

Service
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Service

Service Manual



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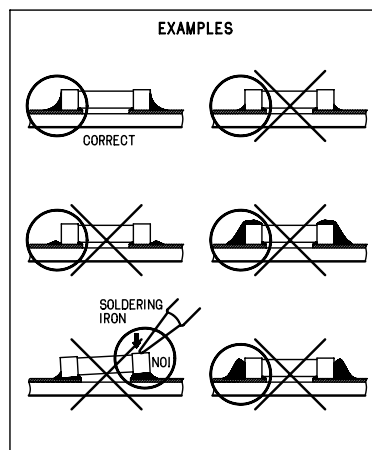
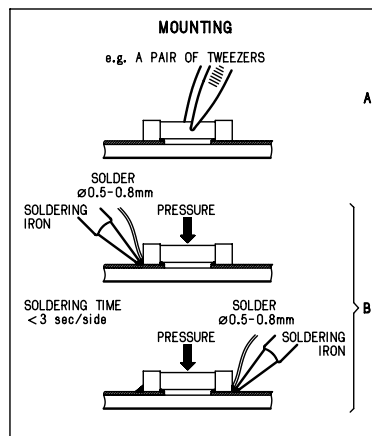
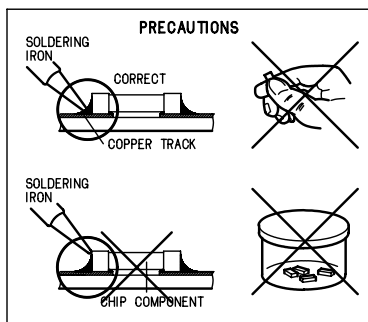
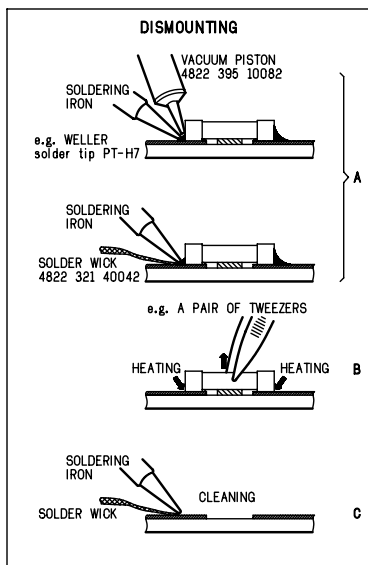
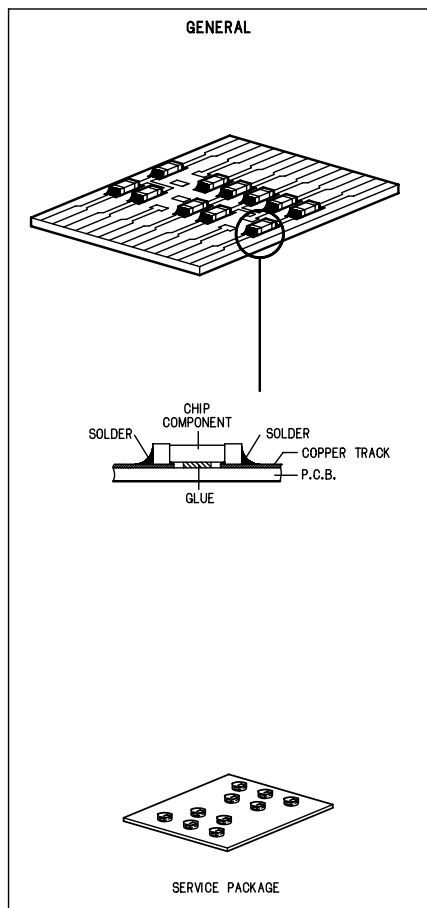
**CLASS 1
LASER PRODUCT**



PHILIPS

GB 3140 785 22910

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 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 dit zelfde 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 enfilez 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 Pulsarmband 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 ridotta 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 braccialetto 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

(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

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden. Sicherheitsbauteile sind durch das Symbol

(NL)

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

(I)

Le norme di sicurezza estigono 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

SAFETY**(GB)**

DANGER: Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

(S) Varning !

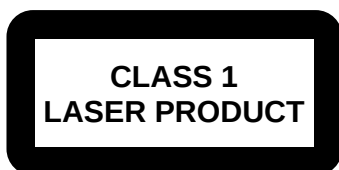
Osynlig laserstrålning när apparaten är öppnad och spårren är urkopplad. Betrakta ej strålen.

(DK) Advarsel !

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse 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 sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

TECHNICAL SPECIFICATIONS

GENERAL

Mains voltage	-/00/05/14 :	230 V
	-/01 :	120 / 230 V
	/10 :	240V
	-/17 :	120 V
Mains freq.	-/00/05/10/14 :	50 Hz
	-/01 :	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
	:	65.81 - 74 MHz (/14 only)
IF frequency	:	10.7 MHz $\pm$ 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 $\pm$ 1 kHz
Sensitivity	MW :	3200 μ V/m at 26dB S/N
	LW :	5500 μ V/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 $\pm$ 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 $\pm$ 1.5 kHz

COMPACT DISC

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

SERVICE TOOLS

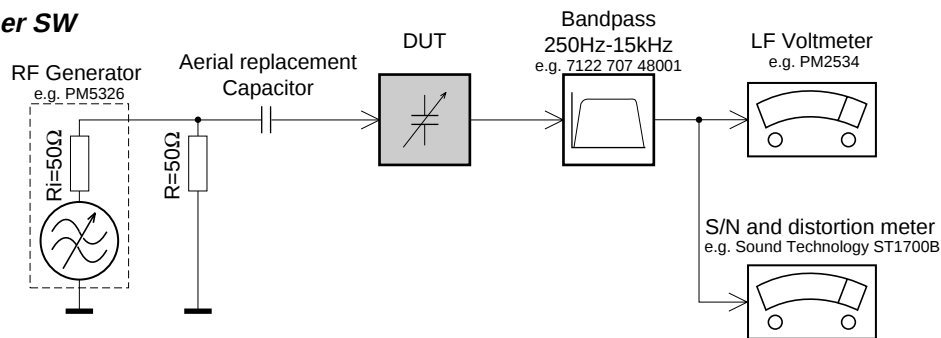
Audio signal disc SBC 429.....	4822 397 30184
Playability test disc SBC 444.....	4822 397 30245
Test disc 5 (disc without errors) +	
Test disc 5A (disc with dropout errors, black spots and fingerprints)	
SBC 426/426A.....	4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause")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

AVAILABLE ESD PROTECTION EQUIPMENT

anti-static table mat	large 1200x650x1.25mm □	4822 466 10953
	small 600x650x1.25mm □	4822 466 10958
anti-static wristband		4822 395 10223
connection box (3 press stud connections, 1M Ω)□		4822 320 11307
extendible cable (2m, 2M Ω , to connect wristband to connection box)□		4822 320 11305
connecting cable (3m, 2M Ω , to connect table mat to connection box)□		4822 320 11306
earth cable (1M Ω , 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

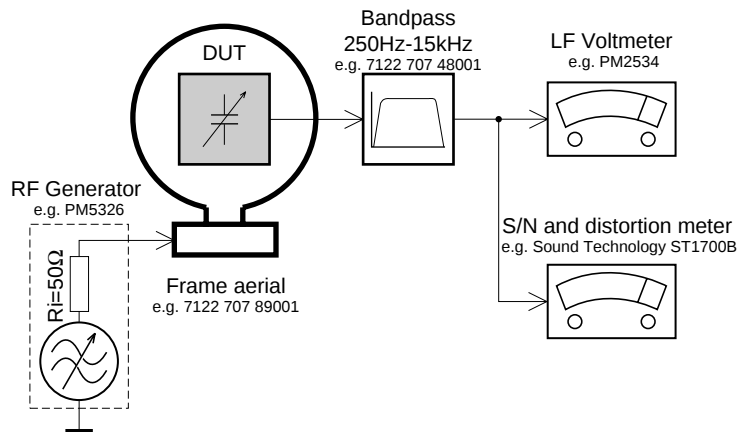
SERVICE MEASUREMENT

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).

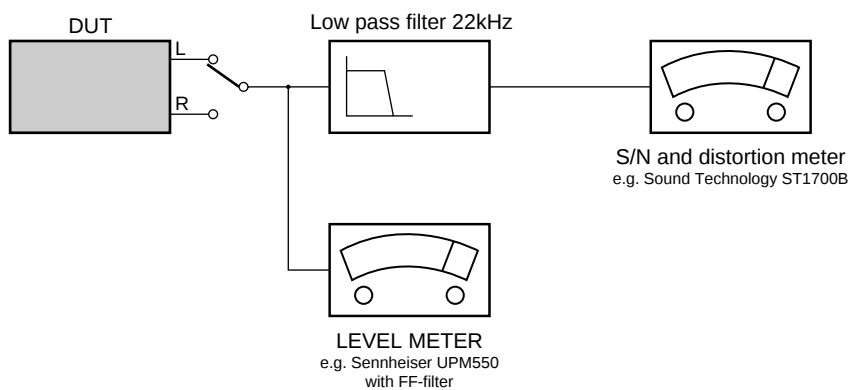
Tuner AM (MW,LW)



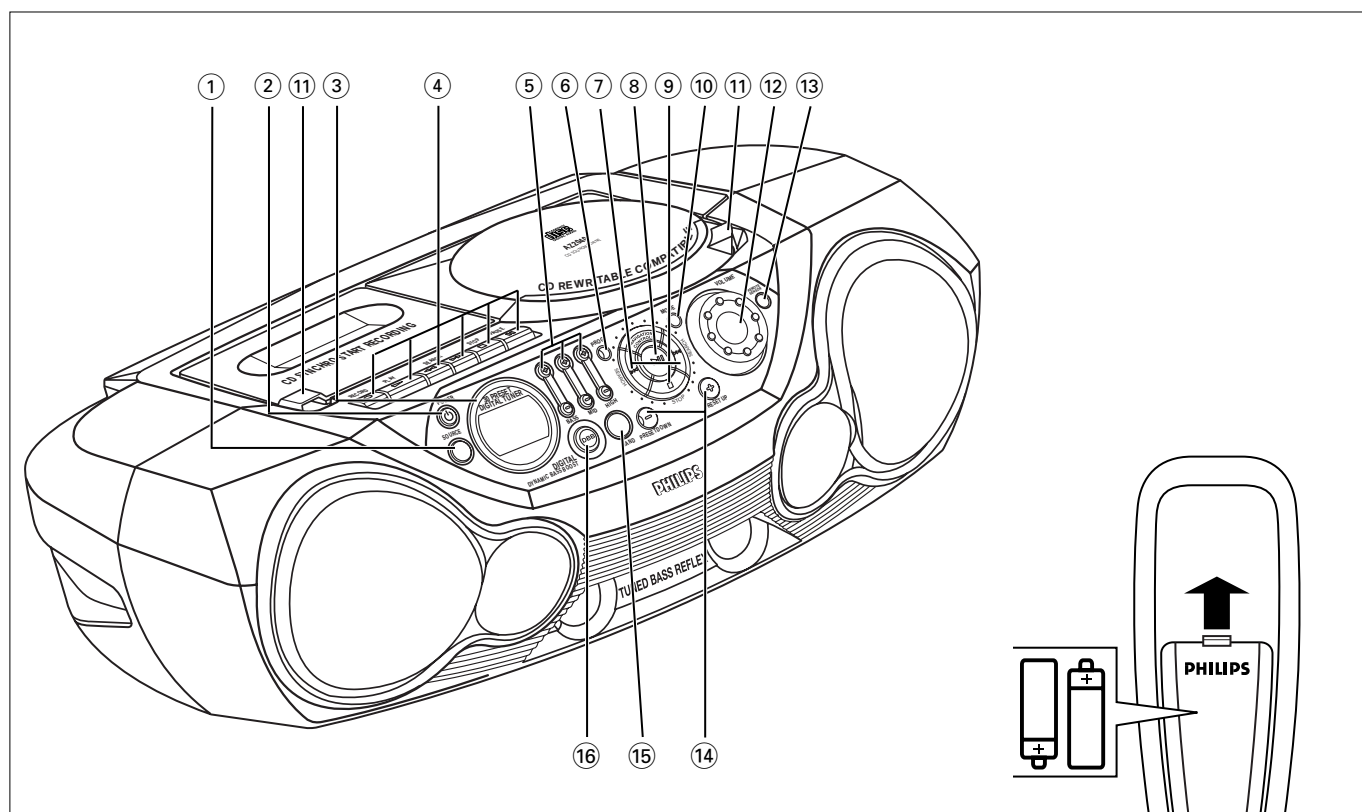
To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage.

CD

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



CONNECTIONS AND CONTROLS



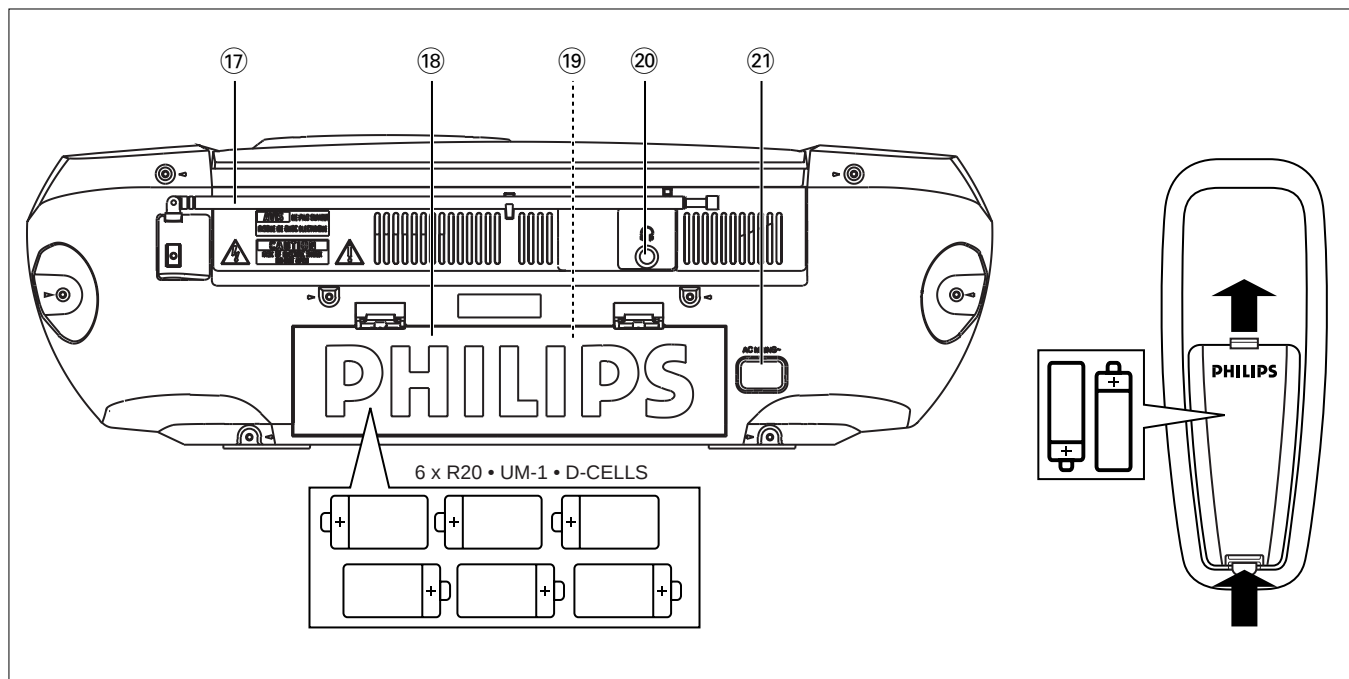
TOP AND FRONT PANELS

- ① **SOURCE** – selects CD / TUNER / TAPE function
- ② ϕ – 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** ■ – stops 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 **Door** – lift at the respective door to open cassette/ tape or cd compartment
- ⑫ **VOLUME** – to adjust volume level
- ⑬ **REMOTE SENSOR** (for AZ2045 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 AZ2045 only)

- ① **CD** – selects CD sound source
- ② ϕ – switches the set off
 - Note:* When the set is switched off, the remote control cannot operate any commands.
 - The set needs to be switched on first via the set's ϕ button.
- ③ **VOLUME** ▲, ▼ – adjusts volume level (up, down)
- ④ **SHUFFLE** – plays all CD tracks in random order
- ⑤ **BASS** – selects DBB on/off
- ⑥ ►|| – starts/ pauses CD playback
- ⑦ **SEARCH** ◀, ▶ – searches backwards/ forwards within a track
- ⑧ **BAND** – selects FM/ MW (AM) waveband
- ⑨ **PRESET** +, – – selects a preset radio station (up, down)
- ⑩ **TUNING** ◀, ▶ – tunes to tuner stations (down, up)
- ⑪ **TUNER** – selects tuner sound source
- ⑫ ■ – stops CD playback;
 - erases a CD program
- ⑬ ◀, ▶ – skips to the beginning of a current track previous/ subsequent track
- ⑭ **MUTE** – interrupts/ resumes sound
- ⑮ **REPEAT** – repeats a track /program/ entire CD

CONNECTIONS AND CONTROLS



BACK PANEL

- ①⑦ **Telescopic aerial** – improves FM reception
- ①⑧ **Battery compartment** – for 6 batteries, type R-20, UM1 or D-cells
- ①⑨ **Voltage selector** (inside battery compartment, some versions only) – adjust to match the local voltage 110/220V before plugging in the set
- ②⑦ **3.5 mm stereo headphone socket**
Note: The speakers will be muted when headphones are connected to the set.
- ②① **AC MAINS** – inlet for mains lead

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 AZ2045 only)

- 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 centre.
- 2** If your set is equipped with a voltage selector, adjust the selector so that it matches with the local mains.
- 3** Connect the mains lead to the wall socket.
- 4** To disconnect the mains supply, unplug the set from the wall socket.

Auto-Standby mode

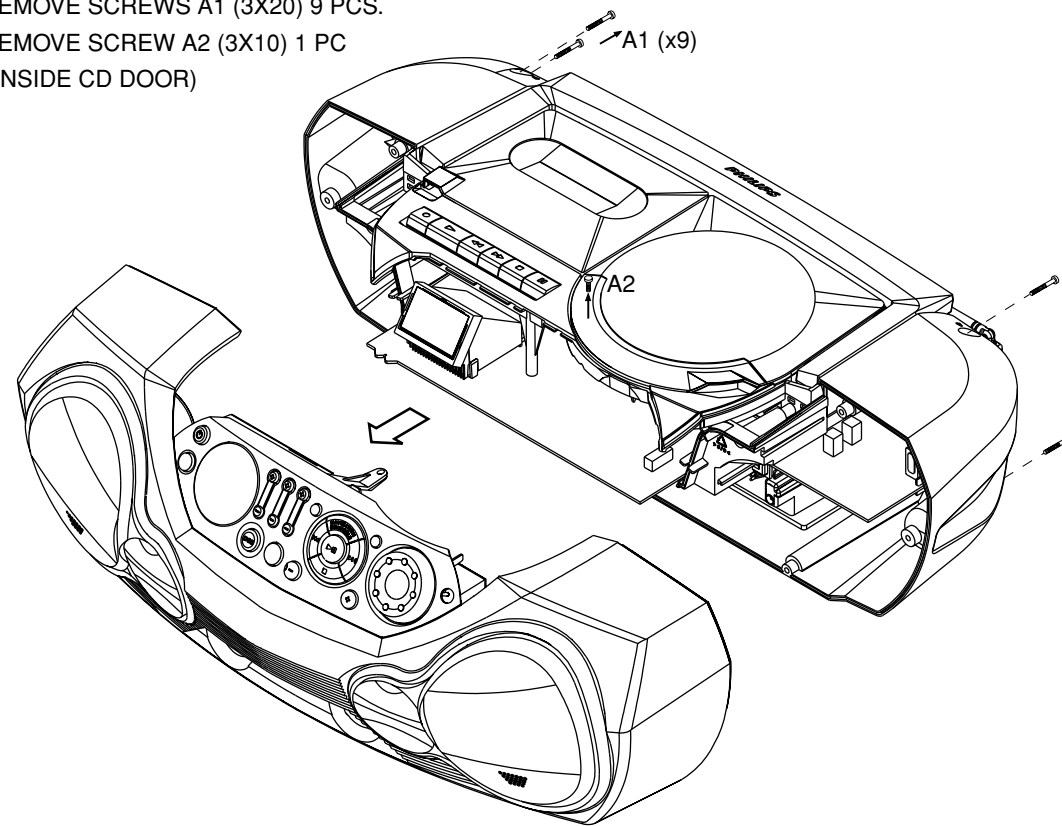
When a CD or tape has reached the end of playback and remains in the stop position for more than 15 minutes, the set will switch off automatically to save power.

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

DISASSEMBLY DIAGRAM

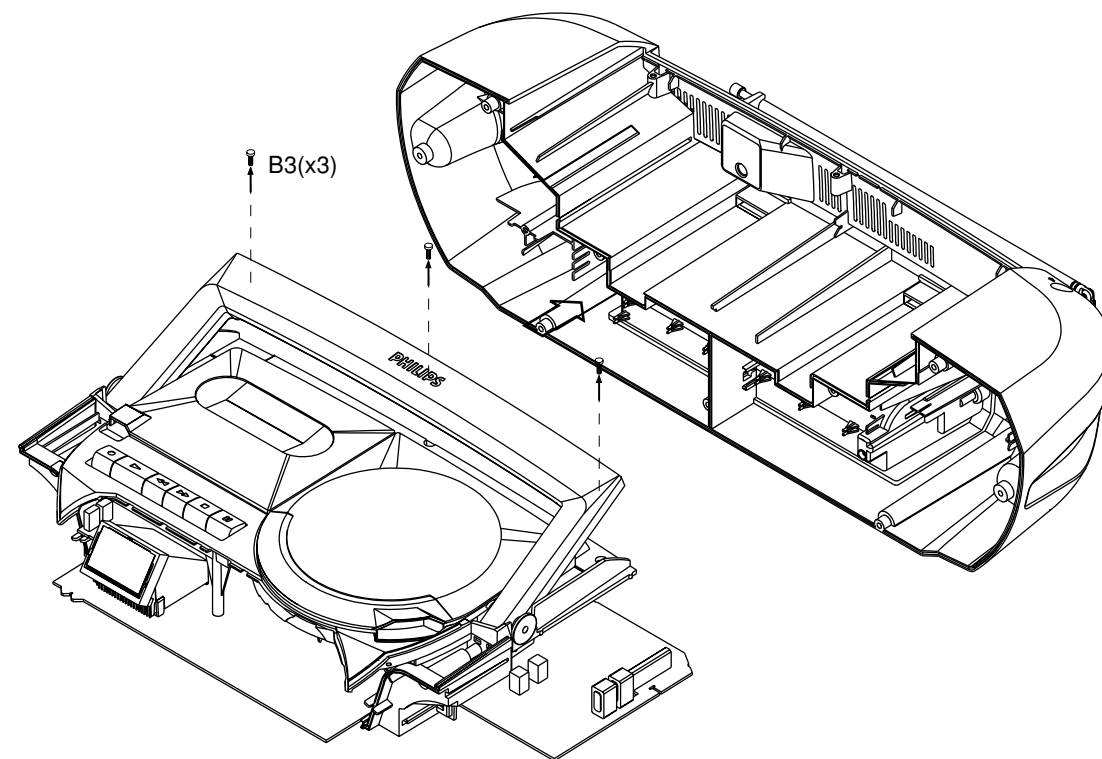
A. REMOVE FRONT CABINET ASSEMBLY

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



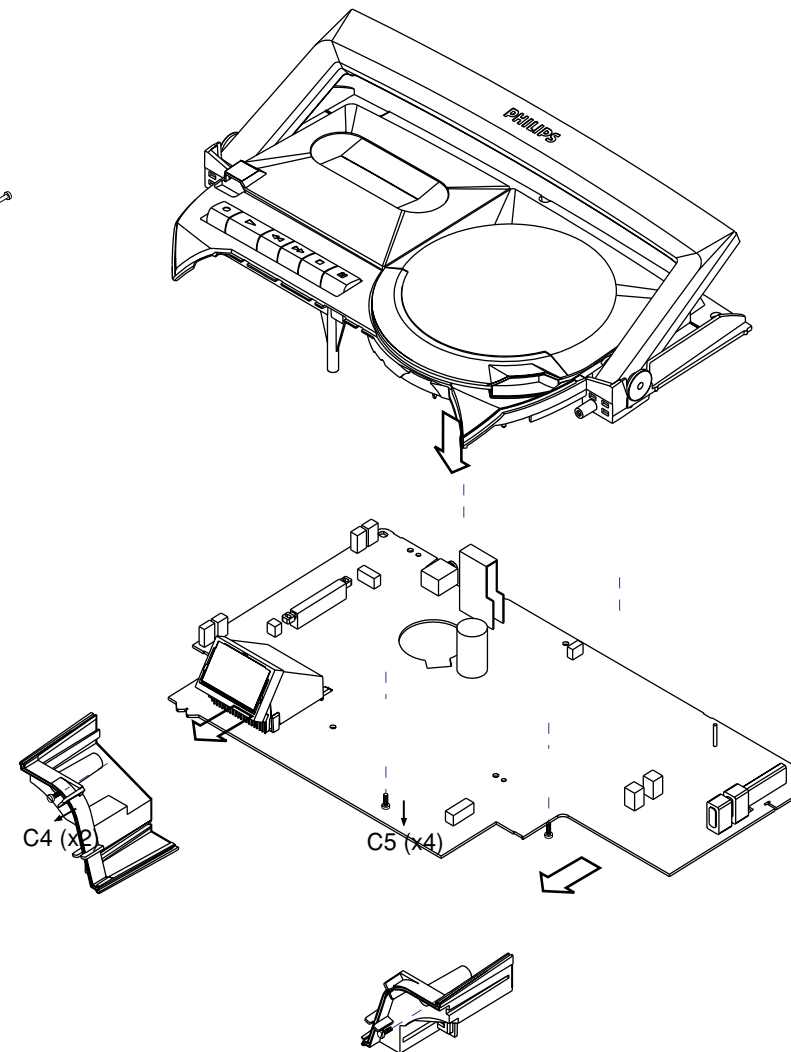
B. REMOVE BACK CABINET ASSEMBLY.

- REMOVE SCREWS B3 (3X10) 3 PCS.



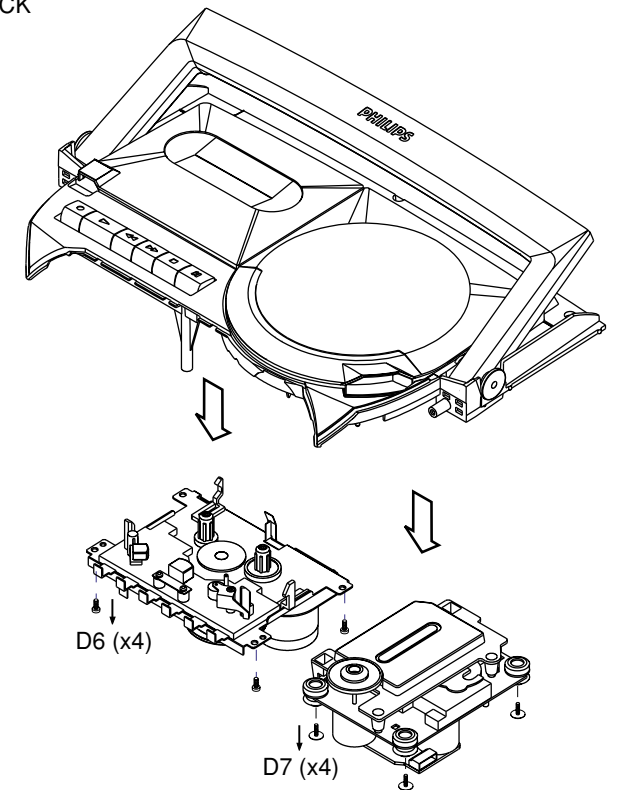
C. REMOVE COMBI BOARD ASSEMBLY

- REMOVE SCREWS C4 (3X10) 2 PCS.
- REMOVE FIXING BRACKETS
- REMOVE SCREWS C5 (3X10) 4 PCS.



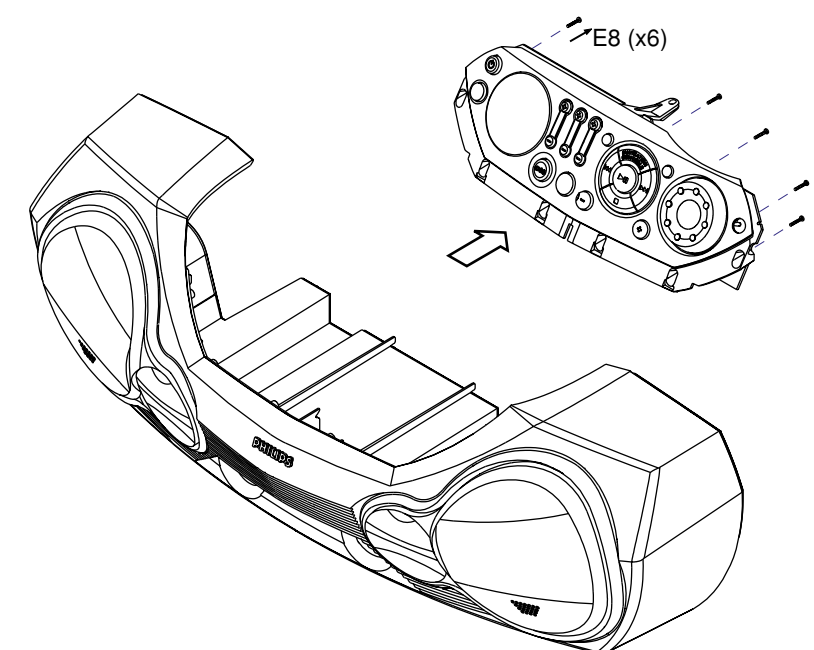
D. REMOVE DECK MECHANISM

- 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.



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 independently of the service testprogram.

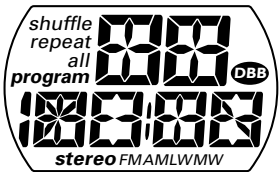
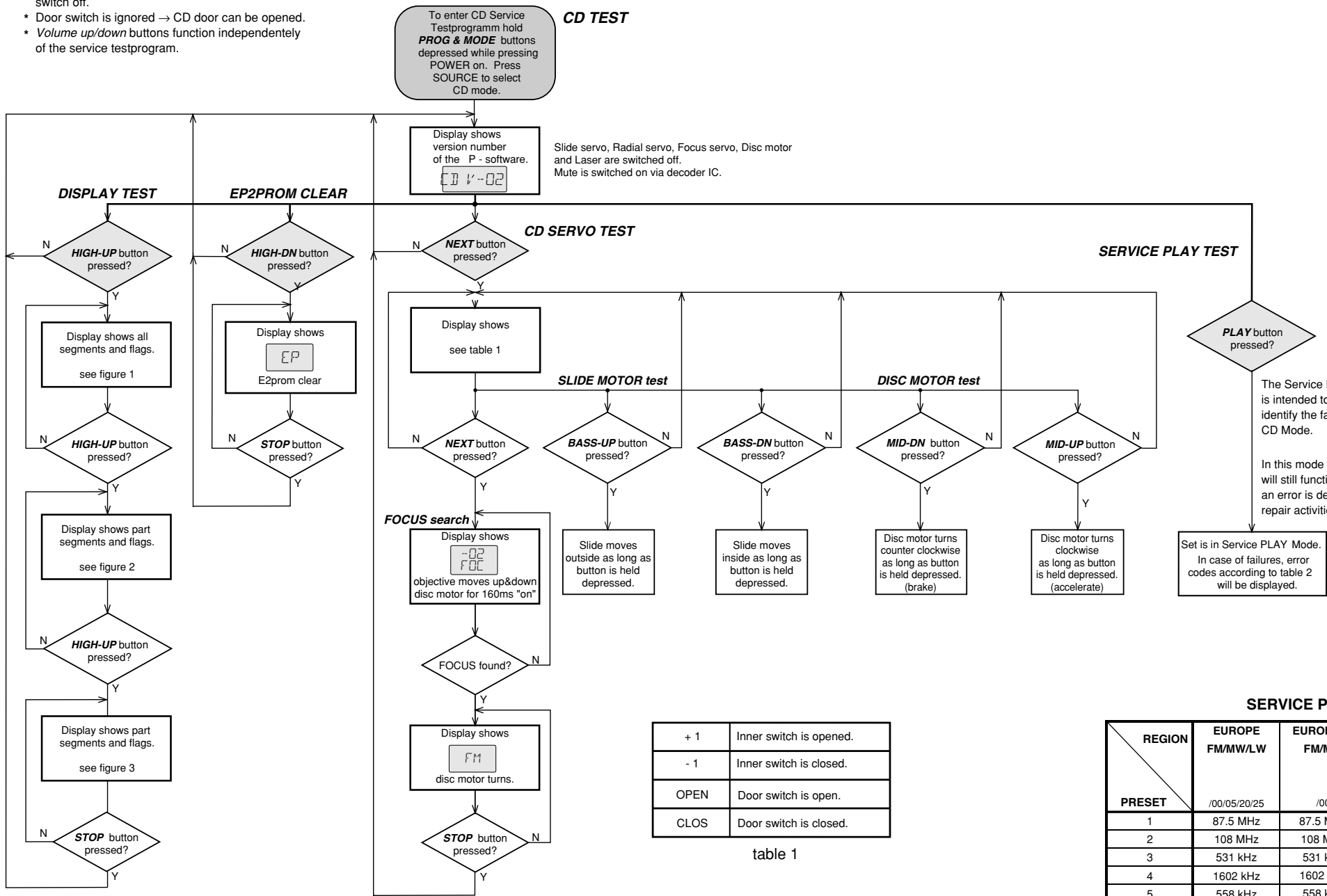


figure 1

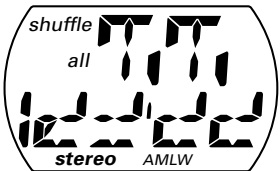


figure 2

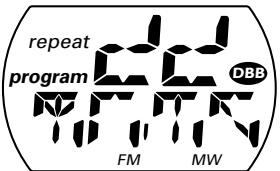


figure 3

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

table 1

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	EUROPE FM/MW/LW	EUROPE2B FM/MW	OVERSEAS FM/MW	EAST-EUROPE FM/MW	USA FM/MW
PRESET	/00/05/20/25	/00	¹⁾ Grid switchable 10-100kHz/9-50kHz /01/21	/14	/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

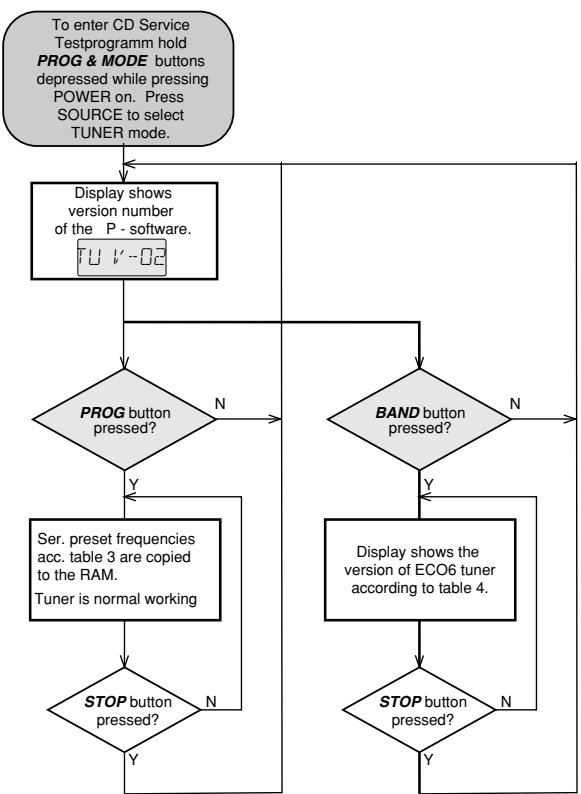
1) How to set frequency grid:

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 switch to **TUNER**.

Selected frequency grid is stored in the EEPROM.

TUNER TEST



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

Abbreviations and Pin-description of CD ICs

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
SELPPL	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

Abbreviations and Pin-description of CD ICs

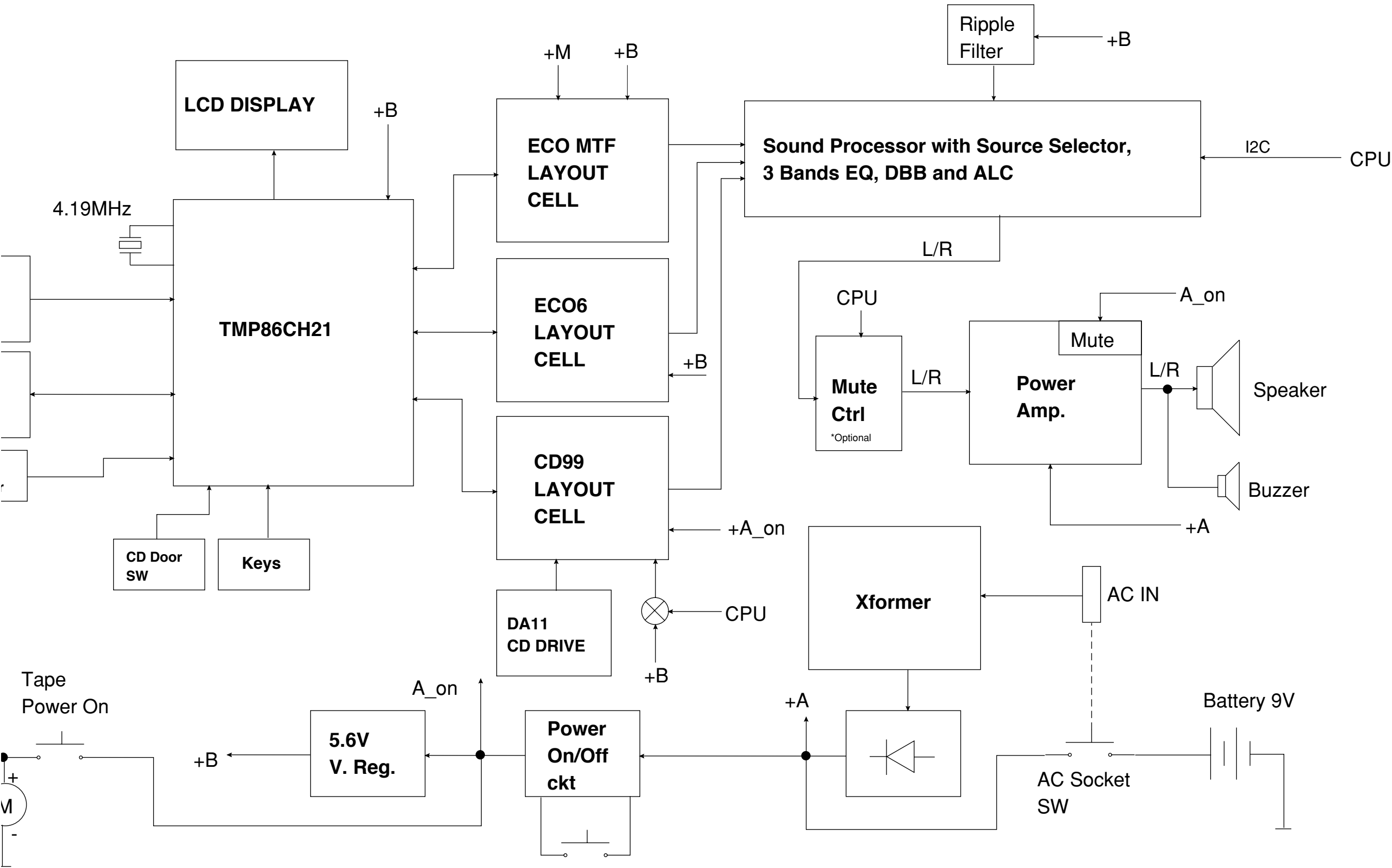
Abbreviations and Pin-description of CD Ics

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)

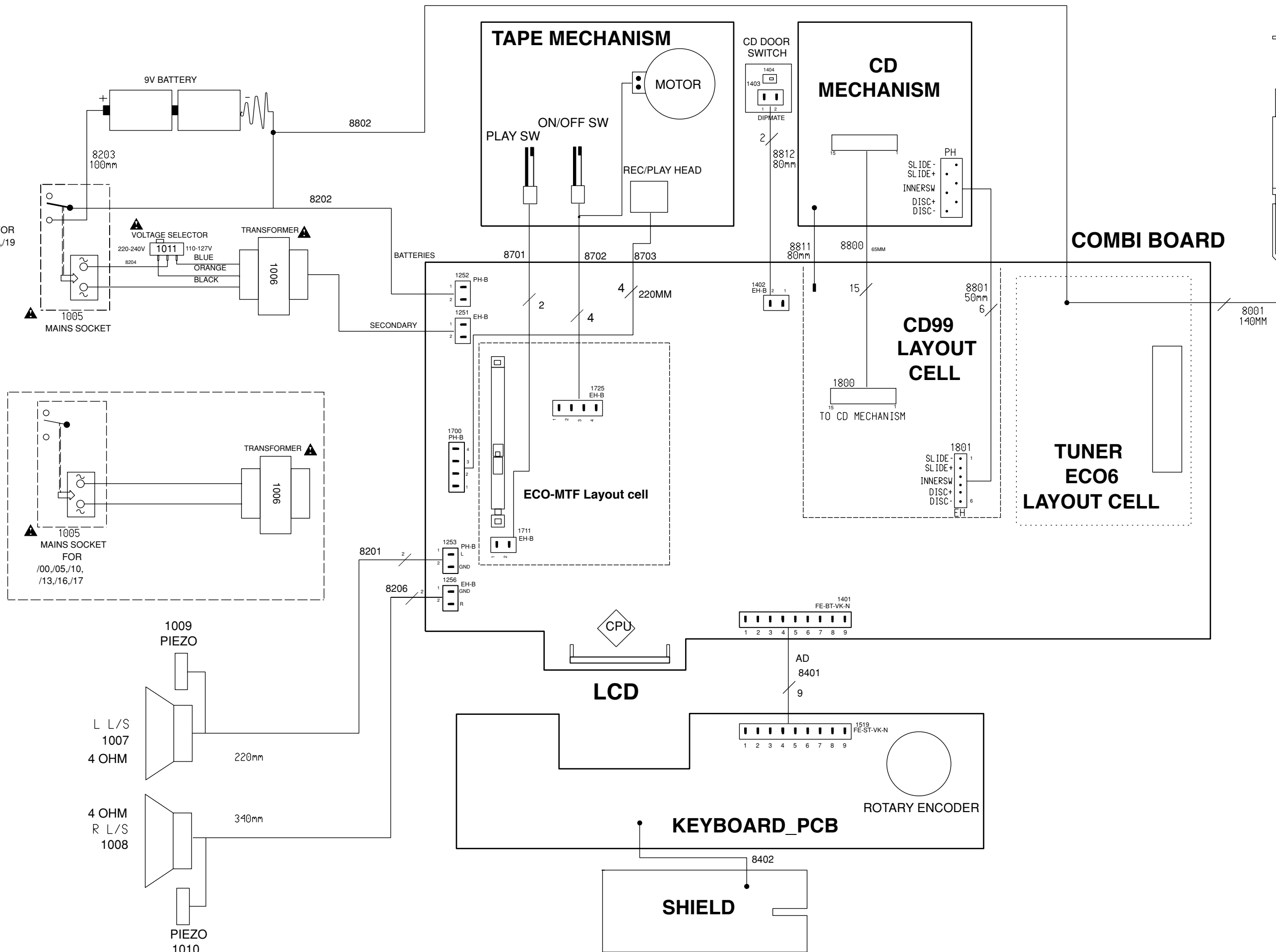
Note : All supply pins must be connected to the same external power supply voltage.

BLOCK DIAGRAM

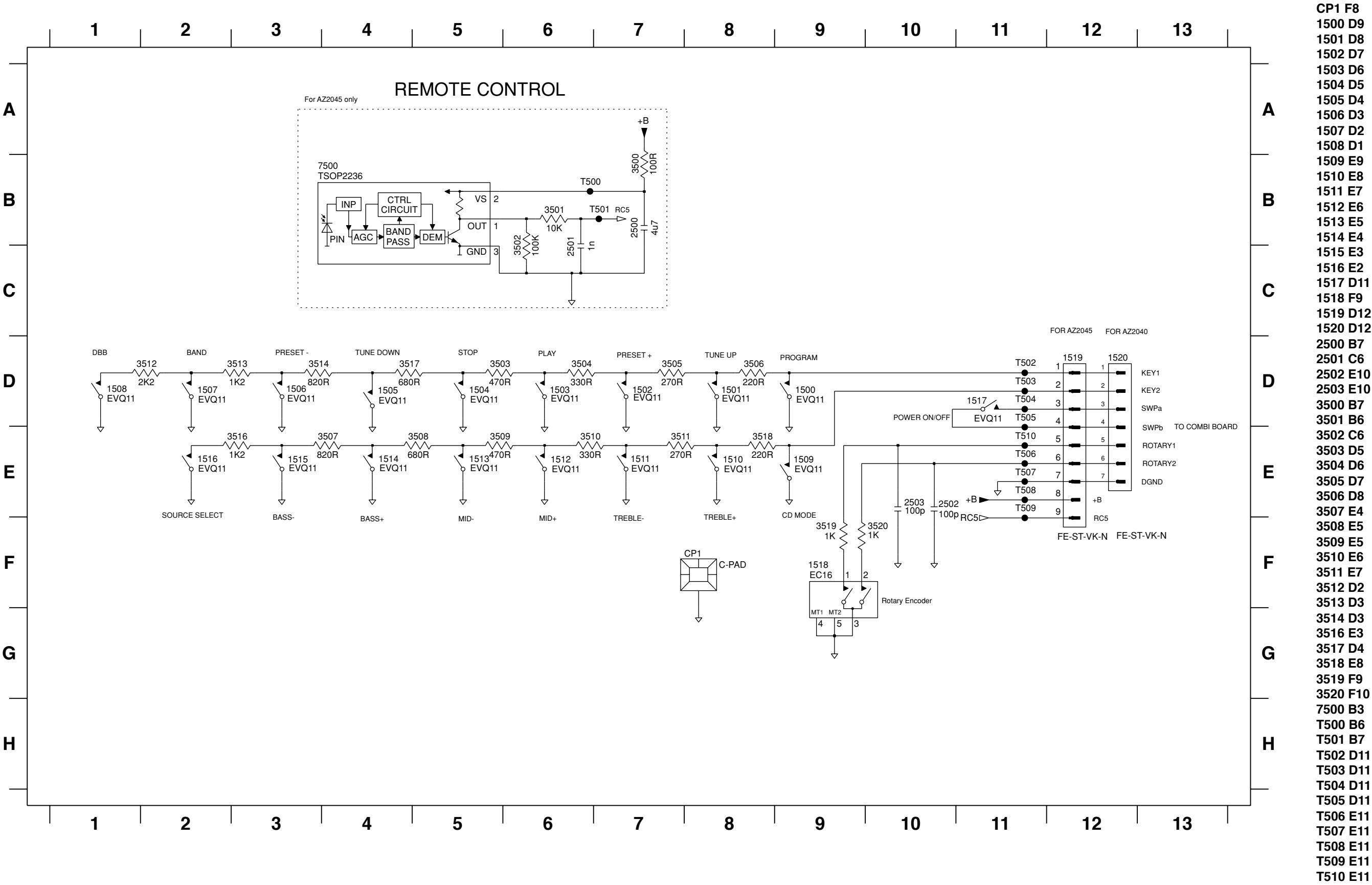


The diagram illustrates the electrical layout of a portable CD player. Key components and their connections include:

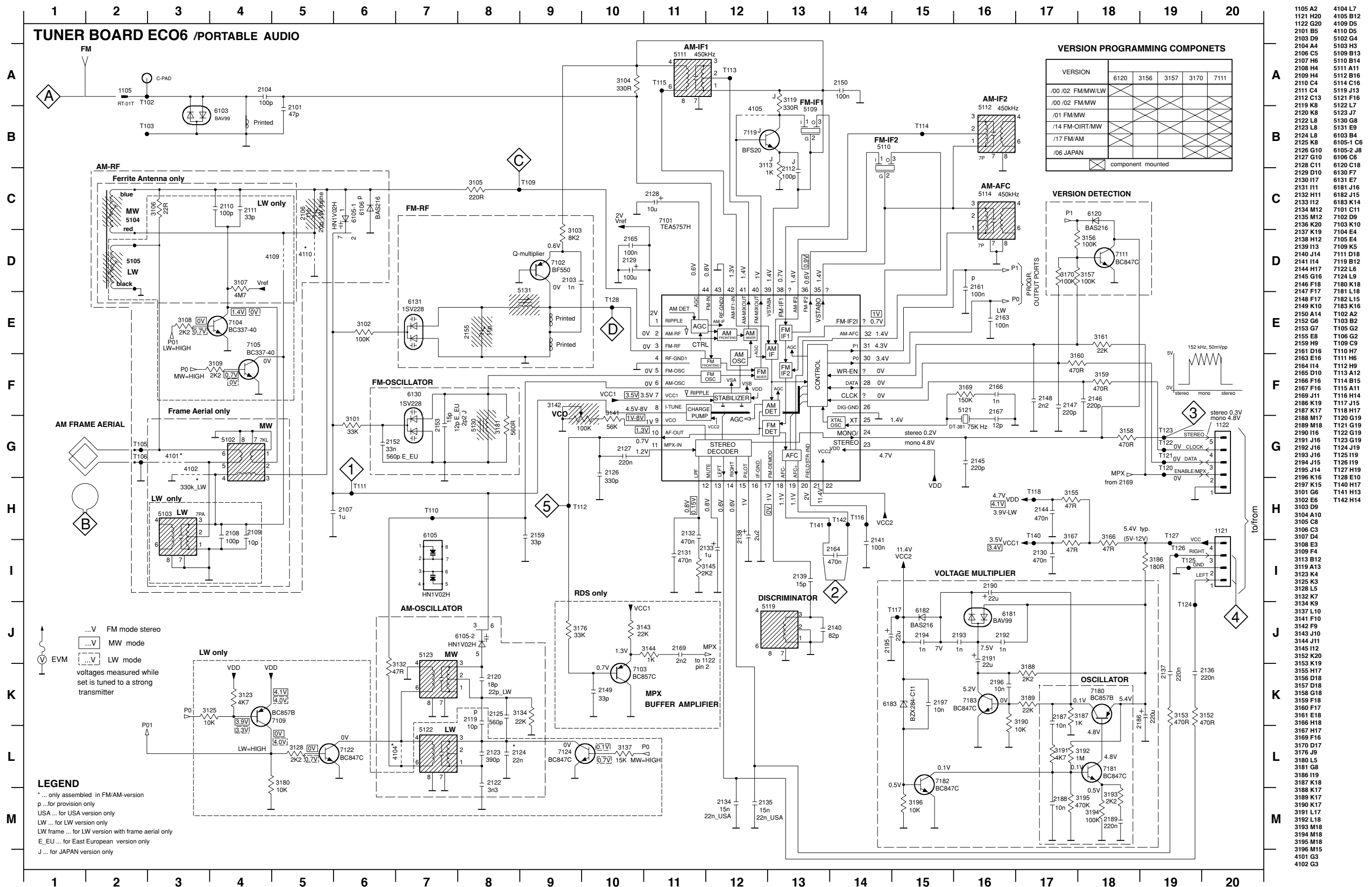
- Power Section:** A 9V BATTERY (8203, 100mm) is connected to a TRANSFORMER (1006) via a VOLTAGE SELECTOR (1011). The transformer's secondary is connected to the COMBI BOARD. A MAINS SOCKET (1005) is also shown for alternative power.
- Audio Section:** The TAPE MECHANISM includes a MOTOR and REC/PLAY HEAD. The CD MECHANISM includes a SLIDE, DISC, and INNERSW. The COMBI BOARD contains the CD99 LAYOUT CELL and TUNER ECO6 LAYOUT CELL. The AUDIO output is connected to two speakers (1007, 1008) and a PIEZO (1009, 1010).
- Control Section:** The KEYBOARD_PCB and SHIELD are connected to the CPU. The CPU is also connected to the LCD and the COMBI BOARD.
- Connectors and Jumper:** Various connectors are labeled with part numbers and dimensions, including 8201, 8202, 8203, 8204, 8205, 8206, 8207, 8208, 8209, 8210, 8211, 8212, 8213, 8214, 8215, 8216, 8217, 8218, 8219, 8220, 8221, 8222, 8223, 8224, 8225, 8226, 8227, 8228, 8229, 8230, 8231, 8232, 8233, 8234, 8235, 8236, 8237, 8238, 8239, 8240, 8241, 8242, 8243, 8244, 8245, 8246, 8247, 8248, 8249, 8250, 8251, 8252, 8253, 8254, 8255, 8256, 8257, 8258, 8259, 8260, 8261, 8262, 8263, 8264, 8265, 8266, 8267, 8268, 8269, 8270, 8271, 8272, 8273, 8274, 8275, 8276, 8277, 8278, 8279, 8280, 8281, 8282, 8283, 8284, 8285, 8286, 8287, 8288, 8289, 8290, 8291, 8292, 8293, 8294, 8295, 8296, 8297, 8298, 8299, 8300, 8301, 8302, 8303, 8304, 8305, 8306, 8307, 8308, 8309, 8310, 8311, 8312, 8313, 8314, 8315, 8316, 8317, 8318, 8319, 8320, 8321, 8322, 8323, 8324, 8325, 8326, 8327, 8328, 8329, 8330, 8331, 8332, 8333, 8334, 8335, 8336, 8337, 8338, 8339, 8340, 8341, 8342, 8343, 8344, 8345, 8346, 8347, 8348, 8349, 8350, 8351, 8352, 8353, 8354, 8355, 8356, 8357, 8358, 8359, 8360, 8361, 8362, 8363, 8364, 8365, 8366, 8367, 8368, 8369, 8370, 8371, 8372, 8373, 8374, 8375, 8376, 8377, 8378, 8379, 8380, 8381, 8382, 8383, 8384, 8385, 8386, 8387, 8388, 8389, 8390, 8391, 8392, 8393, 8394, 8395, 8396, 8397, 8398, 8399, 8400, 8401, 8402, 8403, 8404, 8405, 8406, 8407, 8408, 8409, 8410, 8411, 8412, 8413, 8414, 8415, 8416, 8417, 8418, 8419, 8420, 8421, 8422, 8423, 8424, 8425, 8426, 8427, 8428, 8429, 8430, 8431, 8432, 8433, 8434, 8435, 8436, 8437, 8438, 8439, 8440, 8441, 8442, 8443, 8444, 8445, 8446, 8447, 8448, 8449, 8450, 8451, 8452, 8453, 8454, 8455, 8456, 8457, 8458, 8459, 8460, 8461, 8462, 8463, 8464, 8465, 8466, 8467, 8468, 8469, 8470, 8471, 8472, 8473, 8474, 8475, 8476, 8477, 8478, 8479, 8480, 8481, 8482, 8483, 8484, 8485, 8486, 8487, 8488, 8489, 8490, 8491, 8492, 8493, 8494, 8495, 8496, 8497, 8498, 8499, 8500, 8501, 8502, 8503, 8504, 8505, 8506, 8507, 8508, 8509, 8510, 8511, 8512, 8513, 8514, 8515, 8516, 8517, 8518, 8519, 8520, 8521, 8522, 8523, 8524, 8525, 8526, 8527, 8528, 8529, 8530, 8531, 8532, 8533, 8534, 8535, 8536, 8537, 8538, 8539, 8540, 8541, 8542, 8543, 8544, 8545, 8546, 8547, 8548, 8549, 8550, 8551, 8552, 8553, 8554, 8555, 8556, 8557, 8558, 8559, 8560, 8561, 8562, 8563, 8564, 8565, 8566, 8567, 8568, 8569, 8570, 8571, 8572, 8573, 8574, 8575, 8576, 8577, 8578, 8579, 8580, 8581, 8582, 8583, 8584, 8585, 8586, 8587, 8588, 8589, 8590, 8591, 8592, 8593, 8594, 8595, 8596, 8597, 8598, 8599, 8600, 8601, 8602, 8603, 8604, 8605, 8606, 8607, 8608, 8609, 8610, 8611, 8612, 8613, 8614, 8615, 8616, 8617, 8618, 8619, 8620, 8621, 8622, 8623, 8624, 8625, 8626, 8627, 8628, 8629, 8630, 8631, 8632, 8633, 8634, 8635, 8636, 8637, 8638, 8639, 8640, 8641, 8642, 8643, 8644, 8645, 8646, 8647, 8648, 8649, 8650, 8651, 8652, 8653, 8654, 8655, 8656, 8657, 8658, 8659, 8660, 8661, 8662, 8663, 8664, 8665, 8666, 8667, 8668, 8669, 8670, 8671, 8672, 8673, 8674, 8675, 8676, 8677, 8678, 8679, 8680, 8681, 8682, 8683, 8684, 8685, 8686, 8687, 8688, 8689, 8690, 8691, 8692, 8693, 8694, 8695, 8696, 8697, 8698, 8699, 8700, 8701, 8702, 8703, 8704, 8705, 8706, 8707, 8708, 8709, 8710, 8711, 8712, 8713, 8714, 8715, 8716, 8717, 8718, 8719, 8720, 8721, 8722, 8723, 8724, 8725, 8726, 8727, 8728, 8729, 8730, 8731, 8732, 8733, 8734, 8735, 8736, 8737, 8738, 8739, 8740, 8741, 8742, 8743, 8744, 8745, 8746, 8747, 8748, 8749, 8750, 8751, 8752, 8753, 8754, 8755, 8756, 8757, 8758, 8759, 8760, 8761, 8762, 8763, 8764, 8765, 8766, 8767, 8768, 8769, 8770, 8771, 8772, 8773, 8774, 8775, 8776, 8777, 8778, 8779, 8780, 8781, 8782, 8783, 8784, 8785, 8786, 8787, 8788, 8789, 8790, 8791, 8792, 8793, 8794, 8795, 8796, 8797, 8798, 8799, 8800, 8801, 8802, 8803, 8804, 8805, 8806, 8807, 8808, 8809, 8810, 8811, 8812, 8813, 8814, 8815, 8816, 8817, 8818, 8819



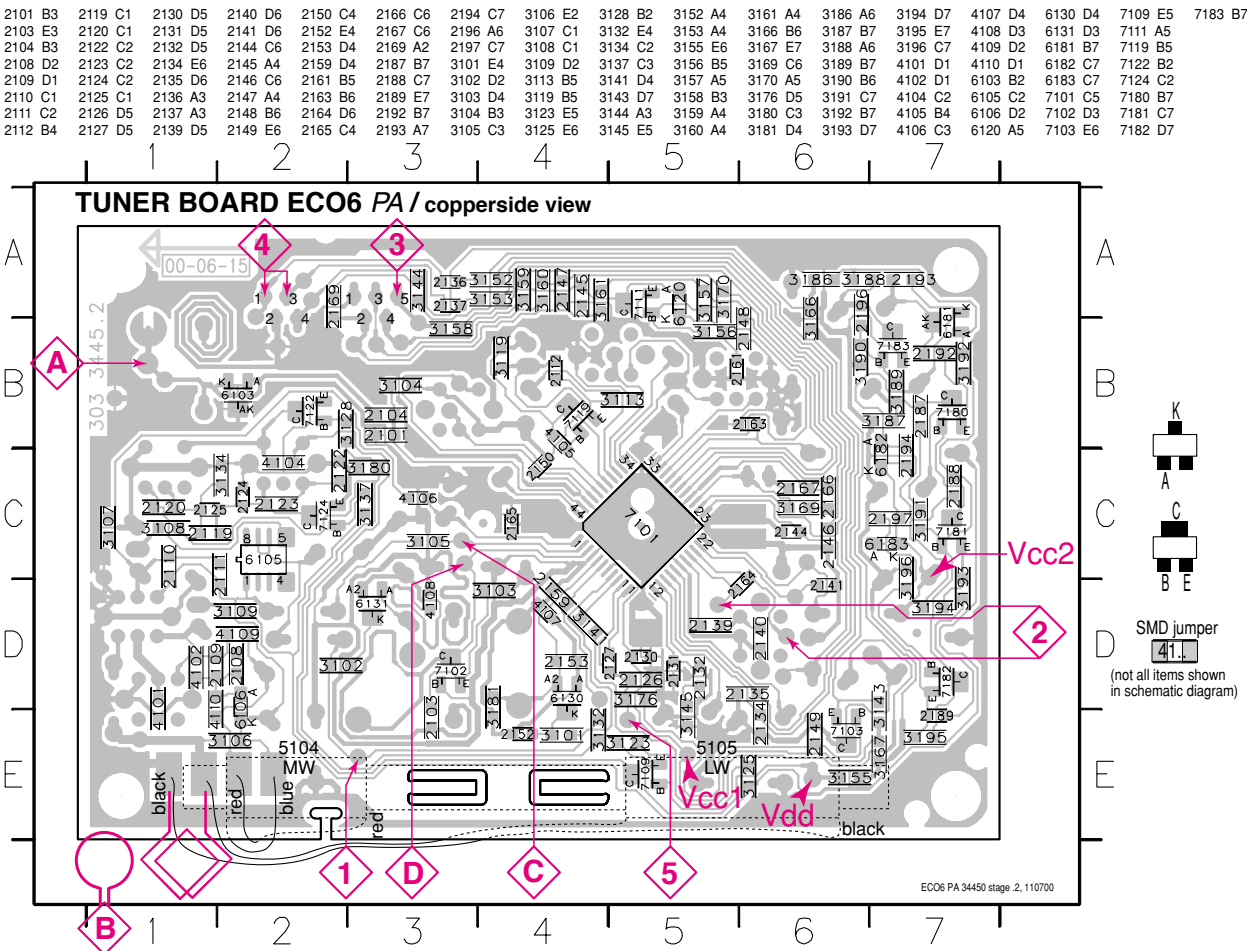
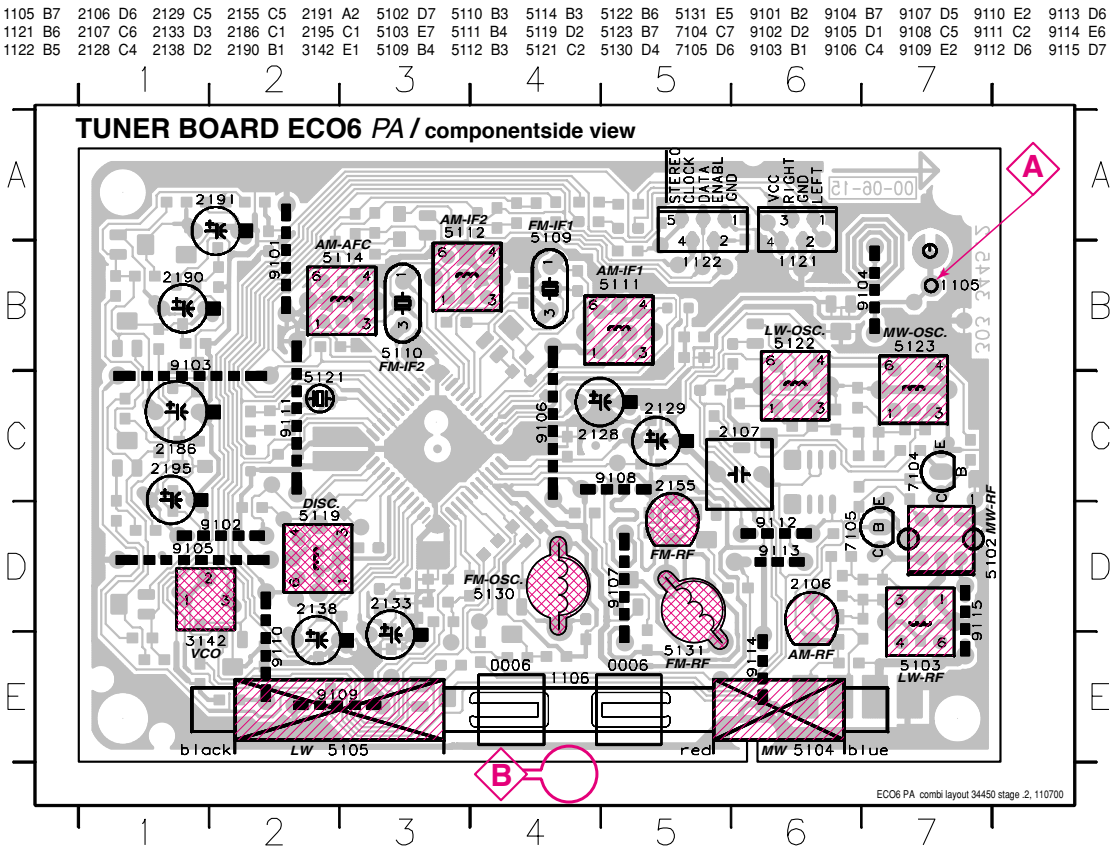
KEY BOARD - CIRCUIT DIAGRAM



COMBI BOARD - CIRCUIT DIAGRAM (TUNER PART)

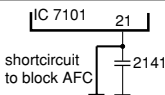
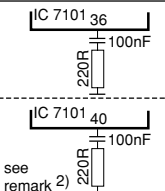
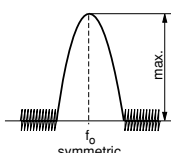
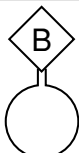
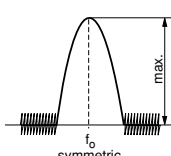


TUNER BOARD ECO6 - LAYOUT DIAGRAM



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

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			279kHz	5122		8V –0.2V
153 - 279kHz			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		5119	2	0 – 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz 87.5MHz (65.81MHz)	A mod=1kHz Δf=–22.5kHz	108MHz 87.5MHz (65.81MHz)	2155 5131	4	MAX
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 2.2kΩ to Vcc	C Δf=–10kHz V _{RF} = 0.5mV (as low as possible)		5111 5112	5	
AM AFC MW		C continuous wave V _{RF} = 2mV		5114	2	0 – 2 mV DC
AM RF ³⁾						
LW	198kHz	B 	198kHz	5105 LW ferrite coil	5	
MW FM/MW/LW- and FM/MW-version (9kHz grid)	1494kHz		1494kHz	2106		
531 - 1602kHz	558kHz		558kHz	5104 MW ferrite coil		
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1500kHz 560kHz		Δf = –30kHz V _{RF} as low as possible	1500kHz 560kHz		

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

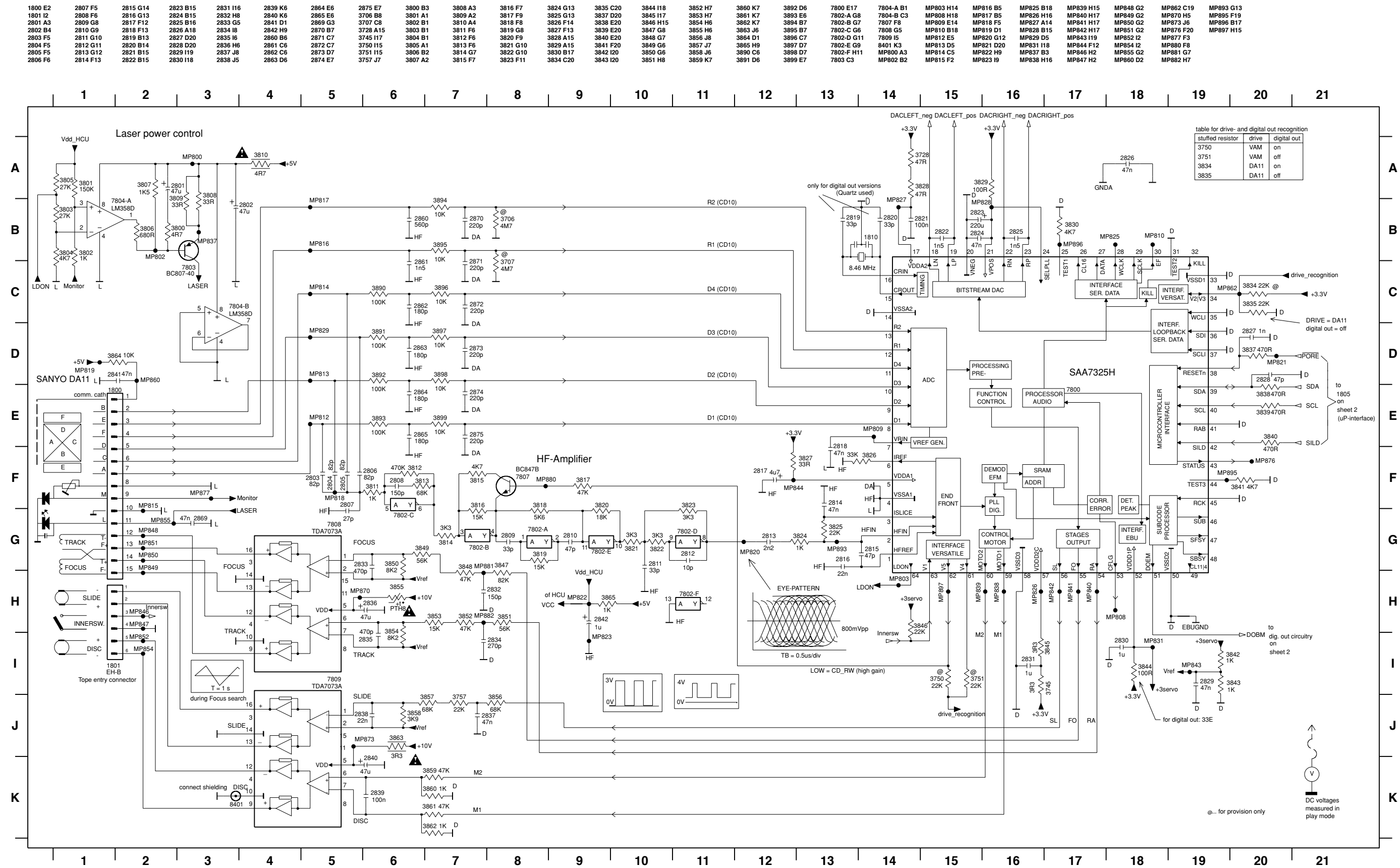
¹⁾ If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)
²⁾ RC network serves for damping the IF-filter while adjusting the other one.

³⁾ LW has to be aligned before MW.

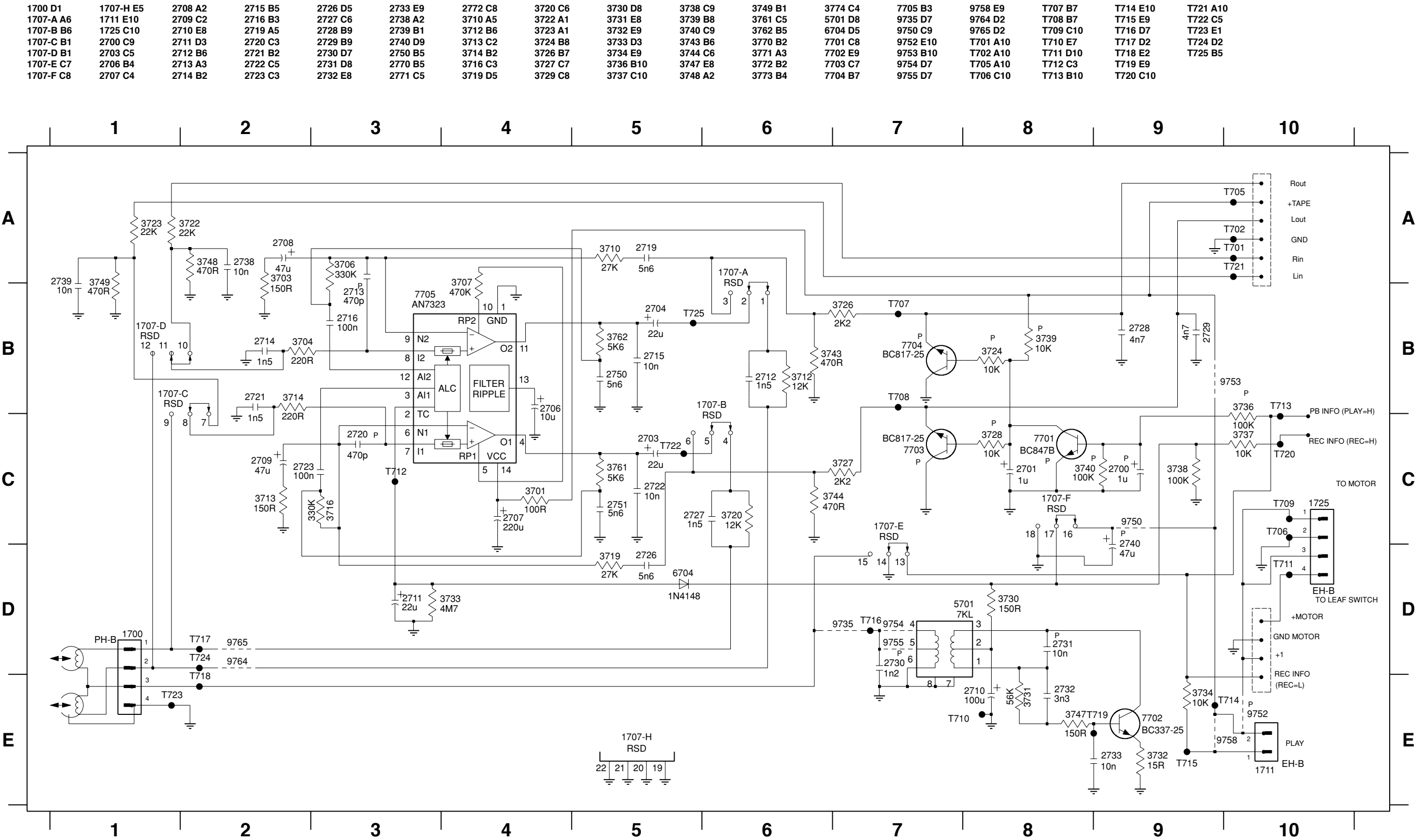
↑ Repeat

ECO6, general with ferrite antenna, 070799

COMBI BOARD - CIRCUIT DIAGRAM
(CD PART 1)



COMBI BOARD - CIRCUIT DIAGRAM
(CD PART 2)



P -- provisional

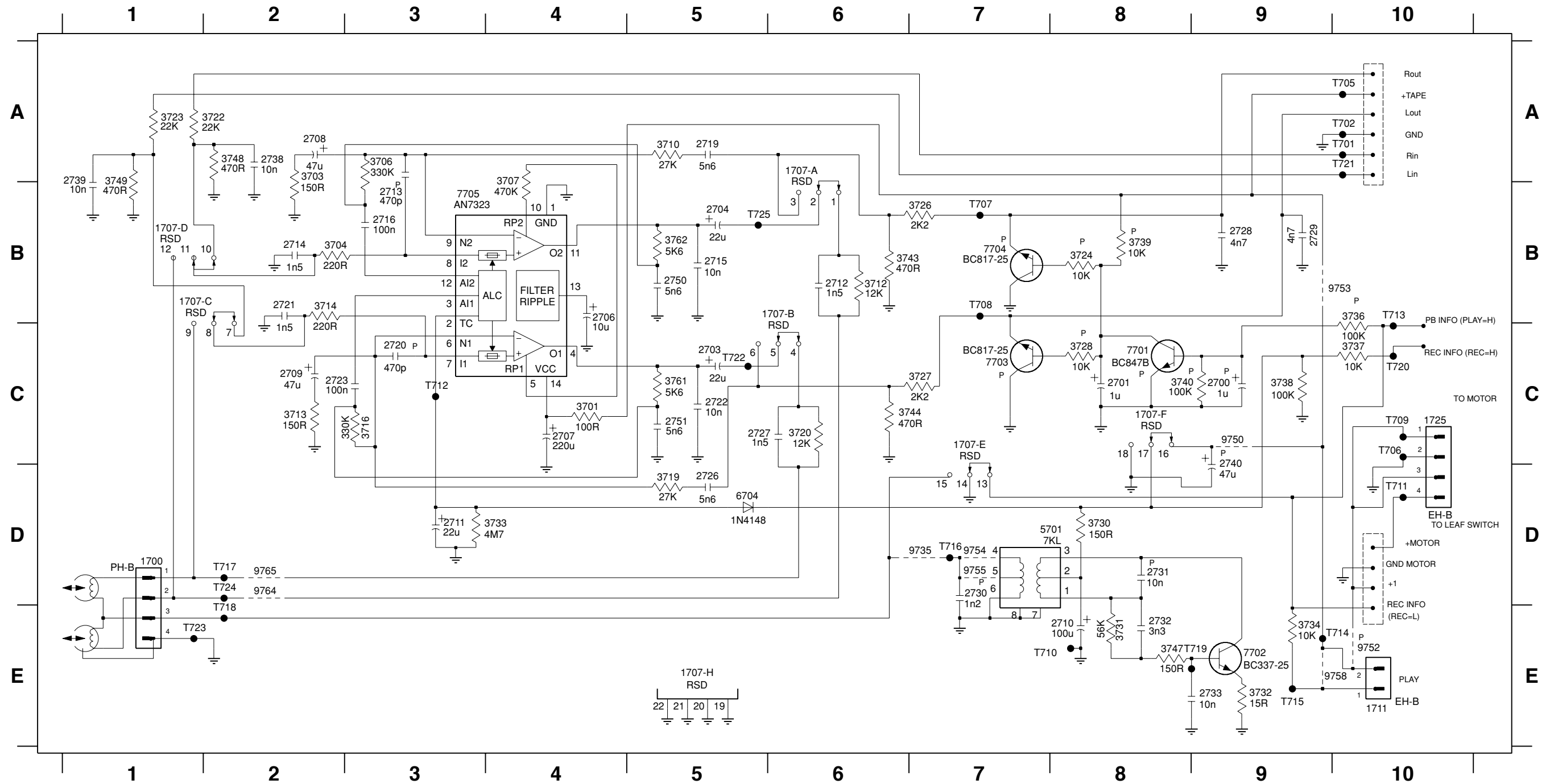
	1712	1713	1725	1711	1700
S11					
S22					

-- component mounted

PLAY RECORD

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	



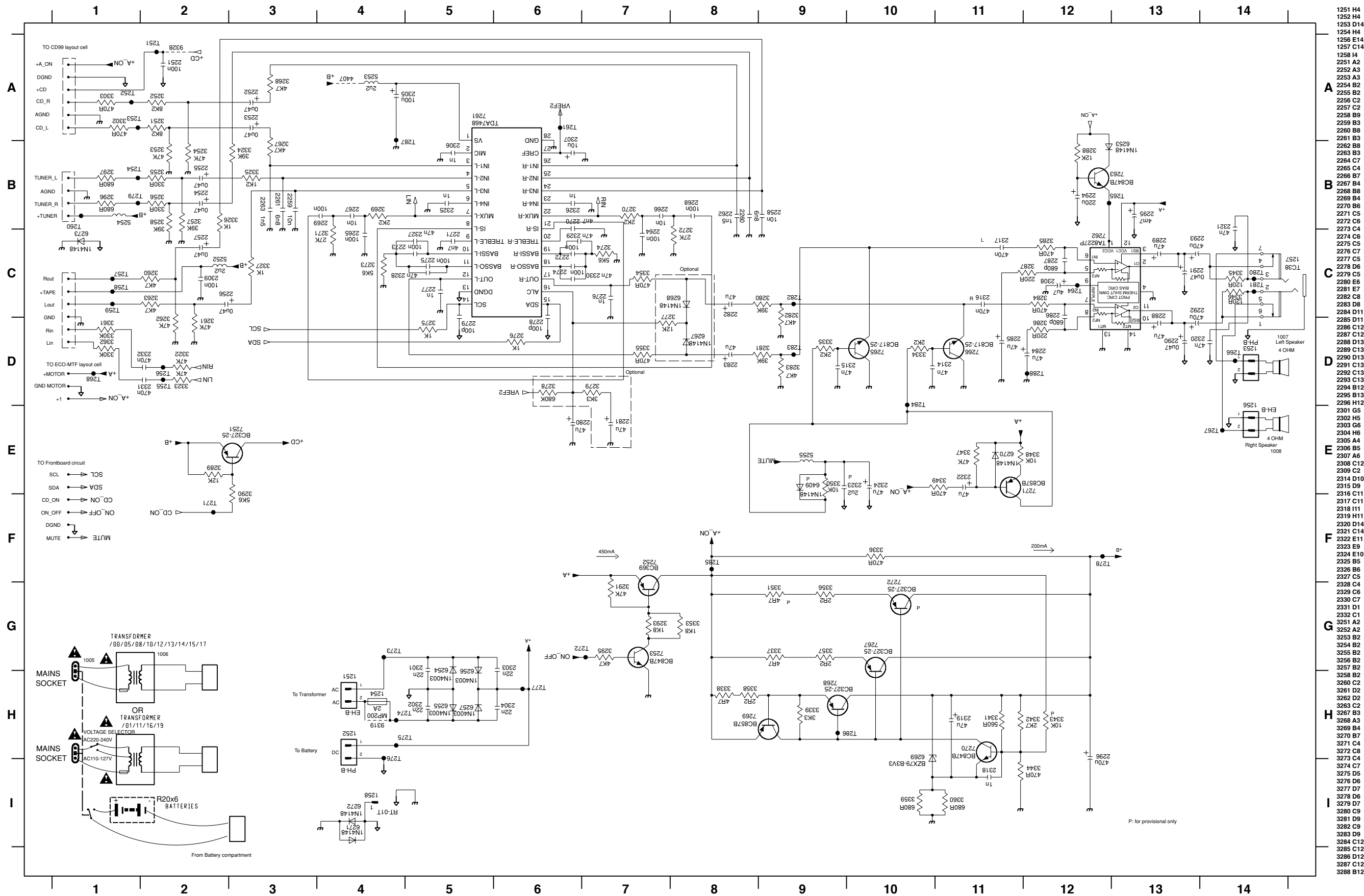
P -- provisional

	1712	1713	1725	1711	1700
S11					
S22					

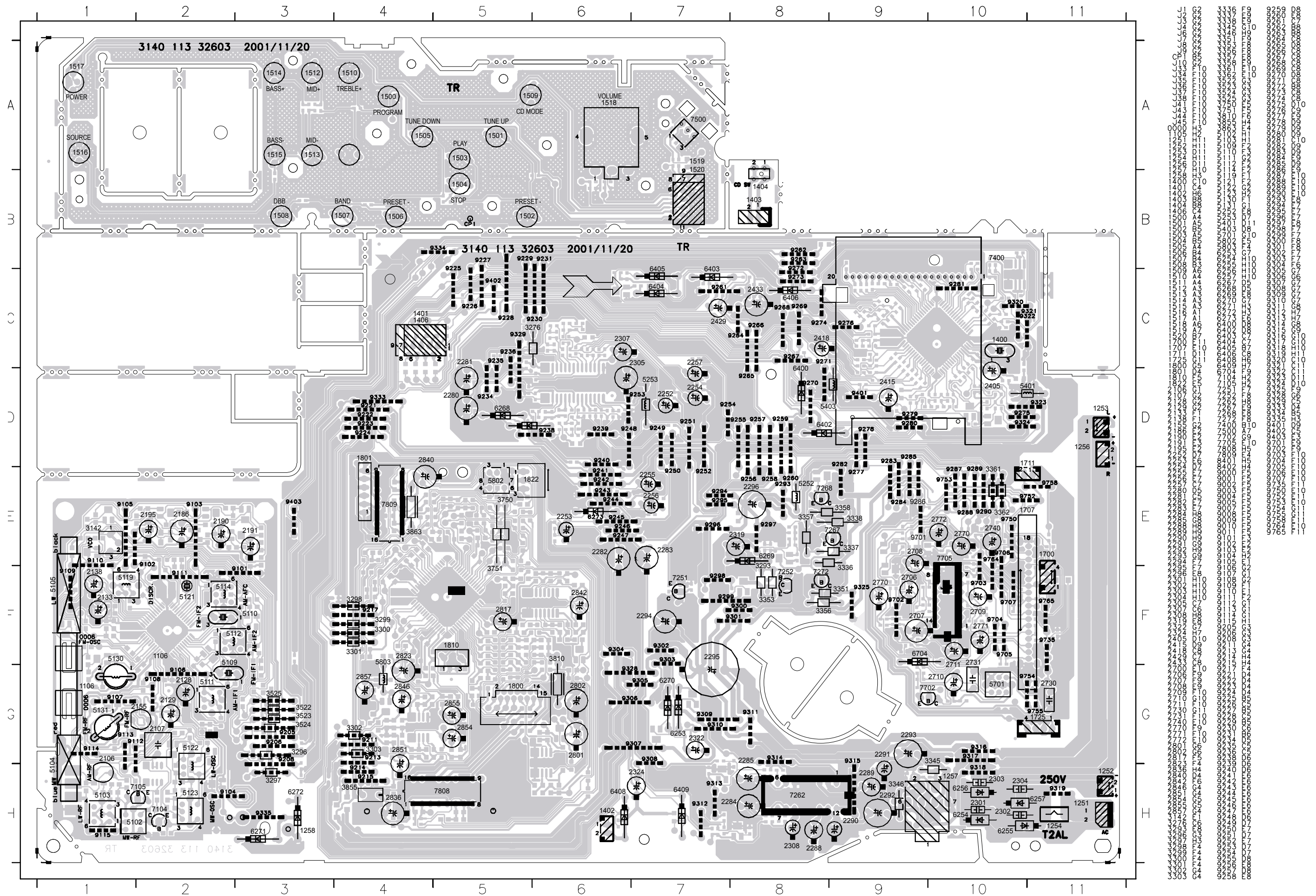
○ -- component mounted

PLAY $\longleftrightarrow$ RECORD

COMBI BOARD - CIRCUIT DIAGRAM
(AUDIO/SUPPLY PART)



COMBI BOARD - LAYOUT DIAGRAM (COPPER SIDE)



3140 113 32603 2001/11/20

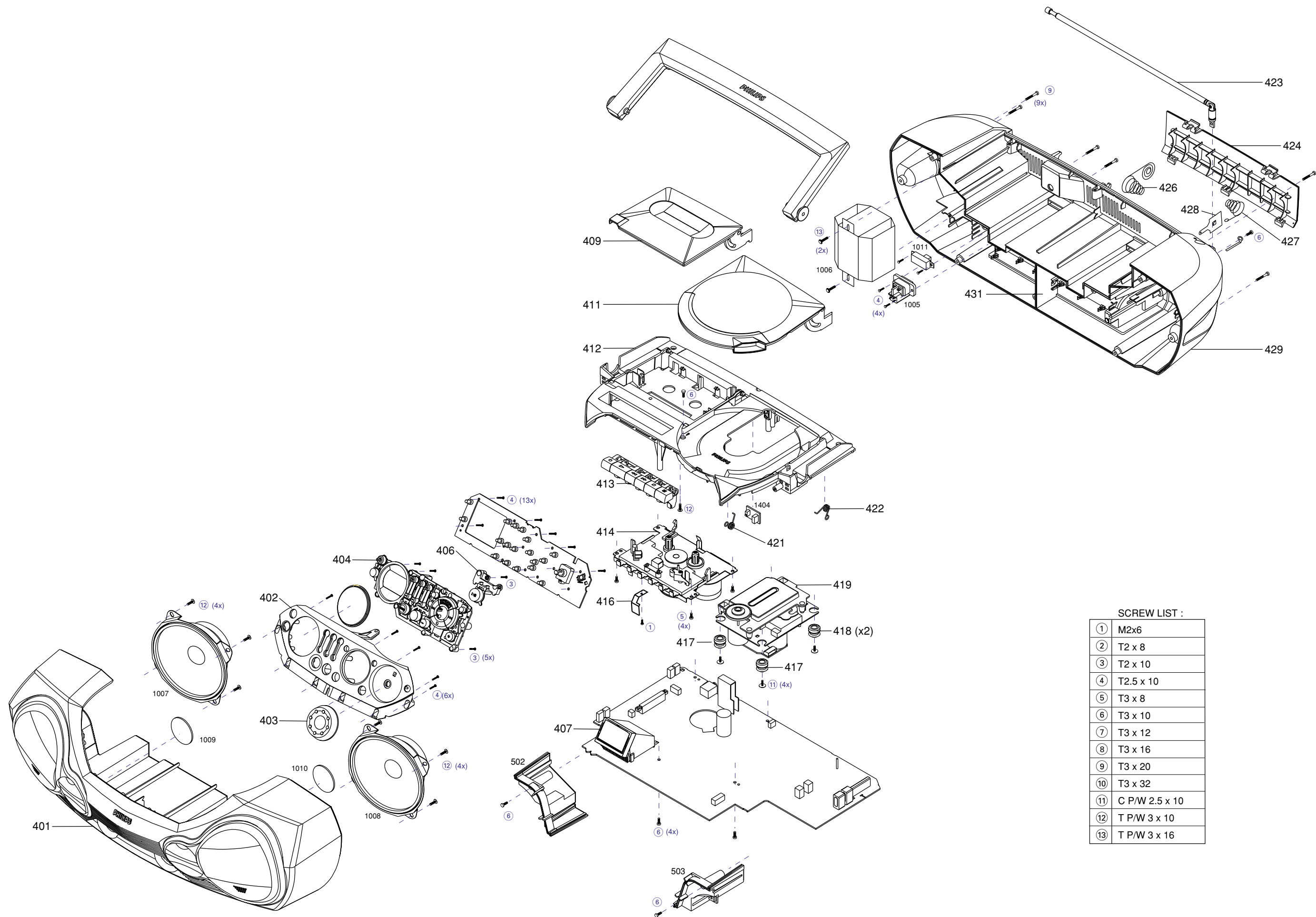
TR

CD

250V T2AL

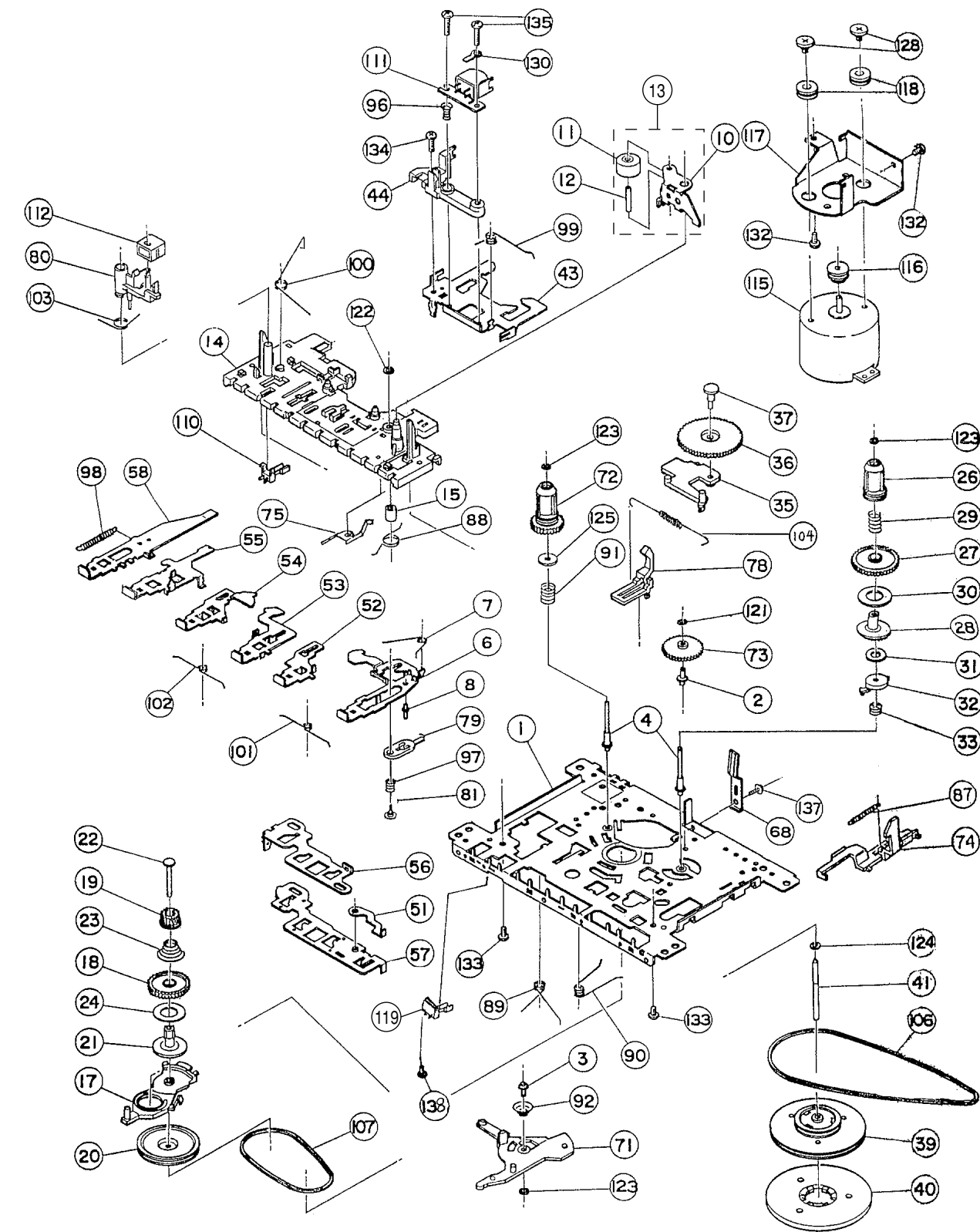
[illegible]

EXPLODED VIEW DIAGRAM - CABINET



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 61760	FRONT CABINET ASS'Y	419	3103 309 05360	CD DA11B1N DRIVE ASSY
401	3140 117 63260	FRONT CABINET ASS'Y (AZ2045/17)	421	3140 111 01120	SPRING-CASS.DOOR
402	3140 117 62050	CD PANEL - FRONT ASS'Y (AZ2045)	422	3140 111 01130	SPRING-CD DOOR
402	3140 117 61770	CD PANEL - FRONT ASS'Y (AZ2040)	423	3140 118 71810	TELESCOPIC AERIAL
402	3140 117 62790	CD PANEL - FRONT ASS'Y (AZ2045/17)	424	3140 114 39870	DOOR-BATTERY
403	3140 114 39850	KNOB-VOLUME	426	4822 492 51733	SPRING
404	3140 114 39820	WINDOW KEYSETS	427	3140 111 01140	SPRING-COMPRESSION(-)
406	3140 114 39800	CD PLAY KEY	428	3140 111 21320	CONTACT PLATE
407	3140 114 39840	BRACKET-LCD	429	3140 117 61790	REAR CABINET ASS'Y
408	3140 114 39880	HANDLE	429	3140 117 62120	REAR CABINET ASS'Y /01 only
409	3140 114 39780	DOOR-CASSETTE	429	3140 117 63280	REAR CABINET ASS'Y AZ2045/17
411	3140 114 39770	DOOR-CD	431	3140 114 39890	COVER BASS
412	3140 117 61780	TOP CABINET ASS'Y (AZ2045)		3139 228 60070	REMOTE CONTROL RC19420002/01
412	3140 117 62780	TOP CABINET ASS'Y (AZ2040)			
412	3140 117 63270	TOP CABINET ASS'Y (AZ2045/17)			
413	3140 114 39860	KEYSET-CASSETTE			
414	3140 118 71870	TAPE DECK CDS83PBF-07			
416	3140 111 22030	SPRING-RECORDING			
417	4822 529 10387	DAMPER - RUBBER (40 DEG)			
418	4822 529 10386	DAMPER - RUBBER (30 DEG)			

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	MAIN BELT
107	9965 000 11408	SUB BELT (B)
110	4822 278 90663	LEAF SWITCH
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	LEAF SWITCH 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%.
Moreover, the wow and flutter value can be read.

ELECTRICAL PARTSLIST - FRONT AND KEY BOARD

- MISCELLANEOUS -		
1401	4822 265 11531	FFC SOCKET 9P HOR.
1404	4822 276 12889	MICRO SWITCH (DOOR)
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

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

ELECTRICAL PARTSLIST - FRONT AND KEY BOARD

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

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 1uF 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 10uF 20% 63V
 2129 4822 124 41584 100uF 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 1uF 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 2,2uF 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 (/14 only)
 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 220uF 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 22uF 20% 50V
 2191 4822 124 81151 22uF 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
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- 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	3,3nF 10% 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**- 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.

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.