VLINK
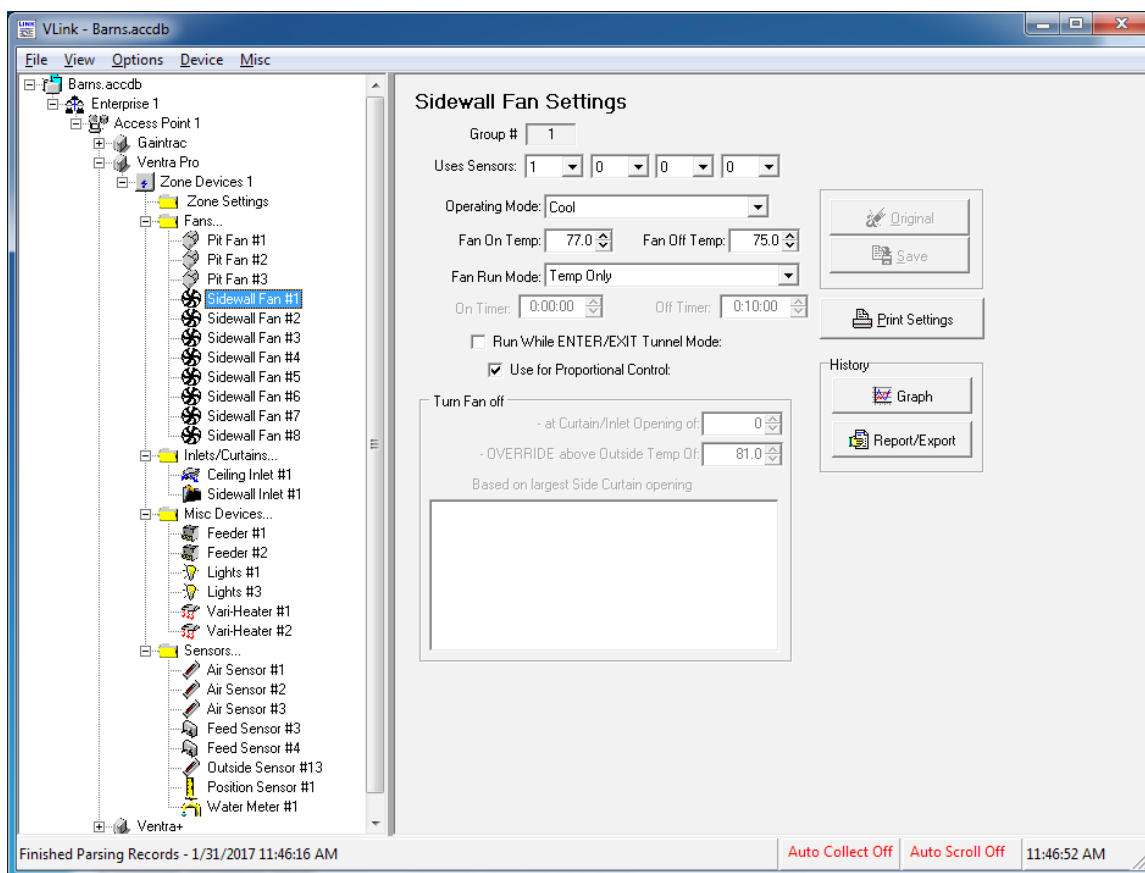# 921645

Remote Access and Management Program

User's Manual

Contents

Introduction

Trademark Acknowledgements

- Shared Sensor Technology is a trademark of Val Products, Inc..

- Carol is a registered trademark of General Cable Industries, Inc.

- Microsoft is a registered trademark of Microsoft Corporation

- Windows is a registered trademark of Microsoft Corporation

- Excel is a trademark of Microsoft Corporation

This application allows you to remotely access your environmental controller using a PC interface or modem. This access gives you nearly all of the same capabilities as using the controller's keypad. This application provides a Microsoft® Windows® user interface making it easy for you to:

- Locate information such as the current building temperature.
- Change controller settings.
- Remotely view equipment status for the whole building.
- View history from your controller.
- Generate graphs and reports.

You may notice some slight variations between this manual and the application you are using. That is because there are several variations of this application to meet a variety of growing requirements. The variations are minor such as an occasional reference to brooders that may not apply to hog growers.

What you need to know

This application uses a standard Microsoft Windows interface. You must be familiar with the Microsoft Windows operating system to use this application.

This application operates on the Window XP, Vista, Win 7, Win 8 and Win 10 systems.

Val Products, Inc. Product Warranties

VAL-C0® MANUFACTURED PRODUCTS OTHER THAN EXTENDED WARRANTY PRODUCTS

Val Products, Inc. (Val Products) warrants to the original purchaser that Val Products' manufactured products (other than the products subject to an extended warranty set forth below) will be free of defects in material and workmanship for a period of one (1) year from and after the date of original purchase and when used in a usual and customary fashion. If Val Products is notified that such a defect exists within one year of the original purchase date and, upon inspection, agrees that the product is defective, Val Products will, at its option, (a) repair or replace (FOB Val Products' plant) the defective product, or (b) refund to the original purchaser the original purchase price paid for the defective product less any installation, shipping, or other charges associated with the original purchase. All defective products must be returned to a Val Products designated location for evaluation. Val Products' determination as to whether the product is defective is final. See the General Conditions and Limitations set forth below.

VAL-CO Standard Plus Extended Warranties

Product	Normal Warranty Coverage Period(1)	Extended Limited Warranty Coverage Period(2)	Total Warranty Coverage Period(3)
VR & VBL Series Drinkers	5 Years	5 Years	10 Years
VQ, VA, & VB-BN Series Drinkers	2 Years	3 Years	5 Years
Roll Formed Tube	3 Years	7 Years	10 Years
Coreless Auger (Moisture Content less than 18%)	3 Years	7 Years	10 Years
Fuze® ProLine Feeder Pans	2 Years	3 Years	5 Years
Fiberglass Fan Housings	Lifetime(4)	N/A	Lifetime(4)
Aluminum Fan Blades	Lifetime(4)	N/A	Lifetime(4)
Fan Motors	2 Years(5)	N/A	2 Years(5)
"Z" Fan Housings	7 Years (6)	N/A	7 Years (6)

Explanations/Conditions of above listed footnotes for VAL-CO warranties:

(1) "Normal warranty coverage period" is subject to the conditions of VAL-CO's standard one year warranty policy.

(2) "Extended limited warranty coverage" will be provided at a charge rate of 50% off the VAL-CO List Price for an item at the time the warranty claim is made known to the company in writing, and is subject to VAL-CO's standard warranty policy conditions and limitations.

(3) "Total warranty coverage period" is the sum of periods for the "normal warranty coverage period" plus the length of the "extended limited warranty coverage period", and is subject to VAL-CO's standard warranty policy conditions and limitations.

(4) The "Lifetime" warranty for fiberglass fan housings manufactured by Val Products is limited to PMC Power Miser, FW, and Hypermax 12", 16", 21", 24", 36", 48", 50", and 54" Fiberglass Fans' housings that prove to be defective in workmanship or material and become unusable over the life of the structure where the VAL-CO Fiberglass Fan was originally installed after original purchase, provided that the fan has remained undisturbed in its original installation location, will be repaired or replaced, at Val Products' option, at no charge (excluding labor of removal and installation and shipping), FOB Val Products' plant. All defective fan housings must be returned to a Val Products' designated location for evaluation. Val Products' determination as to whether the product is defective and unusable is final. See the General Conditions and Limitations set forth below.

(5) This fan motor warranty is limited to the motors used in with respect to the fiberglass fan motors included as original equipment on VAL-CO PMC Power Miser 12", 16", 21", and 24" Fiberglass Fans manufactured by Val Products that prove to be defective in workmanship or material and become unusable within a period of two (2) years from and after the date of original purchase will be repaired or replaced, at Val Products' option, at no charge (excluding labor of removal and installation and shipping), FOB Val Products' plant. All defective fan motors must be returned to a Val Products' designated location for evaluation. Val Products' determination as to whether the product is defective and unusable is final. See the General Conditions and Limitations set forth below.

(6) "Z" Fan housings are warranted for 7 years against rust through in poultry applications only. Other fan components are covered by VAL-CO's standard one year warranty. See the General Conditions and Limitations set forth below.

General Conditions and Limitations Applicable to All Val Products, Inc. (Val Products) Warranties, Including Extended Warranties

1. The Product must be installed and operated in accordance with instructions published by Val Products or the warranty will be void.

2. Warranty will be void if all components of the product or system are not original equipment supplied by the manufacturer.

3. Products not manufactured by Val Products and supplied by outside manufacturers (such as, but not limited to, certain electrical motors, certain controls, gas valves, etc.) are warranted separately by the respective manufacturer and only to the extent of the manufacturer's warranty.

4. Val Products feed bins are designed to be used with free flowing agricultural feed materials with a density proximate to 40 pounds (18.15 kilograms) per cubic foot (.03 cubic meter). Soybean meal, meat scraps and other materials, both agricultural and industrial, are not free flowing and may significantly exceed recommended material density. Feed bin structural failure from their use will void this warranty.

5. Val Products does not warrant against feed bin structural failure, or bin unloading components such as flexible auger transitions and boots that arises due to the addition of aftermarket devices attached to, or installed within or attached to the feed bin structure for the purpose of enhancing feed material flow and/or the elimination of feed bridging issues.

6. Warranty applies only to products used in applications as originally intended by Val Products – other applications in industry or commerce are not covered by the Warranty. Val Products' products are expressly not designed or authorized for use in any applications where intended to sustain or support human life or any other application where the failure of the product could result in personal injury or death.

7. Malfunctions resulting from misuse, abuse, mismanagement, negligence, alteration, accident, lack of proper maintenance, lightning strikes, electrical power surges, or electrical power interruption shall not be considered defects under the Warranty. Corrosion, material deterioration and/or equipment malfunction caused by or consistent with the excessive additions of chemicals, minerals, sediments or other foreign elements with the product shall not be considered defects under the Warranty.

8. VAL PRODUCTS WILL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR ANY KIND OF SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR CONTINGENT DAMAGES INCLUDING, BUT NOT LIMITED TO, LOST OR DAMAGED PRODUCT, GOODS OR LIVESTOCK, COSTS OF TRANSPORTATION, LOST SALES, LOST ORDERS, LOST INCOME, INCREASED OVERHEAD, LABOR AND INCIDENTAL COSTS AND OPERATIONAL INEFFICIENCIES. IN NO EVENT SHALL THE WARRANTY LIABILITY EXCEED THE INVOICED PRICE OF THE PRODUCT TO THE ORIGINAL PURCHASER.

9. THE WARRANTIES SET FORTH ABOVE CONSTITUTE VAL PRODUCTS' ENTIRE AND SOLE WARRANTY. VAL PRODUCTS EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES AS TO THE MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, DESCRIPTION OF QUALITY OF THE PRODUCT FURNISHED, AND ANY OTHER WARRANTY ARISING BY OPERATION OF LAW, CUSTOM OR USAGE.

10. Val Products denies any authorization of any distributor, dealer, agent, or employee to modify, extend, or otherwise alter the conditions of any warranty in addition to, or in lieu of, those conditions and terms expressly stated above. Any exceptions not noted in the body of the Warranty must be authorized in writing by an officer of Val Products. Val Products reserves the right to change or delete models, or change specifications at any time without notice or obligation to improve previous products.

Warning! PROGRAMMING ERRORS AND EQUIPMENT FAILURE COULD RESULT IN YOUR CONTROLLER FAILING TO PERFORM ITS INTENDED FUNCTION. YOU MUST BE AWARE OF THIS AND BE WILLING TO TAKE THE NECESSARY PRECAUTIONS TO PREVENT FINANCIAL LOSS. TO PROTECT AGAINST LOSS RELATED TO THE FAILURE OR MALFUNCTION OF YOUR CONTROLLER, THE FOLLOWING SAFEGUARDS ARE REQUIRED: 1) A MANUAL BACKUP SYSTEM MUST BE INSTALLED. THIS SYSTEM MUST TAKE OVER IN THE EVENT OF A CONTROL SYSTEM MALFUNCTION. 2) AN ALARM SYSTEM MUST BE INSTALLED. THIS SYSTEM MUST PROVIDE A VISUAL INDICATION AND AUDIBLE WARNING OF ABNORMAL CONDITIONS. 3) A WEEKLY TEST OF THE MANUAL BACKUP SYSTEM AND ALARM SYSTEM MUST BE PERFORMED. THIS TEST CONFIRMS THAT THESE SYSTEMS ARE FUNCTIONING PROPERLY. 4) A DAILY CHECK OF THE CONTROL SYSTEM MUST BE PERFORMED. THIS CHECK CONFIRMS THAT THE SYSTEM IS OPERATING PROPERLY. 5) NON-FUNCTIONAL ALARM OR BACKUP SYSTEM COMPONENTS MUST BE REPAIRED IMMEDIATELY.

CONSUMER CAUTION: System configuration, software, operator control of the system, and the application, among other things, will affect this Product's performance. While this Product is considered compatible with its intended purpose, the specific functional implementation by the customers of this Product may vary. The responsibility for using this Product and programming it to achieve the intended purpose, is the sole responsibility of the Purchaser.

Symbols

= IMPORTANT INFORMATION - Be sure to read!

= NOTE! This may help you.

= CHECK DETAILS OF ALL REQUIREMENTS OR PROCEDURES BEFORE PROCEEDING.

= DANGER - imminent hazard, if ignored serious injury or death WILL occur
= WARNING – probable hazard, if ignored serious injury or dearth COULD occur
= CAUTION – potential hazard, if ignored, minor or moderate injury MAY occur

Installation

System Requirements

Minimum System Requirements	Recommended System Requirements
Pentium 100	Pentium 166 or better
16MB Ram	32MB Ram or better
30MB free hard disk space	60MB free hard disk space

Compatibility with Controller Software

VLink is compatible with the following controller software versions:
Ventra Pro II (white screen) all versions.
Ventra Pro (green screen) V2.00.01.06 and above.
Ventra+ PS6.00.00.08 and above.
Gaintrac BS6.00.00.08 and above.

> **Old Link databases are not compatible with VLink. A new database needs to be created when starting to use VLink. You can keep the older version of Link on your computer, along with your old database, if you need access to your old files. If you try to use your old database with VLink, the old database file will be corrupted during the update process**

If you installed Link in the default location, Link and your old database file should be located at one of the following locations. The location depends on your existing version of Link:

- c:\Program Files\PorkLink\
- c:\Program Files\PorkWatch\
- c:\Program Files\BirdLink\
- c:\Program Files\BirdWatch\
- c:\Program Files\Link\

The "C:" may be another disk drive in some cases. Your database file has the extension .mdb.

The default VLink installation location is C:\Valco\VLink. The database file is a MS Access 2007/2010 database with an extension of .accdb.

You can install VLink on the same computer as Link and run both programs without any problems.

Installation Instructions

To install VLink, double click the VLink_Setup.exe file and follow the instructions.

VLink requires the MS Access 2007/2010 drivers in order to run. The installation process will check your computer and, if these drivers are not found, will ask you if you wish to install those drivers. If you say no, the installation will stop, as VLink cannot run without it.

Note: MS Access 2013 or MS Office 2013 and later versions do not include the MS Access 2007/2010 drivers. Having VLink install the correct drivers will not affect your current MS Office/Access installations.

Registration

After installation, you can run VLink for 30 days or 99 starts, whichever comes first, before you need to register the program with Val-co. Until the program is registered, the form shown to the right will appear anytime VLink is started.

A **Purchase Key** is required to register VLink. It is a 12-digit alphanumeric value from a sticker on the information you received with VLink. Enter the value in the box provided before requesting the registration code from Valco.

The **Serial Number** is an 8-digit alphanumeric value that is based on the PC hardware VLink is installed on. This value cannot be changed and is needed to create the Registration number.

Once received from Val-co, enter the **Registration Number** in the box provided and press the **Register** button. This will save the registration information on the PC, allowing the program to start without the registration reminder appearing.

Press the **Register Later** button to continue using VLink until Val-co sends you the Registration code. If the program is not registered after 30 days or 99 starts, VLink will display a message stating the trial period is over and will terminate the program, unless you enter a correct registration number.

Requesting a Registration code by Email

After entering the 12-digit **Purchase Key**, press the **Request Registration Code** button to open the **Request Registration Code** form.
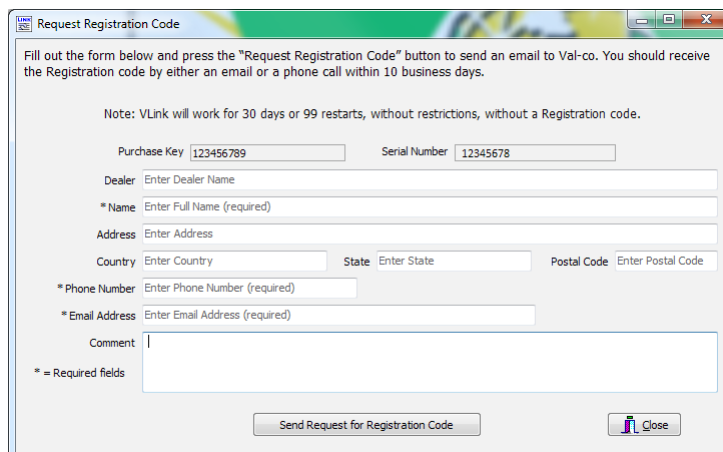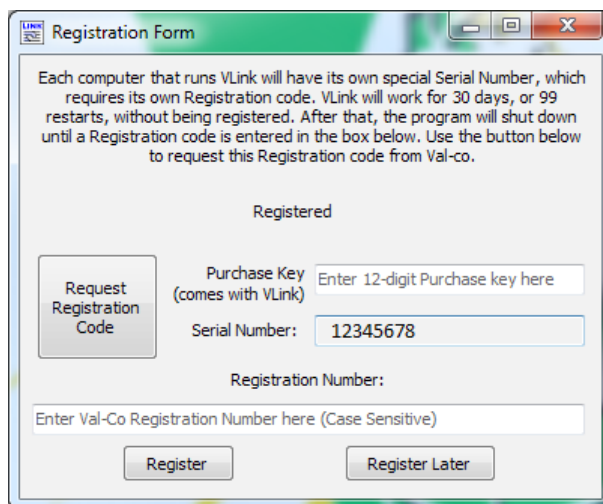
The **Purchase Key** and **Serial Number** fields are filled in automatically and can not be changed on this form.

Fill out the rest of the form. Once the form is filled out, press the **Send Request for Registration Code** button. This will send an email to Val-co requesting a Registration code based on the **Serial Number** provided.

The **Customer Name**, **Phone Number** and **Email Address** are required, but the other fields should also be filled out to allow Val-co to verify the purchase information.

Within 10 business days, Val-co will either send the code to the **Email Address** provided or will call the **Phone Number** to verify and/or request more information about the purchase of the program before providing the Registration code.

While waiting for the Registration code, you can still use VLink for 30 days or 99 restarts. Simply press the **Register Later** button on the Registration form when it appears.

> The Serial Number shown is specific to the current computer VLink is running on. If you require VLink on multiple computers, you will be required to request multiple registration codes, one per computer. Val-co will allow requests for more than one registration code, depending on the circumstances, but could contact you to verify the VLink purchase is valid.

Navigation

The application's window has two main areas:
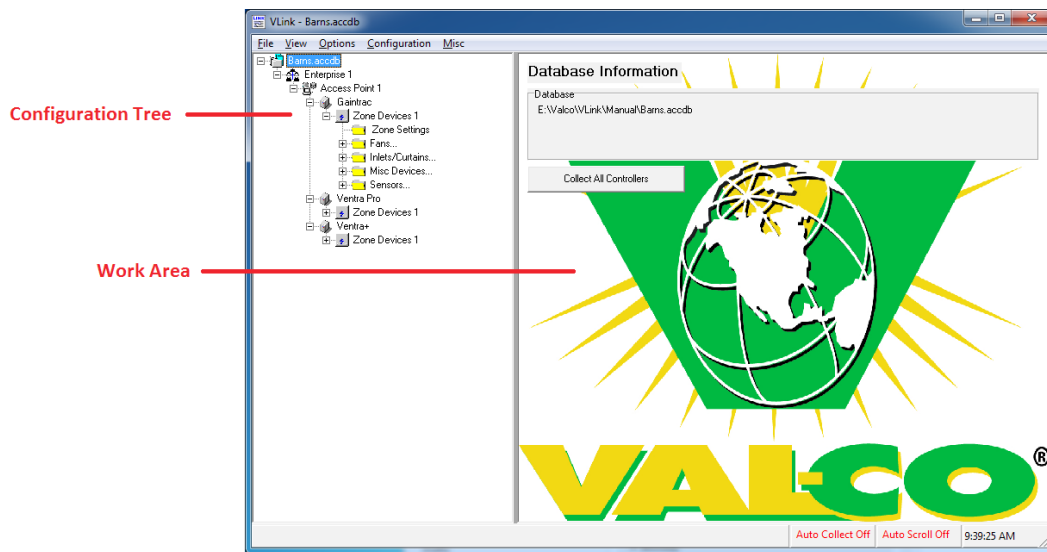
- **Configuration Tree** - This works similar to a directory tree in Windows Explorer. Click the ⊞ next to an item to expand the tree. As you click items in the tree, corresponding information appears in the work area.

- **Work Area** - This side of the screen is called the work area. Use this area to view device information and change control settings.

Using this Application the First Time

The first time you run this application, you will need to create a new database to store the information as it is collected from your controllers.

VLink will explain it did not find an existing file and the Configuration tree will remain blank.

To create a new database

1. Select the **File** menu and click on **New** to create a new database. The Save As dialog will open for you to enter a file name for the database, as well as select where to save the file at. The default location is in the VLink installation folder.

2. Type a name for the database in the File name box.

3. Click the **Save** button. VLink will create the database and add an Enterprise level, Access Point level and a Controller to the Configuration tree.

Now that the database is created, you are ready to identify the equipment being used and set up the communications needed to communicate with the controller. You can set up multiple sites, controllers and modems within a single database.

To open an existing database

There are two options to open an existing database:

1. Select the **File** menu and click on **Open**. The Open dialog will appear to allow you to find and open an existing database. Once the database file is selected, click the **Open** button to open that database in VLink.

2. Select the **File** menu and select **Reopen**. Then select one of the files displayed in the submenu to open that file in VLink. This option will show the last five opened databases.

> **When VLink starts, it will open the last opened database automatically.**

To import data from an SD Card

VLink allows the importing of controller data from a Ventra Pro's SD Card. To do this, select the **File** menu and click on **Import SD Card.** The form to the left will appear.

To perform the importing:

Step 1: Use the Drive box at the top of the left side and the File Explorer box to select the drive and folder the SD files can be found at.

Step 2: Select the database you wish to import the data to. This can be an existing database or a new database. If importing to an existing database, new Enterprise and Access Point levels will be added into which the data will assigned to.

Step 3: Check the boxes for the parameter sets to import. You can import one or all the sets that are available. Each set will be added to the newly created Access Point as a new Controller, labeled with the Set number imported.

Step 4: If you want to also import the Alarm Detail records and/or History records, check the appropriate boxes. Also set the starting Date for the alarm and history records. If checked, VLink will import all alarm and/or history records created after the set dates.

Step 5: Press the **Import Sets in database** button to start the process. Once finished, Close the Import form and the imported database will be opened by VLink.

Using the Configuration Tree

Icons

	Database
	Enterprise (building or location)
	Modem or PC Interface
	Controller
	Zone Devices

Adding an Enterprise
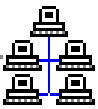
You can set up an enterprise to organize one or more modems for your business or for a location.

1. Click the **Database icon** to highlight it.
2. Click the **Configuration** menu and then select **Add Enterprise**. Note: this will also add an Access Point and Controller to the Configuration tree.

An enterprise is added to your database. You may now rename the enterprise

The work area allows you to enter notes for the enterprise.

Renaming an Enterprise

When you add an enterprise, this application gives it a generic name such as Enterprise 1. You may want to rename the enterprise to relate it to the location or building it refers to.
Click the **Enterprise icon** to highlight it.

1. Click the **Enterprise** menu and then select **Rename Enterprise**.
2. Type the new name.

Press the **Enter** key to finalize the change.

Adding Enterprise Notes

You can type notes about an enterprise to help you remember details about the PC interfaces, modems and controllers located there. This is especially useful in multi-location and multi-building operations.

Deleting an Enterprise
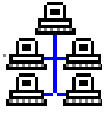
It is possible to delete an Enterprise and all its related Access Points, Controllers and data.

1. Click the **Enterprise icon** to highlight it.
2. Click the **Enterprise** menu and then select **Delete Enterprise**.
3. A dialog will appear asking you to confirm the deletion.

> **Deleting an Enterprise will also delete any data related to that Enterprise, including all its Access Points, Controllers, Zones, and Devices, as well and any history for those devices. Once deleted, there is no going back.**

Adding an Access Point

An Access Point is where you tell VLink how to connect to the controllers connected to this access point. Depending on how VLink is to talk to the different controllers, you can have one or more Access Points per Enterprise level, with one or more controllers wired to each Access Point. Remote access to the controllers can be done in two ways.

1. Direct access from the PC using a Serial Port on the computer. This type can be a RS484 connection straight to the controllers or a RS232 connection by using a Comm Station box between the PC and Controllers.
2. WAN access using a VLink Network Node at the controller site and either Valco's FTP service or you own FTP service.

   Note: using your own FTP service requires additional setup for the VLink Network Node.

To add the Access Point:

1. Click the **Enterprise icon** to highlight it.
2. Click the **Enterprise** menu and then select **Add an Access Point**.

An Access Point is added to the selected Enterprise, along with a Controller level. You may now rename the Access Point.

Renaming an Access Point

When you add an Access Point, this application gives it a generic name such as Access Point 1. You may want to rename the device to display a more meaningful name.

1. Click the **Access Point** icon to highlight it.
2. Click the **Access Point** menu and then select **Rename Access Point**.
3. Type the new name.

Press the **Enter** key to finalize the change.

Deleting an Access Point

It is possible to delete an Access Point and all its related Controllers and data.

1. Click the **Access Point icon** to highlight it.
2. Click the **Access Point** menu and then select **Delete Access Point**.
3. A dialog will appear asking you to confirm the deletion.

> **Deleting an Access Point will also delete any data related to that Access Point including its Controllers, Zones, and Devices, as well and any history for those devices. Once deleted, there is no going back.**

Adding a Controller

You can set up one or more controllers attached to an Access Point. The controllers appear beneath the Access Point icon in the configuration tree. To add a controller:

1. Click the **Access Point icon** to highlight it.
2. Click the **Access Point** menu and then select **Add a Controller**.

Renaming a Controller

When you add a controller, this application gives it a generic name such as Controller 1. You may want to rename the controller to better relate it to the building or area it is in.

1. Click the **Controller icon** to highlight it.
2. Click the **Controller** menu and then select **Rename Controller**.
3. Type the new name.

Press the **Enter** key to finalize the change.

Deleting a Controller

It is possible to delete a Controller and all its related data.

1. Click the **Controller icon** to highlight it.
2. Click the **Controller** menu and then select **Delete Controller**.
3. A dialog will appear asking you to confirm the deletion.

> **Deleting an Controller will also delete any data related to that Controller including its Zones, and Devices, as well and any history for those devices. Once deleted, there is no going back.**

Renaming a Zone Devices Group

When this application detects a devices group or a zone programmed in your controller, it gives it a generic name such as Zone Devices 1. You may want to rename the zone devices group to better relate it to the group or zone it refers to.

1. Click the **Zone Devices icon** to highlight it.
2. Click the **Zone** menu and then select **Rename Zone Devices**.
3. Type the new name.
4. Press the **Enter** key to finalize the change.

Renaming a Device

When this application detects a device programmed in your controller, it gives it a generic name such as Air Sensor 1. You may want to rename a device to better relate it to the device it refers to. For example, you could name a device North Air Sensor.

1. Click the icon for the device to highlight it.
2. Click the Device menu and then select Rename Device.
3. Type the new name.

Press the **Enter** key to finalize the change.

> **The device name in the controller does not change. This name change is only shown in VLink.**

Deleting a Zone or Device

It is possible to delete a Zone or Device from Vlink, by clicking the zone/device in the configuration tree, selecting the Zone or Device menu and clicking the Delete menu. Doing this will also delete all items below the deleted item, including the history.

Summary of Menus

File Menu

New	Allows you to create a new database.
Open	Allows you to open an existing database.
Reopen	Opens a submenu to allow to choose one of the last five databases that VLink had open.
Import SD Card	Allows the importing of controller data from a Ventra Pro's SD Card.
Exit	Closes this application.

View Menu

Communications Log	Allows you to view all activity that occurred while your data was being automatically collected or if you collected information from more than one controller. Use this information before you begin looking at the new data to make sure that no problems occurred during collection.
Show Zone Folders	Toggles the displaying of Device folders. If checked, the Zone Devices will be sorted into Fans, Inlets, Misc. and Sensor groups. If unchecked, the devices will appear under Zone Devices in alphabetic order.
QuickView	Allows you to compare and view data for selected controllers.

Options Menu

Auto Collect	Allows you to specify your settings for automatic data collection. This includes auto collecting data and history on an hourly, daily or weekly schedule, as well as collecting the current information sooner.
File Maintenance	Allows you to repair data or remove old data from a database.
Change Style	Allows you to select a different overall style and color for VLink.
Compact/Repair Database	Allows you compact and repair the database. Note: this is done automatically during shutdown if new data was required from a controller.

Configuration Menu

Add Enterprise	Allows you to add a new enterprise to the configuration tree.

> You can only see this menu item by clicking a database icon in the configuration tree.

Enterprise Menu

Add Access Point	Allows you to add and set up an Access Point connection for your computer.
Delete Enterprise	Allows you to remove an enterprise and everything below it from the database. When you select this option, a new dialog box appears. Click the **Ye**s button if you are sure that you want to delete the enterprise. This only deletes the Enterprise from the database and in no way affects the actual controllers.
Rename Enterprise	Allows you to type a new name for the enterprise you've currently selected.

Access Point Menu

Add Controller	Allows you to add a controller to the configuration tree.
Delete Access Point	Allows you to remove a Access Point and its controllers from the database. When you select this option, a new dialog box appears. Click the **Ye**s button if you are sure that you want to delete the Access Point. This only deletes the Access Point from the database and in no way affects the actual controllers.
Rename Access Point	Allows you to type a new name for the Access Point you've currently selected.

Controller Menu

Delete Controller	Allows you to remove a controller from the database. This only deletes the controller from the database and in no way affects the actual controller.
Rename Controller	Allows you to type a new name for the controller you've currently selected.

Zone Menu

Delete Zone	Allows you to remove a collection of devices or a zone from the database. When you select this option, a new dialog box appears. Click the **Ye**s button if you are sure that you want to delete the collection of devices. This only deletes the collection from the database and in no way affects the actual controller.
Rename Zone	Allows you to type a new name for the devices or zone you've currently selected.

You can only see this menu item by clicking a Zone Devices icon in the configuration tree.

Device Menu

History	Allows you to view or print history information for the current device. You can select Graph, Report or View.
Rename Device	Allows you to type a new name for the device you've currently selected.
Delete Device	Allows you to delete the selected device from the database. Note: collecting the controller again will add this device back in if it still exists on the controller.

Misc Menu

Register Program	Opens the registration form to allow registering the program to view the registration information.
About	Displays copyright and version information for this application.

Maintaining Your Database Files

The File Maintenance dialog box appears when you click the **Options** menu and select **File Maintenance**. This dialog box allows you to delete history records from the database.

Removing Old Records

Periodically, you may want to remove any old database records in order to reduce the file size. This makes it easier to locate the information you want to find.

History records can be deleted using the File Maintenance dialog box.

1. If you want to delete history records prior to a certain date, enter that date in the Delete History records with dates before box. For example, if you want to remove all records before January 1, 2016, enter 01/30/2016.
2. If you want to delete history records on and after a certain date, enter that date in the Delete History records with dates after box. For example, if you want to remove all records after January 1, 2017, enter 01/01/2017.
3. Click the appropriate **Delete** button. You are prompted to verify you want to remove each type of record; History Records, Alarm Detail Records and Alarm History Records.
4. Click the **Yes** button if you are sure that you want to remove the records.
5. Click the **OK** button.

> **Note: You can also set the date by clicking the arrow and selecting the date from the calendar.**

Repairing a Database

If your database is behaving unpredictably, try repairing the database.

1. Click the **Options** menu.
2. Click on **Compact/Repair Database**
3. You are prompted to confirm the repair.
4. Click the **Yes** button run the Compact/Repair routine.

Setting up Communications

You can collect data from on-site controllers, using a serial port or Comm Station, or off-site controllers, using WAN.

The Communications parameters are displayed in the Access Point work area (right pane) by clicking an Access Point icon in the configuration tree (left pane).

There are two Connection types that can be used to connect to the controllers, depending on how the Communication wiring is set up:

Serial Port Connection:

This connection type uses either a Serial Port on the PC or a USB-To-Serial adapter. If using a USB-to-Serial adapter, Valco recommends using one with a FTDI chip, as other chips have problems keeping a good connection.

Wiring requirements

The communication protocol of the Serial Port or adapter can be set up as RS485 or RS232.

If using RS485, the wiring goes directly from the port/adapter to the controllers and the **Use a Comm Station for access (RS232)** needs to be unchecked for this **Access Point**.

If using RS232, the serial port/adapter needs to be connected to a Comm Station and the Comm Station wired to the controllers. In addition, the **Use a Comm Station for access (RS232)** needs be checked for this **Access Point**.

Setup

To use this type of connection:

1. Click on the **Serial Port** radio button in the Connection Type section on the Working Area
2. Click the Arrow button on the **Connection** box and select the Serial Port to use.
3. Check or uncheck the **Use a Comm Station for access (RS232) box**, depending on which protocol your port is using.
4. Click the **Save** button.

VLink sets the default settings which should work with the port selected. However, VLink does provide a **Configure** button which, when pressed, will allow you to make changes to the port settings if there are problems with the connection. The best settings to use for any serial port connection is:

Baud Rate: 19200 (required).

Stop Bits: 1 (required).

Data Bits: 8 (required).

Parity: Odd, Even, Space, or Mark. None can be used if using a Comm Station.

Flow Control: DTR/RTS

Misc: none checked.

Use 9-bit: check this if you are having connection problems.

Setting up Communications - continued
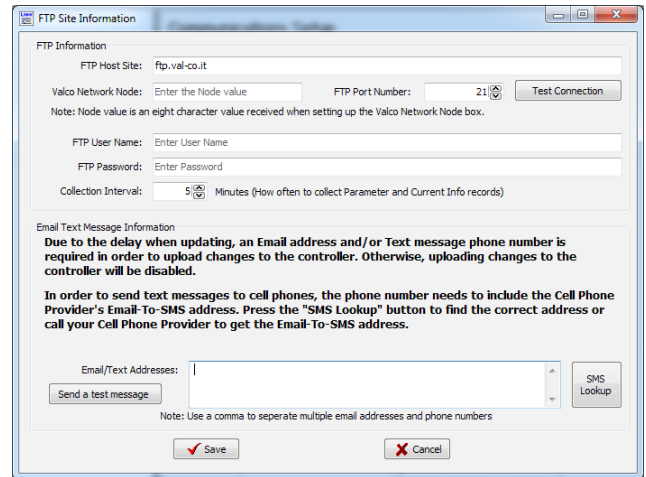
WAN / FTP Connection*:*

This connection type requires a VLink Network Node set up at the controller site, which has access to the Internet through a router. See the VLink Network Node manual for information on how to set up the node.

Note: To use this access type, you will need the serial number, User Name and the User Password that came with the VLink Network Node.

<u>**Setup**</u>

1. Click the **WAN/FTP** radio button in the Work Area.
2. Click the **Configure** button to open the FTP configuration window.
3. In the FTP Site Information box,

   a. **FTP Host Site** and **FTP Port Number** - Unless using your own FTP server, or told otherwise, leave these boxes as is.

   b. **Valco Network Node** – enter the serial number that came with the VLink Network Node.

   c. **FTP User Name** – enter the User Name that came with the VLink Network Node.

   d. **FTP Password** – enter the User Password that came with VLink Network Node.

   e. **Collection Interval (minutes)** – this value is how often the VLink Network Node will request the Parameter, Alarms and Current Environmental Information from the controllers and send the information to the FTP server.

       i   The history and alarm detail records will be collected just after the top of each hour and sent to the FTP server.

       ii   If you are not closely monitoring the current information or the alarms with VLink, you can set this value higher to limit the amount of bandwidth the VLink Network Node uses.

   f. **Email / Text Addresses** – See **Email and Text Messaging** section below on this setting.

   g. Use the **Test Connection** button to verify the entered FTP information is correct.

   h. Use the **Send a test message** button to send a test message to all the entered Email and Text addresses. If any of the addresses do not receive the test message, fix the address.

   i. Once all the FTP information is entered, click the **Save** button to close the window.

       i   When the window closes, the program will connect to the FTP server and update its information to match what was entered.

The **Update Network Node** button is used to send updated FTP and Controller information to the FTP, which allows the VLink Network Node to start collecting from the controllers. See the **Setting up Controller Information** section for more information.

Email and Text Messaging

With the use of a VLink Network Node, it is possible to get emails and/or text messages for problems encountered by the Node, as well as be notified of any alarm conditions from the controllers. This can be set up to email/text multiple people at the same time.

Note: the email feature is only available with the use of the VLink Network Node. It is not available when connecting directly to the controllers from a serial port.

IMPORTANT: Due to delays in collecting the controllers, delays in delivery of emails and text messages by IP providers, and due to possible problems with the Internet system, using the Email/Text message feature of the VLink Network Node should not be used as the only Alarm notification for the controllers. An external alarm system should still be hooked to the alarm relays on the controllers as the primary notification option.

Setting up Communications - continued

> **Note: the email feature is only available with the use of the VLink Network Node. It is not available when connecting directly to the controllers from a serial port.**

The following conditions will send an email/text message from the Node:

1. Any active alarms.
    a. One message per alarm.
    b. New message sent once per hour until all alarms are cleared.
2. Failure to talk to a controller after 10 tries.
3. Failure to connect to the FTP server after 10 tries.
    a. Only happens if internet is working.
4. Success or failure of the updating of the controllers from VLink.

Note: When sending updates to the controllers from VLink by way of the FTP, the changes must be sent to the FTP server, downloaded to the Node, the Node has to send the updates to the controller, verify the updates were successful, then reverse the process to return that status back to VLink. So, it can take up to 10 minutes before any notification is received by VLink of the success or failure of any update. Due to this factor, at least one email or text address is required by VLink before any updates can be sent to the controllers, by way of the VLink Network Node. This is not a restriction when using a serial port for direct access to the controllers.

> **Note: When sending updates to the controllers from VLink by way of the FTP, the changes must be sent to the FTP server, downloaded to the Node, the Node has to send the updates to the controller, verify the updates were successful, then reverse the process to return that status back to VLink. So, it can take up to 10 minutes before any notification is received by VLink of the success or failure of any update. Due to this factor, at least one email or text address is required by VLink before any updates can be sent to the controllers, by way of the VLink Network Node. This is not a restriction when using a serial port for direct access to the controllers.**

Setting up the Email / text messaging

Enter any valid email address to the **Email/Text Addresses** box. Separate multiple addresses by commas.

When entering Phone numbers for text messages, the phone number needs to be followed by the SMS address of the Cell Phone provider. The format for the text message address needs to be phone number@cell provider.xxx.

VLink does provide a list of the SMS addresses of some of the common cell phone carriers. To use this list, click the **SMS Lookup** button in the lower right-hand side of the window.

Enter the cell phone (SMS) number in the box provided, select the correct cell carrier, and click the **Add to Email List** button to include that cell phone in the Email/Text message list.

By default, the list displays some common carriers in the Americas. To see a larger list of carriers, check the **Show All Addresses** box.

The list can be filtered by Continent, Country, and/or carrier.

Setting up Communications - continued

Once all the email and cell phone numbers are added to the Address box, use the **Send a text message** button to send out a test message to each of the addresses provided. If no email/text message is received by an address, fix the problem before continuing.

Note: if your cell phone provider is not shown in the SMS list, or a text message is not received by a cell phone, call your cell phone provider to get the correct SMS address from them, then manually enter the address.

Additional Access Point Settings

Comm Timeout (seconds): this box can be used to increase or decrease the number of seconds VLink waits for a response from the controller. If you have problems with downloading data from the controllers, try increasing this value to see if it helps. Note: setting this value too high can cause the Controller or Comm Station to time out, causing downloads to fail also. You will need to experiment with this value to determine the best wait time for your connection.

Use a Comm Station for access (RS232): Check this box if you are connecting to the controllers by way of a Comm Station and the RS232 protocol. Uncheck the box if using a RS485 connection, where the PC is connected directly to the first controller. This should be unchecked when using the WWW/FTP connection option and a VLink Network Node.

Comm Station Password: Enter the password for the Comm Station here. The password displayed must match the password used by the Comm Station (remote password). The default is MASTER. This box, as well as the **Change Remote Password** button are enabled anytime the **Use a Comm Station for access (RS232)** check box is checked, and the communication type has been set up.

Change Remote Password:
This button allows you to change the password on the Comm Station.

1. Press the **Change Remote Password** button.

    a. The top box will display the current Comm Station password.

2. Enter a new password in the **New Password** box.

3. Press the **OK** button to send the new password to the Comm Station.

Collect All this Access Point's Controllers:
This button allows you a simple way to collect all the controllers under this Access Point at the same time. This collects from all the controllers under the Access Point, regardless of the controller Automatic Collection setting. To do this:

1. Press this button which will open the **Select Information to download** dialog box.

2. Check the boxes for the information you wish to download from all the controllers.

3. Set the Dates for how far back you wish to collect the History and Alarm records.

    a. The dates in these boxes will show the earliest date since a controller has been downloaded.

    b. If this is the first time these controllers are being downloaded, the dates default to one week of data.

    c. The earlier you set these dates the longer it will take to finish downloading, due to the huge number of possible history and alarm records on the controllers.

4. Press the **Collect Information** button to start the downloads.
    a. Note: the Communication Logs form will appear in the lower left corner of the program to show the progress of the downloads.

Checking Your Port Settings

If you are not sure which port to select, you can find out which port is being used by checking your current settings. You can look in the System portion of the Windows Control Panel.

1. Click the **Device Manager** tab. This tab lists all the hardware that is currently connected to your computer, such as your mouse and keyboard.

2. Click the **Plus** icon next to Ports (COM & LPT). A list of ports appears. The port your PC interface is connected to is labeled Communications Port and will have a ⇗ next to it.

3. If it says COM1, return to this application and select Com1. If it says COM2, select Com2, etc. If there is more than one Com number, you may need to try them all until you find the one that works.

Setting up Controller Information

The Controller Information work area appears in the right pane when you click a controller icon in the configuration tree (left pane). This work area allows you to set up information needed for communication with the controller. It also allows you to manually collect information and to update (send information to) the controller.

Entering a Serial Number

You must enter a serial number for each controller in the database. This application uses the serial number to locate the correct controller.

The serial number is entered in the Controller Information work area for each controller. This work area appears when you click any controller icon in the configuration tree.

Type the controller's serial number in the Serial Number box. You can find a controller's serial number by going to the controller, pressing the **Cancel** key three times and then pressing the **Down Arrow** two times.

If the connection type is **WWW/FTP**, after entering the serial number, you will need to return to the **Access Point** screen and press the **Update Network Node** button, which will send the controller information to the VLink Network Node, allowing it to start collecting the controller information. It could take up to 10 minutes before the first information for the controller is available to VLink.

> **Note: The Ventra Pro controllers have a default serial number of 99999999. When using VLink to access these controllers, this serial number needs to be changed to a unique number, unused by another controller. To change the serial number on the Controller, press the Enter key when viewing the serial number and, using the +/- keys to change the number and Left/Right arrow keys to move between numbers, set a new serial number for this controller.**
> **If the serial number ends with a letter, you do not need to type the letter in the serial number box.**

Entering a Load Sequencing Delay

Load sequence delay prevents groups of fans and heaters from all starting at the same moment. Sequencing time is designed to reduce the peak demand power requirements for your buildings.

The delay time should be set just long enough to get a motor up to speed (about 2 to 5 seconds).

The **Load Sequencing Delay** is entered in the Controller Information work area for each controller. This work area appears when you click a controller icon in the configuration tree.

Type the delay time in the Load Sequence Delay box. You will need to click the **Update Controller** button in order to send the new value to the controller. Note: pressing the **Update Controller** button will send all the Zone and Device settings also.

Setting up a Controller for Automatic Data Collection

Before you can collect data from a controller automatically, you will need to set up each controller to allow this.

1. Click a controller icon on the configuration tree in the left pane. **Controller information** appears in the work area.

2. If this is a new controller, type the controller serial number in the **Serial Number** field. You can find a controller's serial number by going to the controller, pressing the **Cancel** key three times and then pressing the **Down Arrow** two times.

If you want to set up this controller for automatic data collection, check **Include this controller in Auto Data Collection**. Leave this box unchecked if you want to collect data manually.

3. Repeat steps 1 through 3 for each controller that you want to collect data from.

Checking **Include this controller in Auto Data Collection** in the Controller Information work area sets this controller to automatically collect data only if Auto Collection is on. To turn Auto Collection on and off, see **Collecting Data Automatically** below.

Controller Security

Setting up security measures ensures that unauthorized personnel do not access your controllers. VLink uses the same passwords and security levels as the controller. In order to see and change the Passwords and Security levels in VLink enter a Security level 7 password in the Controller work area. VLink allows access to all its area, including downloading new data. However, VLink does not allow uploading changes to the controller without first entering a level 7 Password.

Security Levels

Security levels are used to limit the information users are able to change on the controller. VLink allows users to change these from VLink as long as they know a level 7 Security password from the controller. Each level has the abilities of the previous level, as well as the new abilities assigned to that level.

Level	Access
0	Users at this level can view but not change settings.
1	Users can set Animal Information, Air Sensor settings and humidity Sensor Settings. Also has access to Instant On feature in feeders and lights.
2	Users at this level can change the time & date, **Temperature Setpoint** and the Temperature **Ramping Offset.**
3	Users at this level can change Feeder and Light times. Can also change the Variable Speed fan's Power ON setting and the Temperature Alarms settings.
4	Users at this level can change all settings except for adding/deleting control devices and passwords.
5-6	Users at this level are allowed to make any changes, except change the Serial number and the Startup Options password in the Global Parameters.
7	Users at this levels are allowed to make any changes. **Note:** Level 7 is the default setting until you set up passwords and assign security levels. • At least one person must be given access at this level in order to make changes to the controller

Note: there is no PC database or Settings security in VLink, other than when changing the Passwords themselves. Changes in VLink cannot be uploaded to the controller without a level 7 Security password.

Editing Controller Software Passwords

Controllers are shipped without any passwords for the controller software. You can set up passwords using the controller, this application or both to limit the parameter changes that can be made on the controller.

> **These controller software passwords are different than the Comm Station password found in the Access Point work area. The Comm Station password is strictly used for protecting communication between your computer and the controller. You can view or enter controller software passwords in a controller's work area as long as you know one of the controller's level 7 Security passwords. The Controller work area appears in the right pane when you click a controller's icon. There are 10 password boxes since up to 10 passwords can be set up for each controller. These passwords settings are only displayed if no passwords have been set up on the controller, or you enter a controller's level 7 password in VLink.**

To set up controller software passwords:
1. Enter a 4 digit password for each user or level of user you want to set up. Be sure to assign a security level for each.
2. Click the **Update Controller** button to write the new or changed passwords to the controller.

> **Note: If you set up passwords for your controller, be sure to always have at least one Level 7 user so that changes can be made in the future.**

Additional Controller work area features

The **Animal, Unit of Measure and Temperature** boxes at the bottom of the work area are for information purposes only and can not be changed. These show what settings are being used by the controller.

Collect Information

This button is used to download data from the controller. See the next sections for more information on how this works.

Update Controller

This button is used to send any VLink changes back to the controller. See the next sections for more information on how this works. Note: This button is disabled if you are using the **WWW/FTP** connection and have not entered any Email and/or Text message cell phone addresses in the **Access Point** configuration. See the Access Point section for more information.

Print Control Configuration

Use this button to open a report of all the devices configured to this controller, as well as all the settings for these devices. The report includes all zones configured on this controller. If you want a list of a specific zone's devices and settings, then go to the Zone Settings folder. This report can be printed out or saved to a variety of formats (PDF, Text, CSV, Excel).

Additional Controller work area features

Alarm History

This displays a list of the last 20 alarms from the controller. It includes all the alarms for all the zones. If you want a list of a specific zone's alarms, then go to the Zone Settings folder. This list can be printed out or saved to a file.

Error Detail

Displays a list of all the Alarm detail records downloaded from the controller. When you press this button, you will be asked for a range of dates to display. The resulting list will includes all the alarm details for all the zones for the selected dates. If you want a list of a specific zone's alarm details, then go to the Zone Settings folder. This list can be printed out or saved to a file.

Collecting Data Automatically

The **Automatic Data Collection Options** dialog box appears when you click the **Options** menu and then select **Auto Collect**. This dialog box allows you to set the collection frequency and data to be collected for controllers that have automatic data collection enabled (see above). It also allows you to turn on and off Auto Scrolling of the **Zone Device** screens which display the current operating information for controllers (if collected).
There is three sections to the **Automatic Data Collection Options** dialog box:

Current Information Options:

This section is used to set up the automatic collect of the current information from the controller. This information shows the current sensor reads, current zone status, current device on/off/power status, current opening status of inlets, and the daily Feed Runtimes and water usage for the last three days.

To enable this feature:

1. Set the length of time between downloads in the **Collect Every:** box.
2. Check the **Start Collecting** box in the **Current Information Opt**ions box.
3. If you wish to download as soon as the dialog closes, check the **Collect on Close** box.

Scroll thru Zones:

This feature allows you to set VLink up to constantly scroll between the **Zone Devices** screens of any controller set up for automatic **Current Information** collecting. This allows you to set up VLink to automatically download the current information on a regular basis while VLink scrolls through each zone for a quick view.

To enable this feature:

1. Set the wait time before moving on to the next zone in the **Scroll every:** box.
2. Set the **Pause scrolling for** box to a time value to pause the scrolling for a better look at the data, before continuing the automatic scrolling.
    a. This allows you to click on the Zone Device icon and get a better look at what the zone is doing, without having to stop the scrolling completely.
3. Check the **Start Scrolling** box.

> Note: if Auto Scrolling is enabled, selecting an Icon in the configuration tree other than a Zone Device icon will shut off Auto Scrolling. You will need to select a Zone Device Icon and enable Auto Scrolling again to start scrolling again.

Automatic Parameter, History and Alarm data collection:

The right hand section, **Parameters, History, Alarms** is used to set the frequency for automatically downloading all the data from a controller. The frequency options are hourly, daily, or weekly. The download options are Configuration Data, History, Alarm History, Alarm Details and/or Current Information.

To enable this feature:

1. Set the **Frequency** you wish to use. Notice that data collection times are always 10 minutes past the hour. This is because the controllers internally update their history on the hour. The 10-minute delay ensures you always receive the most current history.

2. Check the data items you want to collect (**Configuration Data, History Data, Alarm History, Alarm Details** and/or **Current Information**).

3. Check **Start Collecting** in the **Parameters, History, Alarms** box if you want to have data automatically collected. Only controllers with **Enable Automatic Data Collection** checked in the Controller Information work area will be collected (see above).

Once you have all the Auto Collecting options set, click the Save button to have VLink start auto-collecting the data when requested.

> **The bottom right corner of VLink, next to the clock on the Status bar, displays the on/off status of Auto Collect and Auto Scroll features. You can also use these buttons to quickly enable and disable each feature, by clicking on them to toggle them on and off.**

If you wish to hear a beep each time a collection of data starts and finishes, open the **Communications Log** window and check the **Beep on Collection** box.

> *   **VLink and the PC have to be running at the request collection time in order to have the auto collection occur.**
> *   **If any problems occur during an auto collection, a box will appear explaining the failure.**
> *   **When automatic data collection is enabled, you should ensure Auto Collect doesn't occur at a time you are changing settings in the application. If Auto Collect starts while you are making changes, or before you get a chance to update the controller, all of your new settings in this application will be overwritten by the new downloads.**

Viewing the Communications Log

The **Communications Log** dialog box appears when you click the **View** menu and then select **Communications Log**. If the dialog that opens is a small window, check the **Show Details** box to open a larger view of the log information.

The log lists the dates and times data was automatically collected. The log also shows any errors that occurred.

1. Click the **Save** button to the entire log to a file. Note: VLink also saves this information in the VLink folder in a file names VLink_Comm.log.

2. Click the **Clear button** to delete the contents of the log file.

3. Check the **Beep on Collection** box to hear a beep any time a collection starts or finishes.

The **Show Details** checkbox allows you to increase or decrease the size of the Communications Log dialog when it is visible.

The **Turn On Port Logging** checkbox is used for diagnostic purposes. When checked, this button is used to collect information to send back to Valco if you are encounter problems when downloading. It should only be checked when requested by Valco personal, as it will add more files to the PC on each collection.

Collecting Data Manually

If you need to collect data immediately and do not want to wait for the data to be automatically collected, you can collect data manually. There are multiple ways to start a manual collection:

1. Click the **Collect All Controllers** button, in the **Database Information** work area, to collect data from every controller in the database.

2. Click the **Collect All this Enterprise's Controllers** button, in an **Enterprise** work area, to collect data from all controllers in that enterprise.

3. Click the **Collect All this Access Point's Controllers** button, in an **Access Point** work area, to collect all controllers under that Access Point.

4. Click the **Collect Information** button in a **Controller** work area, to collect just that controller.

> **Clicking any of these buttons will cause VLink to collect all the related controllers, regardless of the controller's Include this controller in Auto Data Collection setting. If you do not wish to collect some of the related controllers, then you need to go farther down the tree to download less controllers at one time.**

When pressing any of these buttons to do a manual collection, the **Select Information to Download** dialog will open. To start the collection:

1. Check the boxes for the information you wish to download from the controllers.

2. Set the Dates for how far back you wish to collect the History and Alarm records.
   a. The dates in these boxes will show the earliest date since a controller has been downloaded.
   b. If this is the first time these controllers are being downloaded, the dates default to one week of data.
   c. The earlier you set these dates the longer it will take to finish downloading, due to the huge number of possible history and alarm records on the controllers.

3. Press the **Collect Information** button to start the downloads.
   a. Note: the Communication Logs form will appear in the lower left corner of the program to show the progress of the downloads.

Updating a Controller

You can make changes to a controller's operating parameters (such as the Load Sequencing Delay) or any operating parameters for the controller's devices using this application.

Note: Updating a controller is disabled if you are using the **WWW/FTP** connection and have not entered any Email and/or Text message cell phone addresses in the **Access Point** configuration. See the Access Point section for more information.

To update a controller's information:

1. Click the controller's icon in the configuration tree (left pane). The **Controller** work area is displayed in the right pane.

2. Click the **Update Controller** button.

3. This application connects to the controller using the information entered in the Access Point section. The controller is updated to reflect the changes you've made in this application.

> **Note: Updating a controller overwrites settings contained in the controller. When updating a controller from Link, you should visually check the controller, after updating, to verify the controller received all the changes without errors.**

You can only update one controller at a time. When updating a controller, the following happens:

1. A Warning dialog appears advising you of possible hazards of updating a controller remotely.

2. If using a WWW/FTP connection, a second warning will explain the hazards and time delays involved with updating a controller over the internet.

3. If you press **Update Anyway**, VLink will attempt to update the controller and provide a notification of the success or failure of the update.

    a. If using a Serial Port connection, VLink will display messages in the lower left-hand corner during the update progress.

    b. If using the WWW/FTP connection, VLink will display a message explaining the update was sent to the FTP and it could take up to 10 minutes before any notification of success or failure is received back from the FTP.
        1. An email and/or text message should be received stating the success or failure of the update.
        2. If VLink is left running, it will check the FTP periodically for the update status.
        3. If VLink is shut down before the update status is received, VLink will display the update status when it is restarted, and the first collection is performed.

Update Procedure:

For both the Serial port and WWW/FTP connection types, the update procedure does the following:

1. Downloads the current parameter settings to use as a back up in case of an update failure.

2. Compares the controller version information to the new parameters and verifies the update is for this specific controller.

    a. The serial number, animal type, unit of measure and temperature settings need to match before any update is performed.

3. Will send **ALL** the Zone and Device records for this controller to the controller.

    a. During the upload, if the controller gets a record that has no matching device configured on the controller, VLink will abort the upload, with a message explaining what failed.

4. If the upload succeeds, VLink will request all zone and device records from the controller again.

    a. The new downloaded records are compared to the uploaded records to verify the controller received the correct information. If any of the download records fail to match an uploaded record, a message will be recorded as to which records had problems.

5. If any of the above steps fail, an attempt will be made to send the backup records back to the controller, in order to return the controller to its previous state.

6. At the end of the procedure, a notification will be displayed on the success or failure.

    a. For the Serial Port connections, the notification will be displayed immediately.

    b. For the WWW/FTP connections, VLink will continue to check the FTP for an update message and will display the notification as soon as it is received, which could be up to 10 minutes later.

- For the Serial Port connection, the messages recorded during the update procedure can be seen by clicking the **View** menu and selecting **Communications Log**.

- For the WWW/FTP connection, go to the VLink directory and open the "**VALCO_UPDATE_STATUS**" log files to see the messages recorded during the update process.

- **Note: If a failure is reported, the controller needs to be inspected immediately to determine if the controller is still in a working condition.**

Zone Devices / Current Information

The Zone Devices work area is displayed when you select a Zone Devices icon. This work area displays the Zone's current operating information from the last download from the controller where the Current Information records were received.

The information displayed on this screen is taken from any download that includes the **Current Information** request when doing manual or automatic downloads. This information can also be obtained by setting up the **Current Information Options** in the **Auto Collect** menu. See the **Collecting Data Automatically** section for more info on setting this up.

The work area is composed of six sections:

Controller Information

this area displays the controller serial number as well as the controller date and time when the data was last collected. If it has been more than 5 minutes since the data was last downloaded, a label will be displayed stating the Data is Old.

You can use the **Collect** button in the Controller Information section to request new data for just this zone.

Zone Information

This area displays the general information about the zone. These include the Zone's Temperature Setpoint, Average Temperature, Humidity and Static Pressure readings, current age and weight, and current ventilation mode.

Feeder Runtimes

This area displays the total daily runtimes of all the feeders in the zone for the last three 24 hour periods.

Water Usage

This area displays the total water usage in the zone for the last three 24 hour periods.

Equipment

This area displays the On/Off status of the devices, other than inlets. A green checkbox indicates the device was running at the time the information was collected. If a variable speed device is running, such as a fan or heater, the current power/BTU level will also be displayed.

Sensors

This area displays all the readings of the various input sensors at the time the information was collected.

Inlets

This area shows the opening sizes and percentages of the inlets at the time the information was collected. It also displays the current status of the relays. If the inlet was currently moving, the inlet will be shown as "Closing" or "Opening" indicating one of the relays is currently on. If the inlet is not moving, the inlet will be shown as "Off-Opening" or "Off-Closing", which indicates both relays are off, as well as which way the inlet was moving before it shut off.

> **Most of these sections are resizable to allow setting up the screen so every device in each section can be seen. These sizes are saved so once set up, they will return to those sizes any time a Zone Device icon is selected. Only one set of sizes is saved, so use the Zone Device with the most devices, to set these up.**

Zone Settings

The **Zone Settings** work area is displayed when you click the **Zone Settings** folder under a **Zone Device** icon. This work area allows access to information and settings for an installed zone.

> **The Zone Devices icon and the icons for specific devices do not appear until you have successfully collected data from a controller.**

Print Zone Configurations

To view, print and/or save the settings for zone and all the devices configured for this zone, press the Print Zone Configuration button. This will open a preview report displaying all this information is one place. This preview allows you to send the report to a printer or export the report to a text, PDF, CSV or Excel file.

Viewing Alarm Information

The controller constantly monitors all input sensors and controller circuits for possible alarm conditions. The criteria necessary to trigger the alarm circuit could be based on the number of times a condition is detected, or the amount of deviation the controller reads. All error conditions are recorded under alarm detail, regardless if it meets the criteria necessary to trigger the alarm circuit.

> **Once an alarm condition meets the criteria necessary to trigger an alarm, the alarm relay closes, activating the external alarm. This alarm activation is recorded under alarm history.**

Alarm History Information

This dialog box appears when you click the **Alarm History** button in the Zone Devices work area.

The Alarm History dialog box displays alarm types, dates, times, and the number of occurrences for the last 20 alarms. Active alarms are identified by a "Yes" in the Active column.

Click the **Print** button to print or export the alarm detail information.

Alarm Detail Information

The Alarm Detail Settings dialog box appears when you click the **Alarm Error Detail** button in the Zone Devices work area. This dialog box allows you to select the start date and end date for the historical information to include in the Alarm Detail report.

There are two calendars. The left calendar is for the start date and the right calendar is for the end date. Click a calendar date to select it. You can select different months and years from the month and year drop-down lists.

After setting the dates, click the **OK** button to view the alarm detail records.

The dialog box that appears allows you to view details about any alarms that have occurred for the current controller. You can also view other significant events such as times when a power up occurred. Click the **Print** button to print or export the alarm detail information.

Zone History

The Zone History Settings dialog box appears when you click the **Zone History** button on the Zone Devices work area. This dialog box allows you to select the start date and end date for the historical information to include in a report. This report displays general hourly information for the zone, such as the number of restarts, Temperature Setpoint and average, and Purge cycles, and Alert indexes (hogs only)

There are two calendars. The left calendar is for the start date and the right calendar is for the end date. Click a calendar date to select it. You can select different months and years from the month and year drop-down lists.

Click the **OK** button to view the history.

Click the **Print** button if you want to print or export this information.

Device Summary

The Device Summary dialog box appears when you click the **Device Summary** button in the Zone Devices work area. The Device Summary dialog box displays description, name, group, module, and channel information for each device on the current controller or zone.

Click the **Print** button to print this information.

Building Purge Settings

The Building Purge Settings dialog box only appears when VLink is used with buildings set up for natural (no fans) ventilation.

The Building Purge Settings dialog box appears when you click the **Building Purge Settings** button in the Zone Devices work area. Purging is the process of evacuating stale contaminated air and replacing it with fresh outside air.

Enter the settings you want for your building:

Purge On Time	Determines how long the building will purge when triggered by the Delay Timer.
Delay Time	The length of time the building must be closed before a purge can start.
Purge Inhibit Temp Low	If the working temperature drops below this setting purging is inhibited. In progress purging is stopped.
Purge Inhibit Temp High	If the working temperature rises above this setting, purging is inhibited. In progress purging is stopped.
Humidity Setpoint	If a building is closed and the humidity rises above this setting for the length of the Humidity Delay Timer, a purge is initiated. This box is disabled if you do not have a humidity sensor installed.
Humidity Purge Time	Determines how long a building is purged when triggered by the Humidity Setpoint and the Humidity Delay Time. This box is disabled if you do not have a humidity sensor installed.
Humidity Delay Time	The length of time a building must be continuously closed and humidity above the Humidity Setpoint before starting a purge based on humidity. This box is disabled if you do not have a humidity sensor installed.
Before Purge raise Temperature to	Heat the building to this temperature before starting a purge cycle.
Abort Heating before Purge after	If the building hasn't reached the desired temperature in this amount of time, the Heat before purge is aborted and the building is purged.

Click the **Print** button to print the settings. Click the **Save** button to save any changes or **Original** button to return the settings to the last saved values.

Minimum Vent and Purge Settings

The Minimum Vent and Building Purge Settings dialog box only appears when Link is used with buildings set up for power (fans and inlets/curtains) ventilation.

The Minimum Vent and Purge Settings dialog box appears when you click the **Minimum Vent and Purge Settings** button in the Zone Devices work area. This dialog box allows you to set up building purges and/or minimum ventilation. Minimum ventilation is important when a building purge is not triggered frequently enough to keep inside air fresh.

Enter the settings you want your building:

Minimum Vent Timer On	Determines the on time (minutes and seconds) for fans designated as Temp or Minimum Vent.
Minimum Vent Timer Off	Determines the off time (minutes and seconds) for fans designated as Temp or Minimum Vent.
Purge Inhibit Temp Low	If the working temperature drops below this setting purging is inhibited. In progress purging is stopped. This box is disabled if you do not have a humidity sensor installed.
Purge Inhibit Temp High	If the working temperature rises above this setting, purging is inhibited. In progress purging is stopped. This box is disabled if you do not have a humidity sensor installed.
Humidity Setpoint	If the humidity remains at or above this setting for the length of the Humidity Delay Timer, a purge is initiated. This box is disabled if you do not have a humidity sensor installed or no fans are set to purge.
Humidity Purge Time	Determines how long a building is purged when triggered by the Humidity Setpoint and the Humidity Delay Time. This box is disabled if you do not have a humidity sensor installed or no fans are set to purge.
Humidity Delay Time	The length of time the humidity must be at or above the humidity setpoint before starting a purge based on humidity. This box is disabled if you do not have a humidity sensor installed or no fans are set to purge.
Before Purge raise Temperature to	Heat the building to this temperature before starting a purge cycle.
Abort Heating before Purge after	If the building hasn't reached the desired temperature in this amount of time, the Heat before purge is aborted and the building is purged.

Click the **Print** button to print the settings. Click the **Save** button to save any changes or **Original** button to return the settings to the last saved values.

Minimum Vent Ramp Table

This table consists of up to 9 different ramp points. Each ramp point consists of an animal age, Minimum Vent On time and Off Time. Every night at midnight, the animal's age is compared to this ramp table. New Minimum Vent On and Off times are extrapolated from the table based on the two settings nearest to the animal's current age. The controller's Minimum Vent times are set to that value.

Ramping is turned on after you have entered at least two ramp points, and after both Animal Count and Animal Age are set above zero. In order for ramping to work, the Age in the first row has to be greater than zero. If you are not familiar with Minimum Vent ramping, refer to the *Operating Manual* for your controller.
The **Minimum Vent Ramp Table** appears on the **Minimum Vent and Purge Settings** dialog box.
Click a box in the Age column to enter the animal's age.

> **Note: If you set this age to zero or below the previous Age row, ramping is disabled beyond that point.**

1. In the On Time column, enter the Minimum Vent On time to use for that age.

2. In the Off Time column, enter the Minimum Vent Off time to use for that age.

> **Note: If Minimum Vent ramping is enabled, the Minimum Vent On and Off times in the controller can not be changed.**

Press the **Graph** button to display a graph of the **Minimum Vent Ramp Table** settings. You can print and save the Graph information by using the **Export** and **Print** buttons in the Graph screen.

Current Animal/Bird Information

The Current Animal Information dialog box appears when you click the **Current Animal Information** button in the Zone Devices work area.

"Current Animal Information" appears as "Current Bird Information" when vLink is used with controllers designed for poultry operations.

The Current Animal Information dialog box allows you to keep up-to-date information about your animals. This information can help you manage the progress and profitability of the current batch of animals. The animal's age, weight, and beginning count also indirectly effect how the environment of your building is controlled.

You can change any of the numbers below, at any time, and the controller recalculates a new projected value for "Today's Animal Weight" at midnight. It also increments the "Today's Animal Age" counter by one. The animal age used here is the same animal age used by the temperature ramping feature. The calculated animal weight is also used in the stress index calculations.

Today's Animal Age	Enter the animal age in days.
Today's Animal Weight	Enter the animal weight based on age and projected finishing weight.
Projected Finishing Age	Enter the age at which the animals are removed from the building.
Projected Finishing Weight	Enter the estimated animal weight when removed from the building.
Beginning Animal Count	Enter the head count initially placed in the building. Setting the beginning animal count to zero forces the temperature control mode to OFF, which also disables the alarms.
Mortality Animal Count	Use this to keep a running total of animals lost.
Total Sold Animal Count	Use this to keep a running total of animals sold.

The Current Inventory value is calculated using the Beginning count, Mortality count and Sold count.

Click the **Print** button to print the settings. Click the **Save** button to save any changes or **Original** button to return the settings to the last saved values.

Sound Alarm When Settings

The Sound Alarm When dialog box appears when you click the **Sound Alarm When...** button in the Zone Devices work area. The Sound Alarm When dialog box allows you to specify when you want your alarms to sound.

Temperature Alarms

High Temperature Alarm	If the average actual temperature exceeds this temperature the alarm will be activated. This setting automatically adjusts when the Temp Setpoint is changed. This setting can also automatically increase, with an outside temperature increase, if the Influence High Temp Exceeds is checked.
Temperature Exceeds (Fixed)	If the average actual temperature exceeds this temperature the alarm will be activated. This setting is fixed and does not adjust automatically when the temperature setpoint changes.
Low Temperature Alarm	If the average actual temperature falls below this temperature the alarm will be activated. This setting automatically adjusts when the Temp Setpoint is changed.
Outside Temp Influences High Temp	Check this if the " High Temperature Alarm" setting should automatically change as the outside temperature changes. The High Temp setting will only start to change once the outside temperature goes above the Temp Setpoint. An outside temperature sensor is required for this to work.
Max Difference of Air Probes	An alarm will activate if the highest air probe reading and lowest air probe reading differ by this much. A value of 99 disables this alarm.

Water Alarms (one set for each water sensor)

Water Meter #1 – 24 Drop %	Each hour, the number of gallons of water measured by water meter number one is totaled. The most recent 24-hour total is compared to the previous 24-hour total. If the total use drops by a percentage larger than the setting entered here, the alarm is activated. Set the value to zero to disable this check. The check is also disabled if the totals being compared are less than 10 gallons. This box is disabled if you do not have a water sensor installed.
Flow Exceeds	If the gallons per hour exceeds the value entered here for one minute, the alarm is activated. Set the value to zero to disable this check. This box is disabled if you do not have a water sensor installed

Feed Sensor Alarms (one set for each Feed sensor)

Feed Sensor Off Time Limit and On Time Limit	Feeder motors can run up to nine times per day. The feeder motor current can be checked to determine if the feeders are on too long or off too long based on the values you enter here. Set the value to zero to disable this check. If a feeder ON alarm is generated, that feeder is turned off until the alarm is cleared or the controller is reset. If a feeder OFF alarm is generated, it is automatically cleared if the feeder is detected as running. This box is disabled if you do not have feed sensors installed.

Static Pressure Alarms

These are disabled if no static pressure sensor is installed.

Open all inlets on High Static Pressure Alarm	Checking this box will cause all the curtains and inlets to open fully if a High Static Pressure alarm is active. Clearing the alarm will allow the devices to return to normal operations.
Stays Above; for	The alarm is activated when negative static pressure exceeds the value you enter here for more than the time you specify.
Stays Below; for	The alarm is activated when negative static pressure drops below the value you enter here for more than the time you specify. This setting is constantly monitored.
Fan On Below; for	The alarm is activated when negative static pressure drops below the value you enter here for longer than the time you specify. This setting is only monitored when proportional fans are running.

> **Refer to your controller's Operating Manual for more information about static pressure.**

Humidity Sensor Alarms

In the **Alarm On Invalid Reading** box, a check box is enabled for each Humidity Sensor installed. Checking the box will enable the alarm for that Humidity Sensor if the reading ever goes outside the range of 0 to 100%.

Click the **Print** button to print the settings for all the alarms. Click the **Save** button to save any changes or **Original** button to return the settings to the last saved values.

Temperature Control Settings

The Temperature Control Settings dialog box appears when you click the **Temperature Control Settings** button in the Zone Devices work area. The Temperature Control Setting dialog box allows you to view or change the temperature setpoints and other settings that control your building's temperature.

Temp Setpoint	The value you enter here is the target building temperature. You can set this manually or have the temperature ramping feature automatically adjust it every day at midnight. Changing the setpoint temperature changes all temperature settings for all installed devices by the same amount. This is disabled if Ramping is ON.
Effective Control	Select the desired control mode from the list box: None, Actual, Effective, or Scaled Effective. Slide the Arrow to to the desired setting. See the next page for more information.
House Control Mode (Poultry controllers only)	Select the desired house control mode from the list box: Brood, Growout1, or Growout2. See the next page for more information.
Ridge to Curtains	Select Interlocked or No Interlock. Interlock means ridge vents will open and close in sync with the curtains. This box is disabled if no ridge vents or curtains are installed.
Heat to Curtains	Select Zone Interlock, No Interlock, or All Zone Interlock. Zone Interlock means the Zone's curtains and ridge vents must close prior to heaters turning on. No Interlock means curtains and ridge vents in the Zone may be operated independent of heater operation. All Zone Interlock means all curtains and ridge vents, in all zones, must close prior to heaters turning on. This box is disabled if no heating devices or curtains/ridge vents are installed.
Enter Tunnel Temp	Enter the temperature at which the controller should begin tunnel mode ventilation. This box is disabled if no tunnel fans are installed.
Exit Tunnel Temp	Enter the temperature at which the controller should exit tunnel mode. This box is disabled if no tunnel fans are installed.
Remain in Tunnel Time	Enter the minimum amount of time in hours, minutes and seconds that tunnel mode will operate. This prevents the ventilation system from going into and out of tunnel mode too quickly. A drop in temperature to the setpoint will override the minimum time.
Tunnel Enable Outside Temp	Enter the Outside Temperature that you want Tunnel mode to be enabled. The controller will not enter Tunnel mode until the outside temperature is above this setting. This box is disabled if no outside temperature setting is installed.
Today's Animal Age	Enter the Animal's age in days. Changing this, with temperature ramping on, will change the Setpoint and all device temp values.
Floor Type (hog controllers only)	Enter the floor type. The type of floor impacts the effective environmental temperature.
Close Curtains Below Outside Temp	Enter a temperature that you want the curtains to close when the outside temperature falls below it. This box is disabled if no outside sensor or curtain is installed.

Temperature Control Settings - continued

The Temperature Control Setting dialog box also allows you to set up a temperature ramp table. A ramp table allows the controller to automatically adjust a building's temperature based on the animals' ages.

Click the **Print** button to print the settings. Click the **Save** button to save any changes or **Original** button to return the settings to the last saved values.

House Control Mode: Poultry

Brood	Indicates the controller should use air sensors in the brood area for controlling devices.
Growout1	Indicates the controller should use air sensors in the brood and growout1 areas for controlling devices.
Growout2	Indicates the controller should use air sensors in the brood, growout1 and growout2 areas for controlling devices.

Temperature Control Mode

Slide the arrow back and forth to select the desired setting.

None	This setting "parks" the control and essentially stops its operation. It changes Animal Count to zero. This setting is handy for shutting down fans and other equipment in between batches of animals (only recommended in climates where heat is not necessary to protect the building against freezing).
Actual	Indicates the controller should use actual temperatures from the sensors. This setting does not use the wind speed to adjust the average working temperature. Some air sensors are capable of sensing wind speed (which is used to calculate the effective environmental temperature).
Effective	Indicates the controller should use effective environmental temperature from the air sensors. The full wind speed is used to adjust the working temperature of the building. You will need to install EET sensors, such as Air Sensor Model 935, to use this feature.
Scaled Effective %	Indicates the controller should use a percentage of actual air temperature and a percentage of effective environmental temperature. Only a percentage of the wind speed calculation is used in adjusting the working temperature.

> **Wind speed will lower the effective temperature in a building. Effective Environmental Temperature takes this factor into account, in order to keep the animals from getting too chilled, due to wind speed.**

Temperature Ramp Offset

If you have set up a temperature ramp table on this dialog box, you can add or subtract a value from every temperature setting in the table. Enter the desired value in the Temperature Ramp Offset box (use a minus – symbol before the value to decrease the temperatures) and then click the **Adjust Table** button. If Ramping is On, clicking the **Adjust Table** button will also change the temperature values for all the devices installed. You can also enter a value without pressing the **Adjust Table** button to have the controller adjust the setpoint temperature at midnight by the amount you enter.

Temperature Ramp Table

This table consists of up to 12 different ramp points. Each ramp point consists of an animal age and a temperature. Every night at midnight, the animal's age is compared to this ramp table. A new setpoint is extrapolated from the table based on the two settings nearest to the animal's current age. The controller's setpoint temperature is set to that value.

Ramping is turned on after you have entered at least two ramp points, and after both Animal Count and Animal Age are set above zero. In order for ramping to work, the Age in the first row has to be greater than zero. If you are not familiar with temperature ramping, refer to the *Operating Manual* for your controller.
The Temperature Ramp Table appears on the Temperature Control Settings dialog box. Click a box in the Age column to enter the animal's age.

> **If you set this age to zero or below the previous Age row, ramping is disabled beyond that point.**

Click a box in the Setpoint column and enter the desired temperature.

Click the **Graph** button to view a graph of your values.

Temperature Ramp Graph

The Temperature Ramp Graph appears when you click the **Graph** button on the Temperature Control Settings dialog box. The graph allows you to quickly verify that the ramp settings you've entered in the table will produce the desired results. If you entered a value that is way out of line, you can quickly spot it on the temperature ramp graph.

Click the **Print** button to print the graph.

Static Pressure Control Settings

The Static Pressure Control Settings dialog box appears when you click the **Static Pressure Settings** button in the Zone Devices work area. The Static Pressure Control Settings dialog box allows you to view or change the static pressure setpoints and other settings that control your building's static pressure. You need to install a static pressure sensor for this feature to work. An outside air sensor is needed to use the ramping feature.

Natural Static Pressure

Natural Static Pressure Setpoint	The value you enter here is the target static pressure while in Natural mode. You can set this manually or have the static pressure ramping feature automatically adjust it every day at midnight.
Natural Static Pressure Close	Enter the pressure where devices controlled by static pressure should start closing to increase static pressure while in Natural mode. This value must be lower than the setpoint.
Natural Static Pressure Open	Enter the pressure where devices controlled by static pressure should start opening to decrease static pressure while in Natural mode. This value must be higher than the setpoint.

Tunnel Static Pressure

Tunnel Static Pressure Setpoint	The value you enter here is the target static pressure while in Tunnel mode. This value does not have a ramping feature
Tunnel Static Pressure Close	Show the pressure where the devices will start to close while in Tunnel mode. This value is calculated based on the offset of the Natural Static Pressure Close setting and can not be changed.
Tunnel Static Pressure Open	Show the pressure where the devices will start to open while in Tunnel mode. This value is calculated based on the offset of the Natural Static Pressure Open setting and can not be changed.

Static Pressure Ramp Table

Set each of the five ramp points to enable ramping.

Temperature	Enter the outside temperature for the ramp point. The Temperature setting should increase for each point.
Pressure	Enter the desired static pressure for the ramp point.

> **The static pressure minimum and maximum values are limited by the WCCal1 and WCCal2 values of the Static Pressure Sensor.**

> **Consult your county extension agent or other specialist for the best use of static pressure control in your region.**

The Static Pressure Ramp Graph appears when you click the **Graph** button on the Static Pressure Control Settings dialog box. The graph allows you to quickly verify that the ramp settings you've entered will produce the desired results. If you entered a value that is way out of line, you can quickly spot it on the static pressure ramp graph. You can print and export the graph from within the graph view.

Click the **Print** button to print the settings. Click the **Save** button to save any changes or **Original** button to return the settings to the last saved values.

Devices – General Information

Viewing Individual Device Settings

The device work area (right pane) appears when you click a specific device's icon in the configuration tree. This work area allows you to view or change a device's settings.

If you edit a setting, be sure to click the controller's icon in the configuration tree (left pane) and then click the **Update Controller** button so that your changes will be communicated to the controller.

The work areas for all the following device descriptions have the following features in common:

Clicking the **Save** button will save any changes you make to the settings.

Clicking the **Original** button to return the settings to the last saved settings or the settings from the controller if the settings haven't been changed.

Clicking the **Print Settings** button will open a report, displaying the device settings for all the devices of the same type. This report can be printed or exported to a text, PDF, csv or Excel file.

In the History box, clicking the **Graph** button will allow you to select a date range to display the history for the devices. Clicking the **Report/Export** button will display a history report for those same devices.

> **Only the devices you have installed will appear in the device list. Devices must be added using the controller's keypad.**

Device History Graphs

The history graphs for all the device settings have the same basic features. When you first press a Graph button in a device work area, a Date Range dialog will appear, allowing you to set the starting and ending date for the history data to view. When you press OK, the graph will appear. The graph will display the appropriate data depending on what device was being looked at. The graph below is for the Sidewall Fans configured for the zone.
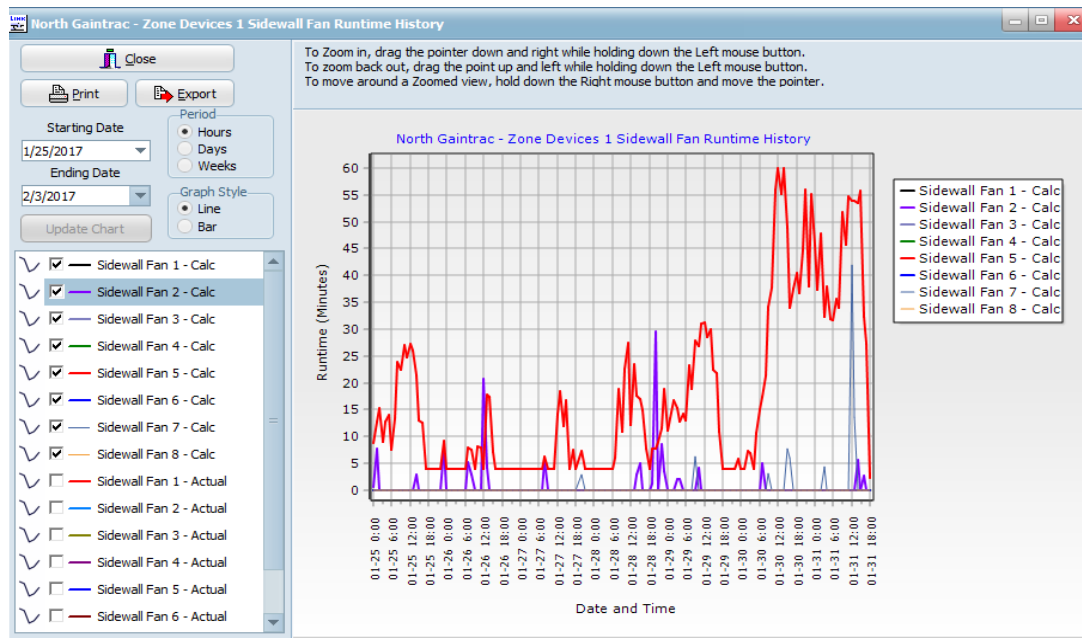
Viewing Individual Device Settings

Once the graph is open you can:

1. Change the **Starting Date** and **Ending Date** values to change what history data is displayed. After you change these, press the **Update Chart** button to retrieve the history for the new date range.

2. Select a different Period to display the data by **Hours, Days or Weeks**. Default is Hours.

3. Change switch the graph between a **Bar and Line** graph. Default if Line.

4. Select which devices or settings to view by checking and unchecking the boxes in the lower left box. Note: for output devices, The **Calc** boxes will display the runtimes that the controller tried to run the device. The **Actual** boxes will display the actual runtimes based on the toggle positions. (Gaintrac controllers do not have the ability to track the output toggle positions).

5. Print and **Export** the graph.

Zooming in and out of Graphs

By clicking on the graph, it is possible to zoom in and out of the graph data to change what data is displayed. The following technics can be used to accomplish this:

Zoom In

1. Set the mouse pointer to the upper left corner of the data you wish to view.
2. Press and hold the left mouse button.
3. Drag the mouse point down and to the right to select the data you wish to view.
4. Let up on the mouse button.

Doing this multiple time will keep narrowing the amount of visible data.

Viewing different data when zoomed in

1. When the graph is zoomed in, press the right mouse button and move the mouse around. The graph will move in the direction you move the mouse.
2. Once you find the data you want, let up on the right mouse button.

Zoom Out – once you have zoomed in, you can zoom back out by:

1. Press and hold the left mouse button.
2. Slide the mouse pointer up and to the left.
3. Let go of the mouse button.

There is no incremental zooming out. Zooming out once will return the view to the full data and you will have to zoom back in to narrow it down again.

Device History Reports

Clicking the **Report** button in a device's work area will open that device's hourly history report. When you first click the button, a Data Range dialog will open, allowing you to select the range of data you wish to see. Clicking the **OK** button will open the report. The report will display the appropriate data depending on what device was being looked at. This report can be sent to a printer, or exported/saved to a text, PDF, CSV, or Excel file.

Sensor Settings

This section describes the input sensor settings. If **Show Zone Folders** in enabled using the **View** menu, these devices will be found under the **Sensors** folder under the **Zone Devices** node in the Configuration tree.

Air Sensor Settings

The air sensor display shows the sensor group, cable length, wire gauge, and location. Location is used for the House Control Mode for poultry controllers.

Group	This is the assigned device group. You cannot change this setting through this application.
Cable Length	Input the length of cable connecting the air sensor to the controller. The air sensor is an analog resistive device so improper cable length settings can cause erroneous temperature readings. If you enter the proper cable length and still get an erroneous reading, you can essentially calibrate the sensor by adding or subtracting the cable length value entered here. Adding about 5 to 15 feet of cable (the variance depends of the cable gauge you are using) will drop the air sensor's temperature reading by 0.1 degree Fahrenheit.
Wire Gauge	Input the gauge of the cable connecting the air sensor to the controller. The air sensor is an analog resistive device so improper cable gauge settings can cause erroneous temperature readings. Use shielded wire, 16 to 24 gauge (.5 to 1.2mm) stranded, such as Carol® AWM style 2426, to connect sensors to input channels.
Sensor Offset	Use this setting to adjust the sensor reading if it doesn't display the correct temperature.
Cal Values	If you are using an effective environmental temperature (EET) air sensor, input the calibration values printed on the sensor's tag. If no calibration values are available, use the default values that appear when you add a new air sensor to the controller.
Location (poultry only)	If applicable, select the location of the air sensor. The location is important because the controller will need to know which sensors to use for the various house control mode settings (found in the Temperature Control Settings menu).
Use for Wind Speed	If you are using an effective environmental temperature (EET) air sensor, check this box to use this sensor when calculating the effective temperature.

Air Sensor Shared Settings

The Air Sensor Shared device is special air sensor. It has it's own Group number but instead of installing this sensor to its own Station/Channel number, it is installed to the same Station/Channel as an existing air sensor. This allows a zone to share an air probe that is installed in another zone, allowing you to control devices based on the temperature in a different zone. The Air Sensor Shared device uses all the settings from the air probe that it is being shared with, except for the Location setting. The Air Sensor Shared Location setting has it's own menu. Only the Location setting should be changed for a air Sensor Shared device.

Outside Air Sensor Settings

This air sensor display shows the sensor group, cable length, wire gauge, and location. Only one Outside air Sensor can be installed per zone. Note: If an Outside Air Sensor is installed in zone 1, the sensor will be used by other zones that do not have their own Outside sensor configured.

Group	The controller will always assign group number 13 to an outside air sensor.
Cable Length	Input the length of cable connecting the air sensor to the controller. The air sensor is an analog resistive device so improper cable length settings can cause erroneous temperature readings. If you enter the proper cable length and still get an erroneous reading, you can essentially calibrate the sensor by adding or subtracting the cable length value entered here. Adding about 5 to 15 feet of cable (the variance depends of the cable gauge you are using) will drop the air sensor's temperature reading by 0.1 degree Fahrenheit.
Wire Gauge	Input the gauge of the cable connecting the air sensor to the controller. The air sensor is an analog resistive device so improper cable gauge settings can cause erroneous temperature readings. Use shielded wire, 16 to 24 gauge (.5 to 1.2 mm) stranded, such as Carol® AWM style 2426, to connect sensors to input channels.

Feed Sensor Settings

The feed sensor measures the motor amps. The controller assumes the feeder is on when the measured current is above the minimum amps setting.

Group	This is the assigned device group. You cannot change this setting through this application.
Minimum amps	Input a value less than the minimum amps draw of the feeder. When the controller detects current higher than this value, it assumes the feeder is on and will track the run time of the feeder for both history and feed sensor alarms.
Cal value	Unless otherwise specified in your feeder sensor's documentation, the calibration value is 100.
Run Time Exceeds Alarms	Set the On Time and Off Time values to activate the Feed Sensor alarms. These settings are the same as the one in the **Sound Alarm When** form found in the **Zone Settings** work area.

Static Pressure Sensor Settings

Only one Static Pressure Sensor can be installed per zone

Group	This is the assigned device group. You cannot change this setting through this application. This will always be 0.
ADC Cal 1 and ADC Cal 2	Input the ADC calibration values for the static pressure sensor. Typical values are 6554 for Cal 1 and 58982 for Cal 2.
WC Cal 1 and WC Cal 2	Input the WC calibration values for the static pressure sensor. Typical values are 0.000 for WC Cal 1 and 0.250 for WC CAL 2. All static pressure settings in the application are limited to values between these settings

If changes are made to these settings, press the **Zone Static Pressure Settings** button to verify/ change the Zone's static pressure settings which are restricted by the ADC and WC values and may have changed. The **Zone Static Pressure Settings** form can also be opened from the **Zone Settings** work area.

Humidity Sensor Settings

Up to three Humidity Sensor can be installed per zone. The average reading of the installed sensors is used to operate the zone.

Group	This is the assigned device group. You cannot change this setting through this application.
Cal 1/ Cal 2	These are the calibration values for the humidity sensor. You can find the Cal values on the sensor. If not, input 10485 for Cal 1 and 51118 for Cal 2 unless the humidity sensor's instructions state otherwise. Do not change these values unless the sensor is being replaced.
Alarm when Humidity Sensor Reading is Invalid	Check this box if you want the controller to alarm if the humidity sensor is sending an invalid reading. This can also be set in the **Sound Alarm When** form found in the **Zone Settings** work area, where you can set this value for all the installed sensors.

Water Meter Sensor Settings

Input the pulses per gallon (PPG) calibration values for the water meter sensor. See the Water Sensor installation manual to determine what value to input here.

Water alarms – Set the values here to enable and disable the water alarms. This can also be set in the **Sound Alarm When** form found in the **Zone Settings** work area, where you can set these values for all the installed sensors.

🚨 Digital Alarm Sensor Settings

Digital alarms provide warnings of almost any emergency condition you need to be informed about. Any no-voltage circuit that can be switched will provide an alarm to the controller. The term "digital" refers to two possible states for a circuit: open and closed. You can set up each digital alarm input to sense for an open or a closed circuit.

Group	This is the assigned device group. You cannot change this setting through this application.
Trigger Alarm on Active Input	Check this if you want the controller to trigger an alarm when the input is active.
Input is Active when	Set this to CLOSED if you want the controller to alarm when the digital input circuit becomes closed. Set this to OPEN if you want the controller to alarm when the digital input circuit becomes open.
Alarm Delay Time	Input the amount of time the alarm condition must exist before the alarm is triggered. For example, if you want to alarm when a door is left open, you would set the Delay Time to 30 seconds to prevent a false alarm from normal building entry and exiting.

📏 Position Sensor Settings

Group	This is the assigned device group. You cannot change this setting through this application.
Percent Out of Position	Input the percentage you want the Position Sensor to be out of position before it will alarm.
Enable Position Alarm	Check this box if you want the Position Sensor to alarm if it is out of position or sends a bad reading.

The following Position Sensor settings are read only. These are set by the controller when the Position Sensor is calibrated.

Attached Device	Shows the device that the Position Sensor is attached to. This has to be changed on the controller and the Position sensor recalibrated.
Closed Resistance	Shows the calibrated resistance when the attached device was fully closed.
Open Resistance	Shows the calibrated resistance when the attached device was fully Open.
Open to Close Time	Shows the time it took the attached device to go from fully open to fully closed. The attached device's Open Travel Time should match this value.
Close to Open Time	Shows the time it took the attached device to go from fully closed to fully open. The attached device's Close Travel Time should match this value.

Whisker Switch Settings

Group	This is the assigned device group. You cannot change this setting through this application.
Validate Switch Low	Input the inches/cm the attached device needs to be closed to in order to indicate a closed position. If the device is supposed to be closed this far, but the switch doesn't indicate this, an alarm will activate.
Validate Switch High	Input inches/cm the attached device needs to be open to in order to indicate an open position. If the device is supposed to be open this far, but the switch doesn't indicate this, an alarm will activate.
Attached Device	Shows the device that the Whisker Switch is attached to. This must be changed on the controller.

Inlets and Curtains

The section describes the Inlet and Curtain settings. If **Show Zone Folders** in enabled using the **View** menu, these devices will be found under the **Inlets/Curtains** folder under the **Zone Devices** node in the Configuration tree.

General settings for all inlets and curtains:

Operating Modes: Curtains and Inlets

Curtains and inlets must be designated for how they will be used (ridge vents are natural only). Here are the basic ventilation modes:

Natural	Operates for all ventilation below the Tunnel Entry Temperature. Often referred to as power, minimum, or natural ventilation. Closed during tunnel mode.
Tunnel	Operates only during tunnel mode. Closed during natural mode.
Static	Operates automatically based on the static pressure sensor readings. You must install the sensor for these options to appear. The inlets open or close based on the Setpoint, Close and Open values you enter in the Static Pressure Sensor Control Settings dialog box.
Temp	Operates based on temperature (typically curtains) or operates proportionally (typically inlets) based on the number of fans running.

The above modes are combined for the following menu choices. These are enabled only if a Static Pressure sensor is installed or a fan is installed and operates during tunnel mode.

Static Tunnel Only	The inlet or curtain only operates during tunnel mode. The device is controlled by static pressure.
Temp Natural Only	The inlet or curtain only operates when the building is not in tunnel mode. All Inlet devices and Chimney Dampers open or close based on the number of fan groups running (proportional control). Curtains and Ridge Vents open or close based on its Open Temp and Close Temp settings. Note: if the Ridge To Curtain setting is checked, Ridge Vents will open at the same time as the Curtains.
Static Natural Only	The inlet or curtain only operates when the building is not in tunnel mode. The device is controlled by static pressure.
Temp Natural/ Temp Tunnel	When the building is not in tunnel mode, an inlet operates based on the number of fan groups running (proportional control). A curtain operates based on its Open Temp and Close Temp settings. During tunnel mode, the inlet or curtain operates based on proportional control.
Temp Natural/ Static Tunnel	When the building is not in tunnel mode, an inlet operates based on the number of fan groups running (proportional control). A curtain operates based on its Open Temp and Close Temp settings. During tunnel mode, the inlet or curtain operates based on static pressure.
Temp Tunnel Only	The inlet or curtain operates only during tunnel mode and its position is based on the number of fan groups running (proportional control).

Operating Modes: Curtains and Inlets

Static Natural/ Temp Tunnel	When the building is not in tunnel mode, the inlet or curtain operates based on static pressure. During tunnel mode, the inlet or curtain operates based on proportional control.
Static Natural/ Static Tunnel	The inlet or curtain operates based on static pressure in natural mode and tunnel mode.

Response Modes – Curtains and Ridge Vents only

Standard	Allows the curtain or ridge vent to open and pause for the times you input.
Aggressive	Allows the curtain or ridge vent to move faster if the temperature is changing quickly. If the temperature is more than 2 degrees beyond the setpoint, the curtain or ridge vent opens or closes twice the distance you input and then pauses for only half the time. If the temperature moves further from the setpoint, the curtain or ridge vent moves further and more often.

> **In areas where temperatures can drop rapidly, we recommend setting the curtain or ridge vent to open slowly and close quickly. This will cut the heat loss and limit chill stress to the animals.**

Side Curtain Settings

The controller has a minimum allowed motion time of 3 seconds. For example, if a curtain moves 60 inches in 60 seconds, 3 inches is the smallest change in opening size that can be made. Opening sizes should be set large enough to allow a minimum of 3 seconds movement from one setting to the next.

Refer to your controller's *Operating Manual* for details about using curtains.

Group	This is the assigned device group. You cannot change this setting through this application.
Use Sensors	Input the group numbers of the air sensors you want to use for controlling the curtain. The controller uses Shared Sensor Technology (SST) to average the temperature readings of any sensors you want to use to control any device. Enabled only when Operate As is disabled or Operating mode has Temp Natural.
Open Temp	Input the temperature at which the controller should open the side curtain (when the curtain is in a temperature-controlled mode). When the temperature is at or above this temperature, the controller will open the curtain as many inches as you designate in **Open this Distanc**e below. Enabled only when Operate As is disabled or Operating mode has Temp Natural.
Close Temp	Input the temperature at which the controller should close the side curtain (when the curtain is in a temperature-controlled mode). When the temperature is at or below this temperature, the controller will close the curtain as many inches as you designate in **Close this Distanc**e below. Enabled only when Operate As is disabled or Operating mode has Temp Natural.
Open : inches/cm	Input the distance the controller should open the curtain before pausing. Enabled only when Operate As is disabled or Operating mode has Temp Natural.
Open Pause Timer	Input the amount of time the controller should pause before checking the temperature to determine if it should open the curtain more, do nothing, or begin closing it. Enabled only when Operate As is disabled or Operating mode has Temp Natural.
Close : inches/cm	Input the distance the controller should close the curtain before pausing. Enabled only when Operate As is disabled or Operating mode has Temp Natural.
Close Pause Timer	Input the amount of time the controller should pause before checking the temperature to determine if it should close the curtain more, do nothing, or begin opening it. Enabled only when Operate As is disabled or Operating mode has Temp Natural.
Operating Mode	Select the operating mode for the curtain. This is enabled only if a Static Pressure sensor is installed or a fan is installed and operates during tunnel mode.

Response Mode	Select the response mode (see Response Modes above). Enabled only when Operate As is disabled or Operating mode has Temp Natural.
Full Opening Size	Input the full opening size. This setting is used for calibration purposes.
Purge Opening Size	The curtain can be used as a purge opening for purge fans. Input zero to disable the curtain during the purge function. The purge opening size must be large enough to allow at least 3 seconds of movement. This box is disabled if you haven't set up purging in the Minimum Vent and Purge Settings dialog box.
Full Open Travel Time	Input the amount of time it takes for the curtain to open completely. The controller uses this time to determine how open the curtain is, so enter the exact travel time.
Full Close Travel Time	Input the amount of time it takes for the curtain to close completely. The controller uses this time to determine how closed the curtain is, so enter the exact travel time.
Pre-Open Time	Input the time the curtain should start opening before fans start running when the controller transitions to a different ventilation mode. This box is enabled only for Static Natural modes.
Static Pressure Pause Timer	Input the time the curtain should pause after it moves due to a change in static pressure. This box is enabled only for Static operating modes.
Maximum Opening Size: Opening Size	Input the maximum opening you want the curtain to open if the current temperature is below the **Override Temperature** setting. This value has to be between the **Temperature Setpoint** and the **Setpoint** + 15 degrees. This feature only works if the value is above 0, is attached to a Position Sensor and the sensor is calibrated, set to alarm and is not in an alarm state.
Maximum Opening Size: Override Temp	Input the temperature where, if the temperature is higher than this, you want the curtain to ignore the **Inlet Maximum Open Size** above.
Curtain Exercise Routine: Perform at	Input the time of day the curtain should close fully, if the curtain has been open for longer than Exercise Delay Days. This setting allows the curtain to close fully at a set time, during periods of hot weather, to prevent rodents from building nests in the curtain.
Curtain Exercise Routine: Days Between	Input the number of days the curtain has to be open more than 50%, before the Curtain Exercise will be performed. This setting allows the curtain to close fully at a set time, during periods of hot weather, to prevent rodents from building nests in the curtain.

Tunnel Opening Settings Fans On / Opening	Input the desired curtain opening size for each potential number of simultaneously operating fan groups while controller is in Tunnel ventilation mode. If vari-speed fans are installed, Fans On can be set in 0.5 increments to account for ramping operating speeds. Enabled for tunnel operating modes only. **Note:** If you are using a static pressure sensor for proportional control, the opening sizes you input here will be used if the static pressure sensor malfunctions.
Tunnel Fan Interlocks	This is an extension of the Fan Groups On boxes. Instead of opening a curtain based on the number of fans running, you can interlock specific fans with curtains (open the curtain based on the number of interlocked fans running). Check each fan that you want the controller to use in determining how far to open the curtain. Enabled for tunnel operating modes only.
Perform Re-Sync at	Input the time of day you would like the curtain to synchronize its opening size to the controller. At the time of day selected, the curtain will turn on either the open or close relay, depending on initial opening, for the full travel time. This forces the curtain to one of its limits, there by synchronizing the opening size with the controller. At the end of the routine, the curtain will return to normal operations.
Tunnel Entry Size Tunnel Exit Size	Input the opening sizes you wish the inlet to move to while transitioning into and out of tunnel mode. The operational mode will not switch until all curtains and inlets are at least open to these values.

> **Side Curtains operate on temperature in natural ventilation mode and so have no Natural Opening settings.**

Ridge Vent Settings

The controller has a minimum allowed motion time of 3 seconds. Opening sizes should be set large enough to allow a minimum of 3 seconds movement from one setting to the next.

Ridge vents operate in natural mode only so there is no operating mode selection as in other types of inlets.

If you have interlocked ridge vents to curtains, the temperature-controlled settings are disabled in the Ridge Vent Settings work area.

Refer to your controller's *Operating Manual* for details about using ridge vents.

Group	This is the assigned device group. You cannot change this setting through this application.
Use Sensors	Input the group numbers of the air sensors you want to use for controlling the ridge vent. The controller uses Shared Sensor Technology (SST) to average the temperature readings of any sensors you want to use to control any device.
Open Temp	Input the temperature at which the controller should open the ridge vent. Whenever the temperature is at or above this temperature, the controller will open the ridge vent as many inches as you designate in **Open this Distan**ce below.
Close Temp	Input the temperature at which the controller should close the ridge vent. Whenever the temperature is at or below this temperature, the controller will close the ridge vent as many inches as you designate in **Close this Distan**ce below.
Open : inches/cm	Input the distance the controller should open the ridge vent before pausing.
Open Pause Timer	Input the amount of time the controller should pause before checking the temperature to determine if it should open the ridge vent more, do nothing, or begin closing it.
Close : inches/cm	Input the number of inches the controller should close the ridge vent before pausing.
Close Pause Timer	Input the amount of time the controller should pause before checking the temperature to determine if it should close the ridge vent more, do nothing, or begin opening it.
Response Mode	Select the response mode (see Response Modes above).
Full Open Size	Input the full opening size. This setting is used for calibration purposes.
Full Open Travel Time	Input the amount of time it takes for the ridge vent to open completely. The controller uses this time to determine how open the ridge vent is, so enter the exact travel time.
Full Close Travel Time	Input the amount of time it takes for the ridge vent to close completely. The controller uses this time to determine how closed the ridge vent is, so enter the exact travel time.
Purge Opening Size	The ridge vent can be used as a purge opening for purge fans. Input zero to disable the ridge vent during the purge function. The purge opening size must be large enough to allow at least 3 seconds of movement. This box is disabled if you haven't set up purging in the Minimum Vent and Purge Settings dialog box.

Perform Re-Sync at	Input the time of day you would like the curtain to synchronize its opening size to the controller. At the time of day selected, the curtain will turn on either the open or close relay, depending on initial opening, for the full travel time. This forces the curtain to one of its limits, there by synchronizing the opening size with the controller. At the end of the routine, the curtain will return to normal operations.
Interlock with Curtain Groups	If you have set the Ridge to Curtains Interlock you will be able to specify the which curtain groups will be used to control this Ridge Vent. Interlocking ridge vents to curtains can enhance air quality in a building while maintaining good temperature control. When ridge vents are interlocked, their open and close settings are ignored. The interlocked ridge vent attempts to open the same number of inches as the curtain with the largest opening size. For example, a curtain has a maximum opening size of 48 inches, and the ridge vent's maximum opening size is 10 inches. As the curtain opens, the ridge vent will also open the same amount as the curtain. When the curtain is open 10 inches, the ridge vent will be fully open at 10 inches. Input up to six curtain groups.
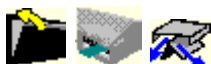
Inlet Settings – Sidewall, Tunnel, Ceiling

The controller has a minimum allowed motion time of 3 seconds. Opening sizes should be set large enough to allow a minimum of 3 seconds movement from one setting to the next.

Inlets are typically a proportionally controlled device so the menu items Open This Distance and Close This Distance are not used. Instead, when an inlet needs to open or close more, the proportional control or static pressure control settings are used.

Refer to your controller's *Operating Manual* for details about using inlets.

Group	This is the assigned device group. You cannot change this setting through this application.
Operating Mode	Select the operating mode for the inlet. This is enabled only if a Static Pressure sensor is installed or a fan is installed and operates during tunnel mode.
Full Opening Size	Input the full opening size. This setting is used for calibration purposes.
Purge Opening Size	The inlet can be used as a purge opening for purge fans. Input zero to disable the inlet during the purge function. The purge opening size must be large enough to allow at least 3 seconds of movement. This box is disabled if you haven't set up purging in the Minimum Vent and Purge Settings dialog box.
Full Open Travel Time	Input the amount of time it takes for the inlet to open completely. The controller uses this time to determine how open the inlet is, so enter the exact travel time.
Full Close Travel Time	Input the amount of time it takes for the inlet to close completely. The controller uses this time to determine how closed the inlet is, so enter the exact travel time.
Pre-Open Time	Input the time the inlet should start opening before fans start running when the controller transitions to a different ventilation mode. This box is enabled only for Natural modes or when Operate As is disabled. This is not available for Tunnel Inlets.
Static Pressure Pause Timer	Input the time the inlet should pause after it moves due to a change in static pressure. This box is enabled only for Static operating modes.
Perform Re-Sync at	Input the time of day you would like the curtain to synchronize its opening size to the controller. At the time of day selected, the curtain will turn on either the open or close relay, depending on initial opening, for the full travel time. This forces the curtain to one of its limits, there by synchronizing the opening size with the controller. At the end of the routine, the curtain will return to normal operations.
Tunnel Entry Size **Tunnel Exit Size**	Input the opening sizes you wish the inlet to move to while transitioning into and out of tunnel mode. The operational mode will not switch until all curtains and inlets are at least open to these values.

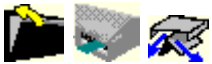|	
Natural Opening Settings Fans On / Opening	Input the desired inlet opening size for each potential number of simultaneously operating fan groups while controller is in natural ventilation mode. If vari-speed fans are installed, Fans On can be set in 0.5 increments to account for ramping operating speeds. Enabled for natural operating modes only.
Natural Fan Interlocks	This is an extension of the Natural Opening boxes. Instead of opening an inlet based on the number of fans running, you can interlock specific fans with inlets (open the inlet based on the number of interlocked fans running). Check each fan that you want the controller to use in determining how far to open the inlet. Enabled for natural operating modes only.
Tunnel Opening Settings Fans On / Opening	Input the desired inlet opening size for each potential number of simultaneously operating fan groups while controller is in tunnel ventilation mode. If vari-speed fans are installed, Fans On can be set in 0.5 increments to account for ramping operating speeds. Enabled for tunnel operating modes only.
Tunnel Fan Interlocks	This is an extension of the Fan Groups On boxes. Instead of opening a inlet based on the number of fans running, you can interlock specific fans with inlets (open the inlet based on the number of interlocked fans running). Check each fan that you want the controller to use in determining how far to open the inlet. Enabled for tunnel operating modes only.

Chimney Damper Settings

The controller has a minimum allowed motion time of 3 seconds. Opening sizes should be set large enough to allow a minimum of 3 seconds movement from one setting to the next.

The Chimney Damper is a unique device because it contains a fan and an inlet. If you use this type of device, install the fan portion as a ridge fan and the damper portion as a chimney damper.

The damper functions as an inlet when it is interlocked with one or more ridge fans (typically just one fan). The damper starts to function as a ridge vent when the curtains open (and, presumably, the fan is turned off).

There are two settings required to accomplish this:

1. The **Ridge to Curtains Interlock** box (in the Temperature Control Settings of the Zone Devices icon) must be set to Interlock.
2. The fan coupled with the chimney damper should be set up to turn off when the curtains open (see **Fans Off at Curtain Opening of** settings for Fans later in this document).

Refer to your controller's *Operating Manual* for details about using chimney dampers.

Group	This is the assigned device group. You cannot change this setting through this application.
Opening Settings Fans On / Opening	Input the desired inlet opening size for each potential number of simultaneously operating ridge fans. If no ridge fans are running, the chimney damper opens and closes based on curtain openings (as long as Ridge to Curtain Interlock is set). If vari-speed fans are installed, Fans On can be set in 0.5 increments to account for ramping operating speeds.
Full Opening Size	Input the full opening size. This setting is used for calibration purposes.
Full Open Travel Time	Input the amount of time it takes for the inlet to open completely. The controller uses this time to determine how open the inlet is, so enter the exact travel time.
Full Close Travel Time	Input the amount of time it takes for the inlet to close completely. The controller uses this time to determine how closed the inlet is, so enter the exact travel time.
Fan Interlocks	This is an extension of the Opening boxes. Instead of opening a chimney damper based on the number of ridge fans running, you can interlock specific ridge fans with the chimney damper (open the damper based on the number of interlocked fans running). Check each fan that you want the controller to use in determining how far to open the damper. Only fixed and variable ridge fans will show here.
Perform Re-Sync at	Input the time of day you would like the curtain to synchronize its opening size to the controller. At the time of day selected, the curtain will turn on either the open or close relay, depending on initial opening, for the full travel time. This forces the curtain to one of its limits, there by synchronizing the opening size with the controller. At the end of the routine, the curtain will return to normal operations.

Miscellaneous Devices

The section describes the heating devices, cooling devices (Cool Pads, Misters, Foggers) and timed devices (Feeders and Lights). If **Show Zone Folders** in enabled using the **View** menu, these devices will be found under the **Misc Devices** folder under the **Zone Devices** node in the Configuration tree.

Brooder, Furnace and Heater Settings

Refer to your controller's *Operating Manual* for details about using heating devices

Group	This is the assigned device group. You cannot change this setting through this application.
Uses Sensors	Input the group numbers of the air sensors you want to use for controlling the furnace or heater. The controller uses Shared Sensor Technology (SST) to average the temperature readings of any sensors you want to use to control any device.
On Temp	Input the temperature at which the controller should turn on the furnace or heater.
Off Temp	Input the temperature at which the controller should turn off the furnace or heater.
Lower Temp At Night	Use the **Lower Temp At Night** settings to allow the barn to cool off at night while the animals are less active. **By**: Input the number of degrees you wish the heating device drop during the selected time period. **From**: input the time of day to start using the lower temperatures. **To:** input the time of day to stop using the lower temperatures. **Adjusted Temps**: these values show what the On/Off temperatures will be used while this feature is active.
BTUs / Has Pilot Light (Ventra Pro only)	For the Ventra Pro, input the BTU rating for the heating device and check the box if the device has a pilot light. These values are used to calculate the number of gallons used by the device.
Use during Heat Purge	Check this box if this furnace/heater should be used to heat the building before performing the purge. See **Minimum Vent Settings** or **Building Purge Settings** under the Zone Devices working area, for the temperature and times settings for the Heat Purge.
Interlock with Curtain Groups	If you have set the Heater to Curtains Interlock (in the Temperature Control Settings of the Zone Devices icon) you will be able to specify the curtain and ridge vent groups here (even though the menu only has enough space to say "Curtains" it actually includes ridge vents). When interlocking is enabled for heaters (and furnaces), and the controller detects that the heater's ON temperature has been reached, the heater will not turn on if the interlocked curtains and ridge vents are open more than one inch. Input up to six curtain and ridge vent groups.

Variable Brooder and Heater Settings (Ventra Pro only)

Variable heating devices are designed to run continuously, adjusting the heat output in order to maintain a consistent temperature for the Zone.

Refer to your controller's *Operating Manual* for details about using variable heating devices

Group	This is the assigned device group. You cannot change this setting through this application.
Uses Sensors	Input the group numbers of the air sensors you want to use for controlling the furnace or heater. The controller uses Shared Sensor Technology (SST) to average the temperature readings of any sensors you want to use to control any device.
Gas Value Info	These values show which Module and channel the gas value of this heating device is using. These settings can only be changed at the controller.
Target Temp	Input the temperature at which the controller should try to maintain the zone temperature at. If the temperature is below this setting, the heater will turn on and adjust the output of the device to get to and maintain the temperature.
Off Temp	Input the temperature at which the controller should turn off the heater if the temperature gets too high. This is the absolute temperature at which the heater should not run. The heater may turn off before this temperature if the temperature is above the Target temperature for any length of time.
Lower Temp At Night	Use the **Lower Temp At Night** settings to allow the barn to cool off at night while the animals are less active. **By**: Input the number of degrees you wish the heating device drop during the selected time period. **From**: input the time of day to start using the lower temperatures. **To:** input the time of day to stop using the lower temperatures. **Adjusted Temps**: these values show what the On/Off temperatures will be used while this feature is active.
Minimum/ Maximum BTUs	Input the minimum and maximum BTU rating for the heating device. These values are used to calculate the current BTU for a running device and to calculate the number of gallons used by the device.
Use during Heat Purge	Check this box if this furnace/heater should be used to heat the building before performing the purge. See **Minimum Vent Settings** or **Building Purge Settings** under the Zone Devices working area, for the temperature and times settings for the Heat Purge.

Alarm When at max BTUs for	Variable heaters are not designed to run at maximum output constantly, but should run a lower output in order to maintain the temperature. Running at max output for a long time usually indicates a problem with the zone/device. Input a time limit for the heating device to run at maximum output. If the heating devices runs at max output for longer than this, the controller will activate the alarm relay.
Shut off Heater on alarm	Check this box if you wish the heating device to turn off if there is an alarm due to running at max output for too long.
Interlock with Curtain Groups	If you have set the Heater to Curtains Interlock (in the Temperature Control Settings of the Zone Devices icon) you will be able to specify the curtain and ridge vent groups here (even though the menu only has enough space to say "Curtains" it actually includes ridge vents). When interlocking is enabled for heaters (and furnaces), and the controller detects that the heater's ON temperature has been reached, the heater will not turn on if the interlocked curtains and ridge vents are open more than one inch. Input up to six curtain and ridge vent groups.

Cool Pad Settings (High or Low)
Mister Settings (Hogs only)
Fogger Settings (Birds only)

These four devices have the same settings.

Refer to your controller's *Operating Manual* for details about using Cool Pads, Misters and Foggers.

Group	This is the assigned device group. You cannot change this setting through this application.
Uses Sensors	Input the group numbers of the air sensors you want to use for controlling the device. The controller uses Shared Sensor Technology (SST) to average the temperature readings of any sensors you want to use to control any device.
Time of Day to Enable	The device can be enabled for a certain period of day to prevent having the device turned on at an undesirable time. The device will only operate between the enable and disable times you input. The time you input here should be in a 24-hour clock format. Input the time when the device should be enabled.
Time of Day to Disable	The time you input here should be in a 24-hour clock format. Input the time when the device should be disabled.
Humidity Disable	Input the humidity percentage at which evaporative cooling should be disabled. When the humidity reaches the Disable value, the evaporative cooling device remains disabled until the humidity drops to the Re-Enable value. Input 100 to have the controller ignore humidity disable/re-enable entirely.
Humidity Re-Enable	Input the humidity percentage at which evaporative cooling should be re-enabled. Input 100 to have the controller ignore humidity disable/re-enable entirely.
Temp + Humidity Disable	Input the temp+humidity (stress index) value at which evaporative cooling should be disabled. When the stress index reaches the Disable value, the evaporative cooling device remains disabled until the stress index drops to the Re-Enable value. Input 220 to have the controller ignore temp+humidity disable/re-enable entirely.
Temp + Humidity Re-Enable	Input the temp+humidity value at which evaporative cooling should be re-enabled. Input 220 to have the controller ignore temp+humidity disable/re-enable entirely.
Full On Temp	Input the temperature at which the controller should turn on the device continuously. When the temperature is between the OFF Temp and the FULL ON Temp, the cycle table is used (see below). This value will change during temperature ramping.
Off Temp	Input the temperature at which or below the device should be turned off. This value will change during temperature ramping.

Minimum On Temp	As the temperature ramps downward over the growing period (assuming you use the temperature ramping feature), you may reach a temperature where evaporative cooling should not be used. You can specify a Minimum On Temp for your devices. The device will not turn on below this temperature, regardless of the Cycle On temperatures. This value will not change with temperature ramping.
Cycle	When the temperature is between the OFF Temp and the FULL ON Temp, the controller scans the On temperature values you enter here. It determines where the current temperature falls in those values and uses the ON Timers and OFF Timers you specify for that temperature. Cycle one should be the lowest temperature and cycle four should be the highest. The cycle one temperature is usually slightly higher than the OFF Temp. These temperature settings will change during temperature ramping.
Min Temps	These boxes show the actual Cycle temperatures used when determining which Cycle times the cool pad uses. These will match the Cycle On Temperatures and the Full On Temperature unless the Cycle #1 On Temp is lower than the Minimum ON Temp. In that case, the first Min Temp will equal the Minimum On Temp with each of the other temperatures set by adding the difference between its Cycle On temp and the Cycle #1 On Temp to the Minimum On Temp. These values are calculated by the application and cannot be changed.

Lights Settings and Feeder Settings

The Light and Feeder settings allow 30 timers to be set up to turn the device on and off. Each of these timers are run based on Age. The controller will search the device's table to find where the current animal age falls, then use any timers that are set up for use during that age to operate the device.

There is no ramping of the age groups and their timers, nor is there any carryover of the timers between age groups. If you require the timers to be available for multiple age groups, you need to set up multiple timers, one for each age group.

Once all the Timers are set up and saved, the 30 slots will be sorted by Age, then On Times, then Off Times. If the Age value is set to 0, or the On and Off times match for any slot, that slot will be removed from the list.

Group	This is the assigned device group. You cannot change this setting through this application.
Age	Set the Age you wish this timer to run. This timer will be used from when the animals reach this age to when they reach the next higher age.
Start	Input the time of day you wish the device to turn on using a 24-hour clock format. To set a light group for continuous on, set the ON time to 00:00 and the OFF time to 24:00.
Stop	Input the time of day you wish the device to turn off using a 24-hour clock format. To set a light group for continuous on, set the ON time to 00:00 and the OFF time to 24:00.

Fans

The section describes the fans. If **Show Zone Folders** in enabled using the **View** menu, these devices will be found under the **Fans** folder under the **Zone Devices** node in the Configuration tree.

Operating Modes: Fans

Each fan can operate in one of nine different operating modes:

Cool	The fan exhausts hot air from the building. The fan turns on when the temperature rises to the ON temperature and turns off when the building cools to the OFF temperature (if set up to run on temperature).
Heat	This setting assumes a fan is blowing hot air into the building from a warmer area. The fan turns on at a low temperature set as the ON temperature and turns off at a higher temperature set as the OFF temperature.
Purge	The fan runs during a purge cycle to clear humidity, ammonia, and bad air from the building. The fan runs based on the purge settings you enter in the Building Purge Settings menu.
Cool & Purge	The fan runs in cool mode when the temperature is at or above the ON temperature and in purge mode when the temperature is below the ON temperature.
Heat & Purge	The fan runs in heat mode when the temperature is below the ON temperature and in purge mode when the temperature is above the ON temperature.
Tunnel	Tunnel mode turns on tunnel fans and moves air from the open tunnel inlets, through the building, and out through the tunnel fans. It closes all natural sidewall inlets and curtains. More groups of tunnel fans typically turn on as the temperature rises. Tunnel fans only run during tunnel mode.
Tunnel & Cool	The fan runs in cool mode when the temperature is below the Tunnel Entry temperature and in tunnel mode when the temperature is at or above the Tunnel Entry temperature.
Tunnel & Purge	The fan runs in purge mode when the temperature is below the Tunnel Entry temperature and in tunnel mode when the temperature is at or above the Tunnel Entry temperature.
Tunnel, Cool, Purge	The fan runs in purge mode when the temperature is below the ON temperature, in cool mode when the ON temperature is reached, and in tunnel mode when the temperature is at or above the Tunnel Entry temperature.

Run Modes: Fans

Each fan can operate in one of five different run modes:

Temp Only	The fan runs when the temperature is at or above the ON temperature. The fan turns off when the temperature is at or below the OFF temperature.
Timed Only	The fan cycles on and off continuously based on the ON and OFF times you input.
Temp or Timed	The fan runs according to temperature control when the temperature is at or above the ON setting. The fan runs according to timed setting when the temperature is below the ON setting.
Temp and Timed	The fan runs according to the timed settings when the temperature is at or above the ON setting. When the temperature is below the ON setting, the fan does not operate.
Temp or Minimum Ventilation	The fan runs according to temperature control when the temperature is at or above the ON setting. The fan runs according to the minimum ventilation times (entered in the Minimum Ventilation and Purge Settings dialog box) when the temperature is below the ON setting.

Fixed Speed Fan Settings

These include Pit (hog only), Sidewall, Tunnel, Ridge and Stir fans.

Group	This is the assigned device group. You cannot change this setting through this application.
Uses Sensors	Input the group numbers of the air sensors you want to use for controlling the fan group. The controller uses Shared Sensor Technology (SST) to average the temperature readings of any sensors you want to use to control any device.
Operating Mode	Select the operating mode for the fan group.
Fan On Temp	Input the temperature at which on or above the fan group should turn on. This box is disabled when Run Mode is Timed Only.
Fan Off Temp	Input the temperature at which or below the fan group should be turned off. This box is disabled when Run Mode is Timed Only.
Fan Run Mode	Select a run mode for the fan group.
On Timer	This item is enabled for timed fans. Input the number of hours, minutes and seconds (up to nine hours) you want the fan group to run when in a timed mode.

Off Timer	This item is enabled for timed fans. Input the number of hours, minutes and seconds (up to nine hours) you want the fan group to remain off after the ON Timer is complete.
Run While Entry/Exit of Tunnel Mode	Check this feature when you want the fan group to run while the building transitions into or out of tunnel mode. Typically, several fans are allowed to run during the transition to continue effective ventilation. Too many fans can create excessive suction and cause inlets to stick shut.
Use for Proportional Control	Check this feature when you want the fan group to be used in proportional control. When a fan group is included in proportional control, it will be counted in determining the total number of fan groups running. The total number of running fan groups determines the positioning of inlets and curtains. **Not**e: Stir fans cannot be used for proportional control since they are not designed to produce negative static pressure in a building.
Fan Off at Curtain Opening of	Input an opening size at which the fan group should be disabled. In buildings where curtains and fans are used, this is used to turn off fans when any curtain is open enough to provide natural ventilation. This is used only when a position sensor is installed to a curtain and is working correctly and the fan doesn't run during Tunnel mode.
Fan Override Curtain Open Temp	This item is an extension of the Fans Off described above. When the temperature reaches the value you enter, the fan group resumes operations according to its run mode. This is enabled if Fan Off is enabled and is greater than 0.
Devices to Check Opening Size	If only certain curtains are to be used to determine whether the fan should be on or off, select the curtains to use from the list in this box. Only curtains with Positions Sensors install and set to alarm will appear in this box.

Variable-Speed Fan Settings

These include Vari-Pit (hog only), Vari-Sidewall, Vari-Tunnel, Vari-Ridge and Vari-Stir fans.

The RPM of most PSC type fan motors is controlled by varying the amount of power (voltage) applied. The way a PSC motor responds to a given power setting varies considerably between fan motor manufacturers. One motor may require a setting of 50 to run at full speed while another just 35.

Fans always get a five second full power burst (see Full Power Setting below) at start up before adjusting to the specified power setting.

Group	This is the assigned device group. You cannot change this setting through this application.
Uses Sensors	Input the group numbers of the air sensors you want to use for controlling the fan group. The controller uses Shared Sensor Technology (SST) to average the temperature readings of any sensors you want to use to control any device.
Operating Mode	Select the operating mode for the fan group.
Fan On Temp	Input the temperature at which on or above the fan group should turn on. This box is disabled when Run Mode is Timed Only.
Fan On Power Setting	Input a value from 0 (off) to 60 (full power) for the power you want the fan to operate at when the temperature is at or above the ON Temp. This box is disabled when Run Mode is Timed Only.
Fan Off Temp	Input the temperature at which or below the fan group should be turned off. This box is disabled when Run Mode is Timed Only.
Power Ramp Starting Temp	Input the temperature at which power ramping should start. Power ramps from the Fan ON Temp (see above) to the FULL Power Temp (see below) as the temperature rises. This box is disabled when Run Mode is Timed Only.
Full Power Temp	Input the temperature at which the fan group should be operating at the FULL Power Setting you specify (see below). This box is disabled when Run Mode is Timed Only.
Full Power Setting	Input the power setting value the fan group should operate at when the FULL Power Temp is reached (see above). This box is disabled when Run Mode is Timed Only.
Fan Run Mode	Select a run mode for the fan group.
On Timer	This item is enabled for timed fans. Input the number of hours, minutes and seconds (up to nine hours) you want the fan group to run when in a timed mode.
Timed Power Setting	This item is enabled for timed fans. Input the power setting that should be used when the fan is operated on time.
Off Timer	This item is for timed fans. Input the number of hours, minutes and seconds (up to nine hours) you want the fan group to remain off after the ON Timer is complete.

Purge Mode Power Setting	Input the power setting that should be used for this fan when the building is in purge mode. This is enabled only when a purge mode has been set in Minimum Vent Settings.
Run While Entry/Exit of Tunnel Mode	Check this feature when you want the fan group to run while the building transitions into or out of tunnel mode. Typically, several fans are allowed to run during the transition to continue effective ventilation. Too many fans can create excessive suction and cause inlets to stick shut.
Use for Proportional Control	Check this feature when you want the fan group to be used in proportional control. When a fan group is included in proportional control, it will be counted in determining the total number of fan groups running. The total number of running fan groups determines the positioning of inlets and curtains. **Not**e: Variable Stir fans cannot be used for proportional control since they are not designed to produce negative static pressure in a building.
Fan Off at Curtain Opening of	Input an opening size at which the fan group should be disabled. In buildings where curtains and fans are used, this is used to turn off fans when any curtain is open enough to provide natural ventilation. This is used only when a position sensor is installed to a curtain and is working correctly and the fan doesn't run during Tunnel mode.
Fan Override Curtain Open Temp	This item is and extension of the Fans Off described above. When the temperature reaches the value you enter, the fan group resumes operations according to its run mode. This is enabled if Fan Off is enabled and is greater than 0.
Devices to Check Opening Size	If only certain curtains are to be used to determine whether the fan should be on or off, select the curtains to use from the list in this box. Only curtains with Positions Sensors install and set to alarm will appear in this box.

QuickView: Viewing Current Conditions

The Current Conditions QuickView dialog box appears when you click the **View** menu and then select **QuickView**. QuickView lets you quickly compare and view selected data across multiple controllers.

Click the **Select Controllers and Options** button to display a dialog box to allow you to select the controllers and what data that you want to include in the QuickView of current conditions.

Selecting controllers to view in QuickView:

The selecting of the controller is done on the left side of the dialog box.

1. Click the **Select All** button to select all (check) the listed controllers.
2. Click the **Unselect All** button to unselect all (uncheck) the listed controllers.
3. Click each controller to select (check) or unselect (uncheck) them.

Selecting QuickView Information

The right side of the dialog shows what information can be displayed in the QuickView window

1. Click the **Select All** button to select all (check) of the available data.
1. Click the **Unselect All** button to unselect all (uncheck) of the available data.
2. Click each box to select (check) or unselect (uncheck) that data for viewing.

Click the **OK** button to view the Current Conditions QuickView dialog box.

Alarm Definitions

Alarm Type	Description
ADC 0 Volt Error	Malfunction in the power supply or analog circuit on the module. Possible faulty ground going to the controller or station.
ADC 5 Volt Error	Malfunction in the power supply or analog circuit on the module.
ADC 9 Volt Error	Malfunction in the power supply or analog circuit on the module.
Air Sensor Bad	Invalid temperature reading from air sensor.
Feeder Error	The feeder run time has exceeded the set limit, or the feeder off time has exceeded the set limit.
Erase Error	Error erasing FLASH memory.
Voltage Low Error	A low power condition was detected when updating FLASH memory.
Write Error	Error writing parameters, history, or errors to the system FLASH memory.
High/Low Temperature Error	Building temperature exceeded alarm limits.
Module Communication Error	0= Power-up clear expected 1= Undefined command 3= Input buffer overrun 4= Non-printable ASCII character received 5= Data field error 7= Invalid limit set 8= Module not available (wind speed) 9= Wind speed data not available 12= Invalid position 13= Incorrect device module type F9= Framing error in response from slave FA= Unknown response from slave FB= Check sum error on response FC= Time out. Module did not respond in allotted time. FD= Buffer overrun on response from module
Access Point Communication Error	Error communicating with Access Point or PC interface.

Temperature Change Error	An air sensor reading has changed more than 15 degrees from the last reading. The new reading will be marked with an "*" in current conditions, and will be ignored until it reads within 15 degrees of the previous temperature.
Unknown Alarm	An alarm of an unknown condition has occurred.
Digital Alarm	The digital alarm input triggered an alarm condition.
Watch Dog Reset	The program watchdog timer caused the system to reset.
Water Flow Error	The water flow exceeded the set limit.
Water Percent Change Error	The total gallons used in the past 24 has dropped more than the alarm percent drop setting.
High or Low Static Pressure	Static pressure has exceeded or fallen below the limits you specified.
Device Out of Position	The position sensor position did not match the inlet or curtain position.
Position Sensor Invalid Reading	The position sensor received a reading that was outside the calibrated range.

Controller Operating Parameters

Use the parameter sets from your control manual.

Customer Service

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