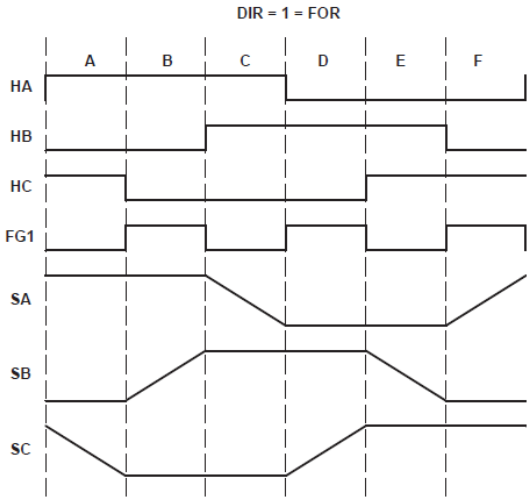
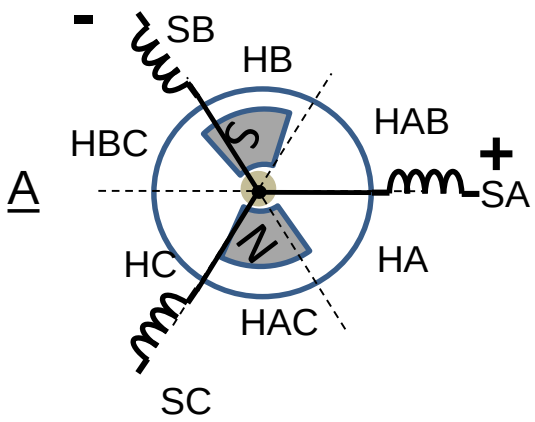
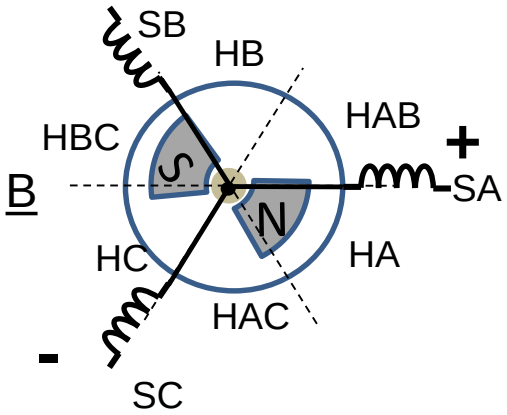
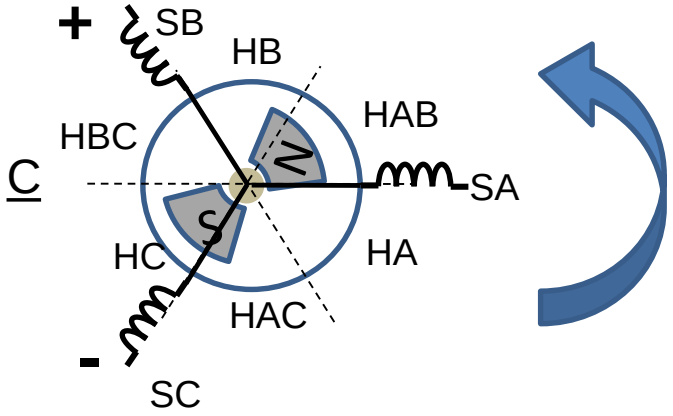


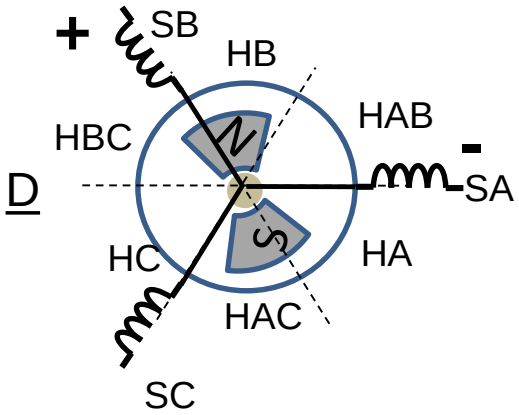
Hall Encoder	High	Low
A=HAC	A	B
B=HA	A	C
C=HAB	B	C
D=HB	B	A
E=HBC	C	A
F=HC	C	B

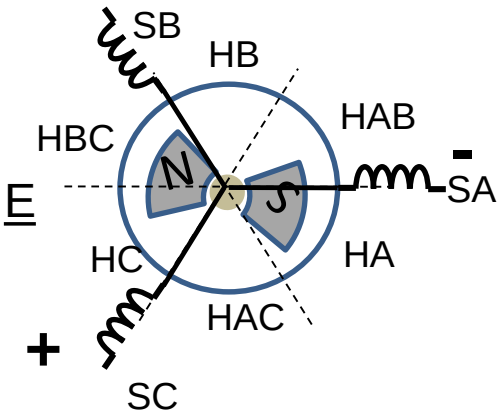
Normal Operation

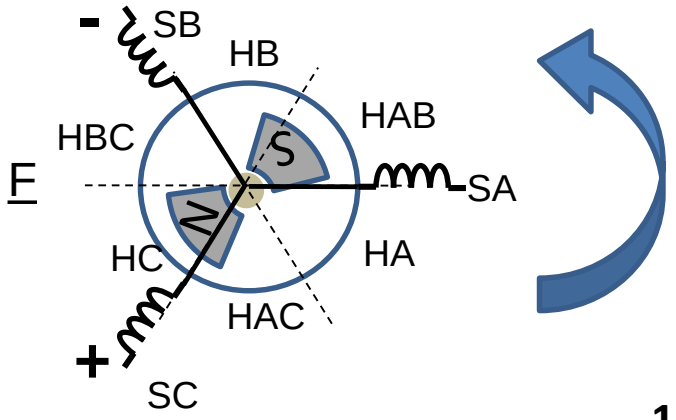


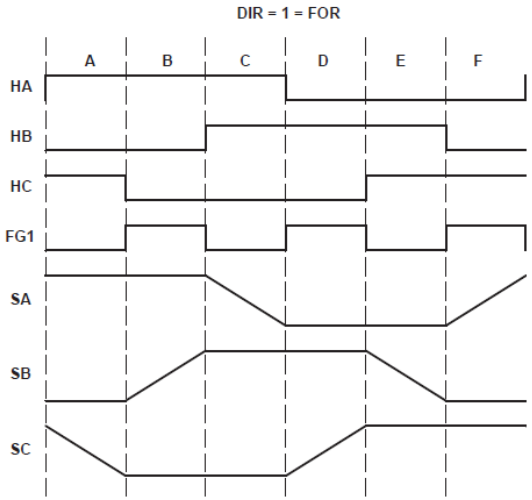






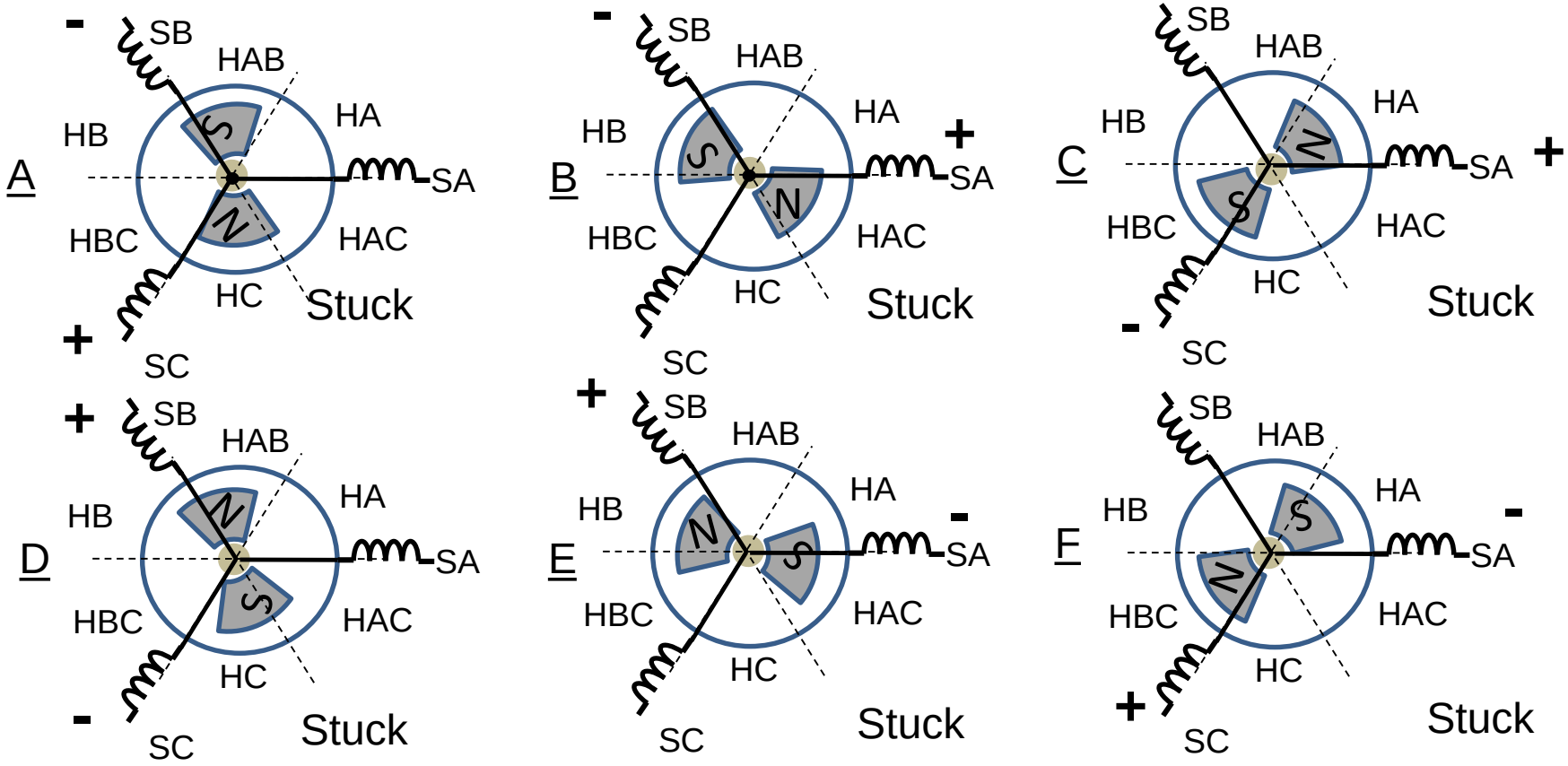


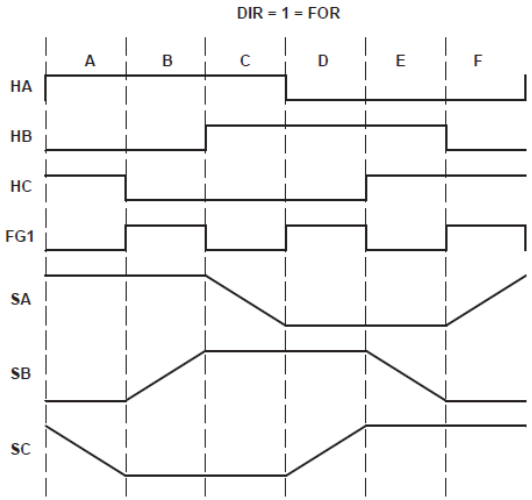




Hall Encoder	High	Low
A=HAC	A	B
B=HA	A	C
C=HAB	B	C
D=HB	B	A
E=HBC	C	A
F=HC	C	B

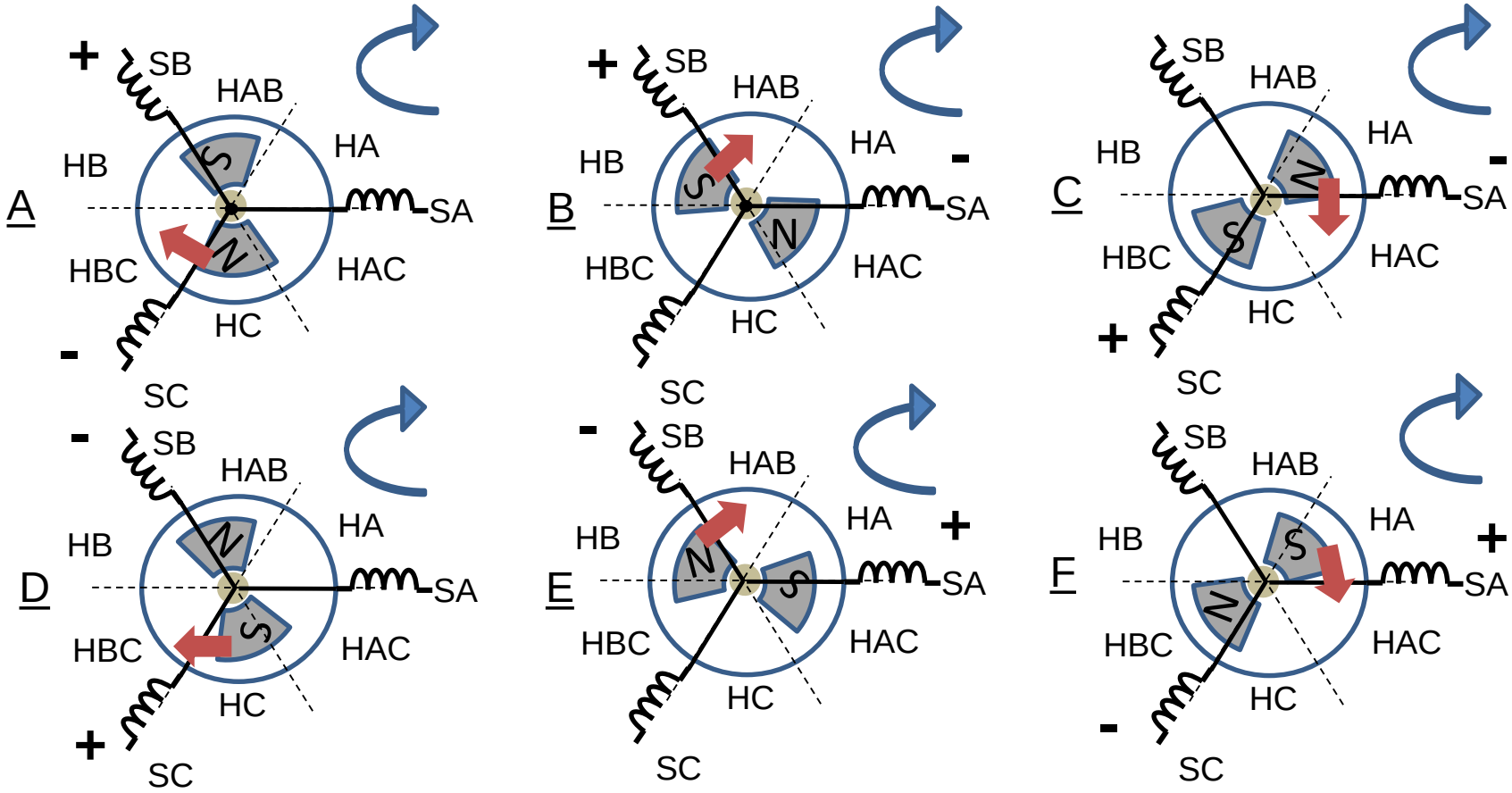
Hall sensor
angle skewed 60 degrees
FWD= STUCK!

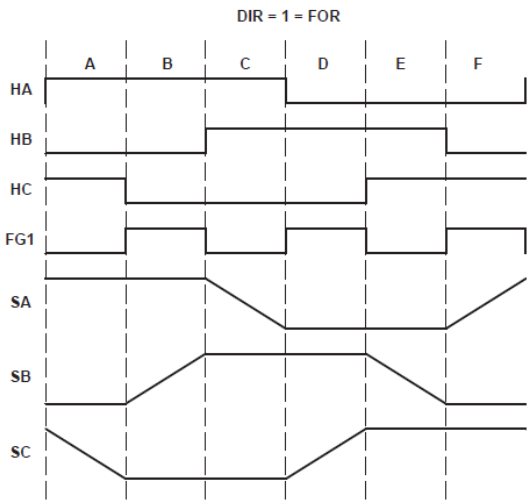




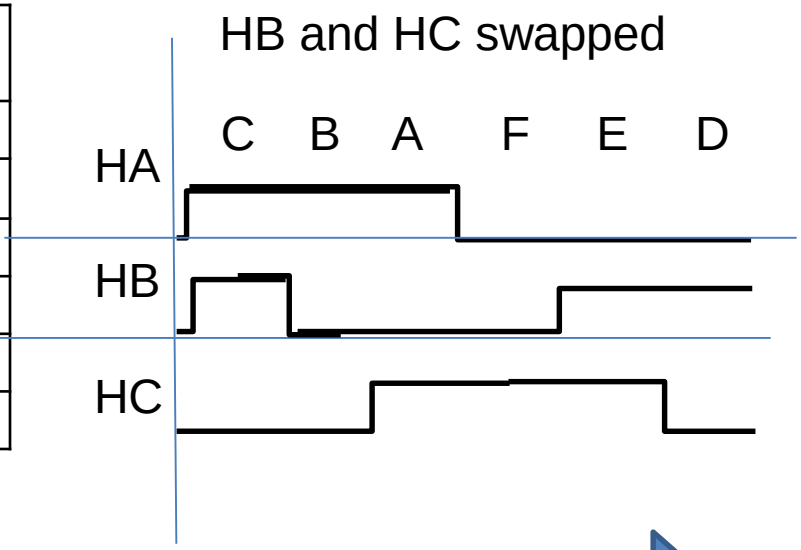
Hall Encoder	High	Low
A=HAC	B	A
B=HA	C	A
C=HAB	C	B
D=HB	A	B
E=HBC	A	C
F=HC	B	C

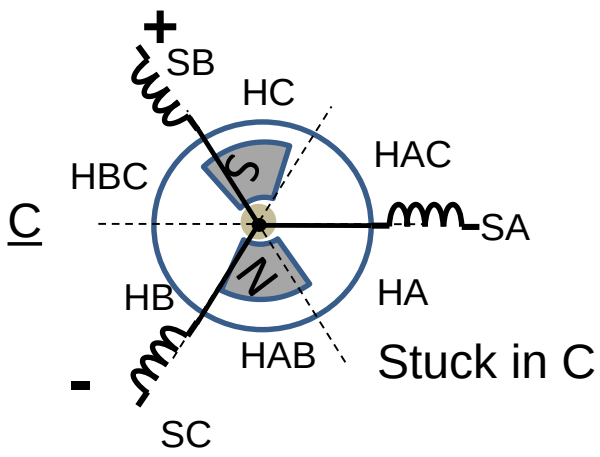
Hall sensor
angle skewed 60 degrees
REV: weak rotation

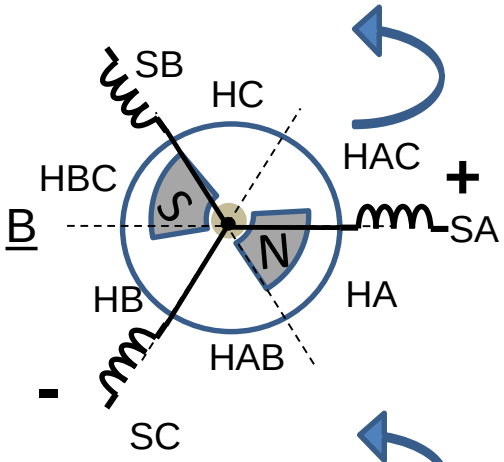


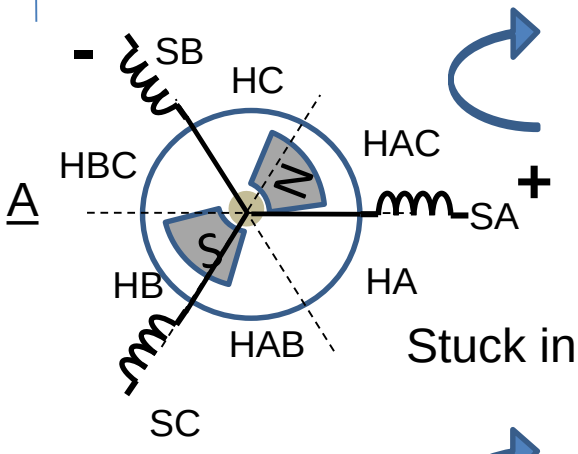


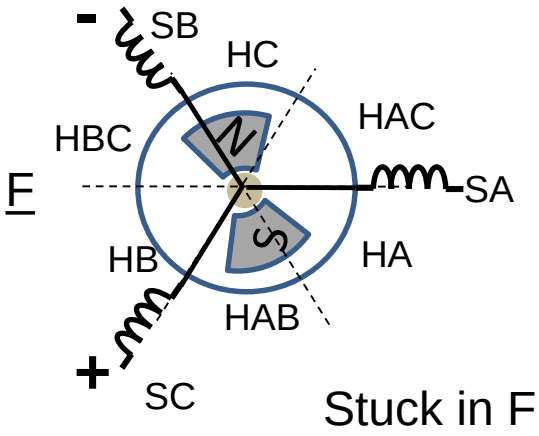
Hall Encoder	High	Low
A=HAC	A	B
B=HA	A	C
C=HAB	B	C
D=HB	B	A
E=HBC	C	A
F=HC	C	B

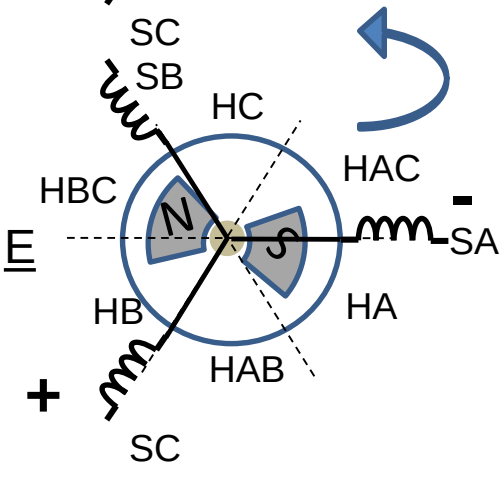


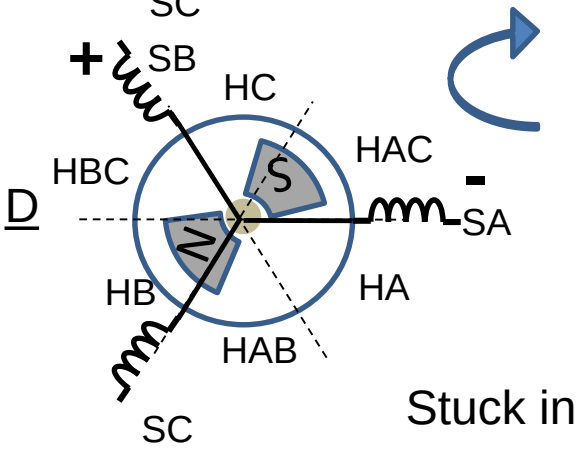


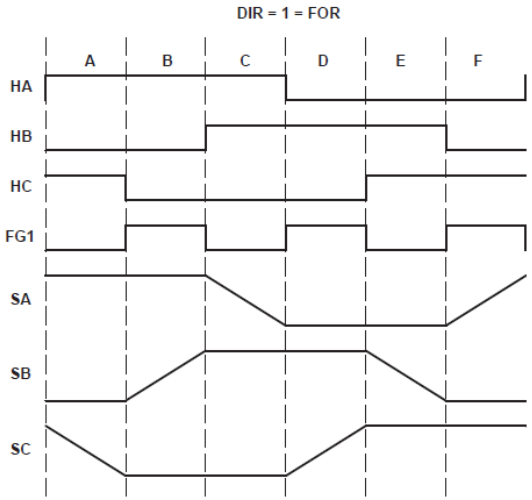




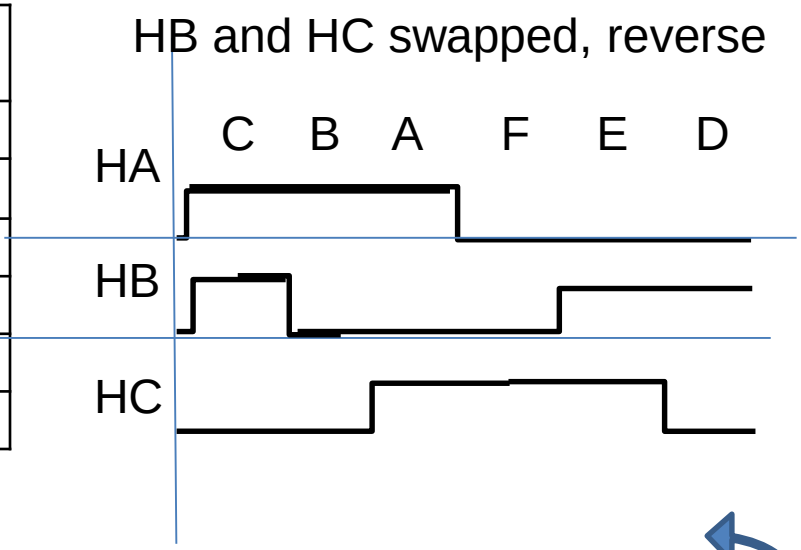


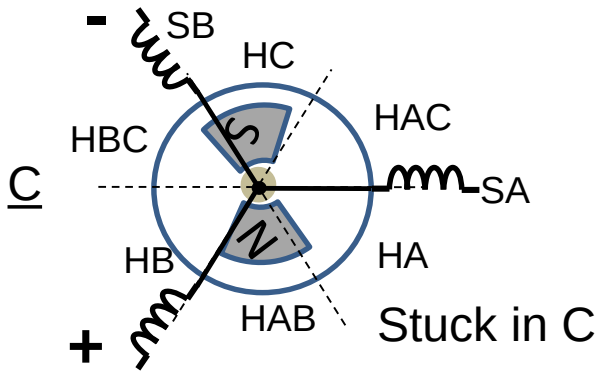


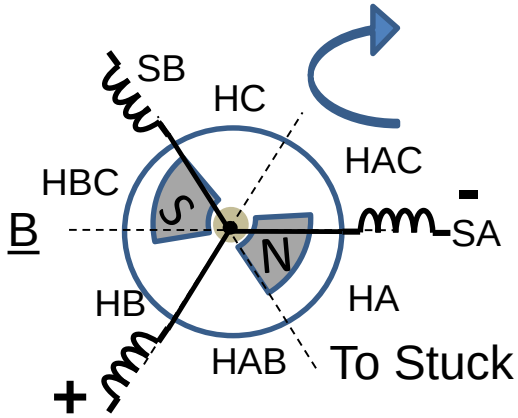


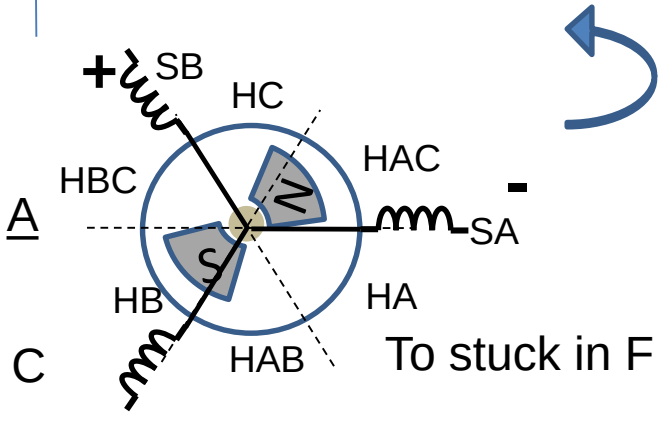


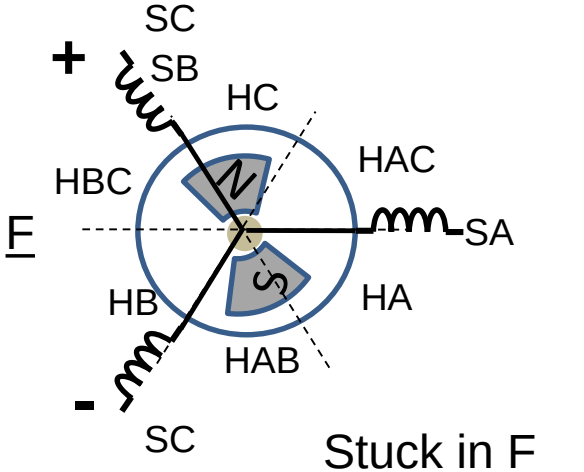
Hall Encoder	High	Low
A=HAC	B	A
B=HA	C	A
C=HAB	C	B
D=HB	A	B
E=HBC	A	C
F=HC	B	C

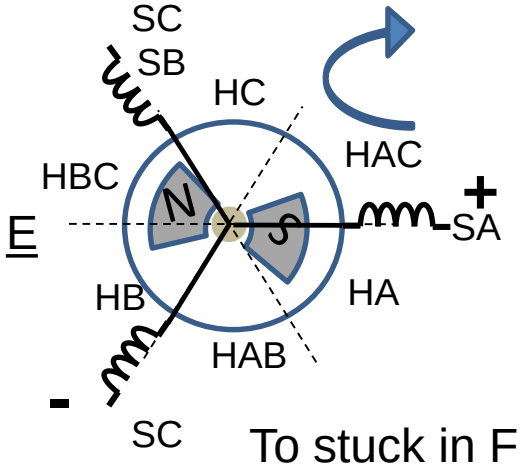


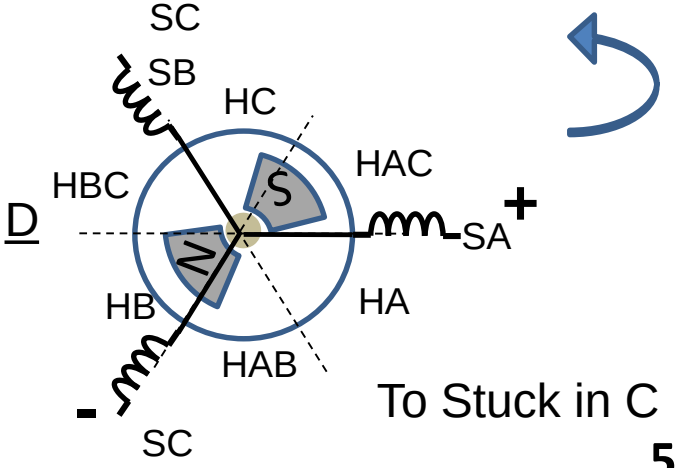


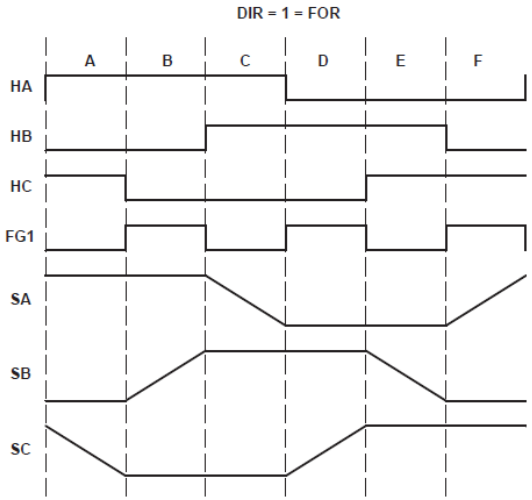








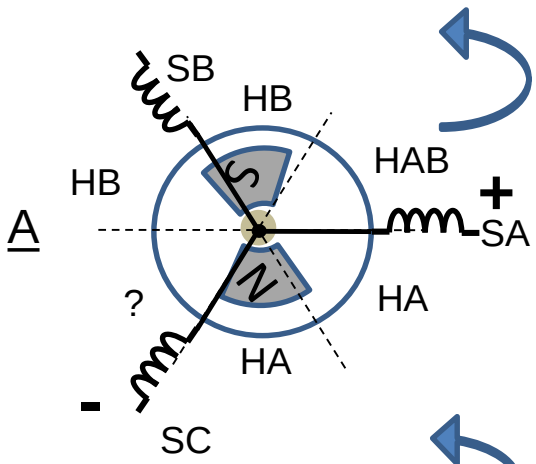


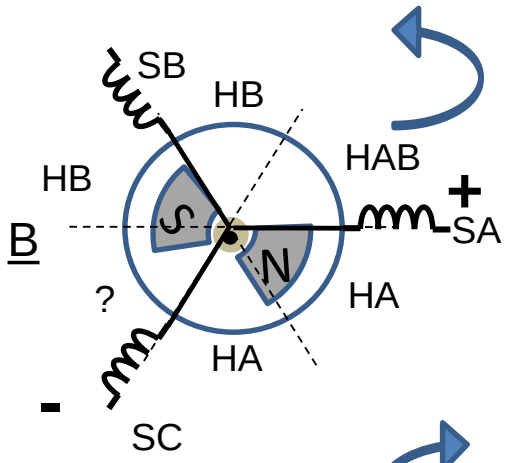


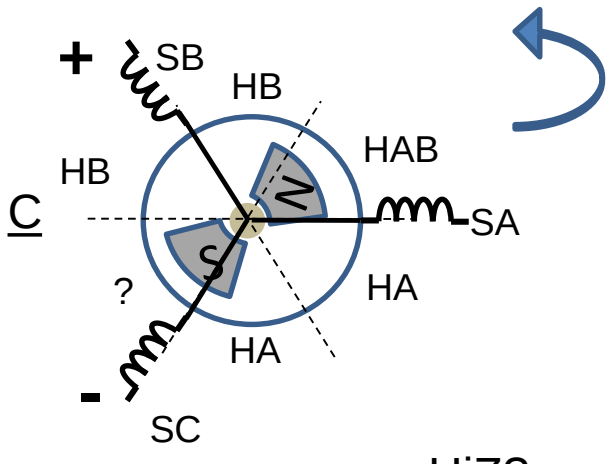
Hall Encoder	High	Low
A=HAC	B	A
B=HA	C	A
C=HAB	C	B
D=HB	A	B
E=HBC	A	C
F=HC	B	C

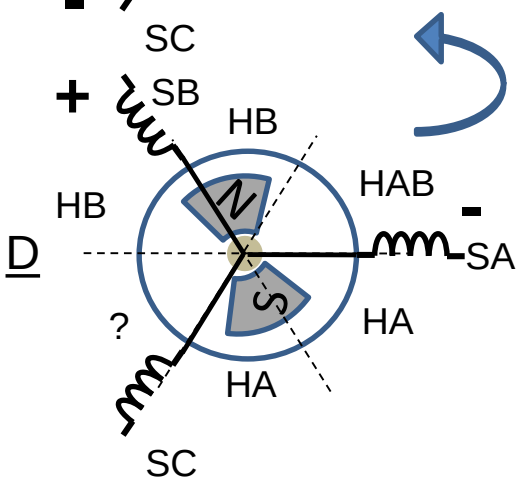
Hall encoder C stuck at 0, FWD

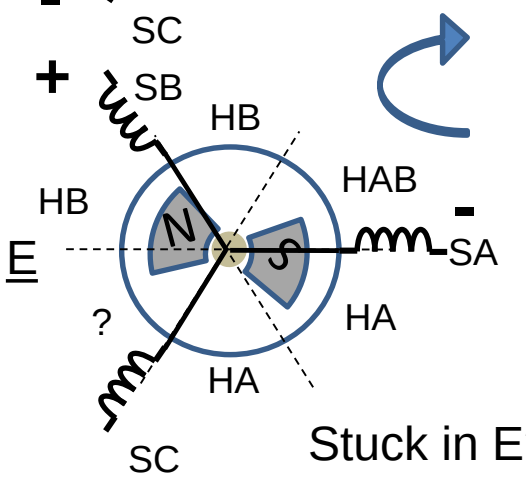
4 of 6 phase CCW,
1 phase HiZ, 1 phase CW



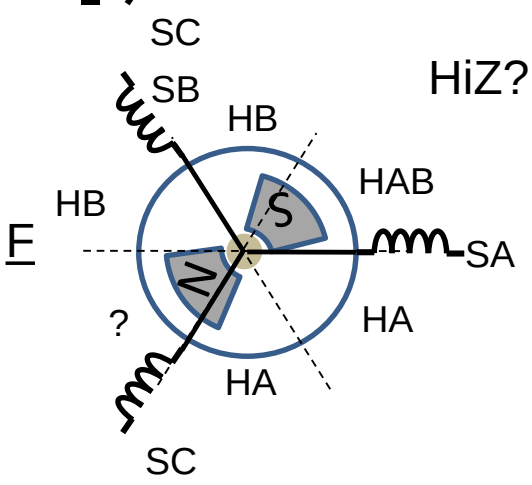




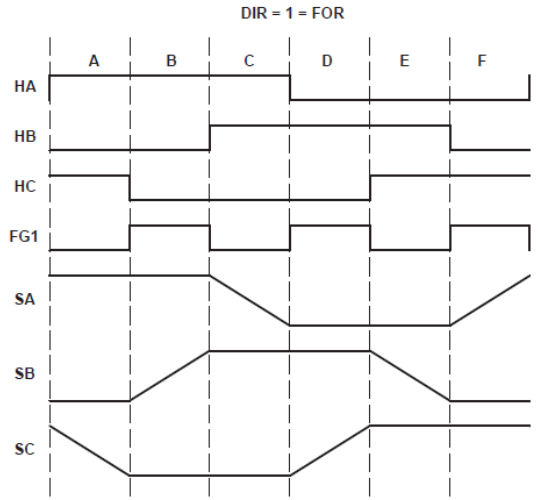




Stuck in E?



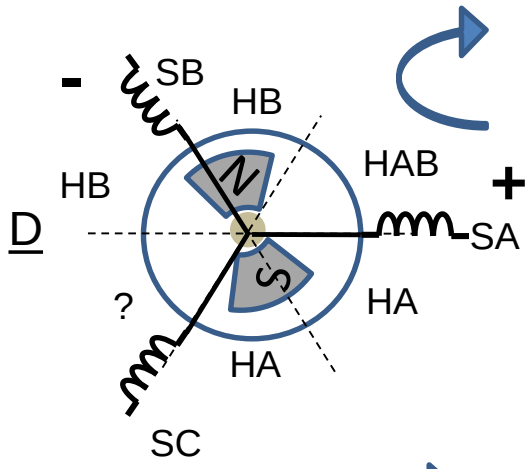
HiZ?

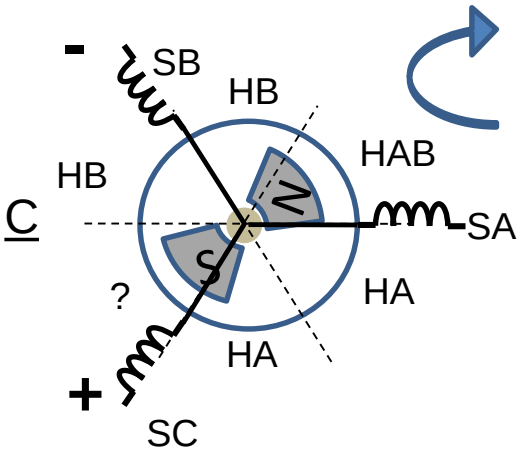


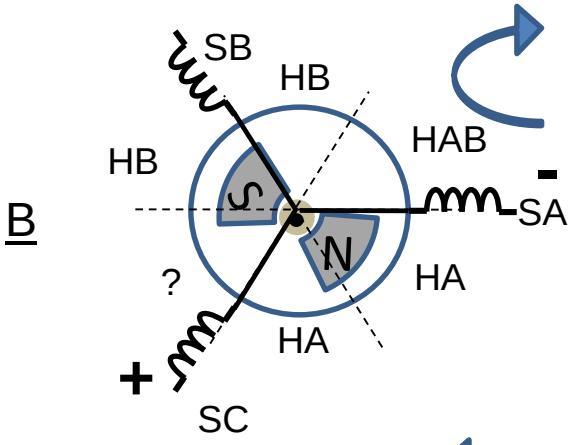
Hall Encoder	High	Low
HAC	*B*	*A*
HA	C	A
HAB	C	B
HB	A	B
HBC	*A*	*C*
HC	*B*	*C*

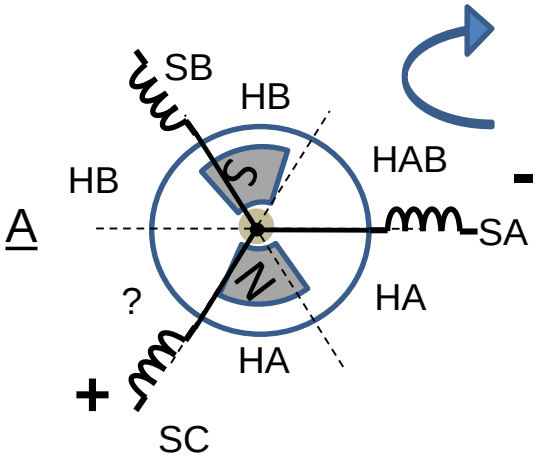
Hall encoder C stuck at 0, REV

4 of 6 phase CW,
1 phase HiZ, 1 phase CCW

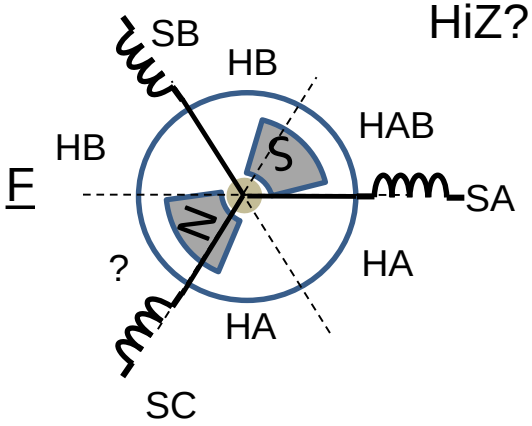


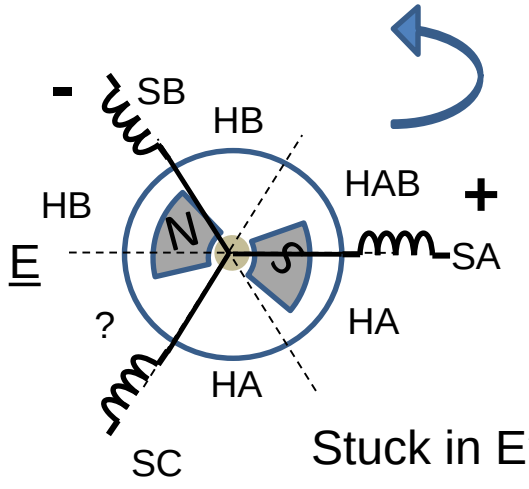




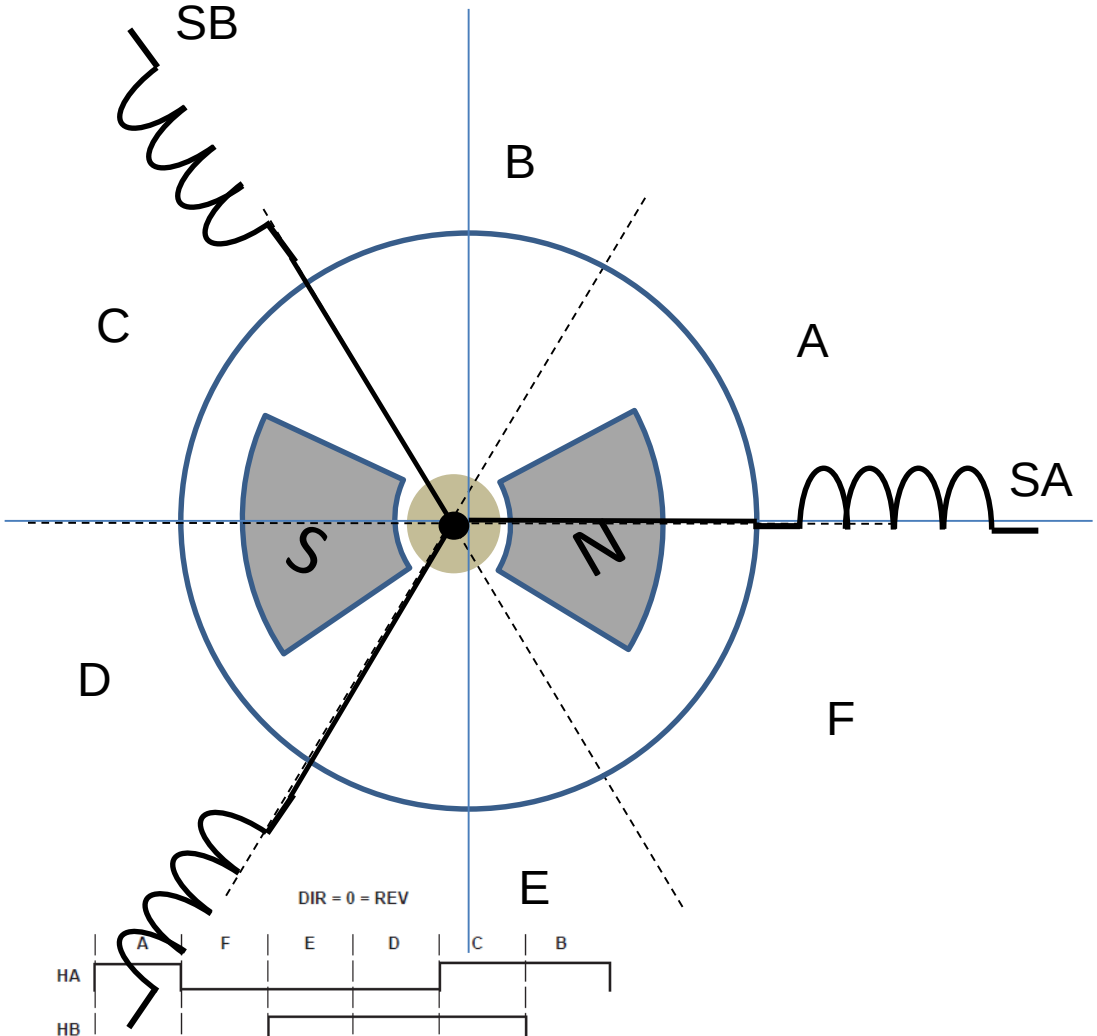


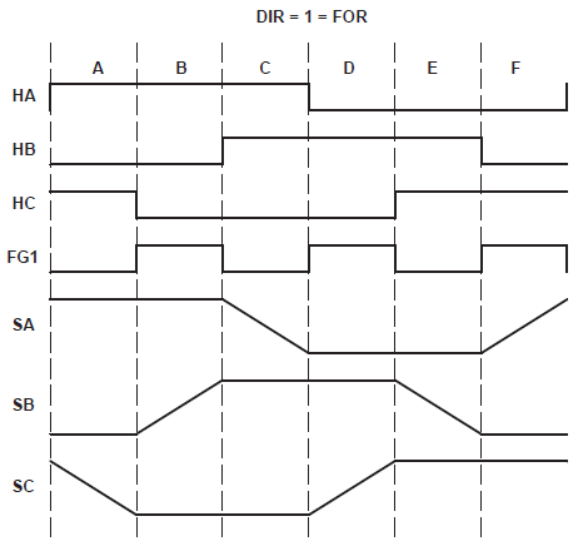
HiZ?

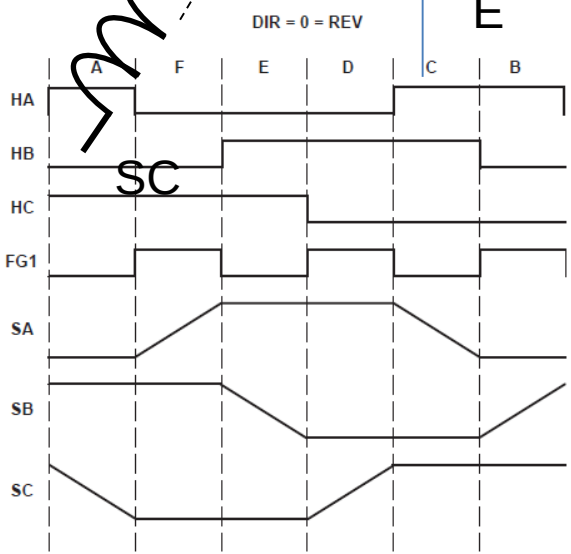




Stuck in E?


SB
B
C
A
SA
S
N
D
F
E
SC


DIR = 1 = FOR
A
B
C
D
E
F
HA
HB
HC
FG1
SA
SB
SC


DIR = 0 = REV
A
F
E
D
C
B
HA
HB
HC
FG1
SA
SB
SC