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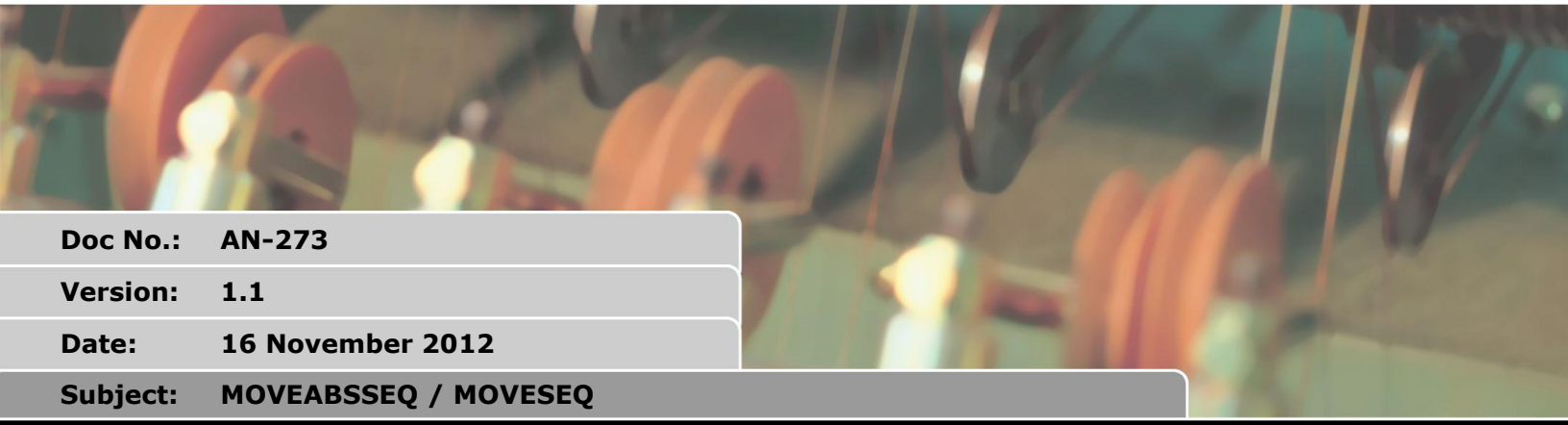

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Subject: MOVEABSSEQ / MOVESEQ

APPLICATION NOTE

1. Summary

The MOVEABSSEQ and MOVESEQ commands allow a sequence of 2 or 3 axis movements to be loaded via TABLE values. The moves can be automatically merged together using a circular or spherical arc.

2. MOVEABSSEQ

The MOVEABSSEQ(table pointer, axes, npoints, options, radius)

Table pointer	-	location of the absolute points in TABLE memory
Axes	-	Number of axes 2 or 3
Npoints	-	The number of points, each point requires 2 or 3 table values
Options	-	0 sets to load MOVEABS etc, 1 set to load embedded speed moves MOVEABSSP etc
Radius	-	The merging/filleting radius to be applied. 0 for no filleting.

Notes:

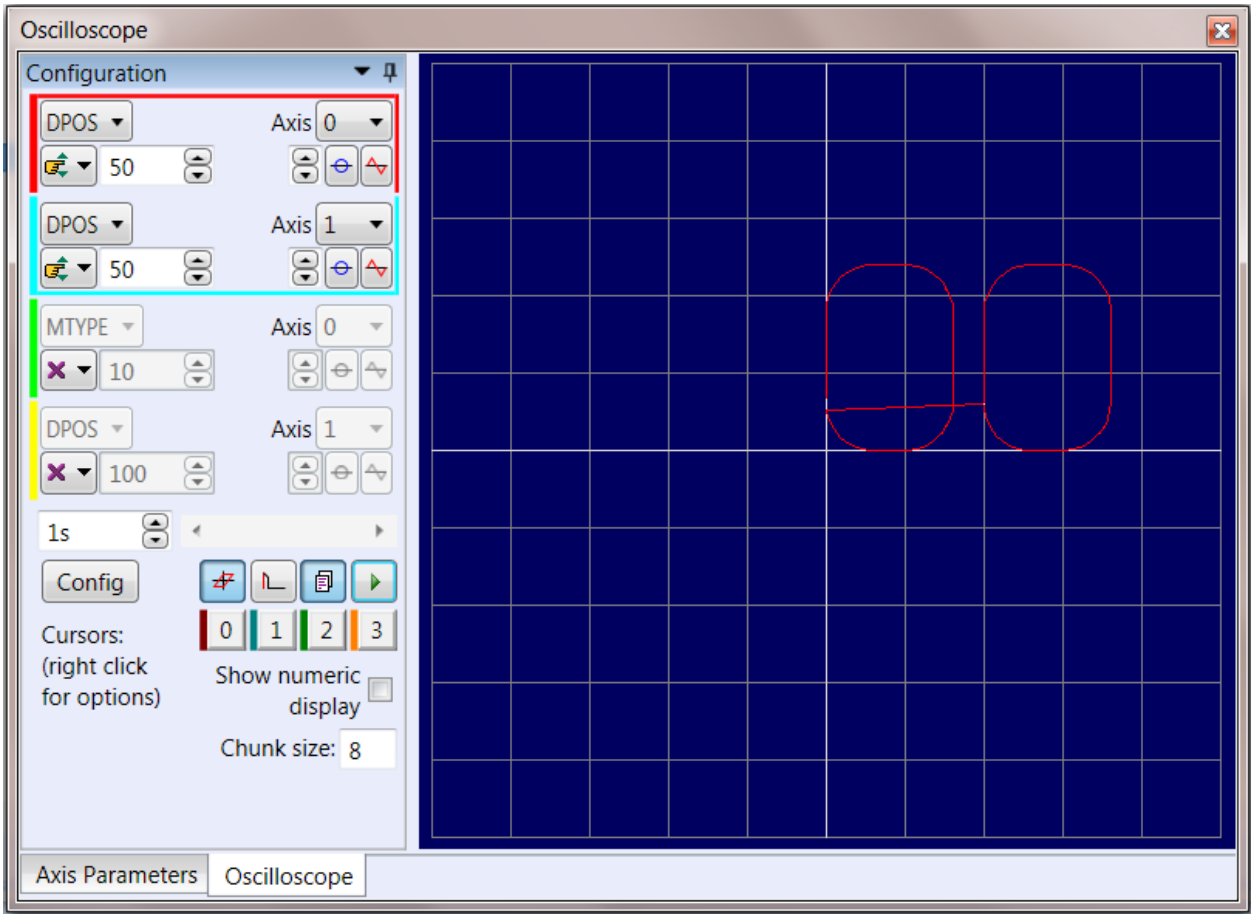
The fillet Radius will automatically be reduced to the maximum possible if the points specified are insufficiently far apart to apply the fillet.

The MOVEABSSEQ is loaded into the controller move buffers as a sequence of MOVEABS->MOVECIRC-> moves if 2 axes are specified and MOVEABS->MSPHERICAL-> if 3 axes are specified. The linear move may be omitted if the arcs blend together. If “Options” is set to 1 the move sequence loaded will be a sequence of MOVEABSSP->MOVECIRCSP-> moves if 2 axes are specified and MOVEABSSP->MSPHERICALSP-> if 3 axes are specified

A new axis parameter MOVE_COUNT is incremented on every move loaded not just moves loaded via MOVEABSSEQ. This parameter can be set by user programs.

The current axes positions at the start of the MOVEABSSEQ are used for calculating the first fillet.

```
'
' Draw O using separate move and movecirc (see Trio Manual MOVECIRC):
'
MOVE(0,60) '                  move A -> B
MOVECIRC(30,30,30,0,1) '      move B -> C
MOVE(20,0) '                  move C -> D
MOVECIRC(30,-30,0,-30,1)'     move D -> E
MOVE(0,-60) '                 move E -> F
MOVECIRC(-30,-30,-30,0,1)'    move F -> G
MOVE(-20,0) '                 move G -> H
MOVECIRC(-30,30,0,30,1) '     move H -> A

WAIT IDLE
DEFPOS(100,30)
WAIT UNTIL OFFPOS=0

' Draw similar O using MOVEABSSEQ:

TABLE(1000,100,120)
TABLE(1002,180,120)
TABLE(1004,180,0)
TABLE(1006,100,0)
TABLE(1008,100,30)

MOVEABSSEQ(1000,2,5,0,30)
```



3. MOVESEQ

The MOVESEQ(table pointer, axes, npoints, options, radius)

Table pointer	-	location of the incremental points in TABLE memory
Axes	-	Number of axes 2 or 3
Npoints	-	The number of points, each point requires 2 or 3 table values
Options	-	0 sets to load MOVE etc, 1 set to load embedded speed moves MOVESP etc
Radius	-	The merging/filleting radius to be applied. 0 for no filleting.

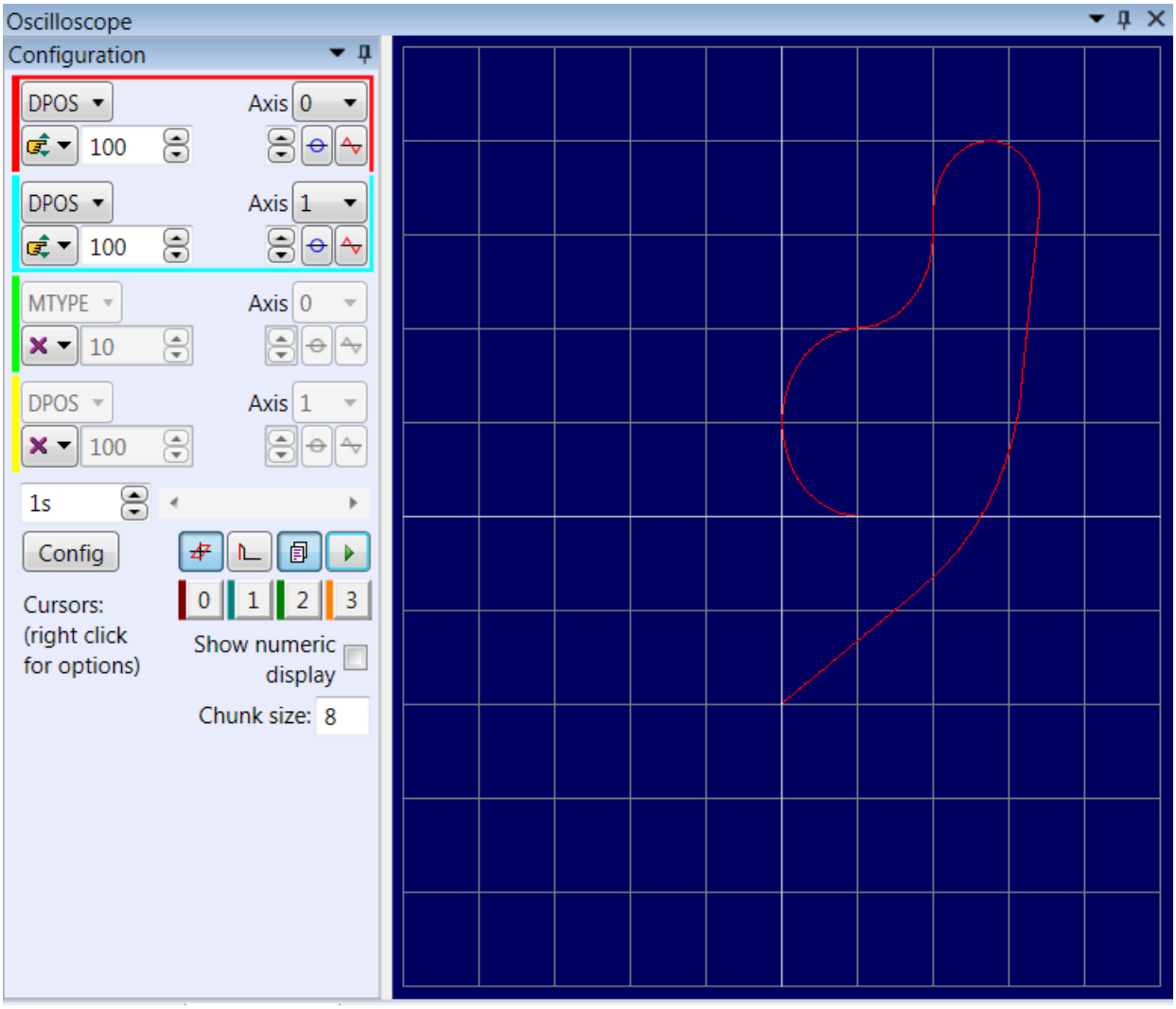
Notes:

The fillet Radius will automatically be reduced to the maximum possible if the points specified are insufficiently far apart to apply the fillet.

The MOVESEQ is loaded into the controller move buffers as a sequence of MOVE->MOVECIRC-> moves if 2 axes are specified and MOVE->MSPHERICAL-> if 3 axes are specified. If "Options" is set to 1 the move sequence loaded will be a sequence of MOVESP->MOVECIRCSP-> moves if 2 axes are specified and MOVESP->MSPHERICALSP-> if 3 axes are specified.

A new axis parameter MOVE_COUNT is incremented on every move loaded not just moves loaded via MOVESEQ. This parameter can be set by user programs.

```
ATYPE AXIS(0)=0
ATYPE AXIS(1)=0
ATYPE AXIS(2)=0

DEFPOS(100,0,0)
WAIT UNTIL OFFPOS=0

TABLE(1000,-100,0,0)
TABLE(1003,0,200,0)
TABLE(1006,200,0,0)
TABLE(1009,0,200,0)
TABLE(1012,150,0,0)
TABLE(1015,-50,-400,0)
TABLE(1018,-300,-200,0)

SPEED=160
TRIGGER
WA(10)

MOVESEQ(1000,3,7,1,300)

WAIT IDLE
```


Oscilloscope
Configuration
DPOS
Axis 0
100
DPOS
Axis 1
100
MTYPE
Axis 0
10
DPOS
Axis 1
100
1s
Config
Cursors:
(right click
for options)
0
1
2
3
Show numeric
display
Chunk size: 8