

Example 1

(This and the following two examples are from a laboratory report in which each student designed and built a scrolling display.)

To display the message “grand theft auto” push DIP switch to on for ground.

This sentence, as it is, seems clear in its meaning.

What is clearly missing is a comma after “auto”.

But ...

This raises an interesting issue. Should the comma be inside the quotation marks, “... auto,” ... , or outside the quotation marks, “...auto”, ... ? Proper English usage traditionally says that the comma should be inside the quotation marks. However, required technical usage for “strings” in programming, and perhaps other forms of communication, suggests that the comma should be outside the quotation marks, so that the message character sequence “grand theft auto” is not taken as including the comma symbol. (I have generally put the comma outside the quotes for a symbol or string, and inside the quotes for an actual quotation.)

Also....

Notice the verb “push.” It is an imperative. Normally you do not want to be throwing imperatives at the reader. If you are the dictator of a small country, or some other type of boss, you can get away with issuing imperatives. If you are writing something to be read by a peer or a superior, be careful. Will the reader see you as issuing orders? Unless there is good reason to deviate, third person passive voice is preferred for technical writing.

“grand theft auto” is not corrected to “Grand Theft Auto”. Reference to the title of a game should be capitalized for normal English. But here, the information being conveyed is the sequence of characters to be displayed, which is the choice of the designer. The designer apparently chose, for reasons unstated, to use all lower case characters. Imposing capitalization loses that information

Another issue is whether “DIP switch” (a set of switches in a DIP package) is singular or plural.

The word “switch” (singular) answers that question. So why isn’t there an article, “a” or “the”, in front of “DIP switch”? There needs to be. Which? Since it is a particular DIP switch rather than just any DIP switch, the article “the” is called for. (One could argue that the particular switch on the multiple element “DIP switch” ought to be identified. However, for practical purposes one can assume that the individual switch to be used is identified somehow.)

The acronym “DIP” for a “Dual Inline Pin” device package is assumed to be understood by the reader, which is reasonable in this context.

The phrase “to on for ground” may be confusing.

In normal usage, DIP switches are used to generate digital binary signals, with the “on” setting resulting in a low Voltage (ground), giving a logical “0”. (This is somewhat counter intuitive.) Perhaps the “for ground” could be omitted, since the intent is to tell the reader how to set the DIP switch to get the desired message. The mapping from switch settings to Voltage and logical levels could be explained later. The point is to limit the number of complex ideas encapsulated in one sentence.

The word “on” is not used in its normal manner, which would be a preposition. Here it is used to designate the state of the DIP switch. It is the label we see on the switch itself to see how to throw it. As a label, the word “on” should be in quotation marks. We are using it as a symbol, not a preposition. If we wanted to be more formal, we would write, “to the ON position.” (Notice how many times in this one example sentence the quotation marks issue has come up!)

As revised:

To display the message “grand theft auto”, the DIP switch is pushed to “on”.