

Service
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Service Manual




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PHILIPS

SPECIFICATIONS**GENERAL:**

Mains voltage : 110-127V/220-240V Switchable for /21/21M
 120V for /37
 220V for /33
 220-230V for /22/34
 230-240V for /30

Mains frequency : 50/60Hz

Power consumption : < 1W at ECO Power Standby
 : < 25W at Standby (DEMO mode off)
 : 175W at Active

Clock accuracy : < 4 seconds per day

Dimension centre unit : 265 x 322 x 390mm

TUNER:**FM**

Tuning range : 87.5-108MHz

Grid : 50kHz
 100kHz for /37

IF frequency : 10.7MHz \pm 25kHz

Aerial input : 75 ohm coaxial
 300 ohm click fit for /37

Sensitivity at 26dB S/N : < 7uV

Selectivity at 600kHz bandwidth : > 25dB

Image rejection : > 25dB [$>$ 75dB]

Distortion at RF=1mV, dev. 75kHz : < 3%

-3dB Limiting point : < 8uV

Crosstalk at RF=1mV, dev. 40kHz : > 18dB

MW

Tuning range : 531-1602kHz
 530-1700kHz for /21/21M/37

Grid : 9kHz
 10kHz for /21/21M/37

IF frequency : 450kHz \pm 1kHz

Aerial input : Frame aerial

Sensitivity at 26dB S/N : < 4.0mV/M

Selectivity at 18kHz bandwidth : > 18dB

IF rejection : > 45dB

Image rejection : > 28dB

Distortion at RF=50mV, M=80% : < 5%

AMPLIFIER:

Output power (6 ohm, 1kHz, 10% THD)

L & R : 2 x 165W RMS

Frequency response within -3dB : 50Hz-16kHz

Incredible Surround : On / Off

Game Sound : Speed /Punch /Blast /Off

WOOX : Level 1, 2, 3 & Off

Digital Sound Control (DSC) : Jazz /Rock /Pop /Optimal

Virtual Ambience Control (VAC) : Cyber / Arcade / Hall /
 Cinema / Concert

Input sensitivity

Aux in (at 1kHz) : 640mV \pm 2dB
 Game Port (at 1kHz) : 310mV \pm 2dB
 USB (at 1kHz) : 830mV at 600 ohm

Output sensitivity

Line out (Left/Right) : 450mV \pm 2dB at 22 kohm
 Headphone output at 32 ohm : 700mV \pm 2dB (Max. vol.)

5DTC:

Measurement done directly at the connector on the board.

Output Resistance : < 100 ohm

Output Voltage (0dB, 1kHz) : 0.5Vrms \pm 1dB (unloaded)

Channel Unbalance : < \pm 1dB

Channel Separation (1kHz) : > 60dB

Frequency Response (\pm 3dB) : 20Hz-20kHz

Signal to Noise Ratio : > 76dBA

MP3-CD Bit Rate : 32-256 kbps

Sampling Frequencies : 32, 44.1, 48 kHz

USB:

Measurement done directly at the connector on the board.

Output Impedance (1 kHz) : < 1.5 kohm

Output Voltage (0dB, 1kHz) : 830mVrms \pm 1.5dB

Channel Unbalance : < \pm 1dB

Distortion THD (0dB, 1kHz) : < 0.3%

Channel Separation (1kHz) : > 40dB

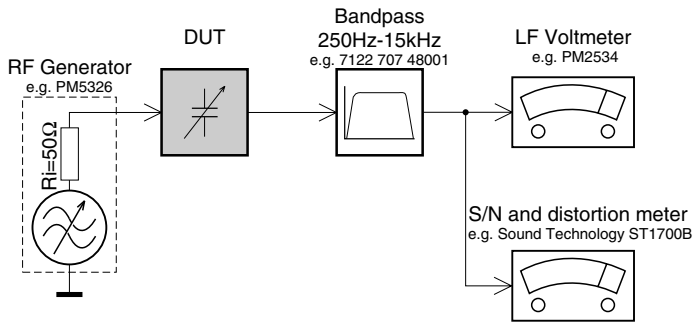
Frequency Response (\pm 3dB) : 20Hz-20kHz

Signal to Noise Ratio : > 75dBA

[...] Values indicated are for "ECO6 Cenelec Board" only.

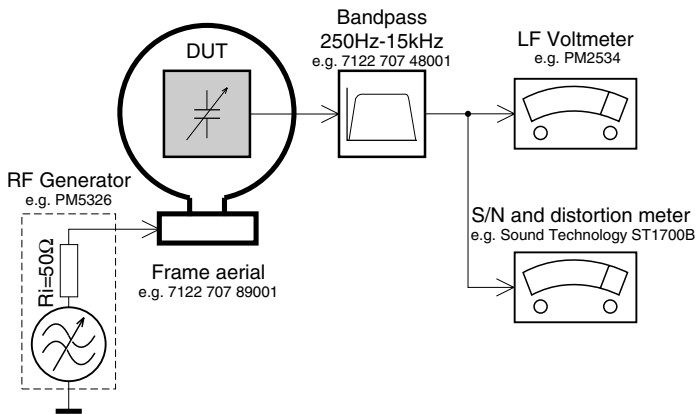
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilotone (19kHz, 38kHz).

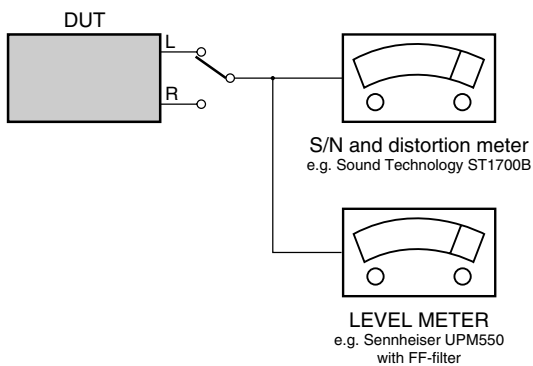
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

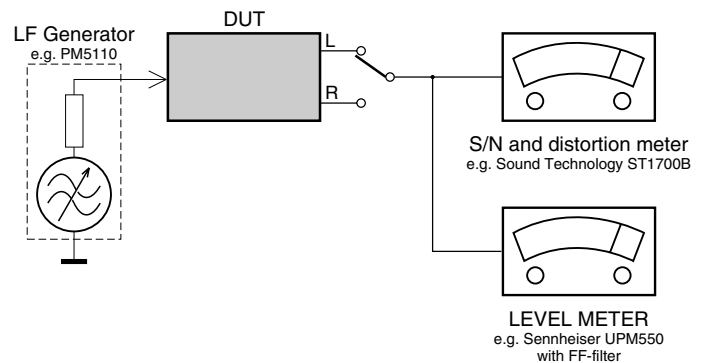
CD

Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)



Recorder

Use Universal Test Cassette **CrO2** SBC419 4822 397 30069
or Universal Test Cassette **Fe** SBC420 4822 397 30071



SERVICE AIDS

Service Tools:

Universal Torx driver holder	4822 395 91019
Torx bit T10 150mm	4822 395 50456
Torx driver set T6 - T20	4822 395 50145
Torx driver T10 extended	4822 395 50423

Cassette:

SBC419 Test cassette CrO2	4822 397 30069
SBC420 Test cassette Fe	4822 397 30071
MTT150 Dolby level 200nWb/M	4822 397 30271

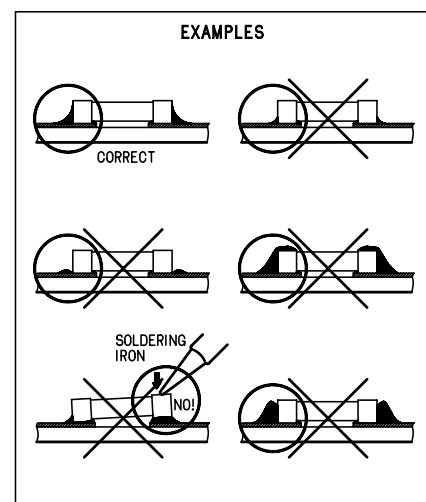
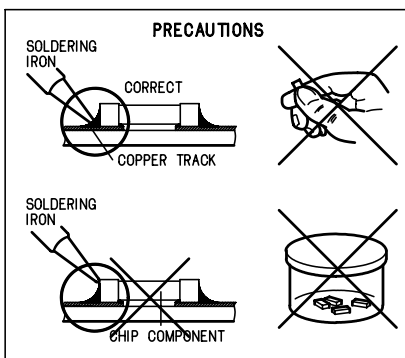
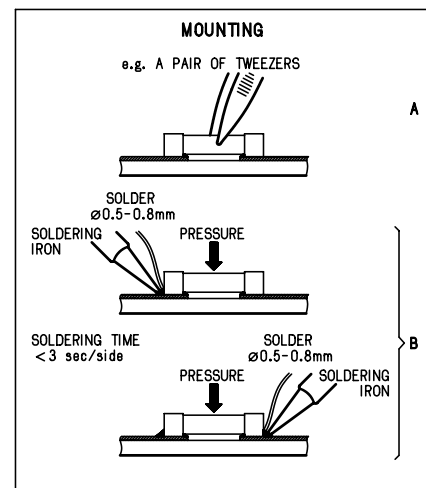
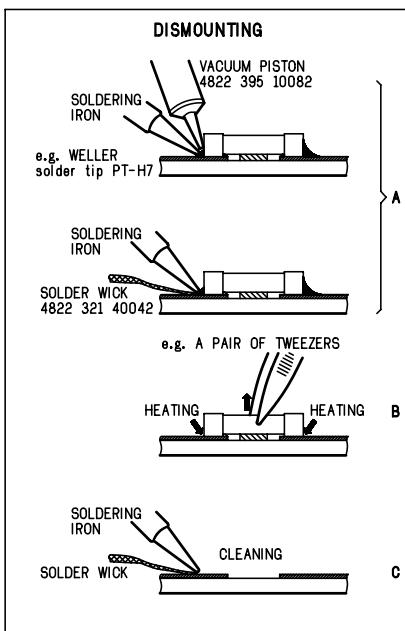
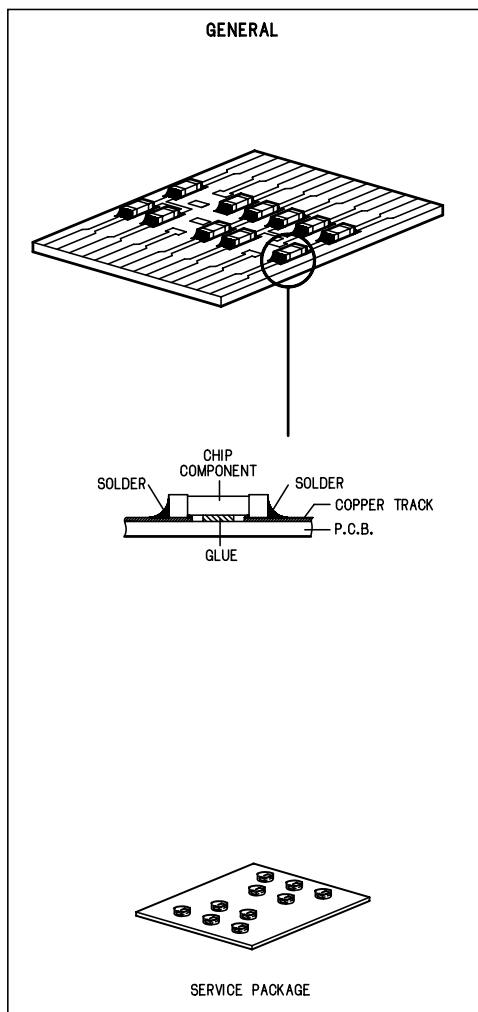
Compact Disc:

SBC426/426A Test disc 5 + 5A	4822 397 30096
SBC442 Audio Burn-in Test disc 1kHz	4822 397 30155
SBC429 Audio Signals disc	4822 397 30184
Dolby Pro-logic Test Disc	4822 395 10216

ESD Equipment:

Anti-static table mat - large 1200x650x1.25mm ...	4822 466 10953
Anti-static table mat - small 600x650x1.25mm	4822 466 10958
Anti-static wristband	4822 395 10223
Connector box (1M Ω)	4822 320 11307
Extension cable (to connect wristband to conn. box)	4822 320 11305
Connecting cable (to connect table mat to conn. box)	4822 320 11306
Earth cable (to connect product to mat or box)	4822 320 11308
Complete kit ESD3 (combining all above products)	4822 320 10671
Wristband tester	4822 344 13999

HANDLING CHIP COMPONENTS



GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.

Keep components and tools also at this potential.

ESD**NL WAARSCHUWING**

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).

Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.

Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).

Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.

Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.

Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).

Unvorsichtige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.

Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.

Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).

La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.

Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un bracciale a resistenza.

Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used

Safety components are marked by the symbol \triangle .

NL

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

De Veiligheidsonderdelen zijn aangeduid met het symbool \triangle

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisés les pièces de rechange identiques à celles spécifiées.

Les composants de sécurité sont marqués \triangle

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

Sicherheitsbauteile sind durch das Symbol \triangle markiert.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

Componenti di sicurezza sono marcati con \triangle

GB

After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA.

**GB Warning !**

Invisible laser radiation when open.
Avoid direct exposure to beam.

S Varning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

SF Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Advarse !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

F

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

DISMANTLING INSTRUCTIONS

Dismantling of the 5DTC Module

- 1) Loosen 4 screws to remove the Cover Top (pos 255) by sliding it out towards the rear before lifting up.
 - 2 screws on the rear
 - 1 screw each on the left & right side
- 2) Loosen 3 screws each to remove the Panel Left (pos 253) and Panel Right (pos 254). The Panels are removed by sliding it towards the rear and outwards.
 - 2 screws on the rear
 - 1 screw on the side
- 3) To loosen the Panel Front Display (pos 120), you have to press in the correct direction and position as shown in Figure 1 and Figure 2. Once the Panel Front Display is loosen, remove it out in the direction as shown in Figure 3.
- 4) Loosen 4 screws A (see Figure 4 and Figure 16) to remove the 5DTC Module (pos 1105).
 - 2 screws on the front
 - 2 screws on the rear

Note : For information on the 'Emergency opening of the trays' of the 5DTC Module, refer to Chapter 10 (Page 10-7).



Figure 1



Figure 2



Figure 3

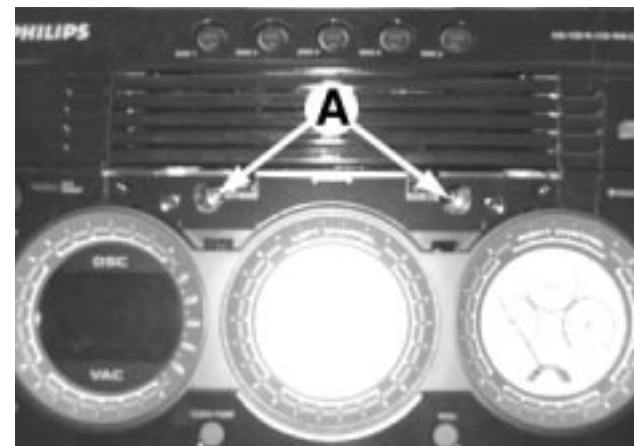


Figure 4

Detaching the Front Panel assembly from the Bottom/Rear assembly

- 1) Remove 2 screws B (pos 226) as shown in Figure 5 from the bottom of the Cabinet Front (pos 101).
- 2) Release the fixation of the AF Board (pos1102-A) to Bracket CDC Right (pos 186) by releasing the 2 catches C1 (see Figure 7) and pulling the AF Board outwards as shown in Figure 6.
- 3) Uncatch 2 catches C2 (see Figure 7) on the left & right sides of the Cabinet Front (pos 101) and slides the Front Panel assembly out towards the front.

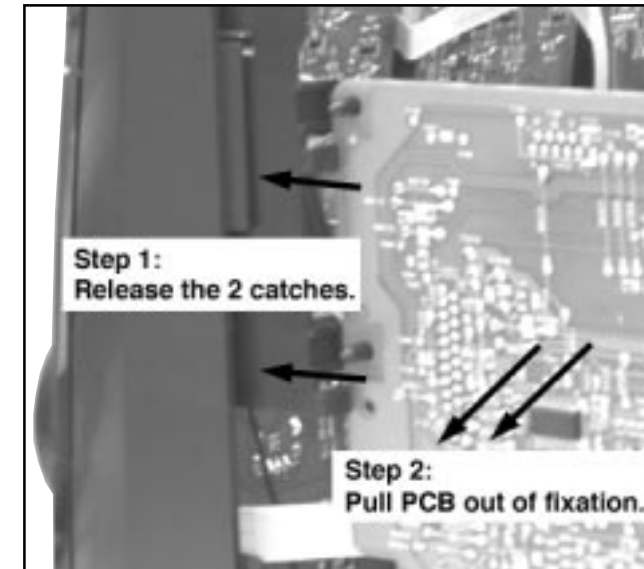


Figure 6

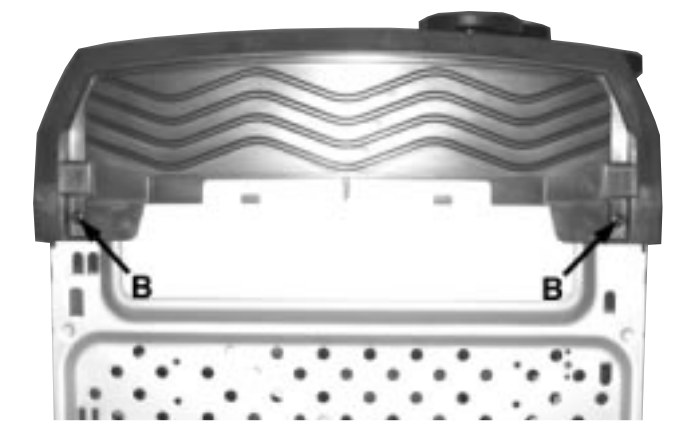


Figure 5

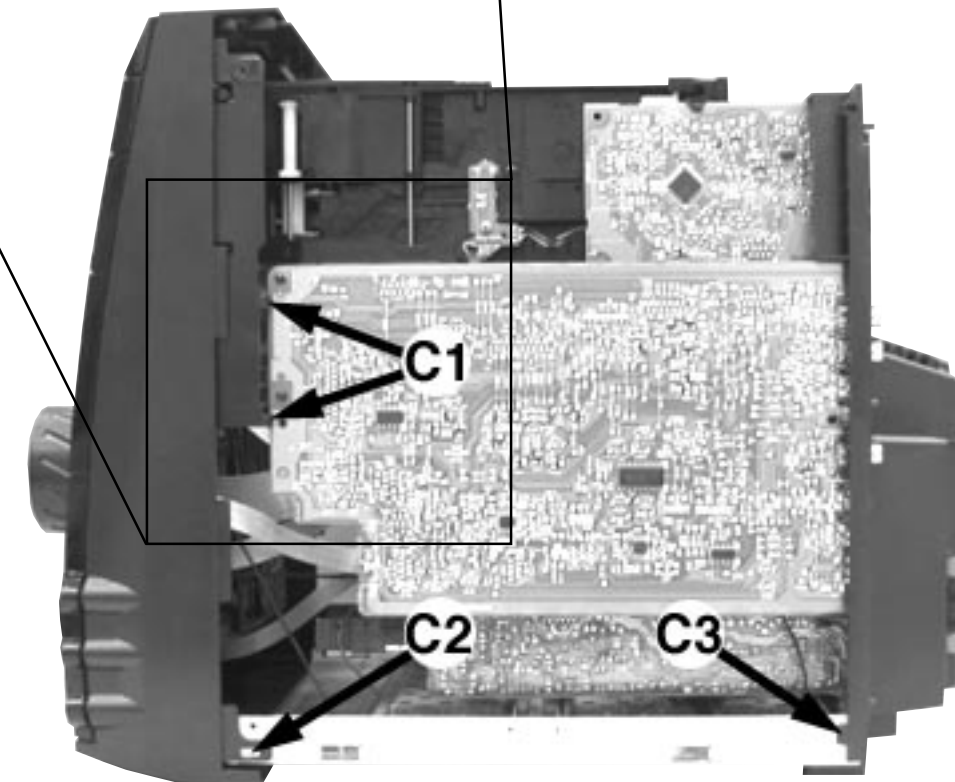


Figure 7

DISMANTLING INSTRUCTIONS

Dismantling of the Front Control Board and Front Display Board

- 1) The Knob Volume Rotary (pos 164) can be removed by pulling it out in the direction as shown in Figure 8.
- 2) The Knob Game Sound Control (pos 176) can be removed by pulling it out in the direction as shown in Figure 9.

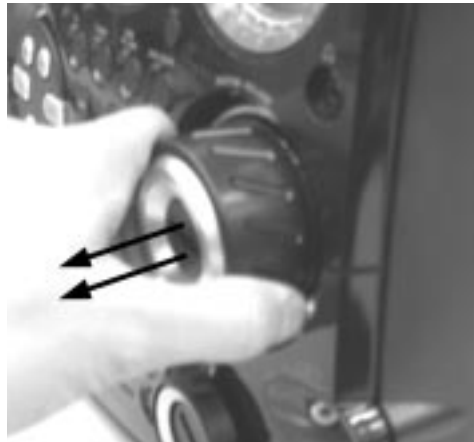


Figure 8



Figure 9

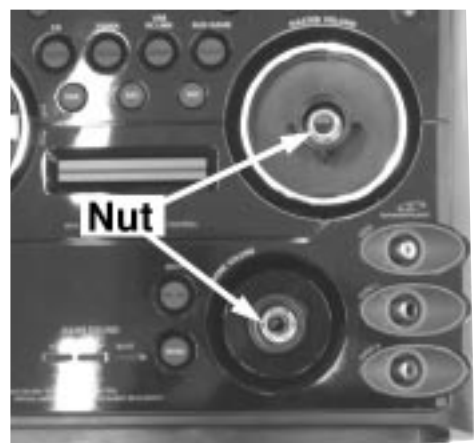


Figure 10

- 3) Loosen 4 screws D (see Figure 11) to remove the Bracket PCB Front Display (pos 183) and Front Display Board (pos 1101-A).
- 4) Loosen 1 screw E (see Figure 12) to remove the IR Eye Board (pos 1107-H).
- 5) Loosen 2 screws F (see Figure 12) to remove the ECO Power Board (pos 1107-E).
- 6) Loosen 3 screws G (see Figure 12) to remove the Bracket VU Meter 2 (pos 136) and loosen 2 screws H to remove the VU Meter Right Board (pos 1107-D) from the Bracket VU Meter 2.
- 7) Loosen 3 screws J (see Figure 12) to remove the Bracket VU Meter 1 (pos 129) and loosen 2 screws K to remove the VU Meter Left Board (pos 1107-C) from the Bracket VU Meter 1.
- 8) Loosen 2 screws L (see Figure 13) to remove the USB PC LINK Board (pos 1104).
- 9) Loosen 9 screws M (see Figure 13) and loosen the 2 nuts (see Figure 10) to remove the Front Control Board (pos 1107-A).
- 10) Loosen 1 screw N (see Figure 13) to remove the Headphone Board (pos 1107-B).

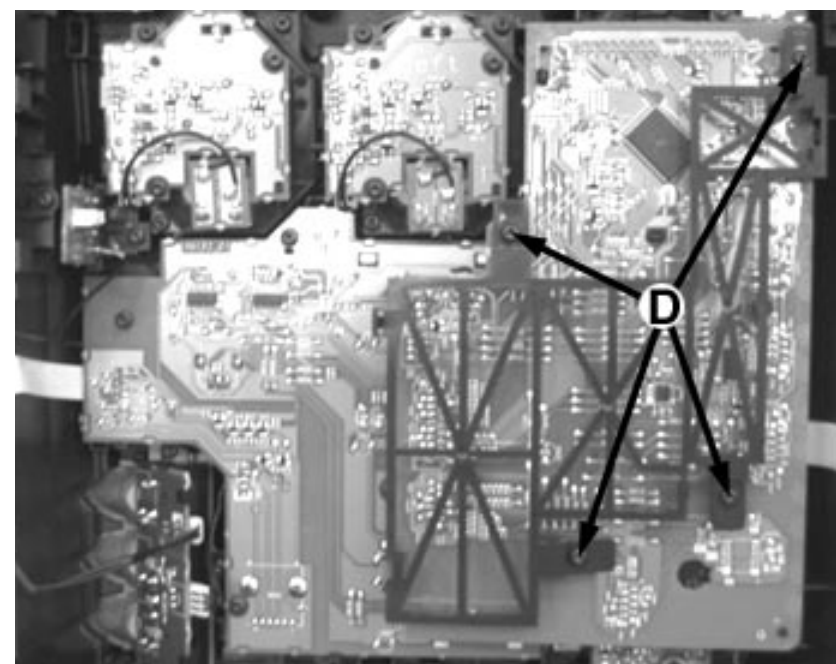


Figure 11

Dismantling of the Front Control Board and Front Display Board

- 11) Loosen 3 screws P (see Figure 14) to remove the Game Port Board (pos 1107-G).
- 12) Loosen 2 screws Q (see Figure 15) to remove the USB LED Board (pos 1107-F).

Figure 12

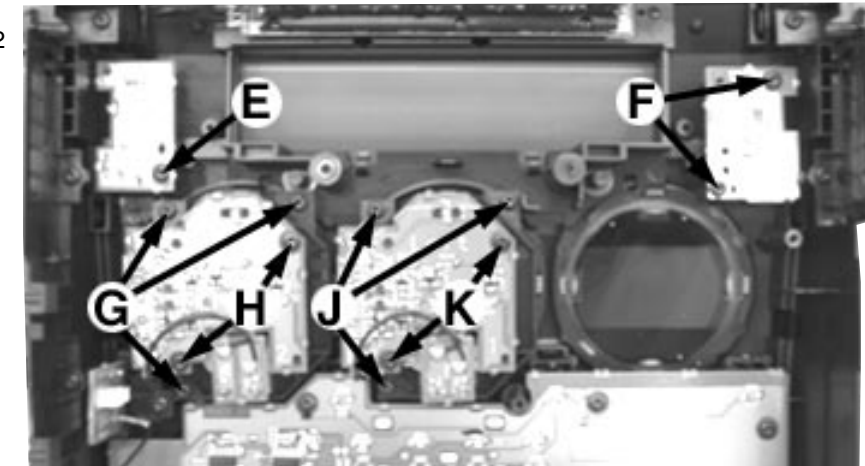


Figure 13

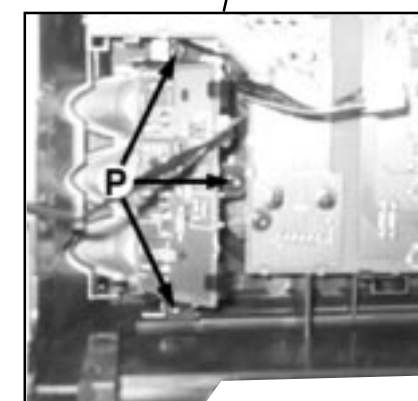
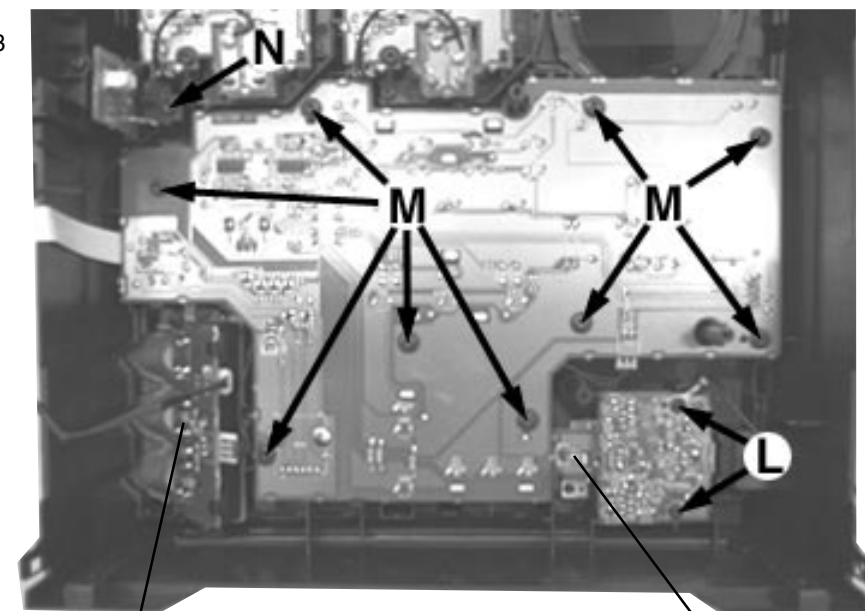


Figure 14

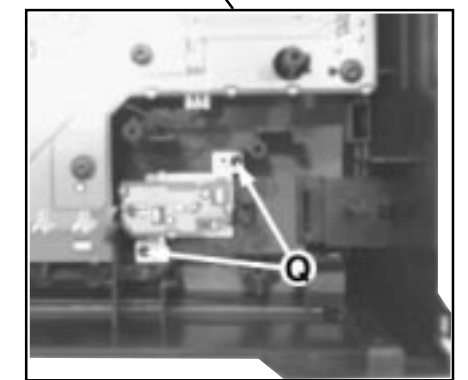


Figure 15

DISMANTLING INSTRUCTIONS

Dismantling of the Rear Panel assembly

- 1) Loosen 3 screws S and 2 catches C4 (see Figure 16) to remove the Tuner Board assembly.
- 2) Loosen 2 screws T (see Figure 16) to free the AF Board (pos 1102-A).
- 3) Loosen 1 screw U (see Figure 16) to remove the Video Cinch Out Board (pos 1102-B).
- 4) Loosen 1 screw V (see Figure 16) to free the Mains Socket Board (pos 1106-1001-B).
- 5) Loosen 4 screws W (see Figure 16) and 2 catches C3 (see Figure 7) to remove the Panel Rear (pos 256) by sliding it out towards the rear (see Figure 19).
Note : Tuner Board assembly and Mains Socket Board can also be remove together with the Panel Rear.
- 6) Loosen 2 screws Y (see Figure 17) and 2 catches C5 (see Figure 16) to remove the Bracket Fan (pos 266).
- 7) Loosen 4 screws Z (see Figure 18) to remove the Fan (pos 1121) from the Bracket Fan (pos 266).

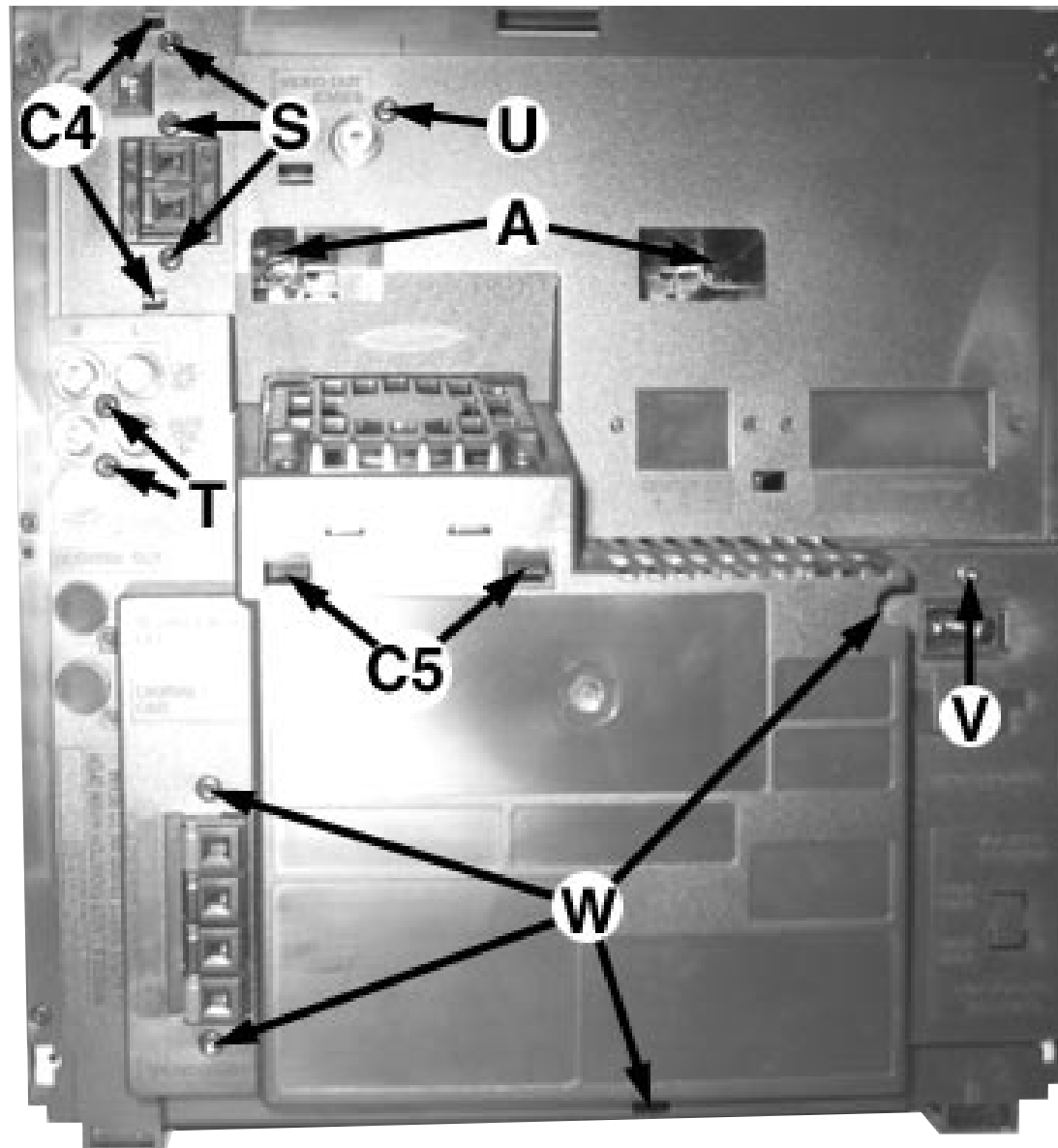


Figure 16

Dismantling of the Rear Panel assembly

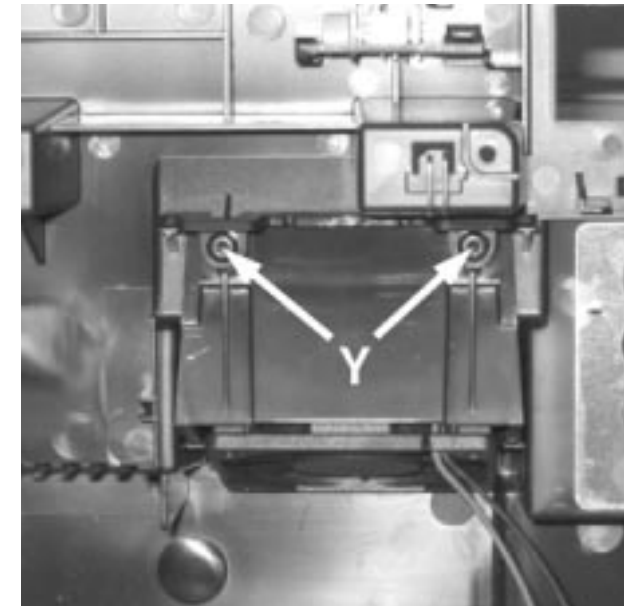


Figure 17

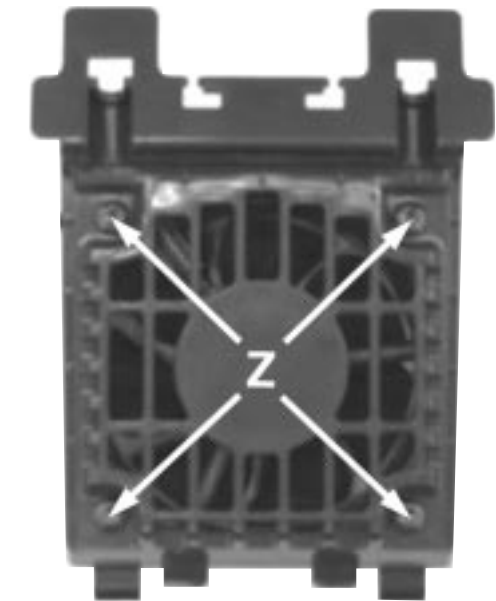


Figure 18

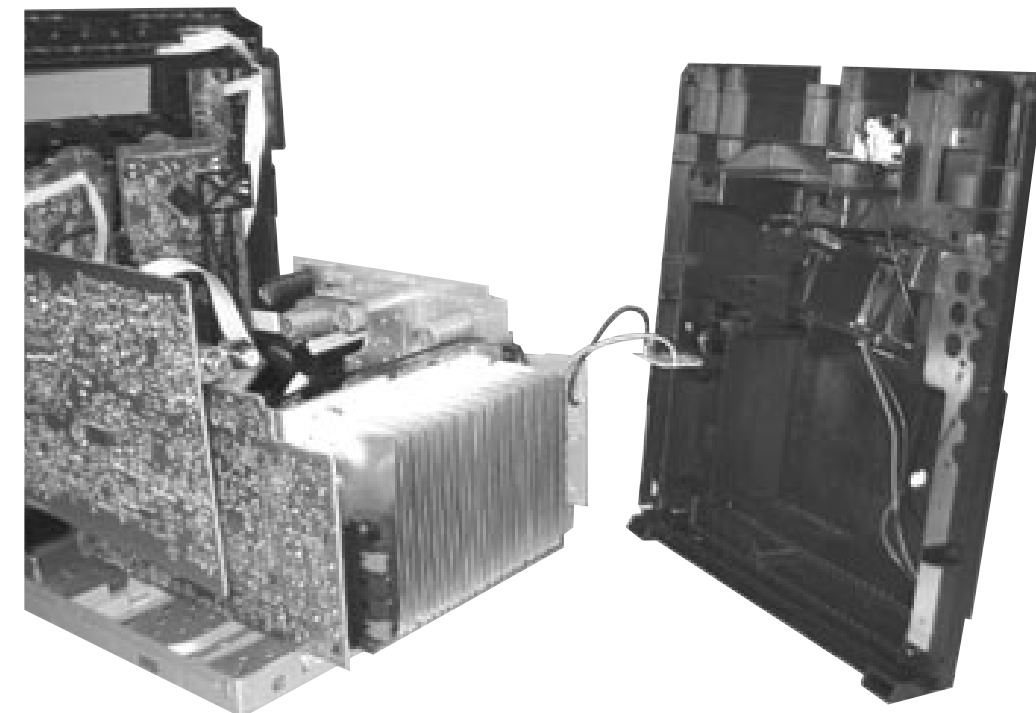


Figure 19

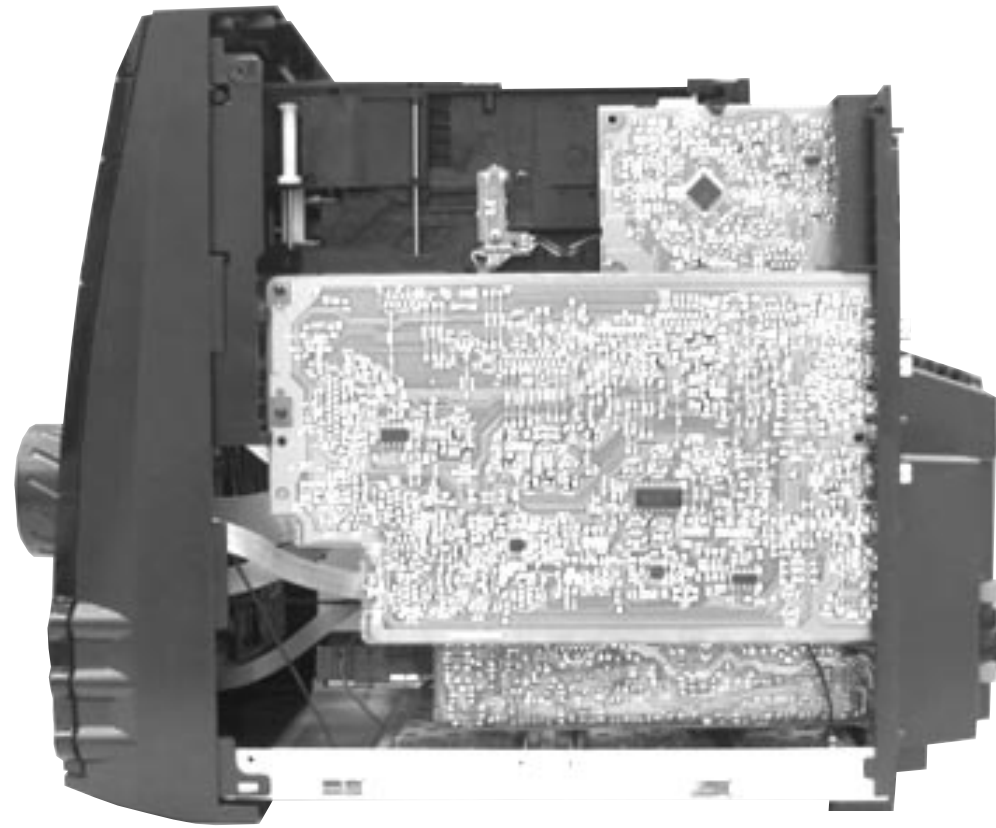
Repair Hints

- 1) During repair it is possible to disconnect the ECO6 Tuner board and/or 5DTC Module completely unless the fault is suspected to be in that area. This will not affect the performance of the rest of the set.

Note: The flex cables are very fragile, care should be taken not to damage them during repair. After repair, be very sure that the flex cables are inserted properly into the flex sockets before encasing, otherwise faults may occur.

DISMANTLING INSTRUCTIONS

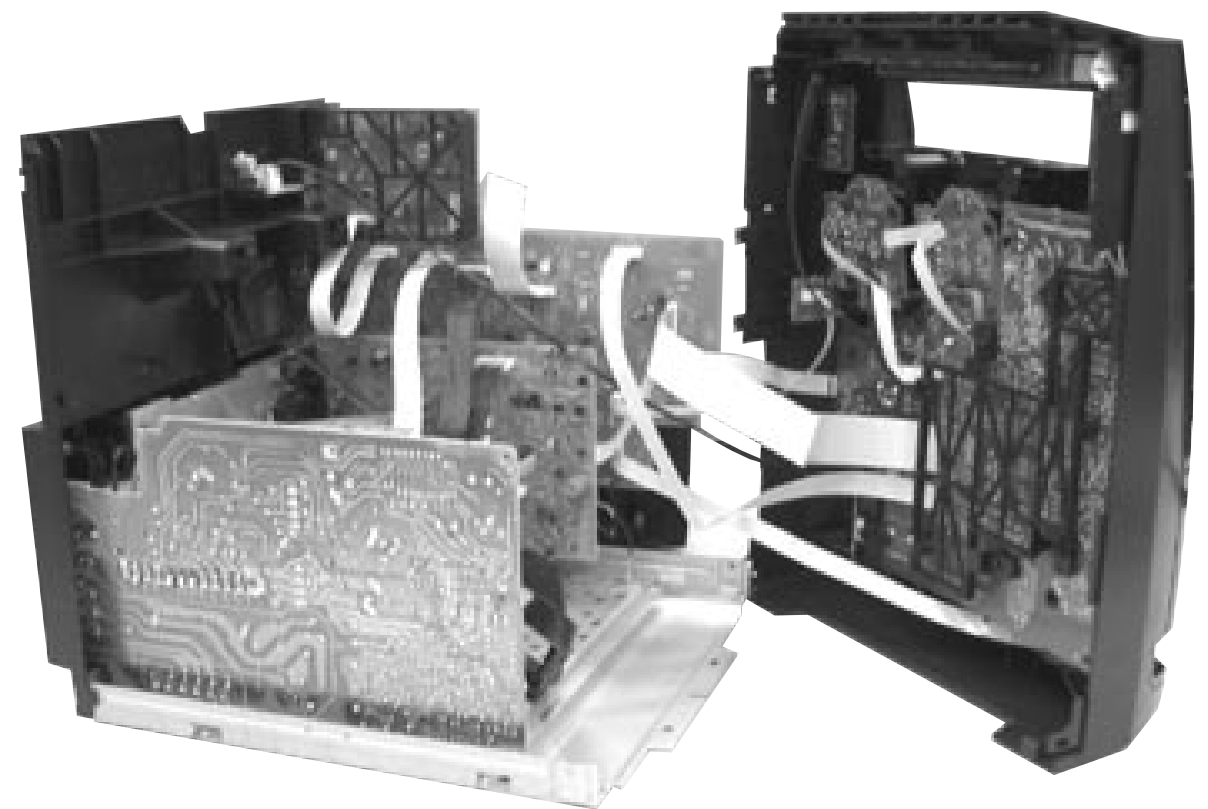
Service position A



Service position B



Service position C



SERVICE TEST PROGRAM

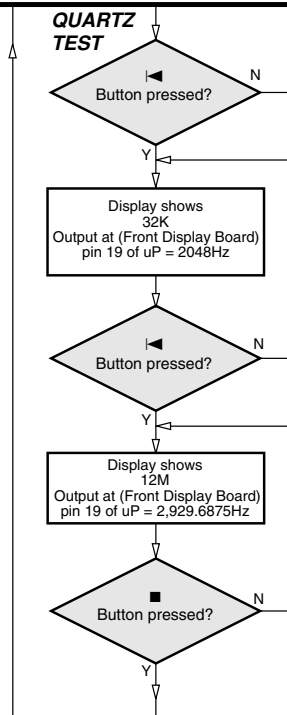
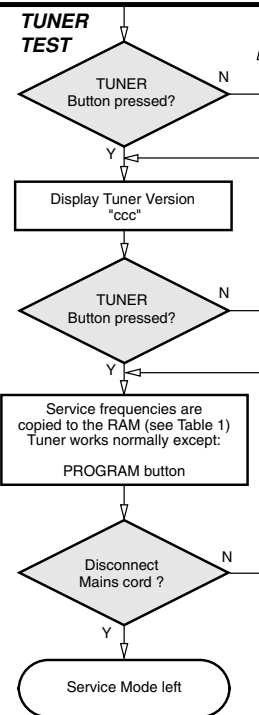
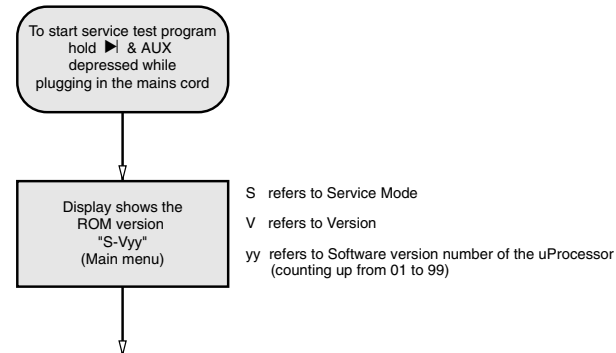


Figure 1

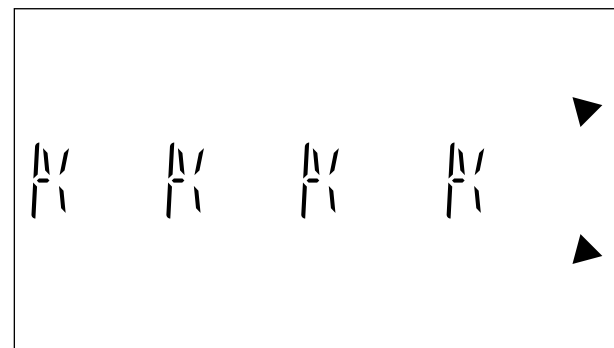
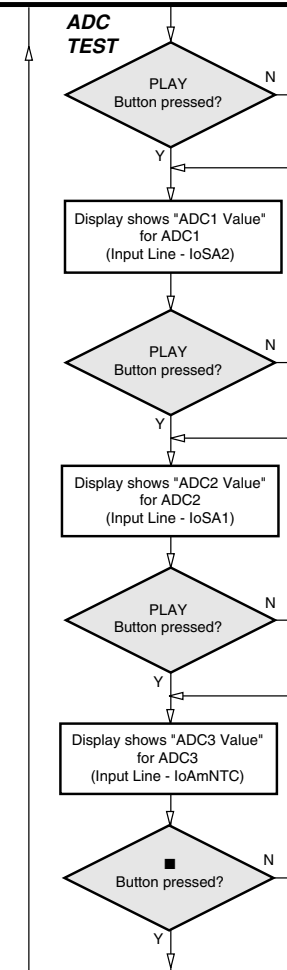
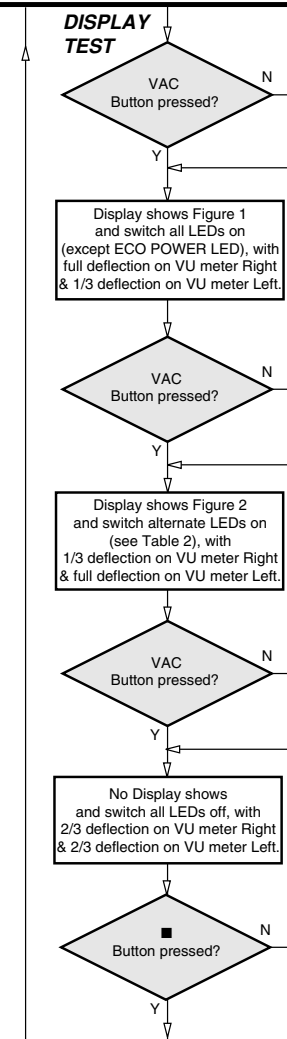


Figure 2



ADC Test is used for checking the ADC inputs to the microprocessor.

The display shows an ADC value between 0 and 255 for an input signal between 0 and 5V.

Various other Tests

PRESET	Europe "EUR"	USA "USA"	Oversea "OSE"
1	87.5MHz	87.5MHz	87.5MHz
2	108MHz	108MHz	108MHz
3	531kHz	530kHz	531/530kHz*
4	1602kHz	1700kHz	1602/1700kHz*
5	558kHz	560kHz	558/560kHz*
6	1494kHz	1500kHz	1494/1500kHz*
7	153kHz	98MHz	87.5/98MHz*
8	279kHz	87.5MHz	87.5MHz
9	198kHz	87.5MHz	87.5MHz
10	98MHz	87.5MHz	87.5MHz
11	87.5MHz	87.5MHz	98/87.5MHz*

Table 1

Note:
* Depending on the selected grid frequency (9 or 10kHz).
By holding the TUNER and **▶▶** buttons depressed while switching on the Mains supply, the tuning grid frequency is toggled between 9kHz and 10kHz for the Oversea (/21) version.

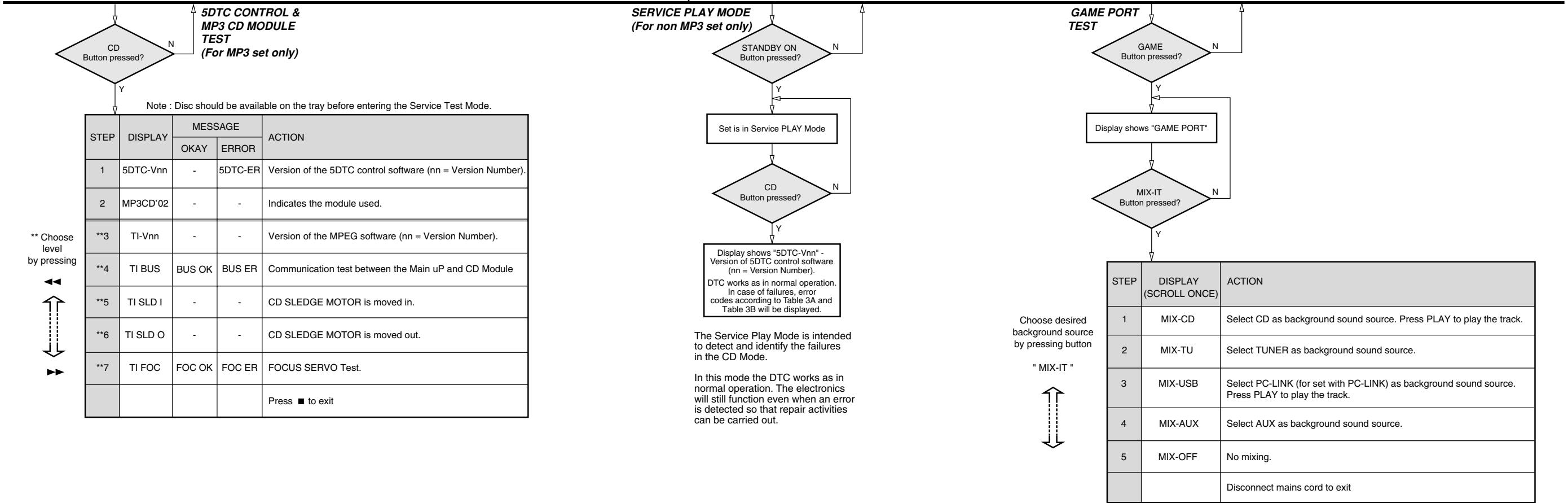
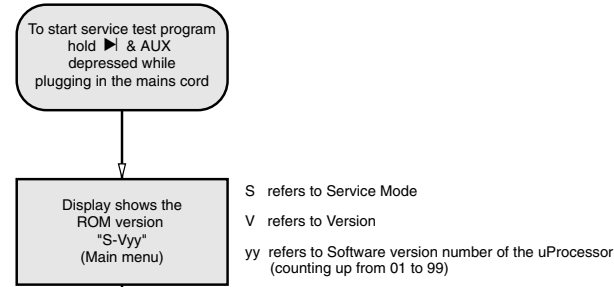
LEDs	FW-C557	FW-C577	FW-C579 FW-M567	FW-C777 FW-M777
CD	-	-	-	OFF
TUNER	-	-	-	ON
AUX / GAME	-	-	-	OFF
USB PC LINK	-	-	-	OFF
DISC 1	-	ON	ON	ON
DISC 2	-	OFF	OFF	OFF
DISC 3	-	ON	ON	ON
DISC 4	-	OFF	OFF	OFF
DISC 5	-	ON	ON	ON
^^ MAX 1 (WOOX 1)	OFF	OFF	OFF	OFF
^^ MAX 2 (WOOX 2)	ON	ON	ON	ON
^^ MAX 3 (WOOX 3)	OFF	OFF	OFF	OFF
SPEED	ON	ON	ON	ON
PUNCH	OFF	OFF	OFF	OFF
BLAST	OFF	OFF	OFF	OFF
USB Indicator	-	OFF	OFF	OFF

Table 2

^^ MAX - FW-C557, FW-C577, FW-C579, FW-M567
WOOX - FW-C777, FW-M777

TEST	Activated with	ACTION
EEPROM TEST	▶▶ ■ to Exit	A test pattern will be sent to the EEPROM. "PASS" is displayed if the uProcessor read back the test pattern correctly, otherwise "FAIL" will be displayed.
EEPROM FORMAT TEST	◀◀	Load default data. Display shows "NEW" for 1 second. Caution! All presets from the customer will be lost!!
DEMO TOGGLE	^^ MAX (WOOX 2)	Pressing this button will toggle between DEMO ON and DEMO OFF. The DEMO status will scroll once across the Display.
ROTARY ENCODER TEST	Rotary Volume Knob	Display shows value for 2 seconds. Values increases or decreases until Volume Maximum (VOL MAX) or Volume Minimum (VOL MIN) is reached.
MICRONAS FIRMWARE VERSION	USB PC LINK ■ to Exit	To read out the Firmware Version of IC UAC3553 on the USB PC LINK Board. Display shows "Vxxxx" (xxxx = Firmware Version number).
LEAVE SERVICE TEST PROGRAM	Disconnect mains cord	

SERVICE TEST PROGRAM



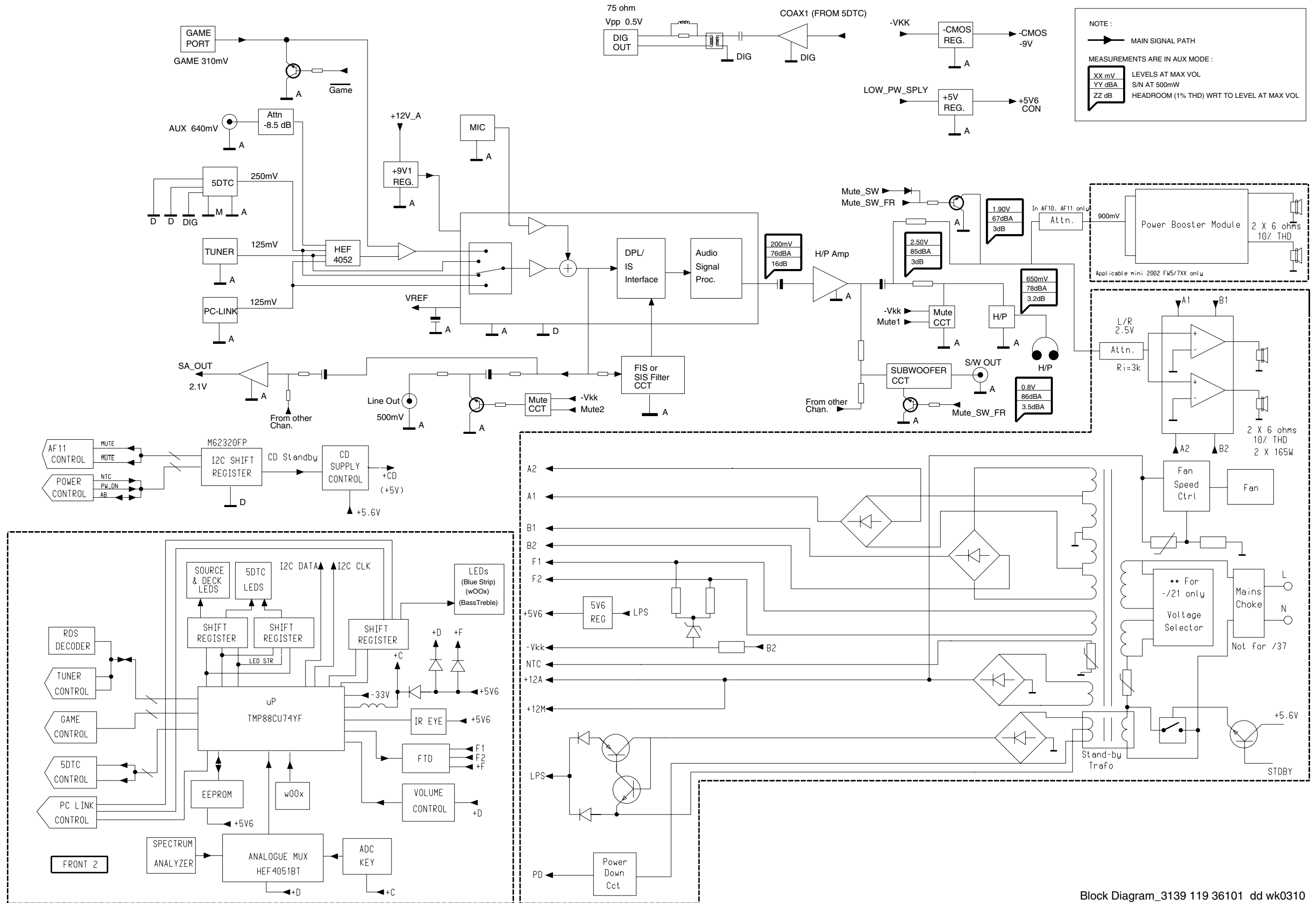
Error code	Error Description
E1000	Focus Error Triggered when the focus cannot be found within a certain time when starting up the CD, or if the focus is lost for more than a certain time during playing of CD.
E1001	Radial Error Triggered when the radial servo is off-track for a certain time during playing of CD.
E1002	Sledge In Error The sledge did not reach its inner position (inner-switch is still close) before approximately 6 seconds have passed by. Inner-switch or sledge motor problem.
E1003	Sledge Out Error The sledge did not come out of its inner position (inner-switch is still open) before approximately 250ms have passed by. Inner-switch or sledge motor problem.
E1005	Jump Error Triggered in normal play when the jump destination could not be found within a certain time.

Table 3A

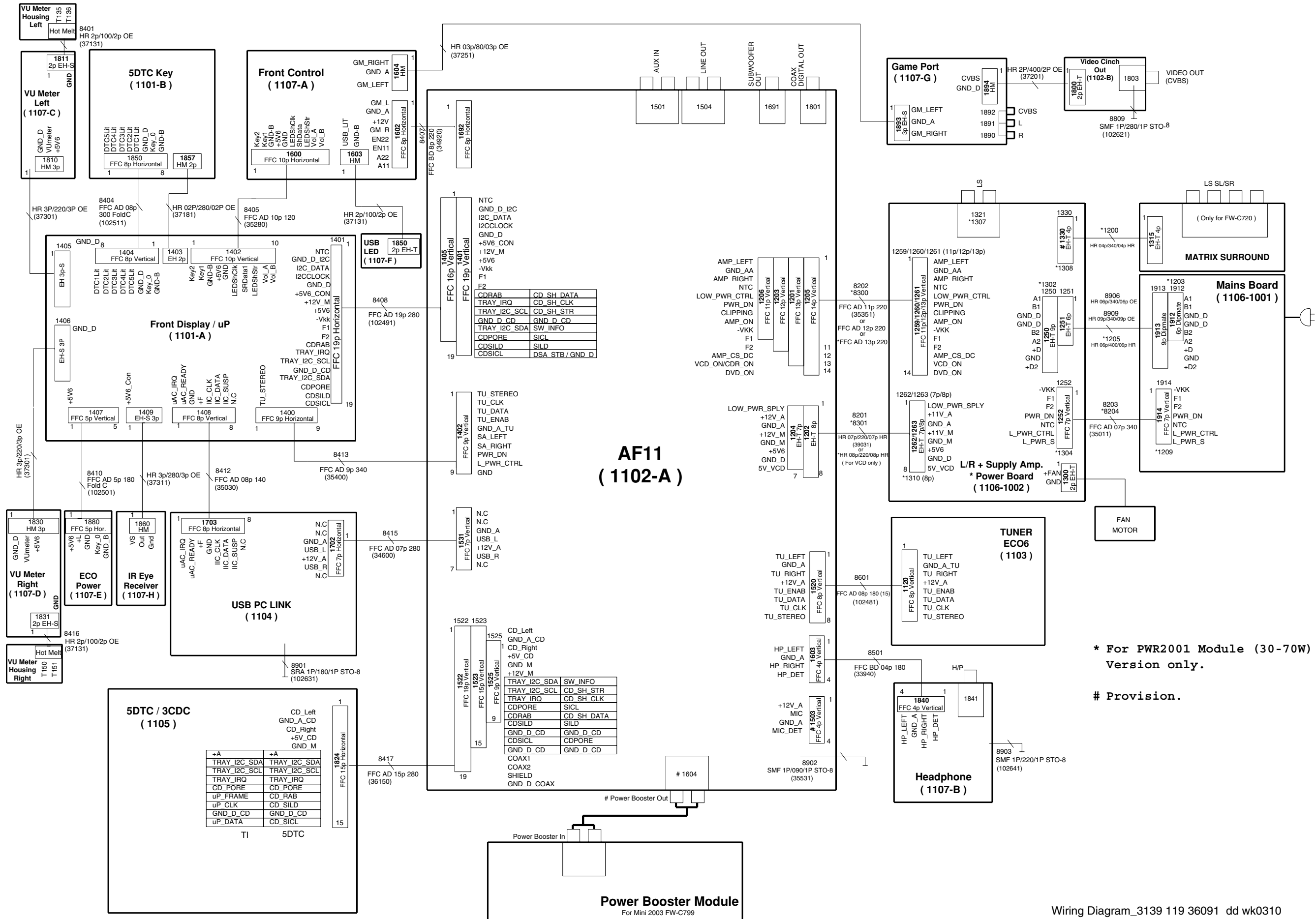
Error code	Error Description
E1006	Subcode Error Triggered when a new subcode was missing for a certain time during playing of CD.
E1007	PLL Error The Phase Lock Loop could not lock within a certain time.
E1008	Turntable Motor Error Generated when the CD could not reached 75% of speed during start-up within a certain time. Disc motor problem.
E1020	Focus Search Error The focus point has not been found within a certain time.
E1061	The tray could not enter the inside position and is opening again. This can happen if the tray is blocked such that it cannot go fully inside, or if the 5DTC control module is defective and never closes.
E1079	The tray could not reach the outside position and is stopped at its blocked position. This can happen if the tray is blocked such that it cannot go fully outside, or if the 5DTC control module is defective and never opens.

Table 3B

SET BLOCK DIAGRAM



SET WIRING DIAGRAM



* For PWR2001 Module (30-70W) Version only.

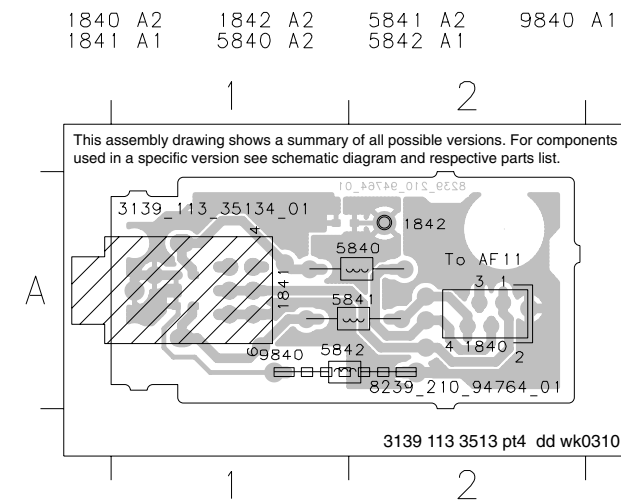
Provision.

FRONT CONTROL BOARD

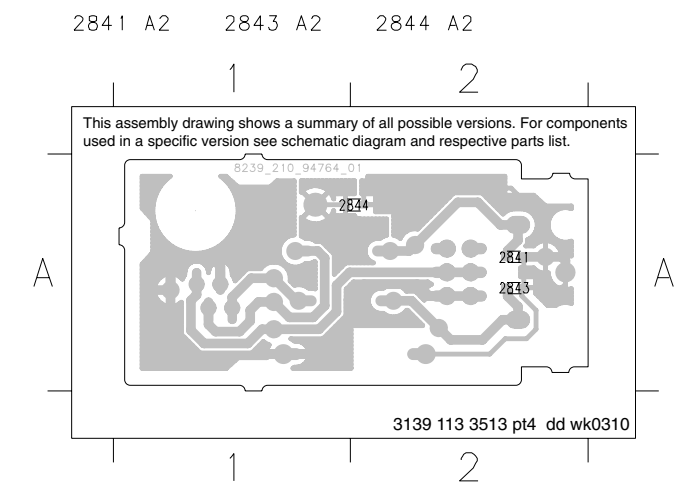
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HEADPHONE BOARD - COMPONENT LAYOUT

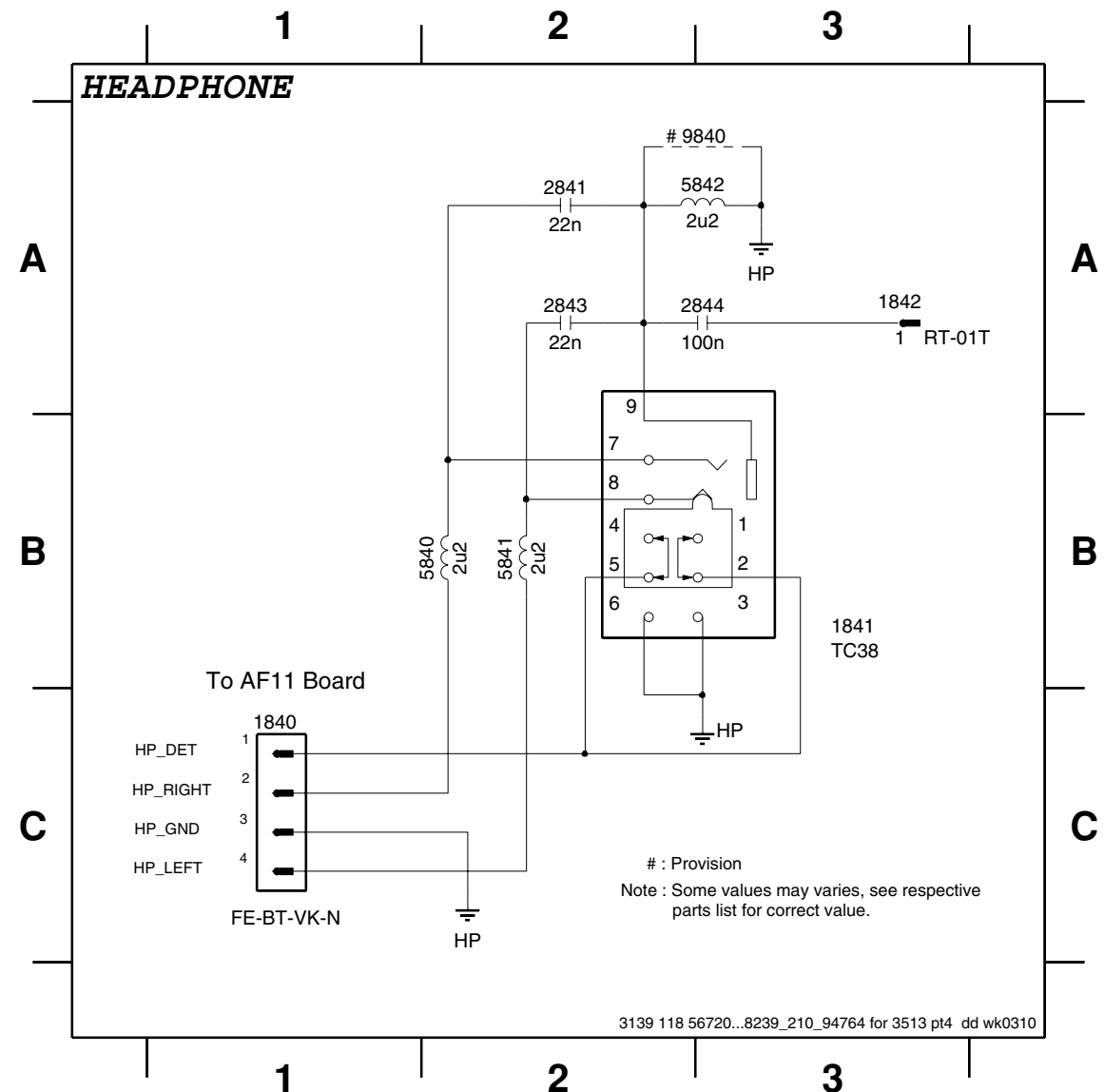


HEADPHONE BOARD - CHIP LAYOUT



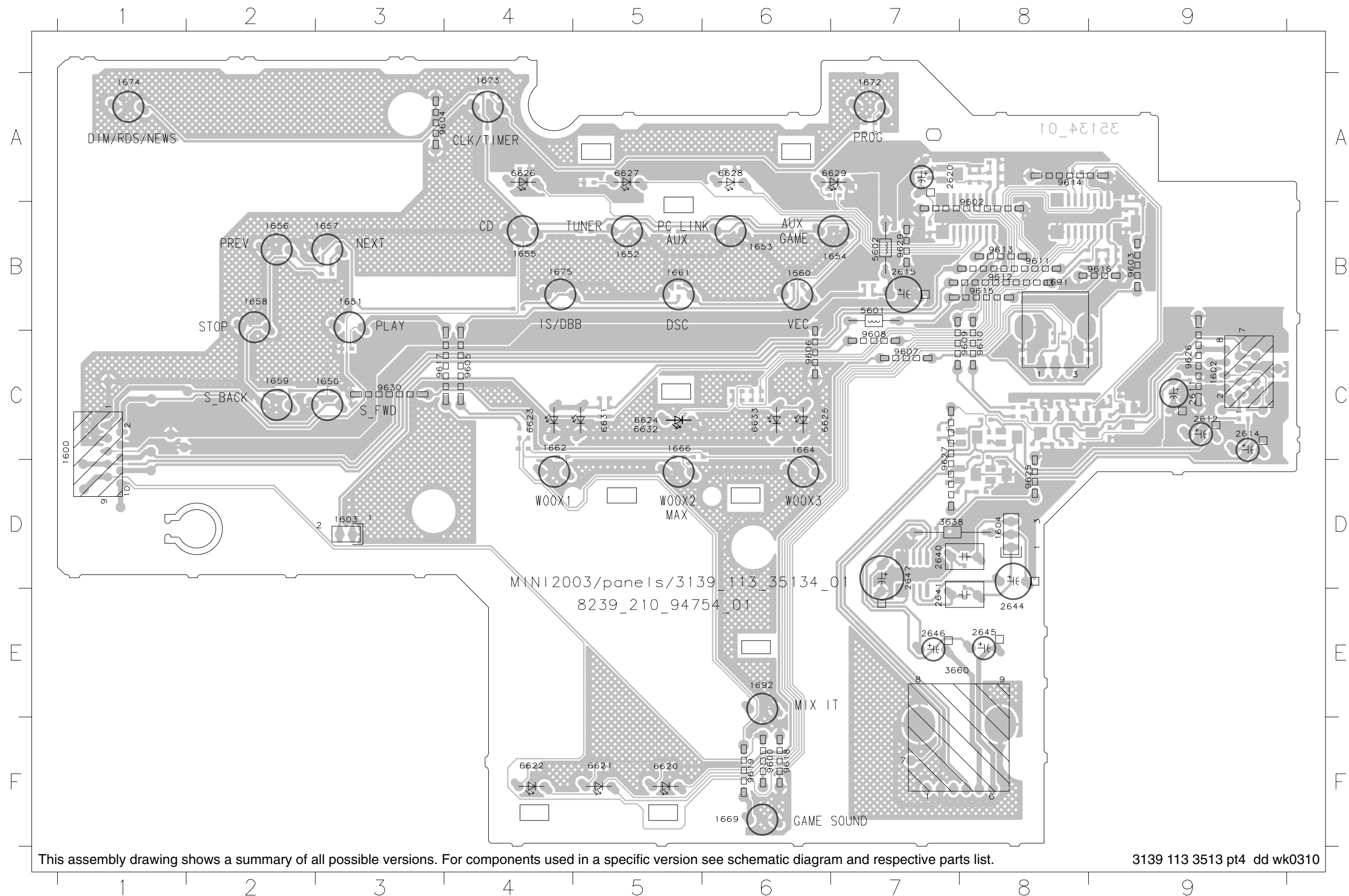
HEADPHONE BOARD - CIRCUIT DIAGRAM

1840 C1 1841 B3 1842 A3 2841 A2 2843 A2 2844 A3 5840 B2 5841 B2 5842 A3 9840 A3



CONTROL BOARD - COMPONENT LAYOUT

1600 C1	1651 B3	1656 B2	1661 B5	1672 A7	1692 E6	2620 A7	2646 E7	5602 B7	6624 C5	6629 A7	9602 B8	9607 C7	9612 B8	9617 C3	9627 C7
1602 C9	1652 B5	1657 B3	1662 C4	1673 A4	2611 C9	2640 D7	2647 D7	6620 F5	6625 C6	6631 C5	9603 B9	9608 C7	9613 B8	9618 F6	9629 B7
1603 D3	1653 B6	1658 B2	1664 C6	1674 A1	2612 C9	2641 E7	3638 D7	6621 F5	6626 A4	6632 C5	9604 A3	9609 C8	9614 A8	9619 F6	9630 C3
1604 D8	1654 B7	1659 C2	1666 C5	1675 B4	2614 C9	2644 E8	3660 E7	6622 F4	6627 A5	6633 C6	9605 C4	9610 C8	9615 B8	9625 D8	9625 D8
1650 C3	1655 B4	1660 B6	1669 F6	1691 B8	2615 B7	2645 E8	5601 B7	6623 C4	6628 A6	9600 F6	9606 C6	9611 B8	9616 B9	9626 C9	9626 C9

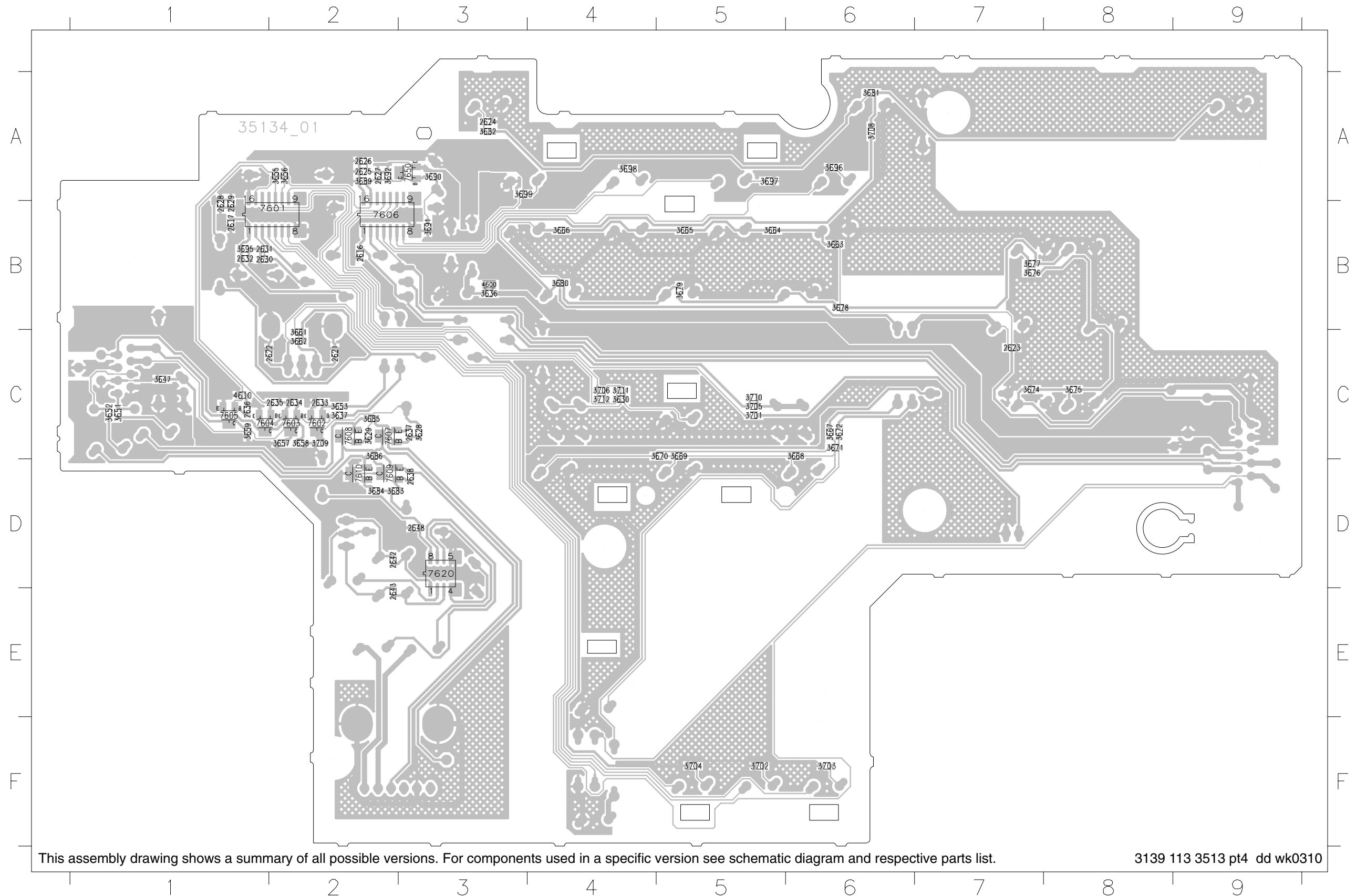


This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

3139 113 3513 pt4 dd wk0310

CONTROL BOARD - CHIP LAYOUT

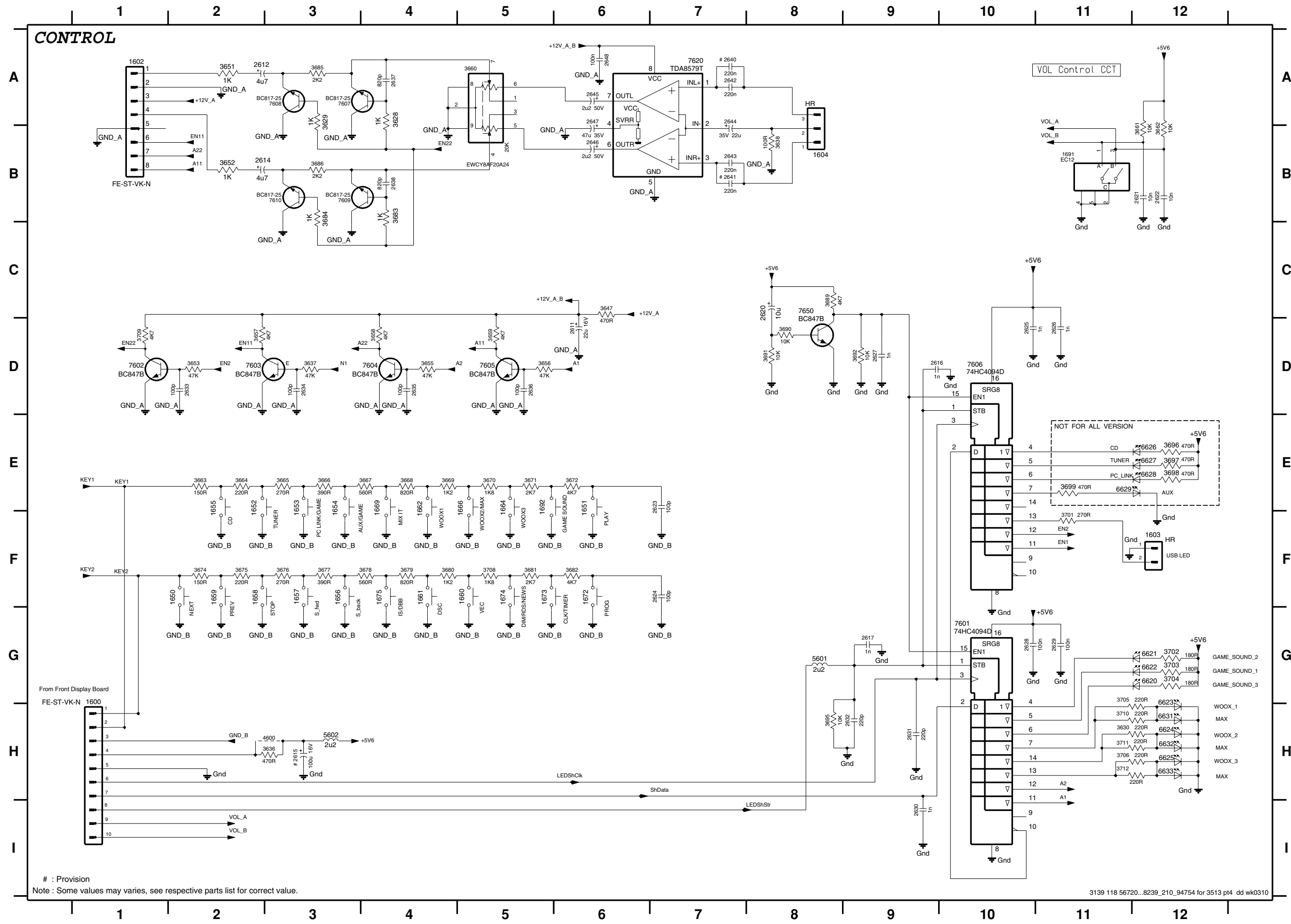
2616 B2	2625 A2	2631 B1	2637 C3	3629 C2	3652 C1	3659 C1	3666 B4	3672 C6	3679 B5	3685 C2	3695 B1	3702 F5	3709 C2	7601 B2	7607 C2
2617 B1	2626 A2	2632 B1	2638 D3	3630 C4	3653 C2	3661 C2	3667 C6	3674 C7	3680 B4	3686 C2	3696 A6	3703 F6	3710 C5	7602 C2	7608 C2
2621 C2	2627 A2	2633 C2	2642 D2	3636 B3	3655 A2	3662 C2	3668 C6	3675 C8	3681 A6	3689 A2	3697 A5	3704 F5	3711 C4	7603 C2	7609 D2
2622 C1	2628 B1	2634 C2	2643 E2	3637 C2	3656 A2	3663 B6	3669 C5	3676 B7	3682 A3	3690 A3	3698 A4	3705 C5	3712 C4	7604 C1	7610 D2
2623 C7	2629 B1	2635 C2	2648 D3	3647 C1	3657 C2	3664 B5	3670 C5	3677 B7	3683 D2	3691 B3	3699 A3	3706 C4	4600 B3	7605 C1	7620 D3
2624 A3	2630 B1	2636 C1	3628 C3	3651 C1	3658 C2	3665 B5	3671 C6	3678 B6	3684 D2	3692 A2	3701 C5	3708 A6	4610 C1	7606 B2	7650 A3



This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

3139 113 3513 pt4 dd wk0310

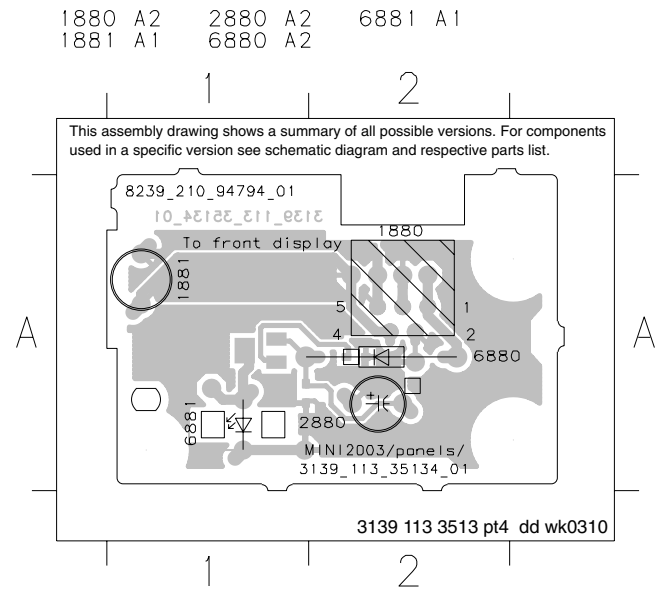
CONTROL BOARD - CIRCUIT DIAGRAM



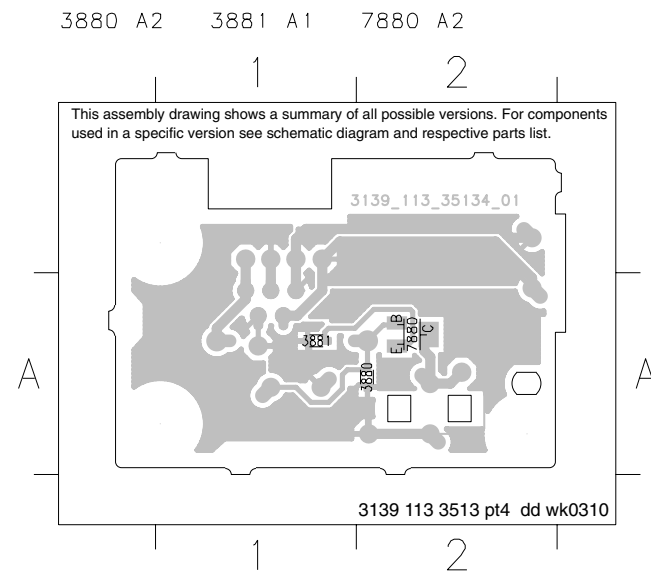
1600 H1	3698 E12
1602 A1	3699 E11
1603 F12	3701 F11
1604 B4	3702 G12
1650 F2	3703 G12
1651 E6	3704 G12
1652 E2	3705 G11
1653 E3	3706 H11
1654 F3	3708 F5
1655 F2	3709 D1
1656 F3	3710 H11
1657 F3	3711 H11
1658 F2	3712 H11
1659 F2	4600 H3
1660 F5	5601 G8
1661 F4	5602 H3
1662 E4	6620 G12
1664 F5	6621 G12
1666 F5	6622 G12
1669 E4	6623 H12
1672 F6	6624 H12
1673 F5	6625 H12
1674 F5	6626 E12
1675 F4	6627 E12
1691 B11	6628 E12
1692 E5	6629 E11
2611 D6	6631 H12
2612 A2	6632 H12
2614 B2	6633 H12
2615 H3	7601 G10
2616 D9	7602 D1
2617 G9	7603 D2
2620 C8	7604 D4
2621 B12	7605 D5
2622 B12	7606 D10
2623 E7	7607 A3
2624 F7	7608 A3
2625 D10	7609 B3
2626 D11	7610 B3
2627 D9	7620 A7
2628 G10	7650 C8
2629 G11	
2630 I9	
2631 H9	
2632 H9	
2633 D2	
2634 D3	
2635 D4	
2636 D5	
2637 A4	
2638 B4	
2640 A7	
2641 B7	
2642 A7	
2643 B7	
2644 A7	
2645 A6	
2646 B6	
2647 A6	
2648 A6	
3628 A4	
3629 A3	
3630 H11	
3636 H3	
3637 D3	
3638 B8	
3647 C6	
3651 A2	
3652 B2	
3653 D2	
3655 D4	
3656 D5	
3657 D2	
3658 D4	
3659 D5	
3660 A5	
3661 B12	
3662 B12	
3663 E2	
3664 E2	
3665 E3	
3666 E3	
3667 E4	
3668 E4	
3669 E4	
3670 E5	
3671 E5	
3672 E6	
3674 F2	
3675 F2	
3676 F3	
3677 F3	
3678 F4	
3679 F4	
3680 F4	
3681 F5	
3682 F6	
3683 B4	
3684 B3	
3685 A3	
3686 B3	
3689 C3	
3690 D8	
3691 D8	
3692 D9	
3695 H8	
3696 E12	
3697 E12	

: Provision
 Note : Some values may varies, see respective parts list for correct value.

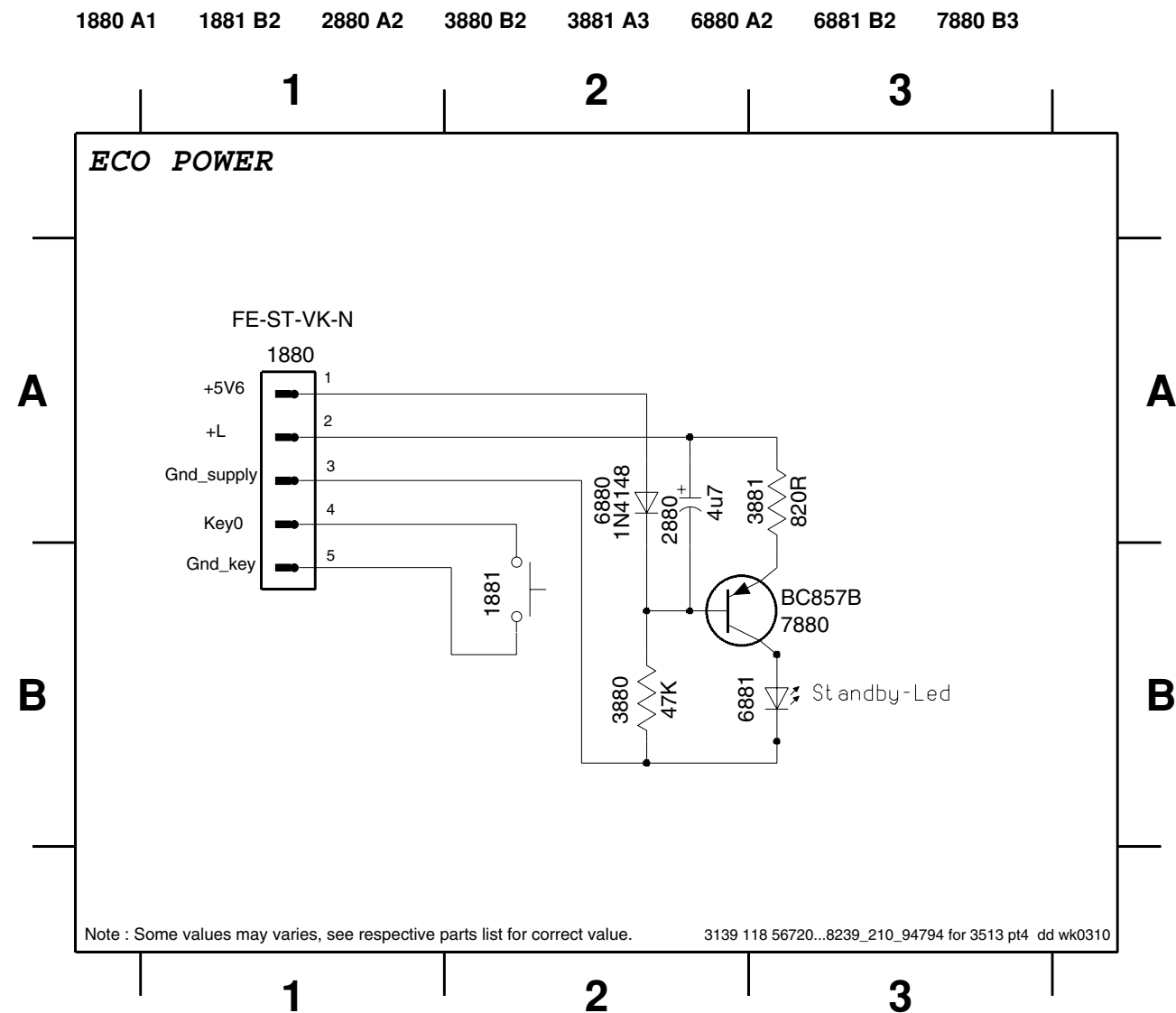
ECO POWER BOARD - COMPONENT LAYOUT



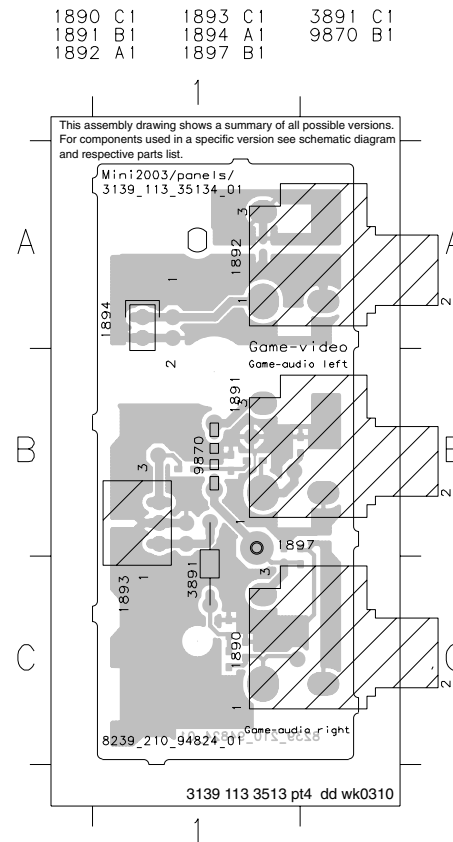
ECO POWER BOARD - CHIP LAYOUT



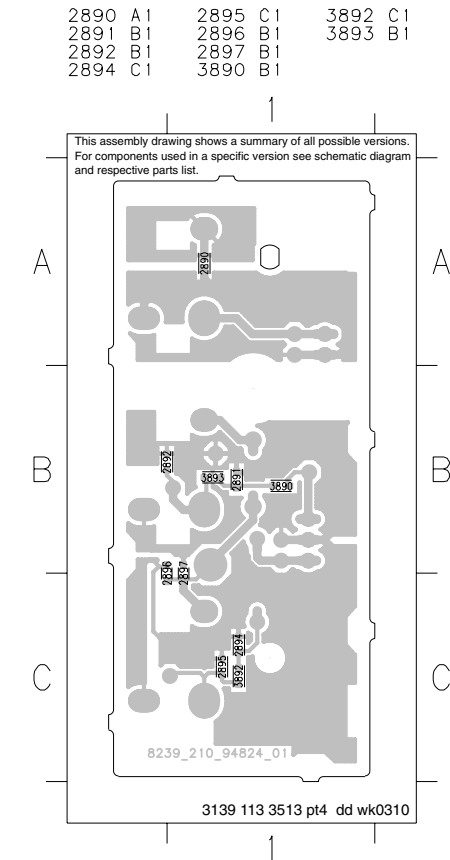
ECO POWER BOARD - CIRCUIT DIAGRAM



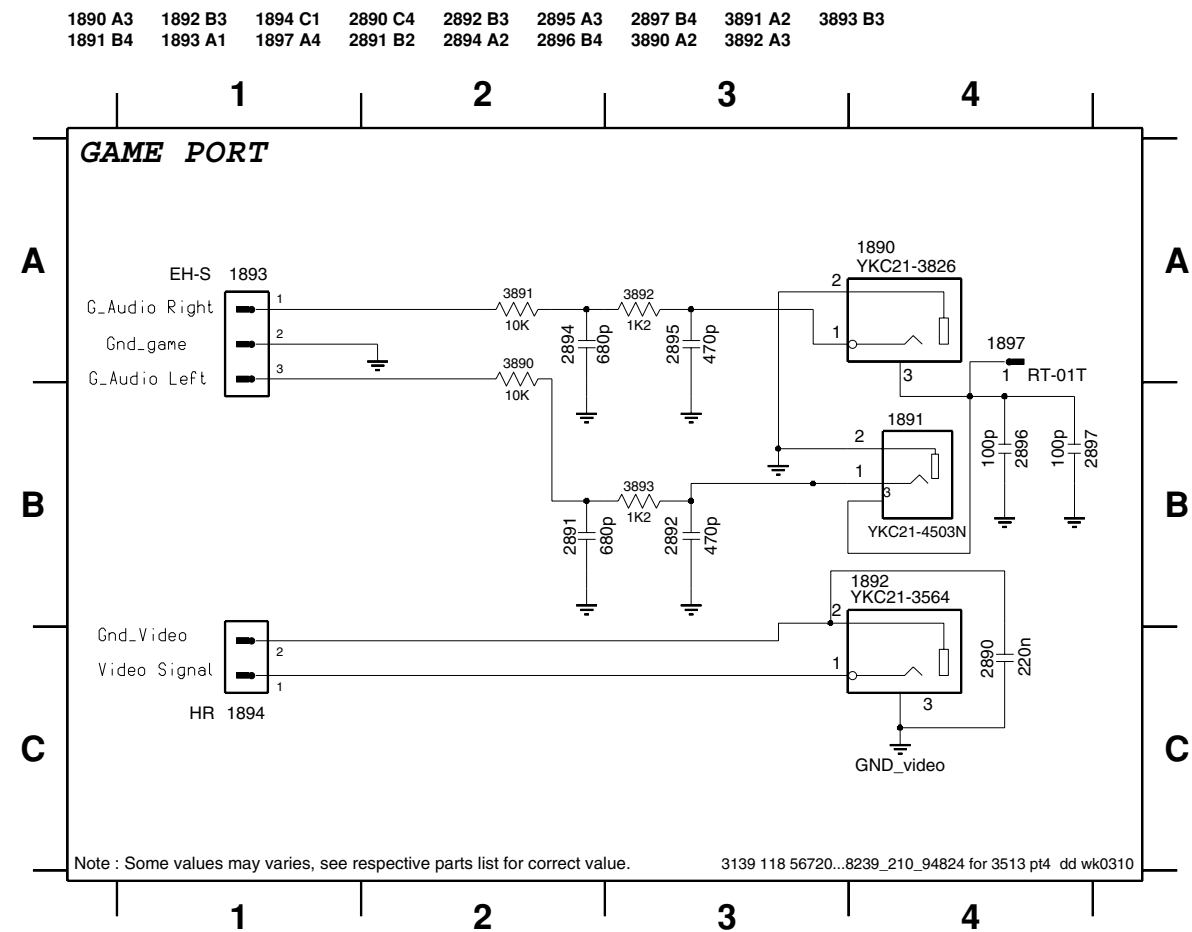
GAME PORT BOARD - COMPONENT LAYOUT



GAME PORT BOARD - CHIP LAYOUT

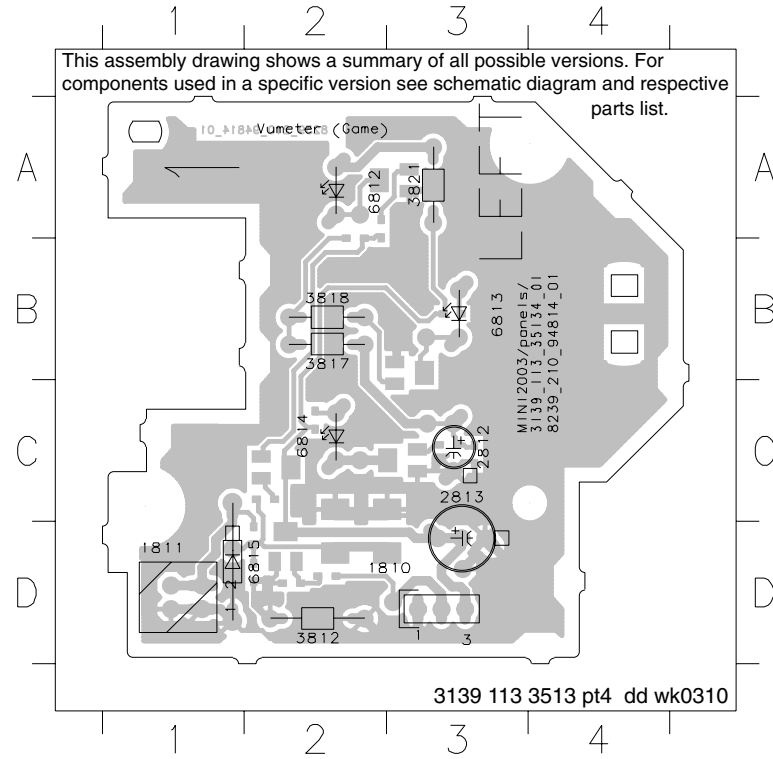


GAME PORT BOARD - CIRCUIT DIAGRAM



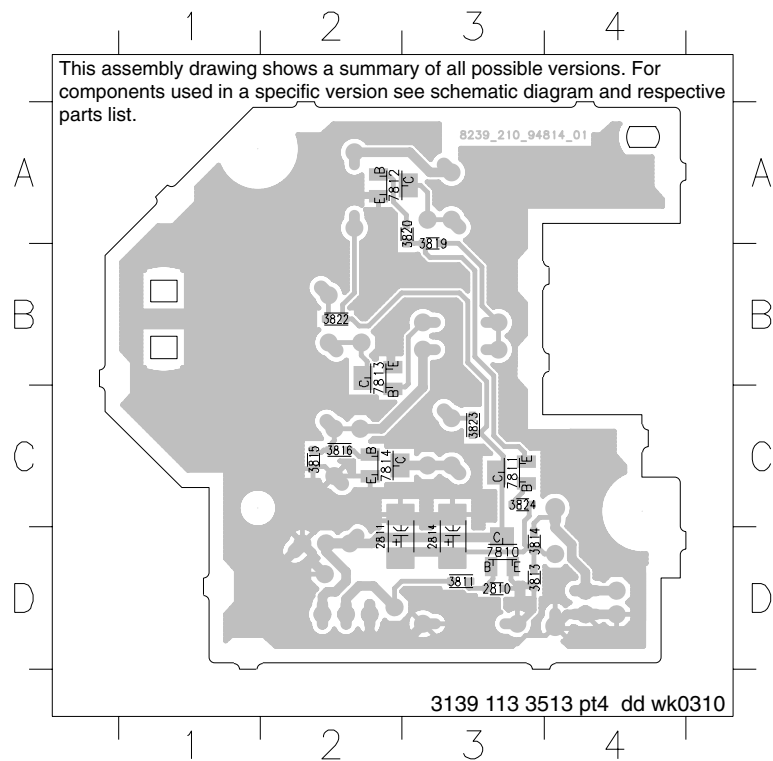
VU METER (LEFT) BOARD - COMPONENT LAYOUT

1810 D3	2813 C3	3818 B2	6813 B3
1811 D1	3812 D2	3821 A3	6814 C2
2812 C3	3817 B2	6812 A2	6815 D2



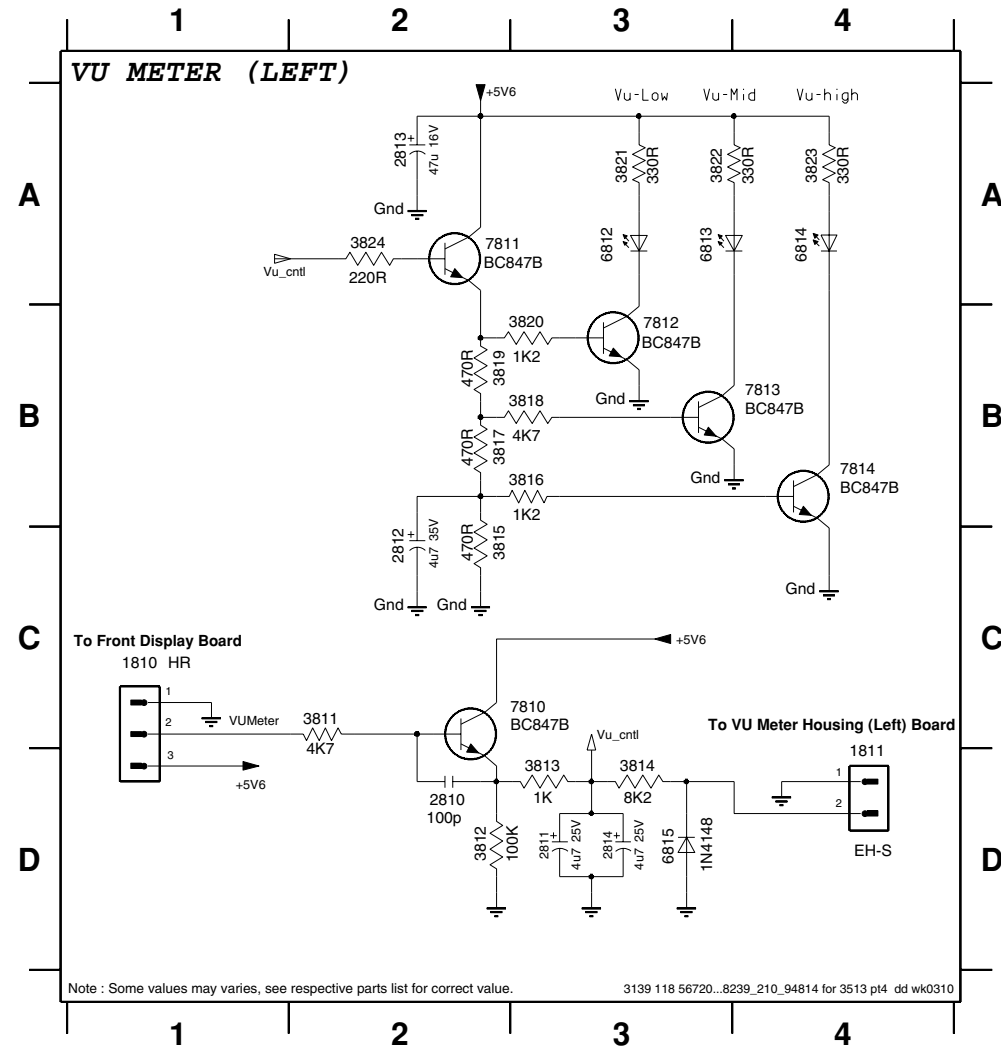
VU METER (LEFT) BOARD - CHIP LAYOUT

2810 D3	3813 D3	3819 A3	3824 C3	7813 B2
2811 D2	3814 D3	3820 A3	7810 D3	7814 C2
2814 D3	3815 C2	3822 B2	7811 C3	
3811 D3	3816 C2	3823 C3	7812 A2	

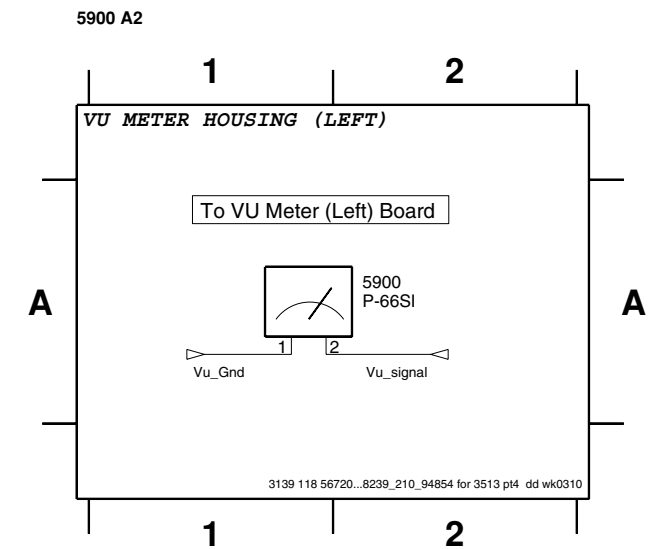
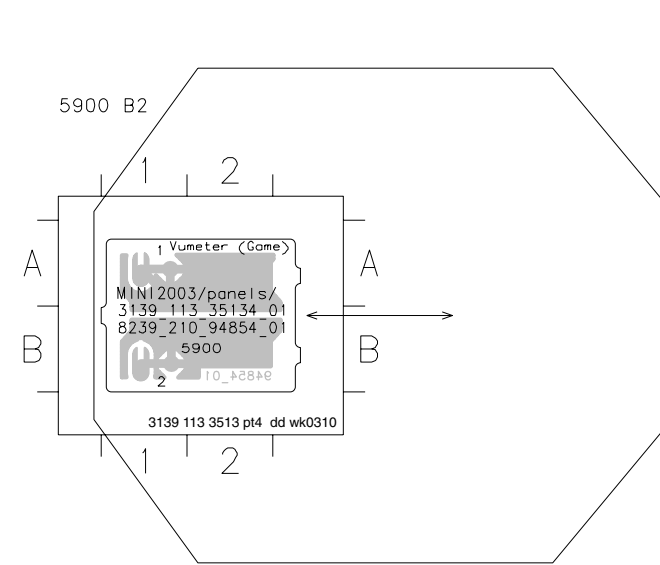


VU METER (LEFT) BOARD - CIRCUIT DIAGRAM

1810 C1	2811 D3	2814 D3	3813 D3	3816 B3	3819 B2	3822 A3	6812 A3	6815 D3	7812 B3
1811 D4	2812 C2	3811 C2	3814 D3	3817 B2	3820 B3	3823 A4	6813 A3	7810 C2	7813 B4
2810 D2	2813 A2	3812 D2	3815 C2	3818 B3	3821 A3	3824 A2	6814 A4	7811 A2	7814 B4

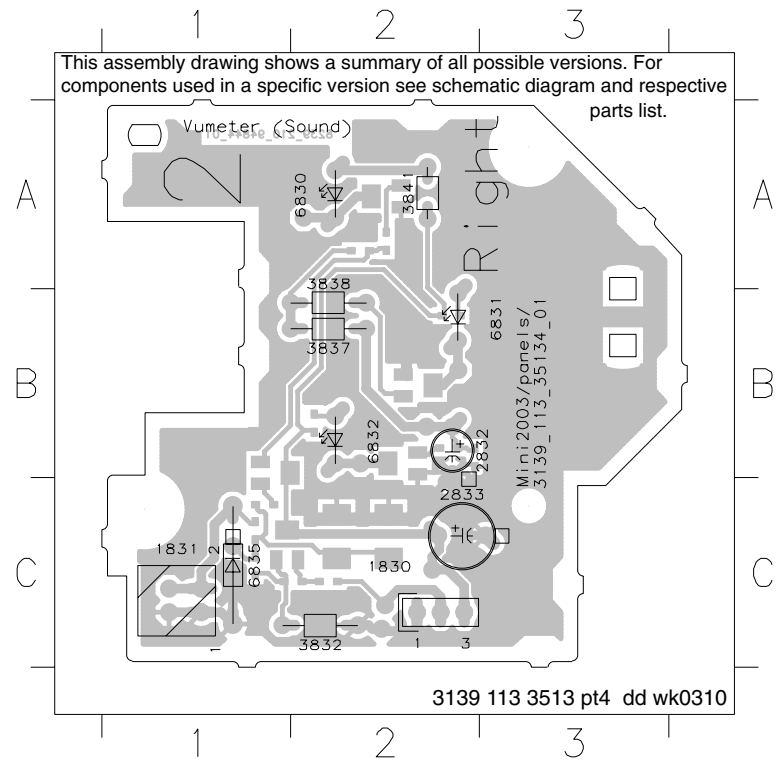


VU METER HOUSING (LEFT) BOARD - COMPONENT LAYOUT & CIRCUIT DIAGRAM



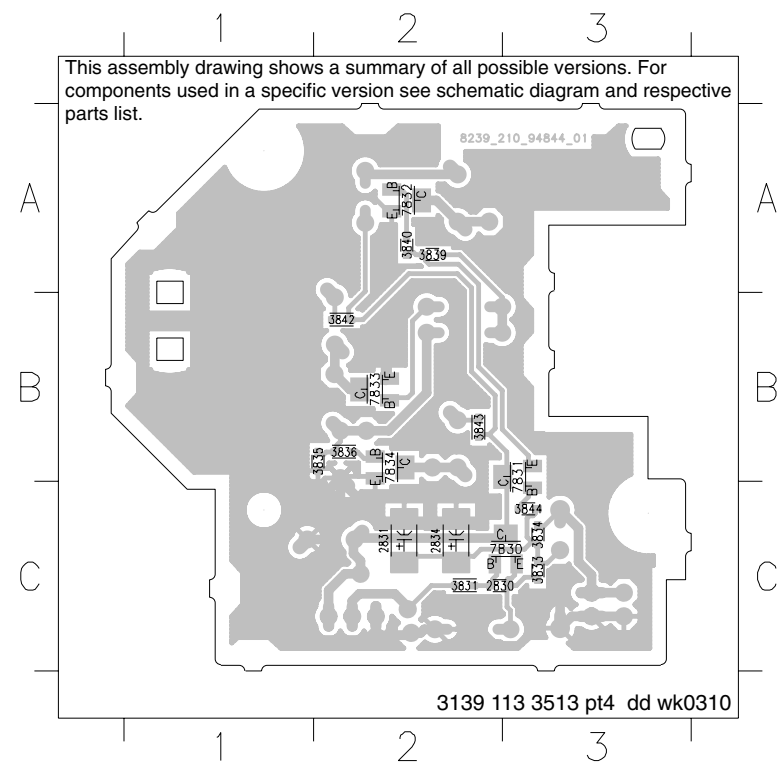
VU METER (RIGHT) BOARD - COMPONENT LAYOUT

1830 C2	2833 C2	3838 A2	6831 B3
1831 C1	3832 C2	3841 A2	6832 B2
2832 B3	3837 B2	6830 A2	6835 C1



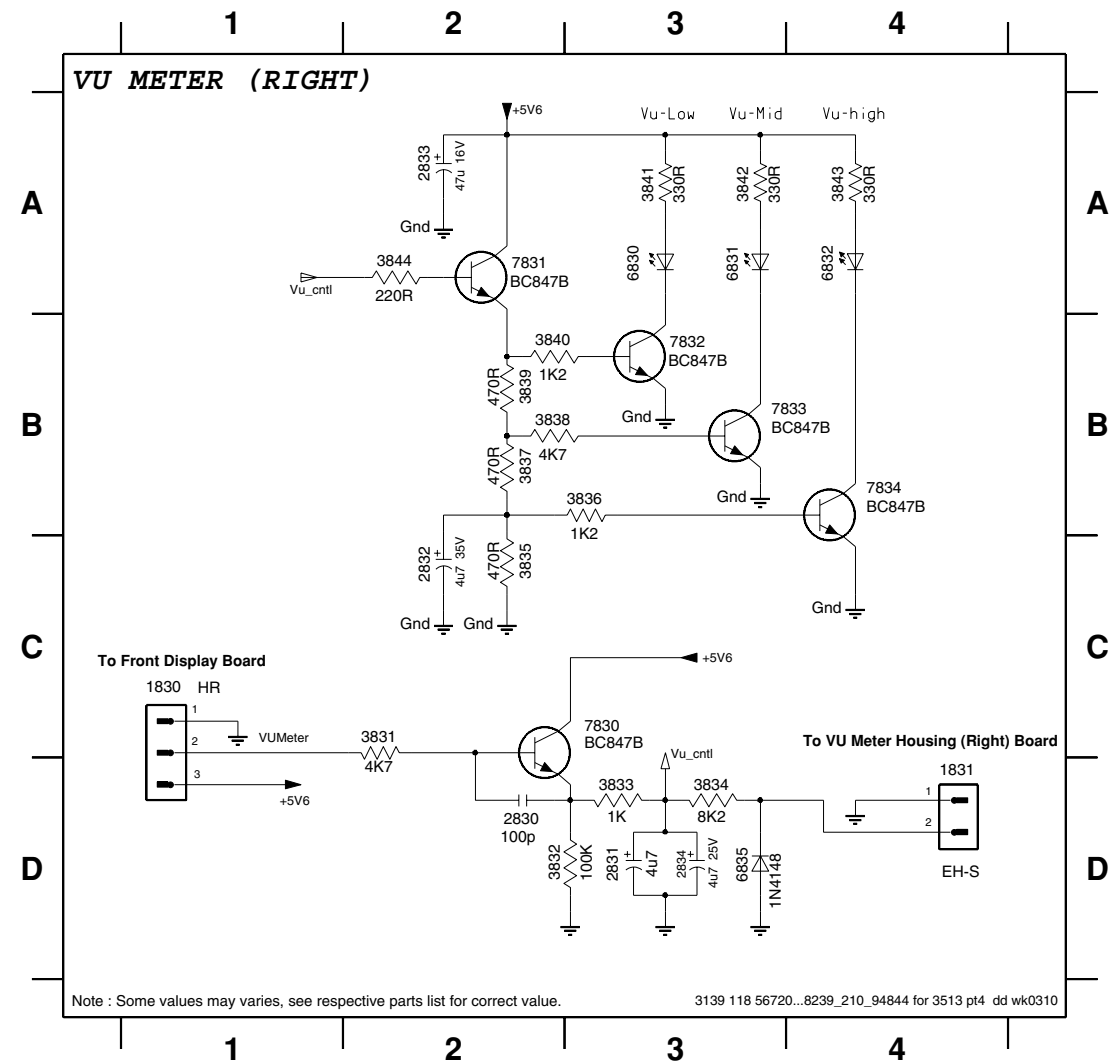
VU METER (RIGHT) BOARD - CHIP LAYOUT

2830 C2	3833 C3	3839 A2	3844 C3	7833 B2
2831 C2	3834 C3	3840 A2	7830 C3	7834 B2
2834 C2	3835 B2	3842 B2	7831 B3	
3831 C2	3836 B2	3843 B2	7832 A2	

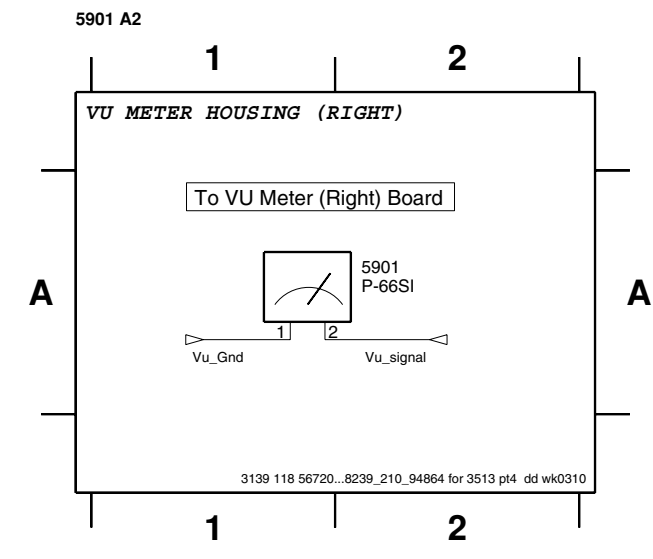
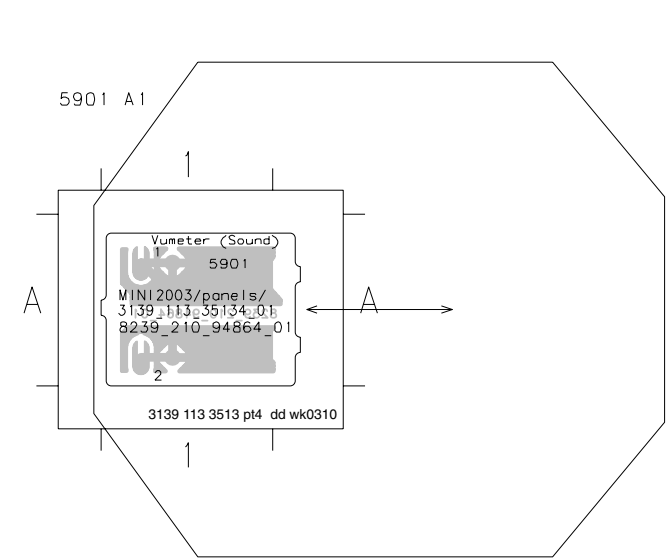


VU METER (RIGHT) BOARD - CIRCUIT DIAGRAM

1830 C1	2831 D3	2834 D3	3833 D3	3836 B3	3839 B2	3842 A3	6830 A3	6835 D3	7832 B3
1831 D4	2832 C2	3831 C2	3834 D3	3837 B2	3840 B2	3843 A4	6831 A3	7830 C3	7833 B3
2830 D2	2833 A2	3832 D2	3835 C2	3838 B2	3841 A3	3844 A2	6832 A4	7831 A2	7834 B4

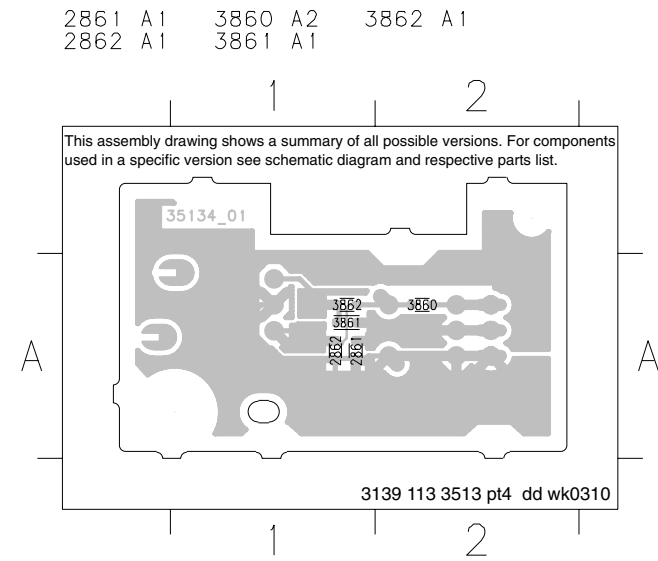
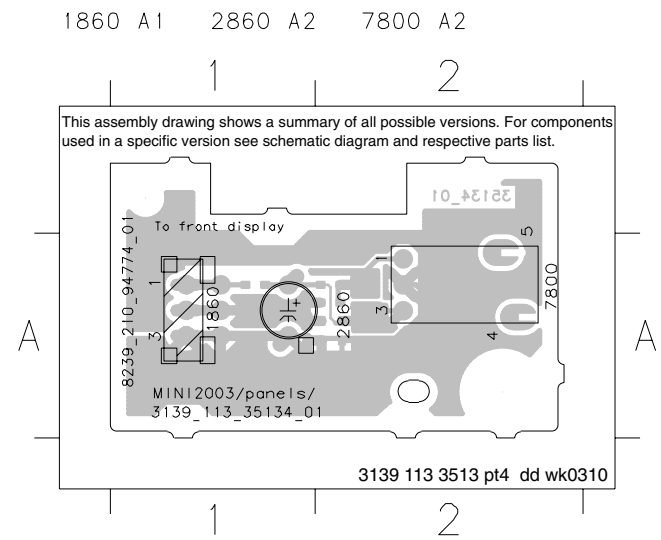


VU METER HOUSING (RIGHT) BOARD - COMPONENT LAYOUT & CIRCUIT DIAGRAM



IR EYE BOARD - COMPONENT LAYOUT

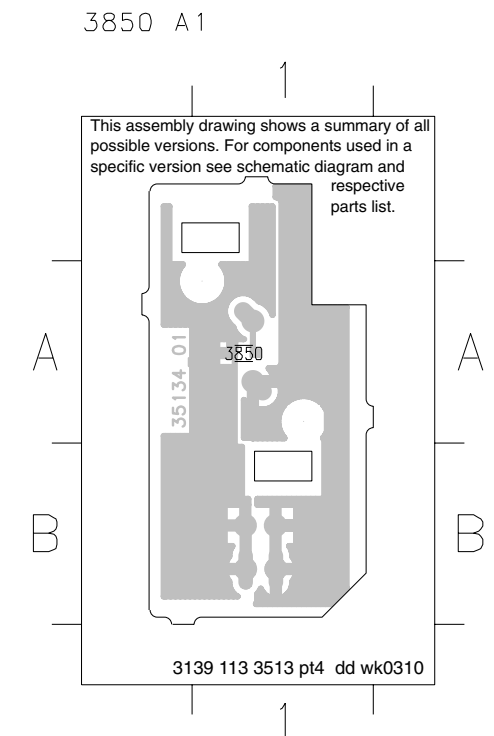
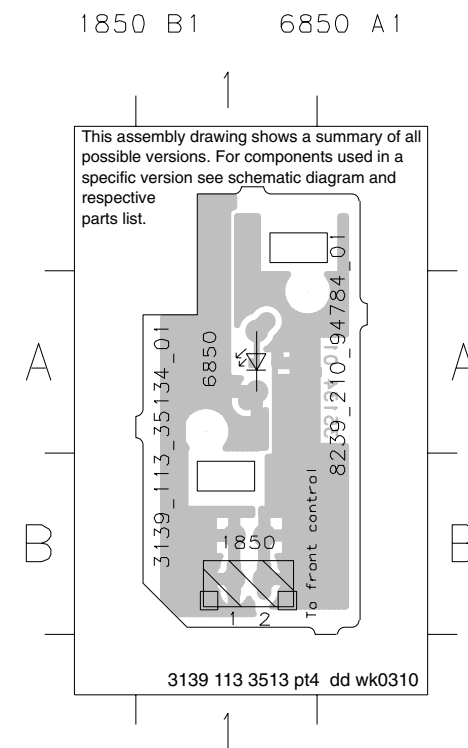
IR EYE BOARD - CHIP LAYOUT



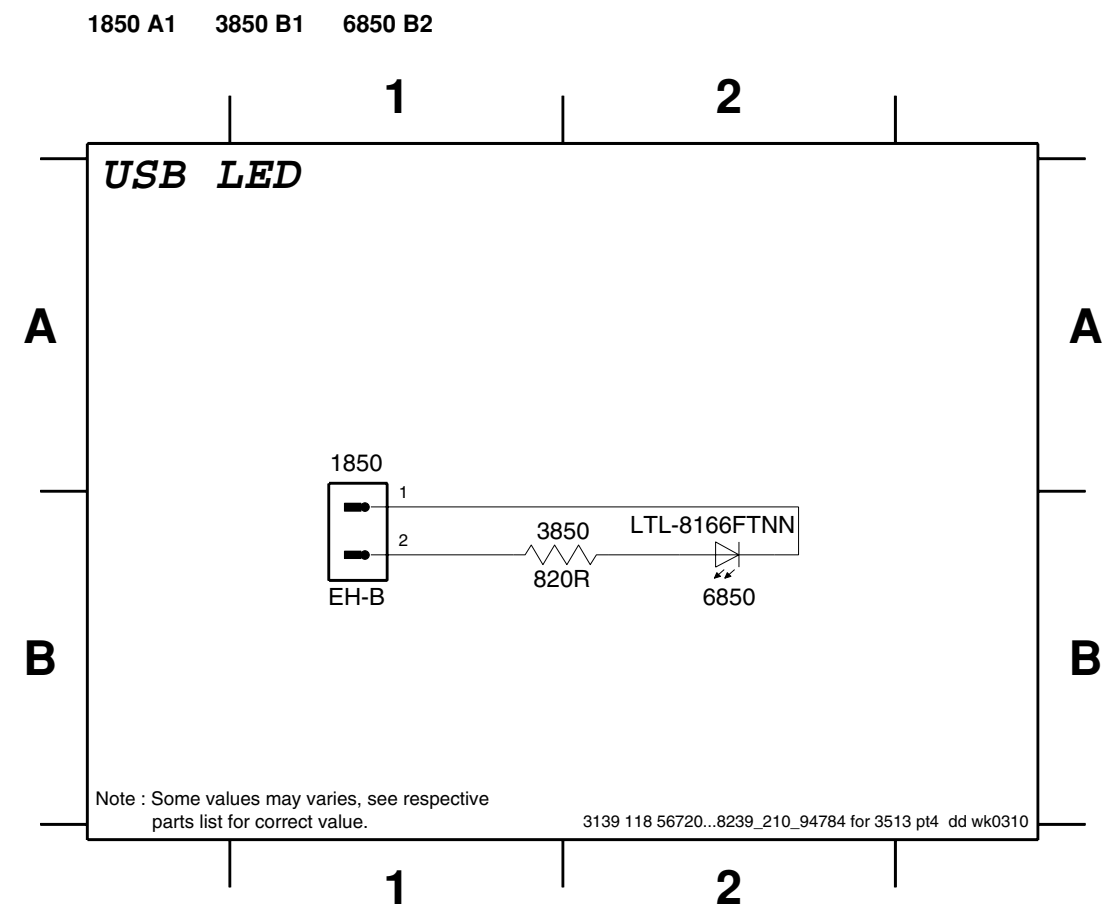
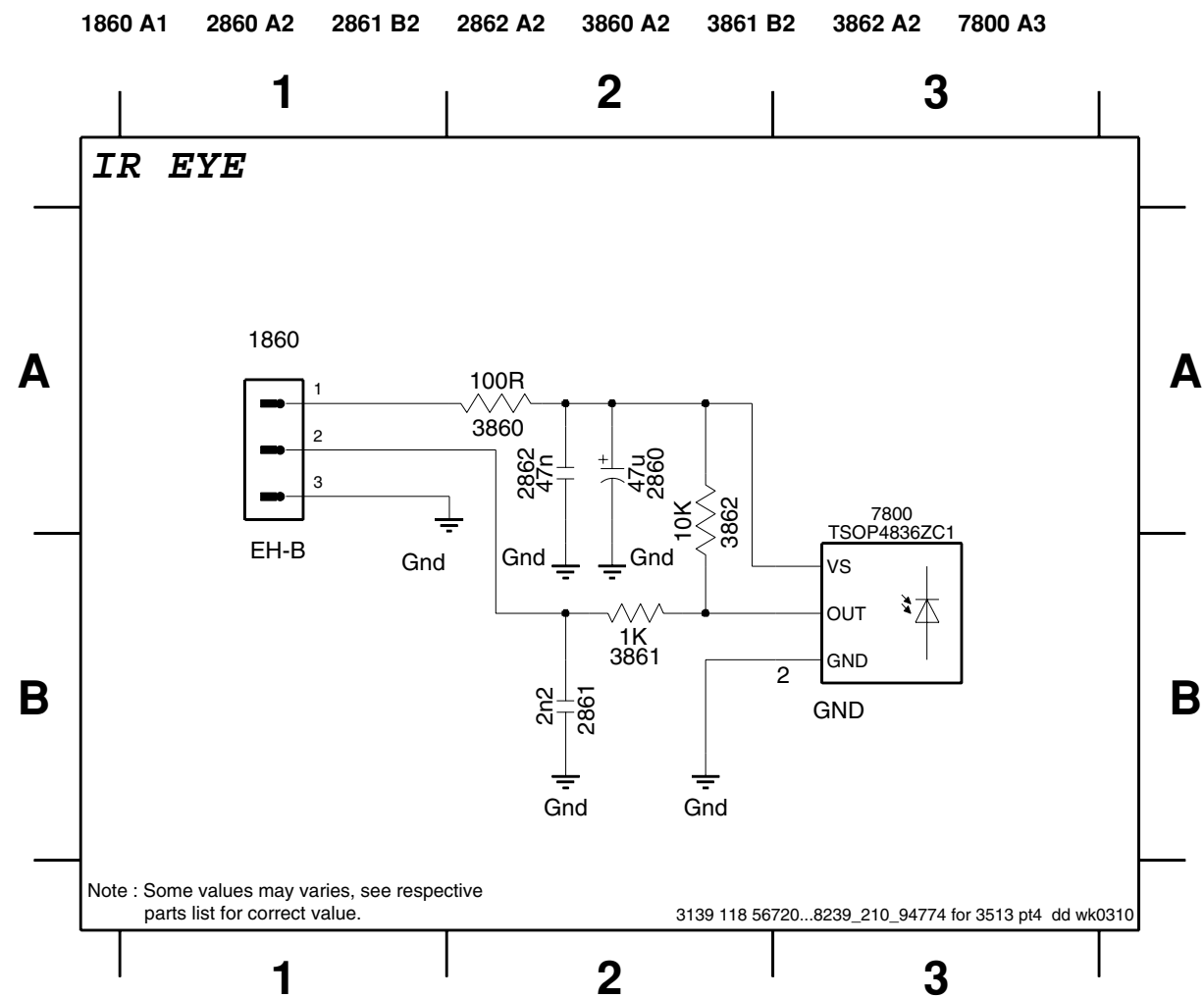
IR EYE BOARD - CIRCUIT DIAGRAM

USB LED BOARD - COMPONENT LAYOUT

USB LED BOARD - CHIP LAYOUT



USB LED BOARD - CIRCUIT DIAGRAM



ELECTRICAL PARTS LIST - FRONT CONTROL BOARD

MISCELLANEOUS

1600	4822 265 11208	Flex Connector 10P
1602	4822 265 11535	Flex Connector 8P
1650	4822 276 13775	Tact Switch
1651	4822 276 13775	Tact Switch
1652	4822 276 13775	Tact Switch
1653	4822 276 13775	Tact Switch
1654	4822 276 13775	Tact Switch
1655	4822 276 13775	Tact Switch
1656	4822 276 13775	Tact Switch
1657	4822 276 13775	Tact Switch
1658	4822 276 13775	Tact Switch
1659	4822 276 13775	Tact Switch
1660	4822 276 13775	Tact Switch
1661	4822 276 13775	Tact Switch
1662	4822 276 13775	Tact Switch
1664	4822 276 13775	Tact Switch
1666	4822 276 13775	Tact Switch
1669	4822 276 13775	Tact Switch
1672	4822 276 13775	Tact Switch
1673	4822 276 13775	Tact Switch
1674	4822 276 13775	Tact Switch
1675	4822 276 13775	Tact Switch
1691	2422 129 16708	Rotary Encoder 24P
1692	4822 276 13775	Tact Switch
1840	4822 267 10733	Flex Connector 4P
1841	4822 265 11529	Headphone Socket
1880	4822 267 10958	Flex Connector 5P
1881	4822 276 13775	Tact Switch
1890	4822 265 10913	Cinch Socket - G/Port Audio R
1891	2422 026 05434	Cinch Socket - G/Port Audio L
1892	4822 267 31996	Cinch Socket - G/Port Video

CAPACITORS

2611	4822 124 41796	22uF 20% 16V
2612	4822 124 22726	4,7uF 35V
2614	4822 124 22726	4,7uF 35V
2616	5322 126 11578	1nF 10% 50V
2617	5322 126 11578	1nF 10% 50V
2620	4822 124 11947	10uF 20% 16V
2621	5322 126 11583	10nF 10% 50V
2622	5322 126 11583	10nF 10% 50V
2623	2020 552 94427	100pF 5% 50V
2624	2020 552 94427	100pF 5% 50V
2625	3198 016 31020	1nF 25V
2626	3198 016 31020	1nF 25V
2627	3198 016 31020	1nF 25V
2628	2238 586 59812	100nF +80/-20% 50V
2629	2238 586 59812	100nF +80/-20% 50V
2630	3198 016 31020	1nF 25V
2631	4822 126 13883	220pF 5% 50V
2632	4822 126 13883	220pF 5% 50V

2633	2020 552 94427	100pF 5% 50V
2634	2020 552 94427	100pF 5% 50V
2635	2020 552 94427	100pF 5% 50V
2636	2020 552 94427	100pF 5% 50V
2637	3198 016 38210	820pF 25V
2638	3198 016 38210	820pF 25V
2810	2020 552 94427	100pF 5% 50V
2811	4822 124 12312	4,7uF 20% 16V
2812	4822 124 22726	4,7uF 35V
2813	4822 124 81286	47uF 20% 16V
2814	4822 124 12312	4,7uF 20% 16V
2830	2020 552 94427	100pF 5% 50V
2831	4822 124 12312	4,7uF 20% 16V
2832	4822 124 22726	4,7uF 35V
2833	4822 124 81286	47uF 20% 16V
2834	4822 124 12312	4,7uF 20% 16V
2841	2238 916 15641	22nF 10% 25V
2843	2238 916 15641	22nF 10% 25V
2844	2238 586 59812	100nF +80/-20% 50V
2860	4822 124 40433	47uF 20% 25V
2861	4822 126 14238	2,2nF 50V
2862	3198 017 34730	47nF 16V
2880	4822 124 40769	4,7uF 20% 100V
2891	3198 016 36810	680pF 25V
2892	4822 126 13881	470pF 5% 50V
2894	3198 016 36810	680pF 25V
2895	4822 126 13881	470pF 5% 50V
2896	2020 552 94427	100pF 5% 50V
2897	2020 552 94427	100pF 5% 50V

RESISTORS

3628	4822 051 30102	1k 5% 0,062W
3629	4822 051 30102	1k 5% 0,062W
3630	4822 051 30221	220R 5% 0,062W
3637	4822 117 12925	47k 1% 0,063W
3647	4822 051 30471	470R 5% 0,062W
3651	4822 051 30102	1k 5% 0,062W
3652	4822 051 30102	1k 5% 0,062W
3653	4822 117 12925	47k 1% 0,063W
3655	4822 117 12925	47k 1% 0,063W
3656	4822 117 12925	47k 1% 0,063W
3657	4822 051 30472	4k7 5% 0,062W
3658	4822 051 30472	4k7 5% 0,062W
3659	4822 051 30472	4k7 5% 0,062W
3660	4822 101 11904	POTM 20KX2 20% 0,025W
3661	4822 051 30103	10k 5% 0,062W
3662	4822 051 30103	10k 5% 0,062W
3663	4822 051 30151	150R 5% 0,062W
3664	4822 051 30221	220R 5% 0,062W
3665	4822 051 30271	270R 5% 0,062W
3666	4822 051 30391	390R 5% 0,062W

ELECTRICAL PARTS LIST - FRONT CONTROL BOARD

3667	4822 051 30561	560R 5% 0,062W
3668	4822 117 12968	820R 5% 0,62W
3669	4822 117 11817	1k2 1% 1/16W
3670	4822 117 12903	1k8 1% 0,063W
3671	4822 051 30272	2k7 5% 0,062W
3672	4822 051 30472	4k7 5% 0,062W
3674	4822 051 30151	150R 5% 0,062W
3675	4822 051 30221	220R 5% 0,062W
3676	4822 051 30271	270R 5% 0,062W
3677	4822 051 30391	390R 5% 0,062W
3678	4822 051 30561	560R 5% 0,062W
3679	4822 117 12968	820R 5% 0,62W
3680	4822 117 11817	1k2 1% 1/16W
3681	4822 051 30272	2k7 5% 0,062W
3682	4822 051 30472	4k7 5% 0,062W
3683	4822 051 30102	1k 5% 0,062W
3684	4822 051 30102	1k 5% 0,062W
3685	4822 051 30222	2k2 5% 0,062W
3686	4822 051 30222	2k2 5% 0,062W
3689	4822 051 30472	4k7 5% 0,062W
3690	4822 051 30103	10k 5% 0,062W
3691	4822 051 30103	10k 5% 0,062W
3692	4822 051 30103	10k 5% 0,062W
3695	4822 051 30103	10k 5% 0,062W
3696	4822 051 30471	470R 5% 0,062W
3697	4822 051 30471	470R 5% 0,062W
3698	4822 051 30471	470R 5% 0,062W
3699	4822 051 30471	470R 5% 0,062W
3701	4822 051 30271	270R 5% 0,062W
3702	4822 051 30181	180R 5% 0,062W
3703	4822 051 30181	180R 5% 0,062W
3704	4822 051 30181	180R 5% 0,062W
3705	4822 051 30221	220R 5% 0,062W
3706	4822 051 30221	220R 5% 0,062W
3708	4822 117 12903	1k8 1% 0,063W
3709	4822 051 30472	4k7 5% 0,062W
3811	4822 051 30472	4k7 5% 0,062W
3812	4822 116 52234	100k 5% 0,5W
3813	4822 051 30102	1k 5% 0,062W
3814	4822 117 12902	8k2 1% 0,063W
3815	4822 051 30471	470R 5% 0,062W
3816	4822 117 11817	1k2 1% 1/16W
3817	4822 116 83883	470R 5% 0,5W
3818	4822 116 52283	4k7 5% 0,5W
3819	4822 051 30471	470R 5% 0,062W
3820	4822 117 11817	1k2 1% 1/16W
3821	4822 116 52219	330R 5% 0,5W
3822	4822 051 30331	330R 5% 0,062W
3823	4822 051 30331	330R 5% 0,062W
3824	4822 051 30221	220R 5% 0,062W
3831	4822 051 30472	4k7 5% 0,062W

3832	4822 116 52234	100k 5% 0,5W
3833	4822 051 30102	1k 5% 0,062W
3834	4822 117 12902	8k2 1% 0,063W
3835	4822 051 30471	470R 5% 0,062W
3836	4822 117 11817	1k2 1% 1/16W
3837	4822 116 83883	470R 5% 0,5W
3838	4822 116 52283	4k7 5% 0,5W
3839	4822 051 30471	470R 5% 0,062W
3840	4822 117 11817	1k2 1% 1/16W
3841	4822 116 52219	330R 5% 0,5W
3842	4822 051 30331	330R 5% 0,062W
3843	4822 051 30331	330R 5% 0,062W
3844	4822 051 30221	220R 5% 0,062W
3850	4822 117 12968	820R 5% 0,62W
3860	4822 051 30101	100R 5% 0,062W
3861	4822 051 30102	1k 5% 0,062W
3862	4822 051 30103	10k 5% 0,062W
3880	4822 117 12925	47k 1% 0,063W
3881	4822 117 12968	820R 5% 0,62W
3890	4822 051 30103	10k 5% 0,062W
3891	4822 050 21003	10k 1% 0,06W
3892	4822 117 11817	1k2 1% 1/16W
3893	4822 117 11817	1k2 1% 1/16W
4600	4822 051 30008	OR Jumper 0603
4610	4822 051 30008	OR Jumper 0603
4660	4822 051 30008	OR Jumper 0603
4661	4822 051 30008	OR Jumper 0603
4662	4822 051 30008	OR Jumper 0603

COILS & FILTERS

5601	4822 157 62552	Coil 2,2uH 5%
5602	4822 157 62552	Coil 2,2uH 5%
5840	4822 157 62552	Coil 2,2uH 5%
5841	4822 157 62552	Coil 2,2uH 5%
5842	4822 157 62552	Coil 2,2uH 5%

DIODES

6620	4822 130 82978	LED VS LTL-1CHPE
6621	4822 130 82978	LED VS LTL-1CHPE
6622	4822 130 82978	LED VS LTL-1CHPE
6623	9322 178 87676	LED VS LTL-1CHTBK4-KA
6624	9322 178 87676	LED VS LTL-1CHTBK4-KA
6625	9322 178 87676	LED VS LTL-1CHTBK4-KA
6626	9322 191 85676	LED VS LTL816KETNN
6627	9322 191 85676	LED VS LTL816KETNN
6628	9322 191 85676	LED VS LTL816KETNN
6629	9322 191 85676	LED VS LTL816KETNN
6812	9322 178 15676	LED VS LTL-8166FTNN
6813	9322 178 15676	LED VS LTL-8166FTNN
6814	9322 191 85676	LED VS LTL816KETNN
6815	4822 130 30621	1N4148

ELECTRICAL PARTS LIST - FRONT CONTROL BOARD

DIODES

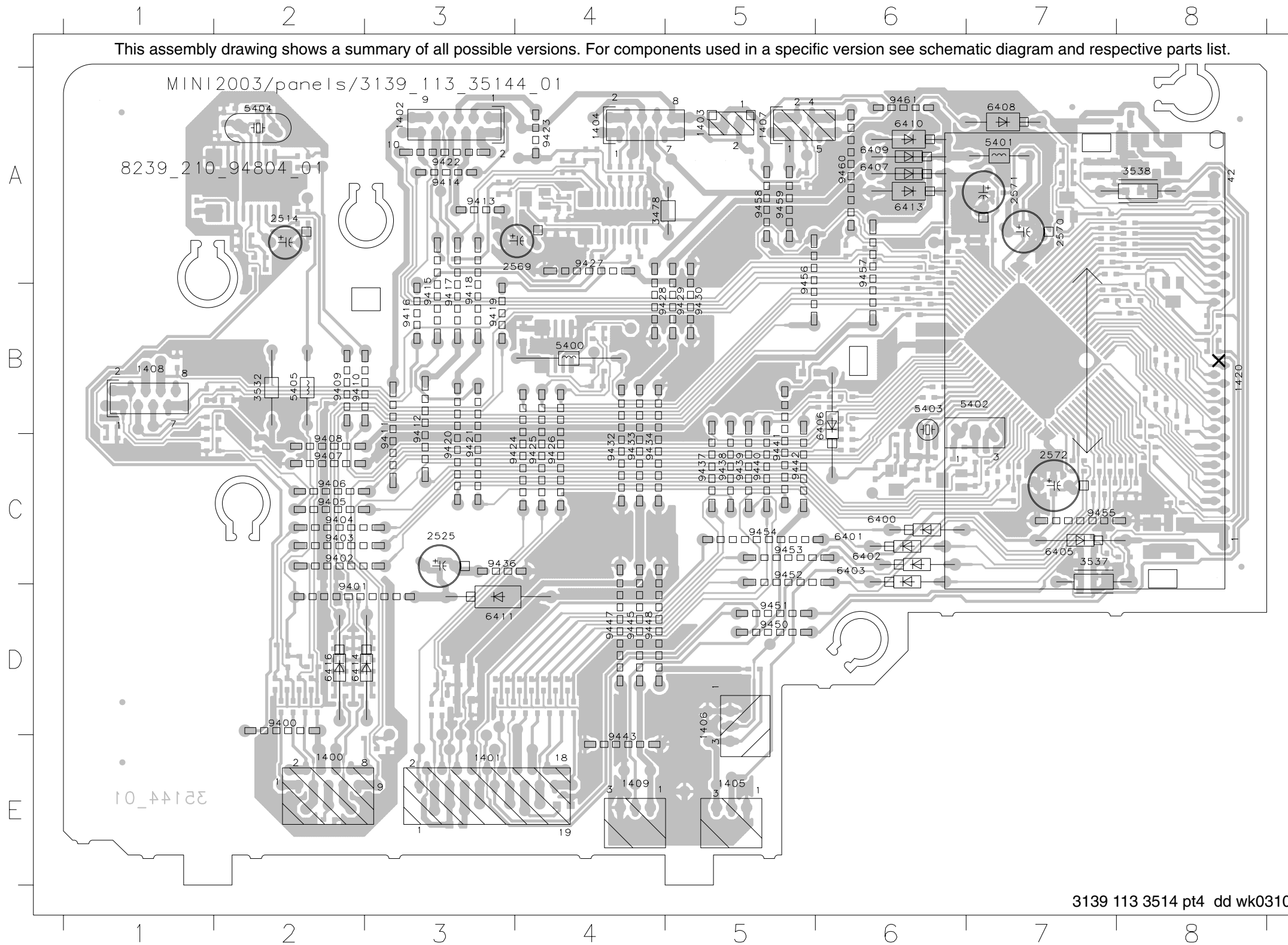
6830	9322 178 15676	LED VS LTL-8166FTNN
6831	9322 178 15676	LED VS LTL-8166FTNN
6832	9322 191 85676	LED VS LTL816kETNN
6835	4822 130 30621	1N4148
6850	9322 191 85676	LED VS LTL816kETNN
6880	4822 130 30621	1N4148
6881	9322 167 73676	LED VS LTL-4221NLC-KA

TRANSISTORS & INTEGRATED CIRCUITS

7601	4822 209 15449	74HC4094D
7602	5322 130 60159	BC847B
7603	5322 130 60159	BC847B
7604	5322 130 60159	BC847B
7605	5322 130 60159	BC847B
7606	4822 209 15449	74HC4094D
7607	4822 130 42804	BC817-25
7608	4822 130 42804	BC817-25
7609	4822 130 42804	BC817-25
7610	4822 130 42804	BC817-25
7650	5322 130 60159	BC847B
7800	9322 185 97667	IR Receiver TSOP4836ZC1
7810	5322 130 60159	BC847B
7811	5322 130 60159	BC847B
7812	5322 130 60159	BC847B
7813	5322 130 60159	BC847B
7814	5322 130 60159	BC847B
7830	5322 130 60159	BC847B
7831	5322 130 60159	BC847B
7832	5322 130 60159	BC847B
7833	5322 130 60159	BC847B
7834	5322 130 60159	BC847B
7880	4822 130 60373	BC857B

Note : Only the parts mentioned in this list are normal service spare parts.

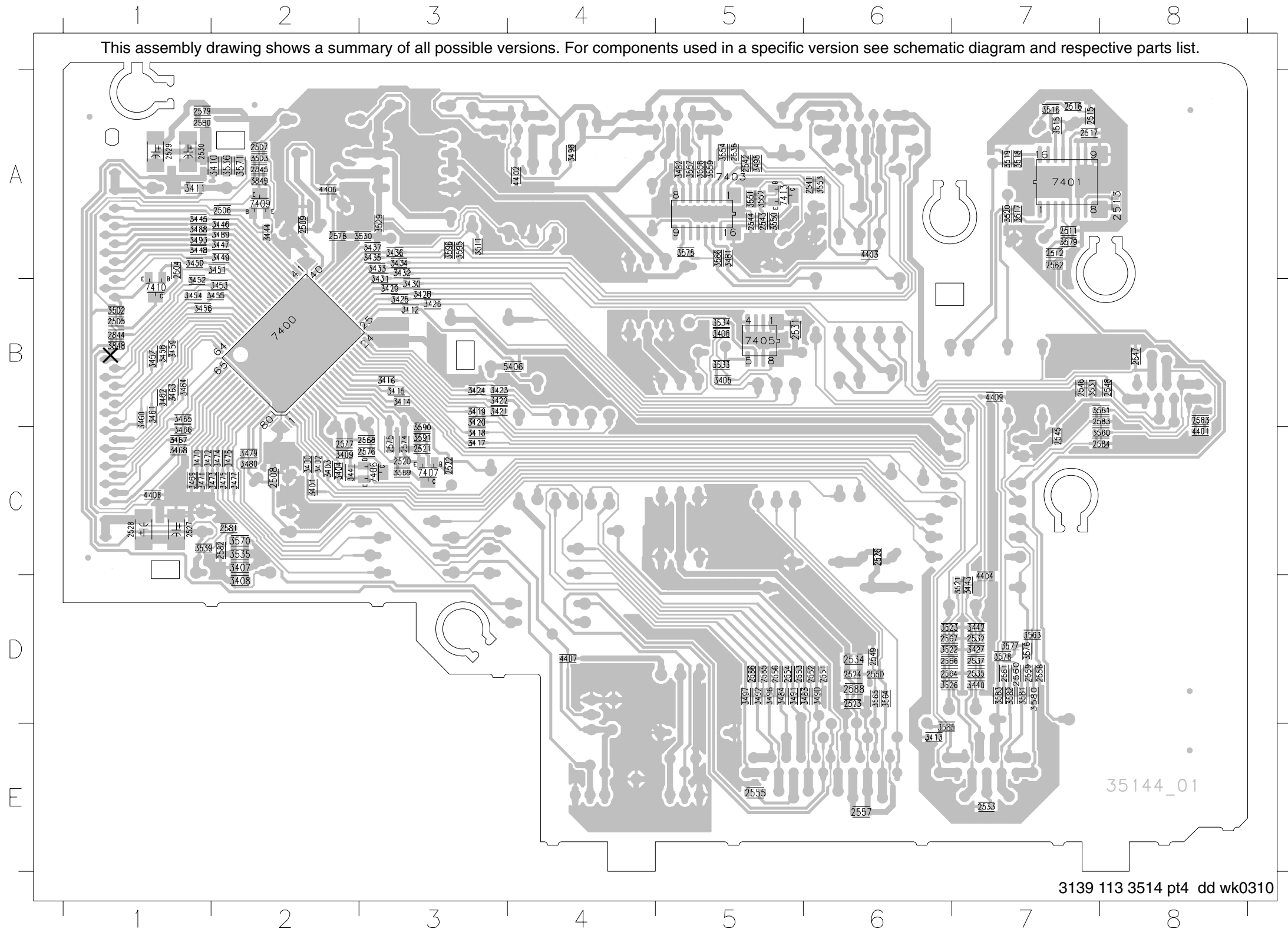
DISPLAY BOARD - COMPONENT LAYOUT



1400	E2	9428	B4
1401	E3	9429	B5
1402	A3	9430	B5
1403	A5	9432	C4
1404	A4	9433	C4
1405	E5	9434	C4
1406	D5	9436	C3
1407	A5	9437	C5
1408	B1	9438	C5
1409	E4	9439	C5
1420	B8	9440	C5
2514	A2	9441	C5
2525	C3	9442	C5
2569	A4	9443	E4
2570	A7	9445	D4
2571	A7	9447	D4
2572	C7	9448	D4
3478	A4	9450	D5
3532	B2	9451	D5
3537	C7	9452	C5
3538	A8	9453	C5
5400	B4	9454	C5
5401	A7	9455	C7
5402	B7	9456	A5
5403	B6	9457	A6
5404	A2	9458	A5
5405	B2	9459	A5
6400	C6	9460	A6
6401	C6	9461	A6
6402	C6		
6403	C6		
6405	C7		
6406	B6		
6407	A6		
6408	A7		
6409	A6		
6410	A6		
6411	D3		
6413	A6		
6414	D2		
6416	D2		
9400	D2		
9401	D2		
9402	C2		
9403	C2		
9404	C2		
9405	C2		
9406	C2		
9407	C2		
9408	C2		
9409	B2		
9410	B2		
9411	C3		
9412	B3		
9413	A3		
9414	A3		
9415	B3		
9416	B3		
9417	B3		
9418	B3		
9419	B3		
9420	C3		
9421	C3		
9422	A3		
9423	A4		
9424	C3		
9425	C4		
9426	C4		
9427	A4		

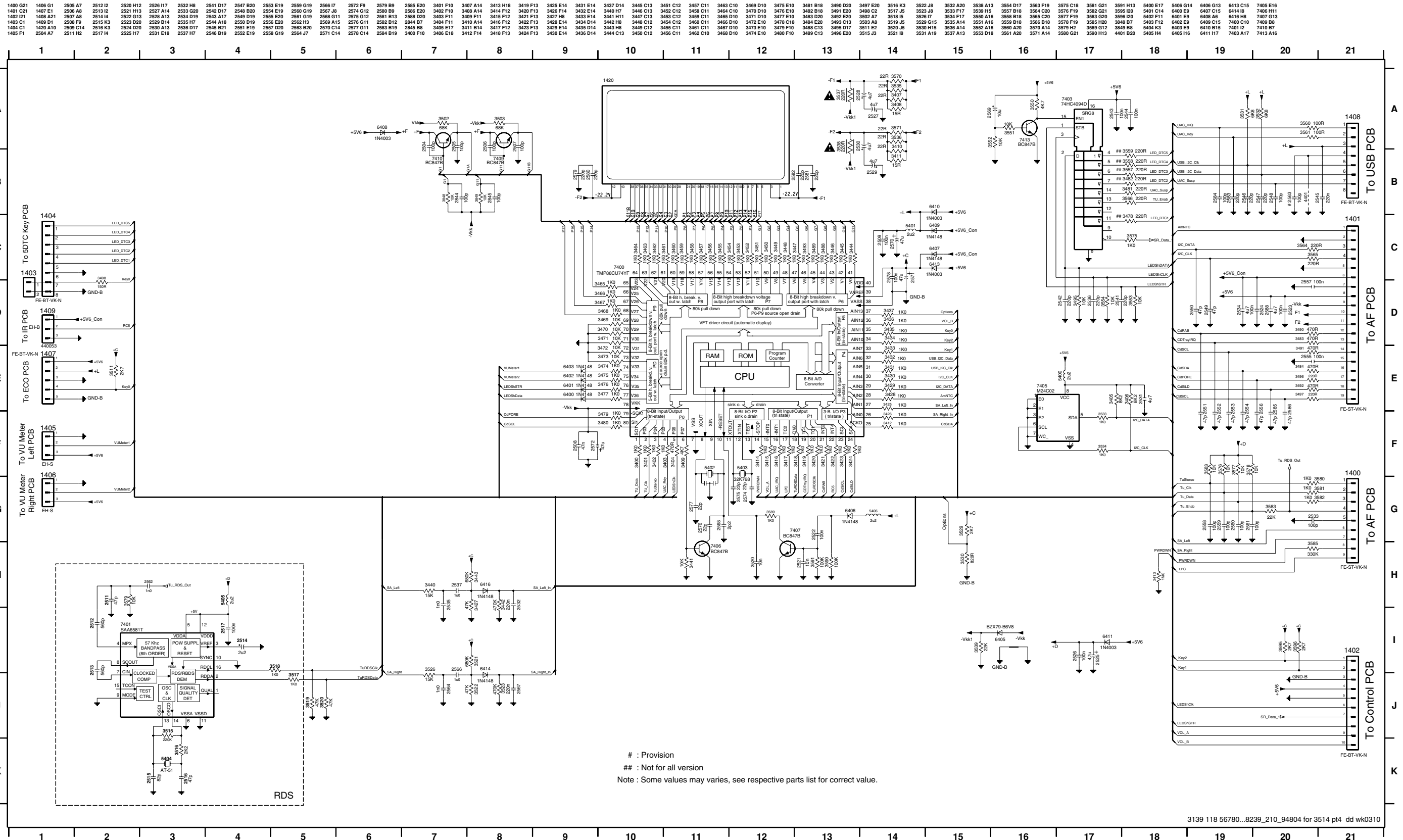
3139 113 3514 pt4 dd wk0310

DISPLAY BOARD - CHIP LAYOUT



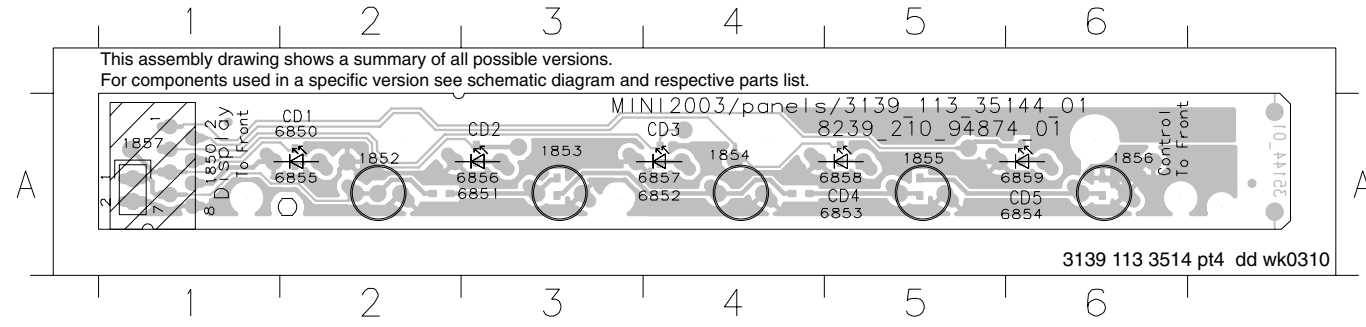
2504	A1	2588	D6	3468	C1	3581	D7
2505	B1	2844	B1	3469	C1	3582	D7
2506	A2	2845	A2	3470	C1	3583	D7
2507	A2	3400	C2	3471	C1	3585	E6
2508	C2	3401	C2	3472	C1	3589	C3
2509	A2	3402	C2	3473	C2	3590	C3
2511	A7	3403	C2	3474	C2	3591	C3
2512	A7	3404	C2	3475	C2	3595	A3
2513	A8	3405	B5	3476	C2	3596	A3
2515	A7	3406	B5	3477	C2	3848	B1
2516	A7	3407	C2	3479	C2	3849	A2
2517	A7	3408	D2	3480	C2	4401	C8
2520	C3	3409	C2	3481	A5	4402	A4
2521	C3	3410	A2	3482	A5	4403	A6
2522	C3	3411	A1	3483	D6	4404	D7
2523	D6	3412	B3	3484	D5	4406	A2
2524	D6	3413	E6	3488	A1	4407	D4
2526	C6	3414	B3	3489	A2	4408	C1
2527	C1	3415	B3	3490	D6	4409	B7
2528	C1	3416	B3	3491	D5	5406	B4
2529	A1	3417	C3	3492	D5	7400	B2
2530	A1	3418	C3	3493	A1	7401	A7
2531	B5	3419	B3	3495	A5	7403	A5
2532	D7	3420	B3	3496	D5	7405	B5
2533	E7	3421	B3	3497	D5	7406	C3
2534	D6	3422	B3	3498	A4	7407	C3
2535	D7	3423	B3	3502	B1	7409	A2
2536	A5	3424	B3	3503	A2	7410	B1
2537	D7	3425	B3	3511	A3	7413	A5
2541	A6	3426	B3	3515	A7		
2542	A5	3427	D7	3516	A7		
2543	A5	3428	B3	3517	A7		
2544	A5	3429	B3	3518	A7		
2545	C7	3430	B3	3519	A7		
2546	B7	3431	A3	3520	A7		
2547	B8	3432	A3	3521	D7		
2548	B8	3433	A3	3522	D6		
2549	D6	3434	A3	3523	D6		
2550	D6	3435	A3	3526	D6		
2551	D6	3436	A3	3529	A3		
2552	D6	3437	A3	3530	A3		
2553	D5	3440	D7	3531	B7		
2554	D5	3441	C2	3533	B5		
2555	E5	3442	D7	3534	B5		
2556	D5	3443	D7	3535	C2		
2557	E6	3444	A2	3536	A2		
2558	D7	3445	A1	3539	C1		
2559	D7	3446	A2	3550	A5		
2560	D7	3447	A2	3551	A5		
2561	D7	3448	A1	3552	A5		
2562	A7	3449	A2	3553	A6		
2563	B8	3450	A1	3554	A5		
2564	D6	3451	A2	3557	A5		
2566	D6	3452	B1	3558	A5		
2567	D6	3453	B2	3559	A5		
2568	C3	3454	B1	3560	C8		
2574	C3	3455	B2	3561	B8		
2575	C3	3456	B1	3563	D7		
2576	C3	3457	B1	3564	D6		
2577	C2	3458	B1	3565	D6		
2578	A2	3459	B1	3566	A5		
2579	A1	3460	B1	3570	C2		
2580	A1	3461	B1	3571	A2		
2581	C2	3462	B1	3575	A5		
2582	C2	3463	B1	3576	D7		
2583	B8	3464	B1	3577	D7		
2584	C8	3465	B1	3578	D7		
2585	D5	3466	C1	3579	A7		
2586	D5	3467	C1	3580	D7		

DISPLAY BOARD - CIRCUIT DIAGRAM



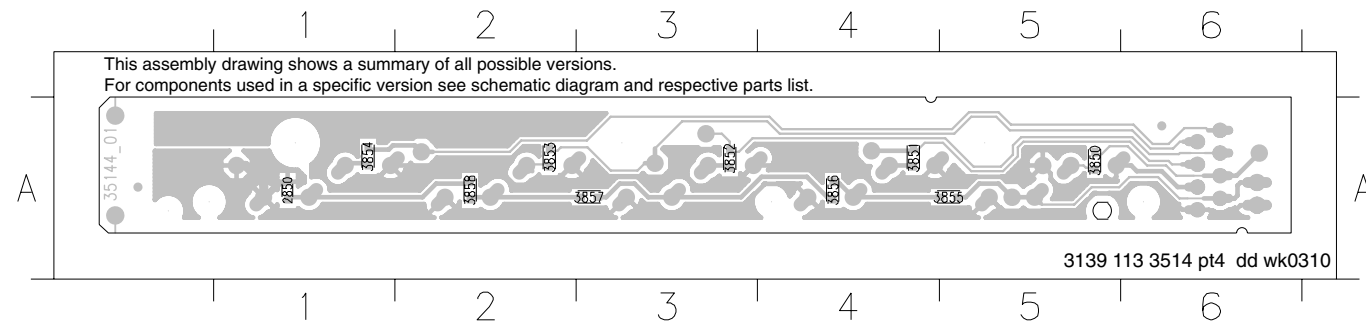
5DTC KEY BOARD - COMPONENT LAYOUT

1850 A1 1853 A3 1855 A5 1857 A1 6851 A3 6853 A5 6855 A2 6857 A4 6859 A6
 1852 A2 1854 A4 1856 A6 6850 A2 6852 A4 6854 A6 6856 A3 6858 A5



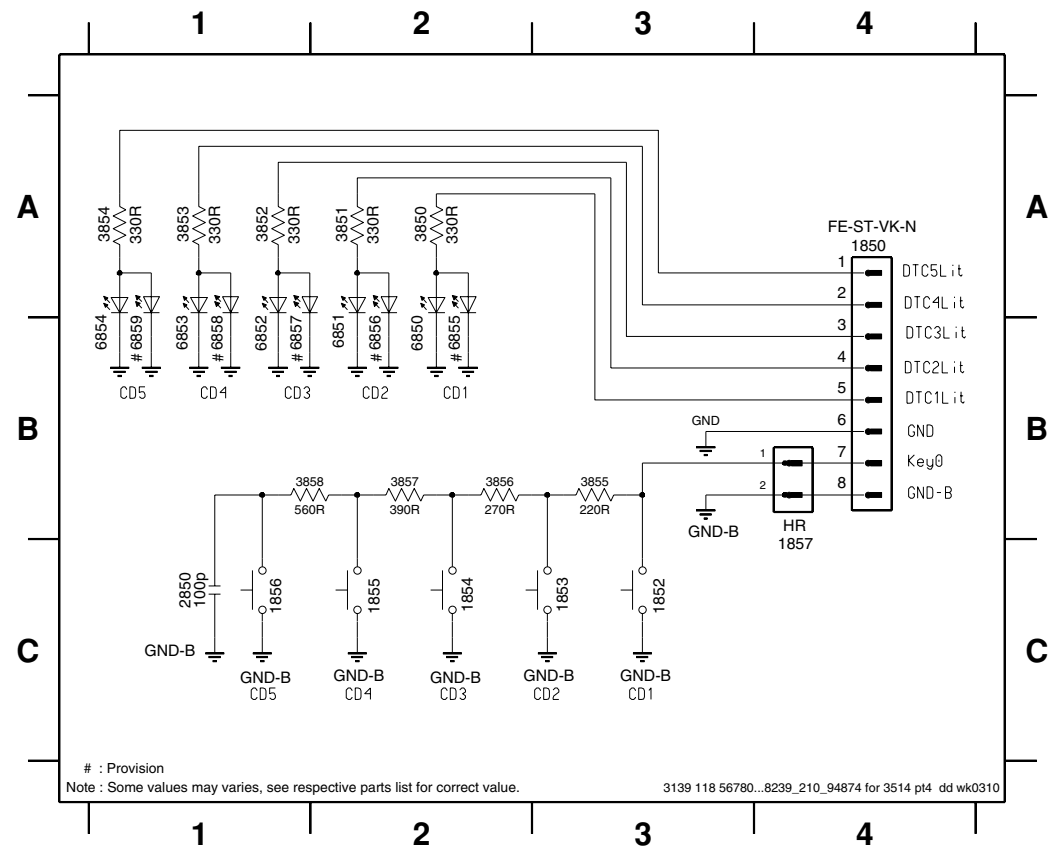
5DTC KEY BOARD - CHIP LAYOUT

2850 A1 3850 A5 3851 A4 3852 A3 3853 A2 3854 A1 3855 A5 3856 A4 3857 A3 3858 A2



5DTC KEY BOARD - CIRCUIT DIAGRAM

1850 A4 1854 C2 1857 C4 3851 A2 3854 A1 3857 B2 6851 A2 6854 B1 6857 B1
 1852 C3 1855 C2 2850 C1 3852 A1 3855 B3 3858 B1 6852 A1 6855 B2 6858 B1
 1853 C3 1856 C1 3850 A2 3853 A1 3856 B2 6850 A2 6853 A1 6856 B2 6859 B1



ELECTRICAL PARTS LIST - FRONT DISPLAY BOARD

MISCELLANEOUS

1400	4822 265 11531	Flex Connector 9P	2547	4822 126 13883	220pF 5% 50V
1401	4822 265 11545	Flex Connector 19P	2548	2020 552 94427	100pF 5% 50V
1402	4822 267 10729	Flex Connector 10P	2549	4822 126 11785	47pF 5% 50V
1404	4822 265 11515	Flex Connector 8P	2550	4822 126 11785	47pF 5% 50V
1407	4822 267 10954	Flex Connector 5P	2551	4822 126 11785	47pF 5% 50V
1408	4822 265 11515	Flex Connector 8P	2552	4822 126 11785	47pF 5% 50V
1420	3139 110 53411	FTD (BJ902GNK)	2553	4822 126 11785	47pF 5% 50V
1850	4822 265 11535	Flex Connector 8P	2554	4822 126 11785	47pF 5% 50V
1852	4822 276 13775	Tact Switch	2555	2238 586 59812	100nF +80/-20% 50V
1853	4822 276 13775	Tact Switch	2556	4822 126 11785	47pF 5% 50V
1854	4822 276 13775	Tact Switch	2557	2238 586 59812	100nF +80/-20% 50V
1855	4822 276 13775	Tact Switch	2558	2020 552 94427	100pF 5% 50V
1856	4822 276 13775	Tact Switch	2559	2020 552 94427	100pF 5% 50V

CAPACITORS

2504	2020 552 94427	100pF 5% 50V	2561	2020 552 94427	100pF 5% 50V
2505	2020 552 94427	100pF 5% 50V	2562	3198 016 31020	1nF 25V /22
2506	2020 552 94427	100pF 5% 50V	2564	5322 126 11578	1nF 10% 50V
2507	2020 552 94427	100pF 5% 50V	2566	3198 017 41050	1uF 10V
2508	3198 024 44730	47nF 50V	2567	4822 126 13879	220nF +80/-20% 16V
2509	2238 586 59812	100nF +80/-20% 50V	2568	4822 126 14223	2.2pF 50V
2511	4822 126 11785	47pF 5% 50V /22	2569	4822 124 40248	10uF 20% 63V
2512	4822 126 14249	560pF 10% 50V /22	2570	4822 124 12233	47uF 20% 25V
2513	4822 126 14249	560pF 10% 50V /22	2571	4822 124 12233	47uF 20% 25V
2514	4822 124 22652	2.2uF 20% 50V /22	2572	3198 028 44790	47uF 20% 35V
2515	4822 126 14226	82pF 5% 50V /22	2574	4822 122 33761	22pF 5% 50V
2516	4822 126 11785	47pF 5% 50V /22	2575	4822 122 33761	22pF 5% 50V
2517	2238 586 59812	100nF +80/-20% 50V /22	2576	4822 122 33761	22pF 5% 50V
2520	5322 126 11583	10nF 10% 50V	2577	4822 122 33761	22pF 5% 50V
2521	5322 126 11583	10nF 10% 50V	2578	2238 586 59812	100nF +80/-20% 50V
2522	2238 586 59812	100nF +80/-20% 50V	2579	4822 126 13883	220pF 5% 50V
2523	2238 586 59812	100nF +80/-20% 50V	2580	4822 126 13883	220pF 5% 50V
2524	2238 586 59812	100nF +80/-20% 50V	2581	4822 126 13883	220pF 5% 50V
2525	4822 124 12233	47uF 20% 25V	2582	4822 126 13883	220pF 5% 50V
2526	2238 586 59812	100nF +80/-20% 50V	2583	4822 126 13883	220pF 5% 50V
2527	4822 124 12312	4.7uF 20% 16V	2584	2020 552 94427	100pF 5% 50V
2528	4822 124 12312	4.7uF 20% 16V	2585	4822 126 11785	47pF 5% 50V
2529	4822 124 12312	4.7uF 20% 16V	2586	4822 126 11785	47pF 5% 50V
2530	4822 124 12312	4.7uF 20% 16V	2588	2020 552 96305	4.7uF +80/-20% 10V
2531	2020 552 96305	4.7uF +80/-20% 10V	2844	2020 552 94427	100pF 5% 50V
2532	4822 126 13879	220nF +80/-20% 16V	2845	2020 552 94427	100pF 5% 50V
2533	2020 552 94427	100pF 5% 50V	2850	2020 552 94427	100pF 5% 50V

RESISTORS

3400	4822 051 30102	1k 5% 0,062W
3401	4822 051 30102	1k 5% 0,062W
3402	4822 051 30102	1k 5% 0,062W
3403	4822 051 30102	1k 5% 0,062W
3404	4822 051 30471	470R 5% 0,062W
3405	4822 117 12902	8k2 1% 0,063W
3406	4822 117 12902	8k2 1% 0,063W
3407	4822 051 20229	22R 5% 0,1W
3408	4822 051 20159	15R 5% 0,1W

ELECTRICAL PARTS LIST - FRONT DISPLAY BOARD

RESISTORS

3409	4822 051 30472	4k7 5% 0,062W	3463	4822 051 30102	1k 5% 0,062W
3410	4822 051 20229	22R 5% 0,1W	3464	4822 051 30102	1k 5% 0,062W
3411	4822 051 20159	15R 5% 0,1W	3465	4822 051 30102	1k 5% 0,062W
3412	4822 051 30102	1k 5% 0,062W	3466	4822 051 30102	1k 5% 0,062W
3413	4822 051 30105	1M 5% 0,062W	3467	4822 051 30102	1k 5% 0,062W
3414	4822 051 30102	1k 5% 0,062W	3468	4822 051 30102	1k 5% 0,062W
3415	4822 051 30102	1k 5% 0,062W	3469	4822 051 30103	10k 5% 0,062W
3416	4822 051 30102	1k 5% 0,062W	3470	4822 051 30103	10k 5% 0,062W
3417	4822 051 30102	1k 5% 0,062W	3471	4822 051 30103	10k 5% 0,062W
3418	4822 051 30102	1k 5% 0,062W	3472	4822 051 30103	10k 5% 0,062W
3419	4822 051 30102	1k 5% 0,062W	3473	4822 051 30103	10k 5% 0,062W
3420	4822 051 30102	1k 5% 0,062W	3474	4822 051 30102	1k 5% 0,062W
3421	4822 051 30102	1k 5% 0,062W	3475	4822 051 30102	1k 5% 0,062W
3422	4822 051 30102	1k 5% 0,062W	3476	4822 051 30102	1k 5% 0,062W
3423	4822 051 30102	1k 5% 0,062W	3477	4822 051 30102	1k 5% 0,062W
3424	4822 051 30102	1k 5% 0,062W	3478	4822 116 83872	220R 5% 0,5W
3425	4822 051 30102	1k 5% 0,062W	3479	4822 051 30102	1k 5% 0,062W
3426	4822 051 30102	1k 5% 0,062W	3480	4822 051 30102	1k 5% 0,062W
3427	4822 117 12925	47k 1% 0,063W	3481	4822 051 30221	220R 5% 0,062W
3428	4822 051 30102	1k 5% 0,062W	3482	4822 051 30221	220R 5% 0,062W
3429	4822 051 30102	1k 5% 0,062W	3483	4822 051 30471	470R 5% 0,062W
3430	4822 051 30102	1k 5% 0,062W	3484	4822 051 30471	470R 5% 0,062W
3431	4822 051 30102	1k 5% 0,062W	3488	4822 051 30102	1k 5% 0,062W
3432	4822 051 30102	1k 5% 0,062W	3489	4822 051 30102	1k 5% 0,062W
3433	4822 051 30102	1k 5% 0,062W	3490	4822 051 30471	470R 5% 0,062W
3434	4822 051 30102	1k 5% 0,062W	3491	4822 051 30471	470R 5% 0,062W
3435	4822 051 30102	1k 5% 0,062W	3492	4822 051 30471	470R 5% 0,062W
3436	4822 051 30102	1k 5% 0,062W	3493	4822 051 30102	1k 5% 0,062W
3437	4822 051 30102	1k 5% 0,062W	3495	4822 051 30103	10k 5% 0,062W
3440	4822 051 30153	15k 5% 0,062W	3496	4822 051 30221	220R 5% 0,062W
3441	4822 051 30103	10k 5% 0,062W	3497	4822 051 30221	220R 5% 0,062W
3442	4822 051 30474	470k 5% 0,062W	3498	4822 051 30151	150R 5% 0,062W
3443	4822 051 30684	680k 5% 0,062W	3502	4822 051 30683	68k 5% 0,062W
3444	4822 051 30102	1k 5% 0,062W	3503	4822 051 30683	68k 5% 0,062W
3445	4822 051 30102	1k 5% 0,062W	3511	4822 051 30272	2k7 5% 0,062W
3446	4822 051 30102	1k 5% 0,062W	3515	4822 117 12891	220k 1% /22
3447	4822 051 30102	1k 5% 0,062W	3516	4822 051 30222	2k2 5% 0,062W /22
3448	4822 051 30102	1k 5% 0,062W	3517	4822 051 30102	1k 5% 0,062W /22
3449	4822 051 30102	1k 5% 0,062W	3518	4822 051 30102	1k 5% 0,062W /22
3450	4822 051 30102	1k 5% 0,062W	3519	4822 117 12925	47k 1% 0,063W /21
3451	4822 051 30102	1k 5% 0,062W	3520	4822 117 12925	47k 1% 0,063W /21
3452	4822 051 30102	1k 5% 0,062W	3521	4822 051 30684	680k 5% 0,062W
3453	4822 051 30102	1k 5% 0,062W	3522	4822 117 12925	47k 1% 0,063W
3454	4822 051 30102	1k 5% 0,062W	3523	4822 051 30474	470k 5% 0,062W
3455	4822 051 30102	1k 5% 0,062W	3526	4822 051 30153	15k 5% 0,062W
3456	4822 051 30102	1k 5% 0,062W	3529	4822 051 30272	2k7 5% 0,062W
3457	4822 051 30102	1k 5% 0,062W	3530	4822 117 11817	1k2 1% 1/16W /21
3458	4822 051 30102	1k 5% 0,062W	3530	4822 117 12903	1k8 1% 0,063W /22
3459	4822 051 30102	1k 5% 0,062W	3531	4822 051 30682	6k8 5% 0,062W
3460	4822 051 30102	1k 5% 0,062W	3532	4822 116 83961	6k8 5%
3461	4822 051 30102	1k 5% 0,062W	3533	4822 051 30102	1k 5% 0,062W
3462	4822 051 30102	1k 5% 0,062W	3534	4822 051 30102	1k 5% 0,062W

ELECTRICAL PARTS LIST - FRONT DISPLAY BOARD

3535	4822 051 20229	22R 5% 0,1W
3536	4822 051 20229	22R 5% 0,1W
3537	4822 052 10221	△ 220R 5% 0,33W
3538	4822 052 10221	△ 220R 5% 0,33W
3539	4822 051 30223	22k 5% 0,062W
3550	4822 051 30472	4k7 5% 0,062W
3551	4822 051 30103	10k 5% 0,062W
3552	4822 051 30103	10k 5% 0,062W
3553	4822 051 30103	10k 5% 0,062W
3554	4822 051 30103	10k 5% 0,062W
3557	4822 051 30221	220R 5% 0,062W
3558	4822 051 30221	220R 5% 0,062W
3559	4822 051 30221	220R 5% 0,062W
3560	4822 051 30101	100R 5% 0,062W
3561	4822 051 30101	100R 5% 0,062W
3563	4822 051 30103	10k 5% 0,062W
3564	4822 051 30221	220R 5% 0,062W
3565	4822 051 30221	220R 5% 0,062W
3566	4822 051 30221	220R 5% 0,062W
3570	4822 051 20229	22R 5% 0,1W
3571	4822 051 20229	22R 5% 0,1W
3575	4822 051 30102	1k 5% 0,062W
3576	4822 051 30103	10k 5% 0,062W
3577	4822 051 30103	10k 5% 0,062W
3578	4822 051 30103	10k 5% 0,062W
3579	4822 051 30103	10k 5% 0,062W /22
3580	4822 051 30102	1k 5% 0,062W
3581	4822 051 30102	1k 5% 0,062W
3582	4822 051 30102	1k 5% 0,062W
3583	4822 051 30223	22k 5% 0,062W
3585	4822 051 30334	330k 5% 0,062W
3589	4822 051 30102	1k 5% 0,062W
3590	4822 117 13632	100k 1% 0,62W
3591	4822 117 13632	100k 1% 0,62W
3595	4822 051 30272	2k7 5% 0,062W
3596	4822 051 30272	2k7 5% 0,062W
3848	4822 051 30103	10k 5% 0,062W
3849	4822 051 30103	10k 5% 0,062W
3850	4822 051 30331	330R 5% 0,062W
3851	4822 051 30331	330R 5% 0,062W
3852	4822 051 30331	330R 5% 0,062W
3853	4822 051 30331	330R 5% 0,062W
3854	4822 051 30331	330R 5% 0,062W
3855	4822 051 30221	220R 5% 0,062W
3856	4822 051 30271	270R 5% 0,062W
3857	4822 051 30391	390R 5% 0,062W
3858	4822 051 30561	560R 5% 0,062W
4401	4822 051 30008	0R Jumper 0603
4402	4822 051 30008	0R Jumper 0603
4403	4822 051 30008	0R Jumper 0603
4404	4822 051 30008	0R Jumper 0603
4406	4822 051 30008	0R Jumper 0603

4407	4822 051 30008	0R Jumper 0603
4408	4822 051 30008	0R Jumper 0603
4409	4822 051 30008	0R Jumper 0603

COILS & FILTERS

5400	4822 157 62552	Coil 2,2uH 5%
5401	4822 157 62552	Coil 2,2uH 5%
5402	5322 242 73686	RES CER 12MHz
5403	4822 242 70938	RES XTL 32,768kHz
5404	4822 242 11033	RES XTL 4,332MHz /22
5405	4822 157 62552	Coil 2,2uH 5% /22
5406	4822 157 10586	Coil 2,2uH 10%

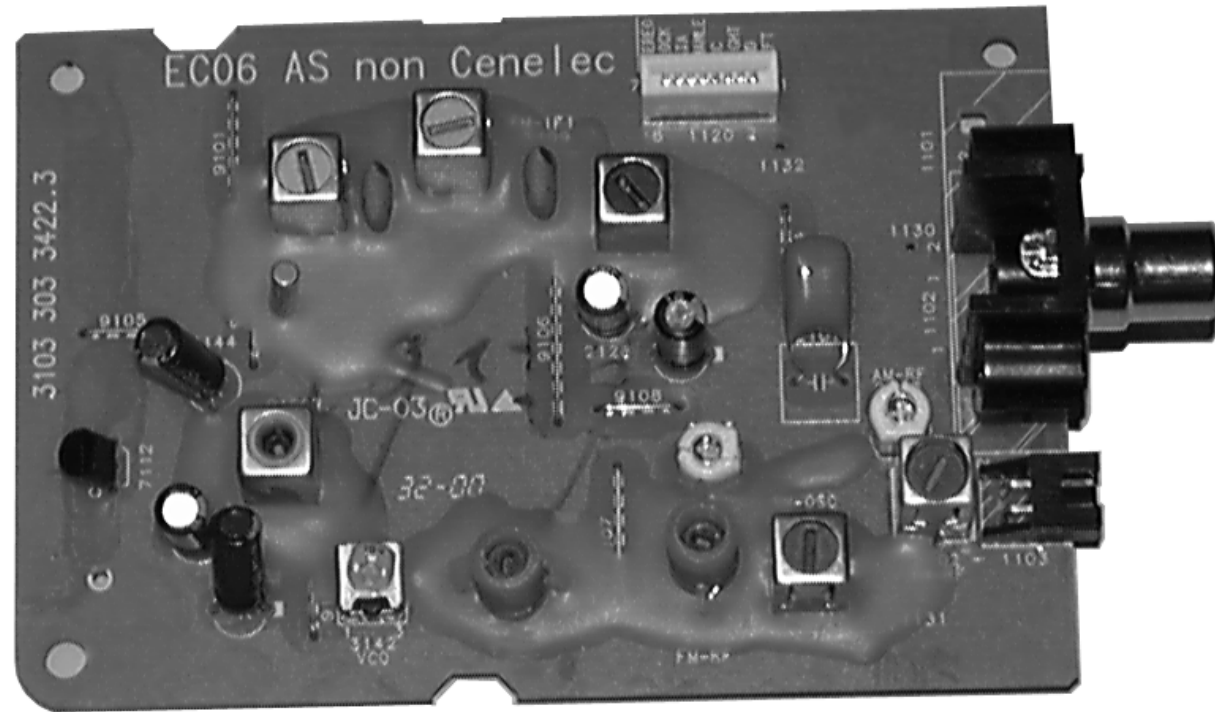
DIODES

6400	4822 130 30621	1N4148
6401	4822 130 30621	1N4148
6402	4822 130 30621	1N4148
6403	4822 130 30621	1N4148
6405	4822 130 34278	BZX79-B6V8
6406	4822 130 30621	1N4148
6407	4822 130 30621	1N4148
6408	4822 130 31878	1N4003G
6409	4822 130 30621	1N4148
6410	4822 130 31878	1N4003G
6411	4822 130 31878	1N4003G
6413	4822 130 31878	1N4003G
6414	4822 130 30621	1N4148
6416	4822 130 30621	1N4148
6855	9322 191 85676	LED VS LTL816KETNN
6856	9322 191 85676	LED VS LTL816KETNN
6857	9322 191 85676	LED VS LTL816KETNN
6858	9322 191 85676	LED VS LTL816KETNN
6859	9322 191 85676	LED VS LTL816KETNN

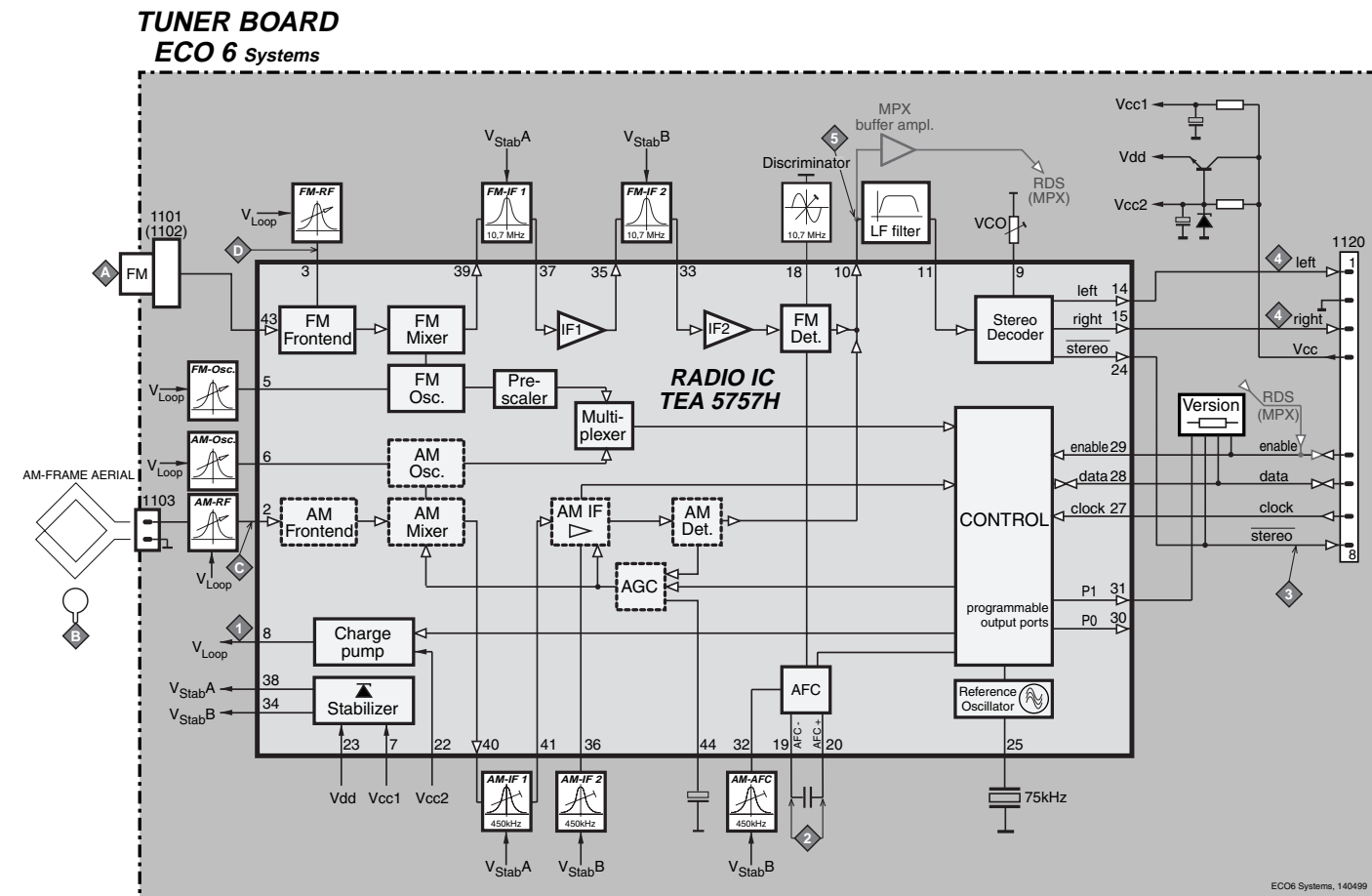
TRANSISTORS & INTEGRATED CIRCUITS

7400	3139 110 53341	TMP88CU74YF - 'M5/7S53341'
7401	9352 686 05118	SAA6581T /22
7403	4822 209 15449	74HC4094D
7405	9322 145 26668	M24C02-WMN6
7406	5322 130 60159	BC847B
7407	5322 130 60159	BC847B
7409	5322 130 60159	BC847B
7410	5322 130 60159	BC847B
7413	5322 130 60159	BC847B

Note : Only the parts mentioned in this list are normal service spare parts.



BLOCK DIAGRAM



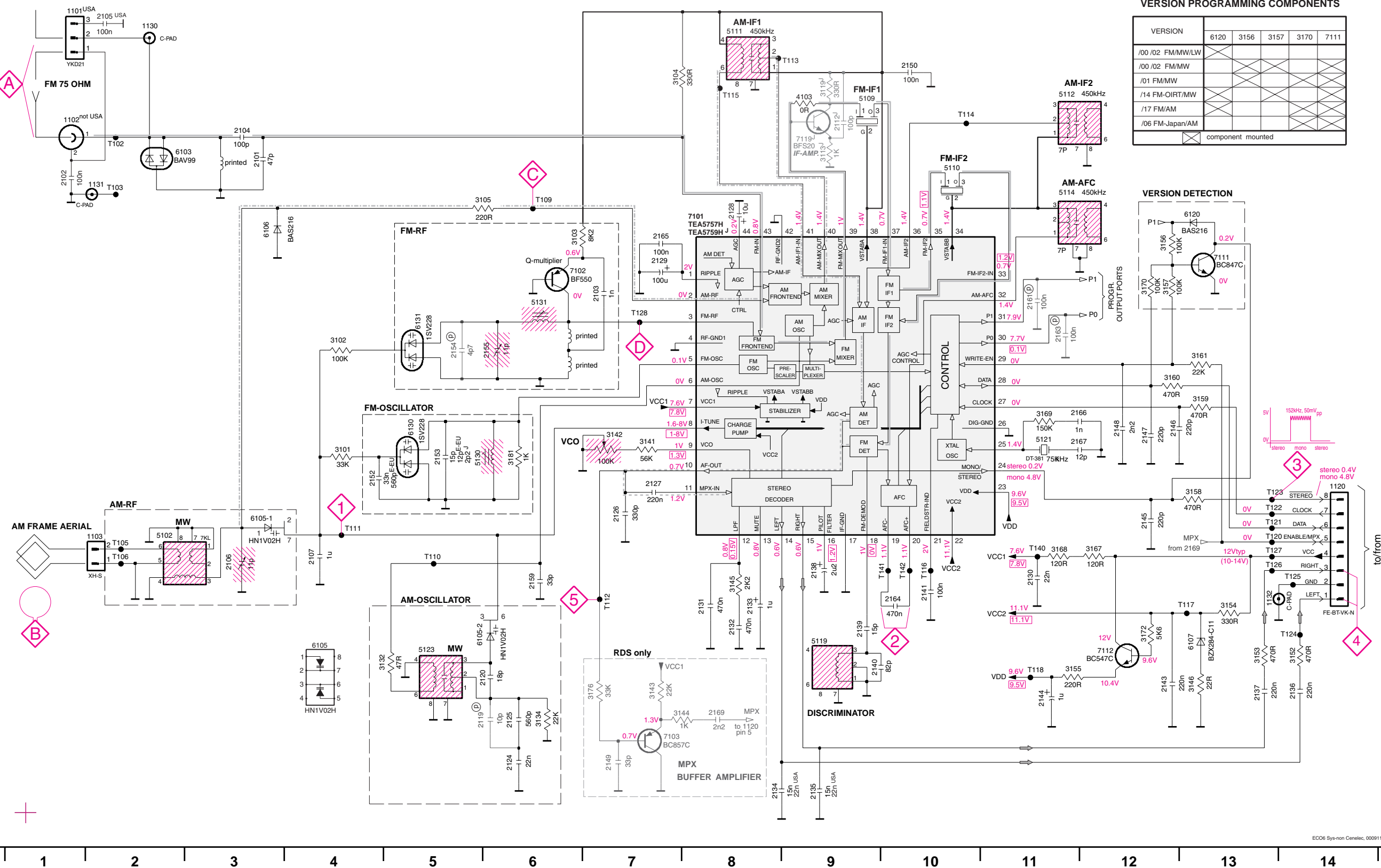
ECO6 Tuner Board

version: **SYSTEMS non-CENELEC**

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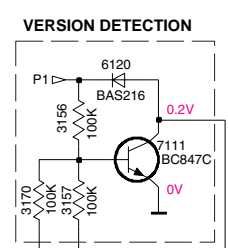
TUNER BOARD ECO6 / SYSTEMS NON CENELEC



VERSION PROGRAMMING COMPONENTS

VERSION	6120	3156	3157	3170	7111
/00 /02 FM/MW/LW					
/00 /02 FM/MW					
/01 FM/MW					
/14 FM-OIRT/MW					
/17 FM/AM					
/06 FM-Japan/AM					

component mounted



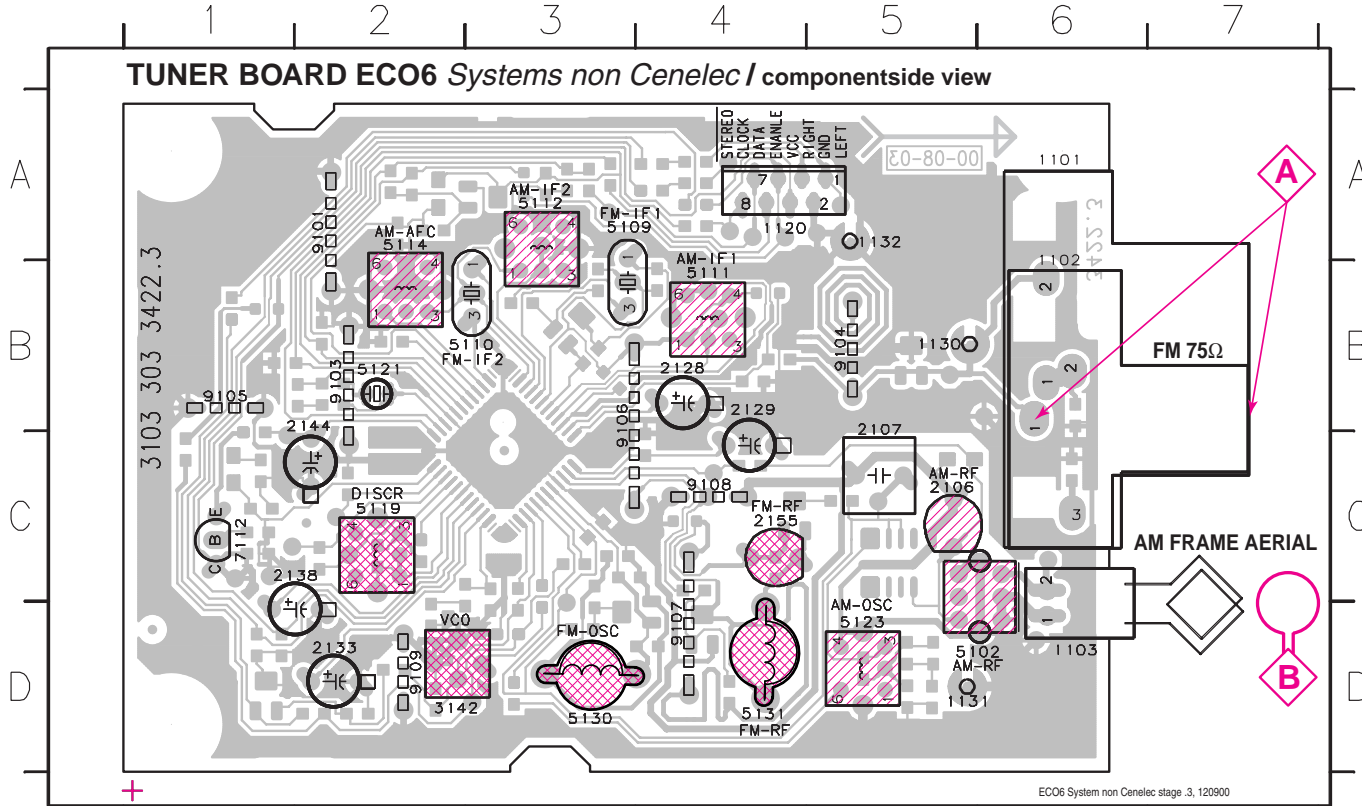
LEGEND
 (P) ... for provision only
 USA ... for USA version only
 E-EU ... for East European version only
 J ... for Japanese version only

...V FM mode stereo
 ...V MW mode
 ...V LW mode
 voltages measured while set is tuned to a strong transmitter

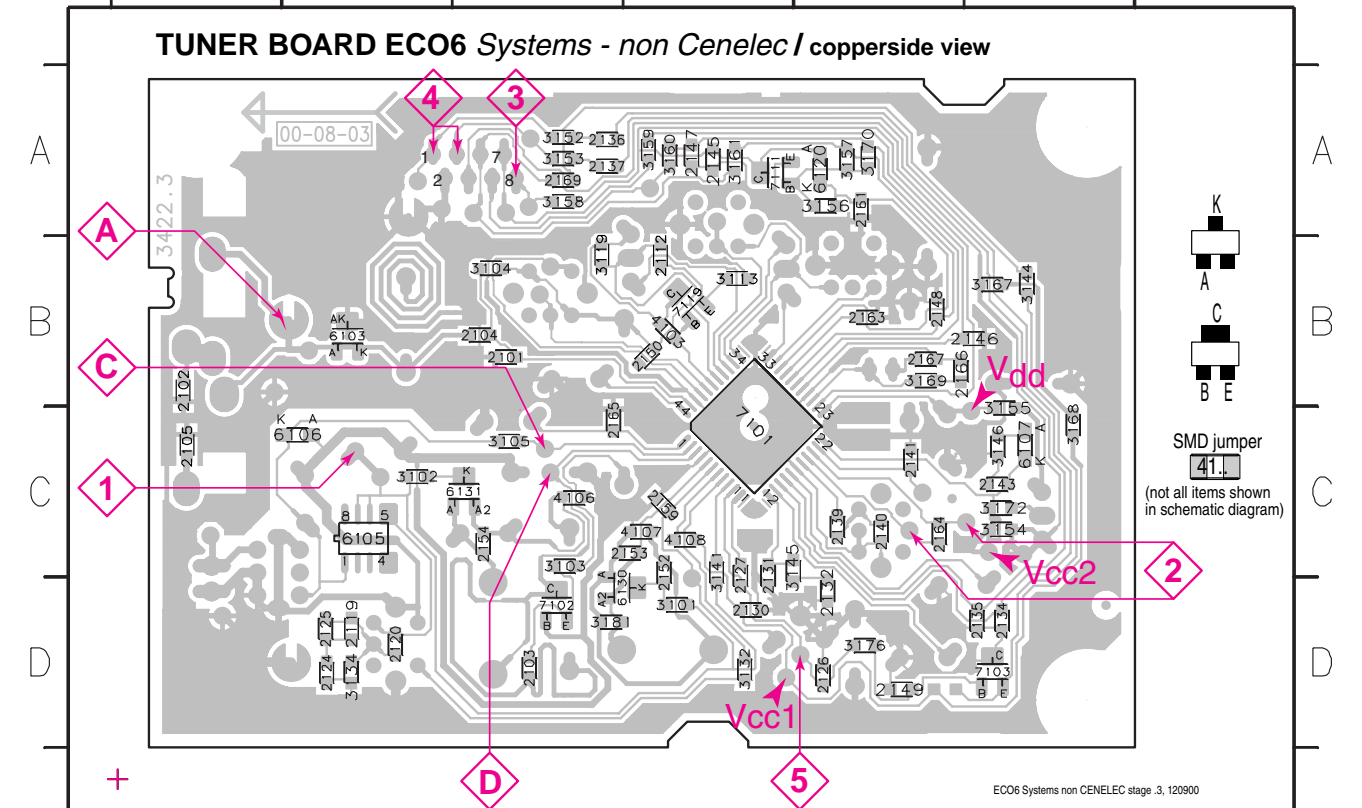
Signal path
 — FM
 - - - AM
 - · - · MPX (Audio Frequency)
 ⇨ AF - left/right

- 1101 A1
- 1102 B1
- 1103 F2
- 1120 E14
- 1130 A2
- 1131 B2
- 1132 G13
- 1133 B3
- 2102 B1
- 2103 C7
- 2104 B3
- 2105 A2
- 2106 F3
- 2107 F4
- 2119 H6
- 2120 G6
- 2124 H6
- 2125 H6
- 2126 F7
- 2127 E7
- 2128 C8
- 2129 C7
- 2130 F11
- 2131 G8
- 2132 G8
- 2133 G8
- 2134 H8
- 2135 H9
- 2136 G14
- 2137 G13
- 2138 F9
- 2139 G9
- 2140 G9
- 2141 F10
- 2143 G12
- 2144 G11
- 2145 F12
- 2146 E12
- 2147 E12
- 2148 H7
- 2149 H7
- 2150 A10
- 2152 E4
- 2153 E5
- 2154 D5
- 2155 D5
- 2159 F6
- 2161 C11
- 2163 D11
- 2164 F10
- 2165 C7
- 2166 E11
- 2167 E11
- 2169 H8
- 3101 E4
- 3102 D4
- 3103 C6
- 3104 A7
- 3105 B6
- 3132 G5
- 3134 H6
- 3141 E7
- 3142 E7
- 3143 G7
- 3144 H7
- 3145 F8
- 3146 G13
- 3152 G14
- 3153 G13
- 3154 G13
- 3155 G11
- 3156 C12
- 3157 D12
- 3158 E13
- 3159 D13
- 3160 D12
- 3161 D13
- 3167 F12
- 3168 F11
- 3169 E11
- 3170 C12
- 3172 G12
- 3176 G7
- 3181 E6
- 5102 F2
- 5109 B9
- 5110 B10
- 5111 A8
- 5112 A11
- 5114 B11
- 5119 G9
- 5121 E11
- 5123 G5
- 5130 E5
- 5131 C6
- 5132 B2
- 6105-1 F3
- 6105-2 G5
- 6106 C3
- 6107 G13
- 6120 C13
- 6130 E5
- 6131 D5
- 7101 C8
- 7102 C6
- 7103 H7
- 7111 C13
- 7112 F13
- T102 B2
- T103 B2
- T105 F2
- T106 F2
- T109 B6
- T110 F5
- T111 F4
- T112 F7
- T113 A8
- T114 B10
- T115 A8
- T116 B10
- T117 G13
- T118 G13
- T119 F13
- T120 F13
- T121 F13
- T122 F13
- T123 F13
- T124 F13
- T127 F13
- T128 D7
- T140 F11
- T141 F10
- T142 F10

1101 A6 1120 A4 1132 A5 2128 C4 2138 C2 3142 D2 5110 B3 5114 A2 5123 D5 7112 C1 9104 B5 9107 D4
 1102 B6 1130 B5 2106 C5 2129 B4 2144 B2 5102 D6 5111 B4 5119 C2 5130 D3 9101 A2 9105 B1 9108 C4
 1103 D6 1131 D5 2107 B5 2133 D2 2155 C4 5109 A3 5112 A3 5121 B2 5131 D4 9103 B2 9106 B3 9109 D2



2101 B4 2119 D3 2130 D5 2137 A4 2146 B7 2153 C5 2165 C4 3103 C4 3134 D3 3152 A4 3158 A4 3169 B6 4106 C4 6107 C7 7103 D7
 2102 B1 2120 D3 2131 C5 2139 C6 2147 A5 2154 C4 2166 B6 3104 B4 3141 C5 3153 A4 3159 A5 3170 A6 4107 C5 6120 A6 7111 A5
 2103 D4 2124 D3 2132 D6 2140 C6 2148 B6 2159 C5 2167 B6 3105 C4 3143 D6 3154 C7 3160 A5 3172 C7 4108 C5 6130 D4 7119 B5
 2104 B4 2125 D3 2134 D7 2141 C6 2149 D6 2161 A6 2169 A4 3113 B5 3144 B7 3155 C7 3161 A5 3176 D6 6103 B3 6131 C4
 2105 C1 2126 D6 2135 D7 2143 C7 2150 B5 2163 B6 3101 D5 3119 B5 3145 C5 3156 A6 3167 B7 3181 D4 6105 C3 7101 C5
 2112 B5 2127 C5 2136 A4 2145 A5 2152 C5 3102 C3 3132 D5 3146 C7 3157 A6 3168 C7 4103 B5 6106 C3 7102 D4



These assembly drawings show a summary of all possible versions.
 For components used in a specific version see schematic diagram respectively partlist.

TUNER ADJUSTMENT TABLE (ECO6 FM/MW- and FM/MW/LW - versions with AM-frame aerial)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz		108MHz	5130		8V ±0.2V
	87.5MHz (65.81MHz)		87.5MHz (65.81MHz)	check		4.3V ±0.5V (1.2V ±0.5V)
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1700kHz		1700kHz	5123		8V ±0.2V
	530kHz		530kHz	check		1.1V ±0.4V
FM/MW-version, 9kHz grid 531 - 1602kHz	1602kHz		1602kHz	5123	1	6.9V ±0.2V
	531kHz		531kHz	check		1.1V ±0.4V
LW 153 - 279kHz	279kHz		279kHz	5122		8V ±0.2V
	153kHz		153kHz	check		1.1V ±0.4V
MW FM/MW/LW- version, 9kHz grid 531 - 1602kHz	1602kHz		1602kHz	5123		8V ±0.2V
	531kHz		531kHz	check		1.1V ±0.4V
FM IF						
FM	10.7MHz, 45mV continuous wave	D		5119	2	0 ± 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	A	108MHz	2155	4	MAX
	87.5MHz (65.81MHz)	mod=1kHz Δf=±22.5kHz	87.5MHz (65.81MHz)	5131		
VCO						
FM	98MHz, 1mV continuous wave	A	98MHz	3142	3	152kHz ±1kHz ¹⁾
AM IF						
MW	450kHz connect pin 6 of IC 7101 (AM Osc.) with 3.3kΩ to Vcc	C		5111	5	
		C		5112		
AM AFC		C		5114	2	0 ± 2 mV DC
AM RF³⁾						
MW⁴⁾ FM/MW/LW- and FM/MW-version (9kHz grid)	1494kHz	B	1494kHz	2106	5	
	531 - 1602kHz		558kHz	5102		
LW	198kHz		198kHz	5103		
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1500kHz	B	1500kHz	2106	5	
	560kHz		560kHz	5102		

Use Service Testprogram. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

- 1) If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)
- 2) RC network serves for damping the IF-filter while adjusting the other one.
- 3) For AM RF adjustments the original frame antenna has to be used!
- 4) MW has to be aligned before LW.

↑ Repeat

MISCELLANEOUS

1101	2422 015 19376	SOCKET 2P CLICKFIT	USA only
1102	4822 267 10283	SOCKET COAX, IEC 75Ω	not USA
1103	4822 265 31184	JST CONNECTOR 2 POLE	
1120	4822 265 11515	FFC SOCKET, 8P	

CAPACITORS

2101	4822 126 13692	47pF	1%	63V	
2102	4822 126 13838	100nF	10%	50V	not USA
2103	5322 122 31647	1nF	10%	63V	
2104	5322 122 32531	100pF	5%	50V	
2105	4822 126 13838	100nF	10%	50V	USA only

2106	2020 800 00191	3-11pF TRIMCAP.,N450		
2107	4822 121 51319	1μF	20%	50V
2120	4822 126 13689	18pF	1%	63V
2124	5322 122 32654	22nF	10%	63V
2125	2020 552 96199	560pF	1%	50V

2126	5322 122 31863	330pF	5%	50V
2127	4822 126 14076	220nF	20%	25V
2128	4822 124 40248	10μF	20%	63V
2129	4822 124 41584	100μF	20%	10V
2130	5322 122 32654	22nF	10%	63V

2131	4822 126 13482	470nF	20%	16V	
2132	4822 126 13482	470nF	20%	16V	
2133	4822 124 21913	1μF	20%	63V	
2134	4822 126 13188	15nF	5%	63V	not USA
2134	5322 122 32654	22nF	10%	63V	USA only

2135	4822 126 13188	15nF	5%	63V	not USA
2135	5322 122 32654	22nF	10%	63V	USA only
2136	4822 126 14076	220nF	20%	25V	
2137	4822 126 14076	220nF	20%	25V	
2138	4822 124 22652	2,2μF	20%	50V	

2139	4822 126 14236	15pF	5%	50V
2140	4822 126 13695	82pF	1%	63V
2141	4822 126 13838	100nF	10%	50V
2143	4822 126 14076	220nF	20%	25V
2144	4822 124 21913	1μF	20%	63V

2145	4822 122 33575	220pF	5%	50V	
2146	4822 122 33575	220pF	5%	50V	
2147	4822 122 33575	220pF	5%	50V	
2148	4822 122 33127	2,2nF	10%	63V	
2149	5322 122 32659	33pF	5%	50V	RDS only

2150	4822 126 13838	100nF	10%	50V	
2152	4822 126 12105	33nF	5%	63V	not for East Europe
2152	5322 116 80853	560pF	5%	63V	for East Europe only
2153	4822 126 13486	15pF	2%	63V	not for East Europe
2153	4822 122 33926	12pF	2%	50V	for East Europe only

2155	2020 800 00191	3-11pF TRIMCAP.,N450		
2159	5322 122 32659	33pF	5%	50V
2164	4822 126 13482	470nF	20%	16V
2165	4822 126 13838	100nF	10%	50V
2166	5322 122 31647	1nF	10%	63V

2167	4822 122 33926	12pF	5%	50V	
2169	4822 122 33127	2,2nF	10%	63V	RDS only

RESISTORS

3101	4822 051 20333	33kΩ	5%	0,1W
3102	4822 117 10837	100kΩ	1%	0,1W
3103	4822 051 20822	8,2kΩ	5%	0,1W
3104	4822 117 13577	330Ω	1%	0,1W
3105	4822 117 11503	220Ω	5%	0,1W

3132	4822 051 20479	47Ω	5%	0,1W
3134	4822 051 20223	22kΩ	5%	0,1W
3141	4822 117 11148	56kΩ	1%	0,1W
3142	4822 100 12159	TRIMPOT. 100kΩ		

RESISTORS

3143	4822 051 20223	22kΩ	5%	0,1W	RDS only
3144	4822 051 10102	1kΩ	2%	0,25W	RDS only
3145	4822 117 11449	2,2kΩ	1%	0,1W	
3146	4822 051 20229	22Ω	5%	0,1W	
3152	4822 051 20471	470Ω	5%	0,1W	

3153	4822 051 20471	470Ω	5%	0,1W
3154	4822 117 13577	330Ω	1%	0,1W
3155	4822 117 11503	220Ω	5%	0,1W
3156	4822 117 10837	100kΩ	1%	0,1W
3157	4822 117 10837	100kΩ	1%	0,1W

3158	4822 051 20471	470Ω	5%	0,1W
3159	4822 051 20471	470Ω	5%	0,1W
3160	4822 051 20471	470Ω	5%	0,1W
3161	4822 051 20223	22kΩ	5%	0,1W
3167	4822 051 20121	120Ω	5%	0,1W

3168	4822 051 20121	120Ω	5%	0,1W	
3169	4822 051 20154	150kΩ	5%	0,1W	
3170	4822 117 10837	100kΩ	1%	0,1W	
3172	4822 051 20562	5,6kΩ	5%	0,1W	
3176	4822 051 20333	33kΩ	5%	0,1W	RDS only

3181	4822 051 10102	1kΩ	2%	0,25W
4103	4822 051 20008	CHIP JUMPER 0805		
4106	4822 051 20008	CHIP JUMPER 0805		
4107	4822 051 20008	CHIP JUMPER 0805		
4108	4822 051 20008	CHIP JUMPER 0805		

COILS

5102	4822 157 71634	RF-COIL MW
5109	4822 242 70665	FM-IF FILTER 10,7MHz
5110	4822 242 70665	FM-IF FILTER 10,7MHz
5111	2422 549 44023	AM-IF FILTER 450kHz
5112	4822 157 70302	AM-IF FILTER 450kHz

5114	4822 157 70302	AM-IF FILTER 450kHz
5119	4822 157 11443	DISCRIMINATOR COIL
5121	4822 242 10261	QUARTZ 75kHz
5123	2422 549 44108	RF-COIL, AM-OSCILLATOR
5130	4822 157 11843	RF COIL 1,5 TURNS

5131	4822 157 11843	RF COIL 1,5 TURNS
------	----------------	-------------------

DIODES

6103	5322 130 34337	BAV99
6105	4822 130 83075	HN1V02H
6106	4822 130 83757	BAS216
6107	9340 386 90115	BZX284-C11
6120	4822 130 83757	BAS216

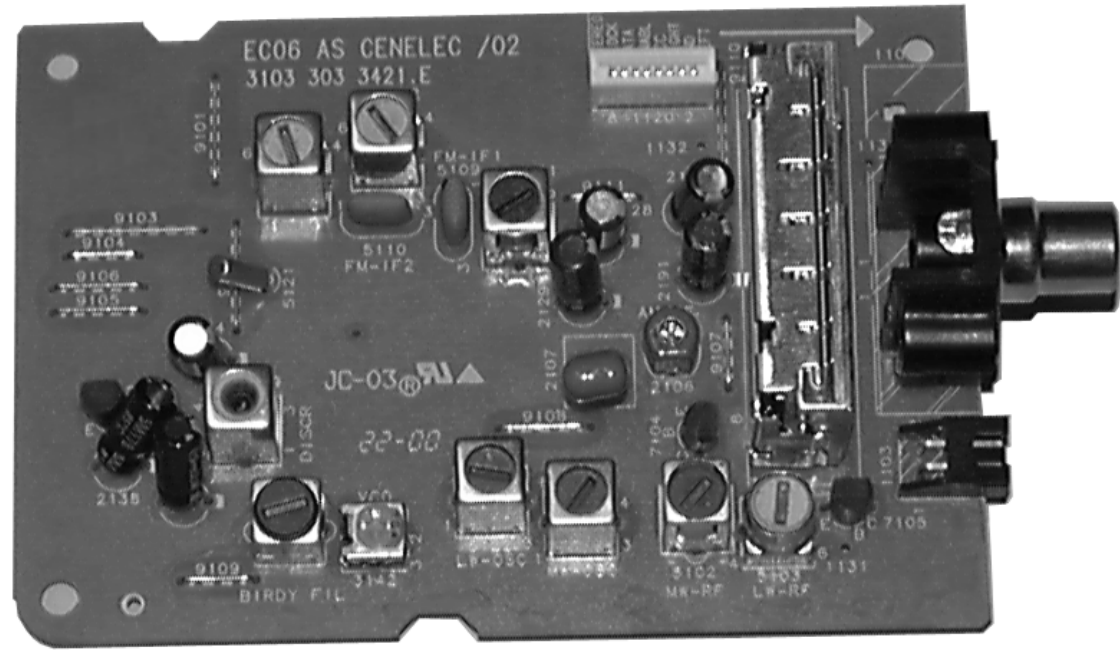
6130	4822 130 82833	1SV228
6131	4822 130 82833	1SV228

TRANSISTORS

7102	4822 130 42131	BF550	
7103	5322 130 42756	BC857C	RDS only
7111	5322 130 42755	BC847C	
7112	4822 130 44503	BC547C	

INTEGRATED CIRCUITS

7101	9351 740 80557	TEA5757H/V1, RADIO IC
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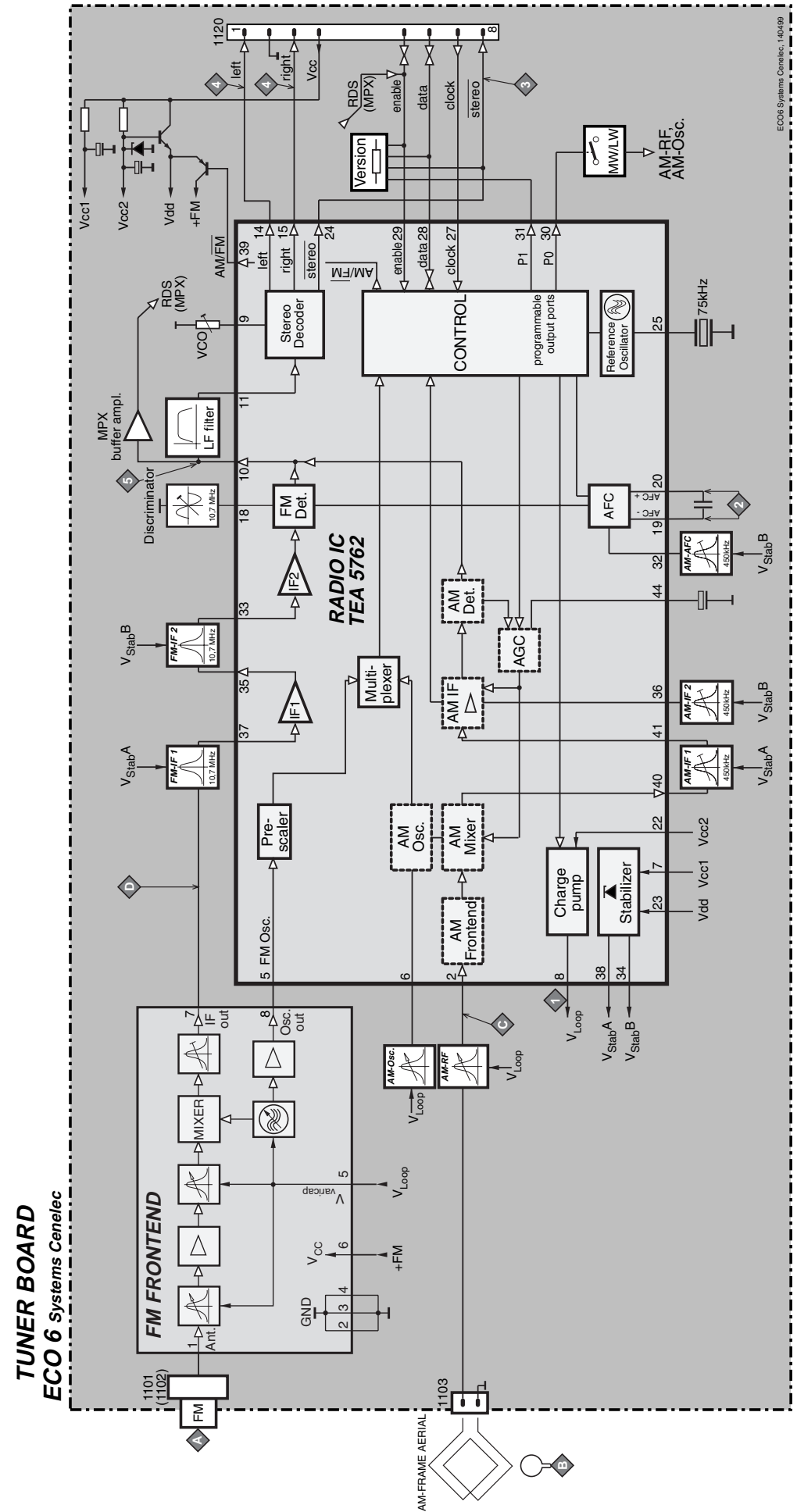
ECO6 Tuner Board

version: **SYSTEMS CENELEC**

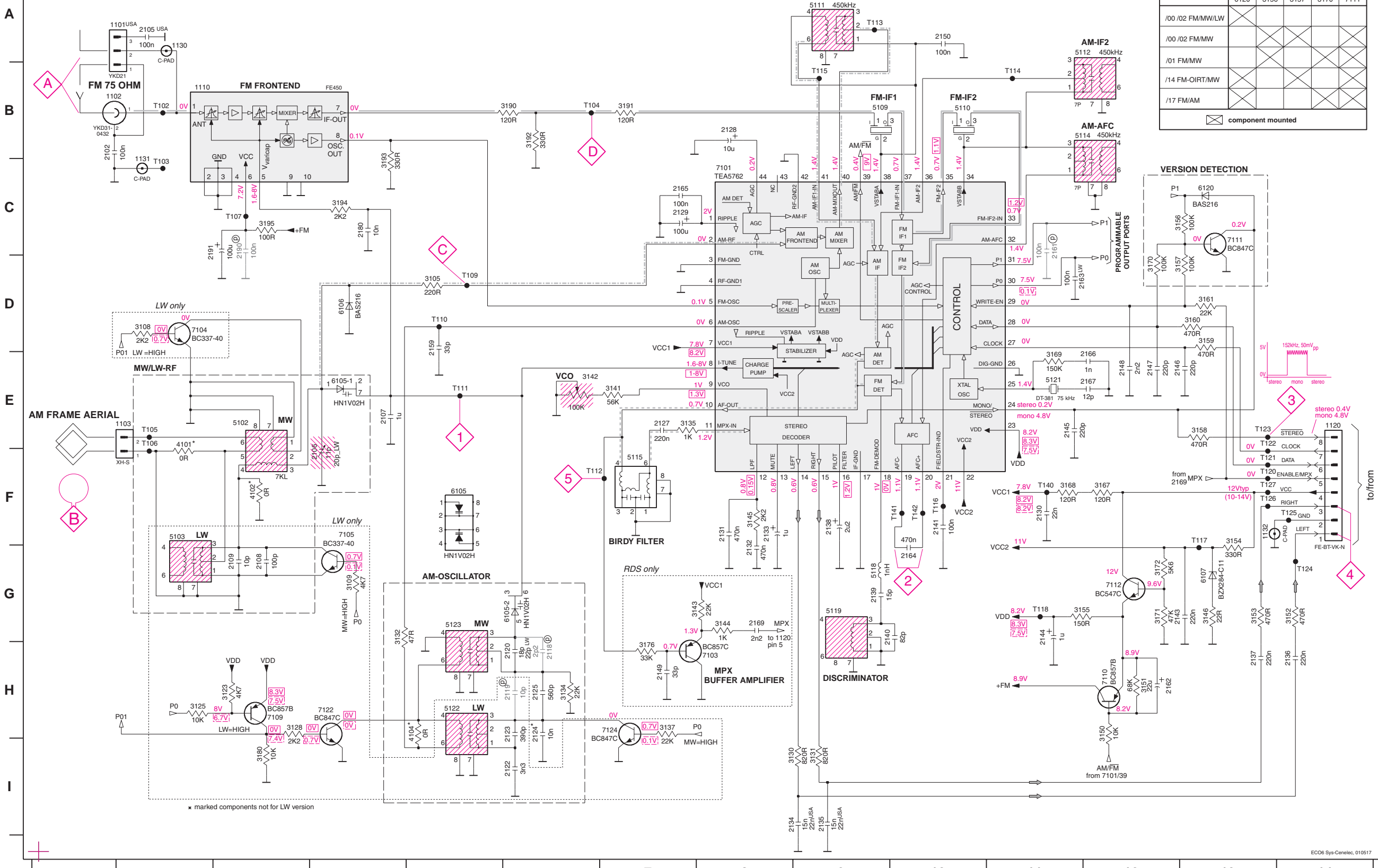
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- Electrical Partslist7B-4

BLOCK DIAGRAM



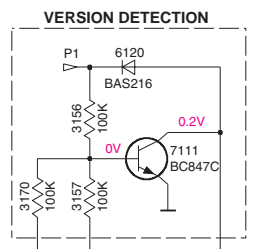
TUNER BOARD ECO6 / SYSTEMS-CENELEC



VERSION PROGRAMMING COMPONENTS

VERSION	6120	3156	3157	3170	7111
/00 /02 FM/MW/LW					
/00 /02 FM/MW					
/01 FM/MW					
/14 FM-OIRT/MW					
/17 FM/AM					

☒ component mounted

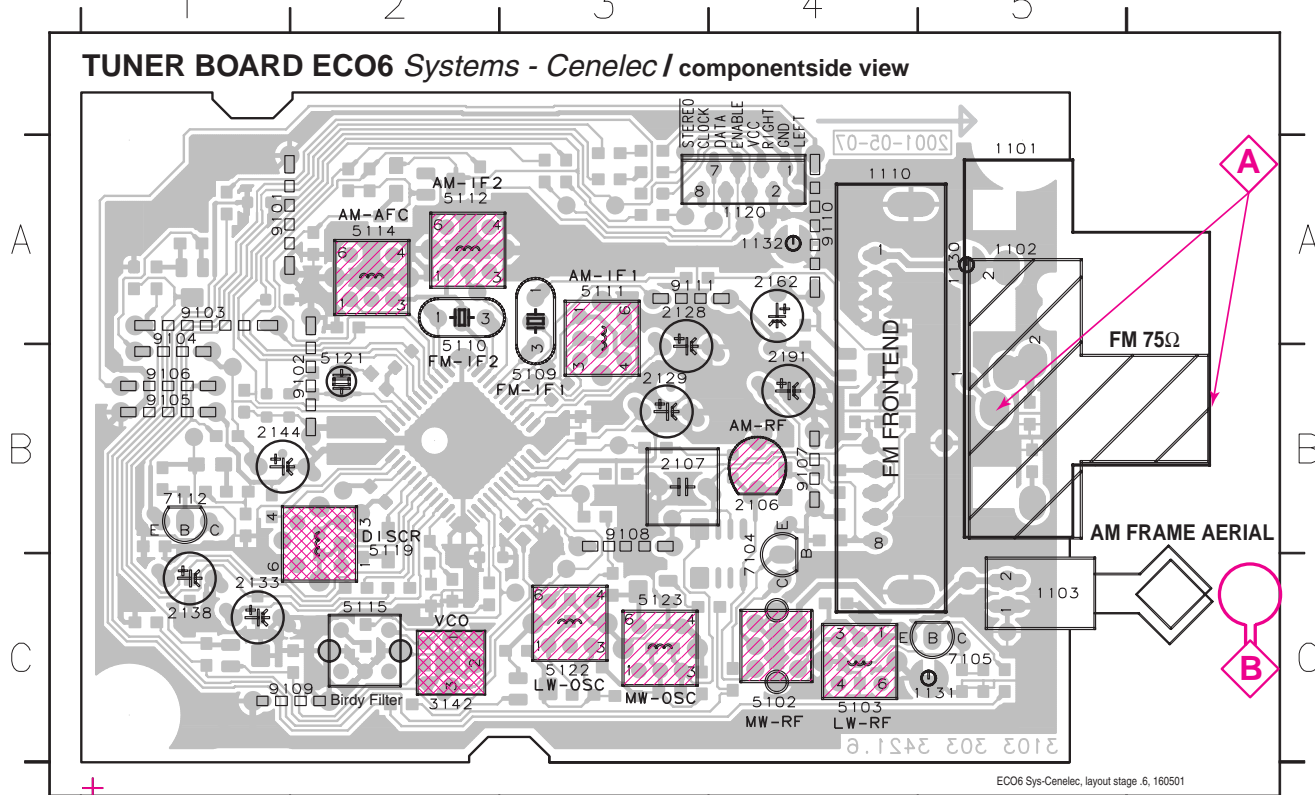


- 1101 A2
- 1102 B1
- 1103 E2
- 1110 B2
- 1120 E14
- 1130 A2
- 1131 C2
- 1132 F13
- 2102 B1
- 2105 A2
- 2106 E3
- 2107 E4
- 2108 G3
- 2109 G3
- 2118 H6
- 2119 H6
- 2120 H6
- 2122 I6
- 2123 H6
- 2124 H6
- 2125 H6
- 2127 E7
- 2128 B8
- 2129 C7
- 2130 F11
- 2131 F8
- 2132 F8
- 2133 F8
- 2134 I8
- 2135 I9
- 2136 H14
- 2137 H13
- 2138 F9
- 2139 G9
- 2140 G9
- 2141 F10
- 2143 G12
- 2144 G11
- 2145 E11
- 2146 E12
- 2147 E12
- 2148 E12
- 2149 H7
- 2150 A10
- 2159 D5
- 2161 C11
- 2162 H12
- 2163 D11
- 2164 G10
- 2165 C7
- 2166 E11
- 2167 E11
- 2169 G8
- 2180 C4
- 2190 C3
- 2191 C3
- 3105 D5
- 3108 D2
- 3109 D4
- 3123 H3
- 3128 H3
- 3130 I9
- 3131 I9
- 3132 G4
- 3134 H6
- 3135 E7
- 3137 H7
- 3141 E7
- 3142 E6
- 3143 G7
- 3144 G8
- 3145 F8
- 3146 G13
- 3150 H12
- 3151 H12
- 3152 G14
- 3153 G13
- 3154 F13
- 3155 G12
- 3156 C12
- 3157 D12
- 3158 E13
- 3159 D13
- 3160 D13
- 3161 D13
- 3167 F12
- 3168 F11
- 3169 E11
- 3170 D12
- 3171 G12
- 3172 G12
- 3176 H7
- 3180 I3
- 3190 B6
- 3191 B7
- 3192 B6
- 3193 B4
- 3194 C4
- 3195 C3
- 4101 E2
- 4102 F3
- 4104 H5
- 5102 E3
- 5103 F2
- 5109 B9
- 5110 B10
- 5111 A9
- 5112 A11
- 5114 B11
- 5115 E7
- 5118 G9
- 5119 G9
- 5121 E11
- 5122 H5
- 5123 G5
- 5125-2 G6
- 6106 D4
- 6107 G13
- 6120 C13
- 7101 C8
- 7103 H8
- 7104 D2
- 7105 F4
- 7109 H3
- 7110 H12
- 7111 C13
- 7112 G12
- 7113 A3
- 7114 B11
- 7116 F10
- 7117 F13
- 7118 G11
- 7120 F13
- 7121 F13
- 7122 E13
- 7123 E13
- 7124 G14
- 7125 F14
- 7126 F13
- 7127 F13
- 7140 F11
- 7141 F10
- 7142 F10

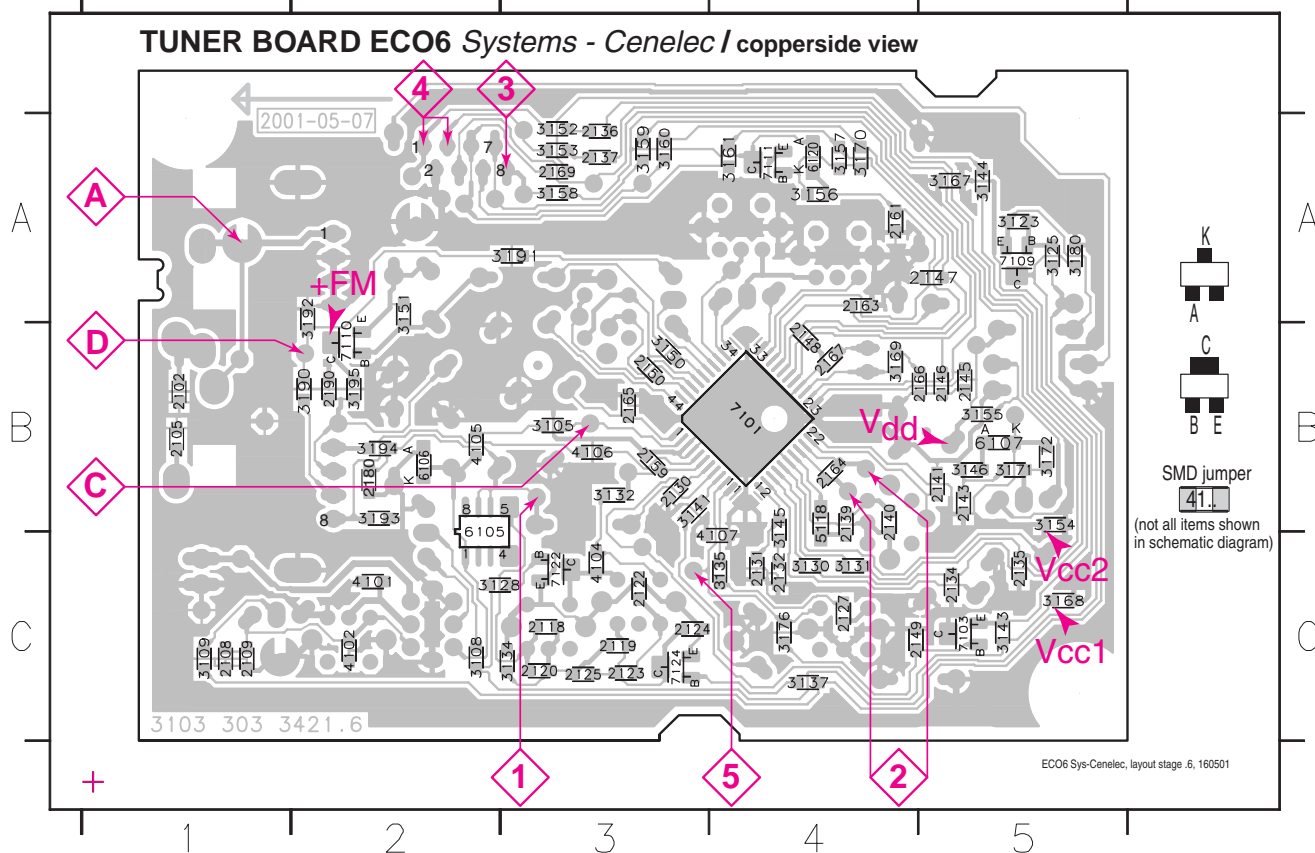
LEGEND

- * ... only assembled in FM/AM-version
- Ⓧ ... for provision only
- USA ... for USA version only
- LW ... for LW version only
- SMD jumper
- Ⓧ EVM
- ...V FM mode stereo
- ...V MW mode
- ...V LW mode
- voltages measured while set is tuned to a strong transmitter
- Signal path
- FM
- - - AM
- ⊃ MPX (Audio Frequency)
- ⇒ AF - left/right

1101 B5 1110 B4 1131 C5 2107 B3 2133 C1 2162 A4 5102 C4 5110 A2 5114 A2 5121 B2 7104 C4 9101 A2 9104 B1 9107 B4 9110 A4
 1102 B5 1120 A4 1132 A4 2128 A3 2138 B1 2191 B4 5103 C4 5111 A3 5115 C2 5122 C3 7105 C5 9102 B2 9105 B1 9108 B3 9111 A3
 1103 C5 1130 A5 2106 B4 2129 B3 2144 B1 3142 C2 5109 B3 5112 A2 5119 B2 5123 C3 7112 B1 9103 A1 9106 B1 9109 C2

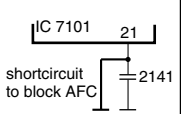
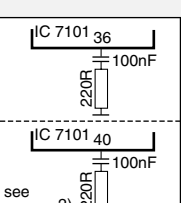
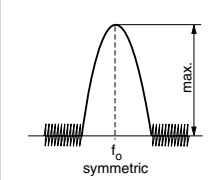

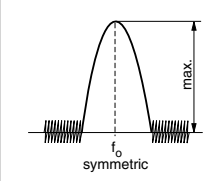


2102 B1 2120 C3 2130 B3 2137 A3 2146 B5 2161 A4 2169 A3 3123 A5 3134 C3 3145 C4 3154 B5 3160 A3 3171 B5 3192 A2 4104 C3 6106 B2 7110 B2
 2105 B1 2122 C3 2131 C4 2139 B4 2147 A5 2163 A4 2180 B2 3125 A5 3135 C4 3146 B5 3155 B5 3161 A4 3172 B5 3193 B2 4105 B2 6107 B5 7111 A4
 2108 C1 2123 C3 2132 C4 2140 B4 2148 B4 2164 B4 2190 B2 3128 C2 3137 C4 3150 B3 3156 A4 3167 A5 3176 C4 3194 B2 4106 B3 6120 A4 7122 C3
 2109 C1 2124 C3 2134 C5 2141 B5 2149 C4 2165 B3 3105 B3 3130 C4 3141 B3 3151 A2 3157 A4 3168 C5 3180 A5 3195 B2 4107 C4 7101 B4 7124 C3
 2118 C3 2125 C3 2135 C5 2143 B5 2150 B3 2166 B5 3108 C2 3131 C4 3143 C5 3152 A3 3158 A3 3169 B4 3190 B2 4101 C2 5118 C4 7103 C5
 2119 C3 2127 C4 2136 A3 2145 B5 2159 B3 2167 B4 3109 C1 3132 B3 3144 A5 3153 A3 3159 A3 3170 A4 3191 A3 4102 C2 6105 B2 7109 A5



These assembly drawings show a summary of all possible versions.
 For components used in a specific version see schematic diagram respectively partslist.

TUNER ADJUSTMENT TABLE (ECO6 Cenelec FM/MW - and FM/MW/LW - versions with AM-frame aerial)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
<i>VARICAP ALIGNMENT</i>						
FM 87.5 - 108MHz (50kHz grid)			108MHz	check		8V ±1.2V
			87.5MHz	check		1.6V ±0.5V
MW 531 - 1602kHz (9kHz grid)			1602kHz	5123	1	8V ±0.2V 3-band 6.9V ±0.2V 2-band
			531kHz	check		1.1V ±0.4V
LW 153 - 279kHz (3kHz grid)			279kHz	5122		8V ±0.2V
			153kHz	check		1.1V ±0.4V
<i>FM - IF</i>						
FM	10.7MHz, 45mV continuous wave	D		5119	2	0mV ±3mV
<i>FM - VCO</i>						
FM	98MHz, 1mV continuous wave	A	98MHz	3142	3	152kHz ±1kHz ¹⁾
<i>FM RF (channel separation)</i> Note: The FM-frontend unit has already been adjusted by the factory and needs therefore no further adjustments for service purposes.						
FM	98MHz, 1mV 90% Left + 9% pilot mod=1kHz	A	98MHz	IF coil inside FM frontend 1110	4	right channel min.
<i>AM IF</i>						
MW	450kHz connect pin 6 of IC 7101 (AM Osc.) with 3.3kΩ to Vcc	C $\Delta f = \pm 10\text{kHz}$ $V_{RF} = 0.5\text{mV}$ (as low as possible)		5111	5	
			see remark 2)	5112		
AM AFC MW		C continuous wave $V_{RF} = 2\text{mV}$		5114	2	0mV ±2mV
<i>AM RF³⁾</i>						
MW	1494kHz	B 	1494kHz	2106	5	
	558kHz		5102			
LW	198kHz	$\Delta f = \pm 30\text{kHz}$ V_{RF} as low as possible	198kHz	5103		

Use Service Testprogram. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

- 1) If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)
- 2) RC network serves for damping the IF-filter while adjusting the other one.
- 3) For AM RF adjustments the original frame antenna has to be used!
 MW has to be aligned before LW.

↑ Repeat

MISCELLANEOUS

1101	2422 015 19376	SOCKET CLICKFIT 2P	USA only
1102	4822 267 10283	SOCKET COAX, IEC 75Ω	not USA
1103	4822 265 31184	JST CONNECTOR, 2 POLE	
1110	2422 542 90071	FM FRONTEND	
1120	4822 265 11515	FFC SOCKET, 8P	

CAPACITORS

2102	4822 126 13838	100nF 10% 50V	not USA
2105	4822 126 13838	100nF 10% 50V	USA only
2106	2020 800 00204	TRIMCAP. 4.2 - 20pF, N750	LW only
2106	2020 800 00191	TRIMCAP. 3 - 11pF, N450	FM/AM only
2107	4822 121 51319	1μF 20% 50V	
2108	5322 122 32531	100pF 5% 50V	LW only
2109	5322 122 32448	10pF 5% 50V	LW only
2120	4822 126 13689	18pF 1% 63V	FM/AM only
2120	5322 122 32658	22pF 5% 50V	LW only
2122	4822 122 33891	3,3nF 10% 63V	LW only
2123	2020 552 93494	390pF 1% 50V	LW only
2124	4822 122 33177	10nF 20% 50V	FM/AM only
2125	2020 552 96199	560pF 1% 50V	
2127	4822 126 14076	220nF 20% 25V	
2128	4822 124 40248	10μF 20% 63V	
2129	4822 124 41584	100μF 20% 10V	
2130	5322 122 32654	22nF 10% 63V	
2131	4822 126 13482	470nF 20% 16V	
2132	4822 126 13482	470nF 20% 16V	
2133	4822 124 21913	1μF 20% 63V	
2134	3198 017 31530	15nF 10% 50V	not USA
2134	5322 122 32654	22nF 10% 63V	USA only
2135	3198 017 31530	15nF 10% 50V	not USA
2135	3198 017 32230	22nF 10% 25V	USA only
2136	4822 126 14076	220nF 20% 25V	
2137	4822 126 14076	220nF 20% 25V	
2138	4822 124 22652	2,2μF 20% 50V	
2139	4822 126 14236	15pF 5% 50V	
2140	4822 126 13695	82pF 1% 63V	
2141	4822 126 13838	100nF 10% 50V	
2143	4822 126 14076	220nF 20% 25V	
2144	4822 124 21913	1μF 20% 63V	
2145	4822 122 33575	220pF 5% 50V	
2146	4822 122 33575	220pF 5% 50V	
2147	4822 122 33575	220pF 5% 50V	
2148	4822 122 33127	2,2nF 10% 63V	
2149	5322 122 32659	33pF 5% 50V	RDS only
2150	4822 126 13838	100nF 10% 50V	
2159	5322 122 31151	22μF 20% 50V	
2163	4822 126 13838	100nF 10% 50V	LW only
2164	4822 126 13482	470nF 20% 16V	
2165	4822 126 13838	100nF 10% 50V	
2166	5322 122 31647	1nF 10% 63V	
2167	4822 122 33926	12pF 5% 50V	
2169	4822 122 33127	2,2nF 10% 63V	RDS only
2180	3198 017 31030	10nF 10% 50V	
2190	4822 126 13838	100nF 10% 50V	
2191	4822 124 40178	100μF 20% 10V	

RESISTORS

3105	4822 117 11503	220Ω 5% 0,1W	
3108	4822 117 11449	2,2kΩ 1% 0,1W	LW only
3109	4822 051 20472	4,7kΩ 5% 0,1W	LW only
3123	4822 051 20472	4,7kΩ 5% 0,1W	LW only
3125	4822 117 10833	10kΩ 1% 0,1W	LW only

RESISTORS

3128	4822 117 11449	2,2kΩ 1% 0,1W	LW only
3130	3198 021 38210	820Ω 5% 0,06W	
3131	3198 021 38210	820Ω 5% 0,06W	
3132	4822 051 20479	47Ω 5% 0,1W	
3134	4822 051 20223	22kΩ 5% 0,1W	
3135	3198 021 31020	1kΩ 5% 0,06W	
3137	4822 051 20223	22kΩ 5% 0,1W	LW only
3141	4822 117 11148	56kΩ 1% 0,1W	
3142	4822 100 12159	TRIMPOT. 100kΩ	
3143	4822 051 20223	22kΩ 5% 0,1W	RDS only
3144	4822 051 10102	1kΩ 2% 0,25W	RDS only
3145	4822 117 11449	2,2kΩ 1% 0,1W	
3146	4822 051 20229	22Ω 5% 0,1W	
3150	4822 117 10833	10kΩ 1% 0,1W	
3151	4822 051 20683	68kΩ 5% 0,1W	
3152	4822 051 20471	470Ω 5% 0,1W	
3153	4822 051 20471	470Ω 5% 0,1W	
3154	4822 117 13577	330Ω 1% 0,1W	
3155	4822 117 10353	150Ω 5% 0,1W	
3156	4822 117 10837	100kΩ 1% 0,1W	
3157	4822 117 10837	100kΩ 1% 0,1W	
3158	4822 051 20471	470Ω 5% 0,1W	
3159	4822 051 20471	470Ω 5% 0,1W	
3160	4822 051 20471	470Ω 5% 0,1W	
3161	4822 051 20223	22kΩ 5% 0,1W	
3167	4822 051 20121	120Ω 5% 0,1W	
3168	4822 051 20121	120Ω 5% 0,1W	
3169	4822 051 20154	150kΩ 5% 0,1W	
3170	4822 117 10837	100kΩ 1% 0,1W	
3171	4822 117 10834	47kΩ 1% 0,1W	
3172	4822 051 20562	5,6kΩ 5% 0,1W	
3176	4822 051 20333	33kΩ 5% 0,1W	RDS only
3180	4822 117 10833	10kΩ 1% 0,1W	LW only
3190	4822 051 20121	120Ω 5% 0,1W	
3191	4822 051 20121	120Ω 5% 0,1W	
3192	4822 117 13577	330Ω 1% 0,1W	
3193	4822 117 13577	330Ω 1% 0,1W	
3194	4822 117 11449	2,2kΩ 1% 0,1W	
3195	4822 051 20101	100Ω 5% 0,1W	
4101	4822 051 20008	CHIP JUMPER 0805	FM/AM only
4102	4822 051 20008	CHIP JUMPER 0805	FM/AM only
4104	4822 051 20008	CHIP JUMPER 0805	FM/AM only
4105	4822 051 20008	CHIP JUMPER 0805	
4106	4822 051 20008	CHIP JUMPER 0805	
4107	4822 051 20008	CHIP JUMPER 0805	

COILS

5102	4822 157 71634	RF-COIL MW	
5103	2422 549 44107	RF-COIL LW	LW only
5109	4822 157 71639	FM-IF FILTER 10,7MHz	
5110	4822 242 70665	FM-IF FILTER 10,7MHz	
5111	2422 549 44023	AM-IF FILTER 450kHz	
5112	4822 157 70302	AM-IF FILTER 450kHz	
5114	4822 157 70302	AM-IF FILTER 450kHz	
5115	4822 157 71636	ANTI BIRDY FILTER	
5118	2422 535 95881	100nH	
5119	4822 157 11443	DISCRIMINATOR COIL	
5121	4822 242 10261	QUARTZ 75kHz	
5122	2422 549 44108	RF-COIL, LW-OSCILLATOR	LW only
5123	2422 549 44108	RF-COIL, MW-OSCILLATOR	

DIODES

6105	4822 130 83075	HN1V02H	
6106	4822 130 83757	BAS216	
6107	9340 386 90115	BZX284-C11	
6120	4822 130 83757	BAS216	

TRANSISTORS

7103	5322 130 42756	BC857C	RDS only
7104	9322 003 64676	TBC337-40	LW only
7105	9322 003 64676	TBC337-40	LW only
7109	4822 130 60373	BC856B	LW only
7110	4822 130 60373	BC856B	
7111	5322 130 42755	BC847C	
7112	4822 130 44503	BC547C	
7122	5322 130 42755	BC847C	LW only
7124	5322 130 42755	BC847C	LW only

INTEGRATED CIRCUITS

7101	4822 209 90315	TEA5762HV/1, RADIO IC	
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BRIEF INTRODUCTION OF THE AF11 BOARD

AF11 BOARD

TABLE OF CONTENTS

Brief Introduction of the AF11 Board	8-1
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AF11 Board - Component & Chip Layout (Mapping)	8-3
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The AF11 Board consists of the following features :

a. TDA7468D IC

TDA7468D IC (7501) which includes functions such as source selection, loudness control, dynamic bass control, treble control, volume control and muting function. Sound features such as ALC, DBB, DSC and IS are controllable via I²C Bus from the microprocessor.

The TDA7468D IC caters for 4 input sources namely TUNER, PC LINK, CD and AUX. It also has a Mic mix input. In our application, software will switch the input source to previous source MUTE during STANDBY mode and some other occasions where noise from other input sources is undesirable.

Note that the input to the TDA7468D IC must be ac coupled to prevent 'pop' noise. Input networks are included to provide appropriate attenuation for various sources.

b. SIMPLE MIC MIXING

The AF11 Board has provisions which can be configured to cater for one of the following:

MM : which caters for Mic mixing with additional Mic amplifier board.

NM : non Mic mixing.

c. LINE OUT

Line out cinch socket for connection to external amplifier.

d. SUB-WOOFER OUT

Sub-woofer out cinch socket for connection to active sub-woofer speaker.

e. INCREDIBLE SURROUND

Incredible surround effect using transistor circuit to create phase shifting and spatial effect.

f. HEADPHONE AMPLIFIER

Headphone amplifier to drive 32 ohm to 1kohm headphone.

g. CD STANDBY CONTROL

CD Standby Control circuit which switches on the supply to CD servo control IC, digital out buffer IC, HF circuit and the laser light pen in CD mode only.

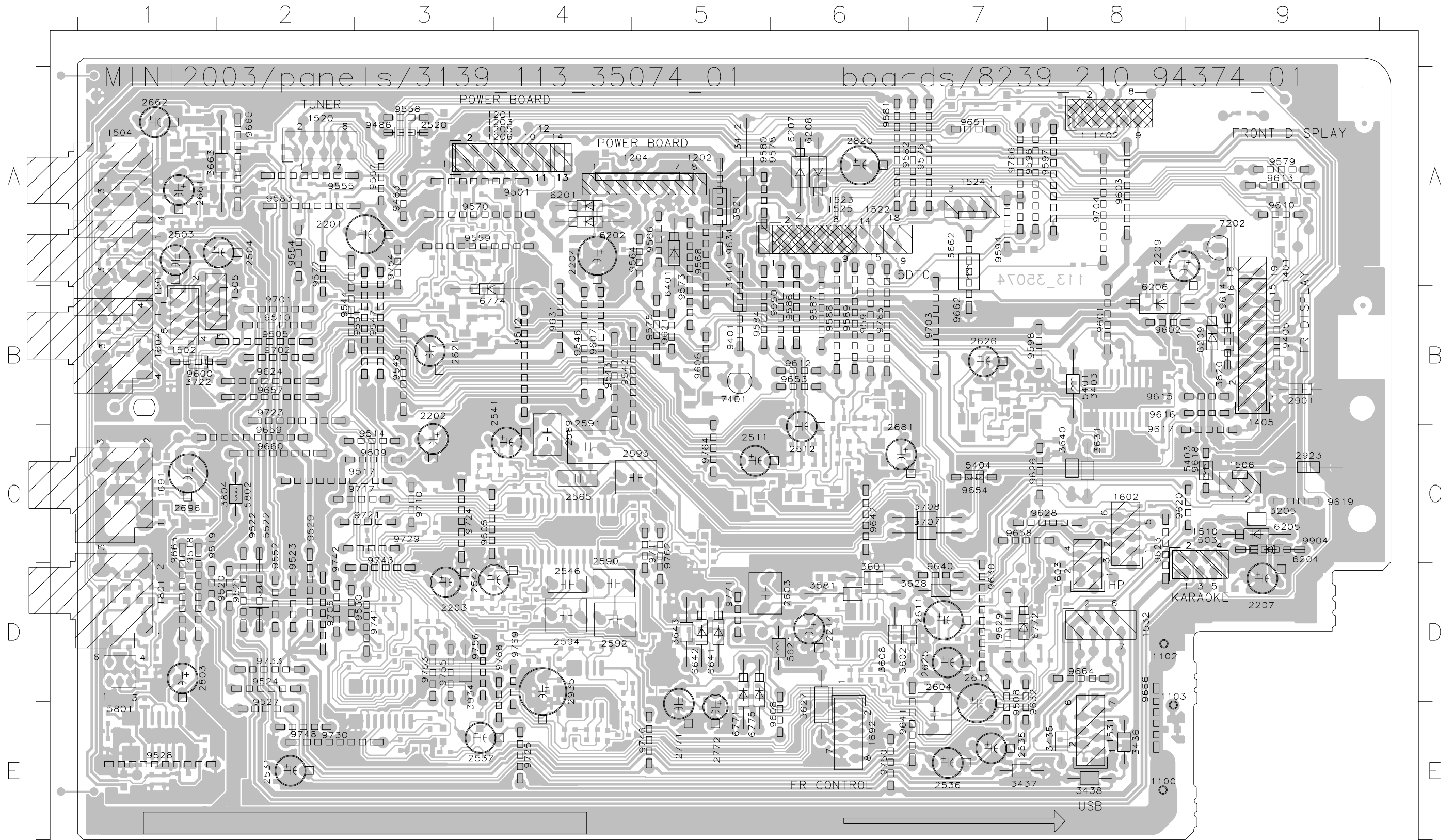
h. ATTENUATION NETWORK

Attenuation network is provided at the output of the AF11 Board for interfacing with power board of different output power.

i. CD DIGITAL OUT

CD Digital out cinch socket for connection to external digital audio decoders.

AF11 BOARD - COMPONENT LAYOUT



This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

3139 113 3507 pt4 dd wk0310

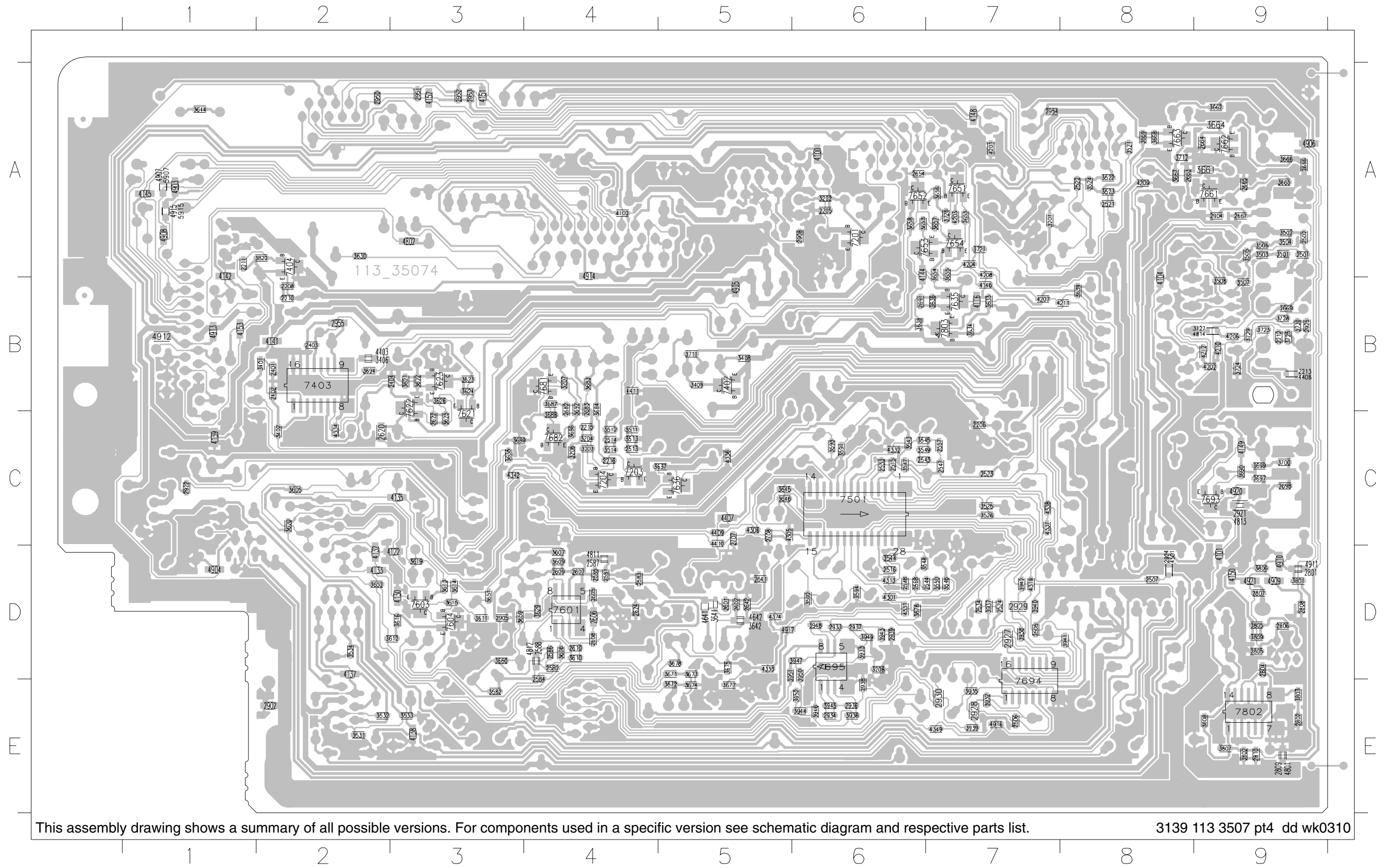
AF11 BOARD - COMPONENT LAYOUT (MAPPING)

1100	E8	1504	A1	1692	E6	2532	E3	2611	D7	2935	D4	3631	C8	5621	D6	6771	E5	9514	C3	9544	B2	9570	A3	9589	B6	9610	A9	9629	D7	9662	B7	9724	C3	9762	C5
1102	D8	1505	B2	1801	D1	2535	E7	2612	D7	3205	C9	3640	C8	5662	A7	6772	D7	9517	C3	9546	B4	9573	B5	9591	B6	9612	B6	9630	D7	9663	C1	9725	E4	9764	C5
1103	D8	1506	C9	2201	A2	2536	E7	2621	B3	3403	B8	3643	D5	5801	E1	6774	B3	9518	C1	9547	B3	9575	B5	9594	A7	9613	A9	9631	B4	9664	D8	9729	C3	9765	B6
1201	A4	1510	C9	2202	B3	2541	B4	2625	D7	3410	A5	3663	A1	5802	C2	6775	E5	9519	C1	9548	B3	9576	A7	9596	A7	9614	B9	9632	E7	9665	A2	9730	E2	9766	A7
1202	A5	1520	A2	2203	D3	2542	D3	2626	B7	3412	A5	3707	C7	6201	A4	7202	A9	9520	D2	9550	B6	9577	A2	9597	A7	9615	B8	9634	A5	9666	D8	9733	D2	9768	D4
1203	A4	1522	A6	2204	A4	2546	D4	2661	A1	3435	E8	3708	C7	6202	A4	7401	B5	9521	D2	9551	B3	9578	A6	9598	B7	9616	B8	9640	D7	9701	B2	9741	D3	9769	D4
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1205	A4	1524	A7	2209	A8	2589	C4	2681	C6	3437	E7	3804	C2	6205	C9	9405	B9	9523	C2	9554	A2	9580	A5	9601	B8	9618	C9	9642	C6	9703	B7	9743	C3	9904	C9
1206	A4	1525	A6	2214	D6	2590	C4	2696	C1	3438	E8	3820	B9	6206	B8	9483	A3	9524	D2	9555	A2	9581	A6	9602	B8	9619	C9	9651	A7	9704	A8	9746	E5		
1401	A9	1531	E8	2503	A1	2591	B4	2771	E5	3581	D6	3821	A5	6207	A6	9486	A3	9527	E2	9557	A3	9582	A6	9603	A8	9620	C8	9653	B6	9705	D2	9748	E2		
1402	A8	1532	D8	2504	A2	2592	D4	2772	E5	3601	D6	3934	D3	6208	A6	9501	A4	9528	E1	9558	A3	9583	A2	9605	C3	9621	B5	9654	C7	9710	C3	9750	E6		
1405	B9	1602	C8	2511	C5	2593	C5	2803	D1	3602	D6	5401	B8	6209	B9	9505	B2	9529	C2	9559	A3	9584	B5	9606	B5	9623	C8	9657	B2	9711	C5	9753	D3		
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1502	B1	1604	B1	2520	A3	2603	D6	2901	B9	3627	E6	5404	C7	6641	D5	9510	B2	9542	B4	9566	A5	9587	B6	9608	E6	9626	C7	9659	C2	9721	C3	9755	D3		
1503	C9	1691	C1	2531	E2	2604	D7	2923	C9	3628	D7	5522	C2	6642	D5	9512	B4	9543	B4	9568	A5	9588	B6	9609	C3	9628	C7	9660	C2	9723	B2	9756	D3		

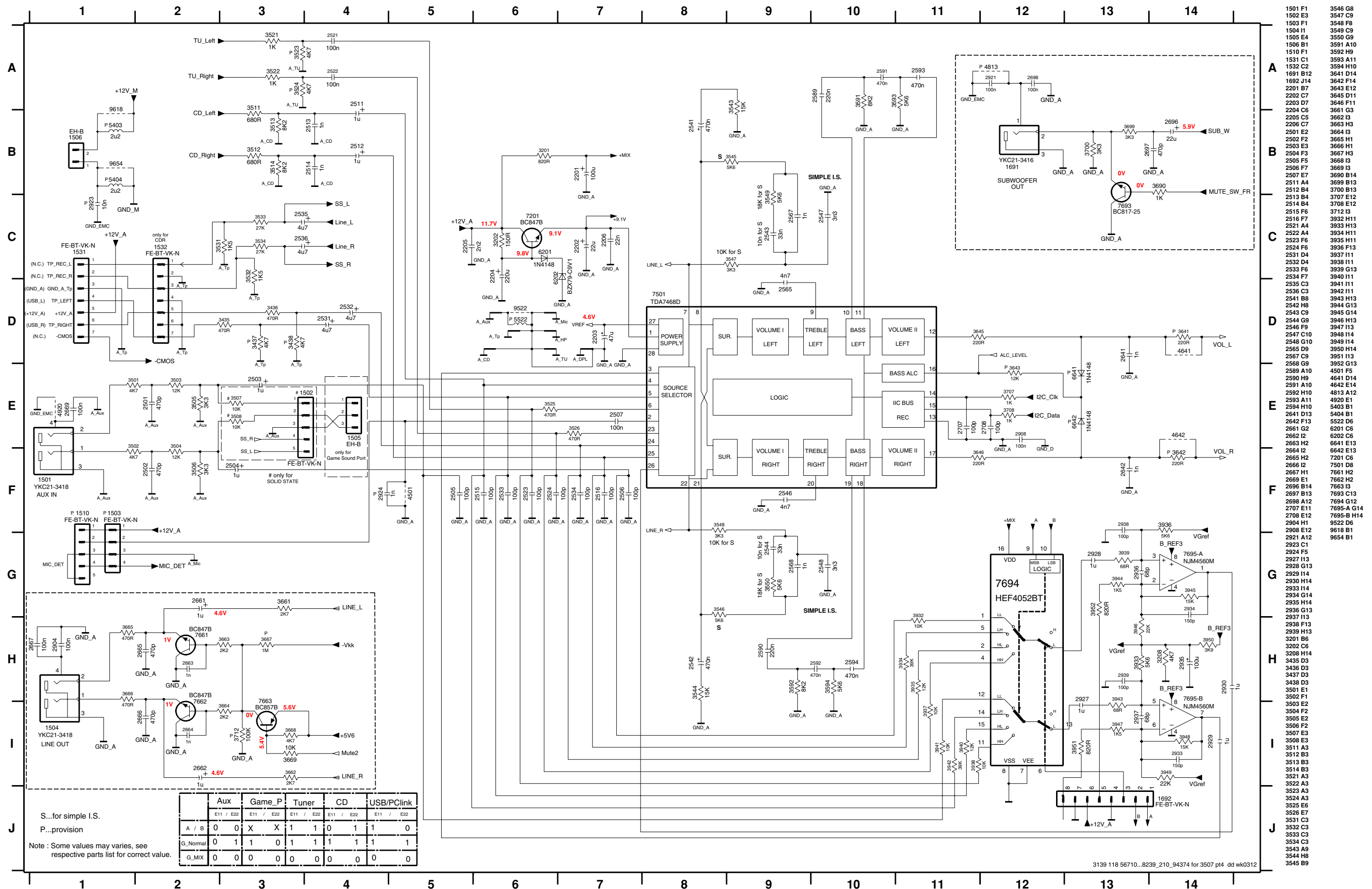
AF11 BOARD - CHIP LAYOUT (MAPPING)

2205	A6	2516	D6	2601	D5	2682	B4	2922	C1	3203	C4	3514	C4	3592	D6	3626	B3	3657	A7	3684	B4	3801	D9	3945	E6	4141	B2	4212	B9	4411	B4	4914	A4	7635	B7
2206	C7	2521	A8	2602	D5	2683	B4	2924	D8	3204	C4	3521	A8	3593	C6	3629	D4	3658	A6	3686	C4	3802	E9	3946	E6	4142	A1	4301	D6	4501	D8	4915	A1	7636	C5
2208	B2	2522	A8	2605	D4	2691	B6	2925	B9	3206	C4	3522	A8	3594	D6	3630	A2	3659	D3	3687	B4	3803	E9	3947	D6	4144	A6	4305	C5	4641	D5	4916	E7	7651	A7
2210	B2	2523	C7	2606	D4	2697	C9	2927	D7	3207	B4	3523	A8	3605	C2	3633	B7	3660	D3	3688	C4	3805	D9	3948	D6	4145	A1	4306	C5	4642	D5	4917	D5	7652	A6
2211	A1	2524	D7	2607	D4	2698	C9	2928	E7	3208	D6	3524	A8	3606	D4	3634	B7	3661	A9	3689	C3	3806	D9	3949	D6	4146	B7	4313	D6	4801	E9	4920	C9	7653	A6
2212	B9	2533	C6	2608	D4	2707	C5	2929	D7	3401	B2	3525	C7	3607	D4	3635	C3	3662	A9	3690	C9	3807	E9	3950	D6	4148	A7	4319	D7	4802	A3	4921	D9	7654	A7
2213	B9	2534	D7	2609	D4	2708	C5	2930	E7	3402	C2	3526	C7	3609	D4	3636	B7	3664	A9	3692	B4	3808	E9	3951	D5	4149	C9	4331	D6	4811	D4	5907	A1	7661	A9
2215	C4	2543	C6	2610	D4	2801	D9	2933	D6	3406	B2	3531	E2	3610	D4	3637	C5	3665	A9	3694	B2	3809	D9	3952	E6	4150	D9	4332	C6	4812	D4	5915	A1	7662	A9
2216	C4	2544	D7	2620	C2	2802	E9	2934	E6	3408	B5	3532	E2	3611	D3	3638	B6	3666	A9	3699	C9	3822	A2	4100	A6	4151	A3	4333	D5	4813	C9	7201	A6	7663	A8
2401	B2	2547	C7	2622	C3	2804	D9	2936	E6	3409	B5	3533	E3	3612	D3	3639	B8	3667	A8	3700	C9	3932	E7	4101	D9	4152	A3	4334	C2	4814	B9	7203	C4	7681	B4
2402	B2	2548	D6	2624	D4	2805	D9	2937	D6	3501	A9	3534	D2	3613	D3	3641	D5	3668	A8	3711	B5	3933	D6	4102	A4	4153	B1	4336	C5	4903	A1	7204	C4	7682	C4
2403	B2	2567	C7	2641	D5	2806	D9	2938	E6	3502	A9	3543	C6	3614	D3	3642	D5	3669	A8	3712	A8	3935	E7	4104	B8	4201	A7	4337	C7	4904	D1	7402	B5	7693	C9
2404	B3	2568	D6	2642	D5	2807	D9	2939	D6	3503	A9	3544	D6	3615	D3	3644	A1	3671	D5	3721	A7	3936	E6	4116	B7	4202	B9	4338	C7	4905	B5	7403	B2	7694	E7
2501	A9	2581	D4	2653	A7	2808	D9	2950	A2	3504	A9	3545	C6	3616	D3	3645	C5	3672	E5	3723	B9	3937	D7	4122	D3	4203	A7	4342	C3	4906	A9	7404	A2	7695	D6
2502	A9	2582	D4	2654	A6	2809	E9	2951	A3	3505	A9	3546	D7	3619	D3	3646	C5	3673	D5	3724	B9	3938	D7	4130	D3	4204	A7	4349	E7	4907	A1	7501	C6	7802	E9
2505	D7	2583	D4	2663	A8	2810	E9	2952	A3	3506	A9	3547	C6	3620	C2	3651	D3	3674	E5	3725	B9	3939	E7	4132	D2	4206	B9	4374	D5	4908	A1	7601	D4	7803	B7
2506	E7	2584	D4	2664	A9	2902	E2	2953	A3	3507	B9	3548	D6	3621	B3	3652	D2	3675	D5	3726	A7	3940	D7	4133	D2	4207	B7	4403	B2	4909	D9	7603	D3		
2507	D8	2585	D4	2665	A9	2904	A9	2954	A7	3508	B9	3549	C6	3622	B3	3653	A6	3676	D6	3727	B9	3941	D8	4135	C3	4208	A7	4407	C5	4910	D9	7604	D3		
2513	C4	2586	D4	2666	A9	2905	D3	2955	B2	3511	C4	3550	D7	3623	B3	3654	A7	3677	E5	3728	B9	3942	D7	4137	D2	4209	A8	4408	B9	4911	D9	7621	C3		
2514	C4	2587	D4	2667	A9	2908	A6	3201	A7	3512	C4	3582	E3	3624	B3	3655	A7	3678	D5	3729	B9	3943	D6	4138	E3	4210	B9	4409	C5	4912	B1	7622	B3		
2515	C6	2588	D4	2669	B9	2921	C9	3202	A6	3513	C4	3591	C6	3625	C3	3656	A7	3683	B4	3730	B9	3944	E6	4139	C1	4211	B8	4410	C5	4913	B1	7623	B3		

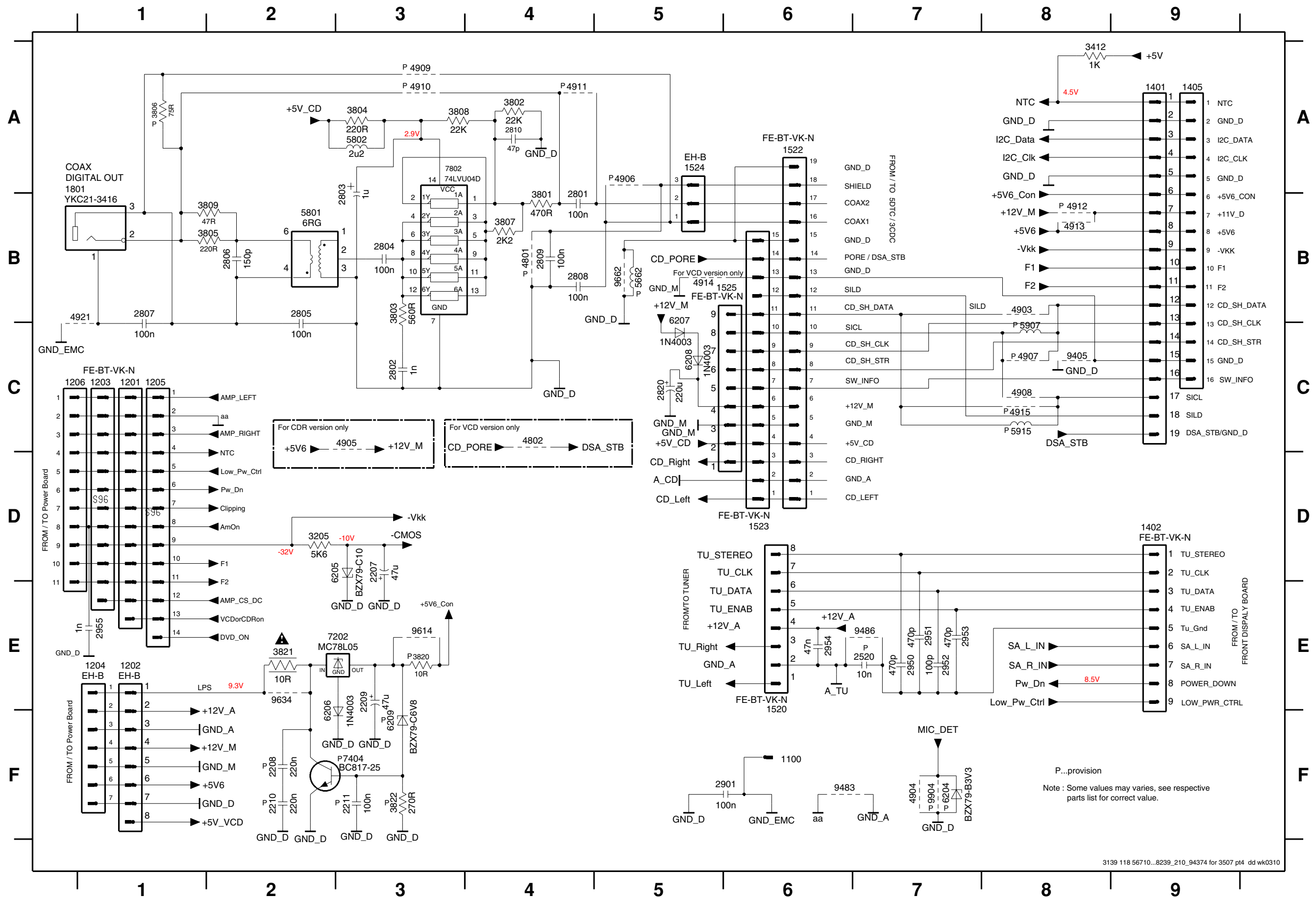
AF11 BOARD - CHIP LAYOUT



AF11 BOARD - CIRCUIT DIAGRAM (PART 1)

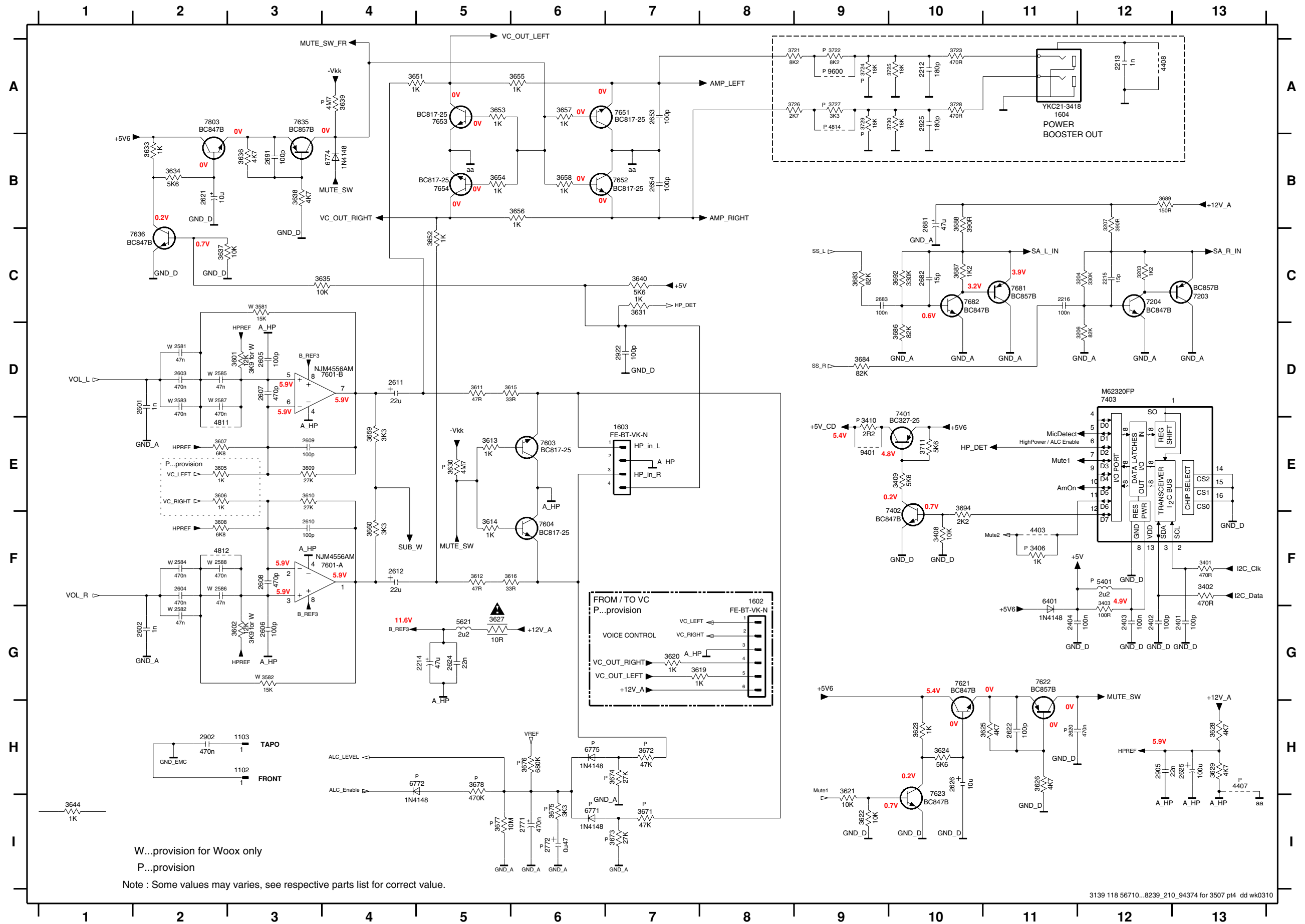


AF11 BOARD - CIRCUIT DIAGRAM (PART 2)



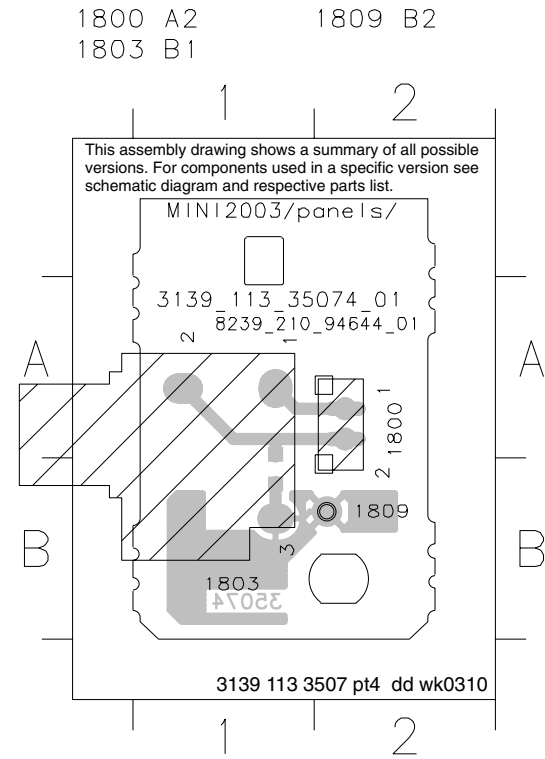
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- 1202 E1
- 1203 C1
- 1204 E1
- 1205 C1
- 1401 A9
- 1402 D9
- 1405 A9
- 1520 E6
- 1522 A6
- 1523 D6
- 1524 A5
- 1525 B5
- 1801 A1
- 2207 D3
- 2208 F2
- 2209 E3
- 2210 F2
- 2211 F3
- 2520 E7
- 2801 B4
- 2802 C3
- 2803 B3
- 2804 B3
- 2805 B2
- 2806 B2
- 2807 B1
- 2808 B4
- 2809 B4
- 2810 A4
- 2820 C5
- 2901 F6
- 2950 E7
- 2951 E7
- 2952 E7
- 2953 E7
- 2954 E6
- 2955 E1
- 3205 D2
- 3412 A8
- 3801 B4
- 3802 A4
- 3803 B3
- 3804 A3
- 3805 B2
- 3806 A1
- 3807 B4
- 3808 A3
- 3809 B2
- 3820 E3
- 3821 E2
- 3822 F3
- 4801 B4
- 4802 C4
- 4903 B8
- 4904 F7
- 4905 C3
- 4906 A5
- 4907 C8
- 4908 C8
- 4909 A3
- 4910 A3
- 4911 A4
- 4912 B8
- 4913 B8
- 4914 B5
- 4915 C8
- 4921 B1
- 5662 B5
- 5801 B2
- 5802 A3
- 5907 C8
- 5915 C8
- 6204 F7
- 6205 D3
- 6206 F2
- 6207 B5
- 6208 C5
- 6209 F3
- 7202 E3
- 7404 F3
- 7802 A3
- 9405 C8
- 9483 F6
- 9486 E7
- 9614 E3
- 9634 E2
- 9662 B5
- 9904 F7

AF11 BOARD - CIRCUIT DIAGRAM (PART 3)

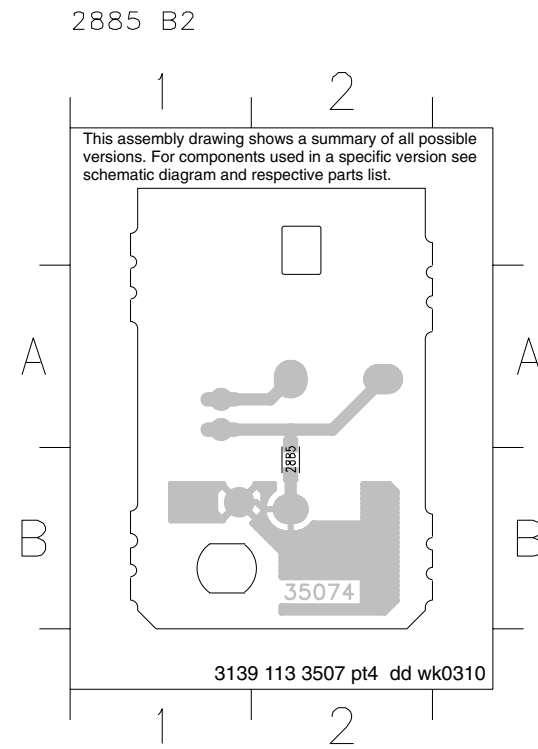


- 1102 H3
- 1103 H3
- 1602 F8
- 1603 E7
- 1604 A11
- 2212 A10
- 2213 A12
- 2214 G5
- 2215 C12
- 2216 C11
- 2401 G13
- 2402 G12
- 2403 G12
- 2404 G11
- 2581 D2
- 2582 G2
- 2583 D2
- 2584 F2
- 2585 D2
- 2586 F2
- 2587 D2
- 2588 F2
- 2601 D2
- 2602 G2
- 2603 D2
- 2604 F2
- 2605 D3
- 2606 G3
- 2607 D3
- 2608 F3
- 2609 E3
- 2610 F3
- 2611 D4
- 2612 F4
- 2620 H11
- 2621 B2
- 2622 H11
- 2624 G5
- 2625 H13
- 2626 H10
- 2653 A7
- 2654 B7
- 2681 B10
- 2682 C10
- 2683 C9
- 2691 B3
- 2771 I6
- 2772 I6
- 2902 H2
- 2905 H12
- 2922 D7
- 2925 A10
- 3203 C12
- 3204 C12
- 3206 D12
- 3207 B12
- 3401 F13
- 3402 F13
- 3403 F12
- 3406 F11
- 3408 F10
- 3409 E10
- 3410 E9
- 3581 C3
- 3582 G3
- 3601 D3
- 3602 G3
- 3605 E2
- 3606 E2
- 3607 E2
- 3608 F2
- 3609 E3
- 3610 E3
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- 3613 E5
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- 3615 D5
- 3616 F5
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- 3620 G7
- 3621 H9
- 3622 I9
- 3623 H10
- 3624 H10
- 3625 H11
- 3626 H11
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- 3629 H13
- 3630 E5
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- 3634 B2
- 3635 C4
- 3636 B3
- 3637 C2
- 3638 B3
- 3639 A4
- 3640 C7
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- 3651 A4
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- 3653 A5
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- 3657 A6
- 3658 B6
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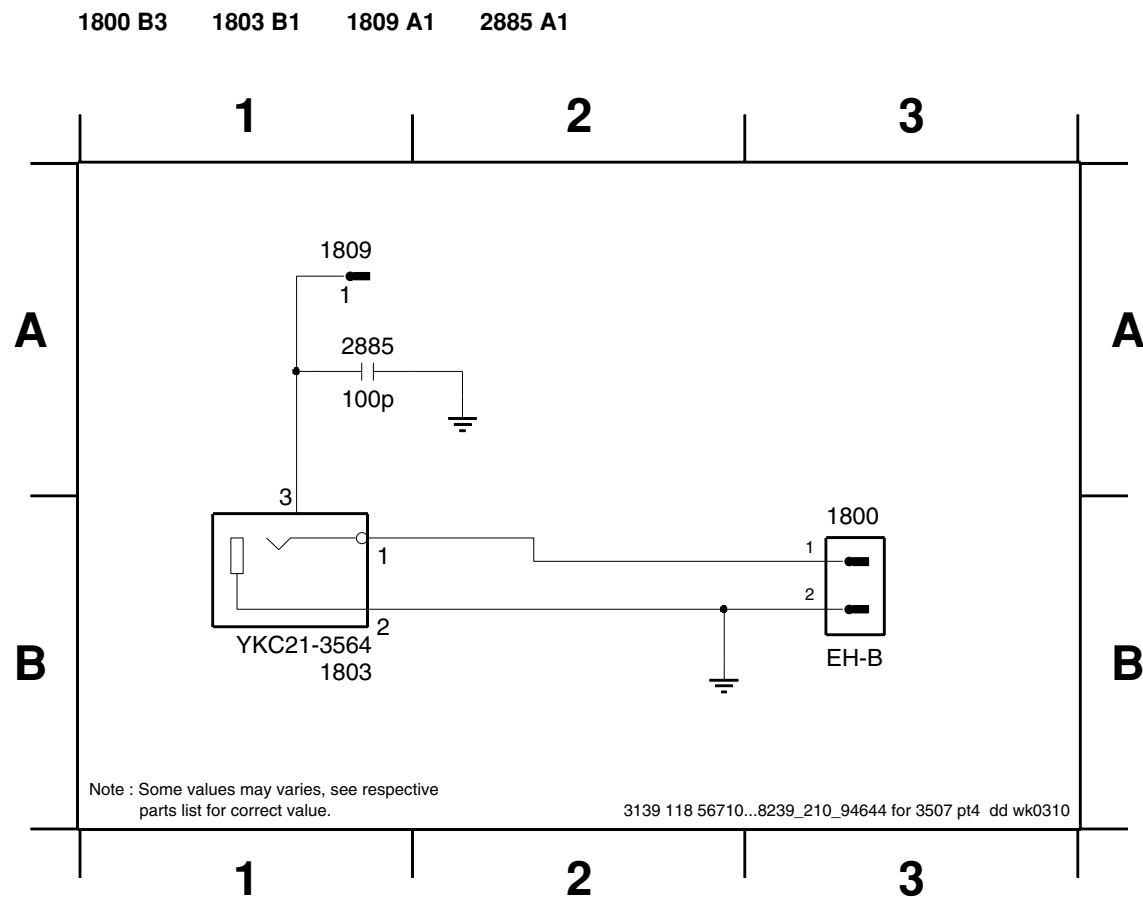
VIDEO OUT CINCH BOARD - COMPONENT LAYOUT



VIDEO OUT CINCH BOARD - CHIP LAYOUT



VIDEO OUT CINCH BOARD - CIRCUIT DIAGRAM



ELECTRICAL PARTS LIST - AF11 BOARD

MISCELLANEOUS

1206	4822 267 11039	Flex Connector 11P
1401	4822 265 11553	Flex Connector 19P
1402	2422 025 14518	Flex Connector 9P
1501	4822 265 20553	Cinch Socket - Aux in
1504	4822 265 20553	Cinch Socket - Line out
1520	4822 265 11515	Flex Connector 8P
1523	4822 265 10981	Flex Connector 15P
1531	4822 267 10953	Flex Connector 7P
1603	4822 267 10733	Flex Connector 4P
1692	4822 265 11515	Flex Connector 8P
1803	4822 267 31996	Cinch Socket - Video out

2542	4822 124 41407	0,47uF 20% 63V
2543	4822 126 14549	33nF 16V
2544	4822 126 14549	33nF 16V
2546	4822 121 10686	4,7nF 10% 50V
2547	5322 126 11579	3,3nF 10% 63V
2548	5322 126 11579	3,3nF 10% 63V
2565	4822 121 10686	4,7nF 10% 50V
2567	3198 016 31020	1nF 25V
2568	3198 016 31020	1nF 25V
2589	4822 121 42408	220nF 5% 63V
2590	4822 121 42408	220nF 5% 63V
2591	4822 121 51252	470nF 5% 63V
2592	4822 121 51252	470nF 5% 63V
2593	4822 121 51252	470nF 5% 63V
2594	4822 121 51252	470nF 5% 63V
2601	3198 016 31020	1nF 25V
2602	3198 016 31020	1nF 25V
2603	4822 121 51252	470nF 5% 63V
2604	4822 121 51252	470nF 5% 63V
2605	2020 552 94427	100pF 5% 50V
2606	2020 552 94427	100pF 5% 50V
2607	4822 126 13881	470pF 5% 50V
2608	4822 126 13881	470pF 5% 50V
2609	2020 552 94427	100pF 5% 50V
2610	2020 552 94427	100pF 5% 50V
2611	4822 124 40764	22uF 100 V
2612	4822 124 40764	22uF 100 V
2621	4822 124 40248	10uF 20% 63V
2622	2020 552 94427	100pF 5% 50V
2624	2238 916 15641	22nF 10% 25V
2625	4822 124 41584	100uF 20% 10V
2626	4822 124 40248	10uF 20% 63V
2641	3198 016 31020	1nF 25V
2642	3198 016 31020	1nF 25V
2653	2020 552 94427	100pF 5% 50V
2654	2020 552 94427	100pF 5% 50V
2661	4822 124 40756	1uF 20% 100V
2662	4822 124 40756	1uF 20% 100V
2663	3198 016 31020	1nF 25V
2664	3198 016 31020	1nF 25V
2665	4822 126 13881	470pF 5% 50V
2666	4822 126 13881	470pF 5% 50V
2667	2238 586 59812	100nF +80/-20% 50V
2669	2238 586 59812	100nF +80/-20% 50V
2681	4822 124 40433	47uF 20% 25V
2682	4822 122 33752	15pF 5% 50V
2683	2238 586 59812	100nF +80/-20% 50V
2691	2020 552 94427	100pF 5% 50V
2707	2020 552 94427	100pF 5% 50V
2708	2020 552 94427	100pF 5% 50V
2711	4822 124 41407	0,47uF 20% 63V
2820	4822 124 40196	220uF 20% 16V

CAPACITORS

2201	4822 124 40207	100uF 20% 25V
2202	4822 124 81151	22uF 50V
2203	4822 124 40433	47uF 20% 25V
2204	4822 124 40196	220uF 20% 16V
2205	4822 126 14238	2,2nF 50V
2206	3198 017 42230	22nF 50V
2207	4822 124 40433	47uF 20% 25V
2209	4822 124 40433	47uF 20% 25V
2214	4822 124 40433	47uF 20% 25V
2215	4822 122 33752	15pF 5% 50V
2216	2238 586 59812	100nF +80/-20% 50V
2401	2020 552 94427	100pF 5% 50V
2402	2020 552 94427	100pF 5% 50V
2403	2238 586 59812	100nF +80/-20% 50V
2404	2238 586 59812	100nF +80/-20% 50V
2501	4822 126 13881	470pF 5% 50V
2502	4822 126 13881	470pF 5% 50V
2503	4822 124 40756	1uF 20% 100V
2504	4822 124 40756	1uF 20% 100V
2505	2020 552 94427	100pF 5% 50V
2506	2020 552 94427	100pF 5% 50V
2507	2238 586 59812	100nF +80/-20% 50V
2511	4822 124 40756	1uF 20% 100V
2512	4822 124 40756	1uF 20% 100V
2513	3198 016 31020	1nF 25V
2514	3198 016 31020	1nF 25V
2515	2020 552 94427	100pF 5% 50V
2516	2020 552 94427	100pF 5% 50V
2521	2238 586 59812	100nF +80/-20% 50V
2522	2238 586 59812	100nF +80/-20% 50V
2523	2020 552 94427	100pF 5% 50V
2524	2020 552 94427	100pF 5% 50V
2531	4822 124 40769	4,7uF 20% 100V
2532	4822 124 40769	4,7uF 20% 100V
2533	2020 552 94427	100pF 5% 50V
2534	2020 552 94427	100pF 5% 50V
2535	4822 124 40769	4,7uF 20% 100V
2536	4822 124 40769	4,7uF 20% 100V
2541	4822 124 41407	0,47uF 20% 63V

2542	4822 124 41407	0,47uF 20% 63V
2543	4822 126 14549	33nF 16V
2544	4822 126 14549	33nF 16V
2546	4822 121 10686	4,7nF 10% 50V
2547	5322 126 11579	3,3nF 10% 63V
2548	5322 126 11579	3,3nF 10% 63V
2565	4822 121 10686	4,7nF 10% 50V
2567	3198 016 31020	1nF 25V
2568	3198 016 31020	1nF 25V
2589	4822 121 42408	220nF 5% 63V
2590	4822 121 42408	220nF 5% 63V
2591	4822 121 51252	470nF 5% 63V
2592	4822 121 51252	470nF 5% 63V
2593	4822 121 51252	470nF 5% 63V
2594	4822 121 51252	470nF 5% 63V
2601	3198 016 31020	1nF 25V
2602	3198 016 31020	1nF 25V
2603	4822 121 51252	470nF 5% 63V
2604	4822 121 51252	470nF 5% 63V
2605	2020 552 94427	100pF 5% 50V
2606	2020 552 94427	100pF 5% 50V
2607	4822 126 13881	470pF 5% 50V
2608	4822 126 13881	470pF 5% 50V
2609	2020 552 94427	100pF 5% 50V
2610	2020 552 94427	100pF 5% 50V
2611	4822 124 40764	22uF 100 V
2612	4822 124 40764	22uF 100 V
2621	4822 124 40248	10uF 20% 63V
2622	2020 552 94427	100pF 5% 50V
2624	2238 916 15641	22nF 10% 25V
2625	4822 124 41584	100uF 20% 10V
2626	4822 124 40248	10uF 20% 63V
2641	3198 016 31020	1nF 25V
2642	3198 016 31020	1nF 25V
2653	2020 552 94427	100pF 5% 50V
2654	2020 552 94427	100pF 5% 50V
2661	4822 124 40756	1uF 20% 100V
2662	4822 124 40756	1uF 20% 100V
2663	3198 016 31020	1nF 25V
2664	3198 016 31020	1nF 25V
2665	4822 126 13881	470pF 5% 50V
2666	4822 126 13881	470pF 5% 50V
2667	2238 586 59812	100nF +80/-20% 50V
2669	2238 586 59812	100nF +80/-20% 50V
2681	4822 124 40433	47uF 20% 25V
2682	4822 122 33752	15pF 5% 50V
2683	2238 586 59812	100nF +80/-20% 50V
2691	2020 552 94427	100pF 5% 50V
2707	2020 552 94427	100pF 5% 50V
2708	2020 552 94427	100pF 5% 50V
2711	4822 124 41407	0,47uF 20% 63V
2820	4822 124 40196	220uF 20% 16V

ELECTRICAL PARTS LIST - AF11 BOARD

CAPACITORS

2885	5322 122 32531	100pF 5% 50V
2901	2020 561 90365	100nF +80/-20% 50V
2904	2238 586 59812	100nF +80/-20% 50V
2905	2238 916 15641	22nF 10% 25V
2908	2238 586 59812	100nF +80/-20% 50V
2922	2020 552 94427	100pF 5% 50V
2927	4822 126 14043	1uF +80/-20% 16V
2928	4822 126 14043	1uF +80/-20% 16V
2929	4822 126 14043	1uF +80/-20% 16V
2930	4822 126 14043	1uF +80/-20% 16V
2933	4822 122 33753	150pF 5% 50V
2934	4822 122 33753	150pF 5% 50V
2935	2020 012 93583	100uF 20% 25V
2936	4822 126 13956	68pF 5% 63V
2937	4822 126 13956	68pF 5% 63V
2938	2020 552 94427	100pF 5% 50V
2939	2020 552 94427	100pF 5% 50V
2950	4822 126 13881	470pF 5% 50V
2951	4822 126 13881	470pF 5% 50V
2952	2020 552 94427	100pF 5% 50V
2953	4822 126 13881	470pF 5% 50V
2954	3198 017 34730	47nF 16V
2955	3198 016 31020	1nF 25V

RESISTORS

3201	4822 117 12968	820R 5% 0,62W
3202	4822 051 30391	390R 5% 0,062W
3203	4822 117 11817	1k2 1% 1/16W
3204	4822 051 30334	330k 5% 0,062W
3205	4822 116 52289	5k6 5% 0,5W
3206	4822 117 12864	82k 5% 0,6W
3207	4822 051 30391	390R 5% 0,062W
3208	4822 051 30472	4k7 5% 0,062W
3401	4822 051 30471	470R 5% 0,062W
3402	4822 051 30471	470R 5% 0,062W
3403	4822 116 52175	100R 5% 0,5W
3408	4822 051 30103	10k 5% 0,062W
3409	4822 051 30562	5k6 5% 0,063W
3412	4822 050 11002	1k 1% 0,4W
3435	4822 116 83883	470R 5% 0,5W
3436	4822 116 83883	470R 5% 0,5W
3501	4822 051 30472	4k7 5% 0,062W
3502	4822 051 30472	4k7 5% 0,062W
3503	4822 051 30123	12k 5% 0,062W
3504	4822 051 30123	12k 5% 0,062W
3505	4822 051 30332	3k3 5% 0,062W
3506	4822 051 30332	3k3 5% 0,062W
3511	4822 051 30681	680R 5% 0,062W
3512	4822 051 30681	680R 5% 0,062W
3513	4822 117 12902	8k2 1% 0,063W
3514	4822 117 12902	8k2 1% 0,063W
3521	4822 051 30102	1k 5% 0,062W

3522	4822 051 30102	1k 5% 0,062W
3525	4822 051 30471	470R 5% 0,062W
3526	4822 051 30471	470R 5% 0,062W
3531	4822 051 30152	1k5 5% 0,062W
3532	4822 051 30152	1k5 5% 0,062W
3533	4822 051 30273	27k 5% 0,062W
3534	4822 051 30273	27k 5% 0,062W
3543	4822 051 30153	15k 5% 0,062W
3544	4822 051 30153	15k 5% 0,062W
3545	4822 051 30562	5k6 5% 0,063W
3546	4822 051 30562	5k6 5% 0,063W
3547	4822 051 30332	3k3 5% 0,062W
3548	4822 051 30332	3k3 5% 0,062W
3549	4822 051 30562	5k6 5% 0,063W
3550	4822 051 30562	5k6 5% 0,063W
3591	4822 117 12902	8k2 1% 0,063W
3592	4822 117 12902	8k2 1% 0,063W
3593	4822 051 30562	5k6 5% 0,063W
3594	4822 051 30562	5k6 5% 0,063W
3601	4822 116 52238	12k 5% 0,5W
3602	4822 116 52238	12k 5% 0,5W
3607	4822 051 30682	6k8 5% 0,062W
3608	4822 116 83961	6k8 5%
3609	4822 051 30273	27k 5% 0,062W
3610	4822 051 30273	27k 5% 0,062W
3611	4822 051 30479	47R 5% 0,062W
3612	4822 051 30479	47R 5% 0,062W
3613	4822 051 30102	1k 5% 0,062W
3614	4822 051 30102	1k 5% 0,062W
3615	4822 051 30339	33R 5% 0,062W
3616	4822 051 30339	33R 5% 0,062W
3621	4822 051 30103	10k 5% 0,062W
3622	4822 051 30103	10k 5% 0,062W
3623	4822 051 30102	1k 5% 0,062W
3624	4822 051 30562	5k6 5% 0,063W
3625	4822 051 30472	4k7 5% 0,062W
3626	4822 051 30472	4k7 5% 0,062W
3627	4822 052 10109	△ 10R 5% 0,33W
3628	4822 116 52283	4k7 5% 0,5W
3629	4822 051 30472	4k7 5% 0,062W
3631	4822 050 11002	1k 1% 0,4W
3633	4822 051 30102	1k 5% 0,062W
3634	4822 051 30562	5k6 5% 0,063W
3635	4822 051 30103	10k 5% 0,062W
3636	4822 051 30472	4k7 5% 0,062W
3637	4822 051 30103	10k 5% 0,062W
3638	4822 051 30472	4k7 5% 0,062W
3640	4822 116 52289	5k6 5% 0,5W
3645	4822 051 30221	220R 5% 0,062W
3646	4822 051 30221	220R 5% 0,062W
3651	4822 051 30102	1k 5% 0,062W
3652	4822 051 30102	1k 5% 0,062W

ELECTRICAL PARTS LIST - AF11 BOARD

3653	4822 051 30102	1k 5% 0,062W
3654	4822 051 30102	1k 5% 0,062W
3655	4822 051 30102	1k 5% 0,062W
3656	4822 051 30102	1k 5% 0,062W
3657	4822 051 30102	1k 5% 0,062W
3658	4822 051 30102	1k 5% 0,062W
3661	4822 051 30272	2k7 5% 0,062W
3662	4822 051 30272	2k7 5% 0,062W
3663	4822 116 52256	2k2 5% 0,5W
3664	4822 051 30222	2k2 5% 0,062W
3665	4822 051 30471	470R 5% 0,062W
3666	4822 051 30471	470R 5% 0,062W
3668	4822 051 30472	4k7 5% 0,062W
3669	4822 051 30103	10k 5% 0,062W
3683	4822 117 12864	82k 5% 0,6W
3684	4822 117 12864	82k 5% 0,6W
3686	4822 117 12864	82k 5% 0,6W
3687	4822 117 11817	1k2 1% 1/16W
3688	4822 051 30391	390R 5% 0,062W
3689	4822 051 30151	150R 5% 0,062W
3692	4822 051 30334	330k 5% 0,062W
3694	4822 051 30222	2k2 5% 0,062W
3707	4822 050 11002	1k 1% 0,4W
3708	4822 050 11002	1k 1% 0,4W
3711	4822 051 30562	5k6 5% 0,063W
3821	4822 052 10109	△ 10R 5% 0,33W
3932	4822 051 30103	10k 5% 0,062W
3933	4822 051 30562	5k6 5% 0,063W
3934	4822 116 83882	39k 5% 0,5W
3935	4822 051 30123	12k 5% 0,062W
3936	4822 051 30562	5k6 5% 0,063W
3937	4822 051 30103	10k 5% 0,062W
3938	4822 051 30103	10k 5% 0,062W
3939	4822 051 30689	68R 5% 0,063W
3940	4822 051 30123	12k 5% 0,062W
3941	4822 051 30103	10k 5% 0,062W
3942	4822 051 30393	39k 5% 0,062W
3943	4822 051 30689	68R 5% 0,063W
3944	4822 051 30152	1k5 5% 0,062W
3945	4822 051 30153	15k 5% 0,062W
3946	4822 051 30223	22k 5% 0,062W
3947	4822 051 30152	1k5 5% 0,062W
3948	4822 051 30153	15k 5% 0,062W
3949	4822 051 30223	22k 5% 0,062W
3950	4822 051 30392	3k9 5% 0,063W
3951	4822 117 12968	820R 5% 0,62W
3952	4822 117 12968	820R 5% 0,62W
4100	4822 051 30008	OR Jumper 0603
4101	4822 051 30008	OR Jumper 0603
4102	4822 051 30008	OR Jumper 0603
4104	4822 051 30008	OR Jumper 0603
4116	4822 051 30008	OR Jumper 0603

4122	4822 051 30008	OR Jumper 0603
4130	4822 051 30008	OR Jumper 0603
4132	4822 051 30008	OR Jumper 0603
4133	4822 051 30008	OR Jumper 0603
4135	4822 051 30008	OR Jumper 0603
4137	4822 051 30008	OR Jumper 0603
4138	4822 051 30008	OR Jumper 0603
4139	4822 051 30008	OR Jumper 0603
4141	4822 051 30008	OR Jumper 0603
4142	4822 051 30008	OR Jumper 0603
4144	4822 051 30008	OR Jumper 0603
4145	4822 051 30008	OR Jumper 0603
4146	4822 051 30008	OR Jumper 0603
4148	4822 051 30008	OR Jumper 0603
4149	4822 051 30008	OR Jumper 0603
4150	4822 051 30008	OR Jumper 0603
4151	4822 051 30008	OR Jumper 0603
4152	4822 051 30008	OR Jumper 0603
4153	4822 051 30008	OR Jumper 0603
4201	4822 051 30008	OR Jumper 0603
4202	4822 051 30008	OR Jumper 0603
4203	4822 051 30008	OR Jumper 0603
4204	4822 051 30008	OR Jumper 0603
4206	4822 051 30008	OR Jumper 0603
4207	4822 051 30008	OR Jumper 0603
4208	4822 051 30008	OR Jumper 0603
4209	4822 051 30008	OR Jumper 0603
4210	4822 051 30008	OR Jumper 0603
4211	4822 051 30008	OR Jumper 0603
4212	4822 051 30008	OR Jumper 0603
4301	4822 051 30008	OR Jumper 0603
4305	4822 051 30008	OR Jumper 0603
4306	4822 051 30008	OR Jumper 0603
4313	4822 051 30008	OR Jumper 0603
4319	4822 051 30008	OR Jumper 0603
4331	4822 051 30008	OR Jumper 0603
4332	4822 051 30008	OR Jumper 0603
4333	4822 051 30008	OR Jumper 0603
4334	4822 051 30008	OR Jumper 0603
4336	4822 051 30008	OR Jumper 0603
4337	4822 051 30008	OR Jumper 0603
4338	4822 051 30008	OR Jumper 0603
4342	4822 051 30008	OR Jumper 0603
4349	4822 051 30008	OR Jumper 0603
4374	4822 051 30008	OR Jumper 0603
4403	4822 051 30008	OR Jumper 0603
4407	4822 051 30008	OR Jumper 0603
4409	4822 051 30008	OR Jumper 0603
4410	4822 051 30008	OR Jumper 0603
4411	4822 051 30008	OR Jumper 0603
4501	4822 051 30008	OR Jumper 0603
4641	4822 051 30008	OR Jumper 0603

ELECTRICAL PARTS LIST - AF11 BOARD

RESISTORS

4642	4822 051 30008	0R Jumper 0603	7694	5322 209 11102	HEF4052BT
4802	4822 051 30008	0R Jumper 0603	7695	4822 209 83357	NJM4560M
4811	4822 051 30008	0R Jumper 0603	7803	5322 130 60159	BC847B
4812	4822 051 30008	0R Jumper 0603			
4903	4822 051 30008	0R Jumper 0603			
4904	4822 051 30008	0R Jumper 0603			
4908	4822 051 30008	0R Jumper 0603			
4913	4822 051 30008	0R Jumper 0603			
4916	4822 051 30008	0R Jumper 0603			
4917	4822 051 30008	0R Jumper 0603			
4920	4822 051 30008	0R Jumper 0603			

Note : Only the parts mentioned in this list are normal service spare parts.

COILS & FILTERS

5522	4822 526 10704	FXD IND BEAD 100MHz 50R
5621	4822 156 21721	Coil 2,2uH 10%

DIODES

6201	4822 130 30621	1N4148
6202	4822 130 30862	BZX79-C9V1
6205	4822 130 61219	BZX79-C10
6206	4822 130 31878	1N4003G
6207	4822 130 31878	1N4003G
6208	4822 130 31878	1N4003G
6401	4822 130 30621	1N4148
6774	4822 130 30621	1N4148

TRANSISTORS & INTEGRATED CIRCUITS

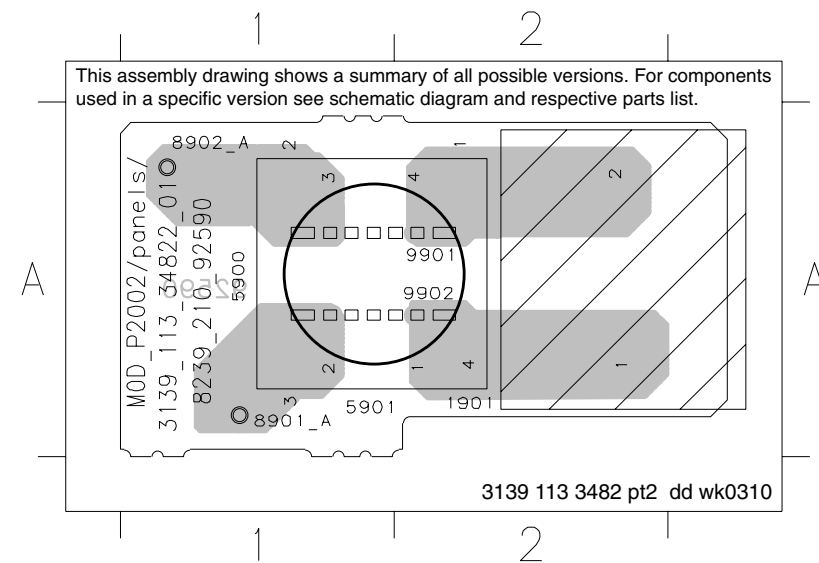
7201	5322 130 60159	BC847B
7202	4822 209 72042	MC78L05ACP
7203	4822 130 60373	BC857B
7204	5322 130 60159	BC847B
7401	4822 130 41246	BC327-25
7402	5322 130 60159	BC847B
7403	4822 209 17345	M62320FP
7501	9322 150 74668	TDA7468D
7601	4822 209 31378	NJM4556AM
7603	4822 130 42804	BC817-25
7604	4822 130 42804	BC817-25
7621	5322 130 60159	BC847B
7622	4822 130 60373	BC857B
7623	5322 130 60159	BC847B
7635	4822 130 60373	BC857B
7636	5322 130 60159	BC847B
7651	4822 130 42804	BC817-25
7652	4822 130 42804	BC817-25
7653	4822 130 42804	BC817-25
7654	4822 130 42804	BC817-25
7661	5322 130 60159	BC847B
7662	5322 130 60159	BC847B
7663	4822 130 60373	BC857B
7681	4822 130 60373	BC857B
7682	5322 130 60159	BC847B

P2003 135/165W MODULE

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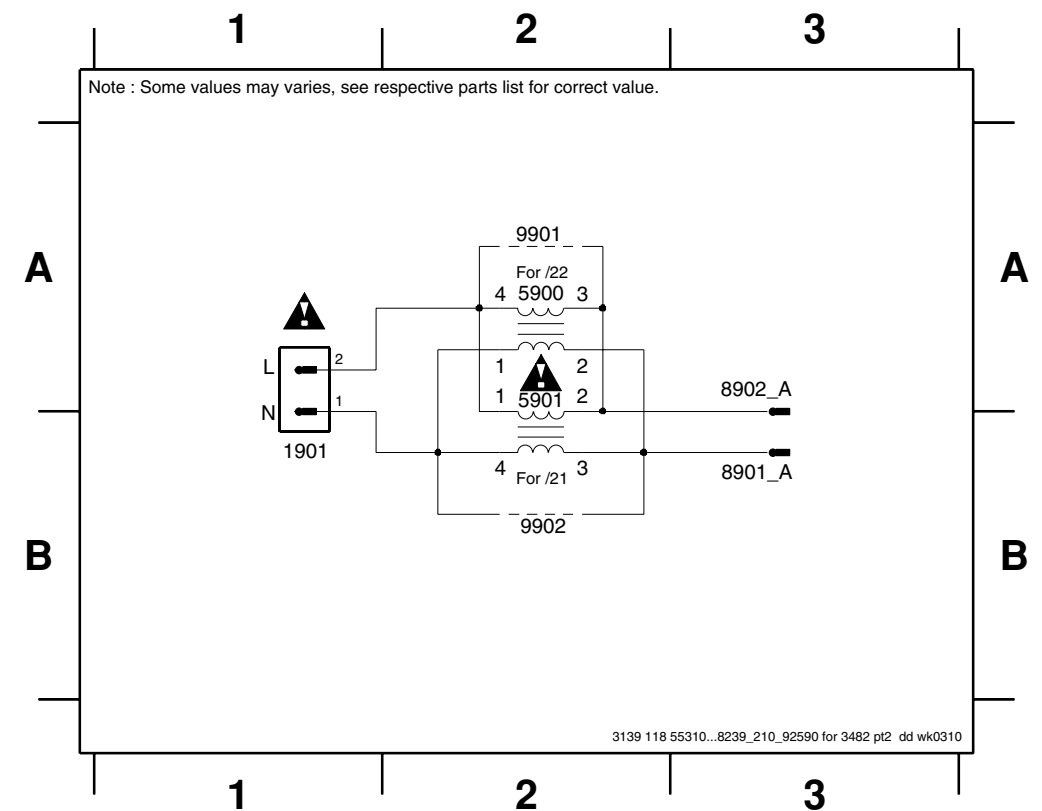
Mains Socket Board - Layout & Circuit Duagram 9-1
 Mains Board - Component Layout 9-2
 Mains Board - Circuit Diagram 9-3
 L/R Amp. & Supply Board - Component Layout 9-4
 L/R Amp. & Supply Board - Circuit Diagram (Part 1) 9-5
 L/R Amp. & Supply Board - Circuit Diagram (Part 2) 9-6
 L/R Amp. & Supply Board - Circuit Diagram (Part 3) 9-7
 Electrical parts list..... 9-7

1901 A2 5901 A1 8902_A A1 9902 A2
 5900 A1 8901_A A1 9901 A2



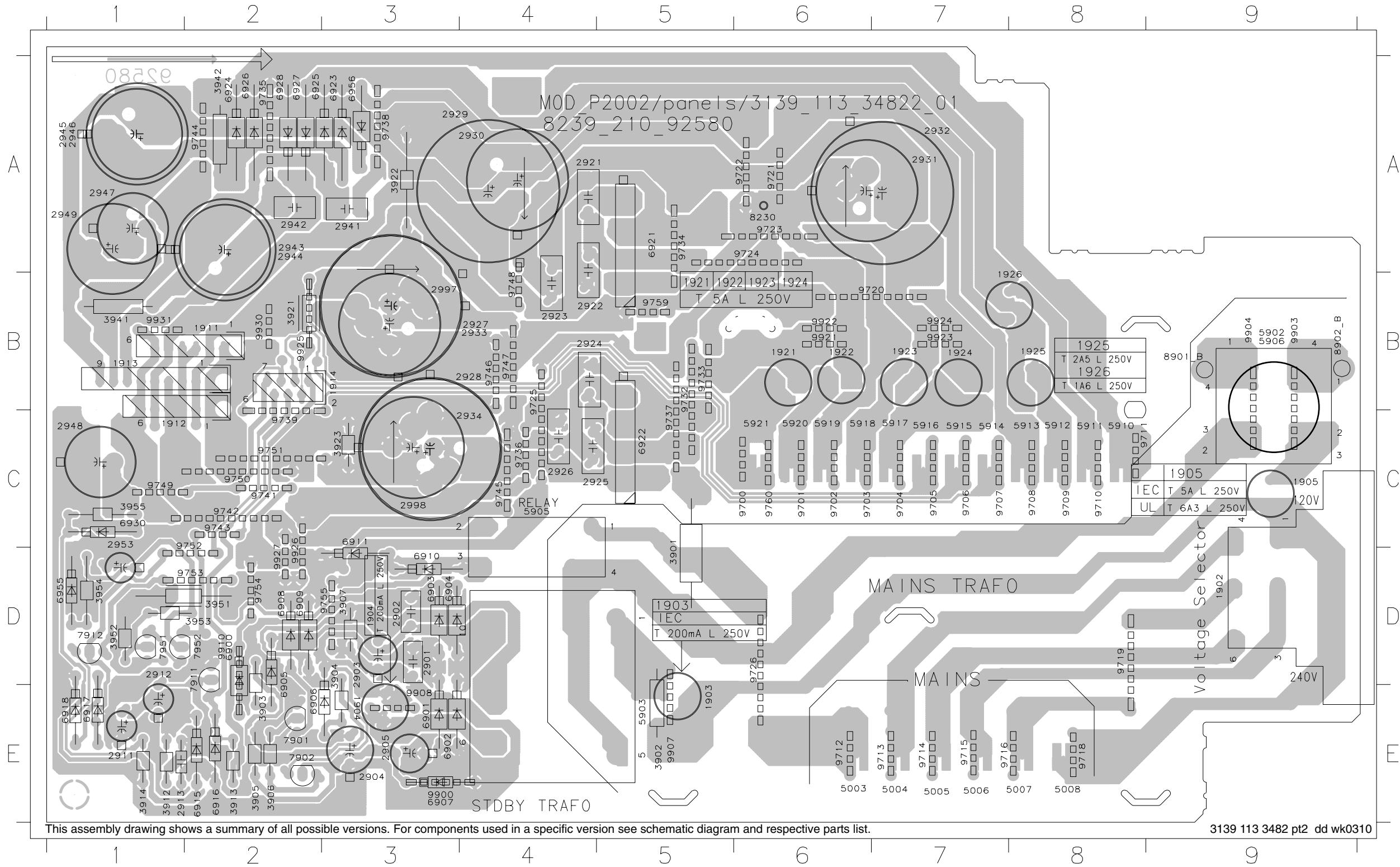
MAINS SOCKET BOARD - CIRCUIT DIAGRAM

1901 B1 5901 A2 8902_A A3 9902 B2
 5900 A2 8901_A B3 9901 A2



MAINS BOARD - COMPONENT LAYOUT

1902 D9	1926 B8	2925 C4	2944 A2	3905 E2	3953 D2	5910 C8	6901 E3	6917 E1	7901 E2	9704 C7	9718 E8	9736 C4	9750 C2	9910 D2
1903 E5	2901 D3	2926 C4	2945 A1	3906 E2	3954 D1	5911 C8	6902 E3	6918 E1	7902 E2	9705 C7	9719 D8	9737 C5	9751 C2	9921 B6
1904 E3	2902 D3	2927 B4	2946 A1	3907 D3	3955 C1	5912 C8	6903 D3	6921 A5	7911 D2	9706 C7	9720 B6	9738 A3	9752 C2	9922 B6
1905 C9	2903 D3	2928 B4	2947 A1	3912 E1	5003 E6	5913 C8	6904 D3	6922 C5	7912 D1	9707 C7	9721 A6	9739 C2	9753 D2	9923 B7
1911 B2	2904 E3	2929 A3	2948 C1	3913 E2	5004 E7	5914 C7	6905 D2	6923 A3	7951 D1	9708 C8	9722 A6	9741 C2	9754 D2	9924 B7
1912 C1	2905 E3	2930 A4	2949 A1	3914 E1	5005 E7	5915 C7	6906 E2	6924 A2	7952 D2	9709 C8	9723 A6	9742 C2	9755 D3	9925 B2
1913 B1	2911 E1	2931 A7	2953 C1	3921 B2	5006 E7	5916 C7	6907 E3	6925 A2	8230 A6	9710 C8	9724 A6	9743 C2	9759 B5	9926 D2
1914 B3	2912 D1	2932 A7	2997 B3	3922 A3	5007 E8	5917 C7	6908 D2	6926 A2	8901 B B9	9711 C8	9725 B4	9744 A2	9760 C6	9927 D2
1921 B6	2913 E1	2933 B4	2998 C3	3923 C3	5008 E8	5918 C6	6909 D2	6927 A2	8902 B B9	9712 E6	9726 D6	9745 C4	9900 E3	9930 B2
1922 B6	2921 A4	2934 C4	3901 D5	3941 B1	5902 B9	5919 C6	6910 D3	6928 A2	9700 C6	9713 E7	9732 B5	9746 B4	9903 B9	9931 B1
1923 B7	2922 B4	2941 A3	3902 E5	3942 A2	5903 E5	5920 C6	6911 C3	6930 C1	9701 C6	9714 E7	9733 B5	9747 B4	9904 B9	
1924 B7	2923 B4	2942 A2	3903 E2	3951 D2	5905 C4	5921 C6	6915 E2	6955 D1	9702 C6	9715 E7	9734 A5	9748 B4	9907 E5	
1925 B8	2924 B4	2943 A2	3904 D3	3952 D1	5906 B9	6900 D2	6916 E2	6956 A3	9703 C6	9716 E7	9735 A2	9749 C1	9908 E3	

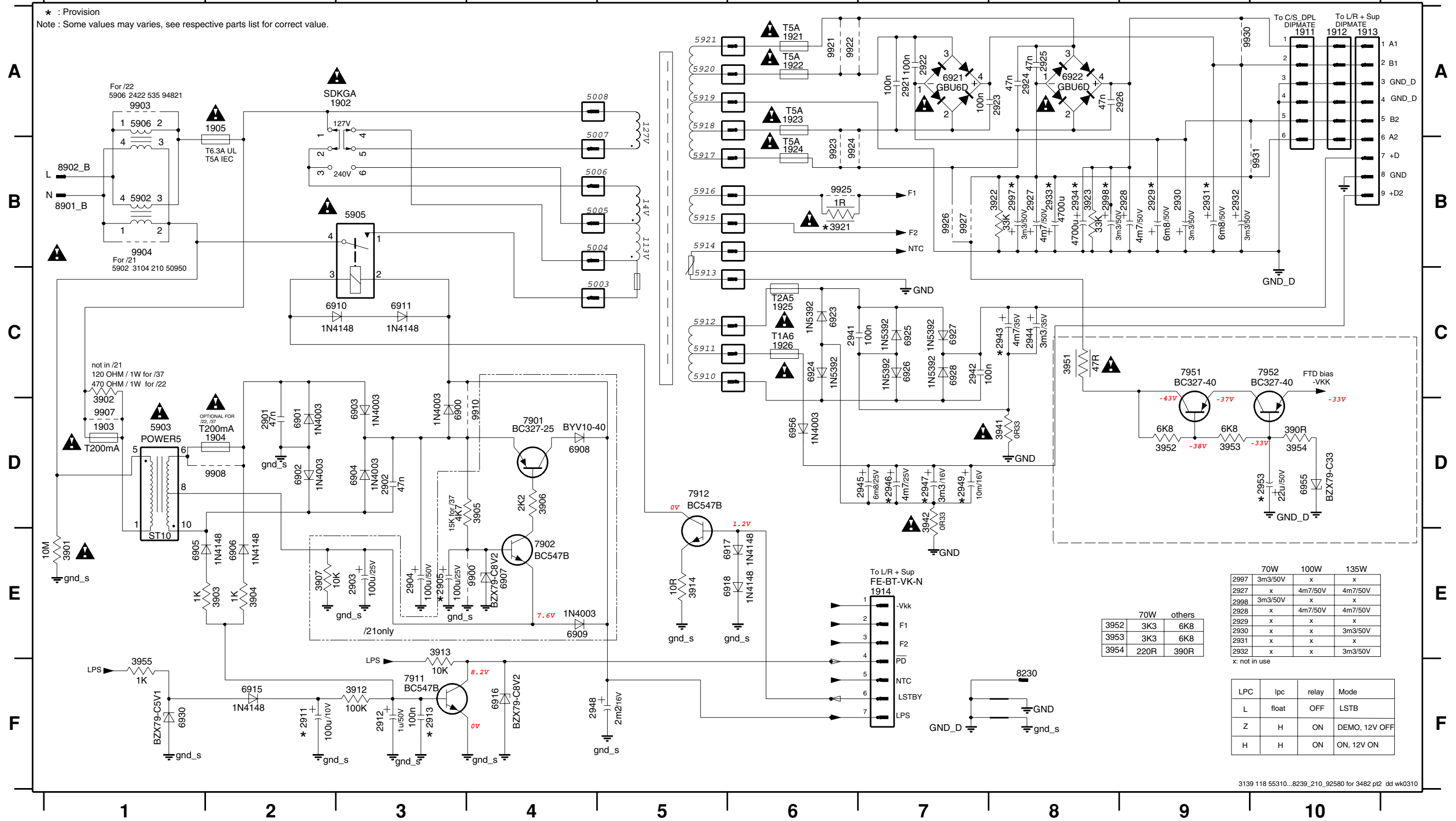


This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

3139 113 3482 pt2 dd wk0310

MAINS BOARD - CIRCUIT DIAGRAM

1902 A3	1912 A10	1923 A6	2902 D3	2912 F3	2924 A8	2929 B9	2934 B8	2945 D7	2953 D10	3903 E2	3912 F3	3923 B8	3953 D9	5905 B3	6903 D3	6908 D4	6916 F4	6923 C6	6928 C7	7902 E4	8230 F8	9904 B1	9922 A6	9927 B7
1903 D1	1913 A10	1924 B6	2903 E3	2913 F3	2925 A8	2930 B9	2941 C6	2946 D7	2957 B8	3904 E2	3913 E3	3941 D8	3954 D10	5906 A1	6904 D3	6909 E4	6917 E6	6924 C6	6930 F1	7911 F3	8901_B B1	9907 D1	9923 B6	9930 A9
1904 D2	1914 E7	1925 C6	2904 E3	2921 A7	2926 A8	2931 B9	2942 C7	2947 D7	2958 B8	3905 D4	3914 E5	3942 D7	3955 F1	5900 D3	6905 E1	6910 C3	6918 E6	6925 C7	6955 D10	7912 D5	8902_B B1	9908 D2	9924 B6	9931 B10
1905 A2	1921 A6	1926 C6	2905 E3	2922 A7	2927 B8	2932 B9	2943 C8	2948 F4	2959 E1	3906 D4	3921 B6	3951 C8	5902 B1	6901 D2	6906 E2	6911 C3	6921 A7	6926 C7	6956 D6	7951 C9	8900 E4	9910 D4	9925 B6	
1911 A10	1922 A6	2901 D2	2911 F2	2923 A8	2928 B9	2933 B8	2944 C8	2949 D7	2952 C1	3907 E2	3922 B7	3952 D9	5903 D1	6902 D2	6907 E4	6915 F2	6922 A8	6927 C7	7901 D4	7952 C10	8903 A1	9921 A6	9926 B7	



	70W	100W	135W
2997	3m3/50V	x	x
2927	x	4m7/50V	4m7/50V
2998	3m3/50V	x	x
2928	x	4m7/50V	4m7/50V
2929	x	x	x
2930	x	x	3m3/50V
2931	x	x	x
2932	x	x	3m3/50V

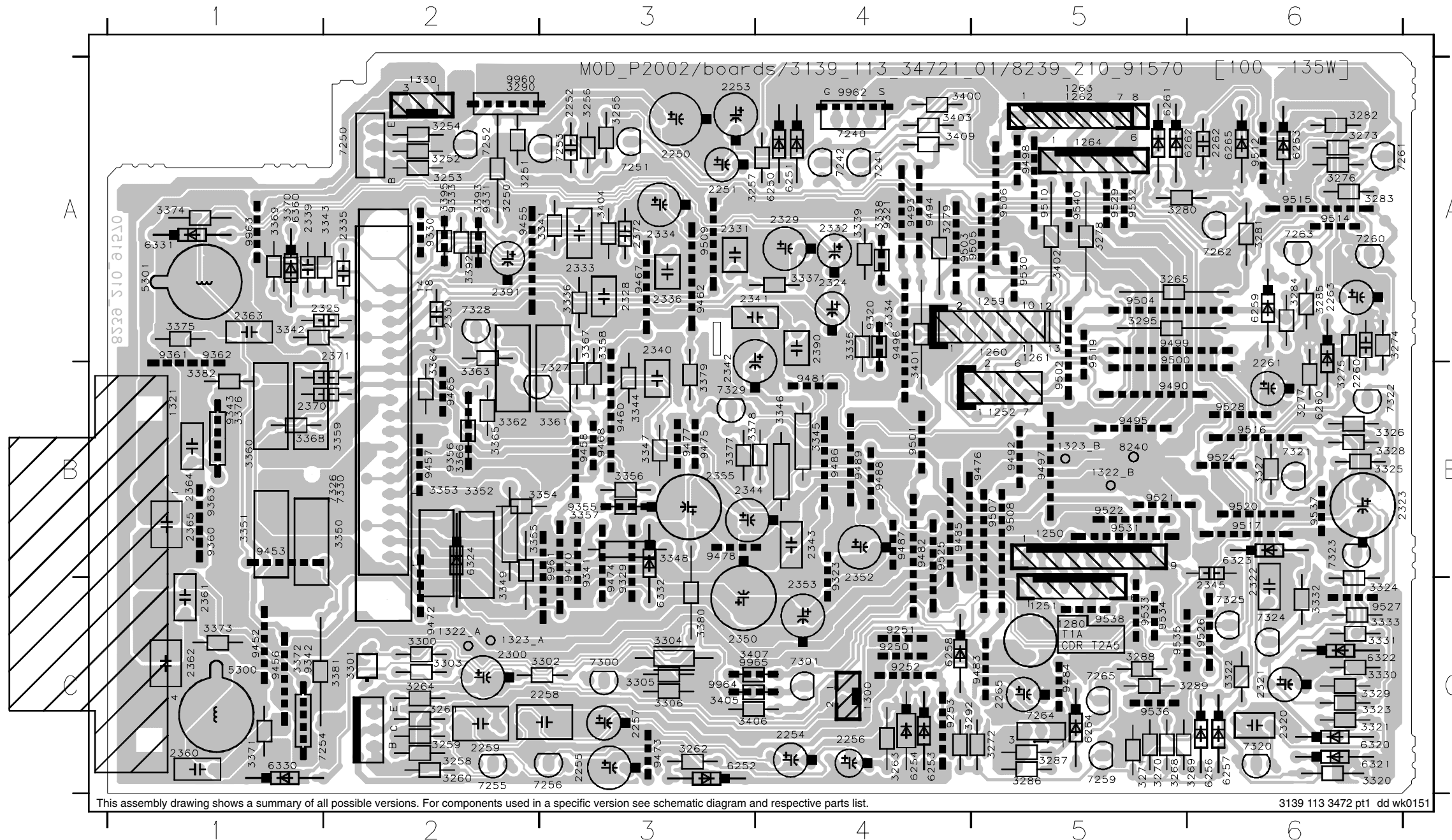
x: not in use

	70W	others
3952	3K3	6K8
3953	3K3	6K8
3954	220R	390R

LPC	lpc	relay	Mode
L	float	OFF	LSTB
Z	H	ON	DEMO, 12V OFF
H	H	ON	ON, 12V ON

LEFT/RIGHT AMPLIFIER & SUPPLY BOARD - COMPONENT VIEW

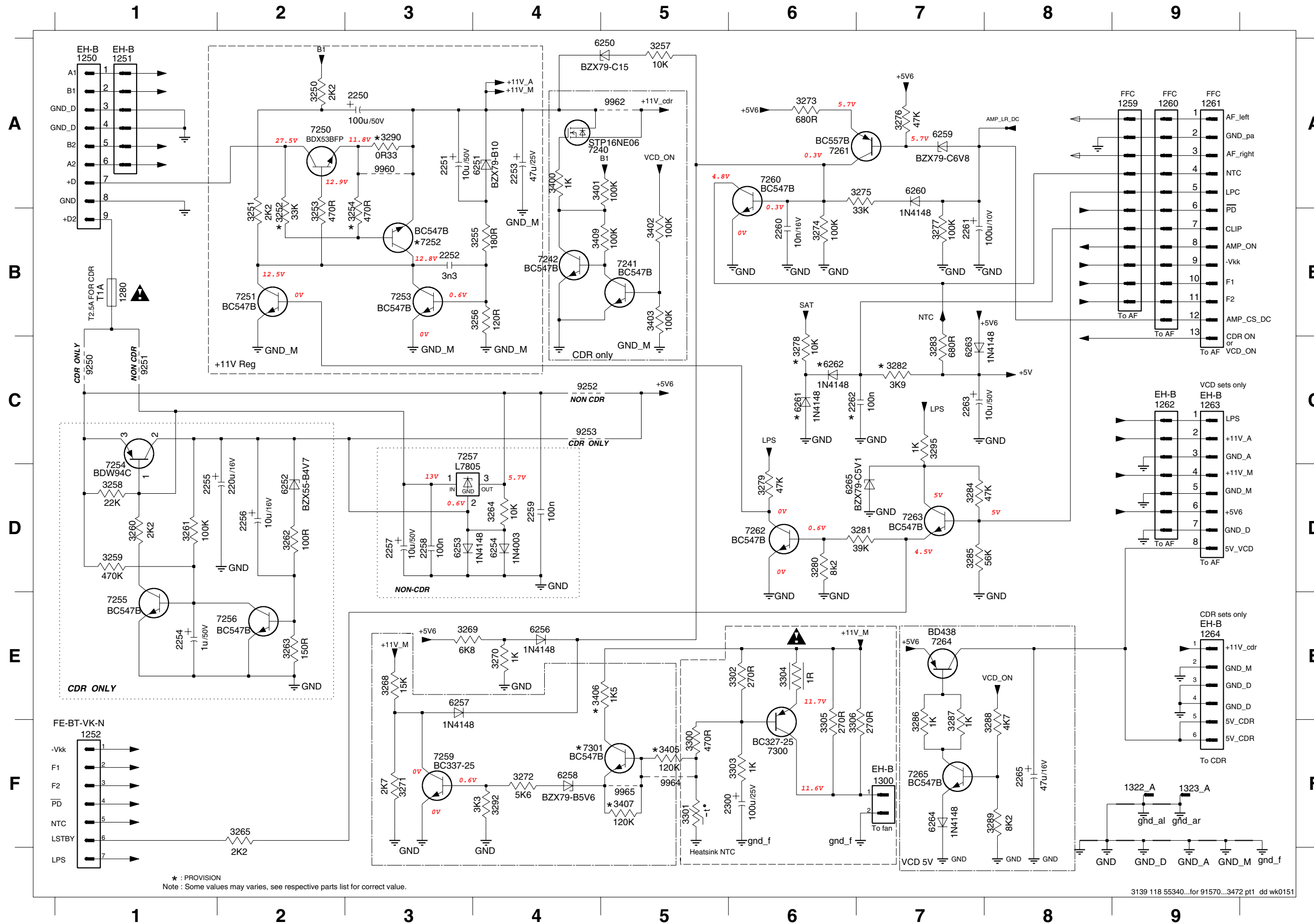
1250 B5	2260 B6	2345 C6	3261 C2	3290 A2	3337 A4	3365 B2	3406 C3	6332 C3	7326 B2	9453 B1	9490 B5	9521 B5
1251 C5	2261 B6	2350 C3	3262 C3	3292 C4	3338 A4	3366 B2	3407 C3	6360 A1	7327 B3	9455 A2	9492 B5	9522 B5
1252 B5	2262 A6	2352 B4	3263 C3	3295 A5	3339 A4	3367 A3	3409 A4	7240 A4	7328 A2	9456 C1	9493 A4	9524 B6
1259 A5	2263 A6	2353 C4	3264 C2	3298 C2	3341 A3	3368 B1	5300 C1	7241 A4	7329 B3	9457 B2	9494 A4	9525 B4
1260 A5	2265 C5	2355 B3	3265 A5	3301 C2	3342 A1	3369 A1	5301 A1	7242 A4	7330 B2	9458 B3	9495 B5	9526 C6
1261 A5	2300 C2	2360 C1	3268 C5	3302 C3	3343 A2	3370 A1	6250 A4	7250 A2	8240 B5	9460 B3	9496 A4	9527 C6
1262 A5	2320 C6	2361 C1	3269 C6	3303 C2	3344 B3	3371 C1	6251 A4	7251 A3	9250 C4	9462 A3	9497 B5	9528 B6
1263 A5	2321 C6	2362 C1	3270 C5	3304 C3	3345 B4	3372 C1	6252 C3	7252 A2	9251 C4	9465 B2	9498 A5	9529 A5
1264 A5	2322 C6	2363 A1	3271 C5	3305 C3	3346 B4	3373 C1	6253 C4	7253 A3	9252 C4	9467 A3	9499 A5	9530 A5
1280 C5	2323 B6	2364 B1	3272 C5	3306 C3	3347 B3	3374 A1	6254 C4	7254 C1	9253 C4	9468 B3	9500 A5	9531 B5
1300 C4	2324 A4	2365 B1	3273 A6	3320 C6	3348 B3	3375 A1	6256 C6	7255 C2	9320 A4	9470 B3	9501 B4	9532 A5
1321 B1	2325 A2	2370 B1	3274 A6	3321 C6	3349 C2	3376 B1	6257 C6	7256 C3	9321 A4	9472 C2	9502 B5	9533 C5
1322_A C2	2328 A3	2371 A2	3275 B6	3322 C6	3350 B2	3377 B3	6258 C4	7259 C5	9323 B4	9473 C3	9503 A4	9534 C5
1322_B B5	2329 A4	2372 A3	3276 A6	3323 C6	3351 B1	3378 B3	6259 A6	7260 A6	9329 C3	9474 C3	9504 A5	9535 C5
1323_A C2	2330 A2	2390 A4	3277 B6	3324 C6	3352 B2	3379 B3	6260 B6	7261 A6	9330 A2	9475 B3	9505 A5	9536 C5
1323_B B5	2331 A3	2391 A2	3278 A5	3325 B6	3353 B2	3380 C3	6261 A5	7262 A6	9331 A2	9476 B5	9506 A5	9537 B6
1330 A2	2332 A4	3250 A2	3279 A4	3326 B6	3354 B3	3381 C2	6262 A6	7263 A6	9333 A2	9477 B3	9507 B5	9538 C5
2250 A3	2333 A3	3251 A2	3280 A5	3327 B6	3355 B2	3382 B1	6263 A6	7264 C5	9341 B3	9478 B3	9508 B5	9540 A5
2251 A3	2334 A3	3252 A2	3281 A6	3328 B6	3356 B3	3392 A2	6264 C5	7265 C5	9342 C1	9481 B4	9509 A3	9960 A2
2252 A3	2335 A2	3253 A2	3282 A6	3329 C6	3357 B3	3393 A2	6265 A6	7300 C3	9343 B1	9482 B4	9510 A5	9961 B3
2253 A3	2336 A3	3254 A2	3283 A6	3330 C6	3358 A3	3395 A2	6320 C6	7301 C4	9355 B3	9483 C5	9512 A6	9962 A4
2254 C4	2339 A1	3255 A3	3284 A6	3331 C6	3359 B2	3400 A4	6321 C6	7320 C6	9356 B2	9484 C5	9514 A6	9963 A1
2255 C3	2340 A3	3256 A3	3285 A6	3332 C6	3360 B1	3401 B4	6322 C6	7321 B6	9360 B1	9485 B4	9515 A6	9964 C3
2256 C4	2341 A3	3257 A3	3286 C5	3333 C6	3361 B3	3402 A5	6323 B6	7322 B6	9361 A1	9486 B4	9516 B6	9965 C3
2257 C3	2342 B3	3258 C2	3287 C5	3334 A4	3362 B2	3403 A4	6324 B2	7323 C6	9362 A1	9487 B4	9517 B6	
2258 C3	2343 B4	3259 C2	3288 C5	3335 B4	3363 B2	3404 A3	6330 C1	7324 B6	9363 B1	9488 B4	9519 A5	
2259 C2	2344 B3	3260 C2	3289 C6	3336 A3	3364 B2	3405 C3	6331 A1	7325 C6	9452 C1	9489 B4	9520 B6	



This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

3139 113 3472 pt1 dd wk0151

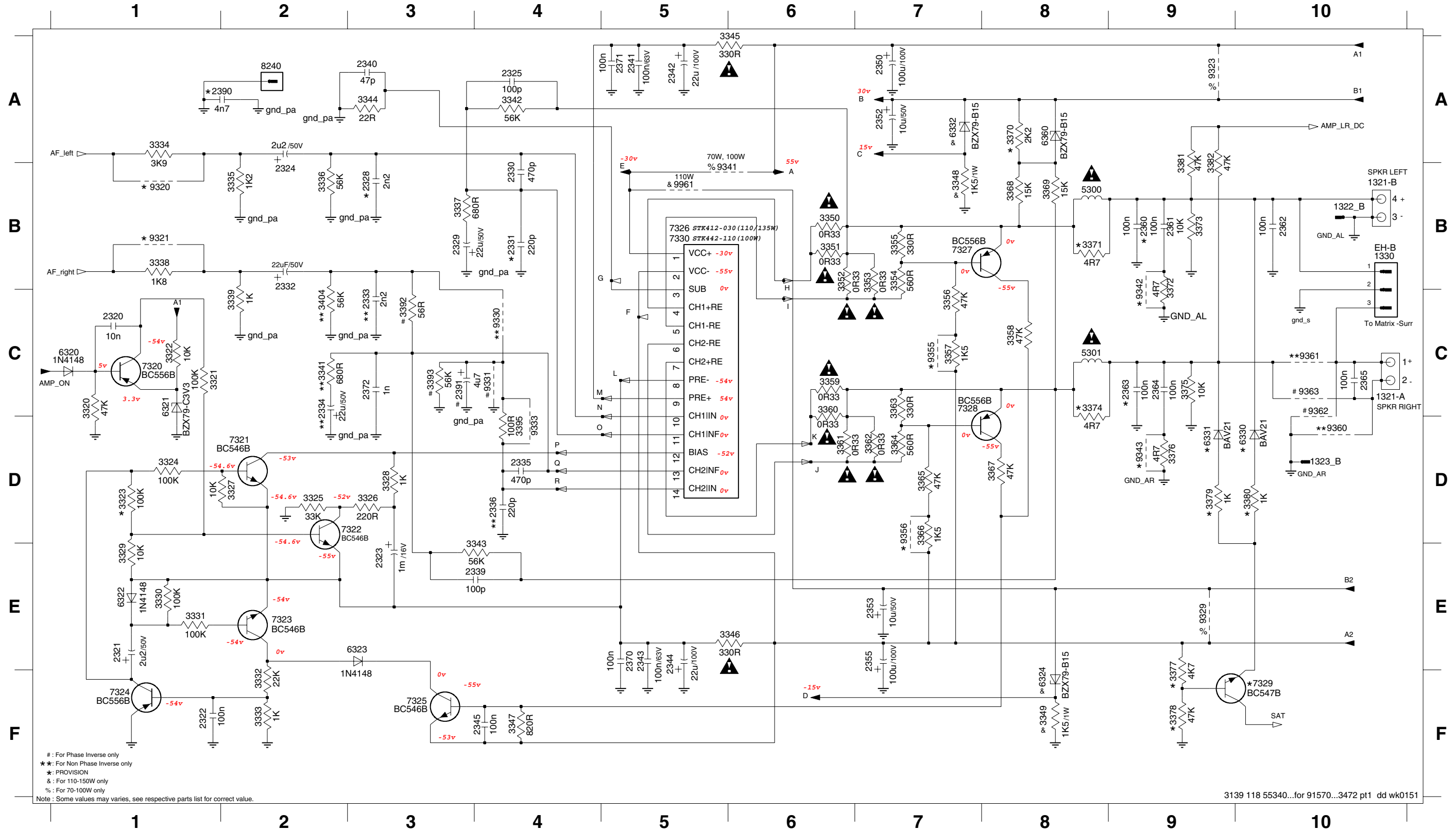
LEFT/RIGHT AMPLIFIER & SUPPLY BOARD - CIRCUIT DIAGRAM (PART 1)



1250 A1	7242 B4
1251 A1	7250 A2
1252 F1	7251 B2
1259 A9	7252 B3
1260 A9	7253 B3
1261 A9	7254 C1
1262 C9	7255 E1
1263 C9	7256 E1
1264 E9	7257 C3
1280 B1	7259 F3
1300 F7	7260 A6
1322_A F9	7261 A6
1323_A F9	7262 D6
2250 A3	7263 D7
2251 A3	7264 E7
2252 B3	7265 F7
2253 A4	7300 F6
2254 E1	7301 F4
2255 D1	9250 C1
2256 D2	9251 C1
2257 D3	9252 C4
2258 D3	9253 C4
2259 D4	9960 A3
2260 B6	9962 A5
2261 B7	9964 F5
2262 C6	
2263 C7	
2265 F8	
2300 F6	
3250 A2	
3251 B2	
3252 B2	
3253 B2	
3254 B3	
3255 B3	
3256 B3	
3257 A5	
3258 D1	
3259 D1	
3260 D1	
3261 D1	
3262 D2	
3263 E2	
3264 D4	
3265 F2	
3268 E3	
3269 E3	
3270 E4	
3271 F3	
3272 F4	
3273 A6	
3274 B6	
3275 A7	
3276 B7	
3277 B7	
3278 C6	
3279 D6	
3280 D6	
3281 D7	
3282 C7	
3283 C7	
3284 D7	
3285 D7	
3287 F7	
3288 F8	
3289 F8	
3290 A3	
3292 F4	
3295 C7	
3300 F5	
3301 F5	
3302 E6	
3303 F6	
3304 E6	
3305 F6	
3306 F6	
3400 A4	
3401 A4	
3402 B5	
3403 B5	
3405 F5	
3406 E4	
3407 F5	
3409 B4	
6250 A5	
6251 A3	
6252 D2	
6253 D3	
6254 D4	
6256 E4	
6257 E3	
6258 F4	
6259 A7	
6260 A7	
6261 C6	
6262 C6	
6263 C7	
6264 F7	
6265 D6	
7240 A4	
7241 B5	

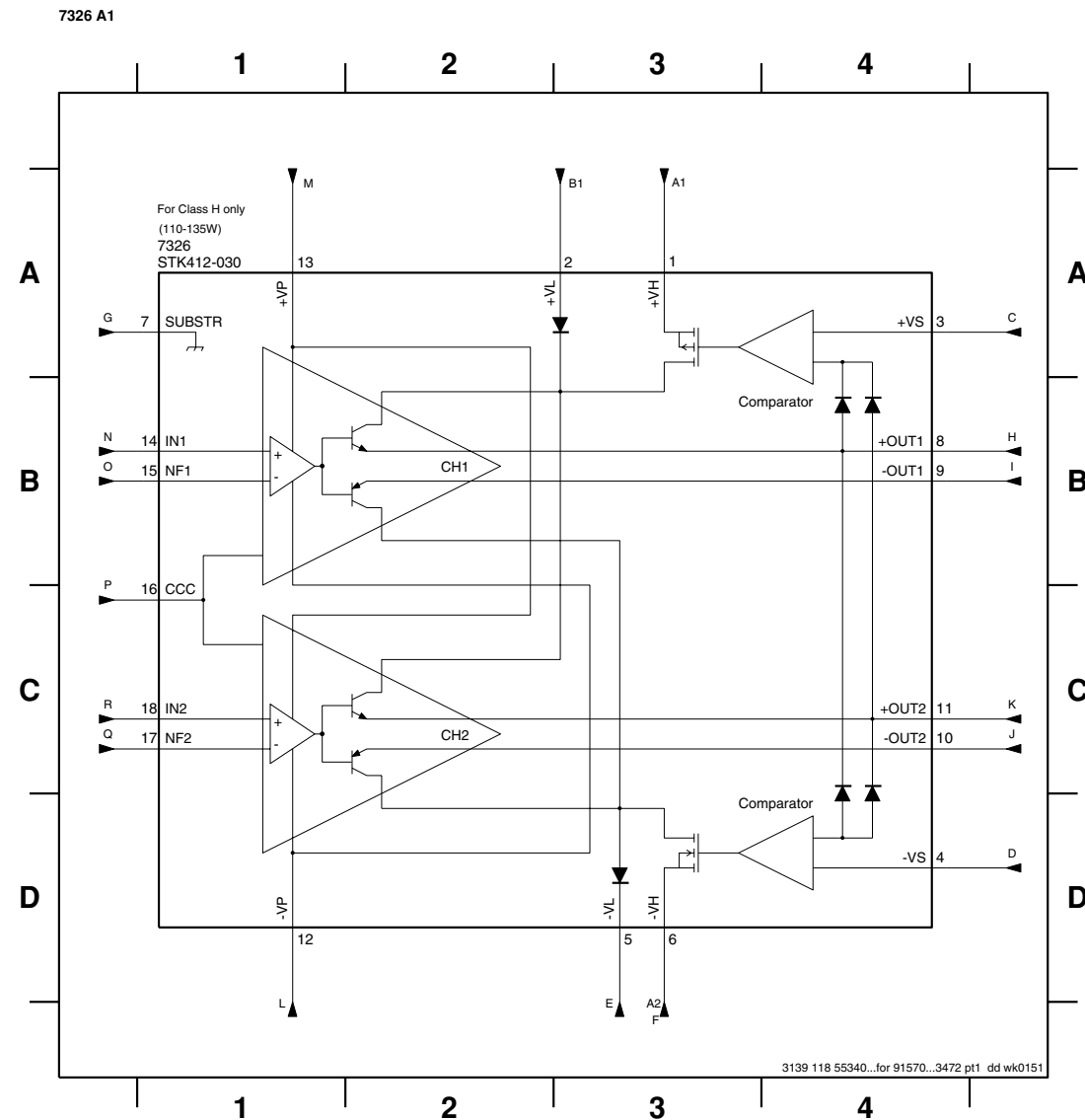
LEFT/RIGHT AMPLIFIER & SUPPLY BOARD - CIRCUIT DIAGRAM (PART 2)

1321-A C10	2322 F1	2331 B4	2340 A3	2352 A7	2364 C9	3320 C1	3327 D2	3334 A1	3342 A4	3349 F8	3356 C7	3363 C7	3370 A8	3377 F9	3393 C3	6322 E1	7320 C1	7328 C7	9329 E9	9355 C7
1321-B B10	2323 E3	2332 B2	2341 A5	2353 E7	2365 C10	3321 C1	3328 D3	3335 B2	3343 E4	3350 B6	3357 C7	3364 D7	3371 B8	3378 F9	3395 D4	6323 E3	7321 D2	7329 F10	9330 C4	9356 D7
1322_B B10	2324 B2	2333 C3	2342 A5	2355 E7	2370 E5	3322 C1	3329 E1	3336 B2	3344 A3	3351 B6	3358 C8	3365 D7	3372 B9	3379 D9	3404 C2	6324 F8	7322 D2	7330 B5	9331 C4	9360 D10
1323_B D10	2325 A4	2334 C2	2343 E5	2360 B9	2371 A5	3323 D1	3330 E1	3337 B3	3345 A6	3352 B6	3359 C6	3366 D7	3373 B9	3380 D10	5300 B8	6330 D10	7323 E1	8240 A2	9333 D4	9361 C10
1330 B10	2328 B3	2335 D4	2344 E5	2361 B9	2372 C3	3324 D1	3331 E1	3338 B1	3346 E6	3353 B7	3360 C6	3367 D8	3374 C8	3381 B9	5301 C8	6331 D9	7324 F1	9320 B1	9341 B5	9362 C10
2320 C1	2329 B3	2336 D4	2345 F4	2362 B10	2390 A2	3325 D2	3332 F2	3339 C2	3347 F4	3354 B7	3361 D6	3368 B8	3375 C9	3382 B9	6320 C1	6332 A7	7325 F3	9321 B1	9342 B9	9363 C10
2321 E1	2330 B4	2339 E4	2350 A7	2363 C9	2391 C3	3326 D3	3333 F2	3341 C2	3348 B7	3355 B7	3362 D7	3369 B8	3376 D9	3392 C3	6321 C1	6360 A8	7327 B7	9323 A9	9343 D9	9361 B5



: For Phase Inverse only
 ** : For Non Phase Inverse only
 * : PROVISION
 & : For 110-150W only
 % : For 70-100W only
 Note : Some values may varies, see respective parts list for correct value.

LEFT/RIGHT AMPLIFIER & SUPPLY BOARD - CIRCUIT DIAGRAM (PART 3)



MECHANICAL PARTS LIST

0002 4822 492 11735 SPRING TRANS

ELECTRICAL PARTS LIST - MAINS BOARD

MISCELLANEOUS

1901	4822 265 31015	△ Mains Socket	/21/22/30
1901	2422 030 00328	△ Mains Socket	/37
1902	2422 129 16478	△ Voltage Selector 2P 5A /21	
1903	4822 071 52001	△ Fuse RAD LT 200mA 250V	/21
1904	4822 071 52001	△ Fuse RAD LT 200mA 250V	/21
1905	2422 086 10963	△ Fuse RAD LT 5A 250V	/21/22/30
1905	4822 252 51123	△ Fuse RAD LT 6,3A 250V	/37
1914	4822 267 10953	Flex Connector 7P	
1921	4822 071 55002	△ Fuse RAD LT 5A 250V	
1922	4822 071 55002	△ Fuse RAD LT 5A 250V	

1923	4822 071 55002	△ Fuse RAD LT 5A 250V	
1924	4822 071 55002	△ Fuse RAD LT 5A 250V	
1925	4822 071 52502	△ Fuse RAD LT 2,5A 250V	
1926	4822 071 51602	△ Fuse RAD LT 1,6A 250V	

CAPACITORS

2901	4822 121 43526	47nF 5% 250V	
2902	4822 121 43526	47nF 5% 250V	
2903	4822 124 40207	100uF 20% 25V	/21
2904	4822 124 40255	100uF 20% 63V	

ELECTRICAL PARTS LIST - MAINS BOARD

2912	4822 124 22652	2,2uF 20% 50V	/21	6901	4822 130 32245	BYV10-40	/21
2912	4822 124 21913	1uF 20% 63V	/22/30/37	6901	4822 130 31878	1N4003G	/22/30/37
2921	2022 318 00109	100nF 10% 250V		6902	4822 130 32245	BYV10-40	/21
2922	2022 318 00109	100nF 10% 250V		6902	4822 130 31878	1N4003G	/22/30/37
2923	2022 318 00109	100nF 10% 250V		6903	4822 130 32245	BYV10-40	/21
2924	4822 121 43526	47nF 5% 250V		6903	4822 130 31878	1N4003G	/22/30/37
2925	4822 121 43526	47nF 5% 250V		6904	4822 130 32245	BYV10-40	/21
2926	4822 121 43526	47nF 5% 250V		6904	4822 130 31878	1N4003G	/22/30/37
2927	2020 024 90733	4700uF 20% 80V		6905	4822 130 30621	1N4148	
2928	2020 024 90733	4700uF 20% 80V		6906	4822 130 30621	1N4148	
2930	2022 020 00644	3300uF 20% 50V		6907	4822 130 34382	BZX79-C8V2	/21
2932	2022 020 00644	3300uF 20% 50V		6908	4822 130 32245	BYV10-40	/21
2941	5322 121 42386	100nF 5% 63V		6909	4822 130 31878	1N4003G	/21
2942	5322 121 42386	100nF 5% 63V		6910	4822 130 30621	1N4148	
2944	4822 124 42367	3300uF 20% 35V		6911	4822 130 30621	1N4148	
2945	9965 000 12531	6800uF 25V 20%		6915	4822 130 30621	1N4148	
2948	4822 123 14025	2200uF 20% 16V		6916	4822 130 34382	BZX79-C8V2	
				6917	4822 130 30621	1N4148	
				6918	4822 130 30621	1N4148	

RESISTORS

3901	4822 053 21106	△ 10M 5% 0,5W	/37
3902	4822 053 10471	470R 5% 1W	/22/30
3902	4822 053 10121	120R 5% 1W	/37
3903	4822 050 11002	1k 1% 0,4W	
3904	4822 050 11002	1k 1% 0,4W	
3905	4822 116 52283	4k7 5% 0,5W	/21
3905	4822 116 52244	15k 5% 0,5W	/22/30/37
3906	4822 116 52256	2k2 5% 0,5W	/21
3907	4822 050 21003	10k 1% 0,6W	/21
3912	4822 116 52234	100k 5% 0,5W	
3913	4822 050 21003	10k 1% 0,6W	
3914	4822 116 52176	10R 5% 0,5W	
3922	4822 050 23303	33k 1% 0,6W	
3923	4822 050 23303	33k 1% 0,6W	
3941	4822 117 11342	△ 0R33 5% 2W	
3942	4822 117 11342	△ 0R33 5% 2W	
3951	4822 052 10479	△ 47R 5% 0,33W	
3952	4822 116 83961	6k8 5%	
3953	4822 116 83961	6k8 5%	
3954	4822 116 83881	390R 5% 0,5W	
3955	4822 050 11002	1k 1% 0,4W	/21/37
3955	4822 116 52263	2k7 5% 0,5W	/22/30

TRANSISTORS & INTEGRATED CIRCUITS

7901	4822 130 41246	BC327-25	/21
7902	4822 130 40959	BC547B	/21
7911	4822 130 40959	BC547B	
7912	4822 130 40959	BC547B	
7951	4822 130 41327	BC327-40	
7952	4822 130 41327	BC327-40	

Note : Only the parts mentioned in this list are normal service spare parts.

COILS & FILTERS

5900	4822 157 11832	△ 400uH 3A	/22/30
5901	4822 157 11628	△ Mains Choke	/21
5903	3103 308 30600	△ Transformer Standby/21	
5903	3103 308 30610	△ Transformer Standby/22/30	
5903	3103 308 30800	△ Transformer Standby/37	
5905	4822 280 10382	△ Relay 1P 9V 10/80A SDT-SS	

DIODES

6900	4822 130 31878	1N4003G	/22/30/37
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ELECTRICAL PARTS LIST - LEFT/RIGHT AMPLIFIER & SUPPLY BOARD

MISCELLANEOUS

0028	3139 114 73910	Holder STK PWR2002 150W
1252	4822 267 10953	Flex Connector 7P
1259	4822 267 11039	Flex Connector 11P
1280	4822 071 51002 Δ	Fuse RAD LT 1A 250V
1321	4822 267 31176	L/R Speaker Terminal

CAPACITORS

2250	4822 124 40255	100uF 20% 63V
2251	4822 124 40248	10uF 20% 63V
2252	4822 122 10577	3,3nF 10% 16V
2253	4822 124 40433	47uF 20% 25V
2257	4822 124 40248	10uF 20% 63V
2258	5322 121 42386	100nF 5% 63V
2259	5322 121 42386	100nF 5% 63V
2260	4822 121 51387	10nF 20% 16V
2261	4822 124 41584	100uF 20% 10V
2263	4822 124 40248	10uF 20% 63V
2300	4822 124 40207	100uF 20% 25V
2320	4822 121 43693	10nF 100V
2321	4822 124 22652	2,2uF 20% 50V
2322	5322 121 42386	100nF 5% 63V
2323	4822 124 81144	1000uF 16V
2324	4822 124 22652	2,2uF 20% 50V
2325	4822 122 33195	100pF 10% 50V
2329	4822 124 81151	22uF 50V
2330	4822 122 33519	470pF 10% 50V
2332	4822 124 81151	22uF 50V
2335	4822 122 33519	470pF 10% 50V
2339	4822 122 33195	100pF 10% 50V
2340	4822 126 12726	47pF 5% 50V
2341	5322 121 42386	100nF 5% 63V
2342	4822 124 40764	22uF 100 V
2343	5322 121 42386	100nF 5% 63V
2344	4822 124 40764	22uF 100 V
2345	2020 561 90365	100nF +80/-20% 50V
2350	2020 012 93547	100uF 20% 63V
2352	4822 124 40248	10uF 20% 63V
2353	4822 124 40248	10uF 20% 63V
2355	2020 012 93547	100uF 20% 63V
2361	5322 121 42386	100nF 5% 63V
2362	4822 121 43856	4,7nF 5% 250V
2364	5322 121 42386	100nF 5% 63V
2365	4822 121 43856	4,7nF 5% 250V
2370	2020 561 90365	100nF +80/-20% 50V
2371	2020 561 90365	100nF +80/-20% 50V
2372	4822 122 33197	1nF 10% 50V
2391	4822 124 40769	4,7uF 20% 100V

RESISTORS

3250	4822 116 52256	2k2 5% 0,5W
3251	4822 116 52256	2k2 5% 0,5W
3253	4822 116 83883	470R 5% 0,5W

3255	4822 116 52213	180R 5% 0,5W
3256	4822 116 52206	120R 5% 0,5W
3257	4822 050 21003	10k 1% 0,6W
3264	4822 050 21003	10k 1% 0,6W
3265	4822 050 11002	1k 1% 0,4W
3268	4822 116 52244	15k 5% 0,5W
3269	4822 116 83961	6k8 5%
3270	4822 050 11002	1k 1% 0,4W
3271	4822 116 52263	2k7 5% 0,5W
3272	4822 116 52289	5k6 5% 0,5W
3273	4822 116 52228	680R 5% 0,5W
3274	4822 116 52234	100k 5% 0,5W
3275	4822 050 23303	33k 1% 0,6W
3276	4822 116 83884	47k 5% 0,5W
3277	4822 116 52234	100k 5% 0,5W
3279	4822 116 83884	47k 5% 0,5W
3280	4822 116 52303	8k2 5% 0,5W
3281	4822 116 83882	39k 5% 0,5W
3283	4822 116 52228	680R 5% 0,5W
3284	4822 116 83884	47k 5% 0,5W
3285	4822 116 52291	56k 5% 0,5W
3292	4822 116 52269	3k3 5% 0,5W
3295	4822 050 11002	1k 1% 0,4W /21/37
3295	4822 116 52263	2k7 5% 0,5W /22/30
3300	4822 116 83883	470R 5% 0,5W
3301	4822 117 12063	NTC DC 5W 10k 5%
3302	4822 116 83876	270R 5% 0,5W
3303	4822 050 11002	1k 1% 0,4W
3304	4822 052 10108 Δ	1R 5% 0,33W
3305	4822 116 83876	270R 5% 0,5W
3306	4822 116 83876	270R 5% 0,5W
3320	4822 116 83884	47k 5% 0,5W
3321	4822 116 52234	100k 5% 0,5W
3322	4822 050 21003	10k 1% 0,6W
3324	4822 116 52234	100k 5% 0,5W
3325	4822 050 23303	33k 1% 0,6W
3326	4822 116 83872	220R 5% 0,5W
3327	4822 050 21003	10k 1% 0,6W
3328	4822 050 11002	1k 1% 0,4W
3329	4822 050 21003	10k 1% 0,6W
3330	4822 116 52234	100k 5% 0,5W
3331	4822 116 52234	100k 5% 0,5W
3332	4822 116 52257	22k 5% 0,5W
3333	4822 050 11002	1k 1% 0,4W
3334	4822 116 52276	3k9 5% 0,5W
3335	4822 116 52207	1k2 5% 0,5W
3336	4822 116 52291	56k 5% 0,5W
3337	4822 116 52228	680R 5% 0,5W
3338	4822 116 52249	1k8 5% 0,5W
3339	4822 050 11002	1k 1% 0,4W
3342	4822 116 52291	56k 5% 0,5W
3343	4822 116 52291	56k 5% 0,5W

ELECTRICAL PARTS LIST - LEFT/RIGHT AMPLIFIER & SUPPLY BOARD

3344	4822 116 52186	22R 5% 0,5W
3345	4822 052 10221 Δ	220R 5% 0,33W /21/22/30
3345	4822 052 10331 Δ	330R 5% 0,33W /37
3346	4822 052 10221 Δ	220R 5% 0,33W /21/22/30
3346	4822 052 10331 Δ	330R 5% 0,33W /37
3347	4822 116 52228	680R 5% 0,5W
3348	4822 053 10152	1k5 5% 1W
3349	4822 053 10152	1k5 5% 1W
3350	2322 194 96001 Δ	RST MFLM PR02 A 0R33 PM5
3351	2322 194 96001 Δ	RST MFLM PR02 A 0R33 PM5
3352	2322 194 96001 Δ	RST MFLM PR02 A 0R33 PM5
3353	2322 194 96001 Δ	RST MFLM PR02 A 0R33 PM5
3354	4822 116 52226	560R 5% 0,5W
3355	4822 116 52219	330R 5% 0,5W
3356	4822 116 83884	47k 5% 0,5W
3357	4822 116 52243	1k5 5% 0,5W
3358	4822 116 83884	47k 5% 0,5W
3359	2322 194 96001 Δ	RST MFLM PR02 A 0R33 PM5
3360	2322 194 96001 Δ	RST MFLM PR02 A 0R33 PM5
3361	2322 194 96001 Δ	RST MFLM PR02 A 0R33 PM5
3362	2322 194 96001 Δ	RST MFLM PR02 A 0R33 PM5
3363	4822 116 52219	330R 5% 0,5W
3364	4822 116 52226	560R 5% 0,5W
3365	4822 116 83884	47k 5% 0,5W
3366	4822 116 52243	1k5 5% 0,5W
3367	4822 116 83884	47k 5% 0,5W
3368	4822 116 52244	15k 5% 0,5W
3369	4822 116 52244	15k 5% 0,5W
3372	4822 053 10478	4R7 5% 1W
3373	4822 050 21003	10k 1% 0,6W
3375	4822 050 21003	10k 1% 0,6W
3376	4822 053 10478	4R7 5% 1W
3381	4822 116 83884	47k 5% 0,5W
3382	4822 116 83884	47k 5% 0,5W
3392	4822 050 15609	56R 1% 0,4W /21
3392	2122 101 02081	56R 5% /22/30/37
3393	4822 116 52291	56k 5% 0,5W
3395	4822 116 52175	100R 5% 0,5W

COILS & FILTERS

5300	2422 536 00615 Δ	Coil 11,5T 1.0-2UEW 8,0D B
5301	2422 536 00615 Δ	Coil 11,5T 1.0-2UEW 8,0D B

DIODES

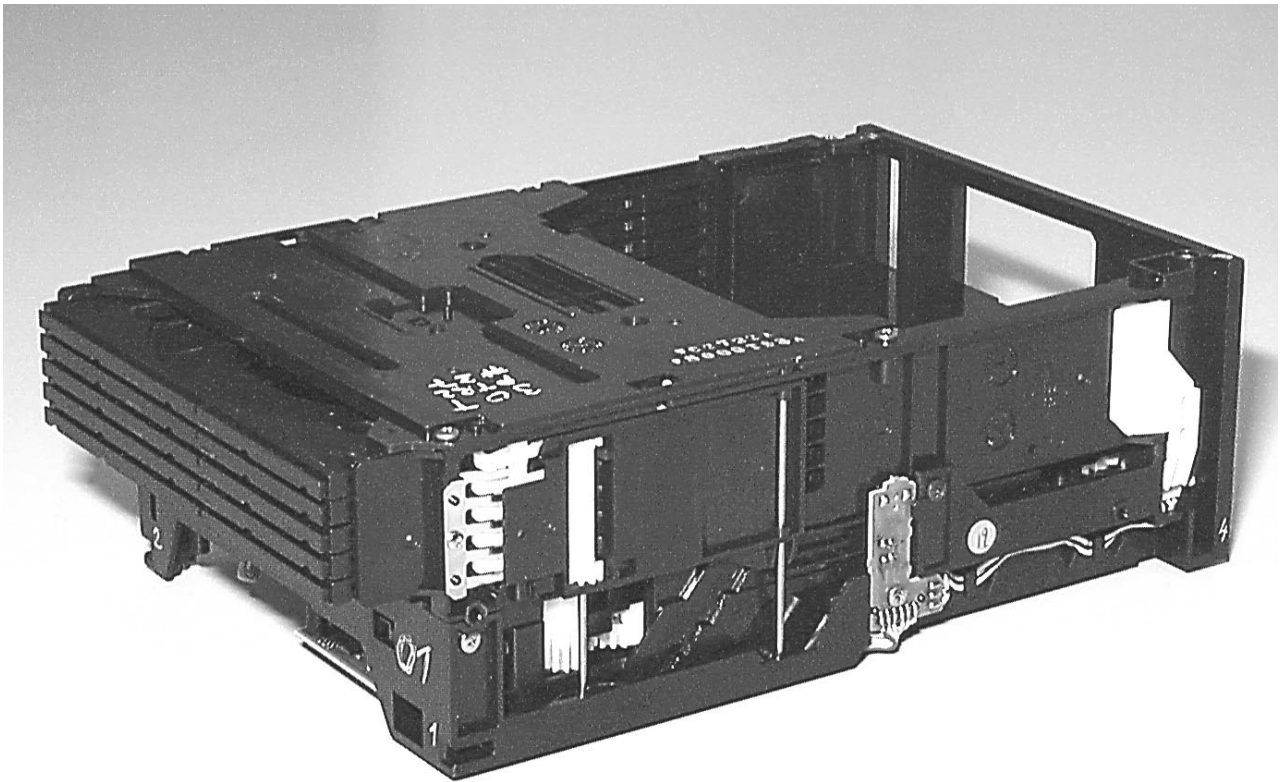
6250	4822 130 34281	BZX79-C15
6251	4822 130 61219	BZX79-B10
6253	4822 130 30621	1N4148
6254	4822 130 31878	1N4003G
6256	4822 130 30621	1N4148
6257	4822 130 30621	1N4148
6258	4822 130 83206	BZX79-B5V6
6259	4822 130 34278	BZX79-C6V8

6260	4822 130 30621	1N4148
6263	4822 130 30621	1N4148
6265	4822 130 34233	BZX79-C5V1
6320	4822 130 30621	1N4148
6321	5322 130 31504	BZX79-C3V3
6322	4822 130 30621	1N4148
6323	4822 130 30621	1N4148
6324	4822 130 34281	BZX79-B15
6332	4822 130 34281	BZX79-B15
6360	4822 130 34281	BZX79-B15

TRANSISTORS & INTEGRATED CIRCUITS

7250	9322 139 23687	BDX53BFP
7251	4822 130 40959	BC547B
7253	4822 130 40959	BC547B
7257	4822 209 31841	L7805CP
7259	4822 130 40981	BC337-25
7260	4822 130 40959	BC547B
7261	4822 130 44568	BC557B
7262	4822 130 40959	BC547B
7263	4822 130 40959	BC547B
7300	4822 130 41246	BC327-25
7320	4822 130 41691	BC556B
7321	4822 130 44461	BC546B
7322	4822 130 44461	BC546B
7323	4822 130 44461	BC546B
7324	4822 130 41691	BC556B
7325	4822 130 44461	BC546B
7326	9322 180 27682	STK412-030I
7327	4822 130 41691	BC556B
7328	4822 130 41691	BC556B

Note : Only the parts mentioned in this list are normal service spare parts.



5DTC Module

(MP3 version)

Layout stage .4

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Service Hints

In case of symptom „skipping tracks“ perform following actions:

1. VERIFY THE COMPLAINT

PLAYABILITY CHECK

Use CDDA SBC 444A:4822 397 30245
 TR 14 (600µ black dot) maximum at 01:15
 TR 19 (fingerprint)
 TR 10 (1000µ wedge)

Use CD-RW Printed Audio Disk7104 099 96611
 TR 3 (Fingerprint)
 TR 8 (600µ black dot) maximum at 01:00

- playback of all these tracks without audible disturbance
- jump forward/backward within a reasonable time

2. CLEAN THE LENS

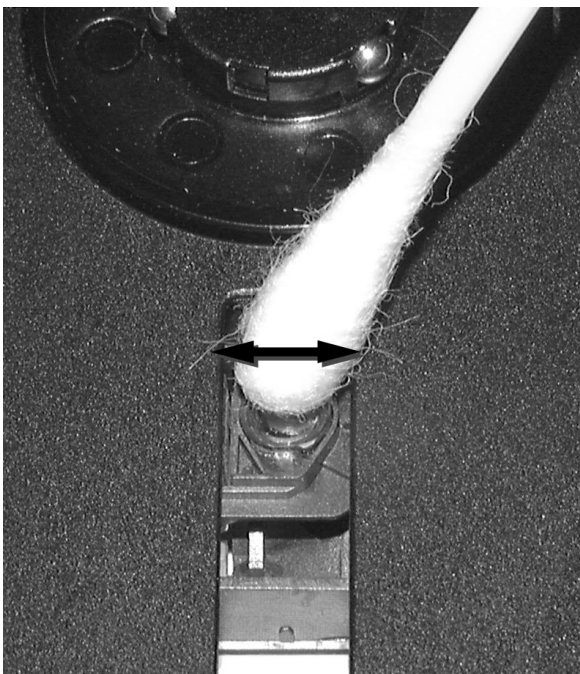
CD DRIVE – LENS CLEANING

Before touching the lens it is advised to clean the surface of the lens by blowing clean air over it in order to avoid that little particles make scratches on the lens.

Because the material of the lens is synthetic and coated with a special anti-reflectivity layer, cleaning must be done with a non-aggressive cleaning fluid. It is advised to use “KODAK LENS CLEANER CAT 176 71 36”, available in normal photo shops.

The actuator is a very precise mechanical component and may not be damaged in order to guarantee its full function. It is advised to clean the lens gently (don't press too hard) with a soft and clean cotton bud moistened with the special lens cleaner.

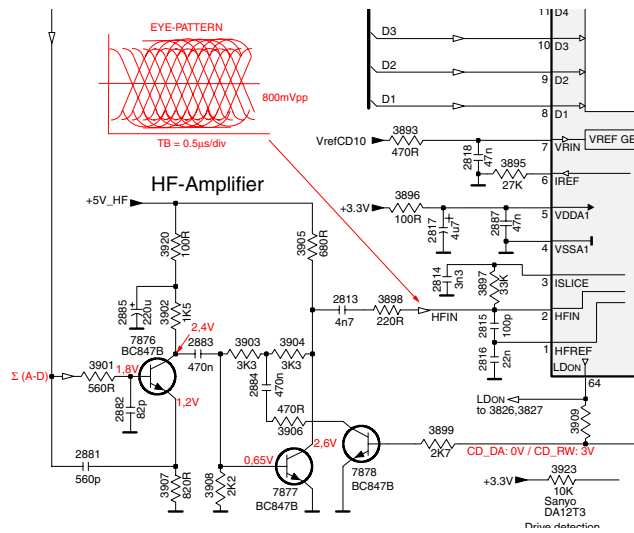
The direction of cleaning must be in the way as indicated in the picture below.



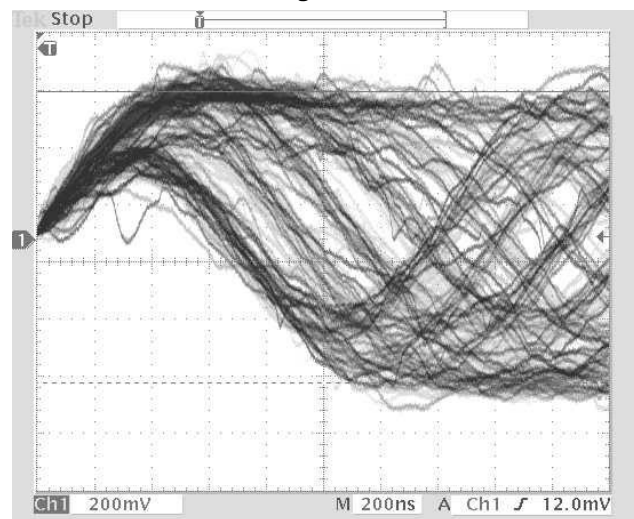
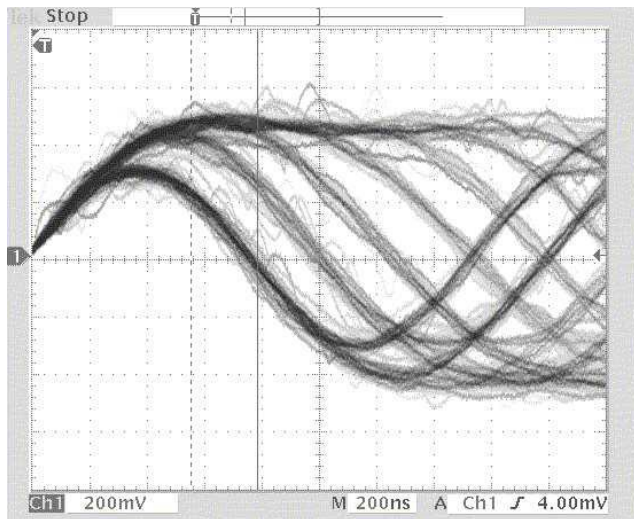
3. MEASURE THE EYE-PATTERN SIGNAL

EYE-PATTERN SIGNAL – JITTER MEASUREMENT

Measure the signal direct on resistor 3898 using an oscilloscope (see also chapter 10-9).



See below examples of the signal. Amplitude should read at least 700mVpp using SBC444A.



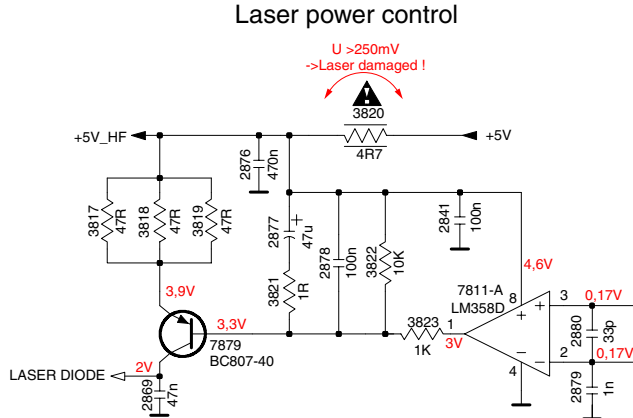
bad

If the oscilloscope shows a signal like the 'bad' one, and/or the amplitude decreases within 1minute - the CD drive has to be replaced.

4. MEASURE THE LASER CURRENT

CD DRIVE – LASER CURRENT MEASUREMENT

The laser current can be measured as a voltage drop on resistor 3820. Typical value 170 - 190mV for CD-DA respectively 200 - 220mV for CD-RW.



5. MEASURE THE OFFSETS OF THE CD-DRIVE

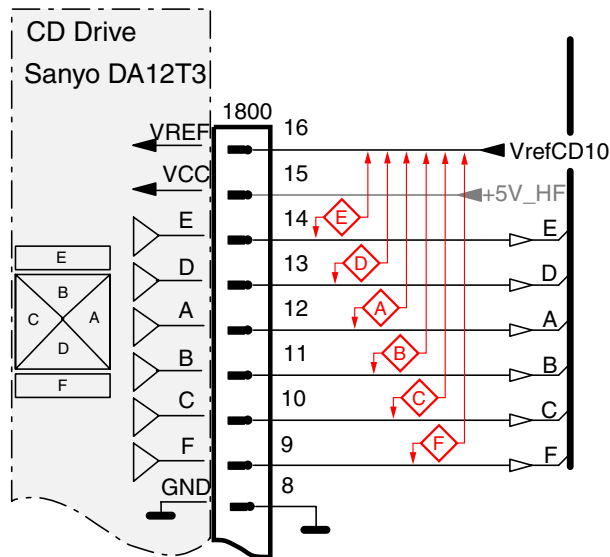
CD DRIVE – OFFSET MEASUREMENT

Each photodiode of the CD-drive may have an offset. This offset has to be compensated by the signal processor. A high offset of the CD-drive leads to poor playability of some CDs (skipping tracks).

Start the **Service Test Program** - section „Focus Test“ without a CD. Focus sensitivity = CD-RW.

Use a DC Millivoltmeter for measurement. The offsets can be measured direct on the connector. See drawing below.

The values from diode A-D should read $0 \pm 10mV$. Diodes E and F are less critical.



If one of the offsets is higher than $\pm 10mV$ the CD drive has to be replaced.

6. MEASURE THE OFFSETS OF THE CD10

SIGNAL PROCESSOR – OFFSET MEASUREMENT

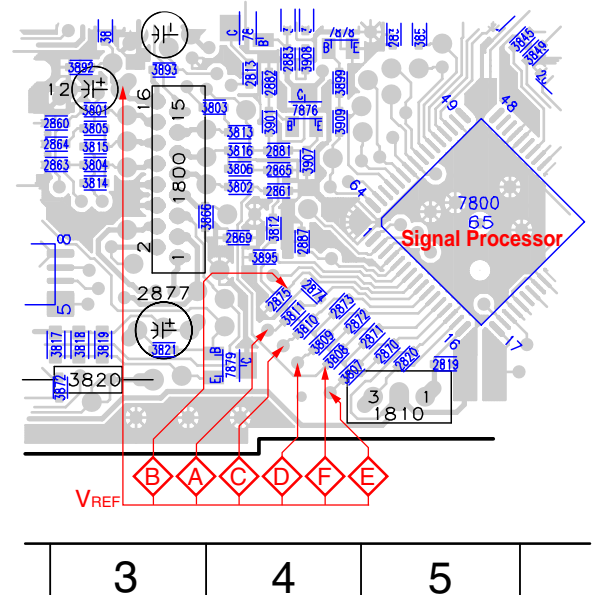
Each ADC input of the CD10 may have an offset too. Also this offset leads (together with the offsets of the CD Drive) to poor playability of some CDs (skipping tracks).

Start the **Service Test Program** - section „Focus Test“ using a CD-RW disc.

Use a DC Millivoltmeter for measurement. The offsets can be measured on capacitors near the signal processor. See drawing below.

The value should read $0mV \pm 10mV$.

CD Board side A view



If one of the offsets is higher than $\pm 10mV$ the signal processor has to be replaced.

If none of the measured offsets is higher than $\pm 10mV$ - replace the part with the higher value.

WARNING

CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE CD DRIVE ELECTRONICS WHEN CONNECTING A NEW CDM MECHANISM. THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

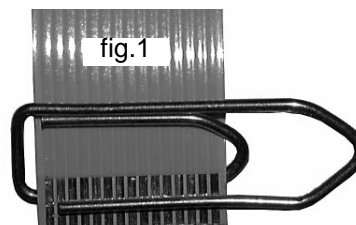
- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

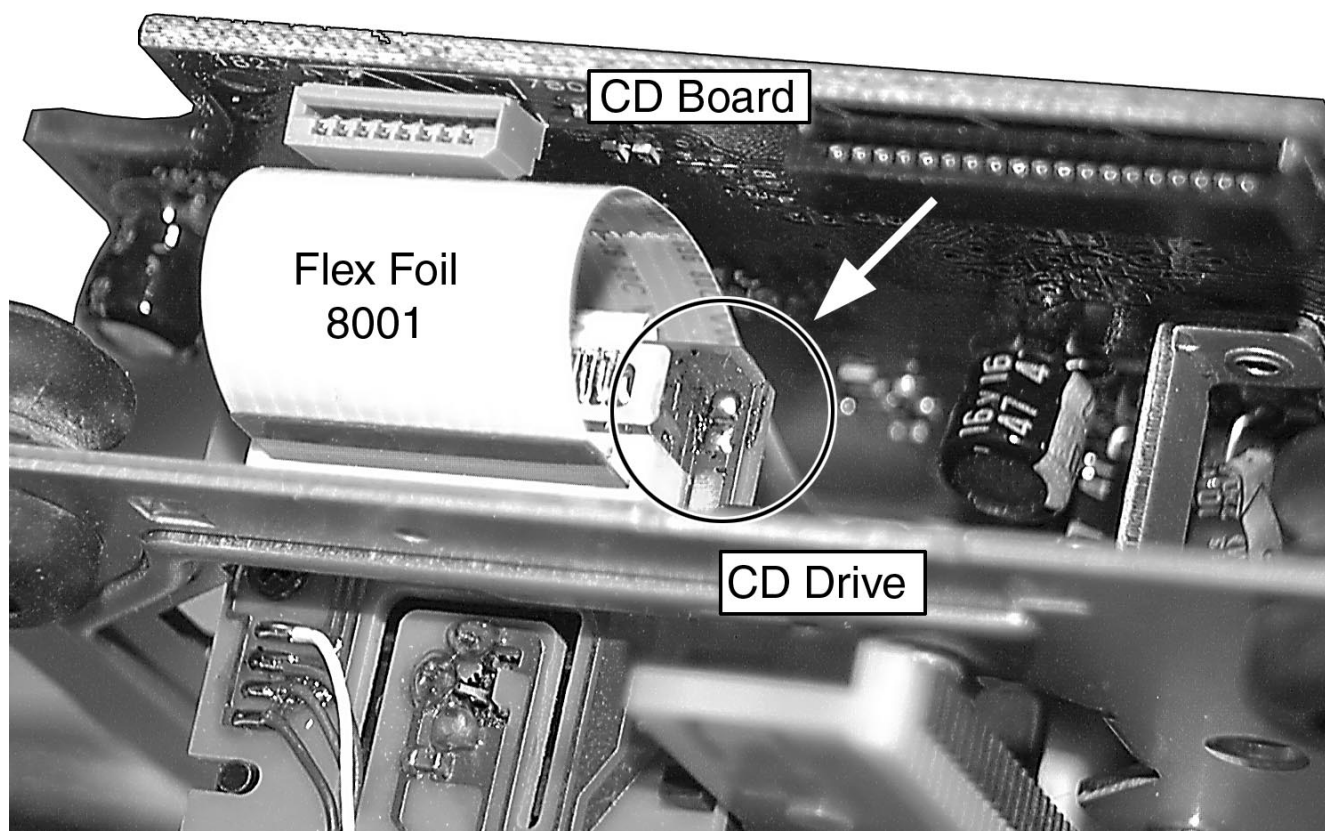
The CD drive forms a compact building block with the CD Board.

The following steps have to be done when replacing the CD mechanism:

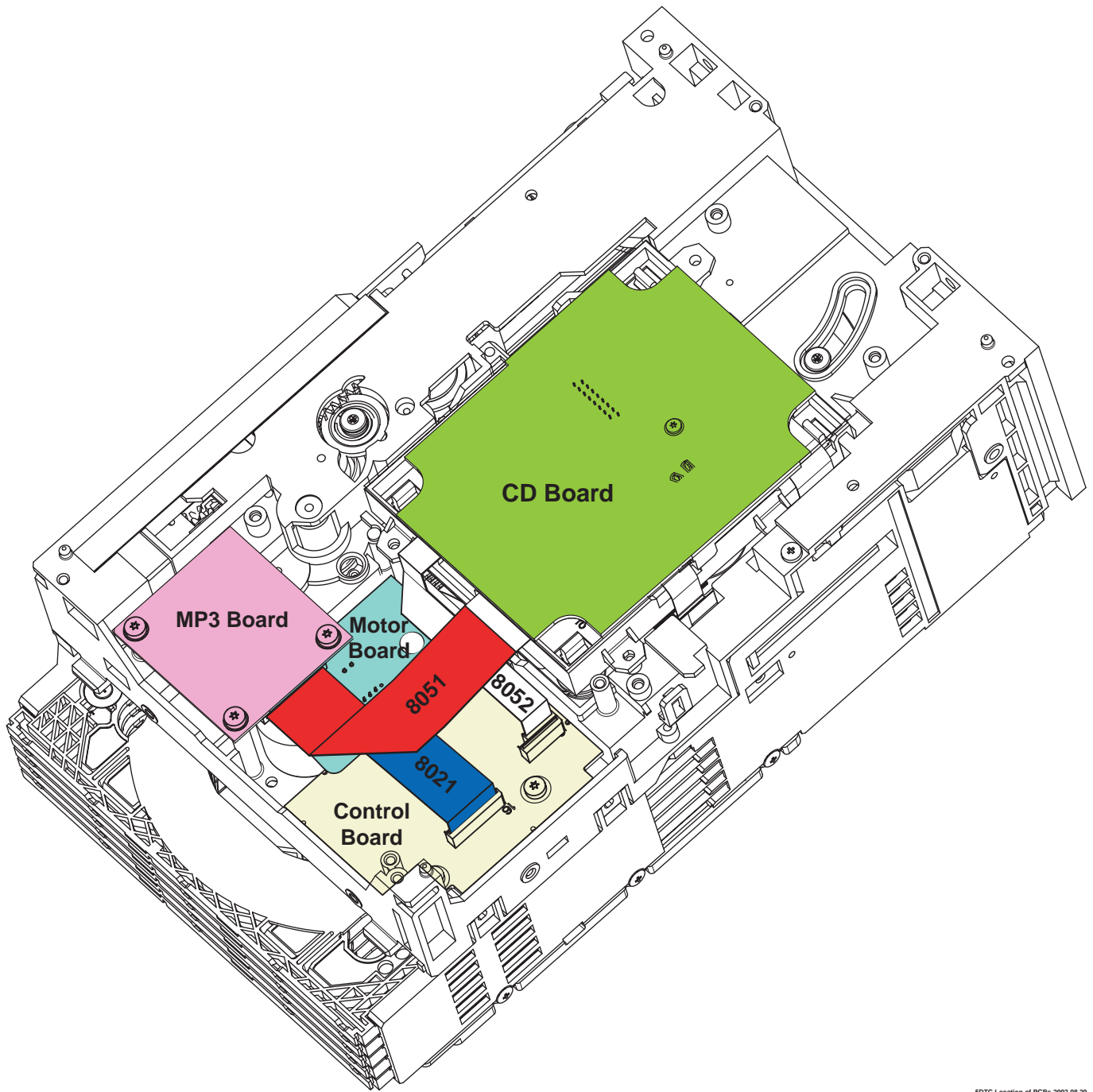
1. Desolder disc and slide motor
2. Loosen 2x screw
1. Disconnect flexfoil from old CD drive
2. Put a paperclip over contacts of flexfoil to short-circuit the contacts (fig.1)
3. Remove old CD drive
4. Mount new CD drive to CD board
5. Solder disc and slide motor **after** fixing the drive to the board
5. Move slide outside
6. Remove paperclip from flexfoil
7. Connect flexfoil to new CD drive
8. Remove ESD-protection (solder joint) from laserunit (see picture below)



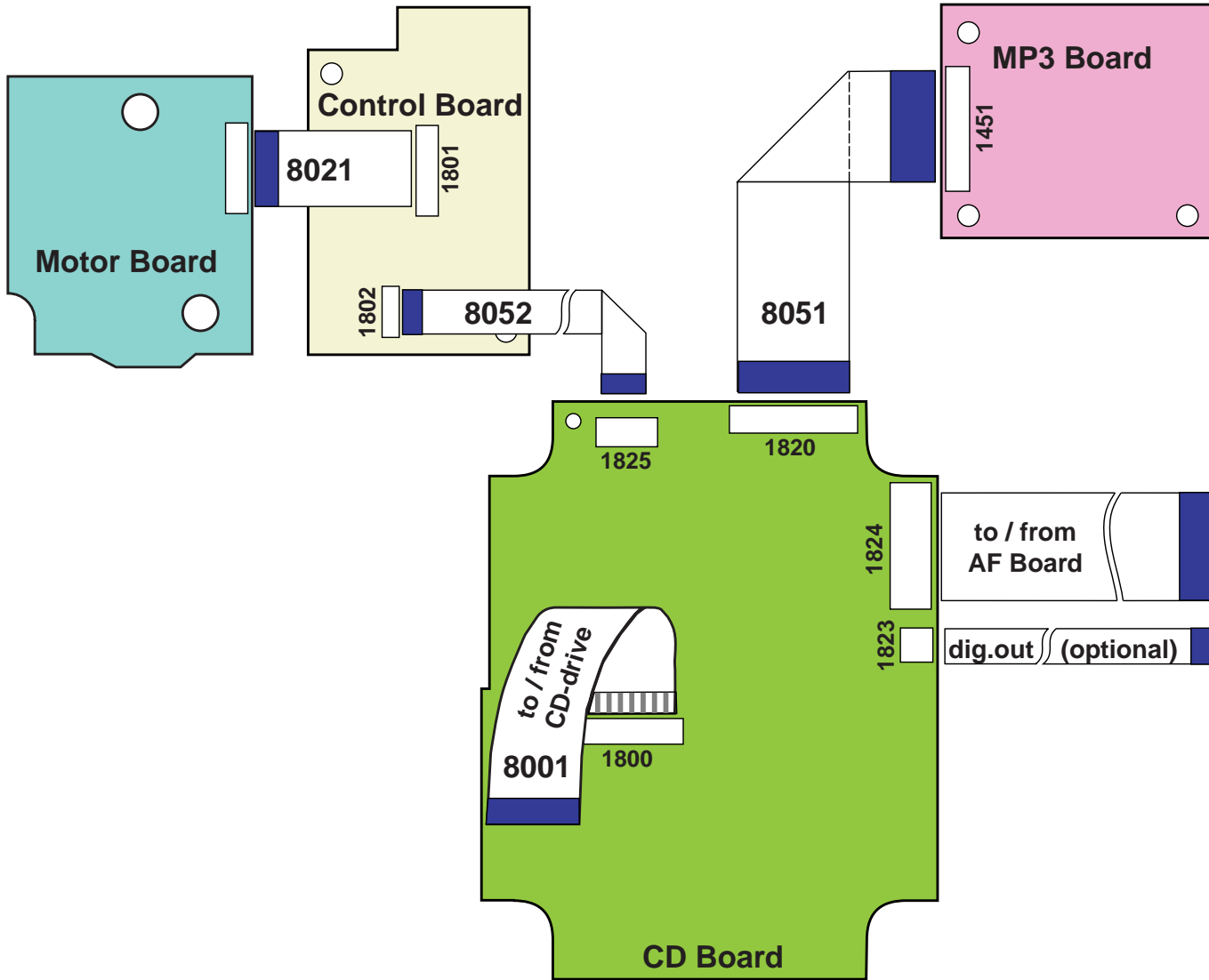
Attention: The laser diode of this CD drive is protected against ESD by a solder joint which shortcircuits the laserdiode to ground.
For proper functionality of the CD drive this solder joint must be removed **after** connection the drive to the set.



Location of Printed Circuit Boards



Wiring Diagram 5DTC Module



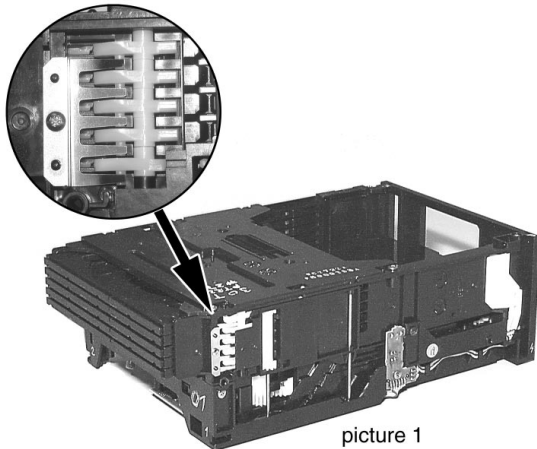
5DTC Wiring Diagram 2002 08 30

The FFC-Cables are available as sparepart.

8001	3103 308 93090	FFC CABLE 16Pin 80mm BD	Connection from CD Board to CD Drive
8051	3103 308 93100	FFC-CABLE 19Pin 90mm AD	Connection from CD Board to MP3 Board
8052	3103 308 93120	FFC CABLE 8Pin 80mm BD	Connection from CD Board to Control Board
8021	3103 308 93110	FFC-CABLE 16Pin 60mm AD	Connection from Control Board to Motor Board

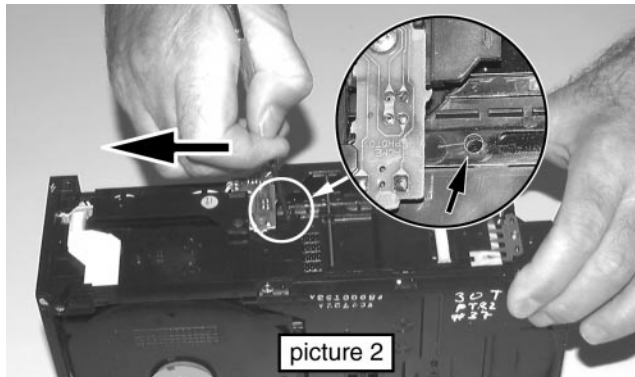
Emergency opening of the trays

The trays of the 5DTC are mechanically locked.



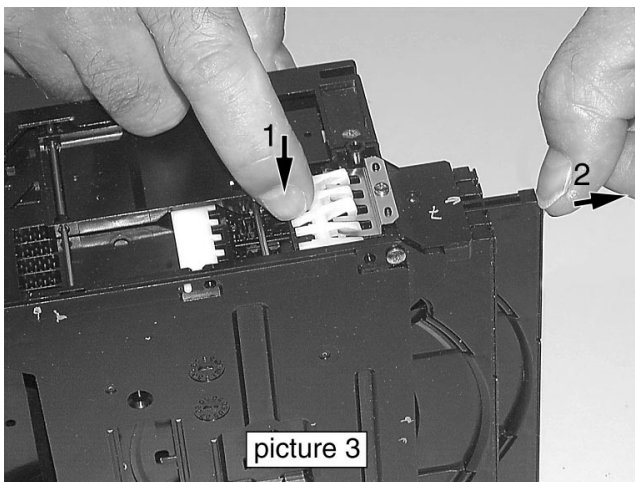
picture 1

To open tray 1, 2 and 3 move lever (pos 29) backwards (e.g. with a screwdriver - see picture 2) to its endposition.



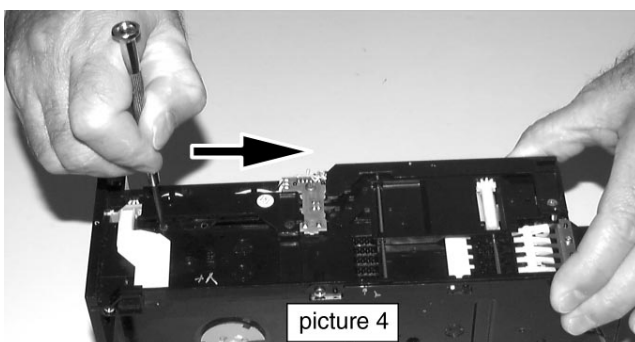
picture 2

Release the locking mechanism and pull out the tray (see picture 3).



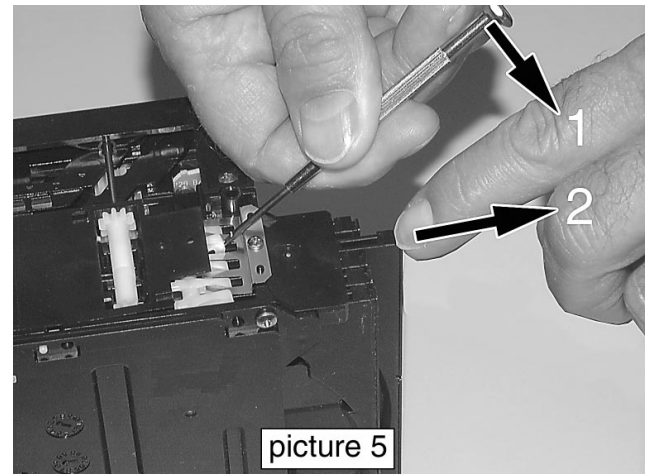
picture 3

To open tray 4 and 5 move lever (pos 29) forward to its endposition (see picture 4).



picture 4

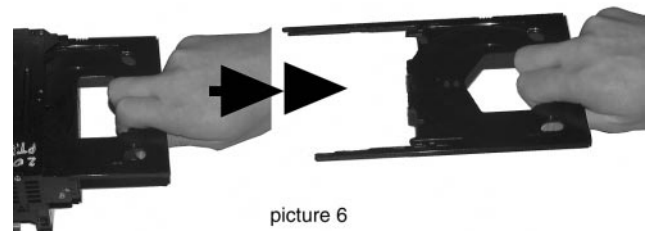
Release snap as shown in picture 5 and pull tray out.



picture 5

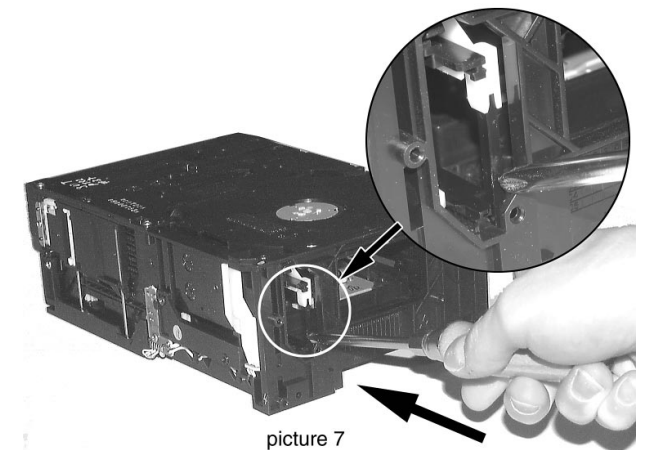
To remove a CD from Play Position perform following steps:

1. Open tray 1 as described before.
2. Tear the tray out with speed (see picture 6). The tray can be inserted afterwards without any alignment.



picture 6

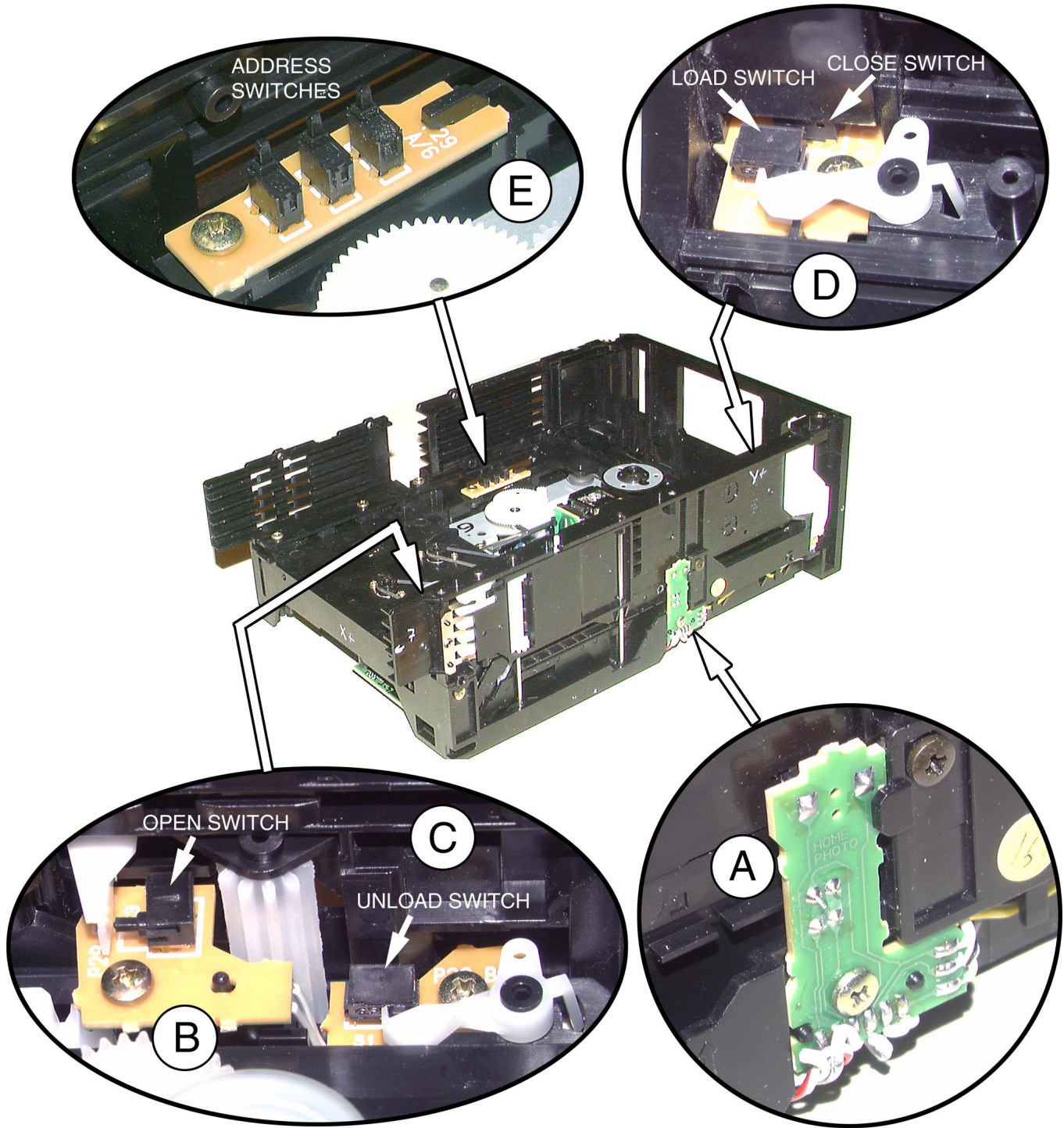
3. Move lever (pos 29) forward to its endposition (see picture 4).
4. Push lever (pos 31) forward (see picture 7).



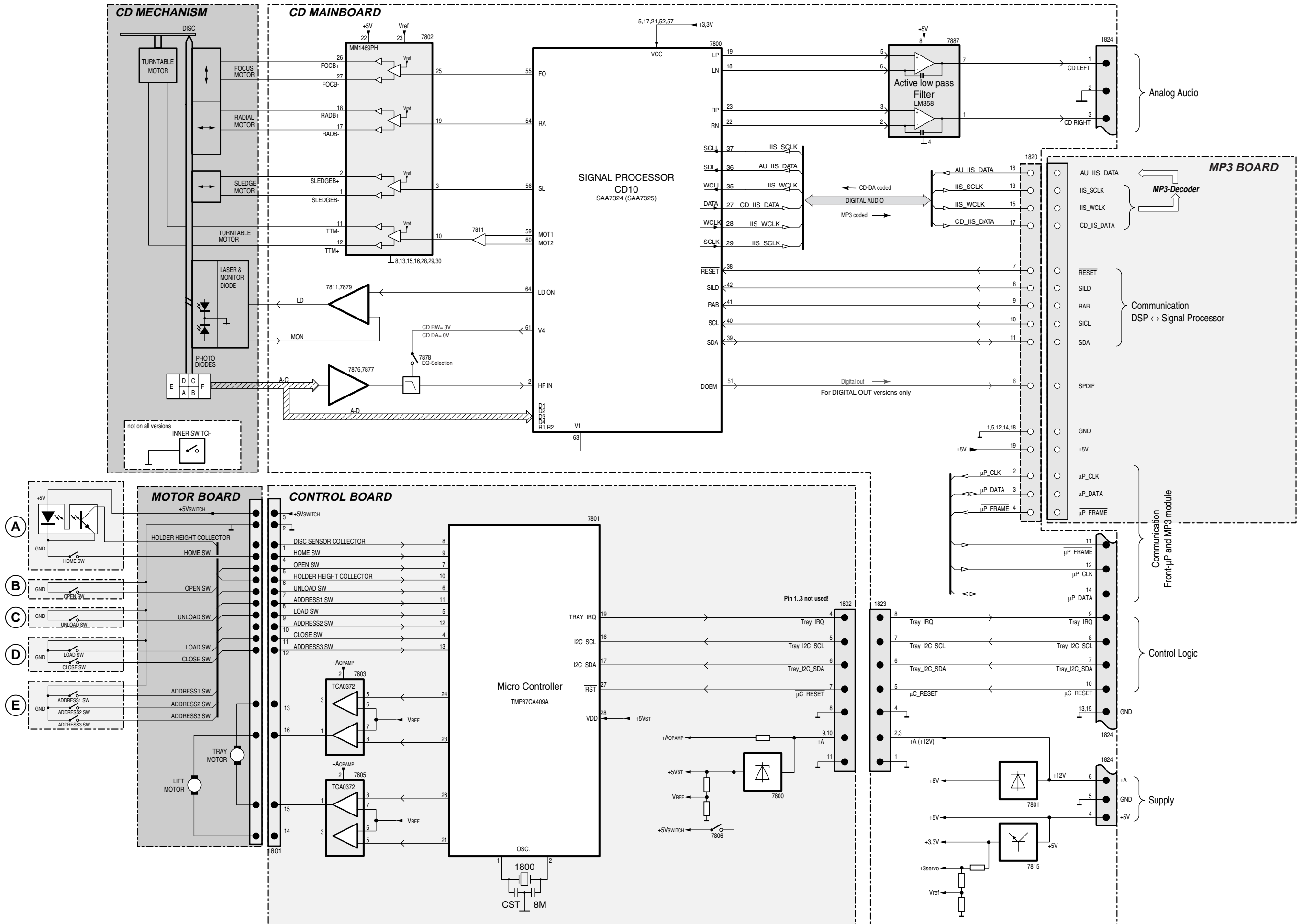
picture 7

5. Remove CD.

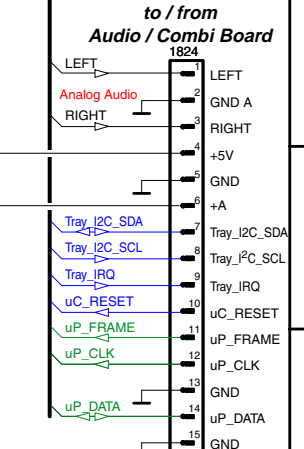
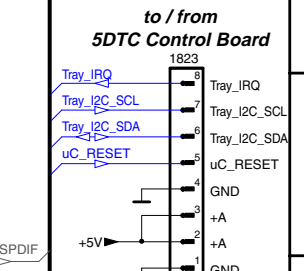
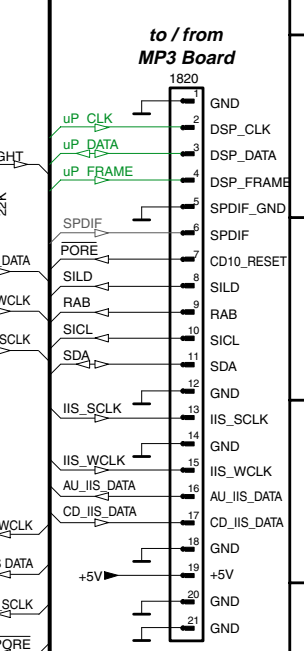
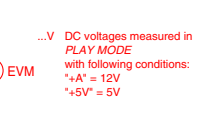
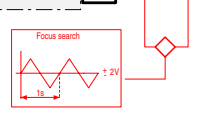
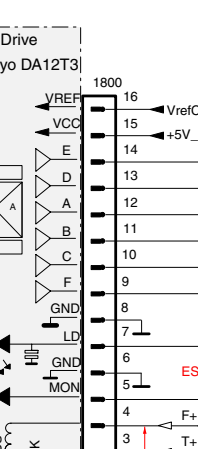
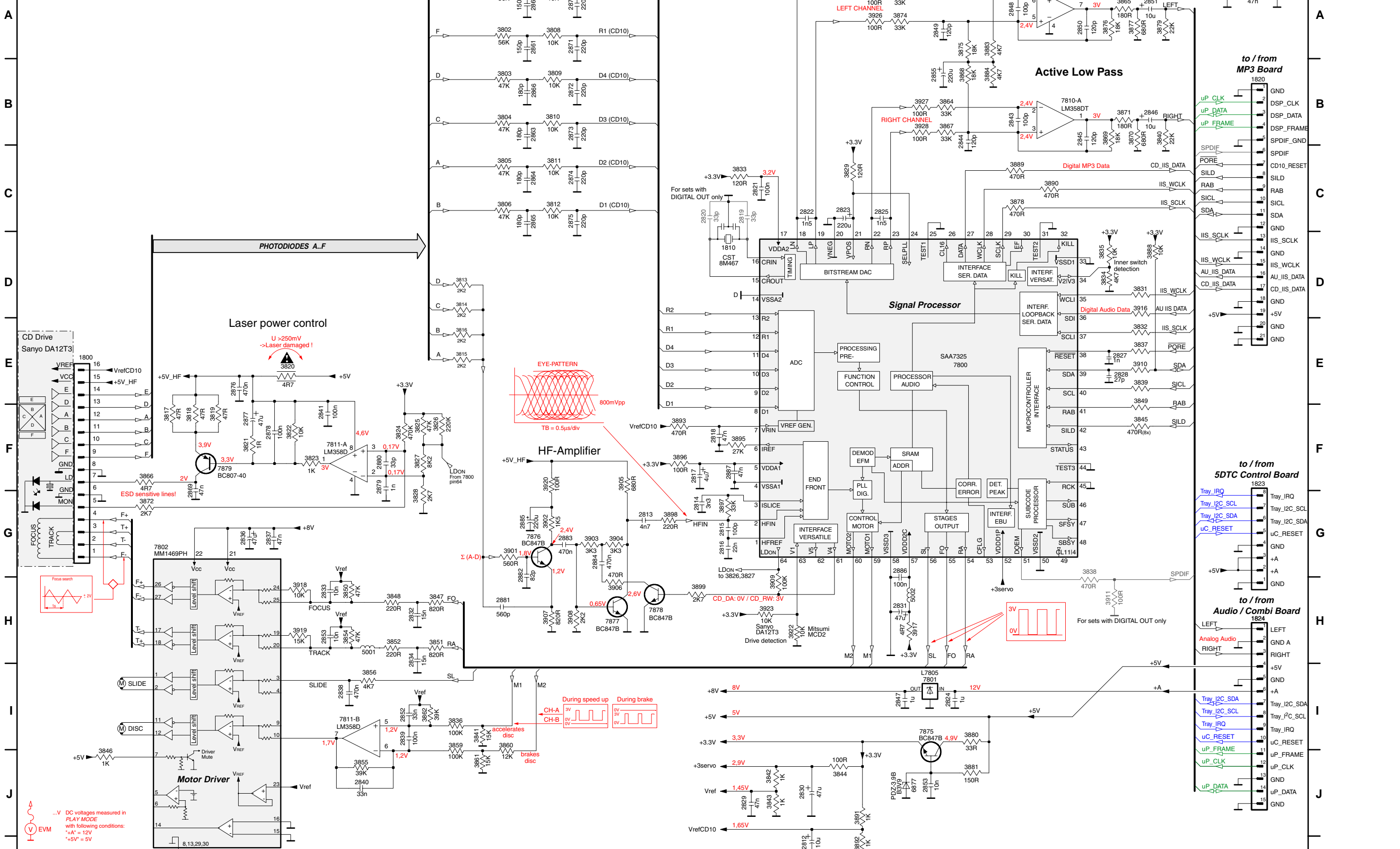
Location of switches



BLOCK DIAGRAM 5DTC MP3 Version



5DTC CD BOARD



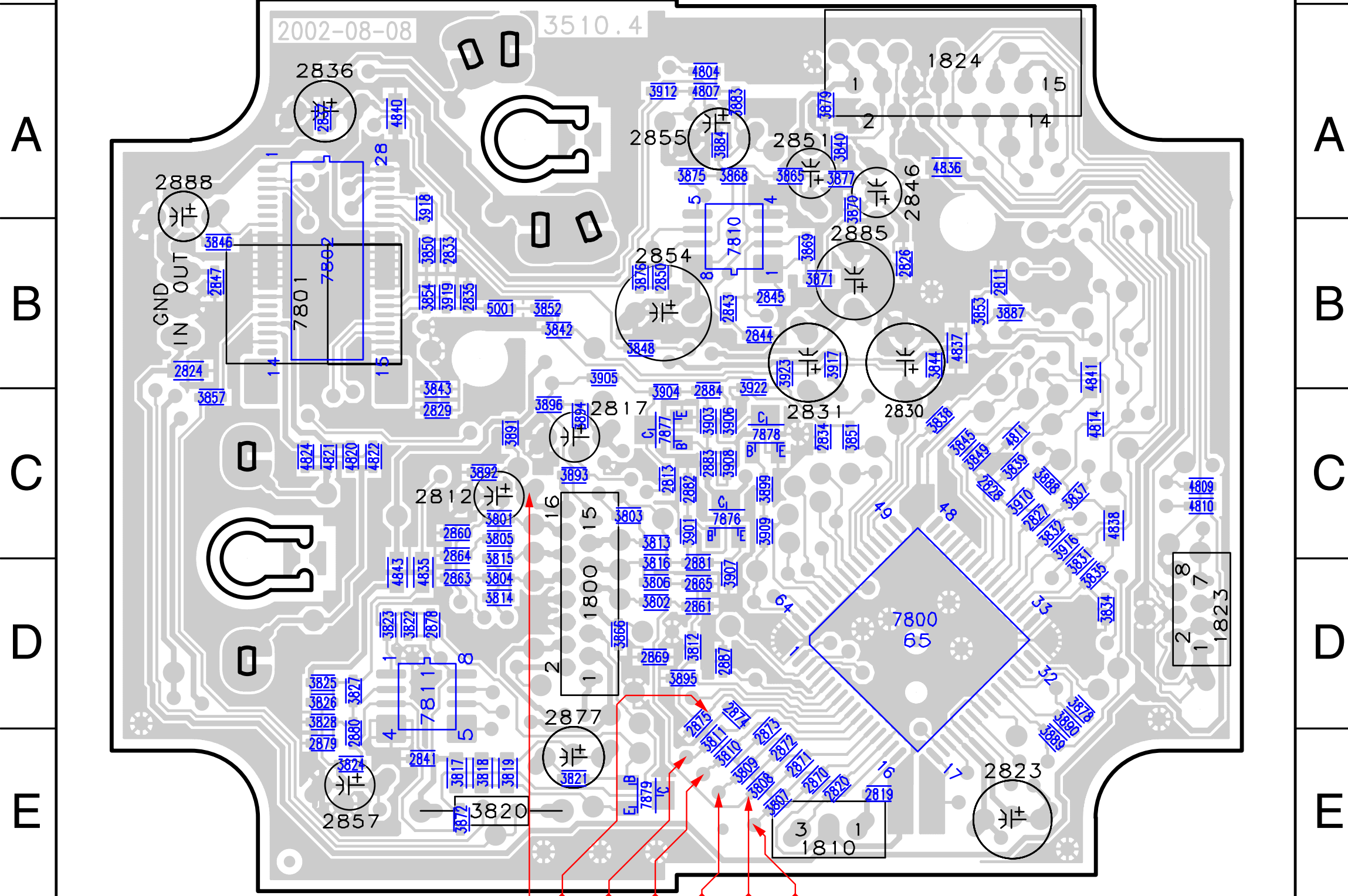
MAPPING FOR
CIRCUIT DIAGRAM

MAPPING FOR
COMPONENT LAYOUT

1800	E1	3827	F5
1810	D9	3828	G5
1820	B15	3829	C10
1823	F15	3831	D14
1824	H15	3832	E14
2187	F9	3833	C9
2812	J10	3834	D13
2813	G8	3835	D13
2814	G9	3836	I6
2815	G9	3837	E14
2816	G9	3838	G13
2817	F9	3839	E14
2818	F9	3840	B14
2819	C9	3841	I6
2820	C9	3842	J9
2821	C9	3843	J9
2822	C10	3844	J10
2823	C10	3845	F14
2824	I12	3846	J1
2825	C11	3847	H5
2826	A15	3848	H5
2827	E13	3849	F14
2828	E13	3850	H4
2829	J9	3851	H5
2830	J10	3852	H5
2831	H11	3854	H4
2832	H5	3855	J4
2833	H4	3856	I5
2834	H5	3859	I6
2836	G3	3860	I6
2837	G3	3861	J6
2838	I4	3862	I5
2839	I5	3864	B11
2840	J4	3865	A14
2841	F4	3866	F2
2843	B12	3867	B11
2844	B12	3868	B12
2845	B13	3869	B13
2846	B14	3870	B14
2847	I11	3871	B14
2848	A12	3872	G2
2849	A11	3873	A11
2850	A13	3874	A11
2851	A14	3875	A12
2852	I5	3876	A13
2853	H4	3877	A14
2853	J11	3878	C12
2854	A12	3879	A14
2855	B11	3880	I12
2860	A6	3881	J12
2861	A6	3883	A12
2863	B6	3884	B12
2864	C6	3888	D14
2865	C6	3889	C12
2866	B6	3890	C13
2869	F2	3891	J10
2870	A7	3892	J10
2871	A7	3893	F8
2872	B7	3895	F9
2873	B7	3896	F8
2874	C7	3897	G9
2875	C7	3898	G8
2876	E3	3899	H8
2877	F3	3901	G6
2878	F3	3902	G7
2879	F5	3903	G7
2880	F5	3904	G8
2881	H6	3905	F8
2882	G6	3906	H8
2884	G7	3907	H7
2885	G6	3908	H7
2886	G11	3909	H9
2893	G7	3910	E14
3801	A6	3911	H13
3802	A6	3912	A11
3803	B6	3917	H11
3804	B6	3918	H4
3805	C6	3919	H4
3806	C6	3920	F7
3807	A7	3922	H10
3808	A7	3923	H9
3809	B7	3925	A11
3810	B7	3926	A11
3811	C7	3927	B11
3812	C7	3928	B11
3813	D6	5001	H5
3814	D6	5002	H11
3815	E6	6877	J11
3816	D14	7800	D11
3816	E6	7801	I11
3817	F2	7802	G2
3818	F2	7810-A	B13
3819	F3	7810-B	A13
3820	E4	7811-A	F4
3821	F3	7811-B	I4
3822	F4	7875	I11
3823	F4	7876	G7
3824	F5	7877	H8
3825	F5	7878	H8
3826	F5	7879	F3

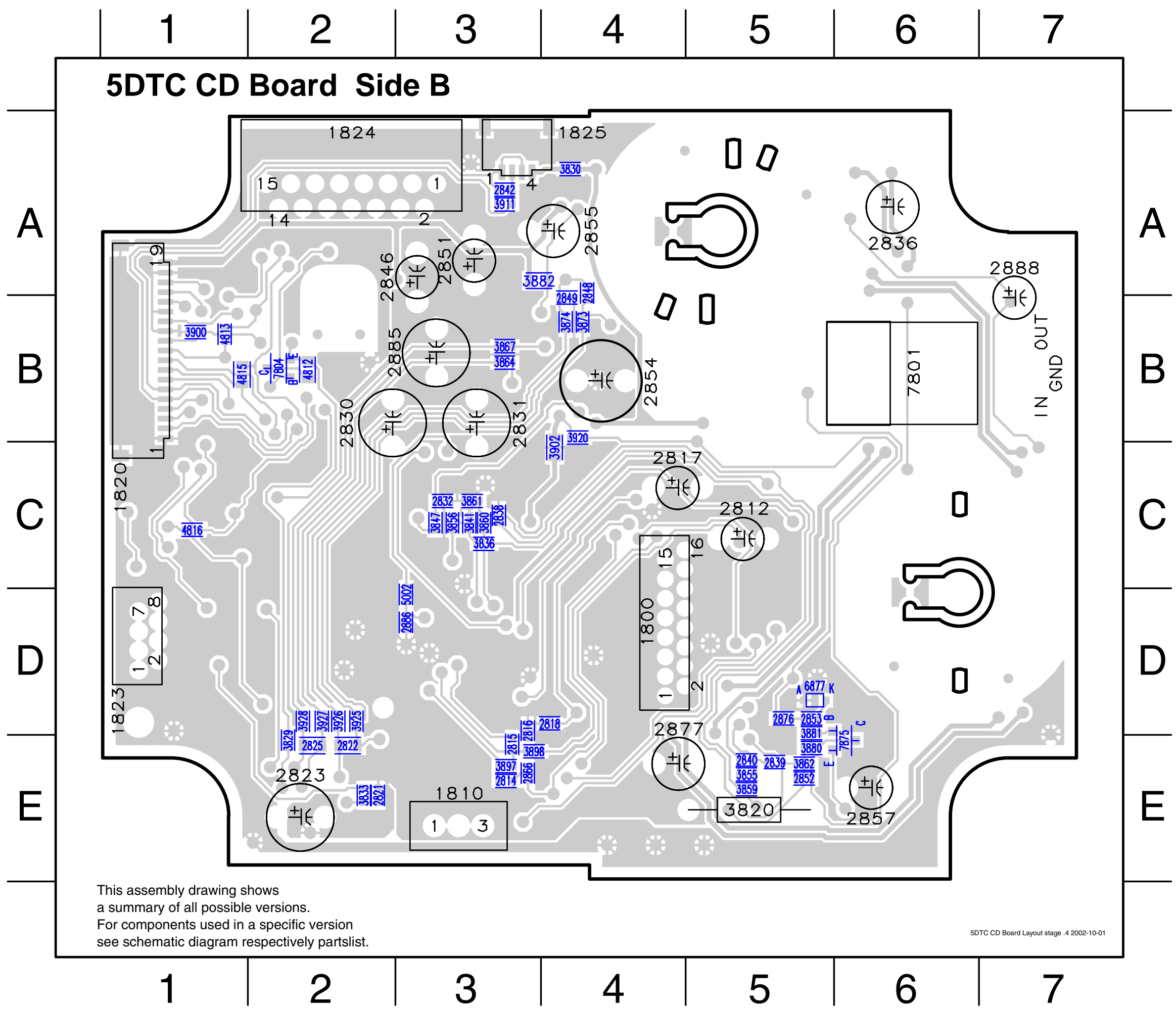
1800	D3	3851	C5
1810	E5	3852	B3
1823	D7	3853	B6
1824	A5	3854	B2
2811	B6	3857	C1
2812	C3	3865	A4
2813	C4	3866	D3
2817	C3	3868	A4
2819	E5	3869	B5
2820	E5	3870	A5
2823	E6	3871	B5
2824	B1	3872	E3
2826	B5	3875	A4
2827	C6	3876	B4
2828	C6	3877	A5
2829	C2	3878	D6
2830	B5	3879	A5
2831	B5	3883	A4
2833	B2	3884	A4
2834	C5	3887	B6
2835	B3	3888	C6
2836	A2	3889	E6
2837	A2	3890	E6
2841	E2	3891	C3
2843	B4	3892	C3
2844	B4	3893	C3
2845	B4	3894	C3
2846	A5	3895	D4
2847	B1	3896	C3
2850	B4	3899	C4
2851	A5	3901	C4
2854	B4	3903	C4
2855	A4	3904	C4
2857	E2	3905	B3
2860	C3	3906	C4
2861	D4	3907	D4
2863	D3	3908	C4
2864	D3	3909	C4
2865	D4	3910	C6
2869	D4	3912	A4
2870	E5	3916	C6
2871	E5	3917	B5
2872	E4	3918	A2
2873	E4	3919	B2
2874	D4	3922	C4
2875	E4	3923	B4
2877	D3	4804	A4
2878	D2	4807	A4
2879	E2	4809	C7
2880	E2	4810	C7
2881	D4	4811	C6
2882	C4	4814	C6
2883	C4	4820	C2
2884	C4	4821	C2
2885	B5	4822	C2
2887	D4	4824	C2
2888	A1	4835	D2
3801	C3	4836	A5
3802	D4	4837	B5
3803	C4	4838	C6
3804	D3	4840	A2
3805	C3	4841	B6
3806	D4	4843	D2
3807	E4	5001	B3
3808	E4	7800	C6
3809	E4	7801	B2
3810	E4	7802	B2
3811	E4	7810	B4
3812	D4	7811	D2
3813	C4	7876	C4
3814	D3	7877	C4
3815	D3	7878	C4
3816	D4	7879	E4

5DTC CD Board Side A



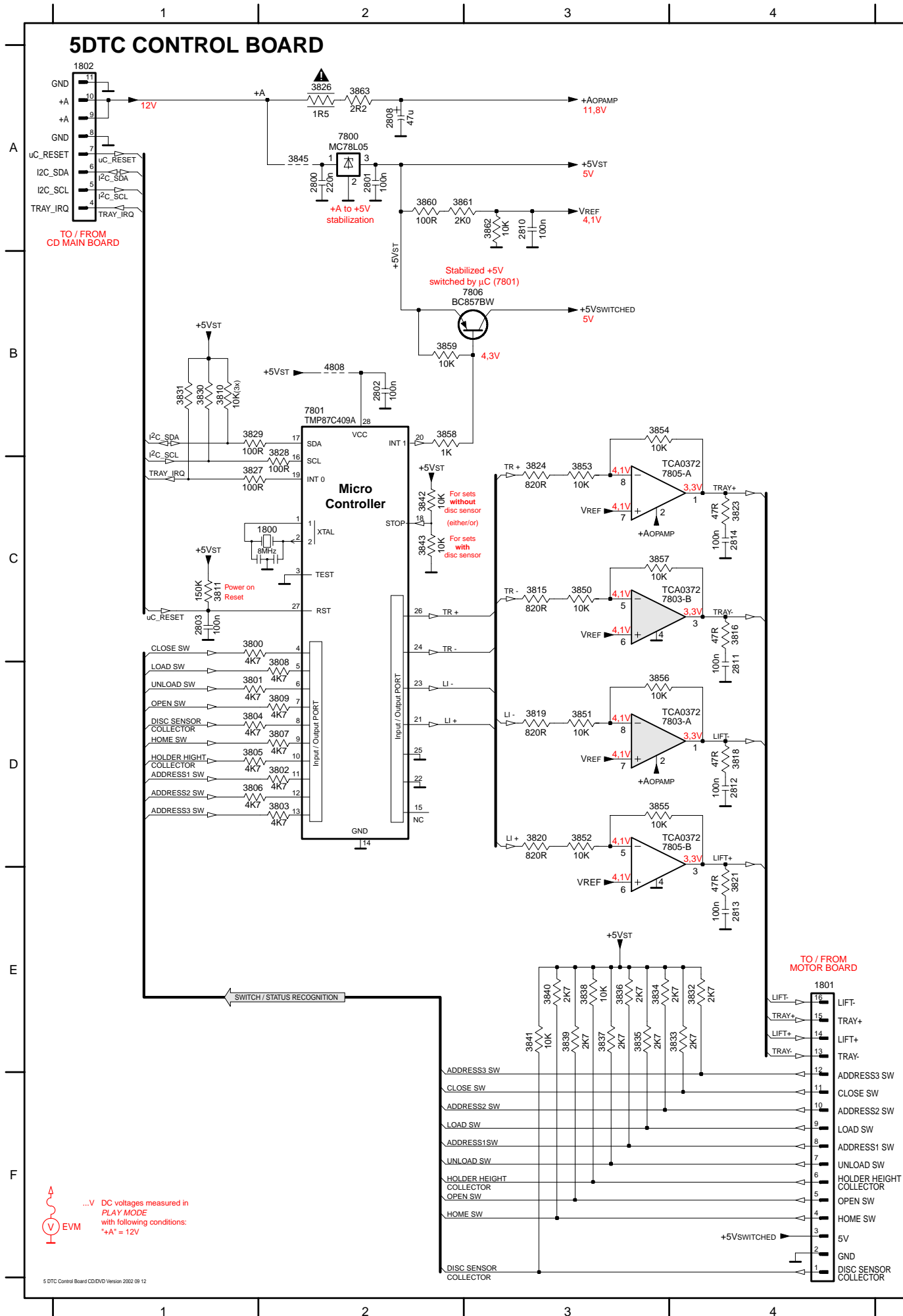
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist.

5DTC CD Board Side B



- 1800 D5
- 1810 E3
- 1820 C1
- 1823 D1
- 1824 A3
- 1825 A4
- 2812 C5
- 2814 E4
- 2815 E4
- 2816 D4
- 2817 C5
- 2818 D4
- 2821 E3
- 2822 E3
- 2823 E2
- 2825 E2
- 2830 B2
- 2831 B4
- 2832 C3
- 2836 A6
- 2838 C4
- 2839 E5
- 2840 E5
- 2842 A4
- 2846 A3
- 2848 A4
- 2849 B4
- 2851 A3
- 2852 E6
- 2853 D6
- 2854 B5
- 2855 A4
- 2857 E6
- 2866 E4
- 2876 D5
- 2877 D5
- 2885 B3
- 2886 D3
- 2888 A7
- 3820 E5
- 3829 E2
- 3830 A4
- 3833 E3
- 3836 C3
- 3841 C3
- 3847 C3
- 3855 E5
- 3856 C3
- 3859 E5
- 3860 C3
- 3861 C3
- 3862 E6
- 3864 B4
- 3867 B4
- 3873 B4
- 3874 B4
- 3880 E6
- 3881 D6
- 3882 A4
- 3897 E4
- 3898 E4
- 3900 B1
- 3902 C4
- 3911 A4
- 3920 B4
- 3925 D3
- 3926 D2
- 3927 D2
- 3928 D2
- 4812 B2
- 4813 B2
- 4815 B2
- 4816 C1
- 5002 D3
- 6877 D6
- 7801 B6
- 7804 B2
- 7875 E6

This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist.

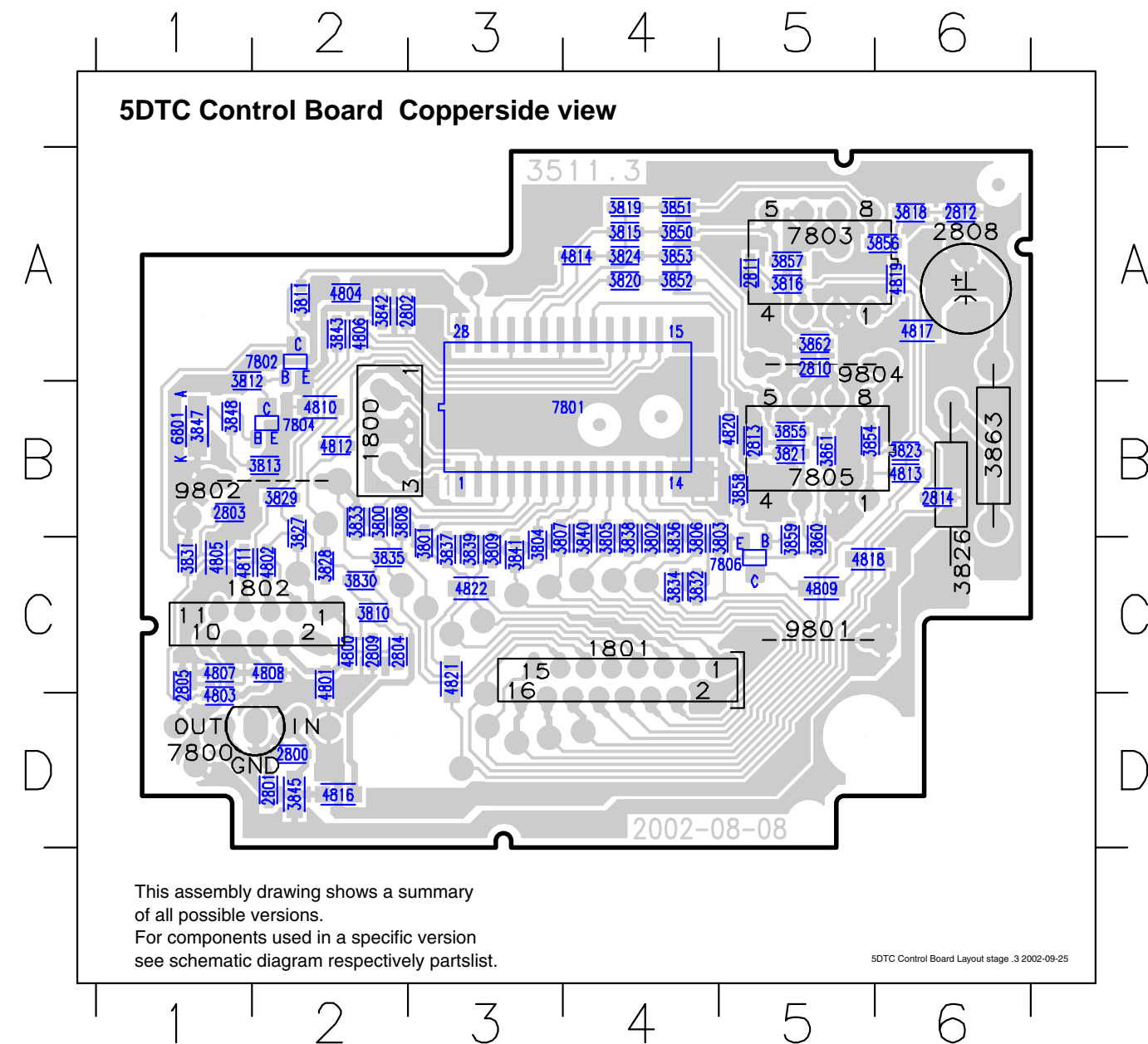


MAPPING FOR CIRCUIT DIAGRAM

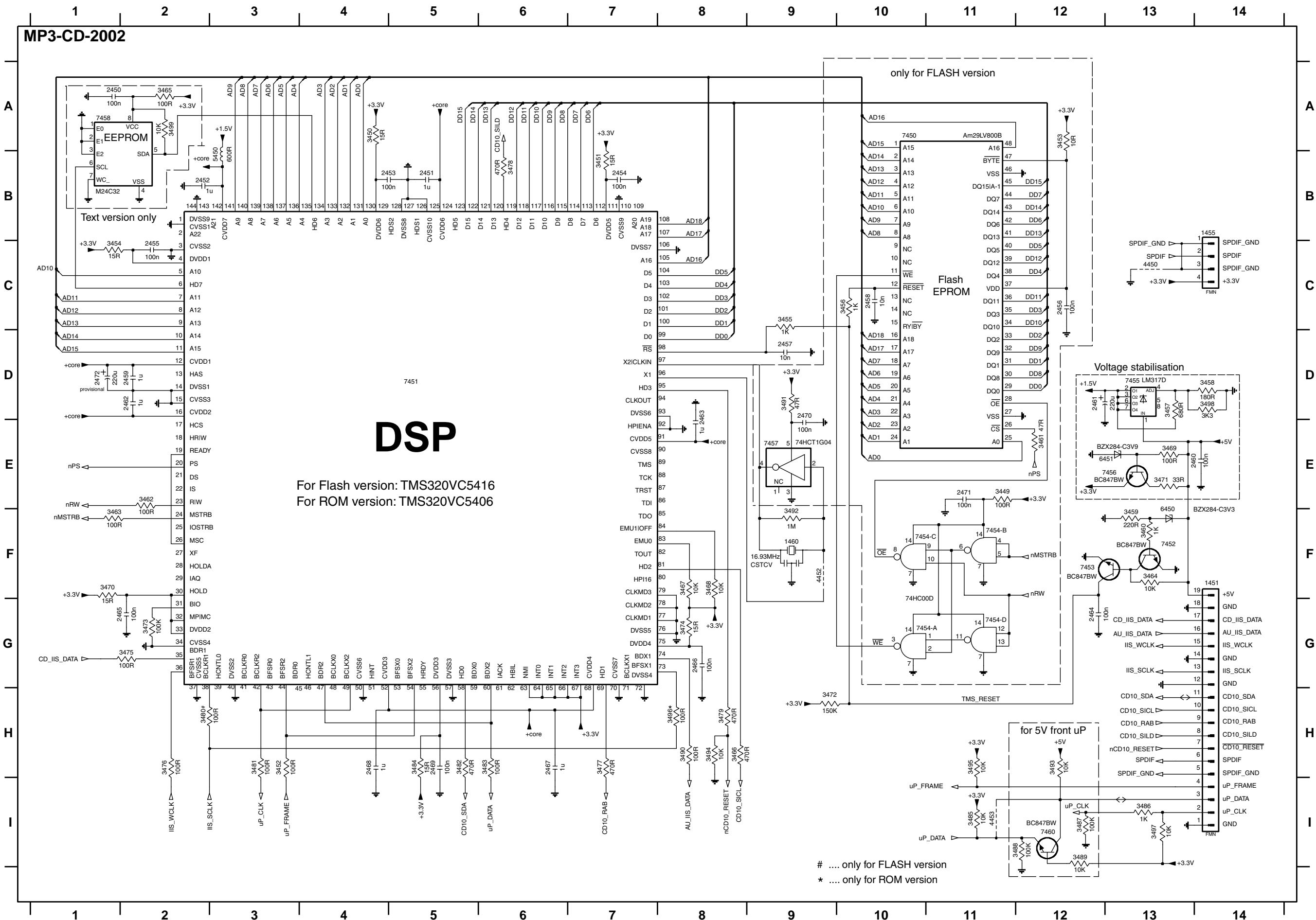
1800	C2	2810	A3	3804	D1	3811	C1	3824	C3	3833	E4	3841	E3	3854	B3	3862	A3	7805-B	D3
1801	E4	2811	D4	3805	D1	3815	C3	3826	A2	3834	E3	3842	C2	3855	D3	3863	A2	7806	B3
1802	A1	2812	D4	3806	D1	3816	C4	3827	C1	3835	E3	3843	C2	3856	D3	3868	B2		
2800	A2	2813	E4	3807	D2	3818	D4	3828	C2	3836	E3	3845	A2	3857	C3	3869	A2		
2801	A2	2814	C4	3808	D1	3819	D3	3829	B1	3837	E3	3850	C3	3858	B2	7801	B2		
2802	B2	3800	C1	3808	D2	3820	D3	3830	B1	3838	E3	3851	D3	3859	B3	7803-A	D3		
2803	C1	3802	D2	3809	D2	3821	E4	3831	B1	3839	E3	3852	D3	3860	A2	7803-B	C3		
2808	A2	3803	D2	3810	B1	3823	C4	3832	E4	3840	E3	3853	C3	3861	A2	7805-A	C3		

MAPPING FOR COMPONENT LAYOUT

1800	B2	2810	A5	3806	C4	3819	A4	3832	C4	3843	A2	3857	A5	4804	A2	4816	D2	7803	A5
1801	C4	2811	A5	3807	C3	3820	A4	3833	B2	3845	D2	3858	B5	4805	C1	4817	A6	7804	B2
1802	C2	2812	A6	3808	B2	3821	B5	3834	C4	3847	B1	3859	C5	4806	A2	4818	C5	7806	C5
2800	D2	2813	B5	3809	C3	3823	B6	3835	C2	3848	B1	3860	C5	4807	C1	4819	A6	9801	C5
2801	D2	2814	B6	3810	C2	3824	A4	3836	C4	3850	A4	3861	B5	4808	C2	4820	B5	9802	B2
2802	A2	3800	B2	3811	A2	3826	B6	3837	C3	3851	A4	3862	A5	4809	C5	4821	C3	9804	A5
2803	B1	3801	C3	3812	A1	3827	B2	3838	C4	3852	A4	3863	B6	4810	B2	4822	C3		
2804	C2	3802	C4	3813	B2	3828	C2	3839	C3	3853	A4	4800	C2	4811	C1	6801	B1		
2805	C1	3803	C4	3815	A4	3829	B2	3840	C4	3854	B5	4801	C2	4812	B2	7800	D2		
2808	A6	3804	C3	3816	A5	3829	C2	3841	C3	3855	B5	4802	C2	4813	B6	7801	B4		
2809	C2	3805	C4	3818	A6	3831	C1	3842	A2	3856	A6	4803	D1	4814	A4	7802	A2		



MP3 BOARD - CIRCUIT DIAGRAM



- 2451 B5
- 2452 B2
- 2453 B4
- 2454 B7
- 2455 C2
- 2456 C12
- 2457 D9
- 2458 C10
- 2459 D2
- 2460 E13
- 2461 D12
- 2462 D2
- 2463 D8
- 2464 G12
- 2465 G2
- 2466 G8
- 2467 H6
- 2468 H4
- 2469 H5
- 2470 D9
- 2471 E11
- 2472 D1
- 3449 E11
- 3450 A4
- 3451 B7
- 3452 H3
- 3453 A12
- 3454 C1
- 3455 C9
- 3456 C10
- 3457 D13
- 3458 D14
- 3459 F13
- 3460 F13
- 3461 E12
- 3462 E2
- 3463 F1
- 3464 F13
- 3465 A2
- 3466 H8
- 3467 F8
- 3468 F8
- 3469 E13
- 3470 F1
- 3471 E13
- 3472 H9
- 3473 G2
- 3474 G8
- 3475 G2
- 3476 H2
- 3477 H7
- 3478 B6
- 3479 H8
- 3480 H2
- 3481 H3
- 3482 H5
- 3483 H6
- 3484 H5
- 3485 I11
- 3486 I13
- 3487 I12
- 3488 I12
- 3489 I12
- 3490 H8
- 3491 D9
- 3492 F9
- 3493 H12
- 3494 H8
- 3495 H11
- 3496 H8
- 3497 I13
- 3498 D14
- 3499 A2
- 4450 C13
- 4452 F9
- 4453 I11
- 4454 B3
- 6450 E13
- 6451 E13
- 7450 A10
- 7451 D5
- 7452 F13
- 7453 F12
- 7454-A G11
- 7454-B F11
- 7454-C F11
- 7454-D G11
- 7455 D13
- 7456 E12
- 7457 E9
- 7458 A1
- 7460 I12

DSP

For Flash version: TMS320VC5416
For ROM version: TMS320VC5406

only for FLASH version

Voltage stabilisation

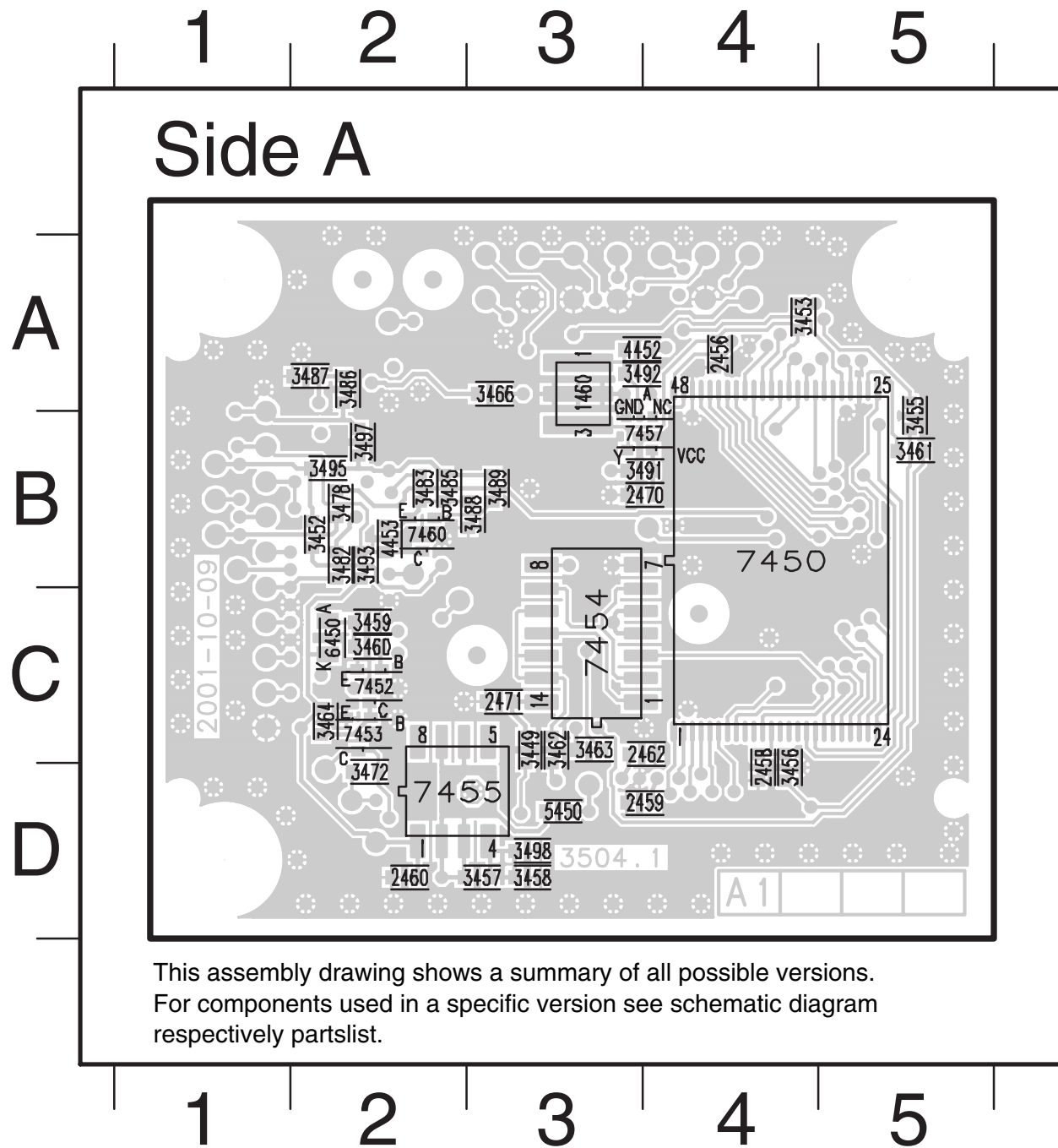
for 5V front uP

.... only for FLASH version
* only for ROM version

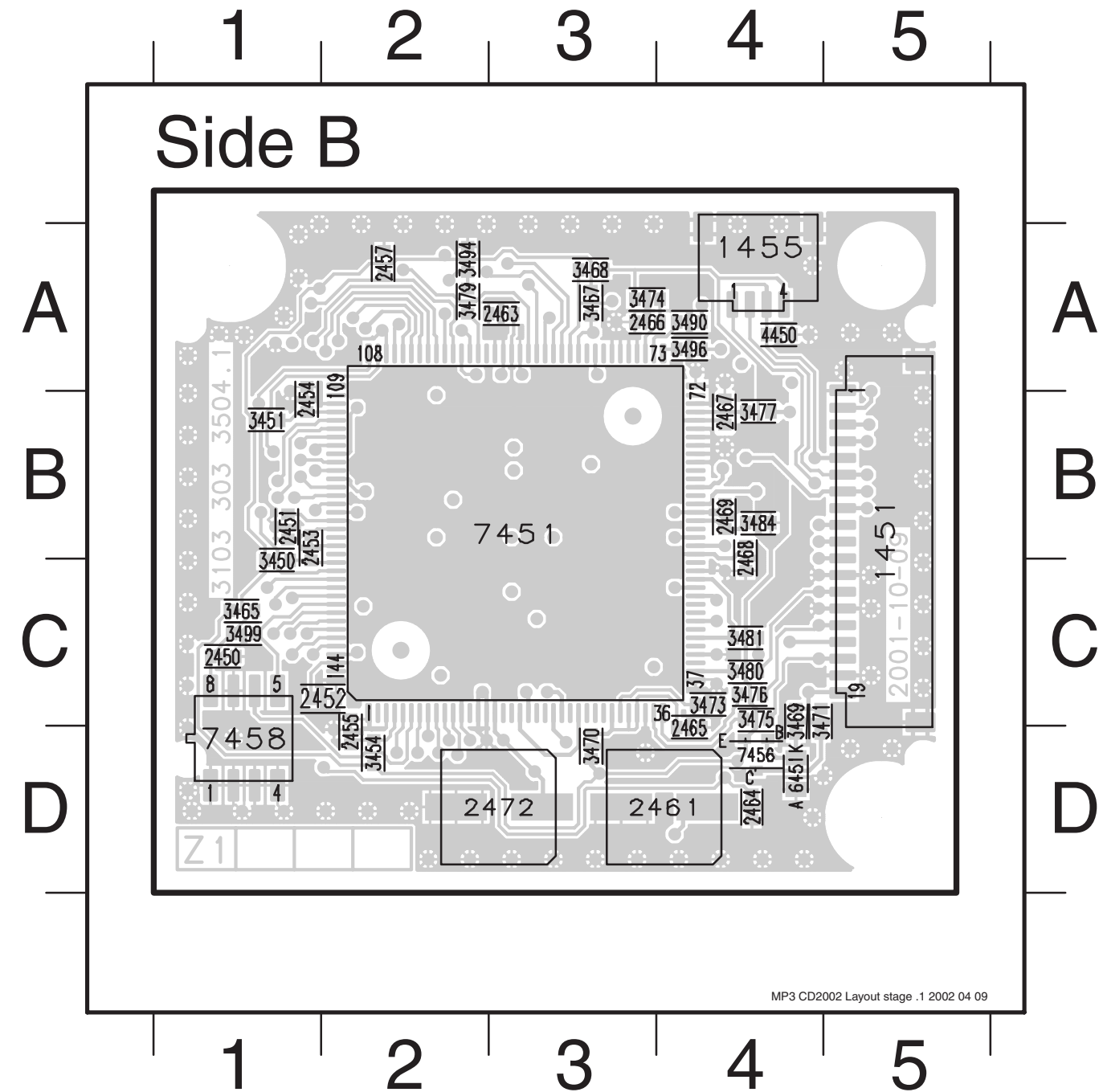
MP3 BOARD - COMPONENT LAYOUT

1460 A3	3449 C3	3460 C2	3482 B2	3492 A3	6450 C2
2456 A4	3452 B2	3461 B5	3483 B2	3493 B2	7450 B4
2458 D4	3453 A4	3462 C3	3485 B2	3495 B2	7452 C2
2459 D4	3455 B5	3463 C3	3486 A2	3497 B2	7453 C2
2460 D2	3456 D4	3464 C2	3487 A2	3498 D3	7454 C3
2462 C4	3457 D3	3466 A3	3488 B3	4452 A3	7455 D2
2470 B4	3458 D3	3472 D2	3489 B3	4453 B2	7457 B4
2471 C3	3459 C2	3478 B2	3491 B4	5450 D3	7460 B2

1451 B5	2457 A2	2469 B4	3469 C4	3479 A2	4450 A4
1455 A4	2461 D4	2472 D3	3470 D3	3480 C4	6451 D4
2450 C1	2463 A3	3450 C1	3471 C4	3481 C4	7451 B3
2451 B1	2464 D4	3451 B1	3473 C4	3484 B4	7456 D4
2452 C2	2465 D4	3454 D2	3474 A3	3490 A4	7458 D1
2453 B1	2466 A3	3465 C1	3475 C4	3494 A2	
2454 B1	2467 B4	3467 A3	3476 C4	3496 A4	
2455 D2	2468 B4	3468 A3	3477 B4	3499 C1	



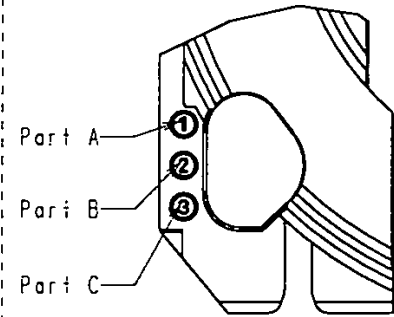
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist.



Exploded view 5DTC mechanic - for orientation only

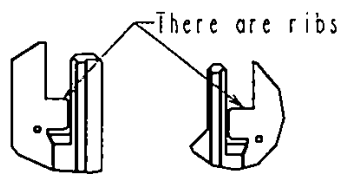
Sketch-1

TRAY(SUB)	3	83	84	85	86
TRAY No.	TRAY 1	TRAY 2; TRAY 3	TRAY 4	TRAY 5	
Part A	1	HOLE	1	HOLE	1
Part B	2	2	HOLE	HOLE	2
Part C	3	3	3	3	HOLE

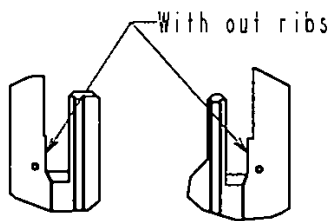


Sketch-2

TRAY(MAIN)

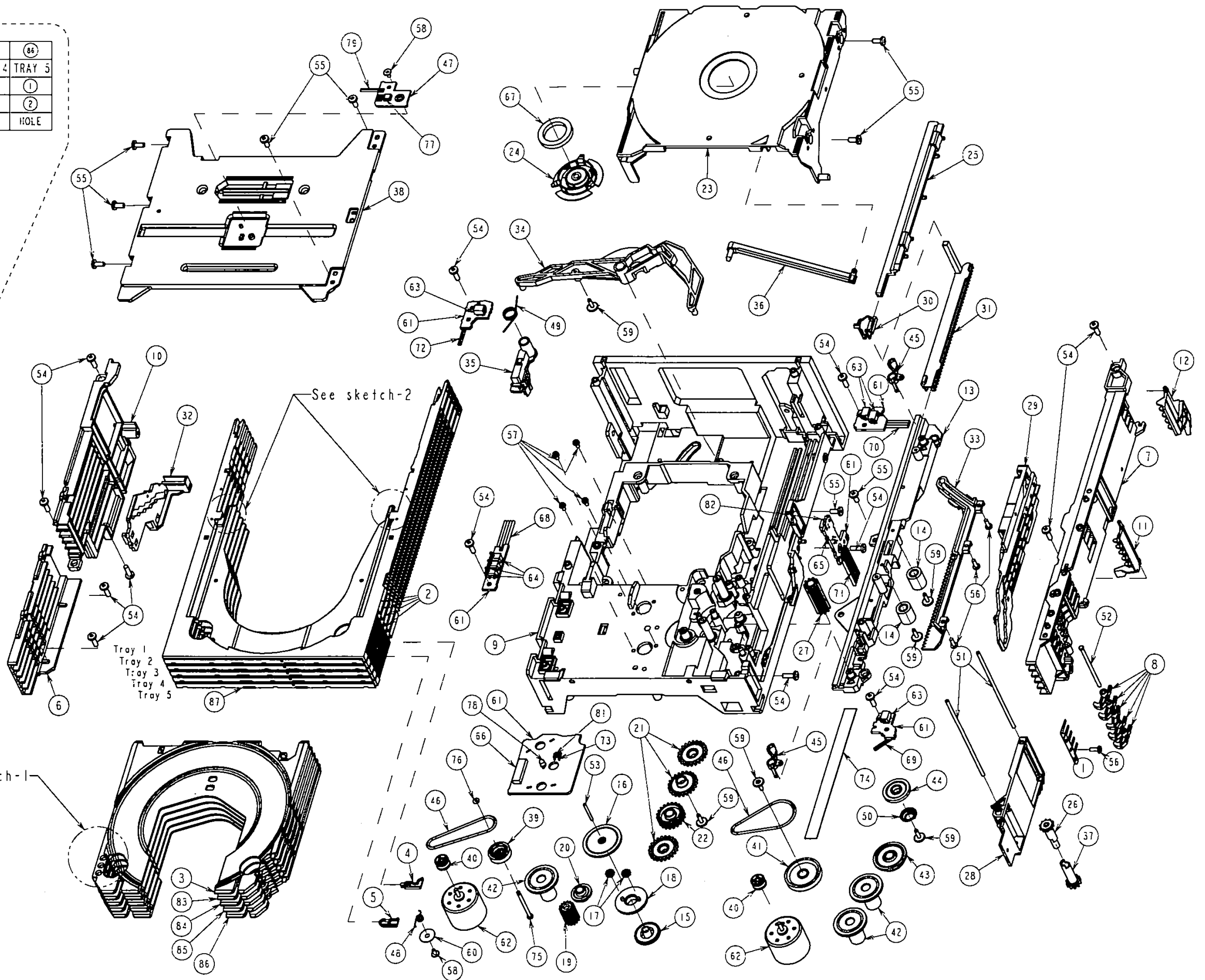


2 TRAY 1~4



87 TRAY 5

See sketch-1



ELECTRICAL PARTSLIST 5DTC MODULE MP3CD Version CD Board**MECHANICAL PARTS**

	3103 308 54710	5DTC Module (mechanic w/o electronic)
201	3103 309 05390	CD DRIVE DA12T3
252	4822 529 10387	Rubber damper CD DRIVE, FRONT
253	4822 529 10386	Rubber damper CD DRIVE, REAR

MISCELLANEOUS

	3103 308 67020	MP3 Board
1800	4822 267 11028	FFC-CONNECTOR 16P, Side entry
1820	2422 025 17303	FFC-CONNECTOR 19P, Side entry
1823	2422 025 16371	FFC-CONNECTOR 8P, Side entry
1824	4822 265 10979	FFC-CONNECTOR, 15P, Side entry

8001	3103 308 93090	FFC CABLE 16Pin 80mm BD
8051	3103 308 93100	FFC-CABLE 19Pin 90mm AD
8052	3103 308 93120	FFC CABLE 8Pin 80mm BD

CAPACITORS

2812	4822 124 11947	10µF	20%	16V
2813	4822 126 13193	4,7nF	10%	63V
2814	5322 126 11579	3,3nF	10%	63V
2815	2020 552 94427	100pF	5%	50V
2816	3198 017 42230	22nF	10%	50V

2817	4822 124 22726	4,7µF	20%	35V
2818	3198 024 44730	47nF	5%	50V
2821	2238 586 59812	100nF	10%	50V
2822	4822 126 13344	1,5nF	5%	63V
2823	4822 124 42383	220µF	20%	4V

2824	4822 126 14043	1µF	20%	16V
2825	4822 126 13344	1,5nF	5%	63V
2826	3198 017 34730	47nF	10%	16V
2827	5322 126 11578	1nF	10%	63V
2828	4822 126 11669	27pF	10%	50V

2829	3198 017 34730	47nF	10%	16V
2830	4822 124 81286	47µF	20%	16V
2831	4822 124 81286	47µF	20%	16V
2832	3198 017 31530	15nF	10%	50V
2833	5322 126 11583	10nF	10%	63V

2834	3198 017 31530	15nF	10%	50V
2835	5322 126 11583	10nF	10%	63V
2836	4822 124 40433	47µF	20%	25V
2837	3198 017 34730	47nF	10%	16V
2838	3198 017 44740	470nF	20%	10V

2839	2238 586 59812	100nF	10%	50V
2840	4822 126 14549	33nF	10%	16V
2841	2238 586 59812	100nF	10%	50V
2843	2020 552 94427	100pF	5%	50V
2844	5322 122 33861	120pF	5%	NP0

2845	5322 122 33861	120pF	5%	NP0
2846	4822 124 40248	10µF	20%	63V
2847	3198 017 41050	1µF	20%	10V
2848	2020 552 94427	100pF	5%	50V
2849	5322 122 33861	120pF	5%	NP0

2850	5322 122 33861	120pF	5%	NP0
2851	4822 124 40248	10µF	20%	63V
2852	4822 126 14549	33nF	10%	16V
2853	5322 126 11583	10nF	10%	63V
2854	4822 124 12245	220µF	20%	16V

2855	4822 124 11912	220µF	20%	6,3V
2860	4822 122 33753	150pF	5%	50V
2861	4822 122 33753	150pF	5%	50V
2863	4822 126 14508	180pF	5%	50V
2864	4822 126 14508	180pF	5%	50V

2865	4822 126 14508	180pF	5%	50V
2866	4822 126 14508	180pF	5%	50V

CAPACITORS

2869	3198 017 34730	47nF	10%	16V
2870	4822 126 13883	220pF	5%	50V
2871	4822 126 13883	220pF	5%	50V
2872	4822 126 13883	220pF	5%	50V
2873	4822 126 13883	220pF	5%	50V

2874	4822 126 13883	220pF	5%	50V
2875	4822 126 13883	220pF	5%	50V
2876	3198 017 44740	470nF	20%	10V
2877	4822 124 40433	47µF	20%	25V
2878	2238 586 59812	100nF	10%	50V

2879	5322 126 11578	1nF	10%	63V
2880	2222 867 15339	33pF	5%	50V
2881	4822 126 14249	560pF	10%	50V
2882	4822 126 14226	82pF	5%	50V
2883	3198 017 44740	470nF	20%	10V

2884	3198 017 44740	470nF	20%	10V
2885	4822 124 40196	220µF	20%	16V
2886	2238 586 59812	100nF	10%	50V
2887	3198 017 34730	47nF	10%	16V

RESISTORS

3801	4822 051 30563	56kΩ	5%	0,06W
3802	4822 051 30563	56kΩ	5%	0,06W
3803	4822 117 12925	47kΩ	1%	0,06W
3804	4822 117 12925	47kΩ	1%	0,06W
3805	4822 117 12925	47kΩ	1%	0,06W

3806	4822 117 12925	47kΩ	1%	0,06W
3807	4822 051 30103	10kΩ	5%	0,06W
3808	4822 051 30103	10kΩ	5%	0,06W
3809	4822 051 30103	10kΩ	5%	0,06W
3810	4822 051 30103	10kΩ	5%	0,06W

3811	4822 051 30103	10kΩ	5%	0,06W
3812	4822 051 30103	10kΩ	5%	0,06W
3813	4822 051 30222	2,2kΩ	5%	0,06W
3814	4822 051 30222	2,2kΩ	5%	0,06W
3815	4822 051 30222	2,2kΩ	5%	0,06W

3816	4822 051 30222	2,2kΩ	5%	0,06W
3817	4822 051 30479	47Ω	5%	0,06W
3818	4822 051 30479	47Ω	5%	0,06W
3819	4822 051 30479	47Ω	5%	0,06W
3820	4822 052 10478	4,7Ω	5%	NFR25

3821	4822 117 12917	1Ω	5%	0,06W
3822	4822 051 30103	10kΩ	5%	0,06W
3823	4822 051 30102	1kΩ	5%	0,06W
3824	4822 051 30474	470kΩ	5%	0,06W
3825	5322 117 13029	47kΩ	1%	0,06W

3826	4822 117 12891	220kΩ	1%	0,06W
3827	5322 117 13056	8,2kΩ	1%	0,06W
3828	5322 117 13052	2,7kΩ	1%	0,06W
3829	4822 051 30121	120Ω	5%	0,06W
3831	4822 051 30471	470Ω	5%	0,06W

3832	4822 051 30471	470Ω	5%	0,06W
3833	4822 051 30121	120Ω	5%	0,06W
3834	4822 051 30472	4,7kΩ	5%	0,06W
3836	4822 117 13632	100kΩ	1%	0,06W
3837	4822 051 30471	470Ω	5%	0,06W

3839	4822 051 30471	470Ω	5%	0,06W
3840	4822 051 30223	22kΩ	5%	0,06W
3841	4822 051 30153	15kΩ	5%	0,06W
3842	4822 051 30102	1kΩ	5%	0,06W
3843	4822 051 30102	1kΩ	5%	0,06W

3844	4822 051 30101	100Ω	5%	0,06W
3845	4822 051 30471	470Ω	5%	0,06W

ELECTRICAL PARTSLIST 5DTC MODULE MP3CD Version CD Board

RESISTORS

3846	4822 051 30102	1kΩ	5%	0,06W
3847	4822 117 12968	820Ω	5%	0,06W
3848	4822 051 30221	220Ω	5%	0,06W
3849	4822 051 30471	470Ω	5%	0,06W
3850	4822 117 12925	47kΩ	1%	0,06W
3851	4822 117 12968	820Ω	5%	0,06W
3852	4822 051 30221	220Ω	5%	0,06W
3854	4822 117 12925	47kΩ	1%	0,06W
3855	4822 051 30393	39kΩ	5%	0,06W
3856	4822 051 30472	4,7kΩ	5%	0,06W
3857	4822 051 30008	CHIP JUMPER 0603		
3859	4822 117 13632	100kΩ	1%	0,06W
3860	4822 051 30123	12kΩ	5%	0,06W
3861	4822 051 30153	15kΩ	5%	0,06W
3862	4822 051 30393	39kΩ	5%	0,06W
3864	4822 051 30333	33kΩ	5%	0,06W
3865	4822 051 30181	180Ω	5%	0,06W
3866	4822 117 13608	4,7Ω	5%	0,06W
3867	4822 051 30333	33kΩ	5%	0,06W
3868	4822 051 30183	18kΩ	5%	0,06W
3869	4822 051 30183	18kΩ	5%	0,06W
3870	4822 051 30681	680Ω	5%	0,06W
3871	4822 051 30181	180Ω	5%	0,06W
3872	4822 051 30272	2,7kΩ	5%	0,06W
3873	4822 051 30333	33kΩ	5%	0,06W
3874	4822 051 30333	33kΩ	5%	0,06W
3875	4822 051 30183	18kΩ	5%	0,06W
3876	4822 051 30183	18kΩ	5%	0,06W
3877	4822 051 30681	680Ω	5%	0,06W
3878	4822 051 30471	470Ω	5%	0,06W
3879	4822 051 30223	22kΩ	5%	0,06W
3880	4822 051 30339	33Ω	5%	0,06W
3881	4822 051 30151	150Ω	5%	0,06W
3883	4822 051 30472	4,7kΩ	5%	0,06W
3884	4822 051 30472	4,7kΩ	5%	0,06W
3888	4822 051 30103	10kΩ	5%	0,06W
3889	4822 051 30471	470Ω	5%	0,06W
3890	4822 051 30471	470Ω	5%	0,06W
3891	4822 051 30102	1kΩ	5%	0,06W
3892	4822 051 30102	1kΩ	5%	0,06W
3893	4822 051 30471	470Ω	5%	0,06W
3895	4822 051 30273	27kΩ	5%	0,06W
3896	4822 051 30101	100Ω	5%	0,06W
3897	4822 051 30333	33kΩ	5%	0,06W
3898	4822 051 30221	220Ω	5%	0,06W
3899	4822 051 30272	2,7kΩ	5%	0,06W
3901	4822 051 30561	560Ω	5%	0,06W
3902	4822 117 11139	1,5kΩ	1%	0,1W
3903	4822 051 30332	3,3kΩ	5%	0,06W
3904	4822 051 30332	3,3kΩ	5%	0,06W
3905	4822 051 30681	680Ω	5%	0,06W
3906	4822 051 30471	470Ω	5%	0,06W
3907	4822 117 12968	820Ω	5%	0,06W
3908	4822 051 30222	2,2kΩ	5%	0,06W
3909	4822 117 13632	100kΩ	1%	0,06W
3910	4822 051 30471	470Ω	5%	0,06W
3912	4822 051 30221	220Ω	5%	0,06W
3916	4822 051 30471	470Ω	5%	0,06W
3917	4822 117 13608	4,7Ω	5%	0,06W
3918	4822 051 30103	10kΩ	5%	0,06W
3919	4822 051 30153	15kΩ	5%	0,06W
3920	4822 051 30101	100Ω	5%	0,06W
3923	4822 051 30103	10kΩ	5%	0,06W

RESISTORS

3925	4822 051 30101	100Ω	5%	0,06W
3926	4822 051 30101	100Ω	5%	0,06W
3927	4822 051 30101	100Ω	5%	0,06W
3928	4822 051 30101	100Ω	5%	0,06W
4807	4822 051 30008	CHIP JUMPER 0603		
4809	4822 051 30008	CHIP JUMPER 0603		
4820	4822 051 30008	CHIP JUMPER 0603		
4824	4822 051 30008	CHIP JUMPER 0603		
4835	4822 051 20008	CHIP JUMPER 0805		
4836	4822 051 20008	CHIP JUMPER 0805		
4837	4822 051 20008	CHIP JUMPER 0805		
4838	4822 051 20008	CHIP JUMPER 0805		
4840	4822 051 20008	CHIP JUMPER 0805		
4841	4822 051 20008	CHIP JUMPER 0805		
4843	4822 051 20008	CHIP JUMPER 0805		

COILS

1810	2422 540 98519	RESONATOR 8,467MHz
5001	2422 549 44607	FERRITE BEAD
5002	2422 549 44607	FERRITE BEAD

DIODES

6877	9322 129 34685	BZX284-C3V9
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TRANSISTORS

7875	5322 130 42755	BC847C
7876	5322 130 42755	BC847C
7877	5322 130 42755	BC847C
7878	5322 130 42755	BC847C
7879	5322 130 60123	BC807-40

INTEGRATED CIRCUITS

7800	9352 684 20557	SAA7325H/T/M2B, Signal Processor
7801	4822 209 72554	MC7808CT 8V Regulator
7802	9322 181 79668	MM1469PH Motor Driver
7810	5322 209 82941	LM358D, Dual Opamp
7811	5322 209 82941	LM358D, Dual Opamp

ELECTRICAL PARTSLIST 5DTC MODULE MP3CD Version Control Board**MECHANICAL PARTS**

3103 308 54710 5DTC Module (mechanic w/o electronic)

MISCELLANEOUS

1801 2422 025 17065 FFC-CONNECTOR 16P, top entry
 1802 2422 025 17788 FFC-CONNECTOR 8P, top entry
 8021 3103 308 93110 FFC-CABLE 16Pin 60mm AD

CAPACITORS

2800© 4822 126 13879 220nF 20% 16V
 2801© 2238 586 59812 100nF 10% 50V
 2802© 2238 586 59812 100nF 10% 50V
 2803© 2238 586 59812 100nF 10% 50V
 2808 4822 124 40433 47µF 20% 25V

2810© 3198 017 34730 47nF 10% 16V
 2811© 2238 586 59812 100nF 10% 50V
 2812© 2238 586 59812 100nF 10% 50V
 2813© 2238 586 59812 100nF 10% 50V
 2814© 2238 586 59812 100nF 10% 50V

RESISTORS

3800© 4822 051 30472 4,7kΩ 5% 0,06W
 3801© 4822 051 30472 4,7kΩ 5% 0,06W
 3802© 4822 051 30472 4,7kΩ 5% 0,06W
 3803© 4822 051 30472 4,7kΩ 5% 0,06W
 3804© 4822 051 30472 4,7kΩ 5% 0,06W

3805© 4822 051 30472 4,7kΩ 5% 0,06W
 3806© 4822 051 30472 4,7kΩ 5% 0,06W
 3807© 4822 051 30472 4,7kΩ 5% 0,06W
 3808© 4822 051 30472 4,7kΩ 5% 0,06W
 3809© 4822 051 30472 4,7kΩ 5% 0,06W

3810© 4822 051 30103 10kΩ 5% 0,06W
 3811© 4822 051 30154 150kΩ 5% 0,0625W
 3815© 5322 117 13057 820Ω 1% 0,06W
 3816© 4822 051 30479 47Ω 5% 0,06W
 3818© 4822 051 30479 47Ω 5% 0,06W

3819© 5322 117 13057 820Ω 1% 0,06W
 3820© 5322 117 13057 820Ω 1% 0,06W
 3821© 4822 051 30479 47Ω 5% 0,06W
 3823© 4822 051 30479 47Ω 5% 0,06W
 3824© 5322 117 13057 820Ω 1% 0,06W

3826▲ 4822 117 12148 1,5Ω 5% 0,33W
 3827© 4822 051 30101 100Ω 5% 0,06W
 3828© 4822 051 30101 100Ω 5% 0,06W
 3829© 4822 051 30101 100Ω 5% 0,06W
 3830© 4822 051 30103 10kΩ 5% 0,06W

3831© 4822 051 30103 10kΩ 5% 0,06W
 3832© 4822 051 30272 2,7kΩ 5% 0,06W
 3833© 4822 051 30272 2,7kΩ 5% 0,06W
 3834© 4822 051 30272 2,7kΩ 5% 0,06W
 3835© 4822 051 30272 2,7kΩ 5% 0,06W

3836© 4822 051 30272 2,7kΩ 5% 0,06W
 3837© 4822 051 30272 2,7kΩ 5% 0,06W
 3838© 4822 051 30103 10kΩ 5% 0,06W
 3839© 4822 051 30272 2,7kΩ 5% 0,06W
 3840© 4822 051 30272 2,7kΩ 5% 0,06W

3841© 4822 051 30103 10kΩ 5% 0,06W
 3842© 4822 051 30103 10kΩ 5% 0,06W
 3845© 4822 051 20159 15Ω 5% 0,1W
 3850© 4822 117 12706 10kΩ 1% 0,06W
 3851© 4822 117 12706 10kΩ 1% 0,06W

3852© 4822 117 12706 10kΩ 1% 0,06W
 3853© 4822 117 12706 10kΩ 1% 0,06W
 3854© 4822 117 12706 10kΩ 1% 0,06W

RESISTORS

3855© 4822 117 12706 10kΩ 1% 0,06W
 3856© 4822 117 12706 10kΩ 1% 0,06W
 3857© 4822 117 12706 10kΩ 1% 0,06W
 3858© 4822 051 30102 1kΩ 5% 0,06W
 3859© 4822 051 30103 10kΩ 5% 0,06W

3860© 5322 117 13017 100Ω 1% 0,06W
 3861© 2322 704 62002 2kΩ 1% 0,06W
 3862© 4822 117 12706 10kΩ 1% 0,06W
 3863 4822 053 10228 2,2Ω 5% 1W
 4800© 4822 051 30008 CHIP JUMPER 0603

4802© 4822 051 30008 CHIP JUMPER 0603
 4803© 4822 051 30008 CHIP JUMPER 0603
 4804© 4822 051 30008 CHIP JUMPER 0603
 4805© 4822 051 20008 CHIP JUMPER 0805
 4806© 4822 051 30008 CHIP JUMPER 0603

4807© 4822 051 30008 CHIP JUMPER 0603
 4808© 4822 051 30008 CHIP JUMPER 0603
 4809© 4822 051 20008 CHIP JUMPER 0805
 4810© 4822 051 20008 CHIP JUMPER 0805
 4811© 4822 051 30008 CHIP JUMPER 0603

4812© 4822 051 30008 CHIP JUMPER 0603
 4813© 4822 051 30008 CHIP JUMPER 0603
 4814© 4822 051 30008 CHIP JUMPER 0603
 4816© 4822 051 20008 CHIP JUMPER 0805
 4817© 4822 051 20008 CHIP JUMPER 0805

4818© 4822 051 20008 CHIP JUMPER 0805
 4819© 4822 051 30008 CHIP JUMPER 0603
 4820© 4822 051 30008 CHIP JUMPER 0603
 4821© 4822 051 20008 CHIP JUMPER 0805
 4822© 4822 051 20008 CHIP JUMPER 0805

COILS

1800 4822 242 72066 CERAMIC FILTER 8,0MHz

TRANSISTORS

7806© 3198 010 42320 BC857BW

INTEGRATED CIRCUITS

7800 4822 209 72042 MC78L05ACP, STABILIZER
 7801© 3103 307 01640 TMP87P809M Microcontroller
 7803 4822 209 62059 TCA0372DP1, 2-FOLD OP-AMP.
 7805 4822 209 62059 TCA0372DP1, 2-FOLD OP-AMP.

ELECTRICAL PARTSLIST 5DTC MODULE MP3CD Version MP3 Board**MISCELLANEOUS**

1451 2422 025 17303 FFC-CONNECTOR 19P,side entry

CAPACITORS

2450	2238 586 59812	100nF	10%	50V
2451	3198 017 41050	1μF	20%	10V
2452	3198 017 41050	1μF	20%	10V
2453	2238 586 59812	100nF	10%	50V
2454	2238 586 59812	100nF	10%	50V

2455	2238 586 59812	100nF	10%	50V
2456	2238 586 59812	100nF	10%	50V
2457	5322 126 11583	10nF	10%	63V
2458	5322 126 11583	10nF	10%	63V
2459	3198 017 41050	1μF	20%	10V

2460	2238 586 59812	100nF	10%	50V
2461	4822 124 81059	220μF	20%	4V
2462	3198 017 41050	1μF	20%	10V
2463	3198 017 41050	1μF	20%	10V
2464	2238 586 59812	100nF	10%	50V

2465	2238 586 59812	100nF	10%	50V
2466	2238 586 59812	100nF	10%	50V
2467	3198 017 41050	1μF	20%	10V
2468	3198 017 41050	1μF	20%	10V
2469	2238 586 59812	100nF	10%	50V

2470	2238 586 59812	100nF	10%	50V
2471	2238 586 59812	100nF	10%	50V

RESISTORS

3449	4822 051 30101	100Ω	5%	0,06W
3450	4822 117 12971	15Ω	5%	0,06W
3451	4822 117 12971	15Ω	5%	0,06W
3452	4822 051 30101	100Ω	5%	0,06W
3453	4822 051 30109	10Ω	5%	0,06W

3454	4822 117 12971	15Ω	5%	0,06W
3455	4822 051 30102	1kΩ	5%	0,06W
3456	4822 051 30102	1kΩ	5%	0,06W
3457	5322 117 13051	680Ω	1%	0,06W
3458	5322 117 13061	180Ω	1%	0,06W

3459	4822 051 30221	220Ω	5%	0,06W
3460	4822 051 30102	1kΩ	5%	0,06W
3461	4822 051 30479	47Ω	5%	0,06W
3462	4822 051 30101	100Ω	5%	0,06W
3463	4822 051 30101	100Ω	5%	0,06W

3464	4822 051 30103	10kΩ	5%	0,06W
3465	4822 051 30101	100Ω	5%	0,06W
3466	4822 051 30471	470Ω	5%	0,06W
3467	4822 051 30103	10kΩ	5%	0,06W
3468	4822 051 30103	10kΩ	5%	0,06W

3469	4822 051 30101	100Ω	5%	0,06W
3470	4822 117 12971	15Ω	5%	0,06W
3471	4822 051 30339	33Ω	5%	0,06W
3472	4822 051 30154	150kΩ	5%	0,06W
3473	4822 117 13632	100kΩ	1%	0,06W

3474	4822 117 12971	15Ω	5%	0,06W
3475	4822 051 30101	100Ω	5%	0,06W
3476	4822 051 30101	100Ω	5%	0,06W
3477	4822 051 30471	470Ω	5%	0,06W
3478	4822 051 30471	470Ω	5%	0,06W

3479	4822 051 30471	470Ω	5%	0,06W
3480	4822 051 30101	100Ω	5%	0,06W
3481	4822 051 30101	100Ω	5%	0,06W
3482	4822 051 30471	470Ω	5%	0,06W
3483	4822 051 30101	100Ω	5%	0,06W

RESISTORS

3484	4822 117 12971	15Ω	5%	0,06W
3486	4822 051 30101	100Ω	5%	0,06W
3488	4822 117 13632	100kΩ	1%	0,06W
3489	4822 051 30103	10kΩ	5%	0,06W
3490	4822 051 30101	100Ω	5%	0,06W

3491	4822 051 30479	47Ω	5%	0,06W
3492	4822 051 30105	1MΩ	5%	0,06W
3493	4822 051 30103	10kΩ	5%	0,06W
3494	4822 051 30103	10kΩ	5%	0,06W
3495	4822 051 30103	10kΩ	5%	0,06W

3497	4822 051 30103	10kΩ	5%	0,06W
3498	4822 051 30332	3,3kΩ	5%	0,06W
3499	4822 051 30103	10kΩ	5%	0,06W
4450	4822 051 30008			CHIP JUMPER 0603

COILS

1460	4822 242 10989	CER.RES. 16,9MHz
5450	4822 157 11074	100μH

DIODES

6450	4822 130 11411	BZX284-C3V3
6451	4822 130 11366	BZX284-C3V9
7454	4822 130 34174	BZX79-B4V7

TRANSISTORS

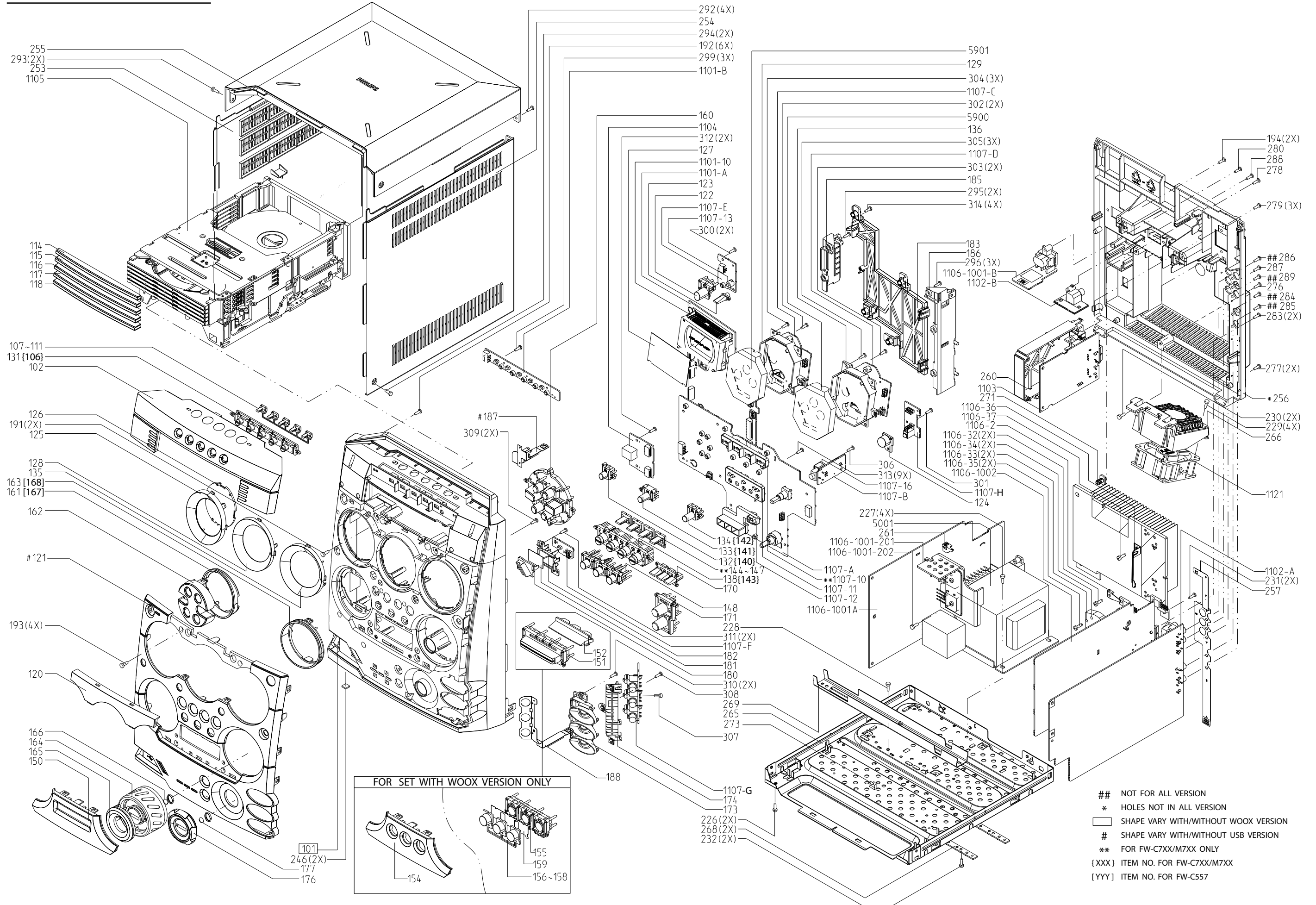
7452	3198 010 42310	BC847BW
7453	3198 010 42310	BC847BW
7456	3198 010 42310	BC847BW
7460	3198 010 42310	BC847BW

INTEGRATED CIRCUITS

7451	not available	please order complete MP3 Board
7455	4822 209 17108	LM317LD Voltage Regulator
7457	9352 456 50115	HC1G04, Inverter
7458	9322 130 41668	M24C64, EEPROM

3103 308 67020 MP3 Board

SET MECHANICAL EXPLODED VIEW



NOT FOR ALL VERSION
 * HOLES NOT IN ALL VERSION
 □ SHAPE VARY WITH/WITHOUT WOXX VERSION
 # SHAPE VARY WITH/WITHOUT USB VERSION
 ** FOR FW-C7XX/M7XX ONLY
 {XXX} ITEM NO. FOR FW-C7XX/M7XX
 [YYY] ITEM NO. FOR FW-C557

MECHANICAL & ACCESSORIES PARTS LIST - MAIN UNIT**SCREW LISTS - MAIN UNIT**

0101	3139 257 51471	Cabinet Front	0160	3139 118 19841	Button Set Func Control	5001	3139 118 32711	△ Mains Transformer /21	191	D3 x 12
0102	3139 257 51481	Panel Front 5DTC	0161	3139 118 19861	Cover Ring Func Control Foil	5001	3139 118 32721	△ Mains Transformer /22	192	D2 x 6
0106	3139 257 50221	Button Set 5DTC Play	0162	3139 257 50951	Cap Func Control	5900	3139 110 53521	Meter VU	193	D3 x 12
0107	3139 114 77741	Lightguide 5DTC Play 1	0163	3139 118 19891	Cover Ring Volume Foil	5901	3139 110 53521	Meter VU	194	D3 x 12
0108	3139 114 77751	Lightguide 5DTC Play 2	0164	3139 114 78031	Knob Volume Rotary	8202	3139 110 35350	FFC Foil 11P/220/11P AD	226	M3 x 6
0109	3139 114 77761	Lightguide 5DTC Play 3	0165	3139 118 19881	Cap Knob Volume	8203	3139 110 35010	FFC Foil 07P/340/07P AD	227	M3 x 10
0110	3139 114 77771	Lightguide 5DTC Play 4	0166	4822 492 51374	Ring	8404	3139 111 02511	FFC Foil 08P/300/08P AD Fold	228	M3 x 6
0111	3139 114 77781	Lightguide 5DTC Play 5	0170	3139 114 78161	Lightguide Game Sound	8405	3139 110 35280	FFC Foil 10P/120/10P AD	229	D3 x 12
0114	3139 257 50231	Cover Tray 5DTC 1	0171	3139 257 50401	Button MIX-IT/Game Mode	8407	3139 110 34920	FFC Foil 08P/280/08P BD	230	M3 x 12
0115	3139 257 50241	Cover Tray 5DTC 2	0173	3139 114 78791	Cover Game Port	8408	3139 111 02491	FFC Foil 19P/280/19P AD	231	M3 x 6
0116	3139 257 50251	Cover Tray 5DTC 3	0174	3139 114 78191	Bracket Game Port	8410	3139 111 02501	FFC Foil 05P/180/05P AD Fold	232	M3 x 6
0117	3139 257 50261	Cover Tray 5DTC 4	0176	3139 118 19931	Knob Game Sound Control	8412	3139 110 35031	FFC Foil 08P/140/08P AD	276	M3 x 6
0118	3139 257 50271	Cover Tray 5DTC 5	0177	4822 492 51374	Ring	8413	3139 110 35400	FFC Foil 09P/340/09P AD	277	M3 x 10
0120	3139 257 51501	Panel Front Display	0182	3139 114 78381	Holder LED USB	8415	3139 110 34600	FFC Foil 07P/280/07P AD	278	D3 x 16
0121	3139 257 50391	Panel Front Control USB /21	0183	3139 114 78301	Bracket PCB Front Display	8417	3139 110 36150	FFC Foil 15P/280/15P AD	279	D3 x 12
0121	3139 257 51491	Panel Front Control USB /22	0185	3139 114 72750	Bracket CDC Left	8501	3139 110 33940	FFC Foil 04P/180/04P BD	280	D3 x 12
0122	3139 257 50281	Button ECO/Standby Power	0186	3139 114 72760	Bracket CDC Right	8601	3139 111 02481	FFC Foil 08P/180/08P AD	283	D3 x 12
0123	3139 114 77901	Lightguide Power ECO	0246	3139 113 27140	Foot Rubber 4mm				286	D3 x 12
0124	3139 114 77911	Lightguide IR	0253	3139 114 79281	Panel Left				287	D3 x 12
0125	3139 257 50291	Cover Ring FTD	0254	3139 114 79301	Panel Right				288	D3 x 12
0126	3139 118 19791	Window Display FTD	0255	3139 114 78801	Cover Top	9965 000 18392	Kendo Mask (L)		292	M3 x 12
0128	3139 257 50301	Cover Ring VU Meter 1 (Left)	0256	3139 114 78361	Panel Rear	9965 000 18393	Kendo Mask (R)		293	M3 x 12
0129	3139 114 78261	Bracket VU Meter 1 (Left)	0266	3139 114 79311	Bracket Fan	9965 000 18394	Woofer 6,5" 6R 165W		294	M3 x 6
0135	3139 257 50311	Cover Ring VU Meter 2 (Right)	0271	3139 114 71010	Stopper Heatsink	9965 000 18395	Woofer Ring (L)		295	D3 x 12
0136	3139 114 78271	Bracket VU Meter 2 (Right)	0347	3139 119 00791	L/R Loudspeaker Box	9965 000 18396	Woofer Ring (R)		296	D3 x 12
						9965 000 18397	Tweeter 2" 6R			
0140	3139 257 50321	Button DIM	0351	2422 076 00546	Cable FM Aerial	9965 000 18398	Tweeter Ring		299	D2 x 8
0141	3139 257 50331	Button PROG	0352	4822 303 50082	Antenna AM Loop	9965 000 18399	Woox 6,5"		300	D3 x 12
0142	3139 257 50341	Button Clock/Timer	0353	3139 228 61801	Remote Control	9965 000 18400	Woox Ring		301	D3 x 12
0143	3139 257 50451	Button Set Source Select	0356	2422 070 98151	△ Mains Cord	9965 000 18389	Rubber Foot (20 x 11 x 3 mm)		302	D3 x 10
0144	3139 114 77961	Lightguide Source Sel CD	0357	3139 128 73010	△ Adaptor Plug /21	9965 000 18401	Rubber Foot (Dia. 15 x 1 mm)		303	D3 x 10
0145	3139 114 77971	Lightguide Source Sel TUNER	0358	4822 263 21206	Cable Cinch/1M7/Cinch				304	D3 x 12
0146	3139 114 77981	Lightguide Source Sel PC-LINK	0364	2422 076 00523	Cable USB-A/USB-B 1M5 4P	Note :	Only the parts mentioned in this list are normal		305	D3 x 12
0147	3139 114 77991	Lightguide Source Sel AUX/ GAME	0369	3139 119 00891	CD-ROM USB PC LINK Installer SW		service spare parts.		306	D3 x 12
0148	3139 257 50351	Button Set IS/DSC/VAC	0370	3139 115 22781	Instruction For Use /21				307	D3 x 12
									308	D3 x 12
0154	3139 257 50381	Cover Orn WOOX	0370	3139 115 22451	Instruction For Use /22				309	D2 x 8
0155	3139 114 78101	Frame Button WOOX	0371	3139 115 22591	Instruction For Use /22 (E. Europe Language)				310	D3 x 10
0156	3139 257 50421	Lightguide WOOX 1							311	D2 x 8
0157	3139 257 50431	Lightguide WOOX 2	1104	3103 308 66991	PBAS USB PC LINK				312	D3 x 12
0158	3139 257 50441	Lightguide WOOX 3	1121	2822 031 01494	Fan 12VDC 0,8W 3100RPM				313	D3 x 12
									314	D3 x 12

REVISION LIST

Version 1.0 (3139 785 30350)

- * Initial Release (FW-M777/22)

Version 1.1 (3139 785 30351)

- * Introduction of FW-M777/21
- * Page 5-9 to 5-10 : Front Control Board - Electrical parts list adapted
- * Page 6-5 to 6-6 : Front Display Board - Electrical parts list adapted
- * Page 8-9 to 8-10 : AF11 Board - Electrical parts list adapted
- * Page 11-2 : Mechanical & Accessories parts list adapted
- * Page 11-2 : Additional of L/R Loudspeaker Box Breakdown