

Chapter 1

Getting started

This chapter tells you how to install COMPONENT, how to start the program, and introduces the basics of using the software.

Installing COMPONENT

Installing COMPONENT is straightforward and should be undertaken in Windows. The installation procedure copies all necessary files onto your hard disk, sets up a Program Manager group displaying the program's icon, and creates an initialisation file (CPW.INI) in your Windows directory.

Hardware and Software Requirements

COMPONENT runs on IBM PCs and compatibles with an Intel 80286 (or higher) processor, 2Mb of RAM, and a hard disk. The program requires Microsoft Windows 3.0 or later. The program requires about 1 Mb of disk space.

Installation

You must install COMPONENT onto your hard disk. This can be done from within Windows.

- Insert the distribution disk into your floppy disk drive.
- From Windows Program Manager's **File** menu choose **Run**.
- Windows will display the following dialog box:

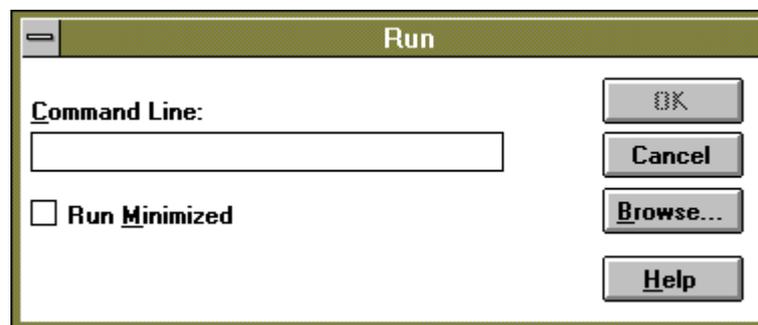


Figure 1.1
The Program Manager
Run dialog box

- Type in A : SETUP (or B : SETUP if you are installing COMPONENT from the B: drive).

The program Setup will start by asking you for a drive and directory in which to install COMPONENT. It will display the default directory, \CPW.

name of that directory.

- From the floppy disk onto the hard disk. You will be prompted for further disks as necessary.

Once Setup has copied all the files it will create a Program Manager group called COMPONENT. This group will display icons for COMPONENT

The COMPONENT group

The COMPONENT group contains icons for several of the distribution files. The

Figure 1.2
The COMPONENT icon



Any other icons are for various documents created for the standard Windows applications such as Write and Win Help, and can be opened by clicking on the

sensitive help. You can access this help from within COMPONENT (see the section "Getting help" below) or by clicking on the help file's icon:

Figure 1.3
The COMPONENT help
file icon



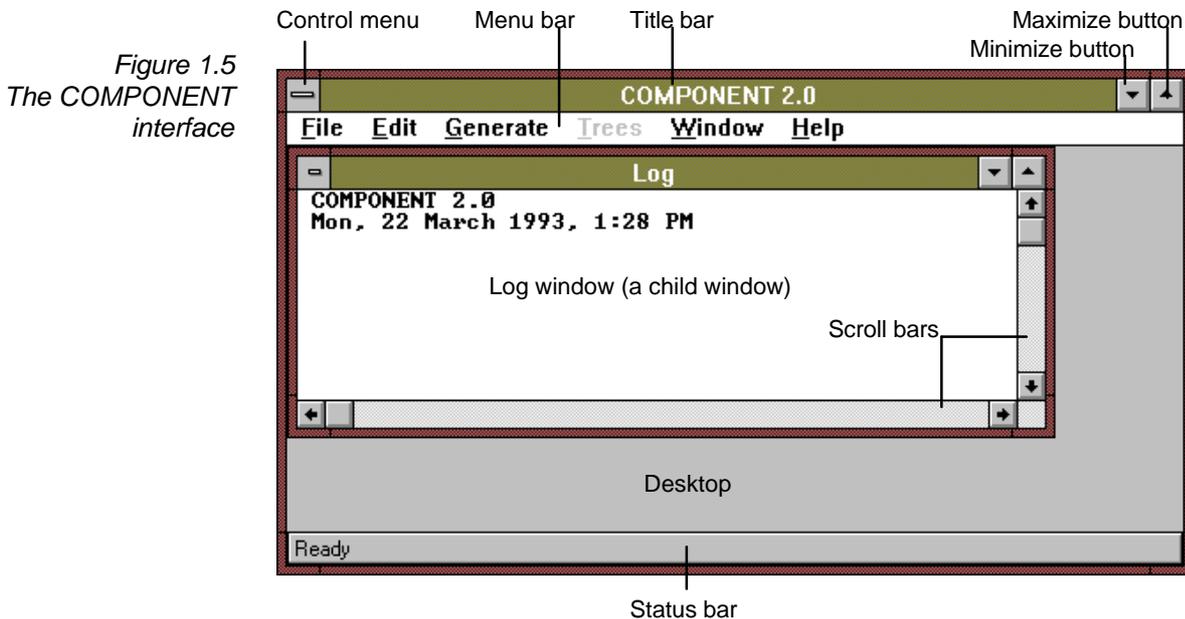
Windows Write editor:

Figure 1.4
The Windows Write icon



Starting COMPONENT

To start COMPONENT click on the COMPONENT icon with the mouse. When COMPONENT starts your screen should look like this:



If this is the first time you have run COMPONENT you will be presented with a dialog box requesting your name and institution. This personalises your copy of the program.

The interface

COMPONENT features a standard Windows user interface. This manual assumes that you have some knowledge about using Windows; if this is not the case please take the time to read through your Windows documentation.

There are three main parts to the COMPONENT interface: the title and menu bar at the top, the desktop, and the status bar at the bottom. When the program starts a single *child window* titled LOG is open on the desktop. This window is used by COMPONENT to display output, and is described further below in the section "Viewing output" below. Other child windows may be opened to edit files and display trees.

Menu bar

The menu bar is used to access the menus. To choose a menu item either click on the item desired, or press *Alt* plus the underlined letter of the menu item. Some menu items have keyboard shortcuts, such as *Shift+F5*, to enable quick access to a command.

Depending on which child window is active some menu items may appear dim, and when you choose them nothing happens. This indicates that the command doesn't make sense in the current context (for example, computing a consensus tree for only one tree). Some child windows may place their own menu on the menu bar.

Child windows

COMPONENT uses a variety of child windows to display output, trees, and files. Only one of these windows is *active* at any time. The active window is the one you're currently working in, and can be recognised by having its title bar highlighted with the same colour as the program's title bar. Child windows can be maximised or minimised; a maximised child window occupies the whole desktop, a minimised child window is shrunk to an icon on the desktop. You can move a window on the desktop by dragging on its title bar.

You can activate a different child window by clicking anywhere on it, by pressing *Ctrl+F6* or *Ctrl+Tab* until the window you want is selected, or by selecting the window's name from the **Window** menu:

Figure 1.6
The Window menu

Window	
Title	Shift+F5
Cascade	Shift+F4
Arrange icons	
1 Log	
2 Tree - [c:\cpw\agree.nex]	
✓ 3 Tree - [Untitled0]	

To close a child window press *Alt+F4*, or double click on the window's Control menu button.

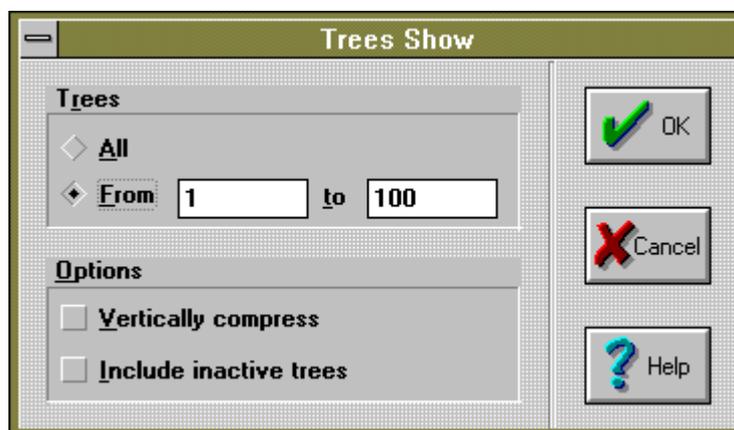
Status bar

The status bar at the bottom of the desktop provides information on the status of the program. If you have opened an Edit window, the status bar displays the location of the cursor. Error messages are displayed here, as are hints about what a menu command does when that command is highlighted.

Dialog Boxes

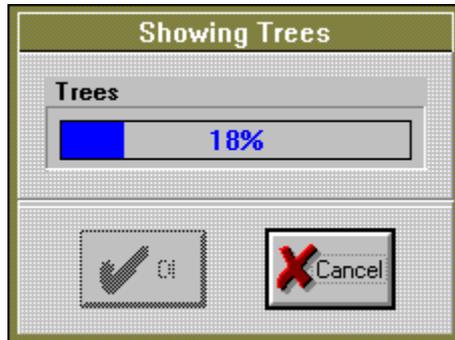
COMPONENT uses dialog boxes to either request information from you, or to provide information to you. Whenever you see an ellipsis (...) after a menu command a dialog box follows. For example, when you choose **Show** from the **Trees** menu, COMPONENT displays the Trees Show dialog box asking what trees you want to show:

Figure 1.7
The Trees Show dialog box



COMPONENT also uses dialog boxes to inform you of the progress of an operation. For example, after selecting the trees you want to show with the **Show** command, COMPONENT displays a dialog box showing what percentage of the trees the program has processed so far:

Figure 1.8
The Showing Trees
progress dialog box



This dialog box allows you to interrupt the program by clicking on the **Cancel** button.

Viewing output

COMPONENT sends all its output to a 32K circular text buffer. The contents of this buffer are displayed in the Log window. This window is the first window you see when you start COMPONENT. The Log window can be moved, resized and iconized, but not closed.

To view output

To view your output first make the Log window the active window. The window will automatically updated with the most recent output. You can scroll through the output by using clicking on the scroll bars and buttons, or by using the \uparrow , \downarrow , \leftarrow , \rightarrow , *PgDn*, or *PgUp* keys.



Once the display buffer is full it starts to overwrite itself, so that output from previous analyses can be lost. To avoid this happening you can either open an output file to send the output to, or save the current contents of the buffer to a file.

Opening an output file

- From the **File** menu choose **Output file**. If the file you specify already exists the program will give you the option of either appending your output to that file, or replacing the file.
- From the **File** menu choose **Echo output to disk**. A check mark will appear to the left of the **Echo output to disk** menu item. From now on any output sent to the display buffer will also be written to the output file. You can switch this feature on and off.

The file being edited can be saved, renamed, printed, and processed using commands on the **File** menu. COMPONENT Edit windows support the Undo, Cut, Copy, Paste, and Delete functions found in most Windows editors. However COMPONENT can only edit small (less than 8K) files. If you try and open a file larger than this COMPONENT will start an external editor (such as Windows Notepad) and load the file into that editor.

Creating a new file

Choose **New** from the **File** menu. COMPONENT will open an edit window and give it a temporary name.

Opening an existing file

Choose **Open** from the **File** menu. A standard File Open dialog box will appear asking for the name of the file you wish to open. After you have entered the file name and clicked on the **OK** button COMPONENT will display a dialog box asking whether you want to edit the file or view the trees:

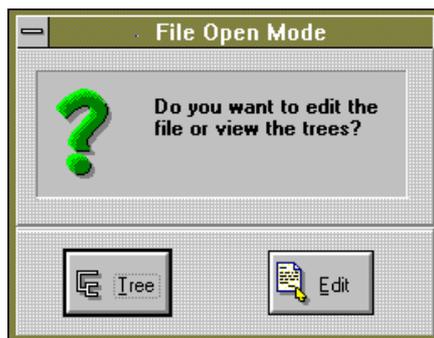


Figure 1.10
The File Open Mode
dialog box

Click on the **Edit** button. If the file is too large to be edited in an Edit window COMPONENT will attempt to load the file into an external editor (currently Windows Notepad).

Saving a file

Choose **Save** from the **File** menu. If you have not changed the default name ("Untitled") COMPONENT displays the File Save As dialog box so that you can name the file.

Saving to a file with a new name

Choose **Save as** from the **File** menu.

Printing a file

Choose the **Print** command from the **File** menu. The contents of the active edit window will be printed on the system printer. If you want to print just part of the file, select that part of the file by either:

- holding the left mouse button down and dragging the mouse pointer over the desired text, or
- holding the *Shift* key down and using the cursor control keys to highlight the text.
- choose **Print selection** from the **File** menu.

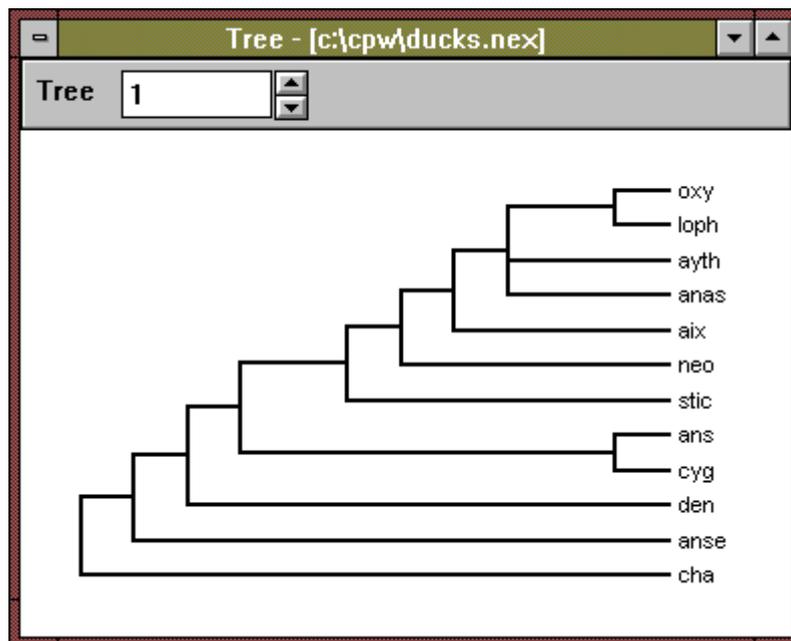
Processing a file

If the file being edited in the active Edit window is a NEXUS file (i.e., it starts with the #NEXUS directive, see Chapter 3) and has been saved to disk then you can process that file by choosing **Execute** from the **File** menu. If COMPONENT encounters an error while processing a file it will highlight the location of the error in the edit window and display an error message on the status bar. You can correct errors by editing the file, saving it, then choosing **Execute** again, until COMPONENT accepts the file.

Tree windows

COMPONENT displays trees in a Tree window:

Figure 1.11
The Tree window



You can open more than one Tree window at a time. The COMPONENT commands that open tree windows are **Open**, and **Execute** from the **File** menu (see above), and the **Random trees** and **All trees** from the **Generate** menu (see Chapter 6).

The commands in the **Trees** menu manipulate the trees in the currently active tree window. These commands are described in Chapters 2, 4, 5, 6, and 7.

Viewing trees

A Tree window displays one tree from the set of trees held in memory. If there is more than one tree you can view the other trees either by typing the number of the tree in the tree input box, or by clicking on the tree spin button:

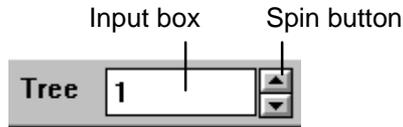


Figure 1.12
The Tree window input
box and its spin button

Viewing blocks of trees

If you are using COMPONENT to compare host and parasite, gene and organism, or taxon and area cladograms then your input file will contain one or more DISTRIBUTION blocks (see Chapter 3). The Tree window will then display a drop down list box listing all the DISTRIBUTION blocks in your file. The TREES (if present) block is also listed. If the DISTRIBUTION block contains a TITLE command, such as

```
TITLE = 'Geomydoecus' ;
```

then the list box will display that title, otherwise it will display a number corresponding to the order in which the block occurs in the file.

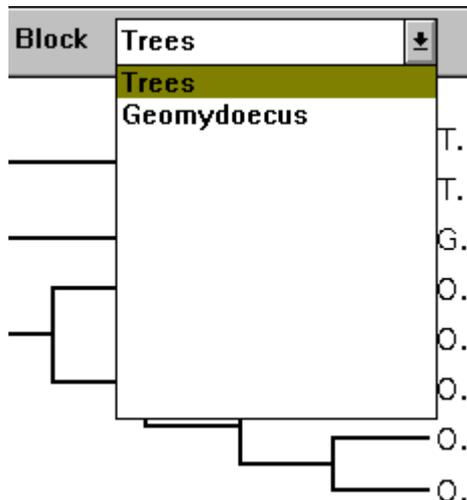


Figure 1.13
The block drop down list
box

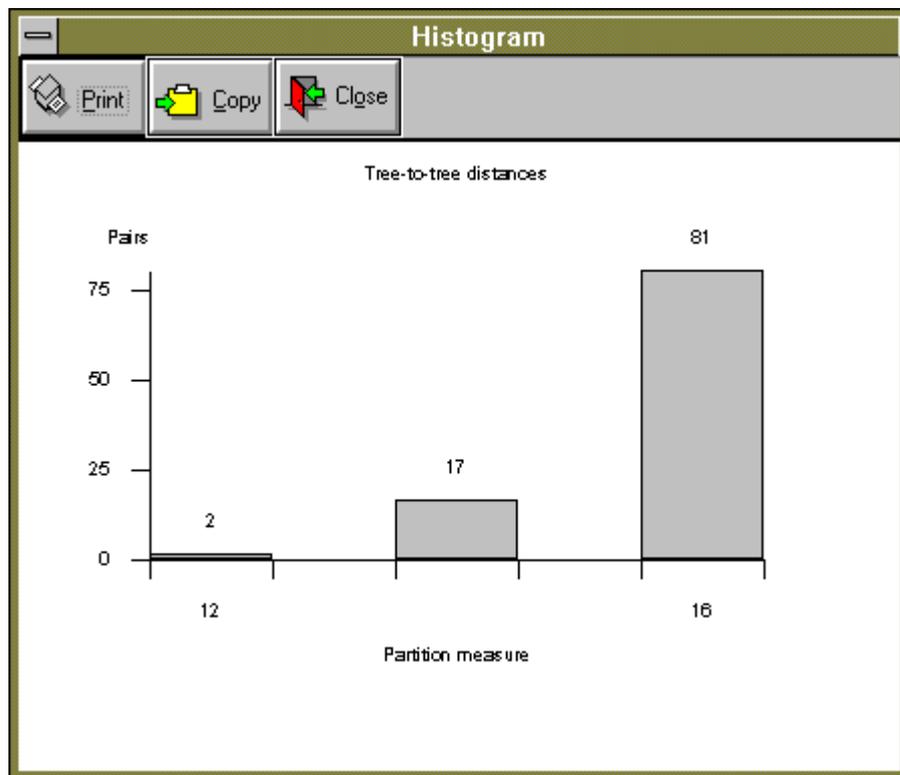
In the example above the input file contains a DISTRIBUTION block called "Geomydoecus" which contains information on the distribution and relationships of some parasitic lice, and a TREES block containing a cladogram for the pocket gopher hosts of the lice.

Some commands in the **Trees** menu are only available if a distribution block has been selected.

Histogram dialog boxes

COMPONENT uses a Histogram dialog box to display histograms:

Figure 1.14
A Histogram dialog box



At present the program's charting facilities are rudimentary—the chart can be printed but you have no control over the appearance of the histogram. You will get much nicer graphics if you use a program such as Microsoft Excel, Borland's Quattro Pro for Windows, or the Graph applet that comes with Microsoft Word for Windows. You can copy the data displayed by the histogram into the Windows Clipboard as tab-delimited text. The data can then be pasted into another program such as a spreadsheet. To paste data to the Clipboard click on the **Copy** button.

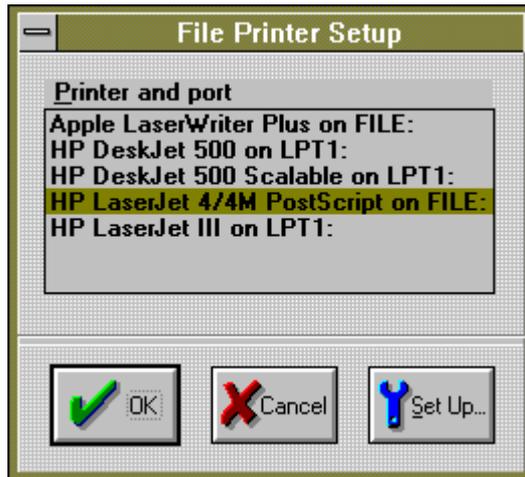
Printing

Within COMPONENT you can print the contents of the display buffer, input files, and trees. Each of these printing operations has its own command, but the printer itself is controlled by the **Printer setup** command in the **File** menu.

Changing the printer

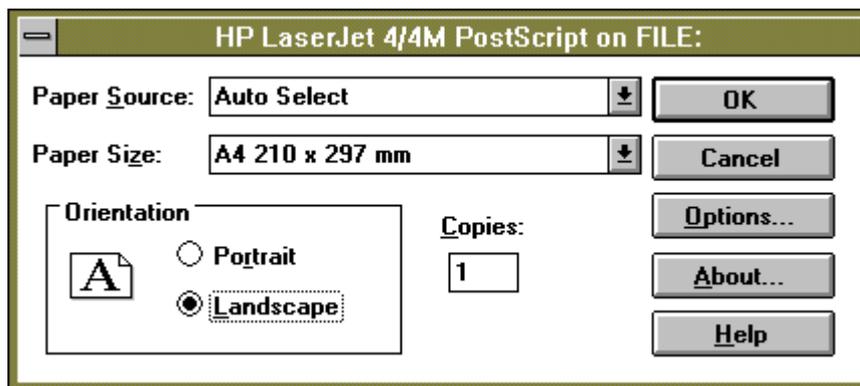
By default COMPONENT uses the current system printer. You can select another printer by choosing **Printer setup** from the **File** menu. When you choose this command COMPONENT displays a dialog box listing the currently active printers:

Figure 1.15
The File Printer Setup
dialog box



If you click on the **Set Up** button, another dialog box appears allowing you to select the paper size, orientation, fonts, and so forth. The options available to you will depend on the capabilities of your printer. Here, for example, is the dialog box for the Hewlett Packard LaserJet 4/4M printer:

Figure 1.16
The printer setup dialog
box for the HP LaserJet
4/4M



Getting on-line help

COMPONENT provides context sensitive on-line help using Windows Help. If you are unfamiliar with Windows Help please see your Windows documentation.

Figure 1.17
The COMPONENT on-
line help



The on-line help is not as extensive as the documentation in this manual.

Getting on-line help

To get help on:

- a specific topic use the **Help** menu.
- the currently highlighted menu item press the *FI* key.
- a dialog box click on the dialog box's **Help** button.