



# Getting the best from your datalogger

## 2 Day Programming and Software Course

### Overview

Our 2 day Programming and Software course is suitable for all users of Campbell Scientific dataloggers.

The first day of the course provides an introduction to using our software to administer, program and collect data from the new generation of dataloggers.

The second day will teach you the basics of customising a datalogger program to suit your sensor and data storage requirements.

Suitable for users of CR200X, CR800, CR1000, CR3000 or CR6 dataloggers. Beginners are welcome and advanced users can also learn new tips and tricks.

### Software and Data Logger Hardware

#### *Device Configuration Utility*

- › Changing Datalogger Settings using Devconfig
- › Sending an Operating System to the Datalogger

#### *Introduction to LoggerNet*

- › Creating a New Station Profile in the Setup Screen
- › Connecting to a Datalogger using the Connect Screen
- › Setting the Datalogger Clock
- › Sending a Program to the Datalogger

#### *Working with Data*

- › Monitoring Real Time Data
- › Display Real Time Data
- › Downloading Data from the Datalogger
- › Viewing Historical Data using View Pro

#### *More LoggerNet Features*

- › Accessing Files via File Control
- › Using the Terminal Emulator with SDI12 Sensors
- › Download Data on a Schedule
- › Monitoring Schedules with the Status Monitor
- › Build a GUI with RTMC

#### *Troubleshooting*

- › Interpreting the Status Table
- › Interpreting the Log Tool

#### *Hardware and Measurement Theory*

- › The CR1000 Wiring Panel
- › Data Logger Power Requirements
- › Analogue Measurement Channels
- › Ground versus Analogue Ground

# Data Logger Programming

## *Data Types and Formats*

- › Available Data Types
- › FP2 versus IEEE4 storage

## *The CRBasic Editor*

- › Help System
- › Commenting and Syntax Highlighting
- › Introduction List
- › Program Templates

## *Introduction to Programming*

- › Measurement and Control Example Program
- › Declaring Variables
- › Declaring Data Tables
- › Creating a Main Program
- › Measurement Instruction Parameters
- › Using If-Then-Else Statements

## *Using Program Features*

- › Dim, Alias and Const instructions
- › Sub Routines
- › For Loops

## *Sensor Examples*

- › Voltage Output Sensor
- › SDI-12 Sensor
- › Multiplexer
- › Other sensors

## *Programming with Shortcut*

- › Choosing Sensors
- › Defining Data Tables
- › Wiring List and Output Files

## General information

Campbell Scientific offers comprehensive training courses for our dataloggers and software. These courses are designed for those without much datalogger experience, or for those wanting to increase their knowledge. The courses have an emphasis on programming; see individual courses for itinerary. "Hands-on" programming exercises and course handouts are used to reinforce the concepts covered by the instructors.

Training can be provided by any of the European offices (UK, France, Germany or Spain). Dates given on our website are for the UK where we have dedicated training facilities. For training at the other offices please contact them directly. We can also run training courses externally, either at your premises or any other suitable venue. This might be more economical if you have several people requiring training.

## Booking for a course?

A few details ...

- All courses are taught using the latest version of LoggerNet software.
- Price includes refreshments and a buffet lunch. Please advise of any special dietary requirements prior to the commencement of the course.
- Attendees will be provided with access to a computer and suitable connections for the course. Customers with specific questions relating to their set-up can bring their own computer for this purpose.
- Course commences 9.00 a.m. each morning and finishes at 5.00 p.m.
- All fees must be paid in full prior to the commencement of the course by either credit card or invoice (for credit approved clients). Full refunds are given up to 2 weeks before the course, cancellations after this time attract a charge of 20% of the course fee. No refund is given for cancellations 24 hours prior to commencement.
- Participant substitutes are welcome at any time prior to commencement of the course. No substitutions will be accepted after the course has begun.
- To book a course contact Campbell Scientific Ltd by phone on 01509 828888 or email [sales@campbellsci.co.uk](mailto:sales@campbellsci.co.uk)

## Courses

For an up to date list of all our current courses please visit our website: <http://www.campbellsci.eu/training>

