

SECTION VI

ILLUSTRATED PARTS LISTS

6.1 INTRODUCTION

This section provides the parts list information for the Printed Circuit Board Assembly and the Disk Drive Mechanical Kit.

6.2 INDEX OF ASSEMBLIES

The following is an index of the assemblies covered in this section (the HDA is a sealed unit and not repairable):

| ASSEMBLY | FIGURE | TABLE |
|--|--------|-------|
| Printed Circuit Board Assembly (P/N 59055) | 6-1 | 6-1 |
| Mechanical Kit (P/N 50461) | N/A | 6-2 |
| HDA (P/N 50454) | N/A | N/A |

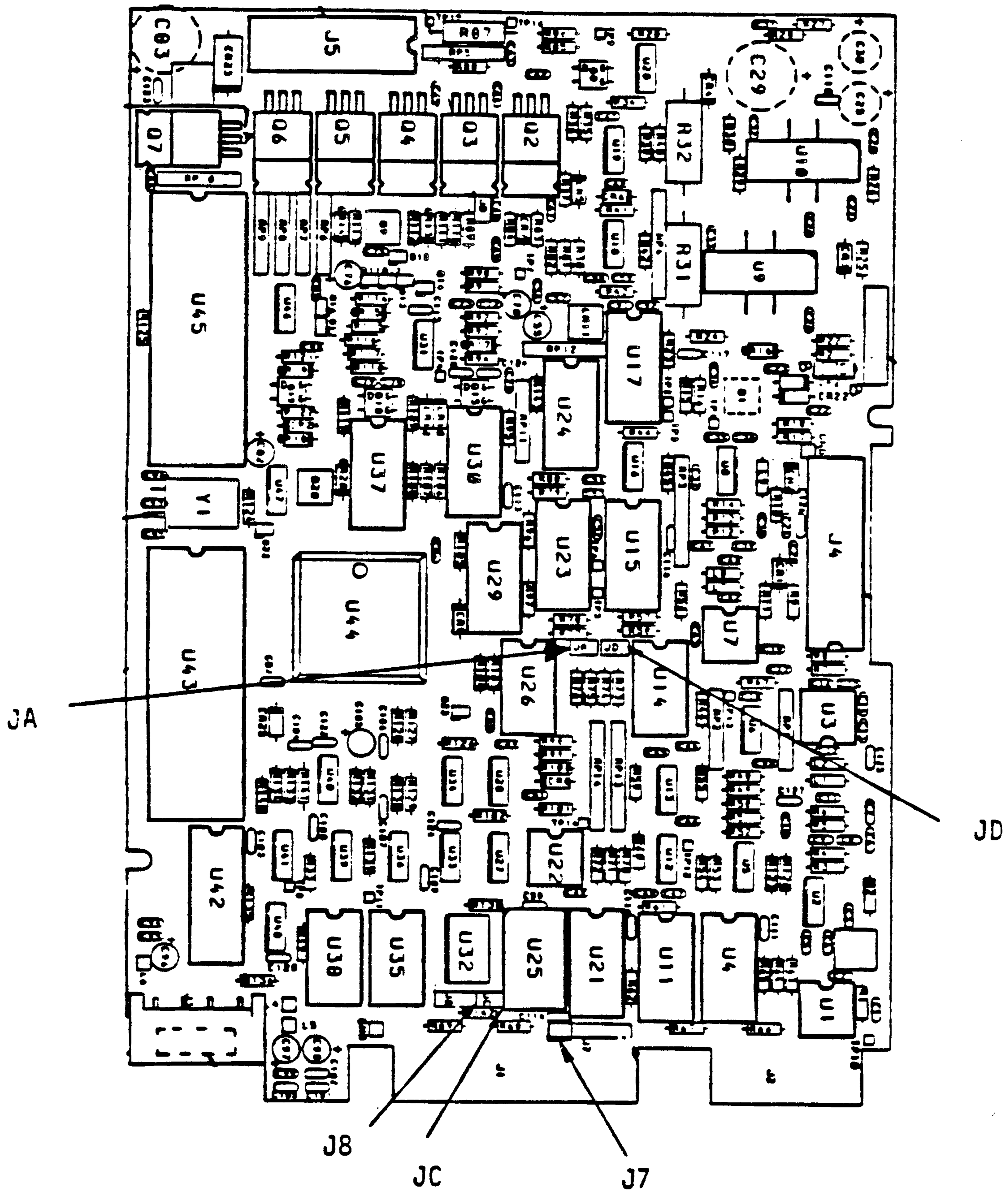


Figure 6-1. Printed Circuit Board Assembly (P/N 59055)

M8083

Table 6-1. Printed Circuit Board Assembly (P/N 59055)

| PART NUMBER | DESCRIPTION | REFERENCE DESIGNATION |
|-------------------|--------------------------------|--|
| 30091 | Adhesive, Tak Pack | |
| 30104 | Adhesive Accelerator | |
| 30108 | Shrink Tubing PVC 3/8 ID | |
| 40109 | Plug, Shorting | |
| 40114 | Pin, IC | |
| 40119 | Post, Feedthru | |
| 47015 | MCU, Z-8 4K, 12Mhz | U43 |
| 48010 | Crystal, 12Mhz, HC-18 | Y1 |
| 50487 | Label, PCB Asm | |
| 59056 | Fabrication, PCB | |
| 59058 | Schematic, Control Module | |
| <u>CAPACITORS</u> | | |
| 43000 | Capac, 10.0PF, 5% (NPO), 50V | C1 |
| 43004 | Capac, 22.0PF, 5% (NPO), 50V | C40, 84, 85 |
| 43006 | Capac, 33.0PF, 5% (NPO), 50V | C11 |
| 43008 | Capac, 47.0PF, 5% (NPO), 50V | C37 |
| 43010 | Capac, 68.0PF, 5% (NPO), 50V | C128 |
| 43012 | Capac, 100PF, 5% (NPO), 50V | C42, 88, 91 |
| 43014 | Capac, 150PF, 5% (NPO), 50V | C12, 43 |
| 43018 | Capac, 330PF, 5% (NPO), 50V | C44, 45, 46, 51, 52 |
| 43030 | Capac, 3900pf, 5%, NPO 50V | C67, 68 |
| 43300 | Capac, 0.01UF, +80/-20%, 50V | C6, 7, 13, 14, 17, 19, 22, |
| 43301 | Capac, 0.10UF, +80/-20%, 50V | C2, 3, 18, 23, 26, 34, 48, 49, 66, 71, 72, 73, 81, 86, 87, 89, 90, 93, 94, 100, 102, 103, 104, 107, 108, 109, 110, 111, 113, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127 |
| 43552 | Capac, 10.0UF, 25V, Bulk | C55, 70, 76, 82, 96, 97, 98, 105 |
| 43560 | Capac, 2200UF, 16V | C29, 83 |
| 43562 | Capac, 220UF Elect, 16V Min | C25, 30 |
| 43600 | Capac, 0.001UF, 10% X 7R, 50V | C20, 21, 24, 27, 50, 59, 62, 64, 65, 79, 99, 114 |
| 43608 | Capac, 0.0047UF, 10% X 7R, 50V | C32, 33, 35, 36, 53, 54 |
| 43612 | Capac, 0.01UF, 10% X 7R, 50V | C39, 41, 92, 106 |
| 43614 | Capac, 0.015UF, 10% X 7R, 50V | C61, 69 |
| 43618 | Capac, 0.033UF, 10% X 7R, 50V | C10 |
| 43624 | Capac, 0.1UF, 10% (NPO), 50V | C4, 5, 8, 9, 15, 16, 28, 31, 47, 60, 63, 75, 78, 115 |

Table 6-1. Printed Circuit Board Assembly (P/N 59055) continued

| PART NUMBER | DESCRIPTION | REFERENCE DESIGNATION |
|----------------------------|-----------------------------------|--|
| <u>CONNECTORS</u> | | |
| 40104 | Conn, 28 Contact, Fem | J4 |
| 40120 | Conn, 24 Contact, Fem | J5 |
| 40123 | Conn 4 Contact, Fem | J3 |
| <u>DIODES</u> | | |
| 46001 | Diodes Switching, 1N914 | CR1, 2, 5, 6, 7, 8, 10, 12, 13, 15, 17, 18, 19, 20, 25 |
| 46002 | Diodes Schottky, 1N6263 | CR16 |
| 46004 | Diodes, 1N4001, Pwr, 50V (DD-41) | CR3, 4, 14, 22 |
| 46005 | Diodes, 80SQ030, Scottky Pwr | CR23 |
| 46007 | Diodes, 1N5818 | CR9, 21, 24 |
| <u>INTEGRATED CIRCUITS</u> | | |
| 44010 | IC, 26LS31 QD, Hgh Spd Ln Drvr | U4 |
| 44011 | IC, 26LS32 QD, Diff Ln Recv | U11 |
| 44051 | SOIC14, 74LS00D QD, 2-In ND Gate | U33 |
| 44053 | SOIC14, 74LS74AD, DL-D TP ET F-F | U41 |
| 44058 | SOIC20, 74LS240D OCT INV BUF 3S | U32 |
| 44062 | SOIC14, 74LS04D, Hex Inverter | U39 |
| 44067 | SOIC14, 74LS02D, QD 2-in NOR GA | U36 |
| 44202 | IC, QD 7438, 2-in NAND Buf (OC) | U35, 38 |
| 44203 | IC, 7445 BCD, DECI/DECD DR (OC) | U29, 30 |
| 44251 | SOIC14, 7406D, HX INV Buf/Dr (OC) | U27, 34, 46, 47 |
| 44300 | IC, Quad, Ex-Dr ECL, 10107 | U15 |
| 44301 | IC, 10131 ECL Dual D F-F | U23 |
| 44302 | IC, Triple Rec ECL, 10114 | U17 |
| 45001 | IC, LM318N, Hi Speed OP-AMP | U1 |
| 45003 | IC, Ref 2.5V, LM336BZ-2.5 | CR11 |
| 45005 | IC, OP-AMP, LF356 | U22 |
| 45007 | IC, MC1350PIF AMP | U3, 7 |
| 45008 | IC, DAC0832 88TuP, D-Buf D-A Con | U42 |
| 45009 | IC, Volt Reg Low P. 8V, 78L08 | Q1 |
| 45013 | IC, LF347, WD BDWTH QD JFT OP-AM | U14 |
| 45014 | IC, TBA810P, 7W Audio Amp | U9, 10 |
| 45052 | SOIC14, LM324D, 6-P S-S OP-AMP | U6, 12, 18, 31 |
| 45054 | SOIC14, LM339D, QD Volt Comparat | U5, 20, 40 48 |
| 45056 | SOIC14, NE592D, Video Amplifier | U2, 8, 16 |
| 45060 | SOIC14, HEF4066B, QDRUF Bilt Swt | U13, 19, 28 |
| 47011 | IC, Z8-2K, MCU 8Mhz 40-Pin DIP | U45 |
| 47013 | IC, Gate Array, Servo Control | U44 |

Table 6-1. Printed Circuit Board Assembly (P/N 59055) continued

| PART NUMBER | DESCRIPTION | REFERENCE DESIGNATION |
|------------------|------------------------------|--|
| <u>RESISTORS</u> | | |
| 41001 | Resis, 10.0 Ohms, 1%, 0.25W | R116 |
| 41009 | Resis, 21.5 Ohms, 1%, 0.25W | R109 |
| 41025 | Resis, 100.0 Ohms, 1%, 0.25W | R2, 43, 55, 59, 66, 76, 78 |
| 41027 | Resis, 121.0 Ohms, 1%, 0.25W | R98 |
| 41028 | Resis, 133.0 Ohms, 1%, 0.25W | R7, 8 |
| 41032 | Resis, 196.0 Ohms, 1%, 0.25W | R9, 10, 103, 106 |
| 41033 | Resis, 215.0 Ohms, 1%, 0.25W | R69 |
| 41035 | Resis, 261.0 Ohms, 1%, 0.25W | R86 |
| 41037 | Resis, 316.0 Ohms, 1%, 0.25W | R5, 6, 45, 68, 79, 80, 95, |
| 41038 | Resis, 348.0 Ohms, 1%, 0.25W | R99 |
| 41041 | Resis, 464.0 Ohms, 1%, 0.25W | R23, 24, 96, 96, 124 |
| 41043 | Resis, 562.0 Ohms, 1%, 0.25W | R11, 12, 13, 56 |
| 41044 | Resis, 619.0 Ohms, 1%, 0.25W | R119 |
| 41046 | Resis, 750.0 Ohms, 1%, 0.25W | R29 |
| 41047 | Resis, 825.0 Ohms, 1%, 0.25W | R62 |
| 41049 | Resis, 1K Ohm, 1%, 0.25W | R14, 15, 16, 19, 50, 51, 61, 64, 65, 83, 100, 105, 108, 117, 128, 135, 143 |
| 41052 | Resis, 1.33K Ohms, 1%, 0.25W | R44 |
| 41056 | Resis, 1.96K Ohms, 1%, 0.25W | R114 |
| 41061 | Resis, 3.16K Ohms, 1%, 0.25W | R1, 3, 4, 49, 52, 63, 115 |
| 41062 | Resis, 3.48K Ohms, 1%, 0.25W | R17, 18, 21, 22 |
| 41063 | Resis, 3.83K Ohms, 1%, 0.25W | R118 |
| 41066 | Resis, 5.11K Ohms, 1%, 0.25W | R92, 107 |
| 41067 | Resis, 5.62K Ohms, 1%, 0.25W | R130 |
| 41068 | Resis, 6.19K Ohms, 1%, 0.25W | R73, 93 |
| 41069 | Resis, 6.81K Ohms, 1%, 0.25W | R48 |
| 41071 | Resis, 8.25K Ohms, 1%, 0.25W | R38 |
| 41073 | Resis, 10K Ohms, 1%, 0.25W | R20, 33, 42, 47, 58, 77, 85, 94, 101, 104, 111, 120, 123, 125, 138, 139, 142 |
| 41075 | Resis, 12.1K Ohms, 1%, 0.25W | R60 |
| 41076 | Resis, 16.2K Ohms, 1%, 0.25W | R131 |
| 41079 | Resis, 17.8K Ohms, 1%, 0.25W | R54, 75 |
| 41080 | Resis, 19.6K Ohms, 1%, 0.25W | R57 |
| 41084 | Resis, 28.7 Ohms, 1%, 0.25W | R133, 134 |
| 41089 | Resis, 46.4K Ohms, 1%, 0.25W | R81 |
| 41090 | Resis, 51.1K Ohms, 1%, 0.25W | R88 |
| 41093 | Resis, 68.1K Ohms, 1%, 0.25W | R129 |
| 41097 | Resis, 100K Ohms, 1%, 0.25W | R132, 140 |
| 41100 | Resis, 133K Ohms, 1%, 0.25W | R34, 90 |
| 41106 | Resis, 237K Ohms, 1%, 0.25W | R110 |
| 41108 | Resis, 287K Ohms, 1%, 0.25W | R122 |
| 41125 | Resis, 76.8K Ohms, 1%, 0.25W | R76 |
| 41211 | Resis, 27.4 Ohms, 1%, 0.25W | R25, 28 |

Table 6-1. Printed Circuit Board Assembly (P/N 59055) continued

| PART NUMBER | DESCRIPTION | REFERENCE DESIGNATION |
|--------------------|-------------------------------------|-----------------------|
| <u>RESISTORS</u> | | |
| 41260 | Resis, 3.01K Ohms, 1%, 0.25W | R30 |
| 41284 | Resis, 30.1K Ohms, 1%, 0.25W | R70, 71, 72, 136 |
| 41291 | Resis, 59.0K Ohms, 1%, 0.25W | R36, 37 |
| 41292 | Resis, 64.9K Ohms, 1%, 0.25W | R102, 126 |
| 41557 | Resis, 18.2K Ohms, 1%, 0.25W | R74 |
| 41560 | Resis, 4.99K Ohms, 1%, 0.25W | R35, 82 |
| 41563 | Resis, 10.0M Ohms, 1%, 0.25W | R112 |
| 41564 | Resis, 26.7K Ohms, 1%, 0.25W | R46 |
| 41566 | Resis, 10.7K Ohms, 1%, 0.25W | R53 |
| 41572 | Resis, 13.7K Ohms, 1%, 0.25W | R39, 40 |
| 41573 | Resis, 57.6K Ohms, 1%, 0.25W | R89 |
| 41574 | Resis, 143K Ohms, 1%, 0.25W | R91 |
| 41575 | Resis, 19.1K Ohms, 1%, 0.25W | R84 |
| 42000 | Resis, 0.1 Ohms, 3%, 2W | R87 |
| 42007 | Resis, 1.00 Ohm, 5%, 0.25W | R26, 27 |
| 42010 | Resis, 0.5 Ohm, 1%, 1W | R31, 32 |
| 42016 | Resis, 1.00M Ohm, 5%, 0.25W | R113, 141 |
| 42045 | Resis, 309K Ohms, 5%, 0.25W | R41 |
| 42046 | Resis, 200 Ohms, 5%, 0.50W | R121 |
| 42100 | Resis, DIP TTL-ECL Xlator Network | U21 |
| 42101 | Resis, DIP 14-Pin, 220/330 | U25 |
| 42102 | Resis, Network, 470 Ohms, DIP | U24 |
| 42106 | Resis, SIP, 1.0K, 6-Pin Ind. | RP5 |
| 42109 | Resis, SIP, 10K, 6-Pin IND | RP1, 2, 7, 12 |
| 42111 | Resis, SIP, 68K, 6-Pin IND | RP8 |
| 42117 | Resis, SIP, 680, 6-Pin COM | RP11 |
| 42121 | Resis, SIP, 10K, 6-Pin COM | RP6, 9, 10 |
| 42131 | Resis, SIP, 2.2K, 8-Pin COM | RP14 |
| 42152 | Resis Netw, 180 Ohms, SIP, 8-Pin-4R | RP3 |
| 42157 | Resis, SIP, 10K, 2%, 8-Pin IND | RP4, 13 |
| <u>TRANSISTORS</u> | | |
| 46102 | Tran, 2N3906 | Q20 |
| 46103 | Tran, Quad 2NPN/2PNP 6700 | U26, 37 |
| 46107 | Tran, IRFD123 N Ch Fet 4-Pin DIP | Q8, 18 |
| 46108 | Tran, IRFD9123 P Ch Fet 4-Pin DIP | Q15, 19 |
| 46110 | Tran, PN4393, N-CH JFET, TO-92 | Q9 |
| 46111 | Tran, IRF521, N-CH HEXFET TD220 | Q5, 6, 7 |
| 46112 | Tran, IRF9521, P-CH HEXFET, TO220 | Q2, 3, 4 |
| 46151 | Tran, 2N3904, NPN SOT-23 | Q10, 22 |
| 46152 | Tran, 2N3906, PNP SOT-23 | Q14, 23 |
| 46153 | Tran, SOT-23, NPN 2222A | Q11, 12, 13, 16, 17 |

Table 6-2. Mechanical Kit (P/N 50461)

| PART NUMBER | DESCRIPTION | REFERENCE DESIGNATION |
|----------------------|---------------------------------|-----------------------|
| <u>RESISTORS</u> | | |
| 41266 | Resis, 5.36K Ohms, 1%, 0.25W | R2 |
| 41267 | Resis, 5.90K Ohms, 1%, 0.25W | R2 |
| 41268 | Resis, 6.49K Ohms, 1%, 0.25W | R2 |
| 41269 | Resis, 7.15K Ohms, 1%, 0.25W | R2 |
| 41279 | Resis, 18.7K Ohms, 1%, 0.25W | R1 |
| 41280 | Resis, 20.5K Ohms, 1%, 0.25W | R1 |
| 41281 | Resis, 22.6K Ohms, 1%, 0.25W | R1 |
| 41282 | Resis, 24.9K Ohms, 1%, 0.25W | R1 |
| 41283 | Resis, 27.4K Ohms, 1%, 0.25W | R1 |
| 41284 | Resis, 30.1K Ohms, 1%, 0.25W | R1 |
| 41285 | Resis, 33.2K Ohms, 1%, 0.25W | R1 |
| 41555 | Resis, 17.4K Ohms, 1%, 0.25W | R1 |
| 41556 | Resis, 22.1K Ohms, 1%, 0.25W | R1 |
| 41557 | Resis, 18.2K Ohms, 1%, 0.25W | R1 |
| 41558 | Resis, 20.0K Ohms, 1%, 0.25W | R1 |
| 41560 | Resis, 4.99K Ohms, 1%, 0.25W | R2 |
| 41575 | Resis, 19.1K Ohms, 1%, 0.25W | R1 |
| 41576 | Resis, 6.34K Ohms, 1%, 0.25W | R2 |
| 41577 | Resis, 6.65K Ohms, 1%, 0.25W | R2 |
| 41578 | Resis, 6.98K Ohms, 1%, 0.25W | R2 |
| <u>MISCELLANEOUS</u> | | |
| 30033 | SCR 4-40 X 0.25 PAN PHIL | |
| 30073 | E-Ring | |
| 30078 | Washer, Lock Split #6 Set | |
| 30088 | Thread Locking Compound | |
| 30110 | Screw, Socket Head, 6-32 X 0.18 | |
| 30144 | 4-40 X 3/16 Flthd Rlvd Phillips | |
| 30147 | Washer, Flt Sm Pattern | |
| 30148 | Washer, Lock Ext Tooth | |
| 40106 | Ground Lug | |
| 50091 | ASM Face Plate | |
| 50284 | Label Warranty | |
| 50288 | Washer | |
| 50458 | ASM Chassis (SC2) | |
| 50463 | Label, Ser No. | |
| 50468 | PCB Insulator | |
| 50475 | Disk Drive ASM-Tab | |

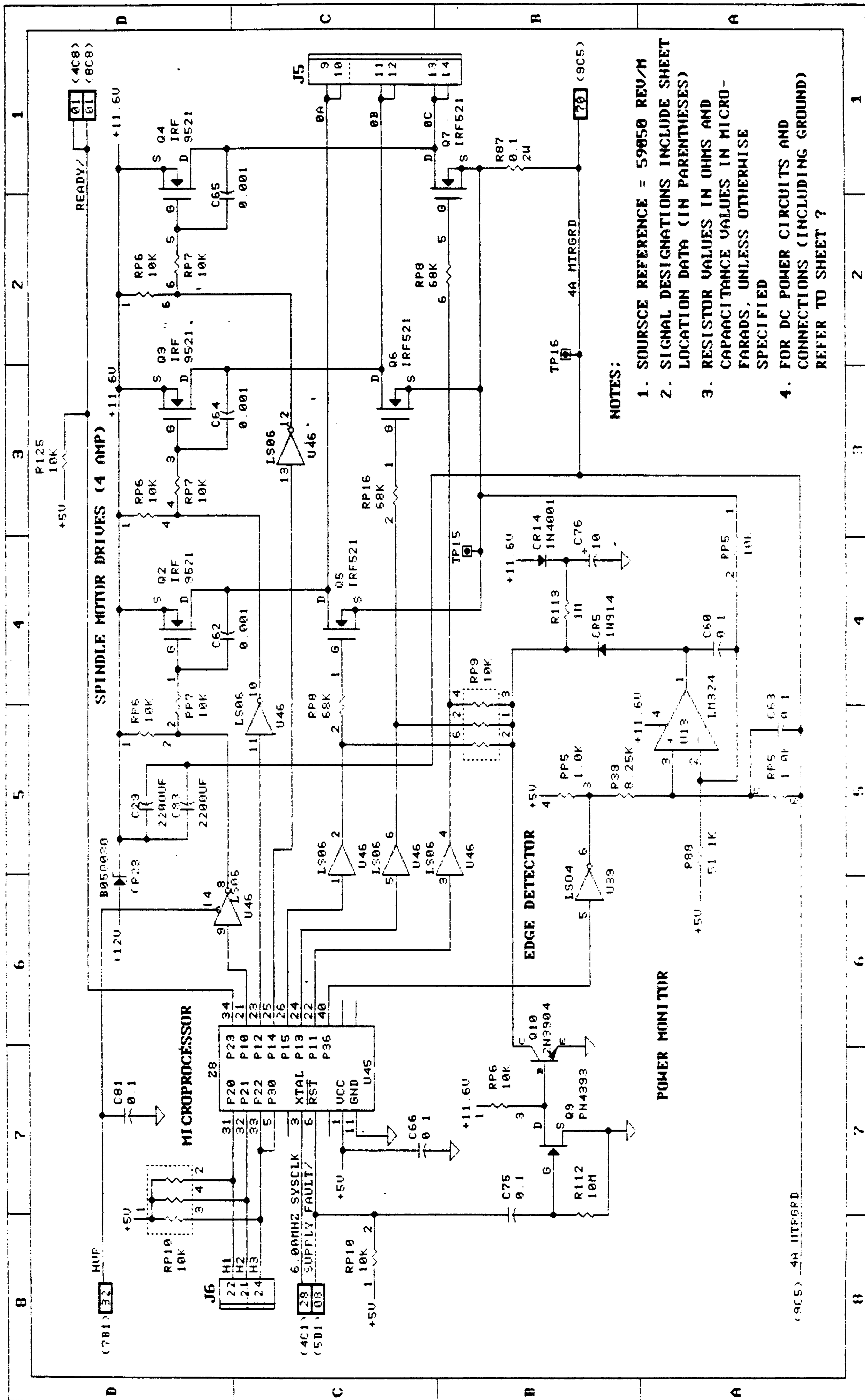
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SECTION VII

SCHEMATICS

7.1 INTRODUCTION

The schematic diagrams for the 5-1/4 Inch Fixed Media Disk Drive are located in figure 7-1.



- NOTES:
1. SOURCE REFERENCE = 59050 REV/M
 2. SIGNAL DESIGNATIONS INCLUDE SHEET LOCATION DATA (IN PARENTHESES)
 3. RESISTOR VALUES IN OHMS AND CAPACITANCE VALUES IN MICRO-FARADS, UNLESS OTHERWISE SPECIFIED
 4. FOR DC POWER CIRCUITS AND CONNECTIONS (INCLUDING GROUND) REFER TO SHEET ?

Figure 7-1. PCBA Schematic Diagram (sheet 1 of 10)
28 Microprocessor Circuits

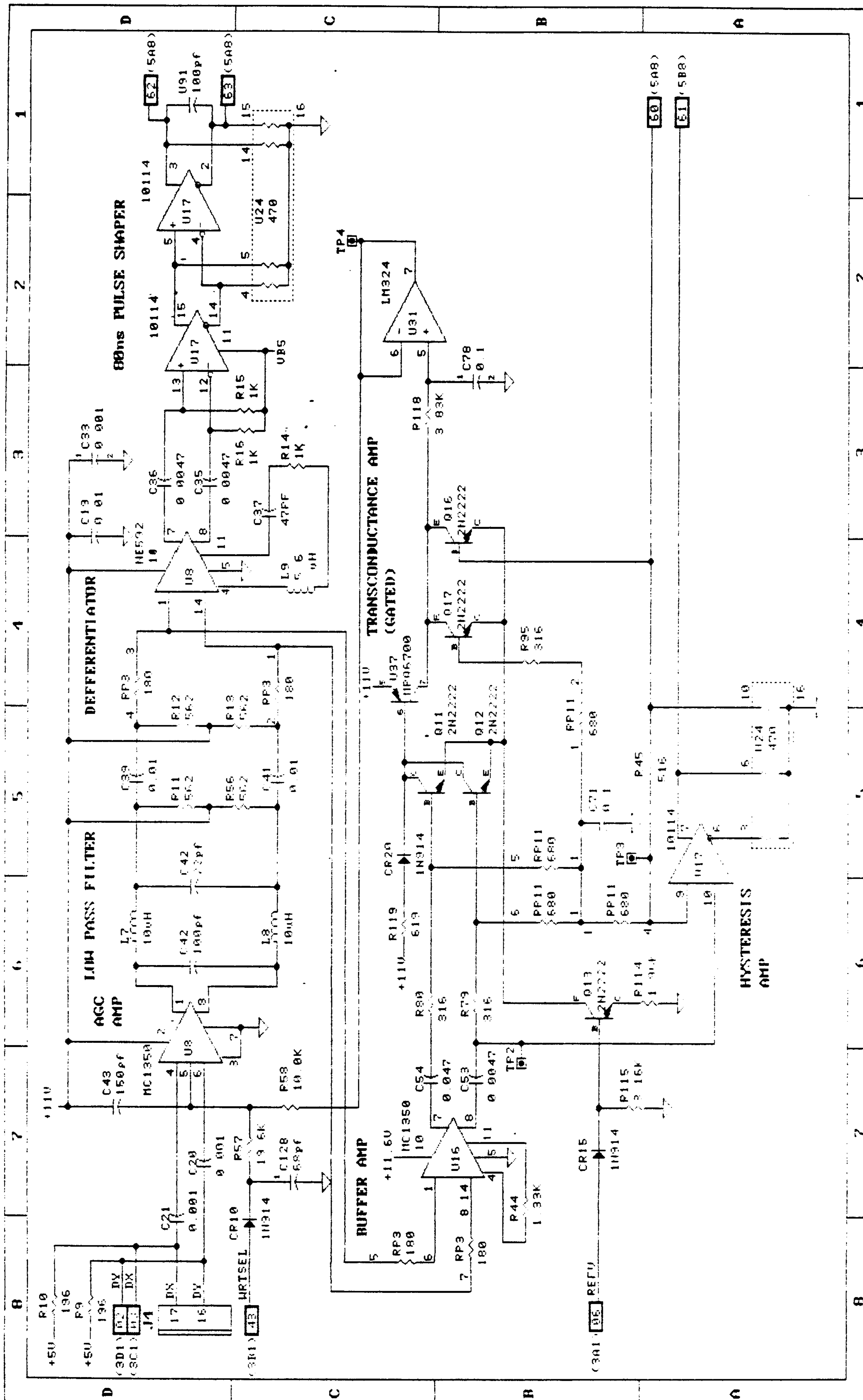


Figure 7-1. PCBA Schematic Diagram (sheet 2 of 10)
Z8 Microprocessor Circuits

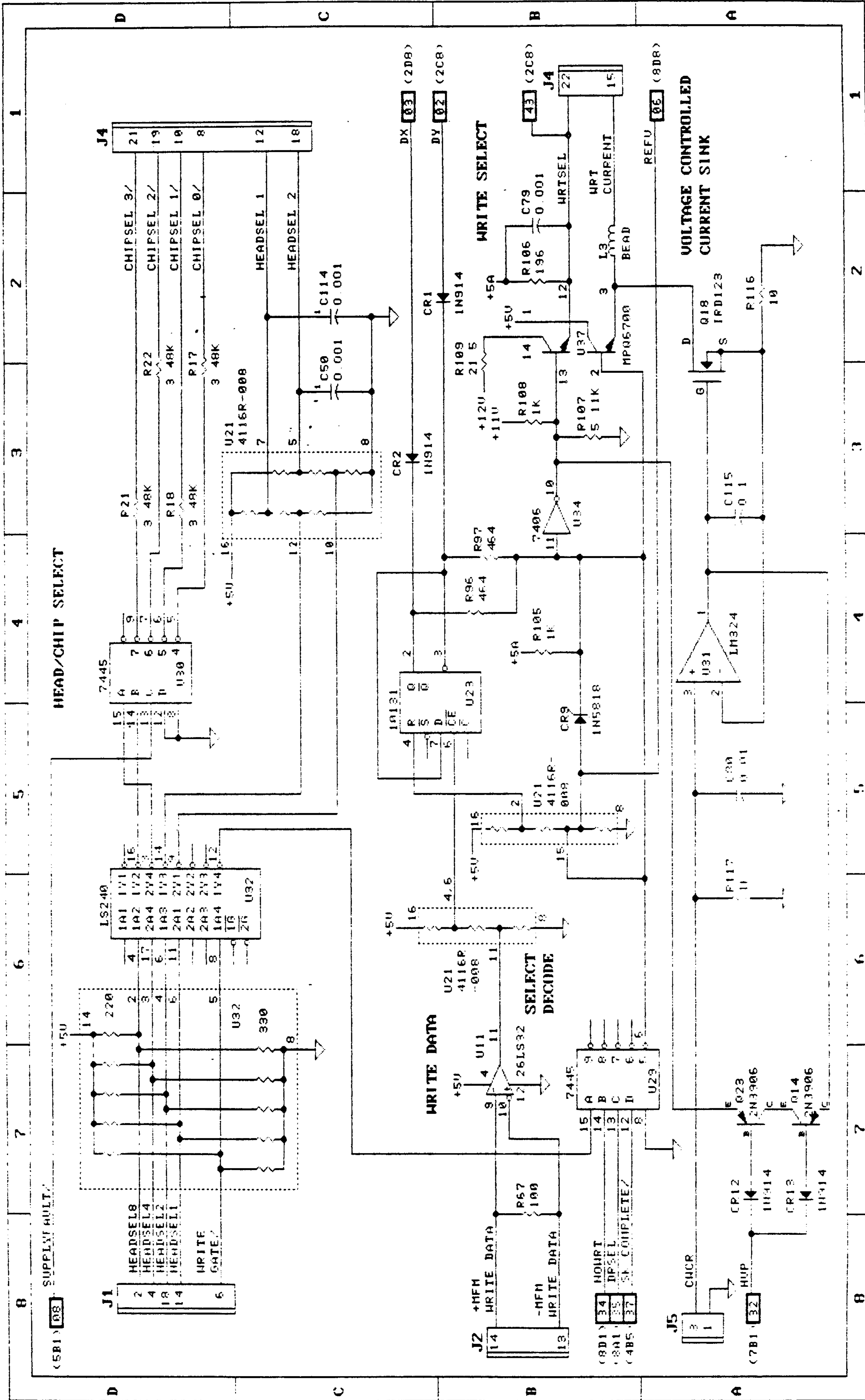


Figure 7-1. PCBA Schematic Diagram (sheet 3 of 10)
Z8 Microprocessor Circuits

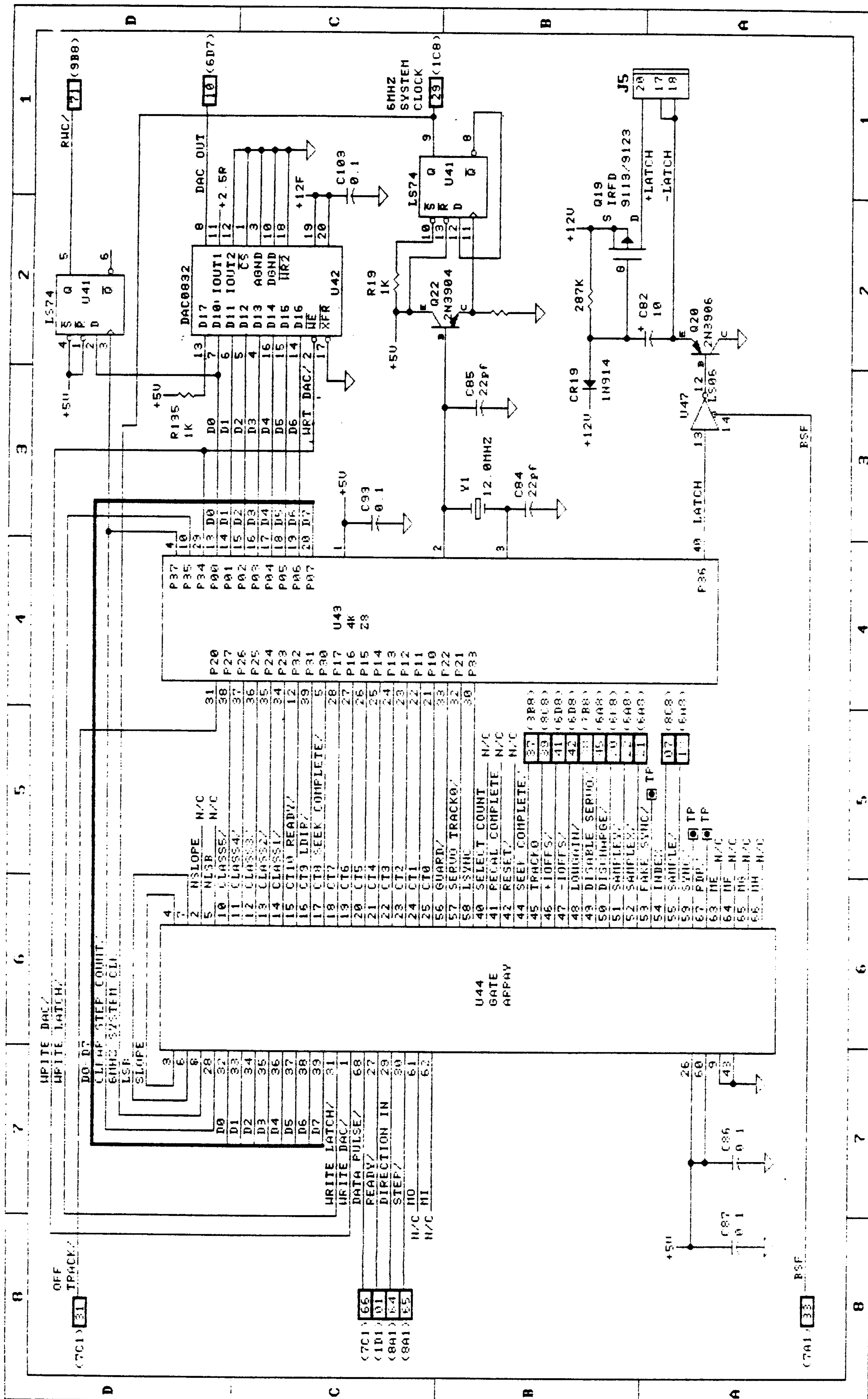


Figure 7-1. PCBA Schematic Diagram (sheet 4 of 10)
28 Microprocessor Circuits

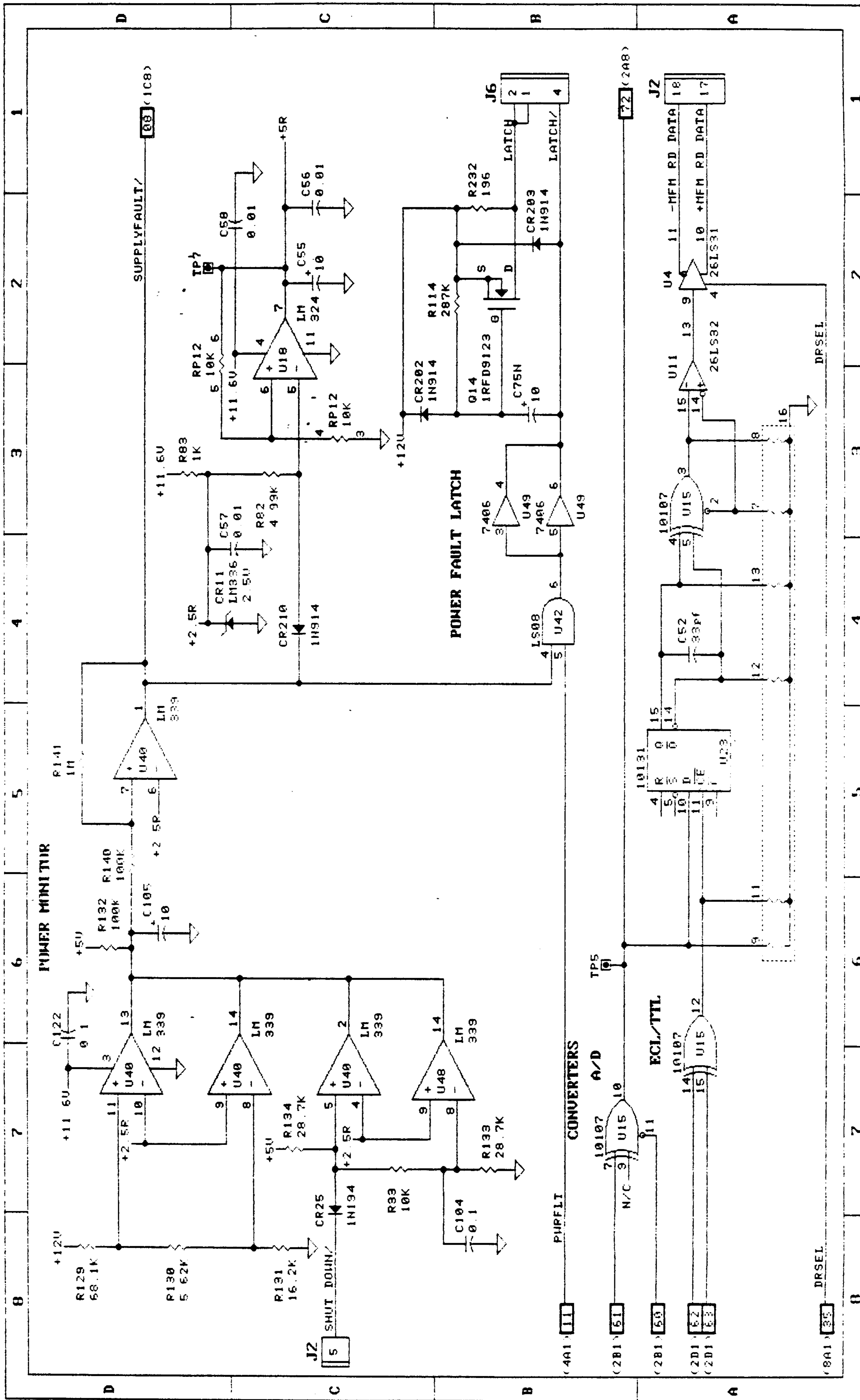


Figure 7-1. PCBA Schematic Diagram (sheet 5 of 10)
Z8 Microprocessor Circuits

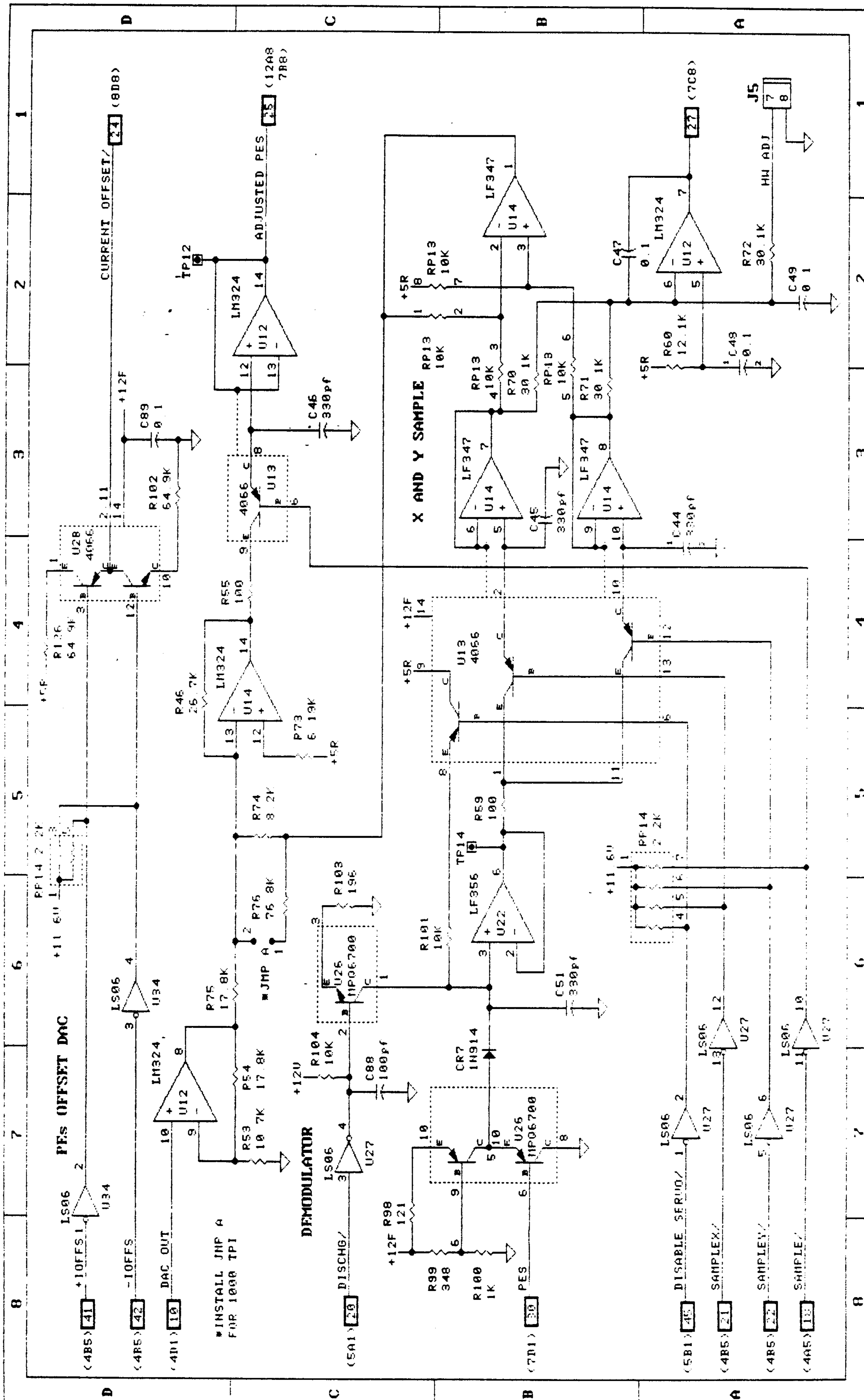


Figure 7-1. PCBA Schematic Diagram (sheet 6 of 10)
Z8 Microprocessor Circuits

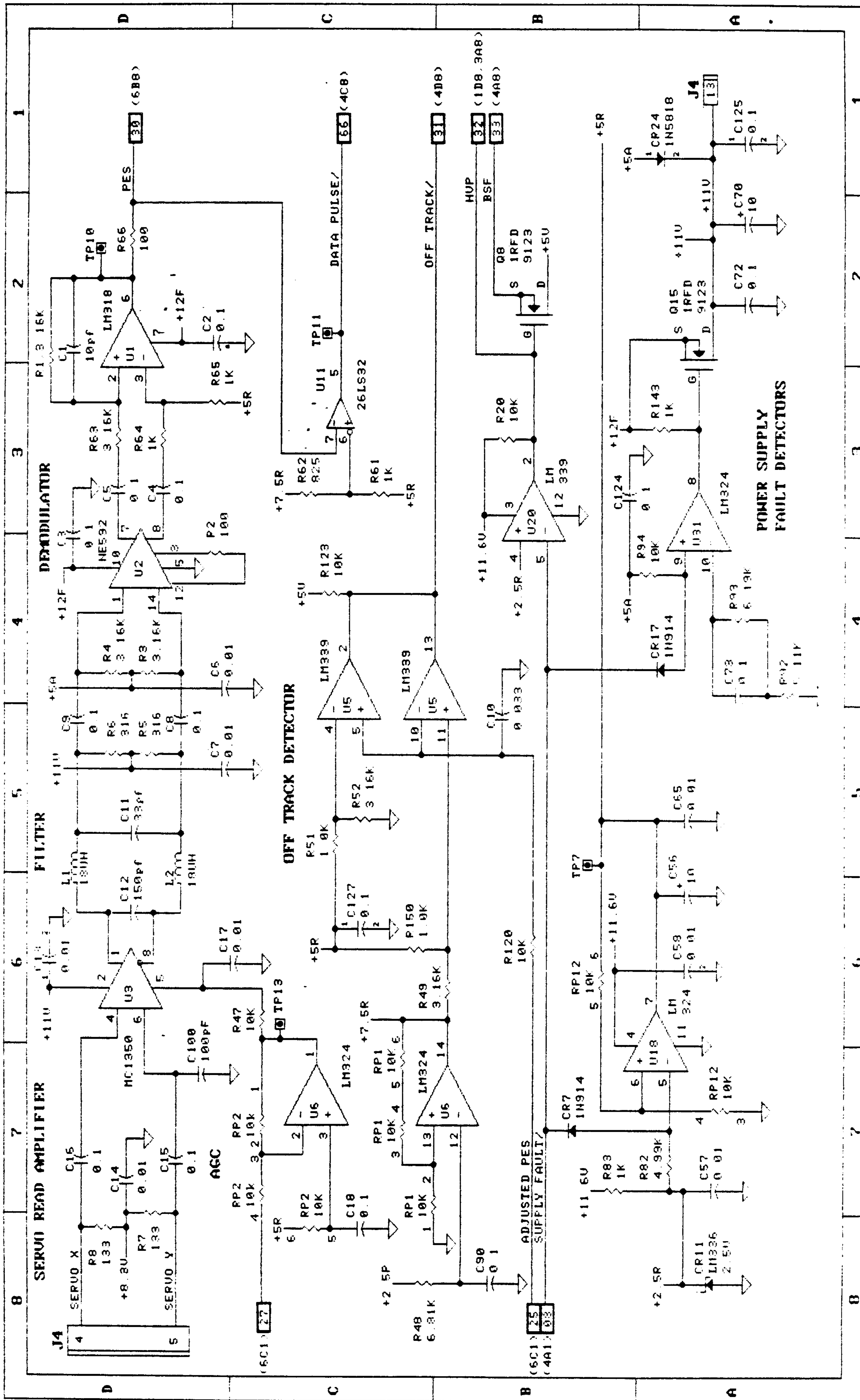


Figure 7-1. PCBA Schematic Diagram (sheet 7 of 10)
Z8 Microprocessor Circuits

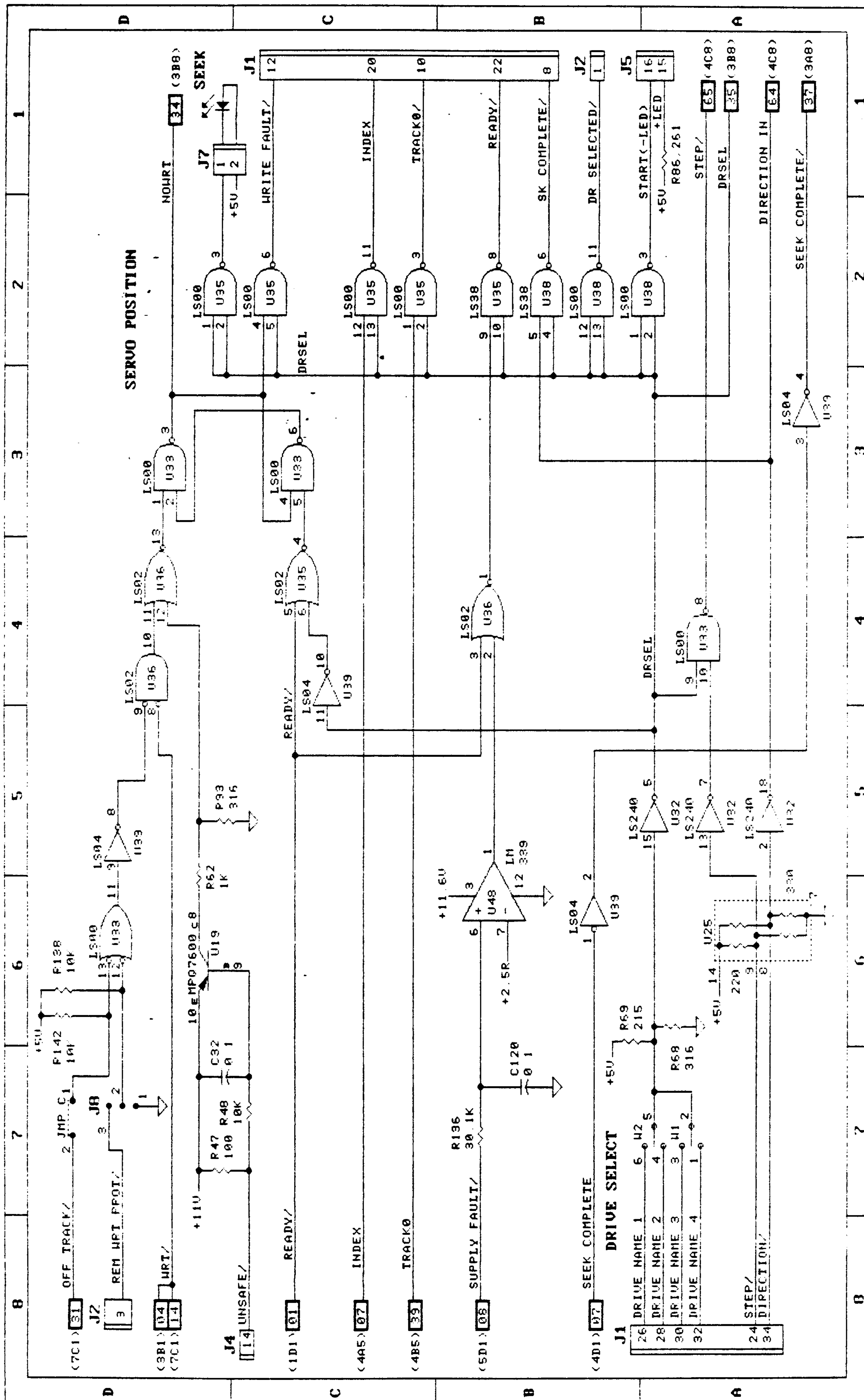


Figure 7-1. PCBA Schematic Diagram (sheet 8 of 10)
Z8 Microprocessor Circuits

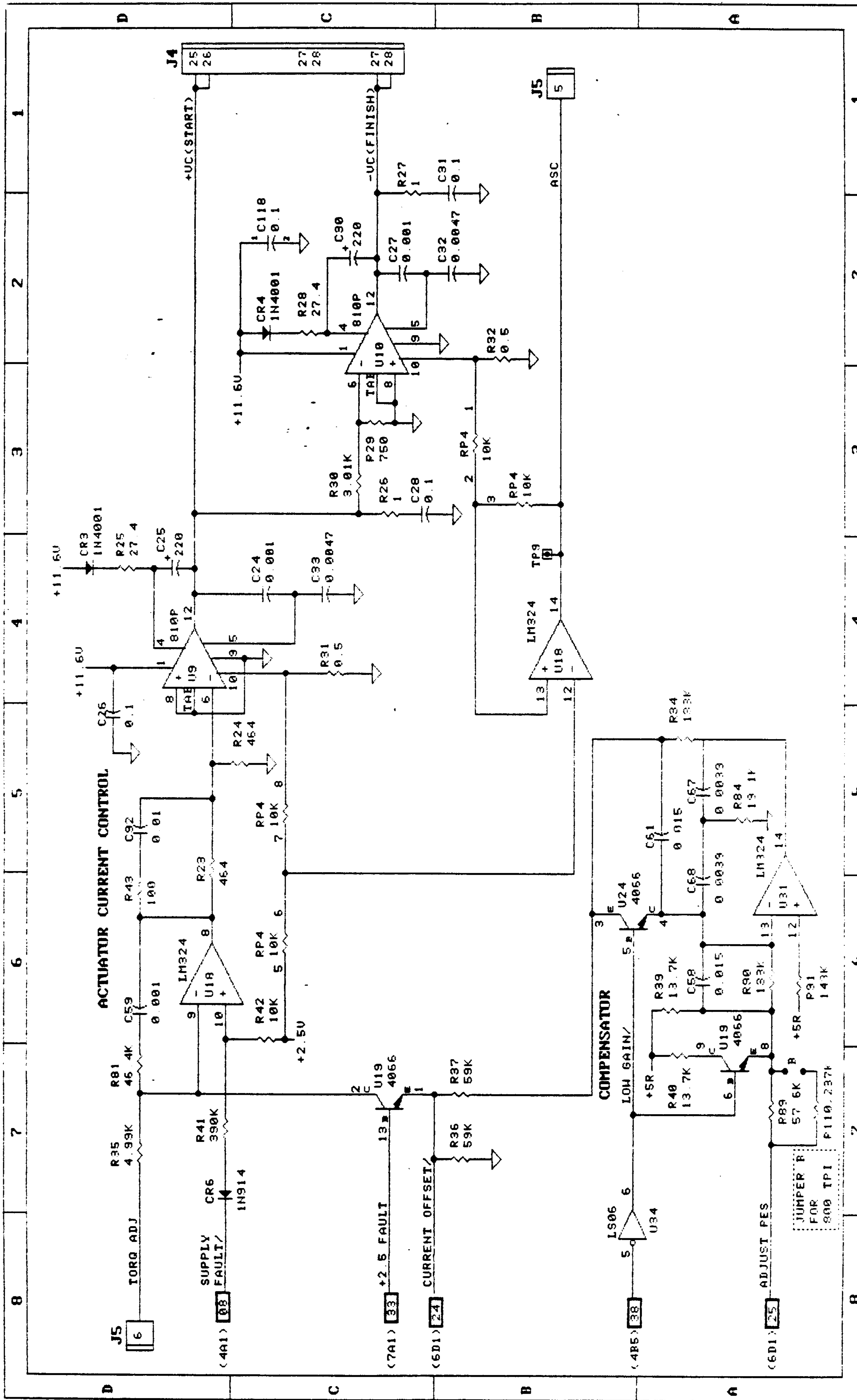
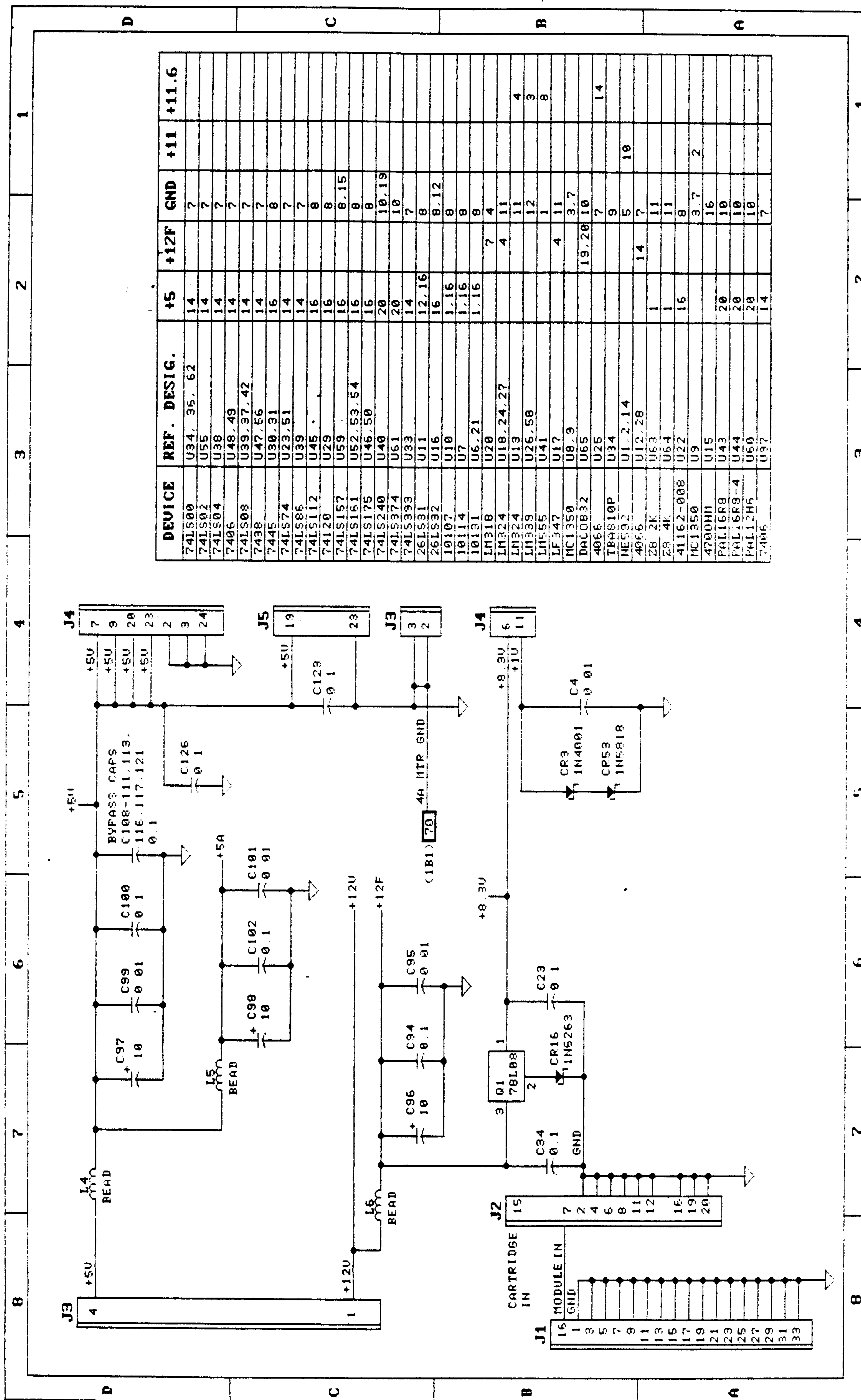


Figure 7-1. PCBA Schematic Diagram (sheet 9 of 10)
Z8 Microprocessor Circuits



| DEVICE | REF. DESIG. | +5 | +12F | GND | +11 | +11.6 |
|-----------|-------------|--------|------|--------|-----|-------|
| 74LS00 | U34, 35, 62 | 14 | | 7 | | |
| 74LS02 | U55 | 14 | | 7 | | |
| 74LS04 | U38 | 14 | | 7 | | |
| 7406 | U48, 49 | 14 | | 7 | | |
| 74LS08 | U39, 37, 42 | 14 | | 7 | | |
| 7438 | U47, 56 | 14 | | 7 | | |
| 7445 | U30, 31 | 16 | | 8 | | |
| 74LS74 | U23, 51 | 14 | | 7 | | |
| 74LS86 | U39 | 14 | | 7 | | |
| 74LS112 | U45 | 16 | | 8 | | |
| 74120 | U29 | 16 | | 8 | | |
| 74LS157 | U59 | 16 | | 8, 15 | | |
| 74LS161 | U52, 53, 54 | 16 | | 8 | | |
| 74LS175 | U46, 50 | 16 | | 8 | | |
| 74LS240 | U40 | 20 | | 10, 19 | | |
| 74LS374 | U61 | 20 | | 10 | | |
| 74LS333 | U33 | 14 | | 7 | | |
| 26LS91 | U11 | 12, 16 | | 8 | | |
| 26LS32 | U16 | 16 | | 8, 12 | | |
| 10107 | U10 | 16 | | 8 | | |
| 10114 | U7 | 16 | | 8 | | |
| 10131 | U6, 21 | 16 | | 8 | | |
| LM318 | U20 | 7, 4 | | 4 | | |
| LM324 | U18, 24, 27 | 4 | | 11 | | |
| LM324 | U19 | 11 | | 11 | | 4 |
| LM339 | U26, 58 | 12 | | 12 | | 3 |
| LM555 | U41 | 1 | | 1 | | 8 |
| LF347 | U17 | 4 | | 11 | | |
| MC1350 | U8, 9 | | | 3, 7 | | |
| DAC0832 | U65 | 19, 20 | | 10 | | |
| 4066 | U25 | | | 7 | | |
| TRAB10P | U34 | | | 9 | | |
| NE592 | U12, 14 | | | 5 | | 10 |
| 4066 | U12, 28 | | | 14 | | |
| 28 2K | U63 | 1 | | 11 | | |
| 28 4K | U64 | 1 | | 11 | | |
| 41162-008 | U22 | 16 | | 8 | | |
| MC1350 | U3 | | | 3, 7 | | 2 |
| 4700HN | U15 | | | 16 | | |
| PAL16R8 | U43 | 20 | | 10 | | |
| PAL16R8-4 | U44 | 20 | | 10 | | |
| PAL12H5 | U60 | 20 | | 10 | | |
| 7406 | U37 | 14 | | 7 | | |

Figure 7-1. PCBA Schematic Diagram (sheet 10 of 10)
28 Microprocessor Circuits