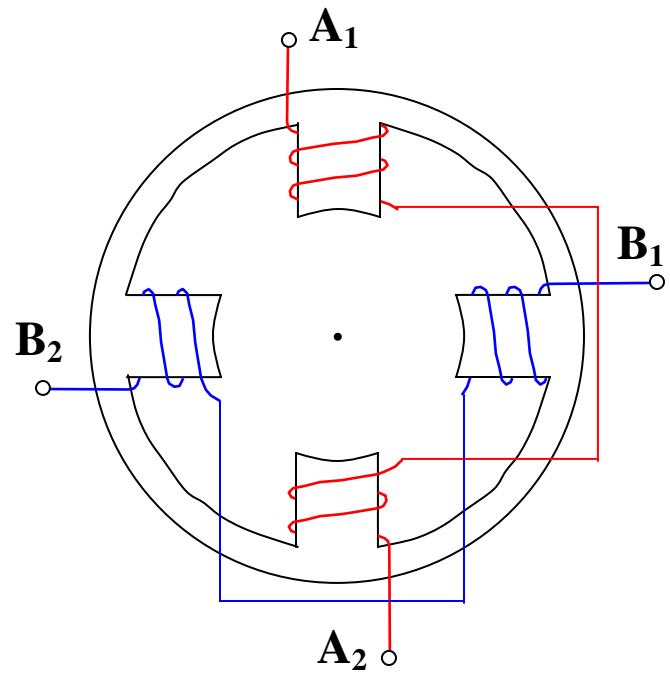


# Stepper Motor Operation



## Full-Step Mode

Step	A <sub>1</sub>	A <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>
1	H	L	H	L
2	L	H	H	L
3	L	H	L	H
4	H	L	L	H
5	Repeat steps 1-4			

## Half-Step Mode

Step	A <sub>1</sub>	A <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>
1	H	L	H	L
2	L	L	H	L
3	L	H	H	L
4	L	H	L	L
5	L	H	L	H
6	L	L	L	H
7	H	L	L	H
8	H	L	L	L
9	Repeat steps 1-8			

# STEPPER MOTOR CONSTRUCTION

(SOURCE: TECHNICAL INFORMATION ON STEPPING MOTORS, ORIENTAL MOTOR CORP.)

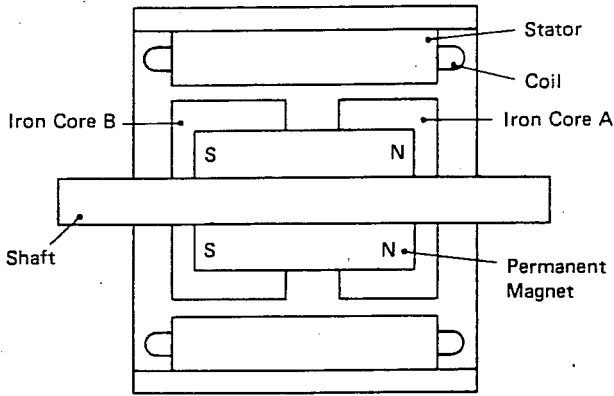


Figure 1-5 Structure of the stator and rotor of an Oriental Motor hybrid stepping motor

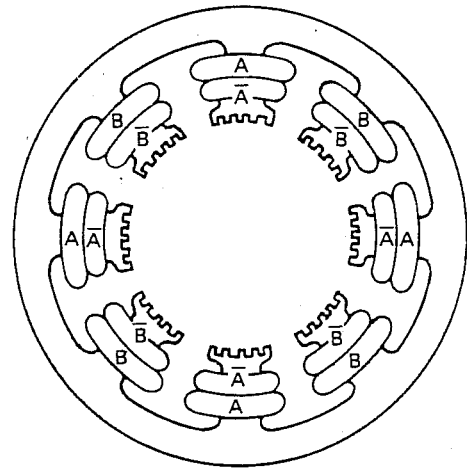
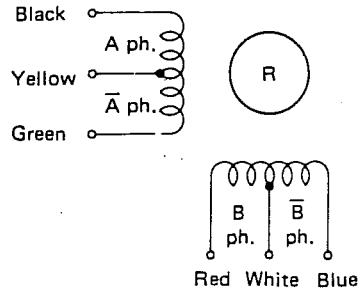
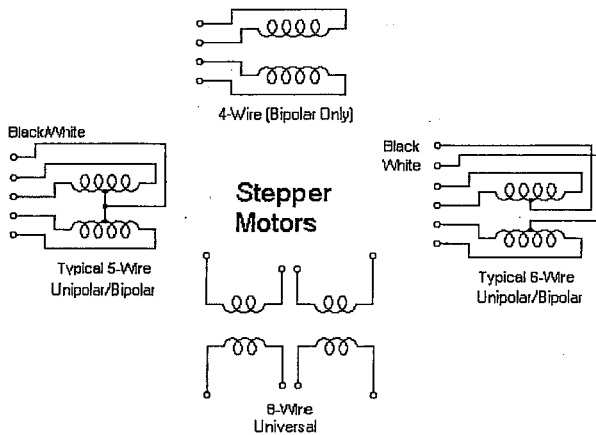


Figure 1-6 Appearance of windings and internal wire connections of an Oriental Motor hybrid stepping motor

## Stepper Motor Construction



(Figure from: <http://209.41.165.153/stepper/Tutorials/BiTutor.html>)

Sources for more information on stepper motors:

1. [stepperworld.com](http://stepperworld.com) (<http://209.41.165.153/stepper/>)
2. <http://www.cs.uiowa.edu/~jones/step/>

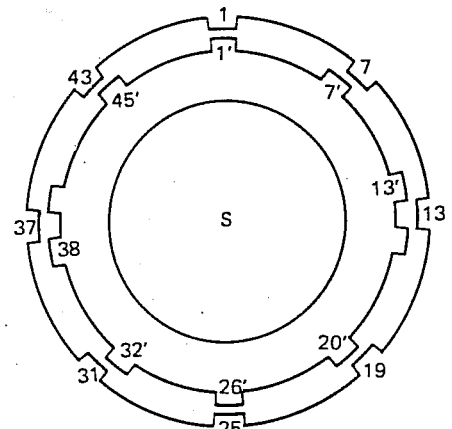


Figure 1-8 Relationship between the stator teeth and rotor teeth of an Oriental Motor hybrid stepping motor with the A phase energized