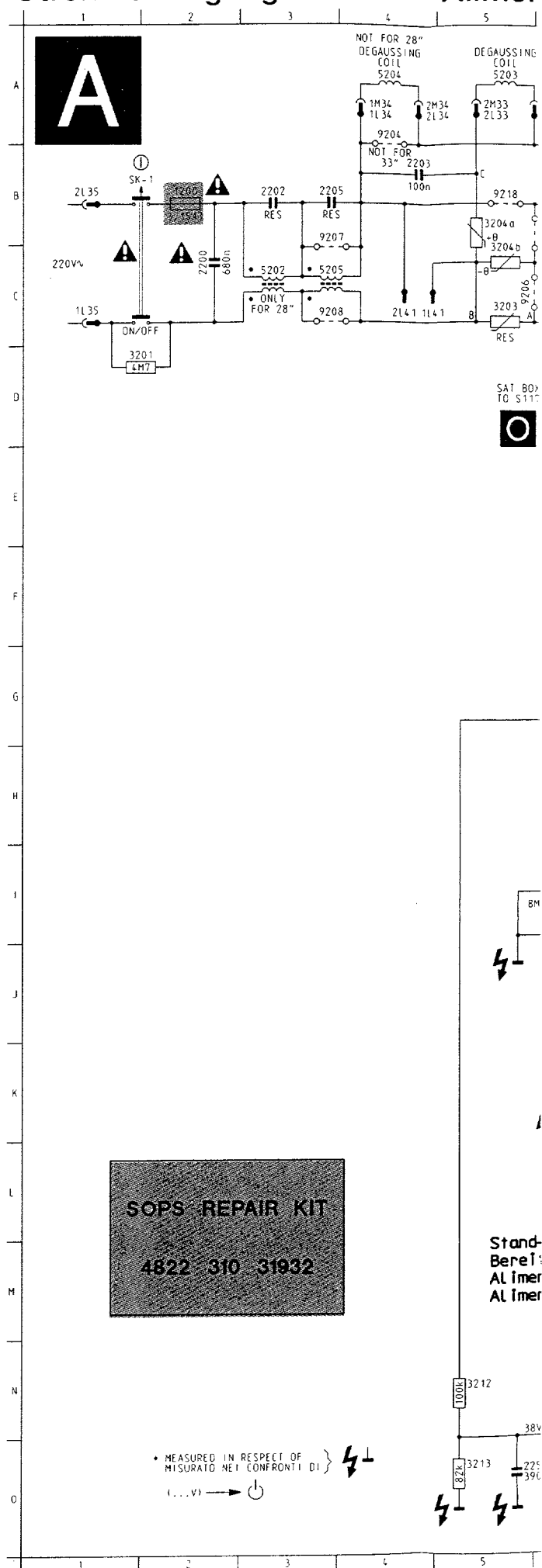


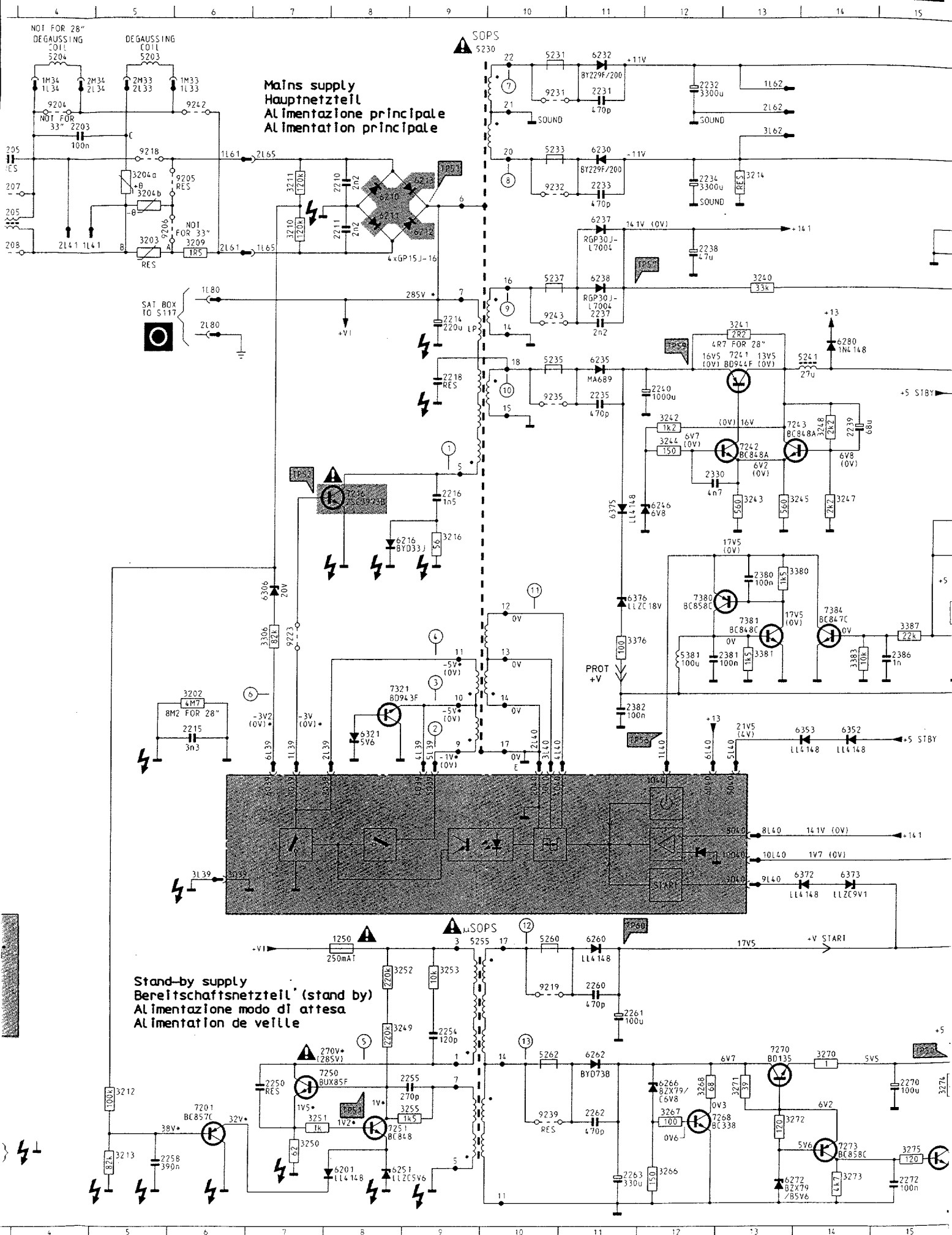
Service Service Service

Service Manual

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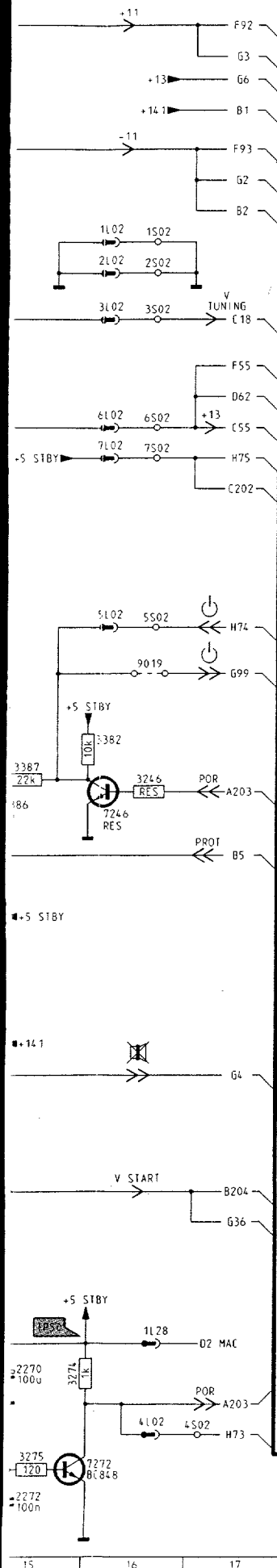
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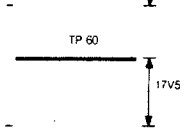
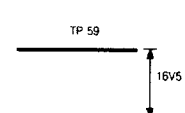
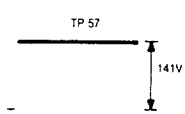
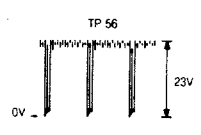
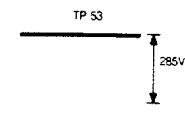
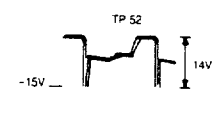
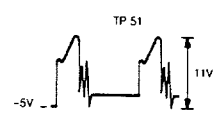
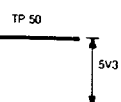
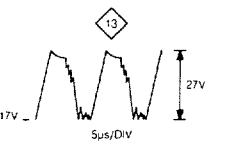
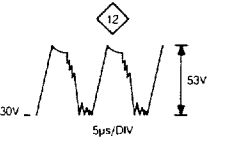
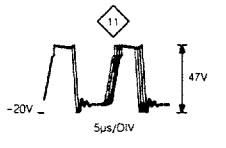
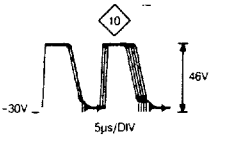
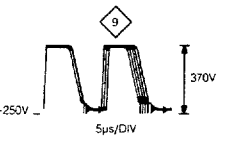
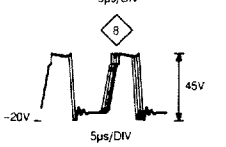
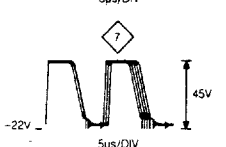
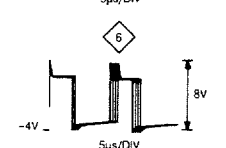
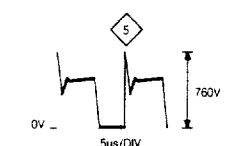
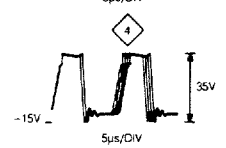
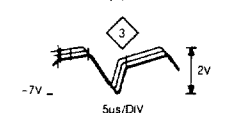
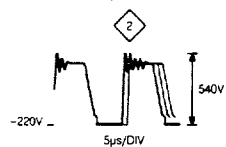
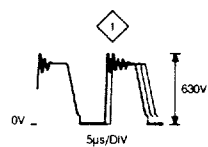
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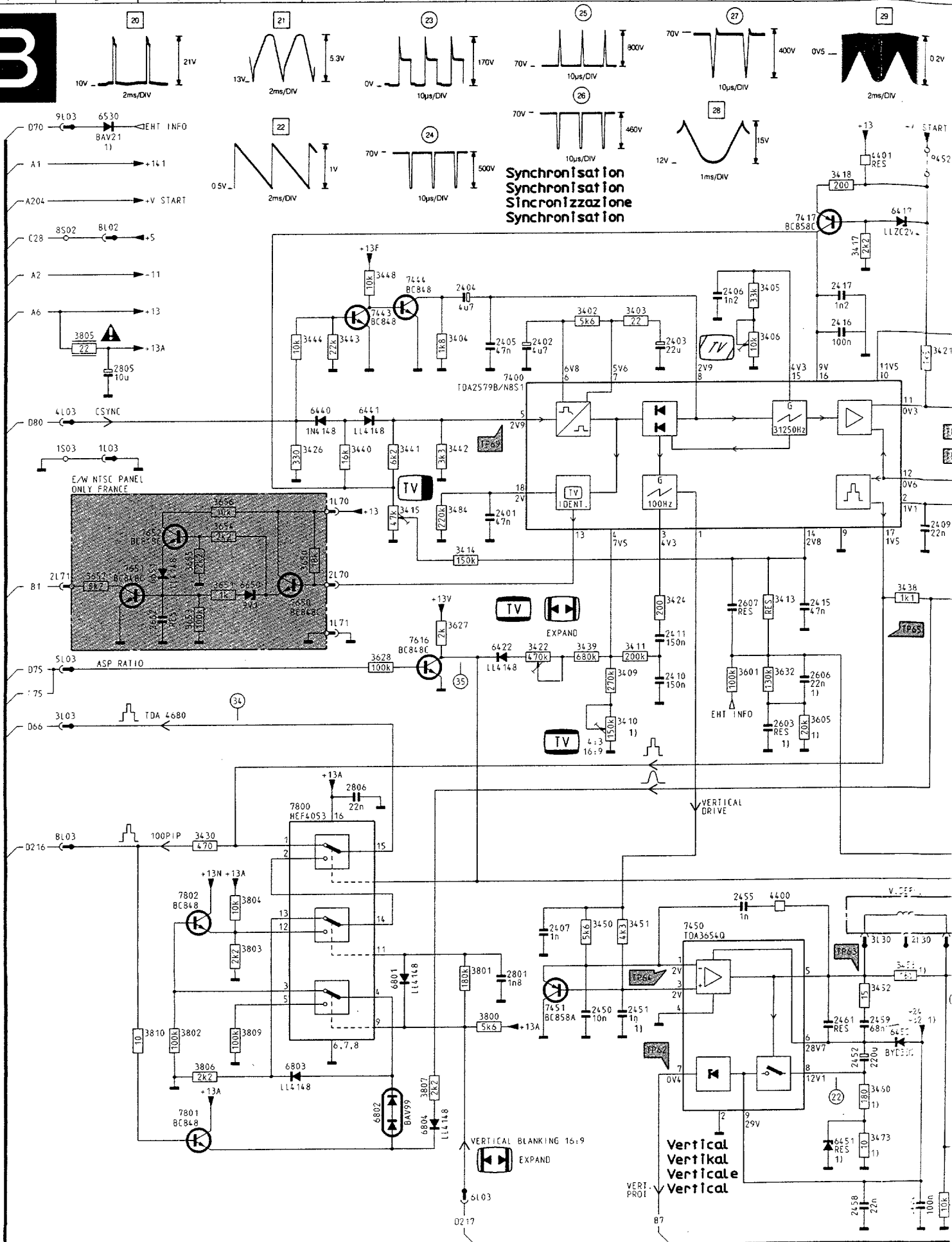


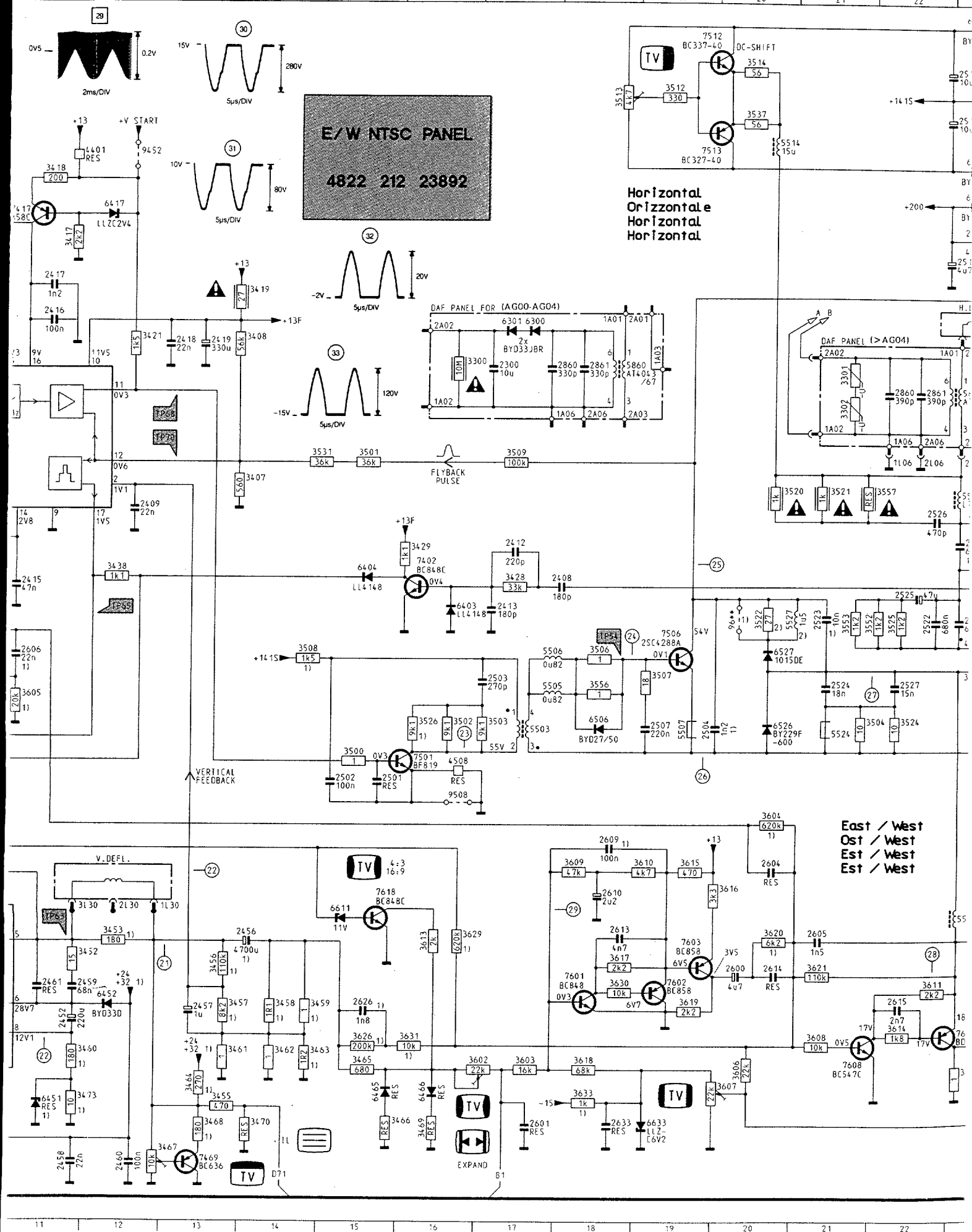
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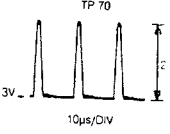
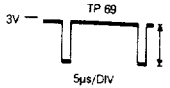
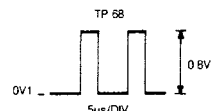
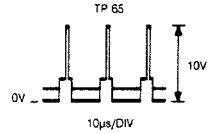
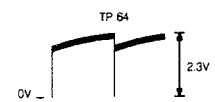
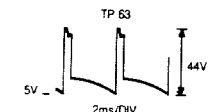
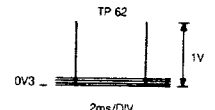
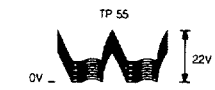
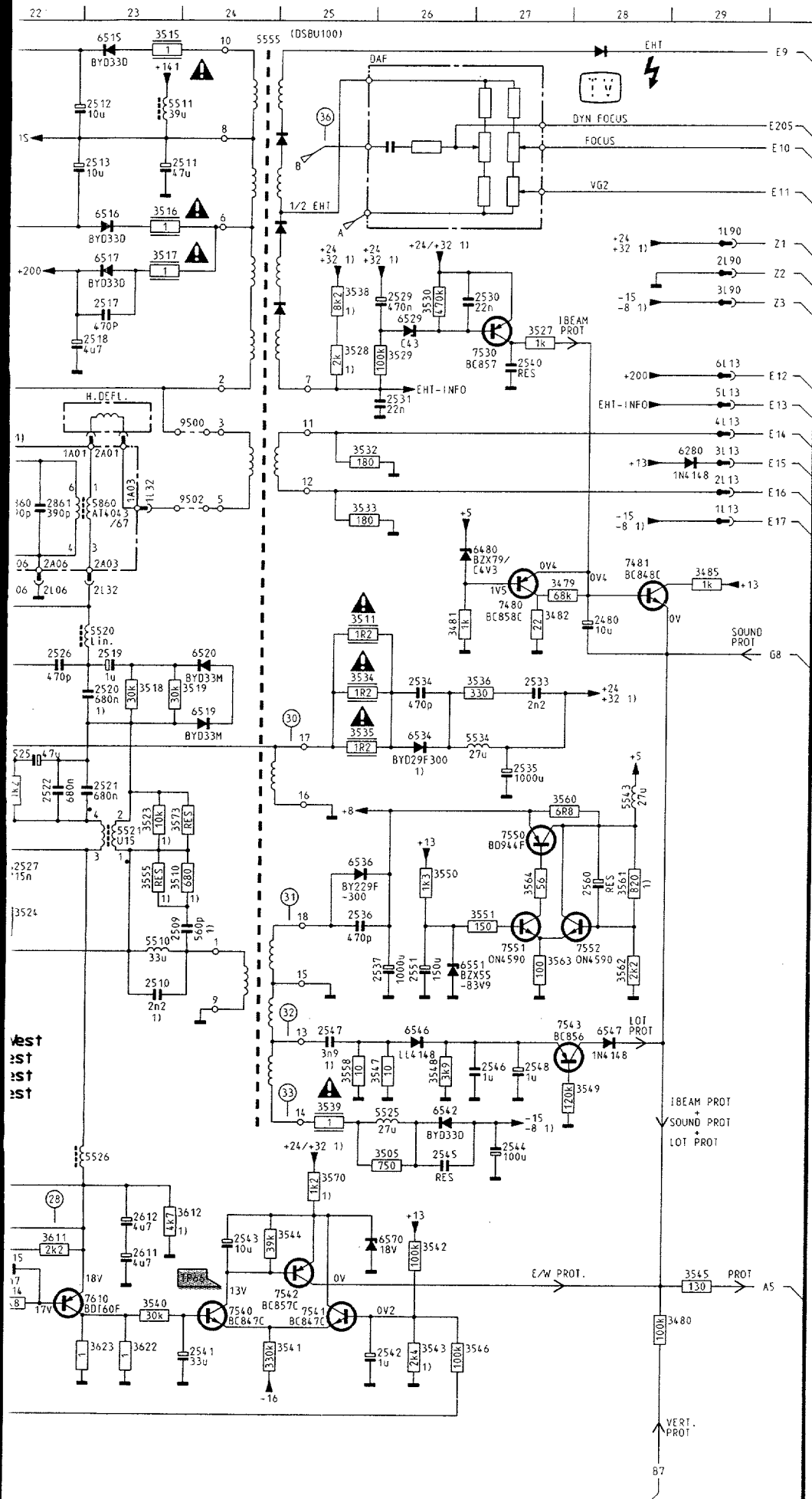
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PRIS 3V

T=26°C

REMARKS/REMARQUES/ANMERKUNGEN/NOTE

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PRESENTE SUI MODELLI:
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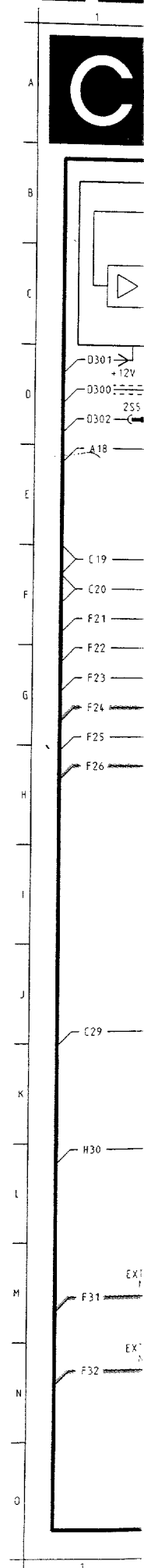
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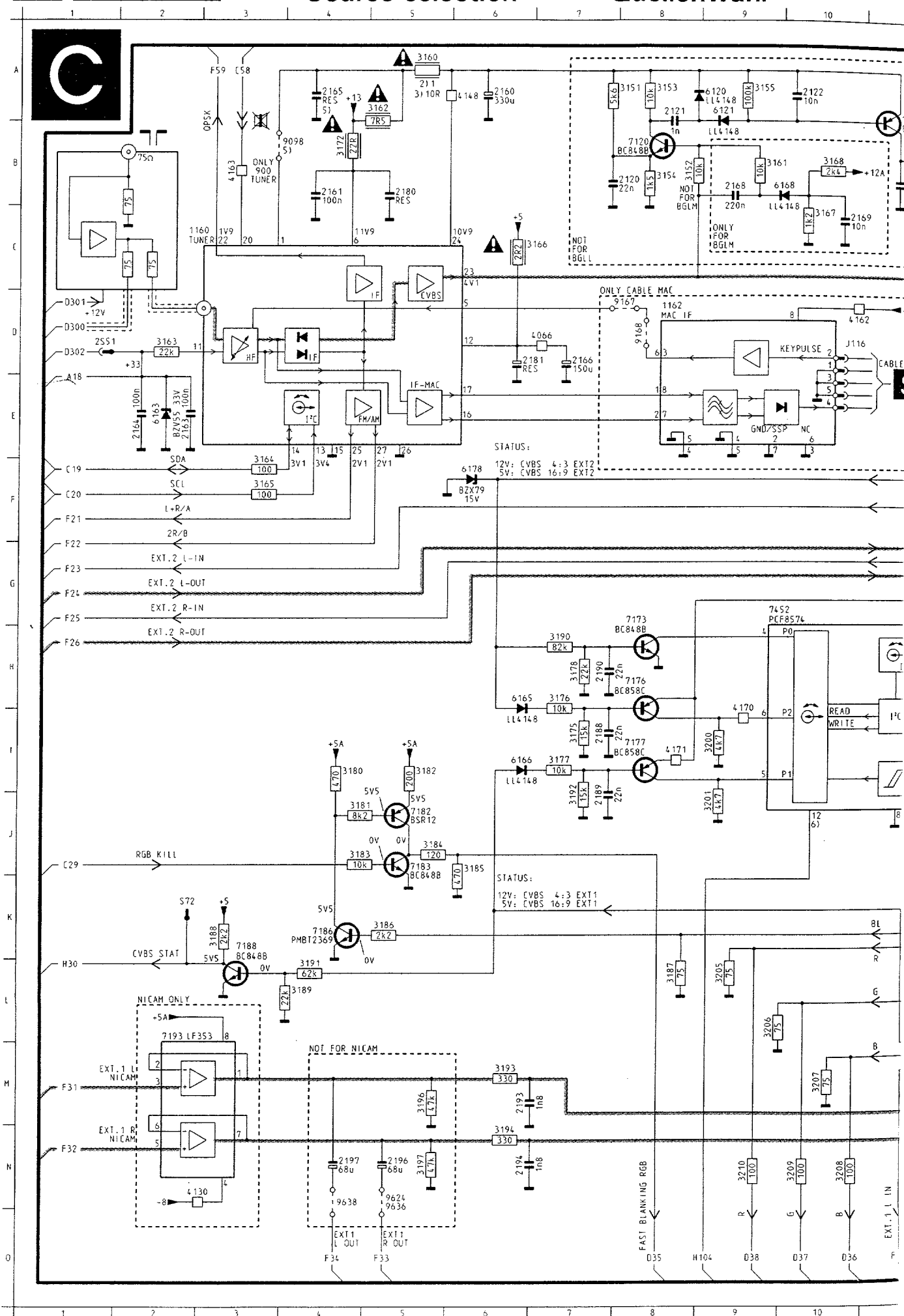
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2606	47n
2609	56n
2626	-
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3459	1R5
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3473	1k5
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3538	15k
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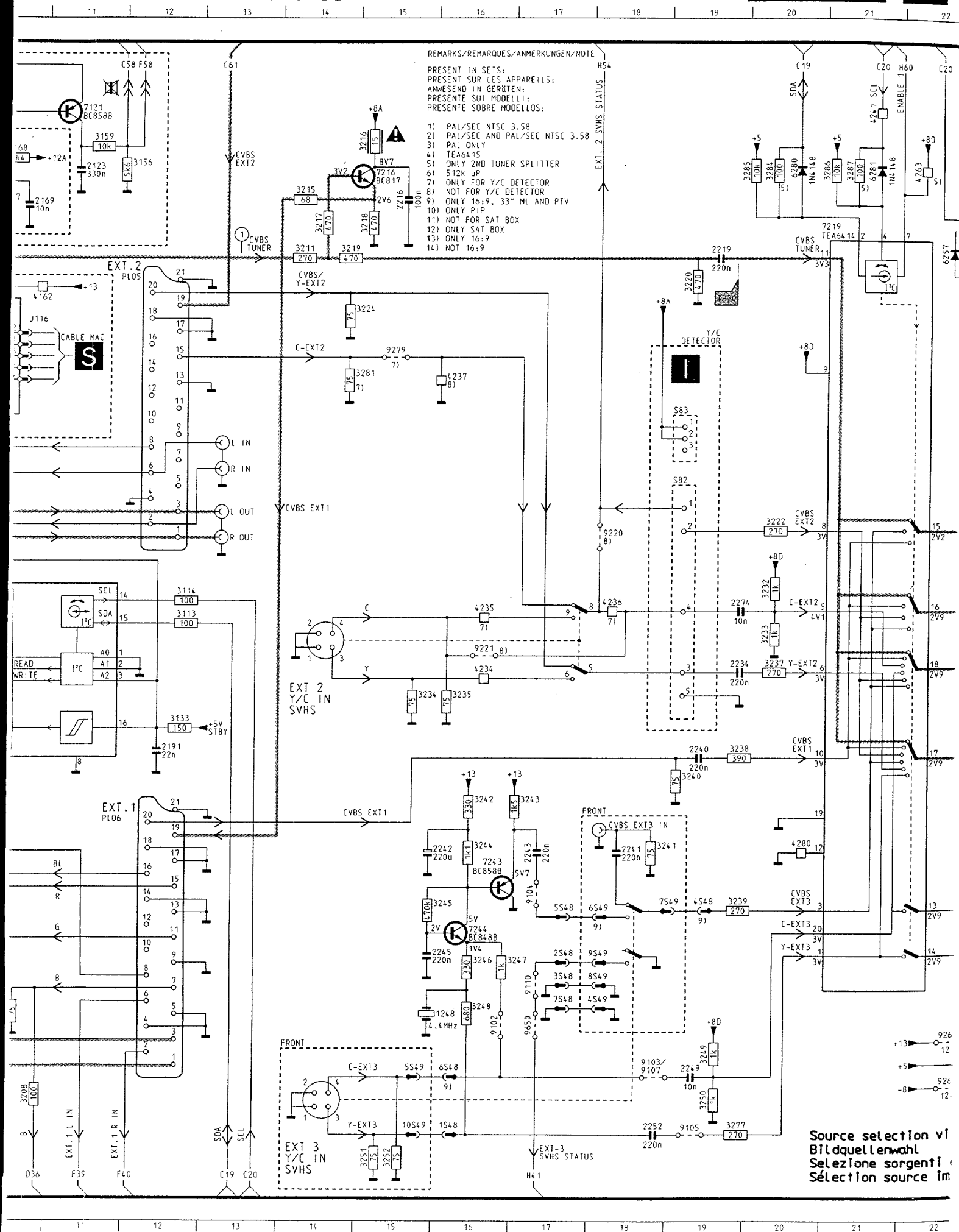
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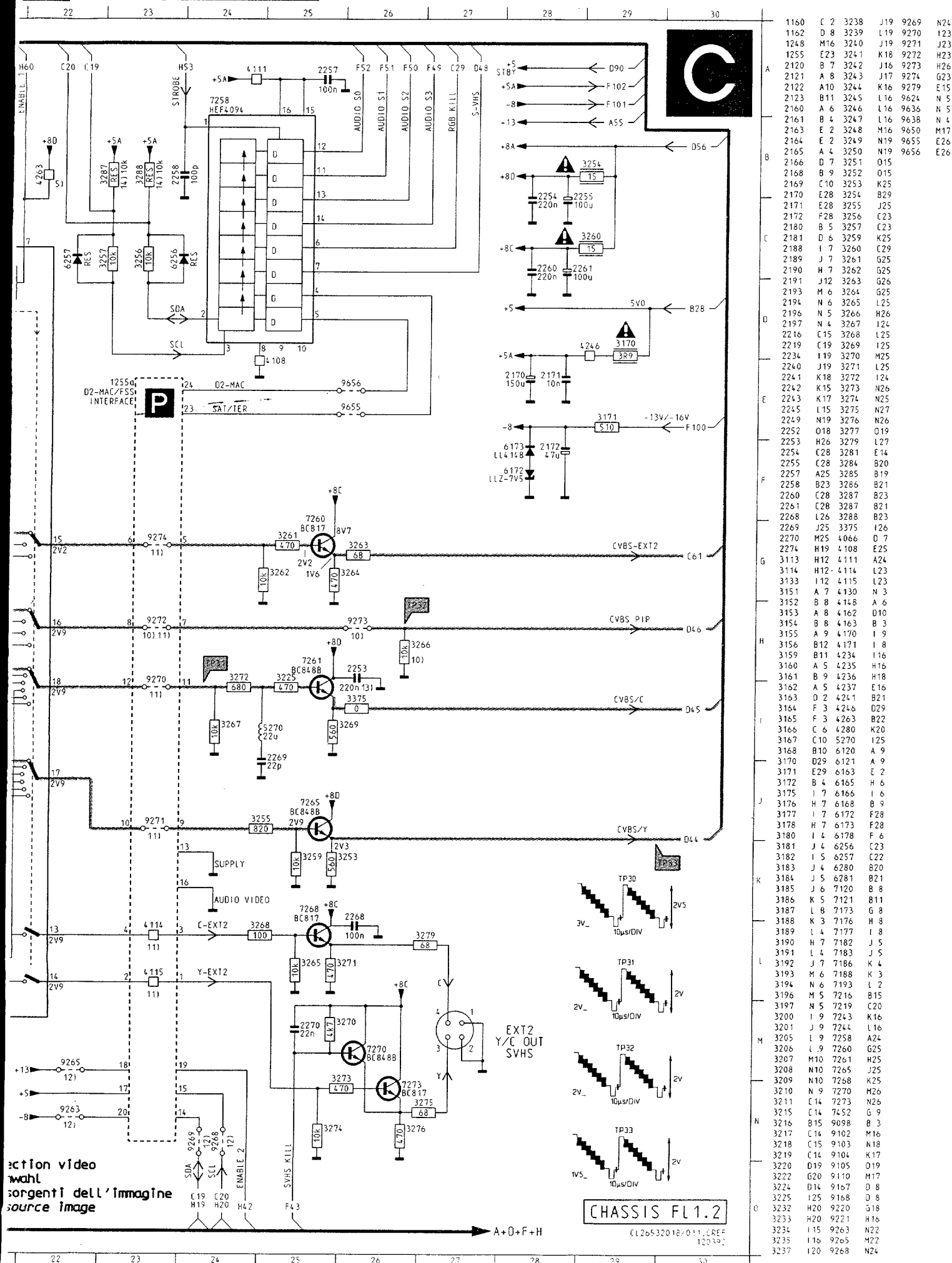
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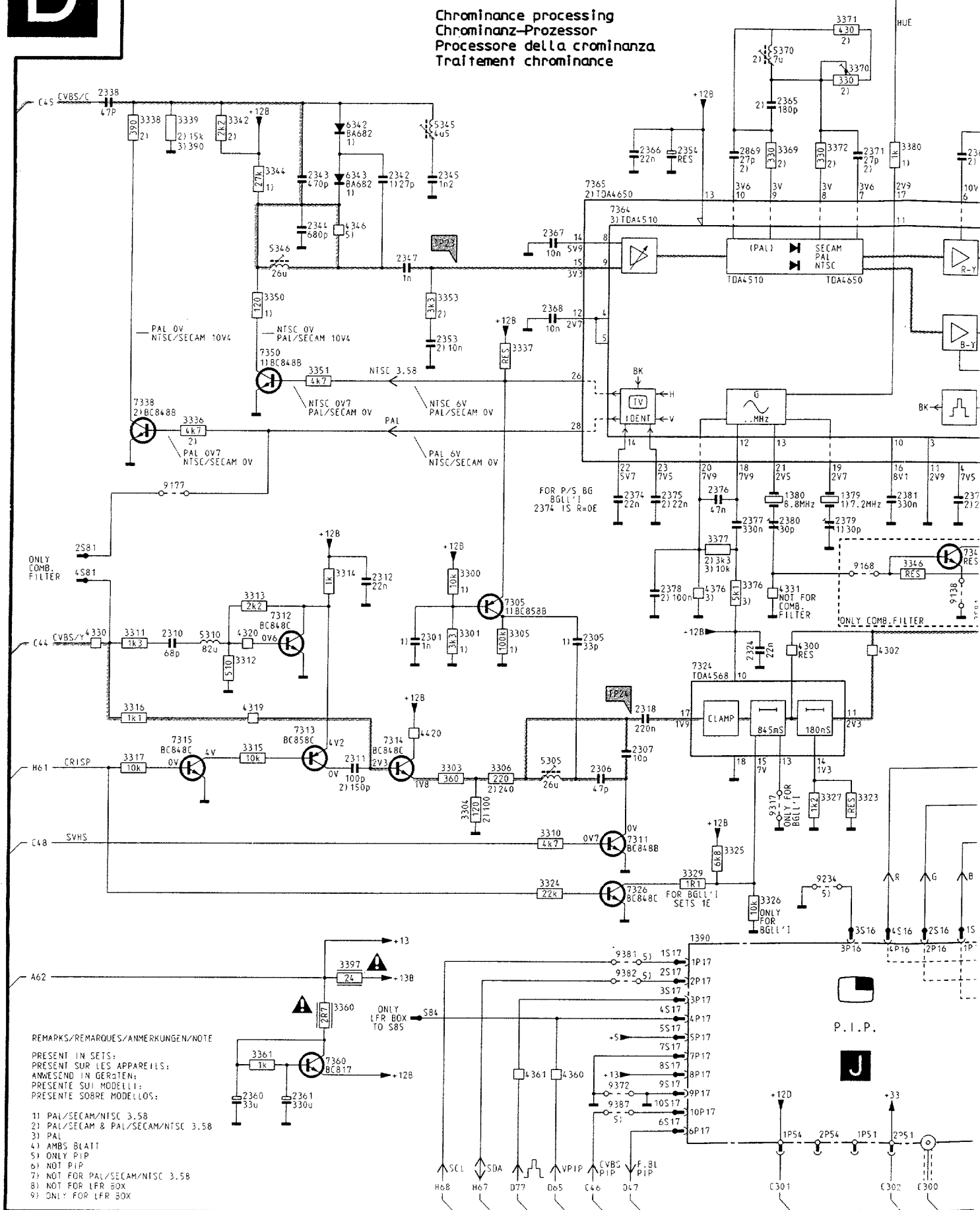






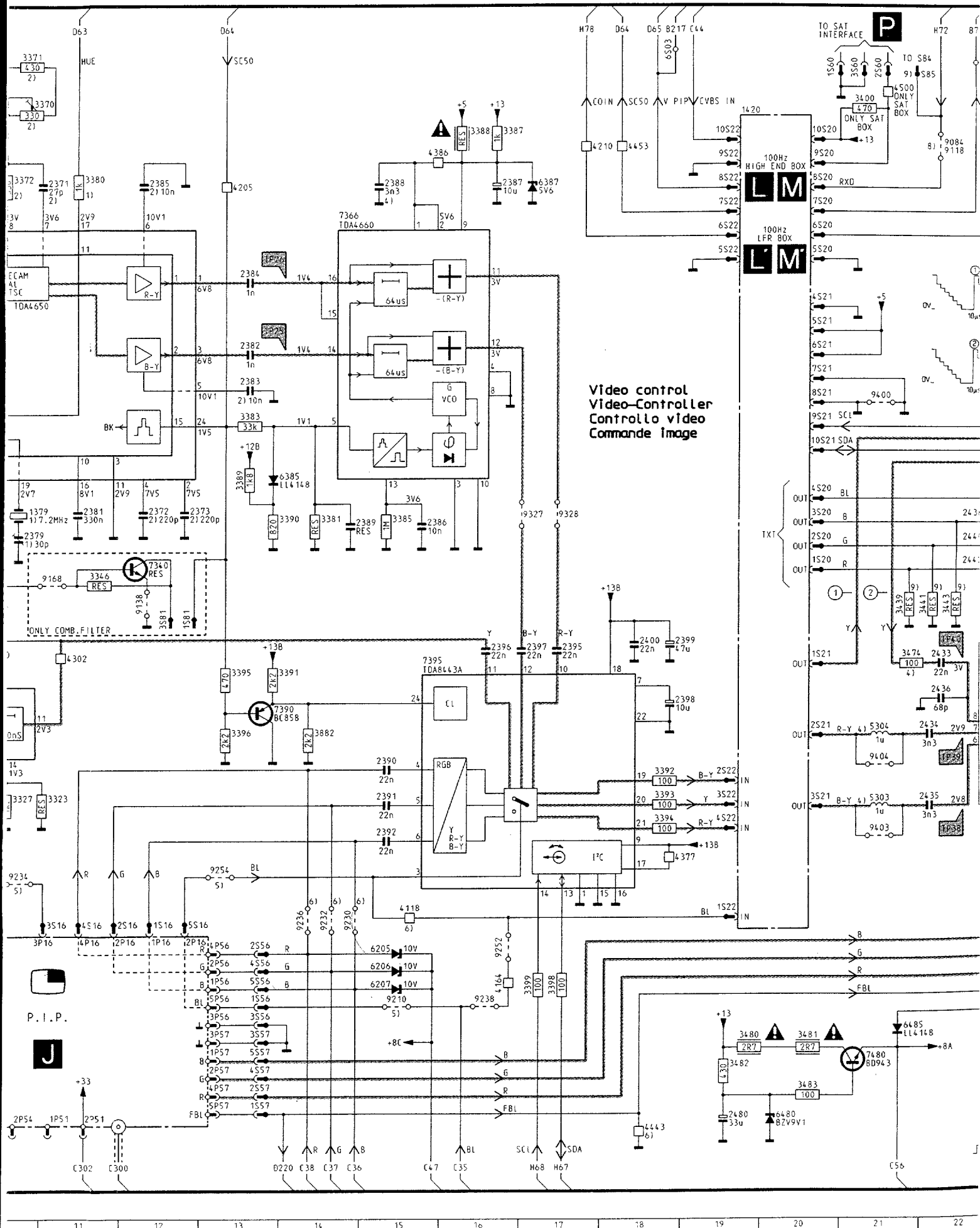
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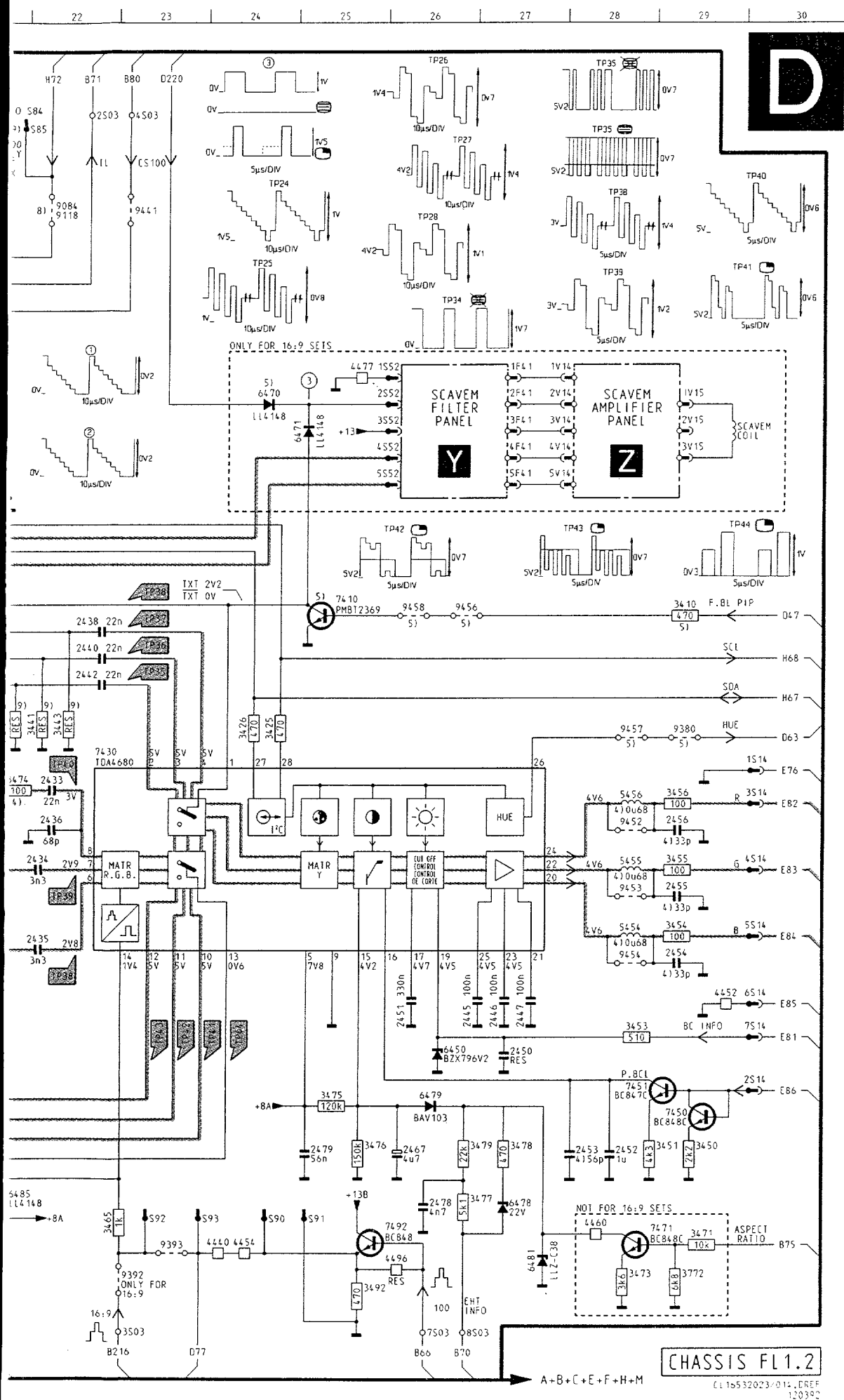
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Chrominanz-Prozessor
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Traitement chrominance



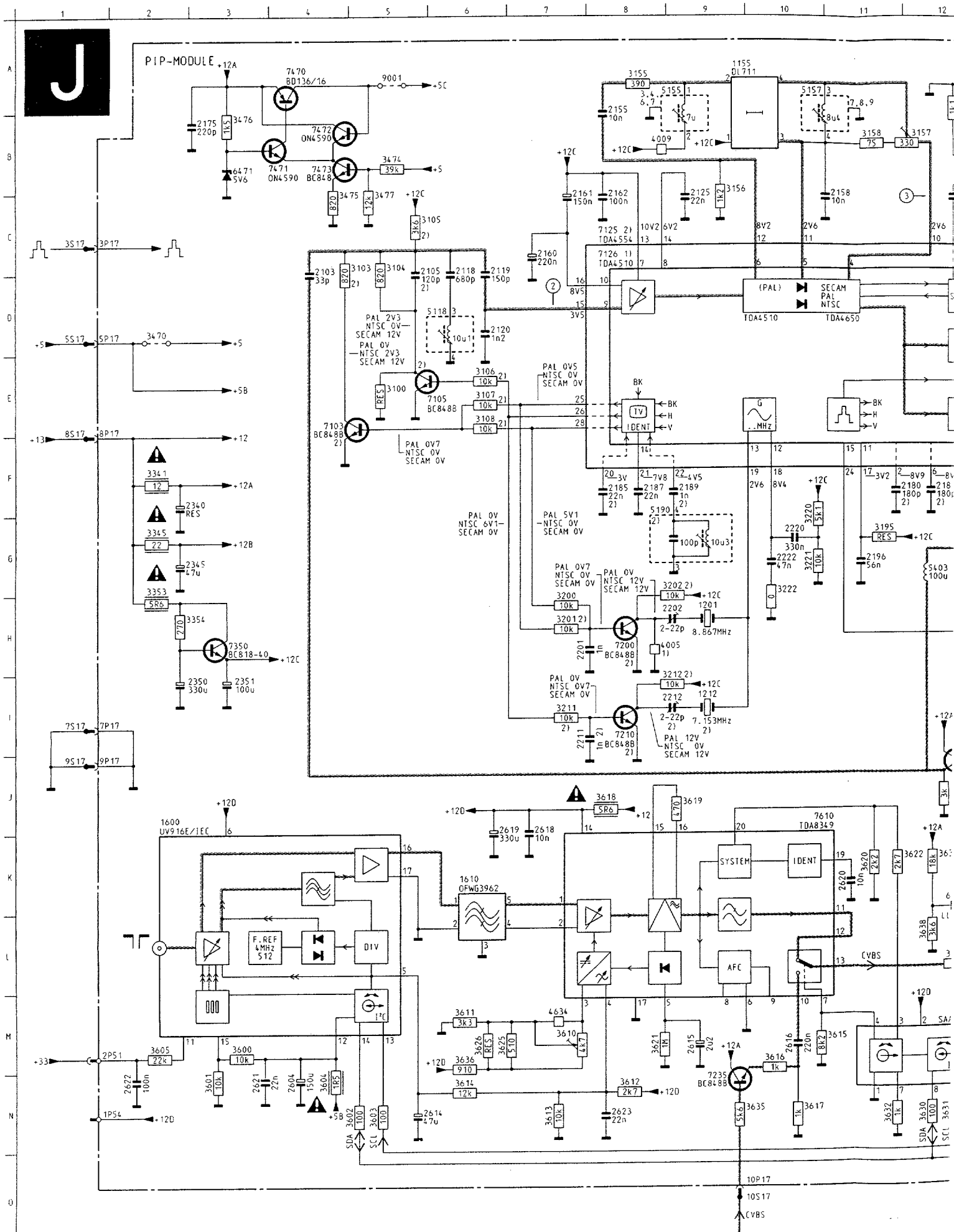
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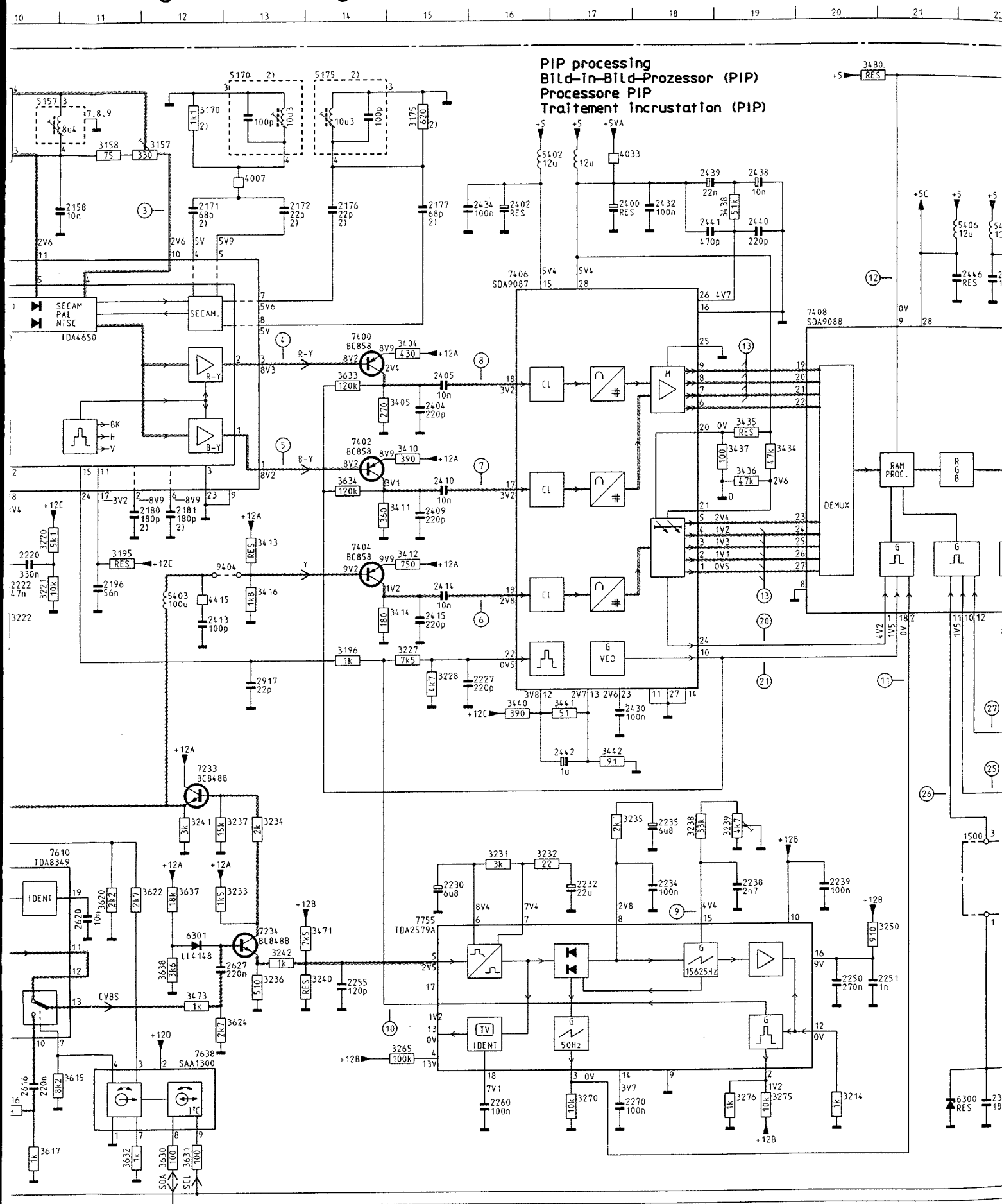
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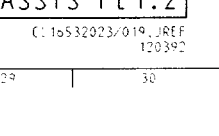




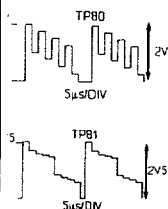
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	2118	D	6	3238	J18	7105	E
	2119	D	6	3239	J19	7125	C
B	2120	D	6	3240	L14	7126	C
	2125	C	9	3241	L12	7200	H
	2155	B	8	3242	J13	7210	I
	2158	C11	3250	K21	7233	I12	
	2160	C	7	3265	M15	7234	K13
	2161	C	7	3270	M17	7235	N
	2162	C	8	3275	M19	7330	M22
	2171	C12	3276	M19	7335	C23	
	2172	C13	3330	M23	7337	C24	
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C	2176	C14	3335	A23	7350	H	
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	2181	F12	3338	A24	7404	G14	
	2185	F	8	3340	C24	7406	I
	2187	F	8	3341	F	7408	D20
	2189	F	9	3345	G	7470	A
	2196	G11	3353	G	7471	B	
	2201	H	7	3354	H	7472	B
	2202	H	9	3376	M25	7473	B
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	2235	J18	3412	G15	9033	I27	
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	2402	C16	3471	K14			
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	2432	C18	3601	N	3		
	2434	C16	3602	N	5		
H	2438	B19	3603	N	5		
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	2440	C19	3605	M	2		
	2441	C18	3610	M	7		
	2442	I17	3611	M	6		
	2445	B23	3612	N	8		
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	2447	I24	3614	N	6		
	2448	C22	3615	M11			
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	2616	M10	3619	J	9		
	2618	K	6	3620	K11		
	2619	K	6	3621	M	8	
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	2622	N	2	3625	M	6	
	2623	N	8	3626	M	6	
	2627	L13	3630	N12			
J	2917	H13	3631	N11			
	3100	E	5	3632	N12		
	3103	C	5	3633	E14		
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	3105	C	5	3635	N10		
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	3107	E	6	3637	K12		
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	3175	A15	4033	B17			
	3195	G11	4047	G26			
	3196	H14	4049	F25			
	3209	H	7	4402	K23		
	3201	H	7	4415	G12		
	3202	G	9	4634	M	7	
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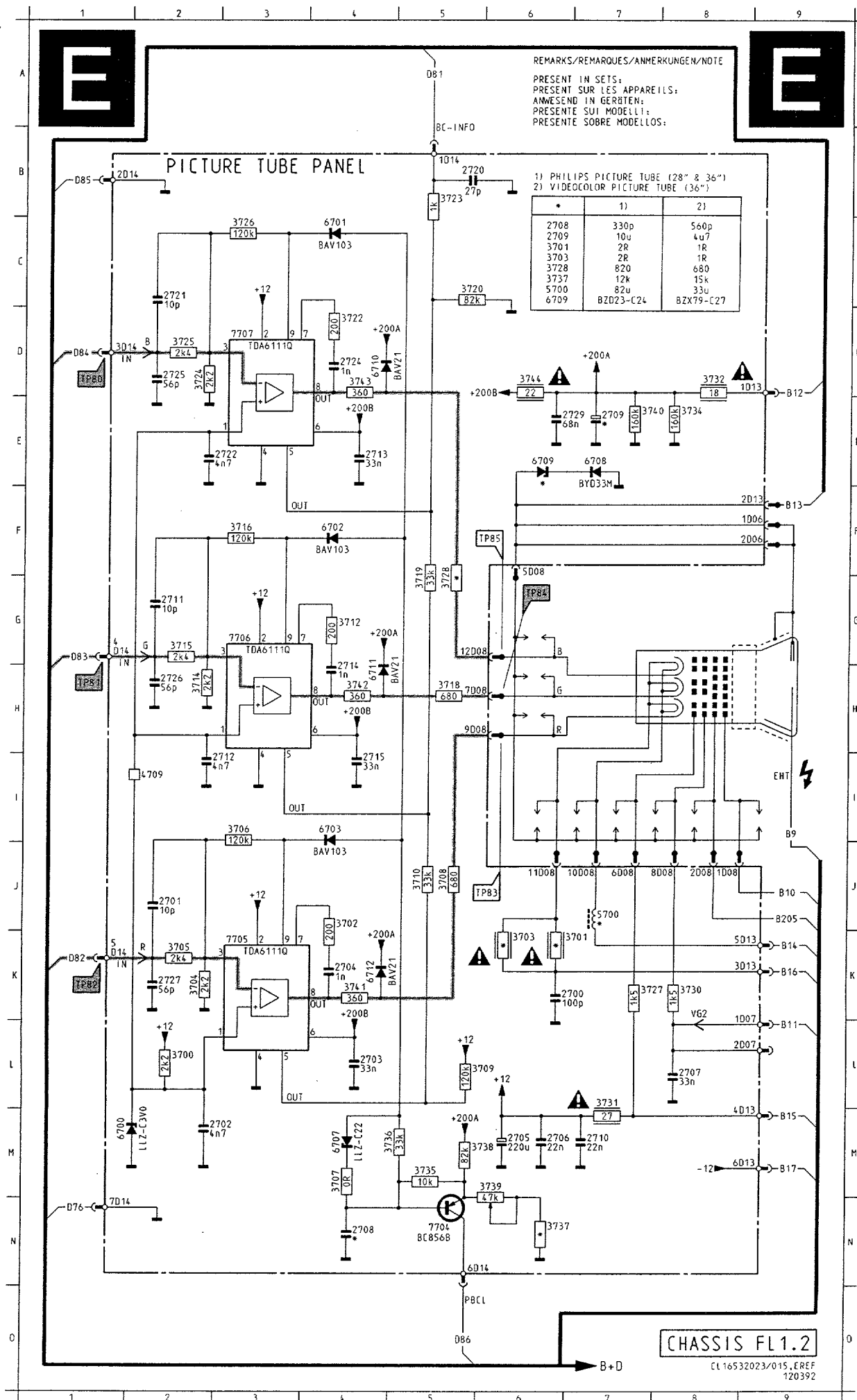


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722 A3 7704 C4
723 A4 7705 B3
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725 A4 7707 A3
726 A3 9709 B1
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728 A3 9713 B4
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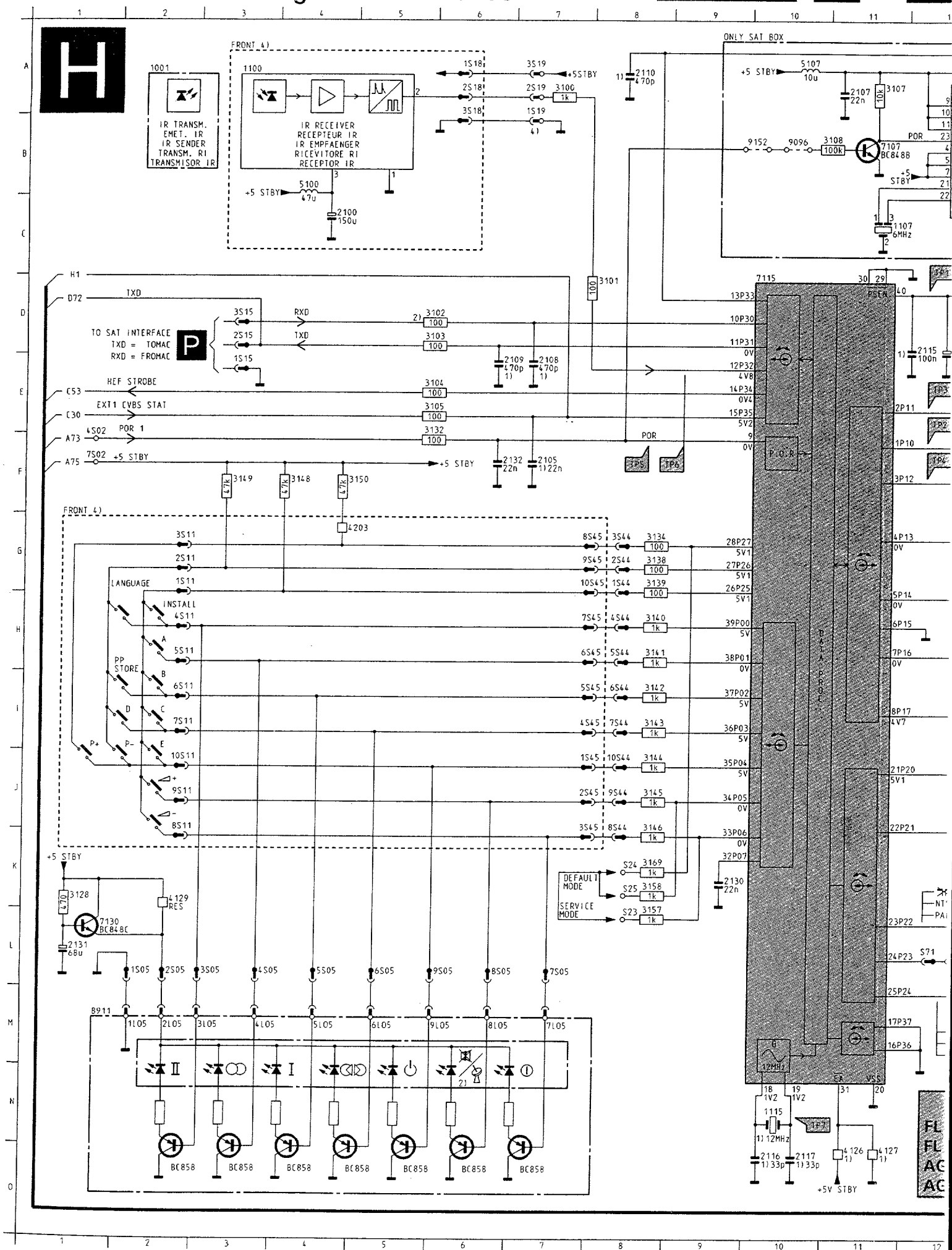
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727 C1 9709 B1
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730 C2 9711 A4
731 A3 9712 B1
732 C1 9713 B4
734 C3 9714 C2
735 C3 9716 B3



2700 K 6
2701 J 2
2702 M 2
2703 L 4
2704 K 4
2705 M 6
2706 M 6
2707 L 8
2708 N 4
2709 E 7
2710 M 7
2711 G 2
2712 I 2
2713 E 4
2714 H 4
2715 I 4
2720 B 5
2721 C 2
2722 E 2
2724 D 4
2725 D 2
2726 H 2
2727 K 2
2729 E 6
2730 L 2
2731 K 6
2732 J 4
2733 K 6
2734 K 2
2735 K 2
2736 I 3
2737 H 4
2738 J 5
2739 L 5
2740 J 5
2741 G 4
2742 H 2
2743 G 2
2744 F 3
2745 H 5
2746 G 5
2747 C 5
2748 D 4
2749 B 5
2750 D 2
2751 C 3
2752 K 7
2753 G 5
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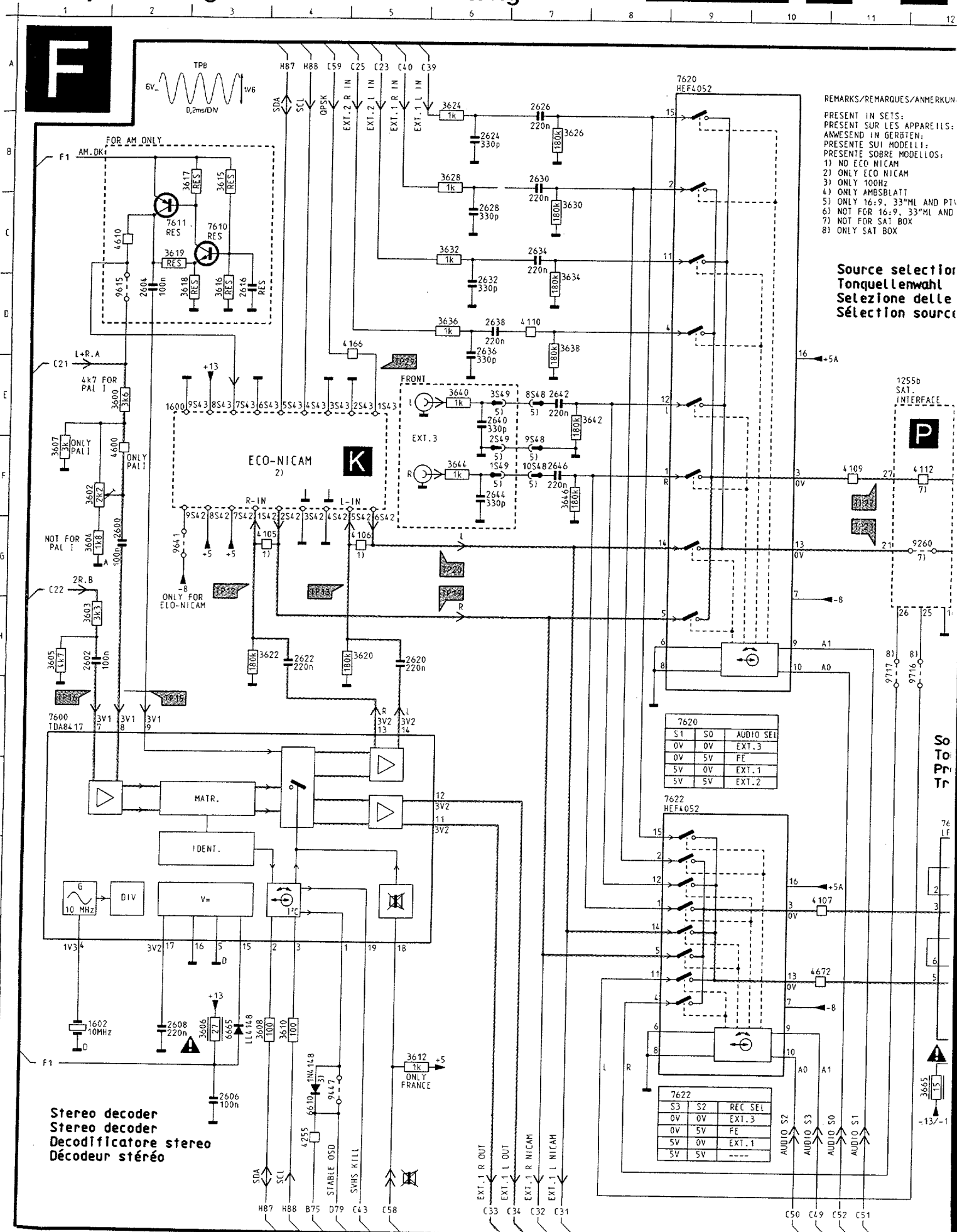
CHASSIS FL1.2



Figure 1 displays five electrophysiological recordings from different sites: TP2, TP3, TP5, TP6, and TP7. Each recording shows a trace of electrical activity over time, with a scale bar indicating the time interval (DIV) and the voltage scale (V).

- TP2:** Shows rhythmic oscillations. Scale: 5ms/DIV, 5V.
- TP3:** Shows rhythmic oscillations. Scale: 5ms/DIV, 5V.
- TP5:** Shows a single action potential. Scale: 10ms/DIV, 5V.
- TP6:** Shows rhythmic oscillations. Scale: 20ms/DIV, 2V.
- TP7:** Shows high-frequency oscillations. Scale: 5ms/DIV, 2V.

CL 16532023/018.HREF
280292



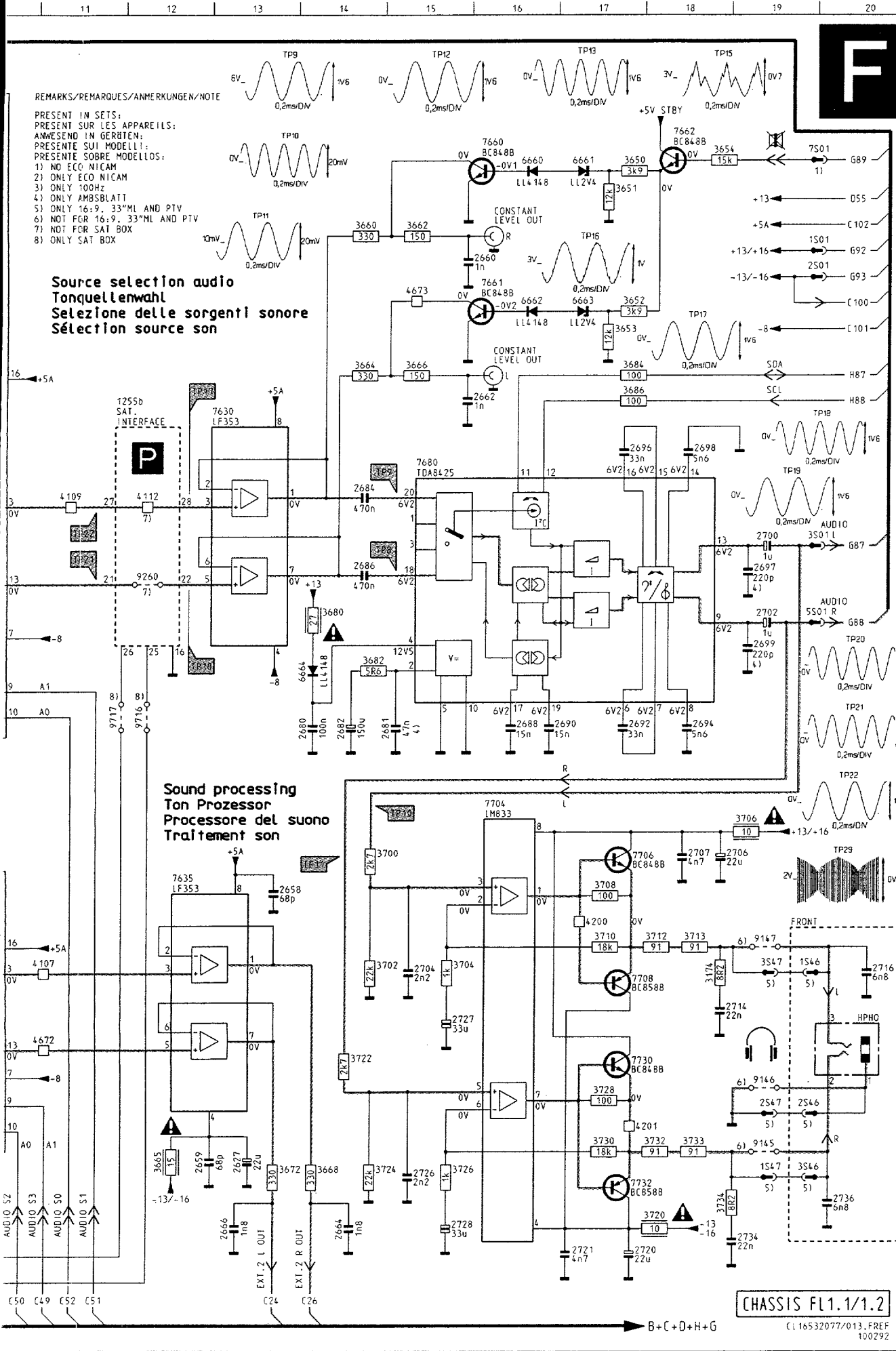
REMARKS/REMARKS/ANMERKUNGEN/NOTE

PRESENT IN SETS:
PRESENT SUR LES APPAREILS:
ANWESEND IN GERÄTEN:
PRESENTI SUI MODELLI:
PRESENTI SUI MODELLI:

- 1) NO ECO NICAM
- 2) ONLY ECO NICAM
- 3) ONLY 100Hz
- 4) ONLY AMBSBLATT
- 5) ONLY 16:9, 33"ML AND PTV
- 6) NOT FOR 16:9, 33"ML AND PTV
- 7) NOT FOR SAT BOX
- 8) ONLY SAT BOX

Source selection audio
Tonquellenwahl
Selezione delle sorgenti sonore
Sélection source son

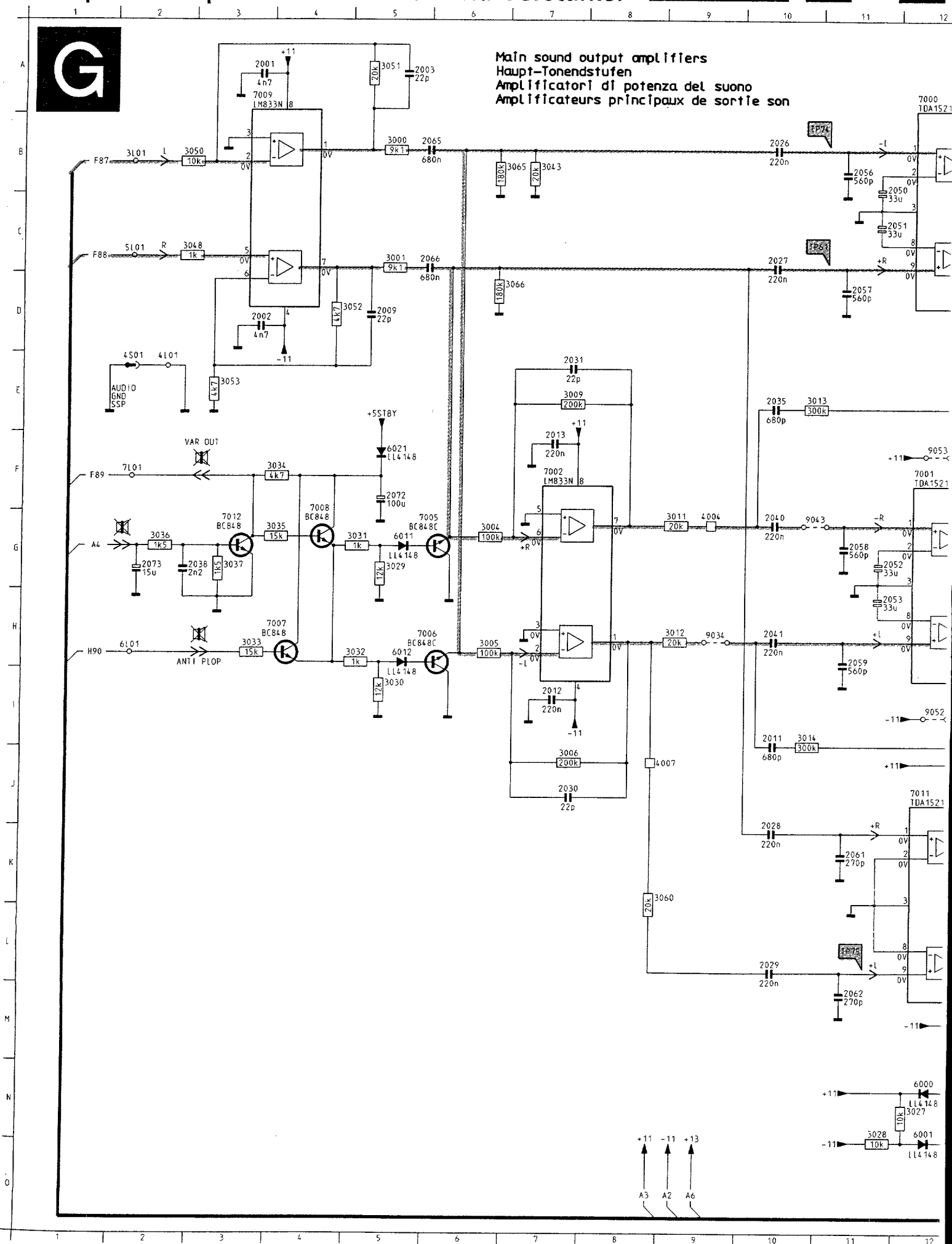
Sound processing
Ton Prozessor
Processore del suono
Traitement son

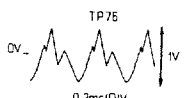
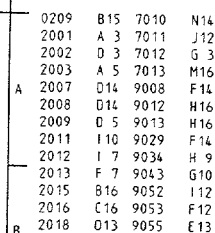


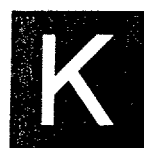
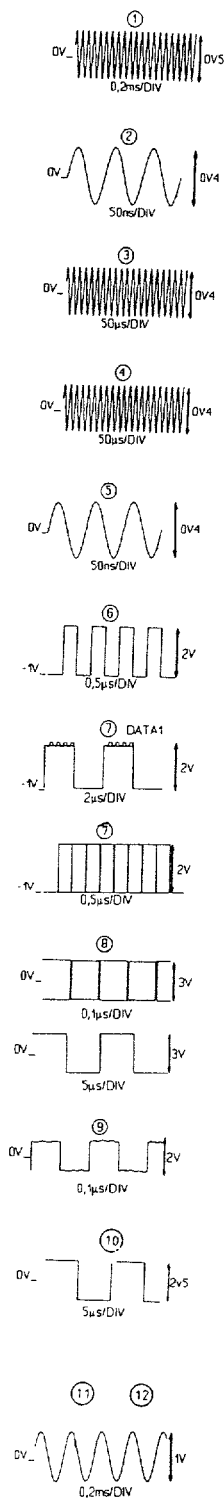
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1600	E 2	3732	M1
1602	M 1	3733	M1
2600	G 2	3734	N1
2602	H 1	4105	G
2604	D 2	4106	G
2606	N 3	4107	K1
2608	M 2	4109	F1
2610	D 3	4110	D
2612	H 5	4112	F1
2614	H 4	4166	D
2616	B 6	4200	K1
2618	A 7	4201	M1
2620	M 3	4255	N1
2622	C 6	4600	F
2624	B 7	4610	L1
2626	D 6	4672	L1
2628	C 7	4673	C1
2630	D 6	6610	N1
2632	D 6	6660	B1
2634	E 6	6661	B1
2636	E 7	6662	D1
2638	F 6	6663	D1
2640	F 7	6664	H1
2642	M 12	7600	L
2644	C 16	7610	C
2646	E 16	7611	C
2648	N 14	7620	A
2650	H 14	7630	E1
2652	H 15	7635	J1
2654	H 14	7660	B1
2656	H 16	7662	B1
2658	H 16	7680	E1
2660	H 16	7700	L1
2662	H 17	7706	J1
2664	H 18	7708	K1
2666	E 18	9145	M1
2668	E 19	9146	M1
2670	F 19	9147	K1
2672	G 19	9260	G1
2674	K 15	9447	N1
2676	J 18	9615	D
2678	J 18	9641	G
2680	L 18	9716	H1
2682	K 20	9717	H1
2684	O 17		
2686	N 15		
2688	L 15		
2690	N 15		
2692	N 19		
2694	N 20		
2696	K 18		
2698	E 2		
2700	F 1		
2702	H 1		
2704	G 1		
2706	H 1		
2708	M 3		
2710	F 1		
2712	M 4		
2714	M 4		
2716	M 6		
2718	B 3		
2720	D 3		
2722	B 3		
2724	D 3		
2726	C 2		
2728	H 5		
2730	H 3		
2732	A 6		
2734	B 7		
2736	B 6		
2738	C 7		
2740	C 6		
2742	C 7		
2744	D 6		
2746	D 7		
2748	E 6		
2750	E 7		
2752	F 6		
2754	F 7		
2756	B 17		
2758	B 17		
2760	D 17		
2762	D 17		
2764	B 18		
2766	C 14		
2768	C 15		
2770	D 14		
2772	M 12		
2774	D 15		
2776	N 14		
2778	N 13		
2780	G 14		
2782	H 14		
2784	D 17		
2786	E 17		
2788	J 14		
2790	K 14		
2792	K 15		
2794	J 19		
2796	J 17		
2798	K 17		
2800	K 18		
2802	K 18		
2804	N 13		
2806	L 14		
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2810	N 15		
2812	M 17		

CHASSIS FL1.1/1.2

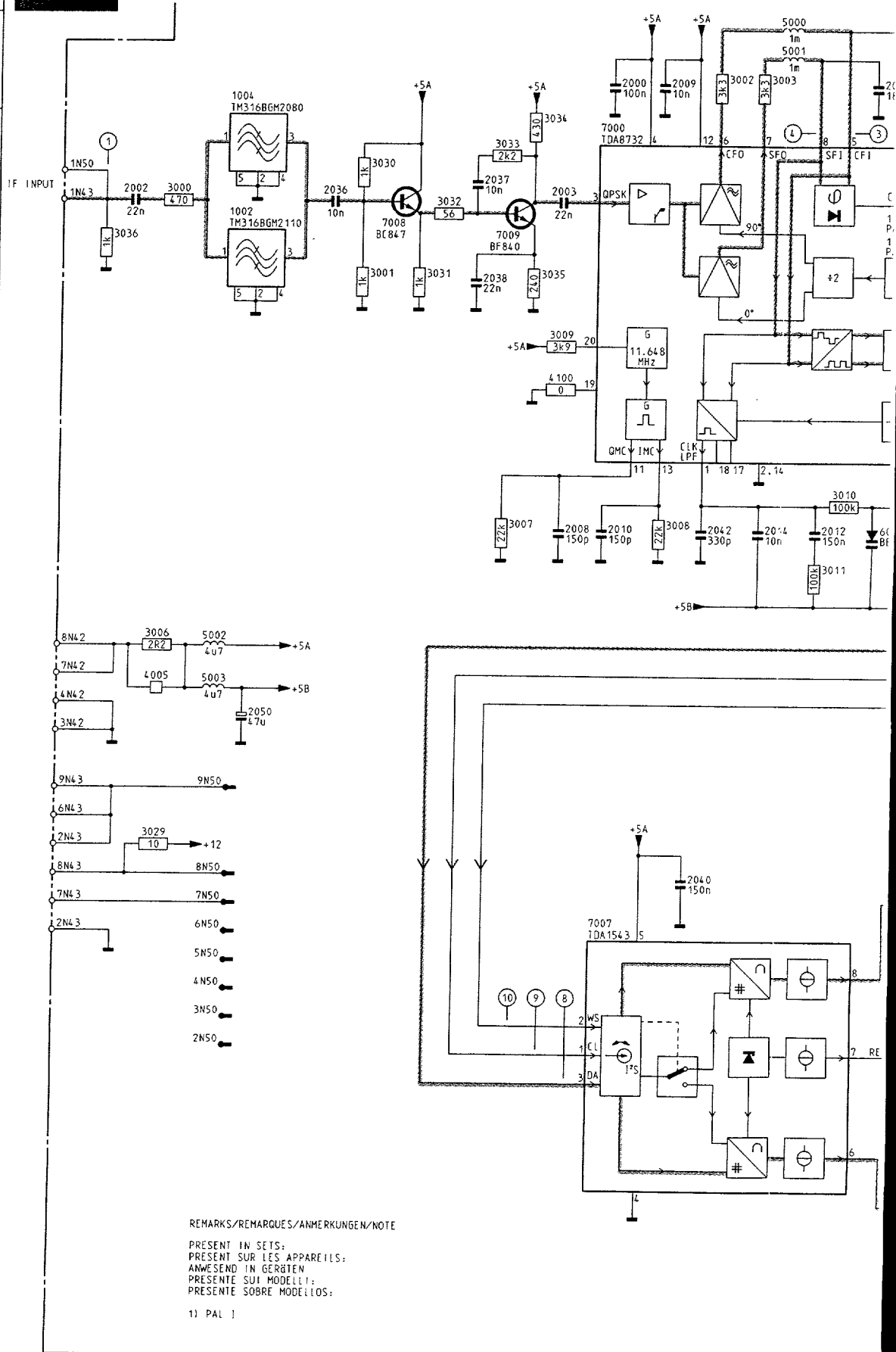
CL 16532077/013, FREQ 100292



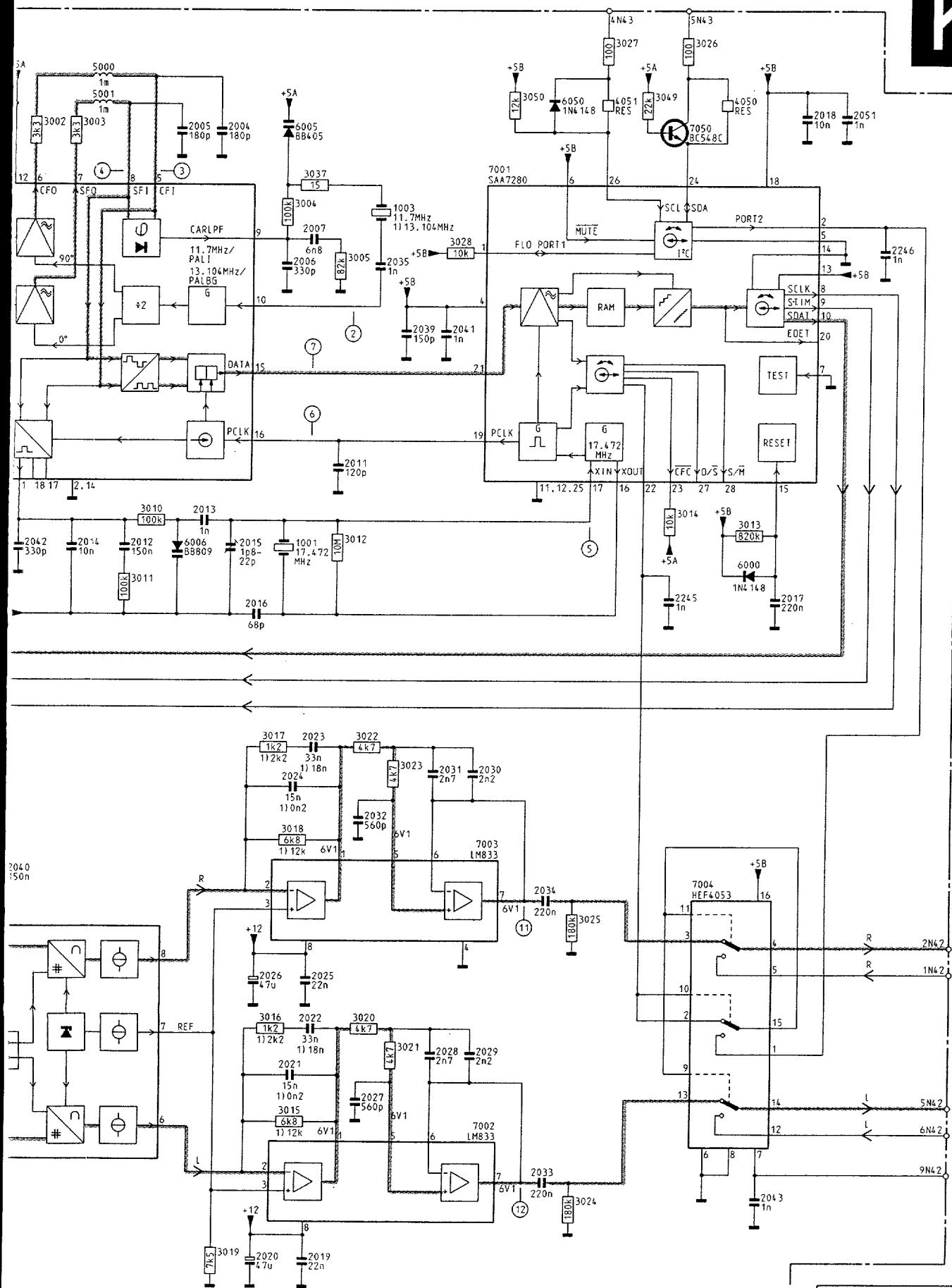
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ECO NICAM



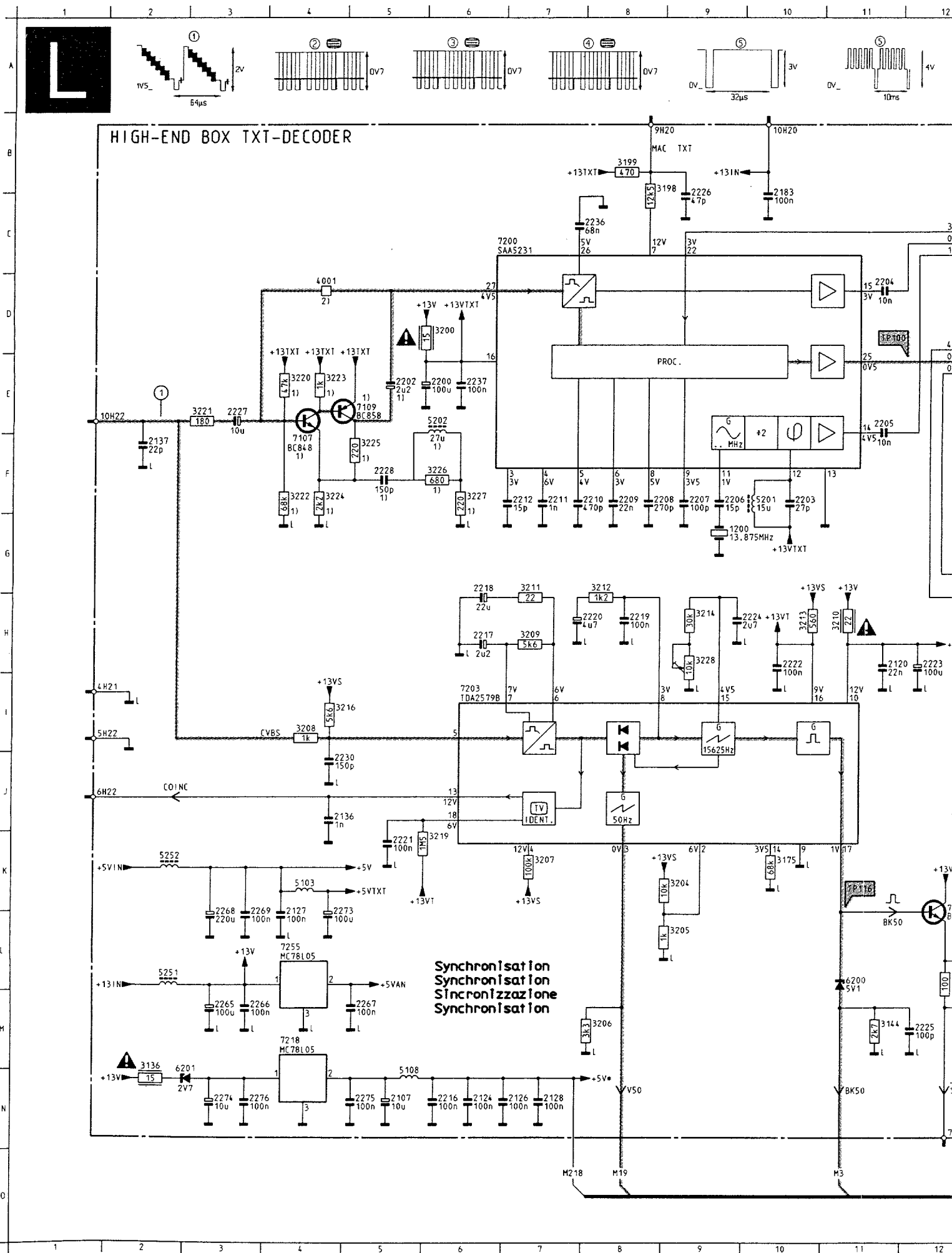
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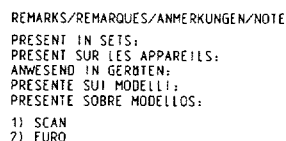


CHASSIS FL1

CL16532084/011, KREF
070292

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1002	D 3
1003	C12
1004	B 3
2000	B 7
2002	C 2
2003	C 6
2004	B10
2005	B 9
2006	D11
2007	C11
2008	G 6
2009	B 7
2010	G 7
2011	F11
2012	G 9
2013	F10
2014	G 8
2015	G10
2016	G10
2017	G16
2018	B16
2019	D11
2020	D10
2021	M11
2022	L11
2023	L11
2024	L11
2025	L11
2026	L10
2027	M12
2028	L12
2029	L13
2030	L13
2031	L12
2032	J12
2033	M14
2034	K14
2035	D12
2036	C 4
2037	C 5
2038	D 5
2039	D12
2040	J 8
2041	D12
2042	G 8
2043	N16
2050	I 3
2051	B17
2245	G15
2246	D17
3000	C 2
3001	D 4
3002	B 8
3003	B 8
3004	C11
3005	D11
3006	H 2
3007	G 6
3008	G 7
3009	E 6
3010	F 9
3011	G 9
3012	G11
3013	G16
3014	F15
3015	M11
3016	L10
3017	I10
3018	J11
3019	O10
3020	L12
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3023	I12
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3033	C 6
3034	C 6
3035	D 6
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3049	B15
3050	B13
4005	H 2
4051	B14
4100	E 6
5000	B 9
5001	B 9
5002	H 3
5003	H 3
6000	G16
6005	B11
6006	G 9
6050	B14
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7050	B15

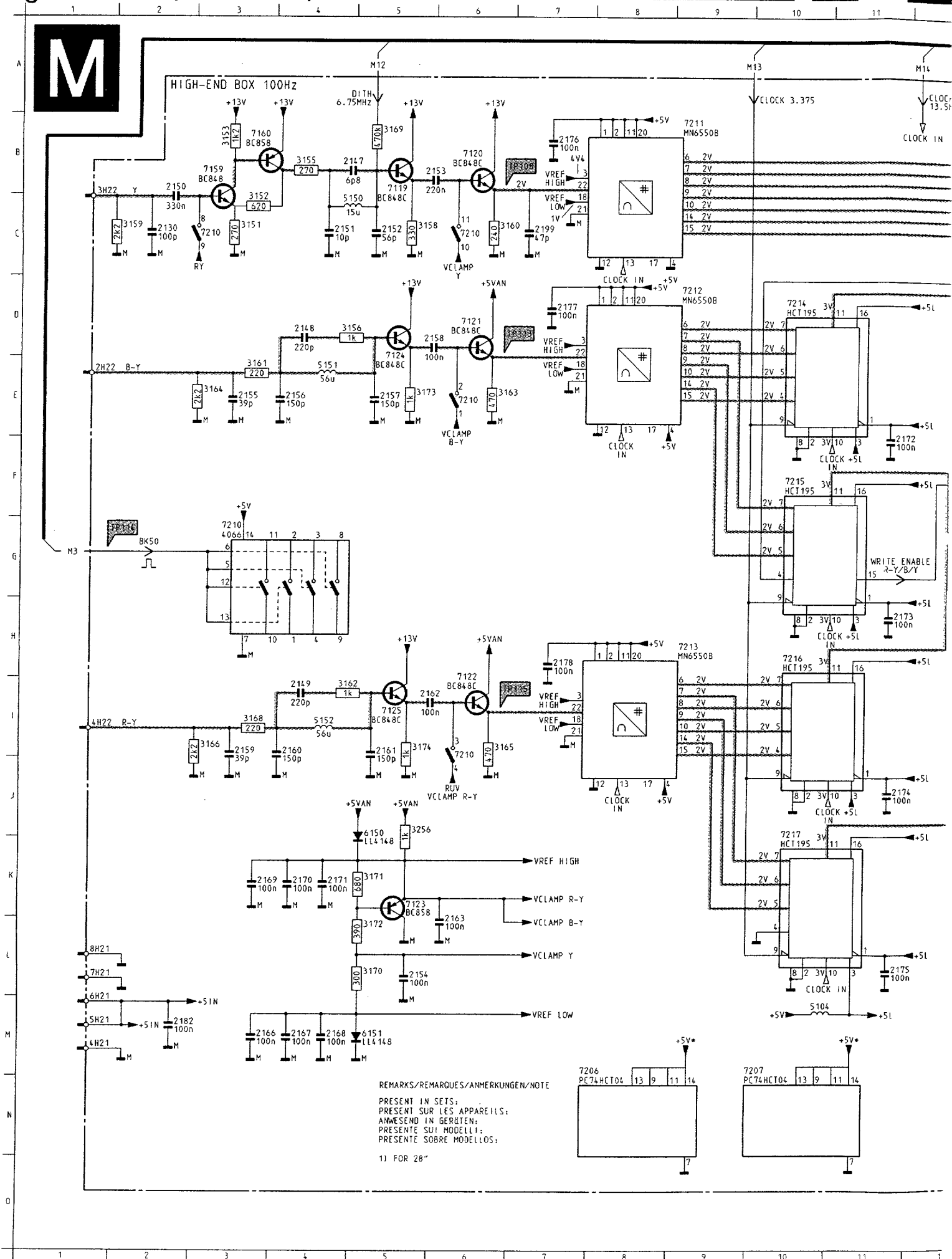


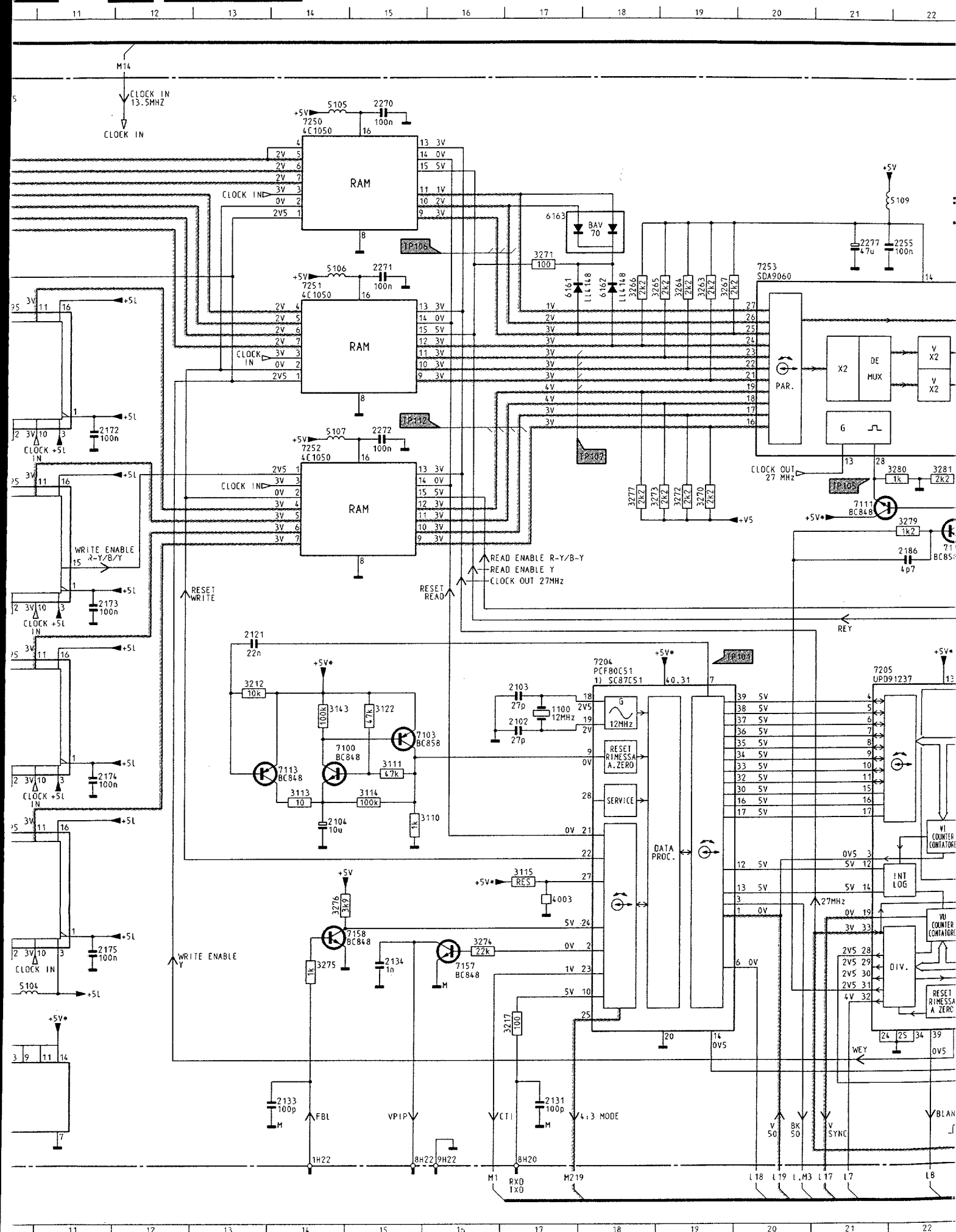


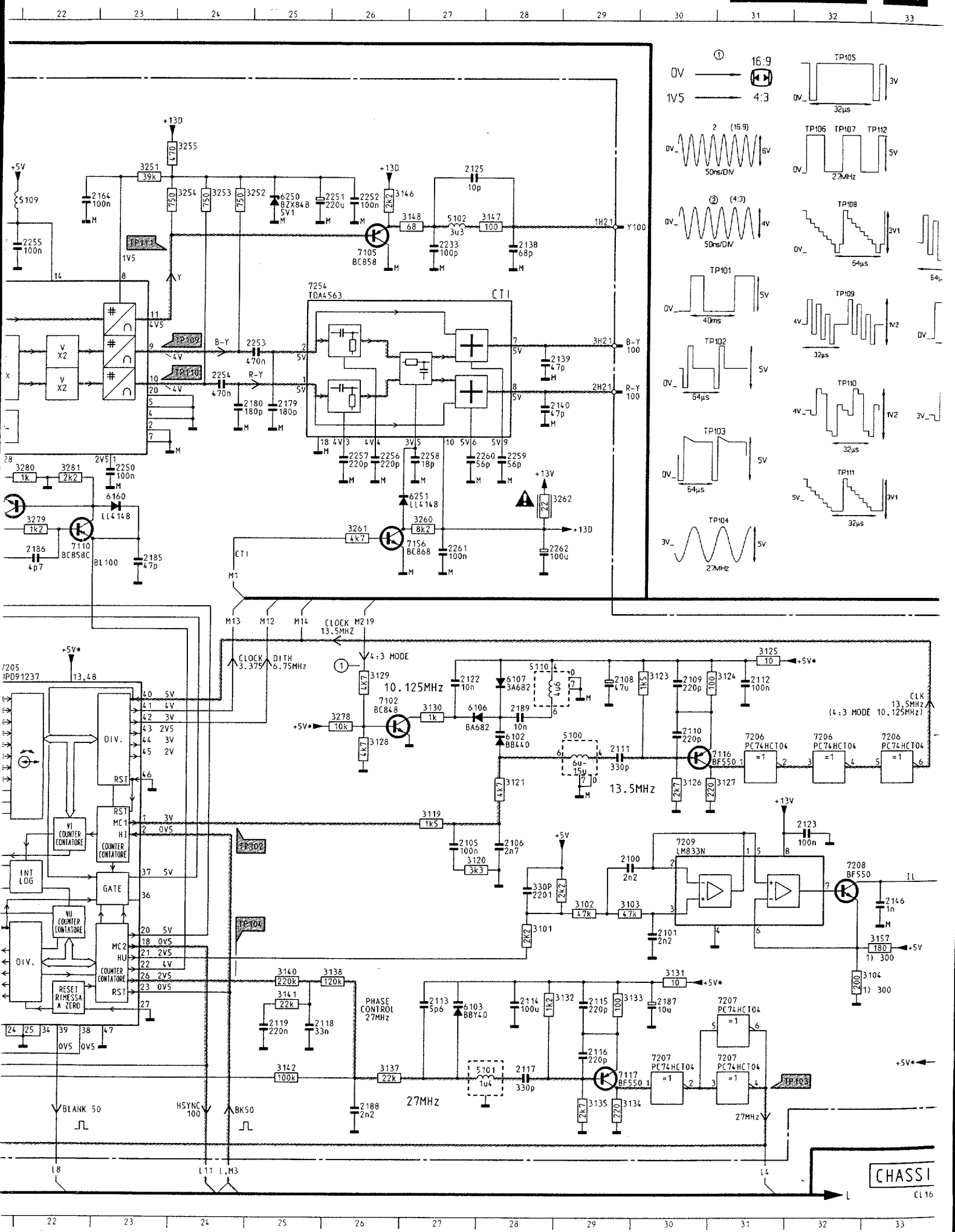
CHASSIS FL1.2

CL 16532023/021, LREF
270691

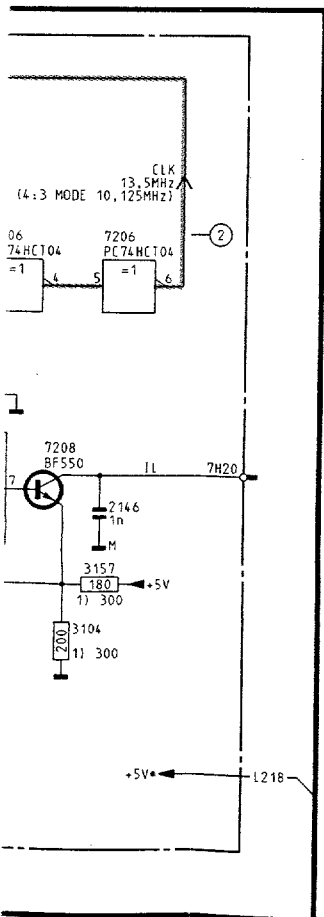
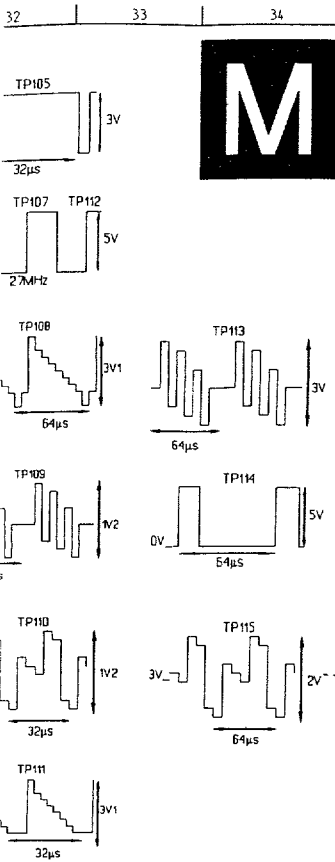
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B	12127	L 4	7202	F 13
	12128	N 7	7203	I 6
	12135	M 13	7218	M 4
	12136	J 4	7255	L 4
	12137	F 2		
C	12141	D 18		
	12142	D 18		
	12143	D 18		
	12144	D 19		
	12165	J 14		
D	12181	B 13		
	12183	C 10		
	12184	J 16		
	12198	J 14		
	12200	E 6		
E	12202	E 5		
	12203	F 10		
	12204	D 11		
	12205	E 11		
	12206	F 9		
F	12207	F 9		
	12208	F 8		
	12209	F 8		
	12210	F 7		
	12211	F 7		
G	12212	F 7		
	12213	B 14		
	12214	B 15		
	12215	B 16		
	12216	N 6		
H	12217	H 6		
	12218	G 6		
	12219	H 8		
	12220	H 7		
	12221	K 5		
I	12222	H 10		
	12223	H 12		
	12224	H 9		
	12225	M 12		
	12226	C 9		
J	12227	E 3		
	12228	F 5		
	12229	F 12		
	12230	J 4		
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	12237	E 6		
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	12273	L 4		
	12274	N 3		
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	13107	L 15		
	13108	L 15		
	13109	J 14		
N	13129	L 12		
	13136	N 2		
	13144	M 11		
	13145	C 17		
	13175	K 10		
O	13176	K 14		
	13177	L 15		
	13178	C 17		
	13198	B 8		
	13199	B 8		
P	13200	D 6		
	13202	B 15		
	13205	L 9		
	13206	M 8		
	13207	K 7		
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U	13231	F 18		
	13232	E 17		
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	6201	N 3		
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	7104	L 12		
	7106	L 15		





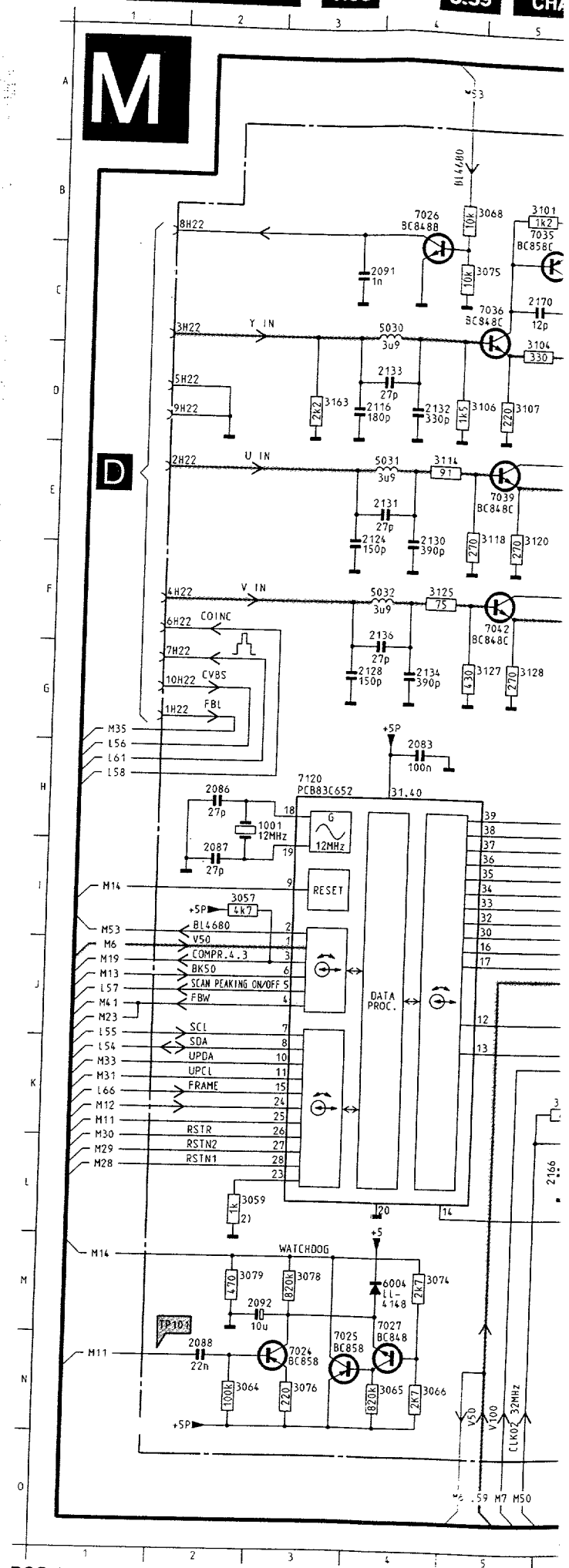


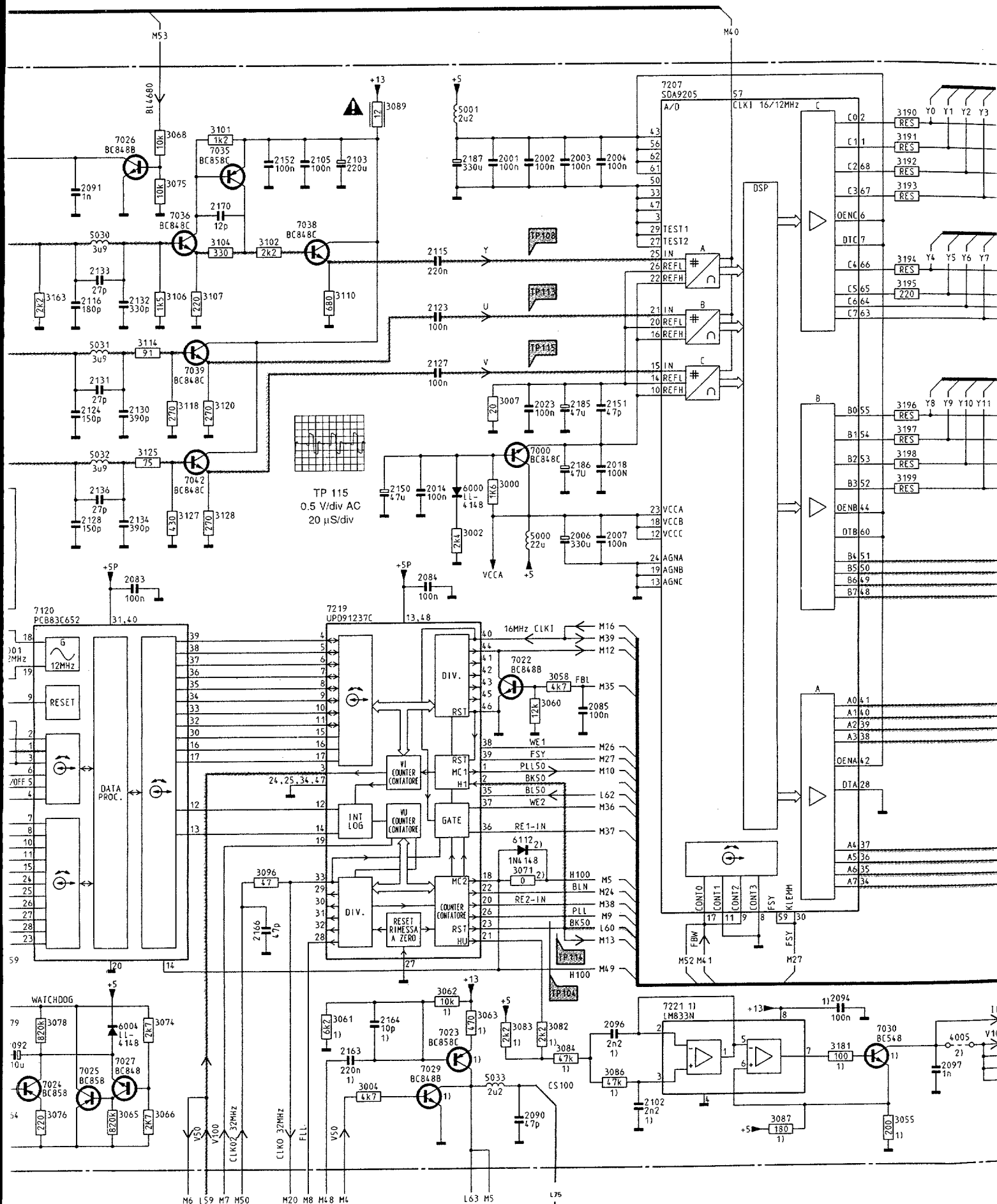
1.2 6.56 6.57 CHASSIS FL1.2

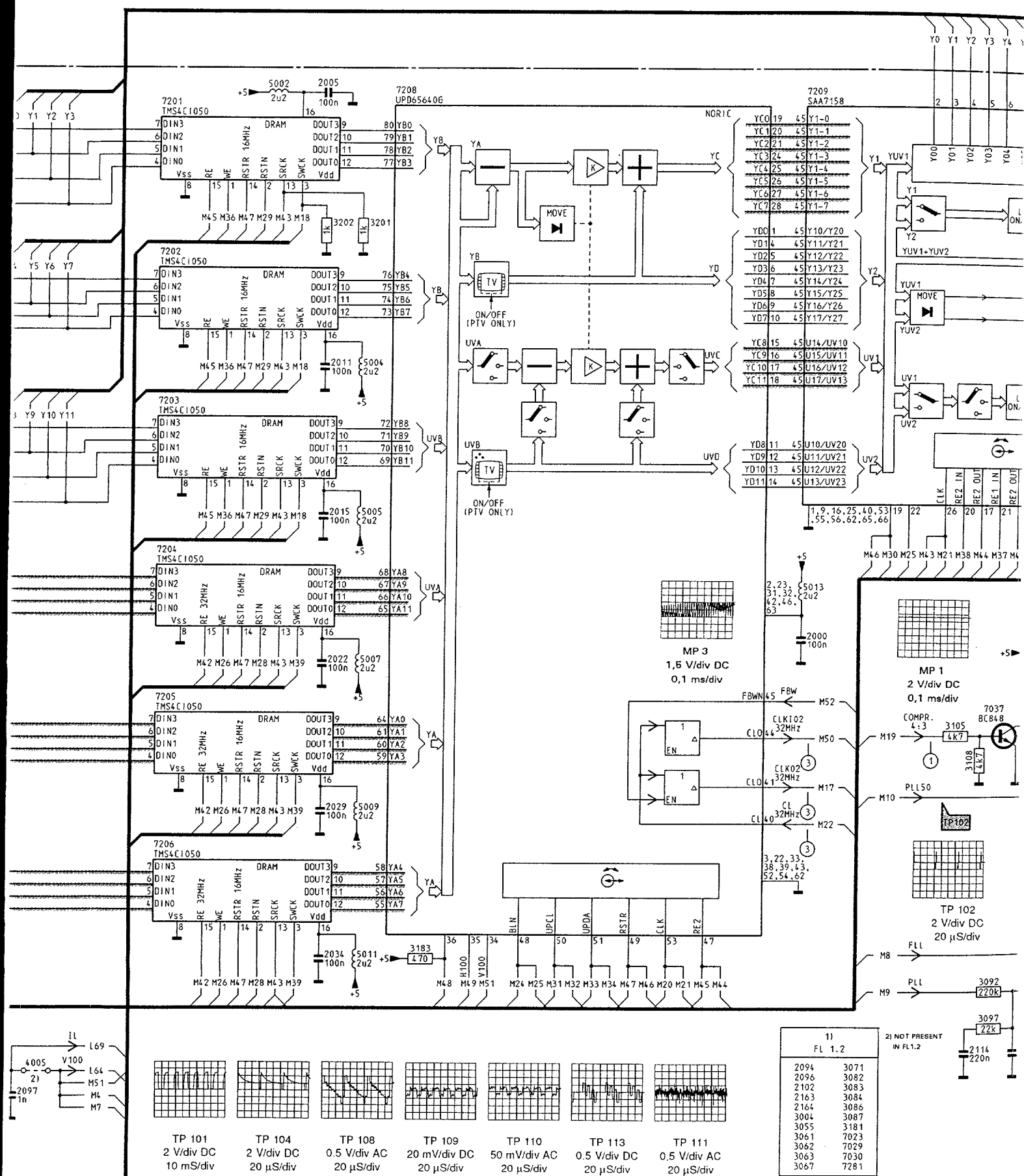


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2102	117	3140	M25	7210	C 6
2103	117	3141	M25	7210	E 6
2104	K14	3142	N25	7210	I 6
2105	K27	3143	I14	7210	G 3
2106	K28	3146	B26	7211	B 9
2108	I29	3147	C28	7212	O 9
2109	I30	3148	C27	7213	H 9
2110	I30	3151	C 3	7214	D10
2111	J29	3152	C 3	7215	F10
2112	I31	3153	B 3	7216	H10
2113	M27	3155	B 4	7217	K10
2114	M28	3156	D 4	7250	B14
2115	M29	3157	L33	7251	D14
2116	N29	3158	C 5	7252	F14
2117	N28	3159	C 2	7253	D20
2118	M25	3160	C 6	7254	D25
2119	M25	3161	E 3		
2121	H13	3162	I 4		
2122	I27	3163	E 6		
2123	K32	3164	E 3		
2125	B27	3165	I 6		
2130	C 2	3166	I 3		
2131	N17	3168	I 3		
2133	N14	3169	B 5		
2134	L15	3170	L 5		
2138	C28	3171	K 5		
2139	E28	3172	L 5		
2140	E28	3173	E 5		
2146	L33	3174	I 5		
2147	B 4	3212	I13		
2148	D 4	3217	M17		
2149	I 4	3251	B23		
2150	B 2	3252	B24		
2151	C 4	3253	B24		
2152	C 5	3254	B24		
2153	B 5	3255	B24		
2154	L 5	3256	J 5		
2155	E 3	3260	G27		
2156	E 4	3261	G26		
2157	E 5	3262	F28		
2158	D 5	3263	D19		
2159	I 3	3264	D19		
2160	I 4	3265	D18		
2161	I 5	3266	D18		
2162	I 5	3267	D19		
2163	L 6	3270	F19		
2164	C22	3271	C17		
2166	M 3	3272	F19		
2167	M 4	3273	F18		
2168	M 4	3274	L16		
2169	K 3	3275	L14		
2170	K 4	3276	L14		
2171	K 4	3277	F18		
2172	F11	3278	I26		
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2174	J11	3280	F22		
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2187	M30	5109	C21		
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2201	L28	5152	I 4		
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2252	C26	6107	I28		
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2257	F26	6162	D18		
2258	F27	6163	C17		
2259	F28	6250	C25		
2260	F27	6251	F27		
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3126	J30	7205	I21		
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	2003	B 9	3058	I 9	7023	M 8
	2004	B10	3059	L 2	7024	N 3
	2005	B18	3060	I 9	7025	N 3
	2006	G 9	3061	M 6	7026	B 4
	2007	G10	3062	M 8	7027	M 4
	2010	C30	3063	M 8	7029	N 8
B	2011	E18	3064	N 2	7030	M13
	2012	F30	3065	N 4	7034	L30
	2013	F30	3066	N 4	7035	B 5
	2014	F 8	3068	B 4	7036	C 5
	2015	G18	3071	K 9	7037	I26
	2016	G29	3074	M 4	7038	C 6
	2017	G30	3075	C 4	7039	E 5
	2018	F10	3076	N 3	7040	J30
	2022	H18	3078	M 3	7042	F 5
	2023	E 9	3079	M 2	7120	H 4
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	2027	C30	3083	M 9	7202	D16
	2028	C31	3084	M 9	7203	E16
	2029	J18	3085	M33	7204	G16
	2030	D31	3086	N10	7205	I16
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	2032	D31	3089	B 7	7207	B11
	2033	E31	3090	L29	7208	B18
	2034	L18	3091	C30	7209	B23
	2035	F30	3092	L26	7210	G29
	2036	F31	3093	L26	7219	H 6
	2037	G32	3094	L26	7221	M11
	2038	G32	3095	L27	7231	M31
	2083	H 4	3096	K 6	7244	H31
	2084	H 8	3097	M26		
E	2085	I10	3098	I33		
	2086	H 2	3099	M30		
	2087	I 2	3100	M30		
	2088	N 2	3101	B 5		
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F	2091	C 3	3103	I26		
	2092	M 3	3104	C 5		
	2093	F32	3105	I25		
	2094	M13	3106	D 4		
	2095	F33	3107	D 5		
	2096	M10	3108	J25		
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	2098	N32	3110	D 7		
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	2102	N10	3112	J30		
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	2105	B 6	3114	E 4		
	2106	K31	3115	H33		
	2107	K28	3116	J27		
	2108	K30	3118	E 5		
H	2109	K27	3119	J27		
	2110	L30	3120	E 5		
	2111	L29	3121	J30		
	2112	M26	3123	J30		
	2113	M27	3125	F 4		
	2114	M25	3127	G 5		
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	2116	D 3	3163	D 3		
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	2125	J27	3192	C14		
	2126	K27	3193	C14		
	2127	E 8	3194	D14		
	2128	G 3	3195	D14		
J	2130	E 4	3196	E14		
	2131	E 4	3197	F14		
	2132	D 4	3198	F14		
	2133	D 4	3199	F14		
	2134	G 4	3201	C18		
K	2136	F 4	3202	C18		
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	2163	M 7	5003	B30		
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	2185	E 9	5014	C32		
	2186	F 9	5020	F33		
	2187	B 8	5021	M29		
	2190	K29	5022	K31		
	3000	F 9	5023	L28		
	3001	G30	5025	H28		
	3002	G 8	5026	G31		
	3003	G28	5027	J28		
N	3004	N 7	5030	C 4		
	3006	G27	5031	E 4		
	3007	E 9	5032	F 4		
	3008	C31	5033	N 8		
	3009	C30	6000	F 8		
O	3011	D31	6002	I29		
	3012	D30	6004	M 4		
	3013	D31	6006	M32		
	3014	E31	6007	I27		
	3016	E30	6008	I27		
	3017	E31	6009	K28		

Electrical adjustments

8. Adjustments in the service menu

Switch in the service menu by connecting pins S23 and S24 on the small-signal panel briefly with each other. The structure of the Service Menu is illustrated in chapter 9. The various adjustments are activated with the aid of the colour- and +/- buttons on the remote control or on the set. When the "PP store" key on the local keyboard is pressed, the adjusted values are stored in the memory and the Service Mode is left.

8.1 White balance (white drive)

Connect a pattern generator and choose a white picture.

- Select green, blue or red
- Using P +/- adjust the values of green, blue and red until the desired white balance has been reached.
- Store the selected value by pressing the "PP store" key on the local keyboard.

8.2 D2-MAC adjustments

The SAT box adjustments are given in FL1 SAT box in chapter 7.

8.3 Options

The control unit used in this set has been prepared for operation of all the functions possible with this set. For correct operation, however, the control unit has to "know" the functions/features located in the set. This is done with a option code.

A number is allocated to each function. The possible functions are shown with their respective numbers in the tables alongside.

Optioncode 1

The numbers of the functions shown in the table have to be added to each other. The total forms the number for option code 1.

For example, a set has:

Function	Number
Front-end FQ816/ME/IF	2
A PIP module	8
	--- +
Optioncode 1 now becomes	10

Option code 2

The number of the functions shown in the table have to be added to each other. The total forms the number for option code 2.

For example, a set has:

Function	Number
IC7175 present on SSP	1
100 Hz high-end box	4
	--- +
Option code 2 now becomes	5

The option codes are set as follows:

- Select option 1, 2, 3 or 4 in the Service Menu (option alignment).
- Using the "Menu +/-" or "P +/-" enter the required option number.
- Store the value chosen by pressing the "PP store" key on the local keyboard.

These option codes are software adaptations. If the set has to be equipped for these features, the necessary hardware has also to be fitted.

Optioncode 1	
Nbr.	Function
0	Front end = FQ816/IF A reception of PAL BG or PAL BG and SECAM BG is now possible.
1	Front end = FQ844 Only reception of the UHF band is now possible.
2	Front end = FQ816/ME/IF Reception of both SECAM L but not of SECAM L' is now possible (reception of NTSC-M is now usually also possible).
4	Front end = FQ816/MF/IF Reception of both SECAM L and SECAM L' is now possible (NTSC M reception is generally possible now via the Euroconnector).
8	PIP module fitted This makes it possible to show PIP (Picture In Picture) displays.
16	NTSC-M reception possible This is normally always in combination with front end FQ816/ME/IF or FQ816/MF/IF.
32	SECAM DK module fitted In this case transmissions using the SECAM DK system can also be received. This module can be placed in place of the ECO NICAM or on the ECO NICAM panel.
64	NICAM module fitted In this case the digital sound with NICAM transmission can be received.
128	Second front end for PIP fitted If this second front end is fitted a second transmitter can be displayed in the PIP picture. The PIP function (number 8) still applies.

Optioncode 2	
Nbr.	Function
1	IC7175 present on SSP Applicable in case IC7175 (PCF8574) is present on the SSP (this is the case in all FL1.2 AB/BB sets).
2	Automatic 1/2 figure mode The set recognizes a 2-figure program number if two numbers are entered quickly enough in succession on the remote control. This automatic recognition can be switched off via this number.
4	100 Hz featuring present This is always the case in chassis FL1.2 (see also number 64).
32	ECO NICAM module present In this case the digital sound broadcast in NICAM transmissions can also be received (see further the number 64 of option code 1).
64	LFR box present This is always the case in chassis FL1.2 BB (see also number 4).
128	Teletext Peaking Filter on/off for LFR box (Scandinavia). In Scandinavia this number must be selected for chassis FL1.2 BB with AG < 20.

Optioncode 3	
Nbr.	Function
1	FSS reception only via SAT box This switches the D2-MAC decoder off.
2	Front-end on SAT box is: SF916 In this case it is possible to tune the SAT box to 2 GHz.
4	Satellite front-end SF914/SF916 present (SAT MAC reception). Switching on and off satellite reception via the satellite front-end. On switching off the front-end D2-MAC can only be received via cable-TV (CABLE MAC via MAC IF module).
8	MAC IF module present (CABLE MAC reception). This module makes it possible to decode a D2-MAC signal which is received via the cable front-end (FQ816/FQ844). In this case, besides satellite transmitters, MAC transmitters can also be received via the cable.
16	SECAM "Telecom Audio" reception possible. This option generates an extra sound channel in the menu on FSS reception. This channel is necessary for the reception of the French "Telecom" satellite. The necessary hardware is present in all sets so that this option may be selected as desired.
32	Cable-MAC reception only in hyperband In this case the reception of MAC-transmitters via the cable is limited to the hyperband.
64	16:9 picture tube present
128	"VIDEO-COLOR" 36" picture tube present

Optioncode 4 (AG ≥ 20)	
Nbr.	Function
1	Teletext Peaking Filter on/off for LFR box (Scandinavia). In Scandinavia this number must be selected for chassis FL1.2 BB with AG ≥ 20.

1.

1.1

1.2

1.3

1.4

1. The Service Default Mode

The FL1.2 is equipped with a service default mode. The service default mode is a fixed, definite state to which the set can be switched.

1.1 Definition state

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

- all sound and picture controls are in the central position (exception volume which is turned down)
- tuned to 475.25 MHz
- system:
 - * PAL/SECAM BG for Multi Europe
 - * PAL I for UK
 - * SECAM L for Multi French

1.2 Switch on and off

The service default mode is switched on by shorting pins S24 and S25 on the small signal panel.

The service default mode can only be switched off by switching the set to stand-by. If the set is switched off and then on again using the mains switch or the mains plug, the service default mode will remain on.

If the set switches to stand-by immediately after switching-on, the set cannot be operated and also cannot be switched to the service default mode. The child-proof lock has already been activated. To deactivate the child-proof lock the following series of commands has to be given using the remote control (see also Section 9):

<MENU> - <BLUE> - <RED> - <MENU + > - <MENU OFF>

1.3 Fault signals

To indicate that the set is in the service default mode, the following is displayed on the screen:

SERVICE 00 00 05 06 05

The five numbers after the word "service" stand for the last five fault signals noted by the operator(s). The number on the extreme right represents the last fault signal, that on the extreme left the last fault signal but 4.

Since this enables fault reports to be looked at afterward, it means that intermittent faults can be traced.

When the set leaves the service default mode, the fault-report memory is cleared.

1.4 Operation

During the service default mode the set will accept all operating commands. When, however, the set is switched off and on, it will return to the state as defined above.

2. Software protection

If it is observed by the control that the front end has ceased to give an I²C response, or that IC7430, IC7600 and also IC 7680 are no longer giving any response, the set will switch to the protection mode since it will be assumed that the +5 V or the +13 V power-supply voltage is absent. This software protection device consists of a fault signal (LEDs , code99) and the switching of the set to stand-by. To enable the fault to be traced, the set has now to be switched to the service default mode. The software protection system is then switched out of circuit.

3. Replacement of EEPROM IC7137

If, during a repair, the EEPROM has to be replaced, the microprocessor will detect that the EEPROM is empty. A fault signal (No. 21) will then be displayed.

If the service mode is now activated (see section 7), the microprocessor will load the EEPROM with a number of standard values for the white balance and the other linear settings. These values, however, must all be checked and, if necessary, re-adjusted.

All options have also to be set, the programs installed and the personal preference set.

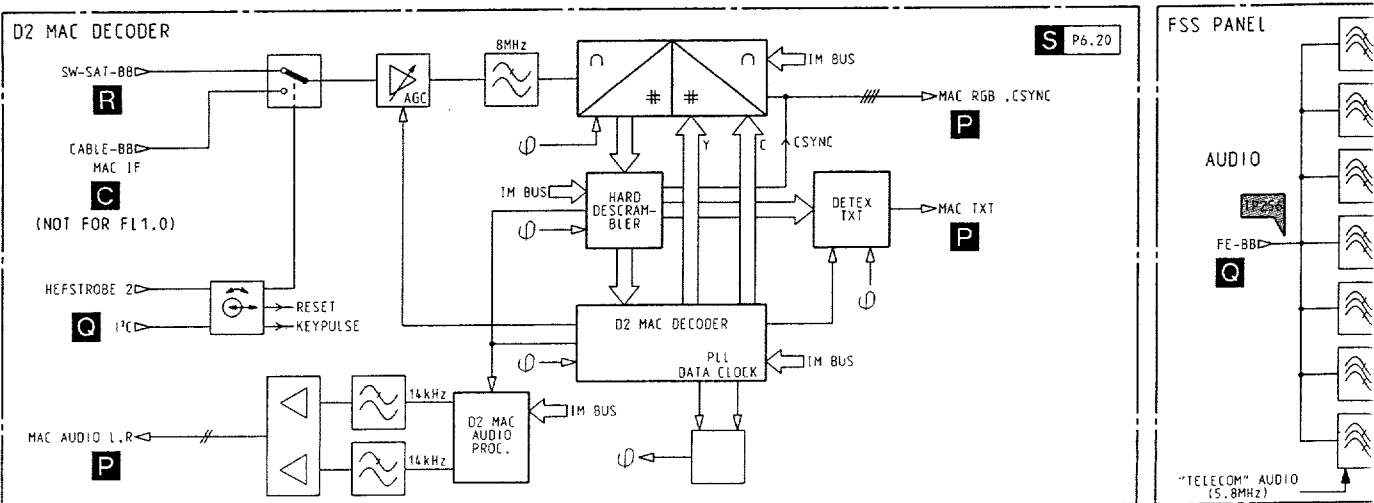
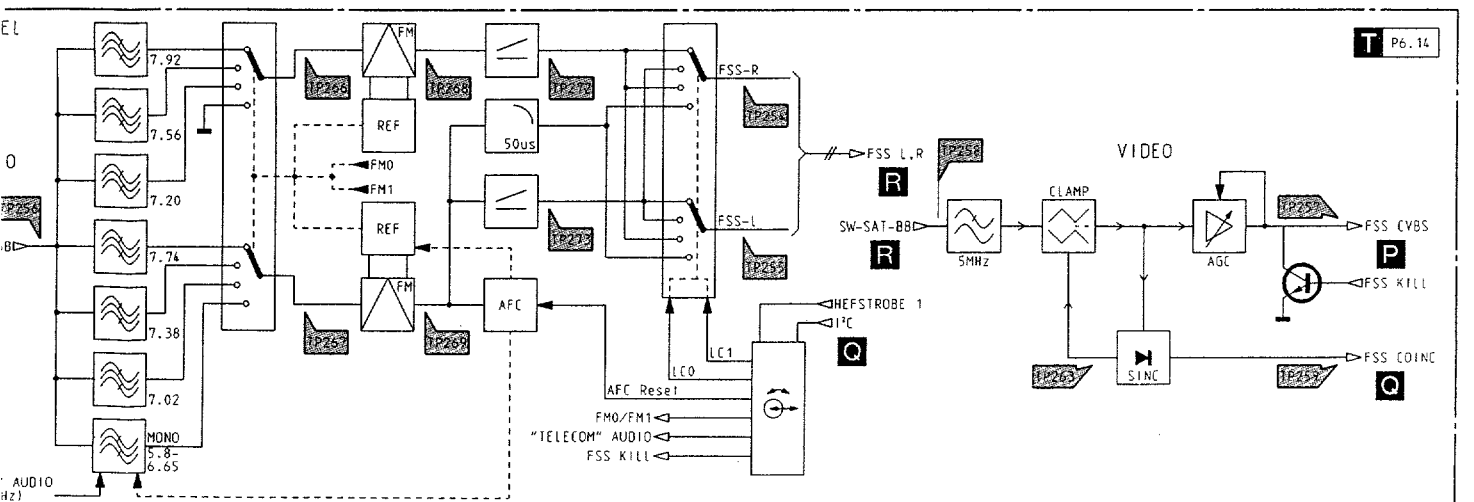
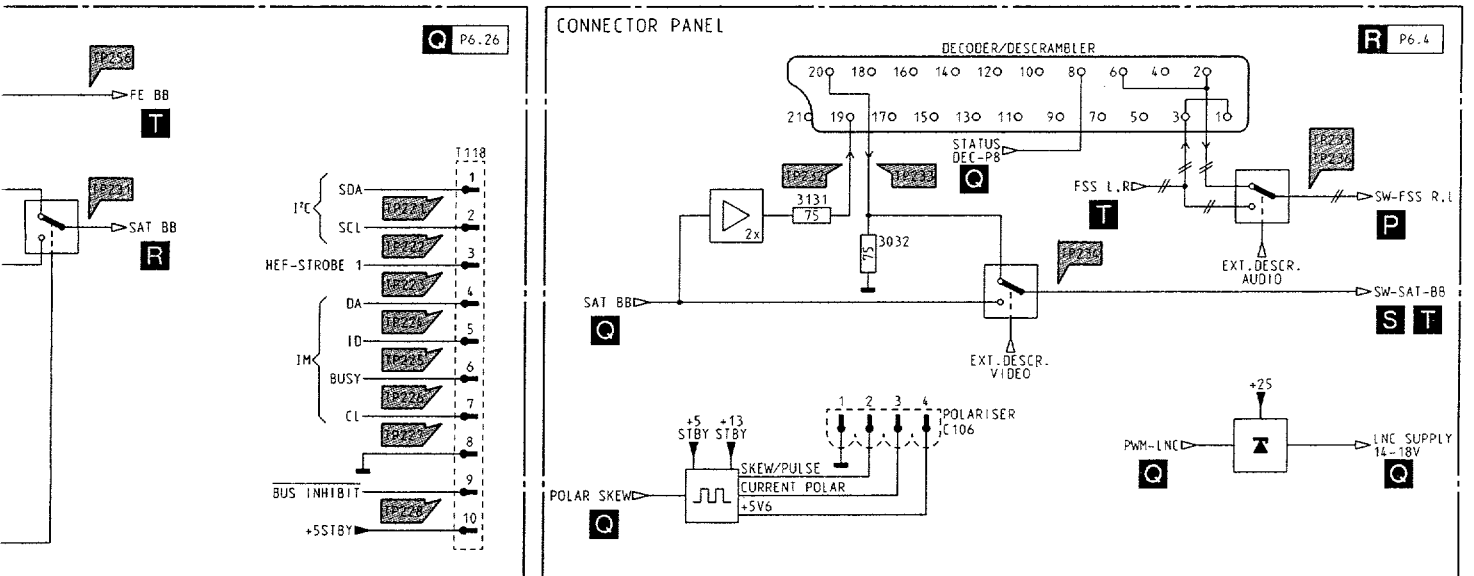
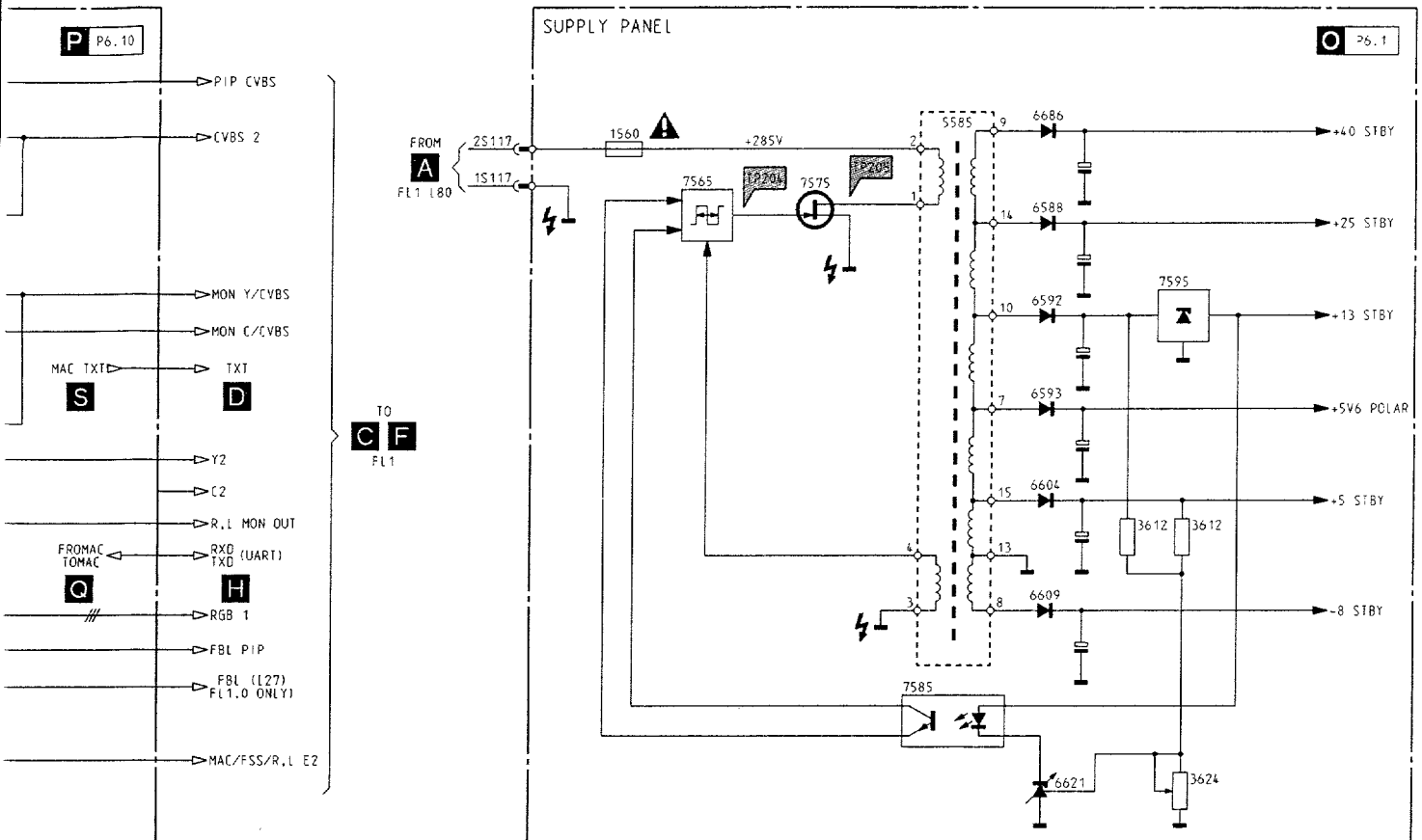


Diagramme schématique

FL1 SAT box

5.2

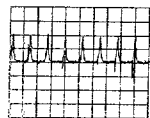
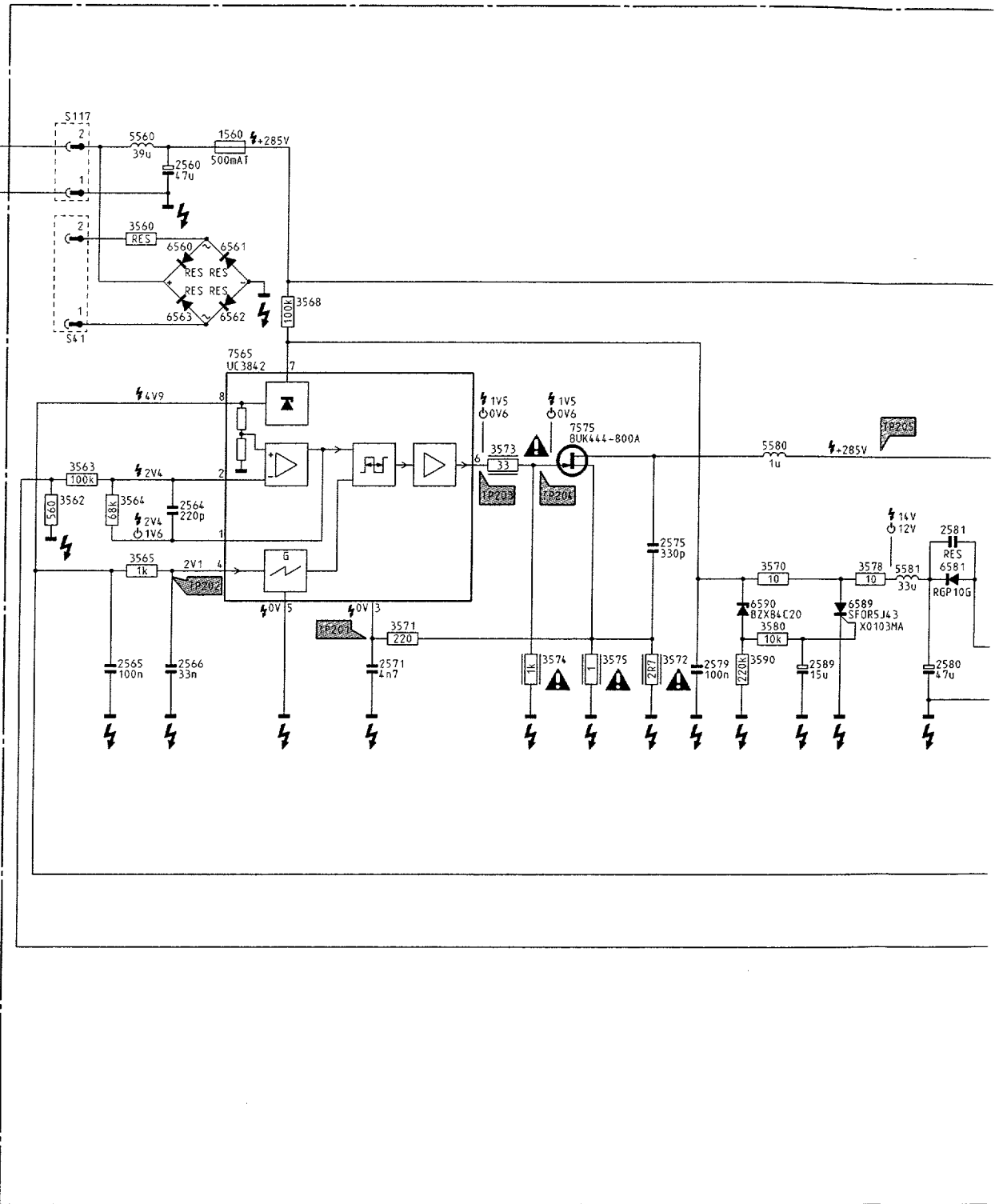


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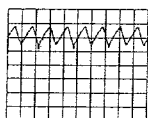
PCS 61719



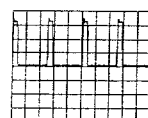
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TO L80



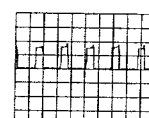
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20 μ S/div



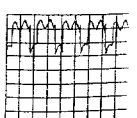
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1 V/div DC
20 μ S/div



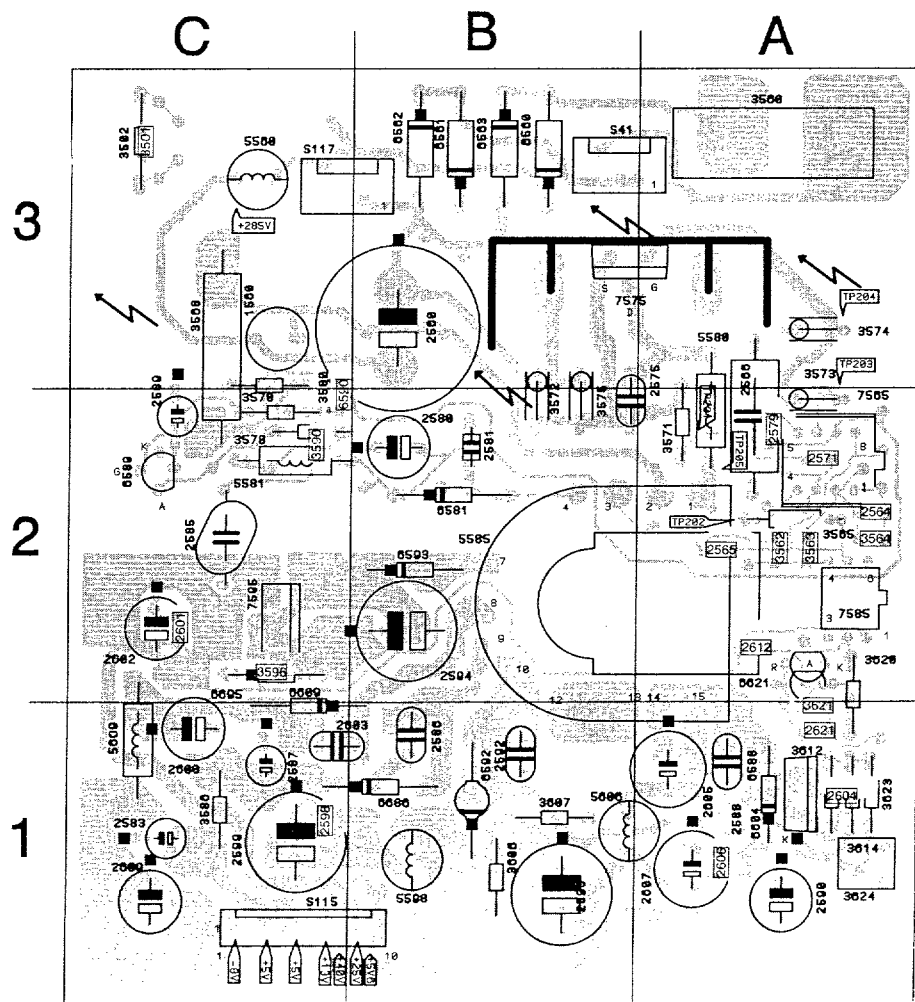
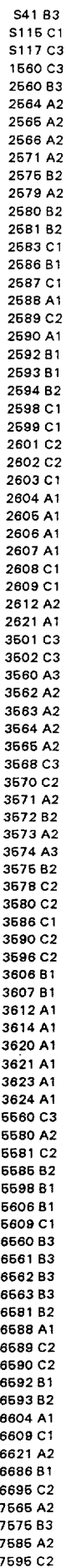
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5 V/div DC
10 μ S/div

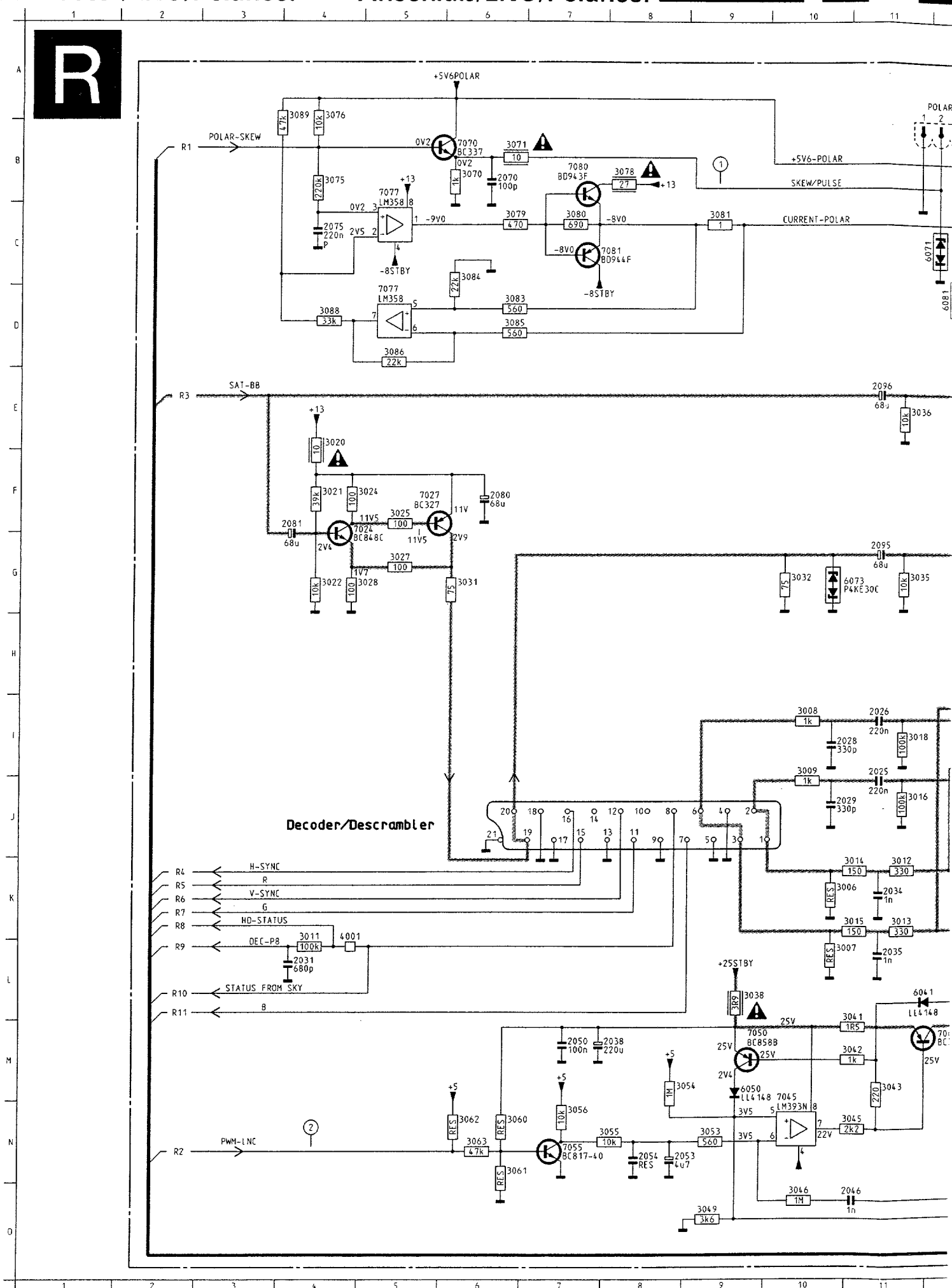


TP 204
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10 μ S/div

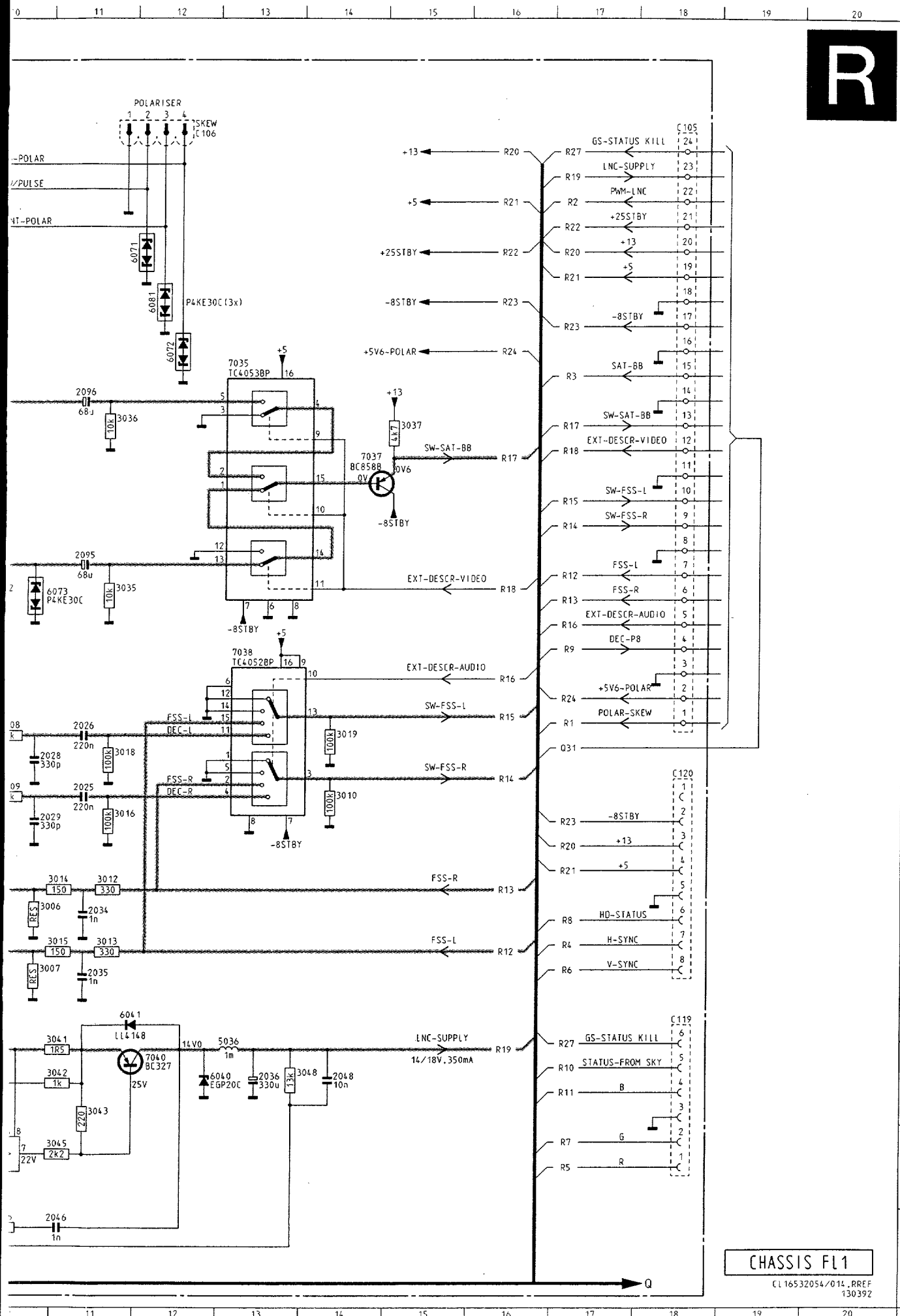


TP 205
100 V/div DC
1.25 ms/div





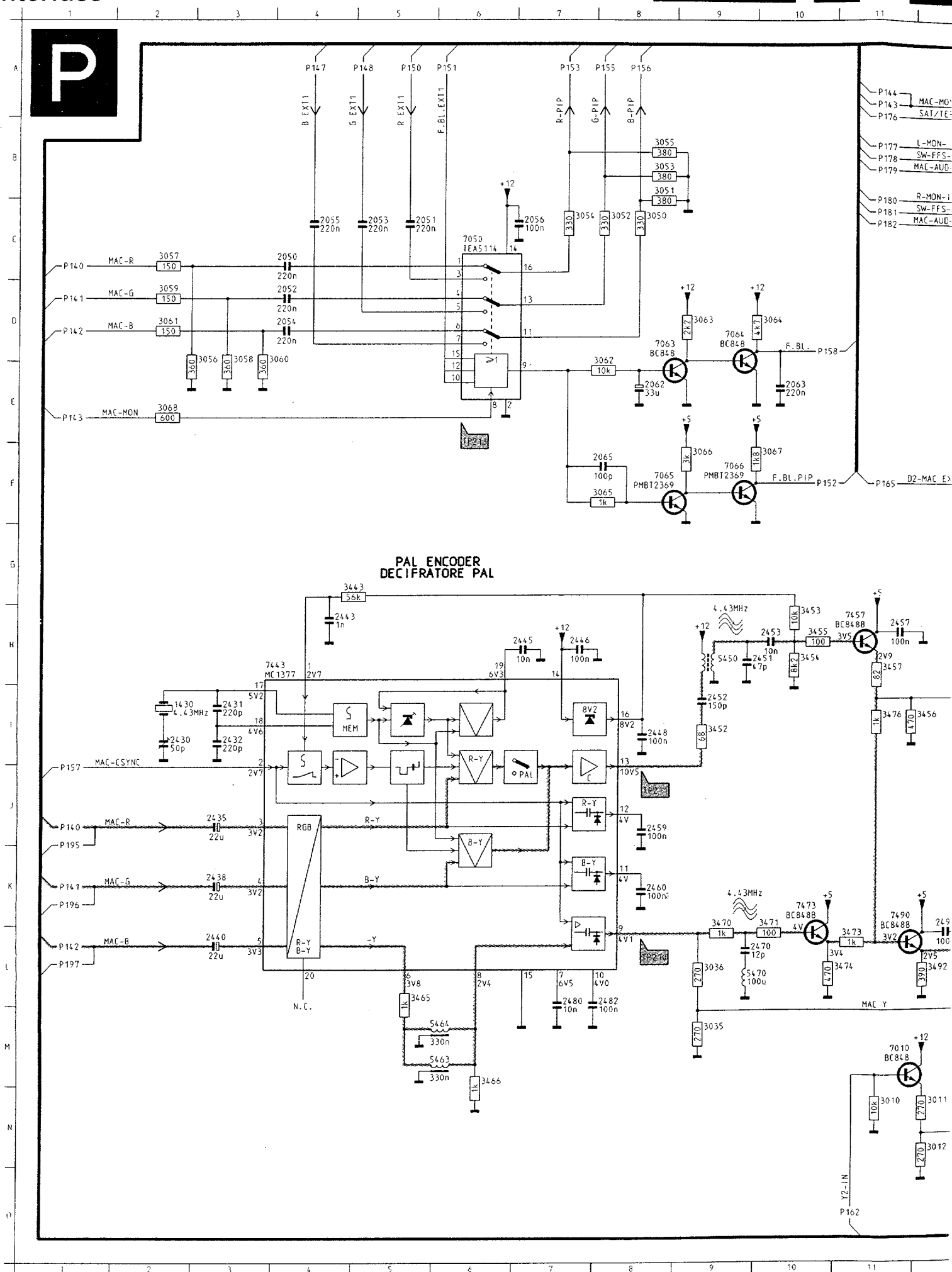
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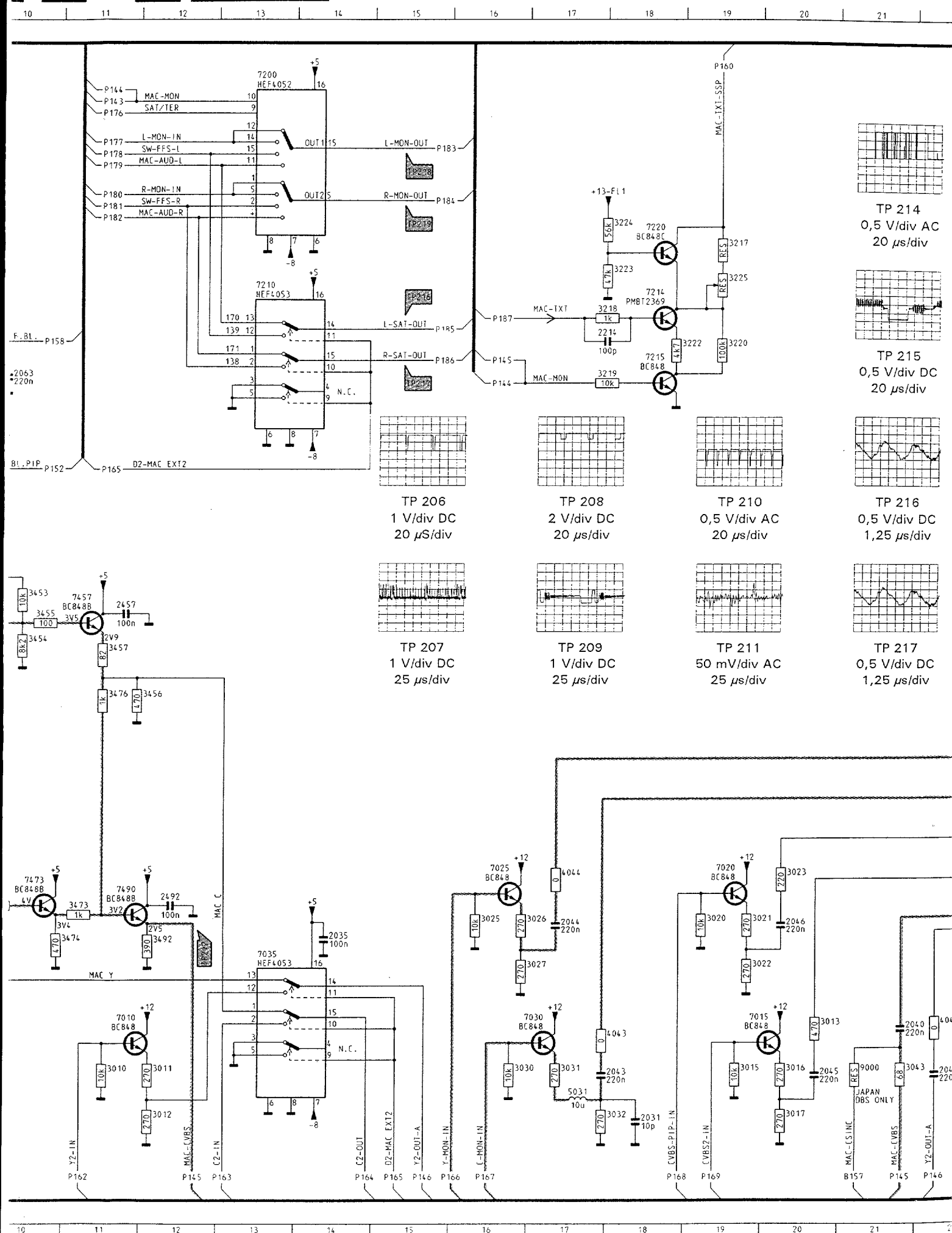


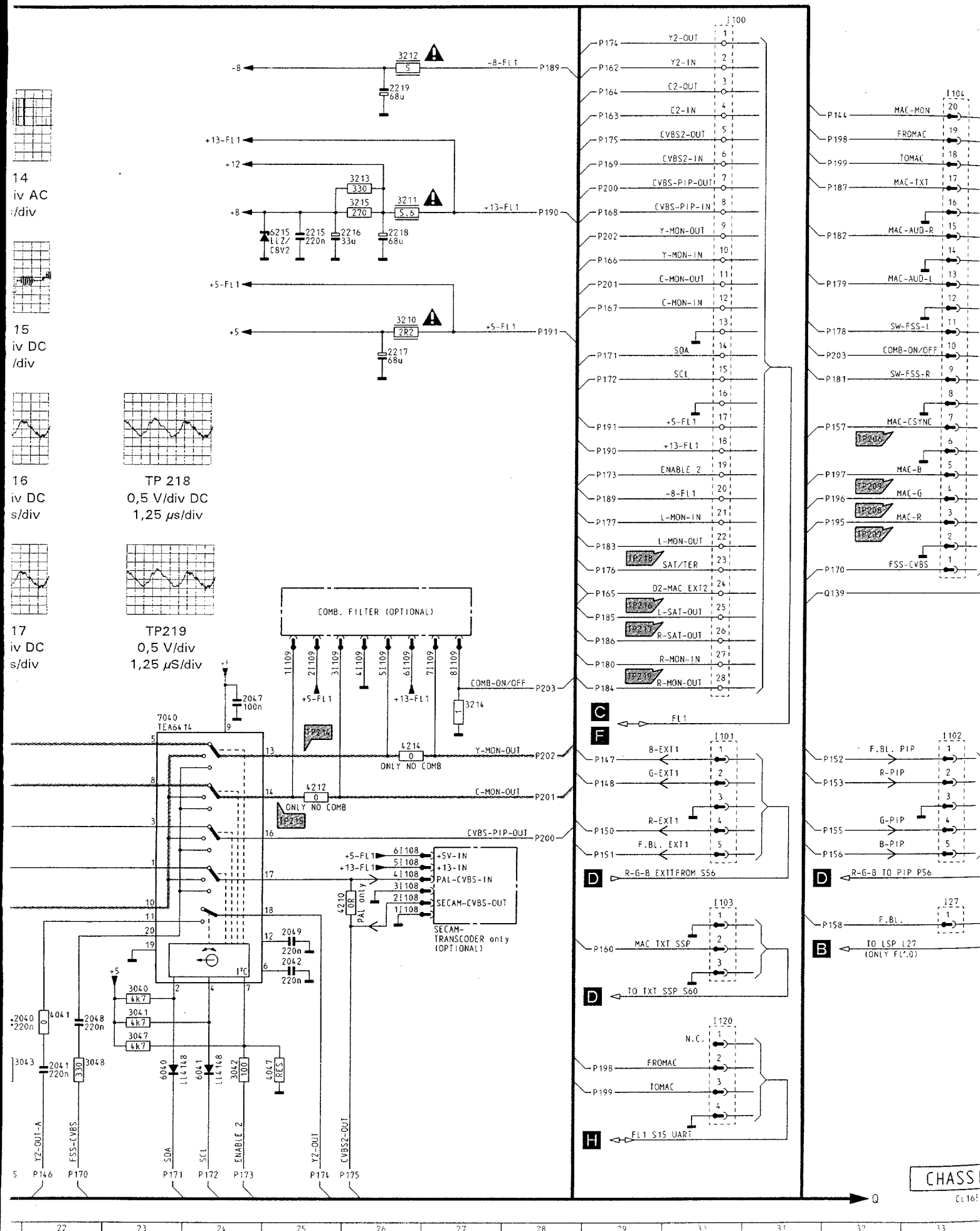
CHASSIS FL1

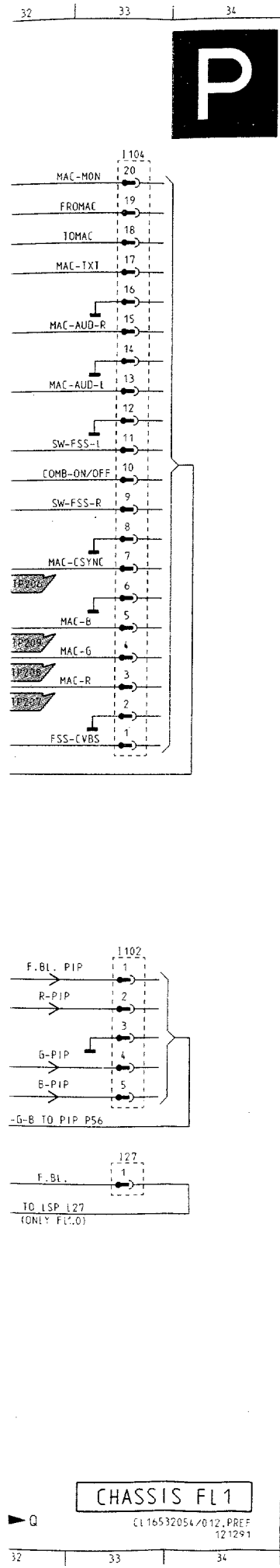
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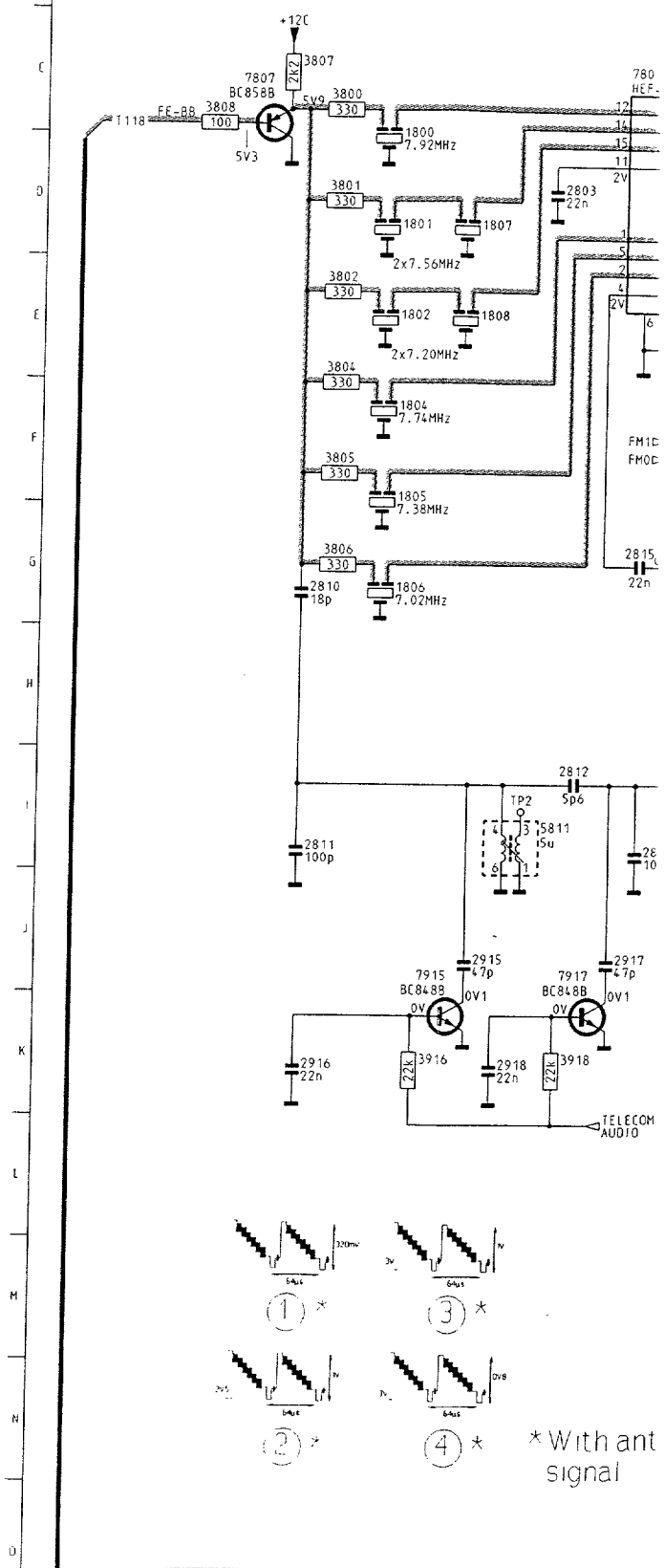


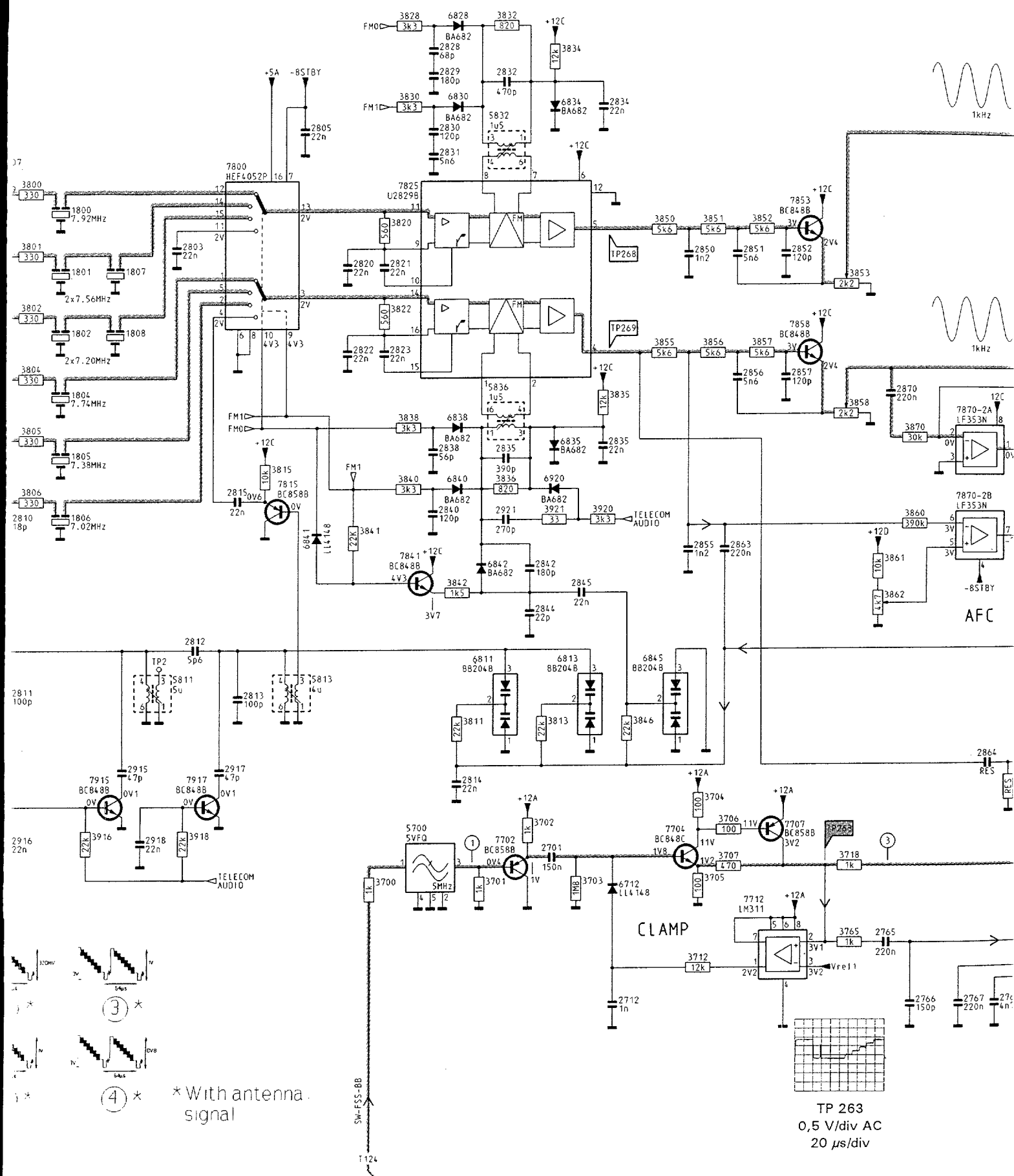


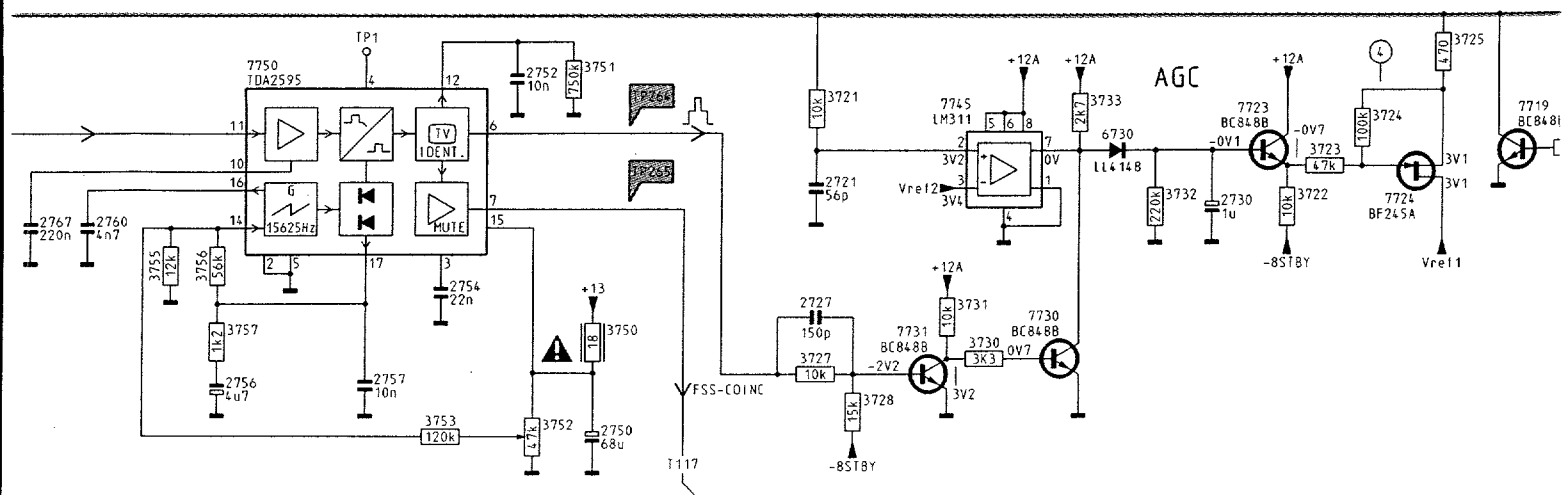
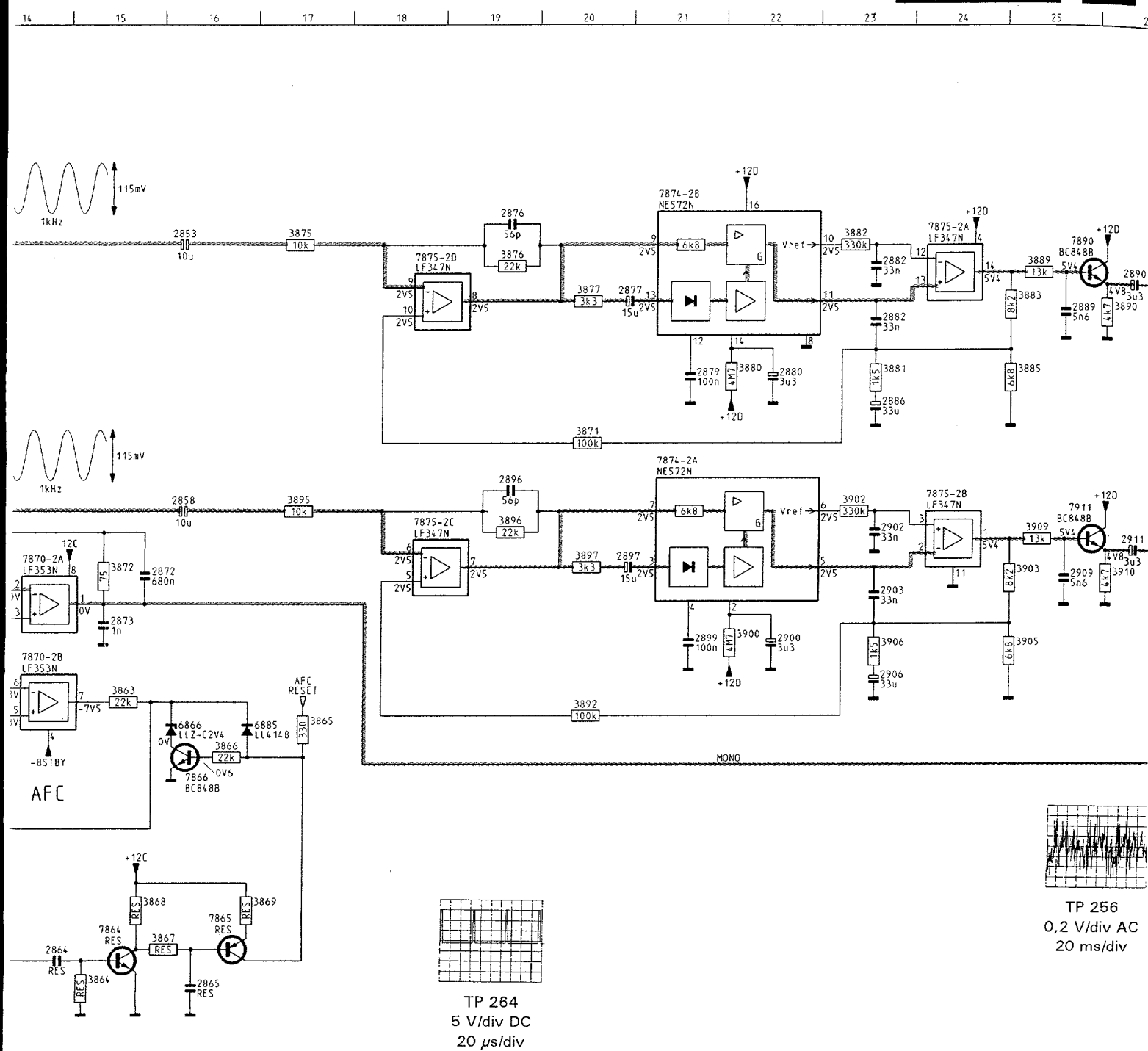


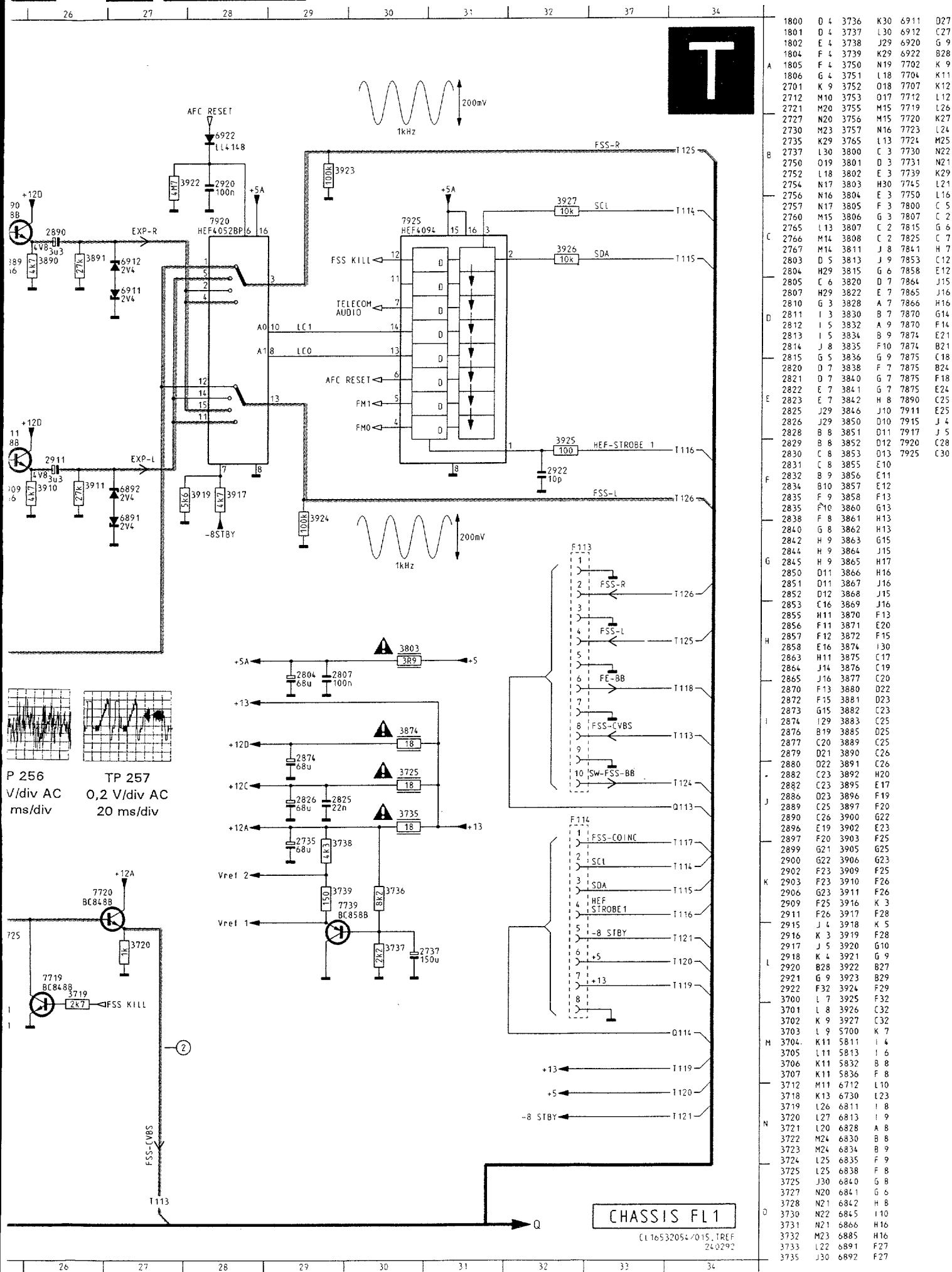
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	2031	N18	3471	L10
	2035	L14	3473	L11
	2040	M21	3474	L11
A	2041	N22	3476	L11
	2042	L25	3492	L12
	2043	N18	4041	M22
	2044	L17	4043	M18
	2045	N20	4044	K17
	2046	L20	4047	N25
	2047	L24	4210	L26
	2048	M22	4212	J25
B	2049	L25	4214	J26
	2050	C 4	5031	N17
	2051	C 5	5450	H 9
	2052	D 4	5463	M 6
	2053	C 5	5464	M 6
	2054	D 4	5470	L 9
	2055	C 4	6040	N23
	2056	C 7	6041	N24
C	2062	E 8	6215	C25
	2063	E10	7010	M11
	2065	F 8	7015	M20
	2214	D17	7020	K19
	2215	C25	7025	K16
	2216	C25	7030	M17
	2217	C26	7035	L13
D	2218	C26	7040	I23
	2219	B26	7050	C 6
	2430	I 2	7063	D 8
	2431	I 3	7064	D 9
	2432	I 3	7065	F 8
	2435	J 3	7066	F 9
	2438	K 3	7200	A13
E	2440	L 3	7210	D13
	2443	H 4	7214	D18
	2445	H 7	7215	E18
	2446	H 7	7220	C18
	2448	I 8	7443	H 3
	2451	H 9	7457	H11
	2452	I 9	7473	K10
	2453	H10	7490	K11
F	2457	H11	9000	N21
	2459	J 8		
	2460	K 8		
	2470	L 9		
	2480	L 7		
	2482	L 8		
	2492	L12		
G	3010	N11		
	3011	N12		
	3012	N12		
	3013	M20		
	3015	N19		
	3016	N20		
	3017	N20		
	3020	L19		
H	3021	L19		
	3022	L19		
	3023	K20		
	3025	L16		
	3026	L16		
	3027	L16		
	3030	N16		
	3031	N17		
I	3032	N18		
	3035	M 9		
	3036	L 9		
	3040	M23		
	3041	M23		
	3042	N24		
	3043	N21		
J	3047	M23		
	3048	N22		
	3050	C 8		
	3051	B 8		
	3052	C 8		
	3053	B 8		
	3054	C 7		
	3055	B 8		
K	3056	D 3		
	3057	C 2		
	3058	U 3		
	3059	D 2		
	3060	D 3		
	3061	D 2		
	3062	E 8		
L	3063	D 9		
	3064	D10		
	3065	F 8		
	3066	F 9		
	3067	F10		
	3068	E 2		
	3210	E26		
	3211	C26		
M	3212	A26		
	3213	C26		
	3214	I27		
	3215	C26		
	3217	C19		
	3218	D17		
	3219	E17		
N	3220	D19		
	3222	D18		
	3223	C18		
	3224	C18		
	3225	D19		
	3443	G 4		
	3452	I 9		
	3453	H10		
	3454	H10		
O	3455	H10		
	3456	I12		
	3457	H11		
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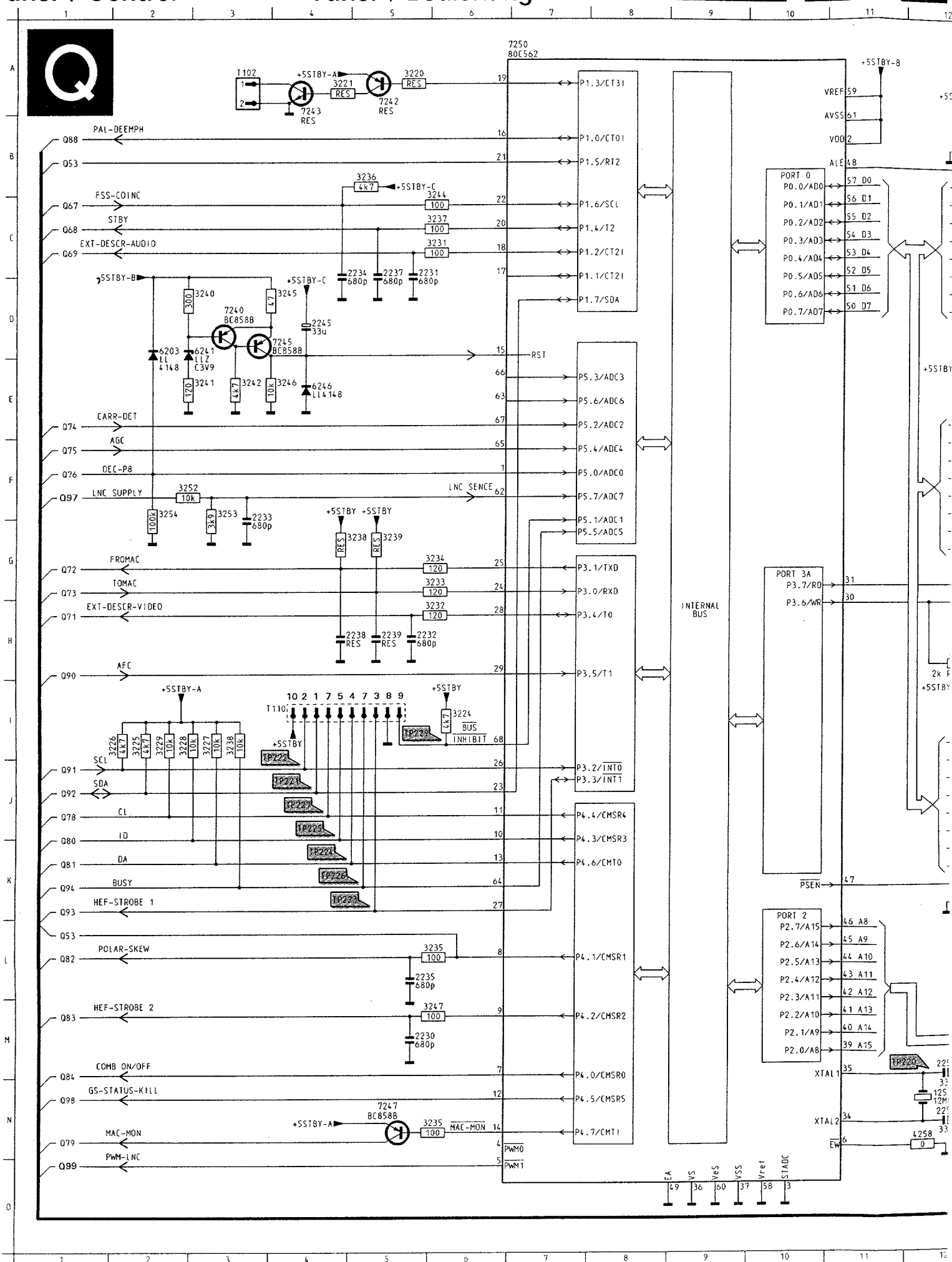
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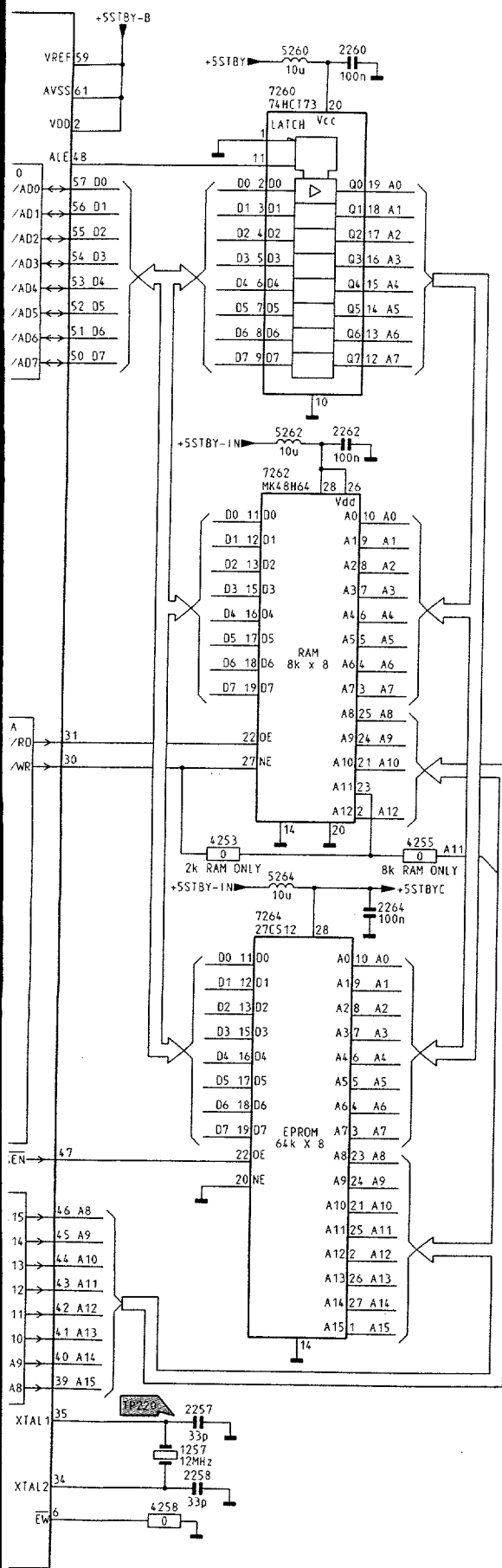




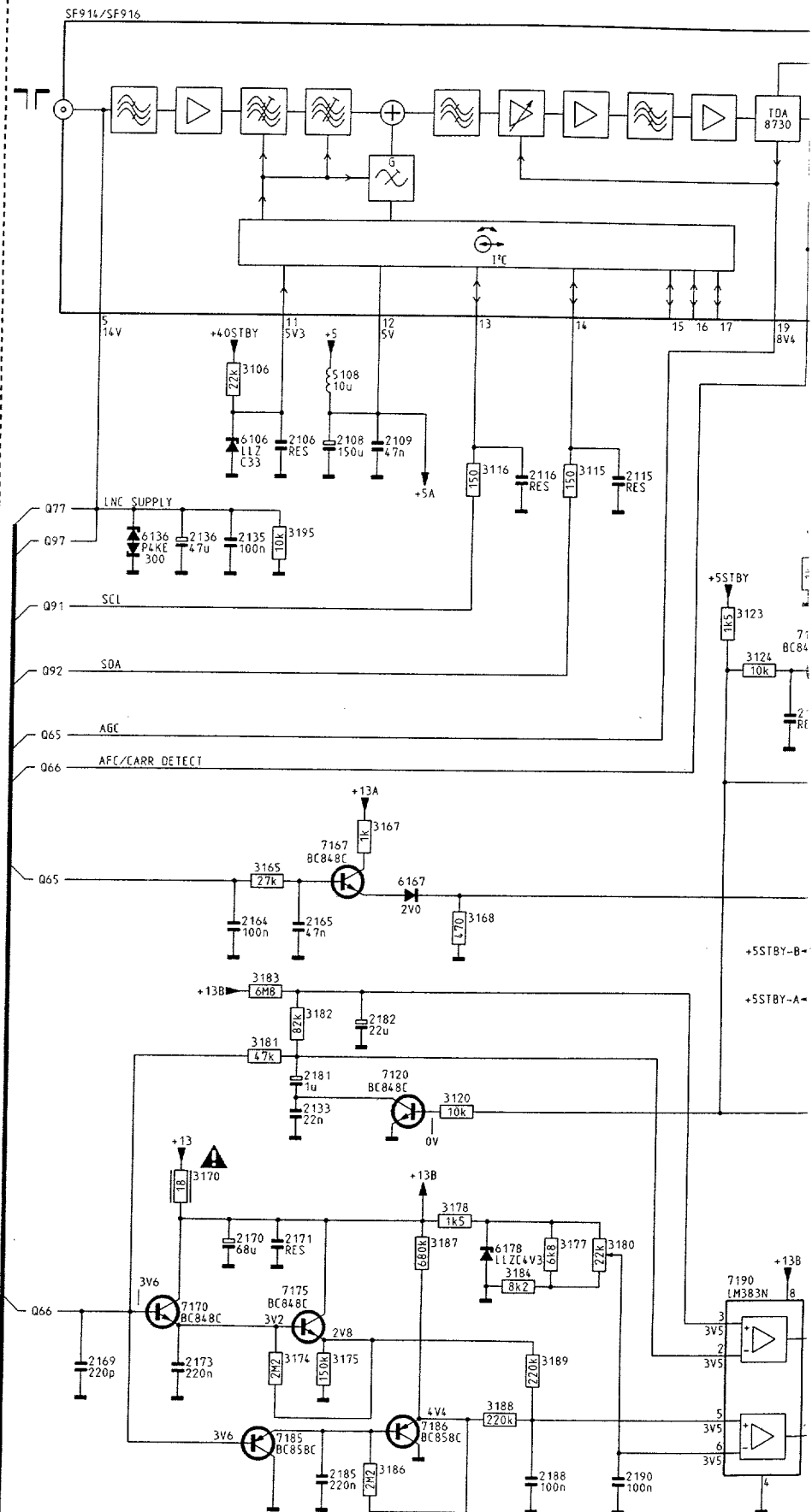








NOT FOR CABLE MAC

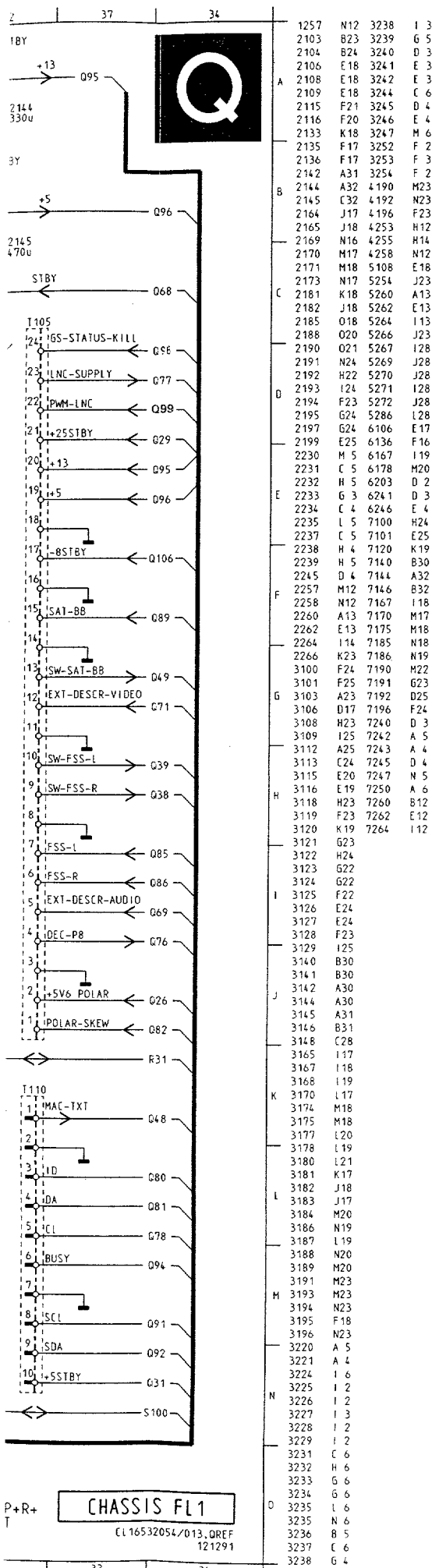




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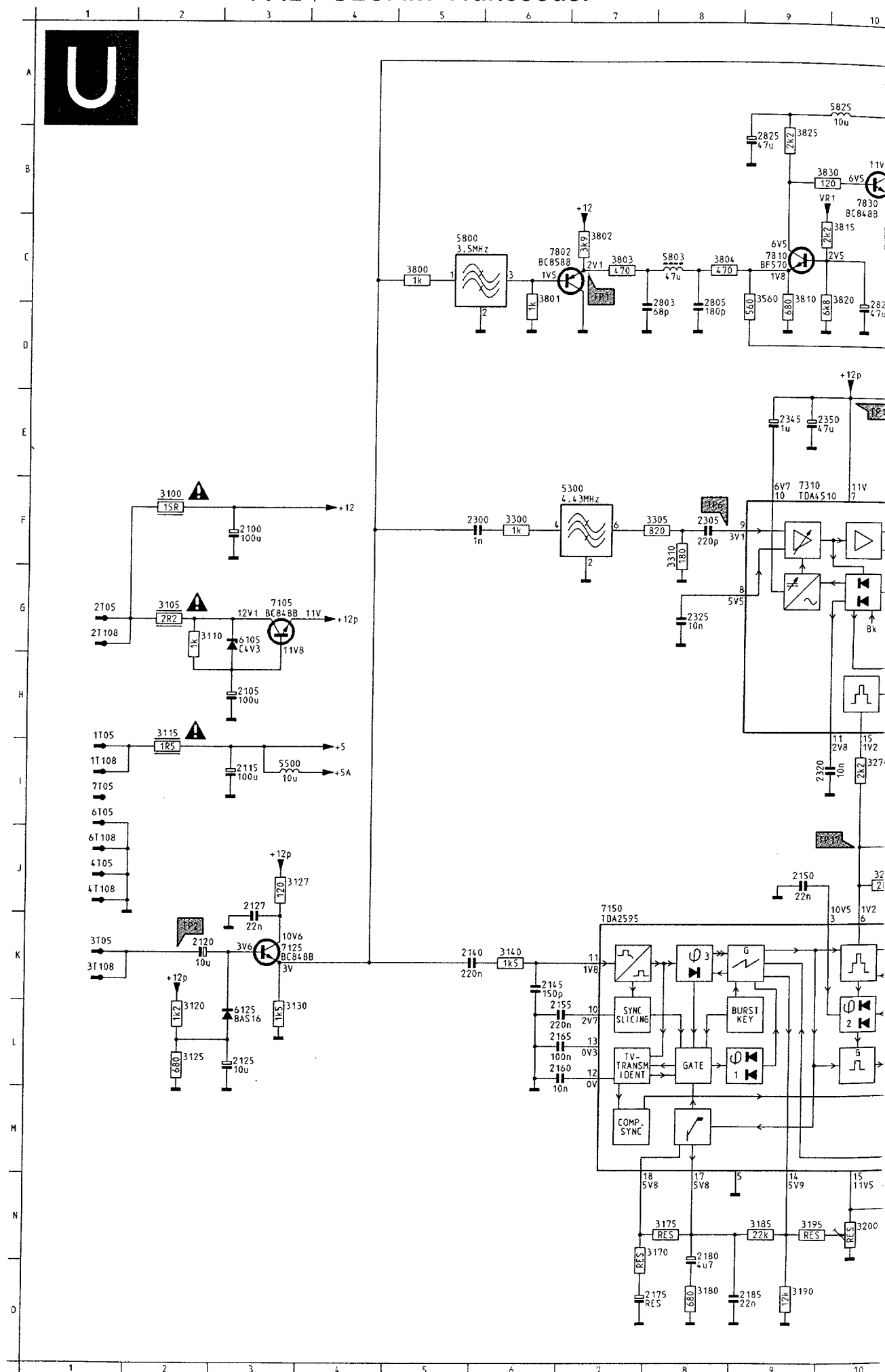
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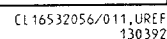
FL1 SAT box



1257	N12	3238	I 3
2103	B23	3239	G 5
2104	B24	3240	D 3
2106	E18	3241	E 3
2108	E18	3242	E 3
2109	E18	3244	C 6
2115	F21	3245	D 4
2116	F20	3246	E 4
2133	K18	3247	M 6
2135	F17	3252	F 2
2136	F17	3253	F 3
2142	A31	3254	F 2
2144	A32	4190	M23
2145	C32	4192	N23
2164	J17	4196	F23
2165	J18	4253	H12
2169	N16	4255	H14
2170	M17	4258	H12
2171	M18	5108	E18
2173	N17	5254	J23
2181	K18	5260	A13
2182	J18	5262	E13
2185	O18	5264	I13
2188	O20	5266	J23
2190	O21	5267	I28
2191	N24	5269	J28
2192	H22	5270	J28
2193	I24	5271	I28
2194	F23	5272	J28
2195	G24	5286	L28
2197	G24	6106	E17
2199	E25	6136	F16
2230	M 5	6167	I19
2231	C 5	6178	M20
2232	H 5	6203	D 2
2233	G 3	6241	D 3
2234	C 4	6246	E 4
2235	L 5	7100	H24
2237	C 5	7101	E25
2238	H 4	7120	K19
2239	H 5	7140	B30
2245	D 4	7144	A32
2257	M12	7146	B32
2258	N12	7167	I18
2260	A13	7170	M17
2262	E13	7175	M18
2264	I14	7185	N18
2266	K23	7186	N19
3100	F24	7190	M22
3101	F25	7191	G23
3103	A23	7192	D25
3106	D17	7196	F24
3108	H23	7240	D 3
3109	I25	7242	A 5
3112	A25	7243	A 4
3113	C24	7245	D 4
3115	E20	7247	N 5
3116	E19	7250	A 6
3118	H23	7260	B12
3119	F23	7262	E12
3120	K19	7264	I12
3121	G23		
3122	H24		
3123	G22		
3124	G22		
3125	F22		
3126	E24		
3127	E24		
3128	F23		
3129	I25		
3140	B30		
3141	B30		
3142	A30		
3144	A30		
3145	A31		
3146	B31		
3148	C28		
3165	I17		
3167	I18		
3168	I19		
3170	L17		
3174	M18		
3175	M18		
3177	L20		
3178	L19		
3180	L21		
3181	K17		
3182	J18		
3183	J17		
3184	M20		
3186	N19		
3187	L19		
3188	N20		
3189	M20		
3191	M23		
3193	M23		
3194	N23		
3195	F18		
3196	N23		
3220	A 5		
3221	A 4		
3224	I 6		
3225	I 2		
3226	I 2		
3227	I 3		
3228	I 2		
3229	I 2		
3231	C 6		
3232	H 6		
3233	G 6		
3234	G 6		
3235	L 6		
3236	N 6		
3237	B 5		
3238	C 6		
3239	G 4		

PAL / SECAM Transcoder





A	1360	I 12	3505	J 18
	2100	F 3	3510	H 18
	2105	H 3	3515	J 19
	2115	I 3	3520	J 19
	2120	K 2	3522	F 25
B	2125	L 3	3524	E 24
	2127	J 3	3525	F 25
	2140	K 5	3530	F 23
	2145	K 6	3535	G 23
	2150	J 9	3540	O 23
C	2155	L 7	3550	O 21
	2160	L 7	3555	F 21
	2165	L 7	3560	C 9
	2170	N 11	3705	G 28
	2175	O 8	3710	G 29
D	2180	N 8	3725	J 24
	2185	O 9	3730	K 25
	2200	N 10	3740	L 25
	2225	M 14	3800	C 5
	2230	N 12	3801	C 7
E	2235	O 14	3802	C 7
	2300	F 5	3803	C 8
	2305	F 8	3804	C 8
	2315	I 11	3810	C 9
	2320	I 10	3815	C 10
F	2325	G 8	3820	C 10
	2330	E 11	3825	B 9
	2335	E 11	3830	B 9
	2340	E 11	3835	C 10
	2345	E 9	3840	C 11
G	2350	E 9	3845	C 11
	2355	E 13	3850	B 11
	2360	I 12	3855	B 12
	2365	I 14	3860	B 29
	2370	G 14	3900	B 13
H	2375	I 17	3905	B 13
	2380	E 16	3910	B 12
	2395	F 19	3920	B 14
	2415	G 19	3930	F 6
	2500	G 23	5500	I 3
I	2505	I 18	5524	E 24
	2520	I 19	5535	F 24
	2522	H 24	5540	O 24
	2523	H 23	5550	D 22
	2524	F 24	5700	G 26
J	2525	F 26	5705	G 28
	2535	G 24	5720	I 25
	2540	D 24	5725	I 24
	2542	D 23	5800	C 5
	2545	E 22	5803	C 5
K	2550	D 21	5825	A 10
	2555	G 22	6105	G 3
	2560	D 11	6125	L 3
	2600	J 20	6205	J 11
	2605	J 23	6380	E 17
L	2610	K 23	6845	C 11
	2615	K 22	7105	G 3
	2620	K 22	7125	K 3
	2625	K 21	7135	C 15
	2630	J 23	7150	J 7
M	2700	G 26	7220	L 14
	2705	G 27	7310	F 9
	2730	K 25	7370	E 15
	2735	K 25	7390	F 19
	2740	L 25	7400	G 18
N	2745	L 25	7410	G 19
	2750	K 29	7500	G 20
	2755	L 29	7505	I 18
	2760	L 29	7515	I 19
	2803	D 7	7520	E 25
O	2805	D 8	7525	E 23
	2820	D 10	7700	H 26
	2825	B 9	7802	C 9
	2835	B 11	7810	C 9
	2845	D 11	7830	B 10
P	3100	F 2	7850	A 12
	3105	G 2	7900	C 13
	3110	G 2	7910	C 12
	3115	H 2	7920	B 14
	3120	L 2		
Q	3125	L 2		
	3127	J 3		
	3130	L 3		
	3135	B 14		
	3140	K 6		
R	3170	N 8		
	3175	N 8		
	3180	O 8		
	3185	N 9		
	3190	O 9		
S	3195	N 9		
	3200	N 10		
	3205	J 10		
	3210	J 11		
	3215	J 12		
T	3220	L 14		
	3225	M 13		
	3230	L 12		
	3235	O 13		
	3240	K 12		
U	3260	I 16		
	3265	I 15		
	3270	I 10		
	3300	F 6		
	3305	F 8		
V	3310	F 8		
	3340	D 11		
	3375	I 16		
	3380	D 17		
	3385	F 18		
W	3390	F 19		
	3395	F 18		
	3400	G 17		
	3405	F 18		
	3410	G 18		
X	3415	G 19		