IntelliTouch®
pool/spa control system

IntelliTouch Pool and Spa Control System

User's Guide

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

Pentair Water
Pool and Spa™

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P/N 520102 - Rev F - 02/28/06

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IMPORTANT SAFETY PRECAUTIONS

Important Notice:

Attention Installer: This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner and/or operator of this equipment.

WARNING - Before installing this product, read and follow all warning notices and instructions which are included. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage. Call (800) 831-7133 for additional free copies of these instructions.

WARNING - Water temperature in excess of 100 degrees Fahrenheit may be hazardous to your health. Prolonged immersion in hot water may induce hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above normal body temperature of 98.6° F (37° C). The symptoms of hyperthermia include drowsiness, lethargy, dizziness, fainting, and an increase in the internal temperature of the body.

The effects of hyperthermia include: 1) Unawareness of impending danger. 2) Failure to perceive heat. 3) Failure to recognize the need to leave the spa. 4) Physical inability to exit the spa. 5) Fetal damage in pregnant women. 6) Unconsciousness resulting in danger of drowning.

WARNING - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

WARNING - **The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.**

WARNING - Control System is intended to control heaters with built-in high limit circuits **ONLY**. Failure to do so may cause property damage or personal injury.

WARNING - Do not use this product to control an automatic pool cover. Swimmers may become entrapped underneath the cover.

WARNING - For units intended for use in other than single-family dwellings, a clearly labeled emergency switch shall be provided as part of the installation. The switch shall be readily accessible to the occupants and shall be installed at least 10 feet (3.05 m) away, adjacent to, and within sight of, the unit.

CAUTION - Except for listed spa-side remote controls, install a minimum of five (5) feet from the inside wall of the pool and spa.

IMPORTANT SAFETY PRECAUTIONS (CONTINUED)

FCC Regulatory Safety Notice - The MobileTouch wireless control panel device 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 device 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.
- Modifications not expressly approved by the party responsible for FCC compliance could void the user's authority to operate the equipment.

General Installation Information

1. All work must be performed by a licensed electrician, and must conform to the National Electric Code and all national, state, and local codes.

2. Install to provide drainage of compartment for electrical components.

3. If this system is used to control underwater lighting fixtures, a ground-fault circuit interrupter (GFCI) must be provided for these fixtures. Conductors on the load side of the ground-fault circuit-interrupter shall **not** occupy conduit, junction boxes or enclosures containing other conductors unless such conductors are also protected by a ground-fault circuit-interrupter. Refer to local codes for details.

4. A terminal bar stamped ⏚ is located inside the supply terminal box. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying this equipment (no smaller than 12 AWG or 3.3 mm). The bonding lug(s) provided on this unit are intended to connect a minimum of one No. 8 AWG for US installation and two No. 6 AWG for Canadian installations solid copper conductor between this unit and any metal equipment, metal enclosures or electrical equipment, metal water pipe, or conduit within 5 feet (1.5 m) of the unit.

5. The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code, ANSI/NFPA 70.1987. The disconnecting means must be readily accessible to the tub occupant but installed at least 10 ft. (3.05 m) from the inside wall of the pool.

6. Supply conductor must be sized to support all loads. Maximum supply conductor current must be 125 Amps at 125 VAC or 63 Amps at 240 VAC.

In this User's Guide

This manual describes the how to operate the IntelliTouch system to control pool pumps, heaters, spa lights, and other functions. Described are basic everyday operations that can be easily automated, to the advanced setup functions that only need to be performed once.

This manual consists of the following sections:

Technical Support

Contact Technical Support at:

Sanford, North Carolina (8 A.M. to 5 P.M.)

Phone: (800) 831-7133

Fax: (919) 566-8920

Moorpark, California (8 A.M. to 5 P.M.)

Phone: (800) 831-7133 (Ext. 6502)

Fax: (805) 530-0194

Web sites

visit www.pentairpool.com and staritepool.com

Related IntelliTouch Manuals

IntelliTouch Personality Kit User's Guide (P/N 520101)

IntelliTouch Load Center and Power Center User's Guide (P/N 520100)

IntelliTouch Expansion Center Kit User's Guide (P/N 520471)

IntelliTouch i-Link Protocol Interface Adapter User's Guide (P/N 520450)

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Section 1

IntelliTouch System Overview

Introduction

Welcome! Your Pentair IntelliTouch Pool and Spa and control system will change the way you view pool and spa controls. This innovation in pool and spa automation offers complete freedom for you while having full automation control over your pool, spa, lights, heater, pump, cleaners and much more. You can now schedule multiple start and stop times to control your lights, heater, spa jets, and filter pumps. Using the IntelliTouch Indoor Control Panel or MobileTouch wireless control panel you can control your pool, spa, and lights from anywhere inside or outside your home. Optional controllers are also available such as the wireless Digital Tablet or Personal Digital Assistant (PDA), and in-wall Touch Screen that can interface with your PC. IntelliTouch is a scalable system that can be upgraded to a completely integrated home automation solution including audio, security, climate, irrigation and more. For more information about using these interfaces, refer to the IntelliTouch ScreenLogic interfaces on page 5.

IntelliTouch System Overview

IntelliTouch systems offer the flexibility to handle from 5 to 40 circuits (high voltage relays) that can be used to control any combination of pumps, lights, water features, etc. As an added benefit, user-configurable circuits can also be used to control these combinations of features and more. The Feature Macro circuits feature allows any number of circuits to be combined on a single button. This gives you the ability to set up "themes" with custom names all with a press of a button. *(Not available with IntelliTouch model i5 or i5S).*

IntelliTouch users can also dim any high voltage incandescent light such as Pentair Amerlites and SpaBrites up to eight levels using the IntelliTouch Dimmer Module (P/N 520406). The dimmer module supports multiple lights from 100 watts up to 1,000 watts and installs in a standard relay location. Any number of dimmers (up to 10 maximum) may be used with a maximum combined load of 4,000 watt in a single Load Center.

In the home

The IntelliTouch system can utilize multiple wired and wireless controllers including the Digital Tablet, Personal Digital Assistant (PDA), the wired in-wall Touch Screen, Indoor Control Panel, and the wireless MobileTouch control panel, and even your existing home PC. A maximum of four ScreenLogic interfaces can be used. For example, four Tablets, or four PDA's, or four in-wall Touch Screen's, or four PC's in any combination.

Around the pool

Located near your spa, the IntelliTouch, iS10 or iS4 spa-side remote provide control buttons for various pool and spa functions. The iS10 spa-side remote also provides a temperature display.

At the equipment pad

Near the pump, filter, and other equipment will be located a metal enclosure known as the Load Center or Power Center. This is where high voltage from the circuit breaker panel junction box at the home is distributed to the IntelliTouch Load Center or Power Center. The pool service person can periodically check pool operations from this unit. The Load Center is also where the various IntelliTouch controllers interface with the other equipment.

Also at the equipment pad there are system pool and spa pipes connected to the pump, heater and filtration system. Mounted on top the valves you may also find motorized valve actuators used to change the flow of water through the plumbing. There are also temperature sensors and cable that connect to the heater. There should be no need for anyone other than your service person to periodically check this equipment.

IntelliTouch System Components

The main required components of an IntelliTouch system are the Load or Power Center, IntelliTouch Personality Kits, and the Interfaces:

Load or Power Center

- **Load Center:** Provides a larger footprint (17" W x 23" H) Includes built-in sub panel (125 AMPS) capable of holding up to eight 1" breakers. Also includes five 25 AMP three HP relays, 110/240 V transformer with secondary side circuit protection. Multiple knockouts for different sizes of conduit are supplied as well as a GFCI side knockout. The Load Center provides ample space for all high and low voltage wiring needs.
- **Power Center:** Offers a smaller footprint (17" W x 17" H) than the Load Center. The Power Center does not include a circuit breaker base. Users should choose this enclosure if they already have existing circuit breakers/sub-panel for their equipment.
- **Expansion Kits:** Models i5X and i10X, offer five or ten additional Auxiliary Circuits for systems i9+3, i9+3S and i10+3D. Each IntelliTouch Expansion Kit requires a Load Center (P/N 520136) or Power Center (P/N 520137). Up to three Expansion Kits and Load or Power Centers may be added to a system, for control of up to 38 Auxiliary Circuits (40 auxiliary circuits for i10+3D).

IntelliTouch Personality Kits

There are several types of IntelliTouch control systems available for different pool/spa configurations:

- **Shared Equipment: Pool and spa combinations with shared filtration system** – Pool owners can enjoy the convenience of motorized valves for water flow separation between pool and spa. The Personality Kit models are:
  - **i5 (P/N 520505)** – Four auxiliary circuits plus filter pump operation. Five relays are included in the Load Center.
  - **i7+3 (P/N 520507)** – Six auxiliary circuits plus filter pump operation and the +3 option (create a Feature circuit for valve actuators without using an existing output auxiliary circuit, and special light functions for color lighting). Two relays are included in the kit and five in the Load Center.
  - **i9+3 (P/N 520509)** – Eight auxiliary circuits plus filter pump operation and the +3 option (create a Feature circuit for valve actuators without using an existing output auxiliary circuit, and special light functions for color lighting). Four relays are included in the kit and five in the Load Center.
- **Dual Equipment: Pool and Spa with Dual Sets of Equipment** – The IntelliTouch i10+3D (P/N 520510) system provides advanced automation for a pool and spa using two separate sets of equipment. This IntelliTouch Personality Kit can control up to 10 pumps and/or lighting circuits, plus two heater circuits. The Personality Kit includes, eight auxiliary circuits plus a filter pump. The +3 option (create a Feature Macro circuit for valve actuators without using an existing output auxiliary circuit). Five relays are included in the kit and five in the Load Center. You can create a Feature circuit for valve actuators without using an existing output auxiliary circuit, and special light functions for color lighting. This model also allows Hi/Low Temperature settings.
- **Single Equipment: Pool Only or Spa Only Applications** – The IntelliTouch i5S (P/N 520506) and i9+3S provide advanced automation for a single body of water. The i5S (P/N 520506) Personality Kits includes eight auxiliary circuits plus filter pump operation. Five relays in the Load Center. The i9+3S (P/N 520508) Personality Kits includes four auxiliary circuits plus filter pump operation and the +3 option (create a Feature Macro circuit for valve actuators without using an existing output aux circuit). Four relays are included in the kit and five in the Load Center. You can create a Feature circuit for valve actuators without using an existing output auxiliary circuit, and special light functions for color lighting. This model also allows Hi/Low Temperature settings.

IntelliTouch Interfaces

Pool and Spa owners can choose one or more of the following interface options to control the IntelliTouch system throughout their home.

- **iTC15 Kit (P/N 520500)** – Includes Protocol Interface Adapter and wireless router that connects to existing Desktop or Laptop PC. This allows control of IntelliTouch pool and spa systems via PC (requires PC with an Ethernet connection, and Windows XP operating system).
- **iTC25 Kit (P/N 520501)** – Includes Wireless Personal Digital Assistant (PDA) with 3.5" color touch screen custom configured for IntelliTouch systems, wireless router, and a Protocol Interface Adapter.
- **iTC35 Kit (P/N 520502)** – Includes in-wall color touch screen with Ethernet (RJ45) connection and Protocol Interface Adapter and wireless router. The in-wall Touch screen is custom configured for IntelliTouch systems. Requires an Ethernet cable to router.
- **iTC45 Kit (P/N 520503)** – Includes wireless Tablet with color touch screen, Protocol Interface Adapter, and wireless router. The Tablet is custom configured for IntelliTouch systems.
- **Indoor Control Panel (P/N 520138)** – 3.75" monochrome backlit LCD control panel. Connects to the Personality board in the Load Center.
- **MobileTouch (P/N 520340)** – 3.75" monochrome backlit LCD wireless control panel with transceiver antenna . Allows any IntelliTouch wired system to also have a wireless remote with all the capabilities of the Indoor Control Panel. With an average range of 300 feet, pool owners have system control anywhere around the home or yard. Powered by a rechargeable lithium-ion battery. Includes an AC adapter for recharging.
- **QuickTouch Wireless Remote (QT4):** Four-function wireless remote for pool and spa functions of your choice. This radio transmitter operates up to 150 feet range from the Load Center or Power Center.
- **iS10 and iS4:** 10-function (iS10) and 4-function (iS4) Spa-Side remote controller for pool and spa functions of your choice. The controllers can operate up to 150 feet range from the Load or Power Center.
- **i-Link Protocol Interface Adapter:** Connects to wireless router via Ethernet connection and to Personality board (Load Center or Power Center) via Serial cable (Four-wire).

PDA

In-Wall Touch Screen

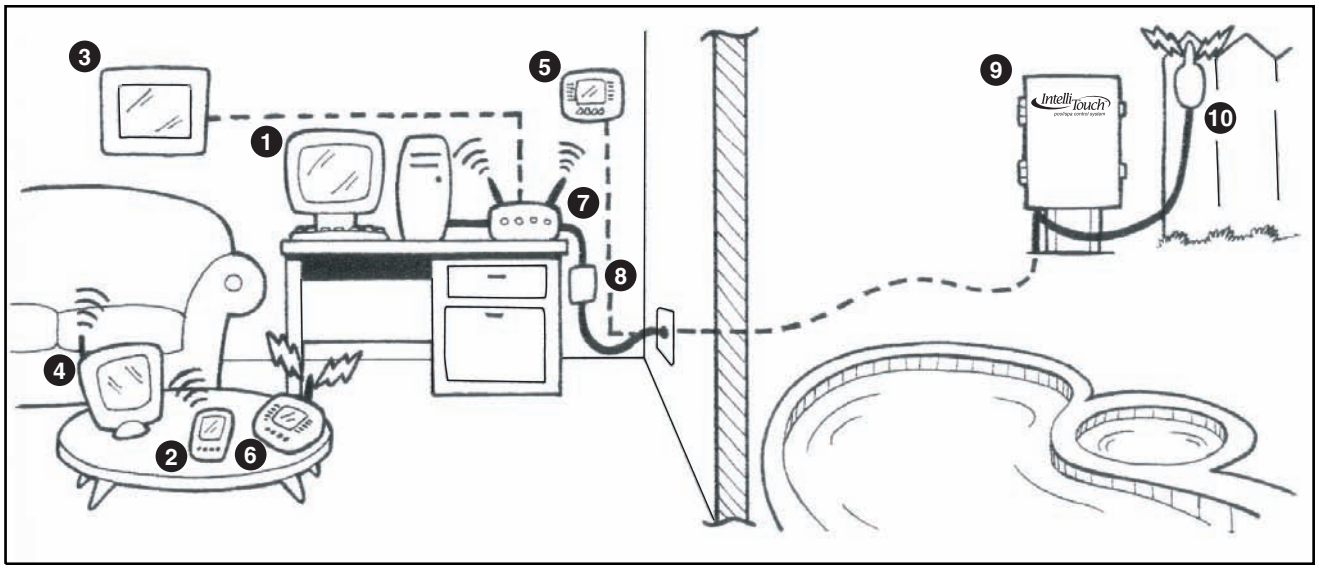
Digital Tablet

i-Link Protocol Interface Adapter

Indoor Control Panel

MobileTouch Wireless Controller

QuickTouch wireless remoter (QT4)



IntelliTouch in your home

1. **Personal Computer (PC):** Existing home owner's PC or Laptop. Connects to a wireless router and the IntelliTouch Protocol adapter for control of IntelliTouch pool/spa systems. Requires a PC/Laptop (Windows XP) with Ethernet/ RJ45 adapter installed.

2. **Personal Digital Assistant (PDA):** This wireless PDA with a color touch screen enables you to control your pool and spa features using the IntelliTouch ScreenLogic interface. The PDA is custom configured for IntelliTouch systems.

3. **In-wall Touch Screen:** A color display with Ethernet (RJ45) connector. Connects to the provided wireless router and Protocol adapter via Ethernet (RJ45) for control of IntelliTouch pool and spa systems. The in-wall Touch Screen is custom configured for IntelliTouch systems.

4. **Wireless Tablet:** This control panel consists of a color touch screen. Receives and transmits commands via wireless router and Protocol adapter for control of IntelliTouch pool/spa systems. The Tablet is custom configured for IntelliTouch systems.

5. **Indoor Control Panel:** This control panel consists of a 3.75" monochrome backlit LCD and connects to the Personality Board in the Load Center or Power Center for control of IntelliTouch pool and spa systems.

6. **MobileTouch:** This wireless control panel has a 3.75" monochrome backlit LCD. Receives and transmits commands via the Transceiver antenna located at the Load or Power Center.

7. **Wireless router**: Connects to the PC or Laptop via Ethernet connection to the Protocol adapter.

8. **Protocol adapter**: Connects to wireless router via Ethernet connection and to Personality board (Load/Power Center) via a four-wire 22-AWG cable.

9. **Load Center or Power Center**. The main control center. Includes the Outdoor Control Panel that controls pump, heater, and light relays. Receives commands via Protocol adapter, and wireless and wired control panels connected to the Personality board.

10. **MobileTouch Transceiver antenna:** This antenna is connected to the Personality board. Sends and receives commands to and from the MobileTouch control panel.

IntelliTouch Interface Kits

The following items are included in your IntelliTouch interface kit. If any item is missing or damaged in the IntelliTouch kit, contact your authorized dealer, or contact Pentair Water technical support.

PC Interface (iTC15 Kit - P/N 520500)

- Protocol adapter for use with existing Desktop or Laptop PC
- Wireless router (802.11b/g) with AC adapter
- IntelliTouch ScreenLogic User's Guide
- CD-ROM containing IntelliTouch ScreenLogic PC user interface software

Personal Digital Assistant (PDA) (iTC25 Kit - P/N 520501)

- Personal Digital Assistant (PDA) with built-in Wi-Fi 802.11b wireless LAN adapter with antenna. Refer to the manufacturers documentation for kit contents
- Wireless router (802.11b/g) with AC adapter
- Protocol adapter
- IntelliTouch ScreenLogic User's Guide
- CD-ROM containing IntelliTouch ScreenLogic PC user interface software

In-Wall Touch Screen (iTC35 Kit - P/N 520502)

- In-wall Digital Tablet, and AC adapter
- Wireless router (802.11b/g) with AC adapter
- Protocol adapter
- IntelliTouch ScreenLogic User's Guide
- CD-ROM containing IntelliTouch ScreenLogic PC user interface software

Digital Wireless Tablet (iTC45 Kit - P/N 520503)

- Digital Tablet (with internal battery pack), stylus, built-in Wi-Fi 802.11b wireless LAN adapter with antenna.
- Wireless router (802.11b/g) with AC adapter
- Protocol adapter
- IntelliTouch ScreenLogic User's Guide
- CD-ROM containing IntelliTouch ScreenLogic PC user interface software

IntelliTouch ScreenLogic Interface Accessory Kits

Up to a total of four ScreenLogic interfaces can be used with an IntelliTouch system, as shown above. If you need additional interfaces, first order one of the ScreenLogic interface kits, then order one or more of the following accessory interfaces accessory kits:

- PDA, CD-ROM and manual (P/N 520497)
- In-Wall Touch Screen, CD-ROM and manual (P/N 520498)
- Tablet, CD-ROM and manual (P/N 520499)

Note: *The above Accessory Kits interfaces do not include a Protocol adapter or wireless router.*

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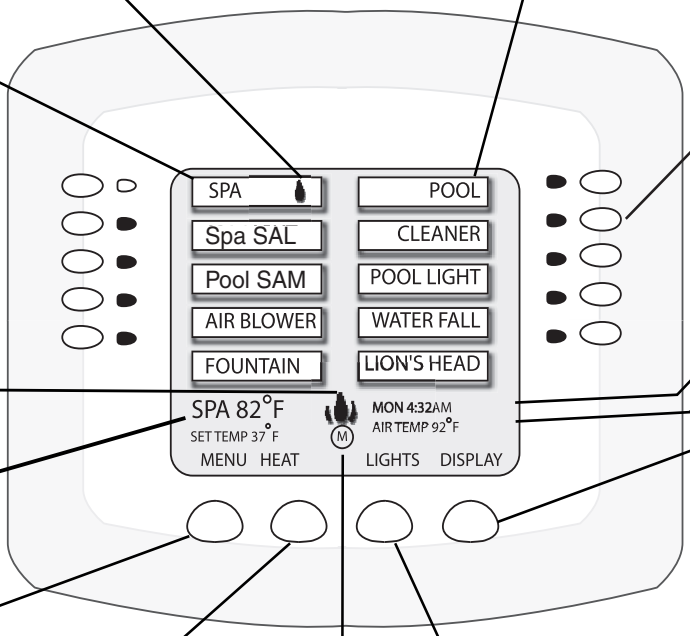
Section 2

Using IntelliTouch Controllers for Everyday Operations

Main Screen (Indoor Control Panel and MobileTouch)



Heater Enabled Indicator (Flame): Flickers when heater is on. Sun icon indicates solar is selected in Heat menu.

Pool or (Lo-Temp) Mode: Switches on Filter Pump and fires heater, (if heater is enabled). Shared equipment systems (i5, i7+3, i9+3); rotates valves to pool position. Single body systems (i5S, i9+3S): Sets Pool or Spa to Lo-Temperature settings

Spa or (Hi-Temp) Mode: For shared (i5, i7+3, i9+3) and dual (i10+3D) equipment systems; switches on filter pump, rotate valve actuator (to isolate spa water from pool water), and fires heater. For single body equipment systems (i5S, i9+3S); Sets Pool or Spa to High-Temperature (Hi-Temp) settings

Auxiliary Buttons: Operate various equipment such as lighting, automatic pool cleaners, jet pumps and fountains. Green LEDs for Off/On operation.

Day/Time.

Current air Temperature.

Flame Icon: Displays when Heater is on for Pool or Spa

SPA: Displays when pool or spa mode is on, and current water temperature and thermostat setting

Display Button: Access the display screens for additional control circuits

(M) Main Screen: Up to ten buttons can be configured to control various equipment. Names on this screen can be user defined

Menu Button: Access various system setup screens

(1) Display 1, 2, 3, 4: Displays the actual circuits connected to main Load Center (1). Also displays additional installed Expansion Centers (2, 3, 4), models i5, i5x and i10x

Heat Button: Access the heating menu for selecting temperature and heating modes

(M) Main screen indicator

(1) Display 1 screen.

(Display 2, 3, and 4 show for additional Expansion Centers)

(F) Feature Circuit screen

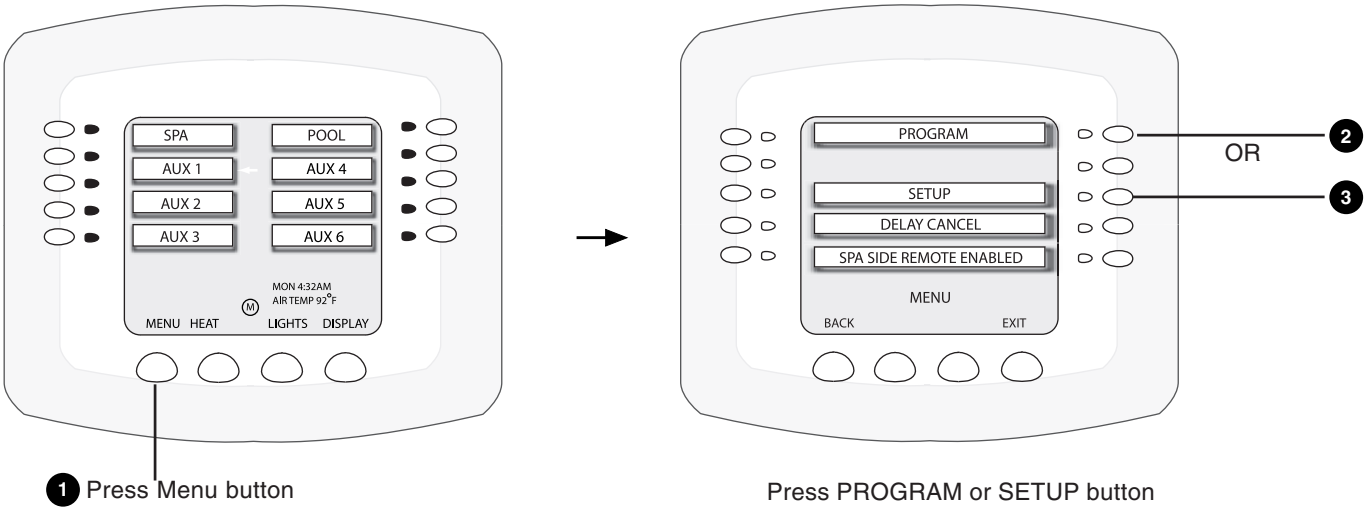
Lights Button: Access the custom lighting effects with IntelliBrite, SAm, SAL, and Fiberworks colored lighting

(F) Feature Circuits: Additional circuits for controlling valve actuators for water features, spa spillway, 2-speed pump, and macro circuits. For i5 or i5S, Feature Circuits are not available.

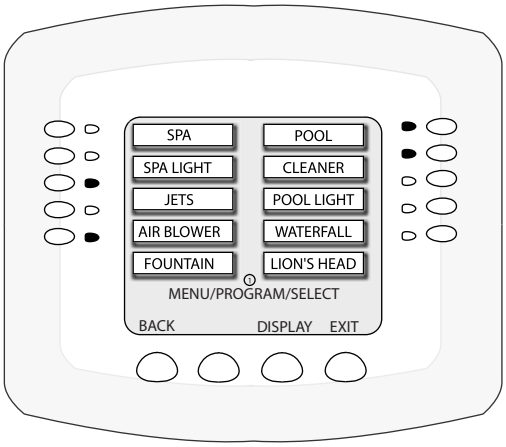
Note: The main screen may be configured to display any ten available circuits (auxiliary or feature).

Menu Settings and Descriptions

Use the IntelliTouch menu selections to setup the system up to automatically control general day-to-day pool and spa operations. As shown below, to setup pool and spa schedules, press **MENU > PROGRAM**. To configure system equipment, press **MENU > SETUP** or **MENU >SETUP > ADVANCED**.

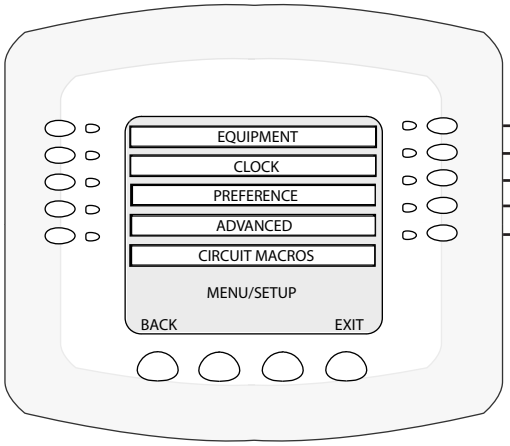


Schedule Spa (left side button) operations (see page 10)



Schedule Pool (right side button) operations (see page 10)

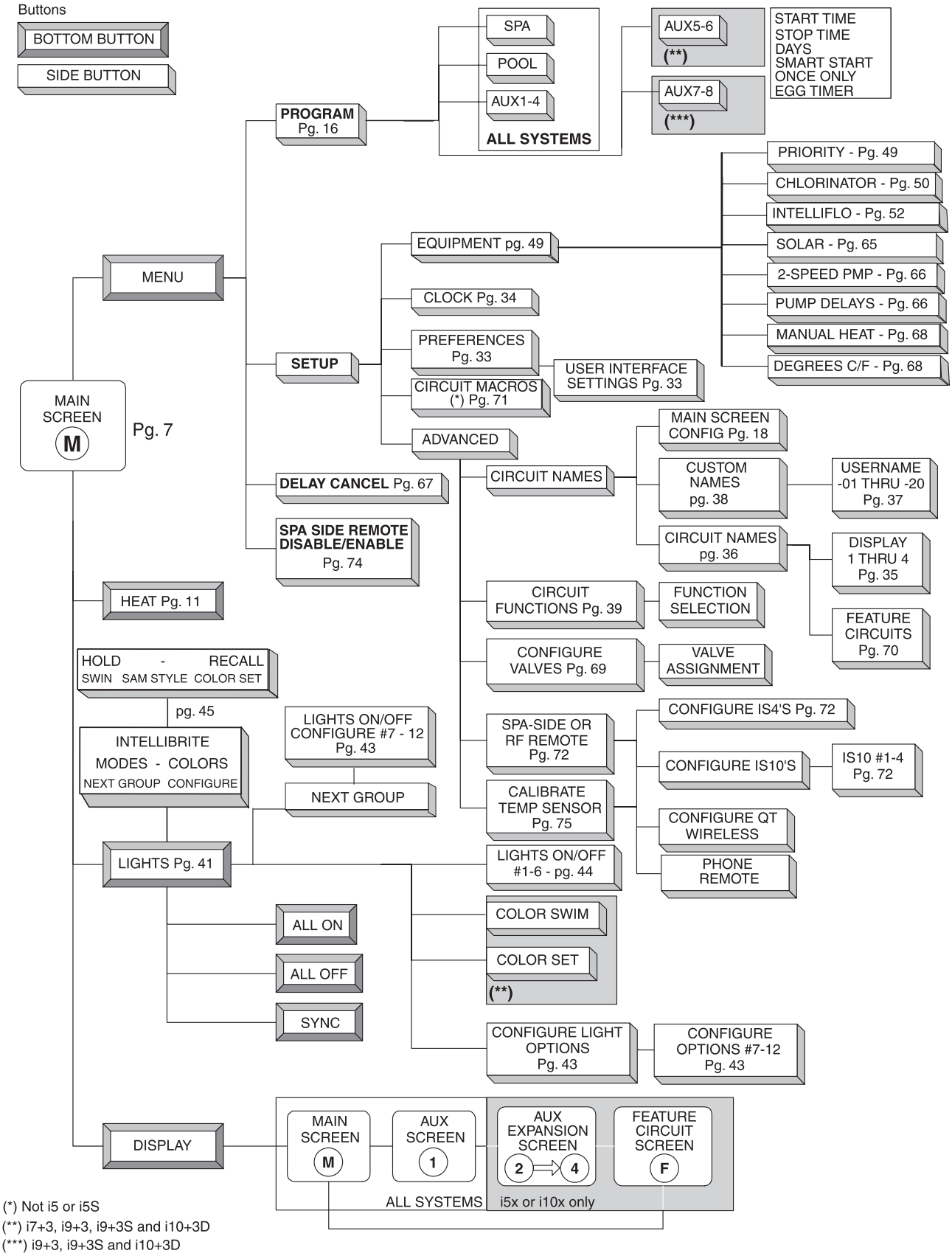
2 **PROGRAM** menu settings



Setup equipment (page 49)
Set the system clock (page 34)
Setup control panel features, backlight, beep etc. (page 33)
Setup circuit macro functions (page 71)
Setup circuit names, functions, configure valves (pages 36-40)

3 **SETUP** menu settings

Indoor Control Panel Menu Structure



(*) Not i5 or i5S
(**) i7+3, i9+3, i9+3S and i10+3D
(***) i9+3, i9+3S and i10+3D

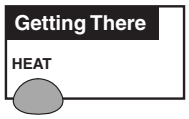
General Pool and Spa Operations

The following describe some of the general day-to-day pool and spa operations.

Heating your Spa and Pool

From the Heat screen, use **Spa** button (left side) or **Pool** button (right side) to adjust the heat temperature for your pool or spa. You can also switch the heater on or off from this screen. For single-body systems (models i5S and i9+3S), spa and pool are replaced with **Hi-Temp** and **Lo-Temp** settings.

Adjust Spa or Pool Heat Settings



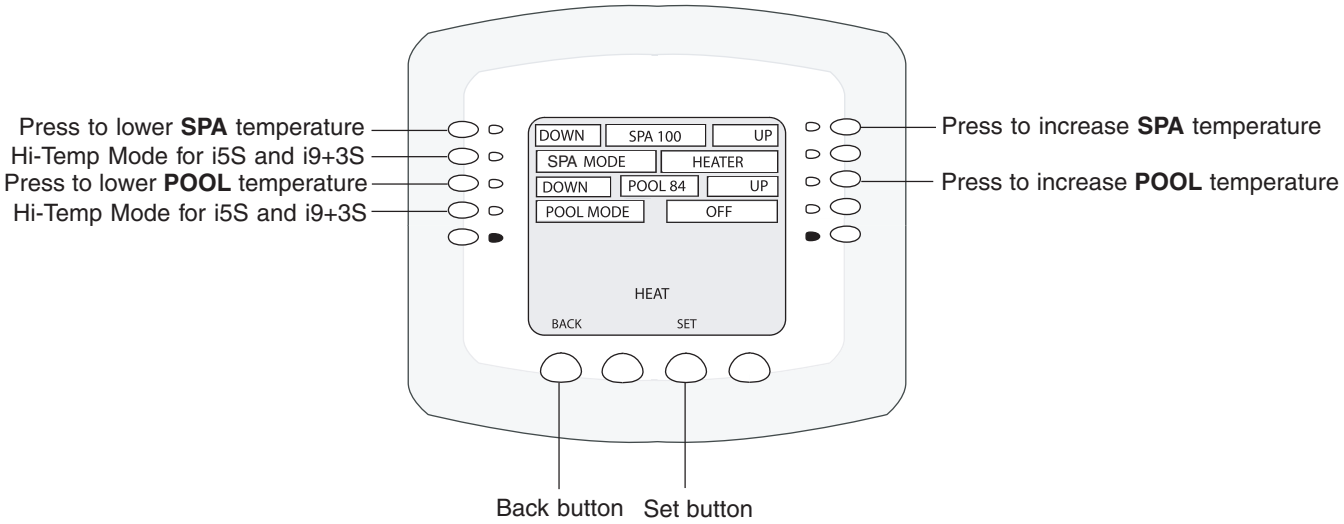
To adjust the spa or pool set point temperature, go to the **Heat** screen:

Note: *Be sure the* ***Spa Mode*** *label does not say OFF. If it displays OFF, refer to "Configuring the Heating System Options," page 11, for more information.*

To adjust the spa or pool set point temperature, press the **HEAT** button at the bottom of the screen:

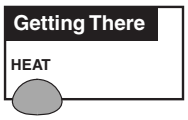
- **SPA:** Press the spa **Up** or **Down** buttons (top left and right side) to increase or decrease the spa temperature. The set point water temperature is displayed in the middle of the screen.
- **POOL:** Press the pool **Up** or **Down** buttons (third down from the top, left and right side) to increase or decrease the pool temperature. The set point water temperature is displayed in the middle of the screen.

1. Press the **Set** button to save the temperature settings. The current spa and pool water temperatures are displayed on the main screen.
2. Press the **Back** button to return to the Main screen.



Configuring the Heating System Options

The IntelliTouch system allows for many different pool and spa heating options. In some instances, more than one heating system may be installed. The system can then automatically select the heating system that is most effective for your settings. However, before the system can take advantage of these options the system must be told what kind of heating systems are installed.



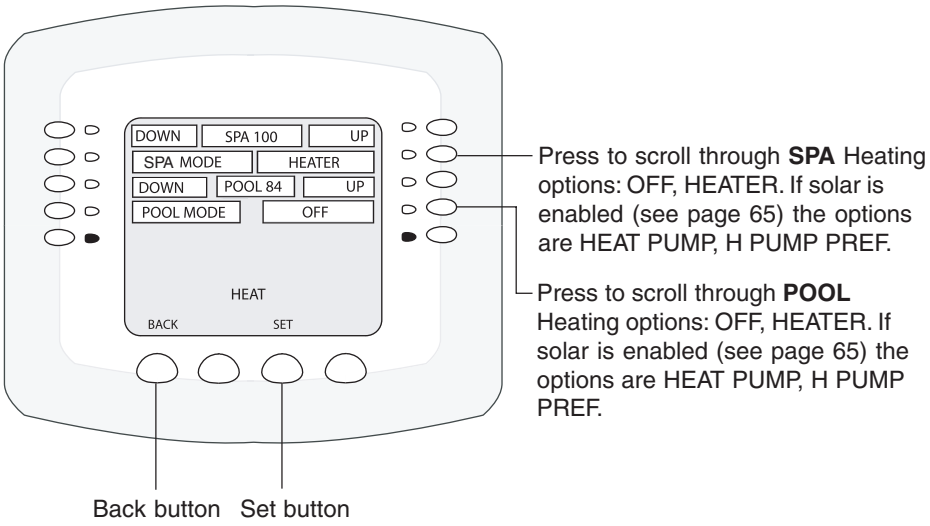
To configure the heating system options, press the **HEAT** button at the bottom of the screen.

- **SPA:** Press the second button from the top (SPA MODE) to select the heating mode.
- **POOL:** Press the third button from the top (POOL MODE) to select the heating mode.

1. Press the **Set** button to save the heat settings.
2. Press the **Back** button to return to the Main screen.

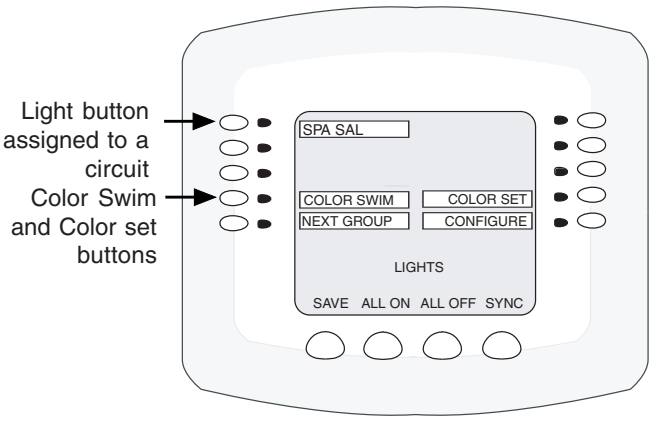
The heat options are:

- **OFF** - No heating even though pump and other circuits may be operating.
- **HEATER** - Gas heater only.
- **HEAT PUMP** - Heat pump only.
- **H PUMP PREF.** - For when a heat pump is in combination with other heating systems and you want to use the heat pump only when it is most effective.

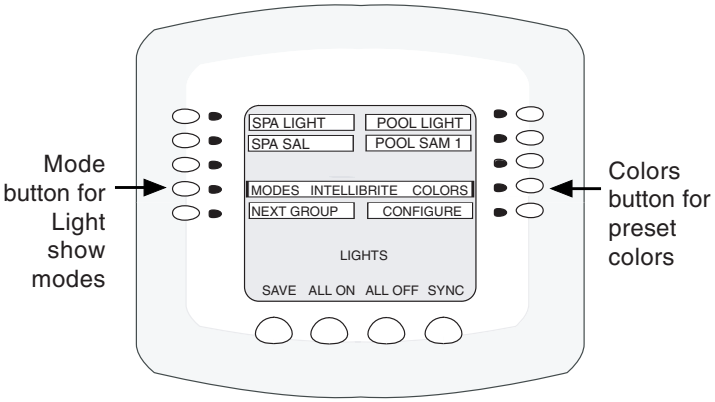


Switching on Lights Manually

Up to 12 individual lights can be accessed from the **Lights** screen. These lights include, IntelliBrite LED lights and S*Am* or S*AL* lights You can also set up the ***Color Swim***, ***Color Set*** and ***Color Sync*** special lighting features. Lights that have dimming functionality can be dimmed from the Lights screen. S*Am* or S*AL* fiber optic, Halogen lights, and IntelliBrite cannot be dimmed. For more information, refer to "Setting up Lighting Options," page 41.



Color Swim and Color Set Lights screen

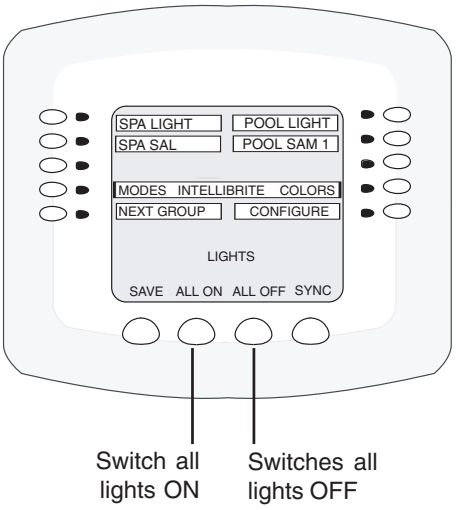


IntelliBrite LED Lights screen

To manually switch on lights, press the **Lights** button on the bottom of the main screen.

1. To switch a light system on, find the label for the lighting system you want to switch on. Press the button next to the label of the light system you want to switch on.
2. If you have more than six circuits, press the **Previous 6** or **Next 6 button** to see these circuits.
3. Press the **All On** button at the bottom of the screen to switch all the lights on.
4. Press the **All Off** button at the bottom of the screen to switch off the lights when you are done.

Note: *All +3 IntelliTouch models include Color Set, and Color Swim lighting features.*



Special Lighting Features

If you have at least two Pentair IntelliBrite, S*Am* and/or S*AL,* and/or FIBER*works* lighting systems, you can use the special light features to change the lighting settings (only available with +3 models). Up to 12 of these lights systems can be independently controlled from the **Lights** screen.

You can change the following light features:

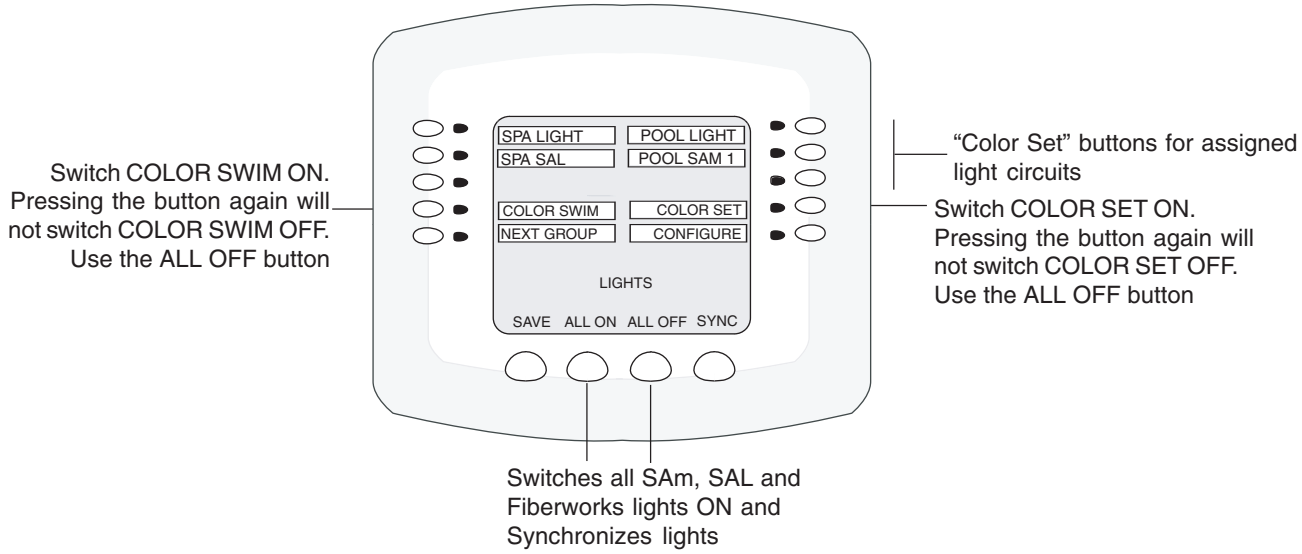
- **Color Swim** - Allows a combination of up to six S*Am*, S*AL*, or FIBER*works* lighting circuits to be preset to transition through colors in sequence. This gives the appearance of colors dancing through the water. You can adjust the delay of each light to make the colors move at different speeds. This feature is not available for i5 or i5S systems. This feature requires a separate relay for each light to achieve the "Color Swim" lighting feature.
- **Color Set** - Allows a combination of up to 12 S*Am*, S*AL*, or FIBER*works* lighting circuits to be preset to specific colors. This feature is not available for i5 or i5S systems. This feature requires a separate relay for each light to achieve different colored lights.
- **Sync -** Causes all color changing lights to synchronize their colors. This feature is available on all IntelliTouch models. This feature is not used when using IntelliBrite LED lights.

Note: *Before you start, review the lighting setup details, refer to "Setting up Lighting Options," page 41. This procedure is usually done by the installer.*

To activate the special lighting features, press the **Lights** button on the bottom of the main screen. For IntelliBrite Lights screen, refer to the following page.

1. Press the button next to **Color Swim** to cycle the lights as though swimming through the water.
2. Press the button next to **Color Set** to get all lights to a pre-programmed color.
3. Press the button next to **Sync** to activate all color changing lights to synchronize.
4. To configure lights on this screen press **Configure**.

Note: *It may take up to a minute or more for Color Set, Color Swim, or Sync to function as programmed depending on what kind of light you are activating and what state it was in when the effect was activated.*



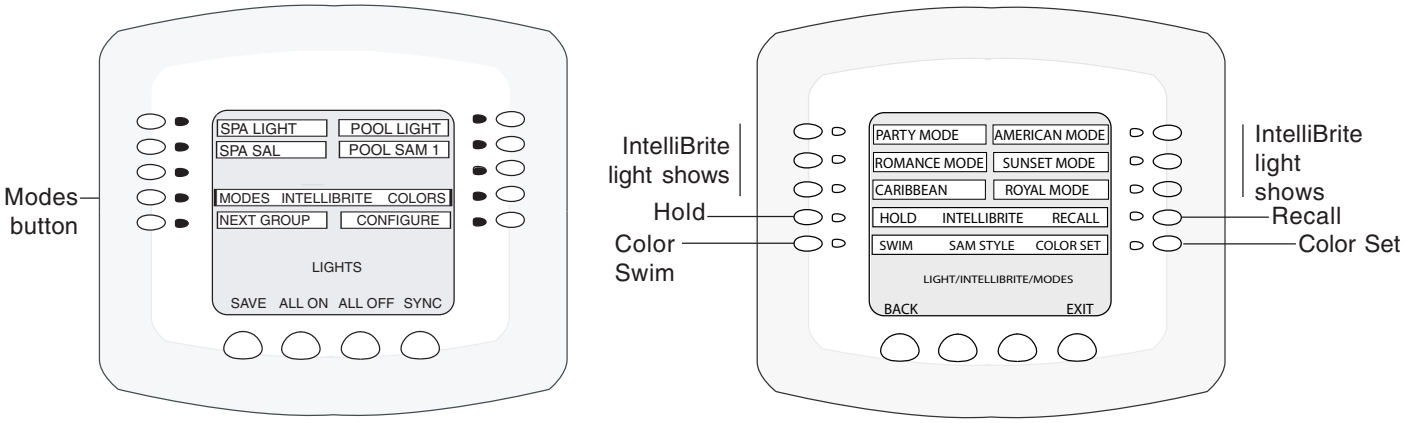
Setting up IntelliBrite LED lights

These can be up to 12 IntelliBrite light circuits on the main **Lights** screen. From the Lights screen you can activate the IntelliBrite lighting features.

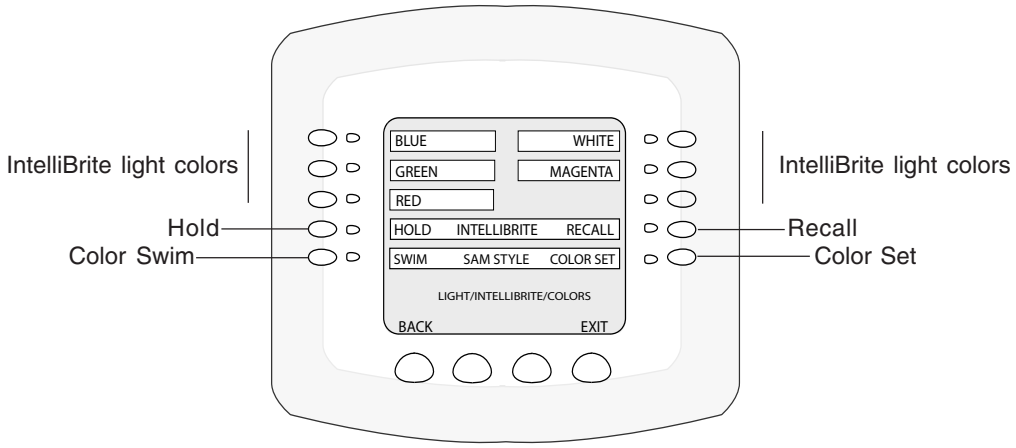
IntelliBrite Modes

From the "Modes" screen you can select various preset color modes, such as American mode and Sunset mode special lighting effects to enhance your pool area, switch on an emulation of the Pentair S*Am* Color Swim or Color Set lighting feature. Also, using the "Hold" and "Recall" feature you can save customized lighting colors from any of the IntelliBrite Light Show modes to recall them at a later time. For example, while the "Sunset" mode is operating, press the "Hold" button at any time during the show to save the current colors. Then press the "Recall" button to use these custom colors at a later time.

Modes feature: To access the IntelliBrite "Modes" features from the Lights screen, press the **Lights** button on the bottom of the screen, then press the left side button next to "MODES."



Colors feature: To access the IntelliBrite Colors feature from the Lights screen, press the **Lights** button on the bottom of the screen, then press the left side button next to "COLORS." To activate a color, press the button next to the selected color. From the "Colors" screen you can select any one of the five preset colors to create dramatic underwater lighting effects.



Dimming Lights

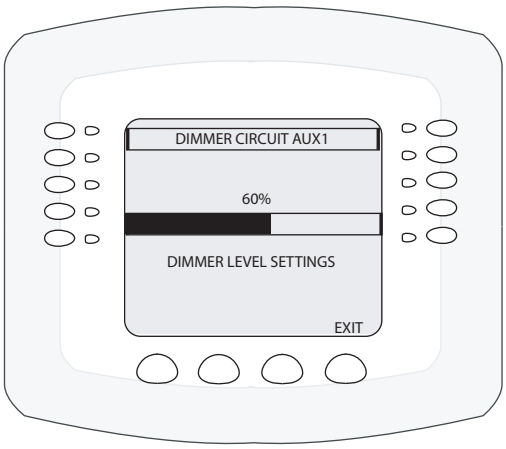
In order to dim lights, the Dimmer Module (P/N 520406) must be installed by a qualified electrician in the IntelliTouch load center or power center. Only incandescent tungsten filament lights can be dimmed (not Halogen lights). Lights that have dimming functionality can be dimmed from the Lights screen. S*Am* or S*AL* fiber optic, Halogen lights, and IntelliBrite cannot be dimmed. For more information, refer to "Setting up Lighting Options," page 41. The feature circuit must be assigned a dimmer circuit function. To assign a circuit function, see page 39.

Getting There

MENU → SETUP → ADVANCED → CIRCUIT FUNCTION → (NAME)

To dim lights, go to the assigned circuit name:

1. Press the button briefly next to the circuit name. A light should come on and be switched on at the specified dimming level.
2. To change the dimming level hold the circuit button down until the **Dimmer Level Settings** screen displays as shown below.
3. Press the button next to **Decrease** to decrease the dimming level, and the button next to **Increase** to increase the dimming level. The percent value displays the current dimming level setting.
4. Press **Save** when done. The light will adjust to the set dimming level.



Note: *Macros can turn on light dimming circuits, but lights cannot be dimmed through the macro. The dimming level must be changed for each light dimming circuit.*

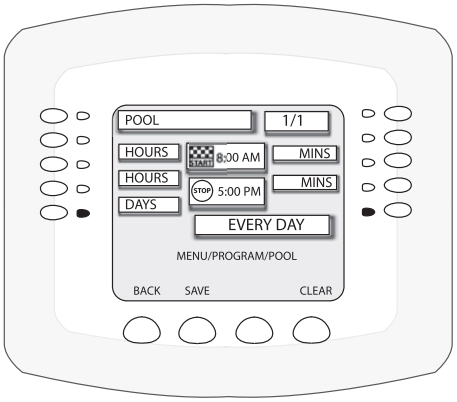
Setting ON/OFF Times for Equipment

From the "Program" screen, you can schedule IntelliTouch to automatically run equipment like pool filtration or lights. Any circuit (auxiliary, feature, or macro) can be scheduled to switch on and off at a specific time and on a any day(s) of the week. Up to 99 total programs may be created for all circuits combined.

Schedule a program: The "Program" screen displays a program counter in the upper right (1/0) side of the screen. This counter indicates the current number of scheduled programs. After setting the start and stop time and the day(s) to run the first scheduled program, press **Save** to view the first program (1/1) and increment the counter to next program. To access the next program screen, press the button next to the counter label (2/1). Set the start and stop time and the day(s) to run the second scheduled program (2/1). Repeat this process to enter another program. For example, **2/3** indicates that you are viewing **program 2 of 3** total programs saved for that circuit. 4/3 indicates that you are creating program 4 but only 3 are currently saved. After pressing the Save button, the counter updates to 4/4. Press the button to the right of the label counter to step through each program first then display the unsaved program screen. The following describes how to program equipment to run the pool filtration system. This process is the same for any installed equipment listed on the screen.

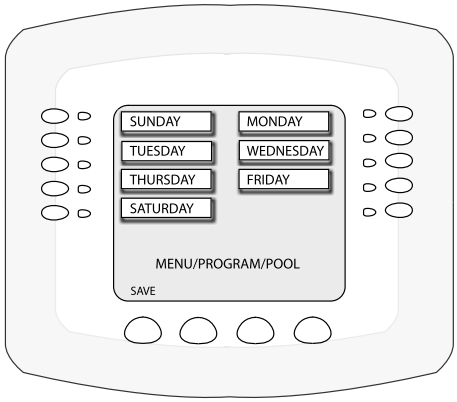
Getting There

MENU → **PROGRAM** → **POOL** (or any other circuit)



Go to the **Program/Select** equipment screen. From this screen you can select SPA, POOL or any of the AUX equipment circuits to program.

1. Press the top right button next to **POOL** to access the "Program" screen to program the pool equipment.
2. **To set the start time:** Press the second button down on the left side, next to **HOURS** (and the start flag icon) to set the hour. Press the right button to set the minutes for the start time. To use the "EGGTIMER" feature, see page 18.
3. **To set the stop time:** Press the third button down on the left side, next to **HOURS** (and the stop icon) to set the hour. Press the right button to set the minutes for the stop time. To use the "ONCE ONLY" feature, see page 17.
4. **Days:** If you want to program certain days and not run **EVERY DAY**, press the button either side of the **DAYS** label. The days of the week screen displays. The lights next to the days of the week are on. To switch off a day, press the button next to the day. The light switches is off. To set all day on, all lights should be on. Press **Save** after selecting the days of the week to run the program. The previous screen will be displayed.

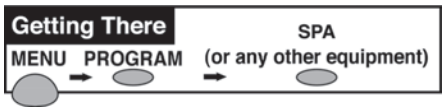


5. Press **Save** to save the current program.

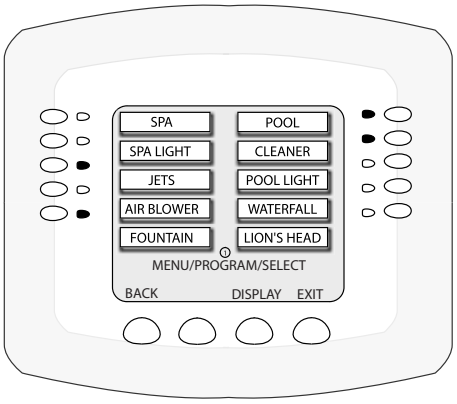
   *Note: If a circuit is assigned a color changing light Circuit Function (SAM, SAL, etc.) an additional menu at the bottom of **Smart Start** displays. Press this button to toggle between **SS_Yes** and **SS_No.** If the top label displays **SS_Yes**, the circuit will switch on and automatically begin changing colors.*
6. To create another program, press the button next to the counter label (2/1) to access the next program screen and repeat steps 1 through 4. To erase a program press the **Clear** button then **Save**.
7. Press the **Back** button to return to the **SPA, POOL** and **AUX** equipment selection screen to choose other equipment. Press the **Exit** button to return to the main screen.

Using the Once Only Timer

The "Once Only" feature enables you to automatically switch equipment on for one time. For example, you can set to have the spa and heater switch on before you get home from work for one evening. Unlike a regular scheduled program, the "Once Only" program does not repeat.



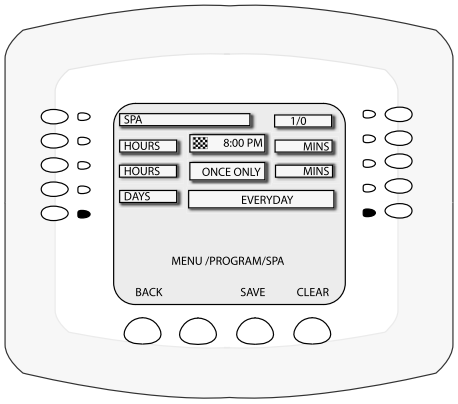
Go to the **Program/Select** equipment screen. From this screen you can select SPA, POOL or any of the AUX equipment circuits to program.



The following example describes how to program the spa equipment using the "Once Only" feature:

1. Press the button next to **SPA** to access the "Program/Select" screen to program the spa equipment. If this is the first program, the program counter displays (1/0).
2. Press the third button down on the left side, next to **HOURS** and select **ONCE ONLY** (Once Only is displayed one press after 11:00 PM).
3. Press the second button down on the left side next to **HOURS** to set the start time.

   Note: *Press the button under CLEAR to reset the default settings.*

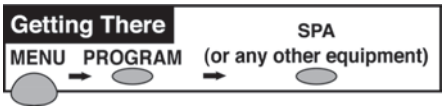


4. **DAYS:** The label displays **EVERYDAY** which means today only. If the time you are setting has passed for today, the "Once Only" program is set for tomorrow. If you want to program certain days and not run **EVERY DAY**, press the button either side of the **DAYS** label. The days of the week screen displays. The lights next to the days of the week are on. To switch off a day, press the button next to the day. The light switches is off. To set all day on, all lights should be on. Press **Save** after selecting the days of the week to run the program. The previous screen will be displayed.
5. Press **Save** to save the current program. The program counter displays (1/1).
6. Press the **Back** button to return to the **SPA, POOL** and **AUX** equipment selection screen to choose other equipment. Press the **Exit** button to return to the main screen.

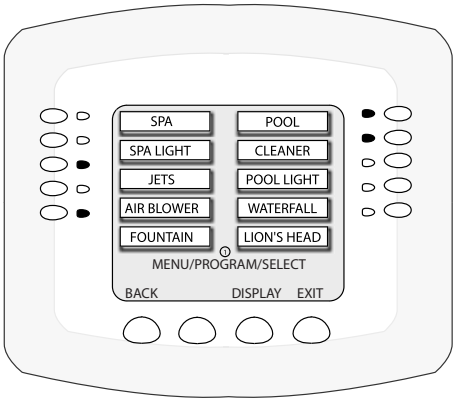
Setting the Egg Timer Function

The "Egg Timer" feature lets you manually switch on equipment and switch off automatically after a specified time. You can set this timer feature for other equipment such as lighting, the spa, or the spa jets. Equipment can be programmed to be switched on for one minute to 24 hours. You can also use the "Don't Stop" feature to override the 12 hour default switch off time, and run continuously until manually switched off.. If you have never set the timer for a specific piece of equipment, the factory default time is set to 12 hours.

If you have a power outage, this feature will not switch the equipment back on, you need to use set the system in "Service" mode at the Outdoor Control center to switch the equipment back on. For more information, refer to "Service Mode," on page 76.



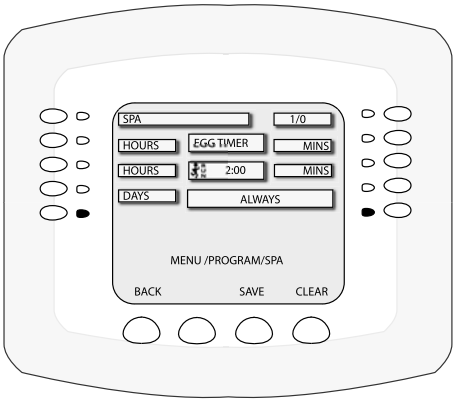
Go to the **Program/Select** equipment screen. From this screen you can select SPA, POOL or any of the AUX equipment circuits to program.



The following example describes how to program the spa equipment using the Egg Timer feature:

1. Press the button next to **SPA** to access the "Program/Select" screen to program the spa equipment. If this is the first program, the program counter displays (1/0).
2. Press the second button down on the left side, next to **HOURS** until **EGG TIMER** is displayed. (EGG TIMER is displayed one press after 11:00 PM).
3. Press the third button on the left side next to **HOURS** to set count down time in hours (from 00:00 to 23:00 hours). You can also select "**DON'T STOP**" to run the circuit continuously until switched off manually. "DON'T STOP" is displayed one press after 23:00. Press the third button down on the right side next to **MINS** to set the minutes.

   Note: *Press the button under CLEAR to reset the default settings.*

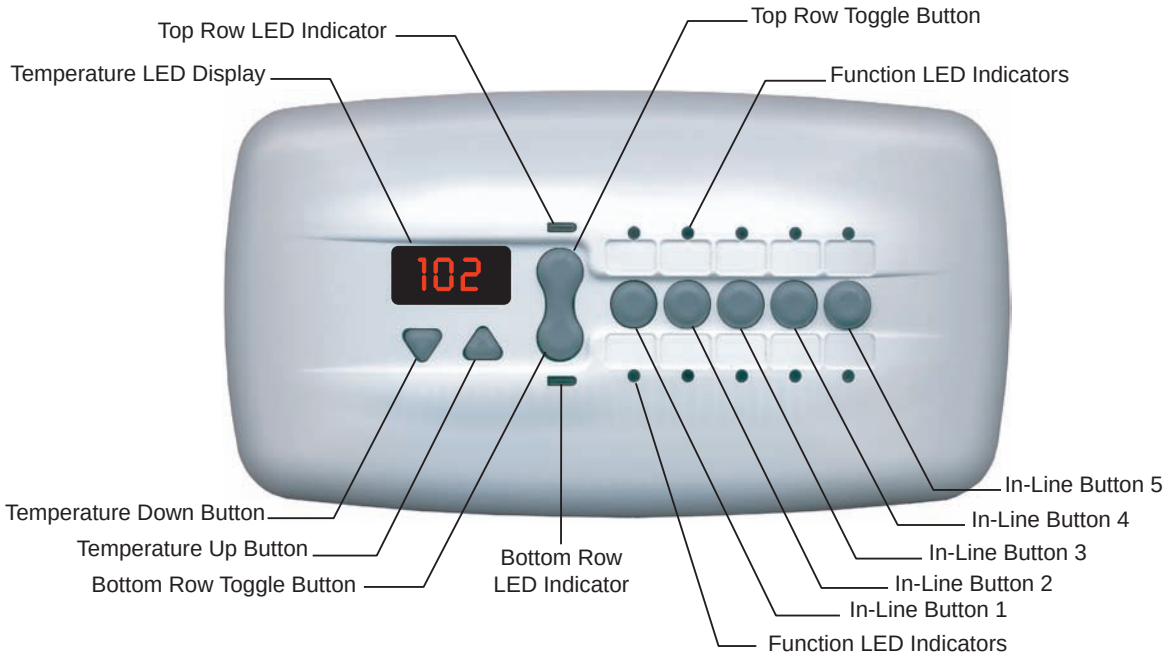


4. **DAYS:** The label displays **ALWAYS** which means run the program to automatically shut-off in the specified time.
5. Press **Save** to save the current program. The program counter displays (1/1).
6. Press the **Back** button to return to the **SPA, POOL** and **AUX** equipment selection screen to choose other equipment. Press the **Exit** button to return to the main screen.

iS10 Spa-Side Remote Controller

The iS10 Spa-Side remote controller is listed UL (1563) for use with the IntelliTouch systems at the water's edge. An iS10 controller can control up to ten functions including a spa temperature adjustment. As many as four iS10's can be installed in i7+3, i9+3, i9+3S, and i10+3D systems. Only one iS10 is supported by the i5 and i5S systems. Note, it is possible to use two iS10's on an i5 system, however, the two iS10's will mirror each other (same ID's).

Five in-line buttons control up to ten system functions numbered one through five from left to right as shown (if the system allows). A label above or below the buttons identifies each circuit function. A "peanut-shaped" middle button toggles between which row of circuit functions will be activated when one of the five in-line buttons are pressed. A red status LED above and below the toggle button indicates which row (Top or Bottom) is active. When one of the in-line buttons is pressed, an adjacent red status LED will be on light, indicating that the circuit has been activated. The default circuits activated by each button are shown in the table below. The iS10 includes an LED display shows the current spa water temperature. The spa temperature may be increased or decreased by pressing the up or down arrow button located under the display. The temperature display will blink while being changed. After setting the desired temperature, the display will return to steady and show the actual temperature as it meets the set point. The temperature set by the iS10 is only temporary. When the Spa mode is switched OFF, the temperature set at the Indoor Control Panel will resume the next time the spa mode is activated (see "Set Manual Heat for details on page 68). The Spa Mode will automatically turn off after 24 hours. For iS10 button configuration information, see page 30.

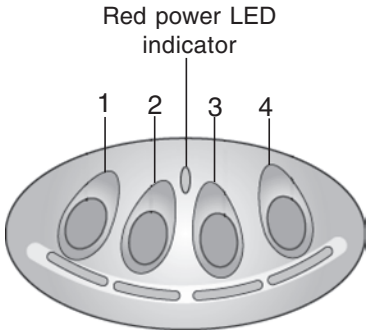


iS10 Spa-Side Remote Controller

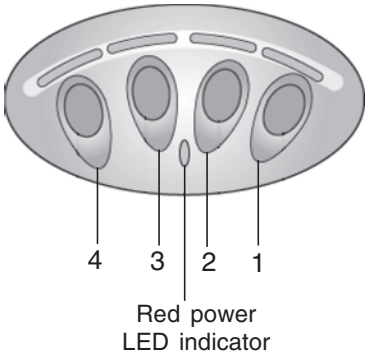
Button 1	i5, i7+3, i9+3, -10+3D, i5S, i9+3S	SPA HI-TEMP	POOL LO-TEMP
Button	2	AUX 1	AUX 5
Button	3	AUX 2	AUX 6
Button	4	AUX 3	AUX 7
Button	5	AUX 4	AUX 8

iS4 Spa-Side Remote Controller

The iS4 Spa-Side remote controller is a double-insulated, waterproof device that is UL (1563) listed for installation at the water's edge. It is typically installed at the tile-line of the spa wall, or in the deck within arm's reach of a spa occupant. The iS4 provides remote switching of up to four control circuits from the spa or nearby location. It is typically used for activating spa circulation and any three auxiliary pieces of equipment (such as lights, jet pump, air blower, etc.). The red status light glows steady when in Spa mode and flashes while spa is heating. For iS4 button assignment information, see page 72.



iS4 Spa-Side Remote Controller
(Wall or tile mount)



iS4 Spa-Side Remote
Controller (Deck mount)

MobileTouch Wireless Controller

The MobileTouch wireless controller provides the same functionality as the IntelliTouch Indoor Control Panel. It has an operating range of up to 300 ft. from the MobileTouch antenna which is typically located near the IntelliTouch load center. The optimum wireless transmit and receive range may be affected by physical obstructions, (especially those containing metal), weather conditions, and geographical features.

The MobileTouch controller screen is an LCD (liquid crystal display) which can be sensitive to sunlight. When exposed for extended periods the LCD screen will heat up and go black. If this happens, place the remote in a shaded area and allow the screen to cool down. Do not attempt to adjust the contrast or the screen will be unreadable when it eventually cools. When used outside, keep the remote covered or in a shaded area. Prolonged exposure to sunlight may permanently damage the unit.

MobileTouch Wireless
Controller

WARNING! Do not plug in the AC adapter to a power source within five (5) feet of the pool and spa. Canadian installations require a minimum of (3) meters from pool water. Do not recharge outdoors. Only use Pentair approved AC adapter transformer.

The MobileTouch wireless controller is water resistant and can be exposed to temporary splashing or wet hands. However, the controller is not intended to be submersible. Remove unit immediately if it is dropped in the water or exposed to rain. Store the unit indoors in a dry environment. Do not charge the remote when it is wet.

Note: *For details about enabling the MobileTouch wireless controller, refer to "Enabling the MobileTouch Wireless Controller," page 28.*

Charging the MobileTouch Wireless Controller

To charge the MobileTouch controller battery:

- Plug the AC adapter (provided with the Personality Kit) into an AC wall outlet. Insert the AC Adapter plug into the MobileTouch power jack.

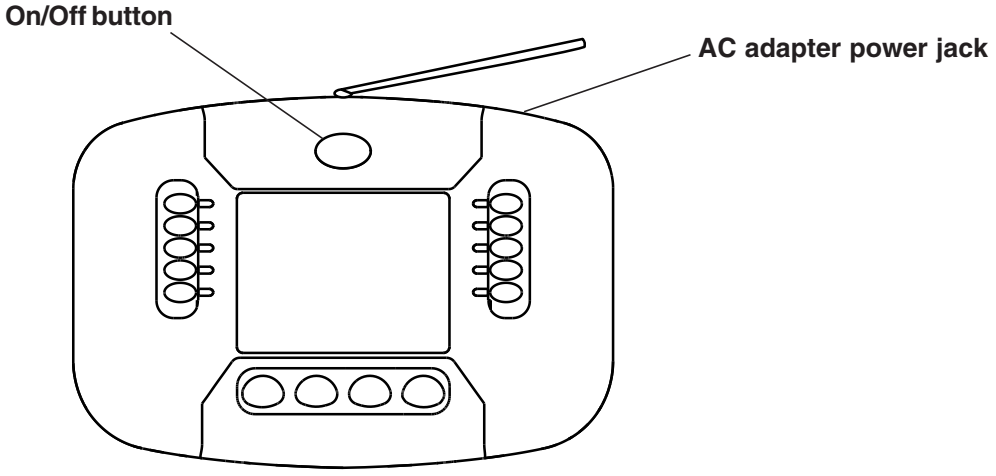
  Note: *A full day's usage requires a complete battery charge (4-5 hours). With a charge time of 10-15 minutes on a dead battery, usage may be up to an hour. The battery is NOT field replaceable. Return unit to the manufacturer for factory service.*

Using the MobileTouch Wireless Controller

The range of the MobileTouch wireless controller can be up to 300 feet from its transceiver antenna. The antenna is typically located near the IntelliTouch Load Center. The unit can be used all day at full power with a complete battery charge (4-5 hours). With a charge time of 10-15 minutes on a dead battery, usage may be up to an hour.

To use the MobileTouch wireless controller:

1. The MobileTouch controller can be used while connected to the to the AC adapter or disconnected from the AC adapter power plug.
2. Press the button at the top of unit to switch the unit ON or OFF. The LCD backlight is set to switch off in five minutes by default. If you wish to change this setting, see "Preference Screen Options," on page 33.
3. The MobileTouch controller is ready for use.



MobileTouch Wireless Controller

QuickTouch Wireless QT4 Remote Controller

The QuickTouch QT4 wireless remote controller provides switching of up to four circuits. It is typically used for activating the spa circulation, and for operating three auxiliary pieces of equipment (such as lights, jet pump, air blower, waterfall, etc.).

Each of the four functions on the QT4 remote controller has an ON and an OFF button. To switch a circuit on or off, press and hold the appropriate button for at least a full second.

Although the Remote is capable of duplicating any four circuits, it has been preset at the factory to control the following:

- Spa button activates the spa circuit.
- **A** button activates **Auxiliary 1** circuit.
- **B** button activates **Auxiliary 2** circuit.
- **C** button activates **Auxiliary 3** circuit.

Note: *To control circuits other than Spa, Aux1, Aux2 and Aux3, it is possible to make adjustments through the Indoor Control Panel or MobileTouch wireless control panel.*

IMPORTANT: *The QT4 remote may be used with wet hands, but should never be submersed in water, as this could damage the unit. If accidental submersion occurs, dry unit out by removing battery cover and removing battery. Position unit so that water can drain out. Reassemble when the unit is completely dry.*

QuickTouch QT4 Wireless Remote Controller

Section 3

Preparing the System for Initial Start-up

Setting up the IntelliTouch System

Use the following recommended steps to configure the IntelliTouch system using the Indoor Control Panel or MobileTouch controller.

1. Main screen preference settings (pages 33-34)

Setup the main screen. Set time, date, clock, button beep sound levels, lights and screen brightness levels.

2. Assign circuit names (pages 36)

Assign circuit names for output auxiliary equipment.

3. Creating custom names for auxiliary circuits (page 38)

There are nearly 100 circuit names stored in the IntelliTouch software (see page 37 for the complete list). If you cannot find one to fit your application you can create up to 20 custom names.

4. Assign a circuit function to a circuit name (Page 39)

From your worksheet **Programmable Settings** section, assign circuit functions to all circuits that are not marked **GENERIC**. Nothing needs to be done if the circuit is GENERIC (simple ON/OFF when the button is pushed). From the **Circuit Functions** screen, you can also assign special logic to a circuit by selecting one of the circuit functions. See page 40 for the complete list of circuit functions.

5. Create and assign a feature circuit name (pages 56)

Based on the temporary circuit names from the worksheet (page 81), create and assign circuit names to the auxiliary (AUX) connections. On the **Assign Circuit Screen**, auxiliary circuit names are assigned through **Displays 1 through 4**. Displays 1 through 4 correspond to the main Load Center or Power Center (Display 1) to which they are wired. Display 2 through 4 may be additional Expansion Centers. Note the original names presented, **AUX 1** through **AUX 10**, correspond to the plug-in location of the relay on the Outdoor Control Panel in the main Load Center or Power Center. Feature circuits are assigned on the **Feature Circuit** screen. Select from the available list circuit names. For a complete list of circuit names see page 37. Up to 20 additional names may be custom created before to assigning names, see page 36. If the circuit is to be a **Macro**, then refer to page 71.

6. Configure valve actuators controlled by AUX or feature circuit (page 69)

Assign which circuits will activate which valves (A and B or optional C, D, E). If more than one circuit must operate the same valve, then one Feature Circuit may be created and configured to activate the valve. Then create Feature Circuits for all other circuits and use the Macro function to activate the valve along with any relay connections. Feature circuits are not available for i5 or i5S systems.

7. Setting up additional equipment (pages 49)

Configure the IntelliTouch system what special equipment the system may have installed.

- Are there IntelliFlo pumps installed?
- Is there an IntelliChlor salt chlorine generator installed?
- Is solar heating available? Is solar being used for a heat pump?
- What circuits will turn 2-Speed pumps to High Speed?
- Cool-down cycle for the heater - Lets you set circuits that switch the filter pump to high speed.
- Do you want to delay turning off the filter pump for 10 minutes when the heater is turned off?
- Do you want the spa to heat whenever the Spa button is pressed?

8. Set up Solar Equipment, 2-speed pump, Set a heater cool-down cycle (pages 65-66)

Set up additional equipment if required such as solar equipment. Set up the chlorine generator

Set up the Indoor Control Panel to operate with optional salt chlorine generators.

9. Configuring the heater system options (pages 11)

Setup gas heater, heat pump or heat pump used in combination with other heating systems.

10. Create Macros from Feature Circuits (pages 71)

Now that all the simple circuits are defined, you may combine circuits (Auxiliaries and Features) to maximize the system capability. Feature circuits that are assigned as **Macros** may also have all the same Circuit Functions and Equipment capabilities as any other circuit. Simply repeat the above steps using the Feature Circuit name.

11. Configure spa-side remote (iS4, iS10, QT4) buttons (pages 72)

Set which circuits will be operated by which button on each remote. Once you have checked all buttons operate properly, place labels on remote controls.

12. Set the delay cancel feature (page 67)

Set the one time Delay Cancel feature for the heater, 2-speed pump, and automatic pool cleaner.

13. Set on/off times for circuit (pages 16-18)

Set times for automatic circuit activation. Each system may have up to 99 total programs. All user created programs are active all the time; so check that there are not conflicting automated times.

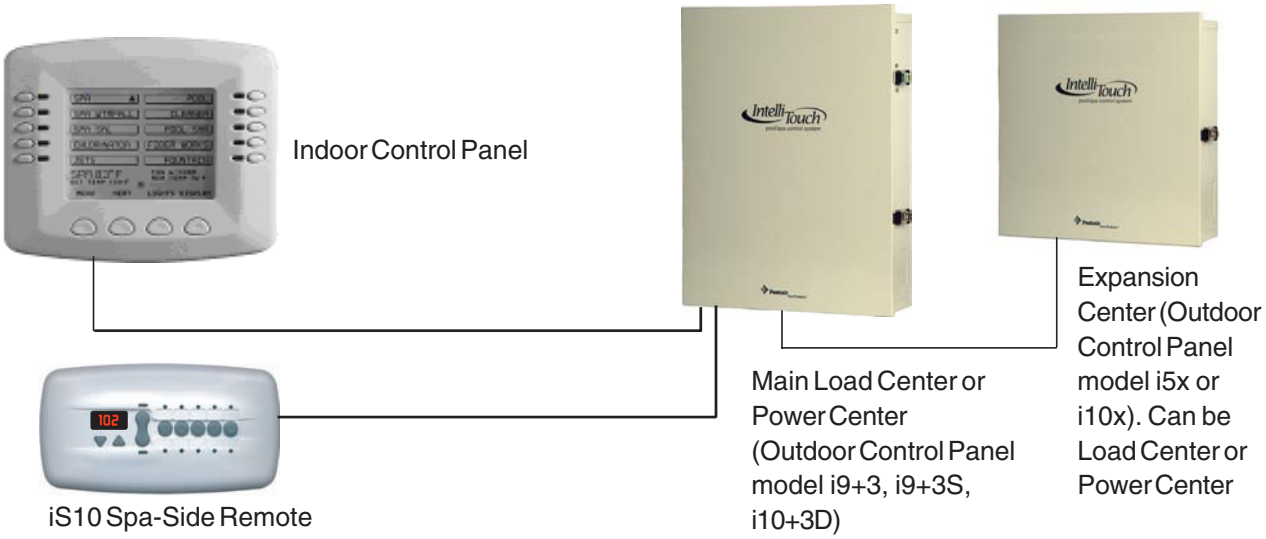
14. Configure the lighting options screen (page 41)

From the lighting screen you can control the pool, spa and backyard lighting, such as the IntelliBrite LED light shows, color changing lights, and synchronized colored lights.

Automatically Enabled Wired Controllers

When powered up for the first time, the IntelliTouch system will automatically enable one each of the following wired controllers:

- Outdoor Control Panel (located in the main Load Center or Power Center)
- Indoor Control Panel (wired to the Personality board in Load Center)
- iS10 Spa-Side Remote (wired to the Personality board in Load Center)
- Expansion Center (includes Outdoor Control Panel model i5x or i10x)



IntelliTouch System Controllers (automatically enabled)

Adding Multiple Controllers and Expansion Centers

When adding multiple Indoor Control Panels, iS10 Spa-Side controllers, and Expansion Centers, you will need to manually enable each controller and assign an Expansion Center. The IntelliTouch system will then be configured to use the additional controller and Expansion Center. To manually enable a wired controller, refer to "Manually Enabling Wired Controllers and Remotes," on page 26. To assign multiple expansion centers, refer to "Assigning Additional Expansion Centers" on page 27.

Adding a MobileTouch Wireless Controller

Before using a MobileTouch wireless controller with the IntelliTouch system, it must first be manually enabled. For details, refer to "Enabling a MobileTouch Wireless Controller," page 28.

Testing the Indoor Control Panel and MobileTouch Controller

To test communication to the Outdoor Control Panel for either the Indoor Control Panel or MobileTouch:

- Press the button next to Spa or Hi-Temp (upper left, depending on the model of Indoor Control Panel). A green light will be on. If none of the lights are on, refer to System Problem Diagnosis," page 95, in the Troubleshooting section.

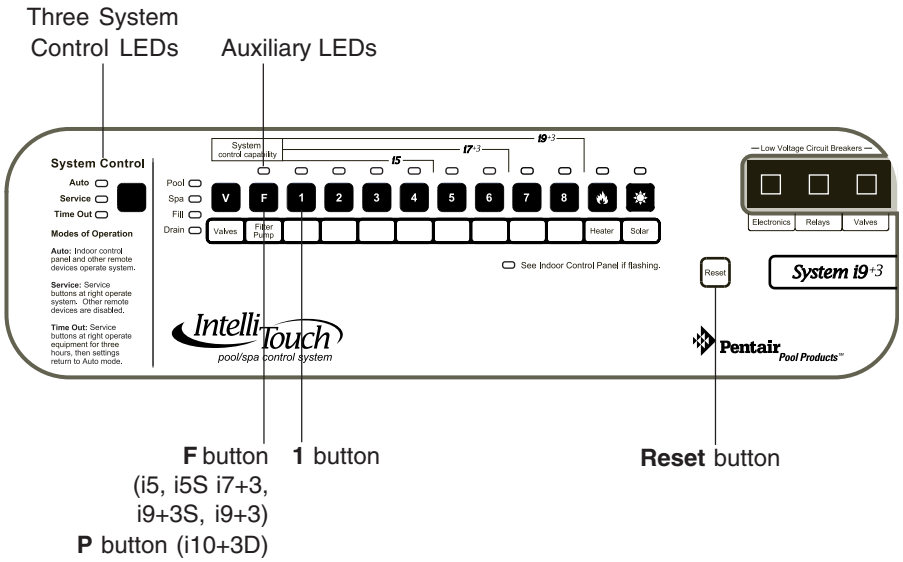
Manually Enabling Wired Controllers and Remotes

To manually enable additional wired controllers, remotes (Indoor Control Panel, iS10 Spa-Side remote Controller) and Expansion Centers, perform the following steps on the Outdoor Control Panel located in the main Load Center or Power Center and at the controller(s) and additional Expansion Centers.

Note: *For information about how the IntelliTouch automatically enables wired controllers, refer to the "Automatically Enabled Wired Controllers," page 25.*

To manually enable additional wired controllers and Expansion Centers:

1. On the Outdoor Control Panel, press the **Reset** button.
2. The three red **System Control** LEDs will be on for about 10 seconds. While these LEDs are lit, press auxiliary **Button 1**.
3. The **auxiliary LEDs** begin flashing together. The system is ready to enable the additional wired controllers (Indoor Control Panels, iS10 Spa-Side remote controllers, and Expansion Centers).
4. **ENABLE EACH CONTROLLER OR REMOTE:** For instructions about enabling each controller, remote and Expansion Center, refer to the following:
   - Indoor Control Panel, go to page 35
   - iS10 Spa-Side Remote, go to page 72
   - Expansion Center, go to page 27
5. After each controller is enabled, press **Reset** on the Outdoor Control Panel and wait until the red Auto and Pool LEDs are lit. The system is ready for normal operation.



Main Outdoor Control Panel (Located in the Load Center or Power Center)

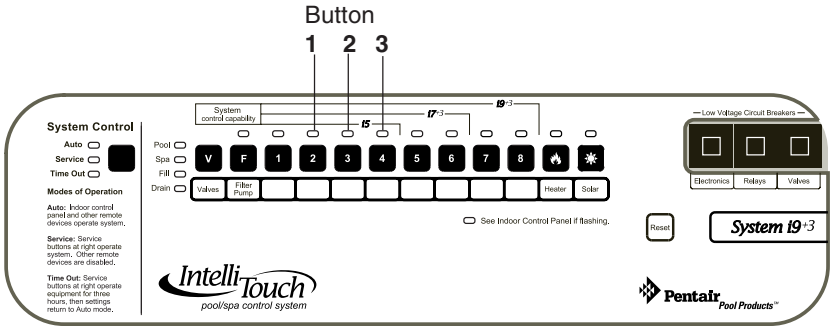
Assigning Additional Expansion Centers

Up to three additional Expansion Centers can be used in an IntelliTouch system. The IntelliTouch system automatically assigns the "main" Load Center or Power Center as number 1, and other additional Expansion Centers as number 2, 3, or 4. An Expansion Center includes an Outdoor Control Panel (model i5x or i10x) which is connected to the Load Center or Power Center.

Note: If the first Expansion Center was installed with the main Load Center or Power Center, it will automatically be assigned as number 2. Other additional Expansion Centers need to be manually assigned a number.

To manually assign a number for an Expansion Center:

1. On the Expansion Center, press the **Reset** button and wait for two seconds, and press **Button 1**. The System Control LEDs on the Expansion Center will flash.
2. **Buttons 2**, **3**, and **4 LEDs** will be on. Do one of the following:
   - If this is the first Expansion Center, press **Button 2**.
   - If this is the second Expansion Center, press **Button 3**.
   - If this is the third Expansion Center, press **Button 4**.



***Note:** For details about selecting the indoor control panel display that corresponds to additional Expansion centers, see page 35.*

***Note:** Do not set more than one Expansion Center to the same number. These numbers correspond with the numbered display screens on the Indoor Control Panel and MobileTouch wireless controller.*

3. The red LED will be on above the selected button number.
4. Repeat the steps above for each additional Expansion Center.

Main Load Center (i9+3, i9+3S, i10+3D)	Expansion Center (i5x or i10x)	Additional Expansion Center	Additional Expansion Center (3 maximum)
Number 1	**Number 2**	**Number 3**	**Number 4**

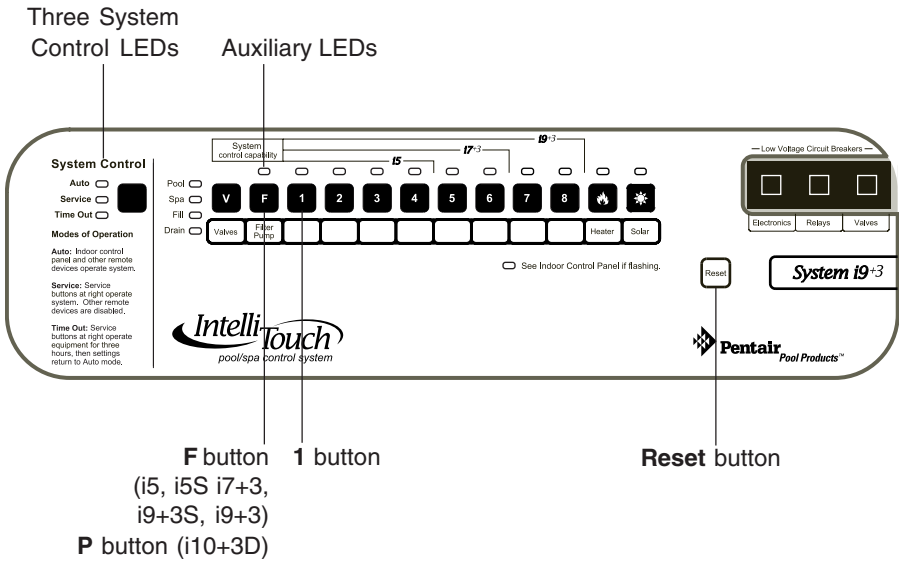
***Note:** Expansion Centers may be a Load Center or Power Center.*

Enabling a MobileTouch Wireless Controller

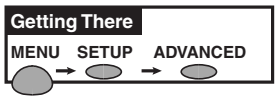
When adding a MobileTouch wireless controller to a new or existing IntelliTouch system installation, you must first manually enable it before using it with the IntelliTouch system.

To manually enable the MobileTouch wireless controller:

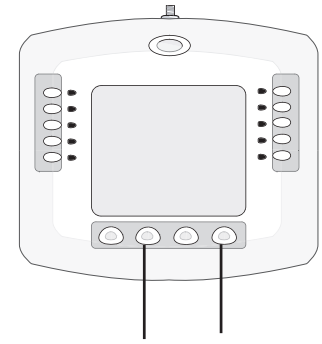
1. On the Outdoor Control Panel, press the **Reset** button.
2. The three red **System Control** LEDs will be on for about 10 seconds. While the LEDs are on, press the **"F" Filter** button. For model i10+3 press the **"P" Pool Filter Pump** button. For model i5S, press the **1 button**.
3. The auxiliary **LEDs** will cycle through the V (or F) button and the 1, 2, ,3, 4 buttons. The system is ready to enable the MobileTouch wireless controller.



Go to the Advanced screen.

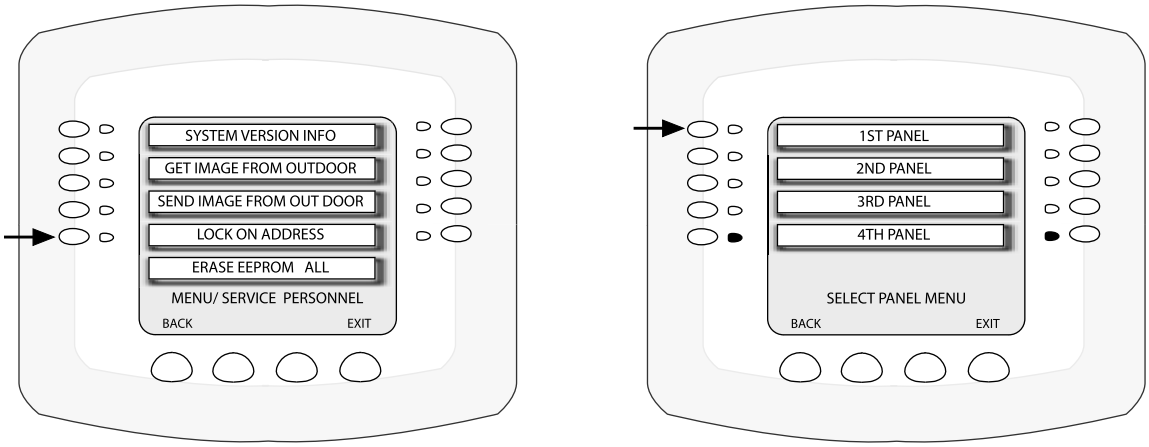


4. From the MobileTouch Advanced screen, press **buttons 2 and 4 at the same time**. The Service Personnel screen is displayed.



Enabling the MobileTouch Wireless Controller (Continued)

5. Press the button next to **Lock On Address**. This will setup the MobileTouch controller to operate on a unique frequency to avoid inference from other wireless devices within range of the controller's Transceiver.
6. Select the control panel number (1, 2, ,3 or 4) for the controller at hand by pressing either button next to the panel number. Do not select a number already in use by another controller. Any combination of up to four Indoor Control Panels and/or MobileTouch control panels may be configured.
7. You will automatically be returned to the Service Personnel screen. Press **Exit** to return to the main screen.
8. Repeat these steps for each controller if necessary.
9. Return the Load Center or Power Center. The System Control LEDs will be flashing. Press the **Reset** button. When the "Auto" LED is on the process is complete and the system is ready for operation.



Adding an iS10 Spa-Side Remote Controller

Up to four iS10 Spa-Side remote controllers can be installed to allow each iS10 to operate different functions or to the same functions at different locations. Each iS10 can be assigned as number 1, 2, 3, or 4. If a different number is not assigned to each installed iS10, then all iS10's are assigned as number iS1. This is useful if you wish to have the same functions available at different iS10 locations.

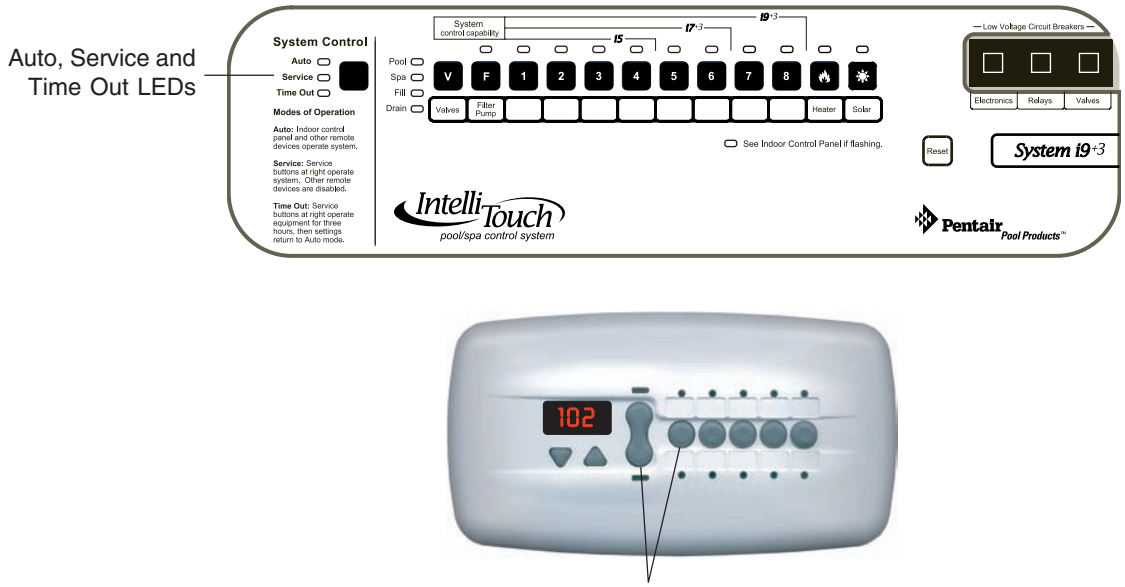
The following steps describes how to manually assign each iS10 a number 2, 3, or 4 as required.

Note: *If the first iS10 was installed with the main Load Center or Power Center, it will automatically be assigned as number 1. Other additional iS10s need to be manually assigned.*

To configure an additional iS10:

1. On the iS10, press the bottom part of the "peanut shaped" toggle switch and the **1** button at the same time while the Outdoor Control Panel lights are flashing.
2. The temperature display should read **SHA**.
3. The four red LEDs adjacent to the in-line buttons will be on. Do one of the following:
   - If this is the second iS10, press **2**. The temperature display reads **IS2**.
   - If this is the third iS10, press **3**. The temperature display reads **IS3**.
   - If this is the fourth iS10, press **4**. The temperature display reads **IS4**.
4. The iS10 Spa-Side Remote red LEDs will start to flash for about a minute. Wait until they stop flashing before resuming normal operation.

Note: *To configure the buttons on the iS10 and QuickTouch (QT4) remote controller, refer to "Configuring Remote Control Button Circuits (iS4, iS10, QT4 QuickTouch, and Phone Remote" on page 58. To disable or enable the iS10 Spa-Side Remote from the Indoor control Panel, refer to "Disable/Enable Spa-Side Remote," page 74.*



Main Outdoor Control Panel and iS10 Spa-Side remote controller

Prepare the System for Operation

Note: *To reset the system to the factory defaults, see "Erasing Outdoor Control Panel Memory (Factory Default)," on page 89.*

If you have more than one Indoor Control Panel, you only need to configure just the one main panel. Other Indoor Control Panels will be configured with the same settings and use the configured settings. Use the following steps to ensure that the IntelliTouch system is properly set up and working correctly. Before you start, make sure you have:

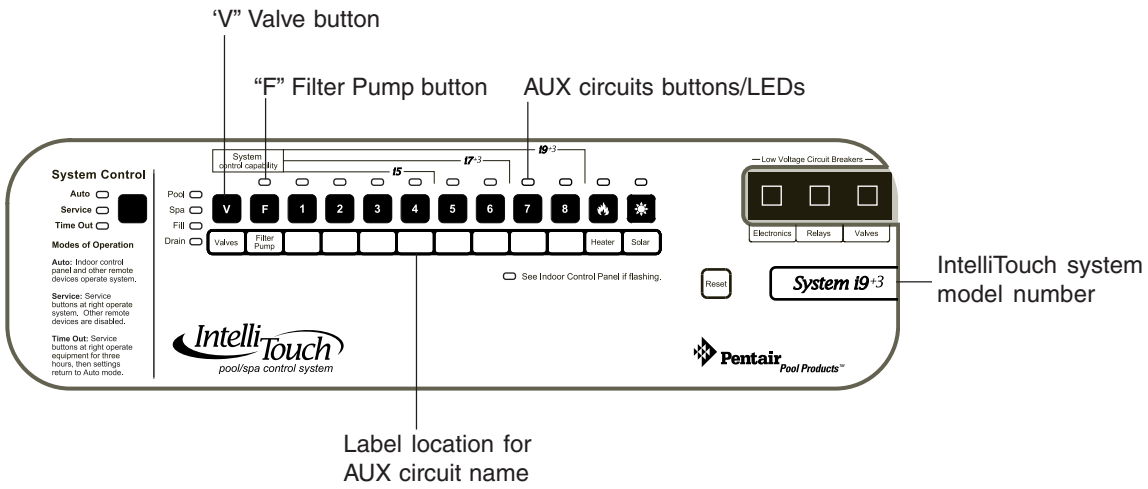
- Pen and paper
- Marker to label the circuits. Use the provided Circuit ID label worksheet (see page 81-86), a permanent marker, or other permanent means of labeling.
- If you are setting up a large system that covers a large area, ask your assistant to visually inspect the equipment while you test the circuits from the Outdoor Control Panel.

Check the Main Load Center

1. Switch on the electrical power at the house breaker.
2. Switch on the Load Center or Power Center. You may need to switch on the breakers on the Load Center.
3. Wait for the following:
   - The red **Auto** LED on.
   - The light labeled **See Indoor Control Panel if Flashing** to stop flashing.
4. Press the **Service** button to put the Load Center or Power Center in Service Mode for testing.

   Note: If you are working with the **i5**, **i7+3**, or **i9+3** systems, go to step **5**. If you are working with the **i5S**, **i9+3S**, or **i10+3D** systems, skip step 5 and go to step 6. The IntelliTouch system model ID is located on the front of the Indoor Control Panel below the low voltage circuit breakers.
5. Press the **Valves** button. Step through all four valve positions: Pool, Spa, Fill, Drain. Make sure the valves rotate to the correct position and the water is moving in the correct direction for each position. If necessary, flip the actuator toggle switch to change the direction of the water. After setting the valves and the system is in "Auto" mode, do not change the toggle switches.
6. Press the **Filter Pump** button. Make sure the filter pump turns on correctly. If the pump has two speeds: Press the one time to run the pump in low speed. Press the button again to run the pump in high speed. Press the button again to switch the pump off. A Two-Speed pump has to be configured from the EQUIPMENT screen.
7. Step through the rest of the system AUX buttons. Notice which button turns on which equipment. You may need to walk the property to find what each button turns on.

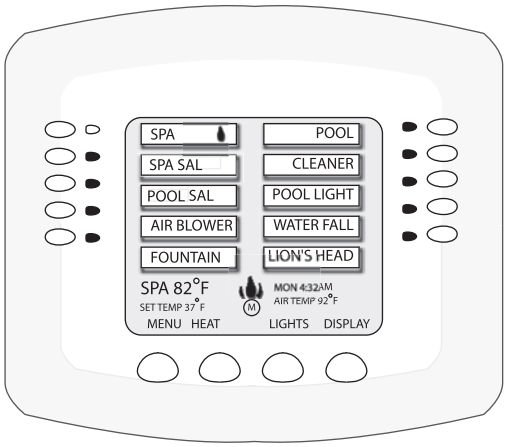
8. Press each AUX button to switch on each circuit. Affix a label under the appropriate button identifying the function and number of the circuit.
9. Repeat steps 4 through 9 for each Expansion Center. Note that **Aux 1** through **Aux 10** are used as circuit names on the Expansion Centers. Do not duplicate these circuit names with the circuit names of the main Load Center or Power Center.
10. The system is automatically configured if there is no more than one Load Center, one Expansion Center, an Indoor Control Panel, and one Spa-Side Remote. If there are additional Expansion Centers and/or controllers, then these need to be configured. For details about adding multiple Expansion Centers and controllers, see "Assigning Additional Expansion Centers" on page 32.



Checking the Indoor Control Panel or MobileTouch

To test communication to the Outdoor Control Panel for either the Indoor Control Panel or MobileTouch:

- Press the button next to Spa or Hi-Temp (upper left, depending on the model of Indoor Control Panel). A green light will be on. If none of the lights are on, refer to System Problem Diagnosis," page 95, in the Troubleshooting section.

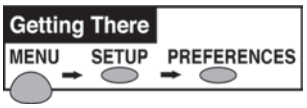


Setting up the IntelliTouch System using the Indoor Control Panel or MobileTouch

This section describes how to configure and set up the IntelliTouch system via the Indoor Control Panel or MobileTouch.

The Preference Screen Options

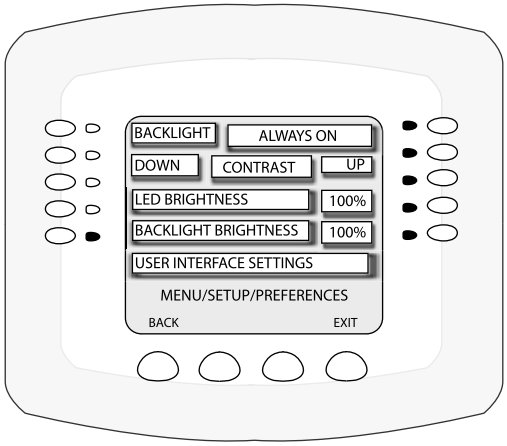
From the Preference screen you can change the control panel beeper volume, display settings, and set the screen contrast.

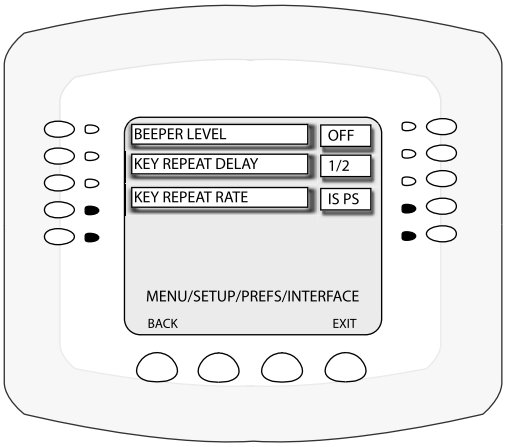


To change the screen settings go to the **Preferences** screen.

1. **To change the display backlight:** Press the top left or right button and select the option that you want. The options are; **OFF IN 5 MIN**, **BLANK IN 5 MIN**, and **ALWAYS ON**.
2. **To change the display contrast:** Press either the left or right second button down, next to the **Up** or **Down** to set the contrast level.
3. **To change the brightness of the LED lights:** Press either the left or right third button down, next to **LED Brightness** label to set brightness level to set the brightness level. The LED brightness levels are **100%**, **75%**, **50%**, and **25%**.
4. **To change the display backlight brightness:** Press either the left or right fourth button down, next to **Backlight Brightness** label to set the backlight brightness. The backlight brightness levels are **100%**, **75%**, **50%**, and **25%**.
5. **To turn the button beeper sound off:** Press the button next to the **User Interface** label. In the next screen, press the button next to **Beeper Level** to **OFF**. To switch **ON** the sound, select **HIGH**. Press the **Back** button when finished.

   Note: *It is recommended to leave the Key Repeat Delay and Rate set to the factory default setting (1/2 and 15 PS). The Key Repeat Delay adjusts the amount of time a key/button has to be held down before it starts auto-repeating. Key Repeat Rate adjusts the number of times per second (5, 10, 15, or 20 key repeats per second) the key/button repeats once it is held down.*

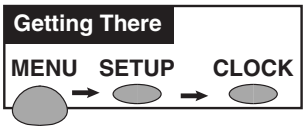




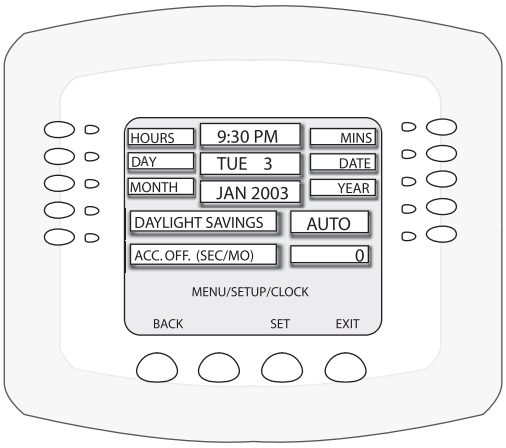
6. When finished, to save the settings press the **Exit** button to return to the main screen.

Set the System Clock

Setting the system clock allows all automatic pool functions to work correctly. Set the clock to the current time and date for your area.



To set the system clock, go to the **Clock** screen.



1. Use the buttons on either side of the panel to set the time and date.
2. Specify the **Daylight Savings** setting.
   If you are in an area that observes Daylight Savings, set this to **Auto**. If you are in an area that does not observe Daylight Savings, set this to **Manual**.
3. Change the clock accuracy offset by seconds, press the right-side button to increase the offset and the left-side button to decrease. The offset value can be set from -300 to +300 seconds.
4. Press the **Save** button when finished.
5. Press the **Exit** button to return to the main screen.

Assigning Circuit Names to Display 1 (or Display 2, 3, and 4)

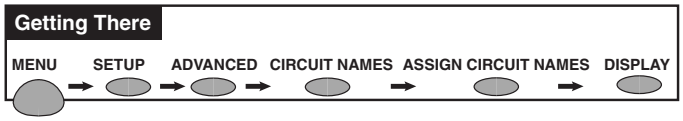
Setting the circuit names allows you to identify equipment from the Indoor Control Panel or MobileTouch wireless control panel. Many common equipment names are already programmed into the control panel.

You can also set up to 20 custom names for equipment, if one of the almost 100 programmed names does not fit. Customizing names can help the homeowner find unusual equipment they may have. For more information, refer to "Creating Custom Circuit Names for Auxiliary Circuits," page 38.

You can also program multiple circuits to work with one button on the Indoor Control Panel and assign it a custom name. This is called creating a MACRO. For example, by creating a macro, you can program one button to switch on the spa, spa lights, fountain, and back yard lights. This is a two step process: first you create a custom name and then create the macro that program the functions to work together. Macros are stored in the Feature Circuits, where motorized valves, 2-Speed filter pump, and other features are saved. You can have up to 10 feature circuits. **Note:** This feature is not available with the i5 or i5S systems.

Note: *The default top row of two circuits on* ***Display 1*** *always has special reserved functionality that cannot be changed. The default circuits may be given any name but always perform in the same manner. Be careful not to duplicate circuit names with these circuits. These circuits may also be used to activate 2-speed pumps to high speed, turn additional valves, etc. The preset functionality is as follows:*

About DISPLAY Screen 1, 2, 3, 4



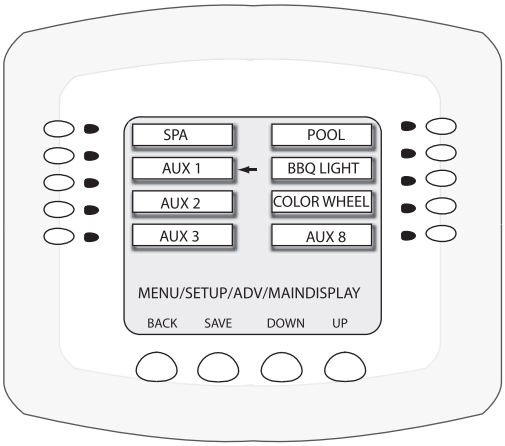
The auxiliary circuits that control the pool and spa equipment can be accessed from the Indoor Control Panel Displays screen. Pressing Display 1, 2, 3, or 4 will put you in the screen with circuits belonging to that particular Load Center or Expansion Center. The **Feature Display** assigns Feature Circuits. The Displays screens are as follows:

Display 1 - This screen shows the filter pump, pool and spa modes, and all high voltage auxiliary circuits connected to the Load Center or Power Center.

Display 2 - This screen shows additional auxiliary circuits connected to the first Expansion Center.

Display 3 - This screen shows additional auxiliary circuits connected to the second Expansion Center.

Display 4 - This screen shows additional auxiliary circuits connected to the third Expansion Center.



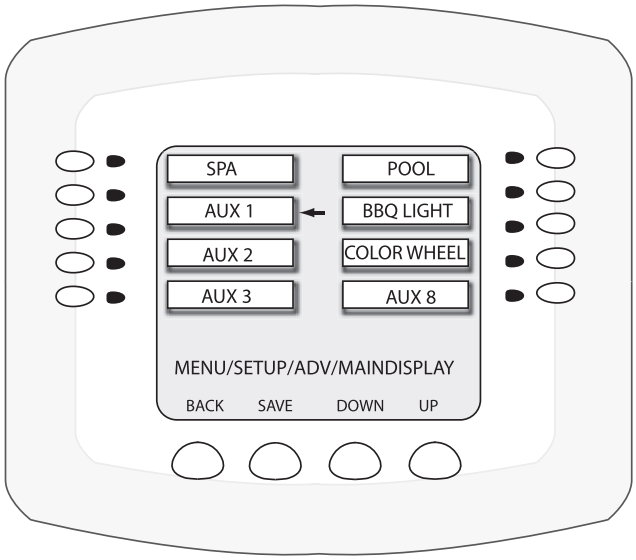
Assigning Circuit Names

Assigning the circuit names allows you to use the pool equipment from the Indoor Control Panel. Many common equipment names are already programmed into the Indoor Control Panel.

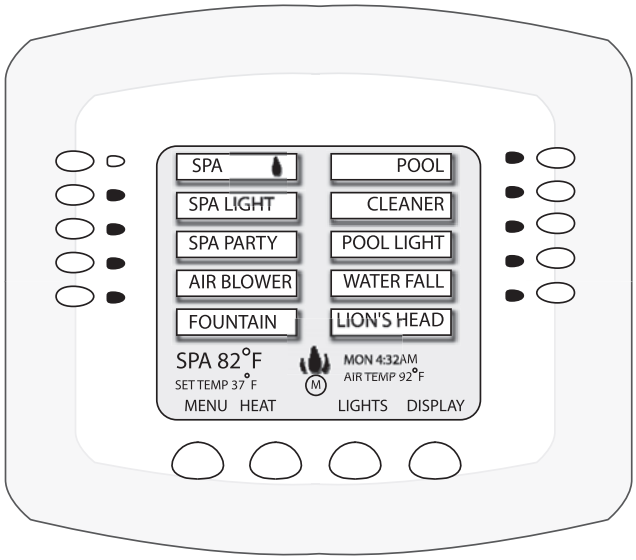
Labeling Circuit Buttons in the Load Center

In order to identify the equipment connected to the auxiliary circuits (SPA, AUX 1, AUX 2) in the Load Center, you need to assign names to the corresponding auxiliary circuits in the Indoor Control Panel. Many common equipment names are already programmed into the Indoor Control Panel.

Use the written list of circuit names (button 1, button 2 etc.) you made while setting up the Load Center. Find what you labeled circuit button 1, button 2 etc. The circuit names you assign must match the labels you put on the Load Center.



1. On the Assign Circuit Display screen, press the button next to the label **AUX 1**. A small arrow pointing to the name is displayed.
2. Get the written list of circuit names you made while setting up the Load Center. Find what you labeled AUX circuit button 1. The circuit names you assign must match the labels you put on the Load Center.
3. Use the **Up** and **Down** buttons at the bottom of the screen to scroll through the alphabetical list of programmed names.
4. When you find the name you want, press the button next to the label **AUX 2**. The small arrow moves to that label. You are done setting the first circuit name and are ready to program the next circuit.
5. Continue the process to assign the other circuits. Depending on the model you are programming, you may not have equipment for all circuits.



6. When you are done assigning names, press the **Save** button.
7. Press the **Exit** button to return to the Main screen.

IntelliTouch Circuit Names

AERATOR
AIR BLOWER
AUX 1
AUX 2
AUX 3
AUX 4
AUX 5
AUX 6
AUX 7
AUX 8
AUX 9
AUX 10
BACKWASH
BACK LIGHT
BBQ LIGHT
BEACH LIGHT
BENCH
BLOWER
BOOSTER PUMP
BUG LIGHT
CABANA LTS
CHEM. FEEDER
CHLORINATOR
CLEANER
COLOR WHEEL
DECK LIGHT
DRAIN LINE
DRIVE LIGHT
EDGE PUMP
ENTRY LIGHT
FAN
FIBER OPTIC
FIBERWORKS
FILL LINE
FLOOR CLNR
FOGGER
FOUNTAIN
FOUNTAIN 1
FOUNTAIN 2
FOUNTAIN 3
FOUNTAINS
FRONT LIGHT
GARDEN LTS
GAZEBO LTS
HIGH SPEED
HIGH TEMP
HOUSE LIGHT
JETS
LIGHTS
LOW SPEED
LOW TEMP
MALIBU LTS
MIST
MOTOR VALVE
MUSIC
(NOT USED)
OZONATOR
PATH LIGHTS
POOL SAM 3
SECURITY LT
SLIDE
SOLAR
SPA
SPA HIGH
SPA LIGHT
SPA LOW
SPA SAL
SPA SAM
SPA WTRFLL
SPILLWAY
SPRINKLERS
STREAM
STATUE LT
SWIM JETS
WTR FEATURE
WTR FEAT LT
WATERFALL
WATERFALL 1
WATERFALL 2
WATERFALL 3
WHIRLPOOL
WTRFL LGHT
YARD LIGHT

Custom Names (11 characters maximum)

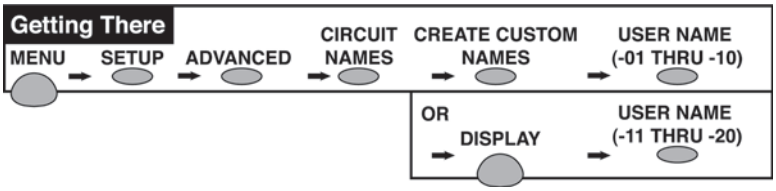
USER NAME 01 _____
USER NAME 02 _____
USER NAME 03 _____
USER NAME 04 _____
USER NAME 05 _____
USER NAME 06 _____
USER NAME 07 _____
USER NAME 08 _____
USER NAME 09 _____
USER NAME 10 _____
USER NAME 11 _____
USER NAME 12 _____
USER NAME 13 _____
USER NAME 14 _____
USER NAME 15 _____
USER NAME 16 _____
USER NAME 17 _____
USER NAME 18 _____
USER NAME 19 _____
USER NAME 20 _____

Creating Custom Names for Auxiliary Circuits

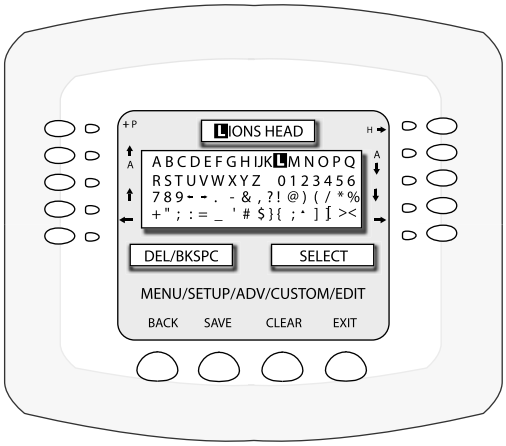
There are nearly 100 circuit names stored in the IntelliTouch software (see page 37 for the complete list). If you cannot find one to fit your application you can create up to 20 custom names. To create a custom name, first choose one of the 20 USERNAMES and change it from "USER NAME-01 thru -20" to your name of choice. Like this example, USER NAME-01 could be changed to LION'S HEAD for a waterfall or fountain. After you have created and saved your custom names. For details, refer to "Feature Circuits," page 70.

To create a custom circuit name go to the **Create Custom Names** screen.

Note: *If you want to create a custom name you must program the name first.*



1. Press the button next to the first **User Name** label you want to create. If no custom names have been created, all labels say **User Name -01** through **User Name -20**.
2. Use the **third and fourth button from the top** to find the first letter of the name.
3. Press the button next to **SELECT** once you have found your letter. Then move on to the next letter. Note: You can also enter names in Spanish if required.
4. Press the **Save** button when you are finished. To program another name, repeat steps 1 and 2.
5. Press the **Exit** button to return to the main screen.



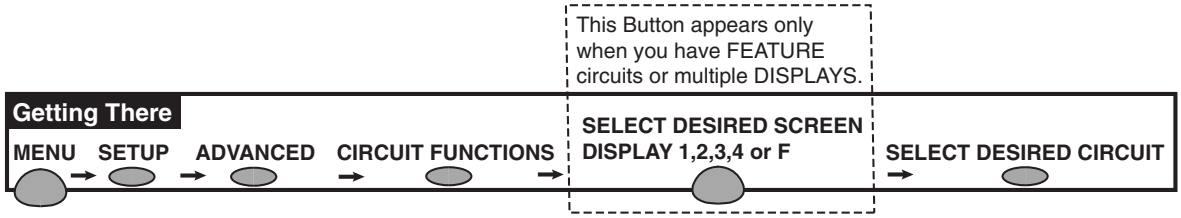
Assign Circuit Functions and Freeze Protection

Assigning circuit functions allows you set special logic to a circuit. For example, when setting up an automatic pool cleaner pump, you would assign the circuit function MASTER CLEANER. With this "Cleaner" logic the cleaner pump would force the filter pump on, and the cleaner pump would start after a delay of five minutes. The cleaner pump would automatically shut off whenever the spa and solar is switched on with the cleaner pump would be delay for five minutes if energy from the solar is required.

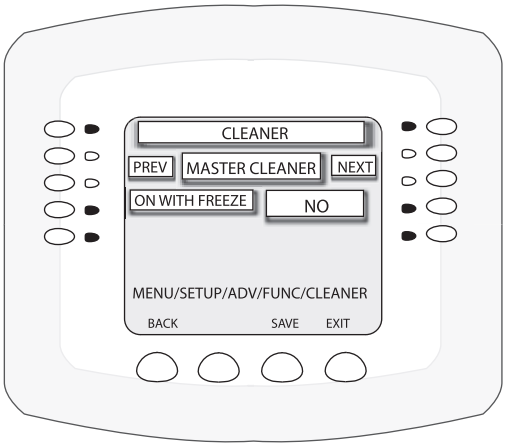
Freeze Protection

Freeze protection switches on a circuit if the outdoor air temperature sensor detects the temperature is getting close to freezing (below 35° F). The system switches on all circuits that have been assign freeze protection, and runs the circuits for 15 minutes to stop the pipes from freezing. This is especially important if there is a pool and spa combination. If freeze protection is set to both the spa and pool circuits, the filter pump switches on and the pool and spa valves alternate every 15 minutes to keep the water moving in both the pool and spa. This process continues until the freeze condition is over.

Assigning Circuit Functions and Freeze Protection



To assign a circuit function:



1. The first line (CLEANER) displays the desired circuit that you wish to assign the function logic to. This circuit is selected from the previous screen.
2. The second line (MASTER CLEANER) shows the type of logic needed for your circuit. Use the **Next/Prev** buttons to select the function. For the complete list of the various types of functions, see "Special Functions to a Circuit," on page 40. ***Note:*** *You must set pressure cleaners to Master Cleaner circuit function.*
3. The third line shows "ON WITH FREEZE." Select **YES** if circuit is to have freeze protection. If you select YES, the circuit will turn on if air temperature drops to 35° F. Repeat steps 1 through 3 for any other circuits that you want to assign freeze protection.
4. Press **Save** when finished.
5. Press the **Back** button to return to the Circuits screen or press the **Exit** button to return to the Main screen.

Note: *SPA, POOL, HI-TEMP, LOW-TEMP factory default settings are set to FREEZE "YES."*

Special Function to a Circuit

Generic	No special Logic. Simple On/Off control of a circuit with all the programmable capabilities.
Master cleaner	Works with automatic pool cleaner pumps or cleaner valve actuator. It does the following: - Forces the filter pump on 5 minutes before the cleaner. - Turns the cleaner off when the spa is on. - Turns the cleaner off for 5 minutes when the solar heating begins.
Light	Allows special lighting features to work, such as ALL lights on or ALL lights off.
Dimmer	Allows light dimming features to work. Dimming relay must be installed.
SAM Light	Activates special color lighting programs on other screens on the Indoor Control Panel when used with SAM pool lights. For example, you can have ALL lights on or ALL lights off, or use Color Swim, Color Set, or Color Synch.
SAL Light	Activates special color lighting programs on other screens on the Indoor Control Panel when used with SAL spa lights. For example, you can have ALL lights on or ALL lights off, or use Color Swim, Color Set, or Color Synch.
Photon Generator	Lets Pentair Fiberworks fiber optic bulb be operated by Color Set or Color Swim programs when used with SAM and SAL lighting.
Color Wheel	Activates special color lighting programs on other screens on the Indoor Control Panel when used with Pentair Fiberworks. For example, you can have ALL lights on or ALL lights off, or use Color Swim, Color Synch, or Color Set.
Valve	Not currently used.
Spillway	For pool/spa combinations where the spa is raised above the pool. This setting moves the return valve so that the filter pump pulls the water from the pool and returns it to the spa, creating a water fall effect. Automatic pool cleaners are turned off when this feature is turned on.
Floor Cleaner	This setting moves a 3-way valve every 20 minutes alternating flow between 2 cleaner system valves that feed the pop-up heads.
IntelliBrite	Activates an IntelliBrite LED light.

Setting up Lighting Options (Color Swim and Color Set) - Requires use of at least two SAm and/or SAL and/or Fiberworks Lighting products controlled by separate AUX circuits

There can be up to 12 light circuits on the main **Lights** screen. From this screen you can activate the "Color Swim" and Color Set" special lighting features. These special features each must have their own relay and separate circuits. These lighting features are not available for the i5, and i5S systems.

Color Swim and Color Set

Although the same screen is used to program the **Color Swim** and **Color Set** features, these two special lighting effects operate independently of each other. It may take up to a minute or more for Color Swim or Color Set to operate as programmed, depending on what kind of light you are activating and what state it was in when the effect was activated.

- **Color Swim -** Allows any combination of up to 12 S*Am*, S*AL*, and/or FIBER*works* lighting circuits to be preset to transition through colors in sequence, giving the appearance of the colors swimming across the water. The delay in sequencing each light can be adjusted to customize the display for your pool. This feature requires the use of at least two S*Am*, S*AL*, and/or FIBER*works* lighting products controlled by separate AUX circuits and relays.
- **Color Set -** Allows any combination of up to 12 S*Am*, S*AL*, and/or FIBER*works* lighting circuits to be preset to specific colors. For example, you can set the colors for red, white, and blue, or red and green.
- **Sync -** Causes all color changing lights to synchronize their colors.

Setting up Color Swim and Color Set with S*Am*, S*AL*, or FIBER*works*

Both the **Color Swim** and **Color Set** feature are configured on the same Lights screen, but operate independently of each other. It may take up to a minute or more for Color Swim or Color Set to operate as programmed, depending on what kind of light you are activating and what state it was in when the effect was activated. The Color Swim feature create the illusion of bands of color moving through the water by switching on each light with a specific color in a specified order and at different time intervals. The order and time delay between lights can be mixed and matched to create many different effects. For example, colors moving left to right, one body of water to another, from the middle outward, etc.

To assign light circuits to the Lights screen:

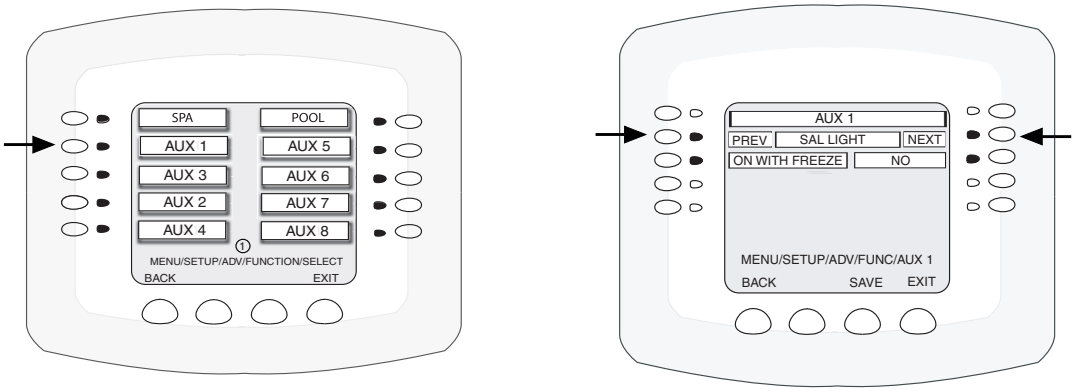
Before Starting: Be sure the auxiliary circuits that control the lights have been assigned names. Then verify that S*Am* and S*AL* lights have been assigned in the "CIRCUIT FUNCTIONS" as SAM and SAL lights. If FIBER*works* lighting is being used, it also has to be set up as a PHOTON GENERATOR for the circuit controlling the light bulb, and COLOR WHEEL for the circuit controlling the color wheel (see page 39).

Setting up Color Swim and Color Set lights

Before starting, be sure the auxiliary circuits that control the Color Swim and Color Set lighting features have been assigned circuit names. Then verify that the lights have been assigned in the "CIRCUIT FUNCTIONS" as SAM or SAL lights (see page 39). Before setting up the light circuits first assign the circuit light function an auxiliary circuit (AUX 1) and a circuit name that will appear on the main screen. If the circuit function has been assigned, proceed to Step 5.

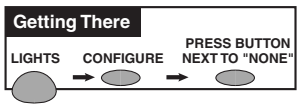
Setting up Set Colors and Color Swim with S*Am*, S*AL*, or FIBER*works* (Continued)

1. Press the button next to an **AUX** button to assign a light function to this circuit. For this example use AUX 1. To use the Color Swim or Color Set feature you need to select SAM, SAL, Photon Generator or Color Wheel
2. Press the right or left side (PREV/NEXT) button next to for example "SAL LIGHT." Scroll through the preset special circuit functions and choose a light selection. See page 40 for the complete list of preset circuit functions.

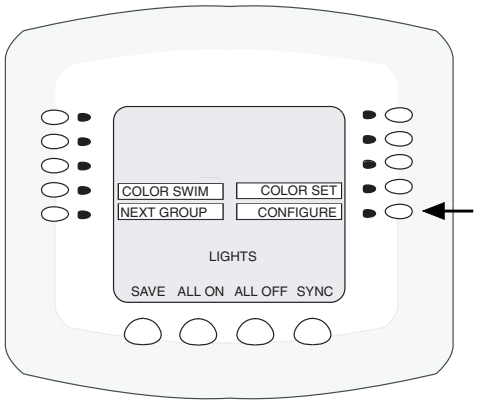


3. Press the **SAVE** button on the bottom of the screen. To assign other circuits, press the **BACK** button.
4. **Name the circuit:** Press the **BACK** button twice to access the Advanced screen.
5. Press the button next to "CIRCUIT NAMES."
6. From the "Circuit Names" screen you can assign circuit names for the main screen and create custom names. Press the button next to "ASSIGN CIRCUIT NAMES" to assign a name to the light circuit AUX 1.
7. Press the button next to "DISPLAY 1." Display 1 is the main indoor control panel. If there are additional IntelliTouch Expansion Centers installed, Display 2, Display 3, and Display 4 will be displayed. Select which indoor control panel to configure. From this screen you can also configure Feature circuits.
8. Press the button next to **AUX 1**.
9. Using the **DOWN/UP** buttons select the name that you want to use for this spa light. For this example select "SPA SAL." Press the **SAVE** button on the bottom of the screen to save the name. Press the EXIT button when finished. The names of the assigned light circuit will display as SPA SAL. Use this button to switch the light on and off.
10. Proceed to Step 11 to configure the SPA SAL light for the Color Swim of Color Set.

To configure the SPA SAL light for the Color Swim of Color Set:

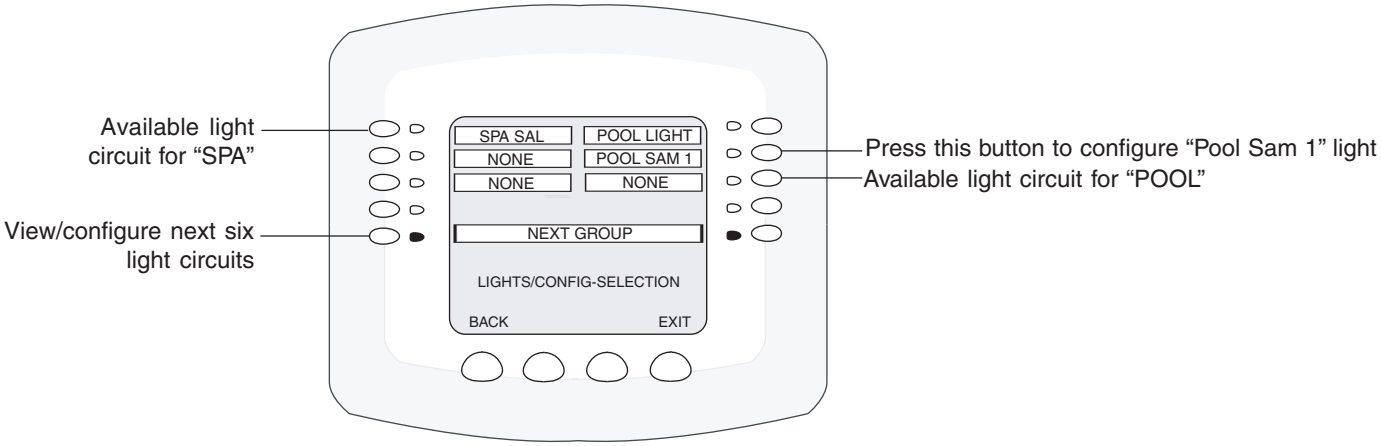


11. Press the **Lights** button on the bottom of the screen.
12. Press the right side button next to "CONFIGURE."



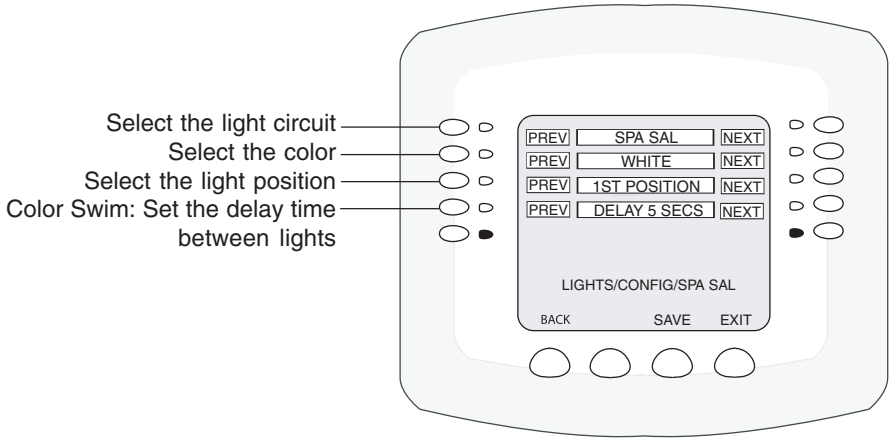
Lights screen

13. Press the button next to "NONE" to assign a light circuit to the selected button. Light names can be setup to display on the left side for "Spa" features and on the right side for the "Pool" features.



Setting up Set Colors and Color Swim with S*Am*, S*AL*, or FIBER*works* (Continued)

14. Press the top left or right side button to scroll through the available light circuits which can be used for the Color Set and Color Swim feature. Stop at the circuit name you wish to use. The displayed circuit names selections are circuit names that were previously assigned when assigning a circuit function. If there are no circuits available for selection, refer to "Assigning Circuit Names, " on page 36, and "Assigning Circuit Functions and Freeze Protection" on pages 39 for more information.



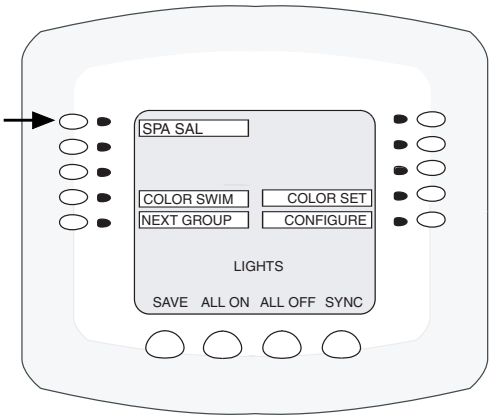
15. **Using the Color Set feature:** Press the second button down from the top to scroll through the color choices. Select the color of your choice. The selections are, White, Light Green, Cyan, Blue, Lavender, Magenta and Light Magenta.

16. **Set Light Position:** Press the third button down from the top to set the position of the first light in the sequence. **Position 1** will lead all the other lights in the color changing sequence. **Position 2** follows Position 1 and so on. There are 12 position to choose from. More than one light may be assigned to the same position number so that their colors may be synchronized. For example, to make the colors swim right to left, make your right most light POSITION 1. You may need to go back to Step 1 and scroll through your lights to find the right most light, and set it as POSITION 1.

17. **Using the Color Swim feature:** Press the forth button down from the top to set the time delay between this light and the previous position. Use a higher delay time for lights spread further apart. Try five seconds for all lights and observe the effect. Use different time settings to achieve unique lighting moods and effects.

18. Press the **Save** button to save the current setting for the first light. The previous "CONFIGURE-SELECTION screen is displayed. Continue to setup the light circuits. Press the button next to "NEXT GROUP" to access the next screen for an additional six circuits. Repeat step 1 through 5 to set the light for POSITION 2 for Color Swim, and a new color choice for Color Set. Press Save. Repeat this process until all desired lights have set colors, positions and delays.

19. Press **Back** to view the Lights screen. "SPA SAL" on and off switch is now assigned to the AUX 1 button.



Setting up IntelliBrite LED lights

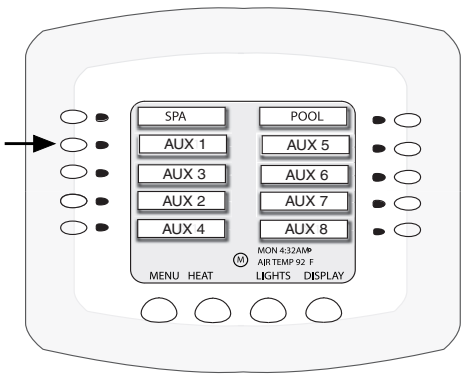
These can be up to 12 IntelliBrite light circuits on the main **Lights** screen. From the Lights screen you can activate the IntelliBrite lighting features. Each IntelliBrite light must have its own relay and separate circuit. The IntelliBrite lighting features are not available for the i5, and i5S systems. The IntelliBrite LED (light-emitting diode) underwater light system gives you brilliant vivid multicolors with spectacular effects for your pool, spa and landscape lighting features. Each of the energy efficiency IntelliBrite colored LED arrays can be individually controlled to custom create any color sequence of the rainbow spectrum. The IntelliBrite LEDs can be automatically programmed to activate and cycle through colors at varying speeds, in different sequences of color.

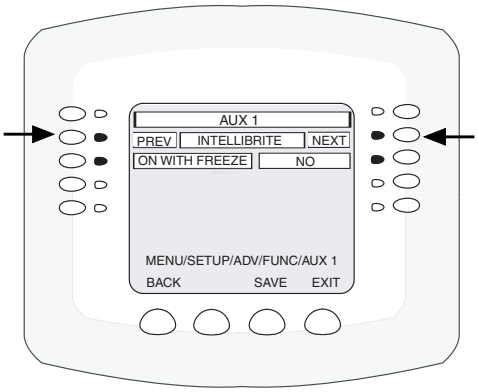
Setting up IntelliBrite lights

Before starting, be sure the auxiliary circuits that control the IntelliBrite lights have been assigned circuit names. Then verify that the lights have been assigned in the "CIRCUIT FUNCTIONS" as IntelliBrite lights (see page 39).

Before setting up the IntelliBrite light circuits first assign the "IntelliBrite" function an auxiliary circuit (AUX 1). If the circuit function has been assigned, proceed to Step 5.

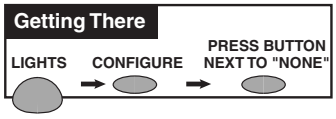
1. Press the button next to **AUX** button.
2. Press the right or left side (PREV/NEXT) button next to "INTELLIBRITE." Scroll through the preset special circuit functions until "IntelliBrite" is displayed. See page 40 for the complete list of preset circuit functions.
3. Press the **SAVE** button on the bottom of the screen. Press the **EXIT** button to return to the main screen.
4. Proceed with Step 5.



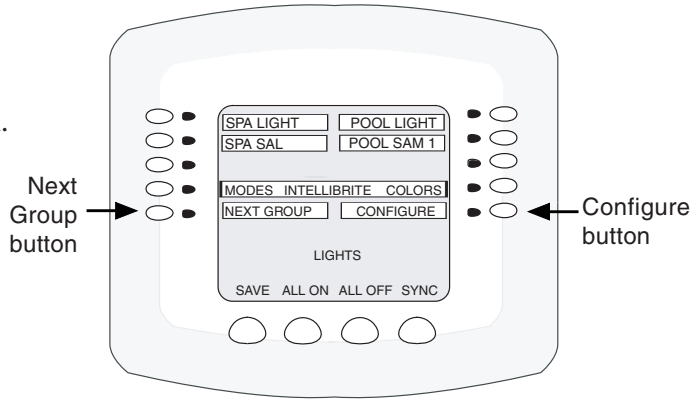


Setting up IntelliBrite LED lights (Continued)

To assign IntelliBrite light circuits to the Lights screen:

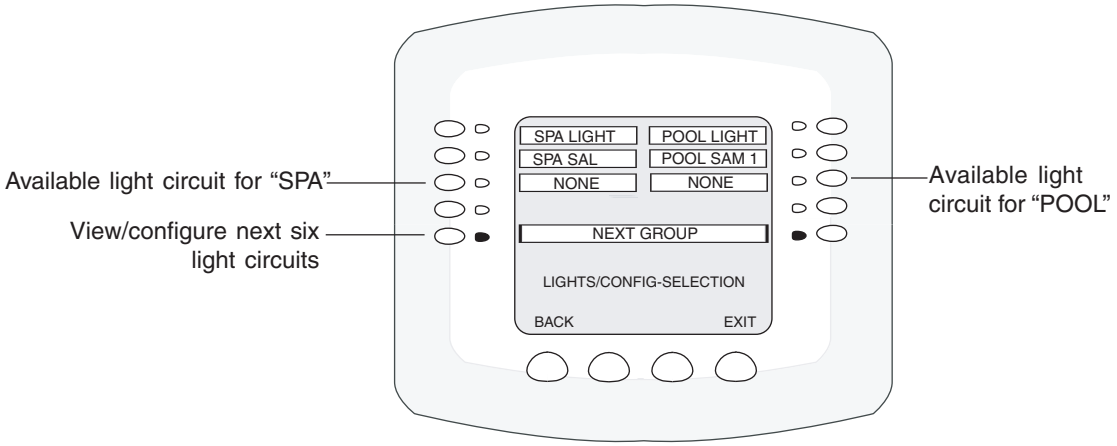


5. Press the **Lights** button on the bottom of the screen.
6. Press the right side button next to "CONFIGURE."

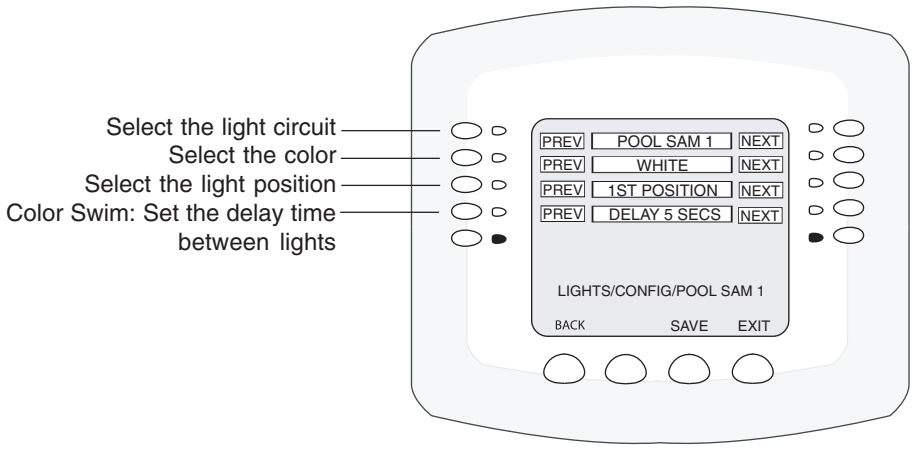


Lights screen

7. Press the button next to "NONE" to assign an IntelliBrite light circuit to the selected button. Light names can be setup to display on the left side for "Spa" features and on the right side for the "Pool" features.



8. Press the top left or right side button to scroll through the available light circuits which can be used for the IntelliBrite lighting features. Stop at the circuit name you wish to use. The displayed circuit names selections are circuit names that were previously assigned when assigning a circuit function. If there are no circuits available for selection, refer to "Assigning Circuit Names, " on page 36, and "Assigning Circuit Functions and Freeze Protection" on pages 39 for more information.



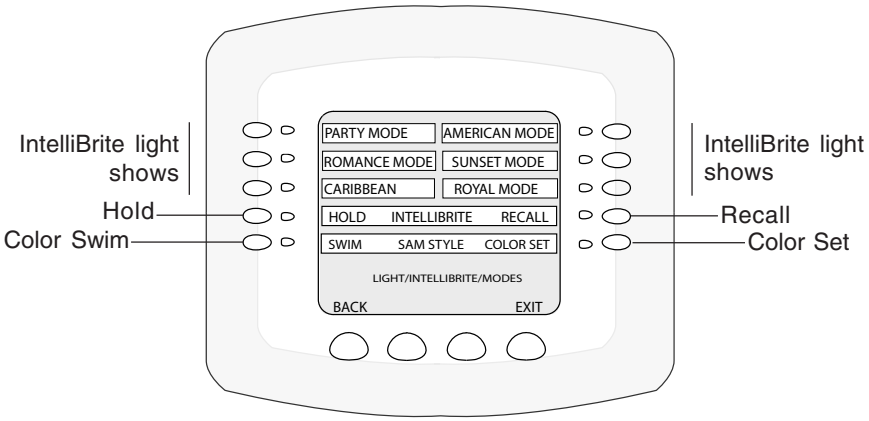
Setting up IntelliBrite LED lights (Continued)

Using IntelliBrite Modes

From the "Modes" screen you can select various preset color modes, such as American mode and Sunset mode special lighting effects to enhance your pool area, switch on an emulation of the Pentair S*Am* Color Swim or Color Set lighting feature. Also, using the "Hold" and "Recall" feature you can save customized lighting colors from any of the IntelliBrite Light Show modes to recall them at a later time. For example, while the "Sunset" mode is operating, press the "Hold" button at any time during the show to save the current colors. Then press the "Recall" button to use these custom colors at a later time.

Modes feature

To access the IntelliBrite "Modes" features from the Lights screen, press the **Lights** button on the bottom of the screen, then press the left side button next to "MODES."



Modes: Color light shows

Choose one of the six pre-programmed color light shows to enhance your backyard pool environment.

- **Party mode:** Rapid color changing building the energy and excitement
- **Romance mode:** Slow color transitions creating a mesmerizing and calming effect
- **Caribbean:** Transitions between a variety of blues and greens
- **American mode:** Patriotic red, white and blue transition
- **Sunset mode:** Dramatic transitions of orange, red and magenta tones
- **Royalty mode:** Beautiful reds and blue tones

Modes: SAM Style (Color Swim/Color Set)

SAM Style simulates the Pentair Color Swim and Color Set feature. Choose the colors to create virtually endless range of dramatic underwater lighting effects.

- **SAm® Style:** Color Swim and Color Set - Cycles through the color spectrum of the Pentair SAM light, SAL light, Color Wheel, and Photon Generator (see page 40).

Modes: Hold/Recall

Saves the current lighting colors for recall at a later time.

- **Hold/Recall:** Press this button to save the current colors while the selected Light Show mode is operating. Press the Recall button to use the last saved colors.

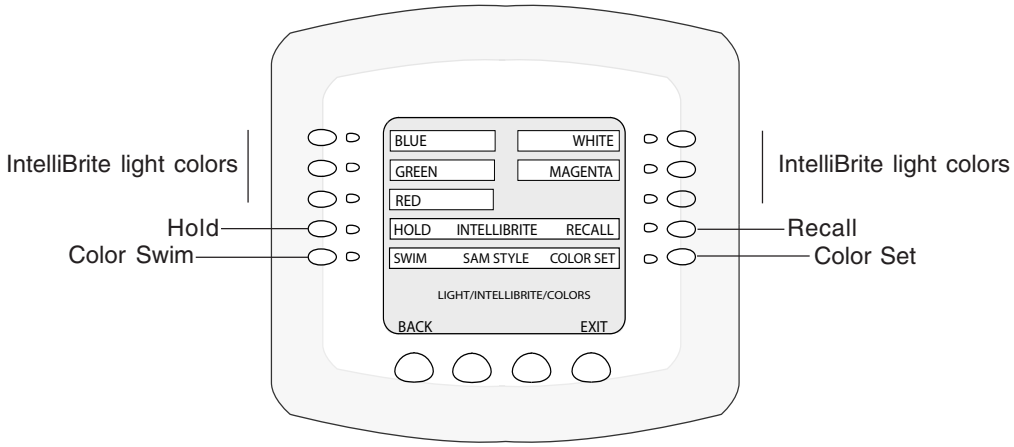
Setting up IntelliBrite LED lights (Continued)

Using IntelliBrite preset colors

From the "Colors" screen you can select any one of the five preset colors to create dramatic underwater lighting effects. Also, using the "Hold" and "Recall" feature you can save customized lighting colors to recall them at a later time.

Colors feature

1. To access the IntelliBrite "Colors" feature from the Lights screen, press the **Lights** button on the bottom of the screen, then press the left side button next to "COLORS."
2. To activate a color, press the button next to the selected color.



Colors: Light color selections

Choose any one of the five constant preset colors to custom create spectacular underwater lighting effects. You can switch the selected light on or off from the main "Lights" screen by using the button assigned to the light circuit.

- **Blue:** preset color
- **Green:** preset color
- **Red:** preset color
- **White:** preset color
- **Magenta:** preset color

Colors: Hold/Recall

Saves the current lighting color for recall at a later time.

- **Hold/Recall:** Press this button to save the current color. Press the Recall button to use the last saved color.

Setting up Equipment

If any special equipment is attached to IntelliTouch the load center you need to configure the system to recognize the equipment. The following equipment may or may not be installed.

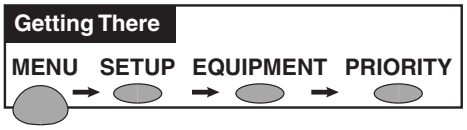
From the Equipment screen you can setup:

- **Solar or heat pump equipment** - Lets you set solar or heat pump heaters to work (see page 49)
- **IntelliFlo or IntelliFlo 4 pump** - Setup and view the current status of the IntelliFlo pump circuits and program the pump
- **IntelliChlor** - Setup and view the correct status of the IntelliChlor salt chlorine electronic generator.
- **Two-speed pump** - Assign a circuit to switch the filter pump to high speed
- **Cool-down cycle for the heater** - Assign a circuit to program a cool-down cycle for the heater
- **Automatic spa heating when the spa is manually turned on** - Heats the spa using the Spa button on the Indoor Control panel or the spa-side control, even when the heater is set to OFF in the Heat screen. This lets the homeowner heat the spa on-demand. Timed programs will not heat the spa.

Manual Priority Override of Timed Program Circuits

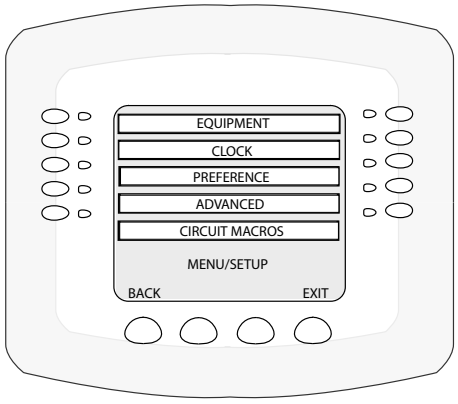
A circuit that is programmed to switch off at a certain time of day will always switch off at that time even if the circuit was manually turned on. For example, a circuit has a program that switches it on from 4 PM to 6 PM. The circuit is activated at 3 PM. At 6 PM the circuit will switch itself off and need to be reactivated manually.

This internal logic may be manually overridden so that a circuit turned on manually will default to the 12 hour time-out instead of turning off at the programmed time.



Go to the Priority screen.

1. Press the top right or left button next to **Manual Op Priority** to select **Yes**.
2. Press **Save**.
3. Press **Exit** to return to the main screen.



Chlorine Generator

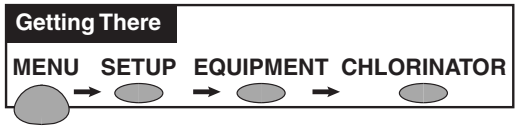
The IntelliTouch system is designed to operate with the following salt chlorine generators:

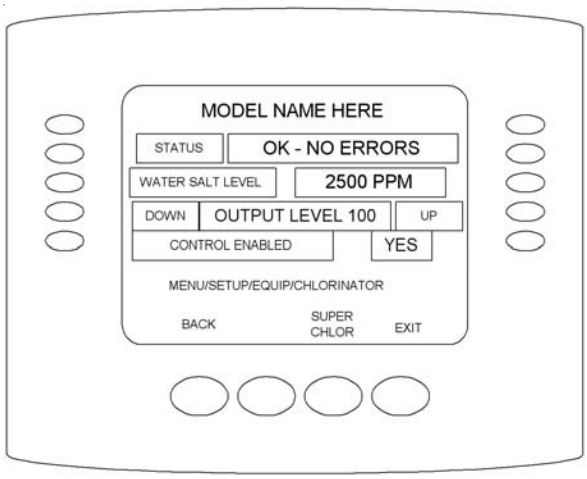
- **IntelliChlor**
- GoldLine **Aqua Rite**
- Clear Tech Automation **AutoClear Plus**
- AutoPilot **Pool Pilot Digital**

Note: *Call your manufacturer for compatibility with IntelliTouch systems.*

Activate the Chlorinator Control Interface

Before operating the chlorinator control interface you must first activate the system to control the chlorinator from the IntelliTouch Indoor Control Panel. The IntelliTouch system can control the chlorinator but does not turn the chlorination system on or off. When the chlorinator control is enabled, the chlorinator can only be operated by the IntelliTouch. When the chlorinator control is disabled, the chlorinator is still operating but must be controlled at the chlorinator control panel.





To obtain chlorination status and make adjustments:

Go to the Chlorinator screen.

1. Press the button next to **Control Enabled** until **Yes** is displayed.
2. Press **Save**.
3. Press the button next to **Chlorinator** to display the chlorinator screen. At the top of the screen your brand of chlorinator is displayed.

- **STATUS line:** Describes the current chlorinator operating condition. Any error codes will display here.
- **WATER SALT LEVEL:** Displays how much salt (in parts per million (ppm)) is in the water. See chlorinator manufacturer's instructions for recommended salt levels.
- **OUTPUT LEVEL (0 -100%):** Displays the chlorination output level from 0 to 100%. Press the button next to UP or DOWN button to increase or decrease the chlorination output level.
- **CONTROL ENABLED:** Press the button next to **YES** until **NO** is displayed to disable the control of the chlorination interface from the Indoor Control Panel.

4. Press **Exit** to return to the main screen.

Changing the Chlorinator Output

The IntelliTouch system will automatically drop the chlorine output levels to 1/20 the output when the Spa mode is switched on. For example, if the output level is set to 60%, when Spa Mode is switched on, the chlorination level is reduced to 3%.

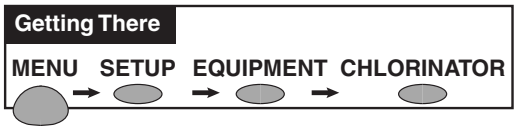
To change the chlorine output level:

Go to the Chlorinator screen.

1. Press the buttons next to **Output Level** to raise or lower the output level. The level displays the 0 to 100%.
2. Press **Save** when done.
3. Press **Exit** to return to the main screen.

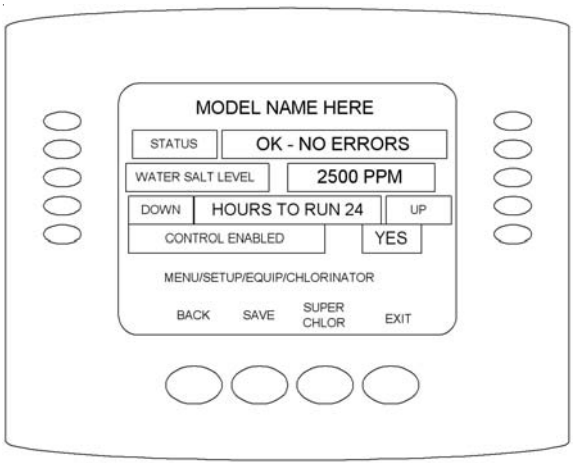
Super Chlorinate the Pool

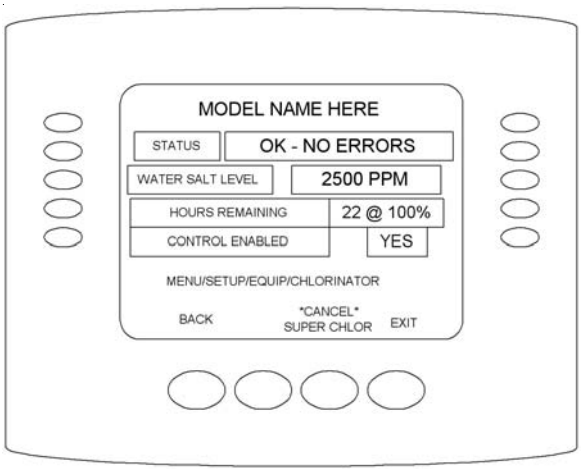
At the start of the pool season or after long periods of disuse you may want to "super chlorinate" the pool to prepare it for swimming.



Go to the Chlorinator screen.

1. Press the bottom button next to **Super Chlor**.
2. The default run time for super chlorination is 24 hours. Press the buttons next to Hours to Run to change the run time of super chlorination mode.
3. Press **Save** when done. The chlorinator will automatically start super chlorination and switch on the filter pump. When done the system will return to normal.
4. **To cancel super chlorination**: Go back to the Chlorinator Screen. The time left for super chlorination is displayed.
5. Press the button under Cancel **Super Chlor**.
6. Press **Exit** to return to the main screen.





Note: *For information about wiring a salt chlorine generator to the IntelliTouch system , see "Wiring IntelliTouch to a Salt Chlorine Generator," on page 103.*

IntelliFlo and IntelliFlo 4 pump setup

Setting up IntelliFlo

IntelliFlo pump can be remotely controlled an IntelliTouch system using a two-wire 50 foot RS-485 communication cable (P/N 350122). The IntelliFlo pump speed, flow rate can be adjusted from the IntelliTouch indoor control panel. For more information refer to the IntelliFlo Installation and User's Guide (P/N 350075).

How many pumps will IntelliTouch support?

IntelliTouch can support up to eight IntelliFlo and four IntelliFlo 4 pumps in any combination with up to eight GPMs or RPMs per pump. For example the pumps can be connected to IntelliTouch as follows:

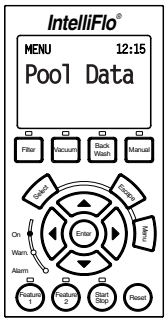
- 8 IntelliFlo
- 7 IntelliFlo + 1 IntelliFlo 4
- 5 IntelliFlo + 3 IntelliFlo 4
- 4 IntelliFlo + 4 IntelliFlo 4

Connecting power to an IntelliFlo pump

The IntelliFlo pump is designed to be permanently connected to its power source. Typically the pump receives power directly from the circuit breaker. No contactor or motor starter is required. The drive controls the starting and stopping of the pump. If the IntelliFlo is connected to an automation system, such as IntelliTouch, EasyTouch or IntelliComm, the drive must be powered up to receive and respond to the RS-485 serial communication from the automation system. However, the pump can be operated in "stand-alone" mode, starting and stopping when power is applied or removed. When the drive powers up it will return to the mode and run status that it was in when power was removed. This setup maybe appropriate if you need to use existing relays or timers.

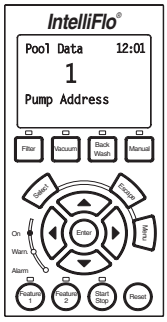
Assigning an IntelliFlo pump address

Before assigning a pump address in the IntelliTouch indoor control panel, first set the address on the pump itself. If there is only one pump, it is always seen as pump #1 by IntelliTouch. In this case you do not need to set the pump address. When using multiple IntelliFlo pumps with IntelliTouch you need to assign an address to each pump. The address can be set to #1, #2, #3, #4, #5, #6, #7, or #,8. The address set at the pump must match the IntelliFlo pump number selected in the IntelliTouch indoor control panel.



> ***Note:*** *IntelliFlo 4 pumps cannot be connected in series with other pumps. Check valves must be used when a pump is used in parallel with other pumps.*

To assign an IntelliFlo pump address:



1. Press the **Start/Stop** button to stop the pump. Be sure that the green power LED is on and the pump is stopped.
2. Press the **Menu** button.
3. Press the **Up and Down** arrow buttons to scroll through the menu items. Press the **Select** button to access the "Pool Data" menu.
4. Press the **Select** button to access the "Pump Address" setting.
5. Press the **Select** button to change the current pump address.
6. To enter the new address number, press the **Left** and **Right** arrows to select which digit to modify, then use the **Up** and **Down** arrows to change the selected digit.
7. When you are done assigning the pump address number, press the **Enter** button to save the changes. To cancel any changes, press the **Escape** button to exit edit mode without saving.

IntelliFlo and IntelliFlo 4 pump setup (Continued)

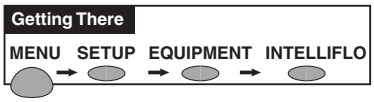
IntelliFlo menu options

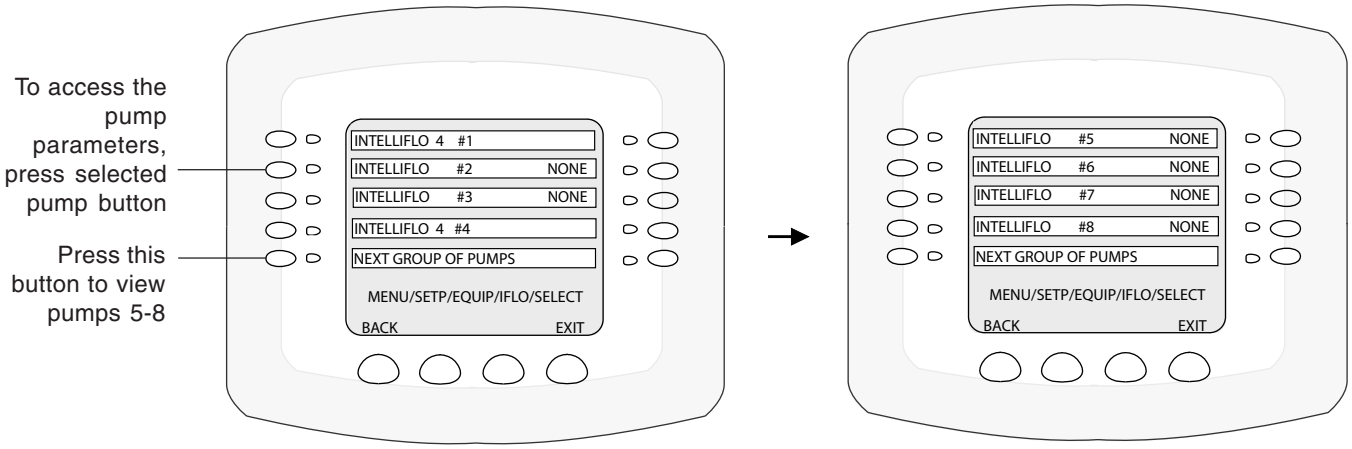
The following screens are available in the **EQUIPMENT > INTELLIFLO** menu:

- **IntelliFlo main pump status screens:** Two status screens (pumps 1-4, pumps 5-8), each displaying the IntelliFlo pump number assignments and assigned circuit name for each pump
- **IntelliFlo Set Parameters screen (page 54):** From these screens you can set up the pump parameters (filtering, priming, backwash, vacuum), assign a circuit name, assign up eight pump flows (GPM), or view the current pump status

IntelliFlo main pump assignment screens

From these screens you can view the current pump address and circuit name for each pump.





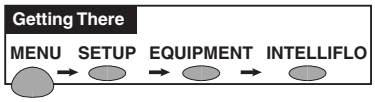
IntelliFlo and IntelliFlo 4 pump setup (Continued)

IntelliFlo Set Parameters screens

From these screen you can assign a circuit name, set up the pump filtering, priming, backwash, vacuum features, assign up eight pump flows (GPM), or view the current pump status.

Assign or change a pump circuit name

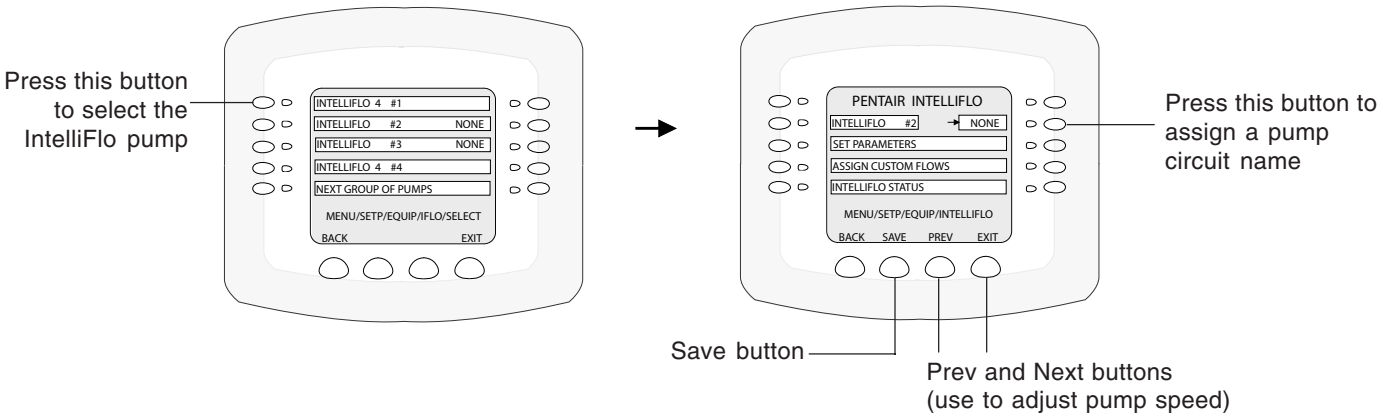
To assign a pump circuit:



1. From the main pump screen, press the left side button next to the selected IntelliFlo pump. The current circuit for the pump is displayed on the main pump screen.
2. On the next screen, press the right side button next to **NONE**. If you have already assigned a circuit the current circuit name is displayed.

> ***Note:*** *The assigned circuits for the IntelliFlo pumps displayed on this screen are tied to the IntelliFlo background filtering mode, which includes programmed run times, turnovers, etc. This is also the circuit which all of the "Set Parameters" are linked to.*

3. To assign a circuit name, press the **PREV** or **NEXT** lower button to select a circuit name for the pump. The selected circuit name must also be assigned a circuit function. For details about assigning a circuit function and a feature circuit, see pages 39 and 40.



4. Press the lower **SAVE** button to save the setting. The main Equipment screen is displayed. Press the button next to **INTELLIFLO**. The main pump screen displays IntelliFlo #2 with the assigned circuit name. Select another IntelliFlo pump and repeat step 3 to assign a circuit name.
5. When finished, press the **BACK** button to return to the Equipment screen.

IntelliFlo and IntelliFlo 4 pump setup (Continued)

Filtering parameters

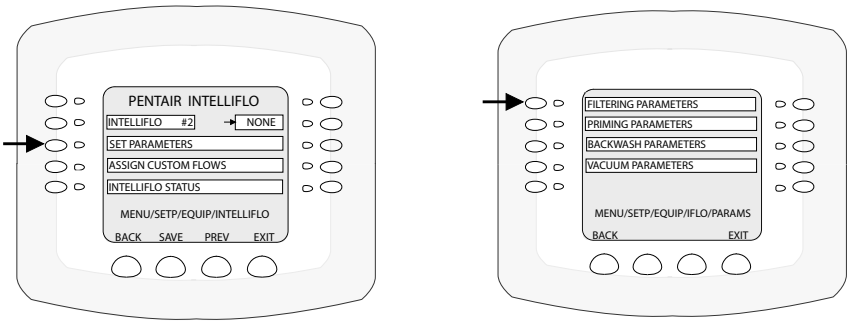
The filtering parameters pool size, turns per day allows IntelliFlo to calculate the required flow rate which controls the motor speed to keep a constant flow. You can set up to eight turns per day. It is recommended that one turn per day for energy conservation and requirements be performed for most common residential pools. The "manual filter" option allows you to set the GPM to clean the filer by performing a "Backwash" cycle (see page 57).

Getting There

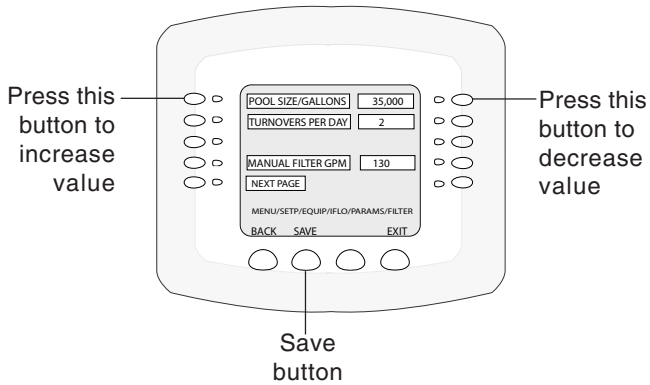
MENU → SETUP → EQUIPMENT → INTELLIFLO

To set filtering parameters:

1. From the main pump screen, press the left side button next to the select IntelliFlo pump.
2. On the next screen, press the left side button next to **SET PARAMETERS** then on the following screen select **FILTERING PARAMETERS**.



3. To adjust one of the parameters, use the right button to increase and the left button to decrease the parameter value.
4. When finished, press the lower **SAVE** button to save the setting. The previous pump parameters screen is displayed. To modify another parameter select a feature from the parameter list. To exit, press the **EXIT** button to return to the Equipment screen.

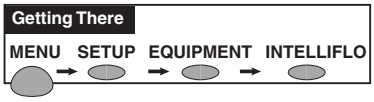


Description	Value
Pool Size/Gallons	0-255
Turnovers per day	1-8
Manual Filter GPM	15-130

IntelliFlo and IntelliFlo 4 pump setup (Continued)

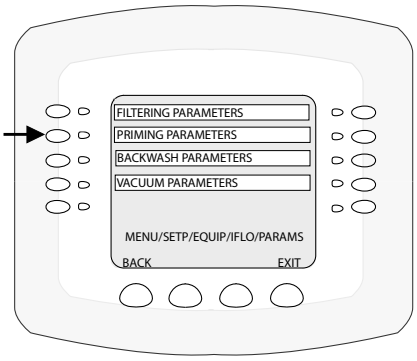
Priming parameters

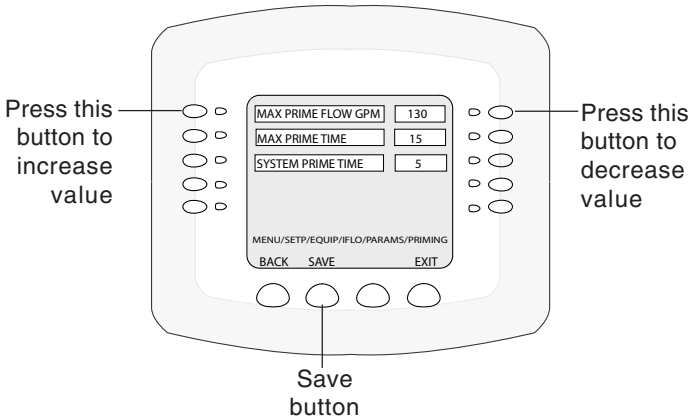
To "prime" a pump means filling the pump and suction pipe with water. This process evacuates the air from all the suction lines and the pump. It may take several minutes to prime depending on the depth of water, pipe size and length. It is easier to prime a pump if you allow all the air to escape from the pump and pipes. The water cannot enter unless the air can escape. Pumps do not hold prime, the pool piping system has that task. Priming is a function used every time the motor is started with a flow as reference. The "Priming Flow" function ensures the proper operation of the pump. The "System Priming Time" function ensures proper operation of the whole pool system. When the pump is priming, the control panel LCD displays "Priming" and then for a moment displays "Primed" when priming is complete.



To set the priming parameters:

1. From the main pump screen, press the left side button next to the select IntelliFlo pump.
2. On the next screen, press the left side button next to **SET PARAMETERS** then on the following screen select **PRIMING PARAMETERS**.
3. To adjust one of the parameters, use the right button to increase and the left button to decrease the parameter value.
4. When finished, press the lower **SAVE** button to save the setting. The previous pump parameters screen is displayed. To moditfy another parameter select a feature from the parameter list. To exit, press the **EXIT** button to return to the Equipment screen.





Description	Value
Max Prime Flow GPM Every time the pump starts this parameter will negotiate the maximum flow of the pump. If the flow is too high, equipment damage can occur. If the flow is to low the pump will not prime. This "flow" is system dependent and may require iteration. The pump will never flow more than this parameter is set to, however, it is common for the pump to ramp up and down quickly while priming. Always try to keep this flow as low as possible for cost savings and safety.	15-130 GPM
Max Prime Time Use this parameter to set the time that you want IntelliFlo try and prime before it reports an error. Remember that the IntelliFlo will attain prime every time it starts and goes through this cycle. The IntelliFlo mechanical seal can withstand about 15 minutes before severe damage occurs. The lower the time the quicker you will get a priming error if the system is difficult to prime. A well plumbed pool without having the strainer removed should prime in less than 30 seconds. If the strainer has been removed for cleaning and a substantial amount of air is in the system it should prime in about 60 to 90 seconds on the average, however, all systems will be different.	1-15 minutes
System Prime Time Remember that the average unit will prime in a short period of time because the IntelliFlo has the ability to monitor itself to make sure it is primed. "System Prime Time" is for systems that require high flows that priming flow can provide but it is deemed that more time is needed to fully relieve all the air. The builder can program a pre determined amount of time, up to 5 minutes, to aid in relieving the air from difficult filters or complex vertical plumbing. The "System PrimeTime" should only be used where large air traps become problems within the system. The display will inform the user when this is engaged and when it is finished during the priming cycle at each start up cycle.	0-5 minutes

IntelliFlo and IntelliFlo 4 pump setup (Continued)

Backwash parameters

When the Filter mode has detected that the differential pressure is at the "Clean Filter Pressure" the filter must be cleaned. You need to stop IntelliFlo either by pressing the Backwash button or "Start/Stop" button. IntelliFlo must now be run for a preset cycle time with a preset flow. The flow is adjustable to accommodate the specific filter backwash flow requirement. After the backwash cycle, a rinse cycle, with preset duration time will be executed. When the two cycles have been completed or if the Start/Stop button is pressed to stop the process, the filter status will be recalculated and the zero-pressure measured when Filter mode is operated again.

When using cartridge filters the backwash cycle must be performed when cleaning or replacing filters. This helps the computer reset its zero head pressure level. If you are charging a DE system, charge the system first during a normal running cycle. After the filter is charged, run the pump in backwash mode with the filter valve in the filter position to reset the % clean filter status. Then run the pump in filter mode.

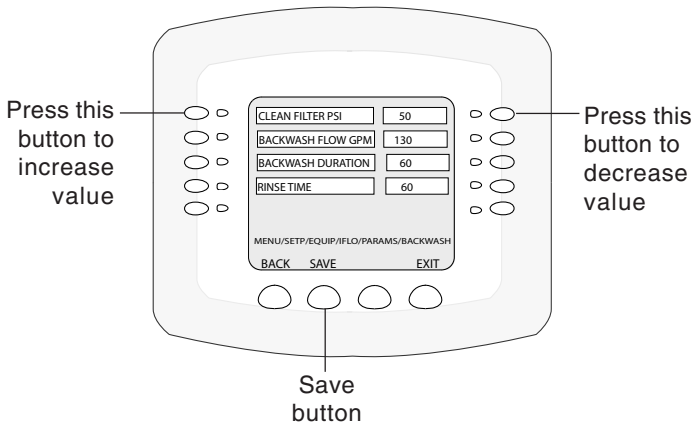
Note: *IntelliFlo will ramp up to full speed if necessary to achieve the commanded flow. Be sure that the system can withstand the resultant pressures.*

Getting There

MENU → SETUP → EQUIPMENT → INTELLIFLO

To set the backwash parameters:

1. From the main pump screen, press the left side button next to the select IntelliFlo pump.
2. On the next screen, press the left side button next to **SET PARAMETERS** then on the following screen select **BACKWASH PARAMETERS**.
3. To adjust one of the parameters, use the right button to increase and the left button to decrease the parameter value.
4. When finished, press the lower **SAVE** button to save the setting. The previous pump parameters screen is displayed. To modify another parameter select a feature from the parameter list. To exit, press the **EXIT** button to return to the Equipment screen.



Description	Value
Clean Filter PSI The average PSI setting is between 10 PSI and 20 PSI for most pools and filters. The entered PSI value splits the percentage meter for the filter. The pump's "Service System Soon" alert is activated by the entered PSI value. When this value is reached the pump stops monitoring flow rates and starts managing pressure. The value represents the change in pressure over time from start up (system clean) to present day (system getting dirty). The changes can come from anywhere in the system, for example clogged skimmers or pots in pumps.	1-50 PSI
Backwash Flow GPM	15-130 GPM
Backwash Duration	1-60 minutes
Rinse Time	1-60 minutes

IntelliFlo and IntelliFlo 4 pump setup (Continued)

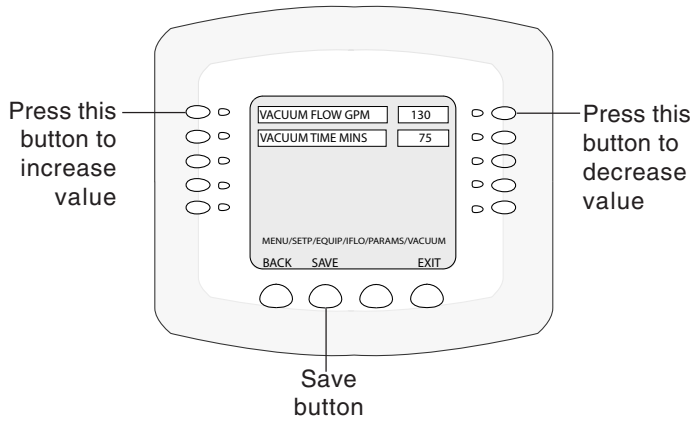
Vacuum parameters

Use the Vacuum mode to clean the pool manually. Vacuum mode only operates in flow control. Vacuum mode shuts off all sensors. This mode is identical to Feature 1 and 2 except that you can manually start this mode using the Vacuum button. Safety considerations should be made when setting the Vacuum flow parameter.

CAUTION: Since vacuuming is manual work and the user will be at the pool, the "Blocked System" will be switched off, it is important not to use any kind of automatic cleaners, (such as Kreepy Krauly, etc.) with Vacuum mode.

To set the vacuum parameters:

1. From the main pump screen, press the left side button next to the select IntelliFlo pump.
2. On the next screen, press the left side button next to **SET PARAMETERS** then on the following screen select **VACUUM PARAMETERS**.
3. To adjust one of the parameters, use the right button to increase and the left button to decrease the parameter value.
4. When finished, press the lower **SAVE** button to save the setting. The previous pump parameters screen is displayed. To modify another parameter select a feature from the parameter list. To exit, press the **EXIT** button to return to the Equipment screen.



Description	Value
Vacuum Flow GPM	15-130 GPM
Vacuum Time Mins This parameter can be set from 1 to 600 minutes. The typical setting is 10 minutes. This setting is the amount of time you wish to run vacuum mode.	1-600 minutes (10 hours)

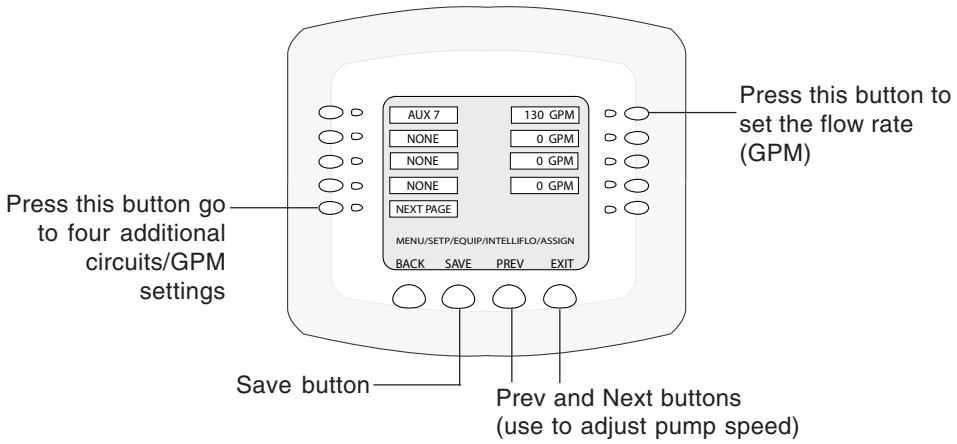
IntelliFlo and IntelliFlo 4 pump setup (Continued)

Assign custom flows

In "Assign Custom Flows" screen you can assign different (normally higher) flows to circuits/features. For example, SPA at 80 GPM. This way when you switch to spa mode, the pump goes from the calculated fitter rate of say 28 GPM to 80 GPM while you use the spa. Or maybe you have a waterfall, and want 60 GPM when it is switched on. This screen is where you assign a specific flow to a given circuit or condition.

To assign a specific flow to a circuit/feature:

1. From the main pump screen, press the left side button next to the select IntelliFlo pump.
2. On the next screen, press the left side button next to **ASSIGN CUSTOM FLOWS**.
3. First assign a circuit name. Press the left side button for the selected circuit. Use the **PREV** and **NEXT** button to set the circuit. Then press the right side button to set the flow rat in GPM. The selected circuit/ feature must also be assigned a circuit function/feature. For details about assigning a circuit function and feature circuit, see pages 39 and 40.
4. When finished, press the lower **SAVE** button to save the setting. The previous pump parameters screen is displayed. To moditfy another parameter select a feature from the parameter list. To exit, press the **EXIT** button to return to the Equipment screen.

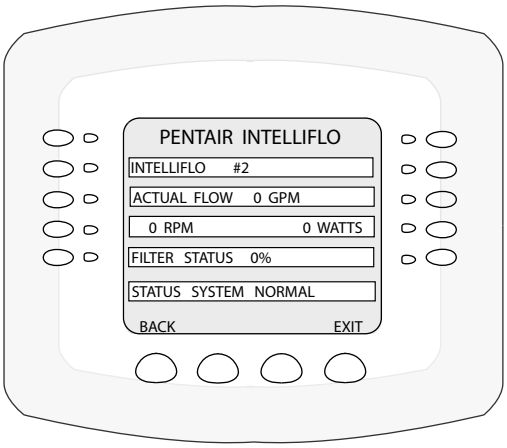


IntelliFlo and IntelliFlo 4 pump setup (Continued)

IntelliFlo status screen

To set the vacuum parameters for the pump:

1. From the main pump screen, press the left side button next to the select IntelliFlo pump.
2. On the next screen, press the left side button next to **INTELLIFLO STATUS**.
3. To adjust a feature parameter, use the right button to increase and the left button to decrease the parameter value.
4. To exit, press the Back button to return to the previous screen or EXIT to return to the main screen.



Description	Comment
IntelliFlo #1	Displays the IntelliFlo pump assignment number
Actual Flow 0 GPM	Displays the current flow rate for the pump in GPM
0 RPM 0 Watts	Displays the current pump speed in RPM. **Watts** To calculate a system's "Continuous Watts" use the following formula: Amps X Volts X Power Factor = Continuous Watts - 1 HP E+ WhisperFlo = 7.4 amps X (230 Volt) X .90 PF = 1532 watts - 1 HP Max – E – Pro = 8.0 amps X (230 Volt) X .87 PF = 1600 watts Once watts are computed, convert watts to kilowatts (kilo is 1000) and multiply this number by kilowatt/hour cost. - 1 watt = .01 Kilowatt - 100 watts = .1 Kilowatt - 1000 watts = 1 Kilowatt - 1 HP E+ WhisperFlo 1532 watts or 1.532 Kilowatt x $.08 = $.122 per hour - 1 HP Max-E-Pro 1600 watts or 1.600 Kilowatt x $.08 = $.128 per hour The IntelliFlo does not require calculation for continuous watts since it is displayed on the screen in all modes. Just simply take the watts published on the screen, convert to kilowatts, and multiply by the kilowatt hour. The formula is: 210 watts = .210 kilowatt X $.08 = $.016 per hour Remember to also consider the amount of water moved for the cost incurred (Water to Wire Efficiency). The IntelliFlo cannot be matched in today's industry for flow versus continuous watts at any speed by any other pump in pool. The Filter mode and flow control further assists in cost saving by always allowing the pump to do the least amount of work at all times.
Filter Status 0%	Displays the current filter status in percentage value
Status	Displays the IntelliFlo operating status

IntelliFlo and IntelliFlo 4 pump setup (Continued)

Setting up IntelliFlo 4

IntelliFlo 4 160 and IntelliFlo 4 100 pump speed can be remotely controlled an IntelliTouch system using a two-wire 50 foot RS-485 communication cable (P/N 350122). The IntelliFlo 4 pump speed can be adjusted from the IntelliTouch indoor control panel to run at any speed between 400 RPM to 3450 RPM with preset speeds of 750, 1500, 2350, and 3110 RPM. For more information refer to the IntelliFlo 4 160/100 Installation and User's Guide (P/N 357269).

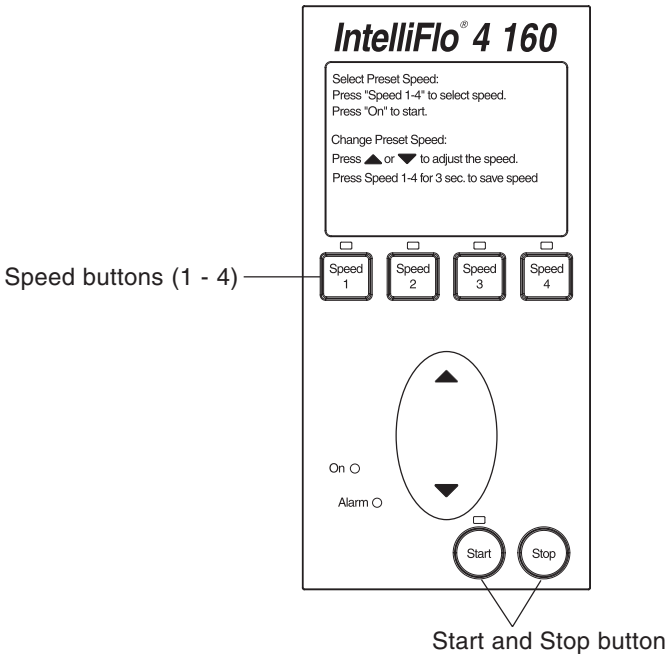
Assigning an IntelliFlo 4 pump address

Before assigning a pump address in the IntelliTouch indoor control panel, first set the address on the pump itself. If there is only one pump, it is always seen as pump #1 by IntelliTouch. In this case you do not need to set the pump address. When using multiple IntelliFlo 4 pumps with IntelliTouch you need to assign an address to each pump. The address can be set to #1, #2, #3, or #4. The address set at the pump must match the IntelliFlo pump number selected in the IntelliTouch indoor control panel.

> ***Note:*** *IntelliFlo 4 pumps cannot be connected in series with other pumps. Check valves must be used when a pump is used in parallel with other pumps.*

To assign an IntelliFlo 4 pump address:

1. Be sure that the pump is powered on and the green power LED is on.
2. Press the **Stop** buttons to stop the pump.
3. Press and hold both the **Start and Stop** buttons until the red LED will starts flashing, then press one of the four speed buttons to select which address to assign the pump. For example, if you are assigning the pump as pump #1, then press Speed button number 1.
4. Press and hold both the **Start and Stop** buttons to save the address. Repeat the process for the other pumps.

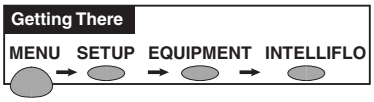


IntelliFlo 4 control panel

IntelliFlo and IntelliFlo 4 pump setup (Continued)

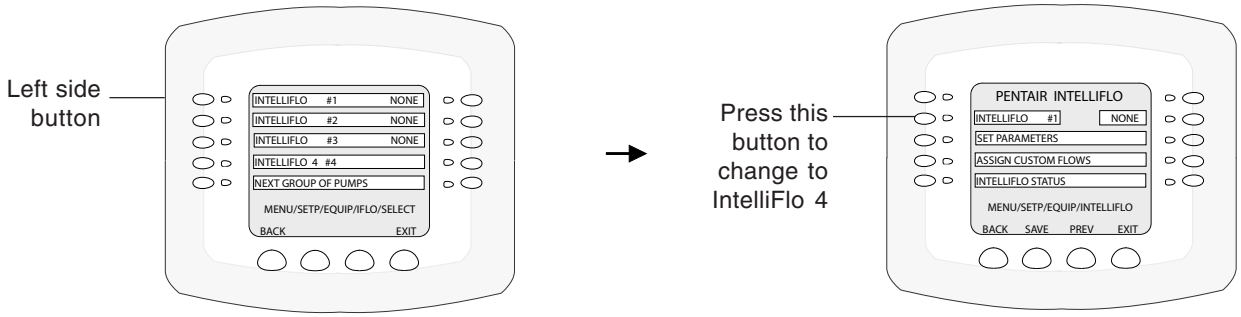
Setting up an IntelliFlo 4 pump in the IntelliTouch menu

After you have assigned the pump address on the IntelliFlo pump (see previous page), assign the same pump address in the IntelliTouch menu. When using a single IntelliFlo 4 pump for remote control with IntelliTouch, the default address is always pump #1. When using multiple IntelliFlo 4 pumps with IntelliTouch you need to assign an address to each pump. The address can be set to #1, #2, #3, or #4. The address set at the pump must match the IntelliFlo pump number selected in the IntelliTouch indoor control panel. Before In order to setup an IntelliFlo 4 pump, you must first change one of four IntelliFlo (IntelliFlo #1, IntelliFlo #2, IntelliFlo #3, IntelliFlo #4) selections to display IntelliFlo 4.

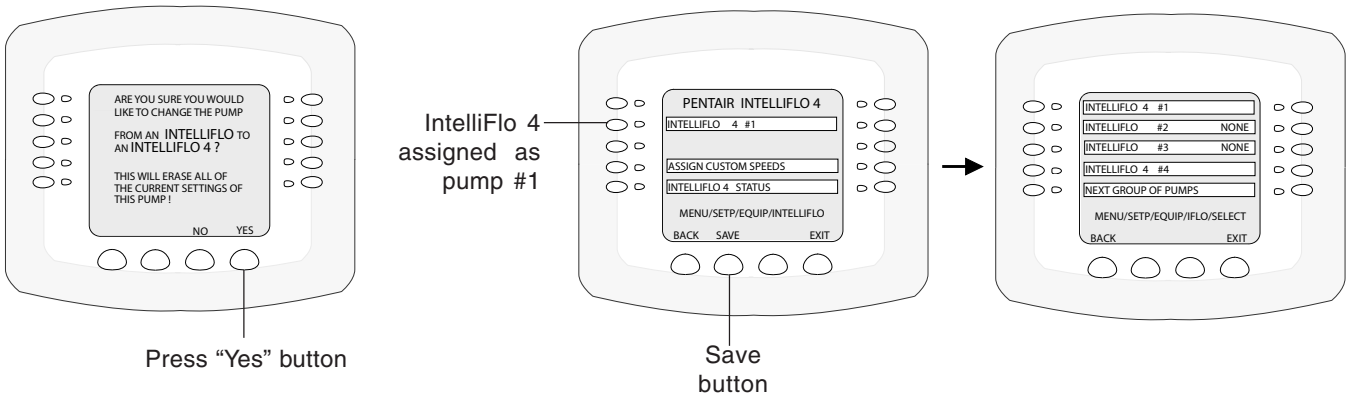


To assign an IntelliFlo 4 pump address:

1. Press one of the four left side buttons next to the IntelliFlo pump number that you wish to change to IntelliFlo 4. Note that IntelliFlo 4 pumps can only be assigned to #1 through #4.



2. Press the left side button again next to the IntelliFlo pump selected in step 1.
3. Press the lower right button "Yes" to accept the selection. If you do not want to change the pump to an IntelliFlo 4, then press the "No" button. On the next screen, press the **Save** button to save the setting. The main Equipment screen is displayed. Press the button next to **INTELLIFLO**. The main pump screen displays IntelliFlo 4 assigned to pump #1.

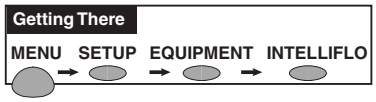


4. To set another IntelliFlo 4 pump, repeat steps 1-3.

IntelliFlo and IntelliFlo 4 pump setup (Continued)

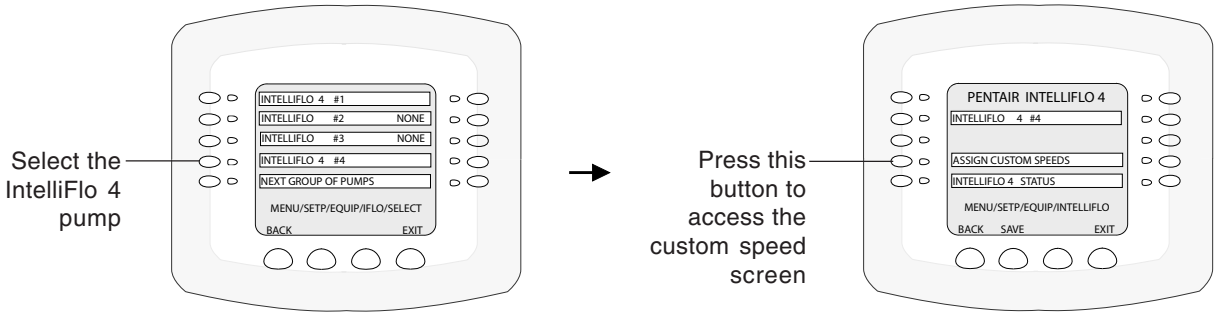
Assign custom speeds

Each Intelliflo 4 pump can have up to eight assigned circuits with eight preset pump speeds. The speeds can be set from 400 RPM to 3450 RPM.

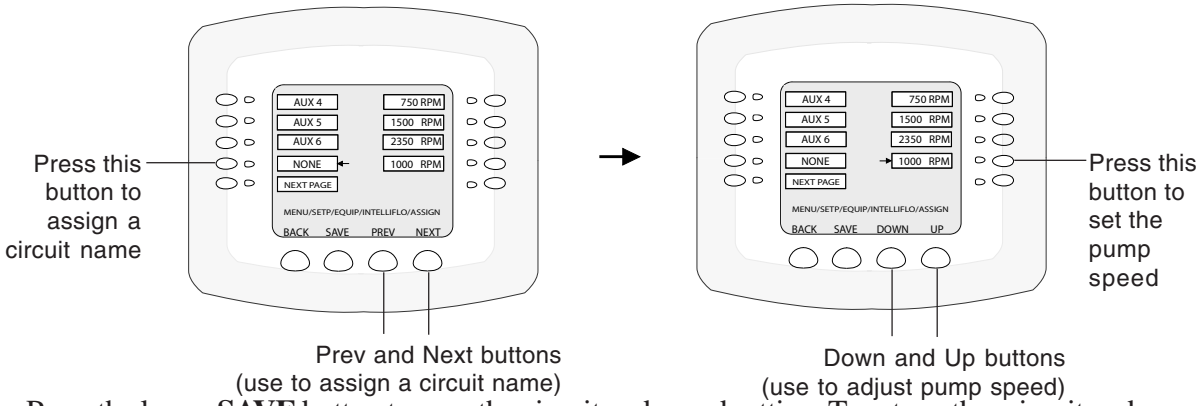


To set the IntelliFlo 4 pump speed to an assigned circuit name:

1. From the main pump screen, press the left side button next to the selected IntelliFlo 4 pump. An IntelliFlo 4 pump can only be assigned as pump #1, #2, #3, or #4.
2. On the next screen, press the left side button next to "Assign custom speeds."



3. From the next screen you can assign a circuit name and set the pump speed. To assign a circuit name, press one of the left side buttons next to "None." Press the PREV or NEXT lower button to select a circuit name for the pump. The selected circuit name must also be assigned a circuit function. For details about assigning a circuit function, see page 39. Press the corresponding RPM button on the right side to set the speed. Use the DOWN and UP lower buttons to adjust the speed from 400 RPM to 3450 RPM.

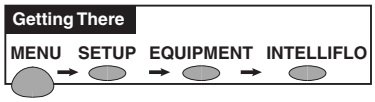


4. Press the lower **SAVE** button to save the circuit and speed setting. To set another circuit and pump speed, press the button next to "Assign custom speeds" to access the circuit and speed setup screen. If you need additional pump speed circuits, press the button next to "Next Page" to access an additional four circuits, then repeat step 3.
5. When finished, press the **BACK** button to return to the Equipment screen.

IntelliFlo and IntelliFlo 4 pump setup (Continued)

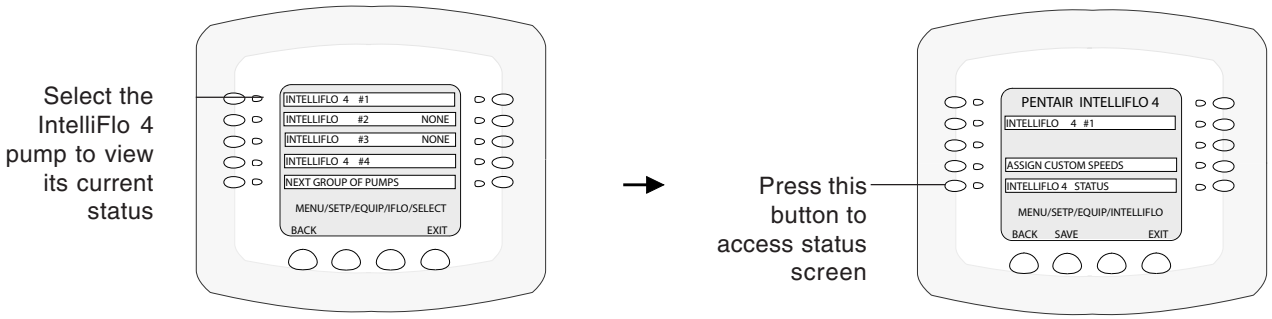
IntelliFlo 4 status screen

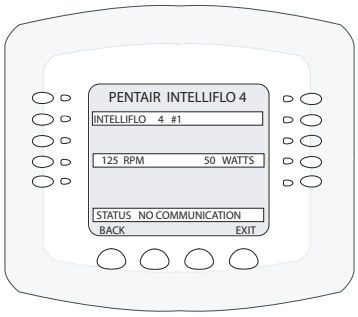
View the IntelliFlo 4 status screen for current real-time pump operations. From this screen you can view the current speed (RPM), power usage (WATTS), and communication status for the pump.



To access the IntelliFlo 4 status screen:

1. From the main pump screen, press the left side button next to the IntelliFlo 4 pump that you wish view the status for. An IntelliFlo 4 pump can only be assigned as pump #1, #2, #3, or #4.
2. On the next screen, press the lower left side button next to "IntelliFlo 4 status" to access the status screen. This screen displays the selected IntelliFlo 4 pump number, current speed, power usage, and communication status.





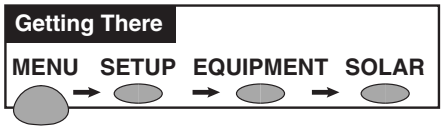
IntelliFlo 4 (#1) status screen

Description	Comment
IntelliFlo 4 #1	Displays the IntelliFlo 4 pump assignment number
RPM Watts	Displays the current speed of the pump in RPM. **Watts** To calculate a system's "Continuous Watts" use the following formula: Amps X Volts X Power Factor = Continuous Watts - 1 HP E+ WhisperFlo = 7.4 amps X (230 Volt) X .90 PF = 1532 watts - 1 HP Max – E – Pro = 8.0 amps X (230 Volt) X .87 PF = 1600 watts Once watts are computed, convert watts to kilowatts (kilo is 1000) and multiply this number by kilowatt/hour cost. - 1 watt = .01 Kilowatt - 100 watts = .1 Kilowatt - 1000 watts = 1 Kilowatt - 1 HP E+ WhisperFlo 1532 watts or 1.532 Kilowatt x $.08 = $.122 per hour - 1 HP Max-E-Pro 1600 watts or 1.600 Kilowatt x $.08 = $.128 per hour The IntelliFlo does not require calculation for continuous watts since it is displayed on the screen in all modes. Just simply take the watts published on the screen, convert to kilowatts, and multiply by the kilowatt hour. The formula is: 210 watts = .210 kilowatt X $.08 = $.016 per hour Remember to also consider the amount of water moved for the cost incurred (Water to Wire Efficiency). The IntelliFlo cannot be matched in today's industry for flow versus continuous watts at any speed by any other pump in pool. The Filter mode and flow control further assists in cost saving by always allowing the pump to do the least amount of work at all times.
Status	Displays the current IntelliFlo operating status

Setup Solar Equipment and Heatpump option

To set up the solar equipment

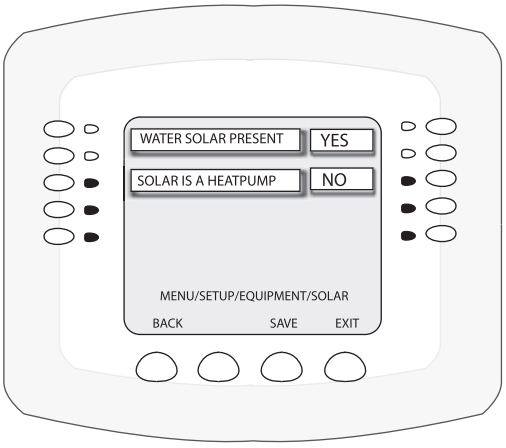
Note: *If solar is set then the* ***Valve A*** *actuator will be dedicated to the solar valve actuator. Setting the system to Heat pump will free* ***Valve A*** *for use on other valves.*



Go to the Solar screen.

1. Press the button next to the **"Water Solar Present"** to change it to **Yes**.
2. If a heat pump is being used instead of a solar heating system, also press the second button to change "**Solar is a Heatpump**" to **Yes**.

   Note: For model i10+3D, press ***YES*** *for each body of water with solar heating.*
3. Press the **Save** button when finished.
4. Press the **Exit** button to return to the main screen.

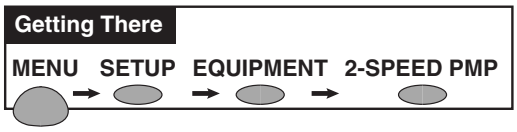


5. Proceed with configuring the solor heating options. Select H PUMP PREF or HEAT PUMP on page 11.

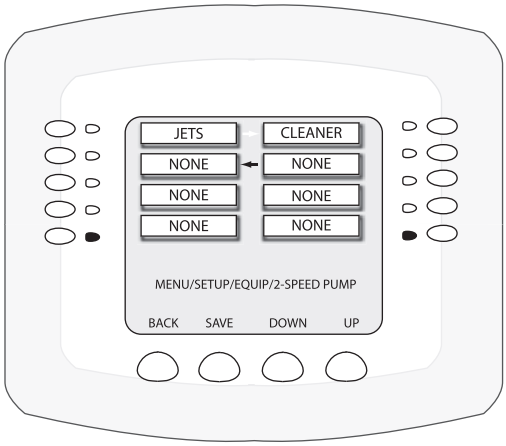
Setting up a 2-Speed Pump

Equipment circuits displayed on this screen will automatically switch a two speed filter pump to high speed when these circuits are switched on. In this example, the FILTER PUMP will switch from low speed to high speed whenever the JETS or CLEANER is on.

Go to the **2-Speed Pump** screen to select your choice of heat options to force the pump to high speed:



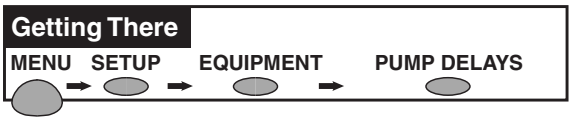
1. Press the button next to a **None** label. The small arrow is pointing to the name of that label.
2. Use the **Up** and **Down** buttons at the bottom of the screen and scroll through the previously assigned names to add another circuit for switching filter pump to high speed. After you have found the desired circuit, you can add another circuit by repeating step 1, or go to step 3. You can use a FEATURE circuit as one of the circuits which can switch the pump to high speed (except for models i5 and i5S).
3. Press the **Save** button. When you find the circuit names that you want, or that will switch the filter pump to high speed.
4. Press the **Exit** button to return to the main screen.



Note: *With a dual equipment system i10+3D, the left column controls the spa pump and the right column controls the pool pump.*

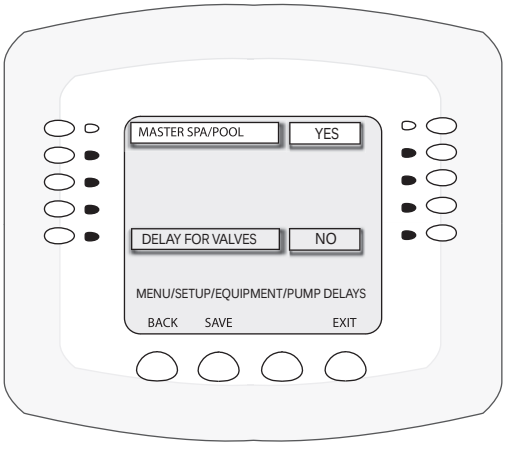
Set a Cool-Down Cycle for the Heater

Go to the **Pump Delays** screen.



1. Find the **Master Spa/Pool** label. Press the button next to it to change the setting to **Yes**.
2. Press the **Save** button when finished.
3. Press the **Exit** button to return to the main screen.

Note: *Pentair heaters do not require this feature.*



Delay Cancel Feature

For convenience, on a one time basis, the DELAY CANCEL feature will cancel the following safety delays which can be set up in the IntelliTouch system. Please note there is generally not a need to cancel any of these delays except for servicing or testing the system.

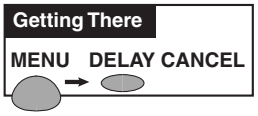
- **Heater Cool-Down Delay Cancel:** Shuts Filter Pump off immediately.
- **2-Speed Filter Pump 5 minute START on HIGH SPEED Delay Cancel:** Shifts pump to low speed.
- **Automatic Pool Cleaner START Delay:** Starts Cleaner Pump immediately. Normally there is a delay in which the filter pump first runs for 5 minutes before the cleaner pump starts.
- **Automatic Pool Cleaner-SOLAR Delay:** Allows Cleaner Pump to run even though solar delay has shut it off for 5 minutes.

About the Heater Cool-down Cycle and Delay Cancel

Some heaters require a cool-down cycle before being turned off. This can be accomplished with a SET UP procedure in the IntelliTouch system which runs the filter pump an additional ten minutes to dissipate residual heat built up inside the heater combustion chamber. The DELAY CANCEL feature is mainly for use by service technicians when they want to shut the filter pump off immediately, and know the heater has not been running.

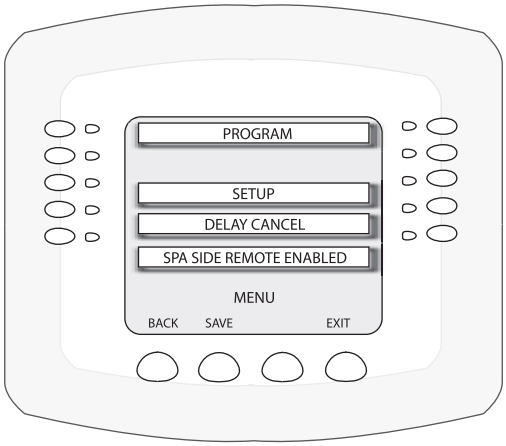
IMPORTANT: Heaters manufactured by Pentair Water Pool and Spa do not require this cool-down period and do not need the delay to be set up.

To cancel a safety delay:



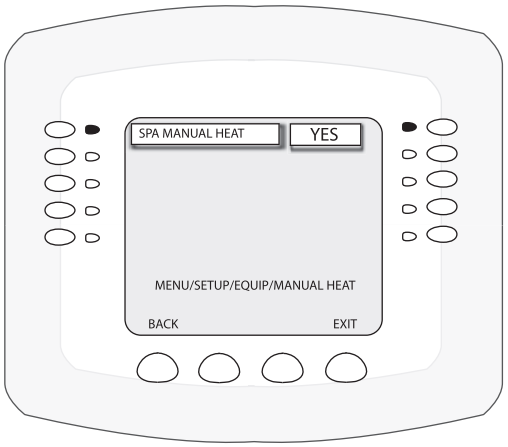
Go to Delay Cancel Screen

1. Press the button next to the **Delay** label. The selected equipment is switched off and the pool is ready to be serviced.
2. Press the **Back** button when finished. The Delay switches off and your system is set back to normal.



Set Automatic Spa Heating When the Spa is Manually Switched On

Go to the **Manual Heat** screen.



1. Find the **Spa Manual Heat** label. Press the button next to it to change the setting to **Yes** (default setting).
2. Press the **Save** button when finished.
3. Press the **Exit** button to return to the main screen.

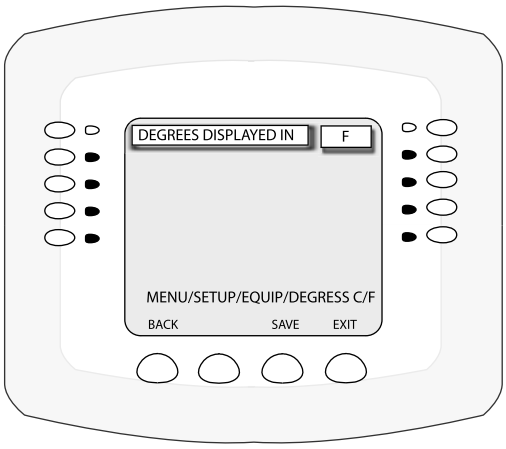
Note: *If you do not want the heater to switch on when you press the SPA button, change the factory setting from YES to NO.*

Changing the Display to Show Fahrenheit to Celsius

You can change the temperature settings to show either Fahrenheit or Celsius.

To change the temperature settings go to the **Degrees C/F** screen.

1. Find the label next to the **Degrees Displayed In** button.



2. To change the setting to the either **Fahrenheit** or **Celsius**, press the button next to the label.
3. Press the **Save** button to save your settings,
4. Press the **Back** button when finished.

Configuring Valve Actuators (Controlled by AUX or Feature Circuit)

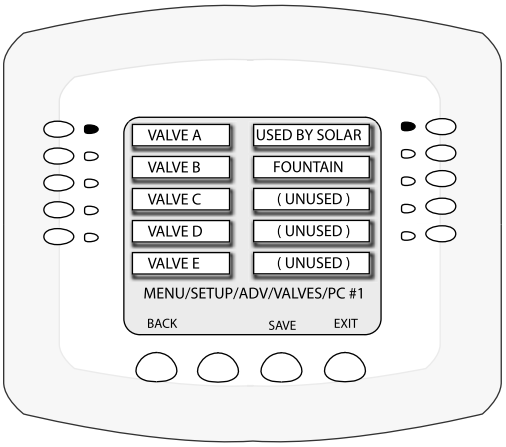
All IntelliTouch systems can drive two auxiliary valve actuators (A and B) for applications such as solar heating and water features. With the addition of the Valve Module (P/N 520285), installed in the Load Center or Power Center, the system will accommodate up to three additional actuators (C, D, and E). An **AUX** circuit or **FEATURE** circuit can control auxiliary valve actuators. Please note that the i5 and i5S models do not include FEATURE circuits and therefore must use the AUX circuits for controlling valve actuators. By using Feature circuits to control valve actuators, you can conserve your AUX circuits for high voltage relays for controlling pumps and lights. Use Macros to couple valve actuators with AUX circuits for specific applications.

Note: *All Personality boards (including i5x and i10x) has two valve outputs A & B. With the addition of the Valve Module (P/N 520285) board that connects to the Personality board, three additional valve operators can be added to the system.*

Configuring Valve Actuators

Note: *If Expansion Centers are a part of the system, before this screen, you must select which main Load Center or Power Center you wish to configure. The Load Center or Power Center number matches display number (1 through 4).*

Go to the Configure Valves screen.



1. Select the button next to the valve actuator you wish to configure. Keep pressing the button until you find the circuit name which you would like to use to control that valve actuator.

   Valve A: Resides on the Personality board. If solar heating is setup AND NOT configured as a heat pump, then this valve is dedicated for controlling the solar heating valve actuator.

   Valve B: Resides on the Personality board next to Valve A.

   Valves C, D, E: Reside on the optional Valve Module board that may be plugged into the Personality board in any Load Center or Power Center.

2. Repeat the above steps for each valve actuator.
3. Press **Save** when done.
4. Press **Exit** to return to main screen.

Feature Circuits

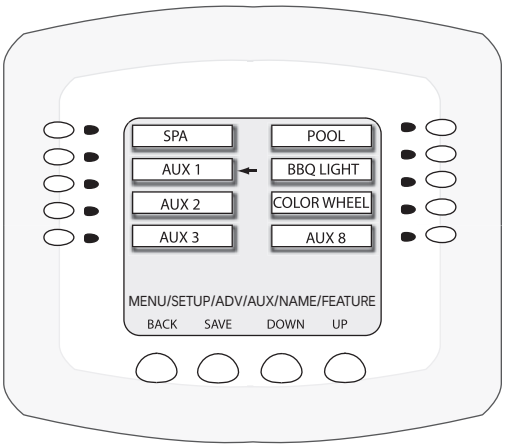
Feature Circuits provide a way to control a piece of equipment, which is not controlled by an AUX circuit. Typically AUX circuits are used for high voltage equipment such as pumps and lights, whereas Feature Circuits are used for valve actuators. However, Feature Circuits can go beyond this definition, and be used in other creative ways. For example, Feature Circuits may be used to create a Macro circuit in which several other circuits can be switched on or off with the same button. This is accomplished by first choosing a name for your Macro and assigning that name to a Feature Circuit. There is a limit of 10 Feature Circuits in the system. Macros are not available with i5 or i5S systems.

- **Valve Actuators** - Feature Circuits may be assigned for controlling up to five valve actuators per Load Center, which requires the installation of the optional Valve Module P/N 520285 that include three actuators outputs (C, D, and E) per Load Center. For more information about configuring valve actuators, refer to page 69.
- **2-Speed Pump** - A Feature Circuit may be assigned as a way to turn a 2-speed Filter Pump to high speed.
- **Spa Spillway** - A Feature Circuit may be assigned to activate the Spa Spillway effect, where in a pool/spa combination, all of the pool water can be diverted to the spa then spill back into the pool.

Assign a Circuit Name to a Feature Circuit (not available for model i5 or i5s)

Note: *Use the written list of circuit names and assigned buttons (**button 1**) on the Outdoor Control Panel that you made while setting up the system. The circuit names you assign in the Indoor Control*

Panel must match the button labels on the Outdoor Control Panel.



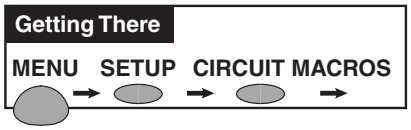
1. Press the button next to the circuit that you wish to assign a name. A small arrow pointing to the name is displayed.
2. Use the **Up** and **Down** buttons to scroll through the list of alphabetical programmed names. If you cannot find a name to match your circuit, you can create your own custom name by going back to the **CREATE CUSTOM NAMES** screen. For a complete list of the IntelliTouch Circuit Names, see the following page.
3. Repeat step 1 and 2 for all the buttons you wish to assign names to. Continue to assign the other circuits. Depending on the model you are programming, equipment may not be installed for all available circuits shown on the screen.
4. Press the **Save** button when you are done assigning names.
5. Press the **Exit** button to return to the main screen.

Create a Macro

Macros give you the ability to combine various circuits together so a single button can operate them all at once. For example, you could create a Macro that would give you one button that turns on your spa, spa light, fountain, fountain light, and patio lights. You can assign a name to your Macro from the list of IntelliTouch circuit names. For the complete list of names, see "IntelliTouch Circuit Names," on page 37. You can also create your own custom name, like SPA PARTY for example. A Macro also has the capability to switch a circuit off. So in this SPA PARTY example, if there was a spa fountain which should not be on when spa is on (because it could put cold water in the spa) it can be set up in the Macro to automatically switch off when SPA PARTY is switched on. An OFF Macro can also be used to switch any number of lights off with one button. To create a Macro, first assign a **feature circuit name**, see page 70), assign the function name for the feature circuit, then go to the **Circuit Macros** screen and set up your Macro.

Note: *Macros may not be set as Dimmers although they can turn on light dimming circuits.*

To create a macro, go to the **Circuit Macro** screen.

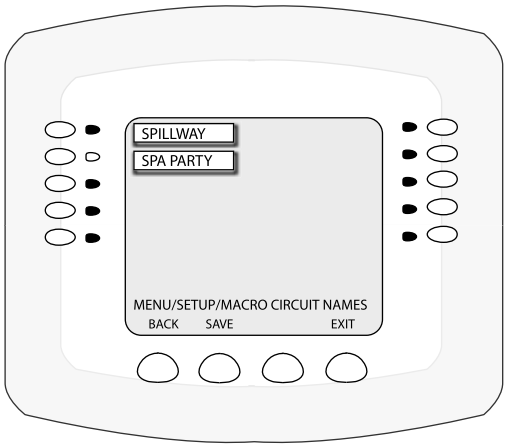


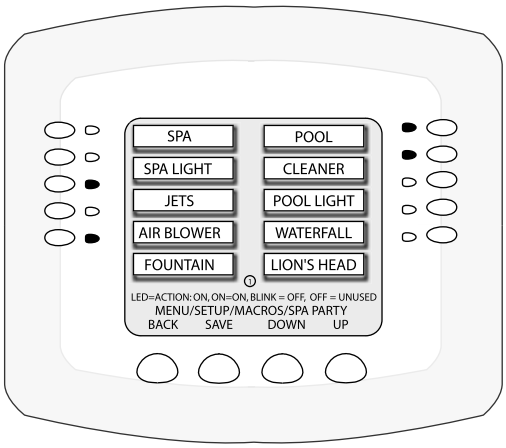
1. Select the button next the label you created. Press the button next to the circuit you want to assign to this macro. If your system includes more than 10 circuits, press the **Display** button to view the next screen of circuits.

- To switch a circuit ON, press the button next to the circuit name one time. The light is on.
- To switch a circuit OFF, press the button next to the circuit name two times. The light blinks on and off.
- To set a circuit to be unaffected by the macro, press the button next to the circuit name three times. The light is off.

Note: *Be careful when you select circuits to switch on. One macro circuit can switch on another macro circuit, resulting in systems switching on or off that you do not want on or off.*

2. Press the **Save** button when finished.
3. Press the **Exit** button to return to the main screen.





Configuring Remote Control Button Circuits (iS4, iS10, QT4 QuickTouch, and Phone Remote)

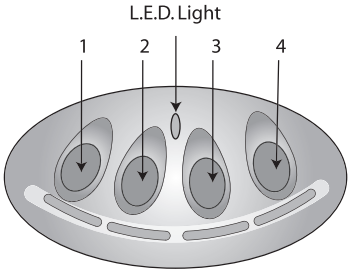
You can specify any Spa-Side remote button to control different functions. Each Spa-Side remote has a slightly different screen, however, all screens configure the same, regardless of how many buttons the remote has.

To configure the Spa-Side remotes:

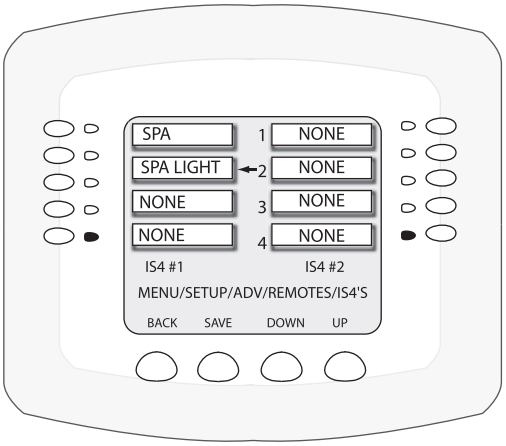
1. Press the button next to **CONFIGURE iS4'S** or **CONFIGURE iS10'S** or **CONFIGURE QUICKTOUCH** to select the remote.

- **For iS4:** Press the top button to access the iS4 setup screen.
- **For iS10:** Press the second button from the top to select **iS10 #1** for the first iS10. Choose which one of the four iS10's you are configuring, **iS10 #2, iS10 #3,** or **iS10 #4**.
- **For QuickTouch:** Press the third button from the top to access the "CONFIGURE QUICKTOUCH" setup screen.

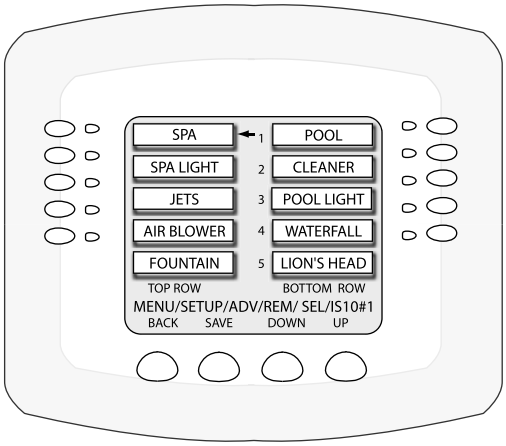
2. On the remote's specific screen, press the button next to the circuit you want to change. You see a small arrow pointing to the name of that circuit.
3. Use the **Up** and **Down** buttons at the bottom of the screen to scroll through the previously assigned circuit names.
4. When you find the circuit you want, press the button next to another Spa-Side control button circuit you want to change. The small arrow moves to that label. You are done setting the first spa-side control button circuit and are ready to set the next.
5. Continue the process to assign other circuits to the spa-side control buttons.
6. When you are done assigning circuits to the buttons on the Spa-Side remote, press the **Save** button.
7. Press the **Exit** button to return to the main screen. You can press **Back** to go back to the remotes screen and configure another remote.



iS4 Spa Side Remote



Configured for iS4



Configured for iS10

Setting up the Remote Control Telephone Feature

The remote control telephone feature allows you to switch on a feature by calling the Indoor Control Panel via the telephone.

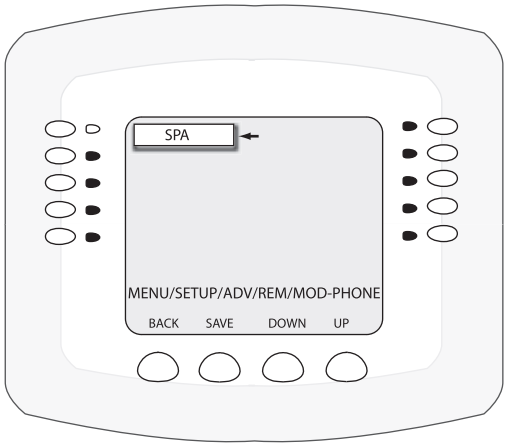
You can only use this feature if you have the **TELSPA** installed in the Load Center or Power Center, connected to the Personality board, and connected to your phone line.

The following describes how to switch on your spa remotely. However, you can scroll through the list of available features and set any one of them. You can also use a macro circuit (see page 71).

To setup the telephone remote control:

Go to the **Spa RF and Phone Remotes** screen.

1. Press the fourth button from the top (**CONFIGURE MOD-PHONE**) to access the Phone Remote setup screen.
2. Press the top left button so that the arrow appears to the right of **NONE**. If this is the first time you have set this feature, **NONE** is displayed.
3. Press the **Up** or **Down** buttons to scroll through the available circuit names until you find the function you would like to assign to the telephone remote. Choose the function you will use most often, for example **SPA** allows you to call the system and switch on spa filtration and heating with one command.



Note: *If you are using the remote to turn on your spa, you must also set up the spa for* ***MANUAL HEAT****. This allows the heater to always switch on whenever the spa is switched on via the telephone. For more information, see page 68.*

4. Press the **Save** button to save the setting. The remotes screen displays.
5. Press the **Exit** button.

Disable/Enable Spa-Side Remote

This feature is useful for families with young children. It gives you an easy way to switch off the Spa-Side Remote so it cannot affect the system. You can enable and disable the Spa-Side Remote with the same button. Each time the button is pressed it toggles to either DISABLED or ENABLED.

Getting There

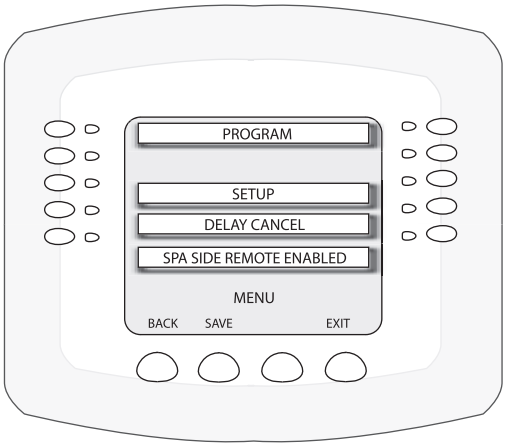
MENU → SETUP → ADVANCED → REMOTES

Go to the **Spa Side Remote Disable/Enable** screen

1. **To Disable:** Press SPA SIDE REMOTE ENABLED. Screen will immediately respond and display SPA SIDE REMOTE DISABLED. Remote is now off.

   To Enable: Press SPA SIDE REMOTE DISABLED. Screen will immediately respond and display SPA SIDE REMOTE ENABLED. Remote is now on.

2. Press the **Back** button when finished.



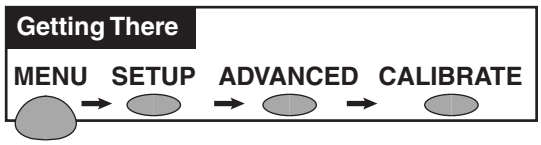
Section 3

Service and Maintenance

Calibrating Temperature Sensors

The IntelliTouch system includes two temperature sensors (10 kΩ) for water and ambient air temperature. You can add a third sensor for controlling solar heating systems. Note: The i10+3D system includes three sensors.

Generally, these sensors are accurate and you do not have to calibrate them. However, long plumbing runs and water features cause temperatures at a body of water to be different from the temperature sensor reading. You can manually recalibrate the sensors to adjust for this.



Before you start, you need an accurate all weather thermometer. If you are calibrating the air sensor, wait until the sensor is not in direct sunlight. Ensure that the air sensors are located in the shade for accurate freeze protection.

To calibrate the sensors, go to the **Calibrate** screen.

There is a Water Temp and Air Temp setting. If you have an i10+3D system, you will see **Spa Temp**, **Pool Temp**, and **Air Temp**. Calibrate the Spa and Pool temperatures the same way as described below for Water Temp. If you have an i5, i5S, i7+3, or i9+3 system, there will be one sensor water and one for air temperature. Make sure to locate the air sensor in the shade for accurate readings. Make sure to locate the solar sensor in the sun for accurate readings.

To calibrate the water sensor:

1. Switch on the spa or pool filter pump.
2. Place the thermometer in the spa or pool, depending on the system model number. For shared equipment, you only need to calibrate one body of water.
3. Take an accurate temperature reading.
4. At the Indoor Control Panel, press the buttons next to the **Water Temp** label to adjust the temperature up or down. If you have an i10+3D repeat the above for the pool. The i10+3D has three sensors, one each for the spa and poll water and one for the air temperature. For the Solar option there will be one sensor for the pool solar, and one for the spa solar.
5. Press the **Exit** button when finished.

To calibrate the air sensor:

1. Place the thermometer next to the air sensor. The sensor is normally located near or under the Load Center or Power Center enclosure, not inside the enclosure.
2. Take an accurate temperature reading in the shade.
3. At the Indoor Control Panel, press the buttons next to the **Air Temp** label to adjust the temperature up or down.
4. Press the **Exit** button when finished.

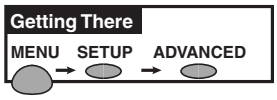
Using the Service Personnel Screen

IntelliTouch system information such as circuit configurations is retained in the Outdoor Control Panel memory. System information relating to user interface settings and ordering of controllers is retained locally at the controller (Indoor Control Panel, MobileTouch, iS10 etc.). All system information is backed up and updated to all Indoor Control Panels, MobileTouch controllers, and the main Outdoor Control Panel periodically. If required, you can upload or down load the current system configuration to and from the Outdoor Control Panel and controllers. This feature is available from the Service Personnel screen.

Checking Firmware Version

The IntelliTouch factory installed operating system software is known as firmware. There is a different firmware program loaded on the controllers (Indoor Control Panel and MobileTouch) and the Outdoor Control Panels. Every time the firmware version is changed it is assigned a new release level number (version #). Changes are made to the firmware to either add functionality or enhance performance. If you need to determine the firmware release level on your system perform the following steps.

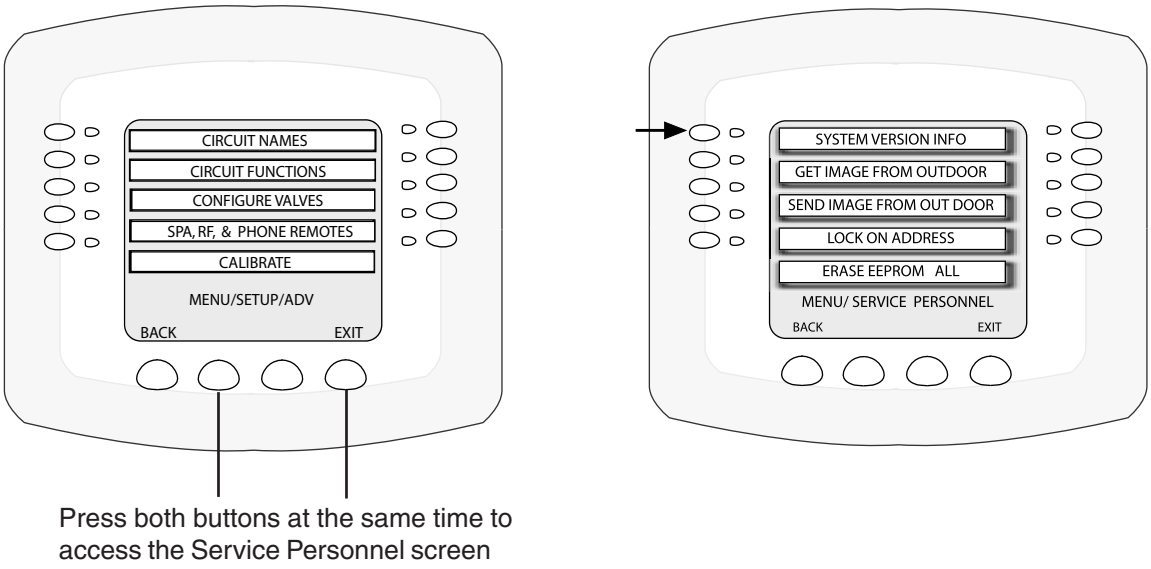
To check the system firmware version:



Go to the Advanced screen.

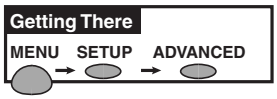
1. From the Advanced screen, press **buttons 2 and 4 at the same time**. The Service Personnel screen is displayed.
2. Press the **System Version Info** button. The firmware version is displayed for the Indoor Control Panel and Outdoor Control Panel. Note: UOC is Outdoor Control Panel. UIC is Indoor Control Panel
4. Press **Back** to exit.
5. Press **Exit** to return to the main screen.

Note: *Different controllers may have different release levels depending on when they were installed. To determine the release version of each controller repeat the above steps for each controller.*



Manually Updating Between Indoor and Outdoor Control Panels

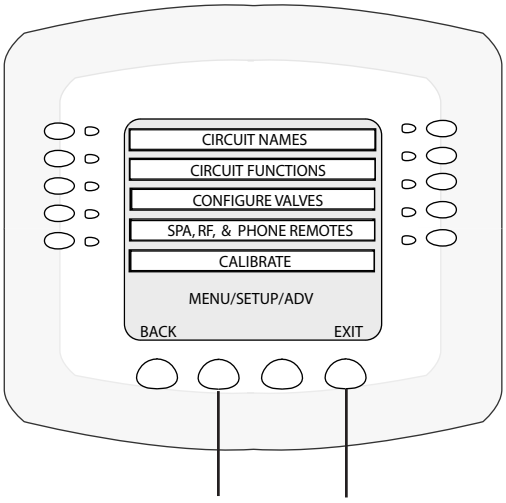
When an update is made to the system configuration or a new component is added the system will automatically communicate the updated information to all the other controllers. System configuration settings reside in all controllers and the Outdoor Control Panel. This facilitates configuration retrieval in the event one of the controllers or control panels is damaged. A system configuration update may be forced immediately by doing the following:



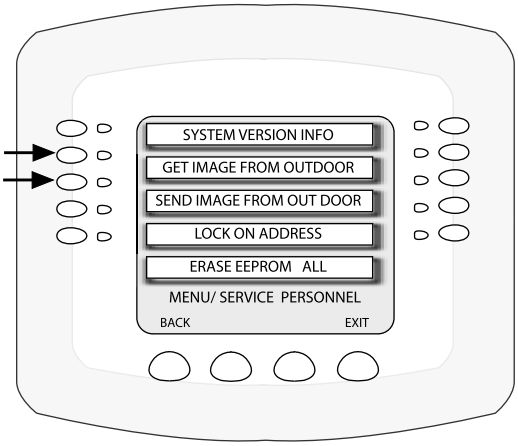
To update system configuration information between controllers:

Go to the Advanced screen.

1. From the Advanced screen, press the **2nd. and 4th. buttons at the same time**. The Service Personnel screen is displayed.
2. Press **Get Image from Outdoor** to download a system configuration residing in the Outdoor Control Panel memory.
3. Press **Send Image to Outdoor** to download a system configuration residing in the controller at hand. You may see a stopwatch clock flash indicating memory transfer.
4. When the transfer is finished, press **Back** to exit.
5. Press **Exit** to return to the main screen.



Press both buttons at the same time to access the Service Personnel screen



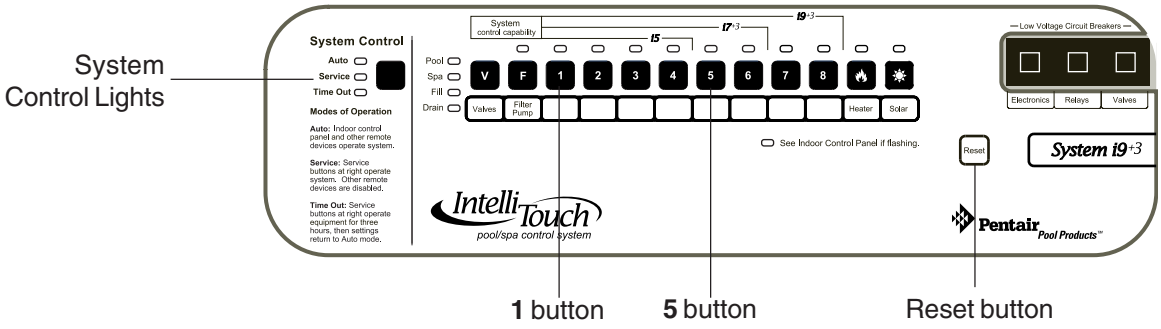
Erasing the System Memory

The IntelliTouch system includes dual micro processors, one on the Outdoor Control Panel, and the other on the Indoor Control Panel. System information relating to circuit configuration, operation and display is retained at the main Outdoor Control Panel and all Indoor Control Panels and MobileTouch controllers. System information automatically downloads from programmed components to non-programmed components in case of accidental memory loss and to ease board replacement, system programmed memory can be erased and returned to the factory default settings. Once this is done, the main Outdoor Control Panel (located in the main Load Center or Power Center) will auto-enable all connected wired controllers. If there are multiple Expansion Center, iS10's, or Indoor Control Panels or a MobileTouch, each one of the controllers will need to be manually enabled.

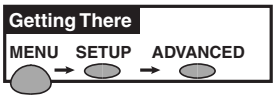
To reset to the system to the factory default settings:

CAUTION: *This procedure will erase all system settings. All controllers will need to be manually enabled again. If more than one wired Indoor Control Panel, MobileTouch, or Expansion unit (2, 3, or 4) is added, the system must be in "AUTO" mode.*

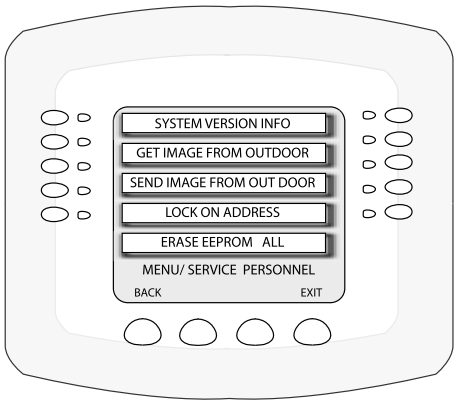
1. On the main Outdoor Control Panel (located in the main Load Center or Power Center), press the **Reset button**. All the System Control lights turn on.
2. Press **5**. The System Control lights flash OFF and then back on.
3. While the System Control LED lights are on, press **1**.
4. The System Control LED lights flash.



Go to the **Advanced** screen.



5. From the Advanced screen, press **buttons 2 and 4 at the same time**. The Service Personnel screen is displayed.
6. Press either button next to **Erase EEPROM All!!**
7. When asked if you are sure you want to do this press **YES**.
8. Then select **ERASE**. The screen will blink a few times then return to the main screen. All system configuration data should now be erased.
9. Repeat this step with each controller.
10. At the Outdoor Control Panel press **Reset** and wait for the system to return to "AUTO" mode.



System Worksheet Overview

System worksheets are provided to help you plan the system at start-up. Make copies of each system worksheet (page 61 - 66) appropriate for your system and use a unique one for each Load Center or Power Center. Circle the Load Center or Power Center number on the top. Each worksheet is divided into a **Hardwired Connections** and a **Programmable Settings** sections. The Hardwired Connections section represents which relays, actuators, and heater have been plugged into the Personality board. Some connections are mandatory for each system as shown on the work sheet. The Programmable Settings section represents what functionality the circuit will have and is set from any Indoor Control Panel and/or MobileTouch control panel independent of the hardwired connection.

In the left-side column, write-in temporary circuit names based on the capabilities you want the system to have. For example: Spillway, Solar Heating, Cherub Fountain, etc. Eventually circuit names will be given to each of these capabilities. Although duplicate names can be used, it is best to keep each one unique. Be sure to write the circuit name on the work sheet that will have the hardwired connection.

Mark on the worksheet which Hardwired Connections (relay or valves) will be activated by the circuit. It may be helpful to fill this out at the Load Center or Power Center where the circuits and associated equipment may be quickly verified. Remember the following rules to assist in making marks:

- Assign no more than one relay connection to any auxiliary circuit (shown on Display 1 through 4) EXCEPT for 2-Speed or Feature Circuits.
- Feature Circuits may have multiple relay connections if set up as a Macro.
- Feature Circuits may have multiple valves assigned to them and 2-Speed without being set up as a Macro and with no other relay connection.
- Valves A-E may be assigned to the same auxiliary circuit as a relay connection.
- If one valve is to be turned on by more than one circuit, then it is suggested to assign a Feature Circuit to just that valve. That valve and any combination of relay connections may be activated with Macros.
- If SOLAR relay connection is checked and SOLAR is **NOT** a heat pump, also check Valve A. Valve A may not then be used with any other circuit. Valve A and the SOLAR relay are activated when solar heating is enabled.

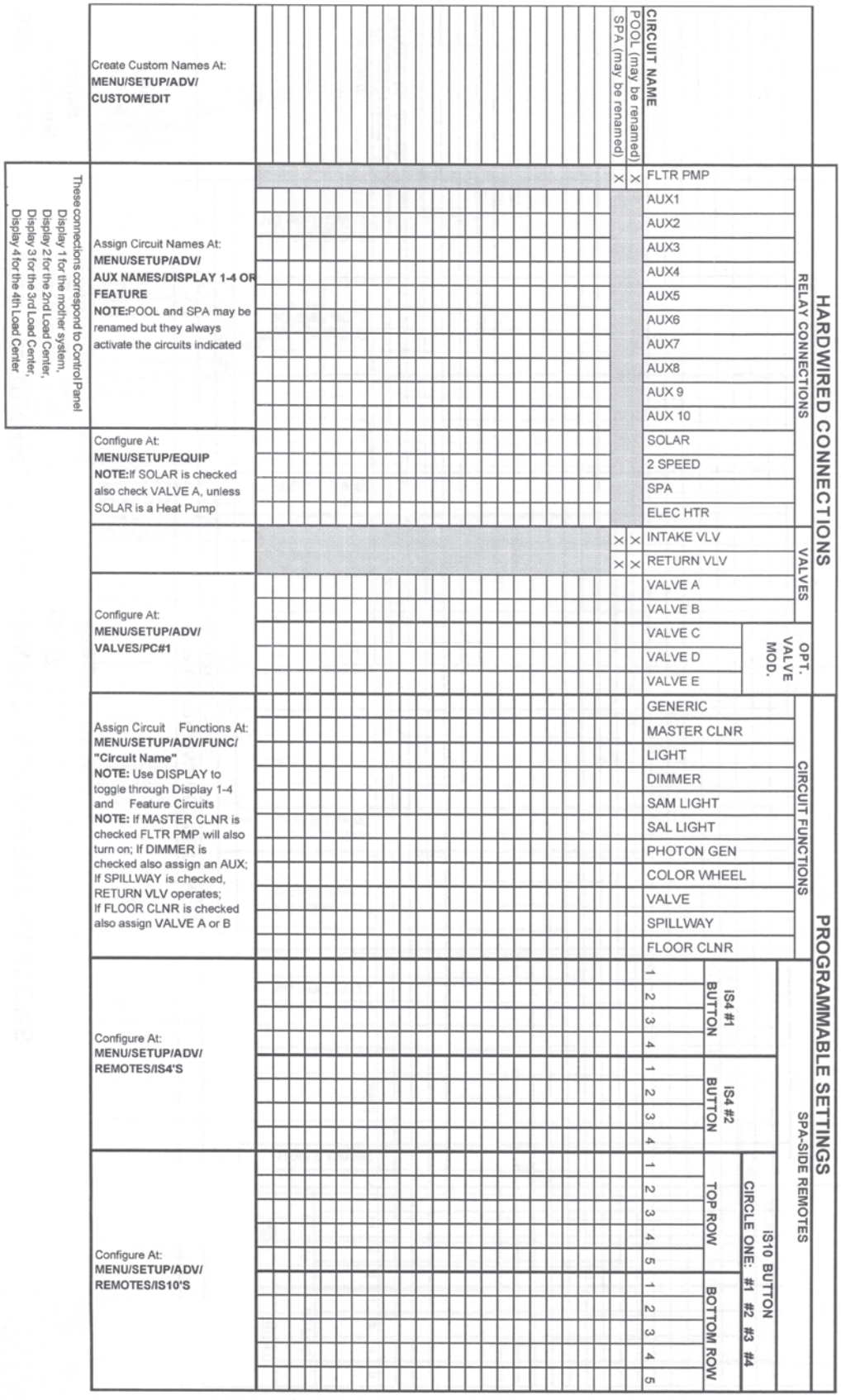
Mark Programmable Settings for each circuit. Mark what special Circuit Functions, if any, each circuit will have. Circuit Functions may be assigned to any number of circuits. For a detailed description of Circuit Functions, see page . If Spillway is checked, the Intake and Return valves will turn to divert all the pool intake water to be returned to the spa. If "Floor Cleaner" is checked, then one or more valves must also be checked to run the floor cleaner multi-port valves. If no special function will be assigned check GENERIC.

Write-in any automatically timed programs you want for a circuit. Up to 99 total timed programs may be assigned, but only three are presented on the work sheet. Indicate start times, stop times, countdown time (called "EGG TIMER"), days to be active, and if a color changing light whether or not it should change colors when turned on (SMART START).

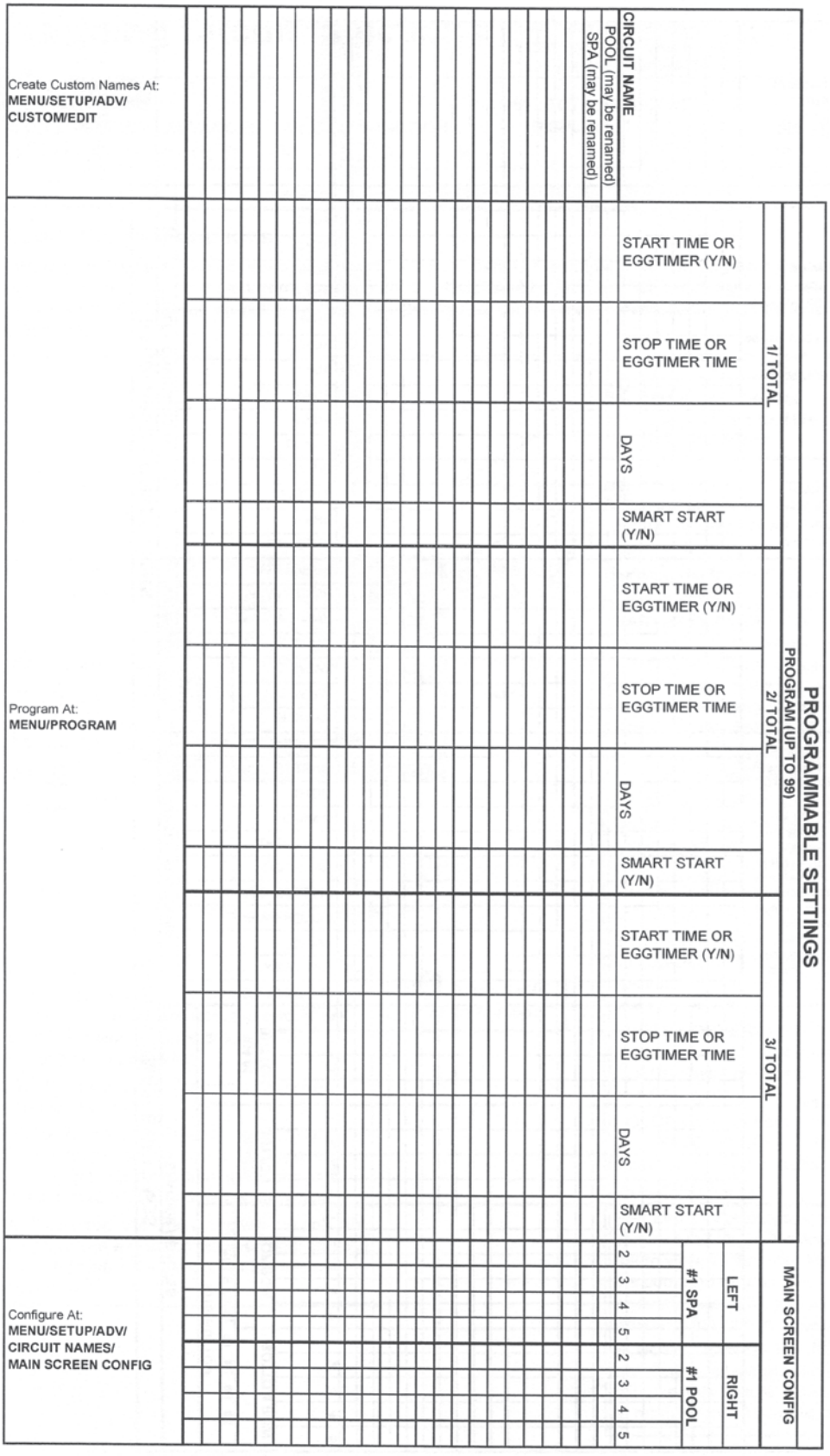
Finally, indicate what circuits you want to appear on the Indoor Control Panel main screen and what circuits you want activated by what buttons on a Spa-Side remote. The top buttons of the main screen are dedicated for Spa and Pool modes, however the lower buttons numbered downward may be configured to display any circuit.

Note: *The homeowner should keep the system worksheet for future reference.*

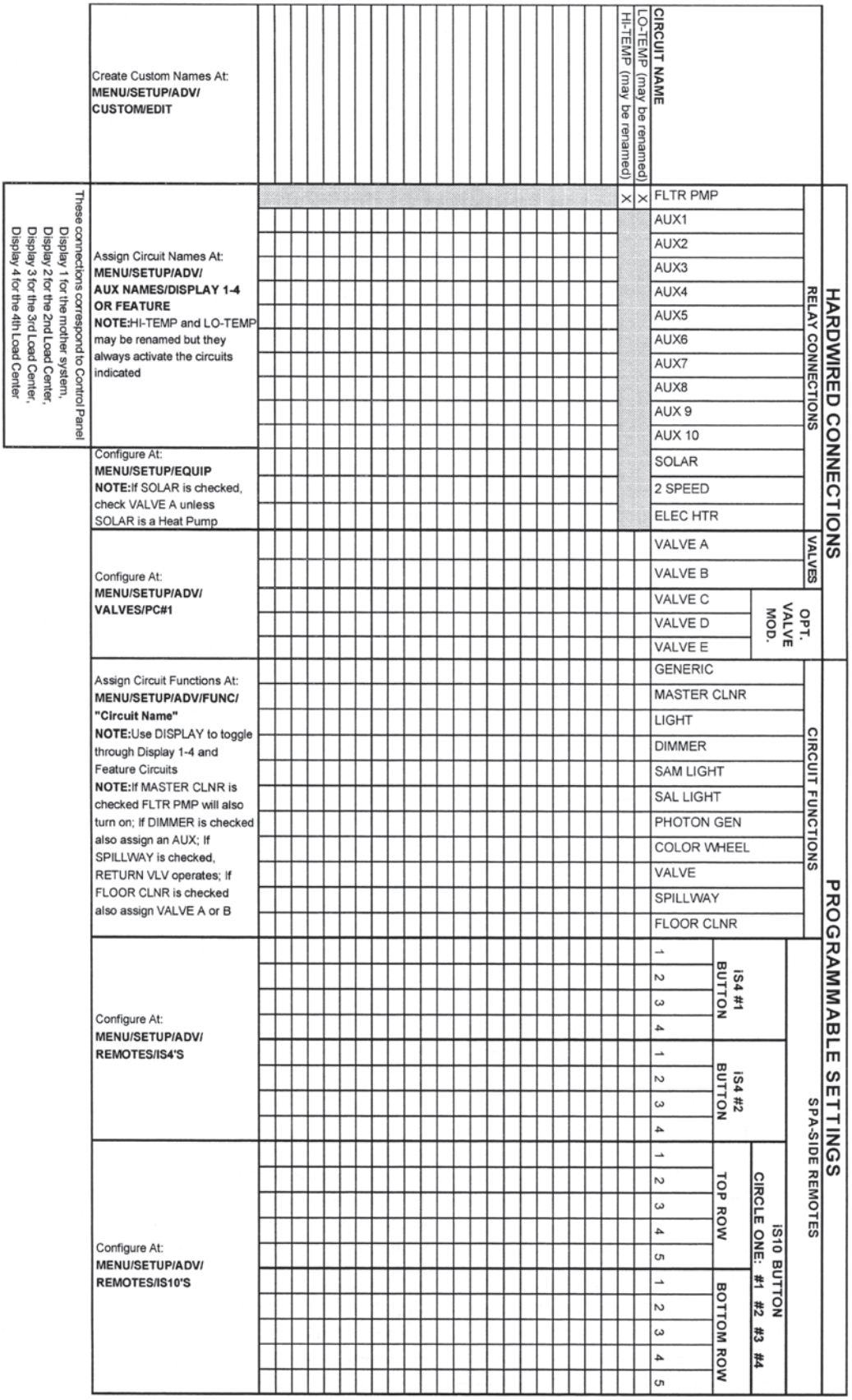
WORKSHEET FOR SHARED EQUIPMENT SYSTEMS
i5, i7+3, i9+3 (Sheet 1 of 2)



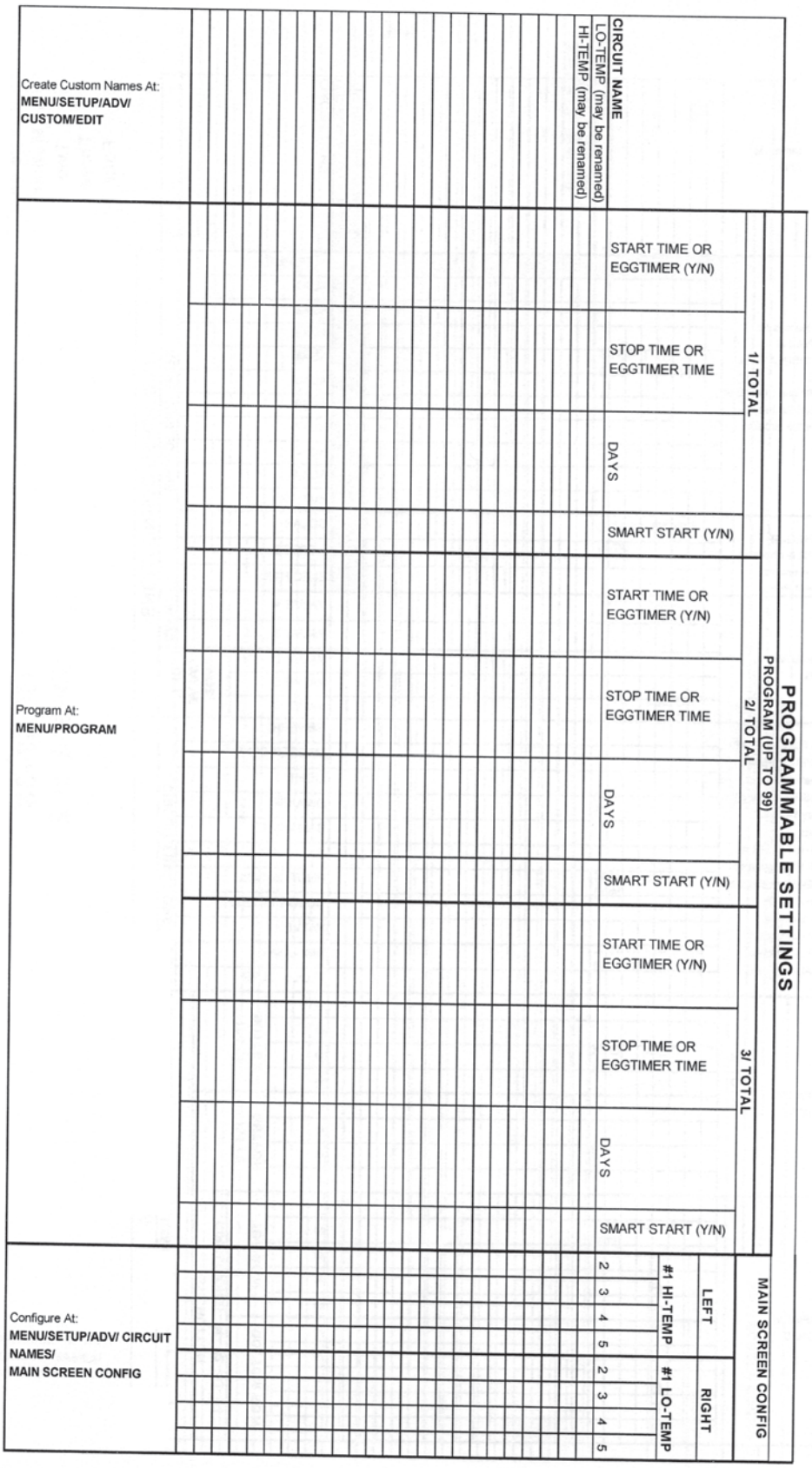
WORKSHEET FOR SHARED EQUIPMENT SYSTEMS
i5, i7+3, i9+3 (Sheet 2 of 2)



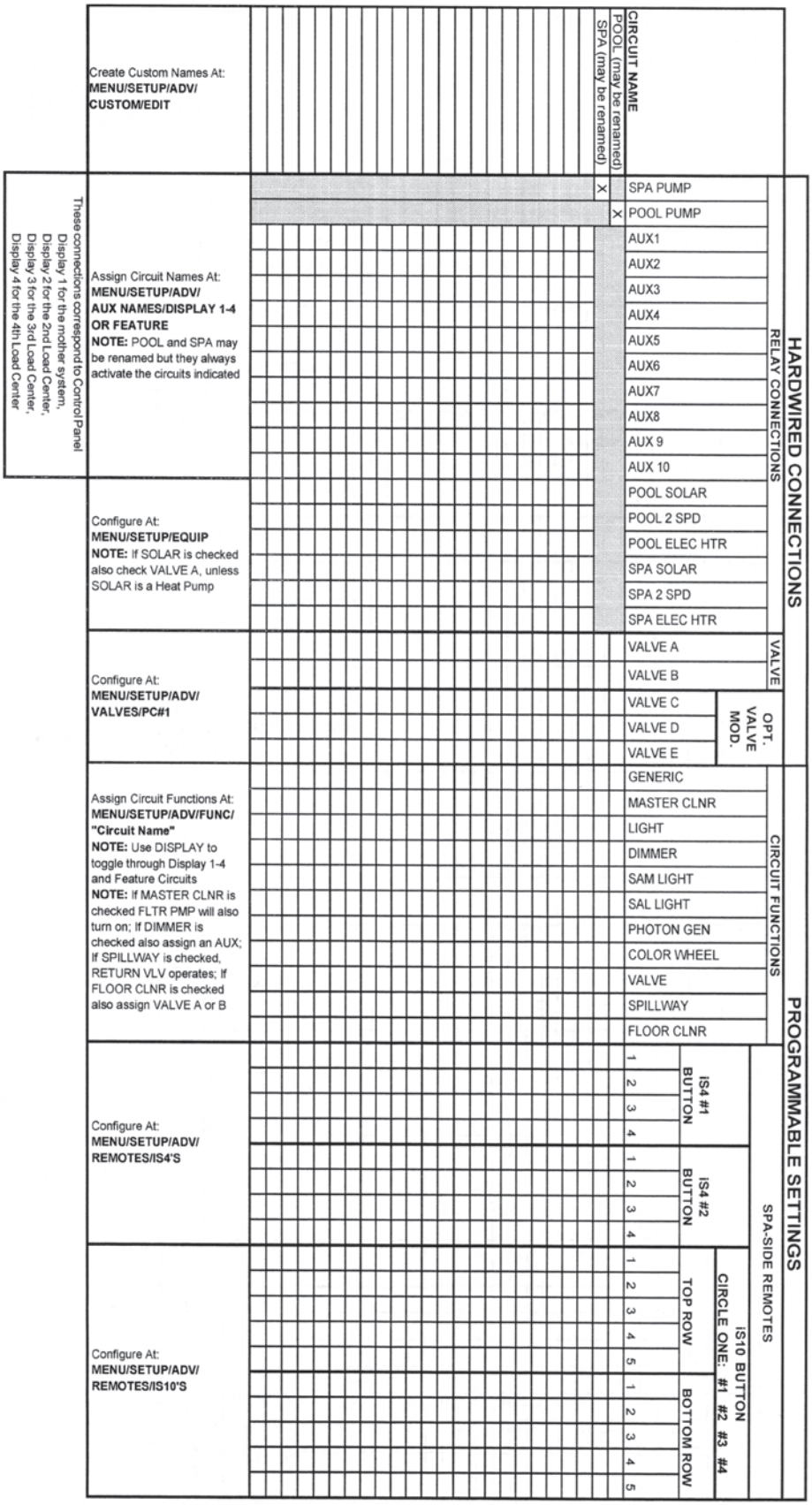
WORKSHEET FOR SINGLE BODY SYSTEMS
i5S, i9+3S (Sheet 1 of 2)



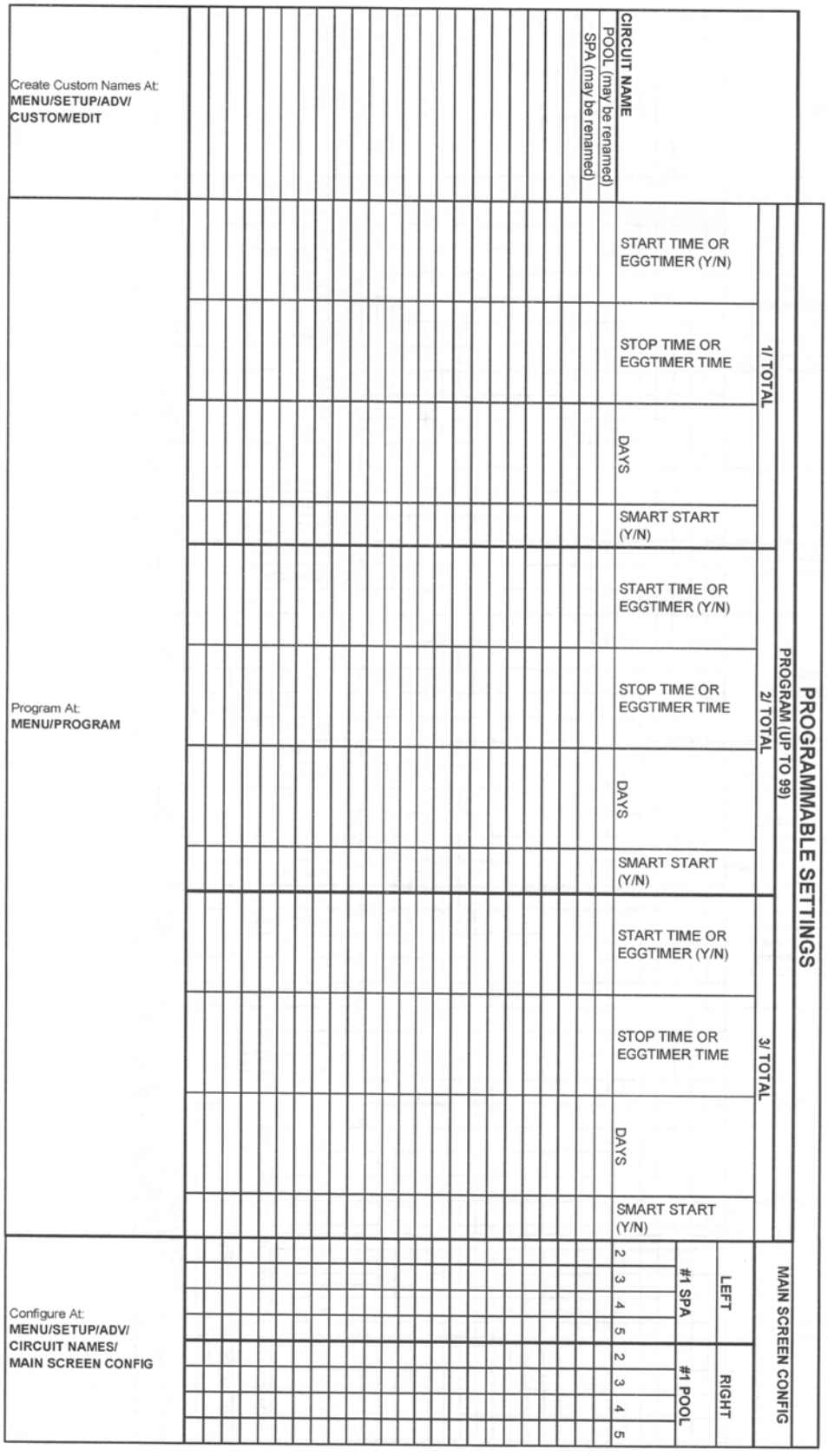
WORKSHEET FOR SINGLE BODY SYSTEMS
i5S, i9+3S (Sheet 2 of 2)



WORKSHEET FOR DUAL EQUIPMENT SYSTEMS
i10+3D (Sheet 1 of 2)



WORKSHEET FOR DUAL EQUIPMENT SYSTEMS
i10+3D (Sheet 2 of 2)



The Main Outdoor Control Panel

The main Outdoor Control Panel consists of the Personality board mounted onto the motherboard. The Outdoor Control Panel is housed in the Load Center or Power Center. It includes, control buttons for pumps, filters, and heater, red status lights, and a Reset button. The Personality board defines the type of equipment installed. The Outdoor Control Panel can be used to override the Indoor Control Panel functions for pool service and for equipment set up. The Outdoor Control Panel can be folded downward to access the Personality board.

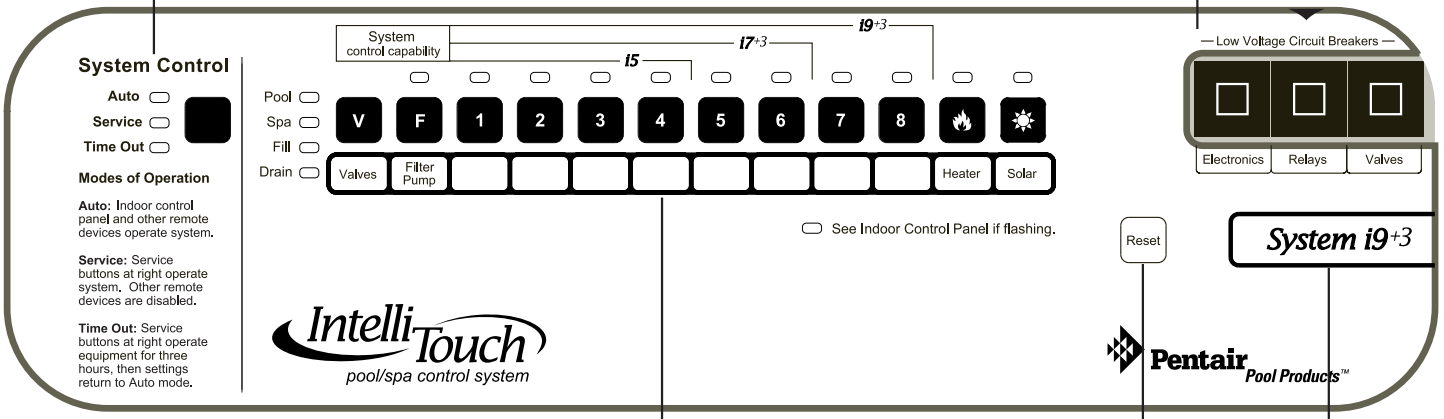
***Note:** Pressing System Control buttons at any of the Outdoor Control Panels, will affect the entire system.*

CAUTION: Be sure the High Voltage Cover Panel is in place over the bottom edge of the control panel. DO NOT OPERATE ANY OF THESE CONTROLS BEFORE READING THESE INSTRUCTIONS.

Shared Equipment Systems i5, i7+3, i9+3

System Control
Three LED indicator lights on the far left indicate the current mode of operation.
By pressing the button adjacent to these lights you may toggle through the various modes.
AUTO mode enables all remote controls (Indoor Control Panel, spa-side remotes, radio frequency remotes, etc. Spa-side remotes may still be disabled by the Indoor Control Panel or MobileTouch).
SERVICE mode allows auxiliaries to be operated directly from the Outdoor Control Panel while disabling all other remotes.

Low Voltage Circuit Breakers
To the far right are 3 Amp circuit breakers to protect low voltage circuits.
Check these as part of any troubleshooting activity.



System Control Capability Buttons
In **SERVICE** mode, hitting any of the horizontal buttons will activate the corresponding circuit.
Some of the buttons are specially dedicated to certain functions described below.

V: This button will turn valves so that only the pool water is circulated through the system, only the spa water is circulated through the system, the spa will be filled with pool water, or the spa will be emptied of water into the pool. When the system is set to **AUTO** mode the actuators will turn to Pool Mode. NOTE: a spillway effect may be simulated by setting valves from the Indoor Control Panel to Fill. Be sure a spillway has been built into the spa.

F: This button will activate the filter pump. If your pump has been wired for two speed operation, the first time this is pressed will put the pump in LOW speed and pressing again will put it in HIGH speed. A third press will turn it off. This button also has further capability during system set-up and configuration.

Heater (Flame): This will automatically turn the heater on. NOTE: This does not activate a pump. Heaters should not be activated without running a pump and normally will not run if water flow is not detected. The heater will continue heating the water until the heater's high limit temperature sensor is triggered (approximately 106° F) or the T-Stat setting.

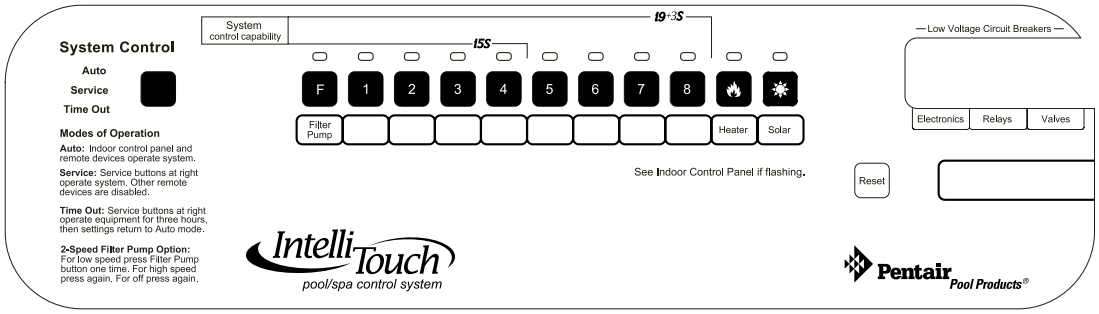
Solar (Sun): Two things happen when this is activated. (1) The solar relay is turned on to activate a booster pump if installed. (2) Valves will be turned to divert water through solar heating panels ONLY IF the system has been told the solar heating is present through the Indoor Control Panel.

System Identification Label:
System i5, System i7+3, System i9+3: Mother System

Reset
Pressing this button will restart the Outdoor Control Panel. Wait until the System Control indicator light has settled on Auto mode and the Valve indicator light has settled on Pool mode before resuming normal operation. DO NOT press any other buttons at this time or you may trigger the Advanced Set-up and Configuration functions.

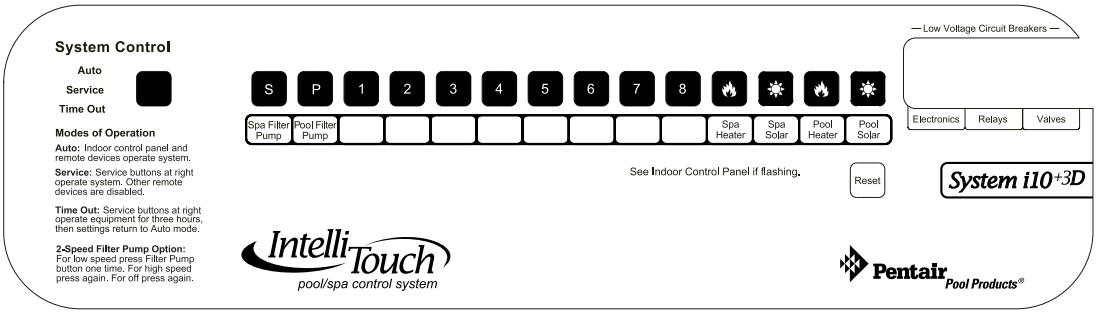
Single Body Systems Model i5S, i9+3S

Operation same as i5, i9+3 except no valve controls.



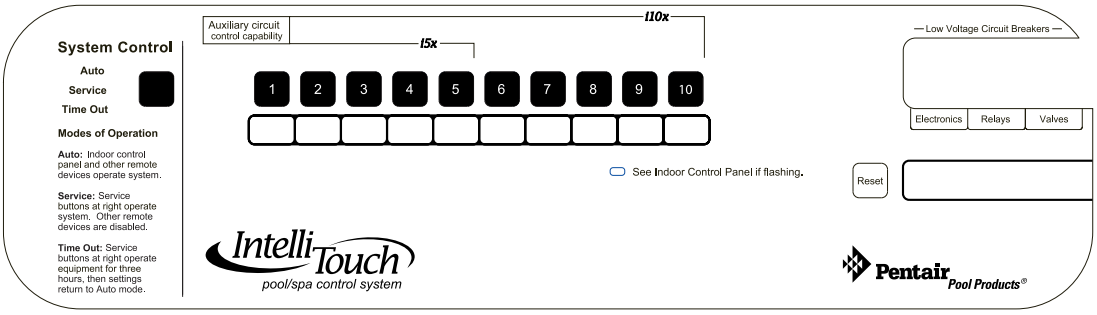
Dual Body Dual Equipment System Model i10+3D

Operation same as i9+3 except **S** and **P** buttons operate independent filter pumps and the Heater and Solar buttons operate independent heating systems and no valve controls.



Expansion Centers Model i5x, i10x

Expansion Centers provide additional valve and auxiliary circuits. They are designed to operate with base systems: i9+3, i9+3S, i10+3D. Auxiliary Control Capability Buttons operate the same way as all other system Control Capability Buttons.

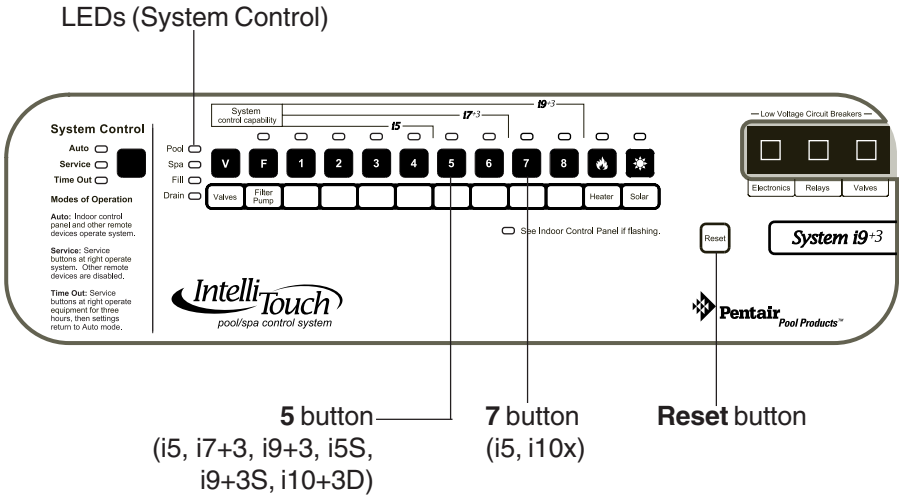


Erasing Outdoor Control Panel Memory (Factory Default)

The Outdoor Control Panel programmed memory can be erased and returned to the factory default settings. System information such as feature circuit configuration, operation and display is retained at the main Load Center Outdoor Control Panel and all Indoor Control Panels and MobileTouch controllers. If the memory is erased in the main Outdoor Control Panel (located in the Load Center or Power Center), system information retained in the Indoor Control Panel or MobileTouch is automatically downloaded. This feature is important in case of accidental memory loss and to ease board replacement. If there are multiple Expansion Center, iS10 Spa-Side remotes, or Indoor Control Panels, each one of the controllers will need to be manually enabled (see page 54 for details). For instructions about erasing system memory from both the Outdoor Control Panel and Indoor Control Panel, refer to "Erasing the System Memory," page 78.

To reset to the factory default settings:

1. On the Outdoor Control Panel, press the **RESET** button.
2. The three red System Control LEDs are lit for about ten seconds.
3. While the red LEDs are lit, press one of the following buttons
   - For models i5, i7+3, i9+3, i5S, i9+3S, and i10+3D, press **button 5**.
   - For models i5x, i10x, press **button 7**.
4. The System Control LEDs will switch off then on completing a normal system restart. Wait until the system has returned to "AUTO" and "POOL" modes before resuming operation.



Main Outdoor Control Panel (Located in the Load Center or Power Center)

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Section 5

Toubleshooting

System Start-Up

The following information describes a basic system start-up procedure. Before switching on the power to the IntelliTouch Load Center or Power Center, first check the following:

Check Electronics

Check that the following plugs are seated correctly on the Personality board. For connector locations, refer to the System Wiring Diagrams on page 88 and 89.

- Relay connectors - **FLTR PUMP - AUX1 - AUX8**
- Temperature sensors connectors - **WATER, SOLAR, AIR**
- Transformer wire harness **- J2**
- Heater control connector **- ELEC HTR or screw terminals**

System Test

The following describes how to test the Outdoor Control Panel to activate the heater, valves and pumps. This test assumes that all system equipment has been properly installed and connected to the Load Center and Power Center.

Testing Valve Actuators and Pumps:

Use the following steps to test the valve actuators (CVA24T - P/N 263045) for proper rotation. For Outdoor Control Panel System i5, i7+3, i9+3 (shared equipment).

To test the valve actuators and pump:

1. Power up the Load Center or Power Center.
2. Press the **SYSTEM CONTROL** button on the Outdoor Control Panel until the **SERVICE** light is on. .
3. Press the **V (Valve)** button to select **POOL.**
4. Press the **F (Filter Pump)** button to activate the filter pump. Water will be removed from the pool and returned to the pool. The bypass valve will allow some water to fall from the spa back to the pool.
5. Set both valve actuators (CVA24T - P/N 263045) for suction and return. Use the toggle switch on the rear of the CVA-24 to withdraw and return water from the pool.

   Note: With the filter pump operating, if water is not being removed and returned to the pool, it may be necessary to check the plugs on the Personality board and the toggle switches on the valve actuators.

Testing the Auxiliary Relays

Affix the auxiliary relay labels to the appropriate buttons on the Outdoor Control Panel. If necessary, write the function on the control panel.

Troubleshooting

This section provides information to help you resolve any problems that may occur during installing or using the IntelliTouch system. If by following the recommended actions you are still unable to resolve the problems please contact Technical Support, see page vi.

Frequently Asked Questions (FAQ)

What does the '+3' on some of the systems mean?

The first number of a "System Personality" indicates the number of high voltage (auxiliary) circuits available including the filter pump. The '+3' indicates the capability of operating additional equipment without using up high voltage circuits. Typically this refers to spillway functionality, valve control (see page 69), and feature circuits (see page 39).

How Do I Setup/Configure/Program the 2-Speed Pump?

Two-speed pumps operate using two relays and one or more circuits with the IntelliTouch system. The first relay turns the pump on or off. Assuming this is the filter pump and depending on the system personality, this circuit is controlled by the Pool, Spa, high temp, or low temp circuits or any other circuit that may be tied to the filter pump (such as circuits with freeze protection, etc.). The second relay turns the pump from low speed to high speed. The default condition is low speed, but up to 10 circuits may be assigned to trigger the pump to high speed. ***Note:*** *These 10 circuits do NOT turn the pump on.*

To configure a two-speed pump relay, refer to "Setting Up a 2-Speed Pump," page 66. For relay location and wiring, see pages 101 and 102. The 2-Speed pump relay is plugged into the 2-SPD output on the Personality board. A circuits must be assigned to trigger from low to high speed, see page 66 for details.

Can I turn the Heater On and Change the temperature from the Spa?

The heater may be turned on from the spa using one of two hard wired Spa-Side remote (iS4 or iS10) or by wireless remote controls (MobileTouch or QuickTouch). To learn more about these remotes and controllers, see page 19, 20, 22, and 16. Only the iS10 or wireless controllers can change the temperature from the spa location.

How do I get Solar to switch on?

The system must first be told that solar heat is installed. Go to the Solar equipment screen (**Menu > Setup > Equipment > Solar**) and press the **YES** button to tell the system solar is present. Note: Do not set solar as a heat pump. Then the heating method must be selected for each body of water. Many options are available through the Heat screen. For instructions on how to select a heating method see page 65.

What are Color Swim and Color Set?

Color Swim: Allows any combination of up to twelve S*Am*, S*AL*, IntelliBrite, and/or FIBER*works* lighting circuits to be preset to transition through colors in sequence, giving the appearance of the colors swimming across the water. The delay in sequencing each light can be adjusted to customize the display for your pool. For more information see "Setting Up Lighting Options," page 41.

Color Set: Allows any combination of up to twelve S*Am*, S*AL*, IntelliBrite, and/or FIBER*works* lighting circuits to be preset to specific colors, such as red, white, and blue for the Fourth of July or red and green for Christmas.

How do I get S*Am*/S*AL*/PG2000 to Synchronize?

There are many ways to configure color changing lights to synchronize on the same colors. The first step is to assign all color changing light circuits a circuit function such as S*Am*, S*AL*, Photon Generator, or Color Wheel. Refer to "Assign Circuit Functions and Freeze Protection," page 43.

To manually synchronize the lights, use the **Sync** button on the Lights screen. Refer to page 13 for details about how to get the circuits to appear on the **Lights** Screen.

Light circuits may be controlled to switch on at a particular time and synchronize automatically. This may be done by using the **Smart Start** functionality in the Program Screen. See page 16 for programming details.

Can I copy a standard configuration to all the systems I install?

Yes you can but only if you maintain a standard system configuration on a system in your headquarters. An Indoor Control Panel with a properly wired four conductor patch cable may be used to accomplish this.

CAUTION - Do NOT use the Service Panel. This accessory auto erases every time power is removed. It is for on-site work only.

1. Plug the Indoor Control Panel into a COM port on the Personality board of dedicated system at headquarters.
2. One of several things may happen at this point:

- The Indoor Control Panel may automatically download the system configuration if its own memory was erased.
- You may be prompted to update system personality, see page 89.
- You may be prompted to select Indoor or Outdoor memory. Always Select Outdoor or you will write over your dedicated set up.
- You may have to force a download to the system.

3. This same controller may then be taken to the job-site to configure the system. Switch off the system power. Open Load Center or Power Center front door, remove the two retaining screws and fold down the Outdoor Control Panel.
4. Plug in the Indoor Control Panel to one of the COM ports from headquarters.

CAUTION - Be sure to check that the wiring is matching both ends before turning system power back on. Crossed wiring may permanently damage the system.

5. The procedure is identical to Step 2 above. Plug into the COM port on the Personality board in the Load Center or Power Center. Again, several different things may happen. Check all the relevant sections to avoid any problems.

Fixing mismatched system personalities

There are many possibilities that may cause an Indoor Control Panel or MobileTouch to have a model personality (i9+3, i10+3D, etc.) that is different from the system personality. Such occasions include but are not limited to:

1. Controller is added or replaced. Accessory and replacement controllers leave the factory identified as i9+3 system personalities.
2. Controller memory is erased while unplugged from the system.
3. System personality was changed.

This is a minor problem and you may see a mismatched system personality screen. Press NEXT to update the controller to match the system personality. If you do not want to update the controller (most likely because you are service person using the controller for another purpose) then press IGNORE.

Indoor Control Panel and Outdoor Control Panel Connection Problem

System information relating to circuit configuration, operation and display is retained at the main Load Center Outdoor Control Panel and all Indoor Control Panels and MobileTouch. System information is automatically downloads from programmed components to non-programmed components in case of accidental memory loss and to ease board replacement.

If for some reason the controller and outdoor control panel both have user settings that conflict with each other then this must be reconciled. Such occasions include but are not limited to:

1. The MobileTouch wireless controller made changes while the system power was down.
2. A service company made a special upgrade and installed it on an existing system.

If the Service Personnel screen appears, choose Indoor to use the controller settings and Outdoor to use the Outdoor Control Panel settings. Refer to page 65 for more information.

MobileTouch Temperature Readout Not Accurate (20 to 30 Degrees off)

Problem: If the MobileTouch wireless controller LCD temperature readout displays an inaccurate reading, it may be due to wireless signal interference. In this case, the air temperature readout can be correct.

Description: Temperature sensor cables are picking up signal interference.

Solution: To prevent signal transmission interference, ensure that the temperature sensor cables that connect the sensor to the Load Center are not routed near a Florescent lighting fixture (within six inches).

System Problem Diagnosis

Use the following information to resolve system problems.

Problem: The system works in Service Mode, but Indoor Control Panel fails to operate.

Symptom	Possible Cause	Solution
Indoor Control Panel has no power - (screen, blank , no LEDs, buttons not working.	Bad wiring run from Outdoor Control Panel/Personality board in the Load Center or Power Center	Check wiring, and screw terminal connections. Ensure no wires are broken or shorted. Create/Use a short test cable and connect the indoor panel directly to the power centerCorrect the wiring order between all units. In some cases this may cause permanent damage. If this occurs contact Technical Support for replacement PCBs.This is most effectively determined by using a spare Indoor controller or Service man's panel. Contact Technical Support for replacement PCB
	Wired incorrectly (wires not in correct order)	Correct the wiring order between all units. In some cases this may cause permanent damage. If this occurs contact tech support for replacement PCBs.
	Defective Indoor Control Panel	This is most effectively determined by using a spare Indoor controller or service man's panel. Contact tech support for replacement PCB
Indoor panel Lights up, but fails to operate correctly. The unit will not turn equipment on/off, or may turn some items on, but not off and may not LEDs near buttons on indoor panel.	Defective Cable/wiring	Verify cable and insure no connections are broken. In some cases a wire is broken under the insulation. The two center wires of the four conductor cable are suspect (Green and Yellow)
	This is most effectively determined by using a spare Indoor controller or service man's panel. Contact tech support for replacement PCB	This is most effectively determined by using a spare Indoor controller or service man's panel. Contact tech support for replacement PCB. In systems with multiple control panels/IS10 determine fault - call Technical Support
Indoor Control Panel not responding.	Incorrect address.	Indoor control Panel has a different address than the Outdoor control Panel. Press RESET then AUX 1 button. Go to the Indoor Control Panel and lock on ADDRESS.

Problem: Indoor and Outdoor Control Panels work, but iS4 fails to operate.

7Symptom	Possible Cause	Solution
iS4 Spa Side fails to operate equipment .	Spa Side Control is Disabled by main panel.	Using the indoor panel or a service man's panel. Press 'MENU' and insure the selection reads "SPA SIDE REMOTE ENABLED". If it reads "SPA SIDE REMOTE DISABLED" press the button beside the option to toggle the selection.
	Incorrect configuration or circuit to switch assignment or defective wiring.	Verify iS4 setup. Press 'MENU/SETUP/ADVANCED/SPA, RF, & PHONE REMOTES'Select 'CONFIGURE iS4's'Insure the iS4 in question has the expected circuit assignments, and is not assigned to unused circuits.
	Defective iS4	Replace defective iS4
iS4 fails to operate only some of the switches, but others work fine.	Defective wiring on one or more iS4 leads	Verify wiring as described above
	Incorrect configuration or circuit to switch assignment.	Verify configuration as described above
	Defective iS4	Test and verify iS4 with a Volt-Ohm meter. Replace defective iS4. Contact Technnical Support. if unit is still bad.

Problem: Indoor and Outdoor Control Panels work, but iS10 fails to operate.

Symptom	Possible Cause	Solution
iS10 Spa Side fails to operate equipment .	Spa Side Control is Disabled from the main control panel.	Using the indoor panel or a serviceman's panel. Press 'MENU' and ensure the selection reads "SPA SIDE REMOTE ENABLED". If it reads "SPA SIDE REMOTE DISABLED" press the button beside the option to toggle the selection.
	Defective Wiring	Verify iS10 setup. Press 'MENU/SETUP/ADVANCED/SPA, RF, & PHONE REMOTES'Select 'CONFIGURE iS10's . Ensure the iS10 in question has the expected circuit assignments, and is not assigned to unused circuits.
	Incorrect configuration or circuit to switch assignment.	Verify iS10 setup. Press 'MENU/SETUP/ADVANCED/SPA, RF, & PHONE REMOTES'Select 'CONFIGURE iS10's' Ensure the iS10 in question has the expected circuit assignments, and is not assigned to unused circuits.
	IS10 is not correctly enabled	See page 74 to manually enable the iS10.
	Defective iS10	Replace defective iS10. Contact Technnical Support.
iS10 fails to operate only some of the switches, but others work fine.	Defective wiring on one or more iS10 leads	Verify wiring as described above. This is rare, and normally the only wire lead that can cause this would be the 'Green' wire. Verify Connection.
	Incorrect configuration or circuit to switch assignment.	Verify configuration as described above
	Defective iS10	Test and verify iS10 with a Volt-Ohm meter. Replace defective iS10. Contact Technnical Support. if unit is still bad.

Problem: The Mobile Control Panel will not work, or will not work dependably.

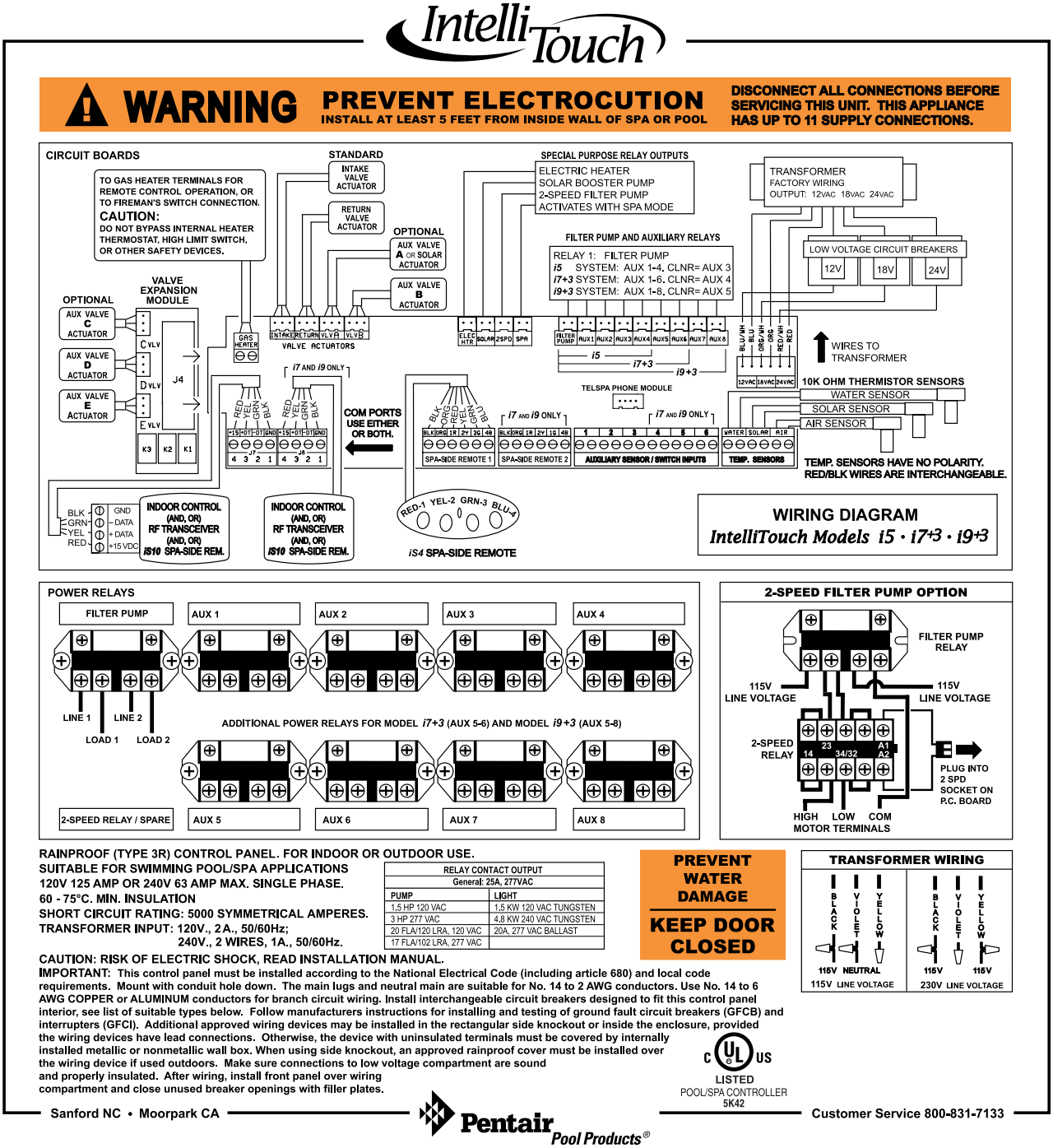
Symptom	Possible Cause	Solution
The MobileTouch fails to operate. It does not turn on or light up.	Battery is not charged or unit is not plugged in.	Attached the AC recharger into the MobileTouch and plug into a wall outlet.
	Defective MobileTouch.	Replace unit. Contact Technical Support.
The MobileTouch fails to operate.	The unit has not been enabled correctly.	See page 28 to manually enable the MobileTouch.
	Defective Wiring - The Transceiver attached to the Load Center or Power Center is not correctly wired.	Verify Wiring, and wiring order. Check for broken wires and loose connections.
	Defective Transceiver at the Load Center or Power Center.	Verify that the two LEDs on the Transceiver are active as expected. The LED marked POWER should always be lit. The LED marked LINK ACTIVITY should flash approx. every two seconds or whenever there is communication (such as when you press a button on the MobileTouch.
	Defective MobileTouch.	Replace unit. Contact Technical Support.
The MobileTouch fails to operate dependably.	Defective Wiring - The Transceiver attached to the Load Center ot Power Center is not correctly wired.	This is rare, and normall, only the green wire would cause this problem. Verify Connection.
The MobileTouch has very poor operating range	Less than optimum location of the Transceiver connected to the Load Center or Power Center.	Relocate the transceiver to allow a less obstructed path between the MobileTouch and the Transceiver.
The MobileTouch range is no more than 30 feet even with clear line of sight operation to the Transceiver.	Defective unit or Transceiver. Likely defective or broken antenna or internal antenna connection.	Contact Technical Support.

Problem: The Quick Touch remote will not work, or will not work dependably.

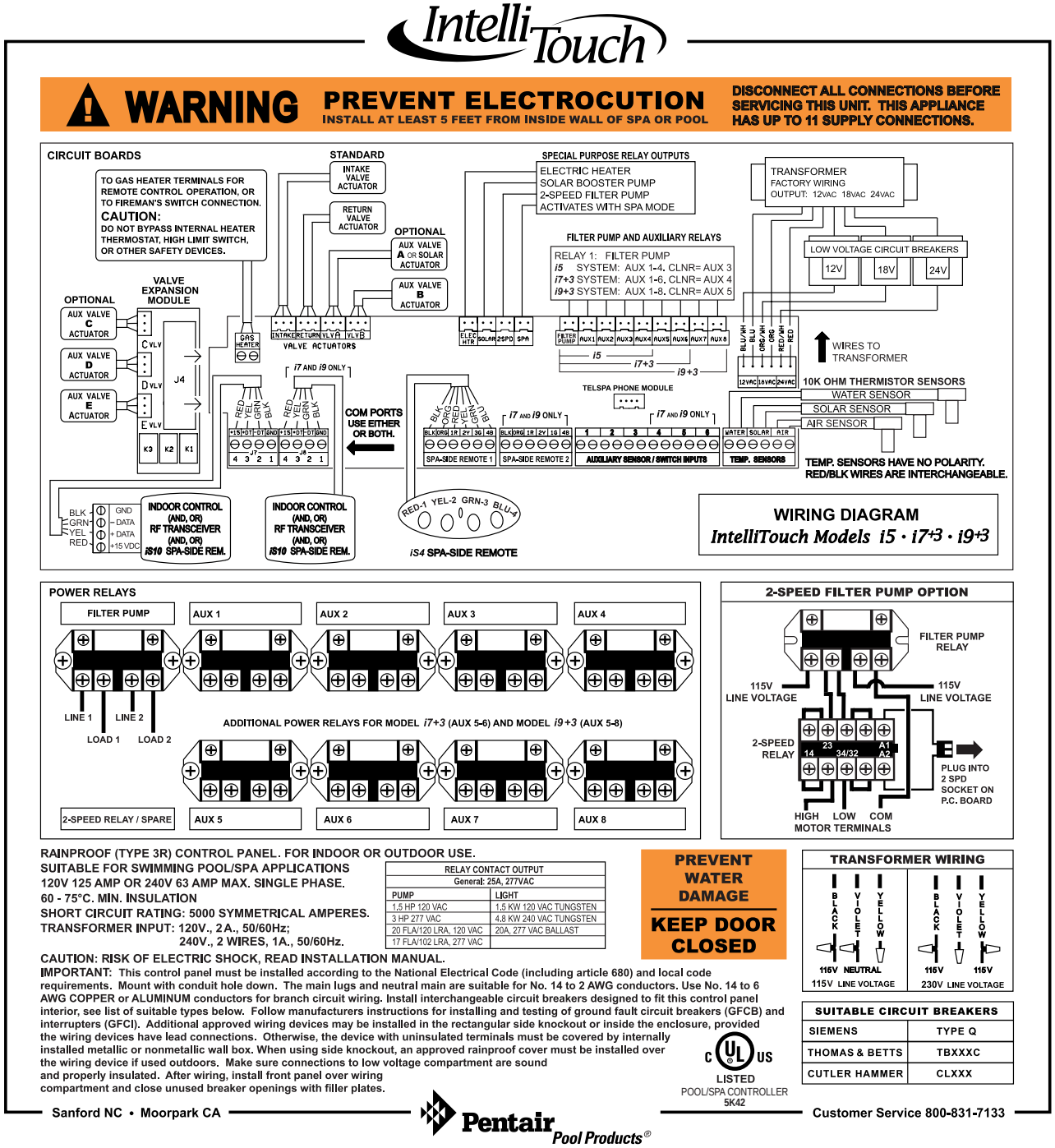
Symptom	Possible Cause	Solution
POWER LED does not light on the Receiver PCB	IntelliTouch Load Center or Power Center does not have power.	Ensure power is being supplied and that the power center operates correctly without the receiver installed.
	Defective cable or connection to the Load Center or Power Center.	Verify the function of the board using known good cable set. Check all wiring.
	Defective Receiver board.	Contact Technical Support.
COMM LINK LED does not light or blink.In normal operation LED will blink at least every 2 seconds	Defective cable or connection to the Load Center or Power Center.	Verify the function of the board using known good cable set.
	Defective receiver board.	Replace receiver board.
Address switches are incorrectly configured	Verify that the address switches on the transmitter and handheld receiver board are correct and match.	Transmitter battery has failed.
	Replace Transmitter battery	Defective Transmitter or Receiver
	Contact Technical Support.	
Unit functions, but some circuits do not work, or operate the incorrect circuit	QuickTouch configuration is incorrect.	Verify QT setup. Press 'MENU/SETUP/ADVANCED/SPA, RF, & PHONE REMOTES'Select 'CONFIGURE QUICKTOUCH' Ensure the QuickTouch has the expected circuit assignments, and is not assigned to unused circuits
Unit fails to operate, or fails operate dependably at range	Undue electrical noise	Relocate the receiver away from equipment such as blower motors.
	Too many obstructions between the transmitter and receiver.	Relocate receiver.
	Receiver unit is too near the ground.	Relocate the receiver to maximize the distance between the receiver antenna and the ground.

Problem: The Quick Touch remote will not work, or will not work dependably (Continued).

Symptom	Possible Cause	Solution
Unit seems to turn on or off circuits without the user / transmitter	A near by home is operating a similar wireless unit	Select a an alternate address code for the transmitter and receiver. I.e. change the switches on both boards to an alternate, but matching setting.
Unit dependably turns equipment ON, but once equipment is running it does not dependably turn equipment OFF, or range is greatly reduced when equipment is running	Undue electrical noise is being produced by one or more pieces of equipment in close proximity to the receiver.	Relocate the Receiver away from equipment such as blower motorsRelocate the Receiver in a location that provides fewer obstructions to the area the user commonly operates the transmitter.
Unit operates, but has greatly reduced range compared to prior function	Transmitter Battery is failing	Replace Transmitter battery



Power Center System Wiring Diagram



Load Center System Wiring Diagram

Wiring IntelliTouch to a Salt Chlorine Generator

Be sure to check the wire color and function of the salt chlorine generator before connecting it to the IntelliTouch COM port on the Personality board. See the wiring table below for the pin configuration.

Commonly used salt chlorine generator wiring is shown but you should still verify with the manufacturers documentation.

Failure to wire the salt chlorine generator properly can permanently damage the IntelliTouch system or chlorine generator.

Wiring Description

IntelliTouch COM port wiring color connection	Descripion	Salt Chlorine Generator commonly used wire colors
RED	+15 VDC	RED
YELLOW	+ DATA	BLACK
GREEN	- DATA	YELLOW
BLACK	GROUND	GREEN

Glossary

Actuators: Motorized accessory for turning valves and diverting water; model CVA24T.

Color Set: Allows a combination of up to 12 SAm, SAL, IntelliBrite or Fiberworks lighting circuits to be preset to specific colors.

Color Swim: Allows a combination of up to 12 SAm, SAL, IntelliBrite or Fiberworks lighting circuits to be preset to transition through colors in sequence. This gives the appearance of colors dancing across your water.

Component ID: Unique identifier that tells the system what each component is.

Controller: Indoor Control Panel or MobileTouch wireless controller.

Expansion Kit: A kit that includes additional auxiliaries to an existing Personality Kit. Requires a Load Center or Power Center for each Expansion Kit.

Feature Circuits: Programmable circuits that may control relays, macros, and/or valve actuators.

Firmware: Factory installed operating system software dedicated for use with the IntelliTouch system; each type of control panel has its own firmware and release level.

Freeze Protection: Switches on a circuit if the air temperature drops below 35° F.

High Voltage Compartment: Large lower right compartment of Load Center or Power Center for all high voltage wiring including circuit breakers, relays, and GFCI.

House Address: Signal that allows Each IntelliTouch system the ability to group all its attached components under a single system identification; prevents the system from confusing its components from components on a neighbor's system.

ICP: Indoor Control Panel.

Indoor Control Panel: Fourteen button remote controller with LCD (liquid crystal display) is wired to the Personality board in the Power/Load Center.

iS4: Four function Spa-Side remote. Wall or deck mounted.

iS10: Ten function spa-side remote with temperature changing capability and display. Wall or deck mounted.

Load Center: Metal enclosure with power relays, transformer, and circuit breakers. The Load Center is Installed prior to Personality Kit installation. Used for distributing power for controlling IntelliTouch Systems. Also known as the "sub-panel."

Low Voltage Compartment: Top compartment of Load Center or Power Center for all low voltage wiring.

Low Voltage Raceway: Vertical space in the left side of Power/Load Center for low voltage cabling.

Macro: Feature circuit that allows you to combine circuits to activate together.

MobileTouch Controller: Wireless controller for the IntelliTouch Systems with all the functionality of the Indoor Control Panel.

Mud Box: Enclosure to provide mounting features for iS10 spa-side remote that is cast into gunite, concrete, or other spa wall/deck construction.

Outdoor Control Panel: Control panel with flexible hinge installed in upper portion of Load Center or Power Center to control IntelliTouch systems.

Glossary of Terms

Personality Board: The circuit board mounted on top of the Outdoor Control Panel motherboard. The Personality board defines the system capabilities.

Personality Kit: Set of parts to define the capability of a system. Can include, temperature sensors, actuators, and additional relays, actuators.

Power Center: Same as Load Center with the exception of the circuit breaker base.

Relay Circuits: The circuits that control the relays on the Personality Board. Connectors on top edge of the circuit board.

Screw Terminal Connector: Removable connector that may attach to circuit board with multiple sockets (anywhere from 2 to 12) to receive wires from controllers and sensors; wires held by screw terminals; multiple wires of a small enough gauge (usually 22 AWG) may be coupled to a single socket of a terminal connector.

Transceiver: Circuit board with attached antenna that can send and receive radio frequency (wireless) transmissions.

Screw Terminal: Removable connector that may attach to circuit board with multiple sockets (anywhere from 2 to 12) to receive wires from controllers and sensors; wires held by screw terminals; multiple wires of a small enough gauge (usually 22 AWG) may be coupled to a single socket of a terminal connector.

System Personality: The capability of a system to operate a set of equipment, independent of the kind of controller or other accessories; system personalities include “shared equipment” (i5, i7+3, i9+3), “dual equipment” (i10+3D), or “single body of water” (i5S, i9+3S).

Temperature Sensor: Specially designed probe for measuring temperature of the air or pool water; 10 kohm thermistor.

Terminal Connector: Removable connector that may attach to PCB with multiple sockets (anywhere from 2 to 12) to receive wires from controllers and sensors; wires held by screw terminals; multiple wires of a small enough gage (usually 22 AWG) may be coupled to a single socket of a terminal connector.

Two-Speed Pump Relay: Relay to toggle a two-speed pump from low-speed to high-speed operation; does not turn pump on or off.

Transceiver: Special printed circuit board that can send and receive radio frequency (wireless) transmissions.

QuickTouch QT4: Provides switching of up to four remote control circuits from a wireless Hand-held Remote.

Valve Module: Accessory PCB (P/N 520285) to increase auxiliary actuator outputs from two to five.

Notes

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