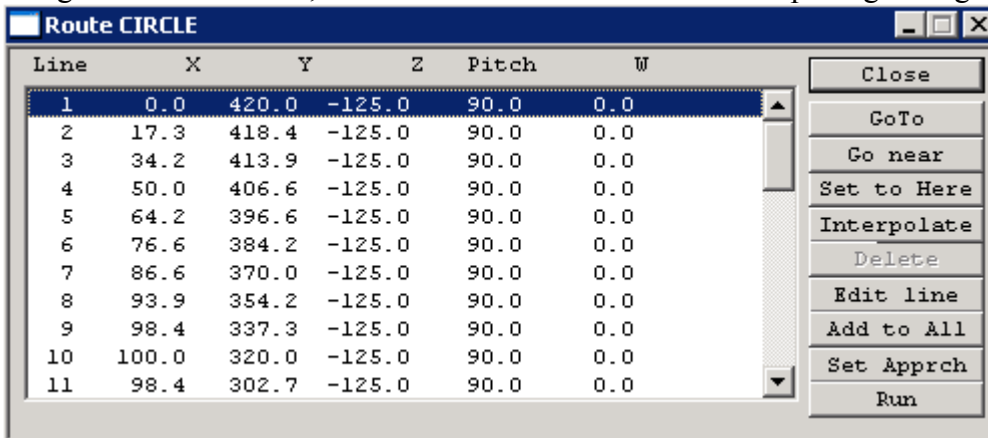


## Timed segments

Version v13.5 up only.

Consider a route created as a ROW in which the points are equally spaced. This could be a straight line, or perhaps a circle comprising 36 points as in the following example. There would be 37 lines, line 37 being the same as line 1, so the robot could draw a circle comprising 36 segments of 10 degrees each.



Line	X	Y	Z	Pitch	W
1	0.0	420.0	-125.0	90.0	0.0
2	17.3	418.4	-125.0	90.0	0.0
3	34.2	413.9	-125.0	90.0	0.0
4	50.0	406.6	-125.0	90.0	0.0
5	64.2	396.6	-125.0	90.0	0.0
6	76.6	384.2	-125.0	90.0	0.0
7	86.6	370.0	-125.0	90.0	0.0
8	93.9	354.2	-125.0	90.0	0.0
9	98.4	337.3	-125.0	90.0	0.0
10	100.0	320.0	-125.0	90.0	0.0
11	98.4	302.7	-125.0	90.0	0.0

A problem arises because as various axes become dominant in different parts of the circle, or as reach changes, the speed of the arm in real terms changes. This can be corrected by specifying a time for each segment. This is a completely different mode. To invoke this mode enter

CONTINUOUS TIMED

To cancel this mode and return to the usual mode enter

CONTINUOUS

Having specified the mode you now need to specify the time for each segment - i.e. the time between one line and the next. Enter a value in milliseconds for SEGTIME e.g.

1000 SEGTIME !

Will make each segment 1 second long. This results in the circle being drawn at 10 degrees per second and takes 36 seconds all the way round.

Obviously this can be applied to any path where exact linear speed is critical. The DSP adjusts the speed so that the time between points (lines) is as specified. Clearly if the distance between one pair of points is very large then the DSP will speed up the robot to cross that distance in the specified time. finally.

RUN

### Pitfalls

As with normal continuous mode if the move is too long or the time is too short then the DSP can not compute a viable speed and you will get the "too tight" error. ADJUST will not work. The solution is to increase the time, or bring the points closer together, or increase the value of ACCEL.

Unlike the normal mode you can never have two points too close together. In fact you can have two lines with identical coordinates (not possible in the normal mode). The robot would simply pause at that position for the specified time before moving on.