Getting to know the PAL/EEPROM Programmer

1. From the c:\> prompt, type **cd Advin98** to change to the Advin98 directory and press **Return.** Now type **Advin** and press **Return**.

2. Select (using the Up and Down arrow keys) the software module s**pV** (Logic Advanced/Complex PLDs, 22V10, MACH, pLSI, etc.) and press **Return**.

3. Highlight the word **Configure** (using the Left and Right arrow keys) on the menu bar on top of the screen and press **Return**. Now highlight the word **Device** (using the Left and Right arrow keys) on the menu bar and press **Return**.

4. You should now see a list of manufactures on top of the screen. Select the manufacturer of the device (using the Left and Right arrow keys) that is to be programmed. For this semester, you should select **Lattice**. If your GAL/PAL does not say Lattice on it, select the appropriate manufacturer. Press **Return** to confirm your choice.

5. Now a list and description of all the devices for that particular manufacturer should be displayed on the screen. Using the Up and Down arrow keys, select the device you want to program. In our case, it should be the **GAL22V10**. If you refer to the notes on the right side of the screen, you should see that this category includes the **V10D** which is the chip we are using. Press **Return** to confirm your choice.

6. You should now see that in the bottom portion of the screen, **Device Type** has been changed to **Lattice GAL22V10**.

7. Now press **ESC**. Highlight the **File** option in the menu bar on top of the screen. Press **Return**. Using the Left and Right arrow keys, select **Directory** and press **Return**. Enter the directory where your .JED file exists. For example, **a:*.JED** will list all the files in the root directory of the floppy that end with the .JED extension. Select the file (you want to program) by highlighting it using the Up and Down arrow keys. Press **Return**.

8. Highlight the word **Load** from the menu and press **Return**. Your .JED file will now be loaded into a buffer to await programming.

9. Insert your device into the programmer. This can be done by first raising the lever on the ZIF (Zero Insertion Force) socket on the programmer. Next take your device with the notch pointing up, and insert it into the socket. The socket can accept devices of various sizes. Place the device as far up as it can go in the socket. Close the lever on the ZIF socket.

10. Press **ESC**. Highlight the word **PAL(device)** in the menu. Press **Return**. Select the word **Program** and press **Return**. You should see a status bar appear on the screen and then the programmer should indicate whether or not your device programmed and verified successfully.

11. Remove the device from the programmer by raising the lever on the ZIF socket. Because GAL/PALs are VERY static sensitive, be sure to place them in conductive foam while walking back to your work area.

12. Press **ESC** to return to the main menu.