

Modine Controls System Quickstart Guide

Atherion® Commercial Packaged Ventilation Unit (MPR)

⚠ WARNING

Installing, starting up and servicing heating, ventilation and air conditioning equipment poses significant hazards and requires specialized knowledge of Modine products and training in performing those services. Failure to have any service properly performed by, or making any modification to Modine equipment without the use of qualified service personnel could result in serious injury to person and property, including death. Therefore, only qualified service personnel should work on any Modine products.

IMPORTANT

These instructions must also be used in conjunction with the Installation and Service Manual (latest revision of MCP15-500) and Controls Manual (latest revision of MCP74-525) that originally shipped with the unit, in addition to any other accompanying component supplier literature.



pCO5 Controller



pGD1 Display Module

This guide is designed to walk through the basics of establishing unit setpoints and scheduling for an Atherion Commercial Packaged Ventilation Unit (MPR) unit using the integrated keypad and LCD screen on the unit controller or pGD1 display module. All settings can be made directly on the unit controller, which features an integrated keypad and LCD screen. For cases where remote access is preferred or the unit controller is difficult to reach when the unit is mounted on taller roof curbs or stands, the pGD1 handheld controller is an excellent alternative that has the same functionality as the unit controller keypad and LCD screen while allowing remote or more convenient access.

Every unit with a Modine Controls System is designed for either standalone or networked operation. For units communicating on a BMS, the guide will also explain how to adjust your unit's device instance to allow proper communication.

1 Begin

- Install unit in desired location in accordance with appropriate Modine Installation and Maintenance Manual. **Note:** Controller will not be powered until unit has appropriate electrical connections and disconnect switch in "ON" position.
- If display module is not unit mounted, connect pGD1 handheld module using RJ-12 communication cable provided in port J10 as shown on unit mounted wiring diagram.

2 Navigating the Display Module Screen

Controller Buttons	Function	Description	Controller Buttons	Function	Description
	ALARM	When one or more alarms are active the ALARM button will blink/flash red. Pressing the ALARM button once will indicate information regarding any active alarms. Pressing the ALARM button twice will reset any active manual-reset alarms.		UP	Pressing the UP button can either: Scroll through the various display screens, provided the cursor is in the top left position. Increase the value of a setpoint adjustment.
	PRG	Pressing the PRG button will select the main navigation menu.		ENTER	Pressing the ENTER button will confirm any setpoint adjustments and move the cursor to the next available setpoint.
	ESC	Pressing the ESC button will return the user to the main display screen showing unit status.		DOWN	Pressing the DOWN button can either: Scroll through the various display screens, provided the cursor is in the top left position. Decrease the value of a setpoint adjustment.

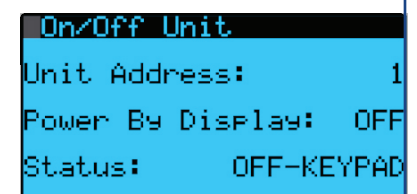
3 Main Screen and System Status

- The main screen (shown at right) is the default navigation page, and can always be recalled by pressing . This may need to be pressed more than once depending on which menu is active.
- By pressing you are able to scroll through the display screens which provide information about the current system operation (examples include temperatures, output status, and space demand).



4 Turning Unit On / Off

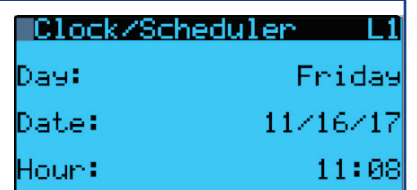
- Enter the main menu by pressing and scroll down to line 'A. On/Off Unit' and press .
- Press to move cursor, to 'Power By Display' line and the or arrow to change the value between 'ON' and 'OFF'. This parameter must be 'ON' for unit to have any functionality (shown at right).



5 Schedule

a. Customizing the 7-Day Schedule

- For units running without BMS communication, the controller has a preset 7-day schedule defined by the internal timeclock. The unit will run in occupied mode from 6:00am to 4:00pm, Monday through Friday, with no holidays.
- Enter the main menu by pressing and scroll down to line 'C. Clock/Scheduler' (shown at right) and press .
- The first screen displays the current date and time. If this is not correct press to highlight the field that needs to be changed. Use the or arrows to adjust the number as needed.
- Press to move through adjustable setpoints until cursor is at the upper left corner of the screen. Use the arrow to scroll to the next page.



Schedule (CONTINUED FROM OTHER SIDE)

- v. Select the amount of schedules desired by pressing to highlight 'Number of Schedules' field and adjust the number. Press until cursor is at the upper left corner of the screen. Use the arrow to scroll to the next page.
- vi. The screen to the right will be the first programmable schedule.
- vii. Highlight the fields and adjust as needed to schedule the time and days of desired unit operation. To move to the next time period, highlight the 'Schedule #' field and adjust this number by pressing .

```
Clock/Scheduler L4
Schedule #: 1
Time On: 6:00
Time Off: 16:00
Days Enabled: MTWTF**
```

b. Customizing Holiday Schedules

- i. Scroll to the 'Holidays' screen in the 'Clock/Scheduler' menu. Use the or arrows to adjust the number of holidays as needed up to 16.
- ii. Press to move the cursor to each date range and use the or arrows to adjust the number as needed. If not all four holiday ranges are required, the unused ranges can be left as '0/0-0/0'.

6 Changing Setpoints

a. Enter the main menu by pressing and scroll down to line B. Setpoint and press .

b. Occupied Setpoints without Space pAD

- i. Press to highlight 'Neutral Air'. Use the or arrows to adjust the setting as needed. This setting will reflect the temperature of the Supply Air entering the space.

c. Occupied Setpoints with Space pAD

- i. Press until cursor is at the upper left corner of the screen. Use the arrow to scroll to the 'pAD Thermostat' page.
- ii. Press to highlight the 'Temperature'. Use the or arrows to adjust the setting as needed. This setting will reflect the space cooling setpoint. The space heating setpoint is determined by a default heating/cooling band of 4°F. (For example, if the temperature is set at 74°F, the heating setpoint will automatically be set to 70°F.) Refer to publication MCP74-525 for additional adjustments.

d. Unoccupied Setpoints (requires Space pAD)

- i. Press until cursor is at the upper left corner of the screen. Use the arrow to scroll to the 'pAD Thermostat' page.
- ii. Press to highlight 'Unoccupied Cool'. Use the or arrows to adjust the setting as needed.
- iii. Press to highlight 'Unoccupied Heat'. Use the or arrows to adjust the setting as needed.

e. Dehumidification Setpoints, Dewpoint & Space pAD

- i. Press until cursor is at the upper left corner of the screen. Use the arrow to scroll to the 'DeHum Setpoint Dewpt' page, for dewpoint dehumidification control.
- ii. Press to highlight 'OA Dewpoint' under Occupied. Use the or arrows to adjust the setting as needed.
- iii. Press to highlight 'Space Dewpoint' under Unoccupied. Use the or arrows to adjust the setting as needed (only applicable with Space pAD).
- iv. Press until cursor is at the upper left corner of the screen. Use the arrow to scroll to the 'DeHum Setpoint pAD' page, Space dehumidification control requires Space pAD.
- v. Press to highlight 'Space Humidity' under Occupied. Use the or arrows to adjust the setting as needed.
- vi. Press to highlight 'Space Humidity' under Unoccupied. Use the or arrows to adjust the setting as needed.

```
Setpoints S2
Outdoor Air Reset
Cooling
OA: 72.0%--> SA: 70.0%
OA: 85.0%--> SA: 55.0%
SA Granularity: 1.0%
```

```
Setpoints S8
pAD Thermostat 1
Occupied Setpoints
Cool Setpoint: 74.0%
Heat Offset: 4.0%
Heat Setpoint: 70.0%
```

Note: The occupied and unoccupied settings can be changed from the Space pAD as well.

7 Service

- a. Enter the main menu by pressing and scroll down to line 'G. Service' and press . This menu allows access to several parameters for advanced setup or control. This includes BMS Setup, Control Settings such as temperature lockouts or stage delays, and Manual Control of controller inputs/outputs.
- b. Reference MCP74-525 for additional information.

8 BMS Setup

- a. Atherion units can utilize one of three different BMS system protocols; LonWorks® FTT-10, BACnet® MS/TP, and BACnet® TCP/IP. Please refer to the BMS Manual 74-530 for installation instructions and the Controls Manual MCP74-525 for additional information.

9 Advanced Information

- a. The manufacturer menu provides access to parameters not typically required to be changed in the field. These parameters include unit configuration, controller input/output configuration, and reboot sequences. Please contact Modine Technical Service for assistance with this section if required.

10 Viewing / Clearing Alarms

- a. If the unit is sending an alarm signal, the alarm icon on the display module will flash continuously:
 - i. Press to display the active system alarms. If there are multiple alarms, they may be viewed by pressing the or arrows.
 - ii. Details of the unit's running conditions when the alarm occurred may be viewed by pressing after reaching the end of the alarm list.
 - iii. Pressing and holding the button will clear the flashing icon and all active alarms, and indicate there are no active alarms in the system.
 - iv. The alarm log can be viewed by pressing . Press to return to the main screen. If an alarm is persisting, the alarm light will begin to flash again.



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