

# Writing Guide

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Campbell Scientific

Technical Communications

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# Table of Contents

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<b>1. Introduction</b> .....	<b>1</b>
<b>2. Manual outline</b> .....	<b>1</b>
2.1 Introduction .....	2
2.2 Precautions .....	2
2.3 Initial inspection .....	3
2.4 QuickStart .....	3
2.5 Overview .....	4
2.6 Specifications .....	4
2.7 Installation .....	4
2.8 Operation .....	4
2.9 Maintenance and troubleshooting .....	5
2.10 Appendices .....	5
<b>3. Elements</b> .....	<b>5</b>
3.1 Boxes .....	5
3.1.1 Caution boxes .....	5
3.1.2 Danger boxes .....	6
3.1.3 Note boxes .....	6
3.1.4 Tip boxes .....	7
3.1.5 Warning boxes .....	7
3.2 Callouts .....	8
3.3 CRBasic examples .....	8
3.3.1 Example programs .....	8
3.3.2 Example code .....	9
3.4 CRBasic instructions .....	9
3.5 Cross-references .....	10
3.6 Equations .....	10
3.7 Footnotes .....	11
3.8 Glossary .....	11
3.9 Headings .....	11
3.10 Hyperlinks .....	12
3.11 Links .....	12
3.12 Lists .....	13

3.13 Screen captures .....	13
<b>4. Acronyms .....</b>	<b>13</b>
<b>5. Code .....</b>	<b>13</b>
<b>6. Company name .....</b>	<b>13</b>
<b>7. Contact information .....</b>	<b>14</b>
<b>8. Order of data logger and software lists .....</b>	<b>14</b>
<b>9. Part numbers .....</b>	<b>14</b>
<b>10. Patents .....</b>	<b>15</b>
<b>11. Phone numbers .....</b>	<b>15</b>
<b>12. Possession .....</b>	<b>15</b>
<b>13. Product descriptions .....</b>	<b>15</b>
<b>14. Safety data sheets (SDS) .....</b>	<b>16</b>
<b>15. SDI-12 .....</b>	<b>16</b>
<b>16. Simple instructions with right angle brackets .....</b>	<b>16</b>
<b>17. Trademarks .....</b>	<b>16</b>
<b>18. Units .....</b>	<b>17</b>
18.1 Ranges .....	18
18.2 Compound units .....	18
18.3 Plural units .....	18
18.4 Pipe and tubing units .....	18
18.5 Units precision .....	19
18.6 Standard/metric tools and hardware .....	19
<b>19. Version identifiers .....</b>	<b>19</b>
<b>20. Terms .....</b>	<b>20</b>
20.1 AC .....	20
20.2 Cable .....	20
20.3 Click .....	20
20.4 Communication, communications .....	20
20.5 Connector .....	21

20.6 CPU .....	21
20.7 Data .....	21
20.8 Data logger, datalogger .....	21
20.9 DC .....	21
20.10 Device Configuration Utility .....	21
20.11 Flash .....	22
20.12 Gage, gauge .....	22
20.13 Hex key .....	22
20.14 Idle, low-power .....	22
20.15 INF .....	22
20.16 Input .....	23
20.17 LED .....	23
20.18 Long-wave .....	23
20.19 NAN .....	23
20.20 Output .....	23
20.21 Port .....	23
20.22 Press .....	24
20.23 Probe .....	24
20.24 Program .....	24
20.25 RX .....	24
20.26 Screen or window .....	24
20.27 Select .....	25
20.28 Short-wave .....	25
20.29 Signal .....	25
20.30 Terminal .....	25
20.31 Three-line-menu .....	26
20.32 True/false .....	26
20.33 TX .....	26
20.34 VAC .....	26
20.35 VDC .....	26
20.36 Window or screen .....	26
20.37 Wire .....	27
<b>21. Policies .....</b>	<b>27</b>
21.1 Retired products .....	27
21.2 RoHS compliance .....	27
<b>22. Glossary .....</b>	<b>28</b>

# 1. Introduction

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This guide outlines standards of writing style. It relies on the following:

- Primary: [Microsoft Writing Style Guide](#) 
- Secondary: [The Chicago Manual of Style](#) 

When there is a conflict between style manuals, this style guide takes precedence over *Microsoft*, and *Microsoft* takes precedence over *Chicago*.

For current spelling and hyphenation, refer to the [Merriam-Webster Dictionary](#) .

## 2. Manual outline

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Use the following outline as a guide for manuals.

Cover

Table of contents

[Introduction](#) (p. 2)

[Precautions](#) (p. 2)

[Initial inspection](#) (p. 3)

[QuickStart](#) (p. 3)

[Overview](#) (p. 4)

Includes bullet list of features

[Specifications](#) (p. 4)

[Installation](#) (p. 4)

Schematics and wiring

Programming

Mounting

[Operation](#) (p. 4)

[Maintenance and troubleshooting](#) (p. 5)

Glossary (optional)

References and attributions (optional)

[Appendices](#) (p. 5)

Warranty (boilerplate)

Assistance (boilerplate)

Safety (boilerplate)

Global Sales & Support Network (boilerplate)

## 2.1 Introduction

Include original manufacturer if product is a buyout. This is the only section where some pre-sales content and wording is appropriate. The text in this section is often similar to the Overview section on the product webpage.

As needed include this note:

**NOTE:**

This manual provides information only for CRBasic data loggers. The <<product>> is also compatible with many of our retired Edlog data loggers. For Edlog data logger support, contact Campbell Scientific.

## 2.2 Precautions

Pick and choose from the following. Edit and add to as needed.

- READ AND UNDERSTAND the Safety section <<xref>> at the back of this manual.
- Although the <<product>> is rugged, it should be handled as a precision instrument.
- Ensure structural integrity of the tripod, mast, or pole during setup and weather extremes to minimize the chance of damaging the enclosure or instruments. Read all instructions carefully.
- Ensure the <<product>> is connected to Earth ground.
- The <<product>> is a precision instrument. Please handle it with care.
- Do not use cable lengths greater than << specific m (ft)>> in electrically noisy environments.
- The black outer jacket of the cable is Santoprene® rubber. This compound was chosen for its resistance to temperature extremes, moisture, and ultraviolet (UV) degradation. However, this jacket will support combustion in air. It is rated as slow burning when tested

according to U.L. 94 H.B. and will pass FMVSS302. Local fire codes may preclude its use inside buildings.

- Wire color and functions of <<product>> purchased through Campbell Scientific may not correspond with the wire colors and functions given in the original manufacturer manual. To ensure proper function, follow the wiring provided in **Short Cut** or in this manual.
- Always use safe lifting practices when moving <<product>>; hold weight firmly, close to body and lift with legs in a smooth, continuous motion. Do not twist while lifting, and do not attempt to move <<product>> with poor leverage, in awkward positions, or with non-fluid motion.
- Follow local regulations (see Compliance in <<xref to specs>>).
- IMPORTANT: Maintain a level of calibration appropriate to the application. Campbell Scientific recommends factory recalibration of the <<product>> every <<number>> years.
- Protect from over-voltage.
- Protect from water.
- Protect from ESD (electrostatic discharge).

## 2.3 Initial inspection

Pick and choose from the following. Edit and add to as needed.

- Upon receipt of the <<product>>, inspect the packaging and contents for damage. File any damage claims with the shipping company.
- The model number and cable length are printed on a label at the connection end of the cable. Check this information against the shipping documents to ensure the expected product and cable length are received.

## 2.4 QuickStart

Use this section to explain how to set up the most expected use case. Do not provide alternatives. Use tools such as **Short Cut** and the **Device Configuration Utility** as needed. Use a numbered list with screenshots and images.

Link to external videos as appropriate.

## 2.5 Overview

This section contains a technical introduction to the product. Do not repeat pre-sales information from the [Introduction](#) (p. 2).

Include schematics as appropriate.

Include bullet list of features.

## 2.6 Specifications

Cross-check the product webpage. Coordinate with webmaster to ensure both sources convey the same data. Webpage often lists fewer specs.

Use the following format for compliance documents:

Compliance documents: View at: [www.campbellsci.com/<<product>>](http://www.campbellsci.com/<<product>>)

Or

Compliance documents: View EU Declaration of Conformity at:  
[www.campbellsci.com/<<product>>](http://www.campbellsci.com/<<product>>)

## 2.7 Installation

If a *Short Cut* tutorial is included in the QuickStart, use the following statement in the beginning of the section:

If you are programming your data logger with *Short Cut*, skip Wiring <<xref>> and Programming <<xref>>. *Short Cut* does this work for you. See QuickStart <<xref>> for a *Short Cut* tutorial.

Include, in this order:

Schematics and wiring

Programming

Siting/mounting

## 2.8 Operation

This section includes information such as updating operating systems, SDI-12 commands, ModBus commands, long cable length information, noisy environment information.

## 2.9 Maintenance and troubleshooting

Include the following note:

**NOTE:**

All factory repairs and recalibrations require a returned material authorization (RMA) and completion of the “Statement of Product Cleanliness and Decontamination” form. Refer to the Assistance <xref> page at the end of this manual for more information.

## 2.10 Appendices

The following are commonly used appendices:

- Importing *Short Cut* Code (include when product is in *Short Cut*)
- Example programs (include if programs are short; otherwise, include them on the website download page)
- SDI-12 command basics (include in most SDI-12 product manuals)
- Determining True North (include in wind direction sensor manuals)

# 3. Elements

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## 3.1 Boxes

Boxes call attention to important or helpful information. To keep their prominence, avoid overusing boxes. The style guide includes the following box types:

3.1.1 Caution boxes .....	5
3.1.2 Danger boxes .....	6
3.1.3 Note boxes .....	6
3.1.4 Tip boxes .....	7
3.1.5 Warning boxes .....	7

### 3.1.1 Caution boxes

Use a caution box if an action can result in repairable damage or bad data.

## Example

### CAUTION:

Voltage levels at the **12V** and switched **SW12** terminals, and pin 8 on the **CS I/O** port, are tied closely to the voltage levels of the main power supply. Therefore, if the power received at the **POWER IN 12V** and **G** terminals is 16 Vdc, the **12V** and **SW12** terminals and pin 8 on the CS I/O port will supply 16 Vdc to a connected peripheral. The connected peripheral or sensor may be damaged if it is not designed for that voltage level.

## See also

[Danger boxes](#) (p. 6)

[Note boxes](#) (p. 6)

[Tip boxes](#) (p. 7)

[Warning boxes](#) (p. 7)

## 3.1.2 Danger boxes

Use a danger box if an action can result in injury or death.

## Example

### DANGER:

Use extreme care when working near overhead electrical wires. Check for overhead wires before mounting the 020C or before raising a tower.

## See also

[Caution boxes](#) (p. 5)

[Note boxes](#) (p. 6)

[Tip boxes](#) (p. 7)

[Warning boxes](#) (p. 7)

## 3.1.3 Note boxes

Use a note box to set critical information off from the body text.

## Example

### NOTE:

Approach killer whales in a subservient manner.

## See also

[Caution boxes](#) (p. 5)

[Danger boxes](#) (p. 6)

[Tip boxes](#) (p. 7)

[Warning boxes](#) (p. 7)

## 3.1.4 Tip boxes

Use a tip box for helpful suggestions.

### Example

**TIP:**

Bow your head and say a prayer before the whale's dinner.

## See also

[Caution boxes](#) (p. 5)

[Danger boxes](#) (p. 6)

[Note boxes](#) (p. 6)

[Warning boxes](#) (p. 7)

## 3.1.5 Warning boxes

Use a warning box if an action can result in data loss or a product being damaged beyond repair.

### Example

**WARNING:**

Because sending an OS resets data logger memory and resets all settings on the data logger to factory defaults, data loss will certainly occur. Depending on several factors, the data logger may also become incapacitated for a time.

## See also

[Caution boxes](#) (p. 5)

[Danger boxes](#) (p. 6)

[Note boxes](#) (p. 6)

[Tip boxes](#) (p. 7)

## 3.2 Callouts

Use letters instead of numbers for callouts. This is done to avoid confusion with numbers in procedures. To avoid issues with resizing, the callouts should not be part of the image.

Colors for callout lines and letters should contrast enough with the image that they are easily seen. Below is a possible color palette to choose from:

#000000
rgb(0, 0, 0)
#939598
rgb(147, 149, 152)
#FFFFFF
rgb(255, 255, 255)
#026CB6
rgb(2, 108, 182)
#00C069
rgb(0, 192, 105)
#FFA61A
rgb(255, 166, 26)
#BF311A
rgb(191, 49, 26)

## 3.3 CRBasic examples

### 3.3.1 Example programs

Program examples are complete, working examples of CRBasic code. These are set off from the text and are numbered and named. Program examples should be kept as short and simple as possible.

#### Example

##### CRBasic Example 1: How to enter example programs

```
'Declare Public Variables  
Public PTemp, Batt_volt
```

## CRBasic Example 1: How to enter example programs

```
DataTable (Test,1,-1)
  DataInterval (0,15,Sec,10)
  Minimum (1,Batt_volt,FP2,False,False)
  Sample (1,PTemp,FP2)
EndTable

'Main Program
BeginProg
  Scan (1,Sec,0,0)
  PanelTemp (PTemp,60)
  Battery (Batt_volt)
  NextScan
EndProg
```

### 3.3.2 Example code

Example code is shorter than an example program and will not run on its own. Use example code to highlight a specific area in a program that a user will need to pay attention to and/or adjust.

#### Example

```
DataTable (Test,1,-1)
  DataInterval (0,15,Sec,10)
  Minimum (1,Batt_volt,FP2,False,False)
  Sample (1,PTemp,FP2)
EndTable
```

See also [Code](#) (p. 13), [Program](#) (p. 24).

## 3.4 CRBasic instructions

Because of precedent, most CRBasic commands and functions are referred to as instructions. An individual instruction, without parameters filled in, can be placed in line with the narrative. Put no space between the instruction and trailing parentheses. If the instruction does not require parentheses, do not include them.

#### Examples

[VoltSE\(\)](#)

[PipelineMode](#)

With instruction pairs or triples, use a slash to separate individuals.

#### Example

[DataTable\(\)/EndTable](#)

Do not duplicate CRBasic Editor Help. Instead, state the instruction to use. Explain parameters that must be set to certain values. Direct the user to CRBasic Editor Help for further help with the instruction.

Precede code comments with a straight apostrophe ('), not a curly apostrophe (').

Use one div.indent (2 spaces, if not using MadCap Flare) per indent. Indenting with the Tab key does not copy well to CRBasic Editor.

## 3.5 Cross-references

Use cross-references to link to sections, figures, tables, and examples within a manual or help system.

Using the title of a section as part of a cross reference assists the writer and reader by ensuring the cross reference is accurate. Avoiding repetitiveness is secondary. Always use the title or caption of an element when it is not contained within the section wherein it is referenced. For example, if a table is within a section, simply stating *in the following table* may be adequate. But if the table is elsewhere, include its caption in the cross-reference. When it is in the same section, unless it is obvious to the reader, use the words *previous* or *following* to indicate where to look for the element.

See also [Hyperlinks](#) (p. 12).

## 3.6 Equations

Offset equations by one standard indent and using the standard document font style and size when possible. If equations will be referred to in subsequent text, identify the equations as Eq. 1, Eq. 2, etc., at the right margin after the equation. When referring to elements of an equation in the text, use bold (or the strong style in MadCap Flare).

Express equations with in-line text, rather than images. For complex equations, use an equation editor, such as the equation editor in Microsoft Word. In MadCap Flare, use LaTeX or MathML. Use images only if there are no other options.

Use the multiplication symbol ( $\times$ ) instead of an x or an asterisk. Use an en dash (–) instead of a hyphen (-) to express a minus or negative sign. Use spaces liberally in equations to eliminate a congested appearance.

### Examples

$$10 - 5 = 15$$

$$y = mx + b$$

Resolution: 130 ns ÷ number of cycles to be measured

$$\sum_{m=1}^3 \sum_{n=1}^m \sin(x^m + y^n)$$

$$\mu\epsilon = \frac{-4 \times 10^6 V_r}{GF(1+2V_r)}$$

## 3.7 Footnotes

Use numbers in superscripts for footnotes.

### Example

C1 - C8<sup>1</sup>

In cases where numbered footnotes can cause confusion, such as in equations or next to units, insert a forward slash immediately after the footnote. If using this style, use it for the entire document.

### Example

25 mV<sup>2/</sup>

When not part of a table, footnotes are shown with numbers at the bottom of the page. When part of a table, they are shown in the table footer.

## 3.8 Glossary

Mark the first instance of a glossary term in a PDF manual, and the first instance in every topic in online help<sup>3</sup>. The glossary term will be defined at the bottom of the page and within the glossary section (if included).

## 3.9 Headings

To improve readability, simplify content as possible to reduce the number of heading levels needed. Only use subheadings when content can be split into two or more distinct topics.

Section headings nest four deep with heading numbers. Headings for levels five and six are not numbered. If further nesting is needed, use bold text with normal body text size (using <strong> in MadCap Flare).

See also [Microsoft Writing Style Guide](#) .

---


<sup>1</sup>My example footnote

<sup>2</sup>/My new footnote


<sup>3</sup>To easily do this in MadCap Flare, set the target for the PDF to convert only marked terms, and the target for online help to convert first occurrence of term.

## 3.10 Hyperlinks


Use hyperlinks to external resources conservatively, with the knowledge that links are often broken. Provide enough information with the link so that a reader will have a reasonable chance of finding the content if the link is broken. This includes links to Campbell Scientific web pages.

When linking to a document, use the document name as the hyperlink, include the leaving-site icon  (found in Flare projects at: Content\Resources\Images\Common\icon\_leaving-site.png), and mention that it is available from a website.

When linking to a web page, use an abbreviated URL and include the leaving-site icon.

When linking to a video, use an abbreviated url and video icon  (found in Flare projects at: Content\Resources\Images\Common\video.png).

### Examples

For more information, refer to [Soil-specific calibration procedure for volumetric water content sensors](#)  available on our website.

Compliance documents: View at: [www.campbellsci.com/soilvue10](http://www.campbellsci.com/soilvue10) 

For more information, watch a video at [www.campbellsci.com/videos/soilvue10](http://www.campbellsci.com/videos/soilvue10) .

**See also** [Cross-references](#) (p. 10).

## 3.11 Links

When a cross-reference or hyperlink is not included as part of paragraph text, use the phrase *See also* in bold text. When listing one or two cross-references or hyperlinks, list on the same line. List three or more on separate lines.

### Examples

**See also** [Flash](#) (p. 22).

**See also**

[Danger boxes](#) (p. 6)

[Note boxes](#) (p. 6)

[Tip boxes](#) (p. 7)

[Warning boxes](#) (p. 7)

## 3.12 Lists

Use numbered lists for items that should be read or steps that must be followed in a specific order. Use lower alpha for substeps.

Use bulleted lists for items or steps that require no particular order. Follow the guidelines shown in the *Microsoft Writing Style Guide*.

**See also** [Microsoft Writing Style Guide](#) .

## 3.13 Screen captures

Computer screen shots of software windows should be used frequently, especially when illustrating a procedure.

# 4. Acronyms

---

Avoid the use of acronyms. If an acronym is used, explain it in the first instance and in the glossary, if included.

# 5. Code

---


Use *code* to describe a piece or pieces of a program. Code is not functional on its own but can be added to other code to complete a program.

**See also** [Program](#) (p. 24).

# 6. Company name

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The Campbell Scientific organization includes several companies. Use the legal name of a Campbell Scientific regional office in rare instances wherein only that company is the subject, such as might be done in a warranty page. Use *Campbell Scientific* when referring to all group companies. Do not use *CSI*, *Campbell*, or *Campbells*.

**See also** [Contact information](#) (p. 14), [Naming Conventions for Campbell Scientific Offices and Affiliated Companies](#) .

## 7. Contact information

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Never list the name or contact information of an individual. That person may leave, or the product may become so successful that he or she would be inundated with requests. If the situation requires a contact, list generic contact information for Campbell Scientific and direct the user to the regional office contact information page. If more contact information is needed, list the job title of the person to contact.

See also [Company name](#) (p. 13).

## 8. Order of data logger and software lists

---

In general, list in order from largest/fastest to smaller/slower/older.

### Data loggers:

GRANITE-series, CR6, CR3000, CR1000X, CR800-series, CR300-series, CR1000

### Software:

*LoggerNet Admin, LoggerNet, RTDAQ, PC400*

## 9. Part numbers

---

Due to differences in part numbers across Campbell Scientific group companies, avoid using part numbers. Instead, use the official product name.

If a part number must be used, abbreviate "part number" to *pn*.

### NOTE:

The AWOS manuals are an exception and can use part numbers because they are project specific.

## 10. Patents

---

If the product is covered under one or more patents, mention as much in the Overview section. List the patent number in the Specifications section. Cite the patent in the References and Attributions section.

### Example

Israelsen, D. L., L. E. Jacobsen, J. A. Swenson. Vibrating Wire Sensor Using Spectral Analysis. U.S. Patent 7,779,690, filed February 6, 2007, and issued August 24, 2010.

## 11. Phone numbers

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Use the following format for phone numbers in the United States: (XXX) XXX-XXXX.

## 12. Possession

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Humans own things. Occasionally, animals own things. However, in technical writing, inanimate objects do not own things. Avoid the use of the possessive form with reference to inanimate objects.

### Example

Preferred: data logger wiring panel

Not preferred: data logger's wiring panel

## 13. Product descriptions

---

If a product description follows a model number, and it is identical to the official description that appears on the price list or product literature, capitalize the first letter of each major word. A product model name is self-highlighting since it is capitalized. Capitalization of a long description is tedious and distracts from the narrative.

Do not overuse a description. Using the description once per section at the top of the section should suffice. In long sections, sprinkle the description sparingly throughout the section.

# 14. Safety data sheets (SDS)

---

Safety data sheets (SDS), or the equivalent, should be referenced if chemicals are sold or used with a product. Including an SDS in a manual, however, becomes additional content that needs to be maintained.

# 15. SDI-12

---

When possible, document relevant SDI-12 commands using the existing, shared SDI-12 documentation. Use monospaced font (the code style in MadCap Flare) for commands and responses.

## Examples

Command: `OM!`

Response: `00352<CR><LF>`


# 16. Simple instructions with right angle brackets

---

Abbreviate simple sequences by using right angle brackets (avoid using the vertical bar (|) character). Include a space before and after each bracket, and don't make the brackets bold.

## Example

Select **Accounts** > **Other accounts** > **Add an account**.

**See also** <https://docs.microsoft.com/en-us/style-guide/procedures-instructions/writing-step-by-step-instructions> .

# 17. Trademarks

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To protect Campbell Scientific trademarks, show the appropriate trademark symbol on the first instance of every trademarked word in a PDF manual, and on the first instance in every topic in

online help. Include the trademark reference as a glossary definition, which will convert to a footnote on the first page of a printed manual and as a popup in online help.

For registered Campbell Scientific trademarks, use the registered trademark symbol (®). For unregistered trademarks, use the trademark symbol (™). Always refer to the official list at [www.campbellsci.com/copyright](http://www.campbellsci.com/copyright) to determine if a trademark is registered or unregistered.

It is not necessary to use trademarks on other manufacturers' products unless using them makes the content clearer.

### Examples

Data loggers use PakBus®<sup>1</sup> to communicate with *LoggerNet*.

EasyFlux™<sup>2</sup> PC is a computer program that processes high frequency time series data, collected using a Campbell Scientific eddy-covariance flux system, into fluxes following community accepted practices.

## 18. Units

---

Express units clearly, concisely, and in a way that balances the demands of international standards organizations with customer and industry expectations. Secondly, maintain consistency with other Campbell Scientific publications. In the US, use the US-customary-unit symbol in parentheses after the SI-unit symbol when appropriate. For example, weights and dimensions are usually expressed in inches when freight costs are being estimated in the US.

Subject to the preference of the writer, spell out the unit name the first time the unit is used or always if the unit is rarely expressed and is obscure. Spelling out compound units is rarely desirable.



Resources:

- [www.bipm.org/en/measurement-units](http://www.bipm.org/en/measurement-units)
- <https://physics.nist.gov/cuu/Units/>
- [www.agronomy.org/files/publications/style/chapter-07.pdf](http://www.agronomy.org/files/publications/style/chapter-07.pdf)

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<sup>1</sup>A proprietary communications protocol developed by Campbell Scientific to facilitate communications between Campbell Scientific devices. Similar in concept to IP (Internet Protocol), PakBus is a packet-switched network protocol with routing capabilities. PakBus is a registered trademark of Campbell Scientific, Inc.

<sup>2</sup>EasyFlux is a trademark of Campbell Scientific, Inc.

- [www.ewh.ieee.org/soc/ias/pub-dept/abbreviation.pdf](http://www.ewh.ieee.org/soc/ias/pub-dept/abbreviation.pdf) 
- [www.jedec.org/sites/default/files/frankrules.pdf](http://www.jedec.org/sites/default/files/frankrules.pdf) 

## 18.1 Ranges

When expressing unit data in a range, print the first scalar value followed by "to" (with leading and following space), followed by the second scalar value in the range, followed by a space, followed by the unit symbol.

### Examples

Range: -40 to 80 °C

Range: 3.5 to 8 kPa

## 18.2 Compound units

When combining more than two units, use "/", "•", and negative powers as needed for clarity. Because unit symbols are mathematical, parentheses may also be used.

### Example

$\mu\text{V}/(\text{V}\cdot\text{A})\cdot\text{m}^{-2}$

## 18.3 Plural units

Express unit names, but not unit symbols, as plurals.

### Examples

50 lb

50 pounds

## 18.4 Pipe and tubing units

Provide the information needed to replace pipe, tubing, and fittings:

- Material
- Nominal size
- Outer diameter
- Wall thickness
- Thread or fitting size

For example, a stainless-steel crossarm for a tripod can be described as "Stainless steel (SS), nominal pipe size (NPS) 3/4, schedule (SCH) 40, with national pipe taper (NPT) 3/4 thread." This gives enough information to derive the following, given that the user, or their pipe supplier, has access to common NPS and NPT charts:

- Material: stainless steel
- Nominal pipe size: NPS 3/4
- Outer diameter (OD): 1.050 in
- Wall thickness: 0.113 in
- Thread: NPT 3/4

## 18.5 Units precision

Use appropriate precision for the measurement being made. If a user is instructed to dig a hole in the ground, much less precision is needed than if they are splicing wire.

In converting one system of units into another, take care to retain the original degree of precision, which should be neither sacrificed nor exaggerated. As a rule of thumb, maintain approximately the same number of significant figures in the conversion as in the original number.

See also [www.jedec.org/sites/default/files/frankrules.pdf](http://www.jedec.org/sites/default/files/frankrules.pdf), step 10.

## 18.6 Standard/metric tools and hardware

For standard to metric conversion for tools and hardware, use the chart at [extension.missouri.edu/webster/wrench-chart.aspx](http://extension.missouri.edu/webster/wrench-chart.aspx).

# 19. Version identifiers

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For software versions, use:

- newer
- older

Otherwise, list every version that is applicable.

### Examples

This information applies to CR6 data loggers with serial numbers 7502 and newer.

These commands apply to the following operating systems and their newer versions: ...

LoggerNet 3.4 and newer do not support Windows NT.

Because of the working directory scheme used in LoggerNet 3.0 and newer, when you use...

Upgrading from an operating system older than OS 28 will reset...

...the mounting with the CSAT3A (CSAT3A serial numbers 2000 and newer), while the bottom images show the mounting with the original version CSAT3A (serial numbers 1999 and older).

## 20. Terms

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### 20.1 AC

Use all capitals for the following abbreviations: AC, DC, VAC, and VDC.

**See also**

AC: [www.merriam-webster.com/dictionary/alternatingcurrent](http://www.merriam-webster.com/dictionary/alternatingcurrent) 

DC: [www.merriam-webster.com/dictionary/directcurrent](http://www.merriam-webster.com/dictionary/directcurrent) 

### 20.2 Cable

Use *cable* to refer to an entire jacketed bundle of wires.

**See also** [Wire](#) (p. 27).

### 20.3 Click

Use *click* to describe interacting with a button.

**Example**

Click **Insert**.

**See also** [Press](#) (p. 24).

**NOTE:**

This term differs from and takes precedence over the *Microsoft Writing Style Guide*.

### 20.4 Communication, communications

Use *communications* (with an s) for systems transmitting information. Use *communication* (no s) for people exchanging messages.

## 20.5 Connector

Use *connector* to describe all or part of a plug-and-socket type device.

See also [Terminal](#) (p. 25), [Port](#) (p. 23).

## 20.6 CPU

Use *CPU*, *CPU memory*, and *CPU: drive* appropriately:

- *CPU* - processor chip in the data logger
- *CPU memory* - final data memory
- *CPU: drive* - memory partitioned for storage of programs and related files

## 20.7 Data

Use *data* to mean human- or machine-readable information. Use *data is*, not *data are*. *Data* is either singular or plural in meaning but always with a singular verb.

See also [Signal](#) (p. 25), [Microsoft Writing Style Guide](#) .

## 20.8 Data logger, datalogger

Use *data logger* unless documenting the software interface and it uses *datalogger*.

### Examples

When primary power is NOT connected to the data logger, the battery will last about three years.

PC400 users, click the **Add Datalogger** button.

## 20.9 DC

Use all capitals for the following abbreviations: AC, DC, VAC, and VDC.

### See also

AC: [www.merriam-webster.com/dictionary/alternatingcurrent](http://www.merriam-webster.com/dictionary/alternatingcurrent) 

DC: [www.merriam-webster.com/dictionary/directcurrent](http://www.merriam-webster.com/dictionary/directcurrent) 

## 20.10 *Device Configuration Utility*

Refer to the utility with its full name, *Device Configuration Utility*. Do not use *DevConfig*.

## 20.11 Flash

For LEDs, use *flash*, not *blink* or *flicker*.

See also [LED](#) (p. 23).

## 20.12 Gage, gauge

Use the term *gage* for water level sensors. Use *gauge*, or preferably *sensor*, for most other sensors.

### Example

Unlike radar gages, bubbler measurements are not affected by wind.

### See also

USGS: [www.usgs.gov/faqs/why-does-usgs-use-spelling-gage-instead-gauge?qt-news\\_science\\_products=0#qt-news\\_science\\_products](http://www.usgs.gov/faqs/why-does-usgs-use-spelling-gage-instead-gauge?qt-news_science_products=0#qt-news_science_products) 

USBR Water Measurement Manual: [www.usbr.gov/tsc/techreferences/mands/wmm/index.htm](http://www.usbr.gov/tsc/techreferences/mands/wmm/index.htm) 

Merriam-Webster: [www.merriam-webster.com/dictionary/gauge](http://www.merriam-webster.com/dictionary/gauge) 

[Probe](#) (p. 24)

## 20.13 Hex key

Use *hex key*, not *Allen wrench*.

## 20.14 Idle, low-power

Use *idle* or *low-power* depending on where they're used. Choose *idle* over *low-power* if either makes sense in context.

Do not use: *sleep mode* or *quiescent*.

## 20.15 INF

In all instances, highlight *INF* (infinite) with the `<strong>` style (bold).

### Example

**INF** indicates that the program has encountered an arithmetic expression that is undefined.

## 20.16 Input

Do not use alone as a form of shorthand when referring to terminals or connectors. Instead, use as an adjective that modifies *terminal*.

See also [Terminal](#) (p. 25).

## 20.17 LED

Use *LED*, not *light*.

See also [Flash](#) (p. 22).

## 20.18 Long-wave

Use *long-wave*, not *longwave*.

See also [Short-wave](#) (p. 25).

## 20.19 NAN

In all instances, highlight *NAN* (Not-a-Number) with the `<strong>` style (bold).

### Example

**NAN** indicates an invalid measurement.

## 20.20 Output

Do not use alone as a form of shorthand when referring to terminals or connectors. Instead, use as an adjective that modifies *terminal*.

See also [Terminal](#) (p. 25).

## 20.21 Port

Use *port* to describe a communications connector. Use either the labels on the data logger wiring panel or the port names listed in the CRBasic Editor.

### Examples

SDM port

Com3 port

SDI-12 port

When configured as a communications port, terminals **C1** and **C2** act as a pair to form **Com1**.

**See also** [Terminal](#) (p. 25), [Connector](#) (p. 21).

## 20.22 Press

Use *press* when pressing a key on a keyboard or keypad, or when pressing a button on a screen, such as on a mobile device.

### Example

Press **Enter**.

#### NOTE:

This term differs from and takes precedence over the *Microsoft Writing Style Guide*.

## 20.23 Probe

Avoid using *probe* and *sensor* interchangeably. A probe is a sensor that is inserted into a medium, or a combination of two or more sensors.

### Example

The SoilVUE 10 incorporates multiple soil sensors into a single probe that...

## 20.24 Program

A *program* can compile and run without any modifications. Of course, modifications will typically be necessary for the user's application.

**See also** [Code](#) (p. 13).

## 20.25 RX

Use to mean "receive." Capitalize.

**See also** [TX](#) (p. 26).

## 20.26 Screen or window

Use *screen* or *window* when referring to a portion of the software interface. Use *screen* when the user interface specifically uses that term, such as the LoggerNet Connect Screen. Be consistent within a topic.

**See also** [Window or screen](#) (p. 26).

## 20.27 Select

Use *select* to refer to marking text, objects, cells, and other items that a customer will take action on, such as copying or moving. Describe the marked items as *the selection* or *the selected* text, objects, cells, and so on.

Don't use *highlight* or *pick* as a synonym for *select*.

### See also

[Click](#) (p. 20)

[Press](#) (p. 24)

[Microsoft Writing Style Guide](#) 

## 20.28 Short-wave

Use *short-wave*, not *shortwave*.

See also [Long-wave](#) (p. 23).

## 20.29 Signal

Use *signal* to mean electromagnetic representation of data.

See also [Data](#) (p. 21).

## 20.30 Terminal

Use *terminal* to describe an individual connector on a data logger terminal strip. Use the labels on the data logger wiring panel to describe the terminal.

When referring to specific terminals, avoid the use of text that does not appear on the instrument label.

### Examples

U terminal

C terminal

DIFF H/L terminals

SE terminal

12V terminal

G terminal

See also [Port](#) (p. 23).

## 20.31 Three-line-menu

Use *three-line menu* to refer to the hamburger menu symbol ☰.

## 20.32 True/false

Use *true* or *false* when speaking in generic terms, but use **True** or **False** (bold with the <strong> style) when referring to a parameter or constant. This matches how the CRBasic Editor presents them when you right-click to select either option.

## 20.33 TX

Use to mean "transmit." Capitalize.

See also [RX](#) (p. 24).

## 20.34 VAC

Use all capitals for the following abbreviations: AC, DC, VAC, and VDC.

See also

AC: [www.merriam-webster.com/dictionary/alternatingcurrent](http://www.merriam-webster.com/dictionary/alternatingcurrent) ↗

DC: [www.merriam-webster.com/dictionary/directcurrent](http://www.merriam-webster.com/dictionary/directcurrent) ↗

## 20.35 VDC

Use all capitals for the following abbreviations: AC, DC, VAC, and VDC.

See also

AC: [www.merriam-webster.com/dictionary/alternatingcurrent](http://www.merriam-webster.com/dictionary/alternatingcurrent) ↗

DC: [www.merriam-webster.com/dictionary/directcurrent](http://www.merriam-webster.com/dictionary/directcurrent) ↗

## 20.36 Window or screen

Use *screen* or *window* when referring to a portion of the software interface. Use *screen* when the user interface specifically uses that term, such as the LoggerNet Connect Screen. Be consistent within a topic.

See also [Screen or window](#) (p. 24).

## 20.37 Wire

Use *wire* to refer to individual conductors.

See also [Cable](#) (p. 20).

# 21. Policies

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## 21.1 Retired products

Excluding special cases, once end-of-product-test-support (EPT), end-of-PC-software-support (EPCS), and end-of-OS-support (EOS) is passed for a product:

- Do not update compatibility on the website on that retired product to show it working with the newer product.
- Do not update manuals of the retired product to show how to use it with the newer product.
- Do not include the retired product in the compatibility section of the new product unless it is part of a special market or product plan.
- If absolutely needed, such as when the retired product is part of a marketing or product plan, include information in the new product's manual about using it with the retired product.

If you find errors in a manual or webpage for a retired product, fix the errors only if the end-of-free-support (EFS) date has not yet passed.

## 21.2 RoHS compliance

For new or updated products, make sure you have an updated RoHS or EU DOC.

They now need to include the following statements to show that they are RoHS3 compliant:

**2011/65/EU** The Restriction of Hazardous Substances Directive (RoHS2)

**2015/863/EU** Amending Annex II to Directive 2011/65/EU (RoHS3)

In the past, only the following statement was used to show that they are RoHS (or RoHS2) compliant:

**2011/65/EU** The Restriction of Hazardous Substances Directive (RoHS2)

# 22. Glossary

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## E

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### EasyFlux™

EasyFlux is a trademark of Campbell Scientific, Inc.

## P

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### PakBus®

A proprietary communications protocol developed by Campbell Scientific to facilitate communications between Campbell Scientific devices. Similar in concept to IP (Internet Protocol), PakBus is a packet-switched network protocol with routing capabilities. PakBus is a registered trademark of Campbell Scientific, Inc.