About this manual

Nobody likes to read extensive manuals. Therefore, this manual was written as concisely and clearly as possible. However, WaveTrak is a powerful application and scripting environment, specifically designed to function in the sometimes difficult realm where hardware, real-time software and signal processing intersect. In order to allow you to fully exploit the capabilities of WaveTrak, it was necessary to include detailed chapters describing how WaveTrak communicates with the various hardware devices, of how certain signal processing functions have been implemented, and so on. The manual reflects the stratified design of WaveTrak itself, allowing the casual user to quickly begin acquiring waveforms, yet including enough detail so that the experienced user can fully exploit all of WaveTrak's potential.

Important Note:
This manual covers both the standard database-only version of WaveTrak (called **WaveTrak DB**, without real-time A/D capabilities) and the 'A/D' version (which includes the Data Acquisition Toolbox contained in the WTRK A/D Lib stack, and for which you require a MacADIOS II A/D board from GW Instruments, called **WaveTrak AD**). Those using only the standard version can skip over any hardware and A/D discussions. You can tell which version you have by the program title (WaveTrak DB or AD) at the top left corner of the Home Card. The A/D version contains all of the capabilities of the DB version.

The manual is organized into the following chapters:

- *Installing WaveTrak*

  Every user should read this short chapter, which will ensure that WaveTrak can find all the files it needs to operate correctly. This chapter also outlines what hardware you will need to run the program.

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- *WaveTrak organization*

  This chapter is also essential reading. It illustrates how the stack is organized, and will eliminate the 'Where am I?' feeling common to many HyperCard stacks.

- *Quickstart*

  This chapter will give you a quick introduction on how to create new cards and acquire new traces within the WaveTrak framework. Every user should read this chapter before doing any data acquisition.

- *WaveTrak Cards*

  The blank WaveTrak stack consists of a number of cards which perform specialized functions. This chapter explains the features and function of each card in detail. Sooner or later you will want to study this chapter thoroughly.

- *WaveTrak Menus*

  Many menus have been added to the standard HyperCard set. This chapter explains what each menu item does, where its script is, and how you can tailor its functions to suit your needs.

- *WaveTrak Buttons*

  One of WaveTrak's cards is called 'Button Bank'. As the name implies, it is a repository of pre-programmed buttons which you can cut and paste anywhere into the WaveTrak stack to perform a variety of acquisition and digital signal processing functions. This chapter describes what the buttons do and how to customize them.

- *Scripting with the WaveTrak Toolbox*

  There will no doubt come a time when you will want to script your own

functions. The WaveTrak environment encourages you to do this, and this chapter gives you the foundation.

- *The remaining chapters...*

  deal with more and more details of WaveTrak's programming environment, HyperTalk extensions and what they do, scripts, global variables, etc... As you get more comfortable with WaveTrak, we hope you will take the time to learn about these features, because this is where the true power and versatility of WaveTrak lie.

- *Glossary*

  If you run into unfamiliar terms along the way, a brief glossary has been included at the end of the manual to help you.

Examples, Tips and Technical notes

Included throughout the manual are examples of how to use the many functions in the toolbox. They are formatted as follows so you can refer to them quickly:

Example:

This is an example.

'Tips' are included describing how to perform a certain function more easily or efficiently.

Tip:

This is what tips look like.

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For the more technically oriented user, 'Technical notes' have been included where appropriate, explaining the inner workings of certain hardware devices, software routines or signal processing functions. They are intended more to satisfy curiosity, and are not essential for making full use of WaveTrak.

> Technical note:
>
> This is what technical notes look like.

What this manual does not cover

The manual assumes that you are comfortable with the basics of operating the Mac, such as the mouse, menus, and windows. Please consult your Macintosh manuals for details. Although the HyperCard environment is easy to use, it has many powerful features. Because WaveTrak was built with HyperCard as the 'front end', we highly recommend that you familiarize yourself with HyperCard and its programming language, HyperTalk. The whole philosophy of WaveTrak is to encourage you to dive into buttons and scripts, and to modify these to suit your particular application. There are many excellent books on HyperCard available in book stores and computer stores.

WaveTrak will continue to evolve for many years to come. We want input from the field, we want users to shape how and where WaveTrak will go in the future. We want to hear your comments, both good and bad, about your experiences with WaveTrak, your applications and wish lists. So please feel free to drop us a line anytime with your comments. The most current mail and e-mail addresses can be found on the Home Card in the WaveTrak stack.