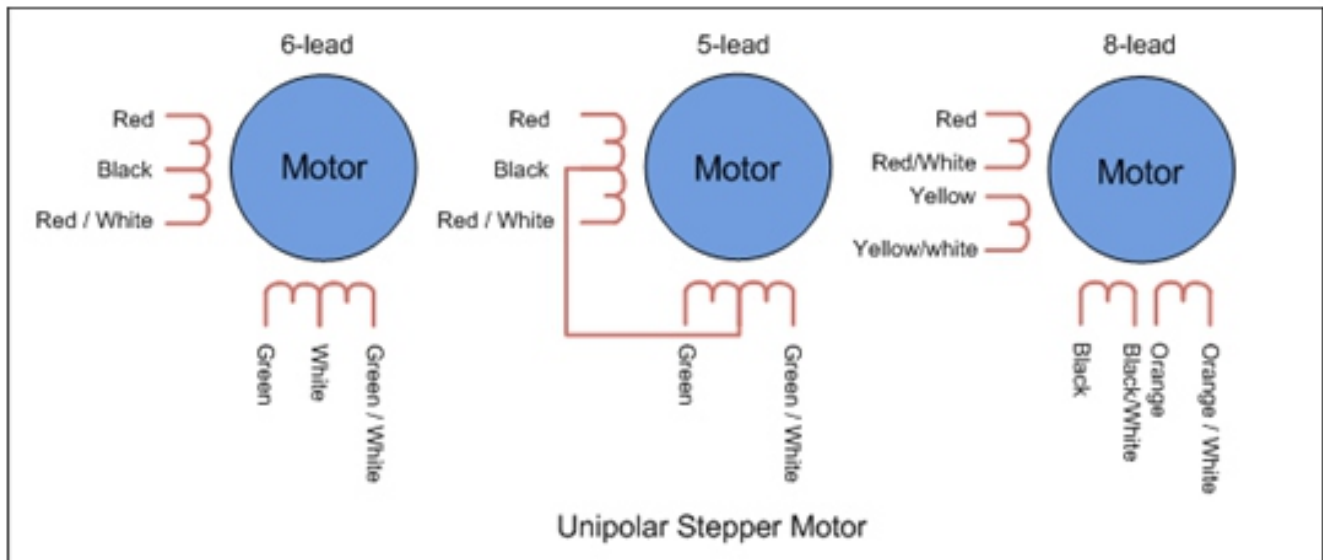


Stepper Motor Interfacing with Motor Shield

1. Mono-Polar/UniPolar Stepper Motors

Monopolar stepper motor have four coils and each pair of coils have a common terminal, so this motor have 6 or 5 wires



Two ways for controlling this type of stepper motor:

- First Method -

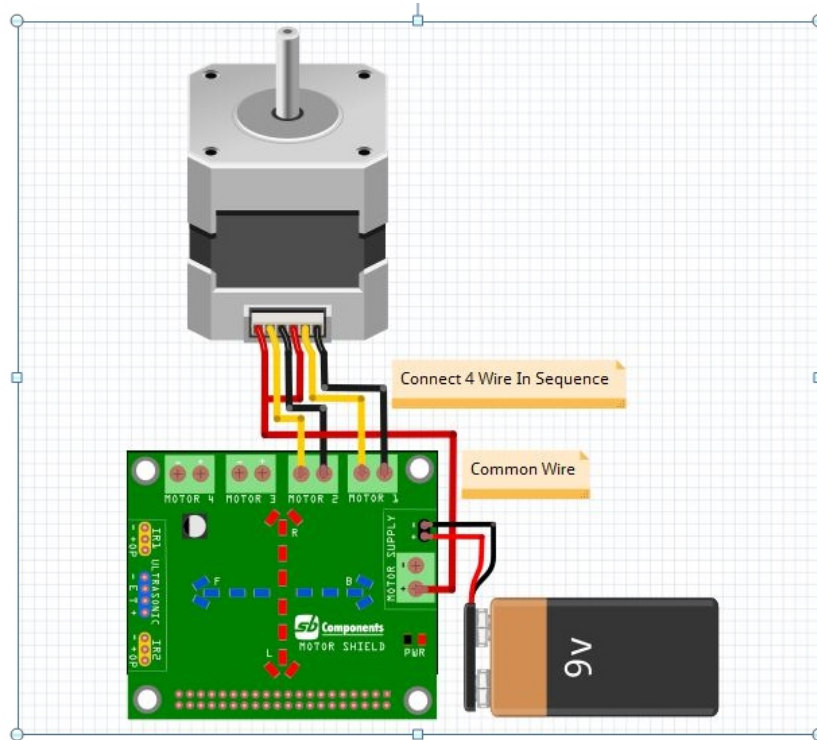
Step	Coil A	Coil B	Coil C	Coil D
1	ON	ON	OFF	OFF
2	OFF	ON	ON	OFF
3	OFF	OFF	ON	ON
4	ON	OFF	OFF	ON

- Second Method -

Step	Coil A	Coil B	Coil C	Coil D
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	OFF	OFF	ON	OFF
4	OFF	OFF	OFF	ON

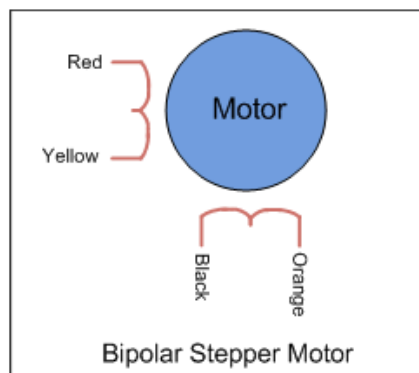
Motor Shield library is designed using second method. User can use first method also by changing the sequence in code

Motor Shield library is designed using second method. User can use first method also by changing the sequence in code



2. Bi-Polar Stepper Motor

Bipolar stepper motor have two coils, so a bipolar motor have 4 wires.



To operate stepper motor, use this sequence:

Step	A Wire	B Wire	C Wire	D Wire
1	+	-	+	-
2	+	-	-	+
3	-	+	-	+
4	-	+	+	-

3. Steps for Interfacing (5 or 6 Wire Stepper Motor)

- First of all check out the common wire using multimeter and connect it with Motor Supply (+ pin) in the Motor Shield. In case of 6 wire stepper motor two wires are common and connect both of them.
- Check the order of coil wires arrangement and note the sequence of color of wires, so that motor will move in particular direction.
- Connect the coil wires into Motor 1 and Motor 2 Terminal (or you can use Motor 3 and Motor 4 Terminal). Kindly make sure order of coil wire will be in sequence, otherwise motor will not be able to rotate in particular direction.
- “STEPPER 1” is linked with Motor 1 and Motor 2 Terminal in motor shield and “STEPPER 2” is linked with Motor 3 and Motor 4 Terminal.
- Run the test code.