

# VXM Stepping Motor Controller

## Application Note # AN102

### Auto-Reverse with Potentiometer Set Speed

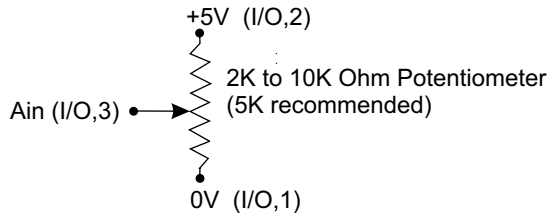
The VXM can be programed to perform auto-reversing, and derive the speed from a user set potentiometer. This Application Note demonstrates a program that homes the VXM initially and auto-reverses continually if the Run input is held low.

#### Materials Needed:

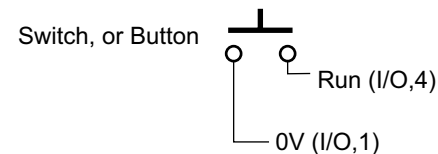
1. 2,000 to 10,000 Ohm, 0.05 Watt Potentiometer (5000 Ohm recommended)
2. Auxiliary I/O Breakout Module or DB15HD (VGA) cable
3. Push Button or Switch for remote Run (Optional)

#### Wiring:

##### Connection to Potentiometer



##### Connection for Remote Run



#### 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
    
```

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