

Service
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Service Manual



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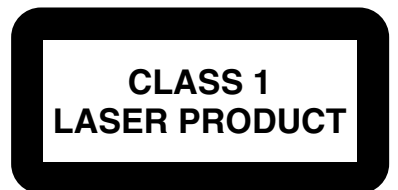
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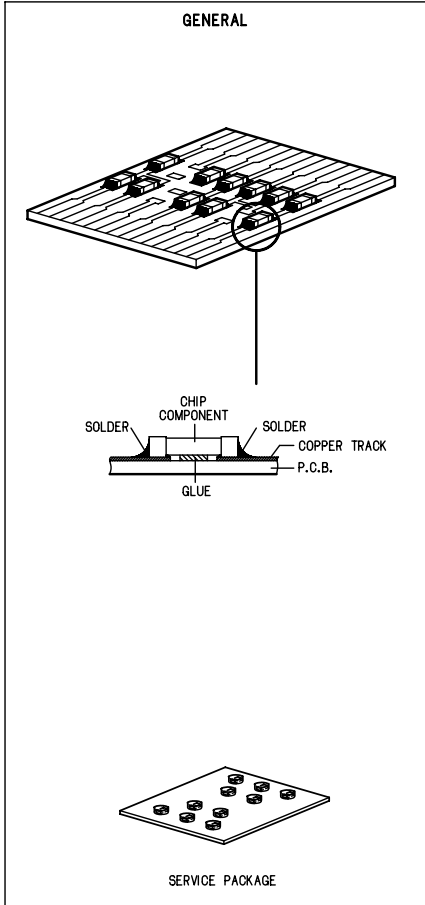
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HANDLING CHIP COMPONENTS



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 ditzelfde potentiaal.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le bracelet sert d'une résistance de sécurité. Veillez 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

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.

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

GB

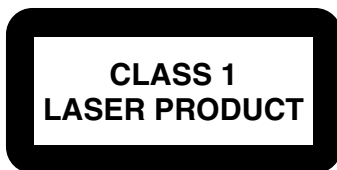
DANGER: Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

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 suojauslaituksen 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	-/00C/05/14	: 230 V
	-/01/11	: 120 / 230 V
	/10	: 240V
Mains frequency	-/17	: 120 V
	-/00C/05/14	: 50 Hz
	-/01/11	: 50 / 60 Hz
Battery	-/17	: 60 Hz
	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 (± 3 dB)

TUNER - FM SECTION

Tuning range	: 87.5 - 108 MHz
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

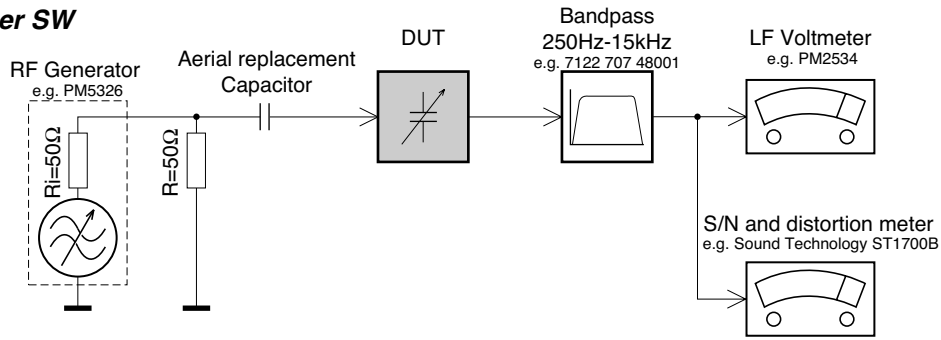
Number of tracks	: 1 stereo
Tape speed	: 4.76 cm/sec \pm 3%
Wow & flutter	: < 0.48 JIS UWTD
Fast wind/rewind C60	: < 110 sec.
Frequency response	P/B : 125 - 8000 Hz
S/N ratio	: > 36 dB (R/P)
Erasing ratio	: > 50 dB
Bias frequency	: 73 \pm 1.5 kHz

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

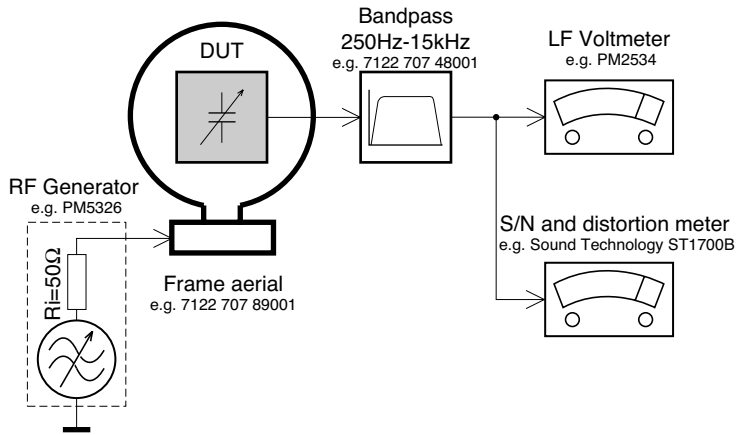
SERVICE MEASUREMENT

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).

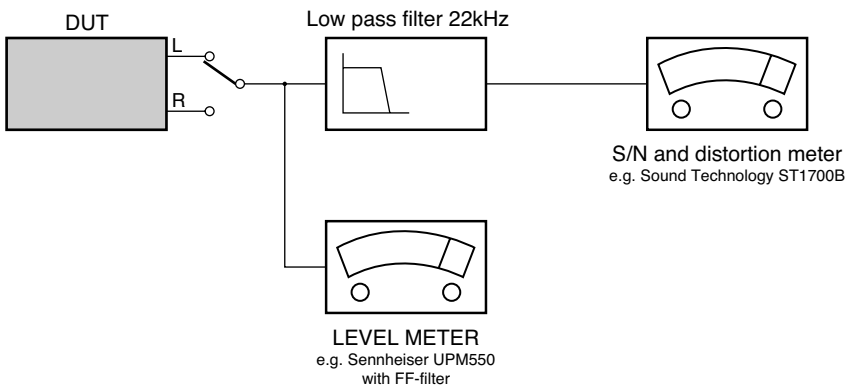
Tuner AM (MW,LW)



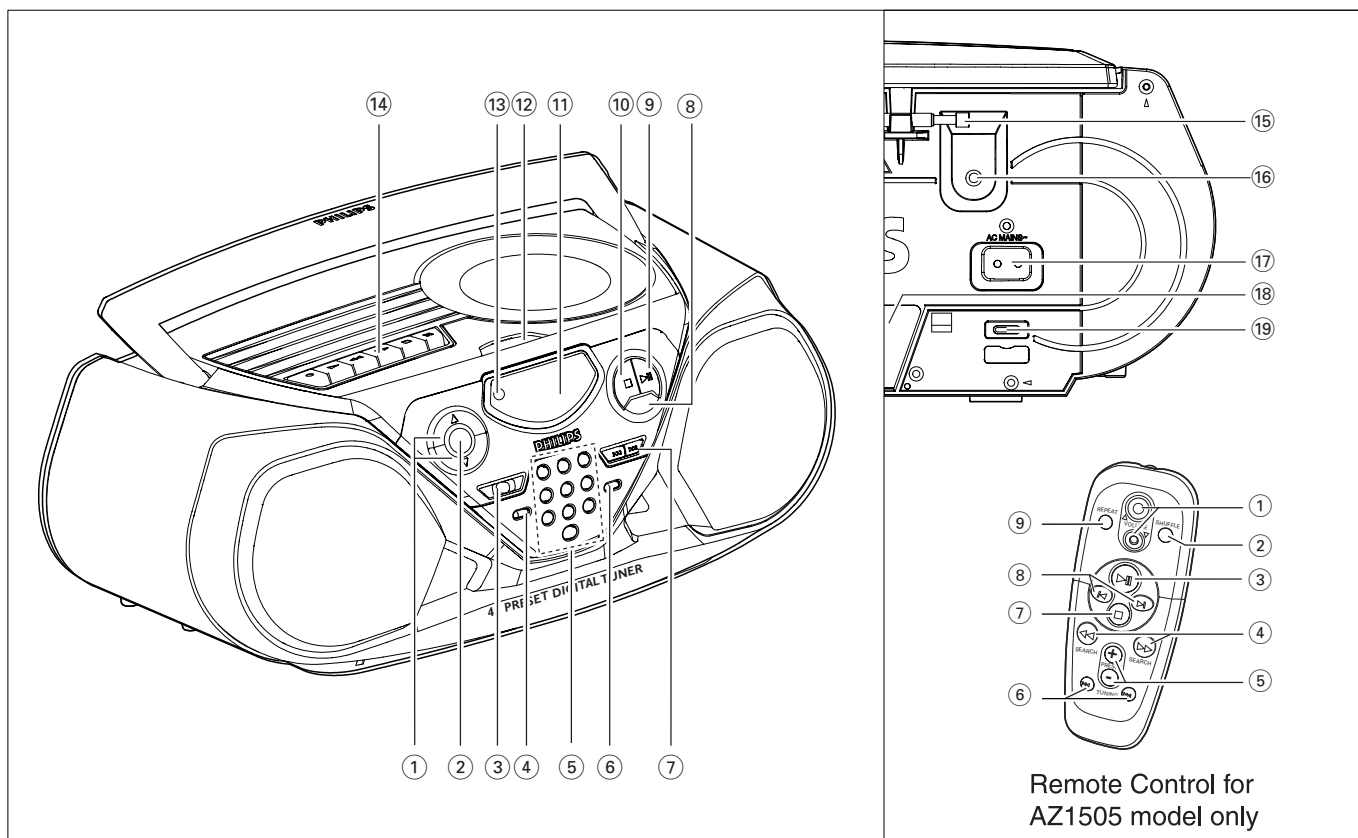
To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage.

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 **▶||** - 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 || - pauses playback or recording.

BACK PANEL

- 15 **Telescopic aerial** - improves FM reception.
- 16 **🎧** - 3.5 mm stereo headphone socket.
Note: The speakers will be muted when headphones are connected to the set.
- 17 **AC MAINS** - inlet for mains lead.
- 18 **Battery compartment** - for 6 batteries, type **R-14**, **UM2** or **C-cells**.
- 19 **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 **▶||** - 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).

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

SERVICE TOOLS

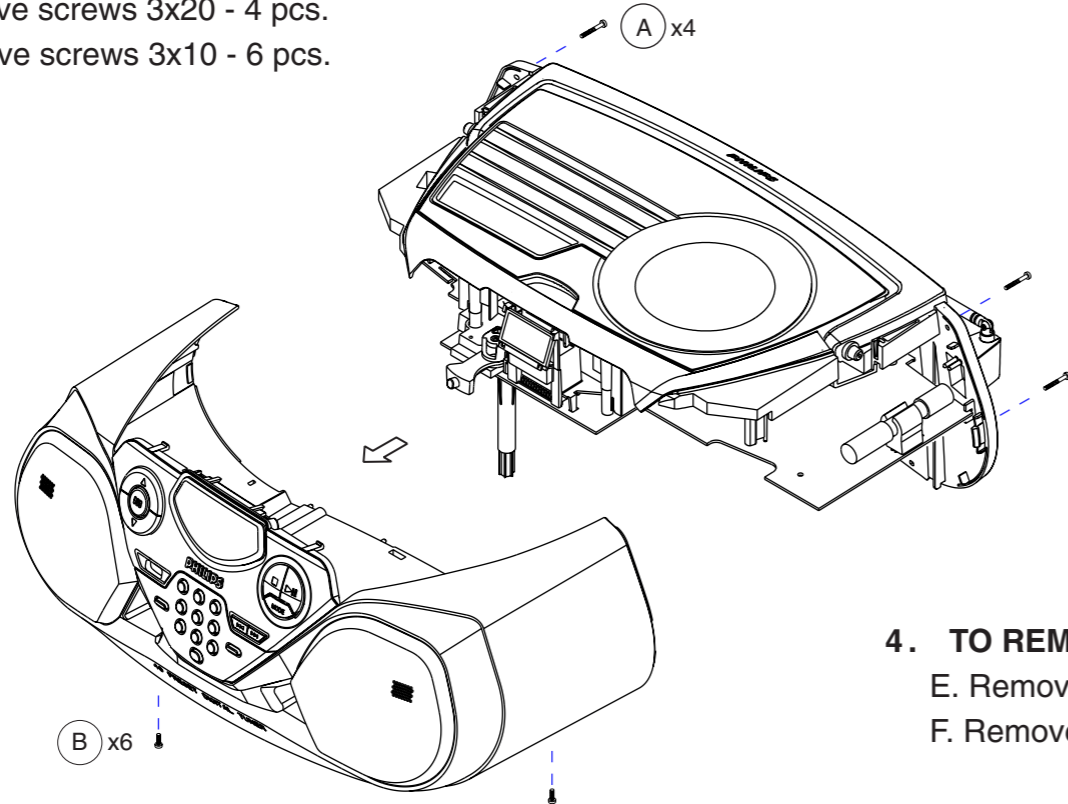
Audio signal disc SBC 429.....	4822 397 30184
Playability test disc SBC 444.....	4822 397 30245
Test disc 5 (disc without errors) +	
Test disc 5A (disc with dropout errors, black spots and fingerprints)	
SBC 426/426A.....	4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause").....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

AVAILABLE ESD PROTECTION EQUIPMENT

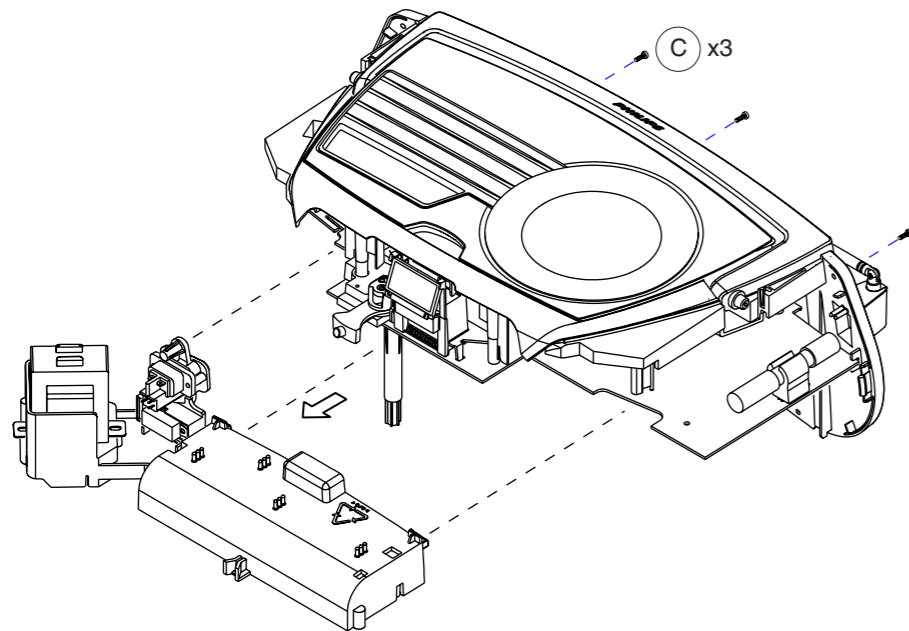
anti-static table mat large 1200x650x1.25mm	4822 466 10953
small 600x650x1.25m	4822 466 10958
anti-static wristband	4822 395 10223
connection box (3 press stud connections, 1M Ω)	4822 320 11307
extendible cable (2m, 2M Ω , to connect wristband to connection box)	4822 320 11305
connecting cable (3m, 2M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

DISASSEMBLY DIAGRAM**1. TO REMOVE BOTTOM CABINET ASEMBLY**

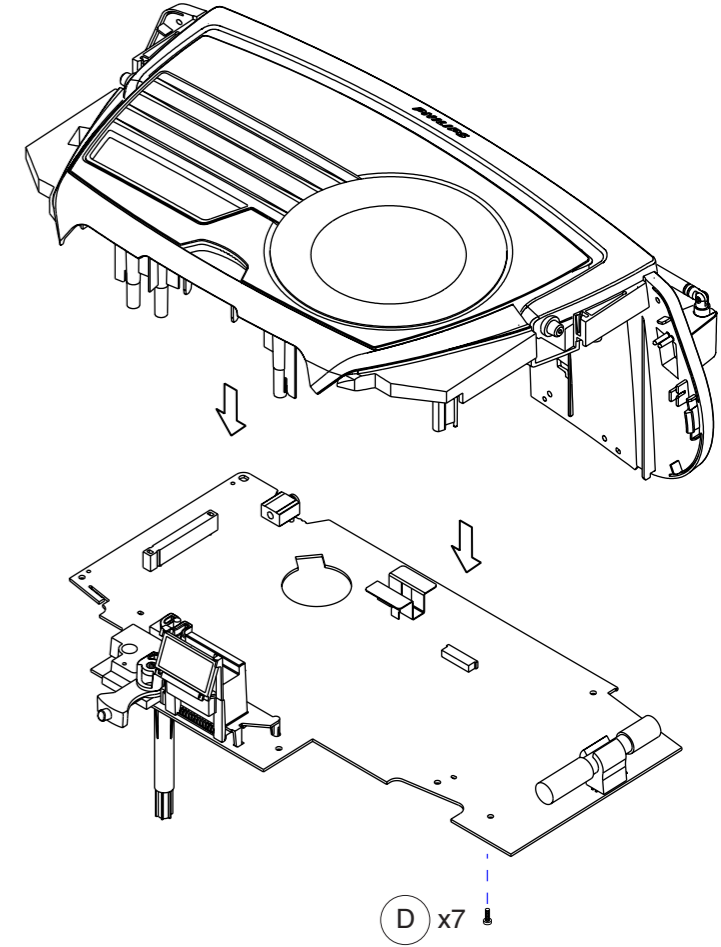
- A. Remove screws 3x20 - 4 pcs.
 B. Remove screws 3x10 - 6 pcs.

**2. TO REMOVE BATTERY COMPARTMENT ASEMBLY**

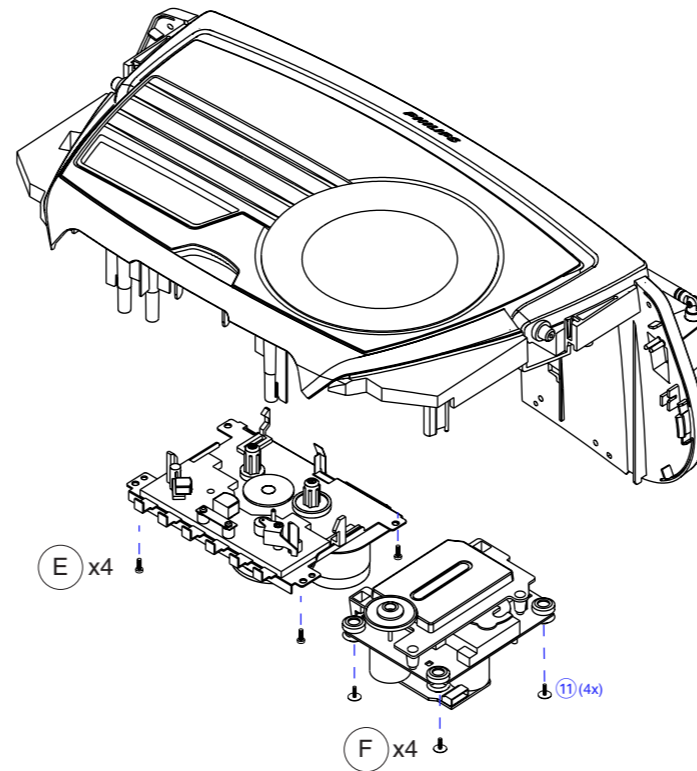
- C. Remove screws 3x10 - 3 pcs.

**3. TO REMOVE COMBI BOARD ASEMBLY**

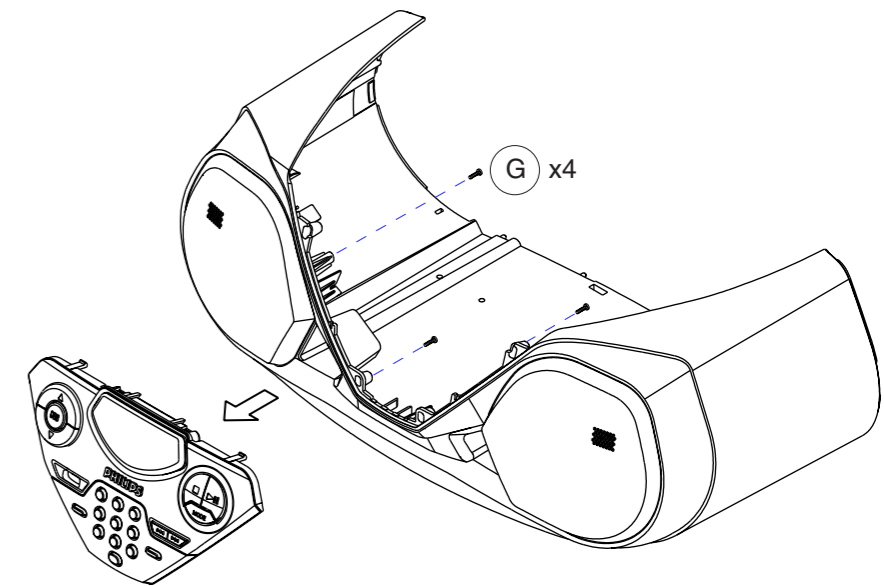
- D. Remove screws 3x10 - 7 pcs.

**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.

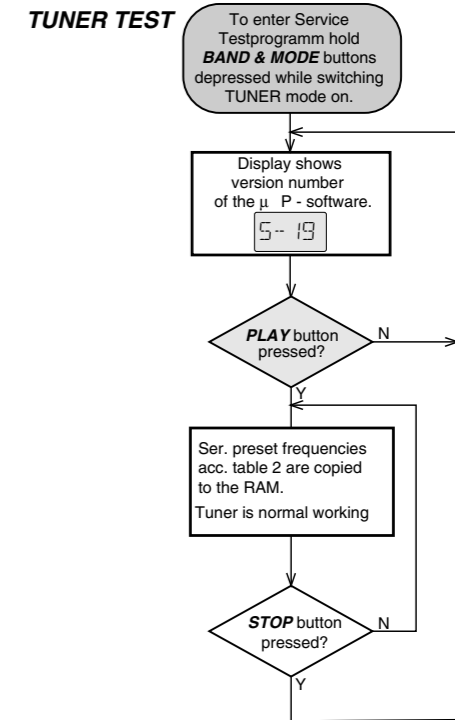
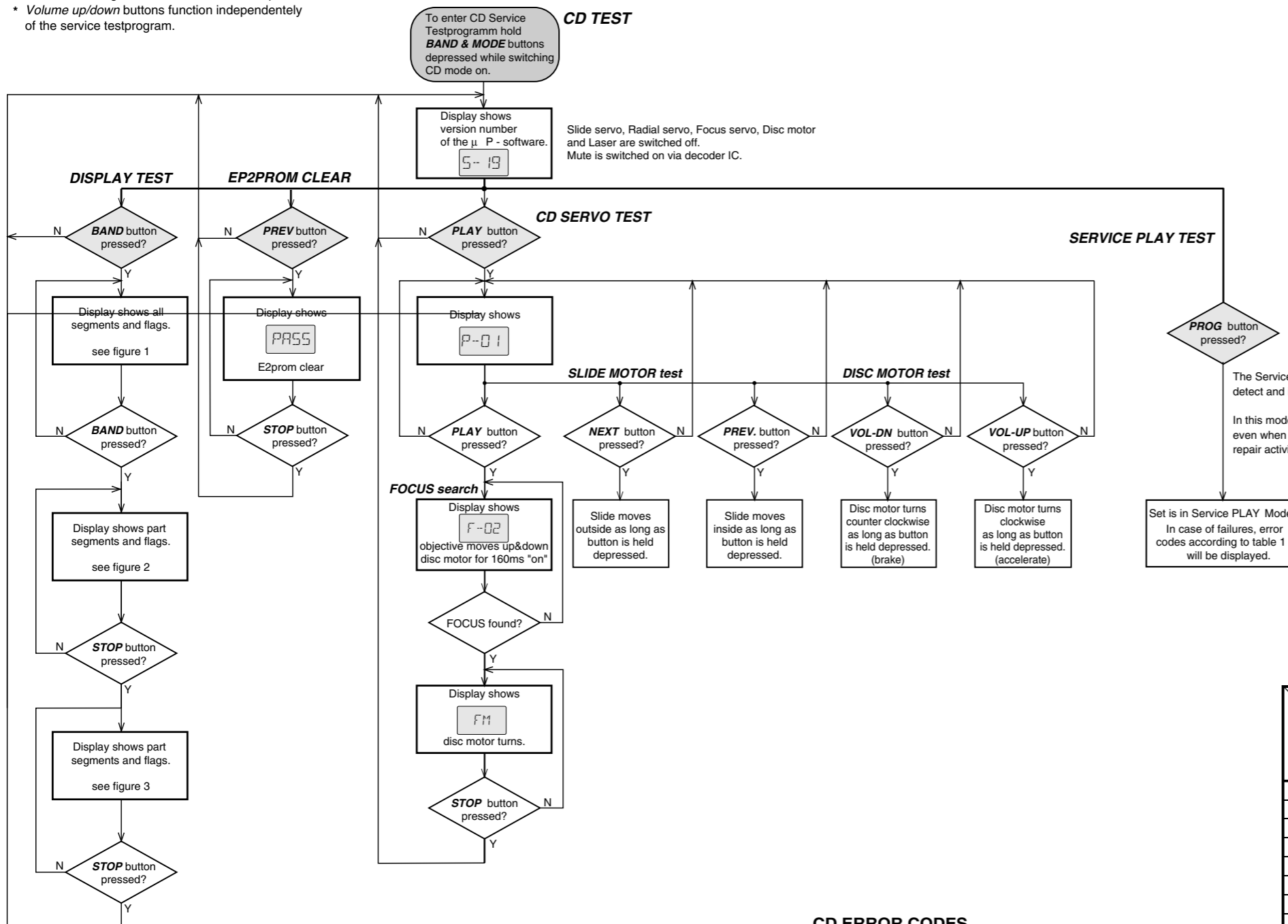


FIGURE 1

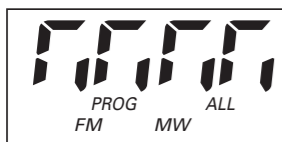


FIGURE 2

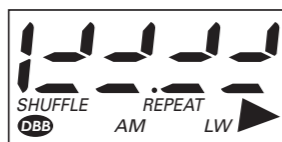


FIGURE 3

CD ERROR CODES

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

table 1

SERVICE PRESET FREQUENCIES

REGION	EUROPE FM/MW/LW	EUROPE2 B FM/MW	OVERSEAS FM/MW <small>¹⁾ Grid switchable 10-100kHz/9-50kHz</small>	EAST-EUROPE FM/MW	USA FM/MW
PRESET	/00/05/20/25	/00	/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 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 SAA7 32 5H

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

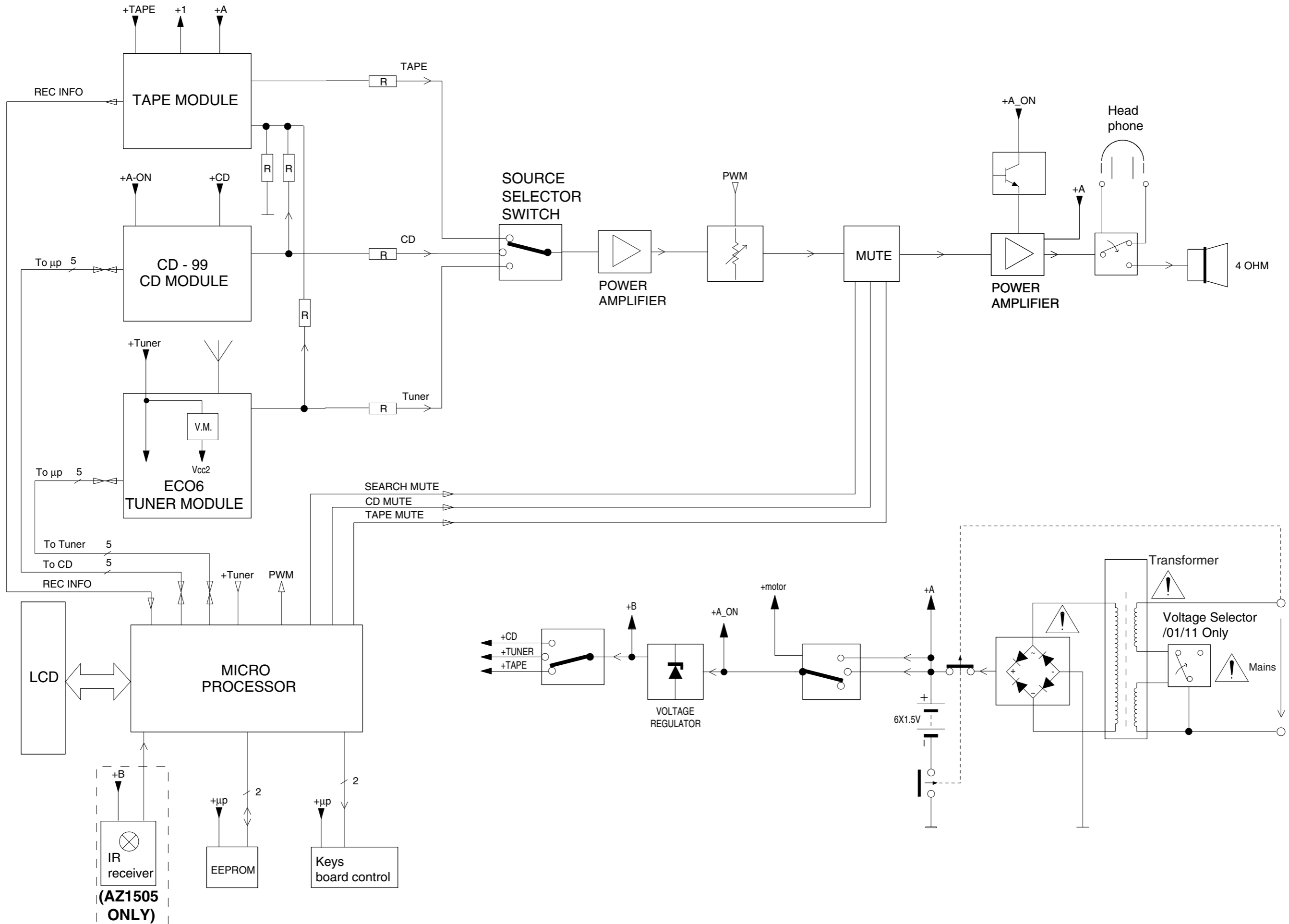
Abbreviations and Pin-description of CD ICs

SERVO PROCESSOR SAA7 32 5H

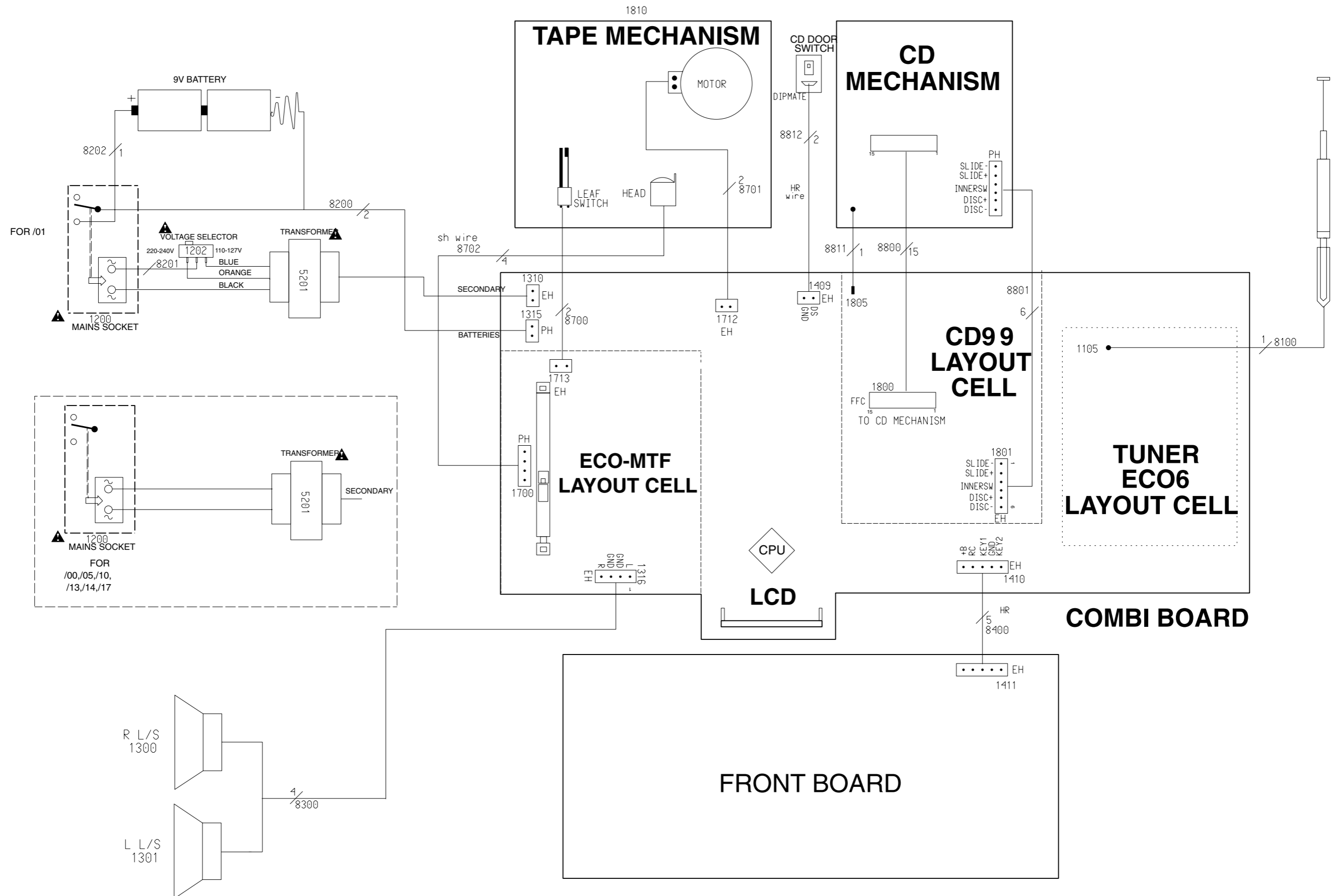
SYMBOL	PIN	DESCRIPTION
RAB	41	microcontroller interface R/W and load control line input (4-wire bus mode)
SILD	42	microcontroller interface R/W and load control line input (4-wire bus mode)
STATUS	43	servo interrupt request line/decoder status register output (open-drain)
TEST3	44	test control input 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
DOB M	51	bi-phase mark output (externally buffered; 3-state)
V _{DD1(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 _{DD2(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 input 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

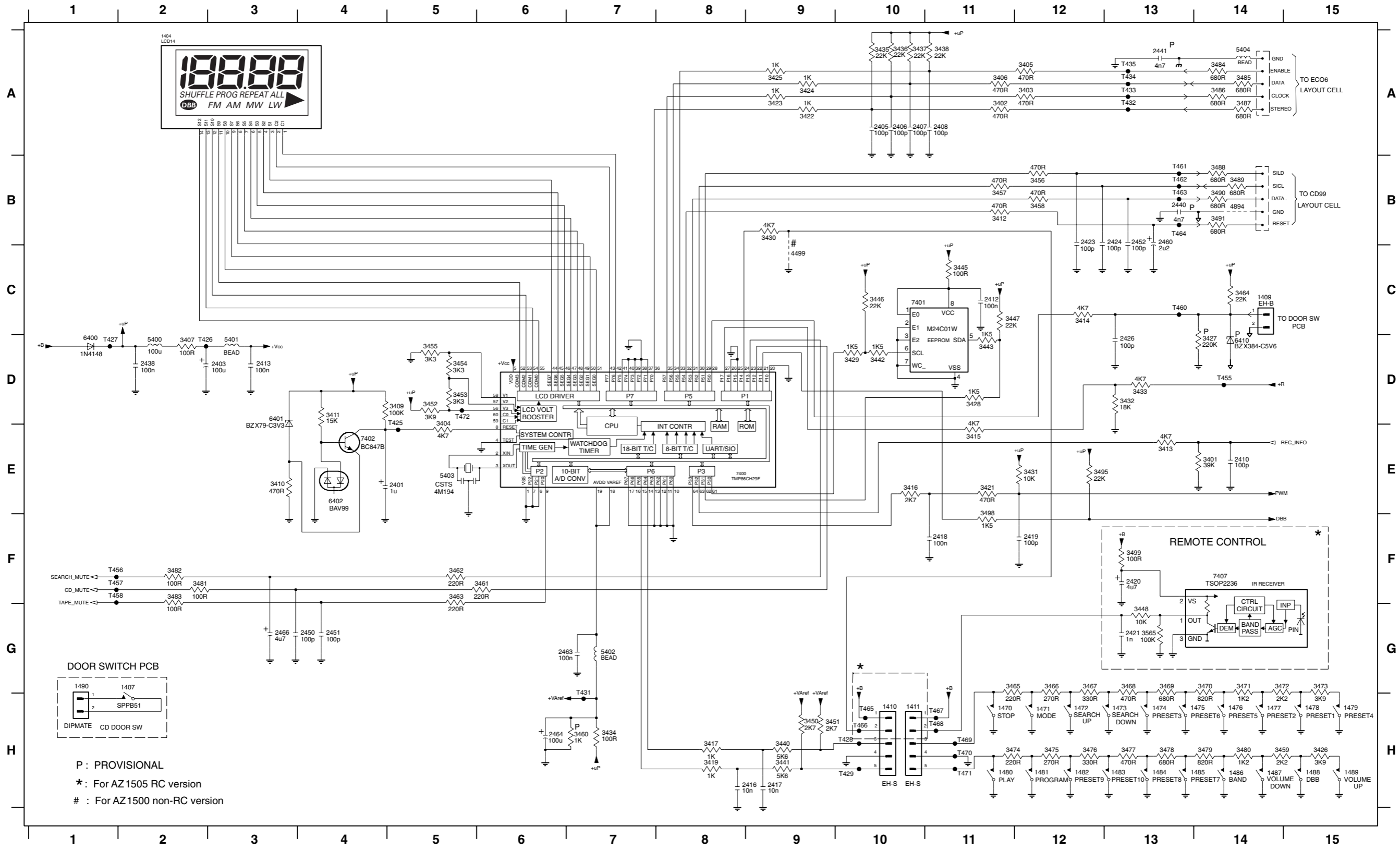


WIRING DIAGRAM



FRONT BOARD - CIRCUIT DIAGRAM

0000 C5	1470 H11	1476 H14	1482 H12	1488 H15	2406 A10	2416 H8	2423 B12	2450 G3	2466 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	T482 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	T425 E5	T432 A13	T457 F1	T464 B13	T470 H11
1410 H10	1474 H13	1480 H11	1486 H14	2403 D2	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 D14	T426 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 H15	3432 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	T427 D1	T434 A13	T460 C13	T466 H10	T472 D5

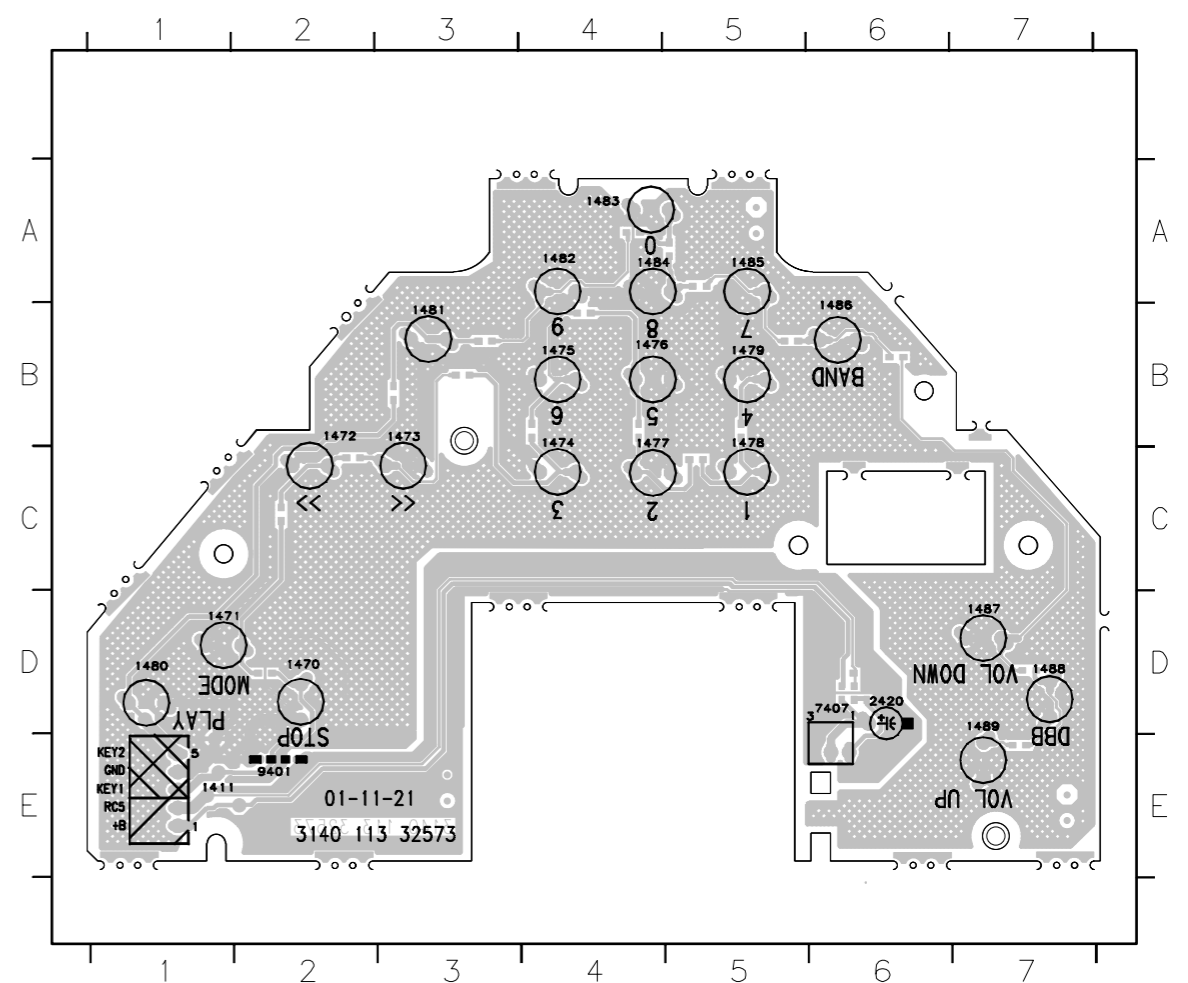
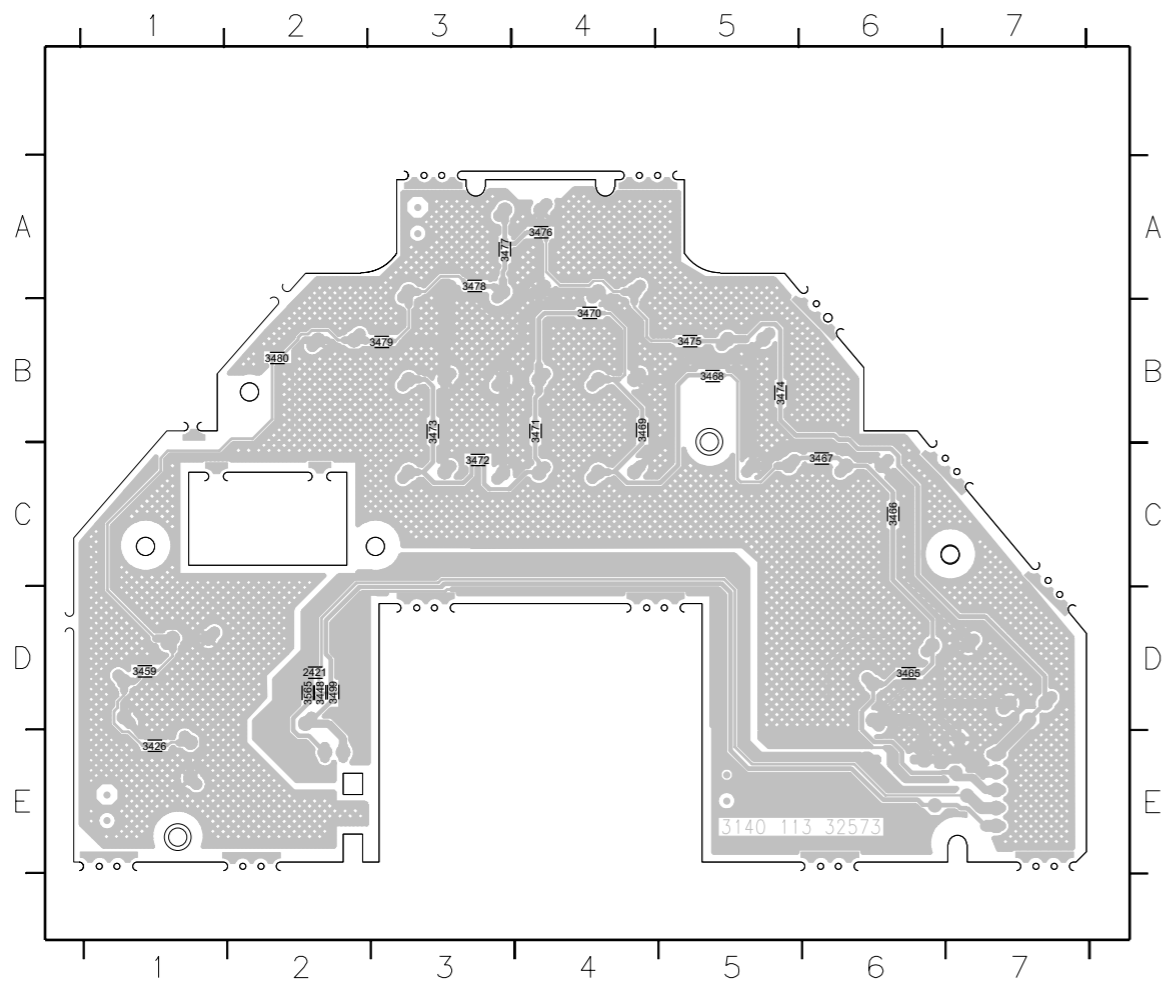


P : PROVISIONAL
 * : For AZ1505 RC version
 # : For AZ1500 non-RC version

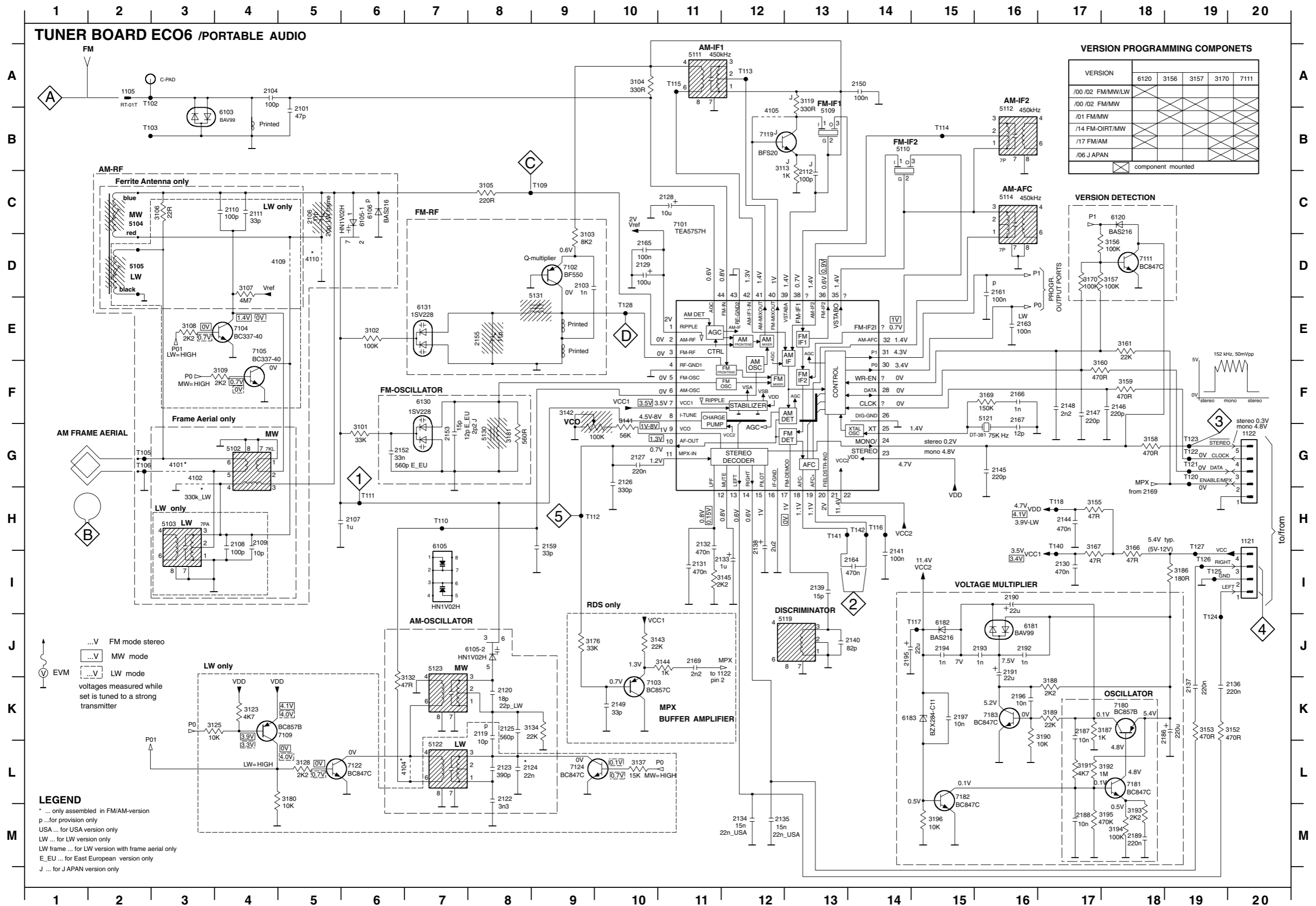
FRONT BOARD - LAYOUT DIAGRAM

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
- 112 2 G2 0
- 2101 B5
- 2103 D9
- 2104 A4
- 2106 C5
- 2107 H6
- 2108 H4
- 2109 H4
- 2110 C4
- 2111 C4
- 2112 C13
- 2119 K8
- 2120 K8
- 2122 L8
- 2123 L8
- 2124 L8
- 2125 K8
- 2126 G10
- 2127 G10
- 2128 C11
- 2129 D10
- 2130 I17
- 2131 I11
- 2132 H11
- 2133 I12
- 2134 M12
- 2135 M12
- 2136 K20
- 2137 K19
- 2138 H12
- 2139 I13
- 2140 J14
- 2141 I14
- 2144 H17
- 2145 G16
- 2146 F18
- 2147 F17
- 2148 F17
- 2149 K10
- 2150 A14
- 2152 G6
- 2153 G7
- 2155 E8
- 2159 H9
- 2161 D16
- 2163 E16
- 2164 I14
- 2165 D10
- 2166 F16
- 2167 F16
- 2169 J11
- 2186 K19
- 2187 K17
- 2188 M17
- 2189 M18
- 2190 I16
- 2191 J16
- 2192 J16
- 2193 J16
- 2194 J15
- 2195 J14
- 2196 K16
- 2197 K15
- 3101 G6
- 3102 E6
- 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
- 4104 L7
- 4105 B12
- 4109 D5
- 4110 D5
- 5102 G4
- 5103 H3
- 5109 B13
- 5110 B14
- 5111 A11
- 5112 B16
- 5114 C16
- 5119 J13
- 5121 F16
- 5122 L7
- 5123 J7
- 5130 G8
- 5131 E9
- 6103 B4
- 6105-1 C6
- 6105-2 J8
- 6106 C6
- 6120 C18
- 6130 F7
- 6131 E7
- 6181 J16
- 6182 J15
- 6183 K14
- 7101 C11
- 7102 A9
- 7102 D9
- 7103 K10
- 7104 E4
- 7105 E4
- 7109 K5
- 7111 D18
- 7119 B12
- 7122 L6
- 7124 L9
- 7180 K18
- 7181 L18
- 7182 L15
- 7183 K16
- T102 A2
- T102 B2
- T102 C2
- T102 D2
- T102 E2
- T102 F2
- T102 G2
- T102 H2
- T102 I2
- T102 J2
- T102 K2
- T102 L2
- T102 M2

LEGEND

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

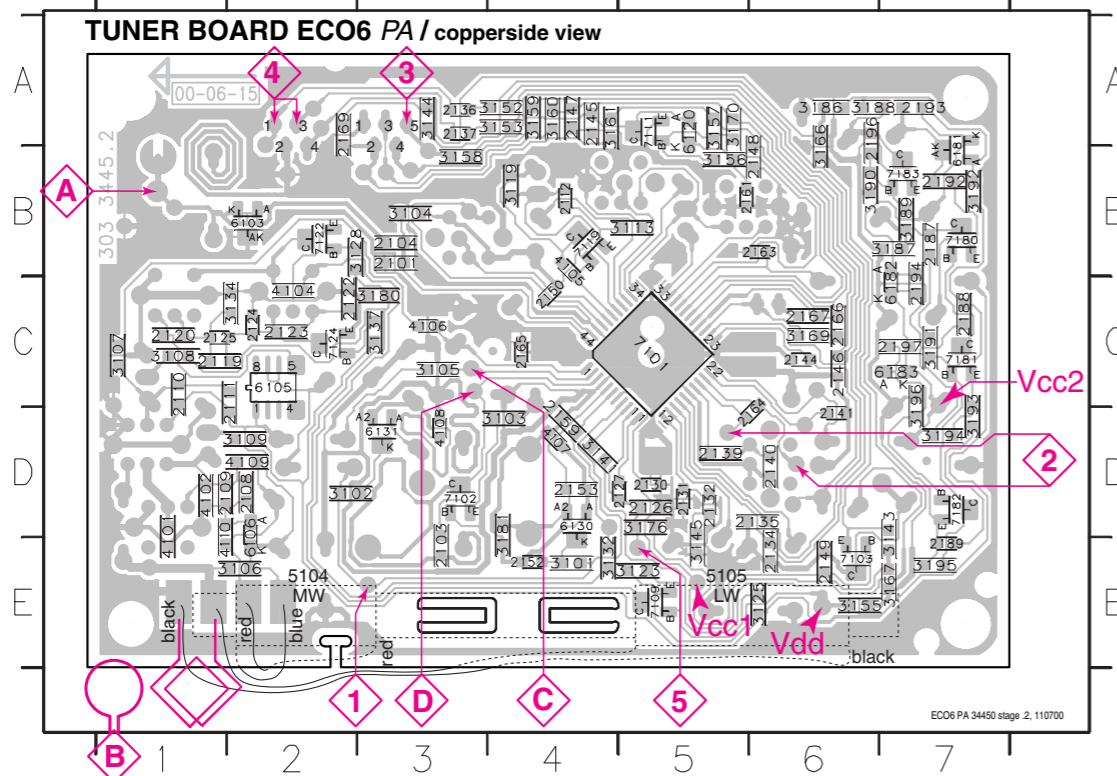
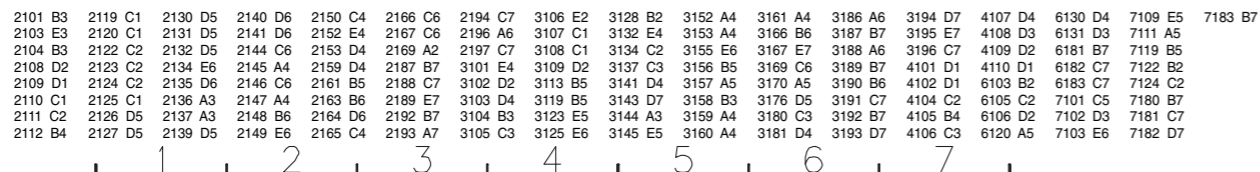
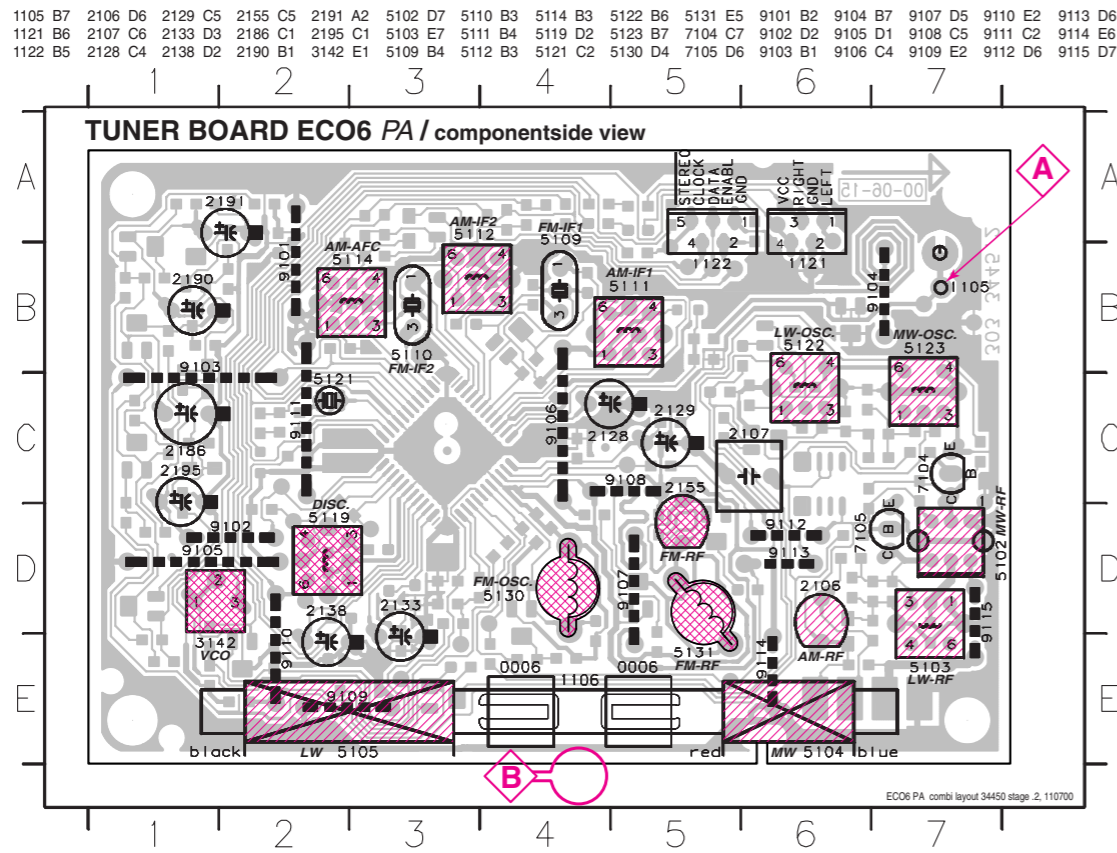
...V FM mode stereo

...V MW mode

...V LW mode

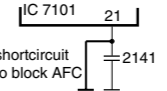
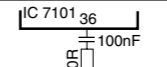
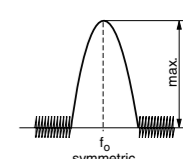
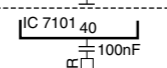
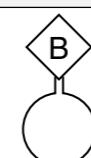
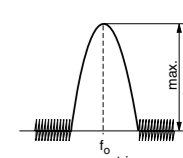
voltages measured while set is tuned to a strong transmitter

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 partlist.

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

Waverange	Input f requency	Input	Tuned to	Adj ust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)			108MHz	5130		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	1	6.9V ±0.2V
			531kHz	check		1.1V ±0.4V
LW 153 - 279kHz			279kHz	5122		8V ±0.2V
			153kHz	check		1.1V ±0.4V
MW FM/MW/LW- version, 9kHz grid 531 - 1602kHz			1602kHz	5123		8V ±0.2V
			531kHz	check		1.1V ±0.4V
FM IF						
FM	10.7MHz, 45mV continuous wave	D		5119	2	0 ± 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	A mod=1kHz Δf=±22.5kHz	108MHz	2155	4	MAX
	87.5MHz (65.81MHz)		87.5MHz (65.81MHz)	5131		
VCO						
FM	98MHz, 1mV continuous wave	A	98MHz	3142	3	152kHz ±1kHz ¹⁾
AM IF						
MW	450kHz connect pin 6 of IC 7101 (AM Osc.) with 2.2kΩ to Vcc	C Δf=±10kHz V _{RF} = 0.5mV (as low as possible) see remark 2)		5111	5	
				5112		
AM AFC MW		C continuous wave V _{RF} = 2mV		5114	2	0 ± 2 mV DC
AM RF³⁾						
LW	198kHz	B 	198kHz	5105 LW ferrite coil	5	
MW FM/MW/LW- and FM/MW-version (9kHz grid) 531 - 1602kHz	1494kHz		2106			
	558kHz		5104 MW ferrite coil			
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1500kHz	Δf = ±30kHz V _{RF} as low as possible	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.

↑ 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	MP803 H14	MP816 B5	MP825 B18	MP839 H15	MP848 G2	MP862 C19	MP893 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-A G8	7804-B C3	MP808 H18	MP817 B5	MP826 H16	MP840 H17	MP849 G2	MP870 H5	MP895 F19
2801 A2	2809 G8	2817 F12	2825 B16	2833 G6	2841 D1	2869 G3	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	MP809 E14	MP818 B5	MP827 A14	MP841 H17	MP850 G2	MP873 J6	MP896 B17
2802 B4	2810 G9	2818 F13	2826 A18	2834 I8	2842 H9	2870 B7	3728 A15	3803 B1	3811 F6	3819 G8	3827 F13	3839 E20	3847 G8	3855 H6	3863 J6	3895 B7	7802-C G6	7808 G5	MP810 B18	MP819 D1	MP828 B15	MP842 H17	MP851 G2	MP876 F20	MP897 H15
2803 F5	2811 G10	2819 B13	2827 D20	2835 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	MP812 E5	MP820 G12	MP829 D5	MP843 I19	MP852 I2	MP877 F3	
2804 F5	2812 G11	2820 B14	2828 D20	2836 H6	2861 C6	2872 C7	3750 I15	3805 A1	3813 F6	3821 G10	3829 A15	3841 F20	3849 G6	3857 J7	3865 H10	3897 D7	7802-E G9	8401 K3	MP813 D5	MP821 D20	MP831 I18	MP844 F12	MP854 I2	MP880 F8	
2805 F5	2813 G12	2821 B15	2829 I19	2837 J8	2862 C6	2873 D7	3751 I15	3806 B2	3814 G7	3822 G10	3830 B17	3842 I20	3850 G6	3858 J6	3890 C6	3898 D7	7802-F H11	MP800 A3	MP814 C5	MP822 H9	MP837 B3	MP846 H2	MP855 G2	MP881 G7	
2806 F5	2814 F13	2822 B15	2830 I18	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	MP802 B2	MP815 F2	MP823 I9	MP838 H16	MP847 H2	MP860 D2	MP882 H7	

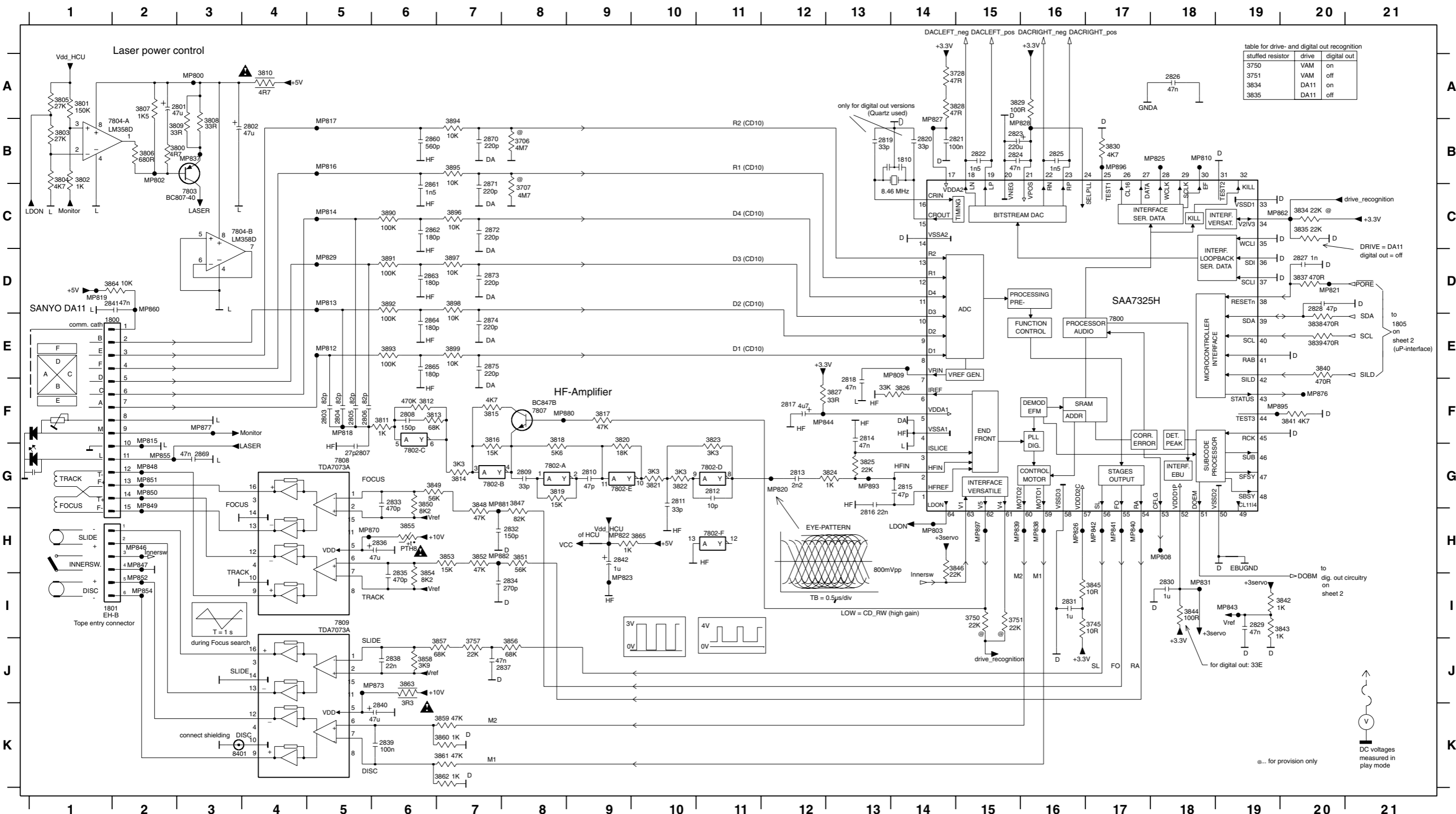
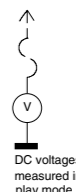


table for drive- and digital out recognition

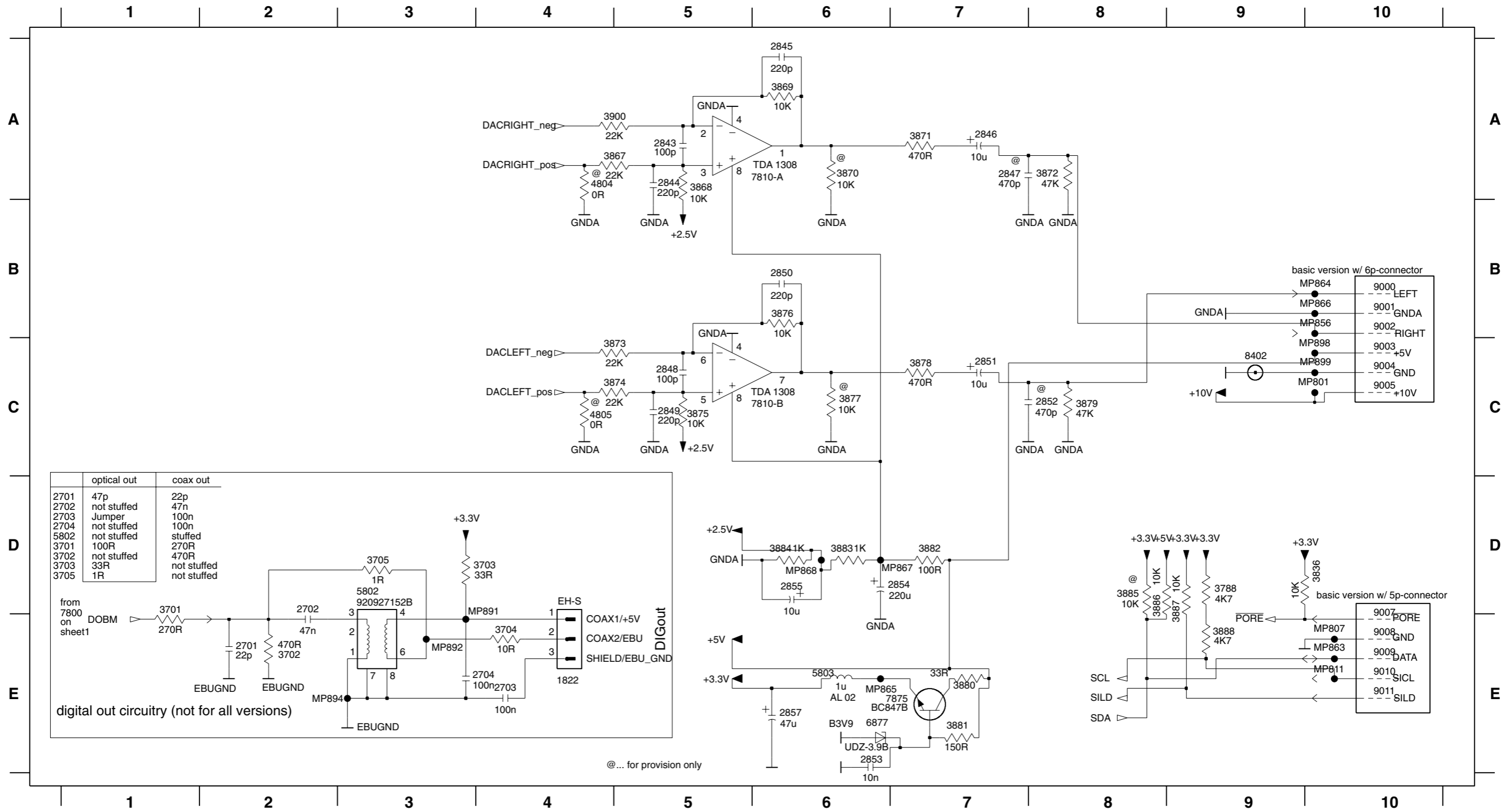
stuffed resistor	drive	digital out
3750	VAM	on
3751	VAM	off
3834	DA11	on
3835	DA11	off



... for provision only

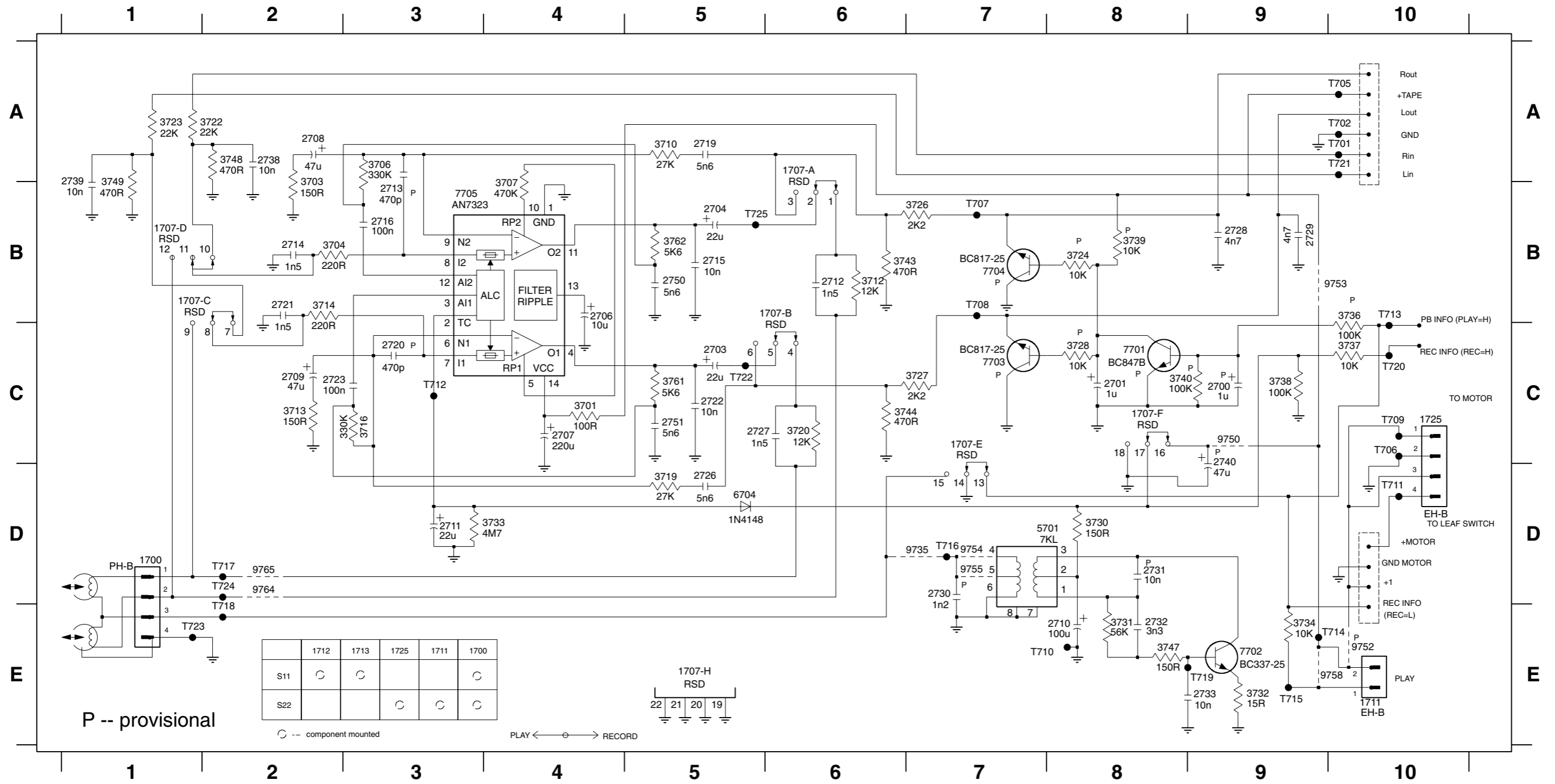
**COMBI BOARD - CIRCUIT DIAGRAM
(CD PART 2)**

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	



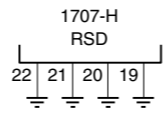
**COMBI BOARD - CIRCUIT DIAGRAM
(TAPE PART)**

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	



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

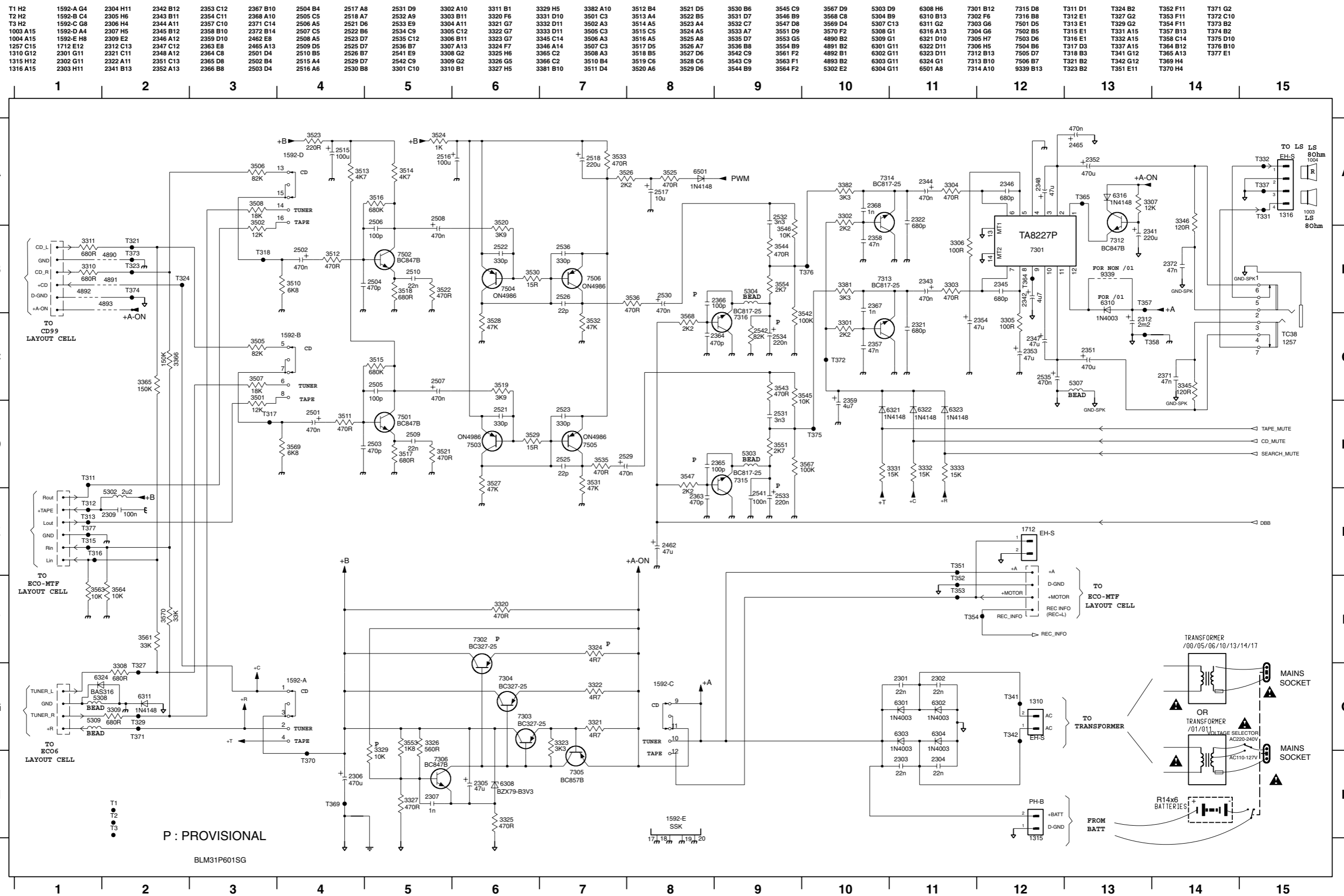
○ -- component mounted



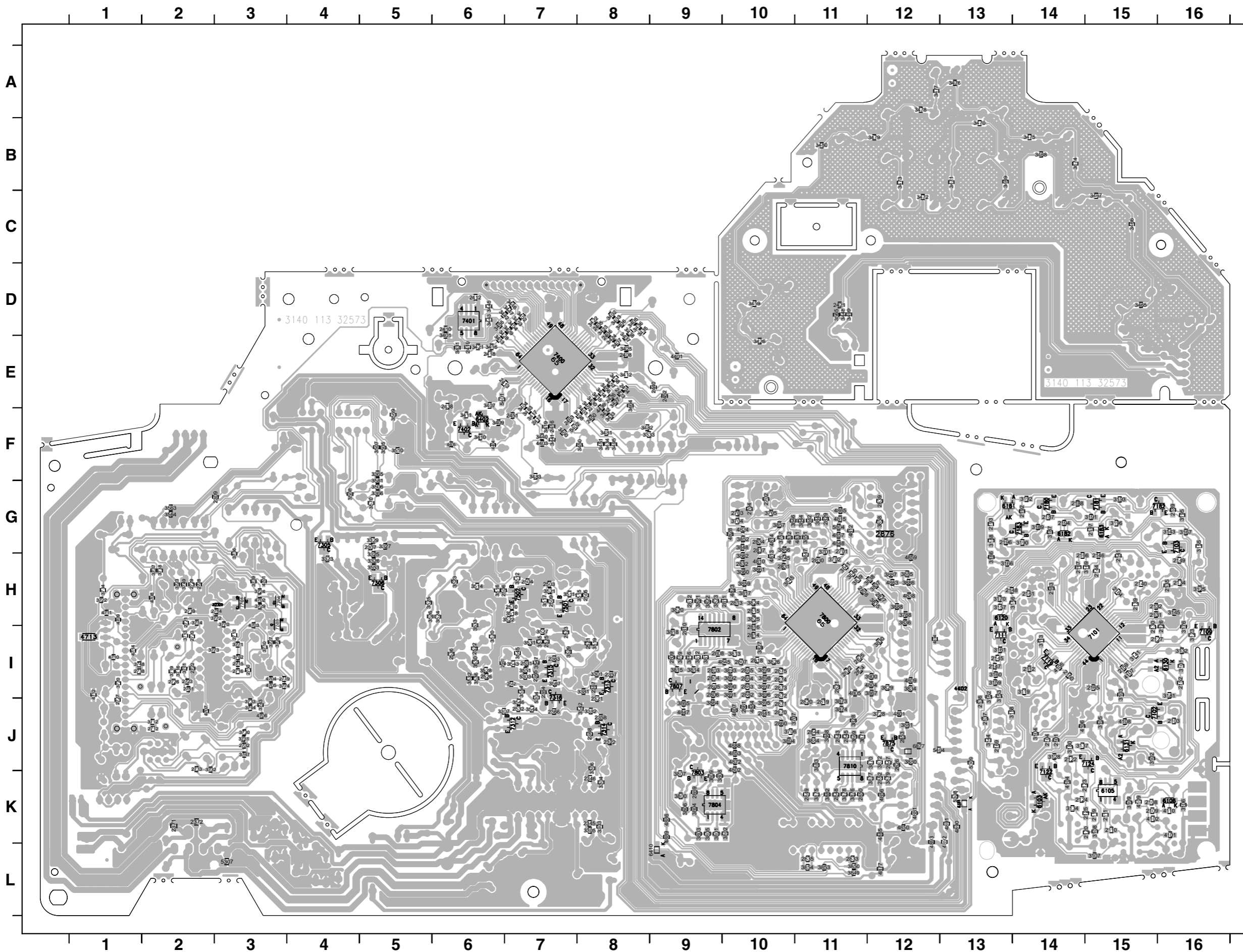
PLAY ← ○ → RECORD

P -- provisional

COMBI BOARD - CIRCUIT DIAGRAM (AUDIO/SUPPLY PART)

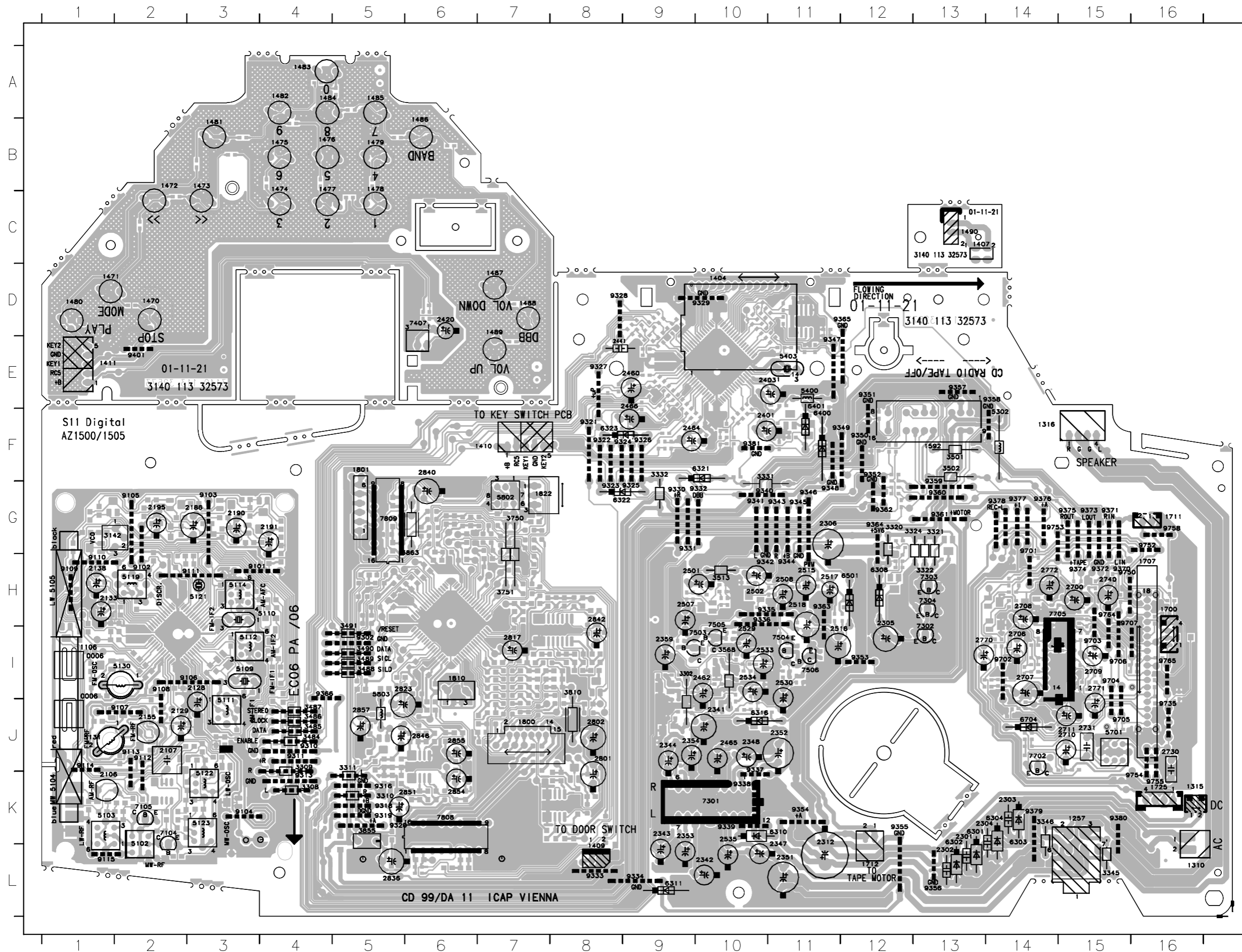


COMBI BOARD - LAYOUT DIAGRAM (COPPER SIDE)



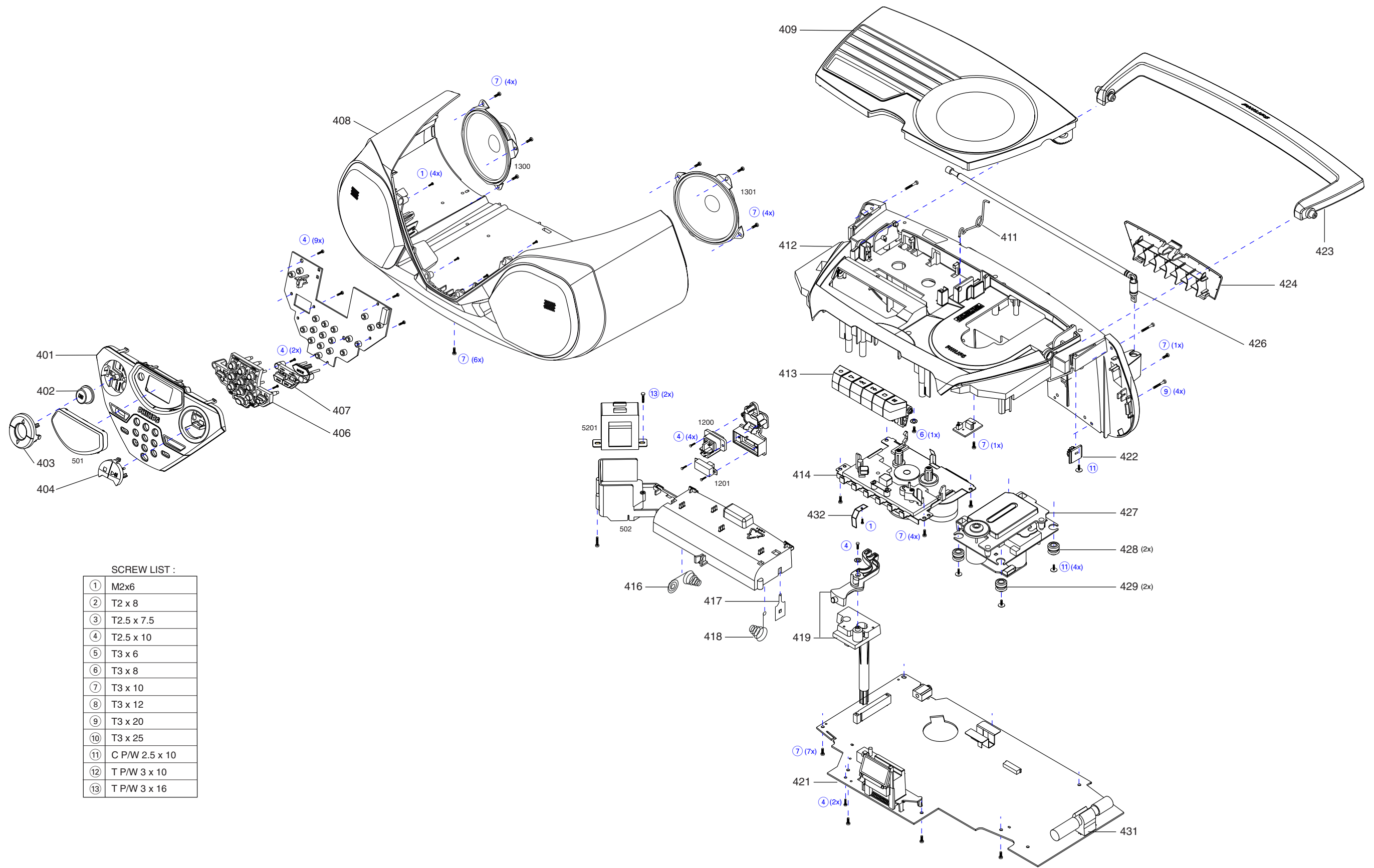
- 2101 J14 2803 I9 3407 E6 3714 H2 3900 I12
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- 2104 J14 2805 I9 3410 F6 3719 I2 4102 K14
- 2108 K15 2806 I9 3411 F6 3720 I1 4104 K14
- 2109 K15 2807 I10 3412 E8 3722 H1 4105 I14
- 2110 K15 2808 I9 3413 E8 3723 H2 4106 J14
- 2111 K15 2809 I9 3414 E8 3724 H3 4107 I15
- 2112 I14 2810 I9 3415 E8 3726 I3 4108 J15
- 2119 K15 2811 H10 3416 E6 3727 I3 4109 K15
- 2120 K15 2812 H9 3417 F7 3728 J12 4110 K16
- 2122 J14 2813 H10 3419 F7 3729 H3 4401 E9
- 2123 K14 2814 I10 3421 E6 3730 J3 4402 I13
- 2124 K14 2815 H10 3422 D8 3731 J3 4403 F7
- 2125 K15 2816 I10 3423 D8 3732 J2 4404 F6
- 2126 I16 2818 I10 3424 E8 3733 J3 4405 F6
- 2127 I15 2819 J11 3425 E8 3734 H1 4499 E8
- 2130 I15 2820 J11 3426 E10 3736 H3 4701 H3
- 2131 H15 2821 I11 3427 E8 3737 H2 4702 H3
- 2132 H15 2822 I11 3428 D6 3738 H2 4703 H3
- 2134 H16 2824 I11 3429 D7 3739 H3 4704 I3
- 2135 H16 2825 I11 3430 E8 3740 H3 4705 I3
- 2136 J13 2826 J12 3431 E6 3743 J3 4706 J3
- 2137 J13 2827 H12 3432 F8 3744 J3 4707 J2
- 2139 H15 2828 H11 3433 F8 3745 H10 4708 H2
- 2140 H15 2829 G11 3434 F8 3747 J3 4709 H1
- 2141 H15 2830 H11 3435 D8 3748 I1 4710 I1
- 2144 H15 2831 H10 3436 D8 3749 H2 4711 H1
- 2145 I13 2832 H10 3437 E8 3757 G10 4712 I1
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- 2147 I13 2834 G10 3440 F7 3762 I3 4714 I1
- 2148 H13 2835 L11 3441 F7 3770 H3 4801 J12
- 2149 H16 2837 G10 3442 D6 3771 I3 4802 J10
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- 2163 H14 2845 J11 3450 F8 3801 K9 4812 G11
- 2164 H15 2847 J12 3451 F8 3802 K10 4813 H10
- 2165 I15 2848 K11 3452 D7 3803 K9 4814 G10
- 2166 H14 2849 K11 3453 D7 3804 K9 4815 G11
- 2167 H14 2850 K11 3454 D7 3805 K9 4823 H10
- 2169 J13 2852 K12 3455 D6 3806 K9 4824 G10
- 2187 G14 2853 J12 3456 E8 3807 K9 4828 G10
- 2188 G14 2860 J10 3457 E8 3808 K9 4831 G11
- 2189 G16 2861 J10 3458 E8 3809 K9 4832 G10
- 2192 G14 2862 I10 3459 D10 3811 I9 4838 H12
- 2193 G13 2863 I10 3460 F7 3812 I9 4845 I10
- 2194 G14 2864 I10 3461 F8 3813 I10 4847 J9
- 2196 G13 2865 I10 3462 E8 3814 I9 4848 G11
- 2197 G15 2869 K9 3463 H3 3815 I9 4850 K12
- 2307 G5 2870 J10 3464 E8 3816 I9 4853 J10
- 2309 G3 2871 J10 3465 D15 3817 H10 4856 K12
- 2321 J8 2872 I10 3466 C15 3818 I9 4857 G11
- 2322 J8 2873 I10 3467 C15 3819 I9 4859 H12
- 2345 K8 2874 I10 3468 B14 3820 H9 4863 H12
- 2346 K8 2875 I10 3469 B13 3821 H9 4865 G11
- 2357 I8 2876 G12 3470 B13 3822 H9 4872 J10
- 2358 J8 3101 I16 3471 B13 3823 H9 4877 L12
- 2363 I7 3102 I15 3472 C12 3824 H10 4881 K12
- 2364 I7 3103 I15 3473 B12 3825 H10 4884 J10
- 2365 I7 3104 J14 3474 B14 3826 I10 4885 K12
- 2366 J7 3105 J15 3475 B14 3827 I10 4886 K9
- 2367 I8 3106 K16 3476 A13 3828 J11 4888 J10
- 2368 J8 3107 L15 3477 A12 3829 I12 4889 K9
- 2371 K2 3108 K15 3478 A12 3830 I12 4890 K13
- 2372 K2 3109 K15 3479 B12 3831 I12 4891 K13
- 2405 D8 3113 I14 3480 B11 3835 H12 4892 K13
- 2406 D8 3119 I14 3481 F8 3836 H12 4893 K12
- 2407 E8 3123 I16 3482 F8 3837 H12 4894 I12
- 2408 E8 3125 H16 3483 F7 3838 H12 5303 I7
- 2410 D6 3128 J14 3495 F8 3839 H11 5304 I7
- 2412 D6 3132 I16 3498 F8 3840 H11 5307 L3
- 2413 E6 3134 K14 3499 D11 3841 H11 5308 K13
- 2416 F7 3137 I14 3505 F5 3842 G11 5309 J13
- 2417 F7 3141 I15 3506 G5 3843 G11 5401 E6
- 2418 E6 3143 G16 3507 F5 3844 G11 5402 F7
- 2419 E6 3144 J13 3508 G4 3845 H10 5404 J12
- 2421 D11 3145 H16 3510 F5 3846 G10 5804 G11
- 2423 E8 3152 I13 3511 H7 3847 H11 6103 K14
- 2424 E8 3153 I13 3512 H7 3848 G10 6105 K15
- 2426 E8 3155 G16 3514 H6 3849 L11 6106 K16
- 2438 E8 3156 H14 3515 H8 3850 L11 6120 K13
- 2440 E9 3157 H13 3516 H6 3851 G11 6130 I16
- 2450 F8 3158 J13 3517 H7 3852 G10 6131 J15
- 2451 F7 3159 I13 3518 H7 3853 L11 6181 G13
- 2452 E9 3160 I13 3519 I8 3854 L11 6182 G14
- 2463 F7 3161 I13 3520 I6 3856 G10 6183 G15
- 2503 H7 3166 H13 3521 H7 3857 G10 6324 K13
- 2504 H7 3167 G16 3522 H7 3858 G12 6402 F6
- 2505 H7 3169 H15 3523 H6 3859 H10 6410 L9
- 2506 H6 3170 H13 3524 H6 3860 H10 6877 J12
- 2509 H7 3176 I16 3525 H5 3861 H10 7101 I15
- 2510 H7 3180 J14 3526 H5 3862 H10 7102 J15
- 2521 I8 3181 I16 3527 I7 3864 J9 7103 G16
- 2522 I6 3186 H13 3528 I6 3865 J9 7109 I16
- 2523 I7 3187 G14 3529 I7 3867 I12 7111 I13
- 2525 I7 3188 G13 3530 I6 3868 J11 7119 I14
- 2526 I6 3189 G14 3531 I7 3869 J11 7122 K14
- 2531 I7 3190 G14 3532 I6 3870 J12 7124 J15
- 2532 J7 3191 G15 3533 H6 3871 J11 7180 G14
- 2536 I6 3192 G14 3535 I7 3872 J12 7181 G15
- 2541 I6 3193 G15 3536 I6 3873 J11 7182 G16
- 2542 I7 3194 G15 3542 H8 3874 J11 7183 G14
- 2701 G11 3195 G16 3543 I7 3875 K11 7305 G4
- 2702 G10 3196 G15 3544 J7 3876 H11 7306 H5
- 2703 G10 3301 I8 3545 I7 3877 K12 7312 J7
- 2704 G10 3303 K8 3546 J7 3878 K11 7313 I8
- 2712 J2 3304 K8 3547 I7 3879 K12 7314 J8
- 2713 I3 3305 K8 3551 I7 3880 J12 7315 I7
- 2714 H3 3306 J8 3553 H5 3881 J12 7316 I7
- 2715 I3 3307 J6 3554 I7 3882 K11 7400 E7
- 2716 I3 3323 H4 3561 F5 3883 J11 7400 D6
- 2719 I3 3325 H5 3563 G2 3884 J11 7402 E8
- 2720 I2 3326 H5 3564 G2 3885 H12 7501 H7
- 2721 H2 3327 G5 3565 D11 3886 H12 7502 H7
- 2722 I2 3329 G5 3567 I7 3887 H12 7701 H3
- 2723 I2 3333 F8 3569 F5 3888 H12 7703 H3
- 2726 I2 3365 F5 3570 G5 3890 I10 7704 H3
- 2727 J1 3366 G5 3701 G11 3891 I10 7800 H11
- 2728 H2 3381 I8 3702 H11 3892 I10 7802 I9
- 2729 H2 3382 I8 3704 G10 3893 I10 7803 K9
- 2732 J3 3401 D6 3705 G10 3894 J10 7804 K9
- 2733 J2 3402 D8 3706 J10 3895 J10 7807 I9
- 2738 I1 3403 D8 3707 J10 3896 I10 7810 J11
- 2739 H2 3404 E7 3710 I3 3897 I10 7875 J12
- 2750 I3 3405 D8 3712 I2 3898 I10
- 2751 I2 3406 D8 3713 I2 3899 I10

COMBI BOARD - LAYOUT DIAGRAM (COMPONENT SIDE)



1105 K3	2771 H5	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	3484 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 I10	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 H11
2302 L13	5121 H3	9347 E11
2303 K14	5122 K3	9348 H11
2304 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 I12
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 G13
2354 J9	6308 H12	9362 G12
2359 J9	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
2508 H11	7302 H13	9379 K14
2515 H11	7303 H13	9380 K15
2516 I11	7304 H13	9381 F10
2517 H11	7407 D6	9401 E2
2518 H11	7503 I10	9701 G14
2529 I10	7504 I11	9702 H14
2530 I11	7505 H10	9703 H15
2533 I10	7506 I11	9704 H15
2534 I10	7702 J14	9705 J15
2535 K10	7705 H14	9706 H15
2700 H15	7808 K6	9707 H15
2706 H14	7809 G5	9735 J16
2707 H14	8401 L7	9750 H15
2708 H14	8402 L5	9752 G16
2709 I15	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 H16
2770 I13	9007 H6	

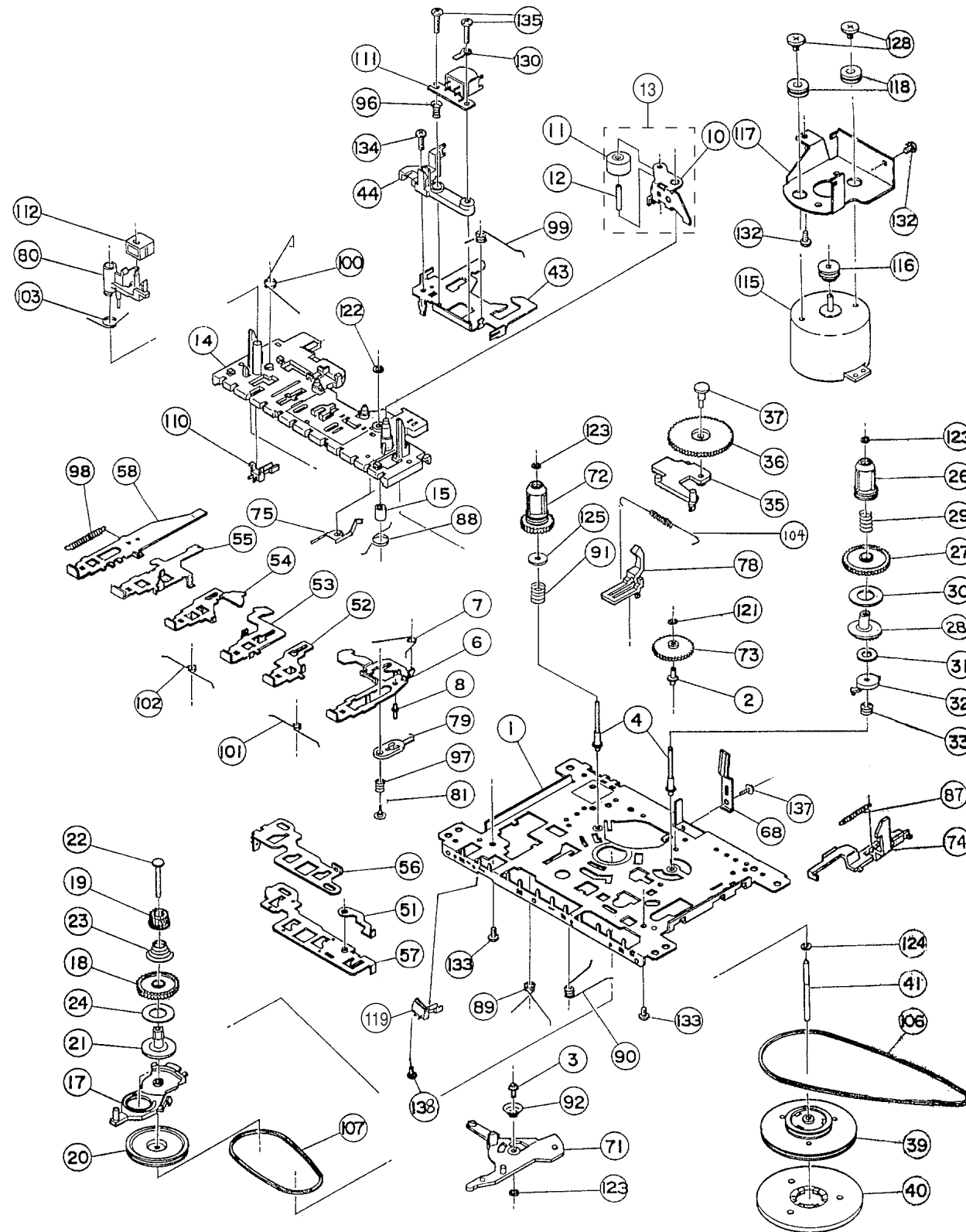
EXPLODED VIEW DIAGRAM - CABINET



SCREW LIST :

①	M2x6
②	T2 x 8
③	T2.5 x 7.5
④	T2.5 x 10
⑤	T3 x 6
⑥	T3 x 8
⑦	T3 x 10
⑧	T3 x 12
⑨	T3 x 20
⑩	T3 x 25
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 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 KEYSSET-1

- 406 3140 114 44370 TUNER KEYSSET
- 407 3140 114 41280 CD KEYSSET-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 KEYSSET
- 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 -**

1404	3140 110 51470	LCD PANEL 91657TR
1407	4822 276 12889	DOOR SWITCH
1470	2422 128 02917	TACT SWITCH 1P
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
1479	2422 128 02917	TACT SWITCH 1P
1480	2422 128 02917	TACT SWITCH 1P
1481	2422 128 02917	TACT SWITCH 1P
1482	2422 128 02917	TACT SWITCH 1P

1483	2422 128 02917	TACT SWITCH 1P
1484	2422 128 02917	TACT SWITCH 1P
1485	2422 128 02917	TACT SWITCH 1P
1486	2422 128 02917	TACT SWITCH 1P
1487	2422 128 02917	TACT SWITCH 1P

1488	2422 128 02917	TACT SWITCH 1P
1489	2422 128 02917	TACT SWITCH 1P

- CAPACITORS -

2401	4822 124 21913	1μF 20% 63V
2403	4822 124 41584	100μF 20% 10V
2405	4822 122 31765	100pF 2% NP0 63V
2406	4822 122 31765	100pF 2% NP0 63V
2407	4822 122 31765	100pF 2% NP0 63V

2408	4822 122 31765	100pF 2% NP0 63V
2410	4822 122 31765	100pF 2% NP0 63V
2412	4822 126 14305	100nF 10% X7R 16V
2413	4822 126 14305	100nF 10% X7R 16V
2416	5322 126 11583	10nF 10% X7R 50V

2417	5322 126 11583	10nF 10% X7R 50V
2418	4822 126 14305	100nF 10% X7R 16V
2419	4822 122 31765	100pF 2% NP0 63V
2420	4822 124 40769	4,7μF 20% 100V
2421	3198 016 31020	1nF 5% NP0 25V

2423	4822 122 31765	100pF 2% NP0 63V
2424	4822 122 31765	100pF 2% NP0 63V
2426	4822 122 31765	100pF 2% NP0 63V
2438	4822 126 14305	100nF 10% X7R 16V
2450	4822 122 31765	100pF 2% NP0 63V

2451	4822 122 31765	100pF 2% NP0 63V
2452	4822 122 31765	100pF 2% NP0 63V
2460	4822 124 22652	2,2μF 20% 50V
2462	4822 124 40433	47μF 20% 25V
2463	4822 126 14305	100nF 10% X7R 16V

- CAPACITORS -

2464	4822 124 41584	100μF 20% 10V
2465	4822 124 41407	0,47μF 20% 63V
2466	4822 124 40769	4,7μF 20% 100V

- RESISTORS -

3401	4822 051 30393	39K 5% 0,062W
3402	4822 051 30471	470R 5% 0,062W
3403	4822 051 30471	470R 5% 0,062W
3404	4822 051 30472	4,7K 5% 0,062W
3405	4822 051 30471	470R 5% 0,062W

3406	4822 051 30471	470R 5% 0,062W
3407	4822 051 30101	100R 5% 0,062W
3409	4822 117 13632	100K 1% 0.62W
3410	4822 051 30471	470R 5% 0,062W
3411	4822 051 30153	15K 5% 0,062W

3412	4822 051 30471	470R 5% 0,062W
3413	4822 051 30472	4,7K 5% 0,062W
3414	4822 051 30472	4,7K 5% 0,062W
3415	4822 051 30472	4,7K 5% 0,062W
3416	4822 051 30272	2,7K 5% 0,062W

3417	4822 051 30102	1K 5% 0,062W
3419	4822 051 30102	1K 5% 0,062W
3421	4822 051 30471	470R 5% 0,062W
3422	4822 051 30102	1K 5% 0,062W
3423	4822 051 30102	1K 5% 0,062W

3424	4822 051 30102	1K 5% 0,062W
3425	4822 051 30102	1K 5% 0,062W
3426	4822 051 30392	3,9K 5% 0,063W
3428	4822 051 30152	1,5K 5% 0,062W
3429	4822 051 30152	1,5K 5% 0,062W

3430	4822 051 30472	4,7K 5% 0,062W
3431	4822 051 30103	10K 5% 0,062W
3432	4822 051 30183	18K 5% 0,062W
3433	4822 051 30472	4,7K 5% 0,062W
3434	4822 051 30101	100R 5% 0,062W

3435	4822 051 30223	22K 5% 0,062W
3436	4822 051 30223	22K 5% 0,062W
3437	4822 051 30223	22K 5% 0,062W
3438	4822 051 30223	22K 5% 0,062W
3440	4822 051 30562	5,6K 5% 0,063W

3441	4822 051 30562	5,6K 5% 0,063W
3442	4822 051 30152	1,5K 5% 0,062W
3443	4822 051 30152	1,5K 5% 0,062W
3445	4822 051 30101	100R 5% 0,062W
3446	4822 051 30223	22K 5% 0,062W

ELECTRICAL PARTSLIST - FRONT BOARD**- RESISTORS -**

3447	4822 051 30223	22K 5% 0,062W
3448	4822 051 30103	10K 5% 0,062W
3450	4822 051 30272	2,7K 5% 0,062W
3451	4822 051 30272	2,7K 5% 0,062W
3452	4822 051 30392	3,9K 5% 0,063W

3453	4822 051 30332	3,3K 5% 0,062W
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
3459	4822 051 30222	2,2K 5% 0,062W
3461	4822 051 30221	220R 5% 0,062W
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
3470	4822 117 12968	820R 5% 0,62W
3471	4822 117 11817	1,2K 1% 1/16W
3472	4822 051 30222	2,2K 5% 0,062W
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

- COILS & FILTERS

5400	4822 157 11228	COIL 100μH 5%
5401	2422 549 44393	FXD SM COIL 100MHZ 2K7
5402	2422 549 44393	FXD SM COIL 100MHZ 2K7
5403	2422 540 98455	RES CER 4,194MHZ
5404	4822 157 11074	COIL 100μH

5405	4822 157 11074	COIL 100μH
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- DIODES -

6400	4822 130 30621	1N4148
6401	5322 130 31504	BZX79-B3V3
6402	5322 130 34337	BAV99

- IC & TRANSISTORS -

7400	3140 110 51210	MCU TMP86CH21F
7401	9322 145 26668	M24C02-WMN6
7402	4822 130 60511	BC847B
7407	9322 155 82667	IR RECEIVER TSOP2236

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

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
3194	4822 117 13632	100K 1%0,62W
3195	4822 051 30474	470K 5%0,062W
3196	4822 051 30103	10K 5%0,062W
4104	4822 051 30008	0R J UMPER
4105	4822 051 30008	0R J UMPER
4106	4822 051 30008	0R J UMPER
4107	4822 051 30008	0R J UMPER
4108	4822 051 30008	0R J UMPER
4109	4822 051 30008	0R J UMPER
4110	4822 051 30008	0R J UMPER

- 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 -**

1707	4822 277 11504	PUSH SWITCH
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- CAPACITORS -

2706	4822 124 40248	10µF 20%63V
2707	4822 124 40196	220µF 20%16V
2708	4822 124 40433	47µF 20%25V
2709	4822 124 40433	47µF 20%25V
2710	4822 124 41584	100 F 20%10V
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	4822 126 14305	100nF 10%X7R 16V
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	4822 126 14305	100nF 10%X7R 16V
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 81151	22µF 20%50V
2771	4822 124 81151	22µF 20%50V

- RESISTORS -

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
3733	4822 051 30475	4,7M 5%0,062W

- RESISTORS -

3734	4822 051 30103	10K 5%0,062W
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	100R 5%0,062W
3710	4822 051 30273	27K 5%0,062W

- COILS -

5701	4822 157 10371	COIL 100KHz
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- DIODES -

6704	4822 130 30621	1N4148
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- IC & TRANSISTORS -

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 - 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

- RESISTORS -

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

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	OR J UMPER (0603)
3847	4822 117 12864	82K 5%0,6W	4802	4822 051 20008	OR J UMPER (0805)
3848	4822 117 10834	47K 1%0,1W	4807	4822 051 20008	OR J UMPER (0805)
3849	4822 051 30563	56K 5%0,062W	4809	4822 051 20008	OR J UMPER (0805)
3850	4822 117 12902	8,2K 1%0,063W	4810	4822 051 20008	OR J UMPER (0805)
3851	4822 051 30563	56K 5%0,062W	4812	4822 051 20008	OR J UMPER (0805)
3852	4822 117 10834	47K 1%0,1W	4813	4822 051 20008	OR J UMPER (0805)
3853	4822 051 30153	15K 5%0,062W	4814	4822 051 20008	OR J UMPER (0805)
3854	4822 117 12902	8,2K 1%0,063W	4815	4822 051 20008	OR J UMPER (0805)
3855	4822 116 40227	4,6R 25%12V	4823	4822 051 20008	OR J UMPER (0805)
3856	4822 051 20683	68K 5%0,1W	4824	4822 051 20008	OR J UMPER (0805)
3857	4822 051 20154	150K 5%0,1W	4828	4822 051 20008	OR J UMPER (0805)
3858	4822 051 30392	3.9K 5%0.063W	4831	4822 051 20008	OR J UMPER (0805)
3859	4822 117 10834	47K 1%0,1W	4832	4822 051 20008	OR J UMPER (0805)
3860	4822 051 30102	1K 5%0,062W	4838	4822 051 20008	OR J UMPER (0805)
3861	4822 117 10834	47K 1%0,1W	4845	4822 051 20008	OR J UMPER (0805)
3862	4822 051 10102	1K 2%0,25W	4847	4822 051 20008	OR J UMPER (0805)
3863	4822 052 10338	3,3R 5%0,33W	4848	4822 051 20008	OR J UMPER (0805)
3864	4822 117 10833	10K 1%0,1W	4850	4822 051 20008	OR J UMPER (0805)
3865	4822 051 30102	1K 5%0,062W	4853	4822 051 20008	OR J UMPER (0805)
3867	4822 051 20223	22K 5%0,1W	4856	4822 051 30008	OR J UMPER (0603)
3868	4822 051 30103	10K 5%0,062W	4857	4822 051 20008	OR J UMPER (0805)
3869	4822 051 30103	10K 5%0,062W	4859	4822 051 20008	OR J UMPER (0805)
3871	4822 051 30471	470R 5%0,062W	4863	4822 051 20008	OR J UMPER (0805)
3872	4822 117 12925	47K 1%0,063W	4865	4822 051 20008	OR J UMPER (0805)
3873	4822 051 30223	22K 5%0,062W	4872	4822 051 20008	OR J UMPER (0805)
3874	4822 051 30223	22K 5%0,062W	4877	4822 051 30008	OR J UMPER (0603)
3875	4822 051 30103	10K 5%0,062W	4881	4822 051 20008	OR J UMPER (0805)
3876	4822 051 30103	10K 5%0,062W	4884	4822 051 20008	OR J UMPER (0805)
3878	4822 051 30471	470R 5%0,062W	4885	4822 051 30008	OR J UMPER (0603)
3879	4822 117 12925	47K 1%0,063W	4886	4822 051 20008	OR J UMPER (0805)
3880	4822 051 20339	33R 5%0,1W	4888	4822 051 20008	OR 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 -**

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
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
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

- 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 -

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 -

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 - 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
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
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

- 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 -

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 -

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.

