



CoolCloudHVAC™ APP Technical Guide for Furnaces with **ComfortBridge™** Control Platform

Part 1: Login and Registration
Part 2: Connecting to a Unit
Part 3: The System Overview Screen
Part 4: Viewing Info from a Unit
Part 5: Setting Up a Non-Communicating System

Appendix A: Example System Configurations

T: 888-593-9988 | F: 713-316-5541



Part 1: Login and Registration Screens

No Service 🗢 3:29 PM 💿 🕸 100% 🖿	ull 중 10:47 AM ֎ ¥ 69% ■	ul ≎ 10:47 AM ® \$ 69% ■		
CoolCloud" 🗞	← CoolCloud 🖄	← CoolCloud 🖄		
	Degister by filling out the	enter your email address		
	Register by filling out the short form below.	Cell phone number		
Welcome back!	short form below.	+1 Enter your cell phone number		
Username	First name	Create a username		
Enter your username	Enter your first name	Enter your username		
Password	Last name	Create a password (Minimum 8 characters)		
Enter your password	Enter your last name	Enter your password		
	Company name	Retype password		
	Enter your company name	Retype your password		
Forgot your password?	Email	By selecting the checkbox , I agree		
Forgot your username?	Enter your email address	to the <u>terms and conditions</u> and <u>privacy policy</u> .		
Need to create a login?	Cell phone number			
<u>Register here</u>	+1 Enter your cell phone number	Register		
Login Screen	Registration Form Top	Registration Form Bottom		

The first thing a user will see when opening the app for the first time is the Login Screen. If a user already has an account, they may log in here with their username and password.

Any new user will first have to register for an account by providing the above information. Once they press the "Register" button at the bottom of the Registration Form, a text message will be sent to the phone number they provided containing a verification number. The user must type this number into the next screen on the app to verify their account. Once their account has been verified, they will be brought back to the Login screen where they can then log in with the username and password they just created.

If a user forgets their password, they may click on the "Forgot your password?" button below the Login button. They will be prompted to provide their username. After providing their username, a text message will be sent to the phone number associated with their account containing a verification code. They must enter this verification code along with the new password they would like to use with their account.

If a user forgets their username, they may click the "Forgot your username?" button below the Login button. They will be prompted to provide the phone number they used to register for their account. A text message will be sent to that number containing the username associated with the given phone number.

Usernames cannot be changed once chosen. If a user changes their phone number, they may continue using the same account, but will not be able to change the phone number associated with their account.

T: 888-593-9988 | F: 713-316-5541



Part 2: Connecting to a Unit

.ogout Bluetooth De	EVICES Refresh	Security Verification
		Select a method for pairing bluetooth devi Please verify that you have access to the equipment before making a connection.
onnect to an HVAC network lodel number of the indoor		Method 1 : Circuit Board Code
DM97MC0804CNAA XXX-XXX-6969	< []0.	Simply enter the 3-digit code found on the indoor unit's circuit board to pair your device
AMVC961205DNBA XXX-XXX-0420	< 18.	Pair Device by Code
AVPTC59C14BA XXX-XXX-6789	< 00m.	Method 2 : Thermostat Tasks
AMVM971205DNAA XXX-XXX-6969	< 00m.	
AVPTC61D14BA XXX-XXX-1555) >	Complete specific tasks at the thermostat t
AVPTC31C14BA XXX-XXX-3847	< 10.	pair your device. Pair Device by Thermostat

After logging in, the user will be shown a list of devices that are within range and have a connection available. Each unit can be identified by its model number and the Bluetooth board broadcast ID. A unit may not show up on this list if:

- It is out of range of Bluetooth
- Another user is connected to the same Bluetooth device
- The indoor unit is experiencing a software issue
- The unit is not powered on

If the unit is experiencing software issues, the Bluetooth device may broadcast under a different name than expected. Here are three possible unexpected names and some information about the possible underlying software issues:

T: 888-593-9988 | F: 713-316-5541



Bluetooth broadcast name	Possible underlying issue(s)
	The indoor unit is a furnace but its model number and serial number could not be retrieved. In this case, the Bluetooth network will not be able to broadcast the model number and will broadcast these default values instead.
Furnace XXX-XXX-1234	This issue can be caused by a blower communication error or by a shared data mismatch. The user should connect to the network and view the Fault Code History menu of the indoor unit for more information.
	Note that XXX-XXX-1234 is not a serial number it is the Bluetooth board broadcast ID. "Furnace" is not a valid model number
	The indoor unit is an air handler but its model number and serial number could not be retrieved. In this case, the Bluetooth network will not be able to broadcast the model number and will broadcast these default values instead.
Air Handler XXX-XXX-1234	This is usually caused by a shared data mismatch. Shared data should be updated on the indoor board before connecting to the unit.
	Note that XXX-XXX-1234 is not a serial number it is the Bluetooth board broadcast ID. "Air Handler" is not a valid model number.
ΟΤΑ	A Bluetooth software update was attempted but was interrupted before completion.
Unknown	The user should immediately connect and complete the software update process.

Once the user has identified the Bluetooth network they would like to connect to, they may select that network. They will be presented with two options to verify the connection.



Verification Method 1: Circuit Board Code



If the user chooses to connect using the circuit board code, they will need to read a 3-digit code off of the indoor circuit board's 7-segment display.

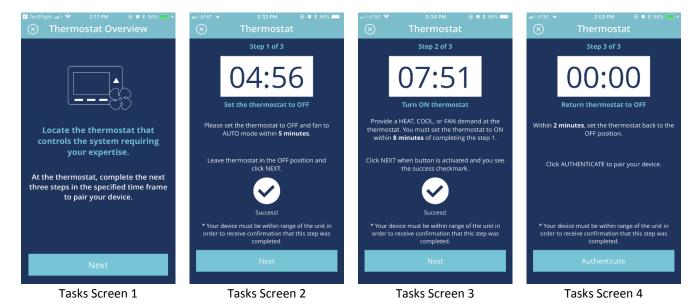
This is the same display they would normally use to change settings on the board through the board's push buttons/human interface (HMI). The code may be visible through the sight glass on the front of the unit. If it is not visible, the user will have to remove the front panel from the unit to see the code.

Since power to the board will be interrupted when the panel is removed/replaced, the user will be disconnected from the Bluetooth device and may need to wait about 30 seconds from when power is restored for the Bluetooth device to begin broadcasting again.

If, for some reason, the code does not display at first, the user can make three consecutive guesses and a new code will be displayed.



Verification Method 2: Thermostat Tasks



If the user chooses to connect using the thermostat tasks method, they will need to locate the thermostat that controls the indoor unit they wish to connect to. In short, the user will have to turn the thermostat off, then on, and then off again within a certain time period. Here is a more detailed description of all the steps:

- 1. Select the unit you would like to connect to, select the thermostat tasks verification method, and locate the thermostat controlling the unit you are trying to connect to.
- 2. When ready, select "Next" (see Tasks Screen 1 above) to start the first timer.
- 3. (Tasks Screen 2 above) Within 5 minutes, ensure there are no calls (W, Y, G, etc.) coming from the thermostat. It may take 5 seconds for the controls to detect any changes. Once the controls confirms there are no calls, the user will receive a "Success!" message and the "Next" button will become active. The user must click "Next" to move to the next task.
- 4. (Tasks Screen 3 above) Within 8 minutes, use the thermostat to send any call to the unit. We recommend sending a G (constant fan) call as there typically aren't any on or off delays associated with these calls. It may take 5 seconds for the controls to detect any changes. Once the controls confirms there is an active call, the user will receive a "Success!" message and the "Next" button will become active. The user must click "Next" to move to the next task.
- 5. (Tasks Screen 4 above) **Within 2 minutes**, remove all calls coming from the thermostat. It may take 5 seconds for the controls to detect any changes. Once the controls confirms there are no calls, the "Authenticate" button will become active.
- 6. Press "Authenticate" to complete the connection process.

If a user fails to complete the thermostat tasks verification method on their first attempt, they will be brought back to the overview screen (Tasks Screen 1). When working with older versions of the Bluetooth module software, it may be difficult to complete the thermostat tasks verification method on consecutive tries. If the phone app fails to

T: 888-593-9988 | F: 713-316-5541

acknowledge calls sent from the thermostat, the user may need to power the unit off and on again before re-attempting the verification process, or use the Circuit Board Code verification method instead.

Software Updates

Once the user has successfully connected to a unit and verified their connection, they may be asked to update the software on the Bluetooth Module. They may skip any optional updates, but must apply mandatory updates before continuing. If they update the software on the Bluetooth module, they will be disconnected from the network after the update is complete.

Staying Connected

Once the user has successfully connected to a Bluetooth network, the phone app will remember that unit. The next time they want to connect to the same unit, they will not be asked to re-verify their connection. The connection will be remembered even if the indoor unit is temporarily disconnected from power or if the user updates software on the Bluetooth module.

This connection will be remembered for 8 hours or until the user connects to a different unit, whichever comes first.

Part 3: The System Overview Screen

Once the user has successfully connected to a unit and completed any software updates, they will be brought to the System Overview screen. This screen contains a list of devices connected to the system, as well as any Notes that other users may have left during previous visits to this site.

The items listed on this screen will usually appear in the same order, though this is not a guarantee. The usual order is:

- 1. System Settings, along with the model number of the indoor unit
- 2. The indoor unit type (Furnace or Air Handler) and the model number of the indoor unit
- 3. The outdoor unit type and the model number of the outdoor unit

Communicating outdoor units will appear on this list as an AC or Heat Pump with the model number of the unit displayed beneath it. For example, in the screenshot on the top right we can see the heat pump unit connected to this system is a communicating heat pump with the model number DZ20VC0601.

The outdoor unit may also appear as "Click to Setup Non-Comm Outdoor" with "24V Outdoor" displayed beneath it. This means that the indoor unit could not detect a communicating outdoor unit connected to its 12RC terminal

T: 888-593-9988 | F: 713-316-5541

Produced by Goodman Business Unit Technical Services | 19001 Kermier Road | Waller, TX 77484

Air Conditioning & Heating

No Service 🗢 3:40 PM © 🕸 100% 📼 ← System Overview Refresh

Previous Work Notes

eric

06/20/18 3:40 PM

Any saved noted will appear here, with the previous user name and a timestamp

View All Notes

Available CoolCloud HVAC devices	
System Settings AMVC961205DNBA	>
Furnace AMVC961205DNBA	>
Heat Pump DZ20VC0601	>



block. If a non-communicating outdoor unit is installed as part of this system, it will be necessary for the installer to manually configure the settings for this unit using its device specific menus. See Part 5: Setting Up a Non-Communicating System for more information on how to configure systems with a non-communicating outdoor unit.

This screen may say "It looks like the system is still booting up, please wait a few seconds and refresh this page." The user may keep refreshing this page using the refresh button in the upper right hand side of the screen until they are able to view the complete device list.

If the user does not see the model number of the indoor unit listed here, it may be necessary to correct an active fault condition on the indoor unit. The active fault may be caused by a blower communication failure or a shared data mismatch. The user should navigate to the Fault Code History menu for the indoor unit to find more information on the active fault along with possible solutions. Some menus may not be available on this unit until the fault condition is corrected.

If the user installed a communicating outdoor unit, but "24V Outdoor" is being displayed beneath the outdoor unit type, then the communicating outdoor unit has not yet been detected. It may take up to 90 seconds for a communicating outdoor unit to be detected under normal conditions. The user should first wait and refresh the System Overview screen to see if the outdoor unit connects on its own. If the outdoor unit has not been detected after 90 seconds, the user should check the communication wires between the indoor and outdoor unit (lines 1 and 2 on the 12RC terminal block). The user should ensure there are no breaks in these lines and that they have the proper bias voltage difference of 0.6 VDC.

If the user does not see the model number of the outdoor unit listed here, it may still be okay to view more information from the unit. The user should confirm that the installed outdoor unit is a communicating outdoor unit that is compatible with the installed indoor unit. If the units are compatible, the user may continue with system setup as normal.



Part 4: Viewing Info from a Unit

No Service 🗢 3:40 PM	֎ ★ 100% ■	📲 🗘 🛪 🖓	🕑 🔰 100% 🥅	∎II 🗢 3:43 PM	● \$ 100% 🔲
← Device Overvie	W Glossary	← Device Overview	V Glossary	\leftarrow Device Overview	
Available Run Modes		Available Run Modes		Available Run Modes	
No test available	2	\$\$ §		₩ \ ()	
Run Mode		Run Mode		Run Mode	
System SettingsAMVC9612	205DNBA	Furnace AMVC96120)5DNBA	Heat Pump DZ20VC060	D1
Configuration Info	>	Configuration Info	>	Configuration Info	>
Device Settings	>	Device Settings	>	Device Settings	>
Device Status	>	Device Status	>	Device Status	>
		Sensor Data	>	Sensor Data	>
Device Overviev	v 1	Device Overview	2	Device Overview	3

Selecting any unit from the System Overview screen will take the user to the Device Overview screen. From here the user can run the unit in any available run modes, or view more detailed information about the unit on any of the unit-specific menus.

Run Modes

Each unit has a specific set of run modes associated with it. A furnace (see Device Overview 2) has the constant fan and gas heat run modes. A heat pump (Device Overview 3) has the cooling and heat pump heat run modes. An air handler will have the constant fan and electric heat run modes, and an air conditioner will have only the cooling run mode. Some devices, such as system settings (Device Overview 1) do not have any run modes.

To run the selected unit in an available run mode, the user must select the desired mode and click "Run Mode". The user will then have to choose a run mode capacity using the slider that appears on screen.

When activating a unit in the constant fan Run Mode, the capacity the user chooses is the percentage of maximum airflow that the unit will provide during the call. For all other run modes (gas heat, cooling, heat pump heat, and electric heat), the capacity selected represents the stage the user would like to run on the unit. All values less than or equal to 50% represent a low-stage call. All values greater than 50% represent a high-stage call. If the unit only supports single-stage operation, all values greater than 0% will activate the unit in the selected run mode.

T: 888-593-9988 | F: 713-316-5541

Produced by Goodman Business Unit Technical Services | 19001 Kermier Road | Waller, TX 77484



Non-communicating outdoor units cannot be activated using run modes on the phone app. The device overview screen will still show the run modes that would typically be available on these units, but activating these run modes from the app will not cause the outdoor unit to turn on in any way. Instead, activating these run modes will cause the indoor unit to provide the airflow that it would normally provide if the outdoor unit was running in the given mode. This can be useful for confirming the indoor unit's airflow settings for cooling and heat pump heating modes.

Once they have selected the desired capacity, they can click "Run Mode" again to start the run mode.

A timer will appear on-screen counting up. This timer will continue running until the user chooses to stop the run mode or they leave the application. The user can look at unit-specific menus for the selected unit while the test mode is active, but they will not be able to view information about other units without stopping the run mode on the current unit first.

The user can stop the run mode by pressing the "Stop Mode" button that replaces the "Run Mode" button.

There is currently a known issue that may cause the unit to continue running in a run mode when it appears the phone app has stopped running the previous run mode. In all cases this behavior will stop once the phone app has disconnected and the run mode request from the phone app has expired (usually less than 4 minutes).

Unit-Specific Menus Overview

There are currently five unit-specific menus.

- 1. Configuration Info
- 2. Device Settings
- 3. Device Status
- 4. Sensor Data
- 5. Fault Code History

Not all units will have all unit-specific menus. The user may select any available unit-specific menu to see what extra information is available for that device. The following sections will cover what kinds of information the user should expect to see under each unit-specific menu. For a more detailed list of what information you should expect to find on different systems, see appendix A.

In general, if a user is attempting to view a unit-specific menu but it is taking a long time to load the menu or no menu loads at all, it is possible the user needs to either refresh the System Overview screen or to force-close the application and reconnect to the system altogether.

Rarely, the phone app can crash when retrieving certain menus. In these cases, it is possible the data on the unit has been corrupted. The board will either need to be reconfigured through the push buttons/human interface (HMI) on the indoor circuit board or replaced entirely.

T: 888-593-9988 | F: 713-316-5541

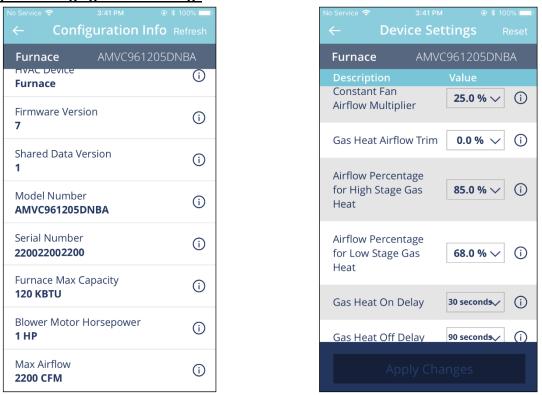


Viewing Configuration Info

Retrieving the configuration info from a particular unit will show information from the unit that does not change, such as serial number of model number. This is useful for confirming shared data information and determining the max airflow of the indoor unit (see Configuration Info Menu below), among other things.

The user may select the (i) icon to the right of each menu item to view the glossary entry for that item.

Viewing and Changing Device Settings



Configuration Info Menu

Device Settings Menu

Viewing the Device Settings menu will show the user a list of the user-modifiable settings that relate to the given unit. To change these settings, the user must click the box and use the OS-specific selection tool that appears (Android uses a dropdown box, iOS uses a roller at the bottom of the screen) and select the desired value for that setting. Once the user has made all of their desired setting changes, they must click "Apply Changes" at the bottom of the screen to send the changes to the unit.

Some setting changes may cause new settings to become available. The user will have to go back to the Device Overview screen and reselect the Device Settings menu to view any new settings.

The user can press the Reset button in the upper right hand corner to clear any changes they have made to that menu so far.

T: 888-593-9988 | F: 713-316-5541

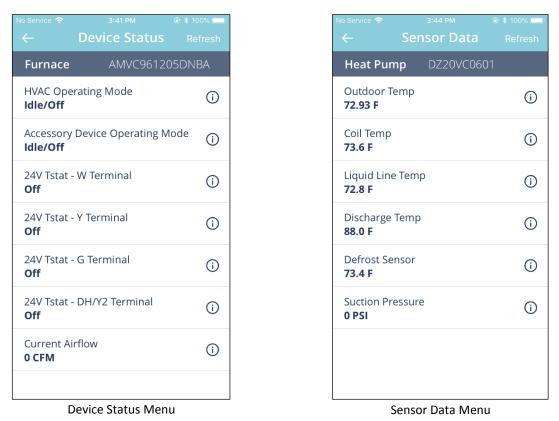
Produced by Goodman Business Unit Technical Services | 19001 Kermier Road | Waller, TX 77484



Viewing Device Status

The device status menu will show any available information about what inputs there are to the unit and what the unit is doing given that information.

This information does not automatically refresh, the user must press the refresh button to see updated values.



Viewing Sensor Data

If there are any sensors connected to the unit, information from those sensors will be displayed here. Currently the only units that will have sensor information are communicating outdoor units.

This information does not automatically refresh, the user must press the refresh button to see updated values.

T: 888-593-9988 | F: 713-316-5541

Produced by Goodman Business Unit Technical Services | 19001 Kermier Road | Waller, TX 77484



Viewing Fault Code History

+ * ● ▼ ■ 4:44 ← Fault Code History Refresh	 □ ⇒ \$ (1) ⇒ ≥ ★ ■ 8:44 ★ ● 68 	No Service 중 3:44 PM
Active Resolved	AC ASXC160241AF	Active <u>Resolved</u>
AC ASXC160241AF	Possible Causes	Heat Pump DZ20VC0601
08 Line Voltage Fault How-to-	Line voltage is outside proper range (185 VAC - 255 VAC).	51 Outdoor Unit Critical Communication Error
Major fix /	Corrective Actions	51 Outdoor Unit Critical Communication Error
08 Major Line Voltage Fault How-to- fix	Check circuit breakers and fuses. Verify unit is connected to power supply as	51 Outdoor Unit Critical Communication Error
	specified on rating plate. Correct Improper voltage condition; contact local	b0 _{Major} Circulator Blower Motor Failure
	utility if needed.	b0 Major Circulator Blower Motor Failure
	Notes & Cautions	b0 Major Circulator Blower Motor Failure
Active Faults	Turn power OFF prior to repair.	"Pocoluod" Faulto

Active Faults

"How-to-fix" Example

"Resolved" Faults

The user can view any active or inactive faults produced by the unit on the Fault Code History menu. If there are any active faults, a "How-to-fix" button will appear next to them. Pressing this button will open up more information on the fault code, with information about possible causes, possible corrective actions, and other notes.

Inactive Faults will appear under the "Resolved" faults tab. These faults are the last 6 faults stored in memory on the device. Though these faults are not active, they may still be caused by an ongoing issue with the unit.

The faults displayed on each device's Fault Code History menu are faults for that device only. The user should go to each device's Fault Code History menu to ensure there are no active faults affecting any of the units connected to their system.

Non-communicating outdoor units will never report active or inactive faults.

This information is not automatically updated, the user must press the refresh button to see updated values.

T: 888-593-9988 | F: 713-316-5541

Produced by Goodman Business Unit Technical Services | 19001 Kermier Road | Waller, TX 77484



>

Part 5: Setting Up a Non-Communicating System

This section will explain how to set up a new non-communicating system. This will only cover what needs to be done on the phone app to complete system setup. See the Furnace IO for other installation requirements and wiring diagrams.

Setting up a non-communicating system

⇔ III	10:15 AM System Overview	● ¥ 65% ■ Refresh
Previou	us Work Notes	
eric	04/27/18 8	3:48 AM
Note		
	View All Notes	
Availab	le CoolCloud HVAC devices	;
System S AMVC9610		>
Furnace AMVC9610		>
Click to S 24V Outdo	Setup Non-Comm Outdoor	>

A System in need of Setup

Device Overview for an Unconfigured Outdoor Unit

10:15 AM

Available Run Modes

If a user has just installed a new system with a CoolCloud-HVAC compatible indoor furnace and a noncommunicating outdoor unit, their system will need to be setup through the phone app before the indoor unit can appropriately process calls made to the outdoor unit. This process will include setting the outdoor unit type and tonnage.

T: 888-593-9988 | F: 713-316-5541

Produced by Goodman Business Unit Technical Services | 19001 Kermier Road | Waller, TX 77484



Selecting the "Click to Setup Non-Comm Outdoor" device from the System Overview list will take the user to the Device Overview screen for that unit, where the only available menu is the Device Settings menu.

II C III C III III	II O II O		Il
Click to Setup Non-Comm D 24V Outdoor	Click to Setup Non-Comm D 24V Outdoor	Click to Setup Non-Comm 0 24V Outdoor	Click to Setup Non-Comm D., 24V OUTdoor
Description Value	Description Value	Description Value	Description Value
Set Outdoor Unit Type (Read Not Set (j) Description)	Set Outdoor Unit Type (Read Description)	Set Outdoor Unit Type (Read 2 Stage H (j) Description)	Set Outdoor Unit Type (Read 2 Stage H (j) Description)
	Cancel Done Not Set Single Stage AC Single Stage Heat Pump		Success! Settings were successfully updated! Ok
Apply Changes	2 Stage AC 2 Stage Heat Pump	Apply Changes	Apply Changes
(1)	(2)	(3)	(4)

(1) Once the user selects the Device Settings menu for the "Click to Setup Non-Comm Outdoor" unit, they will have the option to select which outdoor unit they installed. (2) The available settings for outdoor unit are Single Stage AC, Single Stage Heat Pump, 2 Stage AC, and 2 Stage Heat Pump. (3) The user should select the outdoor unit that is installed and press the Apply Changes button that is now illuminated at the bottom of the screen. (4) The phone app will display a success message once the setting change has been applied.

After this setting change is applied, the "Click to Setup Non-Comm Outdoor" unit will be replaced with the chosen unit type. The user must return to the System Overview screen and press the refresh button to see these changes. The user may need to refresh this screen twice to see the changes take effect. The System Overview screen will now display the unit type chosen previously.



III	● \$ 65% ■) W Refresh		●	ul ≈ 10:16 ← Device Se	
Previous Work Notes		Available Run Modes		Heat Pump 24V	Outdoor
eric 04/27/1	8 8:48 AM			Description	Value
Note	0.40710			Unit Tonnage	3 Ton 🗸 (i)
		₩)))		Set Outdoor Unit Type	2 Stage H
View All Notes		Run Mode		Cooling Trim Factor (High)	0.0 % V (i)
Available CoolCloud HVAC devic	ces			Cooling Airflaw Drafil	
System Settings AMVC96100ERIC	>	Heat Pump 24V Outdoor		Cooling Airflow Profile Cancel	e E 🗸 (i) Done
Furnace AMVC96100ERIC	>	Configuration Info	>	2.7 T 2.8 T	
Heat Pump	>	Device Settings	>	2.9	
24V Outdoor	/	Device Settings	-	3 To	on
		Device Status	>	3.1 T	
				3.2 1	īon
		Sensor Data	>	3.3 1	
Updated System Ove	erview	Updated Device Overvi	iew	Unit Tonnage	e Selection

Once the user can view the updated list of devices, they should then make a tonnage selection for the outdoor unit (see the Unit Tonnage Selection screen above). This can be found in the Device Settings menu of the chosen outdoor unit. The indoor unit will use this value to calculate the airflow to provide during high-stage calls to the outdoor unit. The indoor unit will provide 400 CFM/Ton and provides tonnage settings in increments of 0.1 Tons (40 CFM). For example, setting the Unit Tonnage to 3 Tons means the indoor unit will provide 1200 CFM of airflow during a high stage call to the outdoor unit.

The user should review the remaining settings for this unit, as well as the other connected units, and ensure they are set to their liking. The user can run test modes to ensure the system behaves as they wish, and check for any fault codes that may be generated by the system now that it is fully set up.



Appendix A: Example System Configurations

This section contains a number of tables detailing the values a user should expect to see in several device-specific menus when their CoolCloud-HVAC app is connected to a given device through a 2-Stage furnace unit. These values may change over time as we continue making improvements to the app. A second appendix will also be added in the near future for values relating to the new line of air handlers.

Furnace Values

Furnace Configuration Info

Name	Typical Values
HVAC Device	Furnace
Firmware Version	#
Shared Data Version	#
Model Number	Unit-Specific
Furnace Max Capacity	# KBTU
Blower Motor Horsepower	# HP
Max Airflow	# CFM

Furnace Device Settings

Name	Typical Values
Constant Fan Airflow Multiplier	25% to 100%
Gas Heat Airflow Trim	-10% to 10%
Airflow Percentage for High Stage Gas Heat	81% to 100%
Airflow Percentage for Low Stage Gas Heat	55% to 85%
Gas Heat On Delay	5 to 30 seconds
Gas Heat Off Delay	30 to 180 seconds
Gas Heat Stage During Defrost	1st Stage or 2nd Stage
Dehumidification Logic	Low or High

Furnace Device Status

Name	Typical Values
HVAC Operating Mode	Some Operating Mode
Accessory Device Operating Mode	Off or Dehumidification
24V Tstat - W Terminal	On or Off
24V Tstat - Y Terminal	On or Off
24V Tstat - G Terminal	On or Off
24V Tstat - DH/Y2 Terminal	On or Off
Current Airflow	# CFM

T: 888-593-9988 | F: 713-316-5541

Produced by Goodman Business Unit Technical Services | 19001 Kermier Road | Waller, TX 77484



System Settings Values

System Settings Configuration Info

Name	Typical Values
HVAC Device Type	System Settings

System Settings Device Settings

Name	Typical Values
Compressor Heat Lockout	10 F – 80 F
Set Point Satisfy Rate	10 – 30 minutes or custom
Custom Target Time	1-240 minutes
Custom Stage Up Percentage	1-100%
Custom Stage Down Percentage	1-100%
Custom Over Target Threshold	1-254 consecutive cycles
Custom Under Target Threshold	1-254 consecutive cycles

System Settings Device Status

Name	Typical Values
HVAC Operation Mode	Some Operating Mode
Hum/Dehum/Vent Mode	Off or Dehumidification
24V Tstat - W Terminal	On or Off
24V Tstat - Y Terminal	On or Off
24V Tstat - G Terminal	On or Off



Non-Communicating AC Values

Non-Communicating AC Configuration Info

Name	Typical Values
HVAC Device	AC
Model Number	24V Outdoor

Non-Communicating AC Device Settings

Name	Typical Values
Unit Tonnage	1-6 Ton
Set Outdoor Unit Type	Single Stage AC
Cooling Trim Factor (High)	-10% to +10%
Cooling Airflow Profile	A through E
Blower On Delay - Cooling	5-30 seconds
Blower Off Delay - Cooling	30-120 seconds
Cooling Low Stage Multiplier*	60%-100%

* These values will only be used when the outdoor unit is a 2-stage unit

Non-Communicating AC Device Status

Name	Typical Values
HVAC Operating Mode	Some Operating Mode
Compressor Call	Off or Active



Non-Communicating Heat Pump Values

Non-Communicating Heat Pump Configuration Info

Name	Typical Values
HVAC Device	Heat Pump
Model Number	24V Outdoor

Non-Communicating Heat Pump Device Settings

Name	Typical Values
Unit Tonnage	1-6 Ton
Set Outdoor Unit Type	Single Stage AC
Cooling Trim Factor (High)	-10% to +10%
Cooling Airflow Profile	A through E
Blower On Delay - Cooling	5-30 seconds
Blower Off Delay - Cooling	30-120 seconds
Cooling Low Stage Multiplier*	60%-100%
Heat Pump Heating Trim Factor (High)	-10% to +10%
Blower On Delay - Heat Pump Heat	5-30 seconds
Blower Off Delay - Heat Pump Heat	30-120 seconds
Heat Pump Heating Low Stage Multiplier*	60%-100%

* These values will only be used when the outdoor unit is a 2-stage unit

Non-Communicating Heat Pump Device Status

Name	Typical Values
HVAC Operating Mode	Some Operating Mode
Compressor Call	Off or Active



2 Stage Communicating AC Values

2 Stage Communicating AC Configuration Info

Name	Typical Values
HVAC Device	AC
Firmware Version	#
Model Number	Model Number
Serial Number	#

2 Stage Communicating AC Device Settings

Name	Typical Values
Cooling Trim Factor (High)	-10% to +10%
Cooling Airflow Profile	A through D
Blower On Delay - Cooling	5-30 seconds
Blower Off Delay - Cooling	30-120 seconds
Dehumidification Enable	On or Off
Reset Fault History	Yes or No

2 Stage Communicating AC Device Status

Name	Typical Values
HVAC Operating Mode	Some Operating Mode
Cool Capacity Request	0-100%
Dehumidification Request	0-100%
Outdoor Fan Speed	# RPM
Reported Airflow	# CFM



2 Stage Communicating Heat Pump Values

2 Stage Communicating Heat Pump Configuration Info

Name	Typical Values
HVAC Device	Heat Pump
Firmware Version	#
Model Number	Model Number
Serial Number	#

2 Stage Communicating Heat Pump Device Settings

Name	Typical Values
Cooling Trim Factor (High)	-10% to +10%
Cooling Airflow Profile	A through D
Blower On Delay - Cooling	5-30 seconds
Blower Off Delay - Cooling	30-120 seconds
Dehumidification Enable	On or Off
Heat Pump Heating Trim Factor (High)	-10% to +10%
Blower On Delay - Heat Pump Heat	5-30 seconds
Blower Off Delay - Heat Pump Heat	30-120 seconds
Defrost Interval	30-120 minutes
Compressor Delay	0-30 seconds
Reset Fault History	Yes or No

2 Stage Communicating Heat Pump Device Status

Name	Typical Values
HVAC Operating Mode	Some Operating Mode
Heat Capacity Request	0-100%
Cool Capacity Request	0-100%
Heat Capacity Request During Defrost	0-100%
Dehumidification Request	0-100%
Reversing Valve	Off or Energized
Outdoor Fan Speed	# RPM
Reported Airflow	# CFM

T: 888-593-9988 | F: 713-316-5541



Inverter Heat Pump Values

Inverter Heat Pump Configuration Info

Name	Typical Values
HVAC Device	Heat Pump
Firmware Version	#
Model Number	Model Number
Serial Number	#

Inverter Heat Pump Device Settings

Name	Typical Values
Boost Mode Enable	On or Off
Indoor/Outdoor Height Difference	Both Units at Same Level,
	Indoor Unit is Lower, or
	Outdoor Unit is Lower
Pump Down	On or Off
Activate Charge Mode	On or Off
Reset Cooling Settings	Yes or No
RPS Range for Cooling	Ranges from 62.5-82.5 RPS
Selected RPS for Cooling	Range from 62.5-82.5 RPS,
	depending on selected RPS
	Range for Cooling
Force Unit to Defrost Mode	On or Off
Reset Heat Pump Settings to Factory	Yes or No
Default	
Reset Fault History	Yes or No

Inverter Heat Pump Device Status

Name	Typical Values
HVAC Operating Mode	Some Operating Mode
Heat Capacity Request	0-100%
Cool Capacity Request	0-100%
Heat Capacity Request During Defrost	0-100%
Dehumidification Request	0-100%
Reversing Valve	Off or Energized
Reported Airflow	# CFM
Boost Mode	On or Off
Defrost Run Time	# seconds

T: 888-593-9988 | F: 713-316-5541

Produced by Goodman Business Unit Technical Services | 19001 Kermier Road | Waller, TX 77484