VXM *Stepping Motor Controller*

Application Note # AN102

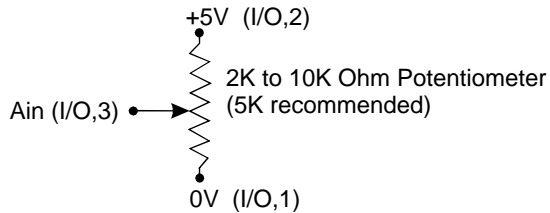## <u>Auto-Reverse with Potentiometer Set Speed</u>

The VXM can be programed to perform auto-reversing, and derive the speed from a user set potentiometer. This Application Note demonstrates a program that homes the VXM initially and auto-reverses continually if the Run input is held low.
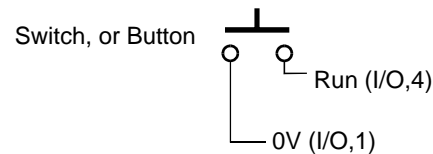
Materials Needed:

1. 2,000 to 10,000 Ohm, 0.05 Watt Potentiometer (5000 Ohm recommended)
2. Auxiliary I/O Breakout Module or DB15HD (VGA) cable
3. Push Button or Switch for remote Run (Optional)

Wiring:

Connection to Potentiometer

+5V (I/O,2)

Ain (I/O,3)

2K to 10K Ohm Potentiometer
(5K recommended)

0V (I/O,1)

Connection for Remote Run

Switch, or Button

Run (I/O,4)

0V (I/O,1)

Program:

Example #1 shows an auto-reverse program with a **rsm** command to save program permanently in the VXM.

Example #2 is similar in function to Example #1, except on the first run, program 4 will do a home to the negative limit switch.

Example #1	Motors run	RAM used	Function
Auto-reverse	1	13	Auto-reverse with Speed derived from Potentiometer

```
PM-0         ;select/clear pgm 0
A1M4         ;set acceleration to 4
S1M-13       ;read/assign spd 1K to 4K
I1M1200      ;Index out 3 revs
I1M-1200     ;Reverse back 3 revs
;next command to save programs/settings
rsm
```

Example #2	Motors run	RAM used	Function
Auto-reverse	1	28	Auto-reverse with Initial Homing, Speed derived from Potentiometer

```
PM-4         ;select/clear pgm 4
A1M4         ;set acceleration to 4
S1M800,I1M-0      ;Home to neg limit
I1M100       ;move off limit
IA1M-0       ;Zero motor here

PM-0         ;select/clear pgm 0
S1M-13       ;read/assign spd 1K to 4K
I1M1200      ;Index out 3 revs
IA1M0        ;Reverse back home

setDM129     ;Set to do Pgm 4 1st time
;next command to save programs/settings
rsm
```