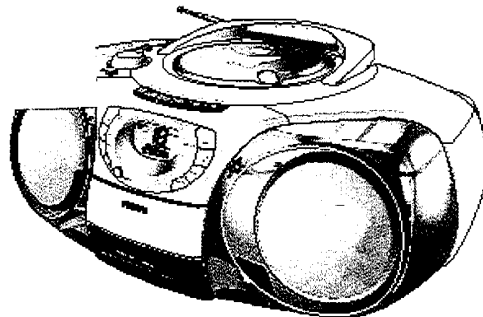


Service  
Service  
**Service**

Service Manual 1919



# Service Manual

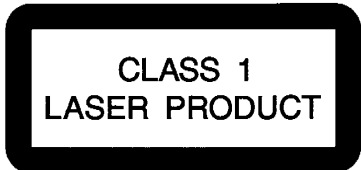


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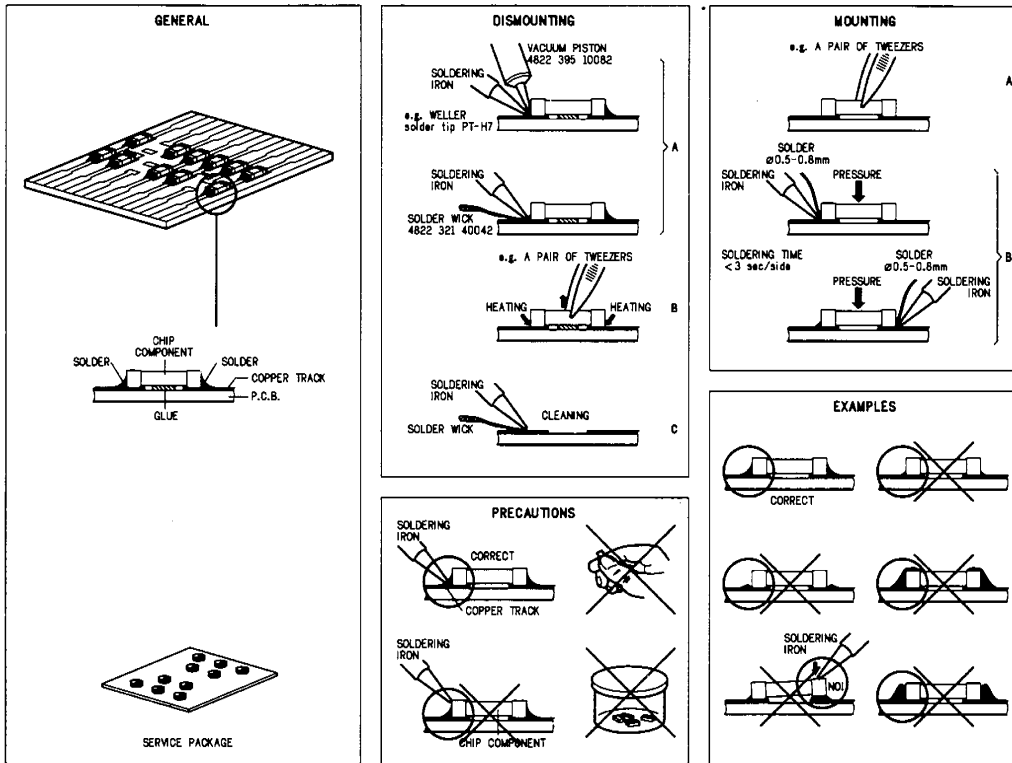
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Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

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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 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 braceleterti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

Anti-static table mat large 1200x650x1.25mm  
small 600x650x1.25mm

Anti-static wrist band  
Connection box (1M $\Omega$ )  
Extendible cable (to connect wrist band to conn. box)  
Connecting cable (to connect table mat to conn. box)  
Earth cable (to connect any product to mat or box)  
Complete kit ESD3 (combining all above products)  
Wristband tester

**D WARNUNG**

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unvorsichtige 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.

4822 466 10953  
4822 466 10958  
4822 395 10223  
4822 320 11307  
4822 320 11305  
4822 320 11306  
4822 320 11308  
4822 310 10671  
4822 344 13999

**ESD**



**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 those symbol.

**S Varning !**

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

**DK Advarsel !**

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

**SF Varoitus !**

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

**GB**

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

**F**

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

**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 braccialeto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

**GB WARNING**

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

**F ATTENTION**

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.

**D WARNUNG**

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Original-ersatzteile zu verwenden.

**NL WAARSCHUWING**

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

**I AVVERTIMENTO**

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.

**TECHNICAL SPECIFICATIONS****GENERAL**

Mains voltage	-/00/14 : 230 V
	-/01/11 : 120/230 V
	-/05/10 : 240 V
	-/17 : 120 V
Mains frequency	-/00/05/10/14 : 50 Hz
	-/01/11 : 50 / 60 Hz
	-/17 : 60 Hz
Battery	mains : 9 V (R20 x 6)
Power consumption	: 22 W
Dimension (W x H x D)	: 486 x 184 x 280 mm
Weight	: 4.6 Kg

**AMPLIFIER**

Output power	mains : 2 x 4 W
	battery : 2 x 2 W
Speaker impedance	: 2 x 4 Ohm
Frequency response	: 100 Hz - 10 kHz ( $\pm 3$ dB)

**TUNER - FM SECTION**

Tuning range	: 87.5 - 108 MHz
IF frequency	: 10.7 MHz
Sensitivity	: 22 dB at 26dB S/N
Selectivity	: 30 dB at $\pm 300$ kHz
IF rejection	: 60 dB
Image rejection	: 25 dB

**SERVICE TOOLS**

<b>TORX T10</b> screwdriver with shaftlength 150mm.....	4822 395 50423
<b>Audio signal disc</b> SBC 429.....	4822 397 30184
<b>Playability test disc</b> SBC 444.....	4822 397 30245
<b>Test disc 5</b> (disc without errors) +	
<b>Test disc 5A</b> (disc with dropout errors, black spots and fingerprints)	
SBC 426/426A.....	4822 397 30096
<b>Burn in test disc</b> (65 min. 1kHz signal at -30 dB level without "pause")...	4822 397 30155
<b>Universal test cassette</b> Fe SBC 420.....	4822 397 30071

**TUNER - AM SECTION**

Tuning range	MW : 531 - 1602 kHz
	-/17 : 530 - 1700 kHz
	LW : 153 - 279 kHz
IF frequency	: 468 kHz $\pm 3$ kHz
Sensitivity	MW : 4000 $\mu$ V/m at 26dB S/N
	LW : 6000 $\mu$ V/m at 26dB S/N
Selectivity	MW : 18 dB
	LW : 24 dB
IF rejection ratio	MW : 24 dB
	LW : 26 dB
Image rejection ratio	MW : 28 dB
	LW : 30 dB

**AUDIO CASSETTE RECORDER**

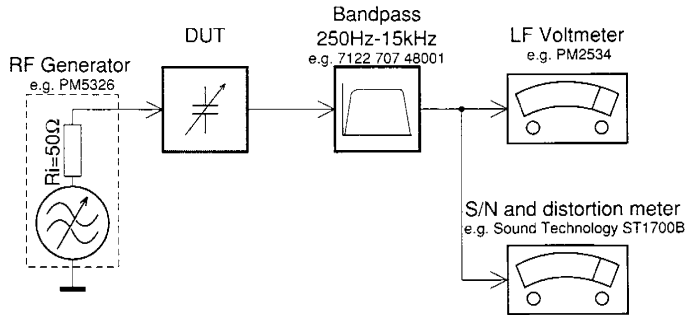
Number of tracks	: 1 stereo
Tape speed	: 4.76 cm/sec $\pm 3\%$
Wow & flutter	: < 0.48 % JIS UWTD
Fast wind/rewind C60	: < 110 sec.
Frequency response	P/B : 125 - 6300 Hz
S/N ratio	: > 38 dB

**COMPACT DISC**

Frequency response	: 100 Hz - 10 kHz
S/N ratio	: 50 dB
Channel difference	1 kHz : 3 dB
Channel crosstalk	1 kHz : 15 dB
Laser wavelength	: 780 $\pm 20$ nm
Laser light power	: < 0.3 mW

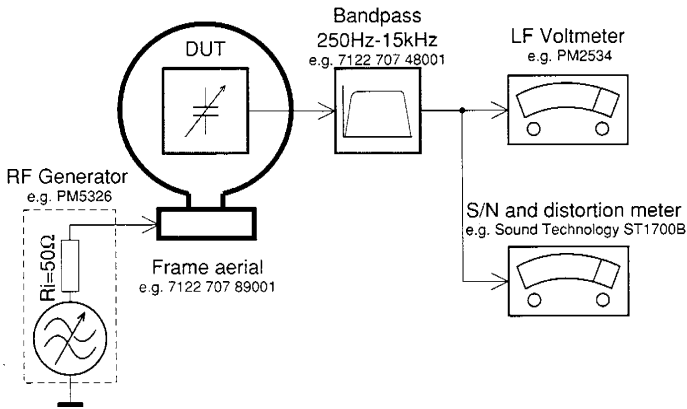
# SERVICE MEASUREMENTS

## Tuner FM



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

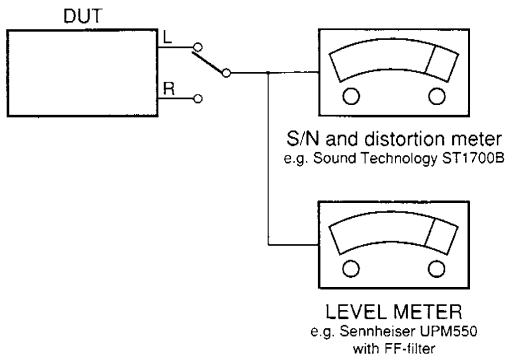
## Tuner AM (MW,LW)



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).

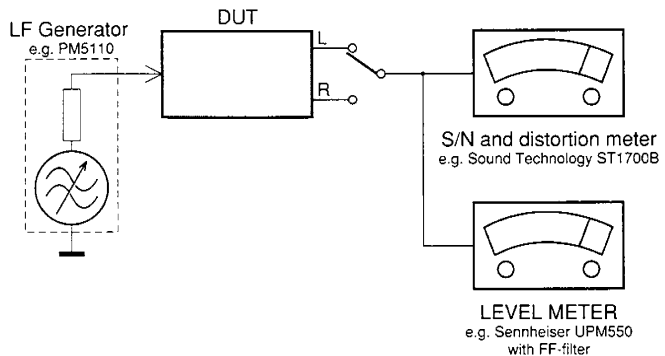
## CD

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



## RECORDER

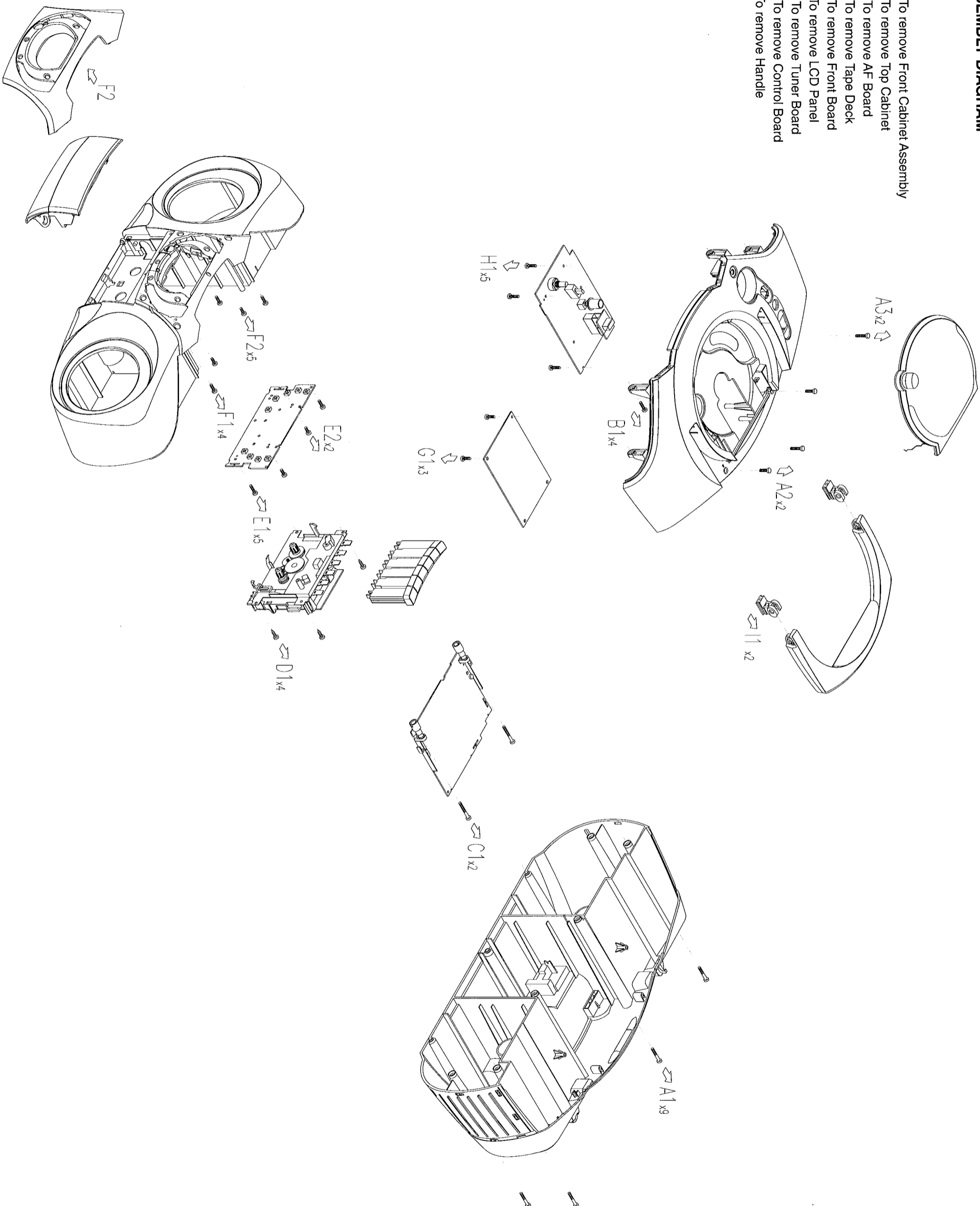
Use Universal Test Cassette Fe SBC420 4822 397 30071



# DISASSEMBLY DIAGRAM

4-1

- A. To remove Front Cabinet Assembly
- B. To remove Top Cabinet
- C. To remove AF Board
- D. To remove Tape Deck
- E. To remove Front Board
- F. To remove LCD Panel
- G. To remove Tuner Board
- H. To remove Control Board
- I. To remove Handle



4-1

- 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.

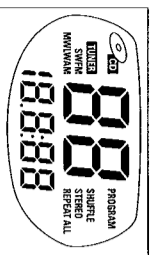
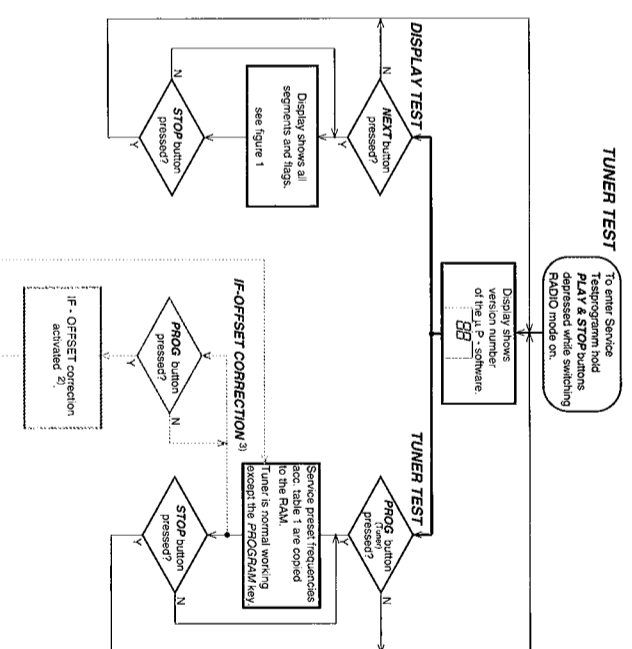
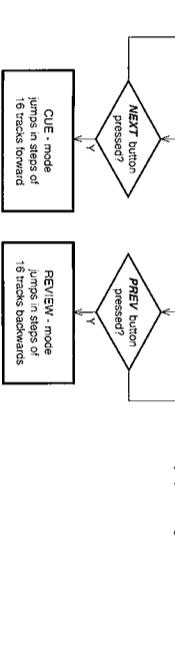
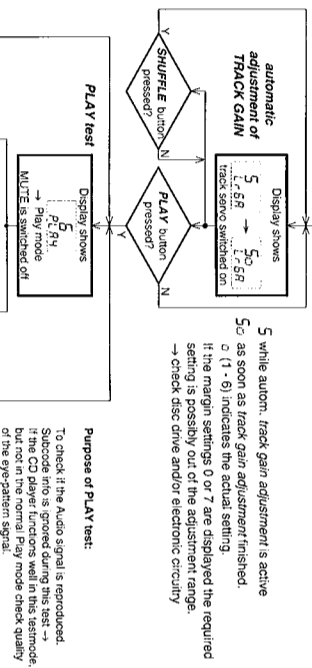
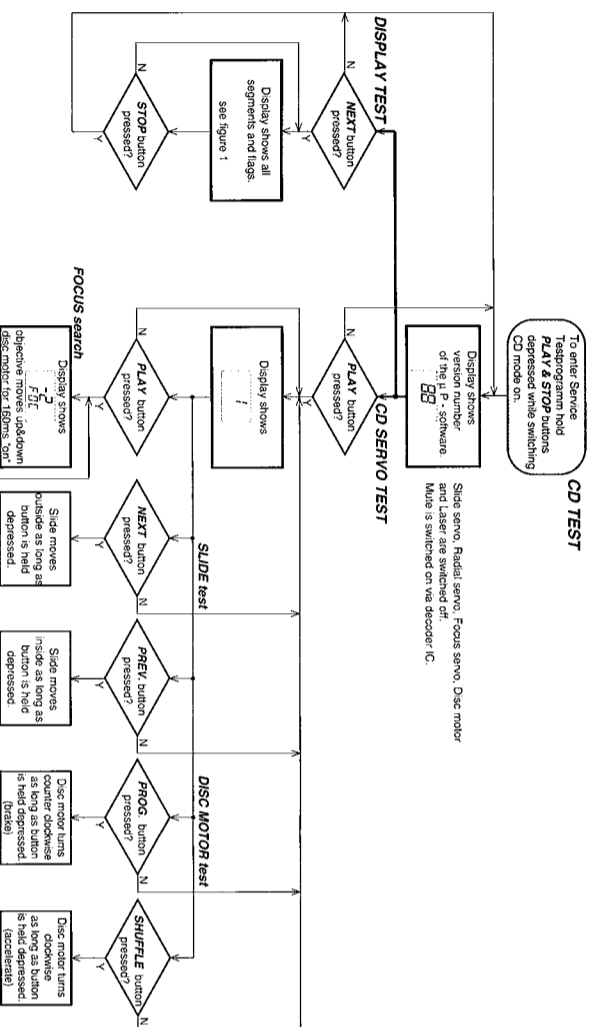


Fig. 1



SERVICE PRESET FREQUENCIES

PRESET	EUROPE FM/MLW/SW	EUROPE FM/MLW/SW	East EUROPE FM/MLW/W	USA FM/MLW	OVERSEAS FM/MLW	OVERSEAS FM/MLW/SW	KOREA FM/MLW-stereo	CHINA FM/MLW/SW
1	800/95/20/2/25	87.5 MHz	65.81 MHz	71/7/97	87.5 MHz	87.5 MHz	87.5 MHz	87.5 MHz
2	108 MHz	108 MHz	108 MHz	108 MHz	108 MHz	108 MHz	108 MHz	108 MHz
3	531 KHz	531 KHz	74 MHz	530/531 KHz	530/531 KHz	530/531 KHz	531 KHz	531 KHz
4	1602 KHz	1602 KHz	531 MHz	1700 KHz	1700/1602 KHz	1700/1602 KHz	1602 KHz	1602 KHz
5	559 KHz	559 KHz	531 KHz	560 KHz	560/559 KHz	560/559 KHz	558 KHz	558 KHz
6	1494 KHz	1494 KHz	1602 KHz	1500 KHz	1500/1494 KHz	1500/1494 KHz	1494 KHz	1494 KHz
7	153 KHz	153 KHz	538 KHz				3.9 MHz	5.9 MHz
8	279 KHz	279 KHz	1494 KHz				12.1 MHz	17.9 MHz
9	198 KHz	198 KHz	153 KHz				4.2 MHz	6.2 MHz
10	5.9 MHz	5.9 MHz	279 KHz				11 MHz	17 MHz
11	17.9 MHz	17.9 MHz	198 KHz					
12	6.2 MHz	6.2 MHz						
13	17 MHz	17 MHz						

table 1

1) How to set frequency grid:

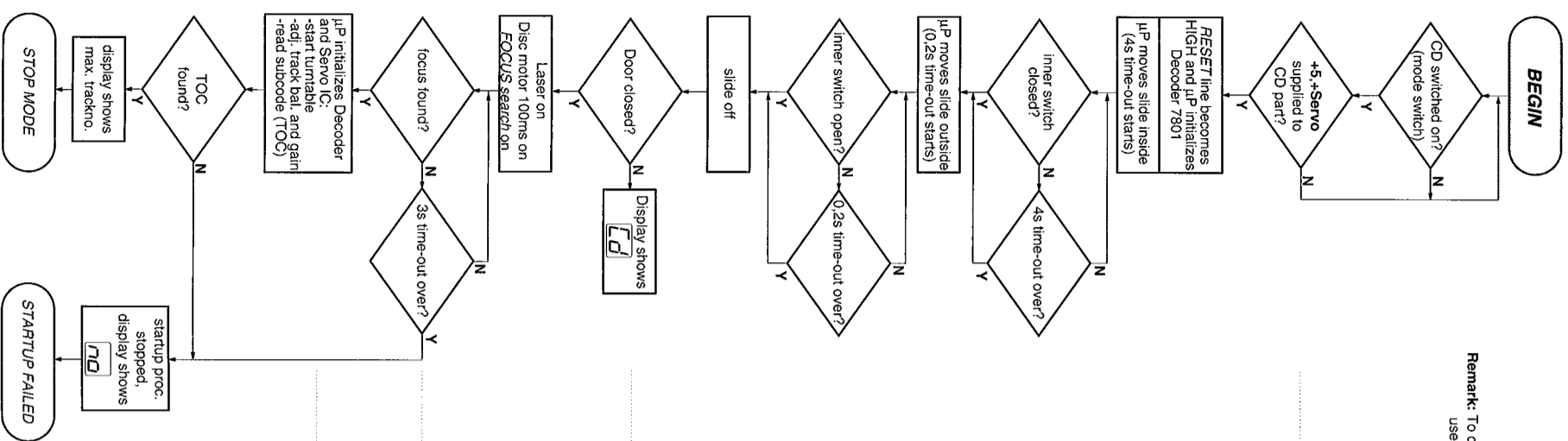
AM - 9 kHz / FM - 50 kHz : Hold BAND & TUNING DOWN buttons depressed while switching MODE-switch to RADIO.

AM - 10 kHz / FM - 100 kHz : Hold BAND & TUNING UP buttons depressed while switching MODE-switch to RADIO.

Selected frequency grid is stored in the EEPROM.

2) In sets with 30kHz grid on FM band it may occur that the tuned frequency is indicated wrong on the display because of tolerance of the discriminator filter.  
For that reason the testsoftware is prepared for an automatic IF-offset correction.  
Note: This test functions only with the East European tuner version used in 1/434 set versions.  
The test was executed on every set in the production line. In case the discriminator filter or the EEPROM has to be exchanged after repair, the automatic IF-offset correction should also be executed after repair.  
To activate the automatic IF-offset correction proceed as follows:  
- feed a sine wave 87.5MHz-Signal to the antenna  
- press the PROGRAM button  
The u.P starts now several times the search mode. If the transmitter was found at 87.5kHz the stop-frequency sent by the radio IC is compared with the nominal frequency else the display shows "00E". When the same difference is found twice the value will be stored as offset. The actual used offset is shown on the display ( -3, -2, -1, 0, 1, 2, 3 ).

# CD STARTUP PROCEDURE



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

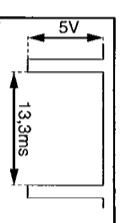
- Battery empty?
- check +5 and +Servo

check: - door switch

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

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

- HF Signal

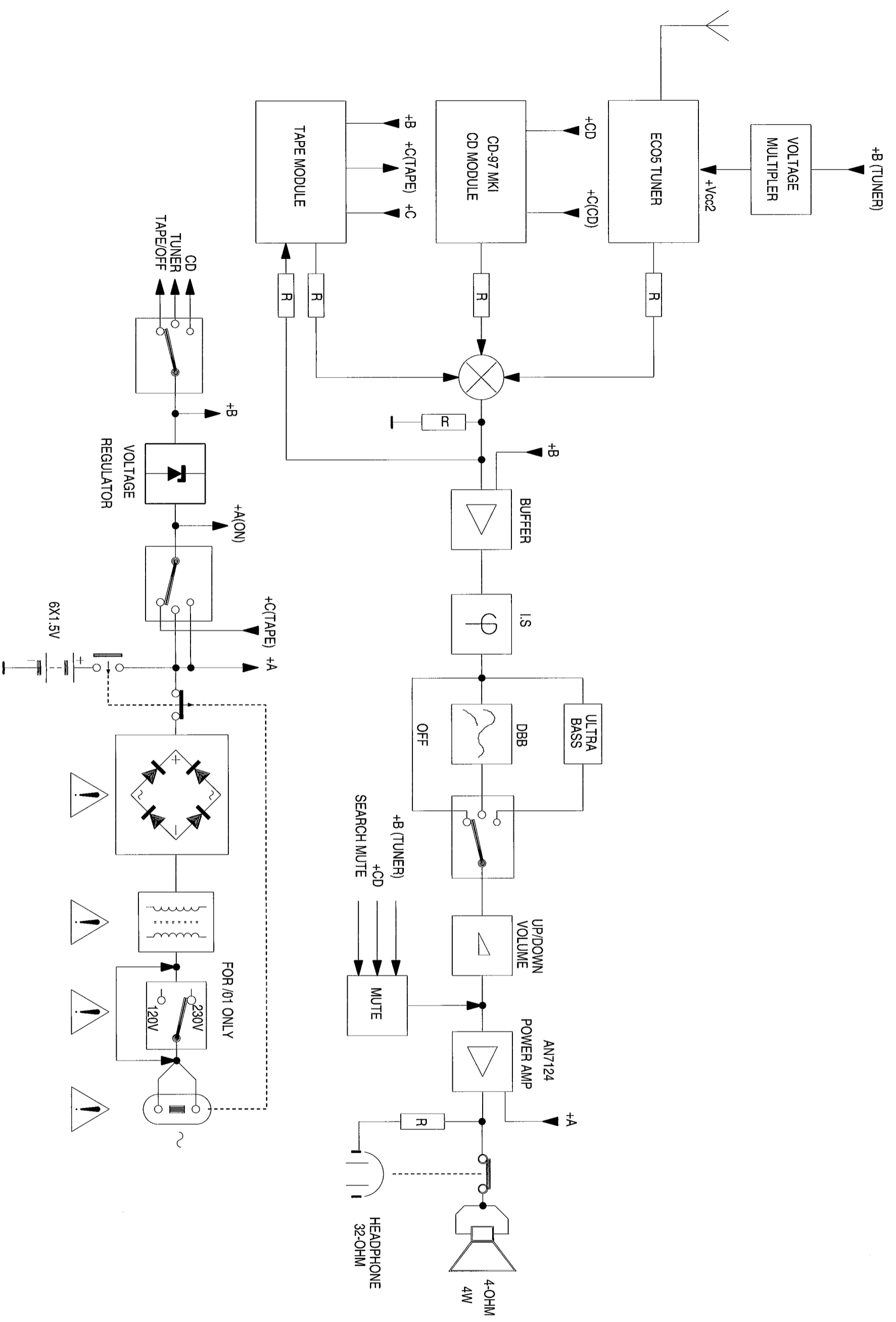


# Abbreviations and Pin-description of CD ICs

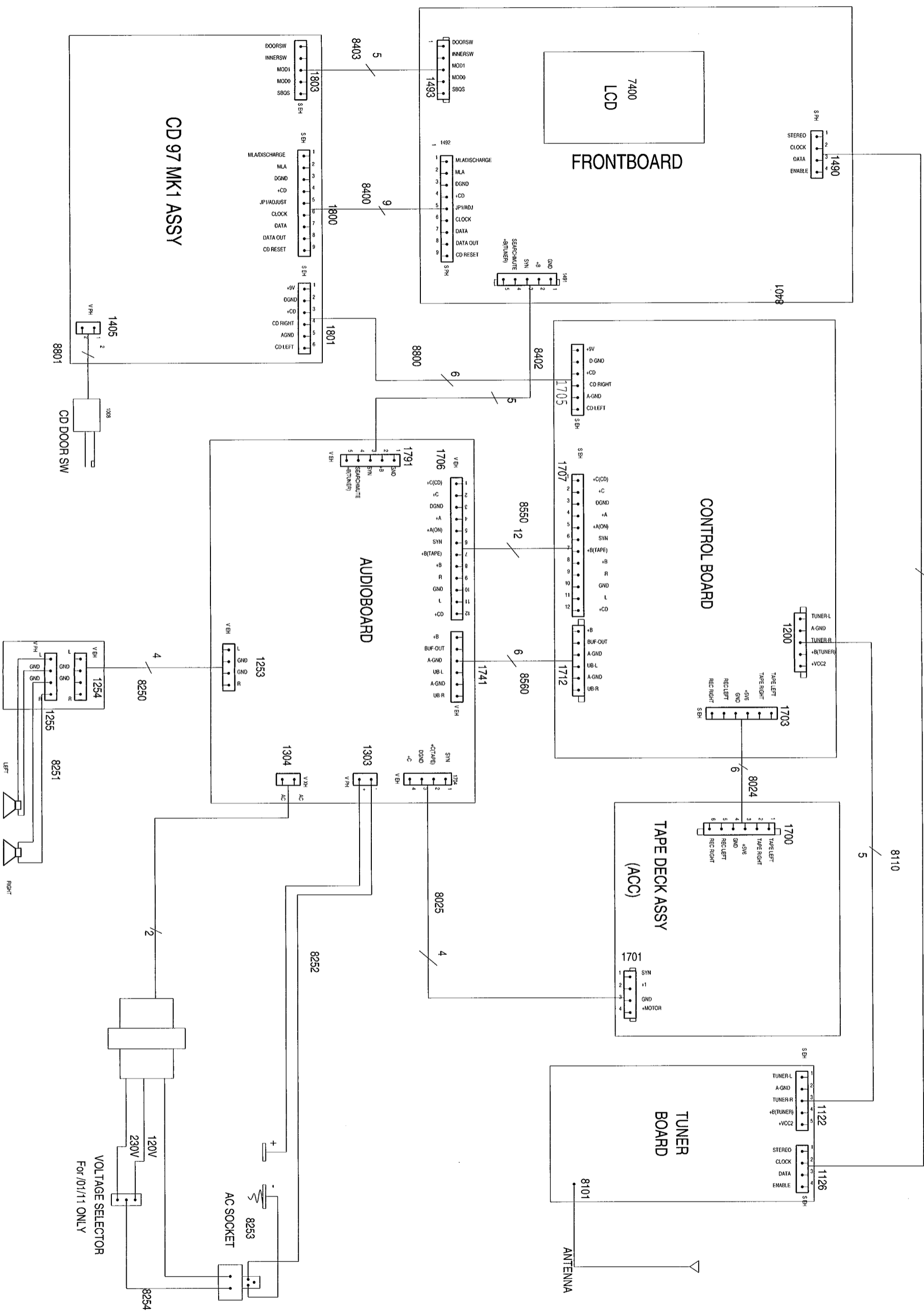
SERVO PROCESSOR	M62475FP	
Pin	Name	Direction
1-3	A, B, C	Diode array → Servo processor
4-5	E, F	Diode array → Servo processor
6	SGT	Servo processor → Track error ampl. Input
7	TE	-
8	TEGain	-
9	TG1	-
10	TE out	-
11	TC/Shock	-
12	TS +	-
13	TG2	-
14	TS -	-
15	TS out	-
16	SS +	Servo processor → Servo driver
17	SS -	-
18	Slide out	Servo processor → Motor driver
19	DET. FILTER	-
20	BIAS	Servo processor → external electronic
21	GND	-
22	MLANDIS	uP → Servo processor
23	JP1/SG	uP → Servo processor
24	MCK	uP → Servo processor
25	MSD	uP → Servo processor
26	D <sub>out</sub>	Servo processor → uP
27	C <sub>up</sub>	-
28	I <sub>ref</sub>	-
29	V <sub>cc</sub>	-
30	F <sub>Sout</sub>	Servo processor → Servo driver
31	FS -	-
32	FEGain	-
33	FE -	-
34	SGF	Servo processor → Focus error ampl. Input
35	C <sub>rgn</sub>	-
36	ALPC +	-
37	ALPC -	-
38	ALPC <sub>out</sub>	Servo processor → Laser driver
39	MRC	-
40	HF	-
41	HFI	Servo processor → Decoder
42	ABC	-

SIGNAL PROCESSOR	M65821FP	
Pin	Name	Direction
1	VDD1	-
2	EMP	not connected
3	SYCLK	not connected
4	LOCK	not connected
5	SCAND	not connected
6	CRCF	not connected
7	SBS	Signal processor → uP
8	MSD	uP ↔ Signal processor
9	RESET	Reset circuit → Signal processor
10	MCK	uP → Signal processor
11	MLA	uP → Signal processor
12-14	MODx	uP → Signal processor
15	VDD2	-
16	IREF	-
17	HFD	Signal processor → uP
18	LPF	-
19	HF	Servo processor → Signal processor
20	TLC	-
21	VSS2	-
22	C846	not connected
23	C423	Signal processor → uP
24	EST2	not connected
25	EST1	not connected
26	XI	X-Tal → Signal processor
27	XO	Signal processor → X-Tal
28	DOTX	not connected
29	DO1	Signal processor → DAC
30	DO2	not connected
31	CKSEL	not connected
32	DSCK	Signal processor → DAC
33	WDCK	Signal processor → DAC
34	LROCK1	Signal processor → DAC
35-36	not used	-
37	PWM1	Signal processor → Motor driver
38	PWM2	Signal processor → Motor driver
39-41	not used	-
42	VSS1	GND

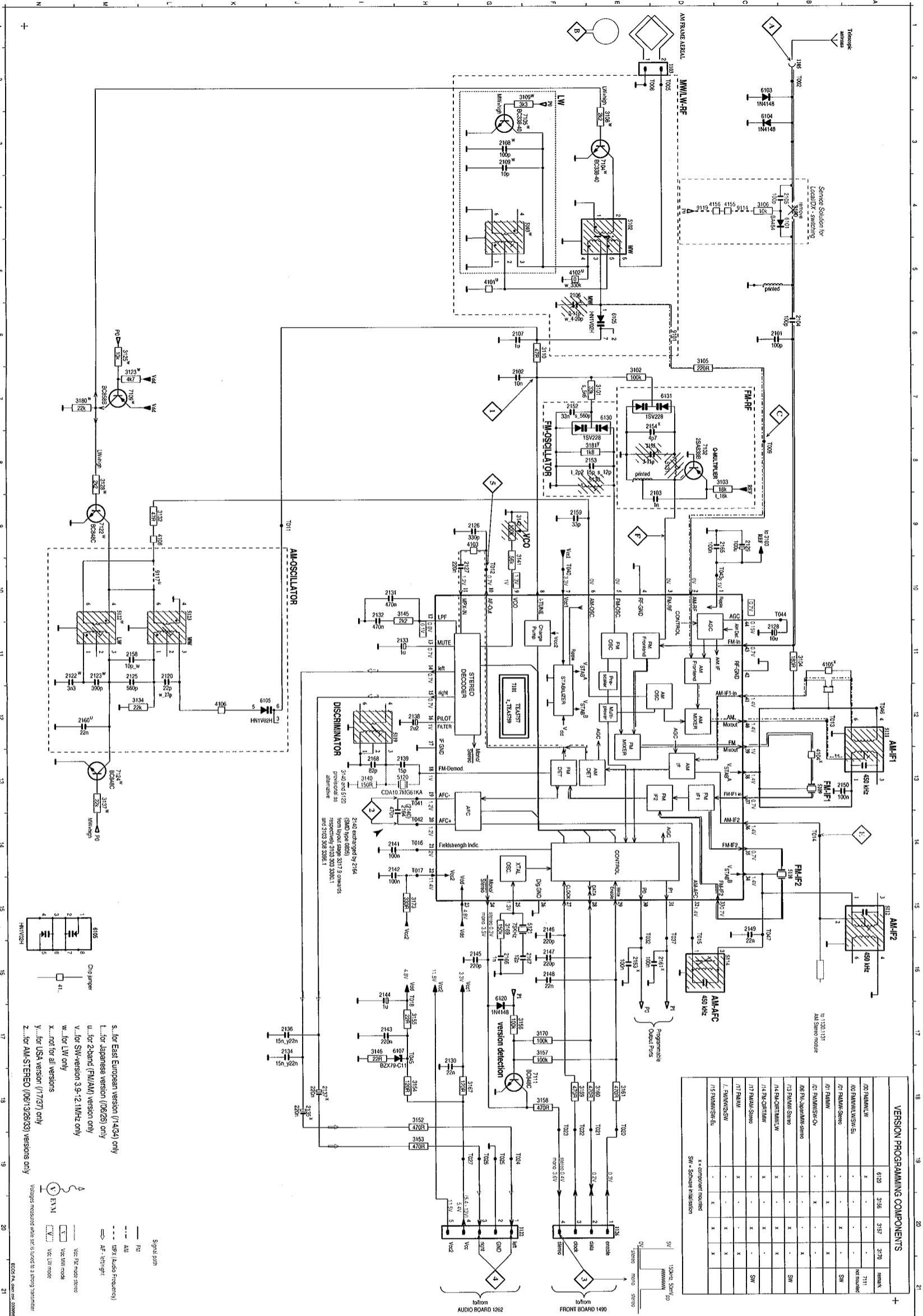
Pin	Name	Description
1	VDD1	+supply for signal processor
2	EMP	Emphasis flag output
3	SYCLK	Frame synchronize output
4	LOCK	Low disc rotation detect output
5	SCAND	Subcode sync signal detection
6	CRCF	Subcode Q CRC check flag output
7	SBS	Interrupt signal to read out subcode Q data
8	MSD	Data line
9	RESET	System reset
10	MCK	Clock input
11	MLA	Latch clock input
12-14	MODx	Mode setting inputs (0,1,2)
15	VDD2	+supply for data slicer and VCO
16	IREF	Current reference
17	HFD	HF signal detect
18	LPF	PLL loop filter
19	HF	HF signal input
20	TLC	Output from slice level control
21	VSS2	Ground
22	C846	8.4672MHz clock output
23	C423	4.2336MHz clock output
24	EST2	Error monitor output 2
25	EST1	Error monitor output 1
26	XI	Crystal oscillator input
27	XO	Crystal oscillator output
28	DOTX	Output of digital interface
29	DO1	Serial data output to DAC
30	DO2	Serial data output to Dual DAC
31	CKSEL	Crystal selector input: H=8MHz, L=16MHz
32	DSCK	Data shift clock
33	WDCK	Word clock
34	LROCK1	Left/Right clock
35-36	not used	-
37	PWM1	Disc motor driving (Pulse Width Modulation) output 1
38	PWM2	Disc motor driving (Pulse Width Modulation) output 2
39-41	not used	-
42	VSS1	Digital system ground







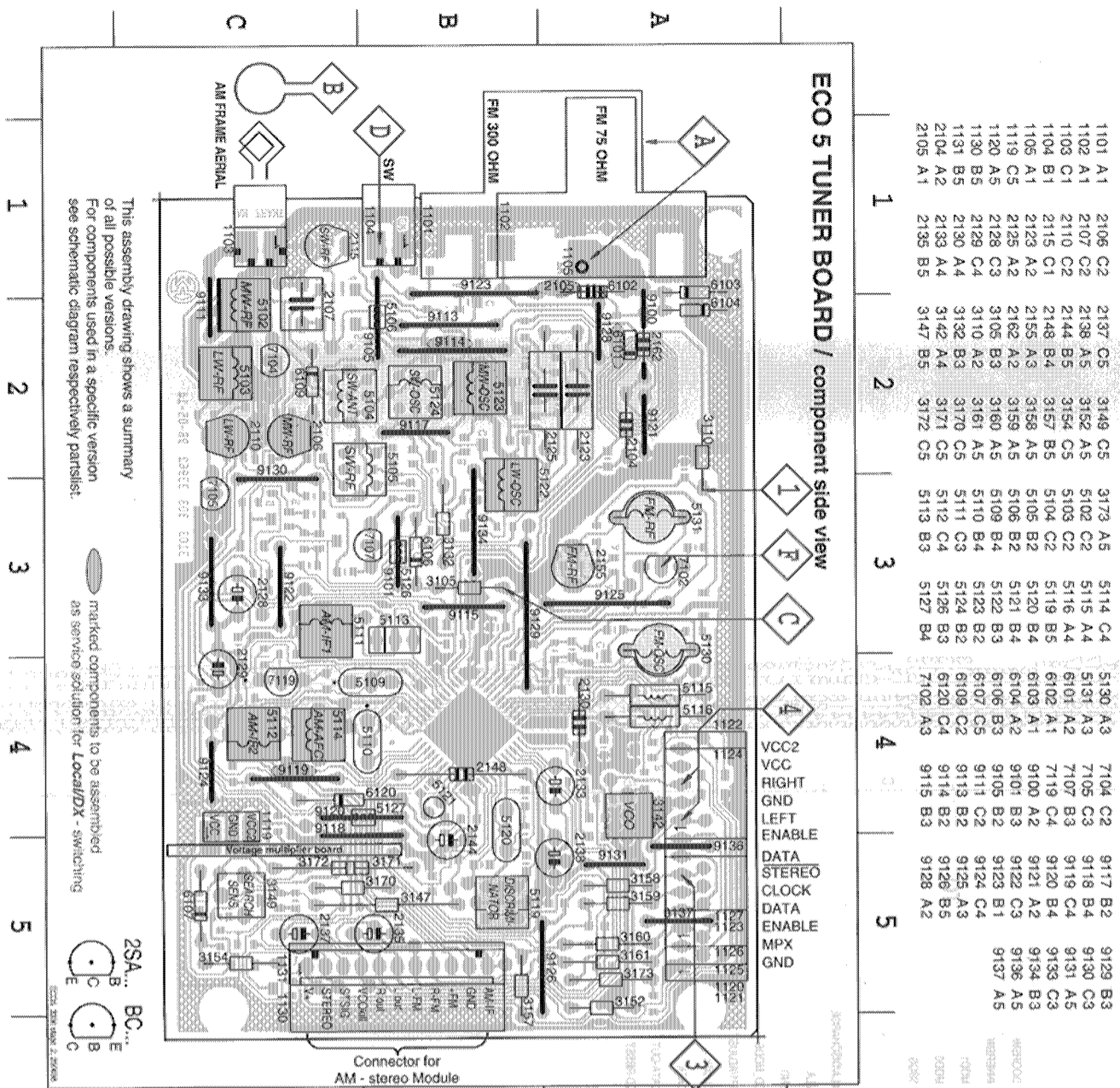
TUNER BOARD ECOS / PA



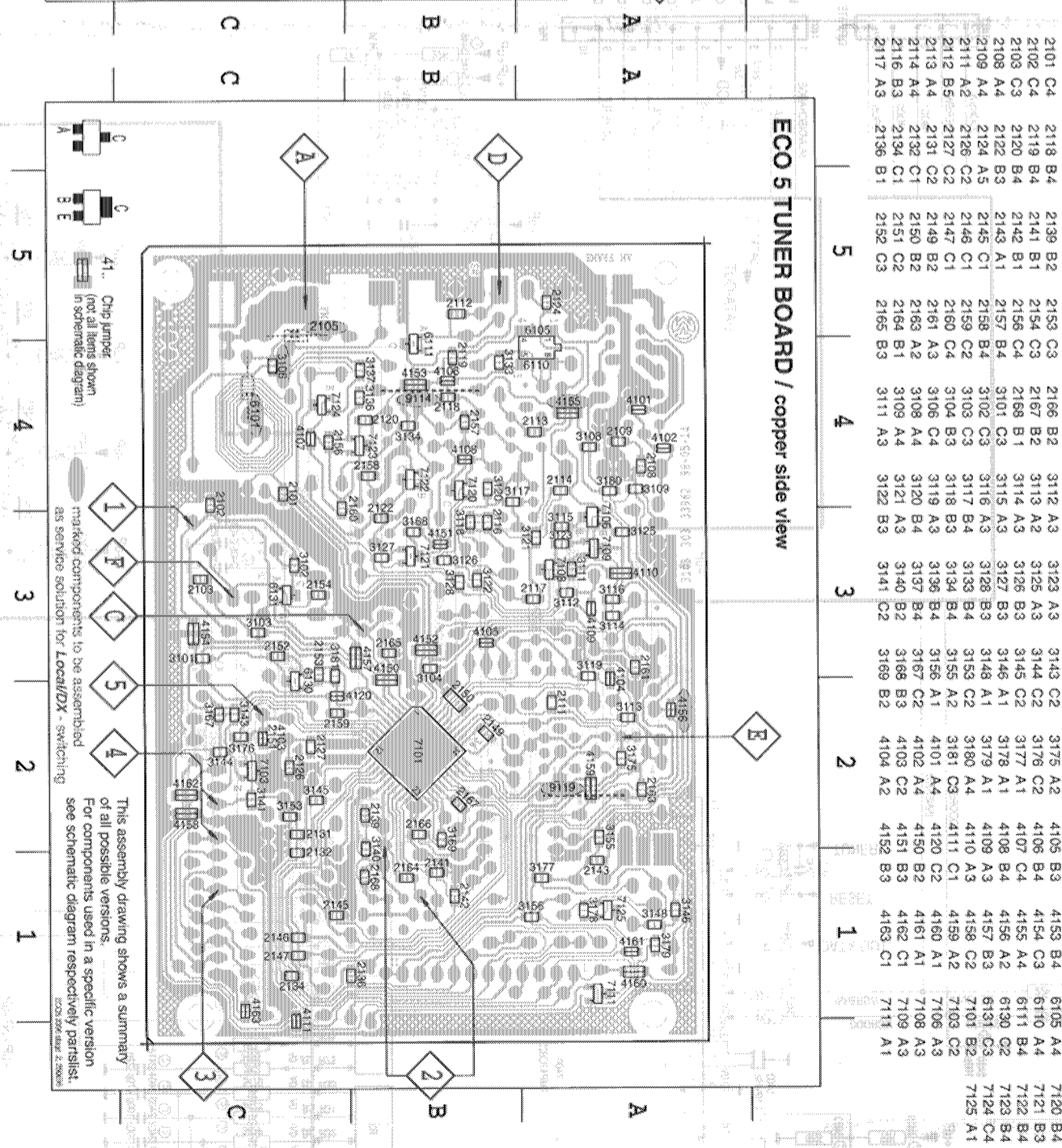
VERSION PROGRAMMING COMPONENTS									
Component	6150	3156	3157	3170	7171	7172	7173	7174	7175
00 PREAMPLIF									
01 PREAMPLIF SW	X								
02 PREAMPLIF SW		X							
03 PREAMPLIF SW			X						
04 PREAMPLIF SW				X					
05 PREAMPLIF SW					X				
06 PREAMPLIF SW						X			
07 PREAMPLIF SW							X		
08 PREAMPLIF SW								X	
09 PREAMPLIF SW									X
10 PREAMPLIF SW									
11 PREAMPLIF SW									
12 PREAMPLIF SW									
13 PREAMPLIF SW									
14 PREAMPLIF SW									
15 PREAMPLIF SW									
16 PREAMPLIF SW									
17 PREAMPLIF SW									
18 PREAMPLIF SW									
19 PREAMPLIF SW									
20 PREAMPLIF SW									
21 PREAMPLIF SW									

S...for East European version (1/4/24) only  
 L...for Japanese version (06/28) only  
 U...for 2-band (FM/AM) version only  
 V...for SW-version 3.9-1.2 MHz only  
 W...for LW only  
 X...not for all versions  
 Y...for USA version (1/7/77) only  
 Z...for AM-STEREO (06/11/28/83) versions only

Signal path  
 FM  
 AM  
 AF (Audio Frequency)  
 AF (Active)  
 V...V...mode stereo  
 V...V...mode  
 V...V...mode



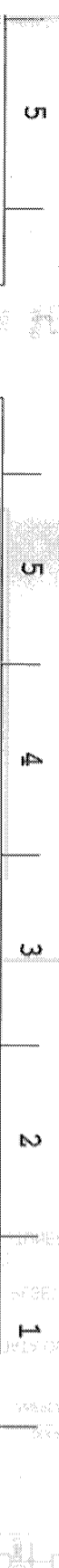
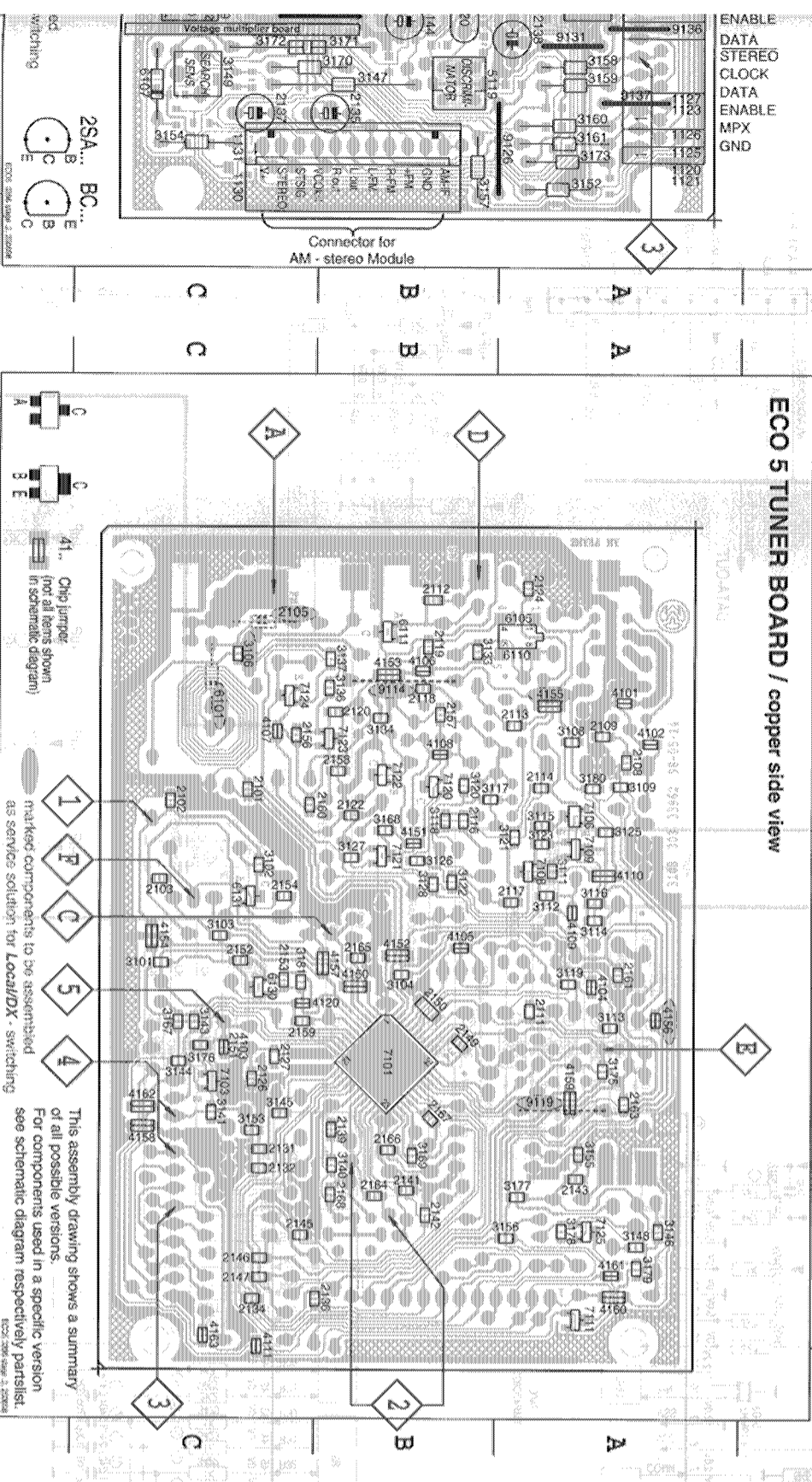
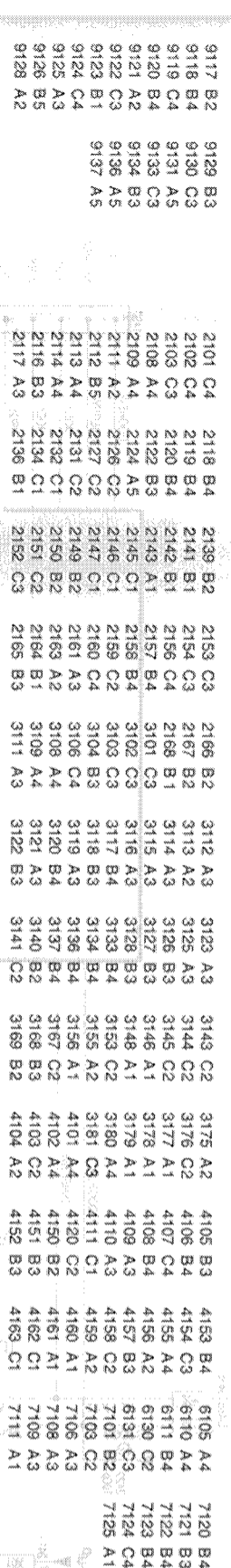
1101 A1	2108 C2	2137 C5	3149 C5	3173 A5	5114 A5	5130 A3	7104 C2	9117 B2	9129 B3
1102 A1	2107 C2	2138 A5	3152 A5	3173 A5	5115 A4	5131 A3	7105 C3	9118 B4	9130 C3
1103 C1	2144 B5	2144 B5	3154 C5	3173 A5	5116 A4	5101 A2	7107 B3	9119 C4	9131 A5
1104 B1	2115 C1	2148 B4	3157 B5	3173 A5	5119 B5	5102 A1	7119 C4	9120 B4	9133 C3
1105 A1	2123 A2	2155 A3	3158 A5	3173 A5	5105 B2	5103 A1	9100 A2	9121 A2	9134 B3
1119 C5	2128 A2	2162 A2	3159 A5	3173 A5	5120 B4	5104 A2	9101 B3	9122 C3	9136 A5
1120 A5	2128 C3	2162 A2	3160 B3	3173 A5	5121 B4	5106 B3	9105 B2	9123 B1	
1130 B5	2129 C4	2162 A2	3161 A5	3173 A5	5122 B2	5107 C5	9111 C2	9124 C4	
1131 B5	2130 A4	2162 A2	3161 A5	3173 A5	5122 B2	5108 B3	9111 C2	9125 A3	
2104 A2	2133 A4	3142 A4	3170 C5	3173 A5	5124 B2	5109 C4	9113 B2	9126 B5	
2105 A1	2135 B5	3147 B5	3172 C5	3173 A5	5126 B4	5110 C4	9114 B2	9128 A2	



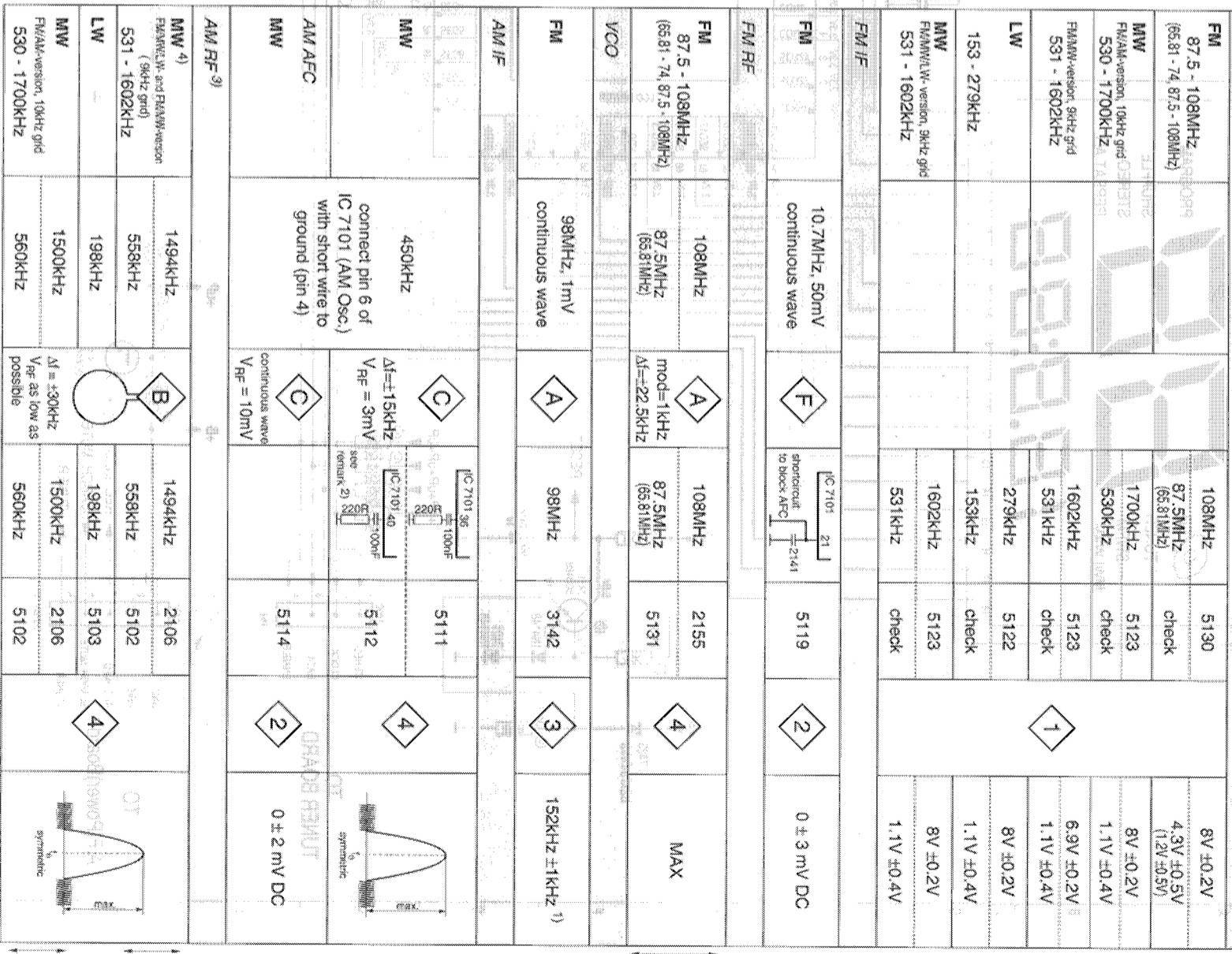
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2102 C4	2119 B4	2141 B1	2154 C3	2167 B2	3113 A2	3125 A3	3144 C2	3176 C2	4106 B4	4154 C3	6110 A4	7121 B3
2103 C3	2120 B4	2142 B1	2156 C4	2168 B1	3114 A3	3126 B3	3145 C2	3177 A1	4107 C4	4155 A4	6111 B4	7122 B4
2108 A4	2122 B3	2143 A1	2157 B4	2169 B1	3115 A3	3127 B3	3146 A1	3178 A1	4108 B4	4156 A2	6130 C2	7123 B4
2109 A4	2124 A5	2145 C1	2158 B4	2170 B1	3116 A3	3128 B3	3148 A1	3179 A1	4109 A3	4157 B3	6131 C3	7124 C4
2111 A2	2126 C2	2146 C1	2159 C2	2171 C1	3117 B4	3129 B4	3149 A1	3180 A4	4110 A3	4158 C2	7101 B2	7125 A1
2112 B5	2127 C2	2147 C1	2160 C4	2172 C2	3118 B3	3130 C3	3150 A2	3181 C3	4111 C1	4159 A2	7103 C2	
2113 A4	2128 C1	2149 B2	2161 A3	2173 C1	3119 A3	3131 B4	3151 A1	3182 A4	4112 C2	4160 A1	7108 A3	
2114 A4	2131 C2	2150 B2	2163 A2	2174 C1	3120 A4	3132 B4	3152 C2	3183 B4	4113 C2	4161 A1	7108 A3	
2116 B3	2132 C1	2151 C2	2164 B1	2175 C1	3121 A3	3133 B4	3153 C2	3184 B4	4114 C2	4162 C1	7109 A3	
2117 A3	2136 B1	2152 C3	2165 B3	2176 B1	3122 B3	3134 C2	3154 A2	3185 B2	4115 B3	4163 C1	7111 A1	

Wavering
VARICAP ALI
FM 87.5 - 108MHz (65.81 - 74.87.5 - 10)
MW FM/AM-version, 10kHz 530 - 1700kHz
FM/AM-version, 9kHz 531 - 1602kHz
LW 153 - 279kHz
MW FM/AM-version, 531 - 1602kHz
FM IF
FM FM RF
FM 87.5 - 108MHz (65.81 - 74.87.5 - 10)
VCO
FM AM IF
AM AFC
MW
AM RF 3)
MW 4)
FM/AM-version, 10kHz 530 - 1700kHz
LW
MW FM/AM-version, 10kHz 530 - 1700kHz

Use service test pr  
1) If sensitivity of the (input signal: ster  
3) For AM RF adjus  
Repeat

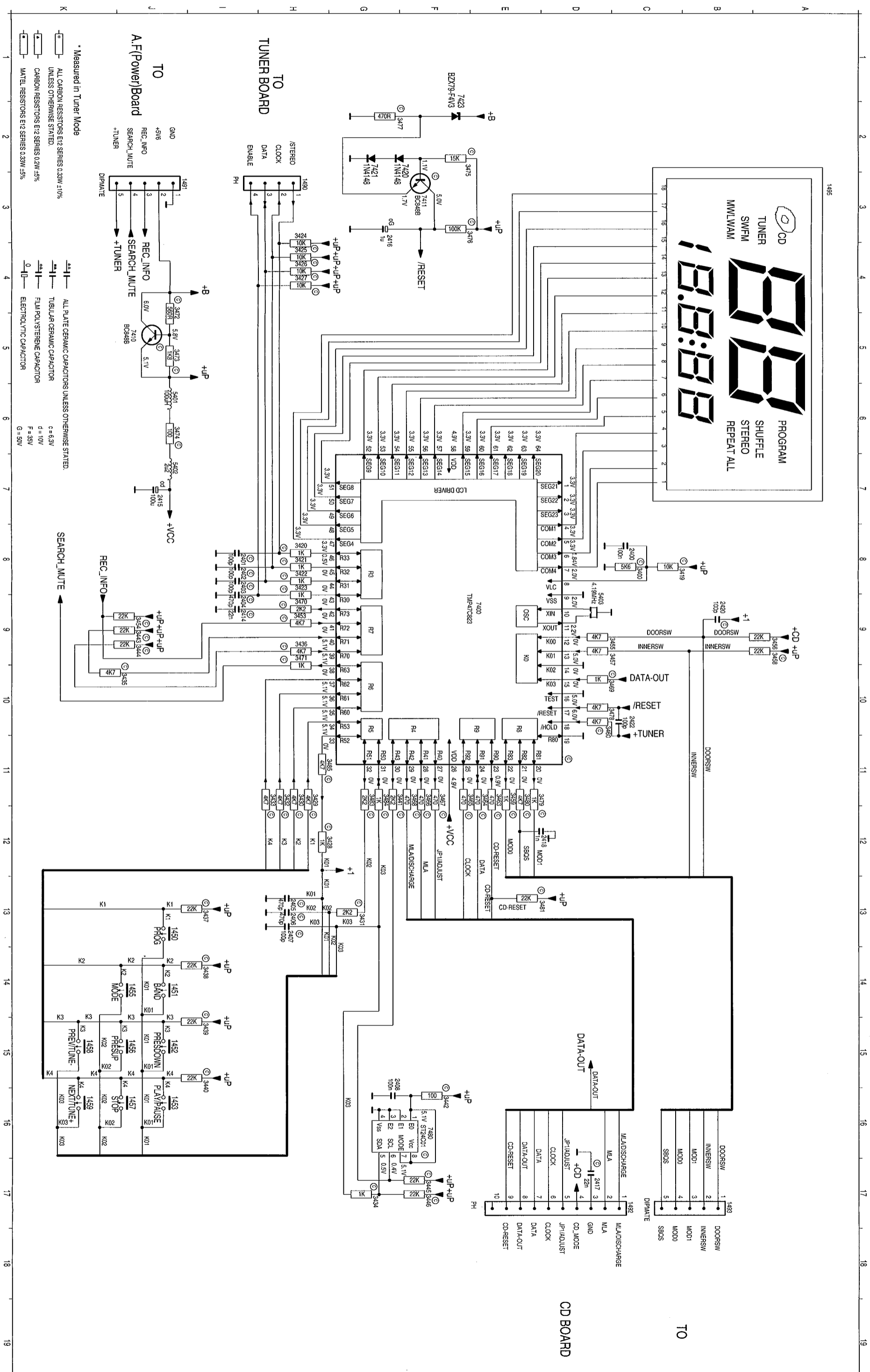


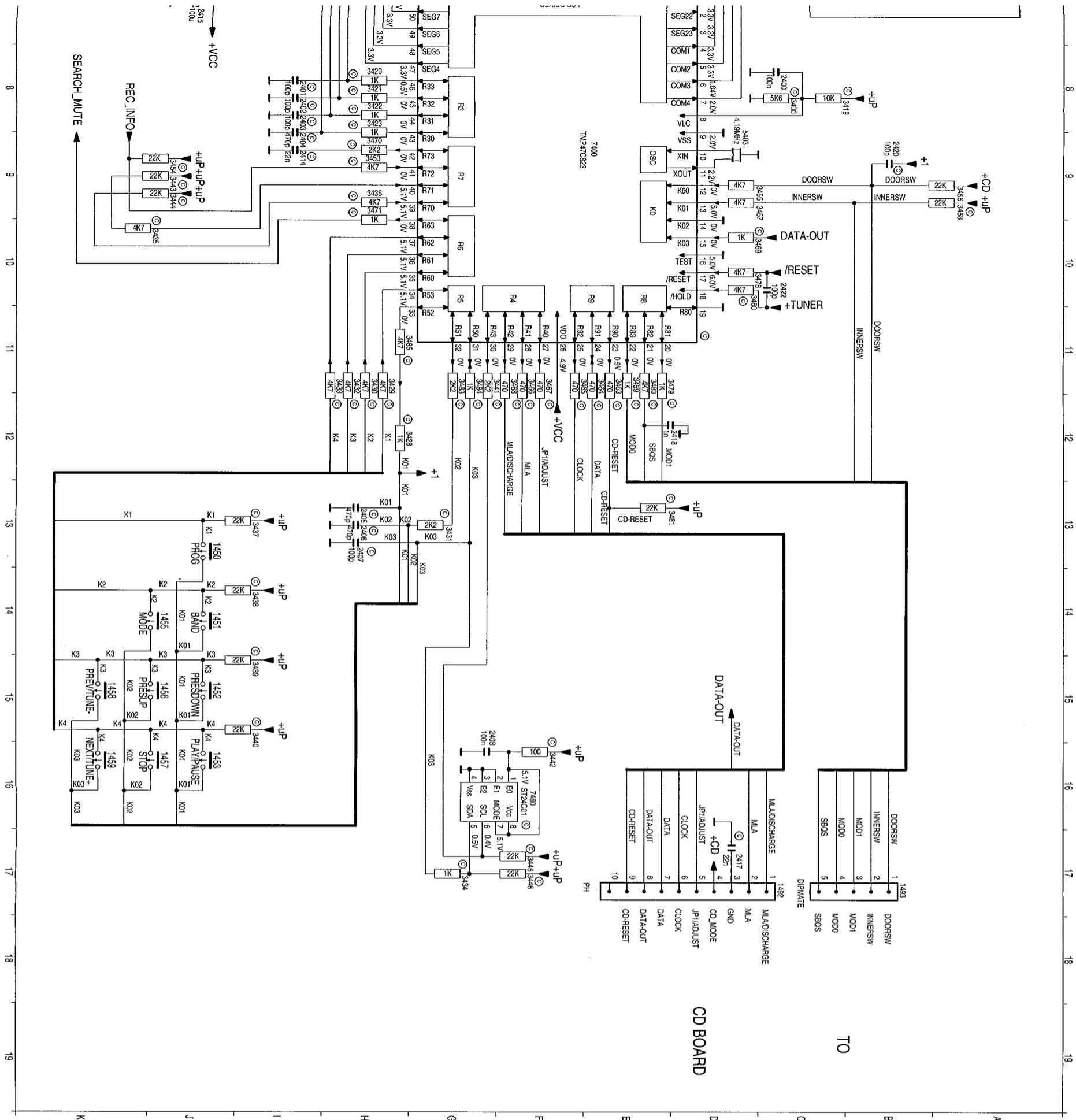
Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Volmeter
<b>VARICAP ALIGNMENT</b>						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	108MHz 87.5MHz (65.81MHz)	5130	check		8V ±0.2V 4.3V ±0.5V (1.2V ±0.5V)
MW FM/MW-version, 10kHz grid 530 - 1700kHz	1700kHz	1700kHz	5123	check		8V ±0.2V 1.1V ±0.4V
FM/MW-version, 9kHz grid 531 - 1602kHz	1602kHz	1602kHz	5123	check	1	6.9V ±0.2V 1.1V ±0.4V
LW	279kHz	279kHz	5122	check		8V ±0.2V
MW FM/MW/LW-version, 9kHz grid 531 - 1602kHz	153 - 279kHz	153kHz	check			1.1V ±0.4V 8V ±0.2V
FM IF	10.7MHz, 50mV continuous wave	F	5119	check	2	0 ± 3 mV DC
FM RF	108MHz	A	2155	check	4	MAX
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	98MHz, 1mV continuous wave	A	3142	check	3	152kHz ±1kHz 1)
VCO	450kHz	C	5111	check	4	
AM IF	connect pin 6 of IC 7101 (AM Osc.) with short wire to ground (pin 4)	C	5112	check		
MW	continuous wave V <sub>RF</sub> = 10mV	C	5114	check	2	0 ± 2 mV DC
AM AFC						
MW	1494kHz	B	2106	check		
AM RF 3)	558kHz		5102	check		
FM/MW/LW-version 531 - 1602kHz	198kHz		5103	check	4	
LW	1500kHz		2106	check		
MW FM/MW-version, 10kHz grid 530 - 1700kHz	560kHz		5102	check		



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

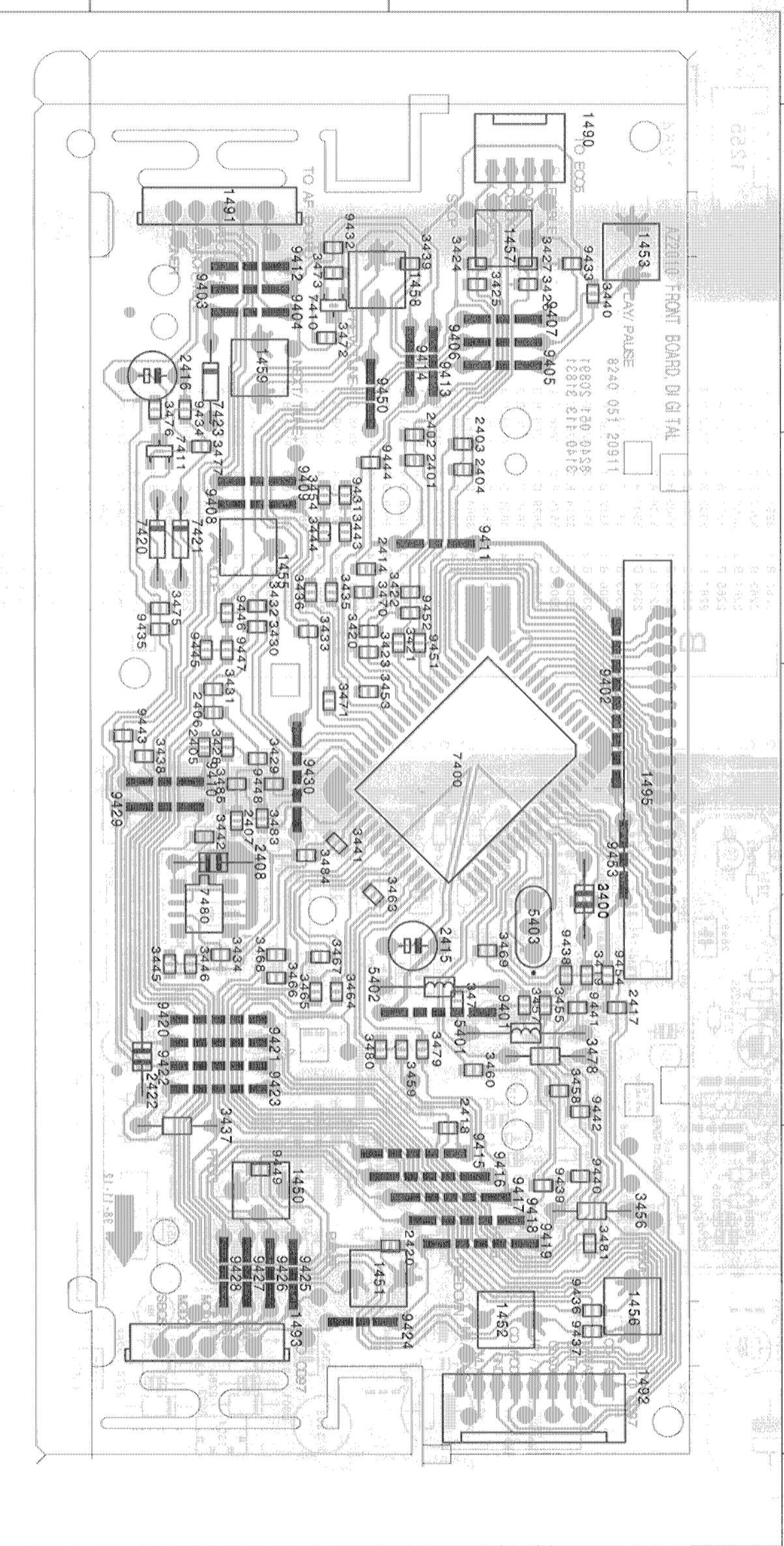
1) If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)  
 2) RC network serves for damping the IF-filter while adjusting the other one.  
 3) For AM RF adjustments the original frame antenna has to be used!  
 4) MW has to be aligned before LW.  
 Repeat





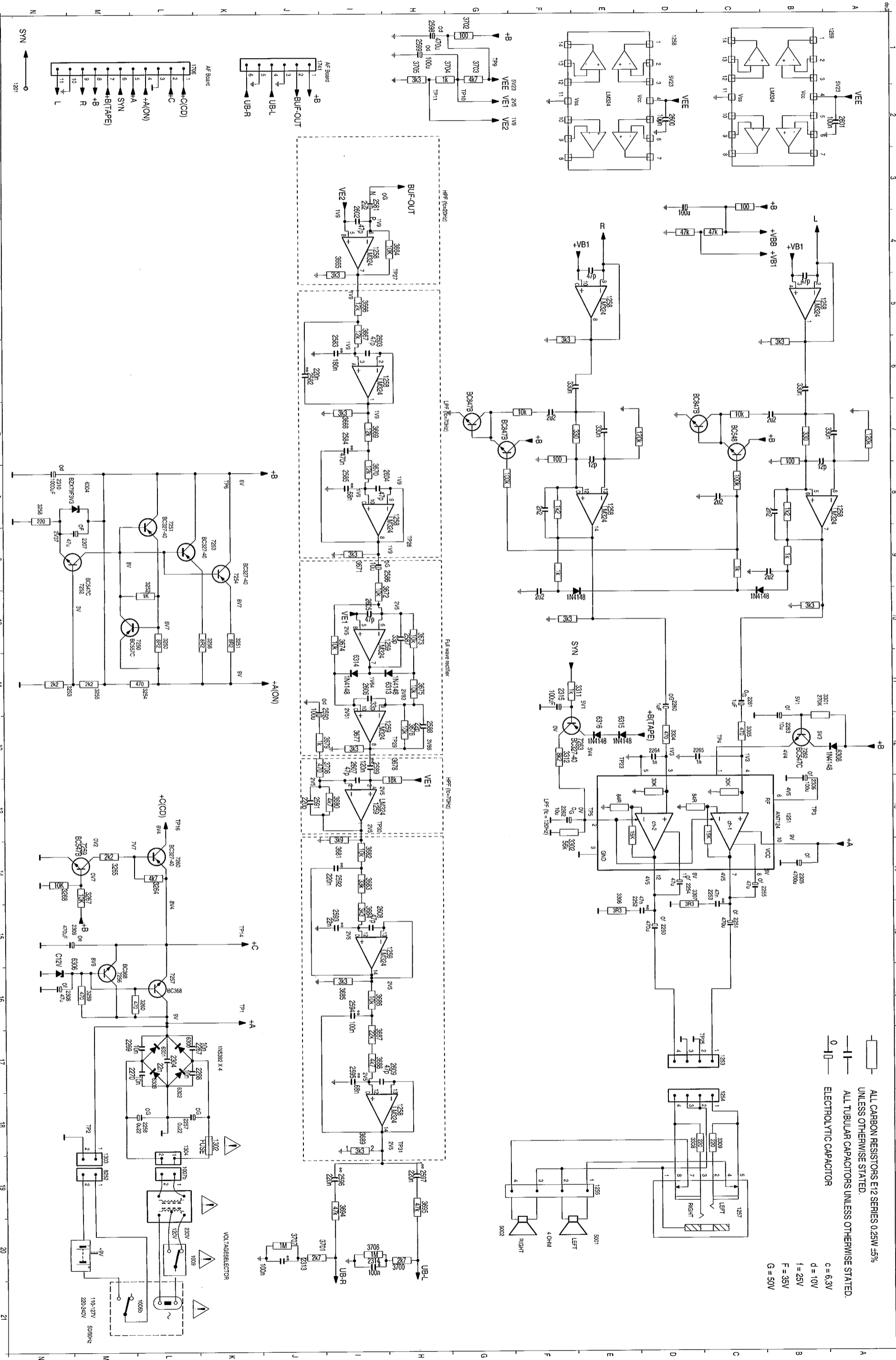
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 1482 INNERSW 2  
 1481 MOD1 3  
 1480 MOD0 4  
 1479 SPOS 5  
 1478 CD-RESET 6  
 1477 DATA-OUT 7  
 1476 DATA 8  
 1475 JPIADJUST 9  
 1474 CLOCK 10  
 1473 CD-RESET 11  
 1472 DATA-OUT 12  
 1471 DATA 13  
 1470 JPIADJUST 14  
 1469 CLOCK 15  
 1468 MOD0 16  
 1467 MOD1 17  
 1466 INNERSW 18  
 1465 DOORSW 19

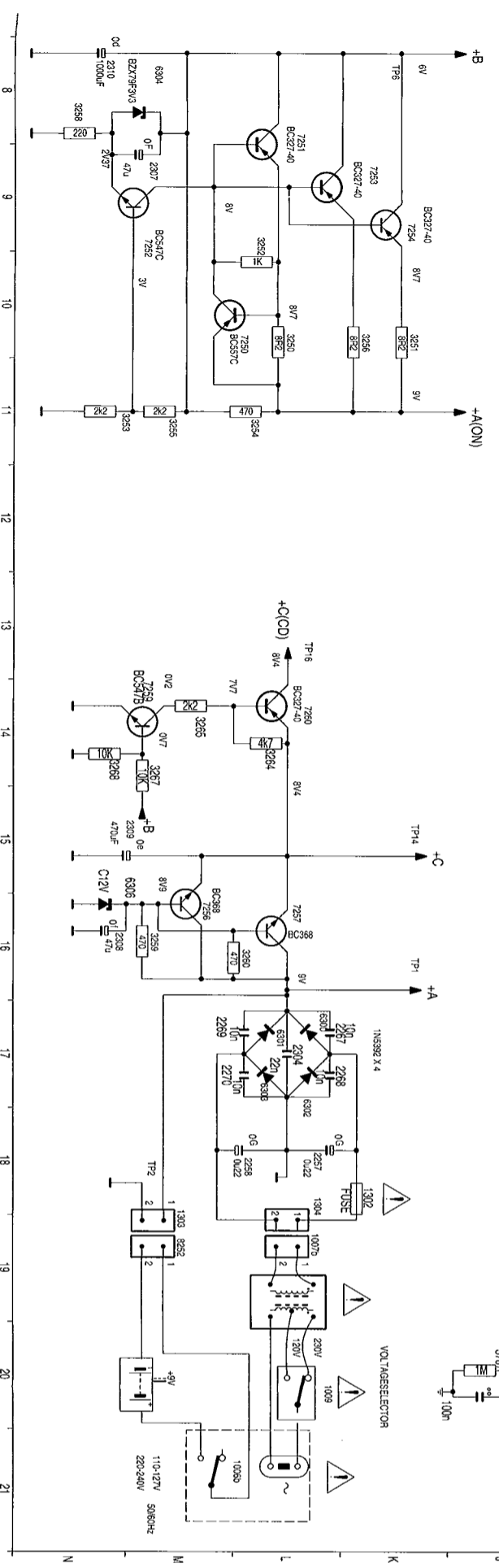
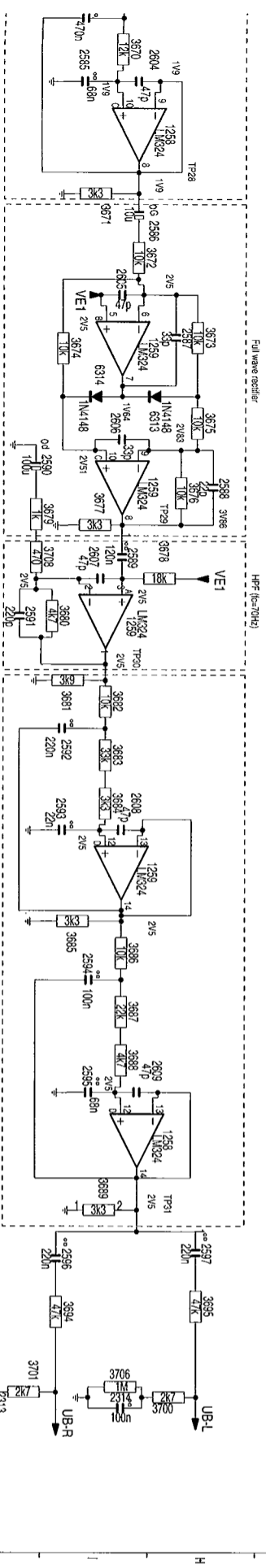
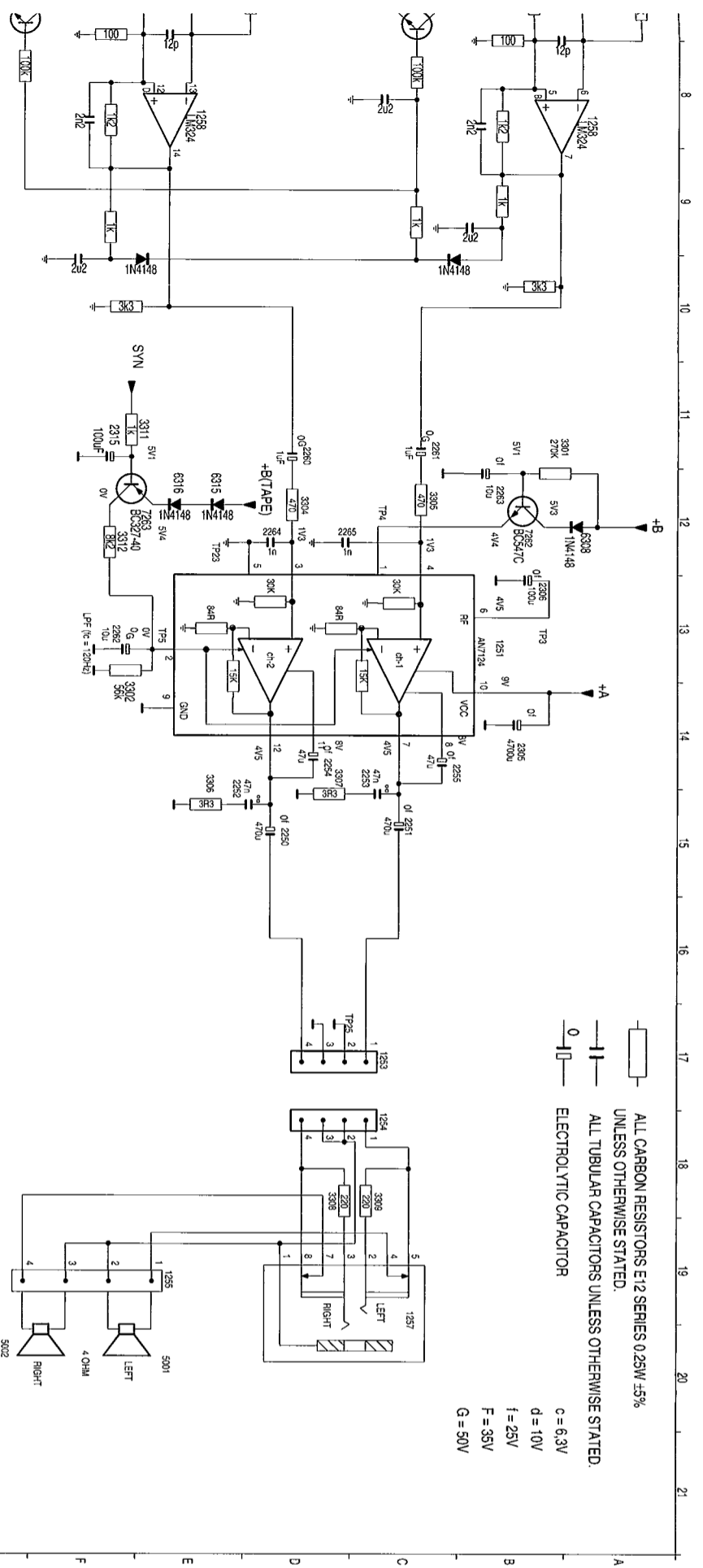
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1451	B 5	1493	B 5	2414	B 2	3422	A 2	3433	B 2	3444	B 2	3463	B 3	3474	A 4	3401	A 4	9402	A 3	9413	A 1	9424	B 5	9435	B 2	9446	B 2
1452	A 5	1495	A 3	2415	A 4	3423	B 2	3434	B 4	3445	B 4	3464	B 4	3475	B 2	5402	A 4	9403	B 1	9414	A 1	9425	B 5	9436	A 5	9447	B 2
1453	A 1	2400	A 4	2416	B 1	3424	A 1	3435	B 2	3446	B 4	3465	B 4	3476	B 1	5403	A 4	9404	B 1	9415	A 5	9426	B 5	9437	A 5	9448	B 3
1455	B 2	2401	A 2	2417	A 4	3425	A 1	3436	B 2	3453	B 3	3466	B 4	3477	B 2	7400	A 3	9405	A 1	9416	A 5	9427	B 5	9438	A 4	9449	B 5
1456	A 5	2402	A 2	2418	A 5	3426	A 1	3437	B 4	3454	B 2	3467	B 4	3478	A 4	7410	B 1	9406	A 1	9417	A 5	9428	B 5	9439	A 5	9450	B 1
1457	A 1	2403	A 2	2420	B 5	3427	A 1	3438	B 3	3455	A 4	3468	B 4	3479	A 4	7411	B 2	9407	A 1	9418	A 5	9429	B 3	9440	A 5	9451	A 2
1458	B 1	2404	A 2	2422	B 4	3428	B 3	3439	A 1	3456	A 5	3469	A 4	3480	B 4	7420	B 2	9408	B 2	9419	A 5	9430	B 3	9441	A 4	9452	A 2
1459	B 1	2405	B 3	3400	A 4	3429	B 3	3440	A 1	3457	A 4	3470	B 2	3481	A 5	7421	B 2	9409	B 2	9420	B 4	9431	B 2	9442	A 4	9453	A 3
1490	A 1	2406	B 3	3419	A 4	3430	B 2	3441	B 3	3458	A 4	3471	B 3	3483	B 3	7423	B 1	9410	B 3	9421	B 4	9432	B 1	9443	B 3	9454	A 4
1491	B 1	2407	B 3	3420	B 2	3431	B 3	3442	B 3	3459	A 4	3472	B 1	3484	B 3	7480	B 4	9411	A 2	9422	B 4	9433	A 1	9444	B 2		











1009	L	20	2315	F	11	3308	D	18	6315	E	12
1251	B	13	2581	I	3	3309	C	18	6316	E	12
1253	C	17	2582	J	6	3311	E	11	7250	L	11
1254	C	18	2583	I	6	3312	F	12	7251	L	8
1255	E	19	2584	I	7	3664	H	4	7252	M	10
1257	C	19	2585	I	8	3665	I	4	7253	K	9
1258	H	18	2586	H	9	3666	I	5	7254	K	9
1258	E	8	2587	H	10	3667	I	6	7256	M	16
1258	E	5	2588	H	12	3668	I	7	7257	M	16
1258	H	8	2589	I	12	3669	I	7	7259	M	14
1258	A	8	2590	I	12	3670	I	8	7260	L	14
1258	I	4	2591	J	13	3671	I	9	7262	B	12
1258	H	6	2592	I	14	3672	I	10	7263	E	12
1258	B	5	2593	I	15	3673	H	10	8252	M	19
1258	H	15	2594	I	16	3674	I	10	1006b	L	19
1259	H	15	2595	I	16	3674	I	10	1007b	L	19
1259	H	12	2595	I	17	3675	H	11			
1259	H	10	2596	I	19	3676	H	12			
1259	I	13	2597	H	19	3677	I	12			
1302	K	18	2598	H	1	3678	H	12			
1303	M	19	2599	H	1	3679	I	12			
1304	L	19	2600	D	2	3680	I	13			
1706	L	1	2601	A	2	3681	I	14			
1741	J	1	2602	I	4	3682	I	14			
2250	D	15	2603	I	6	3683	I	14			
2251	C	15	2604	H	8	3684	I	15			
2252	E	15	2605	I	10	3685	I	16			
2253	C	14	2606	I	11	3686	I	16			
2254	D	14	2607	I	12	3687	I	17			
2255	C	14	2608	I	15	3688	I	17			
2257	L	18	2609	H	17	3689	I	18			
2258	L	18	3250	L	10	3694	I	19			
2260	D	11	3251	K	10	3695	H	19			
2261	C	11	3252	L	10	3700	H	20			
2262	F	13	3253	N	11	3701	J	20			
2263	B	12	3254	L	11	3702	G	1			
2264	D	12	3255	M	11	3703	G	1			
2265	D	12	3256	K	10	3704	G	1			
2267	L	17	3258	N	8	3705	H	1			
2268	L	17	3259	M	16	3706	I	20			
2269	M	17	3260	L	16	3707	J	20			
2270	M	17	3264	L	14	3708	I	12			
2304	L	17	3265	M	14	6300	L	17			
2305	B	14	3267	M	14	6301	L	17			
2306	B	13	3268	N	14	6302	L	18			
2307	M	9	3301	B	11	6303	L	17			
2308	N	16	3302	F	14	6304	M	8			
2309	M	15	3304	D	12	6306	M	16			
2310	N	8	3305	C	12	6308	A	12			
2313	J	20	3306	E	15	6313	H	11			
2314	I	20	3307	D	14	6314	I	11			

COMBI BOARD - CIRCUIT DIAGRAM

9-1

1006b	L 21	1257	C 19	1258	H 6	1303	M 19	2253	C 14	2262	F 13	2270	M 17	2310	N 8	2544	I 7	2591	J 13	2598	H 1	2605	I 10	3252	L 10	3260	L 16	3304	D 12	3312	F 12	3670	I 8	3677	I 12	3684	I 15	3685	H 16	3706	I 20	6304	M 8	7250	L 11	7259	M 14
1007b	L 19	1258	H 18	1258	B 5	1304	L 19	2254	C 14	2263	B 12	2304	L 17	2313	J 20	2545	H 8	2592	I 14	2599	I 14	2600	D 1	2606	I 11	3253	N 11	3264	L 14	3305	E 12	3312	H 4	3671	I 9	3678	H 16	3685	H 16	3707	J 20	6306	M 16	7251	L 11	7260	B 12
1009	L 20	1258	E 8	1259	A 15	1706	L 1	2255	C 14	2264	D 12	2305	B 14	2314	I 20	2546	H 9	2593	I 15	2600	D 2	2607	I 12	2607	I 11	3254	N 11	3265	E 15	3306	E 15	3312	H 4	3672	H 10	3679	H 12	3686	H 16	3708	J 20	6308	A 12	7252	M 8	7262	B 12
1251	B 13	1258	H 5	1259	H 12	1741	J 1	2257	L 18	2265	D 12	2306	B 13	2315	F 11	2547	H 10	2594	I 16	2601	A 2	2608	H 17	2608	H 17	3255	M 11	3267	M 14	3307	D 14	3312	H 4	3673	H 10	3680	H 13	3687	H 17	3702	G 1	6310	L 17	7253	K 9	7263	E 12
1253	C 17	1258	H 8	1259	H 10	2250	D 15	2258	L 18	2267	L 17	2307	M 9	2315	F 11	2548	H 12	2595	I 17	2602	I 1	2609	H 17	2609	H 17	3256	M 10	3268	D 14	3308	D 14	3312	H 4	3674	H 10	3681	H 14	3688	H 17	3703	G 1	6311	H 11	7254	K 9	8252	M 19
1254	C 18	1258	A 8	1259	I 13	2251	C 15	2260	D 11	2268	L 17	2308	M 16	2315	F 11	2549	I 12	2596	I 19	2603	I 8	2609	H 17	2609	H 17	3257	N 8	3269	C 18	3309	C 18	3311	E 11	3675	H 11	3682	I 14	3689	H 18	3704	G 1	6312	L 18	7255	M 16	8252	M 19
1255	E 19	1258	I 4	1302	K 18	2252	E 15	2261	C 11	2269	M 17	2309	M 15	2315	F 11	2550	I 12	2597	H 19	2604	H 8	2610	K 10	3258	N 8	3269	C 18	3310	F 14	3311	E 11	3676	H 12	3683	I 14	3694	L 17	3705	H 1	6313	E 12	7257	L 16	8252	M 19		

9-1

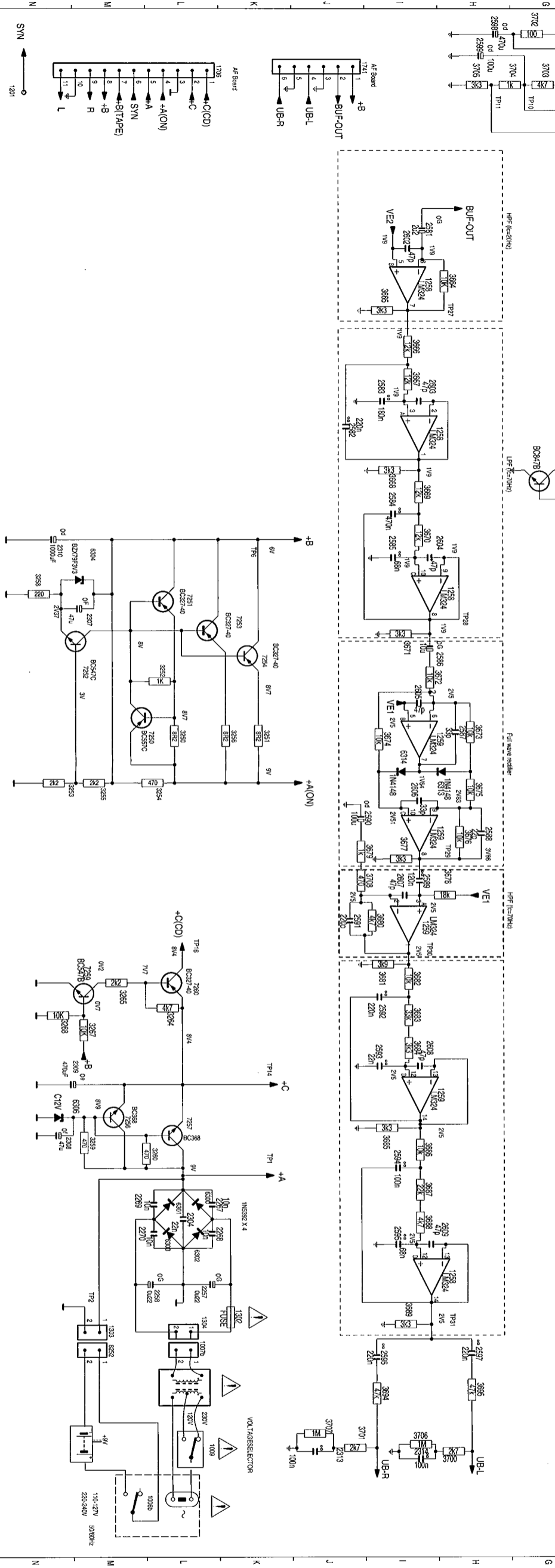
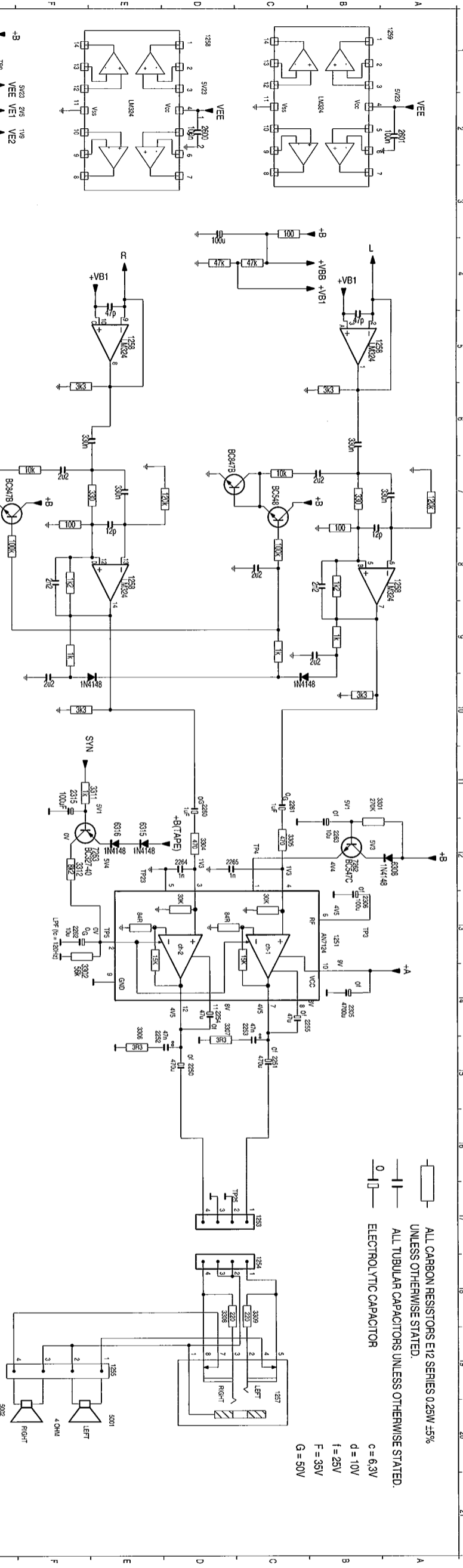
ALL CARBON RESISTORS E12 SERIES 0.25W ±5%  
UNLESS OTHERWISE STATED.  
ALL TUBULAR CAPACITORS UNLESS OTHERWISE STATED.  
ELECTROLYTIC CAPACITOR

c = 0.3V  
d = 10V  
f = 25V  
F = 35V  
G = 50V

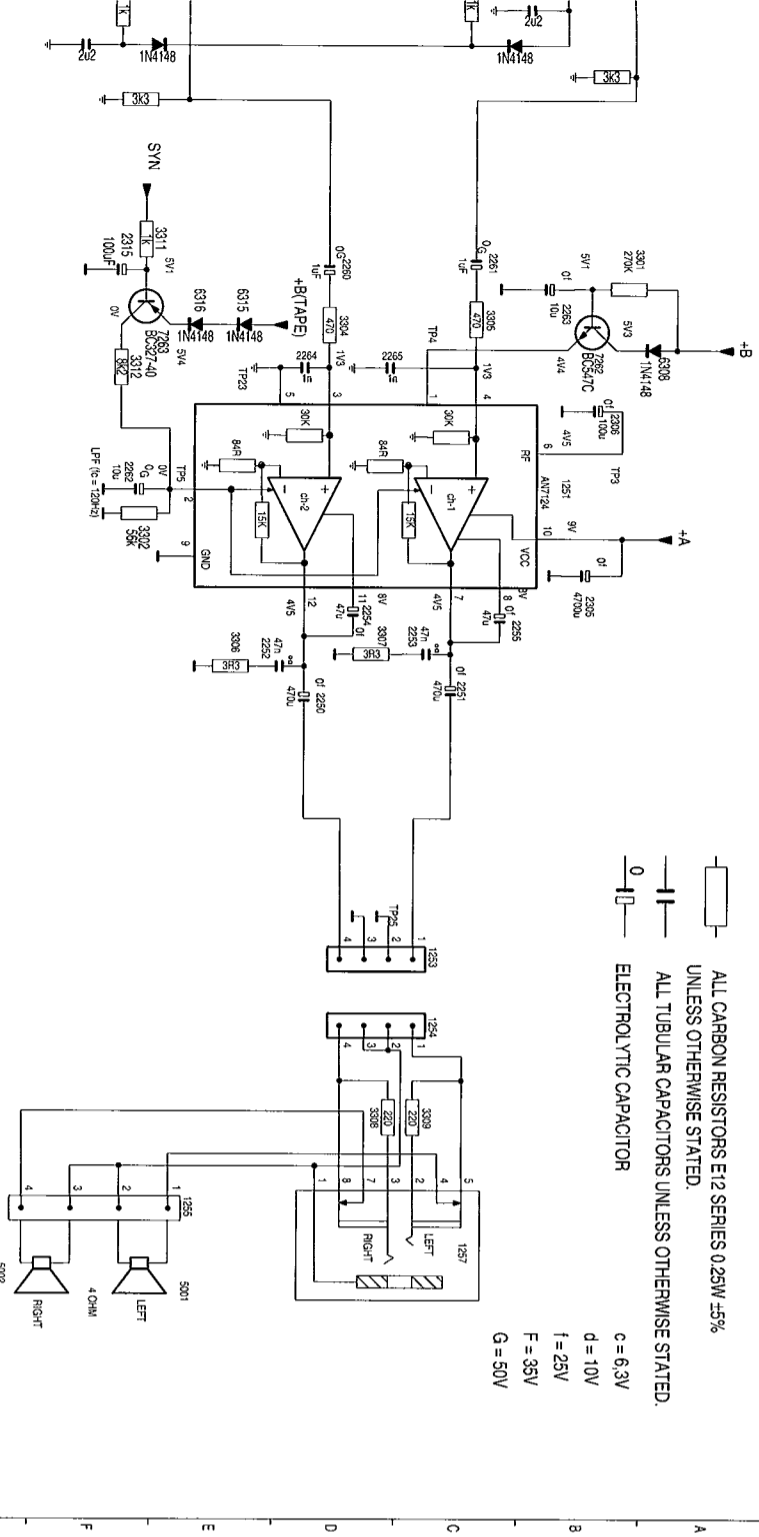
ALL CARBON RESISTORS |  
UNLESS OTHERWISE STAT  
ALL TUBULAR CAPACITOR  
ELECTROLYTIC CAPACITOR

2186 C 2 2191 B 5  
2187 B 4 2192 A 5  
2188 D 4 2193 A 5  
2189 D 3 2194 A 6  
2190 A 5 2195 D 6

VOLTAGE MULTIPLIER -

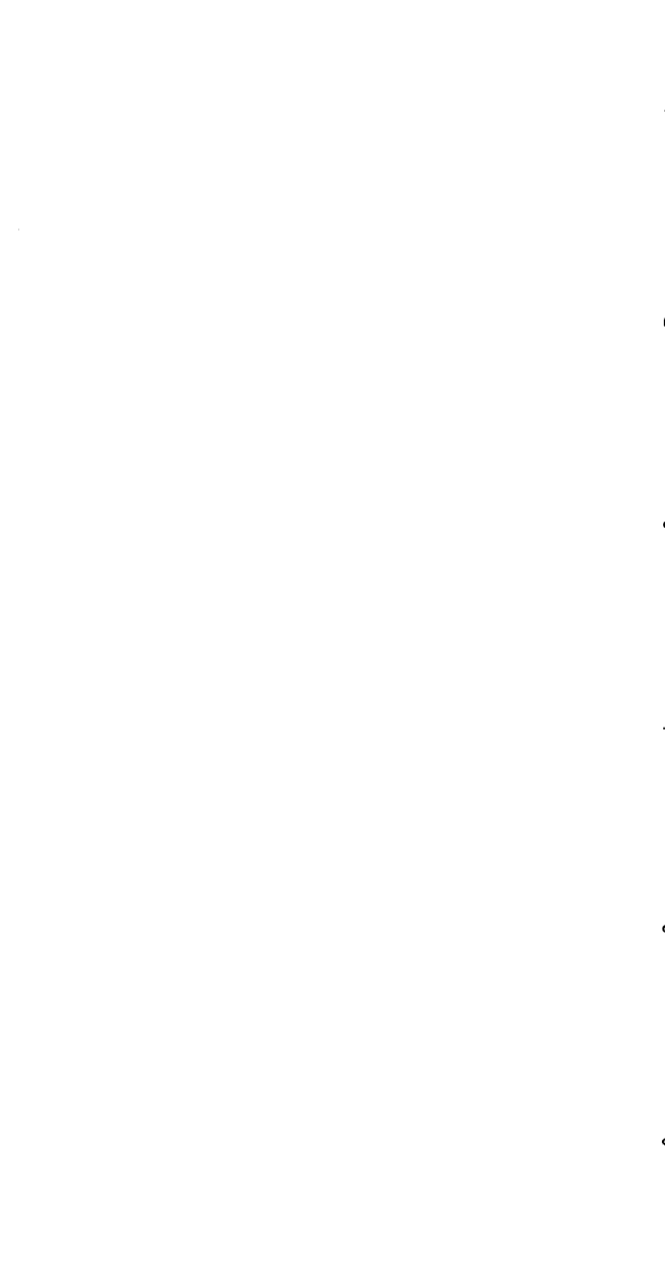
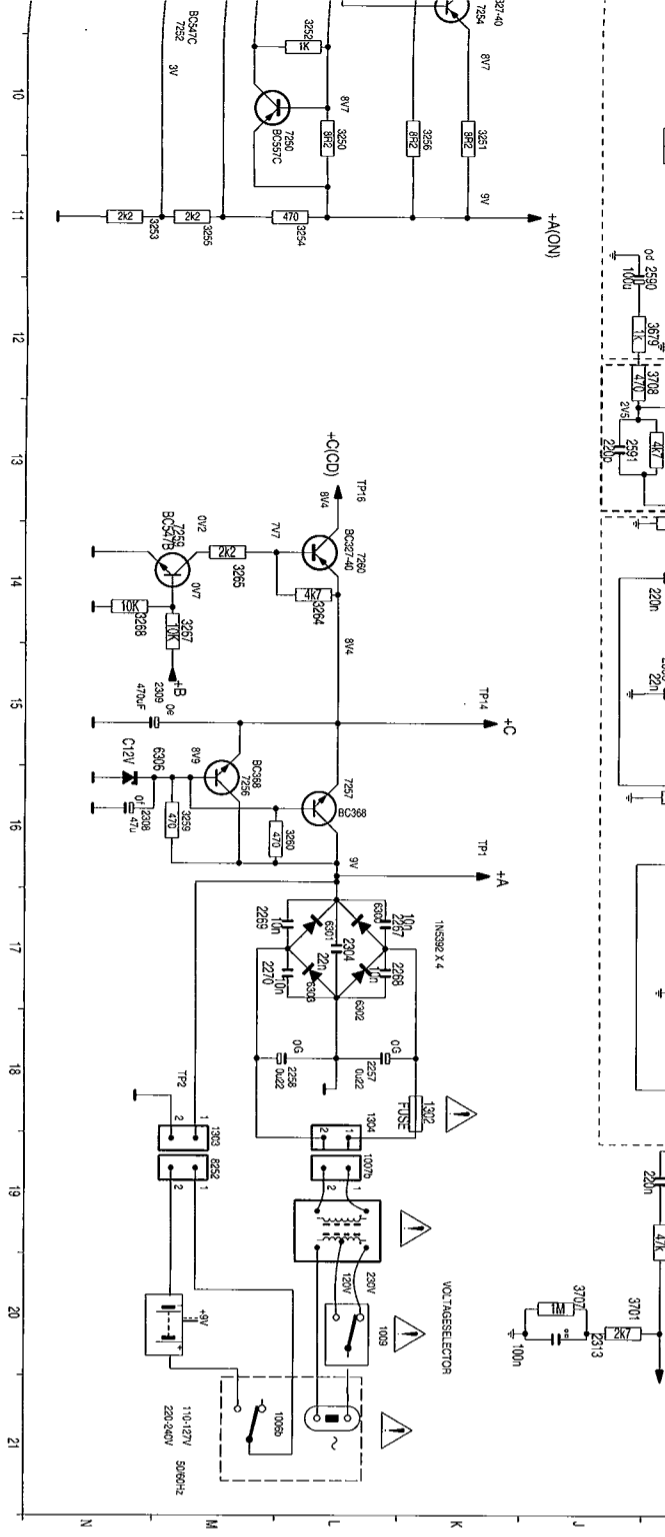
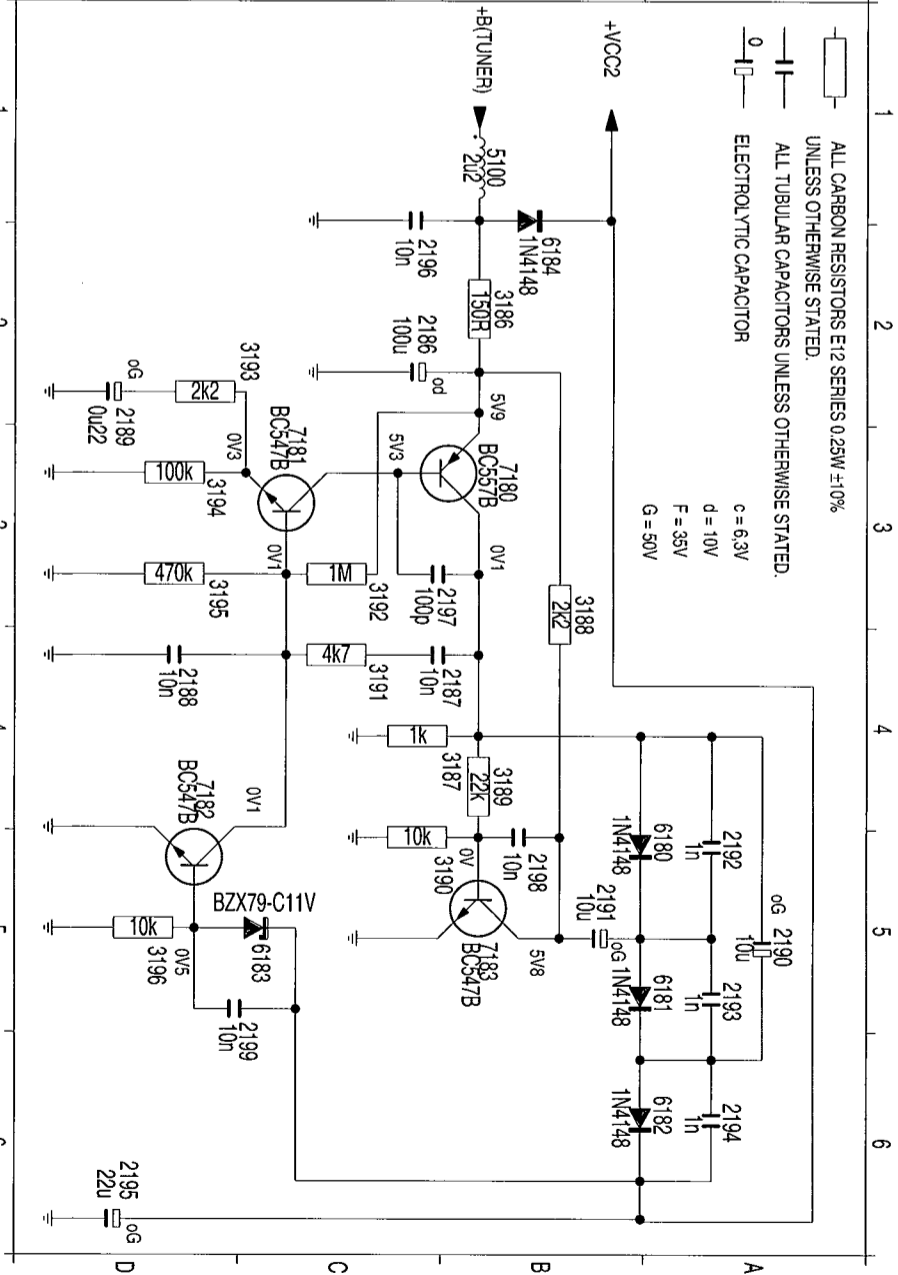


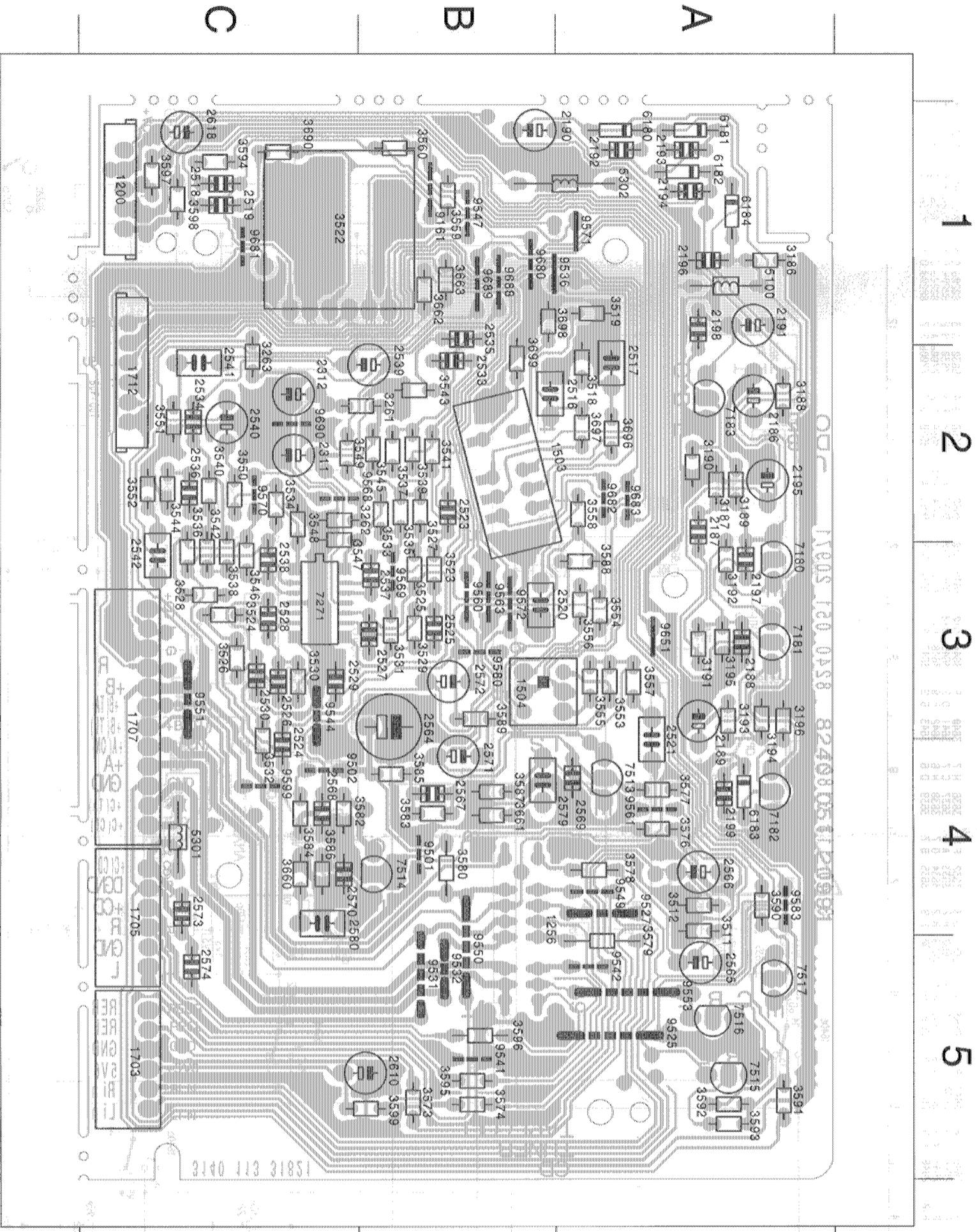
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2599	D	1	2606	I	11	3253	N	11	3261	H	11	3305	C	12	3313	H	4	3671	I	9	3678	H	12	3685	I	16	3696	H	20	3707	J	20	6306	M	16	7251	L	8	7260	B	14
2600	D	2	2607	I	12	3254	L	11	3262	M	14	3306	E	15	3314	C	12	3672	I	10	3679	H	12	3686	I	16	3701	J	20	3708	I	12	6308	A	12	7252	M	10	7262	B	14
2601	A	2	2608	H	15	3255	M	11	3263	M	11	3307	D	14	3315	C	12	3673	H	10	3680	I	13	3687	I	17	3702	G	1	6300	L	17	6313	H	11	7253	K	9	7263	E	12
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2603	I	6	3250	L	10	3258	N	8	3301	B	11	3309	C	18	3317	C	18	3675	H	11	3682	I	14	3689	I	18	3704	G	1	6302	L	16	6315	E	12	7255	M	16	8252	M	19
2604	H	8	3251	K	10	3259	M	16	3302	F	14	3310	E	11	3318	C	18	3676	H	12	3683	I	14	3694	I	19	3705	H	1	6303	L	17	6316	E	12	7257	L	16			



VOLTAGE MULTIPLIER - CIRCUIT DIAGRAM 9-1

2186	C	2	2191	B	5	2196	C	2	3187	B	4	3192	C	3	5100	B	1	6184	B	2
2187	B	4	2192	A	5	2197	C	3	3188	B	3	3193	C	2	6180	A	5	7180	B	3
2188	D	4	2193	A	5	2198	B	5	3189	B	4	3194	D	3	6181	A	5	7181	C	3
2189	D	3	2194	A	6	2199	C	6	3190	C	5	3195	D	3	6182	A	6	7182	D	4
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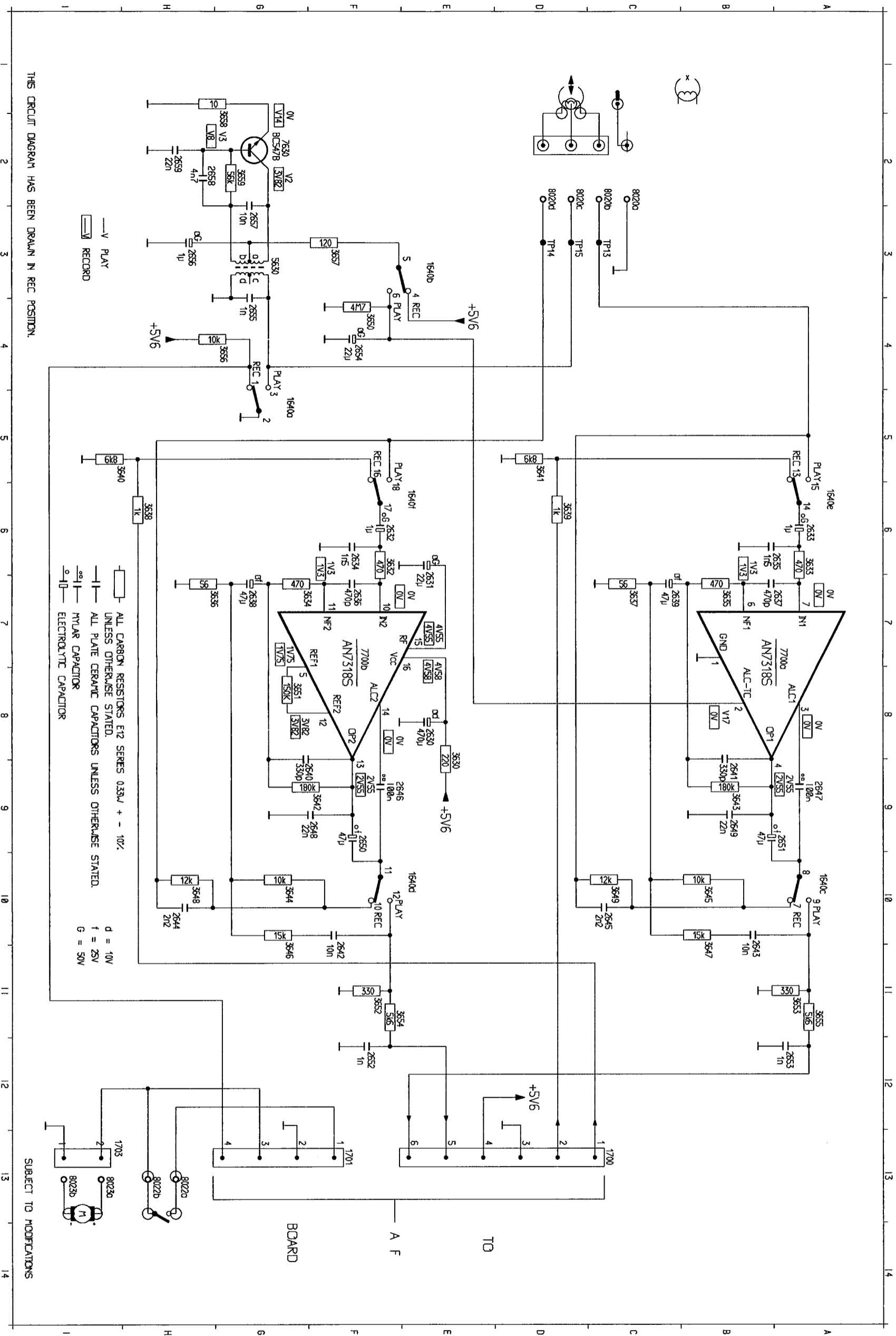
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1504	B 3	2572	B 3	3550	C 2	7180	A 3
1703	C 5	2573	C 4	3551	C 2	7181	A 3
1705	C 4	2574	C 5	3552	C 2	7182	A 4
1707	C 3	2575	B 4	3553	A 3	7183	A 2
1712	C 2	2580	C 4	3554	A 3	7271	C 3
2186	A 2	2610	B 5	3555	A 3	7513	A 4
2187	A 2	2618	C 1	3556	A 3	7514	B 4
2188	A 3	3186	A 1	3557	A 3	7515	A 5
2189	A 3	3187	A 2	3558	A 2	7516	A 5
2190	B 1	3188	A 2	3559	B 1	7517	A 5
2191	A 1	3189	A 2	3560	B 1	9161	B 1
2192	A 1	3190	A 2	3573	B 5	9501	B 4
2193	A 1	3191	A 3	3574	B 5	9502	C 4
2194	A 1	3192	A 3	3576	A 4	9525	A 5
2195	A 2	3193	A 3	3577	A 4	9527	A 4
2196	A 1	3194	A 3	3578	A 4	9531	B 5
2197	A 3	3195	A 3	3579	A 5	9532	B 5
2198	A 1	3196	A 3	3580	B 4	9536	B 1
2199	A 4	3261	B 2	3582	C 4	9541	B 5
2311	C 2	3262	C 2	3583	B 4	9542	A 5
2312	C 2	3263	C 2	3584	C 4	9544	C 3
2516	B 2	3511	A 4	3585	B 4	9547	B 1
2517	A 2	3512	A 4	3586	C 4	9549	A 4
2518	C 1	3518	A 2	3587	B 4	9550	B 5
2519	C 1	3519	A 1	3588	A 3	9551	C 3
2520	B 3	3522	C 1	3589	B 3	9553	A 5
2521	A 4	3523	B 3	3590	A 4	9560	B 3
2522	B 2	3524	C 3	3591	A 5	9561	A 4
2524	C 4	3525	B 3	3592	A 5	9563	B 3
2525	B 3	3526	C 3	3593	A 5	9568	C 2
2526	C 3	3527	B 2	3594	C 1	9569	B 3
2527	B 3	3528	C 3	3595	B 5	9570	C 2
2528	C 3	3529	B 3	3596	B 5	9571	A 1
2529	C 3	3530	C 3	3597	C 1	9572	B 3
2530	C 3	3531	B 3	3598	C 1	9580	B 3
2533	B 2	3532	C 4	3599	B 5	9583	A 4
2534	C 2	3533	B 2	3600	C 4	9591	C 4
2535	B 1	3534	C 2	3601	B 4	9651	A 3
2536	C 2	3535	B 2	3602	B 1	9680	B 1
2537	B 3	3536	C 3	3603	B 1	9681	C 1
2538	C 3	3537	B 2	3604	C 1	9682	A 2
2539	B 2	3538	C 3	3605	A 2	9683	A 2
2540	C 2	3539	B 2	3606	A 2	9688	B 1
2541	C 2	3540	C 2	3607	B 1	9689	B 1
2542	C 3	3541	B 2	3608	B 2	9690	C 2
2564	B 3	3542	C 3	5100	A 1		
2565	A 5	3543	B 2	5301	C 4		
2566	A 4	3544	C 2	5302	A 1		
2567	B 4	3545	B 2	6180	A 1		
2568	C 4	3546	C 3	6181	A 1		

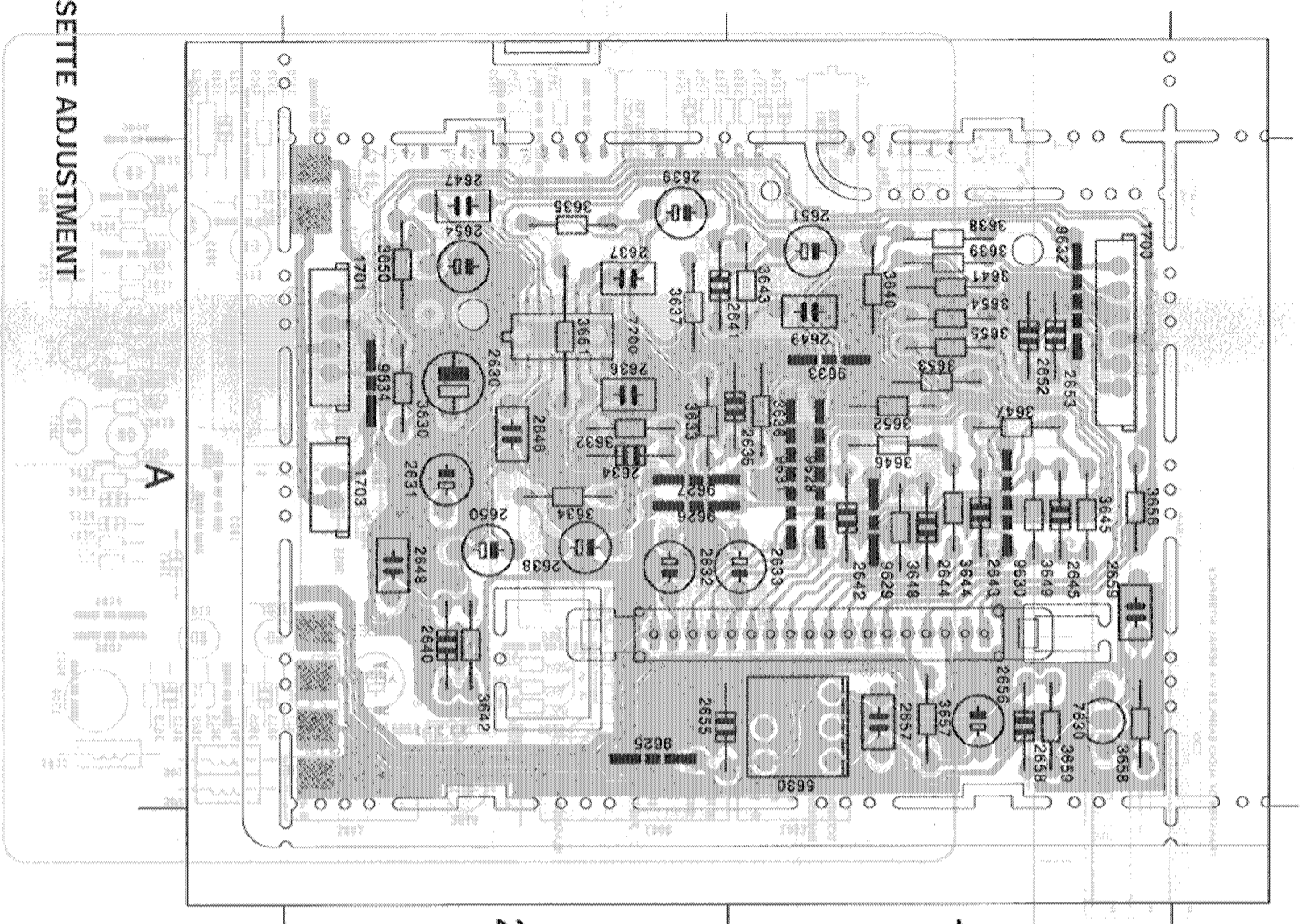
RECORDER BOARD - CIRCUIT DIAGRAM

10-1

10-1

1640c	G 5	1640e	A 6	1703	I 13	2633	A 6	2637	A 7	2641	B 9	2645	C 10	2649	B 9	2653	A 12	2657	G 3	3632	F 6	3636	H 7	3640	I 5	3644	G 10	3648	H 10	3652	F 11	3655	G 4	5630	G 3	8020c	C 3	8022c	H 3
1640b	E 3	1640f	E 9	2630	E 8	2634	F 6	2638	G 7	2642	F 11	2646	F 9	2650	F 9	2654	F 4	2658	H 2	3633	A 6	3637	C 6	3641	D 5	3645	G 10	3649	F 4	3653	F 11	3657	F 3	5630	G 3	8020b	C 3	8022b	H 3
1640a	A 10	1700	F 13	2631	F 6	2635	A 9	2639	C 7	2643	B 11	2647	A 9	2651	A 9	2655	G 4	2659	E 9	3634	G 7	3638	H 6	3642	F 9	3646	F 8	3650	F 4	3654	A 11	3658	G 2	7700c	A 7	8020a	C 3	8022a	H 3
1640d	E 10	1701	F 13	2632	F 6	2636	F 7	2640	G 9	2644	H 10	2648	F 9	2652	F 9	2656	H 3	3635	B 7	3639	D 6	3643	B 9	3647	G 9	3651	A 11	3655	A 11	3659	G 2	7700b	A 7	8020d	D 3	8022d	H 3		





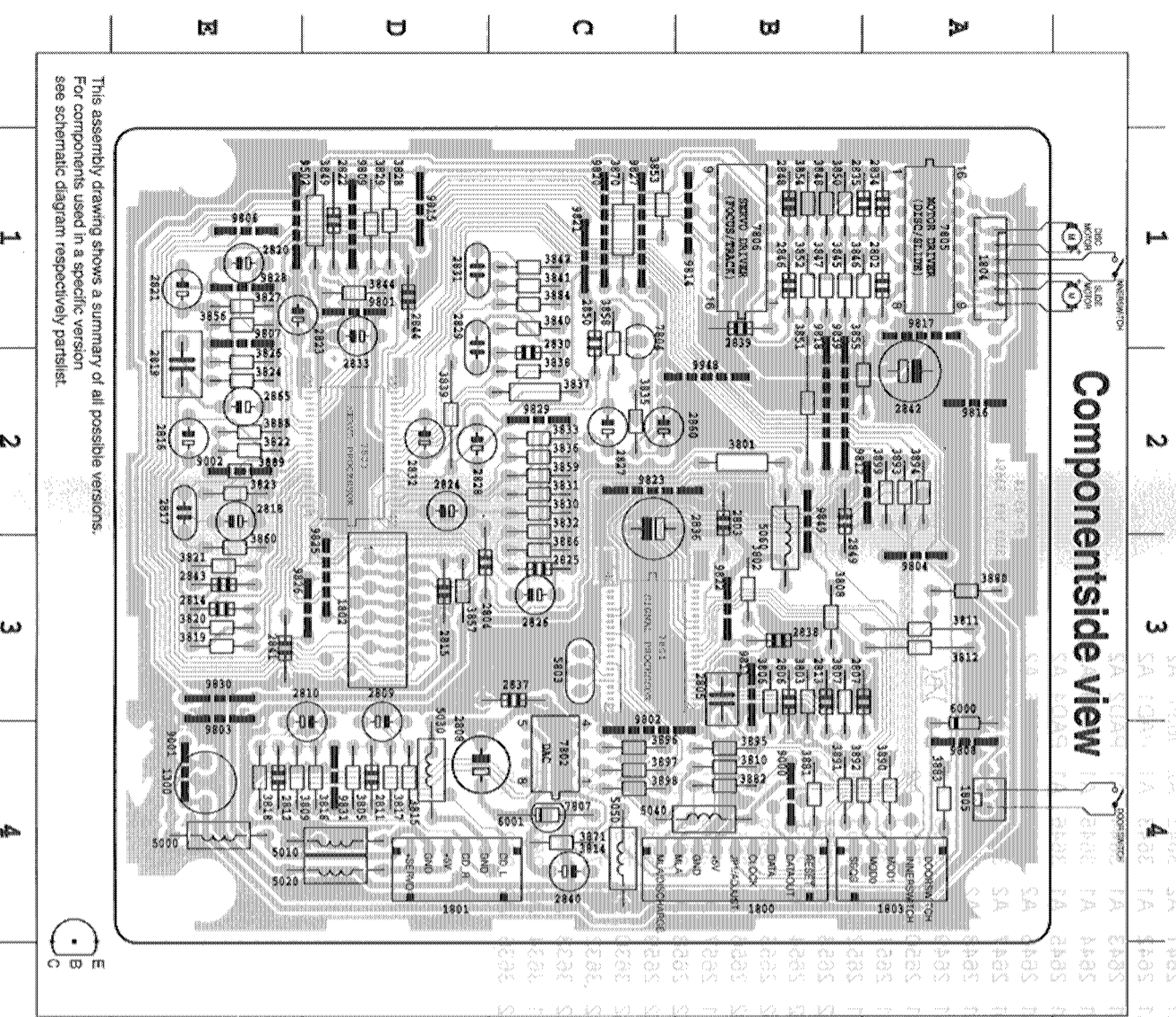
CASSETTE ADJUSTMENT

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

1619	A1	2635	A1	3636	A1	9628	A1
1620	A1	2636	A2	3637	A2	9629	A1
1621	A2	2637	A2	3638	A1	9630	A1
1622	A2	2638	A2	3639	A1	9631	A1
1623	A1	2639	A2	3640	A1	9632	A1
1624	A1	2640	A2	3641	A1	9633	A1
1625	A1	2641	A2	3642	A2	9635	A2
1626	A1	2642	A1	3643	A1	PAD1	A2
1627	A1	2643	A1	3644	A1	PAD2	A2
1628	A1	2644	A1	3645	A1	PAD3	A2
1629	A1	2645	A1	3646	A1	PAD4	A2
1630	A1	2646	A2	3647	A1	PAD5	A2
1631	A1	2647	A2	3648	A1	PAD6	A2
1632	A1	2648	A2	3649	A1		
1633	A1	2649	A1	3650	A2		
1634	A1	2650	A2	3651	A2		
1635	A1	2651	A1	3652	A1		
1636	A1	2652	A1	3653	A1		
1637	A2	2653	A1	3654	A1		
1638	A2	2654	A2	3655	A1		
1639	A2	2655	A2	3656	A1		
1640	A2	2656	A1	3657	A1		
1700	A1	2657	A1	3658	A1		
1701	A2	2658	A1	3659	A1		
1703	A2	2659	A1	5630	A1		
2630	A2	3630	A2	7630	A1		
2631	A2	3632	A2	7700	A2		
2632	A2	3633	A2	9625	A2		
2633	A1	3634	A2	9626	A2		
2634	A2	3635	A2	9627	A2		

\* SBC420 : 4822 397 30071

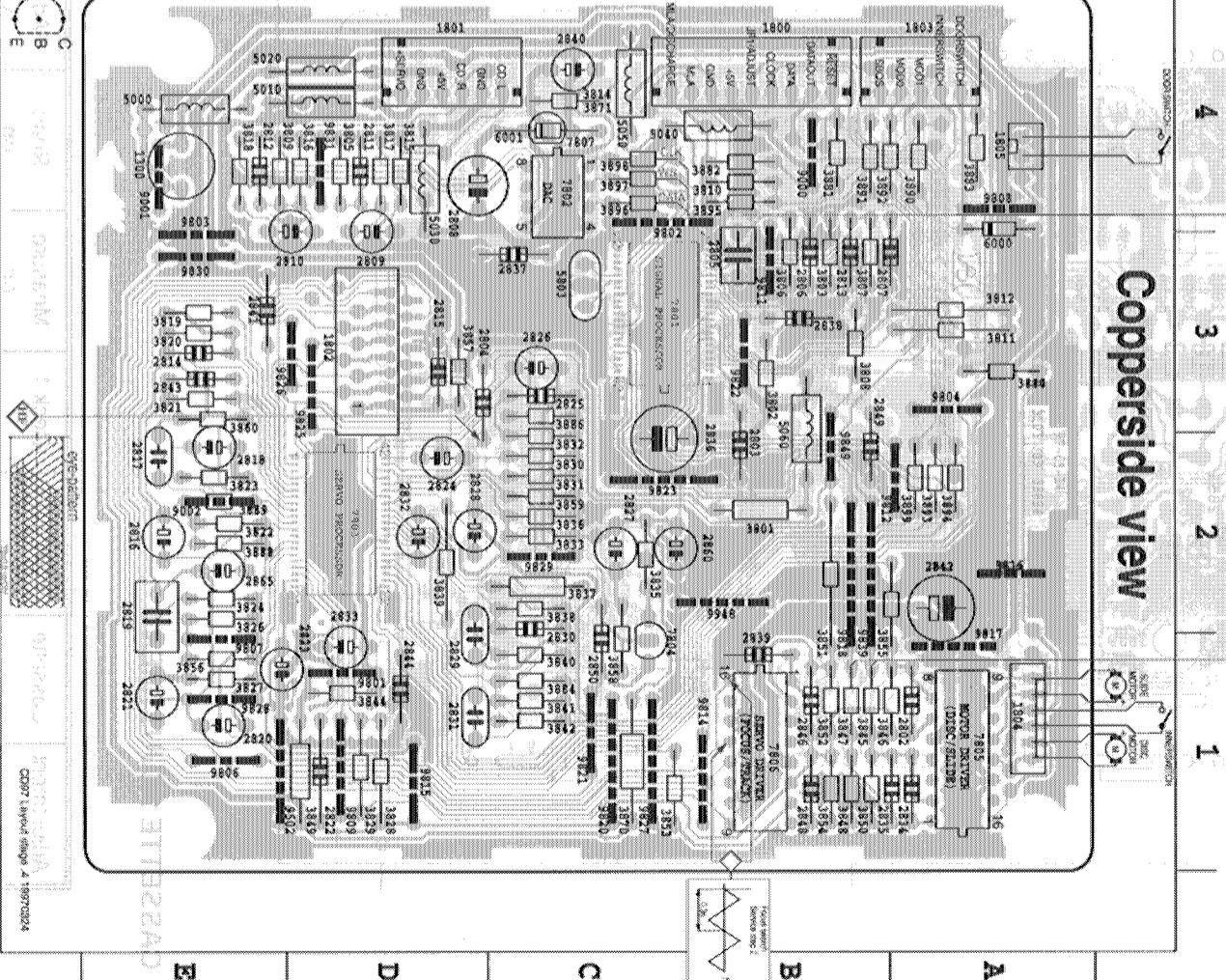
\*\*a The maximum permissible speed deviation is ± 3%.  
Moreover, the wow and flutter value can be read.



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

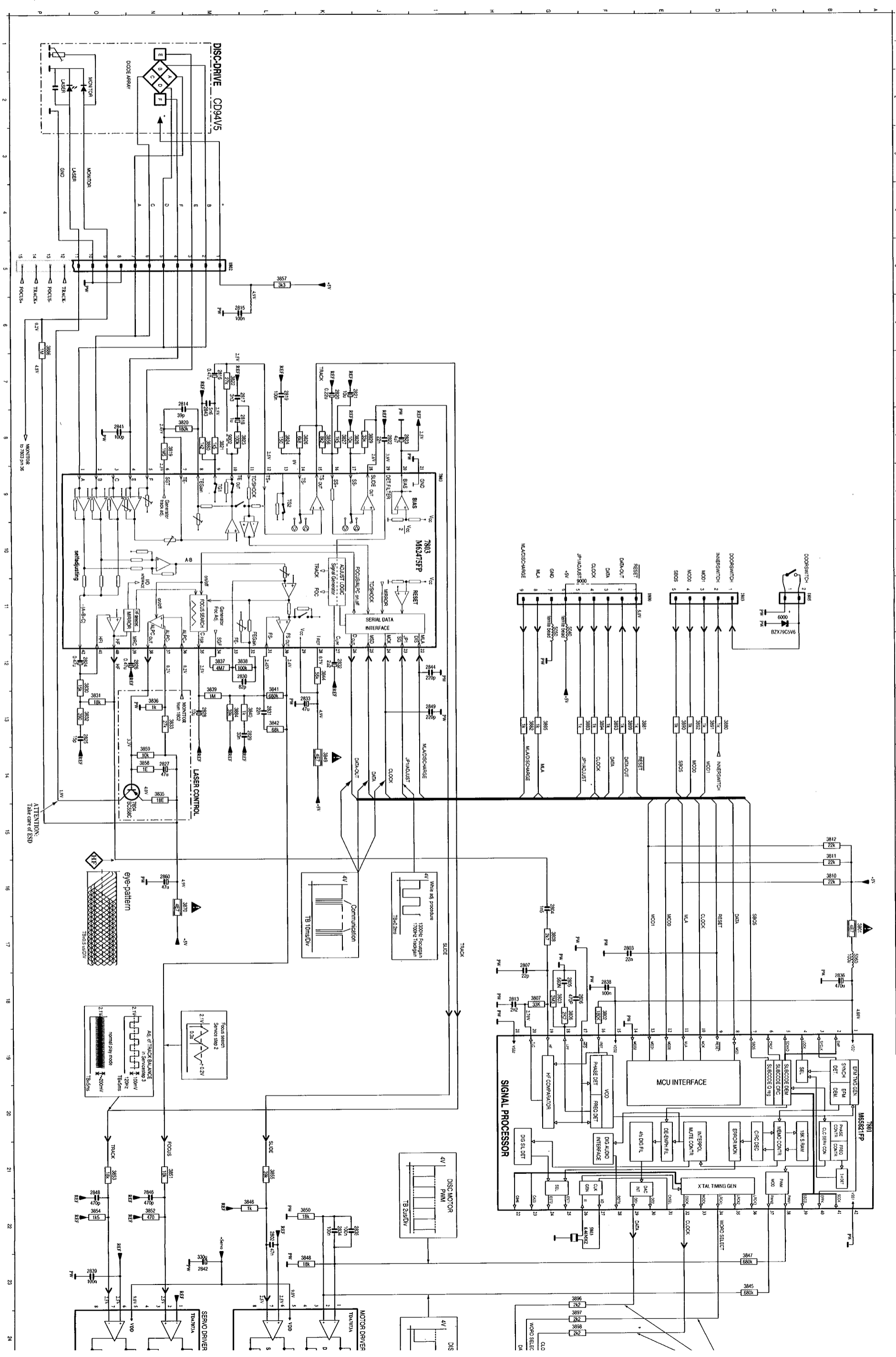
A	1	3807 B 3
A	2	3892 A 4
A	3	3893 A 2
A	4	3894 B 4
B	1	3811 A 3
B	2	3812 A 3
B	3	3895 B 4
B	4	3896 C 4
C	1	3814 C 4
C	2	3815 D 4
C	3	3897 C 4
C	4	3898 C 4
D	1	3817 D 4
D	2	5000 E 4
D	3	5010 D 4
D	4	5010 D 4
E	1	5010 D 4
E	2	5010 D 4
E	3	5010 D 4
E	4	5010 D 4
1	1	3807 B 3
1	2	3892 A 4
1	3	3893 A 2
1	4	3894 B 4
2	1	3811 A 3
2	2	3812 A 3
2	3	3895 B 4
2	4	3896 C 4
3	1	3814 C 4
3	2	3815 D 4
3	3	3897 C 4
3	4	3898 C 4
4	1	3817 D 4
4	2	5000 E 4
4	3	5010 D 4
4	4	5010 D 4

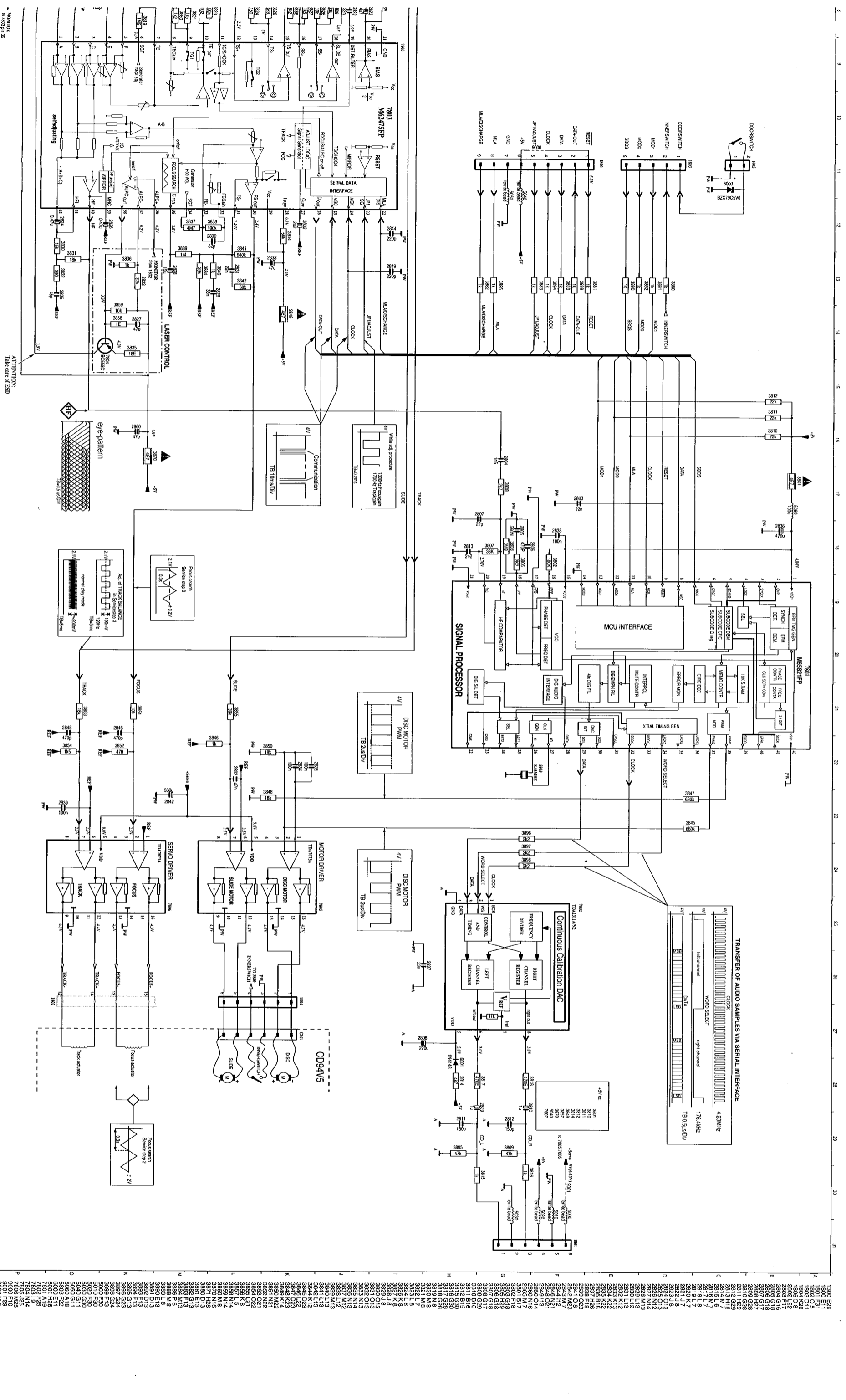
A	1	3807 B 3
A	2	3892 A 4
A	3	3893 A 2
A	4	3894 B 4
B	1	3811 A 3
B	2	3812 A 3
B	3	3895 B 4
B	4	3896 C 4
C	1	3814 C 4
C	2	3815 D 4
C	3	3897 C 4
C	4	3898 C 4
D	1	3817 D 4
D	2	5000 E 4
D	3	5010 D 4
D	4	5010 D 4
E	1	5010 D 4
E	2	5010 D 4
E	3	5010 D 4
E	4	5010 D 4
1	1	3807 B 3
1	2	3892 A 4
1	3	3893 A 2
1	4	3894 B 4
2	1	3811 A 3
2	2	3812 A 3
2	3	3895 B 4
2	4	3896 C 4
3	1	3814 C 4
3	2	3815 D 4
3	3	3897 C 4
3	4	3898 C 4
4	1	3817 D 4
4	2	5000 E 4
4	3	5010 D 4
4	4	5010 D 4



A	1	3807 B 3
A	2	3892 A 4
A	3	3893 A 2
A	4	3894 B 4
B	1	3811 A 3
B	2	3812 A 3
B	3	3895 B 4
B	4	3896 C 4
C	1	3814 C 4
C	2	3815 D 4
C	3	3897 C 4
C	4	3898 C 4
D	1	3817 D 4
D	2	5000 E 4
D	3	5010 D 4
D	4	5010 D 4
E	1	5010 D 4
E	2	5010 D 4
E	3	5010 D 4
E	4	5010 D 4
1	1	3807 B 3
1	2	3892 A 4
1	3	3893 A 2
1	4	3894 B 4
2	1	3811 A 3
2	2	3812 A 3
2	3	3895 B 4
2	4	3896 C 4
3	1	3814 C 4
3	2	3815 D 4
3	3	3897 C 4
3	4	3898 C 4
4	1	3817 D 4
4	2	5000 E 4
4	3	5010 D 4
4	4	5010 D 4

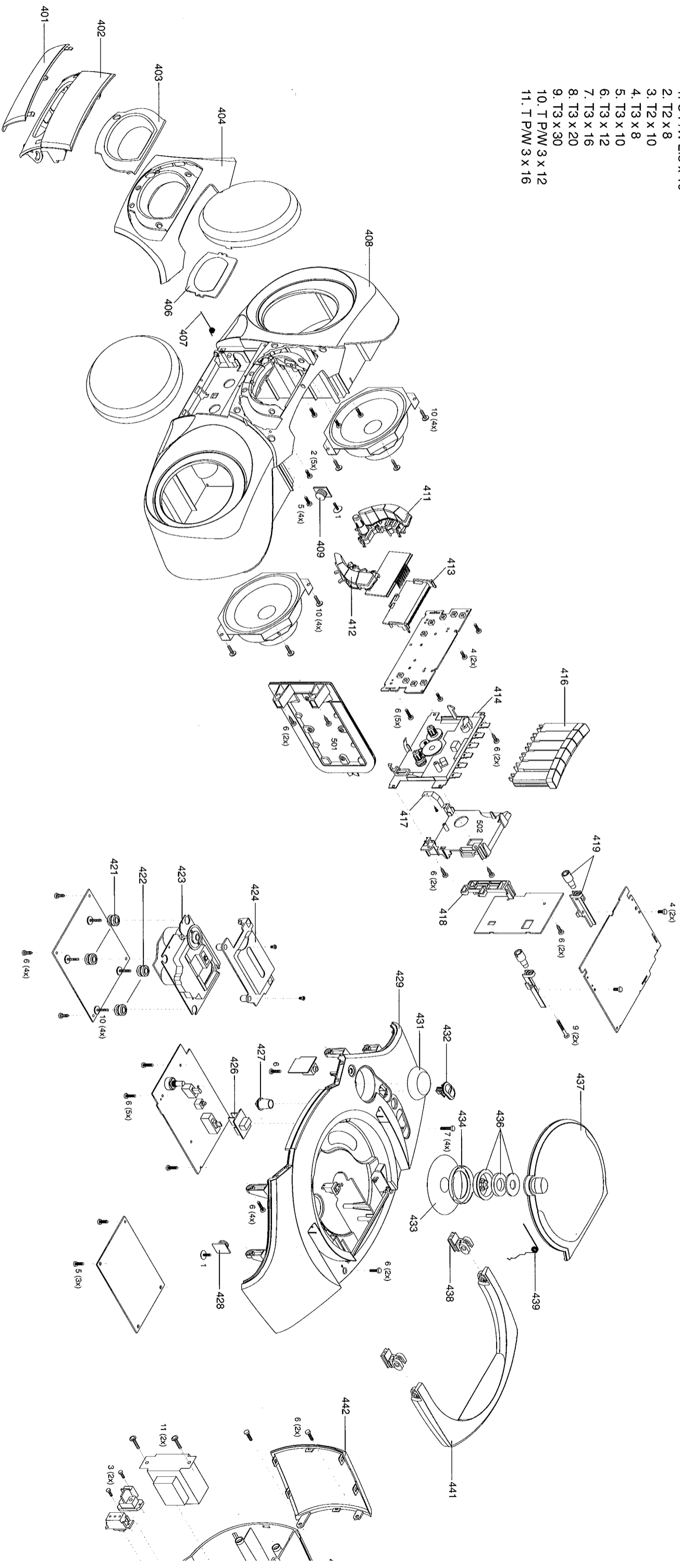


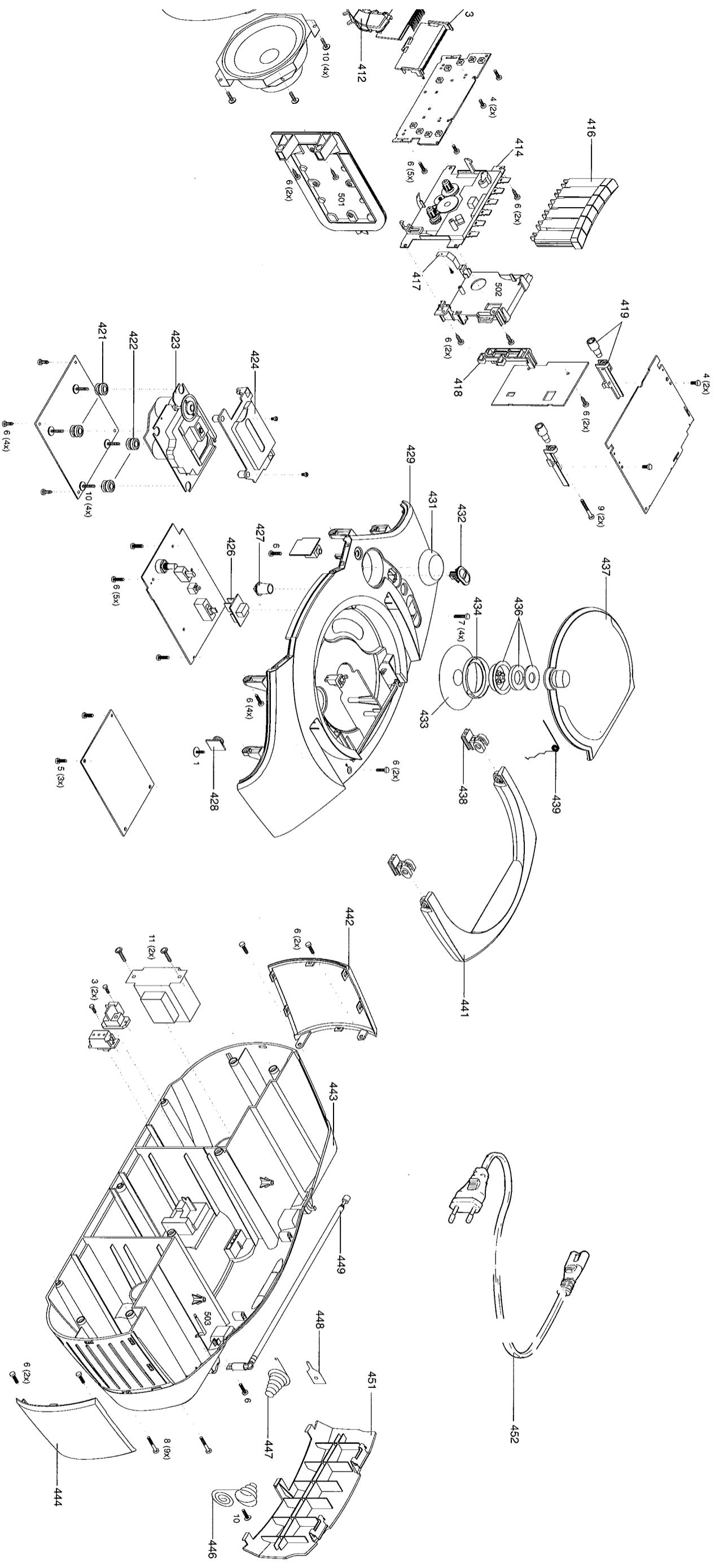




SCREW LIST :

- 1. C P/W 2.5 x 10
- 2. T2 x 8
- 3. T2 x 10
- 4. T3 x 8
- 5. T3 x 10
- 6. T3 x 12
- 7. T3 x 16
- 8. T3 x 20
- 9. T3 x 30
- 10. T P/W 3 x 12
- 11. T P/W 3 x 16





**MECHANICAL PARTSLIST - CABINET**

12-2

401	4822 381 12077	Cassette Lens	433	4822 535 60096	Disc
402	4822 443 11039	Cassette Door (For -/00/05/1/1/4)	434	4822 532 12241	Ring (CD Lid)
402	4822 443 11168	Cassette Door (For -/01)	436	4822 532 12798	Pressure Ring Assy
402	4822 443 11168	Cassette Door (For -/17)	437	4822 443 11178	CD Door
403	4822 454 13446	LCD Panel	438	4822 402 10724	Bracket Handle
404	4822 459 05263	Front Panel	439	4822 492 11685	Spring CD
406	4822 381 12078	Front Lens	441	4822 498 10713	Handle
407	4822 492 42709	Cassette Door Spriong	442	4822 442 01501	Cover Side (L)
408	4822 459 05264	Cabinet Front Assy (For -/00/05/1/4/17)	443	4822 426 10809	Cabinet Rear
408	4822 459 05264	Cabinet Front Assy (For -/01)	444	4822 442 01502	Cover Side (R)
408	4822 459 05264	Cabinet Front Assy (For -/11)	446	4822 492 51733	Spring Compression
409	4822 529 10322	Damper Assy	447	4822 492 51961	Spring Compression
411	4822 410 12323	Button Set CD	448	4822 290 80313	Contact Plate
412	4822 410 12322	Button Set Tuner	449	4822 303 14038	Telescopic Aerial
413	4822 402 11284	Bracket LCD	451	4822 442 01778	Battery Door
414	4822 691 10612	Tape Deck CDS-83-VBF-77	452	4822 321 10249	Mains Cord (For -/00/01/11)
416	4822 410 11955	Cassette Knob	452	4822 321 10886	Mains Cord (For -/05)
417	4822 492 11061	Spring Recording	452	4822 321 11466	Mains Cord (For -/17)
418	4822 402 10126	Lever Recording		4822 242 10291	Headphone AY3680/17
419	4822 402 11152	Bracket AF		4822 736 16748	Instructions Manual (For -/00/05;
421	4822 529 10387	Damper Rubber (40 DEG)		4822 736 16739	Instructions Manual (For -/01)
422	4822 529 10386	Damper Rubber (30 DEG)		4822 736 16739	Instructions Manual (For -/11)
423	4822 691 10654	CD Mechanism CD94V5T1		4822 736 16741	Instructions Manual (For -/14)
424	4822 442 01096	CD Lens Cover		4822 736 16742	Instructions Manual (For -/17)
426	4822 410 11957	Mode Knob			
427	4822 410 11961	IS Knob			
428	4822 529 10322	Damper Assy			
429	4822 442 01777	Cabinet Top			
431	4822 410 12324	Volume Knob			
432	4822 410 11956	DBB Knob			

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

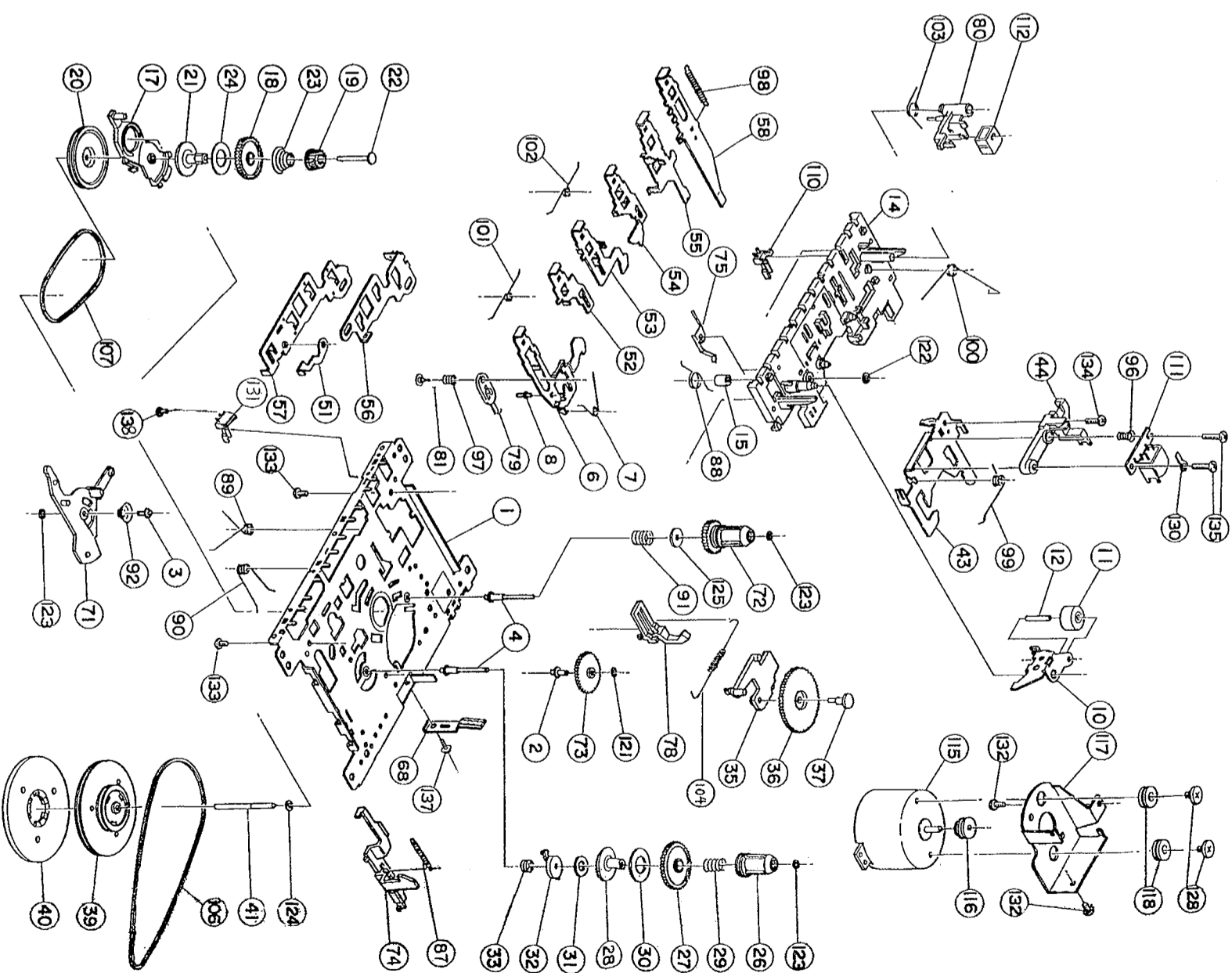
**MECHANICAL PARTSLIST - TAPE DECK**

10	4822 528 70849	Pinch Roller Arm (B)	110	4822 278 90721	Leaf Switch
11	4822 528 70695	Pinch Roller Assy	111	4822 249 30218	MS18R-AKONI
74	4822 403 70968	Eject Hook (A)	112	4822 249 40306	E. Head
106	4822 358 31325	Main Belt 45.2 x 1.2	115	4822 361 21565	Motor EG-530AD-9B
107	4822 358 31124	Sub Belt 44.7 x 1.2	116	4822 528 81497	Motor Pulley

Note : Only those parts mentioned in the are normal service parts.

**EXPLODED VIEW DIAGRAM - TAPE DECK**

12-2



2802	4822 126 12785	47nF +80-20% 50V
2803	4822 126 11585	47nF +80-20% 50V
2804	4822 126 12878	1.5nF 10% 16V
2805	4822 121 51412	560nF 10% 50V
2806	4822 122 33519	470pF 10% 50V
2807	4822 122 33191	18pF 5% 50V
2808	4822 124 22263	220µF 20% 25V
2809	4822 124 40242	1µF 20% 50V
2810	4822 124 40242	1µF 20% 50V
2811	4822 122 33849	150pF 10% 50V
2812	4822 122 33849	150pF 10% 50V
2813	4822 126 12339	2.2nF 10% 16V
2814	4822 126 13677	39pF 5% 50V
2815	4822 126 12882	100nF 8.2% 50V
2816	4822 124 41407	0.47µF 20% 50V
2817	4822 121 42687	3.3nF 10% 50V
2818	4822 124 40242	1µF 20% 50V
2819	5322 121 42386	100nF 10% 50V
2820	4822 124 40746	0.22µF 20% 50V
2821	4822 124 41579	10µF 20% 50V
2822	4822 122 10167	22nF 30% 50V
2823	4822 124 40246	4.7µF 20% 50V
2824	4822 124 41407	0.47µF 20% 50V
2825	4822 122 10462	15pF 5% NPO
2826	4822 124 41407	0.47µF 20% 50V
2827	4822 124 40433	47µF 20% 25V
2828	4822 124 41579	10µF 20% 50V
2829	5322 121 42489	33nF 10% 50V
2830	4822 122 10319	82pF 10% 50V
2831	4822 121 41856	22nF 10% 50V
2832	4822 124 41576	2.2µF 20% 50V
2833	4822 124 40433	47µF 20% 25V
2834	4822 126 12882	100nF +80-20% 50V
2835	4822 126 12882	100nF +80-20% 50V
2836	4822 124 80791	470µF 20% 16V
2837	4822 126 11585	22nF +80-20% 25V
2838	4822 126 12882	100nF +80-20% 50V
2839	4822 126 12882	100nF +80-20% 50V
2841	4822 122 33195	100pF 10% 50V
2842	4822 124 40433	47µF 20% 25V

2843	4822 126 13098	5.6nF 20% 16V
2844	4822 122 10466	220pF 10% 50V
2846	4822 122 33519	470pF 10% 50V
2848	4822 122 33519	470pF 10% 50V
2849	4822 122 10466	220pF 10% 50V
2860	4822 124 40433	47µF 20% 25V
3801	4822 052 10478	4R7 5% 0.33W
3802	4822 116 52252	180K 5% 0.16W
3803	4822 111 50499	3M3 5%
3805	4822 116 83884	47K 5% 0.16W
3806	4822 116 52256	2K2 5% 0.16W
3807	4822 116 52271	33K 5% 0.16W
3808	4822 116 52263	2K7 5% 0.16W
3809	4822 116 83884	47K 5% 0.16W
3810	4822 116 52257	22K 5% 0.16W
3811	4822 116 52257	22K 5% 0.16W
3812	4822 116 52257	22K 5% 0.16W
3815	4822 050 11002	1K 5% 0.16W
3816	4822 050 11002	1K 5% 0.16W
3817	4822 116 83883	470R 5% 0.16W
3818	4822 116 83883	470R 5% 0.16W
3819	4822 117 11825	1M5 5%
3820	4822 116 52252	180K 5% 0.16W
3821	4822 116 52243	1K5 5% 0.16W
3822	4822 116 52264	27K 5% 0.16W
3823	4822 116 52234	100K 5% 0.16W
3824	4822 116 83868	150R 5% 0.16W
3826	4822 116 83961	6K8 5% 0.16W
3827	4822 116 52243	1K5 5% 0.16W
3828	4822 116 83864	10K 5% 0.16W
3829	4822 116 52271	33K 5% 0.16W
3830	4822 116 52244	15K 5% 0.16W
3831	4822 116 52251	18K 5% 0.16W
3832	4822 116 52222	390R 5% 0.16W
3833	4822 116 52264	27K 5% 0.16W
3835	4822 116 52184	18R 5% 0.16W

3836	4822 050 11002	1K 5% 0.16W
3837	4822 111 30893	4M7 5%
3838	4822 116 52234	100K 5% 0.16W
3839	4822 116 52235	1M 5% 0.16W
3840	4822 050 11002	1K 5% 0.16W
3841	4822 116 52298	680K 5% 0.16W
3842	4822 116 52297	68K 5% 0.16W
3844	4822 116 52291	56K 5% 0.16W
3845	4822 116 52298	680K 5% 0.16W
3846	4822 050 11002	1K 5% 0.16W
3847	4822 116 52298	680K 5% 0.16W
3848	4822 116 52251	18K 5% 0.16W
3849	4822 052 10478	4R7 5%
3850	4822 116 52251	18K 5% 0.16W
3851	4822 116 52244	15K 5% 0.16W
3852	4822 116 83883	470R 5% 0.16W
3853	4822 116 52251	18K 5% 0.16W
3854	4822 116 52243	1K5 5% 0.16W
3855	4822 116 83882	29K 5% 0.16W
3856	4822 116 52303	8K2 5% 0.16W
3857	4822 116 52269	3K3 5% 0.16W
3858	4822 116 80176	1R 5% 0.16W
3859	4822 116 83864	10K 5% 0.16W
3860	4822 116 52207	1K2 5% 0.16W
3870	4822 052 10478	4R7 5%
3871	4822 116 52283	4K7 5% 0.5W
3880	4822 050 11002	1K 5% 0.16W
3881	4822 050 11002	1K 5% 0.16W
3882	4822 050 11002	1K 5% 0.16W
3883	4822 050 11002	1K 5% 0.16W
3884	4822 116 83882	39K 5% 0.16W
3886	4822 116 52235	1M 5% 0.16W
3890	4822 050 11002	1K 5% 0.16W
3891	4822 050 11002	1K 5% 0.16W
3892	4822 050 11002	1K 5% 0.16W
3893	4822 050 11002	1K 5% 0.16W
3894	4822 050 11002	1K 5% 0.16W
3895	4822 050 11002	1K 5% 0.16W
3896	4822 116 52256	2K2 5% 0.16W
3897	4822 116 52256	2K2 5% 0.16W

3898	4822 116 52256	2K2 5% 0.16W
3899	4822 050 11002	1K 5% 0.16W
5000	4822 526 10494	Ind Fxd 100MHz
5010	4822 526 10494	Ind Fxd 100MHz
5020	4822 526 10494	Ind Fxd 100MHz
5030	4822 526 10494	Ind Fxd 100MHz
5040	4822 526 10494	Ind Fxd 100MHz
5050	4822 526 10494	Ind Fxd 100MHz
5060	4822 157 50964	Coil 100µH 15%
5803	4822 242 73557	Filter 8MHz467
6001	4822 130 30624	Diode 1N4148
7801	4822 209 13703	IC M65821FP
7802	4822 209 32421	IC TDA1311A
7803	4822 209 90496	IC M62475FP
7804	5322 130 60068	Trans BC558C
7805	4822 209 32852	IC TDA7073A
7806	4822 209 32852	IC TDA7073A
- MISCELLANEOUS -		
1802	4822 265 10925	Connector
8000	4822 265 10925	Connector

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

COMBI BOARD

2186	4822 124 41584	100µF	20%	10V
2187	4822 121 51387	10nF	20%	16V
2188	4822 121 51387	10nF	20%	16V
2189	4822 124 40746	0.22µF	20%	63V
2190	4822 124 41579	10µF	20%	50V
2191	4822 124 41579	10µF	20%	50V
2192	4822 122 33197	1nF	10%	50V
2193	4822 122 33197	1nF	10%	50V
2194	4822 122 33197	1nF	10%	50V
2195	4822 124 81151	22µF	50V	
2196	4822 121 51387	10nF	20%	16V
2197	4822 122 33195	100pF	10%	50V
2198	4822 121 51387	10nF	20%	16V
2199	4822 121 51387	10nF	20%	16V
2250	4822 124 11767	470µF	20%	25V
2251	4822 124 11767	470µF	20%	25V
2252	4822 121 51399	47nF	10%	50V
2253	4822 121 51399	47nF	10%	50V
2254	4822 124 40433	47µF	20%	25V
2255	4822 124 40433	47µF	20%	25V
2257	4822 124 40746	0.22µF	20%	63V
2258	4822 124 40746	0.22µF	20%	63V
2260	4822 124 40242	1µF	20%	63V
2261	4822 124 40242	1µF	20%	63V
2262	4822 124 41579	10µF	20%	50V
2263	4822 124 41579	10µF	20%	50V
2264	4822 126 12339	2.2nF	10%	Y5R
2265	4822 126 12339	2.2nF	10%	Y5R
2267	4822 121 51387	10nF	20%	16V
2268	4822 121 51387	10nF	20%	16V
2269	4822 121 51387	10nF	20%	16V
2270	4822 121 51387	10nF	20%	16V
2304	4822 121 70619	22nF	10%	50V
2305	4822 124 12012	4700µF	20%	25V
2306	4822 124 41584	100µF	20%	10V
2307	4822 124 40433	47µF	20%	25V
2308	4822 124 40433	47µF	20%	25V
2309	4822 124 80791	470µF	16V	20%
2310	4822 123 14024	1000µF	20%	16V
2311	4822 124 81286	47µF	20%	16V
2312	4822 124 12245	220µF	20%	10V
2313	5322 121 42386	100nF	5%	63V
2314	5322 121 42386	100nF	5%	63V
2315	4822 124 41584	100µF	20%	10V
2516	4822 121 51356	180nF	10%	63V

2517	4822 121 51356	180nF	10%	63V
2518	4822 121 51387	10nF	20%	16V
2519	4822 121 51387	10nF	20%	16V
2520	4822 121 51399	47nF	10%	50V
2521	4822 121 51399	47nF	10%	50V
2523	4822 126 12339	2.2nF	10%	Y5R
2524	4822 126 12339	2.2nF	10%	Y5R
2525	4822 122 33848	47pF	5%	SL 50V
2526	4822 122 33848	47pF	5%	SL 50V
2527	4822 122 33848	47pF	5%	SL 50V
2528	4822 122 33848	47pF	5%	SL 50V
2529	4822 122 10466	220pF	10%	50V
2530	4822 122 10466	220pF	10%	50V
2533	4822 121 51387	10nF	20%	16V
2534	4822 121 51387	10nF	20%	16V
2535	4822 126 12339	2.2nF	10%	Y5R
2536	4822 126 12339	2.2nF	10%	Y5R
2537	4822 122 33848	47pF	5%	SL 50V
2538	4822 122 33848	47pF	5%	SL 50V
2539	4822 124 22726	4.7µF	35V	
2540	4822 124 22726	4.7µF	35V	
2541	4822 121 51379	82nF	5%	63V
2542	4822 121 51379	82nF	5%	63V
2564	4822 124 80195	470µF	20%	10V
2565	4822 124 40242	1µF	20%	63V
2566	4822 124 40242	1µF	20%	63V
2567	4822 122 33195	100pF	10%	50V
2568	4822 122 33195	100pF	10%	50V
2569	4822 122 33197	1nF	10%	50V
2570	4822 122 33197	1nF	10%	50V
2571	4822 124 40246	4.7µF	20%	63V
2572	4822 124 40246	4.7µF	20%	63V
2573	4822 122 33197	1nF	10%	50V
2574	4822 122 33197	1nF	10%	50V
2579	5322 121 42386	100nF	5%	63V
2580	5322 121 42386	100nF	5%	63V
2581	4822 124 41576	2.2µF	20%	50V
2582	4822 121 42408	220nF	5%	63V
2583	4822 121 51356	180nF	10%	63V
2584	4822 121 51252	470nF	5%	63V
2585	4822 121 10684	68nF	10%	50V
2586	4822 124 41579	10µF	20%	50V
2587	4822 122 33069	33pF	5%	SL 50V
2588	4822 122 33191	22pF	5%	50V
2589	4822 121 43396	120nF	5%	63V

COMBI BOARD

2590	4822 124 41584	100µF	20%	10V
2591	4822 122 10466	220pF	10%	50V
2592	4822 121 42408	220nF	5%	63V
2593	4822 121 70619	22nF	10%	50V
2594	5322 121 42386	100nF	5%	63V
2595	4822 121 10684	68nF	10%	50V
2596	4822 121 42408	220nF	5%	63V
2597	4822 121 42408	220nF	5%	63V
2598	4822 124 80195	470µF	20%	10V
2599	4822 124 41584	100µF	20%	10V
2600	4822 126 12882	100nF	+80-20%	50V
2601	4822 126 12882	100nF	+80-20%	50V
2602	4822 122 33848	47pF	5%	SL 50V
2603	4822 122 33848	47pF	5%	SL 50V
2604	4822 122 33848	47pF	5%	SL 50V
2605	4822 122 33848	47pF	5%	SL 50V
2606	4822 122 33069	33pF	5%	SL 50V
2607	4822 122 33848	47pF	5%	SL 50V
2608	4822 122 33848	47pF	5%	SL 50V
2609	4822 122 33848	47pF	5%	SL 50V
2610	4822 124 23432	100µF	20%	10V
2611	4822 124 81151	22µF	50V	
2612	4822 126 11714	4.7nF	20%	
2613	4822 126 11714	4.7nF	20%	
2614	4822 124 41579	10µF	20%	50V
2615	4822 124 81151	22µF	50V	
2616	4822 126 14316	680pF	10%	50V
2617	4822 126 14316	680pF	10%	50V
2618	4822 124 23432	100µF	20%	10V
2619	4822 126 12339	2.2nF	10%	Y5R
2620	4822 126 12339	2.2nF	10%	Y5R

3196	4822 116 83864	10K	5%	0.5W
3250	4822 117 12798	8R2	5%	0.25W
3251	4822 117 12798	8R2	5%	0.25W
3252	4822 050 11002	1K	1%	0.4W
3253	4822 116 52256	2K2	5%	0.5W
3254	4822 116 83883	470R	5%	0.5W
3255	4822 116 52256	2K2	5%	0.5W
3256	4822 117 12798	8R2	5%	0.25W
3258	4822 116 83872	220R	5%	0.5W
3259	4822 116 83883	470R	5%	0.5W
3260	4822 116 83883	470R	5%	0.5W
3261	4822 116 52283	4K7	5%	0.5W
3262	4822 116 52283	4K7	5%	0.5W
3263	4822 116 52175	100R	5%	0.5W
3264	4822 116 52283	4K7	5%	0.5W
3265	4822 116 52256	2K2	5%	0.5W
3267	4822 116 83864	10K	5%	0.5W
3268	4822 116 83864	10K	5%	0.5W
3301	4822 116 83878	270K	5%	0.5W
3302	4822 116 52291	56K	5%	0.5W
3304	4822 116 83883	470R	5%	0.5W
3305	4822 116 83883	470R	5%	0.5W
3306	5322 116 53564	3R3	5%	0.5W
3307	5322 116 53564	3R3	5%	0.5W
3308	4822 116 52213	180R	5%	0.5W
3309	4822 116 52213	180R	5%	0.5W
3311	4822 050 11002	1K00	1%	0.4W
3312	4822 116 52303	8K2	5%	0.5W
3313	4822 116 52231	820R	5%	0.5W
3314	4822 116 52231	820R	5%	0.5W
3511	4822 116 83864	10K	5%	0.5W
3512	4822 116 83864	10K	5%	0.5W
3518	4822 116 52235	1M	5%	0.5W
3519	4822 116 52235	1M	5%	0.5W
3522	4822 102 10447	VR 50K BX2		
3523	4822 116 52234	100K	5%	0.5W
3524	4822 116 52234	100K	5%	0.5W
3525	4822 116 52234	100K	5%	0.5W
3526	4822 116 52234	100K	5%	0.5W
3527	4822 116 83878	270K	5%	0.5W
3528	4822 116 83878	270K	5%	0.5W
3529	4822 116 52234	100K	5%	0.5W
3530	4822 116 52234	100K	5%	0.5W
3531	4822 116 83884	47K	5%	0.5W
3532	4822 116 83884	47K	5%	0.5W

COMBI BOARD

3533	4822 116 52291	56K 5% 0.5W
3534	4822 116 52291	56K 5% 0.5W
3535	4822 116 52304	82K 5% 0.5W
3536	4822 116 52304	82K 5% 0.5W
3537	4822 116 52245	150K 5% 0.5W
3538	4822 116 52245	150K 5% 0.5W
3539	4822 116 83864	10K 5% 0.5W
3540	4822 116 83864	10K 5% 0.5W
3541	4822 116 52234	100K 5% 0.5W
3542	4822 116 52234	100K 5% 0.5W
3543	4822 050 11002	1K 1% 0.4W
3544	4822 050 11002	1K 1% 0.4W
3545	4822 116 52234	100K 5% 0.5W
3546	4822 116 52234	100K 5% 0.5W
3547	4822 116 52256	2K2 5% 0.5W
3548	4822 116 52256	2K2 5% 0.5W
3549	4822 050 11002	1K 1% 0.4W
3550	4822 050 11002	1K 1% 0.4W
3551	4822 116 83881	390R 5% 0.5W
3552	4822 116 83881	390R 5% 0.5W
3553	4822 116 52257	22K 5% 0.5W
3554	4822 116 52257	22K 5% 0.5W
3555	4822 116 83864	10K 5% 0.5W
3556	4822 116 83864	10K 5% 0.5W
3557	4822 116 52244	15K 5% 0.5W
3558	4822 116 52244	15K 5% 0.5W
3559	4822 116 83864	10K 5% 0.5W
3560	4822 116 83864	10K 5% 0.5W
3573	4822 116 83884	47K 5% 0.5W
3574	4822 116 83884	47K 5% 0.5W
3575	4822 052 11478	4R7 5% 0.5W
3576	4822 116 83883	470R 5% 0.5W
3577	4822 116 83883	470R 5% 0.5W
3578	4822 116 52303	8K2 5% 0.5W
3579	4822 116 52303	8K2 5% 0.5W
3580	4822 116 83872	220R 5% 0.5W
3582	4822 116 52305	820K 5% 0.5W
3583	4822 116 52305	820K 5% 0.5W
3584	4822 116 52243	1K5 5% 0.5W
3585	4822 116 52243	1K5 5% 0.5W
3586	4822 116 52228	680R 5% 0.5W
3587	4822 116 52228	680R 5% 0.5W
3588	4822 116 52283	4K7 5% 0.5W
3589	4822 116 52283	4K7 5% 0.5W
3590	4822 050 11002	1K 1% 0.4W

3591	4822 050 11002	1K 1% 0.4W
3592	4822 116 52283	4K7 5% 0.5W
3593	4822 116 52283	4K7 5% 0.5W
3594	4822 116 52256	2K2 5% 0.5W
3595	4822 116 52291	56K 5% 0.5W
3596	4822 116 52291	56K 5% 0.5W
3597	4822 050 11002	1K 1% 0.4W
3598	4822 050 11002	1K 1% 0.4W
3599	4822 116 52191	33R 5% 0.5W
3629	4822 116 52283	4K7 5% 0.5W
3630	4822 116 52283	4K7 5% 0.5W
3631	4822 116 83864	10K 5% 0.5W
3632	4822 116 52244	15K 5% 0.5W
3660	4822 116 52219	330R 5% 0.5W
3661	4822 116 52219	330R 5% 0.5W
3662	4822 116 52257	22K 5% 0.5W
3663	4822 116 52257	22K 5% 0.5W
3664	4822 116 83864	10K 5% 0.5W
3665	4822 116 52269	3K3 5% 0.5W
3666	4822 116 52238	12K 5% 0.5W
3667	4822 116 52238	12K 5% 0.5W
3668	4822 116 52269	3K3 5% 0.5W
3669	4822 116 52238	12K 5% 0.5W
3670	4822 116 52238	12K 5% 0.5W
3671	4822 116 52269	3K3 5% 0.5W
3672	4822 116 83864	10K 5% 0.5W
3673	4822 116 83864	10K 5% 0.5W
3674	4822 116 83864	10K 5% 0.5W
3675	4822 116 83864	10K 5% 0.5W
3676	4822 116 83864	10K 5% 0.5W
3677	4822 116 52269	3K3 5% 0.5W
3678	4822 116 52251	18K 5% 0.5W
3679	4822 050 11002	1K 1% 0.4W
3680	4822 116 52283	4K7 5% 0.5W
3681	4822 116 52276	3K9 5% 0.5W
3682	4822 116 83864	10K 5% 0.5W
3683	4822 116 52271	33K 5% 0.5W
3684	4822 116 52269	3K3 5% 0.5W
3685	4822 116 52269	3K3 5% 0.5W
3686	4822 116 83864	10K 5% 0.5W
3687	4822 116 52257	22K 5% 0.5W
3688	4822 116 52283	4K7 5% 0.5W
3689	4822 116 52269	3K3 5% 0.5W
3690	4822 116 52256	2K2 5% 0.5W
3694	4822 116 83864	47K 5% 0.5W

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3695	4822 116 83884	47K 5% 0.5W
3696	4822 116 52263	2K7 5% 0.5W
3697	4822 116 52263	2K7 5% 0.5W
3698	4822 116 52256	2K2 5% 0.5W
3699	4822 116 52256	2K2 5% 0.5W
3700	4822 116 52263	2K7 5% 0.5W
3701	4822 116 52263	2K7 5% 0.5W
3702	4822 116 52175	100R 5% 0.5W
3703	4822 116 52283	4K7 5% 0.5W
3704	4822 050 11002	1K00 1% 0.4W
3705	4822 116 52269	3K3 5% 0.5W
3706	4822 116 52235	1M 5% 0.5W
3707	4822 116 52235	1M 5% 0.5W
3708	4822 116 83883	470R 5% 0.5W
5100	4822 157 62552	Coil 2.2µH
5300	4822 157 70826	Coil 2.4µH
5301	4822 157 53856	Coil 270µH 10%
5302	4822 157 11756	Coil 47µH 5%
6001	5322 130 80686	Diode 1N5392
6001	5322 130 80686	Diode 1N5392
6001	5322 130 80686	Diode 1N5392
6180	4822 130 30621	Diode 1N4148
6181	4822 130 30621	Diode 1N4148
6182	4822 130 30621	Diode 1N4148
6183	4822 130 34488	Diode BZX79-B11
6184	4822 130 30621	Diode 1N4148
6304	5322 130 31504	Diode BZX79-B3V3
6306	4822 130 34197	Diode BZX79-B12
6308	4822 130 30621	Diode 1N4148
6309	4822 130 30621	Diode 1N4148
6310	4822 130 30621	Diode 1N4148
6313	4822 130 30621	Diode 1N4148
6314	4822 130 30621	Diode 1N4148
6315	4822 130 30621	Diode 1N4148
6316	4822 130 30621	Diode 1N4148

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

7180	4822 130 44568	Trans BC557B
7181	4822 130 44503	Trans BC547C
7182	4822 130 44503	Trans BC547C
7183	4822 130 44503	Trans BC547C
7250	4822 130 42231	Trans BC557C
7251	4822 130 41327	Trans BC327-40
7252	4822 130 44503	Trans BC547C
7253	4822 130 41327	Trans BC327-40
7254	4822 130 41327	Trans BC327-40
7256	5322 130 44647	Trans BC368
7257	5322 130 44647	Trans BC368
7259	4822 130 40959	Trans BC547B
7260	5322 130 44593	Trans BC369
7262	4822 130 44503	Trans BC547C
7263	4822 130 41327	Trans BC327-40
7268	4822 130 41344	Trans BC337-40
7269	4822 130 41344	Trans BC337-40
7270	4822 209 12925	IC AN7124
7271	4822 209 63709	IC LM324DTR
7272	4822 209 63709	IC LM324DTR
7273	4822 209 63709	IC LM324DTR
7513	4822 130 44503	Trans BC547C
7514	4822 130 44503	Trans BC547C
7515	4822 130 41344	Trans BC337-40
7516	4822 130 41344	Trans BC337-40
7517	4822 130 40959	Trans BC547B
	<b>- MISCELLANEOUS -</b>	
1002	4822 240 10323	Loudspeaker
1003	4822 240 10323	Loudspeaker
1006	4822 265 20318	Socket Mains (Not for -/17)
1006	4822 265 20706	Socket Mains (For -/17)
1007	4822 146 11039	Transf (For -/00/05/14)
1007	4822 146 11041	Transf (For -/01)
1007	4822 146 11041	Transf (For -/11)
1007	4822 146 11042	Transf (For -/17)
1008	4822 276 13963	CD Door Switch
1009	4822 277 21794	Volt Selector (For -/01/11)
1256	4822 277 11864	Slide Switch
1257	4822 265 11317	Connector 1P
1302	4822 071 52502	Fuse 2.5A
1503	4822 277 11806	Slide Switch
1504	4822 276 12648	Push Switch



FRONT BOARD

13-4

2400	4822 126 12882	100nF +80-20% 50V
2401	5322 122 32531	100pF 5% NPO 50V
2402	5322 122 32531	100pF 5% NPO 50V
2403	5322 122 32531	100pF 5% NPO 50V
2404	5322 122 34099	470pF 10% X7R 63V
2405	5322 122 34099	470pF 10% X7R 63V
2406	5322 122 32531	100pF 5% NPO 50V
2407	5322 122 32531	100pF 5% NPO 50V
2408	4822 126 12882	100nF +80-20% 50V
2414	5322 122 32654	22nF 10% X7R 63V
2415	4822 124 23432	100µF 20% 10V
2416	4822 124 22651	1.0µF 20% 50V
2417	5322 122 32654	22nF 10% X7R 63V
2418	5322 122 34123	1nF 10% X7R 50V
2420	5322 122 32531	100pF 5% NPO 50V
2422	4822 122 33195	100pF 10% 50V

3443	4822 051 20223	22K 5% 0.1W
3444	4822 051 20223	22K 5% 0.1W
3445	4822 051 20223	22K 5% 0.1W
3446	4822 051 20223	22K 5% 0.1W
3453	4822 051 20472	4K7 5% 0.1W
3454	4822 051 20223	22K 5% 0.1W
3455	4822 051 20472	4K7 5% 0.1W
3456	4822 116 52257	22K 5% 0.5W
3457	4822 051 20472	4K7 5% 0.1W
3458	4822 051 20223	22K 5% 0.1W
3459	4822 051 10102	1K 2% 0.25W
3460	4822 051 20472	4K7 5% 0.1W
3463	4822 051 20471	470R 5% 0.1W
3464	4822 051 20471	470R 5% 0.1W
3465	4822 051 20471	470R 5% 0.1W
3466	4822 051 20471	470R 5% 0.1W
3467	4822 051 20471	470R 5% 0.1W
3468	4822 051 20471	470R 5% 0.1W
3469	4822 051 10102	1K 2% 0.25W
3470	4822 117 11449	2K2 1% 0.1W
3471	4822 051 10102	1K 2% 0.25W
3472	4822 051 20561	560R 5% 0.1W
3473	4822 051 20182	1K8 5% 0.1W
3474	4822 051 20101	100R 5% 0.1W
3475	4822 051 20153	15K 5% 0.1W
3476	4822 051 20104	100K 5% 0.1W
3477	4822 051 20471	470R 5% 0.1W
3478	4822 116 52283	4K7 5% 0.5W
3479	4822 051 10102	1K 2% 0.25W
3480	4822 051 20472	4K7 5% 0.1W
3481	4822 051 20223	22K 5% 0.1W
3483	4822 117 11449	2K2 1% 0.1W
3484	4822 051 10102	1K 2% 0.25W
3485	4822 051 20472	4K7 5% 0.1W
9431	4822 051 20008	Jumper
9432	4822 051 20008	Jumper
9433	4822 051 20008	Jumper
9434	4822 051 20008	Jumper
9435	4822 051 20008	Jumper
9436	4822 051 20008	Jumper
9437	4822 051 20008	Jumper
9438	4822 051 20008	Jumper
9439	4822 051 20008	Jumper
9440	4822 051 20008	Jumper
9441	4822 051 20008	Jumper

FRONT BOARD

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9442	4822 051 20008	Jumper
9443	4822 051 20008	Jumper
9444	4822 051 20008	Jumper
9445	4822 051 20008	Jumper
9446	4822 051 20008	Jumper
9447	4822 051 20008	Jumper
9448	4822 051 20008	Jumper
9449	4822 051 20008	Jumper
9451	4822 051 20008	Jumper
9452	4822 051 20008	Jumper
9454	4822 051 20008	Jumper
5401	4822 157 11228	Coil LAN02TB101J
5402	4822 157 62552	Coil 2.2µH
5403	4822 242 73769	Filter CST4.19MGW
7420	4822 130 30621	Diode 1N4148
7421	4822 130 30621	Diode 1N4148
7423	4822 130 31554	Diode BZX79-B4V3
7400	4822 209 17392	IC TMP47C823F-50520
7410	4822 130 60511	Trans BC847B
7411	4822 130 60511	Trans BC847B
7480	4822 209 13156	IC ST24C01M6
<b>- MISCELLANEOUS -</b>		
1450	4822 276 13114	Tact Switch
1451	4822 276 13114	Tact Switch
1452	4822 276 13114	Tact Switch
1453	4822 276 13114	Tact Switch
1455	4822 276 13114	Tact Switch
1456	4822 276 13114	Tact Switch
1457	4822 276 13114	Tact Switch
1458	4822 276 13114	Tact Switch
1459	4822 276 13114	Tact Switch
1495	4822 135 00274	LCD Panel

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

ECOS TUNER BOARD

13-5

2101	5322 122 32531	100pF 5% NP0 50V
2102	4822 122 33177	10nF 20% X7R 50V
2103	5322 122 34123	1nF 10% X7R 50V
2104	4822 122 33195	100pF 10% 50V
2106	4822 125 50355	Var Cap 4-20pF
2106	4822 125 60101	Var Cap 3-11pF
2107	4822 121 51319	1uF 10% 63V
2108	5322 122 32531	100pF 5% NP0 50V
2109	5322 122 32448	10pF 5% 50V
2120	5322 122 31946	27pF 5% NP0 63V
2120	5322 122 32658	22pF 5% 50V
2122	4822 122 33891	3.3nF 10% X7R 63V
2123	4822 121 51254	390pF 1% 400V
2125	4822 121 51381	560pF 5% 400V
2126	5322 122 31863	330pF 5% NP0 50V
2127	4822 122 32927	220nF +80-20% 50V
2127	4822 126 13473	220nF +80-20% 50V
2128	4822 124 41579	10uF 20% 50V
2129	4822 124 41584	100uF 20% 10V
2130	4822 126 11585	22nF +80-20% 25V
2131	4822 122 33325	470nF 16V
2131	4822 126 13482	470nF 80/20% 16V
2132	4822 122 33325	470nF 16V
2132	4822 126 13482	470nF 80/20% 16V
2133	4822 124 40242	1uF 20% 63V
2134	4822 122 33128	15nF 10% X7R 63V
2134	5322 122 32654	22nF 10% X7R 63V
2135	4822 124 40746	0.22uF 20% 63V
2136	4822 122 33128	15nF 10% X7R 63V
2136	5322 122 32654	22nF 10% X7R 63V
2137	4822 124 40746	0.22uF 20% 63V
2138	4822 124 41576	2.2uF 20% 50V
2139	5322 122 32447	1pF 5% 50V
2140	4822 121 51252	470nF 5% 63V
2141	4822 122 31947	100nF 20% Y5V 63V
2141	4822 126 10002	100nF 20% Y5V 25V
2142	4822 122 31947	100nF 20% Y5V 63V
2142	4822 126 10002	100nF 20% Y5V 25V
2143	4822 122 32927	220nF +80-20% 50V
2143	4822 126 13473	220nF +80-20% 50V
2144	4822 124 40242	1uF 20% 63V
2145	4822 122 33575	220pF 5% NP0 50V
2146	4822 122 33575	220pF 5% NP0 50V
2147	4822 122 33575	220pF 5% NP0 50V
2148	4822 126 11585	22nF +80-20% 25V


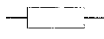
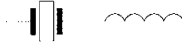
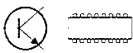

2149	5322 122 32654	22nF 10% X7R 63V
2150	4822 122 31947	100nF 20% Y5V 63V
2152	4822 122 33342	33nF 10% X7R 63V
2153	4822 122 32504	15pF 2% NP0 63V
2155	4822 125 60101	Var Cap 3-11pF
2158	5322 122 32448	10pF 5% 50V
2159	5322 122 32659	33pF 5% 50V
2160	5322 122 32654	22nF 10% X7R 63V
2161	4822 122 31947	100nF 20% Y5V 63V
2161	4822 126 10002	100nF 20% Y5V 25V
2163	4822 122 31947	100nF 20% Y5V 63V
2163	4822 126 10002	100nF 20% Y5V 25V
2164	4822 126 13482	470nF 80/20% 16V
2165	4822 122 31947	100nF 20% Y5V 63V
2165	4822 126 10002	100nF 20% Y5V 25V
2166	5322 122 34123	1nF 10% X7R 50V
2167	4822 122 32139	12pF 2% NP0 63V
3101	4822 051 20333	33K 5% 0.1W
3102	4822 051 20104	100K 5% 0.1W
3103	4822 117 10965	18K 1% 0.1W
3104	4822 117 11448	180R 1% 0.1W
3105	4822 116 83872	220R 5% 0.5W
3108	4822 117 11449	2K2 1% 0.1W
3109	4822 051 20332	3K3 5% 0.1W
3110	4822 116 52195	47R 5% 0.5W
3123	4822 051 20472	4K7 5% 0.1W
3125	4822 117 10833	10K 1% 0.1W
3128	4822 117 11449	2K2 1% 0.1W
3132	4822 116 52195	47R 5% 0.5W
3134	4822 051 20224	220K 5% 0.1W
3137	4822 051 20223	22K 5% 0.1W
3140	4822 051 20008	Jumper
3140	4822 117 10353	150R 1% 0.1W
3141	4822 051 20563	56K 5% 0.1W
3142	4822 100 11163	100K 30% 0.1W
3145	4822 117 11449	2K2 1% 0.1W
3146	4822 051 20229	22R 5% 0.1W
3152	4822 116 83883	470R 5% 0.5W
3153	4822 051 20471	470R 5% 0.1W
3154	4822 116 52206	120R 5% 0.5W
3155	4822 051 20229	22R 5% 0.1W
3156	4822 051 20104	100K 5% 0.1W

3158	4822 116 83883	470R 5% 0.5W
3159	4822 116 83883	470R 5% 0.5W
3160	4822 116 83883	470R 5% 0.5W
3161	4822 116 83883	470R 5% 0.5W
3167	4822 051 20121	120R 5% 0.1W
3169	4822 051 20154	150K 5% 0.1W
3170	4822 116 52234	100K 5% 0.5W
3173	4822 116 52219	330R 5% 0.5W
4101	4822 051 20008	Jumper
4102	4822 051 20008	Jumper
4102	4822 051 20334	330K 5% 0.1W
4103	4822 051 20008	Jumper
4104	4822 051 20008	Jumper
4105	4822 051 20008	Jumper
4106	4822 051 20008	Jumper
4108	4822 051 20008	Jumper
4111	4822 051 20008	Jumper
4120	4822 051 20008	Jumper
4150	4822 051 10008	0R 5% 0.25W
4151	4822 051 20008	Jumper
4152	4822 051 10008	0R 5% 0.25W
4153	4822 051 10008	0R 5% 0.25W
4154	4822 051 10008	0R 5% 0.25W
4155	4822 051 10008	0R 5% 0.25W
4156	4822 051 20008	Jumper
4157	4822 051 10008	0R 5% 0.25W
4158	4822 051 10008	0R 5% 0.25W
4159	4822 051 10008	0R 5% 0.25W
4163	4822 051 20008	Jumper
5102	4822 157 71634	MW Coil
5103	4822 157 71635	LW Coil
5109	4822 242 70665	Filter SFE10.7MMS3-A
5110	4822 242 70665	Filter SFE10.7MMS3-A
5111	4822 158 60511	Coil AM-1F
5112	4822 157 70302	Coil F7MCS-12216N
5114	4822 157 70302	Coil F7MCS-12216N
5120	4822 242 82065	Filter CDA10.7MG40KA
5120	4822 242 10251	CDA10.7MG61K-A-TF21
5121	4822 242 10261	Crystal 75KHz

5122	4822 157 60517	Coil 110.00 uH 8%
5123	4822 157 60517	Coil 110.00 uH 8%
5130	4822 156 30947	RF Coil
5131	4822 156 30947	RF Coil
6103	4822 130 30621	Diode 1N4148
6104	4822 130 30621	Diode 1N4148
6105	4822 130 83075	Diode HN1V02H-B
6107	4822 130 34488	Diode BZX79-B11
6120	4822 130 30621	Diode 1N4148
6130	4822 130 82833	Diode 1SV228
6131	4822 130 82833	Diode 1SV228
7101	4822 209 90924	IC TEA5757H/V1
7102	4822 130 60093	Trans 2SA838B
7104	5322 130 44779	Trans BC338-40
7105	5322 130 44779	Trans BC338-40
7109	5322 130 41983	Trans BC858B
7111	5322 130 42136	Trans BC848C
7122	5322 130 42136	Trans BC848C
7124	5322 130 42136	Trans BC848C

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

## RECORDER BOARD

					
2630	4822 126 13678	470μF 10V	3641	4822 116 83961	6K8 5%
2631	4822 124 41596	22μF 20% 50V	3642	4822 116 52252	180K 5% 0,5W
2632	4822 124 40242	1μF 20% 63V	3643	4822 116 52252	180K 5% 0,5W
2633	4822 124 40242	1μF 20% 63V	3644	4822 116 83864	10K 5% 0,5W
2634	4822 126 12878	1.5μF 10% 16V	3645	4822 116 83864	10K 5% 0,5W
2635	4822 126 12878	1.5μF 10% 16V	3646	4822 116 52244	15K 5% 0,5W
2636	5322 122 32311	470pF 10% 100V	3647	4822 116 52244	15K 5% 0,5W
2637	5322 122 32311	470pF 10% 100V	3648	4822 116 52238	12K 5% 0,5W
2638	4822 124 11958	47μF 20% 25V	3649	4822 116 52238	12K 5% 0,5W
2639	4822 124 11958	47μF 20% 25V	3650	4822 111 30893	4M7 5% 0,2W
2640	4822 126 12787	300pF 10% Y5V 50V	3651	4822 116 52245	150K 55 0,5W
2641	4822 126 12787	300pF 10% Y5V 50V	3652	4822 116 52219	330R 55 0,5W
2642	4822 121 51304	10nF 10% 50V	3653	4822 116 52219	330R 55 0,5W
2643	4822 121 51304	10nF 10% 50V	3654	4822 116 52289	5K6 5% 0,5W
2644	4822 126 12339	2,2nF 10% Y5R	3655	4822 116 52289	5K6 5% 0,5W
2645	4822 126 12339	2,2nF 10% Y5R	3656	4822 116 83864	10K 5% 0,5W
2646	5322 121 42386	100nF 5% 63V	3657	4822 116 52206	120R 5% 0,5W
2647	5322 121 42386	100nF 5% 63V	3658	4822 116 52176	10R 5% 0,5W
2648	4822 126 11167	22nF 20% 50V	3659	4822 116 52291	56K 55 0,5W
2649	4822 126 11167	22nF 20% 50V			
2650	4822 124 11958	47μF 20% 25V	5630	4822 156 20946	Osc Coil 100KHz
2651	4822 124 11958	47μF 20% 25V			
2652	4822 122 33197	1n F 10% 50V	7630	4822 130 40959	Trans BC547B
2653	4822 122 33197	1n F 10% 50V	7700	4822 209 32918	IC AN7318S
2654	4822 124 41596	22μF 20% 50V	<b>- MISCELLANEOUS -</b>		
2655	4822 122 33197	1n F 10% 50V	1640	4822 277 11504	Push Switch
2656	4822 124 40242	1μF 20% 63V			
2657	4822 121 51304	10nF 10% 50V	3630	4822 116 83872	220R 5% 0,5W
2658	4822 126 11714	4,7nF 20%	3632	4822 116 83883	470R 5% 0,5W
2659	4822 126 12147	22nF 10% Y5R 25V	3633	4822 116 83883	470R 5% 0,5W
			3634	4822 116 83883	470R 5% 0,5W
			3635	4822 116 83883	470R 5% 0,5W
			3636	4822 116 52197	56R 55 0,5W
			3637	4822 116 52197	56R 55 0,5W
			3638	4822116 52271	33K 5% 0,5W
			3639	4822116 52271	33K 5% 0,5W
			3640	4822 116 83961	6K8 5%

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

