Bench Programming Motors

Purpose: This application note provides instructions on bench programming motors. This applies to programming motors when they are not within a system or isolating and programming individual motors within a system.

Introduction

There are many reasons to need to program an individual motor or multiple specific motors. These include:

1) Preprogramming a spare motor so that it can be dropped into a system with no additional work.
2) Setting up a single motor for independent testing
3) Loading a different version of code onto certain motors within a system, such as when multiple lookup tables are needed on the same QS system.

Materials

Motor or motors to be programmed
(1) Node Controller (NC) with power supply or cord
(1) EtherNet cable for NC to PC
(1) Communication cable of a type appropriate from the NC to the 1st motor
(As Required) Communication cable of a type appropriate from motor to motor if programming multiple motors
(1) Power Supply appropriate for the motors being programmed
(1) Power connection to the supply for each motor to be programmed
(1) PC with MagneMotion configuration software appropriate to your motor type and the Host TCP Utility (for QuickStick) or NCHost TCP Utility (for MagneMover LITE).
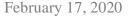
Procedure

1) Create a Configuration File with
   a. A single Path with ID 1 containing an entry for each motor to be programmed.
   b. A single Simple Node with an exit Path ID of 1.
   c. A single Node Controller with an IP address equal to the IP of your NC and ownership of Node 1.
2) Load and activate the appropriate Node Controller image on your Node Controller.
3) Upload the appropriate motor software to the Node Controller.
4) Upload the Configuration File you created.
5) Upload the appropriate motor type files for the motor(s) to be programmed.
6) TCP Utility or NCHost TCP Utility, send a Reset command to Path 1. This may not complete successfully depending on what version of slave code was originally on the motor. Wait for it to complete or fail. Continue with the process upon completion or failure.

7) Using the Web Interface, program the master boards of the motors following steps 1-6 outlined in "Program the Motors" of the 990000377.
   a. If you get a failed message, troubleshoot your cabling, configuration file and power to resolve. Go back to Step 5.
8) Using the Host TCP Utility or NCHost TCP Utility, send a Reset command to Path 1. This may not complete successfully depending on what version of slave code was originally on the motor. Wait for it to complete or fail. Continue with the process upon completion or failure.
9) Using the Web Interface, program the slave boards of the motors following steps 7 outlined in "Program the Motors" of the 990000377.
   a. If you get a failed message, check your configuration file or contact MagneMotion.
10) Using the Host TCP Utility or NCHost TCP Utility, send a Reset command to Path 1. This should complete successfully.
11) Restart services on the Node Controller.
12) Using the Host TCP Utility or NCHost TCP Utility, send a Reset command to Path 1. This should complete successfully.
13) Using the Host TCP Utility or NCHost TCP Utility, send a Startup command to Path 1. This should complete successfully.
14) Using the Host TCP Utility or NCHost TCP Utility, send a Reset command to Path 1. This should complete successfully.

When the motors are ready to be introduced into the system, install the motor and issue a Reset command to the Path where it has been installed. If the Path is programmed after the motor has been installed, this will overwrite the programming that was installed during this process.

Related Documents:
990000377 - MANUAL, NODE CONTROLLER WEB INTERFACE
990000376 - MANUAL, HOST TCP INTERFACE UTILITY
990000562 - MANUAL, NCHOST TCP INTERFACE UTILITY
990000558 – MANUAL, MAGNEMOVER LITE SYSTEM CONFIGURATOR
990000394 - MANUAL, MAGNEMOTION CONFIGURATOR, MAGNEMOVER
LITE
990000403 - MANUAL, MAGNEMOTION CONFIGURATOR, QUICKSTICK

More Information
MagneMotion website: www.magnemotion.com
Questions & Comments: http://www.magnemotion.com/about-magnemotion/contact.cfm

MagneMotion Proprietary Information