

Title: Using MCAPI for Linear Contouring on the DC2-PC / DC2-STN
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Summary

The standard MCAPI functions for advanced contouring cannot be used to perform linear contouring on members of the DC2 controller family. It is possible, however, to use existing MCAPI functions to perform linear contouring.

More Information

Linear contouring on the DC2 family of motion controllers requires placing the controller in synchronized motion mode, programming the vector acceleration / deceleration / velocity, and issuing the moves commands to individual axes.

To place the DC2 in synchronized motion mode use the following code:

```
MCEnableSync( hCtrlr, MC_ALL_AXES, TRUE );
```

Next fill in an MCCONTOUR data structure with the vector acceleration, vector deceleration, and vector velocity desired. Note that the Velocity Override member of the MCCONTOUR data structure is not used by the DC2 and may be ignored.

```
MCCONTOUR Contour;  
Contour.VectorAccel = 100.0;  
Contour.VectorDecel = 100.0;  
Contour.VectorVelocity = 2500.0;  
MCSetContourConfig( hCtrlr, MC_ALL_AXES, &Contour );
```

Finally, issue moves to both axes using MCMoveRelative() or MCMoveAbsolute() and start the motion using MCGo().

```
MCMoveRelative( hCtrlr, 1, 5000.0 );  
MCMoveRelative( hCtrlr, 2, -20000.0 );  
MCGo( hCtrlr, MC_ALL_AXES );
```

You must wait for the above motion to complete before issuing any new moves. The preferred method is to watch the status word of one of the axes for trajectory complete:

```
status = MCGetStatus( hCtrlr, 1 );  
while (!MCDecodeStatus( hCtrlr, status, MC_STAT_TRAJ )) {  
    // do something while waiting  
}  
  
// now issue next move  
MCMoveRelative( hCtrlr, 1, -1000.0 );  
MCMoveRelative( hCtrlr, 2, 4000.0 );  
MCGo( hCtrlr, MC_ALL_AXES );
```