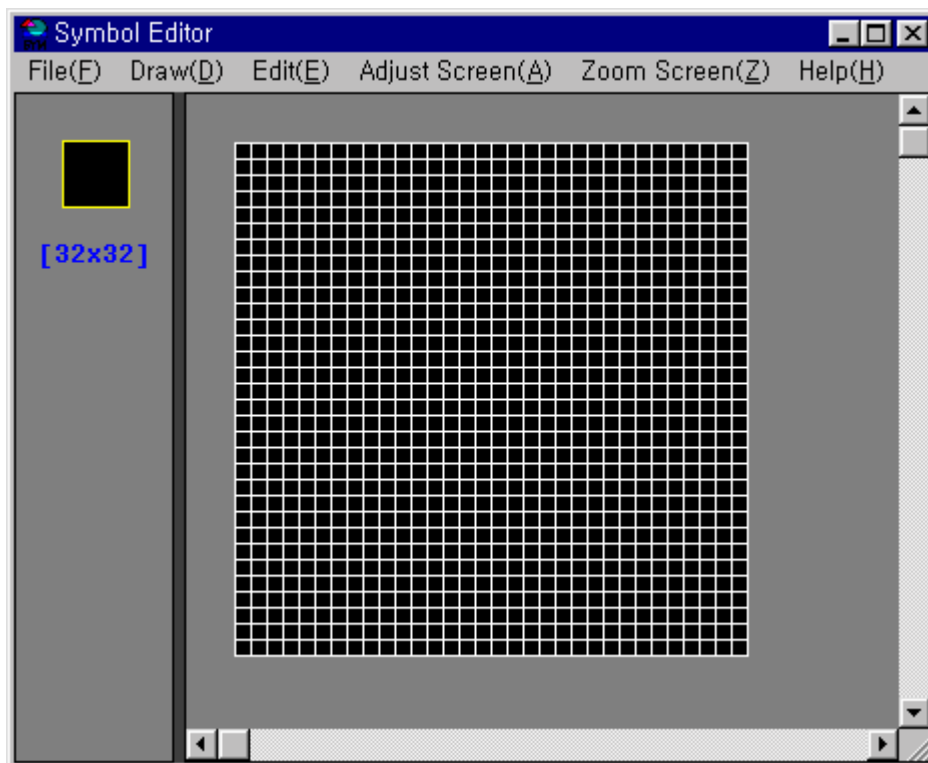# Chapter 6.   Symbol Editor Setup and Function

■ When the main machine operating, you can create symbols to be called open and draw shapes, such as pen, straight lines, ovals, and rectangle on the main screen.

■ The maximum size for symbols is 96 * 96 with the width and height each having units of 16 dots.

■ A bitmap(*.BMP) file created in paintbrush or capture in Windows can be called open and saved as a symbol. Please note that the background for paintbrush in Windows is white, and PMU background is black, thus the bitmap will appear in reverse black and white color from the original form.   To change to the original form, run "Reverse" in the "Edit" menu.

- Symbols with numbers after 900 is saved in image form.   In PMU 300/600, the width and height can only be multiples of 16.

- Image Sizes

PMU-200: width x height, From 16 x 16 to maximum 240 * 128 Screen size.

PMU-300: width x height, From 16 x 16 to maximum 320 * 240 Screen size (only multiples of 16)

PMU-600: width x height, From 16 x 16 to maximum 640 x 480 Screen size (only multiples of 16)

Note: -Ratio cannot be changed. (Enlargement and Reduction is not possible)

- In PMU 300/600, both the width and height must be saved in multiples of 16.
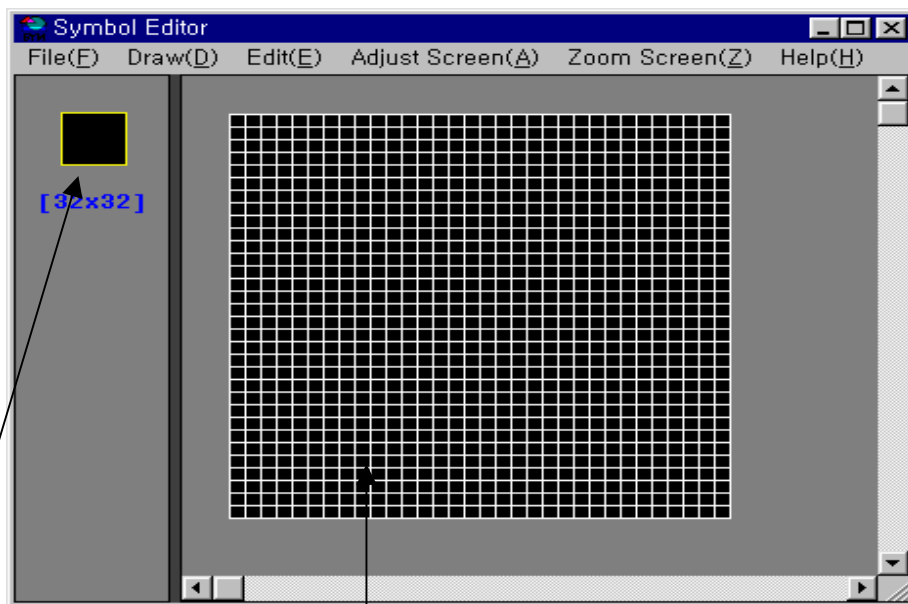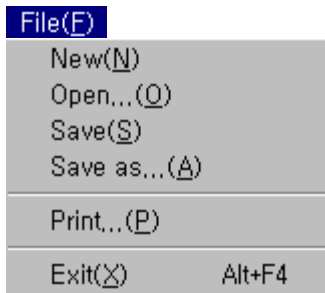

Actual Symbol   Edit Area

The left screen shows the actual size of the symbol, and the right is the work area to edit the symbol.

The symbol worked on in the right screen is shown in actual size on the left side.

6-1 File (F)

```
File(F)
 New(N)
 Open...(O)
 Save(S)
 Save as...(A)

 Print...(P)

 Exit(X)        Alt+F4
```

This menu allows you to manage files in Symbol screen by creating new files, saving and opening files, print, and
exiting the editing tools.

New   - This menu allows you to create a new symbol, and each symbol is managed as one file.
                       - When this menus is selected, a dialogue box appears to set the size of the newly created
                          symbol.

PMU-200/300/600Symbol File Menu   PMU-200/300/600 Image Symbol File Menu
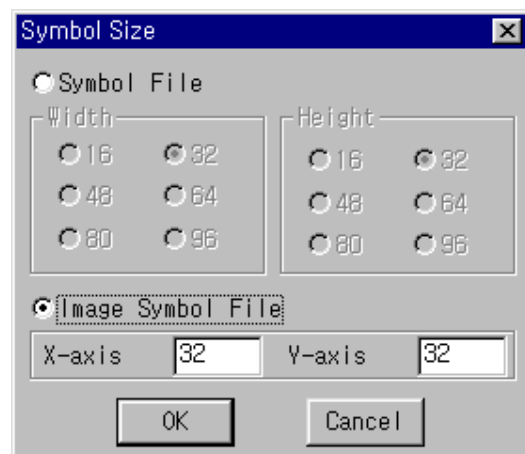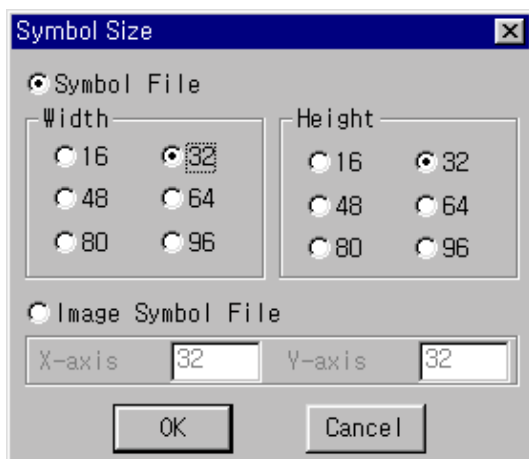
- The main symbol size is set with units of 16 dots for both the width and height, ranging from minimum 16 x 16 to
maximum 96 x 96.

- If Image symbol is selected for PMU-200, there is no need to specify 16 dot units for the width and height.

 PMU-200: width x height,   16 x 16 to maximum 240 * 128 screen size

 PMU-300: width x height   16 x 16 to maximum 320 * 240 screen size

 PMU-600: width x height   16 x 16 to maximum 640 X 480 screen size

- Please note that you are unable to change the ratio of the width and height, when the standard Image Files are
opened on the main screen.   Thus, enlargement and reduction is not possible.

Open   - To open a file, you can call open a file from the desired directory by entering the symbol file extension

".*sym" in the popped up dialogue box.

- "Width" and "Height" shows you the horizontal and vertical size of the currently selected symbol.
- "File Description" shows the file description the user specified when creating the file.
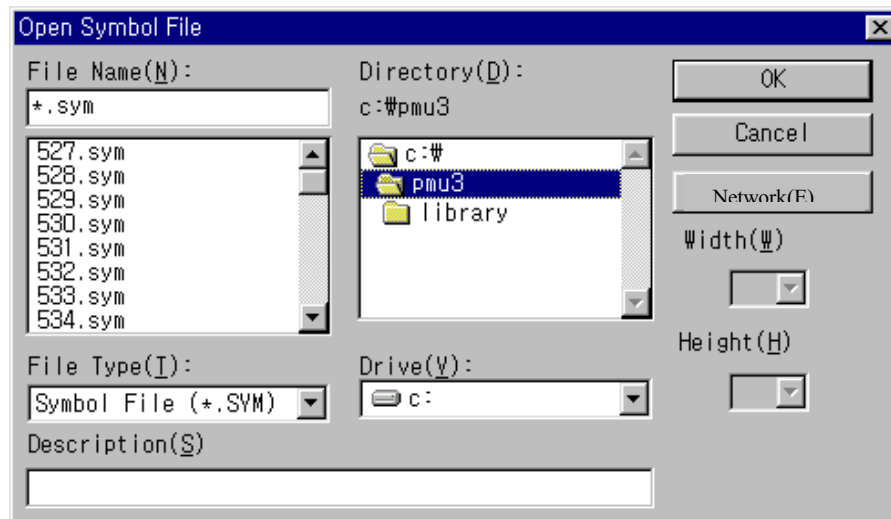
Save If it is a new file, specify name and save in the popped up "Save as …" dialogue box.
If the file was saved already has an existing name, the file will automatically be saved
without dialogue box.

- Symbol Files must be saved as numbers from 1 - 999. If an image symbol is created,
then the file name must be entered as numbers from 900-999.

Save As...

      - If this menu is selected, change the file name and directory and save in the popped up dialogue box.

      - If an Image Symbol, the file name must be entered as numbers from 900-999.

Print   - Prints Symbol File

      - When printing more than one file, the specified range of symbol files in the current directory is printed.

- If the current file is selected, then the opened symbol on the current screen is printed. If a range is specified to print multiple files, the symbols in accordance with those numbers are printed. One symbol per page is printed.
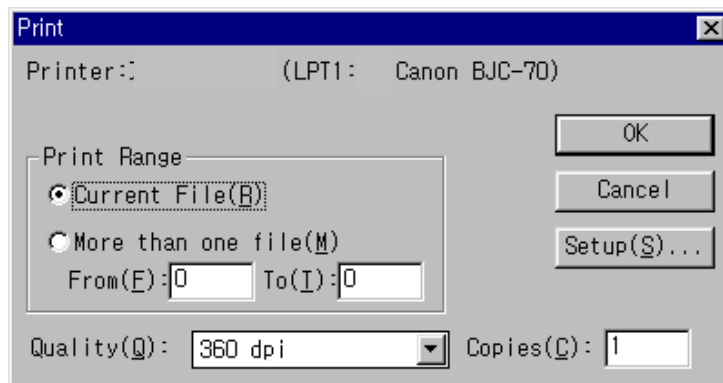
Exit   - If "Exit" is selected, then Symbol Editor is exited.

      If "Exit" is selected when creating a symbol, a window appears inquiring whether you wish to save the created file.

6-2 Draw

```
Draw(D)
  Pen(P)                    Ctrl+P
  Line(L)                   Ctrl+L
  Rectangle(R)              Ctrl+R
  Painted Rectangle(T)  Ctrl+T
  Oval(C)                   Ctrl+E
  Painted Oval(F)           Ctrl+F

  Eraser(E)                 Ctrl+X
```
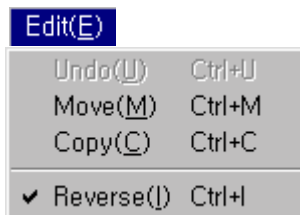
This menu allows you to draw symbols in the symbol creating area.

5 different shapes can be drawn.

Pen   clicking the left mouse button will draw a dot.   Holding the left button down and dragging
                        the mouse draws over the area the cursor passes.

Line   A Straight is drawn from the point the left mouse button is held down to the point the button
                        is released.

Rectangle   A Rectangle is drawn from the point the left mouse button is held down to the point the
                        button is released.

Painted Rectangle   A colored-in Rectangle is drawn from the point the left mouse button is held down to the
                        point the button is released.

Oval   Drawn the same way as the Rectangle but an oval is inscribed in the Rectangle.
                        - The point the mouse was held down and the point released becomes the corners of the
                        circumscribed Rectangle.

Painted Oval   Drawn the same way as the oval but a colored-in oval is drawn.

Eraser   clicking the left button, or holding down the button and dragging the mouse erases the area
                        the cursor passes.

6-3. Edit

Edit(E)
Undo(U)	Ctrl+U
Move(M)	Ctrl+M
Copy(C)	Ctrl+C
✔ Reverse(I)	Ctrl+I

This menu allows you to cancel/move/copy/reverse items on the Symbol Screen.

Undo   Cancels the last action. If there was no action taken, then this menu cannot be selected.

Move   Select the area to be moved by clicking the left mouse button and dragging the cursor to

draw a Rectangle around the area and then let go of the button.

- This selected area will follow the cursor moved by the mouse.

- Clicking the left button at the new location will move the selected area.

- To delete a certain area, move the selected area outside of the working screen and

 the area lying outside of the screen will be deleted.

Copy   Select the area to be copied by clicking the left mouse button and dragging the cursor to

draw a Rectangle around the area and then let go of the button.

- This selected area will follow the cursor moved by the mouse.

- Re-clicking the left button at the new location will copy the selected area.

Reverse   Select the area to be reversed by clicking the left mouse button and dragging the cursor to

draw a Rectangle around the area and then let go of the button.

Re-clicking the left button will reverse the selected area.

6-4. Adjust Screen

Adjust Screen(A)
Delete All(D)
Paint All(F)
Reverse All(I)
Open Bitmap File(B)

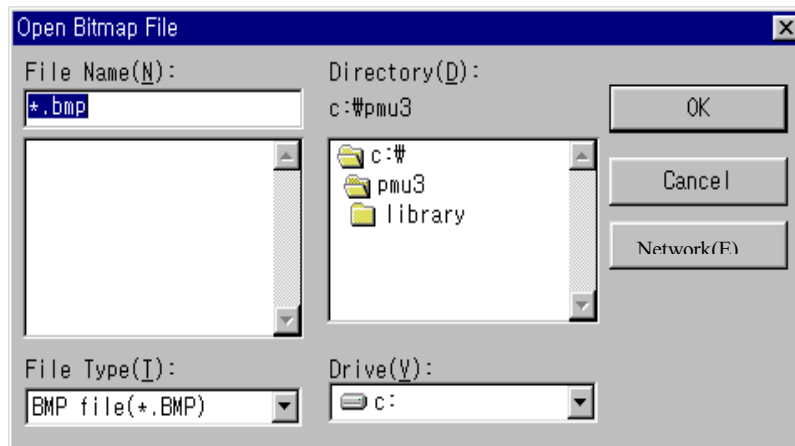Delete All   Deletes the full screen

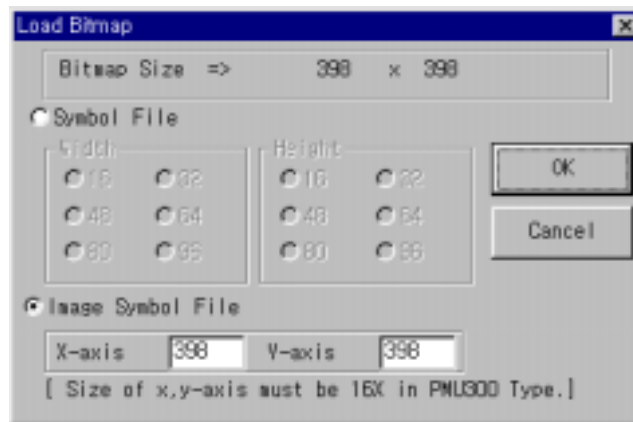Paint All   Paints the full screen white

Reverse All Reverses the full screen.

        The black area becomes white, and the white area is reversed to black.

Open Bitmap File   This menu allows you to read the picture data captured in the paint brush or window screen.

   - The extension to read the data is "*.BMP"

Edit the data read from this menu, and save the data in "*.SYM" format for PMU use.

- When reading Bitmap files, the following should be noted.

1. Even if the actual BMP file has a picture using various color palettes (16 colors, 256 colors, etc.), when called open through this menu, all colors are changed to either black or white. The original colors are reversed. This is because the background color of the window for the application program is usually white and the background for PMU is black. The colors that are not white will all appear in black.

2. First select whether you will use a symbol file or an image file.

   - For a symbol file, select a size between 16 x 16 and 96 x 96. If the BMP file is smaller than the selected size, the dots outside of the area will appear in black.

   - For an image file, select the following numbers
     PMU-200: width x height,   16 x 16 to maximum 240 * 128 screen size
     PMU-300: width x height   16 x 16 to maximum 320 * 240 screen size
     PMU-600: width x height   16 x 16 to maximum 640 X 480 screen size

6-5. Zoom Screen

Zoom Screen(Z)
Zoom In(I)
Zoom Out(O)
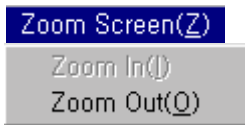
If the symbol creating area is too small or too big, this menu allows you to adjust the area to an appropriate size.

Zoom In   One dot in the working screen area is 8 x 8 pixels.   This function is convenient when detailed work is necessary on a large symbol.
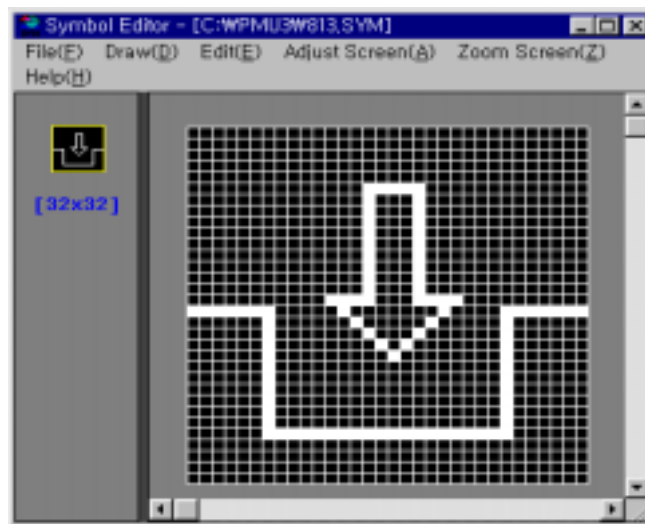
Zoom Out   One dot in the working screen area is 4 x 4 pixels.