Chapter 15

Testing and Receiving Data from Controllers

Introduction

Items included in the Action menu allow you to collect various kinds of information from supported controllers.

This chapter describes how to:

- receive controller information on a single device
- receive controller information on all devices on the N2 Bus
- set VMA controller N2 software addresses
- test a single VAV box
- test multiple VAV boxes
- remove controllers before starting the VAV Box Flow Test
- toggle the start command manually during the VAV Box Flow Test
- collect VAV diagnostics
- use the VMA Balancer Tool
- set the VAV Flow Deadband
- recalculate Flow Tuning parameters
- import AHU DOS configurations
- reset controllers
**Key Concepts**

**Action Menu**

Use the Action menu to test or retrieve information from a controller. Select Action to display its pull-down menu (Figure 15-1).

![Figure 15-1: Action Menu](image)

Action menu items allow you to collect various kinds of information from supported controllers.

**Note:** Additional action menu items are displayed when an N2 Dial application is opened or created. These action items allow the user to define Modem Setup Strings and Phone Number Configurations. Refer to the *N2 Dial Application Application Note (LIT-6375150)*.

**Controller Information**

Use Controller Information to obtain a detailed analysis of a controller or trunk of controllers. Use Controller Information as a quick checkout tool to verify controller hardware and configuration. HVAC PRO software writes a log of information pertaining to the controllers.
VAV Box Flow Test

Use the VAV Box Flow Test to test the flow through a box and obtain a more detailed analysis of the flow characteristics of that particular box. Use the VAV Box Flow Test as a quick checkout tool to verify correct damper operation. HVAC PRO software commands the damper to different positions and reads the flow at each point. It writes a log of the values and runs an analysis on the data to flag VAV boxes that are not operating correctly.

Notes:

This test is for single duct pressure independent non-supply exhaust VAV boxes only. This menu item is not available if you are currently commissioning a different application.

When you are not in Commission mode, you can run the flow test for all single duct VAV boxes on the entire N2 Bus with a single command.

VAV Diagnostics

Select Collect VAV Diagnostics to view and collect diagnostic values for all VMA1400 Series devices and for all VAV controllers that can be configured with diagnostics (Pressure Independent Single Duct VAVs with BOs, Pressure Independent Dual Duct VAVs with BOs, and Constant Volume Dual Duct VAVs with separate dampers and BOs).

VMA Balancer Tool

Select VMA Balancer Tool to determine if the total airflow from all the diffusers is equal to the airflow calculated by the associated VMA1400 Series device.

Note: The VMA Balancer Tool is available only for single duct non-supply exhaust applications.

VAV Flow Deadband

Select the VAV Flow Deadband item in the Action menu to set the default deadband type used for VAV flow control loops. When you select VAV Flow Deadband, a submenu pops up with the following deadband types: Wide, Medium, and Narrow. A check mark indicates the current default as shown in Figure 15-2. The current default is initially set to Wide.
The default deadband type affects the calculated value of the VAV flow deadband. During the following procedures, the flow deadband is automatically calculated, along with the other VAV flow tuning parameters:

- during VAV controller upgrades if the option Update VAV Tuning Parameters is selected
- when you select Recalculate Flow Tuning Parameters from the Action menu
- during the File > Save process if changes to the Box Area, Actuator Stroke time, or Target Device affect the tuning parameters

Note: Simply changing the default deadband type will not cause an automatic recalculation of the VAV flow deadband.

For more information on VAV flow tuning parameters, see the VAV Terminal Control Applications Application Note (LIT-6375120).

Note: This VAV Flow Deadband section does not apply to VMA devices.

Recalculate Flow Tuning Parameters

The Recalculate Flow Tuning Parameters command automatically calculates the flow tuning parameters (Prop Band, Integration Time, and Deadband) for VAV applications. This menu item is enabled only for certain VAV control strategies and only if you have selected a target device for the configuration.

Note: The Recalculate Flow Tuning Parameters section for single duct and dual duct applications does not apply to VMA applications, because the VMA1400 Series includes its own internal calculations.
**Single Duct Applications**

The VAV control strategy for single duct applications is pressure independent with incremental damper output (BOs) including user-defined flow strategy.

**Dual Duct Applications**

The applicable VAV control strategies for dual duct applications are:

- pressure independent with incremental outputs (BOs) including discharge reset and user-defined flow strategies
- constant volume with separate dampers and incremental outputs (BOs) including discharge reset and user-defined flow strategies
- independent cold deck with incremental outputs (BOs)
- single duct conversion with incremental outputs (BOs)
- constant volume with linked dampers and incremental outputs (BOs)

**Import AHU DOS Config**

Upload and upgrade features are available for AHU applications after you convert an AHU path to the new HVAC PRO software format. Due to the complexity and size of AHU applications, there is not an automatic upgrade feature available for AHU controllers downloaded with a DOS version of HVAC PRO software.

**Reset Controllers**

The Reset Controller feature allows you to reset a single ASC or VMA1400 Series device without entering the Commission mode. TC-9100 controllers do not process the reset command.

**ASC Zone Bus Communication**

Most controllers come back online to the N2 Bus after a 10 minute delay following Zone Bus communications. However, the controllers listed below do not have this feature and require a controller reset after Zone Bus communications to enable N2 Bus communications. If you do not reset these controllers, they will not come back online to the N2 Bus. HVAC PRO software displays a reminder with an option to reset the controller after it communicates over the Zone Bus with any of the following:

- **AHU**: Firmware Version B01
- **UNT**: Firmware Version A01
- **VAV**: Firmware Version A01
Refer to the *Receiving Controller Information on a Single Device* procedure in the *Detailed Procedures* section for information on obtaining the controller type and its firmware revision.

**VMA Controller Software Addressing**

**Notes:** Use either the Controller Information or VMA Balancer Tool commands in HVAC PRO software to set the N2 software addresses of a VMA1400 Series device.

For more information on VMA software addressing, see *Mounting and Wiring Variable Air Volume Modular Assembly (VMA) 1400 Series Controllers Technical Bulletin (LIT-6363125).*

Specify the N2 address of a VMA1400 Series (B12 or later) controller through the hardware (DIP switches) or software (HVAC PRO Release 7.02 or later). For VMAs, the hardware setting has the priority. The N2 address of the device is the value of the hardware switches unless the switches are set to 0 or 255. When the hardware is set to 0 or 255, the N2 address is adjustable through the Zone Bus using HVAC PRO software. Since users need to go to each box to perform balancing, this feature provides a convenient means to accomplish both operations from a single screen.

The factory specifies an initial software address of 13 and sets the hardware switches to 0 or 255 for VMAs.

**Notes:** VMA1400 Series controller software addressing is only available through the Zone Bus with VMA code B12 or later and HVAC PRO Release 7.02 or later.

Since the hardware switches take priority over software settings, the decision between software and hardware addressing must be made before installation. If the hardware switches are set incorrectly, software addressing cannot make any corrections until the hardware switches are adjusted to 0 or 255.
## Procedure Overview

### Table 15-1: Testing and Receiving Data from Controllers

<table>
<thead>
<tr>
<th>To Do This</th>
<th>Follow These Steps:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Receive Controller Information on a Single Device</strong></td>
<td>On the Action menu, click Controller Information. Select Single Device and click OK. Enter the port, bus type, and N2 address, and click OK.</td>
</tr>
<tr>
<td><strong>Receive Controller Information on All Devices on the N2 Bus</strong></td>
<td>On the Action menu, click Controller Information. Select All Devices on the N2 Bus and click OK. Enter the port and the starting address. For information about every device type, choose Process All Device Types. For information on only certain types of devices, choose Process Selected Device Types, then pick the types from the list displayed. Select the Process Selected Device Types, and scroll through the list of device types to display additional supported controllers.</td>
</tr>
<tr>
<td><strong>Set VMA Controller N2 Software Addresses</strong></td>
<td>Install all the VMAs and set the hardware address to 0 or 255. Supply the units with power. Program each address through the Zone Bus using a laptop, CablePRO or CVTPRO, and HVAC PRO Release 8.01 or later. In HVAC PRO software, use either the Controller Information dialog box or the VAV Balancer Tool dialog box to set the address. Enter an N2 Address. Click Set Address. Wait for the new address to appear in the N2 Address field of the Controller Information screen or Balancer Tool screen.</td>
</tr>
<tr>
<td><strong>Test a Single VAV Box</strong></td>
<td>On the Action menu, click VAV Box Flow Test. Select Single VAV Box. Set the Flow Test Parameters. Click OK. Verify the communication parameters for the controller. Click OK.</td>
</tr>
<tr>
<td><strong>Test Multiple VAV Boxes</strong></td>
<td>On the Action menu, click VAV Box Flow Test. Verify Multiple VAV Boxes are selected. Select the flow test parameters. Click OK. Enter the port and the starting address. For information about both device types, choose Process All Device Types. For information on only one type of device, choose Process Selected Device Types, then pick the type from the list displayed. Verify the communication port and starting N2 address. Click OK.</td>
</tr>
<tr>
<td><strong>Remove Controllers Before Starting the VAV Box Flow Test</strong></td>
<td>Click on the controller. Click the Remove Controller button.</td>
</tr>
</tbody>
</table>

Continued on next page . . .
<table>
<thead>
<tr>
<th>To Do This (Cont.)</th>
<th>Follow These Steps:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toggle the Start Command Manually During the VAV Box Flow Test</td>
<td>Click on the controller. Click the Toggle Start Command button.</td>
</tr>
<tr>
<td>Collect VAV Diagnostics</td>
<td>On the Action menu, click Collect VAV Diagnostics. Enter the port and the starting address. For information about both device types, choose Process All Device Types. For information on only one type of device, choose Process Selected Device Types, then pick the type from the list displayed. Verify the Communication Port selection and starting address. Click OK.</td>
</tr>
<tr>
<td>Use VMA Balancer Tool</td>
<td>On the Action menu, click VMA Balancer Tool. Verify the communications settings and click OK.</td>
</tr>
<tr>
<td>Set the VAV Flow Deadband</td>
<td>On the Action menu, select VAV Flow Deadband. Choose one of the options in the submenu that appears.</td>
</tr>
<tr>
<td>Recalculate Flow Tuning Parameters</td>
<td>On the Action menu, click Recalculate Flow Tuning Parameters. Click Yes to replace the current configuration values with the new, calculated values.</td>
</tr>
<tr>
<td>Import AHU DOS Configurations</td>
<td>Obtain a printout (filename.prn) of the DOS AHU configuration that you intend to convert. Start HVAC PRO software and perform File &gt; New. Select the matching AHU application. Use the printout of the DOS AHU configuration to re-answer the questions in the Question/Answer session. Select Import AHU DOS Config. Highlight the desired DOS AHU configuration file (*.ahc) within the displayed list of files and directories. Click OK.</td>
</tr>
<tr>
<td>Reset Controllers</td>
<td>On the Action menu, click Reset Controller. Select the proper communication settings for the controller to be reset. Click OK.</td>
</tr>
</tbody>
</table>
Detailed Procedures

Receiving Controller Information on a Single Device

To receive controller information on a single device:

1. On the Action menu, click Controller Information. The Controller Information dialog box appears (Figure 15-3).

![Figure 15-3: Action - Controller Information Dialog Box](image)

2. Select Single Device and click OK. A dialog box similar to Figure 15-4 appears.

![Figure 15-4: Communication Parameter Verification Dialog Box](image)

3. Enter the port, bus type, and N2 address, and click OK or press Enter to display the Controller Information dialog box.

   The information listed in the dialog box is dependent on the connected device type. Figure 15-5 shows a typical Controller Information dialog box for a VMA1400 Series controller.
Figure 15-5: Controller Information Window Example - VMA

Note: An Advanced button appears for VMA devices. Click the Advanced button to display the dialog box in Figure 15-6.

Figure 15-6: Advanced Controller Information Dialog Box
Receiving Controller Information on All Devices on the N2 Bus

To receive controller information on all devices on the N2 Bus:

1. On the Action menu, click Controller Information. The Controller Information dialog box appears (Figure 15-3).

2. Select All Devices on the N2 Bus and click OK. A dialog box similar to Figure 15-7 appears.

3. Enter the port and the starting address.

4. Choose Process All Device Types for information about every device type. For information on only certain types of devices, choose Process Selected Device Types, then pick the types from the list displayed.

5. Select the Process Selected Device Types, and scroll through the list of device types to display additional supported controllers (Figure 15-8).
6. Click OK. The dialog box in Figure 15-9 appears while HVAC PRO software scans the N2 Bus for devices. This scan may be halted at any time by selecting Cancel or pressing the spacebar.

HVAC PRO software displays the message in Figure 15-10 when it completes the N2 Bus scan.
7. View the controller information now or at a later time. The controller information is stored in the file called devices.log. Click Yes to view the file now.

HVAC PRO software displays the devices.log. Figure 15-11 illustrates an example of the devices.log file.

**Figure 15-11: Devices.log Example**

Note: Each time HVAC PRO software collects controller information for multiple devices, it renames the existing devices.log file to devices.nnn, where nnn is a number from 0 to 999.
Setting VMA Controller N2 Software Addresses

To set VMA controller N2 software addresses:

1. Install all the VMAs and set the hardware address to 0 or 255.
2. Supply the units with power.
3. Program each address through the Zone Bus using a laptop, CablePRO or CVTPRO, and HVAC PRO Release 8.01 or later. In HVAC PRO software, set the address using either the Controller Information dialog box (Figure 15-5) or the Balancer Tool dialog box (Figure 15-22).
4. Enter an N2 Address.
5. Click Set Address.
6. Wait for the new address to appear in the N2 Address field of the Controller Information screen or Balancer Tool screen.

Testing a Single VAV Box

Note: This test is for single duct pressure independent non-supply exhaust VAV boxes only. This menu item is not available if you are currently commissioning a different application.

To test a single VAV box:

1. On the Action menu, click VAV Box Flow Test. The VAV Box Flow Test dialog box appears (Figure 15-12).
2. Select Single VAV Box.
3. Set the Flow Test Parameters using the information in Table 15-2.
Table 15-2: Flow Test Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step Amount</td>
<td>The step amount is the value the test uses to adjust to the damper command (Dmp_Cmd) going from 0 to 100% open, then back to 0, or the other way if the start command is 100. This percentage determines the number of steps the test uses. For example, if you enter 25 for the step amount percentage, the test takes four steps to go from 0 to 100. Select from several values for the step amount. Use smaller values for a detailed test or large values (for example, 50 or 100) for a quick checkout. The smaller the step amount, the longer the test takes.</td>
</tr>
<tr>
<td>Settle Time (0-60 seconds)</td>
<td>The settle time is the estimated time required for the airflow to reach a steady state after the damper stops moving. The test waits the proper percentage of the stroke time plus the settle time you stipulate. The larger the settle time, the longer the test takes. For accurate test results, allow the VAV system to settle at each step (for example, 30 to 60 seconds is adequate).</td>
</tr>
<tr>
<td>Stroke Time</td>
<td>Use the following equation to determine the stroke time when there is an actuator that does not have the same stroke time in the open and close direction: Take the larger of the following two values: Stroke Time = (Longest Stroke Time + Shortest Stroke Time)/2 Stroke Time = Longest Stroke Time/1.5</td>
</tr>
</tbody>
</table>

4. Click OK. HVAC PRO software displays a window in which you can verify the communication parameters (Figure 15-13).

![Figure 15-13: Communication Parameter Verification Window](image)

5. Verify the communication parameters for the controller. Click OK.

Notes: If you are already in Commission mode, the Communication dialog box does not display since HVAC PRO software is already communicating with the controller.
After selecting the flow test parameters and verifying the communication port, the VAV Box Flow Test dialog box appears (Figure 15-14).

**Figure 15-14: VAV Box Flow Test Dialog Box**

The VAV Box Flow Test dialog box displays Start Command, Damper Command, Supply CFM, and Supply Delta P. The values of all these parameters except the start command update as the test progresses. The Toggle Start Command toggles the start command from 0 to 100 or 100 to 0.

6. Click OK. HVAC PRO software commands the damper to the start command, waits the full stroke time plus the settle time, then reads the flow. It then adds or subtracts the step amount from the command, commands the damper to the next point, waits the correct percentage of the stroke time plus the settle time, and reads the flow. This continues from 0 to 100% open and back to 0, or the other way if the start command was 100.

HVAC PRO software logs all the data values in a file named vavcfm.log and stores it in the current directory. It is a tab-delimited file that is appended with each test that is run. Once the test is complete, HVAC PRO software checks the flow at both 0 and 100% open. If the difference of these values is less than 10% of the Occupied cfm maximum, an error indicating a flat response is generated. If the flow at 100% open is not at least 90% of the Occupied cfm maximum, an error indicating starved box is generated.
Testing Multiple VAV Boxes

Note: This test is for single duct pressure independent non-supply exhaust VAV boxes only. This menu item is not available if you are currently commissioning a different application.

To test multiple VAV boxes:

1. On the Action menu, click VAV Box Flow Test. The VAV Box Flow Test dialog box appears (Figure 15-15).

![VAV Box Flow Test Dialog Box](VAFLOW3)

Figure 15-15: VAV Box Flow Test Dialog Box

2. Verify Multiple VAV Boxes are selected.

3. Select the flow test parameters (see Figure 15-2), then click OK. A dialog box similar to Figure 15-16 appears.

![VAV Box Flow Test Dialog Box - Communications](vavmult)

Figure 15-16: VAV Box Flow Test Dialog Box - Communications
4. Enter the port and the starting address. For information about both device types, choose Process All Device Types. For information on only one type of device, choose Process Selected Device Types, then pick the type from the list displayed.

Note: You cannot do flow tests for multiple VAV boxes when in Commission mode.

5. Verify the communication port and starting N2 address, then click OK. HVAC PRO software searches the N2 Bus and displays a list of all single duct pressure independent VAV boxes connected to the N2 Bus (Figure 15-17).

![VAV Box Flow Test - N2 Device List](image)

**Figure 15-17: Multiple VAV Box Flow Tests - N2 Device List Window**

*Removing Controllers before Starting the Test*

To remove controllers from the list before starting the test:

1. Click on the controller.
2. Click the Remove the Controller from List button.
**Toggling the Start Command Manually**

As the controllers are listed, HVAC PRO software alternates the start commands. The first controller starts at 0%, the second at 100%, the third at 0%, and so on. This prevents overloading the fan system.

To toggle the start command manually:

1. Click on the controller.
2. Click the Toggle Start Command button.

When you click OK to start the VAV Box Flow Tests, HVAC PRO software commands each damper to the start position, waits the maximum stroke time plus the settle time, and reads the flow for each VAV box. It then adds or subtracts the step amount from each start command, commands each damper to the next point, waits the correct percentage of the maximum stroke time plus the settle time, and reads the flows.

Based on each controller’s starting command, HVAC PRO software repeats this process from 0 to 100% and then back to 0%, or from 100 to 0% and then back to 100%. HVAC PRO software logs the flow readings in a file named vavcfm.log in the current directory. If the file already exists (from a previous test), the data is appended to the end of the file.

HVAC PRO software also creates the status log, flowtest.log, when it completes the VAV box flow test. HVAC PRO software checks the flow for each VAV box at both 0 and 100%. If the difference in these values is less than 10% of the Occupied cfm maximum, HVAC PRO software assumes the box is not operating properly and logs a flat response status, in the flowtest.log file. If the flow at 100% is not at least 90% of the Occupied cfm maximum, HVAC PRO software logs a starved box status in the flowtest.log file.

After the flow tests are completed, the message box in Figure 15-18 displays, prompting you to view the status log file.

![Flow Test Message Box](image)

**Figure 15-18: View Flow Test Message Box**
Collecting VAV Diagnostics

To collect VAV diagnostics:

1. On the Action menu, click Collect VAV Diagnostics. The Collect VAV Diagnostics dialog box appears (Figure 15-19).

![Collect VAV Diagnostics Dialog Box]

2. Enter the port and the starting address. For information about both device types, choose Process All Device Types. For information on only one type of device, choose Process Selected Device Types, then pick the type from the list displayed.

3. Verify the Communication Port selection and starting address.

4. Click OK.

The dialog box in Figure 15-20 appears while HVAC PRO software scans the N2 Bus for all VMA1400 Series devices and VAV controllers with diagnostics.
Figure 15-20: Collect VAV Diagnostics Scan Dialog Box

Note that the device address is logged in the form n-XX, where n is the N2 address and XX is either Single Duct or Dual Duct. Headings with CD and HD in them refer to cold deck and hot deck (for Dual Duct VAVs only). Single duct diagnostic values are listed under the CD heading. Use the scroll bar to view items that do not appear on the screen.

For VMA1400 Series applications, the designation USD is used for single duct applications and UDD is used for dual duct applications.

HVAC PRO software logs the diagnostic values in a file named vavdiag.log in the current directory. It appends this file each time you run a test. This is a tab-delimited file, suitable for importing into spreadsheets.

Using the VMA Balancer Tool

Note: The VMA Balancer Tool is available only for single duct non-supply exhaust applications.

To use the VMA Balancer Tool:

1. On the Action menu, select VMA Balancer Tool.
   HVAC PRO software displays a prompt to verify communications settings as shown in Figure 15-21. (If you are in the Commission mode, the communication dialog box is not shown.)

<table>
<thead>
<tr>
<th>Device Address</th>
<th>Cntl Run Time</th>
<th>Act Run Time</th>
<th>% Act Run Time</th>
<th>Flow Err [CD]</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-SD</td>
<td>212.468</td>
<td>7.650</td>
<td>3.601</td>
<td>18.290</td>
</tr>
<tr>
<td>19-DD</td>
<td>212.399</td>
<td>6.958</td>
<td>3.276</td>
<td>90.324</td>
</tr>
</tbody>
</table>

Note: The VMA Balancer Tool is available only for single duct non-supply exhaust applications.

To use the VMA Balancer Tool:

1. On the Action menu, select VMA Balancer Tool.
   HVAC PRO software displays a prompt to verify communications settings as shown in Figure 15-21. (If you are in the Commission mode, the communication dialog box is not shown.)
Figure 15-21: Balancer Communications Settings

2. Verify the communications settings and click OK. HVAC PRO software displays the Balancer Tool dialog box as shown in Figure 15-22.

Figure 15-22: Balancer Tool Dialog Box
The current minimum and maximum airflow values for the box display, along with the pickup gain, box area, and current flow through the box. The current flow value is dynamic and will update during the tests described below and as the damper position changes.

Flow Tests

The Balancer Tool assists you in determining the correct pickup gain for a particular VAV box. It positions the damper to its minimum and/or maximum flow settings, then calculates the pickup gain based on the current controller values and the actual flow measurement (flow hood reading). The Balancer Tool can calculate the correct pickup gain for the minimum flow, maximum flow, and the average of the two flow readings.

Table 15-3: Balancer Tool Flow Tests

<table>
<thead>
<tr>
<th>Flow Test</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Flow Test</td>
<td>To test the minimum flow through the VAV box, click the Drive Min button. The test will wait for the box to reach the minimum flow or for the flow to stop changing. A prompt displays requesting that you enter the actual flow reading. Enter the flow value, and the new pickup gain value is calculated. The Save Min button is enabled.</td>
</tr>
<tr>
<td>Maximum Flow Test</td>
<td>To test the maximum flow through the VAV box, click the Drive Max button. The test will wait for the box to reach the maximum flow or for the flow to stop changing. A prompt displays requesting that you enter the actual flow reading. Enter the flow value, and the new pickup gain value is calculated. The Save Max button is enabled.</td>
</tr>
</tbody>
</table>

To determine the pickup gain for the average of the minimum and maximum flow, perform both the minimum and maximum flow tests as described above. When both tests are complete, the Balancer Tool calculates and displays the average pickup gain, and the Save Ave button is enabled as shown in Figure 15-22.

When you click one of the Save buttons, the new pickup gain value is written to the controller. If the Balancer Tool is in Commission mode, the new values appear as overrides and can be saved when you exit Commissioning. If you are not in the Commission mode, the values are saved to the controller when you click the Save button and exit the dialog box.
Setting the VAV Flow Deadband

To set the VAV Flow Deadband:

2. Choose one of the options in the submenu that appears. A check mark will appear next to the selected option.

Recalculating Flow Tuning Parameters

To recalculate flow tuning parameters:

1. On the Action menu, click Recalculate Flow Tuning Parameters. The Flow Tuning Parameters dialog box displays as shown in Figure 15-23.

Figure 15-23: Flow Tuning Parameters Dialog Box

This dialog box shows the current value of the flow tuning parameters and the calculated tuning parameter values. Two sets of tuning parameters are displayed for dual duct applications. If the values do not match, you are prompted to use the calculated values.

2. Click Yes to replace the current configuration values with the new, calculated values. Click No to retain the current values. The decision as to which box tuning parameters to use is critical prior to box download.
Note: The Flow Tuning Parameters dialog box also displays during the File > Save process if changes made to the actuator stroke time, box area, or target device affect the tuning parameters.

Importing AHU DOS Configurations

To import AHU DOS configurations:

1. Obtain a printout (filename.prn) of the DOS AHU configuration that you intend to convert.
2. Start HVAC PRO software and perform File > New.
3. Select the matching AHU application. The Question/Answer session begins.
4. Use the printout of the DOS AHU configuration to re-answer the questions. Pay special attention to questions that may have been added.

Note: All added questions to the AHU applications have default answers that will create a configuration equivalent to the DOS AHU application that did not ask the question. For more information on the application changes, refer to the AHU Applications Application Note (LIT-6375080).

5. Select Import AHU DOS Config. HVAC PRO software displays the dialog box shown in Figure 15-24.

![Figure 15-24: Import AHU DOS Configuration Dialog Box](FILEOPN3)

6. Use the mouse and/or keyboard to highlight the desired DOS AHU configuration file (*.ahc) within the displayed list of files and directories.
7. Click OK to import the selected file or Cancel to abort the process.

HVAC PRO software transfers parameter values from the DOS AHU configuration into the new HVAC PRO software AHU configuration. It also adds all hardware attributes and user-defined Input/Output (I/O) points to match the AHU DOS configuration.

Note: If sideloops have been defined, you must redefine each sideloop and set its parameter values using the print out as a guide.

CAUTION: Sideloop parameters addresses will change from the DOS version. Changes may be necessary for Metasys or Companion/Facilitator systems.

8. When you complete the import process and verify the configuration by matching the printout, perform a File > Save. Download the configuration to complete the AHU controller conversion.

### Resetting Controllers

To reset a controller:

1. On the Action menu, click Reset Controller. The Reset Controller dialog box displays (Figure 15-25).

   ![Reset Controller Dialog Box](image)

   **Figure 15-25: Reset Controller Dialog Box**

2. Select the proper communication settings for the controller to be reset.

3. Click OK to reset the controller or Cancel to abort the operation.