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;Descripton: Grid scanning program to test response of smaract

#DEFINE PROGRAM\_NO 3

#DEFINE GLOBAL\_ACC P(1000 \* PROGRAM\_NO + 1)

#DEFINE GLOBAL\_S\_CURVE P(1000 \* PROGRAM\_NO + 2)

#DEFINE X\_VEL P(1000 \* PROGRAM\_NO + 3)

#DEFINE X\_ACC P(1000 \* PROGRAM\_NO + 4)

#DEFINE X\_STEPS P(1000 \* PROGRAM\_NO + 5)

#DEFINE X\_COUNTER P(1000 \* PROGRAM\_NO + 6)

#DEFINE X\_STEP\_SIZE P(1000 \* PROGRAM\_NO + 7)

#DEFINE X\_INCREMENT P(1000 \* PROGRAM\_NO + 8)

#DEFINE Y\_VEL P(1000 \* PROGRAM\_NO + 9)

#DEFINE Y\_ACC P(1000 \* PROGRAM\_NO + 10)

#DEFINE Y\_STEPS P(1000 \* PROGRAM\_NO + 11)

#DEFINE Y\_COUNTER P(1000 \* PROGRAM\_NO + 12)

#DEFINE Y\_STEP\_SIZE P(1000 \* PROGRAM\_NO + 13)

#DEFINE Y\_INCREMENT P(1000 \* PROGRAM\_NO + 14)

#DEFINE Z\_VEL P(1000 \* PROGRAM\_NO + 15)

#DEFINE Z\_ACC P(1000 \* PROGRAM\_NO + 16)

#DEFINE DWELL\_TIME P(1000 \* PROGRAM\_NO + 17)

#DEFINE DEBUG P(1000 \* PROGRAM\_NO + 18)

;Home positions

#DEFINE X\_HOME 0

#DEFINE Y\_HOME 0

#DEFINE Z\_HOME 0

X\_VEL = 20

Z\_VEL = 20

Y\_VEL = 20

GLOBAL\_ACC = 1

GLOBAL\_S\_CURVE = 0

X\_STEP\_SIZE = 0.125

Y\_STEP\_SIZE = 0.125

X\_STEPS = 12

Y\_STEPS = 7

DWELL\_TIME = 5

DEL GAT ; Erase any defined gather buffer

&1 ; Coordinate System 1

CLOSE ; Make sure all buffers are closed

OPEN PROG PROGRAM\_NO ; Open buffer for program entry, Program #1

CLEAR ; Erase existing contents of buffer

DEBUG = 1

X\_COUNTER = 1

Y\_COUNTER = 1

LINEAR ; Blended linear interpolation move mode

ABS ; Absolute mode - moves specified by position

TA(GLOBAL\_ACC) ; Set 1/2 sec (500 msec) acceleration time

TS(GLOBAL\_S\_CURVE) ; Set no S-curve acceleration time

DEBUG = 2

F(X\_VEL)

X(X\_HOME)

DWELL0

DEBUG = 3

F(Y\_VEL)

Y(Y\_HOME)

DWELL0

DEBUG = 4

F(Z\_VEL)

Z(Z\_HOME)

DWELL0

DEBUG = 5

COMMAND"GAT"

DEBUG = 6

WHILE(Y\_COUNTER < Y\_STEPS)

WHILE(X\_COUNTER < X\_STEPS)

F(X\_VEL) ; Set feedrate

X(X\_HOME+(X\_COUNTER\*X\_STEP\_SIZE))

DWELL(DWELL\_TIME)

X\_COUNTER = X\_COUNTER + 1

ENDWHILE

F(Y\_VEL) ; Set feedrate

Y(Y\_HOME+((2\*Y\_COUNTER-1)\*Y\_STEP\_SIZE))

DWELL(DWELL\_TIME)

DEBUG = 7

WHILE(X\_COUNTER > 0)

F(X\_VEL) ; Set feedrate

X(X\_HOME+((X\_COUNTER-1)\*X\_STEP\_SIZE))

DWELL(DWELL\_TIME)

X\_COUNTER = X\_COUNTER - 1

ENDWHILE

F(Y\_VEL) ; Set feedrate

Y(Y\_HOME+(2\*Y\_COUNTER\*Y\_STEP\_SIZE))

DWELL(DWELL\_TIME)

Y\_COUNTER = Y\_COUNTER + 1

ENDWHILE

DEBUG = 8

COMMAND"END GAT"

F(X\_VEL)

X(X\_HOME)

DWELL0

F(Y\_VEL)

Y(Y\_HOME)

DWELL0

F(Z\_VEL)

Z(Z\_HOME)

DWELL0

CLOSE ; Close buffer - end of program