Programming Guide

IntelliPak®
Commercial Self-Contained
Signature Series, 20-80 Ton
Modular Series, 20-35 Ton

Models
"AO" and later Design Sequence

SCWG -020, -025, -030, -035
SIWG -020, -025, -030, -035
SCRG -020, -025, -032
SIRG -020, -025, -032

SCWF -020, -022, -025, -029, -032, -035, -038, -042, -046, -052, -058, -065, -072, -080
SIWF -020, -022, -025, -029, -032, -035, -038, -042, -046, -052, -058, -065, -072, -080
SCRF -020, -025, -029, -030, -035, -040, -050, -060
SIRF -020, -025, -029, -030, -035, -040, -050, -060

April 2000

PKG-SVP01B-EN
About This Manual

Literature Change History

Use this manual for IntelliPak™ commercial self-contained models SCWF/SIWF, SCRF/SIRF, SCWG/SIWG, and SIWG/SIRG. This is the second issue of this manual. This revision includes an index, which was not in the original issue. It provides specific programming instructions for “AO” and later design sequences. For previous design sequences, contact your local Trane representative.

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.
Contents

Cross reference to related publications:
• IntelliPak® Self-Contained Installation, Owner, and Diagnostic Manual SCXF-SVX01A-EN for Signature Series models SCWF, SCRF, SIWF, and SIRF
• IntelliPak® Self-Contained Installation, Owner, and Diagnostic Manual SCXF-SVX01A-EN for Modular Series models SCWG, SCRG, SIWG, and SIRG

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Commonly Used Acronyms and Abbreviations

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

Act = active
AH = Air Handler
Annunc = Annunciator
AS = Airside
Aux = auxiliary
BAS = building automation systems
ccfm = (100 cfm) cubic-feet-per-minute
Cnf = Configured, configuration
cfm = cubic-feet-per-minute
ckt = circuit
Cmd = command
Comp (s) = compressor, compressors
Cond = condenser, condensers
Config = configured, configuration
Ctrl = control
CV = constant volume
Cy = cycle
CW = clockwise
CCW = counterclockwise
Dflt = default
Diag = diagnostic
Dmrpr = damper
DWU = Daytime Warmup
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)
Heat = Heat, heating
HEAT = where all caps HEAT (module)
HGBP = hot gas bypass
Hi = high
Hl = where all caps Human Interface
HVAC = heating, ventilation and air conditioning
ICS = Integrated Comfort System
IGV = inlet guide vanes
I/O = input/output
Indep = Independent
IOD = installation/owner/diagnostic manual
IPC = interprocessor communications
IPCB = interprocessor communications bridge (module)
IWC = inches water column
LCD = liquid crystal display

LH = left-hand
Lo = low
Manif = manifolded
Max = maximum
Min = minimum
Misc = miscellaneous
MCM = multiple compressor module
Mod = modulating
MWU = morning warmup
NSB = night setback panel
Num = number
O/A = outside air
Occ = occupied
Pos = position
Pot = potentiometer
PPM = parts per million
Press = pressure
Propor = proportional
psig = pounds-per-square-inch gauge pressure
PWS = part-winding start
R/A = return air
Refrig = refrigerant
RH = right-hand
rpm = revolutions-per-minute
RTM = RTM module
SA = supply air
SAP = supply air pressure
Sat = saturated
SCM = single compressor module
Setpt = setpoint
SF = supply fan
SRC = source
Stg = stage
Stnd = standard
STP = setpoint
Sw = switch
SZ = single-zone (unit airflow)
TCI = Tracer communications interface module
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
VOM = ventilation override module
W/ = with
w.c. = water column
WU = warmup
Programming

General Information

Glossary
These terms are used throughout this manual. Knowledge of these terms is essential in gaining an understanding of how these units operate.

Active Setpoint
The setpoint which is currently being used for control by the setpoint source selection.

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.

Deadband
As applied to SA temperature control, this refers to a range of temperatures equally spaced above and below the SA temperature control point in which the control algorithm is satisfied.

Economizer Zone Temp Setpoint Suppression
A parameter used for setting the Zone Temp setpoint at a lower value than the mechanical cooling zone temperature 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 when connected to a field-supplied switch.

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.

Low Ambient Compressor Lockout
A function which prevents compressor operation at low outdoor ambient temperatures.

Low Entering Condenser Water Temperature
When the entering water temperature sensor reads a water temperature below the minimum water temperature input into the controller. 54 F is the factory preset temperature.

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.

Manifolded Refrigerant Circuit
Only model SCRF/SIRF units, 30-60 tons, have manifolded refrigerant circuits.

Night Setback (NSB)
Applies to unit control during unoccupied periods.

Night Setback (NSB) Panel
The HI panel display uses this term for NSB zone sensor.

OA Reset
Outdoor Air Reset - Supply Air Temperature Reset based on Outdoor Air Temperature.

Occupied Zone Low Temperature Limit Setpoint
The temperature that initiates daytime warmup.

Purge
A function which causes zone air to purge and be replaced by outside air.

Reference Enthalpy
An outdoor enthalpy value above which economizing disables.

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.

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 overpressurization.

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 temperature 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.

Water Purge
When the waterside economizer valve opens to flush out the economizer tubes to prevent failure due to stagnant water and sedimentation.
### Table P-GI-1. IntelliPak® Points List.

<table>
<thead>
<tr>
<th>Unit Module</th>
<th>Analog Inputs</th>
<th>Analog Outputs</th>
<th>Binary Inputs</th>
<th>Binary Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIM</td>
<td>ASE damper min pos</td>
<td>O/A damper actuator</td>
<td>Emergency stop</td>
<td>VAV box drive max</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>External auto/stop</td>
<td>CV unoccupied mode indicator</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Unoccupied/occupied</td>
<td>Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dirty filter</td>
<td>Fan run request</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>VAV changeover</td>
<td>Water pump request</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Supply airflow proof</td>
<td></td>
</tr>
<tr>
<td>SOM</td>
<td>Evap temp sensor</td>
<td>Cond fan speed (Low ambient)</td>
<td>Low pressure control</td>
<td>Compressor relay</td>
</tr>
<tr>
<td></td>
<td>Sat cond temp sensor</td>
<td></td>
<td>Compressor proving</td>
<td>Condenser fan A, B</td>
</tr>
<tr>
<td>MCM</td>
<td>Evap temp sensor</td>
<td>Cond fan speed</td>
<td>Low pressure control - ckt 1 &amp; 2</td>
<td>Compressor relay</td>
</tr>
<tr>
<td></td>
<td>Sat cond temp sensor</td>
<td>Cond fan speed (Low ambient - ckt 1 &amp; 2)</td>
<td>Compressor proving - ckt 1 &amp; 2</td>
<td>Condenser fan 1A, 1B, 2A, 2B</td>
</tr>
<tr>
<td>Heat Module</td>
<td>MWU temp sensor</td>
<td>Modulating heat actuator</td>
<td>Low entering air</td>
<td>Heat 1 relay</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heat 2 relay</td>
<td>Heat 3 relay</td>
</tr>
<tr>
<td>E2EM</td>
<td>Return air temp sensor</td>
<td>Return air humidity sensor</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>GBAS</td>
<td>N/A</td>
<td>Demand limit contacts</td>
<td>Dirty filter</td>
<td>Refrigeration fail relay</td>
</tr>
<tr>
<td></td>
<td>4 inputs from these choices:</td>
<td></td>
<td>Heat fail relay</td>
<td>Fan fail relay</td>
</tr>
<tr>
<td></td>
<td>OCC zone cool setpt</td>
<td>N/A</td>
<td>TBD relay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OCC zone heat setpt</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>Unocc zone cooling setpt</td>
<td></td>
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<tr>
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<td>Unocc zone heat set</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Min O/A flow setpt</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>Sup air cooling setpt</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Sup air heating setpt</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Sup air static pres setpt</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Programming

General Information

UCM Control System
The IntelliPak® self-contained unit is controlled by a microelectronic control system that consists of a network of modules. These modules are referred to as unit control modules (UCM). In this manual, the acronym UCM refers to the entire control system network.

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

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.

RTM Module Board - 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 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 fan operations, and economizer operation.

Compressor Modules (SCM and MCM)
The compressor modules (single circuit and multiple circuit) energize the appropriate compressors and condenser fans upon receiving a request for mechanical cooling. The modules monitor the compressor operation through feedback 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 zone temperature 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 customer-specified 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.”

Human Interface Module (HI)
The HI module illustrated in Figure P-GI-1, on page 9, enables the user to communicate unit operating parameters; such as cooling and heating setpoints, demand limiting, ventilation override modes, etc.

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

The HI has a 2 line by 40 character LCD screen to provide status information for various unit functions and menus to set or modify operating parameters. There is a 16-key keypad adjacent to the LCD screen to allow the user to scroll through the various menus and make adjustments to setpoints, etc.

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

At power-up, the human interface LCD displays one of four initial screens as illustrated in the “General Status Display” section on page 11 and described below:

1. Unit Off (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 On (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 display 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 – De-energized
- 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

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 – De-energized
- 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) – Off
- 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

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.

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.

Reference Figure P-GI-2 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.

If no key is pressed for 30 minutes while the HI is displaying a menu screen, it will revert back to the unit operating status screen.

STATUS Key

Pressing the status key displays the operating status screen: On, Unit Stop, External Stop, Emergency Stop, or Service Mode. Pressing the NEXT key allows the operator to scroll to screens that provide information such as air and refrigerant temperatures, humidity levels, fan operation, compressor operation, heater operation, economizer positioning, exhaust operation, and heating, cooling, and compressor lockout setpoints. Pressing the STATUS key while viewing any of the data screens will cause the HI to go back to the operating status screen.

SETPOINTS Key

Pressing the SETPOINTS key displays the first of the setpoint screens, allowing the user to designate default temperatures 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 user 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 at any level in the configuration menu will display the first configuration screen.

Note: Unit configuration information is factory-programmed. Use this key only to view current configuration data, or to designate new data if the unit’s configuration data is lost or if new options are added in the field.

SETUP Key

Pressing the SETUP key displays screens that designate various operating parameters such as temperature and pressure ranges, limits, percentages, setpoint source selections, and sensor input definitions for the control of the 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 displays the first of the service test mode screens that allow the user to turn on or off various unit components for a particular test being performed. After designating on/off status, a screen will display requesting the user to designate the TEST START time delay for each test.
Data Manipulation Keys

The data manipulation keys allow the user to modify data within the screens: ENTER, CANCEL, + (Plus), - (Minus), PREVIOUS, and NEXT. See Figure P-GI-2.

ENTER Key
This key will confirm new values 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
When viewing the setpoint screen, the minus key 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 menu level is currently 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 a status menu that can be customized to contain frequently used screens. 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). Press the NEXT key until a screen appears that you would like to add to the CUSTOM menu. To add a screen to the Custom menu, press the + (Plus) key. Once the Custom menu is programmed, access it by pressing the CUSTOM key. To remove a status screen from the Custom menu, press the CUSTOM key. Press the NEXT key until the screen you want to remove appears. Press the - (Minus) key to remove the screen.

Figure P-GI-2. Human interface keypad.
General Status Display
Anytime the self-contained unit is powered up or when the STATUS, AUTO, or STOP keys are pressed, the unit mounted HI will display one of four general status display screens. This will allow the user to navigate through a set of menus and submenus to provide or access various monitoring, setup, and configuration information. The HI will not display screens that the unit is not configured for.

1. Unit “Off” or “Stopped”
If at power up the unit is not running, the following display will appear. When this screen displays, the only functional keys are the menu keys (STATUS, SETPOINTS, DIAGNOSTICS, SETUP CONFIGURATION, and SERVICE MODE), the AUTO key, the CUSTOM key, and the STOP key.

2. Unit “On”
If the unit has entered an operating state (running), the following display will appear. When this screen displays, the only functional keys are the menu keys (STATUS, SETPOINTS, DIAGNOSTICS, SETUP, CONFIGURATION, AND SERVICE MODE), the AUTO key, the CUSTOM key, and the STOP key.
3. VOM Active
If at power up the unit is running and has entered a ventilation override mode, the following display will appear on the human interface LCD screen.

![Diagram of Ventilation Override Mode](image)

4. 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 at the human interface LCD screen. When this screen displays, 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 section on page 63.
Factory Presets
The UCM controlled unit has many operating functions that are preset at the factory, but may be modified to meet the specific job requirements. Tables P-GI-2, P-GI-3, P-GI-4, and P-GI-5 identify each adjustable unit function and the value assigned to it. The tables also provide a space for recording field modifications. If these factory presets match your application requirements, simply press the AUTO key on the HI to begin unit operation (after completing the Pre-Start and Start-Up procedures in the appropriate Installation, Owner, and Diagnostic manual). If your application requires different settings, turn to the referenced page beside the function, press the designated function menu key, then press and hold the NEXT or PREVIOUS key until its screen appears. Once the proper screen appears, simply follow the programming instructions given below the applicable screen in this manual.

Table P-GI-2. Control Parameters Setup.

<table>
<thead>
<tr>
<th>Function</th>
<th>Factory Preset</th>
<th>Changed to:</th>
<th>Reference Page #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default system mode</td>
<td>Auto</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>Demand limit definition for cooling</td>
<td>None</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Demand limit definition for heating</td>
<td>None</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>Economizer minimum position (without IGV or VFD)*</td>
<td>15%</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Economizer minimum position with IGV @ 0%*</td>
<td>15%</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Economizer minimum position with IGV @ 100%*</td>
<td>10%</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Morning warmup type</td>
<td>Full</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Power-up start time delay</td>
<td>0 seconds</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>Supply air low limit*</td>
<td>50 F</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Supply air temperature deadband for cooling*</td>
<td>8 F</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Supply air temperature deadband for heating*</td>
<td>4 F</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Supply air temperature O/A reset start temp cooling</td>
<td>90 F</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Supply air temperature O/A reset end temp cooling</td>
<td>70 F</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Supply air temperature O/A reset start temp heating</td>
<td>10 F</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Supply air temperature O/A reset end temp heating</td>
<td>60 F</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Supply air temperature reset type cooling</td>
<td>none</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>Supply air temperature reset type heating</td>
<td>none</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Supply air temperature zone reset start temp cooling</td>
<td>72 F</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Supply air temperature zone reset end temp cooling</td>
<td>69 F</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Supply air temperature zone reset start temp heating</td>
<td>65 F</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Supply air temperature zone reset end temp heating</td>
<td>68 F</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Supply air temperature reset maximum amount cooling</td>
<td>5 F</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Supply air temperature reset maximum amount heating</td>
<td>10 F</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Unit Address</td>
<td>1</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>Unit Control</td>
<td>Local</td>
<td></td>
<td>32</td>
</tr>
</tbody>
</table>

Note: Press the SETUP or SETPOINTS* key to adjust.
Use Table P-GI-3 to reference factory default setpoints and keep track of setpoint adjustments at start-up. Make necessary adjustments using the setpoint key on the HI.

Table P-GI-3. Default Setpoint Setups.

<table>
<thead>
<tr>
<th></th>
<th>Factory Preset</th>
<th>Changed to:</th>
<th>Reference Page #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime warmup - initiate</td>
<td>67 F</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Daytime warmup - terminate</td>
<td>71 F</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Low ambient compressor lockout (std. units)</td>
<td>50 F</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>Supply air temp - cooling</td>
<td>55 F</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Supply air temp - heating</td>
<td>100 F</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Unoccupied zone temp - cool</td>
<td>85 F</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Unoccupied zone temp - heat</td>
<td>60 F</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Unoccupied zone temp - MWU</td>
<td>72 F</td>
<td></td>
<td>58</td>
</tr>
</tbody>
</table>

Use Table P-GI-4 to reference function setups and keep track of start-up adjustments. Make necessary adjustments using the setup key on the HI.

Table P-GI-4. Function (Enable/Disable) Setups.

<table>
<thead>
<tr>
<th></th>
<th>Factory Preset</th>
<th>Changed to:</th>
<th>Reference Page #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor leadflag</td>
<td>Disable</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>Daytime warmup</td>
<td>Disable</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>Morning warmup</td>
<td>Enable</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Supply air tempering</td>
<td>Disable</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Unoccupied economizer</td>
<td>Enable</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>Unoccupied heating</td>
<td>Enable</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Unoccupied mechanical cooling</td>
<td>Enable</td>
<td></td>
<td>33</td>
</tr>
</tbody>
</table>
Use Table P-GI-5 to reference module factory setups and keep track of setpoint adjustments. Make necessary adjustments using the setup key on the HL.

**Table P-GI-5. Module Defaults.**

<table>
<thead>
<tr>
<th>GBAS input/output assignments</th>
<th>Factory Preset</th>
<th>Changed to:</th>
<th>Reference Page #</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBAS input/output not assigned</td>
<td>not assigned</td>
<td></td>
<td>46</td>
</tr>
</tbody>
</table>

**Information format**

| font displays | English | 32 |
| Unit displays | English | 32 |

**Reference Enthalpy**

| 25 btu/lb. | 59 |

**RTM alarm output assignments**

| any active diagnostic | 47 |

**Sensor source selection for:**

| Daytime warmup | RTM zone temp | 40 |
| Monitor Specified Temp. Input | RTM zone temp | 42 |
| Morning warmup | RTM zone temp | 41 |
| Unoccupied zone control | RTM zone temp | 41 |
| Zone reset | RTM aux temp | 41 |

**Setpoint source selection for:**

| Cooling supply air temp | default | 60 |
| Heating supply air temp | default | 61 |
| Morning warmup | default | 62 |
| Unoccupied zone cooling | default | 61 |
| Unoccupied zone heating | default | 61 |

**Actuator setup:**

| Direct/reverse action | direct acting | 51-55 |
| Max stroke time | 150 seconds | 51-55 |
| Max voltage | 10 VDC | 51-55 |
| Min voltage | 2 VDC | 51-55 |

**Coil frost cutout temperature**

| 30 F | 34 |

**Condenser temperature control band:**

| Temporary low limit suppression | 10 F | 39-40 |
| Upper limit | 120 F | 39-40 |
| Low limit | 80 F | 39-40 |

**Condenser temperature:**

| Efficiency check point | 105 F | 40 |
| Low ambient control point | 90 F | 40 |
| Control algorithm tuning parameters | N/A | 56 |
| Max IGV position occupied | 100% | 37 |

**Temperature input offset for:**

| Heat morning warmup | 0 F | 48 |
| Return air | 0 F | 48 |
| RTM zone temperature | 0 F | 48 |
| RTM aux. temperature | 0 F | 48 |
| Outdoor air | 0 F | 48 |

**Ventilation override definition**

| N/A | 43-45 |
Password Protected Screens

Some of the operating displays on the human interface LCD screen are intended for access by qualified users only, and require a password to change. The following screens display the various programming sections that require a password to view or modify preset operating parameters. The password for each screen is a different series of + (Plus) or - (Minus) key strokes in a predefined sequence. Following are the password protected screens and passwords to access them.

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 displays.

**Configuration is Password Protected**
**Please Enter Password:**

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

**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 displays.

**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 displays.

**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 displays.
**STATUS Menu**

The STATUS menu allows the user to view various setpoints, operating conditions (such as temperature and humidity levels), and unit component status (such as fan, compressor, heater, and economizer operation).

STATUS screens in this section are examples 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 displays 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. Following are sample status screens that can be viewed by pressing the STATUS key.

**Note:** Some of the screens in this section may not be visible on your HI since they are applicable only for particular unit options.

Press the STATUS key to enter into the status menu. The “STATUS MODE” will automatically return to the power-up screen after 30 minutes, if no keys are pressed.

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

---

**STATUS Menu Screens**

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

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

   **(On units with IGV or VFD only)**
   **IGV/VFD Cmd** 30 %
   **Active Supply Air Pressure** 2.0 IWC

   Possible values: Increasing to 0-100%
   Decreasing 100 to 0%

   **(On units without IGV or VFD only)**
   **Active Supply Air Pressure** 2.0 IWC

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

   **(On water-cooled units only)**
   **WSM Water Pump Relay Status**: OFF
   **Active Water Flow Indication** Flow

   Possible values: Pump Status = Off, On
   Waterflow = Flow, No flow

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

(On units with electric heat only)

<table>
<thead>
<tr>
<th>Electric Heat</th>
<th>Enabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Off</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Off</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Off</td>
</tr>
</tbody>
</table>

Possible values: Off, On

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

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

(On units with hydronic heat only)

<table>
<thead>
<tr>
<th>Hydronic Heat</th>
<th>Enabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Air Temp Limit</td>
<td>OK</td>
</tr>
</tbody>
</table>

Possible values: Hydronic Heat = Enabled, Disabled
Valve position = 0-100% open
Low temp air = OK, tripped

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

(On units with VCM module or Traq™ damper option only)

<table>
<thead>
<tr>
<th>Active Min OA Flow Setpoint</th>
<th>342.0 CCFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>OA Flow</td>
<td>350.0 CCFM</td>
</tr>
<tr>
<td>OA Damper Pos</td>
<td>0 %</td>
</tr>
</tbody>
</table>

Possible values: Unit Airflow = 0 to maximum unit airflow

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

(On units with VCM module and CO2 reset enabled)

<table>
<thead>
<tr>
<th>Active Min OA Flow Setpoint</th>
<th>342.0 CCFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>C02 Level</td>
<td>1512 PPM</td>
</tr>
<tr>
<td>OA Damper Pos</td>
<td>0 %</td>
</tr>
</tbody>
</table>

Possible values: Unit Airflow = 0 to maximum unit airflow

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

(On units with VCM module and preheat enabled)

| OA Preheat Output Control | On        |

Possible values: On, Off

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

End of Submenu (NEXT) to Enter SETUP

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

Compressor Status Submenu
Press ENTER to View Data in This Submenu

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

<table>
<thead>
<tr>
<th>Compressor Relay K11</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td></td>
</tr>
</tbody>
</table>

**Possible values:** K11 = Off, On, Locked, Disabled, Enabled

**Disabled by:** Compressor Protection, Frost Protection, Contactor Failure, Low Pressure Cutout, Bad Cond Temp Sensor, Demand Limit, Low Ent Cond Water Temp

**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 display the following screen.

<table>
<thead>
<tr>
<th>Compressor Relay K12</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td></td>
</tr>
</tbody>
</table>

**Possible values:** K11 = Off, On, Locked, Disabled, Enabled

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

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

### On units with independent refrigerant circuits

<table>
<thead>
<tr>
<th>Compressor Relay K3</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td></td>
</tr>
</tbody>
</table>

**Possible values:** K3 = Off, On, Locked, Disabled, Enabled

**Note:** On models SCWF/SIWF, 60-80 ton units, K4 is the “B” compressor.

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

STATUS

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

Possible values: Lockout Temperature = -20-80 F

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

(On units all water-cooled units only)

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

Possible values: Lockout Temperature = 0-99 F

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

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

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

Compressor Module Ckt 2
Evap Temp  72.0 F   Sat Cond Temp  97.0 F

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

(On all SCWF/SIWF 35-80 ton units only)

Compressor Module Ckt 3
Evap Temp  72.0 F   Sat Cond Temp  97.0 F

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

(On all SCWF/SIWF 60-80 ton units only)

Compressor Module Ckt 4
Evap Temp  72.0 F   Sat Cond Temp  97.0 F

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

End of Submenu (NEXT) to Enter SETUP

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

(On units with a waterside or airside economizer only)

Economizer Status Submenu
Press ENTER to View Data in This Submenu

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

<table>
<thead>
<tr>
<th>Water Economizing: DISABLED</th>
<th>Outside Air Damper Pos: 10%</th>
</tr>
</thead>
</table>

Possible values: 
- **Economizer = Disable, Enable**
- **Water econ position = opening to/closing to 0-100%**

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

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

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

<table>
<thead>
<tr>
<th>Water Econ Bypass Pos: 10%</th>
</tr>
</thead>
</table>

Possible values: 
- **Water econ position = opening to/closing to 0-100%**

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

<table>
<thead>
<tr>
<th>Air Economizing: DISABLED</th>
<th>Outside Air Damper Pos: 0%</th>
</tr>
</thead>
</table>

Possible values: 
- **Economizer = Disable, Enable**
- **Outside air = opening to/closing to 0-100%**

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

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

Possible values: 10-99 BTU/LB

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

| Active Outside Air Temperature | 86.0 F |
| ECEM Return Air Temperature | 78.0 F |

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

(On units with an airside economizer only)

<table>
<thead>
<tr>
<th>Active Outside Air Humidity</th>
<th>30 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECEM Return Air Humidity</td>
<td>62 %</td>
</tr>
</tbody>
</table>

Possible values: 0-100%

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

End of Submenu (NEXT) to Enter SETUP

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

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

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

(On all VAV units only)

<table>
<thead>
<tr>
<th>Active Supply Air Cooling STP From HI (KEYPAD) SETPOINT MENU Is 55 F</th>
</tr>
</thead>
</table>

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

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

(On all VAV units with hydronic heat only)

<table>
<thead>
<tr>
<th>Active Supply Air Heating STP From HI (KEYPAD) SETPOINT MENU Is 100 F</th>
</tr>
</thead>
</table>

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

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

(On all VAV units with hydronic, electric, or external heat only)

<table>
<thead>
<tr>
<th>Active Daytime Warmup Setpoints Initiate: 67 F Is Terminate: 71 F</th>
</tr>
</thead>
</table>

Possible Values: HI (Keypad) Setpoint Menu

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

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

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

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

(On units with hydronic, electric, or external heat with daytime warmup enabled only)

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

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

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

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

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

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

(On units with hydronic, electric, or external heat only)

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

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

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

(On units with hydronic, electric, or external heat only)

<table>
<thead>
<tr>
<th>Active Morning Warmup Setpoint From</th>
<th>Hi (KEYPAD) SETPOINT MENU is 72 F</th>
</tr>
</thead>
</table>

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

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

(On units with VCM module only)

<table>
<thead>
<tr>
<th>Active Min OA Flow Setpoint From</th>
<th>REMOTE MIN POS POT INPUT 342.0 CFM</th>
</tr>
</thead>
</table>

Possible Values: Hi (Keypad) Setpoint Menu
GBAS 0-5 VDC Module

Setpoint Range: 0 to max unit airflow

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

(On units with IGV or VFD only)

<table>
<thead>
<tr>
<th>Active Supply Air Pressure STP From</th>
<th>Hi (KEYPAD SETPOINT MENU is 2.0 IWC</th>
</tr>
</thead>
</table>

Possible Values: Hi (Keypad) Setpoint Menu
GBAS Module

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

On units with IGV or VFD only

<table>
<thead>
<tr>
<th>Active Supply Air Pressure Setpoints</th>
<th>High Limit: 40 IWC Deadband: 0.5 IWC</th>
</tr>
</thead>
</table>

Possible Values: High Limit = 1.6-4.7 IWC
Deadband = 0.1-2.0 IWC

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

End of Submenu (NEXT) to Enter SETUP

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

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

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

Active Supply Air Temp Sensor Input From
RTM ZONE TEMP INPUT  is  50.0 F
Possible Values:  RTM Supply Air Temp Input
ICS (Tracer Summit®)

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

(On units with hydronic, electric, or external heat only)

Active Daytime WU Temp Sensor Input From
RTM ZONE TEMP INPUT  is  82.0 F
Possible Values:  RTM Zone Temp Input
NSB Zone Sensor Setpoint Input
RTM Aux Temp Input
Heat Module Aux Temp Input
ECEM return Air Temp Input
ICS (Tracer Summit®)

Sensor Range:  -40 to 200 F
1. Pressing the NEXT key will display the following screen.

(On units with hydronic, electric, or external heat with DWU installed only)

Active Occupied Zone Temp Sensor Input From
HI (KEYPAD) SETPOINT MENU  Is  90 F
Possible Values:  RTM Zone Temp Input
NSB Zone Sensor Setpoint Input
RTM Aux Temp Input
Heat Module Aux Temp Input
ECEM return Air Temp Input
ICS (Tracer Summit®)

Sensor Range:  -40 to 200 F
1. Pressing the NEXT key will display the following screen.

Active Unocc Zone Temp Sensor Input From
RTM ZONE TEMP INPUT  is  75.0 F
Possible Values:  RTM Zone Temp Input
NSB Zone Sensor Setpoint Input
RTM Aux Temp Input
Heat Module Aux Temp Input
ECEM return Air Temp Input
ICS (Tracer Summit®)

Sensor Range:  -40 to 200 F
1. Pressing the NEXT key will display the following screen.

(On units with hydronic, electric, or external heat with MWU enabled only)
Programming

**Active Morning WU Temp Sensor Input From**

RTM ZONE TEMP INPUT  is  82.0 F

Possible Values:  
- RTM Zone Temp Input  
- NSB Zone Sensor Setpoint Input  
- RTM Aux Temp Input  
- Heat Module Aux Temp Input  
- ECEM return Air Temp Input  
- ICS (Tracer Summit®)

Sensor Range:  -40 to 200 F

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

**Active Zone Reset Sensor Input From**

RTM ZONE TEMP INPUT  is  82.0 F

Possible Values:  
- RTM Zone Temp Input  
- NSB Zone Sensor Setpoint Input  
- RTM Aux Temp Input  
- Heat Module Aux Temp Input  
- ECEM Return Air Temp Input  
- ICS (Tracer Summit®)

Sensor Range:  -40 to 200 F

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

**Active OA Temperature Sensor Input From**

RTM OUTSIDE AIR TEMP INPUT  is  86.0 F

Possible Values:  
- RTM Outside Air Temp Input  
- ICS (Tracer Summit®)

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

*(On units with an airside economizer)*

**Active Outside Air Humidity Input From**

OA HUMIDITY SENSOR INPUT  is  30 %

Possible Values:  
- O/A Humidity Sensor Input  
- ICS (Tracer Summit®)

Sensor Range:  0-100%

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

*(On units with IGV, VFD, or with the SAP sensor enabled)*

**Active Supply Air Press Sensor Input From**

RTM SA PRESSURE INPUT  is  2.1 IWC

Possible Values:  
- RTM SA Pressure Input  
- ICS (Tracer Summit®)

1. Pressing the NEXT key will display the following screen.
Temp Sensor Input Being Monitored: RTM ZONE TEMP INPUT is 82.0 F

Possible Values: RTM Zone Temp Input
NSB Zone Sensor Setpoint Input
RTM Aux Temp Input
Heat Module Aux Temp Input
ECEM Return Air Temp Input
ICS (Tracer Summit®)
No sensor selected

Sensor Range: -40 to 200 F

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

End of Submenu (NEXT) to Enter SETUP

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

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

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

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

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

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

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

(On units with a NSB zone sensor installed)
Temp Measured By Sensor Connected To
NSB Panel Temp Sensor Input 79.5 F

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

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

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

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

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

(On units with hydronic, electric, or external heat only)
Temp Measured By Sensor Connected To
HEAT MODULE AUX TEMP INPUT  82.0 F

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

(On units with a VCM and OA preheater enabled)
Temp Measured By Sensor Connected To
ECEM RETURN AIR TEMP INPUT  78.0 F

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

(On water-cooled units only)
Temp Measured By Sensor Connected To
WSM ENT WATER TEMP INPUT  60.1 F

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

(On water-cooled units only)
Temp Measured By Sensor Connected To
WSM MIXED AIR TEMP INPUT  51.7 F

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

(On water-cooled units only)
Temp Measured By Sensor Connected To
WSM ENT COND WATER TEMP INPUT  64.9 F

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

(On units with a VCM installed and O/A preheater enabled)
Temp Measured By Sensor Connected To
VCM MODULE AUX TEMP INPUT  50.0 F

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

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

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

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

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

(On models SCWF/SIWF 42-80 tons or SCRF/SIRF 50-60 tons only)

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

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

(On models SCWF/SIWF 65-80 tons only)

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

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

End of Submenu (NEXT) to Enter SETUP

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

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

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

RTM Supply Airflow Proving Input: FLOW

Possible Values: Flow, No Flow

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

(On units when minimum position pot is assigned to function)

| RTM Remote Min Position Pot Input 0 % |

Possible Values: 0-100%

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

(On units with IGV or VFD, or units without IGV or VFD and supply air pressure is present)

| RTM Supply Air Pressure Input 2.1 IWC |

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

(On units with an airside economizer only)

| Active Outside Air Humidity 30 % |

Possible Values: 0-100%

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

(On units with an airside economizer and comparative enthalpy only)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Outside Air Humidity</td>
<td>30 %</td>
</tr>
<tr>
<td>ECEM Return Air Humidity</td>
<td>62 %</td>
</tr>
</tbody>
</table>

Possible Values: 0-100%

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

(On units with a VCM)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCM Outside Air Flow Input</td>
<td>350.0 CCFM</td>
</tr>
</tbody>
</table>

Possible Values: 0 to max unit airflow.

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

(On units with a VCM installed and CO2 reset enabled)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCM CO2 Level Input</td>
<td>1512 PPM</td>
</tr>
</tbody>
</table>

Possible Values: 0-2000 PPM

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

(On water-cooled units with a water flow switch installed)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSM Water Flow Switch Input</td>
<td>Flow</td>
</tr>
</tbody>
</table>

Possible Values: Flow, No Flow

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

End of Submenu (NEXT) to Enter SETUP

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

(On units with GBAS module)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Submenu</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBAS 0 - 5VDC Module Status</td>
<td>Submenu</td>
</tr>
<tr>
<td>Press ENTER to View Data in This Submenu</td>
<td></td>
</tr>
</tbody>
</table>

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

### GBAS 0-5VDC Module

**Status:** Input 1 = 0.00 VDC  
**Assignment:** Not Assigned

**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 0-5VDC inputs 2, 3, and 4.
2. Pressing the NEXT key will display the following screen.

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

**Status:** OPEN

**Possible Values:** Open, Closed

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

### GBAS (0-5VDC) Module Relay Output Status

**Status:** Output 1 = OFF

**Possible Values:** Open, Closed

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

---

**End of Submenu (NEXT) to Enter SETUP**

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

---

**End of Submenu (NEXT) to Enter SETUP**

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

The setup menu allows the user to input unit control parameters; i.e., 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 displays 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: Some of the screens in this section may not be visible on your HI since they are applicable only for specific unit options.

Press the SETUP key to begin viewing or modifying the SETUP screens. 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 additional values on the same screen that require changing.

SETUP Menu Screens

Press the SETUP key to display the following screen(s).

### Display Text in:
- **ENGLISH LANGUAGE**

### Display Units Using:
- **ENGLISH NOTATION**

**Factory Presets:**
- **Text and Units = English**
- **Possible Values:**
  - Text = English, French, Spanish
  - Units = English, SI

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

#### (On units with a TCI module)

<table>
<thead>
<tr>
<th>Unit Control:</th>
<th>LOCAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Address:</td>
<td>31</td>
</tr>
</tbody>
</table>

**Factory Presets:**
- **Control = Local**
- **Address = 1**
- **Possible Values:**
  - Unit Control = Local, ICS (Tracer Summit®)
  - Unit Address = 0-31

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

#### General Unit Functions Setup Submenu

Press ENTER to Review or Adjust

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

#### (On units with VFD and bypass)

<table>
<thead>
<tr>
<th>Supply Fan VFD Mode:</th>
<th>BYPASS</th>
</tr>
</thead>
</table>

**Factory Presets:**
- **Mode = Normal**
- **Address = 1**
- **Possible Values:**
  - Mode = Normal, Bypass

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

#### If Remote Panel Mode Input Not Present:

<table>
<thead>
<tr>
<th>System Mode:</th>
<th>AUTO</th>
</tr>
</thead>
</table>

**Possible Values:**
- **System Mode = Off, Auto**

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

#### Daytime Warmup Function:

| Disabled |

**Factory Preset:**
- **Disabled**
- **Possible Values:**
  - Daytime Warmup Function = Enabled, Disabled

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

**Programming**

---

#### (On units with hydronic or electric heat)

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning Warmup Function</td>
<td>ENABLED</td>
</tr>
<tr>
<td>Morning Warmup Type</td>
<td>FULL CAPACITY</td>
</tr>
</tbody>
</table>

Factory Presets: Function = Enabled  
MWU Type = Full Capacity  
Possible Values: Function = Enabled, Disabled  
MWU Type = Full Capacity, Cycling Capacity  

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

#### (On units with hydronic heat)

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Air Tempering Function</td>
<td>DISABLED</td>
</tr>
<tr>
<td>Warm Up Outside Air Used for Ventilation</td>
<td></td>
</tr>
</tbody>
</table>

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

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

#### (On cooling-only units)

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unocc Mech Cooling Function</td>
<td>ENABLED</td>
</tr>
</tbody>
</table>

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

**OR**

#### (On units with hydronic, electric, or external heat)

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unocc Mech Cooling Function</td>
<td>ENABLED</td>
</tr>
<tr>
<td>Unocc Heating Function</td>
<td>ENABLED</td>
</tr>
</tbody>
</table>

Factory Presets: Cooling and Heating Function = Enabled  
Possible Values: Cooling and Heating Function = Enabled, Disabled  

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

#### (On units with a VCM)

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>OA Preheater Output Control</td>
<td>ENABLED</td>
</tr>
<tr>
<td>Activate If Preheat Temp Below Setpoint</td>
<td></td>
</tr>
</tbody>
</table>

Factory Presets: Control = Enabled  
Possible Values: Control = Enabled, Disabled  

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

#### Demand Limit Definition:

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling</td>
<td>100 %</td>
</tr>
</tbody>
</table>

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

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

(On units with hydronic or electric heat)

**Demand Limit Definition:**

|      | Cooling: 100% | Heating: 100% |

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

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

**Compressor Lead/Lag Function:** DISABLED

**Vary Staging Order to Distribute Runtime**

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

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

**Reduce Multi-Unit Startup Power Demand**

| After Power-Up, Delay Unit Start: | 0 Sec |

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

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

**Coil Frost Cutout Temperature:** Shut Off

**Compressors If Evap Temp Is Below:** 30 F

Factory Presets: Temp = 30 F
Possible Values: Temp = 25-35 F

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

**End of Submenu (NEXT) to Enter SETUP**

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

VAV Control Functions Submenu
Press ENTER to Review or Adjust

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

(On units without heat)

**Supply Air Temp Reset Type:**

|      | Cooling: ZONE |

Factory Presets: None
Possible Values: Cooling = None, Zone, OA

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

(On units with hydronic heat)

Supply Air Temp Reset Type:
- Cooling: ZONE
- Heating: ZONE

Factory Presets: None
Possible Values: Cooling/Heating = None, Zone, OA

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

(On units when zone cooling reset is selected)

Supply Air Temp Zone
- Reset For Cooling:
  - Start Temp: 72 F
  - End Temp: 69 F

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

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

Supply Air Temp Outside Air
- Reset For Cooling:
  - Start Temp: 90 F
  - End Temp: 70 F

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

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

(On units with outside air cooling reset selected)

Supply Air Temp Zone
- Reset For Cooling:
  - Maximum Amount of Reset Applied: 5 F

Possible Values: SAT = Zone, OA
  - Reset (Zone) = 72
  - Reset (OA) = 72

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

(On units with outside air cooling reset selected)

Supply Air Temp Outside Air
- Reset For Cooling:
  - Maximum Amount of Reset Applied: 5 F

Possible Values: SAT = Zone, OA
  - Reset Zone = 72
  - Reset OA = 72

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

(On units with outside air heating reset selected)

<table>
<thead>
<tr>
<th>Supply Air Temp Outside Air</th>
<th>Reset For Heating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Temp: 10 F</td>
<td>End Temp: 60 F</td>
</tr>
</tbody>
</table>

Factory Presets: Start = 10 F, End = 60 F
Possible Values: Start OA Temp = 73
End OA Temp = 74

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

(On units with zone air heating reset selected)

<table>
<thead>
<tr>
<th>Supply Air Temp Zone</th>
<th>Reset For Heating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Temp: 65 F</td>
<td>End Temp: 68 F</td>
</tr>
</tbody>
</table>

Factory Presets: Start = 65 F, End = 68 F
Possible Values: Start OA Temp = 211
End OA Temp = 212

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

(On units with outside air heating selected)

<table>
<thead>
<tr>
<th>Supply Air Temp OA</th>
<th>Reset For Heating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Amount of Reset Applied: 10 F</td>
<td></td>
</tr>
</tbody>
</table>

Possible Values: SAT Temp = Zone, OA
Zone Reset = 75
OA Reset = 75

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

(On units with outside air heating selected)

<table>
<thead>
<tr>
<th>Supply Air Temp ZONE</th>
<th>Reset For Heating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Amount of Reset Applied: 10 F</td>
<td></td>
</tr>
</tbody>
</table>

Possible Values: SAT Temp = Zone, OA
Zone Reset = 75
OA Reset = 75

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

VAV Box Max Stroke Time: 0 Min

Factory Presets: 6 Min
Possible Values: 0-10

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

(On units with IGV or VFD)

Max Occupied IGV/VFD Command: 100 %

Factory Presets: 100%
Possible Values: 0-100%
1. Pressing the NEXT key will display the following screen.

End of Submenu (NEXT) to Enter SETUP

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

(On units with an airside or waterside economizer)

Economizer Control Functions Submenu
Press ENTER to Review or Adjust

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

(On units with an airside and waterside economizer)

Economizer Priority
Choose Which Economizer Stages Up First

Possible Values: Waterside Econ, Airside Econ
1. Pressing the NEXT key will display the following screen.

(On units with a waterside economizer)

Unocc Water Economizer Function: ENABLED

Factory Presets: Enabled
Possible Values: Enabled, Disabled
1. Pressing the NEXT key will display the following screen.

(On units with an airside economizer)

Unocc Air Economizer Function: ENABLED

Factory Presets: Enabled
Possible Values: Enabled, Disabled
1. Pressing the NEXT key will display the following screen.

(On units with a waterside economizer)

Disable WS Econ If Difference Between MA Temp and Ent Water Temp Less Than 4.0 F

1. Pressing the NEXT key will display the following screen.
End of Submenu (NEXT) to Enter SETUP

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

*(On all water-cooled units and all units with a waterside economizer)*

**Water Flow Control Setup Submenu**

Press ENTER to Review or Adjust

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

*(On all water-cooled units and all units with a waterside economizer)*

**Periodic Water Purge Function:** ENABLED

- **Interval:** 1 Hr
- **Duration:** 1 Min

Possible Values: Enabled, Disabled

Interval = 1-999 Hrs
Duration = 1-9 Min

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

*(On all water-cooled units and all units with a waterside economizer)*

**Water-Flow Init Time Delay:** 1 Min

Time To Establish Water Flow Before Diag

Possible Values: 0-20 Min

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

*(On all water-cooled units and all units with a waterside economizer)*

**Temp Stablization Time Delay:** 1 Min

Water Flow Time For Valid Temp Readings

Possible Values: 0-20 Min

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

*(On all water-cooled units)*

**Head Pressure Control Inactive Min:** 10 %

**Head Pressure Control Active Min:** 30 %

Possible Values: 0-100%

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

SETUP

(On units with waterside economizer)

Water Economizer Min Position: 10%

Possible Values: 0-100%

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

(On all water-cooled units)

Cond Temp Control Point: 90 F

Possible Values: 80-100 F

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

(On all water-cooled units)

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

Possible Values: 0-99 F

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

(On all air-cooled units)

Cond Temp Control Band

Lower Limit: 80 F  Upper Limit: 120 F

Factory Presets: Lower = 80 F  Upper = 120 F

Possible Values: Lower = 70-90 F  Upper = 110-130 F

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

(On all air-cooled units)

Cond Temp Control Band
Temporary Low Limit Suppression: 10 F

Factory Presets: 10 F
Possible Values: 0-20 F

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

Cond Temp Control Band
Temporary Low Limit Suppression: 10 F

(On all air-cooled units)

Efficiency Check Point: 105 F

Factory Presets: 105 F
Possible Values: 95-115 F

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

Cond Temp
Efficiency Check Point: 105 F

(On all air-cooled units)

Low Ambient Control Point: 90 F

Factory Presets: 90 F
Possible Values: 80-100 F

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

End of Submenu (NEXT) to Enter SETUP

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

Sensor Source Selections Submenu

Sensor Source Selections Submenu
Press ENTER to Review or Adjust

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

(On units with electric, hydronic, or external heat and supply air temperature control)

For Daytime Warmup Temp Ctrl, Use Sensor
Connected To: RTM ZONE TEMP INPUT

Possible Values: RTM Zone Temp Input
NSB Zone Sensor
RTM Aux Temp Input
Heat Module Aux Temp Input
ECEM Return Air Temp Input

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

(On all units except those with supply air temperature control without IGV or VFD)

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

Possible Values: RTM Zone Temp Input  
                 NSB Zone Sensor  
                 RTM Aux Temp Input  
                 Heat Module Aux Temp Input  
                 ECEM Return Air Temp Input

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

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

Possible Values: RTM Zone Temp Input  
                 NSB Zone Sensor  
                 RTM Aux Temp Input  
                 Heat Module Aux Temp Input  
                 ECEM Return Air Temp Input

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

(On units with electric, hydronic, or external heat only)

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

Possible Values: RTM Zone Temp Input  
                 NSB Zone Sensor  
                 RTM Aux Temp Input  
                 Heat Module Aux Temp Input  
                 ECEM Return Air Temp Input

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

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

Possible Values: RTM Zone Temp Input  
                 NSB Zone Sensor  
                 RTM Aux Temp Input  
                 Heat Module Aux Temp Input  
                 ECEM Return Air Temp Input

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

(On units with Traq™ dampers only)

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

Possible Values:  VCM Module Aux Temp Input
                  WSM Mixed Air Temp Input

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

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

Factory Presets:  RTM Zone Temp Input
Possible Values:  RTM Zone Temp Input
                  NSB Zone Sensor
                  RTM Aux Temp Input
                  Heat Module Aux Temp Input
                  ECEM Return Air Temp Input
                  No Sensor Selected

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

End of Submenu (NEXT) to Enter SETUP

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

Outside Air Ventilation Setup

(On units with a VCM or airside economizer)

Outside Air Ventilation Setup Submenu
Press ENTER to Review or Adjust

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

(On units with an airside economizer and IGV or VFD)

OA Flow Compensation Function:   DISABLED
Use Fixed OA Damper Minimum Position

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”

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

SETUP

(On units with a VCM)

OA Flow CO2 Reset Function: ENABLED

Possible Values: Enabled, Disabled

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

(On units with a VCM installed and CO2 reset enabled)

OA Flow CO2 Reset Function: ENABLED
CO2 Start: 800 PPM  CO2 Max: 1000 PPM

Possible Values: Enabled, Disabled
CO2 Start = 0-1900 PPM
CO2 Max = 100-2000 PPM

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

(On units with an airside economizer with Traq™ damper)

TRAQ Damper Quantity: 1
TRAQ Damper Size: 28 Inches

Possible Values: Quantity = 1-12
Size = 0, 13, 16, 20, 24, or 28

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

(On units with a VCM)

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

Factory Presets: Gain = 1.0
Offset = 0.0
Possible Values: Gain = 0.0-1.5
Offset = -25.0-25.0

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

End of Submenu (NEXT) to Enter SETUP

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

Ventilation Override Definitions

(On units with a VOM)

Ventilation Override Definitions
Press ENTER to Review or Adjust

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

**On units with a VOM and IGV or VFD**

<table>
<thead>
<tr>
<th>Ventilation Override Definition</th>
<th>Mode A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Fan</td>
<td>ON</td>
</tr>
</tbody>
</table>

Factory Presets: Refer to definitions on page 5.  
Possible Values: On, Off

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

---

**On units with a VOM and airdside or waterside economizer**

<table>
<thead>
<tr>
<th>Ventilation Override Definition</th>
<th>Mode A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside Air Dampers</td>
<td>OPEN</td>
</tr>
</tbody>
</table>

Factory Presets: Refer to definitions on page 5.  
Possible Values: Open, Closed

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

---

**On units with a VOM and electric or hydronic heat**

<table>
<thead>
<tr>
<th>Ventilation Override Definition</th>
<th>Mode A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat</td>
<td>OFF</td>
</tr>
</tbody>
</table>

Factory Presets: Refer to definitions on page 5.  
Possible Values: Off, In Control

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

---

**On units with a VOM**

<table>
<thead>
<tr>
<th>Ventilation Override Definition</th>
<th>Mode A</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAV Box Relay</td>
<td>DEENERGIZED</td>
</tr>
</tbody>
</table>

Factory Presets: Refer to definitions on page 5.  
Possible Values: Energized, Deenergized

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

---

**On units with a VOM installed and OA preheater function enabled**

<table>
<thead>
<tr>
<th>Ventilation Override Definition</th>
<th>Mode A</th>
</tr>
</thead>
<tbody>
<tr>
<td>OA Preheater State</td>
<td>IN CONTROL</td>
</tr>
</tbody>
</table>

Factory Presets: Refer to definitions on page 5.  
Possible Values: In Control, Off

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

---

**On units with a VOM**

<table>
<thead>
<tr>
<th>Ventilation Override Definition</th>
<th>Mode A</th>
</tr>
</thead>
<tbody>
<tr>
<td>VO Relay</td>
<td>ENERGIZED</td>
</tr>
</tbody>
</table>

Factory Presets: Refer to definitions on page 5.  
Possible Values: Energized, Deenergized

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

(On units with a VOM)

<table>
<thead>
<tr>
<th>Ventilation Override Definition</th>
<th>Mode A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter Password to Lock Definition:</td>
<td></td>
</tr>
</tbody>
</table>

Factory Presets:  Refer to definitions on page 5.
Possible Values:  + (Plus), - (Minus)

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

Note:  After lock a MODE (by entering the password), the display for that MODE becomes “reporting” only and the definition cannot be changed unless the VOM is replaced. After entering the password, press the NEXT key to scroll through the previous screens to confirm selected choices for each mode as follows below.

(On units with a VOM and VO mode locked)

<table>
<thead>
<tr>
<th>Ventilation Override Mode A</th>
<th>Is Locked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Fan</td>
<td></td>
</tr>
</tbody>
</table>

Factory Presets:  Refer to definitions on page 5.

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

(On units with a VOM)

<table>
<thead>
<tr>
<th>Ventilation Override Mode B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Fan</td>
</tr>
</tbody>
</table>

Follow the preceding steps used to program MODE “A” to program MODES “B,” “C,” “D,” and “E” as needed.

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

End of Submenu (NEXT) to Enter SETUP

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

GBAS Module I/O Assignments

(On units with a GBAS)

<table>
<thead>
<tr>
<th>GBAS 0 - 5VDC Module I/O Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press ENTER to Review or Adjust</td>
</tr>
</tbody>
</table>

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

(On units with a GBAS)

<table>
<thead>
<tr>
<th>GBAS (0 - 5VDC) Analog Input 1</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT ASSIGNED</td>
<td></td>
</tr>
</tbody>
</table>

Factory Presets: None
Possible Values: Not Assigned, Occupied Zone
Cooling Setpoint, Unoccupied Zone
Cooling Setpoint, Occupied Zone
Heating Setpoint, Unoccupied Zone
Heating Setpoint
SA Static Pressure Setpoint
SA Heating Setpoint
SA Cooling Setpoint
Min OA Flow Setpoint

1. Press the + or - key until the proper selection displays 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 it cannot be duplicated.
3. Press the NEXT key to advance to the number 2 input assignment screen and repeat steps 1 and 2 for assignments 3 and 4.
4. Pressing the NEXT key will display the following screen.

(On units with a GBAS)

<table>
<thead>
<tr>
<th>GBAS (0 - 5VDC) Output 1</th>
<th>Alarm Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Press ENTER to Review or Adjust</td>
</tr>
</tbody>
</table>

Factory Presets: Output 1 = Dirty Filters
Output 2 = Compressor Trip - Ckt 1, 2, 3, or 4
Low Pressure Control Open
Low Pressure Control Open - Ckt 1, 2, 3, or 4
Contactor Fail
Contactor Fail - Ckt 1, 2, 3, or 4
Output 3 = Heat Fail
Output 4 = Supply Fan Failure
Output 5 = Any Active Diagnostic

Possible Values: Refer to the list of active diagnostics assigned to each of the five output definitions in the “Diagnostic Menu” section on page 72. It also can be one of the VOM outputs: supply fan/VFD bypass enabled or high CO2.

1. Press the NEXT key to bypass this section.
2. Press the + or - key until the proper selection displays for the number 1 assignment. The plus key will assign all diagnostics and the 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 display. Repeat step 1 for each remaining output. If “no” was assigned, only one output assignment can be assigned to each output assignment and it cannot be duplicated. Once the output diagnostics are defined, press the NEXT key to advance to the number 2 output assignment screen. Repeat steps 1 and 2.
4. Pressing the NEXT key will display the following screen.

Note: Assigning “yes” to a GBAS output definition means that if the assigned diagnostic is present, the out assigned to it will energize.
RTM Alarm Output Diagnostic Assignment Screens

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

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

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 on page 72.

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.

Note: Assigning “yes” to an alarm output definition means that if the assigned diagnostic is present, the RTM alarm output will energize.
**Temperature Input Calibration**

The following calibration and offset screens allow sensor calibration, when necessary.

For example, if using the MWU sensor and you detect a difference between the actual measured room temperature and the corresponding measured sensor value, the sensor needs calibration. Using the temperature input calibration screen for MWU heat, program the error amount into the Temperature Input Offset field to calibrate the sensor.

**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 bypass this section or press the ENTER key to view the following screens.
2. If no further changes are required and you want to exit back to view the unit operating status, press the STATUS key once.
3. If you want to remain in the temperature input calibration submenu, press the SETUP key once and it will return you to the beginning of that particular submenu.
4. If you want to exit to another menu, such as CONFIGURATION, press that key once, then press the NEXT key to scroll through those screens.

### Temperature Input Calibration Screens

*(Applicable to All Units)*

**Calibration and Offset Submenu**

- **Press ENTER to Review or Adjust**

1. Press the NEXT key to bypass this section or press the ENTER key to view the following screens.

**Temperature Calibration Offset For**

- **RTM Zone Temperature Input**
  - **Factory Preset:** 0.0 F
  - **Possible Values:** Plus or Minus 5.0 F

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

**Temperature Calibration Offset For**

- **RTM Aux Temperature Input**
  - **Factory Preset:** 0.0 F
  - **Possible Values:** Plus or Minus 5.0 F

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

**Temperature Calibration Offset For**

- **RTM Outside Air Temperature Input**
  - **Factory Preset:** 0.0 F
  - **Possible Values:** Plus or Minus 5.0 F

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

*(On units with electric or hydronic heat only)*

**Temperature Calibration Offset For**

- **Heat Module Aux Temp Input**
  - **Factory Preset:** 0.0 F
  - **Possible Values:** Plus or Minus 5.0 F

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

*(On units with comparative enthalpy installed)*

**Temperature Calibration Offset For**

- **ECEM Return Air Temperature Input**
  - **Factory Preset:** 0.0 F
  - **Possible Values:** Plus or Minus 5.0 F

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

(On all water-cooled units and/or units with a waterside economizer)

<table>
<thead>
<tr>
<th>Temperature Calibration Offset For</th>
<th>WSM Entering Water Temp Input</th>
<th>0.0 F</th>
</tr>
</thead>
</table>

Factory Preset: 0.0 F
Possible Values: 0.0-5.0 F

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

(On all water-cooled units and/or units with a waterside economizer)

<table>
<thead>
<tr>
<th>Temperature Calibration Offset For</th>
<th>WSM Mixed Air Temp Input</th>
<th>0.0 F</th>
</tr>
</thead>
</table>

Factory Preset: 0.0 F
Possible Values: 0.0-5.0 F

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

(On all water-cooled units and/or units with a waterside economizer)

<table>
<thead>
<tr>
<th>Temperature Calibration Offset For</th>
<th>WSM Ent Cond Water Temp Input</th>
<th>0.0 F</th>
</tr>
</thead>
</table>

Factory Preset: 0.0 F
Possible Values: 0.0-5.0 F

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

(On all water-cooled units and/or units with a waterside economizer)

<table>
<thead>
<tr>
<th>Temperature Calibration Offset For</th>
<th>Ckt 1 Sat Cond Temp Input</th>
<th>0.0 F</th>
</tr>
</thead>
</table>

Factory Preset: 0.0 F
Possible Values: 0.0-5.0 F

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

(On all water-cooled units and/or units with a waterside economizer)

<table>
<thead>
<tr>
<th>Temperature Calibration Offset For</th>
<th>Ckt 2 Sat Cond Temp Input</th>
<th>0.0 F</th>
</tr>
</thead>
</table>

Factory Preset: 0.0 F
Possible Values: 0.0-5.0 F

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

(On all water-cooled units and/or units with a waterside economizer)

<table>
<thead>
<tr>
<th>Temperature Calibration Offset For</th>
<th>Ckt 3 Sat Cond Temp Input</th>
<th>0.0 F</th>
</tr>
</thead>
</table>

Factory Preset: 0.0 F
Possible Values: 0.0-5.0 F

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

SETUP

(On all water-cooled units and/or units with a waterside economizer)

<table>
<thead>
<tr>
<th>Temperature Calibration Offset For Ckt 4 Sat Cond Temp Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factory Preset: 0.0 F</td>
</tr>
<tr>
<td>Possible Values: 0.0-5.0 F</td>
</tr>
</tbody>
</table>

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

End of Submenu (NEXT) to Enter SETUP

1. Pressing the NEXT key will display the following screen.
Device Characteristic Setup Definitions

To change device characteristic 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 Characteristic Setup Definitions submenu, press the SETUP 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 SETUP menu, press the SETUP key twice. Then press the NEXT key to scroll through the SETUP submenu choices, OR
d. if you want to exit to another menu, such as CONFIGURATION, press that key once, then press the NEXT key to scroll through those screens.

Device Characteristic Setup Screens
(Applicable to units as noted)

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

(On units with an airside economizer)

Actuator Setup
OA Damper

Max Stroke Time
30 Sec

Factory Preset: 150 Seconds
Possible Values: 1-255 Seconds

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

(On units with an airside economizer)

Actuator Setup
OA Damper

Min Voltage
2.0 VDC

Factory Preset: 2.0 VDC
Possible Values: 0.0-9.9 VDC

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

(On units with an airside economizer)

Actuator Setup
OA Damper

Max Voltage
10.0 VDC

Factory Preset: 10.0 VDC
Possible Values: 0.1-10.0 VDC

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

(On units with an airside economizer)

Actuator Setup
OA Damper

Direct/Reverse Act
DIRECT ACTING

Possible Values: Direct Acting, Reverse Acting

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

(On units with a waterside economizer)

Actuator Setup
Water Econo

Max Stroke Time
150 Sec

Factory Presets: 150 Sec
Possible Values: 1-255 Sec

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

*(On units with a waterside economizer)*

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Water Economizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Voltage</td>
<td>2.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 2.0 VDC  
Possible Values: 0-10 VDC

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

*(On units with a waterside economizer)*

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Water Economizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Voltage</td>
<td>10.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 10.0 VDC  
Possible Values: 0-10 VDC

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

*(On units with a waterside economizer)*

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Water Economizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/Reverse Acting</td>
<td>Direct Acting</td>
</tr>
</tbody>
</table>

Factory Presets: Direct Acting  
Possible Values: Direct Acting, Reverse Acting

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

*(On units with water-cooled units)*

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Water Econ Bypass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Stroke Time</td>
<td>150 Sec</td>
</tr>
</tbody>
</table>

Factory Presets: 150 Sec  
Possible Values: 1-255 Sec

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

*(On units with a waterside economizer)*

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Water Econ Bypass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Voltage</td>
<td>2.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 2.0 VDC  
Possible Values: 0-10 VDC

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

*(On units with a waterside economizer)*

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Water Econ Bypass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Voltage</td>
<td>10.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 10.0 VDC  
Possible Values: 0-10 VDC

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

SETUP

(On units with a waterside economizer)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Water Econ Bypass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/Reverse Acting</td>
<td>DIRECT ACTING</td>
</tr>
</tbody>
</table>

Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting
1. Pressing the NEXT key will display the following screen.

(On units with IGV or VFD)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>IGV/VFD Cmd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Stroke Time</td>
<td>150 Sec</td>
</tr>
</tbody>
</table>

Factory Presets: 150 Sec
Possible Values: 1-255 Sec
1. Pressing the NEXT key will display the following screen.

(On units with IGV or VFD)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>IGV/VFD Cmd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Voltage</td>
<td>2.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 2.0 VDC
Possible Values: 0-10 VDC
1. Pressing the NEXT key will display the following screen.

(On units with IGV or VFD)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>IGV/VFD Cmd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Voltage</td>
<td>10.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 10.0 VDC
Possible Values: 0-10 VDC
1. Pressing the NEXT key will display the following screen.

(On units with IGV or VFD)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>IGV/VFD Cmd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/Reverse Act</td>
<td>DIRECT ACTING</td>
</tr>
</tbody>
</table>

Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting
1. Pressing the NEXT key will display the following screen.

(On units with hydronic heat)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Hydronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Stroke Time</td>
<td>150 Sec</td>
</tr>
</tbody>
</table>

Factory Presets: 150 Sec
Possible Values: 1-255 Sec
1. Pressing the NEXT key will display the following screen.
Programming

(On units with hydronic heat)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Hydronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Voltage</td>
<td>2.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 2.0 VDC
Possible Values: 0.0-9.9 VDC

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

(On units with hydronic heat)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Hydronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Voltage</td>
<td>10.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 10.0 VDC
Possible Values: 0.1-10.0 VDC

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

(On units with hydronic heat)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Hydronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/Reverse Act</td>
<td>DIRECT ACTING</td>
</tr>
</tbody>
</table>

Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting

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

(On air-cooled units with low ambient damper)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Num 1 Low Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Stroke Time</td>
<td>60 Sec</td>
</tr>
</tbody>
</table>

Factory Presets: 60 Sec
Possible Values: 1-255 Sec

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

(On air-cooled units with low ambient damper)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Num 1 Low Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Voltage</td>
<td>2.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 2.0 VDC
Possible Values: 0.0-9.9 VDC

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

(On air-cooled units with low ambient damper)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Num 1 Low Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Voltage</td>
<td>10.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 10.0 VDC
Possible Values: 0.1-10.0 VDC

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

(On air-cooled units with low ambient damper)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Num 1 Low Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/Reverse Act</td>
<td>DIRECT ACTING</td>
</tr>
</tbody>
</table>

Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting

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

(On air-cooled units with low ambient damper)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Num 2 Low Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Stroke Time</td>
<td>60 Sec</td>
</tr>
</tbody>
</table>

Factory Presets: 60 Sec
Possible Values: 1-255 Sec

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

(On air-cooled units with low ambient damper)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Num 2 Low Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Voltage</td>
<td>2.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 2.0 VDC
Possible Values: 0.0-9.9 VDC

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

(On air-cooled units with low ambient damper)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Num 2 Low Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Voltage</td>
<td>10.0 VDC</td>
</tr>
</tbody>
</table>

Factory Presets: 10.0 VDC
Possible Values: 0.1-10.0 VDC

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

(On air-cooled units with low ambient damper)

<table>
<thead>
<tr>
<th>Actuator Setup</th>
<th>Num 2 Low Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/Reverse Act</td>
<td>DIRECT ACTING</td>
</tr>
</tbody>
</table>

Factory Presets: Direct Acting
Possible Values: Direct Acting, Reverse Acting

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

End of Submenu (NEXT) to Enter SETUP

1. Pressing the NEXT key will display the following screen.
Control Algorithm Tuning Parameters

(Applicable to all Units)

1. Do not make any adjustments to these settings before contacting your Trane Company representative.
2. Pressing the NEXT key will display the following screen.

End of Submenu (NEXT) to Enter SETUP

1. Pressing the NEXT key will display the following screen.
SETPOINT Menu
The SETPOINT menu allows you to designate default zone temperature setpoints, supply air and space pressure setpoints, and low ambient compressor lockout setpoints.

These setpoints are active (in use) for the “Setpoint Source Selection” designated as “DEFAULT” for these inputs. When a setpoint screen displays for 30 minutes without a key being pressed, the Hi display will revert to the general operating status screen. If this happens, press the SETPOINT key again to return to the setpoint menu.

Pressing the SETPOINT key will allow you to view or modify unit setpoints.

To change setpoint 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 SETPOINT 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 to scroll through those screens.

Note: Some of the screens displayed in this section may not be visible on your Hi since they are applicable only for particular unit options.

SETPOINT Menu Screens
(Applicable for all units except as noted)

<table>
<thead>
<tr>
<th>Default Supply Air Temp Setpoint(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling:</td>
</tr>
<tr>
<td>Factory Presets:</td>
</tr>
<tr>
<td>Possible Values:</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Default Supply Air Temp Setpoint(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling:</td>
</tr>
<tr>
<td>Heating:</td>
</tr>
<tr>
<td>Factory Presets:</td>
</tr>
<tr>
<td>Possible Values:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Supply Air Temperature Deadband</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling:</td>
</tr>
<tr>
<td>Factory Presets:</td>
</tr>
<tr>
<td>Possible Values:</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Supply Air Temperature Deadband</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling:</td>
</tr>
<tr>
<td>Heating:</td>
</tr>
<tr>
<td>Factory Presets:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Possible Values:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Default Daytime Warmup Setpoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiate:</td>
</tr>
<tr>
<td>Terminate:</td>
</tr>
<tr>
<td>Factory Presets:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Possible Values:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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

(On units with hydronic, electric, or external heat only)

Default Occupied Zone Setpoint(s)

| Cool: 74 F | Heat: 71 F |

Factory Presets: Heat = 71 F
Cool = 74 F
Possible Values: Heat = 50-90 F
Cool = 52-92 F

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

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

(On units with hydronic heat only)

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

Factory Presets: 1.5 F
Possible Values: 0.0-3.0 F

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

(On cooling-only units)

Default Unoccupied Zone Temp Setpoint(s)

| Cool: 85 F |

Factory Presets: 85 F
Possible Values: 50-90 F

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

(On units with hydronic, electric, or external heat only)

Default Unoccupied Zone Temp Setpoint(s)

| Cool: 85 F | Heat: 60 F | Morn Warmup: 72 F |

Factory Presets: Cool = 85 F
Heat = 60 F
MWU = 72 F
Possible Values: Cool = 52-90 F
Heat = 50-88 F
MWU = 50-90 F

Note: A minimum difference of 2 F is maintained between heating and cooling setpoints. Also, the morning warmup cannot be lower than the heating setpoint.

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

**SETPOINT**

(On units with an airside economizer)

<table>
<thead>
<tr>
<th>Reference Enthalpy</th>
<th>Enable Air Econ When OA Enthalpy is Below:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factory Presets: 25 BTU/LB</td>
<td>Possible Values: 19-28 BTU/LB</td>
</tr>
</tbody>
</table>

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

(On units with an airside economizer)

| Supply Air Low Limit - Modulate Economizer Toward Min Pos if SA Temp Below: |
|-----------------------------|-----------------------------|
| Factory Presets: 50 F | Possible Values: 40-65 F |

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

(On units with an airside economizer)

<table>
<thead>
<tr>
<th>Default OA Damper Min Position:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factory Presets: 15%</td>
</tr>
</tbody>
</table>

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

(On units with an airside economizer, OA cfm compensation, and IGV or VFD or on units without an economizer, with IGV or VFD, and a VCM)

| Default OA Damper Min Position: with IGV/VFD Command at Minimum (0 %) |
|-----------------------------|-----------------------------|
| Factory Presets: 15% | Possible Values: 0-100% |

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

(On units with an airside economizer, OA cfm compensation, and IGV or VFD or on units without an economizer, with IGV or VFD, and a VCM)

| Default OA Damper Min Position: with IGV/VFD Command at Maximum (100 %) |
|-----------------------------|-----------------------------|
| Factory Presets: 10% | Possible Values: 0-100% |

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

(On units with a VCM)

<table>
<thead>
<tr>
<th>Default Minimum OA Flow Setpoint:</th>
<th>40 CCFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min OA Flow Deadband:</td>
<td>10.0 CCFM</td>
</tr>
</tbody>
</table>

Possible Values: Setpoint = 0-max unit airflow

Deadband = 5.0-20 CCFM

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

(On units with a VCM installed and preheat enabled)

<table>
<thead>
<tr>
<th>Preheat Output ON If Preheat Temp Below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preheat Activation Temperature:</td>
</tr>
<tr>
<td>35 F</td>
</tr>
</tbody>
</table>

Factory Presets: 35 F
Possible Values: 35-75 F

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

(On units with IGV or VFD. Also, on units with SAT control without air volume control and supply air pressure sensor installed)

<table>
<thead>
<tr>
<th>Default Supply Air Pressure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 IWC</td>
</tr>
<tr>
<td>High Limit:</td>
</tr>
<tr>
<td>4.0 IWC</td>
</tr>
<tr>
<td>Deadband:</td>
</tr>
<tr>
<td>0.5 IWC</td>
</tr>
</tbody>
</table>

Factory Presets:
Setpoint = 1.5 IWC
High Limit = 4.0 IWC
Deadband = 0.5 IWC
Possible Values:
Setpoint = 1.0-4.3 IWC
High Limit = 1.2-4.7 IWC
Deadband = 0.1-2.0 IWC

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

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

<table>
<thead>
<tr>
<th>Low Ambient Comp Lockout Temp:</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 F</td>
</tr>
<tr>
<td>Comp (s) OFF If OA Temp Below This Value</td>
</tr>
</tbody>
</table>

Factory Presets: 50 F
Possible Values: -20-80 F

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

Setpoint Source Selections Submenu
Press ENTER to Review or Adjust

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

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
Zone Sensor Setpoint Menu
NSB Zone Sensor Setpoint Input
GBAS 0-5 VDC Module

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

(On units with hydronic or electric heat)

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
GBAS 0-5 VDC Module

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

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
Zone Sensor Setpoint Menu
NSB Zone Sensor Setpoint Input
GBAS 0-5 VDC Module

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

(On units with hydronic or electric heat)

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
Zone Sensor Setpoint Menu
NSB Zone Sensor Setpoint Input
GBAS 0-5 VDC Module

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

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
Zone Sensor Setpoint Menu
NSB Zone Sensor Setpoint Input
GBAS 0-5 VDC Module

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

(On units with hydronic or electric heat)

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
Zone Sensor Setpoint Menu
NSB Zone Sensor Setpoint Input
GBAS 0-5 VDC Module

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

(On units with hydronic, electric, or external heat)

For Unocc ZoneTemp Heating Control, Use
Setpoint From: HI (KEYPAD) SETPOINT MENU

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
Zone Sensor Setpoint Menu
NSB Zone Sensor Setpoint Input
GBAS 0-5 VDC Module

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

(On units with hydronic, electric, or external heat)

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
NSB Zone Sensor Setpoint Input

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

(On units with an airside or waterside economizer or VCM)

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
Remote Min Pos Pot Input

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

(On units with a VCM and GBAS)

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
GBAS 0-5 VDC Module

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

(On units with IGV or VFD and GBAS)

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

Factory Presets: HI (Keypad) Setpoint Menu
Possible Values: HI (Keypad) Setpoint Menu
GBAS 0-5 VDC Module

1. Pressing the NEXT key will display the following screen.
### Configuration Menu

The self-contained unit has many operating functions that are factory preset. The following configuration programming steps allow the user to configure a replacement HI module for a unit that is already in operation.

Refer to the unit model number on the unit nameplate (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 HI for the unit to operate properly.

**Note:** Some of the screens displayed in this section are applicable only for particular options and are not visible unless those options are installed on your unit.

Pressing the CONFIGURATION key will allow you to view or modify unit setpoints.

**To change setpoint 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
2. 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
3. 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
4. c. if you want to exit to another submenu in the CONFIGURATION menu, press the CONFIGURATION key twice. Then press the NEXT key to scroll through the CONFIGURATION submenu choices, OR
5. d. if you want to exit to another menu, such as SETPOINT key, press that key once, then press the NEXT key to scroll through those screens.

### Configuration - Model Num Digit 1

**Unit Type**  
Commercial Self-Contained

**Possible Values:**  
Commercial Self-Contained

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

### Configuration - Model Num Digit 3

**Condenser Medium**  
WATER COOLED CONDENSER

**Possible Values:**  
Water Cooled Condenser  
Air Cooled Condenser  
None - No Condenser

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

### Configuration - Model Num Digit 4

**Development Type**  
SIGNATURE SERIES

**Possible Values:**  
Signature Series  
Modular Series

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

### Configuration - Model Num Digit 5

**Refrig Ckt Config**  
INDEPENDENT

**Possible Values:**  
Independent  
Manifolded

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

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

### Configuration - Model Num Digit 27

**Water Economizer**  
INSTALLED

**Possible Values:**  
Installed  
Not Installed

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

### Configuration - Model Num Digit 29

**Water Piping**  
INTERMEDIATE PIPING

**Possible Values:**  
Intermediate Piping  
Basic Piping  
None - No Piping

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

**(On all water-cooled units or units with a waterside economizer)**

### Configuration - Model Num Digit 29

**Water Piping**  
INTERMEDIATE PIPING

**Possible Values:**  
Intermediate Piping  
Basic Piping  
None - No Piping

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

*(On all water-cooled units and water flow switch or units with a waterside economizer and water flow switch)*

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

**Possible Values:**  
- Installed  
- Not Installed

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heating Type</strong></td>
<td>HYDRONIC</td>
</tr>
</tbody>
</table>

**Possible Values:**  
- Hydronic  
- Electric  
- None  
- External

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit</th>
<th>6, 7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit Capacity</strong></td>
<td>72</td>
</tr>
</tbody>
</table>

**Possible Values:**  
- 20-80  

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

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit</th>
<th>23</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Exhaust</strong></td>
<td>NONE</td>
</tr>
</tbody>
</table>

**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.*

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit</th>
<th>28</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Economizer</strong></td>
<td>INSTALLED</td>
</tr>
</tbody>
</table>

**Possible Values:**  
- Installed  
- Not Installed

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit 9</th>
<th>Air Temp/Vol Ctrl</th>
<th>SA CTRL WITH IGV/VFD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Values:</td>
<td>SA Control with IGV/VFD</td>
<td>Zone Control</td>
</tr>
<tr>
<td></td>
<td>No IGV/VFD or SA Control</td>
<td>No IGV/VFD</td>
</tr>
</tbody>
</table>

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

(On units with SA Control and IGV/VFD installed)

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit 9</th>
<th>Supply Fan VFD Bypass</th>
<th>INSTALLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Values:</td>
<td>Installed</td>
<td>Not Installed</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit 28</th>
<th>Comparative Enthalpy</th>
<th>INSTALLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Values:</td>
<td>Installed</td>
<td>Not Installed</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit 33</th>
<th>GBAS 0 - 5 VDC Module</th>
<th>INSTALLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Values:</td>
<td>Installed</td>
<td>Not Installed</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit 33</th>
<th>Ventilation Override (VOM)</th>
<th>INSTALLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Values:</td>
<td>Installed</td>
<td>Not Installed</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit 28</th>
<th>Ventilation Ctrl</th>
<th>TRAQ DAMPERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Values:</td>
<td>Traq™ Dampers</td>
<td>Standard Dampers</td>
</tr>
</tbody>
</table>

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

**Configuration**

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit</th>
<th>33</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC4 Communications Module</td>
<td>INSTALLED</td>
</tr>
</tbody>
</table>

Possible Values: Installed

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

<table>
<thead>
<tr>
<th>Configuration - Model Num Digit</th>
<th>33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Human Interface</td>
<td>INSTALLED</td>
</tr>
</tbody>
</table>

Possible Values: Installed

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

*(On all units unless the RTM has changed)*

<table>
<thead>
<tr>
<th>Unit Model Number</th>
</tr>
</thead>
</table>

Possible Values: Model Number

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

| Software Revision Number Report: |
| RTM                             |
| 9.13                            |

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

| Software Revision Number Report: |
| Single Compressor Module (SCM)   |
| 1.00                            |

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

| Software Revision Number Report: |
| Multiple Compressor Module (MCM) |
| 4.09                            |

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

*(On units with a GBAS)*

| Software Revision Number Report: |
| GBAS 0-5 VDC Module              |
| 1.00                            |

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

*(On units with a VOM)*

| Software Revision Number Report: |
| Ventilation Override (VOM)       |
| 1.00                            |

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

(On units with comparative enthalpy)

Software Revision Number Report:
Exhaust/Comp Enthalpy Module  8.04

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

(On units with hydronic or electric heat)

Software Revision Number Report:
Heat Module  1.00

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

Software Revision Number Report:
Unit Human Interface  14.07

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

(On units with a RHI)

Software Revision Number Report:
Remote Human Interface  11.04

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

(On units with a VCM)

Software Revision Number Report:
Ventilation Control (VCM)  1.12

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

(On units with a TCI)

Software Revision Number Report:
TCI4 Communications Module  1.00

1. Pressing the NEXT key will display the following screen.
**SERVICE MODE Menu**

The SERVICE MODE key allows the user 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 (i.e.; compressors, fans, dampers, heaters) and selectively turn them on or off. After designating the operating status for each unit component, the user will designate the "TEST START" delay time.

When a service mode screen displays for 30 minutes without a key being pressed, the HI screen will revert to the general operating status display. If this happens, press the SERVICE MODE key to return to the service menu.

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

To operate the unit in test mode, press the SERVICE MODE key to enter the service mode menu. Scroll through system outputs to selectively turn them “on” or “off.”

**To change 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.
3. Press the NEXT key to advance the cursor to another field within a screen.

**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 submenu, OR
c. if you want to exit to another submenu 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 key, press that key once, then press the NEXT key to scroll through those screens.
**Programming**

**SERVICE MODE**

**(On air-cooled units, 40-60 Tons)**

<table>
<thead>
<tr>
<th>Condenser Fan Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
</tr>
</tbody>
</table>

*Factory Presets: Off  
Possible Values: On, Off, Auto*

1. Press the NEXT key to advance the cursor to the next field within this screen.  
2. Press the NEXT key again to display the following screen.

**(On air-cooled units)**

<table>
<thead>
<tr>
<th>Condenser Fan Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ckt 1</td>
</tr>
</tbody>
</table>

*Factory Presets: 0%  
Possible Values: 0-100%, Auto*

1. Press the NEXT key again to display the following screen.

**(On air-cooled units)**

<table>
<thead>
<tr>
<th>Condenser Fan Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ckt 1</td>
</tr>
</tbody>
</table>

*Factory Presets: 0%  
Possible Values: 0-100%, Auto*

1. Press the NEXT key to advance the cursor to the next field within this screen.  
2. Press the NEXT key again to display the following screen.

**Compressor Relays:**

<table>
<thead>
<tr>
<th>Compressor Relays:</th>
</tr>
</thead>
<tbody>
<tr>
<td>K11</td>
</tr>
</tbody>
</table>

*Factory Presets: Off  
Possible Values: On, Off*

1. Press the NEXT key to advance the cursor to the next field within this screen.  
2. Press the NEXT key again to display the following screen.

**(On units with hydronic heat)**

<table>
<thead>
<tr>
<th>Hydronic Heat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actuator</td>
</tr>
</tbody>
</table>

*Factory Presets: 0%  
Possible Values: 0-100%, Auto*

1. Press the NEXT key again to display the following screen.
Programming

(On units with electric heat)

Heat Stages
Stage Off

Factory Presets: 0%
Possible Values: 0-100%, Auto

Note: Only single stage electric heat is available factory installed.

1. Press the NEXT key again to display the following screen.

(On units with an airside economizer)

OA Damper Pos 0%

Factory Presets: OA Damper = 0%
Possible Values: OA Damper = 0-100%

1. Press the NEXT key again to display the following screen.

(On units with VFD and bypass)

Supply Fan Bypass Relay: NORMAL

Possible Values: Normal, Bypass

1. Press the NEXT key again to display the following screen.

(On units with VOM)

Ventilation Override Module Output Relay OFF

Factory Presets: Off
Possible Values: On, Off

1. Press the NEXT key again to display the following screen.

(On units with VCM)

OA Preheater State OFF

Factory Presets: Off
Possible Values: On, Off

1. Press the NEXT key to advance the cursor to the next field within this screen.
2. Press the NEXT key again to display the following screen.
Programming SERVICE MODE

(On units with GBAS)

<table>
<thead>
<tr>
<th>GBAS 0-5 VDC Module Relay Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 OFF    #2 OFF    #3 OFF    #4 OFF    #5 OFF</td>
</tr>
</tbody>
</table>

Factory Presets: Off
Possible Values: 1, 2, 3, 4, 5 = On, Off

1. Press the NEXT key again to display the following screen.

Status/Annunc Test  Sys On (Blinking)
Heat:  OFF  Cool:  OFF  Service:  OFF

Factory Presets: Off
Possible Values: Heat = On, Off
Cool = On, Off
Service = On, Off

1. Press the NEXT key to advance the cursor to the next field within this screen.
2. Press the NEXT key again to display the following screen.

Start Test In  5 Seconds
Press TEST START To Begin, STOP To Halt

1. Press the NEXT key to advance the cursor to the next field within this screen.
2. Press the NEXT key again to display the following screen.
The DIAGNOSTICS menu allows the user to view diagnostics that result from system failures within the unit. There are two lists where diagnostics reside: the active list, and the diagnostic event log.

Use the active list for viewing all active diagnostics and clearing manually resetable diagnostics. If any active diagnostics are present, they will display after pressing the DIAGNOSTICS key.

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 cannot be reset by the HI. To clear the diagnostic, you must correct the condition that caused the diagnostic first.

The word “MORE” will display on all screens if more than one diagnostic exists, 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 allow the user to view the past 20 diagnostics. They will display after scrolling through the active list or after pressing the DIAGNOSTICS key when no active diagnostics are present. Diagnostics in this log are stacked in inverse chronological order, with the first diagnostic screen being the most recently reported diagnostic.

One the following screens will display first 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: ________________________
```

Factory Presets: N/A
Possible Values: + (Plus), - (Minus)

1. Press the + (Plus) and/or - (Minus) keys to enter the password.
2. Press the ENTER key to confirm. When the correct password is entered, the following screen will display.

The following screens will display sequentially.

```
Resetting Active Manual Diagnostics
Sending Reset Request
```

```
Resetting Active Manual Diagnostics
Updating Unit Data, Please Wait
```

```
Active Diagnostic ---- Info
Please Wait, Unit Is In Reset Mode
```

OR

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
```

Possible Values: Emergency Stop
Supply Fan Failure
Low Pressure Control Open - Ckt 1, Ckt 2, Ckt 3, Ckt 4
Compressor Trip - Ckt 1, Ckt 2, Ckt 3, Ckt 4
Low Air Temp Limit Trip
Manual Reset SA Static Pressure Limit
Compressor Contactor Fail - Ckt 1, Ckt 2, Ckt 3, Ckt 4

Note: The word MORE will appear on the screen if more than one failure has occurred.
Programming

DIAGNOSTICS

OR

Active Diagnostic ---- Auto Reset

______________________________                      More

Possible Values:     Failure for the Following
RTM Zone             Heat Aux Temp
Supply Air Temp      Unocc Zone Cool Setpt
RTM Aux. Temp        Unocc Zone Heat Setpt
OA Temp              Supply Air Press Setpt
Mode Input           Space Static 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 Communication VOM Communication
Sup Air Temp Cool Setpt Sup Air Temp Heat Setpt
NSB Panel Zone Temp  CO2 Sensor
VCM Aux Temp         Velocity Press
VCM Communication    WSM Communication
Ent Cond Water Temp  Ent Water Temp
WSM Mixed Air Temp   Water Flow

OR

Pressing the NEXT key to view the diagnostics will prompt the following screen if an "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.
Programming

DIAGNOSTICS

The following screen will appear sequentially.

Log 1

Possible Values: Log Number 1-20
Viewed or Not Viewed
Active or History
Manual
Auto
Info
or any diagnostic listed under the previous screens associated with the diagnostic type, including VOM activated mode

Press the CANCEL key to clear the diagnostics and prompt the following screen.

Diagnostic Log Is Password Protected
Please Enter Password: _____________________

Possible Values: + (Plus) and - (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 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

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, Owner, and Diagnostic Manual that ships with the unit: SCXF-SVX01A-EN ships with Signature Series units and SCXG-SVX01A-EN ships with Modular Series units.
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