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Subject: Trio MCLoader Example Program

APPLICATION NOTE

www.triomotion.com

1. Trio MCLoader

The MCLoader is an ActiveX component that includes functions to check the controller and modify its memory contents. You can perform many functions including loading projects, programs and table data. Please see the Trio Technical Reference Manual for full details. Both the MCLoader and the manual can be downloaded free of charge from the trio website www.triomotion.com, alternatively the manual can be purchased as a printed book.

2. Example Program

The example program uses various modules to set up the communication and project loading. The source code is available so you can study the examples or include them in your own project.

The example was written using Visual Basic Express 2008.

2.1. The main window

The main window shown in Figure 1 is very simply form with three buttons to call the communications window and load project window. The final button quits the program.



Figure 1 Main Window

2.2. Communications Window

The communications window includes all the parameters that you need to connect to both MCLoader and PCMotion ActiveX components. It is tabbed to select the communication method and each tab shows the different settings. Where default settings are available buttons can be pressed to set these.

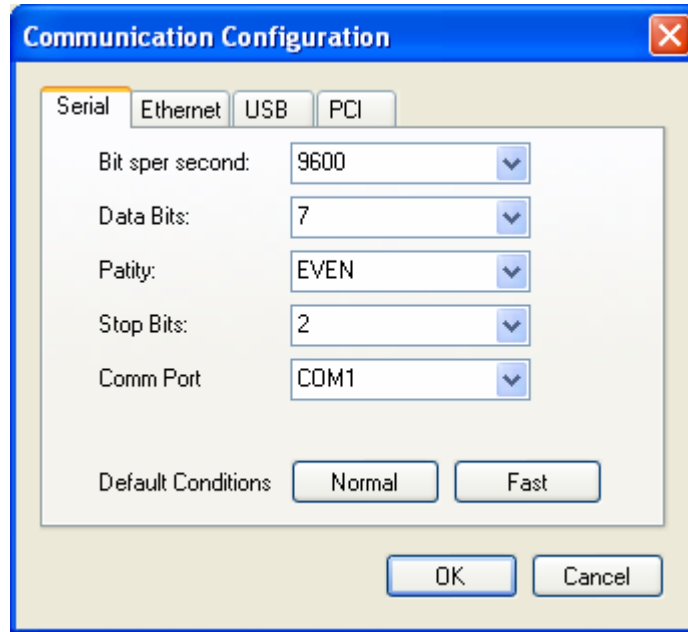


Figure 2 Communications window

When you press the OK button all the parameters are stored in the communications class CCOMMS. The communication method is set to the selected tab. So in Figure 2 Serial communications is selected at normal defaults.

If you do not press the communications button before attempting to load a project a default connection of Ethernet at IP 192.168.0.250 is selected.

2.3. Project Load Window

The project load window has a selection of tick boxes and parameters. The program will simply run down the list when you press the OK button. The functions are detailed below:

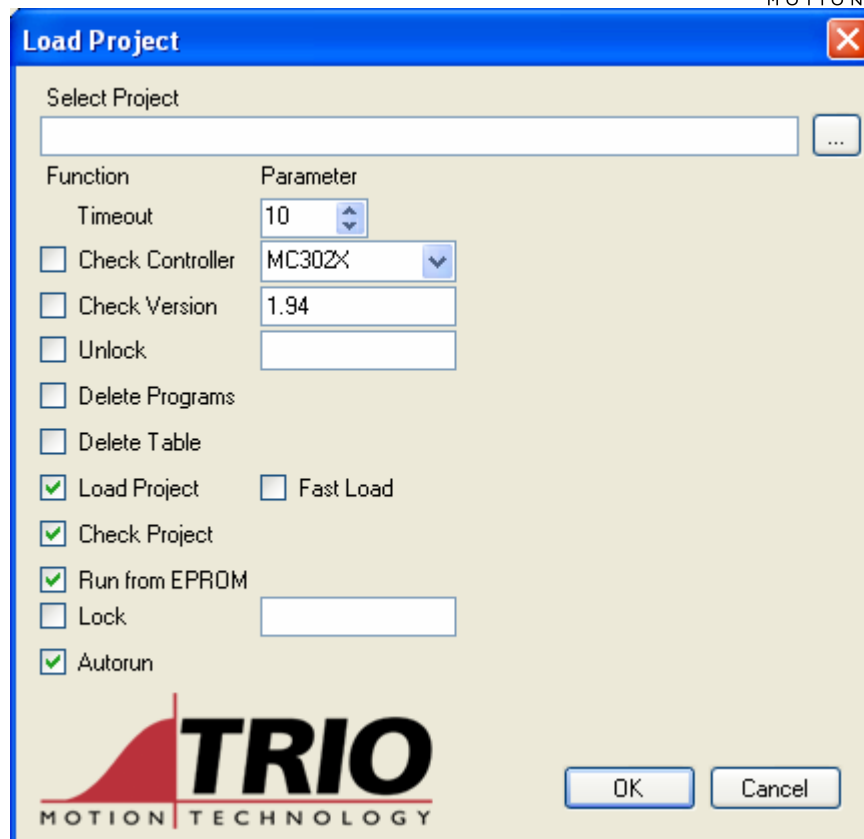


Figure 3 Load Project Window

2.3.1. Select project

Press the button “...” to select a .prj file to load, or simply type its address in the text box

2.3.2. Timeout

This sets the value after which the MCLoader will return a timeout error

2.3.3. Check Controller

If checked the program will check that the selected controller is connected.

2.3.4. Check Version

If checked the program will check that the controller has the correct version of system software

2.3.5. Unlock

If the controller is locked the program will attempt to unlock it using the code in the text box

2.3.6. Delete Programs

If checked the program will delete all programs on the controllers battery backed RAM. Remember to store to EPROM if you simply wish to erase without loading any project.

2.3.7. Delete Table

If checked the table data is cleared

2.3.8. Load Project

If checked the project selected in the top bar will be loaded. It will load using Fast Load if checked.

2.3.9. Check project

If checked the loaded project will be compared to the one on the PC.

2.3.10. Run From EPROM

If checked the project will be saved into EPROM and the coordinator will be set up to load this on power up.

2.3.11. Lock

If checked the coordinator will be locked using the code specified in the text box.

2.3.12. Autorun

If checked the coordinator will be sent the AUTORUN command so that any programs will be run on power up.

2.4. Controller Data

Controller data used in the check controller and version text box is stored in an XML file. This is loaded when the Project Load window is initialised. If you wish to add more coordinators to the list simply open the XML file and add them as follows:

```
<Product Name="name">
  <Control>control number</Control>
  <Version>system software version</Version>
</Product>
```

This file simply sets the defaults; you can overwrite the values in the program. If you wish to change the defaults simply overwrite the values, for example with the latest system software version.