

Version

2.7

November 1, 2015

MULTIPLE UNIT STYLE/TYPE

Standard Program



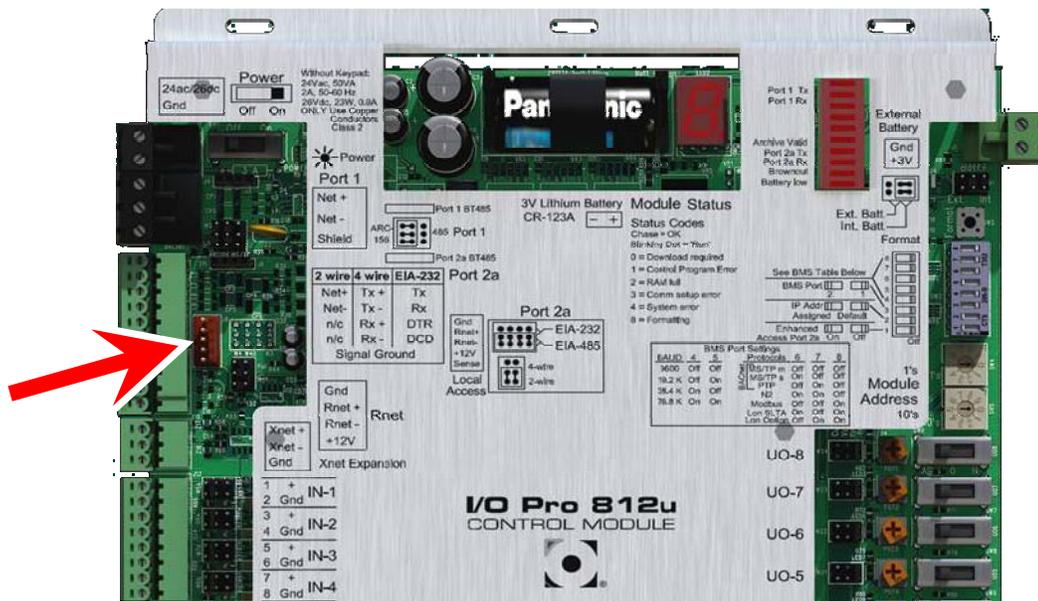
Controller Quick

Start-up Instructions

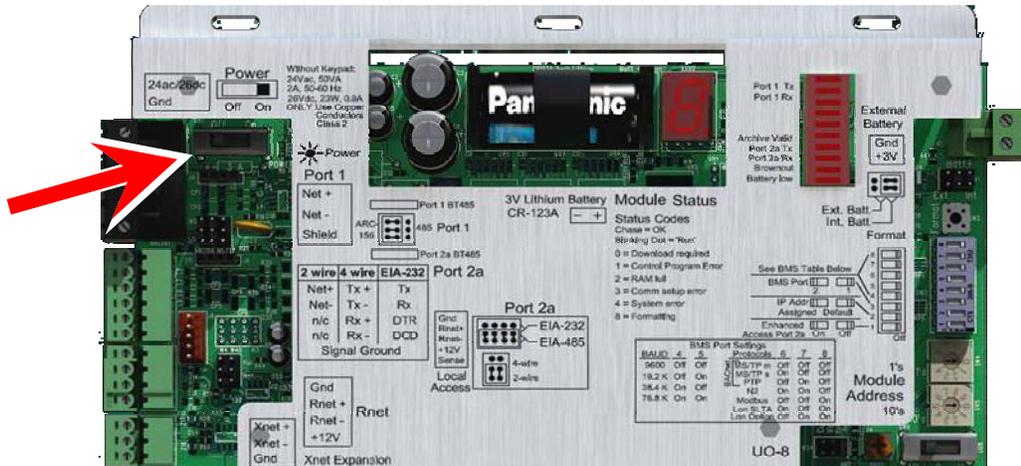
Introduction

These quick start instructions will guide you through the necessary procedures to start-up the unit equipped with an **ALC Controller**. Prior to turning on the **I/O Pro 812u** controller, all required connections must be made to the input and output terminal blocks (located on the right side of controller). Refer to the wiring diagram included with the unit for the connections specific to this unit.

After all the wiring connections for the unit have been made and power to the unit has been turned on, connect the **BACview** display to the controller at the **Rnet** terminal on the middle left-hand side of the controller.

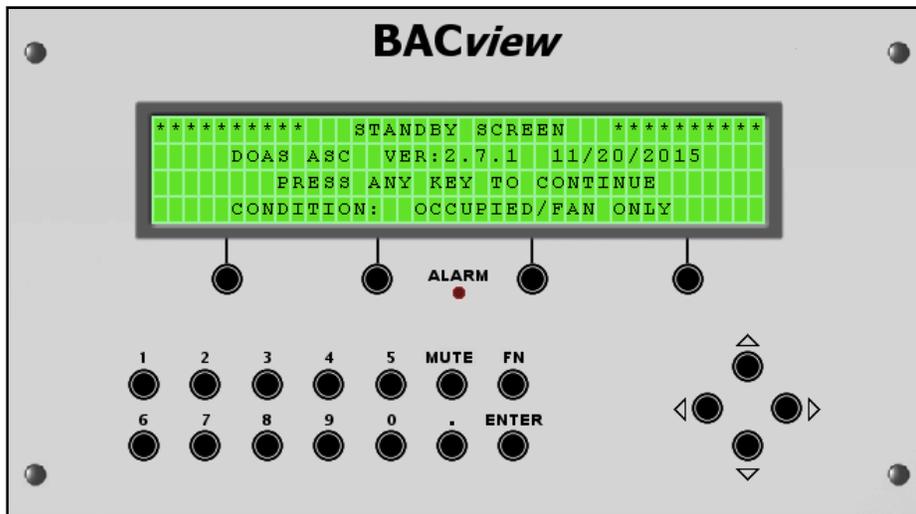


The **ALC** controller can now be turned on by the switch on the upper left-hand side of the controller.



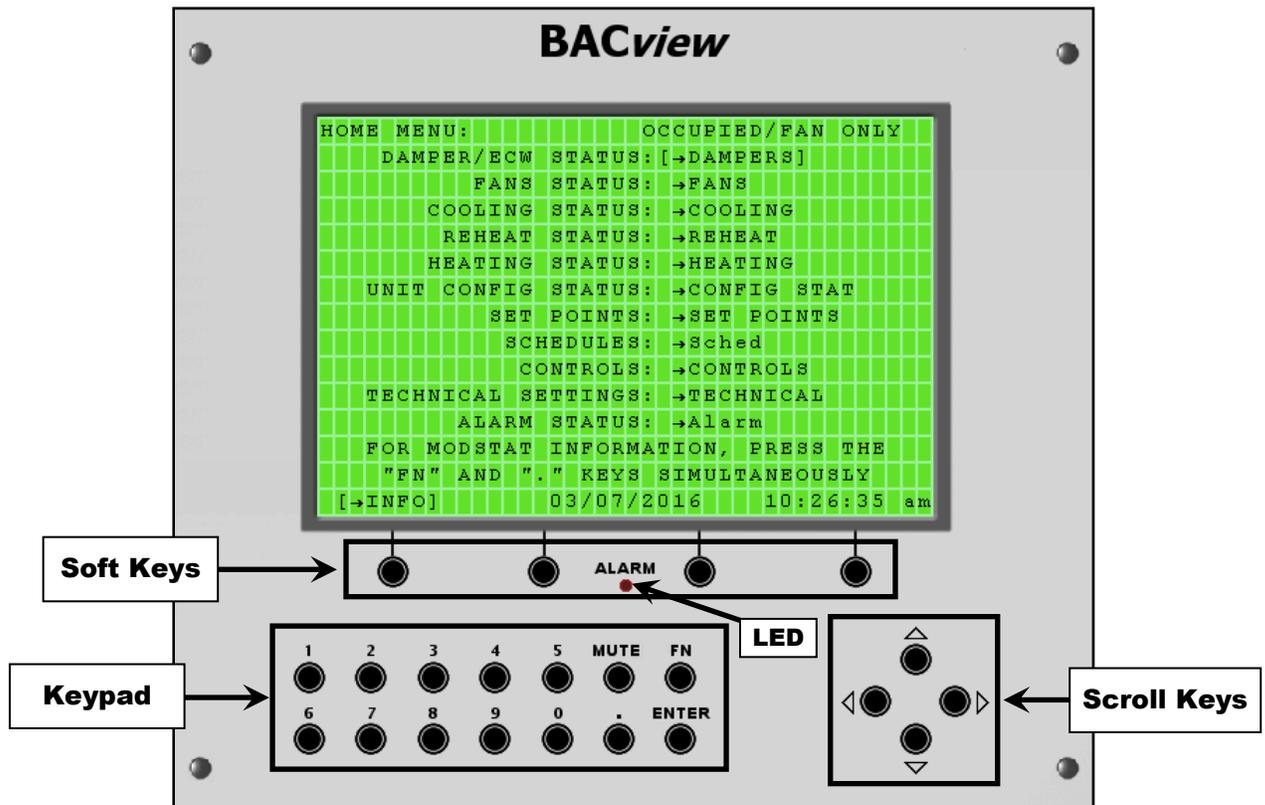
At this point, the **ALC** controller will go through a built-in start-up diagnostic, which can take approximately **10** seconds to complete. After this, the sensors and controls will become fully available and the **BACview** display will show the “**Standby**” screen.

Standby Screen



This screen shows the program name, version number, date of revision issue, and the current operational condition/mode of the unit (i.e. “**Unoccupied/Disabled**” is the initial condition). Press any button on the keypad to go to the “**Home**” screen.

Home Screen



The “**Home**” screen displays the current date and time, the operational condition/mode of the unit, and menu items (some of which are configuration or condition specific).

The menu items can be accessed by scrolling down to the desired menu entry and pressing the “**ENTER**” button. Or they can be accessed directly from any screen by the “**FN**” + “**#**” buttons simultaneously (where “**#**” is one of the numbered buttons on the keypad). The relationship of the keypad numbers to the menu items is as follows:

FN + 1	Damper/ECW Status	FN + 6	Heating Status
FN + 2	Fans Status	FN + 7	Set Points
FN + 3	Cooling Status	FN + 8	Controls
FN + 4	Reheat Status	FN + 9	Technical Settings
FN + 5	Heat Pump Status	FN + 0	Alarm Status

Every screen includes a “[→**HOME**]”, “[→**PREV**]”, or some other link to allow for navigating to a different screen. These links can be operated by pressing one of the four soft keys located below the link on the screen.

On the “**Home**” screen, press the soft key below “[→**INFO**]” to go to the “**Unit Info**” screen (refer to the **IOM** for more information).

Refreshing the Screen

Many items on the screens will automatically update as their values change. However, if a change occurs which causes the screen layout to change (i.e. show or hide a line) then it will be necessary to manually refresh the screen in order to see the change.

An example of this is the “***** [→ALARM] IS ACTIVE *****” notification and the “RESET ALARMS: [NO]” option (see “Alarms and Safeties” later in this document), which will appear toward the top of the “Home” screen. When the alarm is reset these two notifications are supposed to disappear. But, since the **BACview** does not have built-in screen refreshing, it must be performed manually.

To do this, change to a different screen by pressing the soft key below “[→HOME]”, “[→PREV]”, “[→INFO]” (if on the “Home” screen), or any other link. Then go back to the screen and the change will have taken affect.

Start-up Settings, Controls, and Options

Procedures for setting up the date and time, schedule of occupancy, modifying parameters of operation, and selecting options.

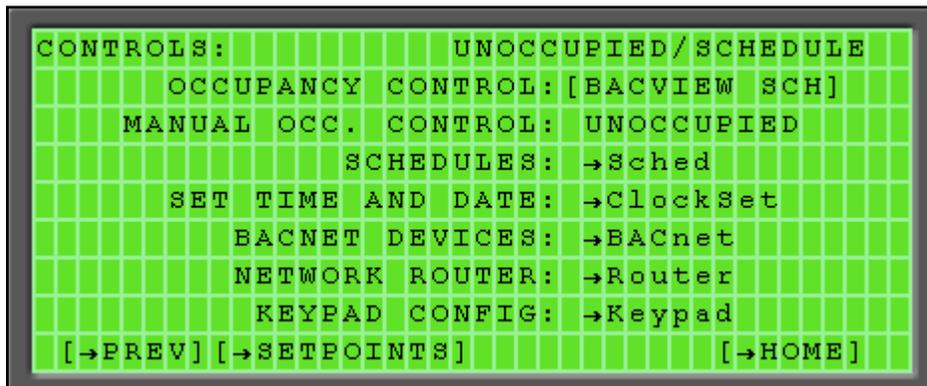
From the “**Home**” screen, most of the status, control, and configuration screens can be directly accessed. Press the **Up** or **Down** arrows of the navigation keys on the lower right of the pad to scroll through the menu of screens.

The controller will be pre-configured from the factory with the necessary options for the unit to operate properly. However, some items may need to be modified in the field as required. This can be achieved in the field through the **BACview** display.

Controls Screen

On the “**Home**” screen, scroll down to the “[→**CONTROLS**]” menu option and press the “**ENTER**” button to go to this screen (or press the “**FN**” + “**8**” buttons simultaneously).

Access to the “**Controls**” screen will require the controls password to be entered. Contact the Addison Technical Service Representative for the password.



The “**Controls**” screen shows the operational condition/mode of the unit and menu items related to control settings for the unit.

Occupancy Control

Occupancy control by the **BACview** is the default setting and used for stand-alone operation. Scroll down to “**Occupancy Control**” menu option and press the “**ENTER**” button to edit the parameter. The “**Occupancy Control**” parameter dictates where the control of the Occupied Mode of the unit originates, and has the following options:

1. **BACview Sch:** Select if the **BACview** is used for schedules.
2. **BAS Control:** Select if the **BAS** is used for schedules.
3. **24 / 7 Operation:** Select if unit will run in **24/7** Occupied Mode.
4. **S/S Switch:** Select if occupancy control is from a separate **ALC** binary input.
5. **CO2 Control:** Select if occupancy control is based upon **CO2** levels.
6. **Clock Ovr:** Select to override scheduled unoccupied condition and place unit in occupied mode for a set period of time (adjustable; **30** minutes default).
7. **Manual Ovr:** Select to manually force Occupied or Unoccupied Mode.

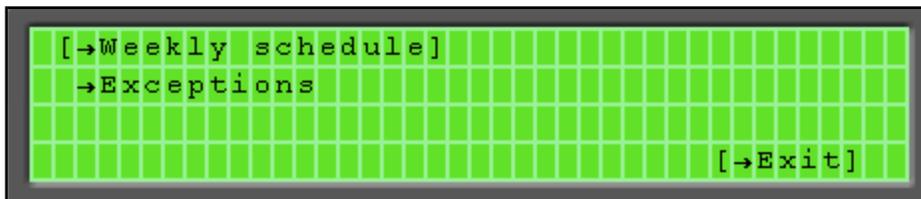
Manual Occ. Control

This control has no affect unless the “**Occupancy Control**” is set to “**Manual Ovr**”. Scroll down to “**Manual Occ. Control**” menu option and press the “**ENTER**” button to edit the parameter. It has the following options:

1. **Unoccupied:** Forces the unit into Unoccupied mode.
2. **Occupied:** Forces the unit into Occupied mode.

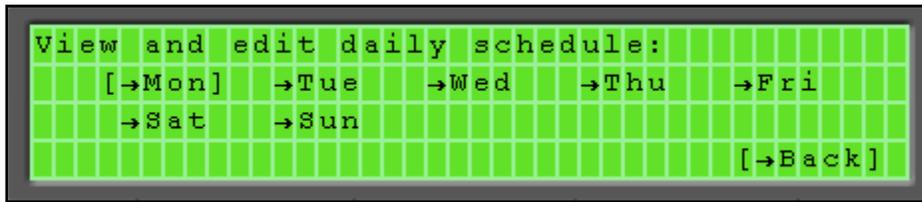
Schedules

The default schedule for Occupied Mode is Monday through Friday, 7am to 5pm. However, a different schedule may be required. To edit the Schedule, scroll down to the “[→**SCHED**]” menu option and press the “**ENTER**” button to go to the “**Schedules**” menu screen. Access to the “**Schedules**” screen may require the user password “**0000**” to be entered.

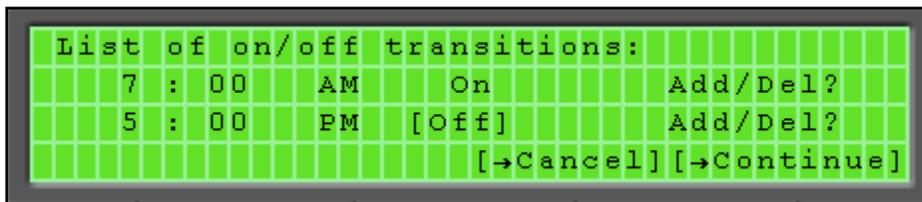


The options on this screen are “**Weekly Schedules**” and “**Exceptions**”. The “**Weekly Schedules**” option is used to set up the regular occupancy schedule which will repeat every week. The “**Exceptions**” option is used to set up overrides to the regular schedule such as holidays. For more information on the “**Exceptions**” option, refer to the **IOM** or contact the Addison Technical Service Representative.

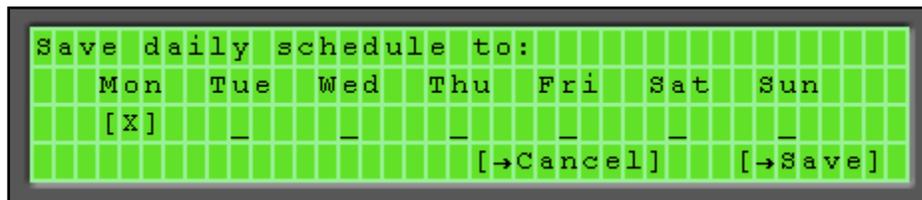
Select the “[→**Weekly schedule**]” option by pressing the “**ENTER**” button.



Select the “[→**Mon**]” option by pressing the “**ENTER**” button. Or press the soft key below “[→**Back**]” to return to the “**Schedules**” menu screen.



Select **Add/Del** and change it to **Add** in order to add a transition time. Edit the time (**hr:min**), **AM** or **PM**, and **On** or **Off**. Additional transition lines can be added, edited, or deleted based upon the requirements of the installation. Press the soft key below “[→**Continue**]” to go to the next screen. Or press the soft key below “[**CANCEL**]” to discard changes.

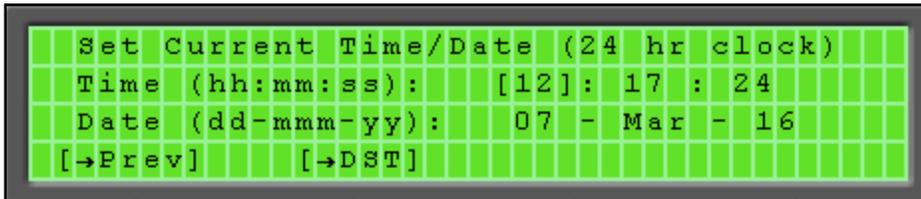


Scroll to each day the schedule will apply to and press “**ENTER**” to change the “_” to an “**X**”. Press the soft key below “[→**Save**]” to accept the changes. Or press the soft key below “[**CANCEL**]” to discard changes.

Press the soft key below “[→**Back**]” to return to the “**Schedules**” menu screen. Press the soft key below “[→**Exit**]” to return to the “**Controls**” screen.

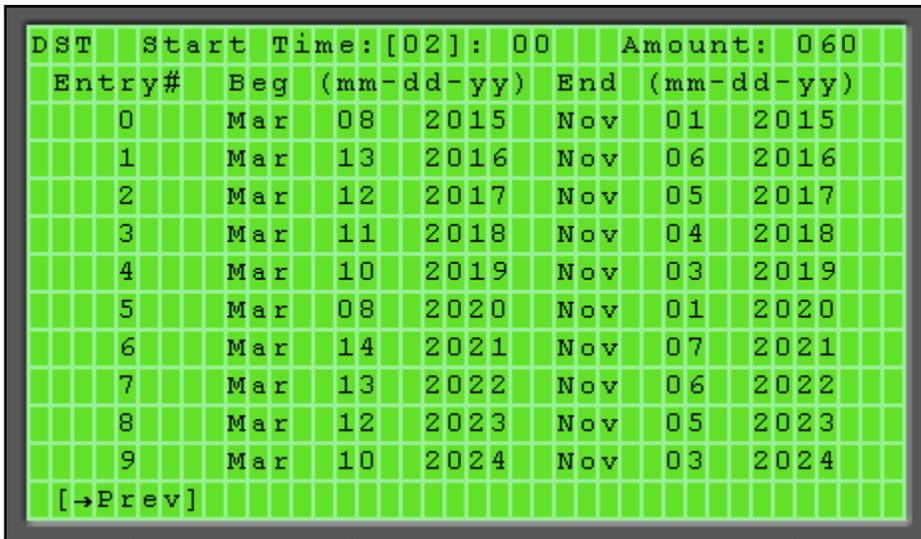
Set Time and Date

The time and date are set in the factory and are based on the Eastern Time Zone settings by default. This can be adjusted in the field for the location of the installation. Scroll down to the **“Set Time and Date: [→ClockSet]”** (or press the soft key below **“[→ClockSet]”** on the **“Schedules”** screen) to go to the **“Set Current Time/Date”** screen, where the time and date can be configured.



Scroll to the various **“Time”** or **“Date”** values and press the **“ENTER”** button to edit them. The cursor must be on the item being edited. Change the value by entering the new value from the keypad or pressing the **“[DECR]”** or **“[INCR]”** soft key buttons. Press the soft key below **“[OK]”** or the **“ENTER”** button to accept the new value. Or press the soft key below **“[CANCEL]”** to discard changes.

Press the soft key below **“[→DST]”** to go to the **“Daylight Savings Time”** screen, where the effective values for Daylight Savings Time can be configured.



Press the soft key below **“[→PREV]”** to return to the previous screen.

BACnet Device

For stand-alone applications, this item does not need to be modified. Scroll down to the “[→BACnet]” menu option and press “ENTER” to go to the “BACnet Device” edit screen.

```

BACnet Device Instance: [ 2402 ]
Base BACnet Device ID: 2400
Autogenerate Device ID? N
[→Prev]

```

The **BACnet** device instance and ID being utilized in the field may differ from the factory default. If this is the case, this screen can be used to modify the factory settings. Contact the Addison Technical Service Representative or refer to the **IOM** for more information.

Network Router

For stand-alone applications, this item does not need to be modified. Scroll down to the “[→Router]” menu option and press “ENTER” to go to the “BACnet Network” edit screen.

```

BACnet Network #      MAC Address
ARC156: [ 0 ]        2
MS/TP: 0              2
[→Prev]

```

The communication network being utilized in the field may differ from the factory default. If this is the case, this screen can be used to modify the factory settings. Contact the Addison Technical Service Representative or refer to the **IOM** for more information.

Keypad Config

Scroll down to the “[→Keypad]” menu option and press “ENTER” to go to the “Keypad Configuration” edit screen.

```

----- Keypad Configuration -----
Inactivity Timeout: [ 0 ] minutes
BACnet Write Priority: 0
[→Prev]

```

This screen allows for modifying the “**Inactivity Timeout**” (“0” = default, **10 min.**; maximum **255 min.**) which is the amount of keypad inactivity time after which the “**Standby**” screen displays and, if applicable, the backlight on the **BACview** device turns off. It also allows for modifying the “**BACnet Write Priority**” level that the **BACview** device uses to write **BACnet** commandable properties to the controller (“0” = default, Relinquish Default; “1” = highest priority; “16” = lowest priority).

Set Points Screen

From the “**Home**” screen, scroll down to the “[→**SETPOINTS**]” menu option and press the “**ENTER**” button to go to the “**Set Points**” edit screen. You can also press the “**FN**” + “**7**” buttons simultaneously on any screen or press the soft key below “[→**SETPOINTS**]” on the “**Controls**” menu screen. Access to the “**Set Points**” screen may require the user password “**0000**” to be entered.

SET POINTS:				OCCUPIED/FAN ONLY	
PARAMETER		SENSOR		SETPOINT	
EFDPT	STATIC PRESS	DPT		[0.020]	"H2O
SFDPT	STATIC PRESS	DPT		0.75	"H2O
----- OCCUPIED MODE -----					
ECW DEFR.	LOWER	WExAT		25	° F
COOLING		DXLAT		55	° F
COOLING		SAT		72	° F
DEHUMIDIFY		SARH		55	%RH
DEHUMIDIFY		DXLAT		50	° F
HEATING		ECAT		50	° F
HEATING		SAT		70	° F
----- SAFETIES -----					
COMPRESSOR	DISABLE	OAT		26	° F
CLG MODE	LOW LIMIT	ECAT		55	° F
DXLAT	UPPER FRZ	DXLAT		55	° F
DXLAT	LOWER FRZ	DXLAT		35	° F
DH MODE	LOW LIMIT	ECAT		60	° F
HTG MODE	HIGH LIMIT	OAT		60	° F
SAT	HEAT FAIL	SAT		50	° F
SAT	LOW LIMIT	SAT		40	° F
SAT	HIGH LIMIT	ELEC SAT		120	° F
[→PREV]	[→DEADBANDS]	[→RANGES]		[→HOME]	

(sample screen selections shown)

This screen shows the current operational condition/mode and the set points for the various sensors and operating modes of the unit based upon its configuration. These set points can be modified as necessary.

Scroll to the set point value to be changed and press the “**ENTER**” button to edit it. The cursor must be on the item being edited. Change the value by entering the new value from the keypad or pressing the “[**DECR**]” or “[**INCR**]” soft key buttons. Press the soft key below “[**OK**]” or the “**ENTER**” button to accept the new value. Press the soft key below “[**CANCEL**]” to discard changes.

Press the soft key below “[→**DEADBANDS**]” to go to the “**Dead Bands**” screen, where the set point dead bands can be configured. Refer to the **IOM** for more information.

Press the soft key below “[→**RANGES**]” to go to the “**SP Ranges**” information screen. Refer to the **IOM** for more information.

Optional Equipment and Operation

On the “**Technical Settings**” screen, scroll down to the “[→**Config**]” menu option and press “**ENTER**” to go to the “**Configure Unit**” menu screen. Access to the “**Tech Settings**” screen and all of the screens in the menu will require the admin password to be entered. Contact the Addison Technical Service Representative for the password.

```

CONFIGURE UNIT:      OCCUPIED/FAN ONLY
DO NOT CHANGE ANY SETTING IN
THESE MENUS UNLESS DIRECTED BY AN
AUTHORIZED ADDISON TECHNICIAN
UNIT CONFIG STATUS: [→CONFIG STAT]
SET UNIT EQUIPMENT:  →CONFIG EQ
SET UNIT SENSORS:    →CONFIG SENS
SET UNIT OPTIONS:    →CONFIG OPTS
=====
ENABLE UNIT OPERATION: YES
[→PREV]              [→ARCHIVE] [→HOME]

```

On the “**Configure Unit**” menu screen, scroll down to the “[→**Config Opts**]” menu option and press “**ENTER**” to go to the “**Config Options**” screen.

```

CONFIG OPTIONS:      OCCUPIED/FAN ONLY
CLG. ENABLED BY: [ECAT & SAT ]
CLG. CONTROLLED BY: DXLAT
DEHUMIDIFY USING:   SA-RH
HTG. ENABLED BY:    ECAT ONLY
MISC. OPTIONS A:    CFI,COS,SD
MISC. OPTIONS B:    NONE
NSB OPTIONS:        NONE
OPT. START OPTIONS: NONE
ZAT/SAT SET POINT RESET: [→RESET]
ALLOW COMPRESSOR DISABLE: YES
BOTH COMPS ON IN CLG MODE: NO
HEATING SUPPORTS REHEAT: NO
[→PREV] [→EQUIP] [→SENSORS] [→HOME]

```

This screen shows optional equipment and operational controls which can be added or modified in the field. Contact the Addison Technical Service Representative or refer to the **IOM** for more information. Some of the options are detailed here.

Miscellaneous Options

These are equipment options that can be added in the field if they were not originally purchased from the factory with the unit. The available options are:

Misc. Options A

1. **CFI** - Clogged Filter Indicator
2. **COS** - Condensate Overflow Switch
3. **SD** - Smoke Detector

Any combination of these can be chosen.

Misc. Options B

1. **EMR** - Energy Management Relay
2. **EMSD** - Emergency Shutdown
3. **S/S SW** - Start/Stop Switch

EMR and **EMSD** cannot be chosen together.

NSB Options

These options are for **Night Setback** operation of the unit. The available options are:

1. **Cooling Mode**
2. **Dehumidification Mode**
3. **Heating Mode**

Any combination of these can be chosen. This optional operation is included in every unit, however, a **ZAT** sensor must be used. For 100% Outdoor Air (**DOAS**) units, **NSB** operation will open the **OA Damper**. All other unit types will operate **NSB** in recirculation mode.

Opt. Start Options

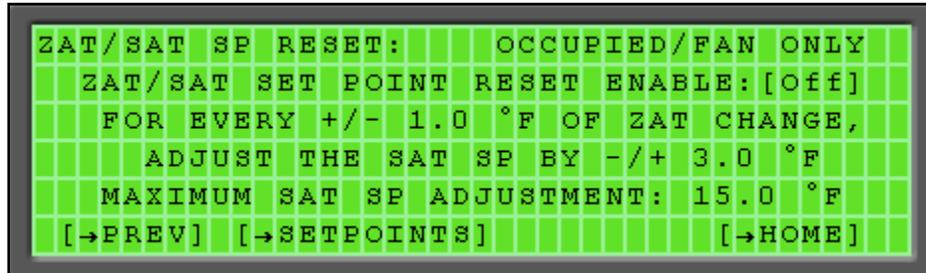
These options are for **Optimal Start** operation of the unit. The available options are:

1. **Morning Cool-down**
2. **Morning Warm-up**

Any combination of these can be chosen. This optional operation is included in every unit, however, a **ZAT** sensor must be used. For 100% Outdoor Air (**DOAS**) units, **Optimal Start** operation will open the **OA Damper**. All other unit types will operate **Optimal Start** in recirculation mode.

ZAT/SAT Set Point Reset

On the “**Config Options**” menu screen, scroll down to the “[→**Reset**]” menu option and press “**ENTER**” to go to the “**ZAT/SAT SP Reset**” screen. Access to this screen may require the user password “**0000**” to be entered.



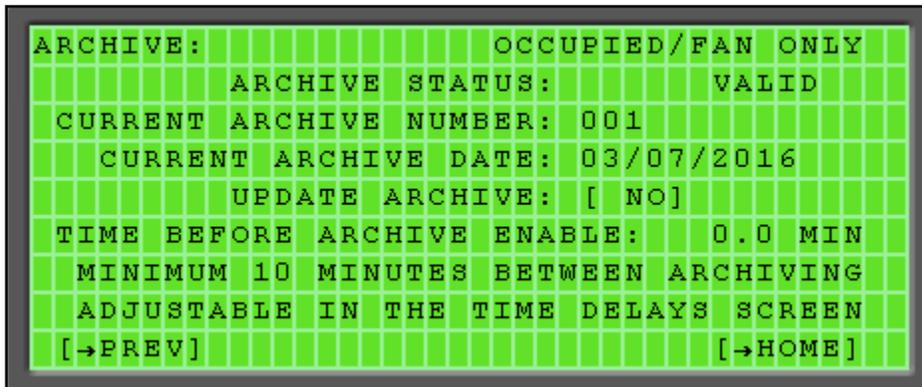
This screen shows the operational condition/mode of the unit, allows for enabling the **ZAT/SAT SP Reset**, and editing the **ZAT/SAT SP Reset** parameters.

When the reset is enabled, for every **1°F** (adjustable) increase or decrease of the **ZAT**, the **SAT** set point will decrease or increase by **3°F** (adjustable) up to a maximum of **15°F** (adjustable) change.

Scroll down to the item to be edited and press the “**ENTER**” button. Change the item by entering the new value from the keypad or by pressing the “[**DECR**]” or “[**INCR**]” soft key buttons. Press the soft key below “[**OK**]” or the “**ENTER**” button to accept the new value. Press the soft key below “[**CANCEL**]” to discard changes.

Archive Program

On the “**Technical Settings**” screen, scroll down to the “[→Archive]” menu option and press “**ENTER**” to go to the “**Archive**” screen. Access to the “**Tech Settings**” screen and all of the screens in the menu will require the admin password to be entered. Contact the Addison Technical Service Representative for the password.

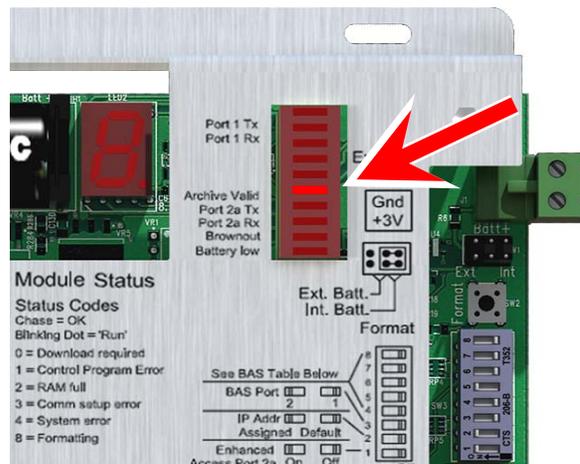


This screen shows the operational condition/mode of the unit, the archive status, the current archive number, the current archive date, and the time before archiving is available if an archive has just been performed.

The controller has the ability to store two program archives in memory. One slot is filled upon program installation (which usually occurs in the factory). The second can be filled by a field-initiated archive.

Scroll down to “**UPDATE ARCHIVE: [NO]**” and press the “**ENTER**” button to edit it. Change the value to “**[YES]**” by pressing the “**[DECR]**” or “**[INCR]**” soft key buttons. Press the soft key below “**[OK]**” or the “**ENTER**” button to initiate a field archive. Press the soft key below “**[CANCEL]**” to discard changes.

An archiving event should take less than **30** seconds to complete. The red “**Archive Valid**” LED bar (located on the top right corner of the controller) will turn off then light up when the archive event is complete.



Restore from Archive

The controller checks the memory configuration of the program during power up. If the program is identified as corrupt, the controller restores it from the last archive. In addition, if the battery fails to power the device during a power outage and controller memory is lost, the controller will restore the program from the last archive upon power up.

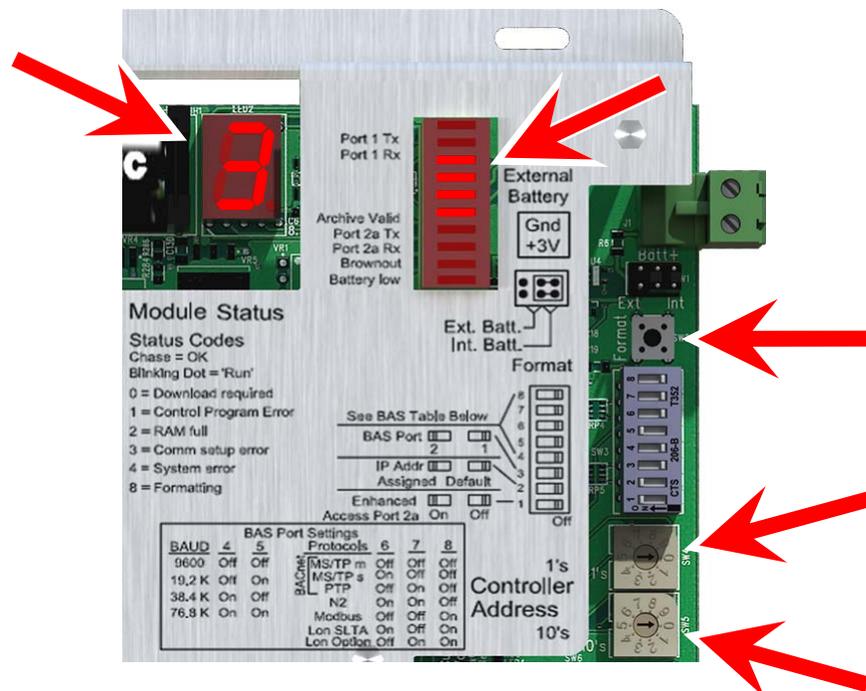
The factory or field archives can also be manually restored in the field.

To restore the Factory archive, follow these steps:

1. Power down the controller.
2. Turn the rotary address switches to 0, 0 (zero, zero).
3. Press the **Format** button and turn on power.
4. Four status LEDs should light. When “3” shows on the Module Status LED turn power off.
5. Set rotary address switches back and power on controller.
6. “**Archive Valid**” LED bar will light when complete.

To restore the Field archive, follow these steps:

1. Power down the controller.
2. Turn the rotary address switches to 0, 1 (zero, one).
3. Press the **Format** button and turn on power.
4. Four status LEDs should light. When “3” shows on the Module Status LED turn power off.
5. Set rotary address switches back and power on controller.
6. “**Archive Valid**” LED bar will light when complete.

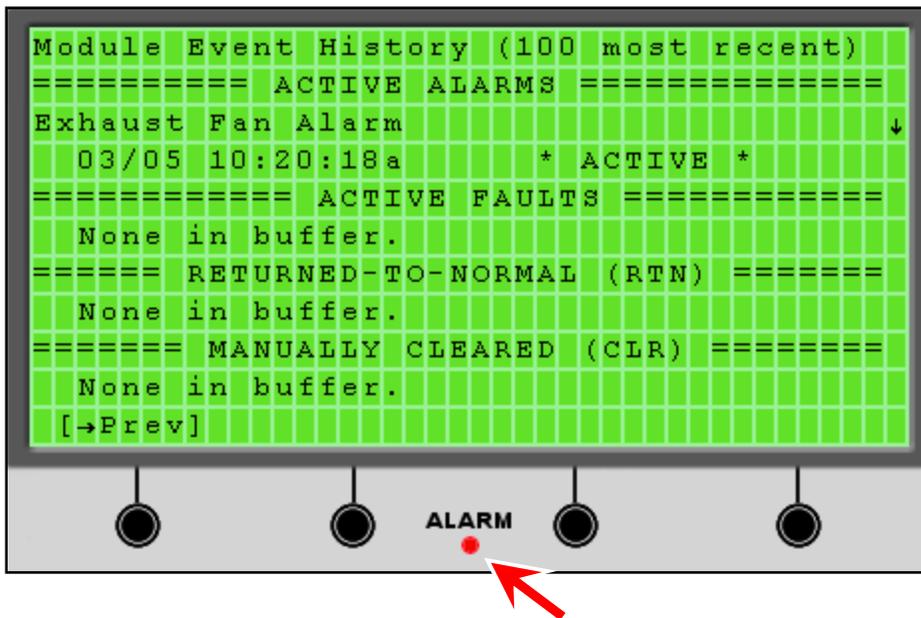


Alarms and Safeties

Alarms inform the end user that there is an operational problem with the unit. Some alarms will result in the unit shutting down, some will only shut down the affected equipment, and some are informational only. The 100 most recent alarms (active or cleared) can be viewed on the “**Alarm Status**” screen on the **BACview** display pad.

Alarm Status

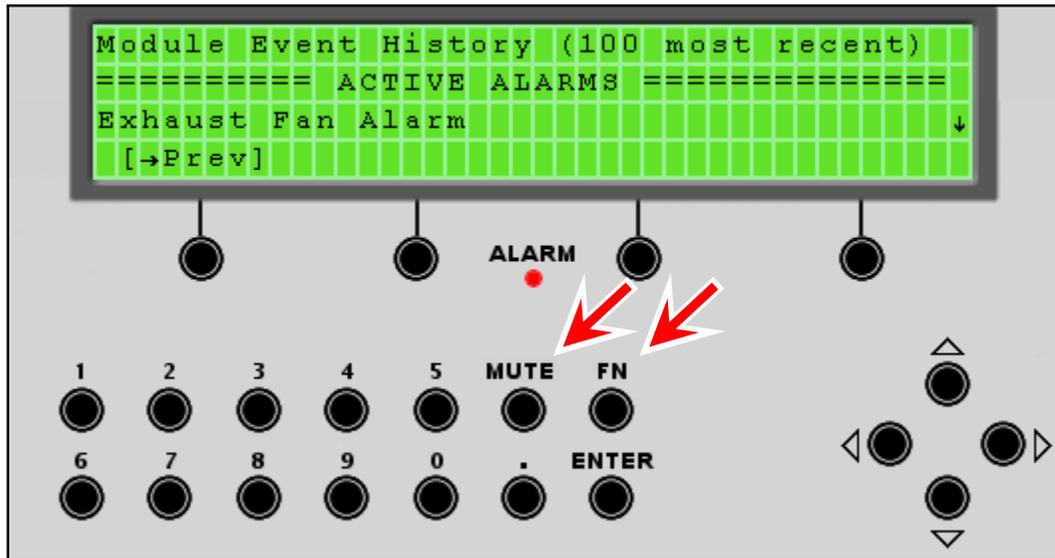
When an alarm is active, the red LED labeled “**Alarm**” below the screen will turn on. On the “**Home**” screen, scroll down to the “[→**ALARM**]” menu option and press the “**ENTER**” button to go to the “**Alarm Status**” screen (or press the “**FN**” + “**0**” buttons simultaneously). Alternately, the “***** [→**ALARM**] IS ACTIVE *****” notification appears toward the top of the “**Home**” screen if there is an active alarm. Press the “**ENTER**” button to go to the “**Alarm Status**” screen.



This screen will list **Active Alarms**, **Active Faults**, **Returned-to-Normal (RTN)** alarms, and **Manually Cleared (CLR)** alarms. Press the soft key below “[→**PREV**]” to return to the previous screen.

Clearing Alarms

When an alarm event occurs, an audible alarm will sound and the **BACview** display pad will log the event on the “**Alarm Status**” screen under “**Active Alarms**”. Most alarms are required to be acknowledged by pressing the “**MUTE**” button. This will end the audible alarm and switch to the “**Alarm Status**” screen. Scroll down for more information.

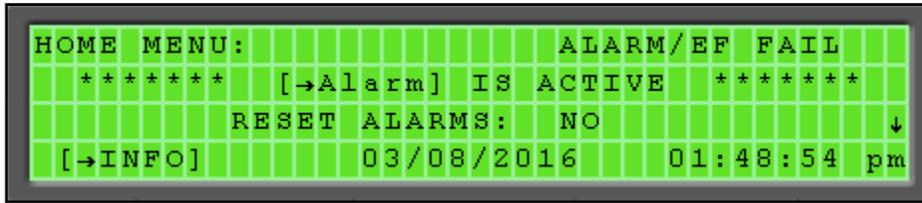


The alarm will remain active until it is cleared. If the alarm is an automatically re-settable alarm, it will be cleared as soon as the condition which initiated it is corrected. To clear an active alarm manually, press the “**FN**” + “**MUTE**” keys simultaneously.

If an alarm is automatically cleared, it will be removed from the “**Active Alarms**” section and moved to the “**Returned-to-Normal (RTN)**” section. If the alarm is manually cleared it will be moved to the “**Manually Cleared (CLR)**” section. Refresh the screen to see the change.

Resetting Alarms

When an alarm event occurs in which the alarm can be reset from the **BACview** keypad, the “**RESET ALARMS: [NO]**” option will appear at the top of the menu list on the Home screen.



Scroll to the “**[NO]**” and press the “**ENTER**” button. Change the value to the “**[YES]**” by pressing the “**[DECR]**” or “**[INCR]**” soft key buttons. Press the soft key below “**[OK]**” or the “**ENTER**” button to accept the new value. Press the soft key below “**[CANCEL]**” to discard changes.

This will automatically reset any **BACview** re-settable alarms and then change the option back to “**NO**”. Refresh the screen to remove the “***** **[→ALARM] IS ACTIVE *******” notification toward the top of the screen and the “**RESET ALARMS: [NO]**” option.

Alarm conditions can also be reset by cycling the power on the **ALC** controller.

Alarm Matrix

There are **59** possible alarm events which could be displayed in the “**Alarm Status**” screen of the **BACview** display pad as well as **37** possible condition/mode statuses which could be displayed to indicate the Alarm condition/mode of the unit. These are broken down into Automatically and Manually re-settable alarms.

Automatic Reset

These are reset automatically after the condition which initiated the alarm is corrected. Then they will show up under the “**Returned-to-Normal (RTN)**” section of the history. These can also be manually cleared using “**FN**” + “**MUTE**”, in which case they will show up under the “**Manually Cleared (CLR)**” section of the history. Refresh the screen to see the change. If the condition which initiated the alarm is not corrected, the alarm will be reissued.

Alarm Status Screen	Condition/Mode	Description
Compressor #1 Alarm	Alarm/C1 Alarm	Compressor #1 shut down; CC1-CS shows “Off” but Y1 is “On”.
High Pressure Switch #1 Alarm	Alarm/HPS1 Alarm	HPS1 switch open; head pressure high in Comp. #1 circuit.
Low Pressure Switch #1 Alarm	Alarm/LPS1 Alarm	LPS1 switch open; refrigerant pressure low in Comp. #1 circuit.
Freeze Protection #1 Alarm	Alarm/FP1 Alarm	DX LAT #1/SLT #1 below the lower freeze set point.
Compressor #1 Run Time Alarm	Alarm/Run Time	Compressor #1 run time exceeded.
Compressor #2 Alarm	Alarm/C2 Alarm	Compressor #2 shut down; CC2-CS shows “Off” but Y2 is “On”.
High Pressure Switch #2 Alarm	Alarm/HPS2 Alarm	HPS2 switch open; head pressure high in Comp. #2 circuit.
Low Pressure Switch #2 Alarm	Alarm/LPS2 Alarm	LPS2 switch open; refrigerant pressure low in Comp. #2 circuit.
Freeze Protection #2 Alarm	Alarm/FP2 Alarm	DX LAT #2/SLT #2 below the lower freeze set point.
Compressor #2 Run Time Alarm	Alarm/Run Time	Compressor #2 run time exceeded.
Exhaust Fan Run Time Alarm	Alarm/Run Time	Exhaust Fan run time exceeded.
Supply Fan Run Time Alarm	Alarm/Run Time	Supply Fan run time exceeded.
BAS Comm. Lost Alarm	--- None ---	Comm. with the BAS has been lost.
Clogged Filter Alarm	Alarm/Cldg Fltr	Clogged Filter needs to be changed.
Condensate Overflow Switch Alarm	Alarm/COS Alarm	Condensate overflow switch is closed.
Emergency Shutdown Alarm	Alarm/Emer Shtdn	Emergency Shutdown switch (N.C.) is open. Resets when closed.
Freeze Stat Alarm	Alarm/FZT Alarm	Water line freeze stat (N.C.) is open.
Water Flow Switch Alarm	Alarm/WFS Alarm	Water flow switch is open.
Heat Failure	Alarm/Heat Fail	SAT below Heat Fail set point.

Alarm Status Screen	Condition/Mode	Description
High CO2 Alarm	Alarm/High CO2	CO2 above High CO2 Limit set point.
High SAT Alarm	Alarm/High SAT	SAT above High SAT Limit set point.
Set Point Alarm	Alarm/SP Overlap	If OAT Clg. and Htg. set points ranges overlap.
Smoke Detector Alarm	Shutdown/SD Stop	Unit shutdown due to Smoke Detector (N.C.) alarm. Resets when Smoke Detector is reset.
CO2 Sensor Failure	Alarm/Sensr Fail	CO2 communication fails from the ZS sensor.
DXLAT #1 Sensor Failure	Alarm/Sensr Fail	DX LAT #1 sensor value of -60.2°F or 296°F.
DXLAT #2 Sensor Failure	Alarm/Sensr Fail	DX LAT #2 sensor value of -60.2°F or 296°F.
ECAT Sensor Failure	Alarm/Sensr Fail	ECAT sensor value of -60.2°F or 296°F.
EC-RH Sensor Failure	Alarm/Sensr Fail	EC-RH sensor value of less than 1% or greater than 100%.
MAT Sensor Failure	Alarm/Sensr Fail	MAT sensor value of -60.2°F or 296°F.
MA-RH Sensor Failure	Alarm/Sensr Fail	MA-RH sensor value of less than 1% or greater than 100%.
OAT Sensor Failure	Alarm/Sensr Fail	OAT sensor value of -60.2°F or 296°F.
OA-RH Sensor Failure	Alarm/Sensr Fail	OA-RH sensor value of less than 1% or greater than 100%.
RAT Sensor Failure	Alarm/Sensr Fail	RAT sensor value of -60.2°F or 296°F.
RA-RH Sensor Failure	Alarm/Sensr Fail	RA-RH sensor value of less than 1% or greater than 100%.
SAT Sensor Failure	Alarm/Sensr Fail	Unit shutdown due to SAT sensor value of -60.2°F or 296°F.
SA-RH Sensor Failure	Alarm/Sensr Fail	SA-RH sensor value of less than 1% or greater than 100%.
SLT #1 Sensor Failure	Alarm/Sensr Fail	SLT #1 sensor value of -60.2°F or 296°F.
SLT #2 Sensor Failure	Alarm/Sensr Fail	SLT #2 sensor value of -60.2°F or 296°F.
WExAT Sensor Failure	Alarm/Sensr Fail	WExAT sensor value of -60.2°F or 296°F.
WEx-RH Sensor Failure	Alarm/Sensr Fail	WEx-RH sensor value of less than 1% or greater than 100%.
ZAT Sensor Failure	Alarm/Sensr Fail	Temperature communication fails from the ZS sensor.
Z-RH Sensor Failure	Alarm/Sensr Fail	Humidity communication fails from the ZS sensor.

Manual Reset

These are reset manually from the **BACview** display pad (see “**Resetting Alarms**”) or after cycling the power on the **ALC**. Then they will show up under the “**Returned-to-Normal (RTN)**” section of the history. These can also be manually cleared using “**FN**” + “**MUTE**”, in which case they will show up under the “**Manually Cleared (CLR)**” section of the history. If the condition which initiated the alarm is not corrected, the alarm will be reissued.

Alarm Status Screen	Condition/Mode	Description
Compressor #1 Stop	Alarm/C1 Stop	Compressor #1 shut down due to CC1-CS lock out.
High Pressure Switch #1 Stop	Alarm/HPS1 Stop	Compressor #1 shut down due to HPS1 lock out.
Low Pressure Switch #1 Stop	Alarm/LPS1 Stop	Compressor #1 shut down due to LPS1 lock out.
Freeze Protection #1 Stop	Alarm/FP1 Stop	Compressor #1 shut down due to FP1 lock out.
Compressor #1 in HAND Alarm	Alarm/C1 Hand	Comp. #1 in Hand: C1 current sensor shows “On” but Y1 is “Off”.
Compressor #2 Stop	Alarm/C2 Stop	Compressor #2 shut down due to CC2-CS lock out.
High Pressure Switch #2 Stop	Alarm/HPS2 Stop	Compressor #2 shut down due to HPS2 lock out.
Low Pressure Switch #2 Stop	Alarm/LPS2 Stop	Compressor #2 shut down due to LPS2 lock out.
Freeze Protection #2 Stop	Alarm/FP2 Stop	Compressor #2 shut down due to FP2 lock out.
Compressor #2 in HAND Alarm	Alarm/C2 Hand	Comp. #2 in Hand: C2 current sensor shows “On” but Y2 is “Off”.
Exhaust Fan Alarm	Alarm/EF Stop	Exhaust Fan Failure; EF-APS shows no air flow but EF is enabled.
Exhaust Fan in HAND Alarm	Alarm/EF Hand	Exhaust Fan in Hand; EF-APS shows air flow but EF not enabled.
Supply Fan Alarm	Shutdown/SF Stop	Unit shutdown due to Supply Fan failure; SF-APS shows no air flow.
Supply Fan in HAND Alarm	Shutdown/SF Hand	Supply Fan in Hand; SF-APS shows air flow but SF not enabled.
High Supply Duct Pressure Stop	Shutdown/High SFDPT	Unit shutdown ; SF-DPT indicates supply duct static pressure over limit.
Low SAT Alarm	Shutdown/Low SAT	Unit shutdown due to SAT below low limit set point.
SAT Sensor Failure	Shutdown/SAT Stop	Unit shutdown due to SAT sensor value of -60.2°F or 296°F.

Alarms may occur after start-up due to a variety of factors. Always check that all sensors and inputs are properly connected.

On the “**Home**” screen, scroll down to the “[→**ALARM**]” menu option and press the “**ENTER**” button to go to the “**Alarm Status**” screen (or press the “**FN**” + “**0**” buttons simultaneously).

Safety Switches:

- **High Pressure Switch (HPS1):** If **HPS1** is open, compressor #1 will turn off and the **ALC** controller will issue an alarm. After manually resetting **HPS1**, the **HPS1** alarm will reset. Following a minimum time off delay, compressor #1 will turn on. If the **ALC** controller records **3** high pressure start/restart failure incidents within **1** hour, compressor #1 is locked out and the **ALC** controller will issue an alarm. The compressor lock-out can be reset in the **BACview** display pad or by cycling the power of the **ALC** controller. Refer to the **IOM** for more information.
 - For systems with two circuits, this is the same for compressor #2, **Y2** and **HPS2**.
- **Low Pressure Switch (LPS1):** If **LPS1** is open after the **LPS1** by-pass time, the **ALC** controller will issue an alarm and compressor #1 turns off. After **30** seconds (fixed), the **LPS1** alarm will reset. Following the minimum time-off delay, the compressor #1 will turn on. If the **ALC** controller records **3** low pressure start/restart failure incidents within **1** hour, compressor #1 is locked out and the **ALC** controller will issue an alarm. The compressor lock-out can be reset in the **BACview** display pad or by cycling the power of the **ALC** controller. Refer to the **IOM** for more information.
 - For systems with two circuits, this is the same for compressor #2, **Y2** and **LPS2**.

Safety Shutdown:

- **Smoke Detector (Optional):** When a smoke detector (**SD**) is provided, it is wired directly to the **ALC** controller. If smoke is detected, the **ALC** controller will shut down the unit. The alarm can be reset in the **BACview** display pad or by cycling the power of the **ALC** controller.
- If a compressor fails to start **3** times in an hour due to high pressure switch lock out. The alarm can be reset in the **BACview** display pad or by cycling the power of the **ALC** controller.
- If a compressor fails to start **3** times in an hour due to low pressure switch lock out. The alarm can be reset in the **BACview** display pad or by cycling the power of the **ALC** controller.
- If a compressor fails to start **3** times in an hour due to DX LAT or suction line temperature lock out. The alarm can be reset in the **BACview** display pad or by cycling the power of the **ALC** controller.
- If the **ALC** controller detects an **SAT** sensor failure. The alarm can be reset in the **BACview** display pad or by cycling the power of the **ALC** controller.

Battery

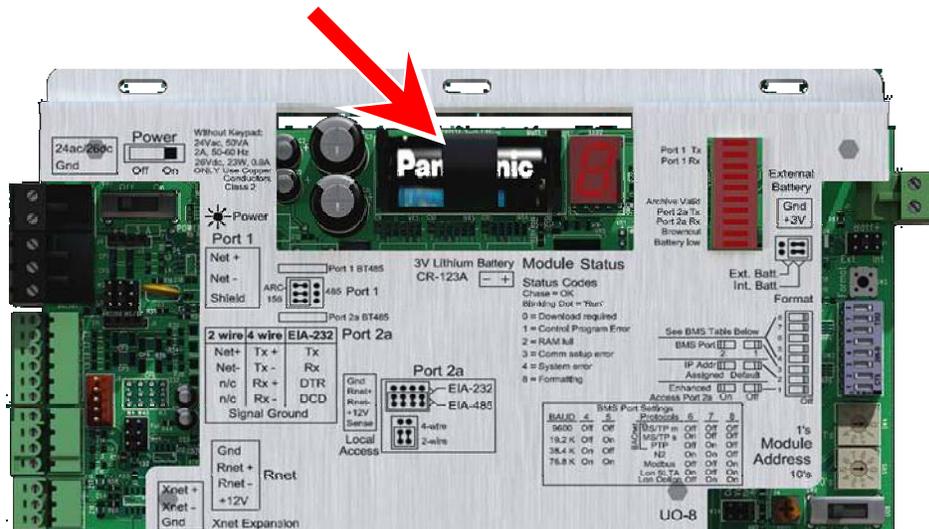
The **ALC** controller has a battery back-up which will maintain the program memory for a maximum of **720** hours during a loss of power to the unit. The battery has a rated life of up to **10** years but should probably be replaced every **7-8** years to be safe.

Loss of battery power will cause the program memory to be lost if the controller power is cycled or if power to the controller is lost. If this occurs, the program will be automatically restored from the last archive when power is restored.

Replacement battery type: **CR123A 3V Lithium**.

To replace the battery, follow these steps:

1. Archive the current program (refer to the **IOM** for more information).
2. **DO NOT** power down the controller.
3. Using a small flathead screwdriver, pry up each side of the black battery clip until it is free and you can remove it.
4. Remove old battery from the controller, making note of the battery's polarity.
5. Insert the new battery into the controller, matching the polarity of the battery you removed (see image on controller case below battery for reference).
6. Push the black clip back onto the battery until you hear both sides click in place.
7. Perform a **ModStat** (press the "**FN**" + "**.**" buttons simultaneously). Cycle the controller power. Perform another **ModStat**.



Sequence of Operations

For specific operational information for this unit, refer to the Sequence of Operations provided separately.



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