Equipment Touch User Guide

CARRIER CORPORATION ©2020 · Catalog No. 11-808-516-01 · 3/5/2020

Verify that you have the most current version of this document from **www.hvacpartners.com** or **www.accounts.ivusystems.com** or your local Carrier office.

Important changes are listed in **Document revision history** at the end of this document.

CARRIER CORPORATION ©2020. All rights reserved throughout the world. i-Vu is a registered trademark of Carrier Corporation. All other trademarks are the property of their respective owners.

Contents

What is the Equipment Touch? **1**

Equipment Touch screens **2**

Viewing alarms **12**

Viewing trends **13**

To view trends 13

Viewing or creating schedules **14**

To view schedules 14

To create a schedule 15

To edit touchscreen settings **18**

Document revision history **20**

What is the Equipment Touch?

The Equipment Touch is a touchscreen device that you can attach to a controller to view or change its property values, schedule equipment, view trends, and more, without having to access the system's server.

CARRIER CORPORATION ©2020
All rights reserved

Equipment Touch screens

The Equipment Touch will display the system screens below as well as custom-designed screens.

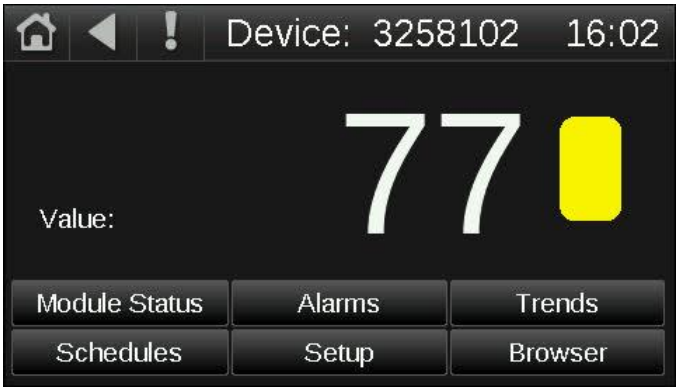
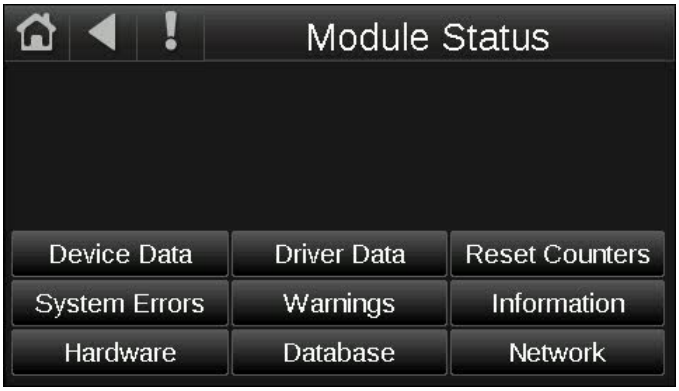
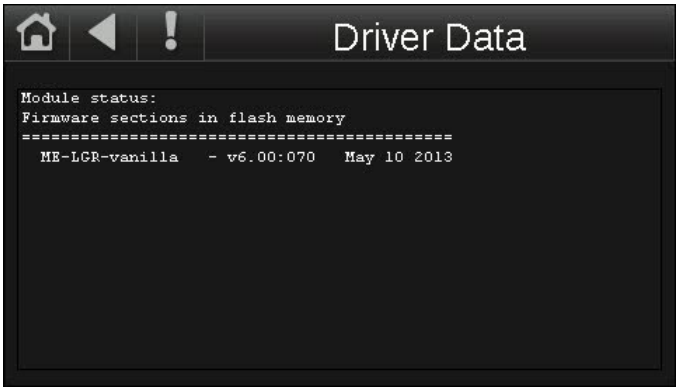
Screen name	Description
Standby	If included in the touchscreen file, a custom screen that displays when the Equipment Touch has had no user activity for the time specified on the **Inactivity Timeout** screen. The **Standby** screen is not interactive, and as soon as you touch the screen, the **Home** screen displays. If the touchscreen file does not include a Standby screen, the Home screen displays after a period of inactivity.
Home	A custom screen for the Equipment Touch.
Login	 Displays if the screen you selected requires a password. Enter your password, then touch **Done**. Each screen is programmed with one of the following password levels:

A screen requiring this password level...	Can be accessed by...
User	A user logged in with the User, Admin, or Factory password
Admin	A user logged in with the Admin or Factory password
Factory	A user logged in with the Factory password
No password	Anyone

NOTES

- You log out on the **Setup** screen.
- You can change passwords on the *Touchscreen Setup* > **Passwords** *screen* (page 18).

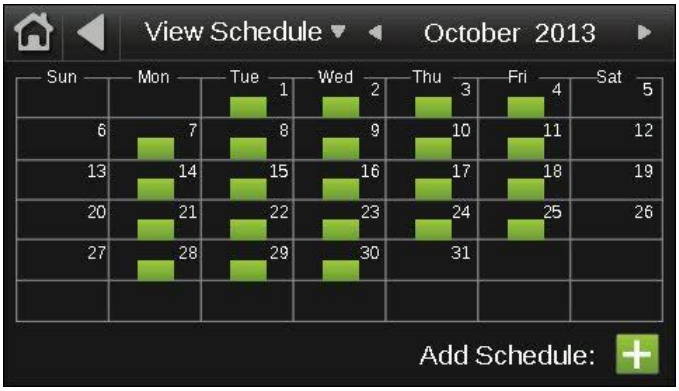
CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
System	 Displays the BACnet device instance number, the controller's time, temperature read from the controller's prime variable, and zone color. Touch a button to jump to the **Module Status**, **Alarms**, **Trends**, **Schedules**, **Setup**, or **Browser** screen.
Module Status	 Touch a button to see one of the following sections of a Module Status report: **Device Data**, **Driver Data**, **Reset Counters**, **System Errors**, **Warnings**, **Information**, **Hardware, Database**, **Network**. For example, the screens below show examples of the Driver Data and Reset Counters information. 

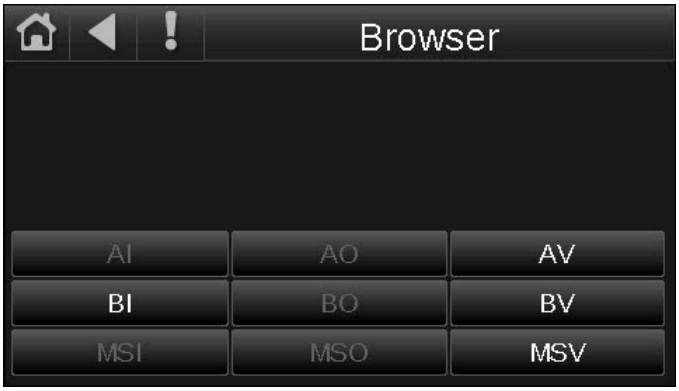
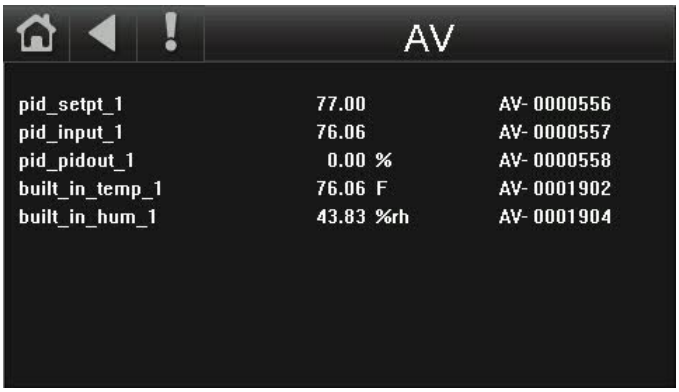
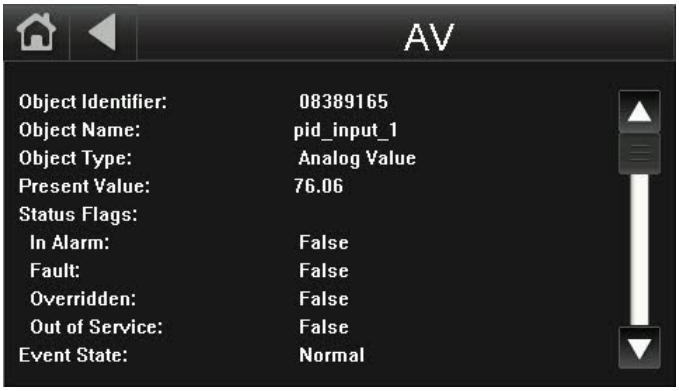
CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
Alarms	 Lets you view alarms from the controller. See *Viewing alarms* (page 12).
Trends	 Lets you view trends for points that have trending enabled. See *Viewing trends* (page 13).

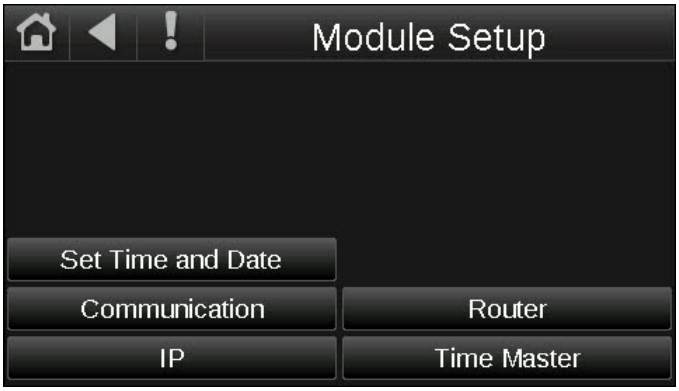
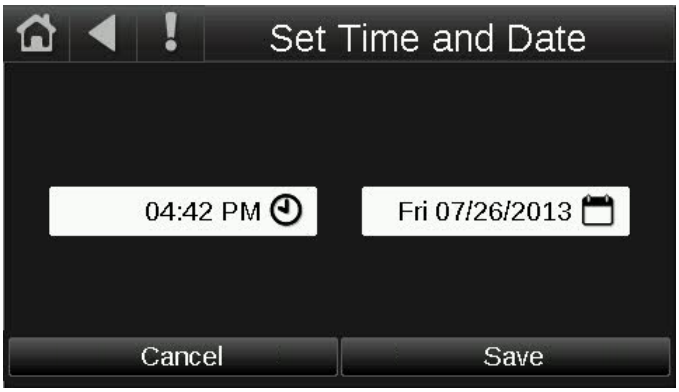
CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
Schedules	 Lets you view, add, edit, or delete BACnet schedules in the controller. See *Viewing or creating schedules* (page 14).
Setup	 Touch a button to jump to the **Module Setup**, **Touchscreen Setup**, or **Login** screen.

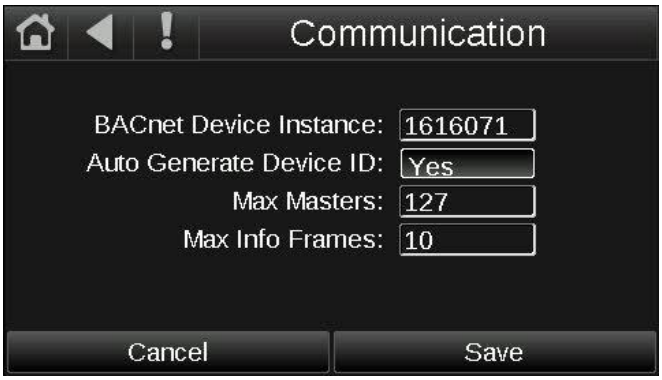
CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
Browser	 Touch a button to see that type of BACnet objects found in the controller. Each screen shows a list of network-visible BACnet objects with BACnet Object Name, Current Value, and BACnet Object Instance number. Below is an example of AV BACnet objects in a controller.  Touch an object in the above screen to see the details shown below. 

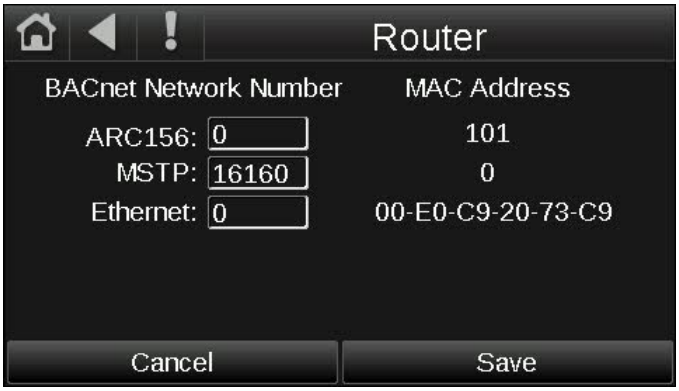
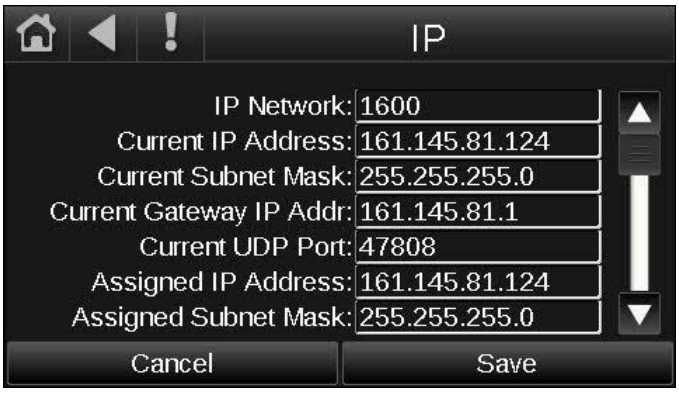
CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
Module Setup	 Touch a button to jump to the **Set Time and Date**, **Communication**, **Router**, **IP**, or **Time Master** screen. **NOTE** A yellow value on a Module Setup screen indicates the value has been changed.
Set Time and Date	 Touch the time or date field to edit it.

CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
Communication	 Lets you edit the information below for the controller. Touch a field to tap in new information. **BACnet Device Instance** number **Auto Generate Device ID**–Enter No or Yes You can edit the following fields that pertain to the controller's MS/TP network: **Max Masters** - Set this to the highest MAC address (up to 127) on the MS/TP network. If you later add a device with a higher address, you must change this field to that new address. **Max Info Frames** - Specifies the maximum number of information messages a controller may transmit before it must pass the token to the next controller. **CAUTION** Increasing this number allows the controller to transmit more messages while it has the token, but it also increases the overall time it takes for the token to pass through the network. • For a router, set this value to a high number such as 200. • In non-router controllers, use the following formula to calculate this value: [2 - (devices * (.002 + (80/baud))] / [(600/baud) * devices] = Max Info Frames For example, if the network has 15 devices at 19200 baud, Max Info Frames would be 4. **NOTE** You may need to increase the result of the formula for controllers that need to communicate many values to other devices.

CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
Router	 Lets you view or edit the router's ARC156 or MS/TP network number. Touch a field to tap in the new number on the keypad. **NOTE** BACnet Ethernet network support will be added in a future release.
IP	 Lets you view or edit network addresses and the UDP Port. Touch a field to tap in the new number on the keypad.

CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
Time Master	 If the Equipment Touch is serving as the front-end for your system, you should designate a controller to be the BACnet Time Master. If a controller will be the BACnet Time Master, this screen lets you configure how it sends time synchronization broadcasts. **Time Sync Mode** - Tap in the number below that represents your selection: • **0 = No Broadcast** - The controller will not act as Time Master. • **1 = Local Broadcast** - If it doesn't already exist, a BACnet address with network number and MAC address length both set to zero is added to the controller's **Time Synchronization Recipients** list found on the driver's **Device** page in the i-Vu® interface. The controller will then send time broadcasts only to controllers on its ARCnet or MS/TP network. • **2 = Global Broadcast** - If it doesn't already exist, a global address with network number set to 65535 and MAC address length set to zero is added to the controller's **Time Synchronization Recipients** list found on the driver's **Device** page in the i-Vu® interface. The controller will then send time broadcasts to all its connected networks. **Time Sync Interval** - Enter how often local or global time broadcast should be sent (1-9999 minutes). If **Time Sync Interval** is set to zero, no time sync messages are sent. **NOTE** If the controller looks through its Time Synchronization Recipient List and finds an entry with MAC address length set to zero and network number set to 65535, the controller's BACnet Time Master mode is set for Global Broadcast. If there is no global broadcast entry in the recipient list, the controller then looks for a local broadcast address (MAC address length set to zero and network number set to zero or to the same network number as the module's). If such an entry is found, the BACnet Time Master mode is set for Local Broadcast. Otherwise, the mode defaults to Disabled/None.

CARRIER CORPORATION ©2020
All rights reserved

Screen name	Description
Touchscreen Setup	 Lets you *edit the touchscreen settings* (page 18).

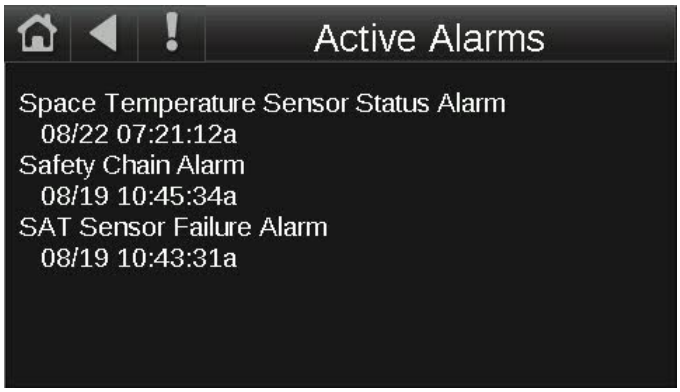
CARRIER CORPORATION ©2020
All rights reserved

Viewing alarms

When the controller generates an alarm, the following actions occur in the Equipment Touch:

- turns red. The button remains red as long as Active Alarms or Active Faults exist.
- An audible alarm sounds if the alarm was set up in ViewBuilder to generate a sound and if Alarm Sounds are turned on in the **Touchscreen Setup** screen. Touch to silence the alarm.
- The alarm is added to the **Active Alarms** or **Active Faults** screen. See table below.

To view alarms, touch or touch **Alarms** on the **System** screen. The **Active Alarms** are displayed.



Touch , then touch...	To...
Active Alarms	See all alarms except those that are defined as Faults in the control program.
Active Faults	See alarms that are defined as Faults in the control program.
Return-To-Normal	See alarms that returned to a normal state.
Manually cleared	See alarms that you cleared using the **Clear Active** button.
Clear Active	Clear all active alarms and faults.

NOTE The Equipment Touch can hold up to 100 alarms.

CARRIER CORPORATION ©2020
All rights reserved

Viewing trends

A controller can read and store point values for any point in the control program that has trending enabled. On the Equipment Touch, you can view trend data for up to 4 points on a trend graph.

To view trends

1. On the **System** screen, touch **Trends**.
2. The **Trend Selector** screen shows any points in the control program that have trending enabled. To select the points you want to see on a trend graph (up to 4 points), touch the appropriate box for the point. For example, for the zone_temp_1 analog point, touch the **Analog** box.
3. Touch **Next**.
4. The **Trend Scaling** screen displays the **Date/Time** of the oldest and newest trend samples in the controller for the selected point(s). Touch a field to enter a new date or time.
5. Analog points only: The **Min Y** and **Max Y** fields show the range of the Y axis based on the lowest and highest trend sample values for the selected point(s). Touch either field and edit the value to define a new range for the Y axis.
6. Touch **Display Trends**.

CARRIER CORPORATION ©2020
All rights reserved

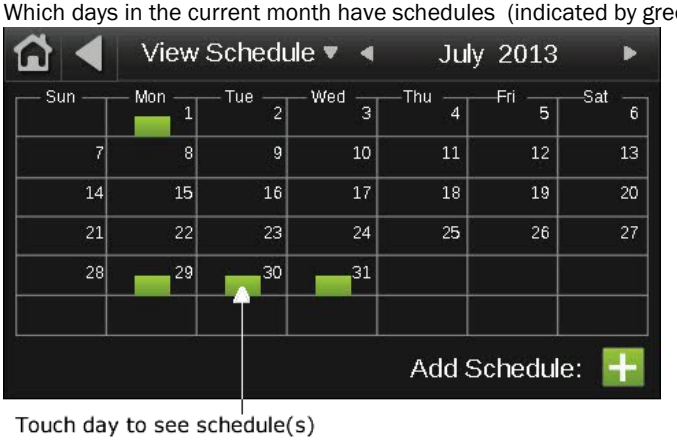
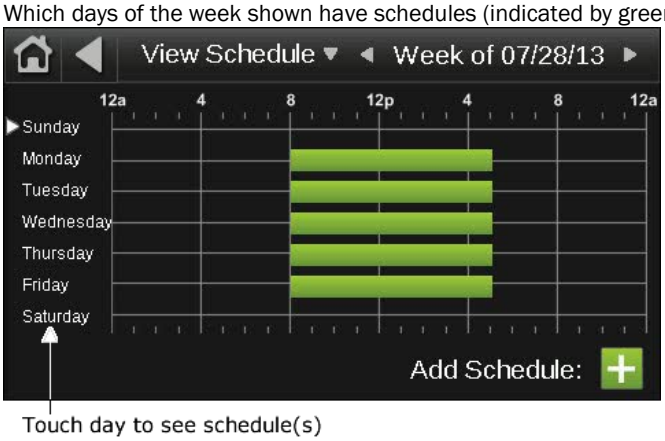
Viewing or creating schedules

To view schedules

1 On the **System** screen, touch **Schedules**.

2 If the controller has multiple control programs that have a time clock microblock, touch the schedule object that you want to see.

3 Touch **View Schedule**, then:

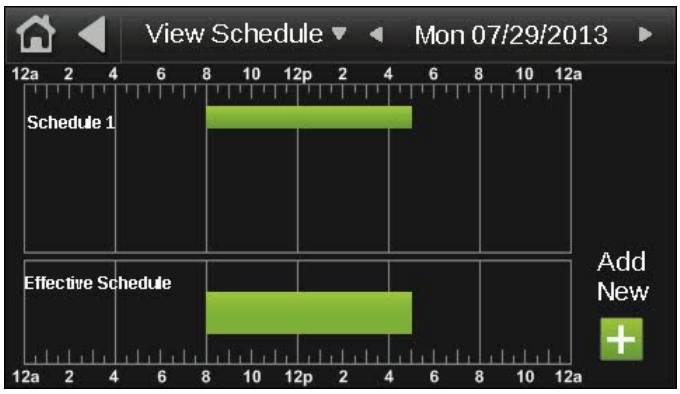
Select...	To see...
Month View (default view)	Which days in the current month have schedules (indicated by green boxes). 
Week View	Which days of the week shown have schedules (indicated by green bars). 

NOTE If you see **Schedule editing disabled** at the bottom of the screen instead of **Add Schedule**, scheduling is being done through another application and is disabled for the Equipment Touch.

CARRIER CORPORATION ©2020
All rights reserved

4 Touch a day to see the schedule(s) for that day.

5 In the screen below, touch a schedule's name or green bar (not the **Effective Schedule** bar) to edit or delete the schedule. See *To create a schedule* (page 15) for field descriptions.



NOTES

- The **Effective Schedule** is the combined result of the day's schedule(s).
- You cannot edit a schedule's **Type** (Dated, Weekly, Continuous), its **Priority** (Normal or Override), or whether the schedule is an **ON Schedule** or **Off Schedule**. If you need to change any of these settings, delete the schedule, and then make a new one.

To create a schedule

1 On the **System** screen, touch **Schedules**.

2 If the controller has multiple control programs that have a time clock microblock, touch the schedule object that you want to add a schedule to.

3 Touch the plus sign to the right of **Add Schedule**.

4 Touch the **Schedule Name** field, and enter a unique name.

5 Select one of the following:

- **ON Schedule** for an occupied period
- **OFF Schedule** for an unoccupied period that is to override an ON schedule. For example, a holiday schedule that is to override a weekly schedule.

CARRIER CORPORATION ©2020
All rights reserved

6 Touch the **Type** field, then select one of the following:

Select...	To use the schedule...
Dated	For a specified period of time between a start and end date. For example, 7:00 am to 7:00 pm every day between July 1st and July 22.
Weekly	Every week on the specified days. For example, every Monday through Friday, 8:00 am to 5:00 pm.
Continuous	Continuously between 2 specified dates/times, For example, a non-stop schedule that starts June 1st at 12:00 am and ends August 31st at 11:50 pm.

7 ON Schedule only–Select one of the following:

- **Normal** for a typical occupied period
- **Override** for a occupied period that is to override an OFF schedule.

8 Touch **Next** to define the criteria for the type of schedule you selected in step 6.

9 Touch **Save** when finished.

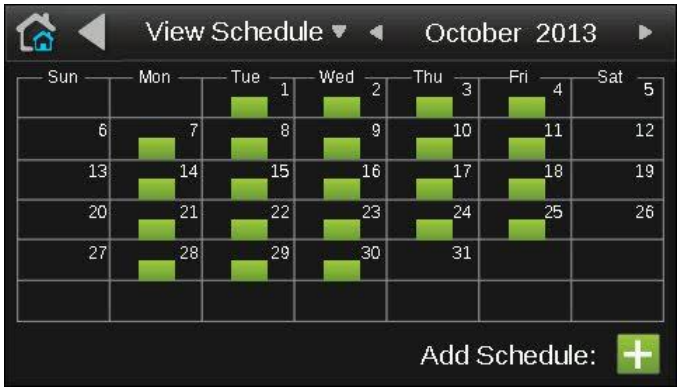
To add multiple periods to a weekly schedule

A weekly schedule can have multiple periods. For example, the first period could be every Monday through Friday, 8:00 am to 5:00 pm. The second period could be every Monday through Wednesday, 6:00 pm to 8:00 pm.

NOTE You can create up to 4 periods for a day, and up to 28 periods in a week.

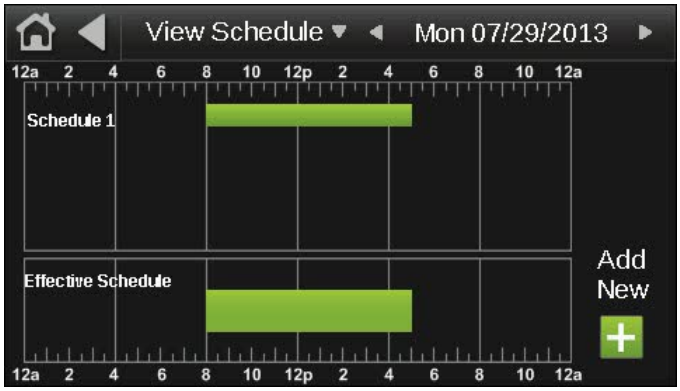
1 Following the instructions above, create a weekly schedule for the first period.

2 In the screen below, touch the green bar for the schedule that you want to add a period to.



CARRIER CORPORATION ©2020
All rights reserved

3 In the screen below, touch the schedule's name or green bar (not the **Effective Schedule** bar).

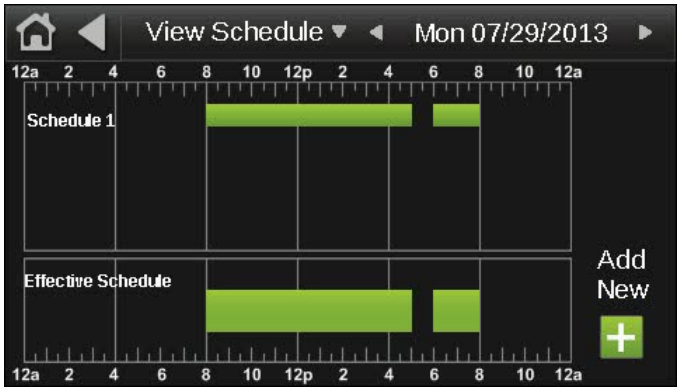


4 Touch **Next**.

5 Touch **+Period**.

6 Set the times and days for the new period. For example, Monday through Wednesday, 6:00 pm to 8:00 pm.

7 Touch **Save**. The screen below now shows both periods.



CARRIER CORPORATION ©2020
All rights reserved

To edit touchscreen settings

1 On the **System View** screen, touch **Setup** > **Touchscreen Setup**.

2 Touch a button to jump to one of the following screens:

Screen	Description
About	Displays information about the touchscreen firmware.
Inactivity Timeout	Lets you define how long the Equipment Touch can have no activity before returning to the Standby screen and logging out the user. Set to 0 to deactivate this feature.
Sensor Setup	Lets the installer set up the Equipment Touch's temperature and humidity sensors.
Clean Screen	Displays a one-minute countdown timer so that you can clean fingerprints from the display window without touching something that would affect equipment operation.
Key Click Off/On	Touch **Key Click Off** to turn off the sound when you touch a field or button. Touch **Key Click On** to turn on the sound.
Alarm Sound Off/On	Touch **Alarm Sound Off** to turn off the alarm notification sound or touch **Alarm Sound On** to turn on the sound. An alarm will generate a sound only if it is set up in ViewBuilder to do so.
Reload Firmware	Lets the installer update the firmware through the USB port. See "To update the Equipment Touch's firmware" in the *Equipment Touch Installation and Setup Guide*.

CARRIER CORPORATION ©2020
All rights reserved

Screen	Description
Language	 English, German, Portuguese, Simplified Chinese, French, Italian, Korean, Spanish, Japanese, Traditional Chinese, Swedish, Thai, Russian If optional languages were defined when the touchscreen file was created, this screen lets you select which language to use for Equipment Touch system screens. If custom screens were included in the touchscreen file, they will display in the language that they were created in.
Passwords	Lets you change the User or Admin password, if allowed.
Calibrate Touch Panel	Lets you recalibrate the Equipment Touch by touching targets. The device is calibrated in the factory, but time, temperature, or handling could affect the calibration. Recalibrate the screen if you touch it in one location and it responds as if you touched it in another.

CARRIER CORPORATION ©2020
All rights reserved

Document revision history

Important changes to this document are listed below. Minor changes such as typographical or formatting errors are not listed.

Date	Topic	Change description	Code*
3/5/20	Cover	Updated logo	C-D
5/7/15	What is the Equipment Touch Equipment Touch screens	Replaced System screen image with one that does not show units	X-O-GA-BR
	To edit touchscreen settings	Replaced language screen image and listed languages	X-D-CP
	To create a schedule	Added "To add multiple periods to a weekly schedule".	X-O-TC-O

* For internal use only

CARRIER CORPORATION ©2020
All rights reserved

CARRIER CORPORATION ©2020 · Catalog No. 11-808-516-01 · 3/5/2020