CD Soundmachine

AZ 2055

all versions

Service
Service
Service

Service Manual

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CLASS 1
LASER PRODUCT

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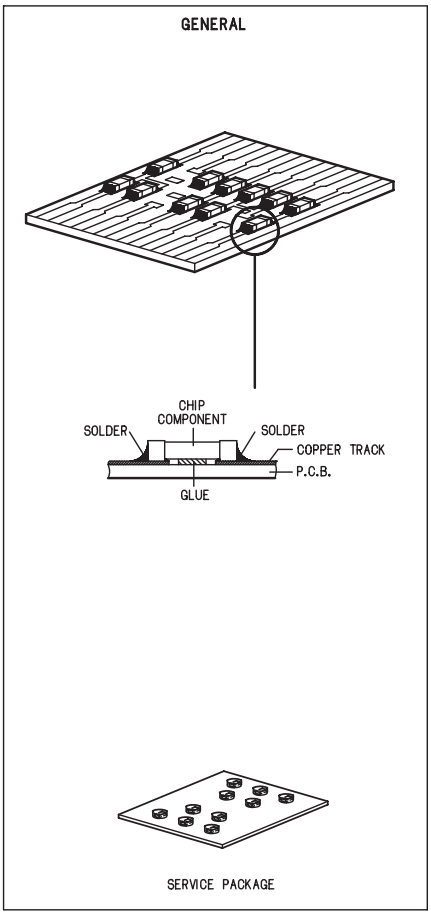
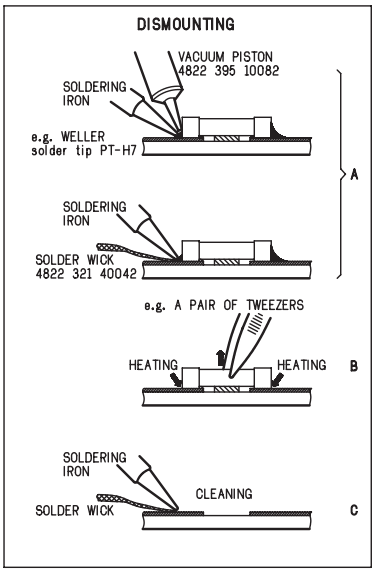
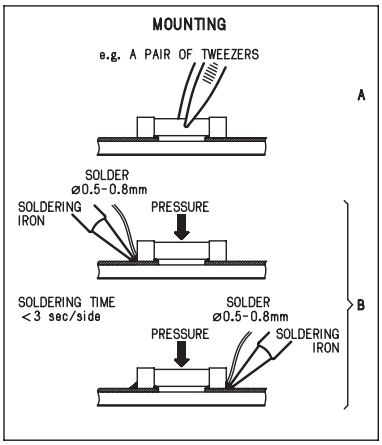
GB 3140 785 32510

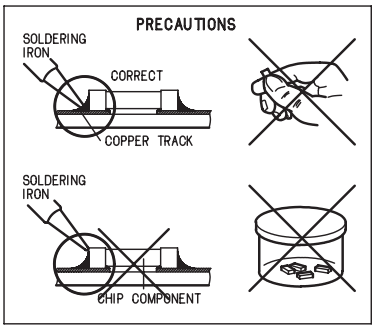
PHILIPS

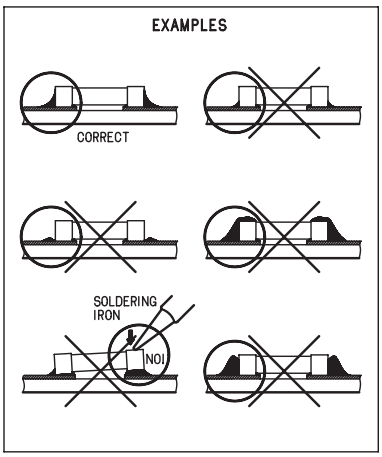
HANDLING CHIP COMPONENTS











GB WARNING
All ICs and many other semiconductors 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 wristband with resistance. Keep components and tools 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 vermindern. 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 longévite pourrait être considérablement écourtée par le fait qu´aucune précaution nést prise à leur manipulation.
Lors de réparations, s´assurer de bien être relié au même potentiel que la masse de l´appareil et enfileer 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).
Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
Sorgen Sie dafür, daß Sie im Reparaturfall über ein Puls-armband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

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 riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa delápparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SAFETY

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 ⚠

NL
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkeliijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.
De Veiligheidsonderdelen zijn aangeduid met het symbool ⚠

F
Les normes de sécurité exigent que l`appareil soit remis à l`état d`origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.
Les composants de sécurité sont marqués ⚠

I
Le norme di sicurezza estigono che l´apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.
Componenty di sicurezza sono marcati con ⚠

D
Bei jeder Reparatur sind die geltenden Sicherheitsvor-schriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Original-ersatzteile zu verwenden.
Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

CLASS 1
LASER PRODUCT

GB **DANGER**: 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.

DK Advarsel !
Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

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

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

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

TECHNICAL SPECIFICATIONS

GENERAL

Mains voltage	-/00C/05	:	230 V
	-/01/19	:	120 / 230 V
	-/17	:	120V
Mains freq.	-/00C/05	:	50 Hz
	-/01/19	:	50 / 60 Hz
	-/17	:	60 Hz
Battery	main set	:	9 V (R20, UM1 x 6)
	remote	:	3V (R03, AAA x 2)
Power consumption		:	< 35 W (max.)
Dimension (W x H x D)		:	471 x 153 x 251 mm
Weight		:	3.8 Kg

AMPLIFIER

Output power	mains	:	2 x 1.6 W
	battery	:	2 x 1.6 W
Speaker impedance		:	2 x 4 ohm
Frequency response		:	
	BASS - 100 Hz	:	+6 / -14 dB
	MID - 1K Hz	:	+8 / -8 dB
	HIGH - 10K Hz	:	+10 / -10 dB
	DBB on	:	+8 dB

TUNER - FM SECTION

Tuning range	:	87.5 - 108 MHz
IF frequency	:	10.7 MHz ± 0.2 MHz
Sensitivity	:	20 dBf at 26dB S/N
Selectivity	:	24 dB at 300kHz
IF rejection	:	85 dB
Image rejection	:	24 dB

TUNER - AM SECTION

Tuning range	MW	:	531 - 1602 kHz
	-/17	:	530 - 1700 kHz
	LW	:	153 - 279 kHz
IF frequency		:	450 kHz ± 1 kHz
Sensitivity	MW	:	3200 µV/m at 26dB S/N
	LW	:	5500 µV/m at 26dB S/N
Selectivity	MW	:	22 dB
	LW	:	29 dB
IF rejection	MW	:	64 dB
	LW	:	60 dB
Image rejection	MW	:	32 dB
	LW	:	38 dB

AUDIO CASSETTE RECORDER

Number of tracks		:	1 stereo
Tape speed		:	4.76 cm/sec ± 3%
Wow & flutter		:	< 0.48 JIS UWTD
Fast wind/rewind C60		:	< 110 sec.
Frequency response	P/B	:	125 - 8000 Hz
S/N ratio		:	> 36 dB (R/P)
Erasing ratio		:	> 50 dB
Bias frequency		:	73 ± 1.5 kHz

COMPACT DISC

Frequency response		:	100 Hz - 10 kHz ± 2dB
S/N ratio		:	60 dB
Channel difference	1 kHz	:	2 dB
Channel crosstalk	1 kHz	:	40 dB
Laser wavelength		:	780 ± 20 nm
Laser light power		:	< 0.5 mW

SERVICE TOOLS

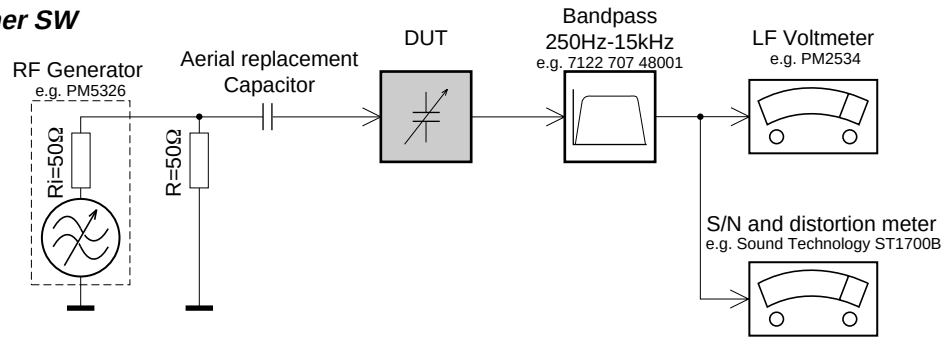
Audio signal disc SBC 429.....4822 397 30184
Playability test disc SBC 444.....4822 397 30245
Test disc 5 (disc without errors) +
Test disc 5A (disc with dropout errors, black spots and fingerprints)
SBC 426/426A.....4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without “pause”).....4822 397 30155

AVAILABLE ESD PROTECTION EQUIPMENT

anti-static table mat	large 1200x650x1.25mm	4822 466 10953
	small 600x650x1.25m	4822 466 10958
anti-static wristband		4822 395 10223
connection box (3 press stud connections, 1MΩ)		4822 320 11307
extendible cable (2m, 2MΩ, to connect wristband to connection box)		4822 320 11305
connecting cable (3m, 2MΩ, to connect table mat to connection box)		4822 320 11306
earth cable (1MΩ, to connect any product to mat or to connection box)		4822 320 11308
KIT ESD3 (combining all 6 prior products - small table mat)		4822 310 10671
wristband tester		4822 344 13999

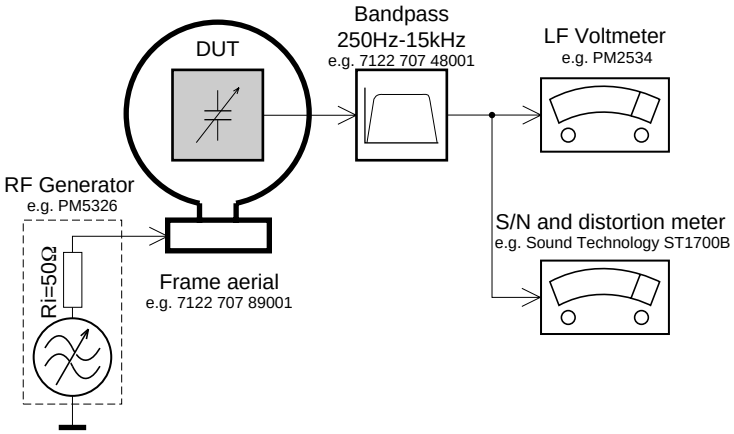
SERVICE MEASUREMENT

Tuner SW



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).

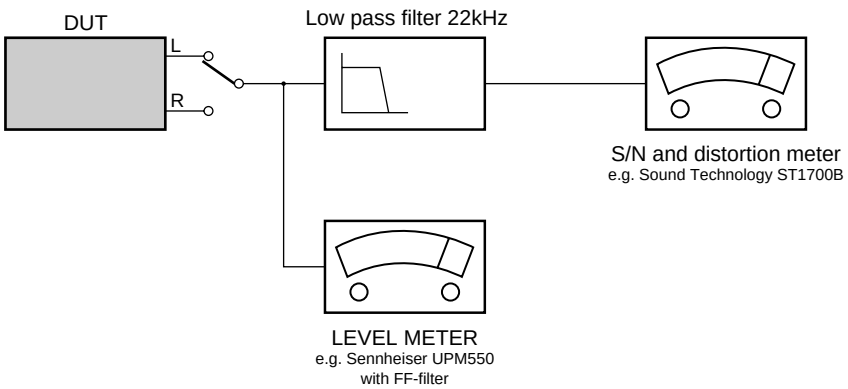
Tuner AM (MW,LW)



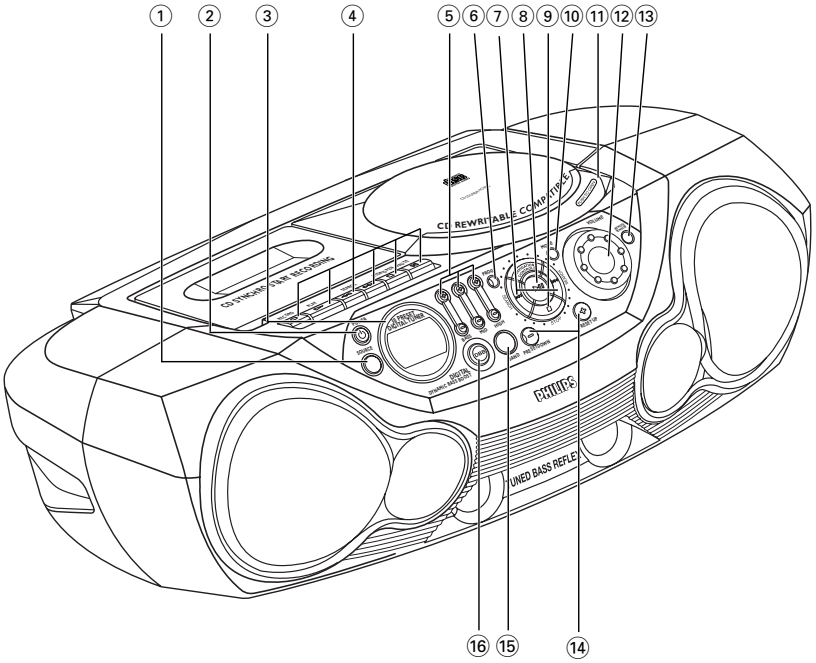
To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday«s cage.

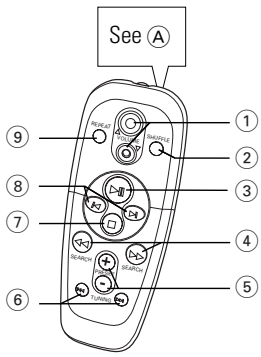
CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)
L.P.F. = 13 th order filter 4822 395 30204



CONNECTIONS AND CONTROLS





Remote control for AZ2055 model only

TOP AND FRONT PANELS

(See 1)

① **SOURCE** – selects CD/ TUNER / TAPE function
② ⏻ – power on/ off switch
③ **Display** – shows the status of the set
④ ***Cassette recorder keys***
RECORD ● – starts recording
PLAY ▶ – starts playback
SEARCH ◀◀/▶▶ – fast winds/rewinds tape
STOP/OPEN ■▲
– opens the cassette compartment
– stops the tape
PAUSE ▮▮ – pauses playback or recording
⑤ **BASS, MID, HIGH** – EQ keys to adjust the bass, mid & treble frequencies
⑥ **PROG**
CD: programs tracks and reviews the program;
Tuner: programs preset radio stations
Navigation controls
⑦ ⏮, ⏭
CD: – searches back and forward within a track;
– skips to the beginning of a current track/previous/ later track
Tuner: – tunes to radio stations *(down, up).*
⑧ ▶▮▮ – starts or pauses CD playback
⑨ ■ – stops CD playback;
– erases a CD program
⑩ **MODE** – selects different play modes: e.g. **REPEAT** or **SHUFFLE** (random) order
⑪ **PUSH TO OPEN** – opens/closes the CD door
⑫ **VOLUME** – to adjust volume level
⑬ **REMOTE SENSOR** *(for AZ2055 model only)* – infrared sensor for remote control
⑭ **PRESET DOWN/ UP** (**–, +**) – selects a preset tuner station *(down, up)*
⑮ **BAND** – selects waveband
⑯ **DBB** – (Dynamic Bass Boost) activates a more vivid bass response

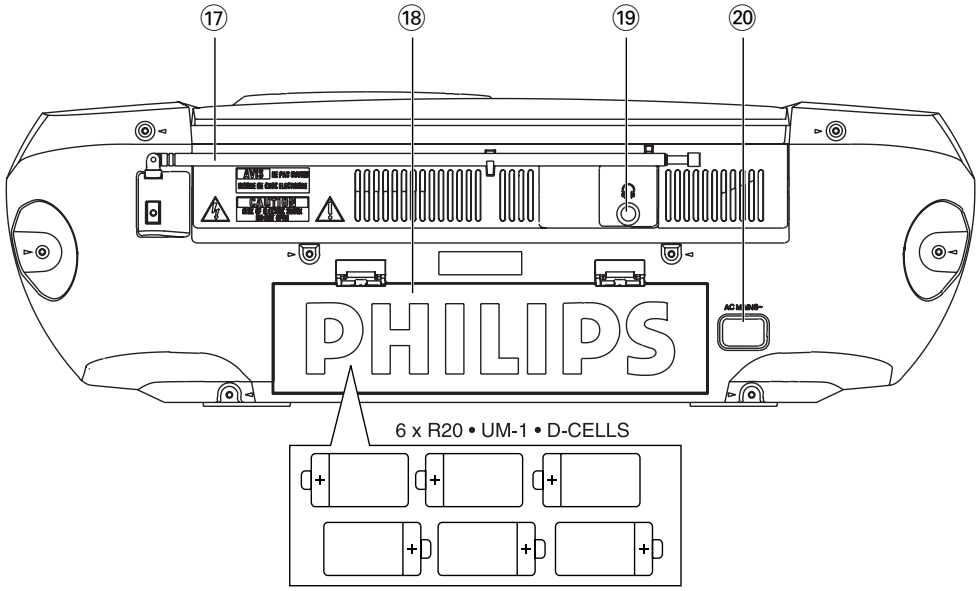
REMOTE CONTROL *(for AZ2055 only)*

① **VOLUME** ▲,▼ – adjusts volume level *(up, down)*
② **SHUFFLE** – plays all CD tracks in random order
③ ▶▮▮ – starts/ pauses CD playback
④ **SEARCH** ◀◀, ▶▶ – searches backwards/ forwards within a track
⑤ **PRESET +, –** – selects a preset radio station *(up, down)*
⑥ **TUNING** ⏮, ⏭ – tunes to tuner stations *(down, up)*
⑦ ■ – stops CD playback;
– erases a CD program
⑧ ⏮, ⏭ – skips to the beginning of a current track previous/ subsequent track
⑨ **REPEAT** – repeats a track /program/ entire CD

CAUTION

Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.

CONNECTIONS AND CONTROLS



BACK PANEL

⑰ **Telescopic antenna** – improves FM reception
⑱ **Battery compartment** – for 6 batteries, type R-20, UM1 or D-cells
⑲🎧 – 3.5 mm stereo headphone jack
Note: The speakers will be muted when headphones are connected to the set.
⑳ **AC MAINS** – inlet for power cord

POWER SUPPLY

Whenever convenient, use the power supply to conserve battery life. Make sure you remove the power plug from the set and wall outlet before inserting batteries.

Batteries *(not included)*

- Insert 6 batteries, type **R-20**, **UM-1** or **D-cells**, (preferably alkaline) with the correct polarity.

Remote control *(for AZ2055 only /See* A *)*

- Insert 2 batteries, type **AAA**, **R03** or **UM4** (preferably alkaline).

Incorrect use of batteries can cause electrolyte leakage and will corrode the compartment or cause the batteries to burst.

- *Do not mix battery types:* e.g. alkaline with carbon zinc. Only use batteries of the same type for the set.
- When inserting new batteries, do not try to mix old batteries with the new ones.
- ***Batteries contain chemical substances, so they should be disposed of properly.***

Using AC Power

1. Check if the power supply, as shown on **the type plate located on the bottom of the set**, corresponds to your local power supply. If it does not, consult your dealer or service center.
2. If your set is equipped with a voltage selector, adjust the selector so that it matches with the local power .
3. Connect the power cord to the wall outlet.
4. To disconnect the power supply, unplug the set from the wall outlet.

Auto-Standby mode

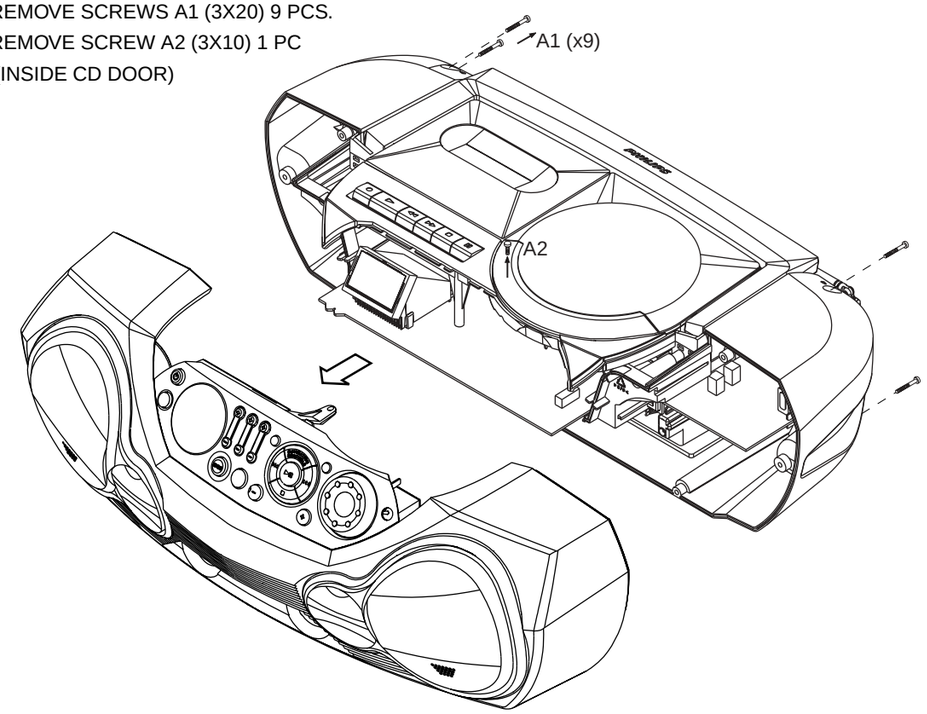
When a CD or tape has reached the end of playback and remains in the stop position for more than 15 minutes, the set will switch off automatically to save energy.

The type plate is located on the bottom of the set.

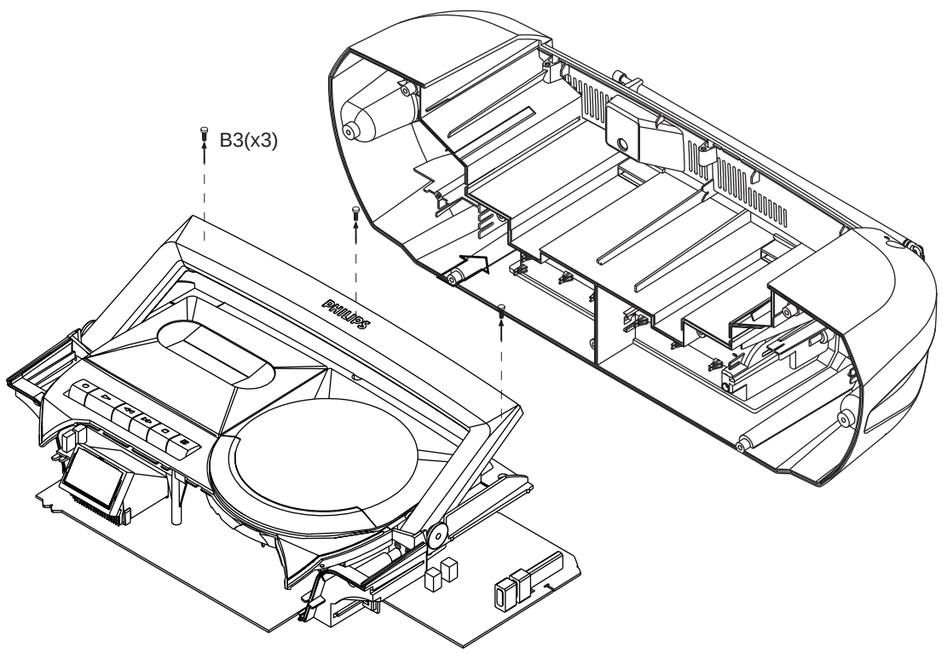
For more information on operation instruction please visit Philips Audio internet site : http://www.audio.philips.com

DISASSEMBLY DIAGRAM

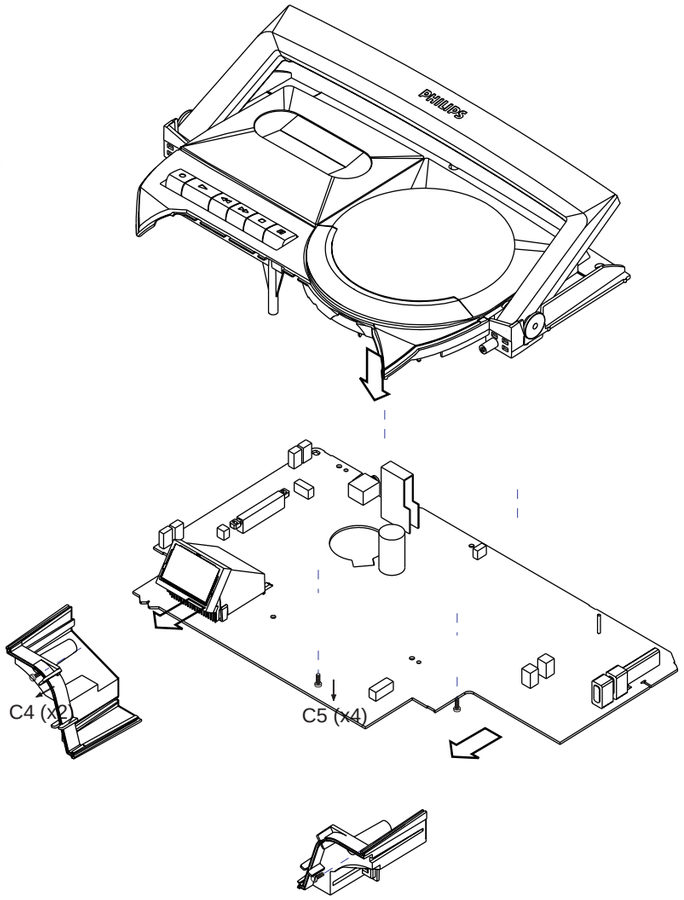
A. REMOVE FRONT CABINET ASSEMBLY
- REMOVE SCREWS A1 (3X20) 9 PCS.
- REMOVE SCREW A2 (3X10) 1 PC
  (INSIDE CD DOOR)



B. REMOVE BACK CABINET ASSEMBLY.
- REMOVE SCREWS B3 (3X10) 3 PCS.



C. REMOVE COMBI BOARD ASSEMBLY
- REMOVE SCREWS C4 (3X10) 2 PCS.
- REMOVE FIXING BRACKETS
- REMOVE SCREWS C5 (3X10) 4 PCS.



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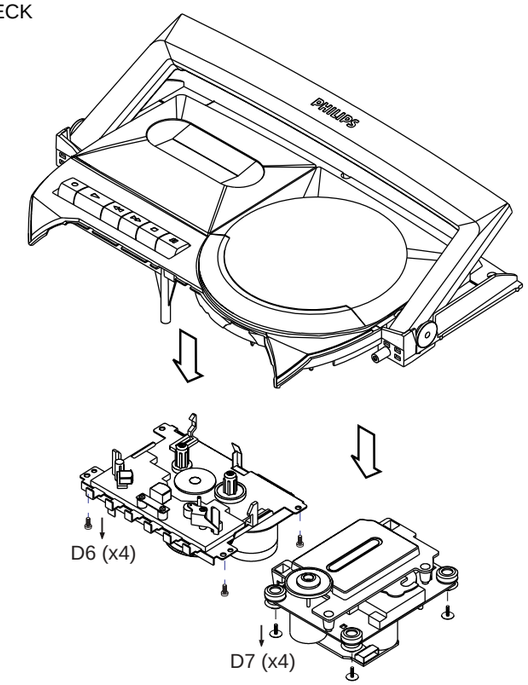
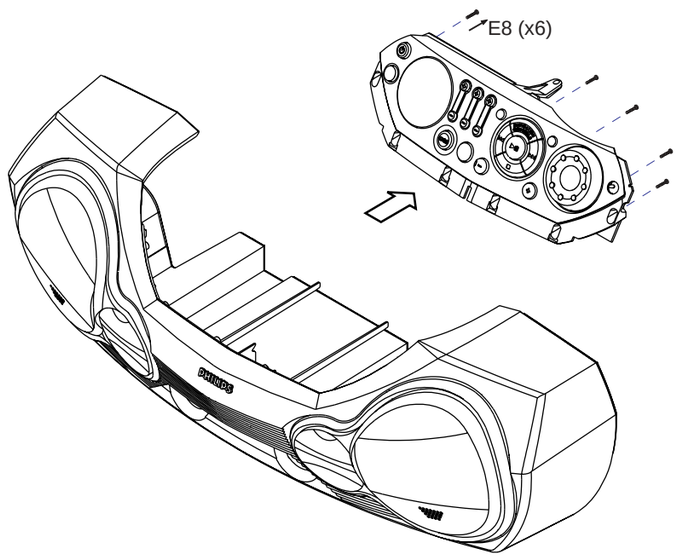
D. REMOVE DECK MECHANISM
- REMOVE SCREWS D6 (3X8) 4 PCS.
- REMOVE CASSETTE DECK
- REMOVE SCREWS D7 (2.5X10) 4 PCS.
- REMOVE CD DECK



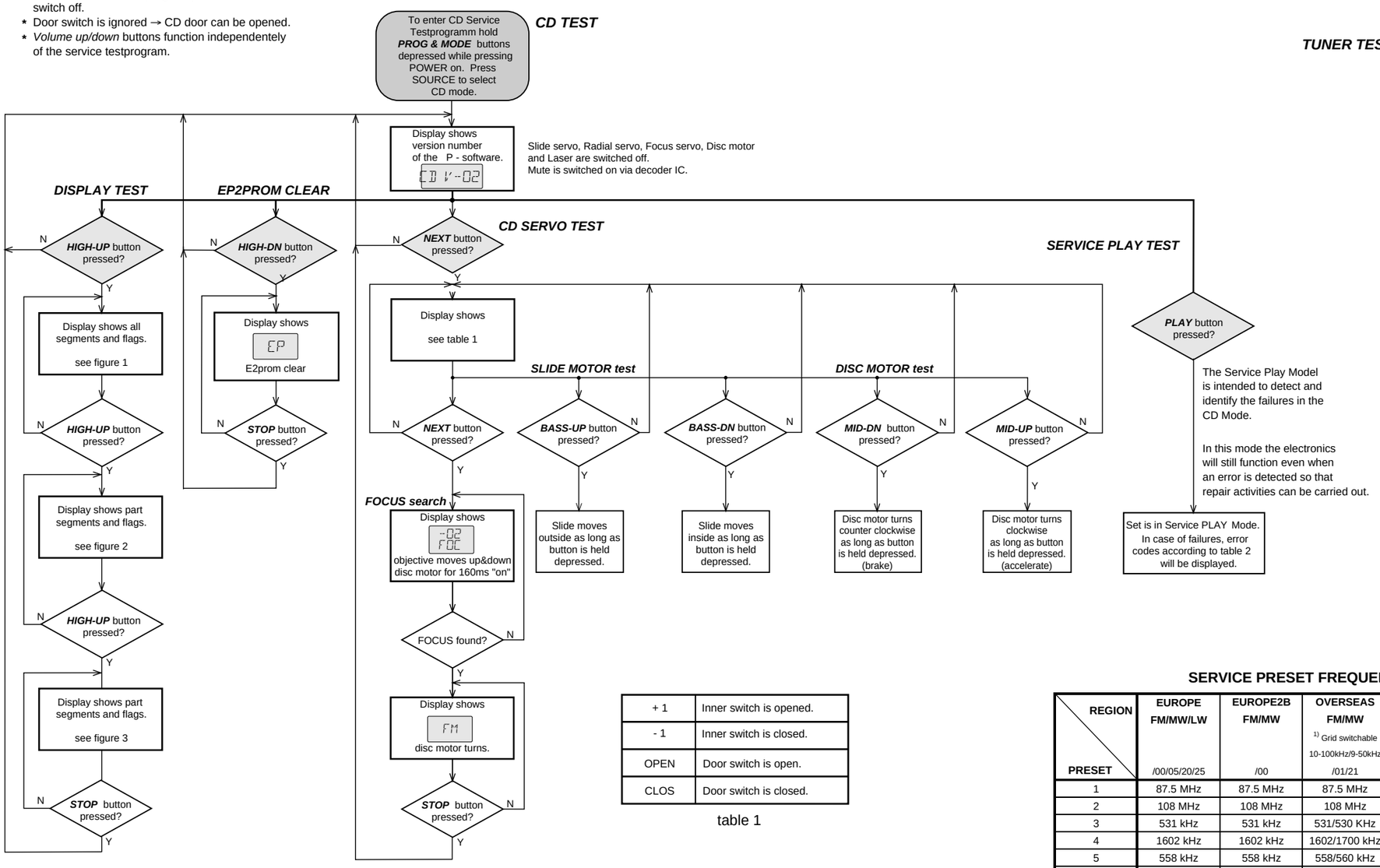
E. REMOVE CD PANEL-FRONT ASSEMBLY
- REMOVE SCREWS E8 (2.5X10) 6 PCS.

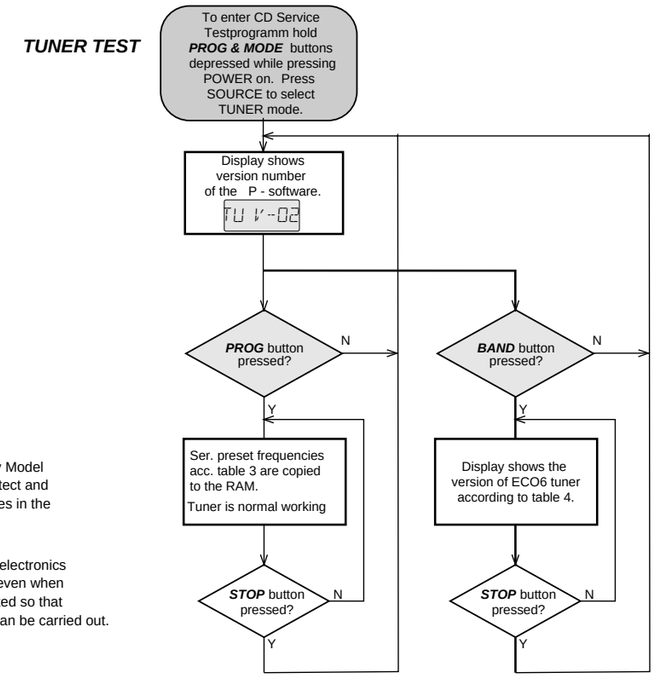


4 - 2

SERVICE TEST PROGRAM

* *STOP* button pressed in any step returns to begin of Service Testprogram.
* To leave Service Testprogram press POWER to switch off.
* Door switch is ignored → CD door can be opened.
* *Volume up/down* buttons function independentely of the service testprogram.





+ 1	Inner switch is opened.
- 1	Inner switch is closed.
OPEN	Door switch is open.
CLOS	Door switch is closed.

table 1

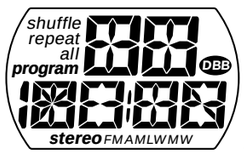


figure 1

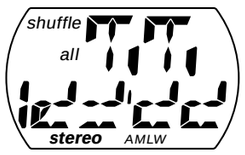


figure 2

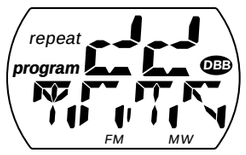


figure 3

CD ERROR CODES

Error code	*Error description*
Err 1	No Focus found.
Err 2	Time out error for disc motor reach the normal speed.
Err 3	Focus error during tracking initialization.
Err 4	Subcode error on play mode.
Err 5	Focus error on play mode.
Err 6	Radial error on search mode.
Err 7	Focus error

table 2

SERVICE PRESET FREQUENCIES

REGION / PRESET	EUROPE FM/MW/LW /00/05/20/25	EUROPE2B FM/MW /00	OVERSEAS FM/MW [1] Grid switchable 10-100kHz/9-50kHz /01/21	EAST-EUROPE FM/MW /14	USA FM/MW /14/17/37
1	87.5 MHz	87.5 MHz	87.5 MHz	65.81 MHz	87.5 MHz
2	108 MHz	108 MHz	108 MHz	108 Mhz	108 MHz
3	531 kHz	531 kHz	531/530 KHz	74 MHz	530 kHz
4	1602 kHz	1602 kHz	1602/1700 kHz	87.5 MHz	1700 kHz
5	558 kHz	558 kHz	558/560 kHz	531 kHz	560 kHz
6	1494 kHz	1494 kHz	1494/1500 kHz	1602 kHz	1500 kHz
7	153 kHz	-	-	558 kHz	-
8	279 kHz	-	-	1494 kHz	-
9	198 kHz	-	-	-	-
10	-	-	-	-	-
11	-	-	-	-	-
12	-	-	-	-	-
13	-	-	-	-	-

table 3

TUNER VERSION

VERS	*REGION*
01	/00 EUROPE - 3 BAND
06	/00 EUROPE - 2 BAND
10	/01 OVERSEAS
14	/14 EAST EUROPE
17	/17 USA

table 4

[1] **How to set frequency grid:**

AM - 9 kHz / FM - 50 kHz : Hold ***MODE*** with the ***PRESET DOWN*** simultaneously and then switch to ***TUNER***.

AM - 10 kHz / FM - 100 kHz : Hold ***MODE*** with the ***PRESET UP*** simultaneously and then swutch to ***TUNER***.

Selected frequency grid is stored in the EEPROM.

Abbreviations and Pin-description of CD Ics

SERVO PROCESSOR SAA7325H

SYMBOL	PIN	DESCRIPTION
HFREF	1	comparator common mode input
HFIN	2	comparator signal input
ISLICE	3	current feedback output from data slicer
V_{SSA1}	4(1)	analog ground 1
V_{DDA1}	5(1)	analog supply voltage 1
I_{ref}	6	reference current output pin
V_{RIN}	7	reference voltage for servo ADC's
D1	8	unipolar current input (central diode signal input)
D2	9	unipolar current input (central diode signal input)
D3	10	unipolar current input (central diode signal input)
D4	11	unipolar current input (central diode signal input)
R1	12	unipolar current input (satellite diode signal input)
R2	13	unipolar current input (satellite diode signal input)
V_{SSA2}	14(1)	analog ground 2
CROUT	15	crystal/resonator output
CRIN	16	crystal/resonator input
V_{DDA2}	17(1)	analog supply voltage 2
LN	18	DAC left channel differential output - negative
LP	19	DAC left channel differential output - positive
V_{neg}	20	DAC negative reference input
V_{pos}	21	DAC positive reference input
RN	22	DAC right channel differential output - negative
RP	23	DAC right channel differential output - positive
SELPLL	24	selects whether internal clock multiplier PLL is used
TEST1	25	test control input 1; this pin should be tied LOW
CL16	26	16.9344 MHz system clock output
DATA	27	serial d4(1)ata output (3-state)
WCLK	28	word clock output (3-state)
SCLK	29	serial bit clock output (3-state)
EF	30	C2 error flag output (3-state)
TEST2	31	test control input 2; this pin should be tied LOW
KILL	32	kill output (programmable; open-drain)
V_{SSD1}	33(1)	digital ground 2
V2/V3	34	versatile I/O: input versatile pin 2 or output versatile pin 3 (open-drain)
WCLI	35	word clock iutput (for data loopback to DAC)
SDI	36	serial data input (for data loopback to DAC)
SCLI	37	serial bit clock input (for data loopback to DAC)
RESET	38	power-on reset input (active LOW)
SDA	39	microcontroller interface data I/O line (open-drain output)
SCL	40	microcontroller interface clock line input

4 - 3

Abbreviations and Pin-description of CD ICs

Abbreviations and Pin-description of CD Ics

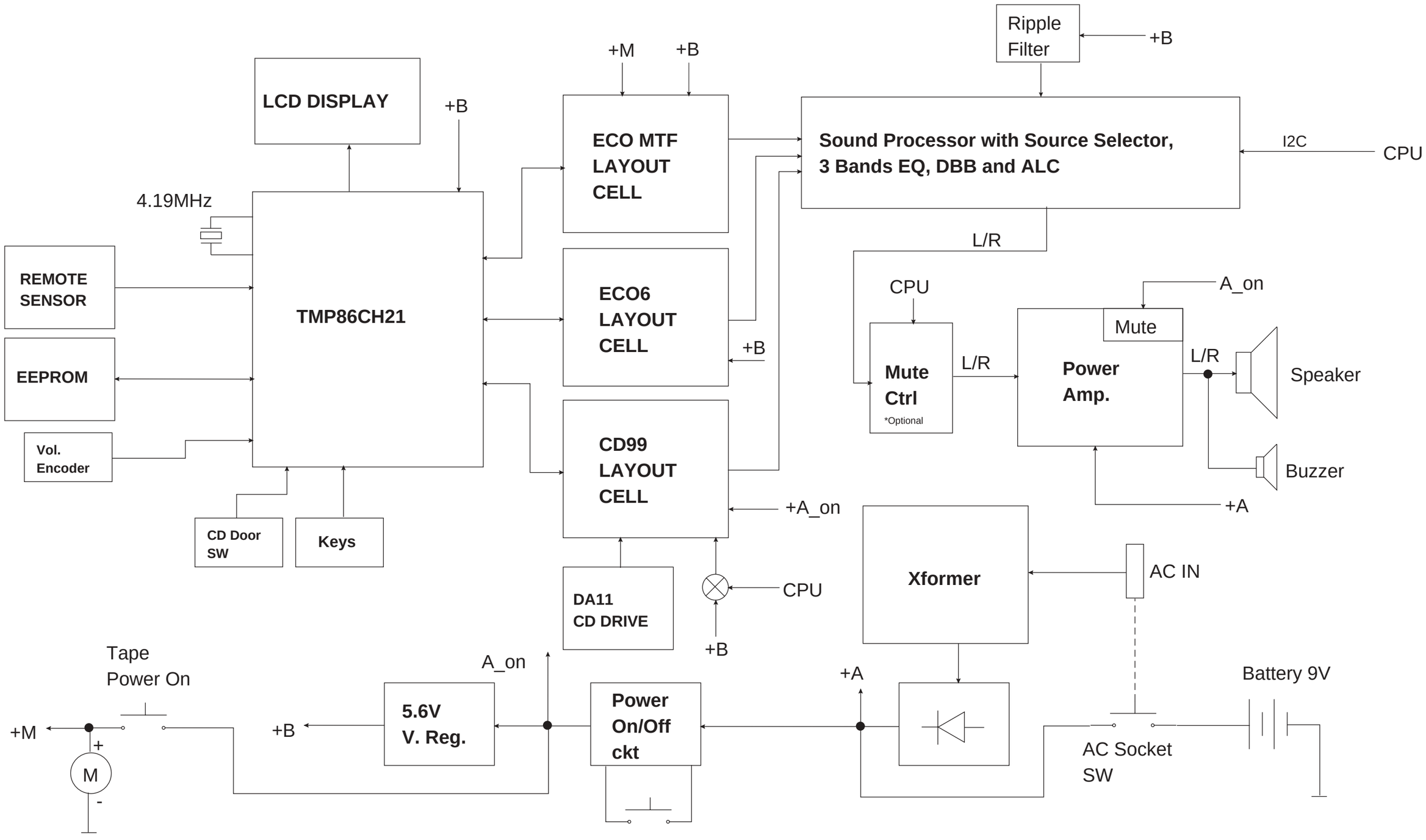
SERVO PROCESSOR SAA7325H

SYMBOL	PIN	DESCRIPTION
RAB	41	microcontroller interface R/W and load control line input (4-wire bus mode)
SILD	42	microcontroller interface R/W and load control line input (4-wire bus mode)
STATUS	43	servo interrupt request line/decoder status register output (open-drain)
TEST3	44	test control input 3; this pin should be tied LOW
RCK	45	subcode clock input
SUB	46	P-to-W subcode bits output (3-state)
SFSY	47	subcode frame sync output (3-state)
SBSY	48	subcode block sync output (3-state)
CL11/4	49	11.2896 MHz or 4.2336 MHz (for microcontroller) clock output
V_{SSD2}	50(1)	digital ground 3
DOBM	51	bi-phase mark output (externally buffered; 3-state)
$V_{DDD1(P)}$	52(1)	digital supply voltage 2 for periphery
CFLG	53	correction flag output (open-drain)
RA	54	radial actuator output
FO	55	focus actuator output
SL	56	sledge control output
$V_{DDD2(C)}$	57(1)	digital supply voltage 3 for core
V_{SSD3}	58(1)	digital ground 4
MOTO1	59	motor output 1; versatile (3-state)
MOTO2	60	motor output 2; versatile (3-state)
V4	61	versatile output pin 4
V5	62	versatile output pin 5
V1	63	versatile intput pin 1
LDON	64	laser drive on output (open-drain)

Note : All supply pins must be connected to the same external power supply voltage.

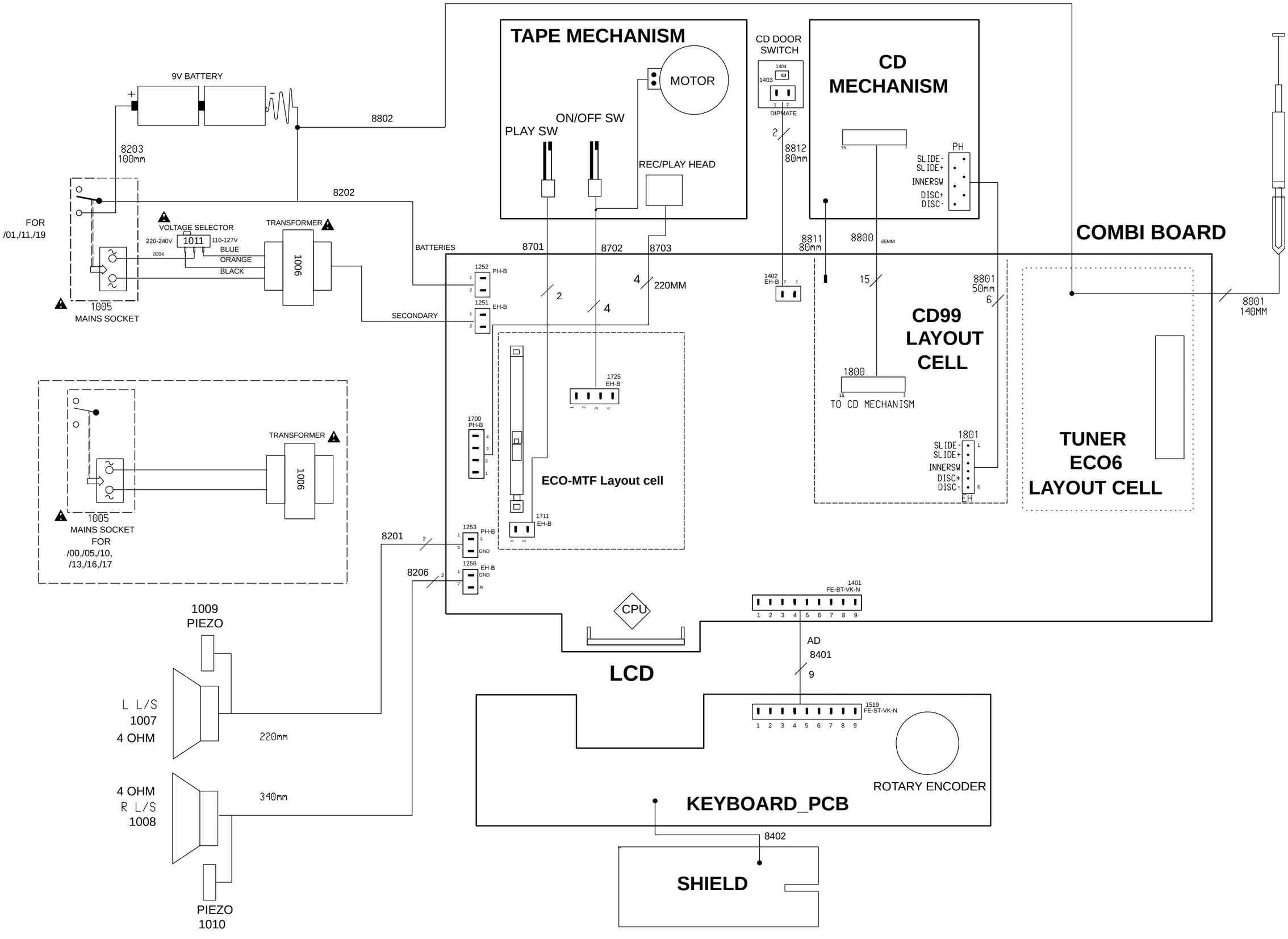
5 - 1

BLOCK DIAGRAM



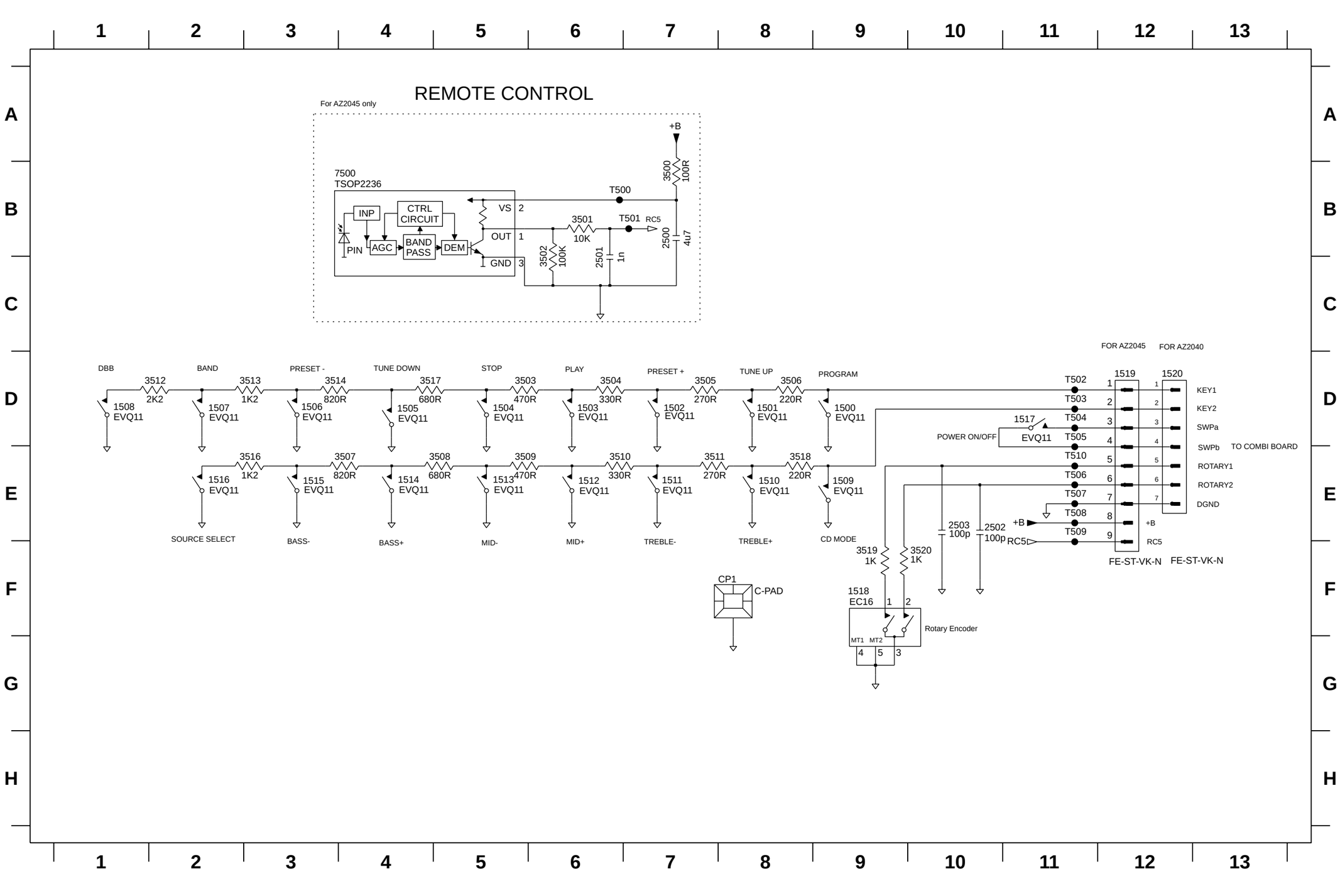
5 - 2

WIRING DIAGRAM



6 - 1

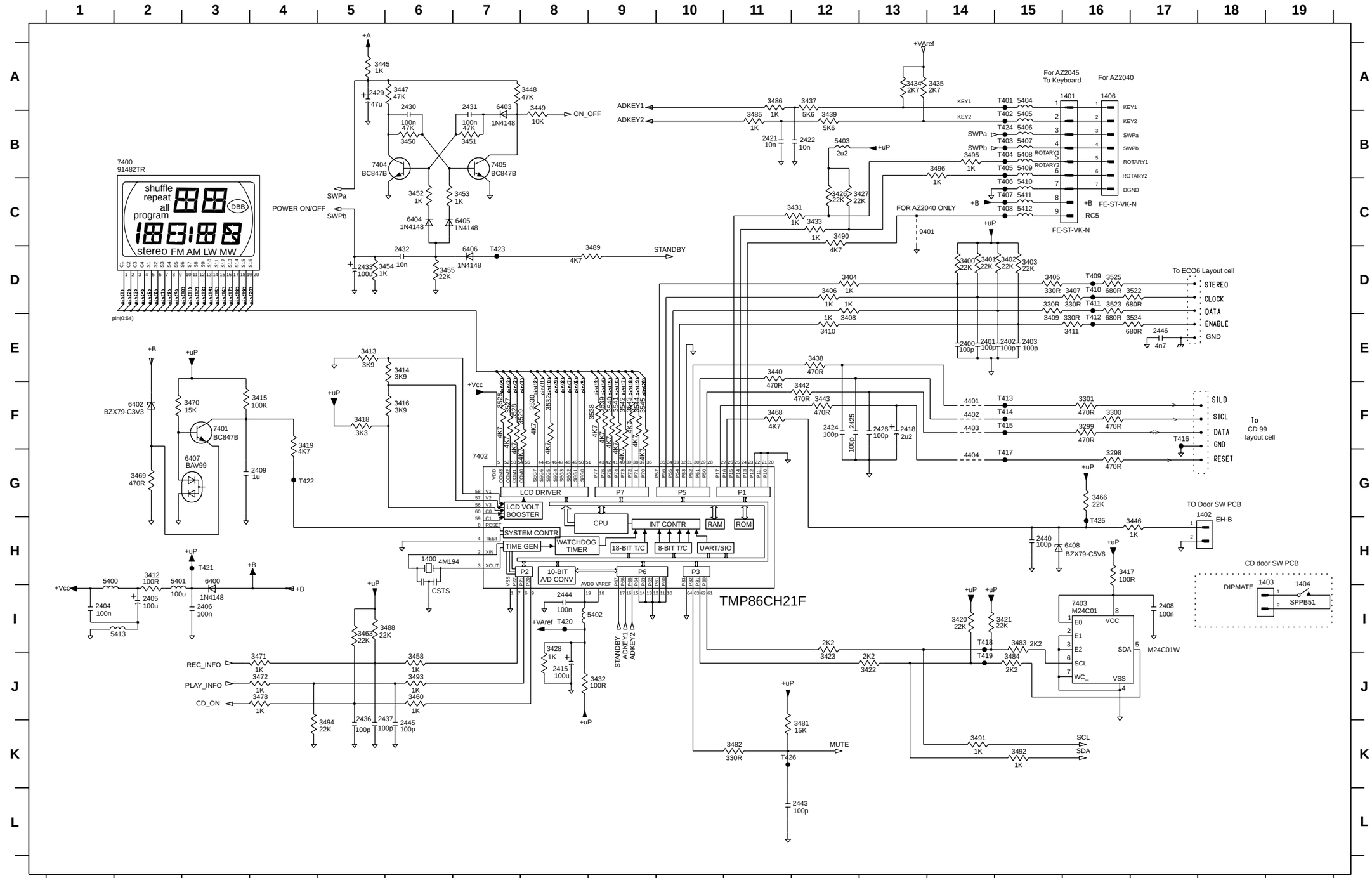
KEY BOARD - CIRCUIT DIAGRAM



CP1 F8
1500 D9
1501 D8
1502 D7
1503 D6
1504 D5
1505 D4
1506 D3
1507 D2
1508 D1
1509 E9
1510 E8
1511 E7
1512 E6
1513 E5
1514 E4
1515 E3
1516 E2
1517 D11
1518 F9
1519 D12
1520 D12
2500 B7
2501 C6
2502 E10
2503 E10
3500 B7
3501 B6
3502 C6
3503 D5
3504 D6
3505 D7
3506 D8
3507 E4
3508 E5
3509 E5
3510 E6
3511 E7
3512 D2
3513 D3
3514 D3
3516 E3
3517 D4
3518 E8
3519 F9
3520 F10
7500 B3
T500 B6
T501 B7
T502 D11
T503 D11
T504 D11
T505 D11
T506 E11
T507 E11
T508 E11
T509 E11
T510 E11

6 - 2

COMBI BOARD - CIRCUIT DIAGRAM (FRONT PART)



1400 H6
1401 A15
1402 G17
1403 H19
1404 I19
1406 A16
2400 E14
2401 E14
2402 E15
2403 E15
2404 I1
2405 I2
2406 I3
2408 I17
2409 G4
2415 J8
2418 F13
2421 B11
2422 B12
2424 F12
2425 F12
2426 F13
2429 A5
2430 A6
2431 A7
2432 D6
2433 D5
2436 K5
2437 K6
2440 H15
2443 L12
2444 I8
2445 K6
2446 E17
3298 G16
3299 F16
3300 F16
3301 F16
3400 D14
3401 D14
3402 D15
3403 D15
3404 D12
3405 D15
3406 D12
3407 D16
3408 E12
3409 E15
3410 E12
3411 E16
3412 H2
3413 E5
3414 E6
3415 F4
3416 F6
3417 H16
3418 F5
3419 F4
3420 I14
3421 I15
3422 J13
3423 J12
3426 C12
3427 C13
3428 I8
3431 C12
3432 J9
3433 C12
3434 A13
3435 A14
3437 A12
3438 E12
3439 B12
3440 E11
3442 F12
3443 F12
3445 A5
3446 H17
3447 A6
3448 A8
3449 A8
3450 B6
3451 B7
3452 C6
3453 C7
3454 D6
3455 D6
3458 J6
3460 J6
3463 I5
3466 G16
3468 F11
3469 G2
3470 F3
3471 J4
3472 J4
3478 J4
3481 K12
3482 K11
3483 I15
3484 J15
3485 B11
3486 A11
3488 I6
3489 C9
3490 C12
3491 K14
3492 K15
3493 J6
3494 K5
3495 B14
3496 B14
3522 D17
3523 D16
3524 E17
3525 D16
3526 F7
3527 F7
3528 F7
3529 F8
3530 F8
3532 F8
3538 F9
3539 F9
3540 F9
3541 F9
3542 F9
3543 F9
3544 F9
3545 F9
4401 F14
4402 F14
4403 F14
4404 G14
5400 H1
5401 H2
5402 I9
5403 B12
5404 A15
5405 B15
5406 B15
5407 B15
5408 B15
5409 B15
5410 C15
5411 C15
5412 C15
5413 I2
6400 H3
6402 F2
6403 A7
6404 C6
6405 C7
6406 D7
6407 G3
6408 H16
7400 B2
7401 F3
7402 G7
7403 I16
7404 B6
7405 B7
9401 C13
T401 A15
T402 B15
T403 B15
T404 B15
T405 B15
T406 C15
T407 C15
T408 C15
T409 D16
T410 D16
T411 D16
T412 E16
T413 F15
T414 F15
T415 F15
T416 F17
T417 G15
T418 I14
T419 J14
T420 I8
T421 H3
T422 G4
T423 D7
T424 B15
T425 H16
T426 K11

7 - 1

COMBI BOARD - CIRCUIT DIAGRAM (TUNER PART)

TUNER BOARD ECO6 /PORTABLE AUDIO

VERSION PROGRAMMING COMPONETS

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

X component mounted

VERSION DETECTION

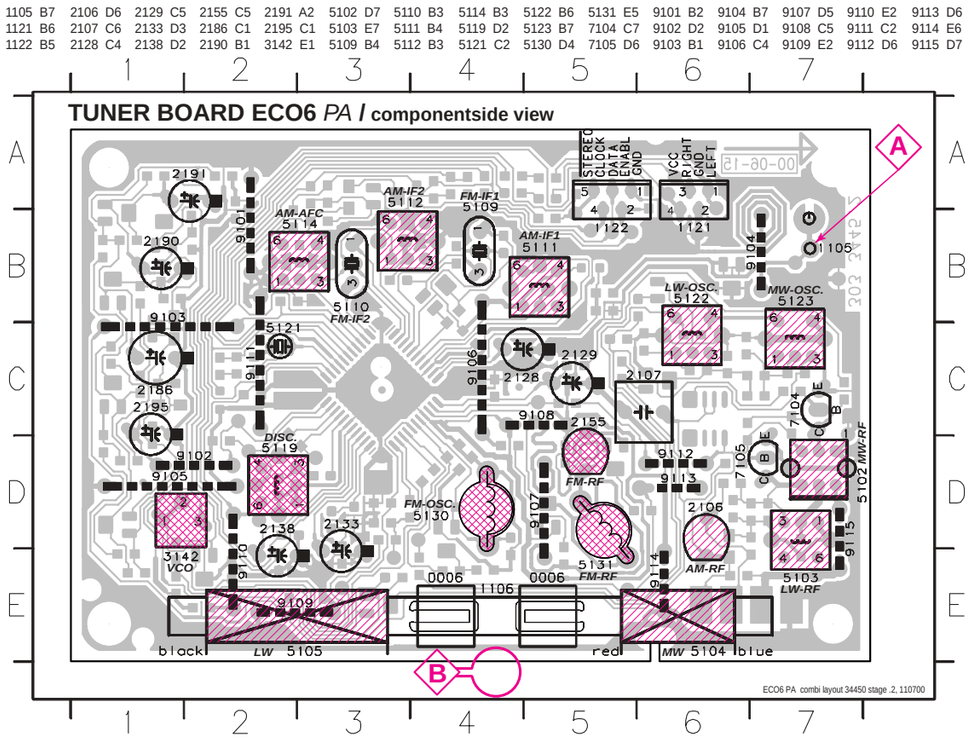
LEGEND

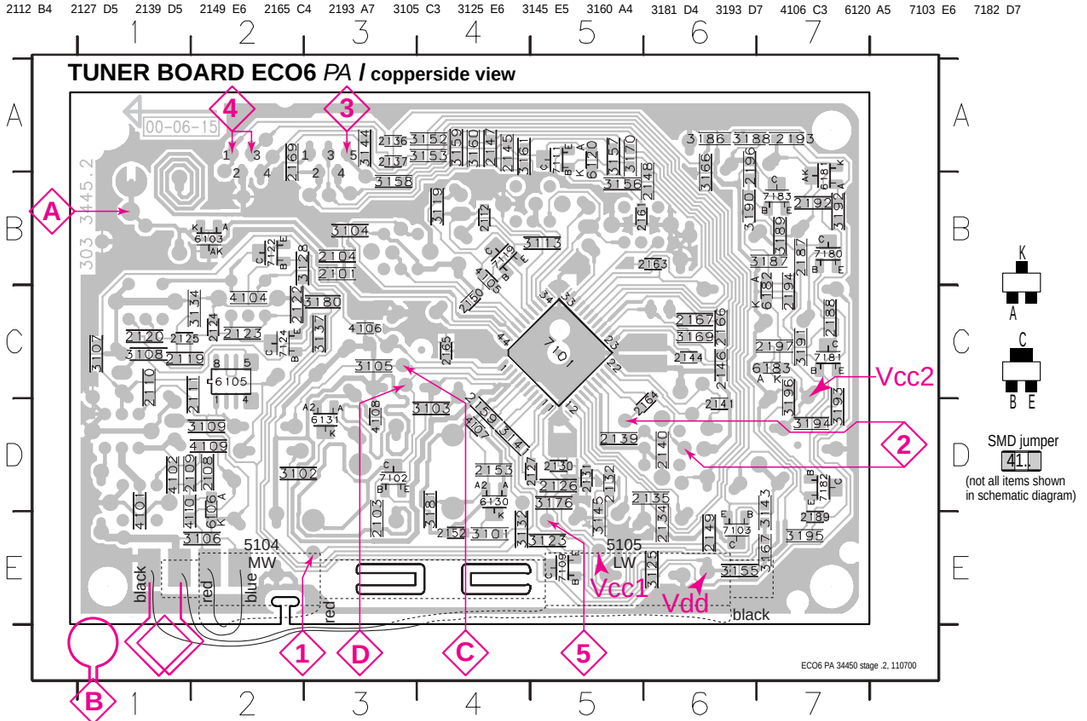
* ... only assembled in FM/AM-version
p ...for provision only
USA ... for USA version only
LW ... for LW version only
LW frame ... for LW version with frame aerial only
E_EU ... for East European version only
J ... for JAPAN version only

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

1105	A2	4104	L7
1121	H20	4105	B12
1122	G20	4109	D5
2101	B5	4110	D5
2103	D9	5102	G4
2104	A4	5103	H3
2106	C5	5109	B13
2107	H6	5110	B14
2108	H4	5111	A11
2109	H4	5112	B16
2110	C4	5114	C16
2111	C4	5119	J13
2112	C13	5121	F16
2119	K8	5122	L7
2120	K8	5123	J7
2122	L8	5130	G8
2123	L8	5131	E9
2124	L8	6103	B4
2125	K8	6105-1	C6
2126	G10	6105-2	J8
2127	G10	6106	C6
2128	C11	6120	C18
2129	D10	6130	F7
2130	I17	6131	E7
2131	I11	6181	J16
2132	H11	6182	J15
2133	I12	6183	K14
2134	M12	7101	C11
2135	M12	7102	D9
2136	K20	7103	K10
2137	K19	7104	E4
2138	H12	7105	E4
2139	I13	7109	K5
2140	J14	7111	D18
2141	I14	7119	B12
2144	H17	7122	L6
2145	G16	7124	L9
2146	F18	7180	K18
2147	F17	7181	L18
2148	K19	7182	L15
2149	K16	7183	K16
2150	A14	T102	A2
2152	G6	T103	B2
2153	G7	T105	G2
2155	E8	T106	G2
2159	H9	T109	C9
2161	D16	T110	H7
2163	E16	T111	H6
2164	I14	T112	H9
2165	D10	T113	A12
2166	F16	T114	B15
2167	F16	T115	A11
2169	J11	T116	H14
2186	K19	T117	J15
2187	K17	T118	H17
2188	M17	T120	G19
2189	M18	T121	G19
2190	I16	T122	G19
2191	J16	T123	G19
2192	J16	T124	J19
2193	J16	T125	I19
2194	J15	T126	I19
2195	J14	T127	H19
3101	G6	T128	E10
3102	E6	T140	H17
3103	D9	T141	H13
3104	A10	T142	H14
3105	C8		
3106	C3		
3107	D4		
3108	E3		
3109	F4		
3113	B12		
3119	A13		
3123	K4		
3125	K3		
3128	L5		
3132	K7		
3134	K9		
3137	L10		
3141	F10		
3142	F9		
3143	J10		
3144	J11		
3145	I12		
3152	K20		
3153	K19		
3155	H17		
3156	D18		
3157	D18		
3158	G18		
3159	F18		
3160	F17		
3161	E18		
3166	H18		
3167	H17		
3169	F16		
3170	D17		
3176	J9		
3180	L5		
3181	G8		
3186	I19		
3187	K18		
3188	K17		
3189	K17		
3190	K17		
3191	L17		
3192	L18		
3193	M18		
3194	M18		
3195	M18		
3196	M15		
4101	G3		
4102	G3		

TUNER BOARD ECO6 - LAYOUT DIAGRAM





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

7 - 2

TUNER ADJUSTMENT TABLE (ECO6 FM/MW- and FM/MW/LW - versions with ferrite antenna)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)			108MHz	5130	◇1	8V –0.2V
			87.5MHz (65.81MHz)	check		4.3V –0.5V (1.2V –0.5V)
MW FM/AM-version, 10kHz grid 530 - 1700kHz			1700kHz	5123		8V –0.2V
			530kHz	check		1.1V –0.4V
FM/MW-version, 9kHz grid 531 - 1602kHz			1602kHz	5123		6.9V –0.2V
			531kHz	check		1.1V –0.4V
LW 153 - 279kHz			279kHz	5122		8V –0.2V
			153kHz	check		1.1V –0.4V
MW FM/MW/LW- version, 9kHz grid 531 - 1602kHz			1602kHz	5123		8V –0.2V
			531kHz	check		1.1V –0.4V
FM IF						
FM	10.7MHz, 45mV continuous wave	◇D	IC 7101 21 — shortcircuit to block AFC — 2141	5119	◇2	0 – 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	◇A mod=1kHz Δf=–22.5kHz	108MHz	2155	◇4	MAX
	87.5MHz (65.81MHz)		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 2.2k‰ to Vcc	◇C Δf=–10kHz V_{RF} = 0.5mV (as low as possible)	IC 7101 36 — 100nF — 220R	5111	◇5	max. — f_o — symmetric
			IC 7101 40 — 100nF — 220R — see remark [2]	5112		
AM AFC **MW**		◇C continuous wave V_{RF} = 2mV		5114	◇2	0 – 2 mV DC
AM RF [3]						
LW	198kHz	◇B Δf = –30kHz V_{RF} as low as possible	198kHz	5105 LW ferrite coil	◇5	max. — f_o — symmetric
MW FM/MW/LW- and FM/MW-version (9kHz grid) 531 - 1602kHz	1494kHz		1494kHz	2106		
	558kHz		558kHz	5104 MW ferrite coil		
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1500kHz		1500kHz	2106		
	560kHz		560kHz	5104 MW ferrite coil		

ECO6, general with ferrite antenna, 070799

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.

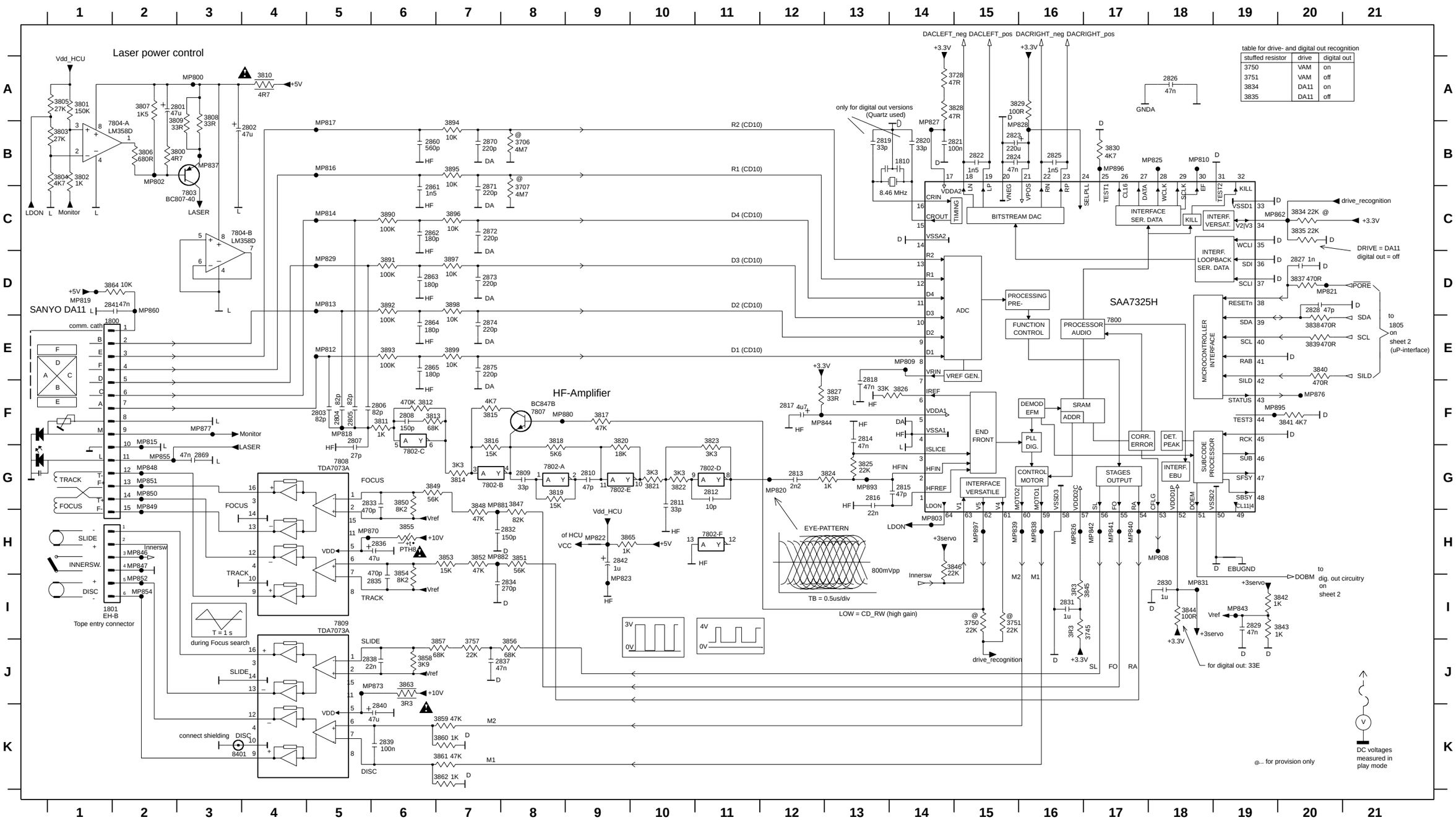
3) LW has to be aligned before MW.

↕ Repeat

8 - 1

COMBI BOARD - CIRCUIT DIAGRAM (CD PART 1)

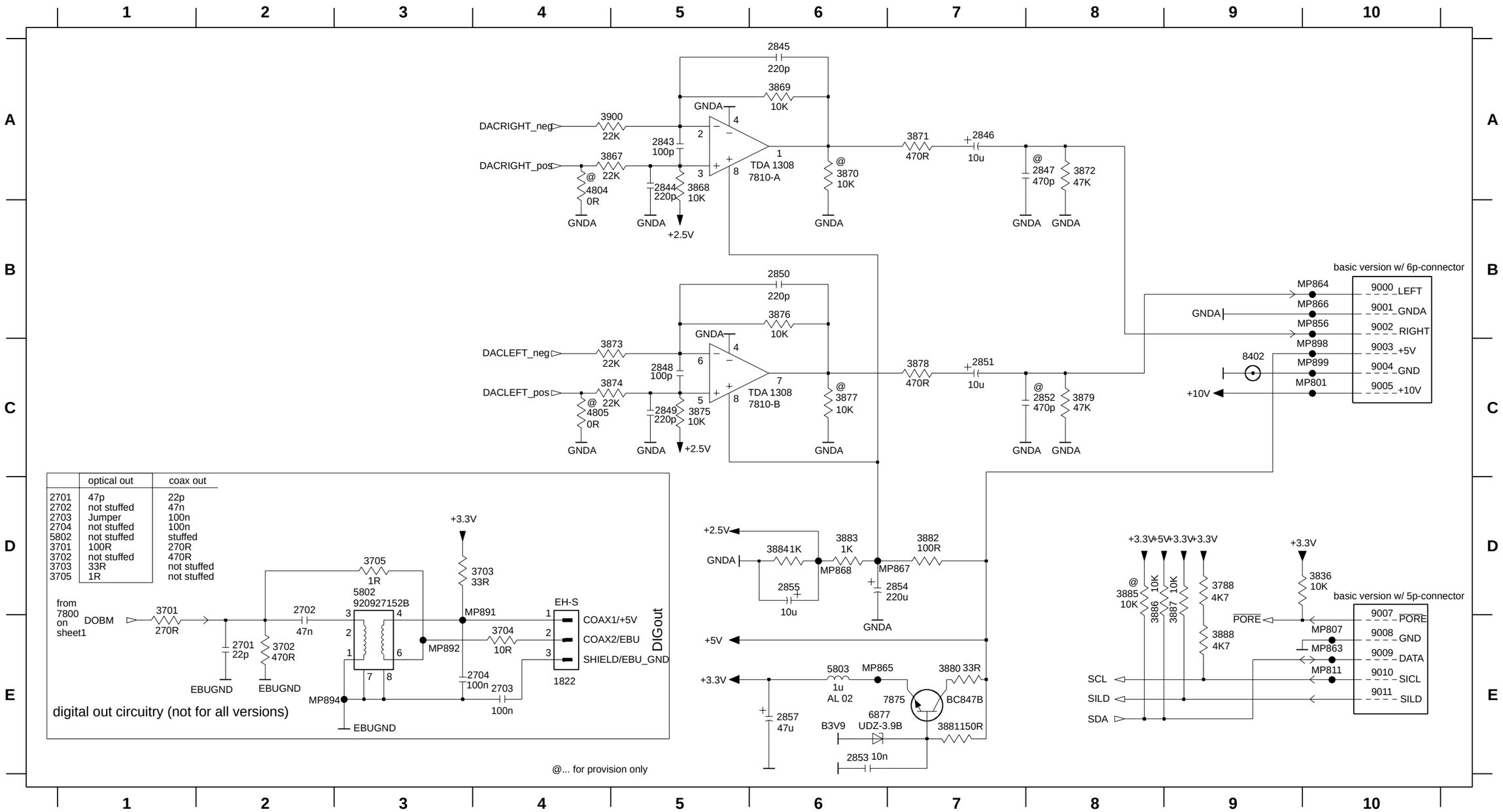
1800 E2	2807 F5	2815 G14	2823 B15	2831 I16	2839 K6	2864 E6	2875 E7	3800 B3	3808 A3	3816 F7	3824 G13	3835 C20	3844 I18	3852 H7	3860 K7	3892 D6	7800 E17	7804-A B1	MP803 H14	MP816 B5	MP825 B18	MP839 H15	MP848 G2	MP862 C19	MP893 G13
1801 I2	2808 F6	2816 G13	2824 B15	2832 H8	2840 K6	2865 E6	3706 B8	3801 A1	3809 A2	3817 F9	3825 G13	3837 D20	3845 I17	3853 H7	3861 K7	3893 E6	7802-A G8	7804-B C3	MP808 H18	MP817 B5	MP826 H16	MP840 H17	MP849 G2	MP870 H5	MP895 F19
2801 A3	2809 G8	2817 F12	2825 B16	2833 G5	2841 D1	2869 G3	3707 C8	3802 B1	3810 A4	3818 F8	3826 F14	3838 E20	3846 H15	3854 H6	3862 K7	3894 B7	7802-B G7	7807 F8	MP809 E14	MP818 F5	MP827 A14	MP841 H17	MP850 G2	MP873 J6	MP896 B17
2802 B4	2810 G9	2818 F13	2826 A18	2834 I8	2842 H9	2870 B7	3728 A15	3803 B1	3811 F6	3819 G8	3827 F13	3839 E20	3847 G8	3855 H6	3863 J6	3895 B7	7802-C G6	7808 G5	MP810 B18	MP819 D1	MP828 B15	MP842 H17	MP851 G2	MP876 F20	MP897 H15
2803 F5	2811 G10	2819 B13	2827 D20	2835 I6	2860 B6	2871 C7	3745 I17	3804 B1	3812 F6	3820 F9	3828 A15	3840 E20	3848 G7	3856 J8	3864 D1	3896 C7	7802-D G11	7809 I5	MP812 E5	MP820 G12	MP829 D5	MP843 I19	MP852 I2	MP877 F3	
2804 F5	2812 G11	2820 B14	2828 D20	2836 H6	2861 C6	2872 C7	3750 I15	3805 A1	3813 F6	3821 G10	3829 A15	3841 F20	3849 G6	3857 J7	3865 H9	3897 D7	7802-E G9	8401 K3	MP813 D5	MP821 D20	MP831 I18	MP844 F12	MP854 I2	MP880 F8	
2805 F5	2813 G12	2821 B15	2829 I19	2837 J8	2862 C6	2873 D7	3751 I15	3806 B2	3814 G7	3822 G10	3830 B17	3842 I20	3850 G6	3858 J6	3890 C6	3898 D7	7802-F H11	MP800 A3	MP814 C5	MP822 H9	MP837 B3	MP846 H2	MP855 G2	MP881 G7	
2806 F6	2814 F13	2822 B15	2830 I18	2838 J5	2863 D6	2874 E7	3757 J7	3807 A2	3815 F7	3823 F11	3834 C20	3843 I20	3851 H8	3859 K7	3891 D6	3899 E7	7803 C3	MP802 B2	MP815 F2	MP823 I9	MP838 H16	MP847 H2	MP860 D2	MP882 H7	



8 - 2

COMBI BOARD - CIRCUIT DIAGRAM (CD PART 2)

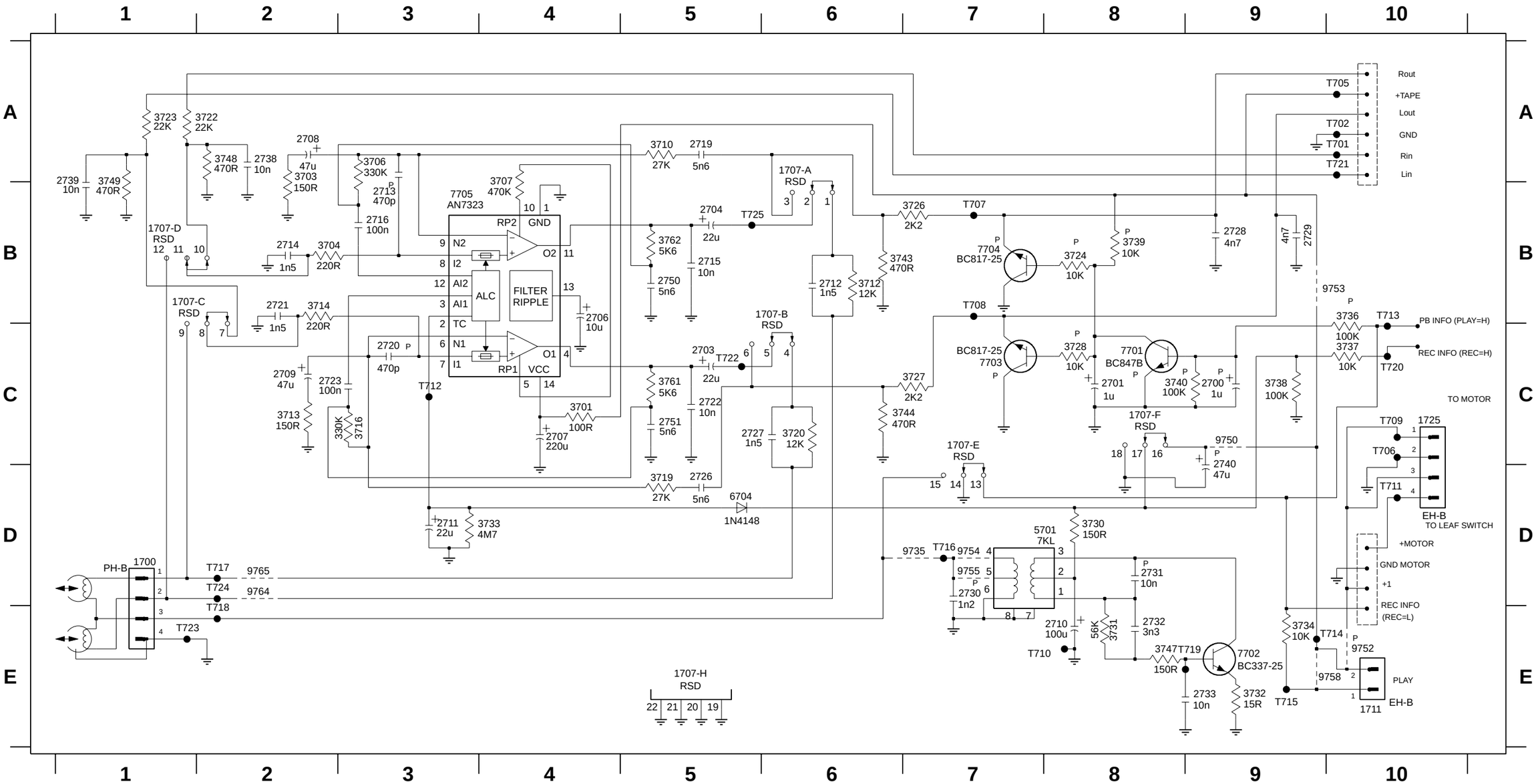
1822 E4	2843 A5	2848 C5	2853 E6	3702 E2	3836 D10	3871 A7	3876 B6	3881 E7	3886 D8	4805 C4	7810-B C5	9002 B10	9008 E10	MP807 E10	MP865 E6	MP892 E3
2701 E2	2844 A5	2849 C5	2854 D6	3703 D3	3867 A5	3872 A8	3877 C6	3882 D7	3887 D9	5802 D3	7875 E7	9003 C10	9009 E10	MP811 E10	MP866 B10	MP894 E2
2702 D2	2845 A6	2850 B6	2855 D6	3704 E4	3868 A5	3873 C5	3878 C7	3883 D6	3888 E9	5803 E6	8402 C9	9004 C10	9010 E10	MP856 B10	MP867 D7	MP898 C10
2703 E4	2846 A7	2851 C7	2857 E6	3705 D3	3869 A6	3874 C5	3879 C8	3884 D6	3900 A5	6877 E7	9000 B10	9005 C10	9011 E10	MP863 E10	MP868 D6	MP899 C10
2704 E3	2847 A8	2852 C8	3701 D1	3788 D9	3870 A6	3875 C5	3880 E7	3885 D8	4804 A4	7810-A A5	9001 B10	9007 E10	MP801 C10	MP864 B10	MP891 E4	



9 - 1

COMBI BOARD - CIRCUIT DIAGRAM (TAPE PART)

1700 D1	1707-H E5	2708 A2	2715 B5	2726 D5	2733 E9	2772 C8	3720 C6	3730 D8	3738 C9	3749 B1	3774 C4	7705 B3	9758 E9	T707 B7	T714 E10	T721 A10
1707-A A6	1711 E10	2709 C2	2716 B3	2727 C6	2738 A2	3710 A5	3722 A1	3731 E8	3739 B8	3761 C5	5701 D8	9735 D7	9764 D2	T708 B7	T715 E9	T722 C5
1707-B B6	1725 C10	2710 E8	2719 A5	2728 B9	2739 B1	3712 B6	3723 A1	3732 E9	3740 C9	3762 B5	6704 D5	9750 C9	9765 D2	T709 C10	T716 D7	T723 E1
1707-C B1	2700 C9	2711 D3	2720 C3	2729 B9	2740 D9	3713 C2	3724 B8	3733 D3	3743 B6	3770 B2	7701 C8	9752 E10	T701 A10	T710 E7	T717 D2	T724 D2
1707-D B1	2703 C5	2712 B6	2721 B2	2730 D7	2750 B5	3714 B2	3726 B7	3734 E9	3744 C6	3771 A3	7702 E9	9753 B10	T702 A10	T711 D10	T718 E2	T725 B5
1707-E C7	2706 B4	2713 A3	2722 C5	2731 D8	2770 B5	3716 C3	3727 C7	3736 B10	3747 E8	3772 B2	7703 C7	9754 D7	T705 A10	T712 C3	T719 E9	
1707-F C8	2707 C4	2714 B2	2723 C3	2732 E8	2771 C5	3719 D5	3729 C8	3737 C10	3748 A2	3773 B4	7704 B7	9755 D7	T706 C10	T713 B10	T720 C10	



P -- provisional

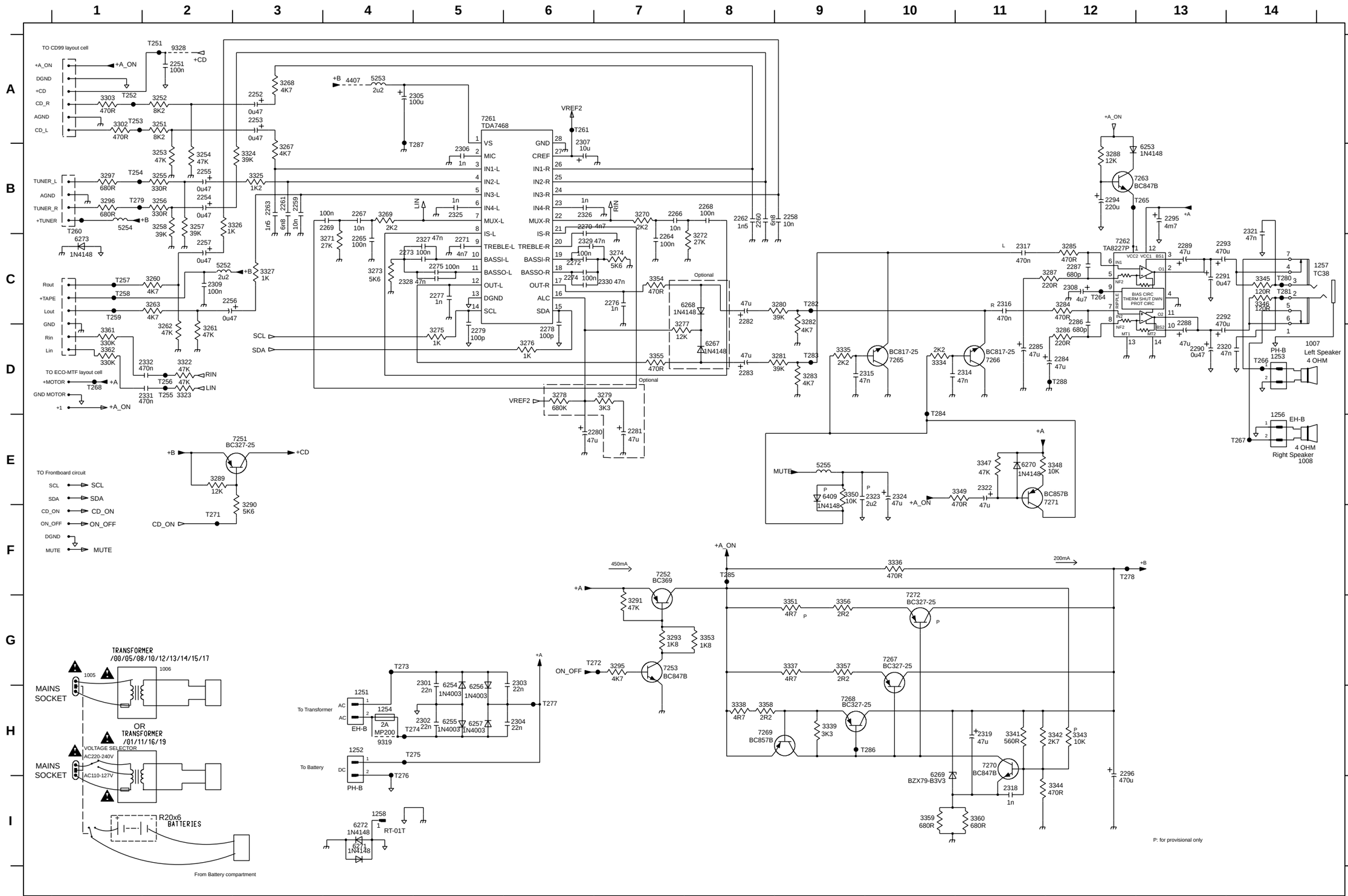
	1712	1713	1725	1711	1700
S11	○	○			○
S22			○	○	○

○ -- component mounted

PLAY ⟷ RECORD

9 - 2

COMBI BOARD - CIRCUIT DIAGRAM (AUDIO/SUPPLY PART)



1251	H4	3289	E2
1252	H4	3290	E2
1253	D14	3291	G7
1254	H4	3293	G7
1256	E14	3295	G7
1257	C14	3296	B1
1258	I4	3297	B1
2251	A2	3302	A1
2252	A3	3303	A1
2253	A3	3322	C1
2254	B2	3323	D1
2255	B2	3324	B2
2256	C2	3325	B3
2257	C2	3326	B2
2258	B9	3327	C3
2259	B3	3334	D10
2260	B8	3335	D9
2261	B3	3336	F10
2262	B8	3337	G9
2263	B3	3338	H8
2264	C7	3339	H9
2265	C4	3341	H11
2266	B7	3342	H12
2267	B4	3343	H12
2268	B8	3344	I12
2269	B4	3345	C14
2270	B6	3346	C14
2271	C5	3347	E11
2272	C6	3348	E11
2273	C4	3349	E11
2274	C6	3350	E9
2275	C5	3351	G9
2276	C7	3353	G8
2277	C5	3354	C7
2278	D6	3355	D7
2279	C5	3356	G9
2280	E6	3357	G9
2281	E7	3358	H8
2282	C8	3359	I10
2283	D8	3360	I11
2284	D11	4407	A4
2285	D11	5252	C2
2286	C12	5253	A4
2287	C12	5254	B1
2288	D13	5255	E9
2289	C13	6253	B12
2290	D13	6254	H5
2291	C13	6255	H5
2292	C13	6256	G5
2293	C13	6257	H5
2294	B12	6267	D8
2295	B13	6268	C8
2296	H12	6269	H10
2301	G5	6270	E11
2302	H5	6271	I4
2303	G6	6272	I4
2304	H6	6273	C1
2305	A4	6409	E9
2306	B5	7251	E3
2307	A6	7252	F7
2308	C12	7253	G7
2309	C2	7261	A5
2314	D10	7262	C12
2315	D9	7263	B12
2316	C11	7265	D10
2317	C11	7266	D11
2318	I11	7267	G10
2319	H11	7268	H9
2320	D14	7269	H9
2321	C14	7270	H11
2322	E11	7271	E11
2323	E9	7272	G10
2324	E10	9319	H4
2325	B5	9328	A2
2326	B6	T251	A2
2327	C5	T252	A1
2328	C4	T253	A1
2329	C6	T254	B1
2330	C7	T255	D1
2331	D1	T256	D1
2332	C1	T257	C1
3251	A2	T258	C1
3252	A2	T259	C1
3253	B2	T260	B1
3254	B2	T261	A6
3255	B2	T264	C12
3256	B2	T265	B13
3257	B2	T266	D14
3258	B2	T267	E14
3260	C2	T268	D1
3261	D2	T271	F2
3262	D2	T272	G6
3263	C2	T273	G4
3267	B3	T274	H4
3268	A3	T275	H4
3269	B4	T276	I4
3270	B7	T277	H6
3271	C4	T278	F12
3272	C8	T279	B1
3273	C4	T280	C14
3274	C7	T281	C14
3275	D5	T282	C9
3276	D6	T283	D9
3277	D7	T284	D10
3278	D6	T285	F8
3279	D7	T286	H9
3280	C9	T287	B4
3281	D9	T288	D12
3282	C9		
3283	D9		
3284	C12		
3285	C12		
3286	D12		
3287	C12		
3288	B12		

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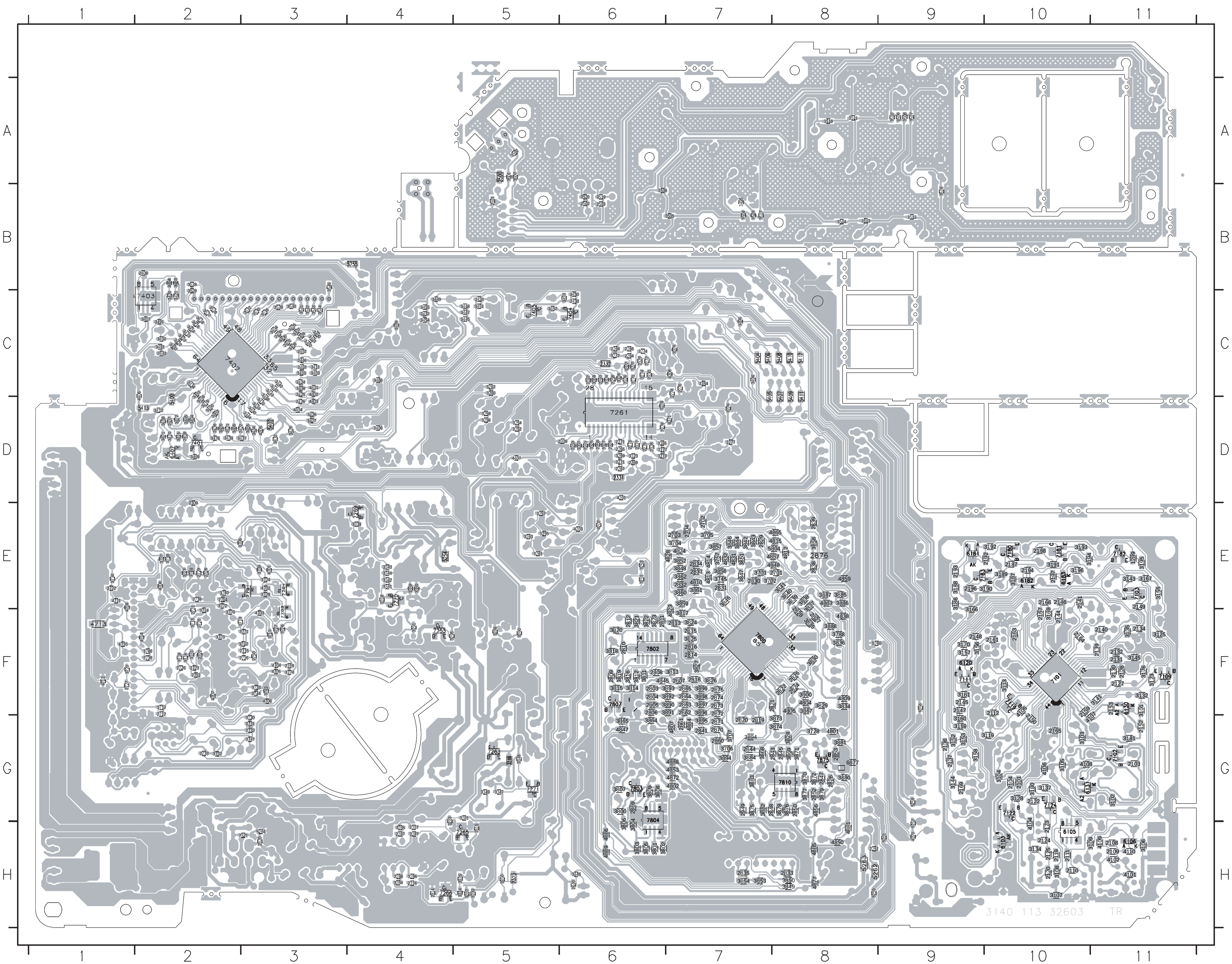
COMBI BOARD - LAYOUT DIAGRAM (COPPER SIDE)



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2104	G10
2108	H11
2109	H11
2110	H10
2111	H10
2112	F10
2119	H10
2120	H10
2122	G10
2123	H10
2124	H10
2125	H10
2126	F11
2127	F11
2130	F11
2131	F11
2132	F11
2134	F11
2135	F11
2136	G9
2137	G9
2139	F11
2140	F11
2141	E10
2144	F10
2145	F9
2146	E10
2147	F9
2148	F9
2149	E11
2150	G10
2152	G11
2153	F11
2159	F10
2161	F10
2163	F10
2164	F10
2165	G10
2166	E10
2167	F10
2169	G9
2187	E10
2188	E10
2189	E11
2192	E10
2193	E9
2194	E10
2196	E9
2197	E10
2251	H8
2258	C6
2259	D6
2260	C6
2261	D6
2262	C6
2263	D6
2264	C6
2265	D6
2266	C6
2267	D6
2268	C6
2269	D6
2270	C6
2271	D6
2272	C6
2273	D6
2274	C6
2275	D6
2276	C7
2277	D6
2278	C7
2279	D6
2286	H4
2287	H4
2306	D6
2309	E2
2314	H4
2315	H5
2316	H4
2317	H4
2318	E4
2320	H3
2321	H3
2323	H5
2325	D6
2326	C6
2327	D6
2328	D6
2329	C6
2330	C6
2331	D6
2332	C6
2400	C3
2401	C3
2402	C3
2403	C3
2404	C2
2406	D4
2408	B2
2409	D2
2421	D2
2422	D2
2424	C3
2425	C3
2426	D3
2430	C6
2431	C5
2432	C4
2436	D2
2437	D2
2440	H6
2443	C2
2444	D3
2445	D2
2446	C3
2500	A5
2501	B5
2502	B6
2503	B6
2701	E8
2702	E7
2703	E7
2704	E7
2712	F2
2713	F2
2714	E2
2715	F3
2716	F3
2719	F3
2720	F2
2721	F2
2722	F2
2723	F2
2726	F2
2727	F1
2728	E2
2729	E2
2732	G3
2733	G2
2738	F2
2739	E2
2750	F3
2751	F2
2803	F6
2804	F6

2805	F6
2806	F6
2807	F7
2808	F6
2809	F6
2810	F6
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2812	F6
2813	F7
2814	F7
2815	F7
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2819	G7
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2828	F8
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2830	E7
2831	E7
2832	E7
2833	H8
2834	E7
2835	H7
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2839	E8
2841	G7
2843	G8
2844	G7
2845	G8
2847	G8
2848	G7
2849	G7
2850	G8
2852	G8
2853	G8
2860	G7
2861	G7
2862	F7
2863	F7
2864	F7
2865	F7
2869	G6
2870	G7
2871	G7
2872	F7
2873	F7
2874	F7
2875	F7
2876	E8
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3102	G11
3103	G10
3104	G10
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3160	G9
3161	F9
3166	F9
3167	E11
3169	F10
3170	F9
3176	F11
3180	G10
3181	G11
3186	E9
3187	E10
3188	E9
3189	E10
3190	E10
3191	E10
3192	E10
3193	E10
3194	E10
3195	E11
3196	E10
3251	E6
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3257	E5
3258	D5
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3263	E5
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3285	H4
3286	H4
3287	H4
3288	G5
3289	F5
3290	F5
3291	F4
3295	F4
3322	C6
3323	D6
3324	C6
3325	D6
3326	C6
3327	D6

3334	H5
3335	H5
3339	E4
3341	E4
3342	E4
3343	E4
3344	E4
3347	G5
3348	G5
3349	G5
3350	H5
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3360	E4
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3434	D3
3435	D3
3437	D3
3438	C3
3439	D2
3440	C3
3442	C3
3443	C3
3445	C5
3446	H6
3447	C5
3448	C5
3449	C4
3450	C6
3451	C5
3452	C5
3453	C6
3454	C4
3455	C4
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3539	C3
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3543	C3
3544	C3
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3702	E7
3704	E7
3705	E7
3706	G7
3707	G7
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3714	F2
3716	F2
3719	F2
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3723	E2
3724	E3
3726	F3
3727	F3
3728	G8
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3730	G3
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3732	G2
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3737	E2
3738	E2
3739	E3
3740	E2
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3745	E7
3747	G3
3748	F2
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3772	E2
3773	F2
3774	F3
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3803	H6
3804	H6
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3806	H6
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3824	F7
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3827	F7
3828	G8
3829	F8
3830	F8
3834	F8
3835	F8
3836	F8
3837	E8
3838	E8
3839	E8
3840	E8
3841	E8
3842	E7
3843	E7
3844	E7
3845	E7
3846	E7
3847	E7
3848	E7
3849	H8
3850	H8
3851	E7
3852	E7
3853	H7
3854	H7
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3894	G7
3895	G7
3896	F7
3897	F7
3898	F7
3899	F7
3900	F8
4101	H11
4102	H11
4104	H10
4105	F10
4106	G10
4107	G11
4108	G10
4109	H11
4110	H11
4201	D6
4202	E6
4203	E6
4205	D3
4206	C7
4270	H9
4271	D7
4401	C3
4402	C3
4403	D3
4404	D3
4406	C2
4407	D5
4701	E3
4702	E3
4703	F3
4704	F3
4705	F3
4706	F3
4707	F2
4708	E2
4709	E1
4710	F1
4711	E1

4712	F1
4713	F1
4714	F2
4801	G8
4802	G7
4804	F8
4805	F8
4807	G7
4809	F8
4810	E7
4812	E8
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4823	F7
4824	E7
4828	E7
4831	E7
4832	E7
4838	F8
4845	F6
4847	G6
4848	E8
4850	H8
4853	G7
4856	G8
4857	E8
4859	E8
4863	E8
4865	E8
4872	G7
4877	H8
4881	H8
4884	G7
4885	H8
4886	H6
4888	G7
4889	H6
5254	E4
5255	B4
5256	F9
5257	H9
5258	G9
5259	H8
5260	F8
5261	H9
5262	H8
5263	H8
5264	H3
5400	D2
5402	D3
5404	C7
5405	D7
5406	C7
5407	D8
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5804	E8
6103	H10
6105	H10
6106	H11
6120	F9
6130	F11
6131	G10
6181	E9
6182	E10
6183	E10
6407	D2
6877	G8
7101	F10
7102	G11
7103	E11
7109	F11
7111	F9
7119	F10
7122	G10
7124	G10
7180	E10
7181	E10
7182	E11
7183	E9
7253	F4
7261	D6
7263	G5
7265	H5
7266	H4
7269	E4
7270	E4
7271	G5
7401	D2
7402	C2
7403	C2
7404	C6
7405	C5
7701	E3
7703	F3
7704	E3
7800	F7
7802	F6
7803	G6
7804	G6
7807	F6
7810	G8
7875	G8

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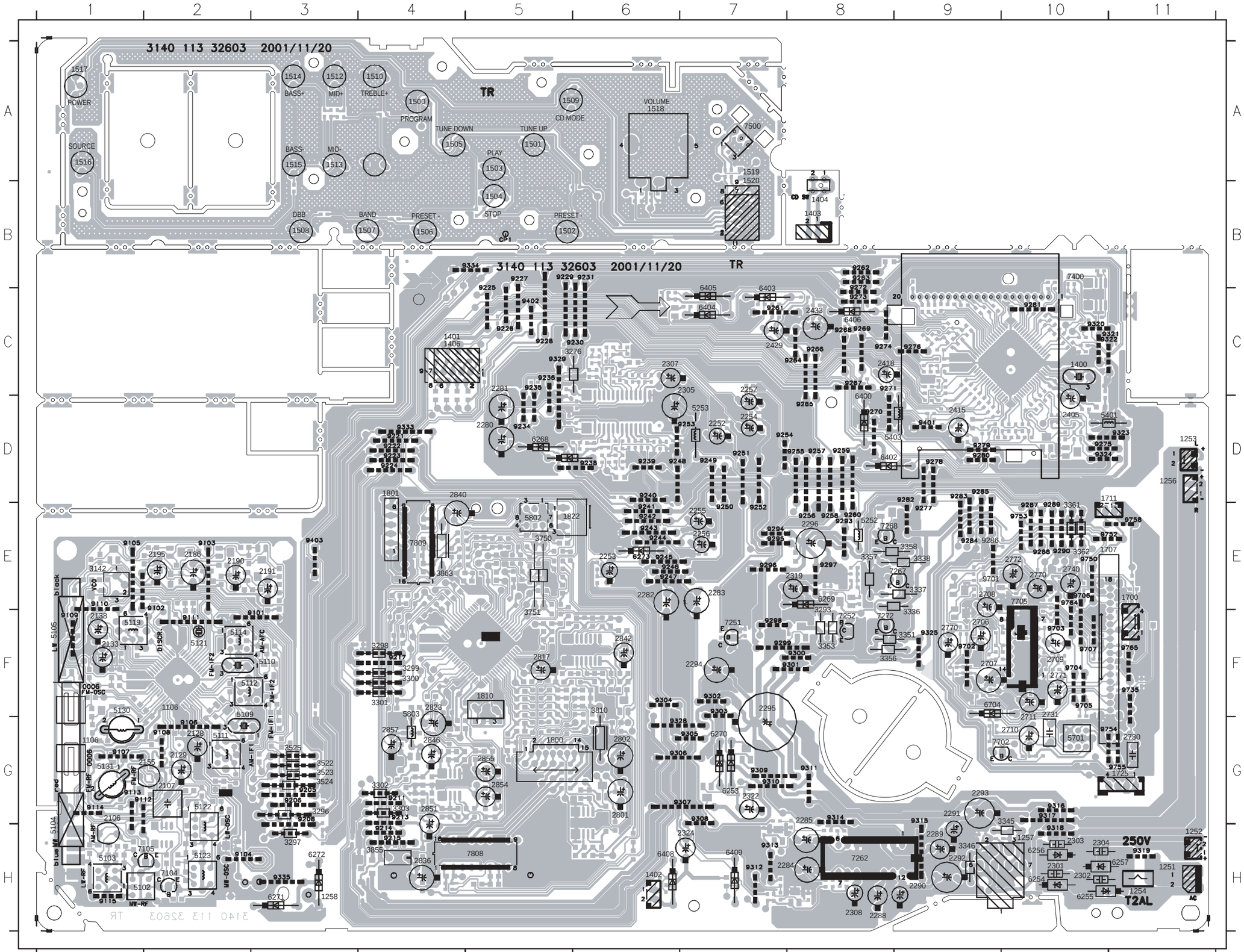
COMBI BOARD - LAYOUT DIAGRAM
(COMPONENT SIDE)



EXPLODED VIEW DIAGRAM - CABINET

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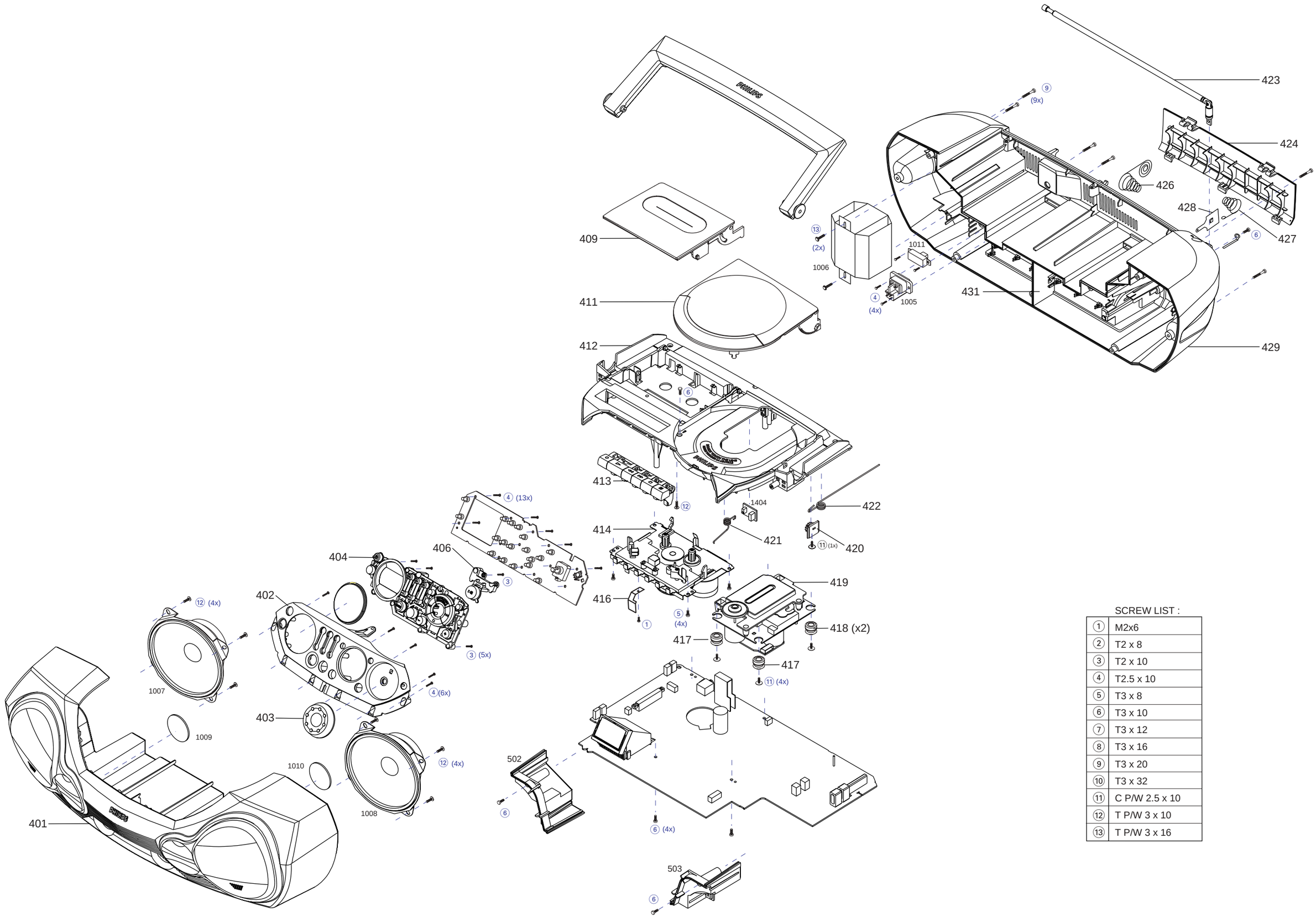
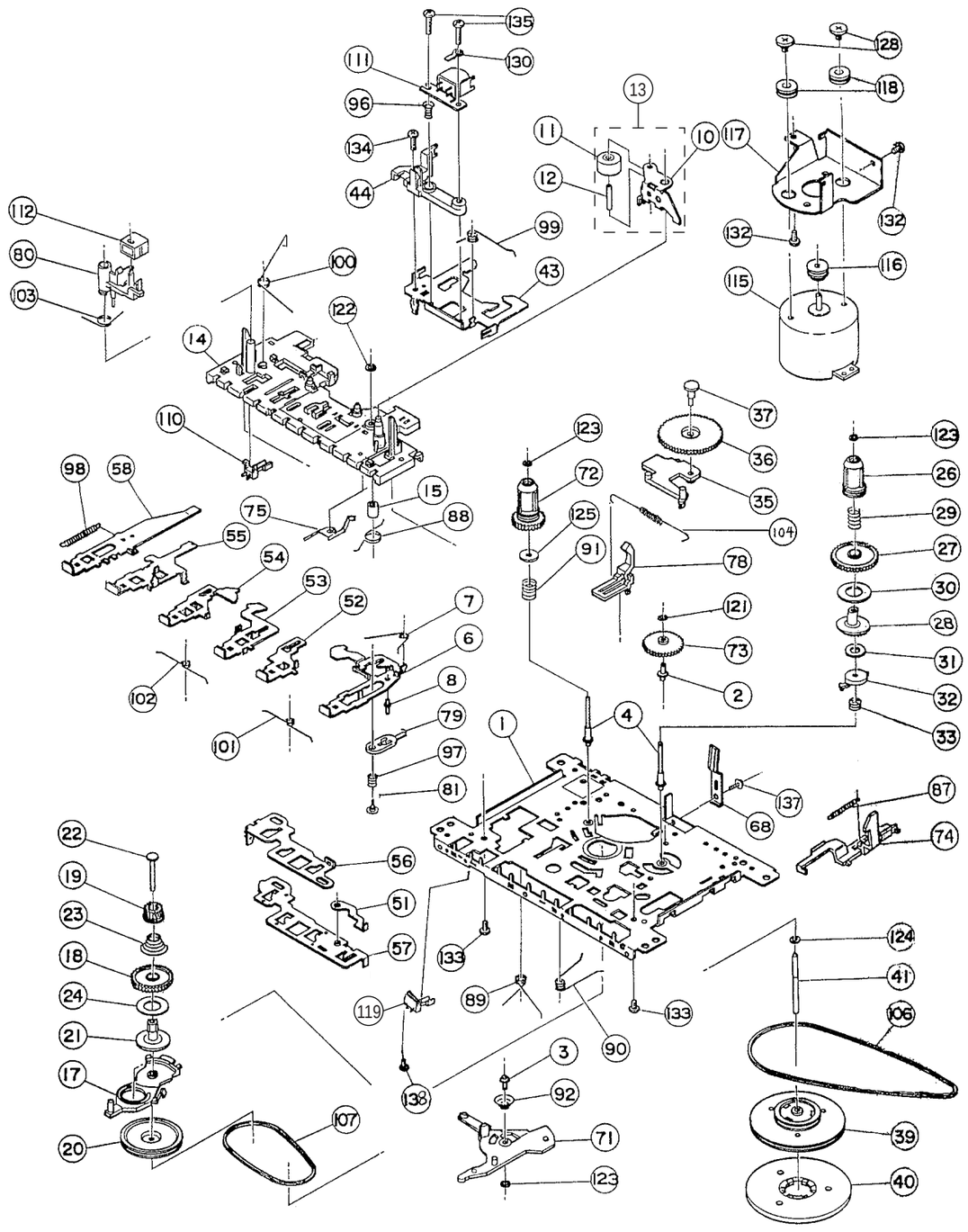


SCREW LIST :

①	M2x6
②	T2 x 8
③	T2 x 10
④	T2.5 x 10
⑤	T3 x 8
⑥	T3 x 10
⑦	T3 x 12
⑧	T3 x 16
⑨	T3 x 20
⑩	T3 x 32
⑪	C P/W 2.5 x 10
⑫	T P/W 3 x 10
⑬	T P/W 3 x 16

EXPLODED VIEW DIAGRAM - TAPE DECK



MECHANICAL PARTSLIST - CABINET

401	3140 117 67811	FRONT CABINET ASS'Y
402	3140 117 67721	CD PANEL - FRONT ASS'Y
402	3140 117 68650	CD PANEL - FRONT ASS'Y (-/17)
403	3140 114 39850	KNOB-VOLUME
404	3140 117 67802	WINDOW KEYSETS
406	3140 117 67792	CD PLAY KEY
408	3140 117 67751	HANDLE
409	3140 117 67651	DOOR-CASSETTE
411	3140 117 67641	DOOR-CD
412	3140 118 01531	TOP CABINET ASS'Y
413	3140 114 60221	KEYSET-CASSETTE
414	3140 118 01431	TAPE DECK
416	3140 111 22030	SPRING-RECORDING
417	4822 529 10387	DAMPER - RUBBER (40 DEG)
418	4822 529 10386	DAMPER - RUBBER (30 DEG)
419	3103 309 05360	CD DA11B1N DRIVE ASSY
420	4822 529 10322	DAMPER ASSY
421	3140 111 01562	SPRING-CASS.DOOR
422	3140 111 01551	SPRING-CD DOOR
423	3140 118 71810	TELESCOPIC AERIAL
424	3140 117 67771	DOOR-BATTERY
426	4822 492 51733	SPRING
427	3140 111 01140	SPRING-COMPRESSION(-)
428	3140 111 21320	CONTACT PLATE
429	3140 117 67731	REAR CABINET ASS'Y
429	3140 117 68830	REAR CABINET ASS'Y (-/01)
431	3140 114 39890	COVER BASS
	3139 228 89740	REMOTE CONTROL RC19414002/01

MECHANICAL PARTSLIST - TAPE DECK

10	4822 528 70849	BRACKET, STEEL
11	4822 528 70695	ROLLER, RUBBER
13	4822 528 11189	PINCH ROLLER ASSY
106	4822 358 31325	BELT, DRIVING
107	9965 000 11408	SUB BELT (B)
110	4822 278 90663	SWITCH, OTHERS
111	9965 000 11448	R/P HEAD SR-20B03
112	9965 000 11449	E HEAD TC-235
115	9965 000 11450	MOTOR MG090Z90U24-1
116	9965 000 11451	MOTOR PULLEY
119	4822 276 13712	LSA1115B

ADJUSTMENT - TAPE DECK

Adjustment	Cassette	SK	Deck 1	Measure on	Read on	Adjust with	Adjust to
Azimuth	10 kHz SBC420*	Tape	Play	H/P Jack	mV meter	Left hand Screw R/P head	max.
Motor Speed	3150 kHz SBC420*	Tape	Play	H/P Jack	Wow and flutter meter	Preset in motor	**a

* SBC420 : 4822 397 30071

**a The maximum permissible speed deviation is – 3%.
Morever, the wow and flutter value can be read.

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ELECTRICAL PARTSLIST - FRONT AND KEY BOARD

ELECTRICAL PARTSLIST - FRONT AND KEY BOARD

- MISCELLANEOUS -

1401	4822 265 11531	FFC SOCKET 9P HOR.
1406	4822 267 10956	FFC SOCKET 7P HOR.
1500	2422 128 02922	SWI TACT 1P
1501	2422 128 02922	SWI TACT 1P
1502	2422 128 02922	SWI TACT 1P
1503	2422 128 02922	SWI TACT 1P
1504	2422 128 02922	SWI TACT 1P
1505	2422 128 02922	SWI TACT 1P
1506	2422 128 02922	SWI TACT 1P
1507	2422 128 02922	SWI TACT 1P
1508	2422 128 02922	SWI TACT 1P
1509	2422 128 02922	SWI TACT 1P
1510	2422 128 02922	SWI TACT 1P
1511	2422 128 02922	SWI TACT 1P
1512	2422 128 02922	SWI TACT 1P
1513	2422 128 02922	SWI TACT 1P
1514	2422 128 02922	SWI TACT 1P
1515	2422 128 02922	SWI TACT 1P
1516	2422 128 02922	SWI TACT 1P
1517	2422 128 02922	SWI TACT 1P
1518	2422 129 16349	ROT ENCODER 24P
1519	4822 265 11531	FFC SOCKET 9P HOR.
1520	4822 267 10956	FFC SOCKET 7P HOR.

- CAPACITORS -

2400	4822 122 31765	100pF 2% NP0 63V
2401	4822 122 31765	100pF 2% NP0 63V
2402	4822 122 31765	100pF 2% NP0 63V
2403	4822 122 31765	100pF 2% NP0 63V
2404	2238 586 59812	100nF +80-20% Y5V 50V
2405	4822 124 41584	100µF 20% 10V
2406	2238 586 59812	100nF +80-20% Y5V 50V
2408	2238 586 59812	100nF +80-20% Y5V 50V
2409	3198 017 41050	1µF 20% Y5V 10V
2415	4822 124 41584	100µF 20% 10V
2418	4822 124 22652	2,2µF 20% 50V
2421	5322 126 11583	10nF 10% X7R 50V
2422	5322 126 11583	10nF 10% X7R 50V
2424	4822 122 31765	100pF 2% NP0 63V
2425	4822 122 31765	100pF 2% NP0 63V
2426	4822 122 31765	100pF 2% NP0 63V
2429	4822 124 40433	47µF 20% 25V
2430	2238 586 59812	100nF +80-20% Y5V 50V
2431	2238 586 59812	100nF +80-20% Y5V 50V
2432	5322 126 11583	10nF 10% X7R 50V

- CAPACITORS -

2433	4822 124 40207	100µF 20% 25V
2436	4822 122 31765	100pF 2% NP0 63V
2437	4822 122 31765	100pF 2% NP0 63V
2440	4822 122 31765	100pF 2% NP0 63V
2443	4822 122 31765	100pF 2% NP0 63V
2444	2238 586 59812	100nF +80-20% Y5V 50V
2445	4822 122 31765	100pF 2% NP0 63V
2500	2020 552 96305	4,7µ +80-20% Y5V 10V
2501	5322 126 11578	1nF 10% X7R 50V
2502	4822 122 31765	100pF 2% NP0 63V
2503	4822 122 31765	100pF 2% NP0 63V

- RESISTORS -

3298	4822 116 83883	470R 5% 0,5W
3299	4822 116 83883	470R 5% 0,5W
3300	4822 116 83883	470R 5% 0,5W
3301	4822 116 83883	470R 5% 0,5W
3400	4822 051 30223	22K 5% 0,062W
3401	4822 051 30223	22K 5% 0,062W
3402	4822 051 30223	22K 5% 0,062W
3403	4822 051 30223	22K 5% 0,062W
3404	4822 051 30102	1K 5% 0,062W
3405	4822 051 30331	330R 5% 0,062W
3406	4822 051 30102	1K 5% 0,062W
3407	4822 051 30331	330R 5% 0,062W
3408	4822 051 30102	1K 5% 0,062W
3409	4822 051 30331	330R 5% 0,062W
3410	4822 051 30102	1K 5% 0,062W
3411	4822 051 30331	330R 5% 0,062W
3412	4822 051 30101	100R 5% 0,062W
3413	4822 051 30392	3,9K 5% 0,063W
3414	4822 051 30392	3,9K 5% 0,063W
3415	4822 117 13632	100K 1% 0,62W
3416	4822 051 30392	3,9K 5% 0,063W
3417	4822 051 30101	100R 5% 0,062W
3418	4822 051 30332	3,3K 5% 0,062W
3419	4822 051 30472	4,7K 5% 0,062W
3420	4822 051 30223	22K 5% 0,062W
3421	4822 051 30223	22K 5% 0,062W
3422	4822 051 30222	2,2K 5% 0,062W
3423	4822 051 30222	2,2K 5% 0,062W
3426	4822 051 30223	22K 5% 0,062W
3427	4822 051 30223	22K 5% 0,062W
3428	4822 051 30102	1K 5% 0,062W
3431	4822 051 30102	1K 5% 0,062W
3432	4822 051 30101	100R 5% 0,062W
3433	4822 051 30102	1K 5% 0,062W
3434	4822 051 30272	2,7K 5% 0,062W

- RESISTORS -

3435	4822 051 30272	2,7K 5% 0,062W
3437	4822 051 30562	5,6K 5% 0,063W
3438	4822 051 30471	470R 5% 0,062W
3439	4822 051 30562	5,6K 5% 0,063W
3440	4822 051 30471	470R 5% 0,062W
3442	4822 051 30471	470R 5% 0,062W
3443	4822 051 30471	470R 5% 0,062W
3445	4822 051 30102	1K 5% 0,062W
3446	4822 051 30102	1K 5% 0,062W
3447	4822 117 12925	47K 1% 0,063W
3448	4822 117 12925	47K 1% 0,063W
3449	4822 051 30103	10K 5% 0,062W
3450	4822 117 12925	47K 1% 0,063W
3451	4822 117 12925	47K 1% 0,063W
3452	4822 051 30102	1K 5% 0,062W
3453	4822 051 30102	1K 5% 0,062W
3454	4822 051 30102	1K 5% 0,062W
3455	4822 051 30223	22K 5% 0,062W
3458	4822 051 30102	1K 5% 0,062W
3460	4822 051 30102	1K 5% 0,062W
3463	4822 051 30223	22K 5% 0,062W
3466	4822 051 30223	22K 5% 0,062W
3468	4822 051 30472	4,7K 5% 0,062W
3469	4822 051 30471	470R 5% 0,062W
3470	4822 051 30153	15K 5% 0,062W
3471	4822 051 30102	1K 5% 0,062W
3472	4822 051 30102	1K 5% 0,062W
3478	4822 051 30102	1K 5% 0,062W
3481	4822 051 30153	15K 5% 0,062W
3482	4822 051 30331	330R 5% 0,062W
3483	4822 051 30222	2,2K 5% 0,062W
3484	4822 051 30222	2,2K 5% 0,062W
3485	4822 051 30102	1K 5% 0,062W
3486	4822 051 30102	1K 5% 0,062W
3488	4822 051 30223	22K 5% 0,062W
3489	4822 051 30472	4,7K 5% 0,062W
3490	4822 051 30472	4,7K 5% 0,062W
3491	4822 051 30102	1K 5% 0,062W
3492	4822 051 30102	1K 5% 0,062W
3493	4822 051 30102	1K 5% 0,062W
3494	4822 051 30223	22K 5% 0,062W
3495	4822 051 30102	1K 5% 0,062W
3496	4822 051 30102	1K 5% 0,062W
3500	4822 051 30101	100R 5% 0,062W
3501	4822 051 30103	10K 5% 0,062W
3502	4822 117 13632	100K 1% 0,62W
3503	4822 051 30471	470R 5% 0,062W
3504	4822 051 30331	330R 5% 0,062W
3505	4822 051 30271	270R 5% 0,062W
3506	4822 051 30221	220R 5% 0,062W

- RESISTORS -

3507	4822 117 12968	820R 5% 0,62W
3508	4822 051 30681	680R 5% 0,062W
3509	4822 051 30471	470R 5% 0,062W
3510	4822 051 30331	330R 5% 0,062W
3511	4822 051 30271	270R 5% 0,062W
3512	4822 051 30222	2,2K 5% 0,062W
3513	4822 117 11817	1,2K 1% 1/16W
3514	4822 117 12968	820R 5% 0,62W
3516	4822 117 11817	1,2K 1% 1/16W
3517	4822 051 30681	680R 5% 0,062W
3518	4822 051 30221	220R 5% 0,062W
3519	4822 051 30102	1K 5% 0,062W
3520	4822 051 30102	1K 5% 0,062W
3522	4822 116 52228	680R 5% 0,5W
3523	4822 116 52228	680R 5% 0,5W
3524	4822 116 52228	680R 5% 0,5W
3525	4822 116 52228	680R 5% 0,5W
3526	4822 051 30472	4,7K 5% 0,062W
3527	4822 051 30472	4,7K 5% 0,062W
3528	4822 051 30472	4,7K 5% 0,062W
3529	4822 051 30472	4,7K 5% 0,062W
3530	4822 051 30472	4,7K 5% 0,062W
3532	4822 051 30472	4,7K 5% 0,062W
3538	4822 051 30472	4,7K 5% 0,062W
3539	4822 051 30472	4,7K 5% 0,062W
3540	4822 051 30472	4,7K 5% 0,062W
3541	4822 051 30472	4,7K 5% 0,062W
3542	4822 051 30472	4,7K 5% 0,062W
3543	4822 051 30472	4,7K 5% 0,062W
3544	4822 051 30472	4,7K 5% 0,062W
3545	4822 051 30472	4,7K 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
4407	4822 051 30008	0R JUMPER 0603

- COILS & FILTERS -

1400	2422 540 98455	RES CER 4,194MHZ
5400	2422 549 44393	IND FXD 2,7K 100MHZ
5401	4822 157 11228	COIL 100µH 5% LAN02
5402	2422 549 44393	IND FXD 2,7K 100MHZ
5403	4822 157 62552	COIL 2,2µH
5404	2422 549 44393	IND FXD 2,7K 100MHZ
5405	2422 549 44393	IND FXD 2,7K 100MHZ
5406	2422 549 44393	IND FXD 2,7K 100MHZ
5407	2422 549 44393	IND FXD 2,7K 100MHZ
5408	2422 549 44393	IND FXD 2,7K 100MHZ

ELECTRICAL PARTSLIST - FRONT AND KEY BOARD

- COILS & FILTERS -

5409	2422 549 44393	IND FXD 2,7K 100MHZ
5410	2422 549 44393	IND FXD 2,7K 100MHZ
5411	2422 549 44393	IND FXD 2,7K 100MHZ
5412	2422 549 44393	IND FXD 2,7K 100MHZ
5413	2422 549 44393	IND FXD 2,7K 100MHZ

- DIODES -

6400	4822 130 30621	1N4148
6402	5322 130 31504	BZX79-B3V3
6403	4822 130 30621	1N4148
6404	4822 130 30621	1N4148
6405	4822 130 30621	1N4148
6406	4822 130 30621	1N4148
6407	5322 130 34337	BAV99
6408	4822 130 34173	BZX79-B5V6
6409	4822 130 30621	1N4148

- IC & TRANSISTORS -

7400	3140 110 51220	LCD PANEL AZ2045
7401	4822 130 60511	BC847B
7402	3140 110 51240	TMP86CH21F
7403	9965 000 04931	M24C01-WMN6
7404	4822 130 60511	BC847B
7405	4822 130 60511	BC847B
7500	9322 155 82667	IR RECEIVER TSOP2236

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

ELECTRICAL PARTSLIST - COMBI BOARD - TUNER PART

- CAPACITORS -

2101	4822 122 33777	47pF 5% NP0 63V
2103	5322 126 11578	1nF 10% X7R 50V
2104	4822 122 31765	100pF 2% NP0 63V
2106	2020 800 00191	TRIM CAP 3P-11P N450
2107	4822 121 51319	1µF 10% 63V
2110	4822 122 31765	100pF 2% NP0 63V
2111	2222 867 15339	33pF 5% NP0 50V
2120	4822 122 33761	22pF 5% NP0 50V (3-band)
2120	4822 126 14507	18pF 5% NP0 50V (2-band)
2122	5322 126 11579	3,3nF10% X7R 63V
2123	2238 861 18391	390pF 1% NP0 50V
2124	4822 126 14494	22nF 10% X7R 25V
2125	2238 861 18561	560pF 1% NP0 50V
2126	4822 126 14241	330pF NP0 50V
2127	4822 126 13879	220nF +80-20% 16V
2128	4822 124 40248	10µF 20% 63V
2129	4822 124 41584	100µF 20% 10V
2130	3198 017 44740	470nF 20% Y5V 10V
2131	3198 017 44740	470nF 20% Y5V 10V
2132	3198 017 44740	470nF 20% Y5V 10V
2133	4822 124 21913	1µF 20% 63V
2134	3198 017 31530	15nF 10% X7R 50V
2134	4822 126 14494	22nF 10% X7R 25V (/17 only)
2134	4822 126 14494	22nF 10% X7R 25V (/17 only)
2135	3198 017 31530	15nF 10% X7R 50V
2136	4822 126 13879	220nF +80-20% 16V
2137	4822 126 13879	220nF +80-20% 16V
2138	4822 124 22652	2,2µF 20% 50V
2139	4822 122 33752	15pF 5% NP0 50V
2140	4822 126 14226	82pF 5% NP0 50V
2141	2238 586 59812	100nF +80-20% Y5V 50V
2144	3198 017 44740	470nF 20% Y5V 10V
2145	4822 126 13883	220pF 5% 50V
2146	4822 122 33575	220pF 5% NP0 63V
2147	4822 126 13883	220pF 5% 50V
2148	4822 126 14238	2,2nF X7R 50V
2150	4822 126 14585	100nF 10% X7R 50V
2152	4822 126 14549	33nF 16V X7R 50V
2152	4822 126 14249	560pF 10% NP0 25V
2153	4822 122 33752	15pF 5% NP0 50V
2153	4822 126 11663	12 pF 5% NP0 50V
2155	2020 800 00191	TRIM CAP 3P-11P N450
2159	2222 867 15339	33pF 5% NP0 50V
2163	2238 586 59812	100nF +80-20% Y5V 50V
2164	3198 017 44740	470nF 20% Y5V 10V
2165	2238 586 59812	100nF +80-20% Y5V 50V
2166	5322 126 11578	1nF 10% X7R 50V
2167	4822 126 11663	12 pF 5% NP0 50V
2186	4822 124 40196	220µF 20% 16V
2187	5322 126 11583	10nF 10% X7R 50V

- CAPACITORS -

2188	5322 126 11583	10nF 10% X7R 50V
2189	4822 126 13879	220nF +80-20% 16V
2190	4822 124 81151	22µF 20% 50V
2191	4822 124 81151	22µF 20% 50V
2192	5322 126 11578	1nF 10% X7R 50V
2193	5322 126 11578	1nF 10% X7R 50V
2194	5322 126 11578	1nF 10% X7R 50V
2195	4822 124 81151	22UF 20% 50V
2196	5322 126 11583	10nF 10% X7R 50V
2197	5322 126 11583	10nF 10% X7R 50V

- RESISTORS -

3101	4822 051 30333	33K 5% 0,062W
3102	4822 117 13632	100K 1% 0,62W
3103	4822 117 12902	8,2K 1% 0,063W
3104	4822 117 13577	330R 1% 1,25W
3105	4822 051 30221	220R 5% 0,062W
3106	4822 117 12139	22R 5% 0,062W
3107	4822 051 30475	4,7M 5% 0,062W
3108	4822 051 30222	2,2K 5% 0,062W
3109	4822 051 30222	2,2K 5% 0,062W
3123	4822 051 30472	4,7K 5% 0,062W
3125	4822 051 30103	10K 5% 0,062W
3128	4822 051 30222	2,2K 5% 0,062W
3132	4822 051 30479	47R 5% 0,062W
3134	4822 051 30223	22K 5% 0,062W
3137	4822 051 30153	15K 5% 0,062W
3141	4822 051 30563	56K 5% 0,062W
3142	4822 100 12159	100K 30% VAR.
3145	4822 051 30222	2,2K 5% 0,062W
3152	4822 051 30471	470R 5% 0,062W
3153	4822 051 30471	470R 5% 0,062W
3155	4822 051 30479	47R 5% 0,062W
3156	4822 117 13632	100K 1% 0,62W
3157	4822 117 13632	100K 1% 0,62W
3158	4822 051 30471	470R 5% 0,062W
3159	4822 051 30471	470R 5% 0,062W
3160	4822 051 30471	470R 5% 0,062W
3161	4822 051 20223	22K 5% 0,1W
3166	4822 051 20479	4,7R 5% 0,1W
3167	4822 051 20479	47R 5% 0,1W
3169	4822 051 20154	150K 5% 0,1W
3170	4822 117 13632	100K 1% 0,62W
3180	4822 051 30103	10K 5% 0,062W
3186	4822 117 11448	180R 1% 0,1W
3187	4822 051 30102	1K 5% 0,062W
3188	4822 051 30222	2,2K 5% 0,062W

ELECTRICAL PARTSLIST - COMBI BOARD - TUNER PART

- RESISTORS -

3189	4822 051 30223	22K 5% 0,062W
3190	4822 051 30103	10K 5% 0,062W
3191	4822 051 30472	4,7K 5% 0,062W
3192	4822 051 30105	1M 5% 0,062W
3193	4822 051 30222	2,2K 5% 0,062W
3194	4822 117 13632	100K 1% 0,62W
3195	4822 051 30474	470K 5% 0,062W
3196	4822 051 30103	10K 5% 0,062W
4105	4822 051 30008	0R JUMPER 0603
4106	4822 051 30008	0R JUMPER 0603
4107	4822 051 30008	0R JUMPER 0603
4108	4822 051 30008	0R JUMPER 0603
4104	4822 051 30008	0R JUMPER 0603
4109	4822 051 30008	0R JUMPER 0603
4110	4822 051 30008	0R JUMPER 0603

- COILS & FILTERS -

1106	3140 114 50050	FER. BAR D10X80 (3-band)
1106	2422 549 44211	FER. BAR 5X13X55 (2-band)
5104	2422 536 00364	COIL MW ANT. (2-band)
5104	4822 157 11269	COIL MW ANT. (3-band)
5105	4822 157 11271	COIL LW ANT.
5109	4822 242 70665	SFE10,7MS3-A
5110	4822 242 70665	SFE10,7MS3-A
5111	2422 549 44023	IFT 450KHZ
5112	4822 157 70302	IFT FM
5114	4822 157 70302	IFT FM
5119	4822 157 11443	COIL 10,7MHZ
5121	4822 242 10261	COIL 75KHZ
5122	2422 549 44108	COIL MW OSC
5123	2422 549 44108	COIL LW OSC
5130	4822 157 11843	MD7B-01F
5131	4822 157 11843	MD7B-01F

- DIODES -

6103	5322 130 34337	BAV99
6105	4822 130 83075	HN1V02H-B
6120	4822 130 11397	BAS316
6130	4822 130 82833	1SV228
6130	9322 169 42685	BB804-SF2 (/17 only)
6131	4822 130 82833	1SV228
6131	9322 169 42685	BB804-SF2 (/17 only)
6181	5322 130 34337	BAV99
6182	4822 130 11397	BAS316
6183	9340 386 90115	BZX284-C11

- IC & TRANSISTORS -

7101	9351 740 80557	TEA5757H/V1
7102	4822 130 42131	BF550
7104	4822 130 40855	BC337
7105	4822 130 40855	BC337
7109	4822 130 60373	BC856B
7111	5322 130 42755	BC847C
7122	5322 130 42755	BC847C
7124	5322 130 42755	BC847C
7180	4822 130 60373	BC856B
7181	5322 130 42755	BC847C
7182	5322 130 42755	BC847C
7183	5322 130 42755	BC847C

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

ELECTRICAL PARTSLIST - COMBI BOARD - CD PART

- CAPACITORS -

2801	4822 124 40433	47µF 20% 25V
2802	4822 124 40433	47µF 20% 25V
2803	4822 126 14226	82pF 5% NP0 50V
2804	4822 126 14226	82pF 5% NP0 50V
2805	4822 126 14226	82pF 5% NP0 50V
2806	4822 126 13695	82pF 1% NP0 63V
2807	4822 126 11669	27pF 5% 50V
2808	5322 122 33538	150pF 2% NP0 63V
2809	4822 126 11669	27pF 5% 50V
2810	4822 126 13692	47pF 1% NP0 63V
2811	2222 867 15339	33pF 5% NP0 50V
2812	4822 122 33741	10PF 10% NP0 50V
2813	4822 126 14238	2,2nF X7R 50V
2814	3198 024 44730	47nF Y5V 50V
2815	4822 122 33777	47pF 5% NP0 63V
2816	5322 122 32654	22nF 10% X7R 63V
2817	4822 124 40769	4,7µF 20% 100V
2818	3198 024 44730	47nF Y5V 50V
2821	2238 586 59812	100nF +80-20% 50V
2822	4822 126 13344	1,5nF 5% 63V
2823	4822 124 42383	220µF 20% 4V
2824	4822 126 13751	47nF10% X7R 63V
2825	4822 126 13344	1,5nF 5% 63V
2826	3198 024 44730	47nF Y5V 50V
2827	5322 126 11578	1nF 10% X7R 50V
2828	4822 122 33777	47pF 5% NP0 63V
2830	3198 017 41050	1µF Y5V 10V
2831	4822 126 14043	1µF +80-20% 16V
2832	4822 122 33753	150pF 5% NP0 50V
2833	4822 126 13881	470pF 5% 50V
2834	4822 126 14506	270pF 5% 50V
2835	4822 126 13881	470pF 5% 50V
2836	4822 124 40433	47µF 20% 25V
2837	3198 024 44730	47nF Y5V 50V
2838	3198 017 42230	22nF Y5V 50V
2839	2238 586 59812	100nF +80-20% 50V
2840	4822 124 40433	47µF 20% 25V
2841	4822 126 13751	47nF10% X7R 63V
2842	4822 124 21913	1µF 20% 63V
2843	4822 122 31765	100pF 2% NP0 63V
2844	4822 126 13883	220pF 5% 50V
2845	4822 126 13883	220pF 5% 50V
2846	4822 124 40248	10µF 20% 63V
2848	4822 122 31765	100pF 2% NP0 63V
2849	4822 126 13883	220pF 5% 50V
2850	4822 126 13883	220pF 5% 50V
2851	4822 124 40248	10µF 20% 63V
2853	5322 126 11583	10nF 10% X7R 50V
2854	4822 124 11912	220µF 20% 6,3V
2855	4822 124 11912	220µF 20% 6,3V

- CAPACITORS -

2857	4822 124 12362	47µ 4V 20%
2860	5322 116 80853	560pF 5% NP0 63V
2861	4822 126 13344	1,5nF 5% 63V
2862	4822 126 14508	180pF 5% 50V
2863	4822 126 14508	180pF 5% 50V
2864	4822 126 14508	180pF 5% 50V
2865	4822 126 14508	180pF 5% 50V
2869	3198 024 44730	47nF Y5V 50V
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	4822 126 13751	47nF10% X7R 63V

- RESISTORS -

3800	4822 117 13608	4,7R 5% 0,0016W
3801	4822 051 30154	150K 5% 0,062W
3802	4822 051 30102	1K 5% 0,062W
3803	4822 051 30273	27K 5% 0,062W
3804	4822 051 30472	4,7K 5% 0,062W
3805	4822 051 30273	27K 5% 0,062W
3806	4822 117 10361	680R 1% 0,1W
3807	4822 051 30152	1,5K 5% 0,062W
3808	4822 051 30339	33R 5% 0,062W
3809	4822 051 30339	33R 5% 0,062W
3810	4822 052 10478	4,7R 5% 0,33W
3811	4822 051 30102	1K 5% 0,062W
3812	4822 051 30474	470K 5% 0,062W
3813	4822 051 30683	68K 5% 0,062W
3814	4822 051 30332	3,3K 5% 0,062W
3815	4822 051 30472	4,7K 5% 0,062W
3816	4822 051 30153	15K 5% 0,062W
3817	4822 117 10834	47K 1% 0,1W
3818	4822 051 20562	5,6K 5% 0,1W
3819	4822 051 30153	15K 5% 0,062W
3820	4822 051 30183	18K 5% 0,062W
3821	4822 051 20332	3,3K 5% 0,1W
3822	4822 051 30332	3,3K 5% 0,062W
3823	4822 051 20332	3,3K 5% 0,1W
3824	4822 051 30102	1K 5% 0,062W
3825	4822 051 30223	22K 5% 0,062W
3826	4822 051 30273	27K 5% 0,062W
3827	4822 051 20339	33R 5% 0,1W
3828	4822 051 20479	47R 5% 0,1W
3829	4822 051 30101	100R 5% 0,062W

ELECTRICAL PARTSLIST - COMBI BOARD - CD PART

- RESISTORS -

3830	4822 051 30472	4,7K 5% 0,062W
3835	4822 051 30223	22K 5% 0,062W
3836	4822 117 10833	10K 1% 0,1W
3837	4822 051 20471	470R 5% 0,1W
3838	4822 051 20471	470R 5% 0,1W
3839	4822 051 30471	470R 5% 0,062W
3840	4822 051 30471	470R 5% 0,062W
3841	4822 051 30472	4,7K 5% 0,062W
3842	4822 051 10102	1K 2% 0,25W
3843	4822 051 30102	1K 5% 0,062W
3844	4822 051 30101	100R 5% 0,062W
3845	4822 051 30109	10R 5% 0,062W
3846	4822 051 20223	22K 5% 0,1W
3847	4822 117 12864	82K 5% 0,6W
3848	4822 117 10834	47K 1% 0,1W
3849	4822 051 30563	56K 5% 0,062W
3850	4822 117 12902	8,2K 1% 0,063W
3851	4822 051 30563	56K 5% 0,062W
3852	4822 117 10834	47K 1% 0,1W
3853	4822 051 30153	15K 5% 0,062W
3854	4822 117 12902	8,2K 1% 0,063W
3855	4822 116 40227	4,6R 25% 12V (FUS.)
3856	4822 051 20683	68K 5% 0,1W
3857	4822 051 20154	150K 5% 0,1W
3858	4822 051 30392	3,9k 5% 0,063W
3859	4822 117 10834	47K 1% 0,1W
3860	4822 051 30102	1K 5% 0,062W
3861	4822 117 10834	47K 1% 0,1W
3862	4822 051 10102	1K 2% 0,25W
3863	4822 052 10338	3,3R 5% 0,33W
3864	4822 117 10833	10K 1% 0,1W
3865	4822 051 30102	1K 5% 0,062W
3867	4822 051 20223	22K 5% 0,1W
3868	4822 051 30103	10K 5% 0,062W
3869	4822 051 30103	10K 5% 0,062W
3871	4822 051 30471	470R 5% 0,062W
3872	4822 117 12925	47K 1% 0,063W
3873	4822 051 30223	22K 5% 0,062W
3874	4822 051 30223	22K 5% 0,062W
3875	4822 051 30103	10K 5% 0,062W
3876	4822 051 30103	10K 5% 0,062W
3878	4822 051 30471	470R 5% 0,062W
3879	4822 117 12925	47K 1% 0,063W
3880	4822 051 20339	33R 5% 0,1W
3881	4822 051 30151	150R 5% 0,062W
3882	4822 117 11373	100R 1%
3883	4822 051 30102	1K 5% 0,062W
3884	4822 051 30102	1K 5% 0,062W
3886	4822 117 10833	10K 1% 0,1W
3887	4822 117 10833	10K 1% 0,1W

- RESISTORS -

3888	4822 051 20472	4,7K 5% 0,1W
3890	4822 117 10837	100K 1% 0.1W
3891	4822 117 10837	100K 1% 0.1W
3892	4822 117 13632	100K 1% 0,62W
3893	4822 117 13632	100K 1% 0,62W
3894	4822 117 10833	10K 1% 0,1W
3895	4822 117 10833	10K 1% 0,1W
3896	4822 117 10833	10K 1% 0,1W
3897	4822 117 10833	10K 1% 0,1W
3898	4822 117 10833	10K 1% 0,1W
3899	4822 117 10833	10K 1% 0,1W
3900	4822 051 20223	22K 5% 0,1W
4801	4822 051 30008	0R JUMPER 0603
4802	4822 051 20008	0R JUMPER 0805
4807	4822 051 20008	0R JUMPER 0805
4809	4822 051 20008	0R JUMPER 0805
4810	4822 051 20008	0R JUMPER 0805
4812	4822 051 20008	0R JUMPER 0805
4813	4822 051 20008	0R JUMPER 0805
4814	4822 051 20008	0R JUMPER 0805
4815	4822 051 20008	0R JUMPER 0805
4823	4822 051 20008	0R JUMPER 0805
4824	4822 051 20008	0R JUMPER 0805
4828	4822 051 20008	0R JUMPER 0805
4831	4822 051 20008	0R JUMPER 0805
4832	4822 051 20008	0R JUMPER 0805
4838	4822 051 20008	0R JUMPER 0805
4845	4822 051 20008	0R JUMPER 0805
4847	4822 051 20008	0R JUMPER 0805
4848	4822 051 20008	0R JUMPER 0805
4850	4822 051 20008	0R JUMPER 0805
4853	4822 051 20008	0R JUMPER 0805
4856	4822 051 30008	0R JUMPER 0603
4857	4822 051 20008	0R JUMPER 0805
4859	4822 051 20008	0R JUMPER 0805
4863	4822 051 20008	0R JUMPER 0805
4865	4822 051 20008	0R JUMPER 0805
4872	4822 051 20008	0R JUMPER 0805
4877	4822 051 30008	0R JUMPER 0603
4881	4822 051 20008	0R JUMPER 0805
4884	4822 051 20008	0R JUMPER 0805
4885	4822 051 30008	0R JUMPER 0603
4886	4822 051 20008	0R JUMPER 0805
4888	4822 051 20008	0R JUMPER 0805
4889	4822 051 20008	0R JUMPER 0805

ELECTRICAL PARTSLIST - COMBI BOARD - CD PART

- COILS & FILTERS -

1810	2422 540 98519	RES CER 8,467MHZ
5803	4822 157 11231	1µH
5804	2422 549 44393	IND FXD 100MHZ 2K7

- DIODES -

6877	4822 130 11564	UDZ3.9B

- IC & TRANSISTORS -

7800	9352 641 80557	SAA7324H/M2B
7802	5322 209 11517	PC74HCU04T
7803	5322 130 60123	BC807-40
7804	5322 209 82941	LM358D
7807	5322 130 42755	BC847C
7808	4822 209 32852	TDA7073A/N2
7809	4822 209 32852	TDA7073A/N2
7810	4822 209 33165	TDA1308T/N1
7875	4822 130 60511	BC847B

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

ELECTRICAL PARTSLIST - COMBI BOARD - TAPE PART

- MISCELLANEOUS -

1707	4822 277 11504	SWITCH-PUSH
5701	4822 157 10371	COIL BIAS OSC

- CAPACITORS -

2706	4822 124 21732	10µF 20% 25V
2707	4822 124 40196	220µF 20% 16V
2708	4822 124 80231	47µF 20% 25V
2709	4822 124 40433	47µF 20% 25V
2710	4822 124 23052	100µF 20% 16V
2711	4822 124 81151	22µF 20% 50V
2712	4822 126 14247	1,5nF X7R 50V
2714	4822 126 14247	1,5nF X7R 50V
2715	5322 126 11583	10nF 10% X7R 50V
2716	2238 586 59812	100nF +80-20% 50V
2719	2238 586 15633	5,6nF 10% X7R 50V
2721	4822 126 14247	1,5nF X7R 50V
2722	5322 126 11583	10nF 10% X7R 50V
2723	2238 586 59812	100nF +80-20% 50V
2726	2238 586 15633	5,6nF 10% X7R 50V
2727	4822 126 14247	1,5nF X7R 50V
2728	4822 126 13193	4,7nF 10% X7R 63V
2729	4822 126 13193	4,7nF 10% X7R 63V
2730	2020 300 90561	1,2nF 10% 50V
2732	5322 126 11579	3,3nF10% X7R 63V
2733	5322 126 11583	10nF 10% X7R 50V
2738	5322 126 11583	10nF 10% X7R 50V
2739	5322 126 11583	10nF 10% X7R 50V
2750	2238 586 15633	5,6nF 10% X7R 50V
2751	2238 586 15633	5,6nF 10% X7R 50V
2770	4822 124 11946	22µF 20% 16V
2771	4822 124 81151	22µF 20% 50V

- RESISTORS -

3710	4822 051 30273	27K 5% 0,062W
3712	4822 051 30123	12K 5% 0,062W
3713	4822 051 30151	150R 5% 0,062W
3714	4822 051 30221	220R 5% 0,062W
3716	4822 051 30334	330K 5% 0,062W
3719	4822 051 30273	27K 5% 0,062W
3720	4822 051 30123	12K 5% 0,062W
3722	4822 051 30223	22K 5% 0,062W
3723	4822 051 30223	22K 5% 0,062W
3726	4822 051 30222	2,2K 5% 0,062W
3727	4822 051 30222	2,2K 5% 0,062W
3728	4822 051 20479	47R 5% 0,1W
3730	4822 051 30151	150R 5% 0,062W
3731	4822 051 30563	56K 5% 0,062W
3732	4822 117 12971	15R 5% 0,62W

- RESISTORS -

3733	4822 051 30475	4,7M 5% 0,062W
3734	4822 051 30103	10K 5% 0,062W
3737	4822 051 30103	10K 5% 0,062W
3738	4822 117 13632	100K 1% 0,62W
3743	4822 051 30471	470R 5% 0,062W
3744	4822 051 30471	470R 5% 0,062W
3745	4822 051 30109	10R 5% 0,062W
3747	4822 051 30151	150R 5% 0,062W
3748	4822 051 30471	470R 5% 0,062W
3749	4822 051 30471	470R 5% 0,062W
3757	4822 051 20223	22K 5% 0,1W
3761	4822 051 30562	5,6K 5% 0,063W
3762	4822 051 30562	5,6K 5% 0,063W
3770	4822 051 30151	150R 5% 0,062W
3771	4822 051 30334	330K 5% 0,062W
3772	4822 051 30221	220R 5% 0,062W
3773	4822 051 30474	470K 5% 0,062W
3774	4822 051 30101	1R 5% 0,062W
3788	4822 051 20472	4,7K 5% 0,1W
4701	4822 051 30008	0R JUMPER 0603
4702	4822 051 30008	0R JUMPER 0603
4703	4822 051 30008	0R JUMPER 0603
4704	4822 051 30008	0R JUMPER 0603
4705	4822 051 30008	0R JUMPER 0603
4706	4822 051 30008	0R JUMPER 0603
4707	4822 051 30008	0R JUMPER 0603
4708	4822 051 30008	0R JUMPER 0603
4709	4822 051 30008	0R JUMPER 0603
4710	4822 051 30008	0R JUMPER 0603
4711	4822 051 30008	0R JUMPER 0603
4712	4822 051 30008	0R JUMPER 0603

- DIODE, IC & TRANSISTORS -

6704	4822 130 30621	1N4148
7702	4822 130 40981	BC337-25
7705	4822 209 17498	AN7323

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

ELECTRICAL PARTSLIST - COMBI BOARD - AF PART

- MISCELLANEOUS -

1254	⚠	2422 086 10783	FUSE 2A 250V IEC
1254	⚠	4822 253 10128	FUSE 2A 250V UL
1257		2422 026 05076	HEADPHONE JACK

- CAPACITORS -

2251	2238 586 59812	100nF +80-20% 50V
2252	4822 124 41407	0,47µF 20% 63V
2253	4822 124 41407	0,47µF 20% 63V
2254	4822 124 41407	0,47µF 20% 63V
2255	4822 124 41407	0,47µF 20% 63V
2256	4822 124 41407	0,47µF 20% 63V
2257	4822 124 41407	0,47µF 20% 63V
2258	5322 126 11583	10nF 10% X7R 50V
2259	5322 126 11583	10nF 10% X7R 50V
2260	5322 126 11582	6,8nF 10% X7R 63V
2261	5322 126 11582	6,8nF 10% X7R 63V
2262	4822 126 14247	1,5nF X7R 50V
2263	4822 126 14247	1,5nF X7R 50V
2264	2238 586 59812	100nF +80-20% 50V
2265	2238 586 59812	100nF +80-20% 50V
2266	5322 126 11583	10nF 10% X7R 50V
2267	5322 126 11583	10nF 10% X7R 50V
2268	2238 586 59812	100nF +80-20% 50V
2269	2238 586 59812	100nF +80-20% 50V
2270	4822 126 13193	4,7nF10% X7R 63V
2271	4822 126 13193	4,7nF10% X7R 63V
2272	2238 586 59812	100nF +80-20% 50V
2273	2238 586 59812	100nF +80-20% 50V
2274	2238 586 59812	100nF +80-20% 50V
2275	2238 586 59812	100nF +80-20% 50V
2276	3198 016 31020	1nF NP0 25V
2277	3198 016 31020	1nF NP0 25V
2278	4822 122 31765	100pF 2% NP0 63V
2279	4822 122 31765	100pF 2% NP0 63V
2280	4822 124 40433	47µF 20% 25V
2282	4822 124 41751	47µF 20% 50V
2283	4822 124 41751	47µF 20% 50V
2284	4822 124 40207	100µF 20% 25V
2285	4822 124 40207	100µF 20% 25V
2286	3198 016 36810	680pF NP0 25V
2287	3198 016 36810	680pF NP0 25V
2288	4822 124 40433	47µF 20% 25V
2289	4822 124 40433	47µF 20% 25V
2290	4822 124 41407	0,47µF 20% 63V
2291	4822 124 41407	0,47µF 20% 63V
2292	4822 124 80195	470µF 20% 10V
2293	4822 124 80195	470µF 20% 10V
2294	4822 124 40196	220µF 20% 16V
2295	4822 124 11878	4700µF 20% 16V.
2296	4822 124 80195	470µF 20% 10V

- CAPACITORS -

2301	4822 126 11585	22nF +80-20% 25V
2302	4822 126 11585	22nF +80-20% 25V
2303	4822 126 11585	22nF +80-20% 25V
2304	4822 126 11585	22nF +80-20% 25V
2305	4822 124 41584	100µF 20% 10V
2306	3198 016 31020	1nF NP0 25V
2307	4822 124 40248	10µF 20% 63V
2308	4822 124 40769	4,7µF 20% 100V
2309	2238 586 59812	100nF +80-20% 50V
2314	3198 017 34730	47nF X7R 16V
2315	3198 017 34730	47nF X7R 16V
2316	3198 017 44740	47nF X7R 16V
2317	3198 017 44740	47nF X7R 16V
2318	3198 016 31020	1nF NP0 25V
2319	4822 124 40433	47µF 20% 25V
2320	3198 017 34730	47nF X7R 16V
2321	3198 017 34730	47nF X7R 16V
2322	4822 124 40433	47µF 20% 25V
2323	4822 126 14491	2.2µF 10V 0805
2324	4822 124 40433	47µF 20% 25V
2325	3198 016 31020	1nF NP0 25V
2326	3198 016 31020	1nF NP0 25V
2327	2238 586 59812	100nF +80-20% 50V
2328	2238 586 59812	100nF +80-20% 50V
2329	2238 586 59812	100nF +80-20% 50V
2330	2238 586 59812	100nF +80-20% 50V
2331	3198 017 44740	47nF X7R 16V
2332	3198 017 44740	47nF X7R 16V

- RESISTORS -

3251	4822 117 12902	8,2K 1% 0,063W
3252	4822 117 12902	8,2K 1% 0,063W
3253	4822 117 12925	47K 1% 0,063W
3254	4822 117 12925	47K 1% 0,063W
3255	4822 051 30331	330R 5% 0,062W
3256	4822 051 30331	330R 5% 0,062W
3257	4822 051 30393	39K 5% 0,062W
3258	4822 051 30393	39K 5% 0,062W
3260	4822 051 30472	4,7K 5% 0,062W
3261	4822 117 12925	47K 1% 0,063W
3262	4822 117 12925	47K 1% 0,063W
3263	4822 051 30472	4,7K 5% 0,062W
3267	4822 051 30471	470R 5% 0,062W
3268	4822 051 30471	470R 5% 0,062W
3269	4822 051 30222	2,2K 5% 0,062W
3270	4822 051 30222	2,2K 5% 0,062W
3271	4822 051 30273	27K 5% 0,062W
3272	4822 051 30273	27K 5% 0,062W
3273	4822 051 30272	2,7K 5% 0,062W
3274	4822 051 30272	2,7K 5% 0,062W

ELECTRICAL PARTSLIST - COMBI BOARD - AF PART

- RESISTORS -

3275	4822 051 30102	1K 5% 0,062W
3276	4822 050 11002	1K 1% 0,4W
3280	4822 051 30393	39K 5% 0,062W
3281	4822 051 30393	39K 5% 0,062W
3282	4822 051 30472	4,7K 5% 0,062W
3283	4822 051 30472	4,7K 5% 0,062W
3284	4822 051 30471	470R 5% 0,062W
3285	4822 051 30471	470R 5% 0,062W
3286	4822 051 30221	220R 5% 0,062W
3287	4822 051 30221	220R 5% 0,062W
3288	4822 051 30123	12K 5% 0,062W
3289	4822 051 30123	12K 5% 0,062W
3290	4822 051 30562	5,6K 5% 0,063W
3291	4822 117 12925	47K 1% 0,063W
3293	4822 116 52249	1,8K 5% 0,5W
3295	4822 051 30472	4,7K 5% 0,062W
3296	4822 116 52228	680R 5% 0,5W
3297	4822 116 52228	680R 5% 0,5W
3302	4822 116 83883	470R 5% 0,5W
3303	4822 116 83883	470R 5% 0,5W
3322	4822 117 12925	47K 1% 0,063W
3323	4822 117 12925	47K 1% 0,063W
3324	4822 117 11817	1,2K 1% 0,062W
3325	4822 117 11817	1,2K 1% 0,062W
3326	4822 051 30102	1K 5% 0,062W
3327	4822 051 30102	1K 5% 0,062W
3334	4822 051 30222	2,2K 5% 0,062W
3335	4822 051 30222	2,2K 5% 0,062W
3336	4822 116 83883	470R 5% 0,5W
3337	4822 050 24708	4,7R 1% 0,6W
3338	4822 050 24708	4,7R 1% 0,6W
3339	4822 051 30332	3,3K 5% 0,062W
3341	4822 051 30561	560R 5% 0,062W
3342	4822 051 30272	2,7K 5% 0,062W
3344	4822 051 30471	470R 5% 0,062W
3345	4822 116 52206	120R 5% 0,5W
3346	4822 116 52206	120R 5% 0,5W
3347	4822 117 12925	47K 1% 0,063W
3348	4822 051 30103	10K 5% 0,062W
3349	4822 051 30471	470R 5% 0,062W
3350	4822 051 30103	10K 5% 0,062W
3351	4822 050 24708	4,7R 1% 0,6W
3353	4822 116 52249	1,8K 5% 0,5W
3354	4822 051 30471	470R 5% 0,062W
3355	4822 051 30471	470R 5% 0,062W
3356	4822 116 81154	2,2R 5% 0,5W
3357	4822 116 81154	2,2R 5% 0,5W
3358	4822 116 81154	2,2R 5% 0,5W
3359	4822 051 30681	680R 5% 0,062W
3360	4822 051 30681	680R 5% 0,062W

- RESISTORS -

3361	4822 116 52272	330K 5% 0,5W
3362	4822 116 52272	330K 5% 0,5W
4201	4822 051 30008	0R JUMPER 0603
4202	4822 051 30008	0R JUMPER 0603
4203	4822 051 30008	0R JUMPER 0603
4205	4822 051 30008	0R JUMPER 0603
4206	4822 051 30008	0R JUMPER 0603
4270	4822 051 30008	0R JUMPER 0603
4271	4822 051 30008	0R JUMPER 0603

- COILS & FILTERS -

5252	4822 157 62552	2,2µH
5253	4822 157 62552	2,2µH
5254	2422 549 44393	IND FXD 100MHZ 2K7
5255	2422 549 44393	IND FXD 100MHZ 2K7
5256	4822 157 11074	100µH
5257	4822 157 11074	100µH
5258	4822 157 11074	100µH
5259	4822 157 11074	100µH
5260	4822 157 11074	100µH
5261	4822 157 11074	100µH
5262	2422 549 44919	IND FXD 100MHZ 600R
5263	2422 549 44919	IND FXD 100MHZ 600R
5264	4822 157 11074	100µH

- DIODES -

6253	4822 130 30621	1N4148
6254	4822 130 31878	1N4003G
6255	4822 130 31878	1N4003G
6256	4822 130 31878	1N4003G
6257	4822 130 31878	1N4003G
6269	3198 010 53380	BZX79-B3V3
6270	4822 130 30621	1N4148
6271	4822 130 30621	1N4148
6272	4822 130 30621	1N4148
6273	4822 130 30621	1N4148

- IC & TRANSISTORS -

7251	4822 130 41246	BC327-25
7252	5322 130 44593	BC369
7253	4822 130 60511	BC847B
7261	9322 150 74668	TDA7468D
7262	4822 209 31544	TA8227P

ELECTRICAL PARTSLIST - COMBI BOARD - AF PART

- IC & TRANSISTORS -

7263	4822 130 60511	BC847B
7265	4822 130 42804	BC817-25
7266	4822 130 42804	BC817-25
7267	4822 130 41246	BC327-25
7268	4822 130 41246	BC327-25
7269	4822 130 60373	BC856B
7270	4822 130 60511	BC847B
7271	4822 130 60373	BC856B
7272	4822 130 41246	BC327-25

ELECTRICAL PARTSLIST - MISCELLANEOUS

1005	⚠	2422 030 00333	AC SOCKET
1005	⚠	4822 265 20706	AC SOCKET (/17 only)
1006	⚠	3140 118 33180	TRANSFORMER 230V
1006	⚠	3140 118 33190	TRANSFORMER 120/220V
1006	⚠	3140 118 33200	TRANSFORMER 120V
1007		2422 264 00447	LOUDSPEAKER 4 OHM 6W
1007		2422 264 00448	LOUDSPEAKER 4 OHM 6W (/17 only)
1008		2422 264 00447	LOUDSPEAKER 4 OHM 6W
1008		2422 264 00448	LOUDSPEAKER 4 OHM 6W (/17 only)
1009		2422 264 00456	LOUDSPEAKER, PIEZO
1009		2422 264 00405	LOUDSPEAKER, PIEZO (/17 only)
1010		2422 264 00456	LOUDSPEAKER, PIEZO
1010		2422 264 00405	LOUDSPEAKER, PIEZO (/17 only)
1011	⚠	2422 127 00453	VOLTAGE SELECTOR
8401		3139 110 35700	FFC FOIL 9P 140MM
8800		4822 320 12637	FFC FOIL 15P 70MM

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