Technical Manual

SMART TRAC™ AC1 Overview

MagneTek, Inc. - Drives and Systems Division

Contents

Smart Trac Technical Information 1

Smart Trac Technical Manuals....1
Smart Trac Engineering Guides....1
Smart Trac Bulletins and Application Notes....1
Online Help....1
Smart Trac Training Seminars....2
Worldwide Web....2
MagneTek Field Service Engineers....2
Where Do I Begin?....2

Smart Trac Workstation Software 7

Workstation Lite....7
Smart Trac Workstation Development Environment....7
Control Manager and Control Studio....7

Smart Trac Systems and Options 9

More? 11

Glossary of Terms 13

Index 15

Smart Trac Technical Information

Smart Trac Technical Manuals

The Smart Trac AC1 Technical Manual and individual printed Technical Manuals for each Smart Trac interface card provide the information you need to install and configure your Smart Trac hardware. They also contain information to network your Smart Trac AC1 with other Smart Trac AC1s, troubleshoot and maintain your Smart Trac system and its individual components, fault tables, and other important information. Each Smart Trac AC1 and each interface card comes with its own Technical Manual. The Technical manuals are oriented toward those responsible to install and maintain a Smart Trac system.

Smart Trac Engineering Guides

The Smart Trac AC1 Engineering Manual and individual printed Engineering Guides for each interface card describe the software used with each Smart Trac AC1, each interface card and each driver. The Engineering Guides are oriented to engineers with a background in programmable logic controllers. You will find driver installation, configuration and troubleshooting information in the Engineering Guides. Depending on the driver, you can also find information regarding how to tailor the driver to your particular environment.

Smart Trac Bulletins and Application Notes

You may receive *Smart Trac Application Notes* and/or *Smart Trac Bulletins* now and then.

- *Bulletins* describe new Smart Trac products and product updates.
- *Application Notes* explain how Smart Trac technology can be used to address particular industry needs. They are oriented toward the engineer of Smart Trac Systems.

Online Help

Smart Trac Technical Manuals and Engineering Guides are available online as well. This means that the same information contained in the printed versions of

your Smart Trac manuals may be accessed on a Smart Trac Workstation computer while you are working.

You'll find HELP buttons on many screens within Smart Trac software. Simply click on the button to view online help for the screen you're viewing.

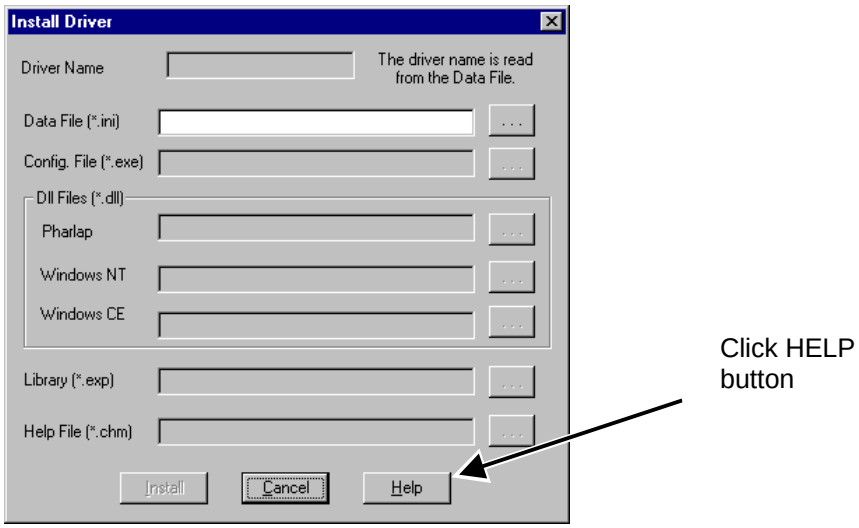

Figure 1. A Smart Trac HELP button.

Most Smart Trac software drivers come with a help file for that particular driver. These help files are installed with installation of the driver.

Smart Trac Training Seminars

Worldwide Web

MagneTek Field Service Engineers

Where Do I Begin?

The *Smart Trac AC1 Technical Manual*, along with basic information in this manual, provides information to get you familiar with Smart Trac technology, install a Smart Trac AC1, and learn about the various options available to network your drives. It is suggested that you read this material first. Depending on your implementation of Smart Trac technology, this may be all you'll need to get you started.

If you're engineering a Smart Trac system, you'll need to read the *Smart Trac AC1 Engineer's Guide*. This guide describes the fundamentals of Smart Trac Workstation software and describes how to configure a basic system.

Next, read the Technical Manuals for each option card to be used in your Smart Trac system. Install the option cards and test each per instructions in the manuals.

To delve further, you should have a working Smart Trac system to access online help.

1. Click **START**, **PROGRAMS**, **MAG-300**, **CONTROL MANAGER**. The Control Manager loads.
2. Click **Help**. A small selection box appears.

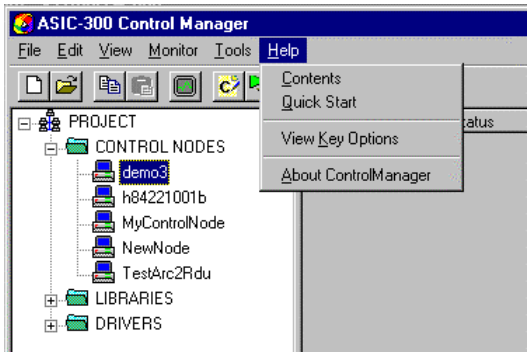

Figure 2. The HELP selection box.

3. Click **Quick Start**. Here you can get a basic idea of how to proceed once your system is assembled.
4. Close the Quick Start Help window by clicking the "X" in the upper right hand corner of the window. The Control Manager screen re-appears.
5. Click **Help** a second time, then **Contents**. Control Manager's online Help **Introduction** screen appears.

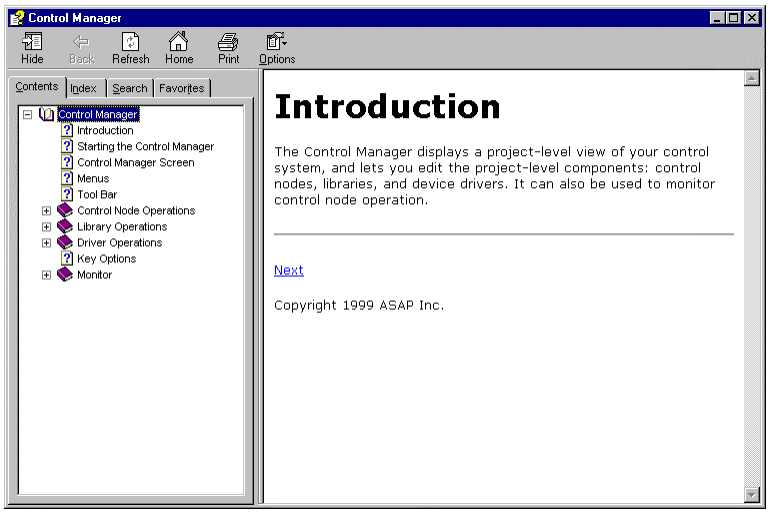

Figure 3. Control Manager's Help Contents Introductory screen.

6. Read the information contained in this Help. It reinforces concepts you're already familiar with in the *Smart Trac AC1 Technical Manual* and/or *Smart Trac Engineer's Guide*.

7. At this point, you should be able to configure a control node. If you haven't already done so, do it now.
8. Double click a control node. **Control Studio** loads.
9. Click **Help**. A small selection box appears.

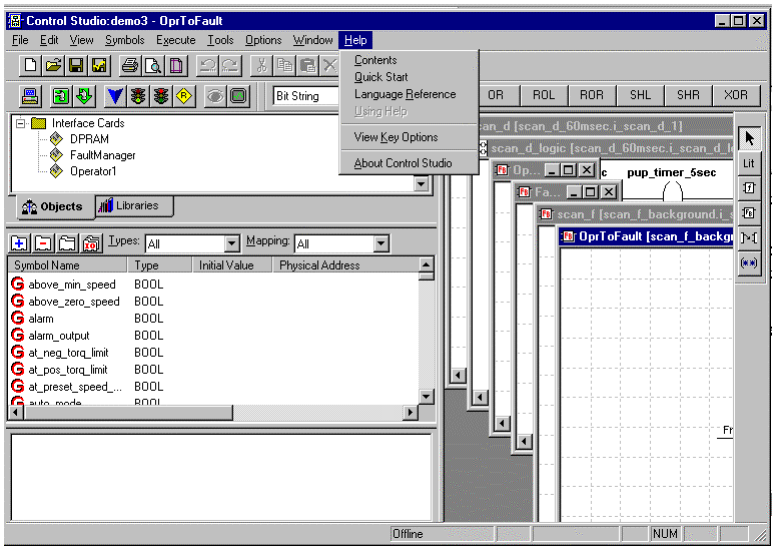

Figure 4. Control Studio's Help selection box.

10. The **Quick Start** available here is identical to that in Control Manager. The other two selections, **Contents** and **Language Reference**, contain information not available in **Control Manager** or in printed technical documenation (although you may choose to print a copy of the online version).
11. If you'll be programming in the Smart Trac Workstation Development Environment, you'll find the information in Control Studio's online help very useful. Topics range from how to use Control Studio, its Toolbars and Windows, to programming using five PLC languages, to monitoring a program. This information can be viewed online while using Smart Trac Workstation software or printed.
12. If programming a Smart Trac system, you'll find the Language Reference a valuable document. Whether you view online or read a copy you print, the Language Reference provides syntax and examples of each Smart Trac Language command.
13. General information about drivers and faults can also be found in Control Studio's online Help. For more specific information, consult the printed Engineer's Guides supplied with each driver. For more detailed fault information, consult the *Smart Trac Fault Manager* publication supplied with the Fault Manager driver.
14. Always consult the MagneTek, Inc. – Drives and Systems web site for the latest information, or ask your MagneTek representative.

Smart Trac Workstation Software

Workstation Lite

Smart Trac Workstation Development Environment

Control Manager and Control Studio

Using **Control Studio**, you program your control application and then build, download, and monitor its operation. Control Studio operations include:

- Configuring a Control Node
- Including function and function block Libraries
- Importing ASIC-100/ASIC-200 Programs
- Configuring your I/O, device network, communications, and other device drivers
- Configuring Symbols (program variables and I/O tags)
- Creating User Data Types
- Programming using the IEC 61131-3 languages: Function Block Diagram, Instruction List, Relay Ladder Logic, Sequential Function Chart, and Structured Text
- Creating Tasks that determine how and when programs run
  Building and Downloading a control application
  Communicating with the Physical Control Node
- Monitoring Control System Operation
- Using the Watch Window to view, set, and force symbols

The **Control Manager** displays a project-level view of your control system, and lets you edit the project-level components: control nodes, libraries, and device drivers. It can also be used to monitor control node operation.

Smart Trac Systems and Options

More?

Glossary of Terms

Index

Error! No index entries found.