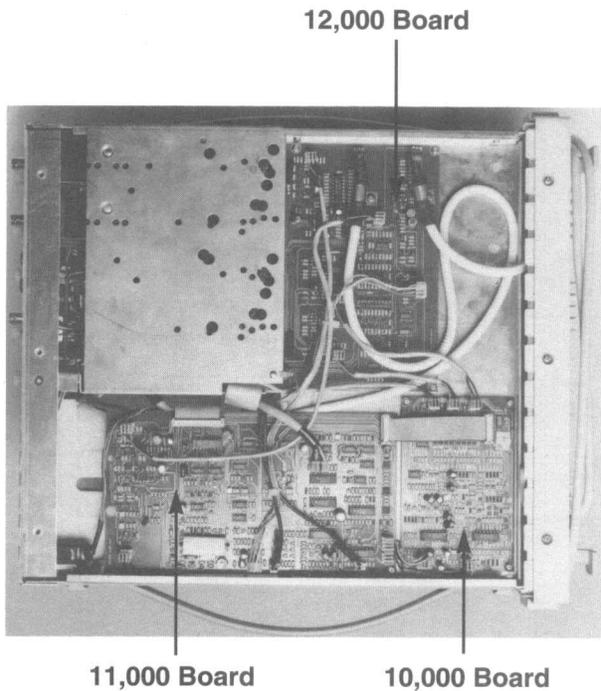
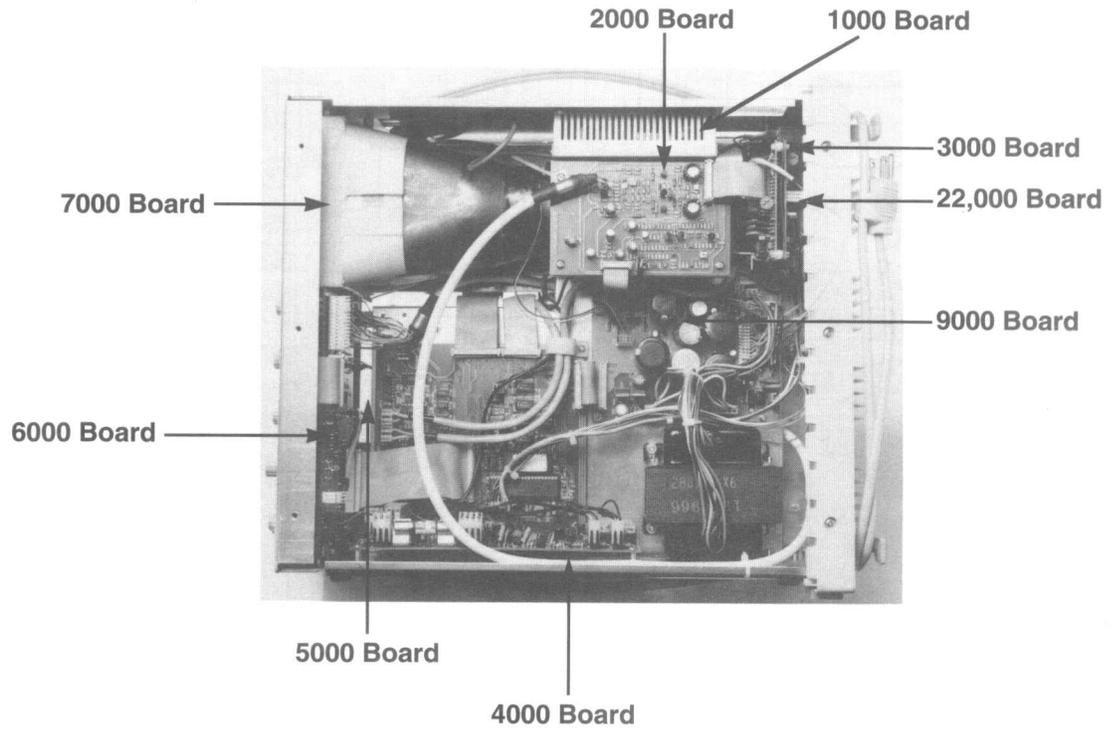


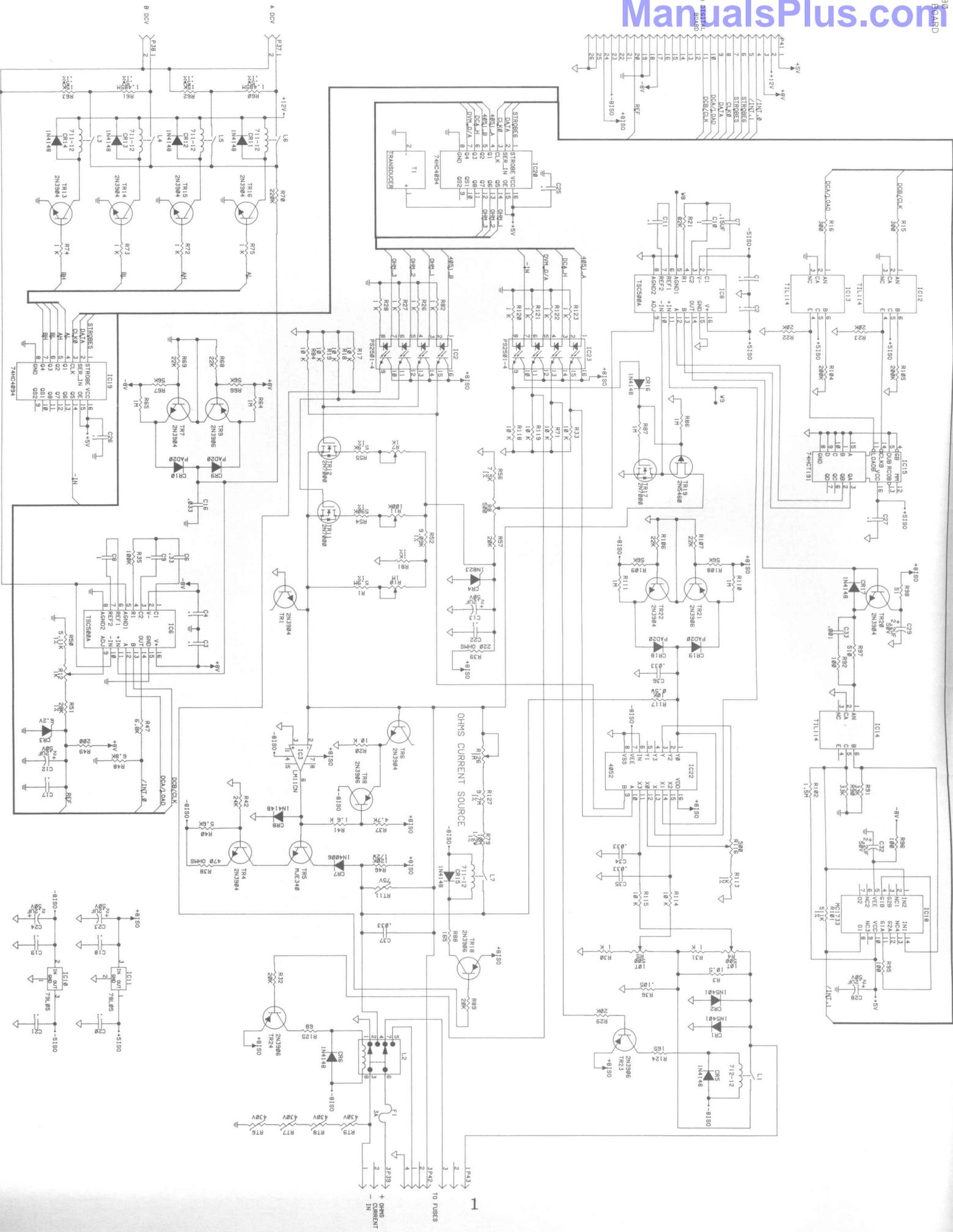
SC3100

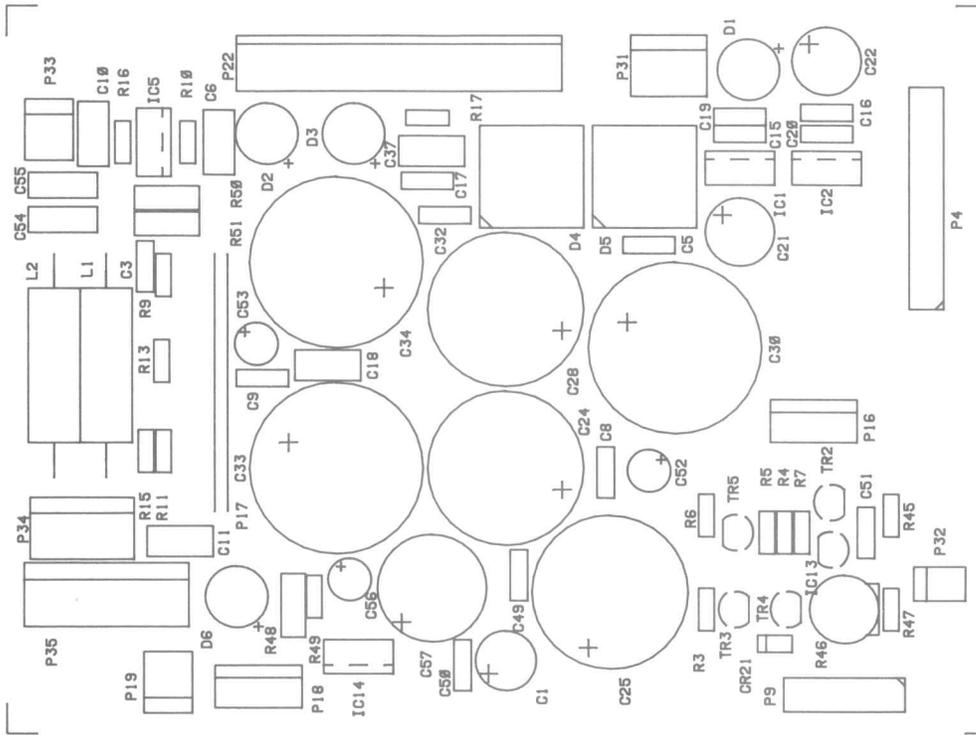
"Auto Tracker"



Index	Page
SC3100 Block Diagram.....	17-19
1000 High Voltage Board.....	14,15
2000 YZ Preamp Board.....	38-40
3000 YZ Board.....	7,8
4000 DVM Board.....	1-3
5000 Front Panel Board.....	5,6
6000 Digital Select/Display Board.....	36,37
7000 CRT Mode Board.....	4
8000 Digital Board.....	11-14
9000 Low Voltage Board.....	9,10
10,000 Trigger/Input PP Board.....	27,29
11,000 Sweep Board.....	30-36
12,000 Attenuator Board.....	16, 20-26
22,000 X-AMP Board.....	41-43

This booklet contains schematic, board legend, and parts list for each board.





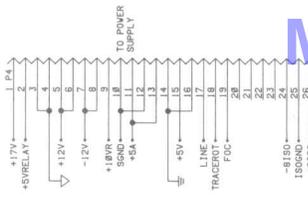
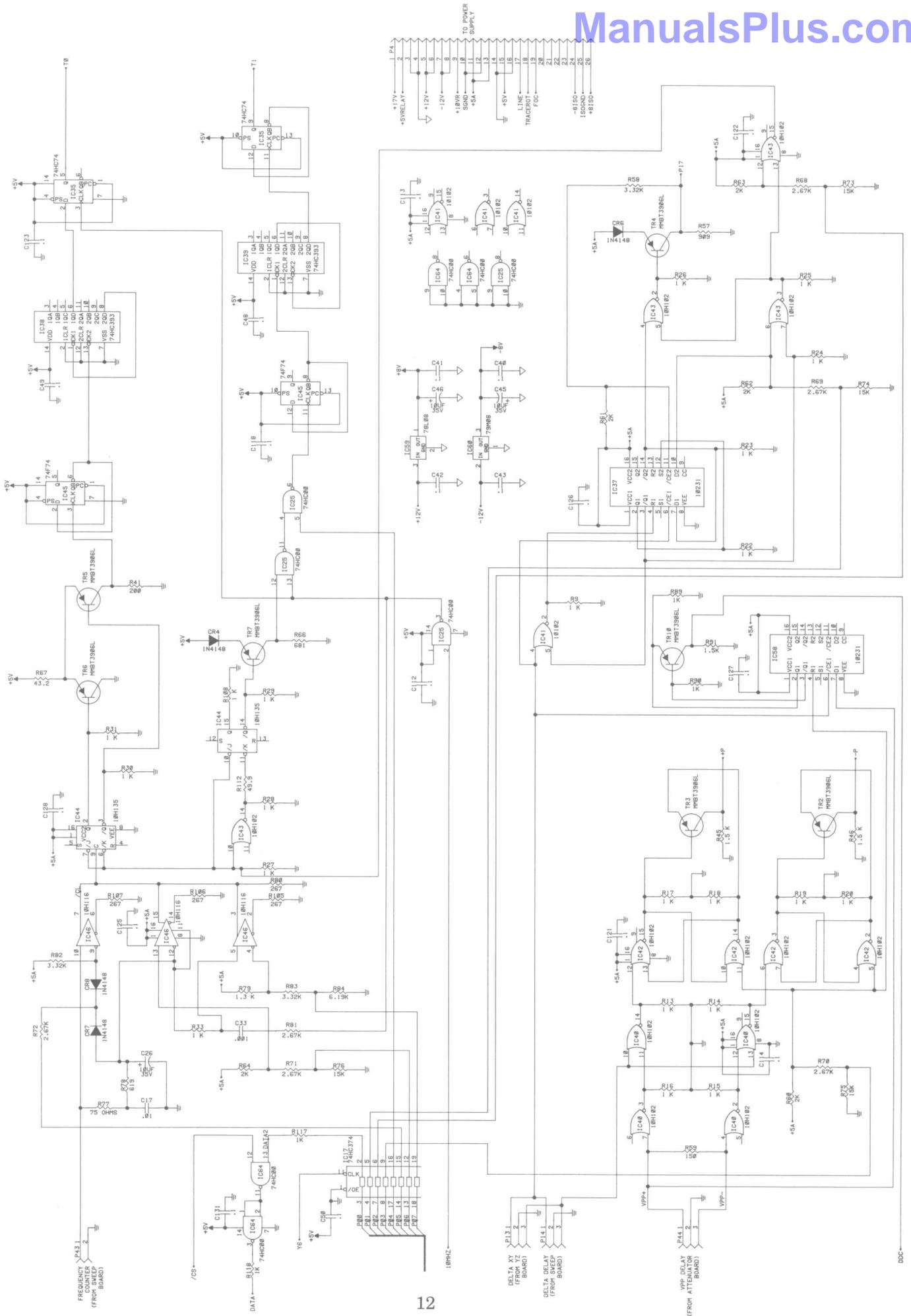
SCHEMATIC REFERENCE

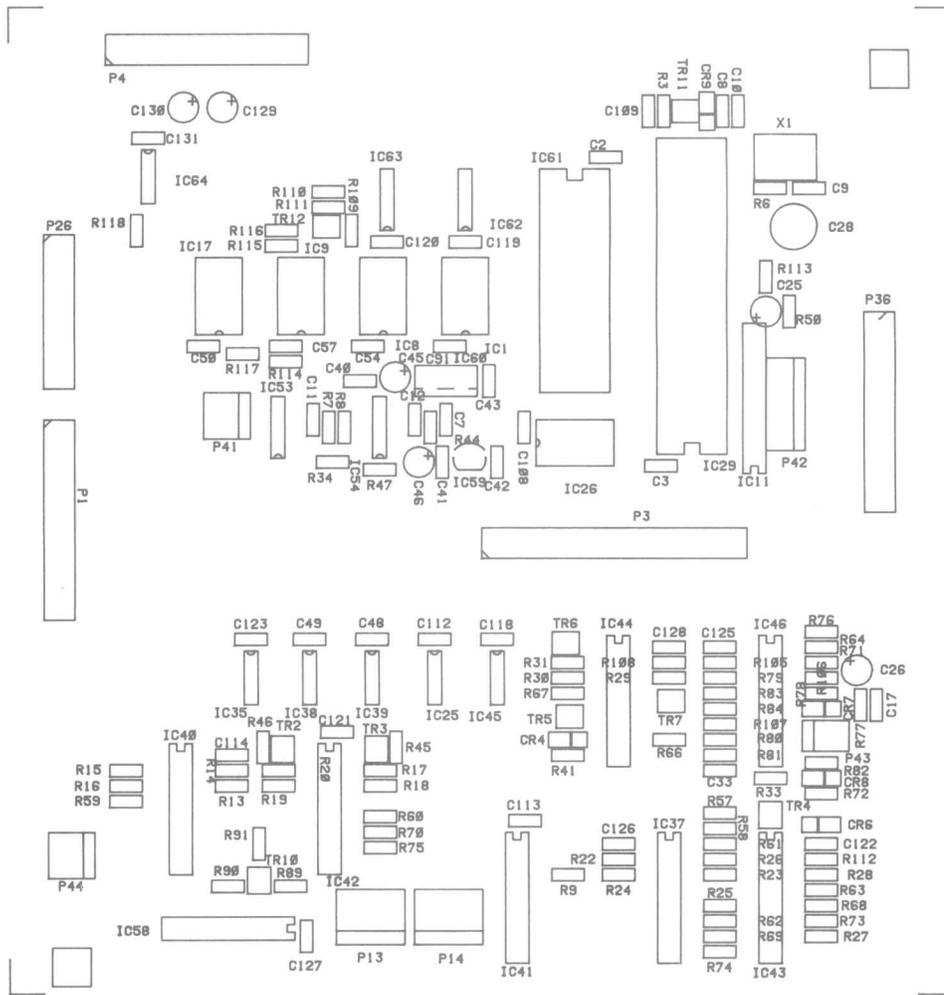
PART NO.

DESCRIPTION

LOW VOLTAGE POWER SUPPLY (9000) BOARD

C1	24G442	CAP,RLYTIC,100UF,16V,+/-20%
C3,5,8,9, 17,32,49,50	24G482	CAP,MYLAR,.1UF,50V,5%,5MM
C11,10,6,18	24G216	CAP,MYLAR,.1UF,100V,10%
C15,16,19,20,51	24G482	CAP,MYLAR,.1UF,50V,5%,5MM
C21,22	24G410	CAP,RLYTIC,220UF,25V,+/-20%
C24	24G672	CAP,RLYTIC,2200UF,50V,+/-20%
C25,28	24G635	CAP,RLYTIC,4700UF,25V,+100/-20
C30	24G413	CAP,RLYTIC,10000UF,16V,+30/-10
C33,34	24G422	CAP,RLYTIC,1000UF,100V,+30/-10
C37	24G496	CAP,MYLAR,.47UF,50V,10%,BULK
C53,52	24G407	CAP,RLYTIC,47UF,25V,+/-20%
C54,55	24G686	CAP,DISC,2200PF,125VAC,20%,CSA
C56	24G698	CAP,RLYTIC,1UF,160V,20%
C57	24G697	CAP,RLYTIC,47UF,250V,20%
CR21	50C5-2:A	DIODE,SIL,75V,100mA,.25uA,4148
D1-3,6	16G27	DIODE,BIDGE,200V,1.5A
D4,5	16G28	DIODE,BRIDGE,200V,3A
IC1	69G79	IC,REG,-8V,500mA,MC79M08CT
IC2	69G78	IC,REG,+8V,500mA,78M08
IC5	69G287	IC,REG,NEG,ADJ,LM337T
IC13	69G212	IC,REG,ADJ,1.5A,LM317
IC14	69G212	IC,REG,ADJ,1.5A,LM317
L1,2	46G92	IND,WIREFORM,50uH,1.5A
R3	14A38-3923A	RES,MET.F,3.92K,1/4W,1%,100PPM
R4	14A38-4702A	RES,MET.F,470,1/4W,1%,100PPM
R5	14A38-2703A	RES,MET.F,2.7K,1/4W,1%,100PPM
R6	14A38-6813A	RES,MET.F,6.81K,1/4W,1%,100PPM
R7	14A38-1003A	RES,MET.F,1K,1/4W,1%,100PPM
R9-11	14A38-2402A	RES,MET.F,240,1/4W,1%,100PPM
R13	14A38-3013A	RES,MET.F,3.01K,1/4W,1%,100PPM
R15,16	14A38-9093A	RES,MET.F,9.09K,1/4W,1%,100PPM
R17	14C1-682	RES,CARBON,6.8K,1/4W,5%
R50,51	14C4-226	RES,CARBON,22M,1/2W,5%
R45	14A38-2402A	RES,MET.F,240,1/4W,1%,100PPM
R46	15C26-2	POT,MVPC CERM,200,1/2W,20%
R47	14A38-1603A	RES,MET.F,1.6K,1/4W,1%,100PPM
R48	14C29-4704A	RES,MET.F,47K,1/2W,1%,100PPM
R49	14A38-5622A	RES,MET.F,562,1/4W,1%,100PPM
TR2,3	19A33-1	TRANS,NPN,40V,200mA,2N3904
TR4,5	19A34-1	TRANS,PNP,40V,200mA,2N3906





SCHEMATIC REFERENCE

PART NO.

DESCRIPTION

DIGITAL (8000) BOARD

C2,3,7,40-43,48-50,24G575
 54,57,91,108,109,
 112-114,118-123,
 125-129,131
 C8,9
 C10
 C11,12,17
 C25,26,45,46,
 129,130
 C28
 C33
 CR4,6-9
 IC1
 IC8,9,17
 IC11
 IC25,64
 IC26
 IC29
 IC35
 IC37,58
 IC38,39
 IC40,42,43
 IC41
 IC44
 IC45
 IC46
 IC53,54
 IC59
 IC60

24G615
 24G607
 24G465
 24G448
 24G387
 24G606
 50G36
 69G433
 69G441
 69G238
 69G438
 69G605
 69G546
 69G436
 69G81
 69G440
 69G132
 69G76
 69G83
 69G604
 69G133
 69G428
 69G147
 69G79

CAP,CHIP,.1UF,50V,10%,X7R
 CAP,CHIP,33PF,50V,5%,NPO
 CAP,CHIP,10PF,50V,.25PF,NPO
 CAP,CHIP,.01uF,50V,10%,X7R
 CAP,RLYTIC,10UF,35V,+/-20%
 CAP,TRIM,2.5-18PF
 CAP,CHIP,.001UF,50V,10%,X7R
 SMT DIODE,SIL,75V,100MA,4148
 SMTIC,F-FLOP,D,OCTAL,74HC373
 SMTIC,F-FLOP,TRI-S,D,74HC374
 IC,RES NET,PULLUP, 8 X 100K
 SMTIC,NAND,2-IN,74HC00
 SMTIC,BUFFER,74HCT244
 IC,MICRO,8032
 SMTIC,F-FLOP,DUAL,D,74HC74
 IC,F-FLOP,"D",DUAL,10231,ECL
 SMTIC,COUNTER,BINARY,74HC393
 IC,NOR,2-IN,10H102
 IC,NOR,2-IN,ECL,10102
 IC,F-FLOP,J-K,DUAL,10135
 SMTIC,F-FLOP,DUAL,D,74F74
 IC,3xLINE,ECL,16 PIN,10H116
 SMTIC,CONV,8BIT,DAC-08E
 IC,REG,+8V,100mA,78L08,TTL
 IC,REG,-8V,500mA,MC79M08CT

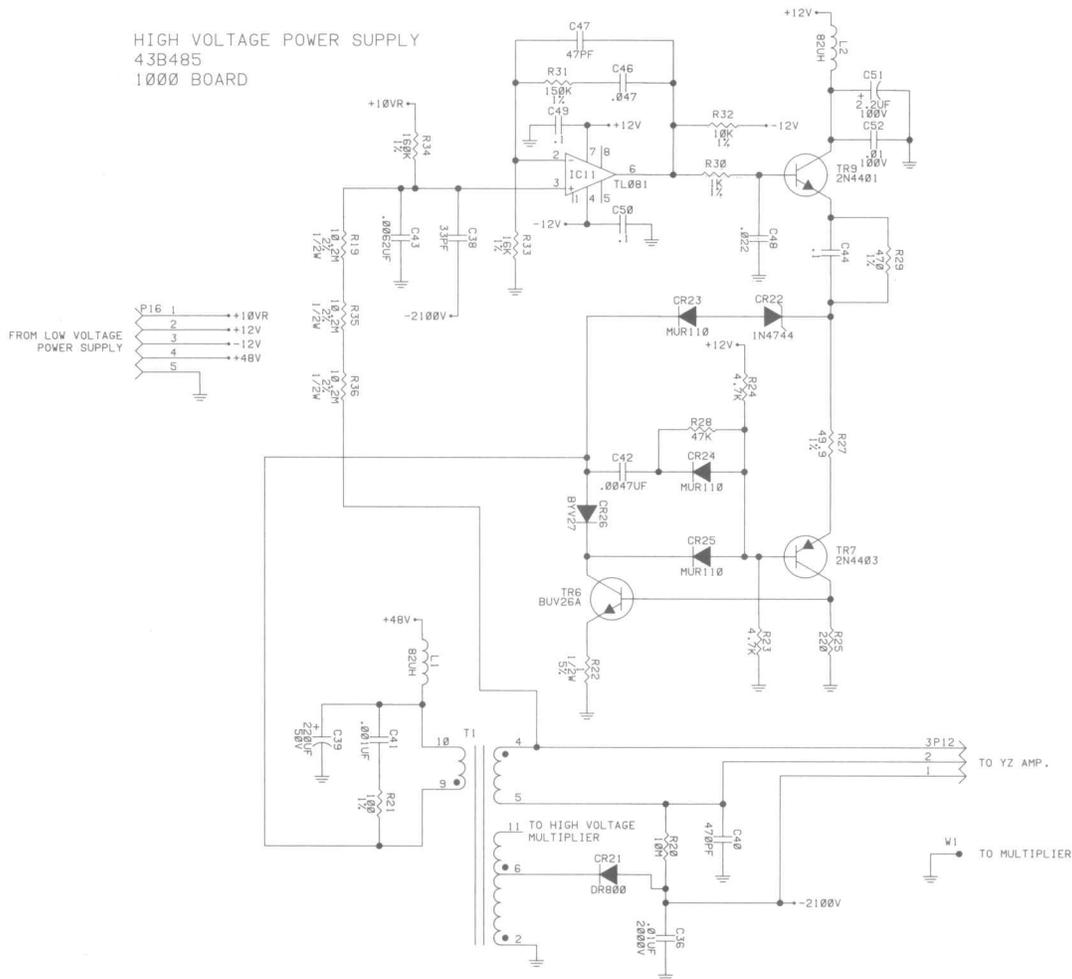
SCHEMATIC REFERENCE

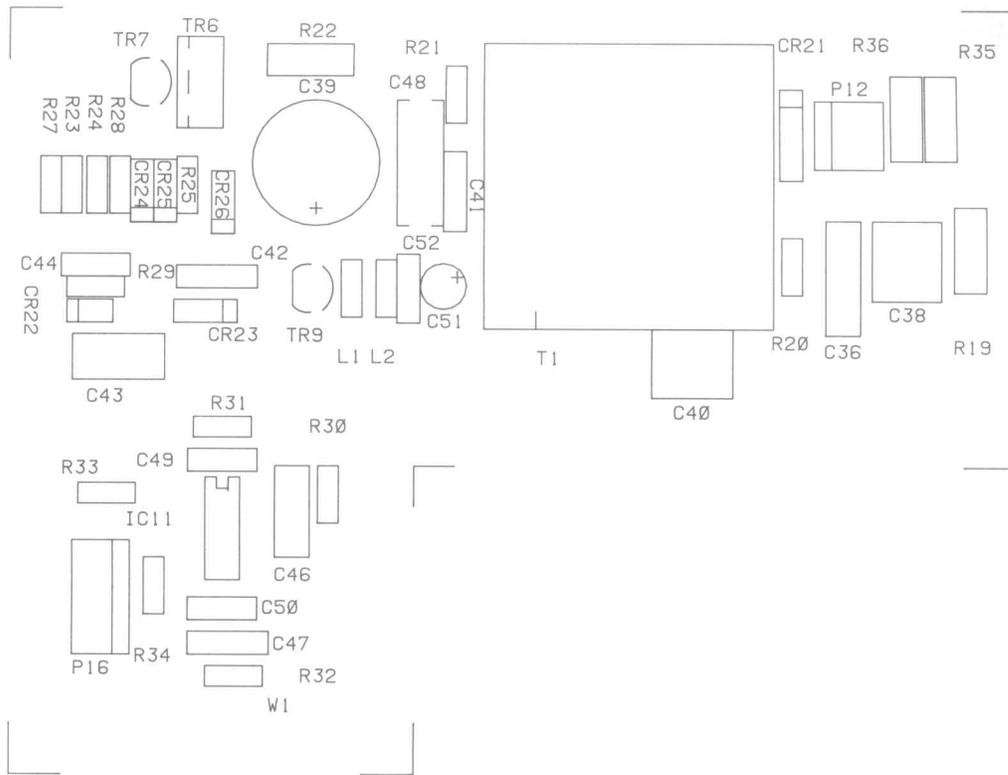
PART NO.

DESCRIPTION

DIGITAL (8000) BOARD CONTINUED

IC61	69G536	IC,EPROM,27C512
IC62,63	69G695	SMTIC,3 TO 8 DECODER,74HC237
R3	14G102-5112A	RES,CHIP,511,1/8W,1%,100PPM
R6	14G102-1302A	RES,CHIP,130,1/8W,1%,100PPM
R7	14G102-4324A	RES,CHIP,43.2K,1/8W,1%,100PPM
R8,9,13-20, 22-31,33,89,90, 108,109,113	14G102-1003A	RES,CHIP,1K,1/8W,1%,100PPM
R34	14G102-4754A	RES,CHIP,47.5K,1/8W,1%,100PPM
R41	14G102-2002A	RES,CHIP,200,1/8W,1%,100PPM
R44-47,91	14G102-1503A	RES,CHIP,1.5K,1/8W,1%,100PPM
R50	14G102-8253A	RES,CHIP,8.25K,1/8W,1%,100PPM
R57	14G102-9092A	RES,CHIP,909,1/8W,1%,100PPM
R58,82,83	14G102-3323A	RES,CHIP,3.32K,1/8W,1%,100PPM
R59	14G102-1502A	RES,CHIP,150,1/8W,1%,100PPM
R60-64	14G102-2003A	RES,CHIP,2K,1/8W,1%,100PPM
R66	14G102-6812A	RES,CHIP,681,1/8W,1%,100PPM
R67	14G102-4321A	RES,CHIP,43.2,1/8W,1%,100PPM
R68-72,81	14G102-2673A	RES,CHIP,2.67K,1/8W,1%,100PPM
R73-76,110	14G102-1504A	RES,CHIP,15K,1/8W,1%,100PPM
R77	14G102-7501A	RES,CHIP,75,1/8W,1%,100PPM
R78	14G102-6192A	RES,CHIP,619,1/8W,1%,100PPM
R79	14G102-1303A	RES,CHIP,1.3K,1/8W,1%,100PPM
R80,105-107	14G102-2672A	RES,CHIP,267,1/8W,1%,100PPM
R84,111	14G102-6193A	RES,CHIP,6.19K,1/8W,1%,100PPM
R112	14G102-4991A	RES,CHIP,49.9,1/8W,1%,100PPM
R114-118	14G102-1003A	RES,CHIP,1K,1/8W,1%,100PPM
TR2-7,10	19G95	SMT TRANS,PNP,40V,200MA,3906
TR11,12	19G92	SMT TRANSISTOR,NPN,3904,SOT23
X1	47A36	CRYSTAL,QTZ,10MHZ,.005%,30PPM,





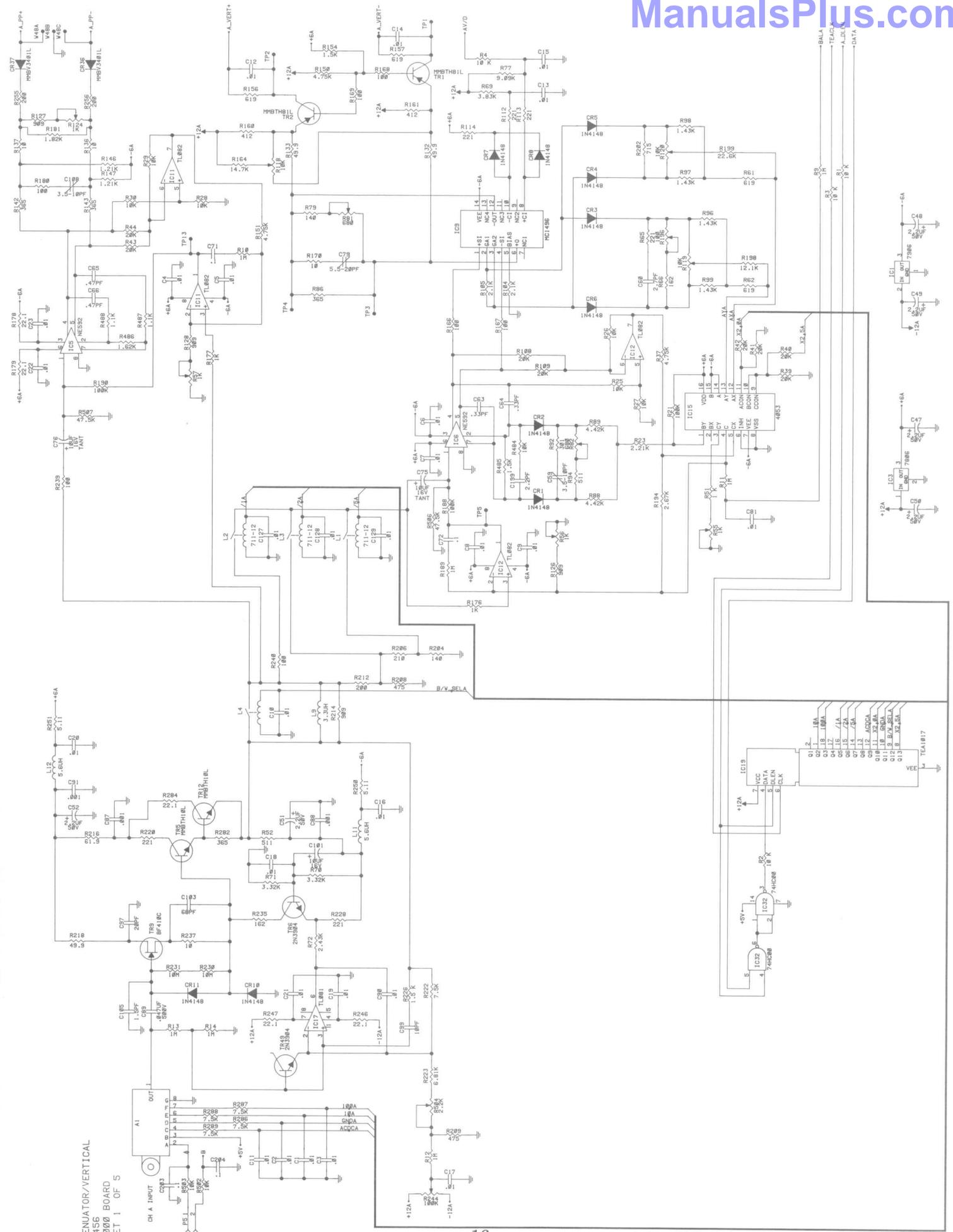
SCHEMATIC REFERENCE

PART NO.

DESCRIPTION

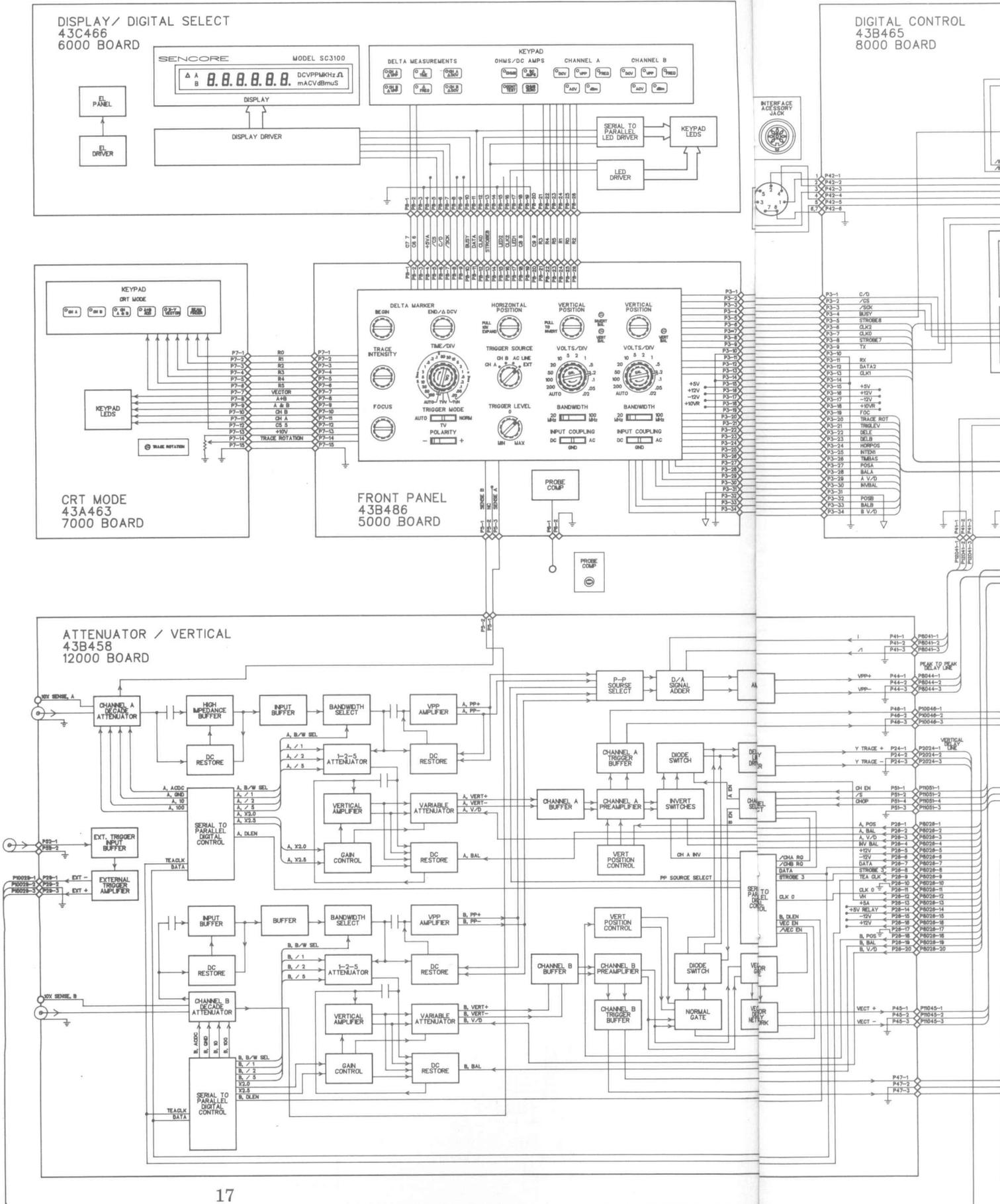
HIGH VOLTAGE POWER SUPPLY (1000) BOARD

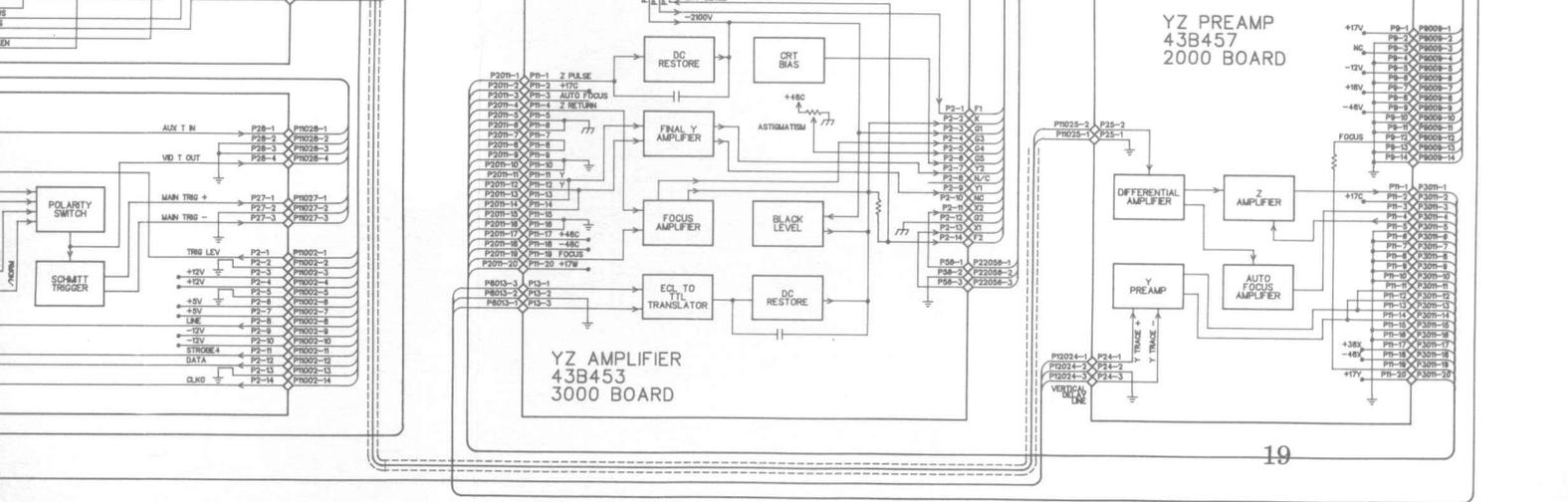
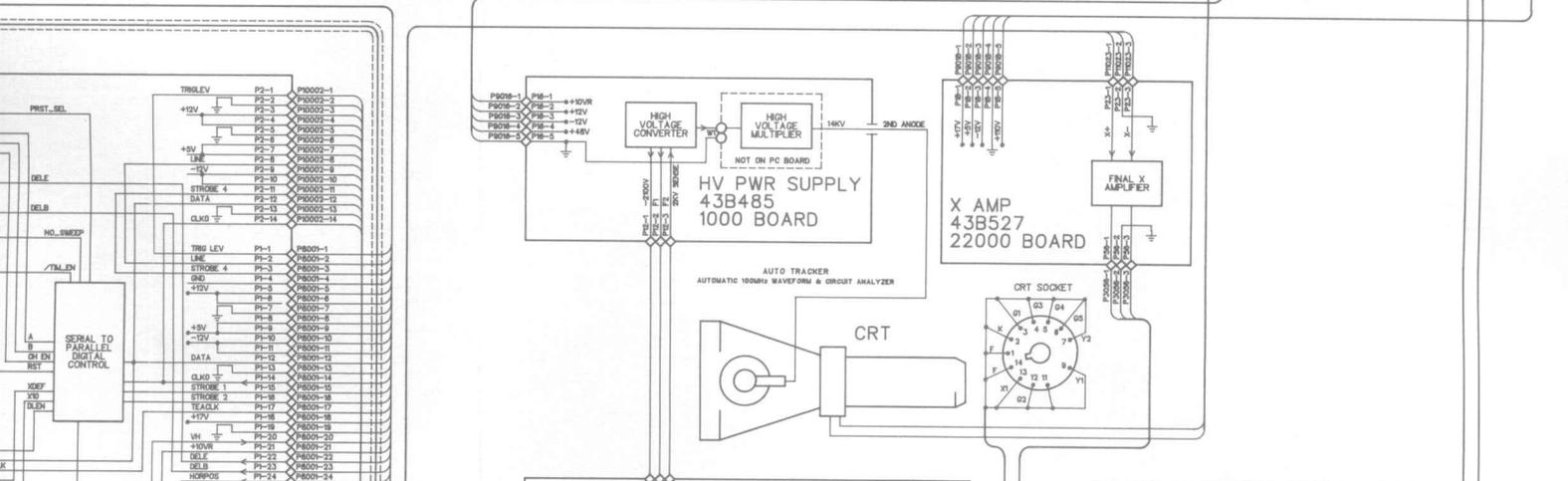
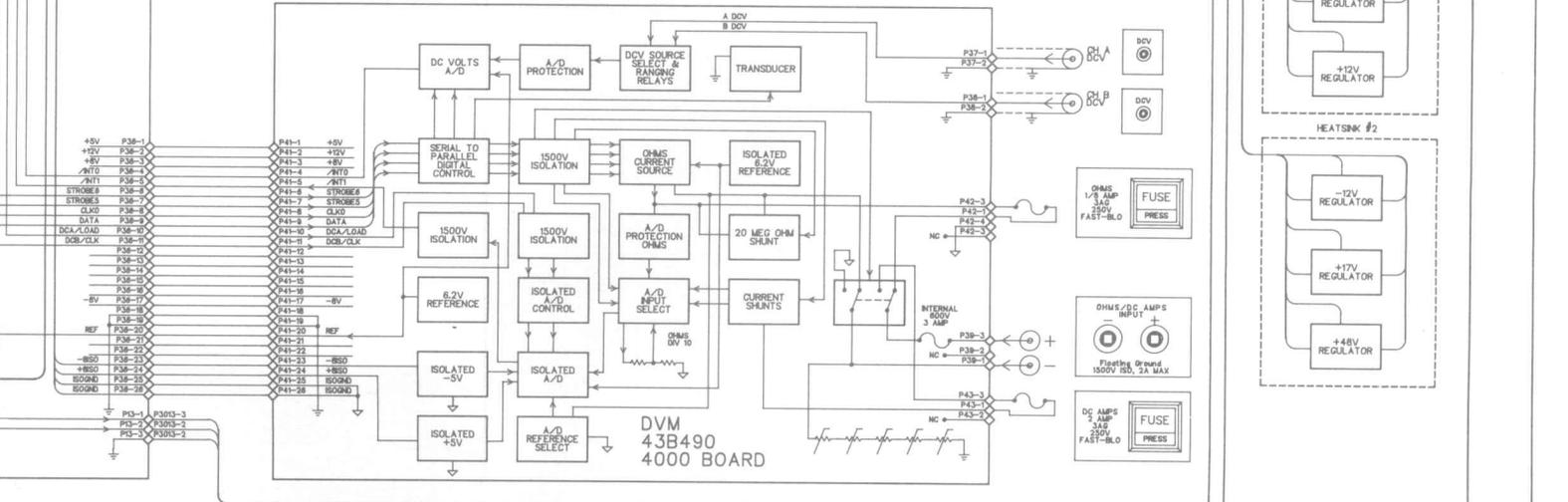
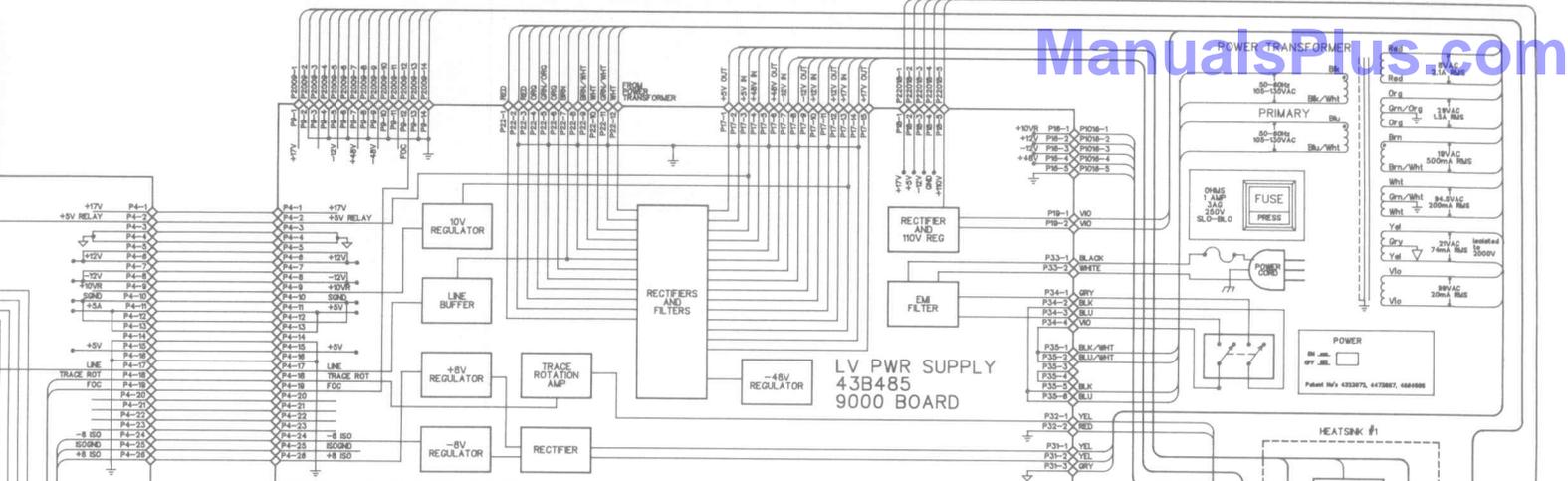
C36	24G221	CAP,DISC,.01UF,3000V,+80/-20%
C38	24G621	CAP,DISC,33PF,3KV,20%
C39	24G411	CAP,RLYTIC,220UF,50V,+/-20%
C40	24G622	CAP,DISC,470PF,3KV,20%
C41	24G214	CAP,DISC,.001UF,500V,10%,Z5F
C42	24G125	CAP,DISC,.0047uF,200V,20%,Z5U
C43	24G261	CAP,POLY,.0062UF,33V,5%
C44,49,50	24G482	CAP,MYLAR,.1UF,50V,5%,5MM
C46	24G212	CAP,MYLAR,.047UF,100V,10%
C47	24G176	CAP,DISC,47PF,500V,5%,NPO
C48	24G195	CAP,MYLAR,.022UF,250V,10%
C51	24G569	CAP,RLYTIC,2.2UF,100V,20%
C52	24G207	CAP,DISC,.01UF,100V,20%
CR21	16G16	DIODE,FAST REC,8KV,25mA,1uA
CR22	50C4-11	DIODE,ZENER,15V,61mA,5%,IN4744
CR23-25	16G21	DIODE,FAST REC,100V,1A,10uA,
CR26	50G39	DIODE,FAST RECOVERY,BYV27
IC11	9G63	IC,OP-AMP,SINGLE,BIFET,TLO81
L1,2	46G105	IND,MINIATURE,82uH,,10%
R19,35,36	14C29-1027A	RES,MET.F,10.2M,1/2W,1%,100PPM
R20	14C1-106	RES,CARBON,10M,1/4W,5%
R21	14A38-1002A	RES,MET.F,100,1/4W,1%,100PPM
R22	14C4-10	RES,CARBON,1,1/2W,5%
R23,24	14C1-472	RES,CARBON,4.7K,1/4W,5%
R25	14C1-221	RES,CARBON,220,1/4W,5%
R27	14A38-4991A	RES,MET.F,49.9,1/4W,1%,100PPM
R28	14C1-473	RES,CARBON,47K,1/4W,5%
R29	14A38-4702A	RES,MET.F,470,1/4W,1%,100PPM
R30	14A38-1003A	RES,MET.F,1K,1/4W,1%,100PPM
R31	14A38-1505A	RES,MET.F,150K,1/4W,1%,100PPM
R32	14A38-1004A	RES,MET.F,10K,1/4W,1%,100PPM
R33	14A38-1604A	RES,MET.F,16K,1/4W,1%,100PPM
R34	14A38-1605A	RES,MET.F,160K,1/4W,1%,100PPM
T1	28B125	TRANSFORMER,FLYBACK,HV BOARD
TR6	19G112	TRANS,NPN,FAST SW,BUV26A
TR7	19G40	TRANS,PNP,40V,500MA,2N4403
TR9	19A44	TRANS,NPN,40V,600MA,,2N4401

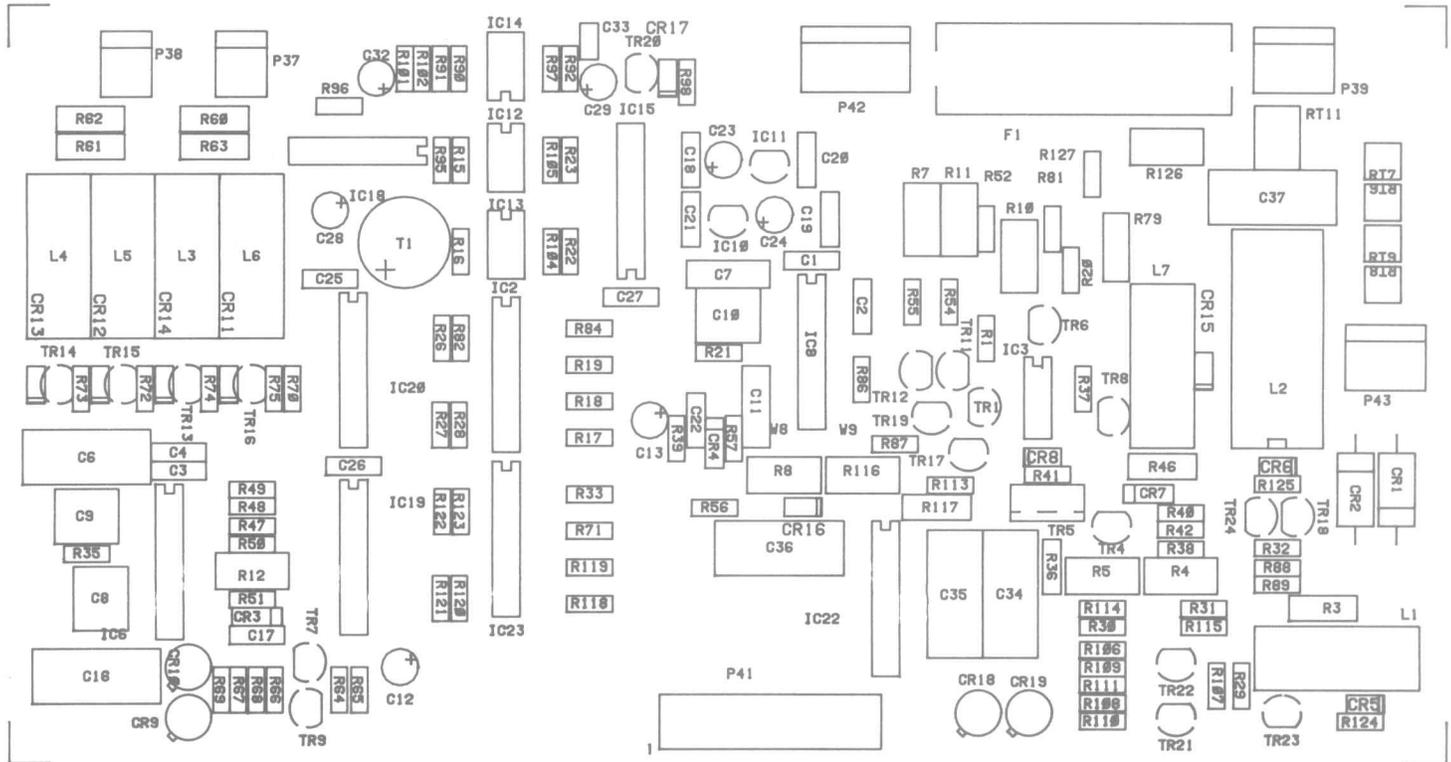


ATTENUATOR/VERTICAL
43B436
12,000 BOARD
SHEET 1 OF 5

SC3100 BLOCK DIAGRAM ManualsPlus.com







**SCHEMATIC
REFERENCE**

PART NO.

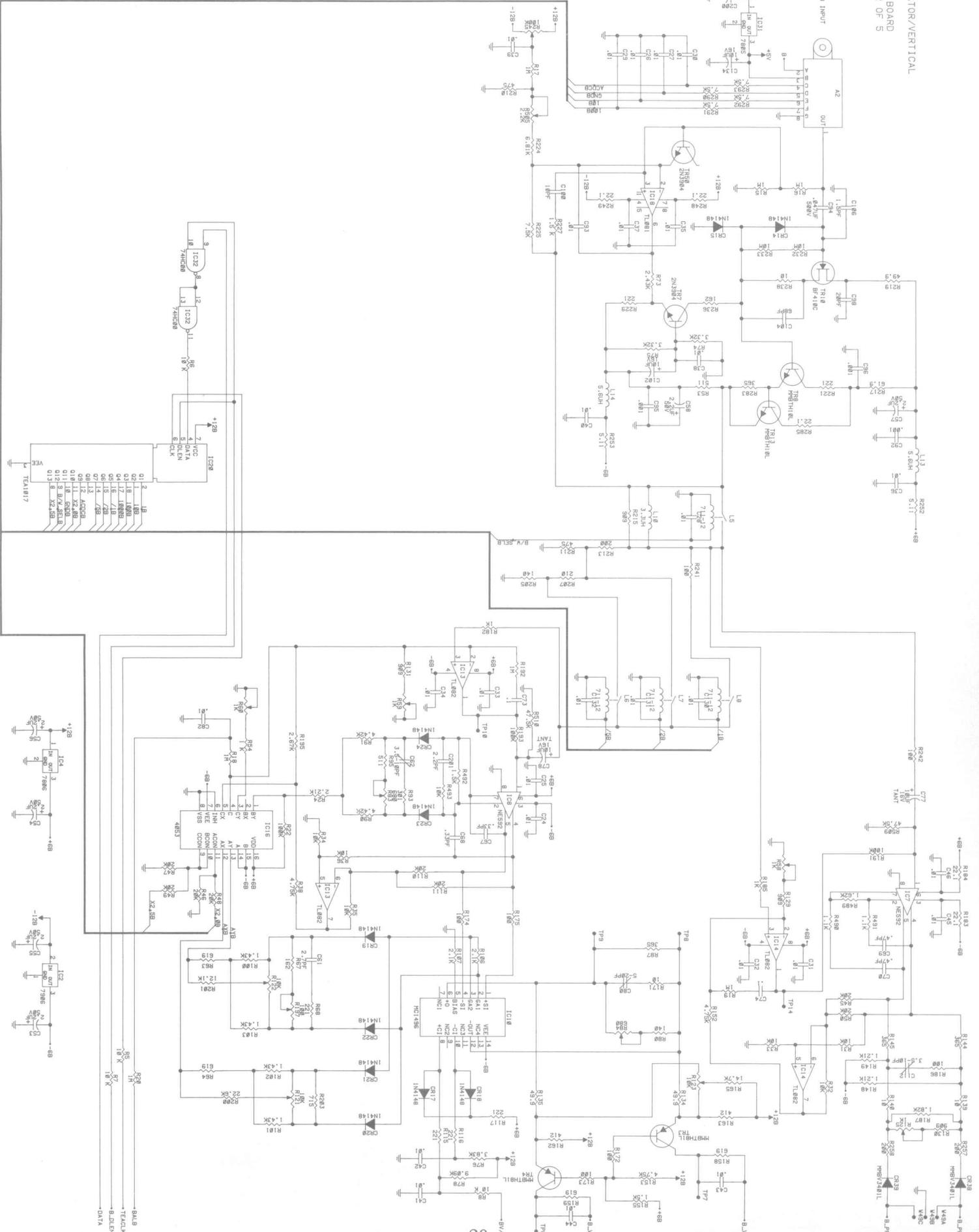
DESCRIPTION

DVM (4000) BOARD

C1,2,18-22,27
 C3,4,17,25,26
 C6
 C7
 C8,9
 C10
 C11
 C12,28,32
 C13,23,24,29
 C16
 C33
 C34,35,37
 C36
 CR1,2
 CR3
 CR4
 CR5,6,8,15
 CR7
 CR11-14
 CR16,17
 FL1
 IC2,23
 IC3
 IC6
 IC8
 IC10
 IC11
 IC13-14
 IC15
 IC18

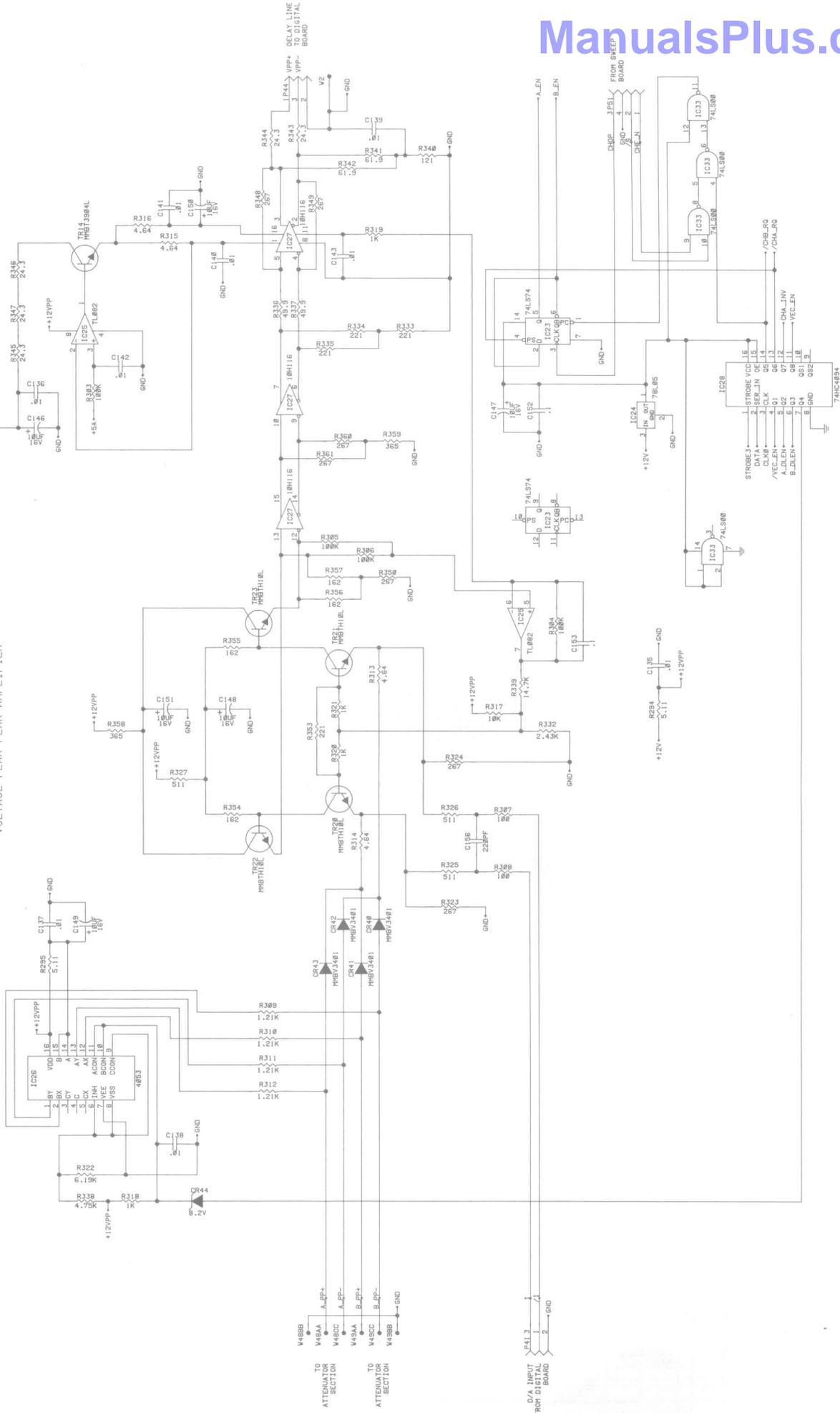
24G104
 24G104
 24G471
 24G674
 24G571
 24G571
 24G512
 24G384
 24G384
 24G404
 24G368
 24G404
 24G404
 16G14
 50C12-1
 50C12-1
 50C5-2:A
 16G5
 50C5-2:A
 50C5-2:A
 44G28
 69G310
 69G730
 69G705
 69G705
 69G116
 69G29
 69G601
 69G675
 69G117

CAP,DISC,,1UF,100V,80/-20%,Z5V
 CAP,DISC,,1UF,100V,80/-20%,Z5V
 CAP,POLY,,.33UF,50V,5%
 CAP,MET.POLY,,.15UF,100V,10%
 CAP,STKD MET FILM,1UF,50V,5%
 CAP,STKD MET FILM,1UF,50V,5%
 CAP,MET.POLY,,.1uF,250V,10%,BUL
 CAP,LYTIC,2.2UF,50V,20%
 CAP,LYTIC,2.2UF,50V,20%
 CAP,POLYPROP,,.033uF,200V,10%
 CAP,DISC,,.001UF,100V,10%
 CAP,POLYPROP,,.033uF,200V,10%
 CAP,POLYPROP,,.033uF,200V,10%
 DIODE,PWR COMP,100V,3A,500uA,
 DIODE,ZENER,6.2V,7.5mA,5%,825
 DIODE,ZENER,6.2V,7.5mA,5%,825
 DIODE,SIL,75V,100mA,.25uA,4148
 DIODE,SILICON,800V,1A,10uA,
 DIODE,SIL,75V,100mA,.25uA,4148
 DIODE,SIL,75V,100mA,.25uA,4148
 FUSE,600V,3A
 IC,OPTOCOUPLER,PS2501
 OP AMP,SINGLE,LO-OFFSET,LM11
 IC,CONV,A/D,16PIN,TSC500ACPE
 IC,CONV,A/D,16PIN,TSC500ACPE
 IC,REG,-5V,100mA,79L05
 IC,REG,+5V,100mA,78L05
 IC,OPTO COUPLER,TIL-114
 IC,COUNTER,UP/DWN,BIN,74HCT191
 IC,AMP,DIFF,VIDEO,733

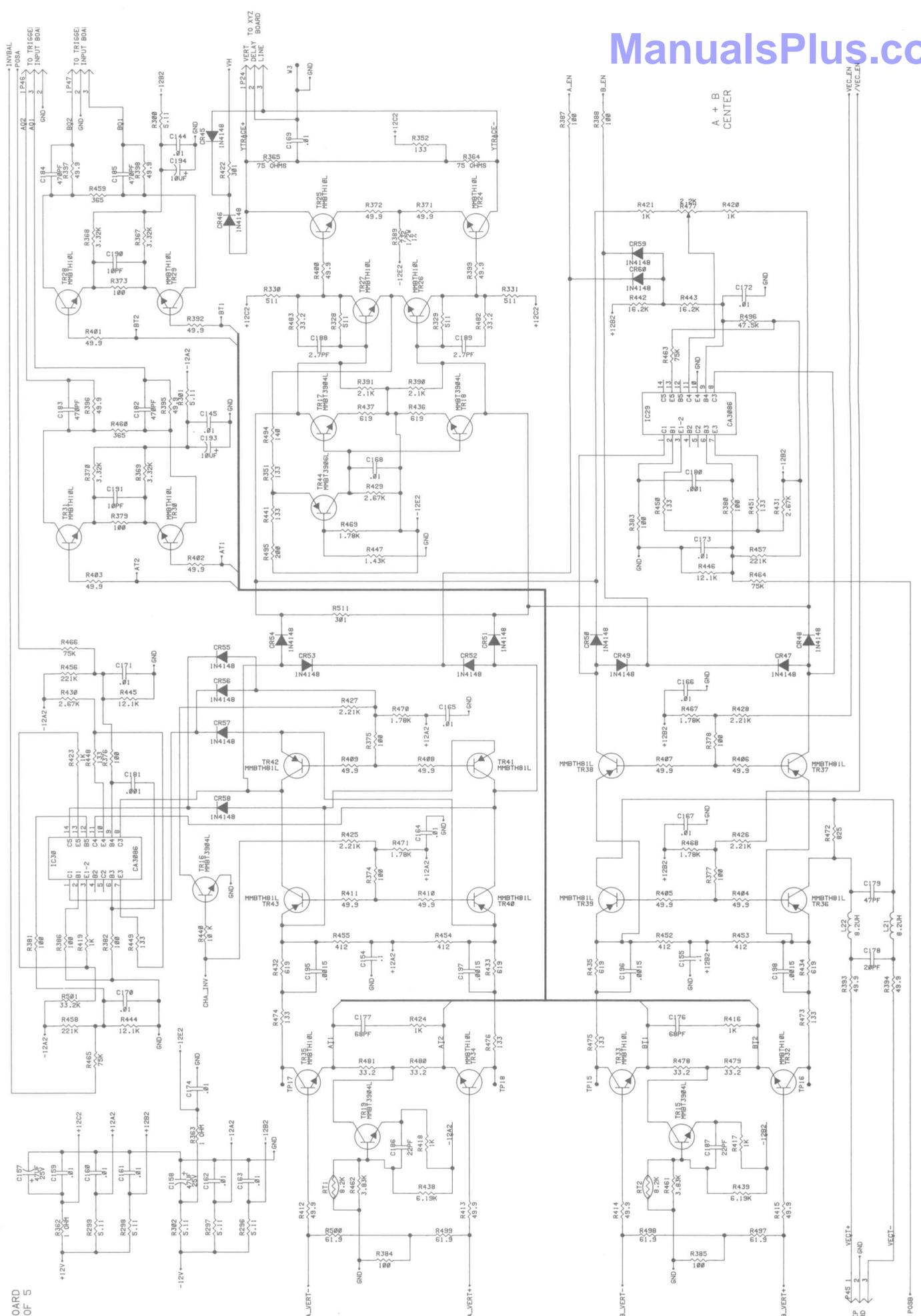


ATTENUATOR/VERTICAL
 43C456 BOARD
 12-0000 BOARD
 SHEET 4 OF 5

VOLTAGE PEAK-PEAK AMPLIFIER

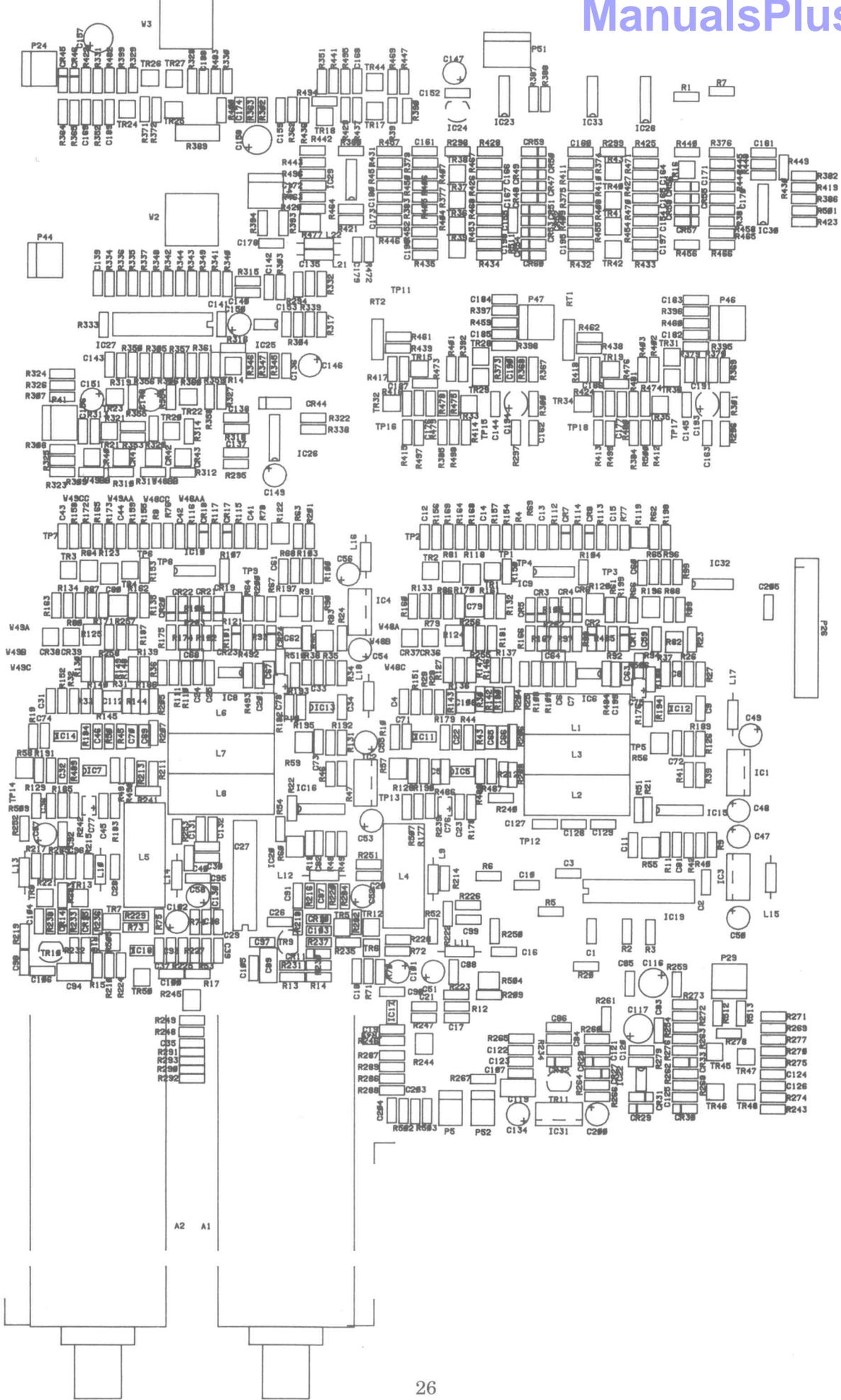


ATTENUATOR/VERTICAL
43C456
12,000 BOARD
SHEET 5 OF 5

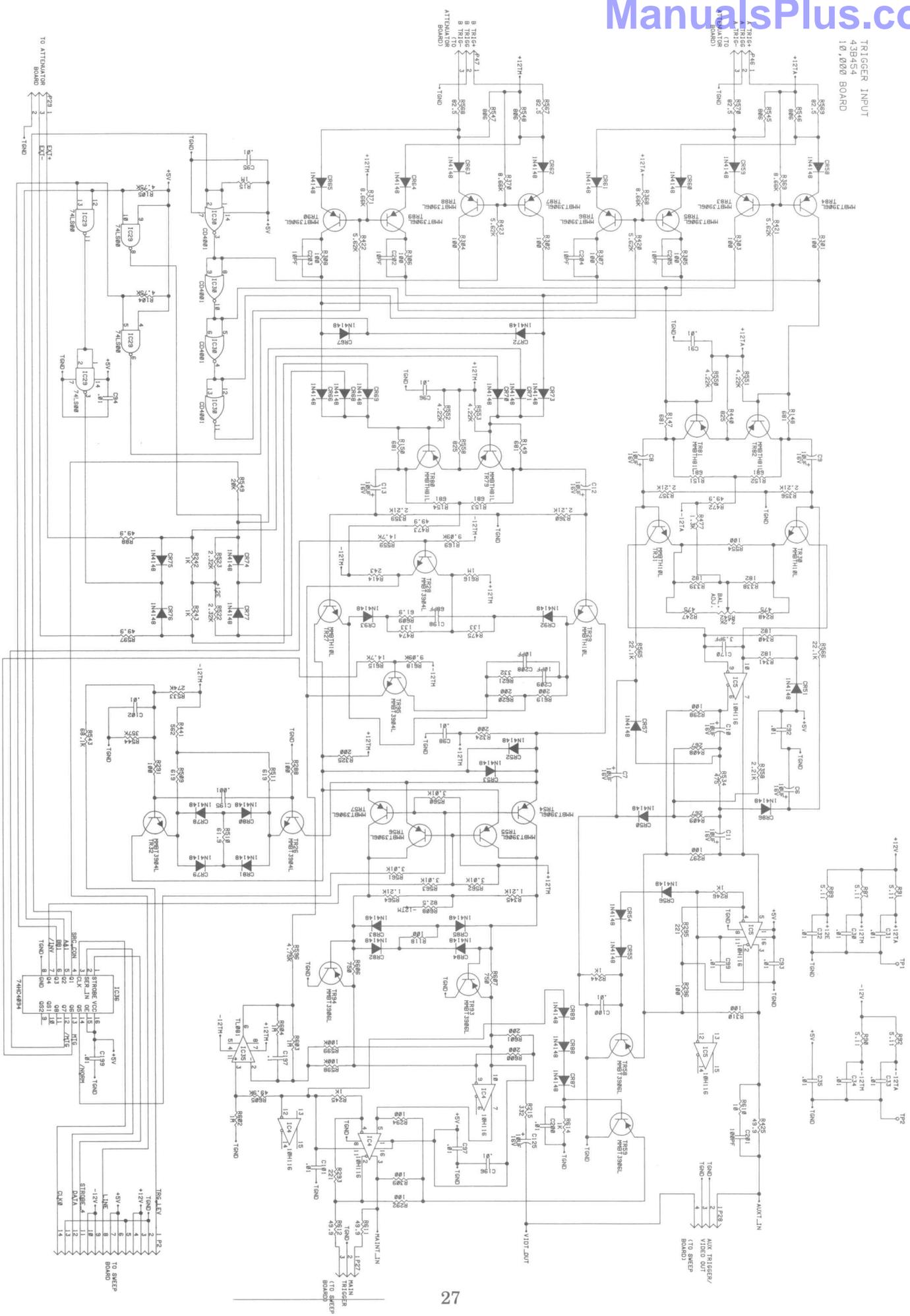


SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
ATTENUATOR (12,000) BOARD CONTINUED		
CR36-43	50G35	SMT DIODE,PIN,MMBV3401
CR44	50C4-1	DIODE,ZENER,8.2V,110mA,5%,4738
CR45-60	50G36	SMT DIODE,SIL,75V,100MA,4148
IC1,2	69G259	IC,REG,NEG 1 AMP, 6V, 7906T
IC3,4	69G258	IC,REG,1AMP,6V,7806T
IC5-8	69G702	SMTIC,VIDEO AMP,NE592D8
IC9,10	69G430	SMTIC,MOD,BALANCED,1496
IC11,14,25	69G432	SMTIC,OP-AMP,DUAL,BIFET,TL082
IC12,13	69G750	SMTIC,DUAL,BIFET,TL082ACD
IC15,16,26	69G450	SMTIC,SW,TRIPLE,4053
IC17,18,22	69G463	SMTIC,OP-AMP,SINGLE,TL081
IC19,20	69G506	IC,CONVERTER,S/P,TEA1017
IC23	69G533	SMTIC,F-FLOP,D,74LS74
IC24	69G29	IC,REG,+5V,100mA,78L05
IC27	69G133	IC,3xLINE,ECL,16 PIN,10H116
IC28	69G693	SMTIC,8 BIT SHIFT REG,74HC4094
IC29,30	69G502	SMTIC,TRANS ARRAY,NPN,3086
IC31	69Z352	IC,REG,+5V,1A,7805
IC32	69G438	SMTIC,NAND,2-IN,74HC00
IC33	69G500	SMTIC,NAND,2-IN,74LS00
L1-8	41G35	RELAY,REED,711-12
L9,10	46G102	IND,RADIAL,3.3uH,100mA,10
L11-18	46G133	IND,AXIAL,5.6UH,50MA,10%
L21,22	46G122	IND,COIL,8.2uH,25mA,10%
R1-8,25-36,317, 440,484,493, 502,503	14G102-1004A	RES,CHIP,10K,1/8W,1%,100PPM
R9-12,13-20,189,192	14G102-1006A	RES,CHIP,1M,1/8W,1%,100PPM
R21,22,188,190, 191,193,303-306	14G102-1005A	RES,CHIP,100K,1/8W,1%,100PPM
R23,24,425-428	14G102-2213A	RES,CHIP,2.21K,1/8W,1%,100PPM
R37,38,150-153, 268,269,338	14G102-4753A	RES,CHIP,4.75K,1/8W,1%,100PPM
R39-50,108-111	14G102-2004A	RES,CHIP,20K,1/8W,1%,100PPM
R51,54,176,177, 182,185	14G102-1003A	RES,CHIP,1K,1/8W,1%,100PPM
R52,53,94,95, 277,325-331	14G102-5112A	RES,CHIP,511,1/8W,1%,100PPM
R55-60,124,125	15G50-102	SMT,POT,VPC CERM,1K,.2W,30%
R61-64,156-159, 432-437	14G102-6192A	RES,CHIP,619,1/8W,1%,100PPM
R65,68,112-117, 220,221,228,229, 333-335,353	14G102-2212A	RES,CHIP,221,1/8W,1%,100PPM
R66,67,235,236, 354-357	14G102-1622A	RES,CHIP,162,1/8W,1%,100PPM
R69,76,461,462	14G102-3833A	RES,CHIP,3.83K,1/8W,1%,100PPM
R70,71,74,75, 366-370,501	14G102-3323A	RES,CHIP,3.32K,1/8W,1%,100PPM
R72,73,332	14G102-2433A	RES,CHIP,2.43K,1/8W,1%,100PPM
R77,78	14G102-9093A	RES,CHIP,9.09K,1/8W,1%,100PPM
R79,80,204,205,494	14G102-1402A	RES,CHIP,140,1/8W,1%,100PPM
R81-84	15G50-681	SMT POT,VPC CERM,680,.2W,30%
R86,87,142-145, 254,282,283,358, 359,459,460	14G102-3652A	RES,CHIP,365,1/8W,1%,100PPM
R88-91	14G102-4423A	RES,CHIP,4.42K,1/8W,1%,100PPM
R92,93,422,511	14G102-3012A	RES,CHIP,301,1/8W,1%,100PPM
R96-103,447	14G102-1433A	RES,CHIP,1.43K,1/8W,1%,100PPM
R104-107,272,273, 390,391	14G102-2103A	RES,CHIP,2.1K,1/8W,1%,100PPM
R118-123	15G50-103	SMT POT,VPC CERM,10K,.2W,30%
R126-131,214,215	14G102-9092A	RES,CHIP,909,1/8W,1%,100PPM
R132-135,218,219, 267,274-276,336, 337,392-399	14G102-4991A	RES,CHIP,49.9,1/8W,1%,100PPM
R136-140,170,171, 237,238,512,513	14G102-1001A	RES,CHIP,10,1/8W,1%,100PPM
R146-149,263, 309-312	14G102-1213A	RES,CHIP,1.21K,1/8W,1%,100PPM
R154,155,226,227, 485,492	14G102-1503A	RES,CHIP,1.5K,1/8W,1%,100PPM
R160-163,452-455	14G102-4122A	RES,CHIP,412,1/8W,1%,100PPM
R164,165,271,339	14G102-1474A	RES,CHIP,14.7K,1.8W,1%,100PPM

SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
ATTENUATOR (12,000) BOARD CONTINUED		
R166-169,172-175, 180,186,239-243, 307	14G102-1002A	RES,CHIP,100,1/8W,1%,100PPM
R178,179,183, 184,246-249, 278,284,285	14G102-2211A	RES,CHIP,22.1,1/8W,1%,100PPM
R181,187	14G102-1823A	RES,CHIP,1.82K,1/8W,1%,100PPM
R194,195,270, 429-430	14G102-2673A	RES,CHIP,2.67K,1/8W,1%,100PPM
R196,197	15G50-101	SMT,POT,VPC CERM,100,.2W,30%
R198,201,262, 444-446	14G102-1214A	RES,CHIP,12.1K,1/8W,1%,100PPM
R199,200	14G102-2264A	RES,CHIP,22.6K,1/8W,1%
R202,203	14G102-7152A	RES,CHIP,715,1/8W,1%,100PPM
R206,207	14G102-2102A	RES,CHIP,210,1/8W,1%,100PPM
R208-211	14G102-4752A	RES,CHIP,475,1/8W,1%,100PPM
R212,213,255-258, 495	14G102-2002A	RES,CHIP,200,1/8W,1%,100PPM
R216,217,341,342, 497-500	14G102-6191A	RES,CHIP,61.9,1/8W,1%,100PPM
R222,225,286-293	14G102-7503A	RES,CHIP,7.5K,1/8W,1%,100PPM
R223,224	14G102-6813A	RES,CHIP,6.81K,1/8W,1%,100PPM
R244,245	15G50-104	SMT POT,VPC CERM,100K,.2W,30%
R250-253,259-261, 294-302	14G102-5110A	RES,CHIP,5.11,1/8W,1%,100PPM
R264	14G102-6815A	RES,CHIP,681K,1/8W,1%,100PPM
R265,478-483	14G102-3321A	RES,CHIP,33.2,1/8W,1%,100PPM
R266	14G102-3165A	RES,CHIP,316K,1/8W,1%,100PPM
R279	14G102-1826E	RES,CHIP,1.82M,1/8W,1%,500PPM
R313-316	14G102-4640A	RES,CHIP,4.64,1/8W,1%,100PPM
R322,438,439	14G102-6193A	RES,CHIP,6.19K,1/8W,1%,100PPM
R323,324,348-350, 360,361	14G102-2672A	RES,CHIP,267,1/8W,1%,100PPM
R343-347	14G102-2431A	RES,CHIP,24.3,1/8W,1%,100PPM
R351,352,441, 448-451,473-476	14G102-1332A	RES,CHIP,133,1/8W,1%,100PPM
R364,365	14G102-7501A	RES,CHIP,75,1/8W,1%,100PPM
R371,372,400, 401-415	14G102-4991A	RES,CHIP,49.9,1/8W,1%,100PPM
R389	14C29-7322A	RES,MET.F,732,1/2W,1%,100PPM
R442,443	14G102-1624A	RES,CHIP,16.2K,1/8W,1%,100PPM
R456-458	14G102-2215A	RES,CHIP,221K,1/8W,1%,100PPM
R463-466	14G102-7504A	RES,CHIP,75K,1/8W,1%,100PPM
R467-471	14G102-1783A	RES,CHIP,1.78K,1/8W,1%,100PPM
R472	14G102-8252A	RES,CHIP,825,1/8W,1%,100PPM
R477,504,505	15G50-222	SMT POT,VPC CERM,2.2K,.2W,30%
R486,489	14G102-1623A	RES,CHIP,1.62K,1/8W,1%,100PPM
R496,506-510	14G102-4754A	RES,CHIP,47.5K,1/8W,1%,100PPM
TR1-4,36-43	19G113	SMT TRANS,PNP,600MHZ,MMBTH81L
TR5,8,12,13,20-35	19G98	SMT TRANS,VHF/UHF AMP,MMBTH10
TR6,7,14-19,45-48	19G92	SMT TRANSISTOR,NPN,3904,SOT23
TR9-11	19G114	TRANS,N-CHNL,LO NOISE,BF410
TR44	19G95	SMT TRANS,PNP,40V,200MA,3906

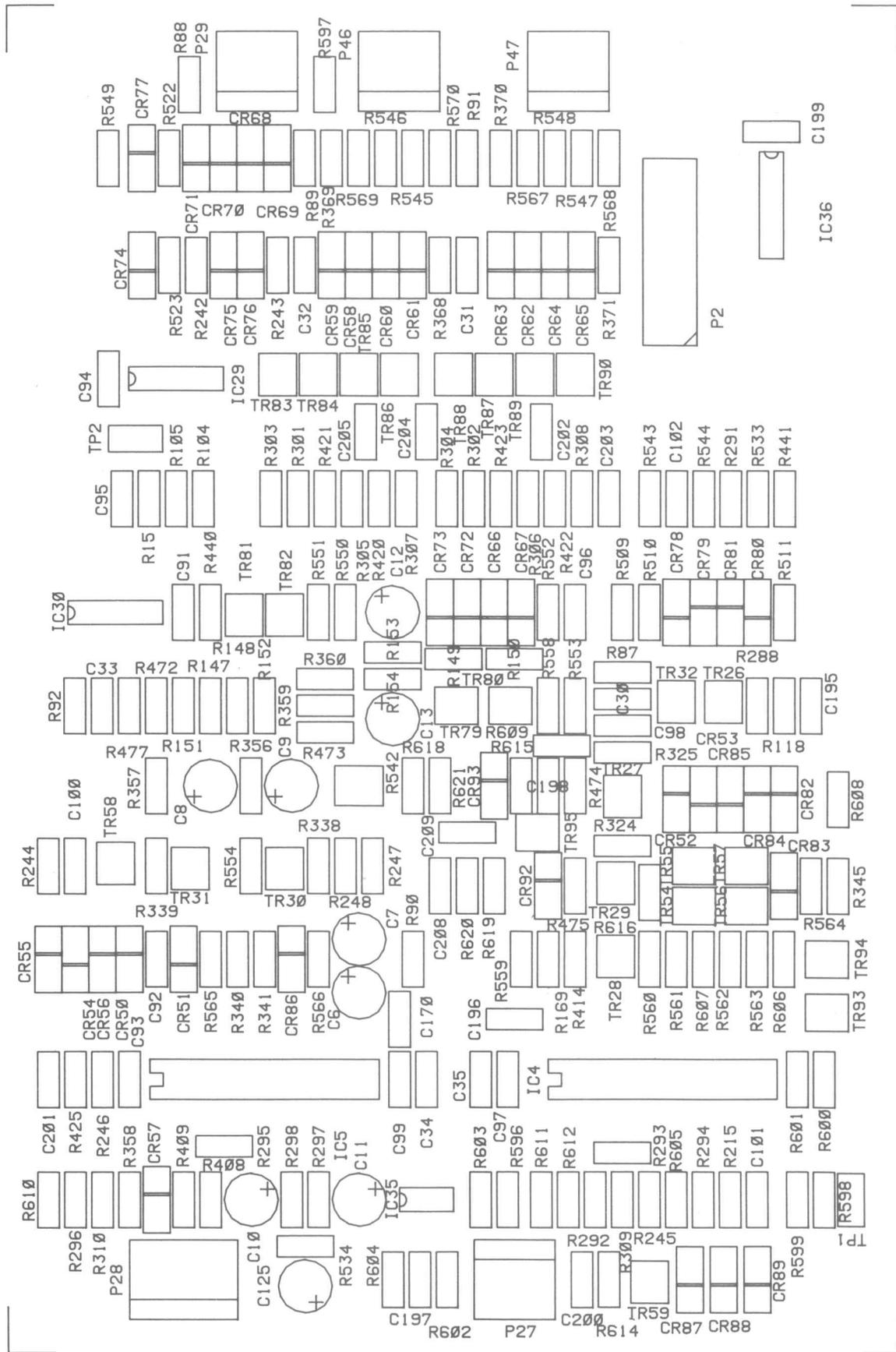


TRIGGER INPUT
43B434
10,000 BOARD



H2

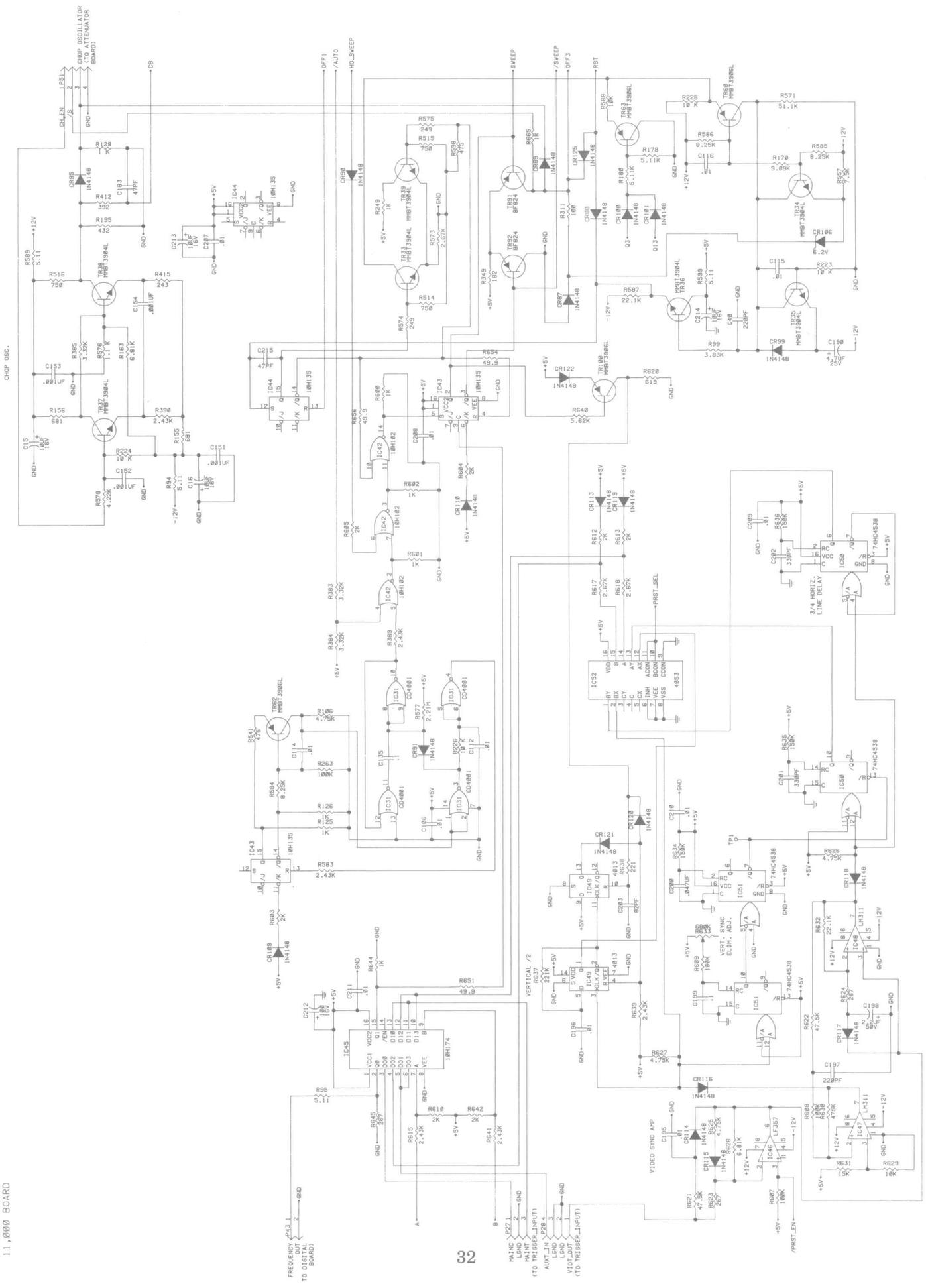
H1

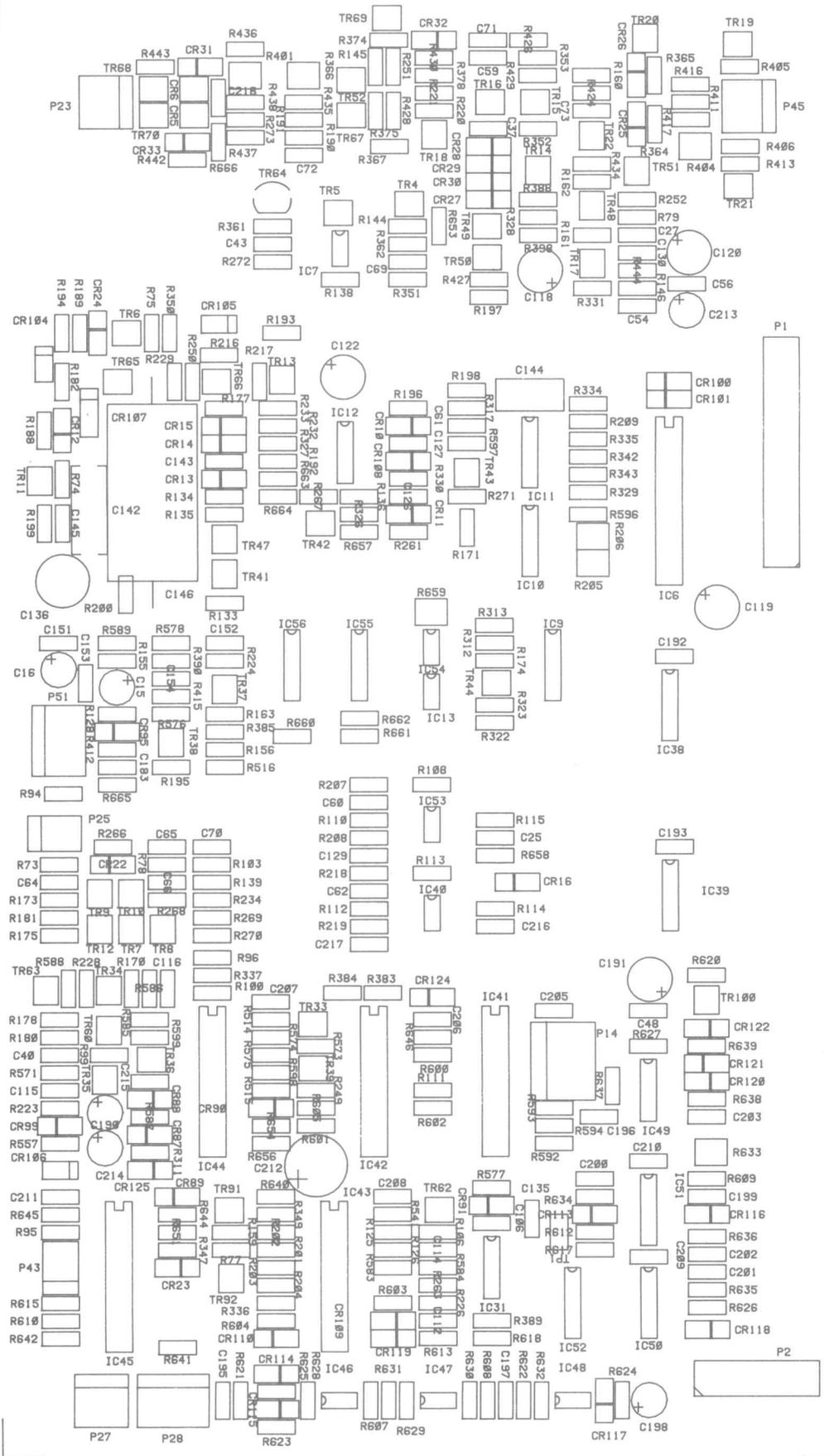


SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
TRIGGER INPUT P/P (10,000) BOARD		
C30-35,91-102, 196,199,200	24G465	CAP,CHIP,.01uF,50V,10%,X7R
C6-13,125	24G382	CAP,RLYTIC,10UF,16V,20%
C170	24G566	CAP,CHIP,3.9PF,50V,10%,X7R
C195	24G606	CAP,CHIP,.001UF,50V,10%,X7R
C197	24G575	CAP,CHIP,.1UF,50V,10%,X7R
C198	24G587	CAP,CHIP,68PF,50V,5%,NPO
C201	24G612	CAP,CHIP,100PF,50V,5%,NPO
C202-205,208,209	24G607	CAP,CHIP,10PF,50V,.25PF,NPO
CR50-89,92,93	50G36	SMT DIODE,SIL,75V,100MA,4148
IC4,5	69G133	IC,3xLINE,ECL,16 PIN,10H116
IC29	69G500	SMTIC,NAND,2-IN,74LS00
IC30	69G497	SMTIC,NOR,2-IN,4001
IC35	69G463	SMTIC,OP-AMP,SINGLE,TL081
IC36	69G693	SMTIC,8 BIT SHIFT REG,74HC4094
R15,602-604,616	14G102-1006A	RES,CHIP,1M,1/8W,1%,100PPM
R87-92	14G102-5110A	RES,CHIP,5.11,1/8W,1%,100PPM
R88,425,472,473, 597,611,612	14G102-4991A	RES,CHIP,49.9,1/8W,1%,100PPM
R104,105,596	14G102-4753A	RES,CHIP,4.75K,1/8W,1%,100PPM
R118,288,291,292	14G102-1002A	RES,CHIP,100,1/8W,1%,100PPM
R147-154	14G102-6812A	RES,CHIP,681,1/8W,1%,100PPM
R169,618	14G102-9093A	RES,CHIP,9.09K,1/8W,1%,100PPM
R215,621	14G102-3322A	RES,CHIP,332,1/8W,1%,100PPM
R242-246,614	14G102-1003A	RES,CHIP,1K,1/8W,1%,100PPM
R247,248,534	14G102-4752A	RES,CHIP,475,1/8W,1%,100PPM
R293,295	14G102-2212A	RES,CHIP,221,1/8W,1%,100PPM
R294,296-310,554	14G102-1002A	RES,CHIP,100,1/8W,1%,100PPM
R324,325,600, 601,619,620	14G102-2002A	RES,CHIP,200,1/8W,1%,100PPM
R338-341	14G102-1822A	RES,CHIP,182,1/8W,1%,100PPM
R345,564	14G102-1213A	RES,CHIP,1.21K,1/8W,1%,100PPM
R356-360	14G102-2213A	RES,CHIP,2.21K,1/8W,1%,100PPM
R368-371	14G102-8663A	RES,CHIP,8.66K,1/8W,1%,100PPM
R408,409	14G102-2672A	RES,CHIP,267,1/8W,1%,100PPM
R414	14G102-2432A	RES,CHIP,243,1/8W,1%,100PPM
R420-423	14G102-5623A	RES,CHIP,5.62K,1/8W,1%,100PPM
R440,558	14G102-8252A	RES,CHIP,825,1/8W,1%,100PPM
R441	14G102-5622A	RES,CHIP,562,1/8W,1%,100PPM
R474,475	14G102-1332A	RES,CHIP,133,1/8W,1%,100PPM
R477	14G102-1303A	RES,CHIP,1.3K,1/8W,1%,100PPM
R509,511	14G102-6192A	RES,CHIP,619,1/8W,1%,100PPM
R510,609	14G102-6191A	RES,CHIP,61.9,1/8W,1%,100PPM
R522,523	14G102-2323A	RES,CHIP,2.32K,1/8W,1%,100PPM
R533	14G102-2745A	RES,CHIP,274K,1/8W,1%,100PPM
R542	15G50-222	SMT POT,VPC CERM,2.2K,.2W,30%
R543	14G102-6814A	RES,CHIP,68.1K,1/8W,1%,100PPM
R544	14G102-3575A	RES,CHIP,357K,1/8W,1%,100PPM
R545-548	14G102-8062A	RES,CHIP,806,1/8W,1%,100PPM
R549	14G102-2004A	RES,CHIP,20K,1/8W,1%,100PPM
R550-553	14G102-4223A	RES,CHIP,4.22K,1/8W,1%,100PPM
R560-563	14G102-3013A	RES,CHIP,3.01K,1/8W,1%,100PPM
R565,566	14G102-2214A	RES,CHIP,22.1K,1/8W,1%,100PPM
R567-570,608	14G102-8251A	RES,CHIP,82.5,1/8W,1%,100PPM
R598,599	14G102-1005A	RES,CHIP,100K,1/8W,1%,100PPM
R599,615	14G102-1474A	RES,CHIP,14.7K,1/8W,1%,100PPM
R605	14G102-4994A	RES,CHIP,49.9K,1/8W,1%,100PPM
R606,607	14G102-7502A	RES,CHIP,750,1/8W,1%,100PPM
R610	14G102-1001A	RES,CHIP,10,1/8W,1%,100PPM
TR26,28,32,95	19G92	SMT TRANSISTOR,NPN,3904,SOT23
TR27,29-31	19G98	SMT TRANS,VHF/UHF AMP,MMBTH10
TR54-59,83-90, 93,94	19G95	SMT TRANS,PNP,40V,200MA,3906
TR79-82	19G113	SMTTRANS,PNP,600MHZ,MMBTH81L

SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
DVM (4000) BOARD CONTINUED		
IC19,20	69G700	IC,8BIT SHIFT REG,74HC4094
IC22	69G183	IC,MUX,,16PIN,CA4052,RCA
L1	41G39	RELAY REED,712-12
L2	41G34	RELAY,PWR,5A 250V
L3-6	41G35	RELAY,REED,711-12
L7	41G35	RELAY,REED,711-12
R1	14A38-5906A	RES,MET.F,5.9M,1/4W,1%,100PPM
R3	14C29-1051A	RES,MET.F,10.5,1/2W,1%,100PPM
R4,5	15A36-2	POT,VPC20T CERM,500,,10%
R7	15A36-1	POT,VPC20T CERM,1K,,10%
R8,116	15A36-2	POT,VPC20T CERM,500,,10%
R10,126	15A36-6	POT,VPC 20T,CERM,1M,10%
R11	15G66-104	POT,VPC,CERM,100K,10%,.5W,20T
R12	15A36-1	POT,VPC20T CERM,1K,,10%
R15,16	14C1-301	RES,CARBON,300,1/4W,5%
R17-19,33,71,84, 118,119	14C1-103	RES,CARBON,10K,1/4W,5%
R20	14C1-103	RES,CARBON,10K,1/4W,5%
R21	14C1-823	RES,CARBON,82K,1/4W,5%
R22,23	14C1-203	RES,CARBON,20K,1/4W,5%
R26-28,72-75,82	14C1-102	RES,CARBON,1K,1/4W,5%
R29,32,89	14C1-203	RES,CARBON,20K,1/4W,5%
R30,31,81,113	14A38-1003A	RES,MET.F,1K,1/4W,1%,100PPM
R35	14C1-104	RES,CARBON,100K,1/4W,5%
R37	14C1-472	RES,CARBON,4.7K,1/4W,5%
R38	14C1-471	RES,CARBON,470,1/4W,5%
R39	14A38-2212A	RES,MET.F,221,1/4W,1%,100PPM
R40	14C1-562	RES,CARBON,5.6K,1/4W,5%
R41	14A38-1603A	RES,MET.F,1.6K,1/4W,1%,100PPM
R42	14C1-243	RES,CARBON,24K,1/4W,5%
R46	14C29-1215B	RES,MET.F,121K,1/2W,1%,50PPM
R47,48	14C1-682	RES,CARBON,6.8K,1/4W,5%
R49	14C1-201	RES,CARBON,200,1/4W,5%
R50	14A38-5113A	RES,MET.F,5.11K,1/4W,1%,100PPM
R51	14A38-2804A	RES,MET.F,28K,1/4W,1%,100PPM
R52	14A38-9093A	RES,MET.F,9.09K,1/4W,1%,100PPM
R54	14A38-5905A	RES,MET.F,590K,1/4W,1%,100PPM
R55	14A38-5903A	RES,MET.F,5.9K,1/4W,1%,100PPM
R56	14A38-7503A	RES,MET.F,7.5K,1/4W,1%,100PPM
R57	14A38-2004A	RES,MET.F,20K,1/4W,1%,100PPM
R60,61	14C26-14856A	RES,MET.F,1.485M,1/2W,.1%,100P
R64,65	14C1-105	RES,CARBON,1M,1/4W,5%
R66,67	14C1-563	RES,CARBON,56K,1/4W,5%
R68,69	14C1-223	RES,CARBON,22K,1/4W,5%
R70	14C1-224	RES,CARBON,220K,1/4W,5%
R79	14C26-1007A	RES,MET.F,10M,1/2W,.1%,100PPM
R86,87	14C1-105	RES,CARBON,1M,1/4W,5%
R88,124	14Z1-161	RES,CARBON,160,1/4W,5%
R90,91	14C1-333	RES,CARBON,33K,1/4W,5%
R92	14C1-101	RES,CARBON,100,1/4W,5%
R95,96	14C1-101	RES,CARBON,100,1/4W,5%
R97	14C1-511	RES,CARBON,510,1/4W,5%
R98	14C1-510	RES,CARBON,51,1/4W,5%
R101	14C1-514	RES,CARBON,510K,1/4W,5%
R102	14C1-155	RES,CARBON,1.5M,1/4W,5%
R104,105	14C1-204	RES,CARBON,200K,1/4W,5%
R106,107	14C1-223	RES,CARBON,22K,1/4W,5%
R108,109	14C1-563	RES,CARBON,56K,1/4W,5%
R110,111	14C1-105	RES,CARBON,1M,1/4W,5%
R114,115	14C1-103	RES,CARBON,10K,1/4W,5%
R117	14C29-1004A	RES,MET.F,10K,1/2W,1%,100PPM
R120-123	14C1-102	RES,CARBON,1K,1/4W,5%
R125	14C1-680	RES,CARBON,68,1/4W,5%
R127	14A38-9706A	RES,MET.F,9.7M,1/4W,1%,100PPM
RT6-9	33G260	VARISTOR,430V,10%
RT11	33G246	SURGE ARRESTOR,GAS DISCHG
T1	48G10	TRANSDUCER, 2.3KHZ, 5VDC
TR1,4,6,22	19A33-1	TRANS,NPN,40V,200mA,2N3904
TR5	19G139	TRANS,NPN,300V,.5A,MJE340
TR7,13-16	19A33-1	TRANS,NPN,40V,200mA,2N3904
TR8,18,21,23,24	19A34-1	TRANS,PNP,40V,200mA,,2N3906
TR9	19A34-1	TRANS,PNP,40V,200mA,,2N3906
TR11,12,17	19G70	TRANS,N-CHNL,60V,200mA,2N7000
TR19	19A41	TRANS,P-CHNL,40V,10mA,,2N5460
TR20	19A33-1	TRANS,NPN,40V,200mA,2N3904

SWEEP - SH 3
43C501
11,000 BOARD





SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
SWEEP (11,000) BOARD		
C15,16,213,214	24G382	CAP,RLYTIC,10UF,16V,20%
C25,37,60,62,126, 127,129,130,135, 199,216,217	24G575	CAP,CHIP,.1UF,50V,10%,X7R
C27,48,54,56, 59,61,64,65, 66,69,70	24G465	CAP,CHIP,.01uF,50V,10%,X7R
C40,197	24G561	CAP,CHIP,220PF,100V,10%,NPO
C43	24G594	CAP,CHIP,1500PF,50V,10%,X7R
C71-73,106,112, 114-116,192,194, 195,196,205-211	24G465	CAP,CHIP,.01uF,50V,10%,X7R
C118-120,122,191	24G407	CAP,RLYTIC,47UF,25V,+/-20%
C136	24G387	CAP,TRIM,2.5-18PF
C142	24G637	CAP,POLY,.0099UF,50V,1%
C143,218	24G612	CAP,CHIP,100PF,50V,5%,NPO
C144	24G496	CAP,MYLAR,.47UF,50V,10%,BULK
C145,183,215	24G577	CAP,CHIP,47PF,50V,10%,NPO
C146	24G638	CAP,POLY,10UF,50V,10%
C151-154	24G606	CAP,CHIP,.001UF,50V,10%,X7R
C190	24G491	CAP,RLYTIC,4.7UF,25V,+100/-20%
C198	24G384	CAP,LYTIC,2.2UF,50V,20%,
C200	24G601	CAP,CHIP,.047UF,50V,10%,X7R
C201,202	24G583	CAP,CHIP,330PF,50V,5%,NPO
C203	24G584	CAP,CHIP,82PF,50V,5%,NPO
C212	24G442	CAP,RLYTIC,100UF,16V,+/-20%
C212	24G500	CAP,RLYTIC,100UF,16V,20%,LOESR
CR5,6	50G35	SMT DIODE,PIN,MMBV3401
CR10-16,22-33	50G36	SMT DIODE,SIL,75V,100MA,4148
CR87-91,95,99-101, 108-110,113-122 124,125	50G36	SMT DIODE,SIL,75V,100MA,4148
CR104-106	50C4-6:A	DIODE,ZENER,6.2V,100mA,5%,4735
CR107	50C3-2:A	DIODE,GERM,20V,100mA,2uA,1N695
IC6	69G506	IC, CONVERTER,S/P,TEA1017
IC7,13,54	69G463	SMTIC,OP-AMP,SINGLE,TL081
IC9,10,52	69G450	SMTIC,SW,TRIPLE,4053
IC11	69G452	SMTIC,SW,1 X 8,4051
IC12	69G501	SMTIC,OP-AMP,LO-PWR,324
IC31	69G497	SMTIC,NOR,2-IN,4001
IC38,39	69G693	SMTIC,8 BIT SHIFT REG,74HC4094
IC40,53	69G429	SMTIC,COMP,SINGLE,8PIN,LM306
IC41	69G691	IC,EXCLUSIVE OR/NOR,10H107
IC42	69G132	IC,NOR,2-IN,10H102
IC44	69G687	IC,J-K FLIP-FLOP,DUAL,10H135
IC45	69G686	IC,DUAL 4 TO 1 MTPLXR,10H174
IC46	69G736	SMTIC,OP-AMP,LF357M
IC47,48	69G699	SMTIC,COMPARATOR,LM311
IC49	69G698	SMTIC,F-FLOP,DUAL,D,14013
IC50,51	69G701	SMTIC,DUAL,MULTIVIB,74HC4538
IC55,56	69G431	SMTIC,MUX,16PIN,4052
R73-75,78,79,94, 95,589,599	14G102-5110A	RES,CHIP,5.11,1/8W,1%,100PPM
R77,159,651, 654,656	14G102-4991A	RES,CHIP,49.9,1/8W,1%,100PPM
R96,250,271,317, 388-390,583, 615,639,641	14G102-2433A	RES,CHIP,2.43K,1/8W,1%,100PPM
R99	14G102-3833A	RES,CHIP,3.83K,1/8W,1%,100PPM
R100,144,145,155, 156,437,438	14G102-6812A	RES,CHIP,681,1/8W,1%,100PPM
R100,620	14G102-6192A	RES,CHIP,619,1/8W,1%,100PPM
R103,106,625-627	14G102-4753A	RES,CHIP,4.75K,1/8W,1%,100PPM
R108,113,577	14G102-2216E	RES,CHIP,2.21M,1/8W,1%,500PPM
R110,112,424,578	14G102-4223A	RES,CHIP,4.22K,1/8W,1%,100PPM
R111,114,115,125, 126,128,232-234, 249,600-602, 644,646,665	14G102-1003A	RES,CHIP,1K,1/8W,1%,100PPM
R133-136,138,139, 220,221,223,224, 226,228,329,347,	14G102-1004A	RES,CHIP,10K,1/8W,1%,100PPM

SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
SWEEP (11,000) BOARD CONTINUED		
429,588,629,664		
R146	14G102-6815A	RES,CHIP,681K,1/8W,1%,100PPM
R160,162,163, 208,219,628	14G102-6813A	RES,CHIP,6.81K,1/8W,1%,100PPM
R161,313	14G102-1214A	RES,CHIP,12.1K,1/8W,1%,100PPM
R170,661	14G102-9093A	RES,CHIP,9.09K,1/8W,1%,100PPM
R171,261,263, 607-609	14G102-1005A	RES,CHIP,100K,1/8W,1%,100PPM
R172	15G50-104	SMT POT,VPC CERM,100K,.2W,30%
R173,557,657	14G102-7503A	RES,CHIP,7.5K,1/8W,1%,100PPM
R174	14G102-6814A	RES,CHIP,68.1K,1/8W,1%,100PPM
R175,177,178,180	14G102-5113A	RES,CHIP,5.11K,1/8W,1%,100PPM
R181,182,229,350, 428,573,617, 618,658	14G102-2673A	RES,CHIP,2.67K,1/8W,1%,100PPM
R188-191	14G102-1006A	RES,CHIP,1M,1/8W,1%,100PPM
R192	14G102-1024A	RES,CHIP,10.2K,1/8W,1%,100PPM
R193-195	14G102-4322A	RES,CHIP,432,1/8W,1%,100PPM
R196,197	14G102-2674A	RES,CHIP,26.7K,1/8W,1%,100PPM
R198,331,621,622	14G102-4754A	RES,CHIP,47.5K,1/8W,1%,100PPM
R199	14G102-8250A	RES,CHIP,8.25,1/8W,1%,100PPM
R200-204	14G102-3321A	RES,CHIP,33.2,1/8W,1%,100PPM
R205,206,659	15G50-103	SMT POT,VPC CERM,10K,.2W,30%
R207,218,378, 383-385	14G102-3323A	RES,CHIP,3.32K,1/8W,1%,100PPM
R209,541,598	14G102-4752A	RES,CHIP,475,1/8W,1%,100PPM
R216,217,330,427	14G102-2004A	RES,CHIP,20K,1/8W,1%,100PPM
R251,252	14G102-5112A	RES,CHIP,511,1/8W,1%,100PPM
R266,268-270,272, 273,311,592	14G102-1002A	RES,CHIP,100,1/8W,1%,100PPM
R267,596	14G102-4423A	RES,CHIP,4.42K,1/8W,1%,100PPM
R312,374,375	14G102-6193A	RES,CHIP,6.19K,1/8W,1%,100PPM
R322	14G102-2002A	RES,CHIP,200,1/8W,1%,100PPM
R323,343,430, 603-605,610,612, 613,642,666	14G102-2003A	RES,CHIP,2K,1/8W,1%,100PPM
R326-328	14G102-1474A	RES,CHIP,14.7K,1/8W,1%,100PPM
R334	14G102-1503A	RES,CHIP,1.5K,1/8W,1%,100PPM
R335	14G102-4993A	RES,CHIP,4.99K,1/8W,1%,100PPM
R336,349	14G102-1822A	RES,CHIP,182,1/8W,1%,100PPM
R337,434	14G102-1433A	RES,CHIP,1.43K,1/8W,1%,100PPM
R342	14G102-3013A	RES,CHIP,3.01K,1/8W,1%,100PPM
R351-353	14G102-2213A	RES,CHIP,2.21K,1/8W,1%,100PPM
R361	14G102-1007E	RES,CHIP,10M,1/8W,1%,500PPM
R362,660	14G102-9092A	RES,CHIP,909,1/8W,1%,100PPM
R364,365	14G102-1304A	RES,CHIP,13K,1/8W,1%,100PPM
R366	15G50-102	SMT POT,VPC CERM,1K,.2W,30%
R367	14G102-8663A	RES,CHIP,8.66K,1/8W,1%,100PPM
R398	14G102-1624A	RES,CHIP,16.2K,1/8W,1%,100PPM
R401	15G50-471	SMT POT,VPC CERM,470,.2W,30%
R404	15G50-221	SMT POT,VPC CERM,220,.2W,30%
R405,406,623, 624,645	14G102-2672A	RES,CHIP,267,1/8W,1%,100PPM
R411,638	14G102-2212A	RES,CHIP,221,1/8W,1%,100PPM
R412	14G102-3922A	RES,CHIP,392,1/8W,1%,100PPM
R413,415	14G102-2432A	RES,CHIP,243,1/8W,1%,100PPM
R416,417,640	14G102-5623A	RES,CHIP,5.62K,1/8W,1%,100PPM
R426,514-516	14G102-7502A	RES,CHIP,750,1/8W,1%,100PPM
R435,436	14G102-1212A	RES,CHIP,121,1/8W,1%,100PPM
R442,443	14G102-4321A	RES,CHIP,43.2,1/8W,1%,100PPM
R444,637	14G102-2215A	RES,CHIP,221K,1/8W,1%,100PPM
R571	14G102-5114A	RES,CHIP,51.1K,1/8W,1%,100PPM
R574,575	14G102-2492A	RES,CHIP,249,1/8W,1%,100PPM
R576	14G102-1103A	RES,CHIP,1.1K,1/8W,1%,100PPM
R584-586,597	14G102-8253A	RES,CHIP,8.25K,1/8W,1%,100PPM
R587,632	14G102-2214A	RES,CHIP,22.1K,1/8W,1%,100PPM
R593,594	14G102-7501A	RES,CHIP,75,1/8W,1%,100PPM
R630	14G102-4755A	RES,CHIP,475K,1/8W,1%,100PPM
R631	14G102-1504A	RES,CHIP,15K,1/8W,1%,100PPM
R633	15G50-684	SMT POT,VPC CERM,680K,.2W,30%
R634-636	14G102-1505A	RES,CHIP,150K,1/8W,1%,100PPM
R653	14G102-2211A	RES,CHIP,22.1,1/8W,1%,100PPM
R662	14G102-9094A	RES,CHIP,90.9K,1/8W,1%,100PPM
R663	14G102-1783A	RES,CHIP,1.78K,1/8W,1%,100PPM

SCHEMATIC REFERENCE

PART NO.

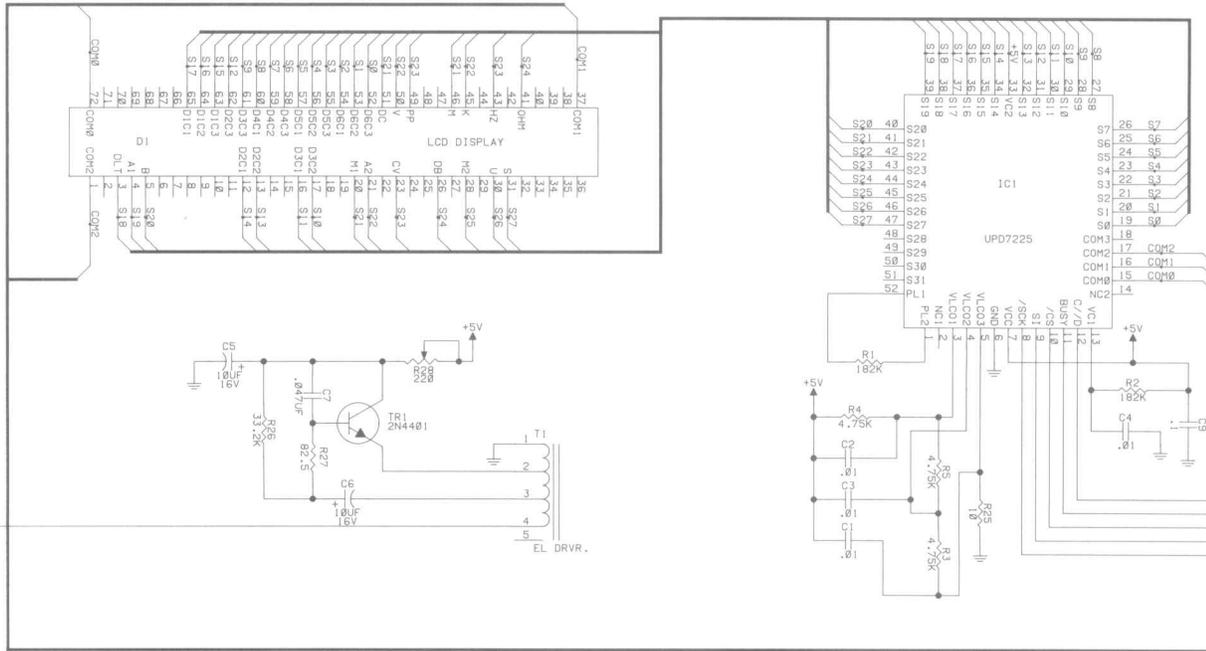
DESCRIPTION

SWEEP (11,000) BOARD CONTINUED

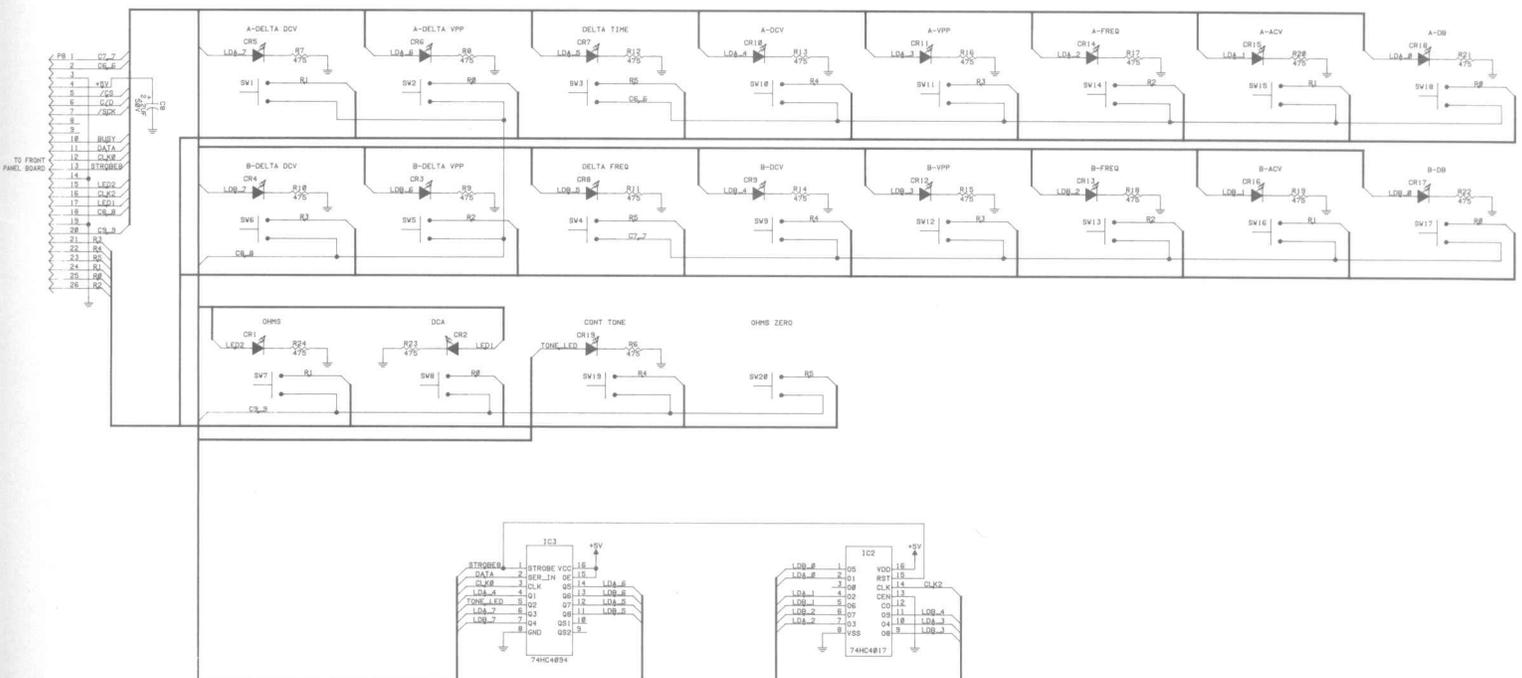
TR4-22,33-39,43	19G92
TR41,42,44,47-52, 60,62,63,100	19G95
TR64	19G114
TR65,66	19G104
TR67-70	19G113
TR91,92	19G105

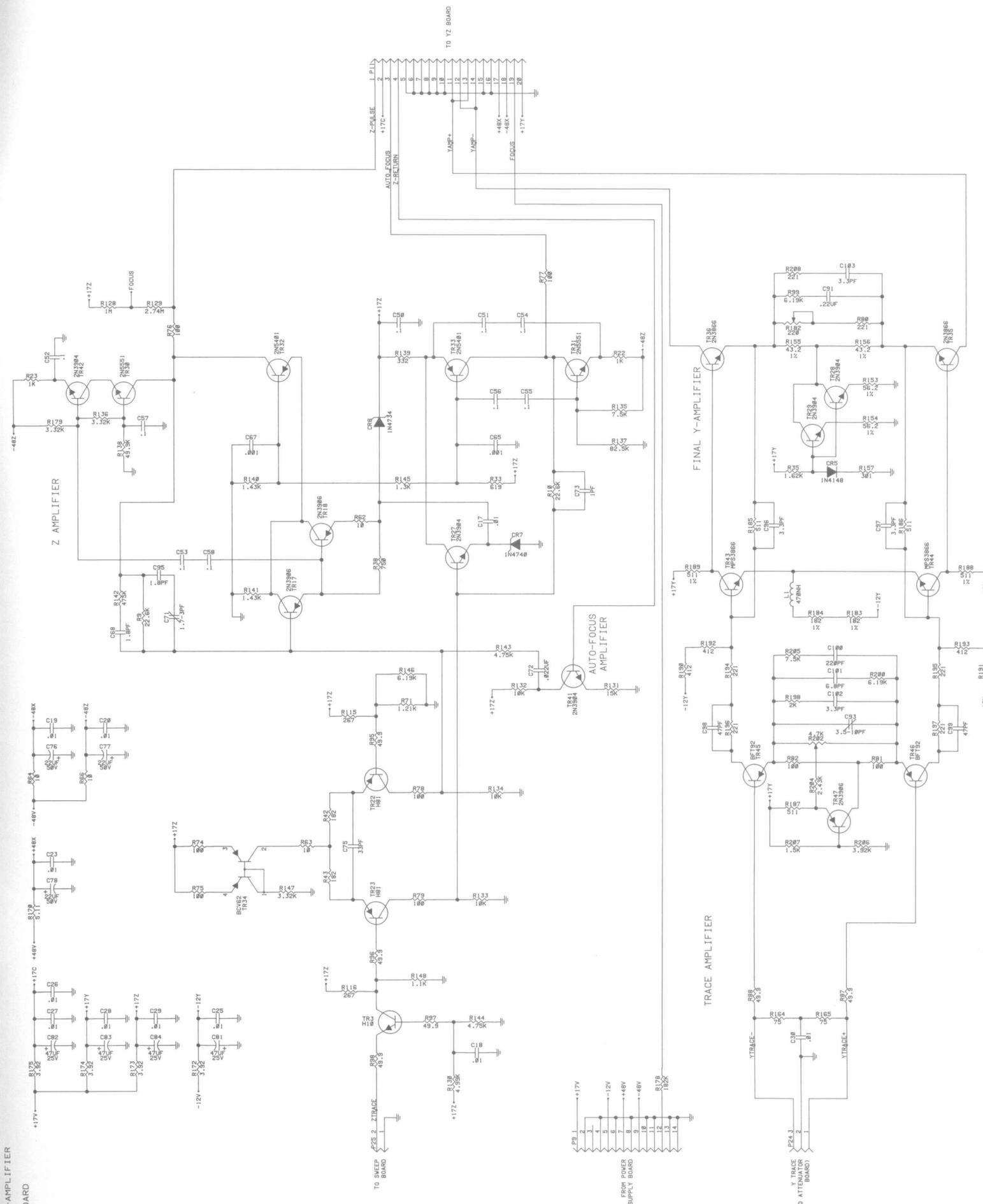
SMT TRANSISTOR,NPN,3904,SOT23
SMT TRANS,PNP,40V,200MA,3906
TRANS,N-CHNL,LO NOISE,BF410
SMT TRANS,NPN,SMALL SIG,2369
SMT TRANS,PNP,600MHZ,MMBTH81L
SMT TRANS,PNP,HI-FREQ,BF824

DISPLAY/DIGITAL SELECT
43C466
6000 BOARD
SHEET 1 OF 2

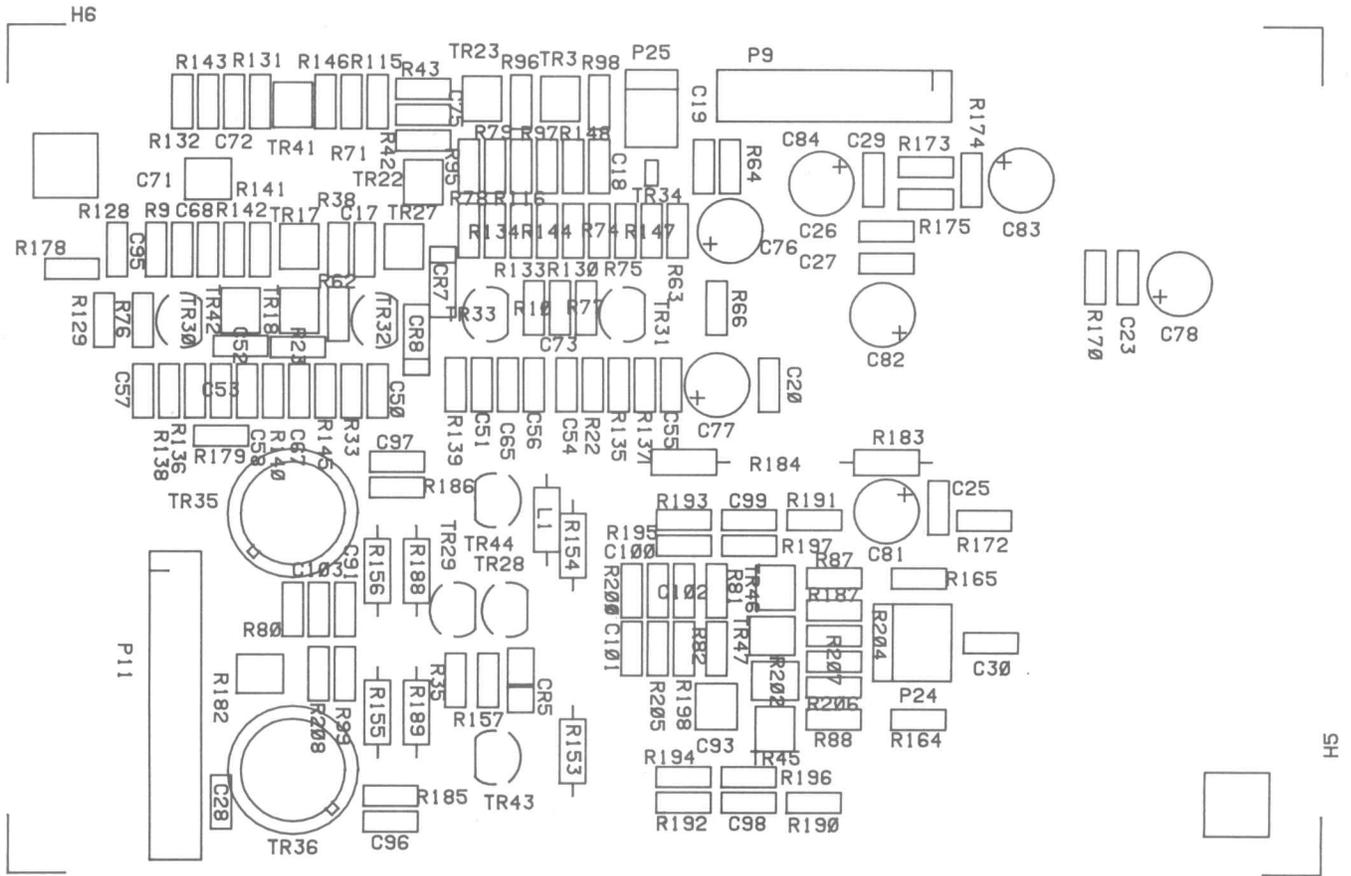


DISPLAY/DIGITAL SELECT
43C466
6000 BOARD
SHEET 2 OF 2





YZ PRE-AMPLIFIER
4.35457
2000 BOARD



SCHEMATIC REFERENCE

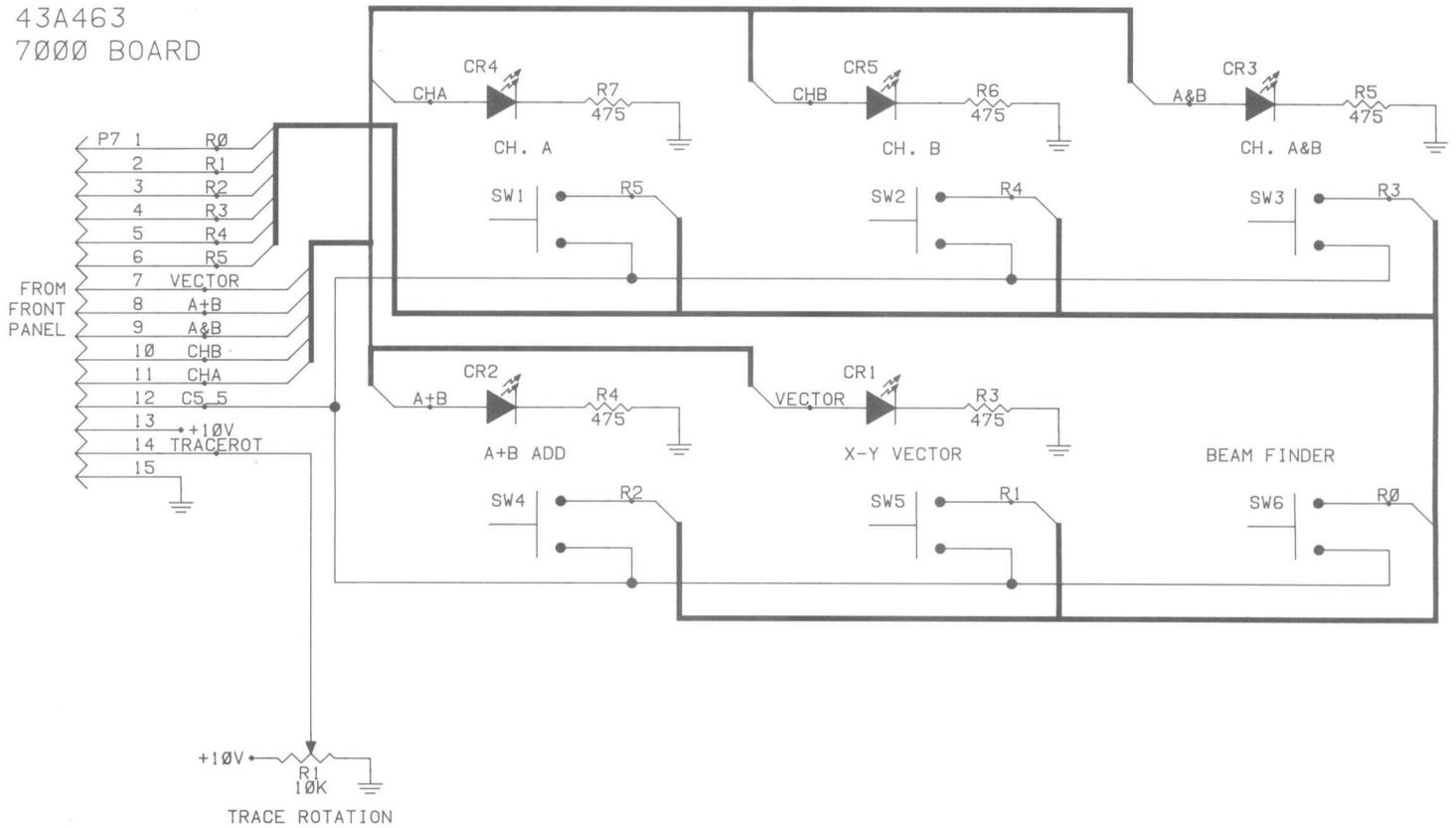
PART NO.

DESCRIPTION

YZ PREAMP (2000) BOARD

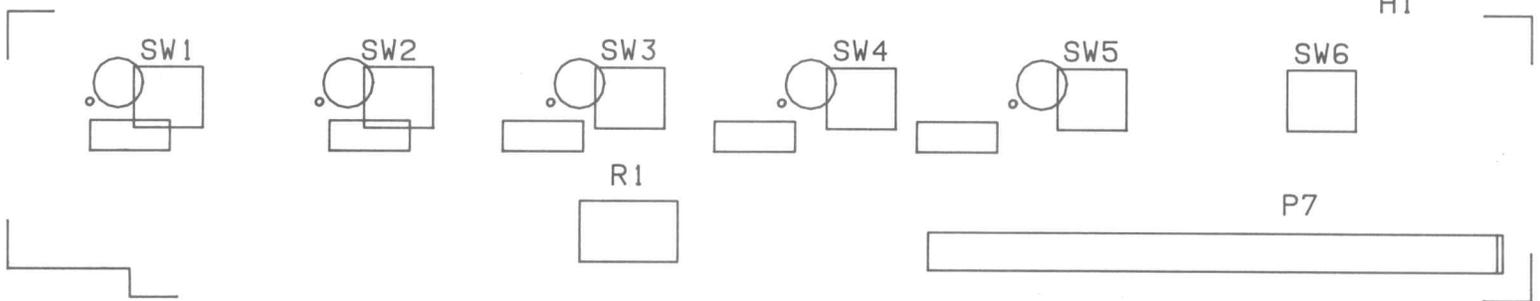
C17-20,23,25-30	24G465	CAP,CHIP,.01uF,50V,10%,X7R
C50-58	24G575	CAP,CHIP,.1UF,50V,10%,X7R
C65,67	24G606	CAP,CHIP,.001UF,50V,10%,X7R
C68,95	24G630	CAP,CHIP,1.8PF,50V,.25PF,NPO
C71	24G676	CAP,TRIM,1.7-3.0PF,100V
C72	24G618	CAP,CHIP,.022UF,50V,10%,X7R
C73	24G629	CAP,CHIP,1PF,50V,.25PF,NPO
C75	24G615	CAP,CHIP,33PF,50V,5%,NPO
C76-78	24G451	CAP,RLYTIC,22UF,50V,20%

CRT MODE
43A463
7000 BOARD



7000 CRT MODE BOARD

H2



**SCHEMATIC
REFERENCE**

PART NO.

DESCRIPTION

CRT MODE (7000) BOARD

CR1-5
R3-7
SW1-6

20G37
14G102-4752A
25B417-2

SMTLED,RED,2.2V,10MA
RES,CHIP,475,1/8W,1%,100PPM
SWITCH PAD, CRT MODE

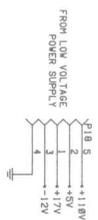
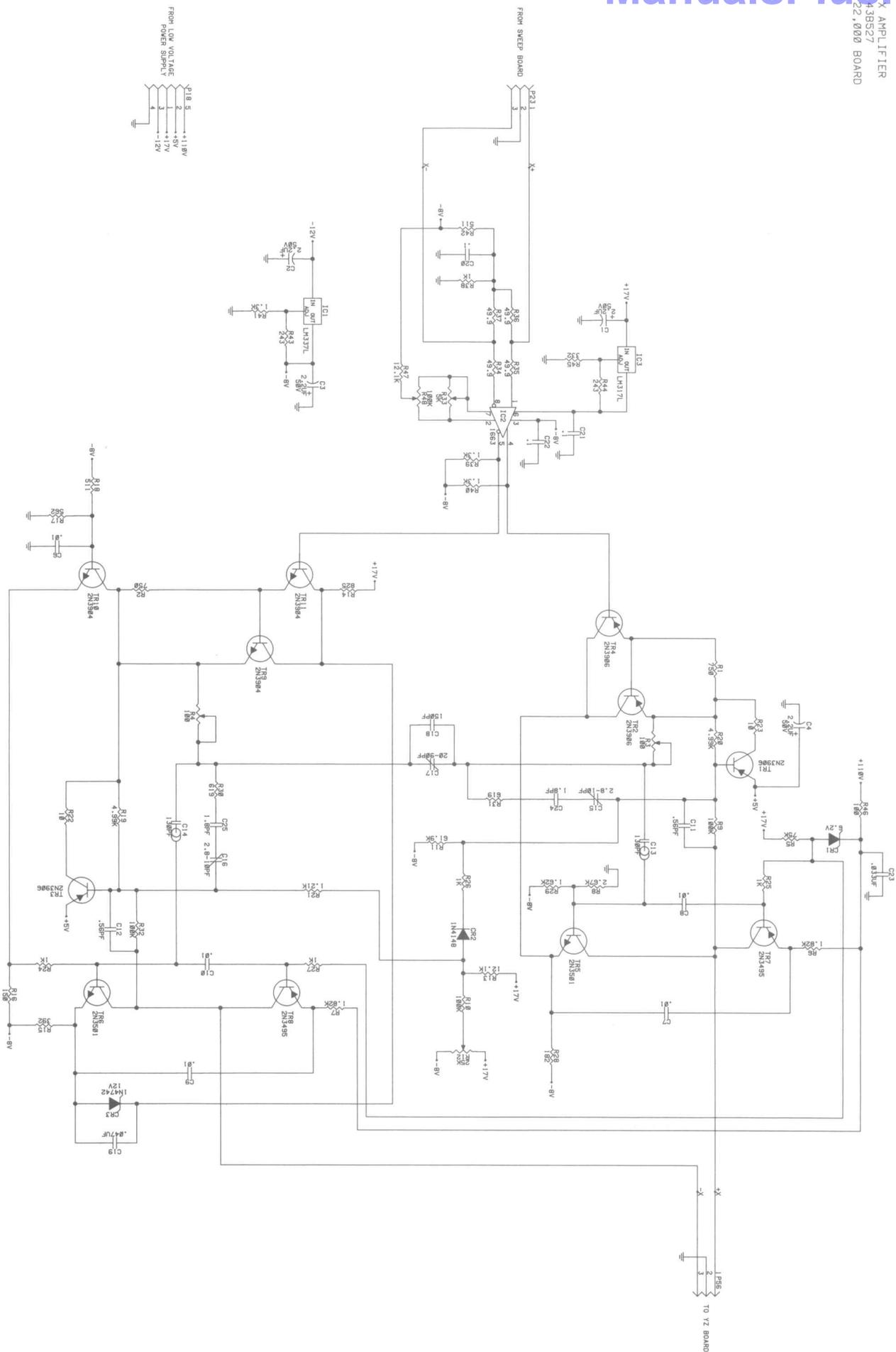
SCHEMATIC
REFERENCE

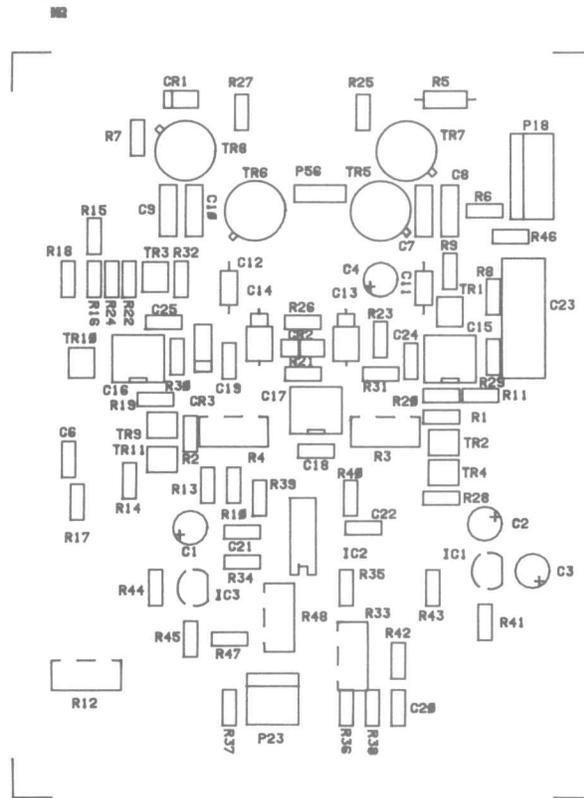
PART NO.

DESCRIPTION

YZ PREAMP (2000) BOARD CONTINUED

C81-84	24G407	CAP,RLYTIC,47UF,25V,+/-20%
C91	24G624	CAP,CHIP,.22UF,50V,+80/-20,Y5V
C93,102	24G677	CAP,TRIM,3.5-10pF,100V
C96,97,102,103	24G611	CAP,CHIP,3.3PF,50V,.25PF,NPO
C98,99	24G577	CAP,CHIP,47PF,50V,10%,NPO
C100	24G561	CAP,CHIP,220PF,100V,10%,NPO
C101	24Z599	CAP,CHIP,6.8PF,50V,.25PF,NPO
CR5	50G36	SMT DIODE,SIL,75V,100MA,4148
CR7	50C4-12	DIODE,ZENER,10V,95mA,10%,4740
CR8	50C4-14	DIODE,ZENER,5.6V,162mA,5%,4734
L1	46Z190	IND,.47UH,10%
R9,10	14G102-2264A	RES,CHIP,22.6K,1/8W,1%
R22,23	14G102-1003A	RES,CHIP,1K,1/8W,1%,100PPM
R33	14G102-6192A	RES,CHIP,619,1/8W,1%,100PPM
R35	14G102-1623A	RES,CHIP,1.62K,1/8W,1%,100PPM
R38	14G102-7502A	RES,CHIP,750,1/8W,1%,100PPM
R42,43	14G102-1822A	RES,CHIP,182,1/8W,1%,100PPM
R62-64,66	14G102-1001A	RES,CHIP,10,1/8W,1%,100PPM
R71	14G102-1213A	RES,CHIP,1.21K,1/8W,1%,100PPM
R74-79,81,82	14G102-1002A	RES,CHIP,100,1/8W,1%,100PPM
R80,194-197,208	14G102-2212A	RES,CHIP,221,1/8W,1%,100PPM
R87,88,95-98	14G102-4991A	RES,CHIP,49.9,1/8W,1%,100PPM
R99,146,200	14G102-6193A	RES,CHIP,6.19K,1/8W,1%,100PPM
R115,116	14G102-2672A	RES,CHIP,267,1/8W,1%,100PPM
R128	14G102-1006A	RES,CHIP,1M,1/8W,1%,100PPM
R129	14G102-2746E	RES,CHIP,2.74M,1/8W,1%,500PPM
R130	14G102-4993A	RES,CHIP,4.99K,1/8W,1%,100PPM
R131	14G102-1504A	RES,CHIP,15K,1/8W,1%,100PPM
R132-134	14G102-1004A	RES,CHIP,10K,1/8W,1%,100PPM
R135,205	14G102-7503A	RES,CHIP,7.5K,1/8W,1%,100PPM
R136,147,179	14G102-3323A	RES,CHIP,3.32K,1/8W,1%,100PPM
R137	14G102-8254A	RES,CHIP,82.5K,1/8W,1%,100PPM
R138	14G102-4994A	RES,CHIP,49.9K,1/8W,1%,100PPM
R139	14G102-3322A	RES,CHIP,332,1/8W,1%,100PPM
R140,141	14G102-1433A	RES,CHIP,1.43K,1/8W,1%,100PPM
R142	14G102-4755A	RES,CHIP,475K,1/8W,1%,100PPM
R143,144	14G102-4753A	RES,CHIP,4.75K,1/8W,1%,100PPM
R145	14G102-1303A	RES,CHIP,1.3K,1/8W,1%,100PPM
R148	14G102-1103A	RES,CHIP,1.1K,1/8W,1%,100PPM
R153,154	14A38-5621A	RES,MET.F,56.2,1/4W,1%,100PPM
R155,156	14A38-4321A	RES,MET.F,43.2,1/4W,1%,100PPM
R157	14G102-3012A	RES,CHIP,301,1/8W,1%,100PPM
R164,165	14G102-7501A	RES,CHIP,75,1/8W,1%,100PPM
R170	14G102-5110A	RES,CHIP,5.11,1/8W,1%,100PPM
R172-175	14G102-3920A	RES,CHIP,3.92,1/8W,1%,100PPM
R178	14G102-1825A	RES,CHIP,182K,1/8W,1%,100PPM
R182	15G50-221	SMT,POT,VPC CERM,220,.2W,30%
R183,184	14A38-1822A	RES,MET.F,182,1/4W,1%,100PPM
R185-187	14G102-5112A	RES,CHIP,511,1/8W,1%,100PPM
R188,189	14A38-5112A	RES,MET.F,511,1/4W,1%,100PPM
R190-193	14G102-4122A	RES,CHIP,412,1/8W,1%,100PPM
R198	14G102-2003A	RES,CHIP,2K,1/8W,1%,100PPM
R202	15G50-472	SMT POT,VPC CERM,4.7K,.2W,30%
R204	14G102-2433A	RES,CHIP,2.43K,1/8W,1%,100PPM
R205	14G102-2673A	RES,CHIP,2.67K,1/8W,1%,100PPM
R206	14G102-3923A	RES,CHIP,3.92K,1/8W,1%,100PPM
R207	14G102-1503A	RES,CHIP,1.5K,1/8W,1%,100PPM
TR3	19G98	SMT TRANS,VHF/UHF AMP,MMBTH10
TR17,18,47	19G95	SMT TRANS,PNP,40V,200MA,3906
TR22,23	19G113	SMTTRANS,PNP,600MHZ,MMBTH81L
TR27,41,42	19G92	SMT TRANSISTOR,NPN,3904,SOT23
TR28,29	19A33-1	TRANS,NPN,40V,200mA,2N3904
TR30,31	19G103	TRANS,NPN,160V,600MA,2N5551
TR32,33	19A32	TRANSISTOR,PNP,2N5401
TR34	69G547	SMTIC,MATCHED PNP TRANS,BCV62
TR35,36	19A13-1	TRANS,NPN,30V,400mA,,2N3866
TR43,44	19G66	TRANS,NPN,30V,400mA,,MPS3866
TR45,46	19G102	SMT TRANS,PNP,15V,25MA,BFT92
	28B124	TRANSFORMER,POWER,SC3100





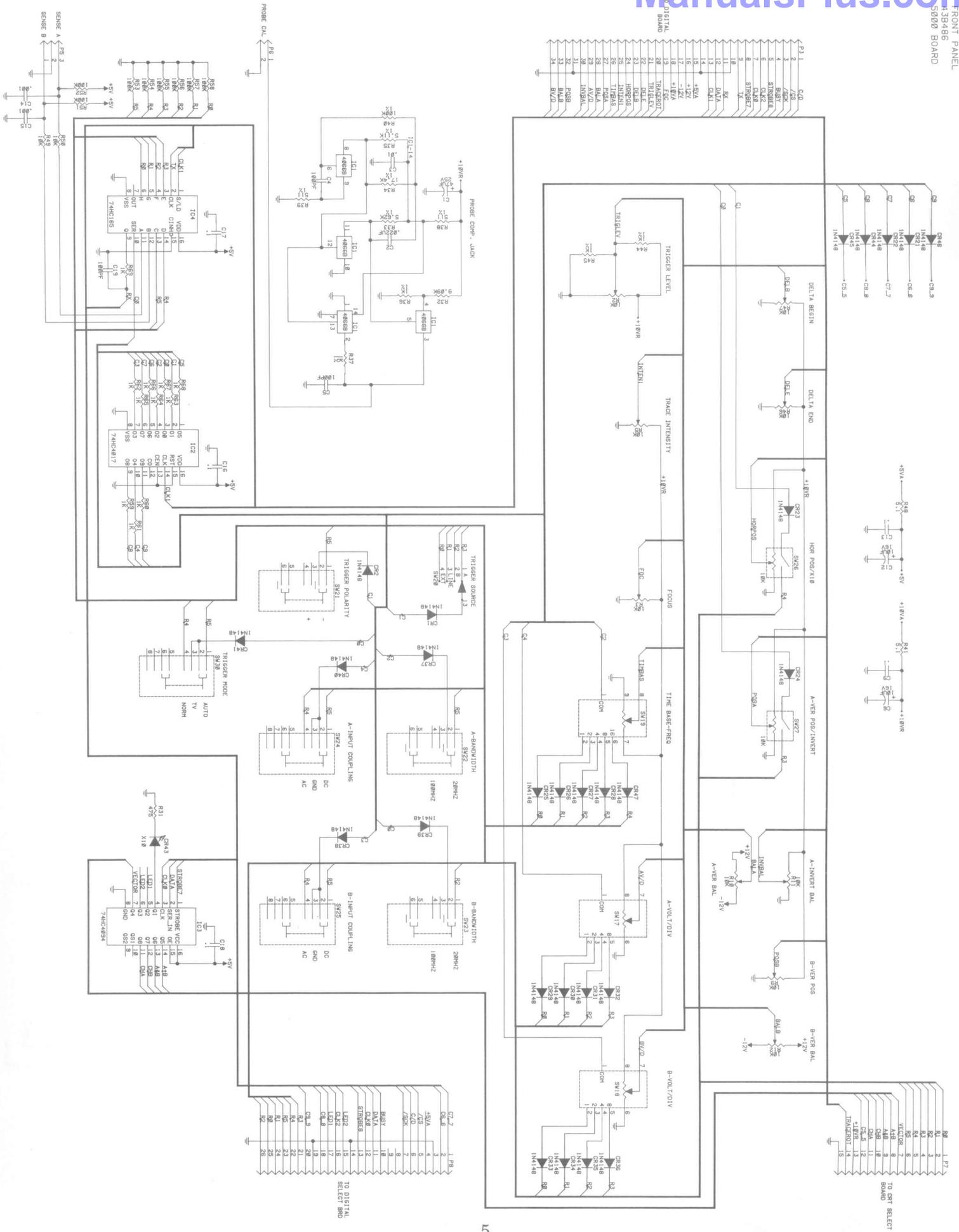
**SCHEMATIC
REFERENCE**

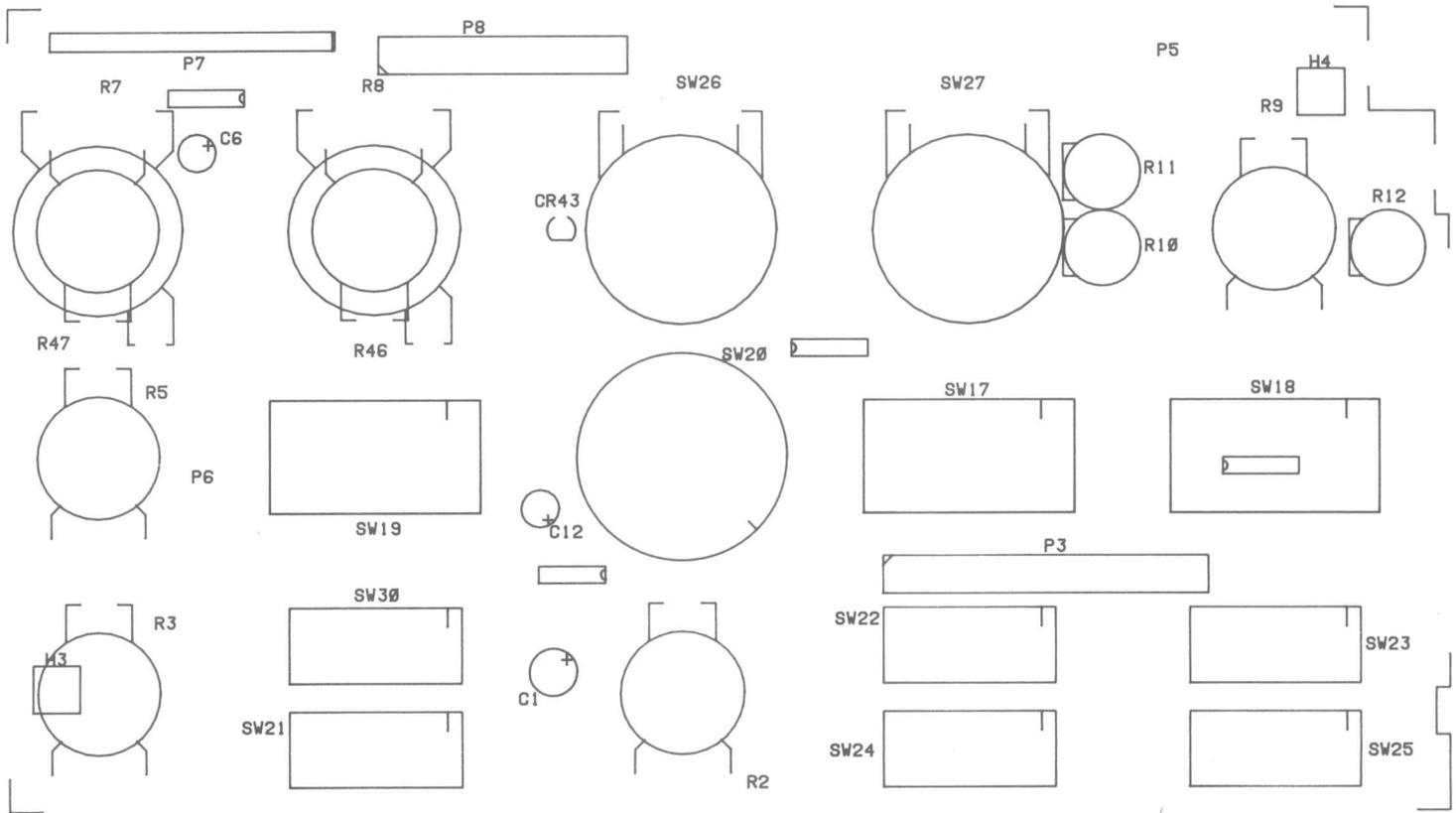
PART NO.

DESCRIPTION

X-AMP (22,000) BOARD

C1-4	24G384	CAP,LYTIC,2.2UF,50V,20%,
C6	24G465	CAP,CHIP,.01uF,50V,10%,X7R
C7-10	24G126	CAP,DISC,.01UF,200V,20%,Z5U
C11,12	24G322	CAP,DISC,.56PF,500V,10%
C13,14	24G71	CAP,DISC,130PF,500V,10%,NPO
C15,16	24G693	CAP,TRIM,2.8-10PF,100V,10%
C17	24G692	CAP,TRIM,20-90PF,100V,10%
C18	24G582	CAP,CHIP,150PF,50V,5%,NPO
C19	24G601	CAP,CHIP,.047UF,50V,10%,X7R
C20-22	24G575	CAP,CHIP,.1UF,50V,10%,X7R
C23	24G404	CAP,POLYPROP,.033uF,200V,10%
C25,24	24G630	CAP,CHIP,1.8PF,50V,.25PF,NPO
CR1	50C4-6:A	DIODE,ZENER,6.2V,100mA,5%,4735
CR2	50G36	SMT DIODE,SIL,75V,100MA,4148
CR3	50C4-17	DIODE,ZENER,12V,76mA,5%,IN4742
IC1	69G288	IC,REG,ADJ,NEG,LM337
IC2	69G729	IC,AMP,DIFF,WIDEBAND,1663
IC3	69G231	IC,REG,ADJ,POS,LM317
L13,14	46G88	IND,FERRITE BEAD
R1,2	14G102-7502A	RES,CHIP,750,1/8W,1%,100PPM
R3,4	15G65-101	POT,VPC,CERM,100,1/2W,20%
R5	14C1-753	RES,CARBON,75K,1/4W,5%
R6,7	14G102-1823A	RES,CHIP,1.82K,1/8W,1%,100PPM
R8	14G102-2673A	RES,CHIP,2.67K,1/8W,1%,100PPM
R9,10,32	14G102-1005A	RES,CHIP,100K,1/8W,1%,100PPM
R11	14G102-6194A	RES,CHIP,61.9K,1/8W,1%,100PPM
R12	15C26-33	POT,MHPC CERM,25K,1/2W,20%
R13,47	14G102-1214A	RES,CHIP,12.1K,1/8W,1%,100PPM
R14	14G102-8252A	RES,CHIP,825,1/8W,1%,100PPM
R15	14G102-3922A	RES,CHIP,392,1/8W,1%,100PPM
R16	14G102-1502A	RES,CHIP,150,1/8W,1%,100PPM
R17	14G102-5622A	RES,CHIP,562,1/8W,1%,100PPM
R18,42	14G102-5112A	RES,CHIP,511,1/8W,1%,100PPM
R19,20	14G102-4993A	RES,CHIP,4.99K,1/8W,1%,100PPM





SCHEMATIC REFERENCE

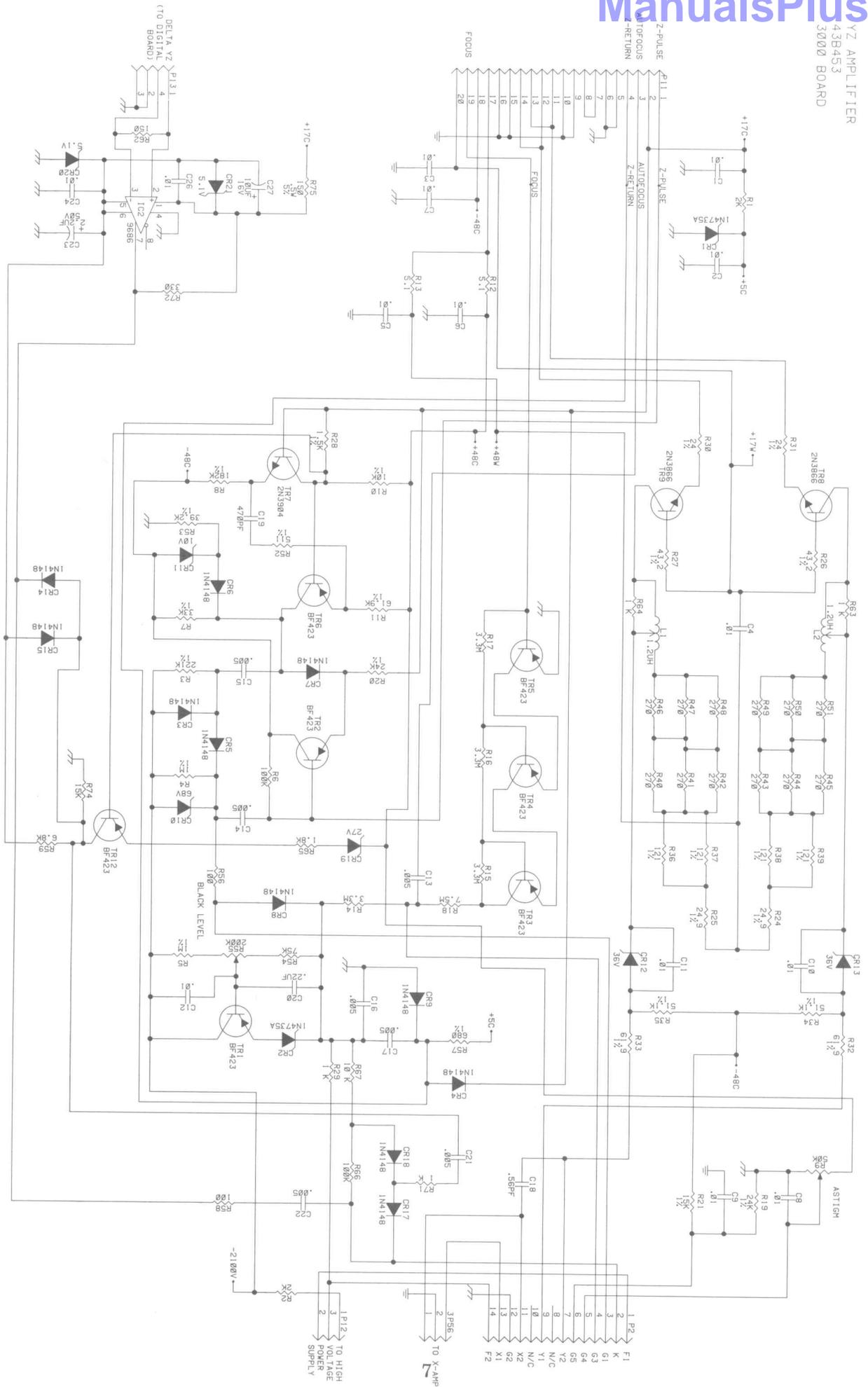
PART NO.

DESCRIPTION

FRONT PANEL (5000) BOARD

C1	24G407	CAP,RLYTIC,47UF,25V,+/-20%
C2	24G618	CAP,CHIP,.022UF,50V,10%,X7R
C3	24G465	CAP,CHIP,.01uF,50V,10%,X7R
C4,5,19	24G612	CAP,CHIP,100PF,50V,5%,NPO
C6,12	24G382	CAP,RLYTIC,10UF,16V,20%
C9,13,16-18	24G575	CAP,CHIP,.1UF,50V,10%,X7R
C14,15	24G606	CAP,CHIP,.001UF,50V,10%,X7R
CR1,2,21-41, 44,45-47	50G36	SMT DIODE,SIL,75V,100MA,4148
CR43	20G14	LAMP,LED,2V,10mA,,MV5054-1
IC1	69G529	SMTIC,SWITCH,JFET,74HC4066
IC2	69G474	SMTIC,COUNTER,DECADE,74HC4017
IC3	69G693	SMTIC,8 BIT SHIFT REG,74HC4094
IC4	69G445	SMTIC,SH REG,PAR/SER,74HC165
R2,3,5,9	15B47	POT,PCMT,10K,EXTENDED LEGS
R10-12	15C26-24	POT,MHPC CERM,10K,1/2W,20%
R31	14G102-4752A	RES,CHIP,475,1/8W,1%,100PPM
R32	14G102-9093A	RES,CHIP,9.09K,1/8W,1%,100PPM
R33	14G102-5623A	RES,CHIP,5.62K,1/8W,1%,100PPM
R34	14G102-1744A	RES,CHIP,17.4K,1/8W,1%,100PPM
R35	14G102-5113A	RES,CHIP,5.11K,1/8W,1%,100PPM
R36,37,44,45,59-69	14G102-1003A	RES,CHIP,1K,1/8W,1%,100PPM
R38,39	14G102-5112A	RES,CHIP,511,1/8W,1%,100PPM
R40,51-58	14G102-1005A	RES,CHIP,100K,1/8W,1%,100PPM
R41,48	14G102-5110A	RES,CHIP,5.11,1/8W,1%,100PPM
R46,47	15B52	POT,VPC,CERM,10K,MULTI-TURN
R49,50	14G102-1004A	RES,CHIP,10K,1/8W,1%,100PPM
SW17,18	25B441	SWITCH,BCD W/POT,14 POS
SW19	25B443	SWITCH,BCD W/POT,24 POS
SW20	25G358	SWITCH,ROTARY,1 POLE,12 POS.
SW21-23	25B421	SWITCH,TOGGLE,2P2T
SW24,25,30	25B420	SWITCH,TOGGLE,2P3T
SW26,27	15B46	POT,VPC CARB,10K,1/2W,20%,PUSH
	25G424	SWITCH,POWER,PUSH-PUSH

YZ AMPLIFIER
43B453
3020 BOARD

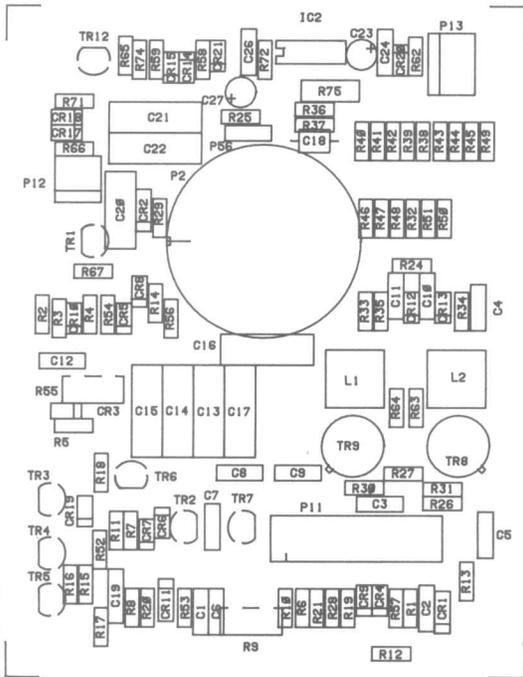


SCHEMATIC REFERENCE

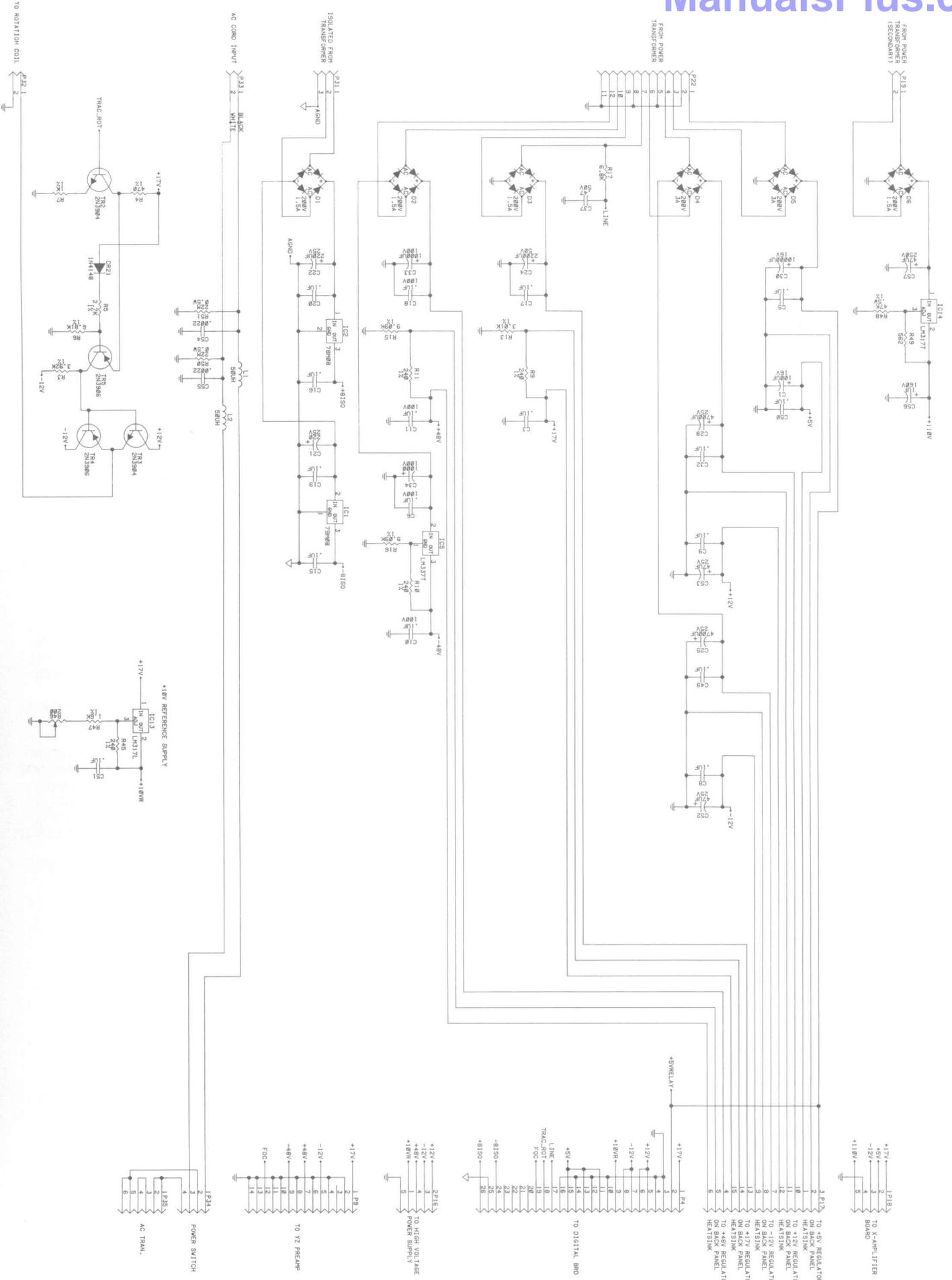
PART NO.

DESCRIPTION

YZ (3000) BOARD



C1-3,5-9	24G483	CAP,MYLAR,.01UF,50V,5%,5MM
C4,10-12,24,26	24G483	CAP,MYLAR,.01UF,50V,5%,5MM
C13-17	24G305	CAP,DISC.,.005UF,3000V,20%
C18	24G322	CAP,DISC.,.56PF,500V,10%
C19	24G119	CAP,DISC,470PF,500V,10%
C20	24G168	CAP,MYLAR,.22UF,100V,10%
C22,21	24G305	CAP,DISC.,.005UF,3000V,20%
C23	24G384	CAP,LYTIC,2.2UF,50V,20%,
C27	24G382	CAP,RLYTIC,10UF,16V,20%
CR1	50C4-6:A	DIODE,ZENER,6.2V,100mA,5%,4735
CR2	50C4-6:A	DIODE,ZENER,6.2V,100mA,5%,4735
CR3-9	50C5-2:A	DIODE,SIL,75V,100mA,.25uA,4148
CR10	50C4-9	DIODE,ZENER,68V,14mA,5%
CR11	50C4-12	DIODE,ZENER,10V,95mA,10%,4740
CR12,13	50C4-10	DIODE,ZENER,36V,30mA,10%,4753
CR17,18,15,14	50C5-2:A	DIODE,SIL,75V,100mA,.25uA,4148
CR19	50C4-33	DIODE,ZENER,27V,1W,5%,4750
CR20,21	50C4-29	DIODE,ZENER,1N4733A,5.1V,5%
IC2	69G674	IC,HI SPD,TTL,COMPARATOR,9686
L1,2	28A132	CRT PEAKING COIL
R1	14C1-202	RES,CARBON,2K,1/4W,5%
R2	14C1-202	RES,CARBON,2K,1/4W,5%
R3	14A38-2215A	RES,MET.F,221K,1/4W,1%,100PPM
R4,5	14A38-1006A	RES,MET.F,1M,1/4W,1%,100PPM
R6	14C1-104	RES,CARBON,100K,1/4W,5%
R7	14A38-3304A	RES,MET.F,33K,1/4W,1%,100PPM
R8	14A38-1825A	RES,MET.F,182K,1/4W,1%,100PPM
R9	15C26-9	POT,MVPC CERM,50K,1/2W,20%
R10	14A38-1004A	RES,MET.F,10K,1/4W,1%,100PPM
R11	14A38-6194A	RES,MET.F,61.9K,1/4W,1%,100PPM
R12,13	14C1-51	RES,CARBON,5.1,1/4W,5%
R14	14C1-335	RES,CARBON,3.3M,1/4W,5%
R16-17	14C1-335	RES,CARBON,3.3M,1/4W,5%
R18	14C1-755	RES,CARBON,7.5M,1/4W,5%
R19,20	14A38-2404A	RES,MET.F,24K,1/4W,1%,100PPM
R21	14A38-1504A	RES,MET.F,15K,1/4W,1%,100PPM
R25,24	14A38-2491A	RES,MET.F,24.9,1/4W,1%,100PPM
R26,27	14C1-430	RES,CARBON,43,1/4W,5%
R28	14A38-1503A	RES,MET.F,1.5K,1/4W,1%,100PPM
R29,71	14C1-102	RES,CARBON,1K,1/4W,5%
R30,31	14C1-240	RES,CARBON,24,1/4W,5%
R32,33	14A38-6191A	RES,MET.F,61.9,1/4W,1%,100PPM
R34,35	14A38-5114A	RES,MET.F,51.1K,1/4W,1%,100PPM
R36-39	14A38-1212A	RES,MET.F,121,1/4W,1%,100PPM
R40-50	14A38-2702A	RES,MET.F,270,1/4W,1%,100PPM
R52	14A38-5112A	RES,MET.F,511,1/4W,1%,100PPM
R53	14A38-3924A	RES,MET.F,39.2K,1/4W,1%,100PPM
R54	14C1-753	RES,CARBON,75K,1/4W,5%
R55	15C26-11	POT,MVPC CERM,200K,1/2W,20%
R56,58	14C1-101	RES,CARBON,100,1/4W,5%
R57	14C1-681	RES,CARBON,680,1/4W,5%
R59	14C1-682	RES,CARBON,6.8K,1/4W,5%
R62	14C1-151	RES,CARBON,150,1/4W,5%
R63,64	14C1-102	RES,CARBON,1K,1/4W,5%
R65	14C1-182	RES,CARBON,1.8K,1/4W,5%
R66	14C1-104	RES,CARBON,100K,1/4W,5%
R67	14C1-103	RES,CARBON,10K,1/4W,5%
R72	14C1-331	RES,CARBON,330,1/4W,5%
R74	14C1-153	RES,CARBON,15K,1/4W,5%
R75	14C4-151	RES,CARBON,150,1/2W,5%
TR1,12	19G101	TRANS,PNP,50MA,BF423
TR2-6	19G101	TRANS,PNP,50MA,BF423
TR7	19A33-1	TRANS,NPN,40V,200mA,2N3904
TR8,9	19A13-1	TRANS,NPN,30V,400mA,,2N3866



SCHEMATIC
REFERENCE

PART NO.

DESCRIPTION

X-AMP (22,000) BOARD CONTINUED

R21	14G102-1213A	RES,CHIP,1.21K,1/8W,1%,100PPM
R22,23	14G102-1001A	RES,CHIP,10,1/8W,1%,100PPM
R24-27,38	14G102-1003A	RES,CHIP,1K,1/8W,1%,100PPM
R28	14G102-1822A	RES,CHIP,182,1/8W,1%,100PPM
R29	14G102-1623A	RES,CHIP,1.62K,1/8W,1%,100PPM
R30,31	14G102-6192A	RES,CHIP,619,1/8W,1%,100PPM
R33	15C26-32	POT,MHPC CERM,5K,1/2W,20%
R34-37	14G102-4991A	RES,CHIP,49.9,1/8W,1%,100PPM
R39-41	14G102-1303A	RES,CHIP,1.3K,1/8W,1%,100PPM
R43,44	14G102-2432A	RES,CHIP,243,1/8W,1%,100PPM
R45	14G102-3322A	RES,CHIP,332,1/8W,1%,100PPM
R46	14G102-1002A	RES,CHIP,100,1/8W,1%,100PPM
R48	15C26-14	POT,MVPC CERM,100K,1/2W,20%
TR1-4	19G95	SMT TRANS,PNP,40V,200MA,3906
TR5,6	19G138	TRANS,NPN,150V,300MA,2N3501
TR7,8	19G137	TRANS,PNP,120V,100MA,2N3495
TR9-11	19G92	SMT TRANSISTOR,NPN,3904,SOT23



WARNING

Avoid damage to parts caused by static electricity!

Most solid-state devices and film resistors are susceptible to damage due to discharge of electricity. Observe the following precautions when a PC board is removed from the unit, or when handling components:

1. The person handling the part must be grounded through a 1 megohm resistor via a wrist strap or similar ground collection.
2. A PC board or component should never be placed on an insulated surface. The surface must be ground (through a 1 megohm resistor) and conductive.
3. All replacement parts must be left in a completely enclosed, conductive container or package until ready for use. The person removing the part from the container must be properly grounded. All parts susceptible to static damage are shipped in conductive containers when ordered from the Sencore Service Department.

Components not listed are standard replacement parts and may be purchased locally. When ordering parts, please specify instrument model number, schematic reference, part number, and description. Please include remittance (check or money order) with your order, otherwise invoice will be shipped C.O.D. Minimum billing is \$5.00.



TOLL FREE 1-800-SENCORE

SENCORE

3200 Sencore Drive
Sioux Falls, SD 57107

*innovatively designed
with your time in mind.*