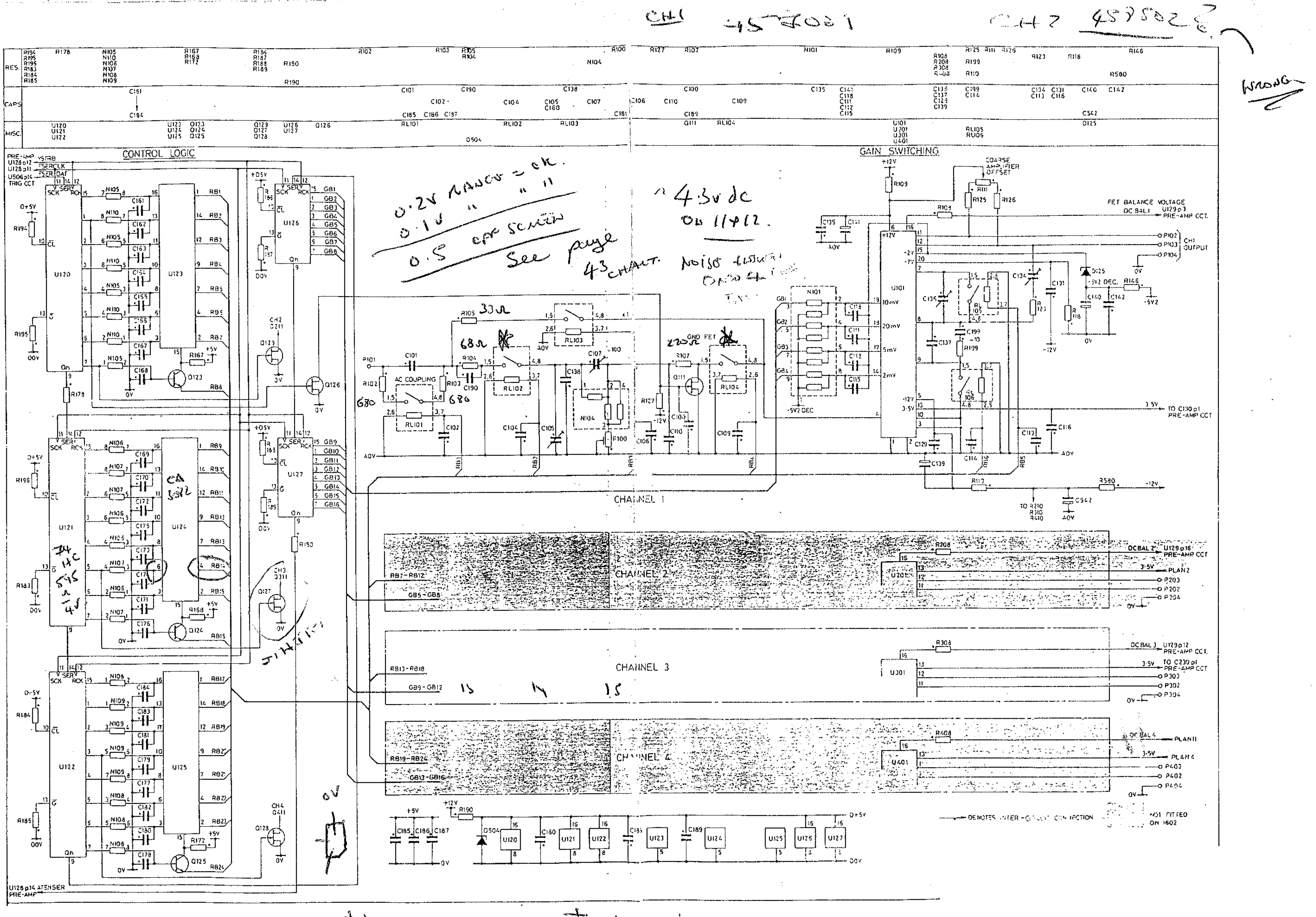
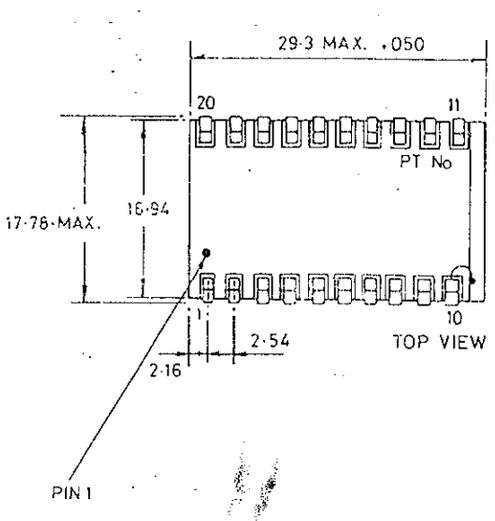
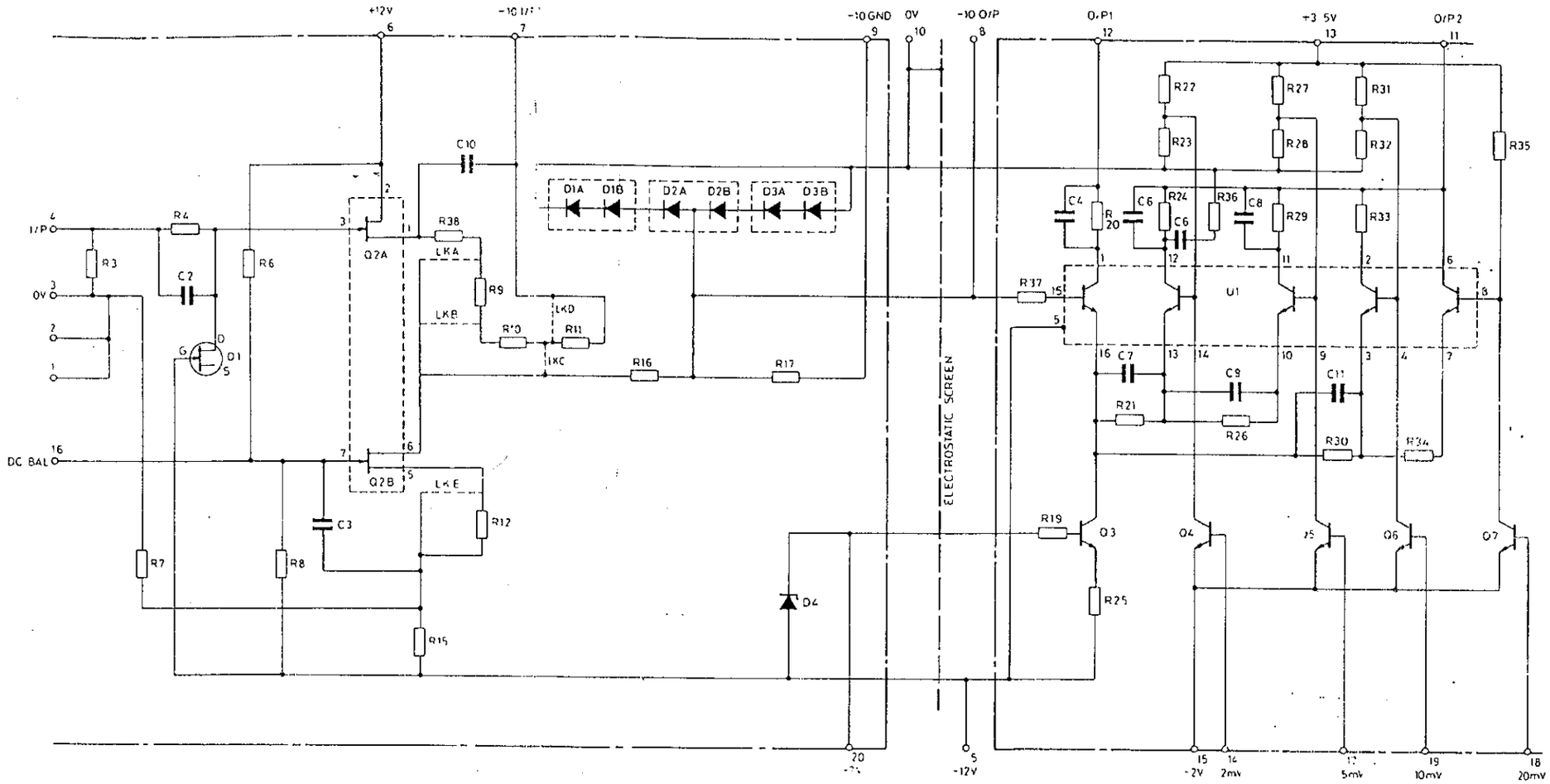


Fig. 6.3 Attenuator Circuit Diagram





CIRCUIT OF SIDE 1 (TOP)

CIRCUIT OF SIDE 2

RES.	R149 R147 R247 R243 R191 R192 R180 R182 R193 N103 R280 N203 R114 R214 R116 R117 R216 R217 R115 R215 R112 R120 R121 R212 R220 R221 R122 R222 R124 R171 R173 R177 R119 R224 R271 R277 R273 R219 R129 R166 R174 R229 R266 R274 R133 R233 R131 R132 R148 R231 R232 R248 R130 R230 R134 R234 R135 R137 R136 R235 R237 R236 R140 R141 R142 R240 R241 R242 R143 R144 R243 R244 N103 N203 R179 R281 R152 R153 R151 R252 R253 R251 R257 R154 R155 R254 R255 R270 R156 R256 R157 R158 R159 R257 R258 R259 R161 R169 R170 R261 R160 R260 N103 N203 R181 R198 R197 R298 R297 R164 R264 R278 R165 R265 R279 R145 R245
CAPS.	C157 C130 C230 C156 C256 C117 C150 C217 C250 C151 C251 C119 C219 C126 C226 C152 C252 C148 C248 C120 C121 C220 C221 C154 C143 C253 C243 C177 C227 C154 C155 C254 C255 C122 C222 C128 C228 C281 C259 C123 C159 C223 C124 C224 C780 C125 C781 C225
MISC.	U206 U128 U106 U129a,c,d,f U111 U211 L101 L201 Q101 U129b Q201 U129e L102 L202 Q103 Q203 Q102 Q202 Q104 Q204 U106 U206 U107 U207 Q105 U111 Q205 U210 Q106 Q206 Q107 Q207 U108 U208 U109 U209

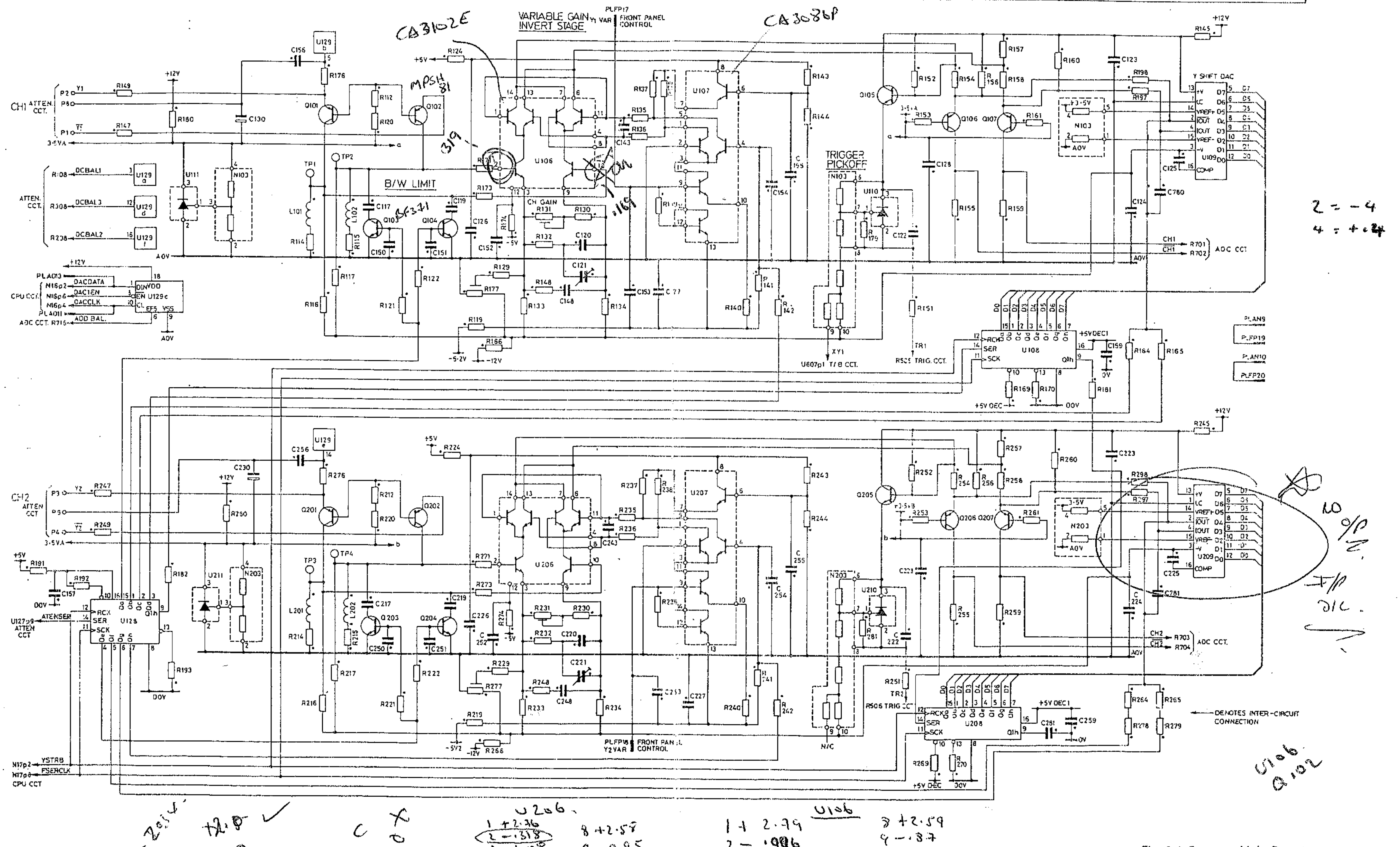
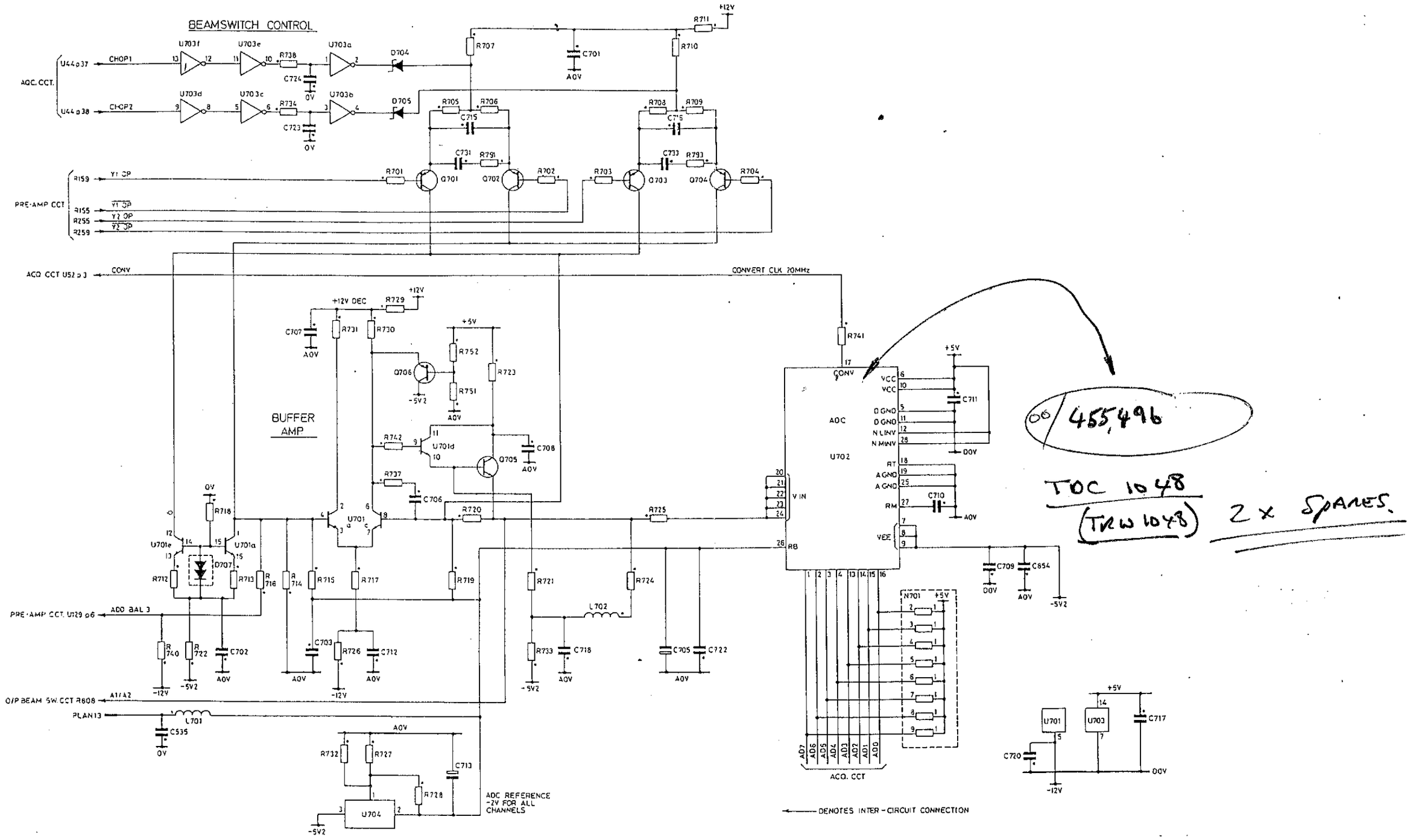


Fig. 6.4 Pre-amp Main Board

RES.	R712 R718 R713 R716 R714 R738 R734 R715 R731 R717 R727 R726 R732 R701 R729 R730 R742 R737 R705 R707 R752 R751 R720 R728 R719 R706 R791 R723 R702 R721 R733 R703 R708 R724 R725 R710 R711 R709 R793 R704 R741 R701 R740 R722
CAPS.	C724 C723 C715 C731 C701 C716 C733 C705 C711 C710 C709 C854 C720 C535 C702 C707 C703 C712 C706 C713 C708 C718 C772 C717
MISC.	U703d,f U703c,e U703a,b D704 D705 Q701 Q702 Q703 Q704 U701e D707 U701a U701b,c U704 Q706 U701d Q705 L702 U702 L701



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TOC 1048
(TRW 1048) 2 x SPARES.

Fig. 6.5 ADC Beamswitch Main Board

RES	R850, R802 R803, R876, R806 R836 R847 R848, R804 R844 R861, R807 R808, R843 R860, R809 R875 R849, R842, R846 R837, R810 R874 R834, R857 R871 R842, R835, R811 R873 R838, R801, R881, R841 R859, R840 R864, R827, R826 R870, R820 R828, R880, R884, R813 R829, R814, R856, R863, R815 R882, R821, R818, R816 R832, R822, R817 R824, R833 R825
CAPS	C811, C827, C817, C809, C810, C840, C820, C818 C806, C852, C828, C821 C850 C805, C801, C851, C826, C814, C853, C815, C830, C804, C813, C816
MISC	U804a,d, U804b,c, U803, U802d,e, D804, Q813, U802a,b, D810, U801c, U802c, Q816, Q811, D806, L801, Q815, Q812, D803, Q814, U801a,b, U817, U801e, U801d

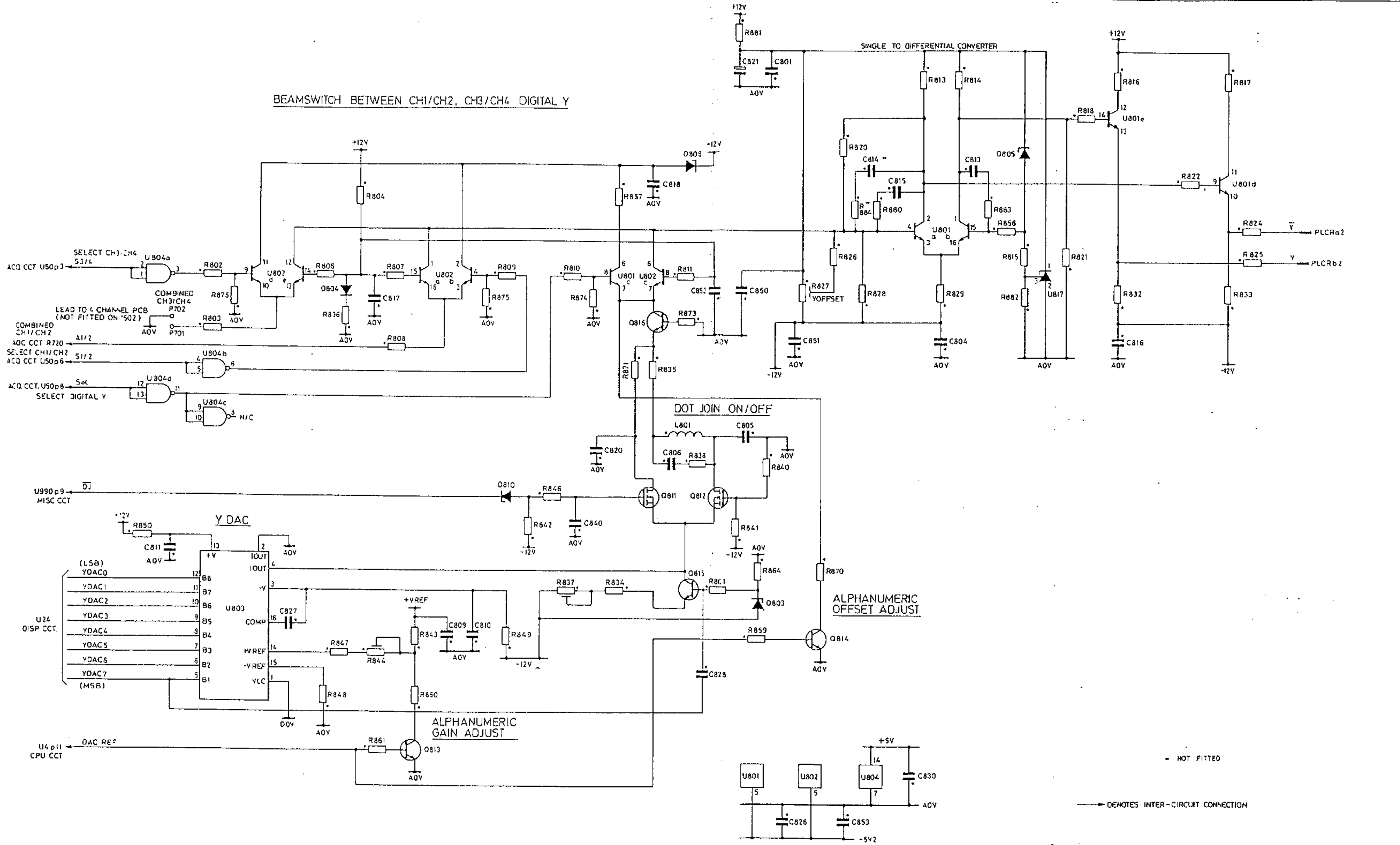


Fig. 6.6 O/P Beamswitch & Y-DAC

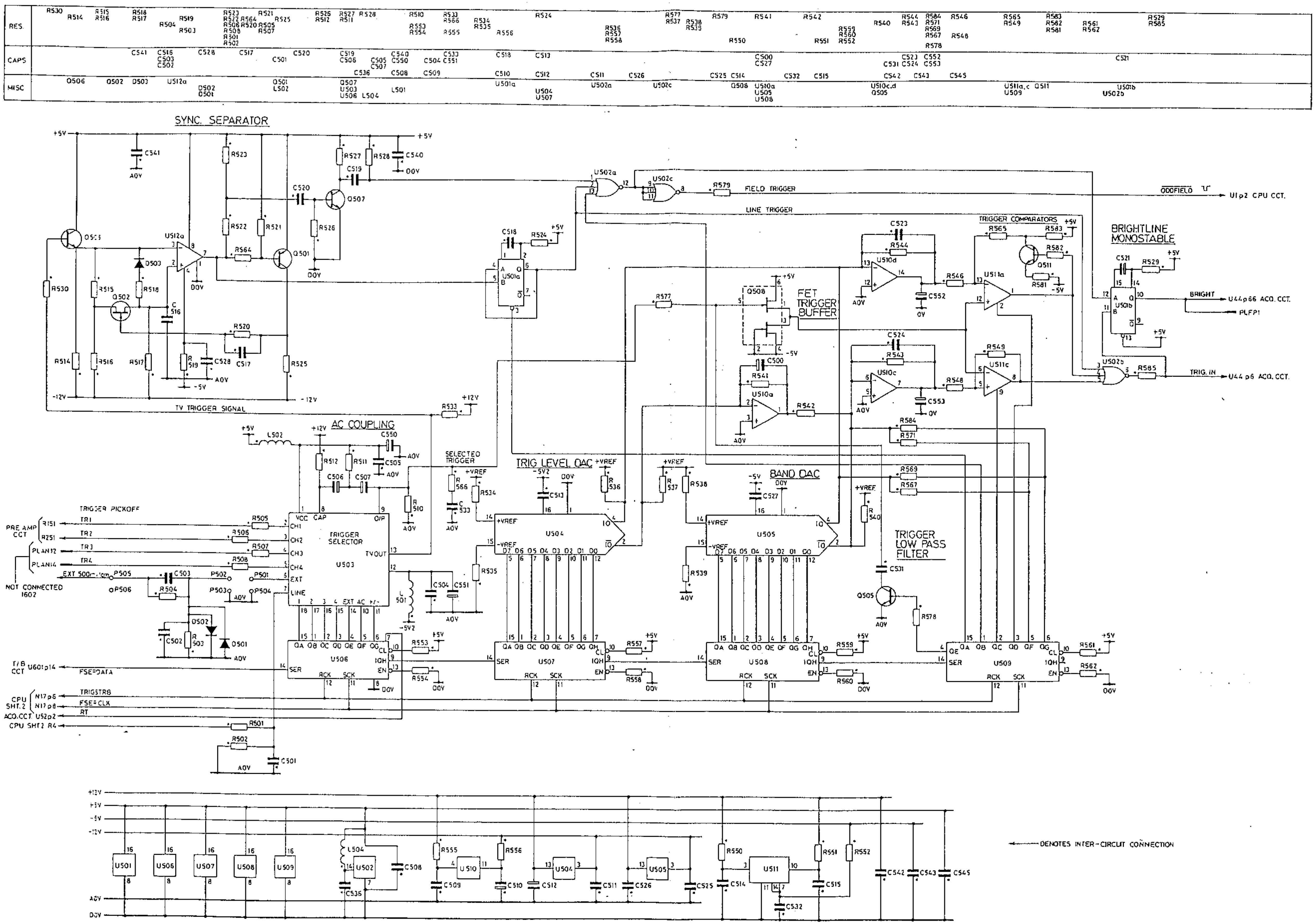


Fig. 6.7 Trigger

RES.	R175 R663 R612 R611 R601 R640 R675 R643 R602 R646 R673 R672 R650 R674 R636 R645 R649 R633 R635 R648 R634 R682 R644 R620 R623 R610 R655 R653 R654 R631 R621 R632 R622 R628 R629 R630 R661 R660 R603 R626 R662 R604 R670 R625 R627 R615 R614 R671 R605 R607 R608 R606 R609
CAPS.	C531 C609 C620 C601 C630 C622 C619 C611 C612 C621 C613 C614 C605 C615 C616 C608 C610 C632 C603 C602 C617 C607 C604 C606 C618
MISC	U603 U601 U605c Q601 U605b,d D601 D603 Q602 U609 D604 Q603 U605a U607a D602 U602 U604 Q605 U606a L602 D620 L601 U607 U9401

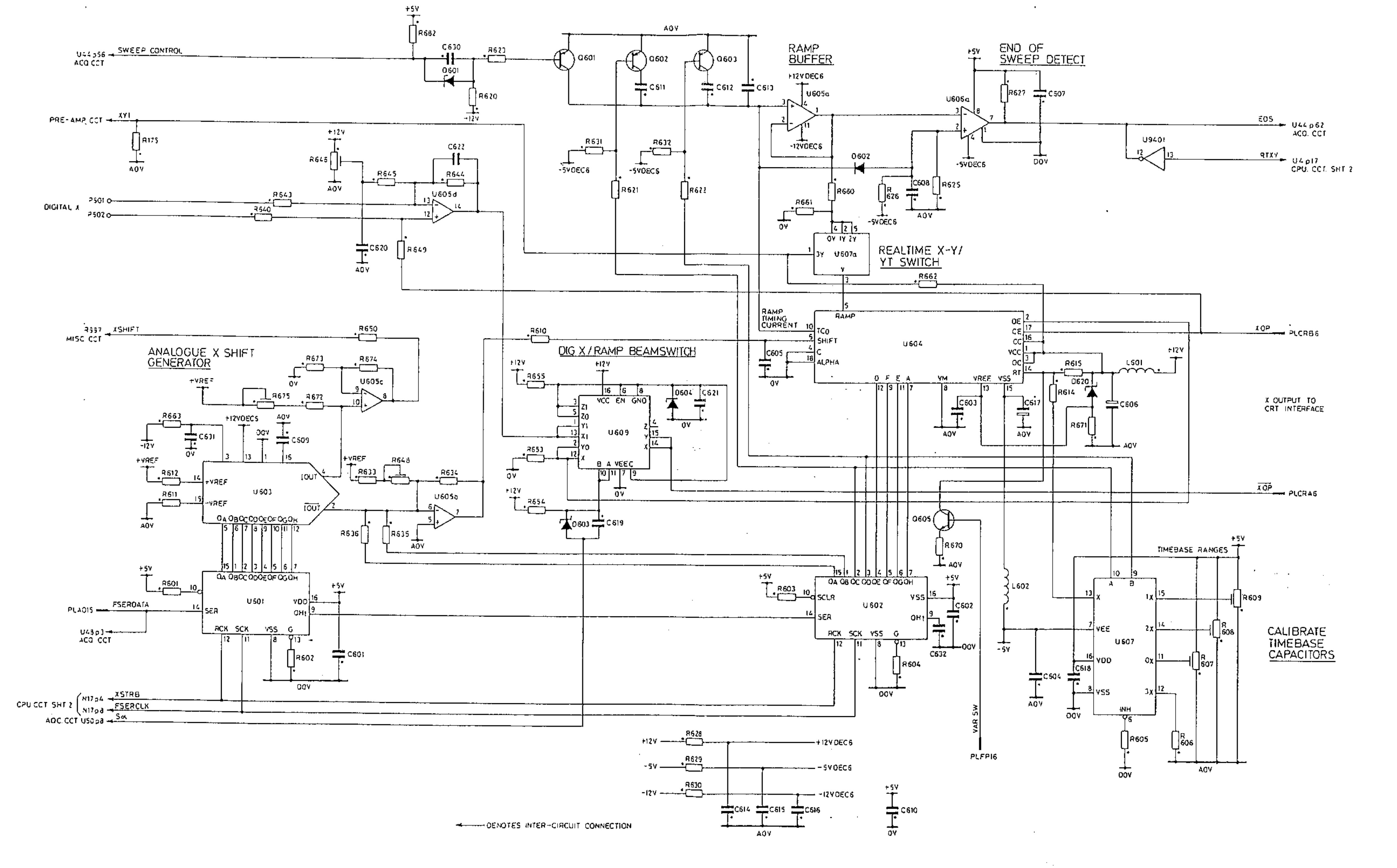


Fig. 6.8 Timebase

RES	R971 R973 R972 R974 R931 R975 R911 R932 R912 R913 R970 R902 R914 R922 R930 R915 N905 N906 R920 R939 R991 R990 R928 R997 R959 R963 R964 R960 R954 R12 R961 R996 R968 R967 R955 R953 R956 R952 R943 R999 R958 R957 R951 R950 R969 R31 R949 R30 R946 R947 R921 R948
CAPS	C951 C960 C925 C934 C935 C955 C936 C937 C926 C927 C901 C929 C930 C932 C933 C953 C954 C950 C989 C928 C944 C945 C991 C948 C992 C956 C949 C939 C990 C998 C952 C993
MISC	U28a,b,d U942a,b U936 U937 U930 U933a,c U934a,c U990c D902 U935a L901 U933b,d U934b,d U942c U990b D912 ↓ D919 D910 D911 U935b U52c U50d U910a U940e Q903 Q904 Q905 D992 U910b U940a,b,c,d U938 D920 D905 D906 Q902 D9

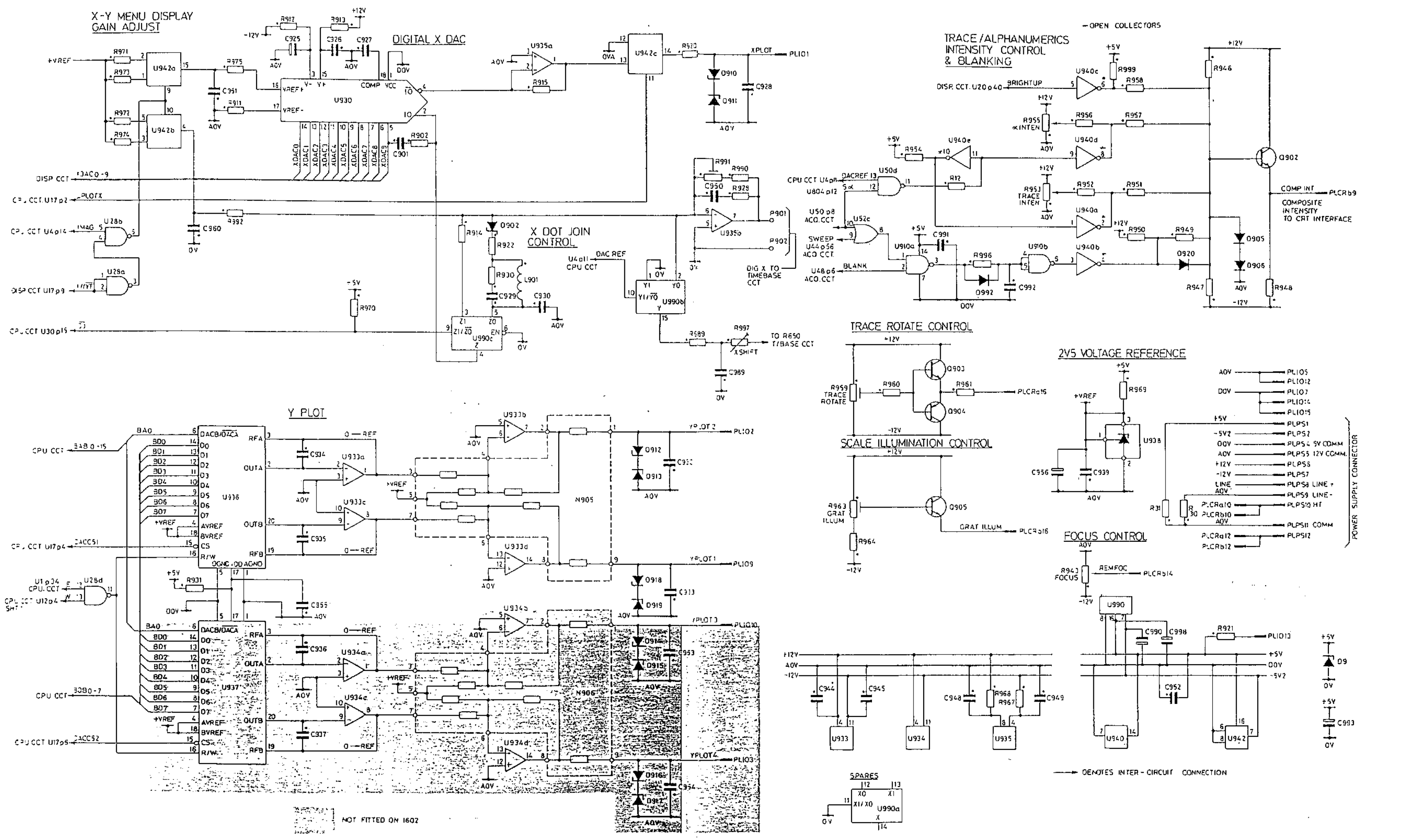


Fig. 6.9 Miscellaneous

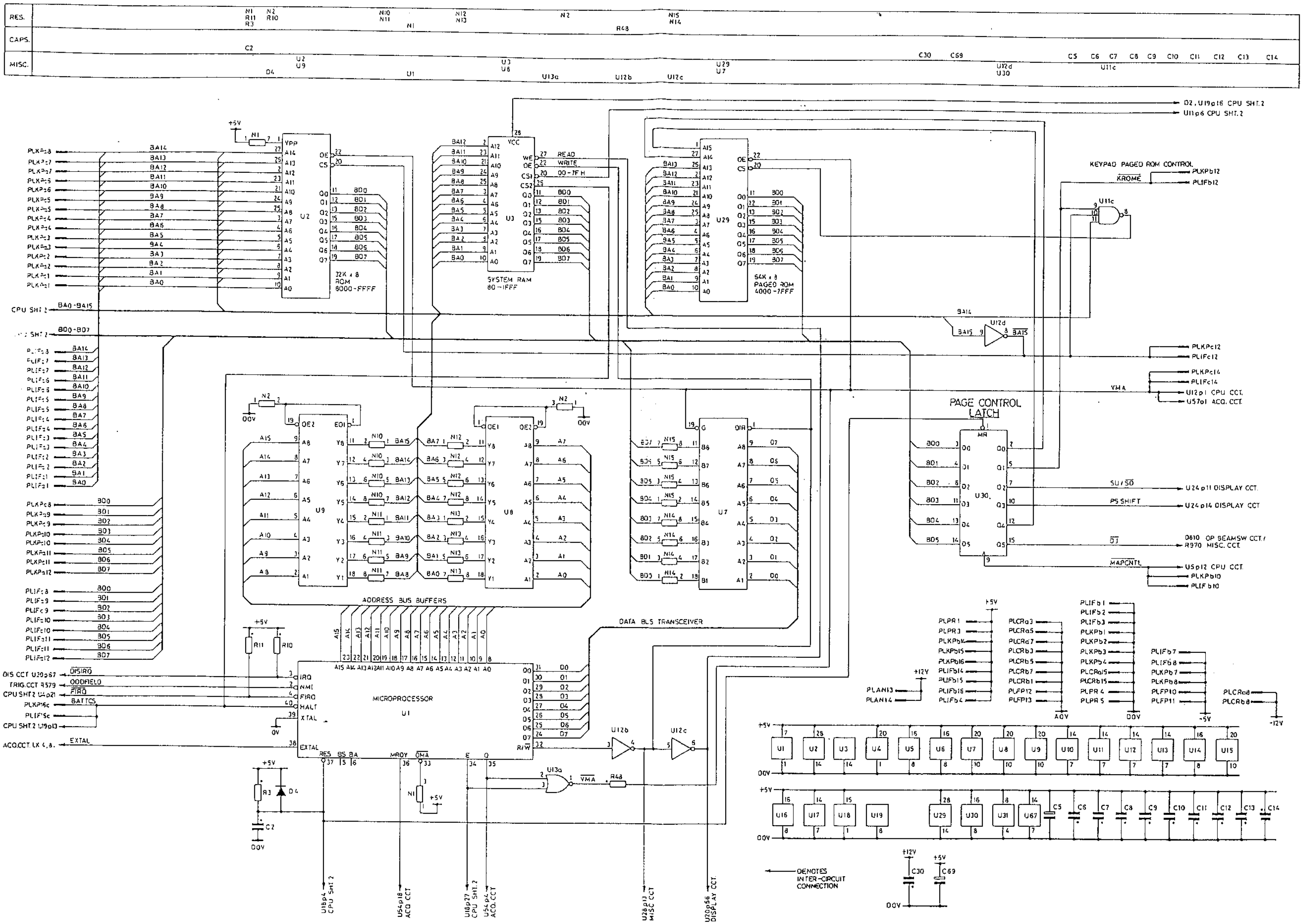


Fig. 6.10a CPU Circuit Diagram

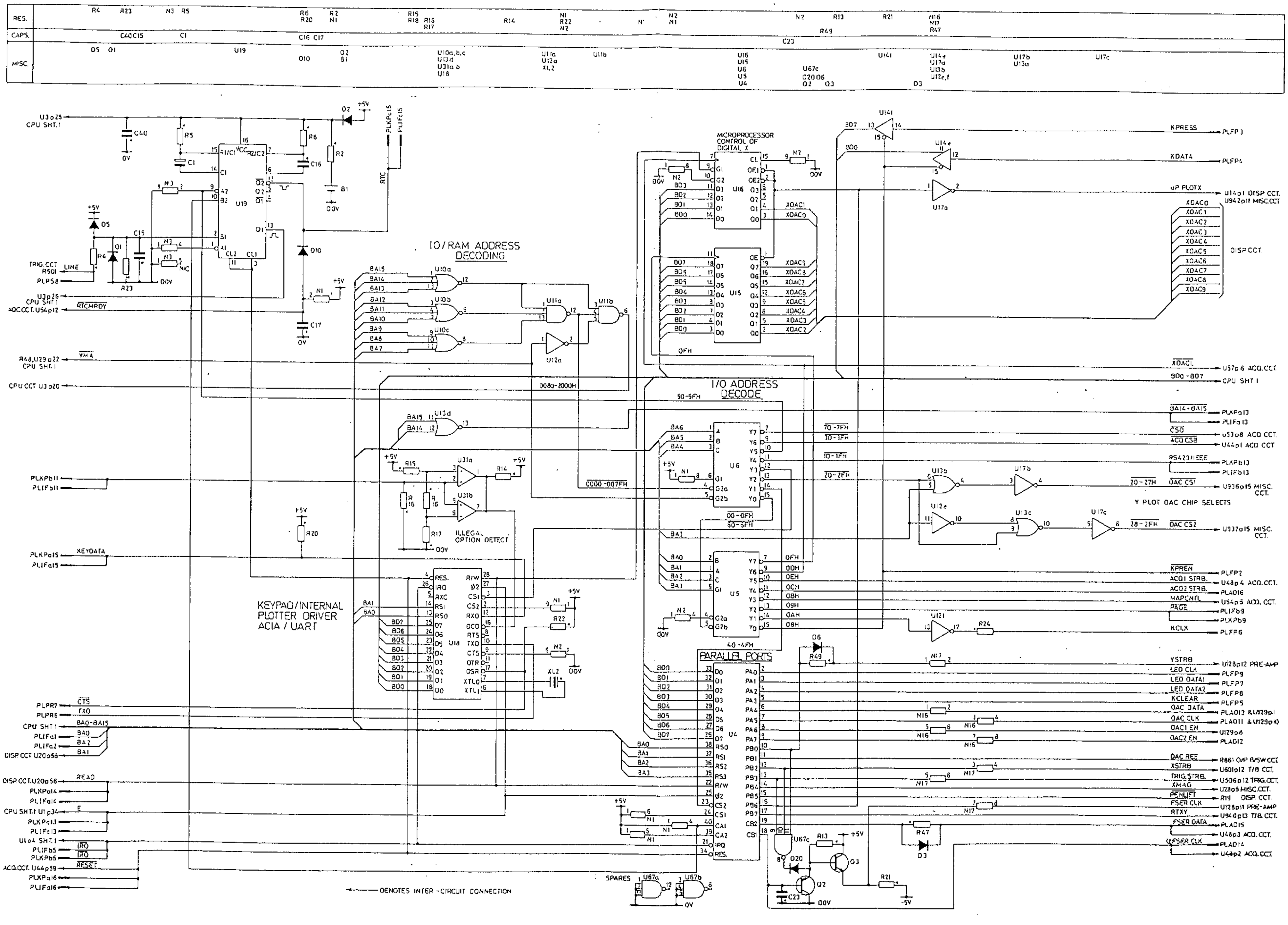


Fig. 6.10b CPU Circuit Diagram

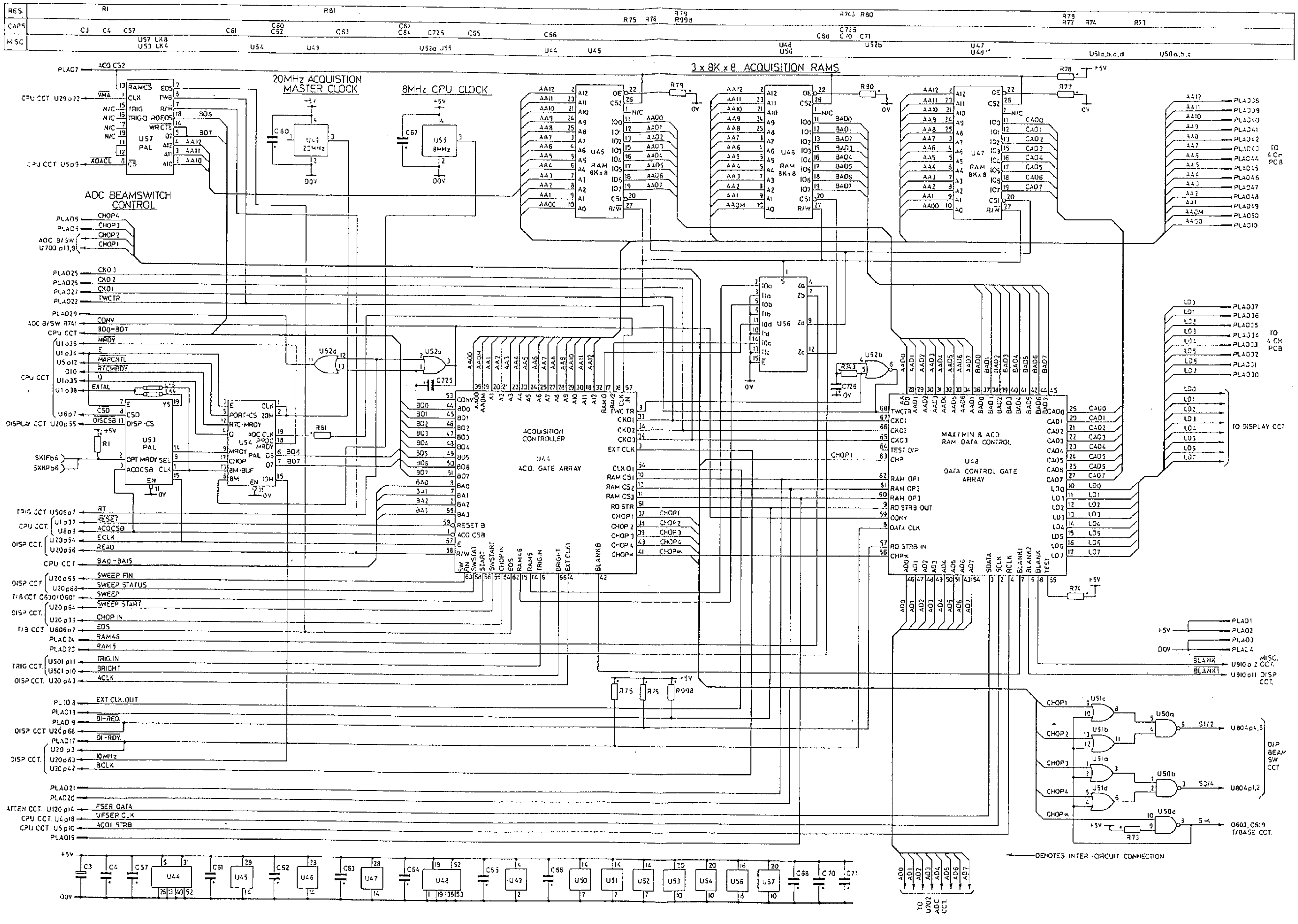


Fig. 6.11 Acquisition Main Board

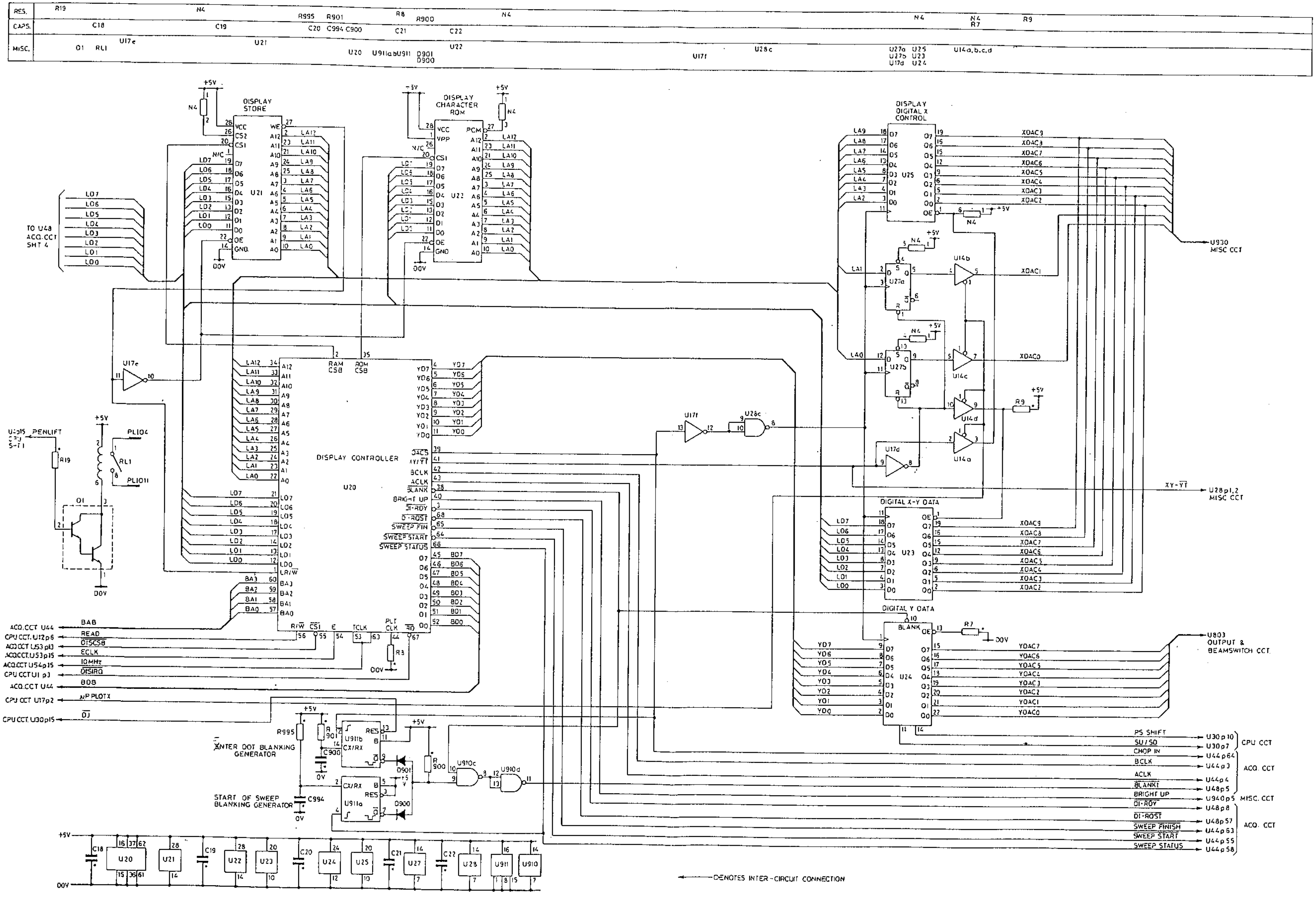


Fig. 6.12 Display

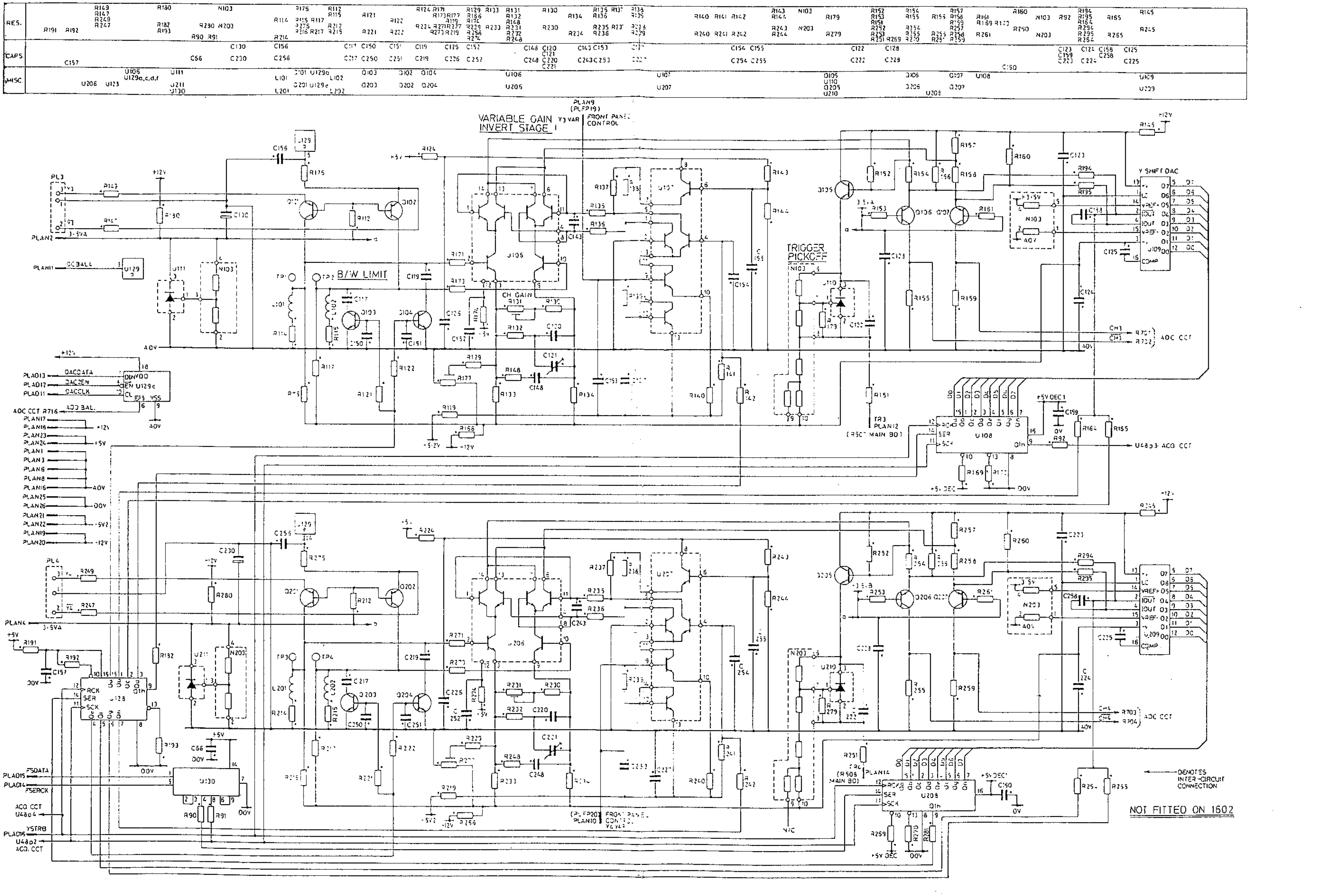


Fig. 6.13 Pre-amp 4 Channel Board

RES	R740 · R738 R715 R714 R734 R715 · R731 R717 R725 R727 R732 · R701 R729 R730 R742 R737 · R705 · R707 R752 R751 R720 R728 R719 · R706 R791 R723 · R702 R721 R733 · R703 · R708 R724 R725 · R710 · R711 R709 R793 · R704 · R741 · N701
CAPS	C535 · C724 C723 · C707 C703 · C712 · C706 · C731 · C715 C713 · C708 · C701 C718 · C733 · C716 C705 · C722 · C711 C710 · C709 · C854 C720 · C717
MISC	U703e* · _701 · U703c,e · U703a,b U701b,c · U704 · Q704 D705 · Q701 Q705 U701d · Q702 Q705 · Q703 _702 · Q704 · U702

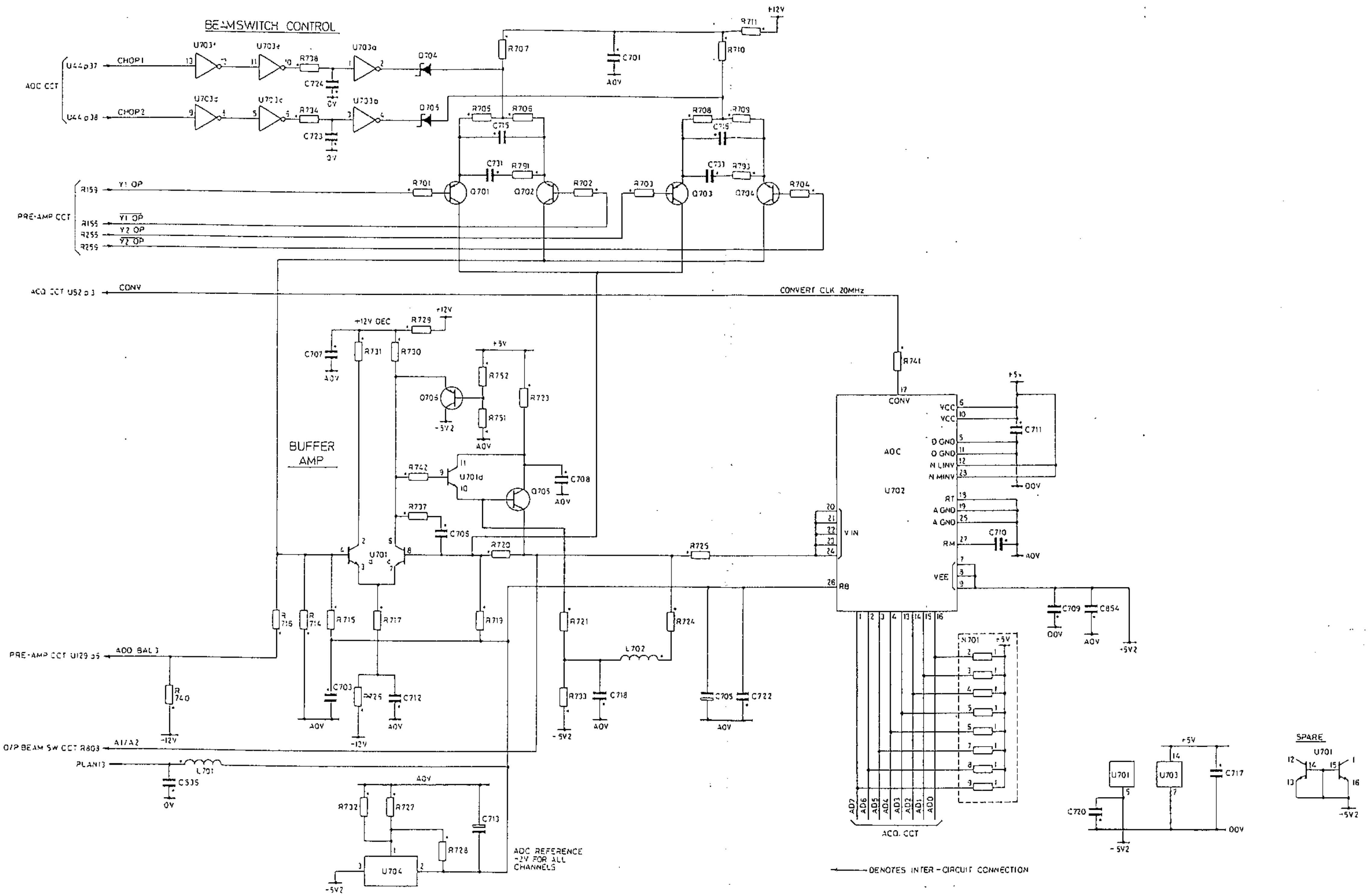


Fig. 6.14 ADC Beamswitch 4 Channel Board

RES	R72 R71 R70 R75 R79 R81 R80 R74 R78 R77*
CAPS	C52 C53 C64 C55 C57 C58 C59
MISC	U45 U46 U43 U47

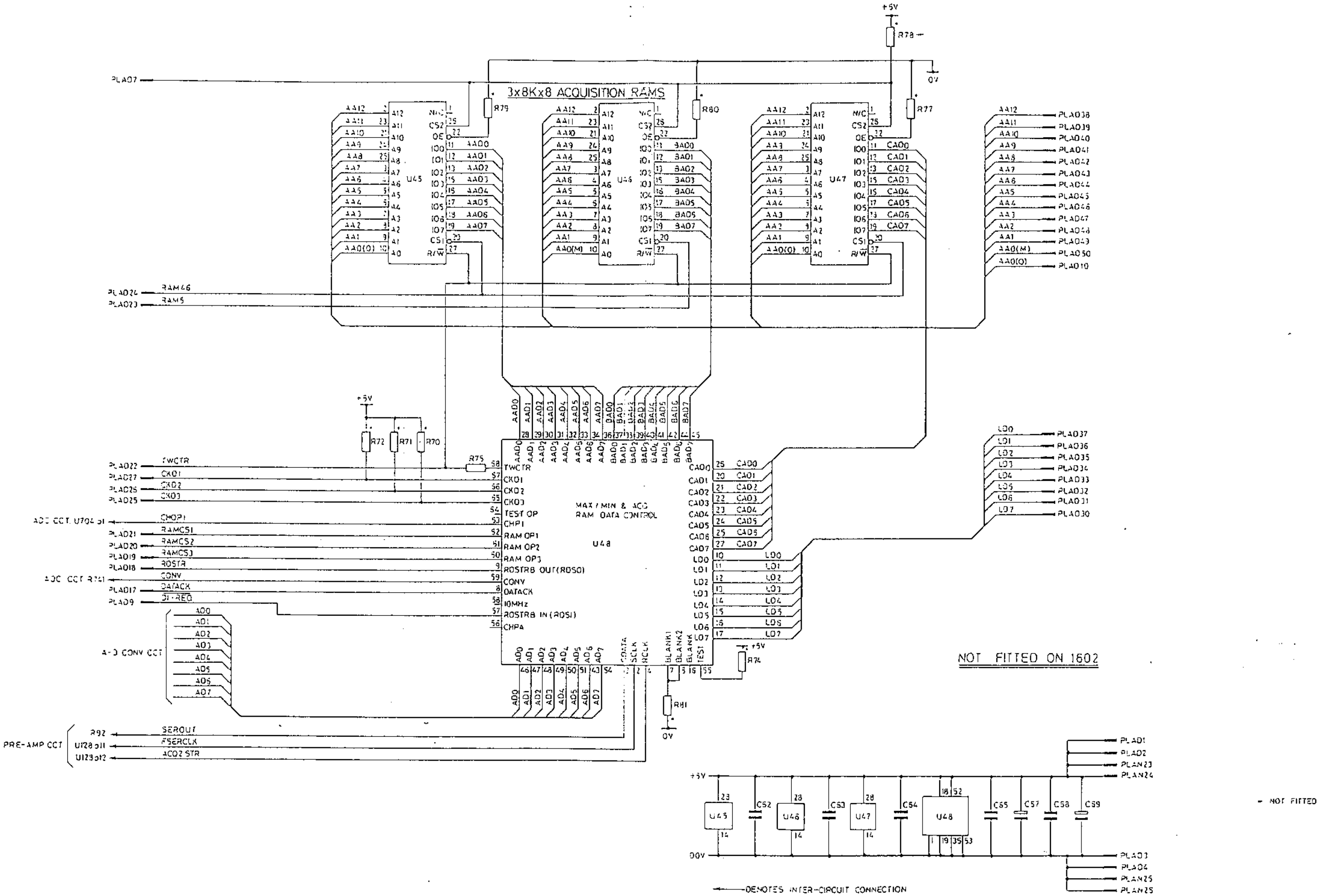


Fig. 6.15 Acquisition 4 Channel Board

RES.	R85 R90		R86 R88 R89		R87 R118 R112		R91	R92	R93			R94			R95		R100		R98 R97 R96		R104	R111 R99			R120 R121	R107	R102 R101 R108 R109		R103	R110	R119
CAPS.		C62 C63				C72	C60	C64		C65	C66			C67	C68	C53 C69 C54		C50			C51		C52			C70, C71					
MISC.			D15 D34	L1 D18 D16		Q17 D17		Q18	LK1 D19				T1 Q19		D20 Q20		D21 D22			D24 D23	D25			MX6		D5		D26	D27 D28 Q23	D29 D30 Q22	

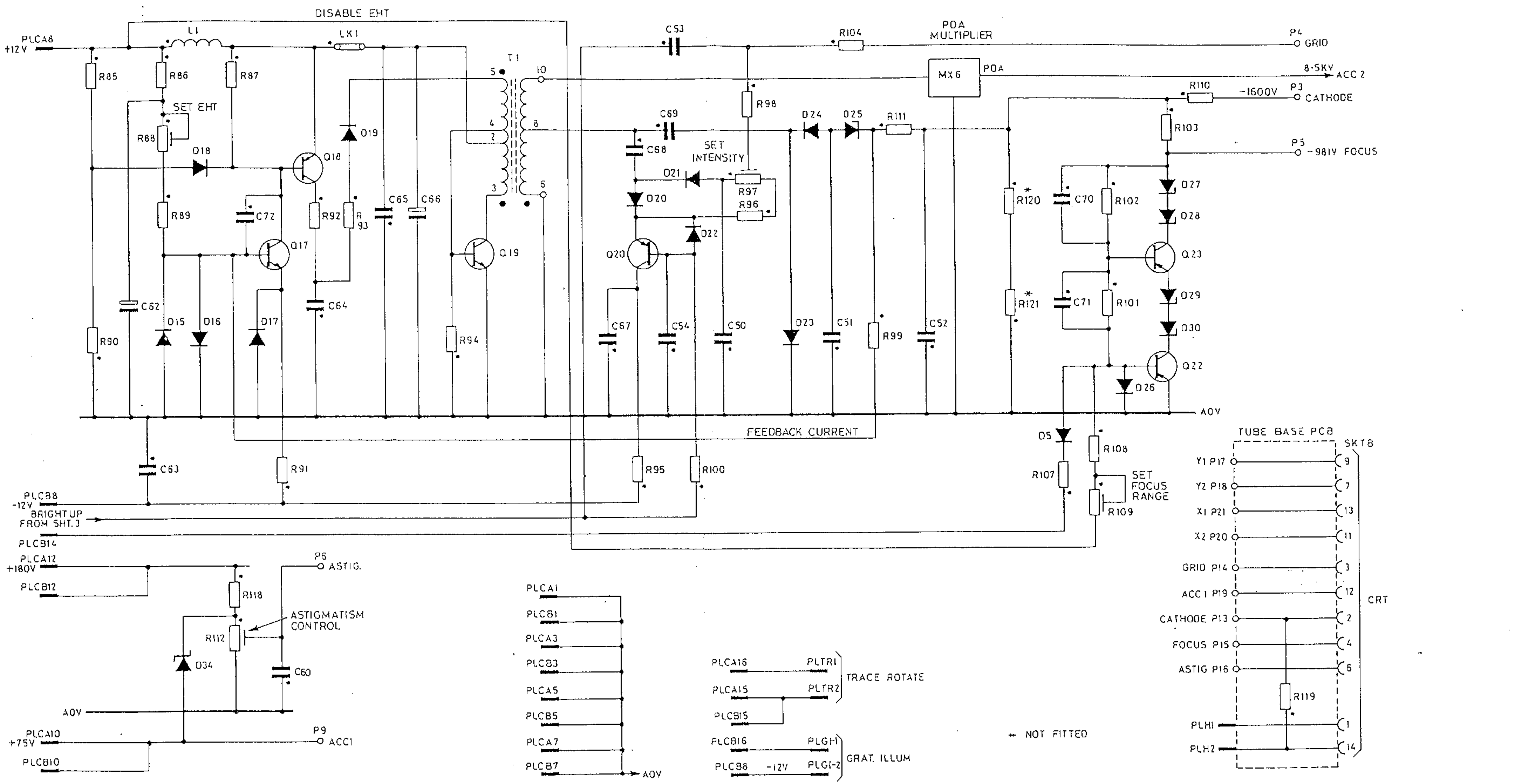
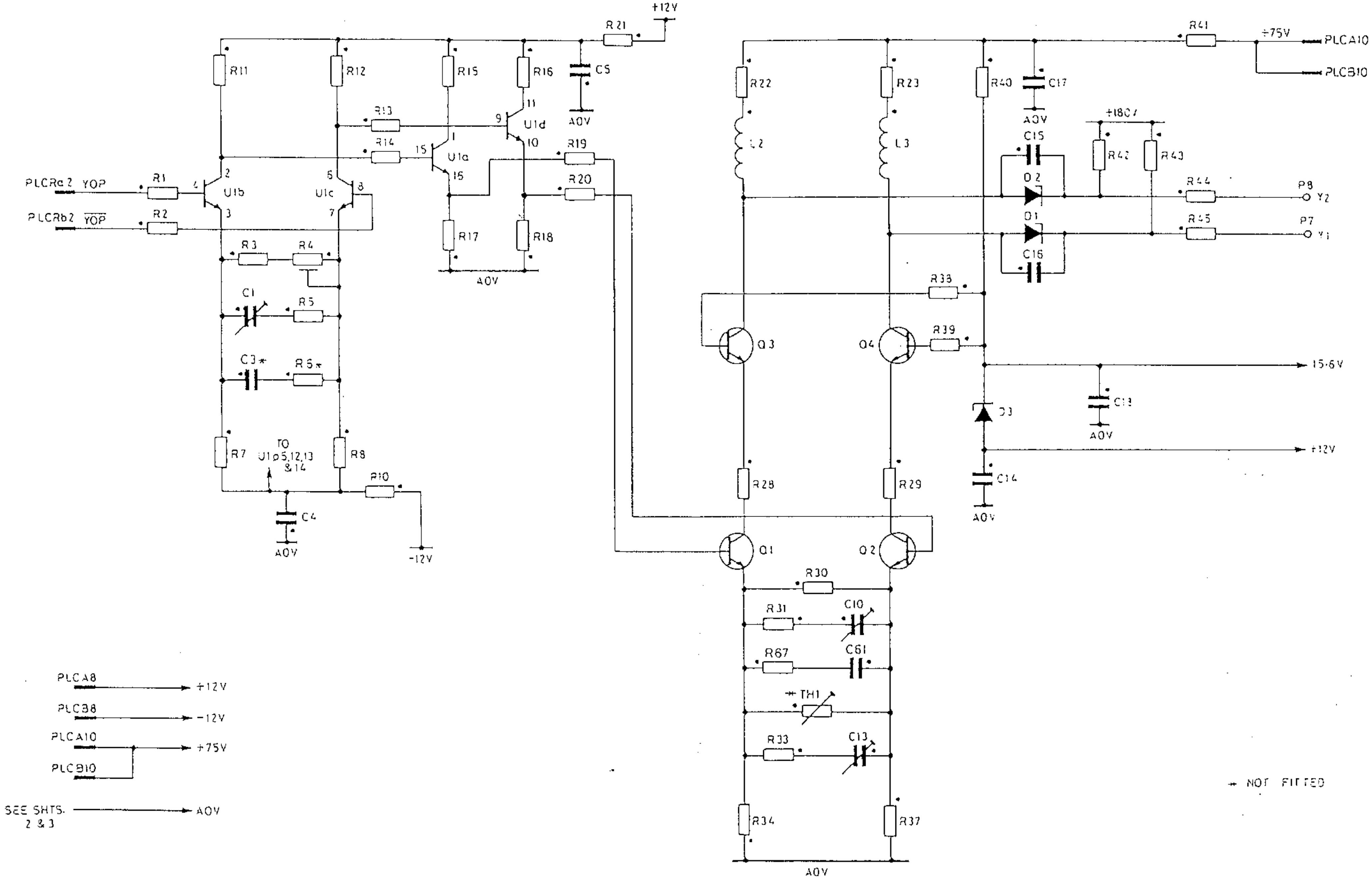


Fig. 6.16a CRT EHT Circuit Diagram

RES	R1 R2	R11 R3 R7		R4 R5 R6	R12 R8	R13 R14 R10	R15 R17	R16 R18	R19 R20	R21	R22 R28 R34	R31 R57 R33	R30 TH1		R23 R29 R37	R38 R39	R40		R42	R43	R41 R44 R45
CAPS.		C1 C3	C4						C5					C10 C61 C13			C14	C17 C15 C16	C18		
MISC.		U1b		U1c			U1a	U1d			L2 Q3 Q1				L3 Q4 Q2		D3	D2 D1			



* NOT FITTED

Fig. 6.16b Y-Amp Circuit Diagram

RES.	R68 R50 R51 R55 R54 R61 R59 R66 R60 R56 R57 R134 R122 R52 R55 R53 R70 R131 R71 R128 R58 R135 R81 R78 R124 R125 R126 R76 R75 R127 R73 R72 R130 R129 R123 R77 R79 R80 R133 R132
CAPS.	C23 C22 C28 C24 C25 C26 C29 C30 C31 C32 C21 C45 C73 C44 C74 C27 C46 C40 C33 C42 C43 C20 C41
MISC.	Q7 Q11 D7 D8 Q10 D32 D13 D31 Q16 Q8 Q9 Q6 D14 Q26 Q25 Q24 Q14 Q15

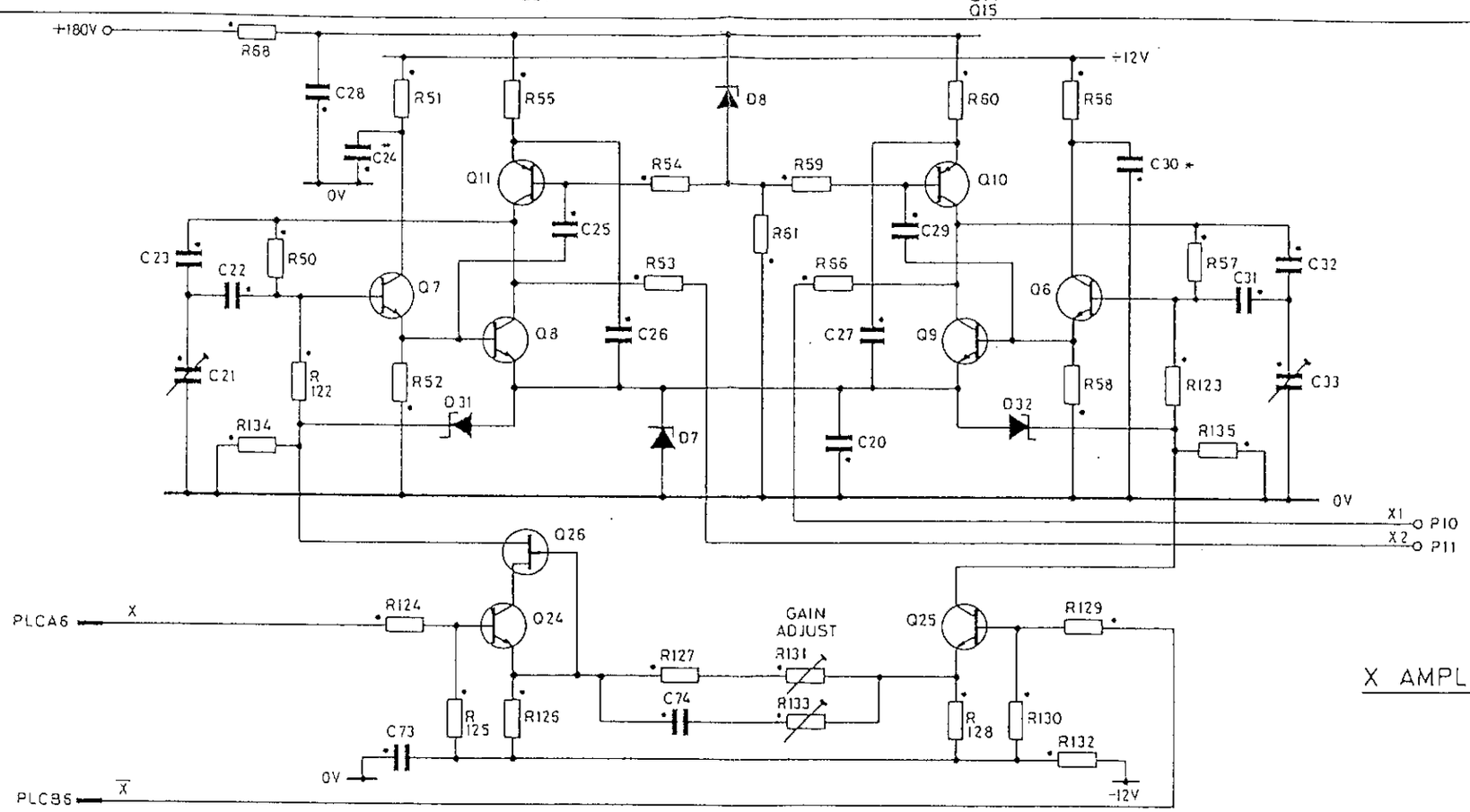
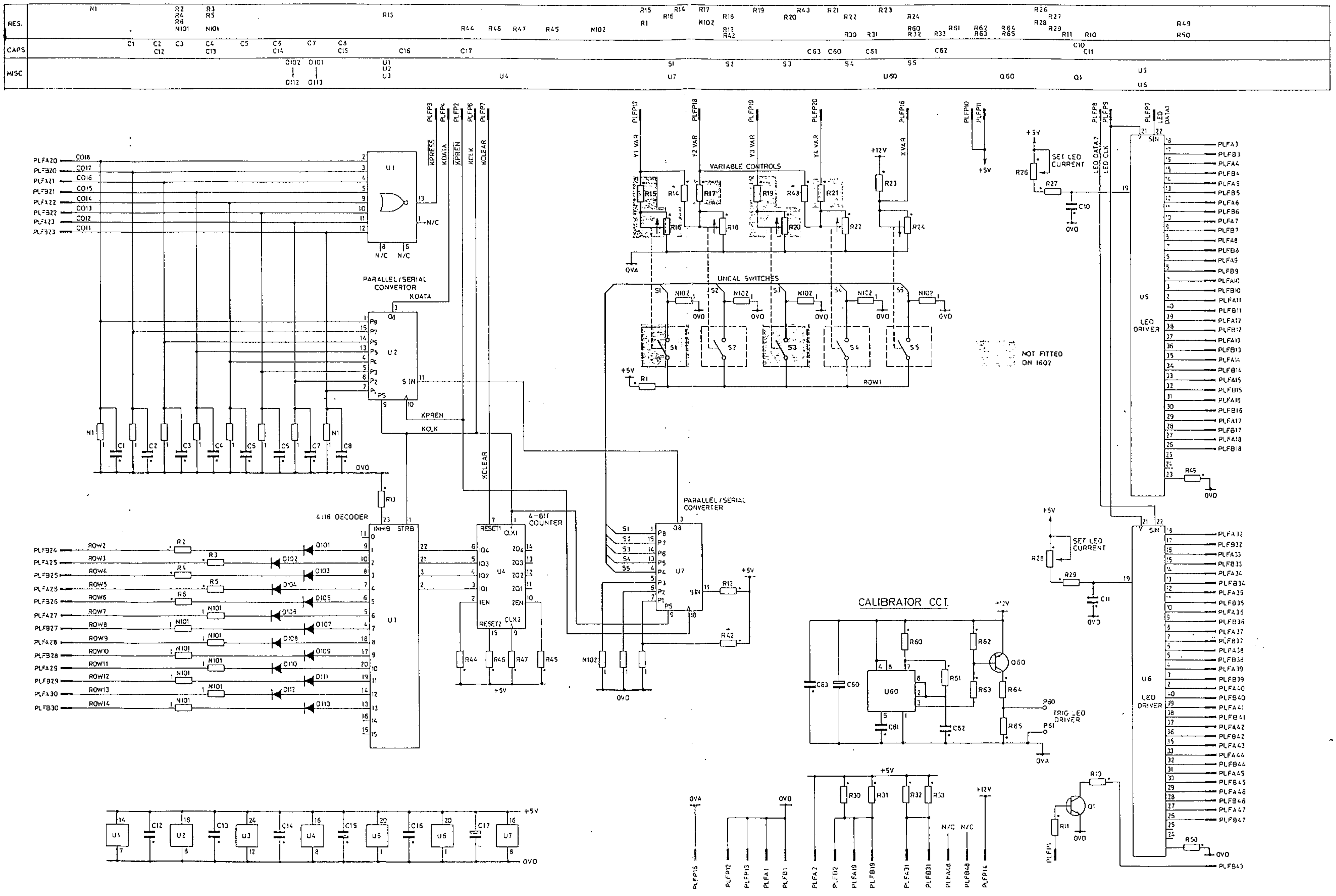


Fig. 6.16c X-Amp & Bright-up Amp Circuit Diagram



= NOT FITTED 1604

Fig. 6.17b Front Panel Circuit Diagram

RES	R19 R20 R13 R14 R8 R9 R15 R3 R4 R11 R12 R7 R5 R6 R18 R1 R16 R2 R17
CAPS.	C1 C2 C3 C5 C4 C19 C13 C6 C14 C20 C7 C8 C17 C9 C12 C21 C15 C18 C10 C27 C23 C16 C11 C22
MISC.	F3 S1 T1 BR1 BR3 BR2 F2 F1 L2 U5 U4 Q2 Q1 U2 U1 U3 D2 L1

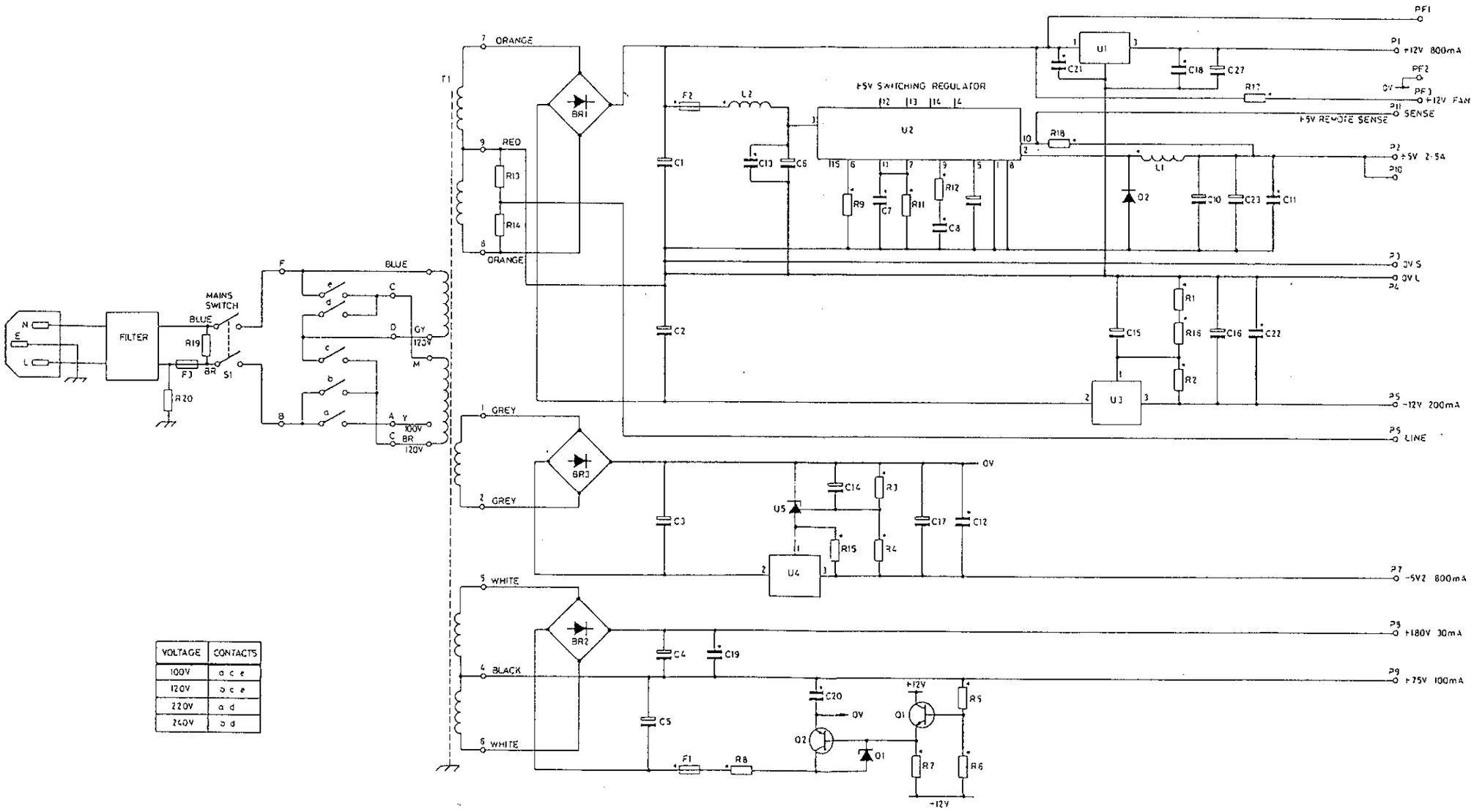


Fig. 6.18 Power Supply

RES.	R5 R1 N1 R2 R3 R6 R4 N1
CAPS.	C1 C4 C5 C6 C7 C2 C3
MISC.	U2 U7d, e, f U1 LK1 U3 U6a U7a,c U6b, c U4 U7b U6d U5

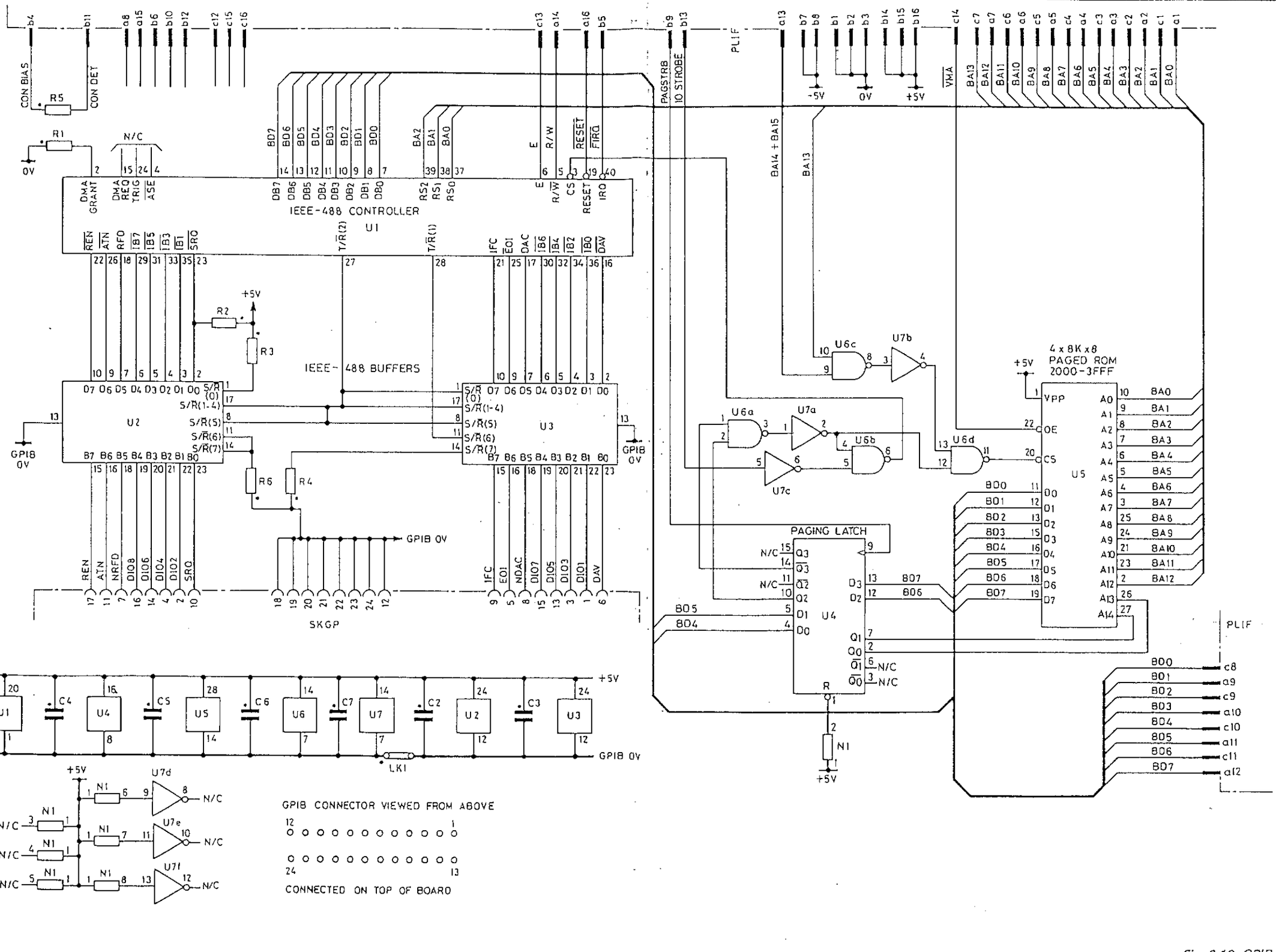


Fig. 6.19 GPIB Option

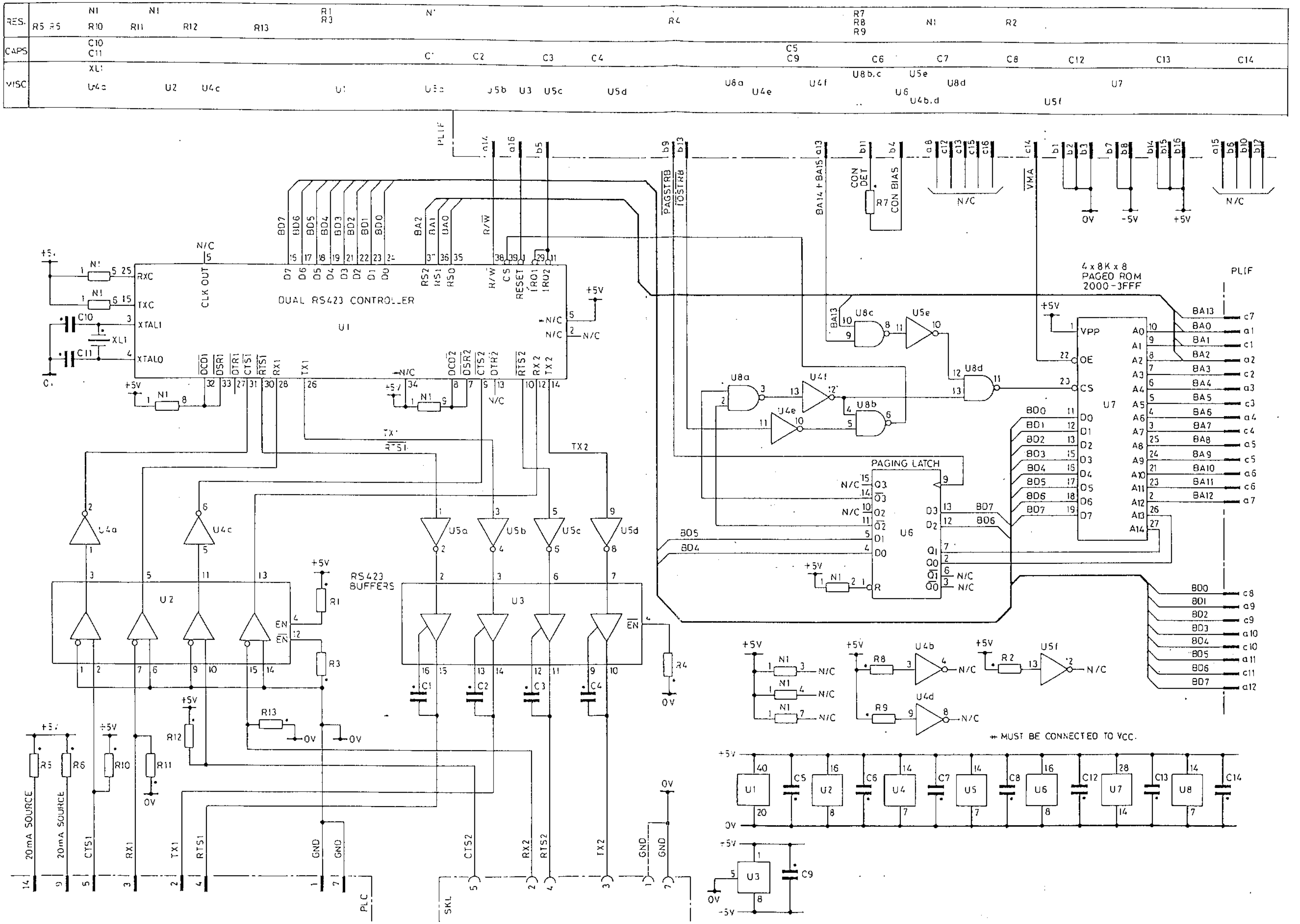


Fig. 6.20 RS423 Option

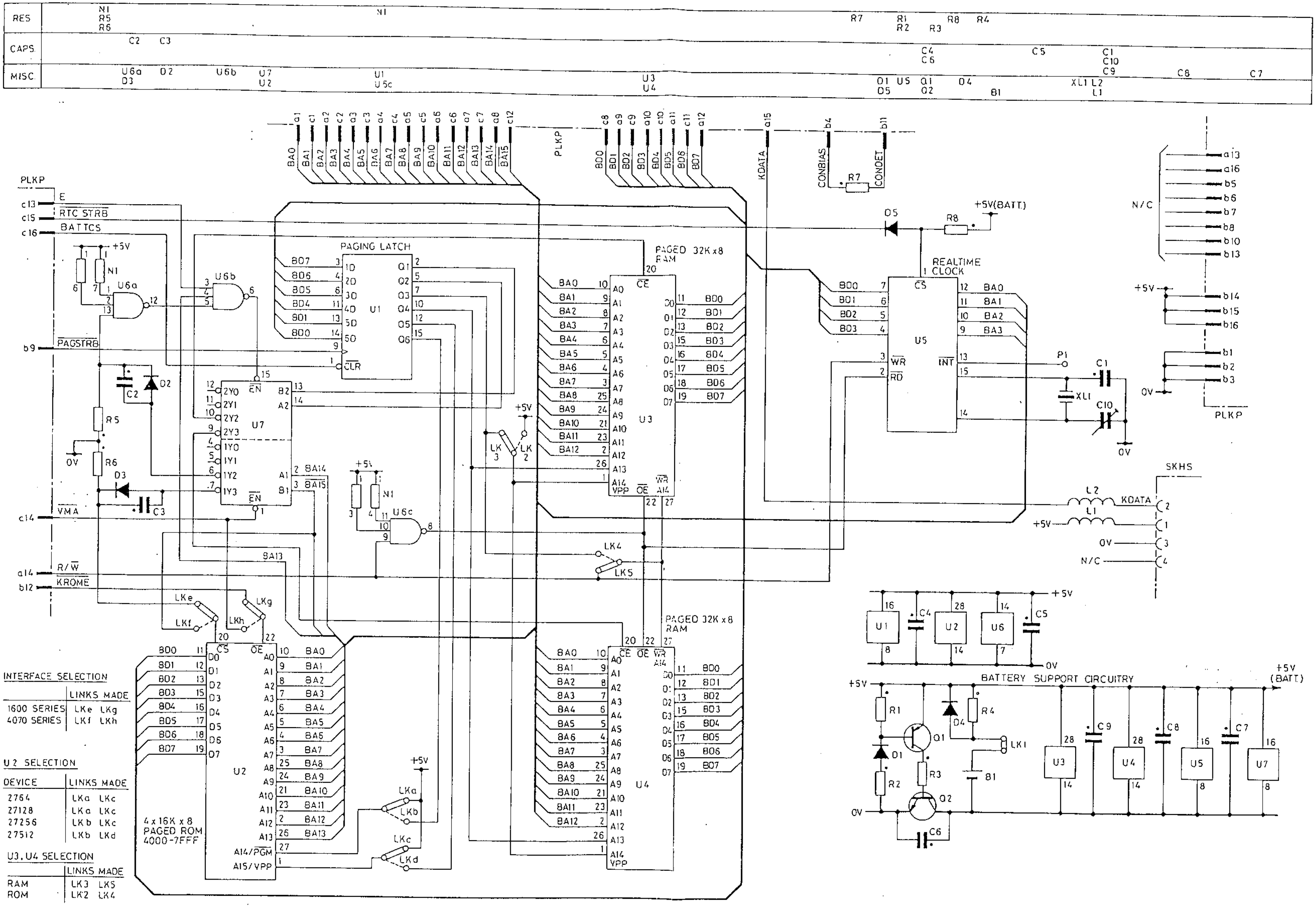


Fig. 6.21 Waveform Processor interface pod option

RES.	R1 R3 R2
CAPS.	C2 C4 C3 C1
MISC	XL1 U2 U1 S16 S1 S17 S2 S18 S3 S19 S4 S26 S20 S10 S5 S15 S21 S11 S6 S22 S12 S7 S23 S13 S8 S24 S14 S25 S9

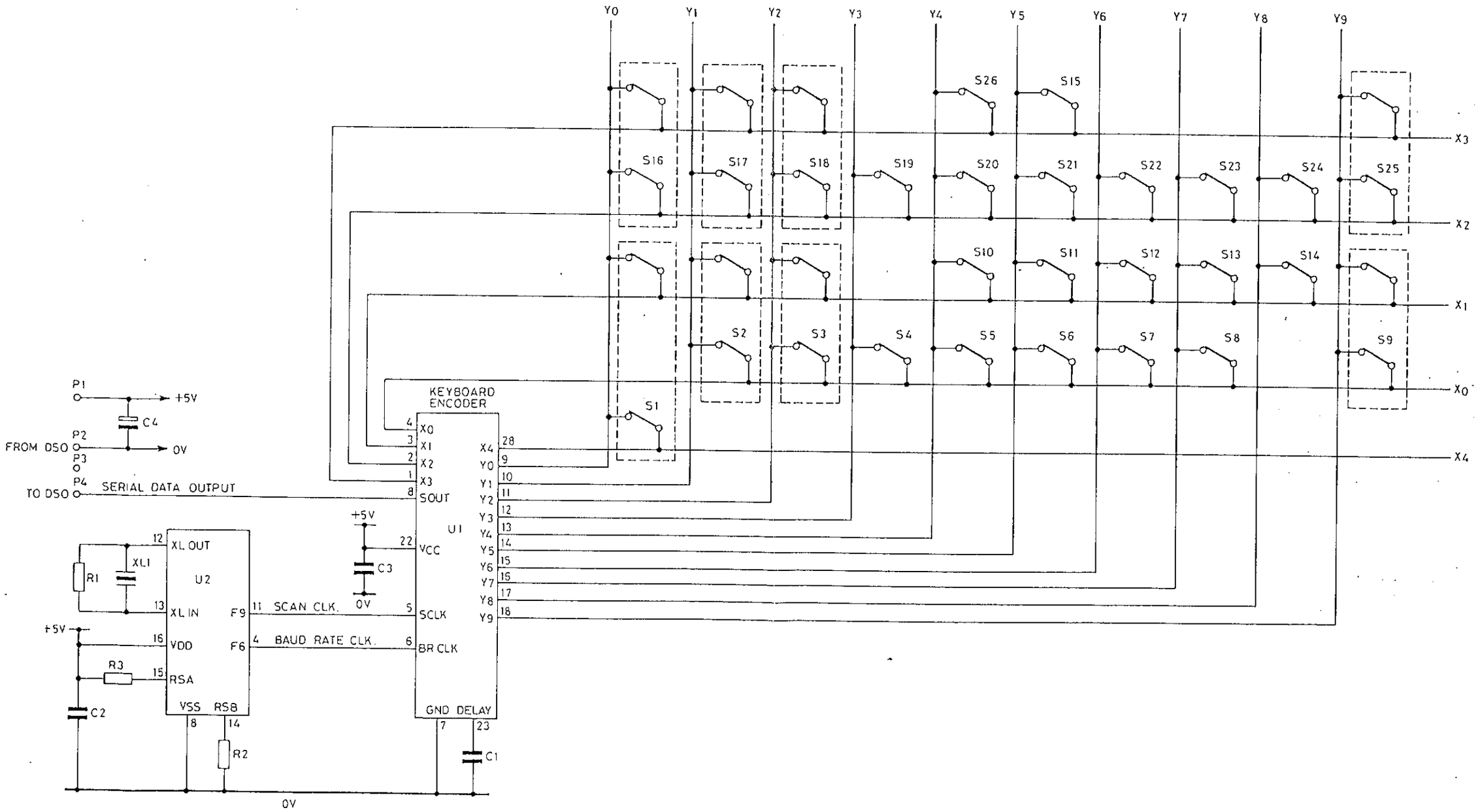


Fig. 6.22 160/170 Keypad

RES.	N1 R1 R2 R3 R4 R5 R12 N2 R6 R7 R8 R9 R10 R11
CAPS.	C1 C4 C5 C6 C7 C2 C3 C9 C8
MISC.	U3a b D1 U1 Q1 XL1 Q2 U3c d Q4 U2 Q3 L1 Q5 Q7 Q6 Q8 D2 D3 S4 S5