

How Stepper Motor Works (3-minute tutorial)

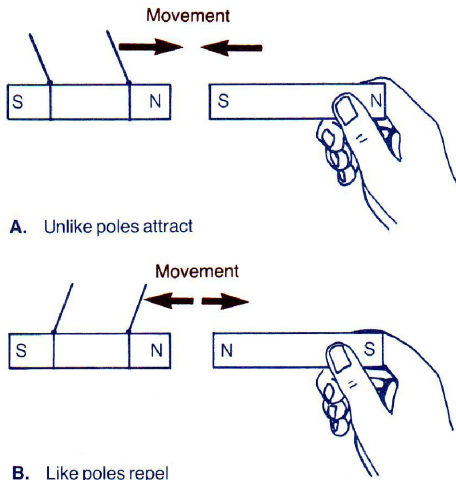


Figure 15-6 Law of magnetic poles.

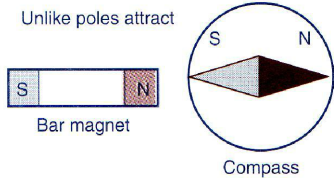
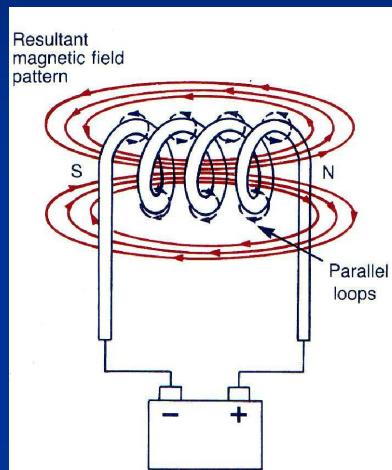
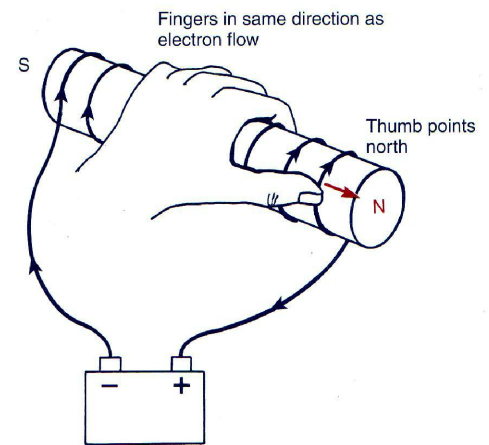


Figure 15-11 Using a compass to mark the polarity of a magnet.

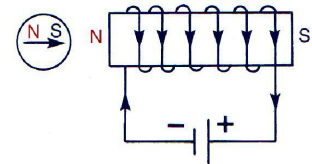


16-9 Magnetic field produced by a current-carrying coil.



A.

Compass used to check polarity



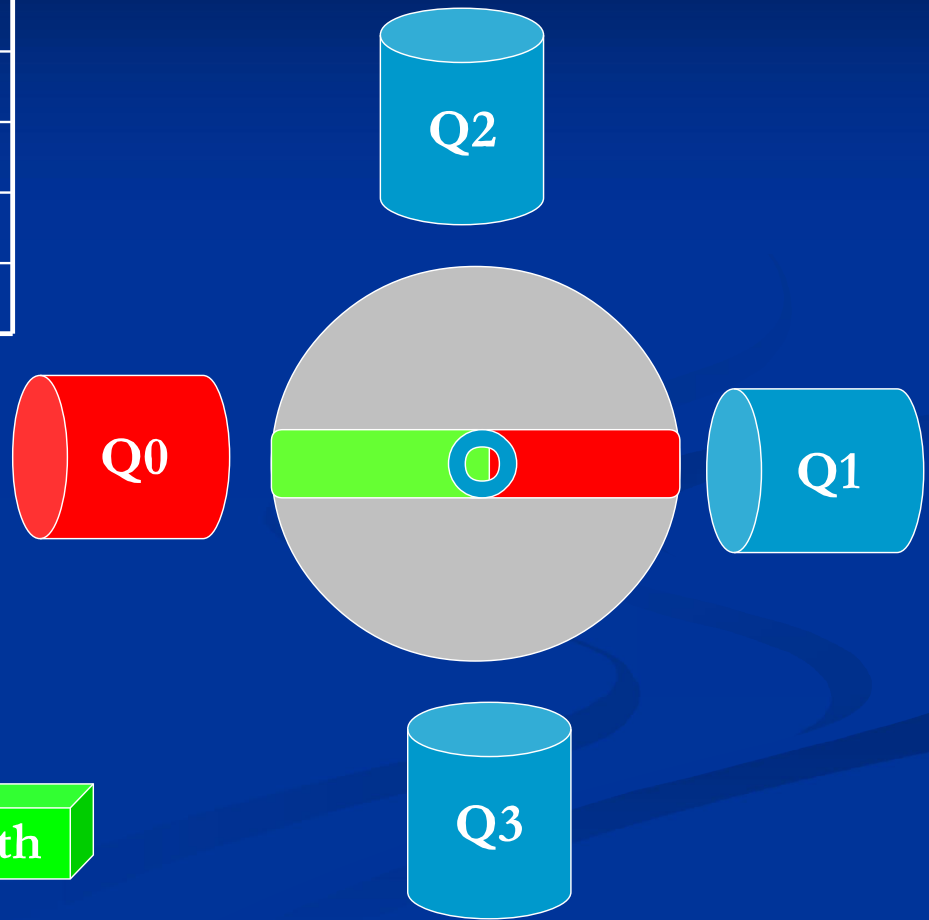
B.

Figure 16-10 Left-hand coil rule.

How Stepper Motor Works (3-minute tutorial)

S1: Q₀ Active

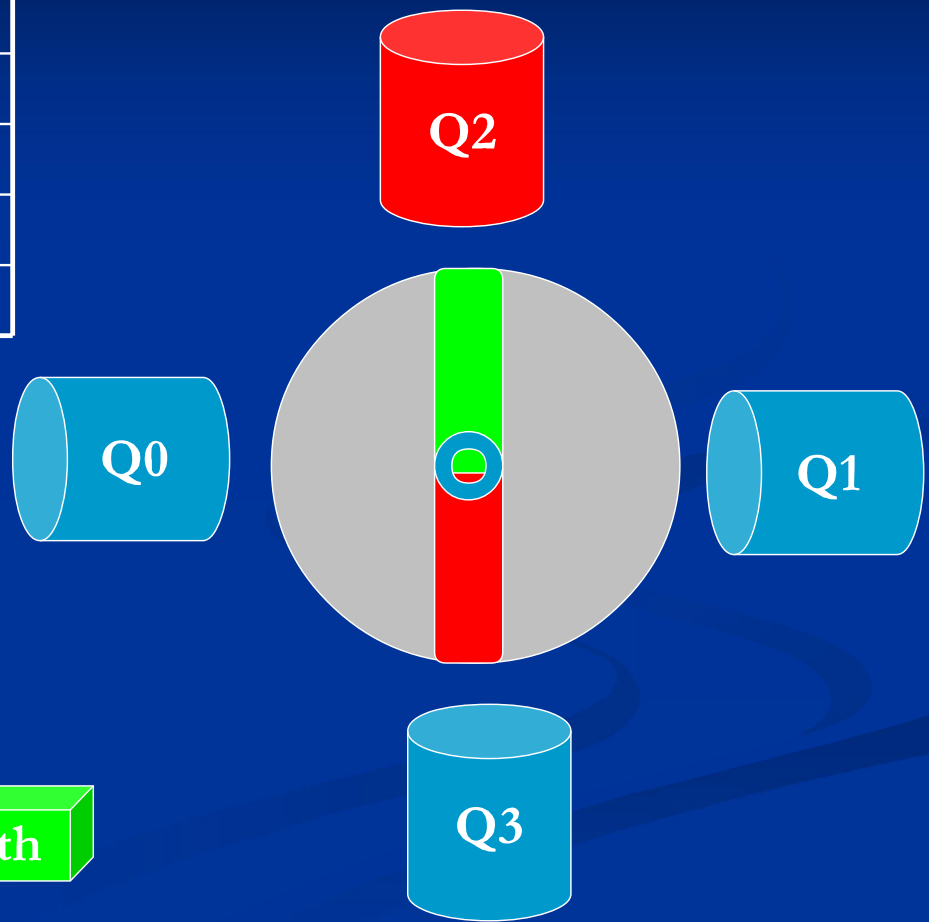
State	Q3	Q2	Q1	Q0
S1	0	0	0	1
S4	0	1	0	0
S2	0	0	1	0
S8	1	0	0	0



How Stepper Motor Works (3-minute tutorial)

S4: Q2 Active

State	Q3	Q2	Q1	Q0
S1	0	0	0	1
S4	0	1	0	0
S2	0	0	1	0
S8	1	0	0	0



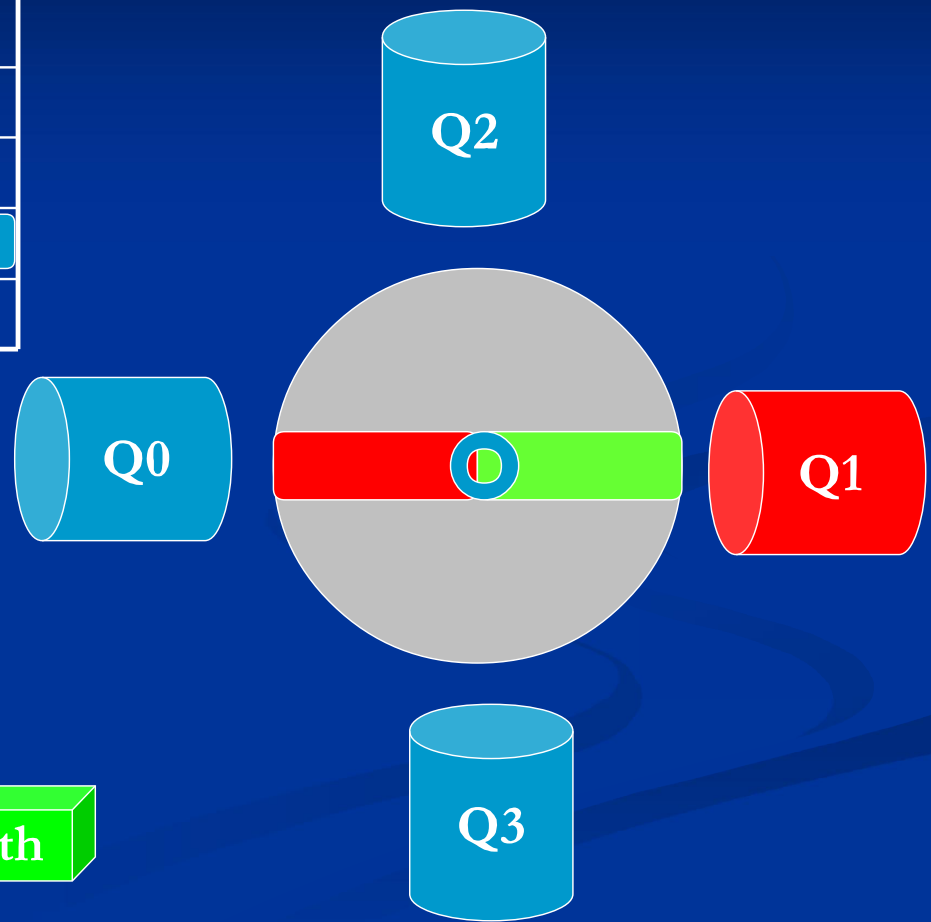
Attracts



How Stepper Motor Works (3-minute tutorial)

S2: Q₁ Active

State	Q3	Q2	Q1	Q0
S1	0	0	0	1
S4	0	1	0	0
S2	0	0	1	0
S8	1	0	0	0

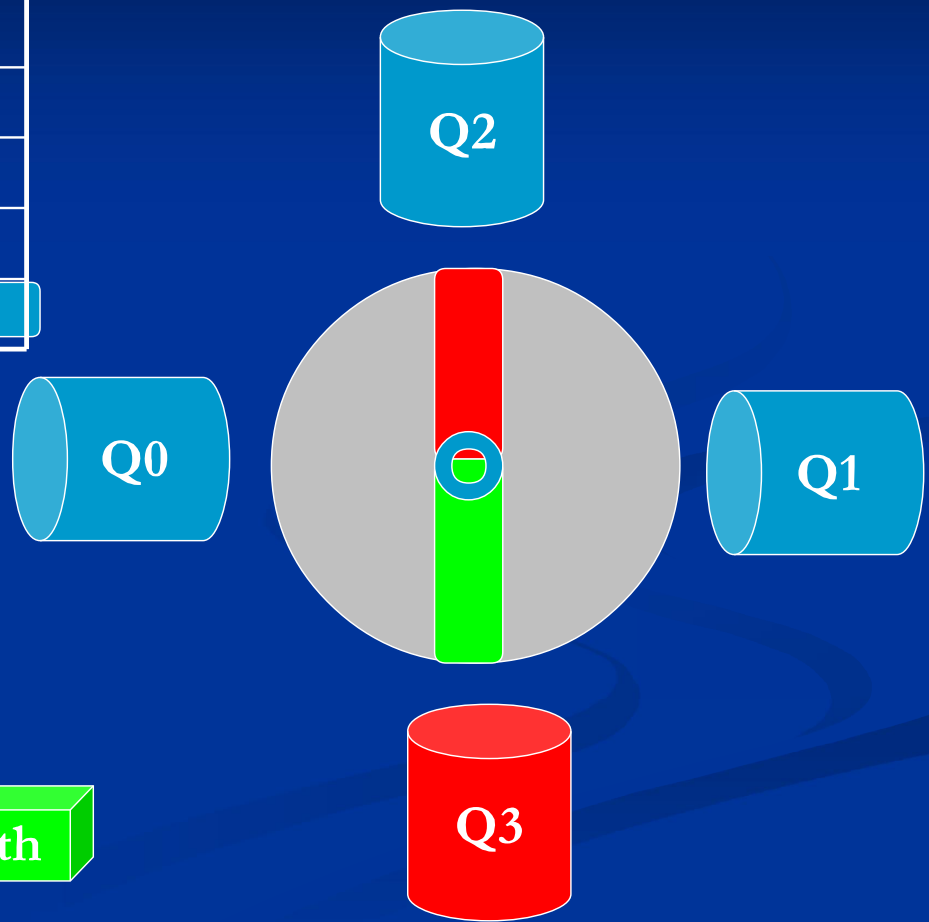


North Attracts **South**

How Stepper Motor Works (3-minute tutorial)

S8: Q₃ Active

State	Q3	Q2	Q1	Q0
S1	0	0	0	1
S4	0	1	0	0
S2	0	0	1	0
S8	1	0	0	0



Attracts



How Stepper Motor Works (3-minute tutorial)

S1: Q₀ Active

State	Q3	Q2	Q1	Q0
S1	0	0	0	1
S4	0	1	0	0
S2	0	0	1	0
S8	1	0	0	0

