

CD Stereo Radio Recorder

AZ8050/10D/17D

AZ8051/01D/10B/11D

AZ8052/00D

Service
Service
Service

RTV servis Horvat

Kešinci, 31402 Semeljci

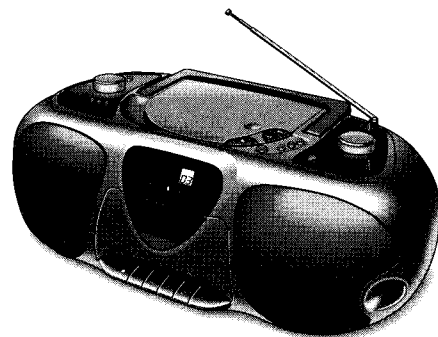
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Croatia



Service Manual

COMPACT
disc
DIGITAL AUDIO

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CLASS 1
LASER PRODUCT



PHILIPS

TECHNICAL SPECIFICATION

General:

Mains voltage	: 220V-230V / 50Hz for /00 /14 230V-240V / 50Hz for /05 /10 110V-127V / 220V-240V /50Hz switchable for /01 120V / 60Hz for /17 100V / 50Hz for /06
Battery	: 9V (6xR20)
Power consumption	: ≤ 20W at maximum output power ≤ 5W in stand by

Amplifier:

Power stage protection	: temperature and shortcircuit
Output power mains	: 2 x 1,6W _{rms} -1dB at 4W D=10%
battery	: 2 x 1,6W _{rms} -1dB at 4W D=10%
Headphone	: 3,5mm stereo jack, ≥ 20mW at 32Ω (≅ 0,8V at 32Ω) D=10%
Frequency response	: 30Hz - 16kHz (typ. at volume set to -20dB, CD mode 0dB signal level ⇒use SBC429)
Tone control	
DBB ¹⁾	: +10dB at 100Hz (volume set to -20dB)
Equalizer ¹⁾	
100Hz	: ±8dB
1kHz	: ±8dB
10kHz	: ±8dB

Tuner:

	FM	MW	LW ¹⁾
Tuning range	87,5 - 108 MHz (65 - 108 MHz for /14) (76 - 108 MHz for /06)	525 - 1607 kHz (530 - 1710 kHz for /01/17)	148,5 - 284 kHz
IF	10,7 MHz ± 20 kHz	468 kHz ± 3 kHz	468 kHz ± 3 kHz
Sensitivity Mono: 26dB S/N, m=30% -3 dB limiting point	≤ 4 μV (≤ 2μV typ.) ≤ 5 μV (≤ 2μV typ.)	≤ 4mV/m (≤ 1,5mV/m typ.)	≤ 6mV/m (≤ 4,5mV/m typ.)
AFC capture range	±300kHz		
Distortion	≤ 7% (≤ 1% typ.) RF=1mV Δf=75kHz	≤ 7% (≤ 3% typ.) RF=100mV/m m=80%	≤ 7% (≤ 3% typ.) RF=100mV/m m=80%
Image rejection ratio	≥ 20dB (26dB typ.)	≥ 28dB	≥ 30dB
Channel separation at 1kHz	≥ 20dB (25dB typ.)		

CD: To be measured on phone socket with 100kΩ load.

Frequency response	: 30 - 16.000 Hz -3dB
Signal/Noise ratio	: ≥ 80dB
Distortion	: ≤ 0.3% at 1 kHz
Channel difference	: ≤ 3dB at 1 kHz
Channel crosstalk	: 35dB max.
De emphasis	: 0 or 15/50μs switched automatically by subcode on the disc

Laser	
Output power	: 500μW
Wave length	: 780 ± 20 nm

Recorder: To be measured on phone socket with 100kΩ load.

Tape speed	: 4,76cm/s ±3%
Wow & Flutter	: ≤ 0,5% weighted
Winding speed	: 130s for C60 cassette
Erase / Bias system	: permanent magnetic erase head / AC 60 ±5kHz
Distortion at 250 nWb/m	: ≤ 7%
Signal/Noise ratio (FF weighted)	: ≥ 40dB
(A - weighted)	: ≥ 43dB
Channel difference at PB	: ≤ 3dB
Channel difference overall	: ≤ 5dB
Channel separation	: ≥ 15dB at 1kHz
Track separation	: ≥ 55dB at 1kHz
Frequency response IEC I	
PB	: 125Hz - 8000Hz (within 8dB)
overall	: 250Hz - 6300Hz (within 8dB)

note: set is not prepared to play or record IEC II Chrome cassettes!

1) Remote Control:

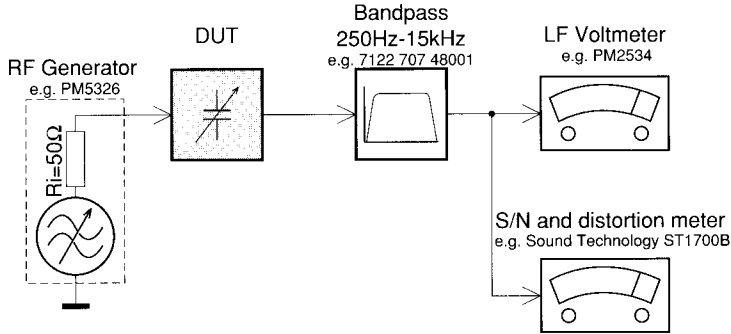
RC5 commands

Remote Control key	System Code	Command CODE
PLAY	21	53
STOP	21	54
NEXT (PRESET UP)	21	32
PREVIOUS (PRESET DOWN)	21	33
VOLUME UP	21	16
VOLUME DOWN	21	17

1) not in all versions

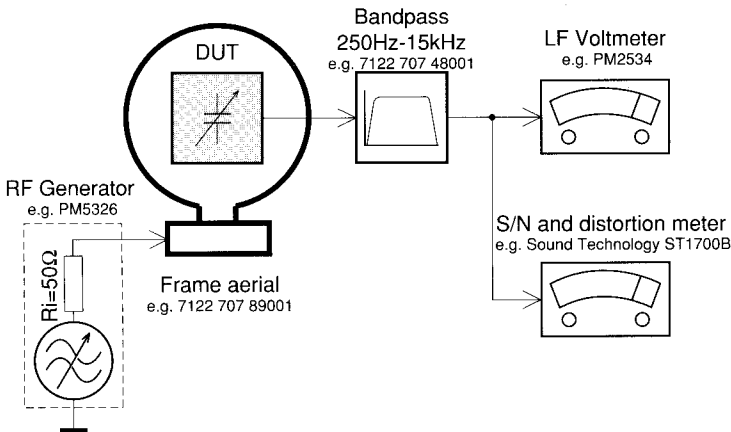
MEASUREMENT SETUP

Tuner FM



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

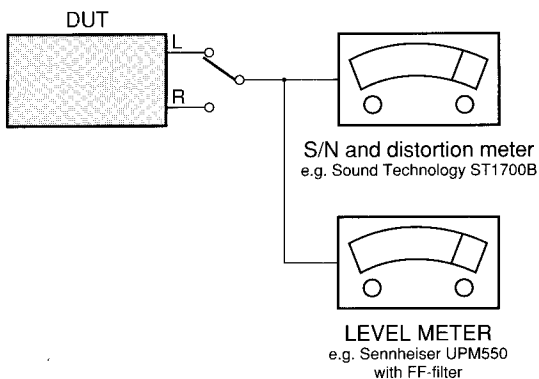
Tuner AM (MW, LW)



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

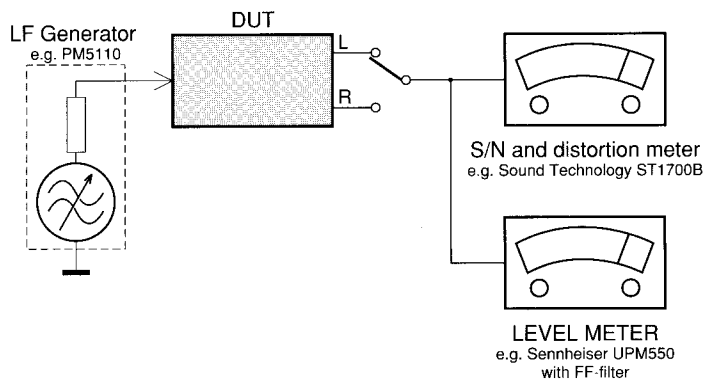
CD

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

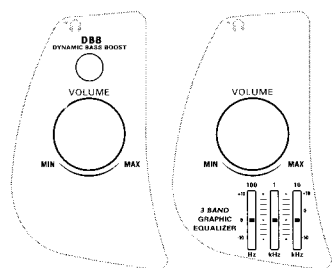


RECORDER

Use Universal Test Cassette Fe SBC420 4822 397 30071

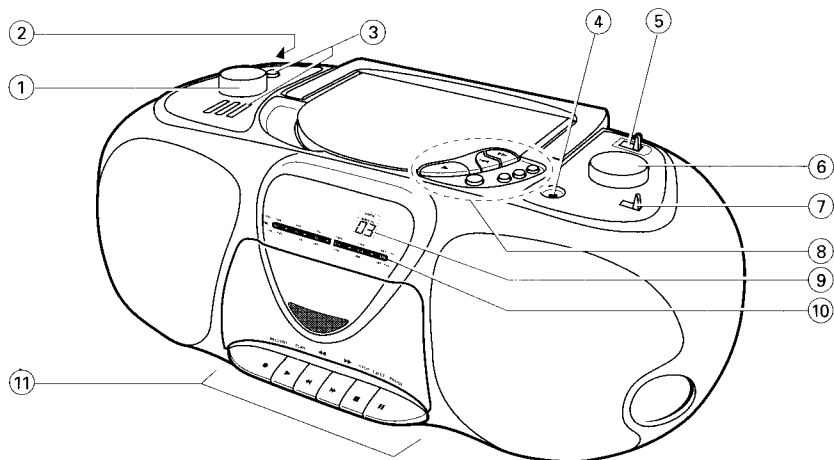


CONNECTIONS & CONTROLS



AZ8050, AZ8051
AZ8150

AZ8052



① VOLUME.....to adjust the volume level

② (at the back)...3.5mm headphone socket.
Note: Inserting the plug will disconnect the speakers.

③ DBBDynamic Bass Boost:
to increase the bass level

or
3 BAND GRAPHIC EQUALIZER: to adjust the
sound to your taste

④ MIC3.5mm microphone socket
(see RECORDING)

⑤ POWER ON.....to select the sound source:
CD-TAPE/OFF-RADIO

RADIO:

⑥ TUNINGto tune to radio stations

⑦ FM-MW-LW.....to select the wave band

⑩ Indicator for radio tuning

CD PLAYER:

⑧ OPEN-CLOSEto open/close the CD lid
PLAY-PAUSE ► to start and to interrupt
CD play

SEARCH ◀◀ ▶▶ to skip and to search
forwards and backwards

STOP ■.....to stop play and to erase a
program

SHUFFLEto play in random order

REPEAT.....to repeat one track or to
repeat the CD or program

PROGto program track numbers
and to review the program

⑨ CD Display

CASSETTE RECORDER:

⑪ RECORD ●to start recording

PLAY ►.....to start playback

◀.....to rewind the tape

▶.....to wind the tape

STOP-EJECT ■.....to stop the tape and to open
the cassette compartment

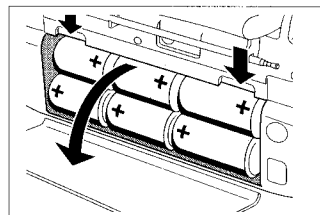
PAUSE ||.....to interrupt recording or playback

DIRECTIONto change the playback direction (AZ8150 only)

Batteries, R20 UM1 or D cells

• Open the battery compartment and insert six batteries, type R20, UM-1 or D-cells (preferably alkaline).

• Remove the batteries if they are empty or the set is not to be used for a long time.



Mains

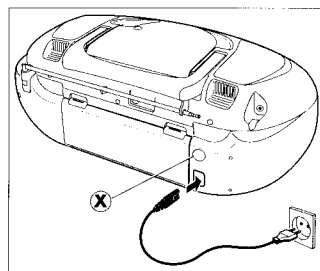
1 Check if the mains voltage as shown on the type plate (on the base of the set) corresponds to your local mains voltage. If it does not, consult your dealer or service organisation.

If the set is equipped with a VOLTAGE selector (X), set this selector to the local mains voltage.

2 Connect the mains lead to the MAINS outlet and the wall socket. The mains supply is switched on.

• The battery supply is switched off when the set is connected to the mains. To change over to battery supply, pull out the plug from the unit's MAINS socket.

• To disconnect the set from the mains completely, withdraw the mains plug from the wall socket.

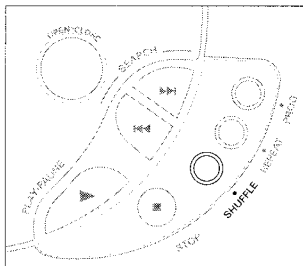


Brief excerpt of the INSTRUCTION FOR USE

CD PLAYER

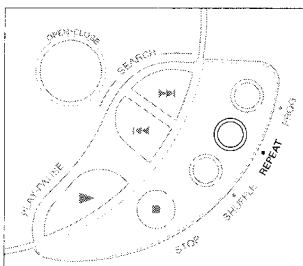
SHUFFLE – playing in random order

- 1 Press SHUFFLE before or during CD play.
 - All the tracks will now be played in a random order.
- 2 To return to normal CD play, press SHUFFLE.



REPEAT – Repeating the entire CD or one track of the CD

- 1 Before or during CD play, press repeated REPEAT to cause the display showing the different repeating modes.
 - **REPEAT**: the current track is played repeatedly.
 - **REPEAT ALL**: the entire CD or program is played repeatedly.
- 2 To return to normal CD play, press REPEAT until the display indication disappears.



Note: You can activate the different playing modes at the same time, e.g. to **repeatedly** play the entire CD or program **in random order** (REPEAT ALL/SHUFFLE)

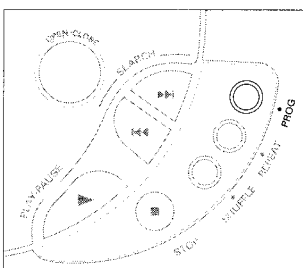


Example
Display indication when the respective playing mode is activated.

Programming track numbers

You may select a number of tracks and store these in the memory in the desired sequence. You may store any track more than once. At most, 20 tracks can be stored in the memory.

- 1 Select with SEARCH ◀◀ or ▶▶ the desired track.
 - 2 As soon as the desired track is displayed, press the PROG button to store the track in the memory.
 - On the display PROGRAM appears and P lights briefly up. After that the stored track number is shown.
 - 3 Select and store in this way all desired tracks.
- You can review your settings by pressing the PROG button for more than 2 seconds.
 - The display shows in sequence all stored track numbers.



Display indication: when you store a track.



Display indication when you try to store more than 20 tracks.

Playing the program

- If you have selected the tracks in the STOP position, press PLAY-PAUSE ►.
- If you have selected the tracks during CD play, press first STOP ■ and then press PLAY-PAUSE ►.



Example
Display indication when you play the program.

Erasing the program from the STOP position

- From the stop position, press STOP ■.
→ PROGRAM disappears on the display and your program is erased.



Display indication when you erase a program.

Note: The program will also be erased

- if you interrupt the power supply;
- if you open the lid or
- if you move the POWER ON selector.

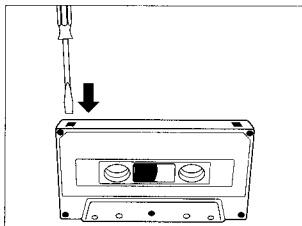
CASSETTE RECORDER

General information on recording

- Recording is permissible insofar as copyright or other rights of third parties are not infringed.
- For recording on this set you should use a cassette of the type "NORMAL" (IEC type **I**). This deck is not suited for recording on cassettes of the type "CHROME" (IEC **II**) or "METAL" (IEC **IV**).
- The recording level is set automatically. The controls VOLUME and DBB or 3 BAND GRAPHIC EQUALIZER do not affect the recording.
- At the very beginning and end of the tape, no recording will take place during the 7 seconds when the leader tape passes the recorder heads.

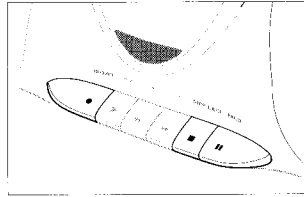
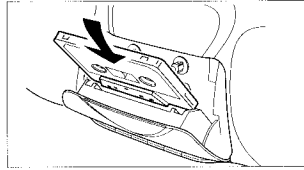
Protecting tapes from accidental erasure

- Keep the cassette side to be safeguarded in front of you and break out the left tab. Now, recording on this side is no longer possible.
- To render this safeguard ineffective, cover the aperture with a piece of adhesive tape.



CD synchro start – recording from the CD player

- 1 Set the POWER ON selector to CD.
- 2 Insert a CD and if desired, program track numbers.
- 3 Press STOP-EJECT ■ to open the cassette compartment.
- 4 Insert a blank cassette with the open side downwards.
- 5 Press RECORD ● to start recording.
 - Playing of the CD or program starts automatically.
 - It is not necessary to start the CD player separately.
- 6 For brief interruptions, press PAUSE II.
 - To resume recording, press the key once more.
- 7 To stop recording, press STOP-EJECT ■.

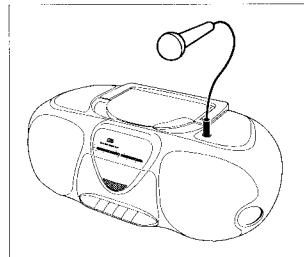


Note: The recording can be started from different positions:

- if the CD player is in the PAUSE position, recording will start from this very position (use SEARCH ◀◀ or ▶▶);
- if the CD player is in the STOP position, recording will start from the beginning of the CD or program.

Recording from the radio or with the microphone

- 1 Set the POWER ON selector to TAPE or RADIO.
- 2 Prepare the sound source for recording:
 - RADIO:** Tune to a radio station.
 - TAPE (microphone):** Connect a microphone with a 3.5mm plug to the MIC socket. Set the VOLUME control to zero (monitoring during microphone recording is not possible).
- 3 Press STOP-EJECT ■ to open the cassette compartment.
- 4 Insert a blank cassette with the open side downwards.
- 5 Press RECORD ● to start recording.
- 6 For brief interruptions, press PAUSE II.
 - To resume recording, press the key once more.
- 7 To stop recording, press STOP-EJECT ■.



Note: When recording from the radio or a CD, you can connect a microphone and mix the sounds. Otherwise, be sure there is no microphone connected that could disturb your recording.

WARNINGS & SAFETY

(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 wrist wrap 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 enfilez le bracelet serti d'une résistance de sécurité.

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


(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 

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

(S) Varning !

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

(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.

ESD



(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.

(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.

SAFETY



(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.


(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.

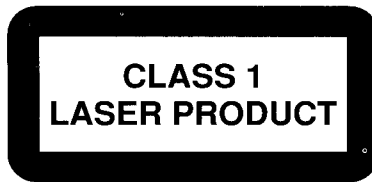
(NL)

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 



(DK) Advarsel !

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for strålning.

(FIN) Varoitus !

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

(F)

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

DISMANTLING INSTRUCTIONS

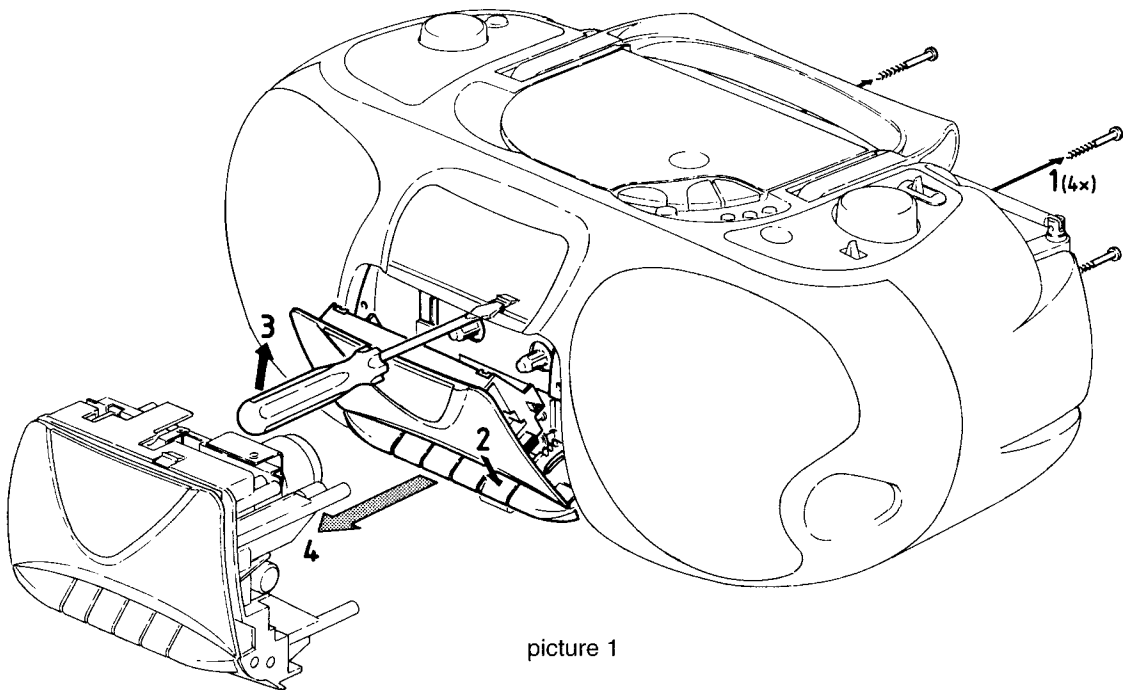
Separation of Front cabinet from Rear cabinet

- Use Torx T10 screwdriver with shaftlength 150mm e.g. 4822 395 50423
- Loosen 8 screws 3x30mm on rear side as shown in the exploded view drawing (4 pcs. inside battery compartment)
- Open CD-door and loosen screw 3x12mm inside CD-compartment.
- Move Front cabinet apart (2-3cm) until actuating lever for REC/Pb-switch overlaps Top cabinet.
- Plug head connection cable off.
- Lift Rear cabinet over the lever and separate cabinet parts as you like.

Separation of Top cabinet from Rear cabinet

- Loosen 4 screws 3x12mm + antenna screw 3x16mm on rear side and 2 screws 3x12mm on front side.
- Loosen 2 screws 3x30mm beneath carrying handle.
- Pull Top cabinet off.

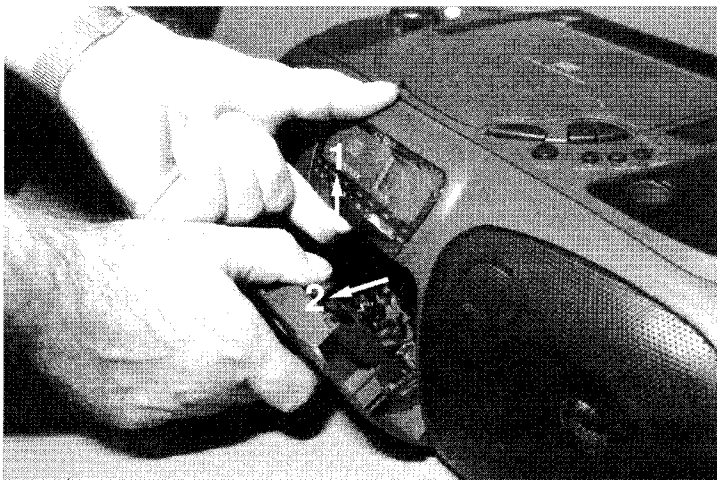
Dismantling of the Tape transport only



picture 1

- Loosen 4 screws 3x30mm inside the battery compartment.
- Open cassette door.
- Release snap hook as shown in picture 1 and pull Recorder Unit out.

remark: to release snap hook it will also do when front cabinet is pressed upwards as shown in picture 2.



picture 2

RTV servis Horvat

Kešinci, 31402 Semeljci

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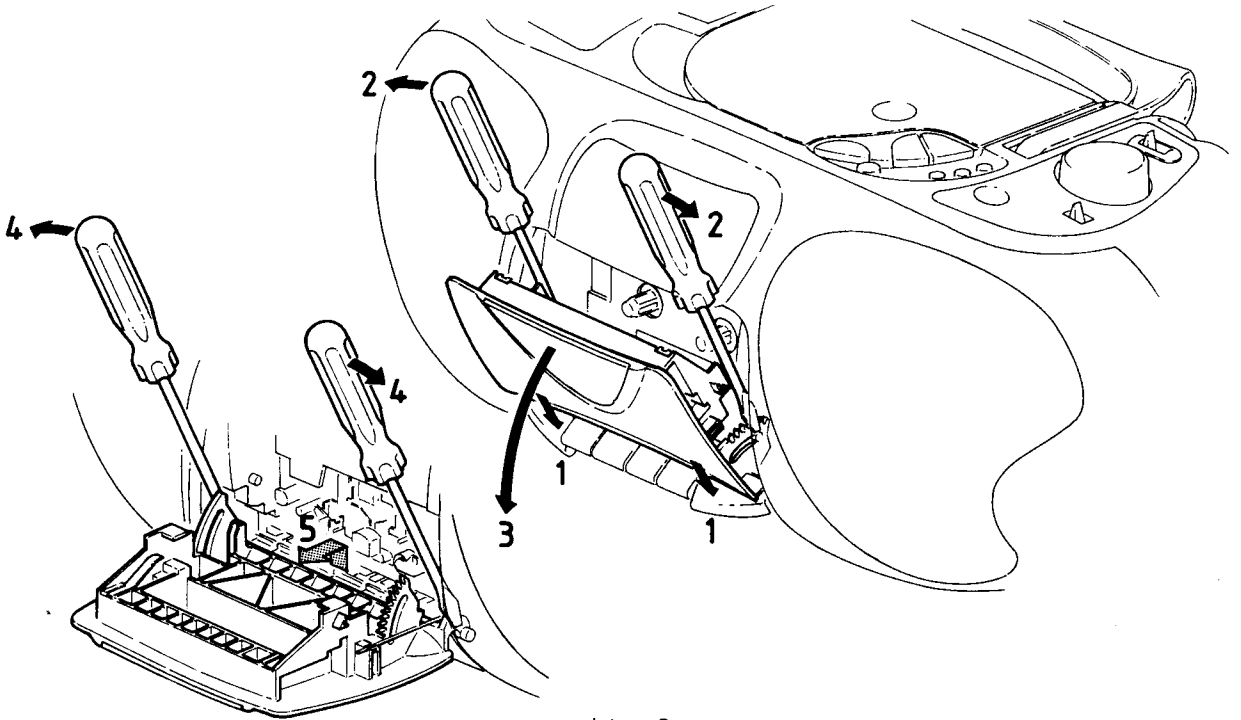
098-788-319

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Croatia

Dismantling of the Cassette Door

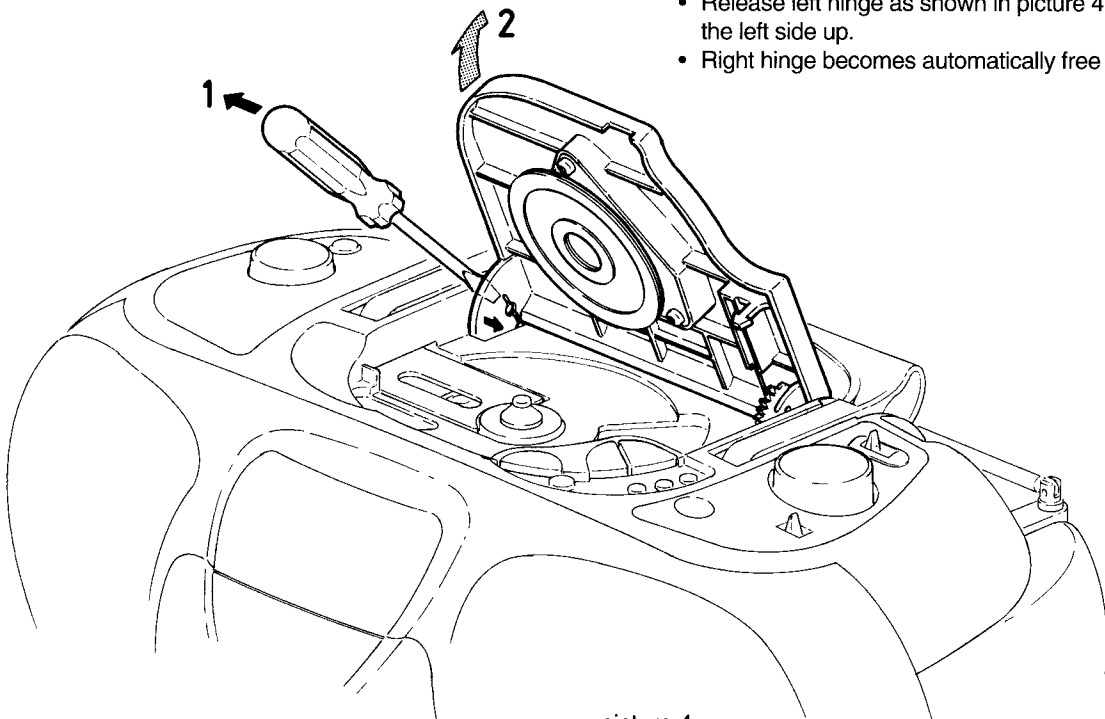
- Open cassette door and depress *REC-* and *PAUSE*-key first.
- Release catches by pressing them inwards with a screwdriver and open door as shown in picture 3.
- Release hinges by pressing them inwards with a screwdriver. Then pull door a bit upwards to get it free from *REC-* respectively *PAUSE*-key and pull door out.



picture 3

Dismantling of the CD Door

- Release left hinge as shown in picture 4 and pull door at the left side up.
- Right hinge becomes automatically free then.

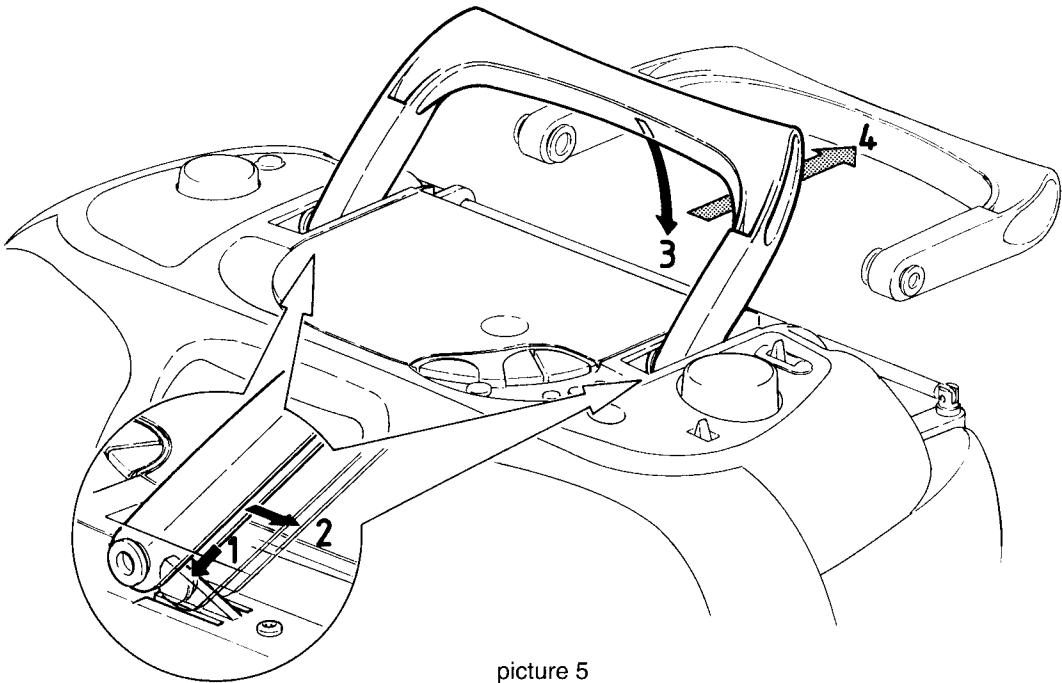


picture 4

Dismantling of the Carrying Handle

- Turn handle upright first.
- Press catch ribs a little bit downwards and pull handle backwards until catch ribs are hold in a slightly lower position.
- Now turn handle completely down \Rightarrow catch ribs will now automatically be bent downwards and release the handle.
- Pull handle backwards until it is free.

To mount the handle simply put it horizontally into the cabinet until it snaps in



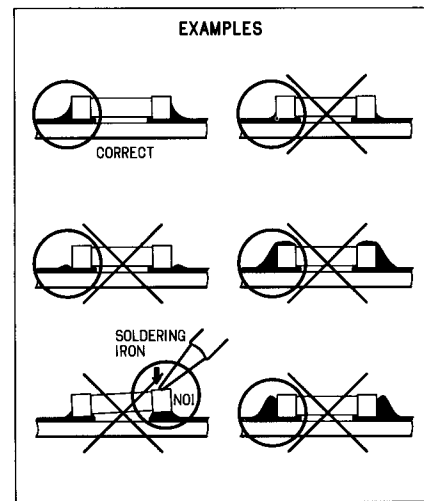
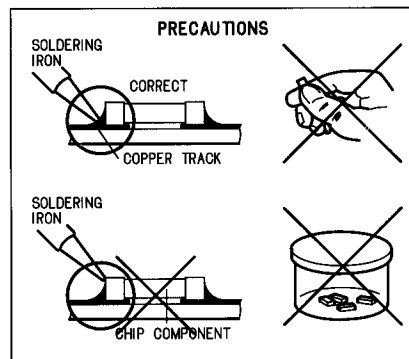
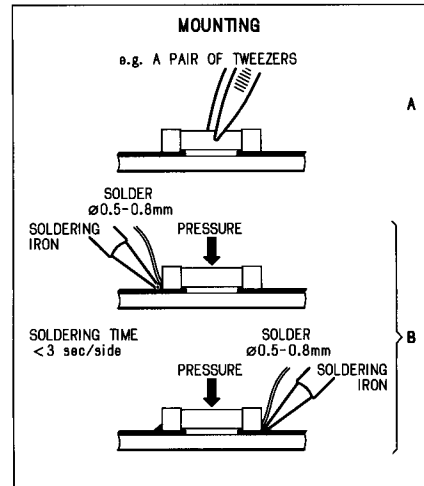
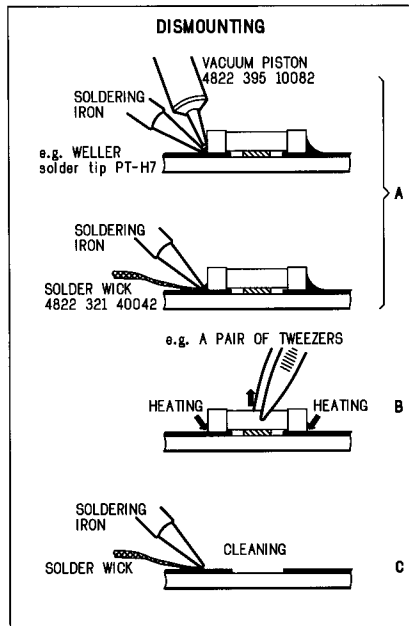
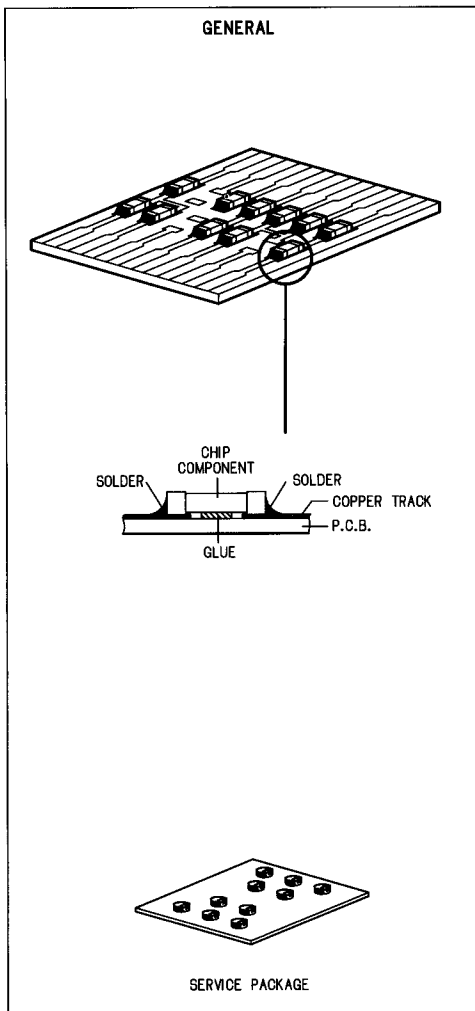
picture 5

SERVICE HINTS

SERVICE TOOLS

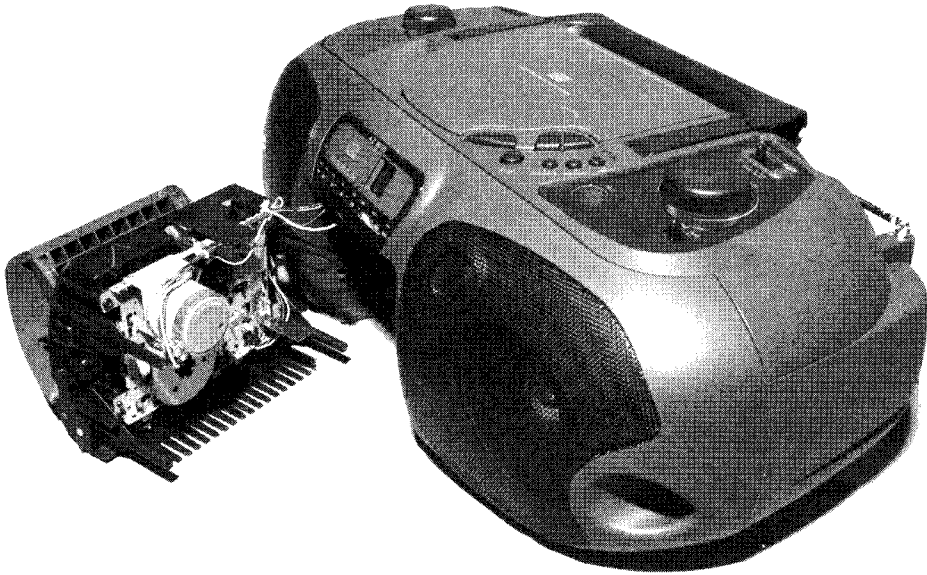
- TORX T10** screwdriver with shaftlength 150mm4822 395 50423
- TORX screwdriver set** SBC 1634822 295 50145
- Audio signal disc** SBC 429.....4822 397 30184
- Test disc 5** (disc without errors) +
- Test disc 5A** (disc with dropout errors, black spots and fingerprints)
SBC 426/426A4822 397 30096
- Burn in test disc** (65 min. 1kHz signal at -30dB level without "pause") ...4822 397 30155
- Universal test cassette** Fe SBC 4204822 397 30071

HANDLING CHIP COMPONENTS



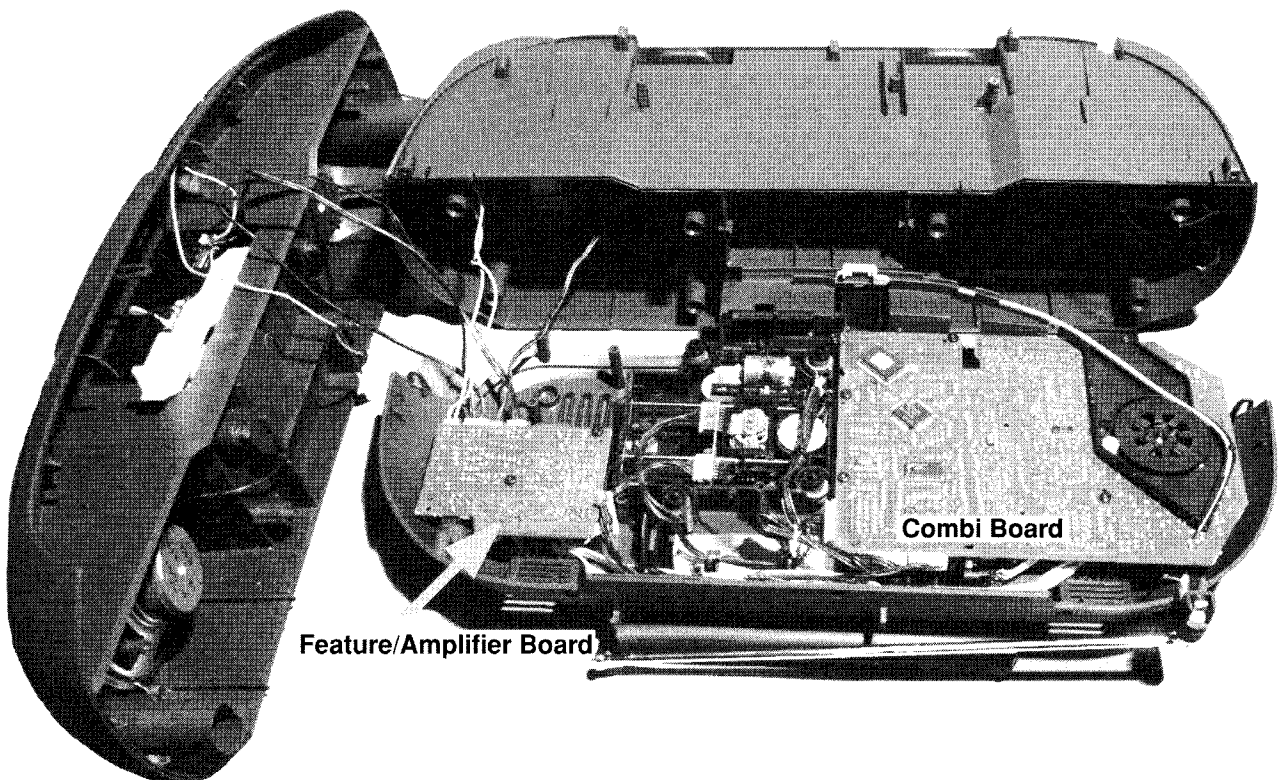
REPAIR POSITIONS

TAPE TRANSPORT



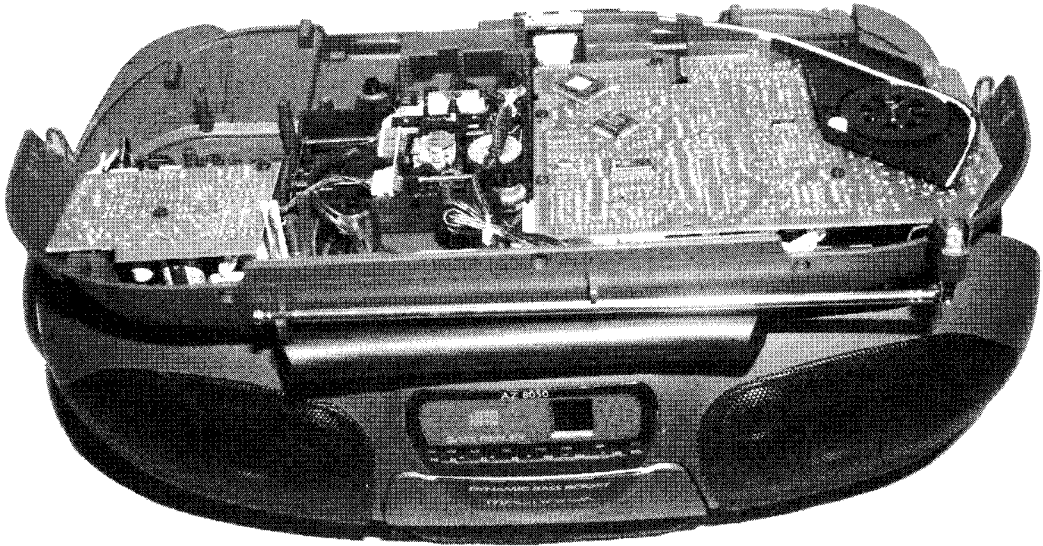
picture 6

Repairs on
Feature/Ampl.- board, Combi-board and CDdrive
(Head connection cable plugged off)

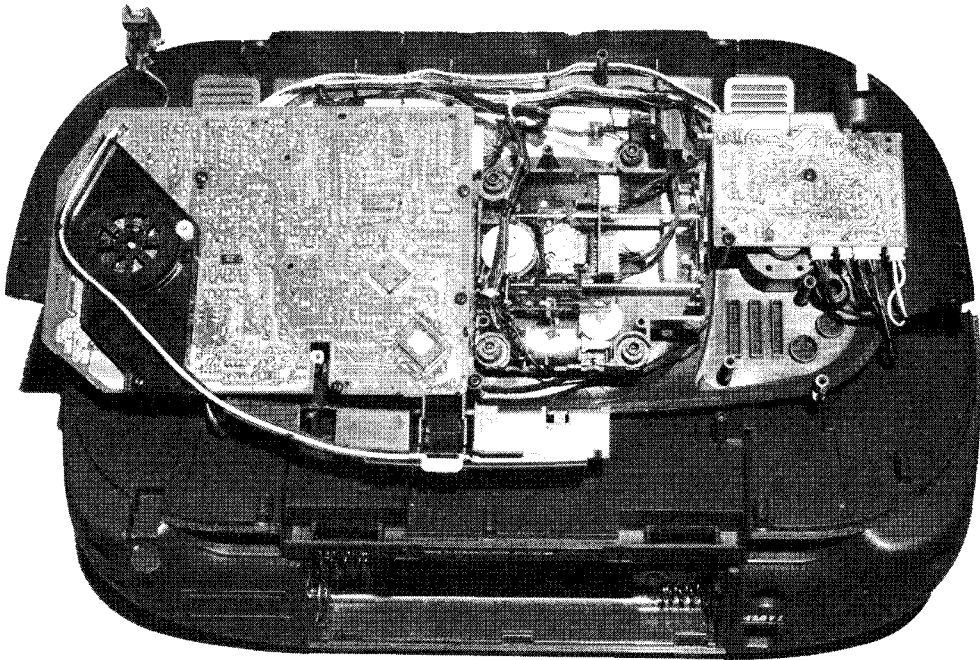


picture 7

**Repairs on
Feature/Ampl.- board, Combi-board and CDdrive**
(Head connection cable connected)



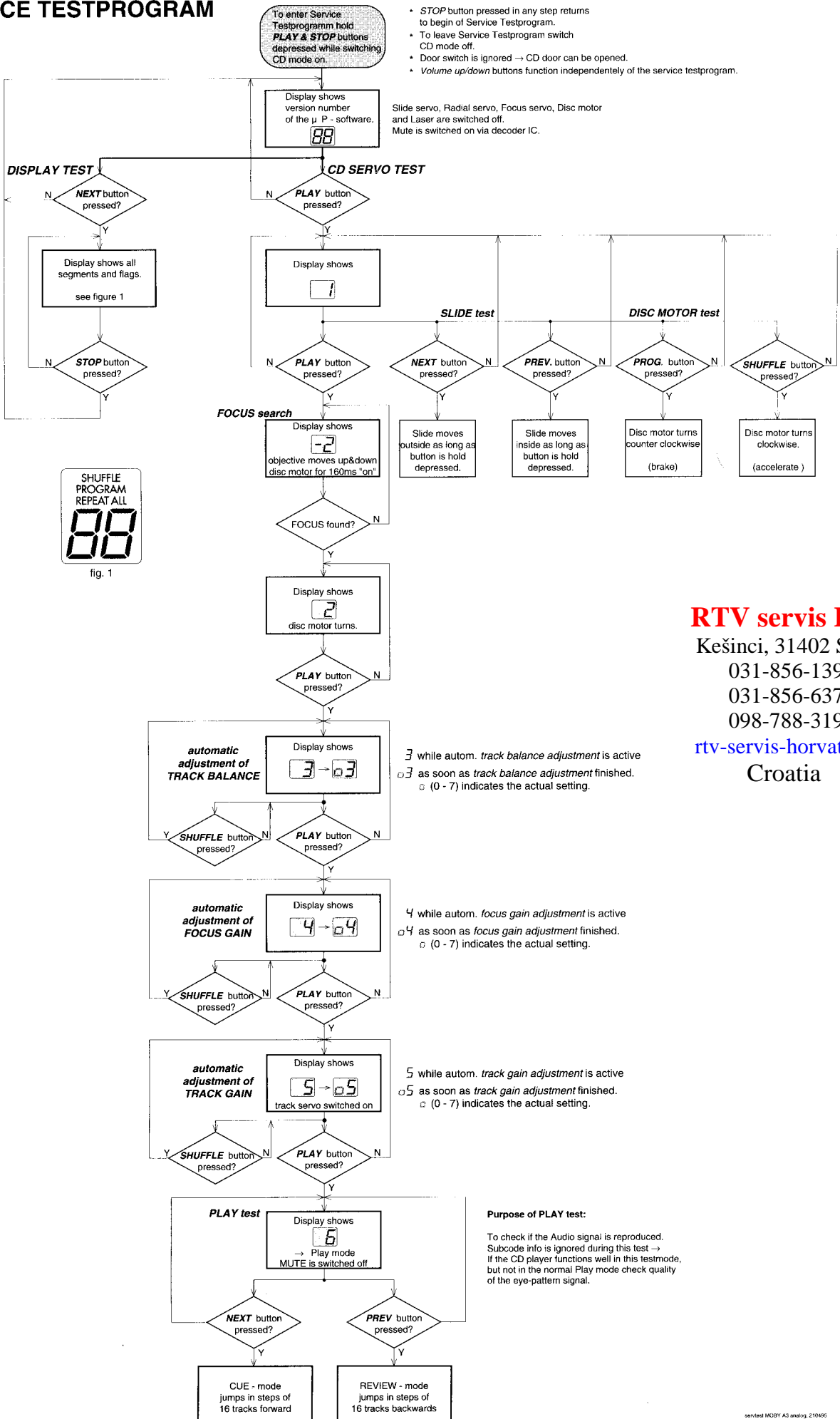
picture 8



picture 9

SERVICE TESTPROGRAM

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



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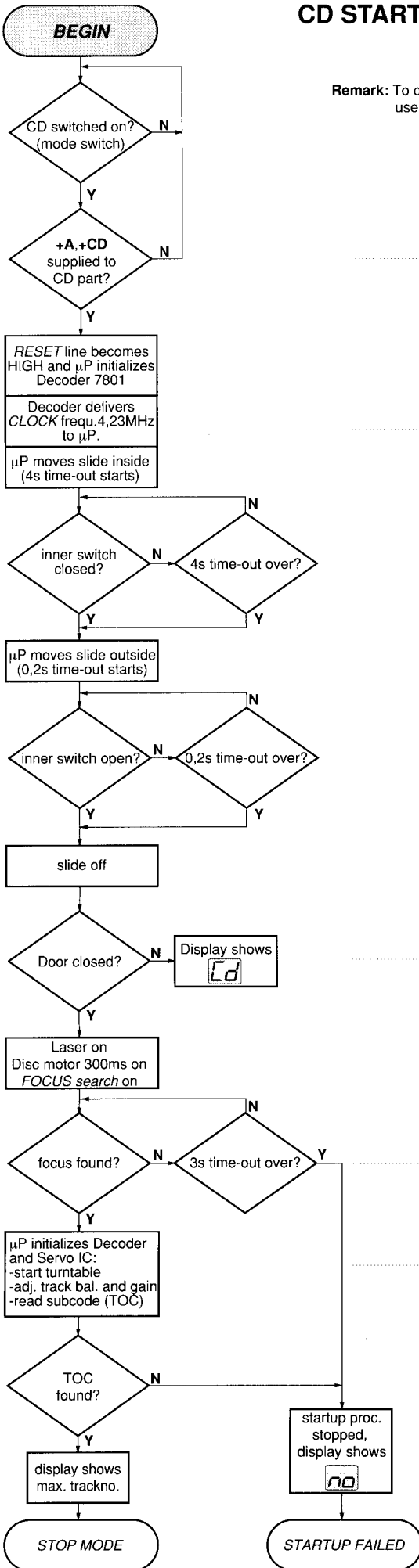
Croatia

3 while autom. track balance adjustment is active
 03 as soon as track balance adjustment finished.
 0 (0 - 7) indicates the actual setting.

4 while autom. focus gain adjustment is active
 04 as soon as focus gain adjustment finished.
 0 (0 - 7) indicates the actual setting.

5 while autom. track gain adjustment is active
 05 as soon as track gain adjustment finished.
 0 (0 - 7) indicates the actual setting.

CD STARTUP - PROCEDURE



Remark: To check focus servo, slide servo, track servo and turntable use service test program

..... - Battery empty?
- check +A, +CD and +μP

..... check: - time constant of reset circuit
- Pin 17 of μP 7800 HIGH ?
- Pin 9 of decoder 7801 HIGH?
..... check: - Pin 10 of μP 7800 - if 4,23 MHz o.k.

..... check: - door switch

..... check: - Laser light on ? - Check pin 38 of 7803 and LASER CONTROL circuit
- Focus Servo

..... check: - Motor control pin 37/38 of Decoder 7801 and Disc Motor driver 7805
- HF Signal

Abbreviations and Pin-descriptions of CD ICs

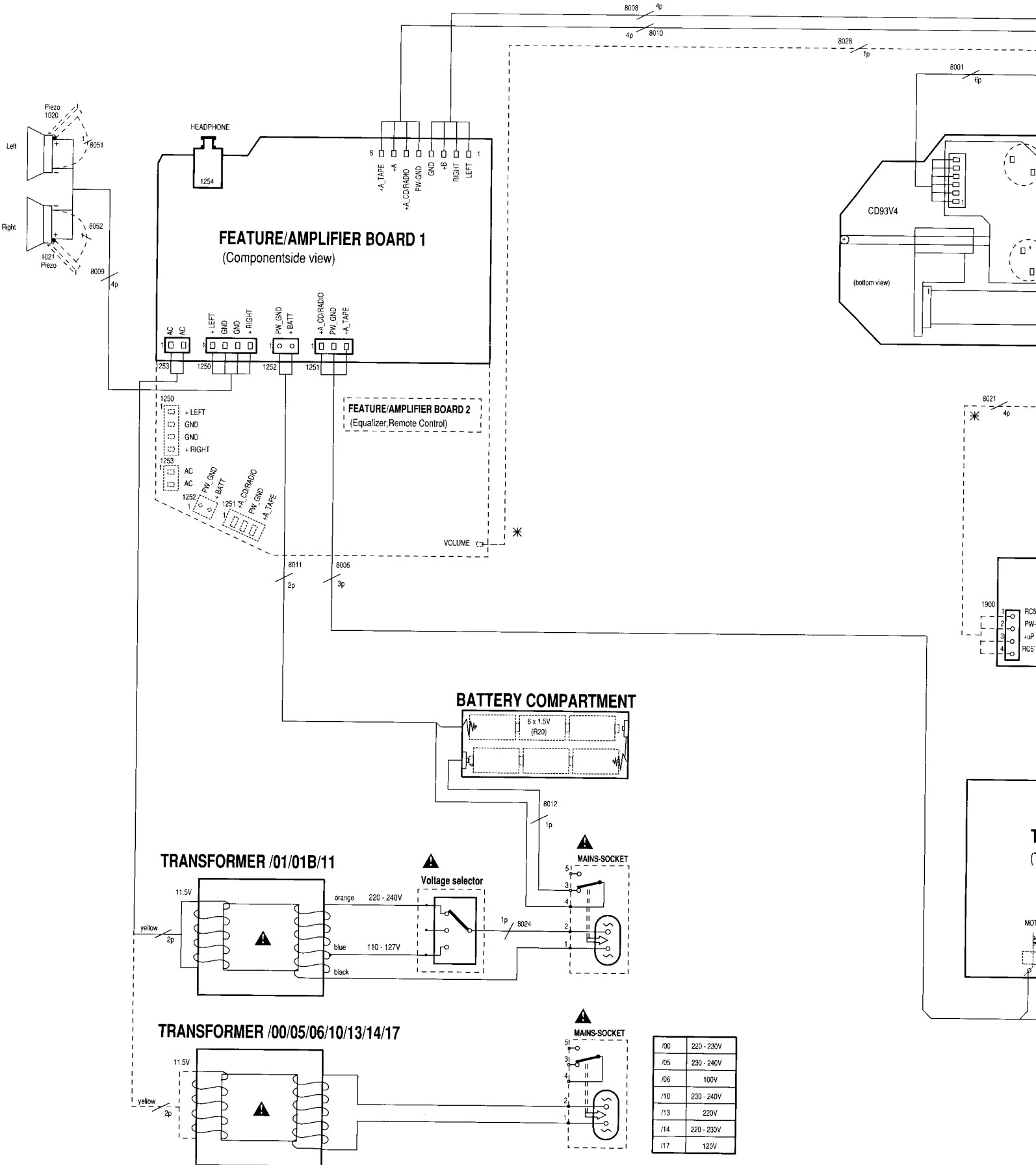
SERVO PROCESSOR M62475FP

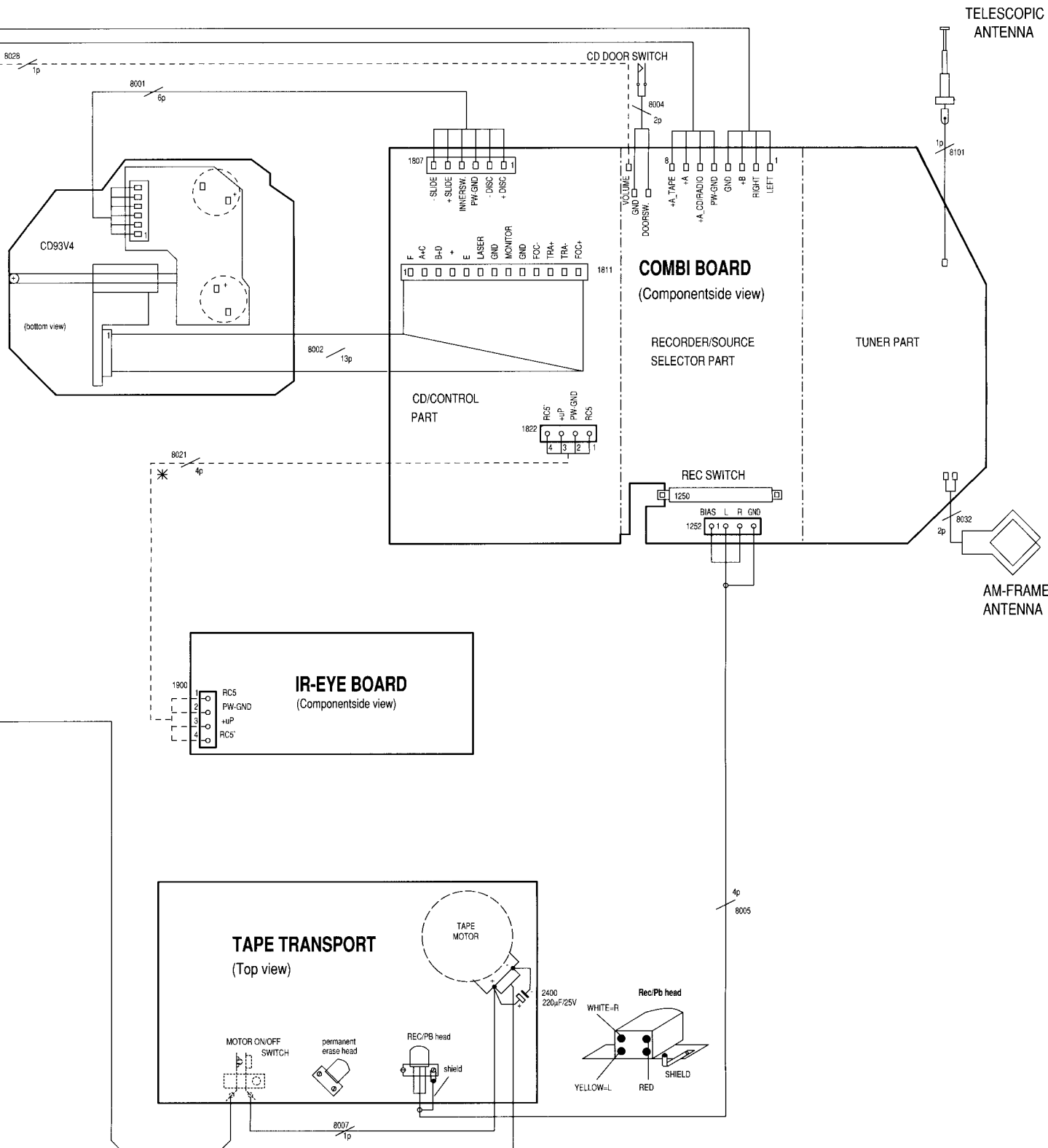
Pin	Name	Direction	Description
1-3	A, B, C	Diode array → Servo processor	Current input (central photo diode signal input)
4-5	E, F	Diode array → Servo processor	Current input (satellite photo diode signal input)
6	SGT	Servo processor → Track servo	Signal generator output to track servo, sends 1700Hz for adjustment procedure
7	TE -	-	Inverting input of trackerror amplifier
8	TEGain	-	Gain control pin of track error amplifier
9	TG1	-	Track Gain 1 - switch: controls the gain of the track servo amplifier
10	TE out	-	Track Error amplifier output
11	TC/Shock	-	Track Cross/Shock detector input
12	TS +	-	Non inverting input of track servo amplifier
13	TG2	not connected	Track Gain 2 - switch: controls the gain of the track servo amplifier
14	TS -	-	Inverting input of track servo amplifier
15	TS out	Servo processor → Servo driver	Output of track servo amplifier
16	SS +	-	Non inverting input of slide servo amplifier
17	SS -	-	Inverting input of slide servo amplifier
18	Slide out	Servo processor → Motor driver	Output of slide servo amplifier
19	DETFIL	-	Pin for connection of DETection FILter capacitor of <i>ADJUST LOGIC</i>
20	BIAS	Servo processor → external electronic	Reference Voltage output $V_{cc}/2$ of internal BIAS-generator
21	GND	-	Ground connection pin (negative supply)
22	MLA/DIS	μP → Servo processor	Serial interface Microprocessor LAtch control / DIScharge control for adjustment
23	JP1/SG	μP → Servo processor	Serial interface Jump control line / Signal Generator input line for adjustment
24	MCK	μP → Servo processor	Serial interface Clock input line
25	MSD	μP → Servo processor	Serial interface Data input line
26	Dout	Servo processor → μP	Serial interface Data output line
27	CLPF	-	Pin for connection of Low Pass Filter capacitor for <i>ADJUST LOGIC</i>
28	IREF	-	Reference current input
29	VCC	-	Positive supply connection pin (4V - 5.5V)
30	FSout	Servo processor → Servo driver	Output of focus servo amplifier
31	FS -	-	Inverting input of focus servo amplifier
32	FEGain	-	Gain control pin of focus error amplifier
33	FE -	-	Inverting input of focus error amplifier
34	SGF	Servo processor → Focus servo	Signal generator output to focus servo, sends 1300Hz for adjust. procedure
35	CFSR	-	Charge capacitor for Focus Search triangle-generator
36	APC +	-	Non inverting input of Automatic laser Power Control amplifier
37	APC -	-	Inverting input of Automatic laser Power Control amplifier
38	APC out	Servo processor → Laser driver	Output of Automatic laser Power Control amplifier
39	MRC	-	Connection pin for capacitor of Mirror detector
40	HF	Servo processor → Decoder	Output of HF amplifier
41	HFI	-	Inverting input of HF amplifier
42	ABC	-	Sum output of amplified A, B and C input (central photo diode signal input) to external ac-coupling capacitor

SIGNAL PROCESSOR M65821FP

Pin	Name	Direction	Description
1	VDD1	-	+supply for signal processor
2	EMP	not connected	Emphasis flag output
3	SYCLK	not connected	Frame synchronize output
4	LOCK	not connected	Low disc rotation detect output
5	SCAND	not connected	Subcode sync signal detection
6	CRCF	not connected	Subcode Q CRC check flag output
7	SBQS	Signal processor → μP	Interrupt signal to read out subcode Q data
8	MSD	μP ↔ Signal processor	Data line
9	RESET	Reset circuit → Signal processor	System reset
10	MCK	μP → Signal processor	Clock input
11	MLA	μP → Signal processor	Latch clock input
12-14	MODx	μP → Signal processor	Mode setting inputs (0,1,2)
15	VDD2	-	+supply for data slicer and VCO
16	IREF	-	Current reference
17	HFD	Signal processor → μP	HF signal detect
18	LPF	-	PLL loop filter
19	HF	Servo processor → Signal processor	HF signal input
20	TLC	-	Output from slice level control
21	VSS2	-	Ground
22	C846	not connected	8,4672MHz clock output
23	C423	Signal processor → μP	4,2336MHz clock output
24	EST2	not connected	Error monitor output2
25	EST1	not connected	Error monitor output1
26	XI	X-Tal → Signal processor	Crystal oscillator input
27	XO	Signal processor → X-Tal	Crystal oscillator output
28	DOTX	not connected	Output of digital interface
29	DO1	Signal processor → DAC	Serial data output to DAC
30	DO2	not connected	Serial data output to Dual DAC
31	CKSEL	not connected	Crystal selector input. H=8MHz, L=16MHz
32	DSCK	Signal processor → DAC	Data shift clock
33	WDCK	Signal processor → DAC	Word clock
34	LRCK1	Signal processor → DAC	Left/Right clock
35-36	not used	-	Left/Right clock
37	PWM1	Signal processor → Motor driver	Disc motor driving (Pulse Width Modulation) output1
38	PWM2	Signal processor → Motor driver	Disc motor driving (Pulse Width Modulation) output2
39-41	not used	-	-
42	VSS1	GND	Digital system ground

WIRING DIAGRAM





230V
240V
100V
240V
220V
230V
120V

* only for Remote control version

○ ○ ○ ○ JST connector 2.0mm

□ □ □ □ JST connector 2.5mm

□ □ □ □ hand soldered

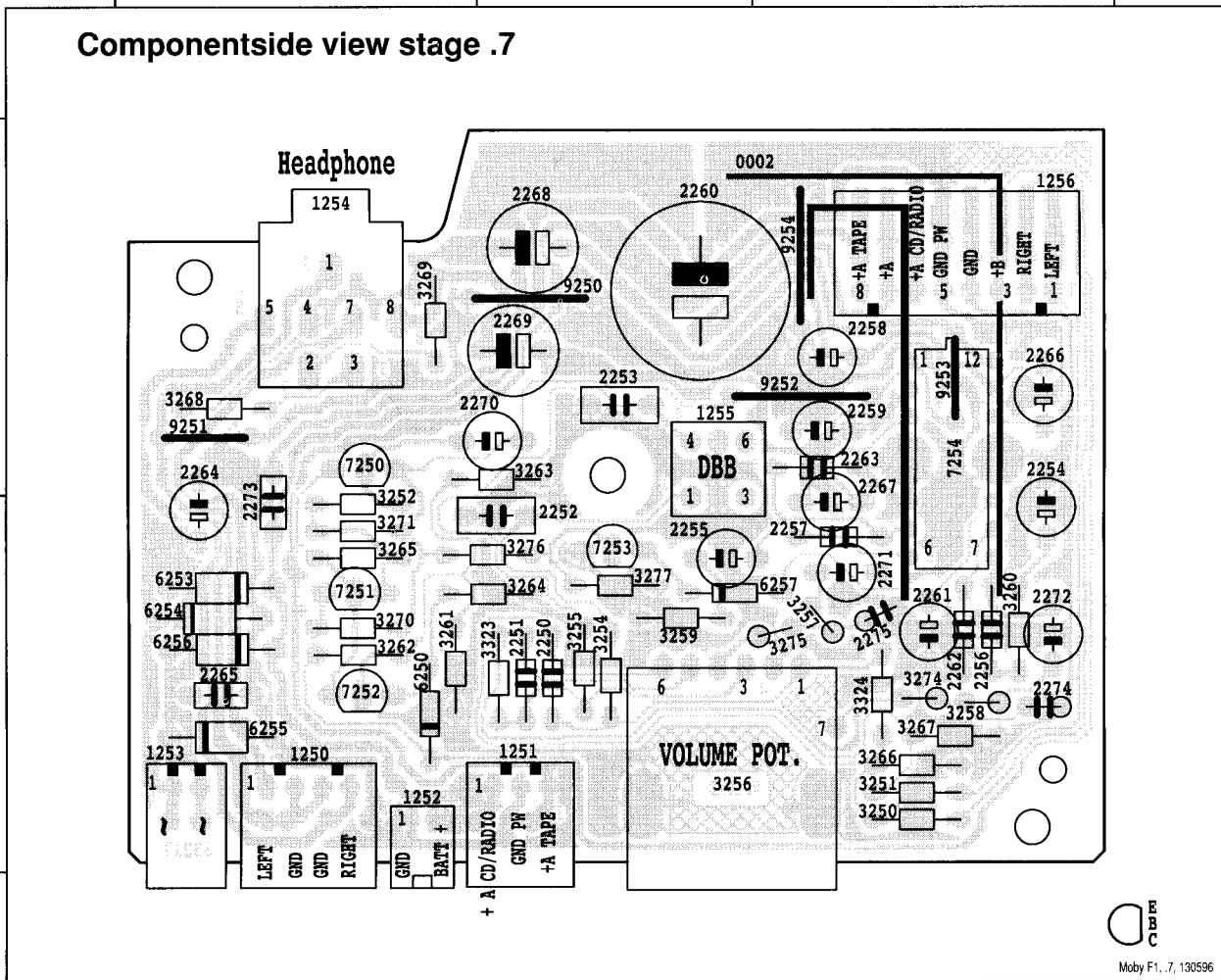
Feature /Amplifier Board (1)
For AZ8050 and AZ8051 only

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1251 B 2	2253 A 2	2262 B 3	2271 B 3	3255 B 2	3264 B 2	3275 B 3	6256 B 1	9252 A 3	1251 B 2
1252 B 1	2254 B 3	2263 A 3	2272 B 3	3256 B 2	3265 B 1	3276 B 2	6257 B 2	9253 A 3	1252 B 1
1253 B 1	2255 B 2	2264 B 1	2273 B 1	3257 B 3	3266 B 3	3277 B 2	7250 A 1	9254 A 3	1253 B 1
1254 A 1	2256 B 3	2265 B 1	2274 B 3	3258 B 3	3267 B 3	3323 B 2	7251 B 1		1254 A 1
1255 A 2	2257 B 3	2266 A 3	2275 B 3	3259 B 2	3268 A 1	3324 B 3	7252 B 1		1255 A 2
1256 A 3	2258 A 3	2267 B 3	3250 B 3	3260 B 3	3269 A 1	6250 B 1	7253 B 2		1256 A 3
2250 B 2	2259 A 3	2268 A 2	3251 B 3	3261 B 1	3270 B 1	6253 B 1	7254 A 3		2250 B 2
2251 B 2	2260 A 2	2269 A 2	3252 B 1	3262 B 1	3271 B 1	6254 B 1	9250 A 2		2251 B 2

1

2

3



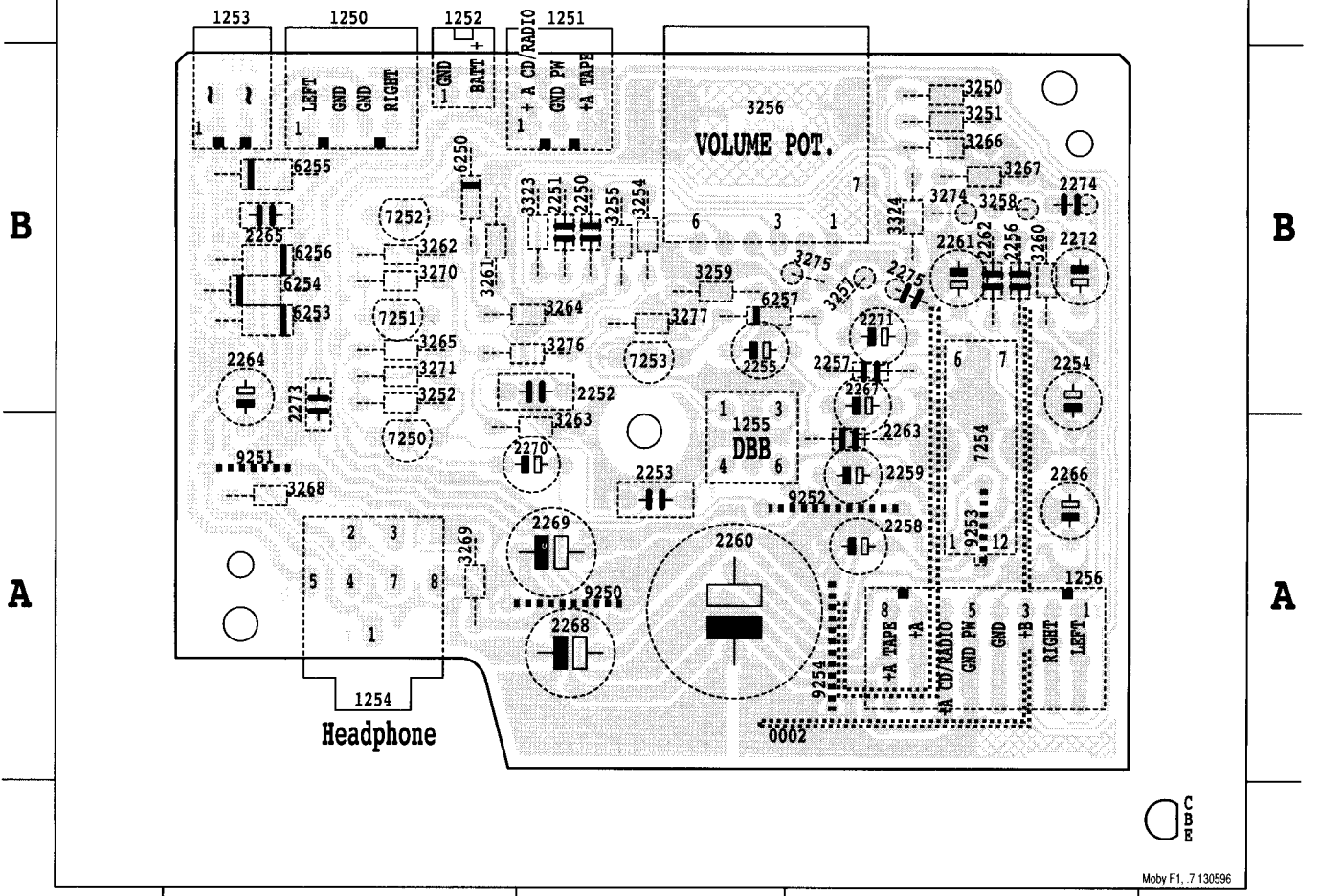
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1251 B 2	2253 A 2	2262 B 3	2271 B 3	3255 B 2	3264 B 2	3275 B 3	6256 B 1	9252 A 3
1252 B 1	2254 B 3	2263 A 3	2272 B 3	3256 B 2	3265 B 1	3276 B 2	6257 B 2	9253 A 3
1253 B 1	2255 B 2	2264 B 1	2273 B 1	3257 B 3	3266 B 3	3277 B 2	7250 A 1	9254 A 3
1254 A 1	2256 B 3	2265 B 1	2274 B 3	3258 B 3	3267 B 3	3323 B 2	7251 B 1	
1255 A 2	2257 B 3	2266 A 3	2275 B 3	3259 B 2	3268 A 1	3324 B 3	7252 B 1	
1256 A 3	2258 A 3	2267 B 3	3250 B 3	3260 B 3	3269 A 1	6250 B 1	7253 B 2	
2250 B 2	2259 A 3	2268 A 2	3251 B 3	3261 B 1	3270 B 1	6253 B 1	7254 A 3	
2251 B 2	2260 A 2	2269 A 2	3252 B 1	3262 B 1	3271 B 1	6254 B 1	9250 A 2	

1

2

3

Copperside view stage .7



1

2

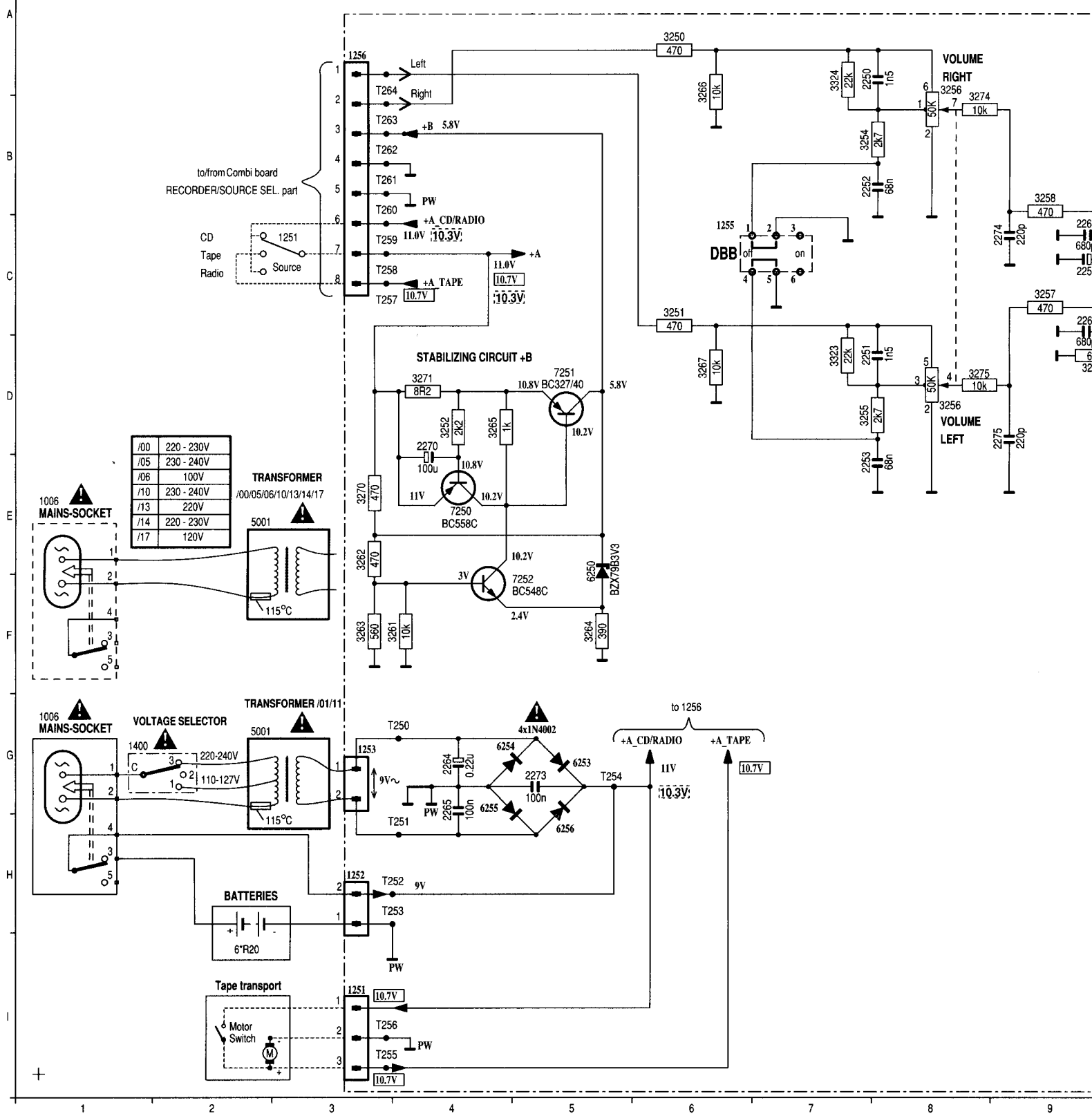
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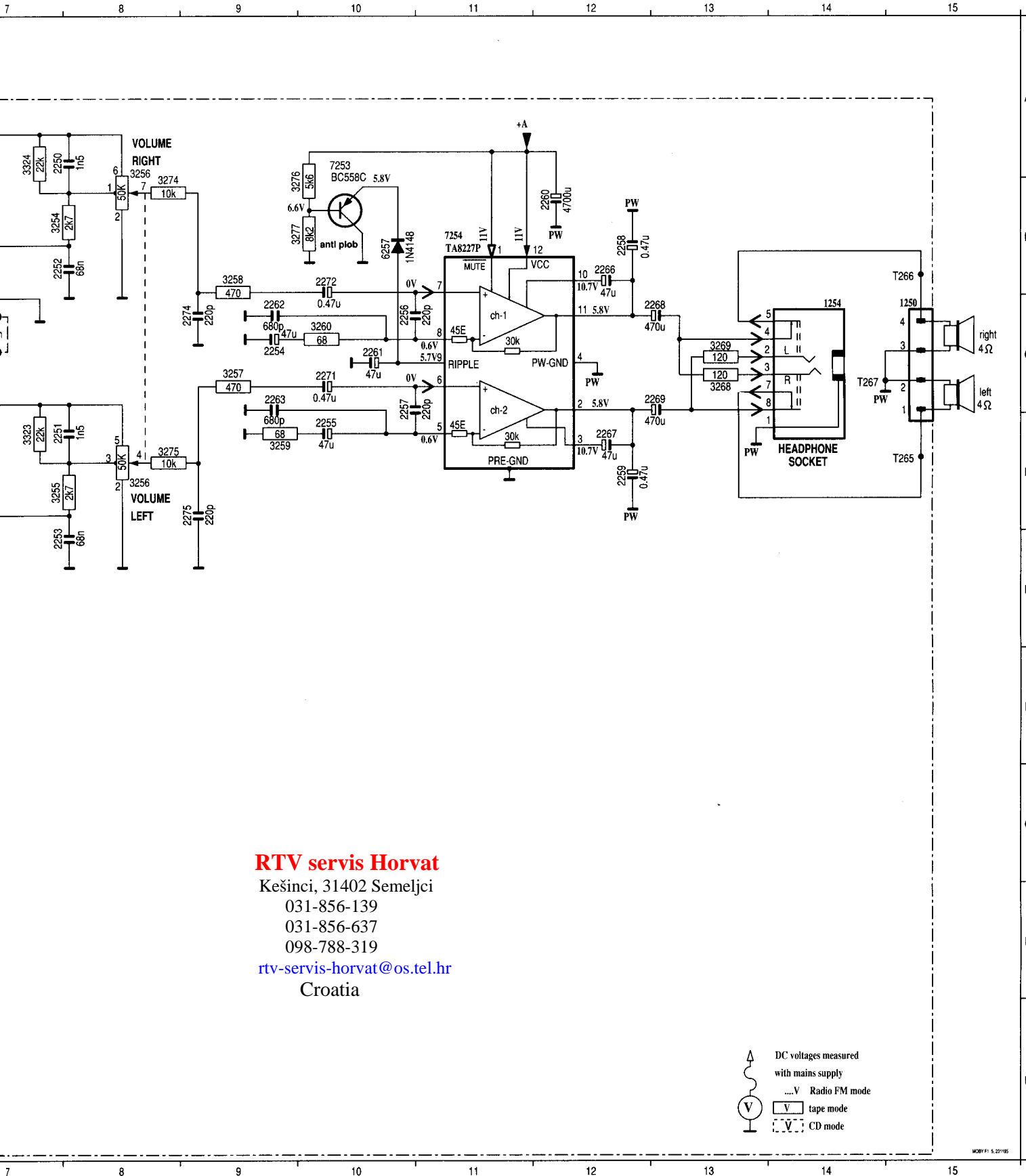


Moby F1.7 130596

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

Feature /Amplifier Board (1) For AZ8050 and AZ8051 only





- 1250 C15
- 1251 I3
- 1252 H3
- 1253 G3
- 1254 C14
- 1255 C6
- 1256 A3
- 2250 A7
- 2251 D7
- 2252 B7
- 2253 E7
- 2254 C9
- 2255 D10
- 2256 C10
- 2257 C10
- 2258 B12
- 2259 D12
- 2260 B12
- 2261 C10
- 2262 C9
- 2263 C9
- 2264 G4
- 2265 G4
- 2266 B12
- 2267 D12
- 2268 C13
- 2269 C13
- 2270 D4
- 2271 C10
- 2272 B10
- 2273 G5
- 2274 G9
- 2275 D9
- 3250 A6
- 3251 C6
- 3252 D4
- 3254 B7
- 3255 B7
- 3256 B8
- 3256 A8
- 3257 C9
- 3258 B9
- 3259 D9
- 3260 C10
- 3261 F4
- 3262 E3
- 3263 F3
- 3264 F5
- 3265 D4
- 3266 A6
- 3267 D6
- 3268 C13
- 3269 C13
- 3270 E3
- 3271 D4
- 3274 B8
- 3275 D8
- 3276 B10
- 3277 B10
- 3323 D7
- 3324 A7
- 6250 F5
- 6253 G5
- 6254 G4
- 6255 G4
- 6256 H5
- 6257 B10
- 7250 E4
- 7251 D5
- 7252 E4
- 7253 A10
- 7254 B11

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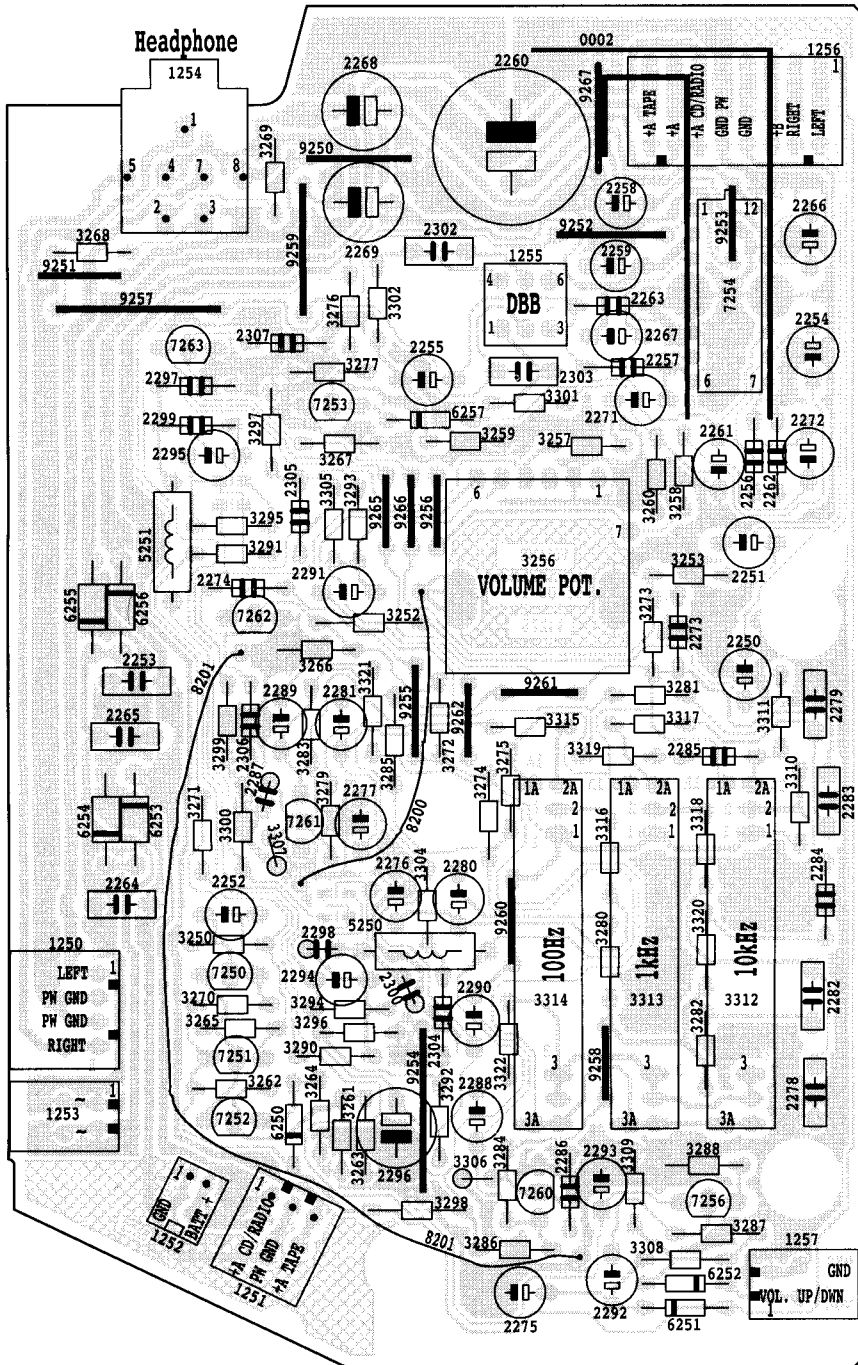
⤴ DC voltages measured with mains supply
 ...V Radio FM mode
 V tape mode
 V̇ CD mode

MORFF: S.22195

Feature /Amplifier Board (2)

For AZ8052 only

Componentside view stage .8



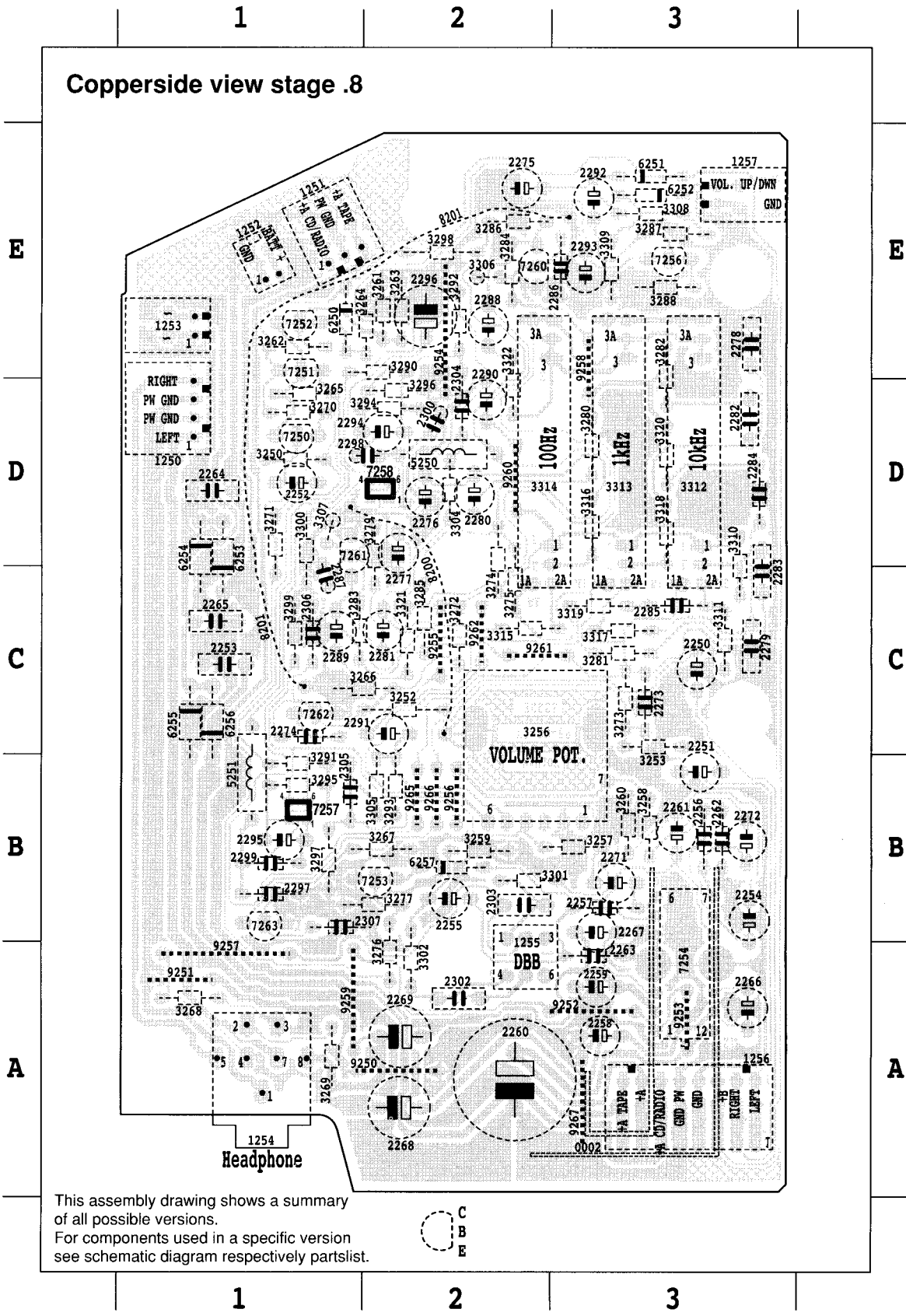
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1251 E 1	3258 B 3	6254 D 1
1252 E 1	3259 B 2	6255 C 1
1253 E 1	3260 B 3	6256 C 1
1254 A 1	3261 E 2	6257 B 2
1255 A 2	3262 E 1	7250 D 1
1256 A 3	3263 E 2	7251 E 1
1257 E 3	3264 E 2	7252 E 1
2250 C 3	3265 D 1	7253 B 2
2251 B 3	3266 C 2	7254 A 3
2252 D 1	3267 B 2	7256 E 3
2253 C 1	3268 A 1	7257 B 1 ©
2254 B 3	3269 A 1	7258 D 2 ©
2255 B 2	3270 D 1	7260 E 2
2256 B 3	3271 D 1	7261 D 1
2257 B 3	3272 C 2	7262 C 1
2258 A 3	3273 C 3	7263 B 1
2259 A 3	3274 D 2	8200 D 2
2260 A 2	3275 C 2	8201 C 1
2261 B 3	3276 A 2	9250 A 2
2262 B 3	3277 B 2	9251 A 1
2263 A 3	3279 D 2	9252 A 3
2264 D 1	3280 D 3	9253 A 3
2265 C 1	3281 C 3	9254 E 2
2266 A 3	3282 E 3	9255 C 2
2267 B 3	3283 C 1	9256 B 2
2268 A 2	3284 E 2	9257 A 1
2269 A 2	3285 C 2	9258 E 3
2271 B 3	3286 E 2	9259 A 1
2272 B 3	3287 E 3	9260 D 2
2273 C 3	3288 E 3	9261 C 2
2274 C 1	3290 E 2	9262 C 2
2275 E 2	3291 B 1	9265 B 2
2276 D 2	3292 E 2	9266 B 2
2277 D 2	3293 B 2	9267 A 3
2278 E 3	3294 D 2	
2279 C 3	3295 B 1	
2280 D 2	3296 D 2	
2281 C 2	3297 B 1	
2282 D 3	3298 E 2	
2283 C 3	3299 C 1	
2284 D 3	3300 D 1	
2285 C 3	3301 B 2	
2286 E 3	3302 A 2	
2287 C 1	3304 D 2	
2288 E 2	3305 B 2	
2289 C 1	3306 E 2	
2290 D 2	3307 D 1	
2291 C 2	3308 E 3	
2292 E 3	3309 E 3	
2293 E 3	3310 D 3	
2294 D 2	3311 C 3	
2295 B 1	3312 D 3	
2296 E 2	3313 D 3	
2297 B 1	3314 D 2	
2298 D 2	3315 C 2	
2299 B 1	3316 D 3	
2300 D 2	3317 C 3	
2302 A 2	3318 D 3	
2303 B 2	3319 C 3	
2304 D 2	3320 D 3	
2305 B 1	3321 C 2	
2306 C 1	3322 D 2	
2307 B 1	5250 D 2	
3250 D 1	5251 B 1	
3252 C 2	6250 E 1	
3253 C 3	6251 E 3	
3256 B 2	6252 E 3	

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



1250 D 1	3257 B 3	6253 D 1
1251 E 1	3258 B 3	6254 D 1
1252 E 1	3259 B 2	6255 C 1
1253 E 1	3260 B 3	6256 C 1
1254 A 1	3261 E 2	6257 B 2
1255 A 2	3262 E 1	7250 D 1
1256 A 3	3263 E 2	7251 E 1
1257 E 3	3264 E 2	7252 E 1
2250 C 3	3265 D 1	7253 B 2
2251 B 3	3266 C 2	7254 A 3
2252 D 1	3267 B 2	7256 E 3
2253 C 1	3268 A 1	7257 B 1 ©
2254 B 3	3269 A 1	7258 D 2 ©
2255 B 2	3270 D 1	7260 E 2
2256 B 3	3271 D 1	7261 D 1
2257 B 3	3272 C 2	7262 C 1
2258 A 3	3273 C 3	7263 B 1
2259 A 3	3274 D 2	8200 D 2
2260 A 2	3275 C 2	8201 C 1
2261 B 3	3276 A 2	9250 A 2
2262 B 3	3277 B 2	9251 A 1
2263 A 3	3279 D 2	9252 A 3
2264 D 1	3280 D 3	9253 A 3
2265 C 1	3281 C 3	9254 E 2
2266 A 3	3282 E 3	9255 C 2
2267 B 3	3283 C 1	9256 B 2
2268 A 2	3284 E 2	9257 A 1
2269 A 2	3285 C 2	9258 E 3
2271 B 3	3286 E 2	9259 A 1
2272 B 3	3287 E 3	9260 D 2
2273 C 3	3288 E 3	9261 C 2
2274 C 1	3290 E 2	9262 C 2
2275 E 2	3291 B 1	9265 B 2
2276 D 2	3292 E 2	9266 B 2
2277 D 2	3293 B 2	9267 A 3
2278 E 3	3294 D 2	
2279 C 3	3295 B 1	
2280 D 2	3296 D 2	
2281 C 2	3297 B 1	
2282 D 3	3298 E 2	
2283 C 3	3299 C 1	
2284 D 3	3300 D 1	
2285 C 3	3301 B 2	
2286 E 3	3302 A 2	
2287 C 1	3304 D 2	
2288 E 2	3305 B 2	
2289 C 1	3306 E 2	
2290 D 2	3307 D 1	
2291 C 2	3308 E 3	
2292 E 3	3309 E 3	
2293 E 3	3310 D 3	
2294 D 2	3311 C 3	
2295 B 1	3312 D 3	
2296 E 2	3313 D 3	
2297 B 1	3314 D 2	
2298 D 2	3315 C 2	
2299 B 1	3316 D 3	
2300 D 2	3317 C 3	
2302 A 2	3318 D 3	
2303 B 2	3319 C 3	
2304 D 2	3320 D 3	
2305 B 1	3321 C 2	
2306 C 1	3322 D 2	
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3252 C 2	6250 E 1	
3253 C 3	6251 E 3	
3256 B 2	6252 E 3	

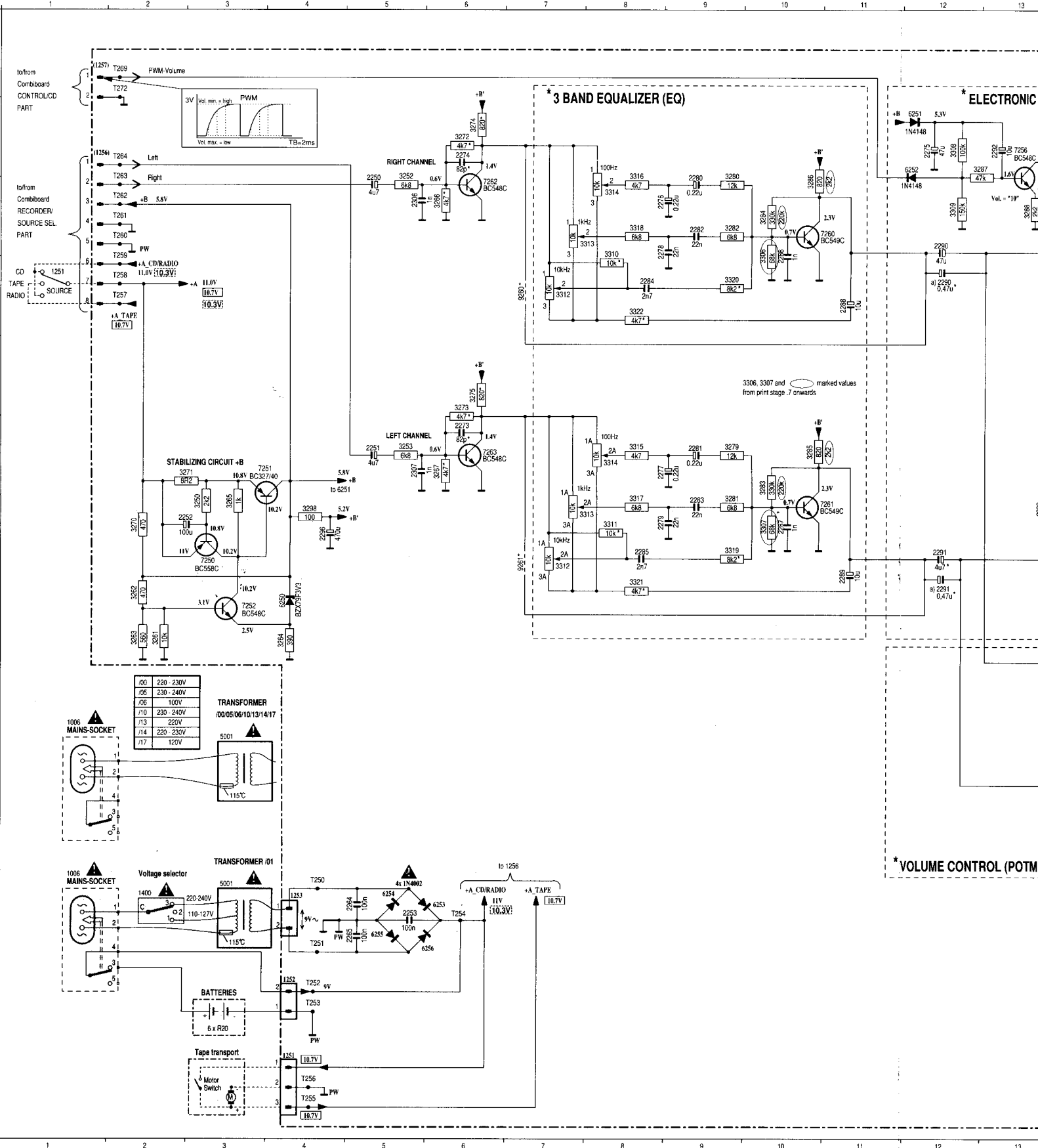
Copperside view stage .8



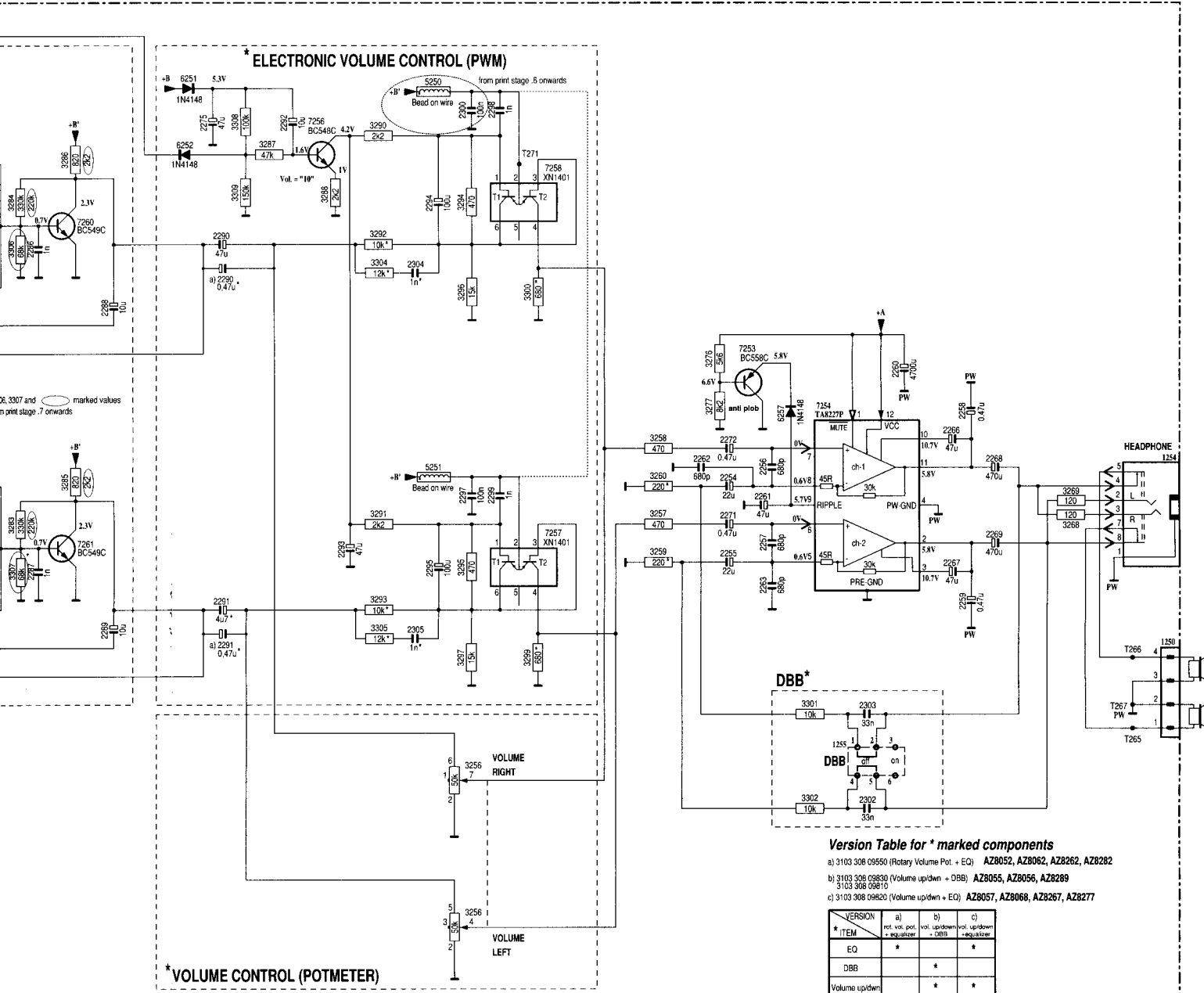
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist.

Feature /Amplifier Board (2) For AZ8052 only

1250 H22	1256 B 1	2254 F17	2260 E19	2266 E20	2273 F 6	2279 G 8	2285 G 8	2291 G12	2297 F15	2304 D14	3253 F 5	3260 F17	3266 C 6	3272 B 6	3279 F 9	3285 F10	3292 C14	3298 F 4	3305 H15
1251 N 4	1257 A 1	2255 G17	2261 F18	2267 G20	2274 96	2280 C 9	2286 C10	2292 B13	2298 F15	2305 H14	3256 K15	3261 H 2	3267 F 6	3273 F 6	3280 C 9	3286 C10	3293 C14	3299 H15	3306 D15
1252 M 4	2250 C 5	2256 F18	2262 F17	2268 F20	2275 B12	2281 F 9	2287 G10	2293 G13	2299 B15	2306 C 5	3257 F17	3262 G 2	3268 F21	3274 B 6	3281 G 9	3287 B12	3294 C14	3300 D15	3307 G15
1253 L 4	2251 F 5	2257 G18	2263 G18	2269 C20	2276 C 8	2282 C 9	2288 D11	2294 C14	2300 B15	2307 F 5	3257 F17	3263 H 2	3269 F21	3275 F 6	3282 C 9	3288 C13	3295 G14	3301 H16	3308 B15
1254 F22	2252 F 2	2258 E20	2264 L 5	2271 F17	2277 F 8	2283 G 9	2289 G11	2295 G14	2302 H19	3250 F 3	3258 F17	3264 H 4	3270 F 2	3276 E17	3283 F10	3290 B14	3296 D14	3302 I18	3309 C15
1255 H8	2253 L 5	2259 G20	2265 L 5	2272 F17	2278 C 8	2284 D 8	2290 C12	2296 G 4	2303 H19	3252 C 5	3259 G17	3265 F 3	3271 F 3	3277 E17	3284 C10	3291 F14	3297 H14	3304 D13	3310 D18

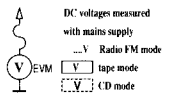


3272 B 6	3279 F 9	3285 F10	3292 C14	3298 F 4	3305 H13	3311 G 8	3314 F 8	3320 D 9	6251 B12	6257 F18	7256 B13	7263 F 6
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3274 B 6	3281 G 9	3287 B12	3294 C14	3300 D15	3307 G10	3312 G 7	3316 G 8	3322 D 8	6253 L 6	7251 F 3	7268 C15	9261 G 7
3275 E 6	3282 C 9	3288 C13	3295 G14	3301 H18	3308 B12	3313 C 8	3317 G 8	6250 B14	6254 L 5	7252 G 3	7260 C10	
3276 E17	3283 F10	3290 B14	3296 D14	3302 H8	3309 C12	3313 G 8	3318 C 8	6251 F14	6255 L 5	7253 D18	7261 G10	
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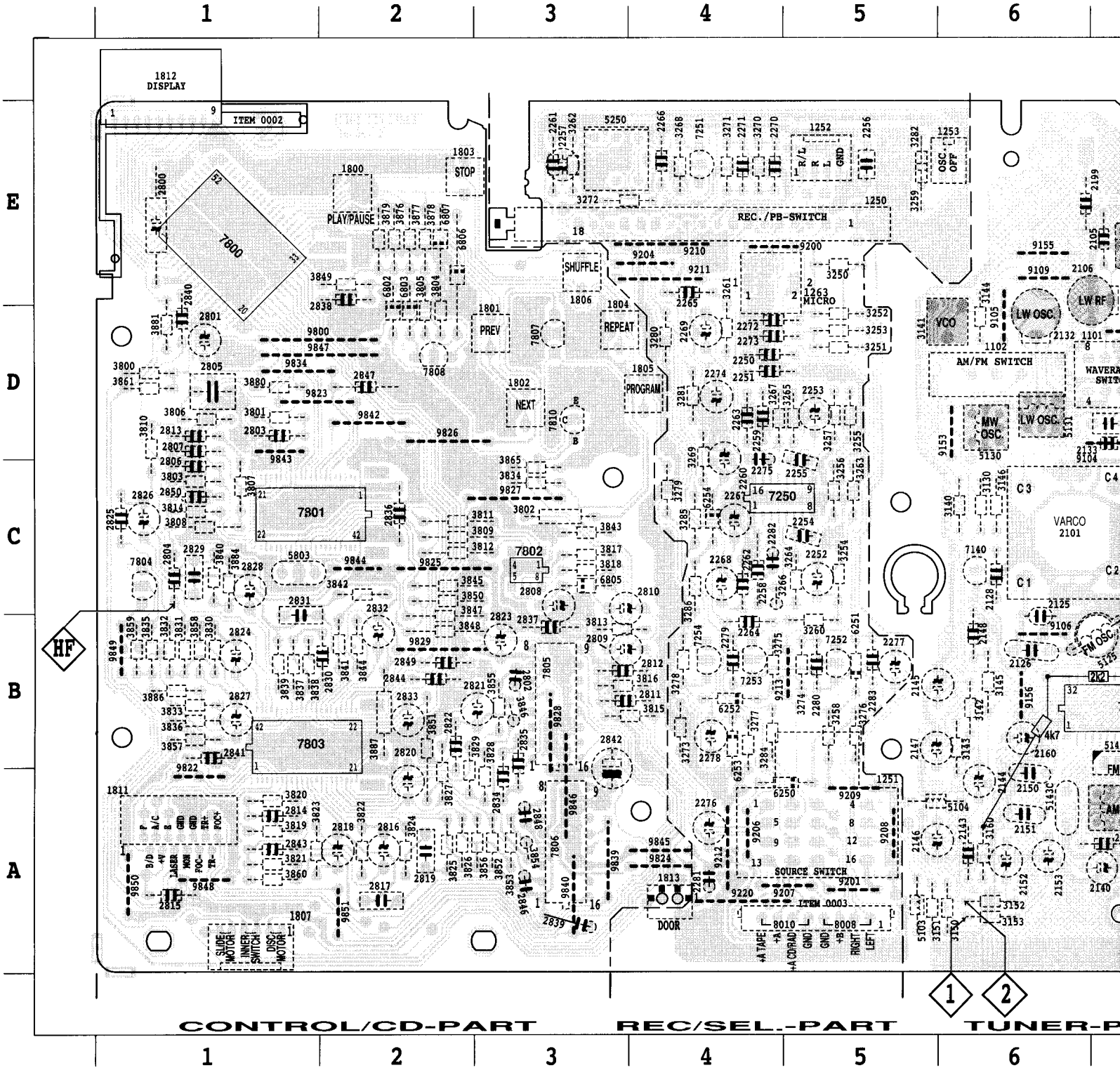


Version Table for * marked components
 a) 3103 308 09550 (Rotary Volume Pot. + EQ) AZ8052, AZ8062, AZ8262, AZ8282
 b) 3103 308 09830 (Volume up/down + DBB) AZ8055, AZ8056, AZ8289
 c) 3103 308 09820 (Volume up/down + EQ) AZ8057, AZ8068, AZ8267, AZ8277

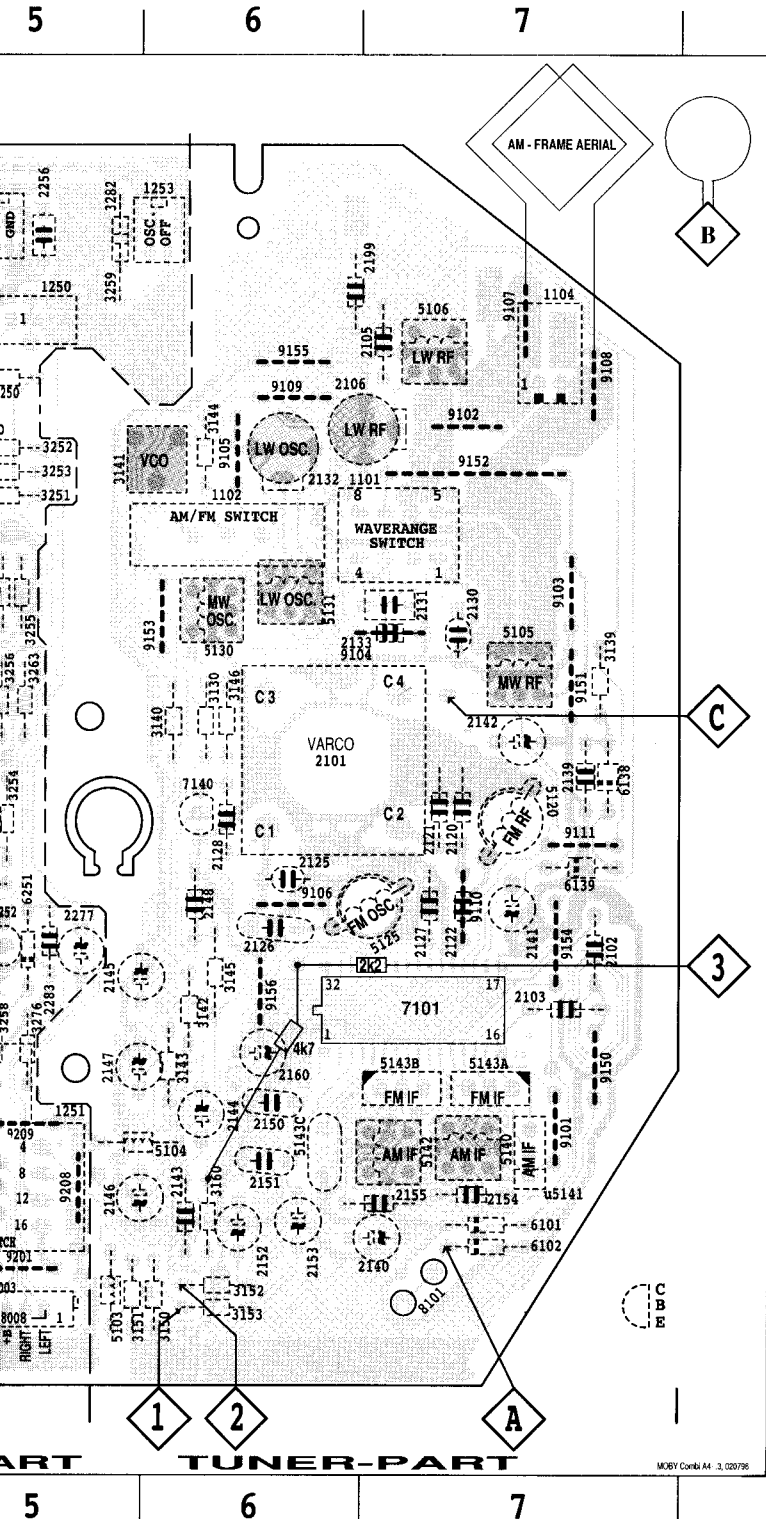
VERSION	a)	b)	c)
* ITEM	rot. vol. pot. + equalizer	vol. up/down + DBB	vol. up/down + equalizer
EQ	*	*	*
DBB		*	
Volume up/down		*	*
Volume Pot.	*		
2273, 2274	820p	82p	220p
2290, 2291	0.47u	4u7	4u7
2304, 2305		1n8	6n8
2359, 3260	220R	82R	150R
3266, 3267	4k7	22k	10k
3272, 3273	4k7	47k	18k
3274, 3275	820R	2k2	2k2
3292, 3293		5k6	2k7
3299, 3300		1k2	680R
3304, 3305		6k8	2k2
3310, 3311	10k		
3319, 3320	8k2		15k
3321, 3322	4k7		3k3
9260, 9261		*	



COMBI BOARD (A4 -) / Copperside view (layout stage .3)



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

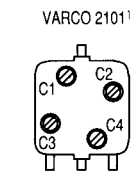


CONTROL /CD PART			REC /SEL PART		TUNER PART	
1800 E 2	3806 D 1	6802 D 2	1250 E 4	3278 B 4	1101 D 7	6102 A 7
1801 D 3	3807 C 1	6803 D 2	1251 A 5	3279 C 4	1102 D 6	6138 C 7
1802 D 3	3808 C 1	6805 C 3	1252 E 5	3280 D 4	1104 E 7	6139 C 7
1803 E 2	3809 C 2	6806 E 2	1253 E 6	3281 D 4	2101 C 6	7140 C 6
1804 D 3	3810 D 1	6807 E 2	1263 E 4	3282 E 5	2102 B 7	8101 A 7
1805 D 4	3811 C 2	7804 C 1	2250 D 4	3284 B 4	2103 B 7	9101 A 7
1806 E 3	3812 C 2	7805 B 3	2251 D 4	3285 C 4	2105 E 7	9102 E 7
1807 A 1	3813 B 3	7806 A 3	2252 C 5	3286 C 4	2106 E 7	9103 D 7
1811 A 1	3814 C 1	7807 D 3	2253 D 5	5250 E 3	2120 C 7	9104 D 7
1812 E 1	3815 B 4	7808 D 2	2254 C 5	6250 A 5	2121 C 7	9105 D 6
1813 A 4	3816 B 3	7810 D 3	2255 C 5	6251 B 5	2122 B 7	9106 B 6
2800 E 1	3817 C 3	9800 D 1	2256 E 5	6252 B 4	2125 B 6	9107 E 7
2801 D 1	3818 C 3	9822 A 1	2257 E 3	6253 B 4	2126 B 6	9108 E 7
2802 B 3	3819 A 1	9823 D 1	2258 C 4	6254 C 4	2127 B 7	9109 E 6
2803 D 1	3820 A 1	9824 A 4	2259 D 4	7251 E 4	2128 C 6	9110 B 7
2804 C 1	3821 A 1	9825 C 2	2260 D 4	7252 B 5	2130 D 7	9111 C 7
2805 D 1	3822 A 2	9826 D 2	2261 E 3	7253 B 4	2131 D 7	9150 B 7
2806 C 1	3823 A 1	9827 C 3	2262 C 4	7254 B 4	2132 D 6	9151 C 7
2807 D 1	3824 A 2	9828 B 3	2263 D 4	8008 A 5	2133 D 7	9152 D 7
2808 C 3	3825 A 2	9829 B 2	2264 B 4	9200 E 4	2139 C 7	9153 D 6
2809 B 3	3826 A 2	9834 D 1	2265 E 4	9201 A 5	2140 A 7	9154 B 7
2810 C 3	3827 A 2	9839 A 3	2266 E 4	9204 E 4	2141 B 7	9155 E 6
2811 B 3	3828 A 3	9840 A 3	2267 C 4	9206 A 4	2142 C 7	9156 B 6
2812 B 3	3829 A 2	9842 D 2	2268 C 4	9207 A 5	2143 A 6	7101 D 1
2813 D 1	3830 B 1	9843 D 1	2269 D 4	9208 A 5	2144 A 6	
2814 A 1	3831 B 1	9844 C 2	2270 E 4	9209 A 5	2145 B 5	
2815 A 1	3832 B 1	9845 A 4	2271 E 4	9210 E 4	2146 A 5	
2816 A 2	3833 B 1	9846 A 3	2272 D 4	9211 E 4	2147 B 5	
2817 A 2	3834 C 3	9847 D 1	2273 D 4	9212 A 4	2148 B 6	
2818 A 2	3835 B 1	9848 A 1	2274 D 4	9213 B 5	2150 B 6	
2819 A 2	3836 B 1	9849 B 1	2275 C 4	9220 A 4	2151 A 6	
2820 A 2	3837 B 1	9850 A 1	2276 A 4	7250 C 4	2152 A 6	
2821 B 3	3838 B 1	9851 A 2	2277 B 5		2153 A 6	
2822 B 2	3839 B 1	7800 A 7	2278 B 4		2154 A 7	
2823 B 3	3840 C 1	7801 C 7	2279 B 4		2155 A 7	
2824 B 1	3841 B 2	7802 C 5	2280 B 5		2160 B 6	
2825 C 1	3842 C 2	7803 B 1	2281 A 4		2199 E 6	
2826 C 1	3843 C 3		2282 C 4		3130 C 6	
2827 B 1	3844 B 2		2283 B 5		3139 C 7	
2828 C 1	3845 C 2		3250 E 5		3140 C 6	
2829 C 1	3846 B 3		3251 D 5		3141 D 6	
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2838 E 2	3855 B 3		3260 B 5		3153 A 6	
2839 A 3	3856 A 3		3261 D 4		3160 A 6	
2840 D 1	3857 B 1		3262 E 3		5103 A 5	
2841 B 1	3858 B 1		3263 C 3		5104 A 5	
2842 A 3	3859 B 1		3264 C 5		5105 C 7	
2843 A 1	3860 A 1		3265 D 5		5106 E 7	
2844 B 2	3861 D 1		3266 C 4		5120 C 7	
2846 A 3	3865 C 3		3267 D 4		5125 B 7	
2847 D 2	3876 E 2		3268 E 4		5130 D 6	
2848 A 3	3877 E 2		3269 D 4		5131 D 6	
2849 B 2	3878 E 2		3270 E 4		5140 A 7	
2850 C 1	3879 E 2		3271 E 4		5141 A 7	
3800 D 1	3880 D 1		3272 E 4		5142 A 7	
3801 D 1	3881 D 1		3273 B 4		5143A B 7	
3802 C 3	3884 C 1		3274 B 5		5143B B 7	
3803 C 1	3886 B 1		3275 B 4		5143C A 6	
3804 D 2	3887 B 2		3276 B 5		6101 A 7	
3805 D 2	5803 C 1		3277 B 4			

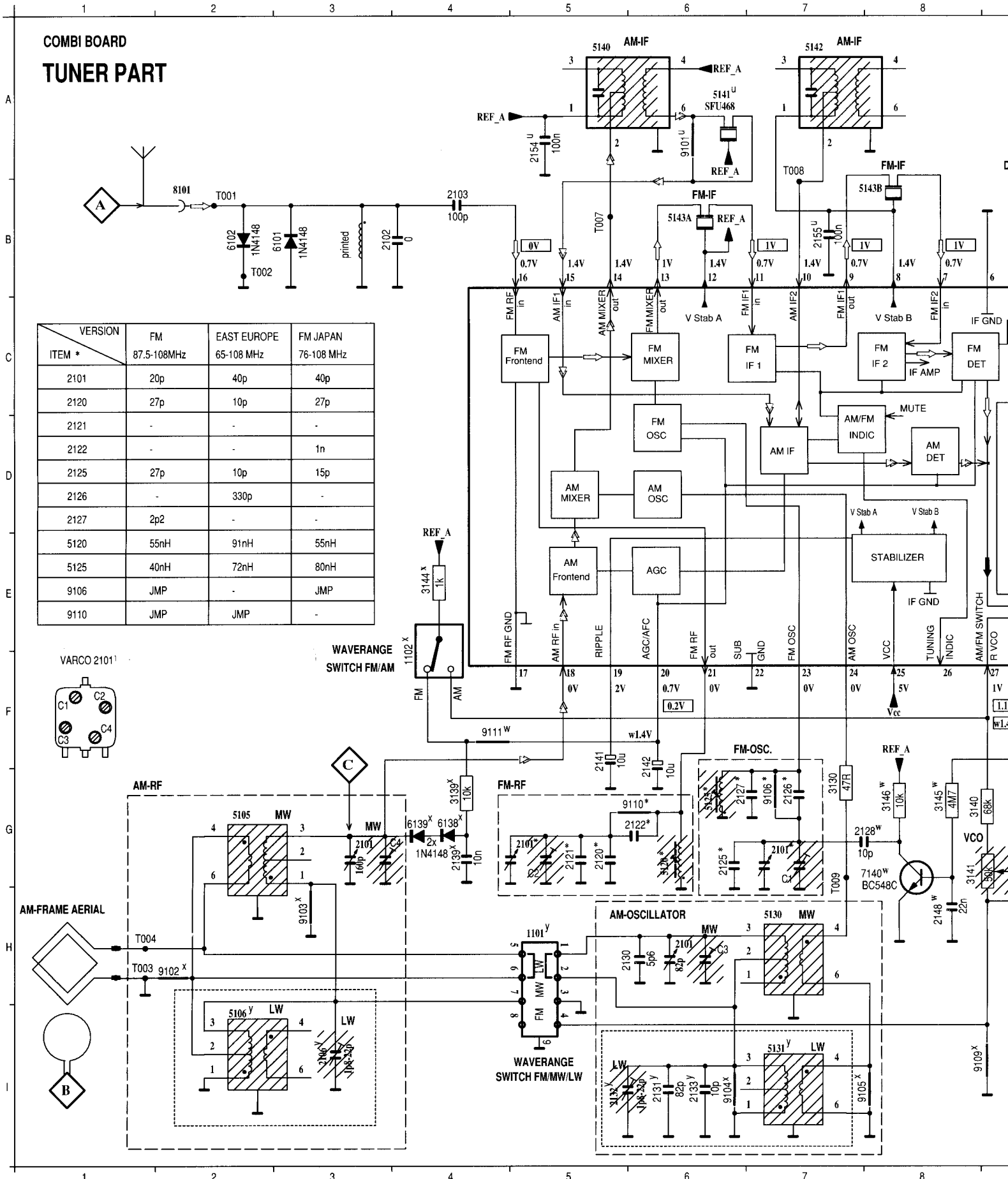
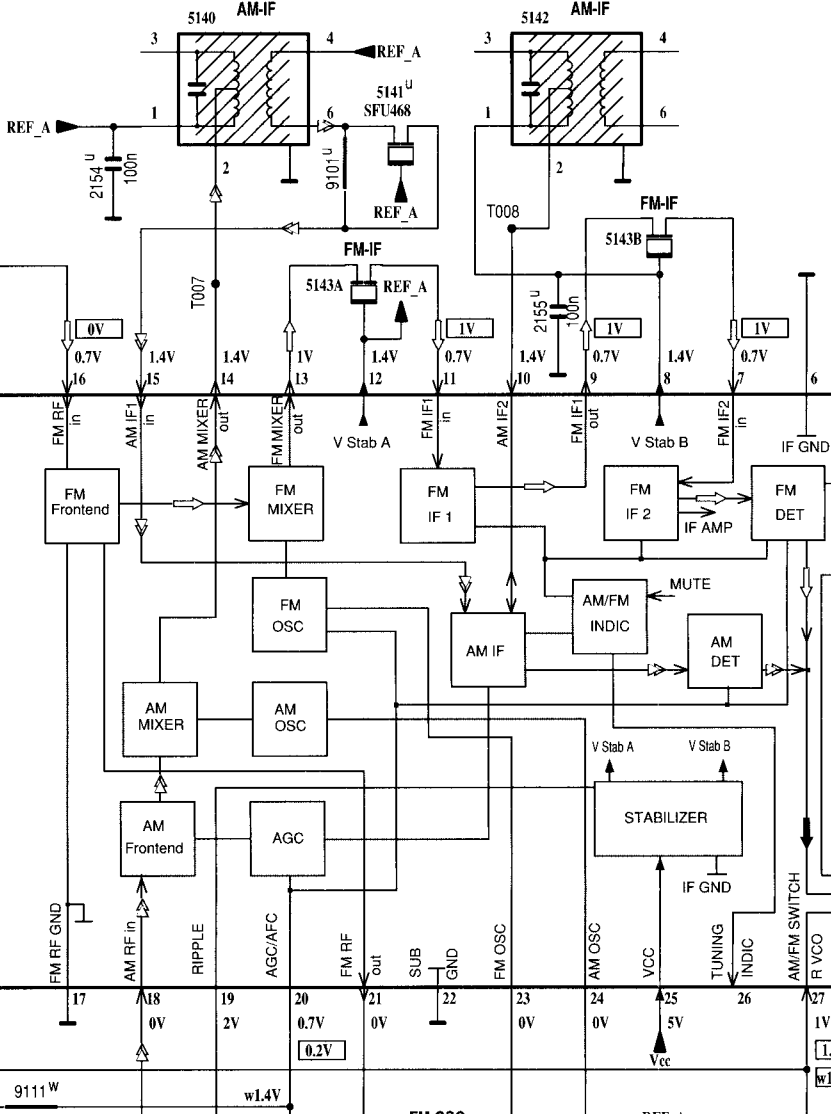
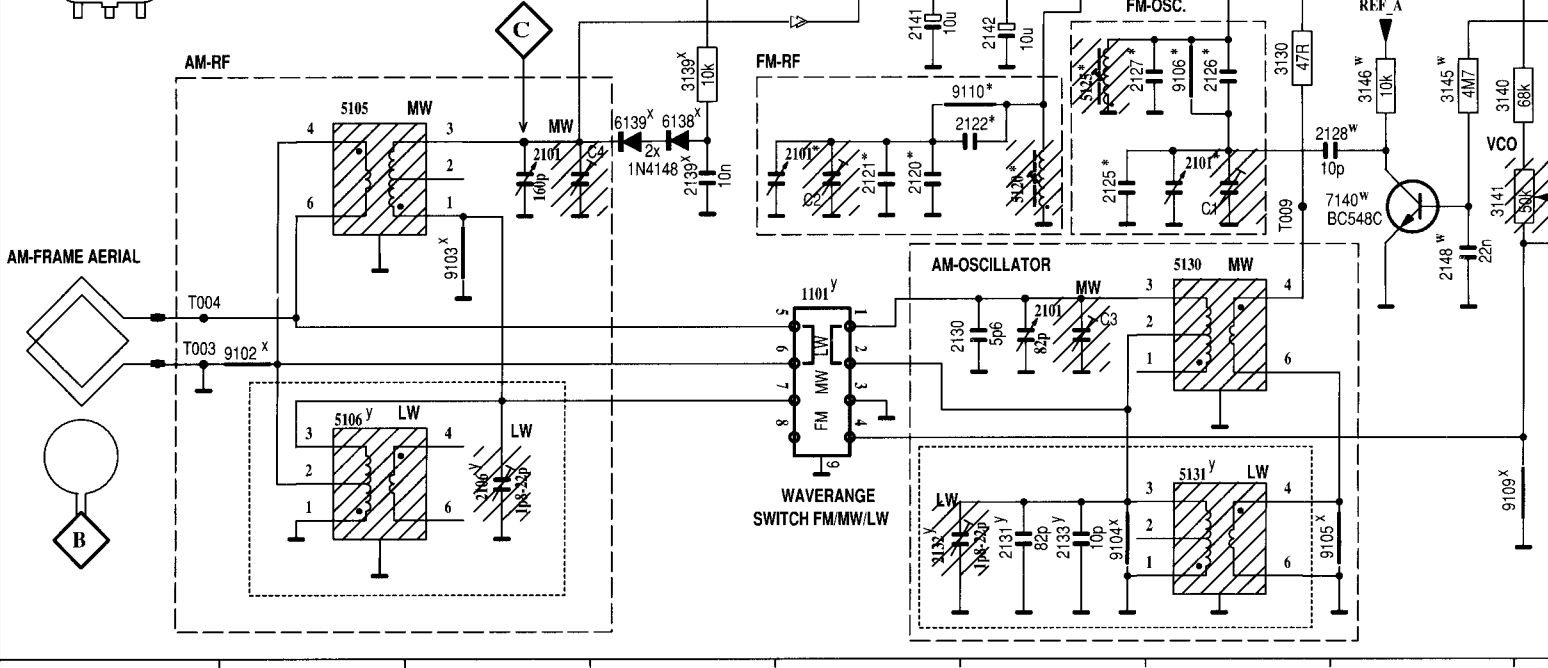
MOBY Comb A4 - 3, 020796

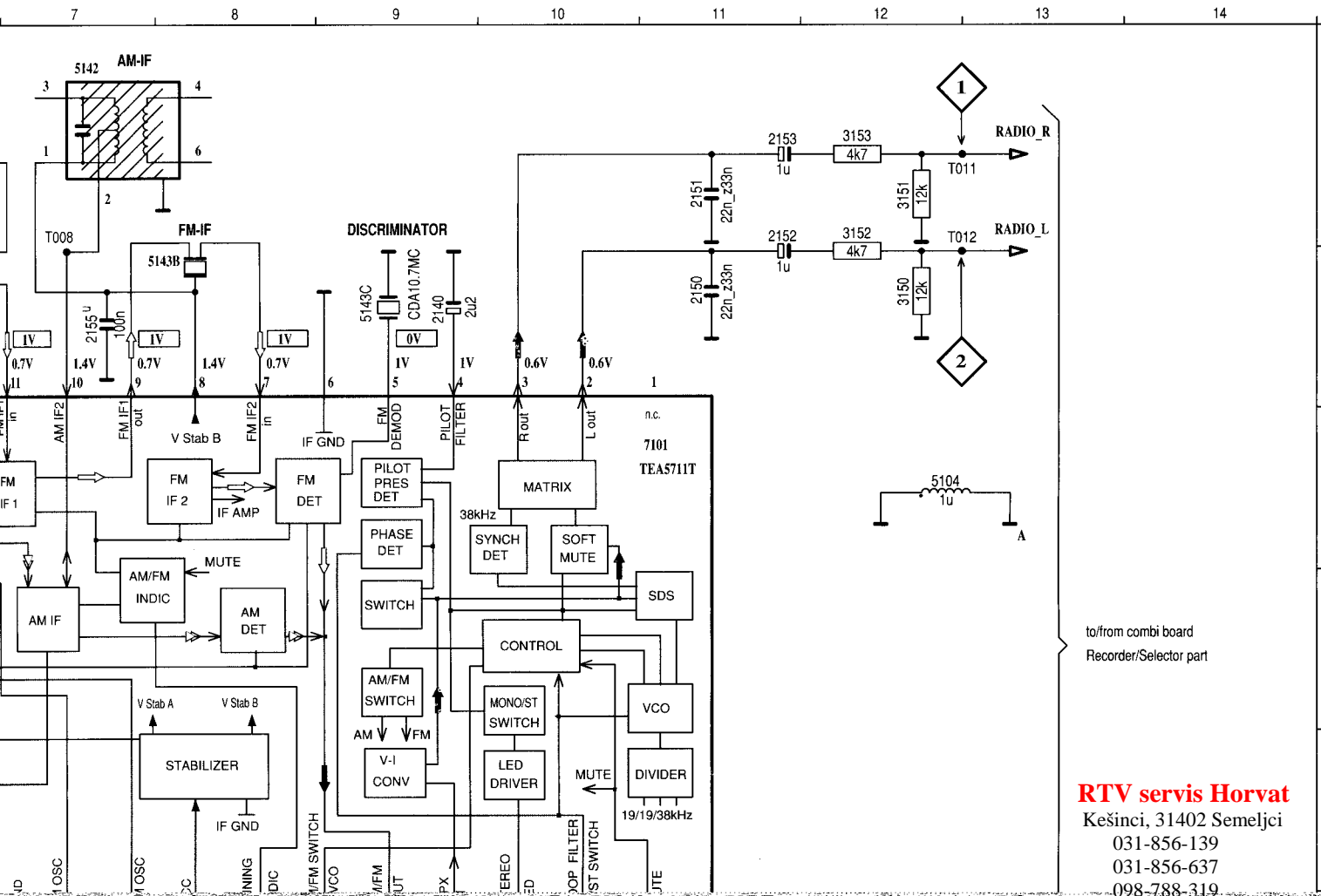
COMBI BOARD
TUNER PART

VERSION	FM 87.5-108MHz	EAST EUROPE 65-108 MHz	FM JAPAN 76-108 MHz
ITEM *			
2101	20p	40p	40p
2120	27p	10p	27p
2121	-	-	-
2122	-	-	1n
2125	27p	10p	15p
2126	-	330p	-
2127	2p2	-	-
5120	55nH	91nH	55nH
5125	40nH	72nH	80nH
9106	JMP	-	JMP
9110	JMP	JMP	-



WAVERANGE SWITCH FM/AM



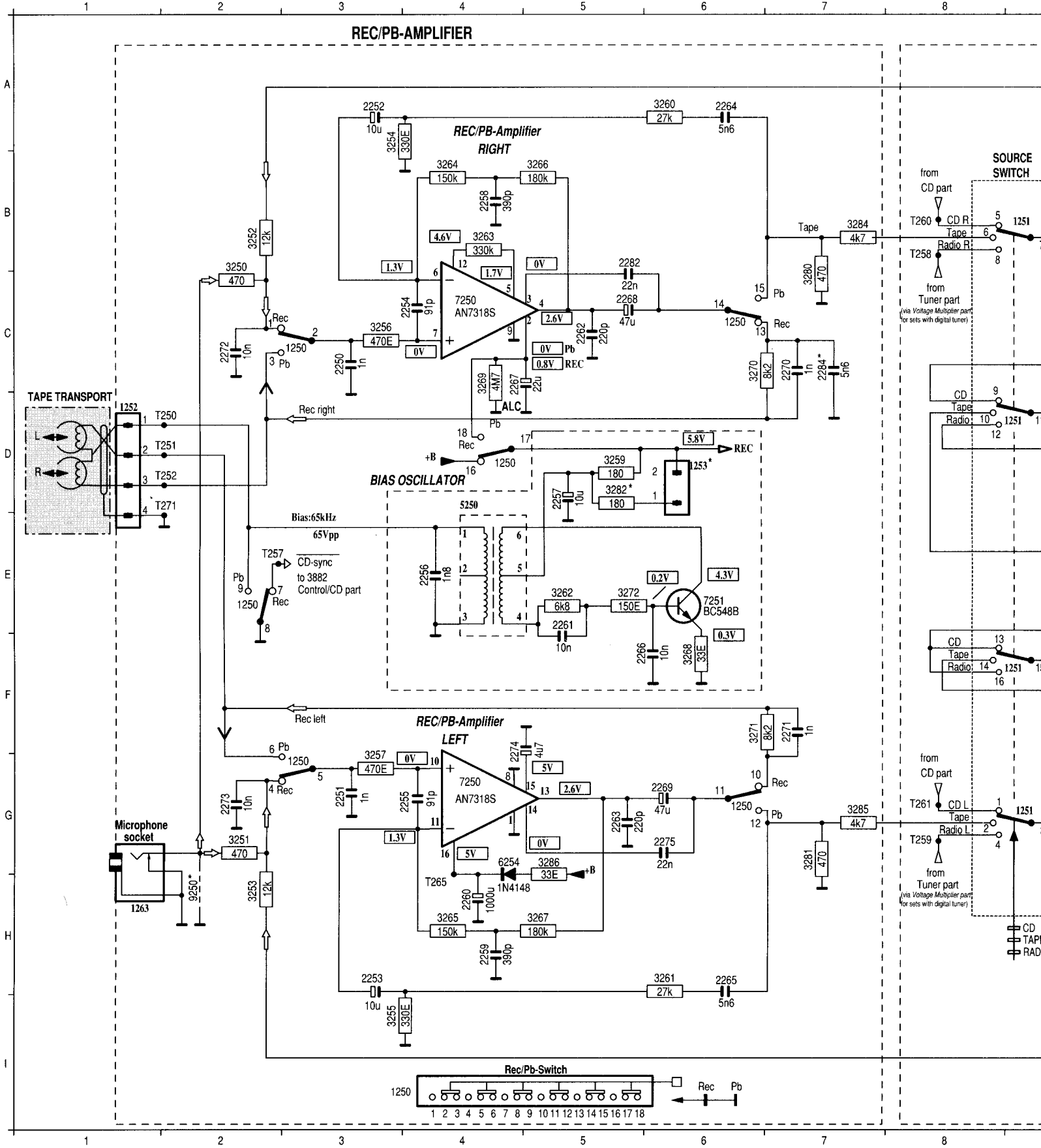


RTV servis Horvat
 Kešinci, 31402 Semeljci
 031-856-139
 031-856-637
 098-788-319

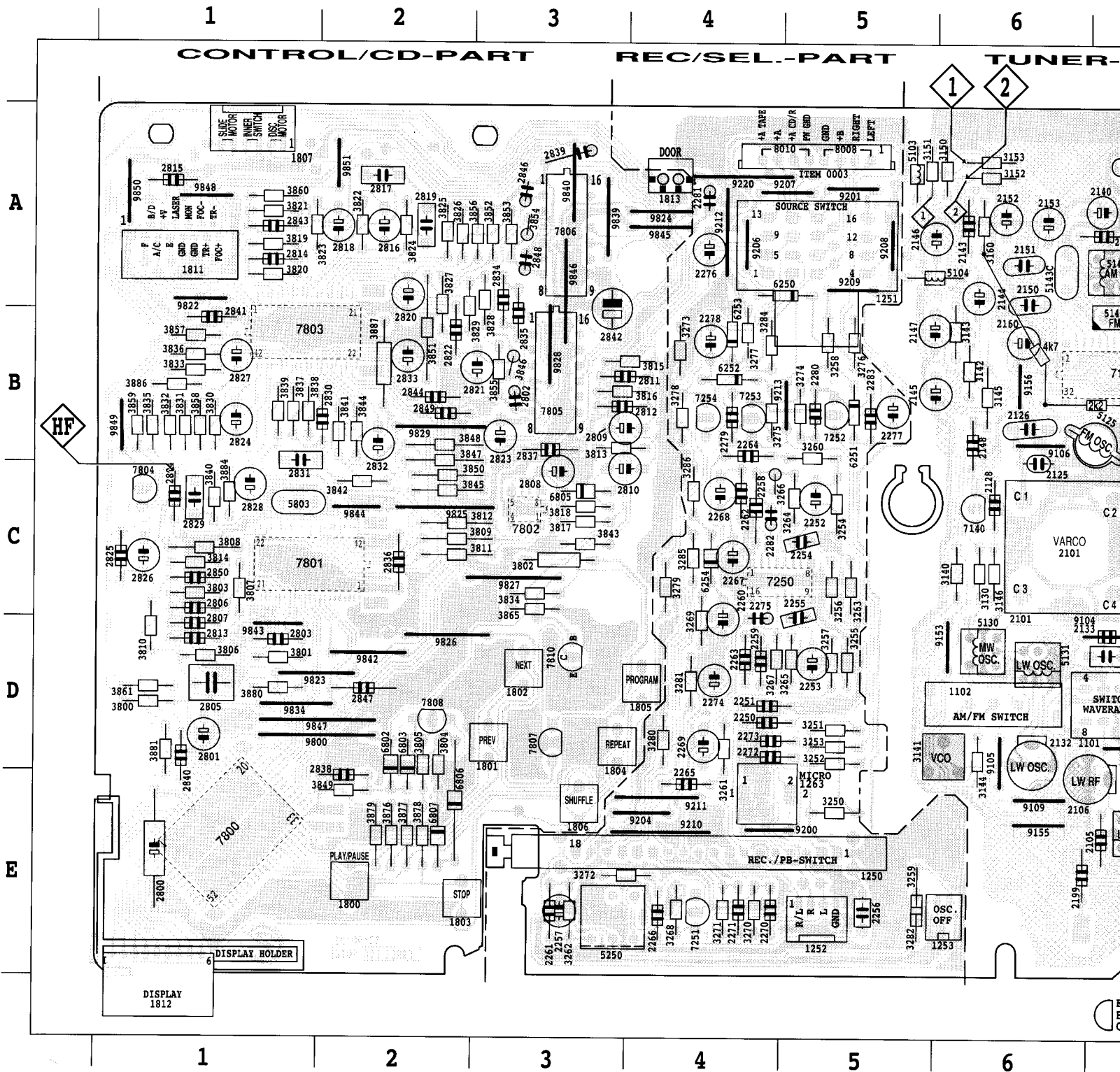
rtv.servis-horvat@ix.tel.hr

- 1101 H5
- 1102 F4
- 1104 H1
- 2101 G7
- 2101 H6
- 2101 G3
- 2101 G5
- 2102 B3
- 2103 B4
- 2106 I3
- 2120 G5
- 2121 G5
- 2122 G6
- 2125 G6
- 2126 F7
- 2127 G6
- 2128 G8
- 2130 H6
- 2131 I6
- 2132 I5
- 2133 I6
- 2139 G4
- 2140 B9
- 2141 F5
- 2142 F6
- 2143 G9
- 2144 F9
- 2145 G10
- 2146 G10
- 2147 G10
- 2148 H8
- 2150 B11
- 2151 A11
- 2152 A11
- 2153 A11
- 2154 A5
- 2155 B7
- 2160 H10
- 3130 G7
- 3139 G4
- 3140 G8
- 3141 G8
- 3142 G10
- 3143 G11
- 3144 E4
- 3145 G8
- 3146 G8
- 3150 B12
- 3151 A12
- 3152 A12
- 3153 A12
- 3160 H10
- 5103 H11
- 5104 C12
- 5105 G2
- 5106 I2
- 5120 G6

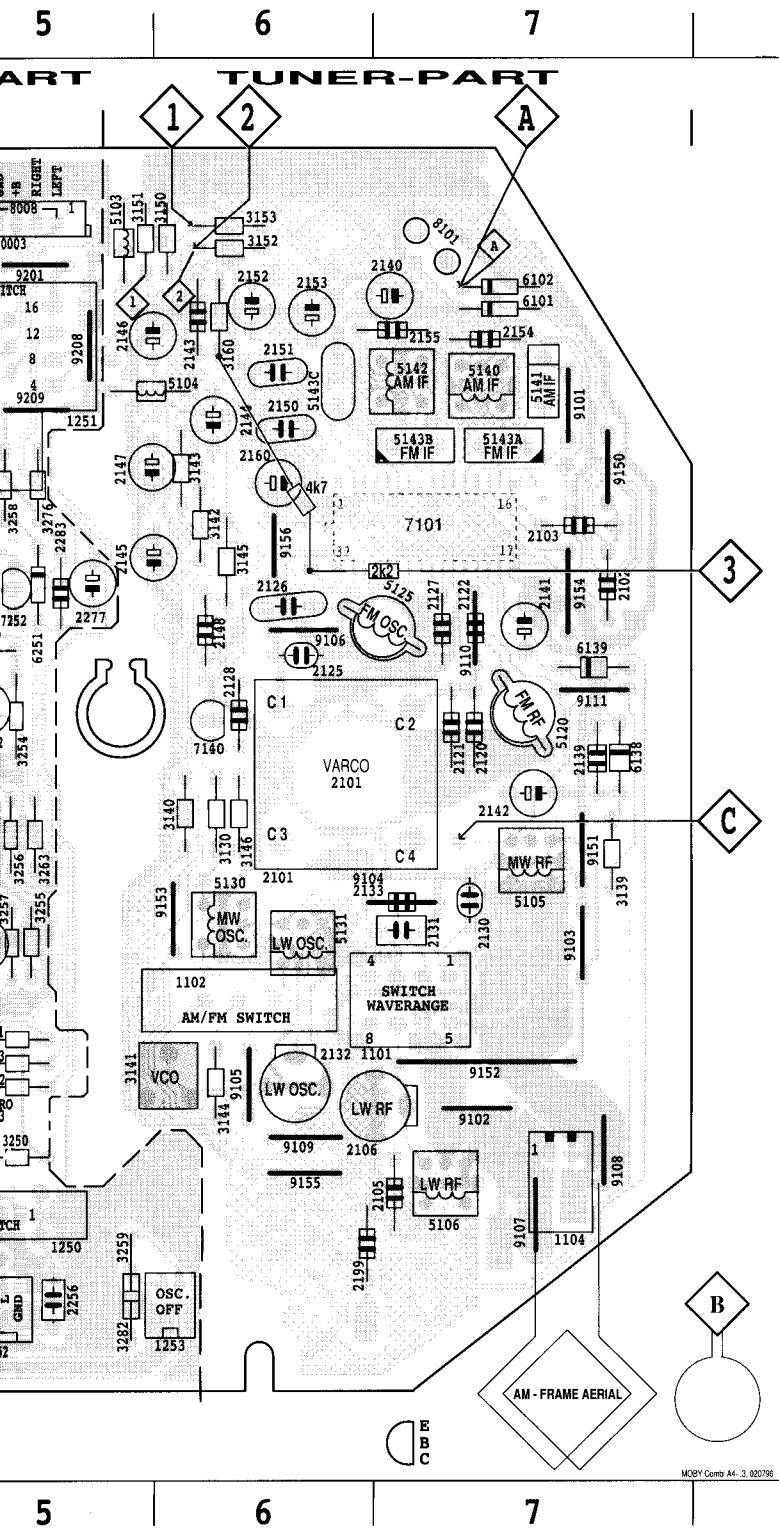
COMBI BOARD
RECORDER/SOURCE SELECTOR PART



COMBI BOARD (A4 -) / Component side view (layout stage .3)



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



CONTROL /CD PART			REC/SEL PART		TUNER PART	
1800 E 2	3806 D 1	6802 D 2	1250 E 4	3278 B 4	1101 D 7	6102 A 7
1801 D 3	3807 C 1	6803 D 2	1251 A 5	3279 C 4	1102 D 6	6138 C 7
1802 D 3	3808 C 1	6805 C 3	1252 E 5	3280 D 4	1104 E 7	6139 C 7
1803 E 2	3809 C 2	6806 E 2	1253 E 6	3281 D 4	2101 C 6	7140 C 6
1804 D 3	3810 D 1	6807 E 2	1263 E 4	3282 E 5	2102 B 7	8101 A 7
1805 D 4	3811 C 2	7804 C 1	2250 D 4	3284 B 4	2103 B 7	9101 A 7
1806 E 3	3812 C 2	7805 B 3	2251 D 4	3285 C 4	2105 E 7	9102 E 7
1807 A 1	3813 B 3	7806 A 3	2252 C 5	3286 C 4	2106 E 7	9103 D 7
1811 A 1	3814 C 1	7807 D 3	2253 D 5	5250 E 3	2120 C 7	9104 D 7
1812 E 1	3815 B 4	7808 D 2	2254 C 5	6250 A 5	2121 C 7	9105 D 6
1813 A 4	3816 B 3	7810 D 3	2255 C 5	6251 B 5	2122 B 7	9106 B 6
2800 E 1	3817 C 3	9800 D 1	2256 E 5	6252 B 4	2125 B 6	9107 E 7
2801 D 1	3818 C 3	9822 A 1	2257 E 3	6253 B 4	2126 B 6	9108 E 7
2802 B 3	3819 A 1	9823 D 1	2258 C 4	6254 C 4	2127 B 7	9109 E 6
2803 D 1	3820 A 1	9824 A 4	2259 D 4	7251 E 4	2128 C 6	9110 B 7
2804 C 1	3821 A 1	9825 C 2	2260 D 4	7252 B 5	2130 D 7	9111 C 7
2805 D 1	3822 A 2	9826 D 2	2261 E 3	7253 B 4	2131 D 7	9150 B 7
2806 C 1	3823 A 1	9827 C 3	2262 C 4	7254 B 4	2132 D 6	9151 C 7
2807 D 1	3824 A 2	9828 B 3	2263 D 4	8008 A 5	2133 D 7	9152 D 7
2808 C 3	3825 A 2	9829 B 2	2264 B 4	9200 E 4	2139 C 7	9153 D 6
2809 B 3	3826 A 2	9834 D 1	2265 E 4	9201 A 5	2140 A 7	9154 B 7
2810 C 3	3827 A 2	9839 A 3	2266 E 4	9204 E 4	2141 B 7	9155 E 6
2811 B 3	3828 A 3	9840 A 3	2267 C 4	9206 A 4	2142 C 7	9156 B 6
2812 B 3	3829 A 2	9842 D 2	2268 C 4	9207 A 5	2143 A 6	7101 D 1
2813 D 1	3830 B 1	9843 D 1	2269 D 4	9208 A 5	2144 A 6	
2814 A 1	3831 B 1	9844 C 2	2270 E 4	9209 A 5	2145 B 5	
2815 A 1	3832 B 1	9845 A 4	2271 E 4	9210 E 4	2146 A 5	
2816 A 2	3833 B 1	9846 A 3	2272 D 4	9211 E 4	2147 B 5	
2817 A 2	3834 C 3	9847 D 1	2273 D 4	9212 A 4	2148 B 6	
2818 A 2	3835 B 1	9848 A 1	2274 D 4	9213 B 5	2150 B 6	
2819 A 2	3836 B 1	9849 B 1	2275 C 4	9220 A 4	2151 A 6	
2820 A 2	3837 B 1	9850 A 1	2276 A 4	7250 C 4	2152 A 6	
2821 B 3	3838 B 1	9851 A 2	2277 B 5		2153 A 6	
2822 B 2	3839 B 1	7800 A 7	2278 B 4		2154 A 7	
2823 B 3	3840 C 1	7801 C 7	2279 B 4		2155 A 7	
2824 B 1	3841 B 2	7802 C 5	2280 B 5		2160 B 6	
2825 C 1	3842 C 2	7803 B 1	2281 A 4		2199 E 6	
2826 C 1	3843 C 3		2282 C 4		3130 C 6	
2827 B 1	3844 B 2		2283 B 5		3139 C 7	
2828 C 1	3845 C 2		3250 E 5		3140 C 6	
2829 C 1	3846 B 3		3251 D 5		3141 D 6	
2830 B 2	3847 B 2		3252 D 5		3142 B 6	
2831 B 1	3848 B 2		3253 D 5		3143 B 6	
2832 B 2	3849 E 2		3254 C 5		3144 D 6	
2833 B 2	3850 C 2		3255 D 5		3145 B 6	
2834 A 3	3851 B 2		3256 C 5		3146 C 6	
2835 B 3	3852 A 3		3257 D 5		3150 A 6	
2836 C 2	3853 A 3		3258 B 5		3151 A 5	
2837 B 3	3854 A 3		3259 E 5		3152 A 6	
2838 E 2	3855 B 3		3260 B 5		3153 A 6	
2839 A 3	3856 A 3		3261 D 4		3160 A 6	
2840 D 1	3857 B 1		3262 E 3		5103 A 5	
2841 B 1	3858 B 1		3263 C 5		5104 A 5	
2842 A 3	3859 B 1		3264 C 5		5105 C 7	
2843 A 1	3860 A 1		3265 D 5		5106 E 7	
2844 B 2	3861 D 1		3266 C 4		5120 C 7	
2846 A 3	3865 C 3		3267 D 4		5125 B 7	
2847 D 2	3876 E 2		3268 E 4		5130 D 6	
2848 A 3	3877 E 2		3269 D 4		5131 D 6	
2849 B 2	3878 E 2		3270 E 4		5140 A 7	
2850 C 1	3879 E 2		3271 E 4		5141 A 7	
3800 D 1	3880 D 1		3272 E 4		5142 A 7	
3801 D 1	3881 D 1		3273 B 4		5143 A B 7	
3802 C 3	3884 C 1		3274 B 5		5143 B B 7	
3803 C 1	3886 B 1		3275 B 4		5143 C A 6	
3804 D 2	3887 B 2		3276 B 5		6101 A 7	
3805 D 2	5803 C 1		3277 B 4			

Waverange	Input Frequency	Input	Set tuned to	Adjust	Measure on	Scope / Counter
OSCILLATOR						
FM 87,5 - 108 MHz (65 - 108 MHz) ¹⁾ [76 - 108 MHz] ²⁾	87,35 MHz (64,7 MHz) [75,7 MHz]	A $\Delta f = \pm 500\text{kHz}$ $V_{RF} = 100\mu\text{V}$	lower band end 	5125	1 or 2	
	108,25 MHz		upper band end 	2101 C1		
MW 525 - 1607 kHz (530 - 1710 kHz) ³⁾	512 kHz (520 kHz)	C $\Delta f = \pm 30\text{kHz}$ $V_{RF} = 100\mu\text{V}$	lower band end 	5130	1 or 2	
	1635 kHz (1730 kHz)		upper band end 	2101 C3		
LW ⁴⁾ 148,5 - 284 kHz	147 kHz	C $\Delta f = \pm 30\text{kHz}$ $V_{RF} = 100\mu\text{V}$	lower band end 	5131	1 or 2	
	291 kHz		upper band end 	2132		
FM - RF						
FM 87,5 - 108 MHz (65 - 108 MHz) ¹⁾ [76 - 108 MHz] ²⁾	87,5 MHz (65 MHz) [76 MHz]	A $\Delta f = \pm 500\text{kHz}$ $V_{RF} = 10\mu\text{V}$	87,5 MHz (65 MHz) [76 MHz]	5120	1 or 2	
	108 MHz		108 MHz	2101 C2		
VCO						
FM	98 MHz	A continuous wave $V_{RF} = 1\text{ mV}$	98 MHz	3141	3 	152 ± 1 kHz
AM - IF						
AM	468 kHz connect pin 24 of IC 7101 (AM Osc) with short wire to ground	C $\Delta f = \pm 15\text{kHz}$ $V_{RF} = 10\text{mV}$	 IC 7101 10 100nF	5140	1 or 2	
			 IC 7101 14 100nF <small>see remark 5)</small>	5142		
AM - RF						
MW	560 kHz	B 	560 kHz	5105	1 or 2	
	1500 kHz		1500 kHz	2101 C4		
LW ⁴⁾	170 kHz	$\Delta f = \pm 30\text{kHz}$ V_{RF} as low as possible	170 kHz	5106	1 or 2	
	260 kHz		260 kHz	2106		

TUNER PART

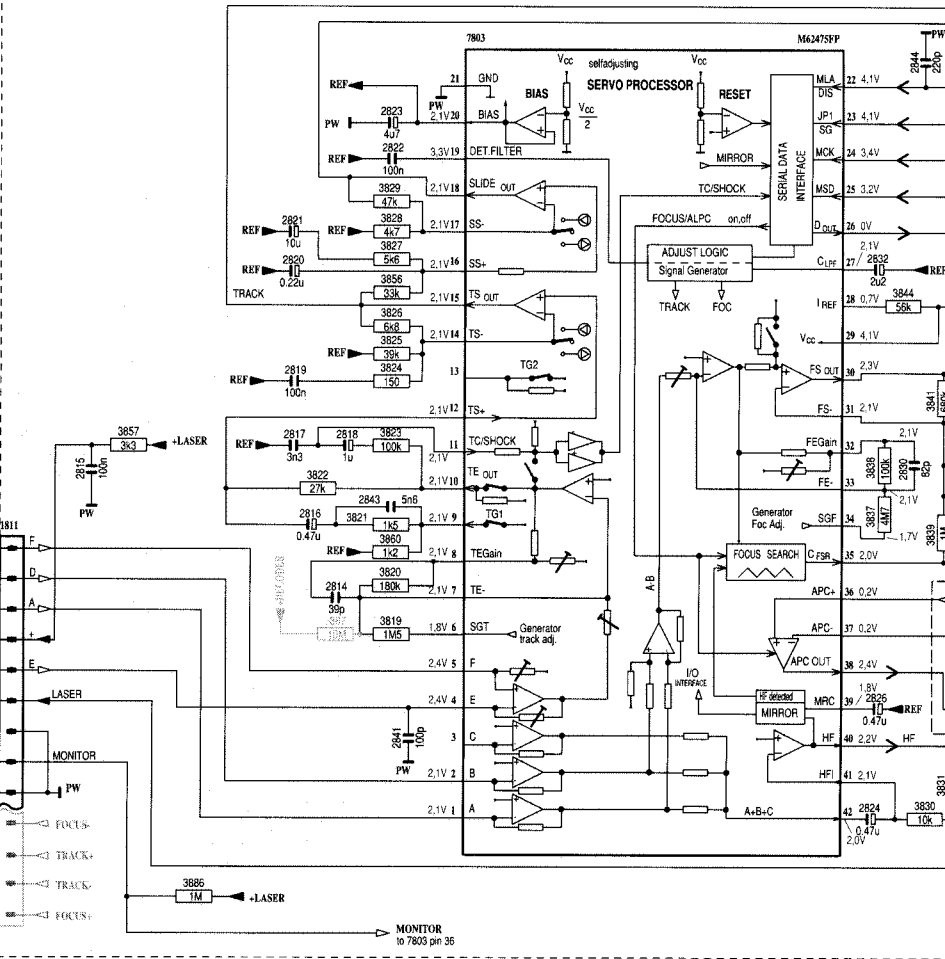
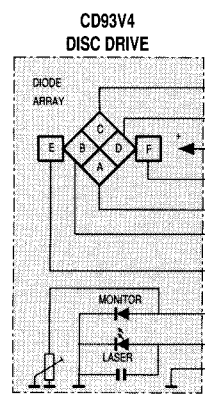
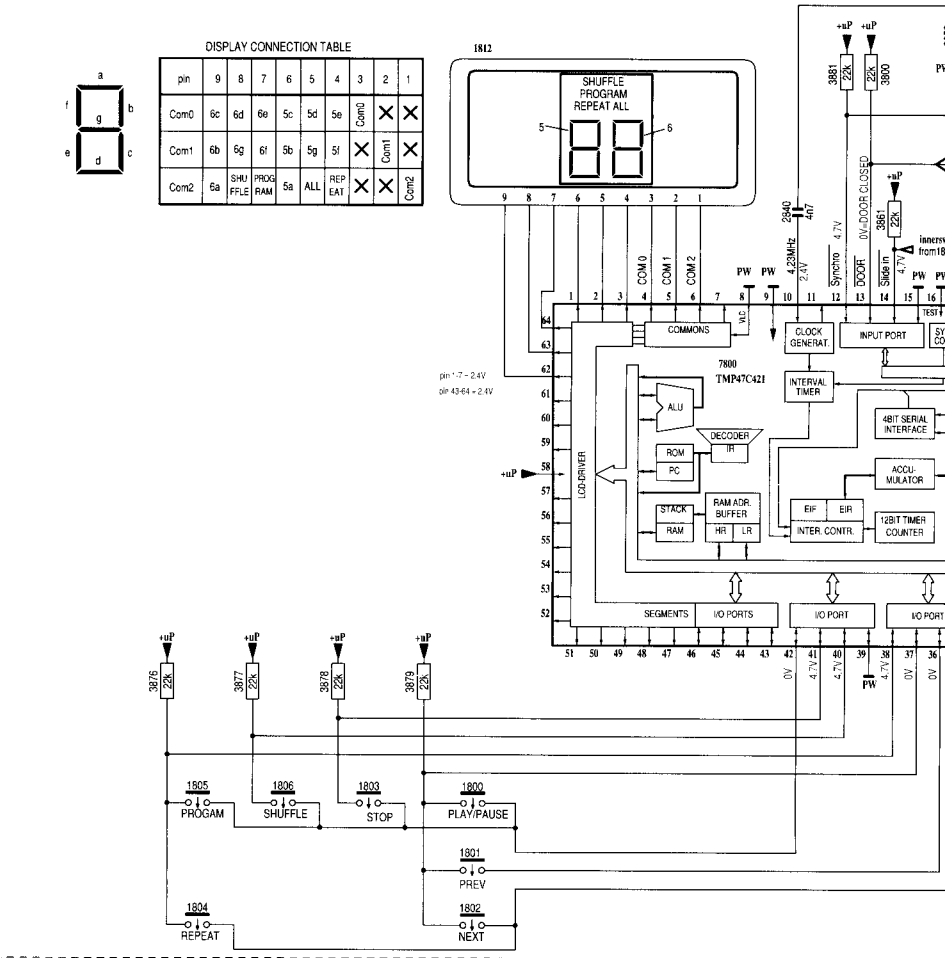
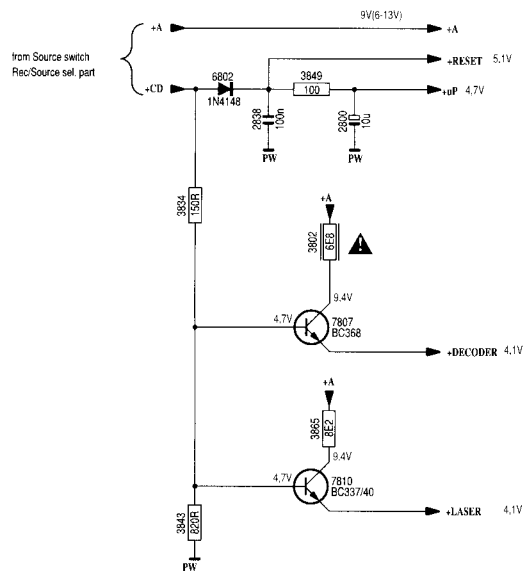
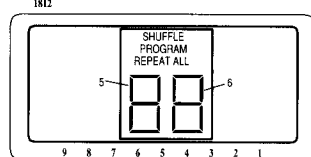
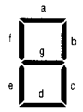
101 D 7 6102 A 7
102 D 6 6138 C 7
104 E 7 6139 C 7
101 C 6 7140 C 6
102 B 7 8101 A 7
103 B 7 9101 A 7
105 E 7 9102 E 7
106 E 7 9103 D 7
120 C 7 9104 D 7
121 C 7 9105 D 6
122 B 7 9106 B 6
125 B 6 9107 E 7
126 B 6 9108 E 7
127 B 7 9109 E 6
128 C 6 9110 B 7
130 D 7 9111 C 7
131 D 7 9150 B 7
132 D 6 9151 C 7
133 D 7 9152 D 7
139 C 7 9153 D 6
140 A 7 9154 B 7
141 B 7 9155 E 6
142 C 7 9156 B 6
143 A 6 7101 D 1
144 A 6
145 B 5
146 A 5
147 B 5
148 B 6
150 B 6
151 A 6
152 A 6
153 A 6
154 A 7
155 A 7
160 B 6
199 E 6
130 C 6
139 C 7
140 C 6
141 D 6
142 B 6
143 B 6
144 D 6
145 B 6
146 C 6
150 A 6
151 A 5
152 A 6
153 A 6
160 A 6
103 A 5
104 A 5
105 C 7
106 E 7
120 C 7
125 B 7
130 D 6
131 D 6
140 A 7
141 A 7
142 A 7
143A B 7
143B B 7
143C A 6
101 A 7

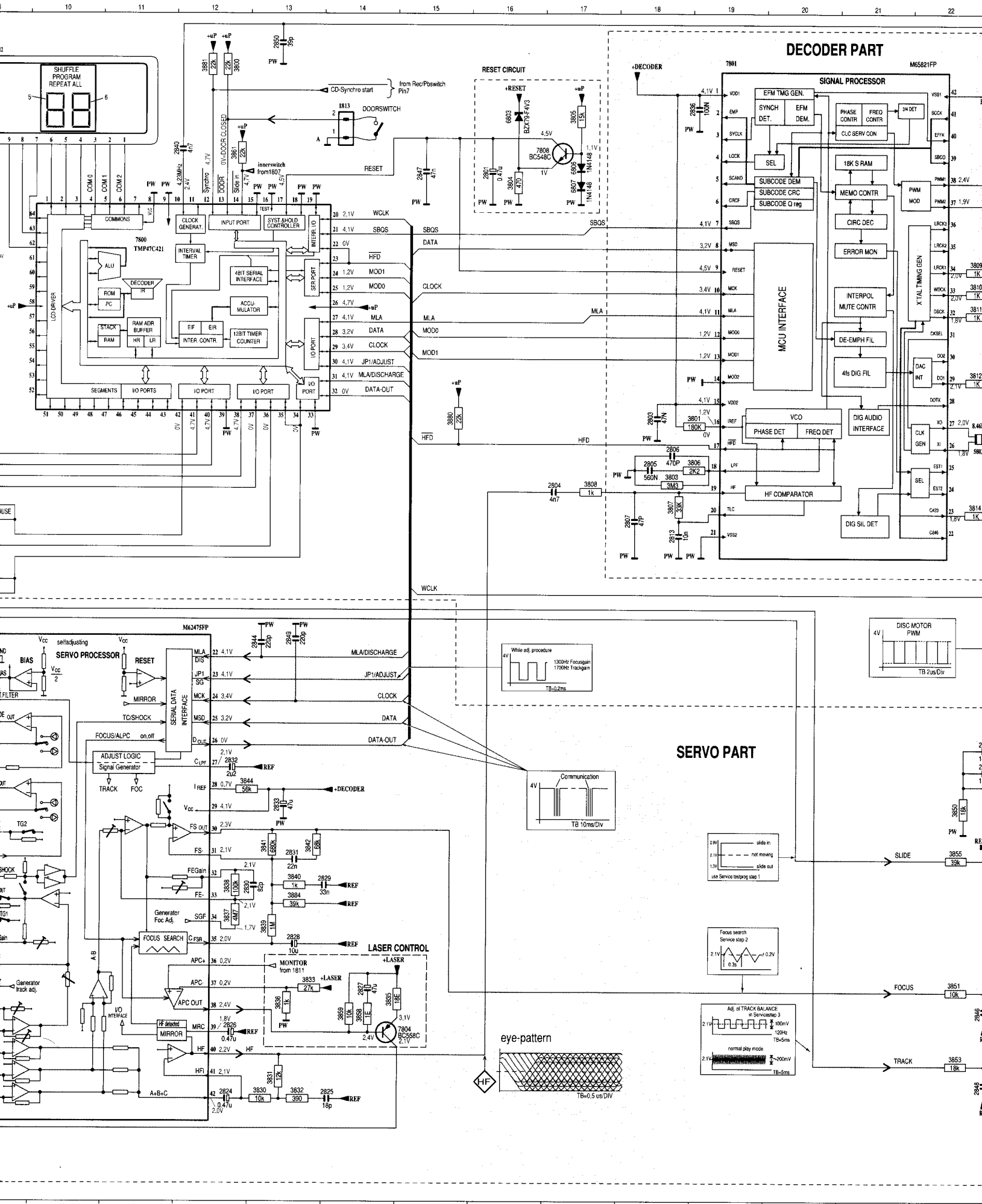
↑ repeat 1) for East Europe /14 2) for Japan /06 3) for USA /17 4) LW not for all versions
5) RC-network serves for damping the IF-filter while adjusting the other one.

COMBI BOARD (A4-)
CONTROL/CD-PART

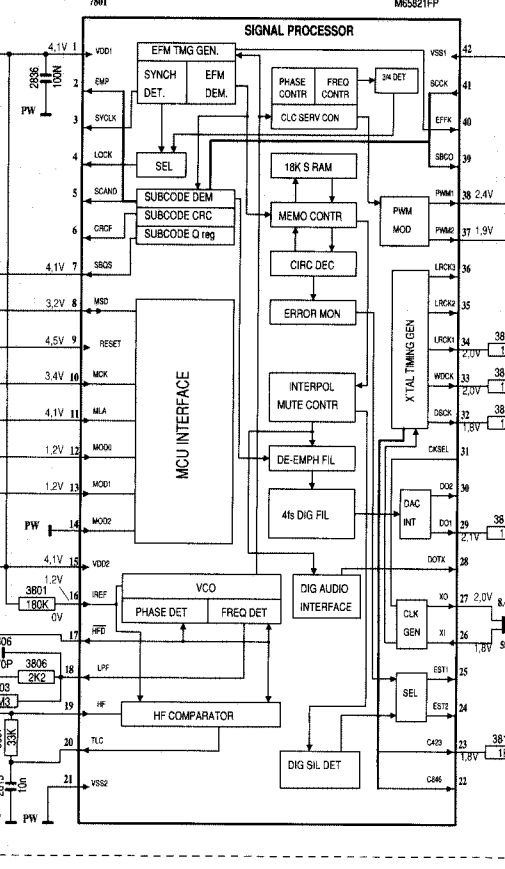
DISPLAY CONNECTION TABLE

pin	9	8	7	6	5	4	3	2	1
Com0	6c	6d	6e	5c	5d	5e	Com0	X	X
Com1	6b	6g	6f	5b	5f	5f	Com1	X	X
Com2	6a	SHL	PRG	ALL	REP	EAT	Com2	X	X
		FILE	RAM	5a					

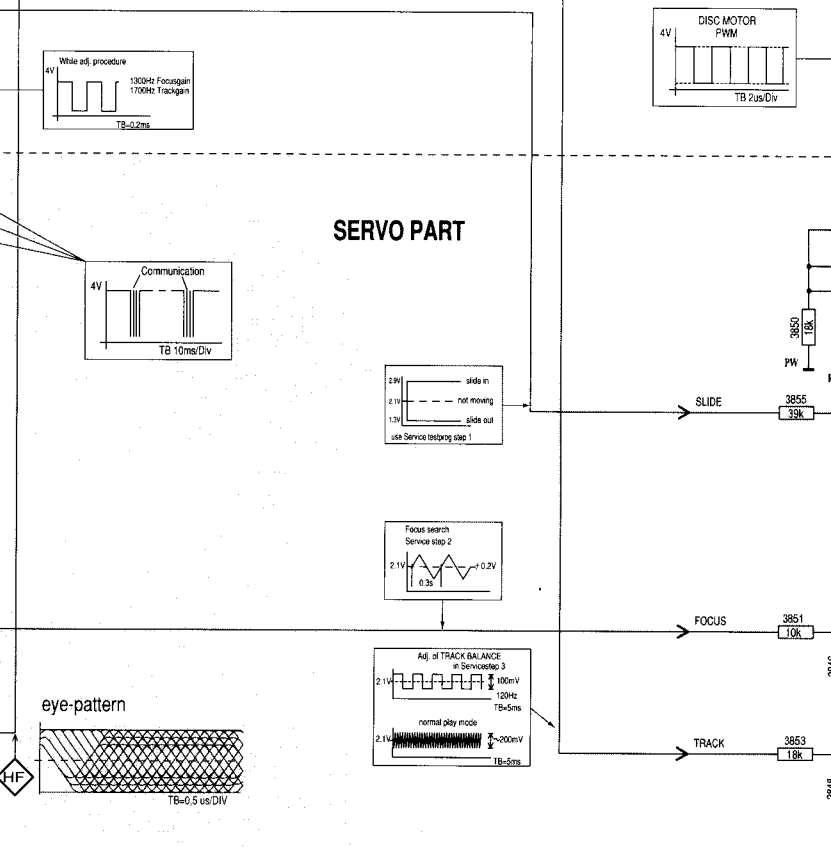




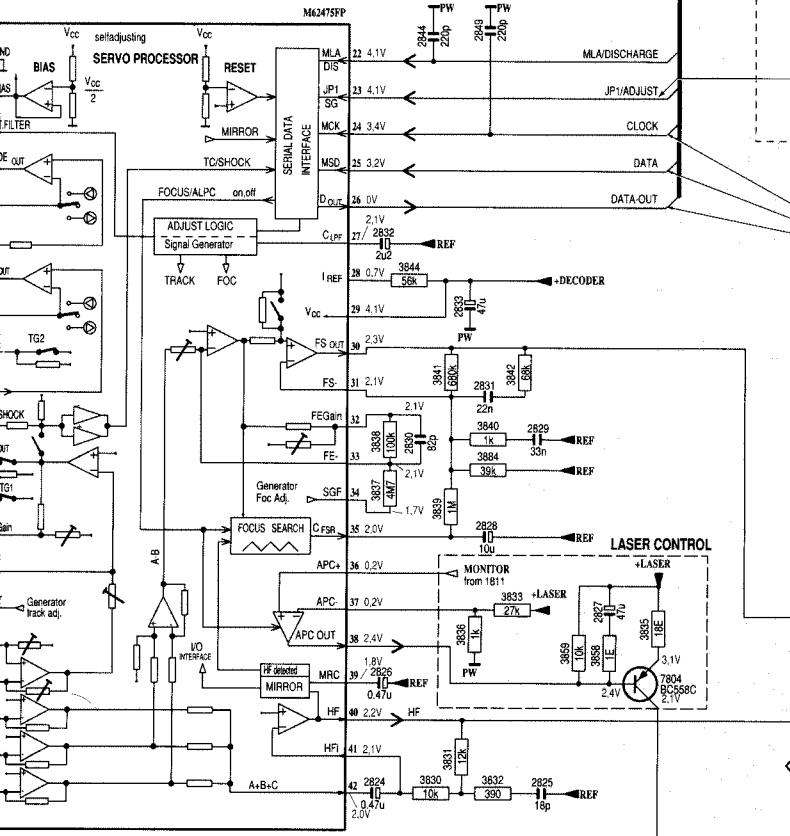
DECODER PART



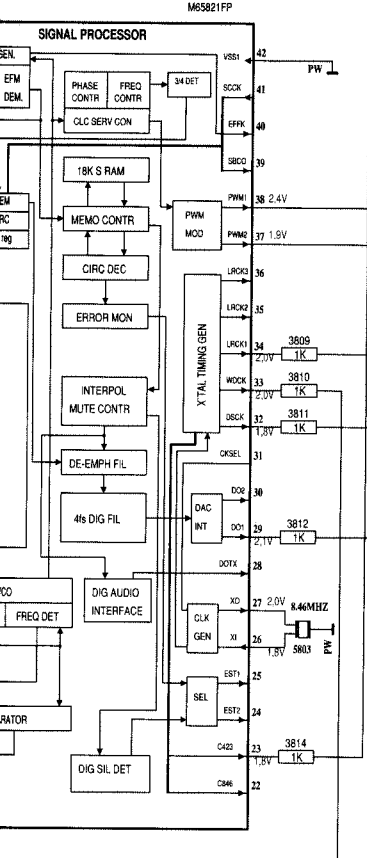
SERVO PART



SERVO PROCESSOR



DECODER PART



RTV servis Horvat

Kešinci, 31402 Semeljci

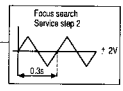
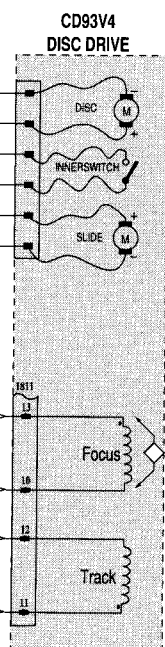
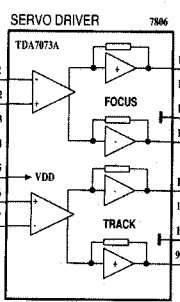
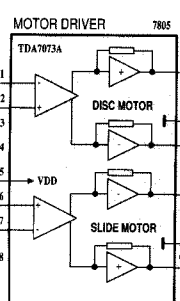
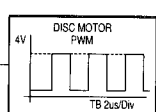
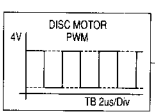
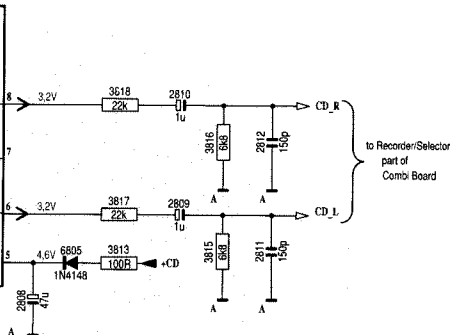
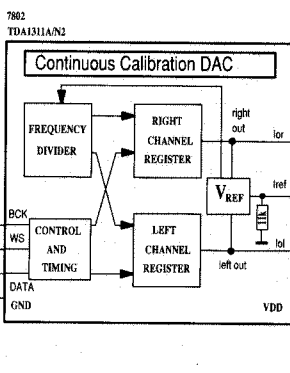
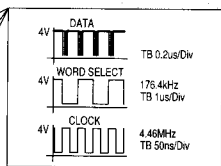
031-856-139

031-856-637

098-788-319

rtv-servis-horvat@os.tel.hr

Croatia



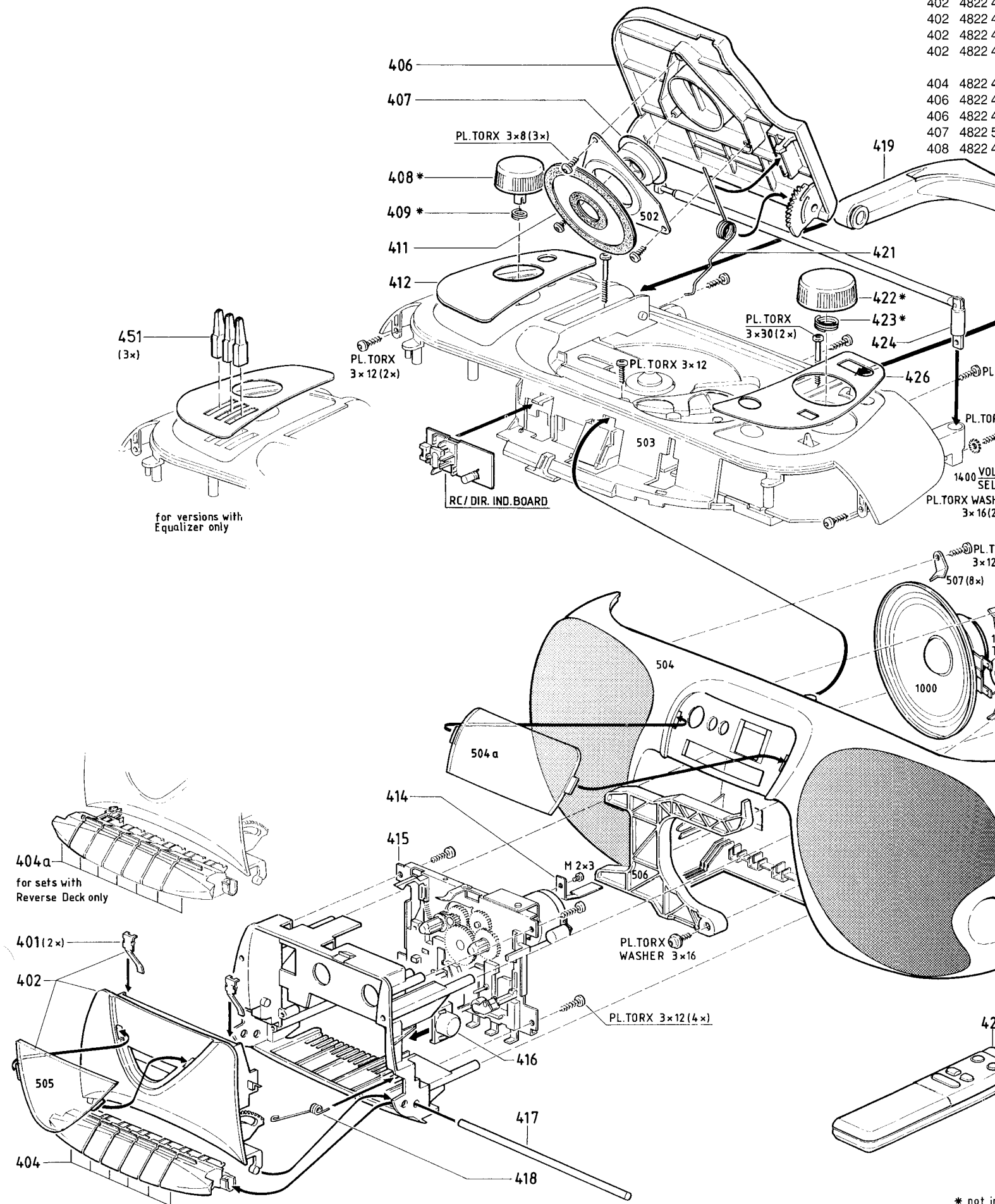
⊖ DC voltages measured with mains supply
 ... V CD mode

- 1800 G 9
- 1801 H 9
- 1802 H 9
- 1803 G 8
- 1804 H 7
- 1805 G 7
- 1806 G 7
- 1807 K 27
- 1811 M 5
- 1812 A 3
- 1813 B 4
- 2800 F 4
- 2801 C 16
- 2802 L 23
- 2803 F 18
- 2804 G 17
- 2805 G 18
- 2806 F 18
- 2807 G 18
- 2808 H 27
- 2809 C 29
- 2810 F 29
- 2811 H 26
- 2812 G 28
- 2815 H 8
- 2814 M 8
- 2815 L 6
- 2816 M 8
- 2817 L 7
- 2818 L 8
- 2819 L 7
- 2820 K 7
- 2821 J 7
- 2822 J 8
- 2823 L 6
- 2824 O 12
- 2825 O 14
- 2826 N 12
- 2827 N 14
- 2828 M 13
- 2829 L 14
- 2830 L 13
- 2831 L 13
- 2832 K 12
- 2833 K 13
- 2834 K 23
- 2835 J 23
- 2836 B 19
- 2837 H 26
- 2838 F 3
- 2839 O 23
- 2840 B 12
- 2841 O 6
- 2842 M 23
- 2843 M 8
- 2844 H 2
- 2845 N 22
- 2847 C 15
- 2848 O 22
- 2849 L 13
- 2850 A 13
- 3800 A 12
- 3801 F 19
- 3802 C 3
- 3803 G 16
- 3804 C 16
- 3805 H 17
- 3806 G 19
- 3807 G 18
- 3808 G 17
- 3809 D 22
- 3810 O 22
- 3811 D 22
- 3812 D 22
- 3813 H 28
- 3814 G 22
- 3815 H 28
- 3816 G 29
- 3817 G 28
- 3818 F 28
- 3819 M 8
- 3820 M 8
- 3821 M 8
- 3822 L 8
- 3823 L 8
- 3824 L 8
- 3825 K 8
- 3826 K 8
- 3827 K 8
- 3828 J 8
- 3829 J 8
- 3830 O 13
- 3831 O 13
- 3832 O 13
- 3833 N 13
- 3834 G 2
- 3835 N 14
- 3836 N 13
- 3837 M 12
- 3838 L 12
- 3839 M 13
- 3840 L 13
- 3841 L 13
- 3842 L 13
- 3843 I 2
- 3844 K 12
- 3845 G 23
- 3846 L 23
- 3847 J 23
- 3848 K 23
- 3849 F 3
- 3850 K 22
- 3851 N 22
- 3852 N 23
- 3853 O 22
- 3854 O 23
- 3855 L 22
- 3856 K 8
- 3857 L 6
- 3858 N 14
- 3859 N 14
- 3860 M 8
- 3861 B 12
- 3862 H 3
- 3876 F 6
- 3877 F 7
- 3878 F 8
- 3879 F 8
- 3880 F 15
- 3881 A 12
- 3884 L 13
- 3886 P 7
- 3887 N 8
- 5803 F 22
- 6802 F 3
- 6803 B 16
- 6805 H 28
- 6806 C 17
- 6807 C 17
- 7800 D 11
- 7801 A 19
- 7802 E 25
- 7803 I 9
- 7804 N 15
- 7805 J 25
- 7806 M 25
- 7807 H 3
- 7808 B 17
- 7810 I 3

EXPLODED VIEW / Drawing 2

MECHANICAL

- 401 4822 4
- 402 4822 4
- 402 4822 4
- 402 4822 4
- 402 4822 4
- 404 4822 4
- 406 4822 4
- 406 4822 4
- 407 4822 5
- 408 4822 4



* not in

MECHANICAL PARTS

- 401 4822 492 70231 SPRING, CASS.PRESS
- 402 4822 443 64406 DOOR CASS. ASSY, MVX
- 402 4822 443 64426 DOOR CASS. ASSY, PH
- 402 4822 443 64427 DOOR CASS. ASSY, PH (AZ8052)
- 402 4822 443 10156 DOOR CASS. ASSY, BLUE

- 404 4822 410 63659 BUTTON SET, RECORDER
- 406 4822 444 61042 CD DOOR PRINTED
- 406 4822 444 10154 CD DOOR PRINTED, BLUE
- 407 4822 532 51871 PRESSURE RING ASSY
- 408 4822 413 41899 KNOB VOLUME

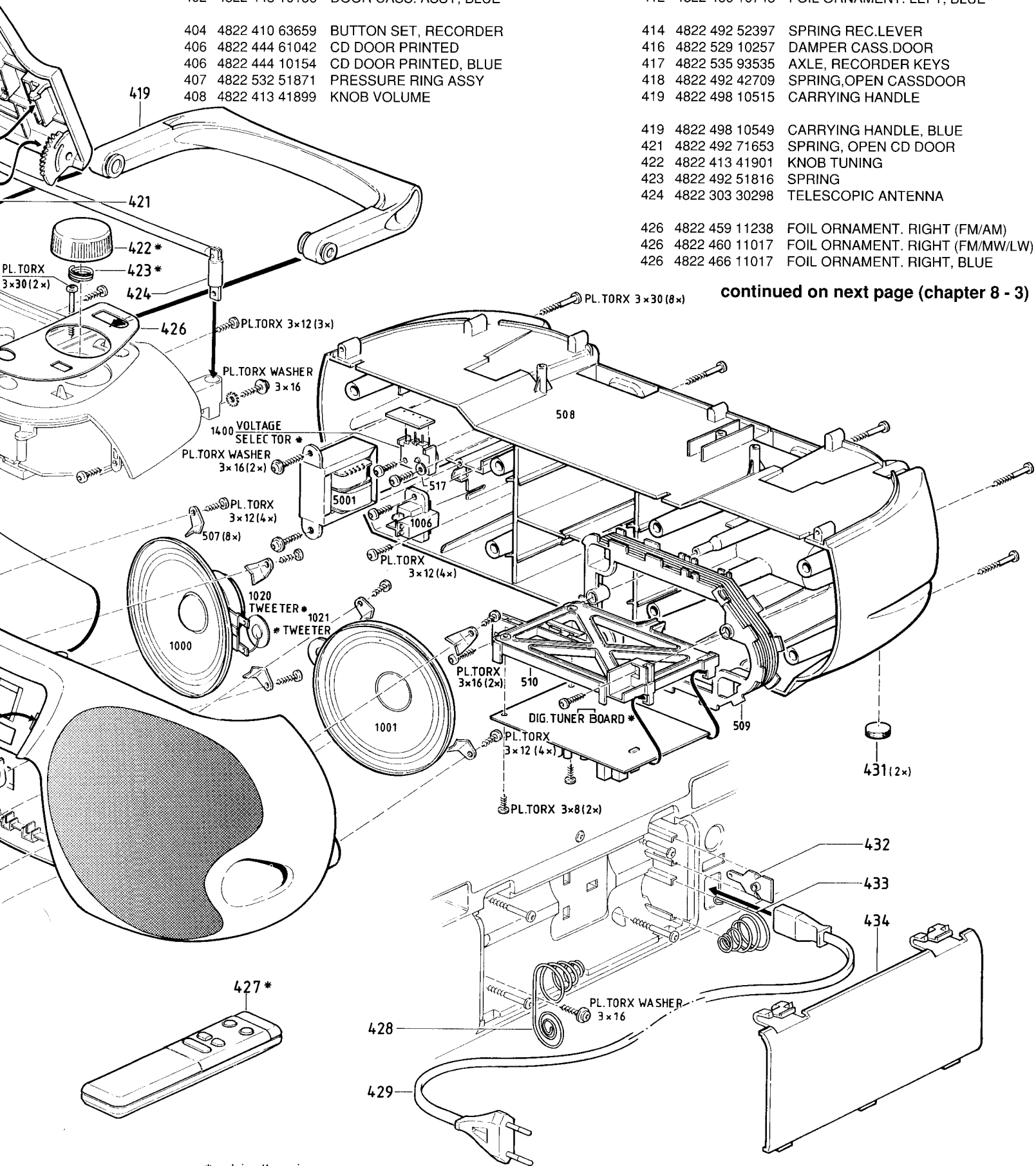
- 409 4822 492 51374 SPRING KNOB CLAMP
- 411 4822 535 60096 DAMPING DISC CD
- 412 4822 459 11239 FOIL ORNAMENT. LEFT w/o Equalizer
- 412 4822 460 11018 FOIL ORNAMENT. LEFT with Equalizer
- 412 4822 466 10743 FOIL ORNAMENT. LEFT, BLUE

- 414 4822 492 52397 SPRING REC.LEVER
- 416 4822 529 10257 DAMPER CASS.DOOR
- 417 4822 535 93535 AXLE, RECORDER KEYS
- 418 4822 492 42709 SPRING,OPEN CASSDOOR
- 419 4822 498 10515 CARRYING HANDLE

- 419 4822 498 10549 CARRYING HANDLE, BLUE
- 421 4822 492 71653 SPRING, OPEN CD DOOR
- 422 4822 413 41901 KNOB TUNING
- 423 4822 492 51816 SPRING
- 424 4822 303 30298 TELESCOPIC ANTENNA

- 426 4822 459 11238 FOIL ORNAMENT. RIGHT (FM/AM)
- 426 4822 460 11017 FOIL ORNAMENT. RIGHT (FM/MW/LW)
- 426 4822 466 11017 FOIL ORNAMENT. RIGHT, BLUE

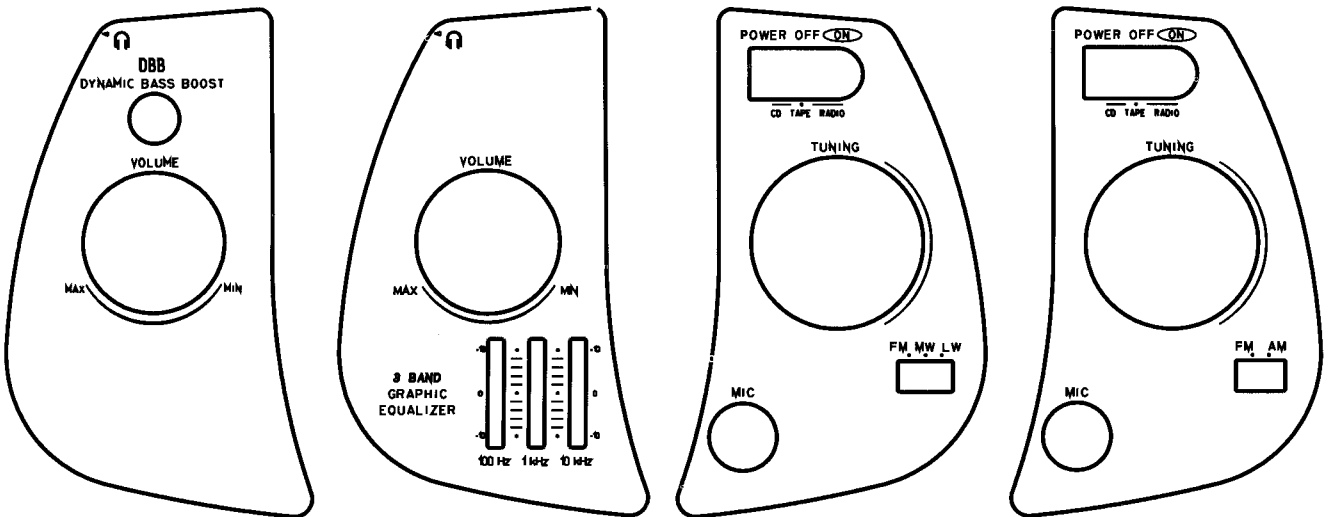
continued on next page (chapter 8 - 3)



* not in all versions.

MECHANICAL PARTS continued

428	4822 492 51733	SPRING BATT.INTERCON	1000	4822 240 30739	LOUDSPEAKER, 4",4OHM
429	4822 321 10249	MAINS CORD EUROPE	1001	4822 240 30739	LOUDSPEAKER, 4",4OHM
429	4822 321 10882	MAINS CORD USA POL.	1006	4822 265 20706	SOCKET MAINS UL POL.
429	4822 321 10954	MAINS CORD AUSTRALIA	1006	4822 267 30738	MAINS SOCKET, IEC
431	4822 462 40683	FOOT RUBBER	1020	4822 240 70273	TWEETER; PIEZZO
432	4822 290 80313	CONTACT PLATE BATT.+	1021	4822 240 70273	TWEETER; PIEZZO
433	4822 492 51961	SPRING, BATTERY -	1805	4822 276 12165	SWITCH LEAF, DOOR
434	4822 423 41255	BATTERY LID	5001	4822 146 31464	TRANSF. MAINS /00
434	4822 443 10155	BATTERY LID, BLUE	5001	4822 146 31463	TRANSF. MAINS /01
451	4822 411 62002	KNOB EQUALIZER (AZ8052)	5001	4822 146 31454	TRANSF. MAINS /17

Overview ORNAMENTAL FOILS

4822 459 11239 (black)
4822 466 10743 (blue)

4822 460 11018 (black)

4822 460 11017 (black)

4822 459 11238 (black)
4822 466 11017 (blue)

FEATURE/AMPLIFIER BOARD 1(AZ8050,AZ8051)**MISCELLANEOUS**

1254	4822 267 31468	SOCKET HEADPH. 3.5MM
1255	4822 276 12648	SWITCH PUSH, DBB
1400	4822 277 21234	VOLTAGE SELECTOR

CAPACITORS

2250	4822 126 12878	1,5nF	10%	16V
2251	4822 126 12878	1,5nF	10%	16V
2252	5322 121 42465	68nF	10%	63V
2253	5322 121 42465	68nF	10%	63V
2254	4822 124 40433	47µF	20%	25V

2255	4822 124 40433	47µF	20%	25V
2256	4822 122 10466	220pF	10%	
2257	4822 122 10466	220pF	10%	
2258	4822 124 41407	0,47µF	20%	63V
2259	4822 124 41407	0,47µF	20%	63V

2260	4822 124 41458	4700µF	20%	16V
2261	4822 124 40433	47µF	20%	25V
2262	4822 122 33169	680pF	10%	50V
2263	4822 122 33169	680pF	10%	50V
2264	4822 124 40746	0,22µF	20%	63V

2265	5322 121 42386	100nF	5%	63V
2266	4822 124 40433	47µF	20%	25V
2267	4822 124 40433	47µF	20%	25V
2268	4822 124 41997	470µF	20%	10V
2269	4822 124 41997	470µF	20%	10V

2270	4822 124 41584	100µF	20%	10V
2271	4822 124 41407	0,47µF	20%	63V
2272	4822 124 41407	0,47µF	20%	63V
2273	5322 121 42386	100nF	5%	63V
2274	4822 122 10466	220pF	10%	

2275	4822 122 10466	220pF	10%	
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RESISTORS

3250	4822 116 52224	470Ω	5%	0,5W
3251	4822 116 52224	470Ω	5%	0,5W
3252	4822 116 52256	2,2kΩ	5%	0,16W
3254	4822 116 52263	2,7kΩ	5%	0,5W
3255	4822 116 52263	2,7kΩ	5%	0,5W

3256	4822 102 10447	2x50kΩ	POTMETER	
3257	4822 116 52224	470Ω	5%	0,5W
3258	4822 116 52224	470Ω	5%	0,5W
3259	4822 116 52199	68Ω	5%	0,16W
3260	4822 116 52199	68Ω	5%	0,16W

3261	4822 116 83864	10kΩ	5%	0,5W
3262	4822 116 52224	470Ω	5%	0,5W
3263	4822 116 52226	560Ω	5%	0,5W
3264	4822 116 52222	390Ω	5%	0,16W
3265	4822 050 11002	1kΩ	5%	0,2W

3266	4822 116 83864	10kΩ	5%	0,5W
3267	4822 116 83864	10kΩ	5%	0,5W
3268	4822 116 52206	120Ω	5%	0,5W
3269	4822 116 52206	120Ω	5%	0,5W
3270	4822 116 52224	470Ω	5%	0,5W

3271	4822 050 18208	8,2Ω	1%	0,4W
3274	4822 116 83864	10kΩ	5%	0,5W
3275	4822 116 83864	10kΩ	5%	0,5W
3276	4822 116 52289	5,6kΩ	5%	0,16W
3277	4822 116 52303	8,2kΩ	5%	0,5W

3323	4822 116 52257	22kΩ	5%	0,5W
3324	4822 116 52257	22kΩ	5%	0,5W

DIODES

6250	5322 130 31504	BZX79-B3V3
6253	5322 130 30684	1N4002
6254	5322 130 30684	1N4002
6255	5322 130 30684	1N4002
6256	5322 130 30684	1N4002

6257	4822 130 30621	1N4148
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TRANSISTORS

7250	5322 130 60068	BC558C
7251	4822 130 41327	BC327-40
7252	4822 130 44196	BC548C
7253	5322 130 60068	BC558C

INTEGRATED CIRCUITS

7254	4822 209 31544	TA8227P, POWER STAGE
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FEATURE/AMPLIFIER BOARD 2(AZ8052 only)**MISCELLANEOUS**

1254	4822 267 31468	SOCKET HEADPH. 3,5MM		
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CAPACITORS

2250	4822 124 40246	4,7µF	20%	63V
2251	4822 124 40246	4,7µF	20%	63V
2252	4822 124 41584	100µF	20%	10V
2253	5322 121 42386	100nF	5%	63V
2254	4822 124 41596	22µF	20%	50V
2255	4822 124 41596	22µF	20%	50V
2256	4822 122 33169	680pF	10%	50V
2257	4822 122 33169	680pF	10%	50V
2258	4822 124 41407	0,47µF	20%	63V
2259	4822 124 41407	0,47µF	20%	63V
2260	4822 124 41458	4700µF	20%	16V
2261	4822 124 40433	47µF	20%	25V
2262	4822 122 33169	680pF	10%	50V
2263	4822 122 33169	680pF	10%	50V
2264	5322 121 42386	100nF	5%	63V
2265	5322 121 42386	100nF	5%	63V
2266	4822 124 40433	47µF	20%	25V
2267	4822 124 40433	47µF	20%	25V
2268	4822 124 41997	470µF	20%	10V
2269	4822 124 41997	470µF	20%	10V
2271	4822 124 41407	0,47µF	20%	63V
2272	4822 124 41407	0,47µF	20%	63V
2273	4822 126 10178	820pF	10%	50V
2274	4822 126 10178	820pF	10%	50V
2276	4822 124 40746	0,22µF	20%	63V
2277	4822 124 40746	0,22µF	20%	63V
2278	4822 121 41856	22nF	5%	250V
2279	4822 121 41856	22nF	5%	250V
2280	4822 124 40746	0,22µF	20%	63V
2281	4822 124 40746	0,22µF	20%	63V
2282	4822 121 41856	22nF	5%	250V
2283	4822 121 41856	22nF	5%	250V
2284	4822 126 12148	2,7nF	10%	16V
2285	4822 126 12148	2,7nF	10%	16V
2286	4822 122 33197	1nF	10%	50V
2287	4822 122 33197	1nF	10%	50V
2288	4822 124 41579	10µF	20%	50V
2289	4822 124 41579	10µF	20%	50V
2290	4822 124 41407	0,47µF	20%	63V
2291	4822 124 41407	0,47µF	20%	63V
2306	4822 122 33197	1nF	10%	50V
2307	4822 122 33197	1nF	10%	50V

RESISTORS

3250	4822 116 52256	2,2kΩ	5%	0,16W
3252	4822 116 52296	6,8kΩ	5%	0,5W
3253	4822 116 52296	6,8kΩ	5%	0,5W
3256	4822 102 10447	2x50kΩ	POTMETER	
3257	4822 116 52224	470Ω	5%	0,5W
3258	4822 116 52224	470Ω	5%	0,5W
3259	4822 116 83872	220Ω	5%	0,5W
3260	4822 116 83872	220Ω	5%	0,5W
3261	4822 116 83864	10kΩ	5%	0,5W
3262	4822 116 52224	470Ω	5%	0,5W
3263	4822 116 52226	560Ω	5%	0,5W
3264	4822 116 52222	390Ω	5%	0,16W
3265	4822 050 11002	1kΩ	5%	0,2W
3266	4822 116 52283	4,7kΩ	5%	0,5W
3267	4822 116 52283	4,7kΩ	5%	0,5W

RESISTORS

3268	4822 116 52206	120Ω	5%	0,5W
3269	4822 116 52206	120Ω	5%	0,5W
3270	4822 116 52224	470Ω	5%	0,5W
3271	4822 050 18208	8,2Ω	1%	0,4W
3272	4822 116 52283	4,7kΩ	5%	0,5W
3273	4822 116 52283	4,7kΩ	5%	0,5W
3274	4822 116 52231	820Ω	5%	0,5W
3275	4822 116 52231	820Ω	5%	0,5W
3276	4822 116 52289	5,6kΩ	5%	0,16W
3277	4822 116 52303	8,2kΩ	5%	0,5W
3279	4822 116 52238	12kΩ	5%	0,5W
3280	4822 116 52238	12kΩ	5%	0,5W
3281	4822 116 52296	6,8kΩ	5%	0,5W
3282	4822 116 52296	6,8kΩ	5%	0,5W
3283	4822 116 83874	220kΩ	5%	0,5W
3284	4822 116 83874	220kΩ	5%	0,5W
3285	4822 116 52256	2,2kΩ	5%	0,16W
3286	4822 116 52256	2,2kΩ	5%	0,16W
3298	4822 116 52175	100Ω	5%	0,5W
3306	4822 116 52297	68kΩ	5%	0,5W
3307	4822 116 52297	68kΩ	5%	0,5W
3310	4822 116 83864	10kΩ	5%	0,5W
3311	4822 116 83864	10kΩ	5%	0,5W
3312	4822 100 12267	10kΩ	SLIDE POTMETER	
3313	4822 100 12267	10kΩ	SLIDE POTMETER	
3314	4822 100 12267	10kΩ	SLIDE POTMETER	
3315	4822 116 52283	4,7kΩ	5%	0,5W
3316	4822 116 52283	4,7kΩ	5%	0,5W
3317	4822 116 52296	6,8kΩ	5%	0,5W
3318	4822 116 52296	6,8kΩ	5%	0,5W
3319	4822 116 52303	8,2kΩ	5%	0,5W
3320	4822 116 52303	8,2kΩ	5%	0,5W
3321	4822 116 52283	4,7kΩ	5%	0,5W
3322	4822 116 52283	4,7kΩ	5%	0,5W

DIODES

6250	5322 130 31504	BZX79-B3V3
6253	5322 130 30684	1N4002
6254	5322 130 30684	1N4002
6255	5322 130 30684	1N4002
6256	5322 130 30684	1N4002
6257	4822 130 30621	1N4148

TRANSISTORS

7250	5322 130 60068	BC558C
7251	4822 130 41327	BC327-40
7252	4822 130 44196	BC548C
7253	5322 130 60068	BC558C
7260	4822 130 44246	BC549C
7261	4822 130 44246	BC549C
7262	4822 130 44196	BC548C
7263	4822 130 44196	BC548C

INTEGRATED CIRCUITS

7254	4822 209 31544	TA8227P, POWER STAGE
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COMBI BOARD A4-

MISCELLANEOUS

1101	4822 277 21779	SWITCH SLIDE, FM/MW/LW
1102	4822 277 21304	SWITCH SLIDE, FM/AM
1250	4822 276 20529	SWITCH SLIDE, REC/PB
1251	4822 277 30689	SWITCH SLIDE, MODE
1263	4822 267 10489	SOCKET 3,5MM JACK
1800	4822 276 13587	SWITCH TACT
1801	4822 276 13587	SWITCH TACT
1802	4822 276 13587	SWITCH TACT
1803	4822 276 13587	SWITCH TACT
1804	4822 276 13587	SWITCH TACT
1805	4822 276 13587	SWITCH TACT
1806	4822 276 13587	SWITCH TACT
1812	4822 130 91462	LCD, FRD-13703AC

CAPACITORS

2101	4822 125 50681	VARCO TUNING
2103	4822 122 33195	100pF 10% 50V
2106	4822 125 50045	1,8-20pF TRIMCAP FM/MW/LW version
2120	4822 122 33192	27pF 5% 50V
2125	4822 126 13674	27pF 5% N330
2127	4822 126 12292	1pF 20% 50V Stage .3 onwards
2127	4822 126 12939	2,2pF 10% 50V
2130	4822 126 12284	5,6pF 5% 50V
2130	4822 126 12337	3,9pF±0,5pF N1500 /17 USA only
2131	4822 126 13992	82P 5% 50V FM/MW/LW version
2132	4822 125 50045	1,8-20pF TRIMCAP. FM/MW/LW version
2133	4822 122 33847	10pF 5% 50V FM/MW/LW version
2139	4822 121 51387	10nF 20% 16V FM/AM version
2140	4822 124 41576	2,2µF 20% 50V
2141	4822 124 41579	10µF 20% 50V
2142	4822 124 41579	10µF 20% 50V
2143	4822 126 12787	330pF 10% 50V
2144	4822 124 40746	0,22µF 20% 63V
2145	4822 124 41407	0,47µF 20% 63V
2146	4822 124 41407	0,47µF 20% 63V
2147	4822 124 40242	1µF 20% 63V
2150	4822 126 12147	22nF 10% 25V
2150	4822 126 13676	33nF 10% 25V /17 USA only
2151	4822 126 12147	22nF 10% 25V
2151	4822 126 13676	33nF 10% 25V /17 USA only
2152	4822 124 40242	1µF 20% 63V
2153	4822 124 40242	1µF 20% 63V
2160	4822 124 40433	47µF 20% 25V
2250	4822 122 33197	1nF 10% 50V
2251	4822 122 33197	1nF 10% 50V
2252	4822 124 41579	10µF 20% 50V
2253	4822 124 41579	10µF 20% 50V
2254	4822 126 13507	91pF 5% 50V
2255	4822 126 13507	91pF 5% 50V
2256	4822 121 43054	1,8nF 10% 50V
2257	4822 124 41579	10µF 20% 50V
2258	4822 126 10139	390pF 10%
2259	4822 126 10139	390pF 10%
2260	4822 124 40184	1000µF 20% 10V
2261	4822 121 51387	10nF 20% 16V
2262	4822 122 10466	220pF 10%
2263	4822 122 10466	220pF 10%
2264	4822 126 13098	5,6nF 20% 16V
2265	4822 126 13098	5,6nF 20% 16V
2266	4822 121 51387	10nF 20% 16V
2267	4822 124 41596	22µF 20% 50V
2268	4822 124 40433	47µF 20% 25V

2269 4822 124 40433 47µF 20% 25V
CAPACITORS

2270	4822 122 33197	1nF 10% 50V
2271	4822 122 33197	1nF 10% 50V
2272	4822 121 51387	10nF 20% 16V
2273	4822 121 51387	10nF 20% 16V
2274	4822 124 40246	4,7µF 20% 63V
2275	4822 126 11585	22nF 20% 50V
2276	4822 124 41596	22µF 20% 50V
2277	4822 124 40246	4,7µF 20% 63V
2278	4822 124 41596	22µF 20% 50V
2279	4822 122 33519	470pF 10% 50V
2280	4822 122 33519	470pF 10% 50V
2281	4822 126 11585	22nF 20% 50V
2282	4822 126 11585	22nF 20% 50V
2283	4822 122 33519	470pF 10% 50V
2800	4822 124 41579	10µF 20% 50V
2801	4822 124 41407	0,47µF 20% 63V
2802	4822 126 12785	47nF 50V
2803	4822 126 12785	47nF 50V
2804	4822 126 11714	4,7nF 20%
2805	4822 121 51412	560nF 5% 63V
2806	4822 122 33519	470pF 10% 50V
2807	4822 122 33848	47pF 5% 50V
2808	4822 124 40433	47µF 20% 25V
2809	4822 124 40242	1µF 20% 63V
2810	4822 124 40242	1µF 20% 63V
2811	4822 122 33849	150pF 10% 50V
2812	4822 122 33849	150pF 10% 50V
2813	4822 121 51387	10nF 20% 16V
2814	4822 126 13677	39pF 5% 50V
2815	4822 126 12882	100nF 20% 50V
2816	4822 124 41407	0,47µF 20% 63V
2817	4822 121 42687	3,3nF 10% 63V
2818	4822 124 40242	1µF 20% 63V
2819	5322 121 42386	100nF 5% 63V
2820	4822 124 40746	0,22µF 20% 63V
2821	4822 124 41579	10µF 20% 50V
2822	4822 126 12882	100nF 20% 50V
2823	4822 124 40246	4,7µF 20% 63V
2824	4822 124 41407	0,47µF 20% 63V
2825	4822 126 12293	18pF 20% 50V
2826	5322 124 41948	0,47µF 20% 50V
2827	4822 124 40433	47µF 20% 25V
2828	4822 124 41579	10µF 20% 50V
2829	5322 121 42489	33nF 5% 100V
2830	4822 122 10319	82pF 5% 50V
2831	4822 121 41856	22nF 5% 250V
2832	4822 124 41576	2,2µF 20% 50V
2833	4822 124 40433	47µF 20% 25V
2834	4822 126 12882	100nF 20% 50V
2835	4822 126 12882	100nF 20% 50V
2836	4822 126 12882	100nF 20% 50V
2837	4822 126 11585	22nF 20% 50V
2838	4822 126 12882	100nF 20% 50V
2839	4822 126 12882	100nF 20% 50V
2840	4822 126 11714	4,7nF 20%
2841	4822 122 33195	100pF 10% 50V
2842	4822 124 40849	330µF 20% 16V
2843	4822 126 13098	5,6nF 20% 16V
2844	4822 122 10466	220pF 10%
2846	5322 122 32311	470pF 10% 100V
2847	4822 126 12785	47nF 50V

2848	5322 122 32311	470pF	10%	100V
2849	4822 122 10466	220pF	10%	

CAPACITORS

2850	4822 126 13677	39pF	5%	50V
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RESISTORS

3130	4822 116 52195	47Ω	5%	0,5W	
3139	4822 116 83864	10kΩ	5%	0,5W	FM/AM version
3140	4822 116 52297	68kΩ	5%	0,5W	
3141	4822 100 20167	50kΩ		TRIMPOT. LIN.	
3142	4822 116 52256	2,2kΩ	5%	0,16W	
3143	4822 116 52234	100kΩ	5%	0,5W	
3144	4822 050 11002	1kΩ	5%	0,2W	FM/AM version
3150	4822 116 52238	12kΩ	5%	0,5W	
3151	4822 116 52238	12kΩ	5%	0,5W	
3152	4822 116 52283	4,7kΩ	5%	0,5W	
3153	4822 116 52283	4,7kΩ	5%	0,5W	
3160	4822 116 52195	47Ω	5%	0,5W	
3250	4822 116 52224	470Ω	5%	0,5W	
3251	4822 116 52224	470Ω	5%	0,5W	
3252	4822 116 52238	12kΩ	5%	0,5W	
3253	4822 116 52238	12kΩ	5%	0,5W	
3254	4822 116 52219	330Ω	5%	0,5W	
3255	4822 116 52219	330Ω	5%	0,5W	
3256	4822 116 52224	470Ω	5%	0,5W	
3257	4822 116 52224	470Ω	5%	0,5W	
3258	4822 116 52285	470kΩ	5%	0,5W	
3259	4822 116 52213	180Ω	5%	0,5W	
3260	4822 116 52264	27kΩ	5%	0,5W	
3261	4822 116 52264	27kΩ	5%	0,5W	
3262	4822 116 52296	6,8kΩ	5%	0,5W	
3263	4822 116 52272	330kΩ	5%	0,5W	
3264	4822 116 52245	150kΩ	5%	0,16W	
3265	4822 116 52245	150kΩ	5%	0,16W	
3266	4822 116 52252	180kΩ	5%	0,5W	
3267	4822 116 52252	180kΩ	5%	0,5W	
3268	4822 116 52184	18Ω	5%	0,5W	
3269	4822 111 30893	4,7MΩ	5%	0,2W	
3270	4822 116 52303	8,2kΩ	5%	0,5W	
3271	4822 116 52303	8,2kΩ	5%	0,5W	
3272	4822 116 83868	150Ω	5%	0,5W	
3273	4822 116 52244	15kΩ	5%	0,5W	
3274	4822 116 83864	10kΩ	5%	0,5W	
3275	4822 116 83864	10kΩ	5%	0,5W	
3276	4822 116 52244	15kΩ	5%	0,5W	
3277	4822 116 52244	15kΩ	5%	0,5W	
3278	4822 116 52283	4,7kΩ	5%	0,5W	
3279	4822 116 52284	47kΩ	5%	0,5W	
3280	4822 116 52224	470Ω	5%	0,5W	
3281	4822 116 52224	470Ω	5%	0,5W	
3284	4822 116 52283	4,7kΩ	5%	0,5W	
3285	4822 116 52283	4,7kΩ	5%	0,5W	
3286	4822 116 52191	33Ω	5%	0,5W	
3800	4822 116 52257	22kΩ	5%	0,5W	
3801	4822 116 52252	180kΩ	5%	0,5W	
3802	4822 052 10688	6,8Ω	5%	0,33W	
3803	4822 111 50499	3,3MΩ	5%	0,2W	
3804	4822 116 52224	470Ω	5%	0,5W	
3805	4822 116 52244	15kΩ	5%	0,5W	
3806	4822 116 52256	2,2kΩ	5%	0,16W	
3807	4822 116 52271	33kΩ	5%	0,16W	
3808	4822 050 11002	1kΩ	5%	0,2W	
3809	4822 050 11002	1kΩ	5%	0,2W	
3810	4822 050 11002	1kΩ	5%	0,2W	
3811	4822 050 11002	1kΩ	5%	0,2W	
3812	4822 050 11002	1kΩ	5%	0,2W	

RESISTORS

3813	4822 116 52175	100Ω	5%	0,5W
3814	4822 050 11002	1kΩ	5%	0,2W
3815	4822 116 52296	6,8kΩ	5%	0,5W
3816	4822 116 52296	6,8kΩ	5%	0,5W
3817	4822 116 52257	22kΩ	5%	0,5W
3818	4822 116 52257	22kΩ	5%	0,5W
3819	4822 117 11825	1,5MΩ	5%	0,4W
3820	4822 116 52252	180kΩ	5%	0,5W
3821	4822 116 52243	1,5kΩ	5%	0,16W
3822	4822 116 52264	27kΩ	5%	0,5W
3823	4822 116 52234	100kΩ	5%	0,5W
3824	4822 116 83868	150Ω	5%	0,5W
3825	4822 116 83882	39kΩ	5%	0,5W
3826	4822 116 52296	6,8kΩ	5%	0,5W
3827	4822 116 52289	5,6kΩ	5%	0,16W
3828	4822 116 52283	4,7kΩ	5%	0,5W
3829	4822 116 52284	47kΩ	5%	0,5W
3830	4822 116 83864	10kΩ	5%	0,5W
3831	4822 116 52238	12kΩ	5%	0,5W
3832	4822 116 52222	390Ω	5%	0,16W
3833	4822 116 52264	27kΩ	5%	0,5W
3834	4822 116 83868	150Ω	5%	0,5W
3835	4822 116 52184	18Ω	5%	0,5W
3836	4822 050 11002	1kΩ	5%	0,2W
3837	4822 111 30893	4,7MΩ	5%	0,2W
3838	4822 116 52234	100kΩ	5%	0,5W
3839	4822 116 52235	1MΩ	5%	0,5W
3840	4822 050 11002	1kΩ	5%	0,2W
3841	4822 116 52298	680kΩ	5%	0,5W
3842	4822 116 52297	68kΩ	5%	0,5W
3843	4822 116 52231	820Ω	5%	0,5W
3844	4822 116 52291	56kΩ	5%	0,5W
3845	4822 116 52298	680kΩ	5%	0,5W
3846	4822 050 11002	1kΩ	5%	0,2W
3847	4822 116 52298	680kΩ	5%	0,5W
3848	4822 116 52251	18kΩ	5%	0,5W
3849	4822 116 52175	100Ω	5%	0,5W
3850	4822 116 52251	18kΩ	5%	0,5W
3851	4822 116 83864	10kΩ	5%	0,5W
3852	4822 116 52224	470Ω	5%	0,5W
3853	4822 116 52251	18kΩ	5%	0,5W
3854	4822 116 52243	1,5kΩ	5%	0,16W
3855	4822 116 83882	39kΩ	5%	0,5W
3856	4822 116 52271	33kΩ	5%	0,16W
3857	4822 116 52269	3,3kΩ	5%	0,5W
3858	4822 116 80176	1Ω	5%	0,5W
3859	4822 116 83864	10kΩ	5%	0,5W
3860	4822 116 52207	1,2kΩ	5%	0,5W
3861	4822 116 52257	22kΩ	5%	0,5W
3865	4822 050 18208	8,2Ω	1%	0,4W
3876	4822 116 52257	22kΩ	5%	0,5W
3877	4822 116 52257	22kΩ	5%	0,5W
3878	4822 116 52257	22kΩ	5%	0,5W
3879	4822 116 52257	22kΩ	5%	0,5W
3880	4822 116 52257	22kΩ	5%	0,5W
3881	4822 116 52257	22kΩ	5%	0,5W
3884	4822 116 83882	39kΩ	5%	0,5W
3886	4822 116 52235	1MΩ	5%	0,5W

COILS

5103	4822 157 62552	2,2μH	
5104	4822 157 53302	1μH	
5105	4822 156 21738	COIL VAR., MW-RF	
5106	4822 156 21739	COIL VAR., LW-RF	FM/MW/LW version
5120	4822 157 53789	COIL VAR., FM-RF	
5125	4822 156 30947	RF COIL 1,5 TURNS	
5130	4822 156 21737	COIL VAR., MW-OSC.	
5131	4822 156 21737	COIL VAR., LW-OSC.	FM/MW/LW version
5140	4822 158 60511	AM-IF FILTER 450kHz	
5142	4822 157 70302	AM-IF FILTER 450kHz	
5143	4822 242 81154	FILTER KIT, FM-IF	
5250	4822 156 20946	OSC.COIL 100kHz	
5803	4822 242 73557	CERAMIC RES. 8,46MHz	

DIODES

6101	4822 130 30621	1N4148	
6102	4822 130 30621	1N4148	
6138	4822 130 30621	1N4148	FM/AM version
6139	4822 130 30621	1N4148	FM/AM version
6250	4822 130 30621	1N4148	
6251	4822 130 30621	1N4148	
6252	4822 130 30621	1N4148	
6253	4822 130 30621	1N4148	
6254	4822 130 30621	1N4148	
6802	4822 130 30621	1N4148	
6803	4822 130 31554	BZX79-B4V3	
6805	4822 130 30621	1N4148	
6806	4822 130 30621	1N4148	
6807	4822 130 30621	1N4148	

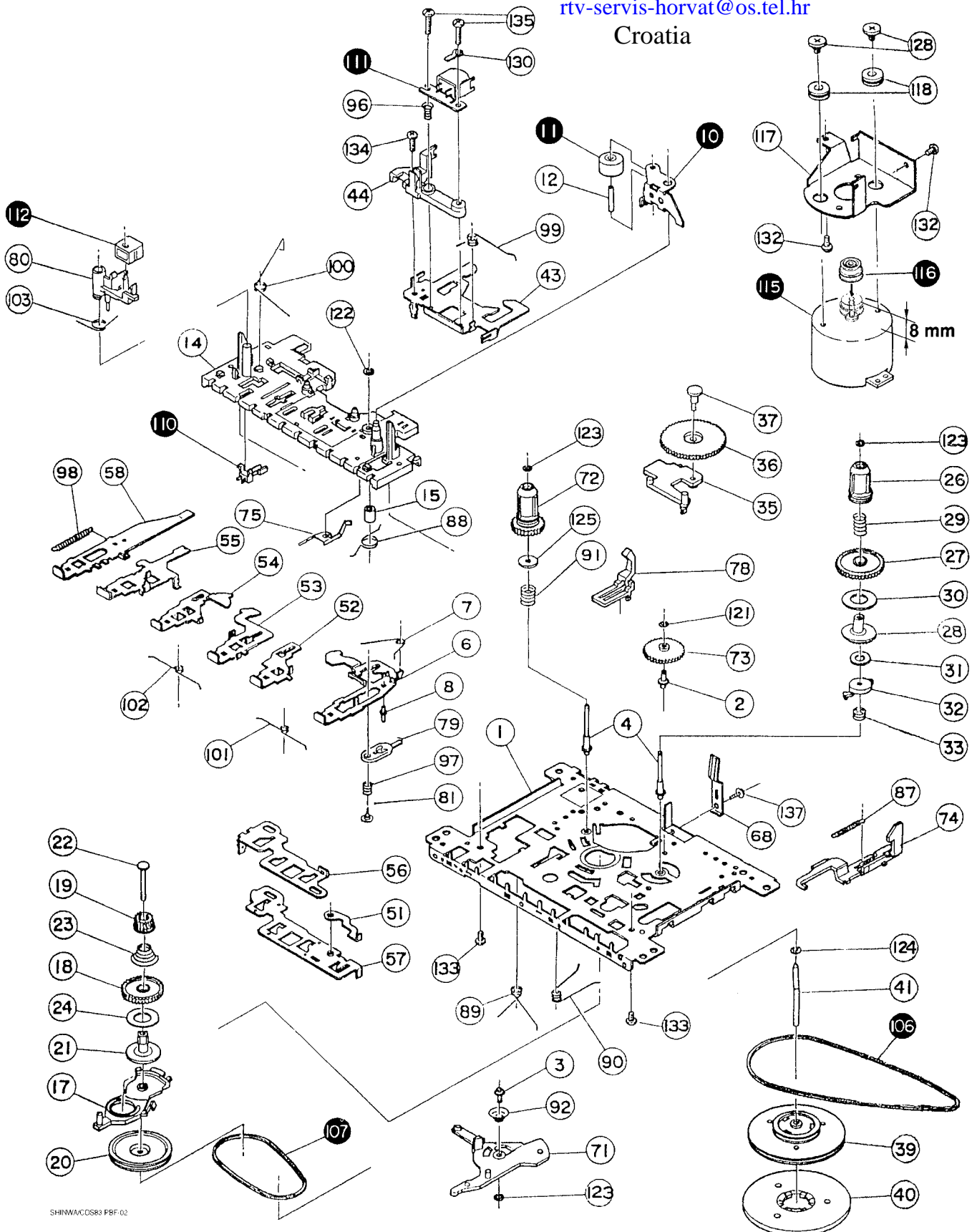
TRANSISTORS

7251	4822 130 40937	BC548B
7252	4822 130 44196	BC548C
7253	4822 130 44196	BC548C
7254	4822 130 40937	BC548B
7804	5322 130 60068	BC558C
7807	5322 130 44647	BC368
7808	4822 130 44196	BC548C
7810	4822 130 41344	BC337-40

INTEGRATED CIRCUITS

7101©	4822 209 32746	TEA5711T/N2, RADIO IC
7250©	4822 209 32918	AN7318S, Rec/Pb-AMPLIFIER IC
7800©	4822 209 13702	TMP47C421ADF-AZ8050D.1
7801©	4822 209 13703	M65821FP, DECODER
7802©	4822 209 32196	TDA1311AT/N2, DAC
7803©	4822 209 90496	M62475FP, SERVO PROCESSOR
7805	4822 209 32852	TDA7073A/N2
7806	4822 209 32852	TDA7073A/N2

TAPE TRANSPORT



SHINWA/CDS83 PBF 02

Only those parts of which a service code number is stated are normal service parts.

- 4822 691 21014 TAPE TRANSPORT CDS-83PBF-02
- 10 4822 528 70849 PINCH ROLLER ARM
- 11 4822 528 70695 PINCH ROLLER ASSY
- 106 4822 358 31325 MAIN BELT
- 107 4822 358 31124 SUB BELT

- 110 4822 278 90663 LEAF SWITCH, MOTOR ON/OFF
- 111 4822 249 10413 REC/PB-HEAD, MS15R-AA2N1
- 112 4822 249 40268 ERASE HEAD, TDK6PA
- 115 4822 361 21656 MOTOR, EG-530AD-9B
- 116 4822 528 81497 MOTOR PULLEY