LEGEND

| S1 | $1-8$ | Node ID Select |
| :--- | :--- | :--- |
| S2 | $1-3$ | I/O Base Address Select |
|  | $4-6$ | Memory Base Address Select |
|  | $7-8$ | RAM Offset Select |
| EXT |  | $\quad$ Extended Timeout Select |
| IRQ |  | Interrupt Select |
| ROM |  | Enable Auto-boot PROM |

SETTING SWITCHES AND JUMPERS
A. Each switch is equivalent to a logical zero (0) when set to set to the ON or CLOSED position and a logical one (1) when set to the OFF or OPEN position.

1. For lever-type switches, push the switch up (towards the OFF position) to set it to a logical one, or down to set it to a logical zero.
2. For slider-type switches, DOWN is the same of OFF.
3. For rocker-type switches, press in as far as possible on the side of the switch labeled ON to set it to the ON position.
4. To select a jumper, connect the two pins of the jumper with a shorting plug.
C. SETTINGS FOR NETWARE
5. The most common switch settings are:
A. I/O base address 2E0
B. RAM memory address D0000
C. IRQ

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2. In the $S 2$ bank of switches, the OFF position would be for switches 2,5, and 6. Switches 1,3,4,7, and 8 are ON.
3. With different hardware configurations or other software, other switch settings may be required.
D. SETTING THE NODE ID

1. The eight switches in group $S 1$ are used to set the PC identification number of node ID.
A. Each node attached to the network must have a unique node ID. A node ID of zero (0) is not permitted.
B. Switch 1 serves as the least significant bit (LSB) for the node ID.
C. The following chart shows how to set the node ID to a decimal number.
```
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & \\
\hline Switch & - & - & - & x & - & X & X & X & On/Closed \\
\hline Group S1 & x & X & x & - & x & - & - & - & Off/Open \\
\hline
\end{tabular}
Example: Node ID 23
    Decimal = 1 + 2 + 4 + 16 = 11101000 Binary
D. After setting these switches, be sure to write the node ID on the identifying label located on the outer edge of the board.
E. Setting the I/O Base Address
1. Switches 1 - 3 in switch group \(S 2\) are mapped to the table of eight hexadecimal I/O base addresses shown below.
\begin{tabular}{lccc} 
I/O & I/O \\
\begin{tabular}{c} 
Address \\
Hex
\end{tabular} & \begin{tabular}{c} 
Switches \\
\(1-3\)
\end{tabular} & \begin{tabular}{c} 
Address \\
Hex
\end{tabular} & \begin{tabular}{c} 
Switches \\
1
\end{tabular} \\
& & & \\
260 & 0 & 0 & 0
\end{tabular}
2. Remember \(0=\) On/Closed \(1=\) Off/Open
F. Setting the Base Memory (RAM) Buffer Address
1. The memory buffer requires only 2 K of a 16 K block of RAM. The base of this 16 K block can be located in any one of eight positions.
2. S2 switches \(4-6\) select the base address of the 16 K block. Within that 17 K address space, the buffer may be assigned any one of four positions, determined by the offset, s2 switches 7 - 8.
Base Address --> \begin{tabular}{ccc} 
& Offset \\
& 2 K & 0 \\
2 K & 1 \\
& 2 K & 2 \\
& 2 K & 3 \\
& 8 K & ROM
\end{tabular}
```

3. These switches are mapped to the table of 32 hexadecimal base memory buffer addresses for the board shown below. For example, for D0000, set S2, 4-8 to 01100.
4. Three additional expansion cards may utilize the three unused 2 K blocks of memory. The remaining 8K is reserved for ROM.

| Address | $4-8$ | Address | $4-8$ |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
| C0000 | 000 | 00 | D4000 | 100 |
| C0800 | 000 | 01 | D4800 | 100 |
| C1000 | 000 | 10 | D5000 | 100 |
| C1800 | 000 | 11 |  | 100 |
|  |  |  | D8000 |  |
| C4000 | 001 | 00 | D8800 | 101 |
| C4800 | 001 | 01 | D9000 | 101 |
| C5000 | 001 | 10 | D9800 | 101 |
| C5800 | 001 | 11 |  | 101 |
|  |  |  | DC000 |  |
| CC000 | 010 | 00 | DD000 | 110 |
| CC800 | 010 | 01 | DD800 | 110 |
| CD000 | 010 | 10 | E0000 | 110 |
| CD800 | 010 | 11 | E0800 | 111 |
|  |  |  | E1000 | 111 |
| D0000 | 011 | 00 | E1800 | 111 |
| D0800 | 011 | 01 | 111 | 11 |
| D1000 | 011 | 10 |  |  |
| D1800 | 011 | 11 |  |  |

G. Setting the Timeouts and Interrupts

1. The jumper set labeled EXT is used to determine the timeout parameters. The two jumpers in this set are normally left open.
2. IRQ jumper set is used to select the interrupt level. The numbers next to each of the five jumpers correspond the interrupts.

| Jumper | Function |
| :---: | :---: |
| 2 | IRQ2 |
| 3 | IRQ3 |
| 4 | IRQ4 |
| 5 | IRQ5 |
| 7 | IRQ7 |

INSTALLING THE AUTO-BOOT PROM
A. This option allows a diskless PC to access the network by booting from the network disk. The PROM can also be used in PCs having floppy and/or hard disk drives.
B. The PROM requires 8 K of memory space on the board. To enable the PROM, the jumper labeled ROM must be selected by connecting the staking pins with a jumper.

1. Position the notch on the PROM over the notch on the socket.
2. Check to make sure each pin of the PROM is aligned with the receptacles on the socket.
3. Push the PROM into the socket gently, but firmly, making
sure not to bend the pins on the PROM. (dkh-08/03/93)
