COOPER POWER SYSTEMS

Cooper Control Interface
Data Reader
User Guide

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Cooper Power Systems

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COOPER CONTROL INTERFACE
DATA READER USER GUIDE

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Chapter 1 Introduction

The Cooper Control Interface Data Reader program is an interactive Windows tool to retrieve data from a McGraw Edison® Data Reader and save it in files for use in other programs such as the Cooper Control Interface control programs and spreadsheet and database applications.

Here is a list of some of its features:

- Easy to use Windows screens with simple menus, scrolling lists of choices and simple mouse-click selections.

- Print reports on any Windows compatible printer without difficult printer and report configuration steps.

- Field technicians can use the McGraw Edison® Data Reader to collect readings from F4C, CL-4C, CL-5A, CL-5C, CL-5D, and CL-5E controls in the field. When the Data Reader is returned to the office, the Data Reader Interface program retrieves the data from the unit.

- When you retrieve the data, you can save it in a file on your PC, print a report showing the data, and change the date and time stamps of when the reading was taken, not the date and time stamps associated with demand meter values.

- You can also delete existing readings from files on your PC, verify Data Reader status, and reset the memory on the Data Reader.

- The readings files are in a non-proprietary format (Microsoft Excel) for easy use by other applications, such as spreadsheets and databases.

- Year 2000 compliant.

New Features in version 2 of Cooper Control Interface

- Supports Windows NT

- Supports international and regional settings.

- Supports CL-5E controls.

Chapter 2 Getting Started

System Requirements

The Cooper Control Interface program can run on systems with Windows 95/98 or Windows NT (4.0 with Service Pack 3 or later) operating systems. This version of the software supports only 32-bit operating systems and is not compatible with Windows 3.1. If you must run on Windows 3.1, then install version 1.02 of Cooper Control Interface from the Ver_1.02 subdirectory of the CD.

Connection to a Data Reader requires an available RS-232 serial port.

Any Windows compatible printer can be used to print reports.

What's in This Package

The Cooper Control Interface program package includes an installation CD and this manual. The CD includes the programs, on-line help files, factory default settings, sample readings, support files, and copies of this user guide.

The Data Reader package includes one cable to connect the Data Reader to a control (black coil cord) and one cable to connect the Data Reader to your PC (gray straight cord). The cables are *not* interchangeable and are necessary for proper Data Reader operation. See manual S225-30-1 for more details on the Data Reader.

This package does not contain floppy disks for installation. If you require floppy disks, run the MakeFlop.bat program from the CD on a computer that has both a CD drive and a floppy drive and follow the prompts. Otherwise, contact your Cooper Power Systems representative to request floppy disks.

Installing and Configuring

The installation CD contains a setup program that will guide you through the installation process. In most cases, you should accept the default answers it proposes for each question. You may want to change some of the options but be sure to read the recommendations on each screen.

The installation CD may contain a "ReadMe.txt" file with new information that became available after this manual was printed. The installation program will ask if you want to view the file.

This installation will not overwrite the sample readings files. If you are repairing or re-installing and want the original files to be installed, then you must first delete or rename the existing files.

The CCI DDE communications server will be installed as needed.

Installing In Windows 95/98/NT

    1   Quit all running applications.

    2   Insert the CD in the CD drive.

    3   Click the Start button and choose Run.
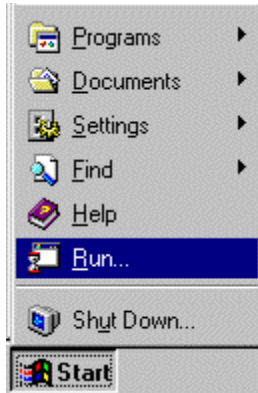
    4   Type d:\setup in the Run box and click "OK". These instructions assume your CD drive is D. If you are using a different CD drive, substitute your drive letter in place of D.
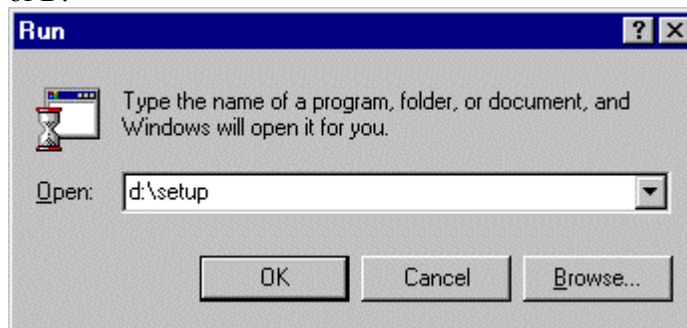
    5   Follow the instructions on the screen to complete the installation.

What's in This Manual

This User Guide describes the Cooper Control Interface Data Reader program and the basic procedures you can do with it. It tells you about the system requirements and how to install it.

What's Not in This Manual

This manual does not discuss how to use Windows dialog boxes and menus, how to use the keyboard and mouse, or other computer operation functions. The manuals with your computer and the on-line help in Windows can show you how to do these tasks.

Nor does this manual discuss the details of the Data Reader. Refer to manual S225-30-1 shipped with the Data Reader for help with its operation.

Where To Get Help

You can get help showing you how to do the basic procedures by choosing **Help** from the menu or clicking the help toolbar button in the program. Look at the "How do I …" sections for most common questions or check the table of contents for specific items.

You can get help on the screen by pressing the **F1** function key.

The Service Information Manual for the Control you are working with will tell you how to set it up and help you analyze the data. The Data Reader manual (S225-30-1) can tell you how to work with a Data Reader.

See also Chapter 5 Troubleshooting and Operating Tips.

Chapter 3 Starting and Stopping the Program

Windows Start Menu

The installation adds the Cooper Power Systems program group to the start menu.

To start the Cooper Control Interface Data Reader program, click on the Start button and select Programs. Then click Data Reader in the Cooper Power Systems group:
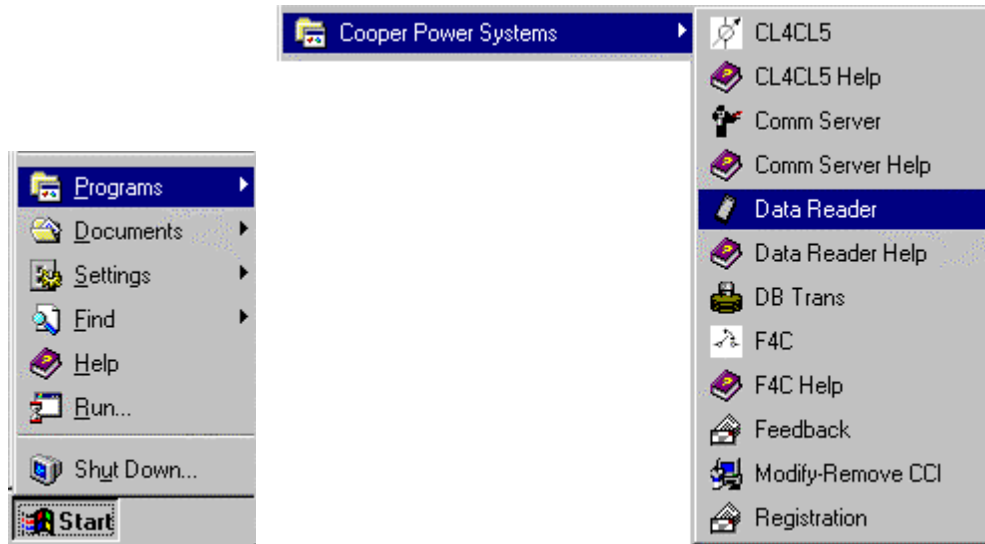
Windows Desktop Shortcuts

For convenience, you can place a shortcut to Data Reader on your Windows desktop. You can find instructions for creating shortcuts in the Windows Help on the start menu.

If you have a shortcut on your desktop, simply double-click on the icon to start the program.

Exit

Exit from the program by choosing File | Exit on the menu or clicking Exit on the toolbar.

Chapter 4 Working With the Data Reader

Making the Connection

- Choose Data Reader | Configure Comm.

  -or-

  Click the Configure Comm button on the toolbar.

- Verify that the communications parameters are correct.

- Connect the Data Reader-to-Computer cable (straight gray) from the COM port on your PC to the port on the Data Reader.

Check the Status

- Choose Data Reader | Status from the menu

  -or-

  Click the Status button on the toolbar.

- Follow the instructions on the screen to see how many readings are in the Data Reader.

Retrieve Readings

- Choose Data Reader | Retrieve Data from the menu.

  -or-

  Click the Retrieve Data button on the toolbar.

- Follow the instructions on the screen to start the transfer.

- All of the readings in the Data Reader will be retrieved one after the other. Because the reader can contain readings from many different controls, you will be shown the type of control, the control ID, and the data acquisition time for each one. As soon as the transfer is complete, information about the first reading in the set will be shown.

- The control ID shows the ID that the control passed to the Data Reader. You can change the ID to another value.

- The acquisition date and time show when the Data Reader took the readings from the control. The load date and time show when the Data Reader transferred the reading to the PC. You can change these dates and times in the dialog box.

- You can save the readings in a file on your computer. See the on-line help for Save and Save As. Saved readings can be read by the Cooper Control Interface CL4/CL5 or F4C Control programs, or other applications that can use .xls files.

- You can view or print the readings in a report. See the on-line help for the view button on the Retrieve Data screen.

- You can scroll through the other readings by clicking on the Skip button. If you click Skip on the last record, the program will display the first reading after warning you that it is wrapping back to the first reading.

Note: **The program was not intended to be used with a common central database (e.g. on a network). Saving data from more than one PC to the same database at the same time can produce unpredictable results.**

Reset the Data Reader Memory

- You can clear the memory in the Data Reader by choosing Date Reader | Reset on the menu.

  -or-

  Clicking the Reset button on the toolbar.

- Follow the instructions on the screen to reset the memory. Reset clears the memory in the Data Reader, but it does not remove the readings from your PC.

Print Readings

If you have readings stored in files on your PC, you can view or print them in a report. The Retrieve Data screen must be closed if you want to view data from a file.

Choose Print from the File menu, or click the print button on the Toolbar. You will be asked to choose the file that contains the data, and then select the reading you want to view. See the on-line help for more information about viewing and printing readings.

Readings saved from the Cooper Control Interface CL4/CL5 and F4C Control programs can be selected for printing. Readings taken by the MS-DOS based program can be printed by this version of the program after they have been converted to the dbf file format.

Readings from the MS-DOS based program may be converted to the dbf file format by using the Database Translator (DB Trans) utility. Execute the DB Trans utility and select the files you wish to translate. These would typically be in subdirectories ending in ".CKT" under the "C:\DATAREAD" directory (e.g. "C:\DATAREAD\DEV15.CKT\"). The DOS-style files are named according to the device ID and end in ".DAT". Select as many of these as you wish and click on the "Convert" button to have them translated into DBF format. The readings and settings thus converted will be placed in files named "READINGS.DBF" and/or "SETTINGS.DBF" in the same directory.

Reports for settings contain the function code, value, unit of measure, and description. Reports for profile data contain entry number, time, and the four parameter values. Reports for event recorder contain entry number, date and time, ground and phase currents, and the event number and description.

If you would like to see the report before printing it, use the File | Print Preview menu choice or click the print preview button on the toolbar. While in print preview, you can:

- Change pages by using the arrow buttons.
- Send the report to the printer by clicking the printer button.
- Export the report to miscellaneous destinations (including text file) by clicking the export (envelope) button. Follow the screen prompts.
- Change the magnification by clicking the magnify button.
- Return to the program by closing the print preview window.

Deleting Readings

You can delete selected readings from your computer files when you no longer need them. Other data in the same file will not be deleted.

Choose Delete Readings from the File menu, and then select the file that contains the data you want to delete.

The program will list the readings contained in the file you select. Choose one or more to delete.

Deleting data from a file does not affect the data currently in the program.

Deleting all readings from a file does not delete the file itself. You can delete the file by using the Windows Explorer.

Chapter 5 Troubleshooting and Operating Tips

NOTE: **Always allow at least 10 seconds between reading attempts.** The Data Reader first attempts to establish communications with a control device, and if a signal is not found, it will look for signals from a computer. The entire sequence takes about 10 seconds, and during this time, it will not respond to actions from the button.

For more detailed information on the Data Reader, see instruction manual S225-30-1.

Data Retrieval from Control

If all three LED lights remain lit for more than two (2) seconds while the button is depressed, then the battery is too weak for data transfer. Replace the battery.

If the "START DATA READING" light does not turn on following the "BATTERY OK" light, then communications with the control device were not established. Check the cable connections on both the Data Reader and control device being read and repeat the reading process.

If the "COMPLETE" light does not turn on after the "START DATA READING" light, then data transfer did not take place. Check the cable connections on both the Data Reader and the control device being read, and repeat the reading process. If the problem persists, the Data Reader's memory may be filled to capacity. (It will not over-write data already in memory). This can be confirmed by connecting the Data Reader to the computer, and using the computer software. The Data Reader memory can be erased using this software.

Data Transfer to Computer

If all three LED lights remain lit for more than two (2) seconds while the button is depressed, then the battery is too weak for data transfer. Replace the battery.

If the computer screen does not acknowledge that communications have been established with the Data Reader, check the cable connections on both the Data Reader and the computer. Confirm that the computer port is a serial port. Verify that the PC port and baud rate are correct. Be sure you are using the Data Reader-to-Computer cable (straight gray).

Reports won't print

The report-printing program uses the printer you have setup in Windows. There are no parameters you need to change within the Cooper Control Interface program.

If your reports do not print properly, verify that you have the correct printer setup in Windows and use the Windows help process to identify what is wrong. Remember that other applications may be used to open and print the data.

For additional troubleshooting assistance

You may contact Cooper Power Systems:

- Customer Service Center: (414) 524-3300
- Internet web address: www.cooperpower.com
- Local Cooper Power Systems Representative

Glossary

Acquisition Date/Time

When the reading was acquired by the Data Reader from a control.

Baud Rate

The speed in bits per second for the serial data transfer between the computer and the control. The Data Reader only supports 4800 baud.

Communications Port

The serial port on your PC where you connect the cable to the Data Reader.

Control ID

The number programmed into a control to uniquely identify it.

Control Type

Identifies the type of a control: CL-4C, CL-5A, CL-5C, CL-5D, CL-5E, or F4C.

Data Port

The front panel 9-pin port on the control where you attach the Data Reader using the black coil cord or you attach a PC using the Data Port-to-Computer Interface cable if the Interface program is used. This port is NOT an RS-232 port. The Data Port uses the 2175 protocol.

Reading

A reading is settings plus the output of metering, load profile, and event/profile recorders in the control. The metering, load profile, and event/profile recorder data tell you how the system and device that the control operates with is performing. The Cooper Control Interface lets you receive the readings from a control so you can analyze them. You can view them on the screen and print reports. A readings file can be sent to another computer for review.

Settings

Settings are the control programming parameters that set up how the control operates. The Cooper Control Interface lets you receive the settings from a control so you can review them, change them, or save them for later use. Settings that you have changed but not saved are displayed in blue. The program also lets you create new settings and upload them to a control. A settings file on your computer can be transferred to another computer for review and modification. You can receive a settings file from someone else and upload it to a control attached to your PC.