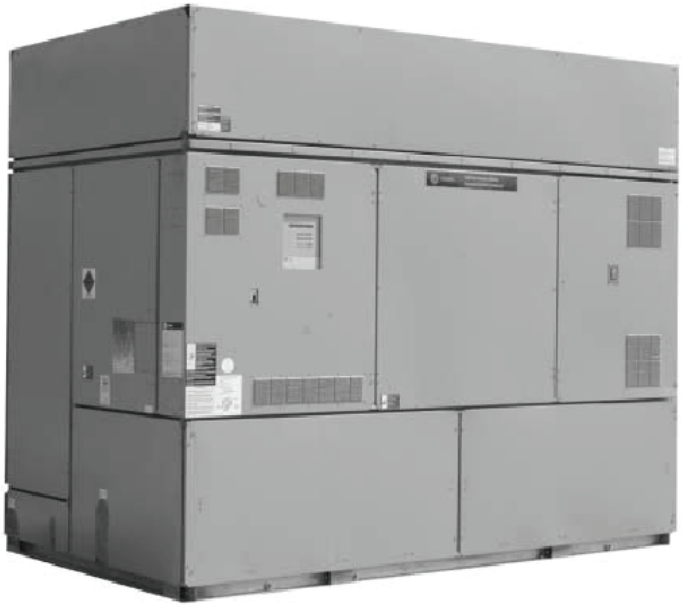
Programming Guide

IntelliPak™ Commercial Self-Contained

Signature Series, 20-110Ton
Modular Series, 20-35Ton



⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

May 2020

PKG-SVP01F-EN

Warnings, Cautions and Notices

Warnings, Cautions and Notices. Note that warnings, cautions and notices appear at appropriate intervals throughout this manual. Warnings are provided to alert installing contractors to potential hazards that could result in death or personal injury. Cautions are designed to alert personnel to hazardous situations that could result in personal injury, while notices indicate a situation that could result in equipment or property-damage-only accidents.

Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

Read this manual thoroughly before operating or servicing this unit.

ATTENTION: Warnings, Cautions, and Notices appear at appropriate sections throughout this literature. Read these carefully:

⚠WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE Indicates a situation that could result in equipment or property-damage only accidents.

Introduction

Note: *One copy of the appropriate service literature (Installation, Owner, and Diagnostic Manual) ships inside the control panel of each unit.*

Use this manual for IntelliPak™ commercial self-contained models SCWF/SIWF, SCRF/SIRF, SCWG/SIWG, and SIWG/SIRG.

Overview

This manual is divided into multiple sections based on the unit's human interface (HI) panel format. Each section provides step by step instructions for programming the unit using the HI. In addition, each section provides specific information about the system operating parameters and their related HI screens, in the order they appear when scrolling through the HI.

By carefully following the screen layout in this manual while referencing the HI panel, the user can monitor operating status, set specific operating parameters, and diagnose system problems.

Some screens shown in this manual are dependent on unit options and/or model configuration. Therefore, some screens in this manual may not appear on a particular unit's human interface panel. Screens that are configuration-dependent are labeled as such. Follow the appropriate steps for each screen as it appears and proceed through each section.

Refer to the table of contents and index for specific topics contained in this manual and supporting manuals.

Complete the "Start-Up" procedures in the applicable Installation, Owner, and Diagnostic (IOD) manual before attempting to operate or service this equipment to minimize the risk of improper operation.

Note: *The procedures discussed in this manual should only be performed by qualified, experienced HVAC technicians.*

Revision History

PKG-SVP01F-EN

- Updated model numbers to include -90, -CO and -C1.

Trademarks

Echelon, the Echelon logo, 3120, 3150, LON, LonBuilder, NodeBuilder, LonLink, LonMaker, LonManager, LonPoint, LonResponse, LonSupport, LonTalk, LONWORKS, LonUsers and Neuron are registered trademarks of Echelon Corporation.

Table of Contents

General Information

Commonly Used Acronyms

For convenience, a number of acronyms and abbreviations are used throughout this manual. These acronyms are alphabetically listed and defined below.

Table 1. Acronyms

Act = active
AH = Air Handler
Annunc = Annunciator
AS = AirSide
Aux = auxiliary
BAS = building automation systems
BCI = BACnet® Communication Interface
CCFM = hundreds of cubic-feet-per-minute
CCW = counterclockwise
cfm = cubic-feet-per-minute
Cfg = Configured, configuration
ckt = circuit
Cmd = command
Comp (s) = compressor, compressors
Cond = condenser, condensers
Config = configured, configuration
Ctrl = control
CV = constant volume
Cy = cycle
CVDA = Constant Speed Fan (CV)/Discharge Air Temp Control
CVZT = Constant Speed Fan (CV)/Zone Temperature Control
CW = clockwise
DCV = Demand Control Ventilation
Dflt = default
Diag = diagnostic
Dmpr = damper
DWU = Daytime Warm-up
E/A = exhaust air
ECEM = exhaust control/enthalpy module
Econ = economizer, economizing
Ent = entering
Evap = evaporator
F/A = fresh air
Funct = function
GBAS = generic building automation system (module)
HGBP = Hot Gas Bypass
HGP = Hot Gas Bypass
Hi = high
HI = where all caps Human Interface
HO = History Only (Diagnostic)
HVAC = heating, ventilation and air conditioning
ICS = Integrated Comfort System
IGV = inlet guide vanes

Table 1. Acronyms (continued)

INFO = Information Only (Diagnostic)
I/O = input/output
Indep = Independent
IOM = installation/operation/ maintenance manual
IPC = interprocessor communications
IPCB = interprocessor communications bridge (module)
IWC = inches water column
LH = left-hand
Lo = low
LCI = LonTalk® Communication Interface
LCI-I = LonTalk Communication Interface for IntelliPak™ Module
Manif = manifolded
Max = maximum
Min = minimum
Misc = miscellaneous
MCM = Multiple Compressor Module
MDM = Modulating Dehumidification Module
Mod = modulating
MPM = Multi-Purpose Module
MWU = morning warm-up
NSB = night setback panel
Num = number
O/A = outside air
Occ = occupied
OVRD = override
PAR = Partial System Disable, Auto Reset (Diagnostic)
PMR = Partial System Disable, Manual Reset (Diagnostic)
Pos = position
Pot = potentiometer
PPM = parts per million
HEAT = where all caps HEAT (module)
Propor = proportional
psig = pounds-per-square-inch gauge pressure
PWS = part-winding start
R/A = return air
Refrig = refrigerant
RH = right-hand
RHI = Remote Human Interface
rpm = revolutions-per-minute
RT = rooftop unit
RTM = rooftop module
SA = supply air
SAP = supply air pressure
Sat = saturated
SCM = Single Compressor Module
Setpt = SETPOINT
SF = supply fan

Table 1. Acronyms (continued)

SRC = source
Stg = stage
Stnd = standard
STP = SETPOINT
Sw = switch
SZ = single-zone (unit airflow)
TCI = Tracer communications interface (module)
Press = pressure
Temp = temperature
UCM = Unit Control (Module)
Unocc = unoccupied
VAV = variable air volume
VCM = ventilation control module
VDC = volts DC
Ventil = ventilation
VFD = variable frequency drive

Table 1. Acronyms (continued)

VOM = ventilation override module
VVDA=Variable Speed Fan (VAV)/Discharge Air Temp Control
W/ = with
w.c. = water column
WU = warmup
XL = across-the-line start

Glossary of Terms

For a glossary of terms see "Glossary," p. 49. Carefully review these definitions since they are used throughout this document and the Installation, Operation, Maintenance Guide (IOM). Knowledge of these terms is essential in gaining an understanding of how these units operate.

IntelliPak™ Points List

Table 2. IntelliPak™ points list

Unit Module	Analog Inputs	Analog Outputs	Binary Inputs	Binary Outputs
RTM	ASE damper min pos	O/A damper actuato	Emergency stop External auto/stop Unoccupied/occupied Alarm Dirty filter VAV changeover Supply airflow proof	VAV box drive max CV unoccupied mode indicator Alarm Fan run request Water pump request
SCM	Evap temp sensor Sat cond temp sensor	Cond fan speed (Low ambient)	Low pressure control Compressor proving	Compressor relay Condenser fan A, B
MCM	Evap temp sensor Sat cond temp sensor	Cond fan speed (Low ambient- ckt 1 & 2)	Low pressure control- ckt 1 & 2 Compressor proving- ckt 1 & 2	Compressor relay Condenser fan 1A, 1B, 2A, 2B
Heat Module	MWU temp sensor Modulating heat actuator	Low entering air	Heat 1 relay Heat 2 relay Heat 3 relay	
ECEM	Return air temp sensor Return air humidity sensor			
VOM	N/A	N/A	VOM mode A, B, C, D, E contacts	VOM relay
GBAS	4 inputs from these choices: Occ zone cool setpt Occ zone heat setpt Unocc zone cooling setpt Unocc zone heat set Min O/A flow setpt Sup air cooling setpt Sup air heating setpt Sup air static pres setp	N/A	Demand limit contacts	Dirty filter Refrigeration fail relay Heat fail relay Fan fail relay TBD relay

UCM Control System

The IntelliPak™ self-contained units are controlled by a microelectronic control system that consists of a network of modules and are referred to as Unit Control Modules (UCM).

The unit size, type, heating functions, peripheral devices, options, exhaust capabilities, etc. determine the number and type of modules that a particular rooftop unit may employ.

These modules perform specific unit functions using proportional/integral control algorithms. They are mounted in the unit control panel and are factory wired to their respective internal components.

By processing analog and binary inputs, each module supplies outputs in the form of modulating voltages (from

other unit modules, sensors, remote panels, and customer binary contacts) to perform the applicable request; such as economizing, mechanical cooling, heating, ventilation.

The UCM provides some equipment protection functions both directly and indirectly, such as duct pressure limits and compressor lockouts. Following is a description of each module's function within the UCM system.

The UCM provides some equipment protection functions both directly and indirectly, such as duct pressure limits and compressor lockouts.

Listed below are the various modules that may be employed in a UCM control system.

Rooftop Module Board (RTM)- Standard on all units

The RTM is the central processor of the system. It continuously receives information from the other unit modules, sensors, the remote control panel, and customer supplied relays. It then interprets this information and responds to cooling, heating, and ventilation requests by directing the other modules in the system to energize the proper unit components. It also directly initiates supply and exhaust fan operations, and economizer operation.

Compressor Module (SCM/MCM)

The Compressor module, (Single Circuit & Multiple Circuit), upon receiving a request for mechanical cooling, energizes the appropriate compressors and condenser fans. It monitors the compressor operation through feedback information it receives from various protection devices.

Heat Module (Standard on all heating units)

The Heat module directs the unit's heater to stage up and down to bring the temperature in the controlled space to within the applicable heating SETPOINT.

Exhaust/Comparative Enthalpy Module (ECEM)(Option)

The ECEM is on units with the comparative enthalpy option. It receives data from the return air humidity sensor, the return air temperature sensor, and the return air space pressure transducer and controls dampers to maintain space pressure and humidity levels.

Generic Building Automation System (GBAS) Module Option

The GBAS module links the RTM with non-Trane building control systems to enable communication (input/output interface) between the systems. It can accept external setpoints for cooling, heating, demand limiting, and S/A pressure.

Ventilation Override Module (VOM) Option

The VOM can control the unit's air handling functions to perform customerspecified functions, such as space pressurization, exhaust, purge, unit off, etc.

Interprocessor Communications Board (IPCB) Option

The IPCB is used to expand communication from the unit's UCM network to a remote human interface panel. DIP switch settings on the IPCB module for this application should be; switches 1 and 2 "off," switch 3 "on."

Trane Communications Interface Module (TCI) Option

The TCI module allows external setpoints for most of the unit functions to be communicated to the unit's UCM network via a Trane ICS™ system. DIP switch settings on the TCI module for these applications should be; switches 1, 2, and 3 are "off."

BACnet Communication Interface Module (BCI) (Optional - used on units with Trane ICS or 3rd party Building Automation Systems)

The BACnet Communication Interface module expands communications from the unit UCM network to a Trane Tracer Summit, or a 3rd party building automation system that utilizes BACnet, and allows external SETPOINT and configuration adjustment and monitoring of status and diagnostics.

Lontalk Communication Interface Module (LCI) (Optional - used on units with Trane ICS or 3rd party Building Automation Systems)

The LonTalk Communication Interface module expands communications from the unit UCM network to a Trane Tracer Summit, or a 3rd party building automation system that utilizes LonTalk, and allows external SETPOINT and configuration adjustment and monitoring of status and diagnostics.

Human Interface Module

The Human Interface (HI) Module illustrated in Figure 1 is the device which enables the customer, building owner, or contractor, to communicate to the Rooftop unit the necessary parameters for unit operation such as cooling and heating SETPOINTs, demand limiting, ventilation override modes, etc.

The HI Module is located in the unit's main control panel. A small door located in the unit's control panel door allows access to the HI Module's keypad and display window.

There is a 2 line by 40 character LCD screen which provides status information for the various unit functions as well as menus used to set or modify the operating parameters. There is a 16 key keypad adjacent to the LCD screen, which allows the operator to scroll through the various menus and make adjustments to the SETPOINTs, etc.

The information displayed in the LCD window will be top-level status information unless the operator initiates other displays.

At power-up, the Human Interface LCD will display one of four initial screens illustrated in the "General Status" section.

1. Unit Status (Unit Off or Stopped) (The unit is configured and operational, but is not running). This screen shows state, mode, and function information when the unit is off or stopped.
2. Unit Status (Unit On) (The unit is configured and operational, and is running). This screen shows state, mode, and function information when the unit is on.
3. VOM Active (a ventilation override command was received) This screen shows that the unit is in a Ventilation Override Mode.
4. No Configuration (the unit needs to be configured). This screen shows that required configuration data is missing.

The LCD screen has a backlight that makes the information easier to read. The light will go out if no keys are pressed for 30 minutes. If it goes out, simply press the STATUS key.

Ventilation Override Module (VOM) Definitions

The ventilation override module can be field-configured with up to five different override sequences for ventilation override control purpose. When any one of the module's five binary inputs are activated, it will initiate specified functions such as; space pressurization, exhaust, purge, purge with duct pressure control, and unit off.

Once the ventilation sequences are configured, they can be changed unless they are locked using the HI. Once locked, the ventilation sequences cannot be unlocked.

The compressors and condenser fans disable during the ventilation operation. If more than one ventilation sequence activates, the one with the highest priority (VOM "A") begins first, with VOM "E" having lowest priority and beginning last.

A description of the VOM binary inputs follows below.

UNIT OFF sequence "A"

When complete system shut down is required, the following sequence can be used.

- Supply fan – Off
- Supply fan VFD – Off (0 Hz) (if equipped)
- Inlet guide vanes – closed (if equipped)
- Outside air dampers – Closed
- Heat – all stages – Off, Modulating heat output at 0 vdc
- Occupied/Unoccupied output – Deenergized
- VO relay – Energized
- Exhaust fan (field-installed) - Off
- Exhaust damper (field-installed) - Closed

PRESSURIZE sequence "B"

This override sequence can be used if a positively pressured space is desired instead of a negatively pressurized space.

- Supply fan – on
- Supply fan VFD – on (60 Hz) (if equipped)
- Inlet guide vanes/VAV boxes – open (if equipped)
- Outside air dampers – open
- Heat – all stages – off, hydronic heat output at 0 vdc
- Occupied/ unoccupied output - energized
- VO relay - energized
- Exhaust fan (field-installed) - off
- Exhaust damper (field-installed) - closed

EXHAUST sequence "C"

With the building's exhaust fans running and the unit's supply fan off, the conditioned space becomes negatively pressurized. This is desirable for clearing the area of smoke when necessary; i.e. from an extinguished fire, to keep smoke out of areas that were not damaged.

- Supply fan – off
- Supply fan VFD – off (0 Hz) (if equipped)
- Inlet guide vanes – closed (if equipped)
- Outside air dampers – closed
- Heat – all stages – Off, hydronic heat output at 0 vdc
- Occupied/Unoccupied output – deenergized
- VO relay – energized
- Exhaust fan (field-installed) - on
- Exhaust damper (field-installed) - open

PURGE sequence "D"

This sequence could be used for purging the air out of a building before coming out of unoccupied mode of operation on VAV units. Also, it can be used to purge smoke or stale air.

- Supply fan – on
- Supply fan VFD – on (60 Hz) (if equipped)
- Inlet guide vanes/VAV boxes – Open (if equipped)
- Outside air damper – Open
- Heat – all stages – Off, Modulating heat output at 0 vdc
- Occupied/Unoccupied output – Energized
- VO relay – Energized
- Exhaust fan (field-installed) - On
- Exhaust damper (field-installed) - Open

PURGE with duct pressure control "E"

This sequence can be used when supply air control is required for smoke control.

- Supply fan – on
- Supply fan VFD – on (if equipped)
- Inlet guide vanes – controlled by supply air pressure control function with supply air pressure high limit disabled
- Outside air dampers – open
- Heat – all stages – off, hydronic heat output at 0 vdc
- Occupied/unoccupied output – energized
- VO relay – energized
- Exhaust fan (field-installed) - on
- Exhaust damper (field-installed) - open

Note: *Each system (cooling, exhaust, supply air, etc.) within the unit can be redefined in the field for each of the five sequences, if required. Also the definitions of any or all of the five sequences may be locked into the software by using the human interface panel keypad. Once locked into the software, the sequences cannot be changed.*

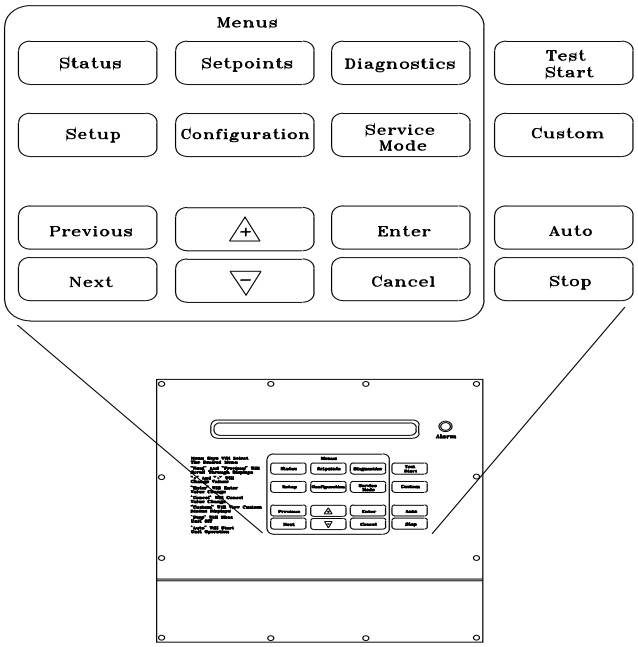
Programming the Unit

The UCM must be programmed with "job-specific"setup information for the unit to operate and function properly. The data necessary for unit operation will vary depending on factors such as unit size, type, and options.

This manual provides step by step instructions for programming setup information using the HI or RHI. It also includes instructions for checking unit operating status, accessing and clearing diagnostics, and performing service tests. Some of the displays in this manual may not appear on the HI or RHI screen during programming. Only applicable screens for specific unit options and operating parameters will display.

Any steps that do not apply to all unit types are marked accordingly. Ignore any steps that do not apply to your unit and/or application. Continue this process until all applicable screens are programmed with the required information.

Figure 1. Human interface module



Menu Keys

Any references in this section to the HI applies to both the HI and RHI, with the exception of the SERVICE MODE key.

See Figure 1 for an illustration of the six menu keys. The menu keys are: STATUS, SETPOINTS, SETUP, CONFIGURATION, DIAGNOSTICS, and SERVICE MODE. These keys allow access to various interactive menus so the user can input and access unit operating data. Pressing these keys will display the initial menu screen designated by the key's name. The following information describes each key and its function.

STATUS Key

Pressing the STATUS key causes the LCD to display the operating status screen; i.e. "On", "Unit Stop", "External Stop", "Emergency Stop", "Service Mode". Pressing the NEXT key allows the operator to scroll through the screens which provide information such as air and refrigerant temperatures, humidity levels, fan operation, compressor operation, heater operation, economizer positioning, exhaust operation, as well as heating, cooling, and compressor lockout SETPOINTs. Pressing the STATUS key while viewing any of the data screens will cause the LCD to go back to the operating status screen.

SETPOINTS Key

Pressing the SETPOINTS key will cause the LCD screen to display the first of the SETPOINT screens where the operator will designate default temperature and pressure SETPOINTs. While scrolling through the SETPOINT screens, pressing this key again will cause the LCD to display the first SETPOINT screen.

DIAGNOSTICS Key

Pressing the DIAGNOSTICS key at any time will allow the operator to view any unit function failures. The LCD screen will display one of the diagnostic screens (depending on which diagnostic, if any, is present). If no key is pressed for 30 minutes while the screen is displaying diagnostic information, it will revert back to the operating status display.

CONFIGURATION Key

Pressing the CONFIGURATION key will cause the LCD screen to display the first of the configuration screens where the operator will designate unit configuration data such as unit type, capacity, system control, etc....

This information was programmed at the factory. Pressing the configuration key at any level in the configuration menu will display the first configuration screen.

Note: *This key should be used if the unit's configuration data is lost or new options are added in the field, and to view current configuration.*

SETUP Key

Pressing the SETUP key will cause the LCD screen to display screens where the operator will designate various operating parameters such as temperature and pressure ranges, limits, percentages, SETPOINT source selections, and sensor input definitions for the control of the rooftop unit's various operating modes. Pressing the SETUP key at any level in the SETUP menu will display the first SETUP screen.

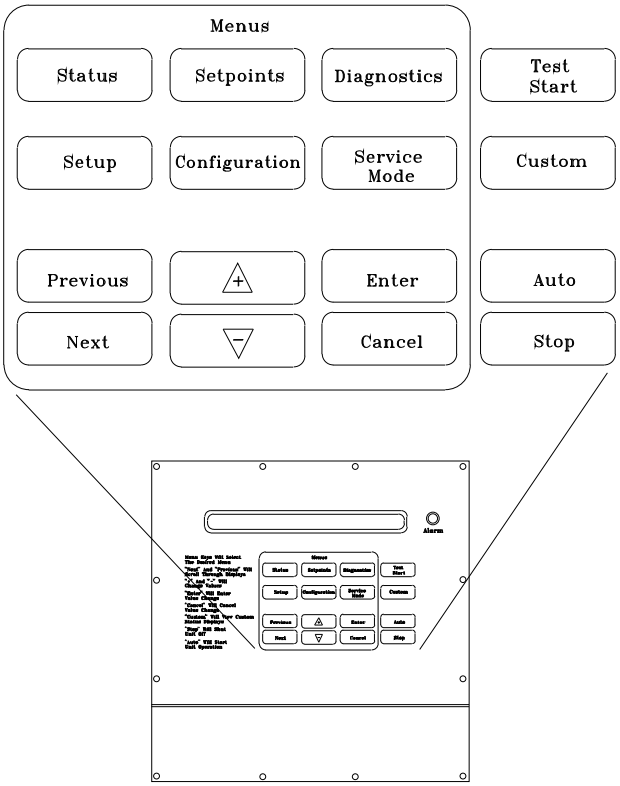
SERVICE MODE Key

Pressing the SERVICE MODE key causes the LCD to display the first of the service test mode screens showing various unit components which may be turned on or off for the particular test being performed. Once the status of these components is designated, the LCD will display screens that allow the operator to designate the TEST START time delay for each test.

Data Manipulation Keys

The six data manipulation keys illustrated in Figure 2, (ENTER, CANCEL, + (Plus), - (Minus), PREVIOUS, and NEXT are used to modify the data within the screens (change values, move the cursor, confirm choices, etc....)

Figure 2. Human interface keypad



ENTER Key

This key will confirm the new values that were designated by pressing the + (Plus) or - (Minus) keys at all edit points. When viewing status and diagnostics screens, it has no function.

CANCEL Key

After changing data, at an editable screen, but before confirming it with the ENTER key, pressing the CANCEL key will return the data to its previous value. This key shall also function to clear active diagnostics.

+ (Plus) Key

When viewing a SETPOINT screen, this key will increase the temperature or pressure value of the SETPOINT. When working with a status menu, it will add the current status display to the custom menu. When viewing the SETUP or service test screens, it will increase SETPOINTs or toggle choices On or Off at each edit point.

- (Minus) Key

This key when viewing the SETPOINT screen will decrease the temperature or pressure value of the SETPOINT. When viewing the SETUP or service test screens, it will decrease SETPOINTs or toggle choices On or Off at each edit point. When viewing the custom menu, pressing the - (Minus) key will remove the status screen from the custom menu. When viewing diagnostics screens it has no function.

PREVIOUS Key

Pressing the PREVIOUS key causes the LCD to scroll backwards through the various displays for each menu. At displays with multiple edit points, it moves the cursor from one edit point to another.

NEXT Key

Pressing the NEXT key causes the LCD to scroll forward through the various displays for each menu. At displays with multiple edit points it moves the cursor from one edit point to another.

Unit Operation Keys

AUTO Key

Pressing the AUTO key at any time will cause the display to go to the top level status display and, if the unit is shutdown, will cause the unit to begin operation in the appropriate mode no matter what level in the menu structure is currently being displayed. If the current display is an editable display, the AUTO key will confirm the desired edit.

STOP Key

Pressing the STOP key will cause the unit to transition to the stop state. If the current display is editable, pressing the STOP key will cancel the desired edit.

TEST START Key (SERVICE)

Pressing this key while viewing any screen in the SERVICE Mode menu will start the service test. When viewing status, SETUP, SETPOINT, and diagnostics screens, it has no function.

CUSTOM Key

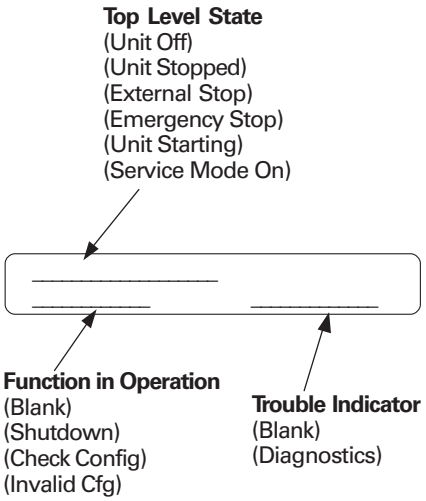
The Custom menu is simply a status menu that contains screens that the user monitors most frequently. The Custom menu can only contain five status screens. To create the Custom menu, press the STATUS key, followed by the NEXT key (this brings up the initial status screen). If you want to add this screen to the Custom menu, press the + (Plus) key, if not, press the Next key again until a status screen appears that you would like to add to the Custom menu. Pressing the + (Plus) key while viewing any of the various status screens will add that screen to the Custom menu. Once the Custom menu is programed it can be accessed by pressing the CUSTOM key. To remove a status screen from the Custom menu, press the CUSTOM key, then press the NEXT key until the status screen that you want to remove appears, then press the - (Minus) key.

General Status Display

Anytime the rooftop unit is powered up, or the STATUS, AUTO, or STOP keys are pressed, the unit mounted Human Interface will display one of the following four general status display screens. The operator will then be able to enter keystrokes which will allow him to navigate through a set of menus and submenus in order to provide/ access various monitoring, SETUP, and configuration information. The Human Interface will not display screens or parts of screens for which the unit is not configured.

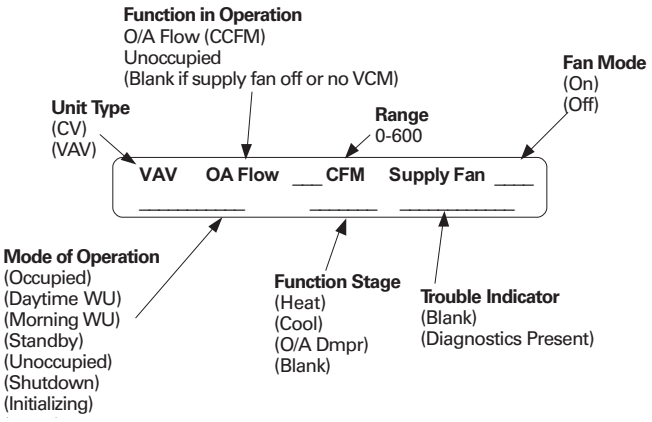
Unit "Off" or "Stopped"

If at power up the unit is not running, the following display will appear on the Human Interface LCD screen. When this screen is being displayed, the only functional keys are the six menu keys (STATUS, SETPOINTS, DIAGNOSTICS, SETUP, CONFIGURATION, and SERVICE MODE), the AUTO key, the CUSTOM key, and the STOP key.



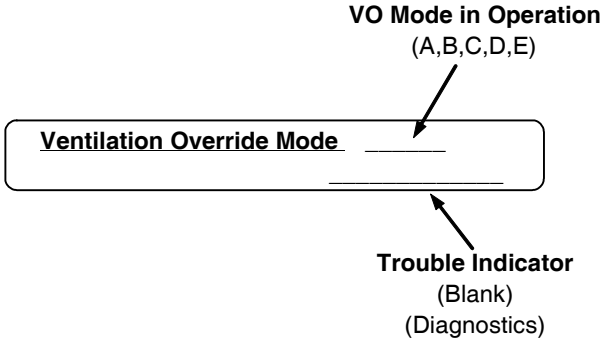
Unit "On"

If the unit has entered an operating state (running), the following display will appear on the Human Interface LCD screen. When this screen is being displayed, the only functional keys are the six menu keys (STATUS, SETPOINTS, DIAGNOSTICS, SETUP, CONFIGURATION, and SERVICE MODE), the AUTO key, the CUSTOM key, and the STOP key.



VOM Active

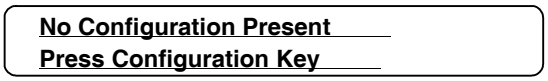
If at power up the unit is running and has entered a Ventilation Override mode of operation, the following display will appear on the Human Interface LCD screen.



No Configuration

If at power up the unit has not been programmed with the necessary configuration data for normal unit operation, the following display will appear on the Human Interface LCD screen. When this screen is being displayed, the only functional key is the CONFIGURATION key.

Note: *This screen will only appear when the RTM has been field replaced. Refer to the Configuration Menu.*



Factory Presets

The UCM controlled unit has many operating functions which are preset at the factory, but may be modified to meet the unique requirements of each job. The following list identifies each of the unit's adjustable functions and the value assigned to it. If these factory presets match the application's requirements, simply press the AUTO key at the Human Interface module to begin unit operation (after completing the Pre-Start and Start-Up procedures in the Installation, Operation, and Maintenance manual). If the application requires different settings, turn to the listed page beside the function, press the designated function menu key, then press and hold the NEXT or PREVIOUS key until its screen appears on the LCD. Once the proper screen appears, simply follow the programming instructions given below the applicable screen in this manual.

Note: *Record any changes made to the factory-preset values in the corresponding space provided.*

Table 3. Factory presents

Adjustable Function	Factory Preset	Changed To	Reference Page
Control Parameters			
Default system mode	Auto		p. 22
Demand limit definition for cooling	None		p. 23
Demand limit definition for heating	None		p. 23
Economizer minimum position (w/o IGV or VFD)*	15%		p. 37
Economizer minimum position with IGV @ 0%*	15%		p. 37
Economizer minimum position with IGV @ 100%*	10%		p. 37
Morning warm-up type	Full		p. 23
Power-up start time delay	0 seconds		p. 23
Supply air low limit*	50 °F		p. 37
Supply air temperature deadband for cooling*	8 °F		p. 36
Supply air temperature deadband for heating*	4 °F		p. 36
Supply air temperature O/A reset start temp cooling	90 °F		p. 24
Supply air temperature O/A reset end temp cooling	70 °F		p. 24
Supply air temperature O/A reset start temp heating	10 °F		p. 24
Supply air temperature O/A reset end temp heating	60 °F		p. 24
Supply air temperature reset type cooling	none		p. 24
Supply air temperature reset type heating	none		p. 24
Supply air temperature zone reset start temp cooling	72 °F		p. 24
Supply air temperature zone reset end temp cooling	69 °F		p. 24
Supply air temperature zone reset start temp heating	65 °F		p. 24
Supply air temperature zone reset end temp heating	68 °F		p. 24
Supply air temperature reset max. amount cooling	5 °F		p. 24
Supply air temperature reset max. amount heating	10 °F		p. 24
Unit Address	1		p. 22
Unit Control	Local		p. 22

Table 3. Factory presents (continued)

Adjustable Function	Factory Preset	Changed To	Reference Page
Default Setpoint Setups			
Daytime warmup - initiate	67 °F		p. 36
Daytime warmup - terminate	71 °F		p. 36
Low ambient compressor lockout (std. units)	50 °F		p. 38
Supply air temp - cooling	55 °F		p. 36
Supply air temp - heating	100 °F		p. 36
Unoccupied zone time - cool	85 °F		p. 36
Unoccupied zone temp - heat	60 °F		p. 37
Unoccupied zone temp - MWU	72 °F		p. 37
Function (Enable/Disable) Setups			
Compressor lead/lag	Disable		p. 23
Daytime warmup	Disable		p. 22
Morning warmup	Enable		p. 23
Supply air tempering	Disable		p. 23
Unoccupied economizer	Enable		p. 25
Unoccupied heating	Enable		p. 23
Unoccupied mechanical cooling	Enable		p. 23
Module Defaults			
GBAS input/output assignments			
GBAS input/output	not assigned		p. 29
Information format			
Text displays	English		p. 22
Unit displays	English		p. 22
Reference Enthalpy	25 btu/lb.		p. 37
RTM alarm output assignments	any active diagnostic		p. 30
Sensor source selection for:			
Daytime warmup	RTM zone temp		p. 27
Monitor Specified Temp. Input	RTM zone temp		p. 27
Morning warmup	RTM zone temp		p. 27
Unoccupied zone control	RTM zone temp		p. 27
Zone reset	RTM aux temp		p. 27
Setpoint source selection for:			
Cooling supply air temp	default		p. 38
Heating supply air temp	default		p. 38
Morning warmup	default		p. 38
Unoccupied zone cooling	default		p. 38
Unoccupied zone heating	default		p. 38
Actuator setup:			
Direct/reverse action	direct acting		p. 32 - p. 35
Max stroke time	150 seconds		p. 32 - p. 35
Max voltage	10 VDC		p. 32 - p. 35
Min voltage	2 VDC		p. 32 - p. 35
Coil frost cutout temperature	30 °F		p. 23
Condenser temperature control band:			

Table 3. Factory presents (continued)

Adjustable Function	Factory Preset	Changed To	Reference Page
Temporary low limit suppression	10 °F		p. 26
Upper limit	120 °F		p. 26
Low limit	80 °F		p. 26
Condenser temperature:			
Efficiency check point	105 °F		p. 26
Low ambient control point	90 °F		p. 26
Control algorithm tuning parameters	N/A		p. 35
Max IGV position occupied	100%		p. 24
Temperature input offset for:			
Heat morning warmup	0 °F		p. 31
Return air	0 °F		p. 31
RTM zone temperature	0 °F		p. 31
RTM aux. temperature	0 °F		p. 31
Outdoor air	0 °F		p. 31
Ventilation override definitions	N/A		p. 28

Password Protected Screens

Some of the operating displays on the Human Interface LCD screens and require a password to change. The following screens display the various programming sections that require a password in order to view or to modify the preset operating parameters. The password for each screen is a different series of + (Plus) or - (Minus) key strokes in a predefined sequence. Shown below are the password protected screens, and the passwords for accessing them.

The following screens display the various programming sections that require a specific PASSWORD to be entered by a qualified operator in order to modify the operating parameters. The following screen will appear if the PASSWORD is not entered within approximately 15 seconds.

Password Entry Time Limit Exceeded

1. Press the NEXT key until the following screen is displayed.

Configuration is Password Protected
Please Enter Password: _____

1. Press the + or - keys in this sequence (+ - - -) to access this restricted screen.
2. Press the ENTER key to confirm the password and enter the menu.
3. Press the NEXT key until the following screen is displayed.

Ventilation Override Mode _____
Enter Password to Lock Definition:

1. Press the + or - keys in this sequence (+ - - +) to lock each VO Mode.
2. Press the ENTER key to confirm the password and Lock the definitions.
3. Press the NEXT key until the following screen is displayed.

Diagnostic Reset is Password Protected
Please Enter Password: _____

1. Press the + or - keys in this sequence (- + +) to access this restricted screen.
2. Press the ENTER key to confirm the password and Lock the definitions.
3. Press the NEXT key until the following screen is displayed.

Diagnostic Log is Password Protected
Please Enter Password: _____

1. Press the + or - keys in this sequence (- + + -) to access this restricted screen.
2. Press the ENTER key to confirm the password and Lock the definitions.
3. Press the NEXT key until the following screen is displayed.

Programming Status

STATUS Menu

The STATUS menu is used to view various operating conditions such as temperatures and humidity levels. It's used to view unit component status such as fan, compressor, heater, and economizer operation, as well as SETPOINT status.

The screens shown in this section are for example only. Pressing the + (Plus) key while viewing any of the status display screens will add that screen to the Custom menu. When a status screen is displayed for 30 minutes without a key being pressed, the LCD screen will revert to the general operating status display. If this happens, press the STATUS key again to return to the status menu. The following are examples of status screens that may be viewed by pressing the STATUS key.

Note: *Many of the screens displayed in this section are applicable only for the options that are installed in the unit and may not be visible on your unit.*

Press the STATUS key to begin viewing the status screens.

Note: *The range for all temperature inputs is –40 to 200 F. "ERR" will appear if the temperature is out of range.*

VAV OA FLOW	**350.0 CCFM**	**SUPPLY FAN ON**
OCCUPIED	**OA DMPR 0%**	**DIAGNOSTICS**

1. Press the NEXT key until the following screen is displayed.

General System Status Submenu
Press ENTER to View Data in this Submenu

1. Pressing the NEXT key will bypass this section.

RTM Supply Fan Relay:	**OFF**
RTM Supply Airflow Proving:	**FLOW**

Possible Values: Fan = On, Off
Airflow = Flow, No Flow

1. Pressing the NEXT key will scroll forward through the screens.
2. Pressing the PREVIOUS key will scroll backwards to view the previously displayed screen.
3. Press the + (Plus) key while viewing any screen to add that screen to the custom menu. Refer to the custom menu for the creation and maintenance of customized menus.
4. Press the NEXT key until the following screen is displayed. (if applicable)

IGV/VFD Cmd	**30%**
Active Supply Air Pressure	**2.0 IWC**

Used With: All units with IGV/VFD.
Possible Values: Increasing to: 0-100%; Decreasing 100-0%

1. Press the NEXT key until the following screen is displayed.

OR

Active Supply Air Pressure	**2.0 IWC**

Used With: Units without IGV/VFD.

1. Press the NEXT key until the following screen is displayed.

OR

WSM Water Pump Relay Status:	**OFF**
Active Water Flow Indication	**Flow**

Used With: Water-Cooled units only
Possible Values: Pump Status = Off, On Waterflow = Flow, No Flow

1. Press the NEXT key until the following screen is displayed.

Electric Heat	**ENABLED**	
Stage 1 OFF	**Stage 2 OFF**	**Stage 3 OFF**

Used With: Units with Electric Heat
Possible Values: ON, OFF

1. Press the NEXT key until the following screen is displayed. (if applicable)

Note: *Two or three stage electric heat is a field-provided option*

Hydronic Heat:	**ENABLED**	**0%**
Low Air Temp Limit	**OK**	

Used With: Units with hydronic heat only
Possible Values: Hydronic Heat = Enabled, Disabled; Valve position = 0-100% open; Low temp air = OK, tripped

1. Press the NEXT key until the following screen is displayed.

Active Min OA Flow Setpoint	**342.0 CCFM**
OA Flow 350.0 CCFM	**OA Damper Pos 0%**

1. Press the NEXT key until the following screen is displayed. (If applicable)

Used With: All units VCM module and CO_2 reset enabled
Possible Values: Unit Airflow = 0 to maximum unit airflow

Active Min OA Flow Setpoint	**342.0 CCFM**
CO_2 Level 1512 PPM	**OA Damper Pos 0%**

1. Press the NEXT key until the following screen is displayed. (If applicable)

Used With: All units VCM module or Traq™ damper option only
Possible Values: Unit Airflow = 0 to maximum unit airflow

OA Preheat Output Control	**ON**

1. Press the NEXT key until the following screen is displayed. (If applicable)

Used With: All units VCM module and preheat enabled
Possible Values: Unit Airflow = 0 to maximum unit airflow

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.
2. Press PREVIOUS to page back through the submenu.

Compressor Status Submenu
Press ENTER to View Data in This Submenu

1. Pressing the NEXT key will display the following screen.

Compressor Relay K11	**OFF**
Enabled	

1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: K11: ON, OFF, LOCKED, Disabled, Enabled
Disabled by: Compressor protection, Frost protection, contactor failure, Tracer Summit® lockout, low pressure cutout, minimum off time, bad cond temp sensor, low ambient lockout, demand limit, ventilation override, low ent cond water temp.

Compressor Relay K12	**OFF**
Enabled	

Used With: Units with manifolded refrigerant circuits
Possible Values: K11: ON, OFF, LOCKED, Disabled, Enabled

Note: *On models SCWF/SIWF and SCRF/SIRF units, K12 is the "B" compressor on units with manifolded refrigerant circuits and "C" compressor on all units with independent refrigerant circuits. Check unit model number, digit 5 to determine which type circuit the unit has.*

1. Pressing the NEXT key will scroll forward through the screens.

Compressor Relay K3	**OFF**
Enabled	

Used With: Units with independent refrigerant circuits.
Possible Values: K3 = ON, OFF, LOCKED, Enabled, Disabled

Note: *On models SCWF/SIWF, 35-80 tons, K3 is the "B" compressor.*

1. Pressing the NEXT key will scroll forward through the screens.

Compressor Relay K4	**OFF**
Enabled	

1. Pressing the NEXT key will scroll forward through the screens.

Used With: On model SCWF/SCIF, 60-80 tons units
Possible Values: K4 = ON, OFF, LOCKED, Disabled, Enabled
Disabled by: Compressor protection, Frost protection, contactor failure, Tracer Summit® lockout, low pressure cutout, minimum off time, bad cond temp sensor, low ambient lockout, demand limit, ventilation override, low ent cond water temp.

Active Outside Air Temperature	**86.0 F**
Low Ambient Comp Lockout Temp:	**32 F**

1. Pressing the NEXT key will scroll forward through the screens.

Possible Lockout Values: Lockout Temperature = -20 - 80 F

WSM Ent Cond Water Temp Input	**65.2 F**
Low Water Temp Compressor Lockout	**34 F**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: All water-cooled units only.
Possible Lockout Values: Lockout Temperature = 0 - 99 F

Compressor Module Ckt 1	
Evap Temp 75.0 F	**Sat Cond Temp 81.0 F**

1. Press the NEXT key until the following screen is displayed. (if applicable)

Compressor Module Ckt 2	
Evap Temp 72.0 F	**Sat Cond Temp 97. 0F**

1. Press the NEXT key until the following screen is displayed.

Compressor Module Ckt 3	
Evap Temp 72.0 F	**Sat Cond Temp 97 .0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All SCWF/SIWF 35-80 ton units only.

Compressor Module Ckt 4	
Evap Temp 72.0 F	**Sat Cond Temp 97 .0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All SCWF/SIWF 60-80 ton units only.

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key until the following screen is displayed.

Economizer Status Submenu
Press ENTER to View Data in This Submenu

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a waterside or airside economizer only.

Water Economizing: DISABLED	
Outside Air Damper Pos:	**10%**

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a waterside economizer only.
Possible Values: Economizer = Disable, enable; Water econ position - opening to/closing to 0-100%

WSM Mixed Air Temperature:	**68 F**
WSM Entering Water Temperature:	**60 F**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with a waterside economizer or condenser only.

Water Econ Bpass Pos:	**10%**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with a waterside economizer and condenser only.

Air Economizing: DISABLED	
Outside Air Damper Pos:	**0%**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with an airside economizer only.
Possible Values: Economizer = Disable, enable; Outside air = opening to/closing to 0-100%

Active Outside Air Enthalpy	**12.0 BTU/LB**
ECEM Return Air Enthalpy	**34.0 BTU/LB**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with an airside economizer and comparative enthalpy only.
Possible Values: 10-99 BTU/LB

Active Outside Air Temperature	**86.0 F**
ECEM Return Air Temperature	**78.0 F0**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with an airside economizer only.

Active Outside Air Humidity	**30%**
ECEM Return Air Humidity	**62%**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with an airside economizer only.
Possible Values: 0-100%

End of Submenu (NEXT) to Enter SETUP

1. Pressing the NEXT key will scroll forward through the screens.

Controlling Setpoint Status Submenu
Press ENTER to View Data in This Submenu

1. Pressing the NEXT key will scroll forward through the screens.

Active Supply Air Cooling STP From
HI (KEY PAD) SETPOINT MENU Is 55 F

1. Pressing the NEXT key will scroll forward through the screens.

Used With: All VAV units only.
Possible Values: HI (Keypad) Setpoint Menu, Zone Sensor Setpoint Input, GBAS 0-5 VDC Module, ICS (Tracer Summit™)

Active Supply Air Heating STP From
HI (KEY PAD) SETPOINT MENU Is 100 F

1. Pressing the NEXT key will scroll forward through the screens.

Used With: All VAV units only.
Possible Values: HI (Keypad) Setpoint Menu, Zone Sensor Setpoint Input, GBAS 0-5 VDC Module, ICS (Tracer Summit™)

Active Daytime Warmup Setpoints
Initiate: 67 F is Terminate 71 F

1. Press the NEXT key until the following screen is displayed.

Used With: Units with hydronic, electric, or external heat only.
Possible Values: HI (Keypad) Setpoint Menu

Active Occupied Zone Cooling STP From
RTM ZONE TEMP INPUT is 74 F

1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: HI (Keypad) Setpoint Menu, Zone Sensor Setpoint Input, NSB Zone Sensor Setpoint Input, GBAS 0-5 VDC Module, ICS (Tracer Summit™)

Active Occupied Zone Cooling STP From
RTM ZONE TEMP INPUT is 100 F

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with hydronic, electric, or external heat with daytime warmup enabled only).
Possible Values: HI (Keypad) Setpoint Menu, Zone Sensor Setpoint Input, NSB Zone Sensor Setpoint Input, GBAS 0-5 VDC Module, ICS (Tracer Summit™)

Active Unoccupied Zone Cooling STP From
RTM ZONE TEMP INPUT is 85 F

1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: HI (Keypad) Setpoint Menu, Zone Sensor Setpoint Input, NSB Zone Sensor Setpoint Input, GBAS 0-5 VDC Module, ICS (Tracer Summit™)

Active Unoccupied Zone Heating STP From
RTM ZONE TEMP INPUT is 60 F

1. Pressing the NEXT key will bypass this section.

Used With: Units with hydronic, electric, or external heat.
Possible Values: HI (Keypad) Setpoint Menu, Zone Sensor Setpoint Input, NSB Zone Sensor Setpoint Input, GBAS 0-5 VDC Module, ICS (Tracer Summit™)
Setpoint Range: 50-90 F

Active Morning Warmup Setpoint From
HI (KEYPAD) SETPOINT MENU is 72 F

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with hydronic, electric, or external heat only.
Possible Values: HI (Keypad) Setpoint Menu, Zone Sensor Setpoint Input, NSB Zone Sensor Setpoint Input, GBAS 0-5 VDC Module, ICS (Tracer Summit™)
Setpoint Range: 50-90 F

Programming Status

Active Min OA Flow Setpoint from	
REMOTE MIN POS POT INPUT	342.0 CFM

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with VCM module only
Possible Values: HI (Keypad) Setpoint Menu, GBAS 0-5 VDC Module
Setpoint Range: 0 to max unit airflow

Active Supply Air Pressure STP From	
HI (KEYPAD SETPOINT MENU) is	2.0 IWC

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with IGV or VFD only.
Possible Values: HI (Keypad) Setpoint Menu, GBAS Module

Active Supply Air Pressure Setpoints	
Hi Limit: 40 IWC	Deadband: 0.5 IWC

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with IGV or VFD only.
Possible Values: High Limit = 1.6-4.7 IWC; Deadband = 0.1-2.0 IWC

End of Submenu (NEXT) to Enter SETUP

1. Pressing the NEXT key will scroll forward through the screens.

Controlling Sensor Status Submenu Press ENTER to View Data in This Submenu

1. Pressing the NEXT key will scroll forward through the screens.

Active Supply Air Heating Temp Sensor Input From	
RTM ZONE TEMP INPUT	is 50.0 F

1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: RTM Supply Air Temp Input, ICS (Tracer Summit™)

Active Daytime WU Temp Sensor Input From	
RTM ZONE TEMP INPUT	is 82.0 F

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with Electric, Hydronic or External Heat installed.
Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)
Sensor Range: -40 to 200 F

Active Occupied Zone Temp Sensor Input From	
HI (KEYPAD) SETPOINT MENU	Is 90.0 F

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with Electric, Hydronic or External Heat with DWU installed.
Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)
Sensor Range: -40 to 200 F

Active Unocc Zone Temp Sensor Input From	
RTM ZONE TEMP INPUT	is 75.0 F

1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)
Sensor Range: -40 to 200 F

Active Morning WU Temp Sensor Input From	
RTM ZONE TEMP INPUT	is 82.0 F

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with Electric, Hydronic or External Heat with MWU installed.
Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)
Sensor Range: -40 to 200 F

Active Zone Reset Sensor Input From	
RTM ZONE TEMP INPUT	is 82.0 F

1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)
Sensor Range: -40 to 200 F

Active OA Temperature Sensor Input From	
RTM OUTSIDE AIR TEMP INPUT	is 86.0 F

1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: RTM Outside Air Temp Input, ICS (Tracer Summit™)

Active Outside Air Humidity Sensor Input From	
OA HUMIDITY SENSOR INPUT	Is 30%

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with an airside economizer.
Possible Values: O/A Humidity Sensor Input, ICS (Tracer Summit™)
Sensor Range: 0 - 100%

Active Supply Air Press Sensor Input From	
RTM SA PRESSURE INPUT is	2.1 IWC

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with IGV, VFD or with the SAP sensor enabled
Possible Values: RTM SA PRessure Input, ICS (Tracer Summit™)

Temp Sensor Input Being Monitored	
RTM ZONE TEMP INPUT is	82.0 F

1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)
Sensor Range: -40 to 200 F

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key until the following screen is displayed. (if applicable)

Temperature Input Status Submenu
Press ENTER to View Data in This Submenu

1. Pressing the NEXT key will scroll forward through the screens.

Temp Meausured By Sensor Connected To	
RTM ZONE TEMP INPUT	82.0 F

1. Press the NEXT key until the following screen is displayed. (if applicable)

Temp Meausured By Sensor Connected To	
RTM SUPPLY AIR TEMP INPUT	50.0 F

1. Press the NEXT key until the following screen is displayed. (if applicable)

Temp Measured By Sensor Connected To	
NSB Panel Temp Sensor Input	79.5 F

1. Press the NEXT key until the following screen is displayed. (if applicable)

Used With: Units with NSB zone sensor installed.

Temp Measured By Sensor Connected To	
RTM AUX TEMP INPUT	62.0 F

1. Press the NEXT key until the following screen is displayed.

Temp Measured By Sensor Connected To	
RTM OUTSIDE AIR TEMP INPUT	86.0 F

1. Press the NEXT key until the following screen is displayed.

Temp Measured By Sensor Connected To	
HEAT MODULE AUX TEMP INPUT	82.0 F

1. Press the NEXT key until the following screen is displayed. (if applicable)

Used With: Units with hydronic, electric, or external heat only

Temp Measured By Sensor Connected To	
ECEM RETURN AIR TEMP INPUT	78.0 F

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a VCM and OA preheater enabled.

Temp Measured By Sensor Connected To WSM ENT WATER TEMP INPUT	**60.1 F**

1. Press the NEXT key until the following screen is displayed.

Used With: On water-cooled units only.

Temp Measured By Sensor Connected To WSM MIXED AIR TEMP INPUT	**51.7 F**

1. Press the NEXT key until the following screen is displayed.(if applicable)

Used With: On water-cooled units only.

Temp Measured By Sensor Connected To WSM ENT COND WATER TEMP INPUT	**64.9 F**

1. Press the NEXT key until the following screen is displayed. (if applicable)

Used With: On water-cooled units only.

Temp Measured By Sensor Connected To VCM MODULE AUX TEMP INPUT	**50.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a VCM installed and O/A preheater enabled.

Compressor Module Ckt 1		
Evap Temp 75.0	**Sat Cond Temp**	**81.0 F**

1. Pressing the NEXT key will scroll forward through the screens.

Compressor Module Ckt 2		
Evap Temp 72.0	**Sat Cond Temp**	**87.0 F**

1. Pressing the NEXT key will scroll forward through the screens.

Compressor Module Ckt 3		
Evap Temp 72.0	**Sat Cond Temp**	**87.0 F**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: SCWF/SIWF 42-80 tons or SCRF/SIRF 50-60 tons only.

Compressor Module Ckt 4		
Evap Temp 72.0	**Sat Cond Temp**	**87.0 F**

Used With: SCWF/SIWF 65-80 tons.

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key until the following screen is displayed.

Misc Input Status Submenu **Press ENTER to View Data in This Submenu**

1. Press the NEXT key until the following screen is displayed. (if applicable)

RTM Supply Airflow Proving Inut:	**FLOW**

1. Press the NEXT key until the following screen is displayed.

Possible Values: Flow, No Flow

RTM Remote Min Position Pot Input	**0%**

1. Press the NEXT key until the following screen is displayed. (if applicable)

Used With: Units when minimum position pot is assigned to function.
Possible Values: 0-100%

RTM Supply Air Pressure Input	**2.1 IWC**

1. Press the NEXT key until the following screen is displayed.

Used With: Units with IGV or VFD, or units without IGV or VFD and supply air pressure is present.

Active Outside Air Humidity	**30%**

Used With: Units with an airside economizer only

1. Press the NEXT key until the following screen is displayed. (if applicable)

Active Outside Air Humidity	**30%**
ECEM Return Air Humidity	**62%**

Used With: Units with an airside economizer and comparative enthalpy only.
Possible Values: 0-100%

1. Press the NEXT key until the following screen is displayed.

VCM Outside Air Flow Input	**350.0 CCFM**

Used With: Units with VCM.
Possible Values: 0 to max unit airflow

1. Press the NEXT key until the following screen is displayed.

VCM CO_2 Level Input	**1512 PPM**

Used With: Units with VCM installed and CO_2 reset enabled.
Possible Values: 0-2000 PPM

1. Press the NEXT key until the following screen is displayed.

WSM Water Flow Switch Input	**Flow**

Used With: Water-cooled units with a water flow switch installed.
Possible Values: Flow, No Flow

1. Press the NEXT key until the following screen is displayed. (if applicable)

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key until the following screen is displayed.

GBAS 0-5VDC Module Staus Submenu
Press ENTER to View Data in This Submenu

Used With: Units with GBAS module

1. Press the NEXT key until the following screen is displayed.

GBAS (0-5VDC)	**Module Input 1 0.00 VDC**
Assignment:	**Not Assigned**

Used With: Units with GBAS module.
Possible Values: The inputs 1,2,3 and 4 may be assigned to: Occ Zone Cooling Setpoint, Occ Zone Heating Setpoint , Unocc Zone Cooling Setpoint, Unocc Zone Heating Setpoint, Space Static Pressure Setpoint, Supply Air Static Pressure Setpoint, Min O/A Flow Setpoint, Not Assigned

1. Press the NEXT key to display GBAS 0-5 VDC inputs 2, 3, and 4.
2. Press the NEXT key until the following screen is displayed.

GBAS (0-5VDC) Demand Limit Input Status
OPEN

Used With: Units with GBAS module.
Possible Values: Open, Closed

1. Press the NEXT key until the following screen is displayed. (if applicable)

GBAS (0-5VDC) Module Relay Output Status	
Output 1	**OFF**

Used With: Units with GBAS module.
Possible Values: Open, Closed

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Programming SETUP

After the unit is installed, the control module must be programmed with certain SETUP information in order to operate and function properly. The data necessary for unit operation will vary depending on certain factors such as unit size, type, and installed options.

This section of the manual provides step by step instructions for programming this information. Also provided are instructions for checking unit operating status, accessing and clearing diagnostics, and performing service tests.

Some of the displays shown in this manual may not appear on the Human Interface (HI) LCD screen during programming. Only the applicable screens for the specific unit options and operating parameters will be displayed.

Ignore the steps that do not apply to your unit and application, and move on to the next applicable set of instructions in the manual. Continue this process until all applicable screens are programmed with the required information.

SETUP Menu

The SETUP menu is used to input initial operating information such as control parameters, SETPOINT source selection, sensor source selections, ventilation override definitions, functions enable/disable, status, text display (language), temperature display (C or F), and system tuning parameters. When a SETUP screen is displayed for 30 minutes without a key being pressed, the LCD screen will revert to the appropriate power-up display. If this happens, press the SETUP key again to return to the SETUP menu.

Note: *Many of the screens displayed in this section are applicable only for the options that are installed in the unit and may not be visible on your unit.*

Press the SETUP key to begin viewing or modifying the SETUP screens.

If a screen is not visible on the Unit Human Interface Module, refer to the "Used With" information listed to the right of each screen in this book.

Follow this procedure when viewing a screen that requires modification:

1. Press the + or - key until the proper value displays.
2. Press the ENTER key to confirm your choice.
3. Press the NEXT key to advance the cursor.
4. Repeat steps 1 and 2 if there are addtional values on the same screen that require changing.

SETUP Menu Screens

Press the SETUP key to display the following screens.

Display Text in:	**ENGLISH LANGUAGE**
Display Units Using:	**ENGLISH NOTATION**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: Text and Units: ENGLISH Language, ENGLISH Notation
Possible Values: Text: ENGLISH, FRENCH, SPANISH; Units: ENGLISH NOTATION, SI NOTATION

Unit Control:	**LOCAL**
Unit Address:	**31**

1. Pressing the NEXT key will bypass this section.

Used With: Units with TCI, LCI or BCI module
Factory Presets: Control = Local, Address = 1 (only shown if TCI installed)
Possible Values: Unit Control = Local, BAS/ NETWORK, Unit address= 0-31 (only shown if TCI installed)

General Unit Functions Setup Submenu
Press ENTER to Review or Adjust

1. Pressing the NEXT key will bypass this section.

Supply Fan VFD Mode:	**BYPASS**

1. Pressing the NEXT key will bypass this section.

Used With: Units with VFD and bypass
Factory Presets: Mode = Normal, Address = 1
Possible Values: Mode = Normal, Bypass

If Remote Panel Mode Input Not Present:
System Mode: AUTO

1. Press the NEXT key until the following screen is displayed (if applicable).

Possible Values: System Mode = OFF/AUTO

Daytime Warmup Function:	**DISABLED**

1. Press the NEXT key until the following screen is displayed.

Factory Preset: Disabled
Possible Values: Daytime Warm up Function: ENABLED, DISABLED

Morning Warmup Function: ENABLED
Morning Warmup Type: FULL CAPACITY

1. Press the NEXT key until the following screen is displayed (if applicable).

Used With: Units when Electric, or Hydronic Heat is installed.
Factory Presets: Function = Enabled; MWU Type = Full Capacity
Possible Values: Function = Enabled, Disabled; MWU Type = Full Capacity, Cycling Capcity

Supply Air Tempering Function: DISABLED
Warm Up Outside Air Used For Ventilation

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Hydronic Heat is installed
Factory Preset: Function = Disabled
Possible Values: Function = Enabled, Disabled

Unocc Mech Cooling Function: ENABLED

OR

Unocc Mech Cooling Function: ENABLED
Unocc Heating Function: ENABLED

1. Press the NEXT key until the following screen is displayed (if applicable).

Used With: Cooling-only units
Factory Preset: Cooling and Heating Function = Enabled
Possible Values: Cooling and Heating Function = Enabled, Disabled

Used With: All Units with electric, hydronic, or external heat is installed
Factory Presets: Cooling & Heating =Enabled
Possible Values: Cooling & Heating = Enabled, Disabled

OA Preheater Output Control: ENABLED
Activate If Preheat Temp Below SETPOINT

1. Press the NEXT key until the following screen is displayed

Used With: Units with VCM installed
Factory Preset: Control = Disabled
Possible Values: Control = Enabled, Disabled

Demand Limit Definition:
Cooling: 100%

1. Press the NEXT key until the following screen is displayed.

Factory Presets: None
Possible Values: Cooling = None, 50 or 100%

Demand Limit Definition:
Cooling: 100% Heating: 100%

1. Press the NEXT key until the following screen is displayed.

Used With: Units Electric or Hydronic heat.
Factory Presets: None
Possible Values: Cooling/Heating: None, 50 or 100%

Compressor Lead/Lag Function: DISABLED
Vary Staging Order To Distribute Runtime

1. Press the NEXT key until the following screen is displayed.

Factory Preset: Function = Disabled
Possible Values: Function = Enabled, Disabled

Reduce Multi-Unit Startup Power Demand
After Power-Up, Delay Unit Start: 0 Sec

1. Press the NEXT key until the following screen is displayed (if applicable).

Factory Preset: Start = 0 Seconds
Possible Values: Start = 0-255 Seconds

Coil Frost Cutout Temperature: Shut off
Compressors If Evap Temp Is Below: 30 F

1. Press the NEXT key until the following screen is displayed.

Factory Preset: 30 F
Possible Values: 25 F to 35 F

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

VAV Control Functions Submenu
Press ENTER to Review or Adjust

1. Press the NEXT key until the following screen is displayed.

Supply Air Temp Reset Type:

Cooling: ZONE

1. Press the NEXT key until the following screen is displayed.

Used With: Units without heat
Factory Presets: None
Possible Values: Cooling = None, Zone, OA

Supply Air Temp Reset Type:

Cooling: ZONE **Heating: ZONE**

1. Press the NEXT key until the following screen is displayed.

Used With: Units with hydronic heat
Factory Presets : None
Possible Values: Cool/Heat = None, Zone, OA

Supply Air Temp Zone Reset For Cooling:

Start Temp: 72 F **End Temp: 69 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Units when Zone Cooling Reset is selected.
Possible Values: Cooling/Heating = Zone, OA; Start Temp Zone = 209 OS = 70; End Temp Zone = 210 OA = 71

Supply Air Temp Outside Air Reset For Cooling:

Start Temp: 90 F **End Temp: 70 F**

1. Press the NEXT key until the following screen is displayed.

Possible Values: Cooling/Heating = Zone, OA; Start Temp Zone = 209 OS = 70; End Temp Zone = 210 OA = 71

Supply Air Temp Zone Reset For Cooling:

Maximum Amount of Reset Applied: 5 F

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Outside Air cooling reset is selected.
Possible Values: SAT = Zone, OA; Reset (Zone) = 72; Reset (OA) = 72

Supply Air Temp Outside Air Reset For Cooling:

Maximum Amount of Reset Applied: 5 F

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Outside Air cooling reset is selected.
Possible Values: SAT = Zone, OA; Reset (Zone) = 72; Reset (OA) = 72

Supply Air Temp Outside Air Reset For Heating:

Start Temp: 10 F **End Temp: 60 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Outside Air heating reset is selected.
Factory Presets: Start = 10 F; End = 60 F
Possible Values: Start OA Temp = 73 F; End OA Temp = 74 F

Supply Air Temp Zone Reset For Heating:

Start Temp: 65 F **End Temp: 68 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Units when Zone Air heating reset is selected.
Factory Presets: Start = 65 F, End = 68 F
Possible Values: Start OA Temp = 211; End OA Temp = 212

Supply Air Temp OA Reset For Heating:

Maximum Amount of Reset Applied: 10 F

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Zone Heating is selected.
Possible Values: SAT temp = Zone, OA; Zone Reset = 75; OA Reset = 75

Supply Air Temp Zone Reset For Heating:

Maximum Amount of Reset Applied: 10 F

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when outside heating is selected.
Possible Values: SAT temp = Zone, OA; Zone Reset = 75; OA Reset = 75

VAV Box Max Stroke Time: 0 Min

1. Press the NEXT key until the following screen is displayed.

Factory Presets: 6 Min
Possible Values: 0 to 10

Max Occupied IGV/VFD Command: 100%

1. Press the NEXT key until the following screen is displayed.

Used With: Units with IGV/VFD installed
Factory Presets: 100%
Possible Values: 0 to 100%

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Economizer Control Functions Submenu

Press ENTER to Review or Adjust

1. Pressing the NEXT key will bypass this section.

Used with: Units with an airside or waterside conomizer.
Possible Values: Waterside Econ, Airside Econ

Economizer Priority

Choose Which Economizer Stages Up First

1. Press the + or - key until the proper value is displayed.

Used with: Units with an airside or waterside conomizer
Possible Values: Waterside Econ, Airside Econ

Unocc Water Economizer Function: ENABLED

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a waterside economizer installed
Factory Presets: Enabled
Possible Values: Enabled, Disabled

Unocc Air Economizer Function: ENABLED

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when an airside economizer is installed
Factory Presets: Enabled
Possible Values: Enabled, Disabled

Disable WS Econ If Difference Between MA

Temp and Ent Water Temp Less Than 4.0 F

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a waterside economizer installed

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.
2. Press PREVIOUS to page back through the submenu.

Water Flow Control Setup Submenu

Press ENTER to Review or Adjust

1. Press the NEXT key until the following screen is displayed.

Used With: All units water-cooled and all units with waterside economizer installed

Periodic Water Purge Function: Enabled

Interval: 1Hr Duration: 1 Min

1. Press the NEXT key until the following screen is displayed.

Used With: All units water-cooled and all units with waterside economizer installed
Possible Values: Enabled, Disabled; Interval = 1-999 Hrs; Duration = 1-9 Min

Water-Flow Init Time Delay: 1 Min

Time to Establish Water Flow Before Diag

1. Press the NEXT key until the following screen is displayed.

Used With: All units water-cooled and all units with waterside economizer installed
Possible Values: 0-20 Min

Temp Stabilization Time Delay: 1 Min

Water Flow Time for Valid Temp Readings

1. Press the NEXT key until the following screen is displayed.

Used With: All units water-cooled and all units with waterside economizer installed
Possible Values: 0-20 Min

Head Pressure Control Inactive Min: 10%

Head Pressure Control Active Min: 30%

1. Pressing the NEXT key will bypass this section.

Used With: All units water-cooled units
Possible Values: 0-100%

Water Economizer Min Position: 10%

Used With: Units with a waterside economizer
Possible Values: 0-100%

1. Press the NEXT key until the following screen is displayed.

Select Water Flow Control Required For **Water Pump System: Variable/Minimize**

Used With: Water-cooled units with a waterside economizer installed.
Possible Values: Constant/Maximize; Variable/Minimize

1. Press the NEXT key until the following screen is displayed.

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key until the following screen is displayed

Head Pressure Ctrl Setup Submenu **Press Enter to Review or Adjust**

1. Press the NEXT key until the following screen is displayed

Cond Temp Control Point: 90 F

Used With: All water-cooled units.
Possible Values: 80 - 100 F

1. Press the NEXT key until the following screen is displayed

Preset Value to Min if Cond Water Below **Head Press Value Preset Temp Limit: 90 F**

Used With: All water-cooled units.
Possible Values: 80 - 100 F

1. Press the NEXT key until the following screen is displayed

Cond Temp Control Band **Lower Limit: 80 F Upper Limit: 120 F**

Used With: All air-cooled units
Factory Presets: Upper: 120 F, Lower: 80 F
Possible Values: Lower: 70 F to 90 F, Upper: 110 F to 130 F

1. Press the NEXT key until the following screen is displayed.

Cond Temp Control Band **Temporary Low Limit Suppression: 10 F**

Used With: All air-cooled units
Factory Presets: 10 F
Possible Values: 0 to 20 F

1. Press the NEXT key until the following screen is displayed.

Cond Temp **Efficiency Check Point: 105 F**

Used With: All air-cooled units
Factory Presets: 105 F
Possible Values: 95 to 115 F

1. Press the NEXT key until the following screen is displayed.

Cond Temp **Low Ambient Control Point: 90 F**

Used With: All air-cooled units
Factory Presets: 90 F
Possible Values: 80 F to 100 F

1. Press the NEXT key until the following screen is displayed.

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Sensor Source Selections Submenu

Sensor Source Selections Submenu **Press ENTER to Review or Adjust**

Used with: All Units.

1. Pressing the NEXT key will bypass this section.

For Daytime Warmup Temp Crtl, Use sensor Connected to: RTM ZONE TEMP INPUT

1. Press the NEXT key until the following screen is displayed.

Used With: Units with electric, Hydronic or External Heat installed.
Possible Values: RTM ZONE TEMP INPUT, NSB PANEL TEMP SENSOR INPUT, RTM AUX TEMP INPUT, HEAT MODULE AUX TEMP INPUT, ECEM RETURN AIR TEMP INPUT

For Occupied Zone Temp Ctrl, Use Sensor Connected To: RTM ZONE TEMP INPUT

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Preset: RTM ZONE TEMP INPUT
Possible Values: RTM ZONE TEMP INPUT, NSB PANEL TEMP SENSOR INPUT, RTM AUX TEMP INPUT, HEAT MODULE AUX TEMP INPUT, ECEM RETURN AIR TEMP INPUT

For Unoccupied Zone Temp Ctrl, Use Sensor Connected To: RTM ZONE TEMP INPUT

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Preset: RTM ZONE TEMP INPUT
Possible Values: RTM ZONE TEMP INPUT, NSB PANEL TEMP SENSOR INPUT, RTM AUX TEMP INPUT, HEAT MODULE AUX TEMP INPUT, ECEM RETURN AIR TEMP INPUT

For Morning Warmup Temp Control, Use Sensor Connected To: RTM ZONE TEMP INPUT

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Electric, Hydronic or External Heat is installed.
Factory Preset: RTM ZONE TEMP INPUT
Possible Values: RTM ZONE TEMP INPUT, NSB PANEL TEMP SENSOR INPUT, RTM AUX TEMP INPUT, HEAT MODULE AUX TEMP INPUT, ECEM RETURN AIR TEMP INPUT

For Zone Reset Function, Use Sensor Connected To: RTM ZONE TEMP INPUT

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: RTM Zone Temp, NSB Panel Temp Sensor Input, RTM Aux Temp Input, Heat Module Aux Temp Input, ECEM Return Air Temp Input

For Outside Air Preheat Ctrl, Use Sensor Connected To: VCM MODULE AUX TEMP INPUT

1. Press the NEXT key until the following screen is displayed.

Used With: Units only when Traq™ Dampers are installed
Possible Values: VCM Module Aux Temp Input; WSM Mixed Air Temp Input

Monitor Specific Temp Input, Use Sensor Connected To: RTM ZONE TEMP INPUT

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Preset: RTM ZONE TEMP INPUT
Possible Values: RTM ZONE TEMP INPUT, NSB PANEL TEMP SENSOR INPUT, RTM AUX TEMP INPUT, HEAT MODULE AUX TEMP INPUT, ECEM RETURN AIR TEMP INPUT, NO SENSOR SELECTED

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Outside Air Ventilation Setup

Outside Air Ventilation Setup Submenu Press ENTER to Review or Adjust

1. Pressing the NEXT key will bypass this section.

Used with: All Units when a VCM or airside economizer is installed

OA flow Compensation Function:	**DISABLED**
Use fixed OA Damper Minimum Position	

1. Press the NEXT key until the following screen is displayed.

Used with: All Units when an airside economizer and IGV or VFD is installed.
Possible Values: ENABLED, DISABLED Enabled 2nd line= "OA Damper Min Pos Depends on IGV/VFD Pos.; Disabled 2nd line= "Use Fixed OA Damper Minimum Position"

OA Flow CO_2 Reset Function:	**ENABLED**

1. Press the NEXT key until the following screen is displayed.

Used with: Units with a VCM
Possible Values: ENABLED, DISABLED

OA Flow CO_2 Reset Function:		**ENABLED**	
CO_2 Start: 800 PPM	**CO_2 Max:**	**1000 PPM**	

1. Press the NEXT key until the following screen is displayed.

Used with: Units with a VCM installed and CO_2 reset enabled.
Possible Values: ENABLED, DISABLED; CO2 Start = 0-1900 PPM; CO2 Max = 100-2000 PPM

TRAQ Damper Quantity:	**1**
TRAQ Damper Size	**28 Inches**

1. Press the NEXT key until the following screen is displayed.

Used with: All Units when an airside economizer with a Traq™ damper installed.
Possible Values: Quantity = 1-12; Size = 0, 13, 16, 20, 24, or 28

OA Flow Calibration Data			
Gain	**1.0**	**Offset**	**0.0 CCFM**

1. Press the NEXT key until the following screen is displayed.

Used with: Units with a VCM installed.
Factory Preset: Gain 1.0, Offset 0 CCFM
Possible Values: Gain= 0.5 to 1.5 (Default 1.0); Offset= -250 to 250 CCFM (Default 0 CFM)

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Ventilation Override Definitions

Ventilation Override Definitions
Press ENTER to Review or Adjust

1. Press the NEXT key until the following screen is displayed.

Used with: All Units when VOM is installed

Ventilation Override Definition	**Mode A**
Supply Fan	**ON**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when VOM and IGV or VFD is installed
Factory Presets: Refer to Definitions
Possible Values: On, OFF

Ventilation Override Definition	**Mode A**
Outside Air Dampers	**OPEN**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when VOM and an airside or waterside economizer is installed
Factory Presets: Refer to Definitions
Possible Values: OPEN/CLOSED

Ventilation Override Definition	**Mode A**
Heat	**OFF**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when VOM and electric or hydronic heat is installed
Factory Presets: Refer to Definitions
Possible Values: Off/In Control

Ventilation Override Definition	**Mode A**
VAV Box Relay	**DEENERGIZED**

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a VOM
Factory Presets: Refer to Definitions
Possible Values: ENERGIZED/DEENERGIZED

Ventilation Override Definition	**Mode A**
VCM Preheater State	**IN CONTROL**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when VOM is installed and OA preheater function is enabled
Factory Presets: Refer to Definitions
Possible Values: OFF, IN CONTROL

Ventilation Override Definition	**Mode A**
VO Relay	**ENERGIZED**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when VOM is installed
Factory Presets: Refer to Definitions
Possible Values: ENERGIZED/DEENERGIZED

Ventilation Override Definition	**Mode A**
Enter Password to Lock Definition:	

1. Press the NEXT key until the following screen is displayed.

Used With: Units a VOM
Factory Presets: Not Locked
Possible Values: + (Plus), -(Minus)

Note: *After locking a MODE (by entering the password), the display for that MODE becomes "Reporting" only and the definition can not be changed unless the Ventilation Override Module is replaced. If the password was entered, pressing the NEXT key will scroll through the previous screens to confirm the selected choices for each mode as follows:*

Ventilation Override	**Mode A**	**Is Locked**
Supply Fan		

Used With: All Units when VOM and VO mode is locked
Factory Presets: Refer to the Definitions
Possible Values: N/A

Ventilation Override	**Mode B**
Supply Fan	

1. Follow the preceding steps used to program MODE "A" to program MODE B", "C", "D", and "E" if modifications are needed. After all of the Ventilation Override Definitions have been programmed, pressing the NEXT key will advance to the following screen.

Used With: All Units
Factory Presets: Refer to the Definitions
Possible Values: ON, OFF

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key until the following screen is displayed.

GBAS Module I/O Assignments

GBAS 0 - 5 VDC Module I/O Assignments
Press ENTER to Review or Adjust

1. Press the NEXT key until the following screen is displayed.

Used with: All Units when GBAS 0-5 VDC is installed.

GBAS (0 - 5 VDC) Analog Input 1	**Assignment**
NOT ASSIGNED	

1. Press the + or - key until the proper selection is displayed for the number 1 assignment.
2. Press the ENTER key to confirm this choice. Only one input definition can be assigned to each input and they can not be duplicated.
3. Press the NEXT key to advance to the number 2 input assignment screen and repeat steps 1 & 2. Follow these steps for input assignments 3 and 4.
4. Press the NEXT key until the following screen is displayed.

Used with: All Units when GBAS is installed.
Factory Presets: Not Assigned
Possible Values: Not Assigned, Unoccupied Zone Cooling SETPOINT
Occupied Zone Heating SETPOINT
Unoccupied Zone Heating SETPOINT
Space Static Pressure SETPOINT, SA Static Pressure SETPOINT, Min OA Flow SETPOINT, Morning Warmup SETPOINT, Econ Dry Bulb Enable SETPOINT, Minimum Position SETPOINT, Occupied Dehumid SETPOINT, Unoccupied Dehumid SETPOINT, Supply Air Reheat SETPOINT, Occupied Humidification SETPOINT, Unoccupied Humidification SETPOINT

GBAS (0 - 5 VDC) Output 1	Alarm Assignments
Press ENTER to Review or Adjust	

1. Pressing the NEXT key will bypass this section.
2. Press the + or - key until the proper selection is displayed for the number 1 assignment. + (Plus) key will assign ALL Diagnostics and - (Minus) key will allow diagnostic selection.
3. Press the ENTER key to confirm this choice. If (Yes) was assigned to the Output assignment, the output 2 assignment screen will be displayed. Repeat step 1 for each of the remaining 4 Outputs. If (NO) was assigned, only one output assignment can be assigned to each output assignment and they can not be duplicated. Once the output diagnostics have been defined, press the NEXT key to advance to the number 2 output assignment screen and repeat steps 1 & 2.

Used With: All Units when GBAS is installed
Factory Presets:
Output 1 = Dirty Filters
Output 2 = Compressor Trip
Compressor Trip - Ckt 1
Compressor Trip - Ckt 2
Low Pressure Control Open
Low Pressure Control Open - Ckt 1
Low Pressure Control Open - Ckt 2
Comp Contactor Fail
Comp Contactor Fail - Ckt 1
Comp Contactor Fail - Ckt 2
Output 3 = Heat Fail
Output 4 = Supply Fan Failure
Output 5 = Any Active Diagnostic
Possible Values: Refer to the list of active diagnostics that can be assigned to each of the five (5) output definitions in the "Diagnostics Menu" section.

Note: *Assigning "Yes" to a GBAS output definition means that if the assigned diagnostic is present, the output assigned to it will be energized.*

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

RTM Alarm Output Diagnostic Assignment Screens

RTM Alarm Output Diagnostic Assignments
Press ENTER to Review or Adjust

1. Pressing the NEXT key will bypass this section.

Used with: All Units

Assign Diagnostic to Alarm Output?	
Any Active Diagnostic	(No)

1. Press the ENTER key then the NEXT key to display the possible diagnostics that may be assigned to the RTM alarm output definition.
2. Press the + (Plus) key to assign "Yes" to the output definition or - (Minus) key to assign "No" to the output definition.
3. Press the ENTER key to confirm each selection.

Used with: All Units
Factory Presets: Any Active Diagnostic
Possible Values: Refer to the list of active diagnostics that can be assigned to each GBAS output definition in the "Diagnostic Menu" section.

Note: *Assigning "yes" to an alarm output definition means that if the assigned diagnostic is present, the RTM alarm output will energize.*

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Temperature Input Calibration

The following five (5) Offset screens are used only if calibration of a sensor designated to perform the listed function is necessary.

Example: If the temperature sensor for Morning Warm Up (MWU) is checked and a difference between the actual measured room temperature and the corresponding measured sensor value is found, by programming the amount of error into the Temperature Input Offset for Morning Warm Up (MWU) Heat — The sensor can be calibrated.

To change offset values on a particular screen:

1. Press the plus or minus key until the correct value appears in the screen.
2. Press the ENTER key to confirm your choice. If you've made an error, press the CANCEL key to delete your entry.

To navigate to another screen:

1. Press the NEXT key to advance to the next screen, or

a. if no further changes are required and you want to exit back to view the unit operationg status, press the STATUS key once, or

b. if you want to remain in the temperature input calibrartion submenu, press the SETUP key once and it will return you to the beinning of that particular submenu, or

c. if you want to exit to another submenu in the SETUP menu, press the SETUP key twice. Then press the NEXT key to scroll through the SETUP sebmenu cho98ices, or

d. if you want to exit to another menu, such as CONFIGURATION, press that key once, then press the NEXT key to scoll through tose screens.

Calibration and Offset Submenu
Press ENTER to Review or Adjust

1. Pressing the NEXT key will bypass this section or press ENTER key to vbiew the following screens.

Used with: All Units

Temperature Calibration Offset For	
RTM Zone Temperature Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For	
RTM Aux Temperature Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For	
RTM Outside Air Temperature Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For	
Heat Module Aux Temp Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Electric, or Hydronic Heat is installed
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For	
ECEM Return Air Temperature Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when comparative enthalpy is installed
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For	
WSM Entering Water Temp Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Water-cooled units and /or units with waterside economizer is installed
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For	
WSM Mixed Air Temp Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Water-cooled units and /or units with waterside economizer is installed
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For	
WSM Ent Cond Water Temp Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Water-cooled units and /or units with waterside economizer is installed
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For	
Ckt 1 Sat Cond Temp Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Water-cooled units and /or units with waterside economizer is installed
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For	
Ckt 2 Sat Cond Temp Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Water-cooled units and /or units with waterside economizer is installed
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For	
Ckt 3 Sat Cond Temp Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Water-cooled units and /or units with waterside economizer is installed
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For	
Ckt 4 Sat Cond Temp Input	**0.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Water-cooled units and /or units with waterside economizer is installed
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Device Charatcteristic Setup Definitions

To change device characteristics values on a particular screen:

1. Press the plus or minus key until the correct value appears in the screen.
2. Press the ENTER key to confirm your choice. If you've made an error, press the CANCEL key to delete your entry.

To navigate to another screen:

1. Press the NEXT key to advance to the next screen or
   a. if no further changes are required and you want to exit back to view the unit operating status, press the STATUS key once, or
   b. if you want to remain in the Device Characteristics Setup Dfinitions submenu, press the SETUP key once and it will return you to the bginning of that particular submenu, or
   c. if you want to exit to another submenu in the SETUP menu, press the SETUP key twice. Then press the NEXT key to scroll through the SETUP choices, or
   d. if you want to exit to another menu, such as CONFIGUREATION, press that key once, then press the NEXT key to scroll through those screens.

Device Characteristic Setup Definitions
Press ENTER to review or Adjust

1. Pressing the NEXT key will bypass this section.

Used with: All Units

Actuator Setup	**OA Damper**
Max Stroke Time	**30 Sec**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when an airside economizer is installed.
Factory Presets: 150 Seconds
Possible Values: 1 - 255 Seconds

Actuator Setup	**OA Damper**
Min Voltage	**2.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when an airside economizer is installed.
Factory Presets: 2.0 VDC
Possible Values: 0.0 to 9.9 Volts DC

Actuator Setup	**OA Damper**
Max Voltage	**10.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when an airside economizer is installed.
Factory Presets: 10.0 VDC
Possible Values: 0.1 to 10.0 Volts DC

Actuator Setup	**OA Damper**
Direct/Reverse Act	**DIRECT ACTING**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when an airside economizer is installed.
Possible Values: DIRECT ACTING, REVERSE ACTING

Actuator Setup	**Water Economizer**
Max Stroke Time	**150 Sec**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when a waterside economizer is installed.
Factory Presets: 150 Sec
Possible Values: 1-255 Sec

Actuator Setup	**Water Economizer**
Min Voltage	**2.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when a waterside economizer is installed.
Factory Presets: 2.0 VDC
Possible Values: 0-10 VDC

Actuator Setup	**Water Economizer**
Max Voltage	**10.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when a waterside economizer is installed.
Factory Presets: 10.0 VDC
Possible Values: 0-10 VDC

Actuator Setup	**Water Economizer**
Direct/Reverse Acting	**Direct Acting**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when a waterside economizer is installed.
Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting

Actuator Setup	**Water Econ Bypass**
Max Stroke Time	**150 Sec**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when a waterside economizer is installed.
Factory Presets: 150 Sec
Possible Values: 1-255 Sec

Actuator Setup	**Water Econ Bypass**
Min Voltage	**2.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when a waterside economizer is installed.
Factory Presets: 2.0 VDC
Possible Values: 0-10 VDC

Actuator Setup	**Water Econ Bypass**
Max Voltage	**10.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when a waterside economizer is installed.
Factory Presets: 10.0 VDC
Possible Values: 0-10 VDC

Actuator Setup	**Water Econ Bypass**
Direct/Reverse Acting	**Direct Acting**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when a waterside economizer is installed.
Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting

Actuator Setup	**IGV/VFD Cmd**
Max Stroke Time	**150 Sec**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when IGV/VFD is installed
Factory Presets: 150 Sec
Possible Values: 1 - 255 Seconds

Actuator Setup	**IGV/VFD Cmd**
Min Voltage	**2.0 VDC**

Used With: All Units when IGV/VFD is installed
Factory Presets: 2.0 VDC
Possible Values: 0 to 10 VDC

Note: *Min. voltage should be set to 2.0 on units with IGV.*

1. Press the NEXT key until the following screen is displayed.

Actuator Setup	**IGV/VFD Cmd**
Max Voltage	**10.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when IGV/VFD is installed
Factory Presets: 10.0 VDC
Possible Values: 0 to 10.0 Volts DC

Actuator Setup	**IGV/VFD Cmd**
Direct/Reverse Act	**DIRECT ACTING**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when IGV/VFD is installed
Factory Presets: DIRECT ACTING
Possible Values: DIRECT ACTING, REVERSE ACTING

Actuator Setup	**Hydronic**
Max Stroke Time	**150 Sec**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Hydronic Heat is installed.
Factory Presets: 150 Seconds
Possible Values: 1 - 255 Seconds

Actuator Setup	**Hydronic**
Min Voltage	**2.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Hydronic Heat is installed.
Factory Presets: 2.0 VDC
Possible Values: 0.0 to 9.9 Volts DC

Actuator Setup	**Hydronic**
Max Voltage	**10.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Hydronic Heat is installed.
Factory Presets: 10.0 VDC
Possible Values: 0.1 to 10.0 Volts DC

Actuator Setup	**Hydronic**
Direct/Reverse Act	**DIRECT ACTING**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Hydronic Heat is installed.
Factory Presets: DIRECT ACTING
Possible Values: DIRECT ACTING, REVERSE ACTING

Actuator Setup	**Num 1 Low Ambient**
Max Stroke Time	**60 Sec**

1. Press the NEXT key until the following screen is displayed.

Used With: Air-cooled units low ambient damper installed.
Factory Presets: 60 Seconds
Possible Values: 1 - 255 Seconds

Actuator Setup	**Num 1 Low Ambient**
Min Voltage	**2.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: Air-cooled units low ambient damper installed.
Factory Presets: 2.0 VDC
Possible Values: 0.0 to 9.9 Volts DC

Actuator Setup	**Num 1 Low Ambient**
Max Voltage	**10.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: Air-cooled units low ambient damper installed.
Factory Presets: 10.0 VDC
Possible Values: 0.1 to 10.0 Volts DC

Actuator Setup	**Num 1 Low Ambient**
Direct/Reverse Act	**DIRECT ACTING**

1. Press the NEXT key until the following screen is displayed.

Used With: Air-cooled units low ambient damper installed.
Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting

Actuator Setup	**Num 2 Low Ambient**
Max Stroke Time	**60 Sec**

1. Press the NEXT key until the following screen is displayed.

Used With: Air-cooled units low ambient damper installed.
Factory Presets: 60 Seconds
Possible Values: 1 - 255 Seconds

Actuator Setup	**Num 2 Low Ambient**
Min Voltage	**2.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: Air-cooled units low ambient damper installed.
Factory Presets: 2.0 VDC
Possible Values: 0.0 to 9.9 Volts DC

Actuator Setup	**Num 2 Low Ambient**
Max Voltage	**10.0 VDC**

1. Press the NEXT key until the following screen is displayed.

Used With: Air-cooled units low ambient damper installed.
Factory Presets: 10.0 VDC
Possible Values: 0.1 to 10.0 Volts DC

Actuator Setup	**Num 2 Low Ambient**
Direct/Reverse Act	**DIRECT ACTING**

1. Press the NEXT key until the following screen is displayed.

Used With: Air-cooled units low ambient damper installed.
Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Control Algorithm Tuning Parameters

(Applicable to all units.)

Control Algorithm Tuning Parameters
Press ENTER to Review or Adjust

Note: *Contact the Trane Company before making any adjustment to these settings.*

1. Pressing the NEXT key will bypass this section.

End of Submenu (NEXT) to Enter SETUP

1. Press the NEXT key to leave the submenu and show following screen.

SETPOINT Menu

The SETPOINT menu is used to designate default zone temperature SETPOINTs, supply air and space pressure SETPOINTs, and low ambient compressor lockout SETPOINTs.

These SETPOINTs will be active (in use) for the "SETPOINT Source Selection" designated as "DEFAULT" for these inputs.

When a SETPOINT screen is displayed for 30 minutes without a key being pressed, the LCD screen will revert to the general operating status display. If this happens, press the SETPOINT key again to return to the SETPOINT menu.

Note: *Many of the screens displayed in this section are applicable only for the options that are installed in the unit and may not be visible on your unit.*

Press the SETPOINT key to begin viewing or modifying the unit SETPOINTs.

To change the sepoint values on a particular screen:

1. Press the plus or minus key until the correct value appears in the screen.
2. Press the ENTER key to confirm your choice. If you've made an error, press the CANCEL key to delete your entry.

To navigate to another screen:

1. Press the NEXT key to advance to the next screen, or
   a. if no further changes are required and you want to exit back to view the unit operating status, press the STATUS key once, or
   b. if you want to remain in the Setpoint submenu, press the SETPOINT key once and it will return you to the beginning of that particular submenu, or
   c. if you want to exit to another submenu in the in the SEPOINT menu, press the SETPOINT key twice. Then press the NEXT key to scroll through the SETPOINT submenu choices, or
   d. if you want to exit to another menu, such as CONFIGURATION, press that key once, then press the NEXT key toscroll through those screens.

Default Supply Air Temp SETPOINT
Cooling: 55 F

Used With: All Units
Factory Presets: 55 F
Possible Values: 40 F to 90 F

Default Supply Air Temp SETPOINTS	
Cooling: 67 F	**Heating: 71 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: Heating: 100 F
Possible Values: Cool: 40 F to 90 F, Heat: 40 F to 180 F

Supply Air Temperature Deadband
Cooling: 8.0 F

Used With: All Units
Factory Presets: 8.0 F
Possible Values: Cooling: 4 - 20 F

Supply Air Temperature Deadband	
Cooling: 8.0 F	**Heating: 4.0 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units with hydronic heat
Factory Presets: Cooling: 8 F, heat: 4 F
Possible Values: Cooling:4 F to 20 F, Heat: 2 F to 10 F

Default Daytime Warmup SETPOINTS	
Cooling: 67 F	**Terminate: 71 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All units with Hydronic, Electric, or External Heat installed.
Factory Presets: Heat = 71 F, Cool = 74 F
Possible Values: Heat = 50-90 F, Cool = 52-92 F

Note: *A minimum of 2° F is maintained between heating and cooling setpoints.*

When Economizer Cooling, Reduce Zone	
Temperature Cooling Setpoint By:	**1.5 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All units with Hydronic Heat installed.
Factory Presets: 1.5 F
Possible Values: 0.0-0.3 F

Default Unoccupied Zone Temp Setpoint(s)	
Cool	**85 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Cooling only units
Factory Presets: 85 F
Possible Values: Heat: 50 F to 90F

Default Unoccupied Zone Temp Setpoint(s)		
Cool: 85 F	**Heat: 60 F**	**Morn Warmup: 72 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Electric, Hydronic or External Heat is installed.
Factory Presets: Cool: 85 F, Heat: 60 F, Morning Warmup: 72 F
Possible Values: Cool: 52 F to 90F, Heat: 50 F to 88F, Morning Warmup: 50 F to 90 F.

Note: *Minimum difference of 2 degrees F maintained between Heating & Cooling SETPOINTS. Morning warmup cannot be lower than Heating SETPOINTS.*

Reference Enthalpy:	Enable Air econ
When OA Enthalpy is below:	**25 BTU/LB**

1. Press the NEXT key until the following screen is displayed.

Used With: Units when an airside economizer is installed.
Factory Presets: 25 BTU/LB
Possible Values: 19 to 28 BTU/LB

Supply Air Low Limit - Modulate Economizer	
Toward Min Pos if SA Temp below:	**50 F**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when an airside economizer is installed
Factory Presets: 50 F
Possible Values: 40 to 65 F

Default Design Min OA Damper Pos:	15%

1. Press the NEXT key until the following screen is displayed.

Used With: All units with an airside economizer installed.
Factory Presets: 15%
Possible Values: 0-100%

Default OA Damper Min Position:	15%
With IGV/VFD Command At Minimum	**(0%)**

1. Press the NEXT key until the following screen is displayed.

Used With: All units with an airside economizer, OA Damper and IGV/VFD or without an airside economizer, with IGV or VFD and a VCM.
Factory Presets: 15%
Possible Values: 0-100%

Default OA Damper Min Position:	10%
With IGV/VFD Command At Maximum	**(100%)**

1. Press the NEXT key until the following screen is displayed.

Used With: All units with an airside economizer, OA Damper and IGV/VFD or without an airside economizer, with IGV or VFD and a VCM.
Factory Presets: 10%
Possible Values: 0-100%

Default Minimum OA Flow Setpoint:	40 CCFM
Min OA Flow Deadband:	**10.0 CCFM**

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a VCM.
Possible Values: Setpoing = 0-max unit airflow; Deadband = 5.0-20 CCFM

Preheat Output ON If Preheat Temp Below	
Preheat Activation Temperature	**35 F**

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a VCM.and preheat enabled.
Factory Presets: 35 F
Possible Values: 35-75 F

Default Supply Air Pressure:		1.5 IWC
High Limit: 4.0 IWC	**Deadband:**	**0.5 IWC**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when IGV/VFD is installed. Also, on units with SAT cotnrol without air voume control and supply air pressure sensor installed.
Factory Presets: SETPOINT: 1.5 IWC
High Limit: 4.0 IWC; Deadband: 0.5 IWC
Possible Values: SETPOINT Setpoint = 0.5-4.3 IWC
High Limit 1.2 - 4.7 IWC;
Deadband 0.1 - 2.0 IWC

Note: *The high limit sepoint cannot be adjusted below the parameters of the following equation: The high limit = Deadband - 0.1*

Low Ambient Comp Lockout Temp: 50 F **Comp(s) OFF if OA Temp Below This Value**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: 50 F
Possible Values: -20 F to 80 F

Setpoint Source Selections Submenu **Press ENTER to Review or Adjust**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units

For Supply Air Temp Cooling Control, Use **Setpoint From: HI (KEYPAD) SETPOINT MENU**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT MENU, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE

For Supply Air Temp Heating Control, Use **SETPOINT From: HI (KEYPAD) SETPOINT MENU**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when hydronic or electric heat is installed.
Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (KEYPAD) SETPOINT MENU, GBAS 0-5VDC Module

For Occ Zone Temp Cooling Control, Use **SETPOINT From: HI (KEYPAD) SETPOINT MENU**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: HI (KEYPAD) SETPOINT MENU
Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT INPUT, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE

For Occ Zone Temp Heating Control, Use **SETPOINT From: HI (KEYPAD) SETPOINT MENU**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units with hydronic or electric heat.
Factory Presets: HI (KEYPAD) SETPOINT MENU
Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT INPUT, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE

For Unocc Zone Temp Cooling Control, Use **Setpoint From: HI (KEYPAD) SETPOINT MENU**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: HI (KEYPAD) SETPOINT MENU
Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT INPUT, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE

For Unocc Zone Temp Heating Control, Use **Setpoint From: HI (KEYPAD) SETPOINT MENU**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when External, Electric or Hydronic Heat is installed
Factory Presets: HI (KEYPAD) SETPOINT MENU
Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT INPUT, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE, GBAS 0-10VDC Module

For Morning Warmup Temp Control, Use **Setpoint From: HI (KEYPAD) SETPOINT MENU**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when Electric, External or Hydronic Heat is installed
Factory Presets: HI (KEYPAD) SETPOINT MENU
Possible Values: HI (KEYPAD) SETPOINT MENU, NSB PANEL SETPOINT INPUT
GBAS 0-5VDC Module

For Default OA Damper Min Position, Use
Setpoint From: HI (KEYPAD) SETPOINT MENU

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when an airside or waterside economizer or VCM is installed.
Factory Presets: HI (KEYPAD) SETPOINT MENU
Possible Values: HI (KEYPAD) SETPOINT MENU, REMOTE MIN POS POT INPUT

For Min Outside Air Flow Rate Ctrl, Use
Setpoint From: HI (KEYPAD) SETPOINT MENU

1. Press the NEXT key until the following screen is displayed.

Used With: Units with a VCM or GBAS installed.
Factory Presets: HI (KEYPAD) SETPOINT MENU
Possible Values: HI (KEYPAD) SETPOINT MENU, GBAS 0-5VDC Module

For Supply Air Pressure Control, Use
Setpoint From: HI(KEYPAD) SETPOINT Menu

1. Press the NEXT key until the following screen is displayed (if applicable)

Used With: AUnits with a IGV or VFD and GBAS installed.
Factory Presets: HI (KEYPAD) SETPOINT Menu
Possible Values: HI (KEYPAD) SETPOINT MENU, GBAS 0-5VDC Module

End Of Submenu (NEXT) To ENTER SETUP

1. Press the NEXT key to leave the submenu and show following screen.

Used With: All units.

Programming Configuration

The electronically controlled unit has many operating functions whose settings are preset at the factory. The following configuration programming steps are provided for those cases where the Human Interface module has been replaced after the unit has been in operation and must be reconfigured.

Refer to the Model number stamped on the unit nameplate located on the control panel door while scrolling through the configuration screens. Certain digits of this alpha/numeric model number provide information that must be entered at the Human Interface (HI) in order for the UCM network to operate properly.

Note: *Many of the screens displayed in this section are applicable only for the options that are installed in the unit and may not be visible on your unit.*

Press the CONFIGURATION key to begin viewing or modifying the configuration screens.

Note: *Pay close attention to the notes throughout this section of the document. The notes describe additional essential messages and other intermediate screen information.*

Press the CONFIGURATION key to begin viewing or modifying the unit setpoints.

To change the sepoint values on a particular screen:

1. Press the plus or minus key until the correct value appears in the screen.
2. Press the ENTER key to confirm your choice. If you've made an error, press the CANCEL key to delete your entry.

To navigate to another screen:

1. Press the NEXT key to advance to the next screen, or
   a. if no further changes are required and you want to exit back to view the unit operating status, press the STATUS key once, or
   b. if you want to remain in the Setpoint submenu, press the CONFIGURATION key once and it will return you to the beginning of that particular submenu, or
   c. if you want to exit to another submenu in the in the CONFIGURATION menu, press the CONFIGURATION key twice. Then press the NEXT key to scroll through the CONFIGURATION submenu choices, or
   d. if you want to exit to another menu, such as SETPOINT, press that key once, then press the NEXT key toscroll through those screens.

Configuration - Model Num Digit	**1**
Unit Type:	**Commercial Self-Contained**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: Commercial Self-Contained

Configuration - Model Num Digit	**3**
Condenser Medium:	**WATER COOLED CONDENSER**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units.
Possible Values: Water-cooled Condenser; Air-colled condenser; None-No Condenser

Configuration - Model Num Digit	**4**
Development Type:	**SIGNATURE SERIES**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units.
Possible Values: Signature Series, Modular Series

Configuration - Model Num Digit	**5**
Refrig Ckt Config	**INDEPENDENT**

Used With: All Units
Possible Values: Independent, Manifold

Note: *Manifolded piping is only available on Signature Series units, 30 tons and larger*

Configuration - Model Num Digit	**27**
Water Economizer	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Possible Values: Installed, Not Installed

Configuration - Model Num Digit	**29**
Water Piping:	**INTERMEDIATE PIPING**

1. Press the NEXT key until the following screen is displayed.

Used With: Units on all water-cooled units or units with waterside economizer.
Possible Values: Intermediate Piping; Basic Piping; Non-No Piping

Configuration - Model Num Digit	**29**
Water Flow Switch	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Used With: Units on all water-cooled units or units with waterside economizer and water flow switch.
Possible Values: Installed, Not Installed

Configuration - Model Num Digit	**20**
Heating Type:	**HYDRONIC**

1. Press the NEXT key until the following screen is displayed.

Possible Values: Hydronic, Electric None, External

Configuration - Model Num Digit	**6, 7**
Unit Capacity	**72**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: 20-80

Note: *The possible value for unit capacity is dependent oupon the unit size (tons).*

Configuration - Model Num Digit	**23**
Power Exhaust	**NONE**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: None, 100% with Statitrac, 50%/ 100% without Statitrac

Note: *This option is currently not available on commercial self-contained units, but this screen still displays..*

Configuration - Model Num Digit	**28**
Air Economizer	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: Installed, Not Installed

Configuration - Model Num Digit	**9**
Air Temp/Vol Ctrl	**SA CTRL WITH IGV/VFD**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: SA Control with IGV/VFD, Zone Control, No IGV/VFD or SA Control, No IGV/VFD

Configuration - Model Num Digit	**9**
Supply Fan VFD Bypass	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Used With: Units with SA Control and IGV/VFD
Possible Values: Installed, Not Installed

Configuration - Model Num Digit	**28**
Comparative Enthalpy	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Used With: All IntelliPak™ II Units
Possible Values: Installed, Not Installed

Configuration - Model Num Digit	**33**
GBAS 0-5 VDC Module	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: Installed, Not Installed

Configuration - Model Num Digit	**33**
Ventilation Override (VOM)	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: Installed, Not Installed

Configuration - Model Num Digit	**28**
Ventilation Ctrl	**TRAQ DAMPERS**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: Traq™ Dampers, Standard Dampers

Configuration - Model Num Digit	**33**
TCI4 Communications Module	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: nstalled, Not Installed

Configuration - Model Num Digit	**33**
Remote Human Interface	**INSTALLED**

1. Press the NEXT key until the following screen is displayed.

Used With: All Units
Possible Values: installed, Not Installed

Unit Model Number

1. Pressing the NEXT key will scroll forward through the screens.

Used With: All units unless RTM has been changed.
Possible Values: Model Number

Software Revision Number Report:	
RTM	**9.13**

1. Pressing the NEXT key will scroll forward through the screens.

Software Revision Number Report:	
Multiple Compressor Module (SCM)	**1.00**

1. Pressing the NEXT key will scroll forward through the screens.

Software Revision Number Report:	
Multiple Compressor Module (MCM)	**4.09**

1. Pressing the NEXT key will scroll forward through the screens.

Software Revision Number:	
GBAS 0-5 VDC Module	**1.00**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with GBAS

Software Revision Number Report:	
Ventilation Override (VOM)	**1.00**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with VOM module installed

Software Revision Number Report:	
Exhaust/Comp Enthalpy Module	**8.04**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with Comparative Enthalpy,

Software Revision Number Report:	
Heat Module	**1.00**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with hydronic or electric heat

Software Revision Number Report:	
Unit Human Interface	**14.07**

1. Pressing the NEXT key will scroll forward through the screens.

Software Revision Number Report:	
Remote Human Interface (RHI)	**11.04**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with Remote Human Interface Module installed.

Software Revision Number Report:	
Ventilation Control Module (VCM)	**1.12**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Screen shown only if VCM Module installed

Software Revision Number Report:		
BAS Communications:	**xxxxxxx**	**13.00**

1. Pressing the NEXT key will scroll forward through the screens.

Used With: Units with TCI, LCI or BCI.

xxxxxxx =
Comm3/4 (when TCI installed)
LonTalk (when LCI installed)
BACnet (when BCI installed)

SERVICE MODE Menu

The SERVICE MODE menu is used to input operating parameters for unit operation during a service test. Depending on the particular test being conducted, the user will cycle through all unit outputs (compressors, fans, dampers, heaters, etc.) and selectively turn them On or Off for the test. After designating the operating status for each unit component, the operator will designate the "TEST START" delay time.

When a service mode screen is displayed for 30 minutes without a key being pressed, the LCD screen will revert to the general operating status display. If this happens, press the SERVICE MODE key again to return to the service menu.

Note: *Many of the screens displayed in this section are applicable only for the options that are installed in the unit and may not be visible on your unit.*

To operate the system in the test mode, press the SERVICE MODE key to enter into the service mode menu and scroll through all of the system outputs and selectively turn them "On" or "Off".

To change the service mode values on a particular screen:

1. Press the plus or minus key until the correct value appears in the screen.
2. Press the ENTER key to confirm your choice. If you've made an error, press the CANCEL key to delete your entry.

To navigate to another screen:

1. Press the NEXT key to advance to the next screen, or
   a. if no further changes are required and you want to exit back to view the unit operating status, press the STATUS key once, or
   b. if you want to remain in the Setpoint submenu, press the SERVICE MODE key once and it will return you to the beginning of that particular submenu, or
   c. if you want to exit to another submenu in the in the SERVICE MODE menu, press the CONFIGURATION key twice. Then press the NEXT key to scroll through the CONFIGURATION submenu choices, or
   d. if you want to exit to another menu, such as SETPOINT, press that key once, then press the NEXT key toscroll through those screens.

Supply Air Controls
Supply Fan OFF

1. Press the NEXT key until the following screen is displayed.

Used With: All Units without IGV/VFD.
Possible Values: ON, OFF, AUTO

Supply Air Controls
Supply Fan OFF **IGV/VFD Cmd 35%**

1. Press the NEXT key until the following screen is displayed.

Possible Values: ON, OFF, AUTO
IGV/VFD Cond: 0 - 100%

Water Pump Relay **OFF**

1. Press the NEXT key until the following screen is displayed.

Used With: Water -cooled units or units with water-cooled condenser.
Possible Values: OFF, ON

VAV Box Relay
RTM Alarm Output

1. Press the NEXT key until the following screen is displayed.

Possible Values: RTM VAV Box -0 = Unocc, Drive Max, Auto-1 = Unocc, Alarm Output = Off, On

Water Econ Control Valve Command 0%
Water Econ Bypass Valve Command 0%

1. Press the NEXT key until the following screen is displayed

Used With: Water -cooled units or units with water-cooled condenser.
Possible Values: 0-100%

Condenser Fan Outputs
1A OFF **1B OFF**

1. Press the NEXT key to advance the cursor.
2. Press the NEXT key until the following screen is displayed

Factory Presets: Off
Used With: Air-cooled units, 20-35 Tons.
Possible Values: ON, OFF, AUTO

Condenser Fan Outputs
1A OFF **1B OFF** **2A OFF** **2B OFF**

1. Press the NEXT key to advance the cursor.
2. Press the NEXT key until the following screen is displayed

Factory Presets: Off
Used With: Air-cooled units, 40-60 Tons.
Possible Values: ON, OFF, AUTO

Condenser Fan Speed
Ckt 1 0 %

1. Press the NEXT key until the following screen is displayed

Used With: Air-cooled units.
Factory Presets: 0%
Possible Values: AUTO, 0-100%

Condenser Fan Speed
Ckt1 0% Ckt2 0%

1. Press the NEXT key to advance the cursor.
2. Press the NEXT key until the following screen is displayed

Used With: Air-cooled units.
Factory Presets: 0%
Possible Values: AUTO, 0-100%

Compressor Relays:
K11 OFF K3 OFf K12 OFF K4 OFF

1. Press the NEXT key to advance the cursor.
2. Press the NEXT key until the following screen is displayed

Factory Presets: Off
Possible Values: On, Off

Hydronic Heat
Actuator 0 %

1. Press the NEXT key until the following screen is displayed.

Used With: Units when Hydronic heat is installed.
Factory Presets: 0%
Possible Values: 0 - 100%, AUTO

Heat Stages
Stage OFF

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when electric Heat is installed
Factory Presets: OFF
Possible Values: OFF, ON

Note: *Only single stage electric heat is available factory installed.*

OA Damper Pos 0%

1. Press the NEXT key until the following screen is displayed.

Used With: All units with an airside economizer.
Factory Presets: OA Damper = 0%
Possible Values: OA Damper: 0 to 100%

Supply Fan Bypass Relay NORMAL

1. Press the NEXT key until the following screen is displayed.

Used With: Units with VFD and bypass.
Possible Values: Normal, Bypass

Ventilation Override Module Output Relay
OFF

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when VOM is installed
Factory Presets: OFF
Possible Values: ON, OFF

OA Preheater State OFF

1.Press the NEXT key to advance the cursor to the next field within this screen.
2. Press the NEXT key until the following screen is displayed.

Used With: All Units when VCM is installed
Factory Presets: OFF
Possible Values: ON, OFF

GBAS 0-5 VDC Module Relay Outputs
#1 OFF #2 OFF #3 OFF #4 OFF #5 OFF

1. Press the NEXT key until the following screen is displayed.

Used With: All Units when GBAS is installed
Factory Presets: OFF
Possible Values: 1, 2, 3, 4, 5 = ON, OFF

Status/Annunc Test Sys On (Blinking)
Heat: OFF Cool: OFF Service: OFF

1. Press the NEXT key to advance the cursor to the next field within this screen.
2. Press the NEXT key until the following screen is displayed.

Used With: All Units
Factory Presets: OFF
Possible Values: HEAT = ON, OFF, COOL = ON, OFF, SERVICE = ON, OFF

Start Test In 5 Seconds
Press TEST START To Begin, STOP To Halt

3. Press the NEXT key to advance the cursor to the next field within this screen.

4. Press the NEXT key until the following screen is displayed.

DIAGNOSTICS Menu

The DIAGNOSTICS menu is used to view diagnostics that have resulted from system failures within the unit. There are two lists where diagnostics reside; the Active list, and the Diagnostic Event Log.

The Active list is used for viewing all active diagnostics and for clearing manually resetable diagnostics. These lists of diagnostics are displayed after pressing the DIAGNOSTICS key if active diagnostics are present.

Active manual diagnostics can be cleared in batch form at the unit mounted Human Interface. When an Active diagnostic is manually or automatically cleared, it is removed from this buffer. Automatically resetting diagnostics can not be reset by the Human Interface, because the condition that caused the diagnostic has to be corrected for the diagnostic to clear.

The word “MORE” is displayed on all screens if more than one diagnostic exist, except for the last diagnostic. Upon reaching the last diagnostic, the word “MORE” disappears. Pressing the NEXT key at this point causes the display to advance to the first diagnostic in the Diagnostic Event Log.

The Diagnostic Event Log screens are displayed after scrolling through the Active list or after pressing the DIAGNOSTICS key when no active diagnostics are present. It’s used to view the past 20 diagnostics. Diagnostics in this log are stacked in inverse chronological order, with the first diagnostic screen being the most recently reported diagnostic.

One of the following screens will be the first screen displayed when the DIAGNOSTIC" key is pressed

Diagnostic Menu ---- Info
No Active Diagnostics (NEXT) History Log

OR

Press CANCEL to Clear All Active Manual
Diagnostics, or Press NEXT to View

1. Pressing the "CANCEL" key to clear the diagnostics will prompt the following screen.

Diagnostic Reset Is Password Protected
Please Enter Password: _____

Used With: All Units
Factory Presets: N/A
Possible Values: + (plus) and - (Minus)

1. Press the + (plus) or - (minus) keys to enter the password
2. Press the ENTER key to confirm this choice. When the correct password is entered, the following screen will be displayed.

Resetting Active Manual Diagnostics
Sending Reset Request

and then the following screen will be displayed

Resetting Active Manual Diagnostics
Updating Unit Data, Please wait

and then the following screen will be displayed

Active Diagnostic -- Info
Please Wait, Unit Is In Reset Mode

OR

1. Pressing the "NEXT" key to view the diagnostics will prompt the following screen if a "MANUAL RESET" failure has occurred.

Active Diagnostic -- Manual Reset	
_____	More

Used With: All units
Factory Presets: N/A

Possible Values:

Low Pressure Control Open - Ckt 1, Ckt 2, Ckt 3, Ckt 4	Manual Reset SA Static Pressure Limit
Compressor Contactor Fail - Ckt 1, Ckt 2, Ckt 3, Ckt 4	Low Air Temperature Limit Trip
Compressor Trip - Ckt 1, Ckt 2, Ckt 3, Ckt 4	Emergency Stop

Note: *The word "MORE" will appear on the screen if more than one failure has occurred.*

OR

Active Diagnostic -- Auto Reset	
_____	More

Possible Values:

RTM Zone	Heat Aux Temp
Supply Air Temp	Unocc Zone Cool Setpoint
RTM Aux. Temp	Unocc Zone Heat Setpoint
OA Temp	Supply Air Pres Setpt
Mode Input	Space Pressure Pres Setpt
Occ Zone Cool Setpoint	Space Pressure
Occ Zone Heat Setpoint	Return Air Temp
Supply Air Pres	RA Humidity
OA Humidity	Auto Reset SA Static Pres Limit
SCM Communication	Evap Temp - CKT 1, 2, 3, 4
MCM Communication	Heat Module Commun.
ECEM Communication	Cond Temp - CKT 1, 2, 3, 4
TCI Communication	GBAS Module Communication
Tracer® Communication	NSB Panel Communication
Unit HI Communcation	VOM Communication
Sup Air Temp Cool Setpt	Sup Air Temp Heat Setpt
NSB Panel Zone Temp	CO_2 Sensor
VCM Aux Temp	Velocity Press
VCM Communication	WSM Communication
Ent Cond Water Temp	Ent Water Temp
WSM Mixe Air Temp	Water Flow

OR

1. Pressing the "NEXT" key to view the diagnostics will prompt the following screen if a "information only" failure has occurred.

Active Diagnostic -- Info	
_____	More

Possible Values:

Heat Fail

Dirty Filter

Ventilation Override Mode A, B, C, D, or E

RTM Data Storage Error

Note: *Activation of any VOM mode can be viewed within the "Active Diagnostic" screen.*

Log 1 _____
_____

Possible Values:

Log number 1-20	Manual
Viewed or Not Viewed	Auto
Active or History	Info

Or any diagnostic listed under the previous screens associated with the diagnostic type including VOM activated mode

1. Press the CANCEL key to clear the diagnostics and prompt the following screen.

Diagnostic Log is Password Protected
Please Enter Password: _____

Possible Values: + (Plus), - (Minus)

1. Press the + (Plus) or - (Minus)keys to enter the password.
2. Press the ENTER key to confirm. After entering the correct password, the following screen will display.

Active Diagnostics _____
Please Wait, Updating Diagnostic Log

Possible Values: Manual, Auto, or Info

If the DIAGNOSTIC LOG is empty when the CANCEL key is pressed, the following screen will display.

Active Diagnostics Info
Diagnostic Buffer Is Already Empty!

Possible Values: Manual, Auto, or Info

Press the AUTO or STOP key to return to the top level status screen.

Failure Modes

When any condition results in the rooftop unit's inability to perform a normal function, it is said to have entered a failure mode. There are two types of failure modes.

1. An "Analog input out of range" failure mode.

   This failure mode occurs when a sensing device such as a zone temperature sensor or a humidity sensor begins to transmit information that is outside its allowable range.

2. A "Fault recognition by input logic" failure mode.

   This failure mode occurs when the UCM receives information that does not "make sense" or does not conform to its predefined logic.

Diagnostics Types

There are three types of diagnostics:

1. Informational - Does not affect machine operation.
2. Automatic Reset - Affects machine operation but returns to normal when diagnostic condition no longer exists.
3. Manual Reset - Affects machine operation and must be reset at the HI or by cycling power to unit for normal operation to resume.

To troubleshoot diagnostics, reference the Installation, Operation, and Maintenance Manual SCXF-SVX01*-EN that ships with the Signature Series units and SCXG-SVX01*-EN that ships with the Modular Series units.

Glossary

A

Active SETPOINT
The SETPOINT which is currently being used for control by the SETPOINT source selection.

B

BACnet®
An open, device networking communications protocol for controls. This protocol utilizes BACnet and ANSI/ASHRAE Standard 135-2004 protocol which provides building owners the capability to connect various types of building control systems or subsystems together.

C

Compressor Lockout
All affected compressors stop and remain off until the condition resets or is manually reset.

Compressor Protection Switch
A pressure switch installed on the suction line that prevents compressor operation below the switch's SETPOINT. The purpose is to prevent no-flow scroll compressor operation.

Control Band
The range of temperatures or pressures which would normally be maintained by the various control functions.

Control Point
The value of a SETPOINT that an algorithm is using at any given time.

D

Deadband
As applied to SA temp control, this refers to a range of temperatures equally spaced above and below the SA temp control point in which the control algorithm is satisfied.

Dry Bulb
An outdoor temperature above which economizing will be disabled (unless comparative enthalpy is the economizer control type being used.)

E

Economizer Zone Temp SETPOINT Suppression
a parameter used for setting the Zone Temp SETPOINT at a lower value than the mechanical cooling zone temp SETPOINT.

External Heat
A heat source external to the self-contained unit that is field installed (i.e. duct heat or VAV reheat boxes).

External Stop
A binary input on the RTM that allows unit shutdown, with automatic reset, when connected to a field-supplied switch.

H

Hydronic Heat
Optional steam or hot water heat coil.

Independent Refrigerant Circuit
All model SCWG/SIWG, SCRG/SIRG and SCWF/SIWF units have independent refrigerant circuits.

I

Interprocessor Communications Board (IPCB) Option
The IPCB is used to expand communication from the unit's UCM network to a remote human interface panel. DIP switch settings on the IPCB module for this application should be; switches 1 and 2 "off," switch3 "on."

L

Low Ambient Compressor Lockout
A function which prevents compressor operation at low outdoor ambient temperatures.

Low Entering Water Temperature
When the entering water temperature sensor reads a water temperature below the minimum water temperature input into the controller. The factory preset temperature is 54° F.

Low Entering Water Temperature Compressor Lockout
On units with head pressure control disabled and an entering water temperature below 54° F, compressor operation disables. economizer operation is still functional.

M

Manifold Refrigerant
Circuit Only model SCRF/SIRF units, 30-60 tons, have manifolded refrigerant circuits.

N

Night SetBack (NSB)

Applies to the control of the rooftop unit during unoccupied periods. Also refers to the NSB panel, a communicating wall sensor with night setback capability.

O

OA Reset
Outdoor Air Reset - Supply Air Temerature Reset based on Outdoor Air Temerpature.

Occupied Zone Low Temerature Limit Setpoint
The temperature that initiates daytime warmup.

P

Purge
A function which causes zone air to purge and be replaced by outside air.

R

Reference Enthalpy
An outdoor enthalpy value above which economizing will be disabled.

Remote Human Interface
A human interface module designed to be mounted remotely from the unit. There are some functional differences between a unit mounted and a remote mounted human interface module.

Reset Amount Maximum
The maximum amount of reset allowed.

Reset End Temperature
The temperature at which the maximum reset amount will occur.

Reset Start Temperature
The temperature at which reset will begin.

S

Space Pressure
The pressure in the building as measured by the Space Pressure Transducer, referenced to outside (atmospheric) pressure.

Supply Air Pressure High Limit
A pressure limit to prevent unit casing and/or ductwork over pressurization.

Supply Air Pressure
The pressure in inches water column (IWC) of the supply duct plenum or outlet as measured by the Supply Air Pressure Transducer, referenced to local outside (atmospheric) pressure.

Supply Air Tempering
Turning on heat when the supply air temperature drops below a preset value usually due to cold outside air being brought in to provide building ventilation.

Supply Air Temperature Control Point
The revised value of supply air temperature SETPOINT after supply air temp reset has been applied.

Supply Air Temperature Reset
A function that shifts the SA Temp SETPOINT an amount based on the value of another parameter—typically Zone Temp or Outdoor Air Temp. The purpose of this function is to lower unit capacity to better meet load requirements.

W

Water Purge
When the waterside economizer valve opens to flush out the economizer tubes to prevent failure due to stagnant water and sedimentation.

Index

T

U

V

W

Trane - by Trane Technologies (NYSE: TT), a global climate innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.

PKG-SVP01F-EN 05 May 2020
Supersedes PKG-SVP01E-EN (Oct 2015)