Chapter

1   Introduction to the CapFast Manual

Welcome to the CapFast? family of EDA tools developed by Phase Three Logic. This manual will provide you with detailed information about CapFast's many functions and features. It is designed as a source for reference and instruction as you use CapFast. Should you have questions regarding CapFast, we encourage you to read the manual first. This manual contains information for the advanced as well as the beginning user.

1.1   Outline of the Manual

Below is a chapter–by–chapter summary of the contents of this manual.

Chapter 1. Introduction to the CapFast Manual

This is the chapter you are reading, which explains what is presented in the manual and how it is presented. The conventions used in the manuals are also explained.

Chapter 2. Installation

This chapter explains how to install CapFast on a personal computer or a workstation.

Chapter 3. CapFast Tutorial

The tutorial is divided into two sections: the JumpStart Tutorial, which gives you a quick and basic introduction to the CapFast tools, and the Advanced Tutorial, which shows you how to create multi–page schematics. The tutorials give you a hands–on approach to using CapFast.

Chapter 4. Creating Electrical Designs

This chapter discusses the general aspects of the electrical design process. Its purpose is to assist you in efficiently planning the design cycle.

Chapter 5. Command Reference Guide

Presented in this chapter is a list of each CapFast command and its function. After you're comfortable with the software, this is the section you'll refer to most often during the design process. The material does not need to be read sequentially; you can browse sections of the chapter in any order to get information.

Chapter 6. Properties

The chapter provides specific information on properties associated with symbols, wires, and ports. It also includes a handy chart showing which properties are required and which are optional for running the different netlisters.

Chapter 7. Printing or Plotting Schematics

This chapter shows you how to plot schematics on various plotters and printers using CapFast.

Chapter 8. Extracting PCB Netlists

This chapter describes the CapFast utility, *Component Packager (pkgr)*, which annotates schematic designs with pin numbers and reference designators. Also described is how to extract netlists from your designs with the CapFast PCB netlist interface tools.

Chapter 9. SPICE Simulator Interface

This chapter describes how to extract netlists from your designs that will interface with ISSPICE, PSPICE, HSPICE and Berkeley SPICE.

Chapter 10. HILO and SUSIE Simulator Interfaces

This chapter describes how to extract netlists from your designs that will interface with HILO and SUSIE.

Chapter 11. PLD Tools

This chapter describes how to use the CapFast Xilinx interface, and the CapFast interface to the Actel development tools.

Chapter 12. Utilities

This chapter describes the CapFast utilities *Bill−of−Materials Generator (partlist)*, *Design Cross Reference Generator (schxref)*, *Design Archiving Utility (schfiles)*, *Part Menu Generator (partsmnu)*, the Gemini netlister, and *cvtrans*.

Appendix A. Customizing CapFast

This chapter shows you how to tailor the CapFast software to your own special requirements. For example, it discusses methods for creating customized commands and menus, as well as changing search paths and much more.

1.2   Conventions Used in the Manual

Though many readers are familiar with computer terms, here is a list of some used in this tutorial.

> **<Enter>** means press the Enter (Return) key on the keyboard.
> **<Esc>** means press the Esc key on the keyboard.
> File®Open... means select Open... from the File menu, by using any combination of the mouse and keyboard.

1.2.1 Conventions Used in Text Notation

As you read this manual, you will see that we use several fonts, such as Courier, **Courier Bold**, *Courier Italic*, Times New Roman and *Times New Roman Italic*. We use different fonts to help clarify meanings and to highlight operations that you are to perform. Here's an explanation of the purpose of each font.

Text appears like this	What it means
:qcheck	This text means that you enter a command or key in text exactly as shown. In this example, you should type **:qcheck** in lower case as shown.
cad.rc	We use this font to show text exactly as it appears on the computer screen, such as a menu, command, or a file name.
filename	This font indicates that we want you to key in the text described but not as literally shown. In this example, you would type the name of the file. If the name of your file is schematic1, that is exactly what you would type in place of *filename*.
most manual text	Most of the manual is written in this font.

Schematic Editor (schedit)	We use this text to show the names of programs and utilities contained in the CapFast tools, such as *Schematic Editor (schedit)*, *Component Packager (pkgr)*, *Symbol Editor (symed)*, etc. We also use it to emphasize a point.

Caution

CapFast is case–sensitive, which means that lower case and uppercase letters can mean different things. For example, CapFast programs interpret the commands `CAT`, `cAt`, and `cat` all differently. Pay attention to case whenever you enter commands, answer prompts, and perform other operations. As a rule, lower case is best. An exception to this is keyboard shortcuts, for which case does not matter.