

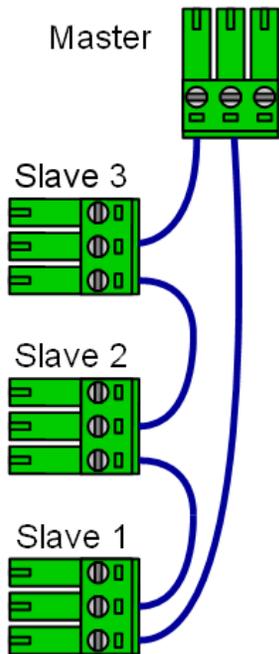
MMC Quick Start Guide

Lesson 6) Using Remote Axes

Multiple modules can connect together over long distances using RS232 in a ring topology. All axes connected appear as if they are present on one module.

Wiring Considerations

Step 1) The modules connect together using the 3 pin connectors on the side of the controllers. The wiring is done in a ring topology as shown below with as many connectors in the ring as needed.



If the controllers are powered from different power supplies then establish a common ground by wiring together the third unused ground pin provided in the plugs.

Prepare the Slaves

Modules are preprogrammed to be slaves. If you do not see a yellow blinking indicator on power-on follow these steps to prepare a module to be a slave.

Step 2) Start Snap2Motion and File | Open from the "Utility" folder the program "MMC Slave".

Step 3) Connect the USB cable to the first slave, power on the slave, and click the "Run" button.



The status will indicate "Connecting", "Running" and open up a window showing that the slave program is being saved, and then show that the slave programming is complete.



Close the status window, remove the USB plug from this slave and repeat Step 3 for every slave in the system.

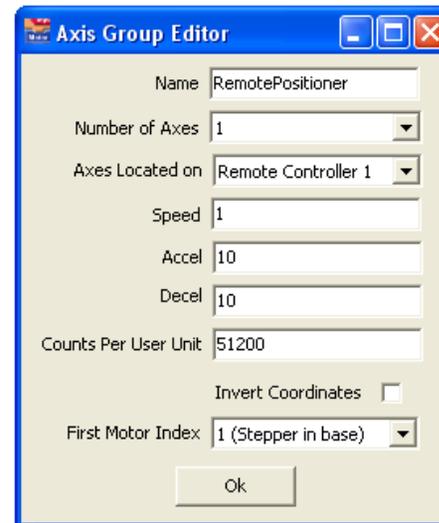
Define the Remote Axes

Step 4) Plug the USB cable into the module that is in the "Master" position of the cable, power cycle all modules and select "File | New" to start a new project.

Step 5) Click on the "Setup" Tab in Snap2Motion and click on the "Add" button.



Step 6) Describe a remote axis by providing a name, indicating the number of the remote slave controller where the axis is located, and other default settings.



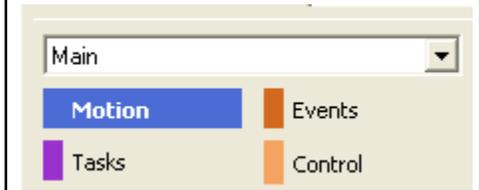
The "First Motor Index" on the bottom refers to the motor number with respect to the slave controller. Click "OK" to save your settings.

Use the Remote Axes

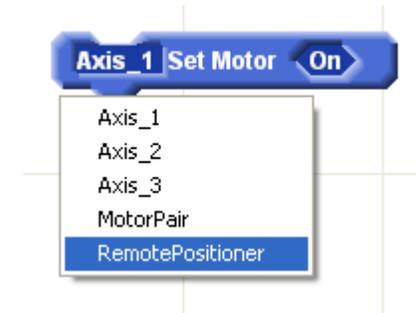
Step 7) Click on the "Blocks" Tab



Step 8) Select the blue "Motion" category



Step 9) Click on the axis field of a motion block and note that the remote axis name is available for selection as if the axis was part of the master controller.



Commands operate as usual however slave commands require some communication time to be performed.

Here's an example program that turns on a remote axis and performs motion

