

GEN II GENERAL SEQUENCE OF OPERATION

When the *GEN II* controllers are powered up, the total number of addressed thermostats (ModStat or MODS2) are determined and verified on the display. This confirms the controller is communicating with all thermostats in the system. If there are no active heat or cool calls detected, the supply dampers will modulate to 50% open (ModStat) or full open (MODS2) for ventilation mode. The system blower operation can be configured for constant ON or intermittent Auto. The controllers are shipped from the factory for Auto fan.

The System 2000 *GEN II* systems can be field configured for adjustable time based opposite call changeover, vote based majority changeover, or priority vote changeover by thermostat assignment. The *GEN II* controllers are shipped from the factory for 10-minute opposing call changeover. The *GEN II* controllers "poll" the thermostats once per minute to determine the thermostat demand status for heat and cool. The heat and cool changeover functions will operate by the type of changeover selected on the controller. When the *GEN II* controllers change modes, a 3-minute purge cycle is initiated before the changeover is completed.

On active heat or cool calls, the non-calling zones will modulate to the close position, or close 100% depending on the thermostat being used. When the last calling zone is satisfied in either heat or cool mode, the *GEN II* controllers will terminate the HVAC outputs after the next "poll"; and the blower output will be de-energized (unless controller is configured for constant fan) for a 3-minute purge cycle. During the purge cycle no heat or cool calls are recognized.

When the system is in the heating mode and calls for cooling are received, an opposing call timer strategy operates. This timer is adjustable from 10 – 30 minutes. The factory default is 10 minutes. At the end of the selected time period, if the opposing call is 3 degrees away from set point, heating is turned off. After a 4-minute purge mode, Cooling is turned on until the cool call is satisfied. If necessary, *GEN II* will return to the heating mode. If all calls have been satisfied, dampers will modulate to the 50% open position for ventilation. If the opposing zone strategy is not desired, this feature may be disabled.

This mode may be enhanced by adding Priority votes to each thermostat in the system, thereby weighting certain zones more than others. This Priority mode allows you to select 0, 1, or 2 additional votes for a thermostat that has unusual loads, like a conference room.