



**INFORMATION SHEET  
CONTROLLER OPERATIONS  
STACKING/OVERLAPPING/FLOW ERROR FUNCTIONS**

**Assume a program like this:**

Program A start time 3:00 a.m. stations 1 (30 minutes) and 2 (40 minutes)  
Program B start time 3:15 a.m. stations 3 (50 min) and 4 (60 min)

**Stacking (All controllers)**

When multiple programs try to run at the same time the controller will run the Program that started first till the end. It will then start the next program, and so on. Programs run one at a time.

So using the above programming: Program A starts at 3:00 a.m. station 1 turns on. At 3:15 a.m. Program B does NOT turn on because Program A is running. At 3:30 a.m. station 2 turns on and station 1 turns off. At 4:10 a.m. when station 2 finishes Program B will start, station 3 turns on. At 5:00 a.m. station 3 turns off and station 4 turns on. Then station 4 turns off at 6:00 a.m.

**Overlap (Ultimo Only)**

Overlap allows multiple programs to run at the same time. You can set from 2 to 4 programs to run at the same time. Note: Overlap is only available on the Ultimo.

If we use the above programming Program A starts at 3:00 a.m. station 1 turns on, at 3:15 a.m. Program B starts station 3 turns on. At 3:30 a.m. station 2 turns on and station 1 turns off. At 4:05 a.m. station 3 turns off and station 4 turns on. At 4:10 a.m. station 2 turns off program A is complete. At 5:05 a.m. station 4 turns off program B is complete.

**Flow Alarms (Ultimo Only)**

The controller can determine the nominal flow of each station. The user can set a percentage of deviation that the controller uses to determine if there is a flow alarm. (High and Low are set independently). If the flow is above the nominal flow plus the high alarm it will turn off the valve and continue with the next station in the program. If the flow is less than the nominal minus the low alarm the controller will display an alarm message but continue to irrigate.

When no stations are running the controller will monitor the flow if a flow above the Main Break level is detected an alarm is displayed.

Note: if the user has set Master Valve 4 as the alarm, the controller will energize Master Valve 4 during alarm conditions.