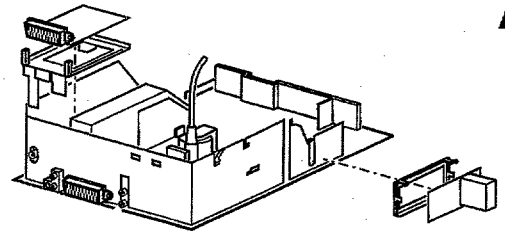


Service  
Service  
Service

**GR 2.3**  
AA



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# Service Manual

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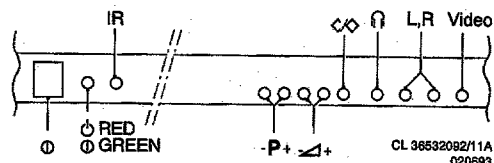
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## 1. Technical specification

Mains voltage	: 220 - 240 V ( $\pm 10\%$ )
Mains frequency	: 50 Hz ( $\pm 10\%$ )
Aerial input impedance	: 75 $\Omega$ - coax
Minimum aerial voltage	: 40 $\mu$ V
Maximum aerial voltage	: 32mV
Pull-in range colour synchronization	: $\pm 300$ Hz
Pull-in range horizontal synchronization	: $\pm 300$ Hz

### Local operation functions:



Programmes: 0-59

VCR operation on programmes: 0-59

### Indications:

- On Screen Display (OSD)
- LED:
  - standby (red)
  - operation (green)
  - RC5 reception (flashing yellow)
  - internal fault in  $\mu$ P (flashing)

## 2. Connection facilities

### 1. Specification of the terminal sockets

#### EXT1

1	-Audio	$\odot$	R (0,5V <sub>RMS</sub> $\leq$ 1k $\Omega$ )
2	-Audio	$\ominus$	R (0,2 - 2V <sub>RMS</sub> ; 0,5 V <sub>nom</sub> ; $\geq$ 10k $\Omega$ )
3	-Audio	$\odot$	L (0,5V <sub>RMS</sub> $\leq$ 1k $\Omega$ )
4	-Audio	$\perp$	
5	-Blue	$\perp$	
6	-Audio	$\ominus$	L (0,2 - 2V <sub>RMS</sub> ; 0,5 V <sub>nom</sub> ; $\geq$ 10k $\Omega$ )
7	-Blue	$\ominus$	(0,7V <sub>pp</sub> /75 $\Omega$ )
8	-16/9 switch		(0V-2V: 4/3; 9,5-12V: 16/9)
9	-Green	$\perp$	
10	--		
11	-Green	$\ominus$	(0,7V <sub>pp</sub> ; 75 $\Omega$ )
12	--		
13	-Red	$\perp$	
14	--		
15	-Red	$\ominus$	(0,7V <sub>pp</sub> ; 75 $\Omega$ )
16	-RGB-Status		(0-0,4V: int. 1-3V ext. 75 $\Omega$ )
17	-CVBS	$\odot$	$\perp$
18	-CVBS	$\ominus$	$\perp$
19	-CVBS	$\odot$	(1V <sub>pp</sub> /75 $\Omega$ )
20	-CVBS	$\ominus$	(1V <sub>pp</sub> /75 $\Omega$ )
21	-Earth screen		

#### Front side EXT2

1	$\perp$	
2	$\perp$	
3	-Y $\ominus$	(1V <sub>pp</sub> ; 75 $\Omega$ )
4	-C $\ominus$	(1V <sub>pp</sub> ; 75 $\Omega$ )
2x	$\odot$ CINCH Audio $\ominus$	L+R (0,2V <sub>RMS</sub> ; 0,5 V <sub>nom</sub> $\geq$ 10k $\Omega$ )
1x	$\odot$ CVBS $\ominus$	(1V <sub>pp</sub> /75 $\Omega$ )

#### EXT3

1	-Audio	$\odot$	R (0,5V <sub>RMS</sub> ; $\leq$ 1k $\Omega$ )
2	-Audio	$\ominus$	R (0,2 - 2V <sub>RMS</sub> ; 0,5 V <sub>nom</sub> ; $\geq$ 10k $\Omega$ )
3	-Audio	$\odot$	L (0,5V <sub>RMS</sub> ; $\leq$ 1k $\Omega$ )
4	-Audio	$\perp$	
5	--		
6	-Audio	$\ominus$	L (0,2 - 2V <sub>RMS</sub> ; 0,5 V <sub>nom</sub> ; $\geq$ 10k $\Omega$ )
7	--		
8	CVBS status 3	$\odot$	(0-2V: int.; 9,5-12V: ext.)
9	--		
10	--		
11	--		
12	--		
13	--		
14	--		
15	-C $\ominus$		(0,3V <sub>pp</sub> ; 75 $\Omega$ )
16	--		
17	-CVBS	$\odot$	$\perp$
18	-CVBS	$\ominus$	$\perp$
19	-CVBS	$\odot$	(1V <sub>pp</sub> /75 $\Omega$ )
20	-Y $\ominus$		(1V <sub>pp</sub> /75 $\Omega$ )
21	-Earth screen		

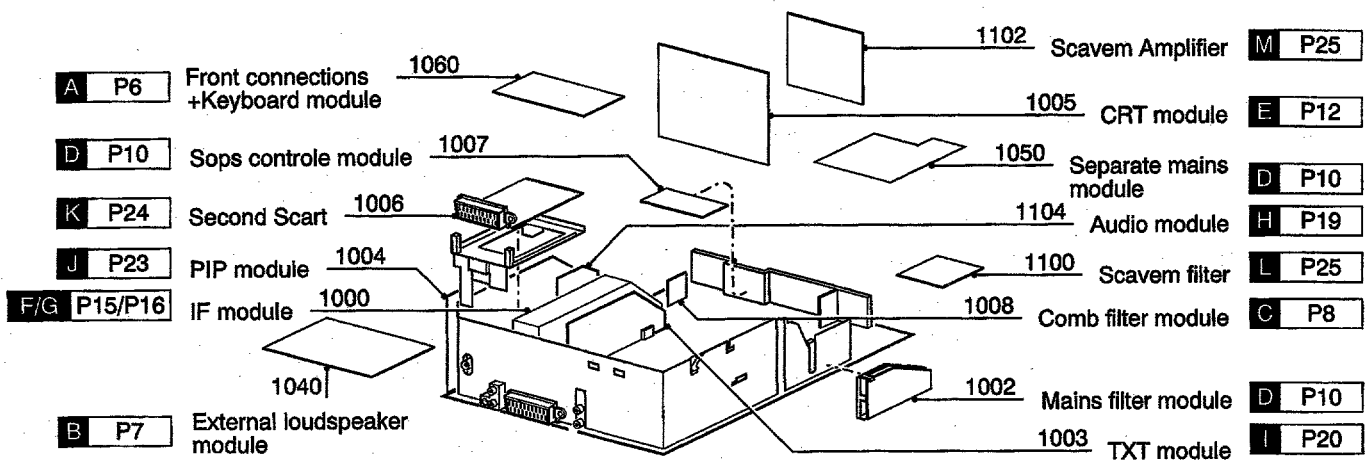
#### Rear side Audio out

2x  $\odot$  CINCH Audio  $\odot$  L+R (0,5V<sub>RMS</sub>;  $\geq$  1k $\Omega$ )

#### Front side

$\odot$   $\frac{1}{1}$   $\geq 8\Omega$

**PWB location drawing**



### 3. Warnings and Notes

#### Warnings

1. Safety regulations require that the unit should be returned in its original condition and that components identical to the original components are used. The safety components are indicated by the symbol ▲.
2. In order to prevent damage to ICs and transistors, all high-voltage flashovers must be avoided. In order to prevent damage to the picture tube, it should be discharged using the method shown in Fig. 3.1. Use a high-voltage probe and a multimeter (position DC-V). Discharge until the meter reading is 0V (after approx. 30s).
3. **ESD** ▲  
All ICs and many other semiconductors are sensitive to electrostatic discharges (ESD). Careless handling during repair can drastically shorten their life. Make sure that during repair you are connected by a pulse band with resistance to the same potential as the earth of the unit. Keep components and tools also at this same potential.
4. When repairing a unit, always connect it to the mains voltage via an isolating transformer.
5. Be careful when taking measurements in the high-voltage section and on the picture tube.
6. Never replace modules or other components while the unit is switched on.
7. It is recommended that safety goggles are worn when replacing the picture tube.
8. When making settings, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.
9. After repair the wiring should be fastened once more in the cable clamps for this purpose.
10. In order to prevent measuring errors, the heat sinks should not be used as reference points for measurements.  
**The heat sink for the sound output amplifier (next to the channel selector) is connected to the -16 or -12 volts.**
11. Together with the deflection unit and any multipole unit, the flat square picture tubes used form an integrated unit. The deflection and the multipole units are set optimally at the factory. Adjustment of this unit during repair is therefore not recommended.
12. The high-voltage cable in 21" units is glued in the line output transformer. This can therefore not be replaced.

#### Notes

1. The picture tube PCB has printed spark gaps. Each spark gap is connected between an electrode of the picture tube and the Aquadag coating.
2. The semiconductors indicated in the circuit diagram and in the parts lists are completely interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.
3. The connectors used for the modules (board to board) are gold-plated and should only be replaced by the same type.
4. In the case of fault finding and/or repair to the teletext module, the accessibility of the circuit and the components can be increased by using extension cards. The order numbers of these extension cards are:  
\* 6 times: 4822 395 30259  
\* 8 times: 4822 214 31402
5. Both multisystem and single system units are mentioned in this documentation. The term multisystem unit is used to refer to a unit that is suitable for the reception of PAL BGI and SECAM BGLL' systems. A multi-system set for Eastern-Europa is suitable for the reception of the PAL/SECAM BGDK systems. The term single system unit is used to refer to all other units (such as PAL BG, PAL/SECAM BG and PAL I units).
6. Blackline units can be recognized by the thick, protected high-voltage cable. Non-blackline units have a thin, unprotected high-voltage cable.

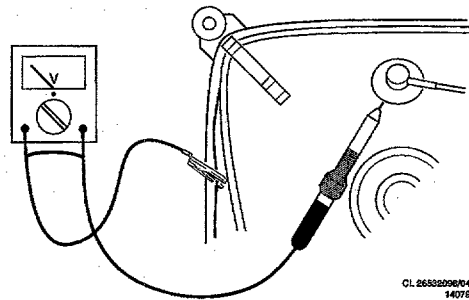


Fig. 3.1

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140782

3 3  
VI P25  
E P12  
D P10  
H P19  
L P25  
C P8  
D P10  
I P20

L 36532107/011  
200893



## 4. Mechanical instructions

### 1. Removing the back plate

It is only possible to remove the back plate after removing the screws on the top, side, possibly on the underneath and possibly under the **EXT 3 connection** (see Fig. 4.1). In the case of subwoofer units, the subwoofer speaker on the carrier panel should also be unplugged. In subwoofer sets the subwoofer plug on the carrier panel must also be disconnected. In sets with an upper panel this should first be removed by unlatching the click-in construction. By applying pressure to the top of the upper panel and pulling to the rear the plastic screws in the rear panel can be given half a turn, allowing the rear panel to be removed. (Fig. 4.2).

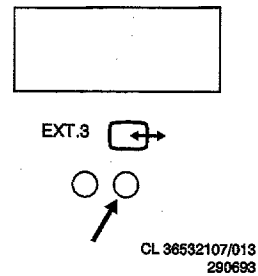


Fig. 4.1

### 2. Service position 1

#### Service position for module service and to measure test points

Unlock the chassis after the cables of the degaussing coil and any PIP module have been disconnected, and pull it backwards until all test points are accessible (see Fig. 4.2).

In order to make the tuner and the IF/sound module accessible, the bracket above these modules can be removed (see Fig. 4.3). With the exception of one fault message, the unit continues to function normally when the PIP module is not connected.

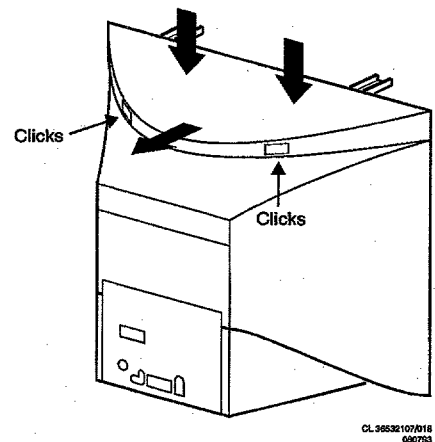


Fig. 4.2

### 3. Service position 2

#### Service position for repair

Place the chassis on the heat sink on the tuner side after service position 1 is reached (see Fig. 4.4).

#### Warning:

**Make sure that the heat sink of the sound output amplifier does not form a short circuit with the raster/line heat sink if the bracket of the euromodule has been removed !**

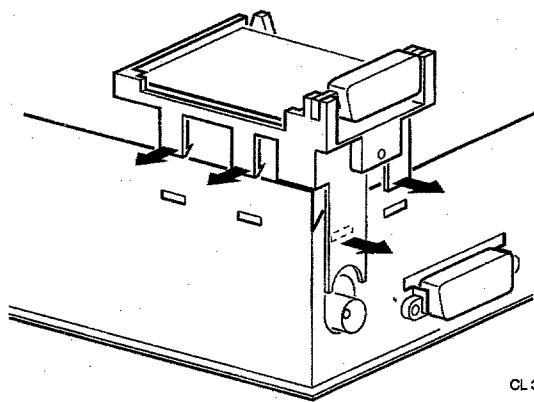


Fig. 4.3

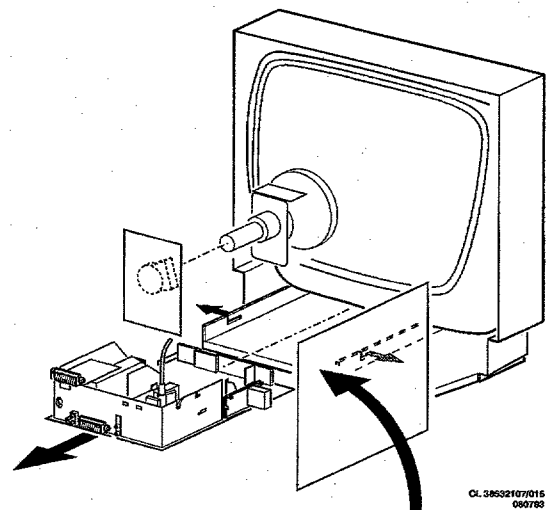
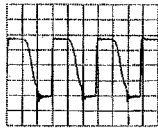


Fig. 4.4

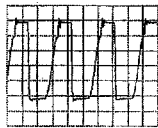


TP1 = DC 15V9  
 TP2 = DC -15V9  
 TP3



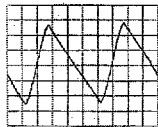
20V/div AC  
 5µs div

TP4 = DC 9V7  
 TP5



5V/div AC  
 5µs div

TP6 = DC 4V8  
 TP7



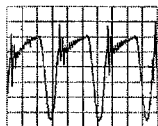
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 2ms div

TP8



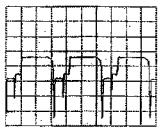
2V/div AC  
 5µs div

TP9



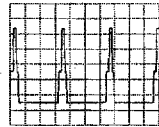
0.2V/div AC  
 5µs div

TP10 = DC 2V4  
 TP11 = DC 0V  
 TP12 = DC 2V7  
 TP14



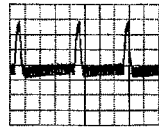
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 20µs div

TP16



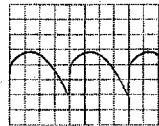
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 20µs div

TP17 = DC 0V  
 TP18



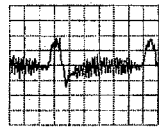
2V/div AC  
 5ms div

TP19



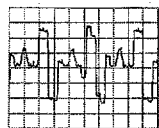
1V/div AC  
 5ms div

TP20



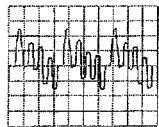
50mV/div AC  
 10µs div

TP21



0.1V/div AC  
 20µs div

TP22



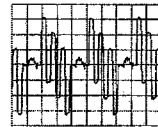
0.2V/div AC  
 20µs div

TP23



0.2V/div AC  
 20µs div

TP24



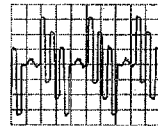
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 20µs div

TP25



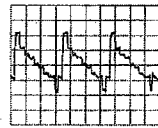
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 20µs div

TP26



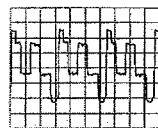
0.2V/div AC  
 20µs div

TP27



0.1V/div AC  
 20µs div

TP28



0.5V/div AC  
 20µs div

TP29



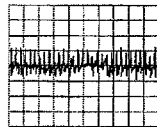
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 20µs div

TP30



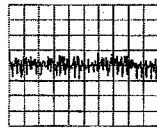
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 20µs div

TP31



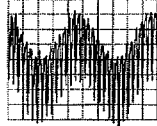
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 0.2ms div

TP34



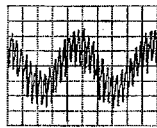
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 0.2ms div

TP35

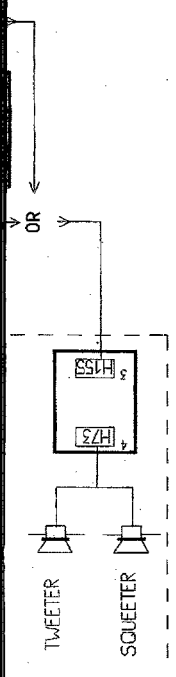


20mV/div AC  
 0.2ms div

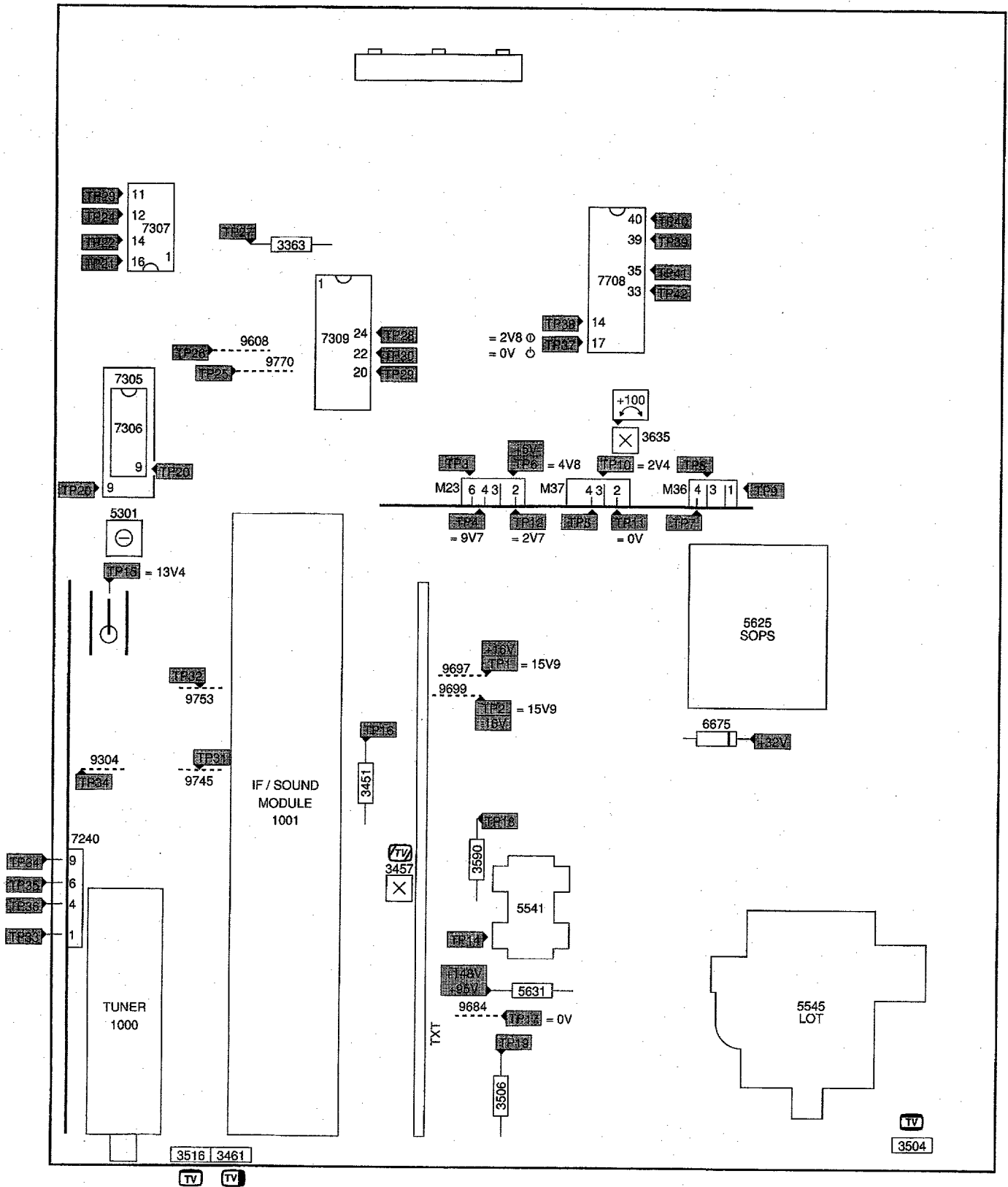
TP36

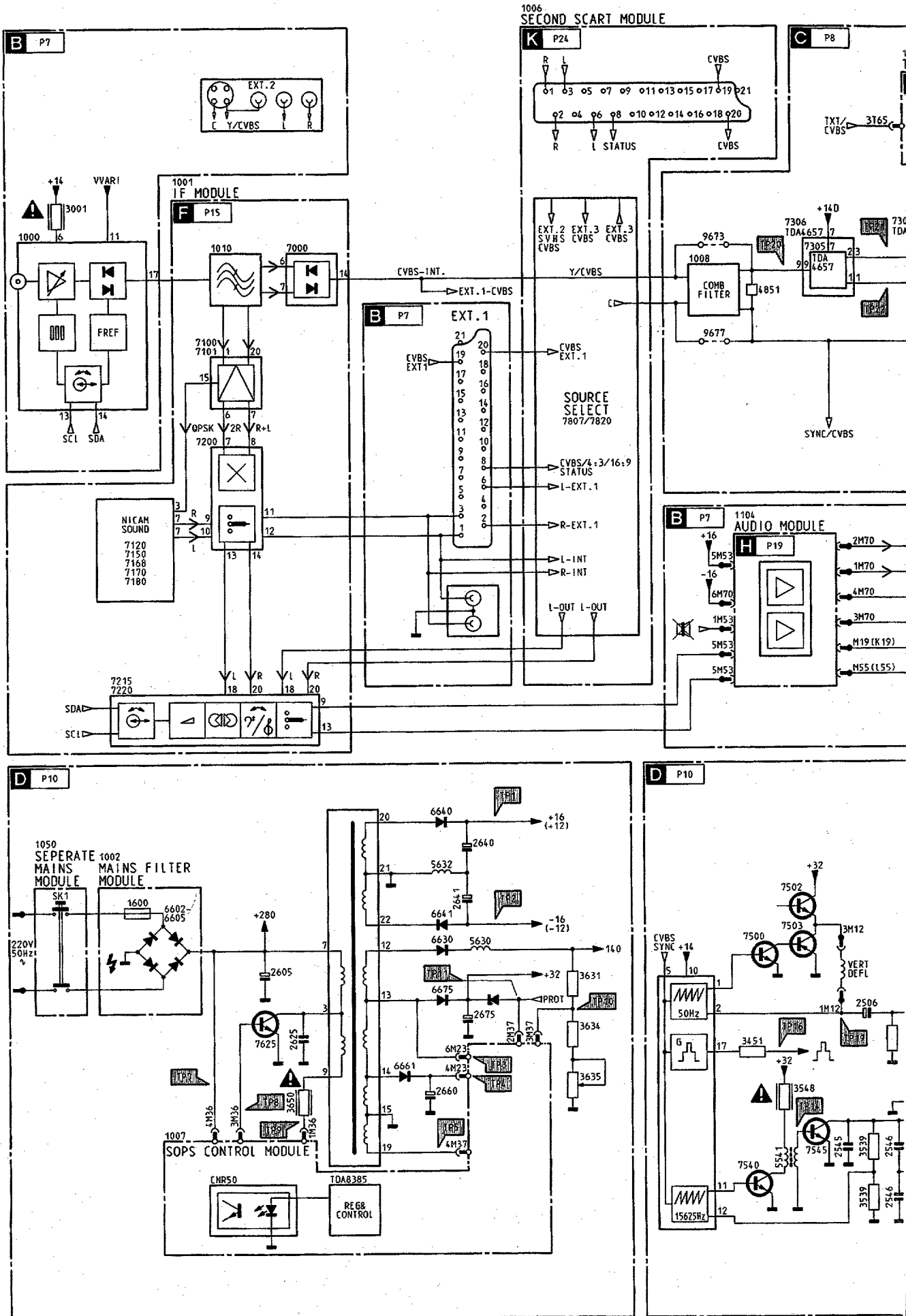


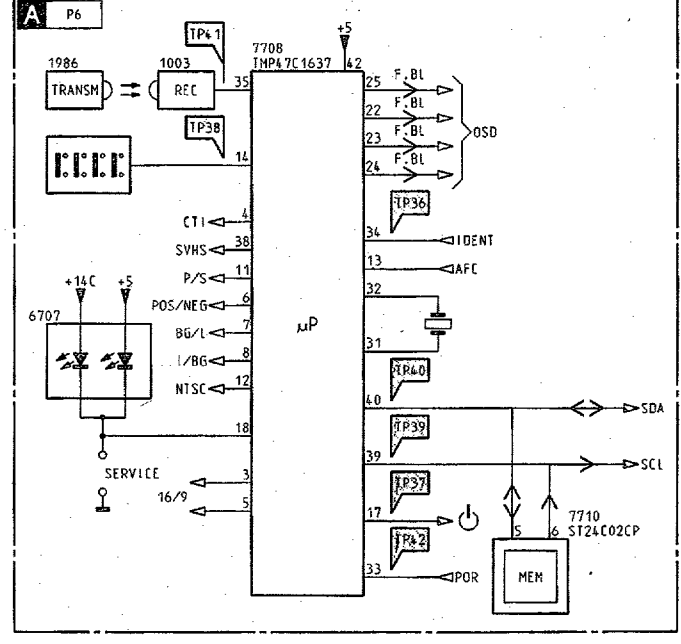
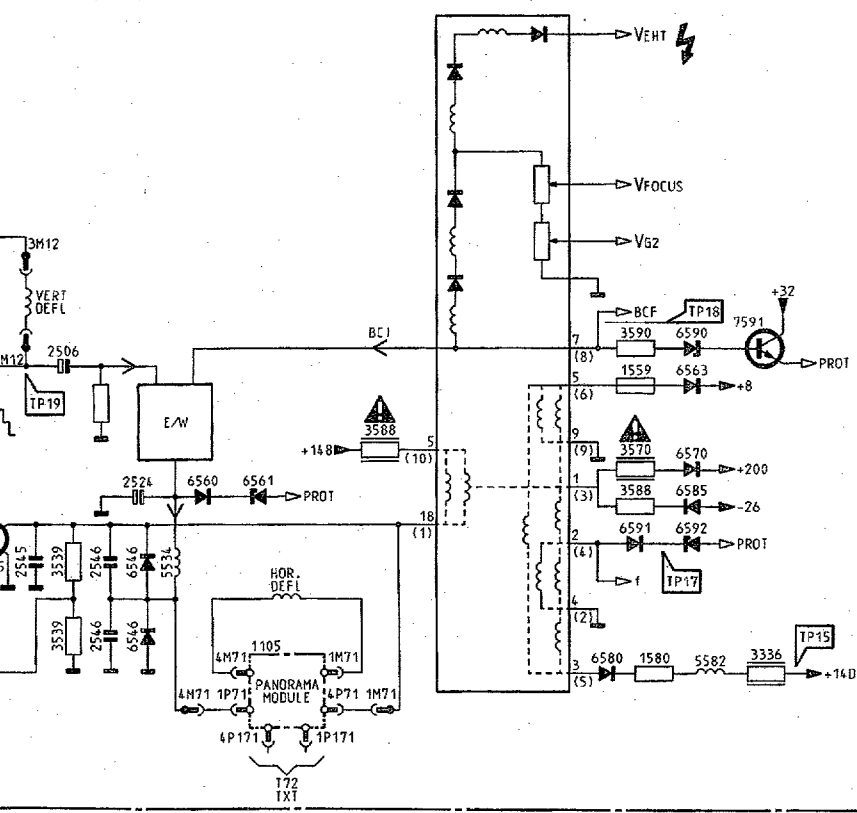
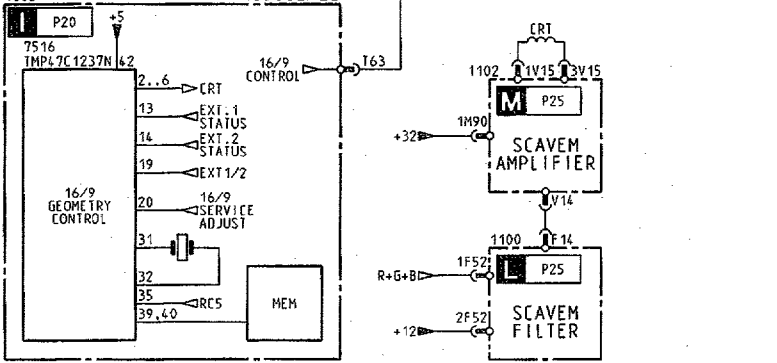
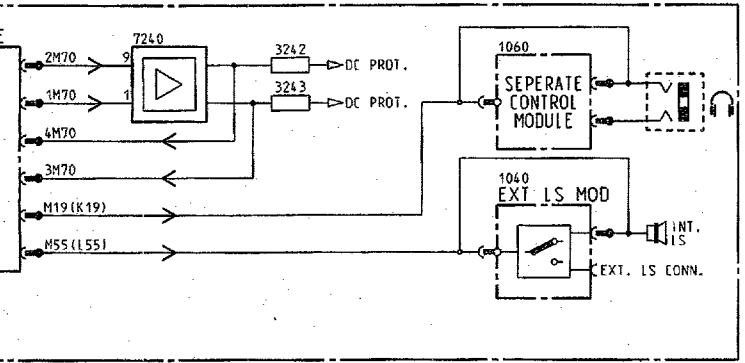
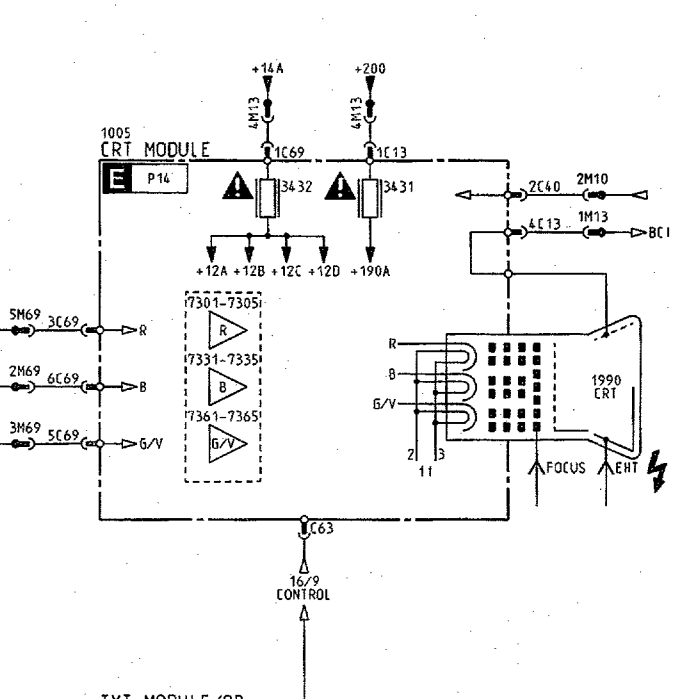
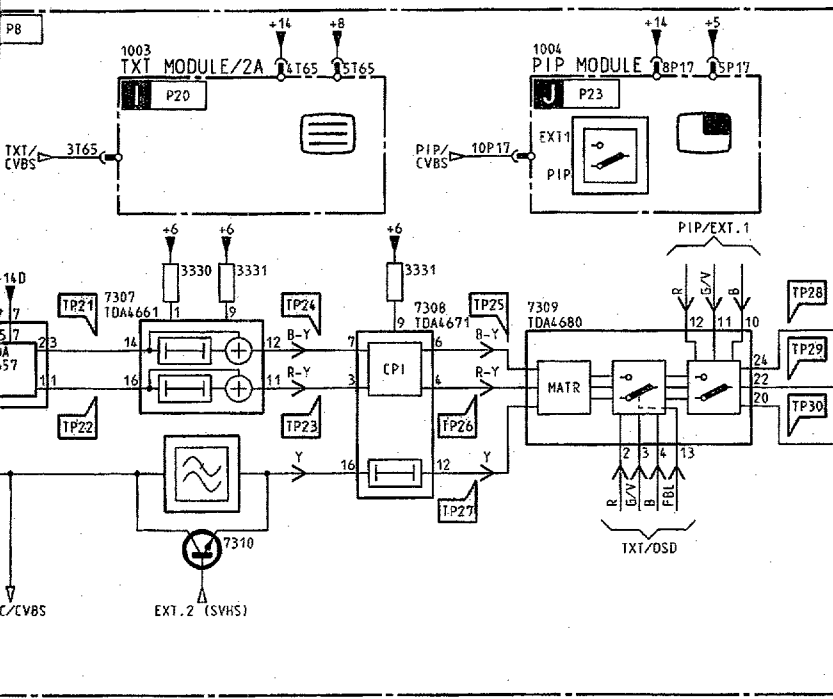
2mV/div AC  
 0.2ms div



# Test point overview/Übersicht Teststellen/Tableau des points à tester

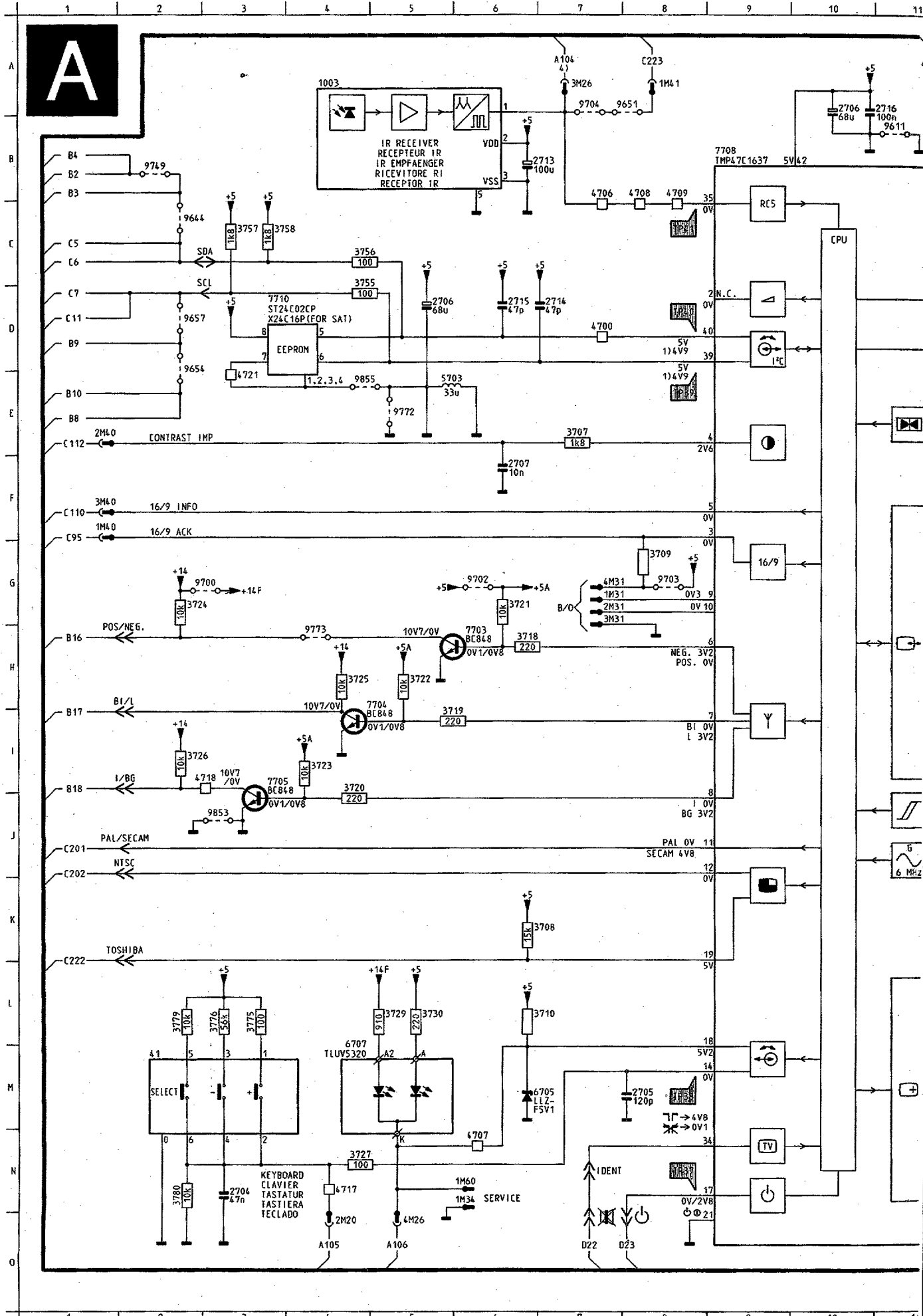


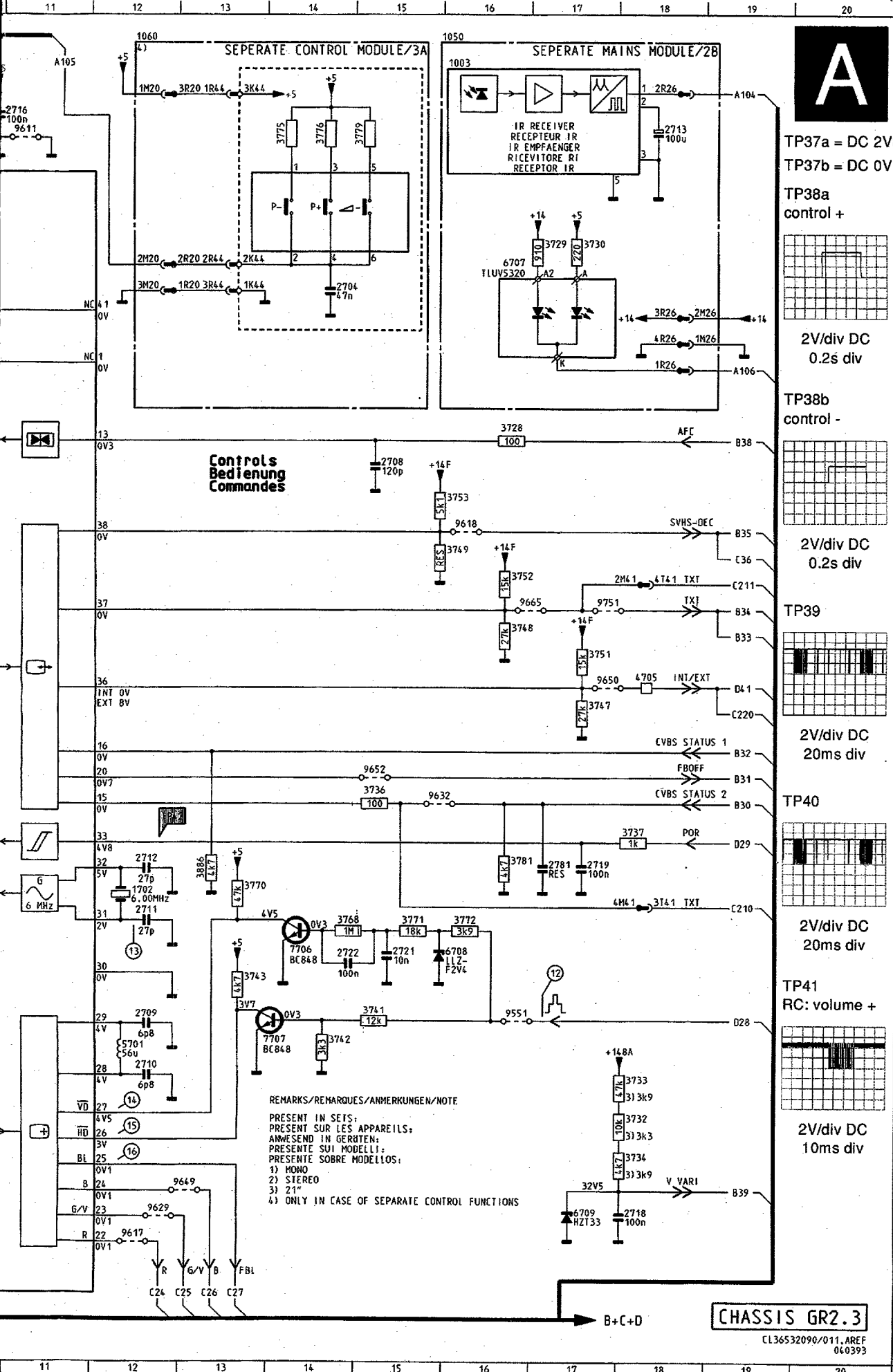




CHASSIS GR2.3

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050893





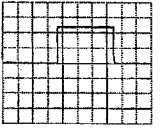
1003	A 4	9703	G 8
1003	A16	9704	A 7
1050	A15	9749	B 2
1060	A12	9751	G17
1702	J12	9772	E 5
2704	N 3	9773	H 4
2704	C14	9853	J 3
2705	M 8	9855	E 4
2706	A10		
2706	D 5		
2707	F 6		
2708	E15		
2709	L12		
2710	L12		
2711	K12		
2712	J12		
2713	B 6		
2713	B18		
2714	D 7		
2715	O 6		
2716	A11		
2718	N18		
2719	J17		
2721	K15		
2722	K14		
2781	J17		
3707	E 7		
3708	K 6		
3709	G 8		
3710	L 6		
3718	H 6		
3719	I 5		
3720	I 4		
3721	G 6		
3722	H 5		
3723	I 4		
3724	G 2		
3725	H 4		
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3727	N 4		
3728	E16		
3729	L 5		
3729	C17		
3730	L 5		
3730	C17		
3732	M18		
3733	L18		
3734	M18		
3736	L15		
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3742	L14		
3743	K13		
3747	H17		
3748	G16		
3749	F16		
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3779	L 2		
3779	B15		
3780	N 2		
3781	J16		
3886	J13		
4100	M 2		
4100	D 7		
4105	H18		
4706	B 7		
4707	N 6		
4708	B 8		
4709	B 8		
4717	N 4		
4718	I 3		
4721	E 3		
5701	L12		
5703	E 5		
6705	M 6		
6707	N 4		
6707	C16		
6708	K16		
6709	N17		
7703	H 6		
7703	I 4		
7703	I 3		
7704	K14		
7707	L13		
7708	B 9		
7710	O 3		
9551	L16		
9611	B11		
9617	N12		
9618	F16		
9629	N12		
9632	L15		
9644	C 2		
9649	N13		
9650	H17		
9651	A 8		
9652	I15		
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9657	D 2		
9665	G16		
9670	G 3		
9702	G 6		



TP37a = DC 2V8

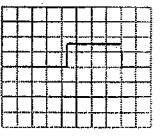
TP37b = DC 0V

TP38a control +



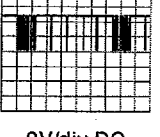
2V/div DC  
0.2s div

TP38b control -



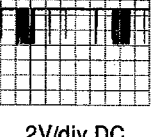
2V/div DC  
0.2s div

TP39



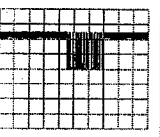
2V/div DC  
20ms div

TP40



2V/div DC  
20ms div

TP41 RC: volume +



2V/div DC  
10ms div

REMARKS/REMARQUES/ANMERKUNGEN/NOTE  
 PRESENT IN SETS;  
 PRESENT SUR LES APPAREILS;  
 ANWESEND IN GERÄTEN;  
 PRESENTE SUI MODELLI;  
 PRESENTE SOBRE MODELLIS;  
 1) MONO  
 2) STEREO  
 3) 21"  
 4) ONLY IN CASE OF SEPERATE CONTROL FUNCTIONS

CHASSIS GR2.3

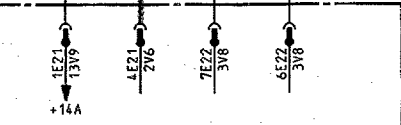
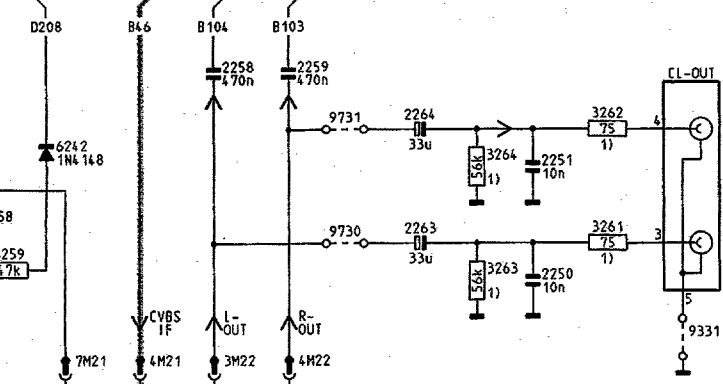
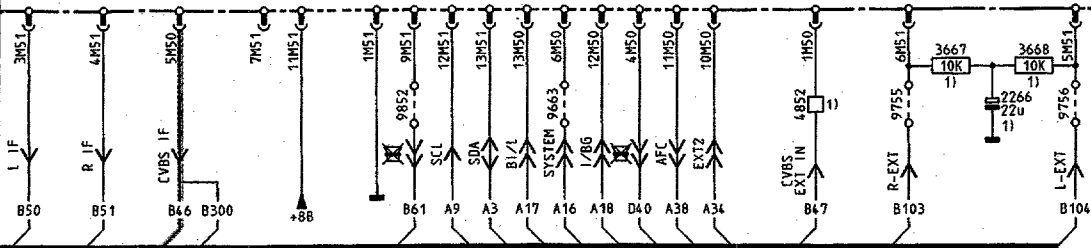
CL36532090/011, AREF 040393





IF MODULE

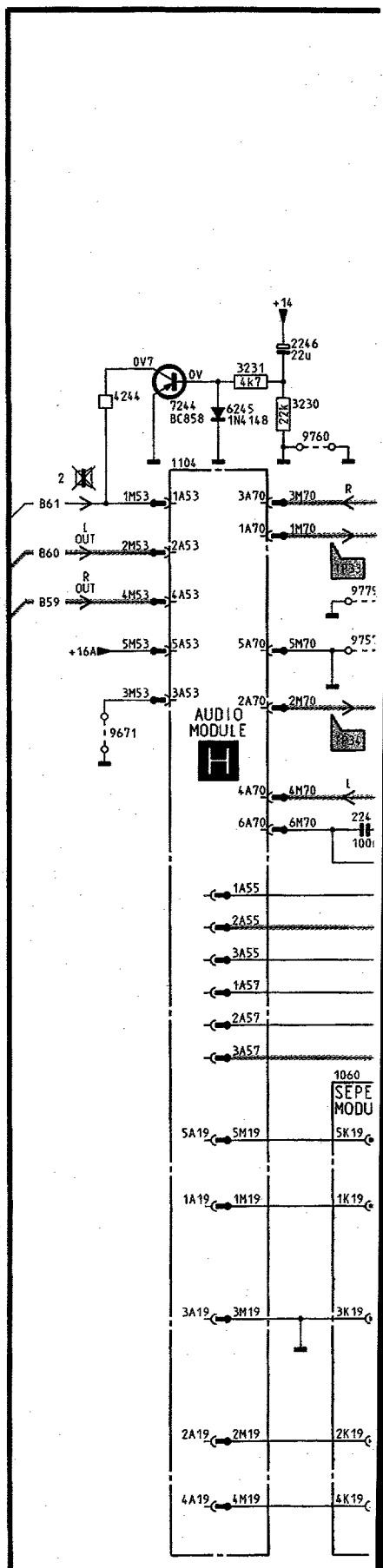
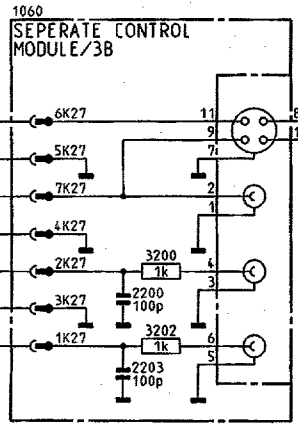
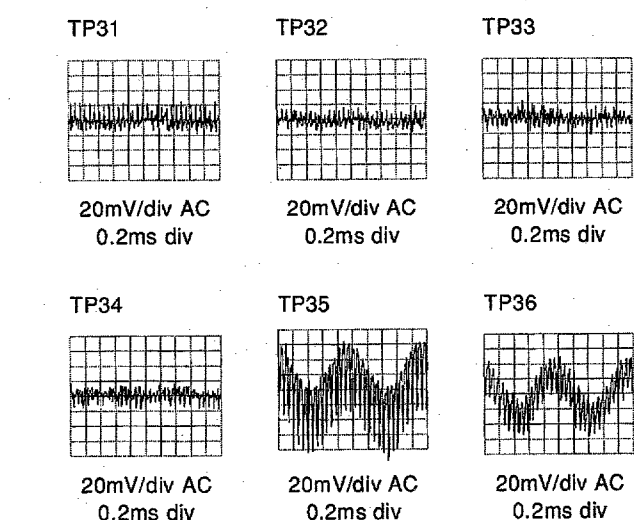
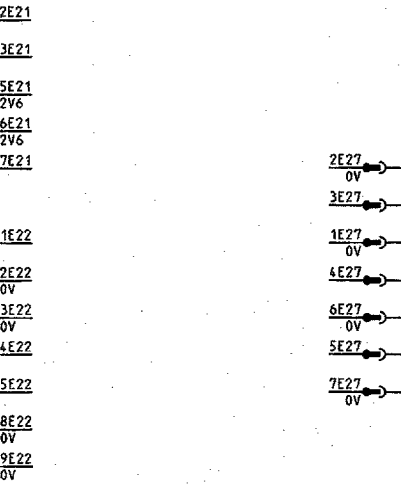
F : STEREO  
G : NICAM



SECOND SCART MODULE

K

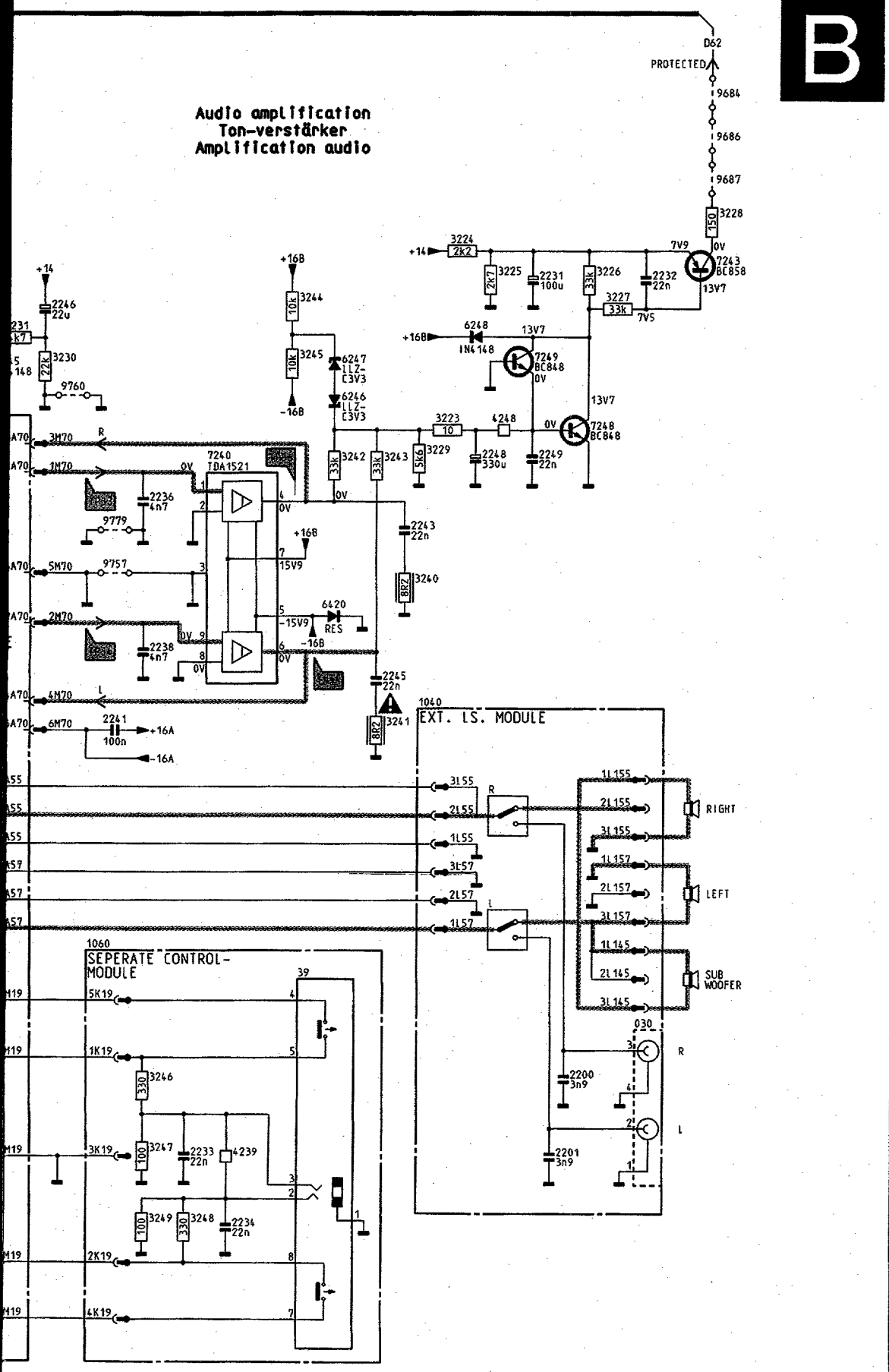
Source selection  
Quellenwahl  
Selection de source



A+C+D

**B**

**Audio amplification  
Ton-verstärker  
Amplification audio**

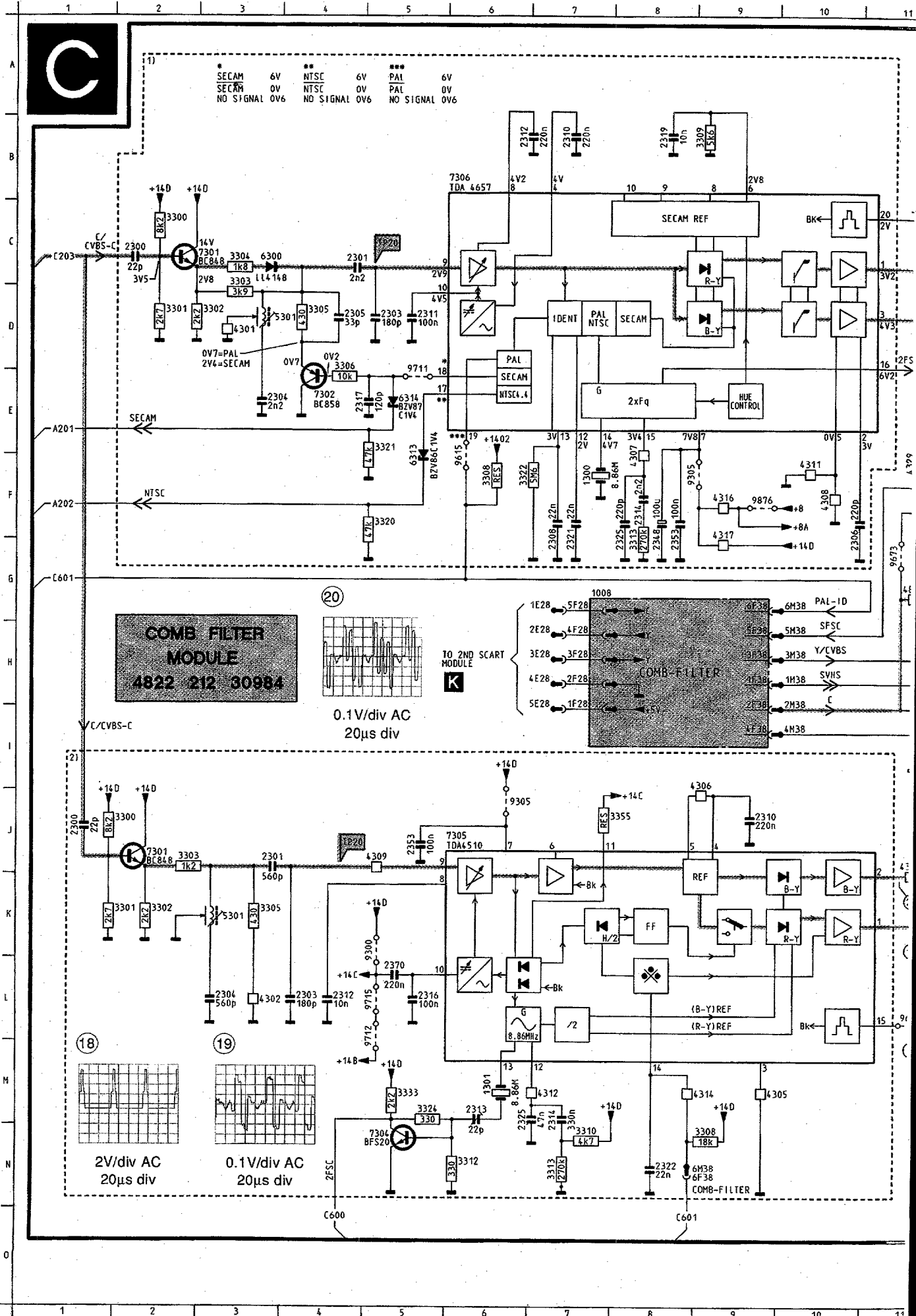


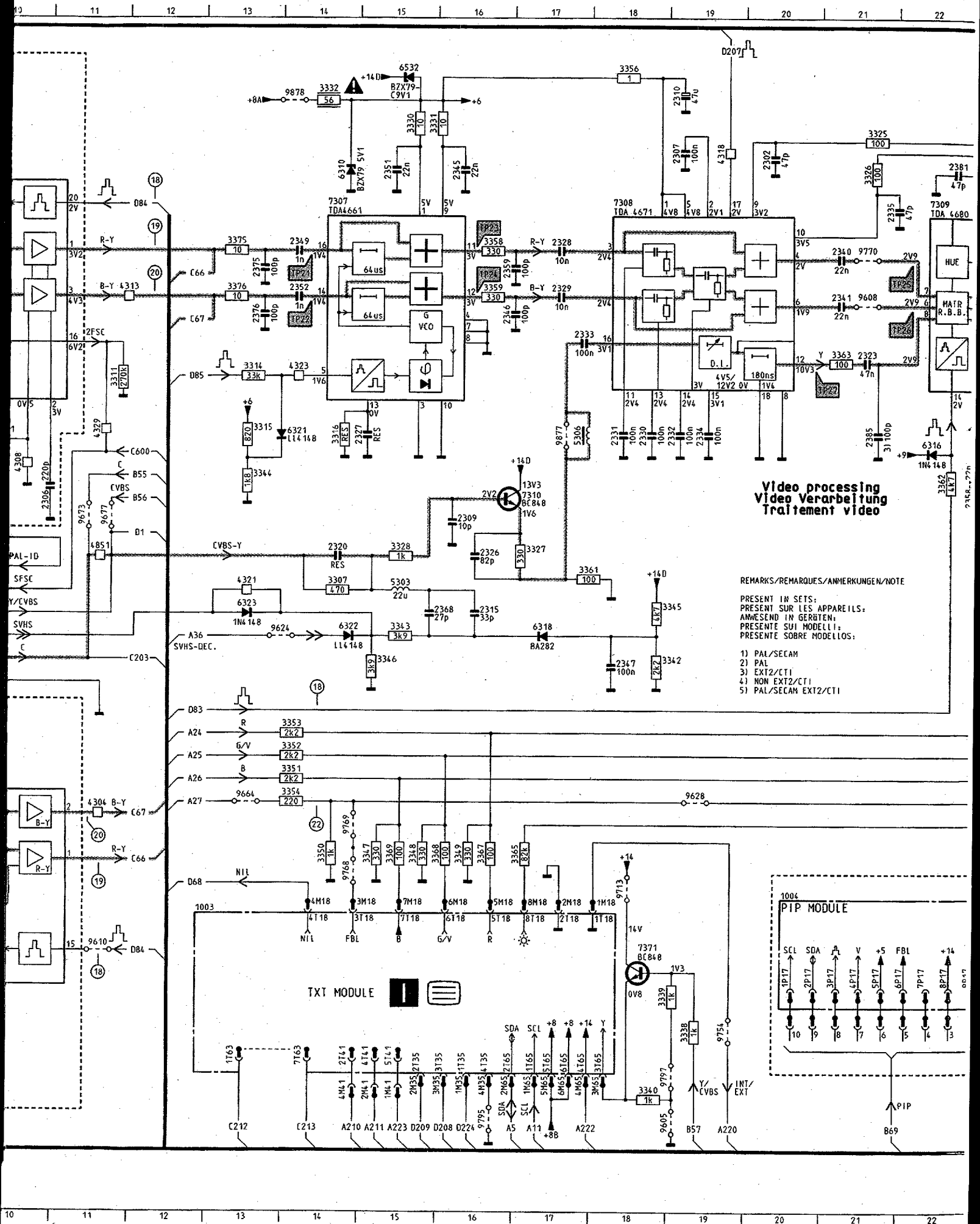
1000	C 1	4242	E 9
1001	A 8	4243	N 2
1006	G10	4244	O20
1040	H26	4248	E27
1060	J22	4850	B10
1060	L14	4852	B17
1104	E21	4853	L 8
1240	B 3	4861	F 4
1242	A 4	4867	K 8
2001	C 1	5001	H 3
2002	E 4	5240	B 3
2003	H 3	5242	A 3
2004	D 4	6241	E 8
2005	H 2	6242	E11
2008	G 4	6245	D21
2010	H 4	6246	E25
2200	L27	6247	O26
2200	N15	6248	O26
2201	L27	6420	G25
2203	N15	7003	G 3
2230	G 1	7240	F24
2231	C27	7241	F 9
2232	C28	7242	E10
2233	L23	7243	C29
2234	M24	7244	O21
2236	F23	7248	E28
2237	B 4	7249	O27
2238	G23	7850	J 2
2239	A 5	7886	M 2
2240	B 4	9270	H 9
2241	H23	9331	F16
2242	A 5	9621	I 2
2243	F26	9630	I 3
2245	G25	9643	I 9
2246	O22	9647	I 9
2248	E26	9648	I 9
2249	E27	9655	I 9
2250	F14	9663	B15
2251	E14	9671	G20
2252	K 5	9675	J 8
2253	K 6	9678	L 8
2254	N 4	9681	L 8
2255	N 6	9684	A29
2256	N 6	9686	B29
2257	O 5	9687	B29
2258	O12	9730	E13
2259	O13	9731	E13
2260	F 8	9739	M 8
2263	E14	9745	B 9
2264	E14	9747	B 4
2266	B18	9748	A 5
2853	J 4	9750	A 3
2854	N 2	9753	B 9
39	K24	9755	B17
3001	B 2	9756	B19
3002	D 5	9757	F23
3003	G 2	9759	K 3
3010	G 4	9760	O22
3200	N15	9779	F23
3202	N15	9852	B13
3220	A 4		
3222	H 1		
3223	E26		
3224	C26		
3225	C27		
3226	C28		
3227	D28		
3228	C29		
3229	E26		
3230	O22		
3231	O22		
3240	F26		
3241	H25		
3242	E25		
3243	E25		
3244	C24		
3245	O24		
3246	L23		
3247	L23		
3248	M23		
3249	M23		
3250	N 6		
3251	N 5		
3253	L 6		
3254	L 6		
3255	F 8		
3256	F 9		
3257	E 9		
3258	E10		
3259	F10		
3260	F 8		
3261	E15		
3262	E15		
3263	F14		
3264	E14		
3667	B18		
3668	B18		
3850	L 2		
3851	N 3		
3852	N 4		
3853	N 4		
3854	N 5		
3855	N 3		
3856	L 2		
3857	L 2		
3858	K 2		
3859	K 2		
3860	N 3		
3862	M 2		
3872	M 2		
3887	I 3		
3888	L 5		
3889	J 3		
3890	J 3		
49	M 3		
4239	L24		

**CHASSIS GR2.3**

CL36532090/012, REF  
040893

# Video processing/Video Verarbeitung/





Video processing  
Video Verarbeitung  
Traitement video

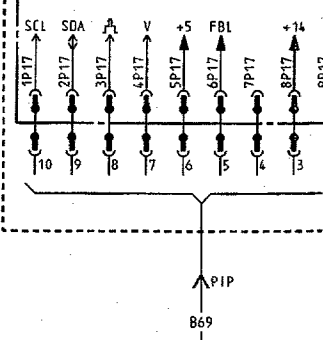
REMARKS/REMARKES/ANMERKUNGEN/NOTE

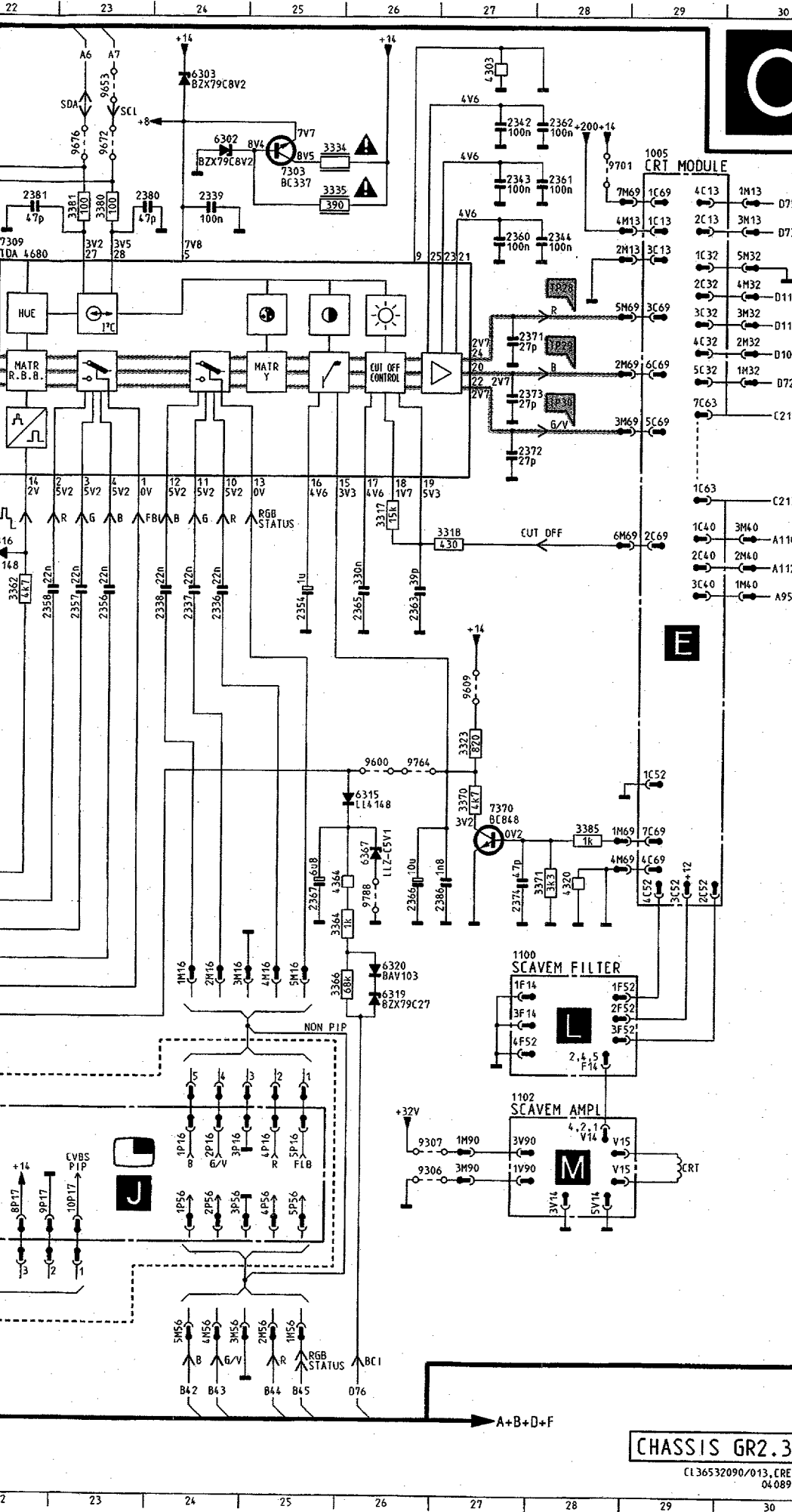
PRESENT IN SETS:  
PRESENT SUR LES APPAREILS:  
ANWESSENT IN GERÄTEN:  
PRESENTE SUI MODELLI:  
PRESENTE SOBRE MODELOS:

- 1) PAL/SECAM
- 2) PAL
- 3) EXT2/CTI
- 4) NON EXT2/CTI
- 5) PAL/SECAM EXT2/CTI

TXT MODULE

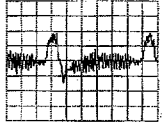
PIP MODULE





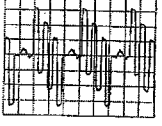
1003	L12	3316	F14	9608	D21
1004	L20	3317	E26	9609	G27
1005	B29	3318	F27	9610	L11
1008	G 7	3320	F 5	9615	F 6
1100	J27	3321	E 5	9624	H13
1102	L27	3322	F 6	9628	J19
1300	F 7	3323	H27	9653	A23
1301	M 6	3324	M 5	9664	J13
2300	C 2	3325	B21	9672	B23
2300	J 1	3326	B21	9673	G11
2301	C 4	3327	G17	9676	B23
2301	J 3	3328	G15	9677	G11
2302	B20	3330	B15	9701	B28
2303	D 5	3331	B15	9711	E 5
2303	L 4	3332	A14	9712	L 5
2304	E 3	3333	M 5	9713	K18
2304	L 3	3334	B25	9715	L 5
2305	D 4	3335	B25	9754	M19
2306	F10	3338	M19	9764	H26
2307	B19	3339	M18	9768	K14
2308	F 7	3340	M18	9769	K14
2309	G16	3342	H18	9770	C21
2310	B 7	3343	H15	9788	I26
2310	J 9	3344	F13	9795	M16
2310	A19	3345	H18	9797	N19
2311	D 5	3346	H15	9876	F 9
2312	B 6	3347	K15	9877	F17
2312	L 4	3348	K15	9878	A14
2313	M 6	3349	K16		
2314	F 8	3350	K14		
2315	H16	3352	J14		
2316	L 5	3353	I14		
2317	E 4	3354	J14		
2319	B 8	3355	J 7		
2320	G14	3356	A18		
2321	F 7	3358	C16		
2322	N 8	3359	D16		
2323	E21	3361	G17		
2325	M 6	3362	F22		
2325	F 8	3363	E21		
2326	G16	3364	J26		
2327	F15	3365	K17		
2328	C17	3366	J26		
2329	D17	3367	K16		
2330	F18	3368	K16		
2331	F18	3369	K15		
2332	F19	3370	H27		
2333	D17	3371	I28		
2334	F19	3375	C13		
2335	C21	3376	D13		
2336	F24	3380	B23		
2337	F24	3381	B23		
2338	F24	3385	I28		
2339	B24	4301	D 3		
2340	C21	4302	L 3		
2341	D21	4303	A27		
2342	A27	4304	J11		
2343	B27	4305	M 9		
2344	C28	4306	I 9		
2345	B16	4307	F 8		
2346	D16	4308	F10		
2347	F 8	4309	J 5		
2348	F 8	4311	F10		
2349	C14	4312	M 7		
2351	B15	4313	O11		
2352	D14	4314	M 8		
2353	F 8	4316	F 9		
2353	J 5	4317	F 9		
2354	F25	4318	B19		
2356	F23	4320	I28		
2357	F23	4321	H13		
2358	F22	4323	E14		
2359	D16	4329	F11		
2360	C27	4364	I26		
2361	B28	4851	G11		
2362	A28	5301	D 3		
2363	F26	5301	K 3		
2365	F26	5303	H15		
2366	I26	5306	F17		
2367	I25	6300	C 3		
2368	H15	6302	B24		
2370	L 5	6303	A24		
2371	D27	6310	B14		
2372	E27	6313	F 5		
2373	D27	6314	E 5		
2374	I27	6315	H26		
2375	D13	6316	F22		
2376	D13	6318	H17		
2380	B23	6319	J26		
2381	B22	6320	J26		
2385	F21	6321	F14		
2386	I27	6322	H14		
3300	C 2	6323	H13		
3300	J 2	6367	I26		
3301	D 2	6532	A15		
3301	K 2	7301	C 2		
3302	D 3	7301	J 2		
3302	K 2	7302	E 4		
3303	D 3	7303	B25		
3303	J 2	7304	N 5		
3304	C 3	7305	J 5		
3305	D 4	7306	B 5		
3305	K 3	7307	C14		
3306	E 4	7308	C18		
3307	H14	7309	C22		
3308	N 9	7310	F17		
3308	F 6	7370	I27		
3309	B 9	7371	L18		
3310	N 7	9300	K 5		
3311	E11	9305	F 8		
3312	N 6	9305	J 6		
3313	N 7	9306	L26		
3313	G 8	9307	L26		
3314	E13	9600	H26		
3315	F13	9605	O19		

TP20



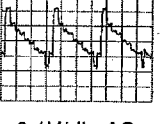
50mV/div AC  
10µs div

TP26



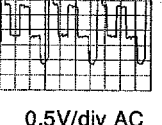
0.2V/div AC  
20µs div

TP27



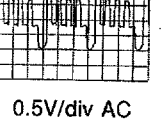
0.1V/div AC  
20µs div

TP28



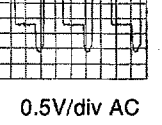
0.5V/div AC  
20µs div

TP29



0.5V/div AC  
20µs div

TP30



0.5V/div AC  
20µs div

CHASSIS GR2.3  
CL36532090/013.CREF  
04.0893

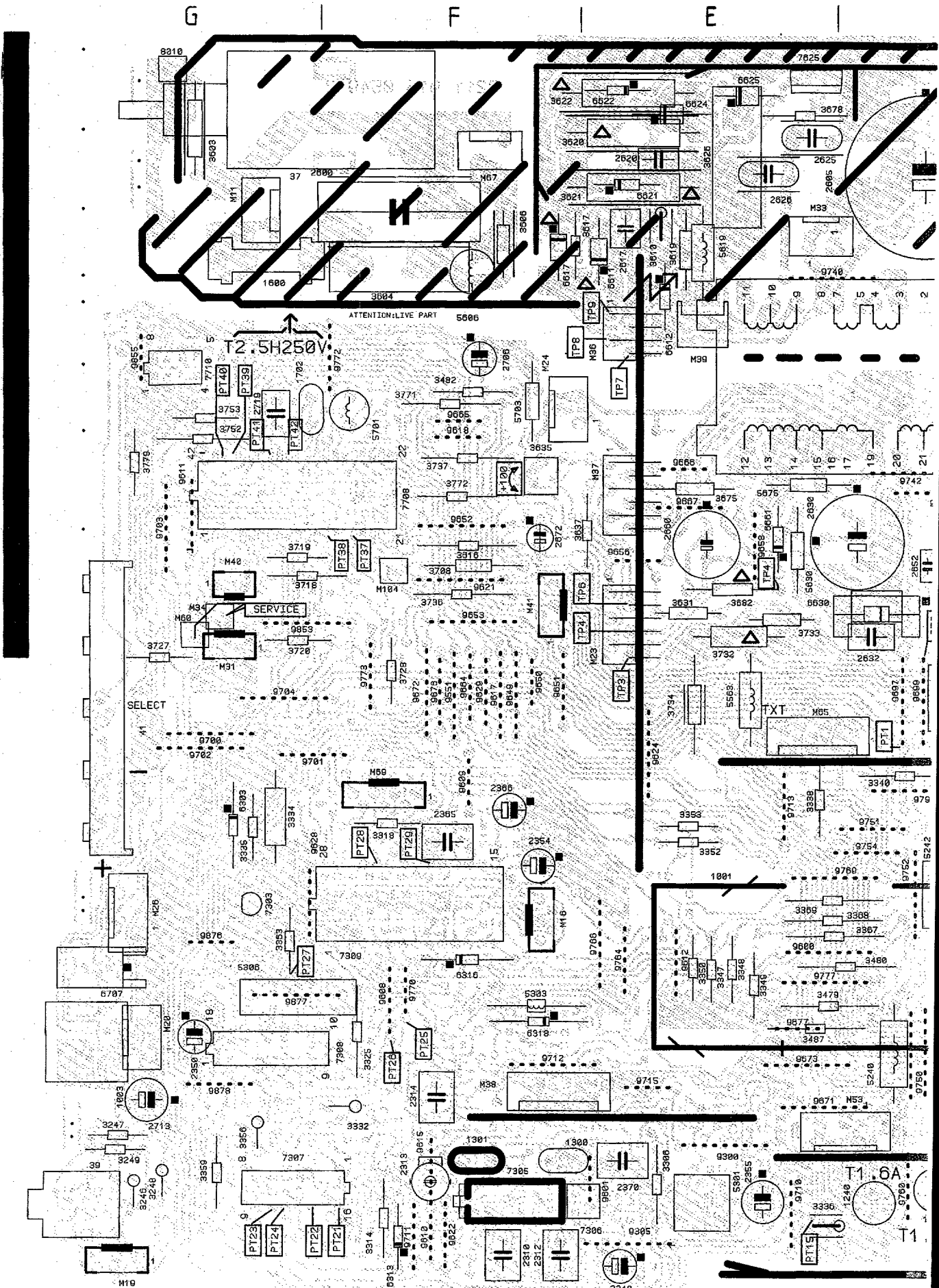
1

2

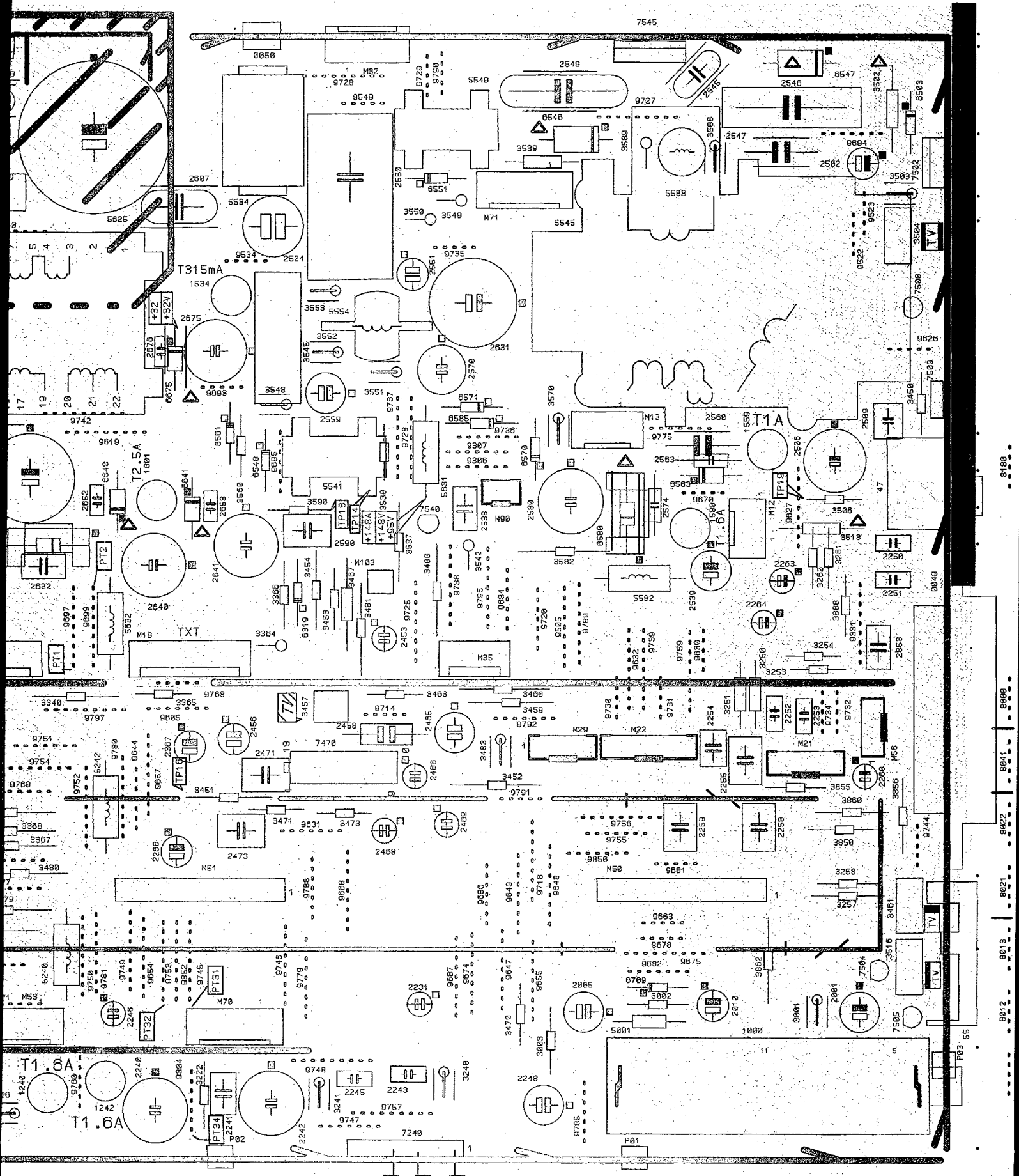
3

4

5



D | C | B | A



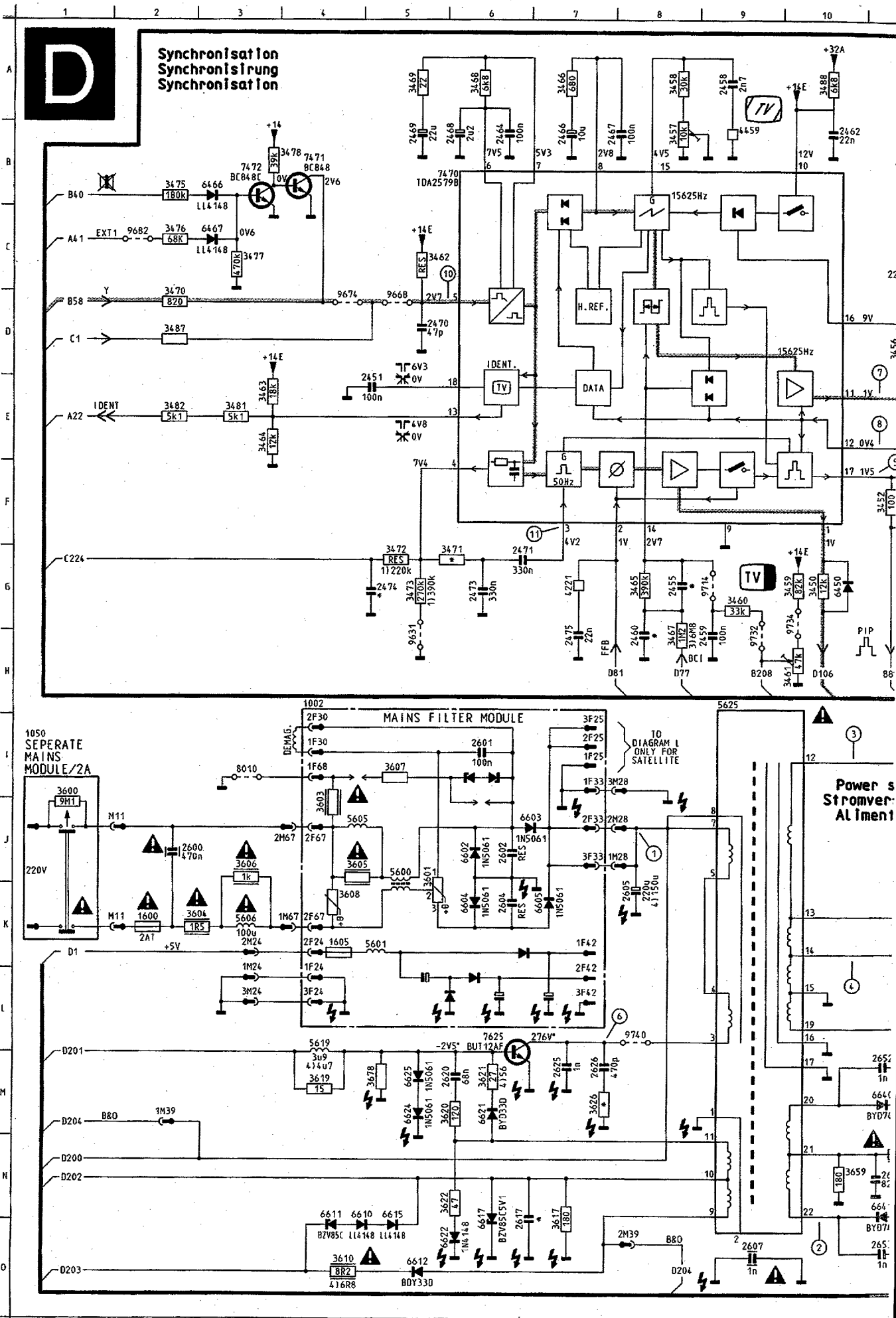
8211 015 0552 2

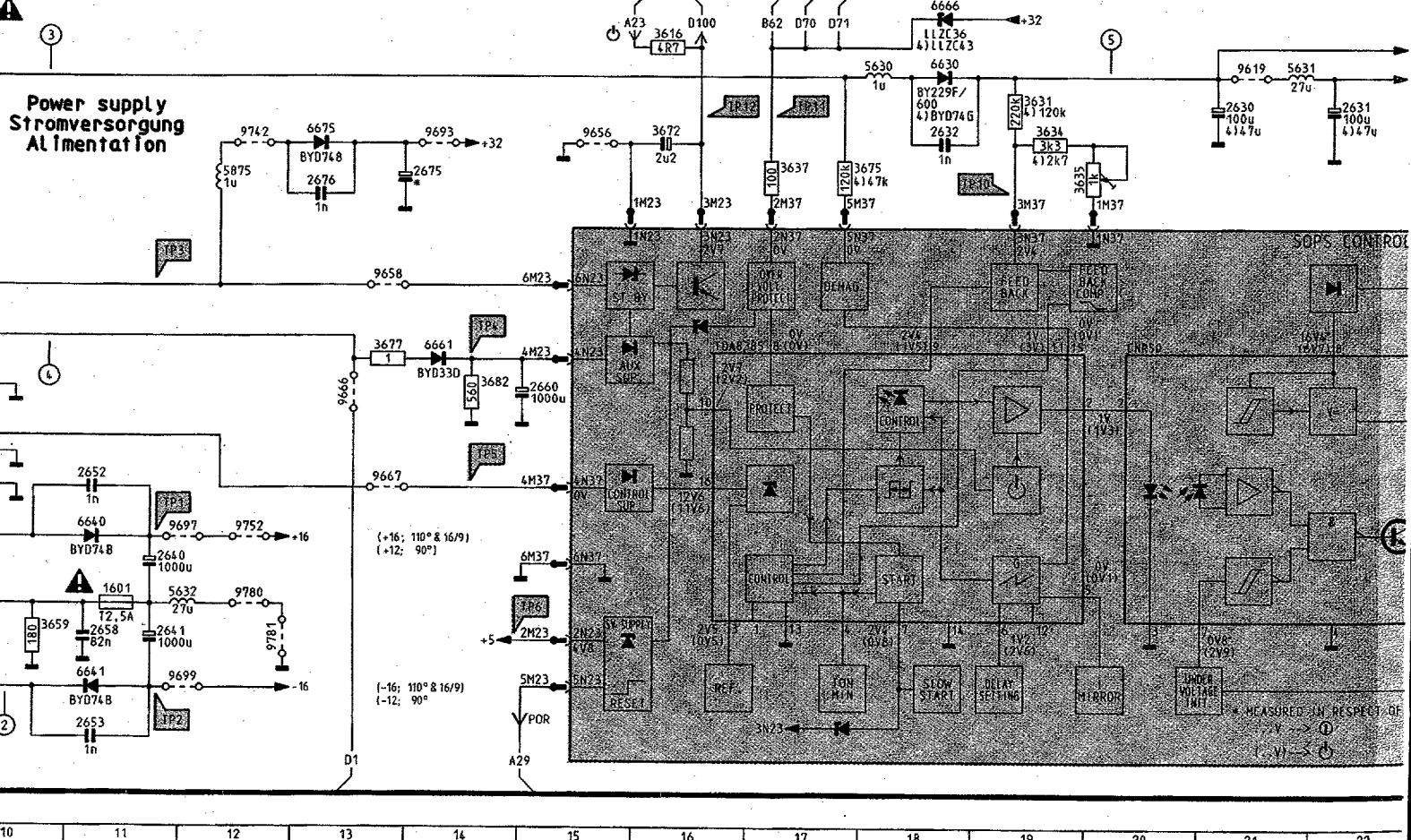
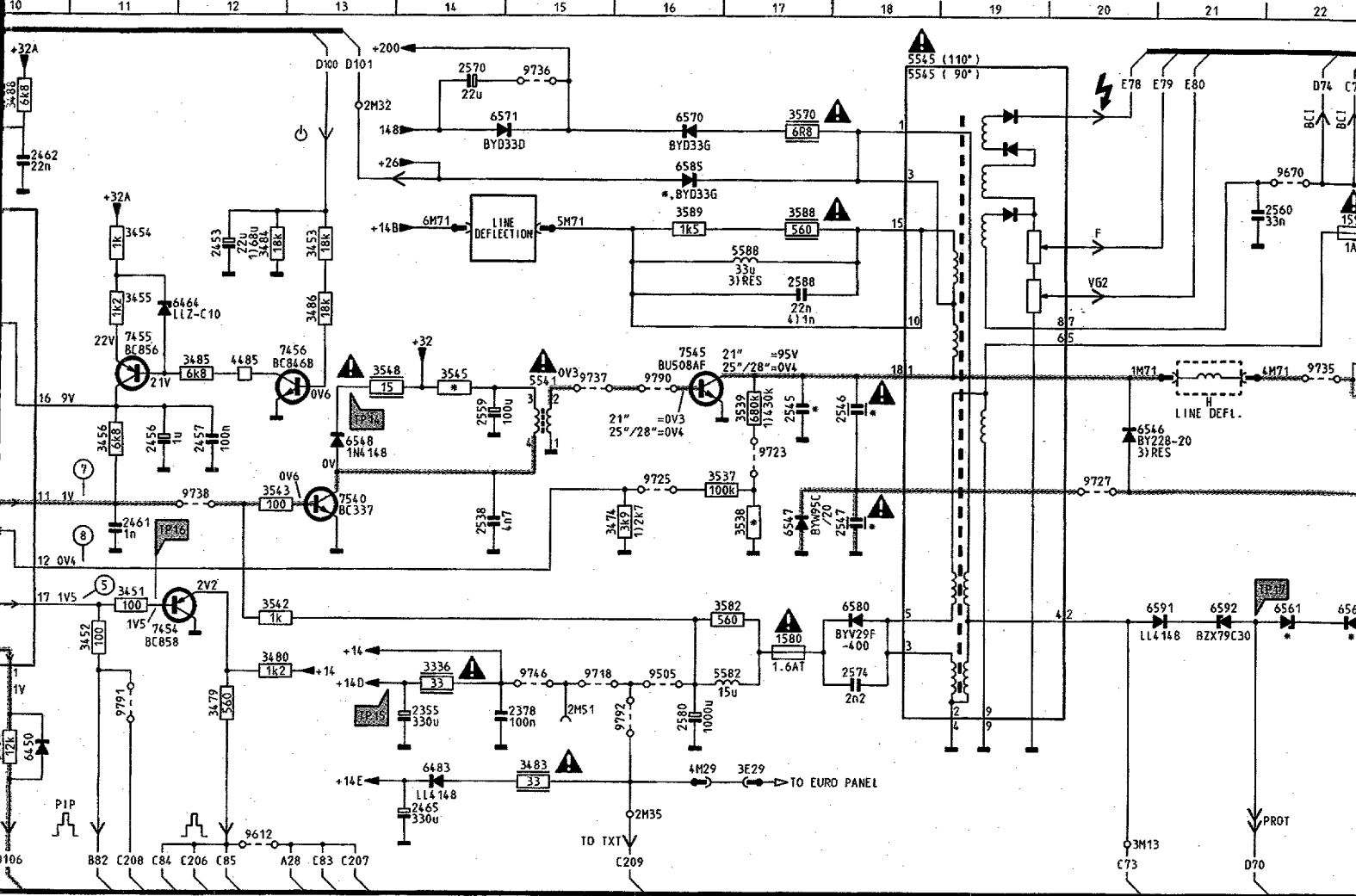
3111 253 3164 2

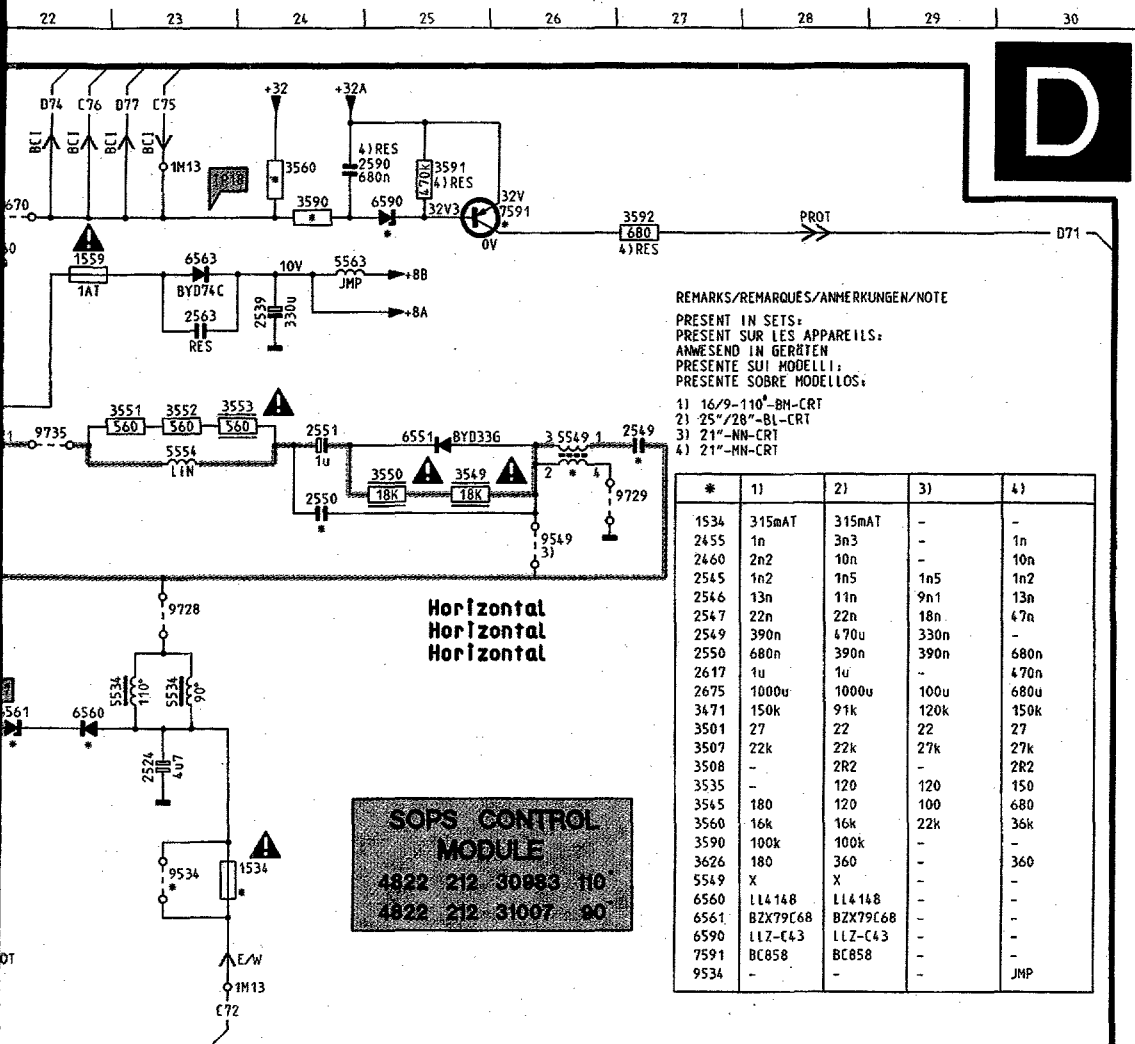


M11	G1	2334	G4	2716	G2	3452	B4	3741	F2	6315	D4	9824	E3
M12	A3	2335	F4	2718	B5	3453	C3	3742	F2	6316	F4	9825	A2
M13	B2	2336	F4	2719	B5	3454	C3	3743	F2	6317	F4	9826	A3
M14	F4	2337	F4	2721	F2	3455	C3	3747	G2	6319	C3	9828	G4
M18	D3	2338	F4	2722	F2	3456	C4	3748	G2	6320	C3	9829	G3
M19	G5	2339	F4	2781	B4	3457	C3	3749	G2	6321	F5	9830	B3
M20	G4	2340	G5	2853	A3	3458	C3	3751	G2	6322	E4	9831	C4
M21	A4	2341	G5	2854	A4	3459	B3	3752	G2	6323	E4	9832	B3
M22	B4	2342	F4	3001	A5	3460	B3	3753	G2	6325	F5	9835	B4
M23	E3	2343	F4	3002	B5	3461	A4	3755	G2	6367	D4	9844	D4
M24	F2	2344	F4	3003	B5	3462	C4	3756	G2	6450	A2	9847	B5
M26	G4	2345	G5	3010	B5	3463	C3	3757	F2	6464	C3	9848	B4
M29	B4	2346	G5	3220	C5	3464	C3	3758	F2	6467	A5	9849	F3
M31	G3	2347	F4	3222	D5	3465	C3	3759	F2	6483	C4	9851	F3
M32	C1	2348	E5	3223	B5	3466	C4	3770	F2	6503	A1	9852	F2
M33	E1	2349	F5	3224	C5	3467	C3	3771	F2	6504	A1	9853	F3
M34	G3	2350	G4	3225	C5	3468	C4	3772	F2	6505	A1	9854	D4
M35	C3	2351	F5	3226	C5	3469	C4	3775	G3	6546	B1	9855	B5
M36	E2	2352	G5	3227	C5	3470	B5	3776	G3	6547	A1	9856	E3
M37	E2	2353	E5	3228	C5	3471	C4	3779	G2	6548	G2	9857	D4
M38	E5	2354	F4	3229	B5	3472	C4	3780	G2	6551	C1	9858	E2
M39	E2	2355	E5	3230	D5	3473	C4	3781	B4	6551	C1	9859	D4
M40	G3	2356	F4	3231	D5	3474	C3	3850	A4	6560	D2	9863	B4
M41	F3	2357	F4	3240	C5	3475	A5	3851	A4	6561	D2	9864	F3
M50	B4	2358	F4	3241	C5	3476	A5	3852	A4	6563	B2	9865	F2
M51	D4	2359	G5	3242	C5	3477	A5	3853	A3	6570	B2	9866	E2
M53	D5	2360	F4	3243	C5	3478	A5	3854	A3	6571	C2	9867	E2
M56	A4	2361	F4	3244	B5	3479	E4	3855	A4	6580	B3	9868	C4
M60	G3	2362	F4	3245	C5	3480	D4	3856	A4	6585	C2	9870	B3
M65	D3	2363	F4	3246	G5	3481	C3	3857	A4	6590	C3	9871	E5
M67	F1	2365	F4	3247	G5	3482	F2	3858	A3	6591	B3	9872	F3
M69	F3	2366	F4	3248	G5	3483	B4	3859	A3	6592	B3	9873	E4
M70	D5	2367	F4	3249	G5	3484	C3	3860	A4	6610	F1	9874	C5
M71	B1	2368	F4	3250	A3	3485	D3	3862	A4	6611	E1	9875	B4
M90	B3	2370	E5	3251	A3	3486	C3	3872	A4	6612	E2	9876	F3
M103	C3	2371	F3	3253	A3	3487	E4	3886	F3	6615	F1	9877	E4
M104	F3	2372	F3	3254	A3	3488	C3	3887	D3	6617	F1	9878	B4
P01	B5	2373	F3	3255	A4	3501	A1	3888	A3	6621	E1	9881	B4
P02	D5	2374	F3	3256	A4	3502	A1	3889	B3	6622	E1	9882	B5
P03	A5	2375	F5	3257	A4	3503	A1	3890	F2	6624	E1	9884	B3
0049	A3	2376	F5	3258	A4	3504	A1	4221	B4	6625	E1	9886	C4
0050	C1	2378	E5	3259	A4	3505	A3	4239	G6	6630	D3	9887	C5
1000	A5	2380	G4	3260	A4	3506	A3	4242	A4	6640	D3	9893	D2
1003	G4	2381	F4	3261	A3	3507	A2	4243	A4	6641	D3	9894	A1
1240	D5	2385	F4	3262	A3	3508	A2	4244	D5	6661	E2	9895	C2
1242	D5	2386	F4	3263	A3	3509	A2	4248	C5	6666	C3	9897	D3
1300	F6	2451	C4	3264	A3	3510	A2	4301	E5	6675	D2	9899	D3
1301	F5	2453	C3	3267	D4	3511	A2	4302	E5	6705	F2	9700	G3
1504	D2	2455	C3	3268	D4	3512	A5	4303	F4	6707	G4	9701	G3
1559	A2	2456	D4	3300	E5	3513	A3	4304	F5	6708	F2	9702	G3
1580	B3	2457	C4	3301	E5	3514	B3	4305	F5	6709	B5	9703	G2
1600	G1	2458	C4	3302	E5	3515	A2	4306	F5	7003	B5	9704	G3
1601	D3	2459	C3	3303	E5	3516	A4	4307	F5	7240	C5	9710	E5
1702	G2	2460	C3	3304	E5	3517	A2	4308	F5	7241	A4	9711	F5
2001	A5	2461	C4	3305	E5	3518	A2	4309	F5	7242	A4	9712	F4
2003	A5	2462	C4	3306	E5	3519	A2	4311	F5	7243	C5	9713	E3
2004	B5	2464	C4	3307	F4	3523	A2	4312	F5	7244	D5	9714	C3
2005	B5	2465	C4	3308	F5	3529	A2	4313	F5	7248	C5	9715	E5
2008	B5	2466	C4	3309	F5	3535	A2	4314	F5	7249	C5	9718	B4
2010	B5	2467	C4	3310	F5	3537	C3	4316	G5	7301	E5	9720	B3
2230	B5	2468	C4	3311	F5	3538	C2	4317	E5	7302	E5	9723	C2
2231	C5	2469	C4	3312	F5	3539	B1	4318	G4	7303	G4	9725	C3
2232	C5	2470	C4	3313	F5	3540	A1	4320	G3	7304	F5	9727	B1
2233	G5	2471	C4	3314	F5	3542	C3	4321	E4	7305	F5	9728	C1
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2239	C5	2500	A2	3318	F4	3549	C1	4459	C4	7309	G4	9732	A3
2240	D5	2501	A2	3320	G5	3550	C1	4485	C3	7310	F4	9734	A3
2241	D5	2502	A1	3321	G5	3551	C2	4504	A4	7370	F3	9735	C2
2242	C5	2505	A2	3322	E5	3552	C2	4506	A2	7371	E3	9736	C2
2243	C5	2506	A2	3323	F4	3553	C2	4700	G2	7454	D4	9737	C2
2245	C5	2507	A3	3324	F5	3560	D2	4705	E3	7455	C4	9738	G3
2246	D5	2509	A2	3325	F4	3570	B2	4706	G3	7456	C3	9739	B3
2248	B5	2524	C1	3326	G4	3582	B3	4707	G3	7470	C4	9740	E1
2249	C5	2538	C3	3327	F4	3588	B1	4708	G2	7471	A5	9742	D2
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2253	A3	2547	A1	3332	F5	3592	C3	4721	G2	7503	A2	9747	C5
2254	B4	2549	B1	3333	F5	3603	G1	4850	B4	7504	A5	9748	C5
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2256	A4	2551	C2	3335	G4	3606	F1	4852	A4	7540	C3	9750	D4
2257	B3	2559	C2	3336	E5	3610	E1	4853	A4	7545	B1	9751	D4
2258	A4	2560	B2	3338	E3	3616	F2	4861	B5	7591	C3	9752	D4
2259	B4	2563	B2	3339	E3	3617	F1	4867	A4	7625	E1	9753	D4
2260	A4	2570	C2	3340	D3	3619	E1	5001	B5	7703	F3	9754	D4
2263	A3	2574	B3	3342	F4	3620	E1	5240	D4	7704	G3	9755	B4
2264	A3	2580	B3	3343	F4	3621	E1	5242	D4	7705	F3	9756	B4
2266	D4	2588	B1	3344	F5	3622	E1	5301	E5	7706	F2	9757	C5
2300	E5	2590	C3	3345	F4	3626	E1	5303	F4	7707	F2	9759	B3
2301	E5	2600	F1	3346	E4	3631	E3	5306	G4	7708	G2	9760	D5
2302	F4	2605	D1	3347	E4	3634	F2	5534	D1	7710	G2	9764	E4
2303	E5	2607	D1	3348	E4	3635	F2	5541	C2	7850	A3	9766	F4
2304	E5	2617	E1	3349	E4	3637	E2	5545	A1	7886	A4	9768	D3
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2307	G4	2626	E1	3352	F4	3677	E2	5583	E3	9304	D5	9772	F2
2308	F5	2630	D3	3353	E4	3679	E1	5582	B3	9305	E5	9773	F3
2309	F4	2631	C2	3354	E4	3682	E3	5588	B1	9306	C2	9775	B2
2310	F5	2632	D3	3355	F5	3707	G3	5606	F1	9307	C2	9777	E4
2311	E5	2640	D3	3356	G5	3708	F3	5619	E1	9331	A3	9779	C5
2312	F5	2641	D3	3358	G5	3709	G2	5625	D2	9505	B3	9780	D4
2313	F5	2652	D3	3359	G5	3710	G3	5630	E3	9522	A1	9781	D4
2314	F5	2653	D3	3361	F4	3718	G3	5631	C2	9523	A1	9785	B5
2315	F4	2658	D2	3362	E4	3719	G3	5632	D3	9534	D2	9788	C4
2316	F5	2660	E3	3363	G4	3720	G3	5675	E2	9549	C1	9789	B3
2317	E5	2672	F2	3364	C3	3721	G3	5701	F2	9551	F3	9790	C1
2319	F5	2675	D2	3365	D3	3722	G3	5703	F2	9600	E4	9791	B4
2320	F4	2676	D2	3366	C3	3723	G3	6240	C5	9601	E5	9792	B3
2321	E5	2704	G2	3367	E4	3724	F3	6241	A4	9605	D9	9795	C3
2322	F5	2705	F2	3368	E4	3725	G3	6242	A4	9608	F4	9797	D3
2323	F4	2706	F2	3369	E4	3726	F3	6245	D5	9609	F3	9850	B

# Power supply/Stromversorgung/Alimentation







REMARKS/REMARQUES/ANMERKUNGEN/NOTE

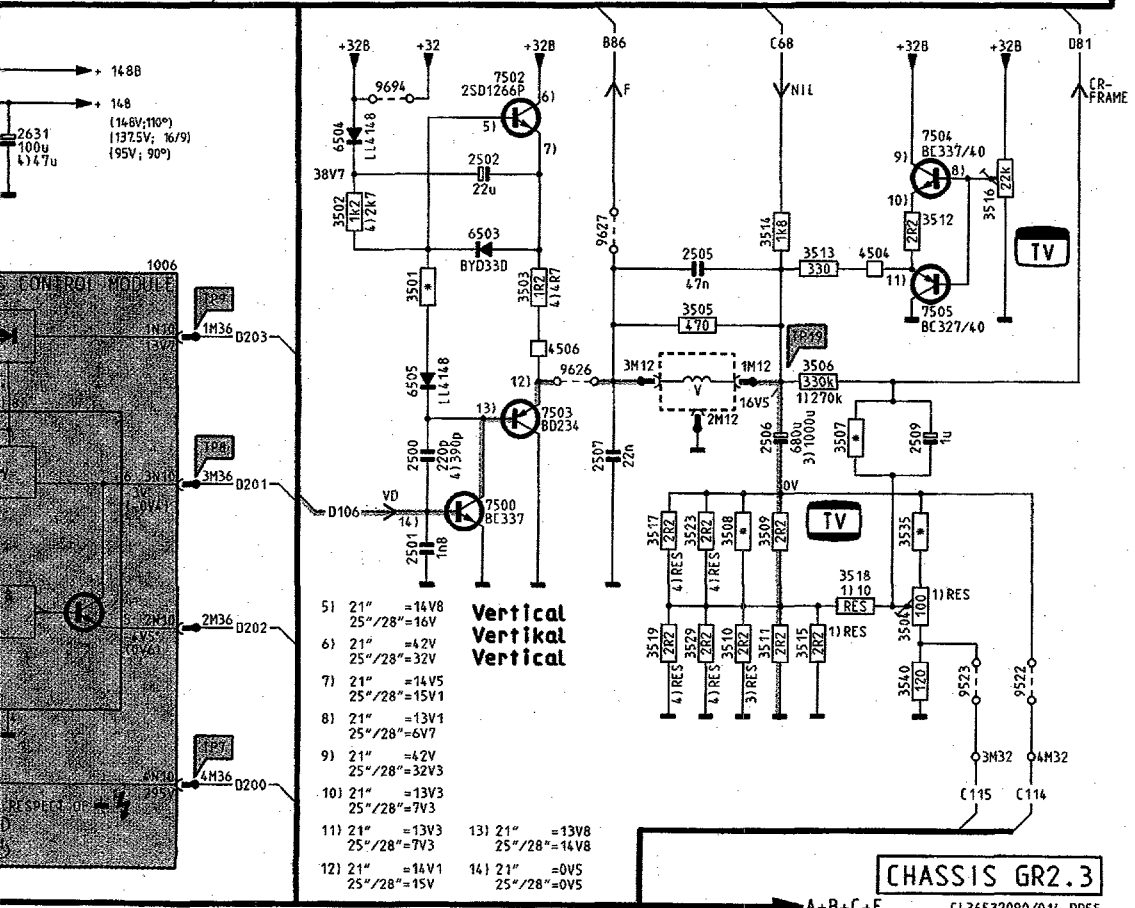
PRESENT IN SETS:  
 PRESENT SUR LES APPAREILS:  
 ANWESEND IN GERÄTEN  
 PRESENTE SUI MODELLI:  
 PRESENTE SOBRE MODELOS:

- 1) 16"/9"-110"-BM-CRT
- 2) 25"/28"-BL-CRT
- 3) 21"-NN-CRT
- 4) 21"-MN-CRT

*	1)	2)	3)	4)
1534	315mA	315mA	-	-
2455	1n	3n3	-	1n
2460	2n2	10n	-	10n
2545	1n2	1n5	1n5	1n2
2546	13n	11n	9n1	13n
2547	22n	22n	18n	47n
2549	390n	470u	330n	-
2550	680n	390n	390n	680n
2617	1u	1u	-	470n
2675	1000u	1000u	100u	680u
3471	150k	91k	120k	150k
3501	27	22	22	27
3507	22k	22k	27k	27k
3508	-	2R2	2R2	2R2
3535	-	120	120	150
3545	180	120	100	680
3560	16k	16k	22k	36k
3590	100k	100k	-	-
3626	180	360	-	360
5549	X	X	-	-
6560	LL4148	LL4148	-	-
6561	BZX79C68	BZX79C68	-	-
6590	LLZ-C43	-	-	-
7591	BC858	BC858	-	-
9534	-	-	-	JMP

Horizontal  
Horizontal  
Horizontal

**SOPS CONTROL MODULE**  
 4822 212 30883 110  
 4822 212 31007 90

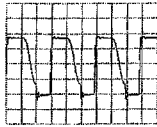


Vertical  
Vertical  
Vertical

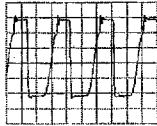
**CHASSIS GR2.3**  
 CL36532090/014, DREF  
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1006	J23	3501	K25	6602	J 6
1050	I 1	3502	J24	6603	J 7
1534	G24	3503	K26	6604	K 6
1559	B22	3504	M29	6605	K 7
1580	F17	3505	K27	6610	N 5
1600	K 2	3506	K28	6611	N 4
1601	N11	3507	L28	6612	O 5
1605	K 4	3508	L27	6615	N 5
2355	G14	3509	L28	6617	M 6
2378	E15	3510	M27	6621	M 6
2451	E 5	3511	M28	6622	O 6
2453	B12	3512	J29	6624	M 5
2455	G 8	3513	J28	6625	M 5
2456	D11	3514	J28	6630	I 18
2457	D12	3515	M28	6640	M11
2458	A 9	3516	J30	6641	N11
2459	H 9	3517	L27	6641	K14
2460	H 8	3518	M28	6666	H18
2461	E11	3519	M27	6675	J13
2462	B10	3523	L27	7454	F12
2464	B 6	3529	M27	7455	C11
2465	H14	3535	L29	7456	C13
2466	B 7	3537	E17	7470	B 6
2467	B 7	3538	E17	7471	B 4
2468	B 6	3539	D17	7472	B 3
2469	B 5	3540	M29	7500	I25
2470	D 5	3542	F12	7502	I26
2471	G 6	3543	E12	7503	I26
2473	G 6	3545	D14	7504	I29
2474	G 5	3548	D13	7505	K29
2475	H 7	3549	D25	7540	E13
2500	L25	3550	O25	7545	C16
2501	M25	3551	C23	7591	B26
2502	J25	3552	C23	7625	L 6
2505	J27	3553	C24	8010	I 3
2506	L28	3560	A24	9505	F16
2507	L26	3570	A17	9522	N30
2509	L29	3582	F17	9523	N29
2524	F23	3588	B17	9534	G23
2538	E14	3589	B16	9549	D26
2539	E24	3590	B24	9612	H12
2545	D17	3591	A25	9619	I21
2546	D18	3592	B27	9626	K26
2547	E18	3600	I 1	9627	J26
2549	D27	3601	K 5	9631	H 5
2550	D24	3603	J 4	9656	K15
2551	D24	3604	K 3	9658	K13
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2560	B22	3606	J 3	9667	M13
2563	C23	3607	I 5	9668	D 5
2570	A14	3608	K 4	9670	B22
2574	F18	3610	O 4	9674	D 4
2580	G16	3616	I16	9682	C 2
2588	C17	3617	N 7	9693	J14
2590	A24	3619	M 4	9694	I25
2600	J 2	3620	M 6	9697	H12
2601	I 6	3621	N 6	9699	N12
2602	J 6	3622	N 6	9714	G 9
2604	K 6	3626	M 7	9718	F15
2605	K 8	3631	I19	9723	D17
2607	D 9	3634	J19	9725	E16
2617	N 6	3635	J19	9727	E20
2620	M 6	3637	J17	9728	E23
2625	M 7	3659	N10	9729	D27
2626	M 7	3672	J16	9732	H 9
2630	I21	3675	J17	9734	G10
2631	I22	3677	K13	9735	D22
2632	J18	3678	M 5	9736	A15
2640	M11	3682	L14	9737	D15
2641	N11	4221	G 7	9738	E12
2652	M11	4459	B 9	9740	L 8
2653	O11	4485	C12	9742	J12
2658	N11	4504	J29	9746	F15
2660	L15	4506	K26	9752	M12
2675	J14	5534	E23	9780	N12
2676	J13	5534	E23	9781	N12
3336	F14	5541	D15	9790	D16
3450	G10	5545	A18	9791	G11
3451	F11	5545	A18	9792	G16
3452	F11	5549	D26	-	-
3453	B13	5554	D23	-	-
3454	B11	5563	B24	-	-
3455	C11	5582	F17	-	-
3456	D11	5588	B17	-	-
3457	B 8	5600	J 5	-	-
3458	A 8	5601	K 5	-	-
3459	G10	5605	J 4	-	-
3460	G 9	5606	K 3	-	-
3461	H10	5619	L 4	-	-
3462	C 5	5625	H 9	-	-
3463	E 3	5630	I18	-	-
3464	E 3	5631	I21	-	-
3465	G 8	5632	N12	-	-
3466	A 7	5875	J12	-	-
3467	H 8	6450	G10	-	-
3468	A 6	6464	C11	-	-
3469	A 5	6466	B 3	-	-
3470	D 2	6467	C 3	-	-
3471	G 6	6483	G14	-	-
3472	G 5	6503	J25	-	-
3473	G 5	6504	I24	-	-
3474	E16	6505	K25	-	-
3475	B 2	6546	D20	-	-
3476	C 2	6547	E17	-	-
3477	C 3	6548	D13	-	-
3478	B 3	6551	D25	-	-
3479	G12	6560	F22	-	-
3480	F12	6561	F22	-	-
3481	E 2	6563	B23	-	-
3482	E 2	6570	A16	-	-
3483	G15	6571	A16	-	-
3484	B12	6580	F18	-	-
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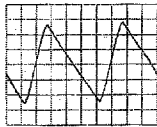
TP1 = DC 15V9  
 TP2 = DC -15V9  
 TP3



20V/div AC  
 5µs div  
 TP4 = DC 9V7  
 TP5



5V/div AC  
 5µs div  
 TP6 = DC 4V8  
 TP7



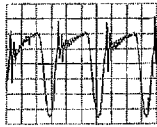
2V/div AC  
 2ms div

TP8



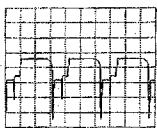
2V/div AC  
 5µs div

TP9



0.2V/div AC  
 5µs div

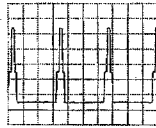
TP10 = DC 2V4  
 TP11 = DC 0V  
 TP12 = DC 2V7  
 TP14



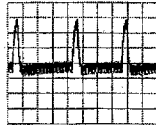
2V/div AC  
 20µs div

TP15 = DC 13V4

TP16

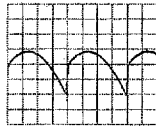


2V/div AC  
 20µs div  
 TP17 = DC 0V  
 TP18

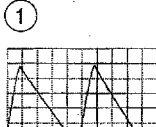


2V/div AC  
 5ms div

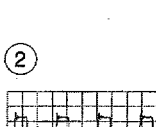
TP19



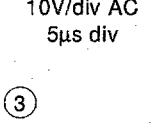
1V/div AC  
 5ms div



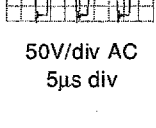
2V/div AC  
 2ms div



10V/div AC  
 5µs div

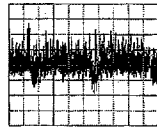


50V/div AC  
 5µs div



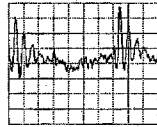
5V/div AC  
 5µs div

5a



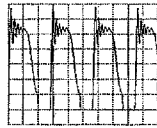
100mV/div AC  
 5ms div

5b



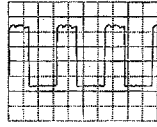
100mV/div AC  
 2µs div

6



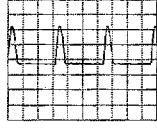
100V/div AC  
 5µs div

7



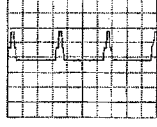
0.5V/div AC  
 20µs div

8



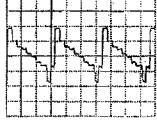
1V/div AC  
 20µs div

9

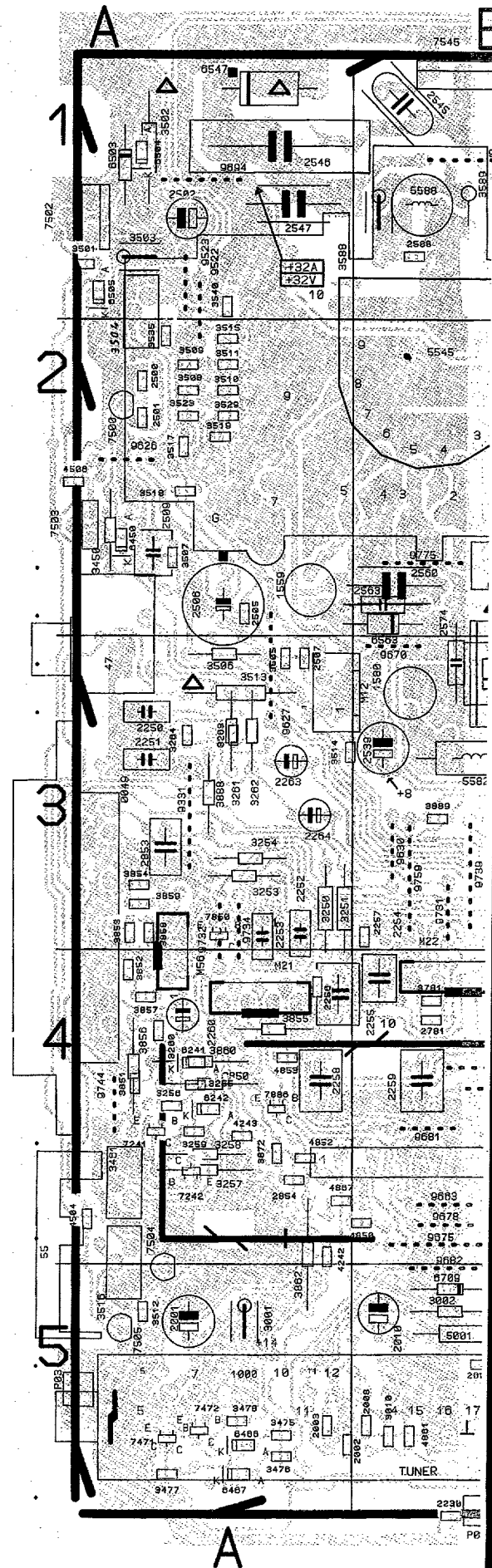


5V/div AC  
 20µs div

10

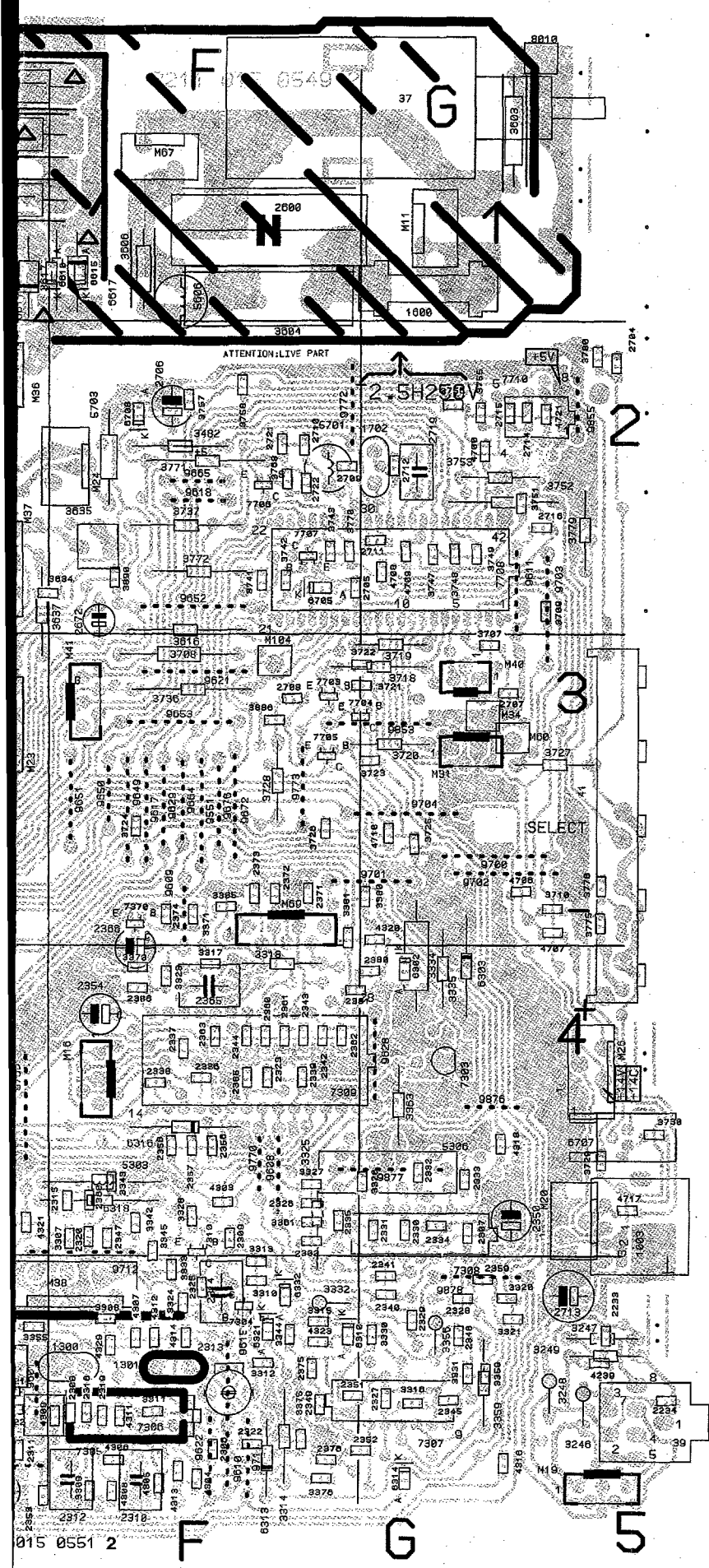


0.5V/div AC  
 20µs div



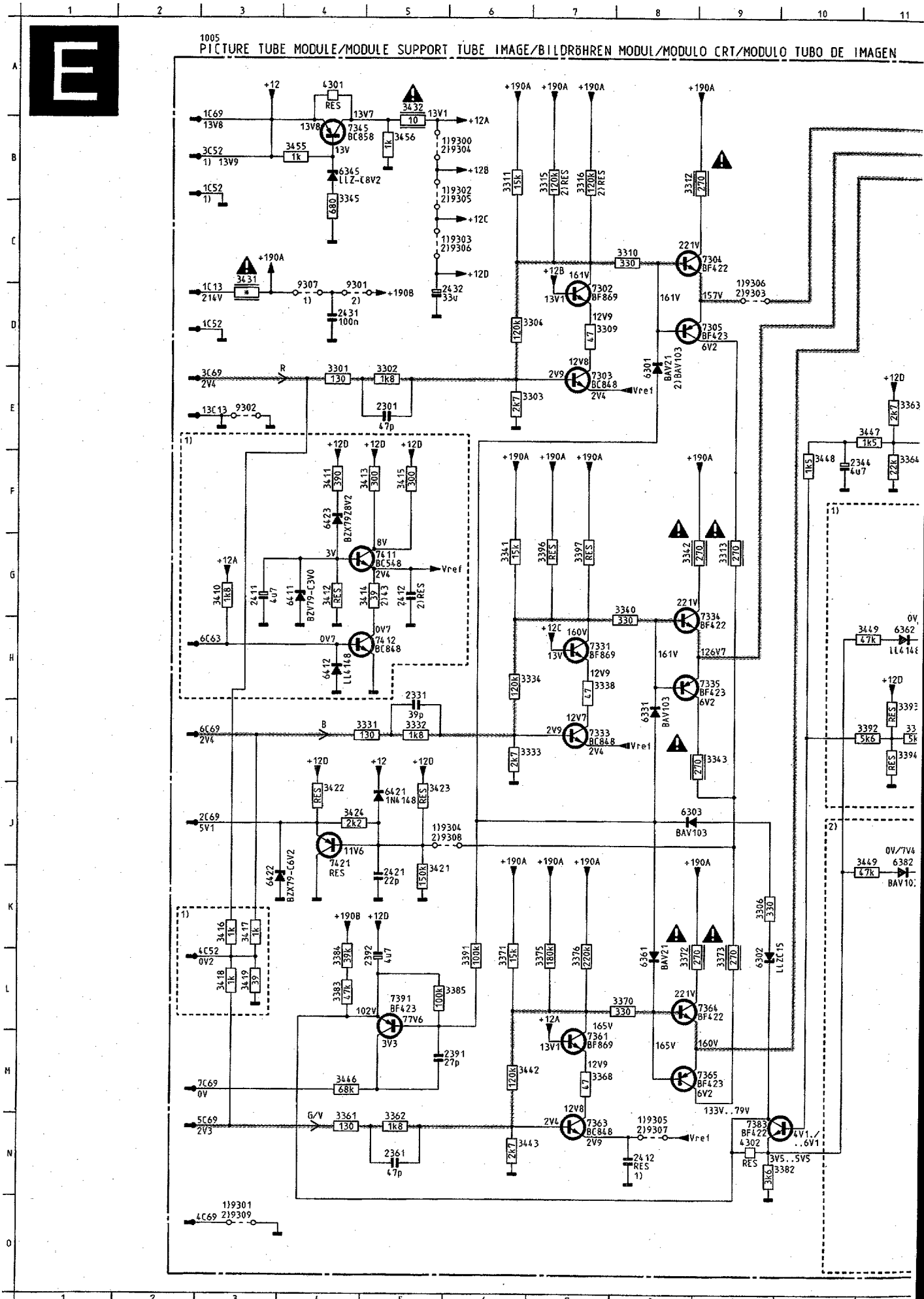






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M12 A3	2335 F4	2718 B5	3453 C3	3742 F2	6316 F4	9626 A2
M13 B2	2336 F4	2719 G2	3454 C3	3743 F2	6318 F4	9627 A3
M16 F4	2337 F4	2721 F2	3455 C3	3747 G2	6319 C3	9628 G4
M18 D3	2338 F4	2722 F2	3456 C4	3748 G2	6320 C3	9629 F3
M19 G5	2339 F4	2781 B4	3457 C3	3749 G2	6321 F5	9630 B3
M20 G4	2340 G5	2853 A3	3458 C3	3751 G2	6322 E4	9631 C4
M21 A4	2341 G5	2854 A4	3459 B3	3752 G2	6323 E4	9632 B3
M22 B4	2342 F4	3001 A5	3460 B3	3753 G2	6332 F5	9643 B4
M23 E3	2343 F4	3002 B5	3461 A4	3755 G2	6367 D4	9644 D4
M24 F2	2344 F4	3003 B5	3462 C4	3756 G2	6450 A2	9647 B5
M26 G4	2345 G5	3010 B5	3463 C3	3757 F2	6464 C3	9648 B4
M29 B4	2346 G5	3220 C5	3464 C3	3758 F2	6466 A5	9649 F3
M31 G3	2347 F4	3222 D5	3465 C3	3768 F2	6467 A5	9650 F3
M32 C1	2348 E5	3223 B5	3466 C4	3770 F2	6483 C4	9651 F3
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M38 E5	2354 F4	3229 B5	3472 C4	3780 G2	6548 C2	9657 D4
M39 E2	2355 E5	3230 D5	3473 C4	3781 B4	6551 C1	9658 E2
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M104 F3	2372 F3	3254 A3	3488 C3	3887 D3	6617 F1	9678 B4
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P02 D5	2374 F3	3256 A4	3502 A1	3889 B3	6622 E1	9682 B5
P03 A5	2375 F5	3257 A4	3503 A1	3890 F2	6624 E1	9684 B3
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0050 C1	2378 E5	3259 A4	3505 A3	4239 G5	6830 D3	9687 C5
1000 A5	2380 G4	3260 A4	3506 A3	4242 A4	6840 D3	9689 D2
1003 G4	2381 F4	3261 A3	3507 A2	4243 A4	6841 D3	9690 A1
1240 D5	2385 F4	3262 A3	3508 A2	4244 D5	6861 E2	9695 C2
1242 D5	2386 F4	3263 A3	3509 A2	4248 C5	6866 C3	9697 D3
1300 F5	2451 C4	3264 A3	3510 A2	4301 E5	6868 D2	9699 D3
1301 F5	2453 C3	3267 D4	3511 A2	4302 E5	6875 F2	9700 G3
1534 D2	2455 C3	3268 D4	3512 A5	4303 F4	6877 G4	9701 G3
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1600 G1	2458 C4	3302 E5	3515 A2	4306 F5	7003 B5	9704 G3
1601 D3	2459 C3	3303 E5	3516 A4	4307 F5	7240 C5	9710 E5
1702 G2	2460 C3	3304 E5	3517 A2	4308 F5	7241 A4	9711 F5
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2006 B5	2465 C4	3309 F5	3522 A2	4314 F5	7249 C5	9716 B4
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2246 D5	2509 A2	3325 F4	3537 B2	4706 G3	7456 C4	9739 B3
2248 B5	2524 C1	3326 G4	3538 B3	4707 G3	7470 C4	9740 E1
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2253 A3	2547 A1	3332 F5	3543 C3	4721 G2	7503 A2	9747 C5
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2322 F5	2705 F2	3368 E4	3575 G3	6242 A4	9608 F4	9797 D3
2323 F4	2706 F2	3369 E4	3576 F3	6245 D5	9609 F3	9850 B4
2325 F5	2707 G3	3370 F4	3577 G3	6246 C5	9610 F5	9852 D4
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2332 G4	2714 G2	3450 A2	3584 F3	6313 F5	9621 F3	
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# Picture tube panel/Bildröhren platte/Platine TRC

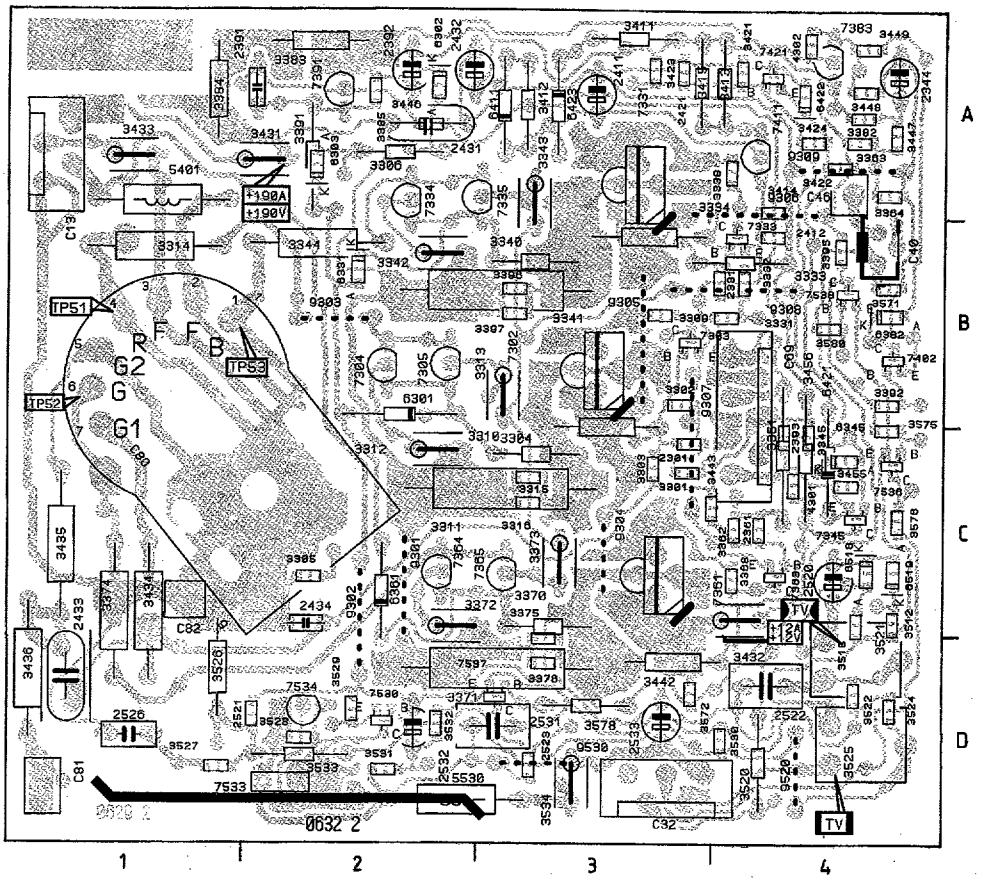




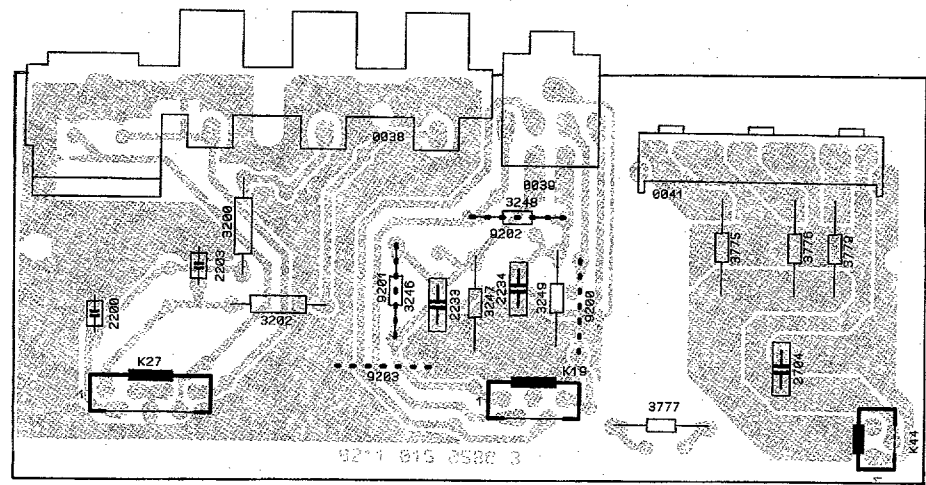


1005 PICTURE TUBE MODULE 4:3

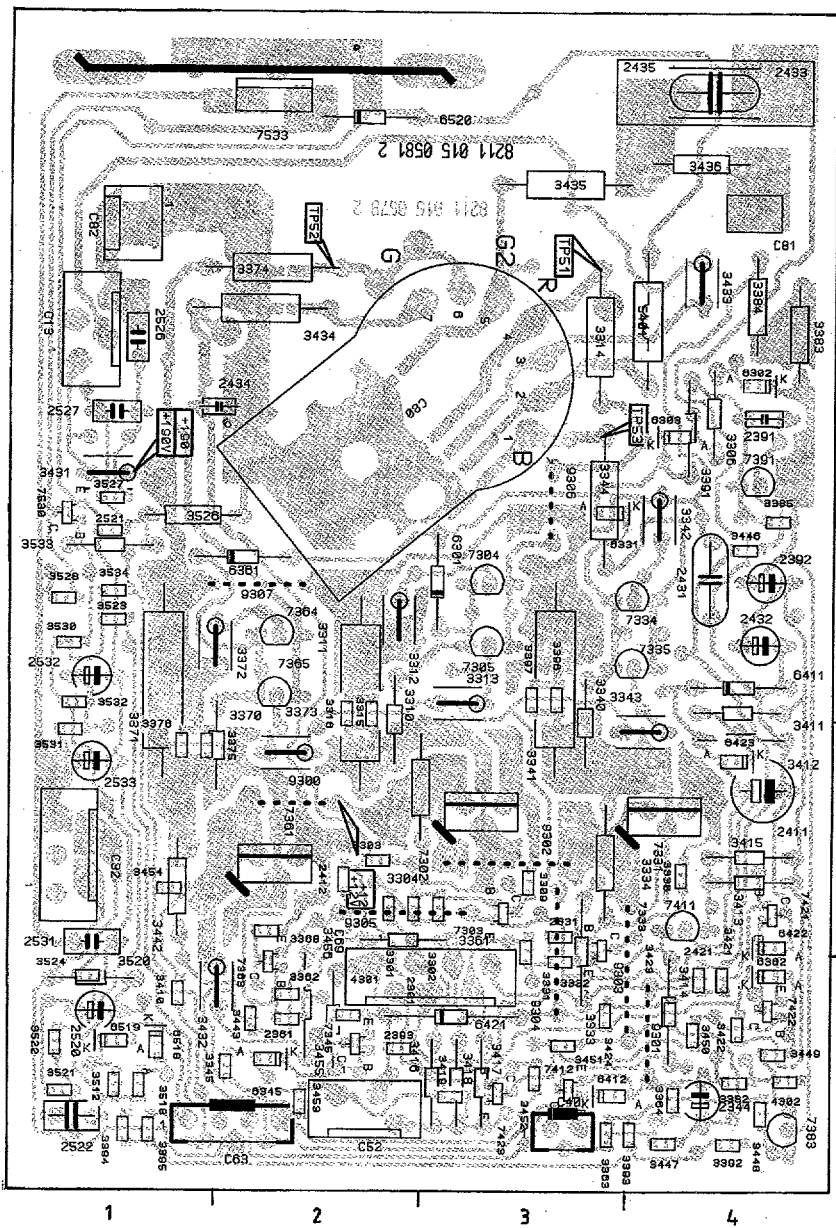
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C69 C4	3361 C4	3525 D4	7533 D2
C80 C1	3362 C4	3526 D1	7534 D2
C81 D1	3363 A4	3527 D1	7536 C4
C92 C1	3364 A4	3528 D2	7537 D3
2301 C3	3368 C4	3529 D2	7538 B4
2331 B4	3370 C3	3530 D4	9301 C2
2344 A4	3371 D8	3531 D2	9302 C2
2361 C4	3371 D9	3532 D2	9303 B2
2391 A2	3372 C2	3533 D2	9304 C3
2392 A2	3373 C3	3534 D3	9305 B3
2393 C4	3374 C1	3571 B4	9306 A4
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2412 B4	3376 D8	3575 C4	9308 B4
2421 A3	3382 A4	3576 C4	9309 A4
2431 A2	3383 A2	3578 D8	9520 D4
2432 A2	3384 A1	3580 B4	9530 D3
2433 D1	3385 A2	4301 C4	
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2521 D2	3395 B4	6301 B2	
2522 D4	3396 B3	6302 A2	
2523 D8	3397 B3	6303 A2	
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2531 D8	3412 A3	6345 C4	
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1060 SEPARATE CONTROL MODULE

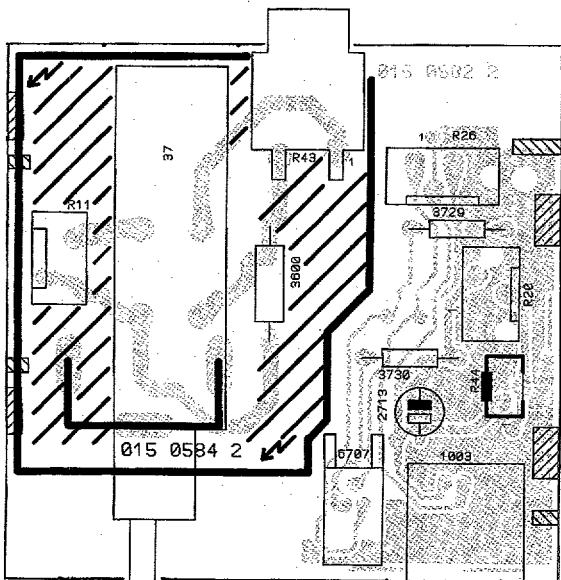


1005 PICTURE TUBE MODULE 16:9

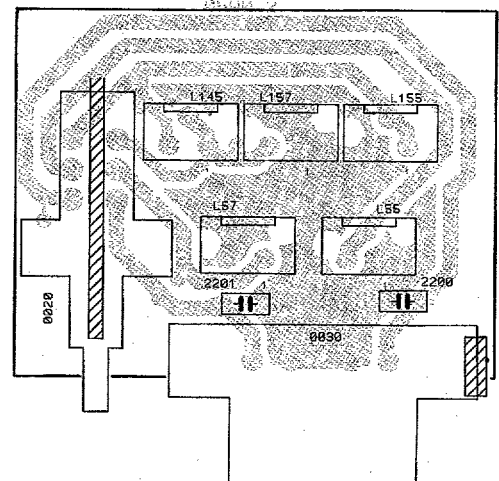


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| 2421 E4 | 3421 E4 | 7412 E3 |
| 2431 C4 | 3422 E4 | 7421 D4 |
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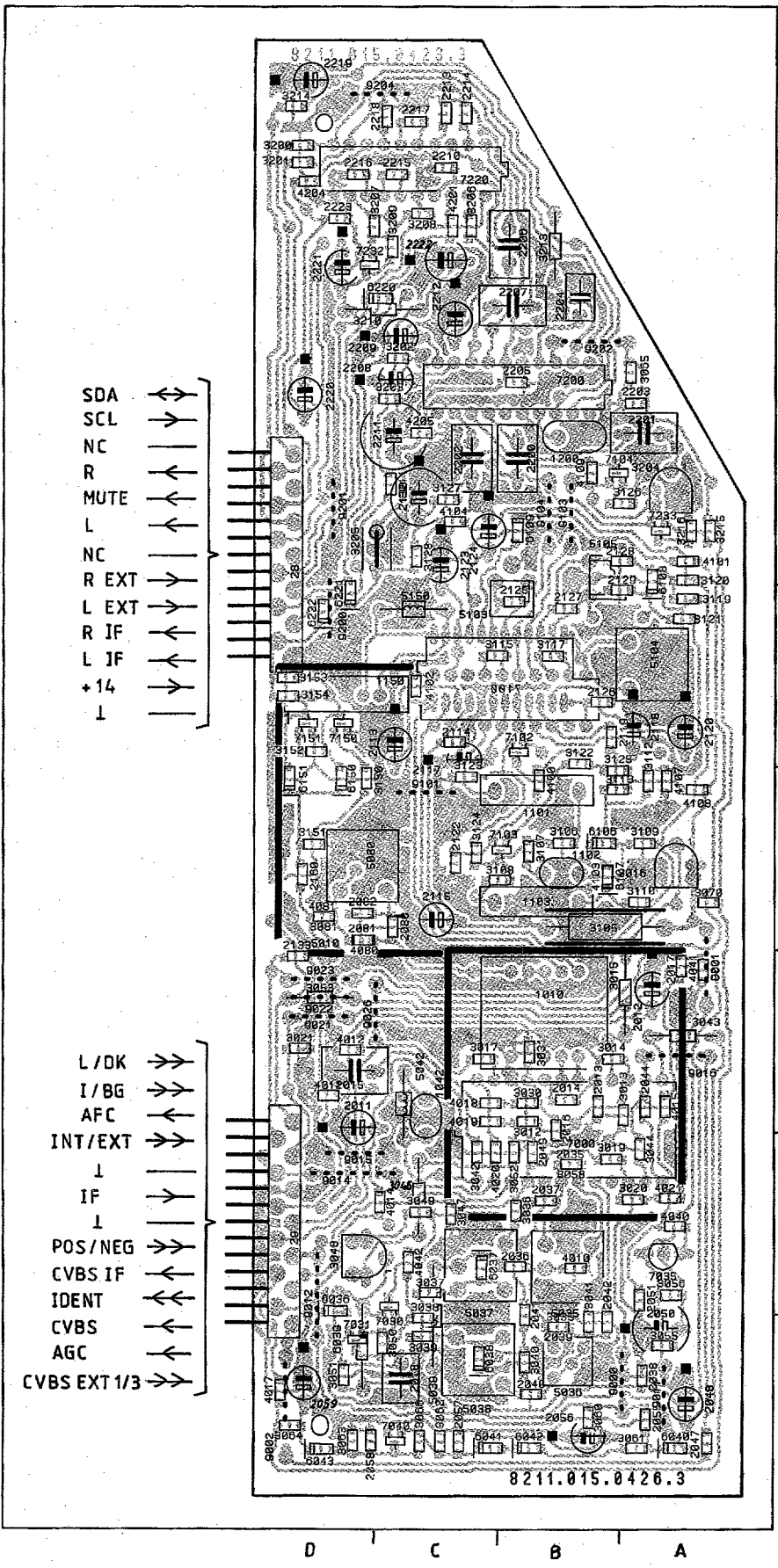
1050 SEPARATE MAINS MODULE



1040 EXTERNAL LOUDSPEAKER MODE



1001 STEREO IF MODULE



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- 2015 D3
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- 7031 D1
- 7035 A2
- 7040 C1
- 7100 B5
- 7102 B5
- 7103 B4
- 7104 B6
- 7150 D5
- 7151 D5
- 7200 B6
- 7220 C8
- 7232 D7
- 7233 A6
- 8695 D9
- 9000 A1
- 9001 A3
- 9002 D1
- 9011 A1
- 9012 D2
- 9014 D2
- 9015 D2
- 9016 A3
- 9021 D3
- 9022 D3
- 9023 D3
- 9026 C3
- 9101 C4
- 9103 B6
- 9104 B6
- 9200 D5
- 9201 D6
- 9202 B7
- 9204 C8

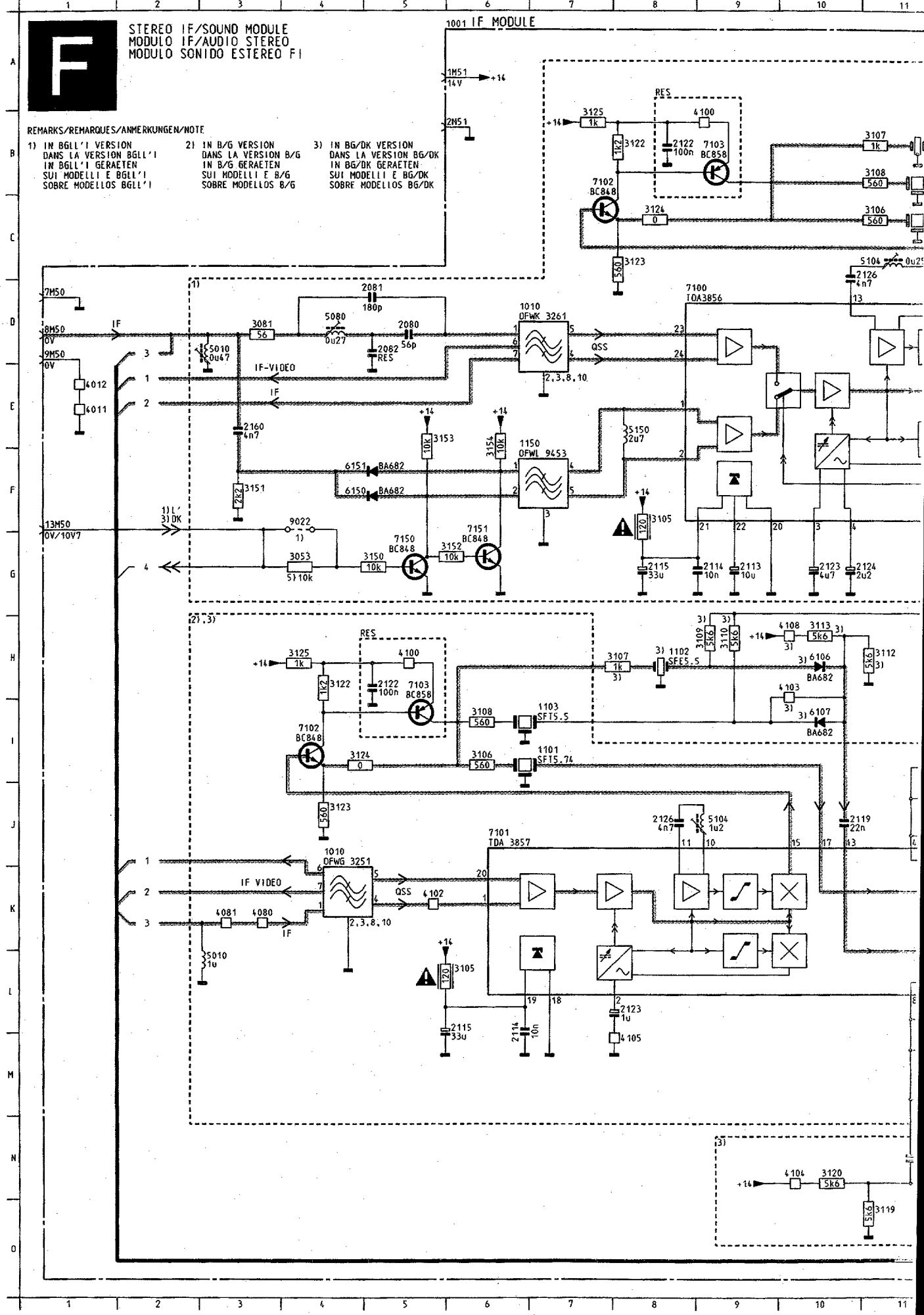
# Stereo IF-Sound module/Stereo ZF-Tonmodule/

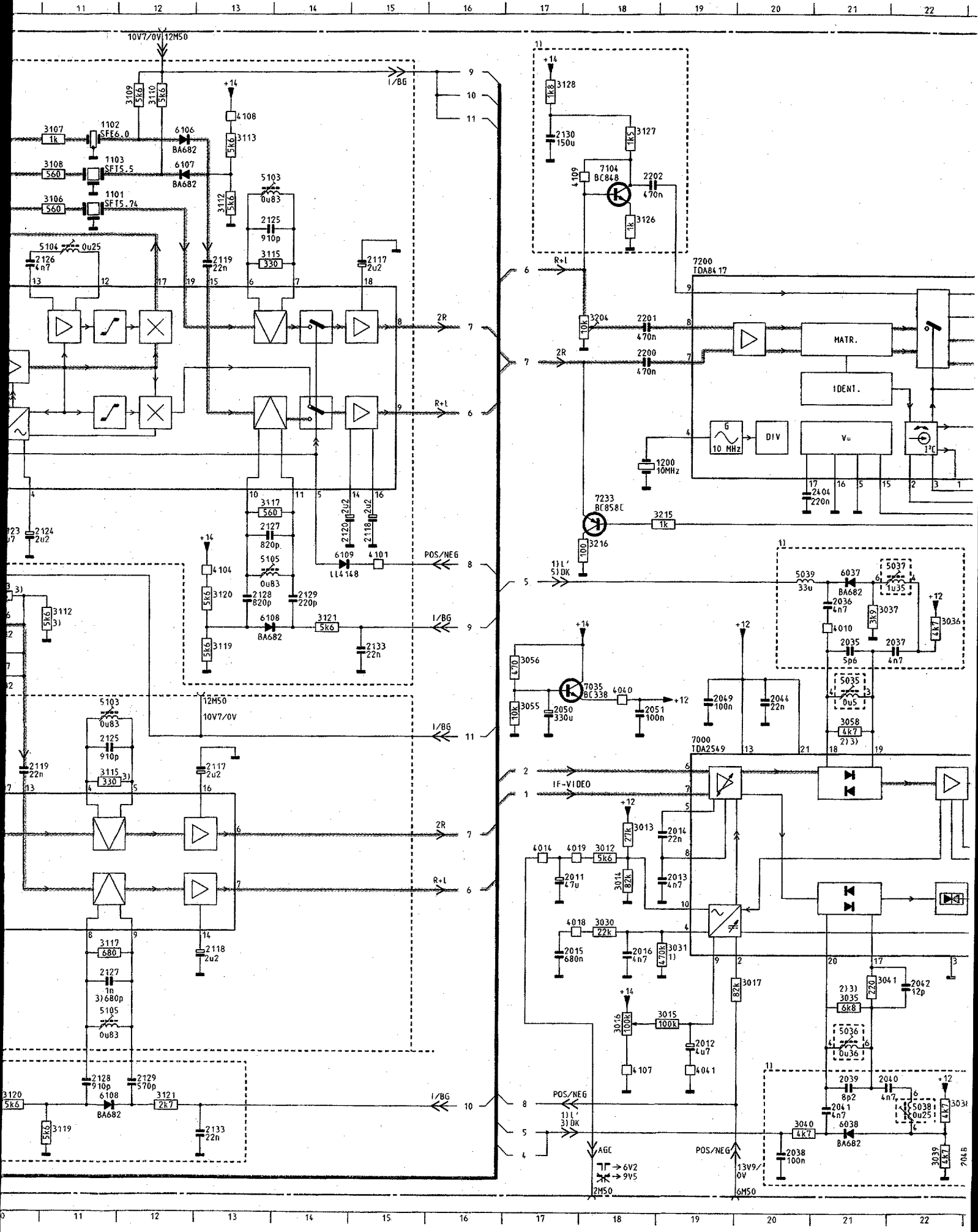


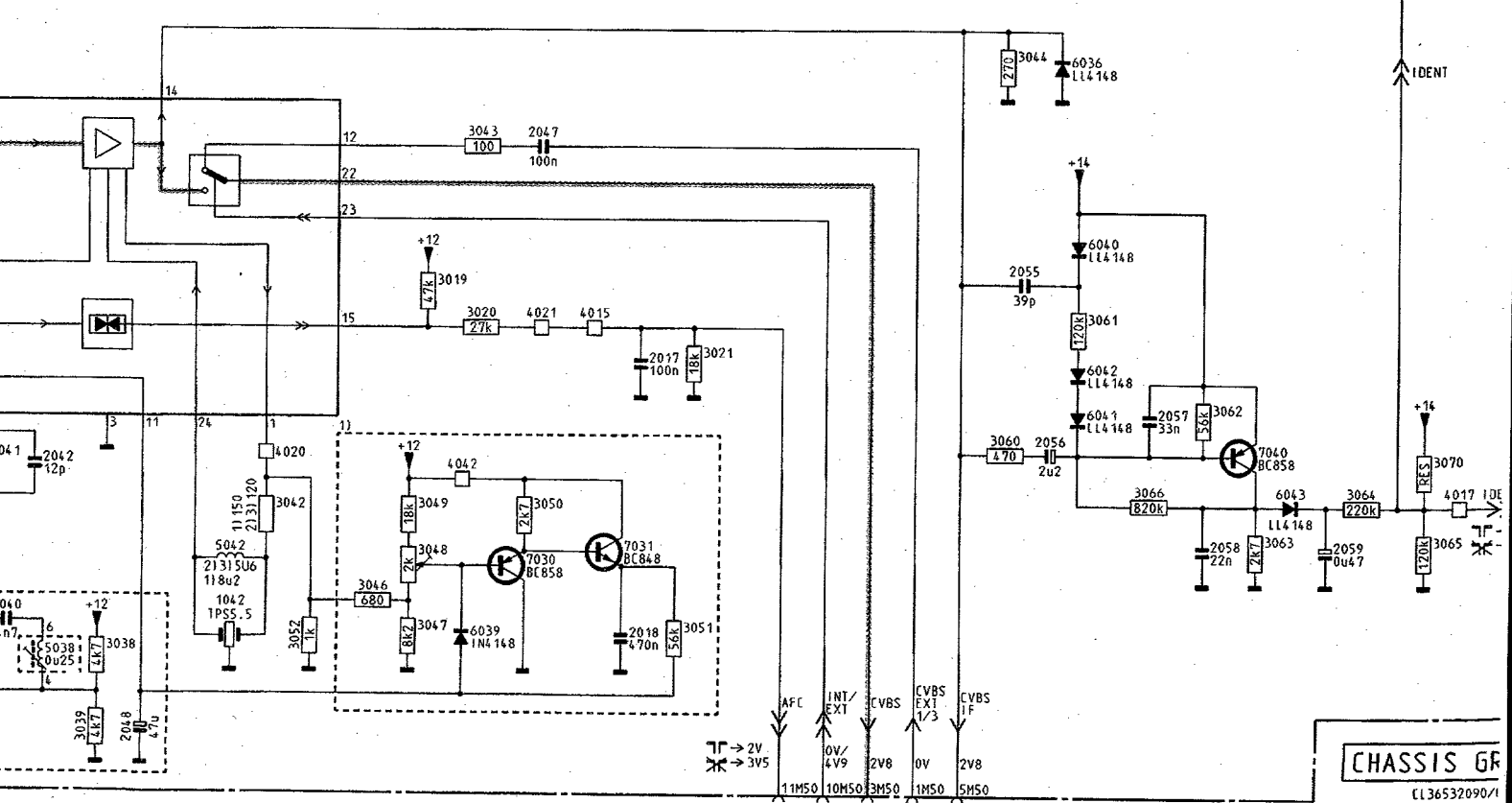
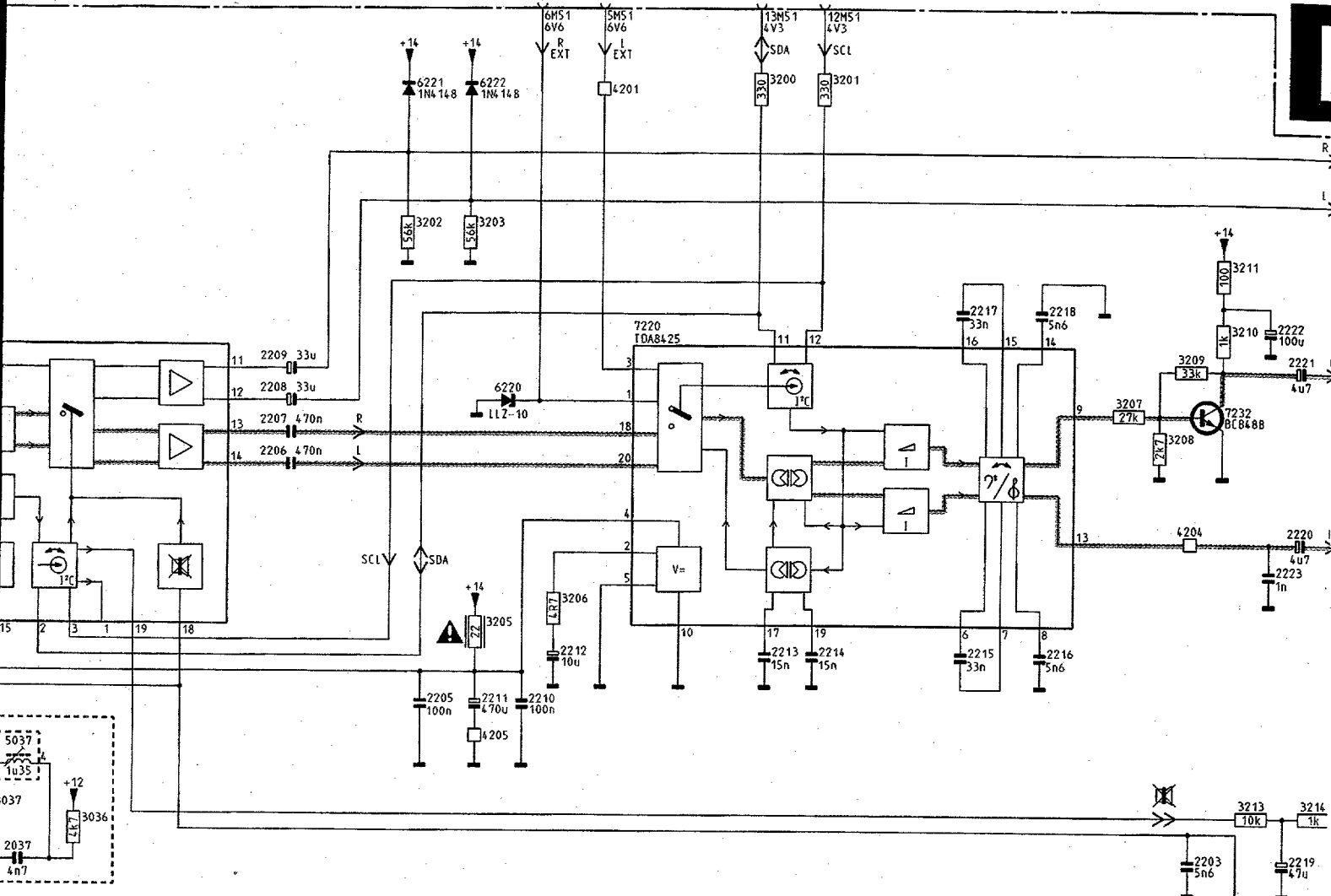
STEREO IF/SOUND MODULE  
 MODULO IF/AUDIO STEREO  
 MODULO SONIDO ESTEREO FI

REMARKS/REMARQUES/ANMERKUNGEN/NOTE

- 1) IN BGLL'I VERSION  
 DANS LA VERSION BGLL'I  
 IN BGLL'I GERÄTEN  
 SUI MODELLI E BGLL'I  
 SOBRE MODELLOS BGLL'I
- 2) IN B/G VERSION  
 DANS LA VERSION B/G  
 IN B/G GERÄTEN  
 SUI MODELLI E B/G  
 SOBRE MODELLOS B/G
- 3) IN B6/DK VERSION  
 DANS LA VERSION B6/DK  
 IN B6/DK GERÄTEN  
 SUI MODELLI E B6/DK  
 SOBRE MODELLOS B6/DK

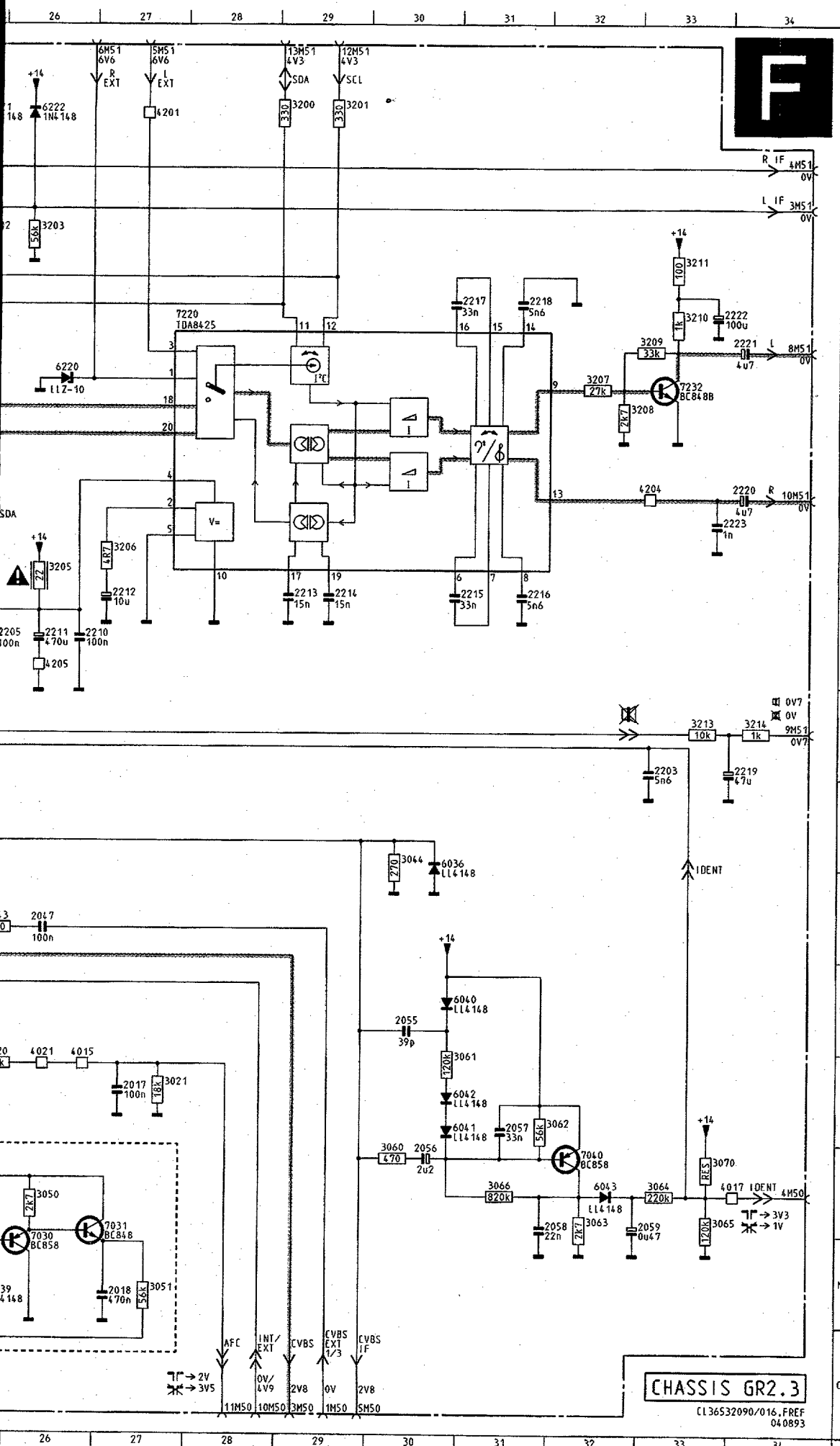






CHASSIS GR  
CL36532090/1





1001	A 5	3043	J25	5039	H20
1010	D 6	3044	I30	5042	M23
1010	J 4	3046	N25	5080	D 4
1042	N23	3047	N25	5103	B13
1101	C11	3048	M25	5103	L11
1101	I 7	3049	M25	5104	J 9
1102	B11	3050	M26	5104	C11
1102	H 8	3051	M27	5105	G13
1103	B11	3052	M24	5105	M11
1103	I 7	3053	G 4	5150	E 8
1150	F 6	3055	I17	6036	I30
1200	F18	3056	I17	6037	G21
2011	K17	3058	I21	6038	O21
2012	M19	3060	M30	6039	N25
2013	K19	3061	K30	6040	K30
2014	K19	3062	L31	6041	L30
2015	L17	3063	M32	6042	L30
2016	L18	3064	M33	6043	M32
2017	L27	3065	M33	6106	B12
2018	N27	3066	M31	6106	H10
2035	H21	3070	M33	6107	B12
2036	H21	3081	D 3	6107	I10
2037	H22	3105	F 8	6108	H13
2038	O20	3105	L 6	6108	N11
2039	N21	3106	C11	6109	G14
2040	N22	3106	I 6	6150	F 5
2041	N21	3107	B11	6151	F 5
2042	M22	3107	H 8	6220	D26
2044	I20	3108	B11	6221	A25
2047	J26	3108	I 6	6222	A26
2048	O23	3109	A12	7000	J19
2049	I19	3109	H 9	7030	N26
2050	I17	3110	A12	7031	M27
2051	I18	3110	H 9	7035	I18
2055	K30	3112	C13	7040	M32
2056	M30	3112	H11	7100	D 8
2057	L31	3113	B13	7101	J 6
2058	M31	3113	H10	7102	B 7
2059	M33	3115	C13	7102	I 4
2080	D 5	3115	J11	7103	B 9
2081	D 5	3117	G13	7103	H 5
2082	D 5	3117	L11	7104	B18
2113	G 9	3119	H13	7150	G 5
2114	G 9	3119	O11	7151	G 6
2114	L 6	3120	H13	7200	D19
2115	G 8	3120	N10	7220	D27
2115	L 6	3121	H14	7232	D33
2117	C15	3121	N12	7233	G18
2117	J13	3122	B 8	9022	F 4
2118	G15	3122	H 4		
2118	L13	3123	C 8		
2119	C13	3123	J 4		
2119	J10	3124	C 8		
2120	G14	3124	I 4		
2122	B 8	3125	H 4		
2122	H 5	3125	B 7		
2123	G10	3126	C18		
2123	L 8	3127	B18		
2124	G10	3128	A17		
2125	C13	3150	G 5		
2125	J11	3151	F 3		
2126	C10	3152	G 6		
2126	J 8	3153	E 5		
2127	G13	3154	E 6		
2127	M11	3200	A29		
2128	H13	3201	A29		
2128	N11	3202	B25		
2129	H14	3203	B26		
2129	N12	3204	D18		
2130	B17	3205	F26		
2133	H15	3206	F27		
2133	O13	3207	D32		
2160	E 3	3208	D32		
2200	E18	3209	D33		
2201	D18	3210	C33		
2202	B18	3211	C33		
2203	H33	3213	H33		
2205	G25	3214	H34		
2206	E24	3215	G19		
2207	D24	3216	G18		
2208	D24	4010	H21		
2209	D24	4011	E 1		
2210	G26	4012	E 1		
2211	G26	4014	K17		
2212	G27	4015	L26		
2213	G29	4017	M34		
2214	G29	4018	L17		
2215	G31	4019	K17		
2216	G31	4020	M24		
2217	C31	4021	L26		
2218	C31	4040	I18		
2219	H34	4041	N19		
2220	E34	4042	M25		
2221	D34	4080	K 3		
2222	C33	4081	K 3		
2223	F33	4100	B 9		
2404	F20	4100	H 5		
3012	K18	4101	G15		
3013	K18	4102	K 5		
3014	K18	4103	H10		
3015	M19	4104	G13		
3016	M18	4104	N10		
3017	M20	4105	M 8		
3019	K25	4107	N18		
3020	L25	4108	B13		
3021	L27	4108	H10		
3030	L18	4109	B17		
3031	L19	4201	A27		
3035	M21	4204	E33		
3036	H22	4205	G26		
3037	H21	5010	L 3		
3038	N22	5010	D 3		
3039	O22	5035	I21		
3040	O20	5036	M21		
3041	M21	5037	G22		
3042	M24	5038	N22		

CHASSIS GR2.3  
 CL36532090/016, FREF  
 04.0893





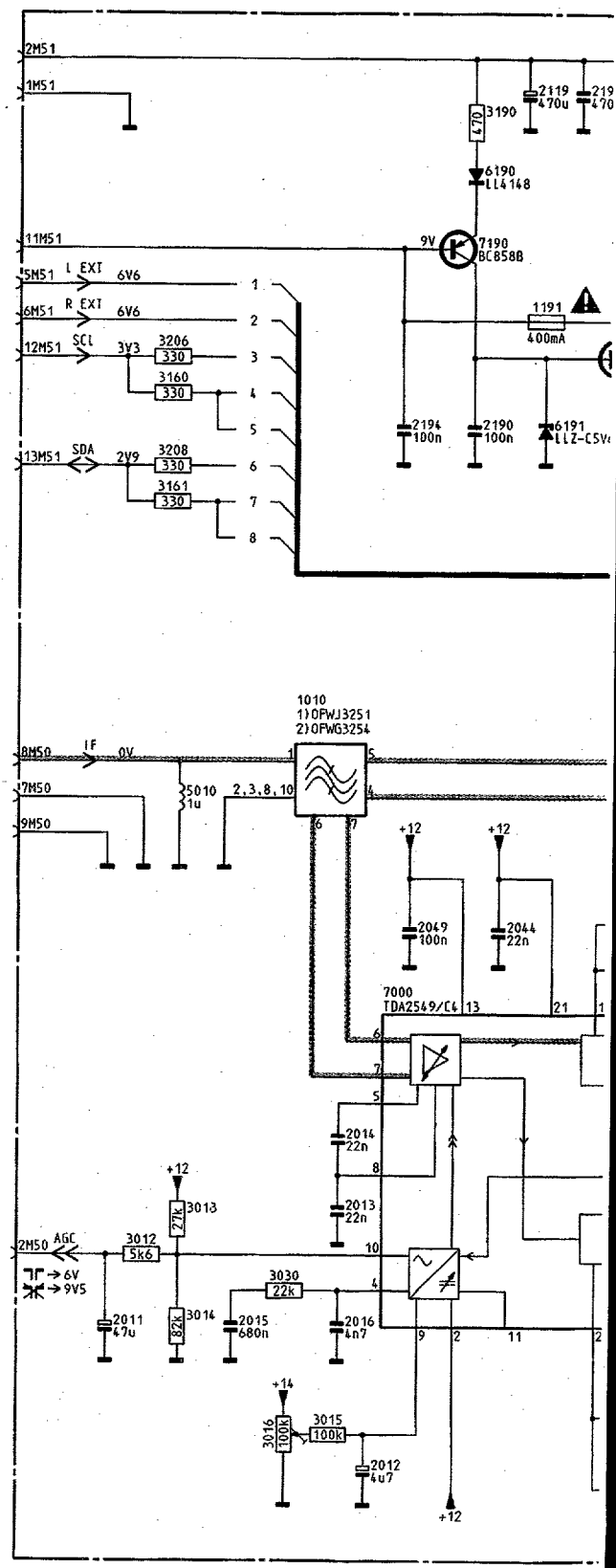
NICAM

REMARKS/REMARQUES/ANMERKUNGEN/NOTE

PRESENT IN SETS:  
PRESENT SUR LES APPAREILS:  
ANWESEND IN GERÄTEN:  
PRESENTE SUJ MODELLI:  
PRESENTE SOBRE MODELLIOS:

- 1) PAL I
- 2) PAL BG

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O



# Nicam IF-Sound module/Nicam ZF-Tonmodule/

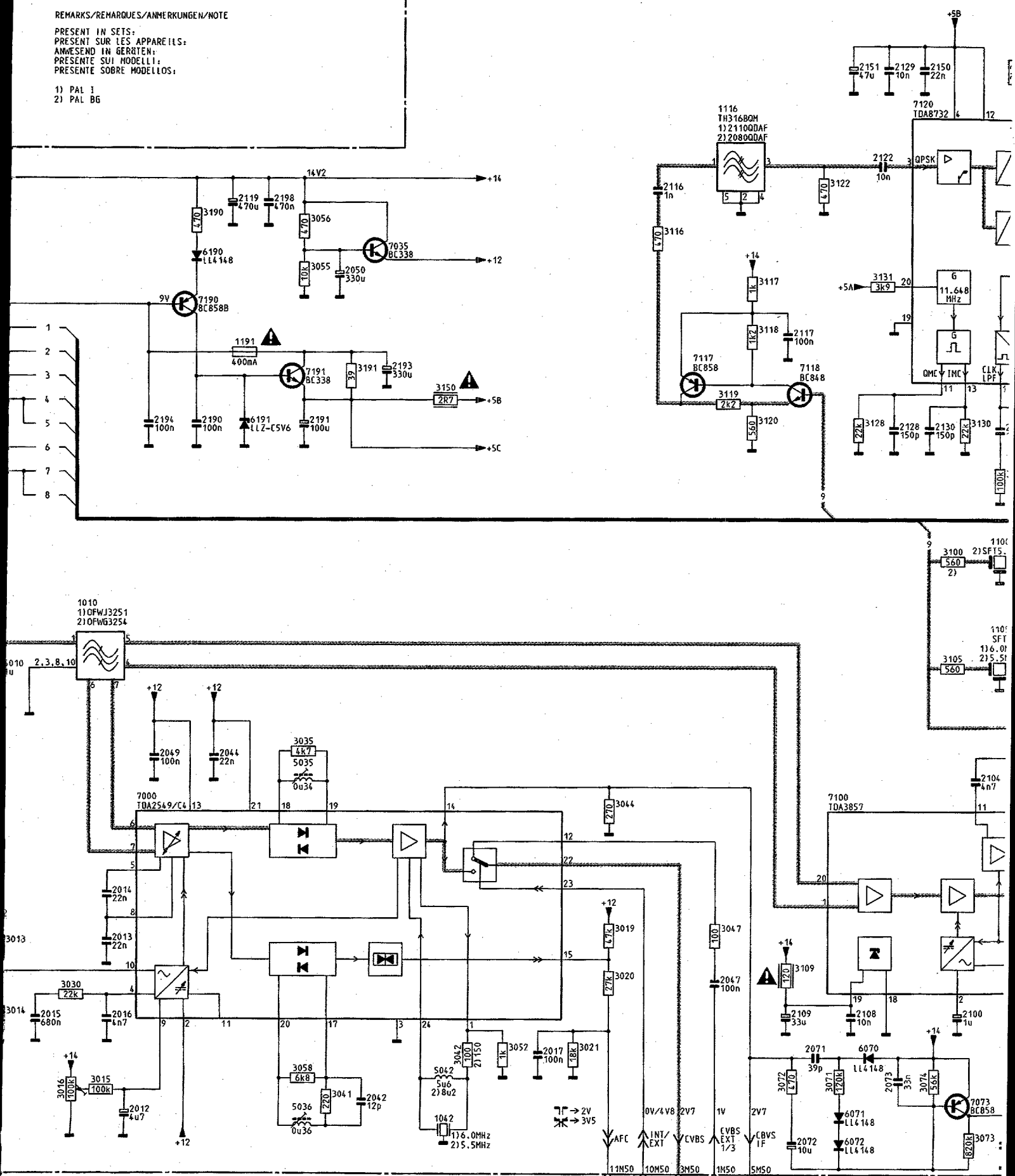
1001 IF MODULE

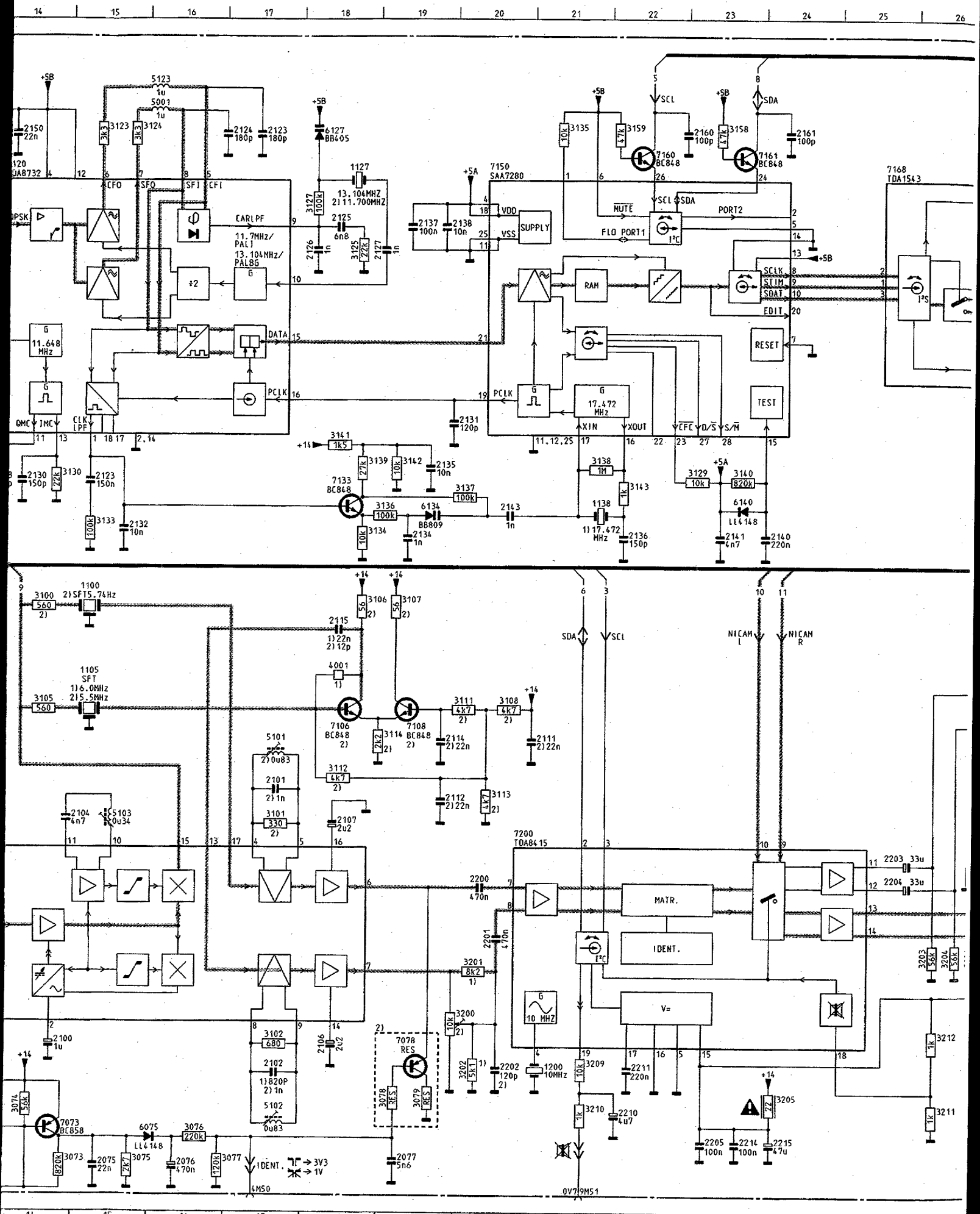
REMARKS/REMARQUES/ANMERKUNGEN/NOTE

PRESENT IN SETS:  
 PRESENT SUR LES APPAREILS:  
 ANWESEND IN GERÄTEN:  
 PRESENTE SUI MODELLI:  
 PRESENTE SOBRE MODELOS:

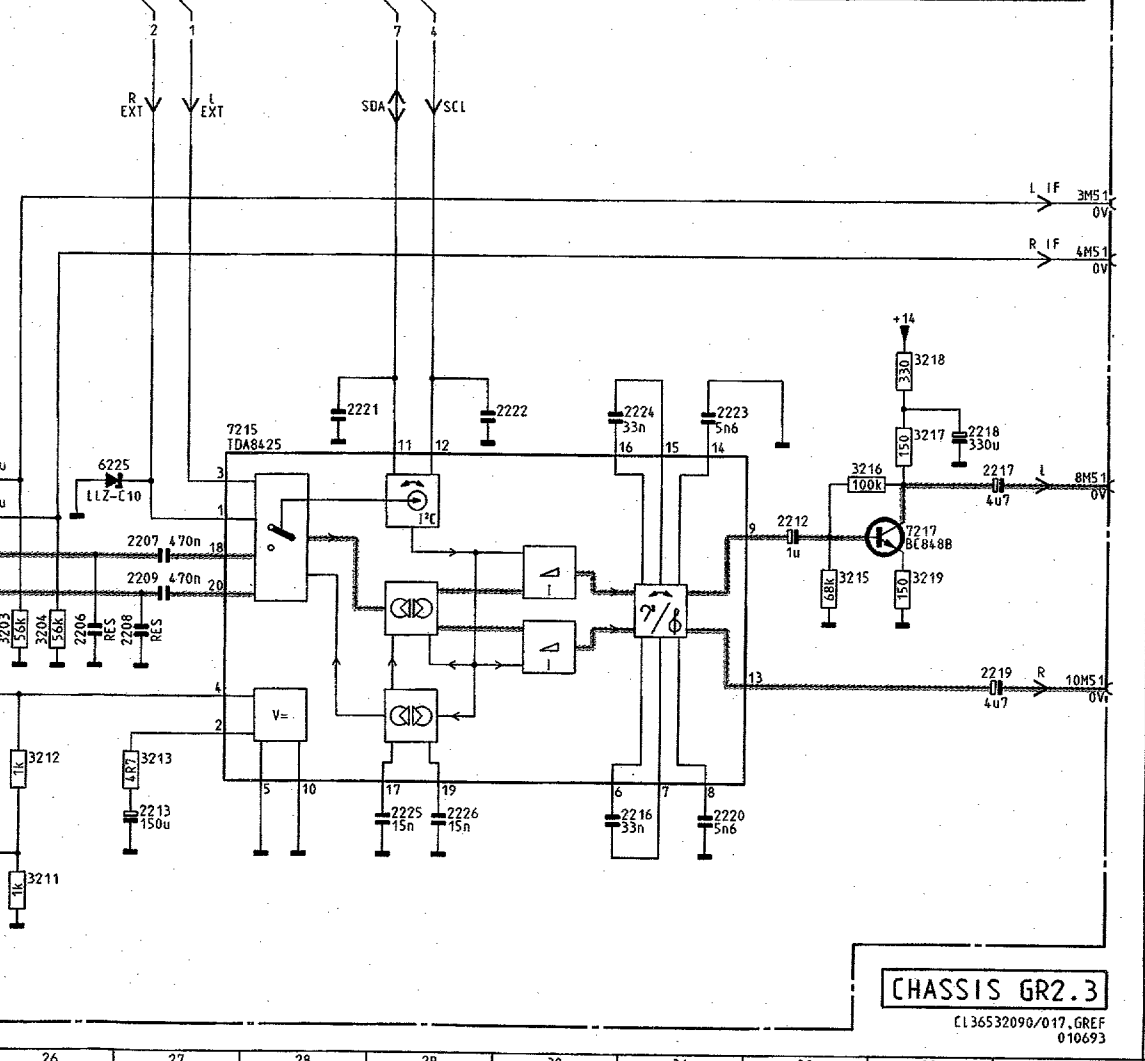
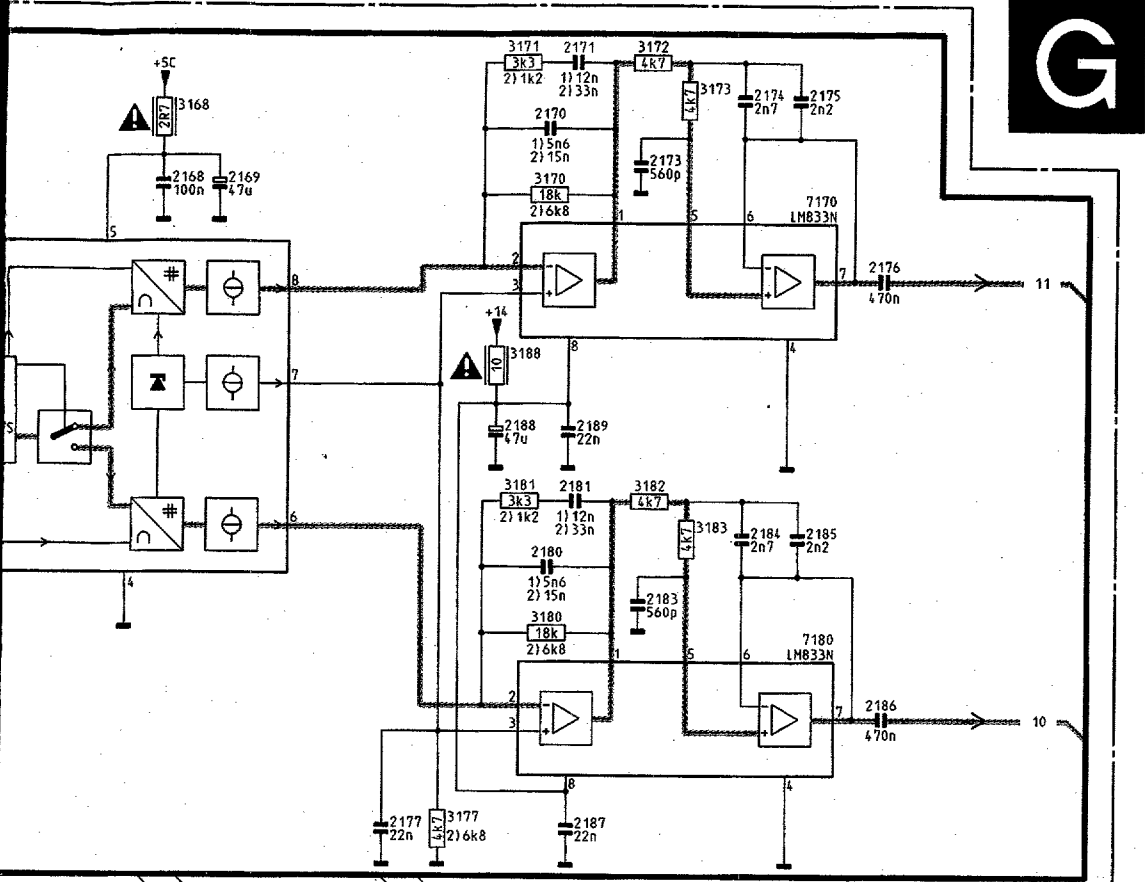
- 1) PAL I
- 2) PAL BG

EAM





26 27 28 29 30 31 32 33 34



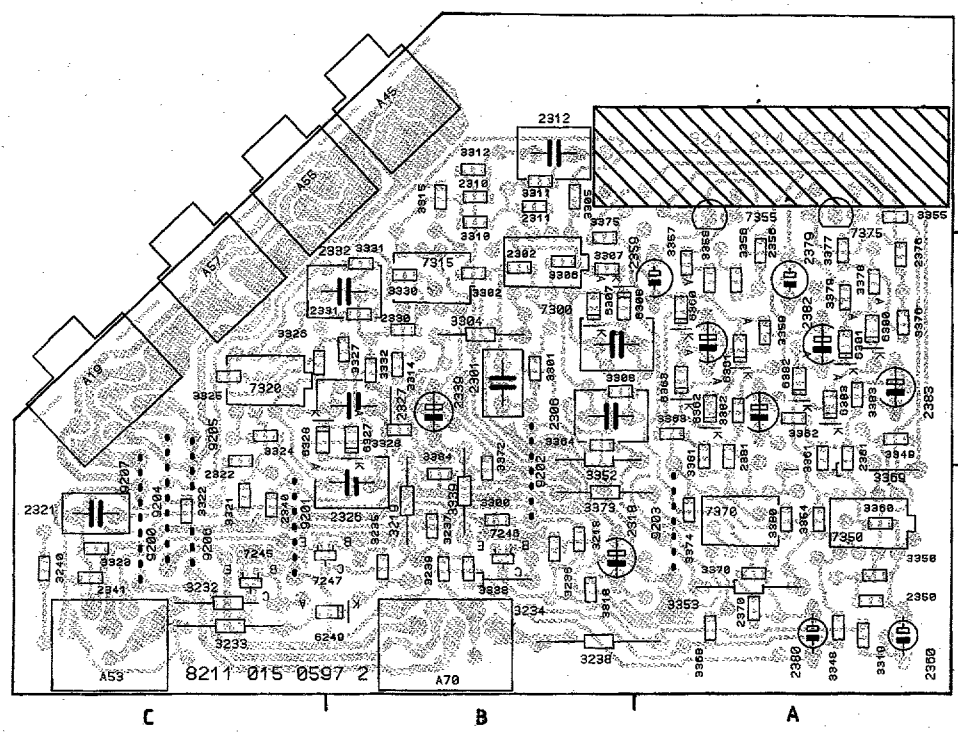
1010	H 3	3012	M 2	6140	G23
1042	O 8	3013	M 2	6190	D 5
1100	H15	3014	M 2	6191	F 5
1105	I15	3015	N 3	6225	K26
1116	B11	3016	N 3	7000	K 4
1127	B18	3019	L10	7035	D 7
1138	G21	3020	M10	7073	O14
1191	E 5	3021	N 9	7078	N19
1200	N21	3030	M 3	7100	K13
2011	N 2	3035	J 6	7106	I18
2012	O 4	3041	N 8	7108	I19
2013	M 4	3042	N 8	7117	E11
2014	L 4	3044	K10	7118	F12
2015	N 3	3047	L11	7120	B14
2016	N 4	3052	N 9	7133	F18
2017	N 9	3055	D 6	7150	B20
2042	O 7	3056	D 6	7150	B22
2044	J 5	3058	N 6	7161	B23
2047	M11	3071	N13	7168	B25
2049	J 4	3072	N12	7170	B32
2050	D 7	3073	O14	7180	F32
2071	N12	3074	N14	7190	E 5
2072	O12	3075	O15	7191	F 6
2073	N13	3076	O16	7200	K20
2075	O15	3077	O16	7215	K27
2076	O16	3078	N19	7217	L33
2077	O19	3079	N19		
2100	N14	3100	H14		
2101	J17	3101	K17		
2102	N17	3102	M17		
2104	K14	3105	I14		
2106	N18	3106	H18		
2107	K18	3107	H19		
2108	N13	3108	I20		
2109	N12	3109	M12		
2111	J21	3111	I20		
2112	J19	3112	J18		
2114	J19	3113	J20		
2115	H18	3114	I19		
2116	C11	3116	D11		
2117	E12	3117	D12		
2119	C 5	3118	E12		
2122	C13	3119	F11		
2123	B17	3120	F12		
2123	F15	3122	C13		
2124	B17	3123	B15		
2125	C18	3124	B15		
2126	C18	3125	C18		
2127	C18	3127	C18		
2128	F13	3128	F13		
2129	B13	3129	F23		
2130	F14	3130	F14		
2131	E20	3131	D13		
2132	G15	3133	G15		
2134	G19	3134	G18		
2135	F19	3135	B21		
2136	G22	3136	G19		
2137	C19	3137	F20		
2138	C19	3138	F21		
2140	G24	3139	F18		
2141	G23	3140	F23		
2143	G20	3141	F18		
2150	B14	3142	F19		
2151	B13	3143	F22		
2160	B23	3150	F 8		
2161	B24	3158	B23		
2168	B27	3159	B22		
2169	B27	3160	F 2		
2170	A30	3161	G 2		
2171	A30	3168	A27		
2173	B31	3170	B30		
2174	A31	3171	A30		
2175	A32	3172	A31		
2176	C33	3173	A31		
2177	G29	3177	G29		
2180	E30	3180	E30		
2181	D30	3181	D30		
2183	E31	3182	D31		
2184	E31	3183	E31		
2185	E32	3188	C30		
2186	F33	3190	C 5		
2187	G30	3191	E 7		
2188	O29	3200	H20		
2189	D30	3201	L20		
2190	F 5	3202	N20		
2191	F 6	3203	L26		
2193	E 7	3204	L26		
2194	F 4	3205	N24		
2198	C 6	3206	E 2		
2200	K20	3208	F 2		
2201	L20	3209	N21		
2202	N20	3210	N21		
2203	K25	3211	N26		
2204	K25	3212	H26		
2205	O23	3213	H27		
2206	L26	3215	L32		
2207	L27	3216	K32		
2208	L27	3217	K33		
2209	L27	3218	J33		
2210	N22	3219	L33		
2211	N22	4001	I18		
2212	L32	5001	A16		
2213	N27	5010	I 2		
2214	O23	5035	J 6		
2215	O24	5036	O 6		
2216	N31	5042	N 8		
2217	K33	5101	J17		
2218	K33	5102	N17		
2219	M33	5103	K15		
2220	N31	5123	A16		
2221	K28	6070	N13		
2222	K29	6071	O13		
2223	K31	6072	O13		
2224	K31	6075	O16		
2225	N29	6127	B18		
2226	N29	6134	G19		

CHASSIS GR2.3  
 CL36532090/017, GREF  
 010693

26 27 28 29 30 31 32 33 34

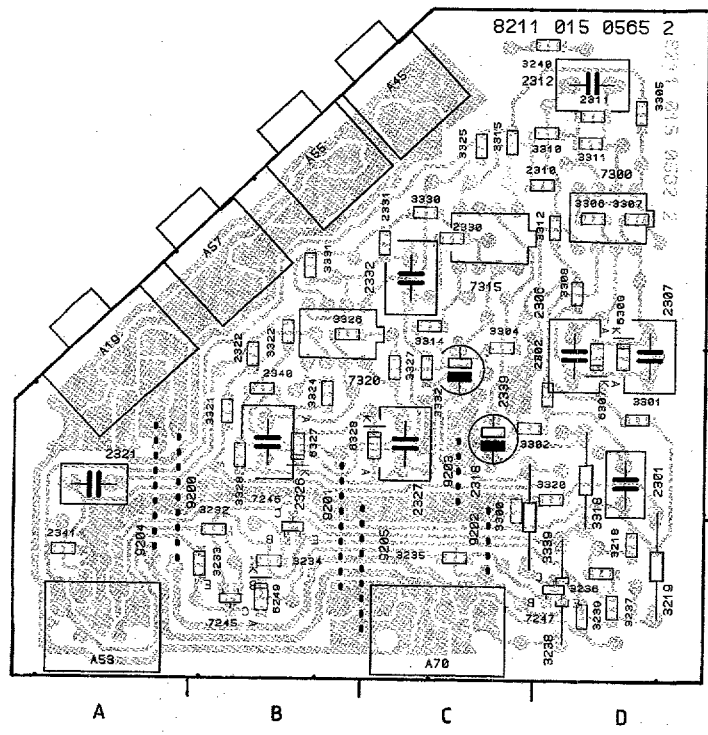


1104 AUDIO 2 MODULE

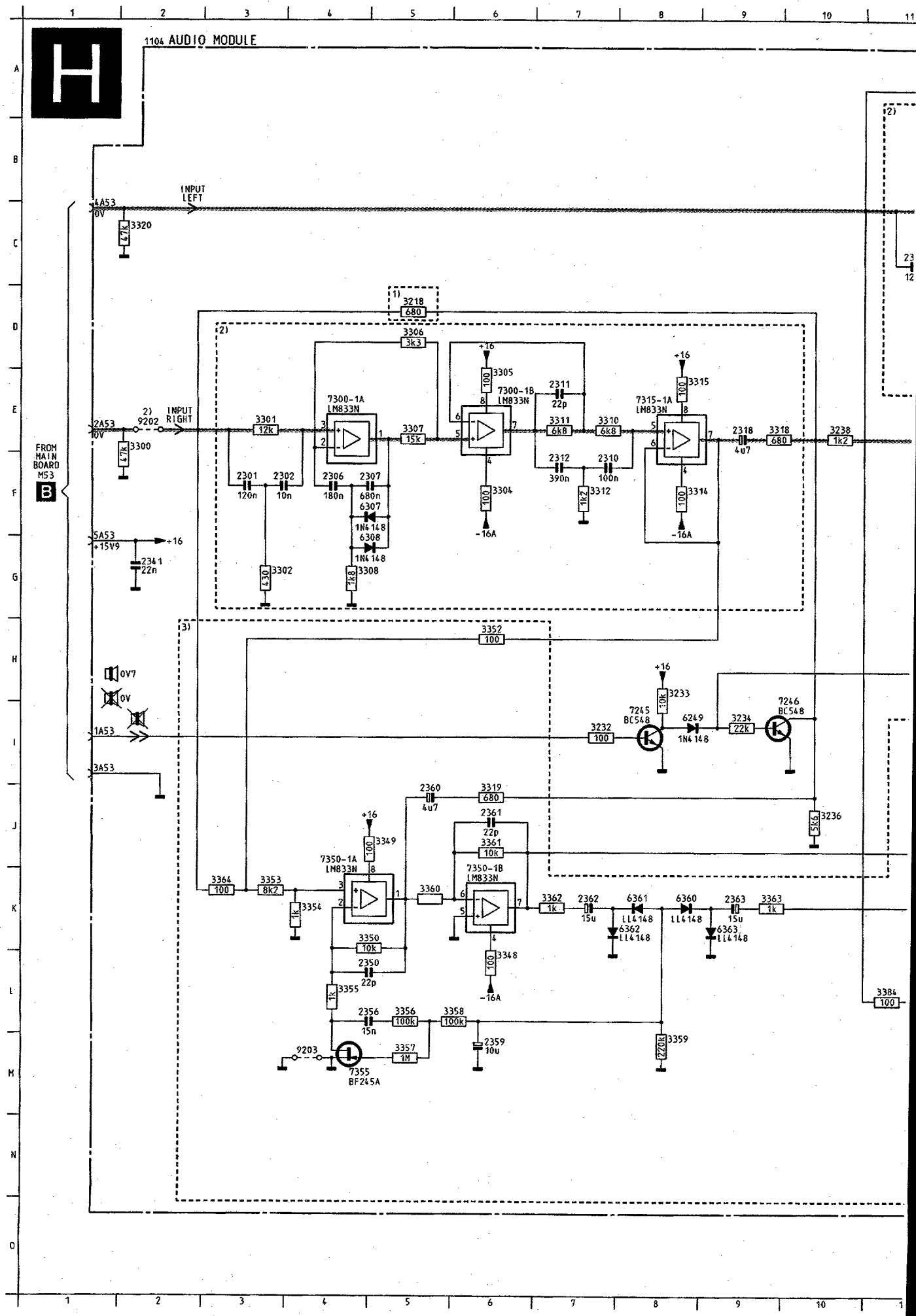


A19	C2	3239	B1	3369	A2
A45	B3	3240	C1	3370	A1
A53	C1	3300	B1	3372	B2
A55	B3	3301	B2	3373	B1
A57	C2	3302	B2	3374	A1
A70	B1	3304	B2	3375	B3
2301	B2	3305	B3	3376	A2
2302	B2	3306	B2	3377	A2
2306	B2	3307	B2	3378	A2
2307	B2	3308	B2	3379	A2
2310	B3	3310	B3	3380	A1
2311	B3	3311	B3	3381	A2
2312	B3	3312	B3	3382	A2
2318	B1	3314	B2	3383	A2
2321	C1	3315	B3	3384	B2
2322	C2	3318	B1	6249	B1
2326	B1	3319	A1	6307	B2
2327	B2	3320	C1	6308	B2
2330	B2	3321	C1	6327	B2
2331	B2	3322	C1	6328	C2
2332	B2	3324	C2	6360	A2
2339	B2	3325	C2	6361	A2
2340	C1	3326	C2	6362	A2
2341	C1	3327	B2	6363	A2
2350	A1	3328	B2	6380	A2
2356	A2	3330	B2	6381	A2
2359	A2	3331	B2	6382	A2
2360	A1	3332	B2	6383	A2
2361	A2	3338	B1	7245	C1
2362	A2	3339	B1	7246	B1
2363	A2	3348	A1	7247	C1
2370	A1	3349	A2	7300	B2
2376	A2	3350	A1	7315	B2
2379	A2	3352	B2	7320	C2
2380	A1	3353	A1	7350	A1
2381	A2	3354	A1	7355	A3
2382	A2	3355	A3	7370	A1
2383	A2	3356	A2	7375	A3
3218	B1	3357	A2	9200	C1
3219	B1	3358	A2	9201	C1
3232	C1	3359	A2	9202	B2
3233	C1	3360	A1	9203	A1
3234	B1	3361	A2	9204	C1
3235	B1	3362	A2	9205	C1
3236	B1	3363	A2	9206	C1
3237	B1	3364	B2	9207	C1
3238	B1	3368	A1		

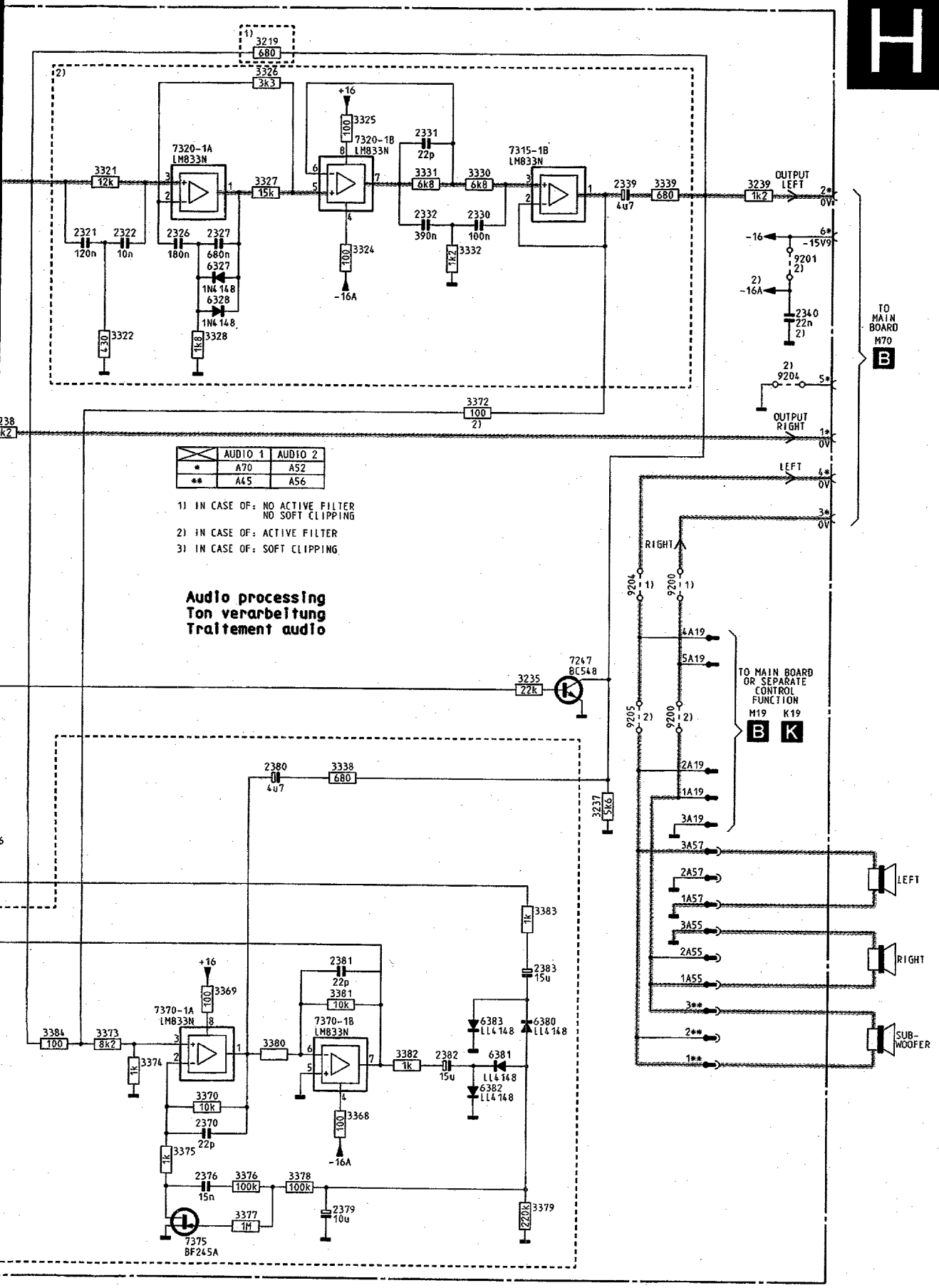
1104 AUDIO 1 MODULE



A19	A2	3310	D1
A45	C1	3311	D1
A53	A4	3312	D2
A55	C1	3314	C2
A57	B2	3315	C1
A70	C4	3318	D3
2301	D3	3320	D3
2302	D3	3321	B3
2306	D3	3322	B2
2307	D3	3324	B3
2310	D2	3325	C1
2311	D1	3326	B2
2312	D1	3327	C3
2318	C3	3328	B3
2321	A3	3330	C2
2322	B3	3331	B2
2326	B3	3332	C3
2327	C3	3339	D3
2330	C2	6249	B4
2331	C2	6307	D3
2332	C2	6308	D3
2339	C3	6327	B3
2340	B3	6328	C3
2341	A4	7245	B4
3218	D4	7246	B4
3219	D4	7247	D4
3232	B4	7300	D2
3233	B4	7315	C2
3234	B4	7320	C3
3235	C4	9200	A3
3236	D4	9201	B4
3237	D4	9202	C4
3238	D4	9203	C3
3239	D4	9204	A3
3300	C3	9205	C4
3301	D3		
3302	D3		
3304	C2		
3305	D1		
3306	D2		
3307	D2		
3308	D2		



# Amplification audio



	AUDIO 1	AUDIO 2
*	A70	A52
**	A45	A56

1) IN CASE OF: NO ACTIVE FILTER  
NO SOFT CLIPPING

2) IN CASE OF: ACTIVE FILTER

3) IN CASE OF: SOFT CLIPPING

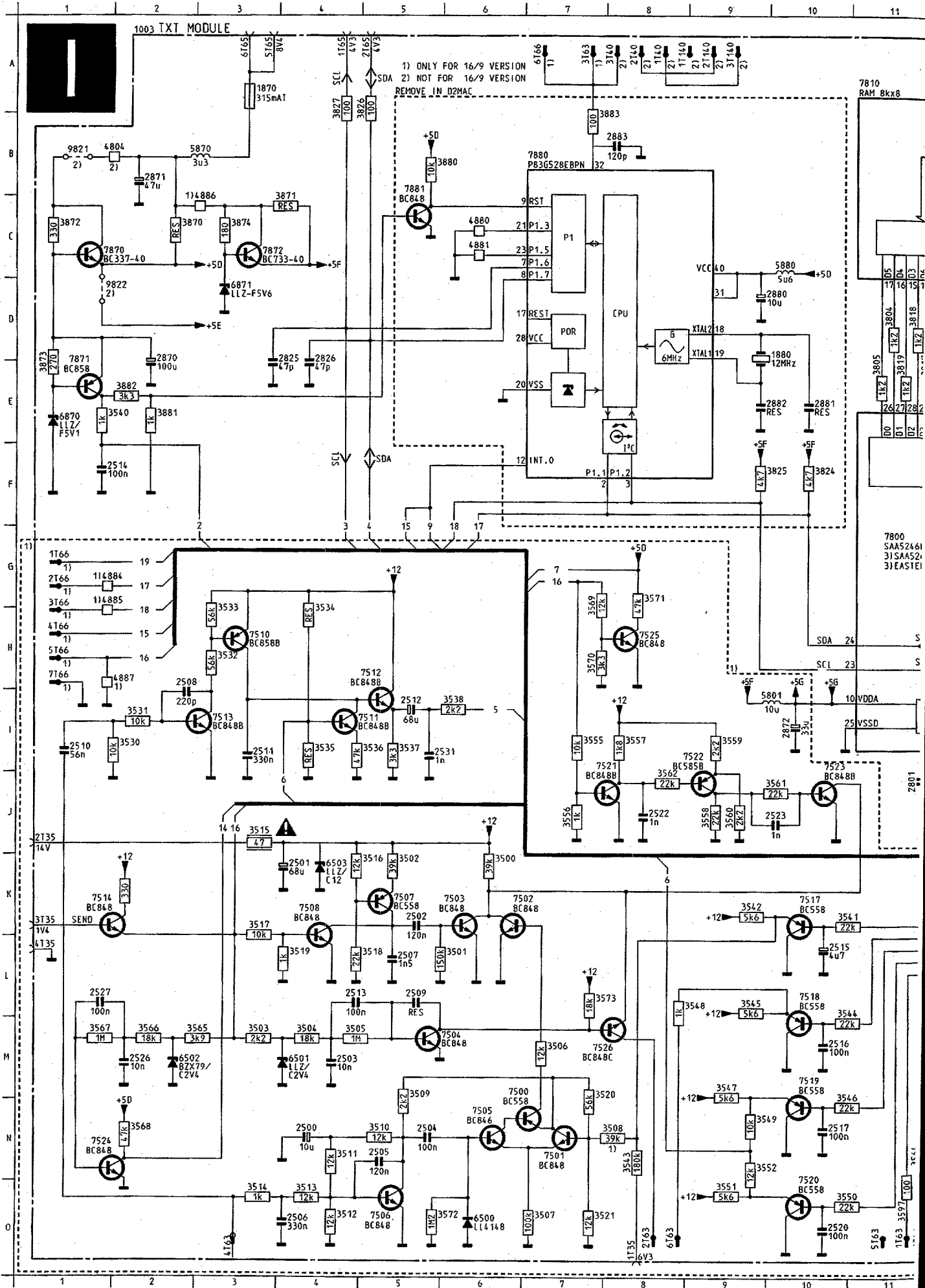
**Audio processing**  
Ton verarbeitung  
Traitement audio

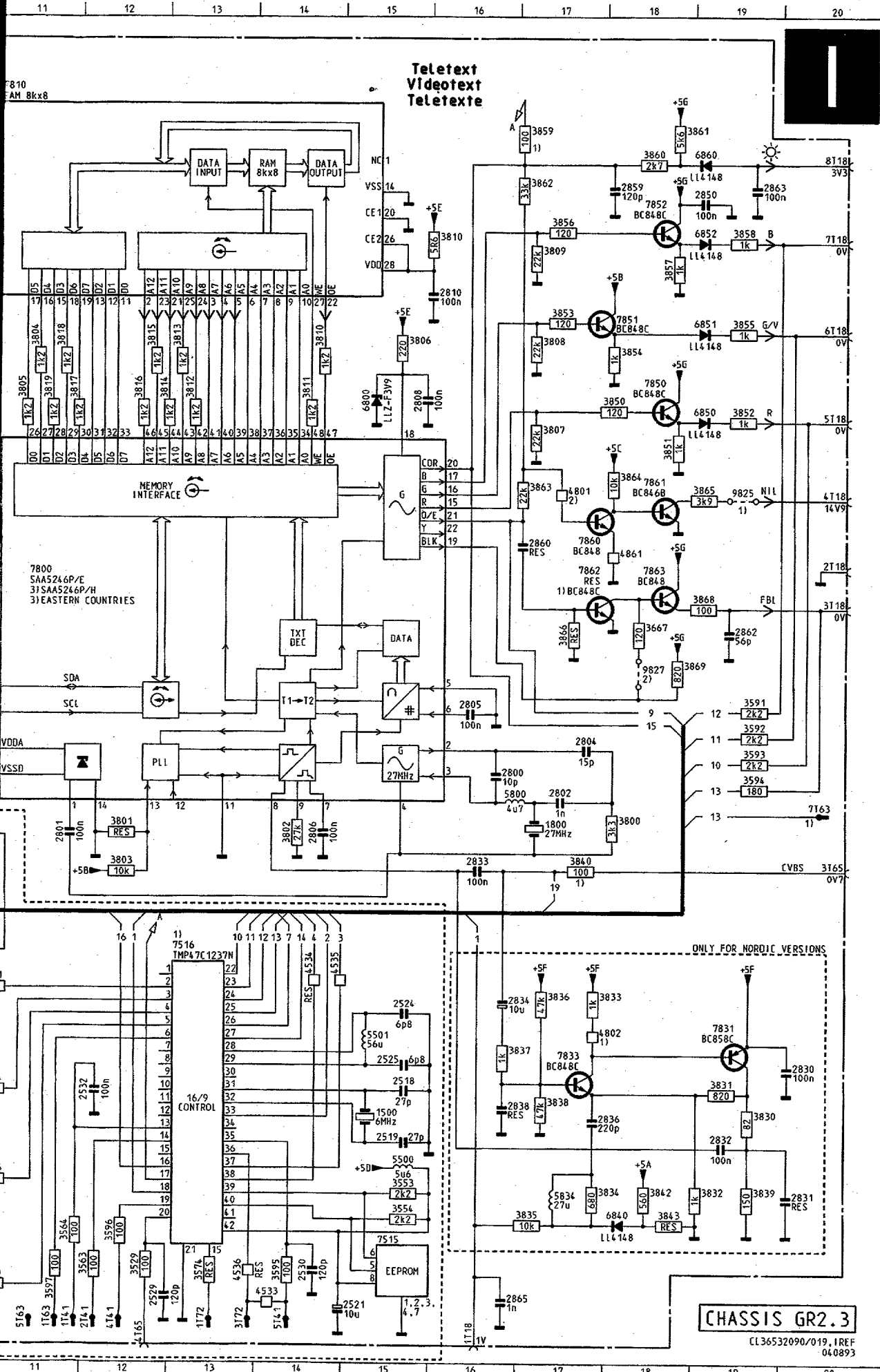
**CHASSIS GR2.3**

CL36532090/018, HREF  
230793

1104	A 2	7245	I 8
2301	F 3	7246	I 9
2302	F 3	7247	H16
2306	F 4	7300	E 6
2307	F 5	7300	E 4
2310	F 7	7315	E 8
2311	E 7	7315	B16
2312	F 7	7320	B14
2318	E 9	7320	B12
2321	C11	7350	J 4
2322	C12	7350	K 4
2326	C12	7355	M 4
2327	C13	7370	L12
2330	C15	7370	L14
2331	B15	7375	N12
2332	C15	9200	H18
2339	C17	9200	G18
2340	D19	9201	C19
2341	G 2	9202	E 2
2350	L 5	9203	M 4
2356	L 5	9204	E19
2359	M 6	9204	G17
2360	J 5	9205	H17
2361	J 6		
2362	K 7		
2363	K 9		
2370	M12		
2376	N12		
2379	N14		
2380	I13		
2381	K14		
2382	L15		
2383	K16		
3218	D 5		
3219	A13		
3232	I 7		
3233	H 8		
3234	I 9		
3235	H16		
3236	J10		
3237	I17		
3238	E10		
3239	C19		
3300	E 2		
3301	E 3		
3302	G 3		
3304	F 6		
3305	D 6		
3306	D 5		
3307	E 5		
3308	G 4		
3310	E 7		
3311	E 7		
3312	F 7		
3314	F 8		
3315	E 8		
3318	E 9		
3319	J 6		
3320	C 2		
3321	C11		
3322	D11		
3324	C14		
3325	B14		
3326	A13		
3327	C13		
3328	D12		
3330	C15		
3331	C15		
3332	C15		
3338	I14		
3339	C17		
3348	L 6		
3349	J 5		
3350	K 5		
3352	H 6		
3353	K 3		
3354	K 4		
3355	L 4		
3356	L 5		
3357	M 5		
3358	L 6		
3359	M 8		
3360	K 5		
3361	J 6		
3362	K 7		
3363	K 9		
3364	K 3		
3368	M14		
3369	K13		
3370	M12		
3372	E15		
3373	L11		
3374	L12		
3375	M12		
3376	N13		
3377	N13		
3378	N14		
3379	N16		
3380	L13		
3381	L14		
3382	L15		
3383	K16		
3384	L11		
6249	I 8		
6307	F 5		
6308	G 5		
6327	D13		
6328	D13		
6360	K 8		
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6363	K 9		
6380	L16		
6381	L16		
6382	M16		
6383	L16		



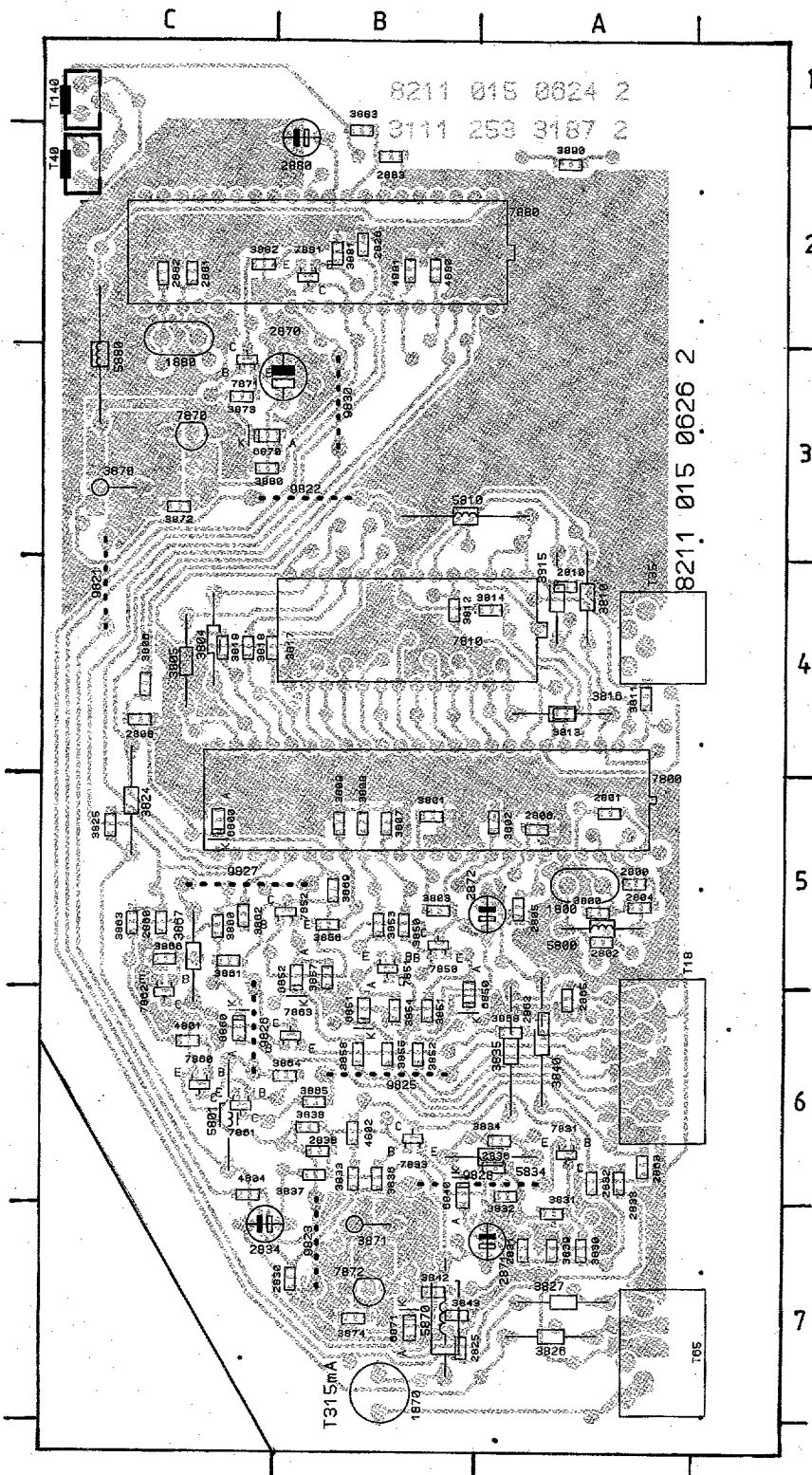




1500	M15	3558	J 9	6503	K 4
1800	J17	3559	I 9	6800	F15
1870	A 2	3560	J 9	6840	M18
1880	C10	3561	J10	6850	E19
2500	N 4	3562	J 8	6851	D19
2501	K 4	3563	O12	6852	C19
2502	K 5	3564	O11	6860	B19
2503	M 4	3565	M 3	6870	E 1
2504	N 5	3566	M 2	6871	D 3
2505	N 5	3567	M 1	7500	M 7
2506	O 4	3568	N 2	7501	N 7
2507	L 5	3569	G 7	7502	K 6
2508	H 2	3570	H 7	7503	K 6
2509	L 5	3571	G 8	7504	M 6
2510	I 1	3572	O 5	7505	N 6
2511	I 3	3573	L 7	7506	O 5
2512	L 5	3574	O13	7507	K 5
2513	L 4	3591	H19	7508	K 4
2515	L10	3592	H19	7510	H 3
2516	M10	3593	I19	7511	I 4
2517	L10	3594	I19	7512	H 3
2518	L15	3595	O14	7513	I 5
2519	H15	3596	O12	7514	K 1
2520	O10	3597	O11	7515	M15
2521	O15	3667	G18	7516	K13
2522	J 8	3800	I18	7517	K10
2523	J10	3801	J12	7518	L10
2524	L15	3802	J14	7519	M10
2525	L15	3803	J12	7520	O10
2526	M 2	3804	O11	7521	I 8
2527	L 1	3805	E11	7522	I 9
2529	O12	3806	O15	7523	I10
2530	O14	3807	E17	7524	N 1
2531	L 6	3808	O17	7525	H 8
2532	M12	3809	C17	7526	M 8
2800	I16	3810	O14	7800	G11
2801	J11	3810	C16	7810	A11
2802	I17	3811	E14	7831	L19
2804	I17	3812	E13	7833	L17
2805	H16	3813	D13	7850	E18
2806	J14	3814	E12	7851	D18
2808	E15	3815	D12	7852	B18
2810	C16	3816	E12	7860	F17
2825	E 3	3817	E11	7861	F18
2826	E 4	3818	D11	7862	S17
2830	L20	3819	E11	7863	S17
2831	N20	3824	F10	7870	C 1
2832	M19	3825	F 9	7871	E 1
2833	J16	3826	A 5	7872	C 3
2834	L16	3827	A 4	7880	B 5
2836	M17	3830	M19	7881	B 5
2838	M16	3831	M19	9821	B 1
2850	B19	3832	M19	9822	D 1
2859	B18	3833	K17	9825	F19
2860	F17	3834	M17	9827	H18
2862	G19	3835	M17		
2863	B19	3836	K17		
2865	O16	3837	L16		
2870	E 2	3838	M16		
2871	B 2	3839	M19		
2871	F 1	3840	J15		
2872	I10	3840	J17		
2880	D 9	3842	N18		
2881	C10	3843	N18		
2882	C 9	3850	E18		
2883	B 8	3851	E18		
3500	K 6	3852	E19		
3501	L 6	3853	O17		
3502	K 5	3854	O17		
3503	M 3	3855	O19		
3504	M 4	3856	C17		
3505	M 4	3857	C18		
3506	M 7	3858	C19		
3507	O 7	3859	B17		
3508	N 8	3860	B18		
3509	M 5	3861	B18		
3510	N 5	3862	B17		
3511	N 4	3863	F17		
3512	O 4	3864	F18		
3513	O 4	3865	F19		
3514	O 3	3866	G17		
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3516	K 5	3869	H18		
3517	K 3	3870	C 2		
3518	L 5	3871	C 4		
3519	L 4	3872	C 1		
3520	M 7	3873	E 1		
3521	O 7	3874	C 3		
3529	O12	3880	B 5		
3530	I 2	3881	E 2		
3531	I 2	3882	E 2		
3532	H 3	3883	A 9		
3533	G 3	4533	O14		
3534	G 4	4534	K14		
3535	I 4	4535	K14		
3536	I 5	4536	O13		
3537	I 5	4801	F17		
3538	I 6	4802	L17		
3540	E 1	4804	B 1		
3541	K10	4861	F18		
3542	K 9	4880	C 6		
3543	N 8	4881	C 1		
3544	L10	4884	G 6		
3545	L 9	4885	G 3		
3546	N10	4886	C 3		
3547	M 9	4887	H 1		
3548	L 8	5500	M15		
3549	N 9	5501	L15		
3550	O10	5800	L16		
3551	O 9	5801	L10		
3552	N 9	5834	N17		
3553	M15	5870	B 2		
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3557	I 8	6502	M 2		

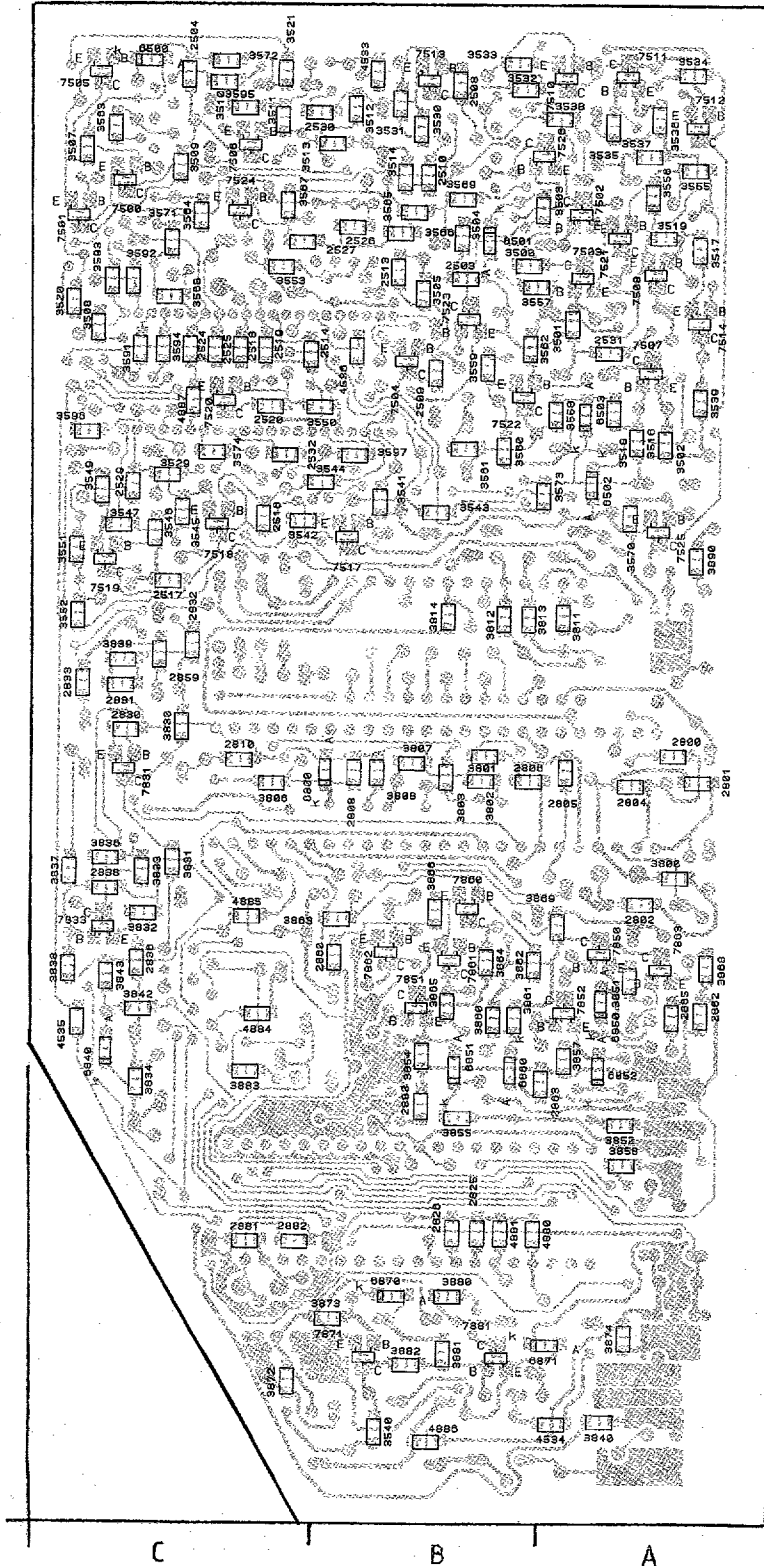
CHASSIS GR2.3  
CL36532090/019, IREF  
040893

1003 TELETEXT MODULE 4:3



- T18 A5 3871 B6
- T35 A4 3872 C3
- T40 C2 3873 C3
- T65 A7 3874 B7
- T140 C1 3880 C3
- 1800 A5 3881 B2
- 1870 B7 3882 C2
- 1880 C2 3883 B1
- 2800 A5 3890 A1
- 2801 A4 4801 C6
- 2802 A5 4802 B6
- 2804 A5 4804 C6
- 2805 A5 4880 B2
- 2806 A5 4881 B2
- 2808 C4 5800 A5
- 2810 A3 5801 C6
- 2825 B7 5810 B3
- 2826 B2 5834 A6
- 2830 B7 5870 B7
- 2831 A7 5880 C2
- 2832 A6 6800 C5
- 2833 A6 6840 B6
- 2834 C6 6850 B5
- 2836 A6 6851 B5
- 2838 B6 6852 B5
- 2860 C5 6860 C6
- 2862 A5 6870 C3
- 2863 A6 6871 B7
- 2865 A5 7800 B4
- 2870 B2 7810 A4
- 2871 A6 7831 A6
- 2872 A5 7833 B6
- 2880 B1 7850 B5
- 2881 C2 7851 B5
- 2882 C2 7852 B5
- 2883 B1 7860 C6
- 3800 A5 7861 C8
- 3801 B5 7862 C5
- 3802 A5 7863 B8
- 3803 B5 7870 C3
- 3804 C4 7871 C2
- 3805 C4 7872 B7
- 3806 C4 7880 A2
- 3807 B5 7881 B2
- 3808 B5 9821 C3
- 3809 B5 9822 B3
- 3810 A4 9823 B7
- 3811 A4 9825 B6
- 3812 B4 9826 C6
- 3813 A4 9827 C5
- 3814 A4 9828 B6
- 3815 A4 9830 B3
- 3816 A4
- 3817 B4
- 3818 C4
- 3819 C4
- 3824 C4
- 3825 C5
- 3826 A7
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- 3869 B5
- 3870 C3

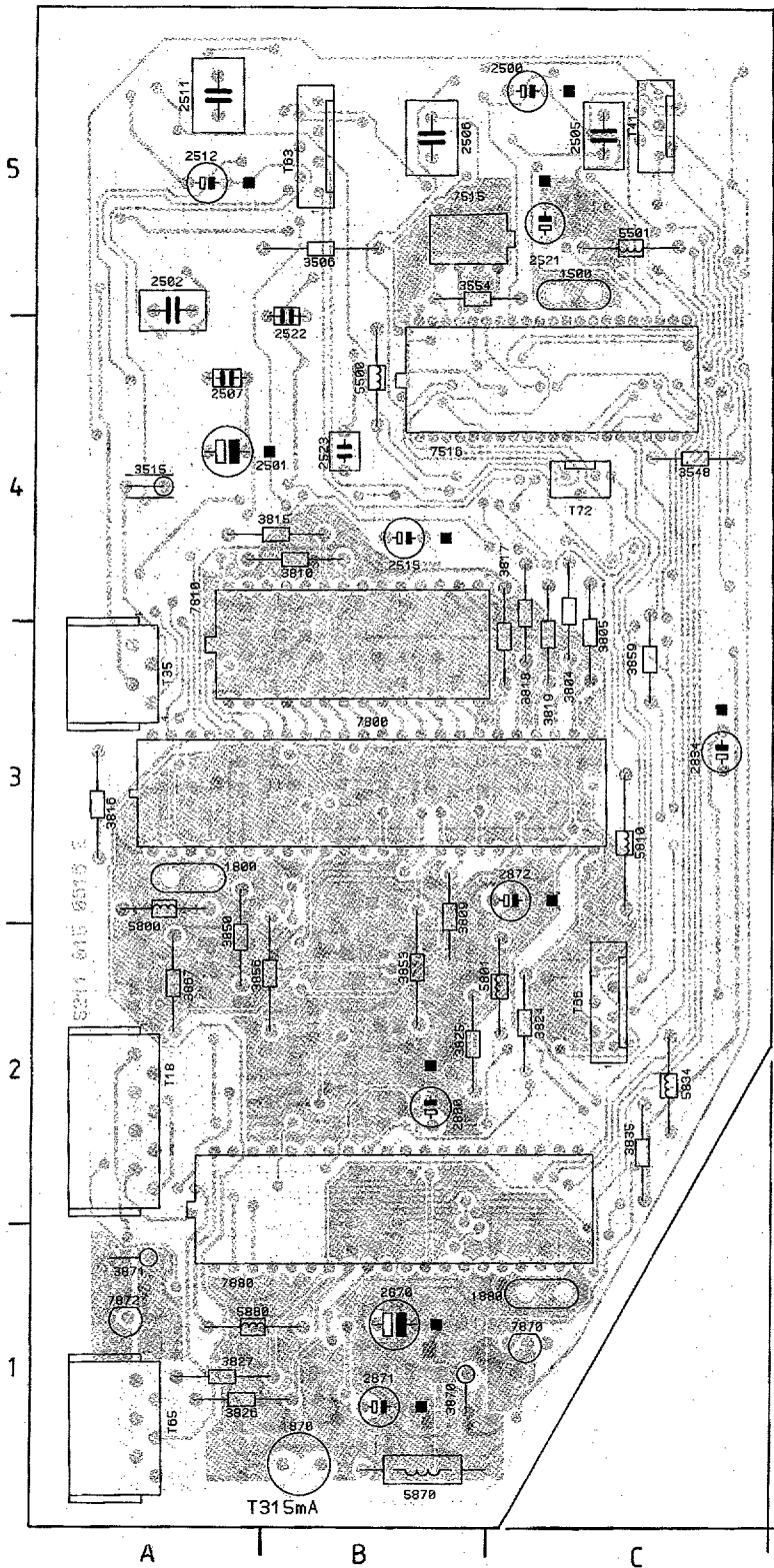
1003 TELETEXT MODULE 16:9 (SMD SIDE)



T18	A2	3521	C5	3853	B2	7862	B2
T35	A3	3529	C4	3854	B2	7863	A2
T41	C5	3530	B5	3855	B2	7870	C1
T63	B5	3531	B5	3856	A2	7871	B1
T65	A1	3532	B5	3857	A2	7872	A1
T66	C2	3533	B5	3858	A2	7880	B2
T72	C4	3534	A5	3859	C3	7881	B1
1500	C5	3535	A5	3860	B2		
1800	A3	3536	A5	3861	B2		
1870	B1	3537	A5	3862	A2		
1880	C1	3538	A5	3863	B2		
2500	C5	3539	A4	3864	B2		
2501	A4	3540	B1	3865	B2		
2502	A4	3541	B4	3866	B2		
2503	B5	3542	B4	3867	A2		
2504	C5	3543	B4	3868	D2		
2505	C5	3544	B4	3868	A2		
2506	B5	3545	C4	3869	A2		
2507	A4	3546	C4	3870	B1		
2508	B5	3547	C4	3871	A1		
2509	B4	3548	C4	3872	B1		
2510	B5	3549	C4	3873	B1		
2511	A5	3550	B4	3874	A1		
2512	A5	3551	C4	3880	B1		
2513	B5	3552	C3	3881	B1		
2514	B4	3553	C5	3882	B1		
2515	B4	3554	B5	3883	C2		
2516	C4	3555	A5	3890	A4		
2517	C4	3556	A5	4533	B5		
2518	C4	3557	A5	4534	A1		
2519	C4	3558	A4	4535	C2		
2520	C4	3559	B4	4536	B4		
2521	C5	3560	B4	4880	A1		
2522	B4	3561	B4	4881	B1		
2523	B4	3562	A4	4884	C2		
2524	C4	3563	C5	4885	C2		
2525	C4	3564	C5	4886	B1		
2526	B5	3565	B5	4887	C4		
2527	B5	3566	B5	5500	B4		
2529	C4	3567	C5	5501	C5		
2530	B5	3568	C5	5800	A3		
2531	A4	3569	B5	5801	B2		
2532	C4	3570	A4	5810	C3		
2800	A3	3571	C5	5834	C2		
2801	A3	3572	C5	5870	B1		
2802	A3	3573	A4	5880	A1		
2804	A3	3574	C4	6500	C5		
2805	A3	3591	C4	6501	B5		
2806	A3	3592	C5	6502	A4		
2808	B3	3593	C5	6503	A4		
2810	C3	3594	C4	6900	B3		
2825	B1	3595	C5	6940	C2		
2826	B1	3596	C4	6950	A2		
2830	C3	3597	B4	6851	B2		
2831	C3	3800	A3	6852	A2		
2832	C3	3801	B3	6860	B2		
2833	C3	3802	B3	6870	B1		
2834	C3	3803	B3	6871	A1		
2836	C2	3804	C3	7500	C5		
2838	C3	3805	C3	7501	C5		
2859	C3	3806	C3	7502	A5		
2860	B2	3807	B3	7503	A5		
2862	A2	3808	B3	7504	B4		
2863	A2	3809	B2	7505	C5		
2865	A2	3810	B4	7506	C5		
2870	B1	3811	A3	7507	A4		
2871	B1	3812	B3	7508	A5		
2872	B3	3813	A3	7510	A5		
2880	B2	3814	B3	7511	A5		
2881	C1	3815	A4	7512	A5		
2882	B1	3817	B3	7513	B5		
2883	B2	3818	C3	7514	A4		
3500	A5	3819	C3	7515	B5		
3501	A4	3824	C2	7516	C4		
3502	A4	3825	B2	7517	B4		
3503	A5	3826	A1	7518	C4		
3504	B5	3827	A1	7519	C4		
3505	B5	3830	C3	7520	C4		
3506	B5	3831	C3	7521	A5		
3507	C5	3832	C2	7522	B4		
3508	C4	3833	C3	7523	B4		
3509	C5	3834	C2	7524	C5		
3510	C5	3835	C2	7525	A4		
3511	C5	3836	C3	7525	A5		
3512	B5	3837	C3	7800	B3		
3513	B5	3838	C2	7810	B3		
3514	B5	3839	C3	7831	C3		
3515	A4	3840	A1	7833	C2		
3516	A4	3842	C2	7850	A2		
3517	A5	3843	C2	7851	B2		
3518	A4	3850	A2	7852	A2		
3519	A5	3851	A2	7860	B3		
3520	C4	3852	A2	7861	B2		

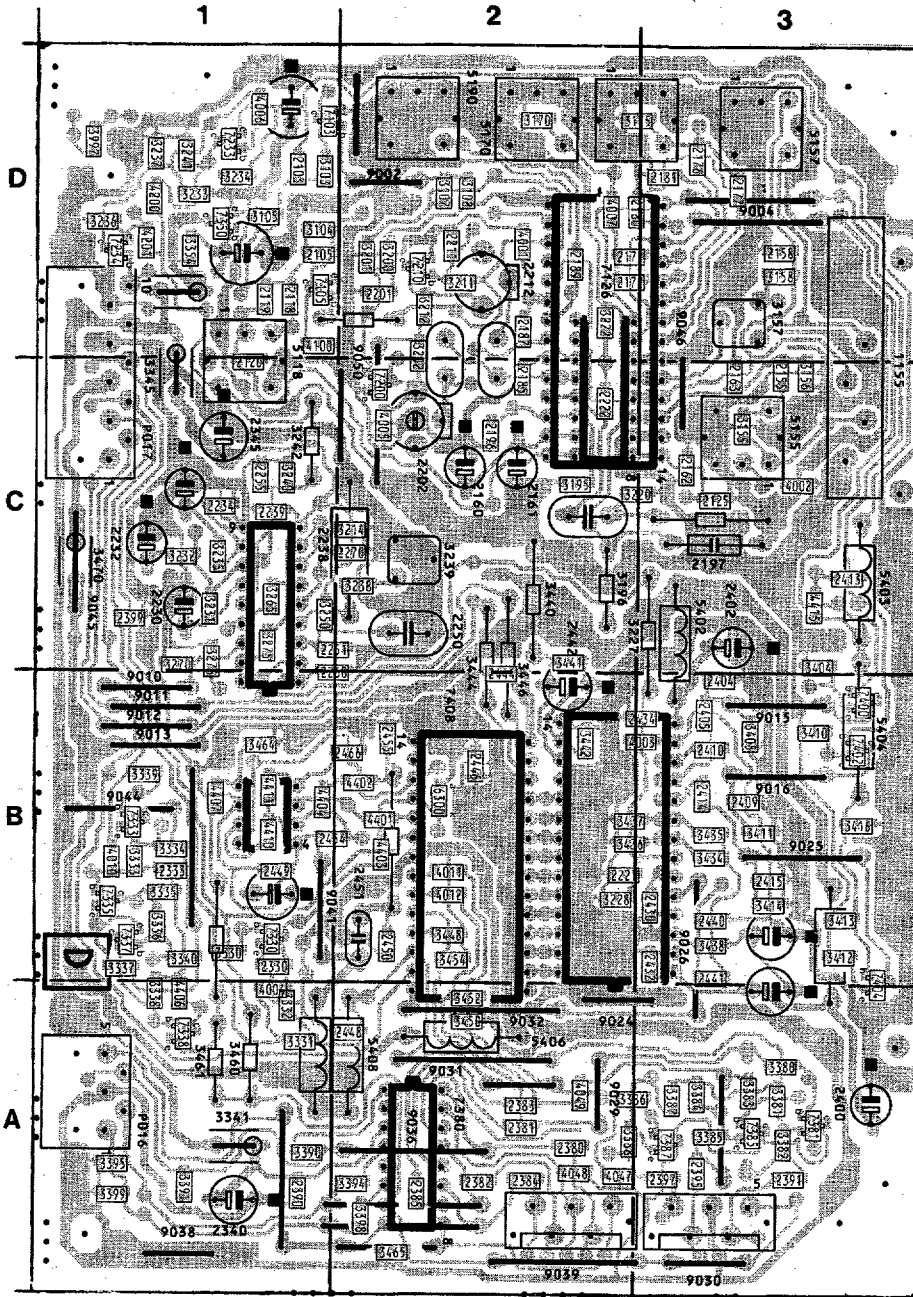
(FOR COMPONENT SIDE SEE NEXT PAGE)

# 1003 TELETEXT MODULE 4:3 (COMPONENT SIDE)



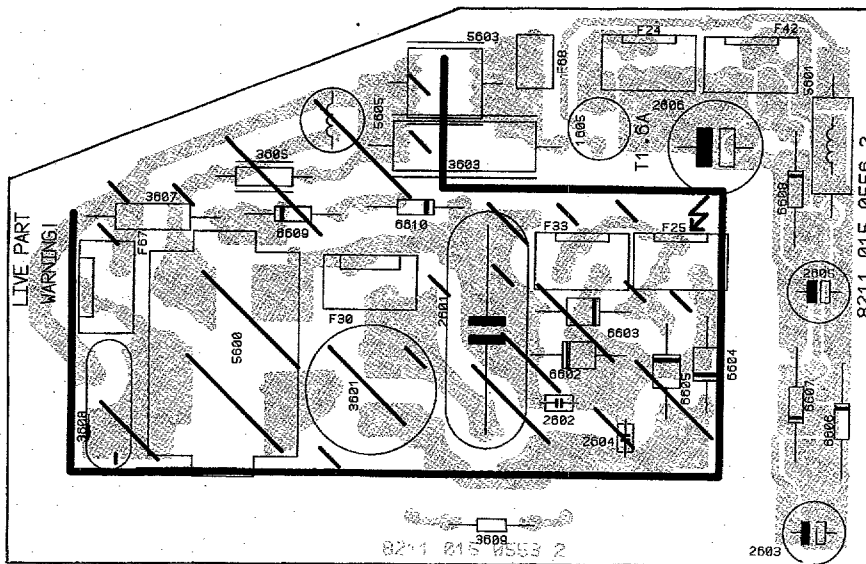
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T35	A3	3529	C4	3854	B2	7863	A2
T41	C5	3530	B6	3855	B2	7870	C1
T63	B5	3531	B5	3856	A2	7871	B1
T65	A1	3532	B5	3857	A2	7872	A1
T66	C2	3533	B6	3858	A2	7880	B2
T72	C4	3534	A5	3859	C3	7881	B1
1500	C5	3535	A5	3860	B2		
1800	A3	3536	A5	3861	B2		
1870	B1	3537	A5	3862	A2		
1880	C1	3538	A5	3863	B2		
2500	C5	3539	A4	3864	B2		
2501	A4	3540	B1	3865	B2		
2502	A4	3541	B4	3866	B2		
2503	B5	3542	B4	3867	A2		
2504	C5	3543	B4	3868	D2		
2505	C5	3544	B4	3868	A2		
2506	B5	3545	C4	3869	A2		
2507	A4	3546	C4	3870	B1		
2508	B5	3547	C4	3871	A1		
2509	B4	3548	C4	3872	B1		
2510	B5	3549	C4	3873	B1		
2511	A5	3550	B4	3874	A1		
2512	A5	3551	C4	3880	B1		
2513	B5	3552	C3	3881	B1		
2514	B4	3553	C5	3882	C1		
2515	B4	3554	B5	3883	B2		
2516	C4	3555	A5	3890	A4		
2517	C4	3556	A5	4533	B5		
2518	C4	3557	A5	4534	A1		
2519	C4	3558	A4	4535	C2		
2520	C4	3559	B4	4536	B4		
2521	C5	3560	B4	4880	A1		
2522	B4	3561	B4	4881	B1		
2523	B4	3562	A4	4882	C2		
2524	C4	3563	C5	4885	C2		
2525	C4	3564	C5	4886	B1		
2526	B5	3565	B5	4887	C4		
2527	B5	3566	B5	5500	A4		
2529	C4	3567	C5	5501	C5		
2530	B5	3568	C5	5800	A3		
2531	A4	3569	B5	5801	B2		
2532	C4	3570	A4	5810	C3		
2800	A3	3571	C5	6834	C2		
2801	A3	3572	C5	5870	B1		
2802	A3	3573	A4	5880	A1		
2804	A3	3574	C4	6500	C5		
2805	A3	3581	C4	6501	B5		
2806	A3	3592	C5	6502	A4		
2808	B3	3593	C5	6503	A4		
2810	C3	3594	C4	6800	B3		
2825	B1	3595	C5	6840	C2		
2826	B1	3596	C4	6850	A2		
2830	C3	3597	B4	6851	B2		
2831	C3	3800	A3	6852	A2		
2832	C3	3801	B3	6860	B2		
2833	C3	3802	B3	6870	B1		
2834	C3	3803	B3	6871	A1		
2836	C2	3804	C3	7500	C5		
2838	C3	3805	C3	7501	C5		
2859	C3	3806	C3	7502	A5		
2860	B2	3807	B3	7503	A5		
2862	A2	3808	B3	7504	B4		
2863	A2	3809	B2	7505	C5		
2865	A2	3810	B4	7506	C5		
2870	B1	3811	A3	7507	A4		
2871	B1	3812	B3	7508	A5		
2872	B3	3813	A3	7510	A5		
2880	B2	3814	B3	7511	A5		
2881	C1	3815	A4	7512	A5		
2882	B1	3817	B3	7513	B5		
2883	B2	3818	C3	7514	A4		
3500	A5	3819	C3	7515	B5		
3501	A4	3824	C2	7516	C4		
3502	A4	3825	B2	7517	B4		
3503	A5	3826	A1	7518	C4		
3504	B5	3827	A1	7519	C4		
3505	B5	3830	C3	7520	C4		
3506	B5	3831	C3	7521	A5		
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3511	C5	3836	C3	7526	A5		
3512	B5	3837	C3	7800	B3		
3513	B5	3838	C2	7810	B3		
3514	B5	3839	C3	7831	C3		
3515	A4	3840	A1	7833	C2		
3516	A4	3842	C2	7850	A2		
3517	A5	3843	C2	7851	B2		
3518	A4	3850	A2	7852	A2		
3519	A5	3851	A2	7860	B3		
3520	C4	3852	A2	7861	B2		

1004 PIP MODULE



1155 C3	2404 B3	3265 C1	3997 D1	7410 B1
1201 D2	2405 B3	3270 C1	4001 D2	7755 B1
1212 D2	2409 B3	3276 C1	4002 C3	9002 D2
2103 D1	2410 B3	3276 C1	4003 B2	9003 D3
2105 D1	2413 C3	3330 B1	4004 A1	9004 D3
2118 D1	2414 B3	3331 A1	4005 C2	9007 C2
2119 D1	2415 B3	3332 A1	4006 D1	9010 B1
2120 D1	2430 B3	3333 B1	4007 D2	9011 B1
2125 C3	2432 B2	3334 B1	4010 B1	9012 B1
2155 C3	2434 B2	3335 B1	4011 B2	9013 B1
2158 D3	2438 B3	3336 B1	4012 B2	9015 B3
2160 C2	2439 A3	3337 B1	4047 A2	9016 B3
2161 C2	2440 B3	3338 A1	4048 A2	9024 A2
2162 C3	2441 B3	3339 B1	4049 A2	9025 B3
2163 C3	2442 B2	3340 B1	4100 D1	9026 B3
2171 D2	2444 C2	3341 A1	4200 D1	9027 A3
2172 D2	2446 B2	3345 C1	4201 D1	9028 A3
2176 D3	2448 A2	3353 D1	4401 B2	9029 A2
2177 D3	2449 B1	3354 D1	4402 B2	9030 A3
2180 D2	2450 B2	3380 A3	4403 B2	9031 A2
2181 D3	2451 B2	3381 A3	4404 B1	9032 A2
2185 C2	2454 B1	3382 A3	4406 A1	9033 A2
2187 D2	2455 B2	3383 A3	4407 B1	9034 A2
2189 D2	2459 B1	3384 A3	4410 B1	9035 A2
2195 C2	2466 B2	3385 A3	4411 B1	9036 A2
2197 C3	3103 D1	3386 A2	4415 C3	9037 A1
2201 D2	3104 D1	3387 A3	5118 D1	9038 A1
2202 C2	3105 D1	3388 A2	5155 C3	9039 A2
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2212 D2	3107 D2	3391 A1	5170 D2	9041 B1
2220 C2	3108 D2	3394 A2	5175 D2	9042 A2
2222 C2	3155 C3	3395 A1	5190 D2	9043 B1
2227 B2	3156 C3	3398 A2	5400 B3	9044 B1
2230 C1	3157 D3	3399 A1	5402 C3	9045 C1
2232 C1	3158 D3	3404 C3	5403 C3	9046 C3
2234 C1	3170 D2	3405 B3	5404 B3	9050 C2
2235 C1	3175 D2	3410 B3	5406 A2	P016 A1
2238 C2	3195 C2	3411 B3	5408 A2	P017 C1
2239 C1	3196 C2	3412 B3	5410 A1	P56 A2
2250 C2	3200 D2	3413 B3	6300 B2	P57 A3
2251 C1	3201 D2	3414 B3	7103 D1	
2255 C1	3202 D2	3416 B3	7105 D1	
2260 C1	3211 D2	3434 B3	7125 D3	
2270 C2	3212 D2	3435 B3	7126 D2	
2330 B1	3214 C2	3436 B2	7200 C2	
2333 B1	3220 C2	3437 B2	7210 D2	
2340 A1	3221 C3	3438 B3	7233 D1	
2345 C1	3222 D2	3440 C2	7234 D1	
2350 D1	3227 C3	3441 C2	7330 B1	
2351 D1	3228 B2	3442 B2	7333 B1	
2380 A2	3231 C1	3444 C2	7335 B1	
2381 A2	3232 C1	3446 C2	7337 B1	
2382 A2	3233 D1	3448 B2	7338 A1	
2383 A2	3234 D1	3450 A2	7350 D1	
2384 A2	3235 C1	3452 A2	7380 A2	
2385 A2	3236 D1	3454 B2	7381 A3	
2390 A1	3237 D1	3460 A1	7385 A3	
2391 A3	3238 C2	3461 A1	7387 A3	
2395 A3	3239 C2	3462 B2	7400 B3	
2397 A3	3240 C1	3463 B1	7402 B3	
2399 C1	3241 D1	3464 B1	7404 B3	
2400 A3	3242 C1	3465 A2	7406 B2	
2402 C3	3250 C1	3470 C1	7408 A2	

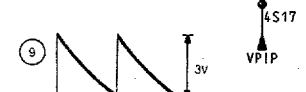
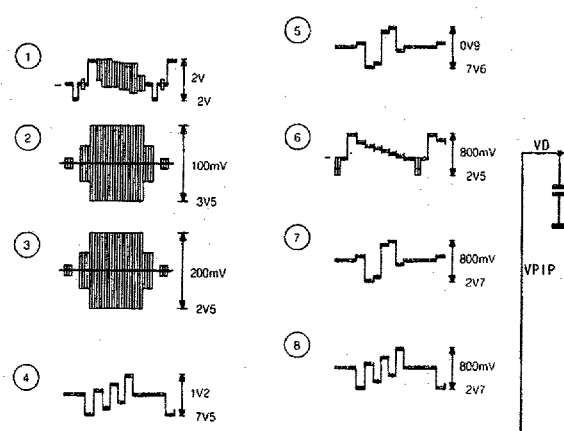
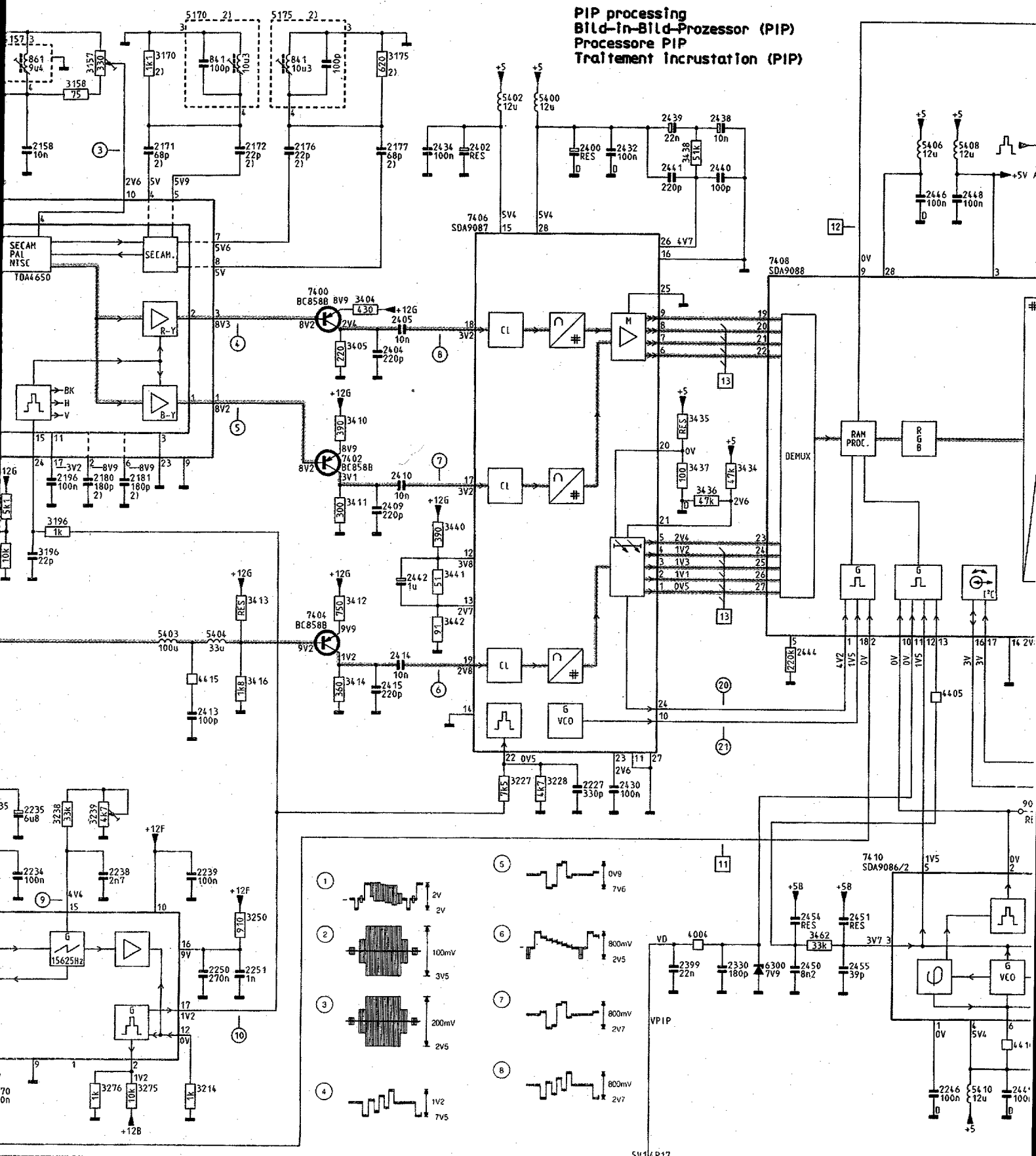
1002 MAINS FILTER MODULE



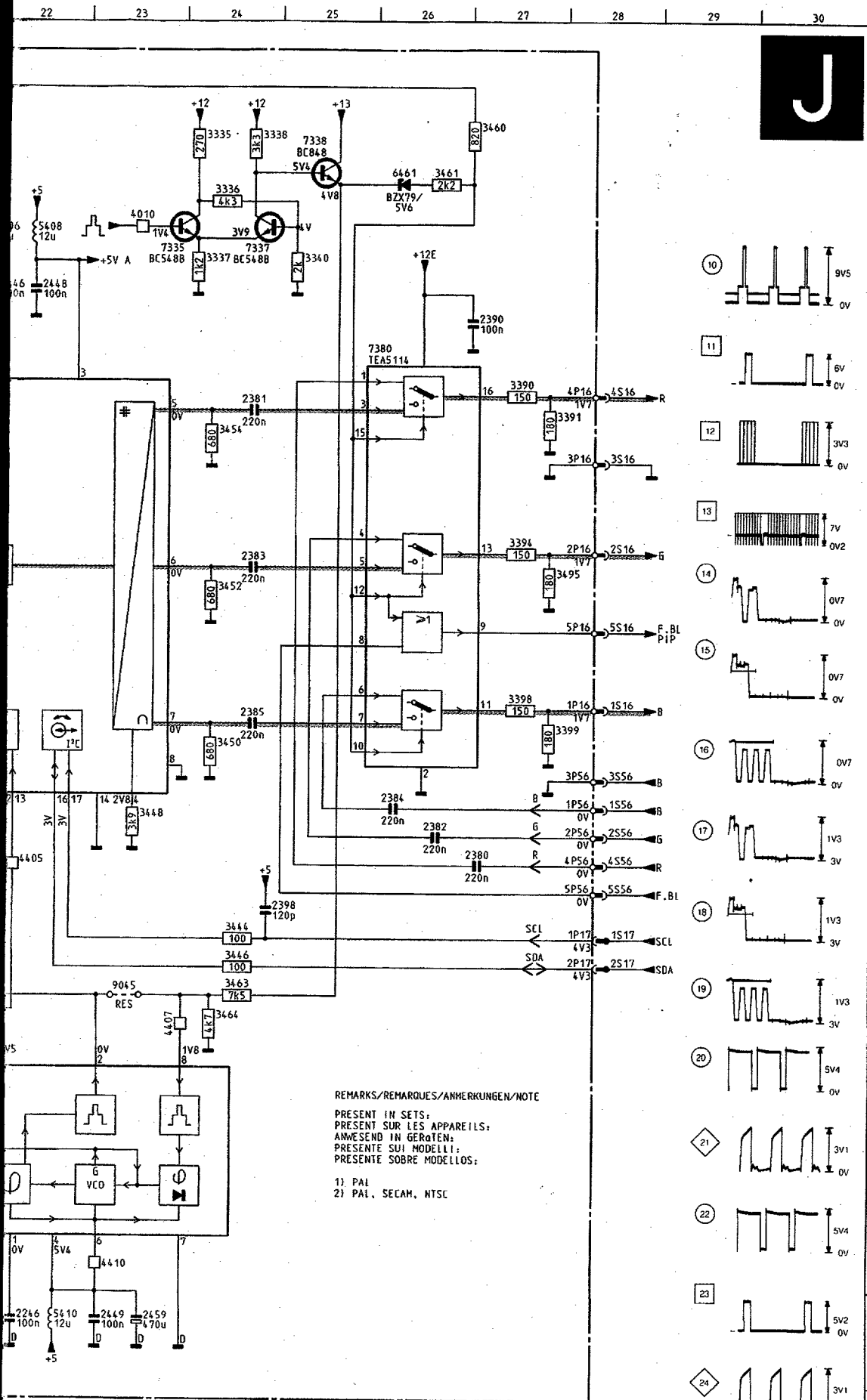




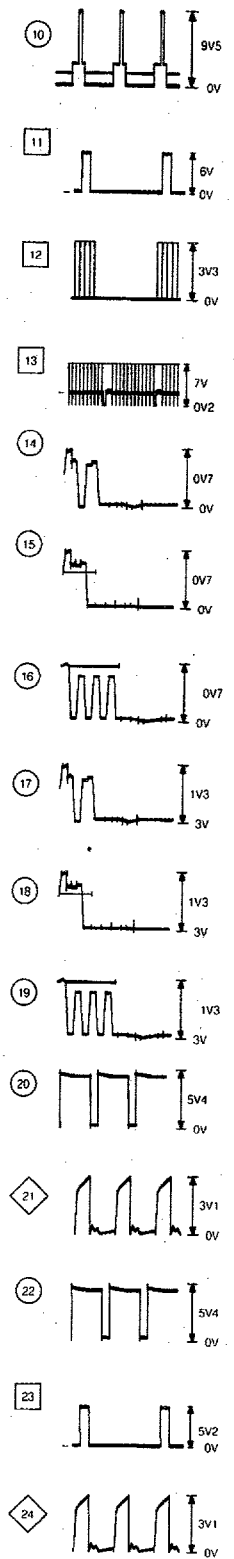
**PIP processing**  
**Bild-in-Bild-Processor (PIP)**  
**Processore PIP**  
**Traitement Incrustation (PIP)**







**J**



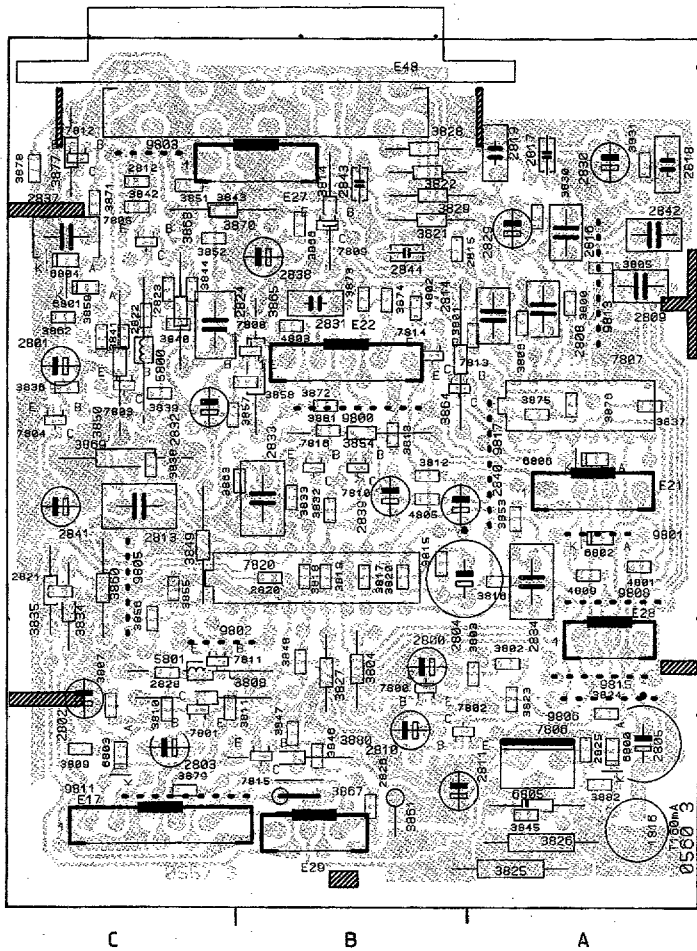
1004	A 2	3238	K11
1155	A 9	3239	K12
1201	H 9	3240	L 5
1212	J 9	3241	L 4
2103	D 4	3242	L 5
2105	D 5	3250	L 3
2118	D 6	3265	M 8
2119	D 6	3270	N10
2120	D 6	3275	N12
2125	C 9	3276	N12
2155	B 8	3335	A24
2158	C11	3336	B24
2160	C 7	3337	C24
2161	C 7	3338	A24
2162	C 8	3340	C25
2171	C12	3341	E 2
2172	C13	3345	F 2
2176	C14	3353	G 2
2177	C15	3354	G 2
2180	G11	3390	D27
2181	G12	3391	D27
2185	G 8	3394	F27
2187	G 8	3398	G27
2189	G 9	3399	H27
2196	G11	3404	D15
2201	I 7	3405	E15
2202	H 9	3410	F15
2211	J 7	3411	G15
2212	J 9	3412	H15
2220	G10	3413	H13
2222	G10	3414	I15
2227	J17	3416	I13
2230	K 8	3434	F19
2232	K10	3435	F19
2234	K11	3436	G19
2235	K11	3437	F19
2238	K12	3438	C19
2239	K13	3440	G16
2246	N22	3441	H16
2250	L13	3442	H16
2251	L13	3444	J24
2255	L 6	3446	J24
2260	N 9	3448	H23
2270	N10	3450	H24
2330	L19	3452	F24
2340	F 2	3454	D24
2345	G 2	3460	A27
2350	H 2	3461	B26
2351	H 3	3462	L20
2380	I27	3463	J24
2381	D24	3464	K24
2382	I26	3470	D 2
2383	F24	3495	F27
2384	H26	4004	L19
2385	H24	4005	I 8
2390	C27	4010	B23
2398	J24	4100	E 5
2399	L19	4200	L 4
2400	C17	4201	L 4
2402	C16	4405	I22
2404	E15	4407	K23
2405	E15	4410	H23
2409	G15	4415	I13
2410	F15	5118	D 5
2413	I13	5155	A 9
2414	I15	5157	A10
2415	I15	5170	A13
2430	J18	5175	A14
2432	C18	5190	G 8
2434	C16	5400	B17
2438	B19	5402	B16
2439	B18	5403	H12
2440	C19	5404	H13
2441	C18	5406	C21
2442	H15	5408	C22
2444	H20	5410	N22
2446	C22	6300	L20
2448	C22	6461	B26
2449	N23	7103	F 4
2450	L20	7105	E 5
2451	L21	7125	C 8
2454	L20	7126	C 8
2455	L21	7200	I 8
2459	N23	7210	J 8
3103	C 5	7233	K 4
3104	C 5	7234	L 3
3105	C 5	7335	C23
3106	E 6	7337	C24
3107	E 6	7338	B25
3108	F 6	7350	H 3
3155	A 8	7380	D25
3156	B 9	7400	D14
3157	B11	7402	F14
3158	B11	7404	H11
3170	A12	7406	C16
3175	A15	7408	D20
3196	G11	7410	K21
3196	G11	7755	L 8
3200	H 7	9045	J23
3201	H 7		
3202	H 8		
3211	J 7		
3212	J 8		
3214	N13		
3220	G10		
3221	G10		
3222	H10		
3227	J17		
3228	J17		
3231	K 9		
3232	K 9		
3233	K 3		
3234	K 4		
3235	J10		
3236	L 3		
3237	L 4		

REMARKS/REMARQUES/ANMERKUNGEN/NOTE  
 PRESENT IN SETS;  
 PRESENT SUR LES APPAREILS;  
 ANWESEND IN GERÄTEN;  
 PRESENTE SUI MODELLI;  
 PRESENTE SOBRE MODELOS;  
 1) PAL  
 2) PAL, SECAM, NTSC

CHASSIS GR2.3

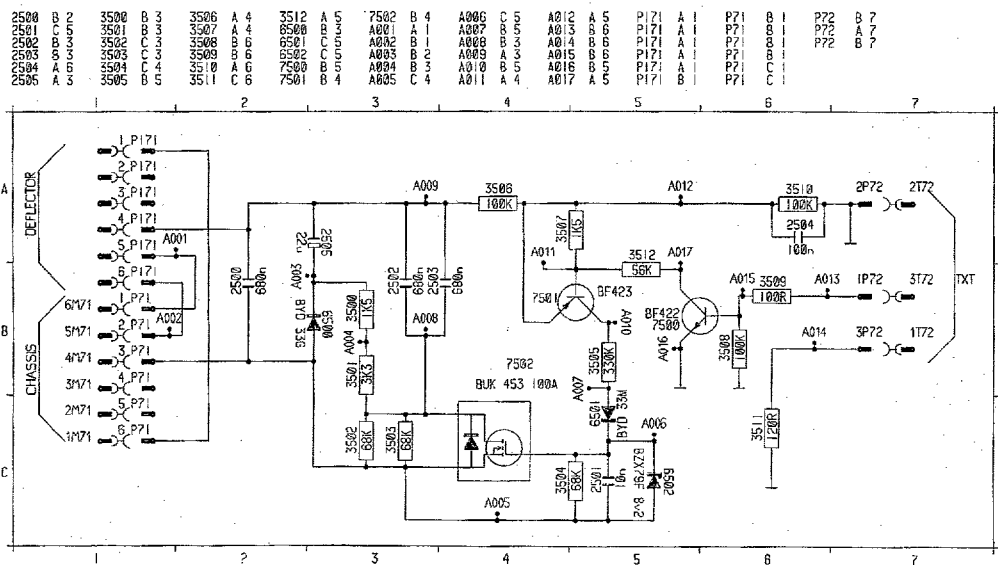
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# 1006 SECOND SCART MODULE



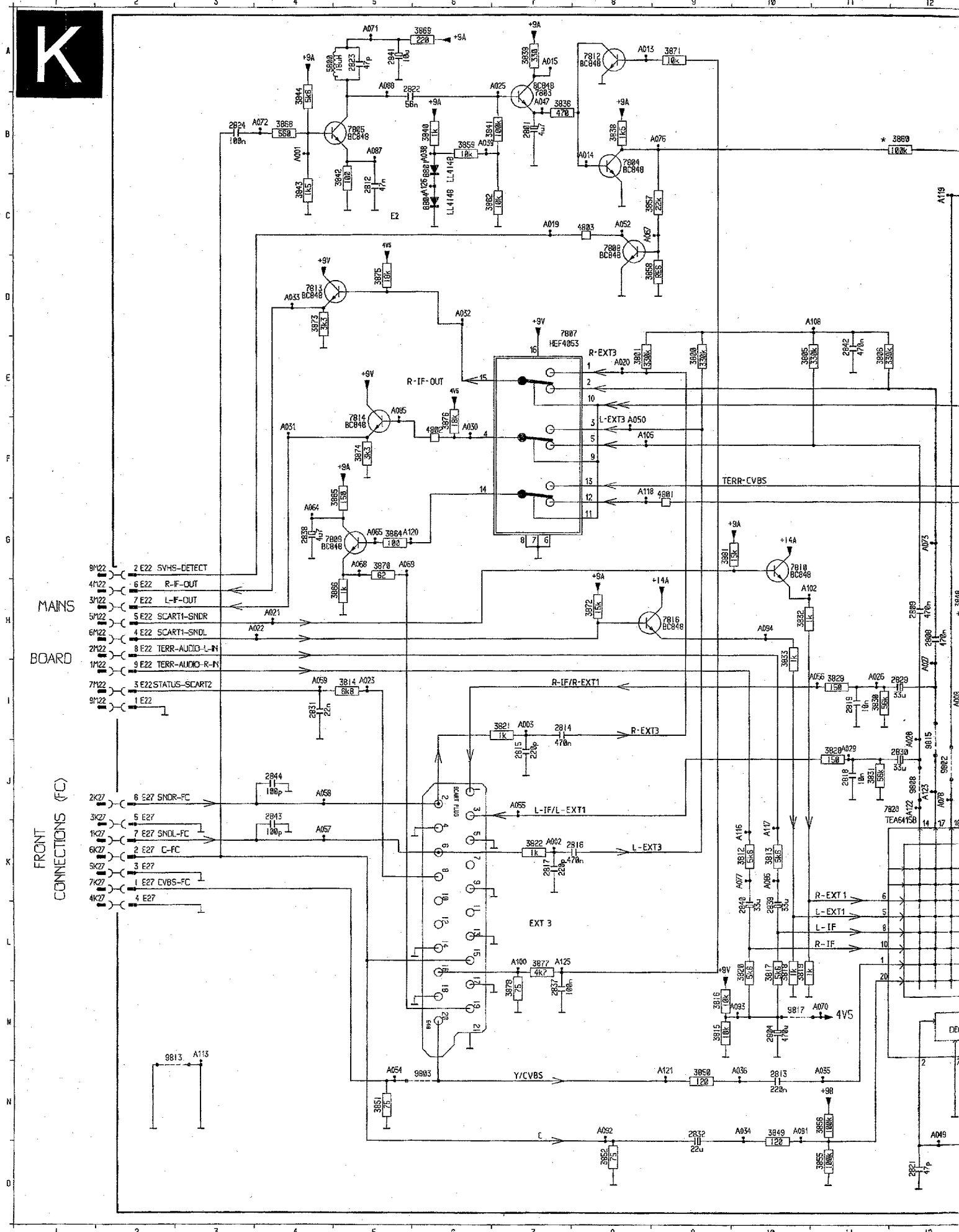
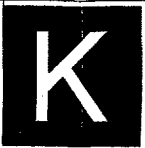
E17	C1	3810	C1	3869	C2
E21	A2	3811	B1	3870	C3
E22	B2	3812	B2	3871	C3
E27	B3	3813	B3	3872	B2
E28	A1	3814	B3	3873	B3
E29	B1	3815	B2	3874	B3
F48	B3	3816	A2	3875	A2
1816	A1	3817	B2	3876	A2
2800	B1	3818	B2	3877	C3
2801	C2	3819	B2	3878	C3
2802	C1	3820	B2	3879	C1
2803	C1	3821	B3	3880	B1
2804	A2	3822	B3	3881	B2
2805	A1	3823	A1	3882	A1
2808	A3	3824	A1	4801	A2
2809	A3	3826	A1	4802	B3
2810	B1	3827	B1	4803	B3
2811	B1	3828	B3	4805	B2
2812	C3	3829	B3	4809	A2
2813	C2	3830	A3	5800	C2
2814	A3	3831	A3	5801	C1
2815	B3	3832	B2	6800	A1
2816	A3	3833	B2	6801	C3
2817	A3	3834	C2	6802	A2
2818	A3	3835	C2	6803	C1
2819	A3	3836	C2	6804	C3
2820	B2	3837	A2	6805	A1
2821	C2	3838	C2	6806	A2
2822	C3	3839	C2	7800	B1
2823	C3	3840	C3	7801	C1
2824	C3	3841	C2	7802	A1
2825	A1	3842	C3	7803	C2
2826	B1	3843	C3	7804	C2
2828	C1	3844	C3	7805	C3
2829	A3	3845	A1	7806	A1
2830	A3	3846	B1	7807	A2
2831	B3	3847	B1	7808	B2
2832	C2	3848	B1	7809	B3
2833	B2	3849	C2	7810	B2
2834	A2	3850	C2	7811	C1
2837	C3	3851	C3	7812	C3
2838	B3	3852	C3	7813	B2
2839	B2	3853	A2	7814	B2
2840	B2	3854	B2	7815	B1
2841	C2	3855	C2	7816	B2
2842	A3	3856	C2	7820	B2
2843	B3	3857	B2	9800	B2
2844	B3	3858	B2	9801	A2
3800	A3	3859	C2	9802	C1
3801	A3	3860	C2	9803	C3
3802	A1	3861	B1	9805	C2
3803	A1	3862	C3	9806	A1
3804	B1	3863	B2	9808	A2
3805	A3	3864	B2	9811	C1
3806	A3	3865	B2	9813	A3
3807	C1	3866	B3	9815	A1
3808	C1	3867	B1	9817	A2
3809	C1	3868	C3		

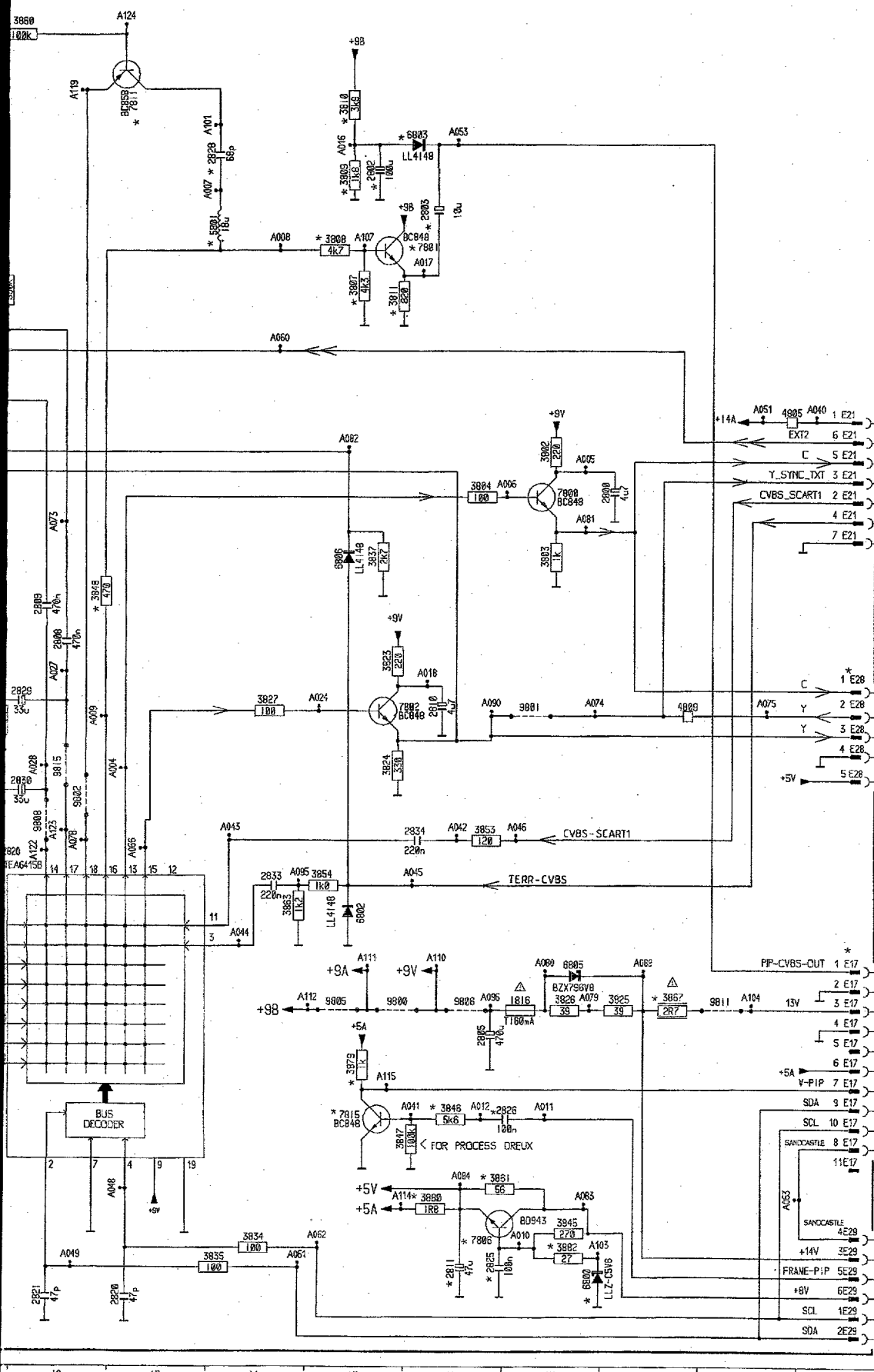
# 1105 PANORAMA MODULE



K  
 MAINE BOARD  
 FRONT CONNECTIONS (FC)

# Second scart module





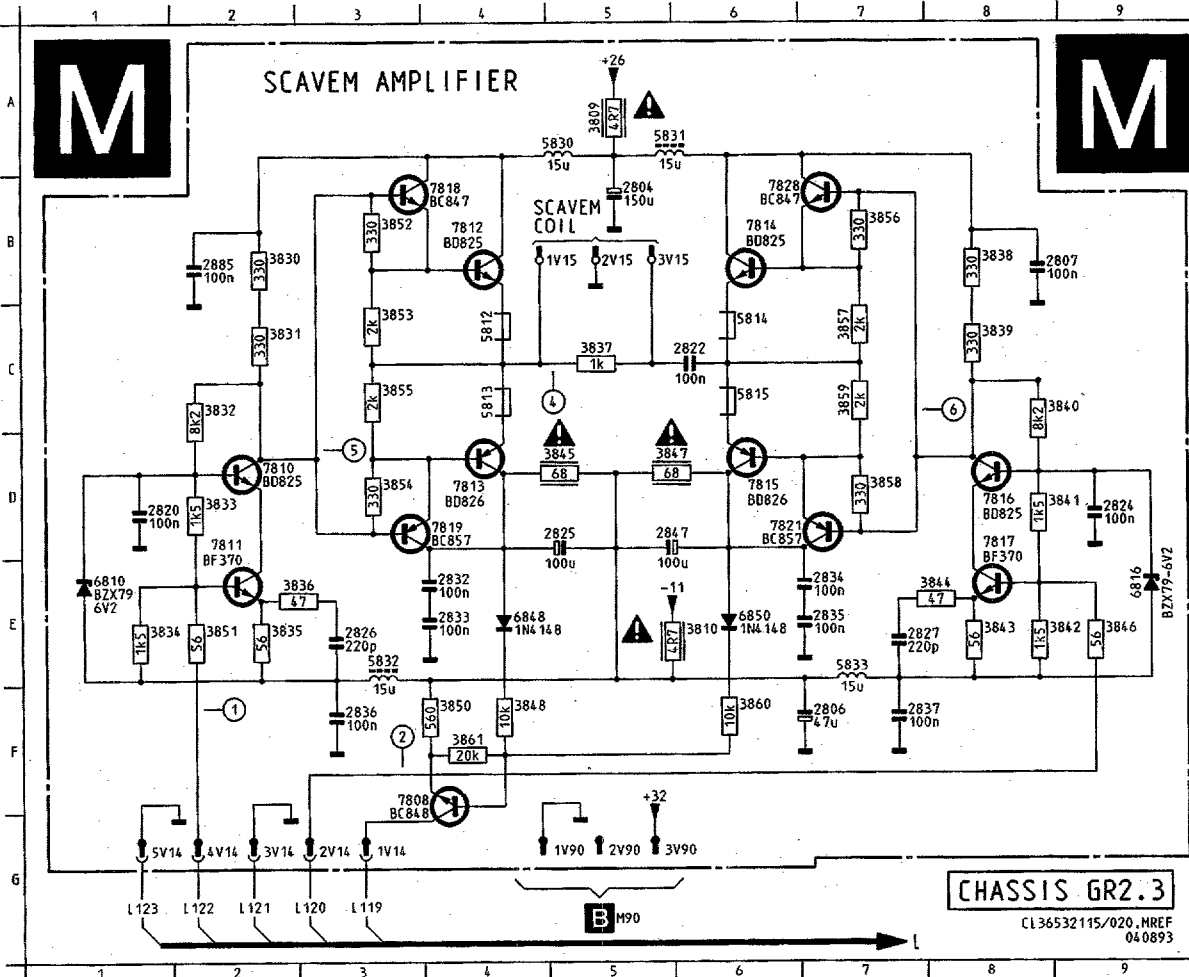
MAINS BOARD

COMB FILTER

PIP

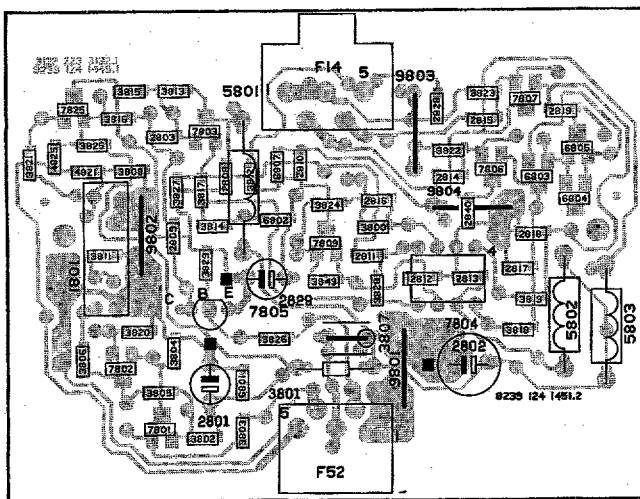
MAINS BOARD

1816	L17	9886	L16
2800	G18	9887	J12
2801	B 7	9888	J19
2802	D15	9889	M 2
2803	D46	9890	M J18
2804	M16	9891	M18
2805	L16	9892	M18
2806	H12	9893	K 7
2809	H12	9894	K 7
2810	H16	9895	K 7
2811	D16	9896	J15
2812	C 5	9897	F17
2813	M10	9898	G17
2814	J 7	9899	D14
2815	J 7	9900	D14
2816	K 8	9901	F12
2817	K 7	9902	N17
2818	J11	9903	M17
2819	I11	9904	M18
2820	O13	9905	A 8
2821	O12	9906	B 8
2822	A 5	9907	A 7
2823	A 5	9908	C15
2824	B 3	9909	D16
2825	H16	9910	F16
2826	H17	9911	C 7
2827	C14	9912	E 8
2828	H16	9913	H 4
2829	H16	9914	H 4
2830	H16	9915	I15
2831	I 4	9916	A 7
2832	N 9	9917	A 7
2833	K14	9918	A 7
2834	K16	9919	A 7
2835	M 7	9920	A 7
2836	G 4	9921	A 7
2837	L18	9922	A 7
2838	L18	9923	A 7
2839	L18	9924	A 7
2840	L18	9925	A 7
2841	A 5	9926	A 7
2842	E11	9927	A 7
2843	J 4	9928	A 7
2844	J 4	9929	A 7
2845	E 9	9930	A 7
2846	E 8	9931	A 7
2847	E 8	9932	A 7
2848	E 8	9933	A 7
2849	E 8	9934	A 7
2850	E 8	9935	A 7
2851	E 8	9936	A 7
2852	E 8	9937	A 7
2853	E 8	9938	A 7
2854	E 8	9939	A 7
2855	E 8	9940	A 7
2856	E 8	9941	A 7
2857	E 8	9942	A 7
2858	E 8	9943	A 7
2859	E 8	9944	A 7
2860	E 8	9945	A 7
2861	E 8	9946	A 7
2862	E 8	9947	A 7
2863	E 8	9948	A 7
2864	E 8	9949	A 7
2865	E 8	9950	A 7
2866	E 8	9951	A 7
2867	E 8	9952	A 7
2868	E 8	9953	A 7
2869	E 8	9954	A 7
2870	E 8	9955	A 7
2871	E 8	9956	A 7
2872	E 8	9957	A 7
2873	E 8	9958	A 7
2874	E 8	9959	A 7
2875	E 8	9960	A 7
2876	E 8	9961	A 7
2877	E 8	9962	A 7
2878	E 8	9963	A 7
2879	E 8	9964	A 7
2880	E 8	9965	A 7
2881	E 8	9966	A 7
2882	E 8	9967	A 7
2883	E 8	9968	A 7
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2887	E 8	9972	A 7
2888	E 8	9973	A 7
2889	E 8	9974	A 7
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2891	E 8	9976	A 7
2892	E 8	9977	A 7
2893	E 8	9978	A 7
2894	E 8	9979	A 7
2895	E 8	9980	A 7
2896	E 8	9981	A 7
2897	E 8	9982	A 7
2898	E 8	9983	A 7
2899	E 8	9984	A 7
2900	E 8	9985	A 7

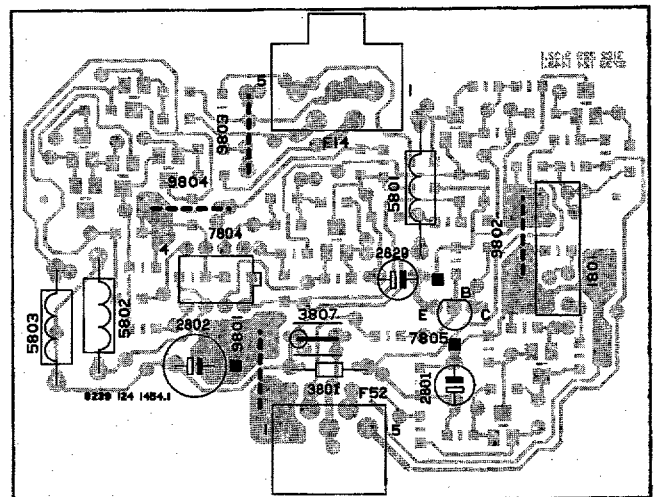


2804	B 5	5831	A 5
2806	F 7	5832	E 3
2807	B 8	5833	E 7
2820	D 1	6810	E 1
2822	C 6	6816	E 9
2824	D 9	6848	E 4
2825	D 5	6850	E 6
2826	E 3	7808	F 4
2827	E 7	7810	D 2
2832	E 4	7812	D 2
2833	E 4	7812	B 4
2834	E 7	7813	D 4
2835	E 7	7814	B 6
2836	F 3	7815	D 6
2837	F 7	7816	D 8
2847	D 5	7817	D 8
2885	B 2	7818	B 4
3809	A 5	7819	D 4
3810	E 6	7821	D 6
3830	B 2	7828	B 6
3831	C 2		
3832	C 2		
3833	D 2		
3834	E 1		
3835	E 2		
3836	E 3		
3837	C 5		
3838	B 8		
3839	C 8		
3840	C 8		
3841	D 8		
3842	E 8		
3843	E 8		
3844	E 8		
3845	D 5		
3846	E 9		
3847	D 5		
3848	F 4		
3850	F 4		
3851	E 2		
3852	B 3		
3853	C 3		
3854	D 3		
3855	C 3		
3856	B 7		
3857	C 7		
3858	D 7		
3859	C 7		
3860	F 6		
3861	F 4		
5812	C 4		
5813	C 4		
5814	C 6		
5815	C 6		
5830	A 5		

SCAVEM FILTER

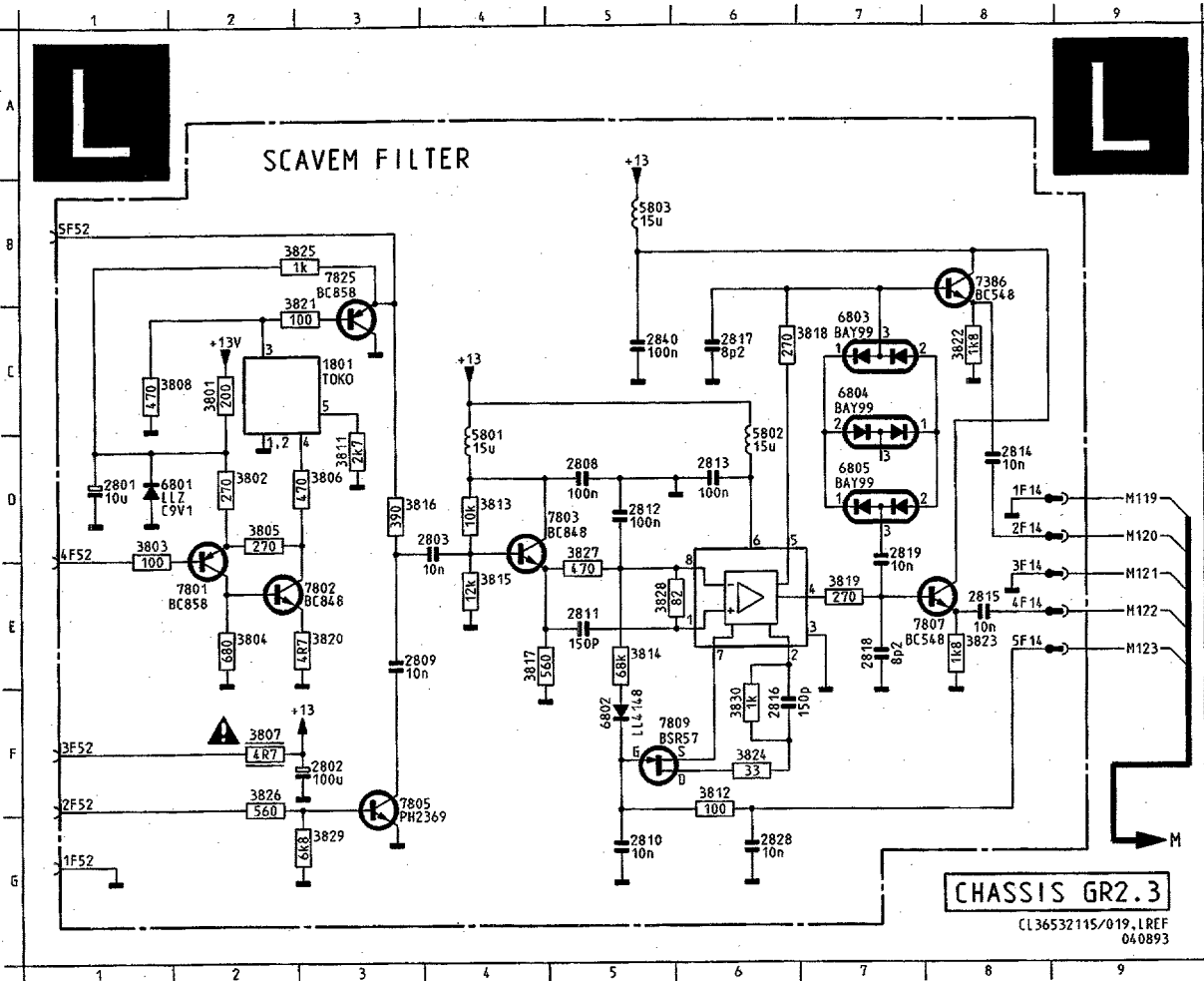


SCAVEM FILTER



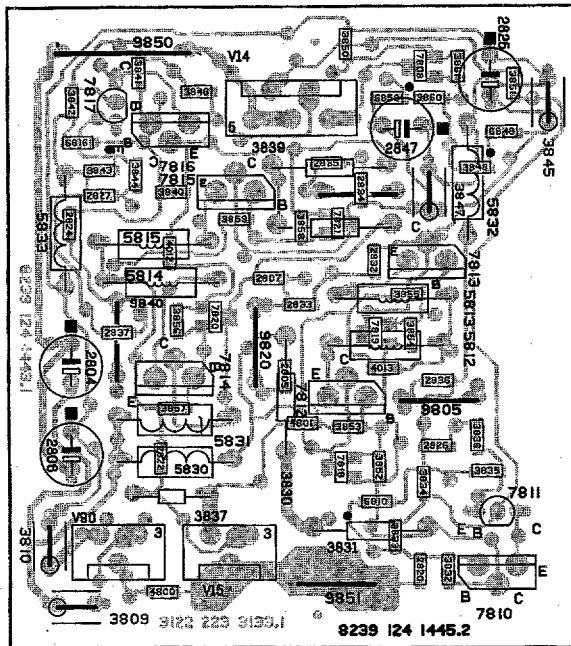
# SCAVEM

5 5831 A 5  
 7 5832 E 3  
 8 5833 E 7  
 1 6810 E 1  
 6 6816 E 9  
 9 6848 E 4  
 5 6850 E 6  
 3 7808 F 4  
 7 7810 D 2  
 4 7811 D 2  
 4 7812 B 4  
 7 7813 D 4  
 7 7814 B 6  
 3 7815 D 6  
 7 7816 D 8  
 5 7817 D 8  
 2 7818 B 4  
 5 7819 D 4  
 6 7821 D 6  
 2 7828 B 6

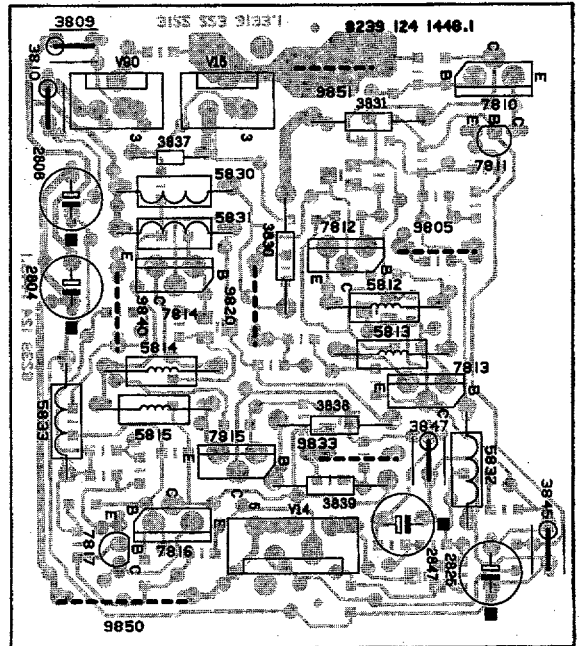


1801 C 3  
 2801 D 1  
 2802 F 3  
 2803 D 4  
 2808 D 5  
 2809 E 3  
 2810 G 5  
 2811 E 5  
 2812 D 5  
 2813 D 6  
 2814 D 8  
 2815 E 8  
 2816 F 6  
 2817 C 6  
 2818 E 7  
 2819 E 7  
 2828 G 6  
 2840 C 5  
 3801 C 2  
 3802 D 2  
 3803 D 1  
 3804 E 2  
 3805 D 2  
 3806 D 3  
 3807 F 2  
 3808 C 1  
 3811 D 3  
 3812 F 4  
 3813 D 4  
 3814 E 4  
 3815 E 5  
 3816 D 3  
 3817 E 4  
 3818 C 6  
 3819 E 7  
 3820 E 3  
 3821 C 8  
 3822 C 3  
 3823 E 8  
 3824 F 6  
 3825 B 3  
 3826 F 2  
 3827 D 5  
 3828 E 5  
 3829 G 3  
 3830 F 6  
 5801 D 4  
 5802 D 6  
 5803 B 5  
 6801 F 5  
 6802 C 7  
 6803 C 7  
 6804 C 7  
 6805 D 7  
 7386 B 8

## SCAVEM AMPLIFIER



## SCAVEM AMPLIFIER



## Setting conditions

All electrical settings should be made under the following conditions:

- \* supply voltage: 220 - 240 V  $\pm$  10%;  
50 Hz  $\pm$  5%
- \* warming-up time  $\approx$  10 minutes
- \* the voltages and oscillograms have been measured with regard to tuner earth.
- \* measuring probe:  $R_i > 10 \text{ M}\Omega$ ;  $C_i < 2.5 \text{ pF}$ .

## 1. Settings on the carrier board

### 1.1 +148V/+95V supply voltage

Connect a voltmeter over C2631. Using R3635, set the supply voltage to +148V  $\pm$  0.5V for 25" and 28" units or to 95V  $\pm$  0.5V for 21" units.

### 1.2 Focusing

This is set using the focusing potentiometer (on the top of the line output transformer).

### 1.3 Vg2 setting

Connect a pattern generator and supply a blanking frame signal (black picture). Switch the unit to the service default mode (see section 9).

Connect an oscilloscope to the emitters of transistors 7304 and 7364 on the picture tube module. Set the oscilloscope to frame frequency. Measure the DC voltage level of the measuring pulses (see Fig. 7.2). Using the Vg2 potentiometer on the line output transformer, set the measuring pulse with the lowest DC voltage level to:

- \* +145 5V for 25" and 28" blackline sets (screened high tension cable)
- \* +135 5V for 28"/25" 16/9 sets
- \* +145 5V for 21"/25"/28" 110 degree sets
- \* +95 5V for 21" sets (90 degrees)

### 1.4 Horizontal synchronization

Connect pin 5-IC7470 to pin 9-IC7470. Supply an aerial signal and tune the set. Adjust potentiometer 3457 until the picture is straight. Remove the interconnection.

### 1.5 Horizontal centring

Set using potentiometer 3461.

### 1.6 Vertical centring

Set using potentiometer 3516.

### 1.7 Picture height

Set using potentiometer 3504.

### 1.8 Chroma bandpass filter

#### a. Setting for PAL/SECAM sets (TDA4650)

Connect a signal generator (e.g. PM 5326) to pin 20 of the euroconnector (EXT1) and set its frequency to 4.286 MHz/0.2 Vpp. Switch the unit to EXT1. Connect pin 27-IC7306 to pin 13-IC7306 (+12V). Connect an oscilloscope to pin 15-IC7306. Set 5301 to maximum amplitude. Remove the interconnection.

#### b. Setting for PAL sets (TDA4510)

Connect a signal generator (e.g. PM 5326) to pin 20 of the euroconnector (EXT1) and set its frequency to 4.43 MHz. Connect the unit to EXT1. Connect pin 18-IC7306 with pin 7-IC7306 (+8V). Connect an oscilloscope to pin 9-IC7306. (TDA4567) Adjust 5301 to maximum amplitude. Remove the through connection.

### 1.9 Chroma auxiliary oscillator

Connect a pattern generator and supply a PAL colour bar pattern. Connect pin 11-IC7305 (TDA4510) or pin 17-IC7306 (TDA4650) to earth. Set 2313 so that the colour on the screen has practically stopped. Remove the interconnection.

### 1.10 White balance

Connect a pattern generator and select a white picture. Switch on the service menu (see section 9) and select "WHITE BALANCE". Set the value of "Green" to 51, and the Value of "Blue" to 46. In most cases no further adjustments are required.

### 1.11 Peak white limit

Switch in the service menu (see chapter 9) and select "WHITE BALANCE". Adjust "WH/LIM" to a value of:

- 43 for 16/9 sets
- 53 for non-blackline units
- 53 for 21" units.

### 1.12 Cut-off points of the picture tube

Connect a pattern generator and select a black picture. Switch on the service menu (see section 9) and select "CUT OFF". Set the value of "Red" to 56, and for "Green" to 16, and for "Blue" to 15. In most cases no further adjustments are required.

### 1.13 Options

Switch in the service menu and select "OPTIONS". Switch the options "ON" and "OFF" according to whether the following options are present:

- "PIP" on a PIP set
- "TELETEXT" on a teletext set
- "MULTI SYSTEM" for multisystem sets
- "UHF ONLY" for a tuner which can only be tuned to the UHF band
- NICAM for stereo sets that can also receive NICAM.

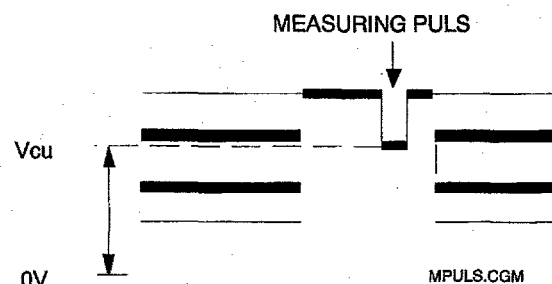
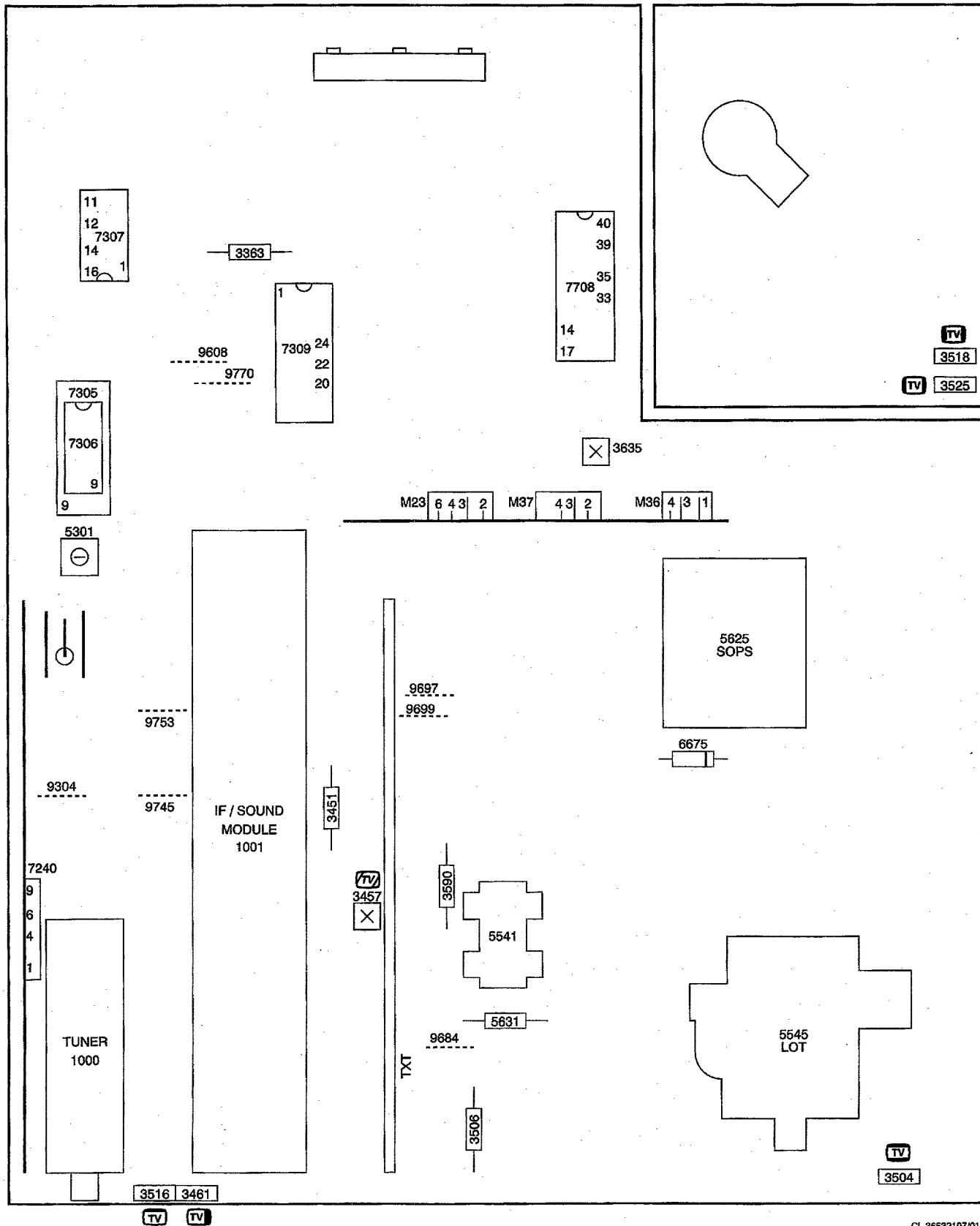


Fig. 7.2

MONO CARRIER

CRT MODULE 4/3



CL 36532107/017  
060783

Fig. 7.1



## 2. MF/sound module adjustment

### 2.1 The M.F. sound modulator

#### a. For multi-system France (BGLI).

##### Stereo + mono:

- Connect a pattern generator (e.g PM 5518) to the tuner and adjust the generator to SECAM L with a frequency of 47.25 MHz (SECAM L'). Adjust L 5080 to minimum picture distortion.
- Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz.

##### Stereo:

- Connect an oscilloscope to pin 17 of IC 7100 (TDA 3856). Using L 5104 adjust the amplitude of the signal to its minimum value.

#### b. For Europe (BG) stereo and East-European multi system (BGDK) stereo.

- Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz.
- Connect an oscilloscope to pin 15 of IC 7101 (TDA 3857). Using L 5104 adjust the amplitude of the signal to its minimum value.

#### c. For NICAM (BGI) stereo.

- Adjust the pattern generator to PAL BG with frequency of 475.25 MHz.
- Connect an oscilloscope to pin 15 of IC 7100 (TDA 3857). Using L 5103 adjust the amplitude of the signal to its minimum value.

### 2.2 The FM sound modulator

#### a. For multi system France (BGLI) + Europe + mono UK.

Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz with stereo L= 3kHz and R= 1kHz.

##### - 5.5 MHz

Test with an oscilloscope on pin 7 of IC7101 (pin 9 of IC7100). Using L5105 adjust to maximum amplitude.

##### - 5.74 MHz (for stereo only).

Test with an oscilloscope on pin 6 of IC7101 (pin 8 of IC7100). Using L 5103 adjust the amplitude to its maximum value.

#### b. For NICAM

##### - NICAM I.

Adjust the pattern generator to PAL I with a frequency of 475.25 MHz. Select analogue sound.

Connect an oscilloscope to pin 7 of IC 7100 (TDA 3857). Using L 5102 adjust the amplitude to its maximum value.

##### - NICAM BG.

Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz. Select analogue stereo sound with L= 3kHz and R= 1kHz.

##### \* 5.5 MHz.

Connect an oscilloscope to pin 7 of IC 7100 (TDA 3857). Using L 5102 adjust the amplitude to its maximum value.

##### \* 5.74 MHz.

Connect an oscilloscope to pin 6 of IC 7100 (TDA 3857). Using L 5101 adjust the amplitude to its maximum value.

STEREO IF/SOUND MODULE

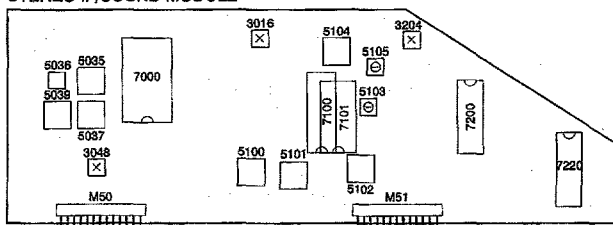


Fig. 7.3

### 2.3 AFC and picture demodulation:

Adjust the pattern generator to the system given in the table below (PAL BGI and SECAM BGDK to 475.25 MHz, SECAM L' to 47.25 MHz).

- Connect an oscilloscope to pin 3 of connector G 29 and using L 5035 or L 5037 (see table) adjust the amplitude to its minimum value.
- Connect an oscilloscope to pin 11 of connector G 29 and using L 5036 or L 5038 (see table) adjust to 2V DC.

### 2.4 RF-AGC

If the picture from a strong local transmitter is distorted, adjust 3016 until the picture is not distorted.

### 2.5 MF-AGC (Multi French (BGLI) system sets).

Connect a pattern generator and select a SECAM-L colour bar signal with a frequency of 475.25 MHz. Connect an oscilloscope to pin 3 of connector M 50. Using 3048 adjust the amplitude of the video signal to 1.8 Vpp.

### 2.6 Stereo matrix (stereo and NICAM units)

Connect a pattern generator and supply a PAL BG signal with stereo sound. Select only the right-hand channel sound. Set the balance of the unit completely to the left. Set 3204 (stereo units) or 3200 (NICAM PAL BG units) to minimum sound reproduction.

NICAM IF/SOUND MODULE

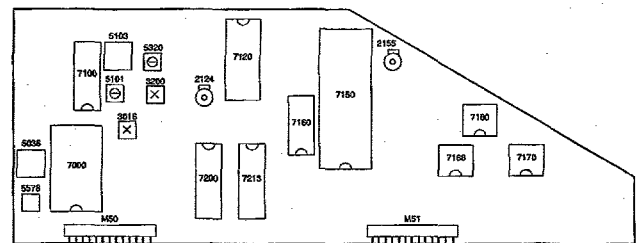


Fig. 7.4

### 3. Adjustments on the PIP module (Fig. 7.5)

#### Adjustment conditions

Before making each adjustment, ensure that a PIP picture with the prescribed signal is visible on the screen and that the unit has reached its operating temperature (after  $\approx 10$  min.).

#### 3.1 Horizontal synchronization

Do not supply an aerial or generator signal. Connect pin 28-IC7125 to pin 13-IC7125 if TDA4554 is present (PAL selection). Connect pin 5-IC7755 to earth. Measure the frequency at pin 17-IC7755 and using 3239 set it to  $15.625 \text{ Hz} \pm 25 \text{ Hz}$ . Remove the interconnection.

#### 3.2 Chroma bandpass filter

##### a. Adjustment for PIP modules with TDA4554

Connect a signal generator (e.g. PM 5326) to pin 10 of P17 and set its frequency to  $4.286 \text{ MHz}/0.2 \text{ Vpp}$ . Connect pin 27-IC7125 to 13-IC7125. Connect an oscilloscope to pin 15-IC7125. Set 5118 to maximum amplitude. Remove the interconnection.

##### b. Adjustment for PIP modules with TDA4510

Connect a signal generator (e.g. PM 5326) to pin 10 of P17 and set its frequency to  $4.43 \text{ MHz}/0.2 \text{ Vpp}$ . Connect an oscilloscope to pin 9-IC7126. Set 5118 to maximum amplitude.

#### 3.3 PAL chroma auxiliary oscillator

Connect a pattern generator and supply a PAL colour bar pattern. Connect pin 17-IC7125 (TDA4554) or pin 11-IC7126 (TDA4510) to earth. Set 2202 so that the colour of the PIP picture is practically still. Remove the interconnection.

#### 3.4 NTSC chroma auxiliary oscillator for PIP modules with TDA4554

Connect a pattern generator and supply an NTSC M colour bar pattern. Connect pin 17-IC7125 to earth. Set 2202 so that the colour of the PIP picture is practically still. Remove the interconnection.

#### 3.5 Delay line

Connect a pattern generator and supply a PAL colour bar signal. Connect the X-input of the oscilloscope to pin 1-IC7125 (TDA4554) or pin 1-IC7126 (TDA4510). Connect the Y-input of the oscilloscope to pin 3-IC7125 (TDA4554) or pin 2-IC7126 (TDA4510). Set the oscilloscope to the X-Y position. Set 5155 and 5157 so that the vectors lie in one line (points which are furthest from the origin). Set the pattern generator to the "DEM" mode. Set R3157 so that the vectors lie on top of one another in the origin.

#### 3.6 SECAM identification for PIP modules with TDA4554

Connect a pattern generator and supply a SECAM colour bar signal. Connect pin 27-IC7125 to pin 13-IC7125. Connect an oscilloscope to pin 21-IC7125. Set 5190 to minimum DC level. Remove the interconnection.

#### 3.7 SECAM demodulators for PIP modules with TDA4554

Connect a pattern generator and supply a SECAM signal without contents (black). Connect pin 27-IC7125 to pin 13-IC7125. Connect an oscilloscope to pin 1-IC7125. Using 5175, set the DC level during the scan equal to the DC level during the flyback. In the same way set 5170, but now measure at pin 3-IC7125. Remove the interconnection.

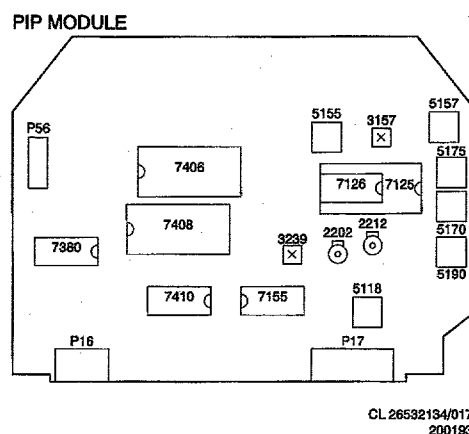


Fig. 7.5

### 4. Adjustments on the picture tube module

#### 4.1 Picture width 4/3

Is adjusted with potentiometer 3525

#### 4.2 East/West correction 4/3

Is adjusted with potentiometer 3521. This adjustment is only applicable to 25" and 28" sets.

#### 4.3 16/9 adjustment

Select "16/9 adjust" in the service menu.

This information will only appear on the screen if "16/9 tube" status indicates "on" ("off" for a 4/3 set) by using the "menu +/-" key.

The following options can now be adjusted using the "menu +/-" key:

- adjust "height" to fill picture height;
- adjust "width" to fill picture width;
- adjust "Parab 4/3" to correct the east/west deflection during a 4/3 broadcast;
- adjust "Max zoom 4/3" to fill the screen completely during a 4/3 broadcast;
- adjust "Parab 16/9" to correct the east/west deflection during a 16/9 broadcast.

## 8. List of error messages and repair tips

Error indication	Description	Possible fault
OSD: ERR PIP	I <sup>2</sup> C fault PIP module	* +5 on PIP module * IC7406
OSD: ERR TXT	I <sup>2</sup> C fault TXT module	* +5 on teletext module * IC7800
OSD: ERR NICAM	I <sup>2</sup> C fault IC7160 (NICAM units)	* +5 on IF/sound module * IC7160, C2160, C2161, C2221, C2222 * IC7213
OSD: ERR 8415	I <sup>2</sup> C fault IC7200 (stereo and NICAM units)	* +14 on IF/Sound module * IC7200 * IC7220
OSD: ERR 8425	I <sup>2</sup> C fault IC7215 (NICAM units) I <sup>2</sup> C fault IC7220 (Stereo units)	* IC7213/IC7220
OSD: ERR EEPROM	I <sup>2</sup> C fault IC7710	* IC7710
OSD: ERR TUNER	I <sup>2</sup> C fault tuner	* Tuner * TS7003
OSD: ERR CHROMA 1	I <sup>2</sup> C fault IC7309	* IC7309 (+8)
OSD: ERR CHROMA 2	I <sup>2</sup> C fault IC7308	* IC7309/IC7308
Flashing LED	Internal fault in $\mu$ P	* IC7708
OSD: ERR BUS	I <sup>2</sup> C-bus blocked	* C2714/C2715
OSD: ERR 8444	I <sup>2</sup> C error IC7509 (16/9 sets)	* IC7509
OSD: ERR 5246	I <sup>2</sup> C fault IC7800	* IC7800
OSD: ERR 6415	I <sup>2</sup> C fault IC7820	* IC7820

### 1. Service-Default-Mode

The GR2.3 is equipped with a service default mode. The service default mode is a fixed defined condition in which the television can be set.

#### 1.1 Mode definition

The definition of the fixed mode in the service default mode is as follows:

- all sound and picture adjustments are set in the middle position (except volume, which is set at low and zoom set at zero) in 4/3 mode.
- The set is tuned to 475.25 MHz
- system:
  - \* PAL BG or PAL I for single system sets (MULTI-SYSTEM "OFF")
  - \* SECAM L/DK for multi-system sets (MULTI-SYSTEM "ON")
  - \* SECAM DK for sets for Eastern Europe (MULTI-SYSTEM "ON").
  - \* PAL BG for sets for Eastern Europe (MULTI-SYSTEM "OFF").

#### 1.2 Service-default-mode

The service default mode is switched on by briefly short-circuiting the pins M33 and M34 (SERVICE) behind the INSTALL key on the carrier panel when switching the unit on with the mains switch. In order to indicate that the unit is in the service default mode, an "SER" appears on the screen.

The service default mode can only be switched off by switching the unit to standby (⏻). The set is switched off and then on again using the mains switch or mains plug, the service default mode remains switched on. Searching for transmitter frequencies begins following the simultaneous pressing of both "install" keys on the remote control. Press both keys to store the frequency concerned. When the service default mode is operational the following functions are switched off:

- automatic video switch-off
- automatic cut-off circuit.

The set can be controlled normally.

#### 1.3 Service menu

- Service menu

The service menu is activated by simultaneously pressing the "menu" and "+" keys on the local operating panel. The service menu now appears on the screen. The service menu offers the facility to set various options and make a number of picture tube settings. The various components in the service menu are selected using the coloured keys on the remote control. The adjustment of the various components is performed with the aid of the "menu +/-" keys on the remote control. The adjusted values and options are immediately stored in the EEPROM when the service menu is exited via "menu on" or "mainsknob" button. With the "menu" key you return to the "default service mode".

#### Remarks 1:

If a multi-system set is nevertheless to be used with the PAL BG system in the service default mode, the option "MULTI" can be temporarily switched off ("OFF").

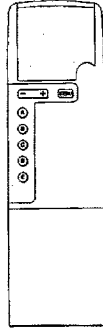
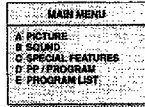
#### Remarks 2:

If a multi-system set for Eastern Europe is nevertheless to be used with the PAL BG system in the service default mode, the option "MULTI" can be temporarily switched off ("OFF").

## Selecting the main menu

The **MAIN MENU** gives you access to the special adjustments and functions of your TV set.

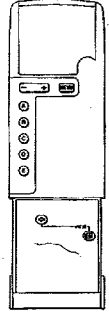
- Press the **MENU** key on the remote control.
  - MAIN MENU** appears on the screen as well as the channel number.
- The coloured **A, B, C, D** and **E** keys give access to the various choices. The **- +** key enables you to make adjustments. The **MENU** key enables you to quit or call up the menu.



## Selecting the installation menu

This menu enables you to tune the TV channels.

- Press keys **⇨** and **⇩** on the remote control at the same time.
- The **INSTALLATION** menu appears.



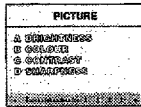
## Adjusting the picture

After having called up the **MAIN MENU** (see above):

- Press the red key **A**.
- The **PICTURE** menu appears on the screen.

### Brightness, colour, contrast, sharpness

- Press the coloured key (**A, B, C** or **D**) corresponding to the adjustment you wish to make.
  - A horizontal ladder appears on the bottom of the screen.
  - Press the **- +** key to adjust.
  - The cursor moves according to your adjustment.
  - Press one of the coloured keys to switch from one adjustment to another.
- To leave the **PICTURE** menu, press the **MENU** key on the remote control.



## Selecting the menu language

With this TV set, you may choose between several languages for the menus to be called up on your screen. You may choose **ENGLISH** or one of the other languages offered.

Starting from the **INSTALLATION** menu : (to select, press keys **⇨** and **⇩** at the same time)

- Press the red key **A**.
- The **LANGUAGE** menu appears.
- Press the coloured key **A, B, C** or **D** corresponding to your language choice.
- The menus appear in the language you have chosen and the **INSTALLATION** menu reappears.
- If none of the languages offered suits you :
  - Press the white key **E**.
  - A second menu appears.
  - Select your language or press the blue key **D** to return to the previous menu.
  - From now on, all the menus will be displayed in the chosen language.



## Searching for the TV channels

The installation menu offers two possibilities of searching for the TV channels : **manual store** or **automatic store**.

## PP for each programme

TV channels are not always transmitted with the same level of sound and picture. At the reception, you can have difference of quality between the channels. **PP / PROGRAM** allows you to correct this differences. This function stores brightness, colour and volume adjustments specific to each program.

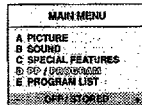
If you wish to store identical picture and sound adjustments for all the channels, use first the **PERS. PREFERENCE** function on the **INSTALLATION** menu (p. 6). Then use **PP / PROGRAM** to correct differences between the channels.

First do your picture and sound adjustments for the chosen channel.

Then, starting from the **MAIN MENU** : (to select it, press the **MENU** key on the remote control)

- Press the blue key **D**.
- OFF** appears on the bottom of the screen.
- Press the **- +** key to store the adjustments of the channel on the screen.
- STORED** appears. The brightness, colour and volume adjustments are stored for that channel.

From now on, if you upset your TV set, you can find these adjustments by pressing the green key **PP** on the remote control.



## Manual store

When following the instructions of the **MANUAL STORE** menu, proceeding **step by step**, in the following order.

Starting from the **INSTALLATION** menu : (to select it, press keys **⇨** and **⇩** on the remote control)

- Press the green key **B**.
- The **MANUAL STORE** menu appears.



### step a Search

- Press the red key **A**.
- The TV set searches for a channel. The frequency counter appears in colour on the bottom of the screen. It runs through all the frequencies. The search ends as soon as a channel is found. The picture becomes stable as well as the frequency number of this channel which appears in white. If you wish to store this channel, **go on to step b**.

If you do not want to store it :

- Press the red key **A** again.
- The TV set begins its search again.

If no picture is found, refer to the tips chapter (p. 23).

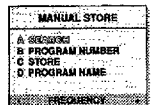
### Fine tuning :

If the reception of a TV channel does not satisfy you, you may adjust its frequency by using the **- +** key on the remote control.

### Direct selection of a transmitter :

If you know the frequency of a channel you wish to receive, you can directly enter its frequency with the keys numbered **0** to **9** on the remote control (eg. for 64 MHz, enter 064).

If you only know the channel, refer to the table of TV frequency on the last page of this handbook.



### step b Numbering the channel

- Press the green key **B**.
- A display zone appears on the bottom of the screen.
- Press the **- P +** key until the number you want appears or enter the number of the channel with the keys numbered **0** to **9**.

To obtain a channel with two figures, you should add the second figure before the hyphen disappears.



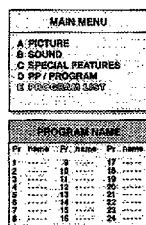
## List of programmes

This function allows you to consult the list of programme names and numbers which you have stored in the **INSTALLATION** menu.

Starting from the **MAIN MENU** : (to select it, press the **MENU** key on the remote control)

- Press the white key **E**.
- The programme list appears on the screen.

To leave the main menu, press the **MENU** key on the remote control twice.



## Automatic store

Your TV set will, by itself, search for all the TV channels available in your area. You will just need to sort the channels and give them a programme number.

### step a Search

Starting from the **INSTALLATION** menu: (to select, press keys **⇐** and **⇒** on the remote control)

- Press the yellow key **C**.
- ▷ **OFF** appears on the bottom of the screen.
- Press the **- +** key.
- ▷ The TV set starts searching. It runs through all the frequency ranges and stores the channels it comes across. It stores them starting with number 59 then 58, 57 etc... until all the channels are found. The search takes a few minutes.



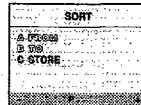
### step b Numbering the channels

When the search is completed, the **SORT** menu appears automatically (this menu is also accessible from the **INSTALLATION** menu).

- Press the red key **A**.
- ▷ A display zone appears on the bottom of the screen. Use the **- P +** key or the keys numbered **0** to **9** to consult the channels found and stored starting from number 59, 58 ... (enter, 59,58,...).

When the channel whose number you want to change is on the screen: (eg. you wish to change the number of channel 58 to channel 1)

- Press the green key **B**.
- ▷ A display zone appears at the bottom of the screen.
- Enter the new channel number (1) with the keys numbered from **0** to **9** or with the **- P +** key.
- ▷ In our example, channel 58 becomes channel 1. Go on to **step c**.

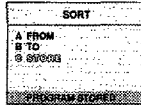


### step c Storing TV channels

- Press the yellow key **C**.
- ▷ **PROGRAM STORED** appears on the bottom of the screen, the new number of the channel is stored.

Repeat steps **b** and **c** as many times as there are channel numbers to be changed. If you want to enter the programme names, go on to **step d** (previous page).

To quit the **INSTALLATION** menu, press the **MENU** key twice.



## Personal preferences

Personal preferences enables you to store your own picture and sound adjustments. Before the using this function, you must make the adjustments to the television, then:

- Starting from the **INSTALLATION** menu, press the white key **E**.
- ▷ **OFF** appears on the bottom of the screen.
- Press the **- +** key to store your picture and sound adjustments.
- ▷ **STORED** appears. From now on, to find these adjustments, press the green key **PP** on the remote control.

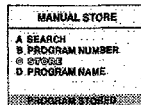


### step c Storing TV channels

- Press the yellow key **C**.
- ▷ **PROGRAM STORED** appears at the bottom of the screen.

To search for other channels:

repeat steps **a, b, c**.



### step d Entering the programme name

You may give a 5 character name to your TV's first 24 channels (e.g.: BBC1, CNN...). This function offers you the possibility to displays the name and the number of the channel on the screen.

Starting from the **MANUAL STORE** menu:

- Press the blue key **D**.
- ▷ The **PROGRAM NAME** menu appears. The television's list of programmes appears and you should enter the name of your channel. The arrow helps you select the desired character.

Use red key **A** to move the arrow to the left and green key **B** to move it to the right.

▷ The selected character appears on the line, opposite the programme number.

When you have selected the right character:

- Press the yellow key **C** to go on to the next one.

Choose another character.

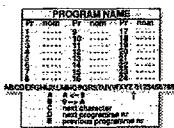
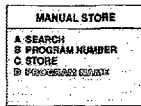
To enter a space, place the arrow between **Z** and **0**.

If you have entered the wrong character, return to it with the yellow key **C** to correct it.

- Press the blue key **D** to enter the following programme name, on the white key **E** for the name of the previous programme.

When you have finished entering the channel names:

- Press the **MENU** key to leave the **PROGRAM NAME** menu.
- ▷ The **MANUAL STORE** menu reappears.



## When searching for the channels is completed

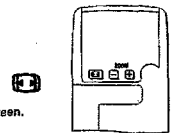
- Press the **MENU** key twice to leave the **INSTALLATION** menu. Now go on to the operation chapter (p. 7).

## 16/9 functions

### Movie expand, Panorama

This function allows to adjust the sizes of the picture to the size of your screen.

- Press key **3**.
- ▷ The picture is enlarged horizontally (movie expand).
- ⋮ This function is only useful for 16/9 broadcastings.



- Press key **4** twice.
- ▷ The picture is enlarged horizontally (panorama). Only the borders of the picture are expanded.
- ⋮ This function is only useful for 4/3 broadcastings.



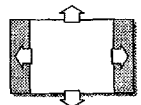
- Press again **3**.
- ▷ The original format (4/3) is back.

### Movie zoom

**- ZOOM +**

This function allows you to zoom a conventional picture (4/3) whilst maintaining the picture proportions.

- Press the **ZOOM +** key.
- ▷ Each time you press this key, the picture is zoomed.
- Press the **ZOOM -** key.
- ▷ Each time you press, the picture is reduced until its normal size is reached.
- ⋮ This function is useful for movies broadcasted in 4/3 cinemascopie format.



Reception of 16/9 picture :

Reception of conventional picture (4/3) :



↓ **3** (x1)

↓ **4** (x2)

↓ **ZOOM +**



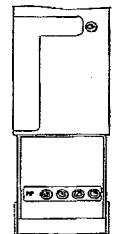
Movie expand

Panorama

Movie zoom

## PIP-Picture in the Picture (option)

With the PIP system, picture in picture, you can create a small picture in the main screen of your TV set. You can thus watch a channel on your TV set at the same time as a programme from other connected equipment (video recorder, video camera...). If you want to watch 2 TV channels at the same time, you need to connect to one of the EXT socket, a video recorder or other equipment with a channel receiver (satellite receiver, ...). The sound of the small picture is not reproduced.



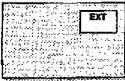
### Switching the PIP function on and off

- Press the **PIP** key.
- ▷ The PIP screen appears in the same picture as the main screen. The name of the channel appears briefly on the screen.
- Press **PIP** again to switch the PIP picture off.



### Choice of the PIP picture

- Press the **EXT** key several times to select the peripheral equipment (video recorder, video camera, ...).
- ▷ **EXT** (blue) or **EXT** (orange) appears and the corresponding picture appears in the PIP screen.



⋮ To connect the required equipment to the EXT entry, refer to the peripherals chapter (p. 18).

### Exchanging the pictures

- Press **PIP** once.
- ▷ The exchange is made between the main picture and the PIP screen.
- Press **PIP** once more to return to the TV programme in the main screen.



### Freezing the picture

- Press **PIP**.
- ▷ The PIP screen freezes.
- Press **PIP** once more to make the picture normal.



### Moving the PIP screen

- Press **PIP**.
- ▷ Every time you press this key, the window moves to a different position in the screen.



⋮ To alter the size of the PIP screen, refer to the SPECIAL FEATURES menu (p. 13).



Table with columns: Percentage, Part Number, Description. Includes entries like 3362 4822 116 52172 4k7 2% 0.5.

Table with columns: Percentage, Part Number, Description. Includes entries like 3542 4822 050 11002 1k 1% 0.4.

Table with columns: Percentage, Part Number, Description. Includes entries like 3850 4822 116 52189 30Ω 5% 0.5.

1002 Mains filter [D]
Various
4822 265 30389 2P YELLOW MALE



# Spare parts lists/Ersatzteilliste/Liste des pièces

-C43  
148  
-C30  
148  
/85-C16  
D33D  
148  
/85-C5V1  
D33D  
148  
P061  
P061  
229F-600  
D74G  
D74B  
D74B  
D33D  
Z-C36  
/85-C43  
D74B  
Z-F5V1  
Z-F2V4  
T33  
817  
A1521/N4  
848C  
848C  
858C  
858C  
848C  
848C  
848  
858  
837  
820  
A4510/V8  
A4657  
A4661/V2  
A4671/V1  
A4680/V6  
848  
848  
848  
858  
856  
846B  
A2579B/N2  
848  
848C  
337-40  
D1266P  
234  
337-40  
327-40  
337-40  
508AF  
858  
T12AF  
848  
848  
848  
848  
848  
P47P1637-  
R  
P47P1637-  
ST/EUR  
24C04B1  
848  
848  
[D]  
YELLOW  
LE  
FEMALE  
AP  
CKET  
INS FILTER  
nF 10% 1K  
nF 10% 1K

3601 4822 116 40211 RES.P.T.C.  
3603 4822 117 10492 10M 5% 1  
3605 4822 052 10102 1k 5% 0.33  
3607 4822 050 23901 390Ω 1% 0.6  
3608 4822 116 21213 387-473V 0.6

5600 4822 157 63073 COIL,CHOKE  
5605 4822 157 53995 COIL

6602 4822 130 31933 1N5061  
6603 4822 130 31933 1N5061  
6604 4822 130 31933 1N5061  
6605 4822 130 31933 1N5061  
6609 4822 130 34281 BZX79-F15  
6610 4822 130 34281 BZX79-F15

**1050 SEP mains [A/D]**

Connectors

4822 264 40207 3P MALE FOR  
BTB-WTB  
CONNECTOR  
4822 265 20514 2P MALE  
4822 265 30389 3P BLACK  
4822 265 40596 2P MALE  
4822 267 40655 3P FEMALE  
GREY  
4822 267 40696 3P SOCKET  
SWITCH  
4822 276 12597 BRACKET  
4822 403 70926 IR-RECEIVER  
LED  
1050 4822 432 11086 SEP. MAINS  
module

2713 4822 124 41584 100 microF 20%  
10V

3600 4822 053 21915 9M1 5% 0.5W  
3729 4822 116 52232 910R 5% 0.5W  
3730 4822 116 52213 180R 5% 0.5W

6707 4822 209 72895 LED

**1008 Comb filter [C]**

Various

4822 265 31137 BTB-6W  
4822 267 40624 5p socket  
4822 267 41114 5P RFK5-White  
1008 4822 212 30984 COMBFILTER  
module

2309 4822 122 31971 10pF 2% 63V  
2400 4822 124 80701 47µF 20% 6.3V  
2401 4822 122 33342 33nF 10% 63V  
2402 4822 124 80701 47µF 20% 6.3V  
2403 4822 122 33342 33nF 10% 63V  
2404 4822 124 80701 47µF 20% 6.3V  
2405 4822 122 33342 33nF 10% 63V  
2406 4822 124 80248 10µF 20% 16V  
2407 4822 122 33342 33nF 10% 63V  
2408 4822 124 80248 10µF 20% 16V

2409 4822 122 33342 33nF 10% 63V  
2410 4822 124 80248 10µF 20% 16V  
2411 4822 122 33342 33nF 10% 63V  
2412 4822 122 33342 33nF 10% 63V  
2413 4822 124 80248 10µF 20% 16V  
2416 4822 122 33216 270pF 5% 50V  
2417 4822 122 33342 33nF 10% 63V  
2418 4822 124 80248 10µF 20% 16V  
2419 4822 122 33342 33nF 10% 63V  
2420▲ 4822 122 33177 10nF 20% 50V  
2421▲ 4822 122 33177 10nF 20% 50V  
2422▲ 4822 122 33177 10nF 20% 50V  
2423▲ 4822 122 33177 10nF 20% 50V  
2424 4822 122 33342 33nF 10% 63V

2425 5322 122 32452 47pF 5% 63V  
2426 4822 122 33342 33nF 10% 63V  
2430 4822 124 80248 10µF 20% 16V  
2431 5322 122 32658 22pF 5% 50V  
2432 4822 122 33342 33nF 10% 63V

3402 4822 051 20103 10k 5% 0.1W  
3403 4822 051 20101 100Ω 5% 0.1W  
3404 4822 051 20301 300Ω 5% 0.1W  
3406 4822 051 20105 1M 5% 0.1W  
3407 4822 051 20103 10k 5% 0.1W  
3410 4822 051 20103 10k 5% 0.1W  
3411 4822 051 20222 2k2 5% 0.1W  
3412 4822 051 20391 390Ω 5% 0.1W  
3413 4822 051 20223 22k 5% 0.1W  
3414 4822 051 20122 1k2 5% 0.1W

3416 4822 051 20681 680Ω 5% 0.1W  
3418 4822 051 10102 1k 2% 0.25W  
3419 4822 051 20181 180Ω 5% 0.1W  
3420 4822 051 20473 47k 5% 0.1W  
3421 4822 051 20473 47k 5% 0.1W  
3422 4822 051 10102 1k 2% 0.25W  
3423 4822 051 20471 470Ω 5% 0.1W  
3424 4822 051 20151 150Ω 5% 0.1W  
3425 4822 051 20471 150Ω 5% 0.1W  
3426 4822 051 20122 1k2 5% 0.1W

3427 4822 051 20479 47Ω 5% 0.1W  
3428 4822 051 20821 820Ω 5% 0.1W  
3429 4822 051 20479 47Ω 5% 0.1W  
3430 4822 051 20561 560Ω 5% 0.1W  
3431 4822 051 20331 330Ω 5% 0.1W  
3432 4822 051 20223 22k 5% 0.1W  
3433 4822 051 20221 220Ω 5% 0.1W  
3434 4822 051 20221 220Ω 5% 0.1W  
3435 4822 051 10102 1k 2% 0.25W  
3436 4822 051 20339 33Ω 5% 0.1W

3438 4822 051 20821 820Ω 5% 0.1W  
3439 4822 051 20431 430Ω 5% 0.1W  
3440 4822 051 20101 100Ω 5% 0.1W  
3443 4822 051 20008 0Ω JUMP. (0805)  
3444 4822 051 20008 0Ω JUMP. (0805)  
3445 4822 051 20008 0Ω JUMP. (0805)  
3446 4822 051 20681 680Ω 5% 0.1W  
3447 4822 051 20162 16k 5% 0.1W  
3448 4822 051 20681 680Ω 5% 0.1W  
3449 4822 051 20151 150Ω 5% 0.1W

5400 4822 152 20677 10µH  
5401 4822 152 20677 10µH  
5402 4822 152 20677 10µH  
5403 4822 157 63065 0.68µH  
5404 4822 152 20677 10µH  
5405 4822 152 20677 10µH

6420 4822 130 80446 LL4148

7400 4822 209 32587 MC141625A  
7401 5322 130 42136 BC848C  
7402 4822 130 61207 BC848  
7403 4822 130 61207 BC848  
7404 4822 130 61207 BC848  
7405 5322 130 42012 BC858  
7410 5322 130 42012 BC858  
7411 4822 130 61207 BC848  
7420 5322 130 42136 BC848C  
7421 5322 130 42136 BC848C

7422 4822 130 42513 BC858C  
7423 4822 130 42513 BC858C  
7430 5322 209 14481 HEF4053BT

**1060 Seperate control [D]**

Connectors

4822 256 92101 FRONT  
CONTROLS UNIT  
4822 265 31135 5P RFK5-BK  
4822 267 31014 BUSHING  
4822 267 50621 7P WHITE

Various

4822 276 30422 3-SWITCH  
1060 4822 212 30992 CTRL. (NO A/M)  
1060 4822 212 30994 FR.CONTROL

1060 4822 212 30993 FR/ SEP SOUND

2200 4822 122 31211 100pF 10% 500V  
2203 4822 122 31211 100pF 10% 500V  
2233 4822 121 41856 22nF 5% 250V  
2234 4822 121 41856 22nF 5% 250V  
2704 4822 121 43526 47nF 5% 100V

3200▲ 4822 050 21002 1k 1% 0.6W  
3202▲ 4822 050 21002 1k 1% 0.6W  
3248▲ 4822 116 52215 220Ω 5%  
0.5W  
3247▲ 4822 116 52215 220Ω 5%  
0.5W  
3248▲ 4822 116 52215 220Ω 5%  
0.5W  
3249▲ 4822 116 52215 220Ω 5%  
0.5W  
3775 4822 116 52175 100Ω 5%  
0.5W  
3776 4822 116 52289 5k8 5% 0.5W  
3779 4822 116 52233 10k 5% 0.5W

**1007 SOPS control mod. [D]**

Various

4822 265 31137 BTB-6W  
4822 265 31138 BTB-4W  
1007 4822 212 30983 110 degree  
MODULE  
1007 4822 212 31007 90 degree  
MODULE

2611 5322 124 41299 68µF 20% 25V  
2629 4822 122 31784 4.7nF 10% 50V  
2636 4822 122 31644 2.2nF 10% 63V  
2637 4822 122 31772 47pF 2% 63V  
2646 4822 124 80465 15µF 10% 25V  
2647 4822 122 31784 4.7nF 10% 50V  
2649 4822 122 33496 100nF 10% 63V  
2650 4822 122 33496 100nF 10% 63V  
2651 4822 122 33496 100nF 10% 63V  
2661▲ 4822 124 40433 47µF 20% 25V

2662 4822 122 32142 270pF 2% 63V  
2663 4822 122 31765 100pF 2% 63V  
2663 4822 122 31839 82pF 2% 63V  
2664 5322 124 41379 2.2µF 20% 50V  
2665 4822 122 32153 1.8nF 10% 63V  
2670 4822 122 31766 120pF 2% 63V  
2671 4822 121 42408 220nF 5% 63V  
2674 4822 122 31644 2.2nF 10% 63V

3623 4822 050 21604 160k 1% 0.6W  
3624 4822 050 21604 160k 1% 0.6W  
3625▲ 4822 053 21564 560k 5% 0.5W  
3628 4822 051 10334 330k 2% 0.25W  
3629 4822 051 10682 6k8 2% 0.25W  
3636 4822 051 10224 220k 2% 0.25W  
3647 4822 050 23303 33k 1% 0.6W  
3647 4822 050 23603 36k 1% 0.6W  
3648 4822 051 10273 27k 2% 0.25W  
3649▲ 4822 050 23309 33Ω 1% 0.6W

3658▲ 4822 052 10688 6Ω 5% 0.33W  
3660 4822 051 10101 100Ω 2% 0.25W  
3661 4822 051 10361 360Ω 2% 0.25W  
3662 4822 051 10221 220Ω 2% 0.25W  
3663 4822 051 10562 5k6 2% 0.25W  
3664 4822 051 10272 2k7 2% 0.25W  
3665▲ 4822 051 10103 10k 2% 0.25W  
3666 4822 051 10102 1k 2% 0.25W  
3667 4822 051 10361 360Ω 2% 0.25W  
3670 4822 051 10303 30k 2% 0.25W

3671 4822 051 10102 1k 2% 0.25W  
3672▲ 4822 051 10103 10k 2% 0.25W  
3673 4822 051 54642 4k64 1% 0.125W  
3674 4822 051 51052 1k05 1% 0.125W  
3674 4822 051 59101 910Ω 1% 0.125W  
3676 4822 051 10682 6k8 2% 0.25W  
3680 4822 051 10102 1k 2% 0.25W  
3680 4822 051 10562 5k6 2% 0.25W  
3681 4822 051 10109 10Ω 2% 0.25W

Jumper

4xxx 4822 051 10008 0Ω 5% 0.25W

5661 4822 157 52279 33µH 10%

6580 4822 130 80791 BYV28-200/20  
6580 4822 130 82512 BYV29F-400  
6646 4822 130 42488 BYD33D  
6648 4822 130 34488 BZX79-F12  
6648▲ 4822 136 61219 BZX79-B10  
6649 4822 130 80446 LL4148  
6660▲ 4822 130 30621 1N4148  
6662 4822 130 80905 LLZ-F5V1  
6663 4822 130 34281 BZX79-F15  
6664 4822 130 31983 BAT85

6665 4822 130 80883 LLZ-C4V7  
6669 4822 130 80446 LL4148  
6670 4822 130 20272 E0102AA

7600 4822 209 63735 TDA8385/N2  
7614▲ 4822 208 30992 CNR50  
7661 5322 130 44921 BD943  
7663 4822 130 42513 BC858C  
7671 4822 130 61207 BC848







Spare parts lists/Ersatzteilliste/Liste des piéces

1003 TXT module [I]

Table of spare parts for 1003 TXT module, including part numbers, descriptions, and quantities.

1004 PIP module [J]

Table of spare parts for 1004 PIP module, including part numbers, descriptions, and quantities.

Jumper

Jumper part: 4xxx 4822 051 10008 0Ω 5% 0.25W

Table of capacitor and coil parts for the Jumper section.

Resistor symbols

Table of resistor parts, including various values and tolerances.

IC symbols

Table of integrated circuit parts with part numbers and descriptions.

Table of additional IC parts.

Table of IC parts for the 1003 TXT module.

Table of IC parts for the 1003 TXT module.

Table of IC parts for the 1003 TXT module.

Resistor symbols

Table of resistor parts, including various values and tolerances.

Table of resistor parts, including various values and tolerances.

Table of resistor parts, including various values and tolerances.

Table of resistor parts, including various values and tolerances.

Table of resistor parts, including various values and tolerances.

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Table of resistor parts, including various values and tolerances.

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.

Jumper

Jumper part: 4xxx 4822 051 10008 0Ω 5% 0.25W

Table of IC parts.

Table of IC parts.

IC symbols

Table of integrated circuit parts.

Table of integrated circuit parts.

1006 Second Scart [K]

Connectors

Table of connector parts.

Various

Table of various parts.

Resistor symbols

Table of resistor parts.

Table of resistor parts.

Table of resistor parts.



## 1006 Second Scart [K]

2840	4822 124 41509	33µF 20% 35V
2841	4822 124 40435	10µF 20% 50V
2842	4822 121 51252	470nF 5% 63V
2843	4822 122 31211	100pF 10% 500V
2844	4822 122 31211	100pF 10% 500V



3800	4822 051 10334	330k 2% 0.25W
3801	4822 051 10334	330k 2% 0.25W
3802	4822 051 10221	220Ω 2% 0.25W
3803	4822 051 10102	1k 2% 0.25W
3804	4822 116 52175	100Ω 5% 0.5W
3805	4822 051 10334	330k 2% 0.25W
3806	4822 051 10334	330k 2% 0.25W
3807	4822 051 10432	4k3 2% 0.25W
3808▲	4822 116 52283	4k7 5% 0.5W
3809	4822 051 10182	1k8 2% 0.25W

3810	4822 051 10392	3k9 2% 0.25W
3811	4822 051 10821	820Ω 2% 0.25W
3812	4822 051 10562	5k6 2% 0.25W
3813	4822 051 10562	5k6 2% 0.25W
3814	4822 116 52296	6k8 5% 0.5W
3815▲	4822 051 10103	10k 2% 0.25W
3816▲	4822 051 10103	10k 2% 0.25W
3817	4822 051 10562	5k6 2% 0.25W
3818	4822 051 10122	1k2 2% 0.25W
3819	4822 051 10122	1k2 2% 0.25W

3820	4822 051 10562	5k6 2% 0.25W
3821	4822 050 11002	1k 1% 0.4W
3822	4822 050 11002	1k 1% 0.4W
3823	4822 051 10221	220Ω 2% 0.25W
3824	4822 051 10331	330Ω 2% 0.25W
3825	4822 050 23909	39Ω 1% 0.6W
3826	4822 050 23909	39Ω 1% 0.6W
3827	4822 116 52175	100Ω 5% 0.5W
3828	4822 116 52211	150Ω 5% 0.5W
3829	4822 116 52211	150Ω 5% 0.5W

3830	4822 051 10563	56k 2% 0.25W
3831	4822 051 10563	56k 2% 0.25W
3832	4822 051 10102	1k 2% 0.25W
3833	4822 051 10102	1k 2% 0.25W
3834	4822 116 52175	100Ω 5% 0.5W
3835	4822 116 52175	100Ω 5% 0.5W
3836	4822 051 10471	470Ω 2% 0.25W
3837	4822 051 10272	2k7 2% 0.25W
3838	4822 051 10152	1k5 2% 0.25W
3839	4822 051 10331	330Ω 2% 0.25W

3840	4822 051 10102	1k 2% 0.25W
3841	4822 051 10104	100k 2% 0.25W
3842	4822 051 10101	100Ω 2% 0.25W
3843	4822 051 10152	1k5 2% 0.25W
3844	4822 051 10562	5k6 2% 0.25W
3845	4822 051 10271	270Ω 2% 0.25W
3846	4822 051 10562	5k6 2% 0.25W
3847	4822 051 10102	1k 2% 0.25W
3847	4822 051 10104	100k 2% 0.25W
3848	4822 051 10471	470Ω 2% 0.25W

3849	4822 050 11201	120Ω 1% 0.4W
3850	4822 050 11201	120Ω 1% 0.4W
3851	4822 116 80747	75Ω 5% 0.125W
3852	4822 116 80747	75Ω 5% 0.125W
3853	4822 051 51201	120Ω 1% 0.125W
3854	4822 050 11002	1k 1% 0.4W
3855	4822 051 10104	100k 2% 0.25W
3856	4822 051 10104	100k 2% 0.25W
3857	4822 051 10223	22k 2% 0.25W
3859▲	4822 051 10103	10k 2% 0.25W

3860	4822 116 52234	100k 5% 0.5W
3861	4822 052 10629	62Ω 5% 0.33W
3862▲	4822 051 10103	10k 2% 0.25W
3863	4822 051 10122	1k2 2% 0.25W
3864	4822 116 52175	100Ω 5% 0.5W
3865▲	4822 050 21501	150Ω 1% 0.6W
3866	4822 051 10102	1k 2% 0.25W
3867▲	4822 052 10278	2Ω 7% 0.33W
3868	4822 116 52226	560Ω 5% 0.5W
3869▲	4822 053 10221	220Ω 5% 1W

3870	4822 116 52189	30Ω 5% 0.5W
3871▲	4822 051 10103	10k 2% 0.25W
3872	4822 051 10333	33k 2% 0.25W
3873	4822 051 10332	3k3 2% 0.25W
3874	4822 051 10332	3k3 2% 0.25W
3875	4822 051 20183	18k 5% 0.1W
3876	4822 051 20183	18k 5% 0.1W
3877	4822 116 80175	4k7 5% 0.5W
3878	4822 116 80747	75Ω 5% 0.125W
3879	4822 051 10102	1k 2% 0.25W

3880	4822 116 81039	1Ω 8 5% 0.5W
3881	4822 051 10333	33k 2% 0.25W
3882	4822 051 10279	27Ω 2% 0.25W

## Jumper

4xxx 4822 051 10008 0Ω 5% 0.25W



5800 4822 153 20251 18µH 10%  
5801 4822 153 20251 18µH 10%



6800 4822 130 80954 LLZ-C5V6  
6801 4822 130 80446 LL4148  
6802 4822 130 80446 LL4148  
6803 4822 130 80446 LL4148  
6804 4822 130 80446 LL4148  
6805 4822 130 34278 BZX79-C6V8  
6806 4822 130 80446 LL4148



7800 4822 130 61207 BC848  
7801 4822 130 61207 BC848  
7802 4822 130 61207 BC848  
7803 4822 130 61207 BC848  
7804 4822 130 61207 BC848  
7805 4822 130 61207 BC848  
7806 5322 130 44921 BD943  
7807 5322 209 10576 4053B  
7808 4822 130 61207 BC848  
7809 4822 130 61207 BC848

7810 4822 130 61207 BC848  
7811 5322 130 42012 BC858  
7812 5322 130 42136 BC848C  
7813 4822 130 61207 BC848  
7814 4822 130 61207 BC848  
7815 4822 130 61207 BC848  
7816 4822 130 61207 BC848  
7820 4822 209 31145 TEA6415B

## 1100 SCAVEM filter [L]

## Various

4822 265 30275 5P grey  
4822 267 40794 3P FEMALE  
4822 403 70584 FOR PTP  
4822 404 31319 bracket  
1100 4822 212 30021 SCAVEM FILTER  
module

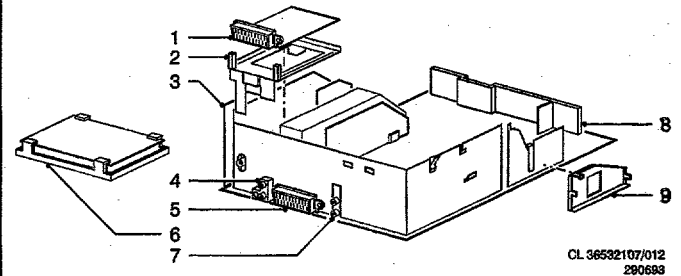
## 1102 SCAVEM amplifier

## [M]

## Various

4822 290 40291 3P FEMALE RED  
4822 290 40284 3P FEMALE  
GREEN  
4822 265 30499 3P FEMALE  
BLACK  
4822 404 31321 BRACKET  
1102 4822 212 30019 SCAVEM  
MODULE

## Mechanical parts



CL 36582107/012  
290693

1 4822 267 60366 ZIP Euroconnector  
2 4822 404 31322 2nd Scart holder  
3 4822 256 91984 PIP holder  
4 4822 255 70279 SVHS connector  
5 4822 267 60367 ZIP Euroconnector  
6 4822 403 70926 Sep. mains holder  
7 4822 267 30631 2-Fold cinch  
8 Not used  
9 4822 404 31317 Mainsfilter bracket