**Main Index**

The Chartist help information is organized into the following major areas:

Keyboard/Mouse
Using the Cursor
The Tool Bar
Commands
Procedures

**Context Help:**

In addtition to using the help system via the Index, Browsing, or Searching, you may also get help for any **Chartist** menu item:

Activate a **Chartist** pull down menu, using **Alt+** the underlined letter of the item in the menu bar (e.g. Alt+F for the File menu), or by clicking on the menu bar item with the mouse left button.

Highlight the menu command for which you want help by using the arrow keys.

Press F1, and the Help system will display information on that command.

**Keyboard / Mouse**

How the keyboard and mouse is used in Chartist is descirbed below:

General     - General Windows interface reference
Accelerators - Short cut key sequences.
Main Window -     How the main window is organized.

**Command Index**

The Main Menu commands are described in the following sections:

**Procedures Index**

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Where did you get the demo version? _____

Software includes, manual, 1 year tech support / update notification, ten additional shape libraries.

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**Chartist-2 Enhanced Product Information.**

Chartist-2 is an enhanced product, upward compatible with Chartist. In addition to all of the features of Chartist, Chartist-2 includes:

**OLE Client Support**

Link or embed OLE objects from Chartist-2 or other applications into symbol pictures or symbol references.

Browse capablility for symbol references.

Nest charts inside symbols, and automatically print the nested charts.

**Advanced Group Editing Functions**

Group resize, allowing all or part of a chart to be resized, or respaced.

Text grow / shrink in selected symbols.

Align to row, column or grid.

**Permanent Grouping Support**

Make a permanent grouping of any set of selected symbols.

**Spell Checker Interface**

Support for using your word processor spell checker to check Chartist-2 documents.

**Symbol Text Word Wrap / Flow**

Automatically wrap text as it is entered. Automatically reflow symbol text whenever symbol is changed.

**Templates**

Use any chart file as a template for new files. Can autoload a template on program launch.

**Text File Exchange Format**

Externally document file save and load format for charts. Use to integrate Chartist-2 with other user software.

**Rotate, Flip Shapes**

Symbol shapes may be rotated in 90 degree increments, or reflected about either axis.

**Rotate Text**

Symbol text may be rotated in 90 degree increments.

**Find / Replace**

Symbol text may be searched and replaced with standard dialogs.

**Additional Symbol Text Macros**

Place document title, page number or symbol identifier number in symbols.

**Using The Cursor**

The appearance of the cursor changes in the main window, depending on whether any items are selected, or some action is under way:

**Cursor** | **Meaning**

Arrow — No items selected.

Cross — One or more items selected.

Dotted Box — Adding, moving or pasting.

Gunsight — Waiting for initial point selection in a multistep operation.

Pencil — Drawing or selecting a line.

Double Arrow — Cursor is over a sizing handle for the selected symbol.

Quad Arrow — Sizing a symbol, or selecting a group.

Router — Routing lines.

Hourglass — Time consuming operation.

**General**

Refer to the Microsoft (c) Windows (tm) User's Guide for general instructions on using Windows applications.

**Accelerators**

Certain keys act as "accelerators" for some menu actions. This allows a short key sequence to activate a menu action.   Activate the main menu with F10 and pull down each submenu to see these key assignments. Accelerator keys do not operate when a menu is active.

**Main Window**

Unique Keyboard/Mouse Actions In Main Window:

**Home**          Restores the display to the horizontal origin.

**Ctrl+Home**  Restores the display to the chart origin.

**End**            Moves the display horizontally to show the right side of the chart.

**Ctrl+End**    Moves the display vertically to show the bottom of the chart.

**Page Down**  Moves the display down by 1/2 of the window height.

**Ctrl+**
**Page Down**  Moves the display right by 1/2 of the window width.

**Page Up**    Moves the display up by 1/2 of the window height.

**Ctrl+**
**Page Up**    Moves the display left by 1/2 of the window width.

**Esc**            Aborts the current action.

**Left Button** Selects/Deselects a symbol if cursor is inside that symbol

**Left Button**
**Click&Drag**  If inside a symbol, selects and begins moving that symbol. Otherwise, begins
                selecting a group symbols.   Mouse movement is tracked until button is
                released, at which time the action completes, if possible.

**Shift+**
**Left Button**
**Click/Drag**  If inside a symbol, adds that symbol to those selected, and begins moving
                them as a group. Otherwise, begins adding to a selected group of symbols.
                Mouse movement is tracked until button is released, at which time the action
                completes, if possible.
**Shift+Ctrl**
**Left Button**
**Click/Drag**  If inside a symbol, toggles the selected state of that symbol, without affecting
                any other symbols.

**Arrow Keys** Arrow keys move the cursor in the direction indicated. Holding down a key

causes the rate of movement to increase as it repeats.

**Return Key**   The Return or Enter key simulates a click of the left mouse button.

**The Tool Bar**


The Tool Bar lies just below the main menu.   Its purpose is provide point-and-click short cuts to some frequently used commands, and to show **status**   information.


Button          Command


⊞          Symbol Add...
⌗          Symbol Shape...
Ⓒ          Symbol Color...
⊞          Symbol Picture...
⑤          Symbol Reference...
±↑          Line Add...
⌗↑          Line Style...
c↑          Line Color..
F          Symbol Text Font...
FF          Symbol Text Enlarge
Fr          Symbol Text Reduce
≣          Symbol Text Justify Left
≣          Symbol Text Jusify Center
≣          Symbol Text Justify Right
⊟          Symbol Text Justify Vertical Center
⊡          Symbol Text Justify Top
⬚          Options Default Symbol Size...
⬚          Symbol Reset Size

<u>Status Information</u>


To the right of the Tool Bar buttons is status information:
Rect  ——  |_  ▸▬  Courier 12pt  100%

1.       Default shape, colors and border style for symbols.
2.       Default source arrow, routing style and line style and colors, destination arrow and font for lines.
3.       Current viewing scale factor

**The Shape Palette**


The Shape Palette is visible along the right hand side of the Chartist-2 Window when the **View Shape Palette** command is checked. This palette may contain up to 16 shapes from the current shape library, and provides a quick way to add symbols of different shapes. See **Adding Symbols**. The contents of the Shape Palette can be customized from the **Select Symbol Shape** dialog.

**Adding Text Outside Symbols**

All text in a chart document must either be inside a symbol or on a line, as a line label (set in the Line Style... dialog).

There is, however a special shape that is used for placing text in a chart, such that it does not appear to be inside a symbol. This shape is called **Titl-Cent.** On the default shape palette it appears as a rectangle with a phantom, or dashed, border. In a chart, on the main display it also has a phantom border, so you can see where it is, and what the boundaries are. When printed, however, there is no border.

Note that any lines connected to the **Titl-Cent** shape will go all the way to the center of the shape. This is because the **Title-Cent** shape has a secondary use as a line connector or waypoint. To have free floating text that does not appear to be inside a symbol, but has lines terminating at the bounding rectangle, use a **Rect** shape, and color the border white with the symbol color dialog.

**File Menu Commands**

**File**
  **New**

  Erases the current chart, and resets the default line style.

**File**
  **Open...**

  Loads a chart from a file. The default extension for chart files is ".CHT".

**File**
  **Save**

  Saves the current chart into the current file. If there is no current file, the user is prompted for a file name.

**File**
  **Save As...**

  Saves the current chart into the file specified by the user.

**File**
  **Print...**

  Prints the current chart.

**File**
  **Delete**

  Allows you to choose and delete files.

**File**
  **Setup Printer & Paper...**

  Selects and configures the current printer, and paper settings

**File**
  **Load Shapes...**

  Loads a shape file.   A shape file defines the names and drawing instructions for symbol types. See Help About...

**File**
  **Exit**

  Exits the Chartist application. If the current chart has been changed, the user will be prompted to save or abandon it.

**Edit Menu Commands**

**Edit**
  **Delete...**
    Deletes selected items.

**Edit**
  **Undo**
    Restores previously changed items.

**Edit**
  **Copy**
    Copies the selected symbols and lines to the Clipboard.

**Edit**
  **Cut**
    Copies the selected symbols and lines to the Clipboard and deletes them from the chart.

**Edit**
  **Paste**
    Copies the contents of the Clipboard to the chart.

**Symbol Menu Commands**

**Symbol**
  **Add...**
      Adds a new symbol to the current chart.

**Symbol**
  **Select**
      Selects a group of symbols.

**Symbol**
  **Select All**
      Selects all symbols in the current chart.

**Symbol**
  **Select by Shape**
      When one symbol is selected. You can use this command to select all other symbols
      that have the same shape.

**Symbol**
  **Select To End**
    **Right**
    **Left**
    **Up**
    **Down**
      Selects all symbols from the selected symbol to the end of the chart in the direction
      indicated.

**Symbol**
  **Move**
      Relocates the selected symbols, together with any lines.

**Symbol**
  **Shape...**
      Selects a new shape for the selected symbols.

**Symbol**
  **Color**
      Sets the background, border and text color for symbols.

**Symbol**
  **Hatch Pattern...**

Sets the hatch pattern for the selected symbols, or the default, if no symbols are selected. A symbol may also be made transparent in this dialog, as in the Symbol color dialog.

**Symbol**
  **Size**
    Changes the size of the selected symbol.

**Symbol**
  **Reset Size**
    Changes the selected symbols to the current default size setting.

**Symbol**
  **Text**
    **Edit...**
    Edits the text inside a symbol, and allows the selection of fonts for use with that text.

**Symbol**
  **Text**
    **Font...**
    Modifies fonts in the selected symbol or symbols.

**Symbol**
  **Justify**
    **Left**
    **Center**
    **Right**
    **Top**
    **Vertical Center**
    Sets the text justification of the selected symbols.

**Symbol**
  **Picture...**
    Selects the bitmap picture to be displayed inside the symbol.

**Symbol**
  **Reference...**
    Edits the reference command line for the symbol.

**Line Menu Commands**

**Line**
### Add
Adds a line from one symbol to another.

**Line**
### Select
Selects a line between two symbols.

**Line**
### Pick From Symbol
Selects the lines connected to all selected symbols, then deselects the symbols.

**Line**
### Font...
Selects the font to be used for line labels.

**Line**
### Style...
Changes the pen style, line width, arrow style and label text for the selected line.

**Line**
### Color...
Selects the color for lines and line labels.

**Line**
### Add Waypoint
Segments a line and inserts a "handle" between the segments, allowing manual manuipulation of the route.

**Line**
### Main Branch
Causes the selected line to be the line to which all other lines, connecting to the same point, fan into. The Options Auto Fan In command must be checked for the fan in logic to operate.

**View Menu Commands**

**View**
  **Refresh**
    Redraws the chart display.

**View**
  **Zoom In**
    The scale of the display is increased by one step, to 4X full scale at most.

**View**
  **Zoom Out**
    The scale of the display is decreased by one step, to a minimum of 1/4 full scale.

**View**
  **Normal**
    The display is returned to full scale.

**View**
  **Reference**
    The reference document of the symbol is activated.   See Establishing A Symbol
    Reference.

**View**
  **Tool Bar**
    When checked, the Tool Bar is displayed.

**View**
  **Shape Palette**
    When checked. the Shape Palette is displayed along the right side of the Chartist-2
    Window

**View**
  **Grid**
    When checked, the grid is displayed.

**View**
  **Ruler**
    When checked, the ruler is displayed.

**View**
  **Pictures**

When checked, pictures that have been loaded into symbols are displayed.   When not checked, gray rectangles are displayed in place of the pictures to save time.

**View**

**Line Attach Points**

When checked, locations on symbols where lines can be attached are shown. The number of line attachment points per symbol side is selected with the **Options Line Attach Points...** command.

**Options Menu Commands**

**Options**

  **Default Symbol Size...**

    Selects the initial size of new symbols added to the chart. Sizes of symbols already in the chart may be changed to the default size by selecting them and using the Edit Reset Size command.

**Options**

  **Chart...**

    Select the chart dimensions, units and grid spacing.

**Options**

  **Snap to Grid**

    When checked, symbol positions and dimensions are rounded to the nearest multiple of the grid interval for that axis.   Note that symbols are positioned relative to their **centers**.

**Options**

  **Line Attach Points**

    Selects the number of possible line attachment points per symbol side. The possible selections are 1, 3, and 7 attachment poitns per side. Existing lines are not affected. Checking the **View Line Attach Points** command shows the attachment points on symbols.

**Options**

  **Auto Fan In**

    When checked, **Auto** routed lines fan into the first line that connects to a given attach point, with the arrows at the first line, or main branch. The main branch can be chosen with the **Line Main Branch** command.

**Options**

  **Fast Line Routing**

    When checked, lines route to the bounding rectangle of symbols, rather than the actual boundary of the solid region of symbols. This results in much faster routing of lines, at less accuracy in some cases. When not checked, lines route to the boundary of the solid region of symbols.

**Options**

  **Active Planes**

    **0**

    **1**

    **2**

**3**

**4**

**5**

Turns on or off the selection and designation logic in the six symbol planes. This is useful for working with symbols in layers.

**Options**

### Add Symbol Dialog

When checked, the **Choose Symbol Shape** Dialog is called when a new symbol is added to the chart, to allow shape selection.   When not checked, the new symbol takes on the current default shape properties.

**Options**

### Edit Colors

Edits current palette colors.

**Options**

### Get Colors

Retrieves a file containing a set of palette colors.

**Options**

### Save Colors

Saves the current set of palette colors into a file.

**Options**

### Background Color...

Sets the background color for the chart.

**Options**

### Clipboard Formats

### Metafile Picture

Checking this option causes Chartist to copy a metafile picture of the selected area to the clipboard when **cutting** or **copying**. Metafile pictures are inherently more accurate and device independent than bitmaps. Many word processing applications can read metafile pictures.

### Bitmap

Checking this option causes Chartist to copy a bitmap picture of the selected area to the clipboard when **cutting** or **copying**.   Many other applications can read bitmap pictures.

Note:   Disable the **Metafile** option if you are pasting to an application that can read both formats, but want the bitmap. Disabling both options still permits cutting and pasting Chartist private clipboard data.

**Directories**

**Documents...**

**Shapes...**

These dialogs allow you to set the initial working directories for chart documents, and shape libraries. The path set by the Shapes... dialog is the one from which shape libraries will be loaded as specified from documents. If no setting is made, then the initial paths are the same as the Chartist-2 program file.

**Help Menu Commands**

**Help**
  **Index**
    Activates the Help system with the Main Index displayed.

**Help**
  **Keyboard**
    Activates the Help system with the Keyboard Index displayed.

**Help**
  **Commands**
    Activates the Help system with the Commands Index displayed.

**Help**
  **Procedures**
    Activates the Help system with the Procedures Index displayed.

**Help**
  **Using Help**
    Activates the Help system with the Help On Help file.

**Help**
  **About...**
    Displays the Chartist copyright information and the full path name of the current
    shape file.

**Adding Symbols**

**Using The Tool Bar Or The Menu:**

Select the **Symbol Add...** Menu Command, press the **Ins** key, or click on ⊞. The cursor changes to a dotted box shape. Move the cursor to the desired location on the chart, and click the left button.

Possible locations for a symbol are indicated with grid dots. A symbol is **centered** on a grid dot. Grid dots are shown for reference only, and are not printed.

The **Select Symbol Shape** dialog box will optionally be displayed.   Select the symbol type from the list.   This dialog is displayed if the **Options Add Symbol Dialog** command is checked.   If this option is not checked, the symbol will take on the current default shape properties.

**Using The Shape Palette:**

If the Shape Palette is visible, click the mouse left button with the cursor over the desired shape. Then, as above, move the cursor to the desired location on the chart, and click the left button. The Shape Palette is made visible by checking the **View Shape Palette** command. The shapes on the Shape Palette may be customized from the **Select Symbol Shape** **dialog.**

**Setting Symbol Shape**

**To change the shape properties of one or more symbols**, choose the **Symbol Shape** command **(F4)**, or click on ⌗.

When no symbols are selected, the current default settings for new symbols are edited.

When multiple symbols are selected, only those properties that are in common among the selected symbols are shown in the dialog.   Any of the properties may be edited, however, and forced to take on a new common value.

Select a shape for the symbol from the list. Highlighting a shape name in the list, causes a model of that shape to be previewed in the dialog box.

The width and style of the border may also be selected from the radio buttons.   It a width other than **Normal** is selected, the style selection is ignored.

The **Plane** selected for a symbol determines the order in which it is drawn.   Symbols are drawn in the bottom plane first, followed by the middle, and finally the top.   This selection allows symbols to be "stacked", using symbols to provide framing and background for other symbols, for example.

**To change the Shape Palette:**

With the Select Symbol Shape dialog displayed, and with the Shape Palette visible, highlight the shape that you wish to add or remove from the Shape Palette. Click on the **Add To Palette** button to add the shape to the Shape Palette. Click on the **Del Fm Palette** button to remove a shape from the Shape Palette. Only one copy of a given shape may be in the Shape Palette. The maximum number of shapes that may be in the Shape Palette is 16. If you change only the contents of the Shape Palette from the Choose Symbol Shape dialog, it is recommended that you use **Cancel** or **Esc** to exit the dialog. The Shape Palette settings are saved in the CHARTIST.INI file in the WINDOWS directory of your system.

**Setting Color for Symbols**

Choose the **Symbol Color** command **(F8)**, or click on ⬚.  If no symbols are selected, the colors for new symbols will be edited.  If symbols are selected, then the colors chosen in the dialog will be applied to the selected symbols.

If the **Transp.** box is checked, then the background area of the affected symbols is made transparent. This means that information that is in a lower plane, or drawn first in the drawing sequence will show through. Any background color selection is ignored.

**Selecting Symbols**

1. Click the left button with the cursor inside the desired symbol.

**or,**

2. Choose the **Symbol Select** command. Click at a point to start the selection. Drag a rectangle to touch or enclose the desired symbols. Click to complete the Selection.

**or,**

3. Click and hold the left button with the cursor outside all opaque symbols Drag a rectangle to touch or enclose the desired symbols. Release the left button to complete the selection.

When **one** symbol is selected, it is highlighted with eight **"handles"** that may be used for sizing.   When **multiple** symbols are selected they are surrounded with  **dotted rectangles** .

**To keep prior selections from being dropped when a new selection is made, hold down the Shift key is while selecting.**

**To toggle the selected state of a symbol while a group is selected, hold down the Ctrl and Shift keys, and click inside the symbol.**

To de-select all items, click on the chart outside any symbol and away from any line.

**Deleting, Cutting Symbols**

With one or more symbols selected, choose the **Edit Delete** or **Edit Cut** command.

If the **Delete** command is chosen, the selected items are removed, they may be recovered with the **Edit Undelete** command, of no other symbol or line changes have been made to the chart..

If the **Cut** command is chosen, the deleted symbols and lines will be placed in the Clipboard and may be Pasted back into the current chart, another chart, or a different application.

**Copying Symbols**

With one or more symbols selected, chose the **Edit Copy** command. The selected information is copied to the Clipboard. As in the **Cut** command, the Clipboard data may be pasted into the current chart, another chart, or a different application.

**Clipboard Data Exchange**

Other applications that can read Clipboard metafile pictures can **Paste** the Chartist information from the Clipboard. The application will generally enable its **Paste** command, if it can read a Clipboard bitmap or metafile picture. Multiple instances of Chartist may also exhange information in this manner.

Applications that support OLE can link or embed Chartist objects. When Chartist information is copied to the clipboard, information is also copied that allows these applications to link or embed that information. Chart objects may be *linked* only if they have been saved to a chart file.

**Editing Text in Symbols**

With the desired symbol selected, choose **Symbol Text...** or press **F3.** The Edit Symbol dialog box is displayed. The area for text entry operates similarly to other Windows applications.

> **Note:**  You may also initiate the **Symbol Text** command by **double-clicking** on the symbol to edit with the mouse left button.

Use the direction keys and mouse to move the cursor and caret. Refer to the ***Chartist User Guide*** for details on selecting, cutting and pasting text.

A new symbol uses the last selected font for text. See **<u>Selecting Fonts for Symbol Text</u>**

If more text is placed in a symbol than will fit, it is clipped when displayed in the chart, but remains in the symbol. To complete editing, click on the **OK** button. To disregard any changes click on the  **Cancel** button.

**Selecting Fonts for Symbol Text**

With the **Symbol Text** dialog box displayed, move the caret to the desired location to start a new font, or select the text to be "re-fonted". Click on the **Fonts** button.

If the line font is currently in use in the selected area of the text, all options will be disabled except the **Use Line Font** checkbox. Click on this checkbox to allow the selection process to proceed.

The list of fonts represents all fonts directly supported by the printer. Each size is listed as a separate font. Once the font is chosen, click on the **OK** button.

**Changing Fonts In Symbols**

The fonts used in a group of symbols can be modified at the same time. Any changes made will be applied to all of the symbols selected.

**Modifying Fonts**

Chose the **Symbol Text Font... (Ctrl+F)** F command to modify all fonts in the selected symbols at once. The Choose Font dialog will appear. Any changes made will be applied to all fonts in the selected symbols. Font properties which vary among the selected group will be "grayed" or not shown, but they may still be modified.

**Establishing A Symbol Reference**

The symbol reference is a command string to display a reference document.   Such a document can be displayed by selecting the **View Reference** (**Shift F3**) command or double clicking on the symbol with the **Ctrl** key held down.   This behavior is similar to that of hypertext.

When a symbol has a reference established, an asterisk (*) will de displayed in the lower right corner of the symbol, in the text color used by the symbol and in the current line font. The asterisk does not show in data sent to the clipboard nor when the Chartist document is printed.

To establish or modify a symbol reference, select the symbol and then choose the **Symbol Reference...** command (**Alt+F4**), or click on the ⑤ button in the Tool Bar.   The **Edit Symbol Reference** dialog box will be displayed. The reference may be a document for which there is a file manager association or an execute command.

**For documents or commands:**

Enter the command string for the reference document into the edit field.   **File names for documents should be fully qualified with the path name**.

The **Clear** button removes the symbol reference.

### Adding A Picture To A Symbol

A symbol can display a picture in its text area.   The picture may be stretched or shrunk to fit inside the symbol. Pictures may be device independent bitmaps (.bmp) files or windows metafiles (.wmf).

To add a picture to a symbol, select the desired symbol and choose the **Symbol Picture...** command (**Shift+F4**) or click on the ⬚ button in the Tool Bar.   The **Edit Symbol Picture** dialog box will appear.   Any picture already in the symbol will be displayed in the dialog box.

To remove a picture, click on the **Clear** button.

Checking the **Stretch to Fil** checkbox, will cause the picture to be stretched or shrunk to fit extactly within the symbol. Otherwise the picture will be displayed in its original size and clipped if necessary.
**For files:**

To load a new picture from a file, click on the **Load** button.   The **Open File** dialog will be displayed, with the default extension set to **.BMP**. Select the desired file by double-clicking on it in the list box, or by typing in the file name and clicking on **Open**.   The selected picture will be loaded into the picture.

### For Metafile Pictures From the Clipboard:

Click on the **Picture** button, if it is enabled. The metafile picture in the clipboard will be loaded and shown in the preview area.

If the **View Pictures** command is checked all symbol pictures will be displayed. Unchecking the **View Pictures** command causes all symbol pictures to be shown as gray rectangles, speeding up the display process considerably if there are pictures.

Stretch or shrink the symbol to get the desired size and aspect ratio for the picture. Depending on how the picture was digitized, it may look distorted on the display.

If there is also text in a symbol, it is displayed on top of the picture.

**Moving, Pasting Symbols**

Using the **Symbol Move** or **Edit Paste** Commands:

With the desired symbols selected, pick the **Symbol Move Command** (F2)

 or if there is chart information in the clipboard, select the
**Edit Paste Command** (Ctrl+V).

The cursor changes to a dotted box. Move the cursor to the desired chart location and click the left button.

Alternative **Move** techniques:

**Dragging** a symbol with the Mouse:

To **drag** one symbol to a new location:

> Click and hold the mouse left button while in the symbol.

> As you start moving the cursor, the bounding rectangle of the symbol will appear and move with the cursor.

> Release the mouse button with the cursor centered over the grid point for the new location.

To **drag** a selected group of symbols:

> Hold down the **Shift** key.

> Click and hold the mouse left button while in one of the selected symbols.

> As you start moving the cursor, the bounding rectangle of the selected group will appear and move with the cursor.

> Release the mouse button with the cursor centered over the grid point for the new location

**Point of Reference** for a group:

The point of reference for the cursor is the upper left corner of a rectangle bounding the group of symbols to be moved or pasted. If appropriate, a dashed bounding rectangle will track the cursor, to show the area needed by the **Move** or **Paste.**

**Note:** If the **Options Snap to Grid** command is checked, the point of reference will be positioned on a grid point.

**Sizing Symbols**

**Using the Symbol Size Command:**

With the desired symbol selected, choose the **Symbol Size (F6)** command. The cursor will move the the lower right corner of the selected symbol. Using the mouse or arrow keys, stretch the symbol to the desired size, and click again to complete. **Hold down the Shift key while stretching to maintain the original aspect ratio of the symbol.**

**or,**

**Stretching with the Selection Handles:**

Having selected the desired symbol, move the mouse so that the cursor covers one of the small black rectangles (selection handles) around the symbol.   The cursorr will change to a **double arrow**, indicating the directions that the symbol sides may be stretched.

While the cursor is a double arrow, click and hold the left mouse button, then move the mouse to change the size of the symbol as desired.   Release the left button to complete the operation.

If you make a mistake in sizing a symbol, you can select it and reset it to the current default symbol size with the **Symbol Reset Size** Command.

**Note:** If the **Options Snap to Grid** command is checked, dimensions of symbols will be rounded to the nearest grid interval multiple.   The **Options Chart...** command allows you to change the grid interval.

Since symbols are always **centered** on grid points, the corners of a symbol can snap to 1/2 the distance between two grid points (for odd multiples of the grid interval).

**Adding Lines**


Choose the **Line Add** menu command **(Tab)**, or click on ⬆️.   Click **inside** the source symbol   bounding rectangle near the desired exit side (and attachment point), and drag a line to the destination symbol. Click again   **inside** the destination symbol bounding rectangle near the desired entry side (and attachment point) to complete the operation.

**The right mouse button may be used to add lines directly.**

The number of points on a symbol side to which a line may be attached is selected with the **Options Line Attach Points** command (1,3, or 7 points per side). The attachment points on symbols may be seen by checking the **View Line Attach Points** command.

The line will exit the source symbol's side that is closest to the initial point.   It will enter the destination symbol's side that is closest to the destination point.

**Routing Lines**

Line routing takes place automatically after any change to the chart that affects the layout of lines.

A line will fail to route properly if the endpoints are not properly designated, or if the connected symbols are moved so that the router cannot route the line.

After a routing failure, the offending line is drawn in **red**, but the line is not deleted automatically. The user can delete the line, rearrange the chart so the line will route, or add a waypoint as described below and manupulate the line route manually.

The route of a line can be modified manually with the **Line Add Waypoint** command. Select the line to be changed and choose the **Line Add Waypoint (Ctrl+Tab)** command. The selected line will be split into two segments, with an invisible symbol (shown with a dot-dash border) at the mid point. The line route can them be moved by dragging the invisible symbol. When this operation is done, there are **two lines and a symbol** replacing the original line.

**Selecting Lines**

1. Place the cursor on a unique part (within 1/16") of the line, that is, an part of the line that is not combined with other lines.   Click the left button to select.

> **Note:**   This method will not work on lines that share full paths with other lines. You must use the **Line Select** Command for them.

**or,**

2. Choose the **Line Select** command.   Click on the source symbol, drag a selection line to the destination symbol and click again to select.

When a line is selected, its path is shown in  **reverse colors**.

**Selecting Multiple LInes:**

The selection of other lines will be dropped unless the **Shift** key is held down while selecting.   If the  **Shift** key is held down while selecting, multiple lines may be selected.

**Selecting Lines From Symbols**

A fast way to select several lines is to select the symbols that they connect to, and then choose the **Line Pick From Symbol** command **(Shift F7)**.   All lines connected to those symbols will be selected.   The symbols will be deselected.

**Setting Style for Lines**

With the desired line selected, choose  **Line Style... (Shift+F4)**, or click on ⬩⬆. The **Edit Line Style** dialog box will be displayed.

> **Note:**  A line that is selectable by clicking directly on it (it does not share both end points), can be **double-clicked** to activate the **Edit Line Style** dialog. Refer to ▭ **Selecting Lines.**

Note that selecting a pen width other than Normal, causes the pen style to be ignored. (This is a characteristic of the Windows 3.0 GDI).

**Setting Color for Lines**


To select line colors, choose the **Line Color** command **(Alt+F8)**, or click on ⬆. If no lines are selected, the colors for new lines will be selected.   If lines are selected, then the selected lines will take on the colors chosen in the dialog box.

**Moving A Line End**

To move one end of a line, select it. Then move the mouse cursor over the end of the line, until the cursor changes to the pencil. Click the left mouse button to pick up the line end and then drag the mouse to the new end location. Release the left button to complete the operation.

**Save Chart File**

Select the **File Save** command. If the current chart does not have a file name, the Save As dialog box will be displayed. **See Save Chart As.**

**Save Chart As File**

To save a chart in native format select the **File Save As...** command. Enter the desired name for the file. The default extension for chart files is CHT, and need not be entered. If the chosen name would cause the overwriting of an existing file, a confirmation is requested.

**Open Chart File**

Select the **File Open...** command. Select the desired chart file from the directory list. Other directories may be browsed by selecting the subdirectories shown enclosed in square brackets. The chart file name may be typed in if it is known.

If you check the **Use Current Shapes** box, the file will load without loading the specified shape file (the shape file with which it was last saved).

**Load Shape File**


Select the **File Load Shapes...** command. Select the desired shape file from the directory list, as in the **File Open Chart** procedure. A shape file defines the names and drawing instructions for symbols. The extension for shape files is SHP.


The current chart will be erased in order to load the new shape file.


The path name to the current shape file is maintained in the CHARTIST.INI system file. Chartist requires a valid shape file to operate. Editing or deleting the supplied shape file is a dangerous business.

**Printing a Chart**

Select the **File Print...** command. A confirmation will be requested. After a print operation is started it may be canceled before completion via the dialog box that remains in view while Chartist is sending output to the printer. The current printer is used.

When there are **selected** symbols, the **Selection Only** or **Selected Pages** box may be checked.

For **Selection Only**, the selected group is printed starting at the top left corner of the printer paper.   Only those lines connected entirely within the selected group are printed.

For **Selected Pages**, all pages containing selected information are printed in their entirety.

When the **Print Selection** box is not checked, the **entire chart** is printed.   The chart is **tiled** onto the required number of printer pages. Also, the **Fit To Page** checkbox will cause the entire chart to be printed on one page in the current page size and orientation.

The **Tile Y First** checkbox causes the chart to be tiled onto paper in Y-order first. This is useful for printing large charts in portrait orientation on continuous form paper.

By choosing a **Scale Factor** other than 100%, the overall size of the priinted chart may be enlarged or reduced. This is usefeul for getting an overview of a large chart on one or a few sheets of paper. Non scalable device fonts may not reduce or enlarge properly with this option.

**Printer Options**


Choose the **File Setup Printer...** command to choose a printer or change the default printer settings. If **Setup...** is selected, the printer driver dialog box will be displayed. The new printer settings apply to the Chartist application, and not to specific chart files.


Depending upon the printer driver, changing the printer option settings may affect other applications currently active. Similarly, other applications that change printer settings may affect the printer settings of Chartist. This interaction depends upon whether the printer driver is fully Windows 3.x compliant.


Paper settings are made in this dialog. The paper settings are saved with the chart document.