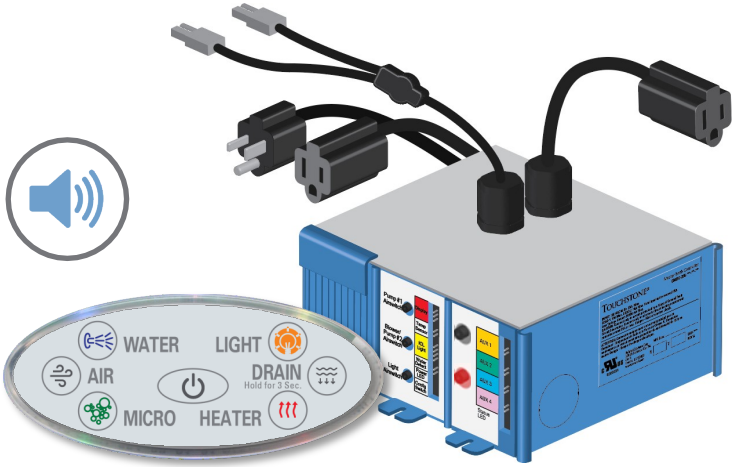
NuWhirl®

THE BEAUTY OF WATER.
THE SCIENCE OF RENEWAL.



TOUCHSTONE®

Master Bath Controller System with Option Board and Wireless Pairing Stereo Sound System

Keypad Models CIDU-264-02-[14/15/16]-02;
Controller Model CMBC-298-03-01-01

Custom Master Bath Configuration Single Speed Pump, Variable Speed Blower, Microbubbles, Multicolor Tub Light, Surface Heater, Automatic Drain, Speaker, Wireless Pairing Stereo Sound System

Installation & Operating Manual

NuWhirl Systems Corp | www.nuwhirl.com | 951-817-5600
MAN-070 REV A 1/14/2021

Important Safety Instructions

PLEASE READ CAREFULLY PRIOR TO
Troubleshooting and Servicing Electrical Equipment

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.

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.

Federal Communications Commission (FCC) Compliance Statements:

CAUTION: Changes or modifications not expressly approved could void your authority to use this equipment.

This device complies with Part 15 of the FCC Rules. Operation to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
•Reorient or relocate the receiving antenna.
•Increase the separation between the equipment and receiver.
•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
•Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment shall be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

ISED STATEMENT:
This device complies with Innovation, Science and Economic Development Canada's license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment shall be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement est conforme aux limites d'exposition aux rayonnements d'ISDE établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et toute partie de votre corps.

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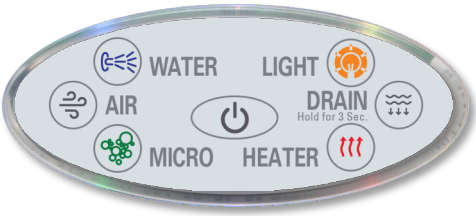
All Installation Procedures are for use by Tub Manufacturers or Qualified Service Personnel ONLY.

Keypad Compatibility Checker



The CIDU-264-02-[14/15/16]-02 keypad is compatible only with CMBC-298-03-series controllers and vice versa. The keypads are **not** backward-compatible with CMBC-298-01 or -02-series controllers. Likewise, CIDU-264-02-[14/15/16]-01 series keypads are not equipped with the software needed to operate the wireless speaker and are thus not compatible with CMBC-298-03-series controller.

CMBC-298-01-Series
Generic Master Bath
Not Compatible
Refer to MAN-060 or MAN-061 for CMBC-298-01-Series System Installations.

CMBC-298-02-Series
Option Board
Not Compatible
Refer to MAN-066 or MAN-068 for CMBC-298-02-Series System Installations.

CMBC-298-03-Series
Option Board,
Speakers
Compatible

Note The CMBC-298-03-01-01 is preset to **Configuration 1** and no configuration changes are necessary for this system for newly received Controllers.

However, if the Controller was changed to any other configuration, it must be manually set back to **Configuration 1** prior to use in order for the bath features to function properly.

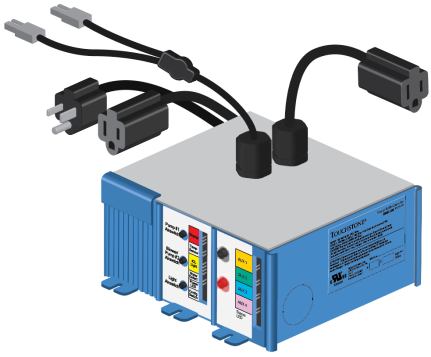
Control Configuration Selection and Setting Guide

Note This only needs to be performed for a Controller that has had its Configuration Settings previously changed.

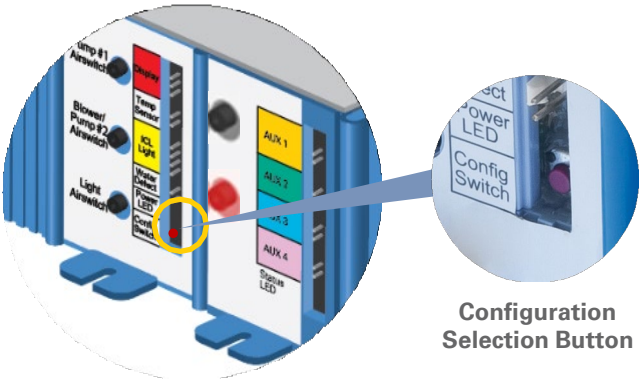
The TOUCHSTONE Master Bath Control box contains multiple software configurations to offer different sets of features on a bathtub. The control boxes must be placed in the proper configuration for the set of features on the bathtub in order to function properly. The configuration is selected by pressing the Configuration Selection button when power is first applied to the system as explained on Page 5. Once a configuration is set, the control box will remain in that configuration, even if power is lost and restored.

CMBC-298-03 Configuration Set Up

The CMBC-298-03-01-01 is preset to Configuration 1 and no configuration changes are necessary for this system for newly received Controllers.



However, if the Controller was changed to any other configuration, it must be manually set back to **Configuration 1** prior to use in order for the bath features to function properly.



Configuration Selection Button

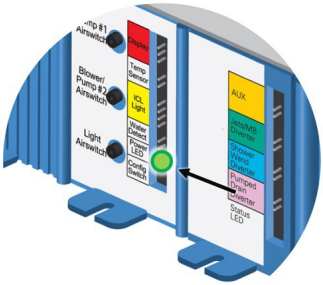
Manually Setting a Configuration

1. Locate the red **Configuration Selection Button** below the pinned ports and green power indicator light in the front of the Master Bath Controller box. Unplug the control box from the AC power, and wait approximately 10 seconds.

2. Plug the control box back in. The **Green Power LED** will blink the current configuration that it is in (e.g. Configuration #1 will blink once, Configuration #2 will blink twice, etc.).

3. Within 20 seconds, press and hold the Configuration Button. Use a small object such as a pen or pencil to press the button. Only gentle pressure is required. Do not release.

   Note: The Configuration Selection Button can be used only for the first 20 seconds after power is first applied to the control box. This is to ensure that the configuration does not get accidently changed.



4. The Power LED will turn off, then blink once, indicating Configuration #1, followed by a pause, then two blinks, indicating Configuration #2, etc. Release the Configuration Button **after the first blink for Configuration 1**. The Power LED will then blink the selected configuration again, as confirmation.

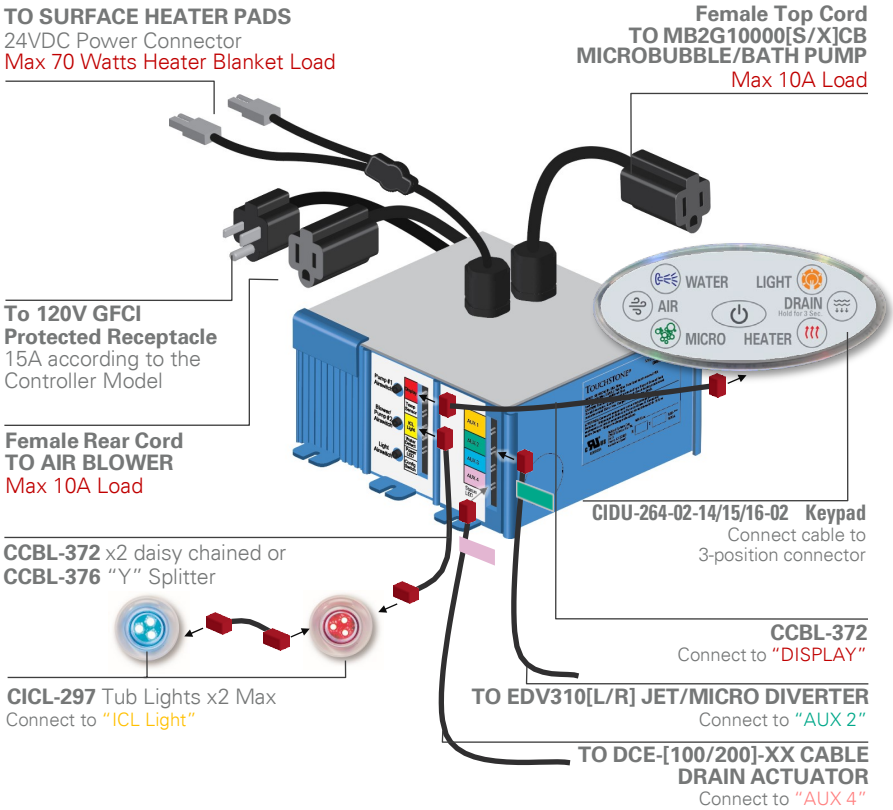
Configuration is complete.

Configuration 1:
Custom Keypads CIDU-264-02-[14/15/16]-02
Single Speed Pump, Dual Speed Bower, Microbubble

System Identification CMBC-298-03-01-01

Note This Controller is shipped with Configuration pre-set to 1. For instructions on manually setting the Configuration Number to 1, see Page 6.

Controller Installation Diagram

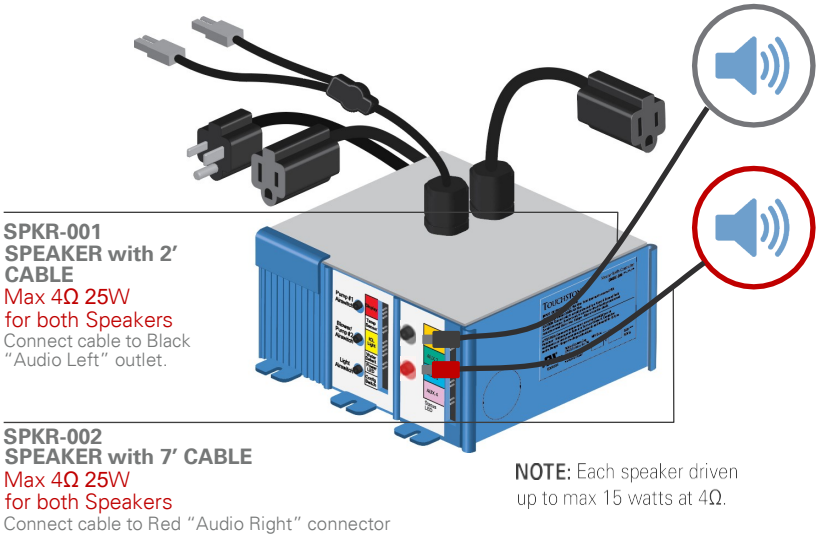


NOTES:

1. PUMPS equipped with air switch must be in the "ON" position prior to plugging into the controller.
2. The combined rating of both Loads must not exceed the Controller's Amperage Rating of 15A.
3. Connect only Heater Blankets to the 24VDC Power Connector.
4. Connect cables to ports as shown. Installation may not require the use of all connection ports.

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

Speaker Installation



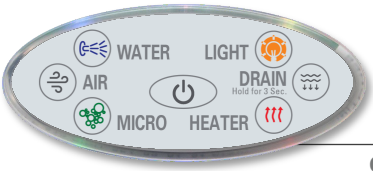
Operation

These operating instructions should be used in conjunction with other instructions and warnings provided with the whirlpool bathtub in order to fully understand and safely utilize the tub.

System Features

Electronic Keypads, Independent Function Timers, Single Speed Pump, Dual Speed Blower, Microbubble Pump, Automatic Drain, Automatic Dry Cycle, Multi-Color LED Tub Lights

Activation



CIDU-264-02-[14/15/16]-02
Custom 7-Button Controller Keypad

Electronic Keypad Operating Instructions

Keypad Backlighting When a function is in use, its key will be brightly lit. When a function is off, its key is dimmed.

Center Power Button The center button is the Master Off Button. During operation, pressing this button at any time will turn the system off. Additionally, when the system is off, it also serves to "wake" the system, illuminating the Keypad and readying it for the next button selection. If no feature is powered on within 30 minutes, the keypad lights will turn off.

When the system is turned on, the spoken message "Welcome to SpaSounds, the SafeStep Bluetooth Audio Bathing Experience" will play through the tub speakers. The sound system is ready for pairing and streaming from the host device. See Page 12 for Pairing operations.

Single Speed Pump The Water System is activated by pressing the Water Key. This will turn on the Pump, and activate its 20-minute timer. Pressing it again will turn the Water Pump off, and its Blue Indicator will dim, indicating that it is off. The Water System will stop automatically when the timer expires.

Note Before turning on the Water System, ensure first that there is sufficient water in the Tub to at least cover the Jets. If the manual diverter is set on the "BACK JETS" option, ensure that the bath water covers the highest back jet, or water may spray outside of the tub.

Dual Speed Air Blower The Air System is activated by pressing the Air Key. The Air System runs independently of the Tub Water Level. This will turn on the Blower on high speed, and activate its 20-minute timer. Pressing the Button a second time will set the Blower to lower speed. Pressing it a third time will turn the Blower off.

Automatic Dry Cycle While the system is on standby mode, if no feature is powered on within 30 minutes, the keypad lights will fully turn off. 30 minutes after the keypad lights are shut off, the Air Blower will automatically come on for 1 minute. This will purge out any residual moisture in the air system, making the system fresh and ready for the next bath.

CAUTION Do not run the whirlpool pump or microbubble system when the bath is empty. Please ensure the foot well is completely filled with water before starting either feature.

Infusion® Microbubbles The Microbubble System is activated by pressing the Bubbles Key. This will turn on the pump in Microbubble mode, and activate a 20-minute timer. To stop the system earlier, press the Bubbles Button and the microbubble system will turn off.

Note The microbubble system is interlocked with the whirlpool water system, and the air blower system. Activating the microbubble system will automatically turn off the whirlpool water system and air system. Similarly, the microbubble system will turn off if the Air Blower or whirlpool water systems are turned on. The air blower and whirlpool water systems can be operated simultaneously.

CozyHeat Surface Heater It is recommended to turn the Surface Heater ON 5-10 minutes prior to entering the tub. Once the "HEATER" Key is pressed the red LED indicator will illuminate and start a 20-minute timer. The Heater will begin to warm the surface of the seat and/or back wall. The temperature will increase to a comfortable level within a 5-10 minute period. To turn off the Surface Heater earlier press the "HEATER" key.

Multi-color Tub Light The LED Multi-Color Tub Light is activated by pressing the "LIGHT" Key. The first press will start its 20-minute timer, and activate the Tub Light in a "Rainbow" mode. Subsequent presses will change the color to Blue, White, Blue, Aqua, Green, Yellow, Red, Magenta, and off. The Tub Light will turn off automatically when the timer expires. To turn off this function earlier, press and hold the Light Key at any time.

Drain Press and hold the Drain Key for 3 seconds to open the tub drain. The drain function will turn Off automatically after 2 1/2 minutes. To cancel the drain function earlier, press the Drain Key a second time. The drain shall remain open after the Drain function concludes or turned Off manually.

Note Electronic Actuator should be used as the secondary means of draining the tub. Turn the Drain Handle as the primary means for draining. When the Electronic Actuator drain feature is activated, any systems currently running will turn off automatically except for the Surface Heater and Tub Light, of which will remain on if currently active.

WARNING When the tub is drained by turning the Primary Drain Handle, any systems currently running will continue to operate (such as the Pump, Blower, Microbubble). If the Water System is operating and any jets become exposed above the water level during the drain cycle, water may splash from the tub.

If the tub is being drained below the seat level of the tub, ensure the Water System or Microbubble System is turned off, so that the pump does not run dry.

Wireless Pairing and Speaker Operating Instructions

Pairing Status

The "Power" button LED indicator on the tub keypad will show the Bluetooth Pairing status. Pressing this button while the System is Off will turn it on and place it into Pairing Mode.

***Flashing blue* = Pairing Mode:**

The System will automatically proceed into Pairing Mode once Powered On.

Open the Bluetooth wireless connection setting on the host device, select "SafeStep" from the device menu screen and confirm connection. If the "SafeStep" option is not visible, scan the area through the host device again to refresh the list.

Note: Depending on the host device settings, this step may only be required for the first connection as the host device may pair automatically upon system start up thereafter.

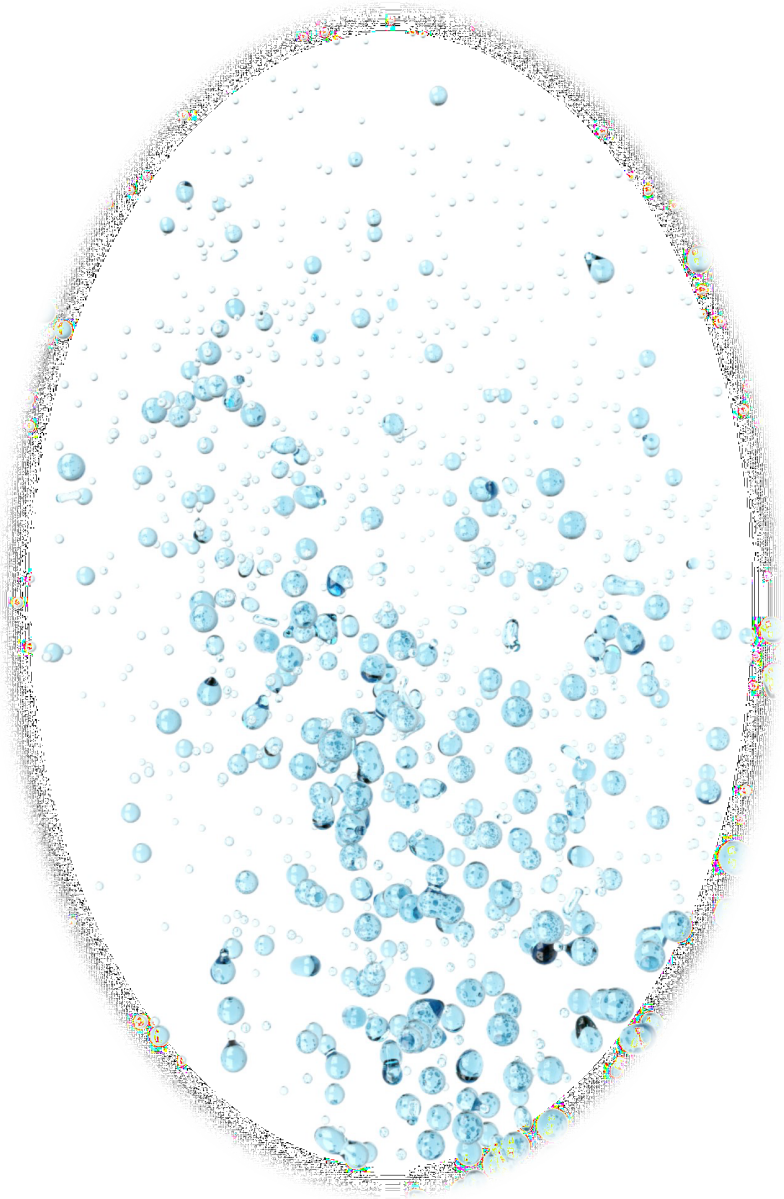
Note: After 2 minutes of no pairing activity, button will illuminate White.

White = Not connected/Pairing in Background. The Bluetooth feature is turned off but all other features of the tub will be available as defined on Pages 10 and 11. The Bluetooth feature remains in Pairing Mode as long as the keypad is lit, and the system is not paired.

Solid Blue = **Connected.** The system is ready to receive streaming from the host device.

Playback Operations

Playback features and volume are controlled from the host device.



System Troubleshooting

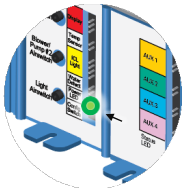
For the general troubleshooting issues related to TOUCHSTONE product, please refer to the TOUCHSTONE General Troubleshooting Guide.

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 Keypad 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. The Drain Diverter Valve and Cable Drain Actuator utilize Green and Pink Flags and corresponding ports respectively.

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: The control box has a green power indicator light on the face where the Keypad plugs in. This 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: No configuration settings need to be made for this system. The keypad and control boxes will detect each other and set up automatically.

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.

Non-Functional Speaker(s): If one or both speakers, or the stereo sound system are not working correctly, please call a SafeStep technician to diagnose and repair the problem.

Retain this manual for future reference

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

Manufacturer: _____

Model: _____

Serial: _____

Date of Installation: _____