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1.0 Introduction

The Zone Master offers unit lead/lag, rotation and a teamwork control solution for Data Aire units.

The Zone Master consists of one Master Unit and up to fifteen (15) Slave Units. Unit #1 is always assigned as the Master Unit (U1). Units #2 through #16 are slave units. Zone Master control logic is configured in the Master unit.

The Zone Master units are connected together in a daisy chain topology using the dap4 pLAN communication port (see the dap4 Zone Master wiring connections on page 9).

Important Note: The Zone Master is optional and requires an Activation Code for each unit in the zone. Units in the same zone must have the same software version in the dap4 controller for the Zone Master function to operate properly. Units manufactured in different period or different job number may have different software version; if this is the case, then a dap4 software upgrade is required on these units before Zone Master can be activated. The dap4 software version can be found in dap4 controller menu “F- Information”.

The Zone Master provides selectable logic choices as listed below:

- Auto Lead/Lag Standby Rotation
- Secondary Operating Schedule for Economical Control
- Activate Standby Unit on Selectable Alarm
- Turn Unit Off Selectable Alarm
- Zone Inhibit Control Preventing Units from Conflicting Operations
- Standby Unit Activation on Temperature Control

1.1 Logic

1.1.1 Auto Lead/Lag Standby Rotation and Temperature Assist Logic – provides a means to automatically rotate the designation of STANDBY among a group of units that must be ON based on programmable schedule.

The user may assign a number of units to a zone where a number units must always be ON and others in STANDBY or OFF. ON units will have a PRIMARY designation on their status page at the Zone Master’s display screen.

ON units will have a ONbyZM (On by Zone Master) designation at status display.

STANDBY will have a STBbyZM (Standby by Zone Master) designation.

Units that are ONbyZM but do not display the PRIMARY designation, have been brought ON by the Zone Master because of a temperature requirement or an alarm.

OFF units will have a OFFbyZM (Off by Zone Master) designation.
The OFF mode setting will cause the blower and all cooling, heating, dehumidification and humidification functions to be held off regardless of the zone’s requirements. The main control display will display the following message: OFFbyZM

The message will also be displayed in the summary page of the master unit (such as – Status: OFFbyZM).

In the STDBY (standby) mode there are two scenarios:

1. The unit that has been selected to always run (ONbyZM – Primary as shown in the master unit display) will operate non-stop providing all cooling, heating, dehumidification and humidification functions required. The blower will run continuously for ventilation and provide airflow across the sensors for accurate temperature and humidity requirements even if no cooling, heating, dehumidification and humidification are required.

2. The standby units that are not required to always run will hold off the blower and all cooling, heating, dehumidification and humidification functions unless among the units which are ONbyZM the average return air temperature in the zone is more than the average setpoint plus average deadband plus 1.5°. If this occurs, one of the STBbyZM will change its status to ONbyZM. The blower of the standby unit will start and the standby unit will then be allowed to regulate cooling as if it was in the ON mode. Normal operation messages will be displayed whenever a standby unit has been reactivated for operation.

If the temperature and humidity condition at the standby unit are satisfied, it will return to inactive (STBbyZM) when the average zone temperature is maintained below the average setpoint plus the average deadband for 15 minutes (this is adjustable and has a range from 30 to 999 seconds).

If the temperature or humidity condition at the standby unit isn’t satisfied even though the zone’s average temperature is maintained below average setpoint plus deadband for 15 minutes (adjustable and the Finish Run to Stby setting programmed to ‘yes’), the unit will continue to run until its temperature and humidity is satisfied. Its status will be RUNtoSTB (run to standby; Otherwise, the standby units will go back to standby mode when the primary unit condition is satisfied.) Once its own temperature and humidity setpoint is reached, if the zone average temperature is below setpoint plus deadband, the zone master will turn the unit to standby and the status will be STBbyZM.

Example - With four units assigned to a Zone, two units must be always ON, one in standby and one unit always OFF, the settings are as follows:

<table>
<thead>
<tr>
<th>Zone Master</th>
<th>Zone ID: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units: 4</td>
<td>Online: 4</td>
</tr>
<tr>
<td>Finish Run-&gt; Stby: Yes</td>
<td></td>
</tr>
<tr>
<td>Primary Schedule Only</td>
<td></td>
</tr>
<tr>
<td>Number of Units On: 2</td>
<td></td>
</tr>
<tr>
<td>Fan Mode: Disable</td>
<td></td>
</tr>
</tbody>
</table>
Based on the above settings, the zone logic will automatically set unit #1 and unit #2 as ONbyZM (On by Zone Master). Unit #3 will be STBbyZM (Standby by Zone Master). Unit #4 will be OFF-byZM (Off by Zone Master).

Typical Screen (values for reference only):

Units that are set to OFF by the Zone Master do not rotate. Auto rotation start time can be set to OFF for no rotation or to any hour during the day for rotation. Rotation can be programmed to occur every 8, 12, 24 hours or day of the week.

Assume 24 hours rotation, on the status page of each unit the following will be displayed:

<table>
<thead>
<tr>
<th>Day</th>
<th>Unit Number 1</th>
<th>Unit Number 2</th>
<th>Unit Number 3</th>
<th>Unit Number 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>ONbyZM</td>
<td>ONbyZM</td>
<td>STBbyZM</td>
<td>Off</td>
</tr>
<tr>
<td>Day 2</td>
<td>STBbyZM</td>
<td>ONbyZM</td>
<td>ONbyZM</td>
<td>Off</td>
</tr>
<tr>
<td>Day 3</td>
<td>ONbyZM</td>
<td>STBbyZM</td>
<td>ONbyZM</td>
<td>Off</td>
</tr>
<tr>
<td>Day 4</td>
<td>ONbyZM</td>
<td>ONbyZM</td>
<td>STBbyZM</td>
<td>Off</td>
</tr>
<tr>
<td>Day 5</td>
<td>STBbyZM</td>
<td>ONbyZM</td>
<td>ONbyZM</td>
<td>Off</td>
</tr>
<tr>
<td>Day 6</td>
<td>ONbyZM</td>
<td>STBbyZM</td>
<td>ONbyZM</td>
<td>Off</td>
</tr>
<tr>
<td>Day 7</td>
<td>ONbyZM</td>
<td>ONbyZM</td>
<td>STBbyZM</td>
<td>Off</td>
</tr>
</tbody>
</table>

**Note:**
- If communication with the Zone Master is broken, all units will operate independently and for the first five (5) minutes, the message will displayed at on each unit’s display screen:
“Master (U1) has Gone Offline”

- If communication between a slave unit (for example Unit #3) and the Zone Master is broken, the Master will exclude Unit Number 3 from its calculation and report on its status loop:

  “Unit 3 is Offline”

  During this time, Unit Number 3 will operate independently on its own setpoints.

The auto Lead/Lag Standby Rotation Logic is enabled through the Zone Master (see Programming and Selection section).

One unit is designated the Master (U1). Each individual unit may be set to OFF or STDBY (Standby).

1.1.2 Standby Alarm Logic – Within a zone one or more units may be designated as STANDBY (STDBY) units which are only available when required by an alarm condition. The Zone Master is designed to detect alarm conditions and to activate standby units as necessary.

Note: Standby unit activation and deactivation are independent of other zones

The user may assign one or more alarms as “Standby Alarms” by selecting Y (yes) in Zone Master Alarms page (see Zone Master Set-Up). The Zone master temporarily activates standby units to supplement units that have experienced one or more Standby Alarms per the following rules:

- For each unit in a zone that experiences a Standby Alarm, a standby unit will activated (if available) in that zone

- Once activated, each activated standby unit remains ON until the Standby Alarm has gone away and for fifteen minutes (adjustable) thereafter.

1.1.3 Off Alarm Logic – Within each zone one or more units may be designated as Standby (STDBY) units which are only available when required by an alarm condition. The Zone Master is designed to detect alarm conditions and to activate standby units as necessary.

Note: - Standby unit activation and deactivation are independent of other zones.
- Off alarm and standby alarm selection can not be duplicated.

The user may assign one or more alarms as “OFF” by selecting Y (yes) in Zone Master Alarms page (see programming and selections section). The Zone master temporarily activates standby units to supplement units that have experienced one or more OFF alarms per the following rules:

- Whenever an ON unit is on by the Zone Master (OnbyZM) experiences an OFF Alarm, the Zone Master immediately reconfigures the unit to OFF (OffbyZM). If there are any standby units available in the affected zone, the Zone Master reconfigures the standby unit with the lowest identification (ID) number ON and changes its status to ONbyZM (on by Zone Master).

- Any reconfiguration accomplished by the Zone Master in response to Off Alarms continues
until the user manually changes the status setting through the Zone Master’s menus.

• The last ONbyZM unit in the zone will remain on even when an Off Alarm is detected.

1.1.4 Zone Inhibit Control Logic – Logic stops units within the same zone from engaging in counterproductive heating and cooling or humidification and dehumidification at the same time in the same zone. Reheat is not considered in the Inhibit Logic since it only accompanies dehumidification.

The logic in enabled by selecting YES for the Inhibit Control in the Zone Master (see programming and selections section).

The following rules apply:

• Cooling/Heating
  
  o The Inhibit Logic can only be influenced by units that are within 3°F of the average measured zone temperature. This prevents a unit with mis-calibrated sensor from causing an inhibit function. Units set to OFF mode are not included in the average.
  
  o If any unit within the zone is currently cooling or starts cooling, then all other units within the zone are inhibited or prevented from continuing or starting heating.

• Humidification/Dehumidification
  
  o The Inhibit Logic can only be influenced by units that are within 5% of the average measured zone humidity. This prevents a unit with mis-calibrated sensor from causing inhibit function. Units set to OFF mode are not included in the average.
  
  o If any unit within the zone is currently dehumidifying or starts dehumidifying, then all other units within the zone are inhibited or prevented from continuing or starting humidification.

**NOTE:** An “EXCLUDED” message will display on the Zone Master when a unit is excluded from the zone by temperature or humidity calibration.

1.2 Additional Zone Master Features:

• Sync Slaves TSP (synchronize the units’ temperature setpoint) – With the Zone Master enabled, under Menu B: Setpoints, users can synchronize the temperature setpoint and deadband of the Master unit to all its units in the zone by selecting YES at the Sync Slaves TSP selection. Individual units’ setpoint can be changed at its own controller.

• Sync Slaves Clock (synchronize the slave unit’s clock) – With Zone Master enabled, under Menu C: Clock/Scheduler, users can synchronize the clock of the Master to all its units in the zone by selecting YES at the Sync Slaves Clock.

• Primary vs. Secondary Schedule – Users have the option to operate the Zone Master under a secondary schedule. The user can select the number of units to run in the secondary schedule and when. The scheduler in the Zone Master will take over the Setback Schedule in Clock/Scheduler of Menu C.
2.0 Wiring and Addressing Units within a Zone

2.1 Wiring

*Important Note:* Do not connect Zone Master wiring until all the units’ address are configured. Connecting Zone Master wiring before configuring the units’ address will cause a network confusion and an irregular operation.

All communication wire must be at least 22 gauge twisted and shielded pair with a drain line. Up to 16 units may be connected in any order (daisy chained). Unit addresses must be assigned at start-up prior to wiring.

Each unit is connected through the unit’s control module pLAN connection (J11 - See dap4 Zone Master wiring connection drawing for wiring details).
Wiring diagram dap4 touch

Wiring diagram Mini-dap4 touch
2.2 Addressing units within a Zone

In pLAN network, both the dap4 controller and the display have separate addresses. "Display Address" is the address of the display and I/O Board Address is the address of the dap4 controller.

In a Zone Master network where all units are connected via pLAN, each unit and its display must have different addresses. Below is the recommendation addresses combination:

Table 1: Recommended Addresses in Zone Master control

<table>
<thead>
<tr>
<th></th>
<th>Unit 1</th>
<th>Unit 2</th>
<th>Unit 3</th>
<th>Unit 4</th>
<th>Unit 5</th>
<th>Unit 6</th>
<th>Unit 7</th>
<th>Unit 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>dap4 pLAN address</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Display Address</td>
<td>32</td>
<td>31</td>
<td>30</td>
<td>29</td>
<td>28</td>
<td>27</td>
<td>26</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Unit 9</th>
<th>Unit 10</th>
<th>Unit 11</th>
<th>Unit 12</th>
<th>Unit 13</th>
<th>Unit 14</th>
<th>Unit 15</th>
<th>Unit 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>dap4 pLAN address</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Display Address</td>
<td>24</td>
<td>23</td>
<td>22</td>
<td>21</td>
<td>20</td>
<td>19</td>
<td>18</td>
<td>17</td>
</tr>
</tbody>
</table>

2.3 Changing the address of the dap4 controller:

Since all units will be shipped as Unit #1, a change of Controller Addresses needs to be done in order to establish a Zone Master communication.

Follow this procedure to set pLAN address to each dap4 controller in the zone:

- Press button A for 5 seconds by using a small screw driver or a small pin. The pLAN address will start flashing.
- Press repeatedly or hold the button until reaching the required address (2, 3, 4…16).

**Note:** You can set up dap4 address from 1 - 16. Address 17 to 32 are reserved for display modules. Follow the table on previous page to set the display module address.

- Wait until the address starts flashing rapidly. In this stage the address has been saved but it is not yet active for the application program. Power down the controller.
- Power up the controller again. The address is now set to the dap4

Figure 1: Address pin on dap4 controller
2.3.1 Changing dap4 Controller Address Using dap4 touch Display

Dap4 controller address can be changed using dap4touch display Emulation mode once zone master function is enable. Follow the steps below to change controller address.

Important Notes: After changing the dap4 controller address, make sure the dap4touch address and its Target address are changed accordingly otherwise dap4touch display will no longer communicate with dap4 controller. For instance, if dap4 controller address changes to 2, the dap4touch display target address must be changed to 2 as well and dap4touch display address should be changed to 31.

a. Press Tool icon to go LCD Emulation mode.

b. Once display is in LCD emulation mode, press Menu (Target) button to enter password

c. Advance to menu G- Network Config then go to second screen of the Network Config menu then use Up/Down/Enter to change controller address (pLAN address).
d. Press Enter to save new address and move cursor to the top of screen then press Return button to go back to main screen.

2.3.2 Changing the Address of the Mini dap4 Controller

Change the display module address to 00 by holding three buttons (UP+ENTER+DOWN) at the same time. A screen will appear showing addresses of the display terminal and I/O board. Use Enter button to go to the display module address (Terminal) then use UP or DOWN button to change address to 00 then press enter. The display will show “Display address changed”.

- Turn unit’s the power off, Press and hold ALARM and UP button at the same time while restarting the unit. After 20 seconds the controller will boot up and this message appears: “Self Checking … Please wait”. Let go the buttons and wait.
- The Mini-dap4 will show the current PLan address: 01- Press UP or DOWN button to change the Plan address to a desired address number (0-16) then press Enter to save and exit. The display may be blank at this point.
- Press and Hold UP+ENTER+ DOWN button once again, the display address will show 00. Press Enter to move the cursor to the display address then use UP/DOWN key to change display address back to 32.
- Press Enter button to go to I/O board address which is display “__”. Use UP button to change I/O board address to the address that is programmed in the steps above then press Enter.
- Display will show “Terminal config press ENTER to continue”, press Enter again, the screen will show the Trm addresses, change Trm1 from 00 to 32 then select “Ok?Yes” to save the change.
- The display will go blank for a second then start to display normal. Refer to Changing address of the dap4 display section if
2.4 Program dap4 touch Display Address for Zone Master Connection

The dap4touch display default address is 32 and the dap4 controller’s default address is 1. When the Zone Master option is enabled, secondary units’ display and their dap4 controller address in the zone must be changed accordingly for a proper zone master operation. The target address on dap4touch display needs to be altered as well to match the new dap4 controller address for graphics display to work properly.

2.4.1 Changing dap4 touch Display Address for Zone Master Configuration

IMPORTANT NOTICE:

a. The dap4touch display and dap4 controller address must aligned otherwise there will dis play errors.
b. If other menus are selected by mistake, press MENU or Exit to exit the programming mode then repeat the programming step to change the dap4touch address.

Press and hold right corner for 3 seconds

Select “Show system settings”. If LogOut is selected by mistake, enter “admin” for user name and password to exit then try again

Wait while this wheel icon displays

After System settings menu display, press and scroll up until Services menu displays
Select Services

Select Set Device Address

Select EDIT on top right corner

Touch on Saved address window, a keyboard appears

Use keyboard to enter new display address

Select Close to hide keyboard

Select Save

Select OK
2.4.2 Checking dap4 touch Display address with dap4 controller in Emulation mode for Zone Master Configuration

Press Tool icon to go LCD Emulation mode
Press Network icon to display I/O board (dap4 controller) address selection screen.

Select the address that matches the dap4 controller address then press OK.

Wait for couple seconds following screen appears, press Enter to advance to Ok? No. Use down key to select Yes then press Enter to return to main screen.
2.4.3 Changing dap4 touch Display Target Address

The dap4touch default Target Address is 1 because the dap4 controller’s default address is 1. Only when the Zone Master option is enabled does the target address need to be changed. Press the Target Address to show the keypad and enter a new Target address. There will be a short delay before the dap4 Address matches the new Target Address as illustrated below. NOTICE: These two addresses must always be the same or there is a communications error with the targeted dap4 controller.
2.4.4 Changing the address of the dap4 display:

To change the address of the dap4 display, press and hold three keys: UP, ENTER and DOWN for approximately 5 seconds, the following screens will show:

Press Enter key to move the cursor to “32”, then change the display address to a desired value, for example 31. Press Enter key again. The display will show “Display address changed” and will turn to blank. Press and hold three keys: UP, ENTER, DOWN for 5 seconds, the following will show:

Press Enter Key until you see the following screen:

Press Enter key to get to “Trm 1”, use UP or DOWN button to change it to a desired value (in this case, it is 31). Press Enter key again until you reach “OK? Yes/No”, select “Yes” and press Enter to save the change and exit. At this point, the controller and the display should be communicating.

After addressing all individual units in a zone to the recommended values in table 1, you can hook up the wiring via pLAN (see diagram on page 9).
3.0 Accessing the Zone Master Configuration

Only units where the Zone Master is being field added require the following configuring steps.

Units with factory installed Zone Master do not require the following steps.

**WARNING: Zone Master Activation Code**

Units that are being retrofitted with Zone Master (field installed) require an activation code. Prior to configuring the Zone Master contact Data Aire Parts Sales and get your Activation Code for every unit in the zone. This will require the Controller ID located in the Information Menu (Menu F).

To enable the Zone Master mode, enter the Service or Factory Password.

Press the Menu button. The following screen will be displayed:

![Menu Screen](image)

Press the Enter key. The cursor will “flash” on the first 0. Enter a value by pressing either the Up or Down keys. Once a value has been entered, press the Enter key to advance to the next input (0). The cursor will flash on the input. Enter a value by pressing the Up or Down keys. Continue until all four inputs have the password entered (the service password is 0000, the factory password is 0002).

Press the Enter key.

The display will show the Main Menu

With the Factory Password or Service Password entered, press and hold the MENU key for ten (10) seconds. The Zone Master Activation page will be displayed.

![Activation Screen](image)

Enter the Activation Code password. The following will be displayed on the screen.
Select “Yes” to enable Zone Master. Press the ESC key to exit. Menu M: Set Zone Master will be available in the menu loop (if not displayed scroll through the menus until Menu M is hi-lighted).

Press the ENTER key to program the Zone Master.

**Note:** Every units within a zone needs to be activated to the Zone Master in order to use the Zone Master Logic.

For all slave units (units 2, 3, ….16), after they have been enabled and connected via pLAN with unit 1 (master), they will act as a member of the zone unless the user chooses otherwise. To disable a unit from the Zone Master go to Menu J: Factory Settings of slave unit.

The following screen will be displayed:

At the “Zone Master Control” input, select YES for the unit to be in the zone. Select NO to not be in the zone.
4.0 Programming the Zone Master

Only the Zone Master unit (Unit #1) requires programming. The Slave units will automatically be controlled by the Master unit.

Scroll through the Main Menu to Menu M (Set Zone Master). Press the Enter key.

The following will be displayed (entries are for reference only):

**Zone ID** – Press the Enter key. The cursor will flash by the current entry. To change the Zone ID, press the Up or Down key to change the ID number.

Once the selection has been made, press the Enter key to advance to the next entry (**Units**).

**Units** (number of units in the zone) – The cursor will flash by the current entry. To change the value, press the Up or Down key. Up to 16 units (including the Master) may be assigned to the zone. This number must be entered or Zone Master does not include slave units.

Once the selection has been made, press the Enter key to advance to the next entry (**Pri/Sec Schedules**).

**Note:** **Online** is a display only showing the total units connected to the zone and cannot be changed. It shows how many units are connected to the Zone Master via the pLan connection. The master unit will automatically detect the online slave units. Finish Run→Stdby. If “yes” is selected, a unit must finish satisfying its condition before going into standby mode. If “no” is selected, standby unit will go to standby mode immediately when the rotation schedule due.

**Pri/Sec Schedule** (Primary/Secondary Schedules) – Users have the option to select Primary or Primary/Secondary Schedules. With the cursor flashing on the first letter on the message line, press the Up or Down keys to change from Pri/Sec Schedule to Primary Schedule Only. Depending on the selection made, the screen entry will change.

If Primary is selected, the displayed screen will be (entries are for reference only):
Number Units on: Number of units that are assigned primary status to be On (Primary Schedule)
Number Units on Sec: Number of units that are assigned secondary status to be On (Secondary Schedule)

If primary and secondary schedule are selected, the displayed screen will be (entries are for reference only):

Number Units ON: The total number of units within a zone that must stay on at all times. This is number is always less than or equal to the number of Units Online

*This value is dependent on number of units in Zone (1 to 16)

**Fan Mode** (optional zone control fan mode) – Choices are Disabled, Unity Cl, C. Airflow (constant airflow), Max Rack or Avg Rack. Standard factory setting is “Disabled”. Only units with special airflow measuring device or Unity Cooling (Unity Cl) options can use Constant Airflow or Unity Cooling selections. Units with optional 32-Rack sensor can select Max Rack or Avg Rack option, see Rack Sense-32 user manual for details. In modes C. airflow or Unity Cl, the Zone Master will control all of the fans in the zone to speed up or slow down to maintain a constant air airflow or an airflow set by BMS or server.

To view the next screen, with the cursor flashing in the title block, Press the Down key. The following will be displayed (entries are for reference only):

**Temperature Assist** – Press the Enter key. The cursor will flash by the current entry. To change the entry, press the Up or Down key. There are two choices, Yes or No. If set to Yes, the Zone Master will be enabled to ask a standby unit to come on when the average temperature is higher than the cooling setpoint plus deadband plus 1.5°F.

Once a selection has been made, press the Enter key to advance to the next entry (Standby On Delay).

**Standby On Delay** – Press the Up or Down key to change the setting. The range is 30 to 999 seconds. The factory setting is 30 seconds. The time entered is the time delay before a standby unit will come on when it is requested by the Zone Master.
Once a selection has been made, press the Enter key to advance to the next entry (Standby Off Delay).

**Standby Off Delay** – Press the Up or Down key to change the setting. The range is 30 to 999 seconds. The factory setting is 900 seconds. The time entered is the time delay before a running standby unit (ONbyZM) will return to standby mode.

Once a selection has been made, press the Enter key to advance to the next entry (Enable Inhibit).

**Enable Inhibit** – There are two choices, Yes or No. If set to Yes, the Zone Master will prevent conflict of units within a zone (i.e. If there is a unit calling for cooling then heating will be inhibited on any other units in the zone. If there is a unit calling for dehumidification then humidification will be inhibited on any other units in the zone).

Once a selection has been made, press the Enter key to advance to the next entry (Rotation).

**Rotation** – Units may set for rotation within a zone. Available selections are None, Every 8 Hrs, Every 12 Hrs, Every 16 Hrs, or Day & Time.

If None is selected, the Force Rotation message will not be displayed. The Force Rotation function when Yes is selected allows the Zone Master to rotate the standby unit the Enter key is manually pressed.

If Day & Time is selected, an additional line for the day time will be displayed. Press the Enter key once the Day & Time selection has been made. The cursor will move to the Force Rotation line. A day and time will appear. Continue to press the Enter key until it is flashing at the day and time entry.

Rotation may set for individual day (Sunday through Saturday) or for Every Day. The time can be set for any time. The time is indicated in AM or PM (not a 24 hours clock).

To change the rotation from Every Day to an individual day or from an individual day to everyday, move the cursor by pressing the Enter key until it flashes over the day entry. Press the Up or Down keys to scroll through the selections and to the desired day.

To change the time, press the Enter key. The cursor will flash at time entry line. Press the Up or Down keys until the desired time is displayed (hours only – minutes are available). Press the Enter key once the selection has been made.

If rotation is set to None:
Lead unit can be selected in both primary and secondary schedule.

4.1 Programming Units with Primary Schedule Only

See Section 1.1.1, Auto lead/lag Standby Rotation Logic for details on unit rotation.

Once the choice of Primary Schedule has been selected, the first screen in the Set Zone Master Menu will display as follows (entries are for reference only):

Move the cursor by pressing the Enter key. Change the values by pressing the Up or Down keys.

With the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

Move the cursor by pressing the Enter key. Change the values by pressing the Up or Down keys.

With the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

The unit may be set to either Stdby (Standby or Off). Press the Enter key to move the cursor from unit to unit. Press the Up or Down key to change from Stdby to Off.
Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

The alarm may be set to either yes or no. Press the Enter key to move the cursor from one alarm to the next. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

The alarm may be set to either yes or no. Press the Enter key to move the cursor from one alarm to the next. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

The alarm may be set to either yes or no. Press the Enter key to move the cursor from one alarm to the next. Press the Up or Down key to change from Y (yes) to N (no).
The alarm may be set to either yes or no. Press the Enter key to move the cursor from one alarm to the next. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

The alarm may be set to either yes or no. Press the Enter key to move the cursor from one alarm to the next. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

Press ESC key to get back to main menu.

4.2 Programming Units with Primary/Secondary Schedule

See Section 1.1.1, Auto Lead/Lag Standby Rotation and Temperature Assist Logic for details on unit rotation.

Once the choice of Primary/Secondary Schedule has been selected, the first screen in the Set Zone Master Menu will display as follows (entries are for reference only):
Move the cursor by pressing the Enter key. Change the values by pressing the Up or Down keys.

With the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

**Zone Master Control**
- Zone ID: 1
- Units in Zone: 4  Units Online: 4
- Finish Run-> Stdby: Yes
- Pri/Sec Schedules: 
- Number Units On Primary: 2
- Number Units On Secondary: 1
- Fan Mode: Disabled

Move the cursor by pressing the Enter key. Change the values by pressing the Up or Down keys.

With the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

**Zone Master**
- Temperature Assist: Yes
- Standby On Delay: 30
- Standby Off Delay: 900s
- Enable Inhibit: Yes
- Rotation: Day & Time
  - Monday at: 4:00 AM
  - Force Rotation: No

The unit may be set to either Stdby (Standby or Off). Press the Enter key to move the cursor from unit to unit. Press the Up or Down key to change from Stdby to Off.

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

**Zone Master Schedule**
- Current Cfg: Secondary
- Override Active: No
- Override Time: 1 Hrs
NOTE: When zone master schedule is used, the unit scheduler is automatically disabled.

Press the Down to key. The following message will be displayed (entries are for reference only):

With the cursor in the title block press the Enter key. The cursor will flash on the day of the week. Press the Up or Down key to change the day (Sunday through Saturday are available). Once the day of the week has been selected, press the Enter key. The cursor will flash on the “Copy to:” selection.

The “Copy to:” function allows the user to copy settings from other days without going through the settings routine. By pressing the Enter key, position the cursor on the Day. Press the Up or Down keys to scroll through the days of the week. Select the day that has been programmed and is to be copied. Press the Enter key. The cursor will flash on the “Copy to:”. Scroll through the days using the Up or Down keys. Select the day to copy. Press the Enter key. The cursor will by the NO message. Press the Up or Down key to change to Yes. Press the Enter key. The display will have a SUCCESSFUL COPY message (which is quickly removed).

The cursor will return to the title block. Repeat the same step for each day to be copied or select ALL.

Press the Enter key. The cursor will flash on the “No or Yes” setting. Pressing the Up or Down key will change from YES to NO or NO to YES. Leave in the NO setting until selections have been made.

Press the Enter key. The cursor will flash on the first time setting. All time is on a 24 hour clock (i.e. 6:00 PM = 18:00). The start time (line # 1) is selected by pressing the Up or Down key.

Press the Enter key to change the hour. Press the Up or Down key to the desired hour. Once the selection has been made, press the Enter key.

The cursor will flash on the minutes. Press the Up or Down key to the desired minutes. Once the selection has been made, press the Enter key.

The cursor will be positioned on the setting input. There are two settings: PRIMARY or SECONDARY. Press the Up or Down keys to change the setting. Once the selection has been made, press the Enter key.

The cursor will flash at the second time setting. Repeat the same steps until all inputs have the desired selections.

Press the Enter key until the cursor is flashing in the title block. With the cursor flashing in the title block, press the Enter key. The following message will be displayed:
Press the Enter key. The cursor will flash on first input (month). Press the Up or Down key to scroll through the two digit month designation. Select the month (1-12).

Press the Enter key. The cursor will flash on the next input (day). Press the Up or Down key to scroll through the day of the month designation. Select the day (1-31).

The entered month and day are the START DATE of the holiday.

Press the Enter key. The cursor will flash on the next input (month). Press the Up or Down key to scroll through the two digit month designation. Select the month (1-12).

Press the Enter key. The cursor will flash on the next input (day). Press the Up or Down key to scroll through the day of the month designation. Select the day (1-31).

The entered month and day are the STOP DATE of the holiday.

Press the Enter key. The cursor will flash on the SETTING input. Press the Up or Down keys to scroll through the choices – there are two: PRIMARY and SECONDARY.

Note: To clear an entry line, press the Enter key until it is over the start month input. Press the Up or Down key until - - appears. Press the Enter key. All inputs for the line will be removed.

With the cursor in the title block,

Press the Up or Down key. The following screen will be displayed:

Press the Enter key. The cursor will flash on first input (month). Press the Up or Down key to scroll through the two digit month designation. Select the month (1-12).

Press the Enter key. The cursor will flash on the next input (day). Press the Up or Down key to scroll through the day of the month designation. Select the day (1-31).
The entered month and day are the **START DATE** of the special day.

Press the Enter key. The cursor will flash on the SETTING input. Press the Up or Down keys to scroll through the choices – there are two: PRIMARY and SECONDARY.

Press ESC key to go back to the main menu. Press ESC key one more time to go back to normal operation mode.

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

```
Zone Alarm Function 1
Stby  Off
CW Sensor  Y  N
DA Sensor  Y  N
Fan Overload  Y  N
Smoke Detect  Y  N
Condensation  N  N
Fire Status  N  Y
```

The alarm may be set to either yes or no. Press the Enter key to move the cursor from one alarm to the next. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

```
Zone Alarm Function 2
Stby  Off
C1 hi Press  Y  N
C1 lo Press  Y  N
C2 hi Press  Y  N
C2 lo Press  Y  N
Short Cycle  N  N
Maint Timer  N  Y
```

The alarm may be set to either yes or no. Press the Enter key to move the cursor from one alarm to the next. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

```
Zone Alarm Function 3
Stby  Off
Hi Humidity  Y  N
Low Humidity  Y  N
Humidifier  Y  N
DA Low Temp  Y  N
RA Low Temp  N  N
RA Hi Temp  Y  N
```

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The alarm may be set to either yes or no. Press the Enter key to move the cursor from one alarm to the next. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

The alarm may be set to either yes or off. Press the Enter key to move the cursor from unit to unit. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):

The alarm may be set to either yes or off. Press the Enter key to move the cursor from unit to unit. Press the Up or Down key to change from Y (yes) to N (no).

Once selections have been made and with the cursor flashing in the title block, press the Down key to see the next screen. The following message will be displayed (entries are for reference only):
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