


# Intelliswitch Gen3C Navigation – V4.15 (AC Motor)

## Display: Gen4




To reduce the risk of injury and ensure proper operation ALL Notes and Instructions shall be read!

Note: The STOP button  is available at any time and will immediately stop the unit in an emergency.

The Intelliswitch® will display STOP briefly and then display the OFF mode. Press  or wait for the display to return to the clock.

Note: When changing USER options, if there is no activity for 15 seconds, the control will save changes and default back to the User Menu display clock.

Note: The  button, unless otherwise noted, saves the current entered value, and returns to the User Menu display clock.

**Section 1:** Quick Start Reference

**Section 2:** Display Controls and Functions

**Section 3:** Menu Structure

**Section 4:** User Menu

**Section 5:** Program Menu

**Section 6:** Diagnostic Menu

**Section 7:** Factory Menu

**Section 8:** External Connections

## 1. Quick Start Reference


1.1. Press the Settings down arrow to Mode.

1.2. Using the plus and minus arrows, select the operating Mode: Off, On, Auto, Comfort Plus or Program Number 1, 2 or 3.

1.3. Press .



## 2. Display Controls and Functions

### 2.1. Sleeping Display

The Gen4 display has a sleep function that allows it to shut off after 1 min. only illuminating the . Press



any button to wake it up. This feature can be shut off, see Program Menu Section 5.9.

### 2.2. Button Navigation

The up and down arrows   cycle through options unless otherwise noted. If a value of an option is changed with the plus/minus, moving up or down to another option saves that setting.

The plus and minus   change values unless otherwise noted.

Button sequence and available settings are illustrated under each option.

Note: The Gen3 Intelliswitch is designed to work with Gen3 or Gen4 displays. If the up/down and left/right arrow functions operate in reverse, check or set the display type by holding the STOP button and pressing the  button 3 times. On the third press the current setting will display; “dsp3” = Gen3 or “dsp4” = Gen4 (shown above). Continue to press  to cycle between each version, release STOP to set.

### 2.3. Berner Air™ Wireless Smart Control

Berner AIR™ is optional hardware that allows wireless control of the Intelliswitch. If equipped, the Intelliswitch must be paired to the Internet, Bluetooth or BACnet connection using the Berner AIR™ app which is available via Google Play or the Apple App Store. Download and pair the air curtain to the app following the onscreen instructions.

Security encryption is at the processor level. When pairing the unit to the Internet via Access Point, security is dependent upon the WiFi network. It is highly recommended that Berner AIR™ be connected to a private network. In the absence of a

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network connection, Bluetooth may be used for control when in range of the unit.

When the Intelliswitch® is connected to a WiFi network, a green LED indicator dot will light in the bottom right corner of the fourth 7-segment LED on the display.

### 2.4. Networking Operation

#### 2.4.1. Peer-to-Peer Serial Connection

Network Operation requires two of more of the same Series of products connected via serial cable(s) between the Intelliswitch® controllers of each unit.

Once linked, all User Menu selections made through any unit display or remote control will transfer to all other linked units. (Note: this does not include the Factory Menu settings).

Parameter changes made on any linked unit will update all other boards immediately upon entering selections.

#### 2.4.2. BACnet-IP Connection

The Intelliswitch® requires the Berner Air™ option to communicate directly with Building or Energy Management Systems (BMS, EMS, BAS) that are compatible with the BACnet protocol.

##### 2.4.2.1. Wireless Connection

Connect wirelessly to a BMS using BACnet-IP. Download the Berner AIR™ app and pair the air curtain to the app. In the settings menu, select the BACnet option. Follow the prompts to configure the BACnet controller.

##### 2.4.2.2. Wired Connection

Connect via wire to a BMS using BACnet-IP, the BernerAir™ option includes an ethernet connection in the wiring compartment. Connect a CAT 5 ethernet cable (provided by others). Download the Berner AIR™ app and pair the air curtain to the app. In the settings menu select the BACnet option. Follow the prompts to configure the BACnet controller.

### 2.5. Building Management (BMS) Connection

The Intelliswitch® alone cannot communicate directly with Building or Energy Management Systems but can be indirectly activate through BMS

dry contact closures to the external connections, See Section 8.

### 3. Menu Structure


The Intelliswitch® has four menus:

- User Menu (Section 4)
- Program Menu (Section 5)
- Diagnostic Menu (Section 6)
- Factory Menu (Section7)

The **User Menu** is the top-level menu where typical air curtain control options are found and set. Available values for each option are based on the operating Mode selected. Each option is identified by a green light when selected. The clock display is the default home position for the User Menu when ✓ is selected or there is no activity for 15 seconds.

*Note: Access to all Secondary Menus must originate from the User Menu. Secondary menus are identified by the menu title upon successful entry, e.g., PRO, DIAG and FACT.*

The **Program Menu (PRO)** is used to edit program options and programable parameters.

The **Diagnostic Menu (dIAG)**  is used to provide parameter status and diagnose and troubleshoot errors with the Intelliswitch®.

The **Factory Menu (FACT)** is only to be used when directed to reset or change factory default settings.

### 4. User Menu

To access the User Menu, press the up or down arrow to step through each option. Each option is identified by a green light when selected. Options available from the User Menu are:

- Mode
- Fan Speed
- Time Delay
- Thermostat Units (degree type)
- Thermostat Setpoint
- Start Time
- Stop Time
- Time Set
- Day Set
- Locked indicator (Enabled/Disabled)

*Note: Thermostat Mode is no longer available.*

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### 4.1. Mode:

↶ OFF-ON-AUTO-PLUS-PURE-PRO1-PRO2-PRO3 ↷

Use plus or minus to select the desired operating Mode:

- OFF – Unit off.
- ON – Unit runs when start/stop time is satisfied. Set times equal for 24-hour operation.
- AUTO – Unit will run when terminals 9 & 10 are connected (closed) and start/stop time is satisfied, ALL menu options available.
- PLUS - Heated units only; unit will run when terminals 9 & 10 are connected (closed) and start/stop time is satisfied. When door is closed and temperature drops below setpoint the unit will run on low speed (set in Program Menu, see Section 5) with heat, unit will run at user level set speed when 9 & 10 closed.
- PURE – Requires PureAir option w/NPBI and option activated in Programming Menu. Unit runs constantly at settings to maximize NPBI effectiveness. See Section 5.8.
- Pro1 – User Program #1 see Section 5.
- Pro2 – User Program #2 see Section 5.
- Pro3 – User Program #3 see Section 5.

*Note: When User Program Modes are selected changes can only be made to the Mode, Time Delay, Temperature, Time, and Day settings. Changes will only remain in effect until the program changes to active time period.*

*Note: AutoLock, Comfort Plus Low Speed and PASSCode are global options, these settings are the same for any Mode. They will not change when the Mode or Program changes.*

### 4.2. Fan Speed:

SP ↶ 1-2-3-4-5-6-7-8-9-10 ↷

Use plus or minus to select fan speed. Depending on the Air Curtain Series, the range will be 1-10, 1-3 or 1-2 where 1 = low, and the highest number = high speed.

### 4.3. Delay Time:

↶ OFF – 00:01 thru 10:00 ↷

Use plus or minus to set time (from OFF to 10 minutes) that the unit will delay shutting off after terminals 9 & 10 are opened.

### 4.4. Thermostat Units:

↶ °F – °C ↷

Use plus or minus arrows to select temperature degree type, Fahrenheit or Celsius, for internal thermostat setpoint.

*Note: Option is only available for heated units.*

### 4.5. Thermostat Setpoint:

↶ OFF – 34°F thru 90°F ↷

or

↶ OFF – 1°C thru 32°C ↷

Use plus or minus arrows to set temperature setpoint for the internal thermostat to activate heat.

*Note: Option is only available for heated units.*

### 4.6. Start Time:

Use plus or minus to set time (including pm) when the unit is to turn on in the ON Mode or become active for AUTO, DELU and PLUS Modes.

**Note: to turn off this feature the Start Time must be set equal to Stop Time (including am/pm).**

### 4.7. Stop Time:

Use the plus or minus to set the time (including pm) when the unit is to turn off in the ON Mode or become inactive for AUTO or PLUS Mode.

**Note: to turn off this feature the Start Time must be set equal to Stop Time (including am/pm).**

4.8. Thermostat Mode: has been removed

### 4.9. Set Time:

Use the plus or minus to set the clock (including pm) used for display, Start/Stop times and User Programs.

*Note: time does not adjust for daylight savings time.*

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#### 4.10. Set Day: single level

↶ DAY1-DAY2-DAY3-DAY4-DAY5-DAY6-DAY7 ↷


Use plus or minus arrows to select day of the week, where Sunday = DAY1, Monday = DAY2, etc. Used as reference for User Programs.

#### 4.11. Locked (enable/disable)

The Intelliswitch® Gen2 can be locked to prevent unauthorized tampering of the settings.

When locked, the options on the User Level can only be viewed except for the Mode. The Mode can be changed between OFF and the Mode that was active when it was locked, other options may NOT be changed.

To lock or unlock, press and hold the plus button for 5 seconds, the Locked light will illuminate when locked.

If the PASScode option is ON, an attempt to unlock the control will display PASS and then a 0000 prompt to enter a four digit unlock code. Use the plus and minus to change the numbers and the up and down arrows to move between positions. Press  when done.

**Note: When the AutoLock option is set to ON in the Program Menu, the Intelliswitch® will automatically lock after 5 minutes without any activity. Default setting – OFF. See Section 5.2.**

**Note: When the PASScode option is set to ON in the Program Menu, the Intelliswitch® will require a code be entered to unlock the control. Default setting – OFF. See Section 5.7.**

### 5. Program Menu

To access the Program Menu, hold down the minus button for 5 seconds. **PRO** will display when the Program Menu is available. Use the up and down arrows to step through each option.


The Program Menu is used to edit program options and programable parameters.

Use the Program Menu to set the following options:


- User Program Pro1, 2 & 3
- AutoLock Display (AULC)
- Comfort Plus low speed (PLUS)

- Serial Network STOP
- Serial Network DOOR
- Serial Network TEMP
- PASScode option
- PureAir Mode option
- Display Sleep
- WiFi Network Error Notice

↶ PRO1-PRO2-PRO3-AULC-PLUS-STOP-DOOR-TEMP-PASS-PURE-DISP-WiFi ↷

**Note: pressing  while at a top-level setting returns to clock display.**

#### 5.1. User Program:

Select the Custom Program you want to edit by pressing the  button at the PRO1, PRO2 or PRO3.

Step through the settings with the up and down arrows and change settings with the plus and minus.

The Intelliswitch® can store up to three user-defined single or dual zone programs. Use this option to edit and save User Menu settings to be recalled under the Mode option as Pro1, Pro2 or Pro3 in the User Menu.

A zone is a time period defined by the user for the unit to be active. Two zones may operate one after the other or with a gap between them.

The Program menu allows parameters for the following options to be set:

- Number of Zones: 1 or 2
- Days of the week to operate (by zone)
- Mode (Off-On-Auto-Plus)
- Speed
- Time Delay
- Thermostat Setpoint
- Start Time
- Stop Time

**Note: After setting the number of zones and active days all parameters are set the same as the User Menu. Use the Up and Down arrows to accept changes.**

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### 5.1.1. Zone:


Zn ↵ 1 – 2 ↵

Select the number of Zones for the program. If **one** zone is selected a prompt will ask to save settings after the last option. If **two** zones are selected, Zone-1 parameters will be set first and then parameters for Zone-2 will be set. A prompt will ask to save settings after the last option of Zone-2.

### 5.1.2. Day:

→ day-day1-day2-day3-day4-day5-day6-day7 →


Set the days of the week that the program is to operate (by zone). Recommend day1 = Sunday.

When **day** is displayed, press the  button to edit the day parameters or the down arrow to skip.

Once in the day parameters, each day is identified by the day number, use plus or minus to select “**y**” to activate a day or “**n**” to deactivate a day.

Use the up and down arrows to move to the next day or skip days until **day** is displayed again.

↵ dy 1n – dy 1y ↵  
↓  
↵ dy 2n – dy 2y ↵  
↓  
↵ dy 3n – dy 3y ↵  
.  
.  
.

From this point press  to re-enter day settings or the down arrow to continue.

*Note: The first seven menu LED's will light from the top-left down representing days 1 thru 7 that have been activated.*

### 5.1.3. Mode:

Select operating mode for the Zone. OFF, ON, AUTO or PLUS are available.

### 5.1.4. Fan Speed:

Set fan speed for the Zone being programmed.

### 5.1.5. Time Delay:

Set time delay for the Zone being programmed.

### 5.1.6. Temperature Setpoint:

For heated units set temperature setpoint of internal thermostat for Zone being programmed. Degree type based on degrees selected on User Menu.

### 5.1.7. Start Time:

Set start time for the Zone program to activate including am/pm.

*Note: Zone 1 has priority over Zone 2. If conflicting times are entered, Zone 1 will activate and take precedence over Zone 2.*


### 5.1.8. Stop Time:

Set stop time for the Zone program to deactivate including am/pm.

**At this point if programming a single zone, there will be a prompt to STORE (Str) the program, proceed to the next step. If programming a dual zone program, day will display. Proceed to STEP 5.1.2 to enter settings for Zone 2 options.**


### 5.1.9. Store:

Str ↵ y – n ↵



Use plus or minus to select **yes** to save program or **no** to abandon changes. Use the  to accept selection and return to the Program Menu.

### 5.2. AutoLock Display:

↵ ON – YES ↵

Use  button to select AutoLock option at **AULC** display. Use plus or minus to select **ON** to have the control automatically lock the display if there is no activity for 5 minutes or **OFF** to deactivate.

Press and hold plus button for 5 seconds to unlock when Locked light is illuminated.


Press  button to return to the Program Menu or press  twice to return to the clock display.



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### 5.3. Comfort Plus low speed:

SP ↶ 1-2-3-4-5-6-7-8-9-10 ↷ see Note\*


Use  button to select Comfort Plus low speed option at the **PLUS** display. Use plus or minus to select the speed for PLUS mode when the door is closed.

Press  button to return to the Program Menu or press  twice to return to the clock display.



\* Note: speeds available is limited to be less than or equal to the current User Menu speed setting.

### 5.4. Serial Network Stop:

↶ ind – ALL ↷


Use  button to select Network Stop option at the **STOP** display. Use plus or minus to select the STOP button behavior when units are serial connected in a Network configuration.

Select “ind” for independent behavior that will only stop the unit where STOP is pressed. Select “ALL” to stop all connected units.



Press  button to return to the Program Menu or press  twice to return to the clock display.

### 5.5. Serial Network Door:

↶ ind – ALL ↷


Use  button to select Network Door option at the **DOOR** display. Use plus or minus to select the door switch behavior when units are serial connected in a Network configuration.

Select “ind” for independent behavior that will only activate the unit where the door switch is connected. Select “ALL” to activate all connected units when any door switch is activated.



Press  button to return to the Program Menu or press  twice to return to the clock display.

### 5.6. Serial Network Temp:

↶ ind – ALL ↷


Use  button to select Network Thermostat option at the **TEMP** display. Use plus or minus to select the thermostat switch behavior when units are serial connected in a Network configuration.

Select “ind” for independent behavior that will only activate the unit where the thermostat is connected. Select “ALL” to activate all connected units when any thermostat is activated.

Press  button to return to the Program Menu or press  twice to return to the clock display.

### 5.7. PASScode:


↶ On – Off ↷

Use  button to select the PASScode option at the PASS display. Use plus or minus to select **ON** to enable or **OFF** to disable the PASScode feature.

When active, the PASScode feature requires a four-digit code be entered every time to unlock the control. The code is: **2376**

### 5.8. PureAir Mode:

↶ Off – PURN – PURC – PURA ↷


Use  button to select the PureAir Mode option at the PURE display. Use the plus or minus to select the mode type.


When selected this option will be added to the Mode list in the User Menu and run the unit continuously to maximize distribution of ionization.

OFF – Not active; removed from User Menu Mode  
PURN – Night; unit runs continuously at low speed, switches to set speed when terminals 9 & 10 closed. Unit runs at high speed outside active time when start/stop are not equal.  
PURC – Comfort+; unit runs continuously at low speed, switches to set speed when terminals 9 & 10 closed. If temperature drops below setpoint the unit will run on low speed with heat, when set point achieved heat will drop out and unit will run continuously at low speed.  
PURA – Auto; unit runs continuously at low speed, switches to set speed when terminals 9 & 10 closed.

### 5.9. Display Sleep:

↶ On – Off ↷

Use  button to select the Display Sleep option at the DISP display. Use plus or minus to select **ON** to enable or **OFF** to disable the Display Sleep feature.

On puts the display to sleep after 1 min. only illuminating the . Press any button to wake it.

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Press ✓ button to return to the Program Menu or press ✓ twice to return to the clock display.

### 5.10. WiFi Network Error:

Er8  On – Off 

Use ✓ to select WiFi Error Display option at the **WiFi** display. Use plus or minus to determine if the WiFi Network error is displayed or suppressed.


This is for cases where the Berner Air™ option was once connected to an access point but is no longer connected and Er81 is displayed.

Select **ON** to suppress the Er81 error code if the WiFi option is no longer used.

Select **OFF** to allow the Er81 error code to display when connection is lost to the network and the WiFi option is being used.

Press ✓ button to return to the Program Menu or press ✓ twice to return to the clock display.

## 6. Diagnostic Menu

To access the Diagnostic Menu, press the  button. **DIAG** will display when the Diagnostic Menu is available. Use the up and down arrows to step through each option.

The Diagnostic Menu provides parameter status to troubleshoot errors. Only “live” parameter settings are displayed, there are no options to change.

The Diagnostic Menu displays the following parameters:

- Intelliswitch Control Board Model
- Software version release
- Speed Range Setting (See 7.1)
- Thermostat Probe Mode (see 7.2)
- Internal Thermostat reading – Celsius
- Internal Thermostat reading – Fahrenheit
- Motor rpm reading
- Supply Voltage Frequency
- Door Switch status
- External Thermostat status
- Heater Onboard Relay status
- Door Switch Cycle Count
- Fan Motor Cycle Count
- Fan Motor Hour Meter

- Heater Hour Meter
- Error Code 1 – Speed Sensor
- Error Code 2 – Line Frequency
- Error Code 3 – Power Issue
- Error Code 4 – Motor Off Fault
- Error Code 5 – only displays if faulted
- Error Code 6 – only displays if faulted
- Error Code 7 – WiFi Pairing
- Error Code 8 – WiFi Network
- Error Code 9 – WiFi Communication

### 6.1. Software Release Version – Format: rX.XX

### 6.2. Intelliswitch Control Board Model

gen3 = Gen3C; gen4 = Gen4, control board.

### 6.3. Fan Speed Range – rn XX (see Section 7.1)

### 6.4. Thermostat Probe – Pr XX (see Section 7.2)

### 6.5. Internal Thermostat – XX °C (np = no probe)

### 6.6. Internal Thermostat – XX °F (np = no probe)

### 6.7. Motor RPM – measured speed in rpm

### 6.8. Supply Voltage – measured frequency in Hz

### 6.9. Door Switch Status – ds 0=open, 1=closed

### 6.10. Ext. T-stat Status – ts 0=open, 1=closed

### 6.11. Heater Relay Status – rl 0=open, 1=closed

### 6.12. Door Switch Cycle Count

Scrolling display of accumulated cycles to 999,999. Berner Air™ App display up to 16,777,215 cycles.

### 6.13. Fan Motor Cycle Count

Scrolling display of accumulated cycles to 999,999. Berner Air™ App display to 16,777,215 cycles.

### 6.14. Fan Hour Motor Meter

Scrolling display of accumulated hours up to 65,535 for both display and Berner Air™ App.

### 6.15. Heater Hour Meter

Scrolling display of accumulated hours up to 65,535 for both display and Berner Air™ App.

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#### 6.16. Error Codes

The Intelliswitch Gen3 has nine error codes for troubleshooting. When an error is encountered, the Intelliswitch will flash the error code intermittently on the display. Codes 1-6 are specific to the controller operation; codes 7-9 are specific to the Berner Air™ WiFi operation.

The status of codes 1-4 and 7 can be observed directly from the Diagnostic Menu. All other codes only appear on the display when the error occurs. The error code format is an “Er” prefix followed by a two-digit code. The first digit is the error number, the second digit is the status where: 0 = inactive (no error exists), 1 = active (error exists).

##### 6.16.1. Error Code 1 – Speed Sensor

Er 10 – Prox Sensor or Speed feedback exists  
Er 11 – No prox Sensor or Speed feedback

**Symptoms** – Products with variable speed control will run at full speed even when the fan speed option is changed. Heating circuit will not engage.

**Solution** – Check to see if the proximity sensor (located next to the motor) is properly seated or connected to the control board. Check distance between tip and trigger bar is approximately 1/16 of an inch.

##### 6.16.2. Error Code 2 – Line Frequency

Er 20 – Power supply line frequency (Hz) identified  
Er 21 – Undetermined supply line frequency

**Symptoms** – If the option to automatically sense line frequency is on, but control cannot determine power supply Hz. Products with variable speed control will run at full speed even when the fan speed option is changed.

**Solution** – Manually set the line frequency in the FACT menu. See Section 7.5.

##### 6.16.3. Error Code 3 – Zero Cross/Power Issues

Er 30 – Clean power exists  
Er 31 – Electrical noise exists in supply power

**Symptoms** – When the control encounters “noise” in the electrical power supply, products with variable speed control will run at full speed even when the fan speed option is changed.

**Solution** – There are no internal changes available. Have the electrical system checked for interference.

##### 6.16.4. Error Code 4 – Speed Feedback

Er 40 – Proper control and sensor operation  
Er 41 – Control is receiving prox/speed sensor feedback from motor shaft when it should be off

**Symptom** – Occurs when the motor shaft is turning when controller mode of operation is off.

**Solution** – Usually the result of voltage leaking through a failing motor control circuit which cannot be serviced. A replacement board is required.

##### 6.16.5. Error Code 5 – Corrupted Memory Setting

Er 51 – Status of this error is not available. It only appears when there has been an event that corrupts the settings in memory.

**Symptoms** – When encountered, the control will reset all settings back to Factory default values except for Speed Range. Some speed ranges are not compatible between product Series; therefore, this value cannot be automatically set and requires user input.

**Solution** – The display scrolls the prompt “SET FACT SPEED”. Press ✓ button, this opens the Speed Range option identified by “rn”. Use plus or minus to select the correct speed range (found on the wiring diagram or Section 7.1) based on the product Series. Press ✓ button.

##### 6.16.6. Error Code 6 – Incompatible Speed Range for Network Serial Connection

Er 61 – Status of this error is not available. It only appears when a Series of units are serial connected and do not have identical Speed Range settings.

**Symptoms** – When multiple units are serial connected without identical speed ranges an Er61 will display on those non-matching units networked to the unit used to change settings every time a button is pressed. The units connected will ignore the commands to prevent motor damage.

**Solution** – If they are the same Series of units check and correct Speed Ranges in the Factory Menu (See Sections 7 and 7.1). If they are not the same Series of units, serial networking will not work. Consult factory for exceptions.



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*Note: Once the speed ranges have been corrected and Er61 no longer occurs indicating networked controls are accepting commands from one another. Units can be synchronized by simply cycling through all settings on the User Menu with the up or down arrows. None of the settings need to be changed.*

**Note: The Intelliswitch® does not monitor if the correct Series speed range has been selected. It only checks if networked products have identical speed ranges.**

#### 6.16.7. Error Code 7 – Pairing Status

Er 70 – Berner Air™ paired or ready to pair  
Er 71 – Berner Air™ network pairing error

**Symptoms** – When trying to pair and there is a communication error with the access point.

**Solution** – Now managed by the Berner Air™ App. Use the App to pair, correct or troubleshoot connection.

#### 6.16.8. Error Code 8 – WiFi Network Connection

Er 81 – Status of this error is not available. It only appears when communication to the network access point is lost.

**Symptoms** – When using Berner Air™, setting changes made in the App do not change settings on the unit. The green LED indicator dot on the bottom right corner of the fourth 7-segment LED on the display is not lit. Status of the WiFi in the settings section of the App shows no connection.

**Solution** – If the network is down the error will disappear when it comes back up. If the network is not down, use the Berner Air™ App to correct or troubleshoot connection


#### 6.16.9. Error Code 9 – WiFi Communication Status

Er 91 – Status of this error is not available. It only appears when there is no communication between the Intelliswitch control and the wireless control board.

**Symptoms** – When using Berner Air™, setting changes made in the App do not change settings on the unit. Located next to the wireless module, the RXD (receiving data) LED on USB to RS485 convertor is not lit.

**Solution** - Check the cables connecting the wireless module to the USB to RS485 convertor and the convertor to the Intelliswitch® controller are properly seated or connected. Check the USB to RS485 convertor Power and TXD (transmitting data) LEDs are lit. If the convertor is transmitting data, consider replacing of the Intelliswitch® controller. If it is not transmitting data, consider replacing the convertor or the wireless module.

### 7. Factory Menu – Service Personnel Only

The Factory Menu must be entered from the DIAG header. To access the Factory Menu, press the  button. **DIAG** will display when the Diagnostic Menu is available. From the DIAG display, press and hold the plus button for 5 seconds. **FACT** will display when the Factory Menu is available.

*Note: When the Factory Menu is accessed, the unit will automatically shut off by changing the Mode to OFF.*

Use up and down arrows to step through each option. Use plus and minus to change settings. The ✓ button saves value and returns to the User Menu.

The Factory Menu is used to change or reset core settings and base functions or resolve errors.

The Factory menu allows parameters for the following options to be set:

- Speed Range
- Temperature Probe Mode
- Restore Factory Defaults
- Reboot Software
- Supply Voltage Frequency

#### 7.1. Speed Range:

rn ↶ 0 – 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 –  
10 – 11 – 12 – 13 – 14 – 15 – 16 – 99 ↷

Select the fan speed range from 0 to 16 using the plus or minus. The speed range for each product is located on the wiring diagram inside the Intelliswitch® schematic identified by the format “SPEED rn: XX”.

**Note: Selecting the incorrect speed range can damage the motor(s) beyond repair, potentially create abnormally high temperatures and create a safety hazard.**

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Speed ranges are dependent upon the air curtain Series, motor type and heat option. The Speed Range on the wiring diagram shall always be the first source to determine the correct setting. The following list can be used a general guide.

### Product Series:

- AC08** (1/5 hp): Amb-1, Heat-2
- AC10** (1/2 hp): Amb-13; Heat-14
- ALC08** (1/5 hp): Amb-1; Heat-2
- AHD10** (1/2 hp): Amb-13; Heat-14
- ARC12** (1/2 hp): Amb (120-240V)-8; (480-600V)-6
- ARC12** (1/2 hp): Heat (208-240V)-9; (480-600V)-7
- ARD12** (1/2 hp): Amb-13; Heat-14
- ARC16** (1 hp): Amb-10; Heat-11
- RVC** (1/2hp): Amb-15, Heat-16
- Motor Control Panel:** 120V Control Amb-3; Heat-5

Available ranges are:

- 0 = ambient – variable 10-speed, 600 rpm to full
- 1 = ambient – variable 10-speed, 1050 rpm to full
- 2 = heated – variable 10-speed, 1250 rpm to full
- 3 = ambient – full on, no adjustment
- 4 = heated – full on, no adjustment (monitored)
- 5 = heated – full on, no adjustment (not monitored)
- 6 = ambient – multiple 3-speed, ITC relay control
- 7 = heated – multiple 3-speed, ITC relay control
- 8 = ambient – variable 3-speed, 1050 rpm to full
- 9 = heated – variable 3-speed, 1250 rpm to full
- 10 = ambient – multiple 2-speed, ITC relay control
- 11 = heated – multiple 2-speed, ITC relay control
- 12 = heated – variable 10-speed, 600 rpm to full
- 13 = ambient – variable 10-speed, 1050 rpm to full
- 14 = heated – variable 10-speed, 1250 rpm to full
- 15 = ambient – variable 10-speed, 600 rpm to full
- 16 = heated – variable 10-speed, 600 rpm to full
- 99 = lock out – scrolling request for user input

### 7.2. Thermostat Probe Mode:

Pr ↵ St – Cd ↵

Use plus or minus to select thermostat probe mode.

Select “**St**” (Standard) mode with error detection when the lowest operating temperatures for the probe will be above the 34°F (1°C) limit. Below this temperature **there will be no call for heat**. Probe error detection will be active, and “nP” (no Probe) will display in diagnostics upon probe failure or disconnection.

Select “**Cd**” (Cold) mode with **no** error detection when the operating temperatures for the probe are expected to be below 34°F (1°C). Below this temperature **there will be call for heat**. Probe error

detection will be disabled, and “nP” (no Probe) will **not** display in diagnostics upon a probe failure or disconnection. Diagnostics will display 34°F (1°C) for temperatures below the limit, upon probe failure or disconnection.

- St – Standard mode, locks out below 34°F (1°C)
- Cd – Cold mode, works below 34°F (1°C)

Press the ✓ button to accept the selection or use the up or down arrows to navigate to next option

### 7.3. Restore Factory Default:

DEF ↵ n – U – P – A – t – C ↵

Use this option to restore any of the control’s settings back to factory defaults.

Use plus or minus to select the factory default restore type.

Available selections are:

- DEFn – no changes
- DEFU – reset User Menu ONLY settings
- DEFP – reset Programs ONLY settings
- DEFA – reset ALL settings (user and program)
- DEFt – set controller to factory TEST parameters
- DEFC – reset all cycle and hour counters to zero

To accept the selection, press the ✓ button, using the up or down navigation arrows ignores any changes and moves to next option

### 7.4. Reboot Software:

reb ↵ y – n ↵

If an error occurs that can be fixed by rebooting the control software.

Use the plus or minus to select “y” to reboot the control or “n” to not reboot the control.

Press the ✓ button to accept the selection, using the up or down navigation arrows ignores any changes and moves to next option.

### 7.5. Line Frequency:

Fr ↵ Au – 60 – 50 ↵

The Intelliswitch® default frequency is set to 60 Hz.

Use the plus or minus to select the frequency of the power supply. The controller can be set to

# Intelliswitch Gen3C Navigation – V4.15 (AC Motor)

## Display: Gen4

automatically sense the line voltage frequency if the destination is unknown, if it is unable to determine the frequency, it must be manually selected.

- Au – Automatically Sense
- 60 – 60 Hz power supply
- 50 – 50 Hz power supply

Press the ✓ button to accept the selection or use the up or down arrows to navigate to next option

### 8. External Connections

There are three types of external connections available on the Intelliswitch®.

- Fan Mode Activation
- Heat Mode Activation
- Network Connection - See Sections 2.3-2.5

#### 8.1. Fan Mode Activation

Terminals 9 and 10 are used to activate Auto, Plus and Programmable Modes when they are connected or closed. The Intelliswitch® uses a low 5-Volt DC signal to monitor contact closure.

##### 8.1.1. Door Switch (limit switch)

The door or limit switch is used in conjunction with the Auto, Plus and Programmable Modes to signal that the door is open. Connect door or limit switch to terminals 9 and 10 in the junction box.

##### 8.1.2. Building Management System

A building management system or dry contact closure can be used to activate the unit through the Auto, Deluxe, Plus and Programmable Modes. Connect applicable BMS contacts to terminals 9 and 10 in the unit junction box.

#### 8.2. Heat Mode Activation

Terminals 6 and 7 are used to activate the Heat Mode for all Operating (On, Auto, Deluxe, Plus and Programmable) Modes when they are connected or closed. The Intelliswitch® uses a 5-Volt DC signal to monitor contact closure.

If a value is selected for the internal thermostat probe, it will work in parallel with an external thermostat contact closure. This allows either thermostat to activate the heat. If the internal thermostat is turned “OFF” the external thermostat will still independently activate the heat.

#### 8.2.1. External Thermostat

An external (remote) thermostat connection can be used to sense temperature independent of the built-in thermostat probe. Connect thermostat to terminals 6 and 7 in the unit junction box.

#### 8.2.2. Building Management System

A building management system or dry contact closure can be used to activate the Heat Mode for all Operating Modes. Connect applicable BMS contacts to terminals 6 and 7 in the unit junction box.

### 9. Infra-red Remote Control

The handheld infra-red remote control button layout and operation are the same as that on the Intelliswitch® unit display (including multiple button presses) with one exception, the Lock Button.

There is no need for multi-button press and hold to lock/unlock display. The Lock button will lock/unlock display with one press.

The Infra-red Remote Control has a range of 15 feet.

Gen3 IR remote can control the Gen4 where:  
Left Arrow = Minus, Right Arrow = plus, OK = ✓

