

Service

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Service Manual

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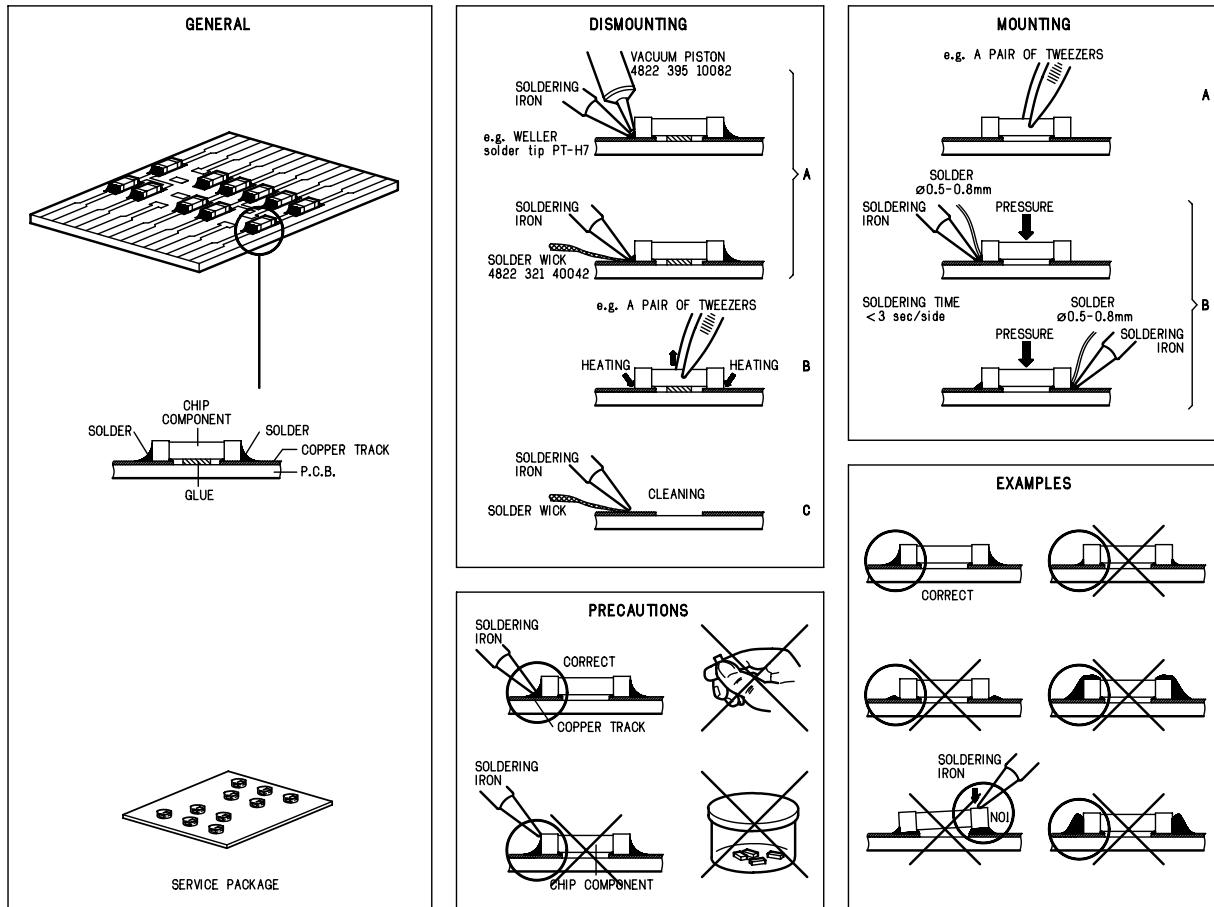
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PHILIPS

**CLASS 1
LASER PRODUCT**

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.

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 enfile le bracelet servi d'une résistance de sécurité.

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

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 recharge identiques à celles spécifiées.

Les composants de sécurité sont marqués

D WARNUNG

Alle IC's 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 Pulssarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.

Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

SAFETY



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 markiert.

CLASS 1 LASER PRODUCT

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

S Warning !

Osynlig laserstrålning när apparaten är öppnad och spärren 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 suoja-alkitukseen ohitetaessa olet alittina näkymättömälle laserisäteilylle. Älä katso sääteeseen !

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	-/00C/05/14 : 230 V -/01/11 : 120 / 230 V /10 : 240V -/17 : 120 V
Mains frequency	-/00C/05/14 : 50 Hz -/01/11 : 50 / 60 Hz -/17 : 60 Hz
Battery	main set : 9 V (R14 x 6) remote : 3V (R6 x 2)
Power consumption	: < 30 W (max.)
Dimension (W x H x D)	: 405 x 162 x 232 mm
Weight	: 2.9 Kg

AMPLIFIER

Output power	mains : 2 x 1 W battery : 2 x 1 W
Speaker impedance	: 2 x 8 ohm
Frequency response	: 60 Hz - 20 kHz ($\pm 3\text{dB}$)

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 $\mu\text{V}/\text{m}$ at 26dB S/N LW : 5500 $\mu\text{V}/\text{m}$ 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

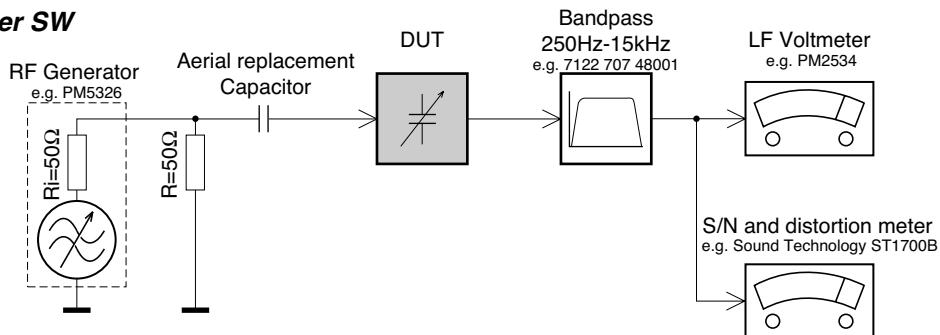
Number of tracks	: 1 stereo
Tape speed	: 4.76 cm/sec $\pm 3\%$
Wow & flutter	: < 0.48 JIS UWTD
Fast wind/rewind	C60 : < 110 sec.
Frequency response	P/B : 125 - 8000 Hz
S/N ratio	: > 36 dB (R/P)
Erasing ratio	: > 50 dB
Bias frequency	: 73 ± 1.5 kHz

COMPACT DISC

Frequency response	: 100 Hz - 10 kHz $\pm 2\text{dB}$
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

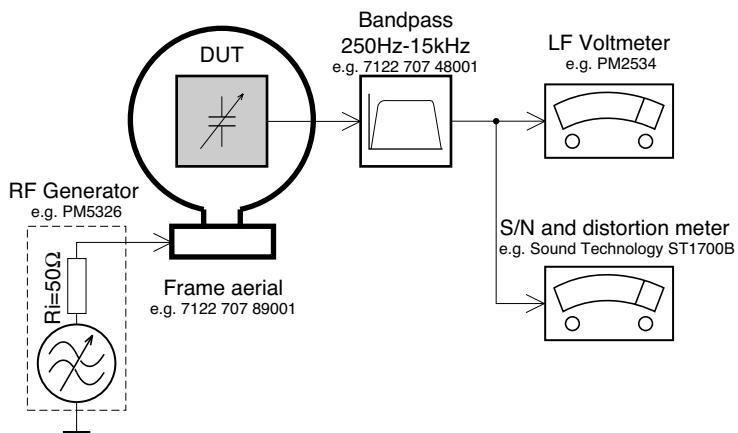
SERVICE MEASUREMENT

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).

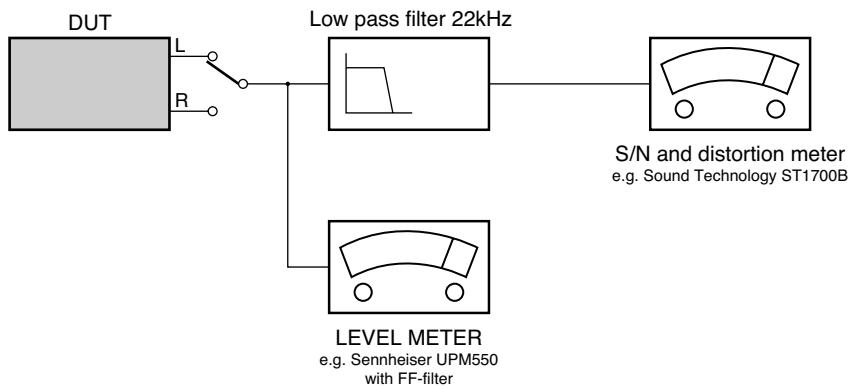
Tuner AM (MW,LW)



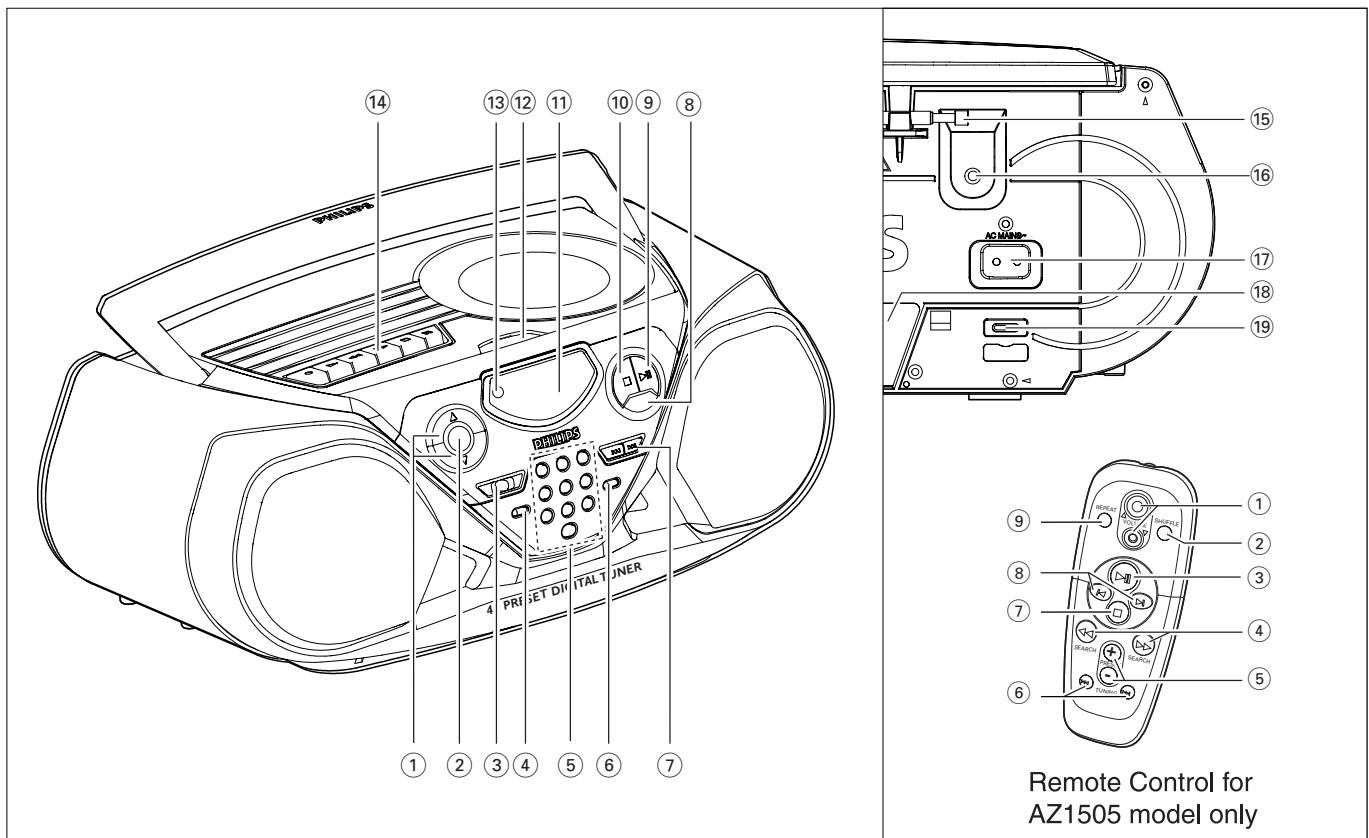
To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage.

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



ACCESSORIES

- 1 x AC mains lead
- 1 x Remote Control (for **AZ1505** model only)

TOP AND FRONT PANEL (See 1)

- ① **VOLUME ▲, ▼** - to adjust volume level.
- ② **DBB (Dynamic Bass Boost)** - activates a more vivid bass response.
- ③ **POWER slider** - selects **TAPE/RADIO/CD** function and also the power off switch (**TAPE/OFF**).
- ④ **BAND** - selects waveband.
- ⑤ **0-9** - digit panel
- CD**: - track selection and direct playback;
- RADIO**: - selecting a preset station.
- ⑥ **PROGRAM**

 - CD**: - programs tracks and reviews the program;
 - Tuner**: - programs preset radio stations.

- ⑦ **SEARCH ▲, ▼**

 - CD**: - searches backward and forward within a track;
 - skips to the beginning of a current track/ previous/ later track.
 - RADIO**: - (down, up) tunes to radio stations.

- ⑧ **MODE** - selects different play modes: e.g. **REPEAT** or **SHUFFLE** (random) order.
- ⑨ **▶II** - starts or pauses CD playback.
- ⑩ **■** - to stop playback;

 - erases a CD program.

- ⑪ **Display** - shows the status of the set.
- ⑫ **LIFT TO OPEN** - lift here to open CD-tape door.
- ⑬ **REMOTE SENSOR** - (for **AZ1505** model only) infrared sensor for remote control.
- ⑭ **CASSETTE RECORDER keys**:

 - RECORD** **●** - to start recording.
 - PLAY** **▶** - to start playback.
 - SEARCH ▲ / ▼** - fast rewinds/ winds tape.
 - STOP** **■** - stops tape.
 - PAUSE II** - pauses playback or recording.

BACK PANEL

- ⑯ **Telescopic aerial** - improves FM reception.
 - ⑰ **3.5 mm** stereo headphone socket.
- Note: The speakers will be muted when headphones are connected to the set.*
- ⑯ **AC MAINS** - inlet for mains lead.
 - ⑰ **Battery compartment** - for 6 batteries, type **R-14, UM2** or **C-cells**.
 - ⑱ **Voltage selector** (some versions only) - adjust to match the local voltage 110/220V before plugging in the set.

REMOTE CONTROL (for AZ1505 model only)

- ① **VOLUME ▲, ▼** - adjusts volume level.
- ② **SHUFFLE** - plays all CD tracks in random order.
- ③ **▶II** - starts or pauses CD playback.
- ④ **SEARCH ▲, ▼** - searches backwards/ forwards within a track.
- ⑤ **PRESET +, -** (up, down) - selects a preset radio station.
- ⑥ **TUNING ▲, ▼** (down, up) - tunes to tuner stations.
- ⑦ **■** - to stop 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.

POWER SUPPLY

Whenever convenient, use the AC 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-14, UM-2** or **C-cells**, (preferably alkaline) with the correct polarity.
 - **Remote control (AZ1505 model only)**
- Insert 2 batteries, type **AAA, R03** or **UM4** (preferably alkaline).

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

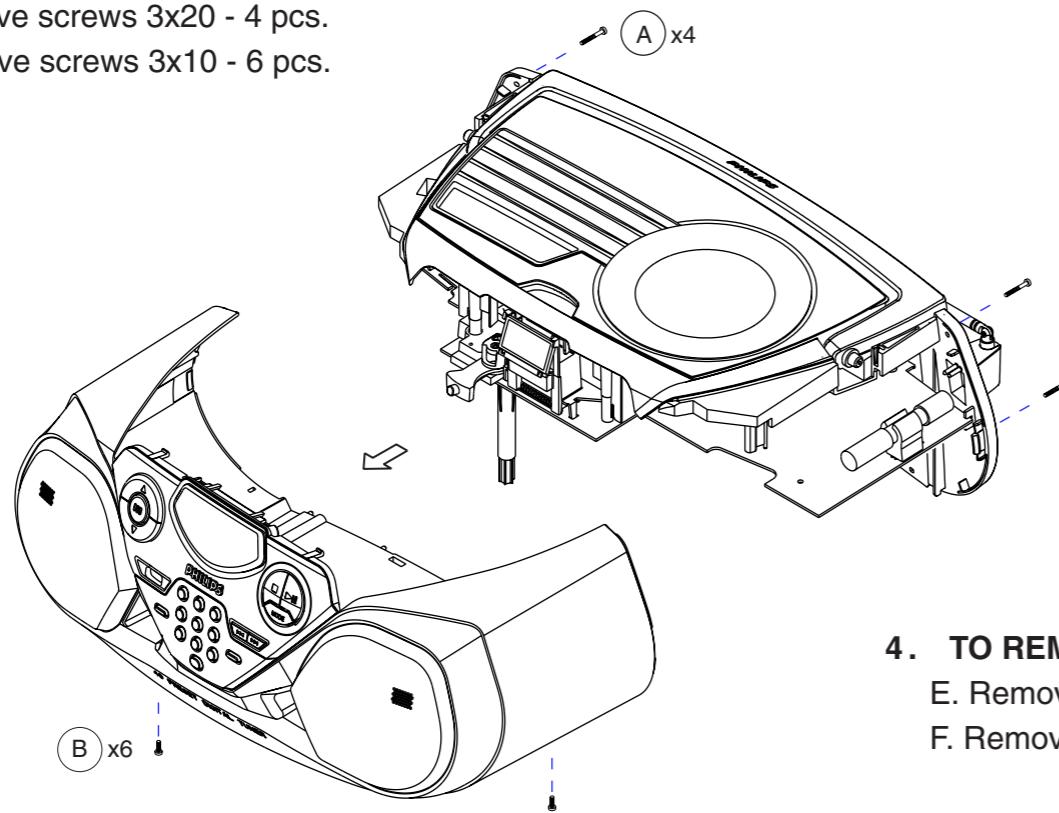
AVAILABLE ESD PROTECTION EQUIPMENT

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

DISASSEMBLY DIAGRAM

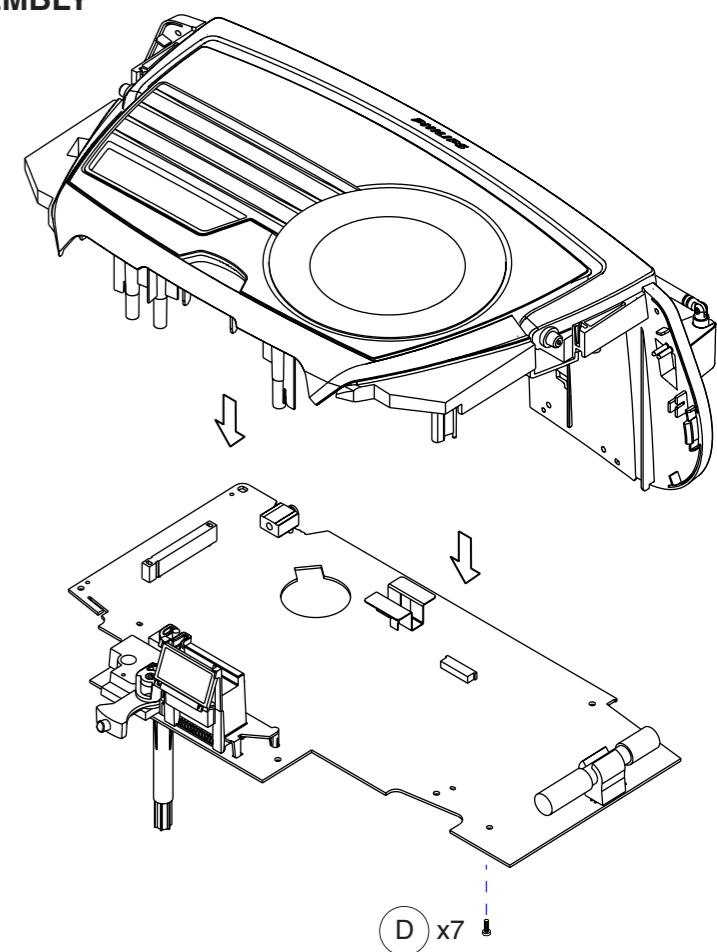
1. TO REMOVE BOTTOM CABINET ASEMBLY

- A. Remove screws 3x20 - 4 pcs.
- B. Remove screws 3x10 - 6 pcs.



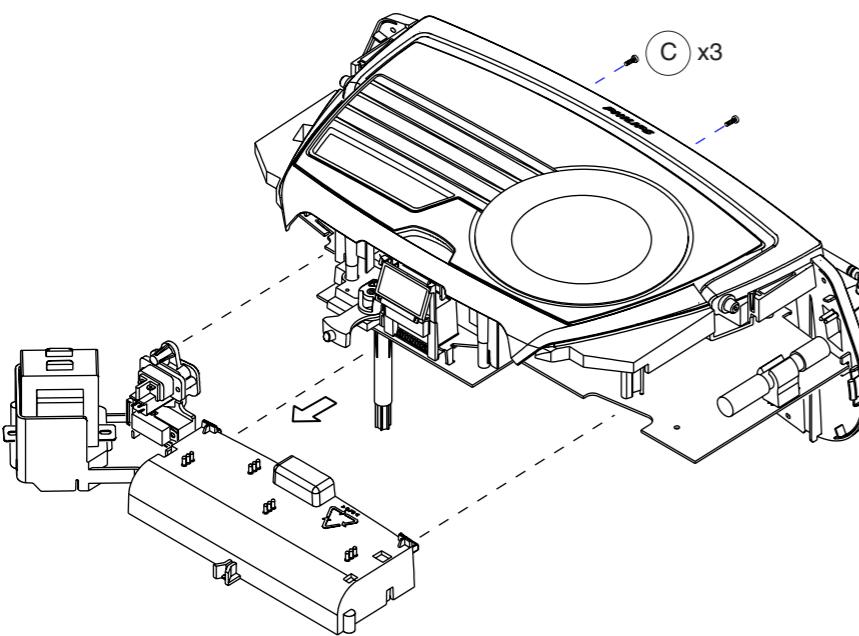
3. TO REMOVE COMBI BOARD ASEMBLY

- D. Remove screws 3x10 - 7 pcs.



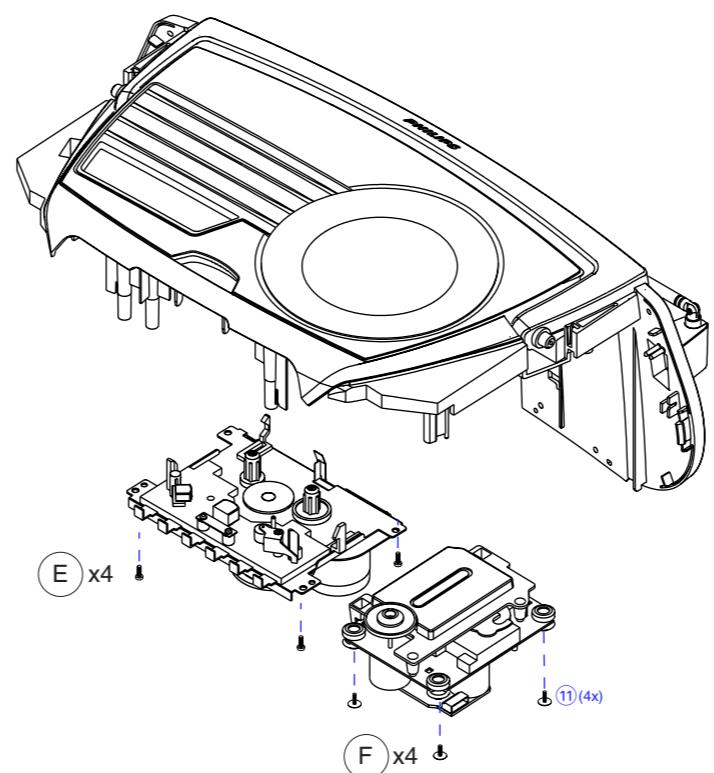
2. TO REMOVE BATTERY COMPARTMENT ASEMBLY

- C. Remove screws 3x10 - 3 pcs.



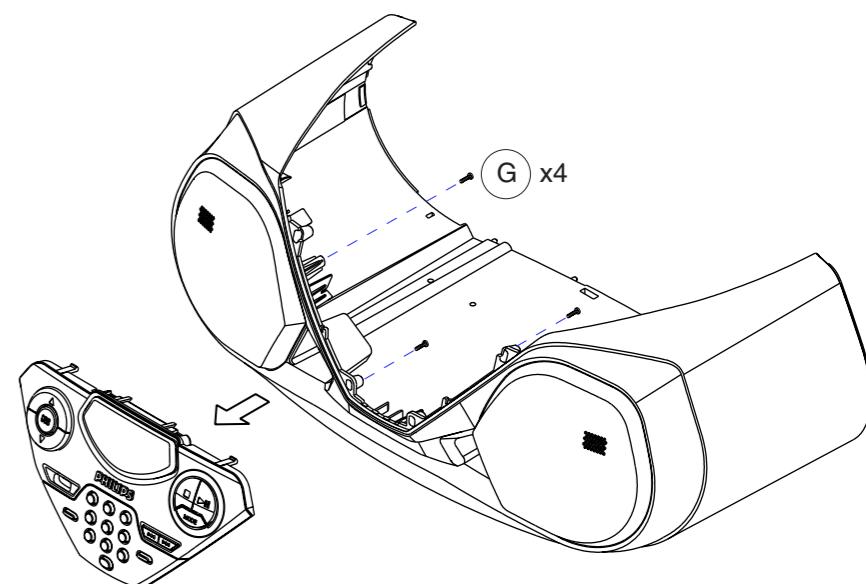
4. TO REMOVE TAPE AND CD MECHANISM

- E. Remove screws 3x10 - 4 pcs.
- F. Remove screws 2.5x10 - 4 pcs.



5. TO REMOVE CD PANEL ASEMBLY

- G. Remove screws 2x8 - 4 pcs.



SERVICE TEST PROGRAM

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

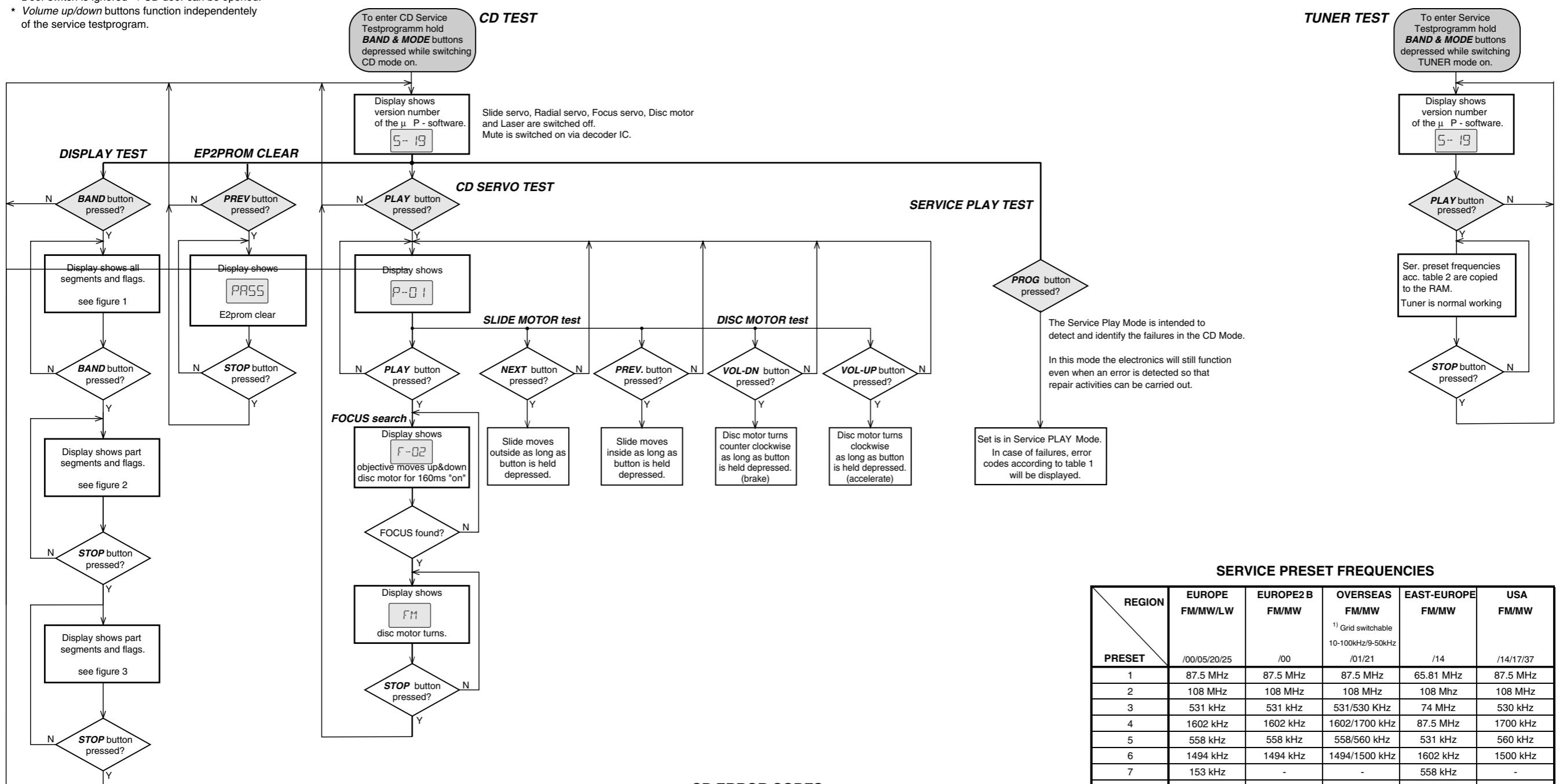


FIGURE 1

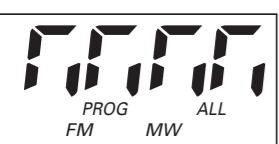


FIGURE 2

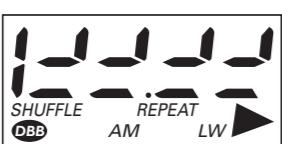


FIGURE 3

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 1

REGION \ PRESET	EUROPE FM/MW/LW	EUROPE2 B FM/MW	OVERSEAS FM/MW	EAST-EUROPE FM/MW	USA FM/MW
1	/00/05/20/25	/00	87.5 MHz	87.5 MHz	65.81 MHz
2	87.5 MHz	87.5 MHz	87.5 MHz	87.5 MHz	87.5 MHz
3	108 MHz	108 MHz	108 MHz	108 MHz	108 MHz
4	531 kHz	531 kHz	531/530 kHz	74 MHz	530 kHz
5	1602 kHz	1602 kHz	1602/1700 kHz	87.5 MHz	1700 kHz
6	558 kHz	558 kHz	558/560 kHz	531 kHz	560 kHz
7	1494 kHz	1494 kHz	1494/1500 kHz	1602 kHz	1500 kHz
8	153 kHz	-	-	558 kHz	-
9	279 kHz	-	-	1494 kHz	-
10	198 kHz	-	-	-	-
11	-	-	-	-	-
12	-	-	-	-	-
13	-	-	-	-	-

table 2

1) How to set frequency grid:

AM - 9 kHz / FM - 50 kHz :Hold **BAND KEY** with the **CD PREV. KEY** simultaneously and then switch to **TUNER**.

AM - 10 kHz / FM - 100 kHz :Hold **BAND KEY** with the **CD NEXT KEY** simultaneously and then switch to **TUNER**.

Selected frequency grid is stored in the EEPROM.

Abbreviations and Pin-description of CD ICs

SERVO PROCESSOR SAA7325H

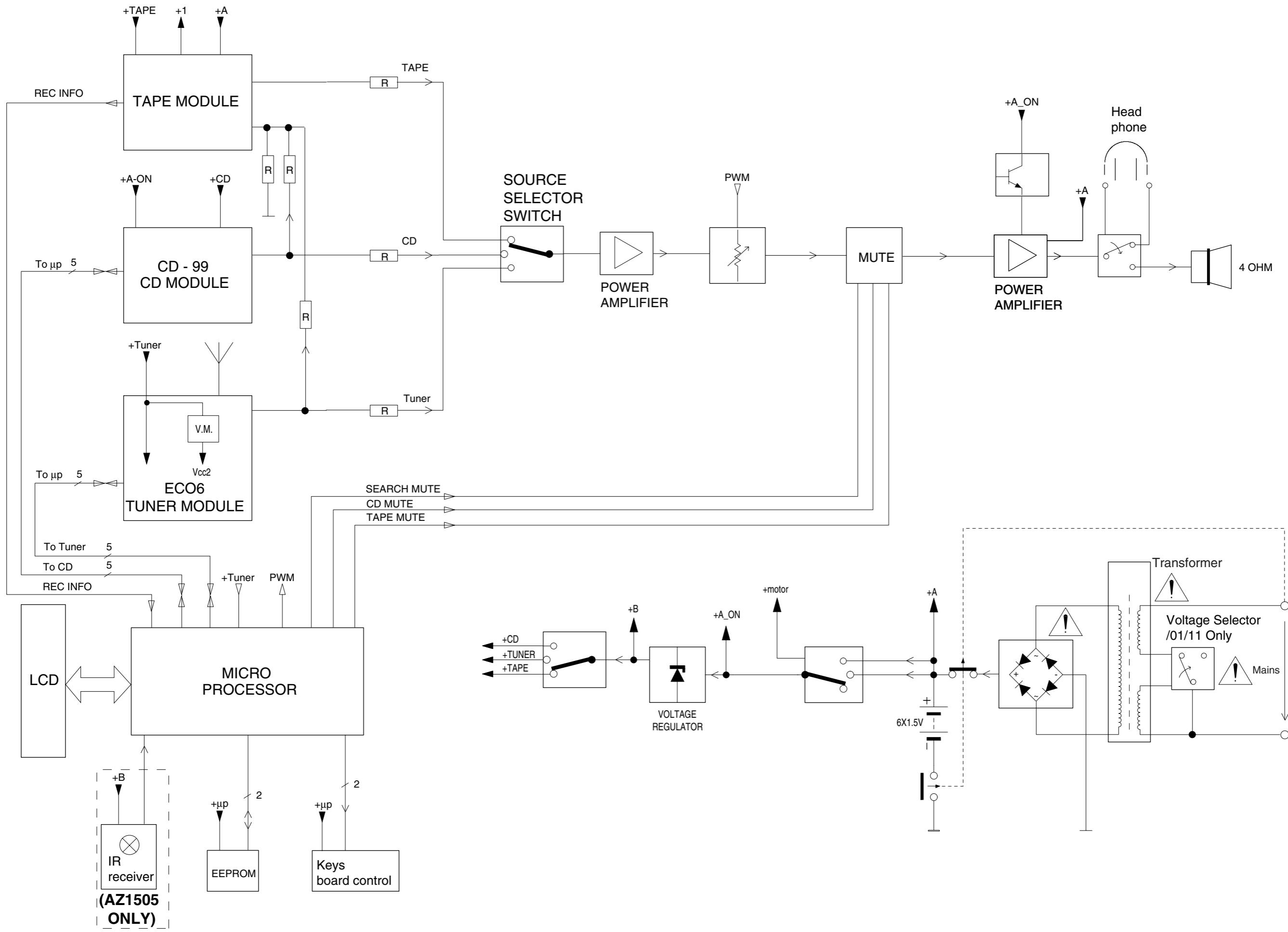
SYMBOL	PIN	DESCRIPTION
HFREF	1	comparator common mode input
HFIN	2	comparator signal input
ISLICE	3	current feedback output from data slicer
V _{SSA1}	4 ⁽¹⁾	analog ground 1
V _{DDA1}	5 ⁽¹⁾	analog supply voltage 1
I _{ref}	6	reference current output pin
V _{RIN}	7	reference voltage for servo ADC's
D1	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
SEPLL	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

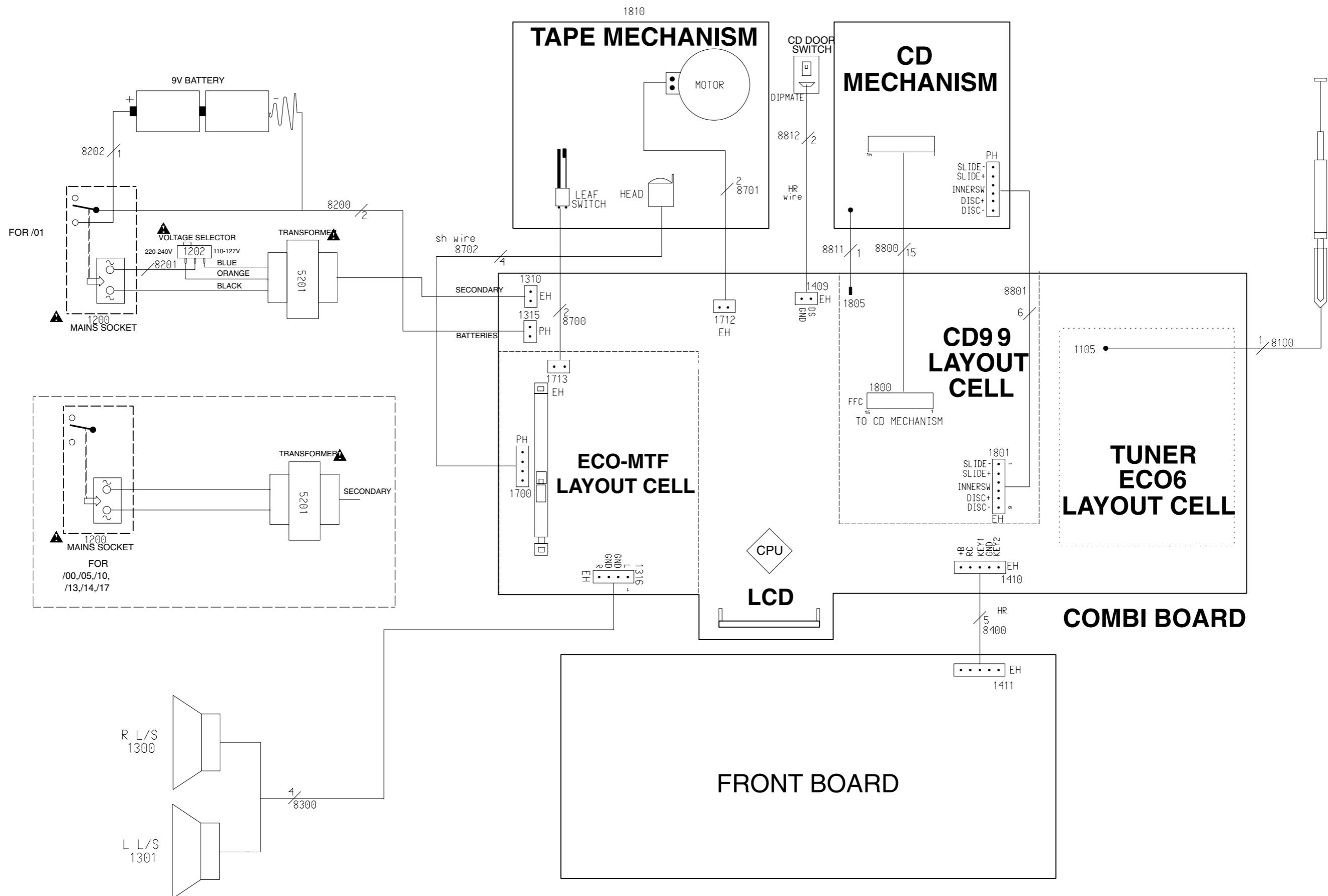
Abbreviations and Pin-description of CD ICs

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)

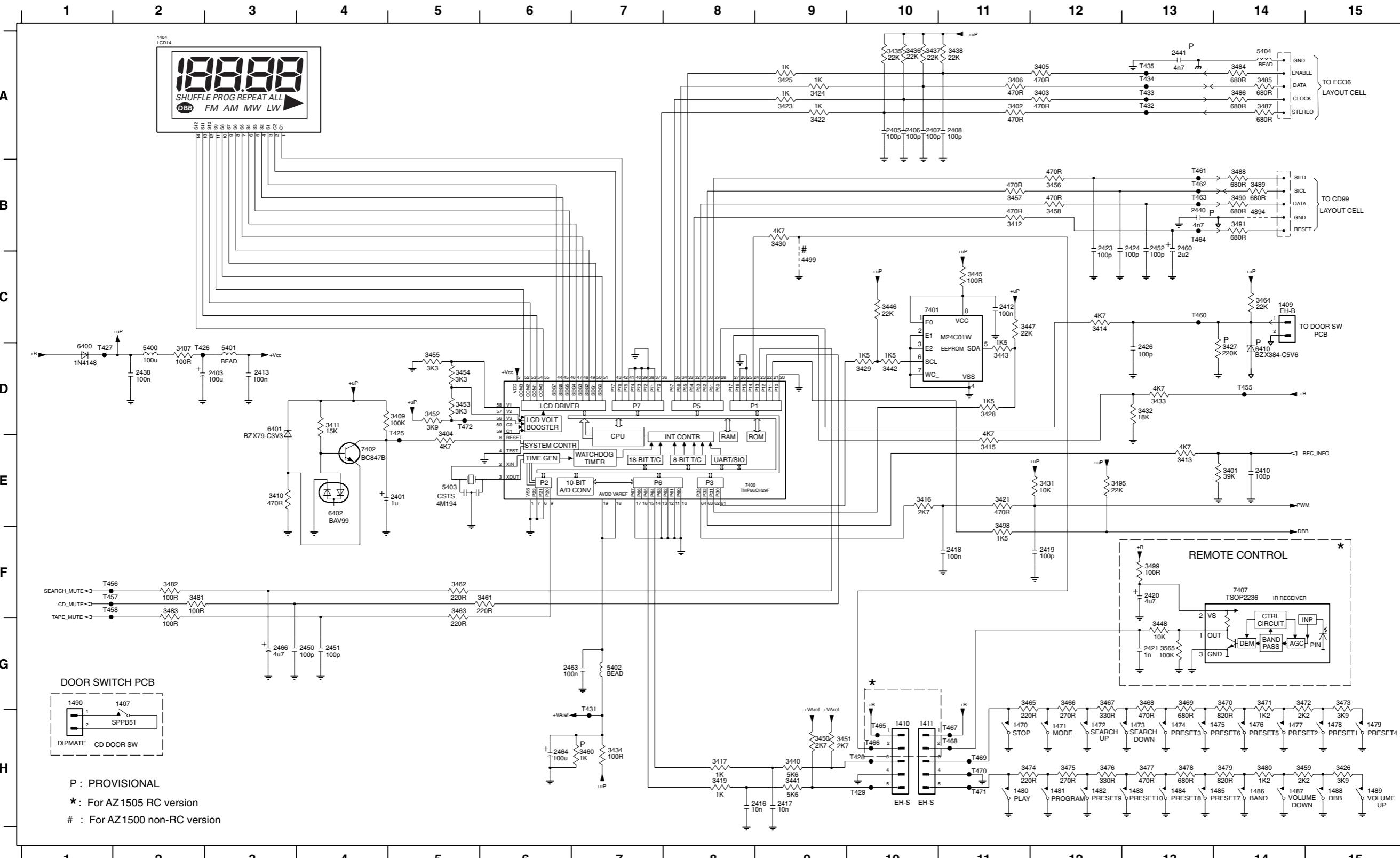
Note : All supply pins must be connected to the same external power supply voltage.

BLOCK DIAGRAM

WIRING DIAGRAM

FRONT BOARD - CIRCUIT DIAGRAM

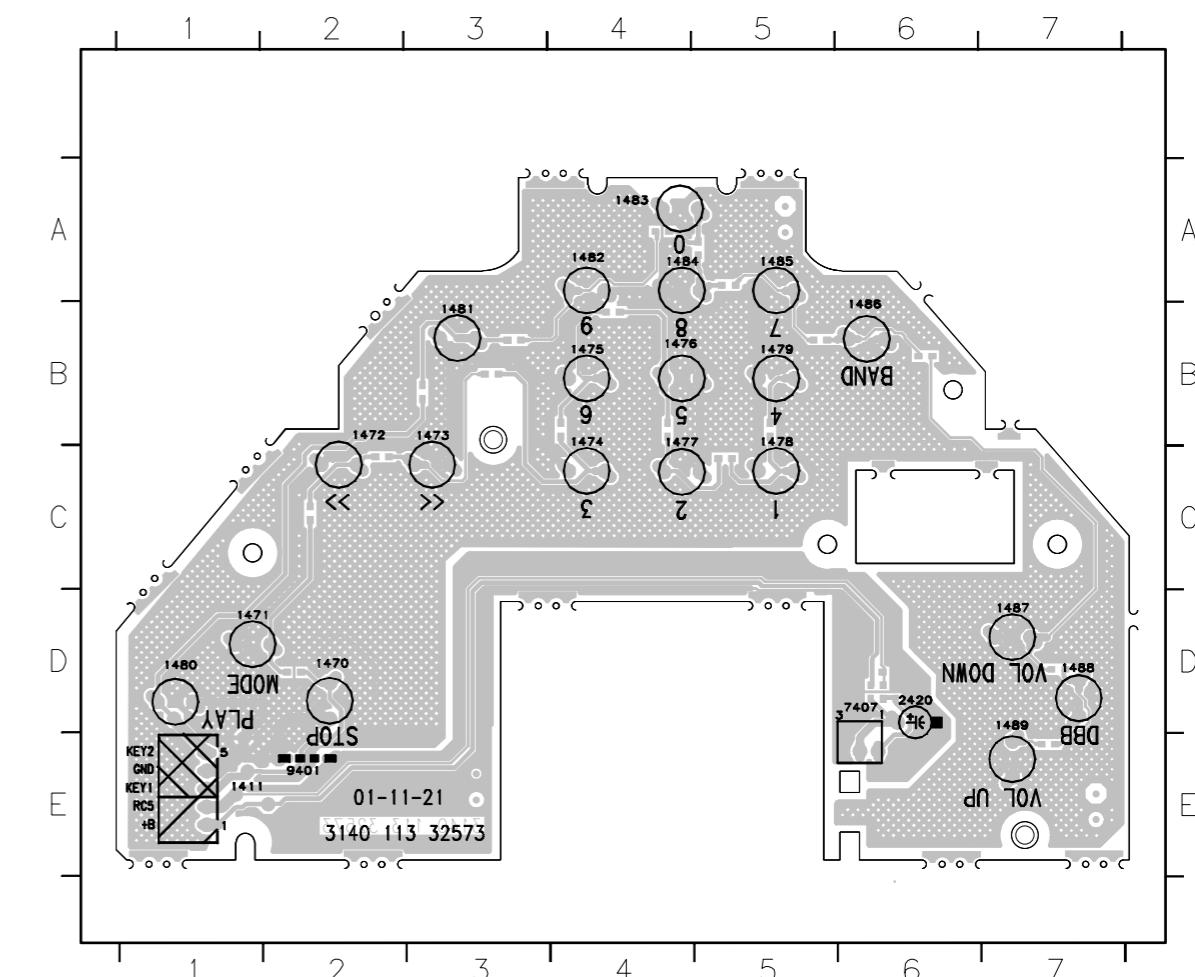
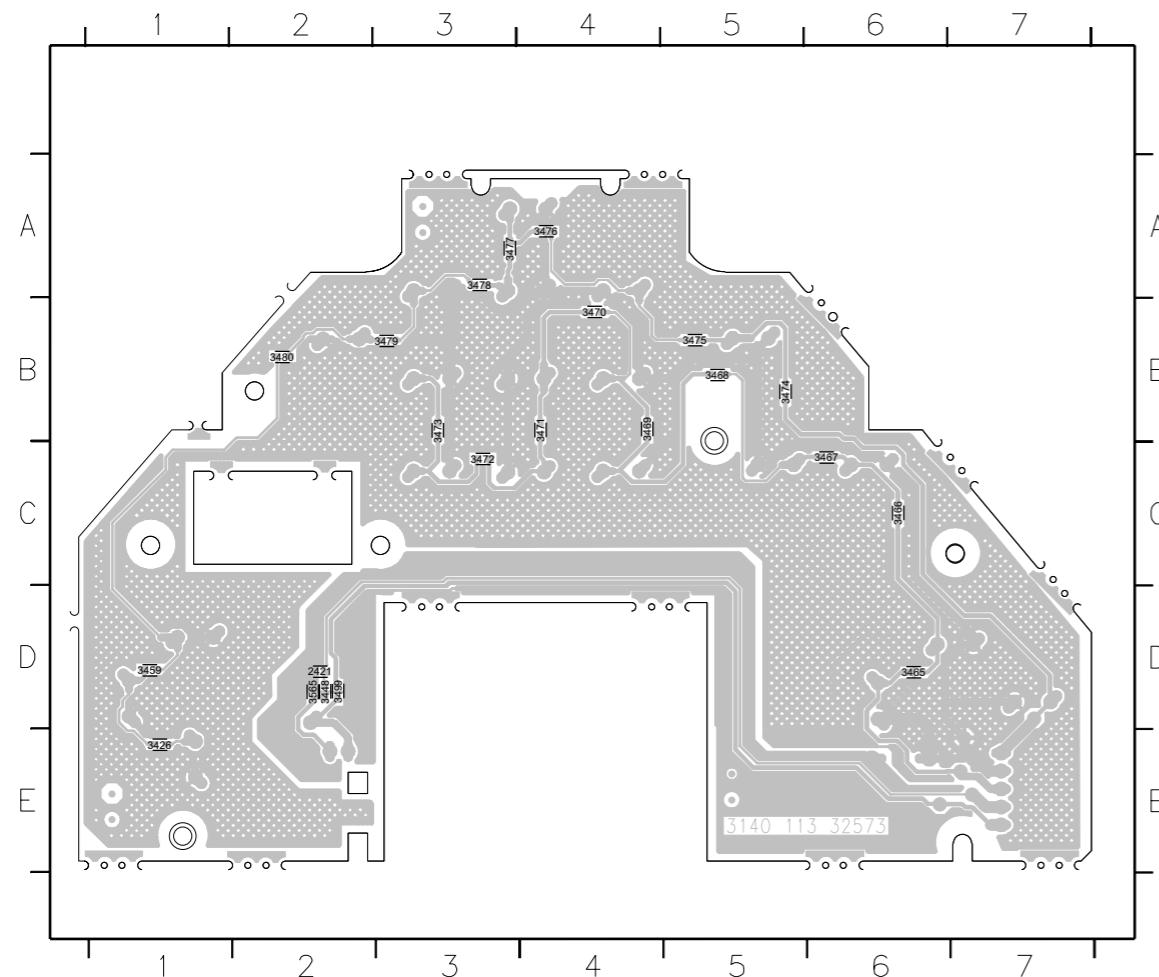
0000 C5	1470 H11	1476 H14	1482 H12	1488 H15	2406 A10	2416 H8	2423 B12	2450 G3	3406 A11	3413 E13	3421 E11	3427 D14	3433 D13	3440 H9	3447 C11	3454 D5	3460 H7	3466 G12	3472 G14	3478 H13	3484 A14	3490 B14	4499 C9	5404 A14	7401 C10	T428 H10	T435 A13	T461 B13	T467 H11	
1404 A2	1471 H12	1477 H14	1483 H13	1489 H15	2407 A10	2417 H9	2424 B12	2451 G4	3401 E14	3407 D2	3414 C12	3422 A9	3428 D11	3434 H7	3441 H9	3448 G13	3455 D5	3461 F6	3467 G12	3473 G15	3479 H14	3485 A14	3491 B14	4894 B14	6400 D1	7402 E4	T429 H10	T455 D14	T462 B13	T468 H11
1407 G2	1472 H12	1478 H15	1484 H13	1490 G1	2408 A11	2418 F10	2426 D13	2452 B13	3402 A11	3409 D4	3415 E11	3423 A9	3429 D10	3435 A10	3442 D10	3450 H9	3456 B12	3462 F5	3468 G13	3474 H11	3480 H14	3486 A14	3495 E12	5400 D2	6401 D3	7407 F14	T431 H7	T456 F1	T463 B13	T469 H11
1409 C14	1473 H13	1479 H15	1485 H13	2401 E4	2410 E14	2419 F11	2438 D2	2460 B13	3403 A12	3410 E3	3416 E10	3424 A9	3430 B9	3436 A10	3443 D11	3451 H9	3457 B11	3463 F5	3469 G13	3475 H12	3481 F2	3487 A14	3498 F11	5401 D3	6402 E4	7425 E5	T432 A13	T457 F1	T464 B13	T470 H11
1410 H10	1474 H13	1480 H11	1486 H14	2412 C11	2420 F13	2440 B13	2463 G7	3404 E5	3411 D4	3417 H8	3425 A9	3431 E12	3437 A10	3445 C11	3452 D5	3458 B12	3464 C14	3470 G14	3476 H12	3482 F2	3488 B14	3499 F13	5402 G7	6410 D4	7426 D2	T433 A13	T458 F1	T465 H10	T471 H11	
1411 H10	1475 H13	1481 H12	1487 H14	2405 A10	2413 D3	2421 G13	2441 A13	2464 H6	3405 A12	3412 B11	3419 H8	3426 D13	3438 A11	3446 C10	3453 D5	3459 H14	3465 G11	3471 G14	3477 H13	3483 F2	3489 B14	3565 G13	5403 E5	7400 E9	7427 D1	T434 A13	T460 C13	T466 H10	T472 D5	

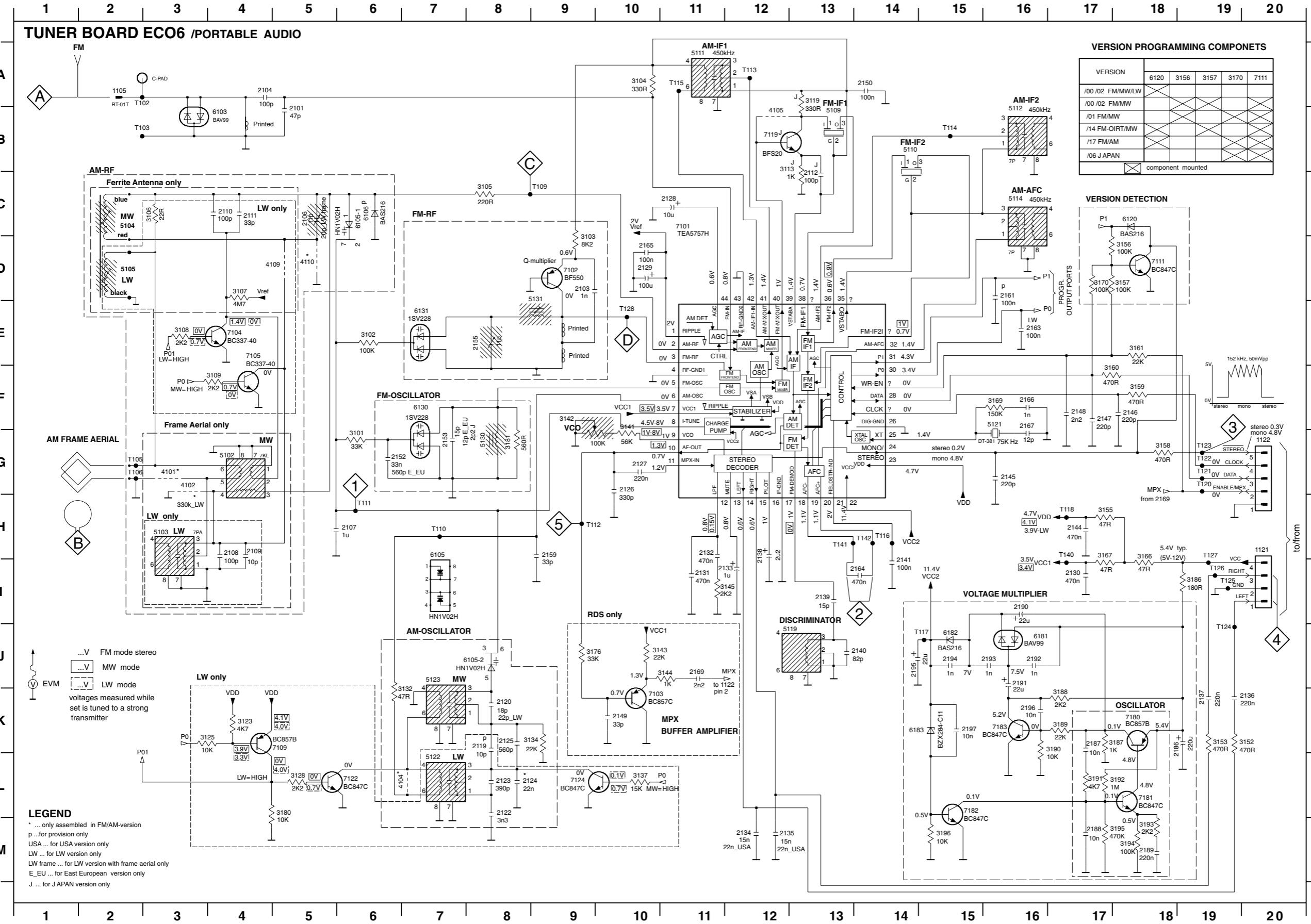


FRONT BOARD - LAYOUT DIAGRAM

2421	D2	3467	C6	3473	B3	3479	B3
3426	E1	3468	B5	3474	B5	3480	B2
3448	D2	3469	B4	3475	B5	3499	D2
3459	D1	3470	B4	3476	A4	3565	D2
3465	D6	3471	B4	3477	A3		
3466	C6	3472	C3	3478	A3		

1480	D1	1481	B3	1476	B4	1486	B6
1471	D1	1473	C3	1474	C4	2420	D6
1411	E1	1482	A4	1477	C4	7407	E6
9401	E2	1483	A4	1478	C5	1487	D7
1470	D2	1484	A4	1479	B5	1488	D7
1472	C2	1475	B4	1485	A5	1489	E7

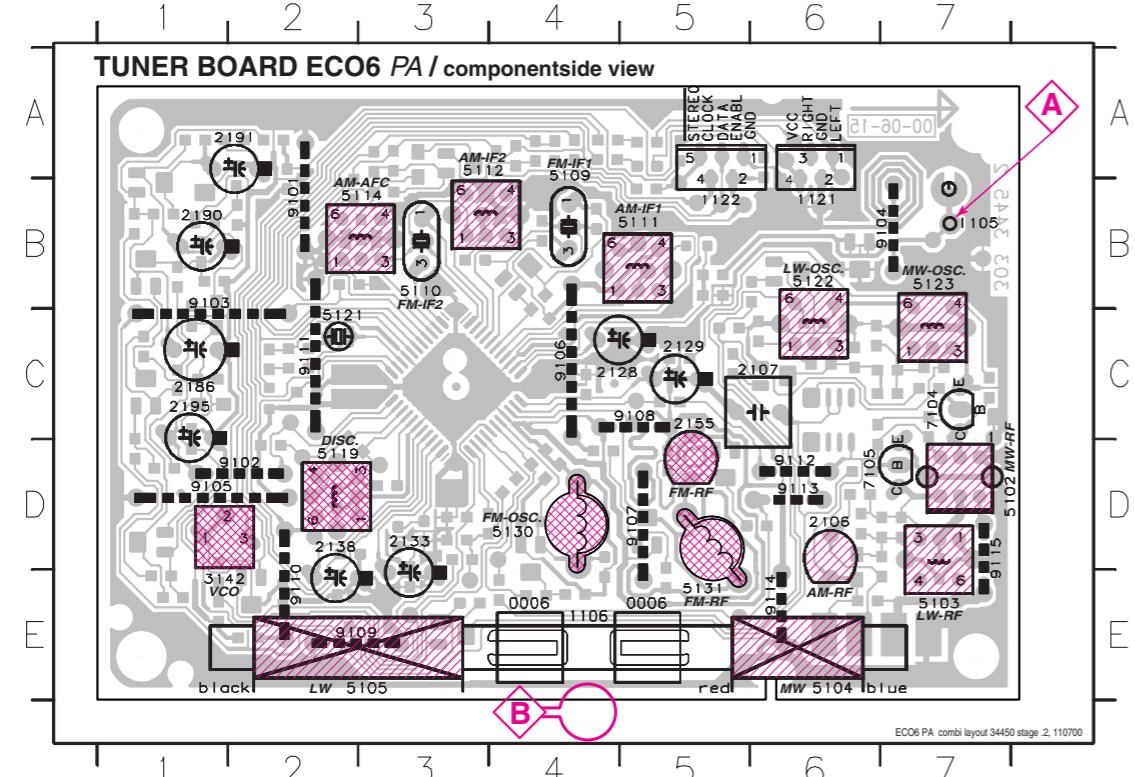


**COMBI BOARD - CIRCUIT DIAGRAM
(TUNER PART)**


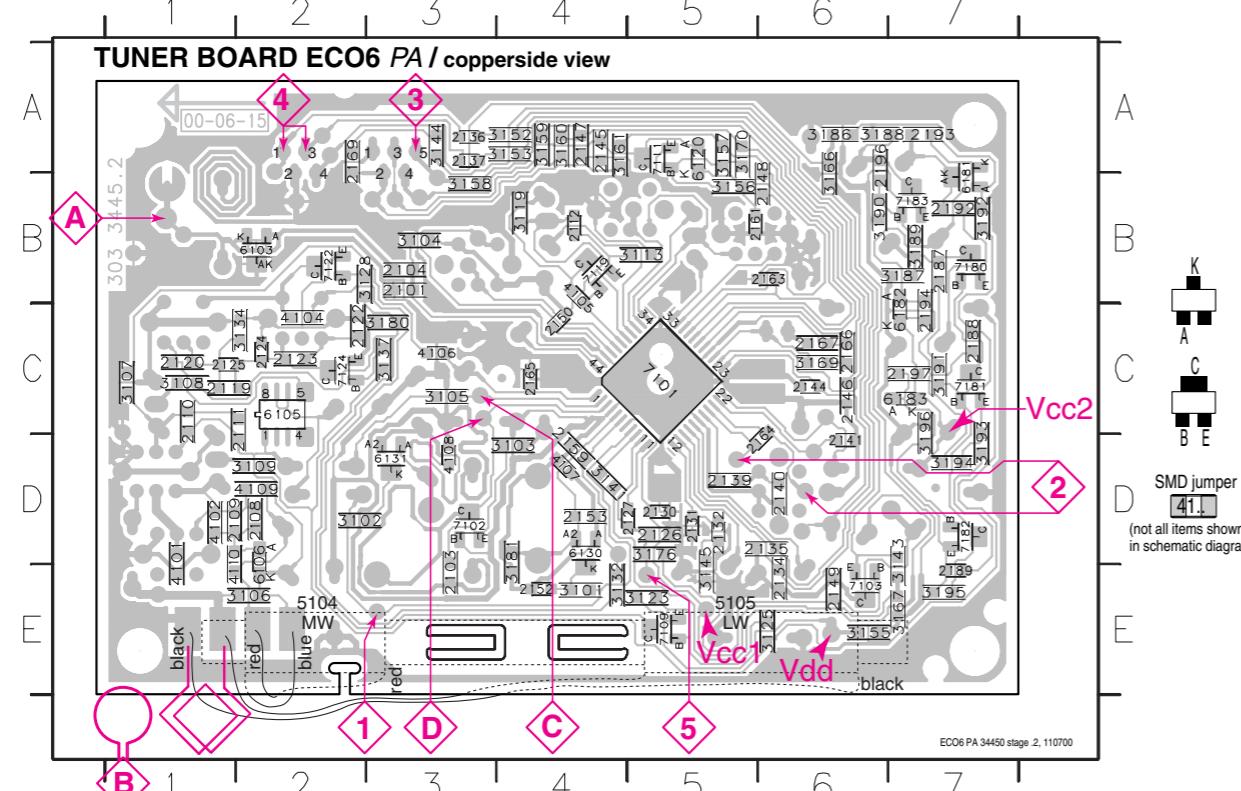
1105 A2	4104 L7
1121 H20	4105 B12
2101 B5	4108 D5
2103 D9	4110 D5
2104 A4	5103 H3
2106 C5	5109 B13
2108 H4	5110 B14
2109 H4	5111 A11
2110 C4	5112 B16
2111 C4	5114 C16
2112 C13	5119 J13
2119 K8	5121 F16
2120 K8	5122 L7
2122 L8	5123 J7
2123 L8	5130 G8
2124 L8	5131 E9
2125 K8	6103 B4
2126 G10	6105-2 J6
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 I22	6183 K14
2134 M12	7101 C11
2135 M12	7102 D9
2136 K20	7103 K10
2137 K19	7104 E4
2138 H12	7105 E4
2139 I13	7105 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 F17	7182 L15
2149 K10	7183 K16
2150 A14	7102 A2
2152 G6	7103 B2
2153 G7	7105 G2
2155 E8	7106 G2
2159 H9	7109 C9
2161 D16	7110 H7
2163 E16	7111 H9
2164 I14	7112 H9
2165 D10	7113 D12
2166 F16	7114 B15
2167 F16	7115 A11
2169 J11	7116 H14
2186 K19	7117 J15
2187 K17	7118 H17
2188 M17	7120 G19
2189 M18	7121 G19
2190 I16	7122 G19
2191 J16	7123 G19
2192 J16	7124 J19
2193 J16	7125 I19
2194 J15	7126 I19
2195 J14	7127 H19
2196 K16	7128 E10
2197 K15	7140 H17
3101 G6	7141 H13
3102 F6	7142 H14
3103 D9	
3104 A10	
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

1105 B7 2106 D6 2129 C5 2155 C5 2191 A2 D7 5102 D7 5110 B3 5114 B3 5122 B6 5131 E5 9101 B2 9104 B7 9107 D5 9110 E2 9113 D6
 1121 B6 2107 C6 2133 D3 2186 C1 2195 C1 5103 E7 5111 B4 5119 D2 5123 B7 7104 C7 9102 D2 9105 D1 9108 C5 9111 C2 9114 E6
 1122 B5 2128 C4 2138 D2 2190 B1 3142 E1 5109 B4 5112 B3 5121 C2 5130 D4 7105 D6 9103 B1 9106 C4 9109 E2 9112 D6 9115 D7



2101 B3 2119 C1 2130 D5 2140 D6 2150 C4 2166 C6 2194 C7 3106 E2 3128 B2 3152 A4 3161 A4 3186 A6 3194 D7 4107 D4 6130 D4 7109 E5 7183 B7
 2103 E3 2120 C1 2131 D5 2141 D6 2152 E4 2167 C6 2196 A6 3107 C1 3132 E4 3153 A4 3166 B6 3187 B7 3195 E7 4108 D3 6131 D3 7111 A5
 2104 B3 2122 C2 2132 D5 2144 C6 2153 D4 2169 A2 2197 C7 3108 C1 3134 C2 3155 E6 3167 E7 3188 A6 3196 C7 4109 D2 6181 B7 7119 B5
 2108 D2 2123 C2 2134 E6 2145 A4 2159 D4 2187 B7 3101 E4 3109 D2 3137 C3 3156 B5 3169 C6 3189 B7 4101 D1 4110 D1 6182 C7 7122 B2
 2109 D1 2124 C2 2135 D6 2146 C6 2161 B5 2188 C7 3102 D2 3113 B5 3141 D4 3157 A5 3170 A5 3190 B6 4102 D1 6103 B2 6183 C7 7124 C2
 2110 C1 2125 C1 2136 A3 2147 A4 2163 B6 2189 E7 3103 D2 3119 B5 3143 D7 3158 B3 3176 D5 3191 C7 4104 C2 6105 C2 7101 C5 7180 B7
 2111 C2 2126 D5 2137 A3 2148 B6 2164 D6 2192 B7 3104 B3 3123 E3 3144 A3 3159 A4 3180 C3 3192 B7 4105 B4 6106 D2 7102 D3 7181 C7
 2112 B4 2127 D5 2138 D5 2149 E6 2165 C4 2193 A7 3105 C3 3125 E6 3145 E5 3160 A4 3181 D4 3193 D7 4106 C3 6120 A5 7103 E6 7182 D7

**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
					87.5MHz (65.81MHz)	check
MW FM/AM-version, 10kHz grid 530 - 1700kHz					1700kHz	5123
					530kHz	check
FM/MW-version, 9kHz grid 531 - 1602kHz					1602kHz	5123
					531kHz	check
LW 153 - 279kHz					279kHz	5122
					153kHz	check
MW FM/MW/LW- version, 9kHz grid 531 - 1602kHz					1602kHz	5123
					531kHz	check
FM IF						
FM	10.7MHz, 45mV continuous wave	D	IC 7101 shortcircuit to block AFC	5119	2	0 ± 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	A	108MHz	2155	4	MAX
	87.5MHz (65.81MHz)	mod=1kHz $\Delta f=\pm 22.5\text{kHz}$	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 2.2kΩ to Vcc	C	IC 7101 36 Δf=±10kHz V _{RF} =0.5mV (as low as possible) see remark 2)	5111	5	
AM AFC MW		C	IC 7101 40 continuous wave V _{RF} =2mV	5112		
AM RF³⁾				5114	2	0 ± 2 mV DC
LW	198kHz	B	198kHz	5105	LW ferrite coil	
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	B	1500kHz	2106		
	560kHz		560kHz	5104	MW ferrite coil	

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.

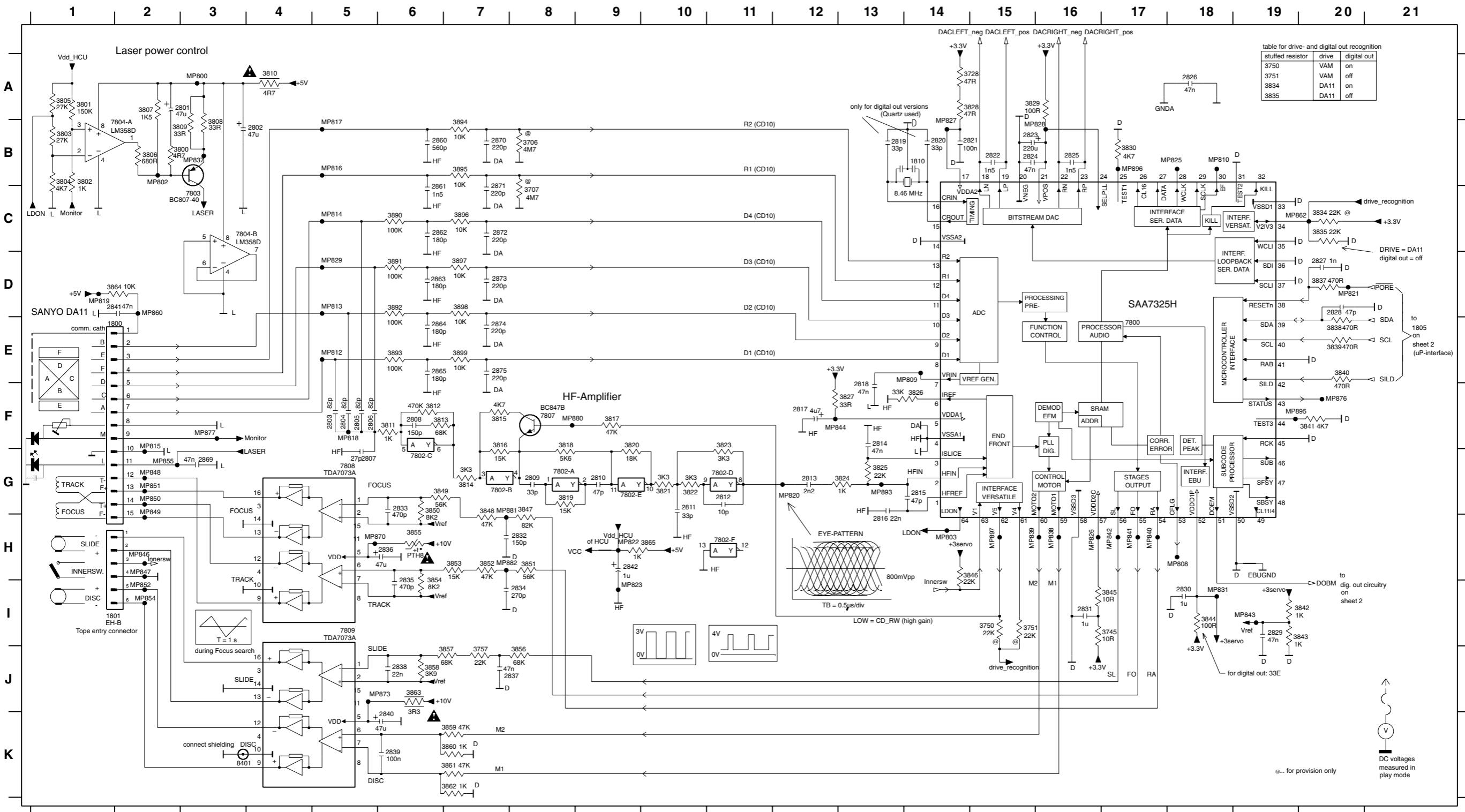
3) LW has to be aligned before MW.

ECO6, general with ferrite antenna, 070799

Repeat

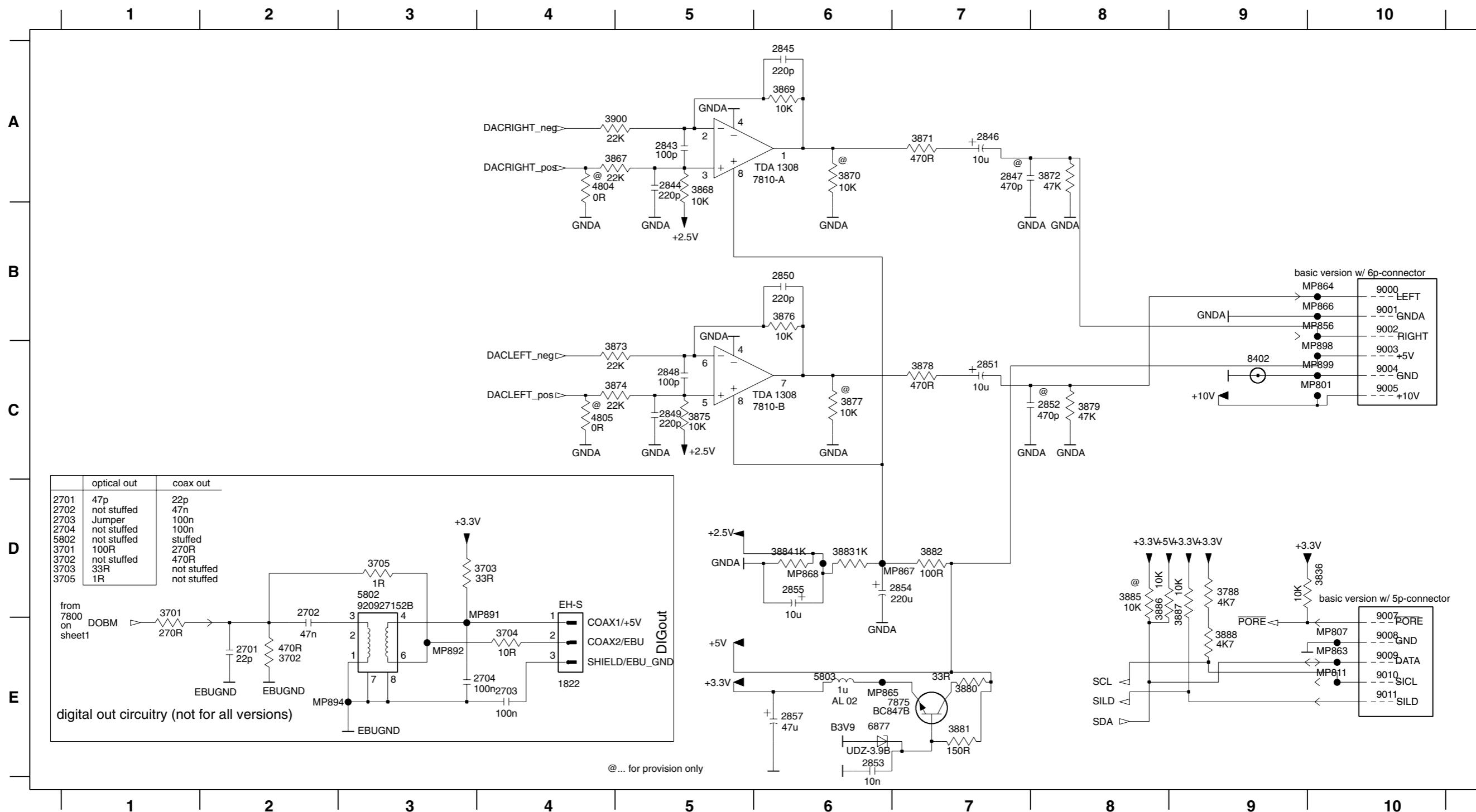
**COMBI BOARD - CIRCUIT DIAGRAM
(CD PART 1)**

1800 E2	2807 G5	2815 G14	2823 B15	2831 I16	2839 K6	2864 E6	2875 E7	3800 B2	3808 B3	3816 F7	3824 G13	3835 C20	3844 I18	3852 H7	3860 K7	3892 D6	7800 E17	7804-A B1	MP8 03 H14	MP8 16 B5	MP8 25 B18	MP8 39 H15	MP8 48 G2	MP8 62 C19	MP8 93 G13
1801 I2	2808 F6	2816 H13	2824 B15	2832 H8	2840 K6	2865 E6	3706 B8	3801 A1	3809 B3	3817 F9	3825 G13	3837 D20	3845 I17	3853 H7	3861 K7	3893 E6	7802-B G8	7804-B C3	MP8 08 H18	MP8 17 B5	MP8 26 H16	MP8 40 H17	MP8 49 G2	MP8 70 H5	MP8 95 F19
2801 A2	2809 G8	2817 F12	2825 B16	2833 G6	2841 D1	3707 C8	3802 C1	3810 A4	3818 F8	3826 F14	3838 E20	3846 H14	3854 H6	3862 K7	3894 B7	7802-B G7	7807 F8	MP8 09 E14	MP8 18 F5	MP8 27 A14	MP8 41 H17	MP8 50 G2	MP8 73 J6	MP8 96 B17	
2802 B4	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	MP8 10 B18	MP8 19 D1	MP8 28 B15	MP8 42 H17	MP8 51 G2	MP8 76 F20	MP8 97 H15	
2803 F5	2811 G9	2819 B13	2827 D20	2835 H6	2860 B6	2871 C7	3745 I17	3804 C1	3812 F6	3820 F9	3828 A15	3840 E20	3848 G7	3856 J8	3864 D1	3896 C7	7802-D G11	7809 I5	MP8 12 E5	MP8 20 G12	MP8 29 D5	MP8 43 I19	MP8 52 I2	MP8 77 F3	MP8 98 H15
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 H10	3897 D7	7802-E G9	8401 K3	MP8 13 D5	MP8 21 D20	MP8 31 I18	MP8 44 F12	MP8 54 I2	MP8 80 F8	
2805 F5	2813 G12	2821 B15	2829 I9	2837 J8	2862 C6	2873 D7	3751 I15	3806 B2	3814 G7	3822 G10	3830 B17	3842 I20	3850 G6	3858 J6	3869 C6	3898 D7	7802-F H11	MP8 00 A3	MP8 14 C5	MP8 15 F2	MP8 38 H16	MP8 46 H2	MP8 55 G2	MP8 81 G7	
2806 F5	2814 F13	2822 B15	2830 I8	2838 J6	2863 D6	2874 E7	3757 J7	3807 B2	3815 F7	3823 F11	3834 C20	3843 I20	3851 H8	3859 K7	3891 D6	3899 E7	7803 C3	MP8 02 B2	MP8 18 C9	MP8 23 I19	MP8 38 H16	MP8 47 H2	MP8 60 D2	MP8 82 H7	



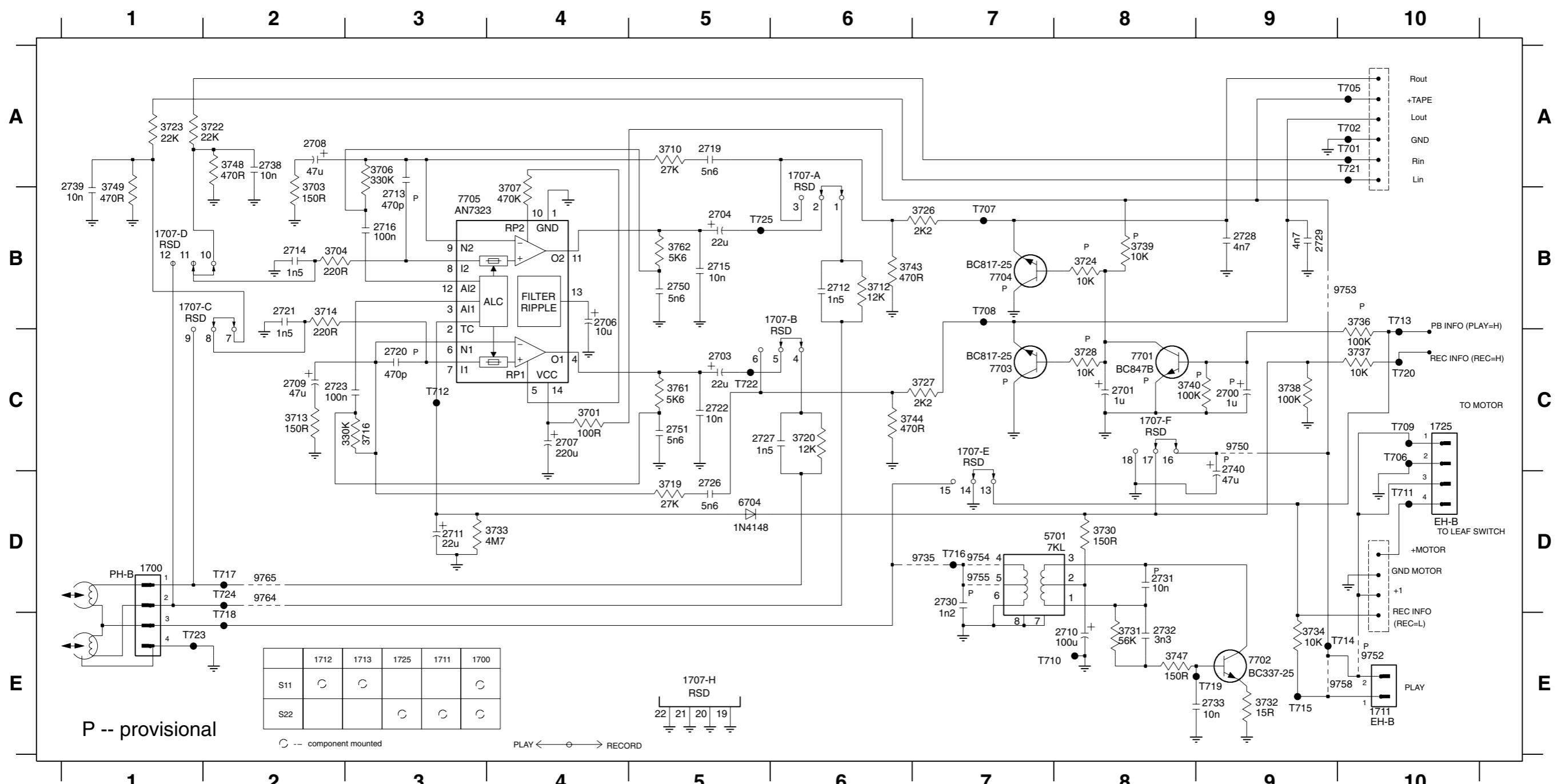
**COMBI BOARD - CIRCUIT DIAGRAM
(CD PART 2)**

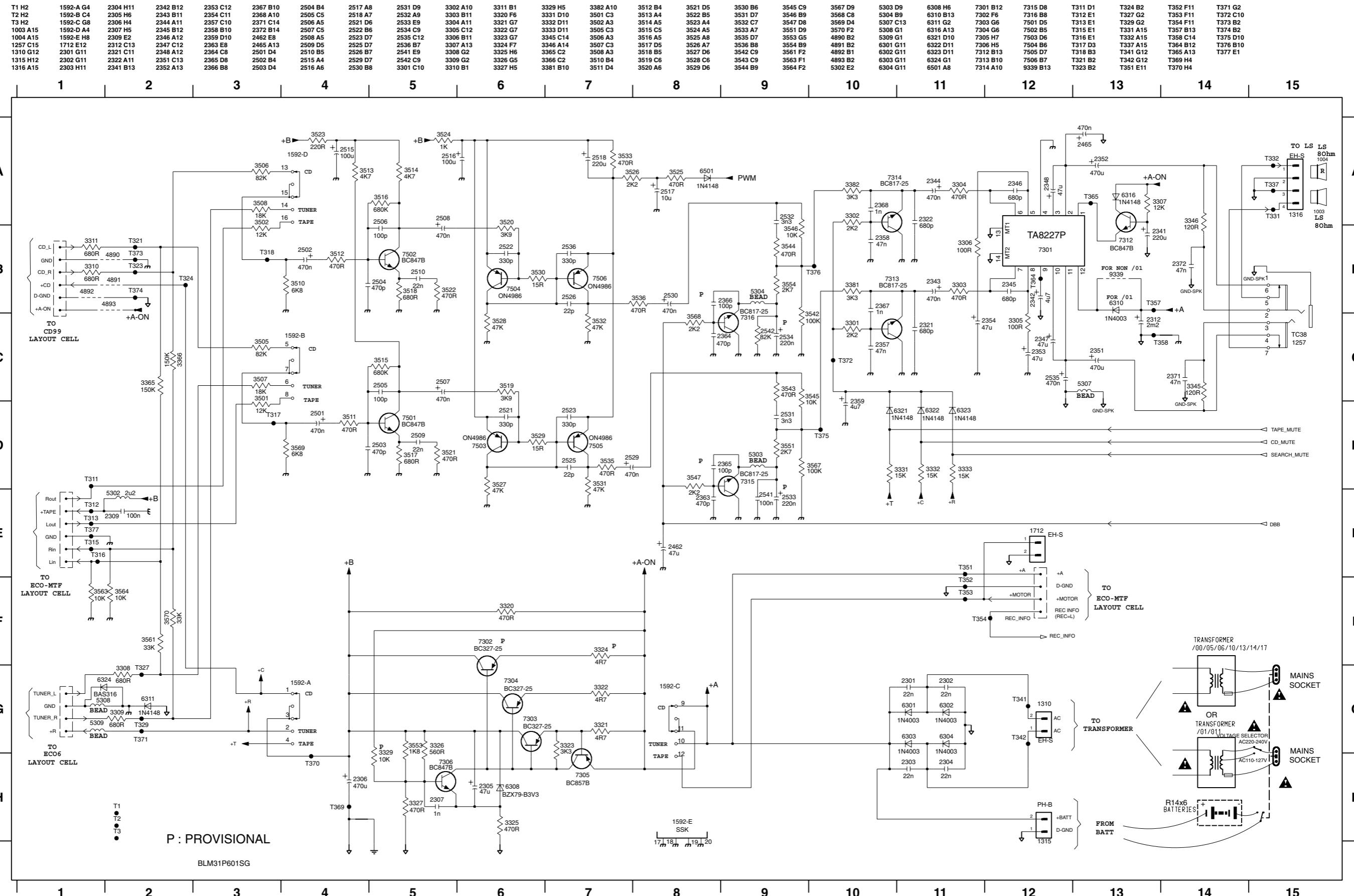
1822 E4	2843 A5	2848 C5	2853 E6	3702 E2	3836 D10	3871 A7	3876 B6	3881 E7	3886 D8	4805 C4	7810-B C5	9002 B10	9008 E10	MP807 E10	MP865 E6	MP892 E3
2701 E2	2844 A5	2849 C5	2854 D6	3703 D3	3867 A5	3872 A8	3877 C6	3882 D7	3887 D9	5802 D3	7875 E7	9003 C10	9009 E10	MP811 E10	MP866 B10	MP894 E2
2702 D2	2845 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	



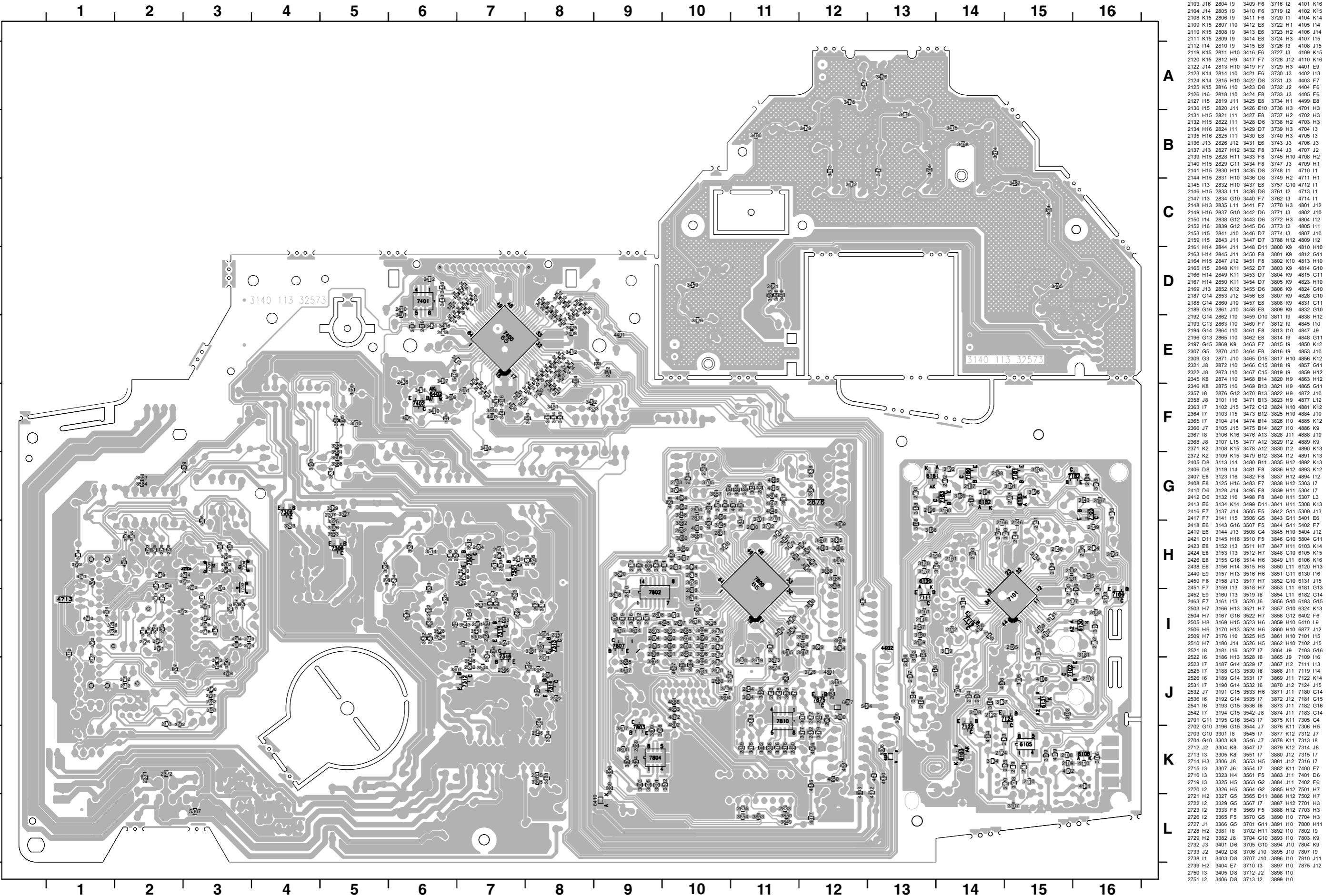
COMBI BOARD - CIRCUIT DIAGRAM (TAPE PART)

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	

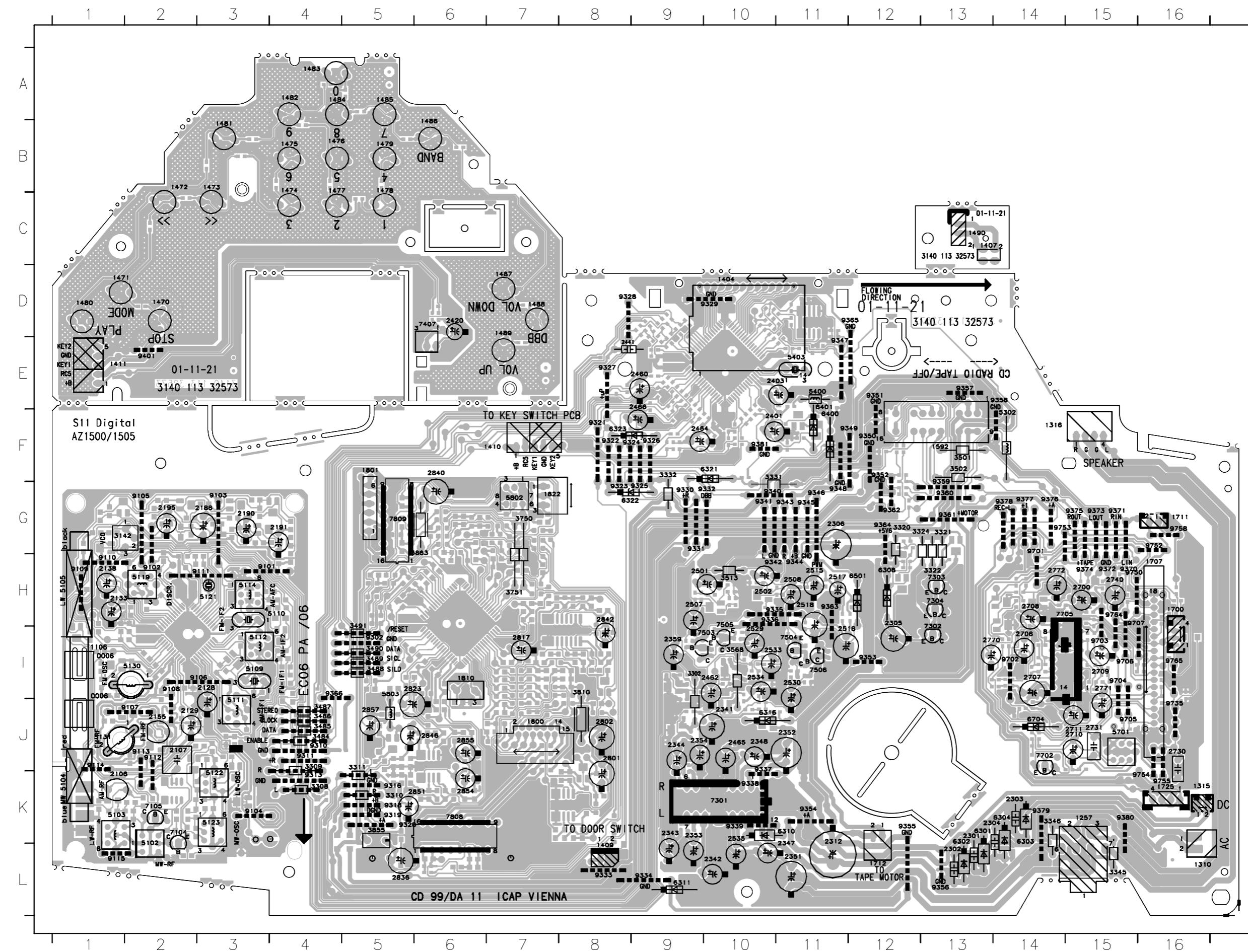


**COMBI BOARD - CIRCUIT DIAGRAM
(AUDIO/SUPPLY PART)**


COMBI BOARD - LAYOUT DIAGRAM (COPPER SIDE)

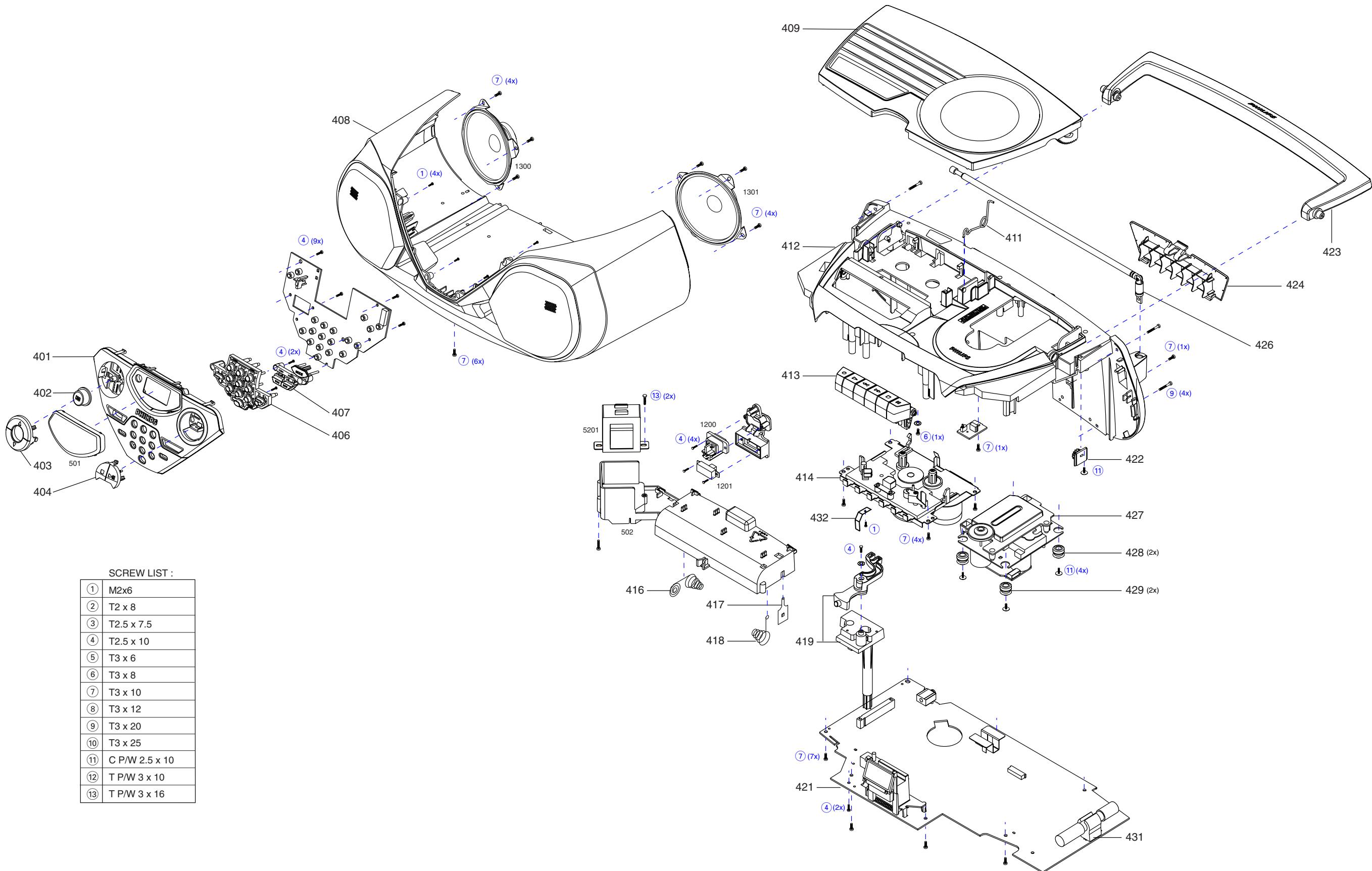


COMBI BOARD - LAYOUT DIAGRAM (COMPONENT SIDE)

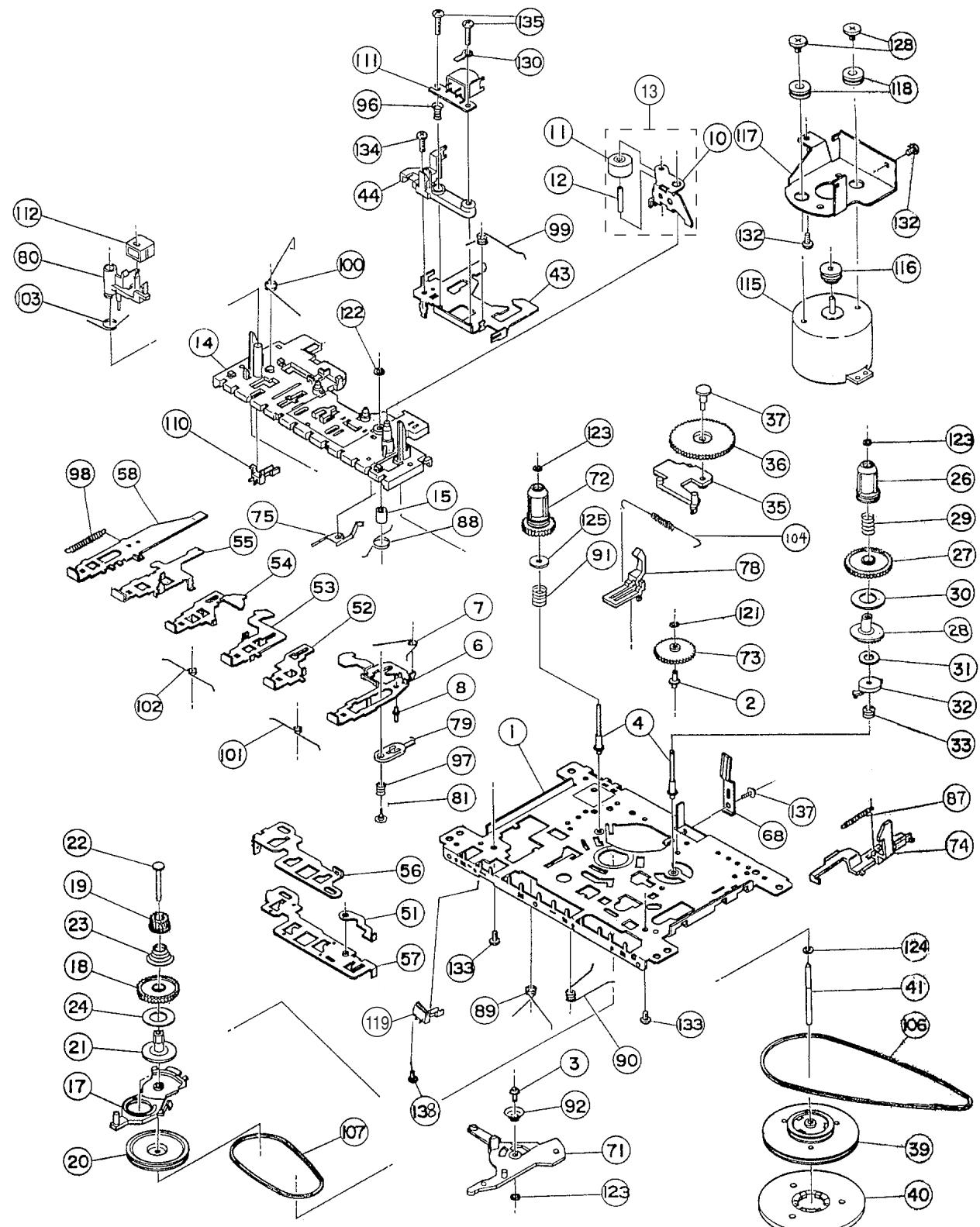


1105	K3	2771	I15	9008	H6
1257	K15	2772	H14	9009	H6
1310	L16	2801	J8	9010	H6
1315	K16	2802	J8	9011	H6
1316	F14	2817	I7	9101	H3
1404	D10	2823	I5	9102	H2
1407	C13	2836	L5	9103	G3
1409	L8	2840	F6	9104	K3
1410	F7	2842	H8	9105	G2
1411	E1	2846	J6	9106	I3
1470	D2	2851	K6	9107	J2
1471	D1	2854	K6	9108	I2
1472	B2	2855	J6	9109	H1
1473	B3	2857	J5	9110	H1
1474	B4	3142	G1	9111	H3
1475	B4	3302	I9	9112	J2
1476	B4	3308	K4	9113	J2
1477	B4	3309	J4	9114	J1
1478	B5	3310	K5	9115	L1
1479	B5	3311	J5	9302	I5
1480	D1	3320	G12	9310	J4
1481	B3	3321	G13	9311	J4
1482	A4	3322	H13	9313	K4
1483	A4	3324	G13	9316	K5
1484	A4	3331	F10	9318	K5
1485	A5	3332	F9	9319	K5
1486	B6	3345	L15	9320	K5
1487	D7	3346	K14	9321	F8
1488	D7	3348	J4	9322	F8
1489	D7	3485	J4	9323	G8
1490	C13	3486	J4	9324	F9
1592	F13	3487	J4	9325	G9
1700	H16	3488	I5	9326	F9
1707	H16	3489	I5	9327	E8
1711	G16	3490	I5	9328	D8
1712	L12	3491	H5	9329	D10
1725	K16	3501	F13	9330	G9
1800	J7	3502	F13	9331	G9
1801	F5	3513	H10	9332	G10
1810	I6	3568	H10	9333	L8
1822	G7	3750	G7	9334	L9
2106	K1	3751	H7	9335	H10
2107	J2	3810	I8	9336	H10
2128	I3	3855	K5	9337	J10
2129	J2	3863	G6	9338	K10
2133	H1	5102	K2	9339	K10
2138	H1	5103	K1	9340	G10
2155	J2	5109	I3	9341	G10
2186	G3	5110	H4	9342	H10
2190	G3	5111	J3	9343	G11
2191	G4	5112	I3	9344	H11
2195	G2	5114	H3	9345	G11
2301	K13	5119	H2	9346	G11
2302	L13	5121	H3	9347	E11
2303	K14	5122	K3	9348	G11
2303	K13	5123	K3	9349	F12
2305	H12	5130	I2	9350	F12
2306	G11	5131	J1	9351	E12
2312	K11	5302	F14	9352	F12
2341	J10	5400	E11	9353	H12
2342	L10	5403	E11	9354	K11
2343	K9	5701	J15	9355	K12
2344	J9	5802	G7	9356	L13
2347	K11	5803	I5	9357	E13
2348	J10	6301	K13	9358	E14
2351	L11	6302	K13	9359	F13
2352	J11	6303	K14	9360	G13
2353	K9	6304	K14	9361	G11
2354	J9	6308	H12	9362	G12
2359	I9	6310	K11	9363	H11
2401	F10	6311	L9	9364	G12
2403	E10	6316	J10	9365	D12
2420	D6	6321	F10	9366	I4
2441	E8	6322	G8	9370	H15
2460	E9	6323	F8	9371	G15
2462	I10	6400	F11	9372	H15
2464	F9	6401	E11	9373	G15
2465	J10	6501	H12	9374	H15
2466	E9	6704	J14	9375	G15
2501	H9	7104	K2	9376	G14
2502	H10	7105	K2	9377	G14
2507	H9	7301	K10	9378	G14
2500	H11	7302	H13	9379	K14
2515	H11	7303	H13	9380	K15
2516	H11	7304	H13	9381	F10
2517	H11	7407	D6	9401	E22
2518	H11	7503	I10	9701	G14
2529	H10	7504	I11	9702	I14
2530	H11	7505	H10	9703	I15
2533	H10	7506	I11	9704	I15
2534	H10	7702	J14	9705	J15
2535	K10	7705	H14	9706	I15
2700	H15	7808	K6	9707	H15
2706	H14	7809	G5	9735	J16
2707	H14	8401	L7	9750	H15
2708	H14	8402	L5	9752	G15
2709	H15	9000	H6	9753	G14
2710	J15	9001	H6	9754	K16
2711	J15	9002	H6	9755	K16
2730	J16	9003	H6	9758	G16
2731	J15	9004	H6	9764	H15
2740	H15	9005	H6	9765	I16
2770	I13	9007	H6		

EXPLODED VIEW DIAGRAM - CABINET



EXPLODED VIEW DIAGRAM - TAPE DECK



MECHANICAL PARTSLIST - CABINET

401	3140 117 62320	CD PANEL ASSY
401	3140 117 62810	CD PANEL ASSY (/17 only)
402	3140 114 41360	KNOB-DBB
403	3140 114 41260	VOLUME KNOB
404	3140 114 41270	CD KEYSET-1
406	3140 114 44370	TUNER KEYSET
407	3140 114 41280	CD KEYSET-2
408	3140 117 62280	BOTTOM CABINET ASSY
409	3140 114 41390	CD DOOR
411	3140 111 01190	SPRING-CD DOOR
412	3140 117 62440	TOP CABINET ASSY
413	3140 114 44350	CASS KEYSET
414	3140 118 71880	TAPE DRIVE CDS83PBF-08
416	3140 111 00790	SPRING-PLUS/MINUS
417	3140 111 21320	CONTACT PLATE
418	3140 111 00780	SPRING-COMPRESSION (-)
419	3140 117 63120	SLIDE KNOB ASSY
421	3140 114 41330	BRACKET-LCD
422	4822 529 10322	DAMPER ASSY
423	3140 114 44320	HANDLE
424	3140 114 44190	BATTERY DOOR
426	3140 118 71810	TELESCOPIC AERIAL
427	3103 309 05360	CD DA11B1N DRIVE ASSY
428	4822 529 10386	DAMPER - RUBBER (30 DEG)
429	4822 529 10387	DAMPER - RUBBER (40 DEG)
431	3140 104 00000	FERRITE BAR HOLDER (3 Band)
431	4822 256 90463	FERRITE BAR HOLDER (2 Band)
432	3140 111 20800	SPRING-RECORDING
	3139 228 89740	REMOTE RC19414002/01T

MECHANICAL PARTSLIST - TAPE DECK

10	4822 528 70849	ROLLER ARM
11	4822 528 70695	ROLLER ASSY
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

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 BOARD

- MISCELLANEOUS -			- CAPACITORS -		
1404	3140 110 51470	LCD PANEL 91657TR	2464	4822 124 41584	100µF 20% 10V
1407	4822 276 12889	DOOR SWITCH	2465	4822 124 41407	0,47µF 20% 63V
1470	2422 128 02917	TACT SWITCH 1P	2466	4822 124 40769	4,7µF 20% 100V
1471	2422 128 02917	TACT SWITCH 1P			
1472	2422 128 02917	TACT SWITCH 1P			
1473	2422 128 02917	TACT SWITCH 1P			
1474	2422 128 02917	TACT SWITCH 1P			
1475	2422 128 02917	TACT SWITCH 1P			
1476	2422 128 02917	TACT SWITCH 1P			
1477	2422 128 02917	TACT SWITCH 1P			
1478	2422 128 02917	TACT SWITCH 1P	3401	4822 051 30393	39K 5% 0,062W
1479	2422 128 02917	TACT SWITCH 1P	3402	4822 051 30471	470R 5% 0,062W
1480	2422 128 02917	TACT SWITCH 1P	3403	4822 051 30471	470R 5% 0,062W
1481	2422 128 02917	TACT SWITCH 1P	3404	4822 051 30472	4,7K 5% 0,062W
1482	2422 128 02917	TACT SWITCH 1P	3405	4822 051 30471	470R 5% 0,062W
1483	2422 128 02917	TACT SWITCH 1P	3406	4822 051 30471	470R 5% 0,062W
1484	2422 128 02917	TACT SWITCH 1P	3407	4822 051 30101	100R 5% 0,062W
1485	2422 128 02917	TACT SWITCH 1P	3409	4822 117 13632	100K 1% 0,62W
1486	2422 128 02917	TACT SWITCH 1P	3410	4822 051 30471	470R 5% 0,062W
1487	2422 128 02917	TACT SWITCH 1P	3411	4822 051 30153	15K 5% 0,062W
1488	2422 128 02917	TACT SWITCH 1P	3412	4822 051 30471	470R 5% 0,062W
1489	2422 128 02917	TACT SWITCH 1P	3413	4822 051 30472	4,7K 5% 0,062W
1490	2422 128 02917	TACT SWITCH 1P	3414	4822 051 30472	4,7K 5% 0,062W
1491	2422 128 02917	TACT SWITCH 1P	3415	4822 051 30472	4,7K 5% 0,062W
1492	2422 128 02917	TACT SWITCH 1P	3416	4822 051 30272	2,7K 5% 0,062W
- CAPACITORS -					
2401	4822 124 21913	1µF 20% 63V	3417	4822 051 30102	1K 5% 0,062W
2403	4822 124 41584	100µF 20% 10V	3419	4822 051 30102	1K 5% 0,062W
2405	4822 122 31765	100pF 2% NP0 63V	3421	4822 051 30471	470R 5% 0,062W
2406	4822 122 31765	100pF 2% NP0 63V	3422	4822 051 30102	1K 5% 0,062W
2407	4822 122 31765	100pF 2% NP0 63V	3423	4822 051 30102	1K 5% 0,062W
2408	4822 122 31765	100pF 2% NP0 63V	3424	4822 051 30102	1K 5% 0,062W
2410	4822 122 31765	100pF 2% NP0 63V	3425	4822 051 30102	1K 5% 0,062W
2412	4822 126 14305	100nF 10% X7R 16V	3426	4822 051 30392	3,9K 5% 0,063W
2413	4822 126 14305	100nF 10% X7R 16V	3428	4822 051 30152	1,5K 5% 0,062W
2416	5322 126 11583	10nF 10% X7R 50V	3429	4822 051 30152	1,5K 5% 0,062W
2417	5322 126 11583	10nF 10% X7R 50V	3430	4822 051 30472	4,7K 5% 0,062W
2418	4822 126 14305	100nF 10% X7R 16V	3431	4822 051 30103	10K 5% 0,062W
2419	4822 122 31765	100pF 2% NP0 63V	3432	4822 051 30183	18K 5% 0,062W
2420	4822 124 40769	4,7µF 20% 100V	3433	4822 051 30472	4,7K 5% 0,062W
2421	3198 016 31020	1nF 5% NP0 25V	3434	4822 051 30101	100R 5% 0,062W
2423	4822 122 31765	100pF 2% NP0 63V	3435	4822 051 30223	22K 5% 0,062W
2424	4822 122 31765	100pF 2% NP0 63V	3436	4822 051 30223	22K 5% 0,062W
2426	4822 122 31765	100pF 2% NP0 63V	3437	4822 051 30223	22K 5% 0,062W
2438	4822 126 14305	100nF 10% X7R 16V	3438	4822 051 30223	22K 5% 0,062W
2450	4822 122 31765	100pF 2% NP0 63V	3440	4822 051 30562	5,6K 5% 0,063W
2451	4822 122 31765	100pF 2% NP0 63V	3441	4822 051 30562	5,6K 5% 0,063W
2452	4822 122 31765	100pF 2% NP0 63V	3442	4822 051 30152	1,5K 5% 0,062W
2460	4822 124 22652	2,2µF 20% 50V	3443	4822 051 30152	1,5K 5% 0,062W
2462	4822 124 40433	47µF 20% 25V	3445	4822 051 30101	100R 5% 0,062W
2463	4822 126 14305	100nF 10% X7R 16V	3446	4822 051 30223	22K 5% 0,062W

ELECTRICAL PARTSLIST - FRONT BOARD

- RESISTORS -			- COILS & FILTERS		
3447	4822 051 30223	22K 5% 0,062W	5400	4822 157 11228	COIL 100µH 5%
3448	4822 051 30103	10K 5% 0,062W	5401	2422 549 44393	FXD SM COIL 100MHZ 2K7
3450	4822 051 30272	2,7K 5% 0,062W	5402	2422 549 44393	FXD SM COIL 100MHZ 2K7
3451	4822 051 30272	2,7K 5% 0,062W	5403	2422 540 98455	RES CER 4,194MHZ
3452	4822 051 30392	3,9K 5% 0,063W	5404	4822 157 11074	COIL 100µH
3453	4822 051 30332	3,3K 5% 0,062W	5405	4822 157 11074	COIL 100µH
3454	4822 051 30332	3,3K 5% 0,062W			
3455	4822 051 30332	3,3K 5% 0,062W			
3456	4822 051 30471	470R 5% 0,062W			
3457	4822 051 30471	470R 5% 0,062W			
3458	4822 051 30471	470R 5% 0,062W	6400	4822 130 30621	1N4148
3459	4822 051 30222	2,2K 5% 0,062W	6401	5322 130 31504	BZX79-B3V3
3461	4822 051 30221	220R 5% 0,062W	6402	5322 130 34337	BAV99
3462	4822 051 30221	220R 5% 0,062W			
3463	4822 051 30221	220R 5% 0,062W			
3464	4822 051 30223	22K 5% 0,062W			
3465	4822 051 30221	220R 5% 0,062W			
3466	4822 051 30271	270R 5% 0,062W			
3467	4822 051 30331	330R 5% 0,062W			
3468	4822 051 30471	470R 5% 0,062W			
3469	4822 051 30681	680R 5% 0,062W	7400	3140 110 51210	MCU TMP86CH21F
3470	4822 117 12968	820R 5% 0,62W	7401	9322 145 26668	M24C02-WMN6
3471	4822 117 11817	1,2K 1% 1/16W	7402	4822 130 60511	BC847B
3472	4822 051 30222	2,2K 5% 0,062W	7407	9322 155 82667	IR RECEIVER TSOP2236
3473	4822 051 30392	3,9K 5% 0,063W			
3474	4822 051 30221	220R 5% 0,062W			
3475	4822 051 30271	270R 5% 0,062W			
3476	4822 051 30331	330R 5% 0,062W			
3477	4822 051 30471	470R 5% 0,062W			
3478	4822 051 30681	680R 5% 0,062W			
3479	4822 117 12968	820R 5% 0,62W			
3480	4822 117 11817	1,2K 1% 1/16W			
3481	4822 051 30101	100R 5% 0,062W			
3482	4822 051 30101	100R 5% 0,062W			
3483	4822 051 30101	100R 5% 0,062W			
3484	4822 116 52228	680R 5% 0,5W			
3485	4822 116 52228	680R 5% 0,5W			
3486	4822 116 52228	680R 5% 0,5W			
3487	4822 116 52228	680R 5% 0,5W			
3488	4822 116 52228	680R 5% 0,5W			
3489	4822 116 52228	680R 5% 0,5W			
3490	4822 116 52228	680R 5% 0,5W			
3491	4822 116 52228	680R 5% 0,5W			
3495	4822 051 30223	22K 5% 0,062W			
3498	4822 051 30152	1,5K 5% 0,062W			
3499	4822 051 30101	100R 5% 0,062W			
3565	4822 117 13632	100K 1% 0,62W			

ELECTRICAL PARTSLIST - TUNER PART

- CAPACITORS -			- CAPACITORS -		
2101	4822 122 33777	47pF 5%NP0 63V	2189	4822 126 13879	220nF +80-20%16V
2103	5322 126 11578	1nF 10%X7R 50V	2190	4822 124 81151	22µF 20%50V
2104	4822 122 31765	100pF 2%NP0 63V	2191	4822 124 81151	22 µF 20%50V
2106	2020 800 00191	TRIM CAP. 3P-11P N450	2192	5322 126 11578	1nF 10%X7R 50V
2107	4822 121 51319	1µF 10%63V	2193	5322 126 11578	1nF 10%X7R 50V
2110	4822 122 31765	100pF 2%NP0 63V	2194	5322 126 11578	1nF 10%X7R 50V
2111	2222 867 15339	33pF 5%NP0 50V	2195	4822 124 81151	22 µF 20%50V
2120	4822 126 14507	18pF 5%NP0 50V	2196	5322 126 11583	10nF 10%X7R 50V
2120	4822 122 33761	22pF 5%NP0 50V (for LW)	2197	5322 126 11583	10nF 10%X7R 50V
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 NPO 50V			
2127	4822 126 13879	220nF +80-20%16V			
- RESISTORS -					
2129	4822 124 41584	100µF 20%10V	3101	4822 051 30333	33K 5%0,062W
2130	3198 017 44740	470nF Y5V 10V	3102	4822 117 13632	100K 1%0,62W
2131	3198 017 44740	470nF Y5V 10V	3103	4822 117 12902	8,2K 1%0,063W
2132	3198 017 44740	470nF Y5V 10V	3105	4822 051 30221	220R 5%0,062W
2133	4822 124 22651	1µF 20%50V	3106	4822 117 12139	22R 5%0,062W
2134	3198 017 31530	15nF X7R 50V	3107	4822 051 30475	4,7M 5%0,062W
2134	4822 126 14494	22nF 10%X7R 25V (/17 only)	3108	4822 051 30222	2,2K 5%0,062W
2135	3198 017 31530	15nF X7R 50V	3109	4822 051 30222	2,2K 5%0,062W
2135	4822 126 14494	22nF 10%X7R 25V (/17 only)	3123	4822 051 30472	4,7K 5%0,062W
2136	4822 126 13879	220nF +80-20%16V	3125	4822 051 30103	10K 5%0,062W
2137	4822 126 13879	220nF +80-20%16V	3128	4822 051 30222	2,2K 5%0,062W
2138	4822 124 22652	2,2µF 20%50V	3132	4822 051 30479	47R 5%0,062W
2139	4822 122 33752	15pF 5%NP0 50V	3134	4822 051 30223	22K 5%0,062W
2140	4822 126 14226	82pF 5%NP0 50V	3137	4822 051 30153	15K 5%0,062W
2141	4822 126 14305	100nF 10%X7R 16V	3141	4822 051 30563	56K 5%0,062W
2144	3198 017 44740	470nF Y5V 10V	3142	4822 100 12159	100K 30% VARIABLE
2145	4822 126 13883	220pF 5%50V	3145	4822 051 30222	2,2K 5%0,062W
2146	4822 122 33575	220pF 5%NP0 63V	3152	4822 051 30471	470R 5%0,062W
2147	4822 126 13883	220pF 5%50V	3153	4822 051 30471	470R 5%0,062W
2148	4822 126 14238	2,2nF X7R 50V	3155	4822 051 30479	47R 5%0,062W
2150	4822 126 14585	100nF 10%X7R 50V	3156	4822 117 13632	100K 1%0,62W
2152	4822 126 14549	33nF 16V X7R	3157	4822 117 13632	100K 1%0,62W
2152	4822 126 14249	560pF 10%25V (/14 only)	3158	4822 051 30471	470R 5%0,062W
2153	4822 122 33752	15pF 5%NP0 50V	3159	4822 051 30471	470R 5%0,062W
2153	4822 126 11663	12pF 5%NP0 50V	3160	4822 051 30471	470R 5%0,062W
2155	2020 800 00191	TRIM CAP. 3P-11P N450	3161	4822 051 20223	22K 5%0,1W
2159	2222 867 15339	33pF 5%NP0 50V	3166	4822 051 20479	47R 5%0,1W
2163	4822 126 14305	100nF 10%X7R 16V	3167	4822 051 20479	47R 5%0,1W
2164	3198 017 44740	470nF Y5V 10V	3169	4822 051 20154	150K 5%0,1W
2165	4822 126 14305	100nF 10%X7R 16V	3170	4822 117 13632	100K 1%0,62W
2166	5322 126 11578	1nF 10%X7R 50V	3180	4822 051 30103	10K 5%0,062W
2167	4822 126 11663	12PF 1%50V	3181	4822 051 30561	560R 5%0,062W
2186	4822 124 40196	220µF 20%16V	3186	4822 117 11448	180R 1%0,1W
2187	5322 126 11583	10nF 10%X7R 50V	3187	4822 051 30102	1K 5%0,062W
2188	5322 126 11583	10nF 10%X7R 50V	3188	4822 051 30222	2,2K 5%0,062W

ELECTRICAL PARTSLIST - 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

- 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.

- COILS & FILTERS -

1106	3140 114 50050	FERRITE BAR D10X80MM
1106	2422 549 44211	FERRITE BAR 5X13X55
5104	4822 157 11269	COIL MW ANT. (3-BAND)
5104	2422 536 00364	COIL MW ANT. (2-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	IND VAR 450KHZ
5112	4822 157 70302	F7MCS-12216N
5114	4822 157 70302	F7MCS-12216N
5119	4822 157 11443	Coil 2,4 H
5121	4822 242 10261	T6252F00 (75KHZ)
5122	2422 549 44108	COIL AM OSC.
5123	2422 549 44108	COIL AM OSC.
5130	4822 157 11843	COIL FM
5131	4822 157 11843	COIL FM

- DIODES -

6103	5322 130 34337	BAV99
6105	4822 130 83075	HN1V02H-B
6120	4822 130 11397	BAS316
6130	4822 130 82833	1SV228
6131	4822 130 82833	1SV228
6181	5322 130 34337	BAV99
6182	4822 130 11397	BAS316
6183	9340 386 90115	BZX284-C11

ELECTRICAL PARTSLIST - TAPE PART

- MISCELLANEOUS -			- RESISTORS -		
1707	4822 277 11504	PUSH SWITCH	3734	4822 051 30103	10K 5%0,062W
- CAPACITORS -			3743	4822 051 30471	470R 5%0,062W
2706	4822 124 40248	10µF 20%63V	3744	4822 051 30471	470R 5%0,062W
2707	4822 124 40196	220µF 20%16V	3745	4822 051 30109	10R 5%0,062W
2708	4822 124 40433	47µF 20%25V	3747	4822 051 30151	150R 5%0,062W
2709	4822 124 40433	47µF 20%25V	3748	4822 051 30471	470R 5%0,062W
2710	4822 124 41584	100 F 20%10V	3749	4822 051 30471	470R 5%0,062W
2711	4822 124 81151	22µF 20%50V	3757	4822 051 20223	22K 5%0,1W
2712	4822 126 14247	1,5nF X7R 50V	3761	4822 051 30562	5,6K 5%0,063W
2714	4822 126 14247	1,5nF X7R 50V	3762	4822 051 30562	5,6K 5%0,063W
2715	5322 126 11583	10nF 10%X7R 50V	3770	4822 051 30151	150R 5%0,062W
2716	4822 126 14305	100nF 10%X7R 16V	3771	4822 051 30334	330K 5%0,062W
2719	2238 586 15633	5,6nF 10%X7R 50V	3772	4822 051 30221	220R 5%0,062W
2721	4822 126 14247	1,5nF X7R 50V	3773	4822 051 30474	470K 5%0,062W
2722	5322 126 11583	10nF 10%X7R 50V	3774	4822 051 30101	100R 5%0,062W
2723	4822 126 14305	100nF 10%X7R 16V	3710	4822 051 30273	27K 5%0,062W
2726	2238 586 15633	5,6nF 10%X7R 50V	- COILS -		
2727	4822 126 14247	1,5nF X7R 50V	5701	4822 157 10371	COIL 100KHz
2728	4822 126 13193	4,7NF 10%X7R 63V	- DIODES -		
2729	4822 126 13193	4,7NF 10%X7R 63V	6704	4822 130 30621	1N4148
2730	2020 300 90561	1,2nF 10%50V	- IC & TRANSISTORS -		
2732	5322 126 11579	3,3nF 10%X7R 63V	7702	4822 130 40981	BC337-25
2733	5322 126 11583	10nF 10%X7R 50V	7705	4822 209 17498	AN7323
2738	5322 126 11583	10nF 10%X7R 50V	- RESISTORS -		
2739	5322 126 11583	10nF 10%X7R 50V	3712	4822 051 30123	12K 5%0,062W
2750	2238 586 15633	5,6nF 10%X7R 50V	3713	4822 051 30151	150R 5%0,062W
2751	2238 586 15633	5,6nF 10%X7R 50V	3714	4822 051 30221	220R 5%0,062W
2770	4822 124 81151	22µF 20%50V	3716	4822 051 30334	330K 5%0,062W
2771	4822 124 81151	22µF 20%50V	3719	4822 051 30273	27K 5%0,062W
3720	4822 051 30123	12K 5%0,062W	Note: Only these parts mentioned in the list are normal service parts.		
3722	4822 051 30223	22K 5%0,062W	3723	4822 051 30223	22K 5%0,062W
3723	4822 051 30223	22K 5%0,062W	3726	4822 051 30222	2,2K 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	3728	4822 051 20479	47R 5%0,1W
3730	4822 051 30151	150R 5%0,062W	3731	4822 051 30563	56K 5%0,062W
3731	4822 051 30563	56K 5%0,062W	3732	4822 117 12971	15R 5%0,62W
3732	4822 117 12971	15R 5%0,62W	3733	4822 051 30475	4,7M 5%0,062W

ELECTRICAL PARTSLIST - CD PART**- MISCELLANEOUS -****- 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
2808	5322 122 33538	150pF 2%NP0 63V
2809	4822 126 11669	27pF
2810	4822 126 13692	47pF 1%NP0 63V
2811	2222 867 15339	33pF 5%NP0 50V
2812	4822 122 33741	10pF10%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	4822 126 14305	100nF 10%X7R 16V
2822	4822 126 13344	1,5nF 5%63V
2823	4822 124 42383	220µF 20%4V
2824	4822 126 13751	47nF 10%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	4822 126 14305	100nF 10%X7R 16V
2840	4822 124 40433	47µF 20%25V
2841	4822 126 13751	47nF 10%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

- CAPACITORS -

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
2857	4822 124 12362	47 µF 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	3198 024 44730	47nF Y5V 50V
3788	4822 051 20472	4,7K 5%0,1W
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

- RESISTORS -

ELECTRICAL PARTSLIST - CD PART

- RESISTORS -			- RESISTORS -		
3824	4822 051 30102	1K 5%0,062W	3881	4822 051 30151	150R 5%0,062W
3825	4822 051 30223	22K 5%0,062W	3882	4822 117 11373	100R 1%RC12H
3826	4822 051 30273	27K 5%0,062W	3883	4822 051 30102	1K 5%0,062W
3827	4822 051 20339	33R 5%0,1W	3884	4822 051 30102	1K 5%0,062W
3828	4822 051 20479	47R 5%0,1W	3886	4822 117 10833	10K 1%0,1W
3829	4822 051 30101	100R 5%0,062W	3887	4822 117 10833	10K 1%0,1W
3830	4822 051 30472	4,7K 5%0,062W	3888	4822 051 20472	4,7K 5%0,1W
3835	4822 051 30223	22K 5%0,062W	3890	4822 117 10837	100K 1%0,1W
3836	4822 117 10833	10K 1%0,1W	3891	4822 117 10837	100K 1%0,1W
3837	4822 051 20471	470R 5%0,1W	3892	4822 117 13632	100K 1%0,62W
3838	4822 051 20471	470R 5%0,1W	3893	4822 117 13632	100K 1%0,62W
3839	4822 051 30471	470R 5%0,062W	3894	4822 117 10833	10K 1%0,1W
3840	4822 051 30471	470R 5%0,062W	3895	4822 117 10833	10K 1%0,1W
3841	4822 051 30472	4,7K 5%0,062W	3896	4822 117 10833	10K 1%0,1W
3842	4822 051 10102	1K 2%0,25W	3897	4822 117 10833	10K 1%0,1W
3843	4822 051 30102	1K 5%0,062W	3898	4822 117 10833	10K 1%0,1W
3844	4822 051 30101	100R 5%0,062W	3899	4822 117 10833	10K 1%0,1W
3845	4822 051 30109	10R 5%0,062W	3900	4822 051 30223	22K 5%0,062W
3846	4822 051 20223	22K 5%0,1W	4801	4822 051 30008	0R J UMPER (0603)
3847	4822 117 12864	82K 5%0,6W	4802	4822 051 20008	0R J UMPER (0805)
3848	4822 117 10834	47K 1%0,1W	4807	4822 051 20008	0R J UMPER (0805)
3849	4822 051 30563	56K 5%0,062W	4809	4822 051 20008	0R J UMPER (0805)
3850	4822 117 12902	8,2K 1%0,063W	4810	4822 051 20008	0R J UMPER (0805)
3851	4822 051 30563	56K 5%0,062W	4812	4822 051 20008	0R J UMPER (0805)
3852	4822 117 10834	47K 1%0,1W	4813	4822 051 20008	0R J UMPER (0805)
3853	4822 051 30153	15K 5%0,062W	4814	4822 051 20008	0R J UMPER (0805)
3854	4822 117 12902	8,2K 1%0,063W	4815	4822 051 20008	0R J UMPER (0805)
3855	4822 116 40227	4,6R 25%12V	4823	4822 051 20008	0R J UMPER (0805)
3856	4822 051 20683	68K 5%0,1W	4824	4822 051 20008	0R J UMPER (0805)
3857	4822 051 20154	150K 5%0,1W	4828	4822 051 20008	0R J UMPER (0805)
3858	4822 051 30392	3,9K 5%0,063W	4831	4822 051 20008	0R J UMPER (0805)
3859	4822 117 10834	47K 1%0,1W	4832	4822 051 20008	0R J UMPER (0805)
3860	4822 051 30102	1K 5%0,062W	4838	4822 051 20008	0R J UMPER (0805)
3861	4822 117 10834	47K 1%0,1W	4845	4822 051 20008	0R J UMPER (0805)
3862	4822 051 10102	1K 2%0,25W	4847	4822 051 20008	0R J UMPER (0805)
3863	4822 052 10338	3,3R 5%0,33W	4848	4822 051 20008	0R J UMPER (0805)
3864	4822 117 10833	10K 1%0,1W	4850	4822 051 20008	0R J UMPER (0805)
3865	4822 051 30102	1K 5%0,062W	4853	4822 051 20008	0R J UMPER (0805)
3867	4822 051 20223	22K 5%0,1W	4856	4822 051 30008	0R J UMPER (0603)
3868	4822 051 30103	10K 5%0,062W	4857	4822 051 20008	0R J UMPER (0805)
3869	4822 051 30103	10K 5%0,062W	4859	4822 051 20008	0R J UMPER (0805)
3871	4822 051 30471	470R 5%0,062W	4863	4822 051 20008	0R J UMPER (0805)
3872	4822 117 12925	47K 1%0,063W	4865	4822 051 20008	0R J UMPER (0805)
3873	4822 051 30223	22K 5%0,062W	4872	4822 051 20008	0R J UMPER (0805)
3874	4822 051 30223	22K 5%0,062W	4877	4822 051 30008	0R J UMPER (0603)
3875	4822 051 30103	10K 5%0,062W	4881	4822 051 20008	0R J UMPER (0805)
3876	4822 051 30103	10K 5%0,062W	4884	4822 051 20008	0R J UMPER (0805)
3878	4822 051 30471	470R 5%0,062W	4885	4822 051 30008	0R J UMPER (0603)
3879	4822 117 12925	47K 1%0,063W	4886	4822 051 20008	0R J UMPER (0805)
3880	4822 051 20339	33R 5%0,1W	4888	4822 051 20008	0R J UMPER (0805)

ELECTRICAL PARTSLIST - CD PART**- COILS & FILTERS**

1810	2422 540 98519	RES CER 8,467MHZ
5803	4822 157 11231	COIL 1 μ H LAN02
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 - AF / SUPPLY PART

- RESISTORS -			- COILS & FILTERS		
3512	4822 051 30471	470R 5%0,062W	5301	4822 157 11074	COIL 100UH
3513	4822 116 52283	4,7K 5%0,5W	5302	4822 157 62552	COIL 2,2UH
3514	4822 051 30472	4,7K 5%0,062W	5303	4822 157 11074	COIL 100UH
3515	4822 051 30684	680K 5%0,062W	5304	4822 157 11074	COIL 100UH
3516	4822 051 30684	680K 5%0,062W	5305	2422 549 44919	IND FXD 100MHZ 600R
3517	4822 051 30681	680R 5%0,062W	5306	2422 549 44919	IND FXD 100MHZ 600R
3518	4822 051 30681	680R 5%0,062W	5307	4822 157 11074	COIL 100UH
3519	4822 051 30392	3,9K 5%0,063W	5308	4822 157 11074	COIL 100UH
3520	4822 051 30392	3,9K 5%0,063W	5309	4822 157 11074	COIL 100UH
3521	4822 051 30471	470R 5%0,062W	5310	4822 157 11074	COIL 100UH
3522	4822 051 30471	470R 5%0,062W			
3523	4822 051 30221	220R 5%0,062W			
3524	4822 051 30102	1K 5%0,062W			
3525	4822 051 30471	470R 5%0,062W			
3526	4822 051 30222	2,2K 5%0,062W			
- DIODES -					
3527	4822 117 12925	47K 1%0,063W	6301	4822 130 31878	1N4003G
3528	4822 117 12925	47K 1%0,063W	6302	4822 130 31878	1N4003G
3529	4822 117 12971	15R 5%0,62W	6303	4822 130 31878	1N4003G
3530	4822 117 12971	15R 5%0,62W	6304	4822 130 31878	1N4003G
3531	4822 117 12925	47K 1%0,063W	6308	3198 010 53380	BZX79-B3V3
3532	4822 117 12925	47K 1%0,063W	6311	4822 130 30621	1N4148
3533	4822 051 30471	470R 5%0,062W	6316	4822 130 30621	1N4148
3535	4822 051 30471	470R 5%0,062W	6321	4822 130 30621	1N4148
3536	4822 051 30471	470R 5%0,062W	6322	4822 130 30621	1N4148
3542	4822 117 13632	100K 1%0,62W	6323	4822 130 30621	1N4148
3543	4822 051 30471	470R 5%0,062W	6324	4822 130 11397	BAS316
3544	4822 051 30471	470R 5%0,062W	6501	4822 130 30621	1N4148
3545	4822 051 30103	10K 5%0,062W			
3546	4822 051 30103	10K 5%0,062W			
3547	4822 051 30222	2,2K 5%0,062W			
- IC & TRANSISTORS -					
3551	4822 051 30392	3,9K 5%0,063W	7301	4822 209 31544	TA8227P
3553	4822 117 12903	1,8K 1%0,063W	7303	4822 130 41246	BC327-25
3554	4822 051 30392	3,9K 5%0,063W	7304	4822 130 41246	BC327-25
3561	4822 117 12864	82K 5%0,6W	7305	4822 130 60373	BC856B
3563	4822 051 30103	10K 5%0,062W	7306	4822 130 60511	BC847B
3564	4822 051 30103	10K 5%0,062W	7312	4822 130 60511	BC847B
3567	4822 117 13632	100K 1%0,62W	7313	4822 130 42804	BC817-25
3568	4822 116 52256	2,2K 5%0,5W	7314	4822 130 42804	BC817-25
3569	4822 051 30682	6,8K 5%0,062W	7315	4822 130 42804	BC817-25
3570	4822 117 12864	82K 5%0,6W	7316	4822 130 42804	BC817-25
			7501	4822 130 60511	BC847B
			7502	4822 130 60511	BC847B
			7503	4822 130 44568	BC557B
			7504	4822 130 44568	BC557B
			7505	4822 130 44568	BC557B
			7506	4822 130 44568	BC557B

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

ELECTRICAL PARTSLIST - AF / SUPPLY PART**- RESISTORS -**

3512	4822 051 30471	470R 5%0,062W
3513	4822 116 52283	4,7K 5%0,5W
3514	4822 051 30472	4,7K 5%0,062W
3515	4822 051 30684	680K 5%0,062W
3516	4822 051 30684	680K 5%0,062W
3517	4822 051 30681	680R 5%0,062W
3518	4822 051 30681	680R 5%0,062W
3519	4822 051 30392	3,9K 5%0,063W
3520	4822 051 30392	3,9K 5%0,063W
3521	4822 051 30471	470R 5%0,062W
3522	4822 051 30471	470R 5%0,062W
3523	4822 051 30221	220R 5%0,062W
3524	4822 051 30102	1K 5%0,062W
3525	4822 051 30471	470R 5%0,062W
3526	4822 051 30222	2,2K 5%0,062W

- COILS & FILTERS

5301	4822 157 11074	COIL 100UH
5302	4822 157 62552	COIL 2,2UH
5303	4822 157 11074	COIL 100UH
5304	4822 157 11074	COIL 100UH
5305	2422 549 44919	IND FXD 100MHZ 600R
5306	2422 549 44919	IND FXD 100MHZ 600R
5307	4822 157 11074	COIL 100UH
5308	4822 157 11074	COIL 100UH
5309	4822 157 11074	COIL 100UH
5310	4822 157 11074	COIL 100UH

- DIODES -

3527	4822 117 12925	47K 1%0,063W
3528	4822 117 12925	47K 1%0,063W
3529	4822 117 12971	15R 5%0,62W
3530	4822 117 12971	15R 5%0,62W
3531	4822 117 12925	47K 1%0,063W
3532	4822 117 12925	47K 1%0,063W
3533	4822 051 30471	470R 5%0,062W
3535	4822 051 30471	470R 5%0,062W
3536	4822 051 30471	470R 5%0,062W
3542	4822 117 13632	100K 1%0,62W
3543	4822 051 30471	470R 5%0,062W
3544	4822 051 30471	470R 5%0,062W
3545	4822 051 30103	10K 5%0,062W
3546	4822 051 30103	10K 5%0,062W
3547	4822 051 30222	2,2K 5%0,062W

6301	4822 130 31878	1N4003G
6302	4822 130 31878	1N4003G
6303	4822 130 31878	1N4003G
6304	4822 130 31878	1N4003G
6308	3198 010 53380	BZX79-B3V3
6311	4822 130 30621	1N4148
6316	4822 130 30621	1N4148
6321	4822 130 30621	1N4148
6322	4822 130 30621	1N4148
6323	4822 130 30621	1N4148
6324	4822 130 11397	BAS316
6501	4822 130 30621	1N4148

- IC & TRANSISTORS -

3551	4822 051 30392	3,9K 5%0,063W
3553	4822 117 12903	1,8K 1%0,063W
3554	4822 051 30392	3,9K 5%0,063W
3561	4822 117 12864	82K 5%0,6W
3563	4822 051 30103	10K 5%0,062W
3564	4822 051 30103	10K 5%0,062W
3567	4822 117 13632	100K 1%0,62W
3568	4822 116 52256	2,2K 5%0,5W
3569	4822 051 30682	6,8K 5%0,062W
3570	4822 117 12864	82K 5%0,6W

7301	4822 209 31544	TA8227P
7303	4822 130 41246	BC327-25
7304	4822 130 41246	BC327-25
7305	4822 130 60373	BC856B
7306	4822 130 60511	BC847B
7312	4822 130 60511	BC847B
7313	4822 130 42804	BC817-25
7314	4822 130 42804	BC817-25
7315	4822 130 42804	BC817-25
7316	4822 130 42804	BC817-25
7501	4822 130 60511	BC847B
7502	4822 130 60511	BC847B
7503	4822 130 44568	BC557B
7504	4822 130 44568	BC557B
7505	4822 130 44568	BC557B
7506	4822 130 44568	BC557B

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

ELECTRICAL PARTSLIST - MISCELLANEOUS

- MISCELLANEOUS -

213	⚠ 2422 070 98151	MAINS CORD SET
213	⚠ 2422 070 98148	MAINS CORD SET (/10 only)
213	⚠ 2422 070 98152	MAINS CORD SET (/17 only)
1200	⚠ 2422 030 00333	AC SOCKET
1200	⚠ 2422 030 00374	AC SOCKET (/17 ONLY)
1202	⚠ 2422 127 00453	VOLTAGE SELECTOR (/01 only)
1300	2422 264 00454	LOUDSPEAKER 8 OHM
1301	2422 264 00454	LOUDSPEAKER 8 OHM
5201	⚠ 3140 118 33280	MAINS TRANSF. 220 - 240V
5201	⚠ 3140 118 33290	MAINS TRANSF. 120/220V
5201	⚠ 3140 118 33300	MAINS TRANSF. 120V
8800	4822 320 12637	FFC CABLE 15P 70MM

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

