

Service
Service
Service

This document was downloaded from

www.mfbfreaks.com

Collecting vintage Philips Audio and more!



Service Manual

CONTENTS

PAGE

Specifications	2
Controls & Connections	3
Circuit Description	4
Warnings	5
Service Hints	6-7
Service Test Program	8
Block Diagram	9
Faultfinding Tree	10-11-12
Wiring Diagram	13-14
Interface & Power Diagram	15-16
DSP Add-On Board Diagram	17
DSP Add-On Board PCB	19
Block Diagram IC's	18-20-21
DSP Motherboard Diagram	22-23-24
DSP Motherboard PCB	25-26
DSP Motherboard Chips PCB	27-28
Power Unit diagram	29-30
Power Unit PCB	31-32
Exploded view	33-34
List of Mechanical Parts	35
List of Electrical Parts	36-37-38-39-40-41



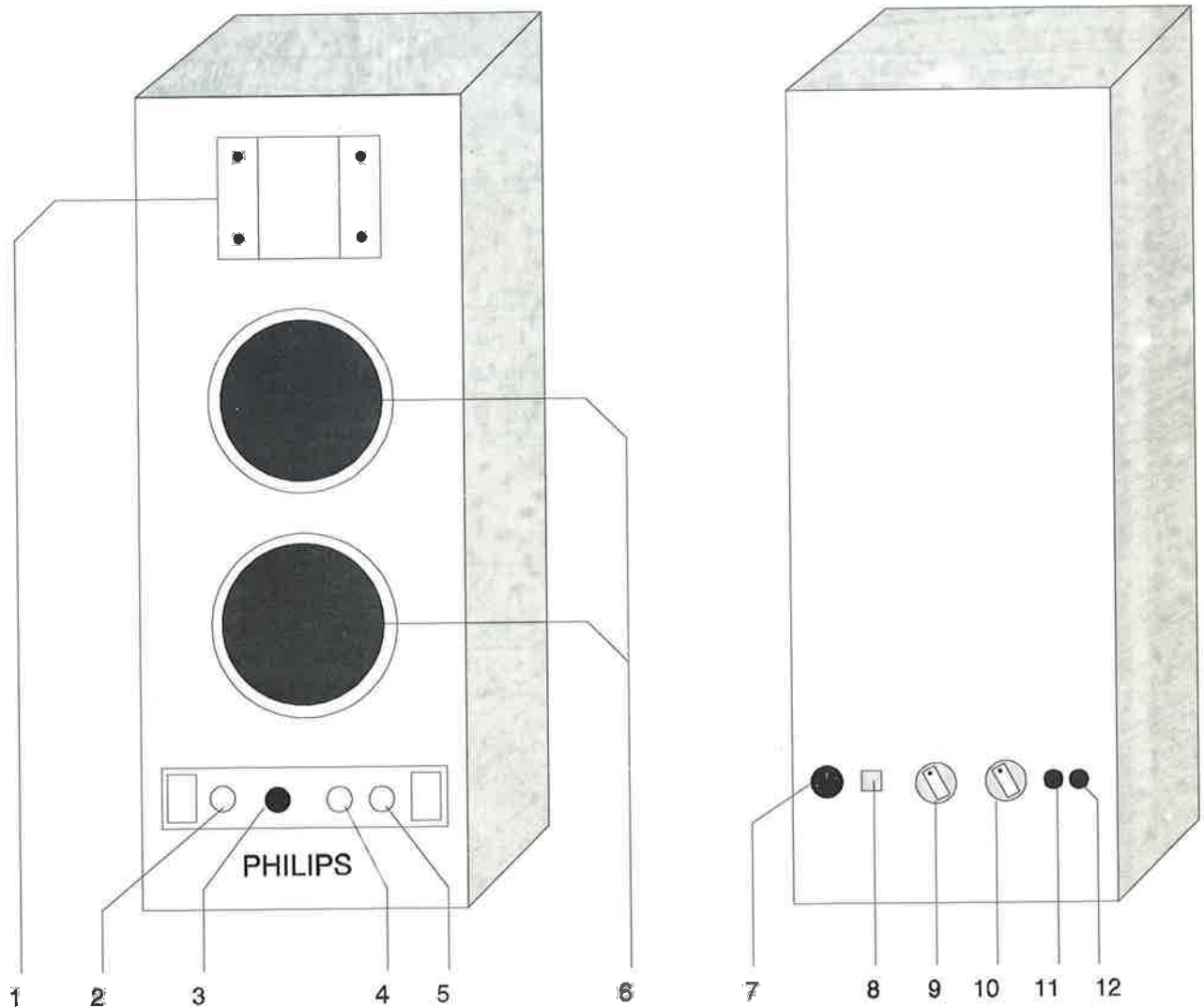
SPECIFICATION**General:**

Mains voltage	:220V	50Hz	for/00
	:240V	50Hz	for/05
	:120V	60Hz	for/17
Power consumption	:≤170W at 80W output power		
	:≤15W at stand by		
Dimensions:(wxhxd)	:220x565x330 mm		
System	:2 way closed, digital, active		
Speakers	:2 x 5 1/4" woofer/midrange		
	:1 x Isophase tweeter		
Connectors	:1 x cinch coaxial digital input		
	(500mV 75Ω digital format)		
	:1 x cinch coaxial digital output		
	(500mV 75Ω digital format)		
Controls	:Left/Right/Mono Rotary		
	:System A/B/C Rotary		
Leds indications	:Red/Green	On/Standby/RC-Acknowledge	
	:Red	Overload high	
	:Yellow	Phase compensation on/off	
Maximum combination of DSS	:12		

Amplifier:

Output power woofer tweeter	:80W at 8Ω D=≤0,05% (IEC)
	:10W at 8Ω D=≤0,05% (IEC)
Music power Low High	:320W(paek)
	:40W (paek)
Woofer channel	:G class
Tweeter channel	:AB class
Frequency response	:50Hz -20kHz ≤2dB
Input sensitivity:	
Woofer channel	:170mV for 80W into 8Ω output
Tweeter channel	:60mV for 10W into 8Ω output
Input impedance	:2k2

CONTROLS & CONNECTIONS



- 1 Tweeter
- 2 ON/Standby led
- 3 I.R. Eye
- 4 Protect tweeter led
- 5 Phase compensation on/off
- 6 Woofer 1 + 2

Pos.nr.

D6411
D6414
D6413
D6412

- 7 Fixed mainscord
- 8 Power on/off
- 9 Switch system A/B/C rotary
- 10 Switch L/R/mono rotary
- 11 DSS ~~OUT~~ connector
- 12 DSS ~~OUT~~ connector

Pos.nr.

1409
1402
1401
1405
1405

CIRCUIT DESCRIPTION

DSS - LINK

The purpose of the DSS-link is to send digital control information as well as digital audio information over only one line.

The digital audio - information or EBU signal is uni-directional, i.e. from the DSS-link IN to the DSS-link OUT, while the digital control information is bidirectional.

See Pb. 15

Both signals (EBU and control) are frequency multiplexed. The control information is a low frequency signal, while the audio information is a high frequency signal. By means of a high-pass filter (C2401, R3402 and C2402) the audio information can be extracted from this composed signal, while the control information can be extracted with a low-pass filter (R3408, C2404 and R3414). The host controller (IC7507) puts control information on the bus, via a low-pass filter (R3409, C2405 and R3415).

The digital audio information (EBU) is extracted by a passive high-pass filter, restored by the non buffered inverters (IC7401) and so mixed by the control information to the DSS link OUT. For the control information you have to see the bus as one long wire. Each bus circuit hangs on this wire and can transmit as well as receive control information. Via the opamp LM324 and the diode BAV74 the control information of the bus is filtered out and passed on to the Host controller. The information coming from the Host is then placed on the bus via the opamp LM324. The circuit build round the transistor 7416 provides a sharp descending ramp of the control information.

ADIC

See Pb. 22

ADIC stands for Audio Digital Interface Circuit. This circuit (IC7500) provides the decoding and the separation of the EBU-format into audio information and sub-code information. The sub-code information that is generated by an EBU source, e.g. a CD player, contains information about this source, like sample frequency, serial copy management. The PLL-circuit, build around a LC-oscillator (5500,7502,6500,2509) sees to it that the ADIC is synchronised with the incoming EBU signal. Depending on the sample frequency the frequency of the LC oscillator varies from 8,192MHz at 32kHz sample frequency till 12,288MHz at 48kHz sampling frequency. The ADIC generates all necessary clock signals so that the whole DSP motherboard is synchronised.

In this configuration, the ADIC gives the decoded information directly to the Host controller. The subcode information that is decoded, is the sample frequency and deemphasis ON/OFF.

DSP ADD-ON

The DSP Add-ON board consists of the DSP processor (7550) and an Eprom (7551).

The Eprom contains the program for the DSP processor as well as all coefficients for the digital

filtering.

The DSP processor is the heart of the DSS930. The functions described below are processed by the processor:

- channel selection : on the back of the DSS930 there is a rotary switch you can put in three positions, left, right or mono. The position of this switch is read by the Host controller, which passes this information to the DSP. Depending on the switch position, the DSP takes only the left or right channel or adds both channels and divides this result by two to reproduce a mono signal.

- compensation on: when the compensation is on (the compensation led lights up), the DSP processes the signal in such a way that the overall amplitude-curve, acoustically measured, stays in a margin of +/- 2dB and the phase-characteristic remains linear within +/- 20°.

- compensation out (tone regulation): when the compensation is switched off (only possible via DSC950) the DSP processor loads other coefficients to use simple tone regulations, +/-5dB for bass as well as treble.

- digitale silence: when there is a 'silence' in the audio signal that is below a fixed threshold level and lasts longer than 8 seconds, the DSP activates the analogue mute line.

UPSAMPLE FILTER AND BITSTREAM DIGITAL-ANALOG CONVERTOR

The upsample filter (7503) fulfills the following functions:

- eight times oversampling, digital deemphasis filtering on three sample frequencies and (fine tuning of the) volume regulation.

- The bitstream DAC (7504) converts the digital audio data into analogue signals.

VOLUME CONTROL AND TWEETER PROTECT

See Pb. 24

The analogue attenuators (3450,3456,3452,3458, 3454 and 3460 for woofer channel and 3451, 3457,3453,3459 3455 and 3461 for tweeter channel) on the end of the DSP motherboard, provides a rough volume control in steps of 8dB. The three attenuators are weighed binary, this means that the first attenuator (3450 and 3456 for the woofer) attenuates 8dB, the second (3452 and 3458 for the woofer) 16dB and the third (3454 and 3460 for the woofer) 24dB.

Combinations of these three attenuators gives attenuation between 8dB and 56dB in steps of 8dB. The fine steps of 2dB between these rough steps are regulated by the upsample filter.

The tweeter protect circuit sees that the isofase tweeter can not be damaged.

- This circuit limits the amplitude and provides soft clipping. The second opamp 7508 is a level comparator that continuously looks at the signal. When the amplitude of the signal rises above the reference voltage the transistor 7521 is switched off, where as the first opamp 7808 gets the signal and antiphase limits and soft clips the output signal.

GB

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

NL

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

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso 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.

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

WARNINGS**GB WARNING**

All ICs and many other semi conductors 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 also at this potential.

NL WAARSCHUWING

Alle ICs 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 hetzelfde potentiaal.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber electrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

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

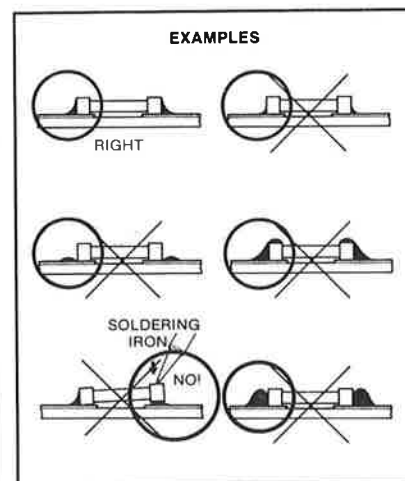
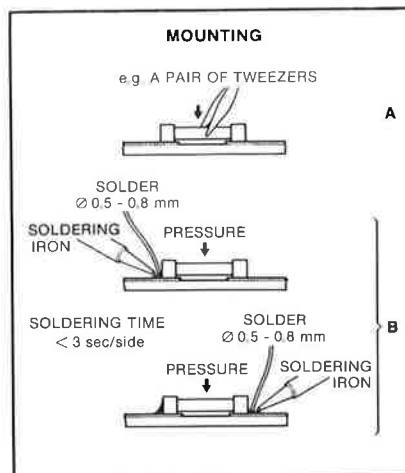
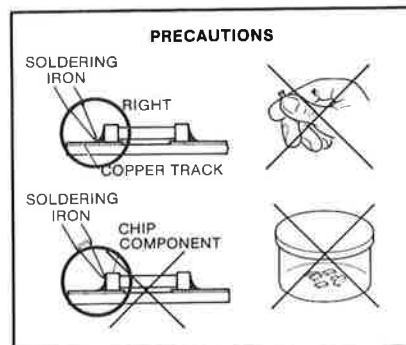
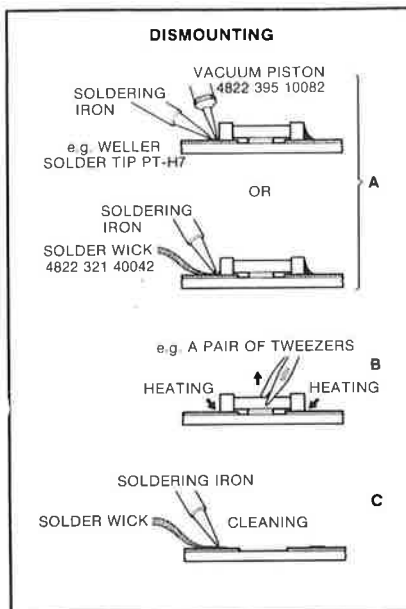
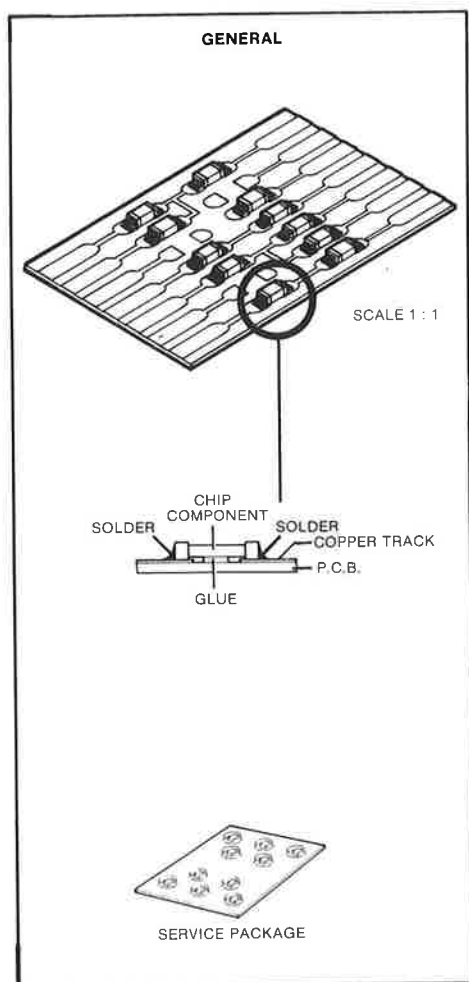
I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche. (ESD) La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicursi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SERVICE HINTS

In the set chip components have been applied.

For disassembly of chip components see the figure bellow.



SERVICING HINTS

Servicing the speakers:

Take off the front grill from the loudspeakerbox.

Tweeter:

Remove the four screw protections by using a point.
Prick the screw protection in the middle and pull it out.
Unscrew the tweeter and replace it.

Remark: You need four new screwprotections!

Woofers:

Pull the ornamental ring off and clear him from the old glue rests.

Unscrew the woofer and take it apart.

Remove also the gluerests on the front of the box.

A woodchisel could be helpfull but, beware for scratches and damages.

Replace the woofer and cleave the ornamental ring back on his place, use there for rectavit-glue.

The coil:

To have acces to the ferrite coil, you need to remove the isophase tweeter.

The coil is mounted in the box by a PZD headed screw.

Led unit and frontplate:

Remove the two screwcaps. Pull it out using a flat screwdriver but beware for scratches on the frontplate.

Unscrew and you will have acces to the led unit.

We remark that in case a full disconnection or replacement of it is needed, the bottemplate aswell as the backplate of the loudspeakerbox must be demounted.

Laying the box on his side could be helpfull in this action.

When you assemble the backplate in to the loudspeakerbox beware that the cables are well positioned.

Explanation of the abbreviations

ADIC	= Audio Digital Input Circuit
BCLK	= Bit Clock
BS DAC	= Bitstraem Digital to Analog converter
BIC	= Bus Interface Circuit
DATA IN	= Data in
DATA OUT	= Data out
DIG CONTROL	= Digital control
DSP HOST BUS	= Digital Signal Processor to Host processor Bus
EBU	= European Broadcast Union
EBU DISABLE	= European Broadcast Union Disable
FRAME SYNC	= Frame Synchronisation
HOST DSP BUS	= Host processor to Digital Signal processor Bus
IR EYE	= Infra Red Eye
MUTE	= Mute (active low)
Ph COMP LED	= Phase Compensation led
PWR FAILURE	= Power Failure
RESET	= Reset (active low)
STBY	= Standby (active low)
STBY/ON LED	= Standby on Led
STEREO R	= Stereo Right
STEREO L	= Stereo Left
TW PROT LED	= Tweeter Protect Led
WCLK	= Word Clock
+5 S	= +5 Volt switched

SERVICE TEST PROGRAM

GENERAL

With this testprogram we can generate two sinuses, one from 5,12kHz for the tweeter circuit and one from 170Hz for the woofer circuit

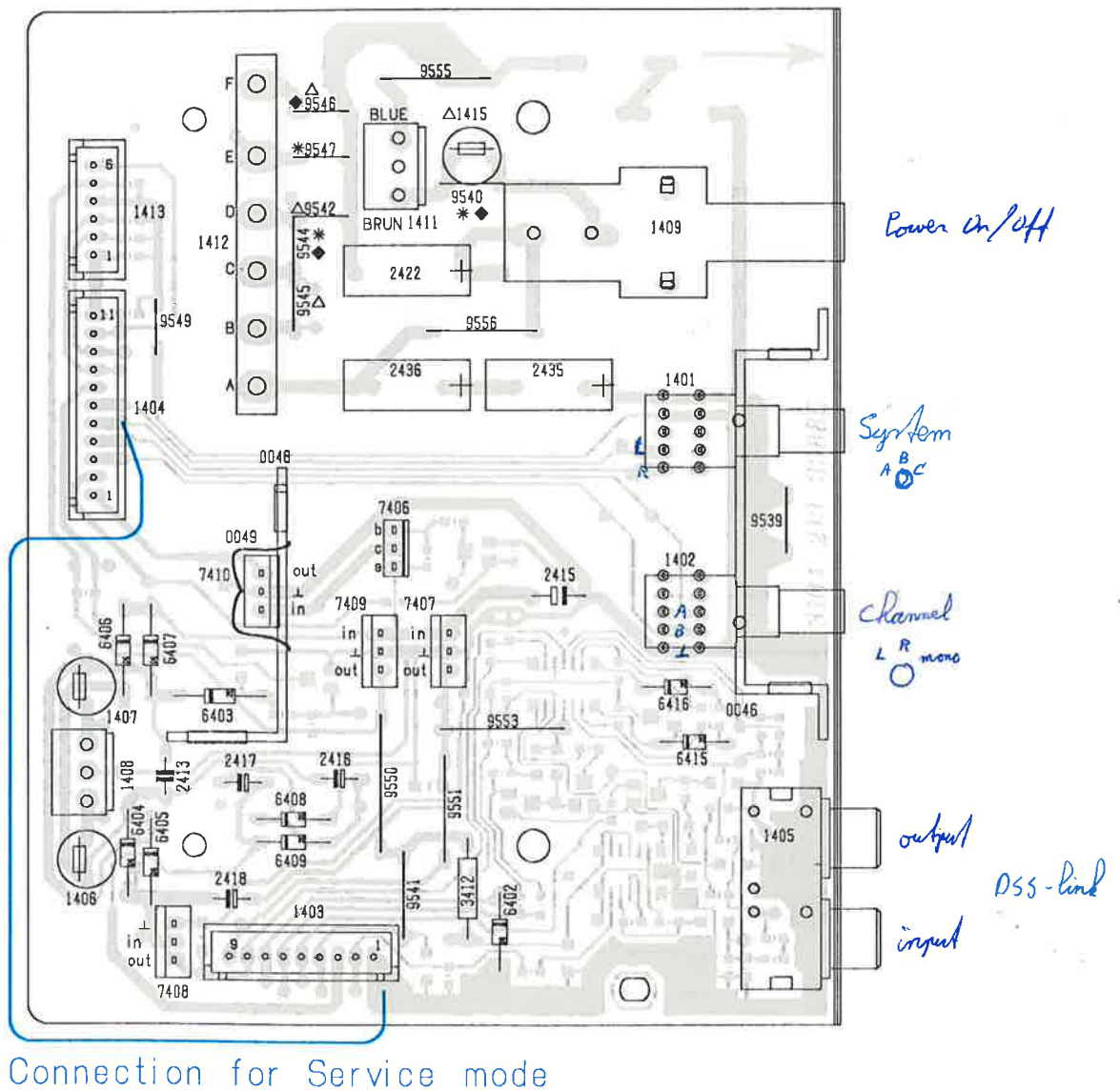
To go on the testmode we have to connect first on the interface and power supply board (see fig 1) on plug 1404 pin 4 and pin 5 to massa, and put the speakers switch 1402 in position B and channel switch 1401 in position Left. When this is done put the power on.

To go out of this mode switch power off, and disconnect the pins 4 and 5 on plug 1404 from massa and put power back on.

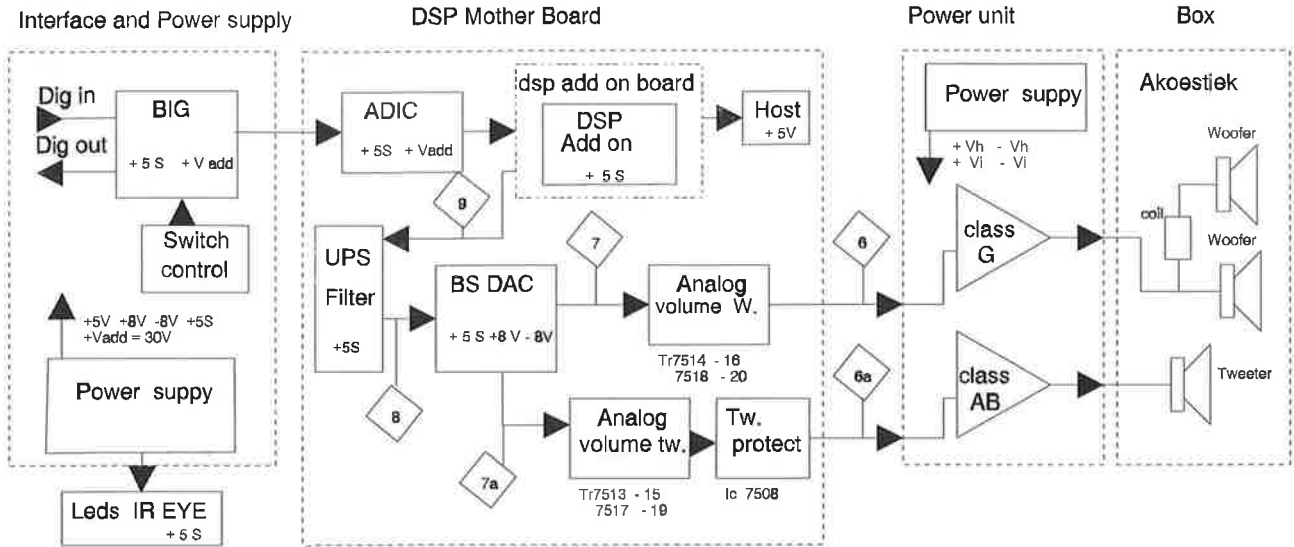
Out of the service test program we can let the box work with out the DSP board. Connect on plug 1504 pin 3 and pin 9 so that we can let the box work without the DSP board.

When the box works with out the DSP board then you must be careful with the high frequency for the tweeter not to be damaged.

Fig 1

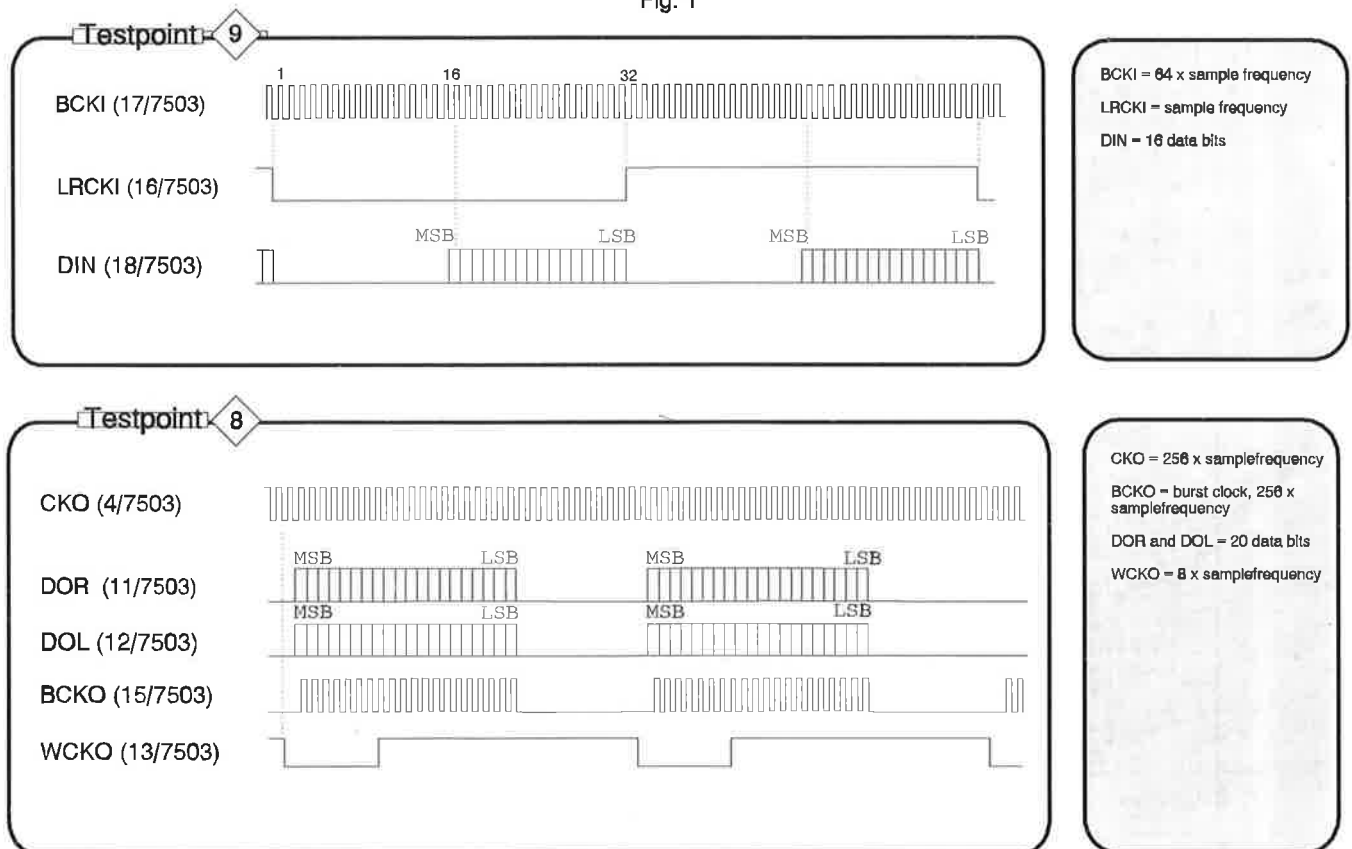


BLOCK DIAGRAM



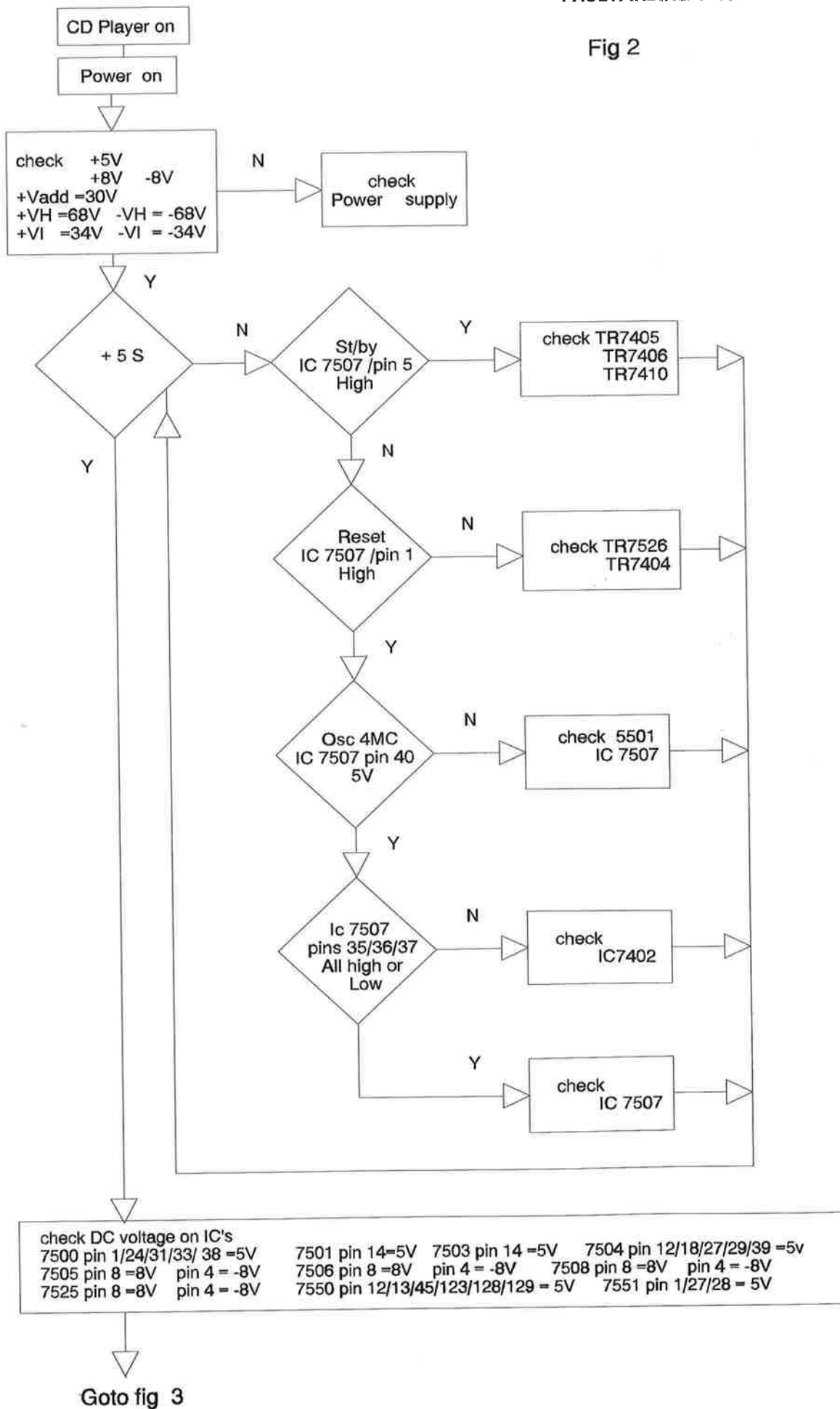
Test point 8 and 9 see fig 1

Fig. 1



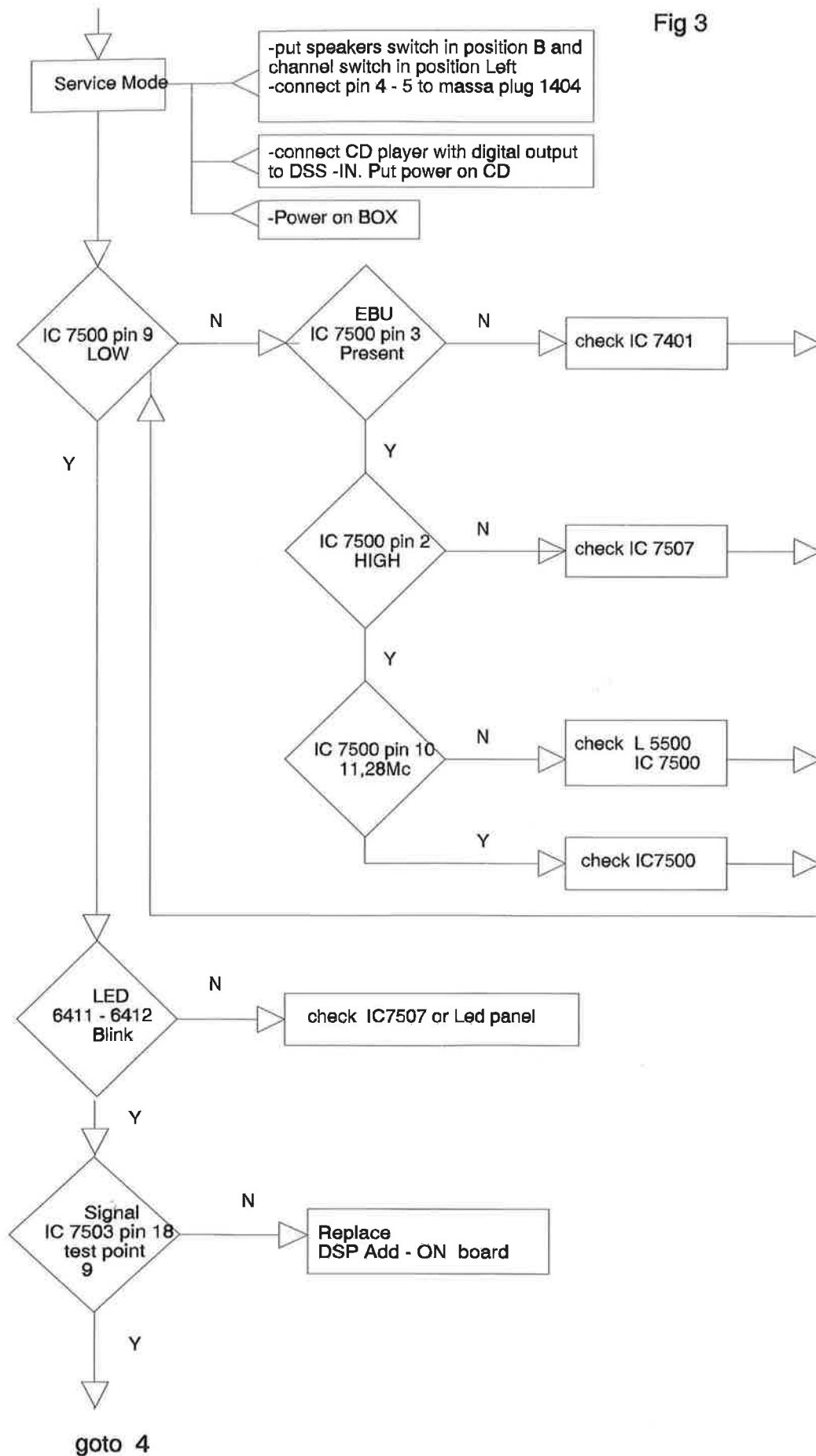
FAULTFINDING TREE

Fig 2



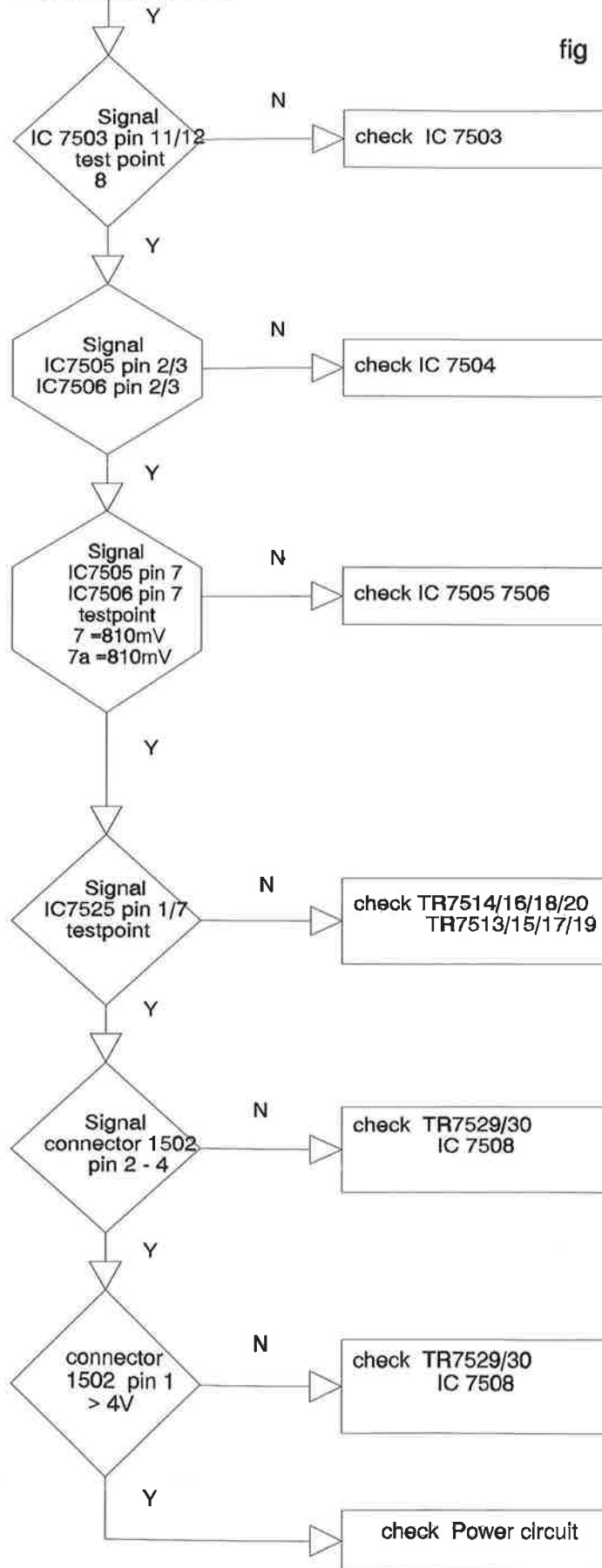
FAULTFINDING TREE

Fig 3

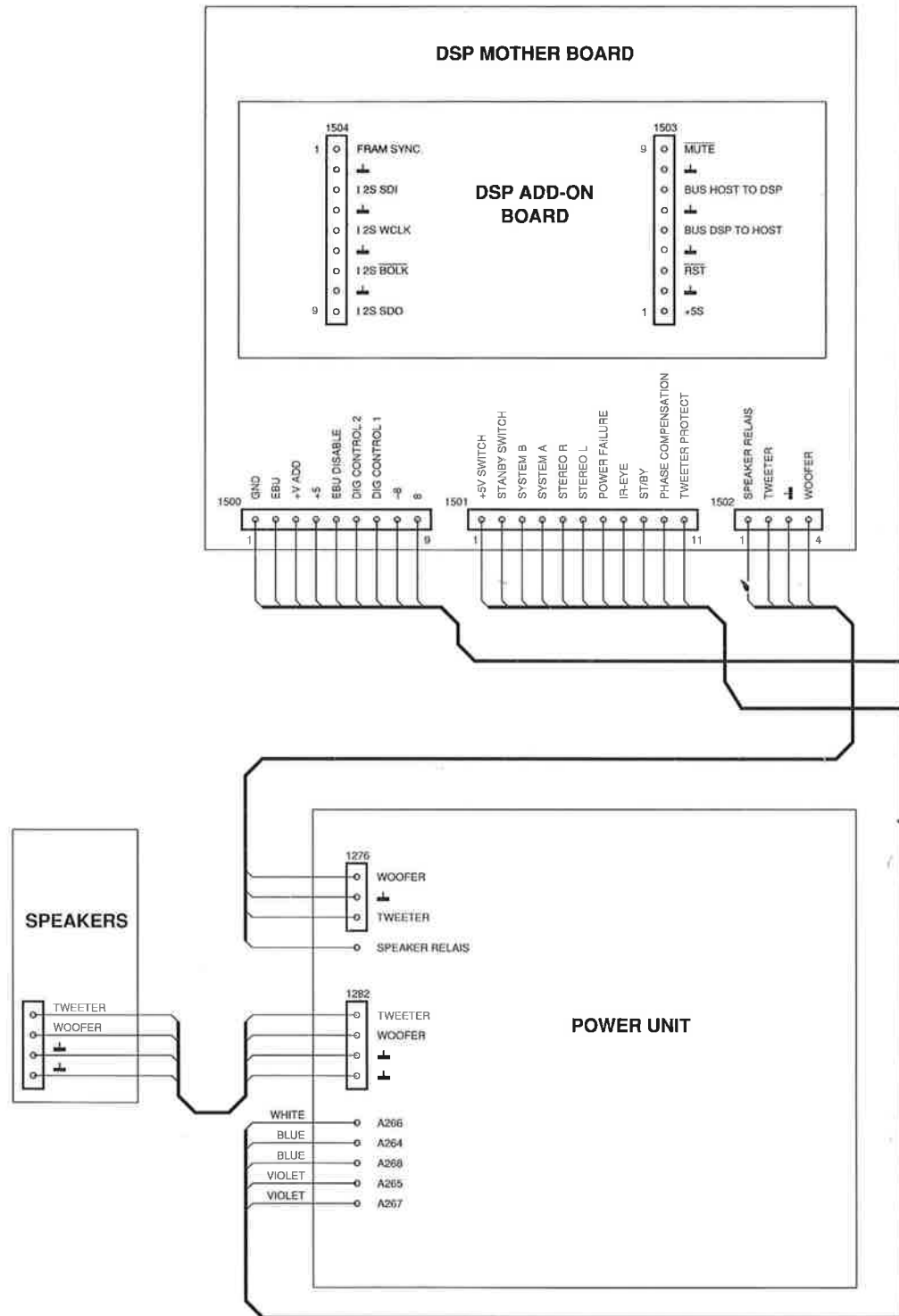


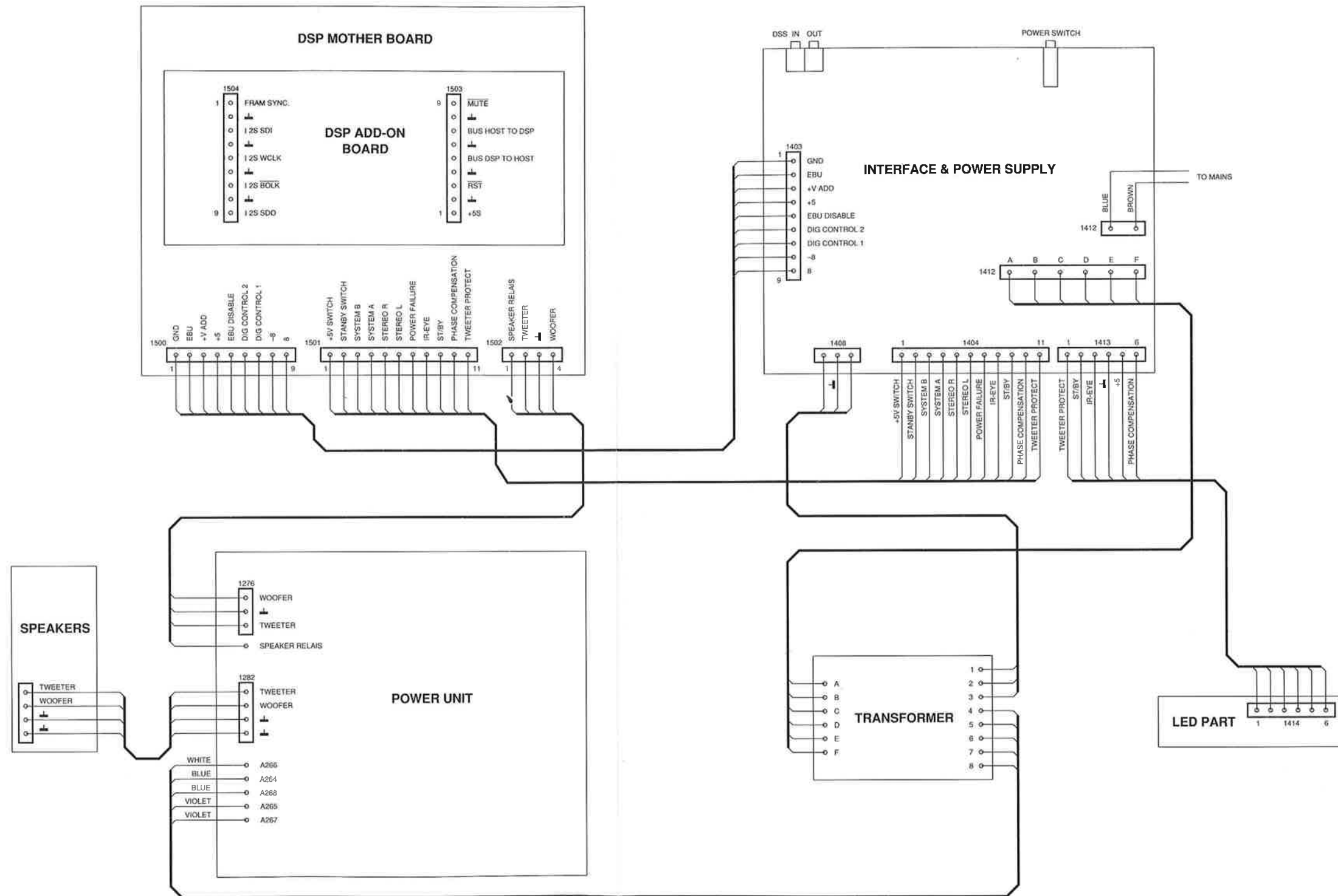
FAULTFINDING TREE

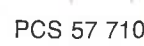
fig 4

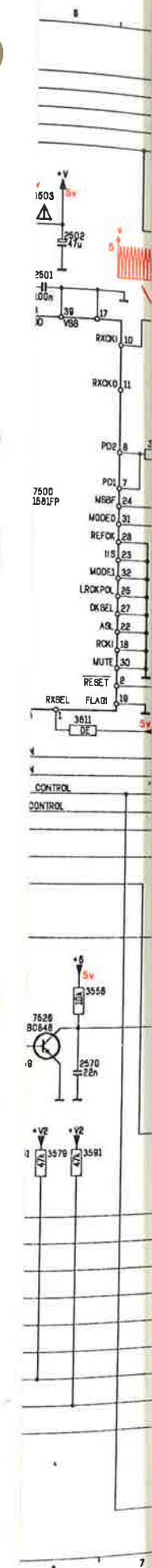
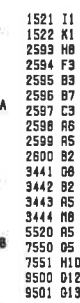


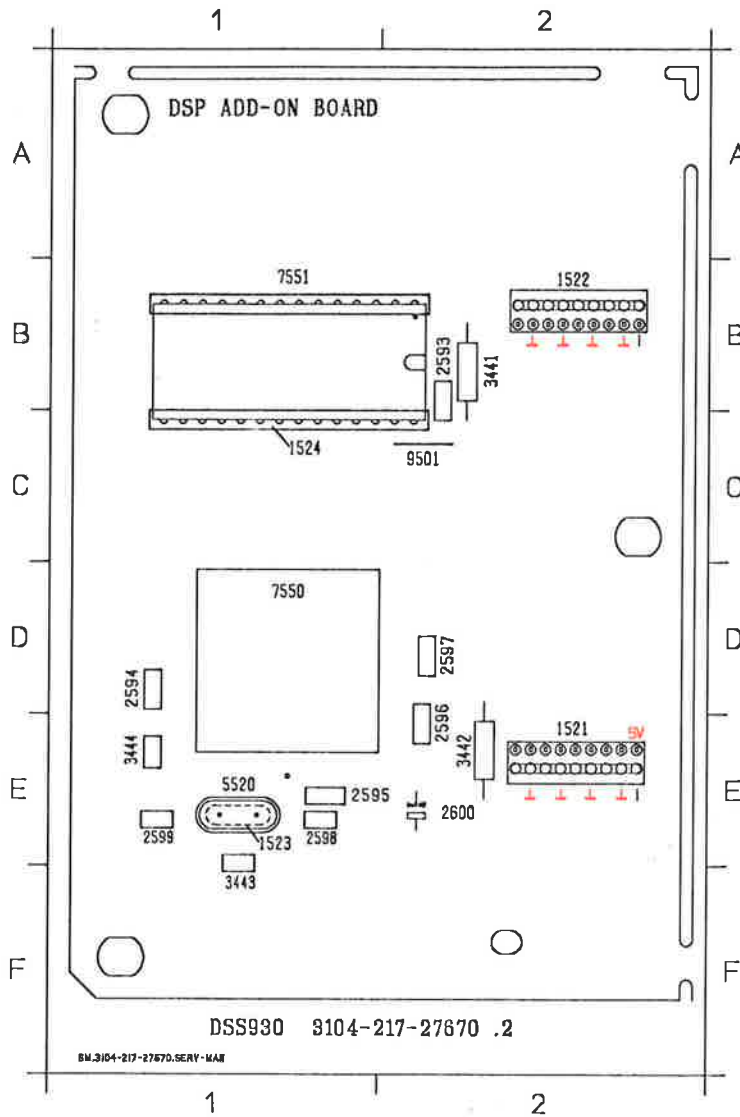
WIRING DIAGRAM



LEU0008
9223



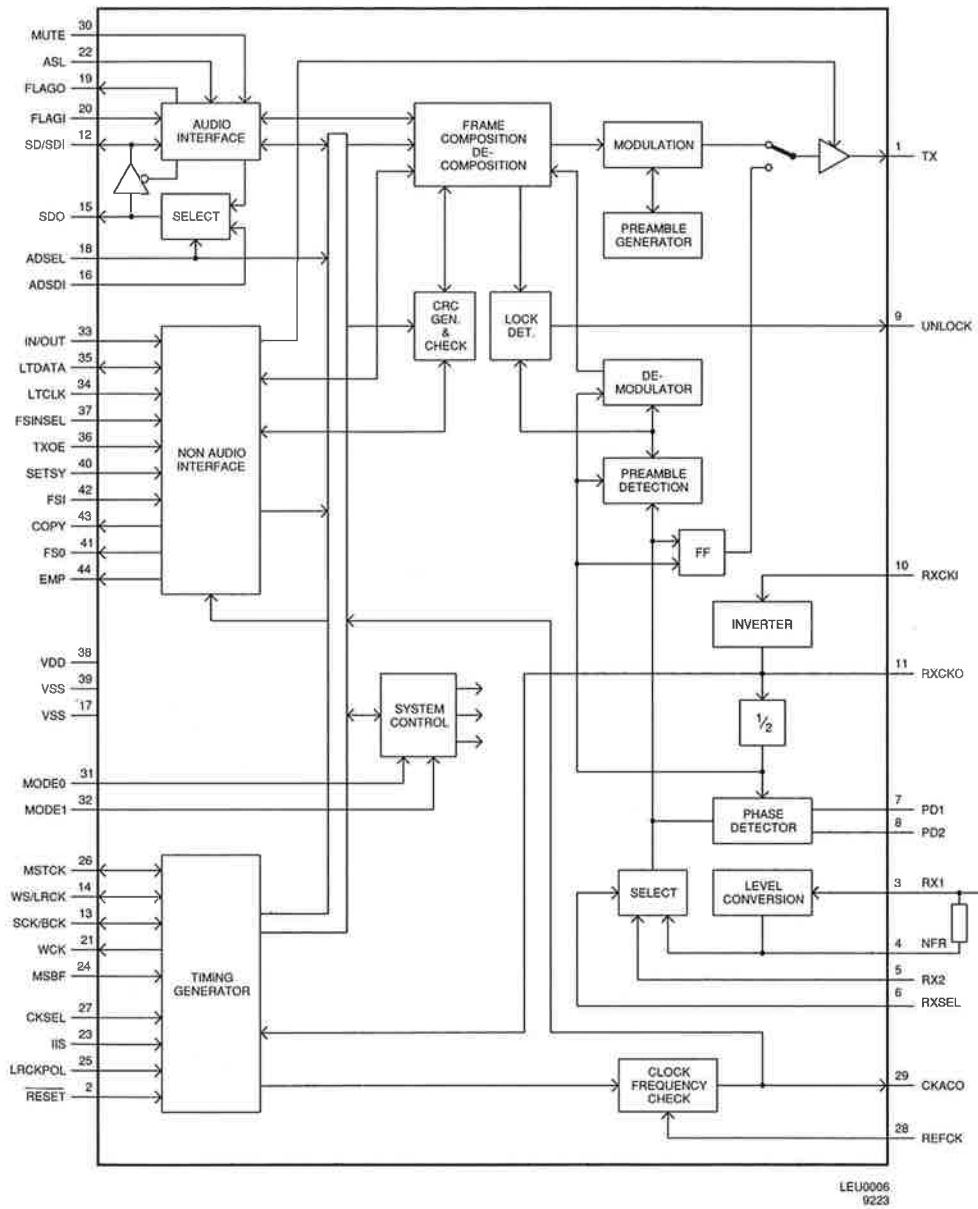




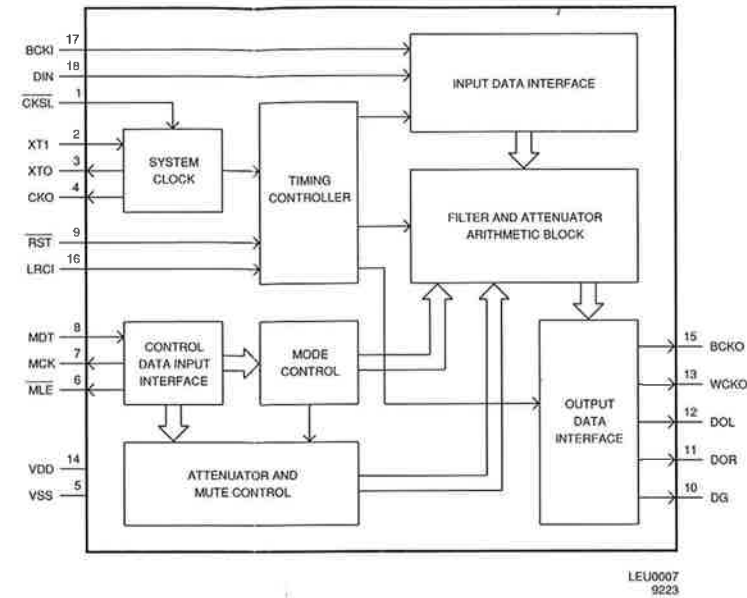
1521 E2
 1522 B2
 1523 E1
 1524 O1
 2593 B2
 2594 D1
 2595 E1
 2596 E2
 2597 D2
 2598 E1
 2599 E1
 2600 E2
 3441 B2
 3442 E2
 3443 F1
 3444 E1
 5520 E1
 7550 D1
 7551 B1
 9501 C2

MUT
 AS
 FLAG
 FLAG
 SD/SC
 SD
 ADSE
 ADSE
 IN/OU
 LTDAT
 LTCL
 FSINSE
 TXO
 SETS
 FS
 COP
 FS
 EM
 VD
 VS
 VS
 MODE
 MODE
 MSTC
 WS/LRG
 SCK/BC
 WCI
 MSB
 CKSE
 IR
 LOCKPO
 RESE

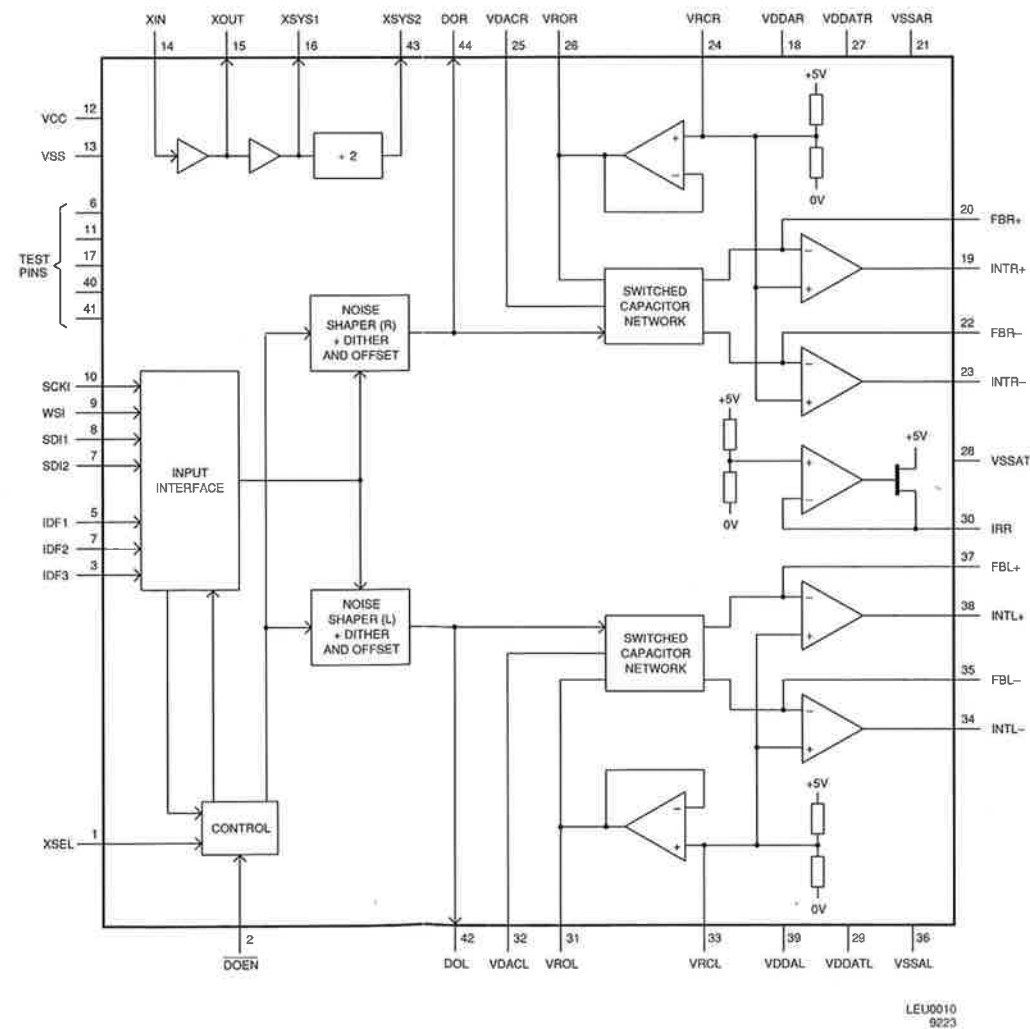
IC7500
M51581FP



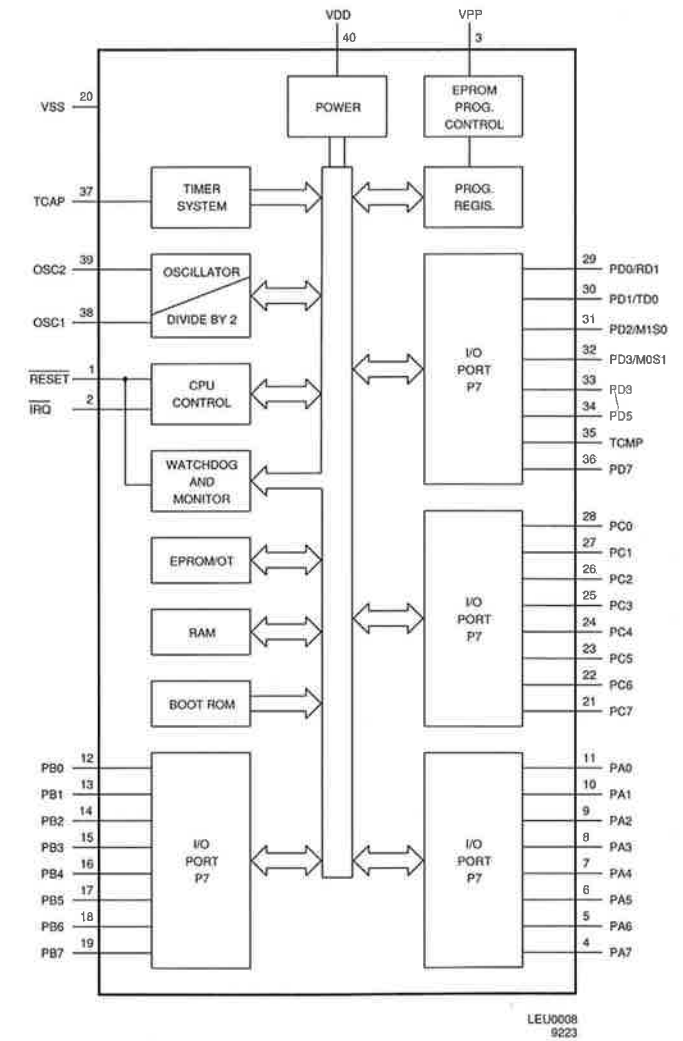
IC7503
SM5840AP

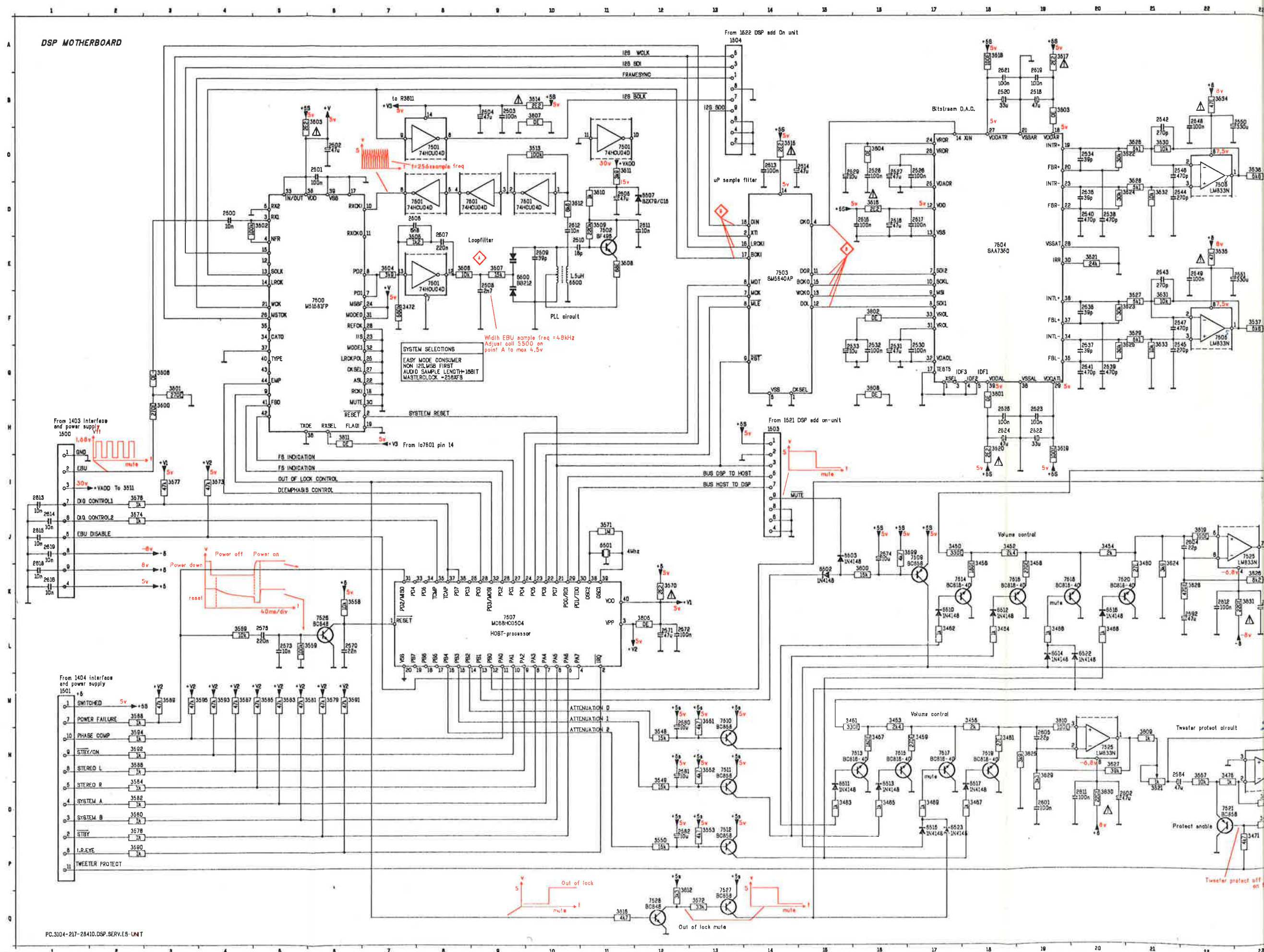


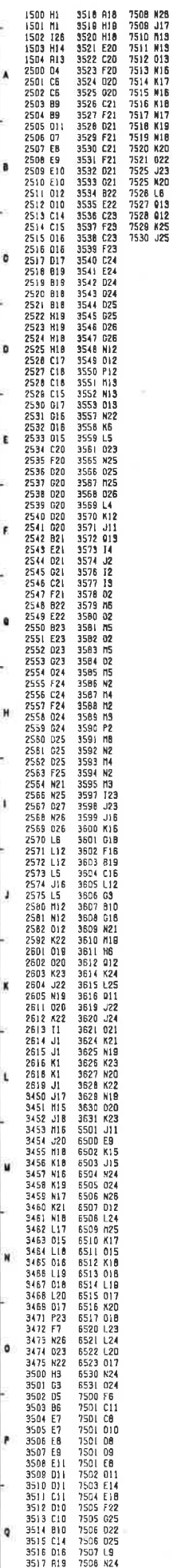
IC7504
SAA7350



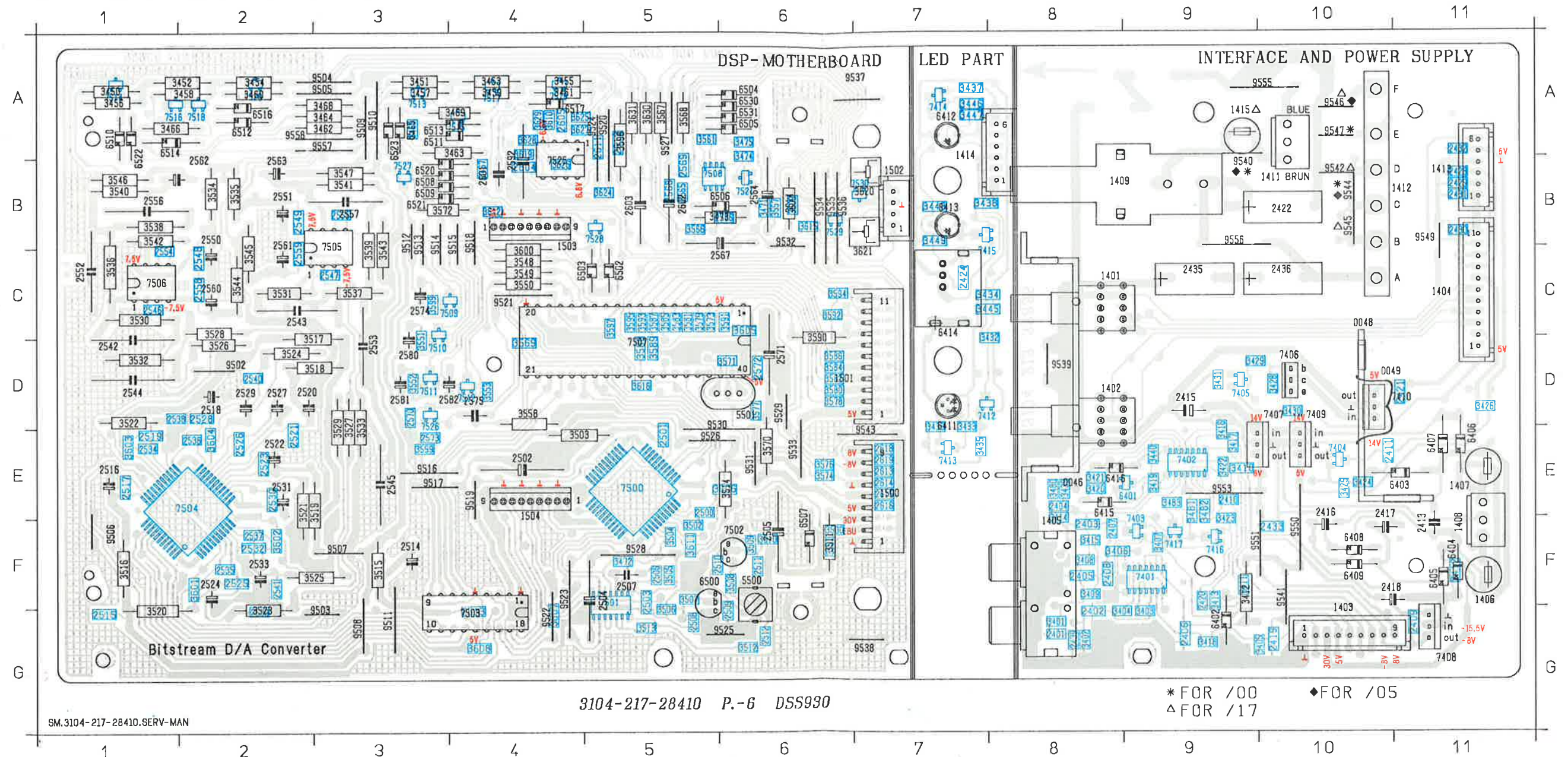
IC7507
MCM68HC05C4







0046 E8	1600 E8	2614 F3	2663 D3	2602 B5	3464 A3	3524 D2	3541 B3	3600 C4	6412 A7	6513 A3	7503 G4	8514 B3	9531 E6	9549 B11
0048 C10	1601 D8	2616 E1	2666 B1	2603 B5	3466 A1	3526 F3	3542 B1	3614 B6	6413 B7	6514 A1	7505 C3	8515 B4	9532 B6	9550 F10
0049 D10	1602 B7	2618 D2	2667 B3	2604 F9	3468 A3	3528 D2	3543 C3	3620 B7	6414 C7	6515 A3	7506 C1	8516 E3	9533 E6	9551 F10
1401 C8	1603 B4	2620 D2	2680 C2	3450 A1	3469 A4	3527 D3	3544 C2	3621 C7	6415 E8	6516 A2	7507 D5	8517 E3	9534 B6	9552 E9
1402 D8	1604 E4	2622 E2	2681 B2	3451 A3	3473 B6	3528 C2	3545 C2	3630 A5	6416 E8	6517 A4	7525 B4	8518 B4	9535 B6	9553 A10
1403 Q10	2413 F11	2624 F2	2682 B2	3452 A2	3503 E4	3529 D3	3546 B1	3631 A5	6500 F5	6520 B3	9502 D2	8519 E4	9536 B8	9554 B9
1404 C11	2415 D9	2627 D2	2683 B2	3453 A4	3511 F6	3530 C1	3547 B3	6500 F8	6502 C5	6521 B3	9503 G3	8520 A5	9537 A7	9555 A3
1405 F8	2416 F10	2629 D2	2684 B6	3454 A2	3514 E6	3531 C2	3548 C4	6501 D8	6503 C6	6522 A1	9504 A3	8521 C4	9538 G7	9556 A2
1406 F11	2417 E10	2631 E2	2687 C6	3455 A4	3515 F3	3532 D1	3549 C4	6402 G9	6504 A6	6523 A3	9505 A3	8522 G4	9539 D8	
1407 E11	2418 F10	2633 F2	2671 D8	3456 A1	3516 F1	3533 D3	3550 C4	6403 E11	6505 A8	6530 A8	9506 F1	8523 F4	9540 B9	
1408 F11	2422 B10	2642 D1	2674 C3	3457 A3	3517 D3	3534 B2	3558 D4	6404 F11	6506 B8	6531 A6	9507 F3	8524 A5	9541 F10	
1409 B8	2435 C9	2643 C2	2675 D4	3458 A2	3518 D3	3535 B2	3567 A5	6405 F11	6507 F8	7406 D10	9508 G3	8525 G6	9542 B10	
1411 B10	2438 C10	2644 D1	2680 D3	3459 A4	3519 E3	3536 C1	3568 A5	6406 E11	6508 B3	7407 D10	9509 A3	8526 E5	9543 E7	
1412 B11	2602 E4	2646 F3	2681 D3	3460 A2	3520 Q1	3537 C3	3570 E6	6407 E11	6509 B3	7408 G11	9510 A3	8527 A5	9544 B10	
1413 B11	2604 F5	2650 B2	2682 D4	3461 A4	3521 E2	3538 B1	3572 B3	6408 F10	6510 A1	7409 D10	9511 G3	8528 F5	9545 B10	
1414 B7	2605 F6	2651 B2	2692 B4	3462 A3	3522 D1	3539 C3	3590 D6	6409 F10	6511 A3	7410 D11	9512 B3	8529 D6	9546 A10	
1415 A9	2607 F6	2652 C1	2801 B4	3463 A4	3523 Q2	3540 B1	3596 A5	6411 D7	6512 A2	7502 F8	9513 B3	8530 E5	9547 A10	



2401	G4	2421	D2	2509	G8	2532	F10	2555	B9	2614	E5
2402	G4	2424	C5	2510	F7	2534	E11	2558	C10	2615	E5
2403	F4	2428	B1	2511	F6	2535	F10	2559	C10	2616	E5
2404	F4	2429	B1	2512	G8	2536	F10	2566	B6	2618	E5
2405	F4	2430	B1	2513	G8	2537	F10	2568	B7	2619	E5
2406	G3	2431	B1	2515	G11	2538	D11	2569	B7	3401	G4
2407	F4	2432	B1	2517	E11	2539	G10	2570	D9	3402	G4
2408	F4	2433	F2	2519	E11	2540	D10	2572	D8	3403	G3
2409	G1	2439	G4	2521	F10	2541	F10	2573	E9	3404	G4
2410	E3	2500	F7	2523	E10	2546	C11	2604	B8	3405	G3
2411	E2	2501	E7	2525	F10	2547	C9	2605	A8	3406	F4
2412	F1	2503	F7	2526	E10	2548	C10	2611	A7	3407	F3
2419	G2	2506	F7	2528	D10	2549	B10	2612	A7	3408	F4
2420	G3	2508	G7	2530	E10	2554	C11	2613	E5	3409	F4

1

2

3

4

5

6

7

8

9

10

11

A

B

C

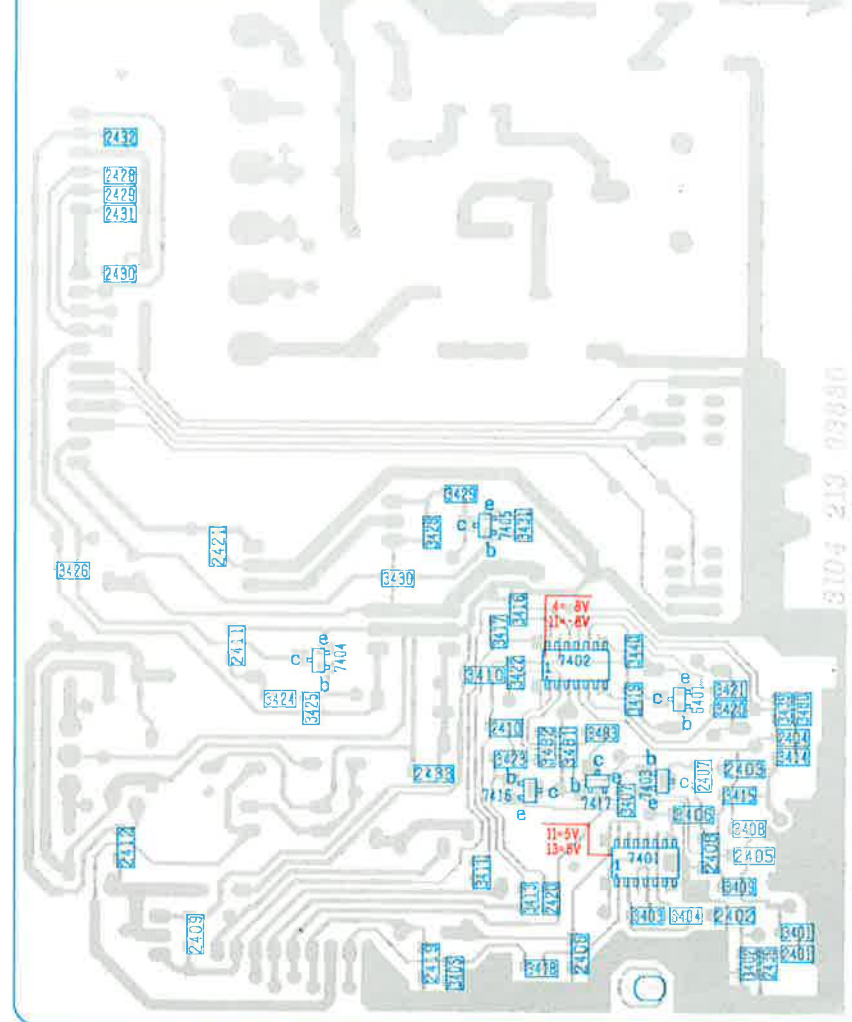
D

E

F

G

INTERFACE AND POWER SUPPLY

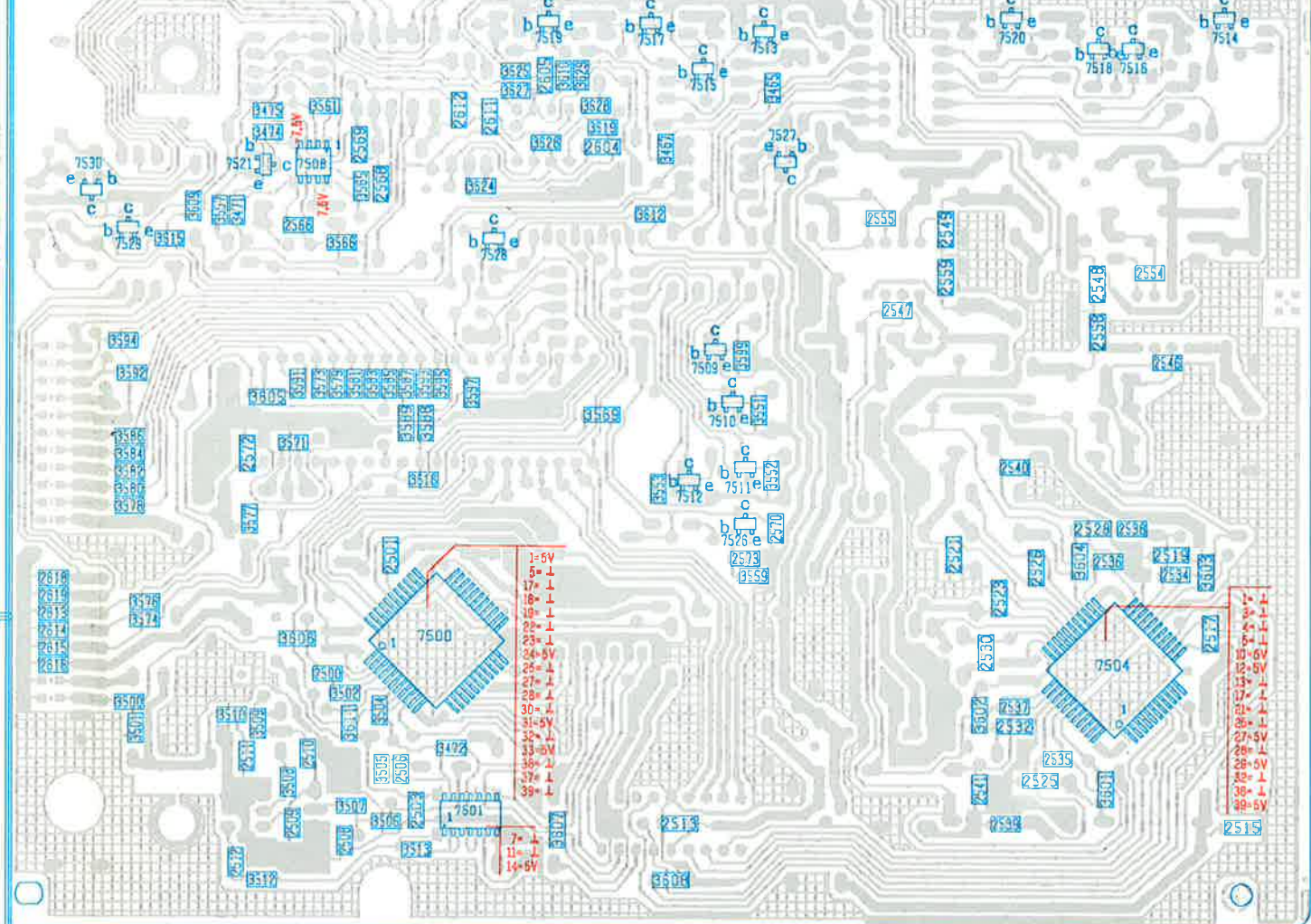


SW.3104-217-28410.SERV-MAN

LED PART



DSP-MOTHERBOARD



3104-217-28410 P.-6 DSS930

1

2

3

4

5

6

7

8

9

10

11

A

B

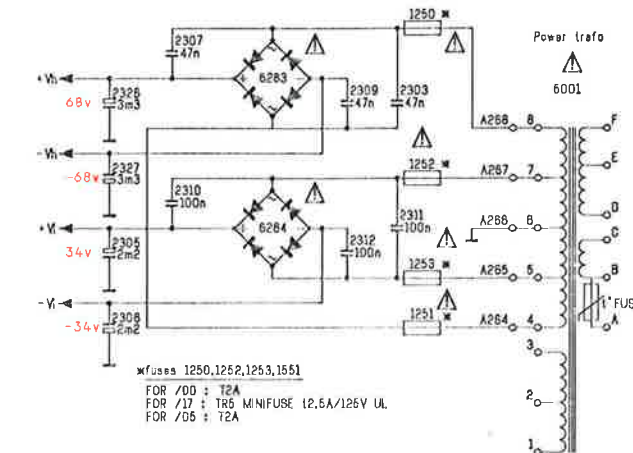
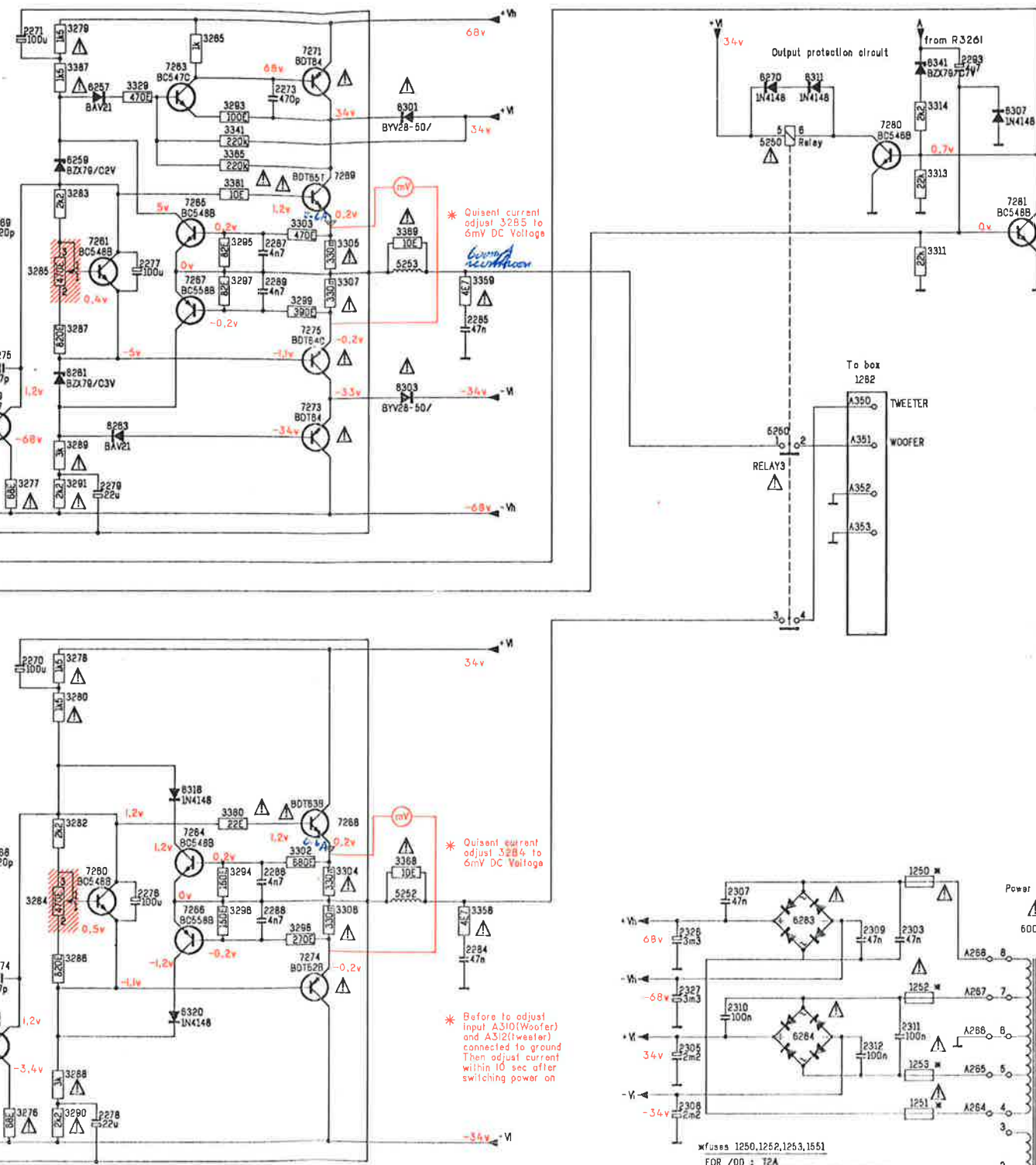
C

D

E

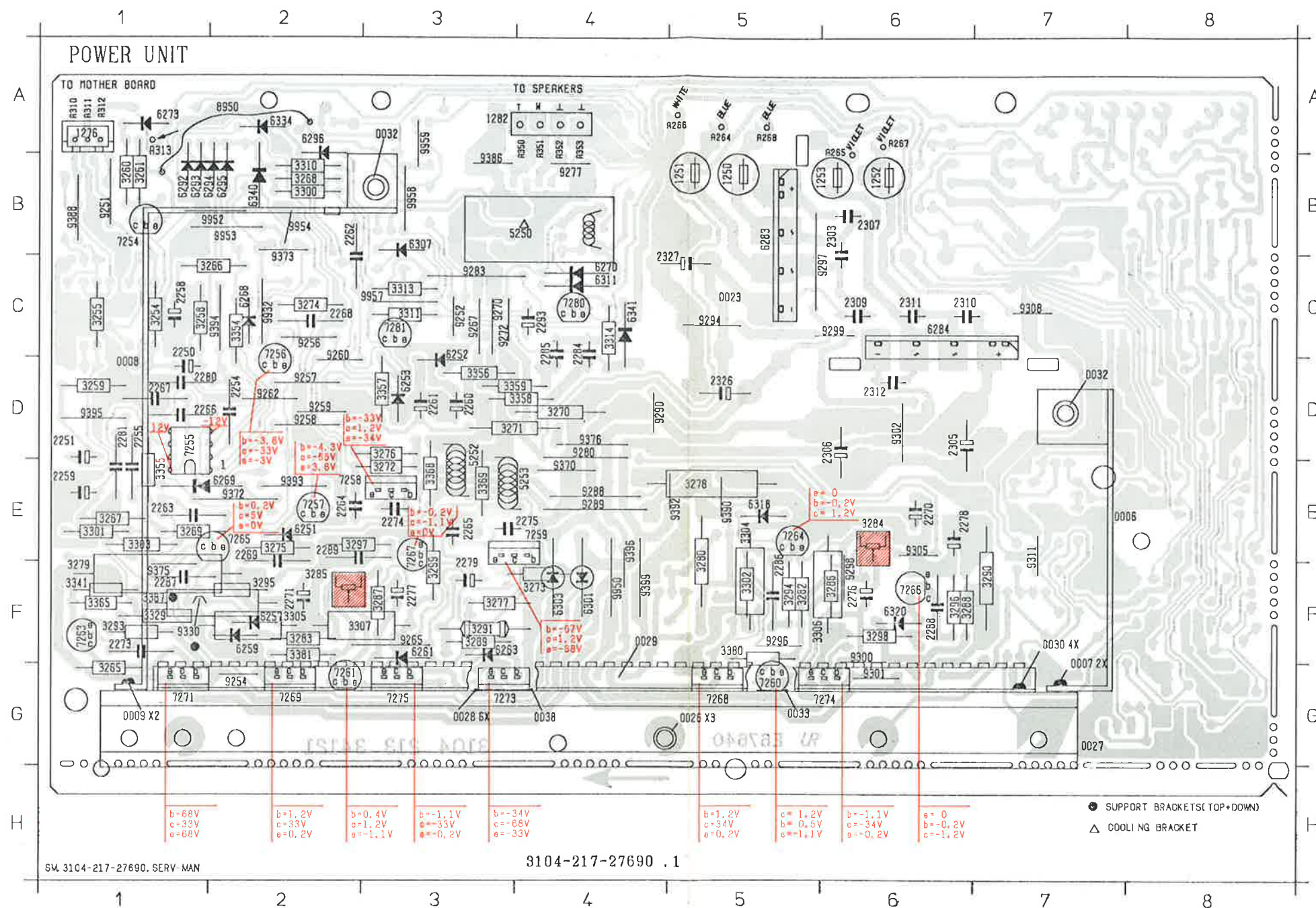
F

G

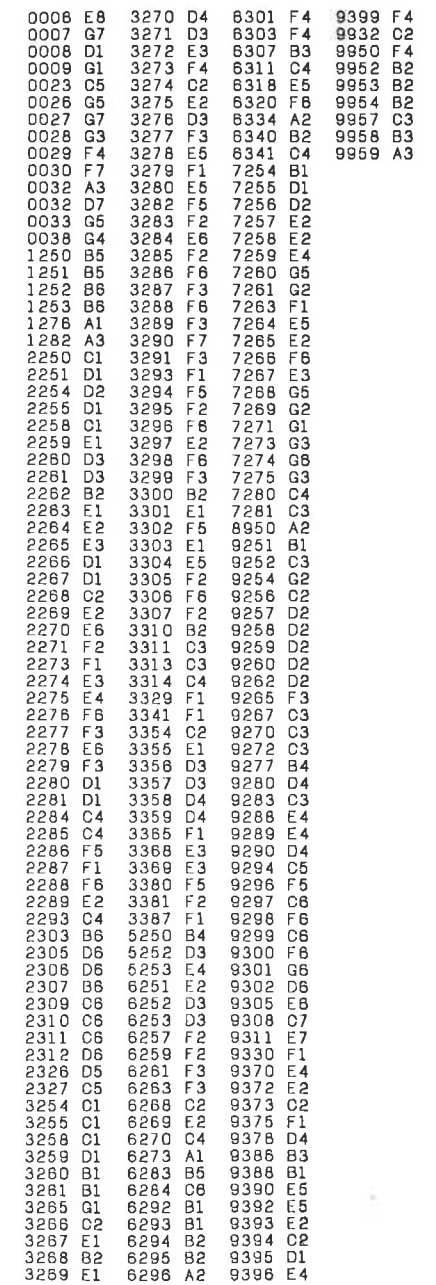


BDT 64
BDT 65 T
BDT 64 C
BDT 64
BDT 63 B
BDT 62 B

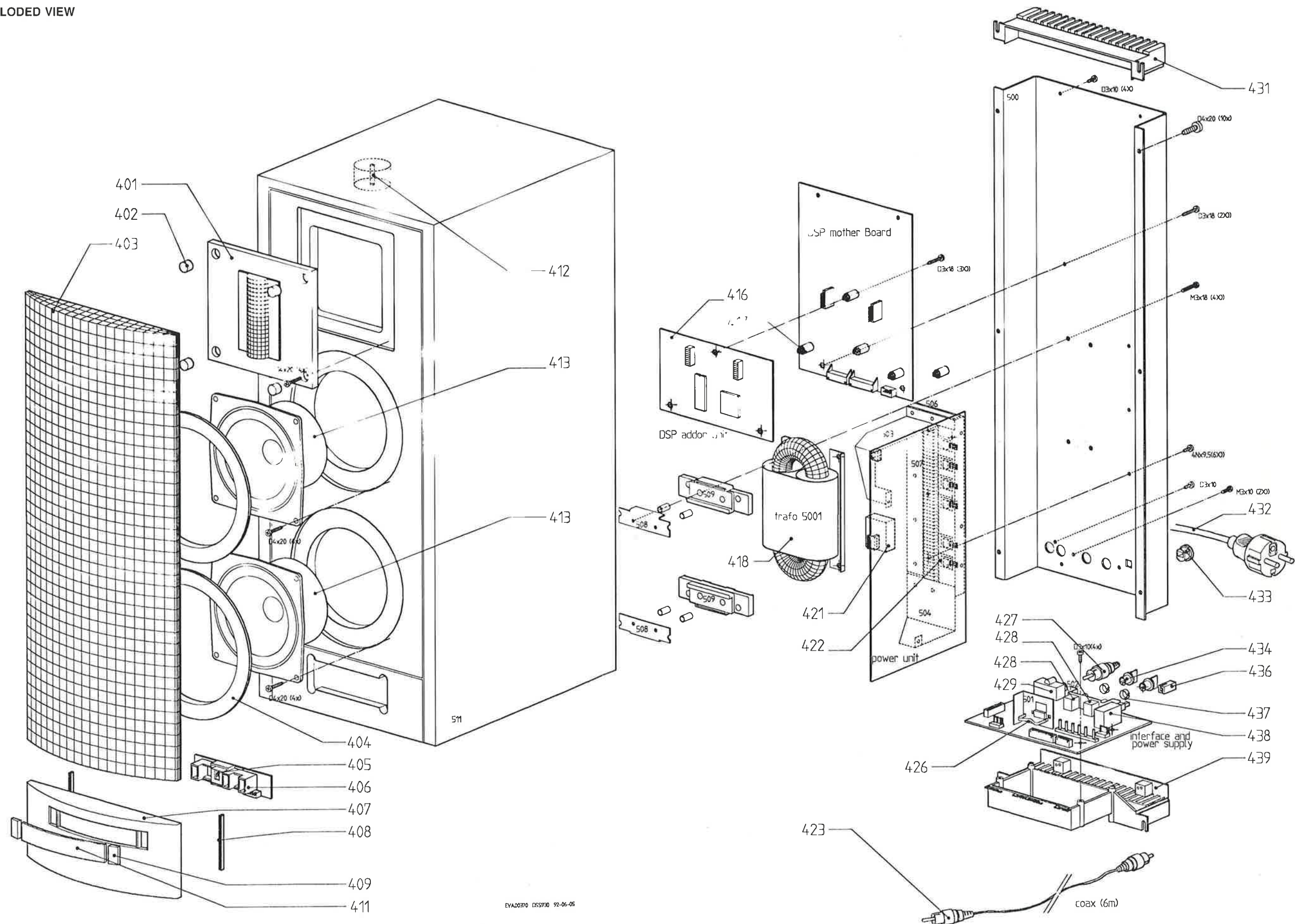
Allen zijn
Burlington.



0008	E8	3270	D4	6301	F4	9399	F4
0007	G7	3271	D3	6303	F4	9392	C2
0008	D1	3272	E3	6307	B3	9950	F4
0009	G1	3273	F4	6311	C4	9952	B2
0023	C5	3274	C2	6318	E5	9953	B2
0026	G5	3275	E2	6320	F6	9954	B2
0027	G7	3276	D3	6334	A2	9957	C3
0028	G3	3277	F3	6340	B2	9958	B3
0029	F4	3278	E5	6341	C4	9959	A3
0030	F7	3279	F1	7254	B1		
0032	A3	3280	E6	7255	D1		
0032	D7	3282	F6	7256	D2		
0033	G5	3283	F2	7257	E2		
0038	G4	3284	E6	7258	E2		
1250	B5	3285	F2	7259	E4		
1251	B6	3286	F6	7260	G5		
1252	B6	3287	F3	7261	G2		
1253	B6	3288	F6	7263	F1		
1276	A1	3289	F3	7264	E5		
1282	A3	3290	F7	7265	E2		
2250	C1	3291	F3	7266	F6		
2251	D1	3293	F1	7267	E3		
2254	D2	3294	F6	7268	G5		
2255	D1	3295	F2	7269	G2		
2258	C1	3296	F6	7271	G1		
2259	E1	3297	E2	7273	G3		
2260	D3	3298	F6	7274	G6		
2261	D3	3299	F3	7275	G3		
2262	B2	3300	B2	7280	C4		
2263	E1	3301	E1	7281	C3		
2264	E2	3302	F5	8950	A2		
2265	E3	3303	E1	9251	B1		
2266	D1	3304	E5	9252	C3		
2267	D1	3305	F2	9254	G2		
2268	C2	3306	F6	9256	C2		
2269	E2	3307	F2	9257	D2		
2270	E6	3310	B2	9258	D2		
2271	F2	3311	C3	9259	D2		
2273	F1	3313	C3	9260	D2		
2274	E3	3314	C4	9262	D2		
2275	E4	3329	F1	9265	F3		
2276	F6	3341	F1	9267	C3		
2277	F3	3354	C2	9270	C3		
2278	E6	3355	E1	9272	C3		
2279	F3	3356	D3	9277	B4		
2280	D1	3357	D3	9280	D4		
2281	D1	3358	D4	9283	C3		
2284	C4	3359	D4	9288	E4		
2285	C4	3365	F1	9289	E4		
2286	F5	3368	E3	9290	D4		
2287	F1	3369	E3	9294	C5		
2288	F6	3380	F6	9296	F5		
2289	E2	3381	F2	9297	C6		
2293	C4	3387	F1	9298	F6		
2303	B6	6250	B4	9299	C6		
2305	D6	6252	D3	9300	F8		
2306	D6	6253	E4	9301	G6		
2307	B6	6251	E2	9302	D6		
2309	C6	6252	D3	9305	E6		
2310	C6	6253	D3	9308	C7		
2311	C6	6257	F2	9311	E7		
2312	D6	6259	F2	9330	F1		
2326	D5	6261	F3	9370	E4		
2327	C5	6263	F3	9372	E2		
3254	C1	6268	C2	9373	C2		
3255	C1	6269	E2	9375	F1		
3258	C1	6270	C4	9378	D4		
3259	D1	6273	A1	9386	B3		
3260	B1	6283	B5	9388	B1		
3261	B1	6284	C6	9390	E5		
3265	G1	6292	B1	9392	E5		
3266	C2	6293	B1	9393	E2		
3267	E1	6294	B2	9394	C2		
3268	B2	6295	B2	9395	D1		
3269	E1	6296	A2	9396	E4		



EXPLODED VIEW



MECHANICAL PARTS

401	4822 240 70246	TWEETER AD21601
402	4822 502 30599	PROTECTION
403	4822 458 40559	GRILLE
404	4822 460 10971	RING ORNAMENTAL
405	4822 214 52009	IR EYE GP1U58XP
406	4822 256 91888	LED HOLDER
407	4822 445 30228	FRONT
408	4822 466 40637	MOUNTING STRIP
409	4822 454 12813	PLATE ORNAMENTAL
411	4822 450 61857	WINDOW
412	4822 158 20462	FERRITE COIL
413	4822 240 50321	WOOFER AD51602
416	4822 214 51989	DSP BOARD
417	4822 532 52454	FIXING STUD
418	4822 146 31105	MAINS TRAFO
420	4822 466 82923	RUBBER BLOCK
421	4822 280 70366	RELAY
423	4822 321 61536	COAX CABLE 75Ω
426	4822 492 63051	SPRING CLIP
427	4822 264 30327	CINCH PLUG 75Ω
→ 428	4822 273 20367	ROTARY SWITCH
429	4822 267 41064	SOCKET
431	4822 458 30627	COOL ORNAMENTAL ASSY
432	4822 321 10845	CORD SET
432	4822 321 10865	CORD SET /05
432	4822 321 10825	CORD SET /17
433	4822 325 80498	BUSH
434	4822 410 60119	KNOB
436	4822 410 61963	POWER BUTTON
437	4822 492 61974	SPRING
438	4822 276 13224	POWER SWITCH
439	4822 458 30628	COOL ORNAM.ASSY DOWN
	4822 736 21363	I.F.U DSS930
	4822 218 10447	REMOTE CONT.RH6860

M3x10 (200)



MISCELLANEOUS

1002	4822 214 51989	DSP BOARD
1250	4822 071 52002	FUSE T 2A
1250	4822 252 51121	FUSE T 2,5A /17
1251	4822 071 52002	FUSE T 2A
1251	4822 252 51121	FUSE T 2,5A /17
1252	4822 071 52002	FUSE T 2A
1252	4822 252 51121	FUSE T 2,5A /17
1253	4822 071 52002	FUSE T 2A
1253	4822 252 51121	FUSE T 2,5A /17
1401	4822 273 20367	ROTARY SWITCH
1402	4822 273 20367	ROTARY SWITCH
1405	4822 267 41064	SOCKET
1406	4822 071 55001	FUSE T 500MA
1406	4822 253 10146	FUSE T 500MA /17
1407	4822 071 55001	FUSE T 500MA
1407	4822 253 10146	FUSE T 500MA /17
1409	4822 276 13224	POWER SWITCH
1415	4822 252 51121	FUSE T 2,5A /17
1524	5322 255 44047	IC SOCKET 28P

CAPACITORS

2250	4822 124 40242	1μF 20% 63V
2251	4822 124 40177	47μF 20% 10V
2254	4822 122 10172	220pF 10% 50V
2255	4822 122 10172	220pF 10% 50V
2258	4822 124 40244	2,2μF 20% 63V
2259	4822 124 41997	470μF 10V
2260	4822 124 41643	100μF 20% 16V
2261	4822 124 41643	100μF 20% 16V
2262	4822 122 31435	470pF 10% 50V
2263	4822 122 10172	220pF 10% 50V
2264	4822 126 11307	180pF 10% 500V
2265	4822 126 11307	180pF 10% 500V
2266	4822 122 31693	560pF 10% 50V
2267	4822 122 31693	560pF 10% 50V
2268	4822 122 10173	820pF 10% 50V
2269	4822 122 10173	820pF 10% 50V
2270	4822 124 42151	100μF 50V
2271	4822 124 42151	100μF 50V
2273	4822 122 31435	470pF 10% 50V
2274	4822 126 11308	47pF 5% 500V
2275	4822 126 11308	47pF 5% 500V
2276	4822 124 41584	100μF 20% 10V
2277	4822 124 41584	100μF 20% 10V
2278	4822 124 41596	22μF 20% 50V
2279	4822 124 41596	22μF 20% 50V
2280	4822 122 31465	270pF 10%
2281	4822 122 31465	270pF 10%
2284	4822 121 43526	47nF 5% 100V

2285	4822 121 43526	47nF 5% 100V
2286	4822 126 11311	4,7nF 50V
2287	4822 126 11311	4,7nF 50V
2288	4822 126 11311	4,7nF 50V
2289	4822 126 11311	4,7nF 50V
2293	4822 124 40246	4,7μF 20% 63V
2303	4822 121 43875	47nF 5% 250V
2305	4822 124 41998	2200μF 50V
2306	4822 124 41998	2200μF 50V
2307	4822 121 43875	47nF 5% 250V
2309	4822 121 43875	47nF 5% 250V
2310	4822 121 42007	100nF 10% 100V
2311	4822 121 42007	100nF 10% 100V
2312	4822 121 42007	100nF 10% 100V
2326	4822 124 41986	3300μF 80V
2327	4822 124 41986	3300μF 80V
2401	5322 122 31865	1,5nF 10% 63V
2402	4822 122 31965	220pF 5% 63V
2403	4822 122 31759	18nF
2404	5322 122 31863	330pF 5% 50V
2405	4822 122 32442	10nF 50V
2406	4822 122 33496	100nF 10% 63V
2407	4822 122 33893	18nF 10% 63V
2408	4822 122 31965	220pF 5% 63V
2409	4822 122 33496	100nF 10% 63V
2410	5322 122 31863	330pF 5% 50V
2411	4822 122 33496	100nF 10% 63V
2412	4822 122 32542	47nF 10% 63V
2413	4822 121 43526	47nF 5% 100V
2415	4822 124 40784	3300μF 20% 16V
2416	4822 124 41525	100μF 20% 25V
2417	5322 124 21189	100μF 20% 40V
2418	4822 124 22263	220μF 20% 25V
2419	4822 122 33496	100nF 10% 63V
2420	5322 122 32659	33pF 5% 50V
2421	4822 122 33496	100nF 10% 63V
2422	4822 121 70087	47nF 250V
2424	4822 122 33496	100nF 10% 63V
2428	4822 122 33177	10nF 20% 50V
2429	4822 122 33177	10nF 20% 50V
2430	4822 122 33177	10nF 20% 50V
2431	4822 122 33177	10nF 20% 50V
2432	4822 122 33177	10nF 20% 50V
2433	4822 122 33496	100nF 10% 63V
2435	4822 122 33284	470pF 20% 400V DC
2436	4822 122 33284	470pF 20% 400V DC
2439	5322 122 31863	330pF 5% 50V
2500	4822 122 33177	10nF 20% 50V
2501	4822 122 33496	100nF 10% 63V
2502	4822 124 22027	47μF 20% 25V
2503	4822 122 33496	100nF 10% 63V
2504	4822 124 22027	47μF 20% 25V

2505
2506
2507
2508
2509

2510
2511
2512
2513
2514

2515
2516
2517
2518
2519

2520
2521
2522
2523
2524

2525
2526
2527
2528
2529

2530
2531
2532
2533
2534

2535
2536
2537
2538
2539

2540
2541
2542
2543
2544

2545
2546
2547
2548
2549

2550
2551
2552
2553
2554

2555
2556
2557
2558

2505	4822 124 22027	47μF 20% 25V
2506	5322 122 31866	6,8nF 10% 63V
2507	4822 121 42408	220nF 5% 63V
2508	5322 126 10223	4,7nF 10% 63V
2509	5322 122 32966	39pF 5% 50V
2510	5322 122 32965	18pF 5%NPO 50V
2511	4822 122 33177	10nF 20% 50V
2512	4822 122 33177	10nF 20% 50V
2513	4822 122 33496	100nF 10% 63V
2514	4822 124 40433	47μF 20% 25V
2515	4822 122 33496	100nF 10% 63V
2516	4822 124 40433	47μF 20% 25V
2517	4822 122 33496	100nF 10% 63V
2518	4822 124 40433	47μF 20% 25V
2519	4822 122 33496	100nF 10% 63V
2520	4822 124 40272	33μF 20% 16V
2521	4822 122 33496	100nF 10% 63V
2522	4822 124 40272	33μF 20% 16V
2523	4822 122 33496	100nF 10% 63V
2524	4822 124 40433	47μF 20% 25V
2525	4822 122 33496	100nF 10% 63V
2526	4822 122 33496	100nF 10% 63V
2527	4822 124 40433	47μF 20% 25V
2528	4822 122 33496	100nF 10% 63V
2529	4822 124 40435	10μF 20% 50V
2530	4822 122 33496	100nF 10% 63V
2531	4822 124 40433	47μF 20% 25V
2532	4822 122 33496	100nF 10% 63V
2533	4822 124 40435	10μF 20% 50V
2534	5322 122 32966	39pF 5% 50V
2535	5322 122 32966	39pF 5% 50V
2536	5322 122 32966	39pF 5% 50V
2537	5322 122 32966	39pF 5% 50V
2538	5322 122 32268	470pF 10% 50V
2539	5322 122 32268	470pF 10% 50V
2540	5322 122 32268	470pF 10% 50V
2541	5322 122 32268	470pF 10% 50V
2542	4822 121 51569	270pF 1% 400V
2543	4822 121 51569	270pF 1% 400V
2544	4822 121 51569	270pF 1% 400V
2545	4822 121 51569	270pF 1% 400V
2546	5322 122 34099	470pF 10% 63V
2547	5322 122 34099	470pF 10% 63V
2548	4822 122 33496	100nF 10% 63V
2549	4822 122 33496	100nF 10% 63V
2550	4822 124 40849	330μF 20% 16V
2551	4822 124 40849	330μF 20% 16V
2552	4822 121 50591	1nF 1% 630V
2553	4822 121 50591	1nF 1% 630V
2554	5322 122 34099	470pF 10% 63V
2555	5322 122 34099	470pF 10% 63V
2556	4822 121 51288	100pF 630V
2557	4822 121 51288	100pF 630V
2558	4822 122 33496	100nF 10% 63V

2559	4822 122 33496	100nF 10% 63V
2560	4822 124 40849	330μF 20% 16V
2561	4822 124 40849	330μF 20% 16V
2562	4822 124 41525	100μF 20% 25V
2563	4822 124 41525	100μF 20% 25V
2564	4822 124 22027	47μF 20% 25V
2566	5322 122 32452	47pF 5% 63V
2567	4822 124 22027	47μF 20% 25V
2568	4822 122 33496	100nF 10% 63V
2569	4822 122 33496	100nF 10% 63V
2570	5322 122 32654	22nF 10% 63V
2571	4822 124 22027	47μF 20% 25V
2572	4822 122 33496	100nF 10% 63V
2573	4822 122 33177	10nF 20% 50V
2574	4822 124 40435	10μF 20% 50V
2575	4822 121 42408	220nF 5% 63V
2580	4822 124 40435	10μF 20% 50V
2581	4822 124 40435	10μF 20% 50V
2582	4822 124 40435	10μF 20% 50V
2592	4822 124 22027	47μF 20% 25V
2593	4822 122 33496	100nF 10% 63V
2594	4822 122 33496	100nF 10% 63V
2595	4822 122 33496	100nF 10% 63V
2596	4822 122 33496	100nF 10% 63V
2597	4822 122 33496	100nF 10% 63V
2598	5322 122 32658	22pF 5% 50V
2599	5322 122 32658	22pF 5% 50V
2600	4822 124 40433	47μF 20% 25V
2601	5322 121 42386	100nF 5% 63V
2602	4822 124 22027	47μF 20% 25V
2603	4822 124 22027	47μF 20% 25V
2604	5322 122 32658	22pF 5% 50V
2605	5322 122 32658	22pF 5% 50V
2611	4822 122 33496	100nF 10% 63V
2612	4822 122 33496	100nF 10% 63V
2613	4822 122 33177	10nF 20% 50V
2614	4822 122 33177	10nF 20% 50V
2615	4822 122 33177	10nF 20% 50V
2616	4822 122 33177	10nF 20% 50V
2618	4822 122 33177	10nF 20% 50V
2619	4822 122 33177	10nF 20% 50V

RESISTORS

3254	4822 116 52224	470Ω 5% 0,5W
3255	4822 050 21002	1k 1% 0,6W
3258	4822 116 52224	470Ω 5% 0,5W
3259	4822 050 21002	1k 1% 0,6W
3260	4822 050 22203	22k 1% 0,6W
3261	4822 050 21003	10k 1% 0,6W
3265	4822 050 21002	1k 1% 0,6W
3266	4822 050 28209	82Ω 1% 0,6W
3267	4822 050 21801	180Ω 1% 0,6W
3268	4822 050 24702	4k7 1% 0,6W

3269 4822 050 21003 10k 1% 0,6W
 3270 4822 053 10122 1k2 5% 1W
 3271 4822 053 10122 1k2 5% 1W
 3272 4822 052 10681 680Ω 5% 0,33W
 3273 4822 052 10681 680Ω 5% 0,33W

3274 4822 050 22202 2k2 1% 0,6W
 3275 4822 050 22202 2k2 1% 0,6W
 3276 4822 052 10689 68Ω 5% 0,33W
 3277 4822 052 10689 68Ω 5% 0,33W
 3278 4822 053 12152 1k5 5% 3W

3279 4822 112 41112 1k5 5% 5,8W
 3280 4822 053 10152 1k5 5% 1W
 3282 4822 050 22202 2k2 1% 0,6W
 3283 4822 050 22202 2k2 1% 0,6W
 3284 4822 101 10927 TRIM 470Ω

3285 4822 101 10927 TRIM 470Ω
 3286 4822 050 28201 820Ω 1% 0,6W
 3287 4822 050 28201 820Ω 1% 0,6W
 3288 4822 052 10302 3k 5% 0,33W
 3289 4822 053 10302 3k 5% 1W

3290 4822 053 10222 2k2 5% 1W
 3291 4822 053 11222 2k2 5% 2W
 3293 4822 051 10101 100Ω 2% 0,25W
 3294 4822 050 21501 150Ω 1% 0,6W
 3295 4822 050 28209 82Ω 1% 0,6W

3296 4822 050 21501 150Ω 1% 0,6W
 3297 4822 050 28209 82Ω 1% 0,6W
 3298 4822 116 52217 270Ω 5% 0,5W
 3299 4822 050 23901 390Ω 1% 0,6W
 3300 4822 050 22202 2k2 1% 0,6W

3301 4822 050 24702 4k7 1% 0,6W
 3302 4822 050 26801 680Ω 1% 0,6W
 3303 4822 116 52224 470Ω 5% 0,5W
 3304 4822 113 80596 0Ω33 5% 3W
 3305 4822 113 80596 0Ω33 5% 3W

3306 4822 113 80596 0Ω33 5% 3W
 3307 4822 113 80596 0Ω33 5% 3W
 3310 4822 050 28203 82k 1% 0,6W
 3311 4822 050 22203 22k 1% 0,6W
 3313 4822 050 22203 22k 1% 0,6W

3314 4822 050 22202 2k2 1% 0,6W
 3329 4822 116 52224 470Ω 5% 0,5W
 3341 4822 050 22204 220k 1% 0,6W
 3354 4822 116 52224 470Ω 5% 0,5W
 3355 4822 116 52224 470Ω 5% 0,5W

3356 4822 051 10101 100Ω 2% 0,25W
 3357 4822 051 10101 100Ω 2% 0,25W
 3358 4822 052 10478 4Ω7 5% 0,33W
 3359 4822 052 10478 4Ω7 5% 0,33W
 3365 4822 050 22204 220k 1% 0,6W

3368 4822 052 10109 10Ω 5% 0,33W
 3369 4822 052 10109 10Ω 5% 0,33W
 3380 4822 052 10229 22Ω 5% 0,33W
 3381 4822 052 10109 10Ω 5% 0,33W

3387 4822 113 80595 1k5 5% 3W
 3401 4822 051 20339 33Ω 5% 0,1W
 3402 4822 051 20271 270Ω 5% 0,1W
 3403 4822 051 10102 1k 2% 0,25W
 3404 4822 051 20332 3k3 5% 0,1W

3405 4822 051 20271 270Ω 5% 0,1W
 3406 4822 051 10331 330Ω 2% 0,25W
 3407 4822 051 20222 2k2 5% 0,1W
 3408 4822 051 20222 2k2 5% 0,1W
 3409 4822 051 20101 100Ω 5% 0,1W

3410 4822 051 20222 2k2 5% 0,1W
 3411 4822 051 20221 220Ω 5% 0,1W
 3412 4822 052 10478 4Ω7 5% 0,33W
 3413 4822 051 20562 5k6 5% 0,1W
 3414 4822 051 20222 2k2 5% 0,1W

3415 4822 051 20101 100Ω 5% 0,1W
 3416 4822 051 20562 5k6 5% 0,1W
 3417 4822 051 20223 22k 5% 0,1W
 3418 4822 051 20271 270Ω 5% 0,1W
 3419 4822 051 20223 22k 5% 0,1W

3420 4822 051 20224 220k 5% 0,1W
 3421 4822 051 20224 220k 5% 0,1W
 3422 4822 051 20221 220Ω 5% 0,1W
 3423 4822 051 20123 12k 5% 0,1W
 3424 4822 051 20334 330k 5% 0,1W

3425 4822 051 20334 330k 5% 0,1W
 3426 4822 051 20223 22k 5% 0,1W
 3428 4822 051 20103 10k 5% 0,1W
 3429 4822 051 20222 2k2 5% 0,1W
 3430 4822 051 20103 10k 5% 0,1W

3431 4822 051 20103 10k 5% 0,1W
 3432 4822 051 20181 180Ω 5% 0,1W
 3433 4822 051 20181 180Ω 5% 0,1W
 3434 4822 051 10561 560Ω 2% 0,25W
 3435 4822 051 20103 10k 5% 0,1W

3436 4822 051 20103 10k 5% 0,1W
 3437 4822 051 10562 5k6 2% 0,25W
 3438 4822 051 10562 5k6 2% 0,25W
 3439 4822 051 20225 2M2 5% 0,1W
 3440 4822 051 20223 22k 5% 0,1W

3441 4822 052 10228 2Ω2 5% 0,33W
 3442 4822 052 10228 2Ω2 5% 0,33W
 3443 4822 051 20105 1M 5% 0,1W
 3444 4822 051 20153 15k 5% 0,1W
 3445 4822 051 10561 560Ω 2% 0,25W

3446 4822 051 10561 560Ω 2% 0,25W
 3447 4822 051 10561 560Ω 2% 0,25W
 3448 4822 051 10561 560Ω 2% 0,25W
 3449 4822 051 10561 560Ω 2% 0,25W
 3450 4822 050 23301 330Ω 1% 0,6W

3451 4822 050 23301 330Ω 1% 0,6W
 3452 4822 050 22402 2k4 1% 0,6W
 3453 4822 050 22402 2k4 1% 0,6W
 3454 4822 050 22002 2k 1% 0,6W

3455	4822 050 22002	2k 1% 0,6W	3530	4822 050 21003	10k 1% 0,6W
3456	4822 050 21801	180Ω 1% 0,6W	3531	4822 050 21003	10k 1% 0,6W
3457	4822 050 21801	180Ω 1% 0,6W	3532	4822 050 21003	10k 1% 0,6W
3458	4822 050 22701	270Ω 1% 0,6W	3533	4822 050 21003	10k 1% 0,6W
3459	4822 050 22701	270Ω 1% 0,6W	3534	4822 050 24709	47Ω 1% 0,6W
3460	4822 050 22709	27Ω 1% 0,6W	3535	4822 050 24709	47Ω 1% 0,6W
3461	4822 050 22709	27Ω 1% 0,6W	3536	4822 050 25602	5k6 1% 0,6W
3462	4822 050 21002	1k 1% 0,6W	3537	4822 050 25602	5k6 1% 0,6W
3463	4822 050 21002	1k 1% 0,6W	3538	4822 050 27502	7k5 1% 0,6W
3464	4822 050 21002	1k 1% 0,6W	3539	4822 050 27502	7k5 1% 0,6W
3465	4822 051 10102	1k 2% 0,25W	3540	4822 050 25602	5k6 1% 0,6W
3466	4822 050 21002	1k 1% 0,6W	3541	4822 050 25602	5k6 1% 0,6W
3467	4822 050 21002	1k 1% 0,6W	3542	4822 050 27502	7k5 1% 0,6W
3468	4822 050 21002	1k 1% 0,6W	3543	4822 050 27502	7k5 1% 0,6W
3469	4822 050 21002	1k 1% 0,6W	3544	4822 050 24709	47Ω 1% 0,6W
3471	4822 051 20472	4k7 5% 0,1W	3545	4822 050 24709	47Ω 1% 0,6W
3472	4822 051 20564	560k 5% 0,1W	3546	4822 050 21003	10k 1% 0,6W
3473	4822 050 21501	150Ω 1% 0,6W	3547	4822 050 21003	10k 1% 0,6W
3474	4822 051 20103	10k 5% 0,1W	3548	4822 116 52244	15k 5% 0,5W
3475	4822 051 10102	1k 2% 0,25W	3549	4822 116 52244	15k 5% 0,5W
3480	4822 051 20225	2M2 5% 0,1W	3550	4822 116 52244	15k 5% 0,5W
3481	4822 051 10104	100k 2% 0,25W	3551	4822 051 20472	4k7 5% 0,1W
3482	4822 051 10105	1M 5% 0,25W	3552	4822 051 20472	4k7 5% 0,1W
3483	4822 051 20109	10Ω 5% 0,1W	3553	4822 051 20472	4k7 5% 0,1W
3500	4822 051 20271	270Ω 5% 0,1W	3557	4822 051 20103	10k 5% 0,1W
3501	4822 051 20271	270Ω 5% 0,1W	3558	4822 050 21003	10k 1% 0,6W
3502	4822 051 20104	100k 5% 0,1W	3559	4822 051 20103	10k 5% 0,1W
3503	4822 052 10228	2Ω2 5% 0,33W	3561	4822 051 20223	22k 5% 0,1W
3504	4822 051 20392	3k9 5% 0,1W	3565	4822 051 20392	3k9 5% 0,1W
3505	4822 051 20122	1k2 5% 0,1W	3566	4822 051 20221	220Ω 5% 0,1W
3506	4822 051 20103	10k 5% 0,1W	3567	4822 050 24709	47Ω 1% 0,6W
3507	4822 051 20153	15k 5% 0,1W	3568	4822 050 24709	47Ω 1% 0,6W
3508	4822 051 20689	68Ω 5% 0,1W	3569	4822 051 10103	10k 2% 0,25W
3509	4822 051 20224	220k 5% 0,1W	3570	4822 052 10228	2Ω2 5% 0,33W
3510	4822 051 10102	1k 2% 0,25W	3571	4822 051 20105	1M 5% 0,1W
3511	4822 050 23902	3k9 1% 0,6W	3572	4822 050 13303	33k 1% 0,4W
3512	4822 051 20682	6k8 5% 0,1W	3573	4822 051 20473	47k 5% 0,1W
3513	4822 051 20104	100k 5% 0,1W	3574	4822 051 10102	1k 2% 0,25W
3514	4822 052 10228	2Ω2 5% 0,33W	3576	4822 051 10102	1k 2% 0,25W
3515	4822 052 10228	2Ω2 5% 0,33W	3577	4822 051 20473	47k 5% 0,1W
3516	4822 052 10228	2Ω2 5% 0,33W	3578	4822 051 10102	1k 2% 0,25W
3517	4822 052 10228	2Ω2 5% 0,33W	3579	4822 051 20473	47k 5% 0,1W
3518	4822 051 10101	100Ω 2% 0,25W	3580	4822 051 10102	1k 2% 0,25W
3519	4822 051 10101	100Ω 2% 0,25W	3581	4822 051 20473	47k 5% 0,1W
3520	4822 052 10228	2Ω2 5% 0,33W	3582	4822 051 10102	1k 2% 0,25W
3521	4822 050 22403	24k 1% 0,6W	3583	4822 051 20473	47k 5% 0,1W
3522	4822 050 23003	30k 1% 0,6W	3584	4822 051 10102	1k 2% 0,25W
3523	4822 050 23003	30k 1% 0,6W	3585	4822 051 20473	47k 5% 0,1W
3524	4822 050 23003	30k 1% 0,6W	3586	4822 051 10102	1k 2% 0,25W
3525	4822 050 23003	30k 1% 0,6W	3587	4822 051 20473	47k 5% 0,1W
3526	4822 050 25102	5k1 1% 0,6W	3588	4822 051 10102	1k 2% 0,25W
3527	4822 050 25102	5k1 1% 0,6W	3589	4822 051 10473	47k 2% 0,25W
3528	4822 050 25102	5k1 1% 0,6W	3590	4822 050 21002	1k 1% 0,6W
3529	4822 050 25102	5k1 1% 0,6W	3591	4822 051 20473	47k 5% 0,1W

3592	4822 051 10102	1k 2% 0,25W
3593	4822 051 20473	47k 5% 0,1W
3594	4822 051 10102	1k 2% 0,25W
3595	4822 051 20473	47k 5% 0,1W
3597	4822 051 20103	10k 5% 0,1W
3598	4822 051 10101	100Ω 2% 0,25W
3599	4822 051 20472	4k7 5% 0,1W
3600	4822 116 52244	15k 5% 0,5W
3601	4822 051 10008	0Ω 5% 0,25W
3602	4822 051 10008	0Ω 5% 0,25W
3603	4822 051 10008	0Ω 5% 0,25W
3604	4822 051 10008	0Ω 5% 0,25W
3605	4822 051 10008	0Ω 5% 0,25W
3606	4822 051 10008	0Ω 5% 0,25W
3607	4822 051 10008	0Ω 5% 0,25W
3608	4822 051 10008	0Ω 5% 0,25W
3609	4822 051 10102	1k 2% 0,25W
3610	4822 051 20101	100Ω 5% 0,1W
3611	4822 051 10008	0Ω 5% 0,25W
3612	4822 051 20332	3k3 5% 0,1W
3614	4822 050 21002	1k 1% 0,6W
3615	4822 051 10102	1k 2% 0,25W
3616	4822 051 20472	4k7 5% 0,1W
3619	4822 051 20101	100Ω 5% 0,1W
3620	4822 100 11348	1k 30%LIN
3621	4822 100 11348	1k 30%LIN
3624	4822 051 20392	3k9 5% 0,1W
3625	4822 051 20392	3k9 5% 0,1W
3626	4822 051 20822	8k2 5% 0,1W
3627	4822 051 20393	39k 5% 0,1W
3628	4822 051 20471	470Ω 5% 0,1W
3629	4822 051 20332	3k3 5% 0,1W
3630	4822 050 22201	220Ω 1% 0,6W
3631	4822 050 22201	220Ω 1% 0,6W

COILS

5001	4822 146 31105	TRAFO
5250	4822 280 70366	RELAY
5252	4822 157 62255	COIL 18,5 TURNS
5253	4822 157 62255	COIL 18,5 TURNS
5500	4822 156 30492SW	COIL
5501	4822 242 72527	CST 4 MHz
5520	4822 242 81217	CST 27MHz

DIODES

6251	4822 130 34499	BZX79-C20
6252	4822 130 61219	BZX79-C10
6253	4822 130 61219	BZX79-C10
6257	4822 130 30842	BAV21
6259	5322 130 34563	BZX79-C2V7

6261	4822 130 80235	BZX79-C3V3
6263	4822 130 30842	BAV21
6268	4822 130 30621	1N4148
6269	4822 130 30621	1N4148
6270	4822 130 30621	1N4148
6273	4822 130 34167	BZX79-C6V2
6283	4822 130 82079	D3SBA20
6284	4822 130 82079	D3SBA20
6292	4822 130 30621	1N4148
6293	4822 130 30621	1N4148
6294	4822 130 30621	1N4148
6295	4822 130 30621	1N4148
6296	4822 130 30621	1N4148
6301	4822 130 83032	BYV28-50/20
6303	4822 130 83032	BYV28-50/20
6307	4822 130 30621	1N4148
6311	4822 130 30621	1N4148
6318	4822 130 30621	1N4148
6320	4822 130 30621	1N4148
6334	4822 130 30621	1N4148
6340	4822 130 30621	1N4148
6341	4822 130 30861	BZX79-C7V5
6401	4822 130 80937	BAV74
6402	4822 130 34174	BZX79-C4V7
6403	4822 130 30621	1N4148
6404	5322 130 30684	1N4002
6405	5322 130 30684	1N4002
6406	5322 130 30684	1N4002
6407	5322 130 30684	1N4002
6408	4822 130 30621	1N4148
6409	4822 130 30621	1N4148
6411	4822 209 72895	LED TLUV5300
6412	4822 130 83065	LED TLHY6405BT12Z
6413	4822 130 83064	LED TLHR6405BT12Z
6414	4822 214 52009	GP1U58XP
6415	4822 130 30621	1N4148
6416	4822 130 30621	1N4148
6500	4822 130 31129	BB212
6502	4822 130 30621	1N4148
6503	4822 130 30621	1N4148
6504	4822 130 30621	1N4148
6505	4822 130 30621	1N4148
6506	4822 130 30621	1N4148
6507	4822 130 34281	BZX79-C15
6508	4822 130 30621	1N4148
6509	4822 130 30621	1N4148
6510	4822 130 30621	1N4148
6511	4822 130 30621	1N4148
6512	4822 130 30621	1N4148
6513	4822 130 30621	1N4148
6514	4822 130 30621	1N4148
6515	4822 130 30621	1N4148
6516	4822 130 30621	1N4148
6517	4822 130 30621	1N4148

6520	4822 130 30621	1N4148	7507	4822 209 31483	MICRO COMPUTER
6521	4822 130 30621	1N4148	7508	4822 209 31378	NJM4556M
6522	4822 130 30621	1N4148	7509	5322 130 42012	BC858
6523	4822 130 30621	1N4148	7510	5322 130 42012	BC858
6530	4822 130 30621	1N4148	7511	5322 130 42012	BC858
6531	4822 130 30621	1N4148	7512	5322 130 42012	BC858
TRANSISTORS & IC's			7513	4822 130 42616	BC818-40
7254	4822 130 44197	BC558B	7514	4822 130 42616	BC818-40
7255	4822 209 83274	NJM4560D	7515	4822 130 42616	BC818-40
7256	4822 130 41691	BC556B	7516	4822 130 42616	BC818-40
7257	4822 130 41691	BC556B	7517	4822 130 42616	BC818-40
7258	5322 130 44413	BF457	7518	4822 130 42616	BC818-40
7259	5322 130 44413	BF457	7519	4822 130 42616	BC818-40
7260	4822 130 40937	BC548B	7520	4822 130 42616	BC818-40
7261	4822 130 40937	BC548B	7521	5322 130 42012	BC858
7263	4822 130 44503	BC547C	7525	4822 209 83163	LM833N
7264	4822 130 40937	BC548B	7526	4822 130 61207	BC848
7265	4822 130 40937	BC548B	7527	5322 130 42012	BC858
7266	4822 130 44197	BC558B	7528	4822 130 61207	BC848
7267	4822 130 44197	BC558B	7529	4822 130 42616	BC818-40
7268	5322 130 42363	BDT63B	7530	4822 130 42616	BC818-40
7269	4822 130 62269	BDT65C	7550	4822 209 31379	XSP56001FE27
7271	4822 130 62268	BDT64	7551	4822 209 31377	TMS27PC256-20NL
7273	4822 130 62268	BDT64			
7274	5322 130 44926	BDT62B			
7275	5322 130 61575	BDT64C			
7280	4822 130 44461	BC546B			
7281	4822 130 40937	BC548B			
7401	4822 209 30704	MC74HCU04D			
7402	4822 209 31615	LM324AD			
7403	4822 130 42616	BC818-40			
7404	5322 130 42136	BC848C			
7405	4822 130 61207	BC848			
7406	5322 130 61573	BD676			
7407	4822 209 72554	MC7808CT			
7408	4822 209 82112	MC7908CT			
7409	4822 209 71579	TY40408			
7410	4822 209 71579	TY40408			
7412	4822 130 61207	BC848			
7413	4822 130 61207	BC848			
7414	4822 130 61207	BC848			
7415	4822 130 61207	BC848			
7416	5322 130 41982	BC848B			
7417	5322 130 41982	BC848B			
7500	4822 209 30718	M51581FP			
7501	4822 209 30704	MC74HCU04D			
7502	4822 130 63046	BF496			
7503	4822 209 31381	SM5840AP			
7504	4822 209 31086	SAA7350			
7505	4822 209 83163	LM833N			
7506	4822 209 83163	LM833N			

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.

ADAPTION OF SERVICE MANUAL 70DSS930 Codnr:4822 725 23911

DSS 930 : Service values for woofer & tweeter trimming.

1. Measurement setup.

Required apparatus : 1 Digital System Controller : DSC 950

1 Sine-generator.

1 AC (milli)Voltmeter (20kohm/V) (Fregrange : 20...20kHz.)

Settings : *DSC950 : Source : CD, analog input., Right Channel, Speakers A ON.

Level Adjust : 0 dB.

Compensation : ON. (Red LED shining.)

Volume : -20 dB.

Balance : Mid.

*Sine Generator : Woofer trimming : $f = 700 \text{ Hz}$. Level : 0.5 Vrms.

Tweeter trimming : $f = 7 \text{ kHz}$. Level : 0.5 Vrms.

*DSS 930: System A, Channel Right,Dummy load (75 ohm) at output terminal.

2.Remark.

As the woofer sensitivity remains ratherly constant during production, it will be almost unnecessary to trim the woofer sensitivity adjust potentiometer.

Only the tweeters for service will have a sticker whereon is mentioned the sensitivity.

The woofers for service use are exactly the same as those used for production of the DSS 930.

The tweeters are specially selected ones, each carefully measured.

3.Procedure.

When the whole setup is switched on, a 700 Hz. must come out of the woofers.

The measured voltage across the amplifier output terminals must be :

If a woofer must be replaced, watch out for correctly phase connecting. The + (red dot) of the woofer must be connected with the hot side of the amplifier.

Idem for the tweeter.

Voltages are measured with speakers connected.

Adjust the tweeter level referring to the following table :

This level must be measured across the amplifier output terminals.

*Voltage on woofer terminals : @ 0.7 kHz. : 1.403 Vrms. Adjust with R3620

*Voltage on tweeter terminals @ 7.0 kHz. Adjust with R3621

Sensitivity	Level
91.0 dB --->	0.860 Vrms.
90.5 ----->	0.911
90.0 ----->	0.956
89.5 ----->	1.023
89.0 ----->	1.084
88.5 ----->	1.148
88.0 ----->	1.216
87.5 ----->	1.287
87.0 ----->	1.363
86.5 ----->	1.444
86.0 ----->	1.529

Service
Service
Service

Product Service Group CE Audio

Service Information

The 70DSS930 the Japan version /06B has been introduced
We refer to the Service manual 70DSS930 codnr.4822 725 23911 ,except the following changes:

Position	Codenummer	Description
418	4822 146 31197	MAINS TRAFO /06
432	4822 321 10919	CORD SET /06

Service Information

93.06,29

LOUDSPEAKER BOX

70 DSS 930 / 00 S / 06 S

A 93/101

Product Service Group CE Audio

In the service manual (4822 725 23911) of loudspeakerbox 70 DSS 930, the list of mechanical parts on page 35 should be completed with the list mentioned below.

These parts are only used in the /06 S and /00 S versions.

POS.NR.	SERVICE CODE	DESCRIPTION
407	4822 455 30258	FRONT
404	4822 460 10971	RING ORNAMENTAL
409	4822 454 12813	PLATE ORNAMENTAL
402	4822 502 30599	PROTECTION
403	4822 458 40567	GRILLE
411	4822 450 61857	WINDOW
408	4822 466 40637	MOUNTING STRIP
406	4822 256 91888	LEG HOLDER
423	4822 322 10099	COAX CABLE 75 OHM
427	4822 265 20645	CINCH PLUG 75 OHM
	4822 736 21363	I.F.U. DSS 930
401	4822 240 70262	TWEETER
413	4822 240 50321	WOOFER AD 51603
413	4822 240 50321	WOOFER AD 51603
412	4822 158 20462	FERRITE COIL
80	4822 218 10447	REMOTE CONT. RH 6860

Service
Service
Service

Product Service Group CE Audio

Service Information

The 70DSS930 version **/16B** has been introduced
We refer to the Service manual 70DSS930 /00B codnr.4822 725 23911

Product Service Group CE Audio

Service Information

Problem:

When the volume changes-over from -34dB to -32dB and from -32dB to -34dB it is possible that you hear a switching plop in the box

Solution:

The plop can be reduced by changing the following components on the DSP motherboard :

change resistor item 3553 4k7 into 6k8 codenumber 4822 051 20682 *SMD*
change resistor item 3460 27E into 33E codenumber 4822 050 23309 *leaded*
change resistor item 3461 27E into 33E codenumber 4822 050 23309 *leaded*

** From week 9302 this is introduced in production