BLOCK DIAGRAM

CLK-LISTEN COUNTER

LOAD STATE FSM

CLK-SM LOGIC

COMPLETION SYNC LOGIC

LATCH COUNT LOGIC

MOVE LOGIC

BUTTON STATE FSM

LOAD OVERRIDE LOGIC

OVERRIDE LOGIC

16 BIT SHIFT REG

CTRL-LATCH

DIR

CLK-CTRL

CTRL-IN

CTRL-OUT

CLK-LISTEN

LOAD-STATE

COMPLETION-SYNC

LATCH-COUNT

CLK-SM

BUTTON-STATE

OVERRIDE-EN

OVERRIDE

MOVE

reset_n

+2

+1

5

2

4

3

1

0

⟸ CLOCKED BY CLK-SYSTEM