
IN C1 C2 G FO NC O VC
C007 0.1
R004
47
R003
180
R005
200K1%
R006
47K
C006
100/10V
C005
100/10V
U003
10000P
+3V
U004
47P
J001
JY-3550-030
REMOTE IN
(From RC-RW2000)
D001
MTZJ2.7B T-77
P005
To FRONT PCB
J506
PH-2P(WHT)
REMOTE
GND
R007
10K
C009
100P(CE)
C008
0.01
R008
10K
C010
0.1
REMOTE IN
PCB,CONTROL I/O


To CONVERTER PCB P703
To CONVERTER PCB P704
To AUDIO/POWER PCB P124
INPUT (COAXIAL)
OUTPUT
INPUT (OPTICAL)
OUTPUT
DIGITAL INPUT (AES/EBU)
OUTPUT
PCB,DIGITAL I/O



No	P501 Dsub15	SIGNAL
1		STOP TALLY
2		REC-PLAY TALLY
3		SKIP>>
4		SKIP<<
5		REC-PAUSE TALLY
6		REC
7		TRACK INCREMENT
8		GROUND (0V)
9		PLAY TALLY
10		PAUSE TALLY
11		FADER START/STOP
12		STOP
13		PLAY
14		PAUSE
15		POWER SUPPLY DC+5V (Max. 50mA)



CONVERTER PCB(1/5)
uCOM SECTION

CD Rewritable Recorder **CD-RW2000**

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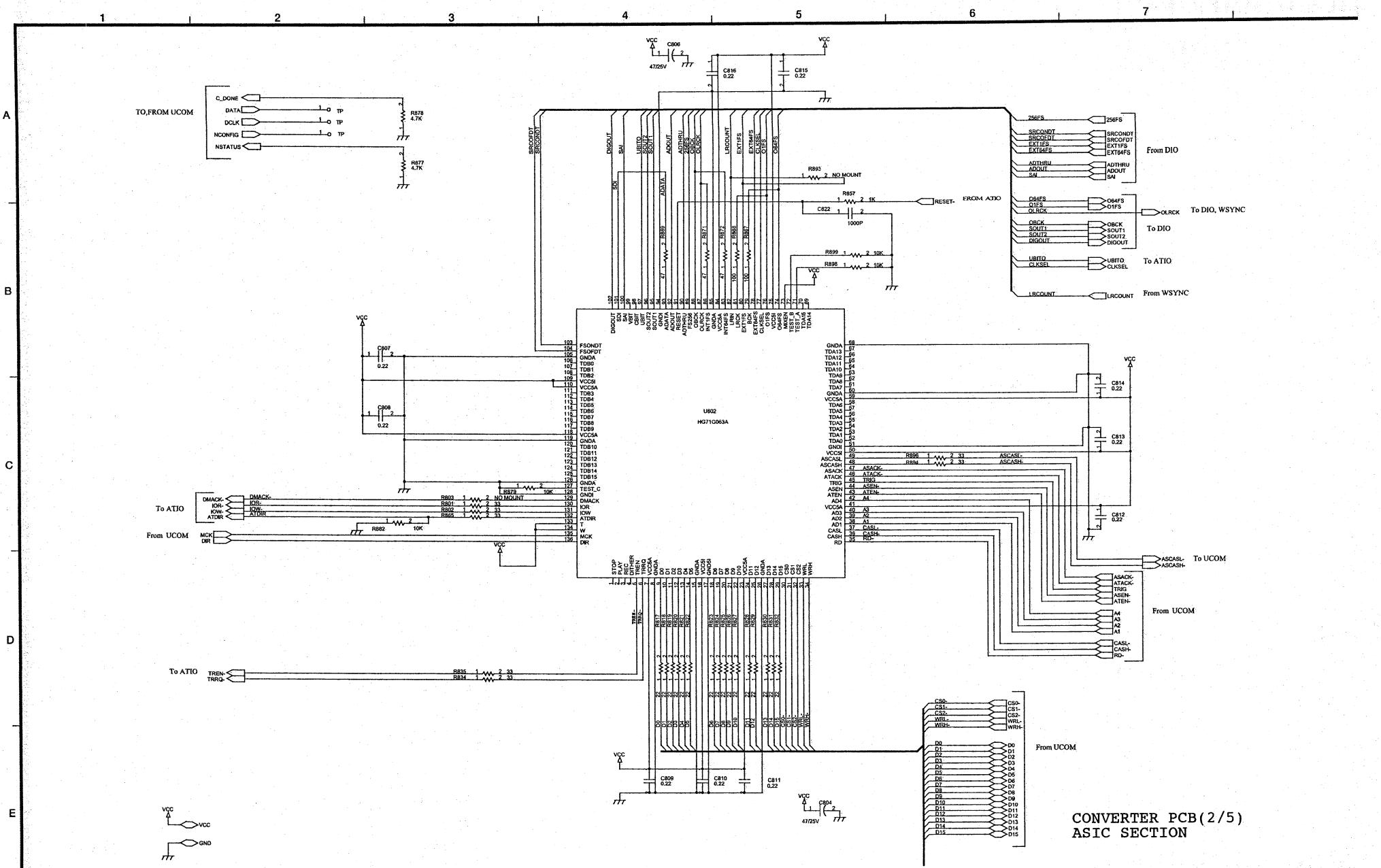
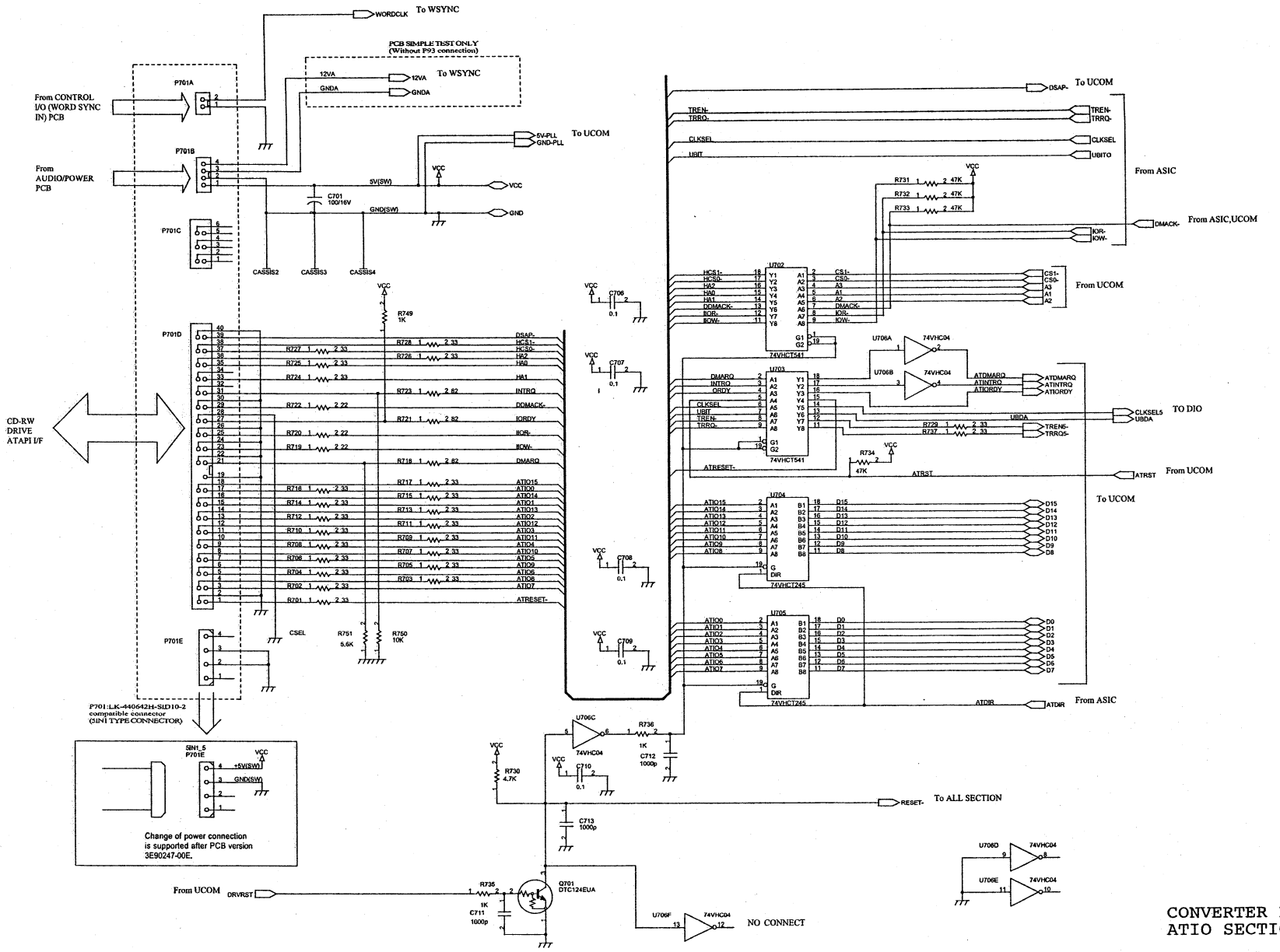
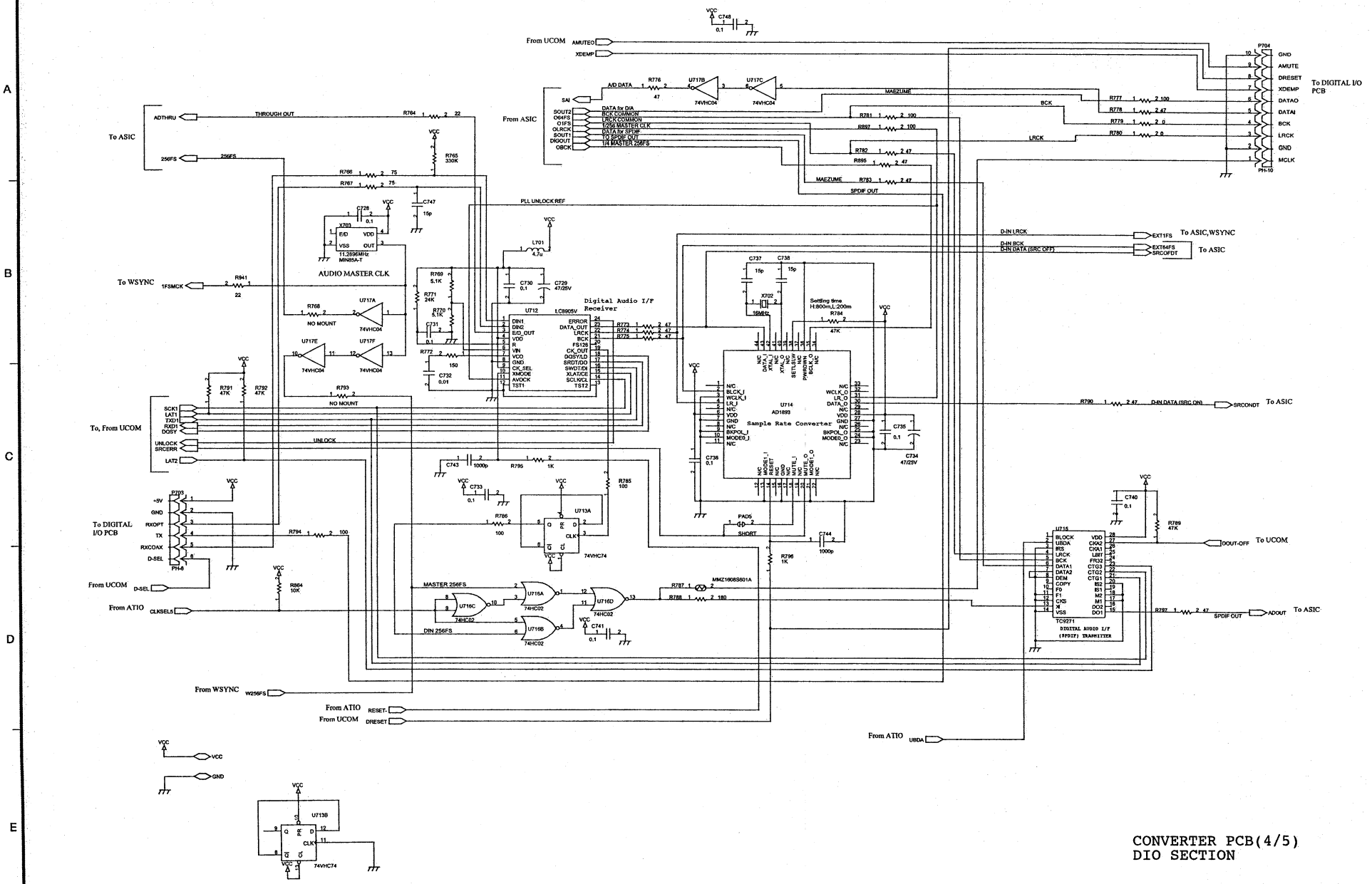

TO,FROM UCOM
C_DONE
DATA
DCLK
NCONFIG
NSTATUS
TP
R878 4.7K
R877 4.7K
VCC
C806 47/25V
C816 0.22
C815 0.22
SRCONDT
SRCOFDT
DIGOUT
SAI
UBITO
CLKSEL
SOUT1
ADOUT
ADTHRU
256FS
OLRCK
EXT1FS
EXT64FS
LRCOUNT
R893 NO MOUNT
R857 1K
RESET-
FROM ATIO
C822 1000P
R889
R887
R888
R886
R899 10K
R898 10K
From DIO
To DIO, WSYNC
To DIO
To ATIO
From WSYNC
U802
HG71G063A
C807 0.22
C808 0.22
C814 0.22
C813 0.22
C812 0.22
R879 10K
R882 10K
R896 33
R894 33
ASCASL-
ASCASH-
To ATIO
DMACK-
IOR-
IOW-
ATDIR
R803 NO MOUNT
R801 33
R802 33
R865 33
From UCOM
MCK
DIR
To UCOM
ASACK-
ATACK-
TRIG
ASEN-
ATEN-
A4
A3
A2
A1
CASL-
CASH-
RD-
TREN-
TRRQ-
R835 33
R834 33
R817
R818
R819
R820
R821
R822
R823
R824
R825
R826
R827
R828
R829
R830
R831
R832
C809 0.22
C810 6.22
C811 0.22
C804 47/25V
CS0-
CS1-
CS2-
WRL-
WRH-
From UCOM
CONVERTER PCB(2/5)
ASIC SECTION
GND



CONVERTER PCB(3/5)
ATIO SECTION

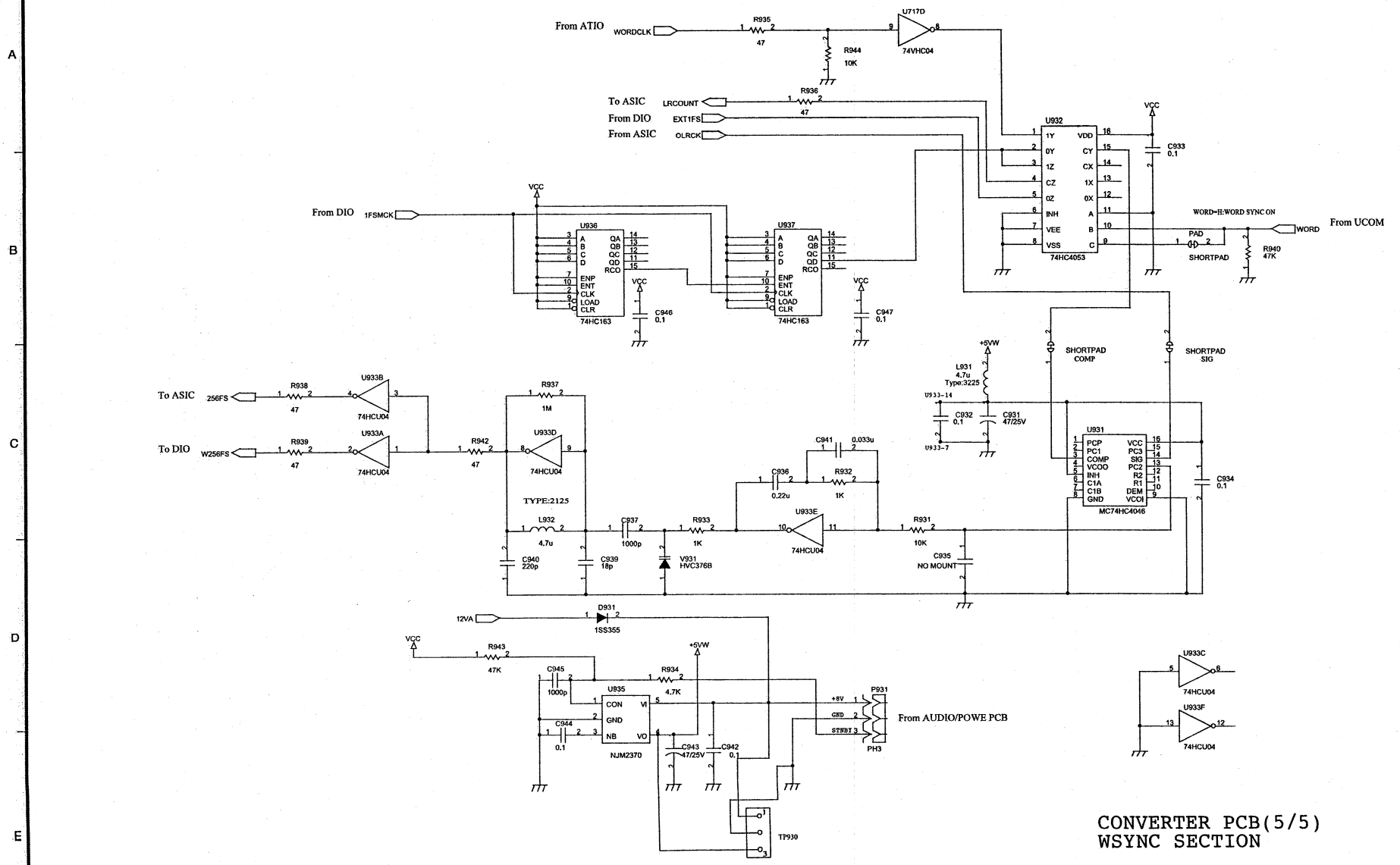
CD Rewritable Recorder **CD-RW2000**

2 nd Issue; August 2005



CONVERTER PCB(4/5)
DIO SECTION

CD Rewritable Recorder **CD-RW2000**



CONVERTER PCB(5/5)
WSYNC SECTION

TEAC **TECHNICAL INFORMATION**

No. **0701**

DATE 16th February 2007

CD-RW402(V3)/CD-RW2000(V3), Substitution of the Drive

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.

TEAC

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.

TEAC **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.

TEAC **TECHNICAL INFORMATION**

No. **0510**

TASCAM CD-RW2000V3, Converter MPU Upgrade 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 RPOHIBIT" 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.

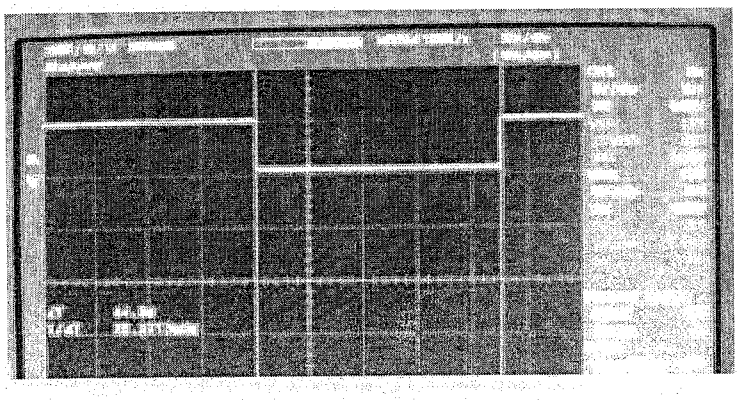
Converter MPU firmware update

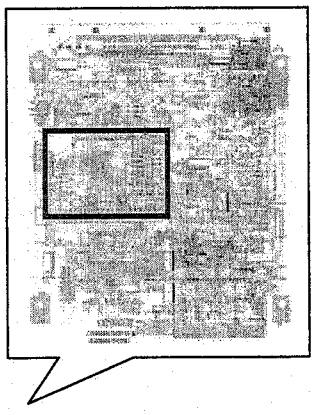
Procedure:

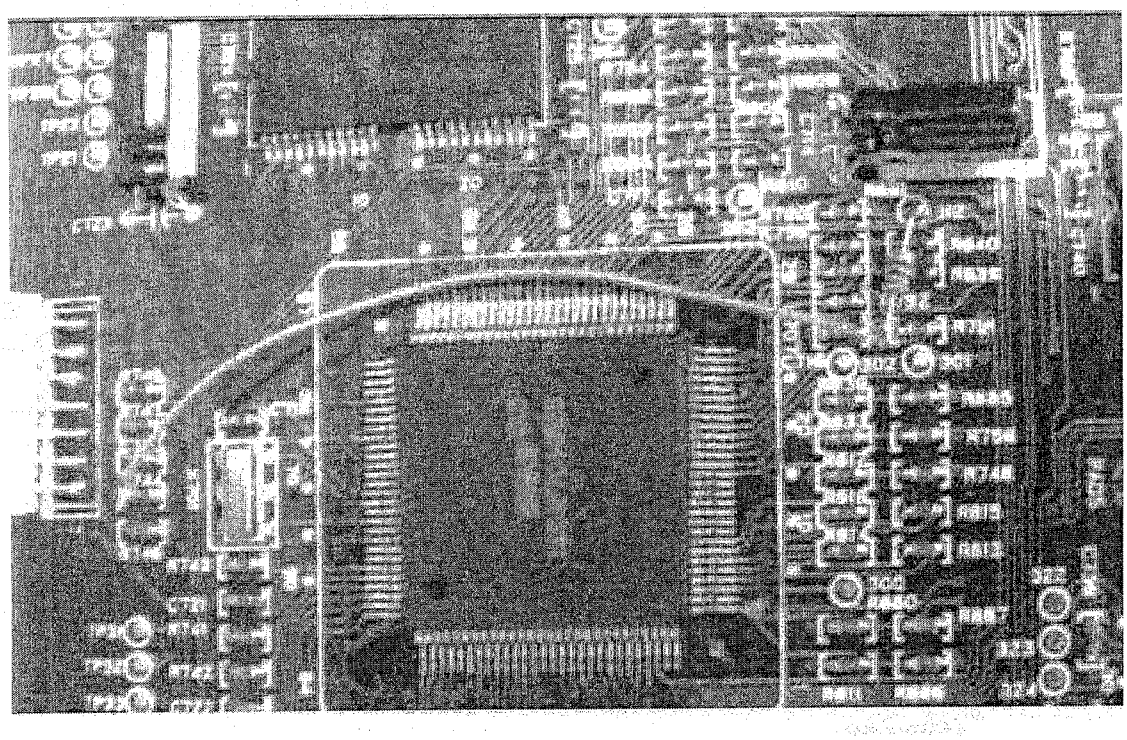
1. Turn on power of the unit while holding **CALL** and **MENU**.
2. Load the "Converter update CD-R" while display shows "RW2000 03.00" that is version of the Front MPU.
3. Confirm "CD" in display blinks. Then press **CALL** to check current version of drive. Existing version is "V1.TA", "V1.TB" (May/2005)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