

CHAPTER 3

Software Installation

3.1 Package Contents

The ADSP-21K Optimized DSP Library for the Analog Devices PC compiler tool set is currently shipping on two 3.5" floppy diskettes. These diskettes contain directories of object code, directories of functional prototypes and directories of example files. The object directories contain an archived library of over 385 routines in ADSP-21K object library format. You may link any routine found within this directory to your application. In addition, example programs demonstrating the use of the library routines are also provided. A file entitled README.DOC is provided on the diskette to help you understand the organization of this installation disk, and discuss any last important changes that have not been included in the User's Manual. Please read this file before installing the software.

3.2 How to Install The Software

To load the Optimized Library software into your system, place the diskette labeled **ADSP-21K Optimized DSP Library (Disk 1 of 2)** in either the **A** or **B** drive of your personal computer.

Type **a** (or **b**): followed by the return key. This will indicate to the computer which floppy drive you are trying to access.

Next, in order to execute the automated installation program, type:

install

followed by the return key.

The installation script will now appear and prompt you with a series of questions. Simply answer them to specify which components you wish to load into defined directories. If none are specified, defaults are provided. Note that if all code options are loaded onto your hard disk, all libraries should occupy approximately 2 Mbytes or hard disk space. Also, use the DOS type command to view the readme file and print a copy to examine the latest updates to the software.

Note that in order to properly compile and link the Wideband archived object library, you must use the `-Lpath` compiler flag to specify the additional search path. Consult page 2-2 of the *ADSP-21000 Family C Tools Manual* for further details.

UNIX systems users should mount the product diskette as a DOS disk and use the UNIX **cp** or **tar** command to copy the appropriate files to newly created directories on their hard disks. Note that the Unix SPARC version is contained within 1 diskette only.

Note that the paths listed are for suggested use only. If you are only using a few routines you may wish to create your own directory and link the routines to your code from there.

3.3 Software Problem Reports

The Wideband 21K Optimized DSP Library routines underwent extensive testing before being released for general purchase by the engineering and scientific community. Great effort has been expended in making sure that the routines you are about to use perform efficiently and correctly.

However, unusual conditions or stressed usage scenarios may result in some bugs or malfunctions being discovered. If you find a bug or suspect that you have come across one please help us correct the problem. Use the bug report at the back of this manual, or your own approximation of this to help us fix whatever problems you encounter. Supply us with the specifics, including the name of the routine used, the error conditions or output returned, along with other important symptoms. Also, helpful is a snippet of your code to help us understand under what conditions the code was called. You may fax the code to us at **415-962-8790** or send us E-Mail at **mark@wideband.com**. Please include a technical contact along with an address, phone number, fax number and/or E-Mail number.

We'll respond to your request by attempting to replicate the problems at our facilities. If we are unable to find an error we would to call or e-mail you and discuss alternatives in

an attempt to track down the nature of the bug. Please provide us with a phone number or e-mail address.

If we do find a bug, the problem will be immediately assigned to our staff for corrective action. Generally, most problems can be fixed within a single day. Once we've fixed the problem and tested the new code we'll send you a new, updated routine by Federal Express, E-mail, or alternative methods if you prefer.

3.4 Sample Source Code Library Routine

Appendix **A** contains the source code for a 21K Optimized DSP Library vector routine which computes the sine of the elements within input vector **a** and stores the results to output vector **c**. The routine is called **vsin.asm**. We disclose the source code for several reasons:

- Many customers are curious about the level of workmanship contained within the 21K Optimized DSP Library. Interested parties may now see the level of detail contained within an actual routine, and how to construct such a routine should the need arise.
- For customers who may be interested in purchasing a site source code license, you may be assured that every routine is documented to this level. The code is maintainable should you decide to expand upon it.

