



Zone Controller Heat/Cool Priority Sequence for Single-Duct Systems

In facilities that have simultaneous demand for both Heat and Cool the Pelican System implements a sequence of operation to assure that all zones are serviced. The sequence of operation for a single-duct zone system is:

1. **First Come First Serve** - From an idle state, the first zone to request heating or cooling will be immediately serviced to provide the desired mode of operation. Other zones that subsequently request this mode will be serviced and zones requesting the opposite mode will be held in a "Waiting" state.



2. **Vote for Changeover** - After 30 minutes of operation, the Pelican System allows all zones to Vote for their desired operating mode. Zones further from their target set point will be given extra votes. If the votes for the opposite mode of operation exceed the votes for the current mode of operation, the Pelican System will initiate a Changeover Cycle and switch operation to the opposite mode.
3. **Satisfy Minority** - After 60 minutes of operation, if the voting has not switched the operating mode, and Zones are still requesting the opposite mode, the Pelican System will initiate a Changeover Cycle and switch to the opposite mode to satisfy the minority Zones.

NOTE: Any time a Changeover Cycle is initiated, the timers are reset and the Sequence of Operation repeats.

Zone Controller Heat/Cool Priority Sequence for Dual-Duct Systems

- In **Dual-Duct Systems**, facilities that have simultaneous demand for both a hot deck and cold deck, the Pelican System allows for the operation of the heating coil and the cooling coil in parallel or individually to assure that all zones are serviced. Both the hot deck and cool deck have their own damper actuators that allow for all zones calling for heat or cool to be satisfied.
- A **Makeup Air Unit (MAU)** has one damper actuator for both the hot deck and cool deck; therefore, enables the fan and provides staged heating and cooling to maintain space setpoint by conditioning outside air instead of recirculated air.