

**RAPID ENGINEERING. INC.**

**Operator's Manual**  
**for**  
**ICS-II Version 2.5**  
**and Remote Station Operation**

**June 2004**



An Employee Owned Company

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## OVERVIEW OF THE ICS II CONTROL SYSTEM

**All buildings require air.** How the air is used depends on the function and operational requirements of the space. **There are four basic air needs:**

### 1. Heating and Cooling

- a. Heating (Worker comfort, process need and building protection)
- b. Cooling (Worker comfort and process need)

### 2. Ventilation

- a. Cooling (Worker comfort)
- b. Diluting contaminated air (Worker comfort and process need)

### 3. Filtration

- a. Protecting workers
- b. Protecting processes

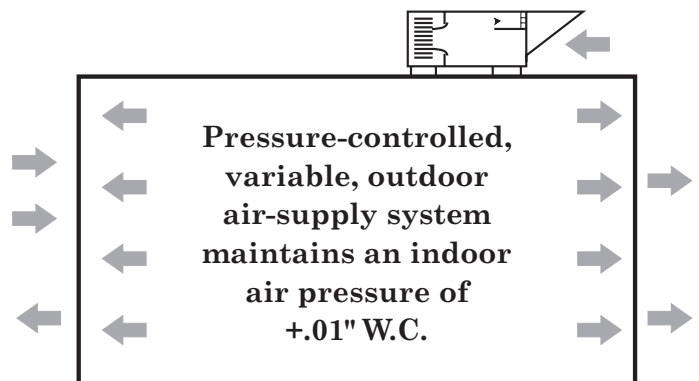
### 4. Replacement

- a. Replacing process exhaust

These demands are extremely dynamic and variable. RAPID air handlers are designed to respond to these demands with variable heat, cooling and ventilation outputs.

## GENERAL

Distribution plays a key part in the success of any HVAC system. The Rapid Air Management System is the most effective means of distributing air throughout the building space. This is accomplished by having all the building's outdoor air needs enter the space through a Rapid air handler. To ensure that this is accomplished, the control system monitors the differential pressure between inside and outside the building. A slight positive pressure (.01" w.c.) is maintained in the building space by continually adjusting the amount of outdoor air introduced by the Rapid air handler. This slight pressure moves **all** the air in the building to the building's relief points, an extremely effective distribution system.



The Intelligent Control System II (ICS-II) is designed to monitor Rapid air handlers to insure the most cost-effective and efficient operating conditions are achieved by the building operator.

## INPUTS

The ICS II control system has been designed to monitor Rapid 4000 Series air handlers with the following information/control points available to the operator:

- |                             |                              |                                    |
|-----------------------------|------------------------------|------------------------------------|
| 1. Occupied Heating Temp.   | 7. Operating Mode            | 12. Percent Outside Air/Return Air |
| 2. Unoccupied Heating Temp. | 8. Time & Date Setting       | 13. Damper Position                |
| 3. Cooling Setpoint         | 9. Pressure (inches w.c.)    | 14. Economizer type and SP         |
| 4. Maximum Discharge Temp.  | 10. Unoccupied Unit Turnoff  | 15. Relative Humidity & SP         |
| 5. Minimum Discharge Temp.  | 11. Low-Temperature Shutdown | 16. Auxiliary Inputs/Outputs       |
| 6. Password Protection      |                              |                                    |

# OVERVIEW OF THE ICS II CONTROL SYSTEM

## DATA OUTPUT

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1. Automatic hourly data collection.
2. Energy consumption.
  - a. Electricity
  - b. Gas
3. Fan run time.

## SOFTWARE ENVIRONMENT

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The control screens are presented in a Windows environment for simplicity and operator ease of use. The screens contain context-sensitive links that allow the operator to move easily around the program.

## MAINTENANCE

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Included in the program are maintenance features that monitor each air handler for up to 43 operating conditions and functions. In the event of a malfunction, the program reports the error, identifies the component or condition/problem and recommends the action to be taken.

## CONTROLLERS

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Each air handler on the system is equipped with a Controller. The Controller is mounted on each air handler and replaces most conventional electromechanical controls. Each air handler operates independently of all other units on the system. Memory retention is provided in the event of power failure or network failure. When power is restored, the air handler will restart and operate based on the current program settings stored in the Controller.

## GENERAL OPERATION

### ■ DESCRIPTION: OPERATING MODES OVERVIEW

Each Intelligent Control air handler is capable of being placed into several modes of operation. These modes generally work **independently of the temperature controls**, however some exceptions are noted in the various temperature control descriptions. In order to fully understand the actions of the ICS II Controller, the user must first determine which mode is in effect and whether the system is operating in the Heating or Cooling Sequence. To do this:

1. Go to the Operating Modes screen. [Click on the Setpoint menu button (see page 18 for example), then click on the Operating Mode button.]
2. Select the air handler you're interested in using the small scrollbar near the Exit button.
3. Note the Current Operating mode shown in the upper portion of the screen.
4. Go to the Current Settings screen for the air handler. [Click on the Air Handler menu button, then select the correct air handler using the small scrollbar at the upper left of the screen.]
5. Study the current temperatures and compare them to the Heating and Cooling Sequence descriptions shown on the following page to determine which sequence is in effect.

### ■ DESCRIPTION: OPERATING MODES

**Start-Up:** A "START-UP" mode occurs when power is applied to the air handler. The "START-UP" period lasts for approximately two minutes on models with modulating outdoor air capability and for a few seconds on other models. When the start-up period is complete, the air handler will automatically go into the mode it was in before power was applied. During the "START-UP" period, the setpoints in the non-volatile memory are checked and the Outside Air and Return Air Dampers are cycled to their end-of-stroke limit stops.

**Off:** In this mode, the air handler will not run (except for override conditions such as flush or exhaust) and all outside dampers are closed. The air handler continues to report its status and other operating conditions to the Network PC or Remote Station.

**Manual Damper:** (This is applicable only to models with modulating outdoor air capability.) Whenever the fan is operating, the mixing dampers are fixed at the damper position set by the operator, except for override conditions such as Flush Mode and Exhaust Mode.

**Auto-Pressure:** (This is applicable only to models with modulating outdoor air capability.) The air handler's pressure transducer compares the pressure inside the building to the pressure outside the building. Whenever the fan is operating, the dampers are automatically positioned to maintain the Pressure Setpoint at all times, except for the following two cases:

1. When the Economizer is active **and more outdoor air is needed for cooling than is needed for pressurization**, the Controller may increase the building pressure above the Pressure Setpoint, since it will bring in as much additional outdoor air as needed to maintain the **Cooling Setpoint**.
2. When the unit is configured for Evaporative Cooling, the Controller will force the AHU to 100% outdoor air whenever it energizes the Evap Cooler.

**Auto-No-Pressure:** (This is applicable only to models with modulating outdoor air capability.) The **Auto-No-Pressure** control works identically to Auto-Pressure, except that the dampers revert to the Manual Damper position during the Cooling Mode unless the Economizer is activated (see Economizer, page 8). Auto-Pressure is generally the preferred mode of operation, however, this Auto-No-Pressure is sometimes appropriate.

# ICS II SEQUENCE OF OPERATION

## GENERAL OPERATION

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### ■ DESCRIPTION: OPERATING MODES (continued)

**Flush and Exhaust Control:** An air handler with the optional Flush or Exhaust Modes provides additional means of controlling temperature, humidity or contaminant levels in the building space. The air handler provides this mode based on an independent control such as a thermostat, humidistat or toxic gas sensor. It operates as described below.

- When signaled to initiate the **Flush Mode**, the air handler will start (if not already on) and provide 100% outside air. Heat or cooling, if needed to maintain the temperature setpoints, will still be supplied to the building.
- When so equipped and signaled to initiate the **Exhaust Mode**, the air handler will start (if not already on), open its outdoor exhaust damper, close its indoor discharge damper, open the return air damper fully and close the outdoor air dampers, providing powered exhaust of the building air while shutting off the burner.

**NOTE:** The Flush and Exhaust signals override the normal operation of the air handler as defined in the other sections of this manual. ( This action takes place whether the air handler is in the OFF, OCCUPIED or UNOCCUPIED modes when the “start” signal occurs.)

The determination of whether the air handler is operating in a Heating or Cooling Sequence is as follows:

- **Heating Sequence:** The air handler is in the **Heating Sequence** when:
  - The room temperature is below the Occupied Space Heating Setpoint, or
  - The room temperature has recently been below the Heating Setpoint and is still below the Occupied Space **Cooling** Setpoint.
- **Cooling Sequence:** The air handler is in the **Cooling Sequence** when:
  - The room temperature is above the Occupied Space Cooling Setpoint, or
  - The room temperature has recently been above the Cooling Setpoint and is still above the Occupied Space **Heating** Setpoint.

Note that the Heating and Cooling Setpoints cannot be set closer than 3° F.

### ■ DESCRIPTION: SCHEDULE PERIODS

The air handler’s operating schedule is comprised of up to 21 **Occupied Periods** per week. All other periods are considered **Unoccupied Periods**. In addition, there is a completely independent schedule available for control of any other device, such as lighting, an exhaust fan, etc. This separate schedule has the same number of Occupied Periods as the main air handler schedule.

# ICS II SEQUENCE OF OPERATION

## HEATING AND VENTILATING

### ■ DESCRIPTION: DIRECT FIRED HEATING

**Occupied Periods:** During an **Occupied Period**, the air handler fan will be “ON”. For models with modulating outdoor air capability (AM or VAV models), the mixing dampers operate according to the Operating Mode selected (e.g., Manual, Automatic Pressure, etc.).

The air handler’s burner output will modulate and cooling outputs will be “ON” or “OFF” depending on the relationship between the building space temperature and the established setpoints.

When in the **Heating Sequence**, the 20% outdoor air damper will open, the burner will light, then modulate to maintain the Occupied Space Heating Setpoint. The control range is  $\pm 2.5^{\circ}\text{F}$ . The discharge temperature will be maintained between the Minimum and Maximum Discharge Setpoint values.

#### **Discharge Temperature Control:**

This control capability allows the customer to specify a constant discharge temperature when room temperature control is not a concern. All ICSII controllers, version 1.7 and higher, can be configured for this operation. To activate the discharge temperature control, a jumper is placed at position A3 on the controller. When configured for constant discharge temperature control, the setpoints should be set as shown above.

<b>Desired Discharge Temperature</b>	<b>Minimum Discharge Setpoint</b>	<b>Maximum Discharge Setpoint</b>
Greater than or equal to 80° F.	80° F.	desired value
Less than or equal to 80° F.	desired value	80° F.

**Notes:** This discharge temperature control option cannot be used with reheat or humidity control. RAPID has elected to continue factory-mounting the discharge sensor on units ordered for discharge temperature control, however, it could be re-located in the field. If it is re-located in the field, proper placement of the sensor within the discharge air stream is critical to prevent nuisance tripping of the high-temperature-limit safety switch.

As a safety feature, if the air handler discharges air colder than the Low-Temperature Shutdown setpoint for longer than five minutes, an error will occur and the air handler will be placed in the “OFF” mode.

When in the **Cooling Sequence**, the burner is shut off and the 20% outdoor air damper is open. However, if configured for DX or chilled water cooling, the 20% damper closes. For models with modulating outdoor air capability (AM or VAV models), the relief output (optional) will energize if the space pressure rises 0.03” w.c. or more **above the setpoint**. If an Economizer type is selected, and the outdoor conditions allow it, outdoor air will be brought into the building for cooling.

**No Burner:** When a RAPID unit is configured and shipped with no burner, as a ventilation/air handler only, all previous heating mode descriptions are non-applicable. The unit will still operate in several modes (such as auto pressure, manual, cooling-mechanical and evaporative), but there are no means for direct-fired heating capabilities. The unit is still capable of programming set schedules (occupied-unoccupied) depending upon the customer’s need.

**Unoccupied Periods:** During any **Unoccupied Period**, the air handler will only run when **heat** is required. The Controller will turn on both fan and burner when the space temperature drops below the Unoccupied Space Heating Setpoint. When on, the air handler will operate in the Operating Mode (e.g., Manual Damper or Auto Pressure) that is currently selected. If the space temperature increases above the Unoccupied Unit Off Setpoint, the air handler will turn off. The Low-Temperature Shutdown works the same as described above.



## ICS II SEQUENCE OF OPERATION

### HEATING AND VENTILATING

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#### ■ DESCRIPTION: STEAM OR HOT WATER HEATING

**Occupied Period:** Control of a steam or hot water coil is accomplished with the analog (modulating) output normally used by the gas valve, and the fan start is delayed for 60 seconds to allow coil warm up. When in the Heating Sequence, the controller will modulate the heating-coil control valve to maintain the building Occupied Space Heating Setpoint. The discharge temperature will be maintained between the Minimum and Maximum Discharge Setpoint values. The Low-Temperature Shutdown works the same as described above.

**Unoccupied Period:** Control during this period is the same as for Direct-Fired Heating.

#### ■ DESCRIPTION: THE HEATING AND VENTILATING SCREEN

For direct-fired models, the burner flame in the on-screen graphic is visible and changes size relative to the actual flame's size. The dampers modulate on screen to reflect their actual position.

### COOLING

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#### ■ DESCRIPTION: OUTDOOR AIR (ECONOMIZER) COOLING

There are two types of Economizer control:

- The **Dry Bulb Economizer** is always available. Its logic assumes that it is always desirable to use outdoor air for cooling whenever the outdoor temperature is below a user-specified changeover value. Whenever the outdoor temperature is **above** the changeover value, the air handler will operate with the amount of outdoor air specified by the Manual Damper or Pressure Setpoint, depending on the current Operating Mode.
- The **Enthalpy Economizer** requires that the air handler be equipped with indoor and outdoor humidity sensors. Its logic calculates the total energy (enthalpy) of both the indoor and outdoor air by using the temperature and humidity measured by the ICS II controller, then selects the air with the **lowest** energy content for cooling. The Economizer Control may be de-activated if desired.

#### **Dry Bulb Economizer operation**

When:

- the air handler is in the Cooling Sequence and in the Auto-Pressure or Auto-No-Pressure Mode, and
- the outdoor air temperature is below the Economizer Changeover Setpoint, then
- the Dry Bulb Economizer control brings in up to 100% outdoor air to maintain the Occupied Space Cooling Setpoint. Bringing in this additional outdoor air means that the building pressure **may rise above the Pressure Setpoint**. If it rises 0.03" w.c. or more **above the setpoint**, the optional Relief Output will be energized.

If, when bringing in outdoor air for cooling, the discharge temperature falls below the Minimum Discharge Temperature Setpoint, the amount of outdoor air will be reduced enough so that the discharge air temperature remains at or above the Minimum Discharge Temperature Setpoint.



## ICS II SEQUENCE OF OPERATION

### Enthalpy operation

When:

- the air handler is in the Cooling Sequence and in the Auto Pressure Mode, and
- the outdoor air enthalpy (determined by outdoor air temperature and humidity) is below the room enthalpy, then
- the enthalpy economizer control brings in up to 100% outdoor air to cool the building.

See the Dry Bulb Economizer discussion above for Relief Output operation and Minimum Discharge Temperature control.

### ■ DESCRIPTION: EVAPORATIVE COOLING

When so equipped, operating in the Cooling Sequence and with the burner shut off, the 20% outdoor air damper opens, the mixing dampers are positioned for 100% outdoor air (when in Auto Pressure mode) and the cooling output energizes. **Note:** This option is not available for AR models.

### ■ DESCRIPTION: MECHANICAL COOLING

The 20% outdoor air damper is closed at all times during the Cooling Sequence when the air handler has a mechanical cooling system.

**DX (refrigerant) Coil Control:** When in the Cooling Sequence, the burner is shut off and the cooling output(s) will energize in sequence to maintain the room at the Occupied Space Cooling Setpoint. The control range is  $\pm 1.5^{\circ}\text{F}$ . If an Economizer is selected and the Operating Mode and outdoor conditions allow it, outdoor air also will be brought into the building for cooling.

**Chilled Water Coil Control:** When in the Cooling Sequence, the burner is shut off and the cooling output modulates to maintain the room at the Occupied Space Cooling Setpoint. If an economizer type is selected and the Operating Mode and outdoor conditions allow it, outdoor air also will be brought into the building for cooling.

### ■ DESCRIPTION: THE COOLING SCREEN

**When evaporative cooling is present and energized,** the cooling section of the air handler graphic turns light blue.

**When mechanical cooling is present and energized,** the cooling section of the air handler graphic displays one bar of light blue for each stage of energized cooling.

**For chilled water cooling,** the screen shows the approximate opening percentage of the chilled water valve. The mixing dampers always display their actual position.

### HUMIDITY CONTROL

#### ■ DESCRIPTION: HUMIDITY CONTROL WITH A HEATING-ONLY SYSTEM

The RAPID Humidity Control Algorithm (HCA) is an optional feature and is only active during the Occupied Period. It is enabled by setting the Relative Humidity Setpoint to a value less than 95%.

Once enabled, the HCA continuously monitors the relative humidity in the space. If the relative humidity reaches the Humidity Setpoint, the air handler is forced into the Heating Sequence, the burner is ignited and the space temperature is raised until the humidity falls below the setpoint. This occurs independently of the Occupied Space Heating or Cooling Setpoints and may warm the space above those Setpoints.

The Relief Output will not energize when the HCA is enabled until the **building space temperature is at least as warm as the outdoor air temperature**. This prevents introducing warm, potentially humid air, onto building contents that may still be cool from the previous night. Since there is little sense in trying to “cool” with air that is warmer than the room, this is more of a safety feature than a practical concern. The HCA may be disabled by entering a setpoint of higher than 95%.

When the HCA is employed, an appropriate humidity sensor must be connected to the Controller and located in a representative spot.

Further specifications for the Humidity Control Algorithm can be found in the “Intelligent Control System Service Technician Manual”.

#### ■ DESCRIPTION: HUMIDITY CONTROL WITH MECHANICAL COOLING (REHEAT)

The RAPID Reheat Control is an optional feature and is only available when the air handler also has mechanical cooling and is configured for Reheat Control. The 20% outdoor air damper is closed at all times during the Cooling Sequence. Note that during the **Heating** Sequence, Humidity Control works as described above, except that the relief output is De-energized *if the space pressure rises 0.03” w.c. or more above the setpoint, and is NOT restricted by the indoor vs. outdoor temperature*.

**Reheat with DX Coil Cooling:** If the space relative humidity reaches the Humidity Setpoint, the cooling output(s) will energize in sequence to maintain the room at the **Humidity** Setpoint. The control range is  $\pm 2\%$ RH.

If, while the cooling is energized to control the space relative humidity, the room **temperature** falls below the Occupied Space Cooling Setpoint, the Reheat Output also will be energized. (This output must be connected to a solenoid or relay which turns on a heating coil to warm the discharge air.)

**Reheat with Chilled Water Coil Cooling:** If the space relative humidity reaches the Humidity Setpoint, the cooling output modulates to maintain the room at the **Humidity** Setpoint. The control range is  $\pm 2\%$ RH.

If, while the cooling is energized to control the space relative humidity, the room **temperature** falls below the Occupied Space Cooling Setpoint, the (digital) Reheat Output also will be modulated to maintain the Cooling Setpoint. (This output must be connected to a control valve which modulates a heating coil to warm the discharge air.)

#### ■ DESCRIPTION: THE HUMIDITY CONTROL SCREEN

When cooling is present and energized, the cooling section of the air handler graphic displays one bar of light blue for each stage of energized cooling. (A light red coil section is displayed whenever the reheat output is energized.)

## ICS II SEQUENCE OF OPERATION

### MISCELLANEOUS

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**Auxiliary Output:** One of the air handler's digital outputs can be turned on by a variety of conditions that are monitored by the Controller. These conditions include the time of day, a rise in any analog input level, be it building pressure, temperature, humidity level, damper position, damper control mode, flush, exhaust mode, start-up mode or off mode. The output also can be configured to work in conjunction with the unit schedule, or can be placed on a schedule completely different than that of the unit.

**NOTE:** Units that are being controlled by the 300 Remote Station are not capable of configuring the auxiliary output.

**Third-Party Interface:** One input is available to monitor an external signal which is intended to turn the air handler on and off. This signal can be from a third-party DDC system, a manually initiated override switch, or any other switching control device.

When the external signal is present, the air handler is placed in the Occupied Period operation. When the external signal is removed, the air handler is placed back into its normal operating schedule.

### **Under-pressure "Energy Alert" Control operation (Patented)**

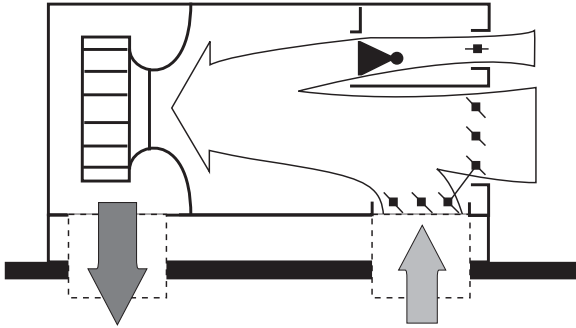
When:

- the air handler is in an Occupied Period and in the Automatic Pressure Mode, and
- has been unable to maintain a building pressure within .01" w.c. of the pressure setpoint for ten (10) consecutive minutes, then
- the control system will place the air handler in Unoccupied Period operation and Minimum Outside Air position. This will be maintained for twenty (20) minutes or until the under-pressure condition has been corrected. The control system will then return the unit to the previous mode (e.g., Occupied Period and Automatic Pressure Mode).

## 4000 SERIES MODEL TYPES

### Rapid 4000 Series: Four Basic Cabinet Configurations

The software configuration is factory set to match the model configuration and the standard options ordered with the air handler.

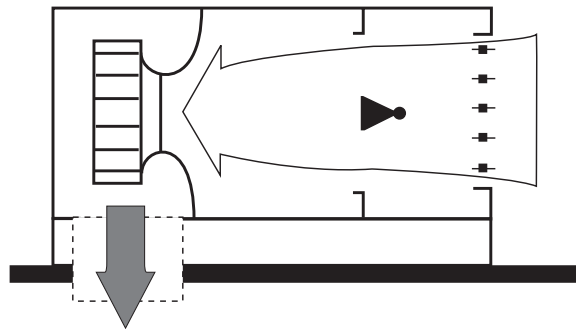


#### AM: AIR MANAGEMENT MODELS

**Design:** Variable outdoor air from 100% to 20%, and a modulating burner with a 25:1 turn-down ratio. Discharge air volume is fixed.

**Function:** Automatically responds to building pressure and temperature needs.

**Application:** Used in industrial and commercial buildings that have air quality and air management requirements for health, safety, comfort, and economy.

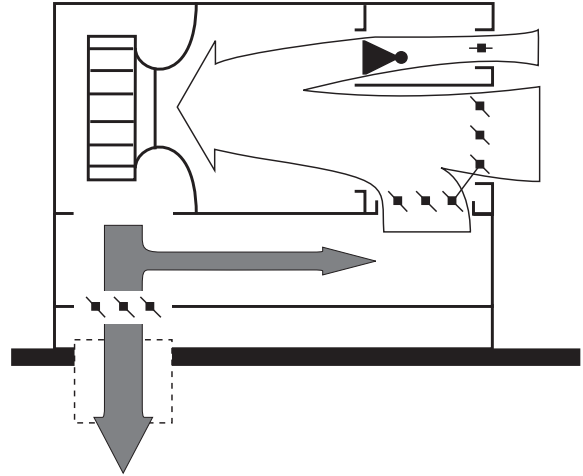


#### MUA: MAKE-UP AIR MODELS

**Design:** Fixed 100% replacement air.

**Function:** Supplies direct replacement air for building mechanical exhaust.

**Application:** Used as make-up air for paint booths and other industrial processes which incorporate mechanical exhaust.

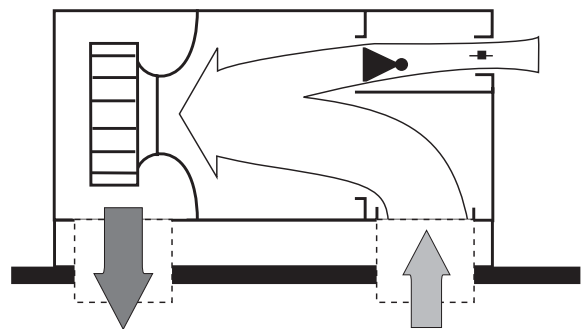


#### VAV: VARIABLE AIR VOLUME MODELS

**Design:** Discharge air volume is variable.

**Function:** Works the same as the AM Model, except all recirculated air passes through a by-pass section, not the building.

**Application:** Used where building pressurization is desired and where contaminants produced by the industrial or commercial process should not be recirculated.



#### AR: AIR ROTATION MODELS

**Design:** Fixed 80% air rotation rate and 20% outdoor air replacement rate.

**Function:** Provides efficient, low-cost heating where minimum ventilation rates are required.

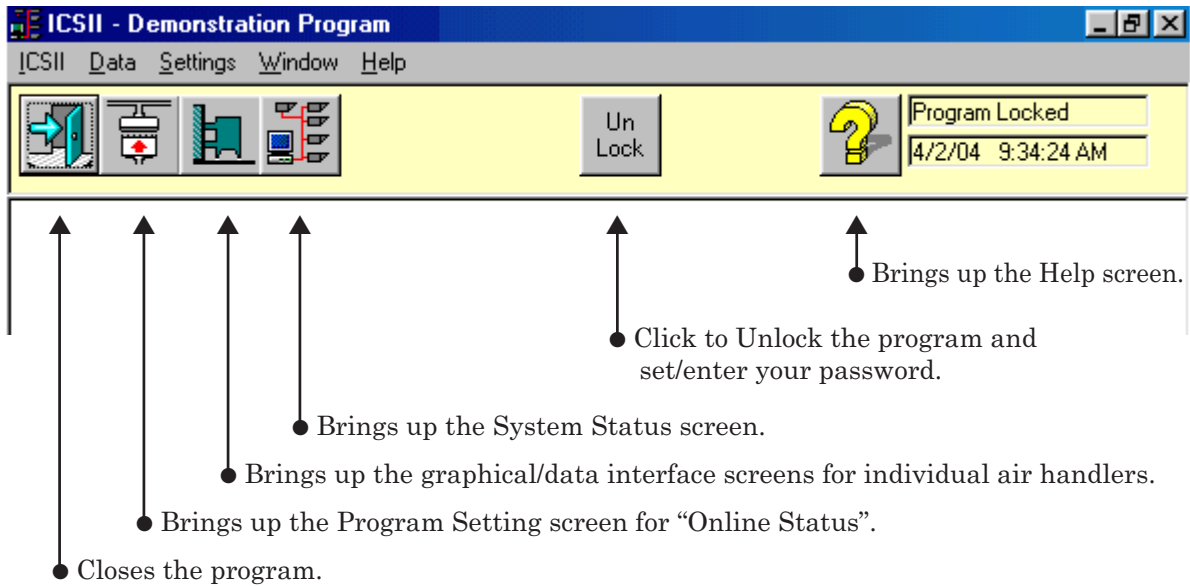
**Application:** Used in warehouses, distribution centers, retail outlets, etc.

# SETTING UP THE ICS II PROGRAM

## THE MENU BAR ICONS

The illustrations below show the menu bar options available within the ICS II program.

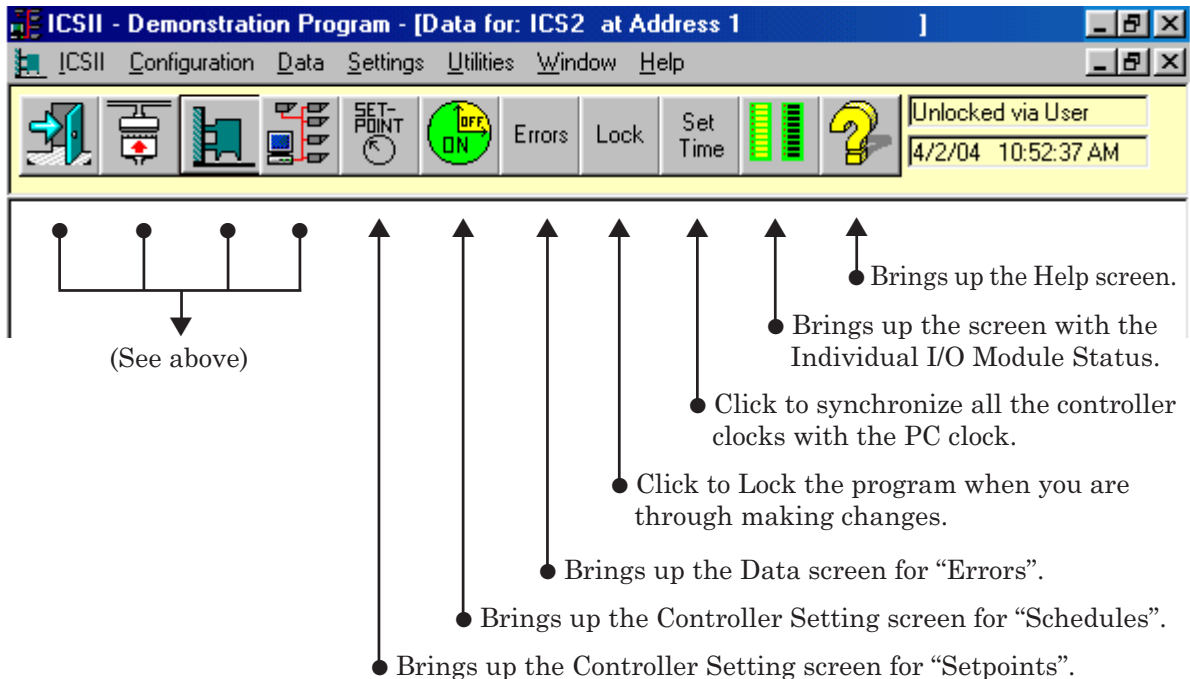
Below are the options available when you first launch the ICS II program.



The screenshot shows the menu bar of the ICSII - Demonstration Program. The menu bar includes: ICSII, Data, Settings, Window, and Help. The toolbar contains icons for: a door with an arrow, a control panel, a building, a computer monitor, an 'Un Lock' button, and a question mark icon. A status box on the right displays 'Program Locked' and the date/time '4/2/04 9:34:24 AM'. Arrows point from the icons to the following descriptions:

- Door icon: Closes the program.
- Control panel icon: Brings up the Program Setting screen for "Online Status".
- Building icon: Brings up the graphical/data interface screens for individual air handlers.
- Computer monitor icon: Brings up the System Status screen.
- 'Un Lock' button: Click to Unlock the program and set/enter your password.
- Question mark icon: Brings up the Help screen.

Below are the options available once you Unlock the ICS II program.



The screenshot shows the menu bar of the ICSII - Demonstration Program after being unlocked. The menu bar includes: ICSII, Configuration, Data, Settings, Utilities, Window, and Help. The toolbar contains icons for: a door with an arrow, a control panel, a building, a computer monitor, 'SET-POINT', a green 'OFF ON' button, 'Errors', 'Lock', 'Set Time', a battery level indicator, and a question mark icon. A status box on the right displays 'Unlocked via User' and the date/time '4/2/04 10:52:37 AM'. Arrows point from the icons to the following descriptions:

- Door icon: (See above)
- Control panel icon: (See above)
- Building icon: (See above)
- Computer monitor icon: (See above)
- 'SET-POINT' icon: Brings up the Controller Setting screen for "Setpoints".
- 'OFF ON' button: Brings up the Controller Setting screen for "Schedules".
- 'Errors' icon: Brings up the Data screen for "Errors".
- 'Lock' button: Click to Lock the program when you are through making changes.
- 'Set Time' icon: Click to synchronize all the controller clocks with the PC clock.
- Battery level indicator: Brings up the screen with the Individual I/O Module Status.
- Question mark icon: Brings up the Help screen.

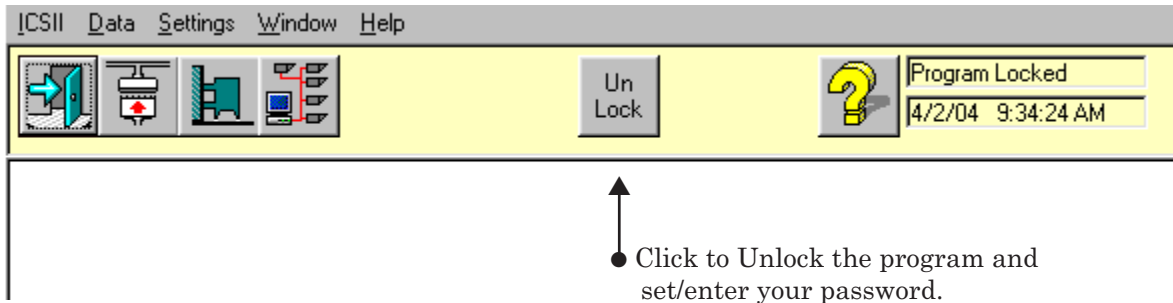
# SETTING UP THE ICS II PROGRAM

## SETTING UP THE ICS II PROGRAM

Follow the steps on pages 14-16 to set up your ICS II program.

### 1. Unlock the program.

Click the Unlock button. A password-entry screen will appear (see page 21). The password set at the factory is “nothing” (i.e., you can simply press the **Enter Password** button to enter the main program).

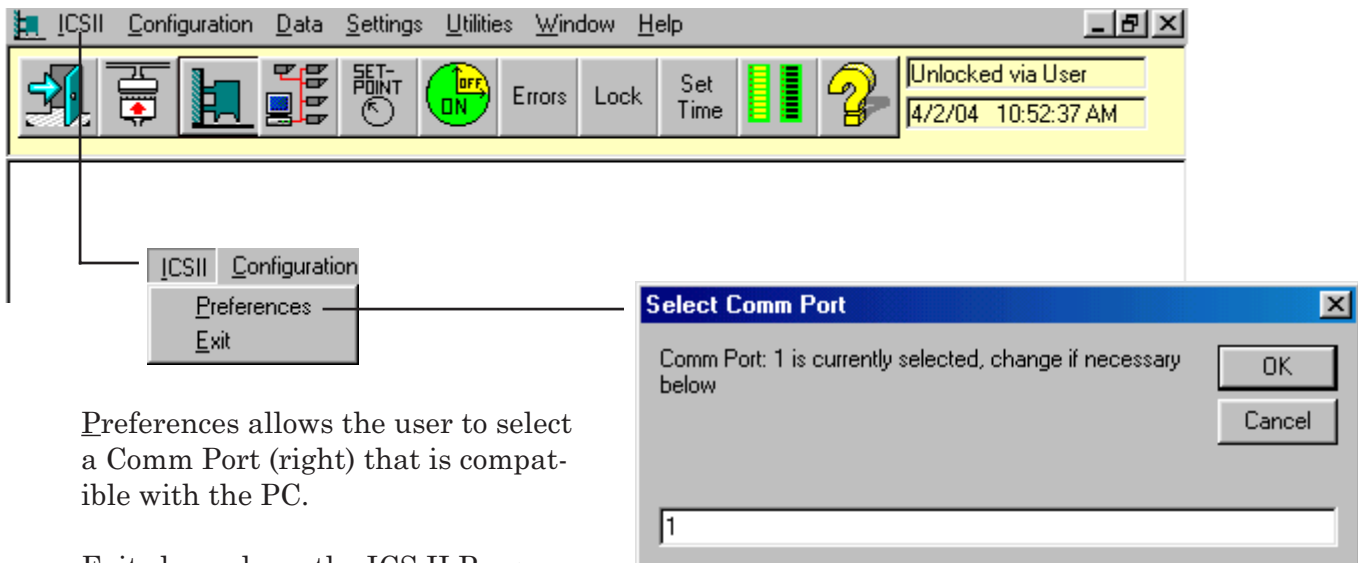


### 2. Create a password.

Follow the instructions in the Password Entry screen to create your own password. (See the illustration on page 21.) You will need to enter your new password in the future to make additional program changes.

### 3. Select a Comm Port.

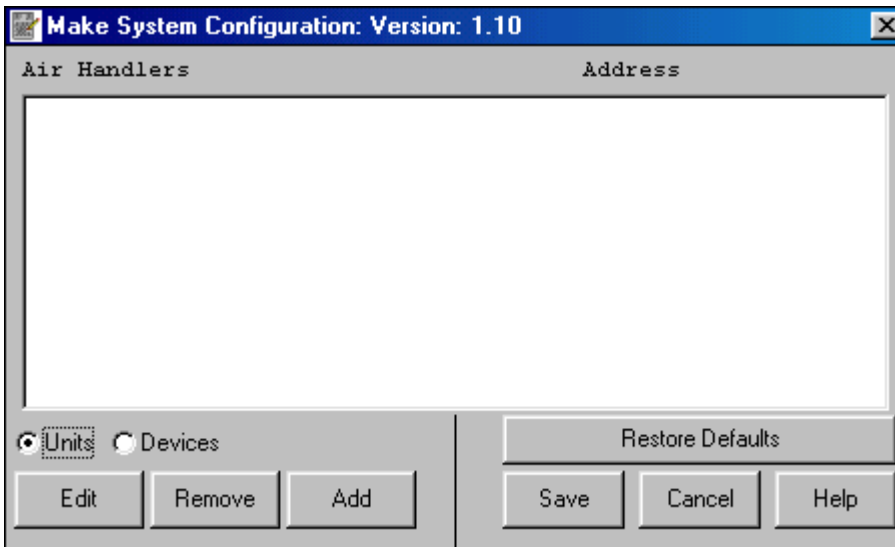
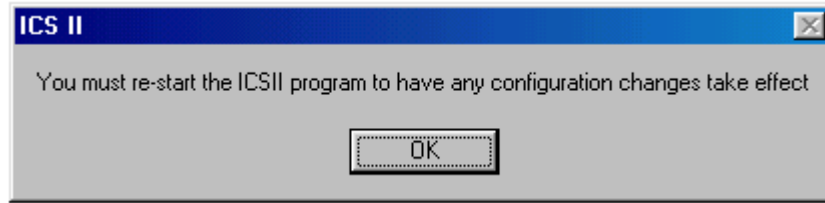
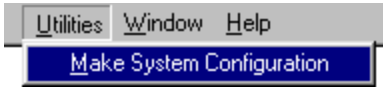
Once you have entered a valid password, the menu options below will be available to you. From the ICS II menu, select Preferences and then select a Comm Port.



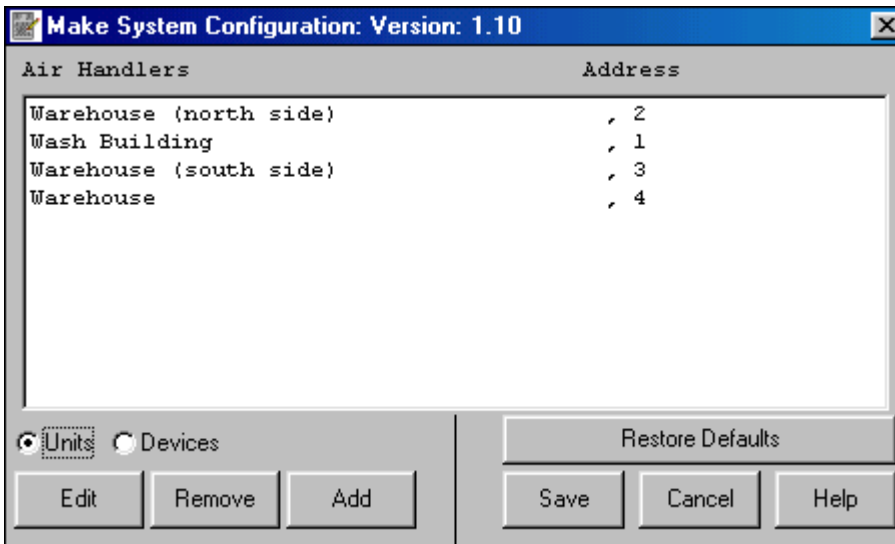
# SETTING UP THE ICS II PROGRAM

## 4. Configuring your system

From the **Utilities** menu, select **Make System Configuration**. The screen below will appear reminding you that you “must restart the ICS II program to have any configuration changes take effect.”+ Click OK.



Once the screen on the left appears, click on the **Add** button to add new units to the network. (See page 16 for information about how to add new units.)



Once new units have been added to the network, use this screen to edit or remove them (by clicking on a unit and then clicking on **Edit** or **Remove**).



# SETTING UP THE ICS II PROGRAM

## 4. Configuring your system (continued)

The screen below is shown after selecting “Add” or “Edit” from the previous screen.

**Add/Modify Air Handler**

Name: Warehouse (north side)

Address: 2

CFH: 4400

Controls Type:  310 Controller  
 ICSII Controller

Motor KW:

Calculate a new KW

Save Cancel Help

**To add a new unit**, give it a descriptive name, assign it an address, select its CFH and choose the type of controller to be used with this unit.

**To make changes to an existing unit's configuration**, simply change any of the existing settings.

**Add/Modify Air Handler**

Name: Warehouse (north side)

Address: 2

CFH: 4400

Controls Type:  310 Controller  
 ICSII Controller

Motor KW: 0.59

Calculate a new KW

Change or recalculate KW

Motor HP: 1 (selected), 1.5, 2, 3, 5, 7.5, 10, 15

Horsepower Used (%): 80%

Derived KW: 0.5968

Save Cancel Help

Once a unit's basic settings have been configured, select **Calculate a new KW** to display the additional information shown. You now may configure the power-usage characteristics of the selected unit. Once you have made the appropriate changes in value(s), press **Save**.

Continue to add new units until you have configured your entire system.

# ICS II PROGRAM MENU: SETTINGS

## ■ Settings: Setpoints

Each setpoint can be displayed and changed from the screen shown below. Clicking on a setpoint data box displays controls (as shown in the dotted area) which allow you to change that setpoint.

### Menu selection:



### Icon shortcut:



SetPoints	Schedules	Operating Mode	Auxiliary Output
Discharge Air Temp. Minimum	12.8°C	Enthalpy Econ/DryBulb/None	Dry-Bulb
Discharge Air Temp. Maximum	35.0°C	Dry-bulb Economizer	18.3°C
Low Temperature Shutdown	4.4°C	Relative Humidity	60%
Pressure	2.5 pa		
Damper Position (Manual Mode)	30%		
Occupied Space Cooling	22.8°C		
Occupied Space Heating	21.1°C		
Unoccupied Space Heating	11.7°C		
Unoccupied Unit Off	14.4°C		

## ■ Settings: Schedules

Schedules are defined as times of the day that are blocked out for **OCCUPIED** operation. Any time covered by any one or more of the schedules will be an occupied time. Options include shortcuts for programming 24-hours-a-day, seven-days-a-week operation, and for clearing a highlighted schedule.

### Menu selection:



### Icon shortcut:

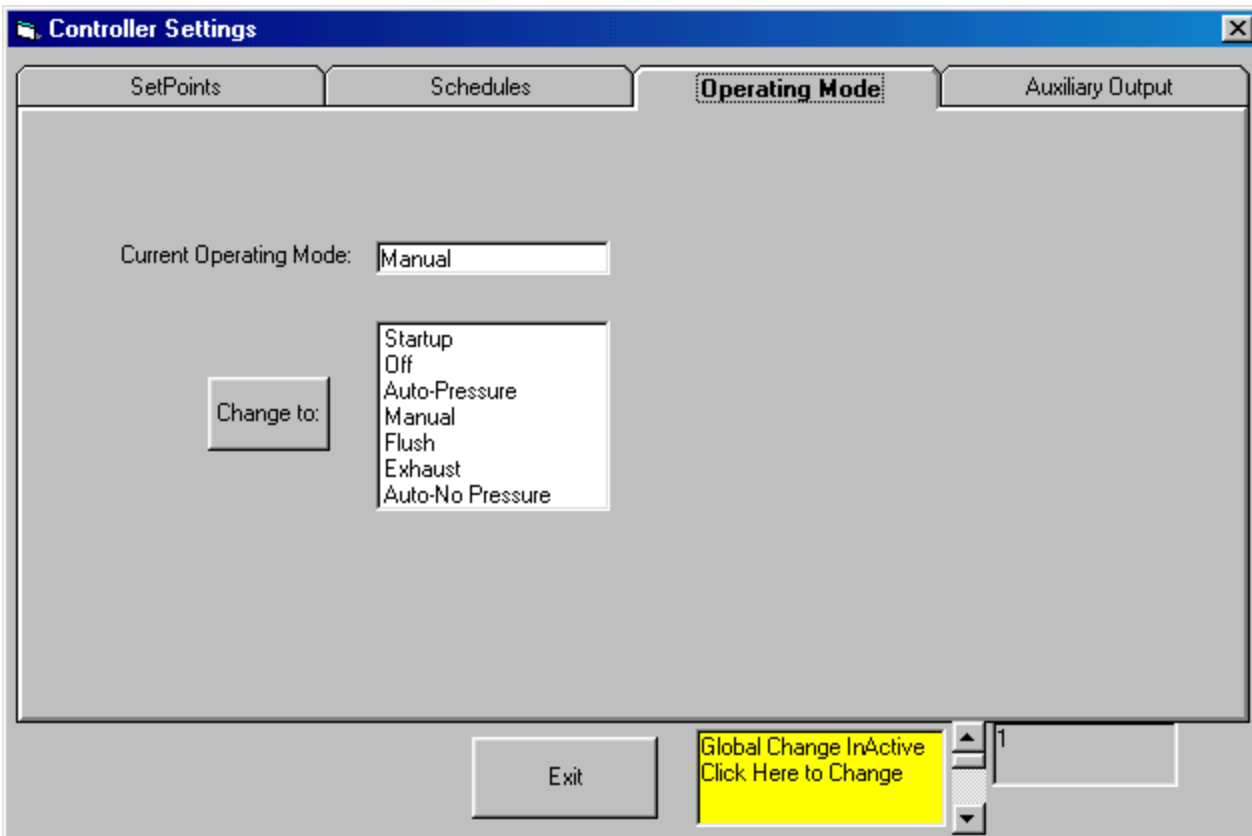
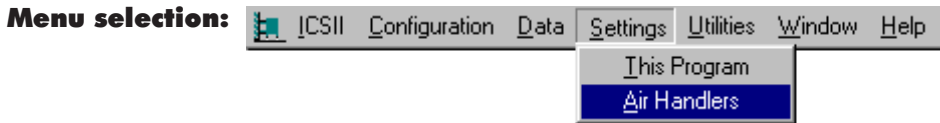


Schedules	Start	Stop
Air Handler Schedule	Sun 8:0	Sat 22:0
01: Sunday 08:00 To Saturday 22:00	Sun	Sat
02: ----	Mon	Mon
03: ----	Tue	Tue
04: ----	Wed	Wed
05: ----	Thu	Thu
06: ----	Fri	Fri
07: ----	Sat	Sat
08: ----		
09: ----		
10: ----		
11: ----		
12: ----		
13: ----		
14: ----		
15: ----		
16: ----		
17: ----		

## ICS II PROGRAM MENU: SETTINGS

### ■ Settings: Operating Mode

This screen displays the current operating mode. Select a mode from the list and click on **Change To:** to initiate the change. These modes are described in detail on pages 5 and 6.

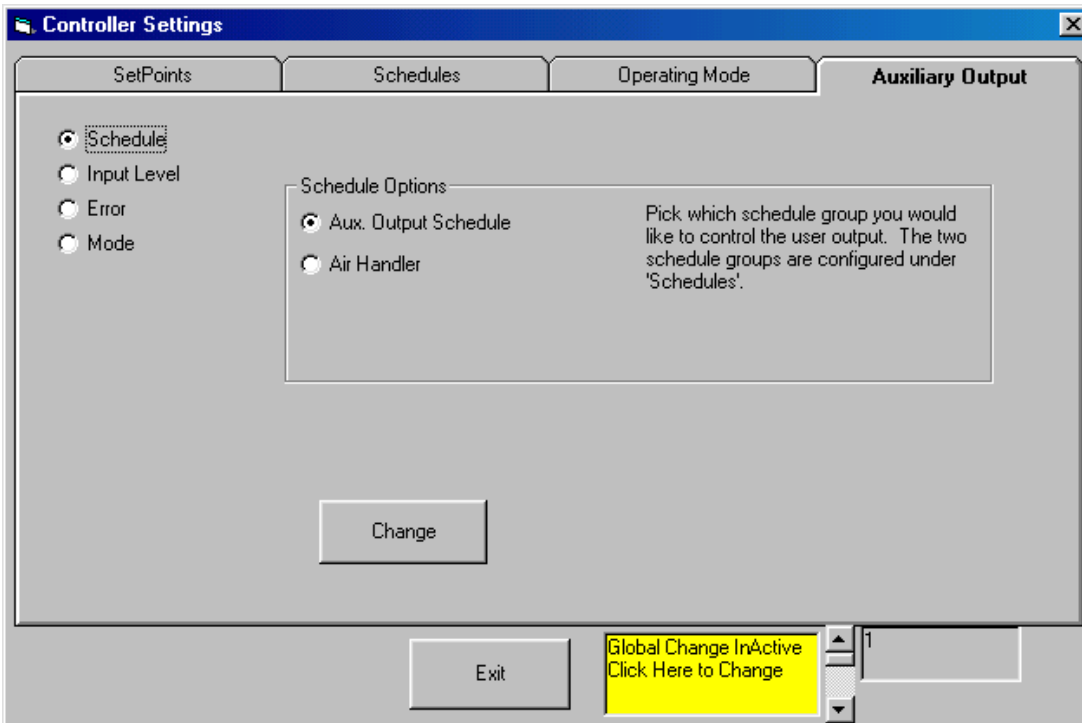
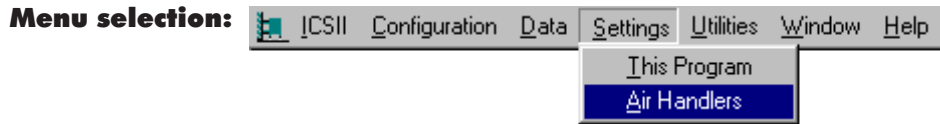


Note: When the “Global” box says “inactive,” only the unit shown is changed. When the “Global” box says “active,” **all** units will be changed.

# ICS II PROGRAM MENU: SETTINGS

## ■ Settings: Auxiliary Output

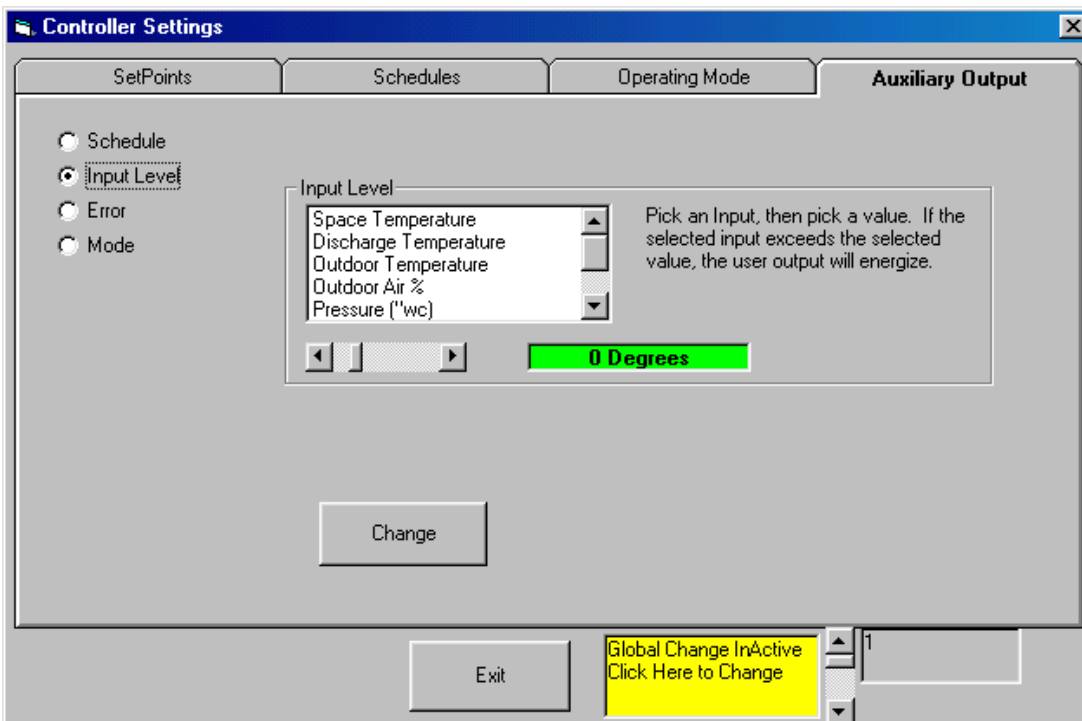
This screen enables turning on a controller output (the "auxiliary output") based on a variety of conditions selected by the user.



### Auxiliary Output

#### ➤ Schedule

This option links the auxiliary output to the auxiliary schedule (see page 17) and turns it on whenever the auxiliary schedule is "on".



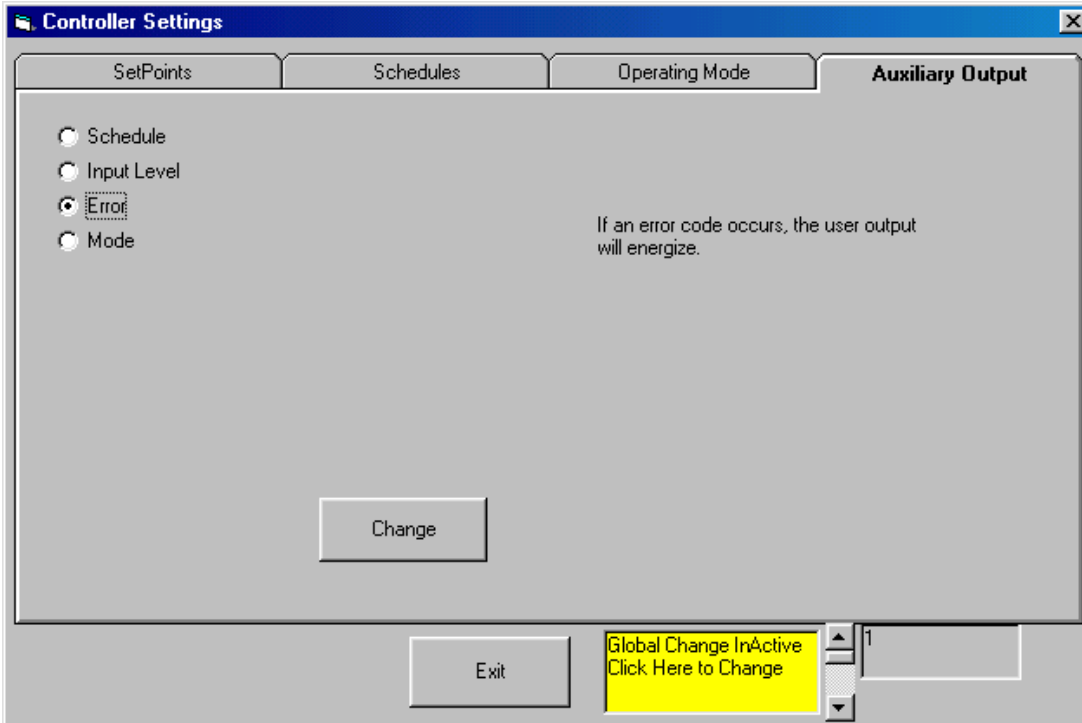
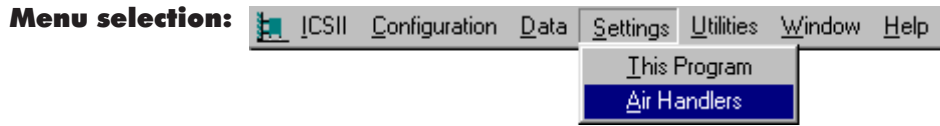
### Auxiliary Output

#### ➤ Input Level

This option links the auxiliary output to a variety of inputs monitored by the Controller. For example, selecting "Space Temp." with a setpoint of 80° F. will turn the auxiliary output on when the space temperature exceeds 80°.

# ICS II PROGRAM MENU: SETTINGS

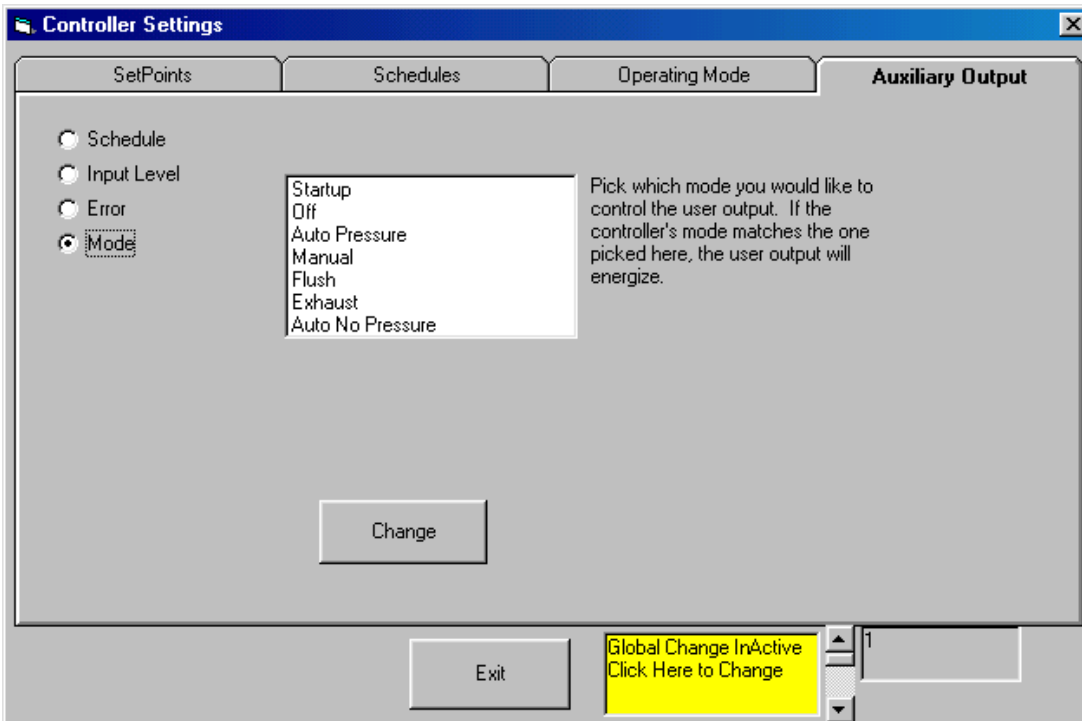
## ■ Settings: Auxiliary Output



### Auxiliary Output

#### ⇒ Error

This option turns on the auxiliary output whenever an error occurs.



### Auxiliary Output

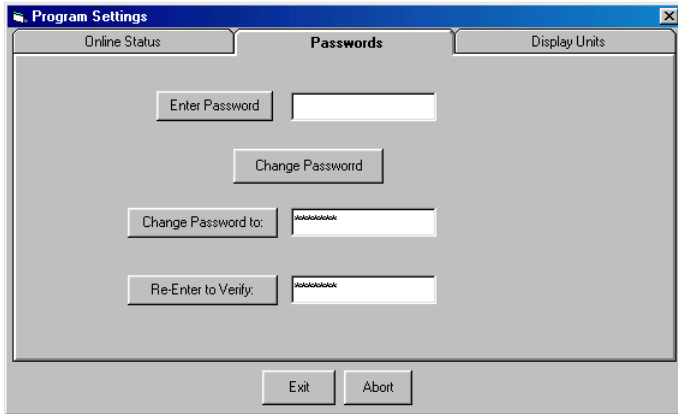
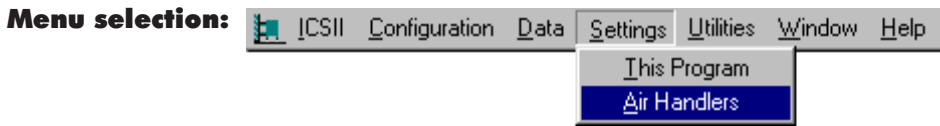
#### ⇒ Mode

This option turns on the auxiliary output whenever the selected mode is active.

# ICS II PROGRAM MENU: SETTINGS

## ■ Settings: This Program

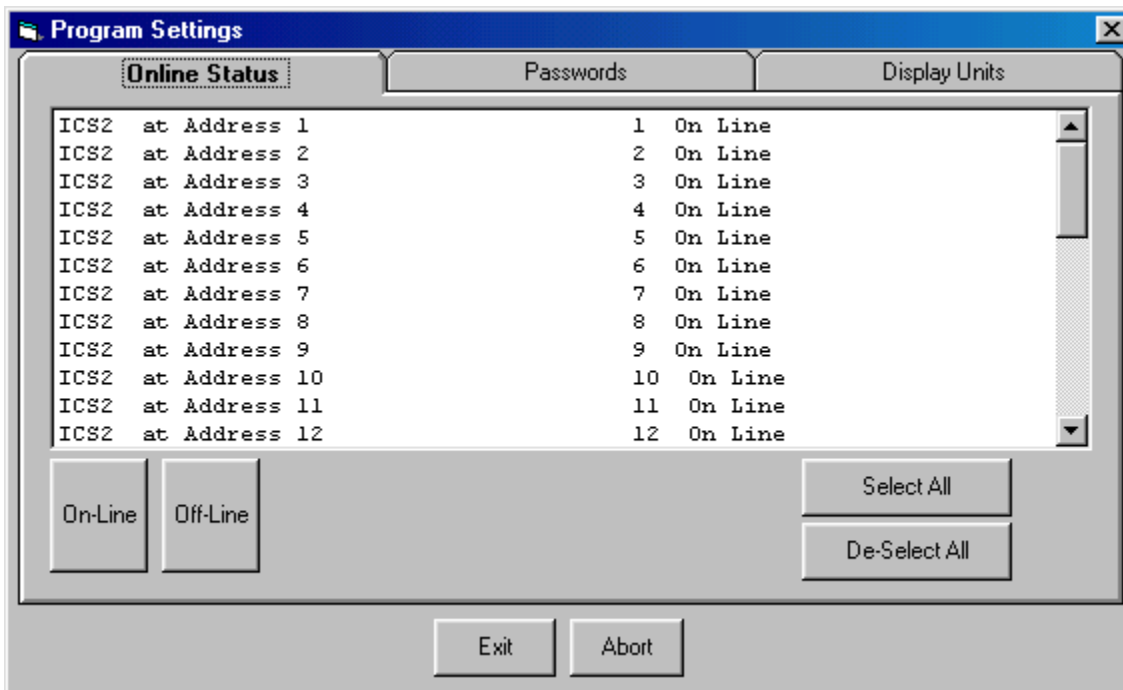
This group of screens allow setting several less-used program features.



**Password:** Enter or change a password.



**Display Units:** Select either Metric or English as the program's unit of measure.



**Online Status:** Bring an Air Handler ON-LINE or OFF-LINE.

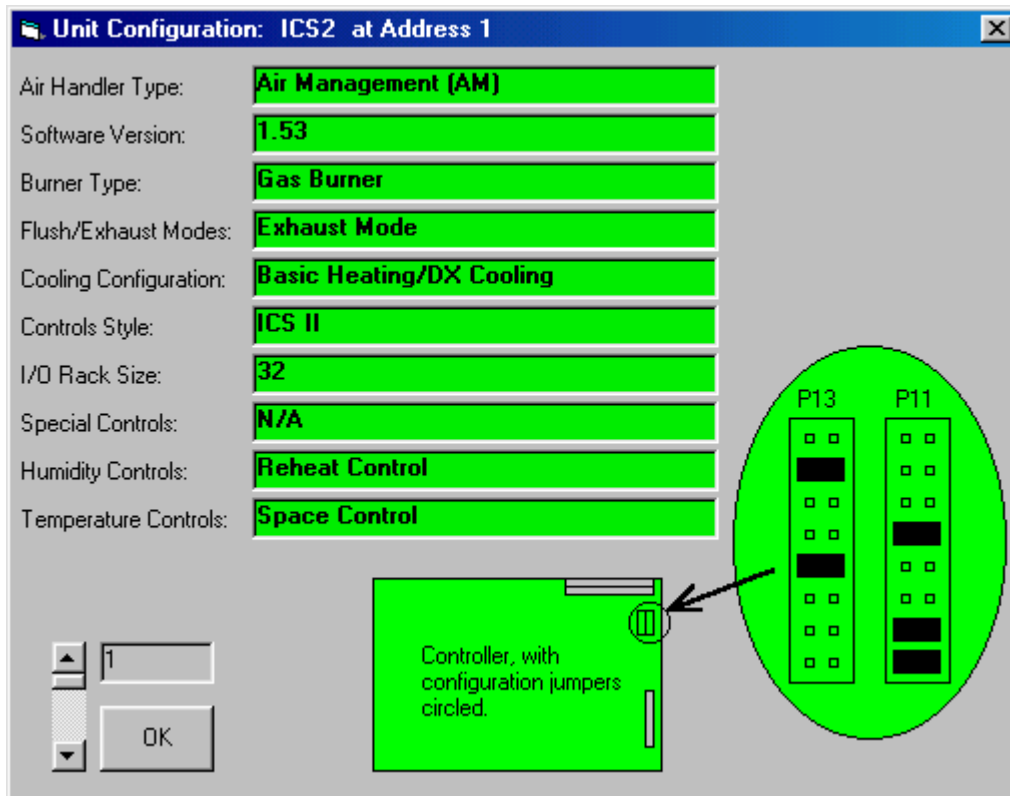
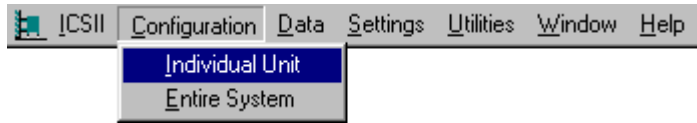
**Note:** ON-LINE means communications between the PC and controller are enabled. OFF-LINE means communications are disabled. Bringing a unit ON-LINE also updates the PC with all current controller settings.

# ICS II PROGRAM MENU: CONFIGURATION

## ■ Configuration: Individual Units

Each Air Handler has a controller that is configured to control its operation. This window shows where the “jumpers” are configured on the controller. The graphic shows how the “jumpers” were set at the last power-up. Other information such as controller software version, cooling type, etc. also is displayed here.

### Menu selection:



↑ Use the scroll bar to view other air handlers on the system

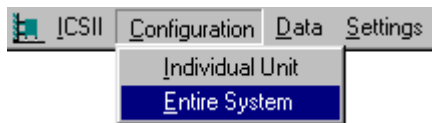


# ICS II PROGRAM MENU: CONFIGURATION

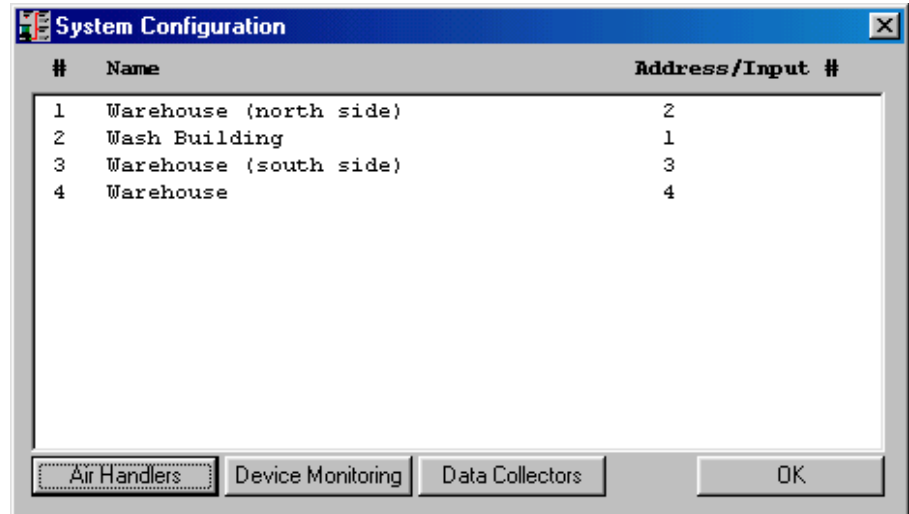
## ■ Configuration: Entire System

In this case, a “System” is one or more controllers working with the PC program. The PC program configures each unit to monitor and display data from the controller. The configuration options are shown below.

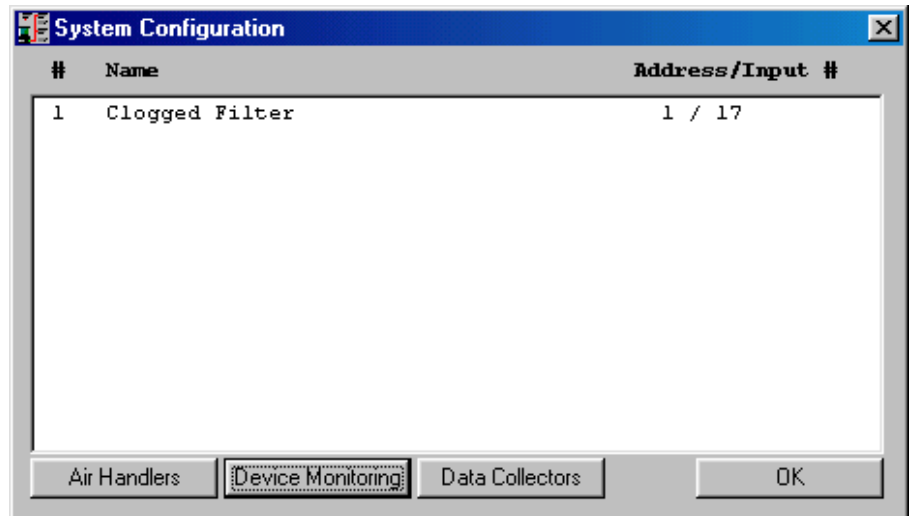
### Menu selection:



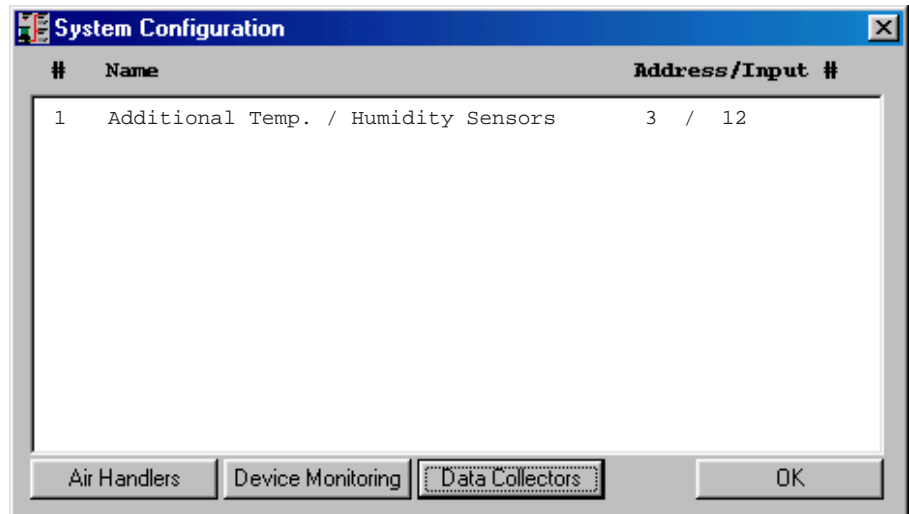
**Air Handlers:** Displays each Air Handler, its address, energy information, etc.



**Device Monitoring:** Displays the devices monitored by each Air Handler



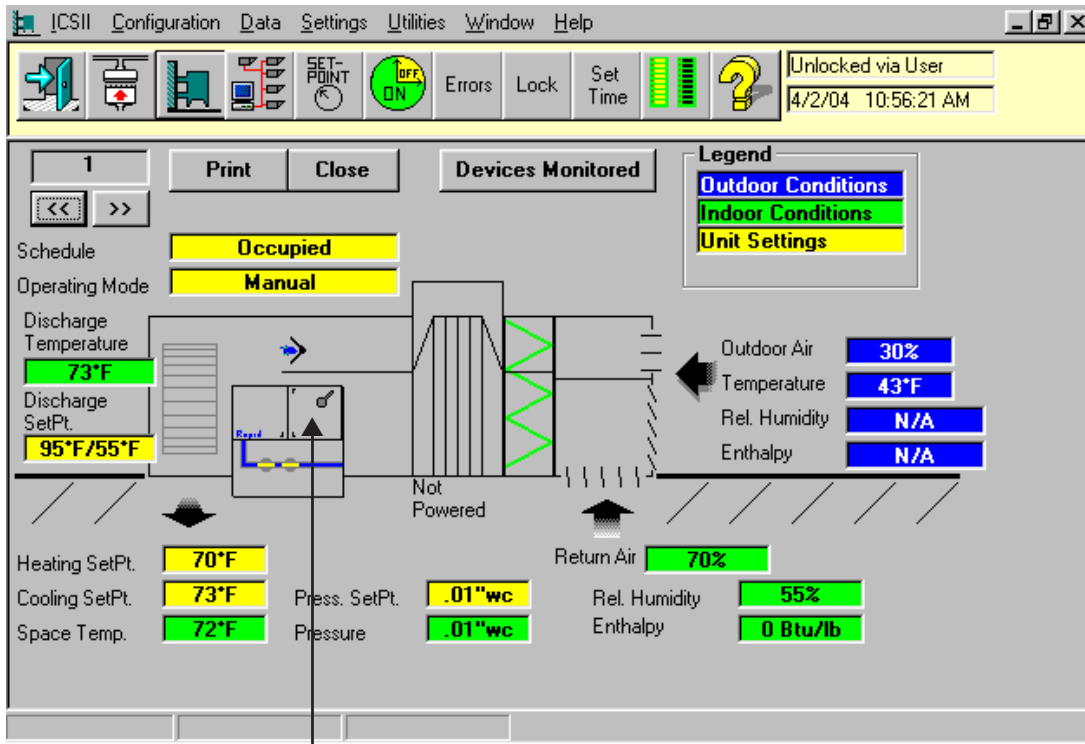
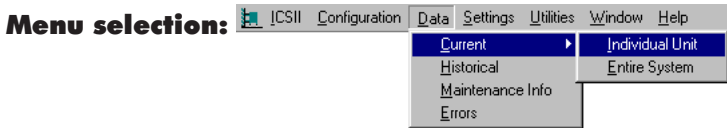
**Data Collectors:** Displays the Data Collectors associated with each Air Handler.



# ICS II PROGRAM MENU: DATA

## ■ Data: Current: Individual Unit

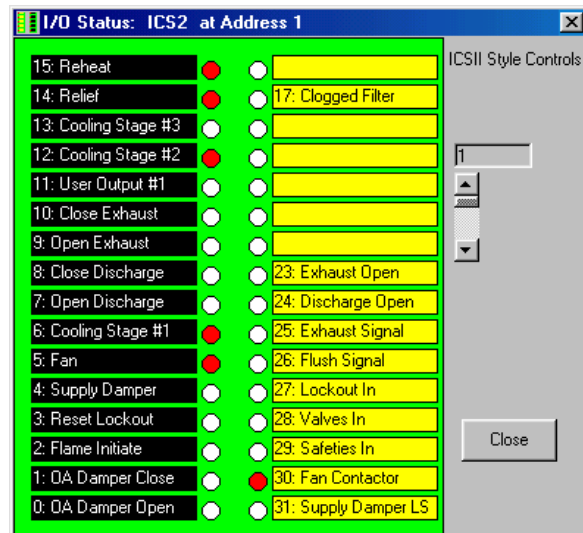
This screen displays the current operating conditions of the individual units on the system. Each unit on the system can be displayed here for more in-depth data. The unit is graphically represented with animations showing the various moving parts on the Air Handler. Additional screens may be accessed from this screen by clicking on the individual data boxes. For instance, clicking on the **Operating Mode** data box, will bring up the **Change Mode** screen; clicking on any setpoint data box will bring up the **Setpoints** screen. This provides easy access to all units operating within the system.



Other information also is displayed such as:

- Any devices monitored by the controller
- The current Occupied/Unoccupied schedule

● **Note:** Clicking on the Control Panel in the Air Handler graphic displays the status for the unit's digital I/O points (right).

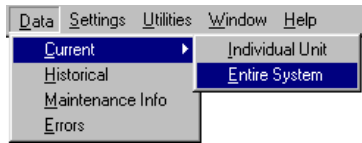


# ICS II PROGRAM MENU: DATA

## ■ Data: Current: Entire System

The entire system's operating data can be viewed from this window. The data is in a spreadsheet-style format. For more in-depth information on any individual unit, click on the line that contains the unit you would like to view. This will bring up the **Individual Air Handler** screen.

### Menu selection:



### Icon shortcut:



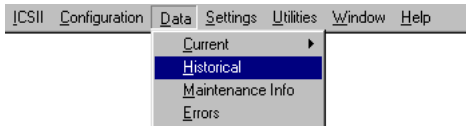
**Note:** Column widths can be adjusted by clicking on the separator line and dragging it to the desired width.

Unit Description	Mode	Fan	Burner	Space SetPt	Space Actual	Min.D SetPt	Max.D SetPt	Disch Temp	CCFH	Cooling SetPt	Percent Outside	Outside Temp	Pressure SetPt	Pressure Actual	Sch. Period	Reli
ICS2 at Address 1	Manual	On	On	70°F	70°F	55°F	95°F	91°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
ICS2 at Address 2	Manual	On	Off	70°F	70°F	55°F	95°F	57°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
ICS2 at Address 3	Manual	On	N/A	70°F	73°F	55°F	95°F	74°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
ICS2 at Address 4	Manual	On	On	70°F	73°F	55°F	95°F	74°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
ICS2 at Address 5	Manual	On	Off	70°F	71°F	55°F	95°F	58°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
ICS2 at Address 6	Manual	On	Off	70°F	73°F	55°F	95°F	67°F	0.12	73°F	20%	43°F	N/A	N/A	Occupied	Off
ICS2 at Address 7	Manual	On	Off	70°F	73°F	55°F	95°F	67°F	0.12	73°F	20%	43°F	N/A	N/A	Occupied	Off
ICS2 at Address 8	Manual	On	Off	70°F	73°F	55°F	95°F	67°F	0.12	73°F	20%	43°F	N/A	N/A	Occupied	Off
ICS2 at Address 9	Manual	On	Off	70°F	74°F	55°F	95°F	67°F	0.12	73°F	20%	43°F	N/A	N/A	Occupied	Off
ICS2 at Address 10	Manual	On	Off	70°F	71°F	55°F	95°F	65°F	0.12	73°F	20%	43°F	N/A	N/A	Occupied	Off
ICS2 at Address 11	Manual	On	Off	70°F	70°F	55°F	95°F	64°F	0.12	73°F	45%	50°F	N/A	N/A	Occupied	Off
ICS2 at Address 12	Manual	On	Off	70°F	70°F	55°F	95°F	65°F	0.12	73°F	45%	50°F	N/A	N/A	Occupied	Off
ICS2 at Address 13	Manual	On	Off	70°F	70°F	55°F	95°F	64°F	0.12	73°F	45%	50°F	N/A	N/A	Occupied	Off
ICS2 at Address 14	Manual	On	Off	70°F	70°F	55°F	95°F	64°F	0.12	73°F	45%	50°F	N/A	N/A	Occupied	Off
ICS2 at Address 15	Manual	On	Off	70°F	69°F	55°F	95°F	64°F	0.12	73°F	45%	50°F	N/A	N/A	Occupied	Off
ICS2 at Address 16	Manual	On	Off	70°F	69°F	55°F	95°F	63°F	0.12	73°F	45%	50°F	N/A	N/A	Occupied	Off
ICS2 at Address 17	Manual	On	Off	70°F	69°F	55°F	95°F	63°F	0.12	73°F	45%	50°F	N/A	N/A	Occupied	Off
310 at Address 1	Manual	Off	Off	70°F	72°F	55°F	95°F	58°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
310 at Address 2	Manual	Off	Off	70°F	71°F	55°F	95°F	58°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
310 at Address 3	Manual	Off	Off	70°F	73°F	55°F	95°F	74°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
310 at Address 4	Manual	Off	Off	70°F	73°F	55°F	95°F	74°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off
310 at Address 5	Manual	Off	Off	70°F	72°F	55°F	95°F	58°F	0.12	73°F	30%	43°F	.01"wc	.01"wc	Occupied	Off

## ■ Data: Historical

Data for each ON-LINE Air Handler is logged to disk.

### Menu selection:



Enter in the Date and the Air Handler Number of the unit you would like to view.

Date ●                      ● Air Handler Number

**Display Logged Data: ICS2 at Address 1**

Display Data for given Date and unit Number ->    04/02/04    Unit Number: 1    Log Rate: 12 per Hr (Click here to change)

Export entire Month's Data to a "CSV" file ->

Exit                      Print Screen

Entry	Date	Time	Mode	Space SetPt	Space Act.	Disch. Temp	Outside	Pressure	Pressure	Outside	Return Air %	Error	Kw	CCF
1	4/2/4	00:59	Manual	21.1°C	21.7°C	14.4°C	6.1°C	2.5 pa	2.5 pa	30%	70%	0	54227.7	6l
2	4/2/4	01:58	Manual	21.1°C	23.3°C	23.3°C	6.1°C	2.5 pa	2.5 pa	30%	70%	0	54227.7	6l
3	4/2/4	02:58	Manual	21.1°C	21.7°C	32.8°C	6.1°C	2.5 pa	2.5 pa	30%	70%	0	54227.7	6l
4	4/2/4	03:59	Manual	21.1°C	21.1°C	16.1°C	6.1°C	2.5 pa	2.5 pa	30%	70%	0	54227.7	6l
5	4/2/4	04:58	Manual	21.1°C	22.8°C	12.2°C	6.1°C	2.5 pa	2.5 pa	30%	70%	0	54227.7	6l

# ICS II PROGRAM MENU: DATA

## ■ Data: Maintenance Info

This screen displays the following maintenance information:

- **Power-Up Date/Time:**

Can be used to detect possible power outages or disturbances at the unit's controller.

- **Number of Fan Starts:**

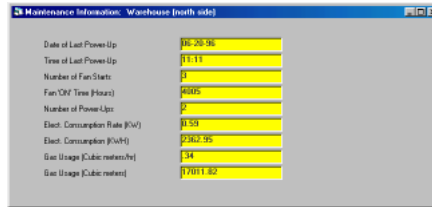
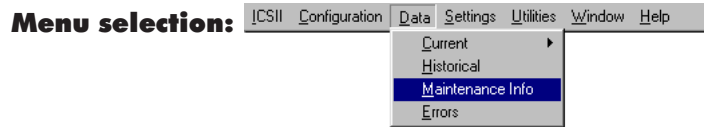
Can be used as a guide for maintenance as well. Also an aid in determining if the unit has been cycling on and off due to improper settings.

- **Fan 'ON' Time:**

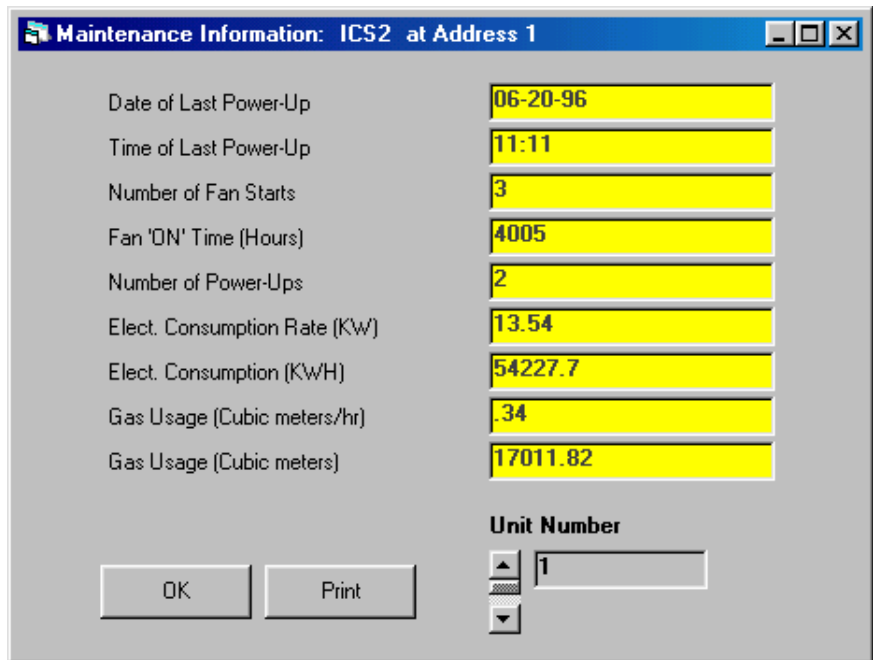
The time (in hours) that the fan has been running. This can be used as a guide for motor maintenance.

- **Electrical and Gas Usage:**

The configuration of the system allows calculation of electrical and gas usage based on motor FLA and flow rates through the burner. The rate and cumulative totals are displayed here.



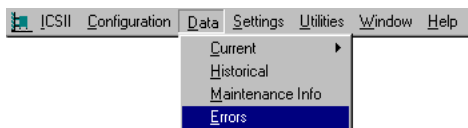
If the initial **Maintenance Info** screen displays as shown at the left, drag the lower righthand corner to resize the window until it looks like the one below.



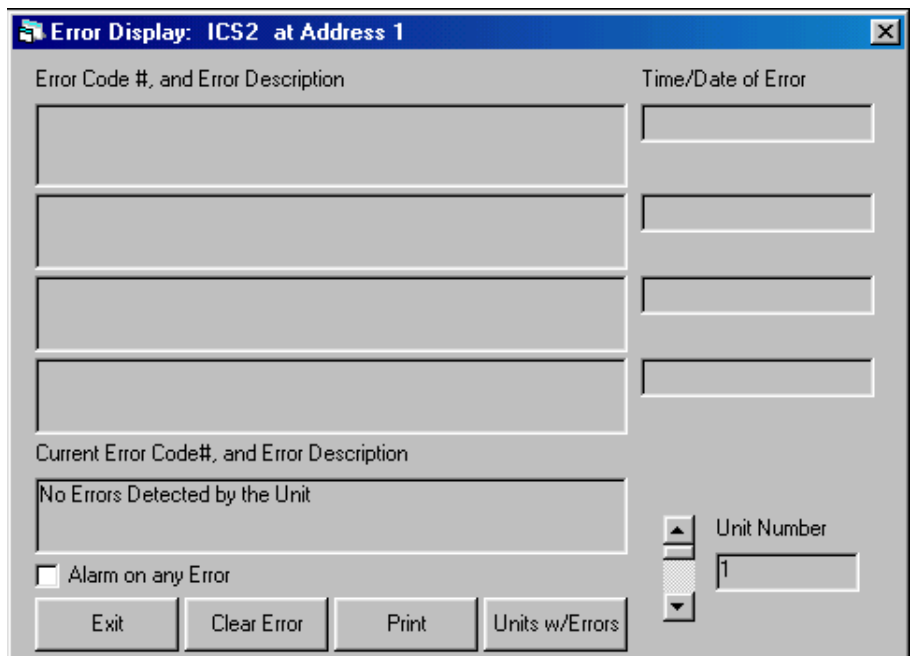
## ■ Data: Errors

This screen displays the current error for each Air Handler. It will request the last four errors from the controllers.

**Menu selection:**



**Icon shortcut:**

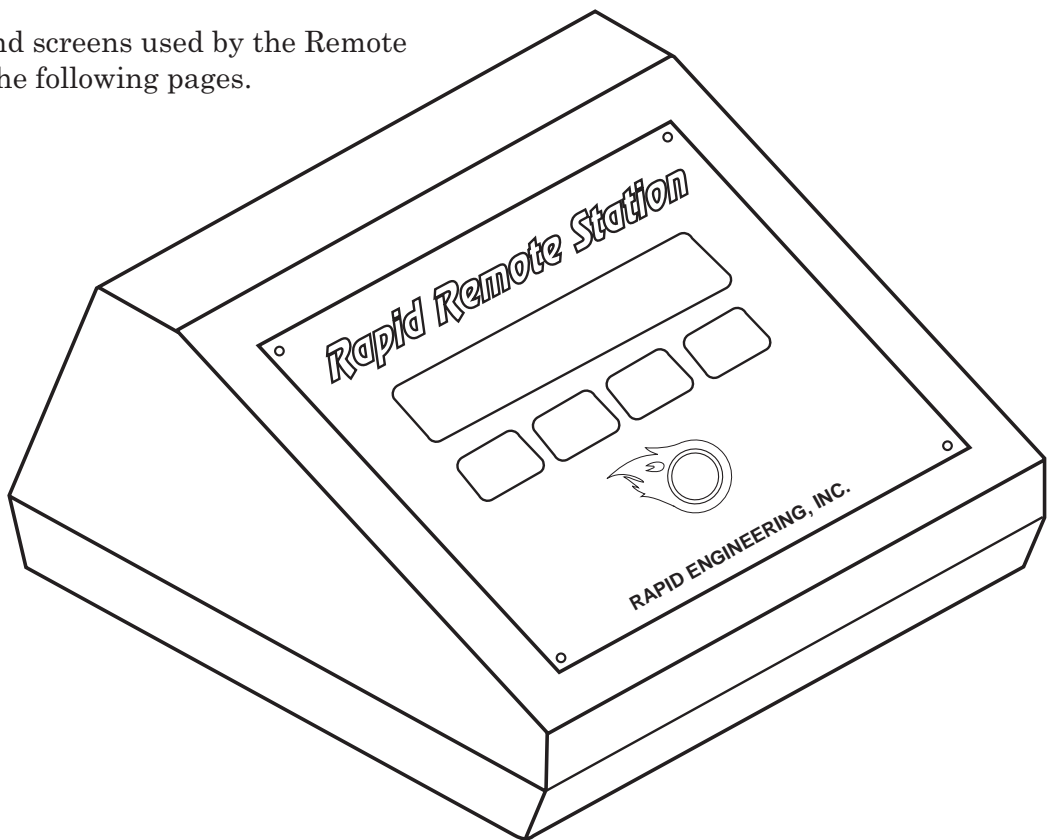


# The Rapid Remote Station

**The RAPID Intelligent Controls Remote Station provides a convenient way to communicate with the Controller without the use of a PC.** This portable unit can be mounted on a wall, placed on a desk, or carried in a service truck – whichever is most convenient!

- The Remote Station communicates with one Controller at a time from a communications port connected directly to the J12 (ICS I) or P5 (ICS II) port of a Controller.
- The Remote Station provides all of the functions available with the Network Computer except Hourly Logs, Error Logs (although the last four errors are always available), Data Collection and (for ICS II) control of the separate schedule and Auxiliary Output.
- The menu-driven program provides complete system setpoint and operational information on the unit's screen.
- Four pressure-sensitive keypads are used to obtain all of the control functions and operating information.
- The Remote Station can be installed up to 1000' from the Controller.

The menu selections and screens used by the Remote Station are shown on the following pages.



# REMOTE STATION SCREENS

## Rapid Remote Station

Main Menu: Monday 4-12-04, 15:35  
 Setpoint / Actual = 60 / 59.5 (°F)  
 ICS II Controller, Version 2.5  
DISPLAY
PROGRAM
UNLOCK

↑

↑

↑

↑

RAPID ENGINEERING, INC.

## Rapid Remote Station

Display Menu, Select Item to Display  
 > Setpoints Filter Errors  
 Schedules Actuals Mode  
NEXT
PREVIOUS
ENTER
EXIT

↑

↑

↑

↑

RAPID ENGINEERING, INC.

## Rapid Remote Station

Display Setpoints: Page 1 of 15  
 Occupied Space Temp. (°F)  
 Current Value = 60  
PAGEUP
PGDOWN
EXIT

↑

↑

↑

↑

RAPID ENGINEERING, INC.

### Main Menu: The Display Option

1. **DISPLAY:** View all setpoints & system operations.
2. **PROGRAM:** Change all setpoints.
3. **UNLOCK:** Deactivate security and access the program to change setpoints.

**NOTE:** The user also is notified of errors here. Display the Errors screen and Request the Error Log to reset the error.

Press **DISPLAY** to go to the Display Menu.

### Accessing "Display: Setpoints"

Select the sub-menu you want to display by pressing **NEXT** or **PREVIOUS**. To enter the sub-menu, press **ENTER**. (To exit this screen and return to the Main Menu, press **EXIT**).

Select Setpoints and press **ENTER**.

### The "Display: Setpoints" Screen

Use **PAGEUP** or **PGDOWN** to view:

- Occupied Space Temp.
- Unoccupied Space Temp.
- Maximum Discharge Temp.
- Minimum Discharge Temp.
- Pressure (Inches W.C.)
- Burner Off / Cooling Setpt.
- Unoccupied Unit Turnoff
- Enable Relief/Cooling
- Low-Temperature Shutdown
- Percent Outside Air
- OA Temp. Control (ICS I)
- Burner Turnoff (ICS I)
- Relative Humidity (ICS II)
- Dry Bulb Economizer (ICS II)
- Economizer Type (ICS II)

Press **EXIT** to return to Display Menu.

## REMOTE STATION SCREENS

### Rapid Remote Station

Display Menu, Select Item to Display  
Setpoints      Filter      Errors  
> Schedules      Actuals      Mode  
NEXT      PREVIOUS      ENTER      EXIT



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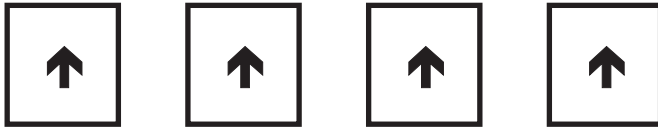
#### Accessing "Display: Schedules"

Select Schedules and press ENTER.

### Rapid Remote Station

Unit Schedules: Period 01 of 21  
Period #01: From Sun 06:30 to Sun 23:50

PGDOWN      PAGEUP      EXIT



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#### The "Display: Schedule" Screen

PGDOWN or PAGEUP to display up to 21 time periods for this air handler.

Any time not specified will automatically default to the Unoccupied mode.

Press EXIT to return to the Display Menu.

### Rapid Remote Station

Display Menu, Select Item to Display  
Setpoints      > Filter      Errors  
Schedules      Actuals      Mode  
NEXT      PREVIOUS      ENTER      EXIT



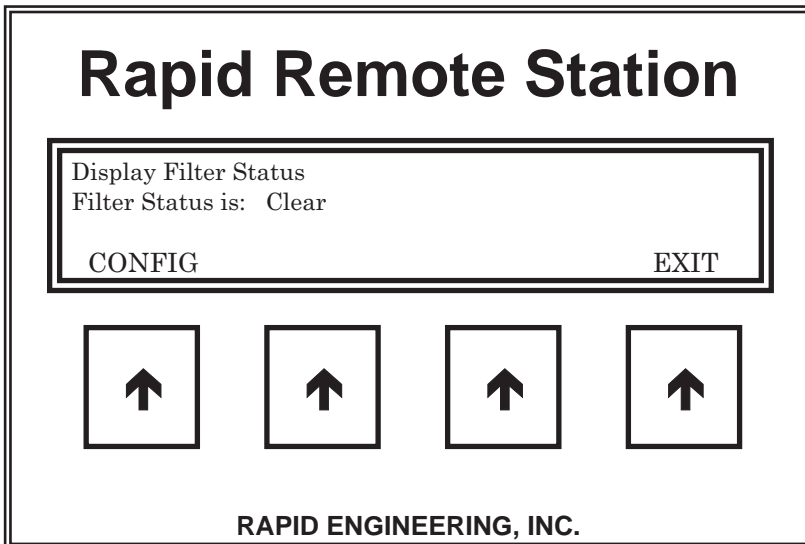
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#### Accessing "Display: Filter"

Select FILTER and press ENTER.



## REMOTE STATION SCREENS

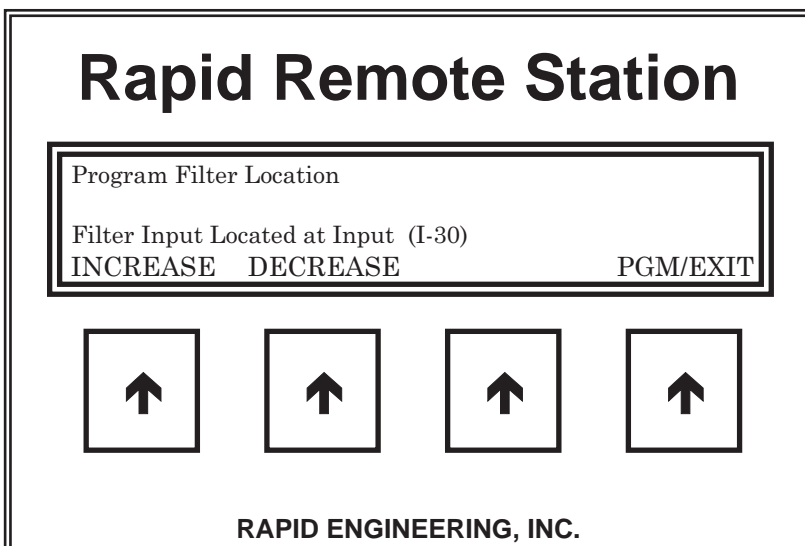


### The "Display: Filter Status" Screen

This screen indicates whether the filter is Clear or Clogged.

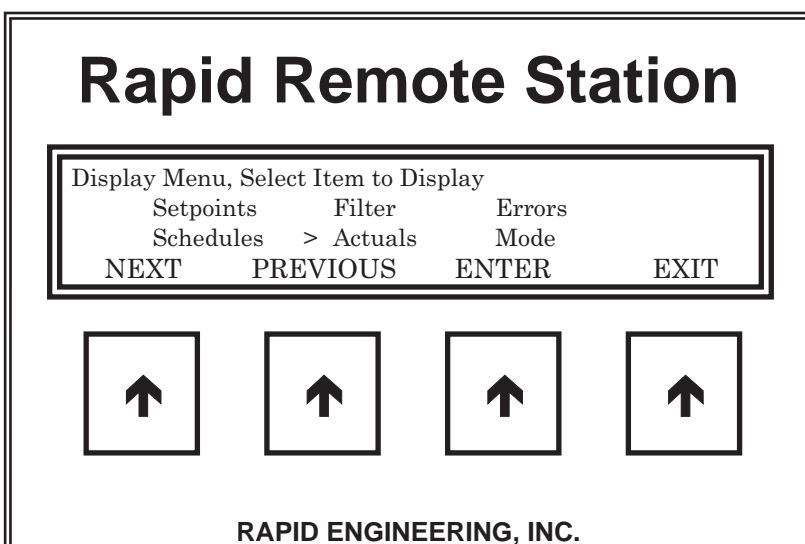
Press **EXIT** to return to the Display Menu.

Note: This is an optional accessory.



### The "Display: Filter Location" Screen

This screen identifies the input for the (optional) clogged-filter switch.



### Accessing "Display: Actuals"

Select **Actuals** and press **ENTER**.

## REMOTE STATION SCREENS

### Rapid Remote Station

Unit actuals, Page 1 of 9  
Unit Mode: AUTO PRESSURE  
Occupied Period: Yes  
PGDOWN      PAGEUP                      EXIT



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#### The "Display: Actuals" Screen

Press PAGEUP or PGDOWN to view:

- Mode
- Burner On/Off
- Relief On/Off
- Fan On/Off
- Error Code
- Temperature Setpoint/Actual
- Discharge Temp.
- Outside Air Temperature
- Building Pressure Setpoint
- Building Pressure Actual
- Percent Outside Air
- Percent Return Air
- Relative Humidity
- Humidity Setpoint
- Cooling Output Status

Press EXIT to return to the Display Menu.

### Rapid Remote Station

Display Menu, Select Item to Display  
Setpoints      Filter      > Errors  
Schedules      Actuals      Mode  
NEXT      PREVIOUS      ENTER      EXIT



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#### Accessing "Display: Errors"

Select Errors and press ENTER.

### Rapid Remote Station

Unit Error Log Display  
Currently no errors being reported

REQUEST                                      EXIT



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#### The "Display: Errors" Screen

Maintains the last four error-code reports from the air handler.

Pressing REQUEST will allow you to scroll through the individual reported errors for more information.

Press EXIT to return to the Display Menu.

## REMOTE STATION SCREENS

### Rapid Remote Station

Display Menu, Select Item to Display

Setpoints	Filter	Errors	
Schedules	Actuals	> Mode	
NEXT	PREVIOUS	ENTER	EXIT



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#### Accessing "Display: Mode" Screen

Select **MODE** and press **ENTER**.

### Rapid Remote Station

Unit Mode Display

Current Mode: AUTO PRESSURE

EXIT



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#### The "Display: Mode" Screen

Indicates the current operating Mode of the air handler.

There are six operating modes:

- OFF
- AUTO PRESSURE
- AUTO - NO PRESSURE
- MANUAL DAMPER
- FLUSH
- EXHAUST

Press **EXIT** to return to the Display Menu.

### Rapid Remote Station

Display Menu, Select Item to Display

Setpoints	Filter	Errors	
Schedules	Actuals	> Mode	
NEXT	PREVIOUS	ENTER	EXIT



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#### Returning to the Main Menu

Press **EXIT** to return to the Main Menu.

## REMOTE STATION SCREENS

### Rapid Remote Station

Main Menu: Monday 4-12-04 , 15:35  
Temperature Setpoint = 60 (°F)  
Temperature Actual = 61.4 (°F)  
DISPLAY PROGRAM UNLOCK



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#### Main Menu: The Unlock Option

Press **UNLOCK** to access the Security Menu.

System security locks automatically after 5 minutes of inactivity.

NOTE: "LOCK" appears after the system is unlocked. Pressing **LOCK** will immediately reinstate Password Security.

### Rapid Remote Station

ENTER PASSWORD  
Personal ID Number ==> 0000  
                                  ^  
INCREMENT NEXT ABORT ENTER



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#### The "Enter Password" Screen

Press **INCREMENT** to select a digit from 0 to 9 above the caret mark (^). Press **NEXT** to move the caret one digit to the right and repeat the first step until the total number has been entered.

Press **ENTER** to enter your number.

### Rapid Remote Station

You now have access to the PROGRAM menu  
You entered this PIN ==> 1000

CHANGE PIN EXIT



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#### Password Verification/Change

This Screen displays the number you entered and allows you to change your Security Number to a new number.

Press **EXIT** to return to the Main Menu.

## REMOTE STATION SCREENS

### Rapid Remote Station

Main Menu: Monday 4-12-04, 15:35  
Temperature Setpoint = 60 (°F)  
Temperature Actual = 61.4 (°F)  
DISPLAY PROGRAM LOCK



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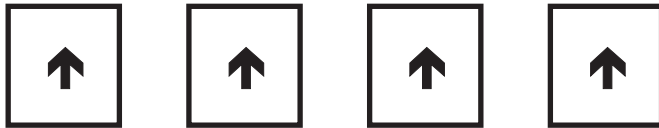
#### Main Menu: The Program Option

Press **PROGRAM** to enter the Program menu.

NOTE: Pressing **LOCK** would reinstate the security feature.

### Rapid Remote Station

Program Menu, Select Item to Program  
> Schedules Setpoints Mode Time  
NEXT PREVIOUS ENTER EXIT



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#### Accessing "Program: Schedules"

Use **NEXT** or **PREVIOUS** to make a selection.

Select Schedules and press **ENTER**.

### Rapid Remote Station

Program Schedule: Period 01 of 21  
Period #01: From Sun 06:30 to Sun 23:50  
PGDOWN PAGEUP PROGRAM EXIT



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#### The "Program: Schedule" Screen

**PGDOWN** and **PAGEUP** will scroll through the 21 periods.

Select the period you want to modify or add, then press **ENTER** to bring up the Edit Schedule Screen for this time period.

## Rapid Remote Station

Edit Schedule: Period 01 of 21  
Period #01: From Sun 06:30 to Sun 23:50  
Item Selected: ^^^  
INCREASE DECREASE NEXT ITEM PGM/EXIT



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## Rapid Remote Station

Program Schedule: Period 01 of 21  
Period #01: From Sun 06:30 to Sun 23:50  
PGDOWN PAGEUP PROGRAM EXIT



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### The "Edit Schedule" Screen

With the caret marks (^^^ ) under the Day or Time, pressing **INCREASE** or **DECREASE** will change the period accordingly. To move the caret marks to a different Day or Time, press **NEXT ITEM** .

After entering your changes, press **PGM/EXIT** to enter the change and return to Program Schedule.

### Returning to the "Program" Menu

Press **EXIT** to return to Program Menu.

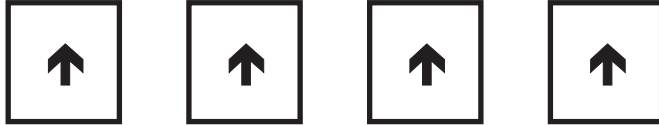
NOTE: Setting start and times the same will delete that schedule.

## REMOTE STATION SCREENS

### Rapid Remote Station

Program Menu, Select Item to Program  
Schedules > Setpoints Mode Time

NEXT PREVIOUS ENTER EXIT



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#### Accessing "Program: Setpoints"

Select Setpoints and press ENTER.

### Rapid Remote Station

Program Setpoints: Page 1 of 15

Occupied Space Temp. (°F)

Current Value = 70

PGDOWN PAGEUP PROGRAM EXIT



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#### The "Program: Setpoints" Screen

Press PROGRAM to change the current value of the setpoint.

### Rapid Remote Station

Program Change: Occupied Space Temp. (°F)

Current Value = 70

Range Allowed: Max: 80 Min: 40

INCREASE DECREASE PGM/EXIT



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#### The "Program Change" Screen (Occupied Space Temp.)

Press INCREASE or DECREASE to change the Current Value within the Range Allowed.

Press PGM/EXIT to enter the change and return to Program Setpoints.

## Rapid Remote Station

Program Setpoints: Page 1 of 15  
Occupied Space Temp. (°F)  
Current Value = 70  
PGDOWN PAGEUP PROGRAM EXIT



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### The "Program: Setpoints" Options

Select any of the following screens by pressing PGDOWN or PAGEUP and PROGRAM:

- Occupied Space Temp.
- Unoccupied Space Temp.
- Maximum Discharge Temp.
- Minimum Discharge Temp.
- Pressure (Inches Water Column)
- Burner Off / Cooling Setpt.
- Unoccupied Unit Turnoff
- Enable Relief/Cooling
- Low-Temperature Shutdown
- Percent Outside Air
- Relative Humidity (ICS II)
- Dry Bulb Economizer (ICS II)
- Economizer Type (ICS II)

Press EXIT to return to Program Menu.

## Rapid Remote Station

Program Menu, Select Item to Program  
Schedules Setpoints > Mode Time  
NEXT PREVIOUS ENTER EXIT



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### Accessing "Program: Mode"

Select Mode and press ENTER.



## REMOTE STATION SCREENS

### Rapid Remote Station

Program Mode: Monday 4-12-04 , 15:35  
Current Mode: AUTO PRESSURE  
Change Mode to: AUTO PRESSURE  
SELECT PGM/EXIT



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#### The "Program: Mode" Screen

Press **SELECT** to select the mode. Press **PGM/EXIT** to enter the mode change and return to the Program Menu.

Selectable Modes are:

- OFF
- AUTO PRESSURE
- AUTO - NO PRESSURE
- MANUAL DAMPER
- FLUSH
- EXHAUST

### Rapid Remote Station

Program Menu, Select Item to Program  
Schedules Setpoints Mode > Time  
NEXT PREVIOUS ENTER EXIT



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#### Accessing "Program: Time"

Select Time and press **ENTER**.

### Rapid Remote Station

Program Time: Monday 4-12-04 , 15:35  
Edit: Weekday ^^  
Select item, then INCREASE or DECREASE  
INCREASE DECREASE SELECT PGM/EXIT



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#### The "Program: Time" Screen

Use the **INCREASE** and **DECREASE** buttons to change the time

After the change, press **PGM/EXIT** to return to the Program Menu.





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