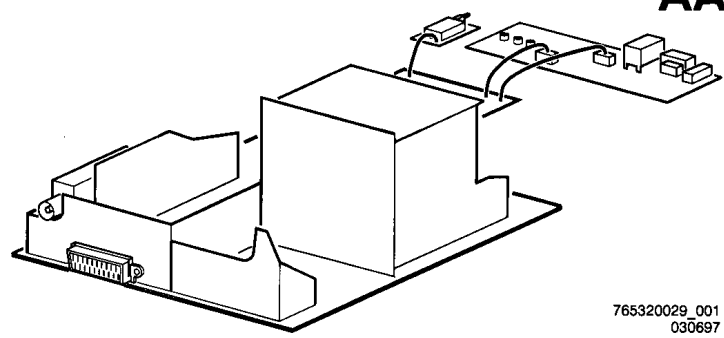


Service
Service
Service

L6.2
AA



765320029_001
030697

Service Manual

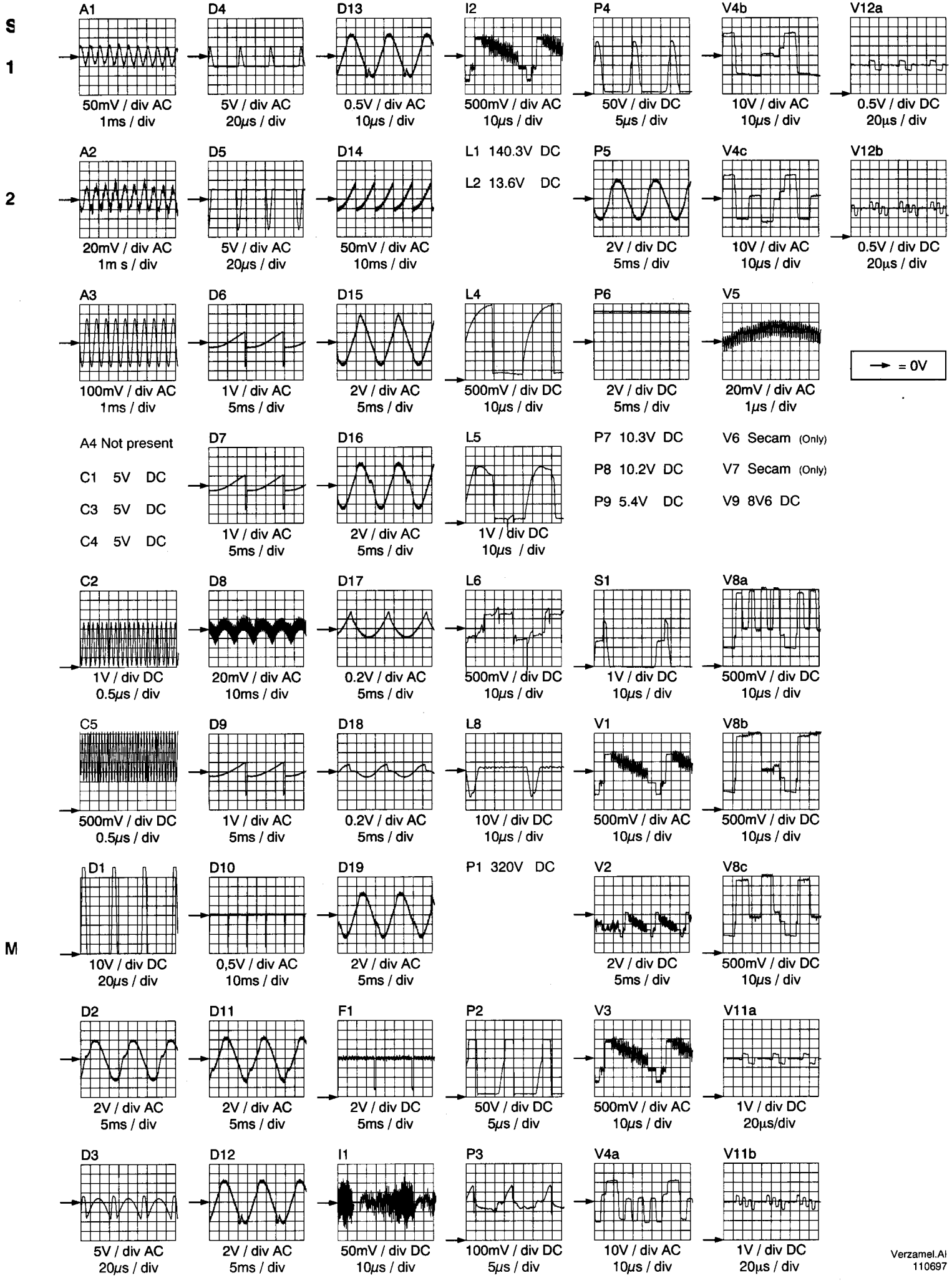
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5. Overview oscillograms / Übersicht Oszillogramme / Vue d'ensemble des oscillogrammes



Survey of testpoints / Übersicht über die Teststellen / Presentation des points à tester

MAIN CARRIER (Component side)

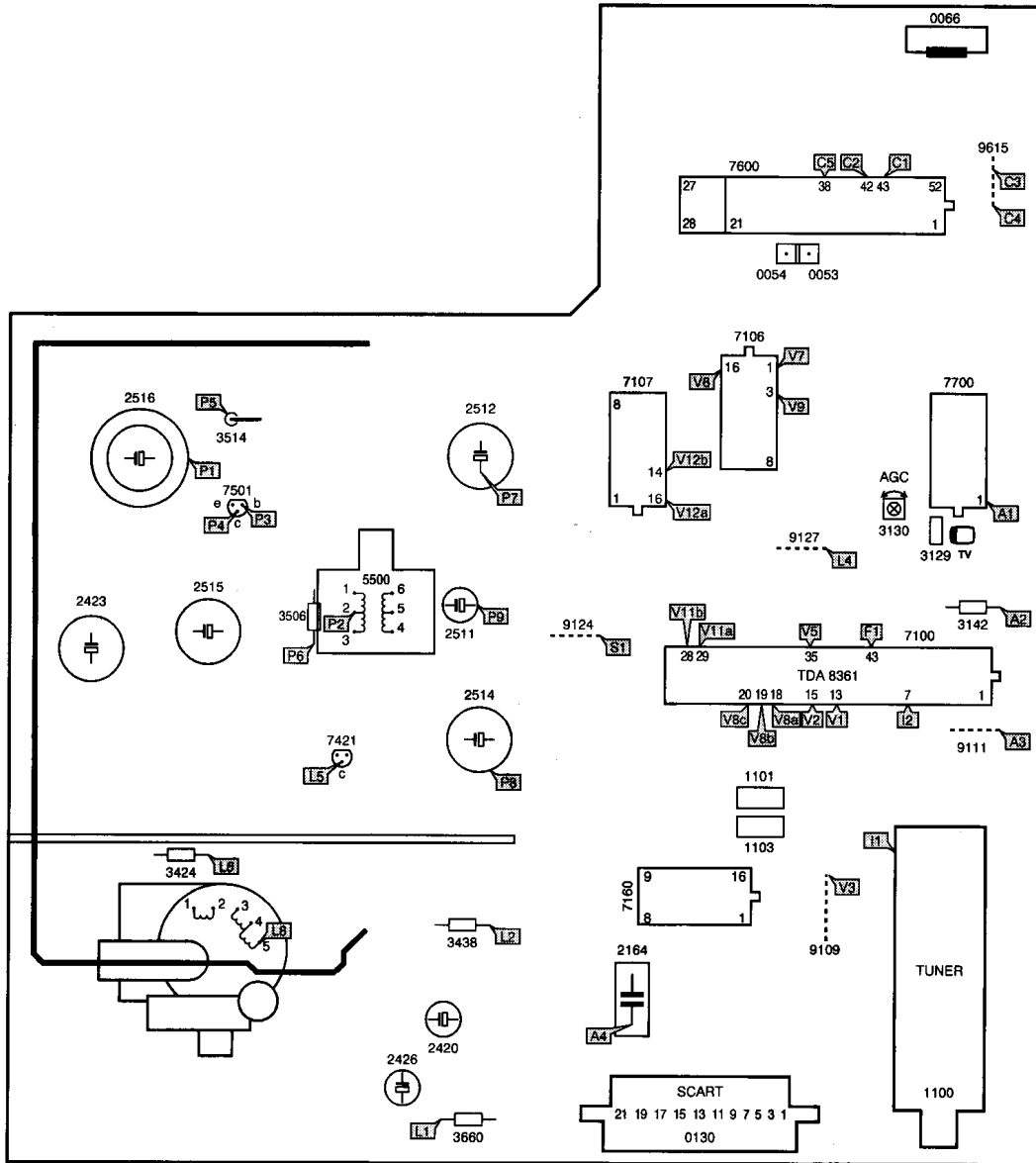


Fig. 5.1

CL 76532029_006.AI
110667

CRT PANEL

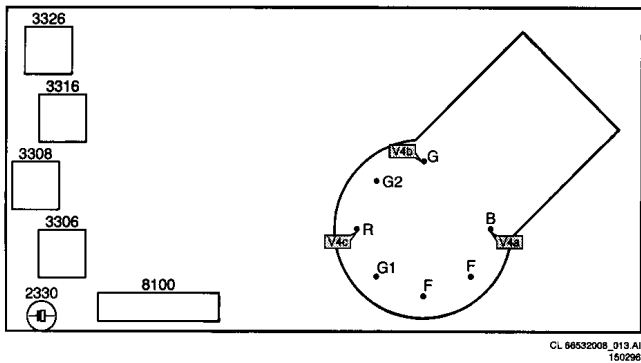


Fig. 5.2

CL 66532008_013.AI
150298

DEFLECTION MODULE 110°

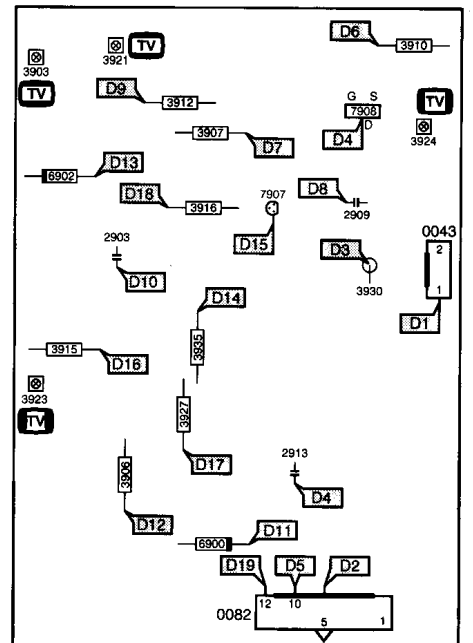
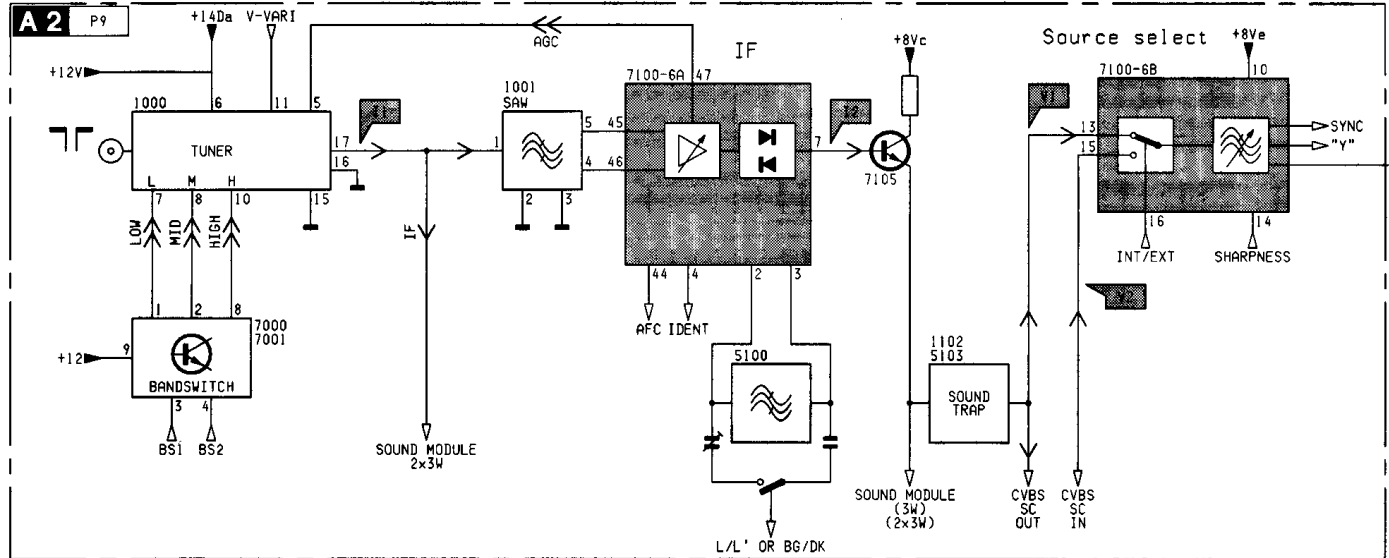


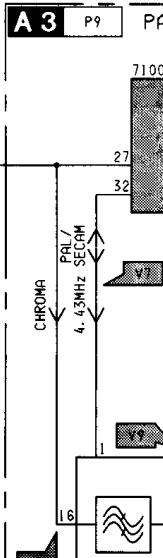
Fig. 5.3

76532029_004.AI
170697

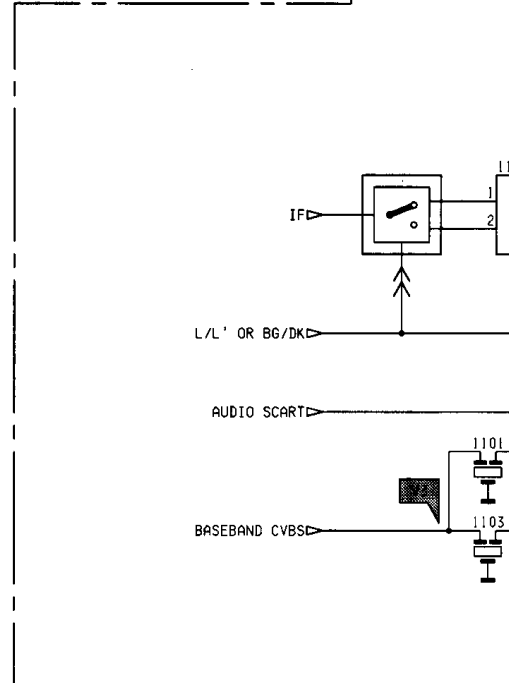
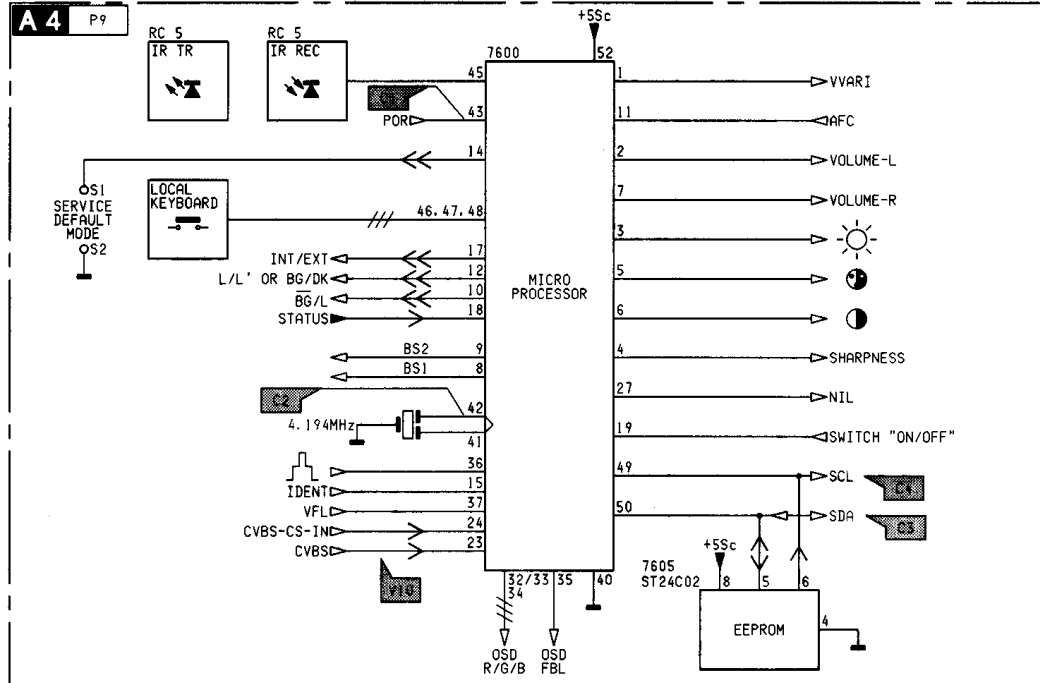
TUNING + IF/Abstimmereinheit/SYNTONISEUR



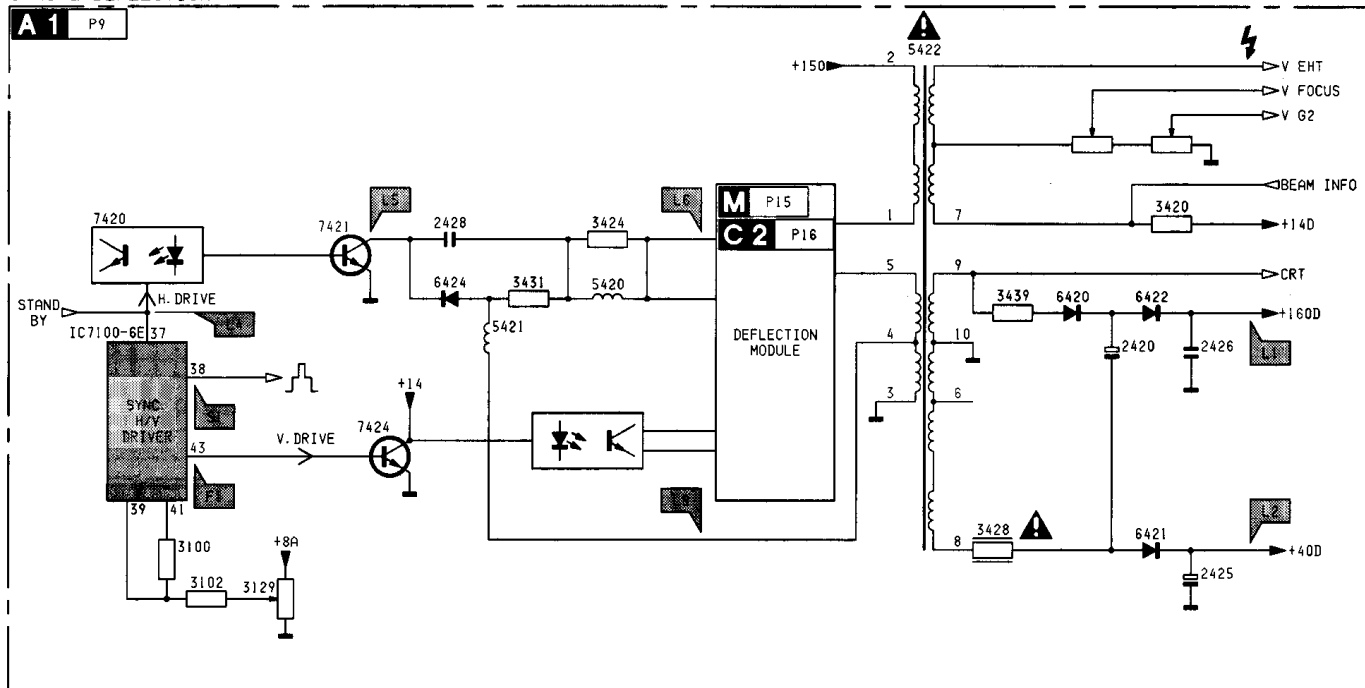
VIDEO + SOUND



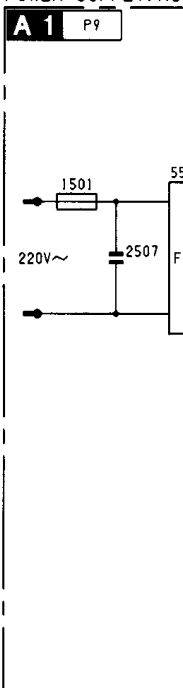
CONTROL/Bedienung/COMMANDE



SYNC & DEFLECTION

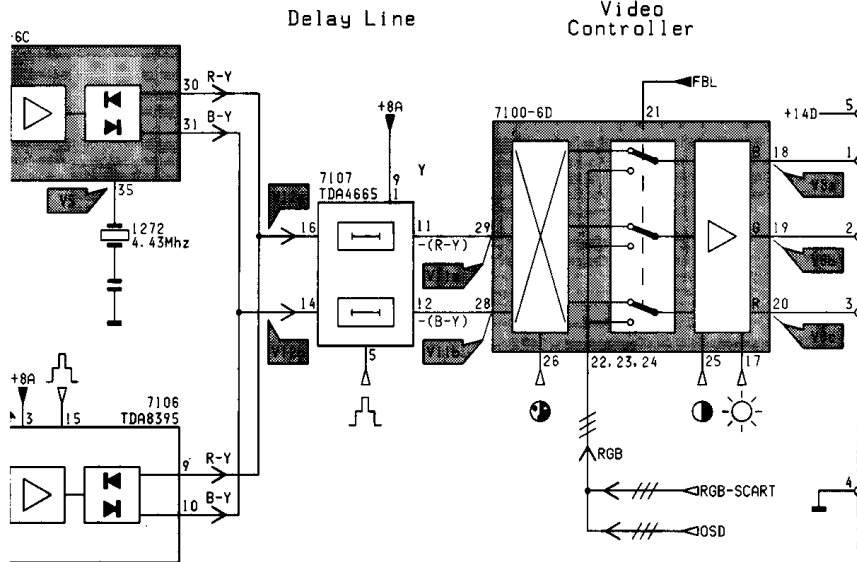


POWER SUPPLY/Ne

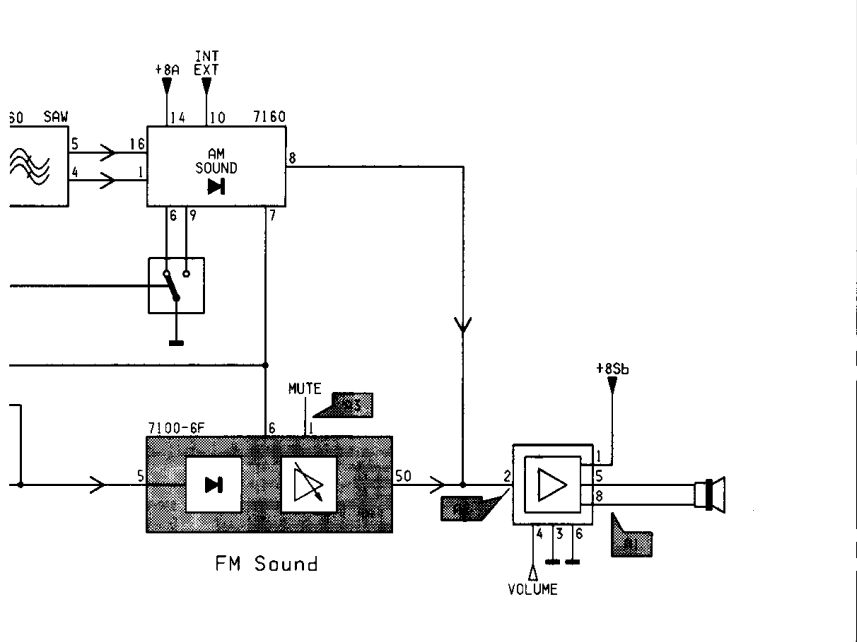


Video + Ton/VIDÉO + SON

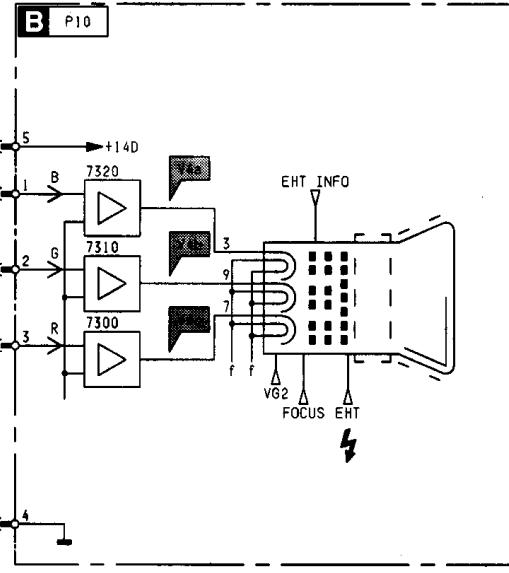
L Chroma decoding



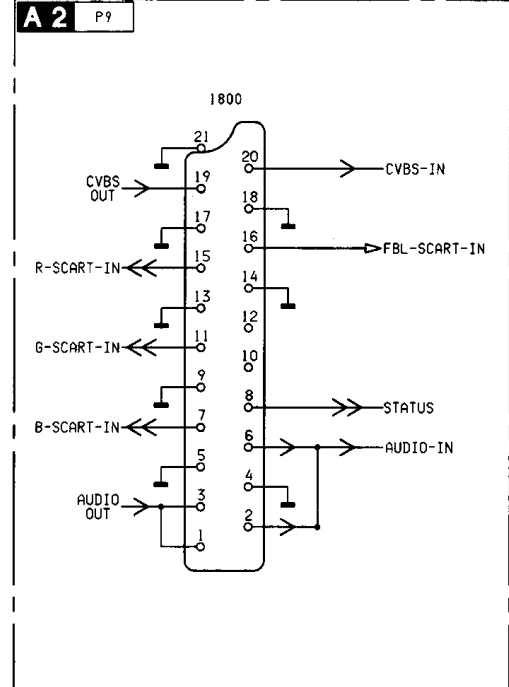
SECAM



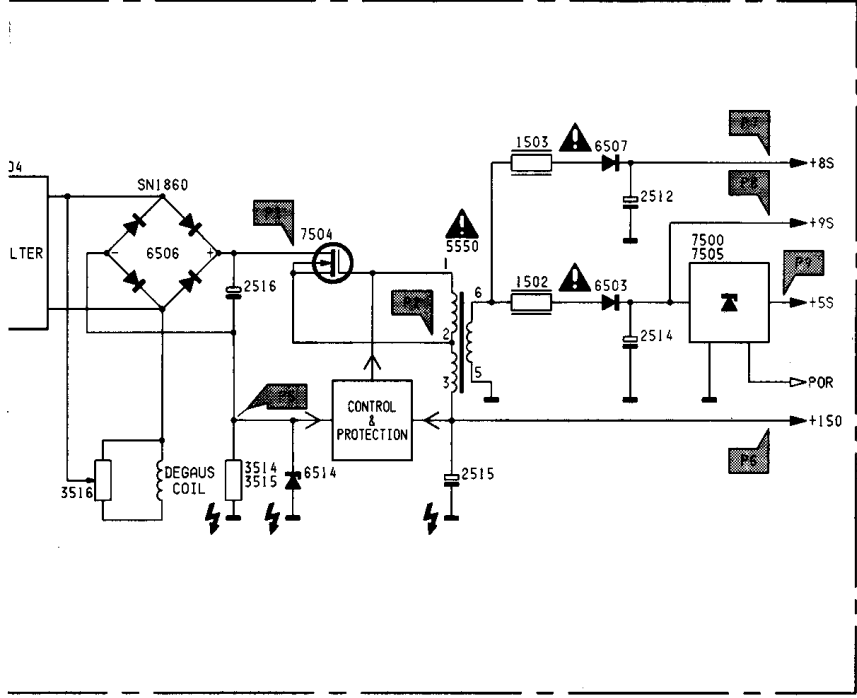
CRT MODULE/CRT Module/CRT MODULE



SCART



zteil / ALIMENTATION



F

Block diagram Supply voltages / Blockschaltbild Speisung / Schéma-bloc du alimentation

Chassis L6.2

6

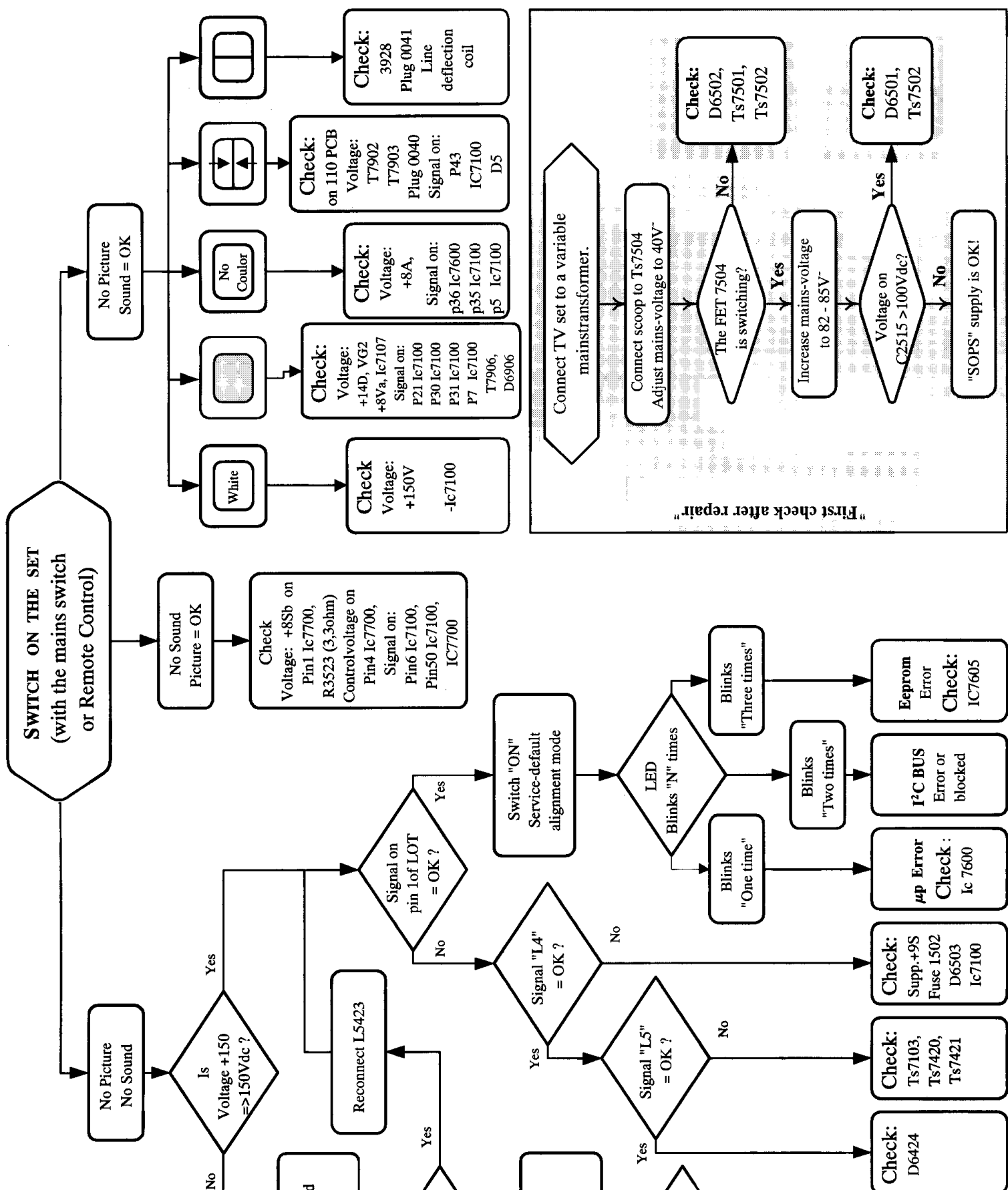
The diagram illustrates the power supply architecture for chassis L6.2, featuring a 220V AC input transformer and a line transformer (LOT) for the CRT section. The main power bus is connected to several functional blocks:

- Power Transformer (A1):** Provides 220V AC input and 0-33V output to the Deflection Module (D).
- Line Transformer (LOT, A1):** Provides +14V DC to the Tuner (A2), Band-switch Tuner, Band switch, and Switch L/L' or BG/DK (A3).
- Deflection Module (D):** Includes a V-Vari (A4) and CRT Panel (B1).
- Beam Info (B):** Receives +14V DC from the Line Transformer.
- AM Sound (A3):** Receives +8V from the P.O.R. block.
- Delay 7107 (A3):** Receives +8Va from the P.O.R. block.
- Secam Det. 7106 (A3):** Receives +8Va from the P.O.R. block.
- Sync 7100-6a (A1):** Receives 8Va from the P.O.R. block.
- IF-Det. 7700-6a (A2):** Receives +8Va from the P.O.R. block.
- "Y"+ Source sel. 7100-6b (A2):** Receives +8V from the P.O.R. block.
- AM/FM Selection (A3):** Receives +8Vd from the P.O.R. block.
- SYNC 7100-6e (A1):** Receives 9124 from the P.O.R. block.
- Sync 7100-6e (A1):** Also receives 8V1 from the P.O.R. block.
- Sync Horz. Vert. (A1):** Receives +9s from the P.O.R. block.
- IR-LED Receiver (A4):** Receives +5Sa from the P.O.R. block.
- ON/OFF A4 (A4):** Receives +5Sb from the P.O.R. block.
- Func.Switch (A4):** Receives +5Sa from the P.O.R. block.
- Control +TXT (A4):** Receives +5Sc from the P.O.R. block.
- Audio Sound 7700 (A3):** Receives +8Sb from the P.O.R. block.

Warning: ATTENTION! "NOT MAINS ISOLATED!"

PCS 91 377

Fault finding tree & Repair facilities / Fehlersuchbaum & Reparaturhinweise / Aide au depannage & Conseils pour la réparations



6. Repair facilities

1. Functional blocks

On both the service printing on the copper and the component side, functional blocks are indicated by lines and text.

2. Test points

The L6 chassis is equipped with test points in the service printing on both sides of mono-board. These test points are referring to the functional blocks as mentioned above:

- * P1-P2-P3, etc: Test points for the power supply
- * L1-L2-L3, etc: Test points for the line drive and line output circuitry
- * F1-F2-F3, etc: Test points for the frame drive and frame output circuitry
- * S1-S2-S3, etc: Test points for the synchronisation circuitry
- * V1-V2-V3, etc: Test points for the video processing circuitry
- * A1-A2-A3, etc: Test points for the audio processing circuitry
- * C1-C2-C3, etc: Test points for the control circuitry
- * T1-T2-T3, etc: Test points for the teletext processing circuitry

The numbering is done in a for diagnostics logical sequence; always start diagnosing within a functional block, in the sequence of the relevant test points, for that functional block.

3. Service default-alignment mode (SDAM)

The service default-alignment mode is a pre-defined mode which can be used for faultfinding (especially when the TV gives no picture at all). All oscillograms and DC voltages in this service manual are measured in the service default-alignment mode.

Activate the service default-alignment mode can be done in 2 ways:

1. By short-circuiting the service pins S1 and S2 of the microcomputer (pin 14 of IC7600).
2. From normal operation mode by pressing the button "DEFAULT" or "ALIGN" on the DST (Dealer Service Tool) RC7150.

Leaving the service default-alignment mode to normal operation can only be done by the stand-by on the remote control or by pressing diagnose 99 followed by the OK-button on the DST (so not via mains switch "off"; after mains switch "off" and then "on" again the set will start up in the service default-alignment mode again to enable easy faultfinding).

Functions of the service default-alignment mode:

1. All analogue settings (volume, contrast, brightness and saturation) are in the mid position.
2. Set is tuned to program number 1
3. Delta volume settings are not used (delta volume setting = a delta on the volume setting)
4. OSD error message (present available error code) is displayed continuously
5. The OSD-key will act as search and auto store on the maximum program number.
6. Automatic switch off function (set switches "off" after 15 minutes no IDENT) will be switched off
7. Hotel mode will be disabled
8. All other functions remain normal controllable

Service default-alignment menu:

New option settings are activated immediately.

1. Software version of the microprocessor used in that typical set is displayed in the right top corner
2. A counter in the middle of the screen indicate the normal operation hours of the set in a hexadecimal code (every time the set is switched "on" the counter is incremented by 1 hour, so +1 at the counter).
3. The "S" in the middle of the screen next to the counter indicate that the set is in the service default-alignment mode
4. Option code
This code indicates the Options setting of the set.
5. Error code history:
The 5 last different error codes occurred are stored in the EEPROM memory; last error code detected will be displayed on the left side (see for an overview of all possible error codes Fig. 6.3), so e.g.:

0 0 0 0 0	means no error codes present in the buffer
3 0 0 0 0	means one error code present in the buffer; error code 3
2 3 0 0 0	means two error codes present in the buffer; last detected error code is error code 2, previous detected error code is error code 3

The error code history buffer is cleared when the Service Menu is left by the stand-by command or by diagnose 99 command. In case the Service Menu is left by the mains switch "off" the error code history buffer will not be cleared.

Option code + Counter + "S" for
Service Menu active + software version →

Error code history →

Option setting row →

001	0023S	1.0
	23000	
-	SYSTEM BG+I	+

Fig. 6.1

6. Option setting:

In the bottom line the options are given.
Control of the options is with the following keys on the remote control:

- * PROGRAM +/- Select the option to be changed:
Via the "PROGRAM +/-" button the option to be changed can be selected. The selected option is implemented immediately.
- * CONTROL up/down Changes the setting of the option.

* MENU +/-

Changes to a submenu: via "MENU +/-" buttons a submenu is selected in which in a stereo version the sound/sync alignment can be done.

The options are stored immediately in the EEPROM. The following table indicates the possible hardware and software options and their technical consequences:

Text displayed in the option row in the Service Menu	The technical consequence for the selected option
SINGLE	→ For a PAL BG only or PAL BG/SECAM BGDK set
SYSTEM I:UK	→ For a PAL I only set
SYSTEM BG+LL'	→ For a PAL BG/SECAM LL' set
SYSTEM BG+DK	→ For a PAL BGI/SECAM LL' set
NATIONAL BRAND MAxxxx→	Selects MENU-Layout National Brand styling

Fig. 6.2

4. Error messages

The microcomputer also detects errors in circuits connected to the I²C (Inter IC) bus. These error messages are communicated via OSD (On Screen Display) and a flashing LED in the service default-alignment mode. (error code history buffer):

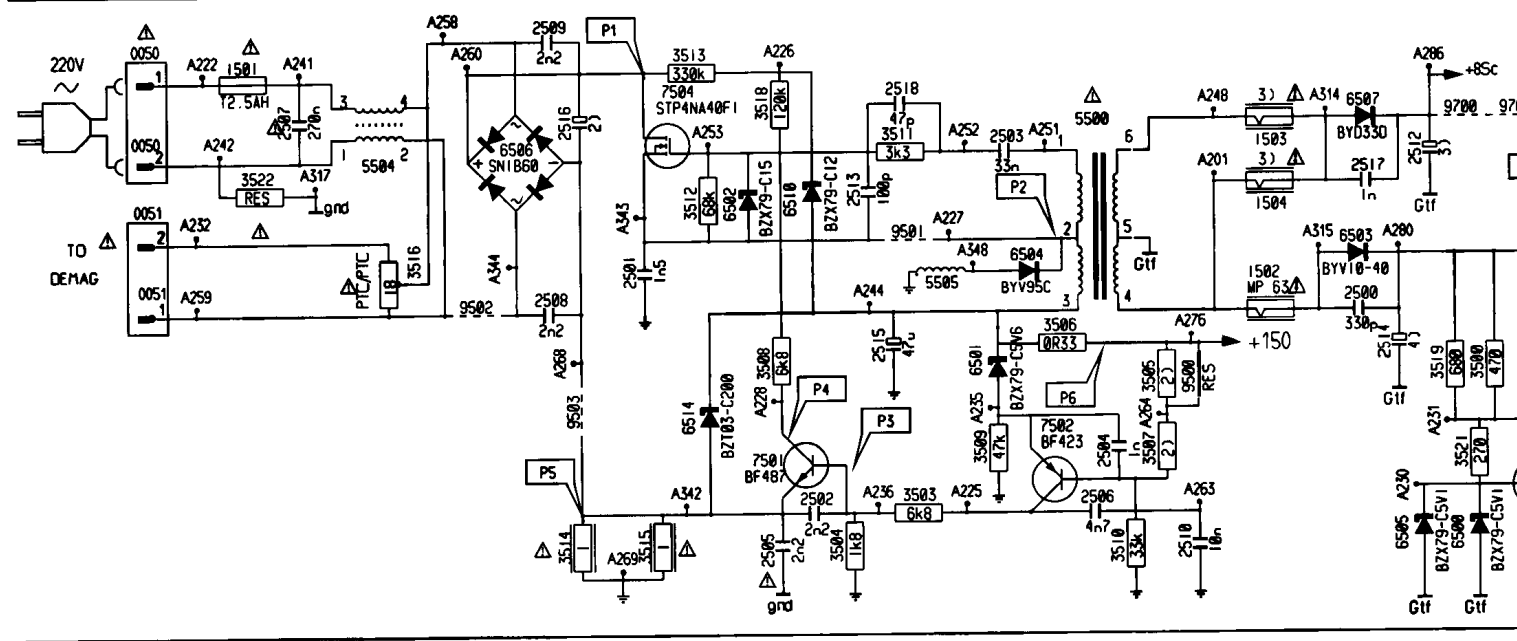
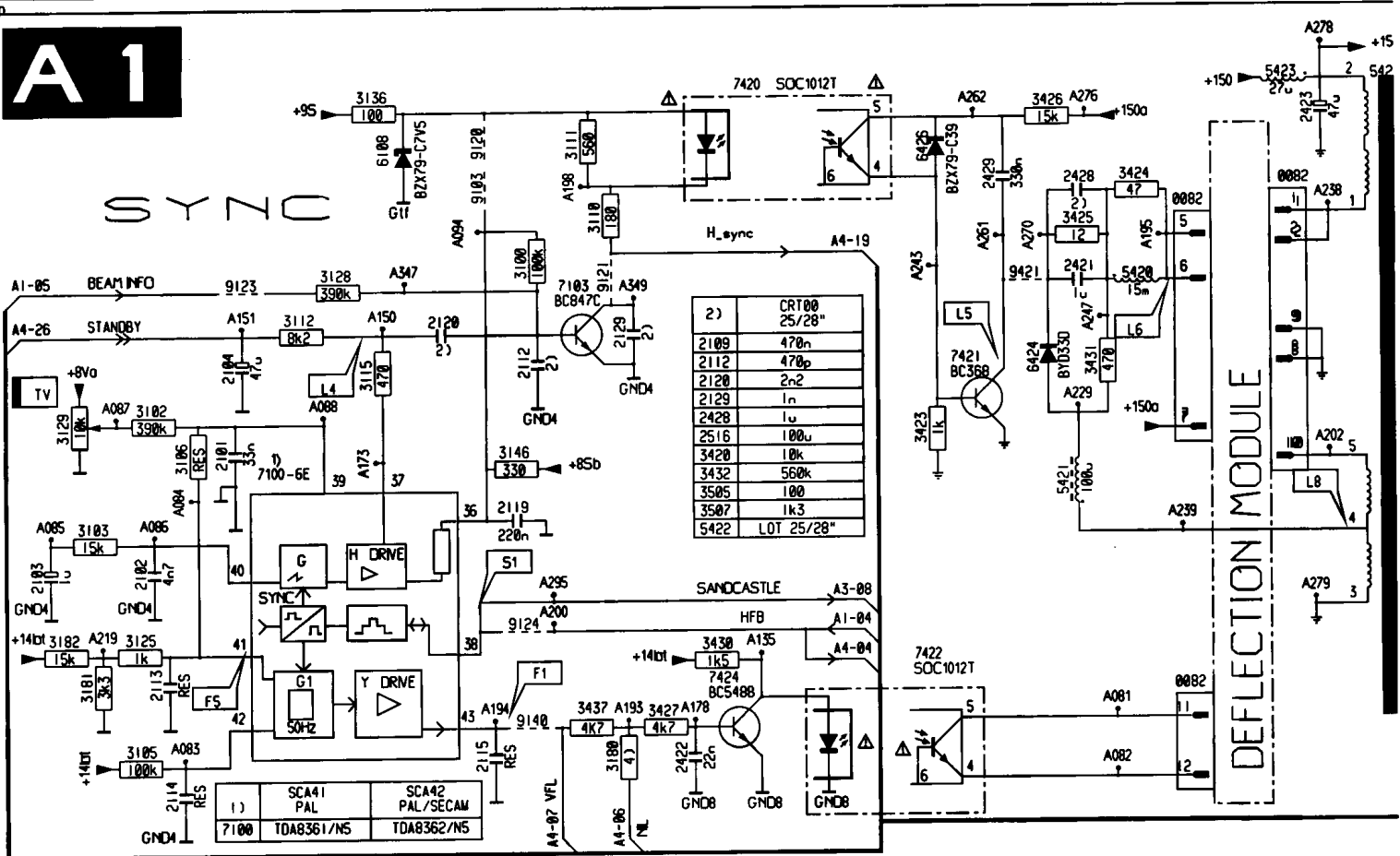
1. In normal operation:
In normal operation no errors are indicated.
2. In the service default-alignment mode:
In the service default-alignment mode both the "OSD error message" and the "LED error" indication will display the present detected error continuously.

"OSD error number" (Service Menu)	"LED behaviour"	Error description	Possible defective component
0	No blinking LED	No error	—
1	LED blinks once	μC error	IC76002
2	LED blinks twice	General I ² C	I ² C bus is blocked
3	LED blinks three times	EEPROM error	IC7605

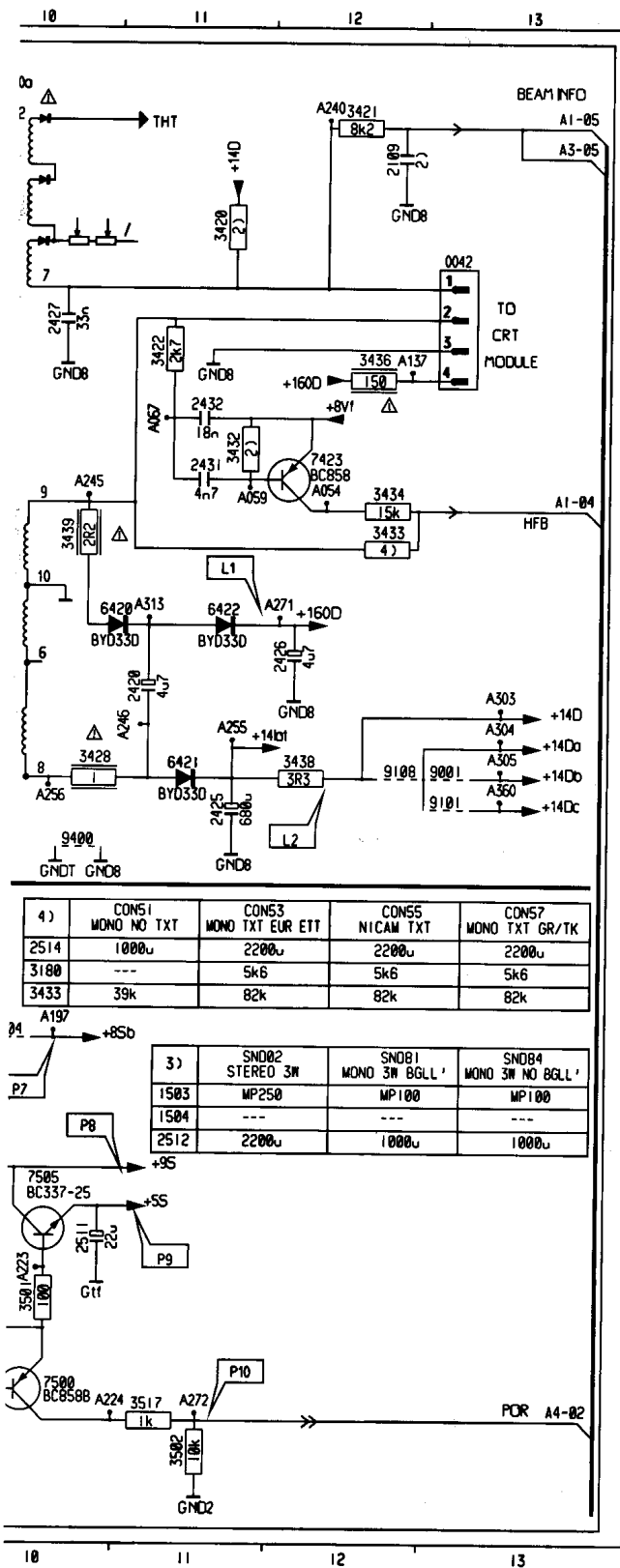
Fig. 6.3

A 1

SYNCO

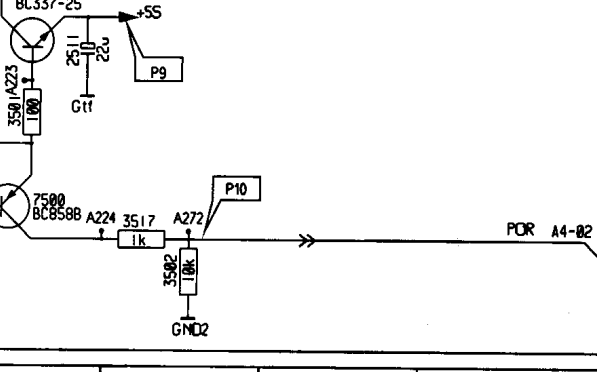


Module secteur & Étage de lignes

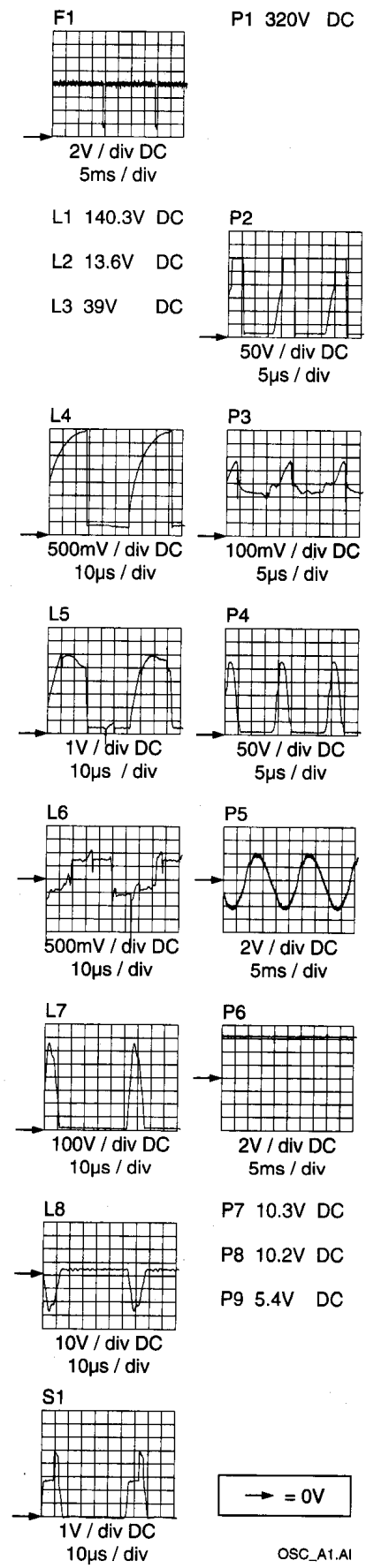


4)	CON51 MONO NO TXT	CON53 MONO TXT EUR ETT	CON55 NICAM TXT	CON57 MONO TXT GR/TK
2514	1000 μ	2200 μ	2200 μ	2200 μ
3180	---	5k6	5k6	5k6
3433	39k	82k	82k	82k

3)	SND02 STEREO 3W	SND01 MONO 3W BGLL'	SND04 MONO 3W NO BGLL'
1503	MP250	MP100	MP100
1504	---	---	---
2512	2200 μ	1000 μ	1000 μ

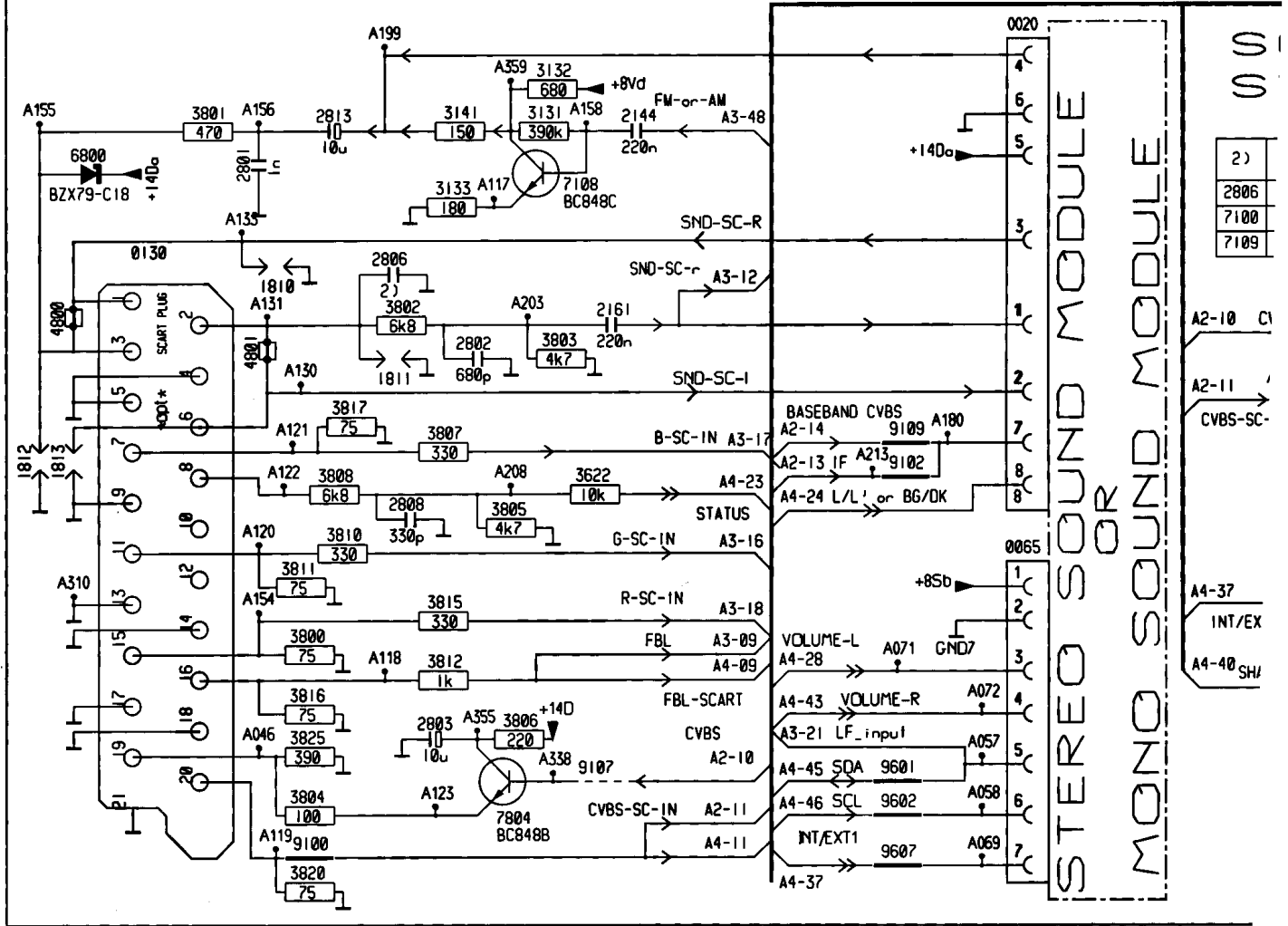
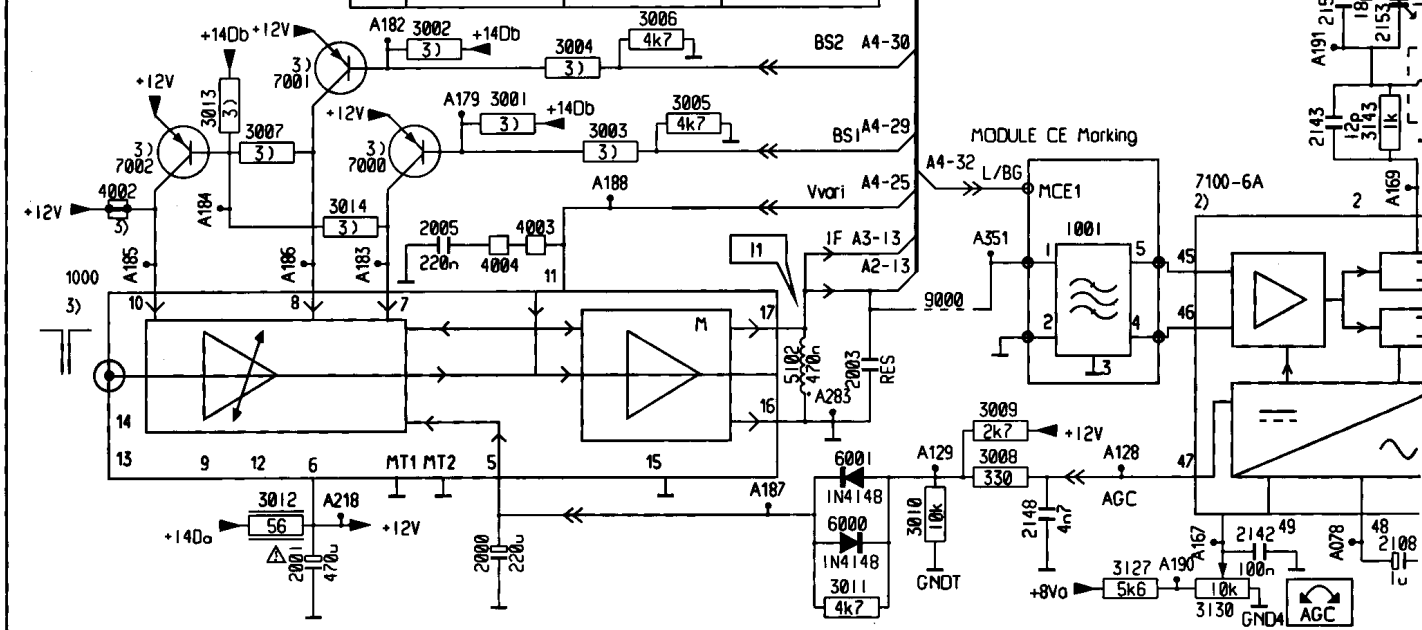


0042 B13 3506 H 7 A228 H C 5
 0042 B13 3507 H 8 A229 H C 6
 0042 B13 3508 H 9 A230 H C 7
 0042 B13 3509 H 0 A231 H C 8
 0050 F11 G 6 A232 H C 9
 0051 G A 9 F 1 4 A233 H C 0
 0082 A A 9 G 6 A234 H C 1
 0082 A A 9 G 6 A235 H C 2
 0082 A A 9 G 6 A236 H C 3
 0082 A A 9 G 6 A237 H C 4
 0082 A A 9 G 6 A238 H C 5
 0082 A A 9 G 6 A239 H C 6
 0082 A A 9 G 6 A240 H C 7
 0082 A A 9 G 6 A241 H C 8
 0082 A A 9 G 6 A242 H C 9
 0082 A A 9 G 6 A243 H C 0
 0082 A A 9 G 6 A244 H C 1
 0082 A A 9 G 6 A245 H C 2
 0082 A A 9 G 6 A246 H C 3
 0082 A A 9 G 6 A247 H C 4
 0082 A A 9 G 6 A248 H C 5
 0082 A A 9 G 6 A249 H C 6
 0082 A A 9 G 6 A250 H C 7
 1501 F 2 8 A10 9 A251 G 6 6
 1502 F 2 8 A10 9 A252 G 6 6
 1503 G 8 8 A10 9 A253 G 6 6
 1504 G 8 8 A10 9 A254 G 6 6
 2101 C 2 1 A10 9 A255 E 10 3
 2102 C 2 1 A10 9 A256 E 10 3
 2103 C 2 1 A10 9 A257 E 10 3
 2104 C 2 1 A10 9 A258 E 10 3
 2109 C 2 1 A10 9 A259 E 10 3
 2112 C 2 1 A10 9 A260 E 10 3
 2113 C 2 1 A10 9 A261 E 10 3
 2114 C 2 1 A10 9 A262 E 10 3
 2115 C 2 1 A10 9 A263 E 10 3
 2119 C 2 1 A10 9 A264 E 10 3
 2120 C 2 1 A10 9 A265 E 10 3
 2129 C 2 1 A10 9 A266 E 10 3
 2420 D 11 1 A10 9 A267 E 10 3
 2421 D 11 1 A10 9 A268 E 10 3
 2422 D 11 1 A10 9 A269 E 10 3
 2423 D 11 1 A10 9 A270 E 10 3
 2425 D 11 1 A10 9 A271 E 10 3
 2426 D 11 1 A10 9 A272 E 10 3
 2427 D 11 1 A10 9 A273 E 10 3
 2428 D 11 1 A10 9 A274 E 10 3
 2429 D 11 1 A10 9 A275 E 10 3
 2431 C 11 9 A10 9 A276 E 10 3
 2432 C 11 9 A10 9 A277 E 10 3
 2500 H 1 4 A10 9 A278 E 10 3
 2502 H 1 4 A10 9 A279 E 10 3
 2503 G 7 7 A10 9 A280 E 10 3
 2504 G 7 7 A10 9 A281 E 10 3
 2505 G 7 7 A10 9 A282 E 10 3
 2506 G 7 7 A10 9 A283 E 10 3
 2507 G 7 7 A10 9 A284 E 10 3
 2508 G 7 7 A10 9 A285 E 10 3
 2510 H 1 4 A10 9 A286 E 10 3
 2511 H 1 4 A10 9 A287 E 10 3
 2512 H 1 4 A10 9 A288 E 10 3
 2513 H 1 4 A10 9 A289 E 10 3
 2514 H 1 4 A10 9 A290 E 10 3
 2515 H 1 4 A10 9 A291 E 10 3
 2516 G 6 4 A10 9 A292 E 10 3
 2517 G 6 4 A10 9 A293 E 10 3
 2518 G 6 4 A10 9 A294 E 10 3
 3100 B 4 6 A10 9 A295 E 10 3
 3102 C 1 1 A10 9 A296 E 10 3
 3103 C 1 1 A10 9 A297 E 10 3
 3105 C 1 1 A10 9 A298 E 10 3
 3106 C 1 1 A10 9 A299 E 10 3
 3110 B 2 4 A10 9 A300 E 10 3
 3111 A 4 4 A10 9 A301 E 10 3
 3112 C 2 3 A10 9 A302 E 10 3
 3115 C 2 3 A10 9 A303 E 10 3
 3125 D 1 3 A10 9 A304 E 10 3
 3128 B 1 3 A10 9 A305 E 10 3
 3129 B 1 3 A10 9 A306 E 10 3
 3136 C 1 3 A10 9 A307 E 10 3
 3146 E 1 5 A10 9 A308 E 10 3
 3181 D 1 1 A10 9 A309 E 10 3
 3420 A 1 2 A10 9 A310 E 10 3
 3421 A 1 2 A10 9 A311 E 10 3
 3422 B 1 1 A10 9 A312 E 10 3
 3423 C 7 7 A10 9 A313 E 10 3
 3424 A 8 8 A10 9 A314 E 10 3
 3425 B 8 8 A10 9 A315 E 10 3
 3426 A 7 7 A10 9 A316 E 10 3
 3427 E 5 5 A10 9 A317 E 10 3
 3428 E 10 5 A10 9 A318 E 10 3
 3430 D 5 5 A10 9 A319 E 10 3
 3431 C 8 8 A10 9 A320 E 10 3
 3432 C 11 9 A10 9 A321 E 10 3
 3433 C 12 0 A10 9 A322 E 10 3
 3434 C 12 0 A10 9 A323 E 10 3
 3436 B 12 0 A10 9 A324 E 10 3
 3437 E 4 4 A10 9 A325 E 10 3
 3438 E 12 2 A10 9 A326 E 10 3
 3439 C 10 0 A10 9 A327 E 10 3
 3500 H 10 0 A10 9 A328 E 10 3
 3501 H 10 0 A10 9 A329 E 10 3
 3502 H 11 0 A10 9 A330 E 10 3
 3503 I 6 6 A10 9 A331 E 10 3
 3504 I 6 6 A10 9 A332 E 10 3
 3505 H 8 8 A10 9 A333 E 10 3



A2

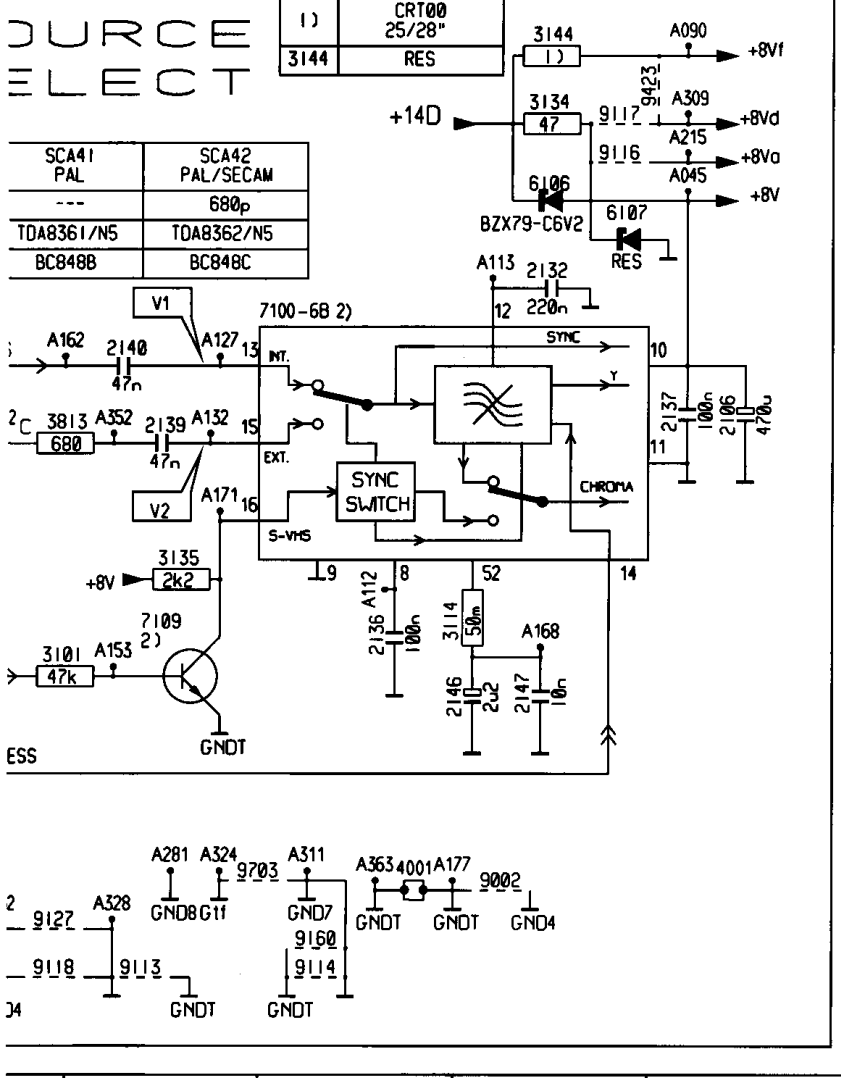
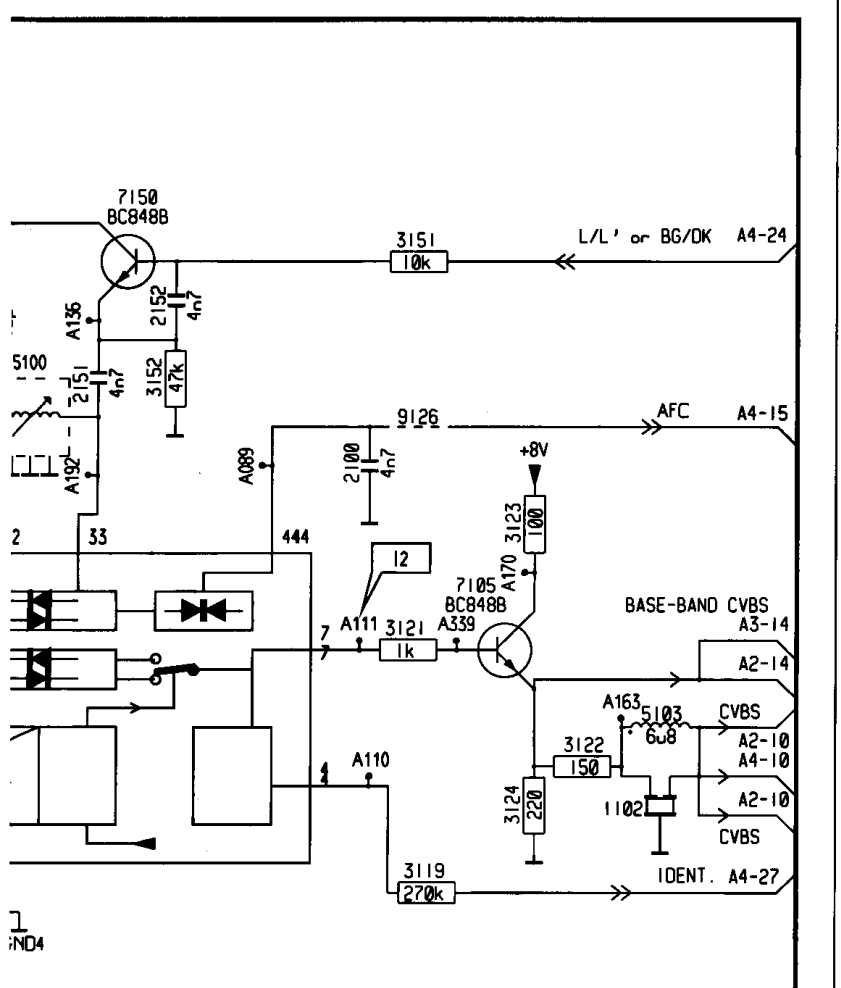
3)	TUN60 U	TUN62 U+V+S	TUN63 U+V+S+H
1000	U943	UV917	UV915E
3001	---	2k2	2k2
3002	---	2k2	2k2
3003	---	5k6	6k8
3004	---	5k6	6k8
3007	---	220k	220k
3013	---	47k	47k
3014	---	220k	220k
4002	50m	---	---
7000	---	BC858C	BC858C
7001	---	BC858C	BC858C
7002	---	BC858C	BC858C



STEREO SOUND MODULE
MONO SOUND MODULE

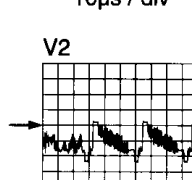
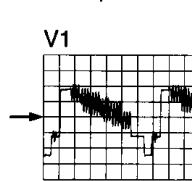
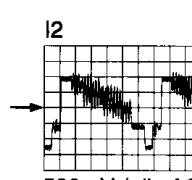
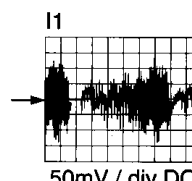
2)	2806
	7100
	7109

A2-10 CI
A2-11 CVBS-SC
A4-37 INT/EX
A4-40 SH



0020	F	7100	H	A352	H
0020	F	7100	C	A355	J
0020	F	7105	D	A359	F
0020	F	7108	G	A362	K
0020	F	7109	B	A363	J
0020	F	7150	I	A4-09	J
0020	F	7804	K	A4-10	E
0020	F	9000	D	A4-11	K
0065	I	9002	K	A4-15	C
0065	I	9100	K	A4-23	I
0130	G	9102	I	A4-24	I
1000	D	9107	J	A4-24	B
1001	D	9109	H	A4-25	C
1102	E	9113	K	A4-27	E
1810	H	9114	K	A4-28	J
1811	H	9116	G	A4-29	L
1812	I	9117	G	A4-30	C
1813	I	9118	K	A4-32	C
2000	E	9126	C	A4-37	K
2001	E	9127	K	A4-40	J
2003	D	9160	K	A4-43	J
2005	D	9423	F	A4-45	J
2100	C	9601	J	A4-46	K
2106	H	9602	K	MCE	I
2108	E	9607	K		D
2132	G	9703	K		
2136	H	A045	G		
2137	H	A046	J		
2139	H	A057	J		
2140	H	A058	K		
2142	G	A069	K		
2143	C	A071	K		
2144	G	A072	J		
2146	J	A078	J		
2147	J	A089	C		
2148	A	A090	F		
2150	B	A110	E		
2151	B	A111	D		
2152	B	A112	D		
2153	C	A113	G		
2161	H	A117	H		
2801	G	A118	J		
2802	H	A119	K		
2803	J	A120	K		
2806	I	A121	H		
2808	I	A122	I		
2813	G	A123	K		
3001	I	A127	K		
3002	C	A128	H		
3003	C	A129	H		
3004	C	A130	H		
3005	C	A131	H		
3006	C	A132	H		
3007	C	A133	G		
3008	C	A136	B		
3009	E	A153	I		
3010	E	A154	I		
3011	F	A155	G		
3012	F	A156	G		
3013	F	A158	G		
3014	D	A162	D		
3101	I	A163	H		
3114	I	A166	B		
3119	E	A167	E		
3121	D	A168	I		
3122	E	A169	C		
3123	E	A170	D		
3124	F	A171	I		
3127	F	A177	J		
3130	G	A179	C		
3131	G	A180	H		
3132	F	A182	C		
3133	G	A183	G		
3134	G	A184	D		
3135	I	A185	D		
3141	G	A186	D		
3143	C	A187	F		
3144	F	A188	C		
3150	B	A190	F		
3151	B	A191	C		
3152	C	A192	C		
3622	I	A199	F		
3800	J	A2-10	E		
3801	G	A2-10	J		
3802	H	A2-10	E		
3803	H	A2-10	H		
3804	K	A2-11	K		
3805	I	A2-11	H		
3806	J	A2-13	I		
3807	H	A2-13	D		
3808	I	A2-14	H		
3810	I	A2-14	D		
3811	I	A203	H		
3812	J	A208	I		
3813	H	A212	H		
3815	I	A213	I		
3816	J	A215	G		
3817	H	A218	E		
3820	K	A281	L		
3825	J	A283	E		
4001	J	A3-09	J		
4002	D	A3-12	H		
4003	D	A3-13	D		
4004	D	A3-14	D		
4800	H	A3-16	I		
4801	H	A3-17	H		
5100	C	A3-18	I		
5102	D	A3-21	J		
5103	D	A3-48	G		
6000	E	A309	G		
6001	E	A310	I		
6106	G	A311	J		
6107	G	A324	J		
6800	G	A328	K		
7000	C	A338	J		
7001	C	A339	D		
7002	C	A351	D		

0020 F 7100 H A352 H
 0020 F 7100 C 7
 0020 F 7105 D 10
 0020 F 7108 G 4
 0020 F 7109 B 9
 0020 F 7150 I 9
 0020 F 7804 K 4
 0020 F 9000 D 6
 0065 I 9002 K 11
 0065 I 9100 K 2
 0130 G 9102 I 6
 1000 D 9107 J 4
 1001 D 9109 H 6
 1102 E 9113 K 9
 1810 H 9114 K 10
 1811 H 9116 G 11
 1812 I 9117 G 11
 1813 I 9118 K 8
 2000 E 9126 C 10
 2001 E 9127 K 8
 2003 D 9160 K 10
 2005 D 9423 F 12
 2100 C 9601 J 10
 2106 H 9602 K 8
 2108 E 9607 K 8
 2132 G 9703 K 10
 2136 H A045 G 12
 2137 H A046 J 10
 2139 H A057 J 10
 2140 H A058 K 10
 2142 G A069 K 10
 2143 C A071 K 10
 2144 G A072 J 10
 2146 J A078 J 10
 2147 J A089 C 10
 2148 A A090 F 10
 2150 B A110 E 10
 2151 B A111 D 10
 2152 B A112 D 10
 2153 C A113 G 11
 2161 H A117 H 11
 2801 G A118 J 10
 2802 H A119 K 10
 2803 J A120 K 10
 2806 I A121 H 10
 2808 I A122 I 10
 2813 G A123 K 10
 3001 I A127 K 10
 3002 C A128 H 10
 3003 C A129 H 10
 3004 C A130 H 10
 3005 C A131 H 10
 3006 C A132 H 10
 3007 C A133 G 10
 3008 C A136 B 10
 3009 E A153 I 10
 3010 E A154 I 10
 3011 F A155 G 10
 3012 F A156 G 10
 3013 F A158 G 10
 3014 D A162 D 10
 3101 I A163 H 10
 3114 I A166 B 10
 3119 E A167 E 10
 3121 D A168 I 10
 3122 E A169 C 10
 3123 E A170 D 10
 3124 F A171 I 10
 3127 F A177 J 10
 3130 G A179 C 10
 3131 G A180 H 10
 3132 F A182 C 10
 3133 G A183 G 10
 3134 G A184 D 10
 3135 I A185 D 10
 3141 G A186 D 10
 3143 C A187 F 10
 3144 F A188 C 10
 3150 B A190 F 10
 3151 B A191 C 10
 3152 C A192 C 10
 3622 I A199 F 10
 3800 J A2-10 E 10
 3801 G A2-10 J 10
 3802 H A2-10 E 10
 3803 H A2-10 H 10
 3804 K A2-11 K 10
 3805 I A2-11 H 10
 3806 J A2-13 I 10
 3807 H A2-13 D 10
 3808 I A2-14 H 10
 3810 I A2-14 D 10
 3811 I A203 H 10
 3812 J A208 I 10
 3813 H A212 H 10
 3815 I A213 I 10
 3816 J A215 G 10
 3817 H A218 E 10
 3820 K A281 L 10
 3825 J A283 E 10
 4001 J A3-09 J 10
 4002 D A3-12 H 10
 4003 D A3-13 D 10
 4004 D A3-14 D 10
 4800 H A3-16 I 10
 4801 H A3-17 H 10
 5100 C A3-18 I 10
 5102 D A3-21 J 10
 5103 D A3-48 G 10
 6000 E A309 G 12
 6001 E A310 I 10
 6106 G A311 J 10
 6107 G A324 J 10
 6800 G A328 K 10
 7000 C A338 J 10
 7001 C A339 D 10
 7002 C A351 D 10

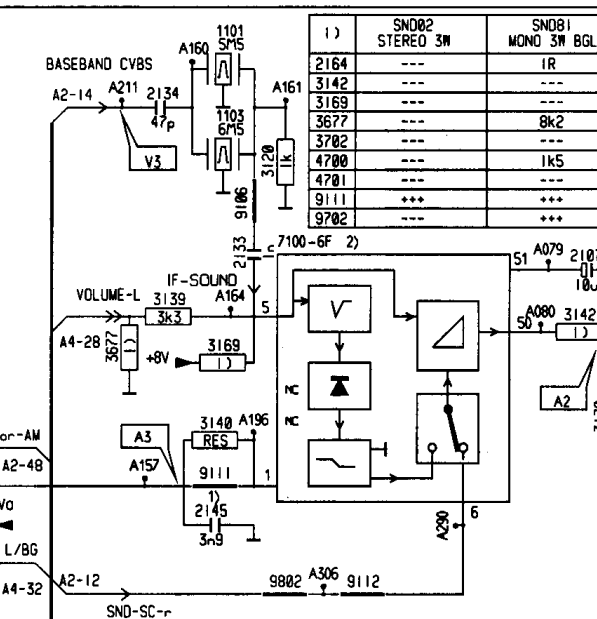
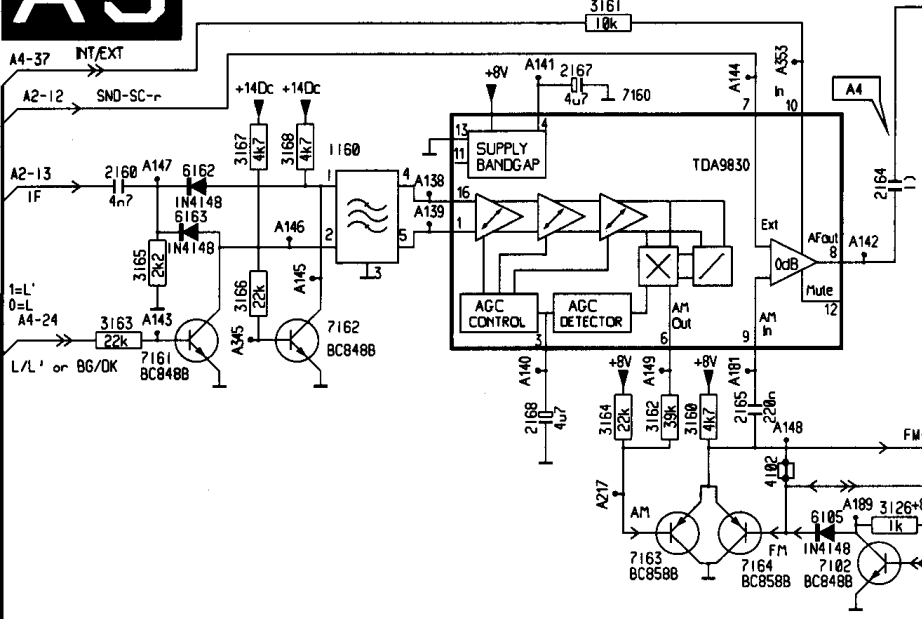


OSC_A2.AI

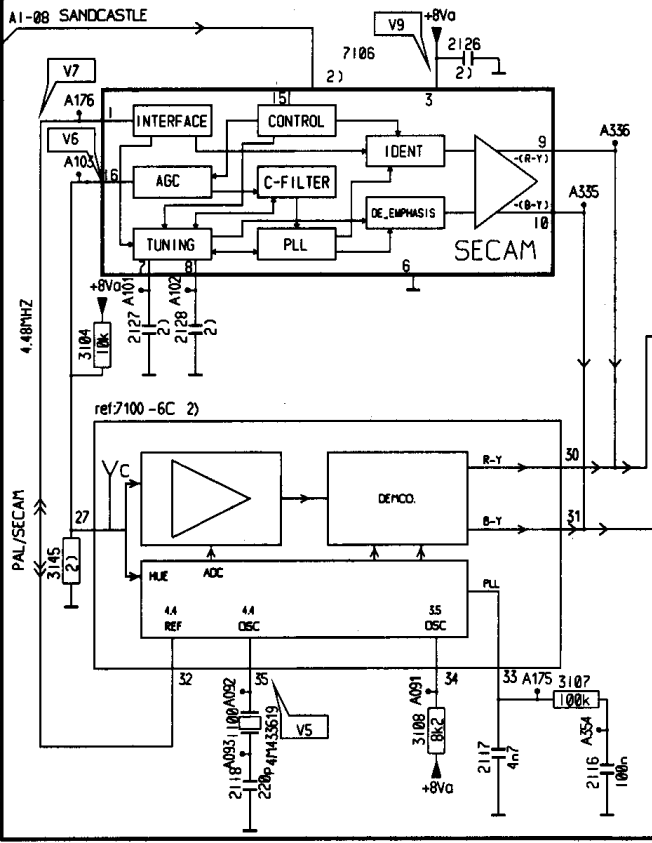
A3

AM-SOUND

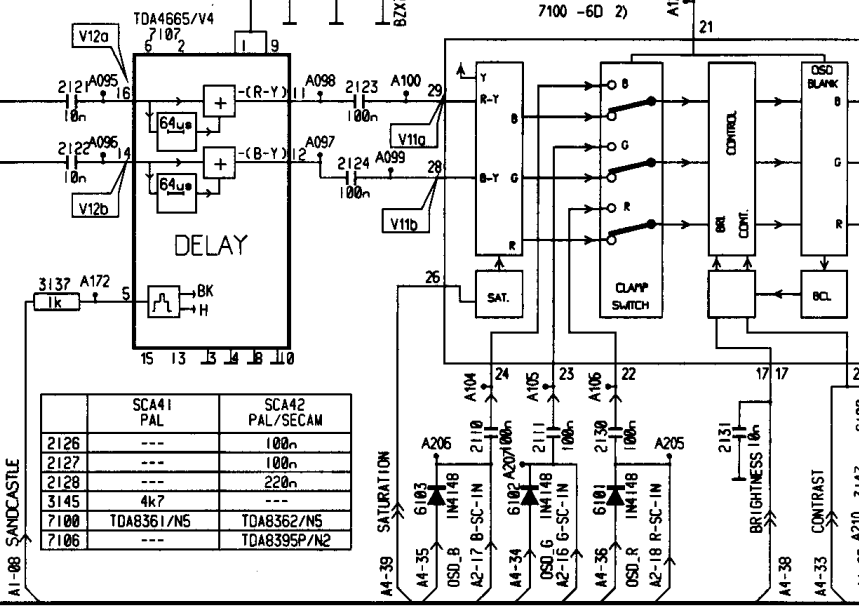
FM-SOUND



	1) SNOB2 STEREO 3W	SNOB1 MONO 3W BELL
2164	---	1R
3142	---	---
3169	---	---
3677	---	8k2
3702	---	---
4700	---	1k5
4701	---	---
9111	+++	---
9702	---	---

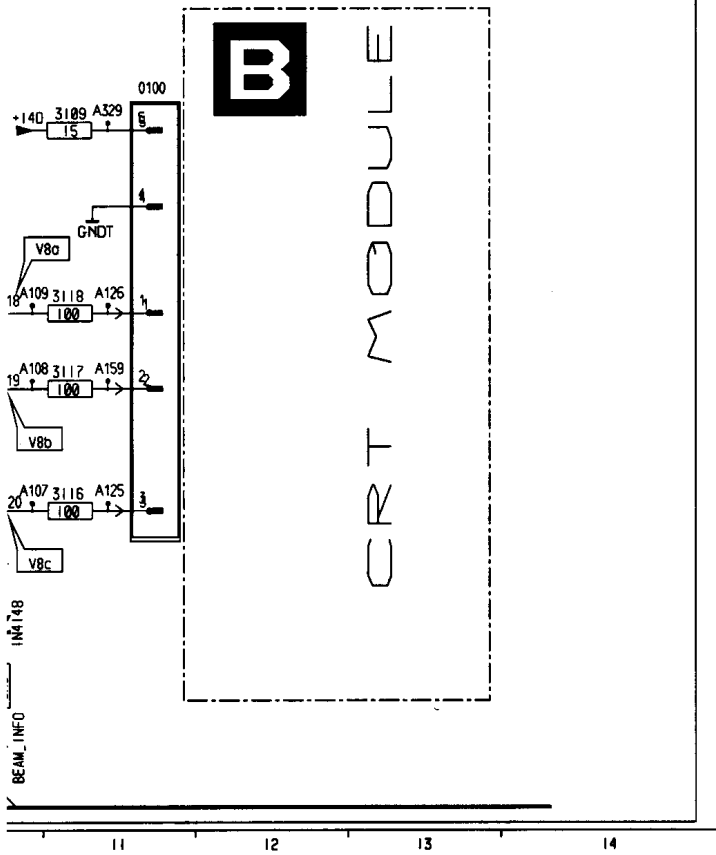
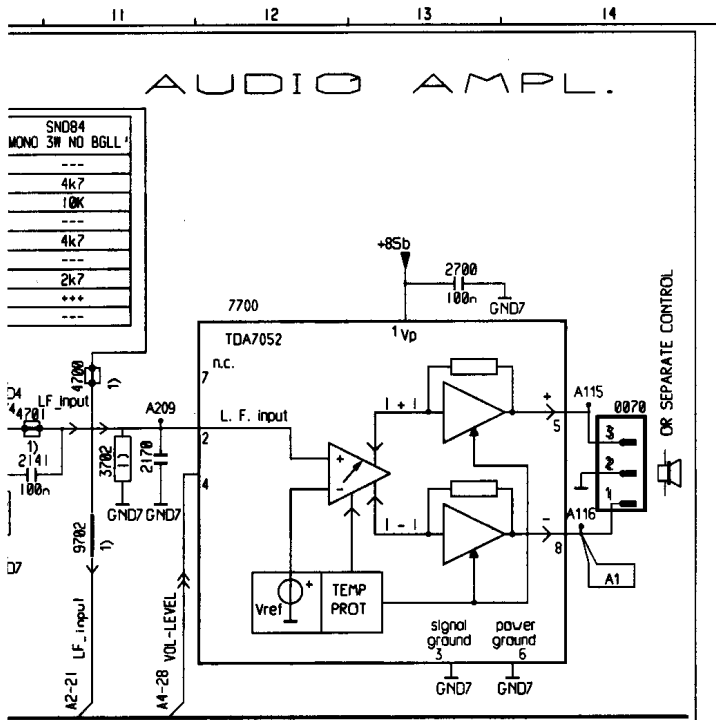


CHROMA DECODING

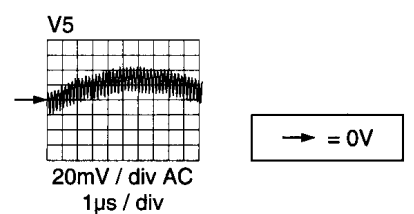
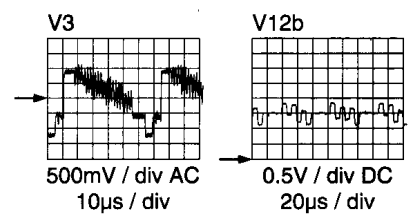
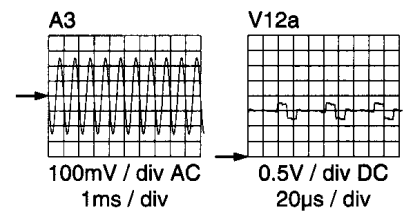
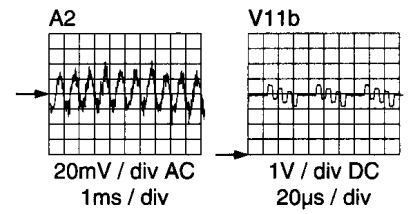
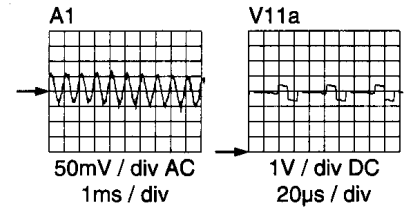


	SCA41 PAL	SCA42 PAL/SECAM
2126	---	100n
2127	---	100n
2128	---	220n
3145	4k7	---
7100	TDA8361/N5	TDA8362/N5
7106	---	TDA8395P/N2

Son & Chrominance

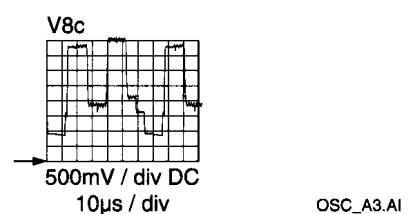
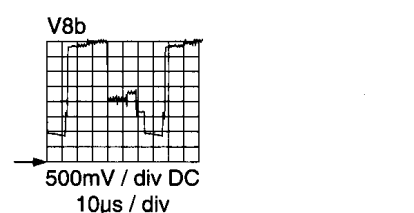
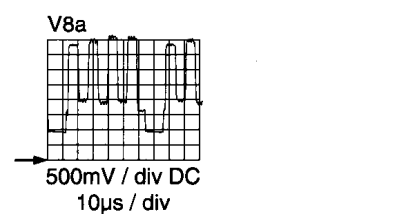


0070	C14	A1-08	L	5
0070	C14	A1-08	L	5
0070	C14	A1-08	L	5
0100	F11	A101	F	11
0100	F11	A102	F	11
0100	F11	A104	F	11
0100	F11	A105	F	11
1100	J2	A106	J	2
1103	J2	A107	J	2
1160	H10	A108	H	10
1160	H10	A109	H	10
0100	F11	A115	F	11
0100	F11	A116	F	11
1110	H11	A124	H	11
1116	J4	A126	J	4
1117	J4	A138	J	4
1118	J4	A139	J	4
2121	C4	A140	C	4
2122	C4	A141	C	4
2123	C4	A142	C	4
2124	C4	A143	C	4
2124	C4	A144	C	4
2125	C4	A145	C	4
2126	C4	A146	C	4
2127	C4	A147	C	4
2128	C4	A148	C	4
2130	C4	A149	C	4
2131	C4	A150	C	4
2133	C4	A151	C	4
2134	C4	A152	C	4
2141	H11	A159	H	11
2141	H11	A160	H	11
2142	H11	A161	H	11
2143	H11	A162	H	11
2144	H11	A163	H	11
2145	H11	A164	H	11
2146	H11	A165	H	11
2147	H11	A172	H	11
2148	H11	A174	H	11
2168	D4	A175	D	4
2170	D4	A176	D	4
2170	D4	A177	D	4
3104	B13	A181	B	13
3104	B13	A189	B	13
3107	F11	A196	F	11
3108	F11	A2-12	F	11
3109	F11	A2-13	F	11
3111	H11	A2-14	H	11
3116	H11	A2-15	H	11
3117	H11	A2-16	H	11
3118	H11	A2-17	H	11
3120	H11	A2-18	H	11
3126	D4	A2-19	D	4
3131	D4	A2-21	D	4
3137	D4	A2-48	D	4
3138	D4	A204	D	4
3139	D4	A205	D	4
3140	D4	A206	D	4
3142	D4	A207	D	4
3145	I10	A209	I	10
3147	J10	A210	J	10
3161	D4	A211	D	4
3161	D4	A217	D	4
3162	D4	A230	D	4
3163	D4	A306	D	4
3164	D4	A329	D	4
3165	D4	A335	D	4
3166	D4	A336	D	4
3167	D4	A337	D	4
3168	D4	A345	D	4
3169	D4	A353	D	4
3170	D4	A354	D	4
3170	D4	A4-09	D	4
3677	C11	A4-28	C	11
2702	C11	A4-28	C	11
402	C11	A4-28	C	11
4700	C10	A4-32	C	10
4701	C10	A4-33	C	10
6100	J10	A4-33	J	10
6101	J10	A4-34	J	10
6102	J10	A4-35	J	10
6103	J10	A4-36	J	10
6104	J10	A4-37	J	10
6105	J10	A4-38	J	10
6163	D4	A4-38	D	4
6163	D4	A4-38	D	4
7100	J10	A4-38	J	10
7100	J10	A4-38	J	10
7102	J10	A4-38	J	10
7106	J10	A4-38	J	10
7107	J10	A4-38	J	10
7161	J10	A4-38	J	10
7163	J10	A4-38	J	10
7164	J10	A4-38	J	10
7700	J10	A4-38	J	10
9106	J10	A4-38	J	10
9111	J10	A4-38	J	10
9112	J10	A4-38	J	10
9113	J10	A4-38	J	10
9703	C11	A4-38	C	11
9802	C11	A4-38	C	11
9802	C11	A4-38	C	11
A079	C10	A4-38	C	10
A080	C10	A4-38	C	10
A091	I13	A4-38	I	13
A092	I13	A4-38	I	13
A093	I13	A4-38	I	13
A095	J16	A4-38	J	16
A096	J16	A4-38	J	16
A097	J16	A4-38	J	16
A098	J16	A4-38	J	16
A099	J16	A4-38	J	16
A1-05	J16	A4-38	J	16



→ = 0V

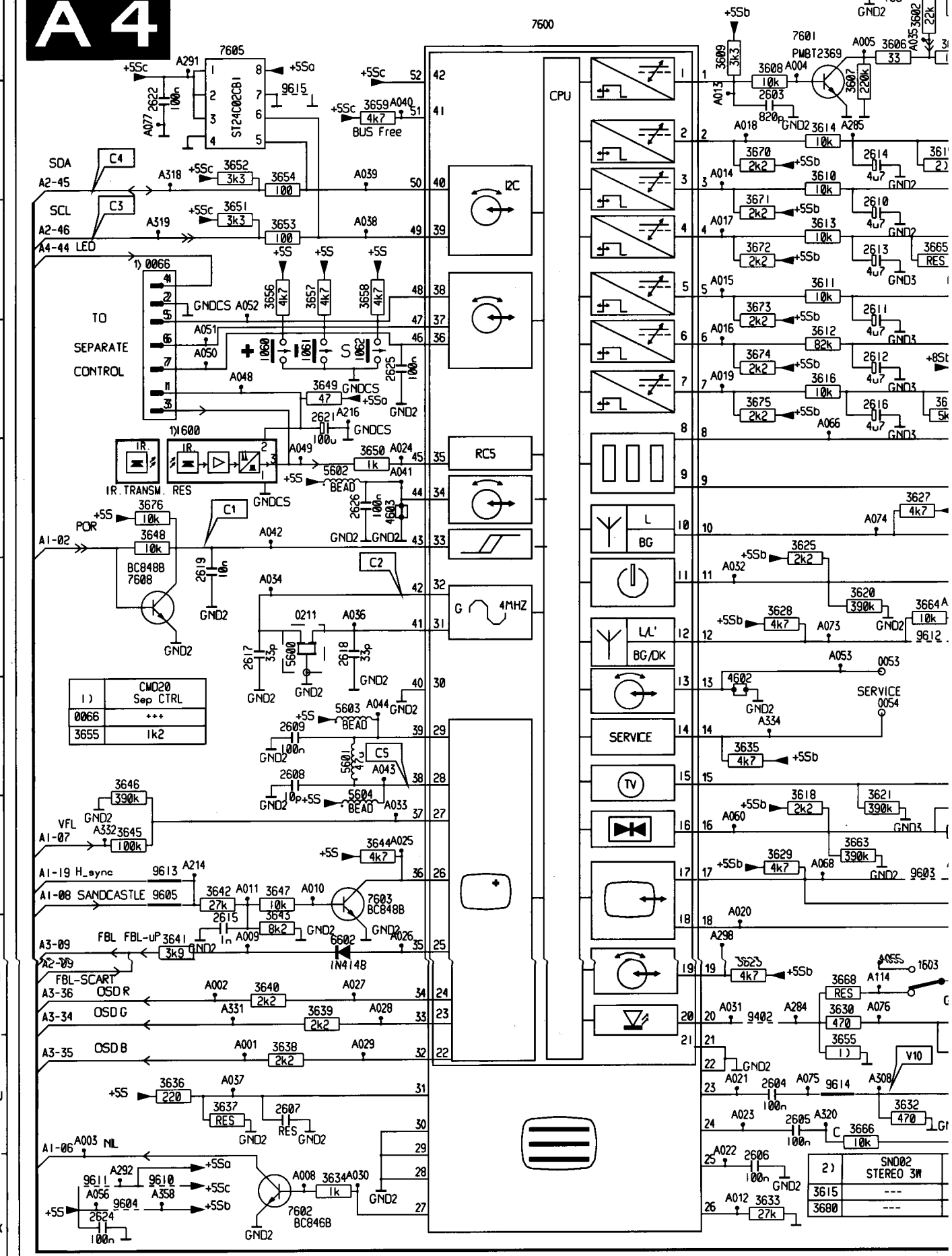
V7 Secam (Only)
V9 8V6 DC



OSC_A3.AI

CONTROL + TXT

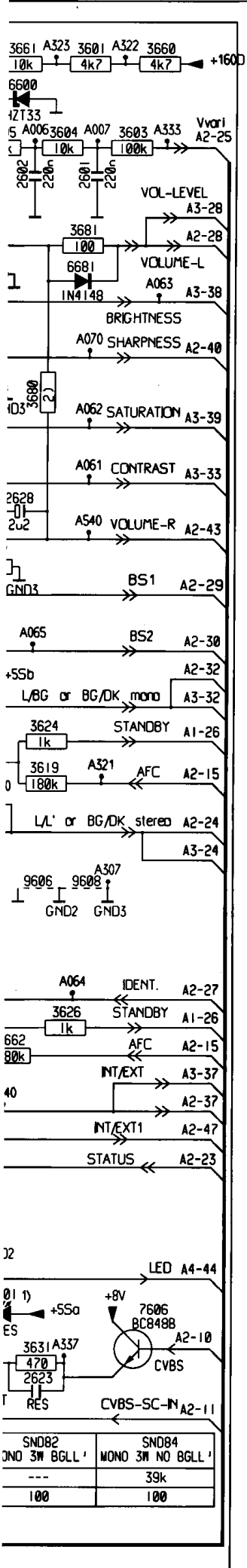
A4



1)	CMD20
	Sep CTRL
0066	+++
3655	1k2

2)	SND02
	STEREO 3W
3615	---
3680	---

Commande & Télétex



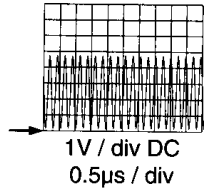
0053	F	5603	G	A285	B	7
0054	G	5604	H	A291	A	2
0066	A	6600	A	A292	K	6
0066	C	6601	J	A298	I	1
0066	C	6602	I	A3-09	F	9
0066	C	6681	B	A3-24	B	9
0066	C	7600	A	A3-28	B	9
0066	C	7601	A	A3-32	F	9
0066	C	7602	A	A3-33	D	1
0211	D	7603	H	A3-34	I	1
1060	D	7605	A	A3-35	J	1
1061	D	7606	A	A3-36	I	1
1062	D	7608	A	A3-37	H	9
1600	D	9402	F	A3-38	B	9
1603	D	9603	H	A3-39	C	9
2600	A	9604	K	A307	G	9
2601	B	9605	H	A308	J	7
2602	B	9606	G	A318	I	1
2603	B	9608	G	A319	J	1
2604	J	9610	K	A320	J	9
2605	K	9611	I	A321	F	9
2606	K	9612	B	A322	A	9
2607	J	9613	F	A323	A	9
2608	G	9614	J	A330	F	9
2609	G	9615	B	A331	I	9
2610	C	A001	J	A332	H	9
2611	C	A002	J	A333	A	9
2612	C	A003	J	A334	G	7
2613	C	A004	A	A337	J	9
2614	B	A005	A	A340	H	8
2615	B	A006	A	A358	K	1
2616	B	A007	A	A4-44	C	9
2617	F	A008	K	A540	D	9
2618	F	A009	I			
2619	F	A010	H			
2621	D	A011	N			
2622	B	A012	X			
2623	J	A013	B			
2624	K	A014	B			
2625	D	A015	C			
2626	E	A016	D			
2628	E	A017	C			
3601	A	A018	B			
3602	A	A019	B			
3603	A	A020	I			
3604	A	A021	J			
3605	A	A022	K			
3606	A	A023	L			
3607	B	A024	E			
3608	A	A025	H			
3609	A	A026	I			
3610	B	A027	I			
3611	C	A028	J			
3612	D	A029	J			
3613	D	A030	K			
3614	D	A031	I			
3615	D	A032	F			
3616	D	A033	H			
3617	D	A034	F			
3618	H	A035	A			
3619	F	A036	F			
3620	F	A037	J			
3621	H	A038	C			
3623	H	A039	B			
3624	E	A040	B			
3625	E	A041	E			
3626	E	A042	E			
3627	E	A043	E			
3628	E	A044	E			
3629	H	A047	A			
3630	I	A048	D			
3631	J	A049	E			
3632	J	A050	D			
3633	K	A051	D			
3634	K	A052	C			
3635	G	A053	F			
3636	J	A055	I			
3637	J	A056	K			
3638	J	A060	H			
3639	I	A061	D			
3640	I	A062	D			
3641	I	A063	C			
3642	H	A064	E			
3643	H	A065	E			
3644	H	A066	D			
3645	H	A068	H			
3646	G	A070	C			
3647	E	A073	F			
3648	E	A074	F			
3649	D	A075	J			
3650	D	A076	I			
3651	C	A077	B			
3652	I	A1-02	E			
3653	I	A1-06	J			
3654	B	A1-07	H			
3655	L	A1-08	H			
3656	C	A1-19	H			
3657	C	A1-26	E			
3658	C	A1-26	H			
3659	B	A114	I			
3660	A	A2-09	I			
3661	A	A2-10	J			
3662	A	A2-11	J			
3663	H	A2-15	F			
3664	F	A2-15	H			
3665	C	A2-23	I			
3666	J	A2-24	F			
3668	J	A2-25	A			
3670	B	A2-27	G			
3671	A	A2-28	B			
3672	C	A2-29	D			
3673	C	A2-30	E			
3674	D	A2-32	F			
3675	D	A2-37	H			
3676	E	A2-40	C			
3680	D	A2-43	D			
3681	D	A2-45	B			
4602	B	A2-46	C			
4603	F	A2-47	C			
5600	F	A214	H			
5601	G	A216	D			
5602	F	A284	I			

C1 5V DC

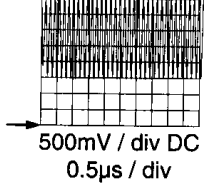
C3 5V DC

C4 5V DC

C2



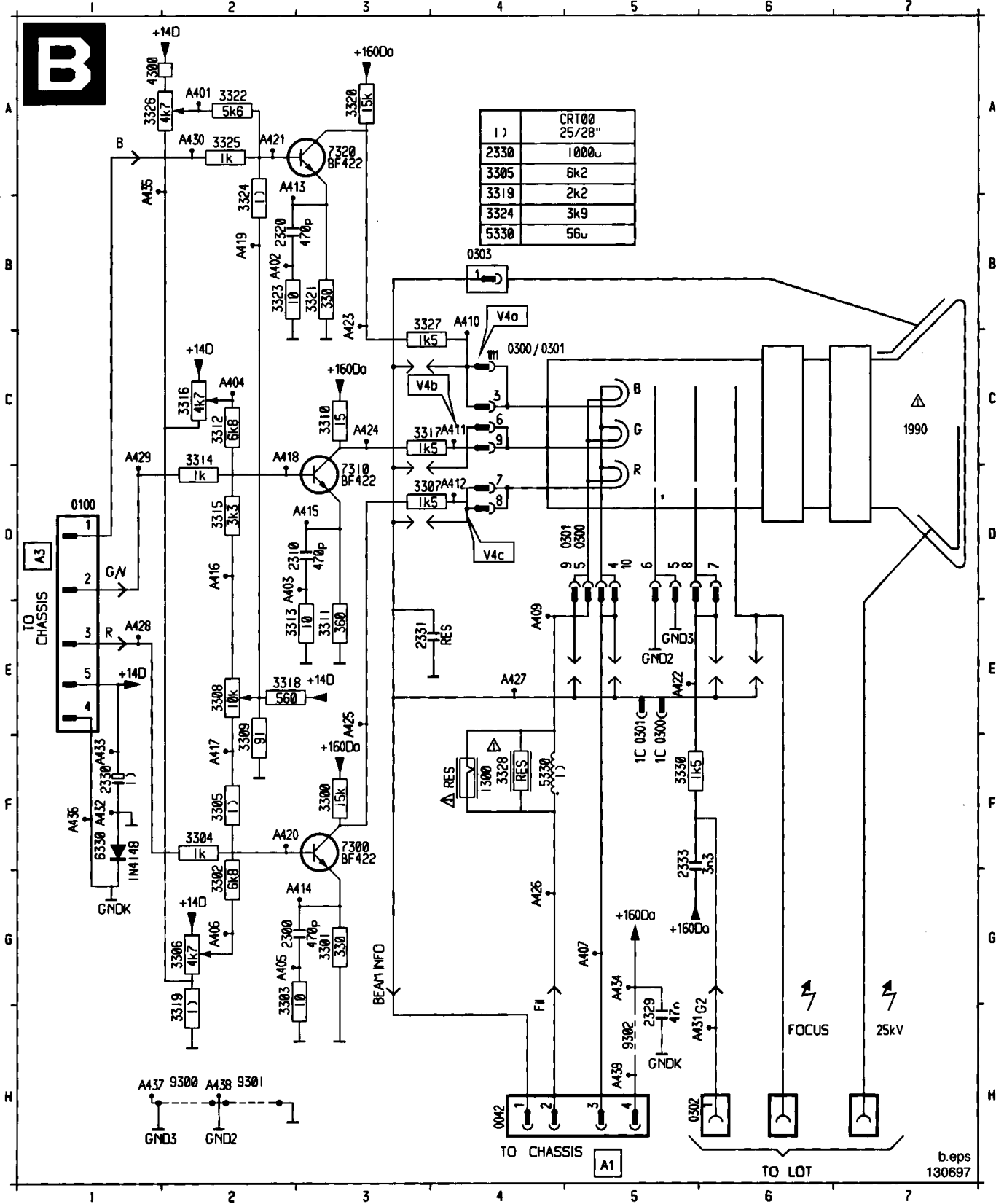
C5



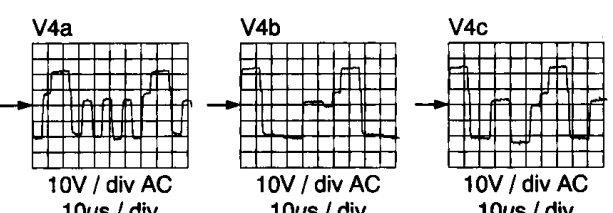
→ = 0V

OSC_A4.AI

0042	H 4	0300	0300	0303	3300	3313	3324	B 2	7320	A 3	A409	E 4	A420	F 2	A431	H 6
0042	H 4	0300	0300	1300	3300	3314	3325	A 1	9300	H 2	A410	B 4	A421	F 4	A432	F 1
0042	H 4	0301	0301	2300	3300	3315	3326	A 1	9301	H 2	A411	C 4	A422	F 4	A433	F 1
0042	H 4	0301	0301	2300	3300	3316	3327	B 3	9302	H 4	A412	D 4	A423	B 4	A434	G 5
0100	I 1	0301	0301	2300	3300	3317	3328	A 4	A401	A 1	A413	A 2	A424	B 4	A435	A 1
0300	C 4	0301	0301	2300	3300	3318	3330	F 5	A402	A 1	A414	G 4	A425	B 4	A436	F 1
0300	C 4	0301	0301	2300	3300	3319	4300	A 1	A403	A 1	A415	B 4	A426	B 4	A437	A 1
0300	C 4	0301	0301	2300	3300	3320	5330	A 4	A404	A 1	A416	D 4	A427	C 4	A438	H 2
0300	C 4	0301	0301	2300	3300	3321	6330	A 1	A405	A 1	A417	D 4	A428	C 4	A439	H 2
0300	C 4	0301	0301	2300	3300	3322	7310	D 3	A406	A 1	A418	C 4	A429	C 4		
0300	C 4	0502	H 5	3500	3500	3523	7510	D 3	A407	A 1	A419	B 2	A430	A 2		



1)	CRT00	25/28"
2330	1000 μ	
3305	6k2	
3319	2k2	
3324	3k9	
5330	56 μ	

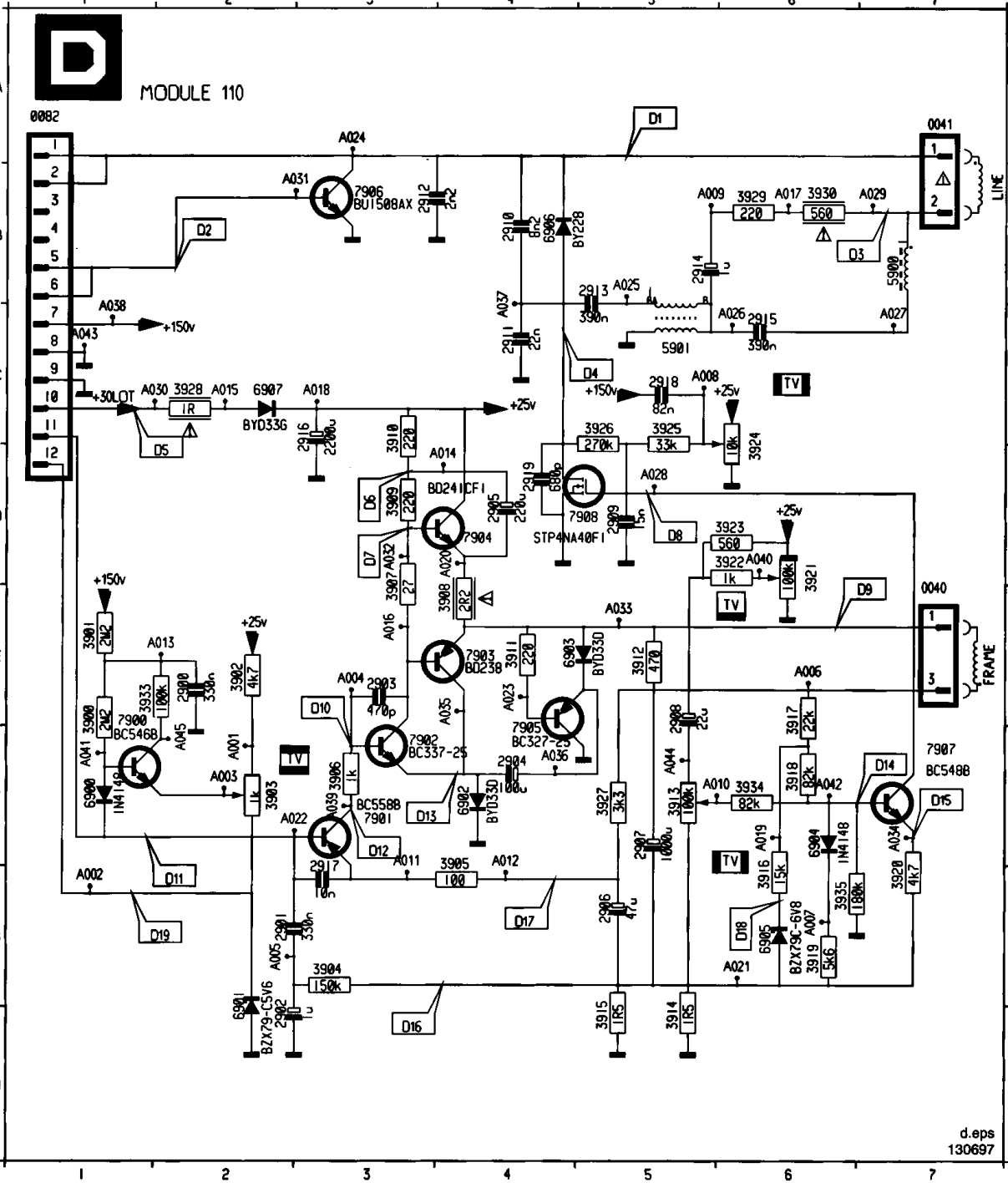
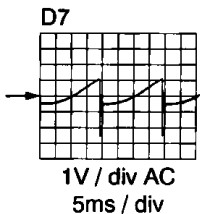
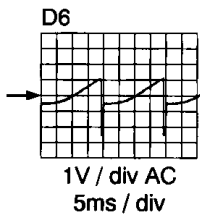
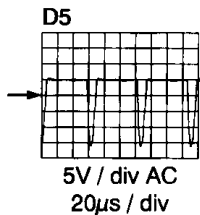
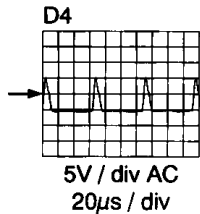
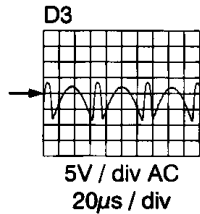
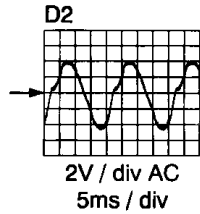
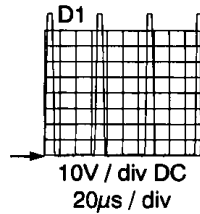


→ = 0V

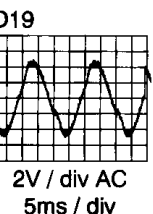
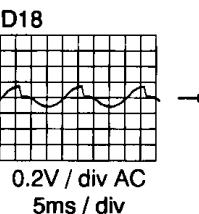
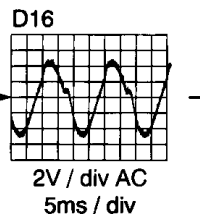
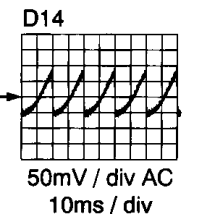
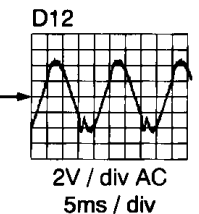
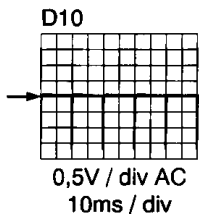
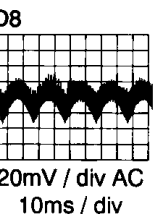
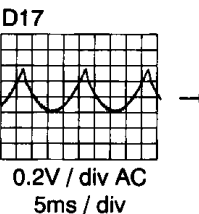
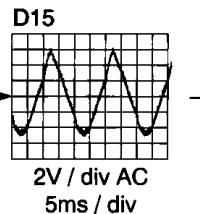
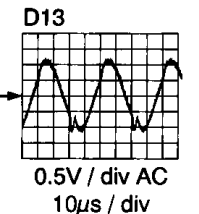
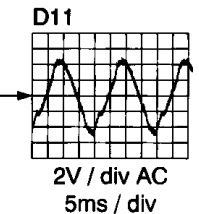
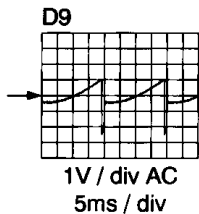
b.eps
130697

Deflection module 110° / Ablenkung-Modul 110° / Module de déviation 110°

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0041	A 7	2911	3904	7907	3917	3926	6907	A004	A017	A030	A043	F 5
0082	A 7	2911	3905	7908	3918	3927	6908	A005	A018	A031	A044	F 5
2900	N 7	2911	3906	7909	3919	3928	6909	A006	A019	A032	A045	F 2
2901	N 7	2911	3907	7910	3920	3929	6910	A007	A020	A033		
2902	N 7	2911	3908	7911	3921	3930	6911	A008	A021	A034		
2903	N 7	2911	3909	7912	3922	3931	6912	A009	A022	A035		
2904	N 7	2911	3910	7913	3923	3932	6913	A010	A023	A036		
2905	N 7	2911	3911	7914	3924	3933	6914	A011	A024	A037		
2906	N 7	2911	3912	7915	3925	3934	6915	A012	A025	A038		
2907	N 7	2911	3913	7916	3926	3935	6916	A013	A026	A039		
2908	N 7	2911	3914	7917	3927	3936	6917	A014	A027	A040		
2909	N 7	2911	3915	7918	3928	3937	6918	A015	A028	A041		



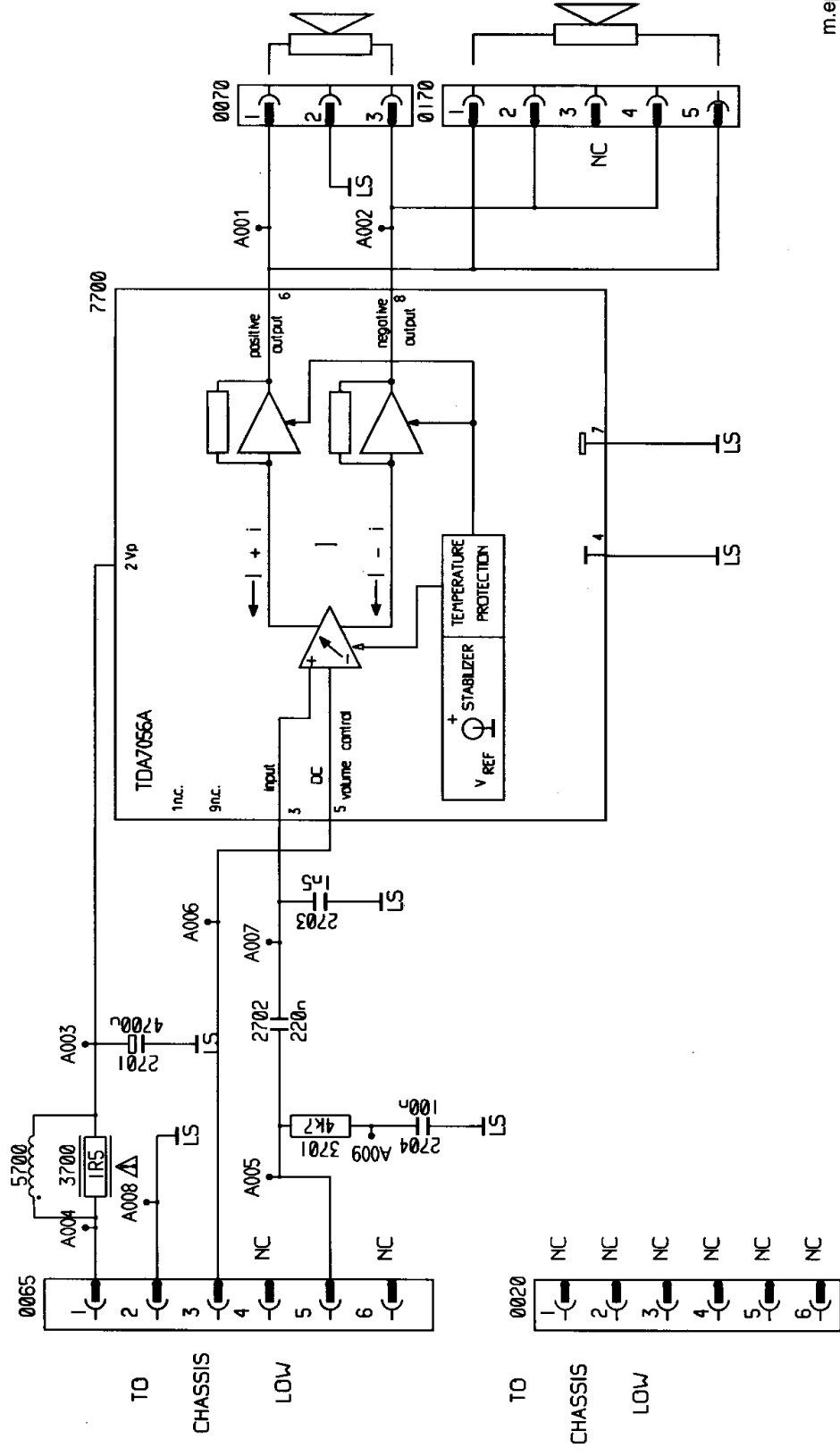
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3W amplifier mono/ 3W Verstärker Mono / 3W amplificateur mono

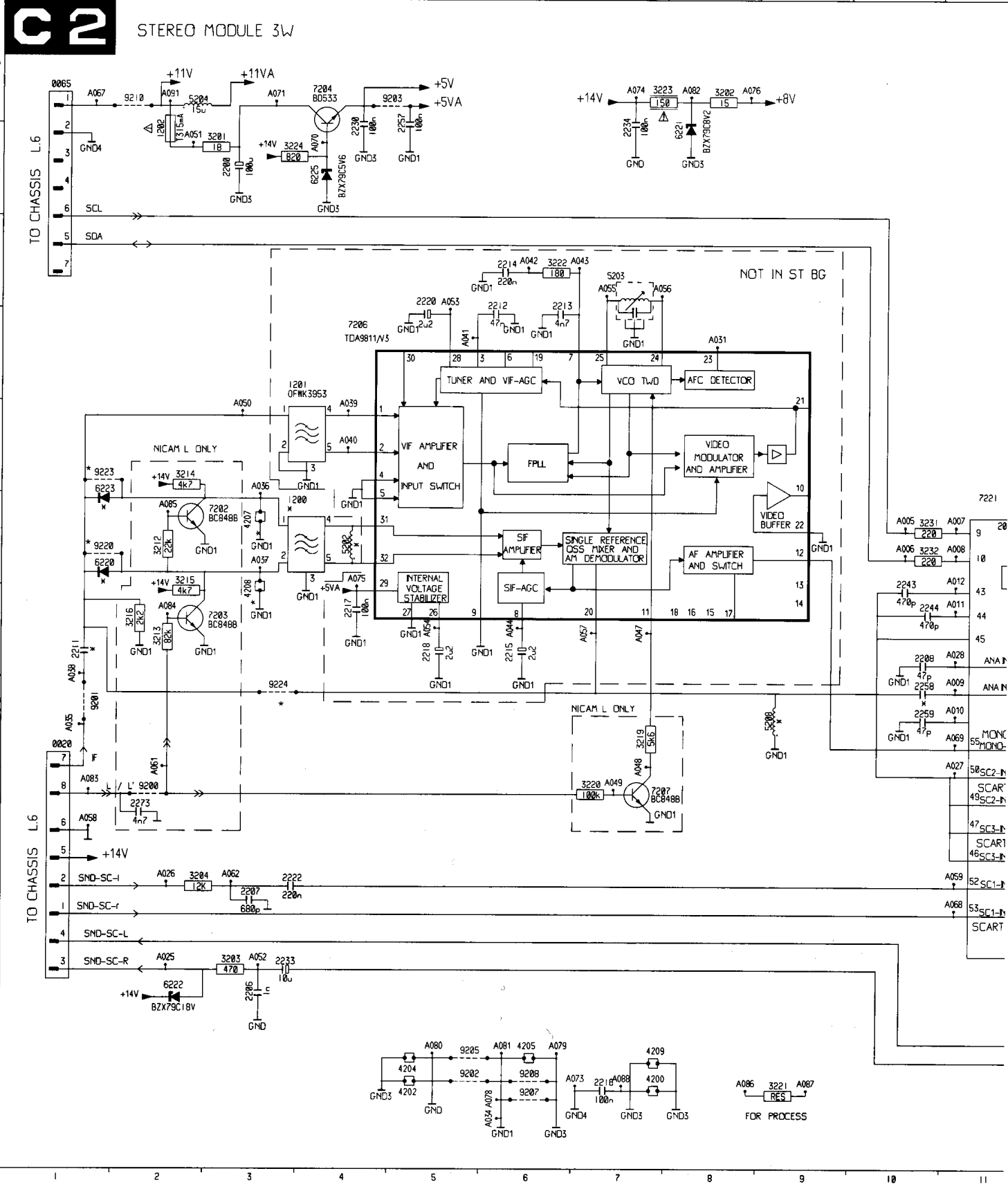


MODULE MONO SOUND 1X3W



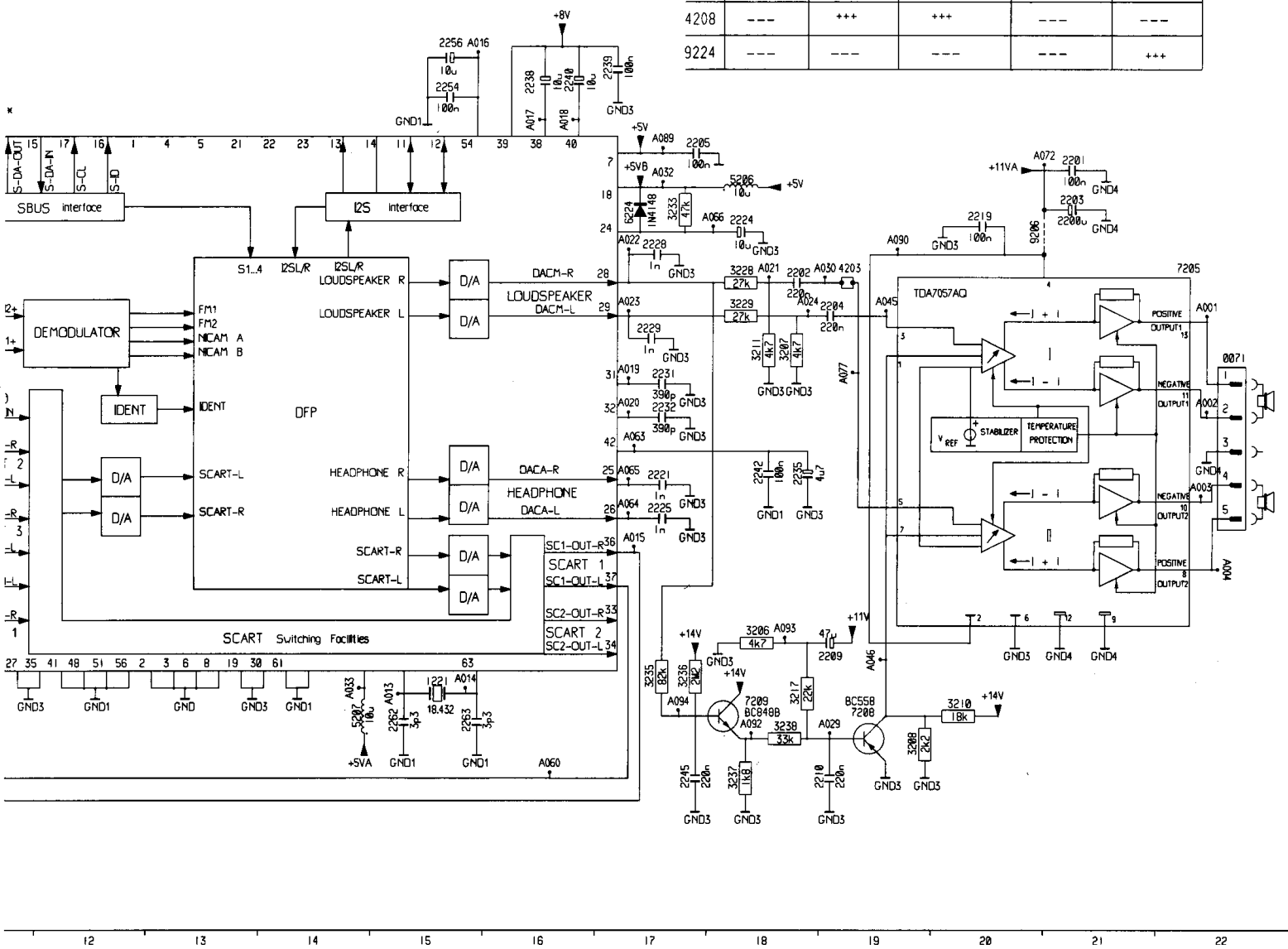
2 x 3W amplifier / 2 x 3W Verstärker / 2 x 3W amplificateur

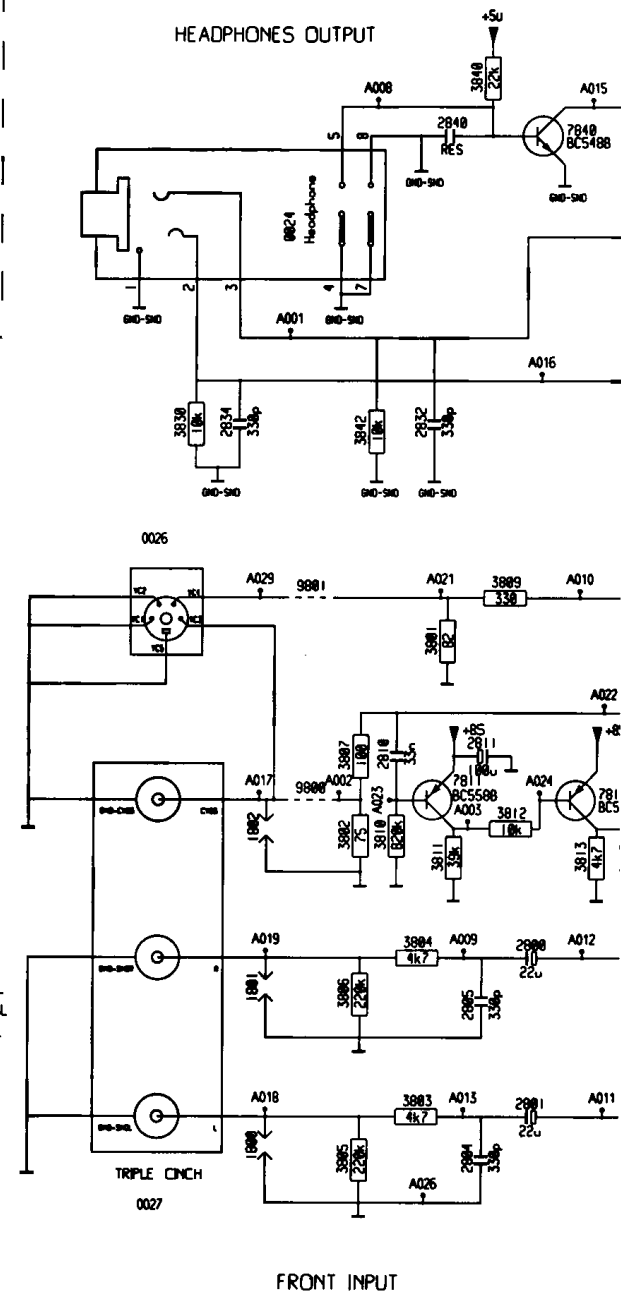
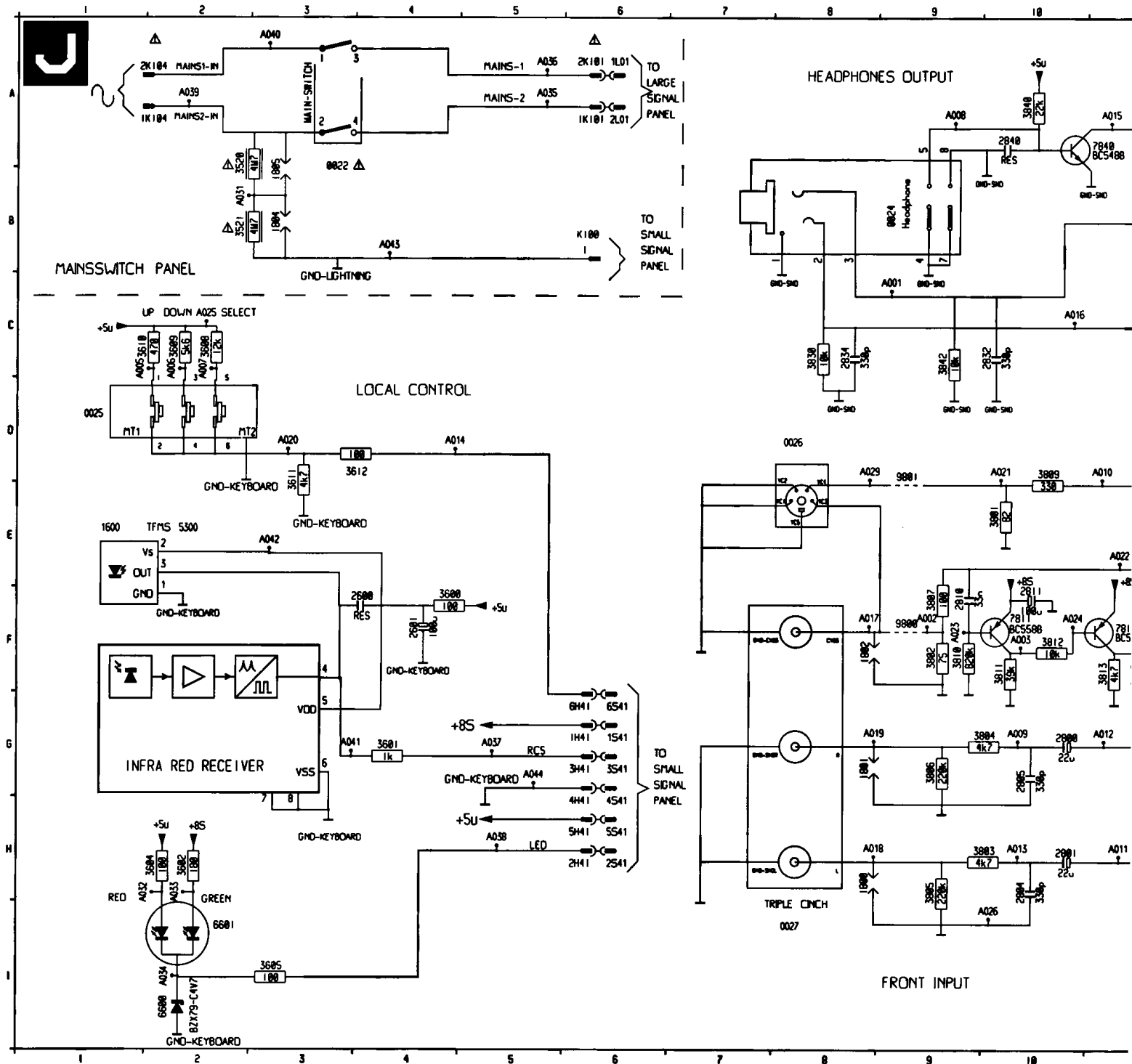
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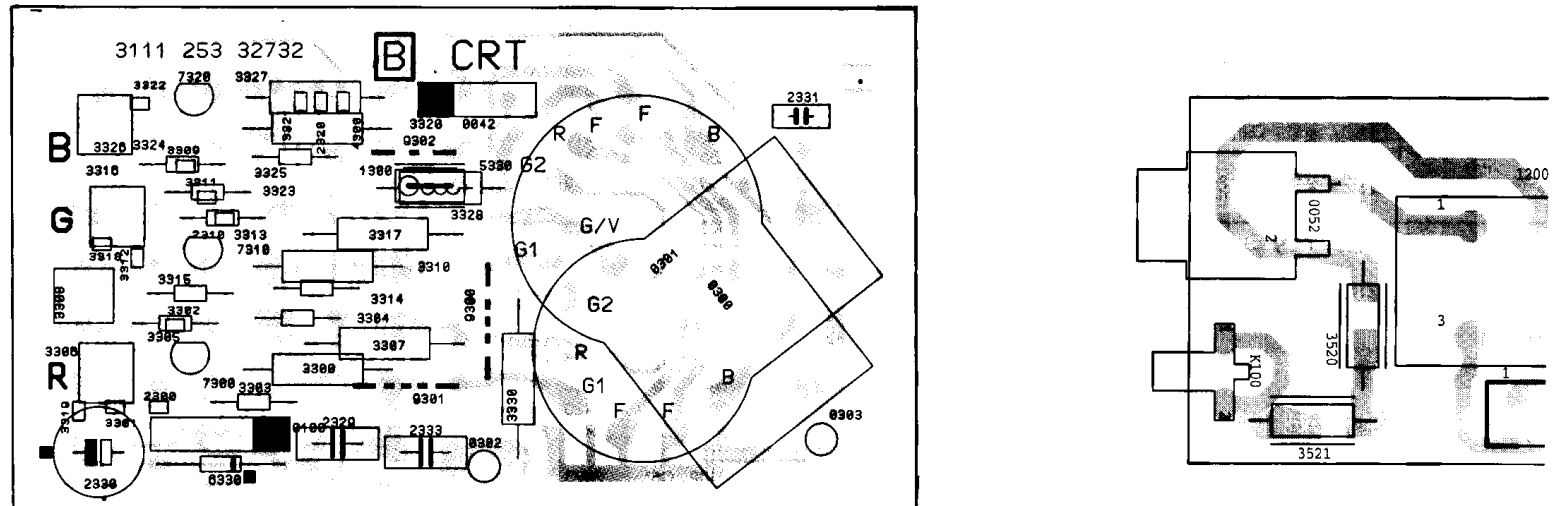
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1	9207	L16	A002	H22	A009	H11	A016	E15	A023	G17	A030	G19	A037	F13	A044	G16	A051	E13	A058	I11	A065	I17	A072	F28	A079	L16	A086	L18	A093	J18
2	9208	L16	A003	J22	A010	H11	A017	F16	A024	G18	A031	D18	A038	F13	A045	G19	A052	K19	A059	J11	A066	G18	A073	L17	A080	L15	A087	L19	A094	K17
3	9210	A12	A004	J22	A011	G11	A018	F16	A025	K12	A032	F17	A039	F13	A046	J19	A053	F17	A060	K16	A067	A11	A074	A17	A081	L16	A088	F17	A095	J18
4	9220	F11	A005	F10	A012	F11	A019	H17	A026	J12	A033	K14	A040	F13	A047	G17	A054	K14	A061	H12	A068	J11	A075	F14	A082	A18	A089	F17	A096	J18
5	9224	H13	A006	F11	A013	K15	A020	H17	A027	H11	A034	L16	A041	F13	A048	H17	A055	H11	A062	J13	A069	H11	A076	A18	A083	I11	A090	G19	A097	A12

	NIC L	NIC I	NIC BG	NIC BG/DK	ST BG
1200	OPWK9456	OFWK9353	OFWG9353	OPWK9456	-
2211	47p	47p	47p	47p	12p
2258	4n7	4n7	4n7	4n7	4p7
5202	2U2	-	-	-	-
5208	-	-	-	-	39u
6220	1N4148	-	-	-	-
6223	1N4148	-	-	-	-
7221	MPS3410 BF7	MPS3410 BF7	MPS3410 BF7	MSP3410 BF7	MPS3400 TC15
9220	---	---	---	+++	---
9223	---	+++	+++	---	---
4207	---	---	---	+++	---
4208	---	+++	+++	---	---
9224	---	---	---	---	+++



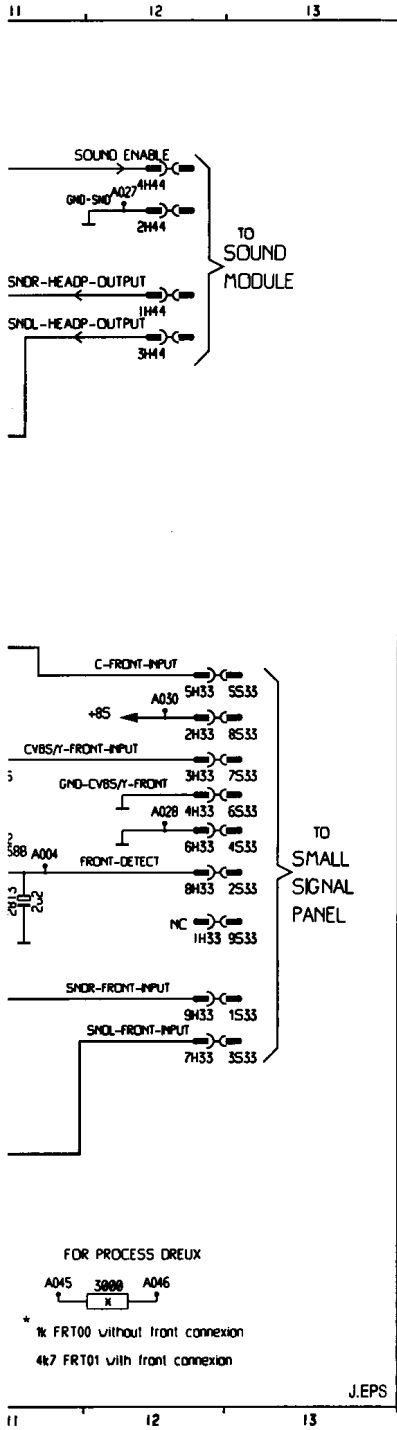


CRT PANEL



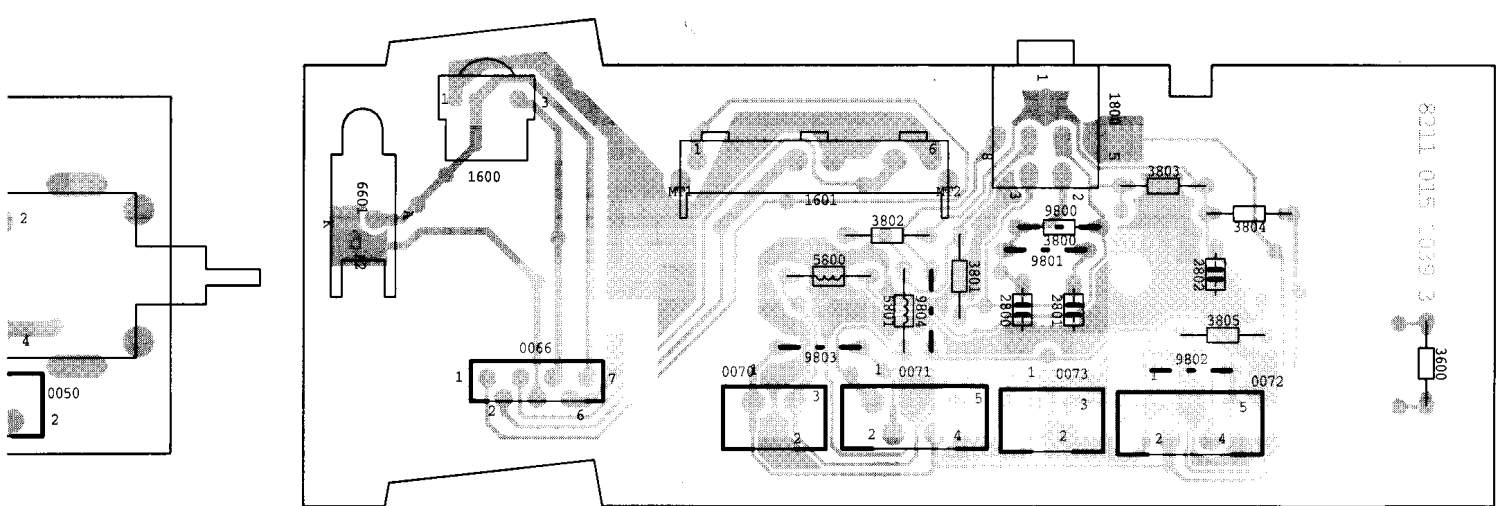
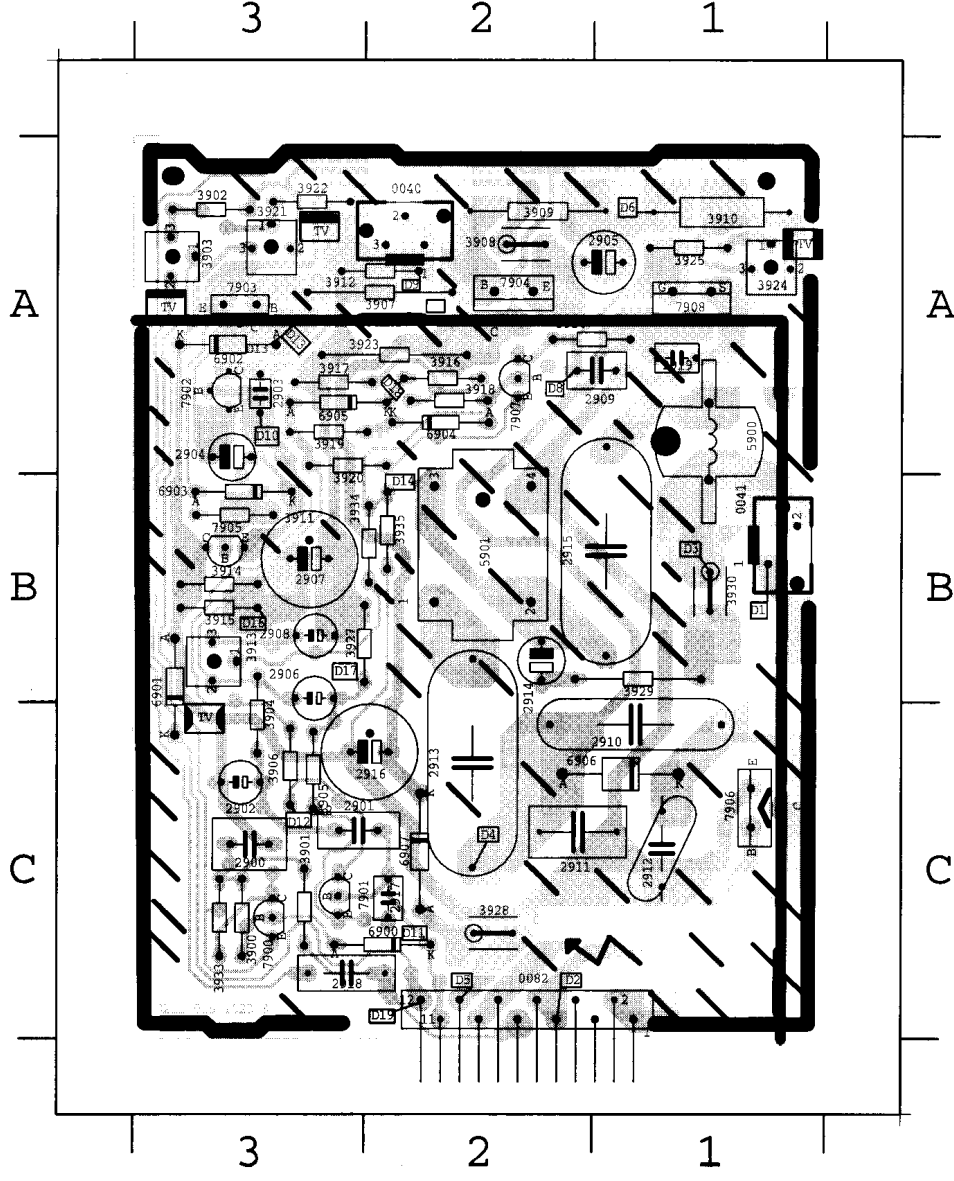
Netz-Modul / Commande & Module du secteur

DEFLECTION MODULE 110°



0022	B 0	H33	F12
0024	B 1	H33	F12
0025	B 2	H33	F12
0026	B 3	H33	F12
0027	B 4	H33	F12
1600	B 5	H33	F12
1800	B 6	H41	F12
1801	B 7	H41	F12
1802	B 8	H41	F12
2600	B 9	H41	F12
2601	B 10	H41	F12
2602	B 11	H41	F12
2603	B 12	H41	F12
2801	B 13	H44	F12
2804	B 14	H44	F12
2805	B 15	H44	F12
2810	B 16	H44	F12
2811	B 17	K100	F12
2813	B 18	K101	F12
2832	B 19	K101	F12
2834	B 20	K104	F12
2840	B 21	K104	F12
3000	B 22	A 2	F12
3520	B 23	A 3	F12
3521	B 24	A 4	F12
3600	B 25	A 4	F12
3601	B 26	A 4	F12
3602	B 27	A 4	F12
3603	B 28	A 4	F12
3604	B 29	A 4	F12
3605	B 30	A 4	F12
3608	B 31	A 4	F12
3609	B 32	A 4	F12
3610	B 33	A 4	F12
3611	B 34	A 4	F12
3612	B 35	A 4	F12
3801	B 36	A 9	F12
3802	B 37	A 9	F12
3803	B 38	A 9	F12
3804	B 39	A 9	F12
3805	B 40	A 9	F12
3806	B 41	A 9	F12
3807	B 42	A 9	F12
3808	B 43	A 9	F12
3809	B 44	A 9	F12
3810	B 45	A 9	F12
3811	B 46	A 9	F12
3812	B 47	A 9	F12
3813	B 48	A 9	F12
3830	B 49	A 10	F12
3840	B 50	A 10	F12
3841	B 51	A 10	F12
3842	B 52	A 10	F12
6500	B 53	A 2	F12
6501	B 54	A 3	F12
6502	B 55	A 4	F12
6503	B 56	A 5	F12
6504	B 57	A 6	F12
6505	B 58	A 7	F12
6506	B 59	A 8	F12
6507	B 60	A 9	F12
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6514	B 67	A 16	F12
6515	B 68	A 17	F12
6516	B 69	A 18	F12
6517	B 70	A 19	F12
6518	B 71	A 20	F12
6519	B 72	A 21	F12
6520	B 73	A 22	F12
6521	B 74	A 23	F12
6522	B 75	A 24	F12
6523	B 76	A 25	F12
6524	B 77	A 26	F12
6525	B 78	A 27	F12
6526	B 79	A 28	F12
6527	B 80	A 29	F12
6528	B 81	A 30	F12
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6532	B 85	A 34	F12
6533	B 86	A 35	F12
6534	B 87	A 36	F12
6535	B 88	A 37	F12
6536	B 89	A 38	F12
6537	B 90	A 39	F12
6538	B 91	A 40	F12
6539	B 92	A 41	F12
6540	B 93	A 42	F12
6541	B 94	A 43	F12
6542	B 95	A 44	F12
6543	B 96	A 45	F12
6544	B 97	A 46	F12
6545	B 98	A 47	F12
6546	B 99	A 48	F12
6547	B 100	A 49	F12
H33	B 101	H33	F12
H33	B 102	H33	F12
H33	B 103	H33	F12

0040 A 2	2904 A 3	2911 C 2	2918 C 2	3905 C 3	3912 A 3	3919 A 2	3926 A 1	3935 B 2	6904 A 2	7903 A 3
0041 B 1	2905 A 1	2912 C 1	2919 A 1	3906 C 3	3913 B 3	3920 A 2	3927 B 3	5900 B 1	6905 A 3	7904 A 2
0082 C 1	2906 B 3	2913 C 2	3900 C 3	3907 A 2	3914 B 3	3921 A 3	3928 C 2	5901 B 2	6906 C 2	7905 B 3
2900 C 3	2907 B 3	2914 B 2	3901 C 3	3908 A 2	3915 B 3	3922 A 3	3929 B 1	6900 C 3	6907 C 2	7906 C 1
2901 C 3	2908 B 3	2915 B 1	3902 A 3	3909 A 1	3916 A 2	3923 A 2	3930 B 1	6901 B 3	7900 C 3	7907 A 2
2902 C 3	2909 A 1	2916 C 2	3903 A 3	3910 A 1	3917 A 3	3924 A 1	3933 C 3	6902 A 3	7901 C 3	7908 A 1
2903 A 3	2910 C 1	2917 C 2	3904 B 3	3911 B 3	3918 A 2	3925 A 1	3934 B 2	6903 B 3	7902 A 3	



8. Electrical adjustments

8.1 Adjustments on the 110 module panel

8.1.1 Horizontal amplitude

Is adjusted with potentiometer R3924

8.1.2 Vertical centring

Is adjusted with potentiometer R3921

8.1.3 Picture height

Is adjusted with potentiometer R3903

8.1.4 East-west correction

Is adjusted by potentiometer R3913

Note: R3903, R3919, R3921 and R3924 are located on the 110° module pcb.

8.1.5 Horizontal centring (main pcb)

Is adjusted with potentiometer R3129 on the main PCB

8.1.6 Focusing

Is adjusted with the focusing potentiometer in the line output transformer

8.1.7 AFC

- a) Adjustment of the AFC and picture demodulator (all versions).
Select a non secam L/L' system in the SDAM mode (negative modulation). Switch the tuner to HIGH BAND (pin 11 of tuner 1100 grounded). Connect a pattern generator to pin 17 of the tuner via a capacitor of 4.7nF and put a 82W resistor from the output of the generator to ground. Connect a DC voltmeter to pin 44 of IC7100. Adjust coil 5100 to get 3V5 on pin 44 of IC7100. The signal of the generator has to be 38.9 MHz.
- b) Adjustment of the AFC and picture demodulator. (BAND 1 L. France versions only).
Same story as a) only the frequency of the generator has to be 33.9Mhz with positive modulation.

8.1.8 RF AGC

If the picture of a strong local transmitter is reproduced distorted, adjust potentiometer R3130 until the picture is undistorted.

or: Connect a pattern generator (e.g. PM5518) to the aerial input with RF signal amplitude = 1mV. Connect a multimeter (DC) at pin 5 of the tuner. Adjust R3130 so that voltage at pin 5 of the tuner is 8V5 +/- 0V5 DC.

8.2 Adjustments on the CRT panel

8.2.1 VG2 cut-off points of picture tube

Apply a black CVBS signal at the input pin 20 of scart.
Adjust the brightness in order to have 1.6V during the line at the R,G,B outputs of the BIMOS pin 18,19,20 of IC7100.
Put potentiometers R3326, R3316 and R3306 to the minimum value (maximum voltage on the CRT cathodes). Adjust now VG2 till the colour that luminates first is not visible anymore.
Adjust now the other two potentiometers in such a way that they just don't luminate.
Potentiometer R3308 should always be in the mid-position.

9. Circuit description

- 9.1** For the description of the audio and video processing see the description in the AA5 AA service manual.

For the description of the power supply see the description in the L6.1 AA service manual.

General

The differences between L6.1 and L6.2 are:

- Large 25" and 28" picture tubes for L6.2
- Stereo 2 X 3 Watt/ stereo headphone
- Mono 3 Watt (also present in some L6.1 versions)

Electrical consequences are a new deflection module (110 degrees), a 2 X 3 Watt stereo amplifier panel and some small adaptations on the L6.2 main panel(derived from L6.1).

9.2 110 deflection module

General

For the 25" and 28" sets a 110 module is needed for East/West correction. This panel is allocated on the right hand side of the mainboard (seen from the rear). East/west correction in this module is based on the diode-modulator principle; the current through the horizontal deflection coil is modulated. As this is done by a parabolic-shaped voltage, E/W distortion is corrected. This parabolic-shaped voltage is derived from a saw-tooth-shaped voltage of the frame deflection.

9.3 Frame (time base frame)

Because the raster part is fed by the primary side a galvanic isolator must be applied between IC 7100 (= so called Bimos ic) in the secondary side and the raster amplifier on primary side. This is realised by opto coupler (7422); this opto coupler will be switched and it will block the saw-tooth of the Bimos ic. So we don't use the saw-tooth of the Bimos((pin 42) or the feedback frame input(pin 41). The only information from the Bimos ic (=IC7100) is the flyback command (pin 43). The output of this pin is a pulse of 6 to 0 Volts during 1 mS with a period of 20mS. This signal blocks transistor 7424 and this causes conduction of the opto coupler diode (7422). The internal transistor also conduct and pins 11 and 12 (connector 00820) of the 110 module will be short circuited.

9.4 Raster part

9.4.1 Saw-tooth generator

A saw-tooth must be created because we don't use it from the Bimos ic(see annex 5). Via 150V C2901 will be charged via R3901, R3900 and D6900; the function of D6901 is to determine the lower part of the potential level. After 20mS a signal coming from the Bimos ic will short-circuit pins 11 and 12 of connector 0082 and C2901 will be discharged. It is a must to have an amplitude on the screen independent of the 50Hz or 60Hz frequency of the mains; see circuit diagram annex 6. The emitter voltage of T7900 can be adjusted with potentiometer 3903; this is the top Voltage of the saw-tooth. This is the circuit for adjusting the vertical amplitude independent of the 50/60Hz frequency. The saw-tooth will control T7901 and this transistor controls the amplifier (= T7902, T7903 and T7904).D6902, D6903, T7905 and C2904 determines the flyback. This flyback pulse is negative and is created by an inverted polarity of C2904. During the deflection T7905 is blocked and C2904 charges; during the flyback T7905 conducts and the flyback pulse will be made.

9.5 East-West modulator

The parabola is taken on C2907; R3916 and D6905 determines the shape of the parabola and they corrects the upper and lower parts. The parabola is fed via C2908 to potentiometer 3913; this for adjusting the pin-cushion correction. Via T7904 this signal goes to MosFet 7908; the Vgs command has two functions by changing the Voltage of Vgs by potentiometer 3924: pin-cushion correction and horizontal amplitude adjustment.

9.6 Special components

- D6904 + R3916 : temperature compensation of Vbe (T7904)
- R3935 : trapezium correction
- C2909 : to avoid external radiation
- C2918 : to avoid "twisted or broken" lines

9.7 Line timebase

The control voltage of pin 37 of the Bimos ic (=ic7100) is derived via opto coupler pos 7420 to transistor T7421; then send via C2428 and C2421 to pins 5 and6 of connector 0082; this is the control of the base of T7906 (=BU1508AX). At the flyback diode between collector and mass there are two parts present to allow the East/west modulation. One part of this modulator consists of D6906, T7908, C2910 and C2911. The second part another diode is not visible in the circuit diagram but it is present in the MosFet 7908.

On pins 1 and 2 of the module the primary side of the LOT is connected. The LOT supplies the following voltages:

- 3-5 : 26 Volts after smoothing
- 10-8 : 14 Volts
- 9 : 160 volts for video amplifiers

9.8 Control and teletext (Diagram A4)

9.8.1 Teletext

Control and teletext are integrated in the same μC . If there is no TXT another μC is used with less pins. In the story below, the numbers mentioned are the numbers mentioned outside the housing of IC7600.

The CVBS-signal is fed to pin 23 or 24 depending on the fact if it is the internal or external CVBS-signal. In this way teletext can be used on the ext- and the int-signal.

The teletext information and OSD-information is present at pin 32-33-34.

9.8.2 Control

μC -connections.

Supply voltage (pin 52);

If this voltage is present and the power-on signal is high the μC will start.

I²C-Bus (pin 50-49);

This bus is used to communicate with the EEPROM in which the settings are stored.

Local keyboard (pin 48-47-46);

These three inputs are present as an input for the local keyboard. The inputs become connected to ground if a key is pressed.

IR-input (pin 45);

Input for the remote-control commands

TXT / no TXT (pin 44);

Depending on the fact if jumper 4600 or 4603 is placed, the μC is told if the set is a TXT or no-TXT set.

POR (pin 43);

If the POR-signal is low the μC will not start. The μC waits until this signal becomes high. In this way the μC knows that the supply-voltage is high enough.

4Mhz oscillator (pin 42-41);

The frequency of the oscillator of the μP is determined by this crystal 5600. In the TXT execution this frequency is 12Mhz.

Ground (pin 40);

Ground of the power-supply.

OSD-Generator (pin 39-38);

The components connected these pins determine the frequency of the OSD-generator. This is 6.5 Mhz.

VFL (pin 37);

This pin is used to tell the μP that vertical flyback takes place. This information is used to determine the location of the OSD.

Horizontal flyback (pin 36);

Pin to inform the μC that horizontal flyback takes place. Also information required for OSD.

Fast-blanking signal (pin 35);

This signal (FBL) is used to indicate the video controller that there is OSD or Teletext information. So this signal blanks the video information.

OSD-signals (pin 34-33-32);

These three signals are used to create OSD information in different colours.

Nil (pin 27);

Signal to generate a DC-current through the deflection coil to create a non interlaced mode during TXT-mode.

CVBS-inputs (pin 24-23);

These pins are used as input for teletext-sources. Pin 24 is input for the CVBS-signal of the scart-input and Pin 23 or the internal CVBS of the set.

LED-drive (pin 20);

Signal to drive the LED when the set is on. With TS7607 it is possible to light the LED with a higher luminance during stand-by.

Functional switch (pin 19);

In the future the switch connected to this pin could be used instead of a mainswitch.

Status (pin 18);

Input-pin to tell the μC that there is an external-signal present. Pin 18 high is external and pin 18 low is internal signal.

Int/Ext (pin17);

Control signal to select between internal and external(scart) signal. If pin 17 is "high" the internal signal is selected, else the external.

Standby/AFC (pin 16);

This pin acts as an input for AFC-control and as an output for standby command. This pin is only used in TXT-versions.

Ident (pin 15);

This signal is high if a CVBS signal is present and low if no CVBS-signal is present. This signal is created by IC7100-6A.

Service (pin 14);

When this pin is connected to ground the service-mode is entered. Use of mains-switch not necessary.

L/L' or BG/DK (pin 12);

In case of a LL' set, selection is made between L and L'. In case of a BGDK set, selection is made between BG and DK. If this pin is "high" then L' or DK is selected.

Standby/AFC (pin 11);

This pin acts as an input for AFC-control and as an output for standby command. This pin is only used in non TXT-versions.

L/BG (pin 10);

To make a selection between AM and FM sound. When this signal is high, than FM sound is selected.

BS1-BS2 (pin 8-9);

Signal lines to select the correct band of the tuner.

	BS1	BS2
VHF1	0	1
VHF2	1	0
UHF	1	1

Control-voltage outputs (pin 7-1);

These pins are used to control volume-right, contrast, saturation, sharpness, brightness, volume-left and the tuning voltage for the VST. In case of a mono BG set, volume is controlled by signal "volume-L" connected to pin 5 of IC7100-6F. In case of a mono multi-france set, volume is controlled by signal "vol-level" connected to pin 4 of IC7700 (output amplifier).