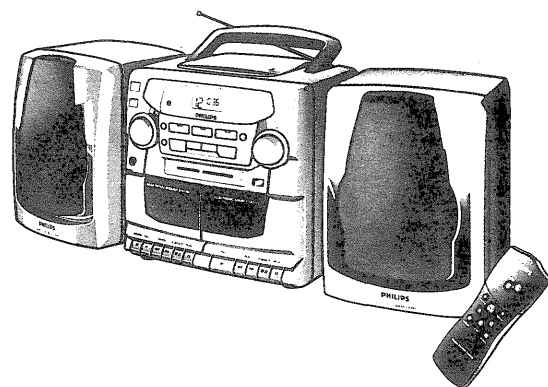


Service
Service
Service

←
Volta ao Menu



Service Manual

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Especificações Técnicas

GENERAL

Tensão de Rede	:	110 / 220 V
Frequência de Rede	:	60 Hz
Bateria	aparelho	: 9V (R20 x 6)
	controle remoto	: 3V (R03 x 2)
Consumo	normal	: 35W
Dimensão (L x A x P)	:	655 x 260 x 210 mm
Peso	:	7 Kg

AMPLIFICADOR

Potência de Saída	rede	: 2 x 2 W (4 ohms)
	bateria	: 2 x 2 W
Resposta de Frequência	:	100 Hz - 8 kHz(±3dB)

TUNER - FM

Range de Sintonia	:	87 MHz - 108.5 MHz
Grid	:	100 KHz
FI	:	10,7 MHz
Sensibilidade (S/N=26dB)	:	≤ 22 dB
Seletividade	:	> 20 dB a 300 KHz
Rejeição de Fi	:	> 54 dB
Rejeição de Imagem	:	> 20 dB a 1 KHz

TUNER - AM

Range de Sintonia	:	516 KHz - 1620 KHz
FI	:	468 KHz ± 3 KHz
Sensibilidade (S/N=26dB)	:	4000 µV/m
Seletividade	:	> 20 dB
Rejeição de Fi	:	> 24 dB
Rejeição de Imagem	:	> 28 dB

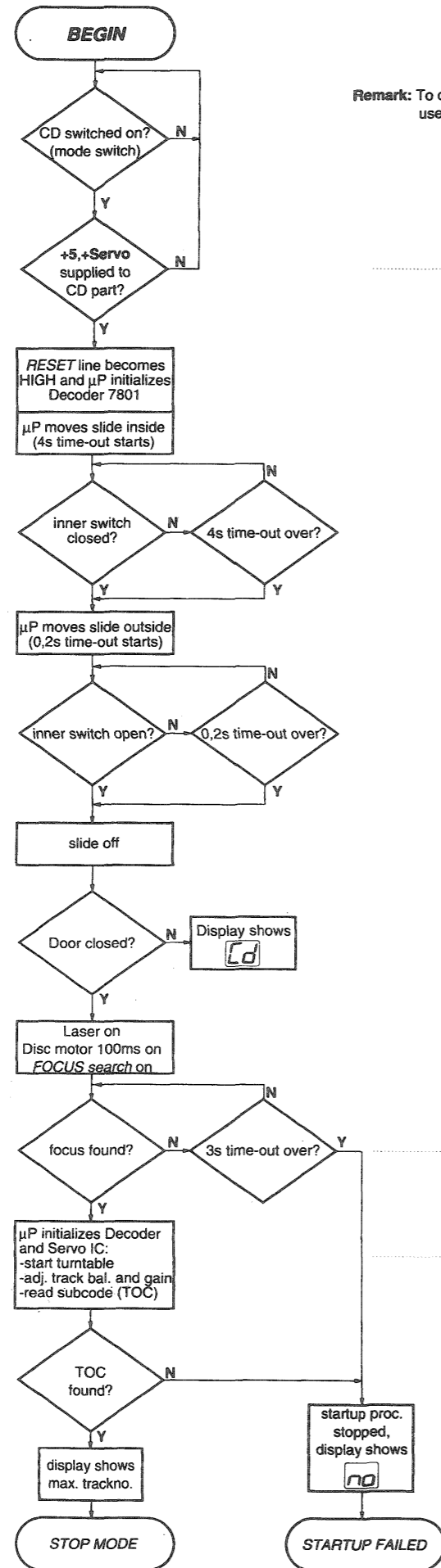
TAPE DECK

Wow & flutter	:	<0.5 WTD DIN
Resposta de Frequência	:	125 - 6300Hz
Relação S/N	:	>40 dB
Apagamento	:	>50 dB
Frequência de Bias	:	73 ± 1.5 kHz

COMPACT DISC

Resposta de Frequência	:	63 Hz - 16 KHz
Relação S/N	:	>60 dB
Diferença entre canais a 1 KHz	:	2 dB
Crosstalk a 1 KHz	:	>50 dB

CD STARTUP PROCEDURE



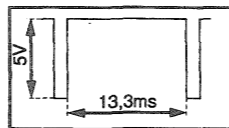
Remark: To check focus servo, slide servo, track servo and turntable use service test program

- Battery empty?
- check +5 and +Servo

check: - door switch

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

check: - Motor control pin 37/38 of Decoder 7801 and Disc Motor driver 7805
- HF Signal
- Signal on pin7 of Decoder 7801



Abbreviations and Pin-description of CD ICs

SERVO PROCESSOR M62475FP

Pin	Name	Direction	Description
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	-	not connected
14	TS -	-	-
15	TS out	-	Servo processor → Servo driver
16	SS +	-	-
17	SS -	-	-
18	Slide out	-	Servo processor → Motor driver
19	DET. FILTER	-	-
20	BIAS	-	Servo processor → external electronic
21	GND	-	-
22	MLA/DIS	-	μP → Servo processor
23	JP1/SG	-	μP → Servo processor
24	MCK	-	μP → Servo processor
25	MSD	-	μP → Servo processor
26	D _{out}	-	Servo processor → μP
27	C _{LPF}	-	-
28	I _{REF}	-	-
29	V _{CC}	-	-
30	FS _{OUT}	-	Servo processor → Servo driver
31	FS -	-	-
32	FEGain	-	-
33	FE -	-	-
34	SGF	-	Servo processor → Focus error ampl. Input
35	C _{FSR}	-	-
36	ALPC +	-	-
37	ALPC -	-	-
38	ALPC _{OUT}	-	Servo processor → Laser driver
39	MRC	-	-
40	HF	-	Servo processor → Decoder
41	HF1	-	-
42	ABC	-	-

Description
Current input (central photo diode signal input)
Current input (satellite photo diode signal input)
Signal generator output to track servo, sends 1700Hz for adjustment procedure
Inverting input of track error amplifier
Gain control pin of track error amplifier
Track Gain 1 - switch: controls the gain of the track servo amplifier
Track Error amplifier output
Track Cross/Shock detector input
Non inverting input of track servo amplifier
Track Gain 2 - switch: controls the gain of the track servo amplifier
Inverting input of side servo amplifier
Output of track servo amplifier
Non inverting input of track servo amplifier
Inverting input of side servo amplifier
Output of slide servo amplifier
Pin for connection of DETection FILTER capacitor of ADJUST LOGIC
Reference Voltage output V _{cc} /2 of internal BIAS-generator
Ground connection pin (negative supply)
Serial interface Microprocessor Latch control/DIScharge control for adjustment
Serial interface Jump control line/Signal Generator input line for adjustment
Serial interface Clock input line
Serial interface Data input line
Serial interface Data output line
Pin for connection of Low Pass Filter capacitor of ADJUST LOGIC
Reference current input
Positive supply connection pin (4V - 5.5V)
Output of focus servo amplifier
Inverting input of focus servo amplifier
Gain control pin of focus error amplifier
Inverting input of focus error amplifier
Signal generator output to focus servo, sends 1700Hz for adjustment procedure
Charge capacitor for Focus Search triangle-generator
Non inverting input of Automatic Laser Power amplifier
Inverting input of Automatic Laser Power Control amplifier
Output of Automatic Laser Power Control amplifier
Connection pin for capacitor of Mirror detector
Output of HF amplifier
Inverting input of HF amplifier
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
3	SYCLK	-	not connected
4	LOCK	-	not connected
5	SCAND	-	not connected
6	CRCF	-	not connected
7	SBQS	-	Signal processor → μP
8	MSD	-	μP ↔ Signal processor
9	RESET	-	Reset circuit → Signal processor
10	MCK	-	μP → Signal processor
11	MLA	-	μP → Signal processor
12-14	MODx	-	μP → Signal processor
15	VDD2	-	+supply for data slicer and VCO
16	IREF	-	-
17	HFD	-	Signal processor → μP
18	LPF	-	-
19	HF	-	Servo processor → Signal processor
20	TLC	-	-
21	VSS2	-	-
22	C846	-	not connected
23	C423	-	Signal processor → μP
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	LRCK1	-	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

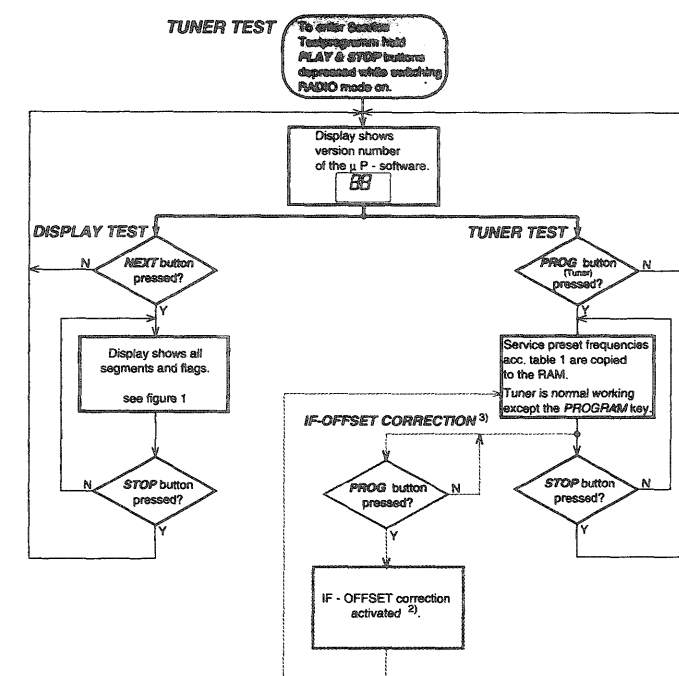
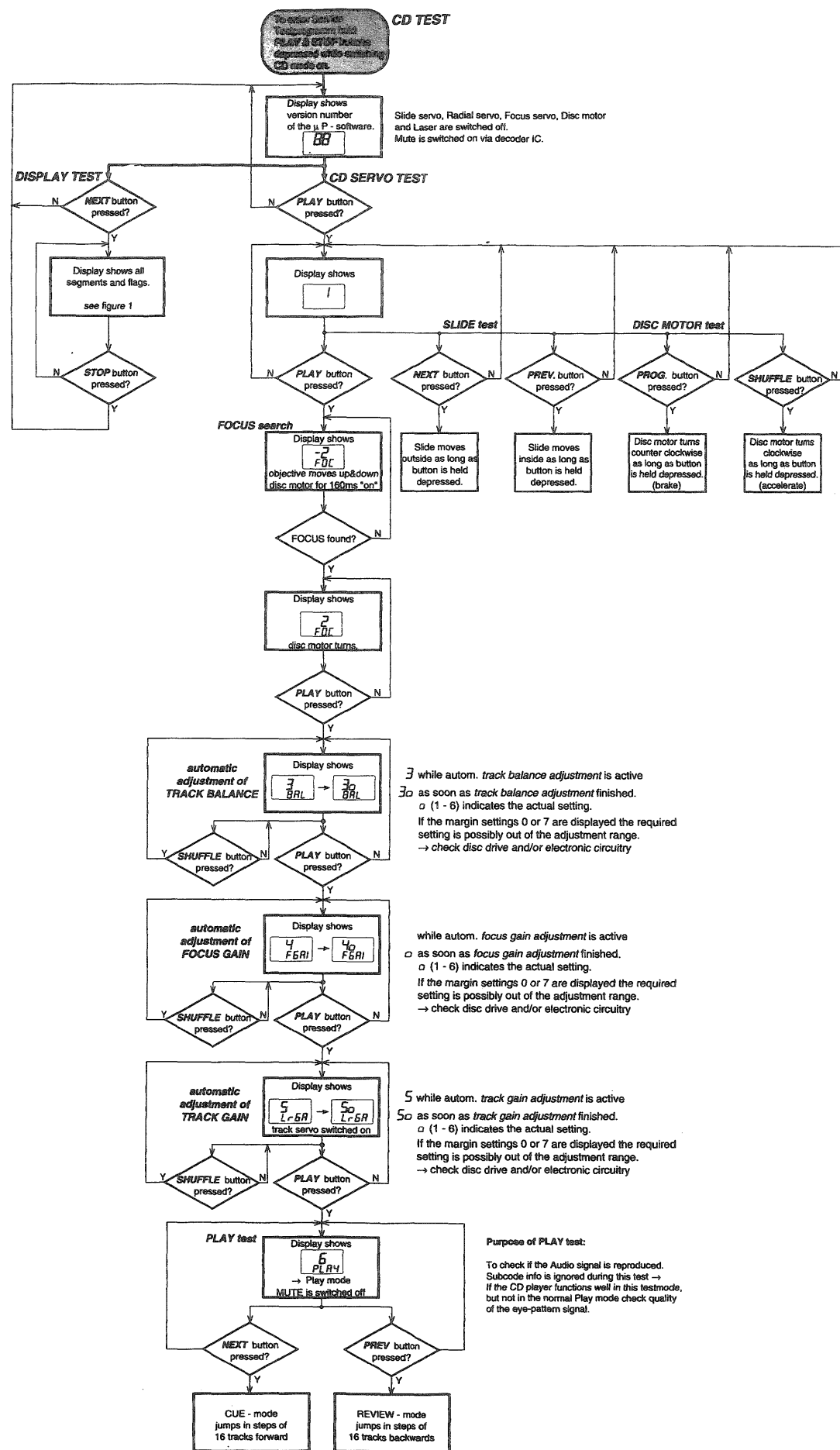
Description
+supply for signal processor
Emphasis flag output
Frame synchronize output
Low disc rotation detect output
Subcode sync signal detection
Subcode Q CRC check flag output
Interrupt signal to read out subcode Q data
Data line
System reset
Clock input
Latch clock input
Mode setting inputs (0,1,2)
+supply for data slicer and VCO
Current reference
HF signal detect
PLL loop filter
HF signal input
Output from slice level control
Ground
8,4672MHz clock output
4,2336MHz clock output
Error monitor output 2
Error monitor output 1
Crystal oscillator input
Crystal oscillator output
Output of digital interface
Serial data output to DAC
Serial data output to Dual DAC
Crystal selector input. H=8MHz, L=16MHz
Data shift clock
Word clock
Left/Right clock
Left/Right clock
Disc motor driving (Pulse Width Modulation) output 1
Disc motor driving (Pulse Width Modulation) output 2
Digital system ground

CD SERVICE TESTPROGRAM

- 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

REGION	EUROPE FM/WLW	EUROPE FM/WLW/SW	East EUROPE FM/WLW	USA FM/W	OVERSEAS FM/W	OVERSEAS FM/W/SW	KOREA FM/W-stereo	CHINA FM/W/SW
PRESET	/00/05/20/25	/00/05/20/25	/14/34	/17/37	¹⁾ Grid switchable 10-100kHz/5-50kHz /01/21	¹⁾ Grid switchable 10-100kHz/5-50kHz /01/21	/13/33	/15/35
1	87,5 MHz	87,5 MHz	65,81 MHz	87,5 MHz	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 kHz	530/531 kHz	530/531 kHz	531 kHz	531 kHz
4	1602 kHz	1602 kHz	87,5 MHz	1700 kHz	1700/1602 kHz	1700/1602 kHz	1602 kHz	1602 kHz
5	558 kHz	558 kHz	531 kHz	580 kHz	580/558 kHz	580/558 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	558 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	279 kHz			11 MHz		17MHz
11		17,9 MHz	198 kHz					
12		6,2 MHz						
13		17MHz						

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 tolerances of the discriminator filter.

For that reason the testsoftware is prepared for an automatic IF-offset correction.

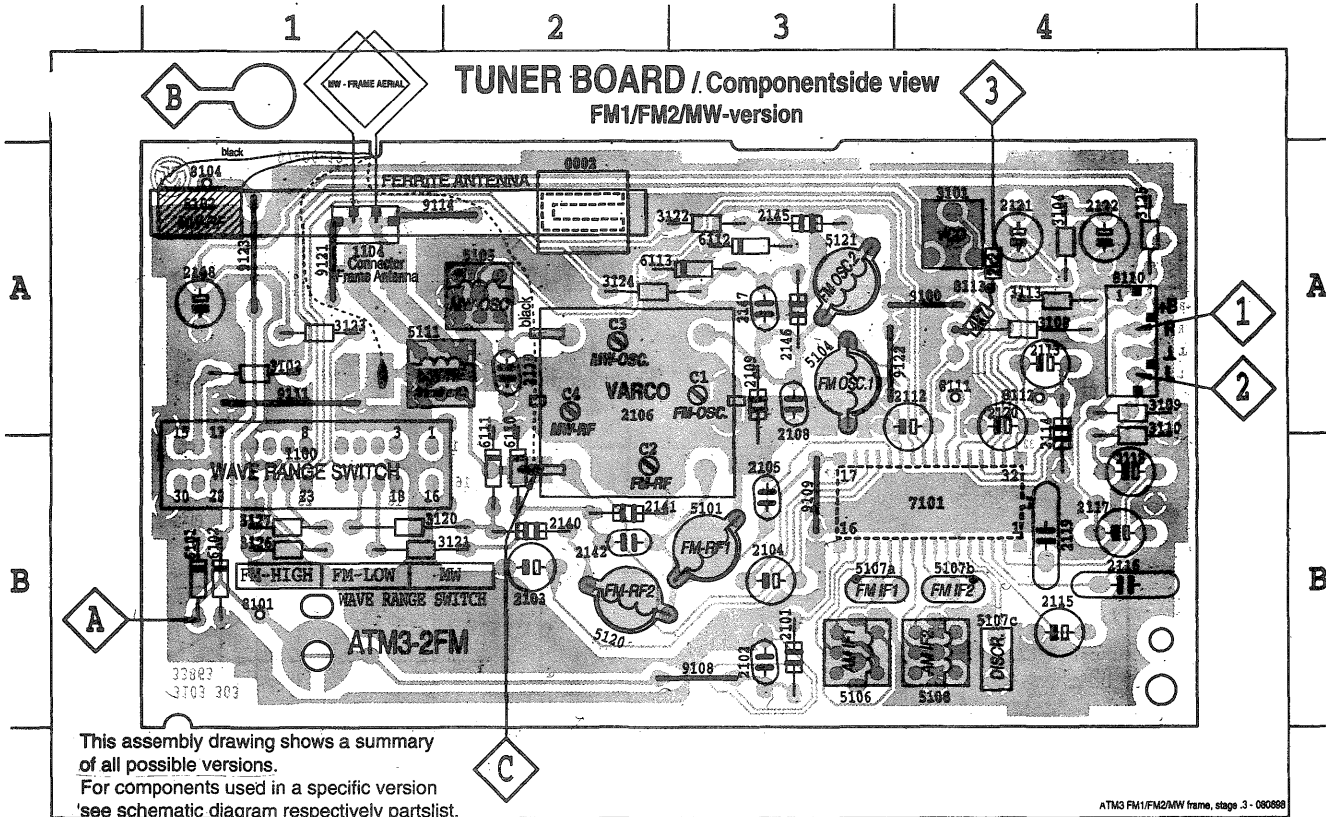
Note: This test functions only with the East European tuner version used in 14/34 set versions.

The test was executed on every set in the production line. In case the discriminator filter or the EEPROM has to be exchanged the automatic IF-offset correction should also be executed after repair.

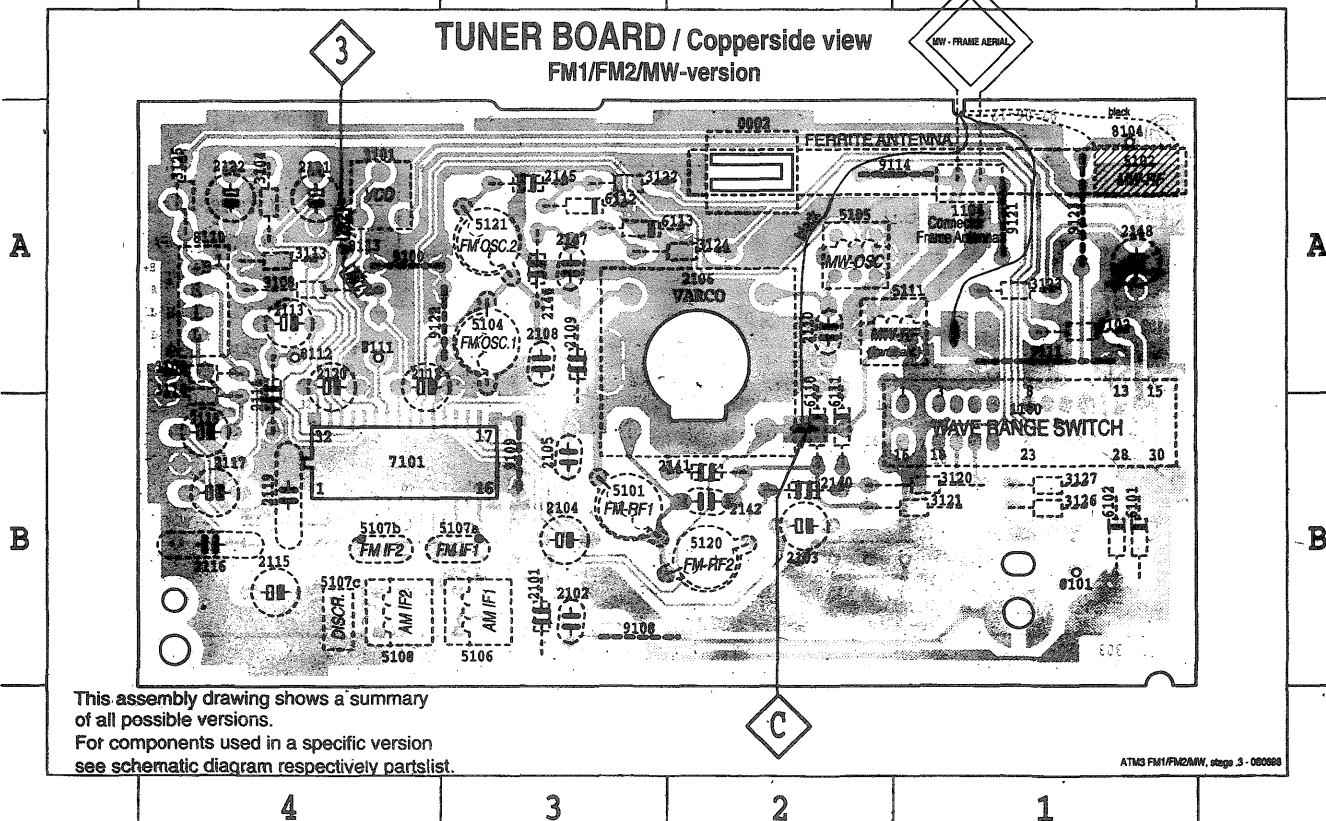
To execute the automatic IF-offset correction proceed as follows:

- * feed a strong 87.5MHz signal to the antenna
 - * press the PROGRAM button
- The μ P starts now several times the search mode. If the transmitter was found at 87.5MHz 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).


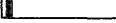
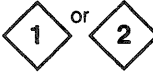
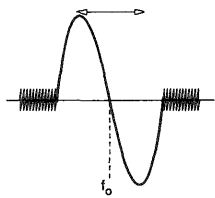
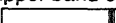
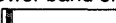
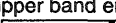
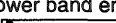


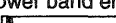
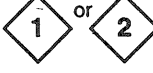
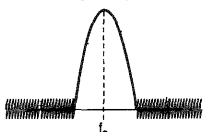


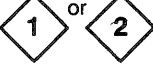
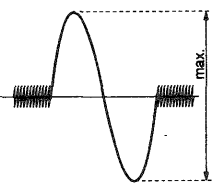


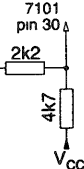

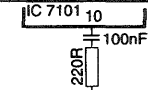
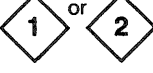
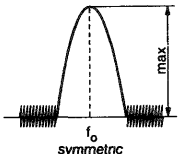
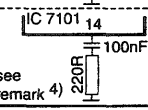

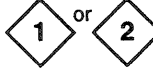
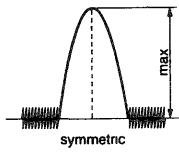
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1104 A 1	2109 A 3	2118 B 4	2145 A 3	3109 A 4	3125 A 4	5107a B 3	6102 B 1	8110 A 4	9114 A 1
2101 B 3	2110 A 2	2119 B 4	2146 A 3	3110 B 4	3126 B 1	5107b B 4	6110 B 2	8111 A 4	9121 A 1
2102 B 3	2112 A 4	2120 A 4	2147 A 3	3113 A 4	3127 B 1	5107c B 4	6111 B 2	8112 A 4	9122 A 3
2103 B 2	2113 A 4	2121 A 4	2148 A 1	3120 B 1	5101 B 3	5108 B 4	6112 A 3	8113 A 4	9123 A 1
2104 B 3	2114 A 4	2122 A 4	3101 A 4	3121 B 1	5102 A 2	5111 A 1	6113 A 3	9100 A 4	
2105 B 3	2115 B 4	2140 B 2	3102 A 1	3122 A 3	5104 A 3	5120 B 3	7101 B 4	9108 B 3	
2106 A 2	2116 B 4	2141 B 2	3104 A 4	3123 A 1	5105 A 2	5121 A 4	8101 B 1	9109 B 3	



1100 B 1	2108 A 3	2117 B 4	2142 B 2	3108 A 4	3124 A 2	5106 B 3	6101 B 1	8104 A 1	9111 A 1
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2105 B 3	2115 B 4	2140 B 2	3102 A 1	3122 A 3	5104 A 3	5120 B 3	7101 B 4	9108 B 3	
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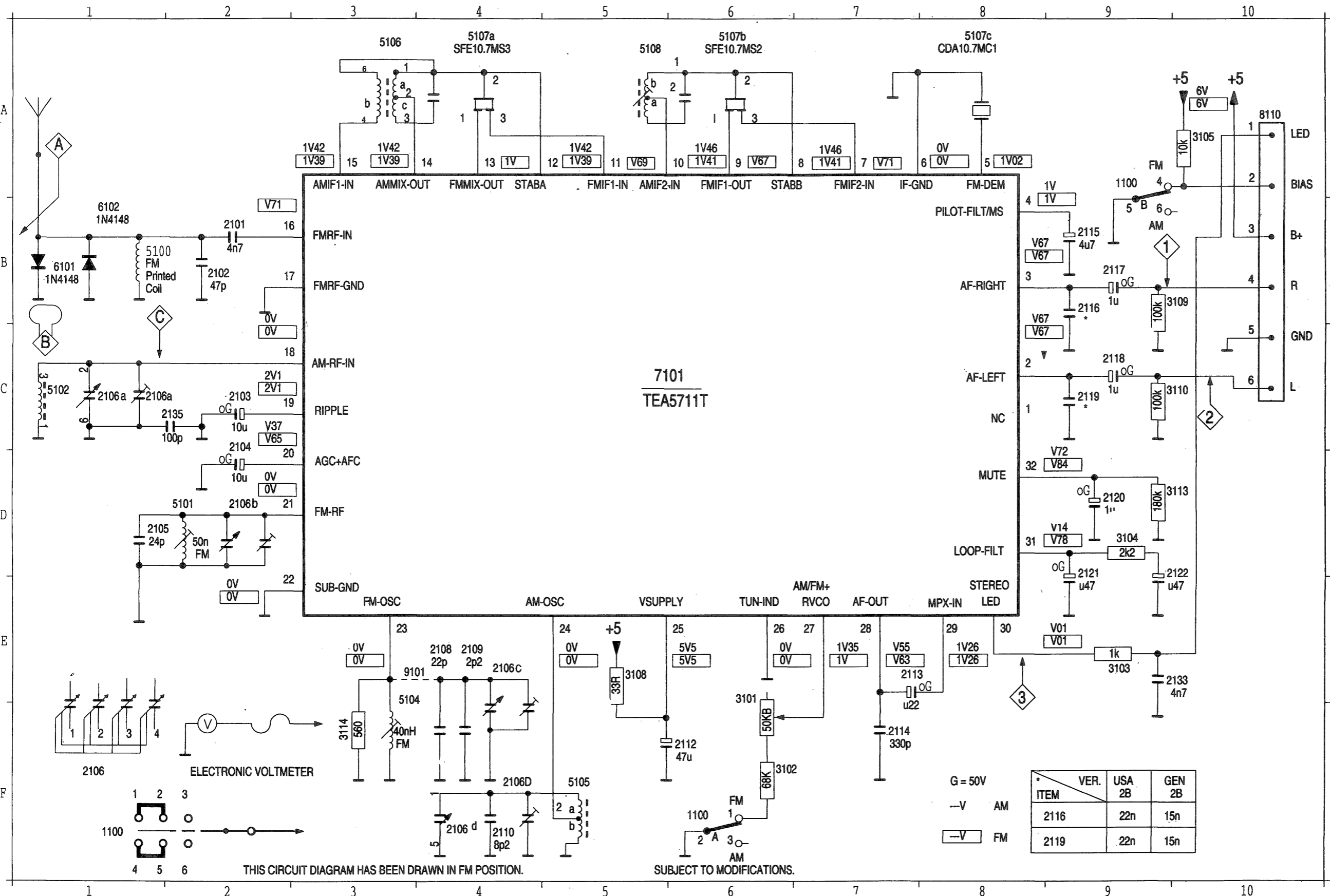
TUNER ADJUSTMENT TABLE (ATM3 FM/FM_{OIRT}/MW- versions with AM-frame aerial)

Waverange	Input Frequency	Input	Set tuned to	Adjust	Measure on	Scope / Counter	
OSCILLATOR							
FM	step 1 87,5 - 108 MHz	 $\Delta f = \pm 500\text{kHz}$ $V_{RF} = 100\mu\text{V}$	lower band end 	5104 ¹⁾ (pre-adjust)			
			upper band end 	2106 C1			
	step 2 65,2 - 75,1 MHz		lower band end 	5104			
			upper band end 	check if 75 ± 0,8 MHz			
	step 3 87,5 - 108 MHz		lower band end 	5121			
			upper band end 	check if 108,5 ± 0,3 MHz			
MW	525 - 1607 kHz	 $\Delta f = \pm 30\text{kHz}$ $V_{RF} = 100\mu\text{V}$	lower band end 	5105			
			upper band end 	2106 C3			
FM - RF							
step 1 87,5 - 108 MHz	87,00 MHz	 $\Delta f = \pm 500\text{kHz}$ $V_{RF} = 10\mu\text{V}$	87,00 MHz	5101 ²⁾ (pre-adjust)			
			108,50 MHz	2106 C2			
	step 2 64,7 - 75 MHz		70,00 MHz	70,00 MHz			5101
	step 3 87,5 - 108 MHz		87,00 MHz	87,00 MHz			5120
	108,50 MHz		108,50 MHz	check if max.			
VCO							
FM	98 MHz	 continuous wave $V_{RF} = 1\text{ mV}$	98 MHz	3101	 	152 ± 1 kHz ³⁾	
AM - IF							
MW	468 kHz connect pin 24 of IC 7101 (AM Osc) with short wire to ground	 $\Delta f = \pm 15\text{kHz}$ $V_{RF} = 10\text{mV}$	 5106				
			 see remark 4) 5108				
AM - RF ⁵⁾							
MW	550 kHz	 $\Delta f = \pm 30\text{kHz}$ V_{RF} as low as possible	550 kHz	5111			
			1500 kHz	1500 kHz			2106 C4

Tuner Adj. ATM3 FM/FM_{OIRT}/MW frame 110697

- ↑ repeat
- 1) If necessary, pre-adjust 5121 first.
 - 2) If necessary, pre-adjust 5120 first.
 - 3) 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)
 - 4) RC-network serves for damping the IF-filter while adjusting the other one.
 - 5) For MW adjustments the original frame aerial has to be used.

ANALOG TUNER BOARD (ATM3)
FM/MW(AM) versions

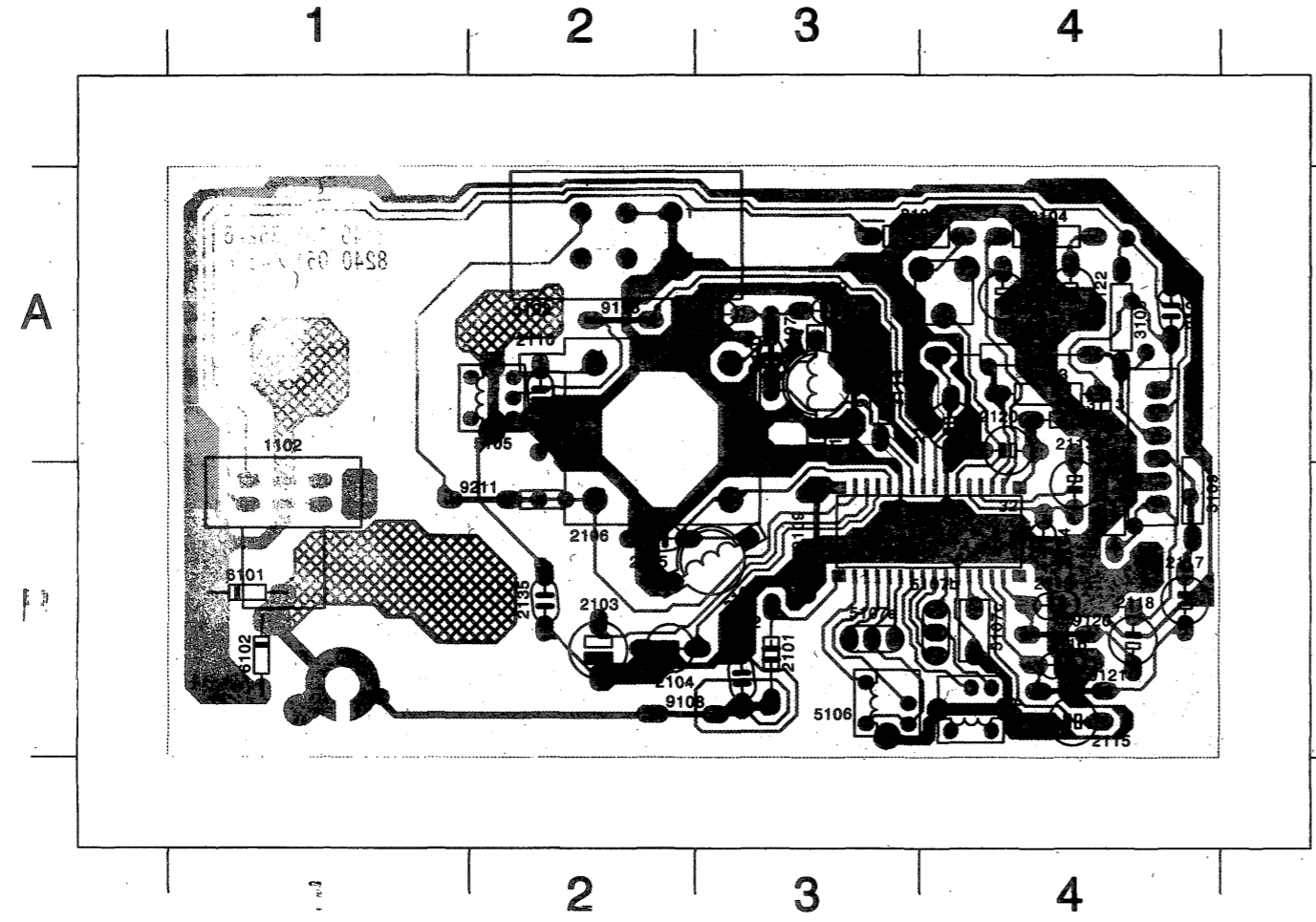


1100 F 6
 1100 A 9
 2101 B 2
 2102 B 2
 2103 C 2
 2104 D 2
 2105 D 1
 2106 D 2
 2106 F 4
 2106 E 4
 2106 C 1
 2106 D F 4
 2106a C 1
 2108 E 4
 2109 E 4
 2110 F 6
 2112 F 7
 2113 E 7
 2114 F 7
 2115 B 9
 2116 B 9
 2117 B 9
 2118 C 9
 2119 C 9
 2120 D 9
 2121 E 9
 2122 E 10
 2133 E 10
 2135 C 2
 3101 F 6
 3102 F 6
 3103 E 9
 3104 D 9
 3105 A 10
 3108 E 5
 3109 B 10
 3110 C 10
 3113 D 10
 3114 F 3
 5100 B 1
 5101 D 2
 5102 C 1
 5104 F 3
 5105 F 5
 5106 A 3
 5107a A 4
 5107b A 6
 5107c A 8
 5108 A 5
 6101 B 1
 6102 B 1
 7101 C 5
 8110 A 10
 9101 E 3

- All CARBON RESISTORS E12 SERIES 0.25W ±5% UNLESS OTHERWISE STATED.
- ALL PLATE CERAMIC CAPACITORS UNLESS OTHERWISE STATED.
- TUBULAR CERAMIC CAPACITOR
- MYLAR CAPACITOR
- ELECTROLYTIC CAPACITOR

ANALOG TUNER BOARD (ATM3)
FM/MW(AM) versions

1102 B 1	2106 A 2	2113 B 4	2119 B 4	3101 A 4	3109 B 4	5104 A 3	5108 B 4	9108 B 2	9211 B 2
2101 B 3	2107 A 3	2114 B 4	2120 A 4	3102 A 3	3110 B 4	5105 A 2	6101 B 1	9109 B 3	
2102 B 3	2108 A 3	2115 B 4	2121 A 4	3103 A 4	3113 A 4	5106 B 3	6102 B 1	9113 A 2	
2103 B 2	2109 A 3	2116 B 4	2122 A 4	3104 A 4	3114 A 3	5107a B 3	7101 B 4	9120 B 4	
2104 B 2	2110 A 2	2117 B 4	2133 A 4	3105 A 4	5101 B 3	5107b B 4	8110 A 4	9121 B 4	
2105 B 2	2112 A 4	2118 B 4	2135 B 2	3108 A 4	5102 A 2	5107c B 4	9101 A 3	9122 A 3	



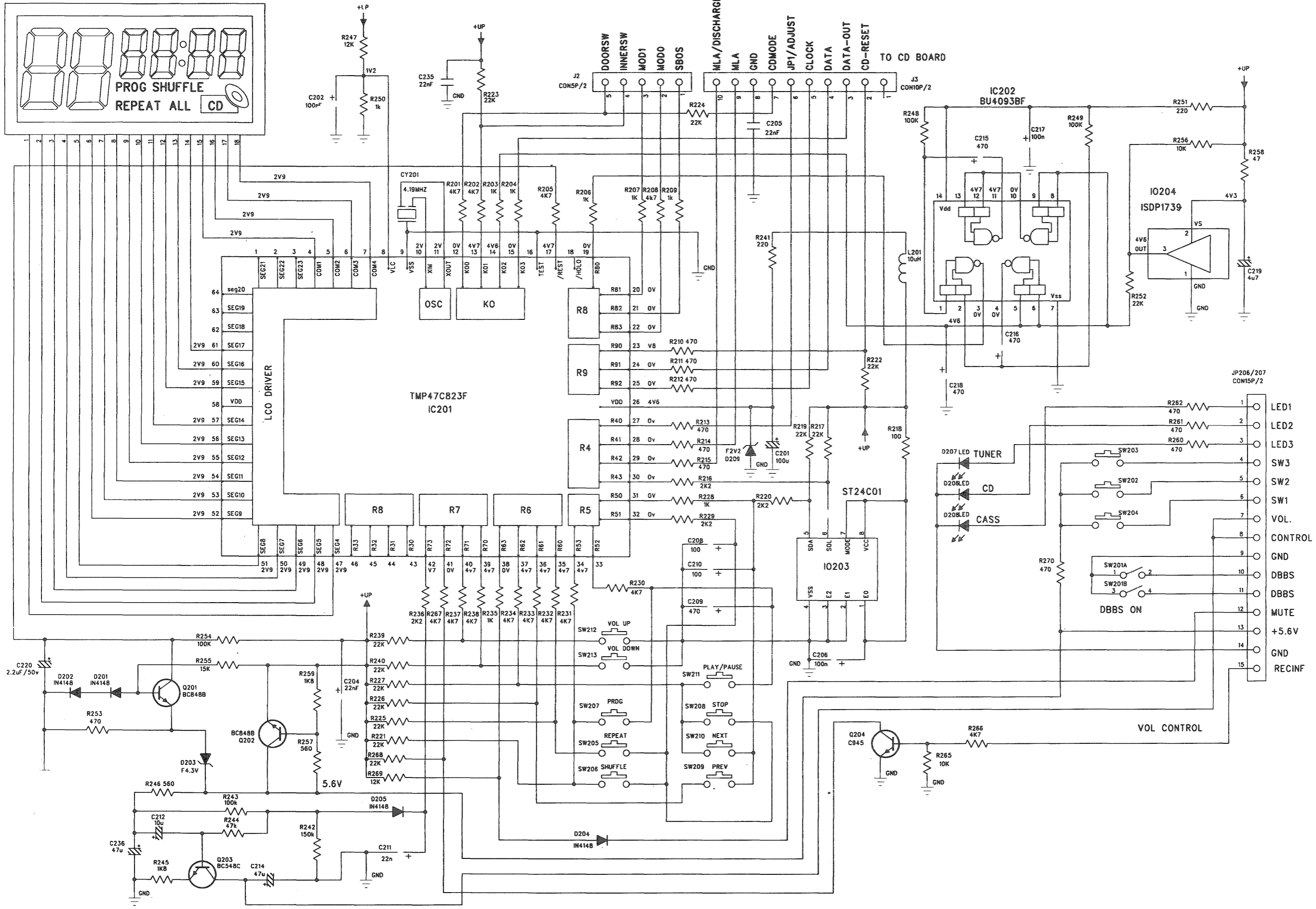
TUNER ADJUSTMENT TABLE (ATM3 FM/MW- versions)

Waverange	Input Frequency	Input	Set tuned to	Adjust	Measure on	Scope / Counter
OSCILLATOR						
FM	87,00 MHz	A	lower band end	5104 ¹⁾ (pre-adjust)	1 or 2	
	step 1 87,5 - 108 MHz		108,50 MHz	upper band end		
step 2	64,70 MHz	A	lower band end	5104	1 or 2	
	65,2 - 75,1 MHz		75,00 MHz	upper band end		
step 3	87,00 MHz	A	lower band end	5121	1 or 2	
	87,5 - 108 MHz		108,50	upper band end		
MW	516 kHz	C	lower band end	5105	1 or 2	
	525 - 1607 kHz		1620 kHz	upper band end		
FM - RF						
step 1	87,00 MHz	A	87,00 MHz	5101 ²⁾ (pre-adjust)	1 or 2	
	87,5 - 108 MHz		108,50 MHz	108,50 MHz		
step 2	64,7 - 75 MHz	A	70,00 MHz	5101	1 or 2	
step 3	87,5 - 108 MHz		87,00 MHz	5120		
			108,50 MHz	check if max.		
VCO						
FM	98 MHz	A	98 MHz	3101	3	
AM - IF						
MW	468 kHz connect pin 24 of IC 7101 (AM Osc) with short wire to ground	C	IC 7101 10	5106	1 or 2	
			IC 7101 14	5108		
AM - RF⁵⁾						
MW	550 kHz	B	550 kHz	5111	1 or 2	
	1500 kHz		1500 kHz	2106 C4		

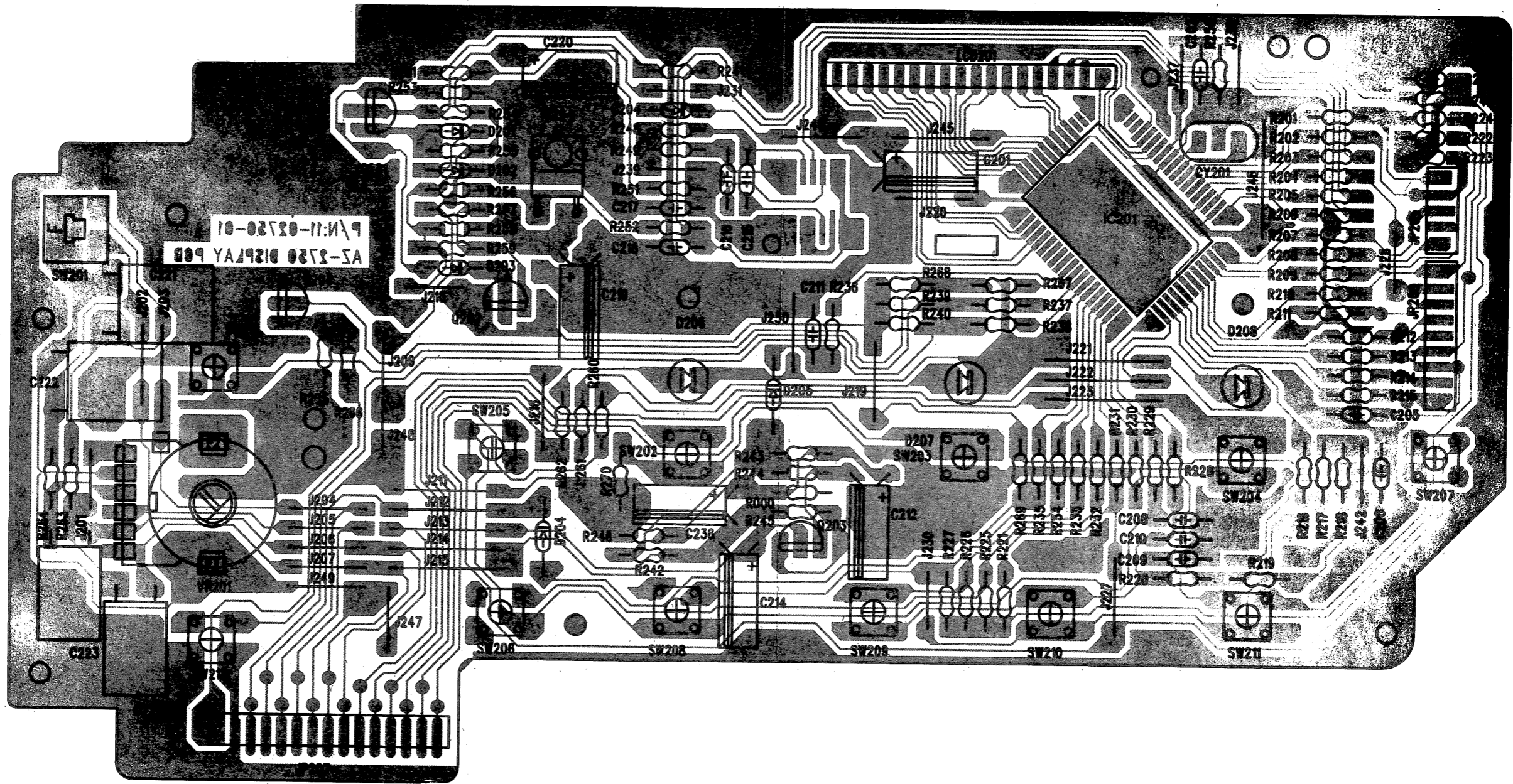
repeat

- 1) If necessary, pre-adjust 5121 first.
- 2) If necessary, pre-adjust 5120 first.
- 3) 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)
- 4) RC-network serves for damping the IF-filter while adjusting the other one.
- 5) For MW adjustments the original frame aerial has to be used.

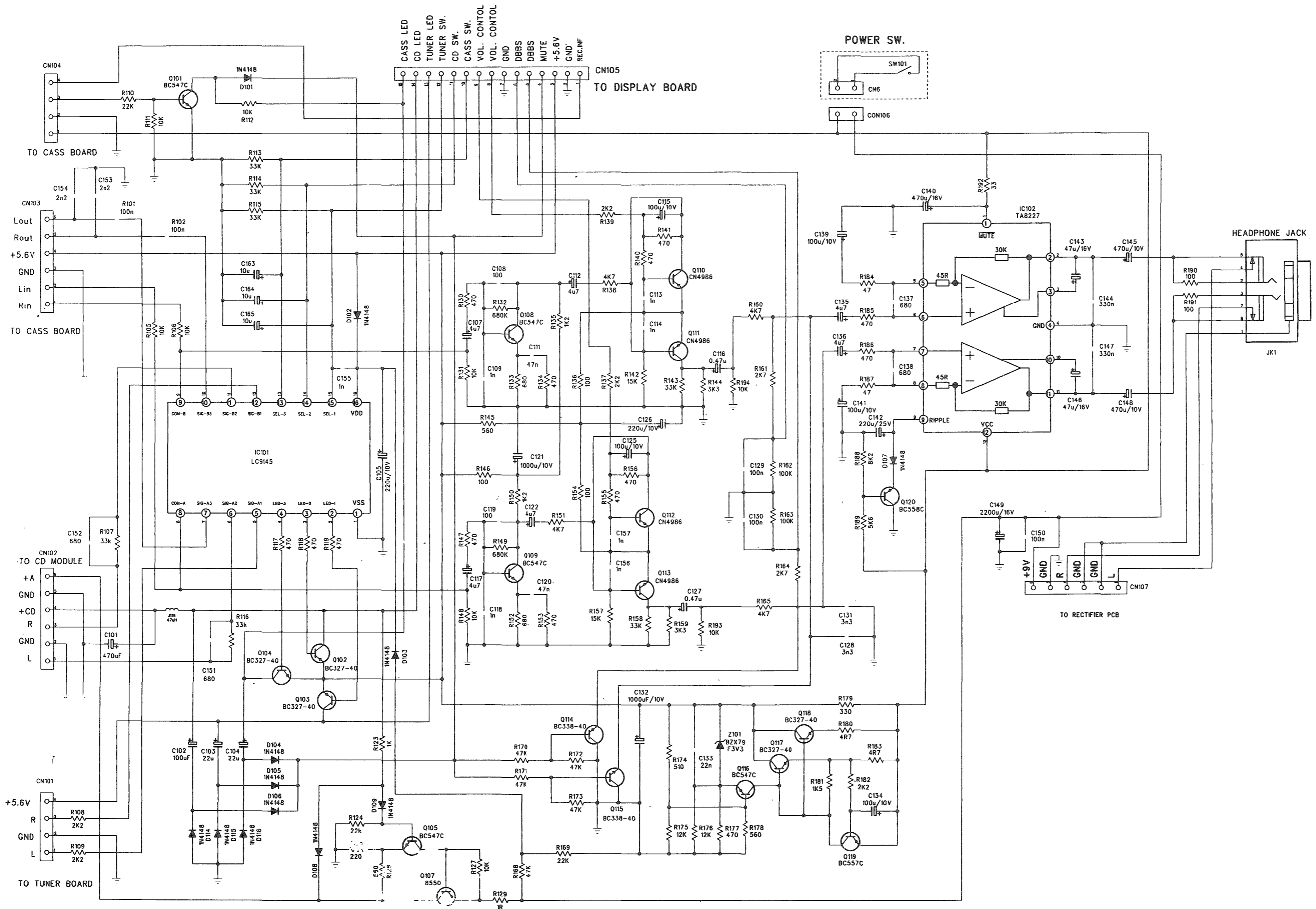
FRONT BOARD - CIRCUIT DIAGRAM



- 1 LED1
- 2 LED2
- 3 LED3
- 4 SW3
- 5 SW2
- 6 SW1
- 7 VOL.
- 8 CONTROL
- 9 GND
- 10 DBBS
- 11 DBBS
- 12 MUTE
- 13 +5.6V
- 14 GND
- 15 RECINF

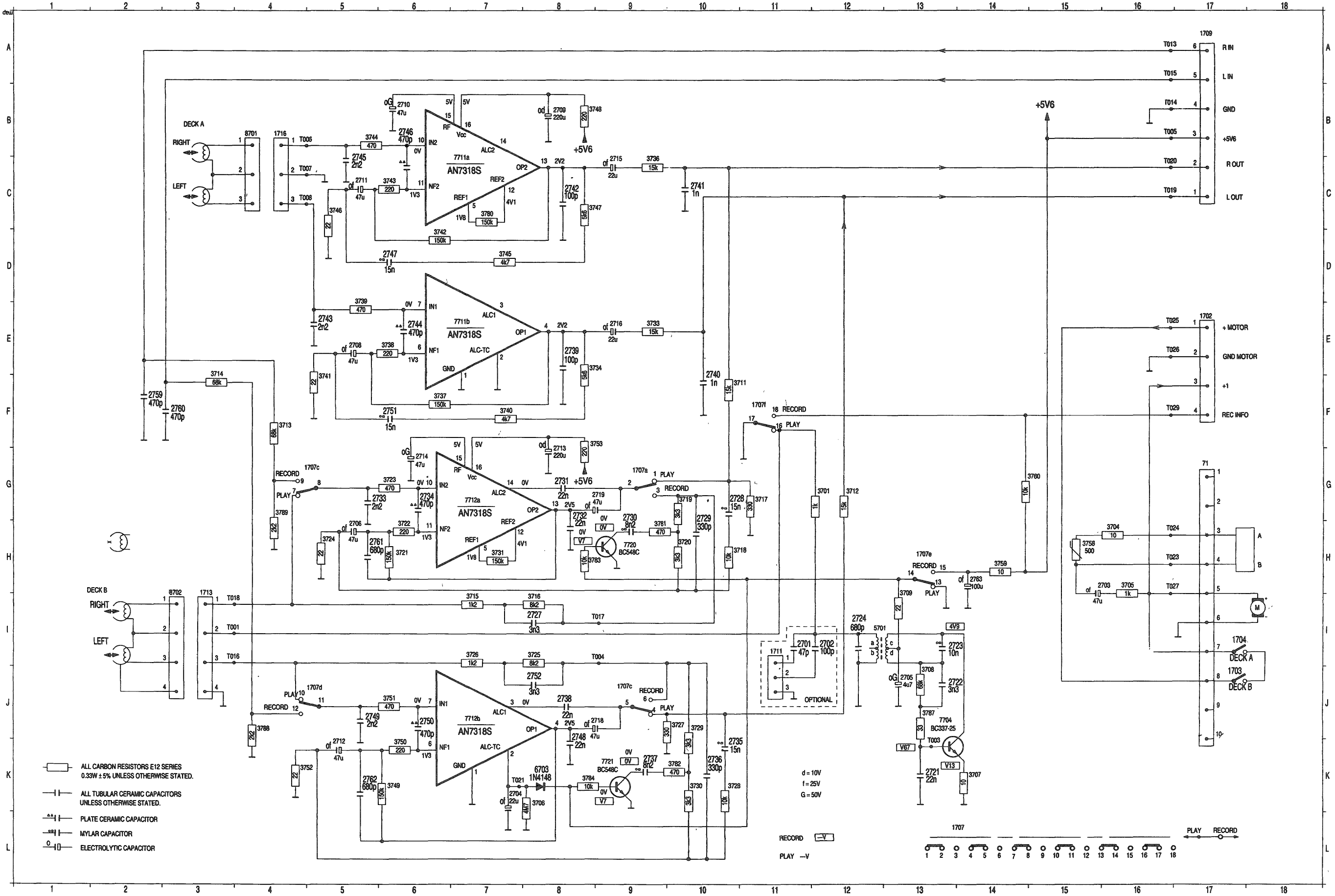


MAIN BOARD - CIRCUIT DIAGRAM



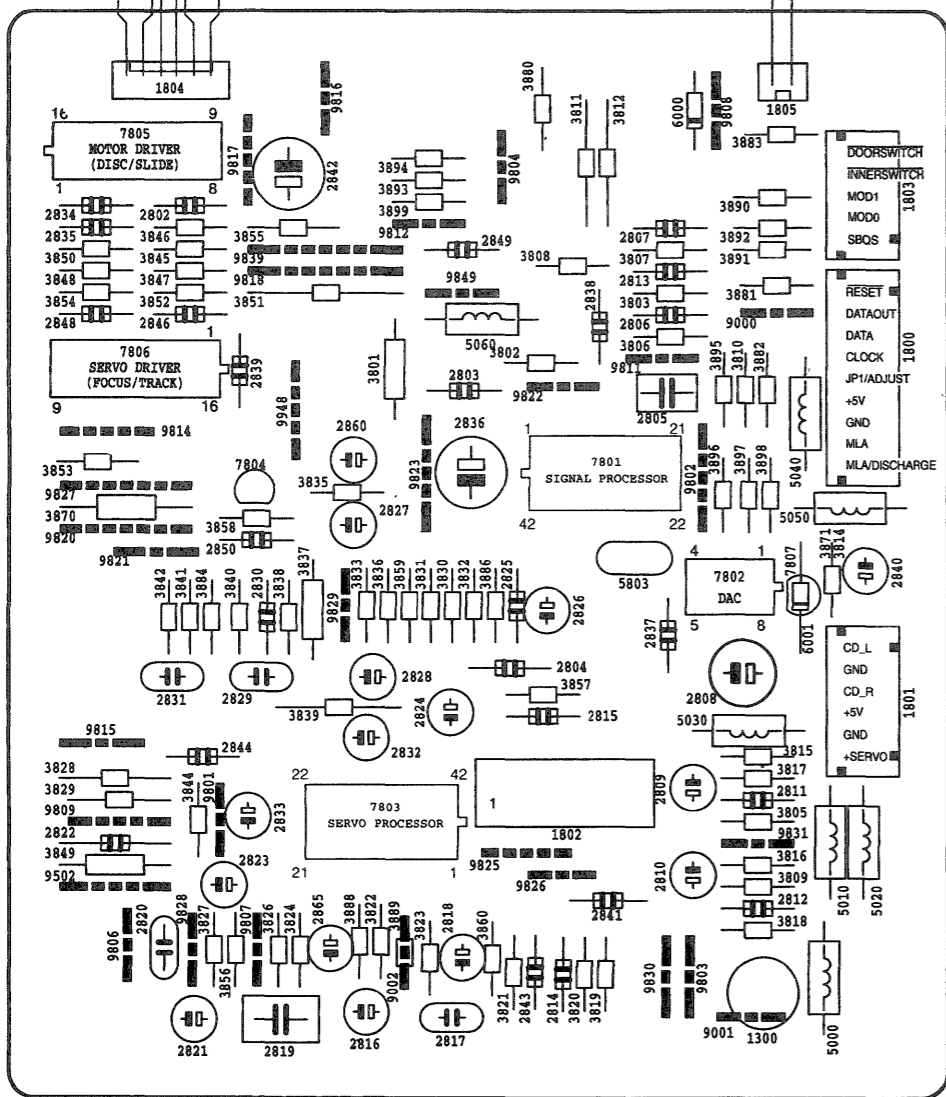
RECORDER BOARD - CIRCUIT DIAGRAM

71 G17	1707c J9	1713 J3	2705 J13	2712 K5	2719 G9	2728 G10	2734 G6	2740 F10	2746 B6	2752 J8	3701 G12	3709 J13	3716 L8	3722 H6	3728 K10	3736 C9	3742 D6	3748 B9	3756 H15	3763 H8	6703 K8	7720 H9	T004 L8	T014 B16	T020 C16	T027 H16
702 E17	1707a J9	1716 B4	2706 J12	2713 K5	2721 K13	2730 G10	2736 G6	2742 F10	2748 B6	2754 J8	3704 G12	3712 J13	3718 L8	3724 H6	3730 K10	3738 C9	3744 D6	3750 B9	3758 H15	3765 H8	6704 J8	7721 H9	T005 L8	T015 A16	T021 C17	T028 H16
703 F17	1707b J9	2701 B4	2707 J12	2714 K5	2722 K13	2731 G10	2737 G6	2743 F10	2749 B6	2755 J8	3706 G12	3714 J13	3720 L8	3726 H6	3732 K10	3740 C9	3746 D6	3752 B9	3760 H15	3767 H8	6705 J8	7722 H9	T006 L8	T016 A16	T022 C17	T029 H16
704 G17	1707c J9	2702 B4	2708 J12	2715 K5	2723 K13	2732 G10	2738 G6	2744 F10	2750 B6	2756 J8	3708 G12	3716 J13	3722 L8	3728 H6	3734 K10	3742 C9	3748 D6	3754 B9	3762 H15	3769 H8	6706 J8	7723 H9	T007 L8	T017 A16	T023 C17	T030 H16
705a G9	1707d J9	2703 B4	2709 J12	2716 K5	2724 K13	2733 G10	2739 G6	2745 F10	2751 B6	2757 J8	3710 G12	3718 J13	3724 L8	3730 H6	3736 K10	3744 C9	3750 D6	3756 B9	3764 H15	3771 H8	6707 J8	7724 H9	T008 L8	T018 A16	T024 C16	T031 H16
707c G5	1711 H11	2704 K7	2710 J12	2717 K5	2725 K13	2734 G10	2740 G6	2746 F10	2752 B6	2758 J8	3712 G12	3720 J13	3726 L8	3732 H6	3738 K10	3746 C9	3752 D6	3758 B9	3766 H15	3773 H8	6708 J8	7725 H9	T009 L8	T019 C16	T025 E16	T032 H16



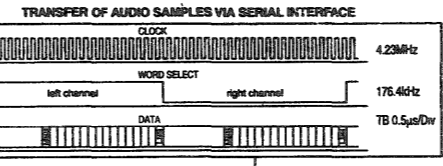
CD97 (DA11 MK I) - LAYOUT DIAGRAM

Componentside view

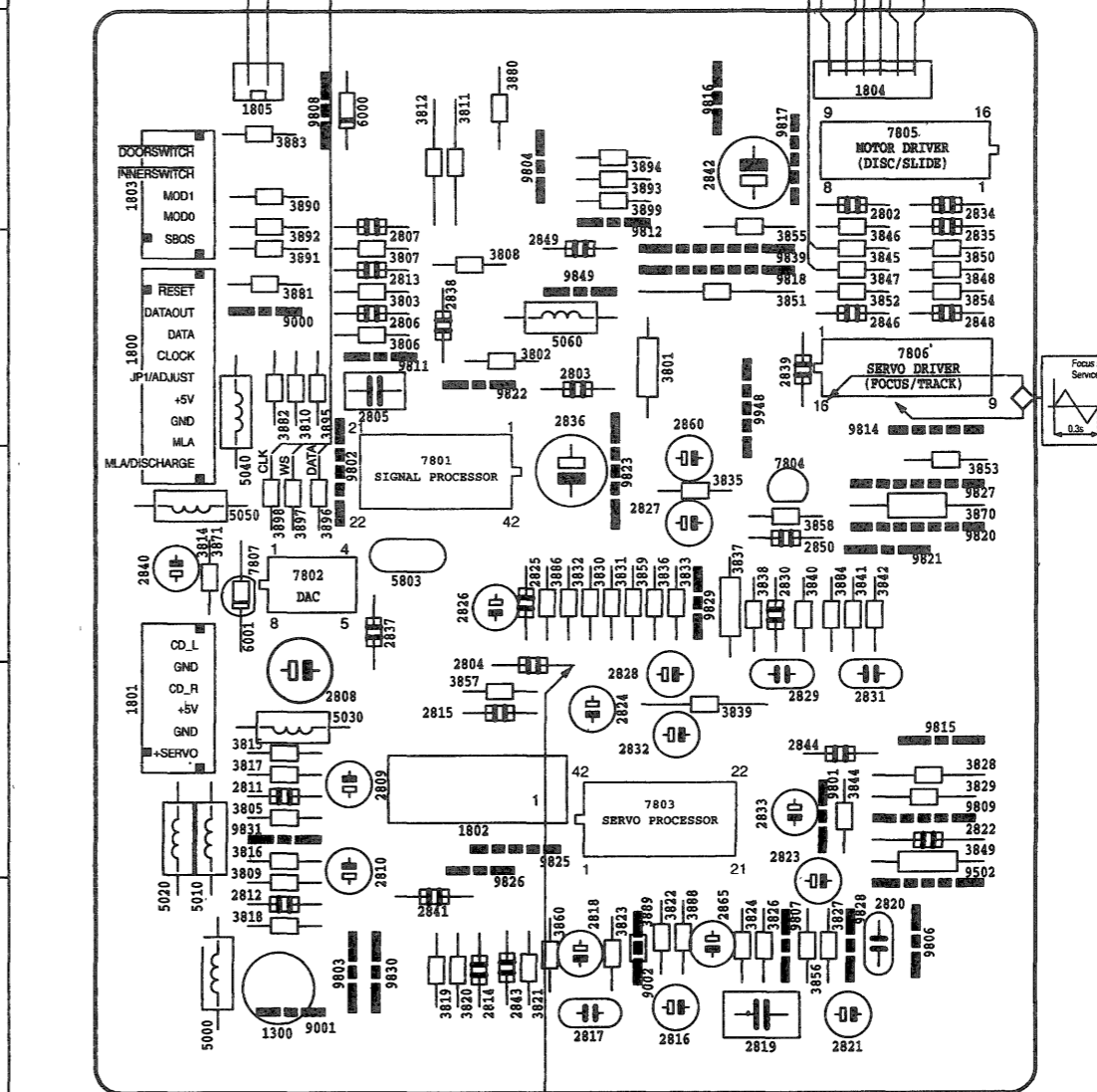


This assembly drawing shows a summary of all possible versions.
For components used in a specific version
see schematic diagram respectively partlist.

1300 E 4	3807 B 3	3891 B 4
1800 B 4	3808 B 3	3892 A 4
1801 D 4	3809 E 4	3893 A 2
1802 D 3	3810 B 4	3894 A 2
1803 A 4	3811 A 3	3895 B 4
1804 A 1	3812 A 3	3896 C 4
1805 A 4	3814 C 4	3897 C 4
2802 A 1	3815 D 4	3898 C 4
2803 B 2	3816 D 4	3899 A 2
2804 D 3	3817 D 4	5000 E 4
2805 B 3	3818 E 4	5010 D 4
2806 B 3	3819 E 3	5020 D 4
2807 A 3	3820 B 3	5030 D 4
2808 D 4	3821 E 3	5040 B 4
2809 D 4	3822 E 2	5050 C 4
2810 D 4	3823 E 2	5060 B 3
2811 D 4	3824 E 2	5803 C 3
2812 E 4	3826 E 2	6000 A 4
2813 B 3	3827 E 1	6001 C 4
2814 E 3	3828 D 1	7802 C 4
2815 D 3	3829 D 1	7804 C 1
2816 E 2	3830 C 2	7805 A 1
2817 E 2	3831 C 2	7806 B 1
2818 E 2	3832 C 2	7807 C 4
2819 E 2	3833 C 2	9000 B 4
2820 E 1	3835 C 2	9001 E 4
2821 E 1	3836 C 2	9002 E 2
2822 D 1	3837 C 2	9502 E 1
2823 E 1	3838 C 2	9801 D 1
2824 D 2	3839 D 2	9802 C 4
2825 C 3	3840 C 1	9803 E 3
2826 C 3	3841 C 1	9804 A 3
2827 C 2	3842 C 1	9806 E 1
2828 D 2	3844 D 1	9807 E 1
2829 D 1	3845 B 1	9808 A 4
2830 C 2	3846 A 1	9809 D 1
2831 D 1	3847 B 1	9811 B 3
2832 D 2	3848 B 1	9812 A 2
2833 D 1	3849 D 1	9814 B 1
2834 A 1	3850 B 1	9815 D 1
2835 A 1	3851 B 2	9816 A 2
2836 C 2	3852 B 1	9817 A 1
2837 C 3	3853 C 1	9818 B 2
2838 B 3	3854 B 1	9820 C 1
2839 B 1	3855 A 2	9821 C 1
2840 C 4	3856 E 1	9822 B 3
2841 E 3	3857 D 3	9823 C 2
2842 A 2	3858 C 1	9825 D 3
2843 E 3	3859 C 2	9826 D 3
2844 D 1	3860 E 3	9827 C 1
2846 B 1	3870 C 1	9828 E 1
2848 B 1	3871 C 4	9829 C 2
2849 B 2	3880 A 3	9830 C 3
2850 C 1	3881 B 4	9831 D 4
2860 C 2	3882 B 4	9839 B 2
2865 E 2	3883 A 4	9849 B 2
3801 B 2	3884 C 1	9948 B 2
3802 B 3	3886 C 3	7801 C 3
3803 B 3	3888 E 2	7803 D 2
3805 D 4	3889 E 2	
3806 B 3	3890 A 4	



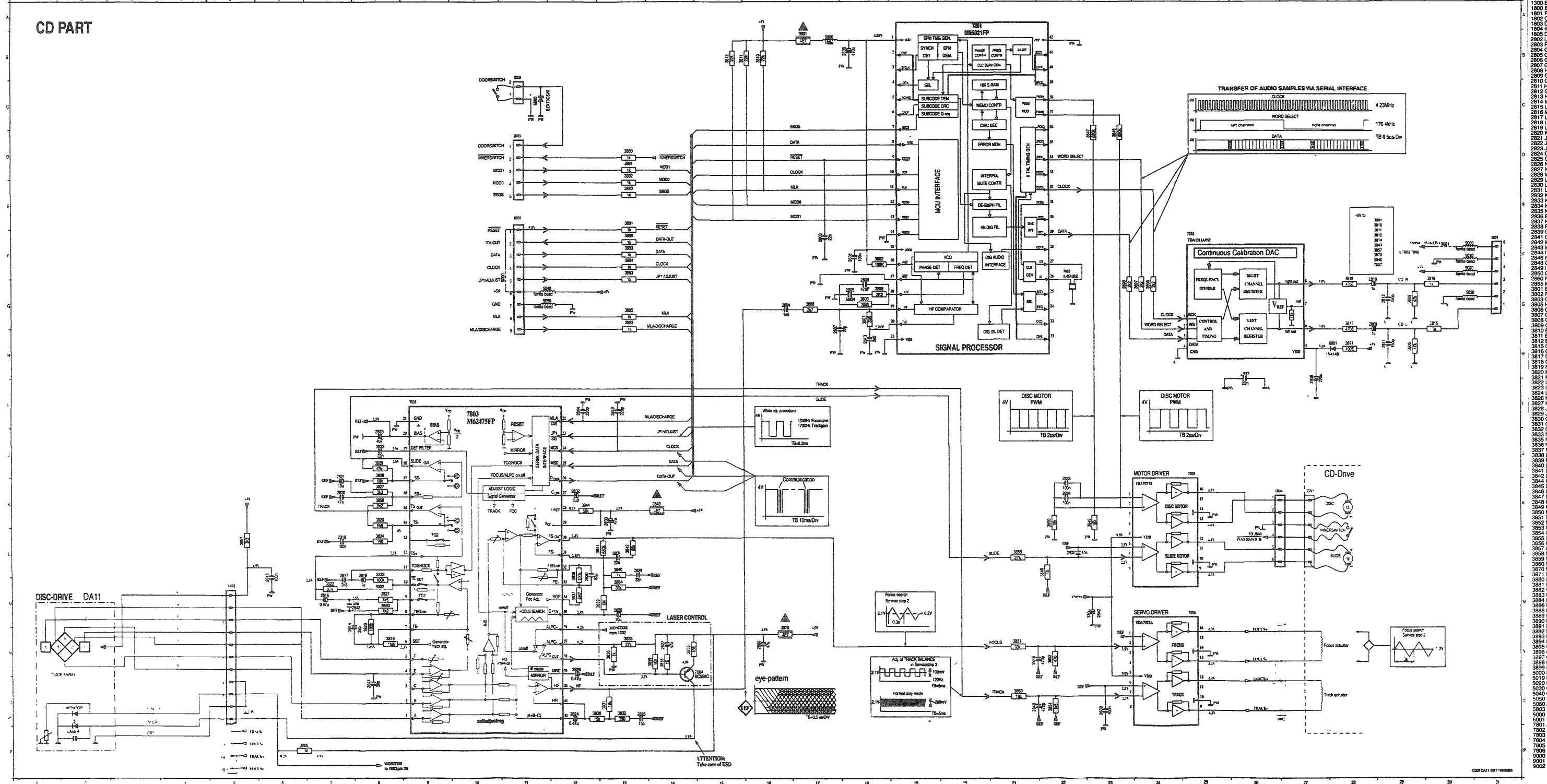
Copperside view



CD97 Mk1 Layout stage 4 19980825

CD97 (DA11 MK I) - CIRCUIT DIAGRAM

CD PART

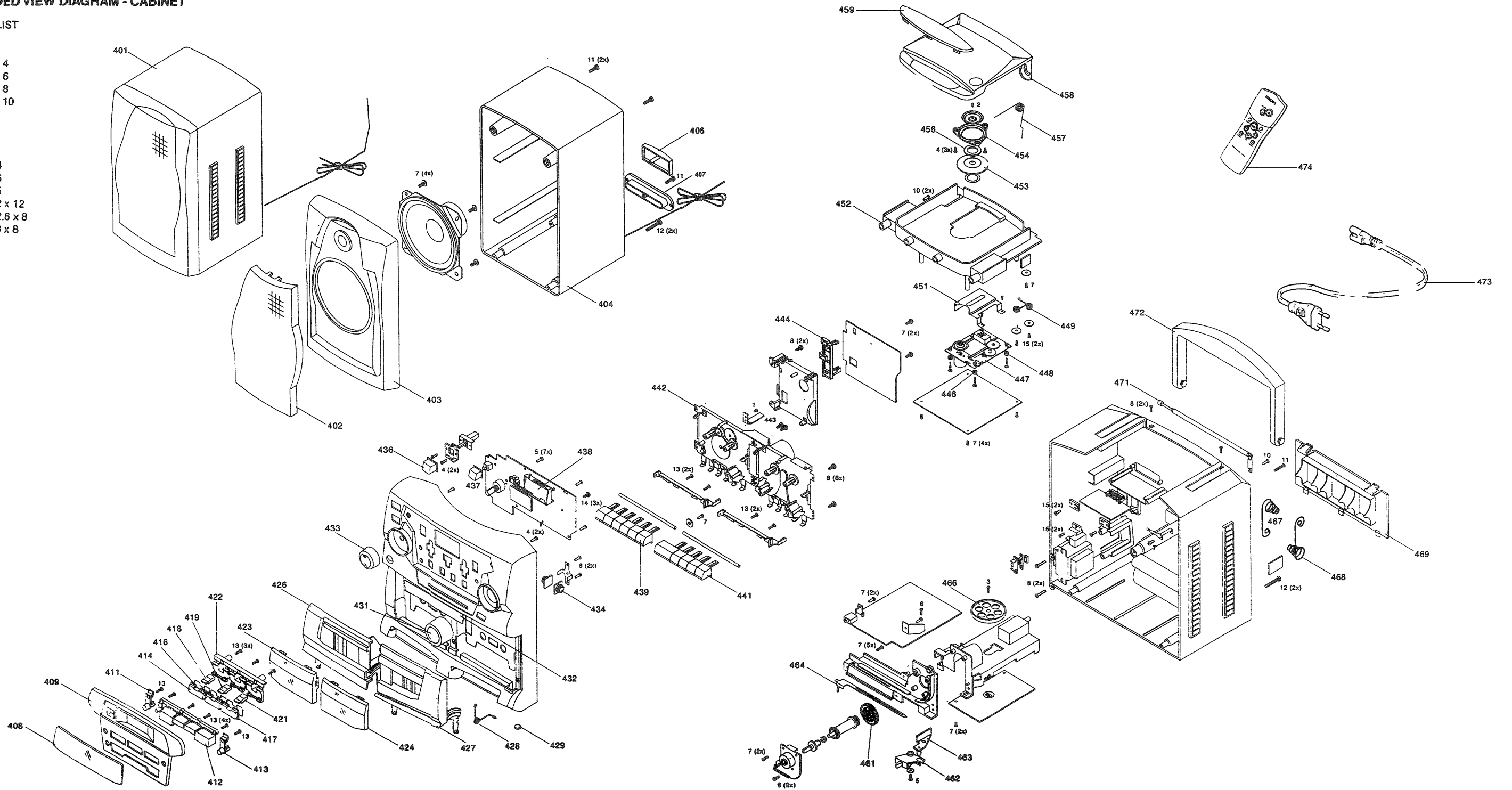


- 1300 E29
- 1800 E11
- 1801 F31
- 1802 O 5
- 1803 D11
- 1804 K26
- 1805 D 8
- 2804 J22
- 2803 F17
- 2804 G16
- 2805 G18
- 2806 G18
- 2807 G11
- 2808 H27
- 2809 G25
- 2810 G25
- 2811 H25
- 2812 G29
- 2813 H18
- 2814 M 7
- 2815 L 6
- 2816 M 7
- 2817 L 7
- 2818 L 8
- 2819 L 7
- 2820 K 7
- 2821 J 7
- 2822 L 8
- 2823 J 8
- 2824 D12
- 2825 D13
- 2826 N12
- 2827 N14
- 2828 M13
- 2829 L13
- 2830 L12
- 2831 L13
- 2832 K12
- 2833 K13
- 2834 K22
- 2835 K22
- 2836 B18
- 2837 H28
- 2838 F18
- 2839 O23
- 2841 O 8
- 2842 M29
- 2843 M 7
- 2844 H12
- 2845 N13
- 2846 O21
- 2849 L13
- 2850 O14
- 2850 N16
- 2851 M 7
- 2852 F18
- 2853 G18
- 2854 G18
- 2855 G18
- 2856 G18
- 2857 G18
- 2858 G29
- 2859 B16
- 2860 B16
- 2861 B16
- 2862 B16
- 2863 G28
- 2864 G28
- 2865 M 8
- 2866 M 8
- 2867 M 8
- 2868 L 8
- 2869 L 8
- 2870 L 8
- 2871 H28
- 2872 H28
- 2873 D13
- 2874 E13
- 2875 G13
- 2876 G13
- 2877 G13
- 2878 F13
- 2879 G24
- 2880 G24
- 2881 F13
- 2882 F13
- 2883 F13
- 2884 F13
- 2885 G13
- 2886 G23
- 2887 G24
- 2888 G24
- 2889 F13
- 2890 F13
- 2891 F13
- 2892 F13
- 2893 F13
- 2894 F13
- 2895 G13
- 2896 G23
- 2897 G24
- 2898 G24
- 2899 F13
- 2900 F30
- 2901 F30
- 2902 F30
- 2903 G30
- 2904 G11
- 2905 G11
- 2906 A18
- 2907 F21
- 2908 F21
- 2909 M25
- 2910 F10
- 2911 F29
- 2912 M 8

EXPLODED VIEW DIAGRAM - CABINET

SCREWS LIST

- 1. C M2 x 3
- 2. C M2.6 x 4
- 3. C M2.6 x 6
- 4. C M2.6 x 8
- 5. C M2.6 x 10
- 6. C 3 x 6
- 7. C 3 x 8
- 8. C 3 x 10
- 9. C 3 x 12
- 10. C 3 x 14
- 11. C 3 x 16
- 12. C 3 x 25
- 13. C P/W 2 x 12
- 14. C P/W 2.6 x 8
- 15. C P/W 3 x 8



DECK PARTLIST

LPD	COMPONENT	DESCRIPTION	
10	4822 528 70849	BRACKET, STEEL	
11	4822 528 70695	ROLLER, RUBBER	
74	4822 403 30792	BRACKET, PLASTIC	
101	4822 402 10126	LEVER, PLASTIC	LEVER RECORDING
104	4822 492 11061	SPRING	SPRING RECORDING
106	4822 358 31125	BELT, DRIVING	
107	4822 358 31124	BELT, DRIVING	
110	4822 278 90663	SWITCH, OTHERS	
111	4822 249 30218	HEAD, RECORD/PLAY-BACK	MS18R-AKONI
112	4822 249 40306	HEAD, ERASE	
113	4822 249 30218	HEAD, RECORD/PLAY-BACK	MS18R-AKONI
115	4822 361 21592	MOTOR DC <=37.5W	EG-530YD-9BH 9V
116	4822 528 81493	PULLEY, PLASTIC	
442	4822 691 10481	TAPE DECK	CDS-83WPB-05

MECHANICAL PARTLIST

LPD	COMPONENT	DESCRIPTION	
401	4822 426 10834	REAR COVER	SPEAKER REAR CAB. (L)
402	4822 458 10676	GRILLE, PLASTIC	SPEAKER GRILLE
403	4822 459 05292	FRONT, PLASTIC	SPEAKER FRONT CAB.
404	4822 426 10835	REAR COVER	SPEAKER REAR CAB. (R)
406	4822 442 01812	COVER, PLASTIC	SPEAKER CABINET COVER
407	4822 463 11256	GUIDE, PLASTIC	SPEAKER CORD WINDER
408	4822 450 10695	PLATE TRANSPARENT, PLASTIC	DISPLAY LENS PHILIPS
409	4822 442 01811	COVER, PLASTIC	FACE COVER
411	4822 410 12424	PUSH BUTTON, PLASTIC	SHUFFLE BUTTON
412	4822 410 12423	PUSH BUTTON, PLASTIC	CD FUNCTION KNOB
413	4822 410 12425	PUSH BUTTON, PLASTIC	PROGRAM BUTTON
414	4822 410 12426	PUSH BUTTON, PLASTIC	FUNCTION SELECTOR (CD)
416	4822 410 12427	PUSH BUTTON, PLASTIC	FUNCTION SELECTOR (TUNER)
417	4822 410 12428	PUSH BUTTON, PLASTIC	FUNCTION SELECTOR (TAPE)
418	4822 380 10269	GUIDE, LIGHT, PLASTIC	LED LIGHT GUIDE (CD)
419	4822 380 10271	GUIDE, LIGHT, PLASTIC	LED LIGHT GUIDE (TUNER)
421	4822 380 10272	GUIDE, LIGHT, PLASTIC	LED LIGHT GUIDE (TAPE)
422	4822 402 11305	BRACKET, PLASTIC	FUNCTION SELECTOR BRACKET
423	4822 450 10651	PLATE TRANSPARENT, PLASTIC	CASS. DOOR LENS (L)
424	4822 450 10652	PLATE TRANSPARENT, PLASTIC	CASS. DOOR LENS (R)
426	4822 443 11196	DOOR, PLASTIC	CASS. DOOR (L)
427	4822 443 11197	DOOR, PLASTIC	CASS. DOOR (R)
428	4822 492 11746	SPRING	CASS. SPRING
429	4822 462 11182	FOOT, RUBBER	RUBBER FOOT
431	4822 410 12419	KNOB, PLASTIC	TUNING KNOB
432	4822 450 10656	PLATE TRANSPARENT, PLASTIC	DIAL LENS
433	4822 410 12515	KNOB, PLASTIC	VOLUME KNOB
434	4822 522 10761	GEAR	DOOR GEAR
436	4822 410 12429	PUSH BUTTON, PLASTIC	POWER BUTTON
437	4822 410 12431	PUSH BUTTON, PLASTIC	BASS BOOST BUTTON
438	4822 402 11304	BRACKET, PLASTIC	LCD BRACKET
439	4822 410 12444	PUSH BUTTON SET, PLASTIC	CASSETTE KEYS A-CASS-A
441	4822 410 12445	PUSH BUTTON SET, PLASTIC	CASSETTE KEYS B-CASS-B
442	4822 691 10481	TAPE DECK	CDS-83WPB-05
443	4822 466 12222	PLATE, STEEL	RECORDING PLATE
444	4822 402 11306	LEVER, PLASTIC	LEVER RECORDING
446	4822 529 10433	SHOCK ABSORBER	CD DAMPER (FRONT)
447	4822 691 10654	MECHANISM, COMPACT DISC	CD94V5T1
448	4822 529 10432	SHOCK ABSORBER	CD DAMPER (REAR)
449	4822 492 11748	SPRING	ASSIST OPENING SPRING
451	4822 442 01096	COVER, PLASTIC	COVER-CD
452	4822 418 10427	TRAY, PLASTIC	CD TRAY
453	4822 466 12221	DISC, STEEL	STABILIZER
454	4822 402 11303	BRACKET, STEEL	DISC HOLDER BRACKET
456	4822 526 10727	MAGNET	MAGNET D32X20.5X2.3
457	4822 492 11747	SPRING	CD DOOR SPRING
458	4822 443 11198	DOOR, PLASTIC	CD DOOR
459	4822 450 10653	PLATE TRANSPARENT, PLASTIC	CD DOOR LENS
461	4822 522 10759	GEAR	GEAR POINTER
462	4822 410 12422	KNOB, PLASTIC	BAND SELECTOR KNOB
463	4822 402 11308	BRACKET, PLASTIC	BAND SELECTOR ADAPTOR
464	4822 450 10655	POINTER	DIAL POINTER
466	4822 528 11332	DRUM, PLASTIC	DIAL DRUM CROWN GEAR

MECHANICAL PARTLIST (continuação)

LPD	COMPONENT	DESCRIPTION	
467	4822 492 11751	SPRING	BATTERY SPRING (+,-)
468	4822 492 11749	SPRING	BATTERY SPRING (-)
469	4822 443 11195	DOOR, PLASTIC	BATTERY DOOR
471	4822 303 14091	AERIAL, TELESCOPIC	ROD ANTENNA
472	4822 498 10734	HANDLE, PLASTIC	HANDLE
473	4822 321 10249	CORD, MAINS	SBC1201 MAINS CABLE
474	4822 219 10765	REMOTE CONTROL	RC331001/04

ELECTRICAL PARTLIST

LPD	COMPONENT	DESCRIPTION	
1000	4822 691 10654	MECHANISM, COMPACT DISC	CD94V5T1
1100	4822 277 11751	SWITCH, OTHERS	SLIDE SWITCH 2P2T
1201	4822 526 10176	BAR, FERRITE	BAR, FERRITE
1707	4822 277 11504	SWITCH, PUSH BUTTON	RSD-62D01N-TA
1802	4822 265 10925	CONNECTOR, PRINTED CIRCUIT	BM 15P F 1.00 FFC 0.3 B
2106	4822 125 50681	CAPACITOR, VARIABLE	
3101	4822 100 20167	RESISTOR, VARIAB., OTHERS <20W	50K 30%LIN 0,1W
3758	4822 100 20165	RESISTOR, VARIAB., OTHERS <20W	500R 30%LIN 0,1W
5060	4822 157 50964	COIL	100MUH
5101	4822 157 70513	COIL	
5102	4822 157 70731	COIL	
5104	4822 156 30947	COIL	
5105	4822 157 71145	COIL	270UH
5106	4822 157 70499	COIL	
5107	4822 242 81154	FILTER, CERAMIC	KMFC5058-Z
5108	4822 156 11146	COIL	
5701	4822 157 10371	COIL	
5803	4822 242 73557	FILTER, CERAMIC	CST8,46MTW-TF01
6001	4806 130 37078	DIODE	1N4148
7101	4822 209 32746	IC ANA OTHERS	TEA5711T/N2
7704	4822 130 40981	TRANSISTOR, <1W	BC337-25
7711	4822 209 32918	IC ANA OTHERS	AN7318S
7712	4822 209 32918	IC ANA OTHERS	AN7318S
7720	4822 130 44196	TRANSISTOR, <1W	BC548C
7721	4822 130 44196	TRANSISTOR, <1W	BC548C
7801	4822 209 13703	IC DIG MOS CONTROLLER	M65821FP
7802	4822 209 32421	IC ANA OTHERS	TDA1311A/N2
7803	4822 209 90496	IC ANA CONTROLLER	M62475FP
7804	5322 130 60068	TRANSISTOR, <1W	BC558C
7805	4822 209 32852	IC ANA OTHERS	TDA7073A/N2
7806	4822 209 32852	IC ANA OTHERS	TDA7073A/N2
8000	4822 320 12178	FLEXIBLE FOIL CONNECTION	15P - 65MM
JK1	4822 265 11614	CONNECTOR, ELECTRICAL OTHERS	STEREO PHONE JACK
D110	5322 130 30684	DIODE	1N4002RL
D111	5322 130 30684	DIODE	1N4002RL
D112	5322 130 30684	DIODE	1N4002RL
D113	5322 130 30684	DIODE	1N4002RL
D203	4822 130 31554	DIODE, REFERENCE	BZX79-B4V3
D206	4822 130 11632	LED	L-934EC (RED)
D207	4822 130 11632	LED	L-934EC (RED)
D208	4822 130 11632	LED	L-934EC (RED)
L201	4822 157 50963	COIL	2,2UH
Q101	4806 130 47038	TRANSISTOR, <1W	BC547C
Q102	4806 130 47313	TRANSISTOR, <1W	BC327-40
Q107	4822 130 63423	TRANSISTOR, <1W	8550C
Q114	4822 130 41344	TRANSISTOR, <1W	BC337-40
Q119	4806 130 47047	TRANSISTOR, <1W	BC557B
Q120	5322 130 60068	TRANSISTOR, <1W	BC558C
Q201	5322 130 41982	TRANSISTOR, <1W	BC848B
Q202	5322 130 41982	TRANSISTOR, <1W	BC848B
Q204	4822 130 41198	TRANSISTOR, <1W	2SC945P
Z101	5322 130 31504	DIODE, REFERENCE	BZX79-B3V3
CY201	4822 242 11034	FILTER, CERAMIC	DCRHTL4.19
IC101	4822 209 17449	IC DIG MOS OTHERS	TC9145
IC101	9965 000 01767	IC DIG MOS OTHERS	IC PT233
IC102	4822 209 31544	IC ANA OTHERS	TA8227P
IC201	4822 209 16811	IC DIG MOS U COMPUTER 4B	TMP47C823F-AZ1209/14.1
SW101	4822 276 14099	SWITCH, MAINS	POWER SWITCH 2P2T
SW201	4822 276 14101	SWITCH UNIT, PUSH-BUTTON	PUSH SWITCH
SW202	4822 276 13797	SWITCH, PUSH BUTTON	TACT SWITCH 1P2T

ELECTRICAL PARTLIST (continuação)

LPD	COMPONENT	DESCRIPTION	
SW213	4822 276 13797	SWITCH, PUSH BUTTON	TACT SWITCH 1P2T
50XX	4822 526 10494	BEAD, FERRITE	FERRITE BEAD
LCD201	4822 135 00276	DISPLAY, LCD	TTD3030
	3103 308 51510	CD MODULE	
	3140 108 89630	ANALOG TUNER ASSEMBLY	
	3140 117 12720	PRINTED CIRUIT, RADIO	
	3140 118 70750	TAPE DECK CDS-83WP MECHANISM	TAPE DECK CDS-83WP MECHANISM
	3103 308 51510	CD MODULE	TECHNICAL SPECIFICATION
	3140 108 89630	ANALOG TUNER ASSEMBLY	TECHNICAL SPECIFICATION
	3140 117 12720	PRINTED CIRUIT, RADIO	MTF-PA-DD-S (MECHSEL)
	4822 070 31602	FUSE	21801.6(1.6A)
	4822 130 10621	DIODE, REFERENCE	HZS2C-1/MTZJ2.2B
	4822 130 11664	REMOTE RECEIVER	PIC-12043T
	4806 130 47042	TRANSISTOR, <1W	BC548C
	4822 146 11192	TRANSFORMER	TRANSFORMER EI48 120/230V
	4822 157 11371	COIL	47UH
	4822 209 17535	IC DIG MOS EEPROM	ST24C01-AZ5755/17
	4822 209 17536	IC DIG MOS OTHERS	BU4093BF
	4822 240 10377	LOUDSPEAKER	SPEAKER 5" 4 OHM
	4822 265 10741	CONNECTOR, ELECTRICAL OTHERS	AC SOCKET
	4822 265 11615	CONNECTOR, ELECTRICAL OTHERS	HSP-114V SPEAKER TERMINAL
	4822 277 11887	SWITCH, OTHERS	VOLTAGE SELECTOR SW. 1P 2T
	4822 402 11307	BRACKET, PLASTIC	LED LAMP BRACKET