Firmware Download Utility

for C500C

UMI-R3-156

Firmware Download Utility for C500C

Revision	History	Date
001	First release.	99-05-27

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CHAPTER 1

Introduction

The firmware download utility allows you to easily update the firmware on the C500C controller. The firmware download should take about two or three minutes. This manual guides you through the firmware download process.

Warning: *The firmware download process rewrites the file system. All old files on the controller are lost. Before downloading, back up onto your computer any configuration files and other files you want to keep.*

You must enter five pieces of information into the download utility before it sends the firmware. As well. before and after downloading, you reset the controller.

The firmware download utility is installed on your computer when you install CROS-500C.

CHAPTER 2

Downloading the Firmware

To install new firmware, the Firmware Download Utility is required. The first step is to start this program.

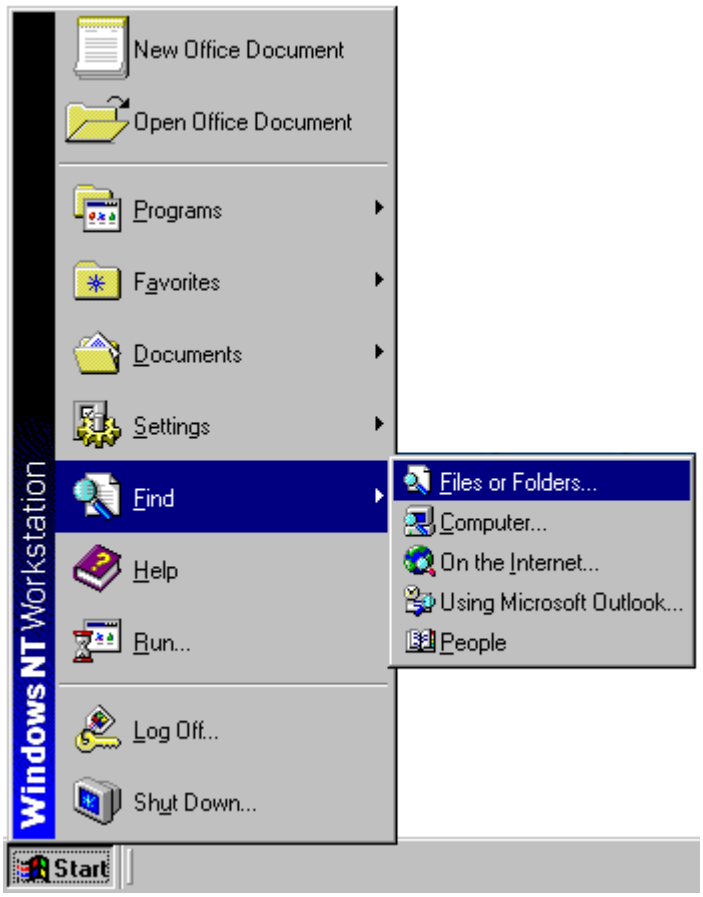
Starting the Firmware Download Utility

There are two possible ways of starting the utility:

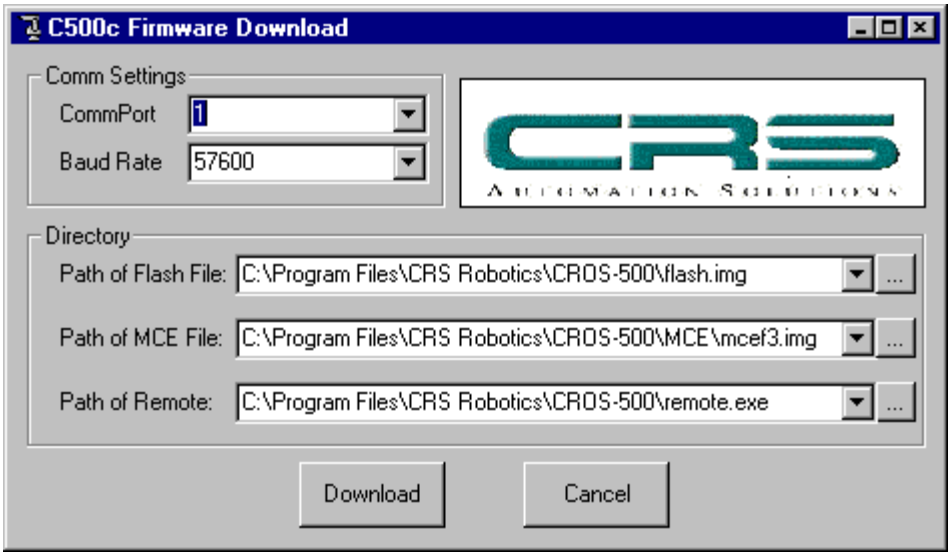
- from the Start menu
- from the Find Files or Folders program

The first requires an icon to be located in the Start menu bar. If it is there, simply click on it and the utility starts.

If there is no icon in the Start menu bar, click on “Find Files or Folders” as shown below and locate the file “C500C Firmware Download.exe”.



Once the utility is started, the C500C Firmware Download window is displayed on your screen.



If you installed CROS-500C and the file “C500C Firmware Download.exe” is not found on your system, contact CRS Robotics or your local distributor.

Setting Up the Utility

Once the utility is open there are five data fields which must be set accurately. If you have a change of mind or need to cancel this process you can click the “Cancel” button at any time.

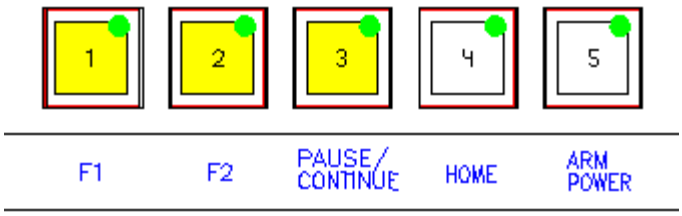
“CommPort” Field

This field requires the identifying number of the communications port used on the computer.

“Baud Rate” Field

The “Baud Rate” field requires the baud rate of the controller transfer port. If you do not know this baud rate, put the controller into diagnostic mode and check the rate.

In order to use the diagnostic mode on the controller, turn it off, and, when you turn it back on, hold down the left three buttons on the controller front panel. The diagram below shows buttons on the panel. Hold down buttons 1, 2, and 3.



The display on the controller indicates “Diagnostic Mode”. Once it is in this mode, at the terminal, type “set”. This displays some information. The value corresponding to “tspeed” is the baud rate which you need to enter in the downloading utility.

“Path of Flash File” Field

The path of the flash file must be set, but is provided with a default directory. If you did a custom install then the default directory should be correct, otherwise it will be located in the directory into which CROS was installed.

If you are unsure of the location of the file “flash.img”, you can either use the “Find Files or Folders” option from the Start Menu bar or use the button just on the right of the field to search for the file yourself.

“Path of MCE File” Field

The path and correct name of the MCE file must be set, but is provided with a default directory. The file name is one of:

Robot Arm	Name of MCE File
A255 arm	mcea255.img
A465 arm	mcea465.img
F3 arm	mcef3.img

If you did a custom install then the default directory should be correct, otherwise it will be located in the subdirectory \MCE off of the directory into which CROS was installed.

If you are unsure of the location of the file, you can either use the “Find Files or Folders” option from the Start Menu bar or use the button just on the right of the field to search for the file yourself.

“Path of Remote” Field

The path of the remote file must be set, but is provided with a default directory. If you did a custom install then the default directory should be correct, otherwise it will be located in the directory into which CROS was installed.

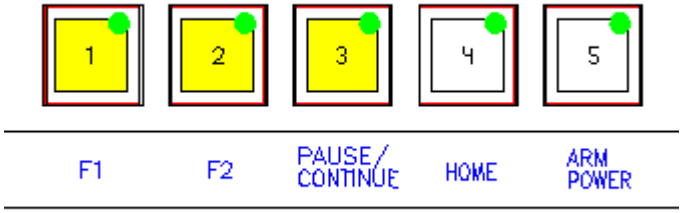
If you are unsure of the location of the file “remote.exe”, you can either use the “Find Files or Folders” option from the Start Menu bar or use the button just on the right of the field to search for the file yourself.

Beginning the Download

After entering the data, click on the “Download” button. If you later have a change of mind or need to cancel you can click the “Cancel” button at any time.

The download utility displays a small message box that asks you to put the controller in diagnostic mode. Do not click the “OK” button until you have reset the controller like this.

In order to use the diagnostic mode on the controller, turn it off, and, when you turn it back on, hold down the left three buttons on the controller front panel. The diagram below shows buttons on the panel. Hold down buttons 1, 2, and 3.



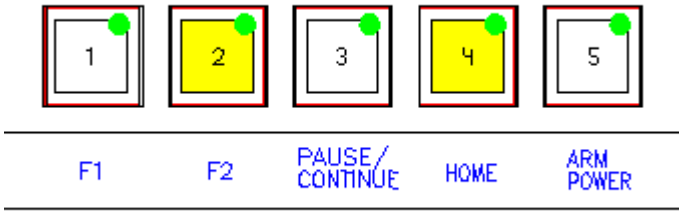
The display on the controller indicates “Diagnostic Mode”. Once it is in this mode, it is safe to press the “OK” button on the message box.

A new window appears. This window displays technical readings about what the controller is doing. If you decide to cancel at this point hitting the cancel button on the Download Firmware Utility will terminate all the other windows and procedures except this new window. To terminate this window, click the “X” in the upper right corner and when it prompts to confirm that you really want to terminate it, click “OK”.

The controller display shows a message “Erasing Flash” followed by “Loading Flash”. Once it is done downloading the firmware it displays “Download Complete”. You are almost done. You will have to rebuild the file system in order to finish off the procedure.

Rebuilding the File System

Turn off the controller. When you turn the controller back on, hold down the button second from the left and the button second from the right. The diagram below shows buttons on the panel. Hold down buttons 2 and 4.



The controller display should show a message “Loading new MFS from Flash”. After rebuilding the File System the controller will continue and start up as normal. Now the downloading firmware process is complete. You will have to copy back to the controller any configuration files and program files you earlier copied to the computer.