SAFETY WARNING

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

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

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

Read this manual thoroughly before operating or servicing this unit.

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

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

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

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

Introduction

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

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

Overview

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

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

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

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

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

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

Revision History

PKG-SVP01F-EN

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

Trademarks

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# Table of Contents

Warnings, Cautions and Notices ........... 2  
Introduction .............................. 2  
   Overview ............................... 2  
   Revision History ....................... 2  
   Trademarks ............................. 2  

General Information ..................... 4  
   Commonly Used Acronyms ............... 4  
   Glossary of Terms ..................... 5  
   IntelliPak™ Points List ............... 5  
   UCM Control System ................... 5  

Programming the Unit ................... 8  
   Data Manipulation Keys ............... 9  
   Unit Operation Keys .................. 10  
   Factory Presets ....................... 11  
   Password Protected Screens .......... 13  

Programming Status .................... 14  
   STATUS Menu .......................... 14  

Programming SETUP ..................... 22  
   SETUP Menu ............................ 22  
   SETUP Menu Screens .................. 22  
   Sensor Source Selections Submenu .. 26  
   Outside Air Ventilation Setup ........ 27  
   Ventilation Override Definitions ..... 28  
   GBAS Module I/O Assignments ........ 29  
   RTM Alarm Output Diagnostic Assignment Screens ............................. 30  
   Temperature Input Calibration ........ 30  
   Device Characteristic Setup Definitions 32  
   Control Algorithm Tuning Parameters .. 35  

SETPOINT Menu ......................... 36  

Programming Configuration ............ 40  

SERVICE MODE Menu ................... 43  

DIAGNOSTICS Menu ..................... 46  
   Failure Modes ......................... 48  
   Diagnostics Types ..................... 48  

Glossary ............................... 49  

Index .................................. 51
General Information

Commonly Used Acronyms

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

Table 1. Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Act</td>
<td>active</td>
</tr>
<tr>
<td>AH</td>
<td>Air Handler</td>
</tr>
<tr>
<td>Annunc</td>
<td>Annunciator</td>
</tr>
<tr>
<td>AS</td>
<td>AirSide</td>
</tr>
<tr>
<td>Aux</td>
<td>auxiliary</td>
</tr>
<tr>
<td>BAS</td>
<td>building automation systems</td>
</tr>
<tr>
<td>BCI</td>
<td>BACnet® Communication Interface</td>
</tr>
<tr>
<td>CCFM</td>
<td>hundreds of cubic-feet-per-minute</td>
</tr>
<tr>
<td>CCW</td>
<td>counterclockwise</td>
</tr>
<tr>
<td>cfm</td>
<td>cubic-feet-per-minute</td>
</tr>
<tr>
<td>Cfg</td>
<td>Configured, configuration</td>
</tr>
<tr>
<td>ckt</td>
<td>circuit</td>
</tr>
<tr>
<td>Cmd</td>
<td>command</td>
</tr>
<tr>
<td>Comp (s)</td>
<td>compressor, compressors</td>
</tr>
<tr>
<td>Cond</td>
<td>condenser, condensers</td>
</tr>
<tr>
<td>Config</td>
<td>configured, configuration</td>
</tr>
<tr>
<td>Ctrl</td>
<td>control</td>
</tr>
<tr>
<td>CV</td>
<td>constant volume</td>
</tr>
<tr>
<td>Cy</td>
<td>cycle</td>
</tr>
<tr>
<td>CVDA</td>
<td>Constant Speed Fan (CV)/Discharge Air Temp Control</td>
</tr>
<tr>
<td>CVZT</td>
<td>Constant Speed Fan (CV)/Zone Temperature Control</td>
</tr>
<tr>
<td>CW</td>
<td>clockwise</td>
</tr>
<tr>
<td>DCV</td>
<td>Demand Control Ventilation</td>
</tr>
<tr>
<td>Dflt</td>
<td>default</td>
</tr>
<tr>
<td>Diag</td>
<td>diagnostic</td>
</tr>
<tr>
<td>Dmpr</td>
<td>damper</td>
</tr>
<tr>
<td>DWU</td>
<td>Daytime Warm-up</td>
</tr>
<tr>
<td>E/A</td>
<td>exhaust air</td>
</tr>
<tr>
<td>ECEM</td>
<td>exhaust control/enthalpy module</td>
</tr>
<tr>
<td>Econ</td>
<td>economizer, economizing</td>
</tr>
<tr>
<td>Ent</td>
<td>entering</td>
</tr>
<tr>
<td>Evap</td>
<td>evaporator</td>
</tr>
<tr>
<td>F/A</td>
<td>fresh air</td>
</tr>
<tr>
<td>Funct</td>
<td>function</td>
</tr>
<tr>
<td>GBAS</td>
<td>generic building automation system (module)</td>
</tr>
<tr>
<td>HGBP</td>
<td>Hot Gas Bypass</td>
</tr>
<tr>
<td>HGP</td>
<td>Hot Gas Bypass</td>
</tr>
<tr>
<td>Hi</td>
<td>high</td>
</tr>
<tr>
<td>HI</td>
<td>where all caps Human Interface</td>
</tr>
<tr>
<td>HO</td>
<td>History Only (Diagnostic)</td>
</tr>
<tr>
<td>HVAC</td>
<td>heating, ventilation and air conditioning</td>
</tr>
<tr>
<td>ICS</td>
<td>Integrated Comfort System</td>
</tr>
<tr>
<td>IGV</td>
<td>inlet guide vanes</td>
</tr>
<tr>
<td>INFO</td>
<td>Information Only (Diagnostic)</td>
</tr>
<tr>
<td>I/O</td>
<td>input/output</td>
</tr>
<tr>
<td>Indep</td>
<td>Independent</td>
</tr>
<tr>
<td>IOM</td>
<td>installation/operation/ maintenance manual</td>
</tr>
<tr>
<td>IPC</td>
<td>interprocessor communications</td>
</tr>
<tr>
<td>IPCB</td>
<td>interprocessor communications bridge (module)</td>
</tr>
<tr>
<td>IWC</td>
<td>inches water column</td>
</tr>
<tr>
<td>LH</td>
<td>left-hand</td>
</tr>
<tr>
<td>Lo</td>
<td>low</td>
</tr>
<tr>
<td>LCI</td>
<td>LonTalk® Communication Interface</td>
</tr>
<tr>
<td>LCI-I</td>
<td>LonTalk Communication Interface for IntelliPak™ Module</td>
</tr>
<tr>
<td>Manif</td>
<td>manifolded</td>
</tr>
<tr>
<td>Max</td>
<td>maximum</td>
</tr>
<tr>
<td>Min</td>
<td>minimum</td>
</tr>
<tr>
<td>Misc</td>
<td>miscellaneous</td>
</tr>
<tr>
<td>MCM</td>
<td>Multiple Compressor Module</td>
</tr>
<tr>
<td>MDM</td>
<td>Modulating Dehumidification Module</td>
</tr>
<tr>
<td>Mod</td>
<td>modulating</td>
</tr>
<tr>
<td>MPM</td>
<td>Multi-Purpose Module</td>
</tr>
<tr>
<td>MWU</td>
<td>morning warm-up</td>
</tr>
<tr>
<td>NSB</td>
<td>night setback panel</td>
</tr>
<tr>
<td>Num</td>
<td>number</td>
</tr>
<tr>
<td>O/A</td>
<td>outside air</td>
</tr>
<tr>
<td>Occ</td>
<td>occupied</td>
</tr>
<tr>
<td>OVRD</td>
<td>override</td>
</tr>
<tr>
<td>PAR</td>
<td>Partial System Disable, Auto Reset (Diagnostic)</td>
</tr>
<tr>
<td>PMR</td>
<td>Partial System Disable, Manual Reset (Diagnostic)</td>
</tr>
<tr>
<td>Pos</td>
<td>position</td>
</tr>
<tr>
<td>Pot</td>
<td>potentiometer</td>
</tr>
<tr>
<td>PPM</td>
<td>parts per million</td>
</tr>
<tr>
<td>HEAT</td>
<td>where all caps HEAT (module)</td>
</tr>
<tr>
<td>Propor</td>
<td>proportional</td>
</tr>
<tr>
<td>psig</td>
<td>pounds-per-square-inch gauge pressure</td>
</tr>
<tr>
<td>PWS</td>
<td>part-winding start</td>
</tr>
<tr>
<td>R/A</td>
<td>return air</td>
</tr>
<tr>
<td>Refrig</td>
<td>refrigerant</td>
</tr>
<tr>
<td>RH</td>
<td>right-hand</td>
</tr>
<tr>
<td>RHI</td>
<td>Remote Human Interface</td>
</tr>
<tr>
<td>rpm</td>
<td>revolutions-per-minute</td>
</tr>
<tr>
<td>RT</td>
<td>rooftop unit</td>
</tr>
<tr>
<td>RTM</td>
<td>rooftop module</td>
</tr>
<tr>
<td>SA</td>
<td>supply air</td>
</tr>
<tr>
<td>SAP</td>
<td>supply air pressure</td>
</tr>
<tr>
<td>Sat</td>
<td>saturated</td>
</tr>
<tr>
<td>SCM</td>
<td>Single Compressor Module</td>
</tr>
<tr>
<td>Setpt</td>
<td>SETPOINT</td>
</tr>
<tr>
<td>SF</td>
<td>supply fan</td>
</tr>
</tbody>
</table>
Glossary of Terms

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

IntelliPak™ Points List

Table 2. IntelliPak™ points list

<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>RTM</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>Unoccupied/occupied</td>
<td>Compressor proving</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alarm</td>
<td>Compressor relay</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dirty filter</td>
<td>Condenser fan A, B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>VAV changeover</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Supply airflow proof</td>
<td></td>
</tr>
<tr>
<td>SCM</td>
<td>Evap temp sensor</td>
<td>Cond fan speed</td>
<td>Low pressure control</td>
<td>Compressor relay</td>
</tr>
<tr>
<td></td>
<td>Sat cond temp sensor</td>
<td>(Low ambient)</td>
<td>Compressor proving</td>
<td>Condenser 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>(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>Low entering air</td>
<td>Heat 1 relay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modulating heat actuator</td>
<td></td>
<td>Heat 2 relay</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heat 3 relay</td>
<td></td>
</tr>
<tr>
<td>ECEM</td>
<td>Return air temp sensor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Return air humidity sensor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOM</td>
<td>N/A</td>
<td>N/A</td>
<td>VOM mode A, B, C, D, E contacts</td>
<td>VOM relay</td>
</tr>
<tr>
<td>GBAS</td>
<td>4 inputs from these choices:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occ zone cool setpt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unocc zone heat set</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unocc zone cooling setpt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Min O/A flow setpt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sup air cooling setpt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sup air heating setpt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sup air static pres setpt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td></td>
<td>Demand limit contacts</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dirty filter</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Refrigeration fail relay</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heat fail relay</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fan fail relay</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TBD relay</td>
<td></td>
</tr>
</tbody>
</table>

UCM Control System

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

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

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

By processing analog and binary inputs, each module supplies outputs in the form of modulating voltages (from
other unit modules, sensors, remote panels, and customer binary contacts) to perform the applicable request; such as economizing, mechanical cooling, heating, ventilation. The UCM provides some equipment protection functions both directly and indirectly, such as duct pressure limits and compressor lockouts. Following is a description of each module’s function within the UCM system.

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

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

**Rooftop Module Board (RTM)- Standard on all units**

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

**Compressor Module (SCM/MCM)**

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

**Heat Module (Standard on all heating units)**

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

**Exhaust/Comparative Enthalpy Module (ECEM)(Option)**

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

**Generic Building Automation System (GBAS) Module Option**

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

**Ventilation Override Module (VOM) Option**

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

**Interprocessor Communications Board (IPCB) Option**

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

**Trane Communications Interface Module (TCI) Option**

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

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

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

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

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

**Human Interface Module**

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

The HI Module is located in the unit’s main control panel. A small door located in the unit’s control panel door allows access to the HI Module’s keypad and display window. There is a 2 line by 40 character LCD screen which provides status information for the various unit functions as well as menus used to set or modify the operating parameters. There is a 16 key keypad adjacent to the LCD screen, which allows the operator to scroll through the various menus and make adjustments to the SETPOINTs, etc.

The information displayed in the LCD window will be top-level status information unless the operator initiates other displays.
At power-up, the Human Interface LCD will display one of four initial screens illustrated in the “General Status” section.

1. Unit Status (Unit Off or Stopped) (The unit is configured and operational, but is not running). This screen shows state, mode, and function information when the unit is off or stopped.

2. Unit Status (Unit On) (The unit is configured and operational, and is running). This screen shows state, mode, and function information when the unit is on.

3. VOM Active (a ventilation override command was received) This screen shows that the unit is in a Ventilation Override Mode.

4. No Configuration (the unit needs to be configured). This screen shows that required configuration data is missing.

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

Ventilation Override Module (VOM) Definitions

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

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

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

A description of the VOM binary inputs follows below.

UNIT OFF sequence “A”

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

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

PRESSURIZE sequence “B”

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

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

EXHAUST sequence “C”

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

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

PURGE sequence “D”

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

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

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

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

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

### Programming the Unit

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

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

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

### Menu Keys

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

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

**STATUS Key**

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

**SETPOINTs Key**

Pressing the SETPOINTS key will cause the LCD screen to display the first of the SETPOINT screens where the operator will designate default temperature and pressure SETPOINTs. While scrolling through the SETPOINT screens, pressing this key again will cause the LCD to display the first SETPOINT screen.
DIAGNOSTICS Key
Pressing the DIAGNOSTICS key at any time will allow the operator to view any unit function failures. The LCD screen will display one of the diagnostic screens (depending on which diagnostic, if any, is present). If no key is pressed for 30 minutes while the screen is displaying diagnostic information, it will revert back to the operating status display.

CONFIGURATION Key
Pressing the CONFIGURATION key will cause the LCD screen to display the first of the configuration screens where the operator will designate unit configuration data such as unit type, capacity, system control, etc....
This information was programmed at the factory. Pressing the configuration key at any level in the configuration menu will display the first configuration screen.

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

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

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

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

Figure 2. Human interface keypad

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

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

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

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

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

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

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

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

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

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

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

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

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

VOM Active
If at power up the unit is running and has entered a Ventilation Override mode of operation, the following display will appear on the Human Interface LCD screen.
No Configuration

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

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

Factory Presets

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

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

Table 3. Factory presents

<table>
<thead>
<tr>
<th>Adjustable 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>p. 22</td>
</tr>
<tr>
<td>Demand limit definition for cooling</td>
<td>None</td>
<td></td>
<td>p. 23</td>
</tr>
<tr>
<td>Demand limit definition for heating</td>
<td>None</td>
<td></td>
<td>p. 23</td>
</tr>
<tr>
<td>Economizer minimum position (w/o IGV or VFD)*</td>
<td>15%</td>
<td></td>
<td>p. 37</td>
</tr>
<tr>
<td>Economizer minimum position with IGV @ 0%*</td>
<td>15%</td>
<td></td>
<td>p. 37</td>
</tr>
<tr>
<td>Economizer minimum position with IGV @ 100%*</td>
<td>10%</td>
<td></td>
<td>p. 37</td>
</tr>
<tr>
<td>Morning warm-up type</td>
<td>Full</td>
<td></td>
<td>p. 23</td>
</tr>
<tr>
<td>Power-up start time delay</td>
<td>0 seconds</td>
<td></td>
<td>p. 23</td>
</tr>
<tr>
<td>Supply air low limit*</td>
<td>50 °F</td>
<td></td>
<td>p. 37</td>
</tr>
<tr>
<td>Supply air temperature deadband for cooling*</td>
<td>8 °F</td>
<td></td>
<td>p. 36</td>
</tr>
<tr>
<td>Supply air temperature deadband for heating*</td>
<td>4 °F</td>
<td></td>
<td>p. 36</td>
</tr>
<tr>
<td>Supply air temperature O/A reset start temp cooling</td>
<td>90 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature O/A reset end temp cooling</td>
<td>70 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature O/A reset start temp heating</td>
<td>10 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature O/A reset end temp heating</td>
<td>60 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature reset type cooling</td>
<td>none</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature reset type heating</td>
<td>none</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature zone reset start temp cooling</td>
<td>72 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature zone reset end temp cooling</td>
<td>69 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature zone reset start temp heating</td>
<td>65 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature zone reset end temp heating</td>
<td>68 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature reset max. amount cooling</td>
<td>5 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Supply air temperature reset max. amount heating</td>
<td>10 °F</td>
<td></td>
<td>p. 24</td>
</tr>
<tr>
<td>Unit Address</td>
<td>1</td>
<td></td>
<td>p. 22</td>
</tr>
<tr>
<td>Unit Control</td>
<td>Local</td>
<td></td>
<td>p. 22</td>
</tr>
</tbody>
</table>
### Default Setpoint Setups

<table>
<thead>
<tr>
<th>Adjustable Function</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>p. 36</td>
</tr>
<tr>
<td>Daytime warmup - terminate</td>
<td>71 °F</td>
<td></td>
<td>p. 36</td>
</tr>
<tr>
<td>Low ambient compressor lockout (std. units)</td>
<td>50 °F</td>
<td></td>
<td>p. 38</td>
</tr>
<tr>
<td>Supply air temp - cooling</td>
<td>55 °F</td>
<td></td>
<td>p. 36</td>
</tr>
<tr>
<td>Supply air temp - heating</td>
<td>100 °F</td>
<td></td>
<td>p. 36</td>
</tr>
<tr>
<td>Unoccupied zone temp - cool</td>
<td>85 °F</td>
<td></td>
<td>p. 36</td>
</tr>
<tr>
<td>Unoccupied zone temp - heat</td>
<td>60 °F</td>
<td></td>
<td>p. 37</td>
</tr>
<tr>
<td>Unoccupied zone temp - MWU</td>
<td>72 °F</td>
<td></td>
<td>p. 37</td>
</tr>
</tbody>
</table>

### Function (Enable/Disable) Setups

<table>
<thead>
<tr>
<th>Adjustable Function</th>
<th>Factory Preset</th>
<th>Changed To</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor lead/lag</td>
<td>Disable</td>
<td></td>
<td>p. 23</td>
</tr>
<tr>
<td>Daytime warmup</td>
<td>Disable</td>
<td></td>
<td>p. 22</td>
</tr>
<tr>
<td>Morning warmup</td>
<td>Enable</td>
<td></td>
<td>p. 23</td>
</tr>
<tr>
<td>Supply air tempering</td>
<td>Disable</td>
<td></td>
<td>p. 23</td>
</tr>
<tr>
<td>Unoccupied economizer</td>
<td>Enable</td>
<td></td>
<td>p. 25</td>
</tr>
<tr>
<td>Unoccupied heating</td>
<td>Enable</td>
<td></td>
<td>p. 23</td>
</tr>
<tr>
<td>Unoccupied mechanical cooling</td>
<td>Enable</td>
<td></td>
<td>p. 23</td>
</tr>
</tbody>
</table>

### Module Defaults

**GBAS input/output assignments**

<table>
<thead>
<tr>
<th>GBAS input/output</th>
<th>Factory Preset</th>
<th>Changed To</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>not assigned</td>
<td></td>
<td></td>
<td>p. 29</td>
</tr>
</tbody>
</table>

**Information format**

<table>
<thead>
<tr>
<th>Text displays</th>
<th>Factory Preset</th>
<th>Changed To</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td></td>
<td>p. 22</td>
</tr>
</tbody>
</table>

**Reference Enthalpy**

<table>
<thead>
<tr>
<th>Reference Enthalpy</th>
<th>Factory Preset</th>
<th>Changed To</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 btu/lb.</td>
<td></td>
<td></td>
<td>p. 37</td>
</tr>
</tbody>
</table>

**Sensor source selection for:**

<table>
<thead>
<tr>
<th>Adjustable Function</th>
<th>Factory Preset</th>
<th>Changed To</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime warmup</td>
<td>RTM zone temp</td>
<td></td>
<td>p. 27</td>
</tr>
<tr>
<td>Monitor Specified Temp. Input</td>
<td>RTM zone temp</td>
<td></td>
<td>p. 27</td>
</tr>
<tr>
<td>Morning warmup</td>
<td>RTM zone temp</td>
<td></td>
<td>p. 27</td>
</tr>
<tr>
<td>Unoccupied zone control</td>
<td>RTM zone temp</td>
<td></td>
<td>p. 27</td>
</tr>
<tr>
<td>Zone reset</td>
<td>RTM aux temp</td>
<td></td>
<td>p. 27</td>
</tr>
</tbody>
</table>

**Setpoint source selection for:**

<table>
<thead>
<tr>
<th>Adjustable Function</th>
<th>Factory Preset</th>
<th>Changed To</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling supply air temp</td>
<td>default</td>
<td></td>
<td>p. 38</td>
</tr>
<tr>
<td>Heating supply air temp</td>
<td>default</td>
<td></td>
<td>p. 38</td>
</tr>
<tr>
<td>Morning warmup</td>
<td>default</td>
<td></td>
<td>p. 38</td>
</tr>
<tr>
<td>Unoccupied zone cooling</td>
<td>default</td>
<td></td>
<td>p. 38</td>
</tr>
<tr>
<td>Unoccupied zone heating</td>
<td>default</td>
<td></td>
<td>p. 38</td>
</tr>
</tbody>
</table>

**Actuator setup:**

<table>
<thead>
<tr>
<th>Adjustable Function</th>
<th>Factory Preset</th>
<th>Changed To</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/reverse action</td>
<td>direct acting</td>
<td></td>
<td>p. 32 - p. 35</td>
</tr>
<tr>
<td>Max stroke time</td>
<td>150 seconds</td>
<td></td>
<td>p. 32 - p. 35</td>
</tr>
<tr>
<td>Max voltage</td>
<td>10 VDC</td>
<td></td>
<td>p. 32 - p. 35</td>
</tr>
<tr>
<td>Min voltage</td>
<td>2 VDC</td>
<td></td>
<td>p. 32 - p. 35</td>
</tr>
<tr>
<td>Coil frost cutout temperature</td>
<td>30 °F</td>
<td></td>
<td>p. 23</td>
</tr>
</tbody>
</table>

**Condenser temperature control band:**
**Table 3. Factory presents (continued)**

<table>
<thead>
<tr>
<th>Adjustable Function</th>
<th>Factory Preset</th>
<th>Changed To</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary low limit suppression</td>
<td>10 °F</td>
<td></td>
<td>p. 26</td>
</tr>
<tr>
<td>Upper limit</td>
<td>120 °F</td>
<td></td>
<td>p. 26</td>
</tr>
<tr>
<td>Low limit</td>
<td>80 °F</td>
<td></td>
<td>p. 26</td>
</tr>
</tbody>
</table>

**Condenser temperature:**
- Efficiency check point: 105 °F
- Low ambient control point: 90 °F
- Control algorithm tuning parameters: N/A
- Max IGV position occupied: 100%

**Temperature input offset for:**
- Heat morning warmup: 0 °F
- Return air: 0 °F
- RTM zone temperature: 0 °F
- RTM aux. temperature: 0 °F
- Outdoor air: 0 °F
- Ventilation override definitions: N/A

**Password Protected Screens**

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

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

**Password Entry Time Limit Exceeded**

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

**Configuration is Password Protected**

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

**Ventilation Override Mode**

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.
Programming Status

STATUS Menu

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

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

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

Press the STATUS key to begin viewing the status screens.

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

### General System Status Submenu

Press ENTER to View Data in this Submenu

1. Pressing the NEXT key will bypass this section.

<table>
<thead>
<tr>
<th>VAV OA FLOW</th>
<th>350.0 CCFM</th>
<th>SUPPLY FAN ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCCUPIED</td>
<td>OA DMPR 0%</td>
<td>DIAGNOSTICS</td>
</tr>
</tbody>
</table>

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

### RTM Supply Fan Relay:

<table>
<thead>
<tr>
<th>RTM Supply Airflow Proving:</th>
<th>OFF</th>
</tr>
</thead>
</table>

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

### IGV/VFD Cmd

<table>
<thead>
<tr>
<th>Active Supply Air Pressure</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 IWC</td>
<td></td>
</tr>
</tbody>
</table>

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

**OR**

**Used With:** All units with IGV/VFD.

**Possible Values:** Increasing to: 0-100%; Decreasing 100-0%

### Active Supply Air Pressure

| 2.0 IWC |

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

**OR**

**Used With:** Units without IGV/VFD.

### WSM Water Pump Relay Status:

<table>
<thead>
<tr>
<th>Active Water Flow Indication</th>
<th>OFF</th>
</tr>
</thead>
</table>

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

**Used With:** Water-Cooled units only

**Possible Values:** Pump Status = Off, On Waterflow = Flow, No Flow

### Electric Heat

<table>
<thead>
<tr>
<th>Electric Heat Stage 1 OFF</th>
<th>ENABLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 2 OFF</td>
<td></td>
</tr>
<tr>
<td>Stage 3 OFF</td>
<td></td>
</tr>
</tbody>
</table>

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

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

**Used With:** Units with Electric Heat

**Possible Values:** ON, OFF

### Hydronic Heat

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

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

**Used With:** Units with hydronic heat only

**Possible Values:** Hydronic Heat = Enabled, Disabled; Valve position = 0-100% open; Low temp air = OK, tripped
### Active Min OA Flow Setpoint
- **OA Flow**: 350.0 CCFM
- **OA Damper Pos**: 0%

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

### Active Min OA Flow Setpoint
- **CO₂ Level**: 1512 PPM
- **OA Damper Pos**: 0%

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

### OA Preheat Output Control
- **ON**

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

### End of Submenu (NEXT) to Enter SETUP
1. Press the NEXT key to leave the submenu and show following screen.
2. Press PREVIOUS to page back through the submenu.

### Compressor Status Submenu
- Press ENTER to View Data in This Submenu

#### Compressor Relay K11
- **Enabled**: OFF

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

#### Compressor Relay K12
- **Enabled**: OFF

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

#### Compressor Relay K3
- **Enabled**: OFF

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

#### Compressor Relay K4
- **Enabled**: OFF

**Note**: On model SCWF/SCIF, 60-80 tons units

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

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

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

---

**Possible Values**: Unit Airflow = 0 to maximum unit airflow

**Possible Values**: Unit Airflow = 0 to maximum unit airflow

**Possible Values**: Unit Airflow = 0 to maximum unit airflow

**Possible Values**:
- K11: ON, OFF, LOCKED, Disabled, Enabled
- K12: ON, OFF, LOCKED, Disabled, Enabled
- K3 = ON, OFF, LOCKED, Enabled
- K4 = ON, OFF, LOCKED, Enabled
- All units VCM module and CO₂ reset enabled
- All units VCM module or Traq™ damper option only
- All units VCM module and preheat enabled
- All units VCM module and preheat enabled
- Units with manifolded refrigerant circuits
- Units with independent refrigerant circuits
- Units with independent refrigerant circuits
- Units with independent refrigerant circuits
- Units with independent refrigerant circuits
- Lockout Temperature = -20 - 80 F
**Programming Status**

### WSM Ent Cond Water Temp Input
65.2 F

**Low Water Temp Compressor Lockout**
34 F

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

**Possible Lockout Values:** Lockout Temperature = 0 - 99 F

### Compressor Module Ckt 1

<table>
<thead>
<tr>
<th>Evap Temp</th>
<th>Sat Cond Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td>75.0 F</td>
<td>81.0 F</td>
</tr>
</tbody>
</table>

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

### Compressor Module Ckt 2

<table>
<thead>
<tr>
<th>Evap Temp</th>
<th>Sat Cond Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td>72.0 F</td>
<td>97.0 F</td>
</tr>
</tbody>
</table>

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

### Compressor Module Ckt 3

<table>
<thead>
<tr>
<th>Evap Temp</th>
<th>Sat Cond Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td>72.0 F</td>
<td>97.0 F</td>
</tr>
</tbody>
</table>

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

### Compressor Module Ckt 4

<table>
<thead>
<tr>
<th>Evap Temp</th>
<th>Sat Cond Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td>72.0 F</td>
<td>97.0 F</td>
</tr>
</tbody>
</table>

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

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

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

### Economizer Status Submenu

**Press ENTER to View Data in This Submenu**

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

**Water Economizing: DISABLED**

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

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

### WSM Mixed Air Temperature:

| 68 F |

### WSM Entering Water Temperature:

| 60 F |

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

### Water Econ Bpass Pos:

| 10% |

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

### Air Economizing: DISABLED

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

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

### Active Outside Air Enthalpy

| 12.0 BTU/LB |

### ECEM Return Air Enthalpy

| 34.0 BTU/LB |

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

### Active Outside Air Temperature

| 86.0 F |

### ECEM Return Air Temperature

| 78.0 F0 |

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

Active Outside Air Humidity 30%
ECM Return Air Humidity 62%

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

End of Submenu (NEXT) to Enter SETUP
1. Pressing the NEXT key will scroll forward through the screens.

Controlling Setpoint Status Submenu
Press ENTER to View Data in This Submenu
1. Pressing the NEXT key will scroll forward through the screens.

Active Supply Air Cooling STP From
HI (KEY PAD) SETPOINT MENU Is 55 F
1. Pressing the NEXT key will scroll forward through the screens.

Active Supply Air Heating STP From
HI (KEY PAD) SETPOINT MENU Is 100 F
1. Pressing the NEXT key will scroll forward through the screens.

Active Daytime Warmup Setpoints
Initiate: 67 F is Terminate 71 F
1. Press the NEXT key until the following screen is displayed.

Active Occupied Zone Cooling STP From
RTM ZONE TEMP INPUT is 74 F
1. Pressing the NEXT key will scroll forward through the screens.

Active Occupied Zone Heating STP From
RTM ZONE TEMP INPUT is 100 F
1. Pressing the NEXT key will scroll forward through the screens.

Active Unoccupied Zone Cooling STP From
RTM ZONE TEMP INPUT is 85 F
1. Pressing the NEXT key will scroll forward through the screens.

Active Unoccupied Zone Heating STP From
RTM ZONE TEMP INPUT is 60 F
1. Pressing the NEXT key will bypass this section.

Active Morning Warmup Setpoint From
HI (KEYPAD) SETPOINT MENU Is 72 F
1. Pressing the NEXT key will scroll forward through the screens.

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

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

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

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

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

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

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

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

Setpoint Range: 50-90 F
### Programming Status

#### Active Min OA Flow Setpoint from
- **REMOTE MIN POS POT INPUT** 342.0 CFM
  - Used With: Units with VCM module only
  - Possible Values: HI (Keypad Setpoint Menu, GBAS 0-5 VDC Module
  - Setpoint Range: 0 to max unit airflow

#### Active Supply Air Pressure STP From
- **HI (KEYPAD SETPOINT MENU)** is 2.0 IWC
  - Used With: Units with IGV or VFD only.
  - Possible Values: HI (Keypad) Setpoint Menu, GBAS Module

#### Active Supply Air Pressure Setpoints
- Hi Limit: 40 IWC
- Deadband: 0.5 IWC
  - Used With: Units with IGV or VFD only.
  - Possible Values: High Limit = 1.6-4.7 IWC; Deadband = 0.1-2.0 IWC

#### End of Submenu (NEXT) to Enter SETUP
- Used With: Units with Electric, Hydronic or External Heat installed.
- Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)

#### Controlling Sensor Status Submenu
Press ENTER to View Data in This Submenu
- Used With: Units with Electric, Hydronic or External Heat installed.
- Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)

#### Active Supply Air Heating Temp Sensor Input From
- **RTM ZONE TEMP INPUT** is 50.0 F
  - Used With: Units with Electric, Hydronic or External Heat installed.
  - Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)

#### Active Daytime WU Temp Sensor Input From
- **RTM ZONE TEMP INPUT** is 82.0 F
  - Used With: Units with Electric, Hydronic or External Heat with DWU installed.
  - Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)

#### Active Occupied Zone Temp Sensor Input From
- **HI (KEYPAD) SETPOINT MENU** is 90.0 F
  - Used With: Units with Electric, Hydronic or External Heat with DWU installed.
  - Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)

#### Active Unocc Zone Temp Sensor Input From
- **RTM ZONE TEMP INPUT** is 75.0 F
  - Used With: Units with Electric, Hydronic or External Heat with MWU installed.
  - Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)

#### Active Morning WU Temp Sensor Input From
- **RTM ZONE TEMP INPUT** is 82.0 F
  - Used With: Units with Electric, Hydronic or External Heat with MWU installed.
  - Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)

#### Active Zone Reset Sensor Input From
- **RTM ZONE TEMP INPUT** is 82.0 F
  - Used With: Units with Electric, Hydronic or External Heat with MWU installed.
  - Possible Values: RTM Zone Temp Input, NSB Zone Sensor Setpoint Input, RTM Aux Temp Input, ECEM return Air Temp Input, ICS (Tracer Summit™)
Active OA Temperature Sensor Input From
RTM OUTSIDE AIR TEMP INPUT is 86.0 F
1. Pressing the NEXT key will scroll forward through the screens.

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

Used With: Units with an airside economizer.

Active Outside Air Humidity Sensor Input From
OA HUMIDITY SENSOR INPUT is 30%
1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: O/A Humidity Sensor Input, ICS (Tracer Summit™)

Sensor Range: 0 - 100%

Active Supply Air Press Sensor Input From
RTM SA PRESSURE INPUT is 2.1 IWC
1. Pressing the NEXT key will scroll forward through the screens.

Possible Values: RTM SA Pressure Input, ICS (Tracer Summit™)

Temp Sensor Input Being Monitored
RTM ZONE TEMP INPUT is 82.0 F
1. Pressing the NEXT key will scroll forward through the screens.

End of Submenu (NEXT) to Enter SETUP
1. Press the NEXT key until the following screen is displayed. (if applicable)

Temperature Input Status Submenu
Press ENTER to View Data in This Submenu
1. Pressing the NEXT key will scroll forward through the screens.

Temp Measured By Sensor Connected To
RTM ZONE TEMP INPUT is 82.0 F
1. Press the NEXT key until the following screen is displayed. (if applicable)

Temp Measured By Sensor Connected To
RTM SUPPLY AIR TEMP INPUT is 50.0 F
1. Press the NEXT key until the following screen is displayed. (if applicable)

Temp Measured By Sensor Connected To
NSB Panel Temp Sensor Input is 79.5 F
1. Press the NEXT key until the following screen is displayed. (if applicable)

Temp Measured By Sensor Connected To
RTM AUX TEMP INPUT is 62.0 F
1. Press the NEXT key until the following screen is displayed.

Temp Measured By Sensor Connected To
RTM OUTSIDE AIR TEMP INPUT is 86.0 F
1. Press the NEXT key until the following screen is displayed.

Temp Measured By Sensor Connected To
HEAT MODULE AUX TEMP INPUT is 82.0 F
1. Press the NEXT key until the following screen is displayed. (if applicable)

Temp Measured By Sensor Connected To
ECEM RETURN AIR TEMP INPUT is 78.0 F
1. Press the NEXT key until the following screen is displayed.

Used With: Units with NSB zone sensor installed.

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

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

## Temp Measured By Sensor Connected To

<table>
<thead>
<tr>
<th>WSM ENT WATER TEMP INPUT</th>
<th>60.1 F</th>
</tr>
</thead>
</table>

*Used With:* On water-cooled units only.

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

## Temp Measured By Sensor Connected To

<table>
<thead>
<tr>
<th>WSM MIXED AIR TEMP INPUT</th>
<th>51.7 F</th>
</tr>
</thead>
</table>

*Used With:* On water-cooled units only.

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

## Temp Measured By Sensor Connected To

<table>
<thead>
<tr>
<th>WSM ENT COND WATER TEMP INPUT</th>
<th>64.9 F</th>
</tr>
</thead>
</table>

*Used With:* On water-cooled units only.

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

## Temp Measured By Sensor Connected To

<table>
<thead>
<tr>
<th>VCM MODULE AUX TEMP INPUT</th>
<th>50.0 F</th>
</tr>
</thead>
</table>

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

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

## Compressor Module Ckt 1

<table>
<thead>
<tr>
<th>Evap Temp 75.0</th>
<th>Sat Cond Temp 81.0 F</th>
</tr>
</thead>
</table>

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

## Compressor Module Ckt 2

<table>
<thead>
<tr>
<th>Evap Temp 72.0</th>
<th>Sat Cond Temp 87.0 F</th>
</tr>
</thead>
</table>

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

## Compressor Module Ckt 3

<table>
<thead>
<tr>
<th>Evap Temp 72.0</th>
<th>Sat Cond Temp 87.0 F</th>
</tr>
</thead>
</table>

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

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

## Compressor Module Ckt 4

<table>
<thead>
<tr>
<th>Evap Temp 72.0</th>
<th>Sat Cond Temp 87.0 F</th>
</tr>
</thead>
</table>

*Used With:* SCWF/SIWF 65-80 tons.

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

## End of Submenu (NEXT) to Enter SETUP

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

## Misc Input Status Submenu

Press ENTER to View Data in This Submenu

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

## RTM Supply Airflow Proving Inut:

| FLOW |

*Possible Values:* Flow, No Flow

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

## RTM Remote Min Position Pot Input

| 0% |

*Used With:* Units when minimum position pot is assigned to function.

*Possible Values:* 0-100%

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

## RTM Supply Air Pressure Input

| 2.1 IWC |

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

1. Press the NEXT key until the following screen is displayed.
### Active Outside Air Humidity

<table>
<thead>
<tr>
<th>Status</th>
<th>Value 30%</th>
</tr>
</thead>
</table>

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

**Used With:** Units with an airside economizer only

### ECEM Return Air Humidity

<table>
<thead>
<tr>
<th>Status</th>
<th>Value 62%</th>
</tr>
</thead>
</table>

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

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

### VCM Outside Air Flow Input

<table>
<thead>
<tr>
<th>Status</th>
<th>Value 350.0 CCFM</th>
</tr>
</thead>
</table>

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

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

### VCM CO₂ Level Input

<table>
<thead>
<tr>
<th>Status</th>
<th>Value 1512 PPM</th>
</tr>
</thead>
</table>

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

**Used With:** Units with VCM installed and CO₂ reset enabled.  
**Possible Values:** 0-2000 PPM

### WSM Water Flow Switch Input

<table>
<thead>
<tr>
<th>Status</th>
<th>Flow</th>
</tr>
</thead>
</table>

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

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

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

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

**Used With:** Units with GBAS module

### GBAS 0-5VDC Module Status Submenu

**Press ENTER to View Data in This Submenu**

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

**Used With:** Units with GBAS module

#### GBAS (0-5VDC) Module Input 1 0.00 VDC

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Value Not Assigned</th>
</tr>
</thead>
</table>

- Press the NEXT key to display GBAS 0-5 VDC inputs 2, 3, and 4.

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

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

<table>
<thead>
<tr>
<th>Status</th>
<th>OPEN</th>
</tr>
</thead>
</table>

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

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

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

<table>
<thead>
<tr>
<th>Output</th>
<th>OFF</th>
</tr>
</thead>
</table>

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

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

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

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

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

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

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

SETUP Menu

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

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

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

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

Follow this procedure when viewing a screen that requires modification:

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

**SETUP Menu Screens**

Press the SETUP key to display the following screens.

<table>
<thead>
<tr>
<th>Display Text in:</th>
<th>ENGLISH LANGUAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Units Using:</td>
<td>ENGLISH NOTATION</td>
</tr>
</tbody>
</table>

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

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

1. Pressing the NEXT key will bypass this section.

**General Unit Functions Setup Submenu**

Press ENTER to Review or Adjust

1. Pressing the NEXT key will bypass this section.

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

1. Pressing the NEXT key will bypass this section.

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

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

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

<table>
<thead>
<tr>
<th>Daytime Warmup Function:</th>
<th>DISABLED</th>
</tr>
</thead>
</table>

1. Press the NEXT key until the following screen is displayed.
### Morning Warmup Function:
- **Status**: ENABLED
- **Type**: FULL CAPACITY

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

### Supply Air Tempering Function:
- **Status**: DISABLED

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

### Unocc Mech Cooling Function:
- **Status**: ENABLED

   OR

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

### OA Preheater Output Control:
- **Status**: ENABLED

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

### Demand Limit Definition:
- **Cooling**: 100%

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

### Compressor Lead/Lag Function:
- **Status**: DISABLED

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

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

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

### Coil Frost Cutout Temperature:
- **Status**: Shut off

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

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

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

### VAV Control Functions Submenu

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

Supply Air Temp Reset Type:

Cooling: ZONE

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

Supply Air Temp Reset Type:

Cooling: ZONE Heating: ZONE

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

Supply Air Temp Zone Reset For Cooling:

Start Temp: 72 F End Temp: 69 F

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

Supply Air Temp Outside Air Reset For Cooling:

Start Temp: 90 F End Temp: 70 F

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

Supply Air Temp Zone Reset For Cooling:

Maximum Amount of Reset Applied: 5 F

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

Supply Air Temp Outside Air Reset For Cooling:

Maximum Amount of Reset Applied: 5 F

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

Supply Air Temp Outside Air Reset For Heating:

Start Temp: 10 F End Temp: 60 F

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

Supply Air Temp Zone Reset For Heating:

Start Temp: 65 F End Temp: 68 F

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

Supply Air Temp OA Reset For Heating:

Maximum Amount of Reset Applied: 10 F

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

Supply Air Temp Zone Reset For Heating:

Maximum Amount of Reset Applied: 10 F

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

VAV Box Max Stroke Time: 0 Min

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

Max Occupied IGV/VFD Command: 100%

1. Press the NEXT key until the following screen is displayed.
End of Submenu (NEXT) to Enter SETUP
1. Press the NEXT key to leave the submenu and show following screen.

Economizer Control Functions Submenu
Press ENTER to Review or Adjust
1. Pressing the NEXT key will bypass this section.

Economizer Priority
Choose Which Economizer Stages Up First
1. Press the + or - key until the proper value is displayed.

Unocc Water Economizer Function: ENABLED
1. Press the NEXT key until the following screen is displayed.

Unocc Air Economizer Function: ENABLED
1. Press the NEXT key until the following screen is displayed.

Disable WS Econ If Difference Between MA Temp and Ent Water Temp Less Than 4.0 F
1. Press the NEXT key until the following screen is displayed.

End of Submenu (NEXT) to Enter SETUP
1. Press the NEXT key to leave the submenu and show following screen.
2. Press PREVIOUS to page back through the submenu.

Water Flow Control Setup Submenu
Press ENTER to Review or Adjust
1. Press the NEXT key until the following screen is displayed.

Periodic Water Purge Function: Enabled
Interval: 1Hr Duration: 1 Min
1. Press the NEXT key until the following screen is displayed.

Water-Flow Init Time Delay: 1 Min
Time to Establish Water Flow Before Diag
1. Press the NEXT key until the following screen is displayed.

Temp Stabilization Time Delay: 1 Min
Water Flow Time for Valid Temp Readings
1. Press the NEXT key until the following screen is displayed.

Head Pressure Control Inactive Min: 10%
Head Pressure Control Active Min: 30%
1. Pressing the NEXT key will bypass this section.
Programming SETUP

**Water Economizer Min Position:** 10%

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

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

**Select Water Flow Control Required For**

**Water Pump System:** Variable/Minimize

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

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

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

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

**Head Pressure Ctrl Setup Submenu**

Press Enter to Review or Adjust

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

**Cond Temp Control Point:** 90 F

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

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

**Preset Value to Min if Cond Water Below**

**Head Press Value Preset Temp Limit:** 90 F

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

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

**Cond Temp Control Band**

Lower Limit: 80 F
Upper Limit: 120 F

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

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

**Cond Temp Control Band**

Temporary Low Limit Suppression: 10 F

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

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

**Efficiency Check Point:** 105 F

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

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

**Low Ambient Control Point:** 90 F

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

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

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

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

**Sensor Source Selections Submenu**

Sensor Source Selections Submenu
Press ENTER to Review or Adjust

Used with: All Units.

1. Pressing the NEXT key will bypass this section.
For Daytime Warmup Temp Ctrl, Use sensor  
Connected to: RTM ZONE TEMP INPUT  
1. Press the NEXT key until the following screen is displayed.

For Occupied Zone Temp Ctrl, Use Sensor  
Connected To: RTM ZONE TEMP INPUT  
1. Press the NEXT key until the following screen is displayed.

For Unoccupied Zone Temp Ctrl, Use Sensor  
Connected To: RTM ZONE TEMP INPUT  
1. Press the NEXT key until the following screen is displayed.

For Morning Warmup Temp Control, Use Sensor  
Connected To: RTM ZONE TEMP INPUT  
1. Press the NEXT key until the following screen is displayed.

For Zone Reset Function, Use Sensor  
Connected To: RTM ZONE TEMP INPUT  
1. Press the NEXT key until the following screen is displayed.

For Outside Air Preheat Ctrl, Use Sensor  
Connected To: VCM MODULE AUX TEMP INPUT  
1. Press the NEXT key until the following screen is displayed.

Monitor Specific Temp Input, Use Sensor  
Connected To: RTM ZONE TEMP INPUT  
1. Press the NEXT key until the following screen is displayed.

End of Submenu (NEXT) to Enter SETUP  
1. Press the NEXT key to leave the submenu and show following screen.

Outside Air Ventilation Setup  

Outside Air Ventilation Setup Submenu  
Press ENTER to Review or Adjust  
1. Pressing the NEXT key will bypass this section.
Programming SETUP

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

OA Flow CO₂ Reset Function: ENABLED
Used with: Units with a VCM
Possible Values: ENABLED, DISABLED

OA Flow CO₂ Reset Function: ENABLED
CO₂ Start: 800 PPM CO₂ Max: 1000 PPM
Used with: Units with a VCM installed and CO₂ reset enabled.
Possible Values: ENABLED, DISABLED; CO₂ Start = 0-1900 PPM; CO₂ Max = 100-2000 PPM

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

OA Flow Calibration Data
Gain 1.0 Offset 0.0 CCFM
Used with: Units with a VCM installed.
Factory Preset: Gain 1.0, Offset 0 CCFM
Possible Values: Gain= 0.5 to 1.5 (Default 1.0); Offset= -250 to 250 CCFM (Default 0 CFM)

End of Submenu (NEXT) to Enter SETUP
Used with: All Units when VOM is installed

Ventilation Override Definitions

Ventilation Override Definitions
Press ENTER to Review or Adjust
Used with: All Units when VOM is installed

Ventilation Override Definition Mode A
Supply Fan ON
Used with: All Units when VOM and IGV or VFD is installed
Factory Presets: Refer to Definitions
Possible Values: On, OFF

Ventilation Override Definition Mode A
Outside Air Dampers OPEN
Used with: All Units when VOM and an airside or waterside economizer is installed
Factory Presets: Refer to Definitions
Possible Values: OPEN/CLOSED

Ventilation Override Definition Mode A
Heat OFF
Used with: All Units when VOM and electric or hydronic heat is installed
Factory Presets: Refer to Definitions
Possible Values: Off/In Control

Ventilation Override Definition Mode A
VAV Box Relay DEENERGIZED
Used with: Units with a VOM
Factory Presets: Refer to Definitions
Possible Values: ENERGIZED/DEENERGIZED
### Ventilation Override Definition

#### Mode A

**VCM Preheater State**
- **IN CONTROL**

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

#### Mode A

**VO Relay**
- **ENERGIZED**

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

#### Mode A

**Enter Password to Lock Definition:**

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

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

#### Mode A

**Supply Fan**

**Is Locked**

#### Mode B

**Supply Fan**

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

---

### GBAS Module I/O Assignments

#### GBAS 0 - 5 VDC Module I/O Assignments

Press ENTER to Review or Adjust

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

#### GBAS (0 - 5 VDC) Analog Input 1

**Assignment**

- **NOT ASSIGNED**

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

---

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

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

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

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

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

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

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

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

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

To change offset values on a particular screen:

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

To navigate to another screen:

1. Press the NEXT key to advance to the next screen, or...
a. if no further changes are required and you want to exit back to view the unit operating status, press the STATUS key once, or
b. 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, 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.

Calibration and Offset Submenu
Press ENTER to Review or Adjust
1. Pressing the NEXT key will bypass this section or press ENTER key to view the following screens.

Temperature Calibration Offset For
RTM Zone Temperature Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Temperature Calibration Offset For
RTM Aux Temperature Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Temperature Calibration Offset For
RTM Outside Air Temperature Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Temperature Calibration Offset For
Heat Module Aux Temp Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Temperature Calibration Offset For
ECEM Return Air Temperature Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Temperature Calibration Offset For
WSM Entering Water Temp Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Temperature Calibration Offset For
WSM Mixed Air Temp Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Temperature Calibration Offset For
WSM Ent Cond Water Temp Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Temperature Calibration Offset For
Ckt 1 Sat Cond Temp Input 0.0 F
1. Press the NEXT key until the following screen is displayed.

Used with: All Units

Temperature Calibration Offset For
RTM Zone Temperature Input 0.0 F
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For
RTM Aux Temperature Input 0.0 F
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For
RTM Outside Air Temperature Input 0.0 F
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For
Heat Module Aux Temp Input 0.0 F
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For
ECEM Return Air Temperature Input 0.0 F
Factory Presets: 0.0 F
Possible Values: Plus or Minus 5.0 F

Temperature Calibration Offset For
WSM Entering Water Temp Input 0.0 F
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For
WSM Mixed Air Temp Input 0.0 F
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For
WSM Ent Cond Water Temp Input 0.0 F
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F

Temperature Calibration Offset For
Ckt 1 Sat Cond Temp Input 0.0 F
Factory Presets: 0.0 F
Possible Values: 0.0-5.0 F
Device Characteristic Setup Definitions

To change device characteristics values on a particular screen:
1. Press the plus or minus key until the correct value appears in the screen.
2. Press the ENTER key to confirm your choice. If you’ve made an error, press the CANCEL key to delete your entry.

To navigate to another screen:
1. Press the NEXT key to advance to the next screen or
   a. if no further changes are required and you want to exit back to view the unit operating status, press the STATUS key once, or
   b. if you want to remain in the Device Characteristics Setup 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 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 Definitions
Press ENTER to review or Adjust
1. Pressing the NEXT key will bypass this section.

Actuator Setup
OA Damper
Max Stroke Time
30 Sec
1. Press the NEXT key until the following screen is displayed.

Actuator Setup
OA Damper
Min Voltage
2.0 VDC
1. Press the NEXT key until the following screen is displayed.

Actuator Setup
OA Damper
Max Voltage
10.0 VDC
1. Press the NEXT key until the following screen is displayed.

Actuator Setup
OA Damper
Direct/Reverse Act
DIRECT ACTING
1. Press the NEXT key until the following screen is displayed.
**Actuator Setup**

**Max Stroke Time**

- **Water Economizer**
  - 150 Sec

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

**Actuator Setup**

**Min Voltage**

- **Water Economizer**
  - 2.0 VDC

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

**Actuator Setup**

**Max Voltage**

- **Water Economizer**
  - 10.0 VDC

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

**Actuator Setup**

**Direct/Reverse Acting**

- **Water Economizer**
  - Direct Acting

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

**Actuator Setup**

**Max Stroke Time**

- **Water Econ Bypass**
  - 150 Sec

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

**Actuator Setup**

**Min Voltage**

- **Water Econ Bypass**
  - 2.0 VDC

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

**Actuator Setup**

**Max Voltage**

- **Water Econ Bypass**
  - 10.0 VDC

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

**Actuator Setup**

**Direct/Reverse Acting**

- **Water Econ Bypass**
  - Direct Acting

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

**Actuator Setup**

**Max Stroke Time**

- **IGV/VFD Cmd**
  - 150 Sec

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

**Actuator Setup**

**Min Voltage**

- **IGV/VFD Cmd**
  - 2.0 VDC

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

**Actuator Setup**

**Direct/Reverse Act**

- **IGV/VFD Cmd**
  - DIRECT ACTING

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

---

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

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

**Actuator Setup**

**Max Voltage**

- **IGV/VFD Cmd**
  - 10.0 VDC

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

**Actuator Setup**

**Direct/Reverse Act**

- **IGV/VFD Cmd**
  - DIRECT ACTING

1. Press the NEXT key until the following screen is displayed.
### Programming SETUP

**Actuator Setup**

**Hydronic**

<table>
<thead>
<tr>
<th>Max Stroke Time</th>
<th>150 Sec</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Hydronic**

<table>
<thead>
<tr>
<th>Min Voltage</th>
<th>2.0 VDC</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Hydronic**

<table>
<thead>
<tr>
<th>Max Voltage</th>
<th>10.0 VDC</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Hydronic**

<table>
<thead>
<tr>
<th>Direct/Reverse Act</th>
<th>DIRECT ACTING</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Num 1 Low Ambient**

<table>
<thead>
<tr>
<th>Max Stroke Time</th>
<th>60 Sec</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Num 1 Low Ambient**

<table>
<thead>
<tr>
<th>Min Voltage</th>
<th>2.0 VDC</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Num 1 Low Ambient**

<table>
<thead>
<tr>
<th>Max Voltage</th>
<th>10.0 VDC</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Num 1 Low Ambient**

<table>
<thead>
<tr>
<th>Direct/Reverse Act</th>
<th>DIRECT ACTING</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Num 2 Low Ambient**

<table>
<thead>
<tr>
<th>Max Stroke Time</th>
<th>60 Sec</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Num 2 Low Ambient**

<table>
<thead>
<tr>
<th>Min Voltage</th>
<th>2.0 VDC</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Num 2 Low Ambient**

<table>
<thead>
<tr>
<th>Max Voltage</th>
<th>10.0 VDC</th>
</tr>
</thead>
</table>

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

**Actuator Setup**

**Num 2 Low Ambient**

<table>
<thead>
<tr>
<th>Direct/Reverse Act</th>
<th>DIRECT ACTING</th>
</tr>
</thead>
</table>

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

Control Algorithm Tuning Parameters
(Applicable to all units.)

Control Algorithm Tuning Parameters
Press ENTER to Review or Adjust

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

1. Pressing the NEXT key will bypass this section.

End of Submenu (NEXT) to Enter SETUP

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

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

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

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

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

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

To change the sepoint values on a particular screen:
1. Press the plus or minus key until the correct value appears in the screen.
2. Press the ENTER key to confirm your choice. If you’ve made an error, press the CANCEL key to delete your entry.

To navigate to another screen:
1. Press the NEXT key to advance to the next screen, or
   a. if no further changes are required and you want to exit back to view the unit operating status, press the STATUS key once, or
   b. if you want to remain in the Setpoint submenu, press the SETPOINT key once and it will return you to the beginning of that particular submenu, or
   c. if you want to exit to another submenu in the 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.

**Default Supply Air Temp SETPOINT**

- **Cooling:** 55 F

**Default Supply Air Temp SETPOINTS**

- **Cooling:** 67 F
- **Heating:** 71 F

**Supply Air Temperature Deadband**

- **Cooling:** 8.0 F
- **Heating:** 4.0 F

**Default Daytime Warmup SETPOINTS**

- **Cooling:** 67 F
- **Terminate:** 71 F

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

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

**Default Unoccupied Zone Temp Setpoint(s)**

- **Cool:** 85 F

**Used With:**

- All Units
- Cooling only units

**Factory Presets:**

- 55 F
- 8.0 F
- 1.5 F
- 85 F

**Possible Values:**

- 40 F to 90 F
- 40 F to 180 F
- 0.0-0.3 F
- 50 F to 90 F, 50 F to 90 F
- Cool = 50-90 F, Cool = 50-90 F
- Heat = 2 F to 10 F
- Heat = 71 F, Cool = 74 F
- Heat = 50-90 F
- 50 F to 90 F

**Used With:**

- All units with Hydronic Heat installed.
- All units with Hydronic, Electric, or External Heat installed.
- Cooling only units

**Factory Presets:**

- 1.5 F
- 8 F
- 4 F
- 8 F
- 4 F
- 4 F
- 4 F

**Possible Values:**

- 0.0-0.3 F
- 4 F to 20 F
- 2 F to 10 F
- 4 F
- 4 F
- 4 F
- 4 F

**Note:** Many of the screens displayed in this section are applicable only for the options that are installed in the unit and may not be visible on your unit.
Default Unoccupied Zone Temp Setpoint(s)

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

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

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

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

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

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

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

Default Design Min OA Damper Pos: 15%

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

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

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

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

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

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

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

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

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

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

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

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

<table>
<thead>
<tr>
<th>Low Ambient Comp Lockout Temp:</th>
<th>50 F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comp(s) OFF if OA Temp Below This Value</td>
<td>Used With: All Units</td>
</tr>
<tr>
<td>Possible Values: -20 F to 80 F</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Setpoint Source Selections Submenu

Press ENTER to Review or Adjust

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

<table>
<thead>
<tr>
<th>For Supply Air Temp Cooling Control, Use</th>
<th>Setpoint From: HI (KEYPAD) SETPOINT MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used With: All Units</td>
<td></td>
</tr>
<tr>
<td>Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT MENU, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>For Supply Air Temp Heating Control, Use</th>
<th>Setpoint From: HI (KEYPAD) SETPOINT MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used With: All Units when hydronic or electric heat is installed.</td>
<td></td>
</tr>
<tr>
<td>Possible Values: HI (KEYPAD) SETPOINT MENU, GBAS 0-5VDC Module</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>For Occ Zone Temp Cooling Control, Use</th>
<th>Setpoint From: HI (KEYPAD) SETPOINT MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used With: All Units</td>
<td></td>
</tr>
<tr>
<td>Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT INPUT, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>For Occ Zone Temp Heating Control, Use</th>
<th>Setpoint From: HI (KEYPAD) SETPOINT MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used With: All Units with hydronic or electric heat.</td>
<td></td>
</tr>
<tr>
<td>Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT INPUT, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>For Unocc Zone Temp Cooling Control, Use</th>
<th>Setpoint From: HI (KEYPAD) SETPOINT MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used With: All Units</td>
<td></td>
</tr>
<tr>
<td>Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT INPUT, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>For Unocc Zone Temp Heating Control, Use</th>
<th>Setpoint From: HI (KEYPAD) SETPOINT MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used With: All Units when External, Electric or Hydronic Heat is installed.</td>
<td></td>
</tr>
<tr>
<td>Possible Values: HI (KEYPAD) SETPOINT MENU, ZONE SENSOR SETPOINT INPUT, NSB PANEL SETPOINT INPUT, GBAS 0-5 VDC MODULE, GBAS 0-10VDC Module</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>For Morning Warmup Temp Control, Use</th>
<th>Setpoint From: HI (KEYPAD) SETPOINT MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used With: All Units when Electric, External or Hydronic Heat is installed.</td>
<td></td>
</tr>
<tr>
<td>Possible Values: HI (KEYPAD) SETPOINT MENU, NSB PANEL SETPOINT INPUT GBAS 0-5VDC Module</td>
<td></td>
</tr>
</tbody>
</table>

1. Press the NEXT key until the following screen is displayed.
For Default OA Damper Min Position, Use
Setpoint From: HI (KEYPAD) SETPOINT MENU
1. Press the NEXT key until the following screen is displayed.

For Min Outside Air Flow Rate Ctrl, Use
Setpoint From: HI (KEYPAD) SETPOINT MENU
1. Press the NEXT key until the following screen is displayed.

For Supply Air Pressure Control, Use
Setpoint From: HI (KEYPAD) SETPOINT Menu
1. Press the NEXT key until the following screen is displayed (if applicable)

End Of Submenu (NEXT) To ENTER SETUP
1. Press the NEXT key to leave the submenu and show following screen.

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

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

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

Used With: All units.
Programming Configuration

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

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

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

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

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

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

To change the 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 CONFIGURATION key once and it will return you to the beginning of that particular submenu, or
   c. if you want to exit to another submenu in the CONFIGURATION menu, press the CONFIGURATION key twice. Then press the NEXT key to scroll through the CONFIGURATION submenu choices, or
   d. if you want to exit to another menu, such as SETPOINT, press that key once, then press the NEXT key to scroll through those screens.

### Configuration - Model Num Digit

<table>
<thead>
<tr>
<th><strong>Unit Type:</strong></th>
<th>Commercial Self-Contained</th>
</tr>
</thead>
</table>

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

Press the NEXT key until the following screen is displayed.

<table>
<thead>
<tr>
<th><strong>Condenser Medium:</strong></th>
<th>WATER COOLED CONDENSER</th>
</tr>
</thead>
</table>

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

Press the NEXT key until the following screen is displayed.

<table>
<thead>
<tr>
<th><strong>Development Type:</strong></th>
<th>SIGNATURE SERIES</th>
</tr>
</thead>
</table>

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

Press the NEXT key until the following screen is displayed.

<table>
<thead>
<tr>
<th><strong>Refrig Ckt Config:</strong></th>
<th>INDEPENDENT</th>
</tr>
</thead>
</table>

Used With: All Units
Possible Values: Independent, Manifold

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

Press the NEXT key until the following screen is displayed.

<table>
<thead>
<tr>
<th><strong>Water Economizer:</strong></th>
<th>INSTALLED</th>
</tr>
</thead>
</table>

Possible Values: Installed, Not Installed

Press the NEXT key until the following screen is displayed.

<table>
<thead>
<tr>
<th><strong>Water Piping:</strong></th>
<th>INTERMEDIATE PIPING</th>
</tr>
</thead>
</table>

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

**Configuration - Model Num Digit**  29
**Water Flow Switch**  INSTALLED
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  20
**Heating Type:**  HYDRONIC
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  6, 7
**Unit Capacity**  72
1. Press the NEXT key until the following screen is displayed.

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

**Configuration - Model Num Digit**  23
**Power Exhaust**  NONE
1. Press the NEXT key until the following screen is displayed.

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

**Configuration - Model Num Digit**  28
**Air Economizer**  INSTALLED
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  9
**Air Temp/Vol Ctrl**  SA CTRL WITH IGV/VFD
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  9
**Supply Fan VFD Bypass**  INSTALLED
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  28
**Comparative Enthalpy**  INSTALLED
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  33
**GBAS 0-5 VDC Module**  INSTALLED
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  33
**Ventilation Override (VOM)**  INSTALLED
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  28
**Ventilation Ctrl**  TRAQ DAMPERS
1. Press the NEXT key until the following screen is displayed.

**Configuration - Model Num Digit**  33
**TCI4 Communications Module**  INSTALLED
1. Press the NEXT key until the following screen is displayed.
**Programming Configuration**

<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>

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

**Remote Human Interface**

INSTALLED

**Possible Values:** installed, Not Installed

**Used With:** All Units

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

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>9.13</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTM</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Compressor Module (SCM)</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>4.09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Compressor Module (MCM)</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number:</th>
<th>1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBAS 0-5 VDC Module</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilation Override (VOM)</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>8.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust/Comp Enthalpy Module</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Module</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>14.07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Human Interface</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>11.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Human Interface (RHI)</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>1.12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilation Control Module (VCM)</td>
<td></td>
</tr>
</tbody>
</table>

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

**Software Revision Number Report:**

<table>
<thead>
<tr>
<th>Software Revision Number Report:</th>
<th>13.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS Communications: xx xxxx xx xx xx xx xx xx xx xx xx xx xx xx xx</td>
<td></td>
</tr>
</tbody>
</table>

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

**Used With:** Units with GBAS

**Used With:** Units with VOM module installed

**Used With:** Units with Comparative Enthalpy

**Used With:** Units with hydronic or electric heat

**Used With:** Units with Remote Human Interface Module installed.

**Used With:** Screen shown only if VCM Module installed

**Used With:** Units with TCI, LCI or BCI.

xxxxxxx =
Comm3/4 (when TCI installed)
LonTalk (when LCI installed)
BACnet (when BCI installed)
SERVICE MODE Menu

The SERVICE MODE menu is used to input operating parameters for unit operation during a service test. Depending on the particular test being conducted, the user will cycle through all unit outputs (compressors, fans, dampers, heaters, etc.) and selectively turn them On or Off for the test. After designating the operating status for each unit component, the operator will designate the “TEST START” delay time.

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

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

To operate the system in the test mode, press the SERVICE MODE key to enter into the service mode menu and scroll through all of the system outputs and selectively turn them “On” or “Off”.

To change the service mode values on a particular screen:

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

To navigate to another screen:

1. Press the NEXT key to advance to the next screen, or
2. 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. if you want to remain in the Setpoint submenu, press the SERVICE MODE key once and it will return you to the beginning of that particular submenu, or
4. 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
5. if you want to exit to another menu, such as SETPOINT, press that key once, then press the NEXT key to scroll through those screens.

Supply Air Controls
Supply Fan OFF
1. Press the NEXT key until the following screen is displayed.

Supply Air Controls
Supply Fan OFF IGV/VFD Cmd 35%
1. Press the NEXT key until the following screen is displayed.

Water Pump Relay OFF
1. Press the NEXT key until the following screen is displayed.

VAV Box Relay
RTM Alarm Output
1. Press the NEXT key until the following screen is displayed.

Water Econ Control Valve Command 0%
Water Econ Bypass Valve Command 0%
1. Press the NEXT key until the following screen is displayed.

Condenser Fan Outputs
1A OFF 1B OFF
1. Press the NEXT key to advance the cursor.
2. Press the NEXT key until the following screen is displayed

Condenser Fan Outputs
1A OFF 1B OFF 2A OFF 2B OFF
1. Press the NEXT key to advance the cursor.
2. Press the NEXT key until the following screen is displayed
SERVICE MODE Menu

Condenser Fan Speed
Ckt 1 0 %
1. Press the NEXT key until the following screen is displayed.

Condenser Fan Speed
Ckt1 0% Ckt2 0%
1. Press the NEXT key to advance the cursor.
2. Press the NEXT key until the following screen is displayed.

Compressor Relays:
K11 OFF K12 OFF K4 OFF
1. Press the NEXT key to advance the cursor.
2. Press the NEXT key until the following screen is displayed.

Hydronic Heat
Actuator 0 %
1. Press the NEXT key until the following screen is displayed.

Heat Stages
Stage OFF
1. Press the NEXT key until the following screen is displayed.

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

OA Damper Pos 0%
1. Press the NEXT key until the following screen is displayed.

Supply Fan Bypass Relay NORMAL
1. Press the NEXT key until the following screen is displayed.

Ventilation Override Module Output Relay OFF
1. Press the NEXT key until the following screen is displayed.

OA Preheater State OFF
1. Press the NEXT key to advance the cursor to the next field within this screen.
2. Press the NEXT key until the following screen is displayed.

GBAS 0-5 VDC Module Relay Outputs
#1 OFF #2 OFF #3 OFF #4 OFF #5 OFF
1. Press the NEXT key until the following screen is displayed.

Status/Annunc Test Sys On (Blinking)
Heat: OFF Cool: OFF Service: OFF
1. Press the NEXT key to advance the cursor to the next field within this screen.
2. Press the NEXT key until the following screen is displayed.

Start Test In 5 Seconds
Press TEST START To Begin, STOP To Halt
3. Press the NEXT key to advance the cursor to the next field within this screen.
4. Press the NEXT key until the following screen is displayed.
DIAGNOSTICS Menu

The DIAGNOSTICS menu is used to view diagnostics that have resulted from system failures within the unit. There are two lists where diagnostics reside; the Active list, and the Diagnostic Event Log.

The Active list is used for viewing all active diagnostics and for clearing manually resetable diagnostics. These lists of diagnostics are displayed after pressing the DIAGNOSTICS key if active diagnostics are present.

Active manual diagnostics can be cleared in batch form at the unit mounted Human Interface. When an Active diagnostic is manually or automatically cleared, it is removed from this buffer. Automatically resetting diagnostics can not be reset by the Human Interface, because the condition that caused the diagnostic has to be corrected for the diagnostic to clear.

Active diagnostics can be cleared in batch form at the unit mounted Human Interface. When an Active diagnostic is manually or automatically cleared, it is removed from this buffer. Automatically resetting diagnostics can not be reset by the Human Interface, because the condition that caused the diagnostic has to be corrected for the diagnostic to clear.

One of the following screens will be the first screen displayed when the DIAGNOSTIC* key is pressed

**Diagnostic Menu ---- Info**

**No Active Diagnostics (NEXT) History Log**

**OR**

**Press CANCEL to Clear All Active Manual Diagnostics, or Press NEXT to View**

1. Pressing the "CANCEL" key to clear the diagnostics will prompt the following screen.

**Diagnostic Reset Is Password Protected**

Please Enter Password: _____________

1. Press the + (plus) or - (minus) keys to enter the password
2. Press the ENTER key to confirm this choice. When the correct password is entered, the following screen will be displayed.

**Resetting Active Manual Diagnostics**

Sending Reset Request

and then the following screen will be displayed

**Resetting Active Manual Diagnostics**

Updating Unit Data, Please wait

and then the following screen will be displayed

**Active Diagnostic -- Info**

Please Wait, Unit Is In Reset Mode

**OR**

1. Pressing the "NEXT" key to view the diagnostics will prompt the following screen if a "MANUAL RESET" failure has occurred.
### Active Diagnostic -- Manual Reset

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

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

### Active Diagnostic -- Auto Reset

**Possible Values:**
- RTM Zone
- Supply Air Temp
- RTM Aux. Temp
- OA Temp
- Mode Input
- Occ Zone Cool Setpoint
- Occ Zone Heat Setpoint
- Supply Air Pres
- OA Humidity
- Auto Reset SA Static Pres Lmt
- SCM Communication
- MCM Communication
- ECEM Communication
- TCI Communication
- Tracer® Communication
- Unit HI Communication
- Sup Air Temp Cool Setpt
- NSB Panel Zone Temp
- VCM Aux Temp
- VCM Communication
- Ent Cond Water Temp
- WSM Mixe Air Temp
- Heat Aux Temp
- Unocc Zone Cool Setpoint
- Unocc Zone Heat Setpoint
- Supply Air Pres Setpt
- Space Pressure Pres Setpt
- Return Air Temp
- RA Humidity
- Heat Module Commun.
- Cond Temp - CKT 1, 2, 3, 4
- GBAS Module Communication
- NSB Panel Communication
- VOM Communication
- Space Pressure
- Cool Setpoint
- Heat Setpoint
- Auto Reset SA Static Press Limit
- Evap Temp - CKT 1, 2, 3, 4
- Heat Module Commun.
- Cond Temp - CKT 1, 2, 3, 4
- GBAS Module Communication
- NSB Panel Communication
- VOM Communication
- Return Air Temp
- RA Humidity
- Heat Module Commun.
- Cond Temp - CKT 1, 2, 3, 4
- GBAS Module Communication
- NSB Panel Communication
- VOM Communication

**OR**

1. Pressing the "NEXT" key to view the diagnostics will prompt the following screen if a “information only” failure has occurred.

### Active Diagnostic -- Info

**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.
When any condition results in the rooftop unit's inability to perform a normal function, it is said to have entered a failure mode. There are two types of failure modes.

1. An "Analog input out of range" failure mode.
   This failure mode occurs when a sensing device such as a zone temperature sensor or a humidity sensor begins to transmit information that is outside its allowable range.

2. A "Fault recognition by input logic" failure mode.
   This failure mode occurs when the UCM receives information that does not "make sense" or does not conform to its predefined logic.

There are three types of diagnostics:

1. Informational - Does not affect machine operation.
2. Automatic Reset - Affects machine operation but returns to normal when diagnostic condition no longer exists.
3. Manual Reset - Affects machine operation and must be reset at the HI or by cycling power to unit for normal operation to resume.

To troubleshoot diagnostics, reference the Installation, Operation, and Maintenance Manual SCXF-SVX01*-EN that ships with the Signature Series units and SCXG-SVX01*-EN that ships with the Modular Series units.
Glossary

A

**Active SETPOINT**
The SETPOINT which is currently being used for control by the SETPOINT source selection.

B

**BACnet®**
An open, device networking communications protocol for controls. This protocol utilizes BACnet and ANSI/ASHRAE Standard 135-2004 protocol which provides building owners the capability to connect various types of building control systems or subsystems together.

C

**Compressor Lockout**
All affected compressors stop and remain off until the condition resets or is manually reset.

**Compressor Protection Switch**
A pressure switch installed on the suction line that prevents compressor operation below the switch’s SETPOINT. The purpose is to prevent no-flow scroll compressor operation.

**Control Band**
The range of temperatures or pressures which would normally be maintained by the various control functions.

**Control Point**
The value of a SETPOINT that an algorithm is using at any given time.

D

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

**Dry Bulb**
An outdoor temperature above which economizing will be disabled (unless comparative enthalpy is the economizer control type being used.)

E

**Economizer Zone Temp SETPOINT Suppression**
a parameter used for setting the Zone Temp SETPOINT at a lower value than the mechanical cooling zone temp SETPOINT.

**External Heat**
A heat source external to the self-contained unit that is field installed (i.e. duct heat or VAV reheat boxes).

**External Stop**
A binary input on the RTM that allows unit shutdown, with automatic reset, when connected to a field-supplied switch.

H

**Hydronic Heat**
Optional steam or hot water heat coil.

**Independent Refrigerant Circuit**
All model SCW/G/SIWG, SCRG/SIRG and SCWF/SIWF units have independent refrigerant circuits.

I

**Interprocessor Communications Board (IPCB) Option**
The IPCB is used to expand communication from the unit’s UCM network to a remote human interface panel. DIP switch settings on the IPCB module for this application should be; switches 1 and 2 “off,” switch 3 “on.”

L

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

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

**Low Entering Water Temperature Compressor Lockout**
On units with head pressure control disabled and an entering water temperature below 54°F, compressor operation disables. economizer operation is still functional.

M

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

N

**Night SetBack (NSB)**
Applies to the control of the rooftop unit during unoccupied periods. Also refers to the NSB panel, a communicating wall sensor with night setback capability.

**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.

**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 over pressurization.

**Supply Air Pressure**
The pressure in inches water column (IWC) of the supply duct plenum or outlet as measured by the Supply Air Pressure Transducer, referenced to local outside (atmospheric) pressure.

**Supply Air Tempering**
Turning on heat when the supply air temperature drops below a preset value usually due to cold outside air being brought in to provide building ventilation.

**Supply Air Temperature Control Point**
The revised value of supply air temperature SETPOINT after supply air temp reset has been applied.

**Supply Air Temperature Reset**
A function that shifts the SA Temp SETPOINT an amount based on the value of another parameter—typically Zone Temp or Outdoor Air Temp. The purpose of this function is to lower unit capacity to better meet load requirements.

**Water Purge**
When the waterside economizer valve opens to flush out the economizer tubes to prevent failure due to stagnant water and sedimentation.
Index

Symbols
- (Minus) Key 9
 Symbols
+ (Plus) Key 9
A
Acronyms 4
Active Diagnostic 46
Active Setpoint 49
Actuator Setup 12
AUTO Key 10
B
BACnet 4, 6, 49
BCI 4, 6
C
CANCEL Key 9
central processor of the system
See Rooftop Module 6
Coil Frost Cutout 12
Comparative Enthalpy Module 6
Compressor Lockout 49
Compressor Module 6
Compressor Protection Switch 49
Condenser 12
Condenser Temperature Control Band 12
CONFIGURATION 9
Configuration 8, 10
Configuration Key 9, 11
CONFIGURATION Menu 40
Configuration Menu 40
Control Algorithm Tuning Parameters 13, 35
Control Band 49
Control Parameters 11
Control Point 49
Custom Key 10
Custom Menu 10, 14
D
Data Manipulation Keys 9
Daytime Warmup 12
Deadband 49
Default Setpoint 12
designate 36
Device Characteristic Setup Definitions 32
Diagnostic 9, 46
diagnostic Event Log 46
DIAGNOSTICS Key
See Figure 2 9
Diagnostics Key 9, 46
Diagnostics Menu 46
E
ECM 4, 6, 16
Economizer Zone Temp Setpoint Suppression 49
Emergency Override modes 10
ENTER Key
See Figure 2 9
Exhaust Sequence 7
Exhaust/Comparative Enthalpy Module 6
External Heat 49
External Stop 49
F
Factory Presets 11
Failure Modes 48
Figure 1 8
Figure 2 9
Function (Enable/Disable) Setups 12
G
GBAS 4, 6, 12
GBAS Input/Output 12
General Status Display 10
Generic Building Automation System 4, 6
Glossary 49
H
Heat Module 6
Human Interface 22, 40
Human Interface Keypad
See Figure 2 9
Human Interface Module
See Figure 1 8
Hydronic Heat 49
I
Independent Refrigeration Circuit 49
Information Format 12
Interprocessor Communications Board (IPCB) Option 6, 49
Interprocessor Communications Bridge Module 6
IPCB 49
L
LCI, LCI-I 6
Low Ambient Compressor Lockout 49
Low Entering Water Temperature 49
Low Entering Water Temperature Compressor Lockout 49
M
Manifold Refrigerant 49
MCM 4, 6
Menu Keys 8
Module Defaults 12
N
NEXT Key 8, 10
Night SetBack (NSB) 49
No Configuration 11
O
OA Reset 50
Occupied Zone Low Temperature Limit Setpoint 50
Outside Air Ventilation Setup 27
P
Password Protected Screens 13
Press 35
Pressurize Sequence 7
Previous Key 10
Programming the Unit 8
Purge 50
Purge Sequence 7
R
Reference Enthalpy 12, 50
Remote Human Interface 50
Reset Amount Maximum 50
Reset End Temperature 50
Reset Start Temperature 50
RHI 4, 8
Rooftop Module 6
RTM 6, 11, 12, 13
RTM Alarm Output Assignments 12
RTM Alarm Output Diagnostic 30
S
SCM 4, 6
Sensor Source Selection 12, 22
SERVICE MODE Key
See Figure 2 9
SERVICE MODE Menu 43
SERVICE Mode Menu 10
SETPOINT Menu 36
SETPOINT Source Selection 36, 38
Setpoint Source Selection 49
Setpoints 36
Setpoints Key 8
SETUP Key
See figure 2 9
Space Pressure 50
special ventilation requirements
See Ventilation Override Module 6
stage heat up and down
See Heat Module 6
Statitrac 50

PKG-SVP01F-EN 51
Index

STATUS key 14
Status Key 8
STATUS Menu 14
STOP Key 10
Supply Air Pressure 4, 50
Supply Air Temperature Control Point 50
Supply Air Temperature Reset 50
Supply Air Tempering 50

T
TCI 5, 47
Temperature Input Calibration 30
Temperature Input Offset 13, 30
TEST START 9, 43
TEST START Key 10
Trane Communications Interface Module (TCI) Option 6

U
UCM 5, 6
UCM Control System 5
UNIT OFF 7
Unit On 7
Unit Operation Keys 10
Unit Status 7
Unit Status (Unit On) 7

V
Ventilation Override 5, 6
Ventilation Override Definition 13, 22
VOM 6
VOM Active 7, 10

W
Water Purge 50