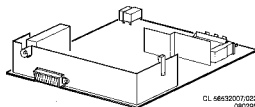


Service
Service
Service

WALTER
oprava spotřební elektroniky
Ve struze 3011/3
tel. 48780
ÚSTÍ nad Labem

AA5
(PHILIPS 21 PT 136B) AB

philips 21 PT 136B



CL 56632007/022
08/295

Service Manual

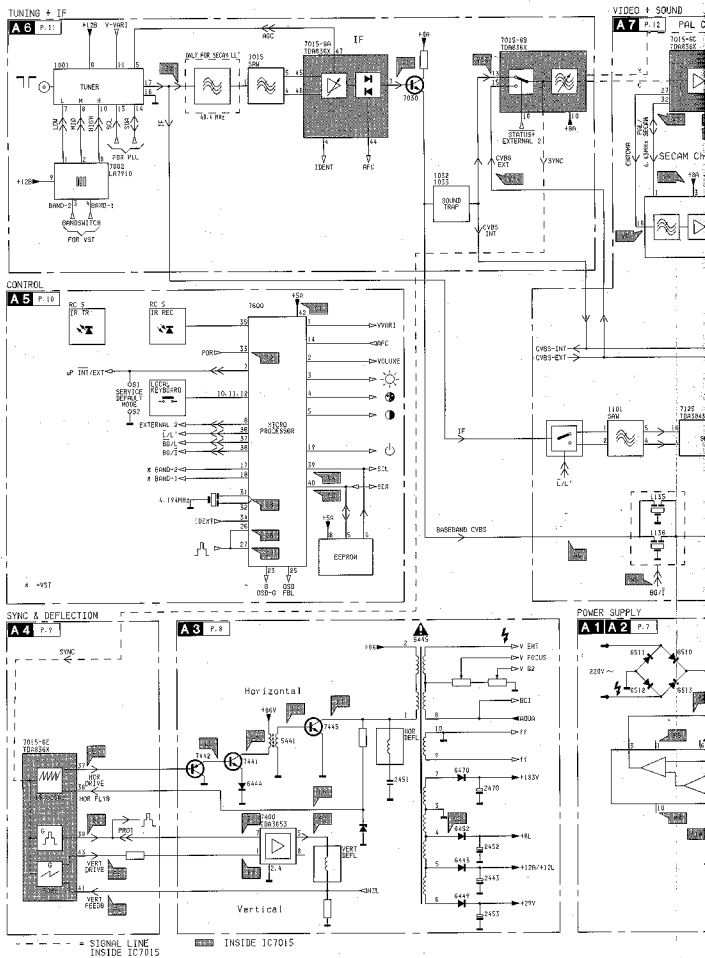
Table of contents

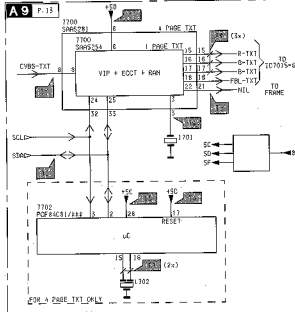
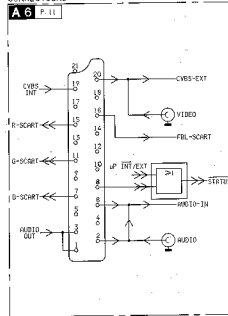
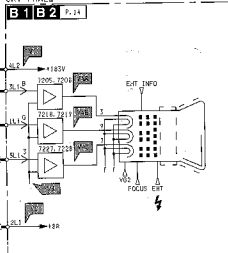
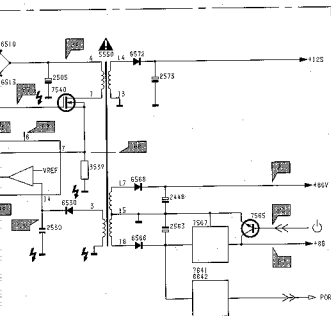
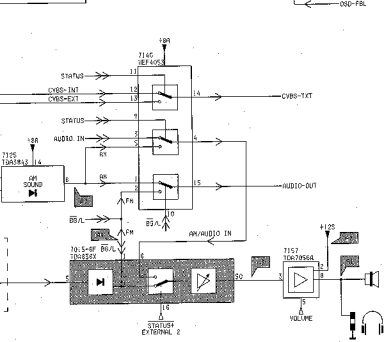
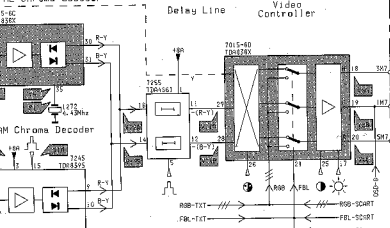
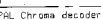
Page

1. Technical specifications	2	
2. Connection facilities	2	
3. Safety instructions, Maintenance instructions, Warnings and notes	3	
4. Mechanical instructions	3	
5. Overview oscillograms	4	
Survey of testpoints	4	
Block diagram	5	
6. Electrical diagrams and print lay-outs	Diagram	PWB
Power supply	(Diagram A1+A2) 7	6
Deflection	(Diagram A3) 8	6
Synchronisation	(Diagram A4) 9	6
Controls	(Diagram A5) 10	6
Tuner+IF+connections	(Diagram A6) 11	6
Video+sound	(Diagram A7) 12	6
Teletext	(Diagram A9) 13	6
SVHS connection	(Diagram A8) 13	6
14-15-17-21" mini neck CRT panel	(Diagram B1) 14	15
20" narrow neck CRT panel	(Diagram B2) 14	15
7. Electrical adjustments	15	
8. Repair facilities		
Description power supply	16	
Test points, Service Default Mode,		
Service Menu, Error codes	18	
Block diagram supply voltages	19	
Fault finding tree	19	
9. Directions for use	20	
10. List of abbreviations	22	
11. Spare parts list	23	

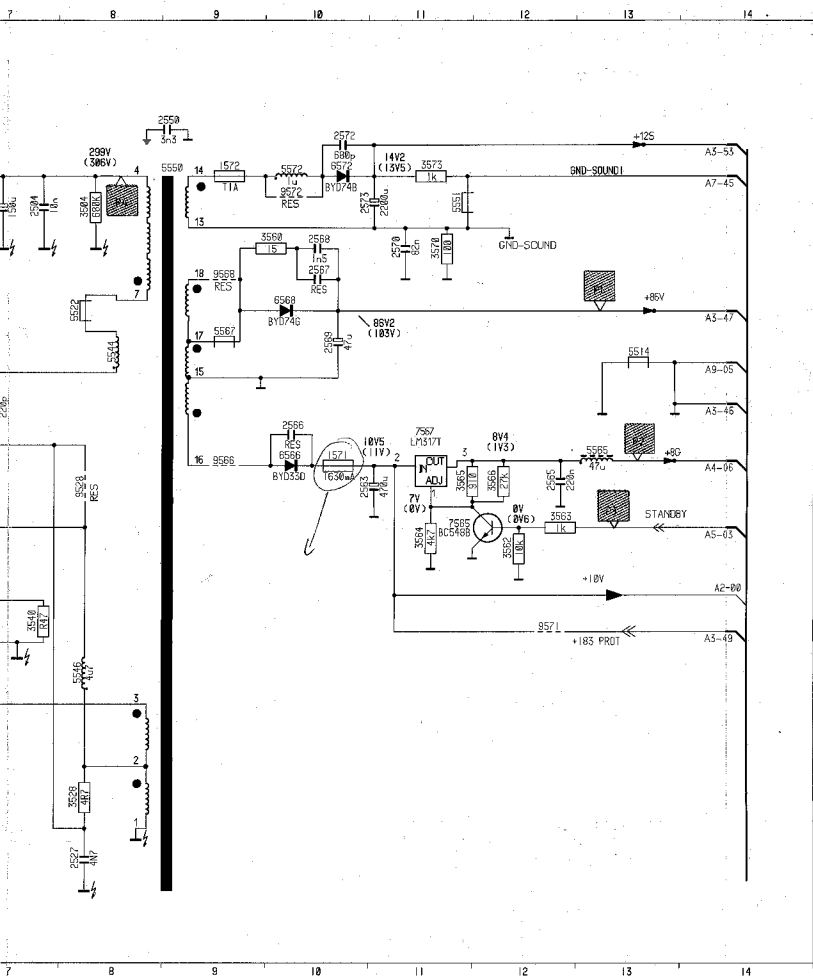
4





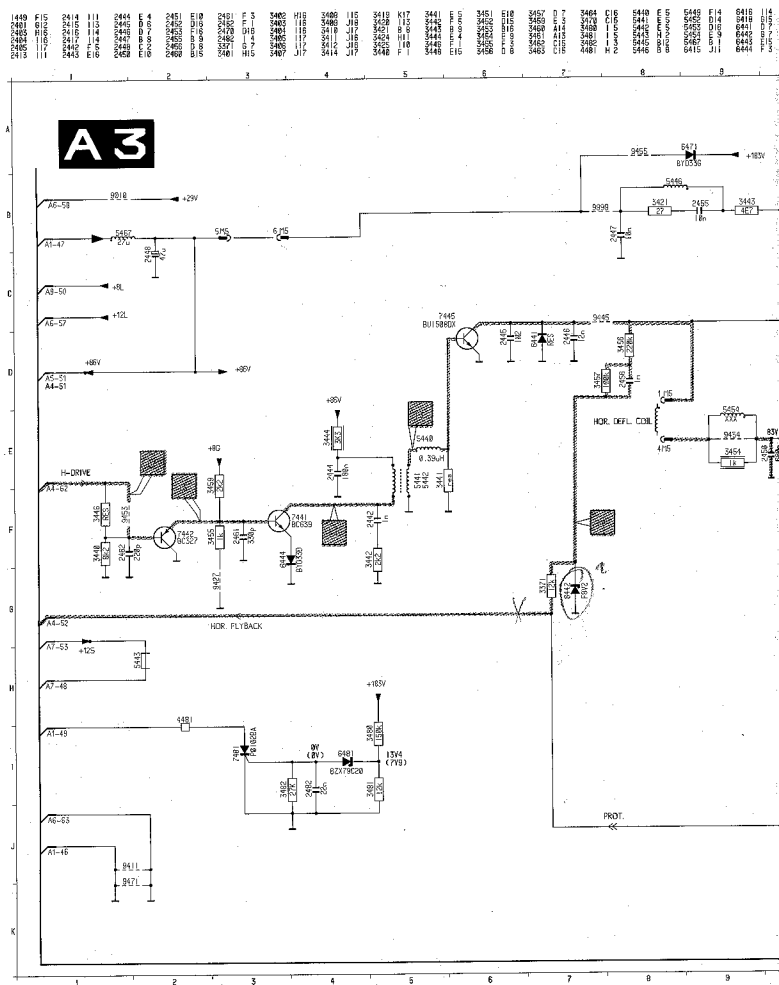


Power supply / Speisung / Alimentation



Deflection / Ablenkung / Déflexion

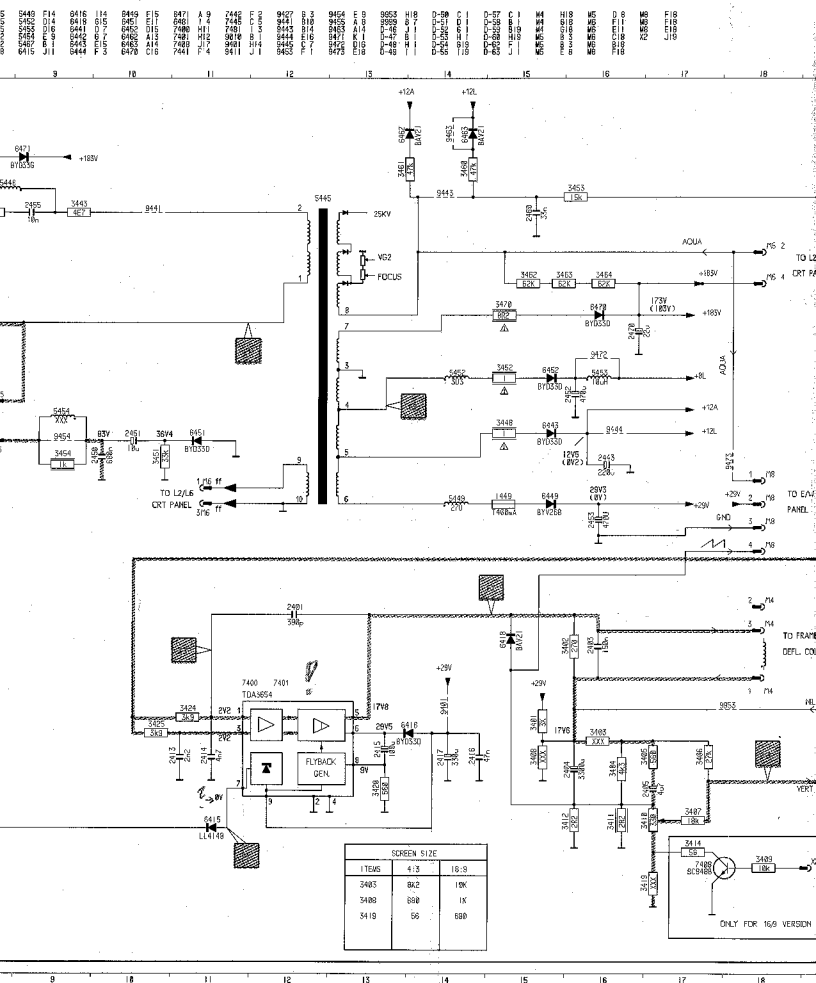
Deflecti

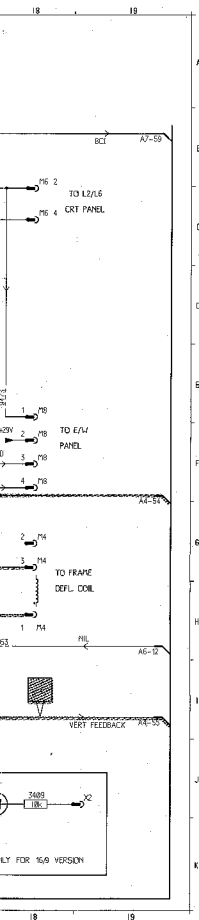


Deflection / Ablenkung / Déflexion

AA5

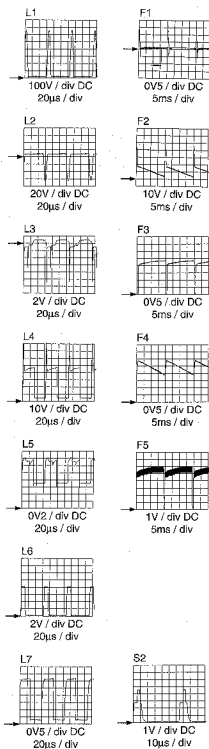
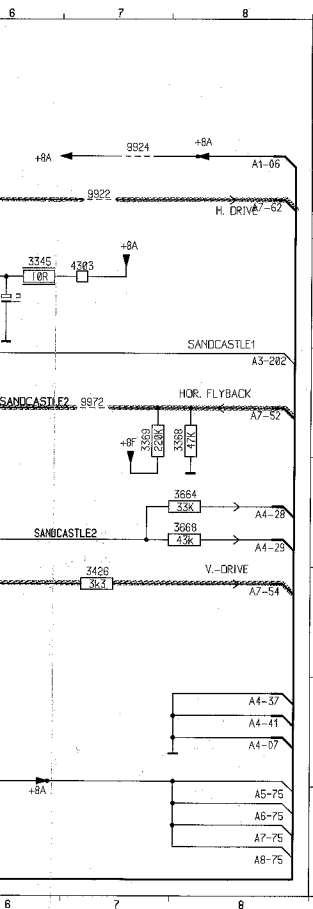
8





9 Synchronisation

A6-75	H	B-29	F	B-52	D
A7-75	H	B-37	F	B-54	D
A8-75	H	B-41	F	B-55	D
B-06	F	B-41	F	B-56	D
B-28	F	B-51	F	B-57	D



C1 5V DC

C2 4V6 DC

C4 5V DC

C5 5V DC



- 1V / div DC
0.5μs / div



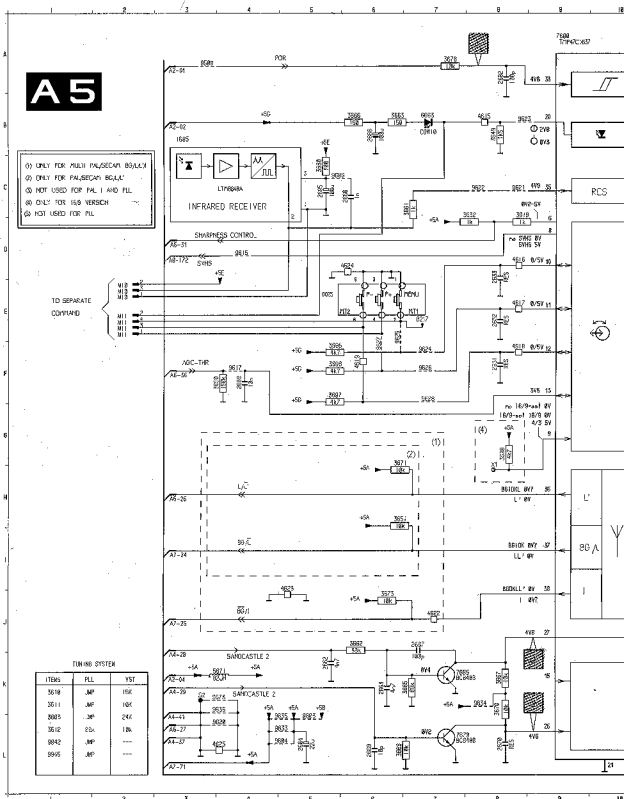
1V / div DC
5ms / div



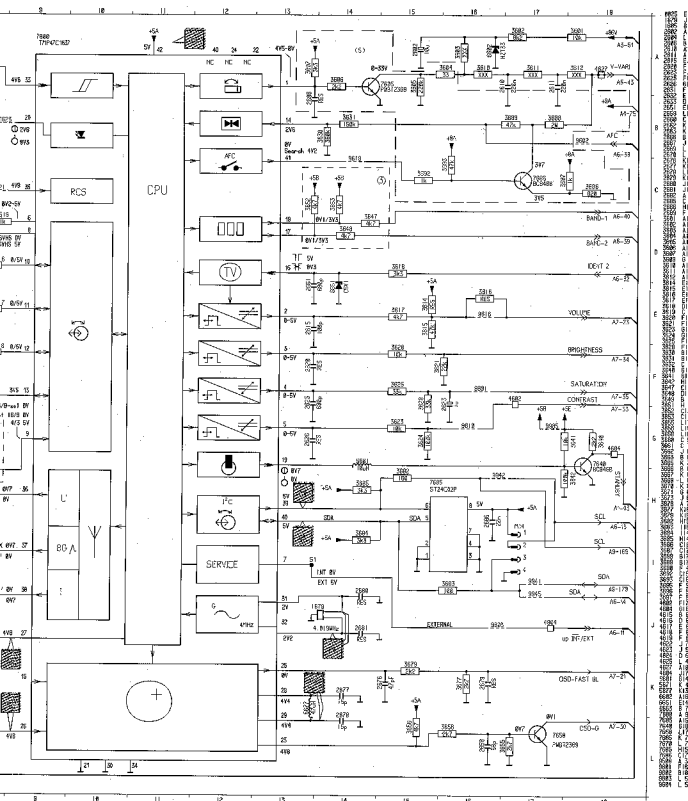
1V / div DC
20 μ s / div



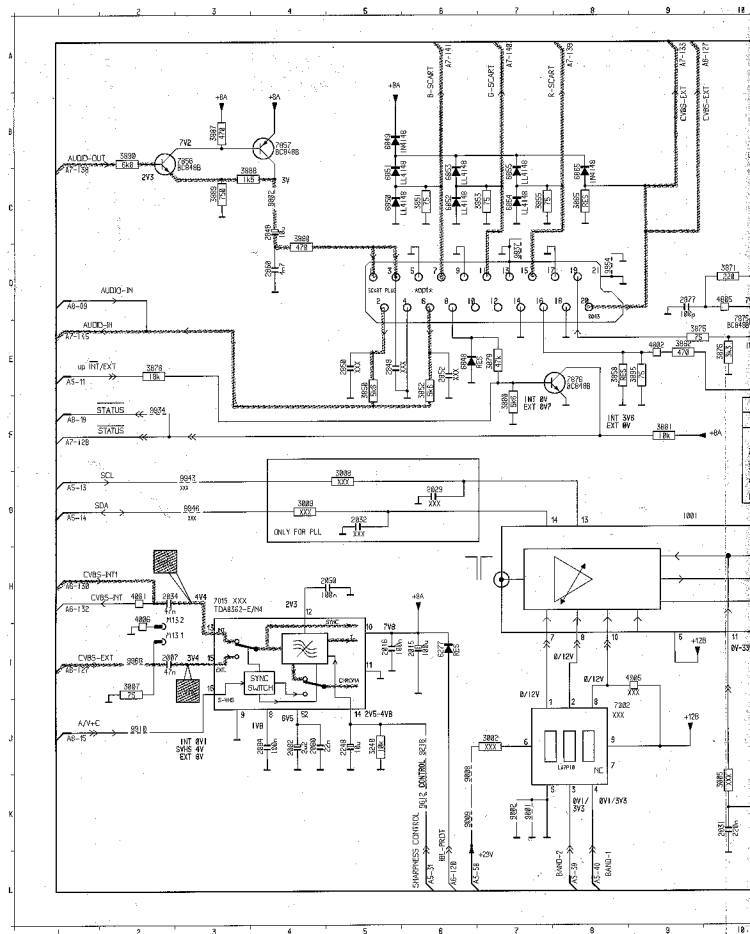
1V / div DC
0.5 μ s / div

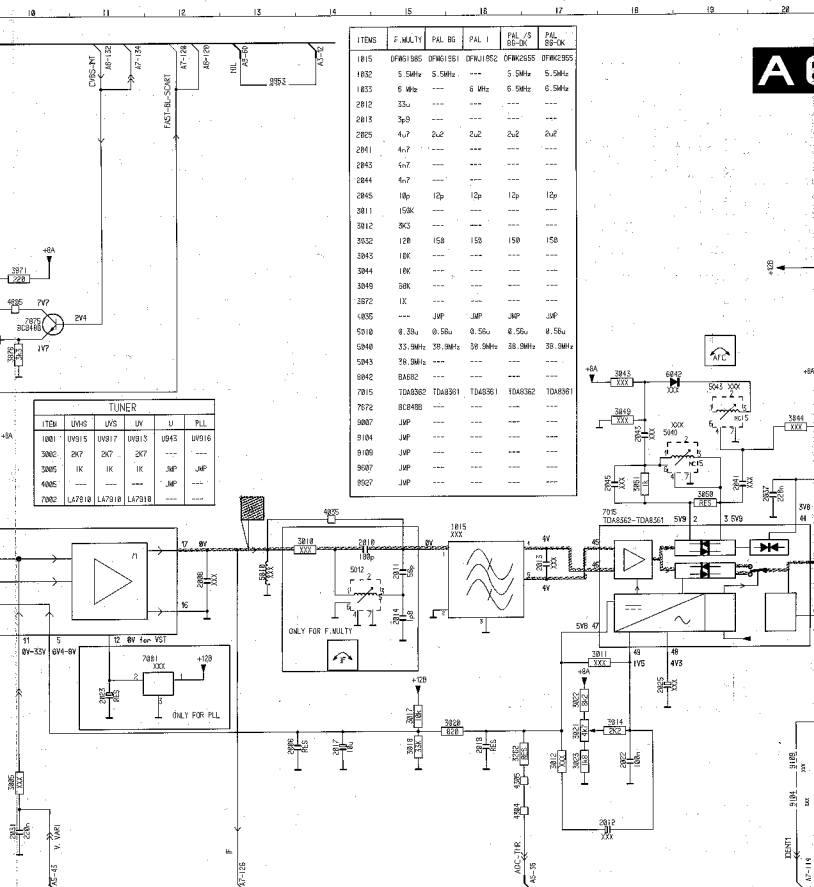


ITEMS	PLL	YST
3518	JMP	15K
3511	JMP	10K
3505	JMP	24K
3512	25K	15K
9042	JMP	-----
9045	JMP	-----



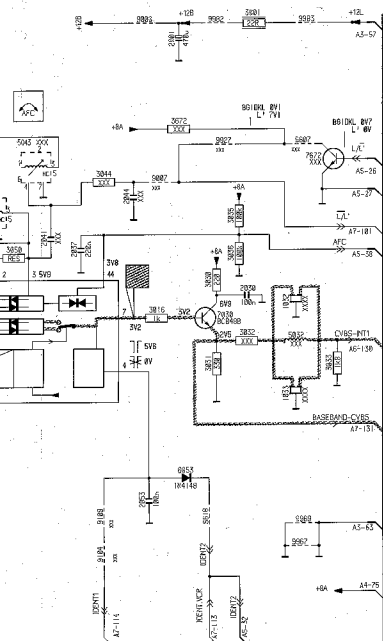
11





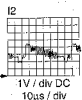
19 20 21 22 23 24

A 6




0043	08	2875	10
0044	09	1676	11
0045	10	1677	12
0046	11	1678	13
0047	12	1679	14
0048	01	1680	15
0049	02	1681	16
0050	03	1682	17
0051	04	1683	18
0052	05	1684	19
0053	06	1685	20
0054	07	1686	21
0055	08	1687	22
0056	09	1688	23
0057	10	1689	24
0058	11	1690	25
0059	12	1691	26
0060	01	1692	27
0061	02	1693	28
0062	03	1694	29
0063	04	1695	30
0064	05	1696	31
0065	06	1697	32
0066	07	1698	33
0067	08	1699	34
0068	09	1700	35
0069	10	1701	36
0070	11	1702	37
0071	12	1703	38
0072	01	1704	39
0073	02	1705	40
0074	03	1706	41
0075	04	1707	42
0076	05	1708	43
0077	06	1709	44
0078	07	1710	45
0079	08	1711	46
0080	09	1712	47
0081	10	1713	48
0082	11	1714	49
0083	12	1715	50
0084	01	1716	51
0085	02	1717	52
0086	03	1718	53
0087	04	1719	54
0088	05	1720	55
0089	06	1721	56
0090	07	1722	57
0091	08	1723	58
0092	09	1724	59
0093	10	1725	60
0094	11	1726	61
0095	12	1727	62
0096	01	1728	63
0097	02	1729	64
0098	03	1730	65
0099	04	1731	66
0100	05	1732	67
0101	06	1733	68
0102	07	1734	69
0103	08	1735	70
0104	09	1736	71
0105	10	1737	72
0106	11	1738	73
0107	12	1739	74
0108	01	1740	75
0109	02	1741	76
0110	03	1742	77
0111	04	1743	78
0112	05	1744	79
0113	06	1745	80
0114	07	1746	81
0115	08	1747	82
0116	09	1748	83
0117	10	1749	84
0118	11	1750	85
0119	12	1751	86
0120	01	1752	87
0121	02	1753	88
0122	03	1754	89
0123	04	1755	90
0124	05	1756	91
0125	06	1757	92
0126	07	1758	93
0127	08	1759	94
0128	09	1760	95
0129	10	1761	96
0130	11	1762	97
0131	12	1763	98
0132	01	1764	99
0133	02	1765	100

If $V_{DD} = 300\text{mV}$



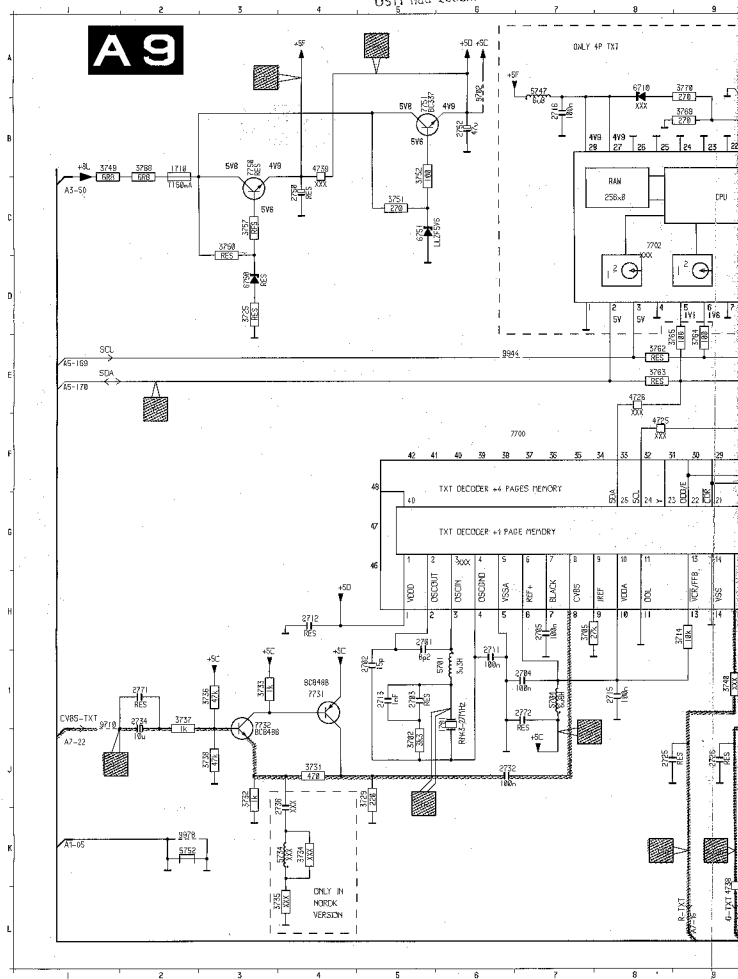
V13

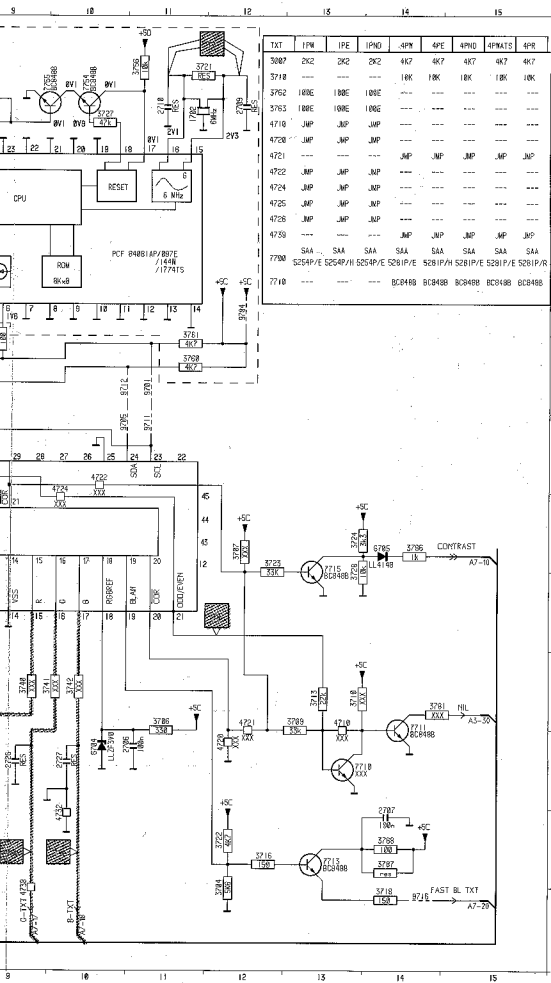


0.5V / div DC
10us / div

V14 (No signal)

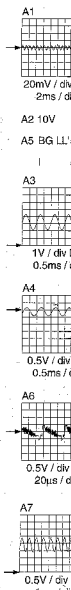


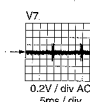
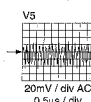
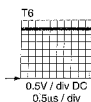
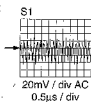
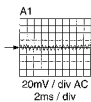




TXT	1PW	1PE	1PD	3PW	4PE	4PD	4PRATS	4PR
3007	2K2	2K2	2K2	4K7	4K7	4K7	4K7	4K7
3718	---	---	---	18K	18K	18K	18K	18K
3762	100E	100E	100E	---	---	---	---	---
3763	100E	100E	100E	---	---	---	---	---
4710	JMP	JMP	JMP	---	---	---	---	---
4720	JMP	JMP	JMP	---	---	---	---	---
4721	---	---	---	JMP	JMP	JMP	JMP	JMP
4722	JMP	JMP	JMP	---	---	---	---	---
4724	JMP	JMP	JMP	---	---	---	---	---
4725	JMP	JMP	JMP	---	---	---	---	---
4726	JMP	JMP	JMP	---	---	---	---	---
4739	---	---	---	JMP	JMP	JMP	JMP	JMP
7700	SAA ...	SAA ...	SAA ...	SAA ...	SAA ...	SAA ...	SAA ...	SAA ...
7710	---	---	---	BC848B	BC848B	BC848B	BC848B	BC848B

1701
1702
1703
1704
1705
1706
1707
1708
1709
1710
1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
1727
1728
1729
1730
1731
1732
1733
1734
1735
1736
1737
1738
1739
1740
1741
1742
1743
1744
1745
1746
1747
1748
1749
1750
1751
1752
1753
1754
1755
1756
1757
1758
1759
1760
1761
1762
1763
1764
1765
1766
1767
1768
1769
1770
1771
1772
1773
1774
1775
1776
1777
1778
1779
1780
1781
1782
1783
1784
1785
1786
1787
1788
1789
1790
1791
1792
1793
1794
1795
1796
1797
1798
1799
1800
1801
1802
1803
1804
1805
1806
1807
1808
1809
1810
1811
1812
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
1825
1826
1827
1828
1829
1830
1831
1832
1833
1834
1835
1836
1837
1838
1839
1840
1841
1842
1843
1844
1845
1846
1847
1848
1849
1850
1851
1852
1853
1854
1855
1856
1857
1858
1859
1860
1861
1862
1863
1864
1865
1866
1867
1868
1869
1870
1871
1872
1873
1874
1875
1876
1877
1878
1879
1880
1881
1882
1883
1884
1885
1886
1887
1888
1889
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000

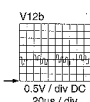
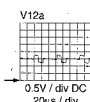
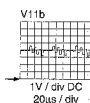
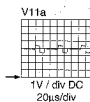
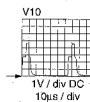
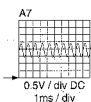
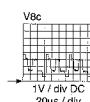
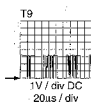
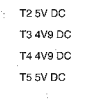
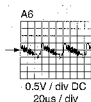
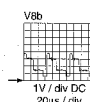
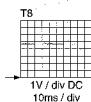
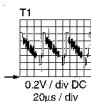
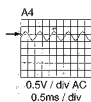
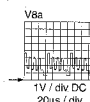
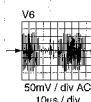
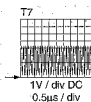
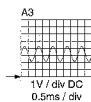




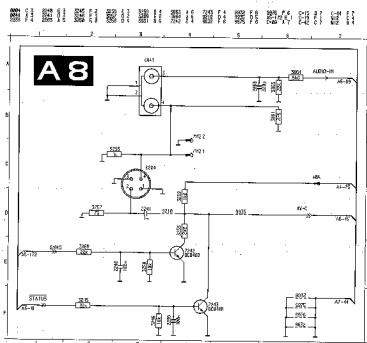
A2 10V

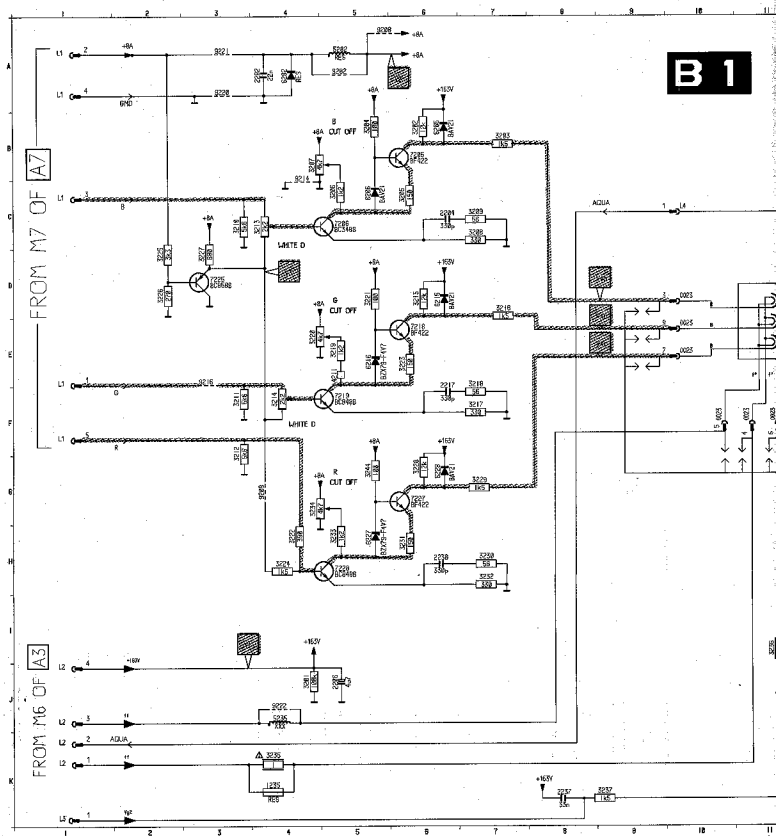
A5 BG LL' = 0V7

I = 0V



SVHS connections





Bildröhren Platte / Platine TRC

AA5

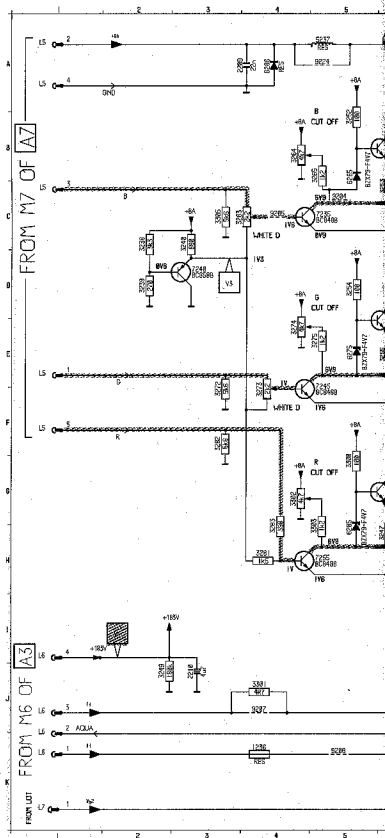
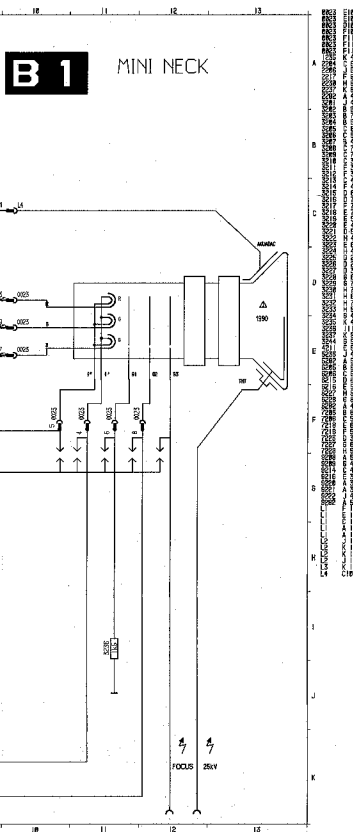
14

20-21"

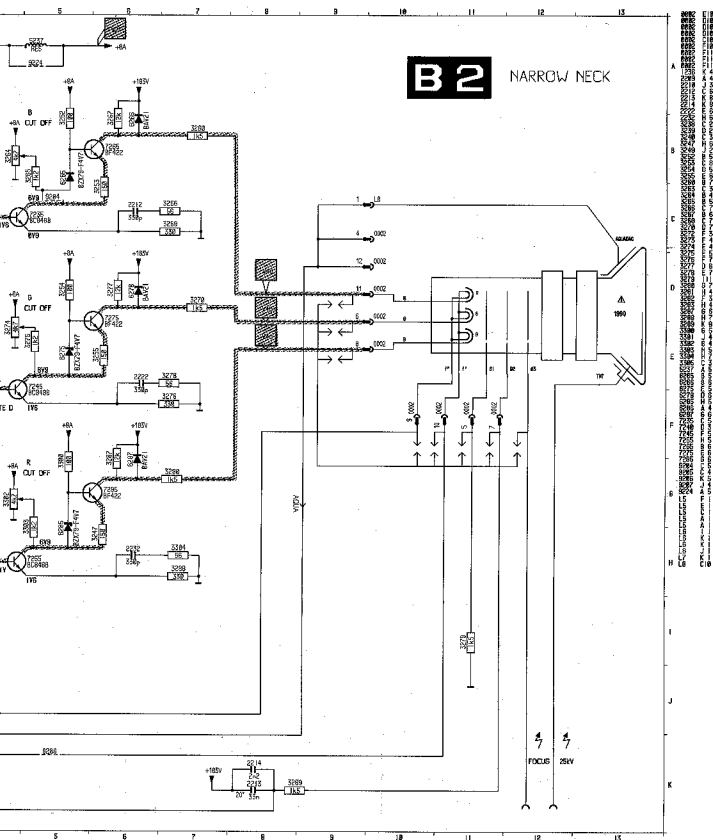
Platinum

B 1

MINI NECK



20-21" Narrow neck CRT panel / Bildröhren Platte / Platine TRC

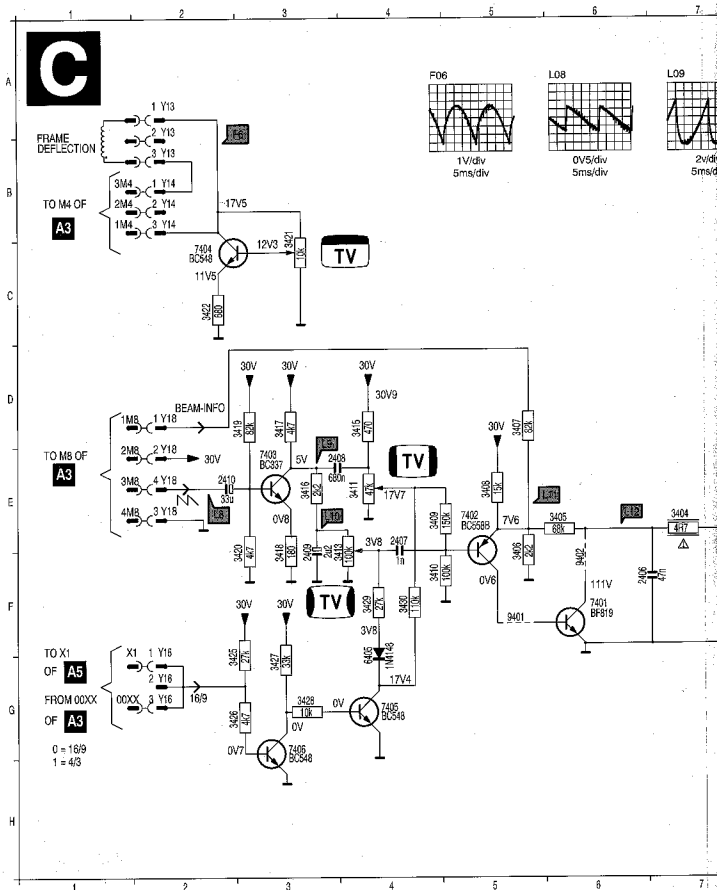


110° EW correction panel /

AA5 95.01

6

2401 F 9	2405 F 9	2409 F 4	3403 F 9	3407 D 6	3411 F 4	3417 D 3	3421 C 3	3425 F 3	3429 F 4	6401
2402 E 10	2406 F 9	2410 F 3	3404 E 7	3408 F 10	3413 F 3	3418 F 3	3422 C 3	3426 G 3	3430 F 4	6402
2403 F 8	2407 F 4	3401 F 12	3405 E 6	3409 F 10	3415 F 4	3419 F 4	3423 C 3	3427 G 3	3431 D 9	6403
2404 F 8	2408 F 4	3402 F 10	3406 E 6	3410 F 10	3416 F 3	3420 E 3	3424 F 11	3428 G 3	3432 D 9	6404



F4	6401	F5	6405	F4	7404	B3	9402	F6	Y13	A2	Y14	B2	Y15	F12	Y16	F10	Y18	Chim	Y171	D12
38	6402	F5	7405		7405	F11	9403	F7	Y13	A2	Y14	B2	Y15	F12	Y16	F10	Y18	Chim	Y171	D12
39	6403	F5	7402		7402	F6	9404	F8	Y13	A2	Y14	B2	Y15	F12	Y16	F10	Y18	Chim	Y171	D12
40	6404	F5	7403		7406	F6	9405	D12	Y14	B2	Y15	G12	Y16	F12	Y18	F10	Y171	D12	Y171	D12



2v/div
5ms/div



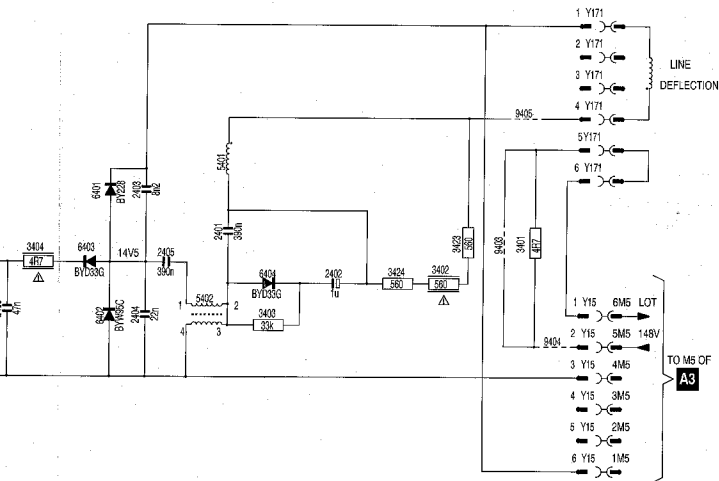
2v/div
5ms/div



2V/div
5ms/div

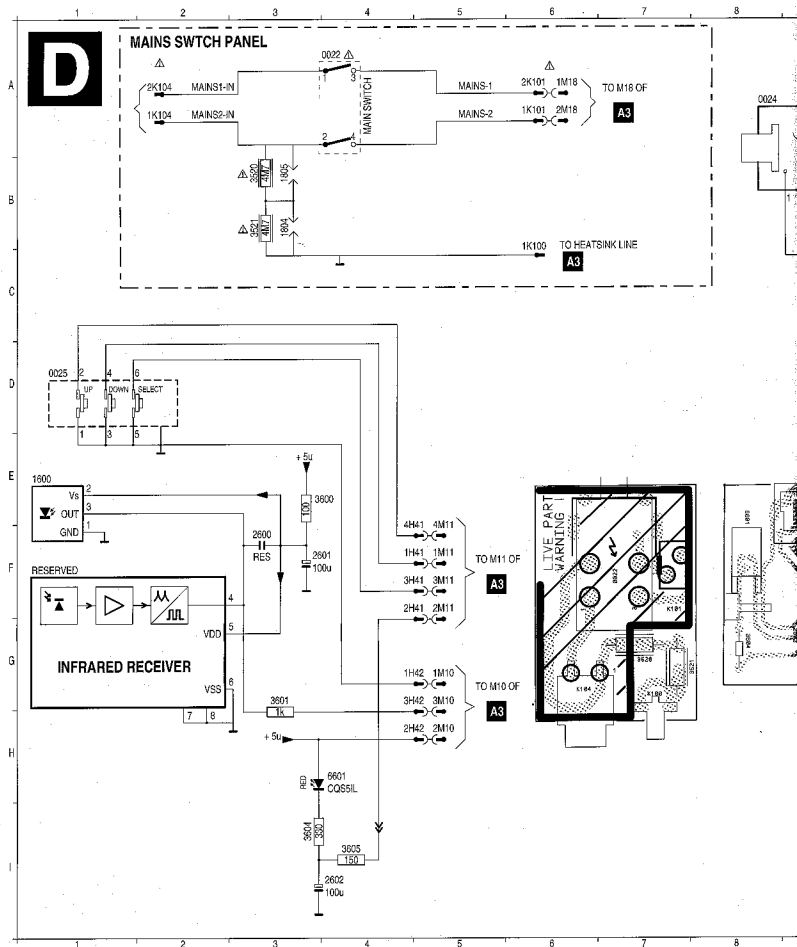


20V/div
5ms/div

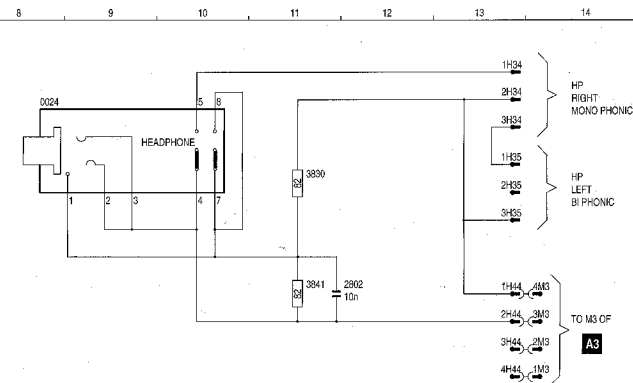


CHASSIS AA 5

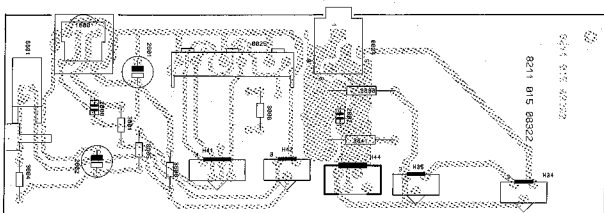
SCHEMA C.EPS
121066



Gesonderte Steuerplatine / Platine de commande distincte



0022 A4
0024 A8
0025 D1
1800 E1
2800 F8
2801 F3
2802 I3
2803 C12
2804 B10
3800 E9
3801 G3
3804 I3
3805 I4
3806 B11
3811 C11
6001 H3
H34 A13
H34 A13
H34 A13
H35 B10
H35 B10
H35 B10
H35 B10
H41 F5
H41 F5
H41 F5
H41 F5
H42 G5
H42 G5
H42 H5
H44 C13
H44 C13
H44 C13
H44 D13
K101 A8
K101 A8
K104 A2
K104 A2



CHASSIS AA 5

SCHEMA DEFS
10/10/88