NuWhirl™

TOUCHSTONE
Dual Variable Speed System

CIDU-315-03-02-01
Configuration #1—Dual Variable Speed Pump/Blower
Configuration #2—Variable Speed Pump
Configuration #3—Variable Speed Blower

Installation & Operating Manual
with Troubleshooting and Configuration Guide

NuWhirl™

Important Safety Instructions

Definitions:
WARNING (May cause serious injuries or death)
CAUTION (May cause property damage)

For information on NuWhirl Instructions, see:
www.nuwhirl.com/docs/product-instructions.html

When installing and using this electrical equipment, basic safety precautions should always be followed, including:

WARNING: Keep dry. Replace control if exposed to water, moisture or contamination.

WARNING: Use and follow these instructions along with all instructions that have been provided with your whirlpool bathtub in order to fully enjoy the bathtub safely.

WARNING: Electronic control system components should be installed as per local and national Electrical Codes, in a location not to be subjected to splashing or flooding. Exposure to water or splashing will void all product certifications and warranties.

There are no user serviceable parts inside. Opening, modifying, or tampering with control system components will void all product certifications and warranties.

WARNING: Risk of electric shock. Connect only to a ground type receptacle or power supply junction box protected by a Ground -Fault Circuit Interrupter (GFCI). Contact a qualified electrician if you cannot verify that the power supply is protected by a GFCI. The GFCI should be tested on a routine basis. Consult the GFCI manufacturer's instructions for correct testing and operation.

For electrical connections, see applicable wiring diagram.
See www.nuwhirl.com/docs/product-instructions.html

Do not use an extension cord to connect the product to the electric supply; provide a properly located receptacle or junction box.

WARNING: Failure to install in strict accordance with each and every instruction above may compromise the system, which may cause injury to persons and/or property.

The tub may be supplied from more than one power source. Before working on any electrical device, make sure all power to the control system is off.

Use this unit only for its intended use as described in this manual. Do not use attachments not recommended by the manufacturer. Any improper installation or misuse of the equipment may result in injury to the user and will void the warranty.

Do not run unit dry. Always be certain that the pump casing is filled with water before starting the unit. If pump fails to prime within 30 seconds, turn it off. Check if there is an airlock, clogged plumbing, or closed valve.

Save these instructions.

TOUCHSTONE Variable Speed Bath System
Installation & Operating Manual

Table of Contents

All Installation Procedures in this manual are for use by Tub Manufacturers or Qualified Service Personnel ONLY.

Control Configuration Selection and Setting Guide

This only needs to be performed on a newly-serviced system, or when the Keypad is replaced.

The location of the Service Button is the "Water Jet" key shown above outlined in red (the appearance of your keypad may differ).

After Power-Up, when this Service Button lights up, press and hold it until it begins displaying the Software number "SFT-383 Rev A". The display will then show "C01", and the Blower and "+" keys will light up (shown in blue circles). Pressing the Blower key will increase the Configuration Number, and the "Speed +" will decrease it. Once the Configuration Number is set to the required value, press and release the Service Button (red circle). The configuration number will now be permanently stored in memory.

The keypad is now ready for use.

The keypad is capable of being programmed to support various system configurations, features and options. These are the configurations currently available, as of April 2017:

CIMC-315-03-02-01 Dual Variable Speed Pump/Blower Config #1: Electronic Keypad, Independent Timers, 10-Speed Blower, 10-Speed Pump, Multi-Color LED Tub Lights, Capacitive Water Detect.

CIMC-315-03-02-01 Variable Speed Pump Config #2: Electronic Keypad, Independent Timers, 10-Speed Pump, Multi-Color LED Tub Lights, Capacitive Water Detect.

CIMC-315-03-02-01 Variable Speed Blower Config #3: Electronic Keypad, Independent Timers, 10-Speed Blower, Multi-Color LED Tub Lights, Capacitive Water Detect.
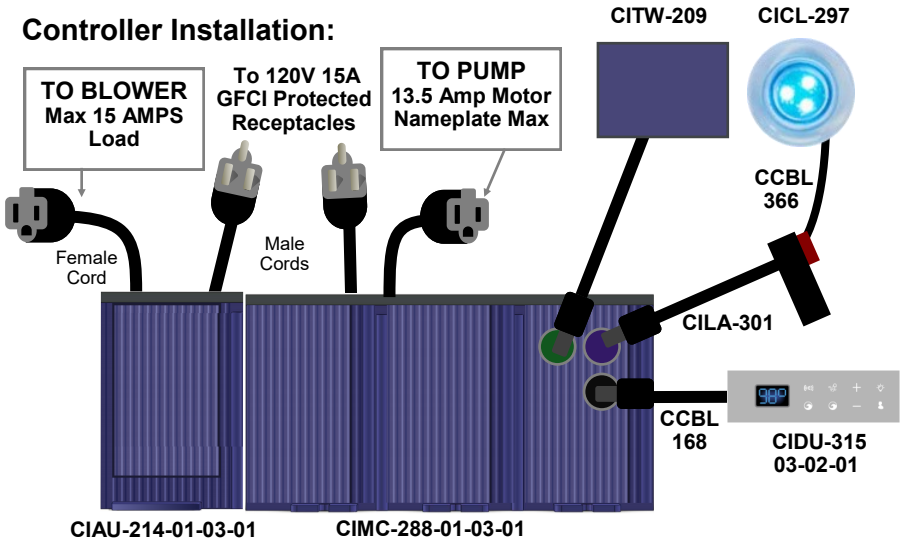
Dual Variable Speed Pump/Blower Configuration #1

System Identification: CIDU-315-03-02-01
Configuration #1 Dual Variable Speed Pump/Blower

System features: Electronic Keypad, Independent Timers, 10-Speed Blower, 10-Speed Pump, Multi-Color LED Tub Lights, Capacitive Water Detect.
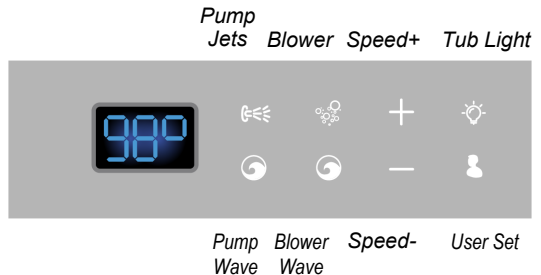
Controller Installation:

CITW-209   CICL-297

TO BLOWER Max 15 AMPS Load

To 120V 15A GFCI Protected Receptacles

TO PUMP 13.5 Amp Motor Nameplate Max

CCBL 366

Female Cord

Male Cords

CILA-301

CCBL 168

CIDU-315 03-02-01

CIAU-214-01-03-01   CIMC-288-01-03-01

NOTES:

1. Use wire clips provided to retain cables.

2. CAUTION: Do not plug 8-pin cables into 6-pin ports or damage may result to system.

3. Connect cables to ports as shown.

4. Before assembling the two controllers together, remove the Blue Communication Window Plugs between them, and replace them with the supplied Clear Red Window Plugs for IR communication to occur between units. CIAU Unit is to be installed on the left of the CIMC unit as shown.

CAUTION: Failure to connect cables to ports as shown, may damage the control box and its components.

Operation:

When the Controller detects that there is sufficient water in the tub, all the buttons will light dim, and the Bath Temperature will display.

Pump Jets   Blower   Speed+   Tub Light

Pump Wave   Blower Wave   Speed-   User Set

Dual Variable Speed Pump/Blower Configuration #1

(continued)

Pump Jets: Press and release the Pump Jets Button to turn it On. This Activates (brightens) the Pump Jets button, turns on the Pump at mid-level speed 5, and sets its 20 minute timer. The Speed+ and Speed– buttons also Activate (brighten).

To adjust the intensity of the Pump Jets:

1. Check that the Pump Button is Active (bright).

2. Press and hold the "Speed+" or "Speed-" Button to slowly increase or decrease the respective speed (ranging from S10 to S1) until the desired intensity is reached. Press and release the "Speed+" or "Speed-" Button to increase or decrease the respective intensity by one full speed.

3. Press the Pump Wave Mode Button to have it oscillate between the highest and lowest speeds. Pressing it again will cancel Wave Mode, and revert to Speed Mode.

To turn the Pump Jets off:

1. Check that the Pump Button is Active (bright).

2. Press and release the Pump Jets Button again and the Pump will turn off, and the associated Buttons will De-Activate (dim).

Blower: Press and release the Blower Button to turn it On. This Activates (brightens) the Blower button, turns on the Blower at mid-level speed 5, and sets its 20 minute timer. The Speed+ and Speed– buttons also Activate (brighten).

To adjust the intensity of the Blower:
1. Check that the Blower Button is Active (bright).
2. Press and hold the "Speed+" or "Speed-" Button to slowly increase or decrease the respective speed (ranging from S10 to S1) until the desired intensity is reached. Press and release the "Speed+" or "Speed-" Button to increase or decrease the respective intensity by one full speed.
3. Press the Blower Wave Mode Button to have it oscillate between the highest and lowest speeds. Pressing it again will cancel Wave Mode, and revert to Speed Mode.
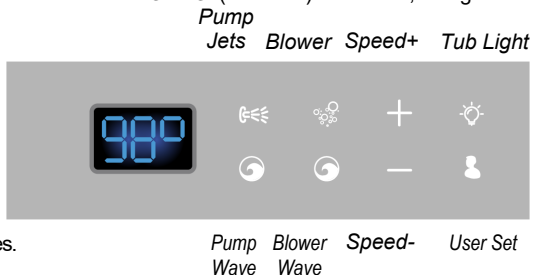
To turn the Blower off:
1. Check that the Blower Button is Active (bright).
2. Press and release the Blower Button. The Blower will turn off, and the associated Buttons will De-Activate (dim).

Tub Light: To activate the Tub Light, and set its 30 minute Timer, press and release the Tub Light Button. The first press will put the light in a Rainbow mode, rotating through each of the color variations (displays Color C00). Subsequent press-and-release of the Light Button will illuminate one color in the following order: White, Blue, Aqua, Green, Yellow, Red, Magenta (Colors C01 – C07). Press-and-releasing of the Light button after C07 or press-and-holding at any time will turn it off.

Timers: Each function will turn off once its individual Timer has run out. If the bath empties during operation, the system will turn off, and it will flash "NO H2O" (No Water) three times, then go out.

User Settings: To store your favorite bath setting in memory, press and hold the User Set Button until it displays "STOR", then release. To recall it at a later time when the bath is running, press and release the button.

Purge Cycle: 30 minutes after the tub has been drained, the Keypad will show DRY, and the Blower will run for 1 minute to remove the water from the lines.

TOUCHSTONE Variable Speed Bath System
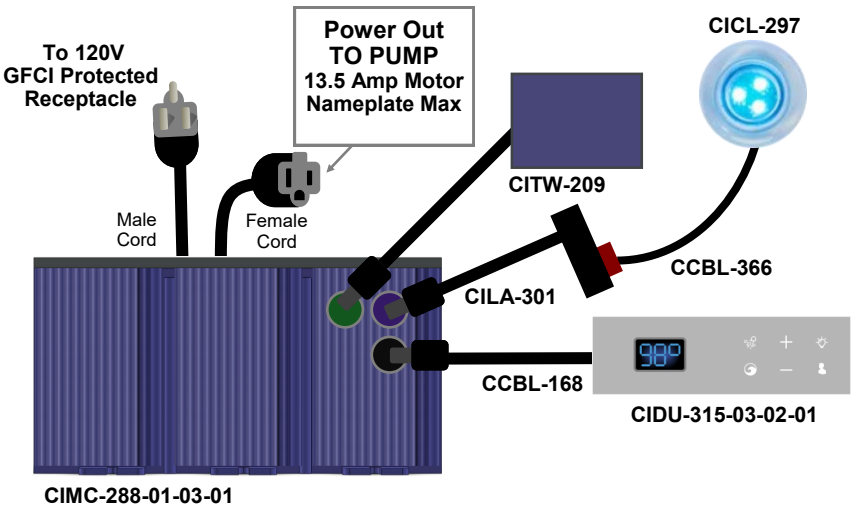## Installation & Operating Manual

Variable Speed Pump Configuration #2

System Identification: CIDU-315-03-02-01
Configuration #2 Variable Speed Pump
System features: Electronic Keypad, Independent Timers, 10-Speed Pump, Multi-Color LED Tub Lights, Capacitive Water Detect.
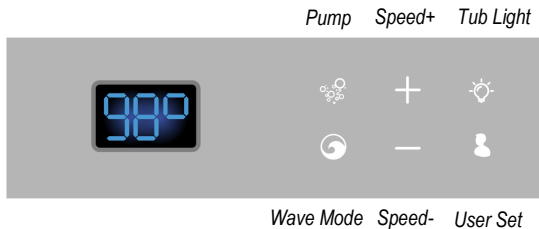
Controller Installation:

To 120V GFCI Protected Receptacle

Power Out TO PUMP 13.5 Amp Motor Nameplate Max

CICL-297

Male Cord

Female Cord

CITW-209

CILA-301

CCBL-366

CCBL-168

CIDU-315-03-02-01

CIMC-288-01-03-01

NOTES:
1. Use wire clips provided to retain cables.
2. CAUTION: Do not plug 8-pin cables into 6-pin ports or damage may result to system.
3. Connect cables to ports as shown.
CAUTION: Failure to connect cables to ports as shown, may damage the control box and its components.

Operation:
When the Controller detects that there is sufficient water in the tub, all the buttons will light dim, and the Bath Temperature will display.

Pump *Speed+* *Tub Light*

Wave Mode *Speed-* *User Set*

Variable Speed Pump Configuration #2 (continued)

Pump: Press and release the Pump Button to turn it On. This Activates (brightens) the Pump Jets button, turns on the Pump at mid-level speed 5, and sets its 20 minute timer. The Speed+ and Speed– buttons also Activate (brighten).

Press and release at any time to turn it Off, and the associated Buttons will De-Activate (dim).
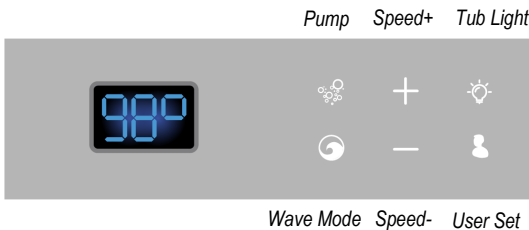
Press and hold the "Speed+" or "Speed-" Button to slowly increase or decrease the respective speed (ranging from S10 to S1) until the desired intensity is reached. Press and release the "Speed+" or "Speed-" Button to increase or decrease the respective intensity by one full speed.

To activate the Pump Wave Mode, press and release the Pump Wave Button and the Pump will oscillate between the highest and lowest speeds. Press and release the Button again to return to regular speed operation.

Tub Light: To activate the Tub Light, and set its 30 minute Timer, press and release the Tub Light Button. The first press will put the light in a Rainbow mode, rotating through each of the color variations (displays Color C00). Subsequent press-and-release of the Light Button will illuminate one color in the following order: White, Blue, Aqua, Green, Yellow, Red, Magenta (Colors C01 – C07). Press-and-releasing of the Light button after C07 or press-and-holding at any time will turn it off.

Timers: Each function will turn off once its individual Timer has run out. If the bath empties during operation, the system will turn off, and it will flash "NO H2O" (No Water) three times, then go out.

User Settings: To store your favorite bath setting in memory, press and hold the User Set Button until it displays "STOR", then release. To recall it at a later time when the bath is running, press and release the button.

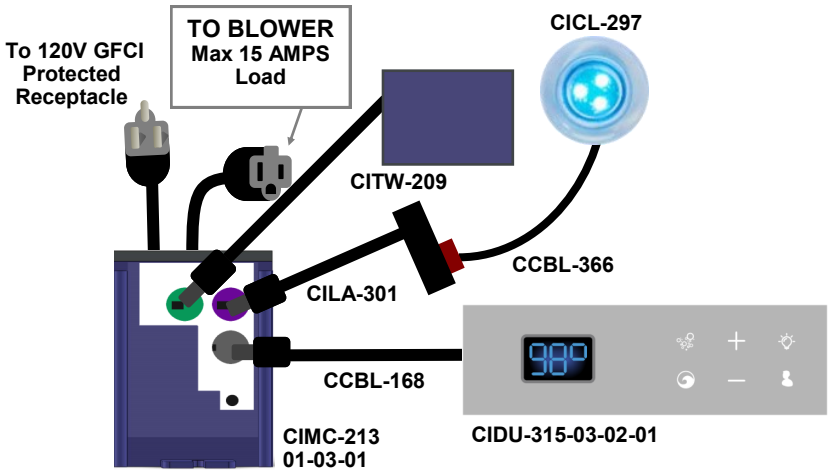|	Pump	Speed+	Tub Light
	⚬	+	☀
	↻	−	👤
	Wave Mode	Speed-	User Set

Variable Speed Blower Configuration #3

System Identification: CIDU-315-03-02-01
Configuration #3 (Variable Speed Blower)
System features: Electronic Keypad, Independent Timers, 10-Speed Blower, Multi-Color LED Tub Lights, Capacitive Water Detect.
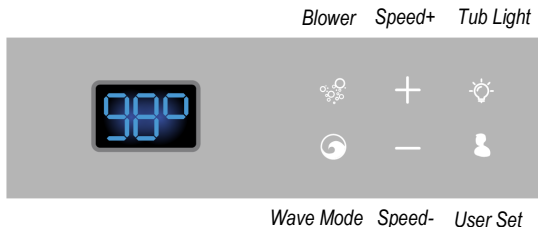
Controller Operation:

To 120V GFCI Protected Receptacle

TO BLOWER Max 15 AMPS Load

CICL-297

CITW-209

CCBL-366

CILA-301

CCBL-168

CIMC-213 01-03-01

CIDU-315-03-02-01

98°

NOTES:
1. Use wire clips provided to retain cables.
2. CAUTION: Do not plug 8-pin cables into 6-pin ports or damage may result to system.
3. Connect cables to ports as shown.
CAUTION: Failure to connect cables to ports as shown, may damage the control box and its components.

Operation:
When the Controller detects that there is sufficient water in the tub, all the buttons will light dim.

Blower   *Speed+*   *Tub Light*

98°

Wave Mode   *Speed-*   *User Set*

Variable Speed Blower Configuration #3 (continued)

Blower: Press and release the Blower Button to turn it On. This Activates (brightens) the Blower button, turns on the Blower at mid-level speed 5, and sets its 20 minute timer. The Speed+ and Speed– buttons also Activate (brighten).

This sets the 20 minute Blower Timer, and the Blower Speed to mid-level Speed 5. Press and release at any time to turn it Off, and the associated Buttons will De-Activate (dim). Once set, the Keypad will display the remaining Time.

Press and hold the "Speed+" or "Speed-" Button to slowly increase or decrease the respective speed (ranging from S10 to S1) until the desired intensity is reached. Press and release the "Speed+" or "Speed-" Button to increase or decrease the respective intensity by one full speed.

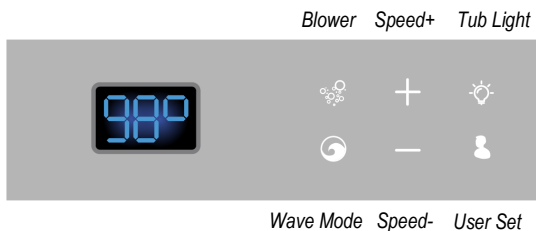-To activate the Blower Wave Mode, press and release the Wave Mode Button.

The Blower will oscillate between the highest and lowest speeds.
Press and release the Button again to return to regular operation.

Tub Light: To activate the Tub Light, and set its 30 minute Timer, press and release the Tub Light Button. The first press will put the light in a Rainbow mode, rotating through each of the color variations (displays Color C00). Subsequent press-and-release of the Light Button will illuminate one color in the following order: White, Blue, Aqua, Green, Yellow, Red, Magenta (Colors C01 – C07). Press-and-releasing of the Light button after C07 or press-and-holding at any time will turn it off.

Timers: Each function will turn off once its individual Timer has run out. If the bath empties during operation, the system will turn off, and it will flash "NO H2O" (No Water) three times, then go out.

User Settings: To store your favorite bath setting in memory, press and hold the User Set Button until it displays "STOR", then release. To recall it at a later time when the bath is running, press and release the button.

Purge Cycle: 30 minutes after the tub has been drained, the Keypad will show DRY, and the Blower will run for 1 minute to remove the water from the lines.

Blower   Speed+   Tub Light

Wave Mode   Speed-   User Set

System Troubleshooting

For the general troubleshooting issues related to TOUCHSTONE product, please refer to the TOUCHSTONE General Troubleshooting Guide.

System Identification and Verification: The first step in troubleshooting is to verify that the hardware required for the system is complete and installed correctly. Each Control System is identified by the Keypad Part Number and the Configuration Number.

Cable Verification: Verify that the cables are connected correctly, and that the pins are straight and free of damage. The Display Unit cable may have a Red Flag on the end, and is connected to the Controller's corresponding port, marked in Red.
The Tub Light Accessory's cable may have a Yellow Flag on the end, and is connected to the Controller's corresponding port, marked in Yellow.

NOTE: If these cables were cross-connected or forced-in at any point, irreparable damage may result, and any warranty will be void. Should this happen, replace all the affected components, ensuring that they are connected correctly.

Power Verification: Each blue control box has a green power indicator light on the face where the Keypad plugs in. These should be constantly illuminated when power is on to the system. If it is not lit, use a meter or suitable device such as a drill motor or hairdryer to verify that there is power to the Control System at the receptacle under the tub. Verify and check that the circuit has GFCI protection, and that the GFCI is functioning properly.

Configuration Verification: Each system is capable of operating a number of different configurations. In order to run the specific system at hand, the correct Configuration must be selected when components are replaced. To verify the Configuration that the Keypad is set to, simply cycle the power to the system and observe the Keypad. On Keypads with an Alphanumeric LED display, it will show "Cxx" after a few seconds, where "xx" is the Configuration number.

NOTE: Once the Configuration is set it will not be affected by cycling the power, it needs only to be set initially.

Load Verification (Pump, Blower, etc.): If a Load will not turn off: Unplug the Keypad. If the load is still on, there is a fault in the Control Box. Replace the Control Box.
If a Load will not turn on: Referring to the Operating Instructions section, confirm that the Load is plugged into the correct Receptacle of the correct Control Box. If it still does not function, verify that the Load is operational by plugging it directly into a known-good wall receptacle. If not, replace the Control Box or Load accordingly.

Non-Functional Keypad: If the Keypad is not functioning, check that the control box has power by observing the green power indicator LED on the control box is illuminated.
Next, check the cable connecting the Keypad to the control box making sure that both connections are secure and the retaining clips (if present) are attached. Inspect each cable end to make sure that the pins are not bent or missing. If the Keypad is still non-functional, replace the Keypad and the Cable. Set the Keypad to the proper Configuration and test the system.

Error Codes on the Keypad: The Alphanumeric LED Display registers hardware conflicts as error codes in the form of "E##". Refer to the General TOUCHSTONE Troubleshooting Guide for list of error codes.

Retain this manual for future reference

For your records and future reference please fill in data below:

Manufacturer: _____

Model: _____

Serial: _____

Date of Installation: _____

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