

Service
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Service



Service Manual

COMPACT
disc
DIGITAL AUDIO

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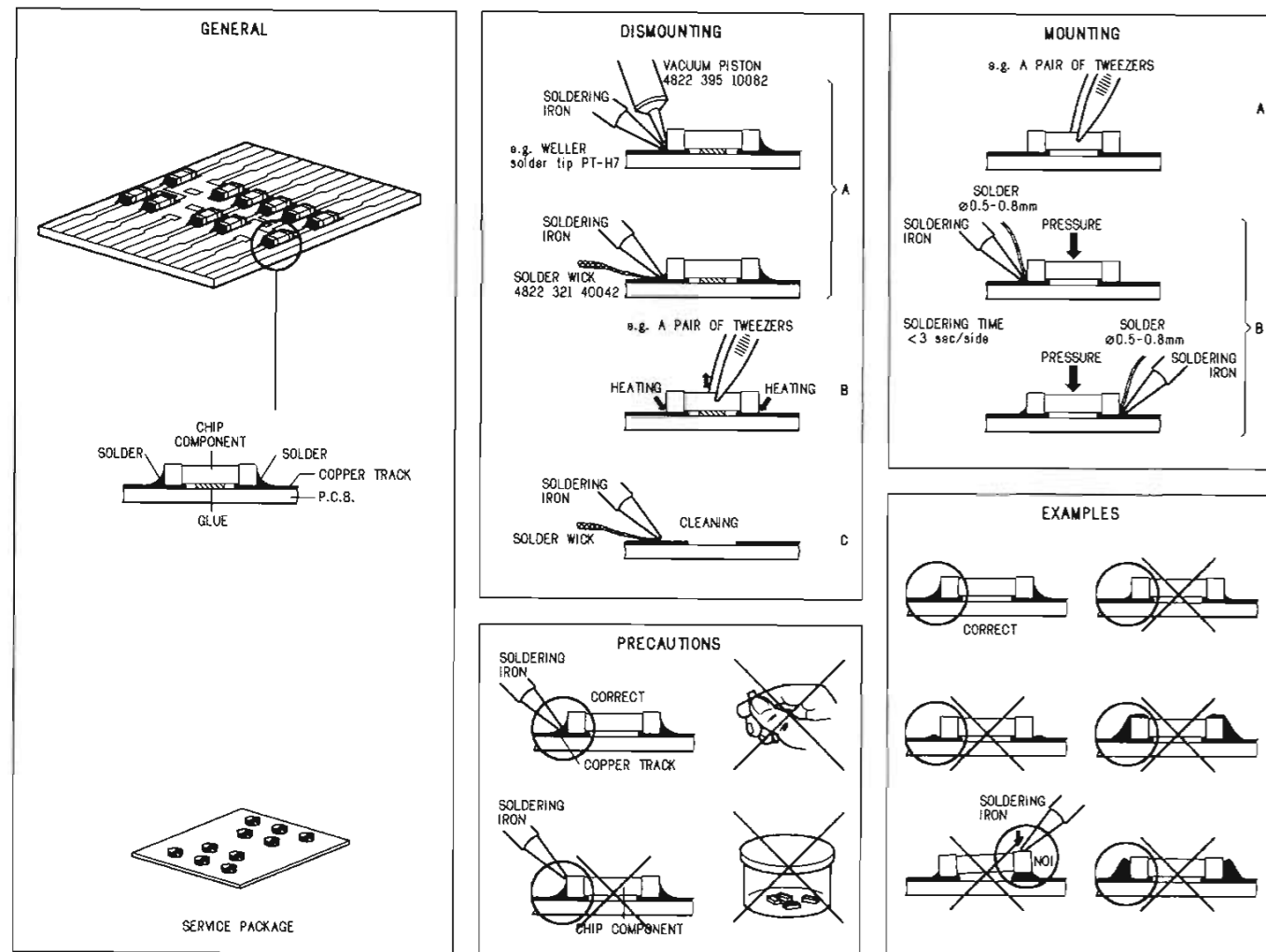
**CLASS 1
LASER PRODUCT**

3122 110 03420



PHILIPS

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

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

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden.

(S) Varning!
Osynlig laserstrålning när apparaten är öppnad och spårren är urkopplad. Beträkta ej strålen.

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

ESD



(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.
Hätten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(I)
Le norme di sicurezza estigono che l'apparecchio venga rimosso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

(F)
Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

(DK) Advarsel!
Usynlig laserstrålning ved åbning når sikkerhedsafbrødere er ude af funktion. Undgå udsættelse for stråling.

(SF) Varoitus!
Avatussa laitteessa ja suojalaitteuksien ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen!

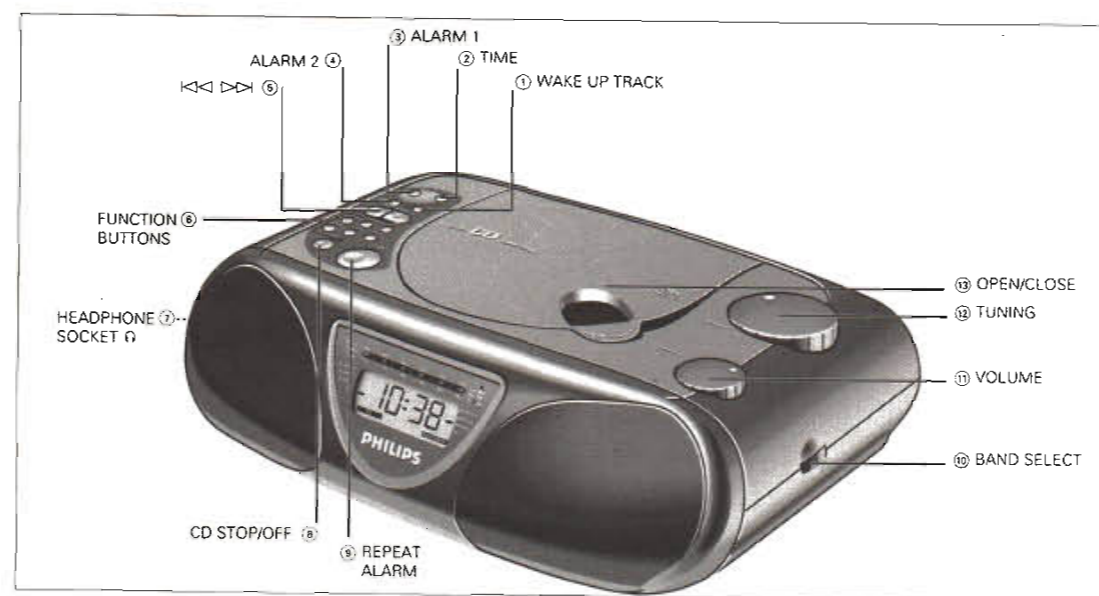
(NL) WAARSCHUWING
Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal 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 collegati 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.

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

(SF) Varoitus!
Avatussa laitteessa ja suojalaitteuksien ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen!

CONNECTIONS AND CONTROLS



CONTROLS

- ① **WAKE UP TRACK:**
 - to display the CD wake-up track number for ALARM 1 or ALARM 2
 - to change the CD wake-up track number for ALARM 1 or ALARM 2
- ② **TIME:**
 - to adjust the time of the clock
 - to resume to the clock display
- ③ **ALARM 1**
 - to display the alarm time of ALARM 1
 - to set alarm time 1.
 - to enable/disable ALARM 1
- ④ **ALARM 2**
 - to display the alarm time of ALARM 2
 - to set alarm time 1.
 - to enable/disable ALARM 2
- ⑤ **⏮ ⏪**
 - to select a next or previous track in CD play mode
 - to search forward or backward in CDplay mode
 - to adjust the TIME or the ALARM TIME setting
 - to select a wake-up track
 - to adjust the buzzer tone number
- ⑥ **FUNCTION BUTTONS BUZZER**
 - to select the buzzer tone for ALARM 1 or ALARM 2
 - to set ALARM 1 or ALARM 2 to buzzer alarm mode

RADIO

- to go to radio mode
- to set ALARM 1 or ALARM 2 to radio alarm mode

CD

- to go to CD mode
- to set ALARM 1 or ALARM 2 to CD alarm mode

BRIGHTNESS

- to change the brightness of the LCD display illumination

SLUMBER

- to switch slumber function on/off
- to set slumber time
- to display remaining slumber time

ALARM RESET

- To stop the active alarm for 24 hours

⑦ HEADPHONE SOCKET

- ⑥ **CD STOP/OFF**
 - to switch off CD
 - to switch off radio
 - to disable ALARM 1 or ALARM 2
 - to reset the wake-up track to track 1 for ALARM 1 or ALARM 2

⑨ REPEAT ALARM

- to switch off the alarm temporarily

⑩ BAND SELECT - to select the waveband

⑪ VOLUME - to adjust the sound level

⑫ TUNING - for station selection

⑬ OPEN/CLOSE - to open and close the CD-door

SPECIFICATIONS

GENERAL

Mains voltage	-/00 : 230V
	-/01 : 120/230V
	-/06 : 100V
	-/17 : 120V
Mains frequency	-/00 : 50Hz
	-/01/06 : 50/60Hz
	-/17 : 60Hz
Power consumption	: 20W
Output power	: 2 x 0.5W
Dimension (W x H x D)	: 315x 229 x 87mm
Weight	: 1.7Kg

COMPACT DISC

Frequency response	±3dB : 30 - 16KHz
Signal/hiss ratio	: > 80dB
Distortion	at 1KHz : < 0.5%
Channel difference	at 1KHz : > 2dB
Channel crosstalk	at 1KHz : > 50dB
Laser wavelength	: 780 ± 20nm
Laser light power	: < 0.3mW

TUNER - FM section

Tuning range	: 87.35 - 108.25MHz
	-/06 : 76.1 - 89.9MHz
IF frequency	: 10.7MHz
Sensitivity	: < 22dBf at 26dB S/N
Selectivity	: > 20dB at 600KHz B.W.
IF rejection	: > 50dB
Image rejection	: > 20dB
AM suppression	: > 25dB
Stereo separation	1KHz : > 20dB

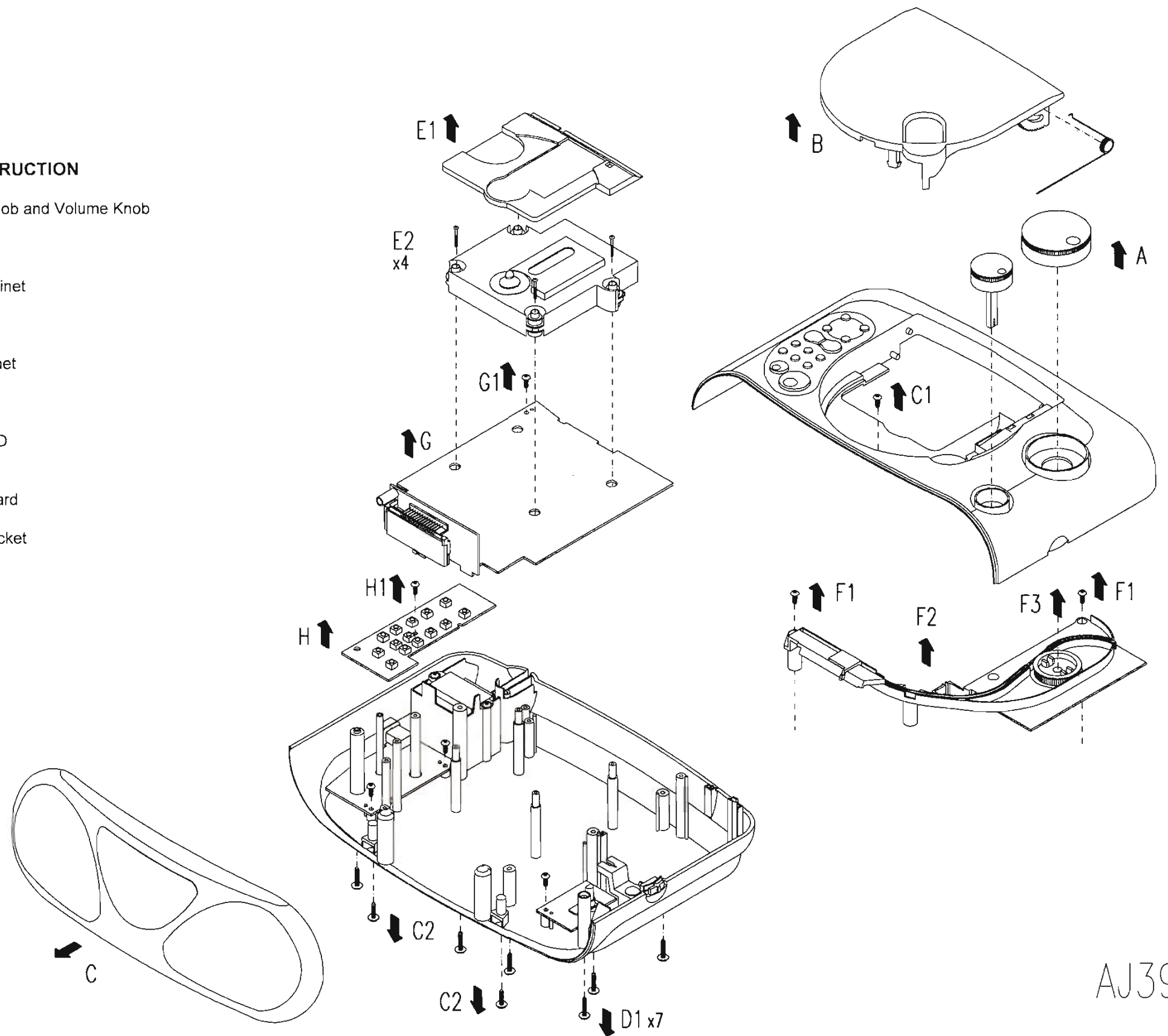
TUNER - AM section

Tuning range	MW : 512 - 1635KHz
	-/17 : 530 - 1710KHz
	LW : 147 - 291KHz
IF frequency	: 468 ± 5Hz
Sensitivity	MW : < 4000µV/m at 20dB S/N
	LW : < 6000µV/m at 20dB S/N
Selectivity	MW : > 16dB
	LW : > 20dB
IF rejection	MW : > 24dB
	LW : > 27dB
Image rejection	MW : > 28dB
	LW : > 30dB

DISASSEMBLY DIAGRAM

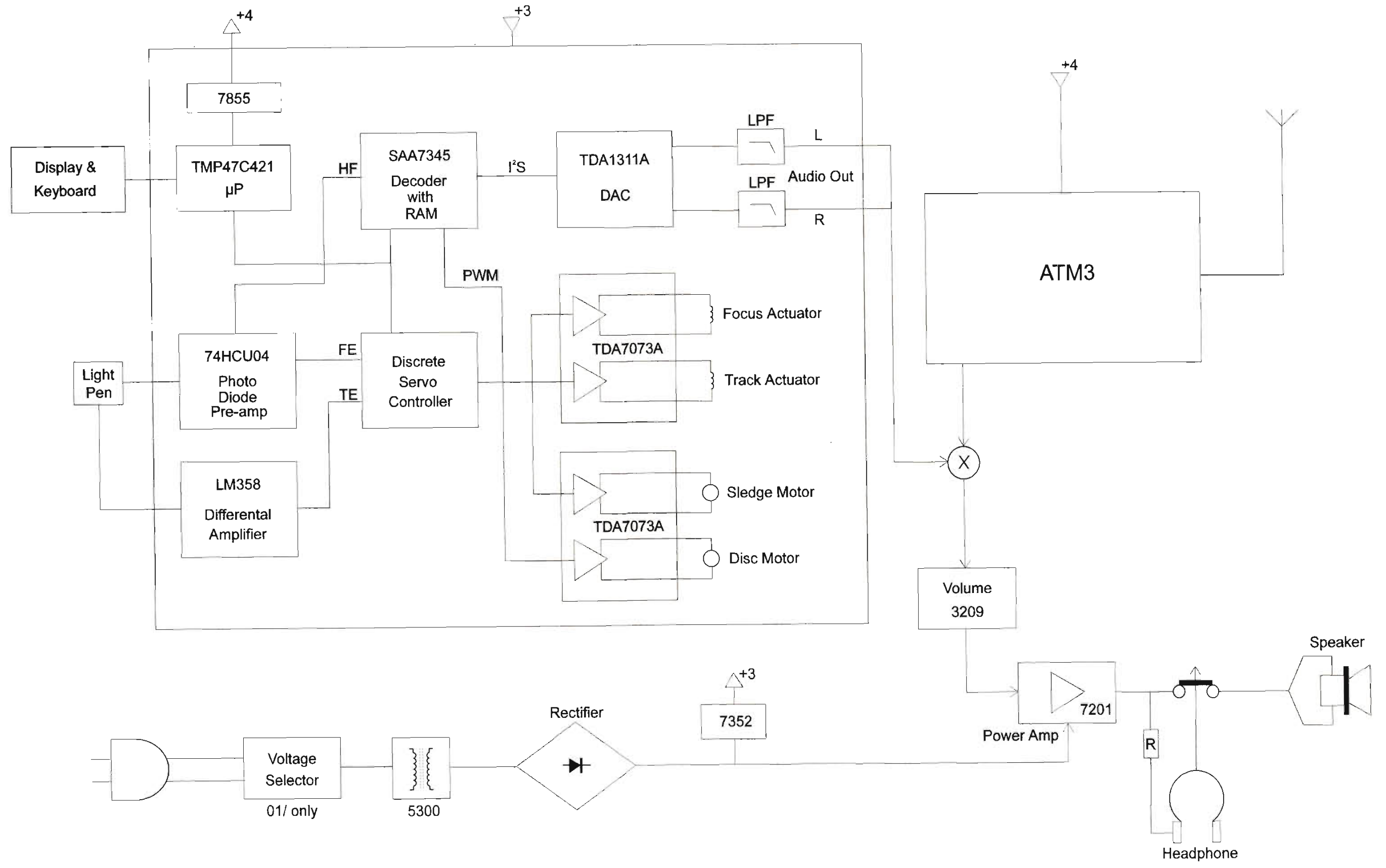
DISASSEMBLY INSTRUCTION

- A. To remove Tuning Knob and Volume Knob
- B. To open CD Door
- C. To remove Front Cabinet
 - 1.Remove Screw x 1
 - 2.Remove Screw x 2
- D. To remove Top Cabinet
 - 1.Remove Screw x 7
- E. To remove RCD
 - 1.Remove Cover RCD
 - 2.Remove Screw x 4
- F. To remove Tuner Board
 - 1.Remove Screw x 2
 - 2.Remove Tuner Bracket
 - 3.Remove Gear
- G. To remove CD Borad
 - 1.Remove Screw x 1

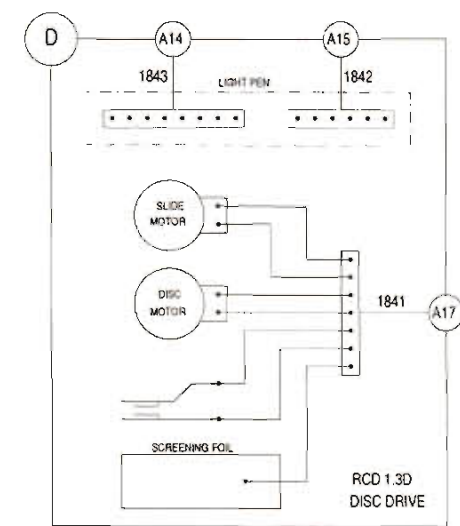
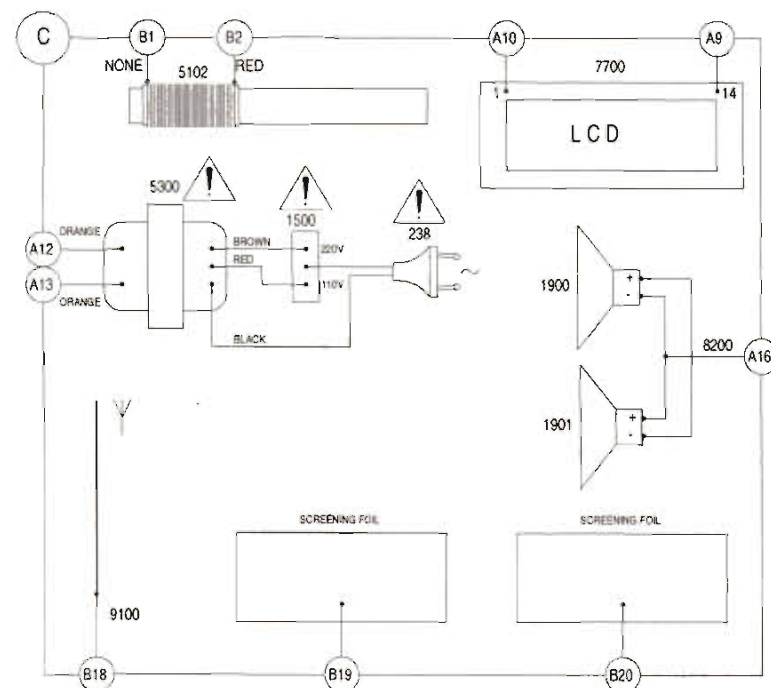
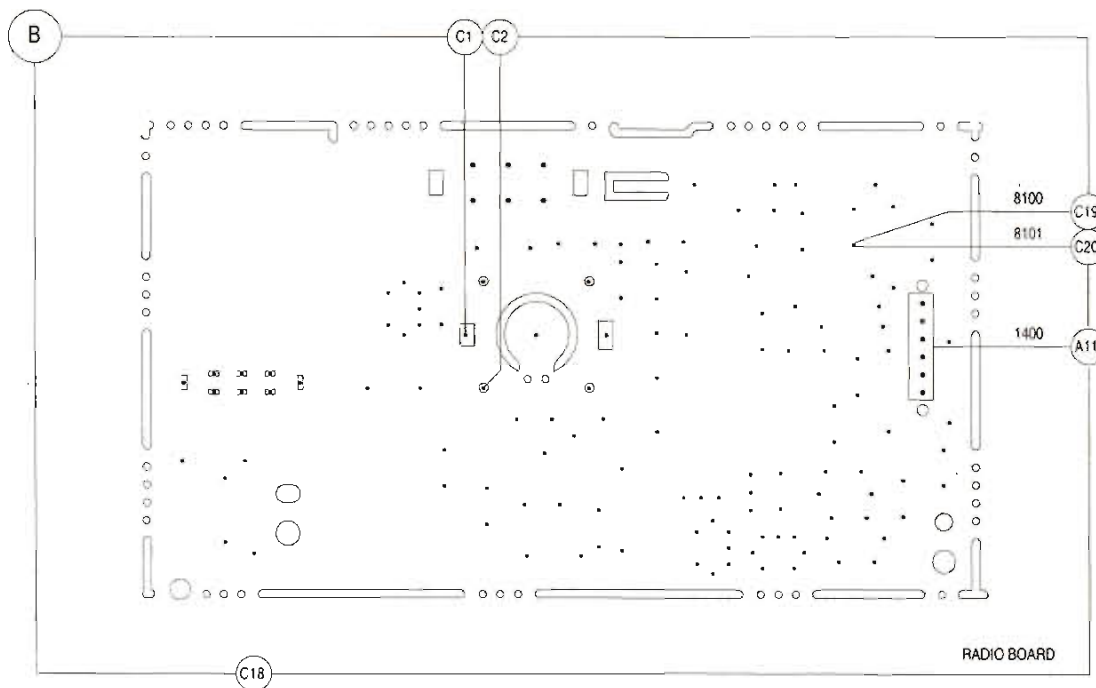
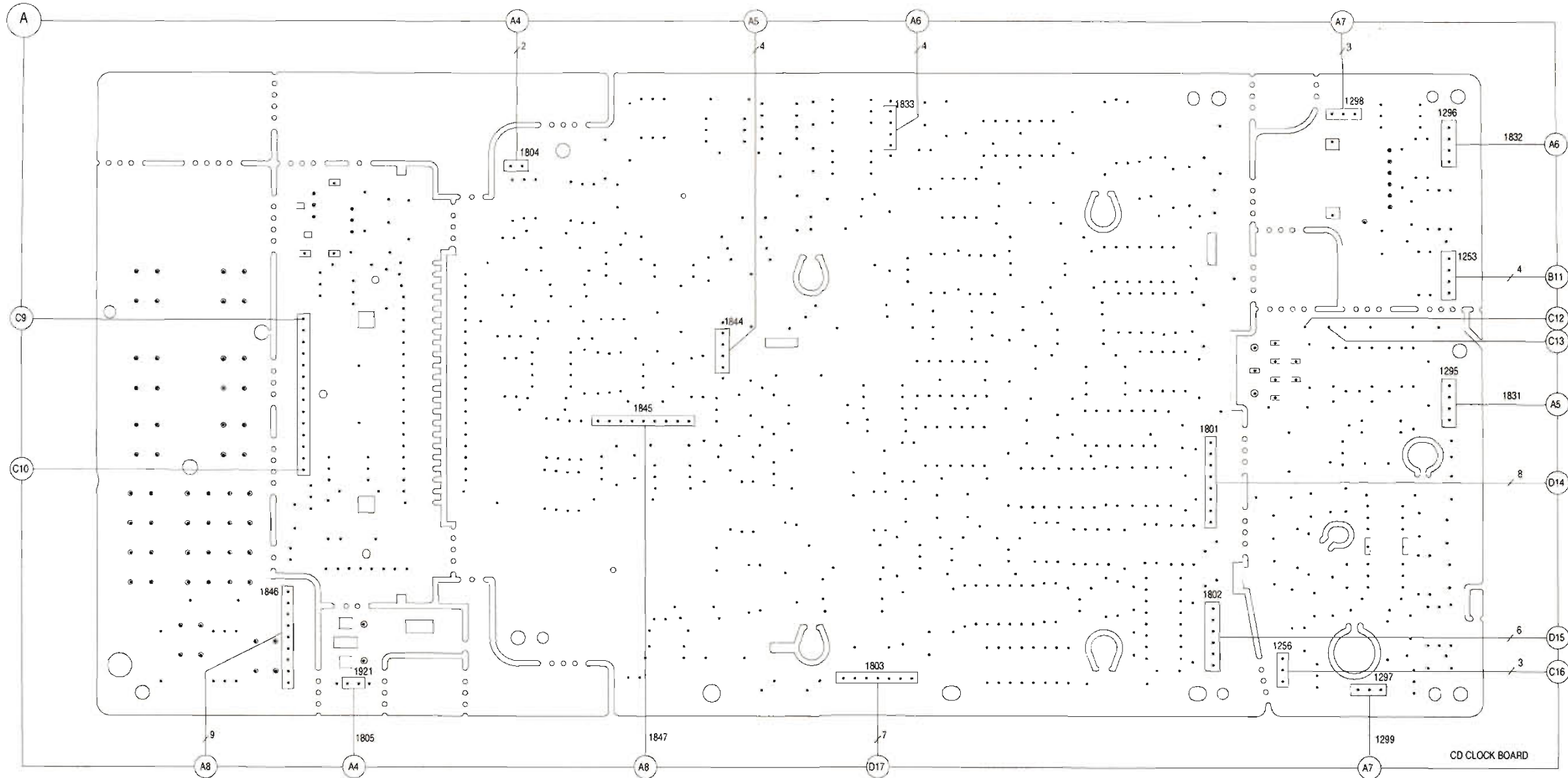


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BLOCK DIAGRAM

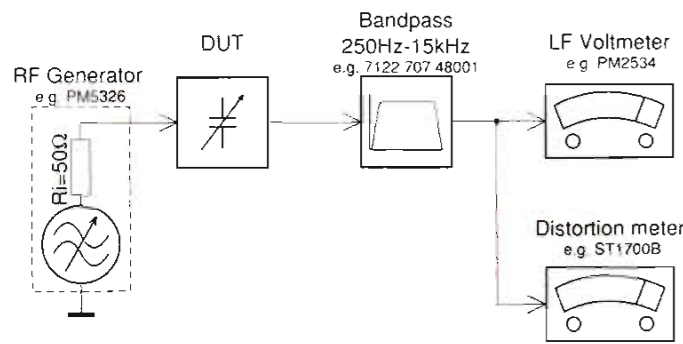


WIRING DIAGRAM



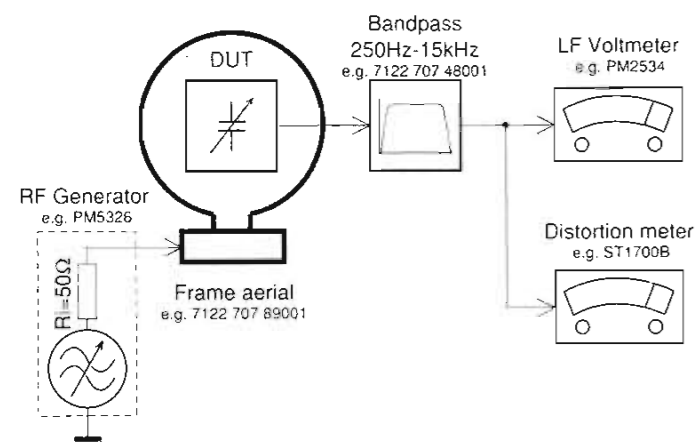
MEASURE SETUP

Tuner FM



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

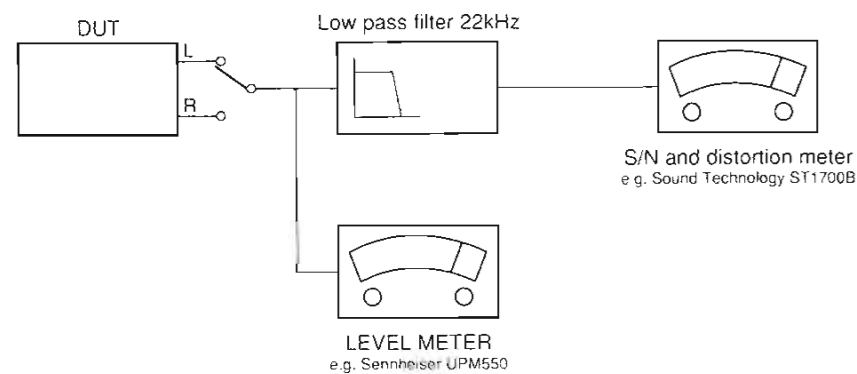
Tuner AM (MW,LW)



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

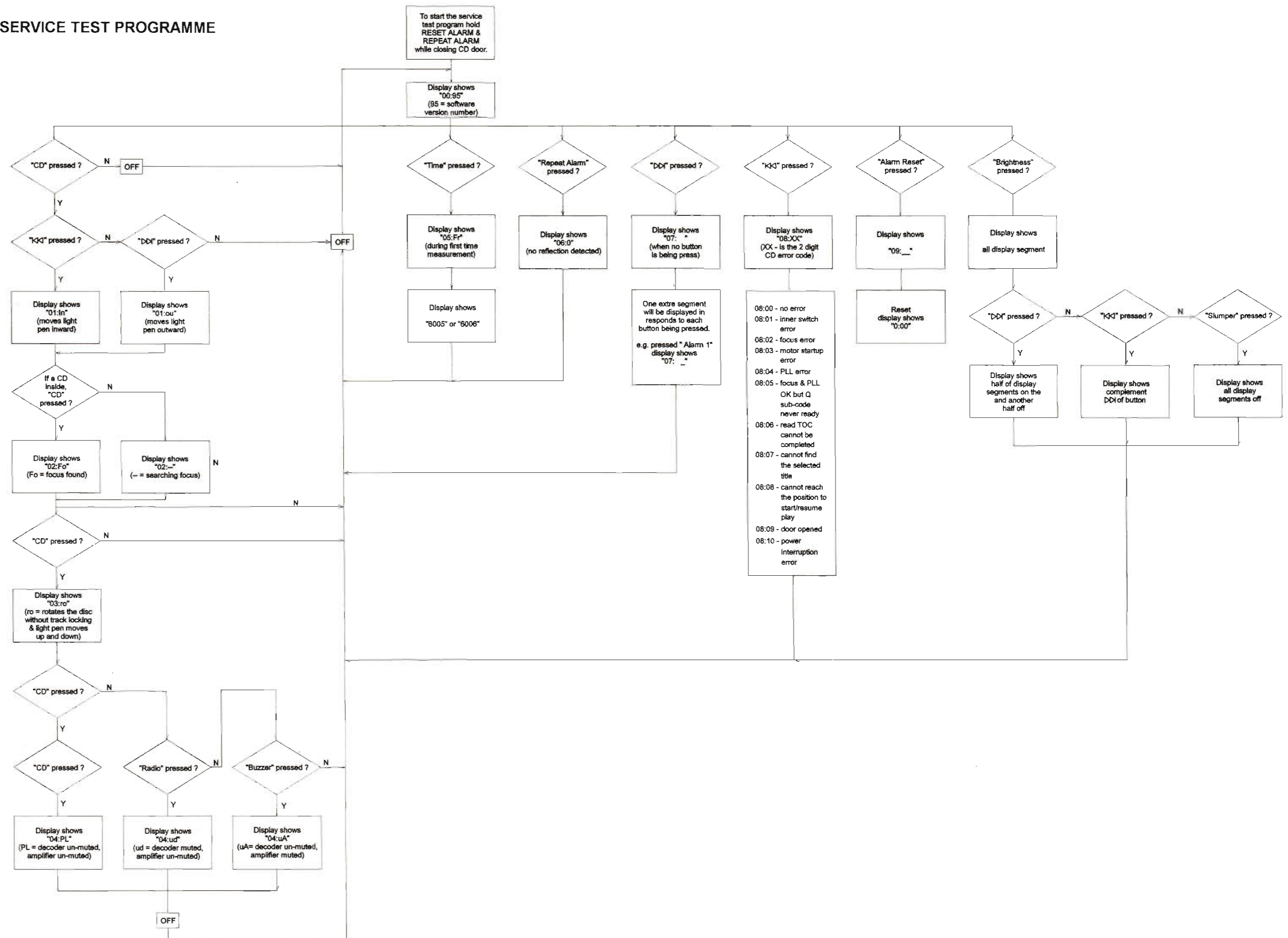
CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)
L.P.F. = 13th order filter 4822 395 30204

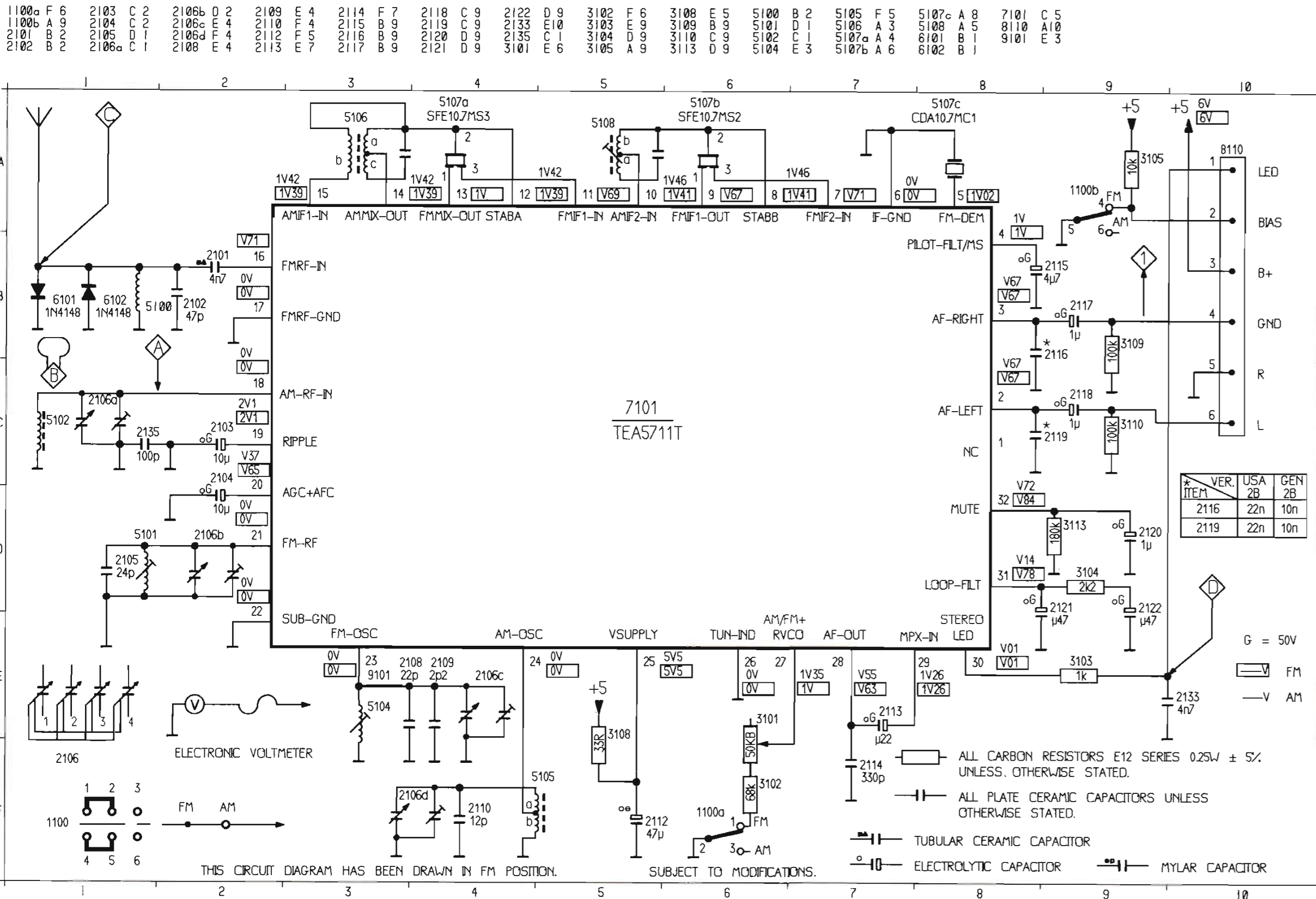


DUT..... Device Under Test

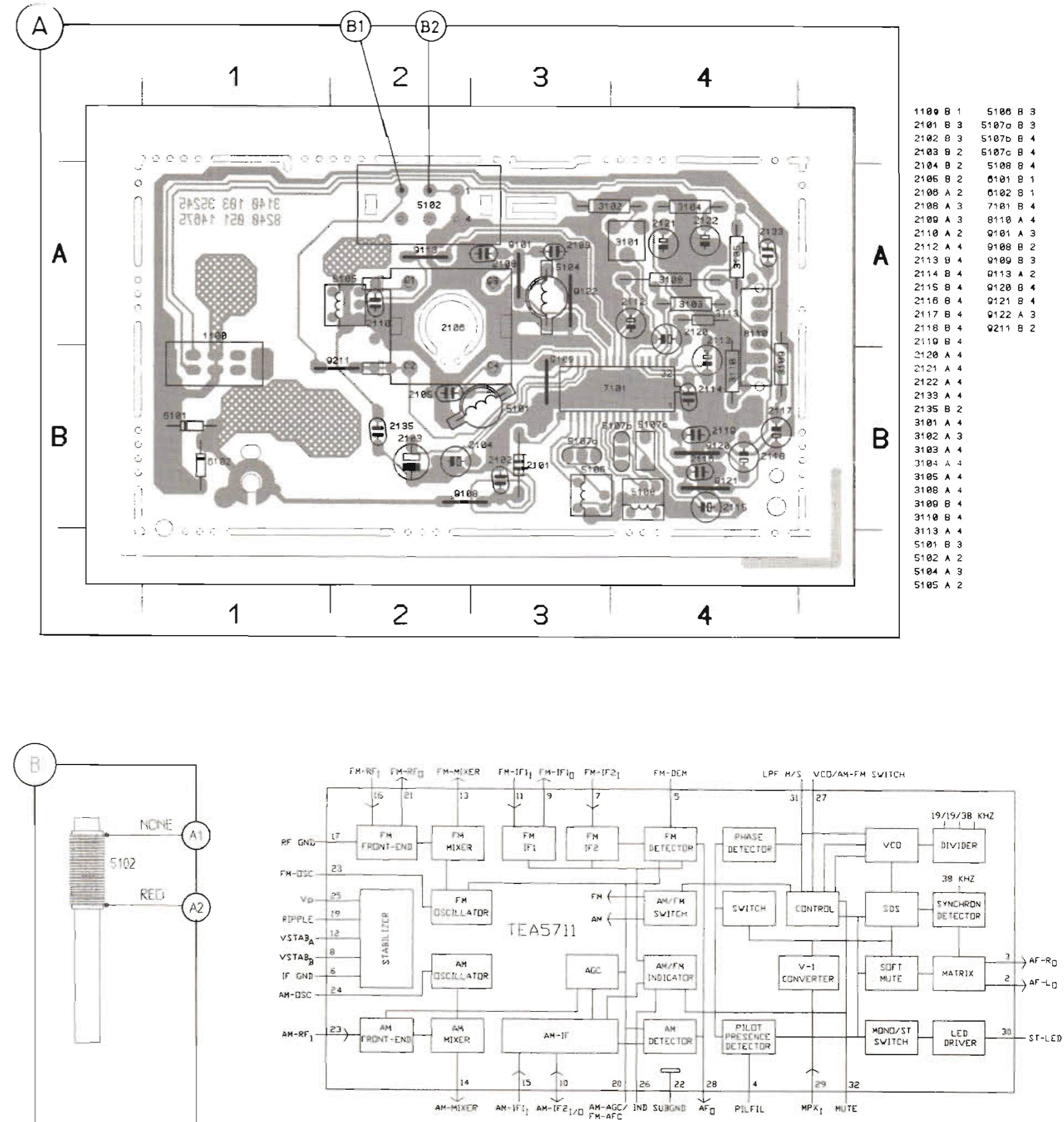
SERVICE TEST PROGRAMME



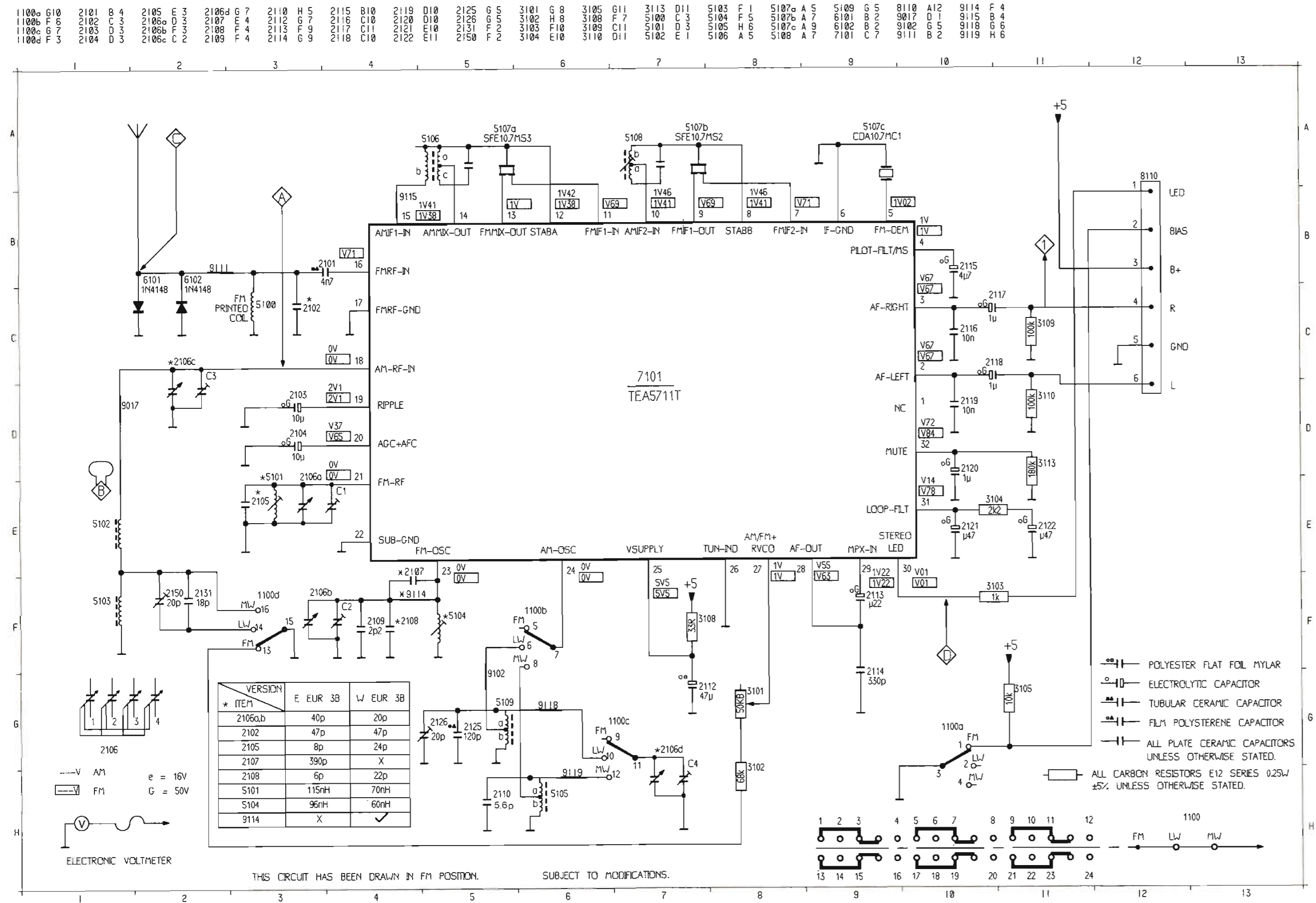
TUNER BOARD (FM/MW) - CIRCUIT DIAGRAM



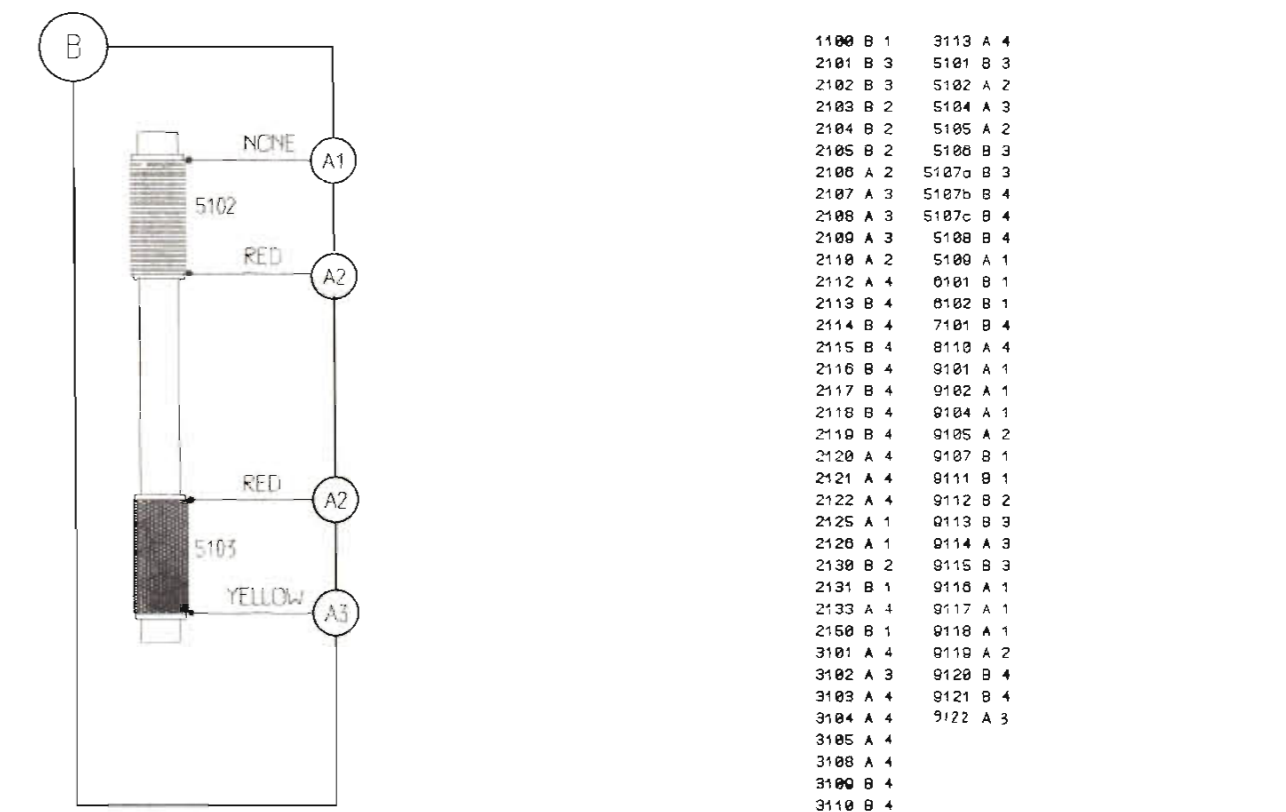
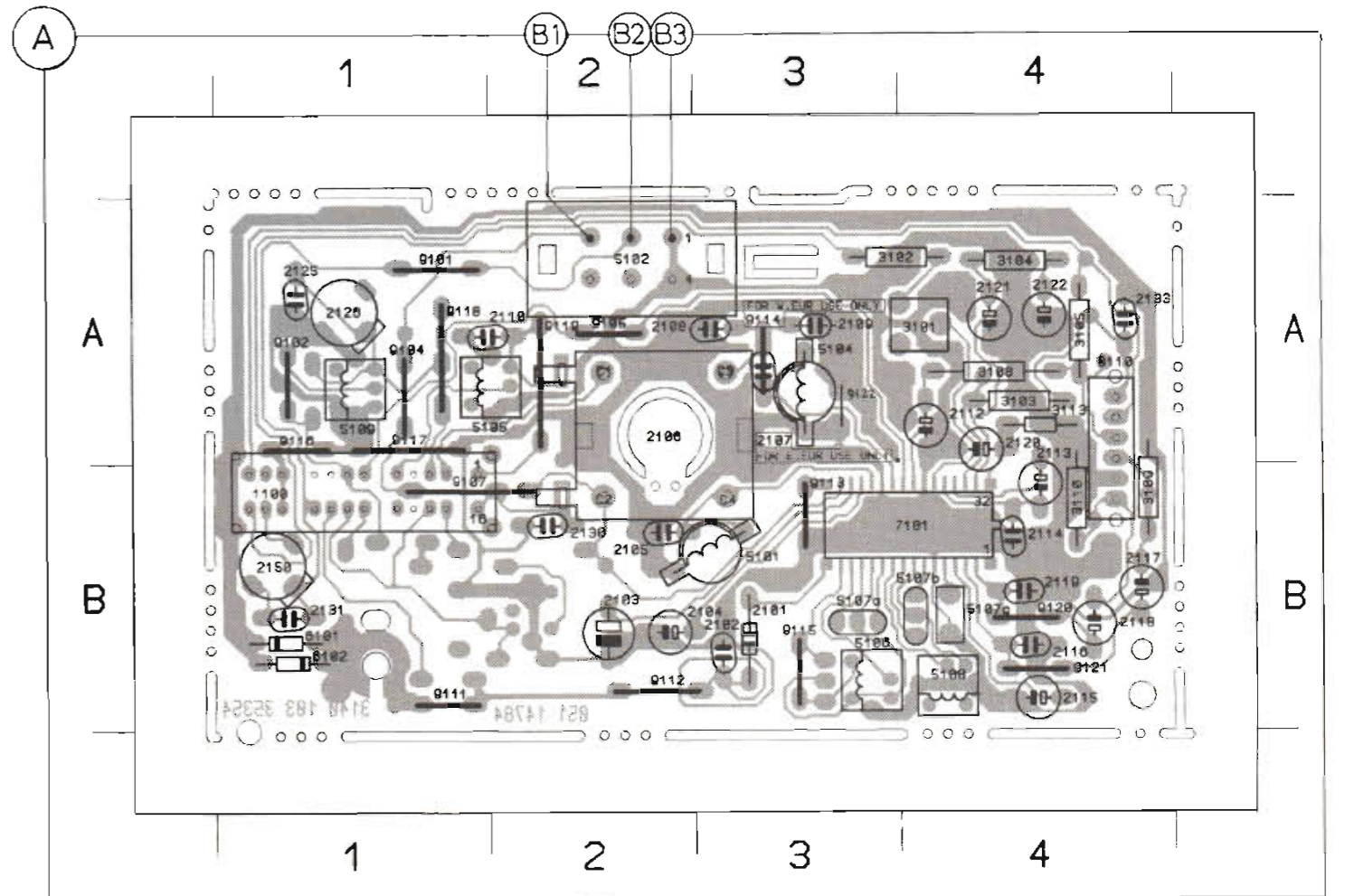
TUNER BOARD (FM/MW) - LAYOUT DIAGRAM



TUNER BOARD (FM/MW/LW) - CIRCUIT DIAGRAM

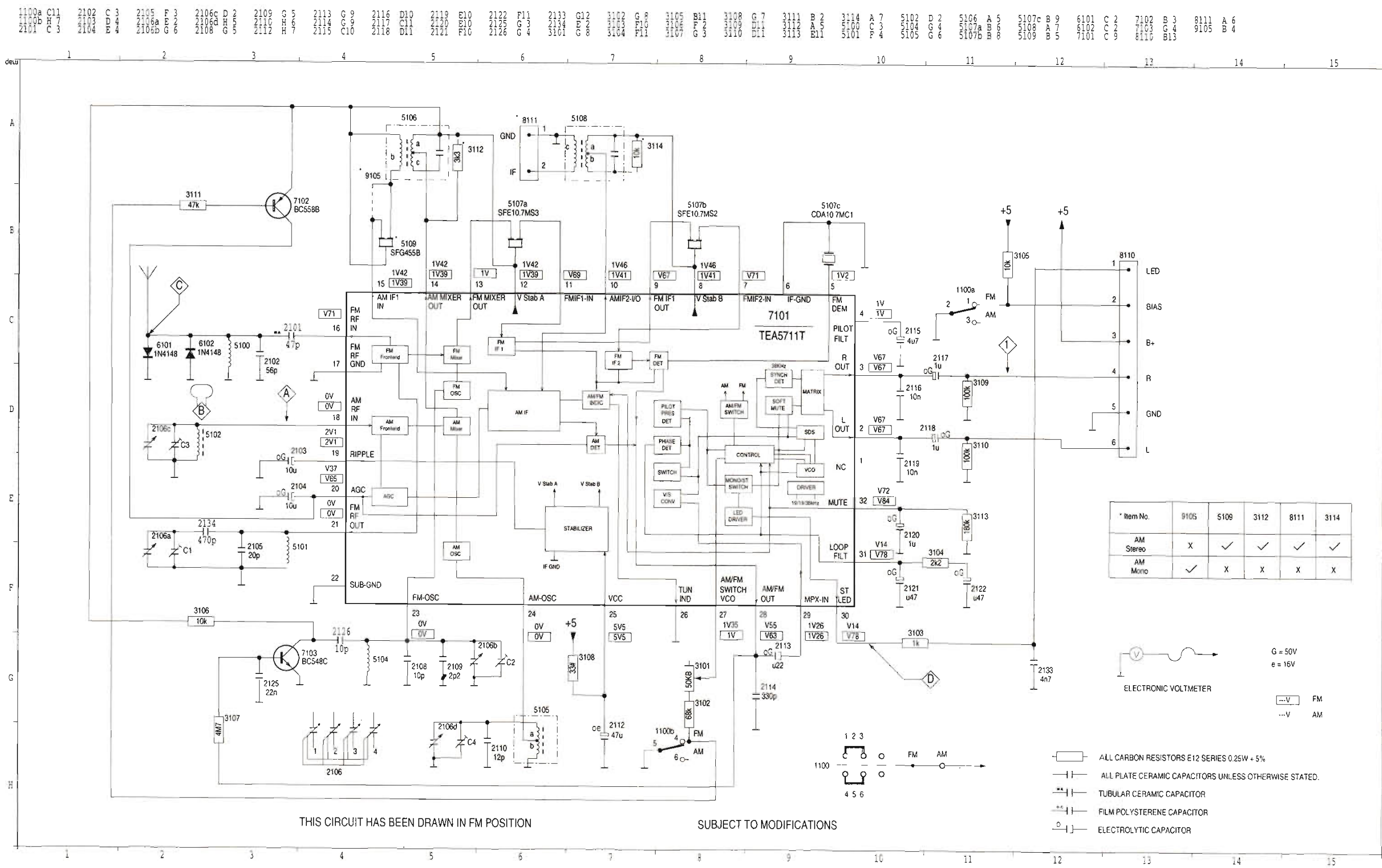


TUNER BOARD (FM/MW/LW) - LAYOUT DIAGRAM

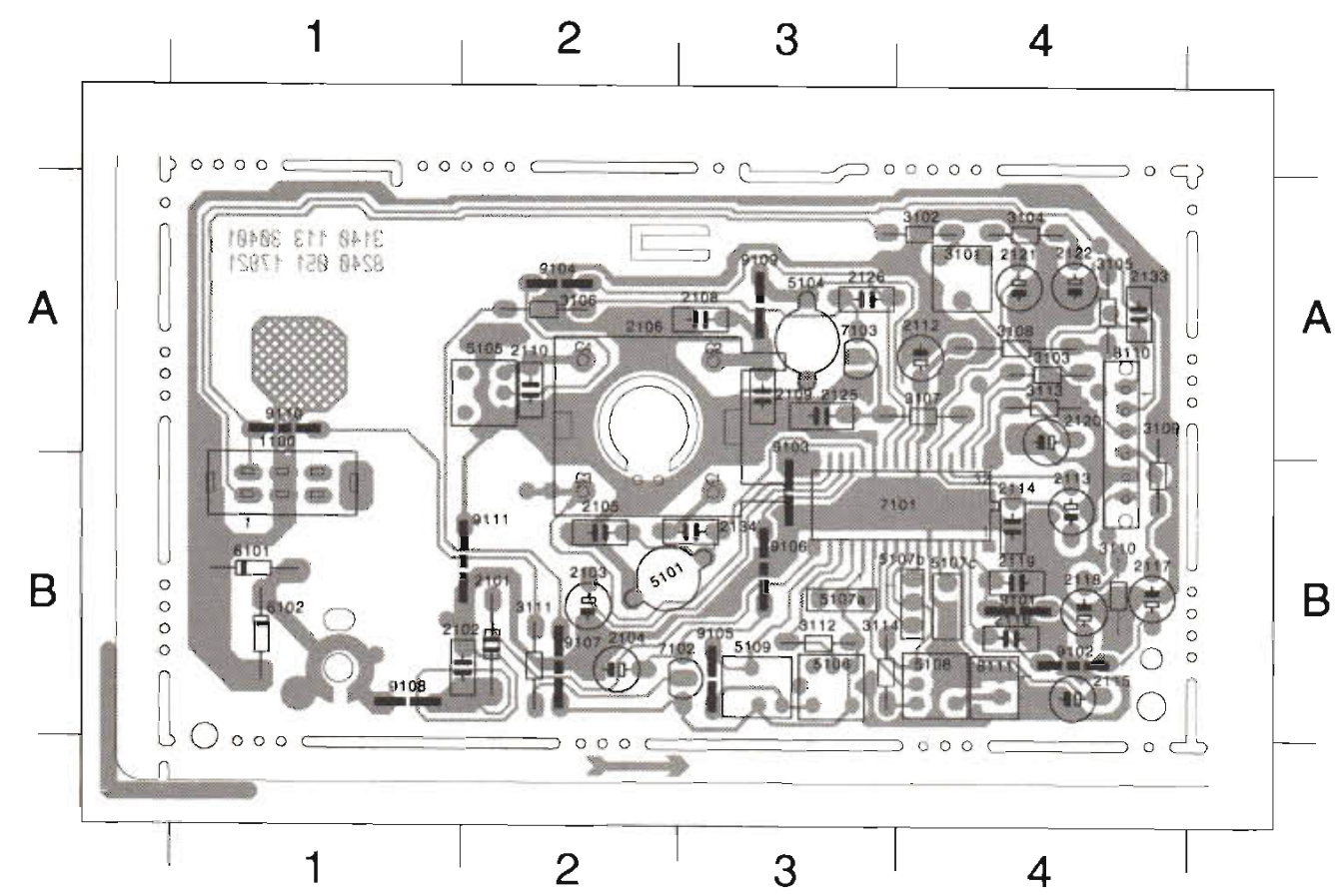


1100	B 1	3113	A 4
2101	B 3	5101	B 3
2102	B 3	5102	A 2
2103	B 2	5104	A 3
2104	B 2	5105	A 2
2105	A 2	5106	B 3
2106	A 2	5107a	B 3
2107	A 3	5107b	B 4
2108	A 3	5107c	B 4
2109	A 3	5108	B 4
2110	A 2	5100	A 1
2112	A 4	0101	B 1
2113	B 4	0102	B 1
2114	B 4	7101	B 4
2115	B 4	8110	A 4
2116	B 4	9101	A 1
2117	B 4	9102	A 1
2118	B 4	9104	A 1
2119	B 4	9105	A 2
2120	A 4	9107	B 1
2121	A 4	9111	B 1
2122	A 4	9112	B 2
2125	A 1	0113	B 3
2128	A 1	0114	A 3
2130	B 2	9115	B 3
2131	B 1	9116	A 1
2133	A 4	9117	A 1
2150	B 1	9118	A 1
3101	A 4	9119	A 2
3102	A 3	9120	B 4
3103	A 4	9121	B 4
3104	A 4	9122	A 3
3105	A 4		
3108	A 4		
3109	B 4		
3110	B 4		

TUNER BOARD (FM/AM/JAP) - CIRCUIT DIAGRAM



TUNER BOARD (FM/AM/JAP) - LAYOUT DIAGRAM



1100 B 1	3112 B 3
2101 B 2	3113 A 4
2102 B 2	3114 B 3
2103 B 2	5101 B 2
2104 B 2	5104 A 3
2105 B 2	5105 A 2
2106 A 2	5106 B 3
2108 A 3	5107a B 3
2109 A 3	5107b B 4
2110 A 2	5107c B 4
2112 A 4	5108 B 4
2113 B 4	5109 B 3
2114 B 4	6101 B 1
2115 B 4	6102 B 1
2116 B 4	7101 B 4
2117 B 4	7102 B 3
2118 B 4	7103 A 3
2119 B 4	8110 A 4
2120 A 4	8111 B 4
2121 A 4	9101 B 4
2122 A 4	9102 B 4
2125 A 3	9103 B 3
2126 A 3	9104 A 2
2133 A 4	9105 B 3
2134 B 3	9106 B 3
3101 A 4	9107 B 2
3102 A 4	9108 B 1
3103 A 4	9109 A 3
3104 A 4	9110 A 1
3105 A 4	9111 B 2
3106 A 2	
3107 A 4	
3108 A 4	
3109 B 4	
3110 B 4	
3111 B 2	

RADIO ALIGNMENT

AM IF							
AM or MW	468KHz		min.	5106 5108		max.	
AM RF							
MW *	512KHz		max.	5105		max.	
	1635KHz		min.	C4			
	550KHz			5102			
	1500KHz			C3			
FM IF							
FM #	10.7MHz						symm. max. lin.
FM RF							
FM #	75.7MHz		max.	5104		max.	
	108.25MHz		min.	C2			
	77MHz			5101			
	106MHz			C1			
STEREO DECODER							
FM #	98MHz		92MHz				152 ± 1KHz

* Mod. 1KHz 30%
10nF + 15E

Repeat

ADJUSTMENT TABLE

CD-PART					
LASER CURRENT					
The trimpot. for adjustment of the laser current is located on the disc drive and has been adjusted in the production line. Therefore for service purpose it is not intended to adjust the laser current. Check only if the HF-signal level is higher than 800mV _{pp} .					
TRACK BALANCE					
Service pos. 3 Display shows "3"			3846	Adjust to 0±10mV DC offset	
TRACK GAIN					
Play with Test-Disc 5 track 1	1300 Hz 100 mV _{rms}	see Fig. 1	3906	CHX = 50 mV/DIV CHY = 50 mV/DIV Adjust according to FIG.3	
FOCUS GAIN					
Play with Test-Disc 5 track 1	1200 Hz 500 mV _{rms}	see Fig. 2	3908	CHX = 200 mV/DIV CHY = 200 mV/DIV Adjust according to FIG.3	

Test disc 5 4822 397 30096

REMARK: In case the discdrive or the optical pickup has been exchanged, always adjust **TRACK BALANCE**, **TRACK GAIN** and **FOCUS GAIN**.

FIG. 1

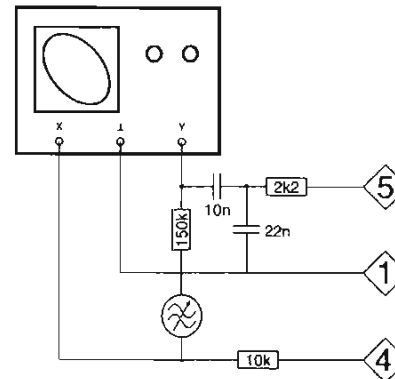


FIG. 2

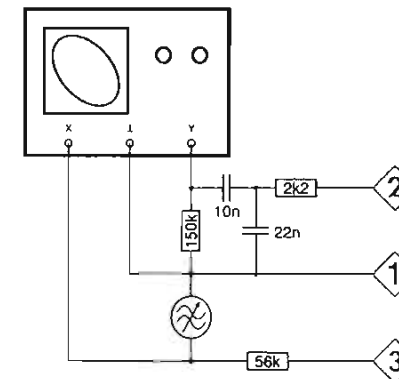
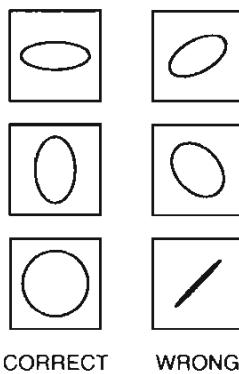


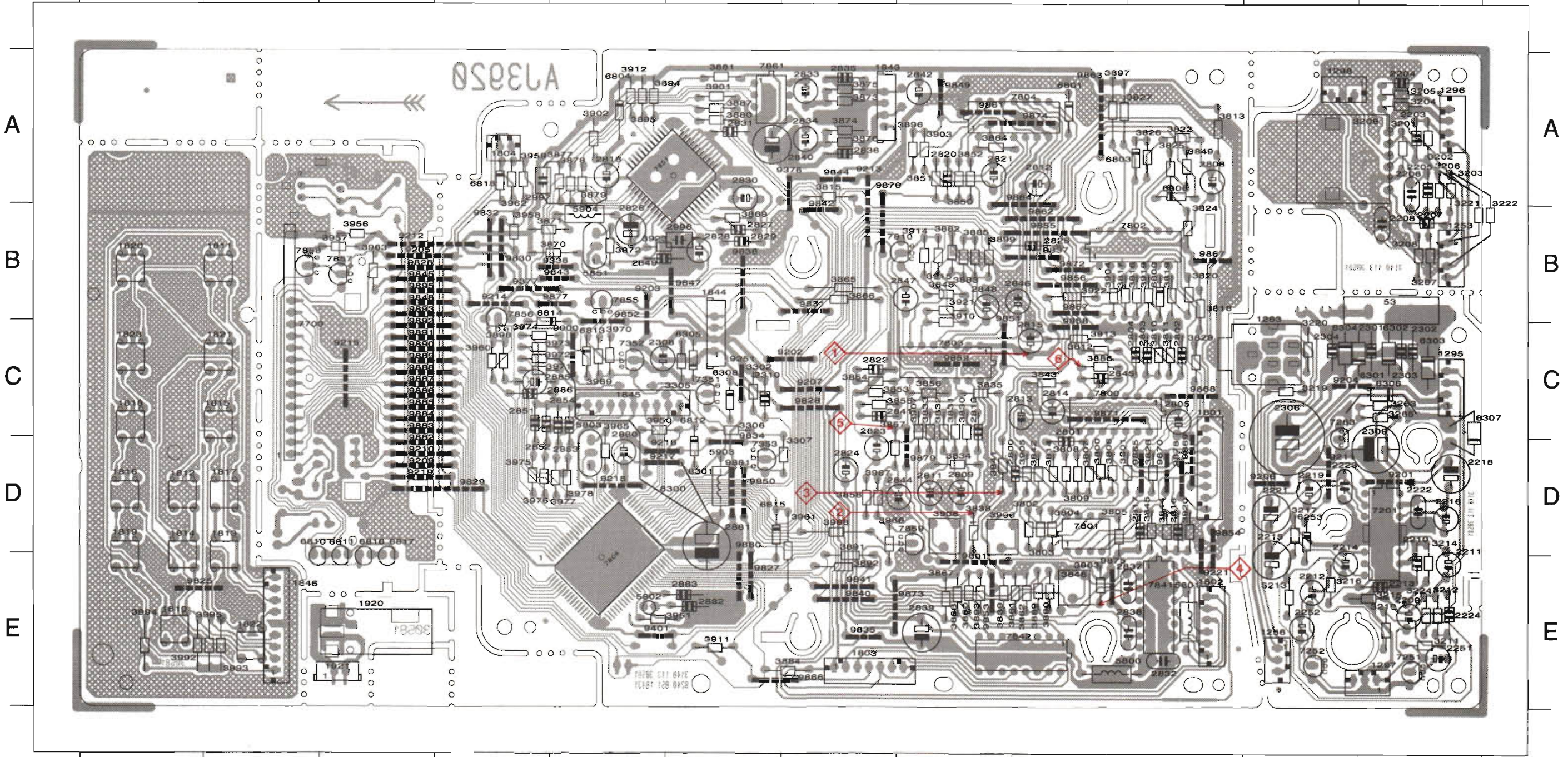
FIG. 3



COMBI BLOCK - LAYOUT DIAGRAM

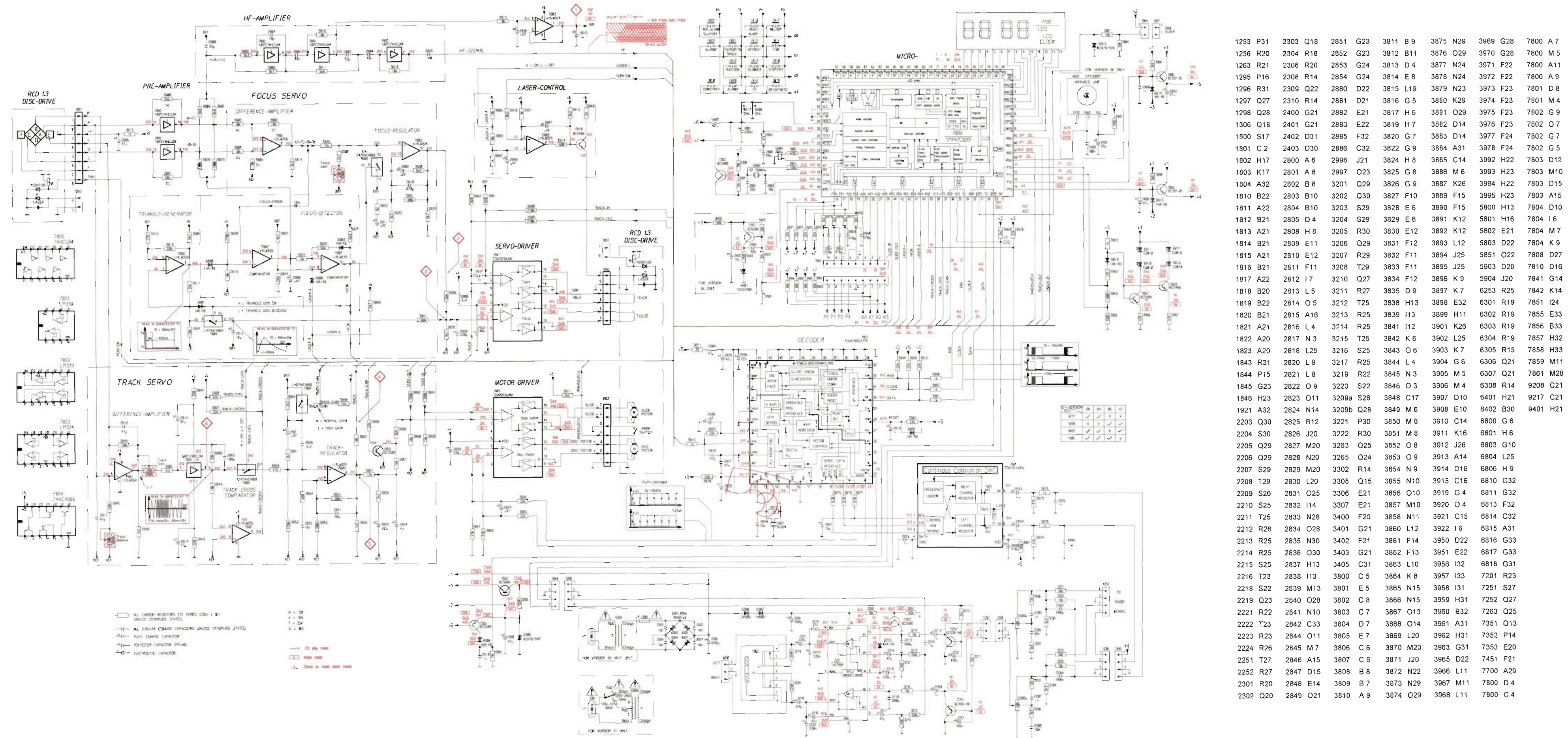
53 B 12	1816 D 1	2207 B 12	2301 C 12	2812 A 9	2831 A 8	2851 C 4	3207 B 12	3305 C 6	3815 A 7	3835 C 8	3857 D 7	3876 A 7	3895 A 5	3915 B 8	3967 D 7	6802 E 5	6806 A 10	7800 C 9	9203 B 5	9338 B 5	9841 E 7	9861 A 8	9879 D 8
1253 B 12	1817 D 2	2208 B 12	2302 C 12	2813 C 9	2832 E 10	2852 C 4	3208 B 12	3306 C 6	3816 B 10	3836 D 8	3858 D 7	3877 A 5	3896 A 8	3919 B 10	3968 D 7	6803 D 5	6810 E 2	7801 D 9	9204 C 11	9376 A 7	9842 B 7	9862 B 9	9880 E 6
1256 E 11	1818 C 1	2209 E 12	2303 C 12	2814 C 9	2833 A 7	2853 C 5	3209 A 12	3307 D 7	3817 B 9	3839 E 8	3860 E 8	3878 A 5	3897 A 9	3920 D 10	3969 C 5	6851 B 5	6811 E 3	7802 B 10	9205 B 3	9377 B 4	9843 B 5	9863 A 9	9881 D 6
1283 C 11	1819 E 1	2210 E 12	2304 C 11	2815 C 9	2834 A 7	2854 C 5	3210 E 12	3800 D 9	3818 B 10	3841 D 8	3861 E 9	3879 A 5	3898 C 4	3921 B 8	3970 C 5	6903 D 6	6812 D 6	7803 C 8	9206 D 11	9401 E 5	9844 A 7	9864 B 9	9882 D 3
1295 C 12	1820 B 1	2211 E 12	2306 C 11	2816 D 10	2835 A 7	2880 D 5	3211 E 12	3801 D 9	3819 B 10	3842 D 9	3862 E 9	3880 A 6	3899 B 8	3922 B 9	3971 C 4	5904 B 5	6813 C 5	7804 A 9	9207 C 7	9801 E 8	9845 B 3	9865 D 10	9883 C 3
1296 A 12	1821 C 2	2212 E 11	2308 C 5	2817 D 10	2836 A 7	2881 D 6	3212 E 12	3802 D 9	3820 B 10	3843 C 9	3863 E 9	3881 A 6	3901 A 6	3923 B 5	3972 C 4	6253 D 11	6814 C 4	7808 E 5	9209 D 3	9825 E 1	9847 B 6	9866 E 6	9884 C 3
1297 E 12	1822 E 2	2213 E 12	2309 D 12	2818 A 5	2837 E 10	2882 E 6	3213 E 11	3803 D 9	3822 A 10	3844 D 10	3864 A 8	3882 B 8	3902 A 5	3950 C 5	3973 C 4	6301 C 11	6815 D 6	7810 B 8	9210 D 3	9826 B 3	9848 B 3	9867 B 10	9885 C 3
1298 A 11	1823 C 1	2214 E 11	2310 C 6	2820 A 8	2838 E 8	2883 E 6	3214 E 12	3804 D 9	3824 B 10	3845 D 10	3865 B 7	3883 B 8	3903 A 8	3951 E 5	3974 C 4	6302 C 12	6816 E 3	7841 E 10	9211 D 11	9827 E 6	9849 A 8	9868 C 10	9886 C 3
1801 D 10	1843 A 7	2215 E 11	2800 D 9	2821 A 8	2839 E 8	2885 C 4	3215 E 12	3805 D 9	3825 A 10	3846 E 9	3866 B 7	3884 E 7	3904 B 9	3956 B 3	3975 D 4	6303 C 12	6817 E 3	7842 E 9	9212 B 3	9828 C 7	9850 D 6	9869 D 10	9887 C 3
1802 E 10	1844 C 6	2216 D 12	2801 D 9	2822 C 7	2840 A 6	2886 C 4	3216 E 11	3806 D 9	3826 A 10	3848 B 8	3867 E 8	3885 B 8	3905 D 9	3957 B 3	3976 D 4	6304 C 11	6818 A 4	7851 A 6	9213 B 7	9829 D 4	9851 C 8	9870 D 10	9888 C 3
1803 E 7	1845 C 5	2218 D 12	2802 C 10	2823 D 7	2841 C 7	2996 B 6	3217 D 11	3807 D 9	3827 A 9	3849 A 10	3868 E 8	3886 C 9	3906 D 8	3958 B 4	3977 D 5	6305 C 6	7201 D 12	7855 B 5	9214 B 4	9830 B 4	9852 C 5	9871 C 9	9889 C 3
1804 A 4	1846 E 2	2219 D 11	2803 C 10	2824 D 7	2842 A 8	2997 A 4	3218 C 11	3808 D 9	3828 D 10	3850 A 8	3869 B 6	3887 A 6	3907 C 8	3959 A 4	3978 D 5	6306 C 12	7251 E 12	7856 B 4	9215 C 3	9831 B 7	9853 E 8	9872 B 9	9890 C 3
1810 E 1	1920 E 3	2221 D 11	2804 C 10	2825 B 9	2844 D 8	3201 A 12	3220 C 11	3809 D 9	3829 C 10	3851 A 8	3870 B 5	3889 E 9	3908 D 8	3960 C 4	3992 E 1	6307 C 12	7252 E 11	7857 B 3	9216 D 5	9832 B 4	9854 D 10	9873 E 7	9891 C 3
1811 B 2	1921 E 3	2222 D 12	2805 C 10	2826 B 5	2845 C 9	3202 A 12	3221 B 12	3810 C 10	3830 C 8	3852 A 8	3871 B 4	3890 E 9	3910 C 8	3961 D 7	3993 E 2	6308 C 6	7263 D 11	7858 B 2	9217 D 5	9834 D 6	9855 B 9	9874 A 9	9892 C 3
1812 D 1	2203 A 12	2223 D 11	2806 A 10	2827 B 6	2846 B 9	3203 A 12	3224 C 12	3811 C 10	3831 C 8	3853 C 7	3872 B 5	3891 E 7	3911 E 6	3962 A 4	3994 E 1	6800 C 10	7351 C 8	7859 D 8	9218 D 5	9835 E 7	9856 B 9	9875 E 9	9893 B 3
1813 E 2	2204 A 12	2224 E 12	2809 D 8	2828 B 6	2847 B 8	3204 A 12	3263 C 12	3812 C 9	3832 C 8	3854 C 7	3873 A 7	3892 E 7	3912 A 5	3963 B 3	3995 E 2	6801 A 9	7352 C 5	7861 A 6	9219 D 3	9836 B 6	9857 B 9	9876 B 7	9895 B 3
1814 E 1	2205 A 12	2251 E 12	2810 C 8	2829 B 6	2848 B 8	3205 A 12	3265 C 12	3813 A 10	3833 C 8	3855 C 7	3874 A 7	3893 E 8	3913 C 9	3965 D 5	5800 E 9	6803 A 10	7353 D 8	9201 D 12	9221 E 10	9837 B 9	9858 C 9	9877 B 5	9900 C 5
1815 C 2	2206 A 12	2252 E 11	2811 D 8	2830 A 6	2849 B 5	3206 A 12	3302 C 8	3814 D 9	3834 D 8	3856 C 8	3875 A 7	3894 A 5	3914 B 8	3966 D 7	5801 E 10	6804 A 5	7700 C 2	9202 C 7	9261 C 6	9840 E 7	9859 C 8	9878 D 10	8300 D 6
																							8301 D 6

1 2 3 4 5 6 7 8 9 10 11 12



1 2 3 4 5 6 7 8 9 10 11 12

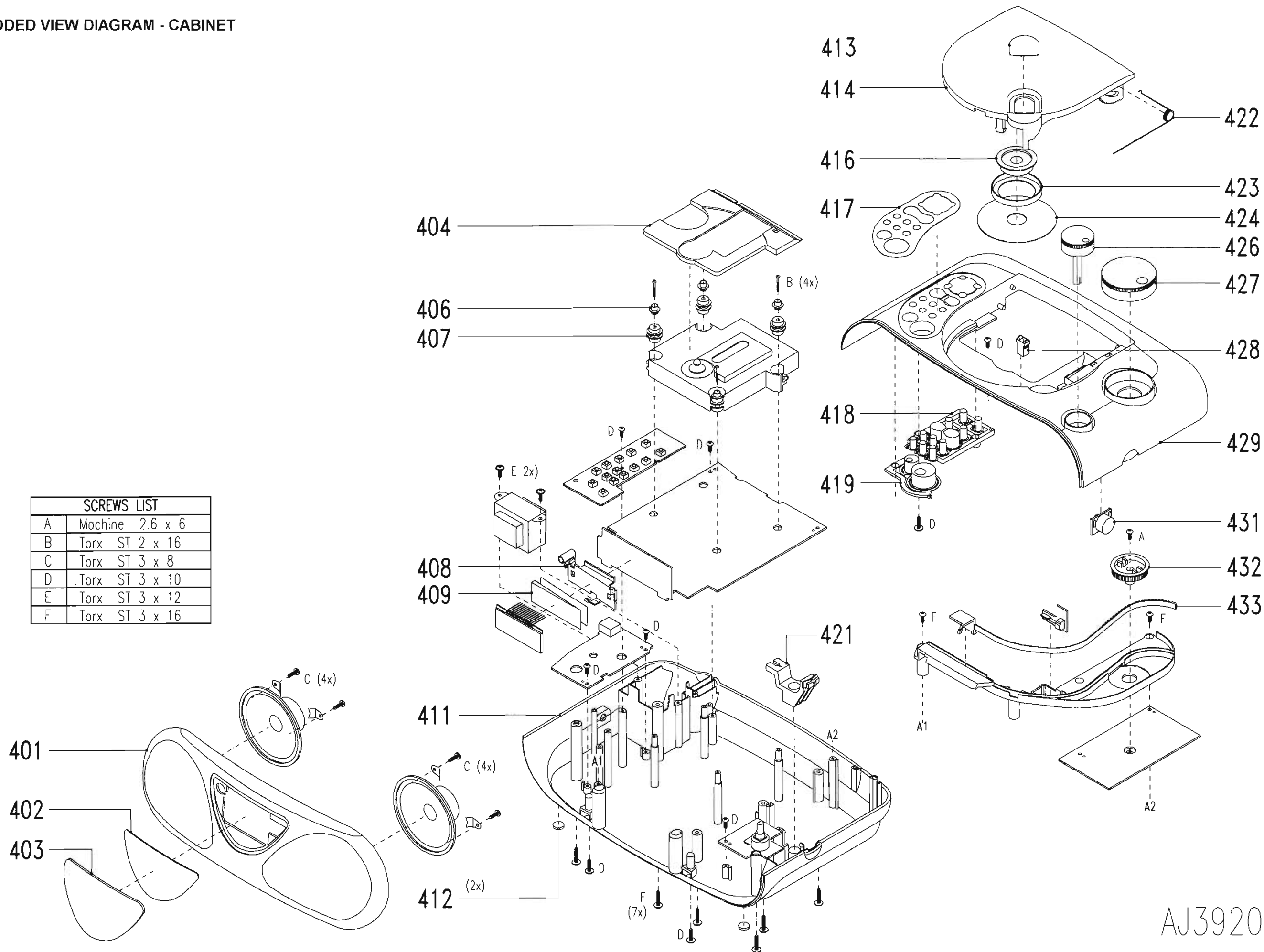
COMBI BLOCK - CIRCUIT DIAGRAM



EXPLODED VIEW DIAGRAM - CABINET

MECHANICAL PARTSLIST

SCREWS LIST		
A	Machine	2.6 x 6
B	Torx	ST 2 x 16
C	Torx	ST 3 x 8
D	Torx	ST 3 x 10
E	Torx	ST 3 x 12
F	Torx	ST 3 x 16



- 401 4822 423 51208 Cabinet Front
- 402 4822 454 12976 Sheet Lens (for -/00)
- 402 4822 454 12979 Sheet Lens (for -/01)
- 402 4822 454 12978 Sheet Lens (for -/06)
- 402 4822 454 12975 Sheet Lens (for -/17)

- 403 4822 450 62497 Lens Display (not for-/17)
- 403 4822 450 62491 Lens Display (for -/17 only)
- 406 4822 532 61104 Spacer
- 407 4822 532 61103 Damper
- 408 4822 256 80076 Bracket

- 409 4822 380 20507 Guide
- 411 4822 423 90223 Cabinet Bottom
- 412 4822 462 40692 Plug
- 413 4822 454 30504 Sheet CD Door
- 414 4822 444 61076 CD Door (not for -/17)

- 414 4822 444 61074 CD Door (for -/17 only)
- 416 4822 532 51871 Ring Pressure
- 417 4822 454 12977 Sheet Function Knob
- 418 4822 410 63853 Knob Funtion
- 419 4822 410 63854 Knob Repeat Alarm

- 421 4822 410 63852 Knob Band
- 422 4822 492 52332 Spring Compression
- 424 4822 535 60096 Disc
- 426 4822 413 51518 Knob Volume
- 426 4822 532 12241 Ring

- 427 4822 413 51517 Knob Tuning
- 428 4822 276 13079 Locking Mechanism
- 429 4822 423 90222 Cabinet Top (for -/00)
- 429 4822 423 90224 Cabinet Top (for -/01)
- 429 4822 423 90224 Cabinet Top (for -/06)

- 429 4822 423 90221 Cabinet Top (for -/17)
- 431 4822 529 10257 Damper
- 432 4822 522 33579 Gear
- 433 4822 450 81232 Pointer
- 4822 321 10853 Mains (for -/01)

- 4822 736 22491 IFU (for -/00/01)
- 4822 736 22488 IFU (for -/17)

AJ3920

TUNER BOARD (FM/MW)

2101	4822 122 32764	4,7nF 20% 50V
2102	4822 126 12812	47pF 5% 50V
2103	4822 124 40248	10µF 20% 63V
2104	4822 124 40248	10µF 20% 63V
2105	4822 126 12814	24pF 5% N220 50V
2106	4822 125 50681	Polyvaricon
2108	4822 122 32147	22pF 2% N470 100V
2109	4822 126 12809	2,2pF 5% N470 50V
2110	4822 126 13592	5,6pF±0.5pF N1500
2112	4822 124 41397	47µF 20% 25V
2113	4822 126 13581	0,22µF 20% 50V
2114	4822 126 12671	330pF 10% YB 50V
2115	4822 124 40246	4,7µF 20% 63V
2116	4822 124 80141	10nF 10% 50V
2117	4822 124 40242	1µF 20% 63V
2118	4822 124 40242	1µF 20% 63V
2119	4822 124 80141	10nF 10% 50V
2120	4822 124 40242	1µF 20% 63V
2121	4822 124 40239	0,47µF 20% 63V
2122	4822 124 40239	0,47µF 20% 63V
2133	4822 126 12672	4,7nF 10% 50V
2135	4822 126 10777	100pF 50V
3101	4822 100 20167	50K 30%LIN 0,1W
3102	4822 116 52297	68K 5% 0,5W
3103	4822 116 83863	1K 5% 0,5W
3104	4822 116 52256	2K2 5% 0,5W
3105	4822 116 83864	10K 5% 0,5W
3108	4822 116 52191	33R 5% 0,5W
3109	4822 116 52234	100K 5% 0,5W
3110	4822 116 52234	100K 5% 0,5W
3113	4822 116 52252	180K 5% 0,5W

TUNER BOARD (FM/MWLW)

2101	4822 122 32764	4,7nF 20% 50V
2102	4822 126 12812	47pF 5% 50V
2103	4822 124 40248	10µF 20% 63V
2104	4822 124 40248	10µF 20% 63V
2105 #	4822 126 12828	24pF 5% 50V
2105 *	4822 126 12283	8,2pF 5% N220
2106 #	4822 125 50681	Polyvaricon
2106 *	4822 125 50648	Polyvaricon
2107 *	4822 126 12827	390pF 5% N1500
2108 #	4822 122 32147	22pF 2% N470 100V
2108 *	4822 126 12284	5,6pF±0.5pF N1500
2109	4822 126 12809	2,2pF 5% N470 50V
2110	4822 126 12284	5,6pF 0,5% N1500 50V
2112	4822 124 41397	47µF 20% 25V
2113	4822 126 13581	0.22µF 20% 50V
2114	4822 126 12671	330pF 10% 50V
2115	4822 124 40246	4,7µF 20% 63V
2116	4822 124 80141	10nF 10% 50V
2117	4822 124 40242	1µF 20% 63V
2118	4822 124 40242	1µF 20% 63V
2119	4822 124 80141	10nF 10% 50V
2120	4822 124 40242	1µF 20% 63V
2121	4822 124 40239	0,47µF 20% 63V
2122	4822 124 40239	0,47µF 20% 63V
2125	4822 126 12826	120pF 50% N750 50V
2126	4822 125 50045	1,8pF-22pF 250V
2131	4822 126 12824	18pF 50% NP0 50V
2150	4822 125 50045	1,8pF-22pF 250V
3101	4822 100 20167	50K 30%LIN 0,1W
3102	4822 116 52297	68K 5% 0,5W
3103	4822 116 83863	1K 5% 0,5W
3104	4822 116 52256	2K2 5% 0,5W
3105	4822 116 83864	10K 5% 0,5W
3108	4822 116 52191	33R 5% 0,5W
3109	4822 116 52234	100K 5% 0,5W
3110	4822 116 52234	100K 5% 0,5W
3113	4822 116 52252	180K 5% 0,5W

TUNER BOARD (FM/AM/JAP)

2101	4822 122 33848	47pF 5% 50V
2102	4822 126 13686	47pF 5% 50V
2103	4822 124 40248	10µF 20% 63V
2104	4822 124 40248	10µF 20% 63V
2105	4822 126 12078	20pF 5% N200 50V
2106	4822 125 50648	PVC 160P/82P+40PX2
2108	4822 126 13685	10pF 5% 50V
2109	4822 126 12809	2,2pF 5% N470 50V
2110	4822 126 12361	12pF 5% N750 50V
2112	4822 124 41397	47µF 20% 25V
2113	4822 126 13581	0,22µF 20% 50V
2114	4822 126 12671	330pF 10% YB 50V
2115	4822 124 40246	4,7µF 20% 63V
2116	4822 124 80141	10nF 10% 50V
2117	4822 124 40242	1µF 20% 63V
2118	4822 124 40242	1µF 20% 63V
2119	4822 124 80141	10NF10% 50V
2120	4822 124 40242	1µF 20% 63V
2121	4822 124 40239	0,47µF 20% 63V
2122	4822 124 40239	0,47µF 20% 63V
2125	4822 126 11167	22nF 80% 50V
2126	4822 126 13685	10pF 10% N1500 50V
2133	4822 126 12672	4,7nF 10% 50V
2134	5322 122 32311	470pF 5% 50V
3101	4822 100 20167	50K 30% LIN 0,1W
3102	4822 116 52297	68K 5% 0,5W
3103	4822 116 83863	1K 5% 0,5W
3104	4822 116 52256	2K2 5% 0,5W
3105	4822 116 83864	10K 5% 0,5W
3106	4822 116 83864	10K 5% 0,5W
3107	4822 111 30893	4M7 5% 0,5W
3108	4822 116 52191	33R 5% 0,5W
3109	4822 116 52234	100K 5% 0,5W
3110	4822 116 52234	100K 5% 0,5W
3111	4822 116 52284	47K 5% 0,5W
3113	4822 116 52252	180K 5% 0,5W

5101	4822 157 70513	Coil - FM ant
5102	4822 157 70731	Coil - MW/LW ant. assy
5104	4822 156 30947	Coil - FM osc
5105	4822 157 71145	Coil - MW osc
5106	4822 157 70499	IFT - AM
5107	4822 242 81154	FM cer. Filter Kits
5108	4822 156 11146	IFT - AM
6101	4822 130 30621	1N4148
6102	4822 130 30621	1N4148
7101	4822 209 32746	TEA5711T/N2
- MISCELLANEOUS -		
1100	4822 277 21698	Switch - slide
1201	4822 526 10176	Rod
	4822 256 90463	Holder Ferrite Bar

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

5101 #	4822 157 70513	Coil - FM ant
5101 *	4822 157 70762	Coil - Chole 4.5T D5
5102	4822 158 60627	Coil MW/LW ant. assy
5104 #	4822 156 30947	Coil - FM osc
5104 *	4822 157 70033	Coil - FM osc
5105	4822 157 71145	Coil - MW osc
5106	4822 157 70499	IFT - AM
5107	4822 242 81154	KMFC5058-Z
5108	4822 156 11146	IFT - AM
5109	4822 157 71144	Coil-LW osc
6101	4822 130 30621	1N4148
6102	4822 130 30621	1N4148
7101	4822 209 32746	TEA5711T/N2
- MISCELLANEOUS -		
1100	4822 277 30933	Switch - slide


* For -/14 only
Not for -/14

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

5101	4822 156 21671	Coil - Aerial FM
5102	4822 157 70731	Coil - MW/LW ant. assy
5104	4822 157 70033	Coil - Osc FM
5105	4822 157 71145	Coil - M/O
5106	4822 157 70499	IFT - AM
5107	4822 242 81154	FM cer. Filter Kits
5108	4822 156 11146	IFT - AM
6101	4822 130 30621	1N4148
6102	4822 130 30621	1N4148
7101	4822 209 32746	TEA5711T/N2
7102	4822 130 44197	BC558B
7103	4822 130 44196	BC548C
- MISCELLANEOUS -		
1100	4822 277 21698	Switch - slide
1201	4822 526 10176	Rod
	4822 256 90463	Holder Ferrite Bar


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

ELECTRICL PARTSLIST




2204	4822 122 33169	680pF
2205	4822 122 33197	1nF 10% 50V
2206	5322 121 42465	68nF 5% 63V
2207	4822 122 33197	1nF 10% 50V
2208	5322 121 42465	68nF 5% 63V
2209	4822 124 40242	1µF 20% 63V
2210	4822 122 33169	680pF 10% 50V
2211	4822 124 41397	47µF 20% 25V
2212	4822 124 40242	1µF 20% 63V
2213	4822 122 33169	680pF 10% 50V
2214	4822 124 41397	47µF 20% 25V
2215	4822 124 80144	220µF 20% 25V
2216	4822 124 41397	47µF 20% 25V
2218	4822 126 13678	470µF 10V
2219	4822 124 41397	47µF 20% 25V
2221	4822 126 13678	470µF 10V
2222	5322 121 42661	330nF 5% 63V
2223	5322 121 42661	330nF 5% 63V
2224	4822 122 33197	1nF
2225	4822 116 83864	10K 5% 0,5W
2226	4822 116 83864	10K 5% 0,5W
2251	4822 124 41973	100µF 16V
2252	4822 124 41973	100µF 16V
2301	4822 121 51387	10nF 20% 16V
2302	4822 121 51387	10nF 20% 16V
2303	4822 121 51387	10nF 20% 16V
2304	4822 121 51387	10nF 20% 16V
2306	4822 124 41458	4700µF 20% 16V
2308	4822 124 41397	47µF 20% 25V
2309	4822 124 40184	1000µF 20% 10V
2310	4822 122 33197	1nF 10% 50V
2400	4822 124 23179	10µF 20% 16V
2401	4822 126 10329	68pF 5%
2402	4822 124 41596	22µF 20% 50V
2403	4822 126 12882	100nF +80-20% 50V
2800	4822 122 33069	33pF 5% 5L 50V
2801	4822 122 33847	10pF 5% NP0 50V
2802	4822 122 33069	33pF 5% 5L 50V
2803	4822 122 33069	33pF 5% 5L 50V
2804	4822 121 51387	10nF 20% 16V
2805	4822 124 41397	47µF 20% 25V
2808	4822 124 40239	0,47µF 20% 63V
2809	4822 126 13581	0,22µF 20% 50V
2810	4822 126 12702	270pF 10% Y5P 50V
2811	4822 126 13581	0,22µF 20% 50V
2812	4822 124 40248	10µF 20% 63V
2813	4822 124 41397	47µF 20% 25V
2814	4822 124 41397	47µF 20% 25V
2815	4822 124 40242	1µF 20% 63V
2816	4822 122 33848	47pF 5% SL 50V

ELECTRICL PARTSLIST




2817	4822 122 33848	47pF 5% SL 50V
2818	4822 124 40242	1µF 20% 63V
2820	4822 126 12148	2,7nF 10%
2821	4822 124 40239	0,47µF 20% 63V
2822	4822 121 51387	10nF 20% 16V
2823	4822 124 41596	22µF 20% 50V
2824	4822 124 40239	0,47µF 20% 63V
2825	4822 126 12795	1,8nF 20% Y5R 16V
2826	4822 124 41397	47µF 20% 25V
2827	4822 126 11585	22nF +80-20% Y5V 25V
2828	4822 124 41397	47µF 20% 25V
2829	4822 122 33848	47pF 5% SL 50V
2830	4822 126 13581	0,22µF 20% 50V
2831	4822 122 33197	1nF 10% 50V
2832	4822 126 12938	100nF 80-20% 25V
2833	4822 124 40242	1µF 20% 63V
2834	4822 124 40242	1µF 20% 63V
2835	4822 122 33197	1nF 10% 50V
2836	4822 122 33197	1nF 10% 50V
2837	4822 126 11592	1nF 10% 50V
2838	4822 126 10778	220pF 50V
2839	4822 124 22225	330µF 20% 16V
2840	4822 126 13678	470µF 10V
2841	4822 126 10329	68pF 5%
2842	4822 124 41397	47µF 20% 25V
2844	4822 124 40242	1µF 20% 63V
2845	4822 126 10053	180pF 10% Y5P
2846	4822 126 13581	0,22µF 20% 50V
2847	4822 124 40239	0,47µF 20% 63V
2848	4822 124 40239	0,47µF 20% 63V
2849	4822 122 10462	15pF 5% NP0
2851	4822 122 33519	470pF 10% 50V
2852	4822 122 33519	470pF 10% 50V
2853	4822 122 33519	470pF 10% 50V
2854	4822 122 33519	470pF 10% 50V
2880	4822 124 41973	100µF 10V
2881	4822 124 80148	2200µF 20% 16V
2882	4822 122 33069	33pF 5% 5L 50V
2883	4822 122 33069	33pF 5% 5L 50V
2885	4822 124 41397	47µF 25V
2886	4822 122 33197	1nF 10% 50V
2996	4822 126 13632	22nF 80% M20 50V
2997	4822 126 13696	15pF 10%




3201	4822 116 52269	3K3 5% 0,5W
3202	4822 116 83864	10K
3203	4822 116 52238	12K 5% 0,5W
3204	4822 116 52269	3K3 5% 0,5W
3205	4822 116 83864	10K
3206	4822 116 52238	12K 5% 0,5W
3207	4822 116 52269	3K3 5% 0,5W
3208	4822 116 52269	3K3 5% 0,5W
3209	4822 102 10447	50KBX2
3210	4822 116 52256	2K2 5% 0,5W
3211	4822 116 52256	2K2 5% 0,5W
3212	4822 116 52245	150K 5% 0,5W
3213	4822 116 52245	150K 5% 0,5W
3214	4822 116 83864	10K 5% 0,5W
3215	4822 116 52206	120R
3216	4822 116 83864	10K 5% 0,5W
3217	4822 116 52206	120R
3219	4822 116 52215	220R 5% 0,5W
3220	4822 116 52215	220R 5% 0,5W
3221	4822 116 52289	5K6
3222	4822 116 52289	5K6
3263	4822 116 52234	100K 5% 0,5W
3265	4822 116 52251	18K 5% 0,5W
3302	4822 116 83864	10K 5% 0,5W
3305	4822 116 52211	150R
3306	4822 116 83864	10K 5% 0,5W
3307	4822 116 83864	10K 5% 0,5W
3400	4822 116 52175	100K 5% 0,5W
3401	4822 116 52257	22K 5% 0,5W
3402	4822 116 52257	22K 5% 0,5W
3403	4822 116 52175	100K 5% 0,5W
3405	4822 116 52175	100K 5% 0,5W
3800	4822 050 15603	56K 1% 0,4W
3801	4822 050 15603	56K 1% 0,4W
3802	4822 050 11003	10K 1% 0,4W
3803	4822 050 11003	10K 1% 0,4W
3804	4822 050 11003	10K 1% 0,4W
3805	4822 050 11003	10K 1% 0,4W
3806	4822 116 52296	6K8 5% 0,5W
3807	4822 116 52296	6K8 5% 0,5W
3808	4822 116 52269	3K3 5% 0,5W
3809	4822 116 52269	3K3 5% 0,5W
3810	4822 116 83864	10K 5% 0,5W
3811	4822 116 52289	5K6 5% 0,5W
3812	4822 116 52251	18K 5% 0,5W
3813	4822 116 83863	1K 5% 0,5W
3814	4822 116 52269	3K3 5% 0,5W
3815	4822 116 83863	1K 5% 0,5W
3816	4822 116 52297	68K
3817	4822 116 83882	39K 5% 0,5W

ELECTRICL PARTSLIST



3819	4822 116 83864	10K 5% 0,5W
3820	4822 116 83878	270K
3822	4822 116 52244	15K 5% 0,5W
3824	4822 116 52297	68K 5% 0,5W
3825	4822 116 52283	4K7 5% 0,5W
3826	4822 116 52291	56K 5% 0,5W
3827	4822 116 52296	6K8 5% 0,5W
3828	4822 116 52234	100K 5% 0,5W
3829	4822 116 52234	100K 5% 0,5W
3830	4822 116 52303	8K2 5% 0,5W
3831	4822 116 52234	100K 5% 0,5W
3832	4822 116 52202	8K2 5% 0,5W
3833	4822 116 52269	3K3 5% 0,5W
3834	4822 116 52283	4K7 5% 0,5W
3835	4822 116 52244	15K 5% 0,5W
3838	4822 116 52291	56K 5% 0,5W
3839	4822 116 52283	4K7 5% 0,5W
3841	4822 116 52234	100K 5% 0,5W
3842	4822 116 52219	330R 5% 0,5W
3843	4822 116 52215	220R 5% 0,5W
3844	4822 116 52245	150K 5% 0,5W
3845	4822 116 52239	120K 5% 0,5W
3846	4822 100 20167	50K 30% LIN 0,1W
3848	4822 116 52186	22R 5% 0,5W
3849	4822 116 83864	10K 5% 0,5W
3850	4822 116 52284	47K 5% 0,5W
3851	4822 116 52263	2K7 5% 0,5W
3852	4822 116 52285	470K 5% 0,5W
3853	4822 116 52234	100K 5% 0,5W
3854	4822 116 52228	680R 5% 0,5W
3855	4822 116 52234	100K 5% 0,5W
3856	4822 116 52243	1K5 5% 0,5W
3857	4822 116 52238	12K 5% 0,5W
3858	4822 116 52256	2K2 5% 0,5W
3860	4822 116 52251	18K 5% 0,5W
3861	4822 116 52231	820R 5% 0,5W
3862	4822 116 52231	820R 5% 0,5W
3863	4822 116 83864	10K 5% 0,5W
3864	4822 116 52256	2K2 5% 0,5W
3865	4822 116 52257	22K 5% 0,5W
3866	4822 116 52257	22K 5% 0,5W
3867	4822 116 52224	470R 5% 0,5W
3868	4822 116 52234	470R 5% 0,5W
3869	4822 116 52257	22K 5% 0,5W
3870	4822 116 52215	220R 5% 0,5W
3871	4822 116 52191	33R 5% 0,5W
3872	4822 116 52235	1M 5% 0,5W
3873	4822 116 52284	47K 5% 0,5W
3874	4822 116 52284	47K 5% 0,5W
3875	4822 116 83863	1K 5% 0,5W



3876	4822 116 83863	1K 5% 0,5W
3877	4822 116 52224	470R 5% 0,5W
3878	4822 116 52224	470R 5% 0,5W
3879	4822 116 52224	470R 5% 0,5W
3880	4822 116 83863	1K 5% 0,5W
3881	4822 116 52213	180R 5% 0,5W
3882	4822 116 83863	1K 5% 0,5W
3883	4822 116 83864	10K 5% 0,5W
3884	4822 116 83864	10K 5% 0,5W
3885	4822 116 83864	10K 5% 0,5W
3886	4822 116 83882	39K 5% 0,5W
3887	4822 116 83863	1K 5% 0,5W
3889	4822 116 83878	270K 5% 0,5W
3890	4822 116 83878	270K 5% 0,5W
3891	4822 116 52278	390K 5% 0,5W
3892	4822 116 52278	390K 5% 0,5W
3893	4822 116 52244	15K 5% 0,5W
3894	4822 116 52257	22K 5% 0,5W
3895	4822 116 52257	22K 5% 0,5W
3896	4822 116 52257	22K 5% 0,5W
3897	4822 116 52257	22K 5% 0,5W
3898	4822 116 52276	3K9 5% 0,5W
3899	4822 116 52263	2K7
3901	4822 116 83863	1K 5% 0,5W
3902	4822 116 52271	33K 5% 0,5W
3903	4822 116 52257	22K 5% 0,5W
3904	4822 116 52256	2K2 5% 0,5W
3905	4822 116 52243	1K5 5% 0,5W
3906	4822 100 20589	20K 30% lin 0,1W
3907	4822 116 52263	2K7 5% 0,5W
3908	4822 100 20589	20K 30% lin 0,1W
3910	4822 116 52303	8K2 5% 0,5W
3911	4822 116 52256	2K2 5% 0,5W
3912	4822 116 52257	22K 5% 0,5W
3913	4822 116 83864	10K 5% 0,5W
3914	4822 116 52226	560R 5% 0,5W
3915	4822 116 52256	2K2 5% 0,5W
3919	4822 116 52257	22K 5% 0,5W
3920	4822 116 52243	1K5 5% 0,5W
3921	4822 116 52235	1M 5% 0,5W
3922	4822 116 52245	150K 5% 0,5W
3950	4822 116 52284	47K 5% 0,5W
3951	4822 116 52234	100K 5% 0,5W
3956	4822 116 52195	47R 5% 0,5W
3957	4822 116 52195	47R 5% 0,5W
3958	4822 116 52211	150R 5% 0,5W
3959	4822 116 52175	100R 5% 0,5W
3960	4822 116 52276	3K9 5% 0,5W
3961		

ELECTRICAL PARTSLIST



6815	4822 130 34173	BZX79-C5V6
6816	4822 130 83363	LTL-16KGE
6817	4822 130 83363	LTL-16KGE
6818	4822 130 30621	1N4148



7201	4822 209 70372	IC TA7769P
7251	5322 130 44779	Trans. BC338-40
7252	5322 130 44779	Trans. BC338-40
7263	4822 130 44197	Trans. BC558B
7351	4822 130 44197	Trans. BC558B
7352	4822 130 40937	Trans. BC548B
7353	4822 130 40937	Trans. BC548B
7451	4822 130 44197	Trans. BC558B
7700	4822 130 91496	LCD Panel LPH6329-1
7800	5322 209 11323	IC 74HCU04N
7801	5322 209 61487	IC LM358N
7802	4822 209 80631	IC LM339N
7803	4822 209 80587	IC LM324N
7804	4822 209 11529	IC 74HC4066N
7808	4822 209 90498	TMP47C820DF
7810	4822 130 40937	Trans. BC548B
7841	4822 209 32852	IC TDA7073A/N2
7842	4822 209 32852	IC TDA7073A/N2
7851	4822 209 33339	IC SAA7345GP/M5
7855	4822 130 40981	Trans. BC337-25
7856	4822 130 40981	Trans. BC337-25
7857	4822 130 40937	Trans. BC548B
7858	4822 130 40937	Trans. BC548B
7859	4822 130 44197	Trans. BC558B
7861	4822 209 32421	IC TDA1311A/N2

- MISCELLANEOUS -

1263	4822 267 31468	Socket-headphone
1306	4822 070 31252	Fuse 1.25A
1306	5322 253 30203	Fuse 1.6A
1500	4822 277 30974	Voltage Selector
1810	4822 276 12465	Switch Tact
1811	4822 276 12465	Switch Tact
1812	4822 276 12465	Switch Tact
1813	4822 276 12465	Switch Tact
1814	4822 276 12465	Switch Tact
1815	4822 276 12465	Switch Tact
1816	4822 276 12465	Switch Tact
1817	4822 276 12465	Switch Tact
1818	4822 276 12465	Switch Tact
1819	4822 276 12465	Switch Tact
1820	4822 276 12465	Switch Tact

- MISCELLANEOUS -

1821	4822 276 12465	Switch Tact
1822	4822 276 12465	Switch Tact
1823	4822 276 12465	Switch Tact
1900	4822 240 10041	Loudspeaker
1901	4822 240 10041	Loudspeaker
1920	4822 276 13625	Door Switch
5300	4822 146 31484	Transf. Mains 230V
5300	4822 146 31485	Transf. Mains 230V
5300	4822 146 31486	Transf. Mains 100V
5300	4822 146 31483	Transf. Mains 120V

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

Service
Service
Service

Service Manual



TABLE OF CONTENTS

Exchange instruction for optical pickup unit
Partslist
Service hints
Cleaning the lens

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

**CLASS 1
LASER PRODUCT**

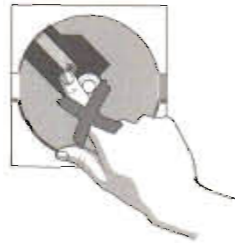
Exchange instruction for the OPTICAL PICKUP unit

SERVICE HINTS

WARNINGS: Danger of electrostatic discharge!

The laser diode is more sensitive to ESD than MOS ICs.
Therefore take care of ESD-protection whenever working on the disc drive.

Never touch the lens!

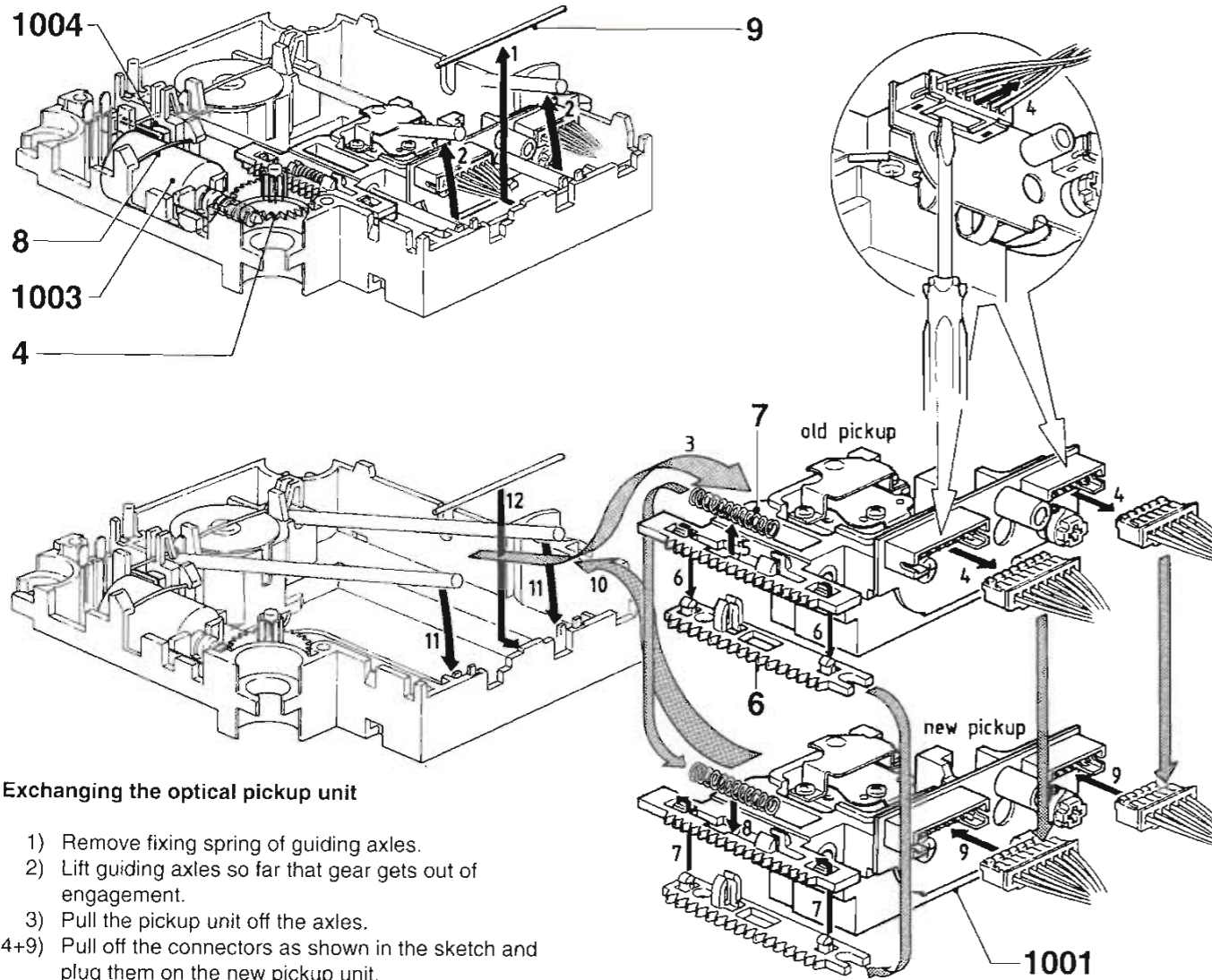


Service DISC - HOLDDOWN

The disc must always be fixed well on the turntable.
If the mechanism has to be dismantled for repair, a separate disc-holddown has to be used (e.g. service disc-holddown 4822 532 51871).
The CD mechanism then can function normally as in the set.

REDUCTION of REPAIR PRICE

If the disc drive does not function, in most cases the optical pickup unit will be defect.
To reduce the actual repair price it is recommended to replace the optical pickup unit only.
Follow the exchange instruction on the previous page.



CLEANING the LENS

Principle: Avoid cleaning of the lens !

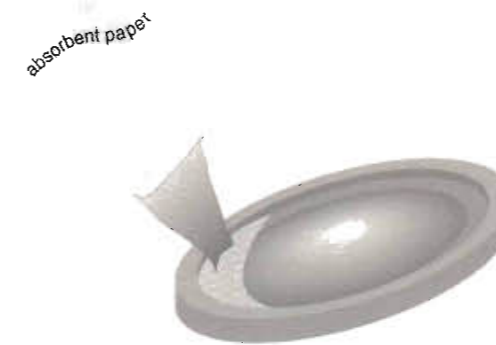
DUST particles are normally no major problem. They can be blown away with oilfree compressed air.

Finger - prints

If the lens is obviously polluted with finger - prints, it can be cleaned with alcohol or spirit.
Take a padstick and tip it into alcohol until it is soaked.
Then clean the surface of the lens by rotating the soaked padstick smoothly.
The alcohol will dissolve the finger - prints, rotation helps mechanically. Finally the lens will be filled with the dirty cleaning solvent.



Now incline the lens (disc drive) and soak the solvent up with absorbent paper.
The remnants of the solvent will evaporate.



Exchanging the optical pickup unit

- 1) Remove fixing spring of guiding axes.
- 2) Lift guiding axes so far that gear gets out of engagement.
- 3) Pull the pickup unit off the axes.
- 4+9) Pull off the connectors as shown in the sketch and plug them on the new pickup unit.
- 5+6) Remove the toothed bar plus compression spring.
- 7+8) Mount toothed bar and compression spring on new pickup unit.
- 10) Put the new pickup unit on the guiding axes.
- 11) Put guiding axes down to the chassis while positioning the pickup unit so that gear is forced easily into engagement.
- 12) Mount fixing spring of guiding axes.

4822 691 30345 RCD1.3D disc drive assy

- 4 4822 522 32451 gear wheel
- 6 4822 522 32453 toothed bar
- 7 4822 492 51979 spring, compression
- 8 4822 492 63941 spring, wire (motor)
- 9 4822 492 63942 spring, wire (axles)

- 1001 4822 218 30768 optical pickup unit RCD1.3
- 1003 4822 361 21113 servomotor assy
- 1004 4822 276 12163 switch, leaf

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

IMPORTANT NOTE:
All electrical adjustments have to be carried out new.
Follow the adjustment table of the service manual for the relevant set the disc drive is used.
The laser current has already been adjusted by the factory.

Service
Service
Service

Product Service Group CE Audio

Service Information

GB

To adapt the service manual the following sheets have been added/changed.

F

Afin de pouvoir adapter le "manual service" les feuillets suivants ont été soit modifiés, soit ajoutés.

NL

Voor het aanpassen van de service manual zijn de onderstaande pagina's toegevoegd/gewijzigd.

D

Zür anpassung des Service Manual sind die nachstehenden Seiten hinzugefügt/geändert.

I

Le seguenti pagine sono state cambiate/aggiunte allo scopo di adattare il Manuale di Servizio.

Many changes implemented at the start of production and new release of PCB will be used from week 9538 onwards.

Page	Contents	PCS No.
11-a	Combi Board - Layout diagram	PCS 84 856
12-a	Combi Board - Circuit diagram	PCS 84 857

RADIO ALIGNMENT

AM IF							
AM or MW	468KHz		min.	5106 5108		max.	
AM RF							
MW *	512KHz		max.	5105		max.	
	1635KHz		min.	C4			
	550KHz			5102			
	1500KHz			C3			
FM IF							
FM #	10.7MHz					symm. max. lin.	
FM RF							
FM #	75.7MHz		max.	5104		max.	
	108.25MHz		min.	C2			
	77MHz			5101			
	106MHz			C1			
STEREO DECODER							
FM #	98MHz		92MHz			152 ± 1KHz	

* Mod. 1KHz 30%

10nF + 15E

Repeat

ADJUSTMENT TABLE

CD-PART					
LASER CURRENT					
The trimpot. for adjustment of the laser current is located on the disc drive and has been adjusted in the production line. Therefore for service purpose it is not intended to adjust the laser current. Check only if the HF-signal level is higher than 800mV _{pp} .					
TRACK BALANCE					
Service pos. 3 Display shows "3"			3846	Adjust to 0±10mV DC offset	
TRACK GAIN					
Play with Test-Disc 5 track 1	1300 Hz 100 mV _{rms}	see Fig. 1	3906		CHX = 50 mV/DIV CHY = 50 mV/DIV Adjust according to FIG.3
FOCUS GAIN					
Play with Test-Disc 5 track 1	1200 Hz 500 mV _{rms}	see Fig. 2	3908		CHX = 200 mV/DIV CHY = 200 mV/DIV Adjust according to FIG.3

Test disc 5 4822 397 30096

REMARK: In case the discdrive or the optical pickup has been exchanged, always adjust **TRACK BALANCE**, **TRACK GAIN** and **FOCUS GAIN**.

FIG. 1

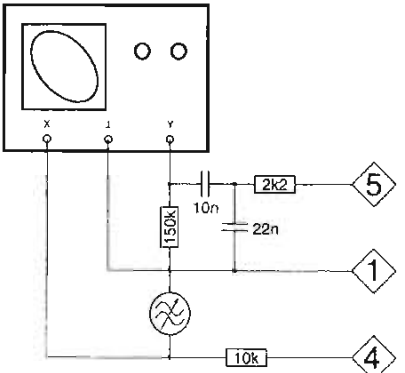


FIG. 2

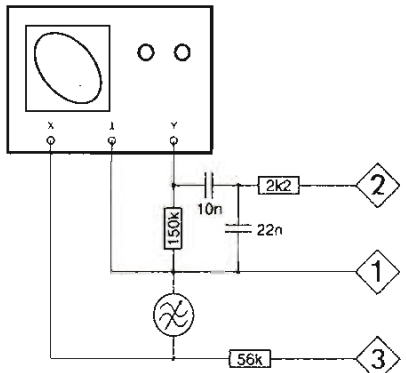
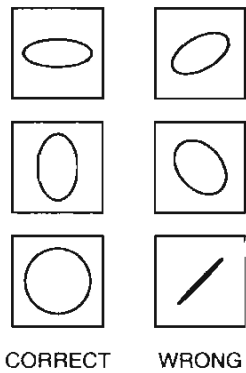


FIG. 3



COMBI BOARD - LAYOUT DIAGRAM

53 B 12	1816 D 1	2207 B 12	2301 C 12	2812 A 9	2831 A 6	2851 C 4	3207 B 12	3305 C 6	3815 A 7	3838 D 8	3858 D 7	3877 A 5	3896 A 8	3919 B 10	3969 C 5	5851 B 5	6811 E 3	7803 C 8	9205 B 3	9377 B 4	9843 B 5	9863 A 9	9882 D 3
1253 B 12	1817 D 2	2208 B 12	2302 C 12	2813 C 9	2832 E 10	2852 C 4	3208 B 12	3306 C 6	3816 B 10	3839 E 8	3860 E 8	3878 A 5	3897 A 9	3920 D 10	3970 C 5	5903 D 6	6813 C 5	7804 A 9	9206 D 11	9401 E 5	9844 A 7	9864 B 9	9883 C 3
1256 E 11	1818 C 1	2209 E 12	2303 C 12	2814 C 9	2833 A 7	2853 C 5	3209 A 12	3307 D 7	3817 B 9	3841 D 8	3861 E 9	3879 A 5	3898 C 4	3921 B 8	3971 C 4	5904 B 5	6814 C 4	7808 E 5	9207 C 7	9801 E 8	9845 B 3	9865 D 10	9884 C 3
1263 C 11	1819 E 1	2210 E 12	2304 C 11	2815 C 9	2834 A 7	2854 C 5	3210 E 12	3800 D 9	3819 B 10	3842 D 9	3862 E 9	3880 A 6	3899 B 8	3922 C 5	3972 C 4	6253 D 11	6815 D 6	7810 B 8	9209 D 3	9825 E 1	9847 B 6	9866 E 6	9885 C 3
1295 C 12	1820 B 1	2211 E 12	2306 C 11	2816 D 10	2835 A 7	2880 D 5	3211 E 12	3801 D 9	3820 B 10	3843 C 9	3863 E 9	3881 A 6	3901 A 6	3950 C 5	3973 C 4	6301 C 11	6816 E 3	7841 E 10	9210 D 3	9826 B 3	9848 B 3	9867 B 10	9886 C 3
1296 A 12	1821 C 2	2212 E 11	2308 C 5	2817 D 10	2836 A 7	2881 D 6	3212 E 12	3802 D 9	3822 A 10	3844 D 10	3864 A 8	3882 B 8	3902 A 5	3951 E 5	3974 C 4	6302 C 12	6817 E 3	7842 E 9	9211 D 11	9827 E 6	9849 A 8	9868 C 10	9887 C 3
1297 E 12	1822 E 2	2213 E 12	2309 D 12	2818 A 5	2837 E 10	2882 E 6	3213 E 11	3803 D 9	3824 B 10	3845 D 10	3865 B 7	3883 B 8	3903 A 8	3956 B 3	3975 D 4	6303 C 12	6818 A 4	7851 A 6	9212 B 3	9828 C 7	9850 D 6	9869 D 10	9888 C 3
1298 A 11	1823 C 1	2214 E 11	2310 C 6	2820 A 8	2838 E 10	2883 E 6	3214 E 12	3804 D 9	3825 A 10	3846 E 9	3866 B 7	3884 E 7	3904 B 9	3957 B 3	3976 D 4	6304 C 11	7201 D 12	7855 B 5	9213 B 7	9829 D 4	9851 C 8	9870 D 10	9889 C 3
1801 D 10	1833 A 7	2215 E 11	2800 D 9	2821 A 8	2839 E 8	2885 C 4	3215 E 12	3805 D 9	3826 A 10	3848 B 8	3867 E 8	3885 B 8	3905 D 8	3958 B 4	3977 D 5	6305 C 6	7251 E 12	7856 B 4	9214 B 4	9830 B 4	9852 C 5	9871 C 9	9890 C 3
1802 E 10	1844 C 6	2216 D 12	2801 D 9	2822 C 7	2840 A 6	2886 C 4	3216 E 11	3806 D 9	3827 A 9	3849 A 10	3868 E 8	3886 C 9	3906 D 8	3959 A 4	3978 D 5	6306 C 12	7252 E 11	7857 B 3	9215 C 3	9831 B 7	9853 E 8	9872 B 9	9891 C 3
1803 E 7	1845 C 5	2218 D 12	2802 C 10	2823 D 7	2841 C 7	2996 B 6	3217 D 11	3807 D 9	3828 D 10	3850 A 8	3869 B 6	3887 A 6	3907 C 8	3960 C 4	3992 E 1	6307 C 12	7263 D 11	7858 B 2	9216 D 6	9832 B 4	9854 D 10	9873 E 7	9892 C 3
1804 A 4	1846 E 2	2219 D 11	2803 C 10	2824 D 7	2842 A 8	2997 A 4	3219 C 11	3808 D 9	3829 C 10	3851 A 8	3870 B 5	3889 E 9	3908 D 8	3961 D 7	3993 E 2	6308 C 6	7351 C 6	7859 D 8	9217 D 5	9834 D 6	9855 B 9	9874 A 9	9893 B 3
1810 E 1	1920 E 3	2221 D 11	2804 C 10	2825 B 9	2844 D 8	3201 A 12	3220 C 11	3809 D 9	3830 C 8	3852 A 8	3871 B 4	3890 E 9	3910 C 8	3962 A 4	3994 E 1	6800 B 10	7352 C 5	7861 A 6	921 D 5	9835 E 7	9856 B 9	9875 E 9	9895 B 3
1811 B 2	1921 E 3	2222 D 12	2805 C 10	2826 B 5	2845 C 9	3202 A 12	3221 B 12	3810 C 10	3831 C 8	3853 C 7	3872 B 5	3891 E 7	3911 E 6	3963 B 3	3995 E 2	6801 A 9	7353 D 6	9200 B 12	9219 D 3	9836 B 6	9857 B 9	9876 B 7	9899 D 6
1812 D 1	2203 A 12	2223 D 11	2808 A 10	2827 B 6	2846 B 9	3203 A 12	3222 B 12	3811 C 10	3832 C 8	3854 C 7	3873 A 7	3892 E 7	3912 A 5	3965 D 5	5800 E 9	6803 A 10	7700 C 2	9201 D 12	9221 E 10	9837 B 9	9858 C 9	9877 B 5	9900 C 5
1813 E 2	2204 A 12	2224 E 12	2809 D 8	2828 B 6	2847 B 8	3204 A 12	3263 C 12	3812 C 9	3833 C 8	3855 C 7	3874 A 7	3893 E 8	3913 C 9	3966 D 7	5801 E 10	6804 A 5	7800 C 9	9202 C 7	9251 C 6	9840 E 7	9859 C 8	9878 D 10	
1814 E 1	2205 A 12	2251 E 12	2810 C 8	2829 B 6	2848 B 8	3205 A 12	3265 C 12	3813 A 10	3834 D 8	3856 C 8	3875 A 7	3894 A 5	3914 B 8	3967 D 7	5802 E 5	6806 A 10	7801 D 9	9203 B 5	9338 B 7	9841 E 7	9861 A 8	9879 D 8	
1815 C 2	2206 A 12	2252 E 11	2811 D 8	2830 A 6	2849 B 5	3206 A 12	3302 C 6	3814 D 9	3835 C 8	3857 D 7	3876 A 7	3895 A 5	3915 B 8	3968 D 7	5803 D 5	6810 E 2	7802 B 10	9204 C 11	9376 A 7	9842 B 7	9862 B 9	9881 D 6	

1 2 3 4 5 6 7 8 9 10 11 12

A

B

C

D

E

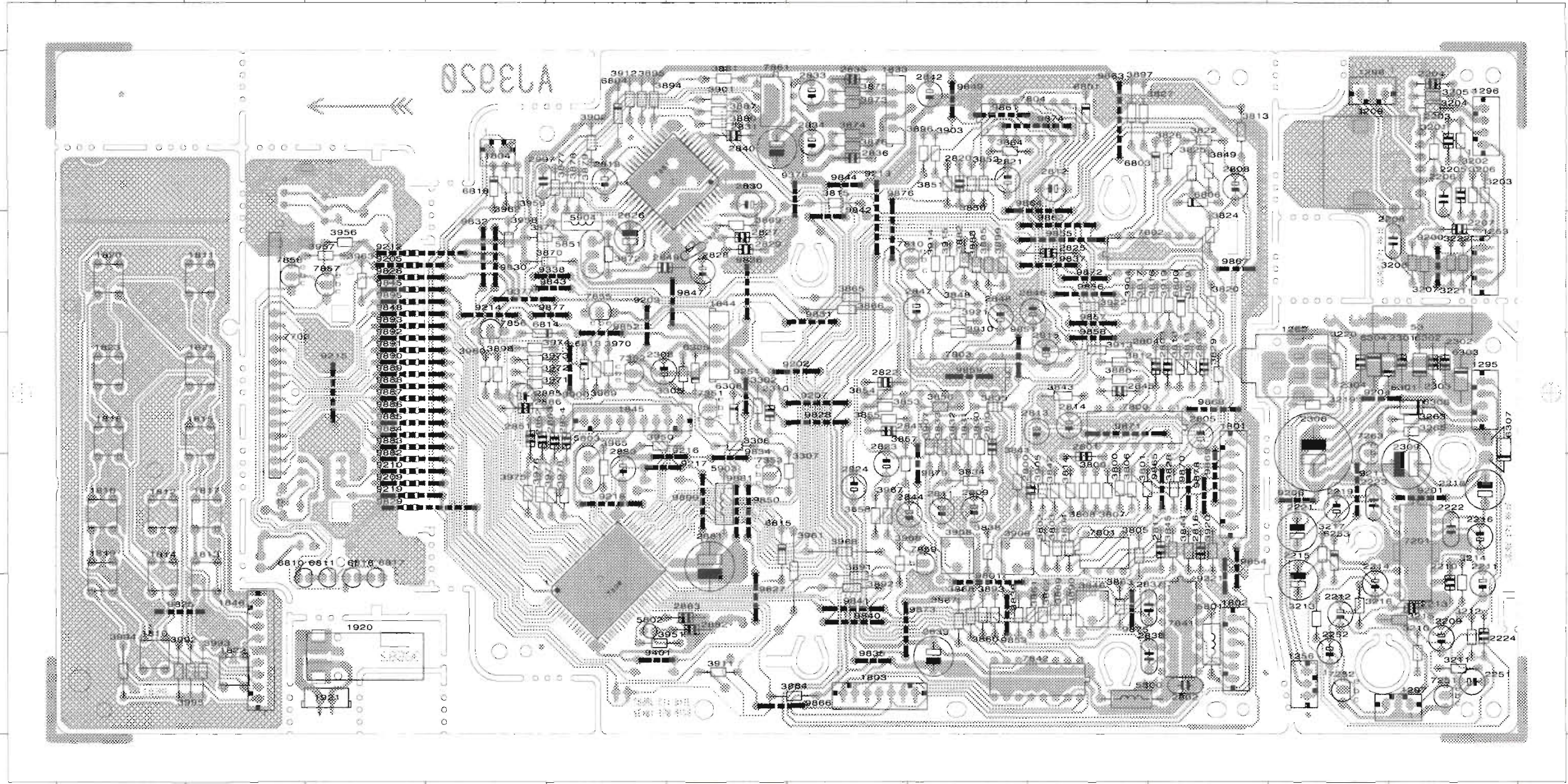
A

B

C

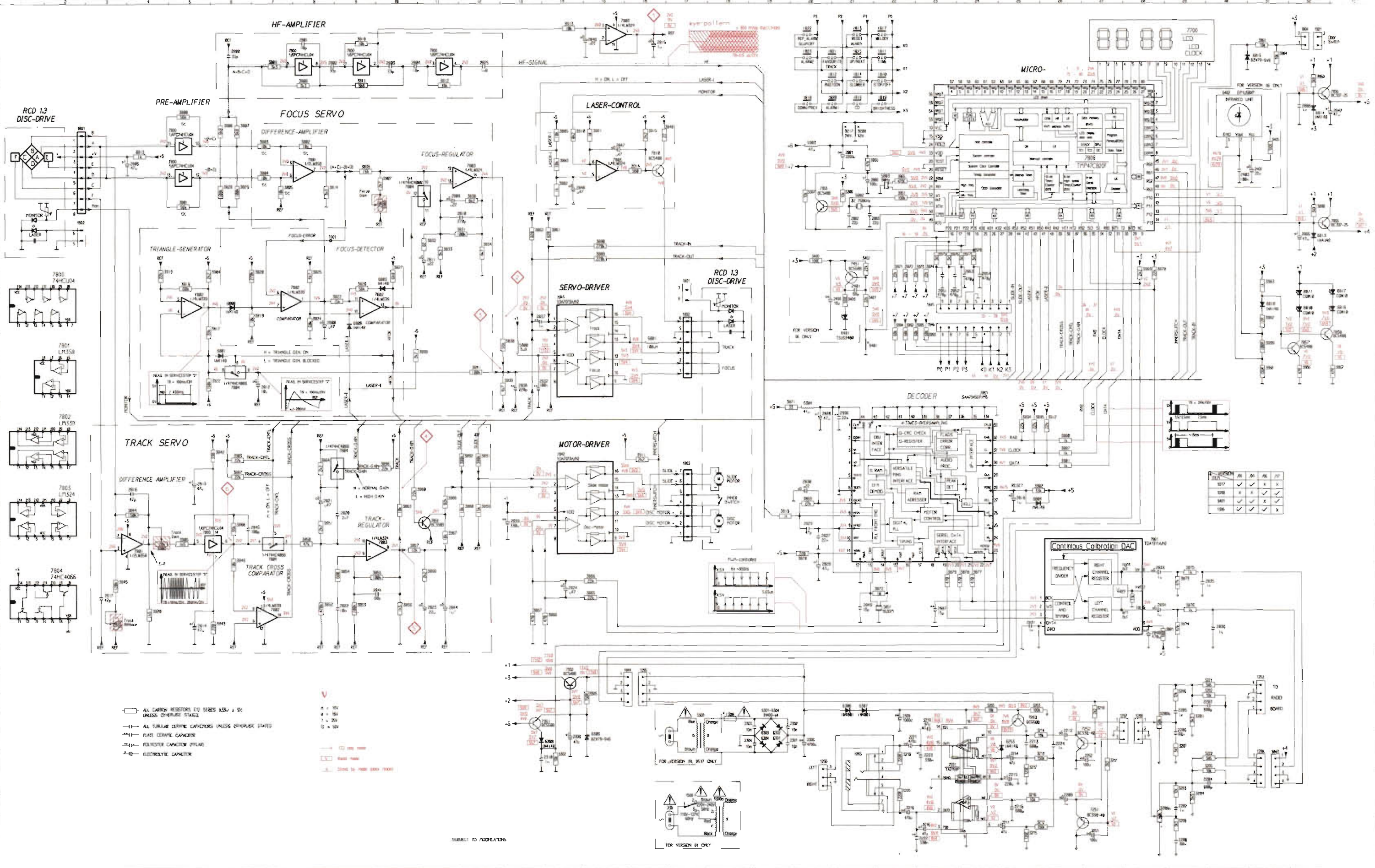
D

E



1 2 3 4 5 6 7 8 9 10 11 12

COMBI BOARD - CIRCUIT DIAGRAM

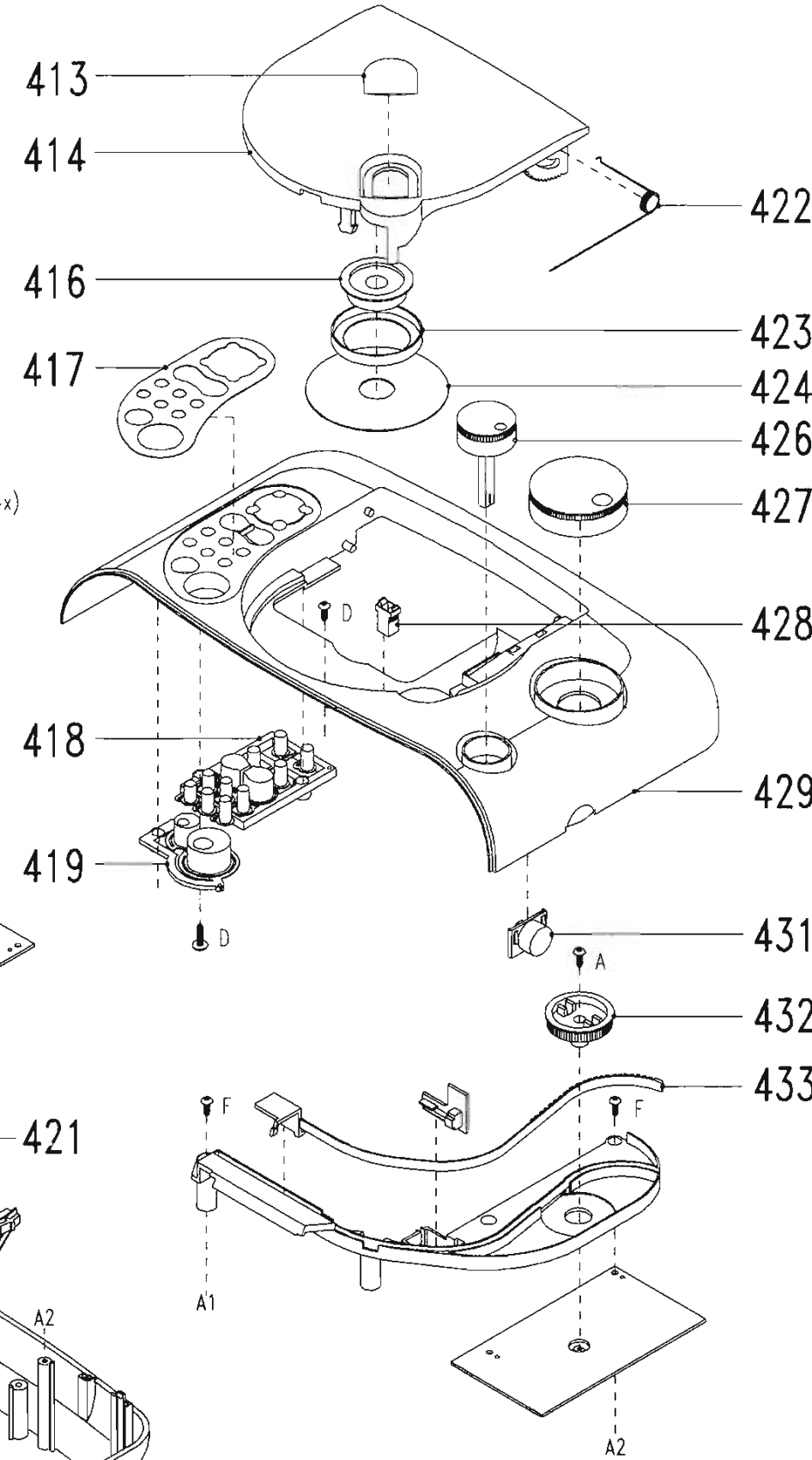
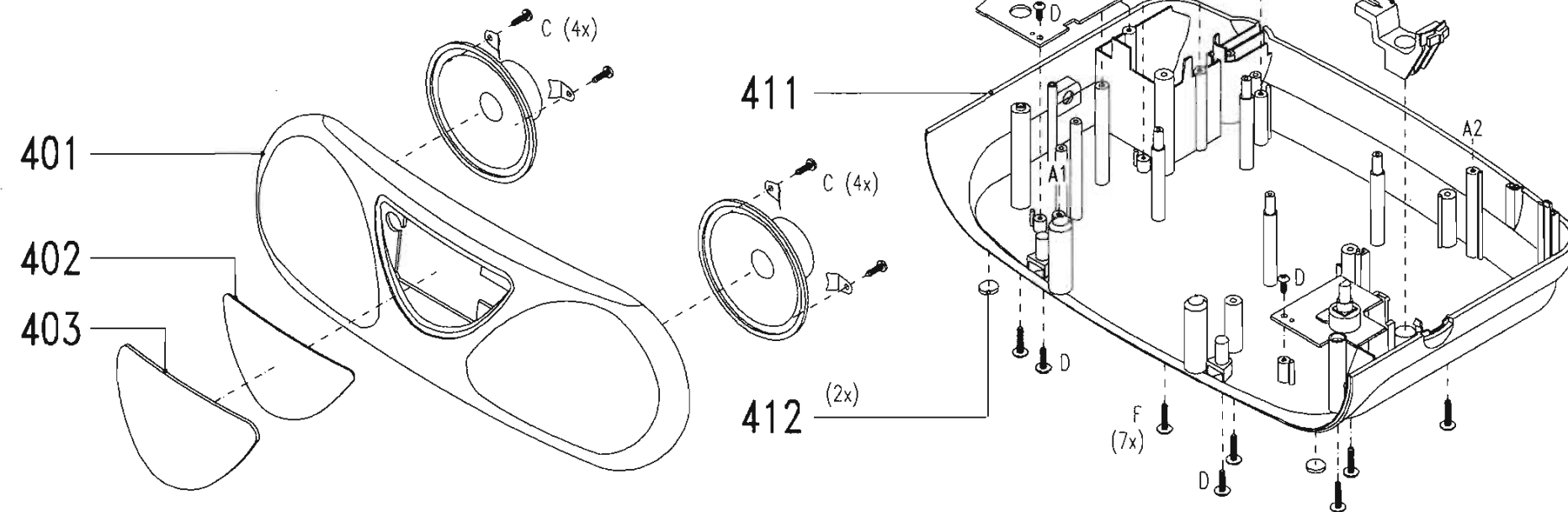


238	S17	2302	Q20	2849	O21	3810	A 9	3874	O29	3968	L11	7451	F21
1253	P31	2303	Q18	2851	G23	3811	B 9	3875	N29	3969	G28	7700	A29
1256	R20	2304	R18	2852	G23	3812	B11	3876	O29	3970	G28	7800	D 4
1263	R21	2306	R20	2853	G24	3813	D 4	3877	N24	3971	F22	7800	C 4
1295	P16	2308	R14	2854	G24	3814	E 8	3878	N24	3972	F22	7800	A 7
1296	R31	2309	Q22	2880	D22	3815	L19	3879	N23	3973	F23	7800	M 5
1297	Q27	2310	R14	2881	D21	3816	G 5	3880	K26	3974	F23	7800	A11
1298	Q28	2400	G21	2882	E21	3817	H 6	3881	O29	3975	F23	7800	A 9
1306	Q18	2401	G21	2883	E22	3819	H 7	3882	D14	3976	F23	7801	D 8
1500	S17	2402	D31	2885	F32	3820	G 7	3883	D14	3977	F24	7801	M 4
1801	C 2	2403	D30	2886	C32	3822	G 9	3884	A31	3978	F24	7802	G 9
1802	H17	2800	A 6	2996	J21	3824	H 8	3885	C14	3992	H22	7802	O 7
1803	K17	2801	A 8	2997	O23	3825	G 8	3886	M 6	3993	H23	7802	G 7
1804	A32	2802	B 8	3201	Q29	3826	G 9	3887	K26	3994	H22	7802	G 5
1810	B22	2803	B10	3202	Q30	3827	F10	3889	F15	3995	H23	7803	D10
1811	A22	2804	B10	3203	S29	3828	E 6	3890	F15	5300	Q17	7803	M10
1812	B21	2805	D 4	3204	S29	3829	E 6	3891	K12	5300a	S18	7803	D15
1813	A21	2808	H 8	3205	R30	3830	E12	3892	K12	5300b	Q17	7803	A15
1814	B21	2809	E11	3206	Q29	3831	F12	3893	L12	5800	H13	7804	D10
1815	A21	2810	E12	3207	R29	3832	F11	3894	J25	5801	H16	7804	I 6
1816	B21	2811	F11	3208	T29	3833	F11	3895	J25	5802	E21	7804	M 7
1817	A22	2812	I 7	3209a	S28	3834	F12	3896	K 10	5803	D22	7804	K 9
1818	B20	2813	L 5	3209b	Q28	3835	D 9	3897	K 6	5815	O22	7808	D27
1819	B22	2814	O 5	3210	R27	3838	H13	3898	E32	5903	D20	7810	D16
1820	B21	2815	A16	3211	R27	3839	I13	3899	H11	5904	J20	7841	G14
1821	A21	2816	L 4	3212	T25	3841	I12	3901	K26	6253	R25	7842	K14
1822	A20	2817	N 3	3213	R25	3842	K 6	3902	L25	6301	R19	7851	I24
1823	A20	2818	L25	3214	R25	3843	O 6	3903	K 6	6302	R19	7855	E33
1843	R31	2820	L 9	3215	T25	3844	L 4	3904	G 6	6303	R19	7856	B33
1844	P15	2821	L 8	3216	S25	3845	N 3	3905	M 5	6304	R19	7857	H32
1845	G23	2822	O 9	3217	R25	3846	O 3	3906	M 4	6305	R15	7858	H33
1846	H23	2823	O11	3219	R22	3848	C17	3907	D10	6306	Q21	7859	M11
1921	A32	2824	N14	3220	S22	3849	M 6	3908	E10	6307	Q21	7861	M28
2203	Q30	2825	B12	3221	P30	3850	M 8	3910	C14	6308	R14	9208	C21
2204	S30	2826	J20	3222	R30	3851	M 8	3911	K16	6401	H21	9217	C21
2205	Q29	2827	M20	3263	Q25	3852	O 8	3912	J26	6402	B30	9401	H21
2206	Q29	2828	N20	3265	Q24	3853	O 9	3913	A14	6800	G 6		
2207	S29	2829	M20	3302	R14	3854	N 9	3914	D16	6801	H 6		
2208	T29	2830	L20	3305	Q15	3855	N10	3915	C16	6803	G10		
2209	S26	2831	O25	3306	E21	3856	O10	3919	G 4	6804	L25		
2210	S25	2832	I14	3307	E20	3857	M10	3920	O 4	6806	H 9		
2211	T25	2833	N28	3400	F20	3858	N11	3921	C15	6810	G32		
2212	R26	2834	O28	3401	G21	3860	L12	3922	I 6	6811	G32		
2213	R25	2835	N30	3402	F21	3861	F14	3950	D22	6813	F32		
2214	R25	2836	O30	3403	G21	3862	F13	3951	E22	6814	C32		
2215	S25	2837	H13	3405	C31	3863	L10	3956	I32	6815	A31		
2216	T23	2838	I13	3800	C 5	3864	K 8	3957	I33	6816	G33		
2218	S22	2839	M13	3801	E 5	3865	N15	3958	I31	6817	G33		
2219	Q23	2840	O28	3802	C 8	3866	N15	3959	H31	6818	G31		
2221	R22	2841	N10	3803	C 7	3867	O13	3960	B32	7201	R23		
2222	T23	2842	C33	3804	D 7	3868	O14	3961	A31	7251	S27		
2223	R23	2844	O11	3805	E 7	3869	L20	3962	H31	7252	Q27		
2224	R26	2845	M 7	3806	C 6	3870	M20	3963	G31	7263	Q25		
2251	T27	2846	A15	3807	C 6	3871	J20	3965	D22	7351	Q13		
2252	R27	2847	D15	3808	B 8	3872	N22	3966	L11	7352	P14		
2301	R20	2848	E14	3809	B 7	3873	N29	3967	M11	7353	E20		

EXPLODED VIEW DIAGRAM - CABINET

MECHANICAL PARTSLIST

SCREWS LIST		
A	Machine	2.6 x 6
B	Torx	ST 2 x 16
C	Torx	ST 3 x 8
D	Torx	ST 3 x 10
E	Torx	ST 3 x 12
F	Torx	ST 3 x 16



- 401 4822 423 51208 Cabinet Front
- 402 4822 454 12976 Sheet Lens (for -/00)
- 402 4822 454 12979 Sheet Lens (for -/01)
- 402 4822 454 12978 Sheet Lens (for -/06)
- 402 4822 454 12975 Sheet Lens (for -/17)

- 403 4822 450 62497 Lens Display (not for-/17)
- 403 4822 450 62491 Lens Display (for -/17 only)
- 406 4822 532 61104 Spacer
- 407 4822 532 61103 Damper
- 408 4822 256 80076 Bracket

- 409 4822 380 20507 Guide
- 411 4822 423 90223 Cabinet Bottom
- 412 4822 462 40692 Plug
- 413 4822 454 30504 Sheet CD Door
- 414 4822 444 61076 CD Door (not for -/17)

- 414 4822 444 61074 CD Door (for -/17 only)
- 416 4822 532 51871 Ring Pressure
- 417 4822 454 12977 Sheet Function Knob
- 418 4822 410 63853 Knob Funtion
- 419 4822 410 63854 Knob Repeat Alarm

- 421 4822 410 63852 Knob Band
- 422 4822 492 52332 Spring Compression Disc
- 424 4822 535 60096 Disc
- 426 4822 413 51518 Knob Volume
- 426 4822 532 12241 Ring

- 427 4822 413 51517 Knob Tuning
- 428 4822 276 13079 Locking Mechanism
- 429 4822 423 90222 Cabinet Top (for -/00)
- 429 4822 423 90224 Cabinet Top (for -/01)
- 429 4822 423 90224 Cabinet Top (for -/06)

- 429 4822 423 90221 Cabinet Top (for -/17)
- 431 4822 529 10257 Damper
- 432 4822 522 33579 Gear
- 433 4822 450 81232 Pointer
- 4822 321 10853 Mains (for -/01)

- 4822 736 22491 IFU (for -/00/01)
- 4822 736 22488 IFU (for -/17)

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