



Title: Velocity Mode motion and the MC100 and MC110
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Summary

Due to a 'quirk' in the operation of the motion control processor used on the MC100 and MC110, a couple of 'work arounds' are required when moving in Velocity Mode.

Starting and / or changing Velocity Mode motion

It is **strongly** recommended that the Velocity Mode (aVMn) command be issued prior to any other move or parameter command. This would include changing the programmed velocity and / or acceleration parameters, commanding a new move, changing the direction of a the servo, etc...

```
1VM,1SV100000,1SA5000,1GO           ;begin a new velocity mode move

1VM,1SV75000,1GO                     ;change the programmed velocity of the
                                     ;current move
```

Changing the direction of a servo

To command a new motion (to a stationary axis) in the opposite direction of the previous move, the Set Velocity command **must** be issued after the Direction (aDI) command and **before** the Go (aGO) command. This is the case **even** if the velocity of the new move is to be the same as the previous move. If this is not done the direction change will not take place until the next move is commanded (using the GO command).

```
1VM,1DI0,1SV75000,1GO               ;correct sequence of commands for
                                     ;changing the direction of a servo while
                                     ;in velocity mode

1VM,1DI0,1GO                         ;incorrect sequence of commands for
                                     ;changing the direction of a servo while
                                     ;in velocity mode

1VM,1SV75000,1DI0,1GO               ;incorrect sequence of commands for
                                     ;changing the direction of a servo while
                                     ;in velocity mode. The set velocity
                                     ;command must come after the direction
                                     ;change
```