



Title: Using Master/Slave Mode with MultiFlex Motion Controllers
Products(s): All MultiFlex 1000 Series motion controllers
Keywords: MultiFlex, MCCL, Macro, Master/Slave, Gantry
ID#: TN1078
Date: October 27, 2010

Summary

Correct behavior of axis motion when using Master/Slave mode requires that certain conventions are observed in code implementation of macros in the MCCL command language and function calls using the Motion Control API .

More Information

The primary commands for Master/Slave motion mode are

aSSn	axis a master/slave ratio = n
aSMn	slave axis a motion to axis n

Following is a typical macro to set up the mode and execute a move after configuring the motion parameters of the axes

1MN, 5MN, 5SS1, 5SM1, 1MR1000, 1WS

To terminate Master/Slave mode for these axes, the following command sequence is recommended:

5SS1, 5SM0, 5MN

These two command sequences illustrate the key aspects of entering and exiting this motion mode:

1. A Motor On (MN) command to an axis will reset it out of Master/Slave mode
2. The Slave Ratio command (SS) must always be followed by a SlaveMode (SM) command in order for the ratio to take affect for the subsequent move.
3. Predictable behavior is insured if the Master/Slave mode is terminated by resetting the slave axis to a ratio of 1 and passing a parameter of 0 to the mode command.