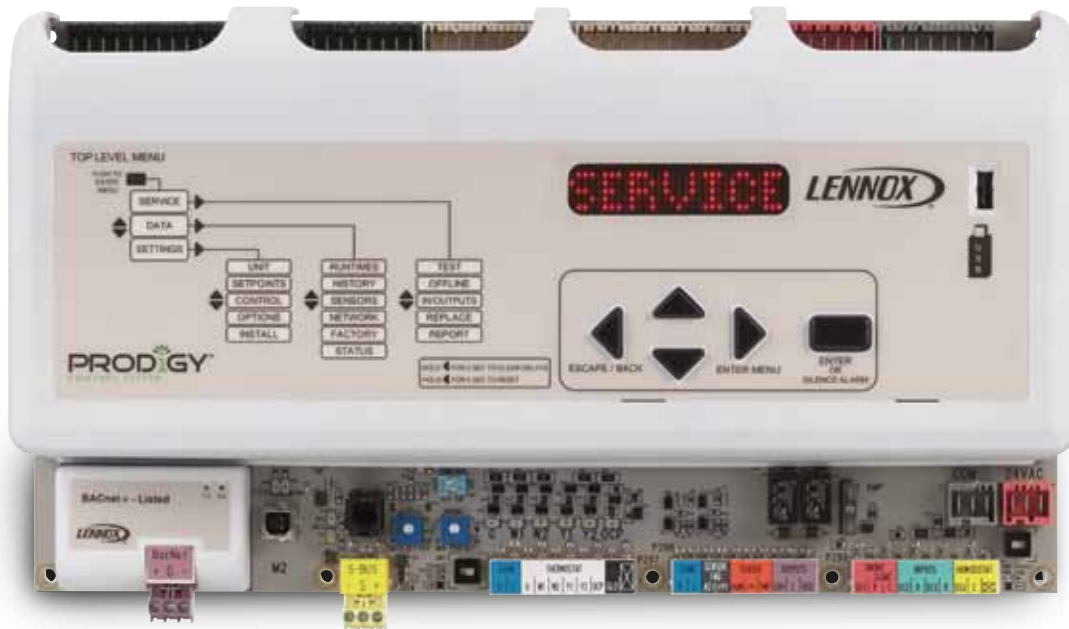


# OPERATION MANUAL | PRODIGY<sup>®</sup> CONTROL SYSTEM





**PRODIGY**<sup>®</sup>  
CONTROL SYSTEM

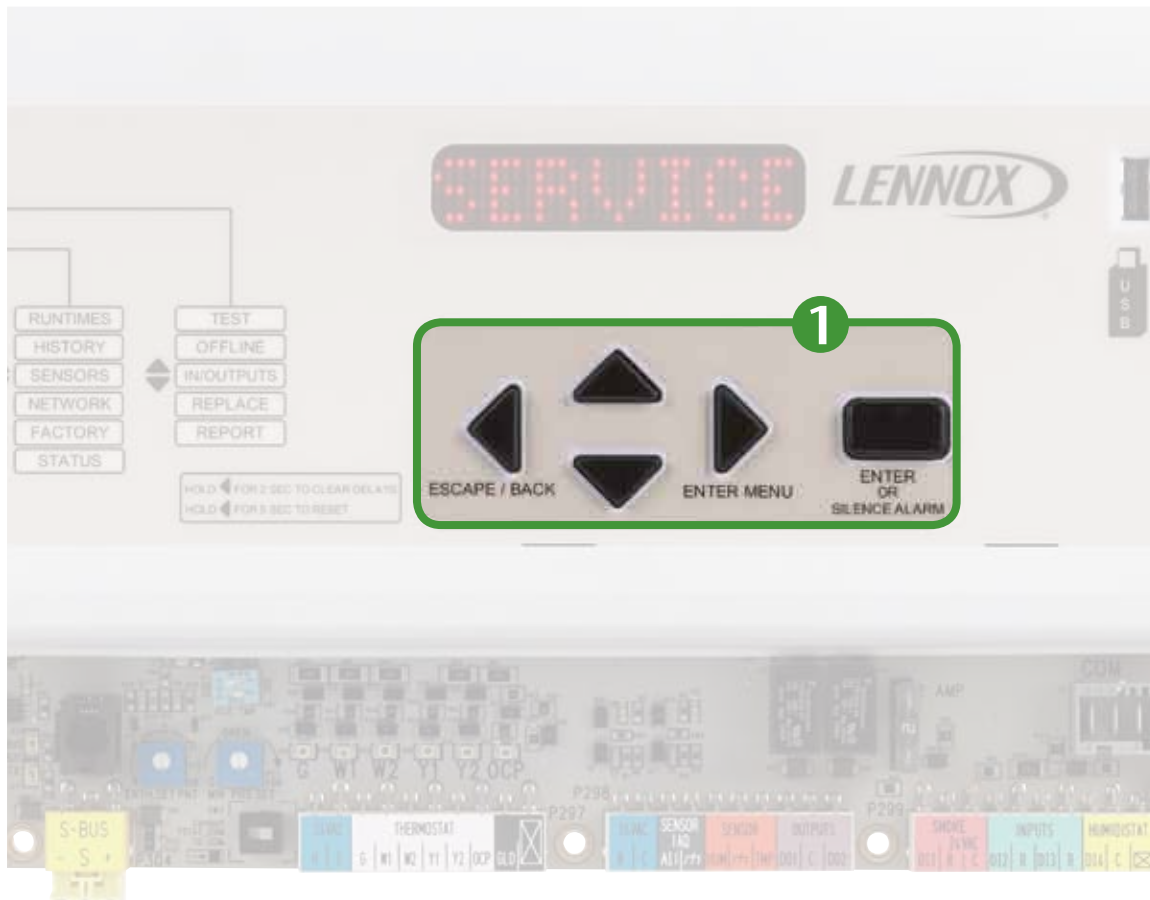
The Prodigy® control system is the latest example of Lennox' commitment to advanced HVAC technology. Standard on every Emergence® rooftop unit, the Prodigy control system makes setup, troubleshooting and servicing easier than ever.

The Prodigy control system includes:

- Prodigy unit controller
- SmartWire™ system
- Optional Prodigy BACnet module (BTL certified)
- Optional Prodigy LonTalk® module (LonTalk certified)



# NAVIGATION

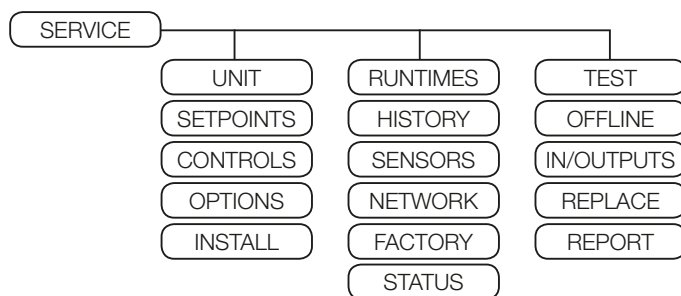



1. Navigation is performed by using the arrowed keys and the enter button

- To reset the Prodigy® unit controller, press the left arrow ◀ and hold for 5 seconds

— You will now be at the beginning of the menu structure


- Press the enter ■ or right arrow ▶ to go into the sub menus:

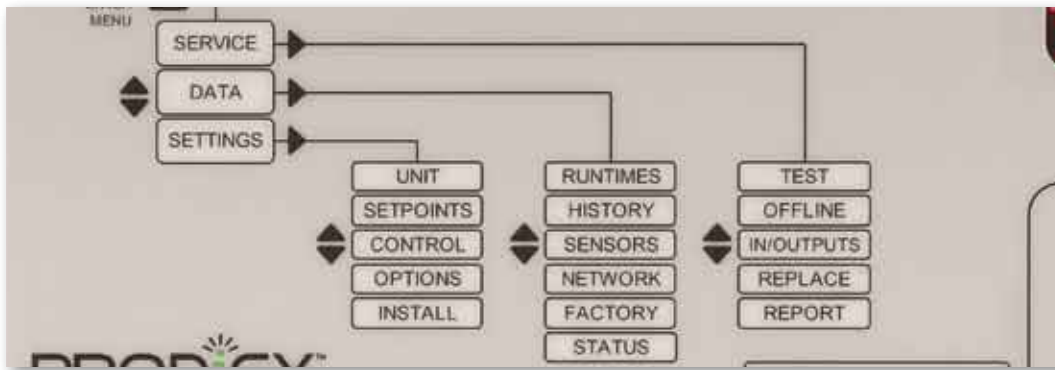


- Press the down arrow ▼ until you see 
- To exit the menu structure, press the left arrow ◀
  - Press the left arrow ◀ again to return to the Display mode.

## DISPLAY

---

- Display shows the controller's current state
  - It will show either the current mode of operation or an alarm/status message
- To exit the display mode, press enter 
- You are now in the menu structure
- Notice that the first level of the menu structure is located on the controller





*English, French or Spanish language can be selected.*

## ALARMS

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The Prodigy® unit controller displays alarms in descriptive, actionable text.

- To simulate an alarm, press the left arrow  until you are in the display mode
- Flip down the switch to the right of the controller labeled Compressor 1HP (s4). It is located on the green trainer board next to the lower right corner of the gray M2
- This will show the alarm for a high-pressure switch trip for Compressor 1
- To silence the alarm, press enter 
- To turn off the alarm, simply flip the switch (S4) back to the up position



---

## 1. The Prodigy® controller's USB port can download service reports

- To generate a report, insert a USB memory stick into the USB port then press enter 
- With  displayed, press enter  to write the report
- The display will show it is writing the report and then indicate when it is complete
- The report will be saved to the memory stick with a file name based on the unit's serial number
- This report can be transferred to any computer via the memory stick

1

=====
USB SERVICE REPORT
=====

Service Date 7/4/2010
Service Time 3:15:00
Serial No. 5609K00002
M2 Version 7.06.00
DB1 Version 1.06.00
Unit No. 2
Sbus Address 2
BACnet Address 2
CAT No. 36187
MODEL NO. LGH036H4ES1Y
COOLING
Status

Runtime Data table with columns: Component, HRS, CYCLES. Rows include Total Power On (1832 HRS), Before Install (286 HRS), Filter (1063 HRS), Belt (1162 HRS), Blower (46 HRS), Compressor 1-4, Outdoor Fan 1-6, Heat Stage 1-2, Reheat, Free Cooling, UV Lamp.

Sensor Data
OAT : 100 degF
RAT : 85 degF
DAT : 86 degF
ZAT : 83 degF
RH : 60 %
CO2 : 415 ppm

Alarm/Status Log
( 23 ) 7.04.2010 1:05:00 23 ALARM(23) STRIKE 3 ON COMP...
( 22 ) 7.04.2010 1:00:00 22 ALARM(22) COMP 1 LOW PRESS...
( 5 ) 6.30.2010 21:05:00 ALARM(5) FILTER S27 REPLACE...
END OF REPORT

2

=====
USB SERVICE REPORT
=====

Service Date
Service Time 4:23:00
Serial No. 5609K00002
M2 Version
DB1 Version
Unit No.
Sbus Address
BACnet Address
CAT No.
MODEL No.
Status COOLING

Runtime Data table with columns: Component, HRS, CYCLES. Rows include Total Power On (1832 HRS), Before Install (286 HRS), Filter (1063 HRS), Belt (1162 HRS), Blower (46 HRS), Compressor 1-4, Outdoor Fan 1-6, Heat Stage 1-2, Reheat, Free Cooling, UV Lamp.

Sensor Data
OAT : 100 degF
RAT : 76 degF
DAT : 57 degF
ZAT : 77 degF
RH : 50 %
CO2 : 415 ppm

Alarm/Status Log
( 23 ) 7.04.2010 1:05:00 23 ALARM(23) STRIKE 3 ON COMP 1 S87 COMP LOCKOUT...
( 22 ) 7.04.2010 1:00:00 22 ALARM(22) COMP 1 LOW PRESS S87 COMP OFF...
( 5 ) 6.30.2010 21:05:00 ALARM(5) FILTER S27 REPLACE FILTER OR CHECK FILTER...
END OF REPORT



## USB SERVICE REPORTS

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The reports at left are an example of a service call.

1. The first report shows the status of a unit with a faulty compressor and dirty filter
  - The sensor data illustrates the issue
2. The second report shows the same unit with a new compressor and filter
  - Notice the new sensor readings and the reset runtime information

## USB PROFILES





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You can also save a unit profile which can be uploaded to another similar unit.

- To save or upload a unit profile, insert a USB memory stick in the USB port
- Press enter  when the screen reads  then scroll down to  and press enter 
- The controller will automatically check to see if there is a profile that matches the unit
- If there is a profile saved to the memory stick with a matching cat number, the controller will ask to upload it
- This will instantly upload all setpoints to the unit that are saved to the profile
- If there is no profile saved, the controller will ask if you want to save the unit's profile

## SELF-TEST

---






The Prodigy® unit controller features a self-test function. This allows the user to individually test critical component operation.

- First, navigate to the  menu and press enter 
- Then, press enter  again to access the  menu
- Press the down arrow  to find  and press enter 
- Then select either an individual compressor or stage (L or H)
- The controller will turn on just that compressor (stage)
- It will then return the RAT and DAT as a check of correct operation

## REPLACE

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The replace function is used to reset component runtime information. To demonstrate, we will use a filter replacement.

- First, navigate to the **SERVICE** menu and press enter 
- Press the down arrow  to scroll to **REPLACE** and press enter 
- Press enter  on **FILTER** which should be the first category
- To reset the filter runtime, press enter 
- This resets the filter runtime, which should be done after every filter change









## RUNTIMES

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






The Prodigy® unit controller contains runtime information on all key components.

- Navigate to the  menu and press enter 
- Press enter  again on  to access the menu
- You can scroll through all the runtimes using the up and down arrows  
- Press the left button  twice to return to the  menu

## HISTORY

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You can also view the history of alarm and status messages.

- From the  screen, press enter  and scroll to  and press enter 
- Press enter  on the  screen
- The Prodigy<sup>®</sup> unit controller will display the last five alarms
- Press the left button  three times to return to the  screen

## SENSOR DATA

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The Prodigy® unit controller can also display important sensor data.

- Once on the  screen, press enter  and scroll to  then press enter 
- You can scroll through all the sensors and their current readings
- This data can be critical in diagnosing a problem
- Press the left button  twice to return to the  menu









## SETPOINTS

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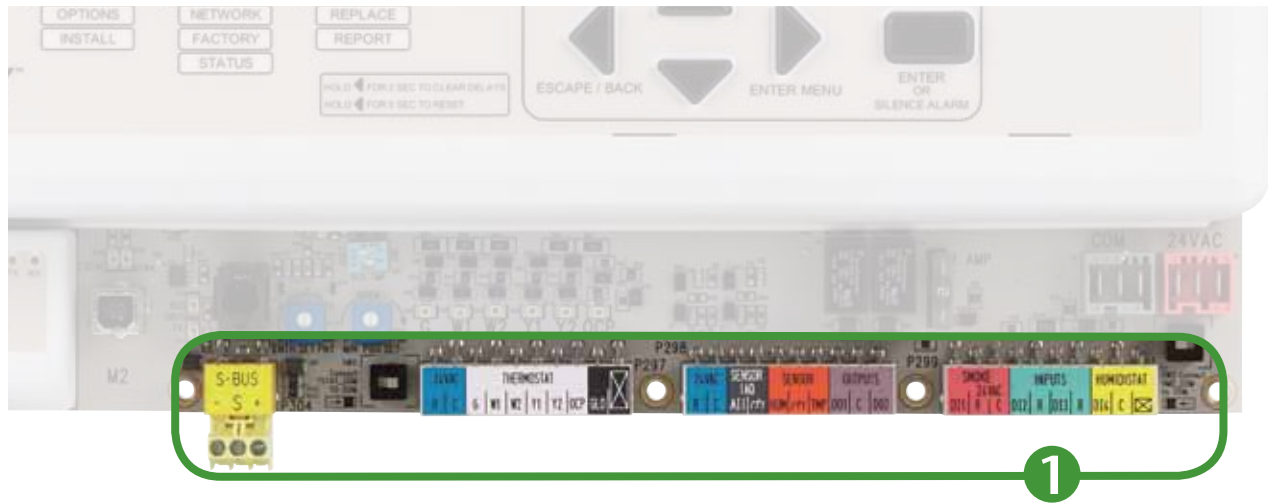


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Changing setpoints on the Prodigy® unit controller is quick and easy.

- First, navigate to the **SETTINGS** menu and press enter 
- Press the down arrow  to scroll to the **SETPOINTS** menu and press enter 
- Press enter  to view the **COOLING** setpoints
- Press enter  to change the **OCCUPIED** cooling setpoint
- Use the up and down arrows   change the setpoint
- Press enter  to set the value

# SMARTWIRE™ SYSTEM



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The SmartWire™ system is designed to simplify field wiring and sensor installation.

1. Advanced connectors are color-coded, labeled and keyed to prevent miswiring and ensure units are installed and set up correctly
  - The wire-coloring scheme is standard across all units
  - Each connection is intuitively labeled to simplify troubleshooting

# SOLUTIONS FOR CUSTOMIZED COMFORT



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Heat Pumps
- T-Class™ Air Conditioners/  
Heat Pumps
- Air Handlers
- Indoor Coils

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- Furnaces

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- UVC Germicidal Lights

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