PENTAIR

EASYTOUCH® PL4/PSL4 CONTROL SYSTEM
FOR POOL AND SPA

USER'S GUIDE

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

Eco Select™
Efficiency • Conservation
PENTAIR

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Web sites

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IMPORTANT WARNING AND SAFETY INSTRUCTIONS

INSTALLERS, POOL OPERATORS AND POOL OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS BEFORE USING THIS PRODUCT. This Guide provides installation and operation instructions for the product. Consult Pentair Water Pool and Spa Inc. ("Pentair") with any questions regarding this product. This product is intended for use in swimming pool applications only.

Most states and local codes regulate the construction, installation, and operation of public pools and spas, and the construction of residential pools and spas. It is important to comply with these codes, many of which directly regulate the installation and use of this product. Consult your local building and health codes for more information.
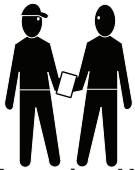
IMPORTANT NOTICE - Attention Installer: This Installation Guide ("Guide") contains important information about the installation, operation and safe use of this product. This Guide should be given to the owner and/or operator of this equipment.

Attention User: This Guide contains important information that will help you in operating and maintaining this product. Please retain it for future reference.

Before installing this product, read and follow all safety 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 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. This product is intended to control heaters with built-in high limit circuits **ONLY**. Failure to do so may cause property damage or personal injury.

⚠ WARNING Water temperature in excess of 100° F (37.7° C) 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.). 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. The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and

⚠ 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.

⚠ CAUTION Except for listed spa-side remote controls, install a minimum of five (5) feet (1.52 m) from the inside wall of the pool and spa.

⚠ WARNING A pool or spa pump must be installed by a qualified pool and spa service professional in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation may create an electrical hazard which could result in death or serious injury to pool users, installers, or others due to electrical shock, and may also cause damage to property.

Two Speed Pump Controls Notice (Title 20 Compliance) Please read the following important Safety Instructions (See page 47 for pump speed setup) When using two-speed pumps manufactured on or after January 1, 2008, the pump's default circulation speed MUST be set to the LOWEST SPEED, with a high speed override capability being for a temporary period not to exceed one normal cycle, or two hours, whichever is less.

IMPORTANT WARNING AND SAFETY INSTRUCTIONS

General Installation Information

1. All work must be performed by a licensed electrician, and must conform to 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 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 in accordance with the National Electrical Code (NEC), NFPA 70 or the Canadian Electrical Code (CEC), CSA C22.1. All applicable local installation codes and ordinances must also be adhered to. The disconnecting means must be readily accessible to the tub occupant but installed at least five (5) feet (1.52 m) from the inside wall of the pool.

6. **GAS HEATER:** This automation control system is designed to supply high voltage (120 VAC / 240 VAC) to a gas heater and override the thermostat in the heater's control circuit. This automation control system is intended to control gas heaters with a high temperature limit switch(s) safety circuit.

For information about the Virginia Graeme Baker Pool and Spa Safety Act, contact the Consumer Product Safety Commission at (301) 504-7908 or visit www.cpsc.gov.

NOTE: Always turn off all power to the pool pump before installing the main drain cover or working on any suction outlet.

IMPORTANT WARNING AND SAFETY INSTRUCTIONS

FCC Standard - 47 CFR Part 15, Subpart C (Section 15.247). This version is limited to chapter 1 to chapter 11 by specified firmware controlled in the U.S.A.

Instruction to user - This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

Note: In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

Canada - Industry Canada (IC) Regulatory Notice: - This device complies with RSS210 of Industry Canada. (1999).

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Exposure Requirements: The antenna(s) used for this device must be installed to provide a separation distance of at least 7.0 inches (20 cm) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. L'antenne (s) utilisé pour cet appareil doit être installé pour fournir une distance de séparation d'au moins (20 cm) à partir de toutes les personnes et ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.

EasyTouch® PL4/PSL4 Control System Kit Contents

The following items are included in the EasyTouch® PL4/PSL4 Control System kit. The optional IntelliChlor® Salt Chlorine Generator with separate Power Supply may also include the kit.

- EasyTouch PL4/PSL4 Control Panel (mounted in the Power Center)
- EasyTouch PL4/PSL4 Power Center enclosure
- Two motorized valve actuators (CVA-24T P/N 263045) - (PSL4 EasyTouch Control System Shared body of water only)
- Water sensor with 25 foot cable, o-ring and hose clamp (P/N 520272)
- Air sensor with 25 foot cable (P/N 520272)
- EasyTouch PL4/PSL4 Control System User's Guide (P/N 522461) - this manual

Optional Equipment

- IntelliChlor Salt Chlorine Generator - model IC20 (P/N 520554), IC40 (P/N 520555)
- IntelliChem® no-pump (P/N 521357), one-pump (P/N 521356), two-pump (P/N 521355)
- IntelliChlor Salt Chlorine Generator User's Guide (P/N 520589)
- EasyTouch PL4/PSL4 Control System Power Center Installation Guide (P/N 522460)

EasyTouch Control System PL4/PSL4 Accessory Equipment

iS4 Spa-Side Remote, 4 circuits	(P/N 520094)
QuickTouch® II four-function wireless remote kit with transceiver assembly	(P/N 521245)
IntelliChem® Controller	(P/N 521356)
IntelliChlor® Chlorine Generator Acid Cleaning Kit	(P/N 520670)
IntelliChlor Salt Chlorinator Spacer pass-through cell for new pool start-up	(P/N 520588)

EasyTouch PL4/PSL4 Control Systems Model Part Numbers

EasyTouch PL4/PSL4 Control System Model Part Numbers

522352	PL4 - Single Body / Base System (no Indoor Control Panel, no actuators)
522353	PL4 - Single Body / ScreenLogic® Bundle (no Indoor Control Panel, no actuators)
522354	PSL4 - Pool/Spa / Base System (no Indoor Control Panel, two actuators)
522355	PSL4 - Pool/Spa / ScreenLogic® Bundle (no Indoor Control Panel, two actuators)

EasyTouch PL4/PSL4 Control Systems Model Part Numbers (Canada)

522352	PL4 - Single Body / Base System (no Indoor Control Panel, no actuators)
522353	PL4 - Single Body / ScreenLogic® Bundle (no Indoor Control Panel, no actuators)
522354	PSL4 - Pool/Spa / Base System (no Indoor Control Panel, two actuators)
522355	PSL4 - Pool/Spa / ScreenLogic Bundle (no Indoor Control Panel, two actuators)
520911	IntelliChlor Salt Chlorine Generator IC20 cell (Canada)
520912	IntelliChlor Salt Chlorine Generator IC40 cell (Canada)

EasyTouch® PL4/PSL4 Control Systems Overview

EasyTouch® PL4/PSL4 Control Systems Overview

Welcome to the EasyTouch PL4/PSL4 Control Systems - Now at your fingertips, you can automatically control all of your pool and spa daily operations and optional equipment the easy way.

System Configuration

- Pool Lite 4 Circuit (PL4 - Four circuit, pool only system)
- Pool and Spa Lite 4 Circuit (PSL4 - Four circuit, pool and spa shared equipment system)

The EasyTouch PL4/PSL4 control systems provides three (3) auxiliary relay circuits to operate your pool filter pump and up to three (3) lights. The control system is factory configured to operate as a "shared" equipment system or a "single body" system.

The EasyTouch PL4/PSL4 Control Systems can control high voltage (120 VAC / 240 VAC) equipment, automatic valve actuators, pumps, lighting, a conventional heater or a solar heating system, heat pump, and the optional IntelliChlor® Salt Chlorine Generator and IntelliChem® Water Chemistry Controller.

Pool and spa service operations can be manually controlled from the Outdoor Control Panel located in the Power Center at the pool equipment pad.

Also available are the optional Indoor Control Panel, Wireless Controller, iS4 Spa-Side Remote, and the QuickTouch® II Wireless Controller for complete control of pool and spa operations from inside you home or outside around your pool area.

Features

- Four Schedules/Programs
- Adjustable Egg timer for easy system scheduling
- Two Feature Circuits
- IntelliFlo® VS pump support - Supports up to four (4) speed control
- iS4 and QuickTouch® II Wireless Controller Support
- Supports up to three IntelliBrite® LED Color lights
- Valves: Intake/Return plus A & B valve circuits
- Custom Circuit naming
- ScreenLogic2® Interface support
- Indoor Control Panel, Wireless Hand-Held Remote, Outdoor Control Panel
- IntelliChem® Controller support
- IntelliChlor® Salt Chlorine Generator support (using external IntelliChlor Power Center)

- Spa, Manual Heat Function
- Spa Side Control Enable/Disable
- Solar Heating Option/Support
- Heat Pump Support: RS485 Support, Heat Pump Cooling Support.
- Safety and Functional Delay(s) and Cancel Systems Delays
- Real Time Clock
- Assignable Circuit Names and Custom Circuit Names
- Special Circuit Types/Function
- Two Speed Pump Support
- English/Metric Support
- Sensor Calibration
- Password Protection

Operating EasyTouch PL4/PSL4 Control System

The EasyTouch PL4/PSL4 Control System is designed to automatically control your pool and spa equipment, lights and other optional equipment. For maintenance and service purposes, use the MODE button, located on the outdoor control panel to manual control of all pool and spa operations. For more information, see page 13. The EasyTouch PL4/PSL4 Control System menu features let you create customized schedules for your pool and spa equipment, heat temperatures, and chlorination settings to switch on and off at a set day and time. Scheduled automatic operations can be performed at either the outdoor control panel, the optional indoor control panel and wireless control panel. For menu options, see page 20.

EasyTouch® PL4/PSL4 Control System Accessories

QuickTouch® II Wireless Controller (optional)

The optional hand held QuickTouch® II Wireless Controller can control up to four pool/spa circuits. Each of the four functions on the remote has an on and an off button. For more information, see page 50.

Indoor Control Panel (optional)

The EasyTouch PL4/PSL4 Indoor Control Panel provides you with one touch automatic control for all of your pool and spa daily operations from inside your home. The indoor control panel is connected to the Power Center enclosure.

Wireless Control Panel (optional)

The EasyTouch PL4/PSL4 Control System Wireless Controller provides complete control of pool and spa operations from inside you home or outside around your pool area. For more information, see page 55 and 65.

IntelliChlor® Salt Chlorine Generator - (optional)

The optional IntelliChlor Salt Chlorine Generator system allows the EasyTouch PL4/PSL4 Control System system to automatically control water sanitization by using a low concentration of salt (sodium chloride) in the pool and spa water. IntelliChlor automatically converts the salt into free chlorine which eliminate bacteria and algae in the pool and spa water. The chlorine will then revert back to sodium chloride after killing the bacteria. The outcome of this continuous cycle, practically eliminates the need to use sanitizing chemicals in the pool/spa water. IntelliChlor model IC20 (P/N 520554/520556) is designed for swimming pools up to 20,000 U.S. gallons (75,000 liters). Model IC40 (P/N 520555/520556) is designed for swimming pools up to 40,000 U.S. gallons (151,000 liters).

IntelliChem® Chemical Controller (optional)

The optional IntelliChem® Controller is a pH and ORP sensing device that dispenses correct amount of chlorine or bromine, muriatic acid or CO2 gas. IntelliChem provides continual analysis of your swimming pool water sanitation and pH levels, providing real-time status information to dispense the proper amount of muriatic acid (pH reducer) and chlorine or bromine for the correct sanitization and pH balance. IntelliChem Controller operates with or without a salt chlorine generator to provide a self-replenishing supply of chlorine generated from salt. IntelliChem Controller can also connect to carbon dioxide (CO2) liquid gas tanks to lower pH in your swimming pool water. When CO2 dissolves into water it produces weak neutral bicarbonate salts which reduces pH. CO2 is environmentally friendly and produces no secondary pollution into the treated water by salts such as chlorides or sulfates. IntelliChem also supports IntelliChlor® Salt Chlorine Generator to help manage your pool water sanitizer levels.

iS4 Spa-Side Remote (optional)

The iS4 Spa-Side remote controller is a double-insulated, waterproof device that is UL (1563) listed for installation at the water's edge. Installed above the water line of the spa wall, or in the deck within arm's reach of a spa occupant. The iS4 can control four circuits from the spa location. Used for activating spa circulation and any three auxiliary pieces of equipment (such as lights, jet pump, air blower, etc.). The red status LED indicator glows steady when in Spa mode and flashes while the spa is heating. For more about assigning circuits to the iS4 buttons, refer to "Settings Menu: iS4 Spa-Side Remote controller," on page 50. There are two installation choices as shown.

QuickTouch II Wireless Remote
(P/N 521245)

IntelliChlor Salt Chlorine Generator

IntelliChem Chemical Controller

iS4 Spa-Side Remote
(P/N 521885) Optional

EasyTouch® PL4/PSL4 Control System Power Center
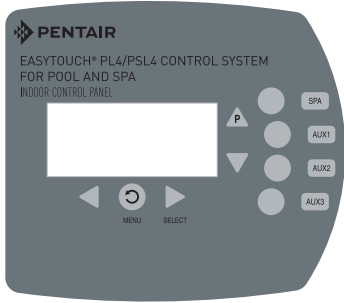
Indoor Control Panel
(3 AUX circuits)
(P/N 522465) Optional

Wireless Controller
(3 AUX circuits)
(P/N 522464) Optional

QuickTouch® II
Wireless Remote
(P/N 521245) Optional

iS4 Spa-Side Remote
(P/N 521885) Optional

Temperature Sensors
(Water, Air and Solar)

Electric Heater - Connects
to plug J16 on EasyTouch
PL4/PSL4 Control System
circuit board

Connects to Outdoor Control
Panel RS-485 COM port, located
on EasyTouch PL4/PSL4 Control
System Power Center main circuit
board

QuickTouch® II
Wireless Controller
Transceiver Antenna

EasyTouch PL4/PSL4 Control System
Outdoor Control Panel (not shown)

Low Voltage (DC)
circuit breakers

SHOWN WITH 1
SERIAL COM PORT
EXPANSION
CIRCUIT BOARD
(OPTION)
P/N 520818
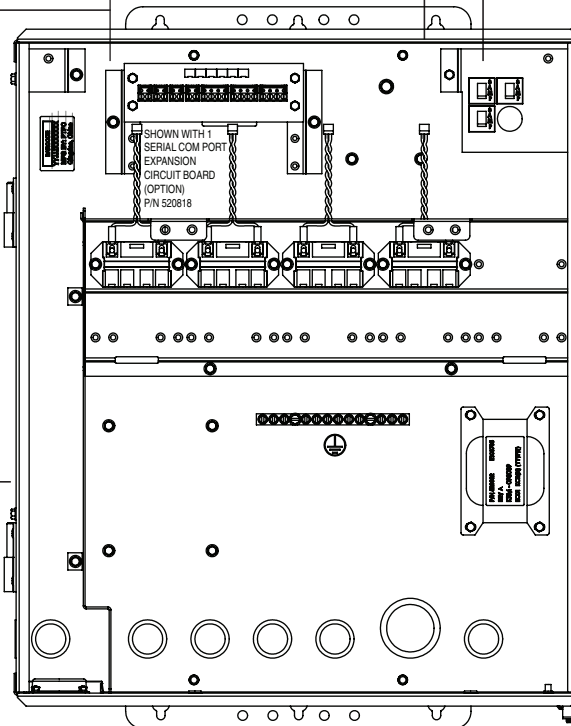
EasyTouch PL4/PSL4 Control System Power Center
(Front panel and outdoor control panel not shown)

• IntelliChlor® Salt Chlorine Generator (with
  separate Power Center):
• IC20 P/N 520554 520556
• IC40 P/N 520555/520556 (see page 26)
• IntelliChem® Controller: P/N 521357 (no
  pump), P/N 521356 (one pump), P/N
  521355 (two pump). See page 39.

• **Pumps**
  Filter, Cleaner, Spa Jet,
  1.5 HP 120 VAC
  3 HP 277 VAC
  20 FLA/120 LRA,
  120 VAC
  17 FLA/102 LRA,
  277 VAC

• **Relays**
  25 AMP, 277 VAC

• **Pool/Spa Lights**
  1.5 KW 120 VAC
  Tungsten
  4.8 KW 240 VAC
  Tungsten
  20 AMP, 277 VAC Ballast

• **Pool/Spa Valve**
  Suction and return.
  24 VAC valve actuator,
  shared equipment only

• **Auxiliary Valves**
  (Qty. 2) A and B

• **Heater**
  Gas or electric

• **Heat Pump
  (UltraTemp®)**
  Heating or cooling

• **IntelliFlo® Pumps:**

  VS Pump P/N 011018

EasyTouch® PL4/PSL4 Control Systems Outdoor Control Panel

You can fully automate your pool, spa, and lighting operations from the EasyTouch PL4/PSL4 Control Systems Outdoor Control Panel or from the optional Indoor Control Panel and Wireless Controller. For maintenance and service purposes, using the "Mode" button, the system can be switched from "Auto" mode (normal operating mode) to "Service" mode for manual operation and service purposes. Using the outdoor control panel buttons you can manually override any automatic settings. For more information, see page 13.

From the EasyTouch PL4/PSL4 Control Systems menu you create customized schedules for your pool and spa equipment, heat temperatures, and chlorination settings to switch on and off at a set day and time. Scheduled automatic operations can be performed at either the outdoor control panel, the optional indoor control panel and wireless control panel. For menu options, refer to "EasyTouch PL4/PSL4 Control Systems Menus," on page 20. The following describes the outdoor control panel buttons, and LED indicators.

If required, the optional EasyTouch PL4/PSL4 outdoor control panel can be password protected. To access a password protected control panel, simply enter the assigned the four digit password (see page 52).
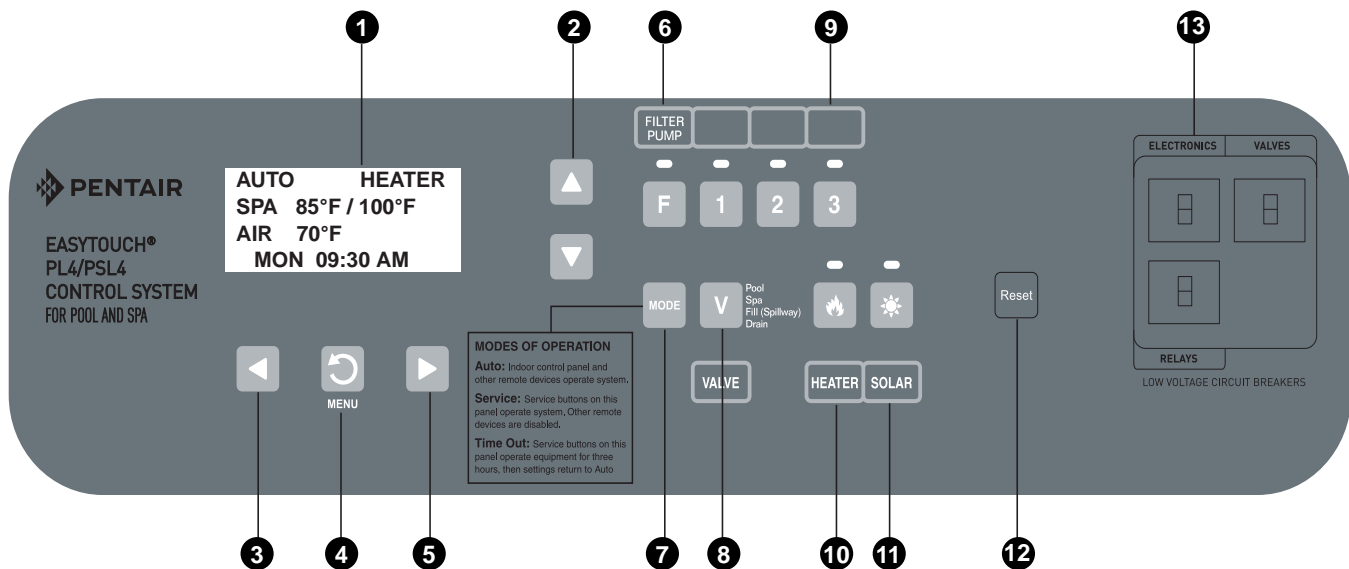
EasyTouch PL4/PSL4 Control System Outdoor Control
Panel (Located in system Power Center)

EasyTouch PL4/PSL4 Control System Outdoor Control Panel Controls

① **Liquid Crystal Display (LCD):** The main system display consists of a 16 x 4 alphanumeric character LCD with EL backlighting for easy viewing of the menu items and status messages. Press the Menu button twice to refresh the display.

② **Up/Down buttons:** Use the Up and Down buttons to scroll through the main menu items and to adjust or change settings. Use these buttons after pressing the Menu button to access the main menu items. While editing settings, press and hold the Up or Down button to fast forward or fast reverse through settings and values.

③ **Left button:** When in pool or spa mode use the **Left and Right button** to adjust the temperature level. Press the Left button to lower the set point water temperature. Press the **Filter Pump (F) button** to display the current water temperature. Use the Left button to scroll through sub-menu selections, setting and values. While editing settings, press and hold the Left button to fast reverse through settings and values.

EasyTouch® PL4/PSL4 Control System Outdoor Control Panel Controls (Continued)

④ MENU

Menu/back button (Power On - Wireless Controller): Use this button to access, save and exit from a current menu or sub-menu settings. Also, while in a menu or sub-menu items, use this button to go back to a previous menu level or item. If no menu activity is detected after five minutes, the main screen is displayed. All menu settings are permanently saved and retained in the control panel even after power is removed from the control panel. Control panel buttons are disabled while in the menu mode.

⑤ ▶

Right button: When in pool or spa mode use the Left and Right button to adjust the temperature level. Press the Right button to raise the set point water temperature. Press the Filter Pump (F) button to display the current water temperature. Use the Right button to select a sub-menu item for editing. After pressing the Menu button to access the main menu items, use the Right button to select the menu item and access the sub-menu items for adjustment. While editing a settings, press and hold the Right button to fast forward through settings and values.

⑥ FILTER PUMP ⟶ F

Filter Pump (F) button/LED: Switches a single speed filter pump on and off in "Pool" or "Spa" mode. Press the Valves (V) button to toggle between "Pool" and "Spa" mode and rotate valves. If "Heater" is enabled in the "Heat" menu (see page 30), pressing the Filter Pump button will also enable the selected heat source (Heater/Solar LED on). The default time before the filter pump will switch off is 12 hours. This button operates in "Auto" or "Service" mode.

Single-Speed Filter Pump: If the pump is currently off, press the Filter Pump button (LED on) to switch the pump on. Press the Filter Pump button again to switch the pump off. However, if the heater is operating, and a delay is enabled for valves, this allows the heater to cool down (heater cool-down), then when you press the F button to switch off the pump, only the heater will turn off, then the filter pump will automatically switch off after 10 minutes to allow the heater to cool down. Pentair Water Pool and Spa heaters do not require a cool down time. To override the "heater cool-down," press the Filter Pump button again to switch off the pump.

Two-Speed Filter Pump: Press the Filter Pump button (LED on) to switch the two-speed pump on in high speed. If you switch the pump off to low speed shortly after switching it to high speed, the filter pump will automatically remain in high speed for a few minutes before switching back to low speed to allow the pump to prime and establish normal water flow. In order to use the "2-Speed Pump" menu assignments (see page 47), the 2-Speed relay option must be installed in the EasyTouch PL4/PSL4 Control System Power Center.

Freeze Protection: This function protects the pool, plumbing, and equipment against freeze damage. If the outside air temperature sensor falls below 36° F, "Freeze Protection" is activated and the Filter Pump relay is switched on to circulate the pool water. To enable freeze protection for a circuit, see Settings Menu: Circuit Function, on page 44.

⑦ MODE

Mode button: Use this button for service purposes to manually control the EasyTouch PL4/PSL4 Control System. Press this button once activate "Service" mode, to allow AUX circuit buttons, Filter Pump, Valves, Heater and Solar buttons to be operated manually. Press the button a second time to enable "Timeout" mode. This mode is similar to "Service" mode except that the system will automatically return to normal operation (Auto) after three hours. Press the button a third time to return the system to "AUTO" mode. The current operating status is shown in the LCD display. The menu buttons, remote controllers, and menu scheduled operations are disabled (except for switching off equipment manually for emergencies) while the system is in "Service" mode.

Auto: In Auto (automatic) mode the system is in normal operating mode and is controlled by the main control panel LCD menu features.

Service: Use this mode to service pool equipment and to operate equipment manually.

Timeout: Same functionality as "Service" mode, except that the system will automatically return to normal operation (Auto) after three hours.

EasyTouch® PL4/PSL4 Control System Outdoor Control Panel Controls (Continued)

⑧ **V** **Valves (V) - (Pool/Spa/Fill (Spillway)/Drain) button:** When in normal operating mode, the Valves (V) button is in "Pool" mode. In this mode the valves are automatically rotated so that only the pool water is circulated through the system and the filter pump is activated. Pressing this button once enables "Spa" mode, and activates the filter pump to circulate only spa water through the system. "Fill/Spillway" and "Drain" mode can only be used while in "Service" mode (See Mode button for details). "Fill/Spillway" and "Drain" mode are used when cleaning the spa. Pressing the Valves (V) button again returns the system to "Pool" mode. Note that the filter pump will switch off while the pool/spa valves are rotating into position. The current operating mode is shown in the LCD display. *Note: The Valves button (Pool, Spa, Fill (Spillway), Drain) button has no function in "Pool only" or "Spa only" systems. For PL4/PLS4 Control System single body system, "Pool" and "Spa" modes are Lo- Temp (Pool) and Hi-Temp (Spa) temperature controls. For more information, see "Hi-Temp/Lo-Temp Controls for Single Body Systems," page 42.*

⑨ **1** **Aux 1-3 buttons/LEDs:** Auxiliary output circuit buttons operate the pool and spa system valves, lights and other equipment. These auxiliary circuits are assigned in the "Circuit Function" menu, see page 46 for details. There are three auxiliary circuits (AUX 1- 3) on the PL4/PLS4 Control System Outdoor Control Panel. Labels can be affixed next to each auxiliary button to identify the circuit function. When an auxiliary circuit is activated or the button is pressed, the LED is on. Pressing an auxiliary circuit button will activate the corresponding circuit in either "Auto" or "Service" mode. When a circuit relay is switched on manually, it remains on until either you switch it off manually, or the next time the relay is scheduled to be switched off. For example, if the filter pump is scheduled to automatically run from 9:00 AM to 5:00 PM daily then the filter pump is switched on manually at 9:00 PM (schedule interrupted), it will run continuously until the next day at 6:00 PM then switch off. The schedule will then continue from then on. Note: A circuit turned on manually will run as long as the "Egg Timer" is set for default 12 hours.

⑩ **Heater (Flame) button/LED:** This button is only used in "Service" mode for manual heat on and off control. The Heater LED will be on if "Heater" is enabled in the "Heat" menu setting (see page 30). Switching the heater on automatically controls the output between a "forced off" state and a normal automatic thermostatic control operating state. The heater will continue heating the water until the heater's current highest set point temperature triggers the heater sensor (approximately 104° F). Note that the Heater button does not activate the pump. Do not activate the heater without running the pump. The heater will not run if water flow is not detected.

⑪ **Solar (Sun) button/LED:** In solar mode this button is only used in "Service" mode for manual solar heat on and off control. The Solar LED will be on if "Solar" is enabled in the "Heat" menu setting. Solar must also be enabled in the "Solar" menu. Use the Solar button to manually switch the heater control output between a "forced off" state and a normal automatic thermostatic control operating state. When this button is pressed the solar relay is switched on to activate a booster pump, if installed, and activates valves to rotate to divert water through solar heating panels.

⑫ Reset **Reset button:** Press this button to reinitialize the EasyTouch PL4/PSL4 Control System outdoor control panel.

⑬ **Low voltage circuit breakers:** Three amp circuit breakers protect the low voltage EasyTouch PL4/PSL4 Control System main circuit board circuits, relays and valves.

EasyTouch® PL4/PSL4 Control System Indoor Control Panel (Optional)

The EasyTouch PL4/PSL4 Control System Indoor Control Panel allows you to control the pool and spa daily operations from around your pool area or inside your home. Use the "P" (Pool) and "Spa" (Pool) buttons to heat and filter your pool and spa. The indoor control panel connects to the EasyTouch PL4/PSL4 Control System main circuit board located in the Power Center.

AUTO (Automatic): The system is in normal operating mode. Scheduled programs will run automatically. SERVICE or TIMEOUT mode are displayed when the system is being serviced. These modes are activated from the Outdoor Control Panel.
HEATER: Heater is switched on. Displays when the Pool (P) or Spa button is pressed. For pool operations the heat source must be enabled in the Heat menu (see page 30). Displays "Solar" or "Solar Prf" if solar is enabled. The heater is active when the set temperature is higher than the water temperature. The heater will switch off when the water temperature rises above the set temperature.
SPA (Hi-T) or POOL (LO-T) : Displays when the Spa/HI-T or Pool/LO-T button is pressed to rotate valve actuators and activate the filter pump and heater. This line on the screen is blank when no spa or pool function is active. Note: Depending on the configuration of the PL4/PLS4 Control System, the screen displays SPA (shared equipment - EasyTouch PSL4 Control System), HI-T (single body of water - EasyTouch PL4 Control System). system), POOL (shared equipment), LO-T (single body of water system).
85° F / 100° F: Displays the actual spa or pool water temperature (85° F) and the set point temperature (100° F) as set in the Heater menu. Degree units are displayed in either Fahrenheit or Celsius.
AIR: Displays the actual outside air temperature (70° F) as read by the air sensor located near the PL4/PLS4 Control System Power Center. Degree units are displayed in either Fahrenheit or Celsius (see page 49).
FRZ: Displays when freeze protection is active. To protect pool system equipment, freeze protection must be enabled for the filter pump circuit. If the outside air temperature sensor detects the temperature is getting close to freezing point (below 36° F (2° C)), the freeze protection feature switches on the filter pump circuit to circulate water through the system. For more information, see page 44.
DEL: Displays when "Delay Cancel" is active. For more information, see page 31.
Date and Time: Displays the PL4/PLS4 Control System day and time as specified in the "Clock" menu setting (see page 34).

Spa (Hi-Temp) Button: Switches the filter pump on, rotates valve actuator (to isolate spa water from pool water), and switches the heater on. Hi-Temp (single body system) sets the high temperature settings for the spa.

Pool (Lo-Temp) Button: Switches the filter pump on, rotates valve actuator (to isolate pool water from spa water), and switches heater on. Lo-Temp (single body system) sets the low temperature settings for the pool.

Set Temperature buttons, see page 3.

Circuit LED.
Circuit name label.

Three (3) user defined auxiliary circuits. Buttons switch the assigned circuit function on/off. (Default time is a 12 hour time-out).

PENTAIR

EASYTOUCH® PL4/PSL4 CONTROL SYSTEM FOR POOL AND SPA
INDOOR CONTROL PANEL

```
AUTO        HEATER
SPA      85°F / 100°F
AIR      70°F     FRZ
   MON  09:30 AM
```

P

SPA
AUX1
AUX2
AUX3

MENU   SELECT

(Left arrow button)
Lower set temperature

(Right arrow button)
Raise set temperature

EasyTouch PL4/PSL4 Control System Indoor Control Panel

EasyTouch® PL4/PSL4 Control System Wireless Controller (Optional)

The EasyTouch PL4/PSL4 Control System Wireless Controller allows you to control your pool and spa daily operations from around your pool area or inside your home. Use the "P" (Pool) and "Spa" (Pool) buttons to heat and filter your pool and spa. The wireless controller communicates with the outdoor control panel via the transceiver located near the Power Center.

AUTO (Automatic): The system is in normal operating mode. Scheduled programs will run automatically. SERVICE or TIMEOUT mode are displayed when the system is being serviced. These modes are activated from the Outdoor Control Panel.

HEATER: Heater is switched on. Displays when the Pool (P) or Spa button is pressed. For pool operations the heat source must be enabled in the Heat menu (see page 30). Displays "Solar" or "Solar Prf" if solar is enabled. The heater is active when the set temperature is higher than the water temperature. The heater will switch off when the water temperature rises above the set temperature.

SPA (Hi-T) or POOL (LO-T) : Displays when the Spa/HI-T or Pool/LO-T button is pressed to rotate valve actuators and activate the filter pump and heater. This line on the screen is blank when no spa or pool function is active. Note: Depending on the configuration of the PL4/PLS4 Control System, the screen displays SPA (shared equipment - EasyTouch PSL4 Control System), HI-T (single body of water system - EasyTouch PL4 Control System), POOL (shared equipment), LO-T (single body of water system).

85° F / 100° F: Displays the actual spa or pool water temperature (85° F) and the set point temperature (100° F) as set in the Heater menu. Degree units are displayed in either Fahrenheit or Celsius.

AIR: Displays the actual outside air temperature (70° F) as read by the air sensor located near the PL4/PLS4 Control System Power Center. Degree units are displayed in either Fahrenheit or Celsius (see page 51).

FRZ: Displays when freeze protection is active. To protect pool system equipment, freeze protection must be enabled for the filter pump circuit. If the outside air temperature sensor detects the temperature is getting close to freezing point (below 36° F (2° C)), the freeze protection feature switches on the filter pump circuit to circulate water through the system. For more information, see page 46.

DEL: Displays when "Delay Cancel" is active. For more information, see page 31.

Date and Time: Displays the PL4/PLS4 Control System day and time as specified in the "Clock" menu setting (see page 34).

Battery icon: Displays the available battery power usage for the device. See page 11 for details.

Spa (Hi-Temp) Button: Switches the filter pump on, rotates valve actuator (to isolate spa water from pool water), and switches the heater on. Hi-Temp (single body system) sets the high temperature settings for the spa.

Pool (Lo-Temp) Button: Switches the filter pump on, rotates valve actuator (to isolate pool water from spa water), and switches heater on. Lo-Temp (single body system) sets the low temperature settings for the pool.

Set Temperature buttons, see page 3.

(Left arrow button) Lower set temperature
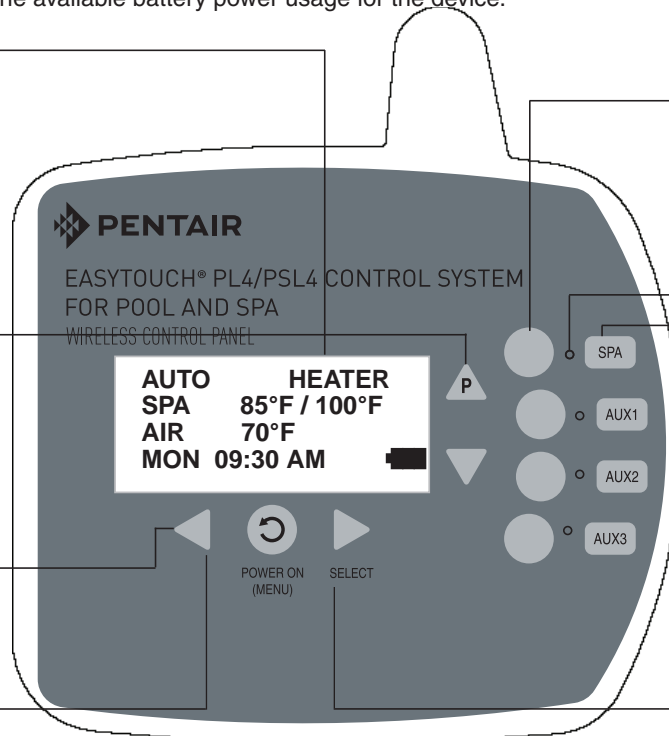
Circuit LED. Circuit name label.

Three (3) user defined auxiliary circuits. Buttons switch the assigned circuit function on/off (Default time is a 12 hour time-out).

(Right arrow button) Raise set temperature

EASYTOUCH® PL4/PSL4 CONTROL SYSTEM FOR POOL AND SPA
WIRELESS CONTROL PANEL

```
AUTO        HEATER
SPA      85°F / 100°F
AIR      70°F
MON  09:30 AM
```

P

SPA

AUX1

AUX2

AUX3

POWER ON (MENU)   SELECT

EasyTouch® PL4/PSL4 Control System Wireless Controller

EasyTouch® PL4/PSL4 Control System Indoor Control Panel and Wireless Controller Buttons

Spa button/LED: For spa operations. Press the Spa button to activate the filter pump to rotate the pool/spa valve actuators and circulate the spa water (LED on). Press the button again to switch the filter pump off (LED off). While the valves are rotating into position the filter pump will switch off. For service or testing purposes, if the heater is enabled in the Heat menu, pressing this button will also activate the heater. For normal spa operations the heater is automatically switched on with the filter pump (see Man Heat page 42) regardless of the Heat menu setting. When this button is pressed the circuit is activated, the LED is on and "SPA" is displayed on the screen with the current and set point water temperatures. Once the filter pump is switched on it will run for 12 hours unless it is switched off. When this button is pressed, the LEDs on the outdoor control panel Filter Pump (F) button, Valves (V) button, and Heater button (if enabled in the Heat menu) will be on. If this display line is blank, it indicates no spa or pool function is currently active.

Pool Button: For pool operations. Press the Pool (P) button to activate the filter pump, rotate the pool/spa valve actuators and circulate the pool water and switch on the heater (if enabled in the Heat menu). Press the button again to switch the filter pump off. While the valves are rotating into position the filter pump will switch off. When this button is pressed the circuit is activated and "POOL" is displayed on the screen with actual and set point water temperatures. When the filter pump is switched on it will run for 12 hours unless it is switched off. When this button is pressed, the LEDs on the outdoor control panel Filter Pump (F) button, Valves (V) button, and Heater button (if enabled in the Heat menu) will be on. If this display line is blank, it indicates no pool or spa function is currently active.

- **Single-Speed Filter Pump:** If the pump is currently off, press the Pool button to switch the pump on. Press the Pool button again to switch the pump off. However, if the heater is operating, and a delay is enabled for valves, this allows the heater to cool down (heater cool-down), then when you press the Pool button to switch off the pump, only the heater will turn off, then the filter pump will automatically switch off after 10 minutes to allow the heater to cool down. To override the "heater cool-down," press the **Pool button** again to switch off the pump.

- **Two-Speed Filter Pump:** Press the Pool button to switch the two-speed pump on in high speed. Press the Pool button again to run the pump in low speed. In order to use the "2-Speed Pump" menu assignments (see page 36), the 2-Speed relay option must be installed in the EasyTouch Power Center.

  Notes about Freeze Protection: This function protects the pool, plumbing, and equipment against freeze damage. If the outside air temperature sensor falls below 36° F (2° C), "Freeze Protection" is activated and the Filter Pump relay is switched on to circulate the pool water. To enable freeze protection for a circuit, see "Settings Menu: Circuit Functions, " on page 44.

  Liquid Crystal Display (LCD): The main system display consists of a 16 x 4 alphanumeric character LCD with EL backlighting for easy viewing of the menu items, and status messages. Press the Menu button twice to refresh the display.

Left button: When in pool or spa mode, press the Left button to lower the set point water temperature. Press the Spa or Pool (Up arrow **P**) button (page 8) to display the current water temperature. While in the main menu, press the Left button to scroll through sub-menu selections, setting and values. While editing settings, press and hold the Left button to fast reverse through settings and values.

EasyTouch PL4/PSL4 Control System Indoor Control Panel and Wireless Controller Buttons (Continued)

Menu/Back button: Press the Menu/Back button to access, save and exit the menu settings. Use this button to exit from main menu or sub-menu items. Pressing the Menu/Back button while in a menu item will return to the main status screen. If no menu activity is detected after five minutes, the main screen is displayed. All menu settings are permanently saved and retained in the control panel even after power is removed from the control panel. Control panel buttons are disabled while in menu mode.

MENU

Power ON, Menu/Back button (Wireless Controller): Use this button to power on the EasyTouch PL4/PSL4 Wireless Controller. If there has been no button activity for 60 seconds (see page 54). The Menu/Back button to access, save and exit the system menu settings. Use this button to exit from main menu or sub-menu items. Pressing the Menu/Back button while in a menu item will return to the main status screen. If no menu activity is detected after five minutes, the main screen is displayed. All menu settings are permanently saved and retained in the control panel even after power is removed from the control panel. Control panel buttons are disabled while in "menu" mode.

POWER ON MENU

Right button: When in pool or spa mode use the Left and Right button to adjust the temperature level. Press the Right button to raise the set point water temperature. Press the Filter Pump (F) button to display the current water temperature. Use the Right button to select a sub-menu item for editing. After pressing the Menu button to access the main menu items, use the Right button to select the menu item and access the sub-menu items for adjustment. While editing a settings, press and hold the Right button to fast forward through settings and values.

AUX (1-3) buttons/LEDs: The auxiliary output circuit buttons operate the pool and spa system valve actuators, lights and other equipment. The auxiliary (AUX) relay circuits are assigned in the "Circuit Functions" menu, see page 46 for details. There are three auxiliary circuits (AUX 1- 3) on the EasyTouch PL4/PSL4 Control System Indoor Control Panel. Labels can be affixed next to each auxiliary button to identify the circuit function. When an auxiliary circuit is activated or the button is pressed, the LED is on. Pressing an auxiliary circuit button will activate the corresponding circuit in either "Auto" or "Service" mode. When a circuit relay is switched on manually, it remains on until either you switch it off manually, or the next time the relay is scheduled to be switched off. For example, if the filter pump is scheduled to automatically run from 9:00 AM to 5:00 PM daily then the filter pump is switched on manually at 9:00 PM, it will run continuously until the next day at 5:00 PM then switch off. The schedule will then continue from then on. AUX buttons are disabled while in the main menu. *Note: A circuit turned on manually will run as long as the "Egg Timer" is set for default 12 hours.*

Up/Down buttons: Use the Up and Down buttons to scroll through the main menu items and to adjust or change settings. Use these buttons after pressing the Menu button to access the main menu items. While editing settings, press and hold the Up or Down button to fast forward or fast reverse through settings and values.

EasyTouch® PL4/PLS4 Control System Wireless Controller Power Saving Options and Changing Batteries

Power Save Options

Use the power save function to reduce power consumption and extend battery life. The power save options are:

- **Idle Time:** If there is no control panel activity, the idle time can be set to 60 seconds (default), 30 seconds, or five minutes before it shuts down. The default time is 60 seconds. For information about accessing the idle time options menu, see page 54.

Note: If the unit is not used for 60 seconds the power save function switches off the unit. To switch the unit on, press the POWER ON button (see page 10).

Backlight Options

Use the backlight on time power save options to reduce power consumption and extend battery life. To access the Backlight options menu, see page 48. The backlight options are:

- **On Time:** Backlight is on for 60 seconds, 30 seconds, five minutes, or off. The default setting is 30 seconds.
- **Brightness:** Backlight brightness can be set to low, medium or high. The default setting is medium.

Battery Replacement

The average life for the EasyTouch® Control System Wireless Controller batteries can last the summer season with normal use. Battery life varies depending on the type of batteries used and the amount of usage. The following battery types are compatible with the wireless controller:

- AA-size alkaline battery (four provided in the kit)
- AA-size Ni-MH rechargeable battery (four purchased separately)

Safety Precautions when using batteries

Read the following important information before installing batteries into the wireless controller.

- Never use batteries with split or peeling outer casings
- Never use combinations of different types of batteries or new and used batteries together
- Do not use manganese or Ni-Cd batteries
- Ensure that batteries poles are clean. Dirty poles can shorten battery life
- The time for which AA-size alkaline batteries can be used vary depending on the brand. Some brands may provide less power than others. Note that the time Alkaline batteries can be used decreases in cold conditions (0° C to 10° C (32° F to 50° F)). Therefore, it is recommended to use AA-size Ni-MH batteries in the unit.
- When first purchased, or if left unused for a long period, the amount of time that the AA-size alkaline, Ni-MH, or rechargeable batteries can be used, may be shortened.

Checking the battery charge

A check battery status icon displays on the main screen of the wireless controller. The check battery icon is located in the lower right corner of the main screen.

Check battery icons

AUTO	HEATER
SPA	85°F / 100°F
AIR	70°F
MON	09:30 AM
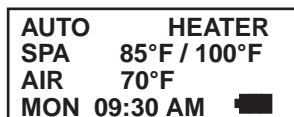
Ample battery charge.

Sufficient charge left in the batteries to operate the unit. The unit's estimated battery life varies greatly depending on use and backlight display time (see page 12).

Batteries are depleted. Before the batteries are completely depleted this icon will start flashing, indicating that the LCD will shortly go blank and the wireless controller will stop working. Replace or recharge the batteries. Depending on the type of batteries installed, this icon may display more quickly.

Installing Batteries

The PL4/PLS4 Control System Wireless Controller is shipped with four AA-size alkaline batteries. Before using the unit install the batteries.

To install batteries:

1. Place the PL4/PLS4 Control System Wireless Controller face down on a flat clean surface. Remove the six screws securing the battery cover. Set the cover aside.

Screw (6x)
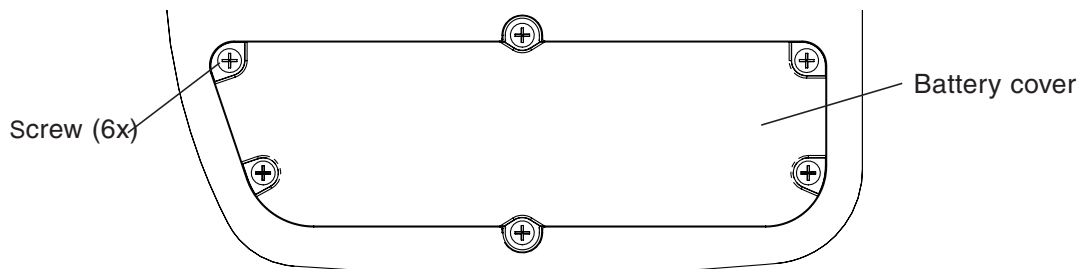
Battery cover

EasyTouch PL4/PSL4 Control System Wireless Controller (rear view)

2. Load the four batteries into the battery compartment. Orient the positive polarity end of each battery as shown below.
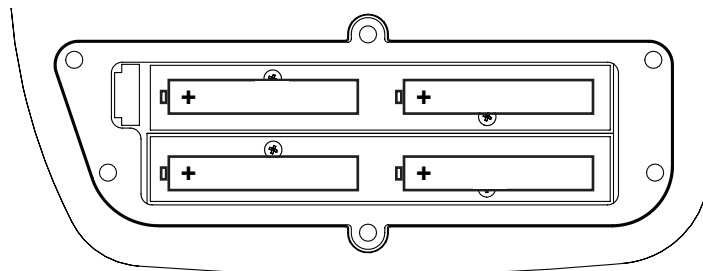
3. Install the battery cover and secure with the six screws. Make sure that the battery cover is secure and that all the screws are hand tightened. CAUTION - DO NOT OVER TIGHTEN THE SCREWS. OVER TIGHTENING THE SCREWS CAN DAMAGE THE UNIT.

4. Power up the unit: To switch the unit on, press the Power On button located on the front of the unit.

5. Display messages after replacing batteries: After replacing depleted batteries a check battery message is displayed on the screen. Press the MENU button to continue.

6. The screen will then display a second message to check the battery cover. After checking that the battery cover is secure and that all screws are tightened, press the MENU button.

    The battery icon should display the fully charged icon. The unit is ready for use.

EasyTouch® PL4/PSL4 Control System Outdoor Control Panel Operating Modes

The EasyTouch PL4/PSL4 Control System can run in automatic mode or manual mode. Use the "Mode" button to switch the system from "Auto" mode (normal operating mode) to "Service" for manual operation and service purposes. Before operating the system, familiarize yourself with the LCD status messages and operating buttons.

AUTO (Automatic): The system is in normal operating mode. Scheduled programs will run automatically.

HEATER: Displays the heat source (**Off, Heater, Solar Prf., Solar**) as specified in the Heater menu settings (see page 30). When the Filter Pump (F) button is pressed in "Pool" or "Spa" mode, and heat source is enabled (Heater button LED on).

POOL (SPA): Indicates that the Valves (V) button is in "Pool" or "Spa" mode and the Filter Pump (F) button has been pressed to switch on the filter pump. If this display line is blank, it indicates no spa or pool function is active. For a single body system, Hi-Temp (Spa) / Lo-Temp (Pool) sets the temperature settings (see page 44)

85° F / 100° F: Displays the actual spa or pool water temperature (85° F) and the set point temperature (100° F) as set in the "Heat" menu (see page 30).

AIR: Displays the actual outside air temperature (70° F) as read by the air sensor located near the Power Center.

Date and Time: Displays the system day and time as specified in the "Clock" menu settings (see page 34).

Left and Right Button:
Use these buttons to lower and raise the current set point water temperature level.


```
AUTO        HEATER
SPA    85°F / 100°F
AIR       70°F
   MON  09:30 AM
```

MODES OF OPERATION
Auto: Indoor control panel and other remote devices operate system.
Service: Service buttons on this panel operate system. Other remote devices are disabled.
Time Out: Service buttons on this panel operate equipment for three hours, then settings return to Auto
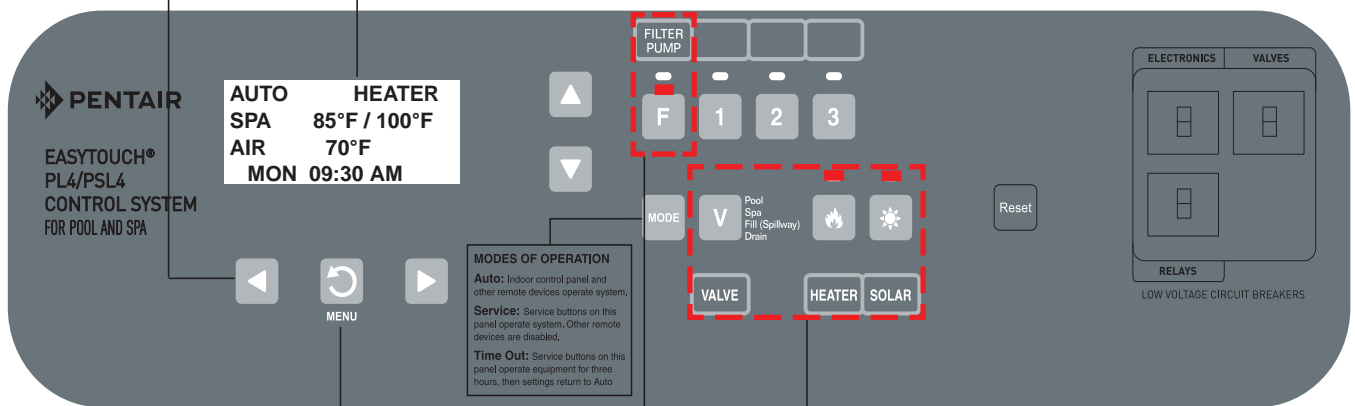
MENU / BACK button:
Access the system menu. Also used to save and exit from a current menu or sub-menu settings. While in menu mode, all system control panel buttons are disabled. Press this button twice to refresh the display.

Filter Pump button:
For spa operations, press the **Valves (V)** button to rotate valves into "Spa" mode, then press the **Filter (F)** button to activate the filter pump. Press the Valves button to toggle to "Pool" mode. The Heater button LED will be on if a heat source is enabled in the Heat menu.

Valves (V) button: When in normal operating mode, the system is in "Pool" mode so that only the pool water is circulated through the system. Press the Valves button to enable "Spa" mode and to rotate valves and activate the Filter pump (Filter Pump LED on) automatically so that only the spa water is circulated through the system. Note that the filter pump will switch off while the pool/spa valves are rotating into position. "Fill/Spillway" and "Drain" modes are used only in "Service" mode.

Quick Start - Pool and Spa Operations (Shared Equipment)

The following describes how to adjust the heat temperature for the spa and pool water, schedule a daily run time for the pool/spa filter pump and control lights.

Heating your Spa (manual control)

Heating the spa water on demand is easy, just press the **SPA button** to switch the heater on. The control panel will display the current temperature setting. Heater" is displayed when the heater is active. The heater is active when the set temperature is higher than the water temperature. The heater will switch off when the water temperature rises above the set temperature. For more information about the spa manual heating "MAN HEAT" feature, see page 51. Pressing the Spa button will switch the filter pump on and rotate the spa valve actuator to isolate and circulate the spa water from the pool water.

Heating your Pool (manual control)

Heating the pool water is normally part of the daily scheduled program (see page 32). However, if you need to adjust the pool water temperature, press the **Pool (P) button** to display the current temperature settings on the PL4/PLS4 Control System Indoor Control Panel. "Heater" will be displayed on the screen when the heater is active and a heat source has been selected in the Heat menu. The heater is active when the set temperature, as specified in the Heat menu, is higher than the water temperature. For more information about selecting a heat source and setting the pool water temperature setting, see page 30. Pressing the Pool button will switch the filter pump on and rotate the pool valve actuator to isolate and circulate the pool water from the spa water.

Adjusting the water temperature setting

To adjust the set temperature setting for the pool or spa water, either use the **Left arrow button** to lower the temperature setting or the **Right arrow button** to higher the temperature setting.

Schedule start and stop times for equipment

From the Schedules menu you can set the a start and stop time to automatically run pool and spa equipment and control underwater and backyard lights. For example, the filter pump relay circuit can be scheduled to run the daily pool and spa filtration at a specific time and day(s) of the week. Up to 4 total program schedules may be created for all relay circuits combined. The pool and spa circuits can also be scheduled to switch on the heater to heat the pool or spa water up to the set point temperature as set in the "Heat" menu (see page 30). If the pool has a separate jet pump or blower controlled by AUX 1 and/or AUX 2 , these need to be scheduled separately. For more information, see page 16.

Schedules

MENU ▷ SCHEDULES ▷ SPA (POOL)

To create a schedule to heat the spa:

```
► SPA        0  ▲
  POOL       0
  AUX 1      0
  AUX 2      0  ▼
```

```
  SPA       0/0  ▲
  Mode: New

```

```
  SPA       1/1  ▲
  Mode: Schedule
  06:00P - 08:00P
  SMTWTFS        ▼
```

Right button: Select the **Spa** circuit. The standard generic circuit names are: Spa, Pool, Aux1-3, Features 1-2. **Right button:** Select **Mode** if there are existing programs. Skip this step to create a new program.

Up/Down button: Select **New** to create a new program.

Right button: To create a new program and enter the Mode settings.

Up/Down button: 1/1 indicates that this circuit has one program. If there are existing programs assigned to this circuit, use these buttons to view and select the existing program settings.

Right button: To select the Schedule settings. **Right button:** Move to start and stop time settings.

Up/Down and Right buttons: Set start and stop hour (A/P), minutes.

The A (AM) and P (PM) time is set when setting the start and stop hour (6:00 PM to 8:00 PM).

Right button: Move to days of the week to run the program.

Right and Up/Down buttons: By default the program is set to run all the days of the week. If you wish to edit which days to run the program, select the day of the week, then press the

Up/Down button to remove the bar from the top of the letter. A bar on top of the letter indicates the day selected to run the program. In this example Sunday and Tuesday are scheduled. Press the **Menu** button to save the settings and to return to the Schedules menu options. Press the **Menu** button again to return to the main menu options or press again to return to the Main screen.

Quick Start - (Pool and Spa Operations (Shared Equipment) Continued

The following describes how to adjust heat temperature for the spa and pool water, schedule a daily run time for the pool/spa filter pump and control lights for shared equipment.

Heat your spa or pool

```
AUTO        HEATER
SPA    85°F / 100°F
AIR    70°F
  MON  09:30 AM
```

First enable the heat source (see "Adjust your spa heat settings" below) then press the **Valves (V)** button to enable "Spa" mode, and press the **Filter Pump** button to activate the filter pump. When in normal operating mode, the Valves (V) button is in "Pool" mode which turns valves and activates the filter pump automatically so that only the pool water is circulated through the system. Press the button to enable "Spa" mode and activate the Filter pump to circulate only spa water through the system. In the main screen shown on left, 95°F (35°) is the current temperature and 100° F (38° C) is set point temperature. By default, the setting "**Man Heat'** is set to "**On**" (see page 53) which allows the spa to begin to heat whenever it is manually switched on.

From the Indoor or wireless control panel (option): First enable the heat source in the Heat menu (see "Heat Menu," on page 30). Press the **Spa** button (top button) to switch the filter pump on, rotate the valve actuator (to isolate spa water from pool water), and switch the heater on. Press the **Pool** button to switch the filter pump on, rotate the valve actuator (to isolate pool water from spa water), and switch the heater on. For Pool and Spa button location, see page 5 (#6).

Adjust your spa or pool heat settings

From the "Heat" menu (**MENU > HEAT > POOL TEMP/SRC OR SPA TEMP/SCR**) you can select the heat source and set the water temperature. The spa or pool water will heat to the settings specified. The EasyTouch PL4/PSL4 Control System allows for solar and conventional heaters. The system will use the heating source that is selected. The heat source selections are:

- **OFF -** No heating even though pump and other circuits may be operating.
- **HEATER -** Gas heater only.
- **SOLAR** - Solar heating system to be the only heat source. In order to display "Solar Only" as a heat option in the "Heat" menu, you must first enable solar in the **Settings > Solar** menu, (see page 49).
- **SOLAR PREF. (Solar Preferred)** - Used if solar and gas heating are combined and you want to use solar heating only when it is most effective. In order to display "Solar Preferred" as a heat option in the "Heat" menu, you must first enable solar in the **Settings > Solar** menu.
- **Heat Pump (UltraTemp):** If a heat pump is being used (UltraTemp), enable the UltraTemp and heating setting from the **SETTINGS > HEAT PUMP COM > SETTINGS** menu options (see page 41).

To set the spa temperature set point and select the heat source:

MENU ▽HEAT

```
   POOL Temp/Src     ▲
 ▶SPA   Temp/Src
                     ▼
```

Right button: Select spa temperature and heat source.
Up/Down button: Adjust the spa water temperature from 40° F to 104° F (4° C to 40° C)
Right or Left button: Move to Heat source options.
Up/Down: Set the Heat option: **Off, Heater, Solar,** or **Solar Preferred**.

```
 SPA                 ▲

 Set Temp: 85° F
 Heat:  Heater       ▼
```

Press the **Menu** button to save the settings and to return to the Heat menu or press the button again to return to the main screen. **Note:** Select "**POOL Temp/Src**" to adjust the pool temperature.

Quick Start - Spa and Pool Operations (Shared Equipment) Continued

Controlling Lights

MENU▷SCHEDULES▷SPA (POOL)

From the Lights screen you can manually switch all lights on or off, configure and synchronize colored lights. For more information about setting up IntelliBrite colored show modes, fixed colored lights, S*Am* and S*AL* Color Swim and Color Set modes, refer to the Lights Menu on page 23.

```
Modes          ▲
Colors
All On
All Off        ▼
```

To manually switch on or off all lights:

Up/Down button: Select: **All Off** or **All On**.
Press the **Menu** button save the settings and to return to the main menu items or press the button again to return to the Main screen.

Switch on lights manually and synchronize light colors

From the Lights screen you can manually switch all lights on or off, and synchronize colored lights. Up to three (3) lights can be controlled. For more information about setting up lights, including IntelliBrite® LED lights and MagicStream® laminars, refer to "Lights Menu" on page 25.

MENU ▽LIGHTS ▽ALL ON

To manually switch on all lights and synchronize light colors:

```
  Modes        ▲
  Colors
▸All On
  All Off       ▼
```

Press the **Up/Down button** to select **All On** or **All Off**. Use the **Sync** feature with any combination of up to three (3) S*Am*®, S*AL*®, IntelliBrite, FIBER*works*® lights and MagicStream laminars to synchronize their colors before switching the lights on. Press the **Menu** button to save the settings and to return to the main menu items or press the button again to return to the main screen.

Schedule start and stop times for equipment

You can set timers (schedules) to automatically run equipment for pool filtration or turn on or off lights. Any EasyTouch PL4/PSL4 circuit can be set to switch on and off on every or any day of the week. Up to four (4) total system programs may be created for all circuits combined.

You can use the "Schedule" feature to set the time and day(s) when to switch the filter pump on and rotate the pool/spa valves into the "Pool" or "Spa" position. The heater will automatically heat the pool or spa water up to the set point temperature as set in the "Heat" menu (see page 30). If the pool has a separate jet pump or blower controlled by AUX 1 and/or AUX 2 , these need to be scheduled separately. If you don't have enough or you need to conserve auxiliary relay circuits, you can program up to four "Feature Circuits." If a feature circuit is scheduled, it must be turned on from the control panel "Feature Circuits" menu to allow the schedule to run (see page 23).

Quick Start - Spa and Pool Operations (Shared Equipment) Continued

MENU▽SCHEDULES▷SPA (POOL)

To create a schedule for your spa or pool:

▸SPA	0	▲
POOL	0	
AUX 1	0	
AUX 2	0	▼

SPA	0/0	▲
Mode: None (New)		

SPA	1/1	▲
Mode: Schedule		
08:00A - 05:00P		
smtwtfs		▼

Right button: Select the **Spa** or **Pool** circuit. You can also select any of the available circuits. The generic circuit names are: Spa, Pool, Aux 1-3, Feature 1-2.
Right button: Select **Mode** if there are existing programs. Skip this step to create a new program.
Up/Down button: Select **New** to create a new program.
Right button: To create a new program and enter the "Mode" settings.
Up/Down button: 1/1 indicates that this circuit has one program. If there are existing programs assigned to this circuit, use these buttons to view and select the existing program settings.
Right button: To select the "Schedule" settings.
Right button: Move to start and stop time settings.
Up/Down and Right buttons: Set start and stop hour (A/P), minutes.
The A (AM) and P (PM) time is set when setting the start and stop hour.
Right button: Move to days of the week to run the program.
Right and Up/Down buttons: By default the program is set to run all the days of the week. If you wish to edit which days to run the program, select the day of the week, then press the **Up/Down** button to remove the bar from the top of the letter. A bar on top of the letter indicates the day selected to run the program.
Press the **Menu** button to save the settings and to return to the Schedules menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Setting the Egg Timer Feature (One time schedule)

The "Egg Timer" feature lets you manually switch on equipment and program the system to automatically switch off after a specified time. You can set this timer feature for other equipment such as lighting, spa, or spa jets. Equipment can be set to be on for one minute or 24 hours. The Egg Timer program is factory set to switch off after 12 hours. You also have the option to use the "Don't Stop" feature to run a circuit continuously until manually switched off.

Please note that in the event of a power failure, the Egg Timer feature will not switch the circuit back on. Use the "Service" mode button to turn the equipment back on manually. Refer to "Mode button," page 5 for details.

Note: When running the filter pump continuously during a new pool start up, it is recommended to use the "Service" mode, which will automatically restart the filter pump in the event of a power failure.

To set the Egg Timer feature:

MENU▽SCHEDULES▷SPA (POOL)

▸SPA 0 ▲ POOL 0 AUX 1 0 AUX 2 0 ▼	**Right button:** Select the **Spa** or **Pool** circuit. You can also select any of the available circuits. The generic circuit names are: Spa, Pool, Aux 1-3, and Feature 1-2.
	Right button: Select **Mode** if there are existing programs. Skip this step to create a new program.
SPA 0/0 ▲ Mode: None (New)	**Up/Down button:** Select **New** to create a new program.
	Right button: To create a new program and enter the "Mode" settings.
	Up/Down button: 1/1 indicates that this circuit has one program. You can create a total of 4 programs. If there are existing programs assigned to this circuit, use these buttons to view and select the existing program settings.
SPA 1/1 ▲ Mode: Egg Timer Time: 05:00 ▼	**Right button:** To select the "Egg Timer" settings.
	Right button: Move to the time settings.
	Up/Down and Right buttons: Set the hour and minutes for the program to run. The count down time can be set from 00:01 to 23:59 and Don't Stop. The "Don't Stop" feature allows the circuit to run continuously until manually switched off.
	Press the **Menu** button to save the settings and to return to the Schedules menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Section 2
Setting up the EasyTouch® PL4/PSL4 Control System

Setting up the EasyTouch PL4/PSL4 Control System for the First Time

Use the following steps if you are setting up the EasyTouch PL4/PSL4 Control System for the first time. *Note: The following setup steps assume that the EasyTouch PL4/PSL4 Control System Power Center is installed at the equipment pad and ready for operation. For more information see the EasyTouch PL4/PSL4 Control System Power Center installation instructions (P/N 520583).*
The recommended first time installation steps for the EasyTouch PL4/PSL4 Control System are:

1. **Set the system date and time (page 34)**
   Set the current date and time.

2. **Assign circuit names (pages 42)**
   Assign the generic default circuit names for output auxiliary equipment. Rename (if necessary) and assign circuit names to the auxiliary (AUX 1, AUX 2, AUX3) connections. Note the factory set auxiliary names correspond to the plug-in location of the relay on the motherboard. You can assign circuit names from the available of circuit names. There are nearly 100 circuit names available (see page 43 for the complete list).

3. **Create custom names for auxiliary circuits (page 46)**
   If you cannot find a circuit name that fits your application you can create up to 10 additional customized names that can be created before assigning circuit names.

4. **Assign a "Circuit Function" to a "Circuit Name" (Page 44)**
   Assign "Circuit Functions" (1-7) to the auxiliary circuit names you created in Step 3 above. From the Circuit Function menu, you can assign special logic to a circuit by selecting one of the available circuit functions. For the complete list of preset Circuit Functions. If an auxiliary circuit (AUX) is assigned GENERIC (simple ON/ OFF when the button is pushed) then nothing needs to be done.

5. **Create "Feature Circuits" to conserve relays (page 23)**
   If you need to conserve physical auxiliary Power Center relays, there are two (2) Feature Circuits available that you can assign to circuit functions. Feature Circuits are manually turned on or off from the control panel "Feature Circuits" menu.

6. **Configure valve actuators (controlled by AUX circuit) (page 46)**
   The EasyTouch PL4/PSL4 Control System can drive one auxiliary valve actuators for applications such as solar heating and water features. Assign which circuits that will activate valves A and B. Auxiliary valve actuators can be controlled by any AUX circuit. Valve A is automatically assigned to solar if "Solar" is enabled in the "Solar" menu. Tip: Use a "Feature Circuit" to control a valve actuator (see page 23).

7. **Set up optional equipment, solar, two-speed pump (page 47)**
   Set up additional equipment such as solar, 2-speed pump, and optional equipment if required. Set up the control panel to operate with the optional IntelliChlor® Salt Chlorine Generator (see page 38 and IntelliChem® Controller (see page 39). To configure the system for special equipment:

   • Is solar heating available? Is solar being used for a heat pump?

   • What circuits will turn 2-Speed pumps to High Speed?

   • Is there a heat pump (UltraTemp® Heat Pump) being used?

   • Is there an IntelliChlor® SCG installed?

   • Is there an IntelliChem® Controller installed?

   • 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. **Configure the heater system options (page 30)**
   Set the type of heat source being used (Heater, Solar, Solar Preferred). Enable heat pump (UltraTemp® Heat Pump) for heating/cooling if installed.

9. **Configure the iS4 Spa-Side Remote (page 44)**
   Assign circuits to the iS4 Remote buttons. Once you have checked that all buttons operate properly, place labels on remote buttons.

10. **Set the delays feature (page 48)**
    Enable the one time "delay" feature for the heater, 2-speed pump, and automatic pool cleaner.

11. **Schedule on/off times for circuit (page 32)**
    Set times for automatic circuit activation. Up to four (4) total programs can be created for all circuits combined. One circuit can have up to a maximum of four (4) programs (4/4), or programs can be used by separate circuits. All user created programs are active all the time; so check that there are not conflicting automated times.

EasyTouch® PL4/PSL4 Control System Menus

```
MAIN SCREEN

FEATURE CIR ──── FEATURE 1-2 [OFF]   MANUALLY TURN A FEATURE CIRCUIT ON/OFF.
                                     USE FEATURE CIRCUITS TO CONTROL PUMP SPEEDS AND VALVES.

LIGHTS ──── MODES [6 LIGHT SHOWS, HOLD, RECALL, COLOR SWIM, COLOR SET]
            COLORS [5 FIXED COLORS, HOLD, RECALL, COLOR SWIM, COLOR SET]
            ALL ON (SWITCH ALL LIGHTS ON)
            ALL OFF (SWITCH ALL LIGHTS OFF)
            SYNC (SYNCHRONIZE COLORED LIGHTS)
            MAGICSTREAM [TOGGLE THUMPER, HOLD, RESET, CHANGE MODE]
            CONFIG (SETUP EIGHT LIGHT POSITIONS)

HEAT ──── POOL TEMP/SRC ──── TEMP (40° F - 104° F) OR (4° C - 41° C)
                             HEAT (OFF/HEATER/SOLAR/SOLAR PRF) - SOLAR/SOLAR PRF MUST BE ENABLED IN "SOLAR" MENU TO DISPLAY.

         SPA TEMP/SRC ──── TEMP (40° F - 104° F) OR (4° C - 41° C)
                           HEAT (OFF/HEATER/SOLAR/SOLAR PRF) - "SOLAR/SOLAR PRF" MUST BE ENABLED IN "SOLAR" MENU TO DISPLAY.

DELAY CANCEL ──── (DELAYED CANCELLED) PRESS RIGHT BUTTON TO ACTIVATE

SCHEDULES ──── SPA        0      HI-TEMP (SPA) / LO-TEMP (POOL) FOR SINGLE BODY SYSTEM (SEE SETTINGS MENU: CIRCUIT NAMES)
               POOL       0
               AUX 1      0      MODE: SCHEDULE
               AUX 2      0      08:00A -- 05:00P (12:00 AM - 11:59 PM -12 HOURS)
               AUX 3      0      S M T W T F S (DAYS OF THE WEEK)

                                MODE: EGG TIMER
                                TIME: 12:00 (00:00 - 23:59) / DON'T STOP

                                MODE: NEW / DELETE / NONE

               FEATURE 1-2   0   FEATURE 1 - 2

A
```

Continue on next page.

EasyTouch® PL4/PSL4 Control System Menus (Continued)

(A)

SETTINGS

CLOCK
- DATE & TIME 1/2 - (MONTH/DAY/YEAR) - (DAY/HOUR/MINUTES/AM/PM)
- DATE & TIMER 2/2 - DAYLIGHT SAVING: (AUTO/MANUAL)
- CLOCK ADJUST 00:00 (0 TO 300) - (-300 TO -5) IN 5 SCEOND INCREMENTS

INTELLIFLO (OPTIONAL)
- PUMP #1 - PUMP TYPE [VS, VSF, NONE]
- FILTERING, PRIMING, BACKWASH, VACUUM, STATUS

INTELLICHLOR (OPTIONAL)
- INTELLICHLOR 1/2 - ENABLE (YES/NO), POOL MODE: 0 - 100 % (50% default) SPA MODE: 0% (2% default)
- INTELLICHLOR 2/2 - SUPER CHLR (ON/OFF), RUN HOURS (0 -72)

INTELLICHEM (OPTIONAL)
- PH/OPR Values (pH VAL, SET - OPR VAL, SET) - Status (pH/OPR level) - Saturation Index (CH,TDS,TA,SI)

HEAT PUMP COM (OPTIONAL)
- **SETTINGS:** ENABLE, DISABLE (NO/YES) - [HEATING, COOLING] - STATUS

CIRCUIT NAMES
- CIRCUIT NAMES (1/7) - [SPA, POOL, AUX1, AUX2, AUX3, FEATURE 1-2]

CIRCUIT FUNC.
- **CIRCUIT:** (SPA [MASTER SPA], POOL [MASTER POOL], AUX 1-3, FEATURE 1-2, AUX EXTRA -
- **FUNCTIONS:** GENERIC, MASTER SPA, MASTER POOL,
- MSTR CLEANER, LIGHT, SAM LIGHT, SAL LIGHT, PHOTON GENERATOR, COLOR WHEEL,
- SPILLWAY, FLOOR CLEANER, INTELLIBRITE, MAGICSTREAM, FREEZE: NO/YES

CUSTOM NAMES
- CSTM NAME 1/7 (ASSIGN UP TO 100 CUSTOM NAMES)
- [USERNAME-01...100] (UP TO 11 ALPHANUMERIC CHARACTERS)

VALVES
- A: [NONE, SPA, POOL, AUX1, AUX2, AUX3, FEATURE 1-2, HEATER]
- B: [NONE, SPA, POOL, AUX 1, AUX2, AUX3, FEATURE 1-2, HEATER]

2-SPEED PUMP
- 2-SPEED PMP 1/4 (ASSIGN UP TO 4 CIRCUITS)
- CIRCUIT (NONE, SPA, POOL, AUX1, AUX2,AUX3, FEATURE 1-2, SOLAR, HEATER, POOL HEATER, SPA HEATER, FREEZE)

SOLAR
- SOLAR 1/2 - ENABLE (YES/NO) - HEAT PUMP (YES/NO) - SOLAR 2/3 - FREEZE,
- SOLAR 3/3 (TEMPREATURE DIFFERENCE) - START (3°-9° (6° default)) - RUN (2°-5° (3° default))

DELAYS
- COOL DOWN (YES/NO) - VALVES (YES/NO)

F° / C°
- FAHRENHEIT / CELCIUS

iS4
- ASSIGN CIRCUITS 1/4
- CIRCUIT - (NONE, SPA, POOL, AUX 1 - 3, FEATURE 1-2)

QUICK TOUCH II
- ASSIGN QT4 II 1/4 (ASSIGN UP TO 4 CIRCUITS)
- CIRCUIT - (NONE, SPA, POOL, AUX 1 - 3, FEATURE 1-2)

MAN HEAT [OFF/ON]
- SWITCH MANUAL HEAT ON OR OFF WHEN SPA IS MANUALLY SWITCHED ON (USE RIGHT BUTTON SELECT ON/OFF)

CALIBRATION
- WATER (FAHRENHEIT/CELCIUS) - AIR (FAHRENHEIT/CELCIUS) - SOLAR (FAHRENHEIT/CELCIUS) -
- SOLAR MUST BE ENABLED IN "HEAT" MENU TO DISPLAY

ERASE EEPROM
- ERASE ALL (YES /NO) - ARE YOU SURE? (YES/NO)

SET PASSWORD
- SET PASSWORD: {XXXX} 4 DIGITS - ENABLE / DISABLE [NO/YES]

WIRELESS ADDR
- SET AN ADDRESS FOR EASYTOUCH WIRELESS CONTROL PANEL

BACKLIGHT
- ON TIME: 5 S, 15 S, 30 S, 60 S, 5 M, OFF [BRIGHTNESS: LOW, MED HI]

POWER SAVE
- IDLE TIME: 15 S, 30 S, 60 S, 5 ME

WIRELESS ADDR
- SET AN ADDRESS FOR EASYTOUCH WIRELESS CONTROL PANEL

WIRELESS CONTROL PANEL ONLY

SPA SIDE [OFF/ON] — ENABLE/DISABLE IS4 SPA-SIDE REMOTE

DIAGNOSTICS
- **SOFTWARE REV** (REVISION LEVEL FOR THE OUTDOOR AND INDOOR CONTROL PANEL)
- **BOOTLOADER REV** (REVISION LEVEL FOR THE OUTDOOR AND INDOOR CONTROL PANEL)
- **SELF TEST** (STATUS: TESTING (FOLLOW ON-SCREEN PROMPTS TO TEST LCD AND BUTTONS) - CODE: 0 -
  SEE "TROUBLESHOOTING" SECTION FOR ERROR CODES)
- **CHLORINATOR** — SALT LEVEL: DISPLAYS CURRENT SALT LEVEL (XXXX) PPM
  - STATUS: OK - NO ERRORS (SUPER CHLORINATE, COM LINK ERROR, CHECK FLOW / PCB,
    LOW SALT, VERY LOW SALT, HIGH CURRENT, CLEAN CELL!!, LOW VOLTAGE)
- **WATER TEMP** (FAHRENHEIT/CELCIUS - STATUS DISPLAY ONLY)
- **SOLAR TEMP** (FAHRENHEIT/CELCIUS - STATUS DISPLAY ONLY) - (DISPLAYS IF SOLAR IS ENABLED IN HEAT MENU)
- **AIR TEMP** (FAHRENHEIT/CELCIUS - STATUS DISPLAY ONLY)
- **DISP OP CODES -** DISPLAY? NO/YES (DISPLAYS TRANSMIT/RECEIVE PACKETS NUMBERS ON SCREEN)
- **CIR NAMES [ON/OFF]** VIEW DEFAULT CIRCUIT NAMES BEFORE MODIFICATION.
- **RESET SYSTEM** (REINITIALIZE INDOOR CONTROL PANEL - USE RIGHT BUTTON)
- **FLASH UPDATE** (USED FOR FIRMWARE UPDATES VIA PC - PRESS MENU TO ABORT)

EasyTouch® PL4/PSL4 Control Systems Menus

From the EasyTouch PL4/PSL4 Control Systems control panel menus you can schedule everyday pool/spa, heating, filtration and cleaning. Lights and laminars can also be scheduled to switch on and off at specific times. The "Settings" and "Schedule" menus are typically used most often for daily spa and pool operations. The "Settings" menu is used by the pool installer to setup installed equipment which is connected to each output relay (filter pump, auxiliary relays, heater, valves, lights, etc.). For EasyTouch PL4/PSL4 Control Systems equipment installation instructions, see the EasyTouch PL4/PSL4 Control Systems Installation Guide (P/N 520584).

Main Screen

```
AUTO        HEATER
SPA     85°F / 100°F
AIR     70°F
  MON  09:30 AM
```
```
AUTO        HEATER
POOL    85°F / 95°F
AIR     70°F
  MON  10:30 AM
```
```
AUTO

AIR     70°F
  MON  11:30 AM
```

The EasyTouch PL4/PSL4 Control Systems main screen displays the current mode of operation (AUTO/SERVICE/TIMEOUT), heat source being used, spa (or pool) actual water temperature (95° F), current heater set point temperature (100° F) and the current ambient air temperature (air sensor). Degree units can be displayed in either Fahrenheit (default) or Celsius (see page 49). If the second display line is blank and the heat source is not displayed, there is no spa or pool function currently active. The main screen is automatically displayed if there is no control panel menu activity for five minutes. If there is an IntelliChlor® Salt Chlorine Generator (SCG) being used, pool and spa sanitizer settings, and salt levels can be viewed in the Diagnostics, "Chlorinator," settings (see page 38).

Main Screen Description

AUTO: The control system is in normal (automatic) operating mode. For information about "Service" and "Timeout" operating modes, see page 4.

HEATER: The selected heat source as selected in the "Heat" menu (see page 30). The heat options are:

- **OFF -** No heating even though pump and other circuits may be operating.
- **HEATER -** Gas heater only.
- **SOLAR ONLY** - Solar heating system to be the only heat source. In order to display "Solar Pref." on the main screen, you must first enable solar in the "Solar" menu (see page 30).
- **SOLAR PREF.** - (Solar Preferred) - For when solar and gas heating are combined, and you want to use solar heating only when it is most effective. In order to display "Solar Pref." on the main screen, you must first enable solar in the "Solar" menu.

SPA: "SPA" is displayed after the **Valves (V)** button is pressed to set in "spa" mode then the **Filter (F)** button is pressed to switch the filter pump on, rotate the valve actuator (to isolate spa water from pool water), and switch the heater on (if enabled in the "Heat" menu). Pressing the **Valves (V)** button alternates between "Pool" and "Spa" mode. The temperature unit displayed on the left side is the actual water temperature (95° F) and the set point temperature (100° F) as set in the "Heat" menu is displayed on the right side. If this display line is blank, it indicates no spa or pool function is currently active. For Hi-Temp controls (single body system), see page 30.

POOL: "POOL" is displayed after the **Filter (F)** button is pressed to switch the filter pump on, rotate the valve actuator to isolate the pool water from the spa water, and switch the heater on (if enabled in the "Heat" menu). Pressing the **Valves (V)** button alternates between "Pool" and "Spa" mode. The temperature unit displayed on the left side is the actual water temperature (95° F) and the set point temperature (100° F) as set in the "Heat" menu is displayed on the right side. If this display line is blank, it indicates no spa or pool function is currently active. For Lo-Temp controls (single body system), see page 30.

AIR: Displays the actual outside ambient air temperature (70° F) as recorded by the air sensor located near the EasyTouch PL4/PSL4 Control Systems Power Center.

DAY and TIME: The current system day and time (AM/PM). See the "Clock" menu to set the system day and time (page 34).
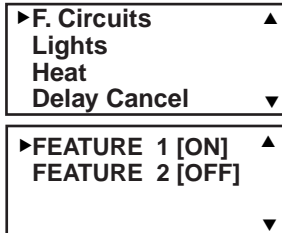
Feature Circuits Menu

There are two Feature Circuits that can be used to control IntelliFlo® Pump speeds or valves actuators for a spa spillway. Unlike an auxiliary relay circuit, a "Feature" circuit does not connect directly to a relay. "Feature" are turned on and off from the control panel "Feature" circuit menu.

Feature Circuits

MENU ▷ F. CIRCUITS

To switch a feature circuit ON or OFF:

```
▶F. Circuits        ▲
  Lights
  Heat
  Delay Cancel      ▼
```

```
▶FEATURE 1 [ON]     ▲
 FEATURE 2 [OFF]

                    ▼
```

Right button: Select the feature circuit to turn ON or OFF..
Up/Down buttons: Choose assigned feature circuit: FEATURE 1 - 2.
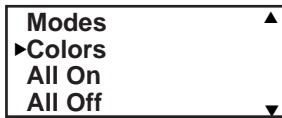**Right button:** Switch the selected feature circuits ON or OFF.

When finished, press the **Menu** button twice to return to the main screen.

Lights Menu

From the Lights screen you can manually switch all lights on or off, and synchronize colored lights. Up to three (3) lights can be independently controlled from the **Lights** screen. Each light requires a separate auxiliary relay circuit. Up to three (3) lights can be assigned on each auxiliary circuit. A circuit name must be assigned to the AUX relay circuits which controls the light. Verify that IntelliBrite®, S*Am*®, S*AL*®, and/or FIBER*works*® have been selected in Circuit Function. If FIBER*works* lighting is being used, it also has to be set up as a Photon Generator® light source (PHOTON GENERATOR) for the circuit controlling the light bulb, and COLOR WHEEL for the circuit controlling the color wheel. For more information about setting up lights, see "Settings Menu: Circuit Function," on page 44.
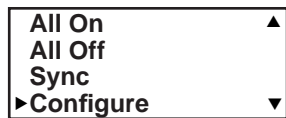
MENU▽LIGHTS▷LIGHTS

The Color Swim and Color Set Lighting Features

```
 Modes              ▲
▶Colors
 All On
 All Off            ▼
```

```
 Hold               ▲
 Recall
▶Color Swim
 Color Set          ▼
```

The Color Swim and Color Set lighting features is selected from the **LIGHTS > MODES** and **(COLORS)** menu. At least two (2) IntelliBrite®, S*Am*®, S*AL*®, and/or FIBER*works*® lighting systems are required to use the lighting features.

- **Color Swim** - Select the Color Swim feature in the **MODES** and **COLORS** menus to start lights to transition through colors in sequence to give the appearance of colors dancing through the water. You can adjust the delay of each light to make the colors move at different speeds using the LIGHTS > CONFIG option. This lighting feature requires a separate relay for each light. To switch off the Color Swim feature, select the AUX button assigned to the light circuit or select ALL OFF in the Lights menu.

- **Color Set** - Select the Color Set feature in the **MODES** and **COLORS** menus to switch the light on using specific color as selected in the COLORS menu. This feature requires a separate relay for each light. To switch off the Color Swim feature, select the AUX button assigned to the light circuit or select ALL OFF in the Lights menu.

- **Configure** - Select "Configure" to setup the positions of the lights the pool. Up to eight (8) lights can be assigned a position. For more information see page 27.

```
 All On          ▲      ▶1- [NONE      ]  ▲      1- [AUX 1        ]  ▲
 All Off                  2- [NONE      ]         2- [LT.GREEN     ]
 Sync          ▶          3- [NONE      ]  ▶      3- [1ST POSITION ]
▶Configure       ▼                         ▼      4. [DELAY 5 SECS]   ▼
```

Setting up Lights

The following section describes how to assign a light circuit name and function to control IntelliBrite®, S*Am*®, S*AL*®, and/or FIBER*works*® lights.

Assign the Light Circuit Name and Function

The first step in setting up a light circuit is to assign a name to the relay circuit (example; AUX 3, as "Pool Light"), then assign the name "Pool Light" circuit in the Circuit Func. menu as a "light" circuit (IntelliBrite, SAM, SAL..). The light circuit functions are: **Light, SAM, SAL, Photon Generator, Color Wheel, Spillway, MagicStream and IntelliBrite** (see page 45). After assigning the circuit name and function, the light circuit name "Pool Light" can be setup in the CONFIG menu for light position, color etc.

To assign a CIRCUIT NAME:
MENU▽SETTINGS▽CIRCUIT NAMES▷

```
IntelliFlo            ▲
IntelliChlor
▶Circuit Names
 Circuit Func.        ▼
```
```
Circuit Names         ▲
Circuit #:  1/7
Circuit  :  AUX 1
[POOL LIGHT   ]       ▼
```

Up/Down buttons: Select the circuit number 1/7. Press the **Up button** two times to select AUX 1 to choose this circuit for a light circuit On/Off button. The generic circuits names are: Spa, Pool, Aux 1-3, FEATURE 1-2 (Ft. 1-2). The circuit number (1/7) corresponds to its assigned circuit name.

Right button: Select the system preset circuit names and user defined custom circuit names.

Up/Down buttons: Scroll through the list of preset names (see page 45 for a complete list of circuit names). Select a name that describes where the light is located or that suits the function, such as "Pool Light." AUX 1 has now been assigned the circuit name "Pool Light." If you cannot find a name to match your circuit, you can create your own custom name (see page 43). Repeat this step for all the circuit buttons that you wish to assign names to.

Press the **Menu** button to return to the Settings menu. Press the Down button to and select "Circuit Func." Press the **Right button** to access the Circuit Func. menu.

Up/Down buttons: Select the already assigned circuit name "Pool Light."
Right button: View "Circuit Functions" to assign to light circuit "Pool Light."
Up/Down buttons: Select the type of light circuit function to use. The circuit function names are: LIGHT, SAM LIGHT, SAL LIGHT, PHOTON GEN, COLOR

Note: To use the "Color Swim" or "Color Set" feature, select IntelliBrite, SAM, SAL, Photon Generator or Color Wheel. Select "MagicStream" for MagicStream laminars.

Press the **Menu** button three times to return to the main screen. WHEEL, VALVE, SPILLWAY, FLOOR CLEANER, INITELLIBRITE, MAGICSTREAM, GENERIC, and MSTR CLEANER. For a complete list of preset circuit functions, see "Preset Circuit Functions" on page 45.

To assign a CIRCUIT FUNCTION:
MENU▽SETTINGS▽CIRCUIT FUNC.▷

```
Circuit / Func. :     ▲
[POOL LIGHT   ]
[INTELLIBRITE ]
Freeze:  No           ▼
```

Press the **Menu** button to return to the Settings menu. Press the Down button to and select "Circuit Func." Press the **Right button** to access the **Circuit Func.** menu.

Up/Down buttons: Select the already assigned circuit name "Pool Light."
Right button: View "Circuit Functions" to assign to light circuit "Pool Light."
Up/Down buttons: Select the type of light circuit function to use. The circuit function names are: LIGHT, SAM LIGHT, SAL LIGHT, PHOTON GEN, COLOR WHEEL, VALVE, SPILLWAY, FLOOR CLEANER, INITELLIBRITE, MAGICSTREAM, GENERIC, and MSTR CLEANER. For a complete list of preset circuit functions, see "Preset Circuit Functions" on page 45.

Note: To use the "Color Swim" or "Color Set" feature, select IntelliBrite, SAM, SAL, Photon Generator or Color Wheel. Select "MagicStream" for MagicStream laminars.

Press the **Menu** button three times to return to the main screen.

Setting up Lights (Continued)

From the Lights screen you can manually switch all lights on or off, synchronize colored lights, and activate color light shows. Up to three (3) light circuits can be configured from the "Config" light menu. Each light must have its own relay and separate circuit

Setting up IntelliBrite Light Circuits

Before configuring the lights, be sure the auxiliary (AUX) circuits that control the IntelliBrite® Lights have been assigned as an "IntelliBrite" light. For more information about "Circuit Functions" (page 44) and "Circuit Names," (page 45).

Lights Menu

To access the Lights menu screen, press **Menu > Lights**. The Lights menu settings are: MODES, COLORS, ALL ON, ALL OFF, SYNC, MAGICSTREAM, CONFIG:

MENU▽LIGHTS▷LIGHTS

Modes (IntelliBrite Color light shows, Color Swim, Color Set)

To access the Modes menu, press **Menu > Lights > Modes**. There are six pre-programmed color light shows to choose from. From the "Modes" screen you can select various preset show color lighting effects, such as "American mode" and "Sunset mode", "Color Swim" or "Color Set." Using the "Hold" and "Recall" feature (see page 26) you can also capture and save a unique color light show effect to recall at a later time.

The IntelliBrite color "Mode" settings light shows are:

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

> *IntelliBrite Light: If the IntelliBrite light was not previously on, after selecting a color show mode, no illumination will occur for up to ten (10) seconds (depending on the selection), then a white light will momentarily illuminate, followed by the color show mode selection. If the light was previously on, selecting the a color show mode button will momentarily illuminate the previously selected color before changing to the selected color show.*

Modes (Color Swim)

The Color Swim feature cycles through white, magenta, blue and green colors. Using IntelliBrite lights, Color Swim emulates the S*Am*®, S*AL*® Color Swim feature.

> *IntelliBrite Light Color Swim/Color Set: If the light was not previously on, after selecting Color Swim, no illumination will occur for approximately six (6) seconds followed by the selection. If the light was previously on, after selecting the Color Swim feature, the previously selected color will momentarily illuminate, no illumination will occur for approximately six (6) seconds followed by the selection.*

Setting up lights (Continued)

Modes (Color Set)

The "Color Set" feature allows any combination of up to three IntelliBrite®, S*Am*®, S*AL*®, and/or FIBER*works*® lighting to be preset to specific colors. Fixed light colors are selected and activated from the Colors screen.

> ***IntelliBrite Light:*** *If the light was not previously on, after selecting the fixed colored light, no illumination will occur for approximately six (6) seconds followed by the selection. If the light was previously on, after selecting the colored light, the previously selected color will momentarily illuminate, no illumination will occur for approximately six (6) seconds followed by the selection.*

Colors

Choose any one of the five fixed colors to create a spectacular underwater lighting effect. The fixed colors are: **Blue, Green, Red**, **White** and **Magenta**. You can switch each fixed colored light on or off from the Colors screen.

> ***IntelliBrite Light:*** *If the light was not previously on, after selecting a fixed colored light, no illumination will occur for up to ten (10) seconds (depending on the selection), then a white light will momentarily illuminate, followed by the color selection. If the light was previously on, selecting the a color button will momentarily illuminate the previously selected color before changing to the selected color.*

To select a fixed color press: **Menu > Lights > Modes > Colors**:

▸**Blue** ▲
Green
Red
White ▼

Green ▲
Red
White
▸**Magenta** ▼

Magenta

Up/Down buttons: Choose a color for the light.
Right button: Switch the selected colored light ON. To switch the light off, go to the main Lights menu and select **All Off**, or press the AUX button assigned to the light. The AUX button will also switch the light on.
Press the **Menu** button three times to return main menu.

> ⚠ **WARNING** - IntelliBrite Lights: During the off/on switching process, before the selected color is displayed, no illumination will occur. This operating mode is normal during the switching process. During this period the pool and spa will be dark and precautions should be taken to avoid unforeseen accidents. Failure to observe this warning may result in serious injury or death to pool and spa users.

Hold/Recall

Select Hold and Recall from the "Modes" or "Color" screen to capture and save a unique color effect and recall it at a later time. For example, while a light show (Romance Mode) is active, select "Hold" to save the exact colors that are being displayed, then later, to recall the exact color effect, select "Recall."
Note: *After selecting* Hold or Recall*, no illumination will occur for up to 10 seconds, then a white light will momentarily illuminate, followed by the saved color.*

All On / All Off (Lights Menu)

Select **All On** or **All Off** from the Lights screen to manually switch all lights on or off, including any MagicStream laminar circuits. Press the control panel auxiliary button (AuxX) assigned to a light circuit will also switch a light on or off.

Sync

Select **Sync** from the "Lights" screen to synchronize colors for all IntelliBrite, S*Am*, S*AL* and FIBER*works* color changing lights.

Setting up lights (Continued)

Config

From the "Config" screen you can setup the IntelliBrite light position, and specify the color of each pool and spa light. Any combination of up to three (3) IntelliBrite®, S*Am*®, S*AL*®, and/or FIBER*works*® lights can be preset for specific colors and position when using the "Color Swim" and "Color Set" feature. Fixed light color are selected and activated from the Colors screen. *Note: The "Config" menu settings do not apply to the MagicStream laminars.*

To select configure a light position and color:

MENU ▽LIGHTS ▷CONFIG

```
1- [POOL          ]
2- [SPA           ]
3- [BACK YARD  ]
```

```
▶[ AUX 3          ]
 [ MAGENTA        ]
 [ 1ST POSITION   ]
 [ DELAY  5 SECS ]
```

Up/Down buttons: Choose the light circuit (1-3) to configure. Select an available auxiliary circuit (NONE). For more about assigning an auxiliary circuit to a light, see "Circuit Functions (page 44) and "Circuit Names" (page 42).
The system supports up to three (3) auxiliary circuits.
Right button: Select the light to setup.
Up/Down buttons: Select the light circuit.
Right button: Move to the light color selection.
Up/Down buttons: Select the light color (**Blue, Cyan, Green, Lt. Green, White**, **Lt. Magenta**, **Magenta**, **Lavender**).
Right button: Move to the light position selection.
Up/Down buttons: Select the light position. A light can be assigned to any position from 1 through 12. To ensure that the "Color Swim" and "Color Set" lighting feature color effects are correct, set the position of the light according to where it's located in the pool or spa. **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 and scroll through your lights to find the right most light, and set it as Position 1.
Right button: Move to the light delay selection. The Delay time between two or more lights can be set from 0 to 60 seconds. 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.

Press the **Menu** button to setup other lights or press Menu button four times to return main screen.

Setting up SAM, SAL, PG2000, Color Wheel Lights

Before using the lighting feature "Color Swim" or "Color Set" with SAM or SAL lights, make sure the AUX relay circuits which control the lights have been assigned as "light" circuit and that the name (AUX 1, AUX 2, AUX 3) has been changed to best fit the light being used. Verify that S*Am* and/or S*AL,* and/or FIBER*works* have been assigned in "Circuit Functions" as SAM or SAL light. If FIBER*works* lighting is incorporated, it also has to be set up as a "PHOTON GENERATOR" light for the circuit controlling the light bulb, and COLOR WHEEL for the circuit controlling the color wheel it self. The circuit light "functions" are: Light, SAM, SAL, Photon Generator, Color Wheel, and IntelliBrite lights, see page 45 for a complete list of Preset Circuit Functions.

Setting up MagicStream® Laminars

The MagicStream Laminar provide a clear, turbulence-free stream of water that is lit with a fiber optic cable, or an LED light for a dazzling nighttime effect. The 12 VAC powered LED light can generate a series of multicolored light shows, or can be set to display a continuous, single color. If desired, the built-in solenoid "thumper" can create a random "wrinkle," in the Laminar's stream, causing it to display a brilliant spot of light that moves along the stream's arc. The light enhancer can be adjusted to maximize the light in the arc.

Up to three (3) MagicStream Laminar circuits can be displayed on the main Lights screen, assuming each laminar has its own relay and separate circuit.. From the Lights screen you can activate the MagicStream laminars (changing color modes, turn Thumper on/off, Hold and Reset, see page 29). For more information, see the MagicStream Laminar Installation Guide, P/N 520969.

Setting up MagicStream Laminar LED Lights

To setup MagicStream laminar circuits, first assign each laminar auxiliary relay circuit a circuit name (see "Circuit Names" page 42, then assigned the laminar relay circuit name to "MAGICSTREAM" in the circuit functions menu (Circuit Func.).

To setup the MagicStream laminar circuit names and function:

MENU▽SETTINGS▽CIRCUIT NAMES

```
IntelliFlo              ▲
IntelliChlor
▶Circuit Names
Circuit Func.           ▼
```

```
Circuit Names           ▲
Circuit #:  1/7
Circuit :   AUX 1
[STREAM      ]          ▼
```

Up/Down buttons: Select the circuit number 1/7. Press the **Up button** two times to select AUX 1 to choose this circuit for the MagicStream laminar circuit On/Off button. The generic circuits names are: Spa, Pool, Aux 1-3, FEATURE 1-2 (Ft. 1-2). The circuit number (1/7) corresponds to its assigned circuit name.

Right button: Select one of the system preset circuit names and/or user defined custom circuit names.

Up/Down buttons: Scroll through the list of preset names (see page 38 for a complete list of circuit names). Select a name that describes where the MagicStream laminar is located or that suits the function, such as "Stream." AUX 1 has now been assigned the circuit name "Stream." for the first MagicStream laminar. Repeat this step for the next laminar circuit. If you cannot find a name to match your circuit, you can create your own custom name (see page 46).

Press the **Menu** button to return to the Settings menu. Press the Down button to and select "Circuit Func." Press the **Right button** to access the Circuit Func. menu.

Up/Down buttons: Select the already assigned circuit name "Stream."
Right button: View the "Circuit Functions" to assign to laminar circuit "Stream."
Up/Down buttons: Select the type of circuit function to use, in this case select "MAGICSTREAM." The circuit function names are: LIGHT, SAM LIGHT, SAL LIGHT, PHOTON GEN, COLOR WHEEL, VALVE, SPILLWAY, FLOOR CLEANER, INITELLIBRITE, MAGICSTREAM, GENERIC, and MSTR CLEANER. For a complete list of preset circuit functions, see "Preset Circuit Functions" on page 45.

Right button/ Up Button: Turn "Freeze" protection ON.

Press the **Menu** button three times to return to the main screen.

MENU ▽SETTINGS▽FUNC.

```
Circuit / Func. :       ▲
[STREAM        ]
[MAGICSTREAM ]
Freeze:  Yes            ▼
```

Continue on next page.

Using the MagicStream® Laminar Features

The MagicStream laminar features are displayed in the MagicStream laminar menu. Each time a MagicStream laminar feature is activated, it resumes with the same features in operation as when last switched off. The MagicStream features are as follows:

Toggle Thumper - Pressing this button creates a "wrinkle" in the laminar stream, producing a brilliant spot of light in the laminar arc.

Hold - Select Hold to capture the current color effect while colors are changing. The colors will stop changing. Selecting Hold again will resume the color changing mode.

Reset - Pressing this button reverts to the **Random** color changing mode with the Thumper ON.

Change Mode - Pressing this button (each successive OFF/ON combination) will cycle through **Sync, Random** and **Party**. Color changing mode - The color of the light changes automatically, according to one the following three programs:
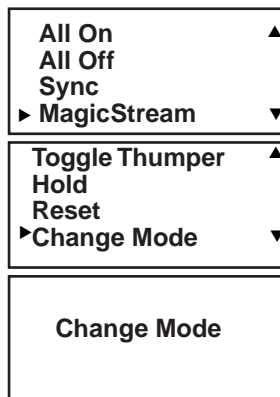
Sync - Colors will change at ten second intervals. In this mode, multiple laminars will synchronize colors together. Note: To sync multiple laminars (two or more AUX circuits), be sure to define the "MagicStream" circuits in the "Circuit Functions" menu.

Random - Colors will change at ten (10) second intervals in a random sequence. In this mode, multiple laminars will NOT synchronize colors together.

Party - Colors will change randomly and slowly at first, then speed up, until the sequence ends with quick flashes and strobes. The sequence then repeats, beginning with the slow changes. In this mode, multiple Laminars will NOT synchronize colors together.

To access the MagicStream laminar features:

MENU▽LIGHTS▷LIGHTS

| All On ▲ |
| All Off |
| Sync |
| ▶ MagicStream ▼ |

| Toggle Thumper ▲ |
| Hold |
| Reset |
| ▶Change Mode ▼ |

| Change Mode |

Down button: Choose MagicStream.
Right button: Select **MagicStream**.
Up/Down button: Select the desired MagicStream laminar features.
Right button: Use this button to activate the selected MagicStream laminar feature. After the button is pressed, the following screen displays the name of the selected feature (indicating that the MagicStream feature has been activated) then returns to the MagicStream laminar feature menu.

Press the **Menu** button three times to return to the main screen.

Heat Menu

Use the heat menu settings to specify the set point temperature and select the heat source for the pool and spa water. The water will begin to heat whenever the heater is manually switched on, (by pressing the Valves (V) button (on the Outdoor Control Panel) or the "Pool" or "Spa" button on the Indoor Control Panel and Wireless Controller), even if the heater is set to off. The EasyTouch® PL4/PSL4 Control System allows for solar and conventional heaters. The system will use the heating source that is selected. The heat source selections are:

- **OFF -** No heating even though pump and other circuits may be operating.
- **HEATER -** Gas heater only. Use the Heater button to automatically switch the heater on which controls the output between a "forced off" state and a normal, automatic thermostatic control operating state. The heater will continue heating the water until the heater's current highest set point temperature triggers the heater sensor (approximately 104° F (40° C). Note that the Heater button on the control panel does not activate the pump. Do not activate the heater without running the pump. The heater will not run if water flow is not detected.
- **SOLAR ONLY** - Solar heating system to be the only heat source. In order to display "Solar Pref." on the main screen, you must first enable solar in the "Solar" menu (see page 47).
- **SOLAR PREF. (Solar Preferred)** - Solar and gas heating systems are installed, and you want to use solar heating only when it is most effective. In order to display "Solar Pref." on the main screen, you must first enable solar in the "Solar" menu. To set the spa temperature and select the heat source:

Pool Temp/Src

To set the pool temperature and select the heat source:

MENU▽HEAT

▶POOL Temp/Src ▲ SPA Temp/Src ▼	**Right button:** Select pool temperature and heater options. **Up/Down button:** Set the pool temperature from 40° F to 104° F (4° C - 40° C). **Right or Left button:** Move to Heater option. **Up/Down:** Set Heater option: **Off, Heater, Solar,** or **Solar Preferred**.
POOL ▲ **Temp: 72° F** **Heat: Off** ▼	Press the **Menu** button to save the settings and to return to the previous menu or press the button again to return to the main screen.

Spa Temp/Src

To set the spa temperature and select the heat source:

▶POOL Temp/Src ▲ SPA Temp/Src ▼	**Right button:** Select spa temperature and heater options. **Up/Down button:** Set the spa temperature from 40° F to 104° F (4° C - 40° C). **Right or Left button:** Move to Heater option. **Up/Down:** Set Heater option: **Off, Heater, Solar,** or **Solar Preferred**.
SPA ▲ **Temp: 85° F** **Heat: Off** ▼	Press the **Menu** button to save the settings and to return to the Heat menu or press the button again to return to the main screen.

Note: For the EasyTouch PL4 Control System single body system, "Pool" and "Spa" modes are Lo- Temp (Pool) and Hi-Temp (Spa) temperature controls. For more information, see "Hi-Temp/Lo-Temp Controls for Single Body Systems," on page 42.

Delay Cancel Menu

Use the Delay Cancel feature for service or testing purposes. For convenience, on a onetime basis, the Delay Cancel feature will cancel the following safety delays. Please note, generally there is no need to cancel any of the following delays except for servicing or testing the system.

- **Heater Cool-Down Delay Cancel:** Shuts Filter Pump off immediately.
- **2-Speed Filter Pump five-minute START on HIGH SPEED Delay Cancel:** Shifts pump to low speed.
- **Automatic Pool Cleaner START Delay:** Starts Cleaner Pump immediately, without normal delay in which the filter pump first runs for 5 minutes.
- **Automatic Pool Cleaner SOLAR Delay:** Allows Cleaner Pump to run even though solar delay has shut it off for 5 minutes.

Some heaters require a cool-down cycle before being switched off. This can be setup in the menu to run 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 it's necessary to shut the filter pump off immediately, and know the heater has not been running. 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.

Note: *For Information about assigning delays to the pool and spa valves, refer to "Settings Menu: Delays" on page 48.*

Delay Cancel

To activate Delay Cancel:

MENU▽DELAY CANCEL▷

F. Circuits	▲
Lights	
Heat	
▶ Delay Cancel	▼
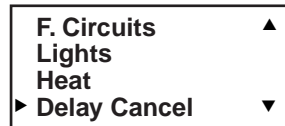
Up/Down button: Select Delay Cancel.
Right button: Use this button activate Delay Cancel for one time only. "Delay Cancelled" is displayed after pressing the Right button.

Press the **Menu** button to return to the main screen.

Schedules Menu

Use the Schedules menu to create programs to schedule start and stop times to automatically run equipment, such as pumps and lights. Any circuit can be programmed to switch on and off at a specific time on every or any specific day of the week. The number of programs that can be created for circuits are as follows:

- **Up to four (4) programs can be created for all circuits combined.**
- **One circuit can have up to a maximum of four (4) programs (1/4). Programs that can used by circuits for a total of four (4) programs.**

Using the Schedules menu

Use the Schedules menu features to program operating schedules for the pool, spa and auxiliary circuits:

MENU▽SCHEDULES ▷SPA

▸SPA 0 ▲ POOL 0 AUX 1 0 AUX 2 0 ▼	**Choose the circuit to program** **Up/Down button:** Select the generic circuit name to program: Spa, Pool, Aux 1-3, Feature 1- 2. The current number of programs for each circuit is displayed opposite the circuit name. A circuit can have up to 4 programs (1/4). Three additional programs can be assigned to another circuit or three separate circuits for a maximum of seven (7) programs.
SPA 0/0 ▲ Mode: None	**Create a new program** The current number of programs for each circuit is indicated opposite to the circuit name. 0/0 indicates no programs assigned to this circuit. **Right button:** To move to the "Mode" selection.
SPA 0/0 ▲ Mode: New ▼	**Up/Down button:** Select **New** to create a new program. Use "None" when a circuit has existing programs and you wish to exit the "Mode" selections without modifying the existing programs.
SPA 1/1 ▲ Mode: Schedule 08:00A - 05:00P smtwtfs ▼	**Choose the type (Mode) of program to run** After selecting "New" the current program number (**1**/1) for this circuit is displayed. **Right button:** To move to the "Mode" selections. **Up/Down button:** Choose the program to run: **Schedule, Egg Timer, New, Delete,** and **None**. If there are existing programs assigned to this circuit, use these buttons to
SPA 1/1 ▲ Mode: Egg Timer Timer: 12:00 ▼	view and select the existing program settings. **Mode Selection:** **Schedule:** Set start, stop times and the day(s) of the week to automatically switch pool/spa circuits on or off. Default run time for the "Schedule" feature is 8:00 AM to
SPA 1/1 ▲ Mode: New ▼	5:00 PM. If you program the start and stop times the same the schedule is will run for 24 hours. **Egg Timer:** A one time program that switches on a function at a specific time, and counts down the preset time to the switch off the function. After the "Egg Timer"
SPA 1/1 ▲ Mode: None ▼	schedule has finished, the system can be operated in manual mode. The "DON'T STOP" option allows a circuit to run continuously until its switched off manually. **New:** press the **Right** button to create a new program.
SPA 1/1 ▲ Mode: Delete ▼	**Delete:** Select the program and press the **Right** button to delete it. **None**: Press the **Right** button to exit the "Mode" selections without modifying the program.

Using the Egg Timer (countdown) Feature

The "Egg Timer" feature allows you switch off a circuit automatically after a specified time. The time period is from one minute to 24 hours or run continuously. The "Egg Timer" (countdown) feature is useful for switching off lighting and spa therapy jets. For example, a jet pump can be setup to switch off in 15 minutes, even if you switch it on using the iS4 Spa-Side Remote or QuickTouch® II Wireless Remote or whenever you switch your spa on, you would like it to automatically switch it off in two hours. All Egg Timer programs are factory set to switch off after 12 hours. You also have the option to use the "Don't Stop" feature to run a circuit continuously until manually switched off.

In the event of a power failure, the "Egg Timer" feature will not switch the circuit back on. They must be switched back on manually. For running the filter pump continuously during new pool start up, it is recommended to use the "Service" mode, which will automatically restart the filter pump in the event of a power failure.

The following example describes how use the "Egg Timer" (once only) feature to program the spa circuit to switch the filter pump on and rotate the valves into the "Spa" position and switch the heater on for one time only. This example can also be used if you wanted to program when to filter and heat your pool, and switch light or auxiliary circuits on.

To set the Egg Timer feature:

MENU▽SCHEDULES▷SPA

```
▸SPA        0    ▲
 POOL       0
 AUX 1      0
 AUX 2      0    ▼
```

```
 SPA       0/0   ▲
 Mode: None (New)


```

```
 SPA       1/1   ▲
 Mode: Egg Timer
 Time:  12:00
                 ▼
```

Press the Up/Down button to select the circuit to schedule then press the Right button.

Right button: Select **Mode** if there are existing programs. Skip this step to create a new program.
Up/Down button: Select **New** to create a new program.
Right button: To create a new program and enter the "Mode" settings.

Up/Down button: 1/1 indicates that this circuit has one program. If there are existing programs assigned to this circuit, use these buttons to view and select the existing program settings.
Right button: To select the "Egg Timer" settings.
Right button: Move to the time settings.
Up/Down and Right buttons: Set the hour and minutes for the program to run. The count down time can be set from 00:01 to 23:59 and Don't Stop. The "Don't Stop" feature allows the circuit to run continuously until manually switched off.

Press the **Menu** button to save the settings and to return to the Schedules menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Settings Menu: Clock

Use the Clock menu to set the EasyTouch PL4/PSL4 Control System date and time. The day, time and AM/PM is displayed on the main screen. The system clock settings are used for the system scheduled operations. The system clock will continue to run if power is removed from the system at the Power Center.

Clock

To set the system date and time:

MENU▽SETTINGS ▷CLOCK

Date & Time 1/2 JAN 12 2009 ▲ 09:20 AM ▼	**Right button:** Move to the day setting. **Up/Down buttons:** Set the day of the month. **Right button:** Move to the year setting. **Up/Down buttons:** Set the year.
Date & Time 2/2 DayLt Sav: Auto ▲ Clk Adj: 00:00 ▼	**Right button:** Move to the next set of settings (2/2). **Up/Down buttons:** Set Daylight Savings to Auto or Manual. Auto keep track of the semi annual time changes. If you do not live in an area that observes daylight savings time, choose Manual.

Right button: Move to the clock adjustment setting. If the internal system clock loses time during the month, use this setting to set the number of seconds in five second increments per month to automatically adjust the clock to the correct time.
Up/Down buttons: Adjust the offset in five second increments.

Press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Settings Menu: IntelliFlo® (IntelliFlo® and IntelliPro® pump)

The EasyTouch PL4/PSL4 Control System communicates with the IntelliFlo pump via a two-wire RS-485 cable (PN 350122). IntelliFlo operations can be controlled from the EasyTouch PL4/PSL4 Control System Indoor and Outdoor control panel and the Wireless Controller. The system supports the following pumps:

IntelliFlo VS+SVRS (1100-3450 RPM)

IntelliFlo VS-3050 (400-3110 RPM)

IntelliPro VS-3050 (400-3450 RPM)

IntelliFlo VSF+SVRS.

For more information refer to the following manuals:
IntelliFlo VS 3050 (P/N 357269), IntelliFlo VSF+SVRS (P/N 351420).

How many IntelliFlo pumps will EasyTouch PL4/PSL4 Control System support?

EasyTouch PL4/PSL4 Control System can support **one** IntelliFlo® (or IntelliPro) or IntelliFlo VS3050 (or VSF+SVRS) pumps in with up to four GPMs or RPMs.

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

Settings Menu: IntelliFlo® Pump (Continued)

## Connecting Power to the 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 pump is connected to an automation system, such as the EasyTouch PL4/PSL4 Control System, 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 is appropriate if you need to use existing relays or timers.

Assigning an IntelliFlo VS 3050 pump address

Before assigning a pump address at the EasyTouch PL4/PSL4 Control System indoor, wireless or outdoor control panel, first set the address **on the pump itself.** The pump's default address is pump #1.

To assign an IntelliFlo VS 3050 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 (1-4) 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.

| Speed 1 | Speed 2 | Speed 3 | Speed 4 |

IntelliFlo VS Pump Speed buttons (1-4)
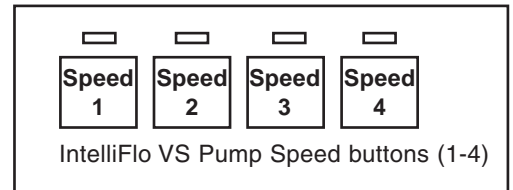
NOTE: INTELLIFLO IN "SERVICE MODE" - IntelliFlo pumps will STOP when the system is in 'Service" mode.

NOTE: INTELLIFLO "FREEZE" PROTECTION - If the IntelliFlo pump is on due to a freeze condition (not switch on from a relay circuit), and if a freeze protect for a certain speed is set, this setting takes priority even if the previous setting is lower than the default circuit speed. If no "freeze" protection is set, the pump will be forced on at the default circuit speed. Any programmed or manual operation that actually switches on a circuit, will cause the pump to run at that speed if it is higher.

Selecting the IntelliFlo PUMP TYPE

To access the IntelliFlo menu:
MENU▽SETTINGS▽INTELLIFLO▷PUMP#1

| ▶Pump #1 ▲ |
| ▼ |
| Changing Pump1's Type will config it to default. Continue ? N |
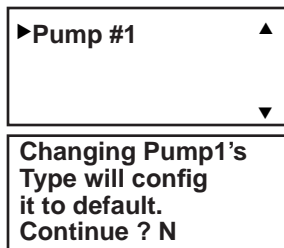
Up/Down button: Choose **Pump #1**.
Right button: Select **Pump #1**.
Right button: Select **Pump Type**. Note: To change the current pump type for Pump #1. press the **Up/Down** button and select **Y**, then press the **Right button**. To continue to the Pump #1 settings menu, press the **Right button** (or **Menu** to exit).

IntelliFlo VS and VSF+SVRS Settings

| ▶Pump Type ▲ |
| Speeds |
| Priming |
| Status ▼ |
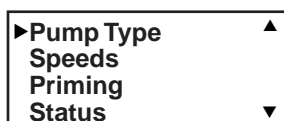
SELECT PUMP TYPE: Up/Down buttons: Choose **VS** or **VSF+SVRS**.
Menu button: Press the **MENU** button to save selection and return to the selected pump's menu settings (see VS and VSF pump settings descriptions below)

IntelliFlo VS and VSF+SVRS Settings (Continued)

```
┌─────────────────────────┐
│ Pump #1 Type      ▲     │
│                         │
│ Type:  VS               │
│                   ▼     │
├─────────────────────────┤
│ Pump #1      1/4  ▲     │
│ RPM:  1200              │
│ Circuit:                │
│ [ POOL        ]   ▼     │
└─────────────────────────┘
```

INTELLIFLO VS SPEEDS SETTING:
Down button: Choose **Speeds**.
Right button: Access the IntelliFlo VS speed (RPM) settings for Pump #1.
Up/Down button: Select the **circuit number 1 of 4** (1/4).
Right button: Move to **RPM** to change the pump speed.
Up/Down buttons: Set speed of the pump from 400 to 3450 RPM in increments of 10 RPM. The default speed for each circuit correspond to the four speed buttons on the IntelliFlo VS control panel is: **Speed 1 button 750 RPM, Speed 2 button 1500 RPM, Speed 3 button 2350 RPM, and Speed 4 button 3110 RPM.**

```
┌─────────────────────────┐
│ ▶ Pump Type       ▲     │
│   Flow/Speeds           │
│   Status                │
│                   ▼     │
├─────────────────────────┤
│ Pump #1 Type      ▲     │
│                         │
│ Type: VSF+SVRS          │
│                   ▼     │
├─────────────────────────┤
│ Pump #1      1/4  ▲     │
│ GPM:30  PSI: 15         │
│ Circuit:                │
│ [ NONE        ]   ▼     │
└─────────────────────────┘
```

INTELLIFLO VSF+SVRS FLOW RATE SETTING:
Down button: Choose **Flow/Speeds**.
Right button: Access the IntelliFlo VSF+SVRS speed (RPM/GPM) settings for Pump #1.
Up/Down button: Select the **circuit number 1 of 4** (1/4).
Right button: Move to **GPM** to change the pump flow rate.
Up/Down button: Select **RPM or GPM**. Press **Up/Down button** to toggle between RPM and GPM and pressure setting (PSI).
Right button (GPM): Move to **GPM** pump flow rate.
Up/Down button: Set speed of the pump from 15 to 130 GPM. The default flow rate is 30 GPM. The preset speed for each button is: **Speed 1 button 1100 RPM (30 GPM), Speed 2 button 1500 RPM, Speed 3 button 2350 RPM, and Speed 4 button 3110 RPM.**
Right button (GPM/PSI): Move to **PSI** (pounds per square inch) pressure setting.
Up/Down button: Select the pump pressure setting from 1 to 30 PSI. **See above for equivalent default RPM/GPM (speed/flow rate).**

```
┌─────────────────────────┐
│ Pump #1      1/4  ▲     │
│ GPM:30  PSI: 15         │
│ Circuit:                │
│ [ AUX 1       ]   ▼     │
├─────────────────────────┤
│ GPM: 30           ▲     │
│ 1200 RPM  12 W          │
│ Watts:  10              │
│ Status: GOOD      ▼     │
└─────────────────────────┘
```

VS and VSF+SVRS CIRCUIT SETTING:
Right button: Move to the circuit names.
Up/Down buttons: Assign the pump circuit: NONE, SPA, POOL, AUX 1-3, FEATURE 1-2, HEATER, POOL HEATER, SPA HEATER, FREEZE, POOL/SPA, and SOLAR/HEAT.
Right button: Press the **Up arrow button** and go to the next circuit page settings (2/4) and repeat the previous steps.

When finished setting up the circuits, press the **Menu** button to save the settings and to return to the Settings menu options. Press the button two times to return to the main screen.

INTELLIFLO VS STATUS SETTING:
Down button: Choose **STATUS**.
Right button: View the current IntelliFlo VS pump status.
Menu: Press **MENU** to exit.

IntelliFlo VS and VSF+SVRS Settings (Continued)

Pump Type
Speeds
▶ **Priming**
Status ▲▼

INTELLIFLO VS PRIMING SETTING:
Down button: Choose **SPEEDS**.
Right button: Access the priming settings.
Up/Down button: Adjust the priming time from 0 to 5 minutes.

Pump Priming
Time: 0
Speed: 1000 ▲▼

Right button: Move to **SPEED (RPM)** to change the pump speed.
Up/Down buttons: Set speed of the pump from 400 to 3450 RPM in increments of 10 RPM. The default speed for each circuit correspond to the four speed buttons on the IntelliFlo VS control panel is: **Speed 1 button 750 RPM, Speed 2 button 1500 RPM, Speed 3 button 2350 RPM, and Speed 4 button 3110 RPM.**

Pump Type
Speeds
Priming
▶ **Status** ▲▼

Pump Status
RPM: 1200
Watts: 10
Status: GOOD ▲▼

INTELLIFLO VS STATUS SETTING:
Down button: Choose **STATUS**.
Right button: View the current VS status.
Menu: Press **MENU** to exit.

IntelliFlo VF 3050 pump Settings

Assigning an IntelliFlo VF 3050 Pump Address

Before assigning a pump address, first set the address **on the pump itself.** If there is only one pump, it is always seen as pump #1 by the EasyTouch PL4/PSL4 Control System. In this case you do not need to set the pump address. The address should be set to #1. The address set at the pump must match the IntelliFlo pump number selected in the system IntelliFlo **PUMP # > PUMP TYPE** menus.

> Note: IntelliFlo VF 3050 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 VF 3050 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.

> *NOTE: INTELLIFLO "FREEZE" PROTECTION - If the IntelliFlo pump is on due to a freeze condition (not switch on from a relay circuit state), and if a freeze speed/flow is set, this setting takes priority even if the previous setting is lower than the default circuit speed. If no "freeze" protection is set, the pump will be forced **on** at the default circuit speed/flow. Any programmed or manual operation that actually switches on a circuit, will cause the pump to run at that speed if it is higher.*
>
> *NOTE: INTELLIFLO IN "SERVICE MODE" - The IntelliFlo pump will STOP when the control system is in 'Service' mode.*
>
> *NOTE: INTELLIFLO VF PUMPS - If the IntelliFlo VF pump is just starting (requiring a prime) and SOLAR is available, solar will be delayed for five (5) minutes to allow the pump to prime. This only applies for IntelliFlo pump(s) assigned as to a "pool" pump.*

Settings Menu: IntelliChlor

While the EasyTouch® PL4/PSL4 Control System is in normal operating mode ("Pool," "Spa" mode or "Spa Fill (Spillway)," it will control the IntelliChlor® Salt Chlorine Generator (SCG) chlorine output level. The amount of chlorine introduced into the pool is determined by the amount of salt in the water, water temperature, and the amount of time the pool pump is running in "Pool" mode. Note: While in "Freeze Protection" mode (see page 44), the IntelliChlor (SC) will not operate or produce chlorine during the time that the filter pump is operating. For more information, refer to the IntelliChlor Salt Chlorine Generator User's Guide (P/N 520589).

IntelliChlor

To setup the IntelliChlor® SCG:

MENU▽SETTINGS▽INTELLICHLOR

```
IntelliChlor    1/2   ▲

Enable: No
Level:   50%          ▼
```

```
IntelliChlor    2/2   ▲

Super Chlr: Off
Run Hours:  24        ▼
```

Right button: Enable/Disable the IntelliChlor. SCG (To select SuperChlor, run hours, press the **Up/Down** button - **2**/2).
Up/Down buttons: Select **Yes** or **No** to enable or disable the IntelliChlor (SC).
Right button: POOL Mode "50%" setting.
Up/Down buttons: Set the chlorination output level for the pool water from 0 to 100%. EasyTouch PL4/PSL4 Control System will determine the chlorinator output level when the system is operating in "Spa" or "Pool" mode. The amount of chlorine introduced into the pool/sap is determined by the amount of salt in the water, water temperature, and the amount of time the pool/spa operates in these modes mode.
Right button: SPA Mode "0%" setting.
Up/Down buttons: Set the chlorination output level for the spa water from 0 to 20%.
Right button: Move to the next set of settings (2/2).
Up/Down buttons: Select **2**/2.
Right button: Move the Super Chlorination settings.
Up/Down buttons: Set Super Chlorination **On** or **Off**. See note below about Super Chlorination.
Right button: Move to "Run Hours" setting.
Up/Down buttons: Set the number of hours to run Super Chlorination. 24 hours is the default setting. Run hours can be set from 0 to 72 hours.
Press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Note: *For IntelliChlor (SC) status messages, see "Diagnostics: Chlorinator" page 58.*

About Super Chlorination: The Super Chlorination feature is used to introduce large amounts of chlorine into the pool water if there has been heavy rain fall, many bathers in the pool, cloudy water conditions, etc. When Super Chlorination is enabled, the system will switch on the filter pump, set the pool/spa valves to the correct position, and set the IntelliChlor (SC) to maximum output. This process continues for 24 hours. At the end of the Super Chlorination process, the pool will return to normal operation. It is possible to manually stop the Super Chlorination process and switch off the filter pump using the Filter (F) button on the main control panel at the pool equipment pad. When the filter pump is switched on again using the Filter (F) button, the Super Chlorine process will resume for the duration of time left.

Settings Menu: IntelliChem® Controller

IntelliChem® Controller provides the EasyTouch® PL4/PSL4 Control System with continual analysis of your swimming pool water sanitation and pH levels, providing real-time status information to dispense the proper amount of muriatic acid (pH reducer) and chlorine or bromine for the correct sanitization and pH balance. IntelliChem controller operates with or without a salt chlorine generator to provide a self-replenishing supply of chlorine generated from salt. For more information, refer to the IntelliChem Controller Installation and User's Guide (P/N 521363).

From the IntelliChem controller menu you can adjust the pH and Oxidation Reduction Potential (ORP) set point values to meet pool and spa chemistry standards for your pool. A status screen displays a user adjustable pH and OPR fuel gauge which visually represents the same amount of chemicals available in pH and ORP container.

IntelliChem

To access the IntelliChem Controller pH and ORP settings:

MENU▽SETTINGS▽INTELLICHEM

PH/ORP Values: Press the **Right button** to access the pH and OPR set point values screen. Use the **Up/Down** button to adjust the pH set point value. Press the **Right button** again to set the ORP set point value. Press **MENU** to save and return to the previous screen.

```
Clock              ▲
IntelliFlo
IntelliChlor
▶ IntelliChem      ▼
```

```
IntelliChem
▶ PH/ORP Values
Status
Sat Index
```

```
pH      VAL  7.0
pH      Set: 7.5
ORP     VAL: 650
ORP     SET: 750
```

```
IntelliChem
PH/ORP Values
▶ Status
Sat Index
```

```
pH      Lv1: ▯
ORP     Lv1: ▯
ICHEM: ON
ORP Dosage Limit
```

```
IntelliChem
PH/ORP Values
Status
▶ Sat Index
```

```
CH: 245    TDS: 0
TA: 75     CYA: 18
SI: NA     TMP: 0
      IDEAL
```

pH Set Point: Displays the current pH set point value. The adjustable range is from 7 to 8 in increments of 0.1. The default pH set point value is 7.5.

ORP Set Point: Displays the current ORP set point value. Use the **Up/Down button** to adjust the ORP set point value. The adjustable range is from 650 to 800 in increments of 10. The default ORP set point value is 700 (chlorine level of 3.0 ppm). The ORP set point is the value that IntelliChem will try to achieve based on the actual chlorine level (ppm).

STATUS: Displays the current communication link between EasyTouch PL4/PSL4 and IntelliChem via the RS-485 cable. **IChem Comm Error:** Check the RS-485 communication cable is connected to the COM port on the EasyTouch PL4/PSL4 Control System main circuit board.

Level Gauge indicator: Press the **Up/Down button** to "fill" the gauge icon so that it visually represents the same amount of acid available in the container. Press Up/Down button six (6) times to fill the gauge (three times to half fill the gauge). Six horizontal bars represent chlorine (or bromine) supply is full. One bar indicates the supply is nearly empty.

*Note: Use the **Langelier Saturation Index (LSI)** Calculator to diagnose the water balance in your pool. Water with a LSI of 1.0 is one pH unit above saturation. Reducing the pH by one unit will bring the water into equilibrium. To use the LSI calculator, refer to: **http://www.pentairpool.com/pool-owner/resources/calculators/langelier/***

Sat Index: To access the Sat Index settings, press the **Up/Down button** then press the **Right button**. Use the **Up/Down button** to adjust the levels/values for: **CH (calcium hardness), TDS (Total Dissolved Solids), TA (total alkalinity), CYA (cyanuric acid) and TMP (current temperature).** *Note: See table below for ideal Saturation Index levels.*

SI: The saturation Index is displayed. IDEAL: Optimum levels. CORROSIVE: pH too low. SCALING:

Press the **Menu** button three times to return to the main screen.

Recommended Pool Chemistry

ph range:	7.2 to 7.6
ORP range:	650 to 750
Alkalinity:	80 to 120 ppm
Calcium Hardness:	200 - 500 ppm
Cyanuric Acid/Stabilizer:	30 ppm

SAT INDEX: The Saturation Index (SI), also called the Langelier Index, is a chemical equation or formula used to diagnose the water balance in the pool. The Saturation Index formula is SI = pH + TF + CF + AF - 12.1. To calculate the Saturation Index, you must first test the pool water for pH, temperature, calcium hardness, and total alkalinity. Refer to a chart for assigned values for your hardness, and alkalinity readings then add these to your pH value. Subtract 12.1, which is the constant value assigned to Total Dissolved Solids and a resultant number will be produced. A result between -0.3 and +0.5 indicates balanced water. Test results not within these values require chemical adjustments to achieve balance. This formula is more or less reliable but not guaranteed. In some cases, individual readings for pH, calcium, and alkalinity might be beyond normal recommendations, however, combined within the formula can produce "balanced water." The SI is useful to pinpoint potential water balance problems.

pH: pH produced by the IntelliChlor (SC) is close to Neutral pH. However, other factors usually cause the pH of the pool water to rise. Therefore, the pH in a pool chlorinated by the IntelliChlor (SC) tends to stabilize at approximately 7.8. This is within APSP standards. If the pool pH rises above 7.8, have a pool professional test to see if other factors such as high Calcium Hardness or Total Alkalinity are the cause and then balance accordingly.

pH Level Test: Test the pH level of your pool water with a reliable test method. If necessary, adjust according to your pool professional's recommendations. APSP's recommended ideal range for pH is 7.4 to 7.6. Note: Never use dry acid (sodium bisulfate) to adjust pH in arid geographic areas with excessive evaporation and minimal dilution of pool water with fresh water. A buildup of byproducts can damage the IntelliChlor (SC).

Calcium Hardness: Recommended range for calcium hardness is 200-400 ppm. Calcium Hardness levels should be tested weekly. Calcium hardness is the calcium carbonate scale deposited on pool surfaces. The test for Calcium Hardness is a measure of how "hard" or "soft" the water is testing. "Hard" water can have high levels of calcium and magnesium. If these levels are too high the water becomes saturated and will leave calcium carbonate scale deposits (a "white-ish," crystallized rough spot) on any surface inside the pool. If the levels are too low, the water becomes "soft" and will corrode surfaces inside the pool. Use TSP or Hydroquest 100 to lower Calcium Hardness levels that are too high or add water to the pool which has a lower calcium hardness content. Levels which are too low require the addition of calcium chloride.

Total Dissolved Solids (TDS): Adding salt to pool water will raise the TDS level. While this does not adversely affect the pool water chemistry or clarity, the pool water professional testing for TDS must be made aware salt has been added to the IntelliChlor system. The individual performing the TDS test may then subtract the salinity level to arrive at a TDS level that would be compatible to a TDS reading for a non-salt water pool.

Total Alkalinity: APSP's recommended ideal range for total alkalinity is 80 to 120 ppm for "gunite" and concrete pools and 125-170 ppm for painted, vinyl, and fiberglass pools. Test levels weekly and adjust according to your pool professional's recommendations. Alkalinity can be described as a buffer that keeps pH in order. pH depends on the ability of the alkalinity in the water to withstand the changes in pH. If the alkalinity is too high, adding acid (similar to pH) lowers the level. Adding a base (e.g sodium bicarbonate) when alkalinity is low, raises the level. The level of alkalinity in the water is a measurement of all carbonates, bicarbonates, hydroxides, and other alkaline substances found in the pool water.

Cyanuric Acid: Cyanuric acid is needed in outdoor pools to help to stabilize and maintain proper levels of chlorine. 90% of unstabilized chlorine is destroyed by the UV radiation from the sun within two hours. Cyanuric acid stabilizes chlorine in water from UV degradation. When using the IntelliChlor (SC), the cyanuric acid level should be maintained between 30-50 ppm (50ppm maximum).

# Settings Menu: Heat Pump COM (UltraTemp® Heat Pump)

Heat Pump Com screen

From the Heat Pump Com screen you can view the current UltraTemp® Heat Pump operation status, and set the unit to operate with for heating only, cooling only, or both heating and cooling if the unit is reversible. Connection from UltraTemp Heat Pump is via the COM PORT on the EasyTouch PL4/PSL4 Control System main circuit board. See page 69 for UltraTemp Heat Pump to EasyTouch PL4/PSL4 Control System COM port wiring information. The UltraTemp Heat Pump must be set to default ADDRESS 1. One UltraTemp Heat Pump unit can be connected to EasyTouch PL4/PSL4 Control System.

*Note: Once the UltraTemp Heat Pump is enabled, use the **Left** and **Right** arrow buttons to adjust the UltraTemp Heat Pump temperature and cooling.*

Heat Pump Com

To access Heat Pump Com (UltraTemp Heat Pump) settings menu:

MENU▽SETTINGS▽HEAT PUMP COM▷SETTINGS

```
▶ Settings          ▲
  Status

                    ▼
```

```
Heat Pump Com
Enable  : Yes
Heating : Yes
Cooling : Yes
```
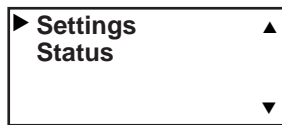
Right button: Access the "Settings" menu.
Up/Down buttons: Select **Yes** or **No** to enable or disable UltraTemp.
Right button: Move to the "Heating" setting.
Up/Down buttons: Select **Yes** or **No** to use for heating.
Right button: Move to the "Cooling" setting.
Up/Down buttons: Select **Yes** or **No** to use for cooling only or if the unit is reversible select both heating and cooling.
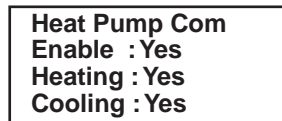
Press the **Menu** button to save the settings and to return to the Heat Pump Com Settings and Status menu options.
Press the **Menu** button three times to return to the main screen.

To access Heat Pump Com (UltraTemp Heat Pump) Status menu:

MENU▽SETTINGS▽HEAT PUMP COM▷STATUS

```
  Settings          ▲
▶ Status

                    ▼
```

```
Status              ▲

[ OP NORMAL    ]
  <MENU> = EXIT     ▼
```

Right button: To view the current UltraTemp status.

Press the **Menu** button to return to the main screen.
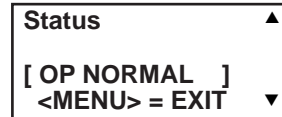
Settings Menu: Circuit Names

Labeling Circuit Buttons in the EasyTouch® PL4/PSL4 Control System Power Center

EasyTouch PL4/PSL4 Control System is factory configured to display each output circuit by its generic name (e.g. AUX 1, AUX 2, AUX 3). These generic circuit auxiliary names can be assigned a new names which are more descriptive of the equipment being controlled. This makes it much easier to operate all of the pool, spa and lighting equipment without having to memorize what each output controls.

For circuit identification, adhesive backed circuit name labels are provided for placement next to each auxiliary control panel button. Use the written list of circuit names (buttons) that you made while setting up the Power Center. Identify what you labeled circuit button 1, button 2 etc. The circuit names you assign should match the labels you put on the Power Center control panel buttons and/or the optional Indoor Control Panel buttons. Note that examples shown below use the factory set generic output names displayed in the control system control panel menus.

Circuit Names

To assign circuit names:

MENU▽SETTINGS▽CIRCUIT NAMES▷CIRCUIT NAMES

```
Circuit Names        ▲
Circuit #:  1/7
Circuit  :   SPA
[SPA JET         ]   ▼
```

Up/Down buttons: Select the circuit number **1**/7. Press the **Up button** two times to select AUX 1. **The generic circuits names are: Spa (1/7), Pool (2/7), Aux 1-3 (3-5/7), Ft 1-2 (6-7/7).** The circuit number 1/7 corresponds to its assigned circuit name. This name can be changed to suit the function.

Right button: Move to system preset circuit names and user defined custom circuit names.

Up/Down buttons: 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 (see page 48). Repeat for all the circuit buttons that you wish to assign names to. For a complete list of system circuit names, see page 43.

Press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Note: *After a generic circuit name is changed and saved, the new name is displayed in the menu settings. You can view the default generic circuit names in the menu settings before they were changed by enabling "Cir Names." Refer to "Diagnostics: Cir Names (Off)," on page 59.*

Hi-Temp/Lo-Temp Controls for Single Body System

For an EasyTouch PL4 Control System single body system, you have the option to control your pool and spa temperature settings using the Valves (V) button or the Spa (Hi-Temp) and Pool (Lo-Temp) button on the optional Indoor Control Panel. Change the circuit name **SPA** to **HI-TEMP** and **POOL** to **LO-TEMP** so that the display shows the correct temperature controls for your single body system.

EasyTouch® PL4/PSL4 Control System Circuit Names

AERATOR
AIR BLOWER
AUX 1
AUX 2
AUX 3
BACKWASH
BACK LIGHT
BBQ LIGHT
BEACH LIGHT
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
FIBER WORKS
FILL LINE
FLOOR CLNR
FOGGER
FOUNTAIN
FOUNTAIN 1
FOUNTAIN 2
FOUNTAIN 3
FOUNTAINS
FRONT LIGHT
GARDEN LTS
GAZEBO LTS
HIGH SPEED
HI-TEMP
HOUSE LIGHT
JETS
LIGHTS
LOW SPEED
LO-TEMP

MALIBU LTS
MIST
MUSIC
NOT USED
OZONATOR
PATH LIGHTS
PATIO LTS
PERIMETER L
PG2000
POND LIGHT
POOL PUMP
POOL
POOL HIGH
POOL LIGHT
POOL LOW
POOL SAM
POOL SAM 1
POOL SAM 2
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
FEATURE 1
FEATURE 2
FEATURE 3
FEATURE 4
FEATURE 5
FEATURE 6
FEATURE 7
FEATURE 8

Custom Circuit Names (11 characters maximum)

USERNAME-01 _____

USERNAME-02 _____

USERNAME-03 _____

USERNAME-04 _____

USERNAME-05 _____

USERNAME-06 _____

USERNAME-07 _____

USERNAME-08 _____

USERNAME-09 _____

USERNAME-10 _____

Settings Menu: Circuit Functions

Assigning Circuit Functions

From the "Circuit Functions" menu you can assign special logic to the cleaner pump, spa spillway, lights and MagicStream® Laminar circuits. 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/or solar is switched on.

Freeze Protection

Freeze protection switches on a circuit if the outside air temperature sensor detects the temperature is getting close to freezing (below 35° F (40° C)). The system will switch on all circuits that have been assigned 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.

Circuit Functions

To assign a circuit function and freeze protection:

MENU▽SETTINGS▽CIRCUIT FUNC.▷CIRCUIT/FUNC.

```
Circuit/Func.:         ▲
[SPA            ]
[Master Spa     ]
Freeze: Yes           ▼
```

```
Circuit/Func.:         ▲
[AUX 1          ]
[LIGHT          ]
Freeze: No            ▼
```

Up/Down buttons: Choose the circuit name (displayed on the second line). The generic circuits names are: **SPA [MASTER SPA - Freeze protection on by default], POOL [MASTER POOL - Freeze protection on by default], AUX 1-3 FEATURE 1-2.**

Right button: Move to the "Circuit Function" setting to select the circuit function for the select circuit name displayed on the line above.

Up/Down buttons: Select the circuit function. This is the circuit that you wish to assign the function logic to. **For a complete list of preset circuit functions, see "Preset Circuit Functions," on page 42.**

Right button: Move to Freeze Protection setting.

Up/Down buttons: Select **Yes** or **No** to assign freeze protection to this circuit. If "Yes" is selected, the circuit will switch on if the air temperature drops to 35° F.

Note: *for the POOL circuit the filter pump will have freeze protection. For the SPA circuit the filter pump will run and the pool/spa valves will switch between pool and spa at 15 minutes intervals throughout the freeze condition. For the MASTER CLEANER circuit freeze protection is generally not needed for pool cleaner pumps since they get water flow from the filter pump. Just make sure that POOL has freeze protection.*

Press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Preset Circuit Functions

Generic	No special Logic. Simple On/Off control of a circuit with all the programmable capabilities.
Master Spa	Works with automatic pool cleaner pumps or cleaner valve actuator. It does the following: - Forces the filter pump on 5 minutes before the cleaner pump switches on. - Switch the cleaner off when the spa is on. - Switch the cleaner off for 5 minutes when the solar heating begins.
Master Pool	Works with automatic pool cleaner pumps or cleaner valve actuator. It does the following: - Forces the filter pump on 5 minutes before the cleaner pump switches on. - Switch the cleaner off when the spa is on. - Switch the cleaner off for 5 minutes when the solar heating begins.
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 pump switches on. - Switch the cleaner off when the spa is on. - Switch 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.
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.
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.
Photon Generator	Photon Generator® light source allows Pentair Fiberworks fiber optic bulb be operated by the Lights menu features Sync, Rotate, ALL ON and ALL OFF 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.
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	Activate an Intellibrite LED light.
MagicStream	Activate a MagicStream laminar.

Settings Menu: Custom Names

There are nearly 100 circuit names available to choose from. If you cannot find one to fit your application you can create up to 10 custom names. Each name can be up to 11 alphanumeric characters. After a custom name is saved, it is then available for selection in the Schedules, 2-Speed Pump, iS4 and QuickTouch Controller menus.

Custom Name

To assign a custom circuit name:

MENU▽SETTINGS▽CIRCUIT NAMES▷CUSTOM NAMES

```
Cstm Name   1/10   ▲

[USERNAME-01]      ▼
```

Up/Down buttons: Select a custom circuit name number (1-10). You can create up to 10 custom circuit names.
Right button: Move to custom circuit name setting.
Up/Down/Right buttons: Enter the custom circuit name (11 characters maximum).

Press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Settings Menu: Valves

This feature lets you assign a circuit to Valve A or B. The EasyTouch PL4/PSL4 Control System can drive two auxiliary valve actuators (A and B) for applications such as solar heating and water features. By assigning AUX circuits to control valve actuators, you can conserve auxiliary circuits for high voltage relays for controlling pumps and lights.

Valve A: Resides on the EasyTouch PL4/PSL4 Control System main circuit board. If solar heating is setup and is not configured as a heat pump, then Valve A is dedicated for controlling the solar heating valve actuator. Solar is enabled in the "Solar" menu. The Valve A selection will display "USED SOLAR."
Valve B: Resides on the main circuit board. Can be configured to be controlled by any circuit.

Valves

To assign a circuit to Valve A and Valve B:
MENU▽SETTINGS▽VALVES▷SETUP VALVES

```
Set Valves         ▲

A: [CLEANER    ]
B: [FOUNTAIN   ]   ▼
```
```
Set Valves         ▲

A: [USED SOLAR]
B: [FEATURE 1  ]   ▼
```

Up/Down buttons: Select a circuit to assign to **VALVE A**. The generic circuit names are: The generic circuits names are: NONE, SPA, POOL, AUX 1-3 FEATURE 1-2, and HEATER. Use the Solar button to switch the circuit on and off (see page 5). Selecting NONE does not assign a circuit.
Right button: Move to Valve B setting.
Up/Down buttons: Select a circuit to assign to Valve B. See above for the generic circuits names.

Press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Settings Menu: 2-Speed Pump

Equipment circuits selected in this menu will automatically switch a two-speed filter pump to high speed when these circuits are on. If a two-speed pump is assigned to solar, a cleaner or a pump, when activated the pump will automatically run for five minutes in high speed then switch to low speed. For example, when on, the filter pump will switch to high speed whenever the JETS or CLEANER is on. There must be a two-speed relay installed in the EasyTouch PL4/PSL4 Control System Power Center in order for the "2-Speed Pump" menu settings to function.

2-Speed Pump

To configure a two-speed pump to a circuit:

MENU▽SETTINGS▽2-SPEED PUMP▷2-SPEED PUMP

```
2-Speed Pmp  1/4    ▲

Circuit:
[SPA HEATER     ]   ▼
```

Up/Down buttons: Select a circuit that will switch the filter pump to high speed. You can set up to four circuits to use a two-speed pump (**1**/4, **2**/4, **3**/4, **4**/4).
Right button: Move to assign a circuit setting.
Up/Down buttons: Select the circuit to assign to a two-speed pump. The generic circuits names are: **NONE, SPA, POOL, AUX 1-3, FEATURE 1-2, SOLAR, HEATER, POOL HEATER, SPA HEATER and FREEZE.** Selecting NONE does not assign a circuit. *Note: You can use a Feature circuit to change a 2-Speed pump to high speed.*
Right button: Assign the next circuit (**2**/4).
Up/Down buttons: Select the first digit for the circuit number (**1**/4, **2**/4, **3**/4, **4**/4).
Right button: Move to circuit setting.
Up/Down buttons: Select the next circuit. When finished press the **Menu** button.

Settings Menu: Solar

Use the solar settings to setup solar or configure solar as a heat pump: **Setting Up Solar Control**: Ensure that the solar temperature sensor is installed.

About Installing Solar Heating: First, install the solar sensor at the collectors and connect to the EasyTouch PL4/PSL4 Control System Power Center. If HEAT PUMP is selected and is being used in place of a solar heating system, install Solar sensor near the EasyTouch PL4/PSL4 Control System Power Center. Connect the wires to the SOLAR screw terminals according to the wiring diagram on page 64. Plug the solar valve actuator cable into three-pin socket marked VLV A on the EasyTouch PL4/PSL4 Control System main circuit board. If a solar booster pump is being installed, connect the pump to a power relay and plug a low voltage cable from relay into the two-pin socket marked SOLAR on the EasyTouch PL4/PSL4 Control System main circuit board.

To access the Solar menu:
MENU▽SETTING▷SOLAR▷SOLAR

```
Solar       1/3    ▲

Enable:     Yes
Heat Pump:  No     ▼
```

```
Solar       2/3    ▲
Enable Freeze
Enable:     Yes/ No  ▼
```

```
Solar       3/3    ▲
Temperature Diff
Start:   6°
Run :    4°        ▼
```

Solar: Press the Up/Down button **to select which solar screen to view. Press the** Right

Press the **Up/Down button** to select which solar screen to view. Press the **Right button** to select the setting and the **Up/Down button** to change a setting or value**.**
Screen (1/3): ENABLE SOLAR: Is the pool using solar heat? Select **Yes** or **No** to enable solar heat. To display the solar selection as a heat source in the main screen, select **Yes**.

HEAT PUMP: Is a heat pump being used for solar heat? Select **Yes** or **No** to enable solar as a heat pump. **Heat Pump Control instead of Solar:** Select **YES** if a heat pump is being used in place of a solar heating system. If Solar is set to heat pump, **Valve A** is free for other circuits.

Right button: Select **2** of 3 (**2**/3) to access the freeze and night cooling features.

Screen (2/3): ENABLE FREEZE: Enable freeze protection when using solar heat. Select **Yes** or **No** to enable freeze solar protection.

Screen (3/3): Solar temperature differential start up and run settings.

Start: Set the temperature differential to start heating from 3° to 9°. For example, if "Start" is set to 3°, this ensures that the temperature has to deviate by 3° at least to the specified set point temperature (in the Heat menu, on page 25) before it switches on. Once the solar comes on it will start converging as it is heating. This ensures that it will not continually be switching on and off.

Run: Set the temperature differential to stop heating from 2° to 5°. This setting sets how close to the target set point temperature to switch off solar heat.

Settings Menu: Delays (Spa/Pool (Heater Cool-Down) and Delays For Valves)

Setup which functions (pool/spa, and valves) to assign the delay feature. Delays can be assigned to the following equipment. See "Delays" below for delay cool down and delay for valves information.

- **Heater Cool-Down Delay Cancel:** Shuts Filter Pump off immediately.
- **2-Speed Filter Pump five-minute START on HIGH SPEED Delay Cancel:** Shifts pump to low speed.
- **Automatic Pool Cleaner START Delay:** Starts Cleaner Pump immediately, without normal delay in which the filter pump first runs for 5 minutes.
- **Automatic Pool Cleaner SOLAR Delay:** Allows Cleaner Pump to run even though solar delay has shut it off for 5 minutes.

Some heaters require a cool down cycle before being switched off. This can be setup to run the filter pump an additional ten minutes to dissipate residual heat built up inside the heater combustion chamber. You can also cancel the delay feature. For information about using the cancel delay feature, refer to "Delay Cancel" on page 31.

Delays

To assign a delay feature:

MENU▽SETTING▽DELAYS▷DELAYS

Delays ▲ Cooldown: No Valves: No ▼	Press the **Up/Down buttons** to select **YES to enable COOLDOWN** delays for the pool and spa circuits. Select **YES** to use delays for valves. Press the **Menu** button to save and to return to the Settings menu options.

Delays Cool down: This feature keeps the pump running for ten minutes after the heater is switched off to cool down the heaters header and heat exchanger. Some heater models require this cool down period or damage will occur. This is sometime referred toas the "Fireman Switch." for example, If you are in the spa, and you switch it off. The system will return the valves to "Pool" mode position. If the pool is running a cycle, or the Fireman switch (Spa/Pool Delay) is enabled,colder water from the pool would be pumped into the spa as the valves turn. Note: If the pool is not running a cycle,and the fireman switch is not enabled, the pump stops and no pool water would be pumped into the spa as the valves turn back to pool.

Delays For Valves: This feature creates a 30 second PUMP OFF (forced) period anytime the valves rotate. Either from pool to spa, or spa to pool. When you switch the spa off, even if the pool is running a cycle or the fireman switch is enabled,it stops the pump for 30 seconds while the valves turn, so colder water from the pool will not enter the spa. This feature prevents cold water entering the spa when you start the spa, so less heating is needed. It also stops the pump when the system is changing from pool to spa or back again in Freeze mode.

Settings Menu: F° / C° (Fahrenheit/Celsius)

The temperature settings for the water, solar and air can be displayed in either Fahrenheit or Celsius.

F° / C°

To change the temperature units:

MENU▽**SETTING**▽**F°/C°**▷**DF°/C°**

F° / C°	▲
FAHRENHEIT	▼

Up/Down buttons: Select either Fahrenheit or Celsius. Press the Menu button to save the settings and to return to the Settings menu options. Press the **Menu** button again to return to the main menu options or press again to return to the main screen.

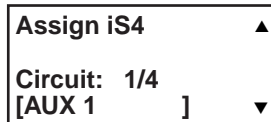# Settings Menu: iS4 Spa-Side Remote Controller

You can specify any iS4 Spa-Side remote button to control different functions by assigning each button to a specific circuit. For example, you can use the iS4 Spa-Side remote to activate the spa circulation and for operating auxiliary equipment such as heater, lights, jet pump, air blower, waterfall, etc.).

Assign iS4

Before configuring the iS4 Spa-Side remote controller assign names to the circuits (see page 45).

To assign iS4 Spa-Side buttons:

MENU▽**SETTING**▽**IS4**▷**ASSIGN IS4**

Assign iS4	▲
Circuit: 1/4	
[AUX 1]	▼

Note: To disable or enable the iS4 Spa-Side remote, see Settings Menu: Spa Side," on page 56.

Up/Down buttons: Select a circuit to one of the iS4 buttons. You can set up to four circuits (**1/**4, **2**/4, **3**/4, **4**/4).
Right button: Move to the circuit setting.
Up/Down buttons: To configure the first button on the iS4 Spa-Side Remote, scroll through the circuit names and find the circuit that you would like to assign to the first button on the iS4. The generic circuits are: **NONE, SPA, POOL, AUX 1-3, FEATURE 1-2.** Selecting "NONE" does not assign a circuit.

Right button: Assign the next circuit (2/4).
Up/Down buttons: Select the first digit for the circuit number (**1**/4, **2**/4, **3**/4, **4**/4) and repeat the procedure for the other three buttons.
Press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Settings Menu: QuickTouch® II (QT4) Wireless Controller

The QuickTouch® II (QT4) Wireless Controller provides switching of up to four circuits. For example, you can use the QT4 wireless controller to activate 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 wireless 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.

The QT4 wireless controller buttons can be assigned to any available circuit. However, the QT4 wireless remote has the following preset circuits assigned to the four buttons:

- Spa button activates the **spa circuit**.

- A button activates **Auxiliary 1** circuit.

- B button activates **Auxiliary 2** circuit.

- C button activates **Auxiliary 3** circuit.

Assign QT4 II Remote

To assign circuits to the QuickTouch II Wireless Controller buttons:

MENU▽SETTING▽QUICKTOUCH▷ASSIGN QT4

| Assign QT4 ▲

Circuit: 1/4
[SPA   ] ▼ | **Up/Down buttons:** Select a circuit to assign to one of the QuickTouch wireless remote buttons. You can set up to four circuits (**1**/4, **2**/4, **3**/4, **4**/4).
Right button: Move to the circuit setting.
Up/Down buttons: To configure the first button (1/4) on the QuickTouch wireless controller. Use these buttons to scroll through the circuit names and find the circuit that you would like to assign to the first button. The generic circuits are: **NONE, SPA, POOL, AUX 1-3, FEATURE 1-2.** Selecting "None" does not assign a circuit. |

Right button: Assign the next circuit (2/4).
Up/Down buttons: Select the first digit for the circuit number (**1**/4, **2**/4, **3**/4, **4**/4), then repeat the procedure for the other three buttons.

Press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Settings Menu: Man Heat (Off/On)

By default manual heat (Man Heat) is set to "On," which allows your spa to begin to heat whenever it is manually switched on, (by pressing the **Valves (V)** button and **Filter Pump (F)** button on the outdoor control panel or the **Spa** button on the Indoor Control Panel), even if the Heat menu setting is set to "OFF" (see page 30). Your spa will also begin to heat when switched on by the iS4 Spa-Side remote. This feature allows you to program your spa to filter daily with the heater set to off, and then be ready to heat whenever the Spa button is pressed manually.

Man Heat

To enable or disable spa manual heat when switched on manually:

MENU▽SETTING▽MAN HEAT (ON/OFF)

| QuickTouch Man Heat [On] Calibration ▲ ▼	**Right button:** Select **Off** to disable or **On** to automatically begin spa heating whenever the spa is switched on manually. Press the **Menu** button to save the settings and to return to the main screen.

Settings Menu: Calibration

The EasyTouch PL4/PSL4 Control System includes two temperature sensors (10 kΩ) for water and ambient air temperature. You can also add an additional sensor for controlling solar heating systems. Generally, these sensors are accurate and you do not have to calibrate them. However, long plumbing runs and water features can 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. You only need to calibrate one body of water, since the temperature sensor is common to both the pool and spa. The system must be in "Service" mode to calibrate sensors.

Calibration

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. For the air temperature sensor, make sure that the sensor is located in the shade for accurate readings.

To calibrate the water, air and solar temperature sensors:

MENU▽SETTING▽CALIBRATION▷CALIBRATION

Calibration Water: 70°F Air: 80°F Solar: 90°F ▲ ▼
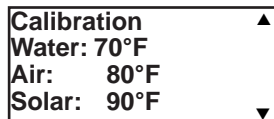
1. Press the **Mode** button on the control panel to place the system in "Service" manual mode.

2. Press the **Filter Pump (F)** button to switch on the pool/spa filter pump.

3. Place the thermometer in the spa or pool water. Take an accurate temperature reading. When calibrating the air sensor, place the thermometer next to the air sensor. The air sensor is normally located near or under the EasyTouch PL4/PSL4 Control System Power Center enclosure, not inside the enclosure. Take an accurate temperature reading in the shade.

4. Use the **Up** or **Down** buttons to raise or lower the water temperature to match the corresponding thermometer temperature reading.

5. After calibrating the water sensor, use the **Right** button to move to the "AIR" setting and repeat step 4 and repeat the procedure for the solar sensor. Ensure that the solar sensor is in the sun for accurate readings.

6. After calibrating all the sensors, press the **Menu** button to save the settings and to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Settings Menu: Erase EEPROM (Erase System Memory)

EasyTouch® PL4/PSL4 Control System configuration data is stored and retained in "Flash" memory in an EEPROM located on the control panel main circuit board, and optional Indoor Control Panel. The EasyTouch PL4/PSL4 Control System user system configuration data can be erased to restore the factory defaults settings. System information automatically downloads from programmed components to non-programmed components in case of accidental memory loss and to ease board replacement. Any optional controllers (iS4 and QuickTouch® II QT4 Wireless Controller) that were configured need to be reconfigured.

Erase EEPROM

The following procedure describes how to erase the system memory from either the main EasyTouch PL4/PSL4 Control System control panel or the EasyTouch PL4/PSL4 Control System Indoor Control Panel.

CAUTION: This procedure will erase all system settings. Any optional controllers will need to be reconfigured.

MENU▽SETTING▽ERASE EEPROM▷ERASE EEPROM

Erase EEPROM **Erase ALL? No (Yes)** ▲▼	**Up/Down button:** Select **Yes**.
Erase EEPROM **Are You Sure?** **No (Yes)** ▲▼	**Right button:** The message **"Erase EEPROM Are You Sure? No"** is displayed. **Up/Down button:** Select **Yes**.
AUTO HEATER **SPA 85°F / 100°F** **AIR 70°F** ** MON 09:30 AM**	**Right button:** Press this button to erase system data and restore the factory defaults. The display will go blank, then the main screen will be displayed.

Settings Menu: Set Password

If required, the password feature allows you to password protect the EasyTouch PL4/PSL4 Control System control panel. To access a password protected control panel, you must enter the correct four digit password before access is granted.

Password

To enable the password protect feature:

MENU▽SETTING▽SET PASSWORD

Set Password **PW : [0000]** **Enable : No** ▲▼	**Up/Down button:** Select the password **first** digit (0-9) of the four digit password. **Right button:** Select the next password digit. Repeat the previous step to enter each of the password digits. **Right button:** After you are finished entering the four password digits, press the Right button to enable the password feature. **Up/Down button:** Select **Yes** enable the password feature. Press the **Menu** button three times to save the settings and to return to the main screen. **Note:** If the password feature is enabled, the current four digit password can be viewed from the EasyTouch PL4/PSL4 outdoor control panel in the "Set Password" setting.

Settings Menu: Wireless Addr

Use this feature to assign the EasyTouch® PL4/PSL4 Control System Wireless Controller a unique communication address to allow the wireless device to operate with the EasyTouch PL4/PSL4 Control System outdoor control panel (see page 64).

Wireless Addr

To search and lock on to the EasyTouch PL4/PSL4 Control System wireless controller:

MENU▽SETTING▽WIRELESS ADDR▷Press Right Arrow button

> **Address Wireless
> Scanning ...**

Right button: Press this button to automatically search and lock on to the Wireless Controller within range of the transceiver antenna.
For more information about the Wireless Controller, see page 70

> **Address Wireless
> Sending Address..**
>
> **<MENU>**

Press the **Menu** button to save the settings and to return to the Settings menu selections.

Important Note:
1. After you plug in a transceiver or power up the unit, wait at least 60 seconds before addressing the unit.
2. If the wireless unit times out and power off before locking on the address, set the auto power off time to 5 minutes then start the addressing. Remember to set it back to 1 minute after it is working or battery life is greatly decreased.
3. If you are working with multiple sets of transceivers and handhelds make sure you keep them separated into sets.

EASYTOUCH PL4/PSL4 CONTROL SYSTEM WIRELESS CONTROLLER:

Settings Menu: Backlight

Use the backlight "On Time" option to set the duration that the backlight will stay on. The "Brightness" setting allows you to set the backlight brightness. These options can help to reduce power consumption and extend battery life. The Backlight options are:

- **On Time:** Backlight will stay on for 60 seconds, 30 seconds, five minutes, or "Backlight" feature is off. The default setting is 30 seconds.

- **Brightness:** Backlight brightness can be set to low, medium or high. The default setting is medium.

Backlight

To set the backlight duration and brightness:

MENU▽SETTING▽BACKLIGHT

> **BACKLIGHT OPTIONS** ▲
>
> **On Time: 30 S
> Brightness: MED** ▼

Up/Down buttons: Select **5 S, 15 S, 30 S, 60 S, 5 M** or **OFF** for the backlight to stay on.
Right button: Select **LOW, MED or HI** for the backlight brightness setting.
Press the Back button to save the settings and to return to the previous screen.

WIRELESS CONTROLLER: Settings Menu: Power Save

This option sets the time the EasyTouch® PL4/PSL4 Wireless Controller will shut down if there is no control panel activity. Use the power save options to reduce power consumption and extend battery life. The options are:

- **Power save:** Set the power save time to 15, 30, or 60 seconds, or five minutes before the unit shuts down. The default time is 60 seconds.

Note: If the unit is not used for 60 (default) seconds the power save function switches off the unit. To switch the unit on, press the "POWER ON" button (see page 10).

Idle Time

To set the idle time for the EasyTouch PL4/PSL4 Wireless Controller:

MENU▽SETTING▽POWER SAVE

POWER SAVE
IDLE TIME: 60 S

Right or Up/Down buttons: Select **30 S, 60 S** or **5 M**.
Press the Back button to save the settings and to return to the previous screen.
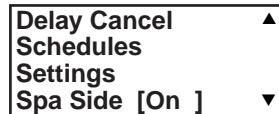
Spa Side [Off/On]

Enable or disable the iS4 Spa Side remote. This feature is useful for families with young children or when you go on vacation. It allows you to switch off the iS4 Spa Side remote at the control panel so that the remote cannot be used.

Spa Side

To enable or disable the iS4 Spa Side remote:

MENU▽SPA SIDE (ON/OFF)

Delay Cancel	▲
Schedules	
Settings	
Spa Side [On]	▼

Right button: Select **On** or **Off** to enable or disable the spa side remote.
Press the **Menu** button to save the settings and to return to the main screen.

Diagnostics Menu: Software Rev

Displays the current software revision for the EasyTouch Control System PL4/PSL4 main control panel and the optional indoor control panel.

MENU▽DIAGNOSTICS▽SOFTWARE REV
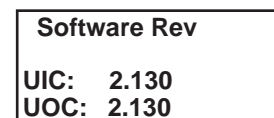
Software Rev
UIC: 2.130
UOC: 2.130

UIC: Displays the current software revision level for the indoor control panel.
UOC: Displays the current software revision level for the outdoor control panel.
Press the **Menu** button to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Diagnostics Menu: Bootloader Rev

Displays the current bootloader revision for the indoor control panel and the main EasyTouch PL4/PSL4 Control System control panel.

MENU▽DIAGNOSTICS▽BOOTLOADER REV

Bootloader Rev
UIC: 1.02
UOC: 1.02

UIC: Displays the current bootloader revision level for the indoor control panel.
UOC: Displays the current bootloader revision level for the outdoor control panel.
Press the **Menu** button to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Diagnostics Menu: Self Test

Tests the control panel LCD and buttons. Follow the on-screen prompts to perform the tests.

MENU▽DIAGNOSTICS▽SELF TEST

Note: If the Indoor Control Panel is connected to the EasyTouch PL4/PSL4 Control System outdoor control panel, select "LINK CLOSED" in the UART test to abort the UART test. This allows the test to complete with and display PASSED.

Firmware Version
Soft: 2.130
Boot: 2.130
Press Any Button

Press the **Right** button to display the current software and boot loader revision levels for the outdoor control panel.
Press the **Right** button to start the test:
Press the Right button to start the test:

Press ▌Any ▌Button
▉▉▉▉▉▉▉▉▉▉▉▉
▉▉▉▉▉▉▉▉▉▉▉▉
▉▉▉▉▉▉▉▉▉▉▉▉

Display Test: Press any button to start the LCD test.

Backlight Test: Press the **Left** then **Right** button.

Backlight On
<=Backlight On
>=Backlight Off

Contrast Test: Press any button to continue.

LED Test: Press any button to continue. All of the button LEDs will be tested.

Switch Test: Press any button to continue. As prompted, press the appropriate buttons.

Contrast:
Press any button

UART Test: Select "LINK CLOSED" to abort this test if the optional Indoor Control Panel is connected to the system Power Center.

Status: Passed - Code 0: After you have completed the test an error code is displayed. "Passed" is displayed if the test was successful. For error code descriptions, see "Self Test Error Codes," on page 59.

LED Test

Press the **Menu** button to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Switch Test
Press any button

UART Test
<=Link Closed
>=Link Open

Diagnostics Menu: Chlorinator

Displays the current IntelliChlor® Salt Chlorine Generator system status. For more information, refer to the IntelliChlor Salt Chlorine Generator User's Guide (P/N 520589).

MENU▽DIAGNOSTICS▽CHLORINATOR

```
Chlorinator        ▲
Salt Level:3200ppm
Status:
[OK-NO ERRORS]     ▼
```

Menu: Press this button to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

SALT LEVEL: Displays the current salt level. Values from 0 to 12750 ppm in 50 ppm increments.

IntelliChlor Status messages:

SUPER CHLORINATE: IntelliChlor is in "Super Chlorination mode (see page 35 for details)

COM LINK ERROR: Check cable from IntelliChlor to EasyTouch PL4/PSL4 Control System mian circuit board.

Check FLOW/PCB: Check IntelliChlor electrolytic cell controller. Refer to IntelliChlor User's Guide troubleshooting information.

LOW SALT: Add salt to pool water. The water salt level is between 2500 ppm and 2900 ppm. The IntelliChlor will continue to produce chlorine at a reduced level.

VERY LOW SALT: Not enough salt in pool. The water salt level has fallen below 2500 parts per million (ppm). IntelliChlor will not produce chlorine until additional salt is added manually.

HIGH CURRENT: Check IntelliChlor electrolytic cell controller. Refer to IntelliChlor User's Guide troubleshooting information..

CLEAN CELL!!: Cell has calcium build up and requires cleaning. Refer to IntelliChlor User's Guide for cleaning instructions.

LOW VOLTAGE: Check IntelliChlor electrolytic cell controller. Refer to IntelliChlor User's Guide troubleshooting information.

OK - NO ERRORS: IntelliChlor is in normal operating mode.

Diagnostics Menu: Water Temp

Displays the current water temperature for the pool and spa.

MENU▽DIAGNOSTICS▽WATER TEMP

```
Water Temperature  ▲


     75° F         ▼
```

Press the **Menu** button to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Diagnostics Menu: Solar Temp

Displays the current solar temperature.

MENU▽DIAGNOSTICS▽SOLAR TEMP

```
Solar Temperature  ▲


     85° F         ▼
```

Press the **Menu** button to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Diagnostics Menu: Air Temp

Displays the current outside air temperature.

MENU▽DIAGNOSTICS▽AIR TEMP

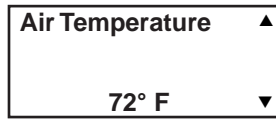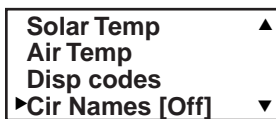|	
Air Temperature ▲ **72° F** ▼	Press the **Menu** button to return to the Settings menu options. Press the button again to return to the main menu options or press again to return to the main screen.

Diagnostics Menu: Cir Name: [Off/On]

This feature is useful if you have renamed many circuits and want to view the original factory default circuit names.

MENU▽DIAGNOSTICS▽CIR NAMES (OFF)

Solar Temp ▲ **Air Temp** **Disp codes** ▶**Cir Names [Off]** ▼	To enable: **Right button:** Select **On** to view the factory default circuit names. Press the **Menu** button to exit. To disable: **Right button:** Select **Off** to disable the feature. Press the **Menu** button to exit.

Diagnostics Menu: Reset System

Reinitialize the Outdoor Control Panel. Resetting the Outdoor Control Panel will not effect the system configuration settings.

MENU▽DIAGNOSTICS▽RESET SYSTEM
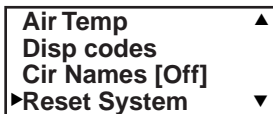
Air Temp ▲ **Disp codes** **Cir Names [Off]** ▶**Reset System** ▼	**Right button:** Press the Right button to reset system. The main screen will be displayed and communication will be established with the optional EasyTouch PL4/PSL4 Control System Indoor Control Panel if installed.

Diagnostics Menu: Flash Update

Use this feature to update the EasyTouch PL4/PSL4 Control System Outdoor Control Panel firmware. The EasyTouch PL4/PSL4 Control System main circuit board must be connected to a personal computer (PC) in order to update the firmware.

MENU▽DIAGNOSTICS▽FLASH UPDATE

Press MENU **to exit**	Press the **Menu** button to exit the flash mode.

WARNING / **PREVENT ELECTROCUTION**
INSTALL AT LEAST 5 FEET (1.52m) FROM INSIDE WALL OF POOL OR SPA.

AVERTISSEMENT / **ÉVITER TOUT RISQUE D'ÉLECTROCUTION**
INSTALLER AU MOINS 1.52 MÈTRES DU MUR INTÉRIEUR DE LA PISCINE OU DU SPA.

DISCONNECT ALL SUPPLY CONNECTIONS BEFORE SERVICING. THIS APPLIANCE MAY HAVE UP TO 8 SUPPLY CONNECTIONS.

DÉBRANCHER TOUTES LES CONNEXIONS AVANT DE TRAVAILLER SUR CETTE UN ITÉ. CET APPAREIL PEUT AVOIR JUSQU'À 8 CONNEXIONS DE L'ALIMENTATION.

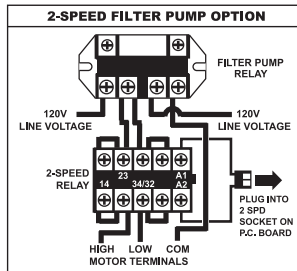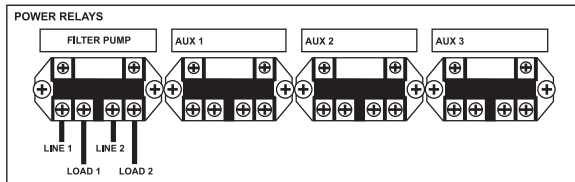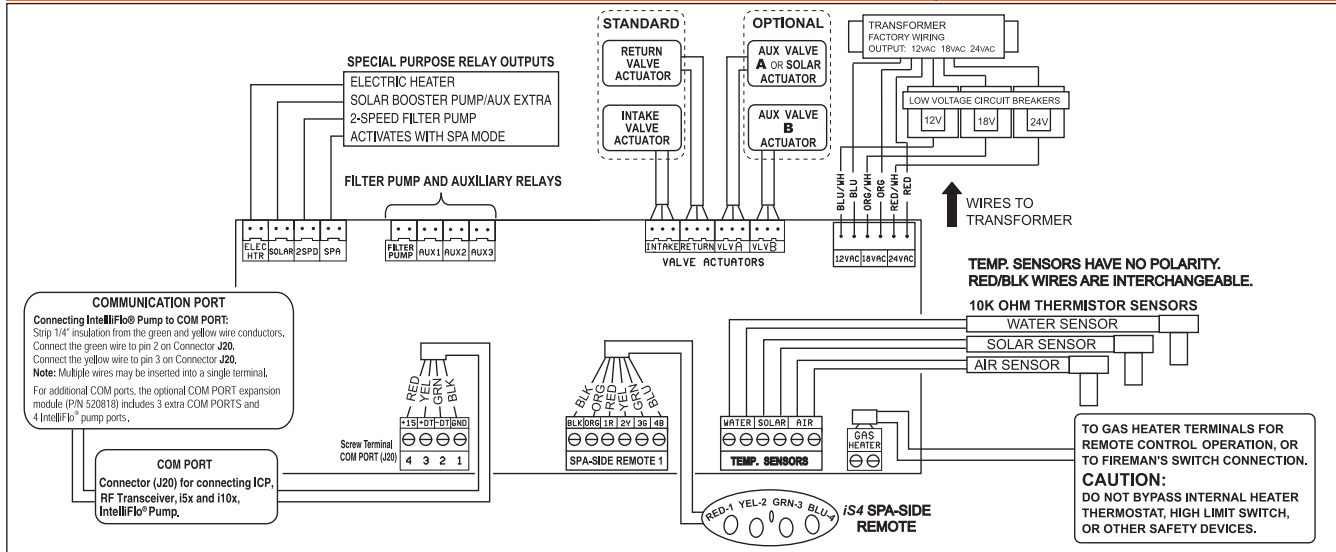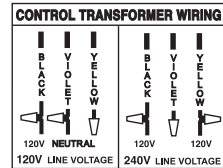SPECIAL PURPOSE RELAY OUTPUTS
ELECTRIC HEATER
SOLAR BOOSTER PUMP/AUX EXTRA
2-SPEED FILTER PUMP
ACTIVATES WITH SPA MODE

FILTER PUMP AND AUXILIARY RELAYS

STANDARD
RETURN VALVE ACTUATOR
INTAKE VALVE ACTUATOR

OPTIONAL
AUX VALVE A OR SOLAR ACTUATOR
AUX VALVE B ACTUATOR

TRANSFORMER FACTORY WIRING
OUTPUT: 12VAC 18VAC 24VAC

LOW VOLTAGE CIRCUIT BREAKERS
12V 18V 24V

ELEC HTR | SOLAR | 2SPD | SPA
FILTER PUMP | AUX1 | AUX2 | AUX3

INTAKE | RETURN | VLVA | VLVB
VALVE ACTUATORS

BLU/WH BLU ORG/WH ORG RED/WH RED

12VAC 18VAC 24VAC

WIRES TO TRANSFORMER

TEMP. SENSORS HAVE NO POLARITY.
RED/BLK WIRES ARE INTERCHANGEABLE.

10K OHM THERMISTOR SENSORS
WATER SENSOR
SOLAR SENSOR
AIR SENSOR

COMMUNICATION PORT
Connecting IntelliFlo® Pump to COM PORT:
Strip 1/4" insulation from the green and yellow wire conductors.
Connect the green wire to pin 2 on Connector J20.
Connect the yellow wire to pin 3 on Connector J20.
Note: Multiple wires may be inserted into a single terminal.
For additional COM ports, the optional COM PORT expansion module (P/N 520818) includes 3 extra COM PORTS and 4 IntelliFlo® pump ports.

COM PORT
Connector (J20) for connecting ICP, RF Transceiver, i5x and i10x, IntelliFlo® Pump.

RED YEL GRN BLK
+1S +D1-D1 GND
Screw Terminal COM PORT (J20) 4 3 2 1

BLK ORG RED YEL GRN BLU
BLK ORG 1R 2V 3G 4B
SPA-SIDE REMOTE 1

WATER SOLAR AIR
TEMP. SENSORS

GAS HEATER

RED-1 YEL-2 GRN-3 BLU-4
iS4 SPA-SIDE REMOTE

TO GAS HEATER TERMINALS FOR REMOTE CONTROL OPERATION, OR TO FIREMAN'S SWITCH CONNECTION.
CAUTION:
DO NOT BYPASS INTERNAL HEATER THERMOSTAT, HIGH LIMIT SWITCH, OR OTHER SAFETY DEVICES.

POWER RELAYS
FILTER PUMP | AUX 1 | AUX 2 | AUX 3
LINE 1 LINE 2
LOAD 1 LOAD 2

⚠ CAUTION: RISK OF ELECTRIC SHOCK, READ INSTALLATION MANUAL

IMPORTANT: This Control Panel must be installed in compliance with the National Electrical Code (NFPA 70) including article 680, as well as all local Authority Having Jurisdiction requirements. Mount enclosure with conduit holes down. This control is not provided with integral GFCI protection for the lighting circuit. When this control is used to power or switch an underwater luminaire, suitable GFCI protection shall be provided in the field. Follow manufacturers' instructions for installing and testing of Ground Fault Circuit Breakers (GFCB) and Interrupters (GFCI); (Canada Class A GFCI). An APPROVED GFCI duplex receptacle may be installed in the rectangular knockout provided on the right side of the enclosure. If the panel is installed outdoors, an APPROVED TYPE 3R (RAINPROOF) Cover MUST be installed over the wiring device in the rectangular opening. Make sure connections inside the low voltage compartment are well insulated, connectors properly seated and wiring lugs tightened. After wiring is completed, install front panel over wiring compartment opening.

2-SPEED FILTER PUMP OPTION
FILTER PUMP RELAY
120V LINE VOLTAGE   120V LINE VOLTAGE
2-SPEED RELAY   14 23 34/32 A1 A2
PLUG INTO 2 SPD SOCKET ON P.C. BOARD
HIGH LOW COM MOTOR TERMINALS

⚠ WARNING
DO NOT USE AN EASYTOUCH® OR INTELLITOUCH® SYSTEM TO CONTROL AN AUTOMATIC POOL COVER. SWIMMERS CAN BECOME ENTRAPPED UNDER THE COVER, WHICH COULD RESULT IN INJURY AND/OR DEATH.

TYPE 3R "Rainproof" (IPX3).
Enclosure suitable for INDOOR or OUTDOOR USE.
Pour une utilisation en intérieue comme en extérieue.
Control Panel suitable for SWIMMING POOL/SPA applications.
Electrical Rating: 120/240VAC 150 AMP Single Phase (3 Wire).
Control Transformer Input: 120VAC, 2A; 240VAC, 1A, 50/60Hz.
Short Circuit Current Rating: 5000 RMS SYMMETRICAL AMPERES.
Use COPPER CONDUCTORS ONLY.
Use 14 AWG to 6 AWG, 60˚/75˚C Copper conductors for all field wiring.

PREVENT WATER DAMAGE
KEEP DOOR CLOSED

A disconnecting means must be located within sight from the equipment and at least 5 feet (1.52 m) from the inside walls of the pool, spa or hot tub.

CONTROL TRANSFORMER WIRING
BLACK VIOLET YELLOW   BLACK VIOLET YELLOW
120V NEUTRAL   120V   120V
120V LINE VOLTAGE   240V LINE VOLTAGE

RELAY CONTACT OUTPUT	
General: 25A, 277VAC	
PUMP	LIGHT
1.5 HP 120 VAC	1.5 KW 120 VAC TUNGSTEN
3 HP 277 VAC	4.8 KW 240 VAC TUNGSTEN
20 FLA/120 LRA, 120 VAC	20A, 277 VAC BALLAST
17 FLA/102 LRA, 277 VAC	

PENTAIR
EASYTOUCH® PL4/PSL4 CONTROL SYSTEM
FOR POOL AND SPA
Sanford NC • Moorpark CA

P/N 522427.A

c(UL)us
LISTED
POOL/SPA CONTROLLER
5K42

Customer Service 800-831-7133

EasyTouch® PL4/PSL4 Control System Wiring Diagram
(Outdoor Control Panel)

Section 3
Troubleshooting

Troubleshooting

Use the following troubleshooting information to help resolve problems that may occur when using the EasyTouch® PL4/PSL4 Control System. If by following the recommended actions you are still unable to resolve the problems, please contact Technical Support (see page ii).

Frequently Asked Questions (FAQ)

How do I setup a two-speed pump?

A two-speed pump operates using two relays and one or more circuits. The first relay turns the pump on or off. Assuming this is a filter pump, this circuit is controlled by the pool and spa circuits or any other circuit that may be tied to the filter pump (such as circuits with freeze protection, etc.). The second relay switches the pump from low speed to high speed. The default condition is low speed. Up to four circuits (except for Spa/Hi Temp) may be assigned to trigger the pump to high speed. Note: These circuits do not switch the pump on.

To configure a two-speed pump relay, refer to "Settings Menu: 2-Speed Pump," on page 47. For relay location and wiring (see page 58). The 2-Speed pump relay connector is plugged into the 2-SPD output on the EasyTouch PL4/PSL4 Control System main circuit board.

How do I switch on solar heating?

The system must first be configured for solar heating. Go to the "Heat" menu (see page 30) and enable "Solar" as the heat source **MENU▽HEAT▽SOLAR** Note: Do not set solar as a heat pump. Then the heating method must be selected for each body of water.

EasyTouch® PL4/PSL4 Control System Error Messages

Error Messages

If the system detects that a sensor is not connected to the EasyTouch PL4/PSL4 Control System Power Center or it is defective, an error message is displayed in the "Diagnostics" menu. The following lists the sensor errors.

Error Message	Possible Cause	Solution
Air Err (Displays on the Main Screen)	Air sensor not connected to the EasyTouch PL4/PSL4 Control System main circuit board.	Check that the air sensor plug is connected to J21 connector on the EasyTouch PL4/PSL4 Control System main circuit board. Check that the sensor wire is connected properly.
Air Temperature Err (Displays in the "Diagnostics" menu)	Air sensor not connected to the EasyTouch PL4/PSL4 Control System main circuit board.	Check that the air sensor plug is connected to J21 connector on the EasyTouch PL4/PSL4 Control System main circuit board.
Water Temperature Err, displays in the "Diagnostics" menu)	Water sensor not connected to the EasyTouch PL4/PSL4 circuit board.	Check that the water sensor plug is connected to J21 connector on the main circuit board.
Solar Temperature Err,,displays in the "Diagnostics" menu)	Solar sensor not connected to the EasyTouch PL4/PSL4 circuit board.	Check that the solar sensor plug is connected to J21 connector on the main circuit board.

EasyTouch® PL4/PSL4 Control System Error Messages (Continued)

Self Test Error Codes

The "Self Test" feature is intended for use by service personnel. If after performing a control panel self test (see page 55) there were no errors detected, Code 0 is displayed, indicating that there were no problems and the test was successful. If a problem is detected during the test, an error code is displayed upon completion of the test. For example Code 3 would indicate a problem with the LEDs on the control panel. If multiple errors are detected, multiple code numbers are displayed. For example, Codes 4, 2, 1, would indicate problems detected with the buttons, LEDs, and the LCD backlight on the control panel.

The following lists the control panel self test error codes.

Error Code Table

Error Code	Description
Code 0	PASS - The control panel has no problems
Code 1	LCD backlight
Code 2	LCD contrast
Code 3	LEDs
Code 4	Switch (buttons)
Code 5	UART loopback test
Code 6	Sensor/Relay/Valves test

Maximum Programs Exceeded

The "Maximum Programs Exceeded" message displays in the "Schedules" menu if you try to create a new program after exceeding the four program limit. To create a new program you must first delete an existing program. For information about deleting a program, refer to "Schedule Menu" on page 32.

IntelliChlor Salt Chlorine Generator (SCG) Error Messages

The IntelliChlor Salt Chlorine Generator status and error messages are displayed in the "IntelliChlor" menu (see page 38). Use the following information to resolve the IntelliChlor Salt Chlorine Generator problems. To access the "IntelliChlor" menu, press **Menu > Diagnostics > Chlorinator**.

Status Message	Possible Cause	Solution
OK-NO ERRORS	IntelliChlor (SC) normal operating mode.	N/A
SUPER CHLORINATE	IntelliChlor (SC) is in "Super Chlorination" mode for 24 hours.	IntelliChlor (SC) is in "Super Chlorination mode (see page 38 or details)
COM LINK ERROR	IntelliChlor SC communication error with EasyTouch PL4/PSL4 Control System circuit board.	Check cable from IntelliChlor SC to EasyTouch PL4/PSL4 Control System circuit board.
CHECK FLOW/PCB	Check IntelliChlor (SC) electrolytic cell.	Refer to IntelliChlor (SC) User's Guide troubleshooting information.
LOW SALT	Add salt to pool water.	The water salt level is between 2500 ppm and 2900 ppm. The IntelliChlor (SC) will continue to produce chlorine at a reduced level. See IntelliChlor SCG User's Guide for details.
VERY LOW SALT	Not enough salt in pool.	The water salt level has fallen below 2500 parts per million (ppm). IntelliChlor (SC) will not produce chlorine until additional salt is added manually. See IntelliChlor (SC) User's Guide for details.
HIGH CURRENT	Check IntelliChlor (SC) electrolytic cell.	Check IntelliChlor electrolytic cell controller. Refer to IntelliChlor (SC) User's Guide troubleshooting information.
CLEAN CELL!!	Cell has calcium build up and requires cleaning.	Cell has calcium build up and requires cleaning. Refer to IntelliChlor (SC) User's Guide for cleaning instructions.
LOW VOLTAGE	Check IntelliChlor (SC) electrolytic cell.	Refer to IntelliChlor (SC) User's Guide troubleshooting information.

System Problem Diagnosis

Use the following information to resolve control system problems.

Problem: The control system works in Service Mode, but EasyTouch PL4/PSL4 Control System 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/ main circuit board in the Power Center.	Verify cable and ensure 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)
Indoor Control 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 control panel.	Defective Cable/wiring	Verify cable and ensure 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)

Problem: iS4 fails to operate.

Symptom	Possible Cause	Solution
iS4 Remote fails to operate equipment.	iS4 Remote is disabled.	See page 54 to enable the iS4.
	Defective Wiring	Verify iS4 Remote setup. Ensure the iS4 Remote in question has the expected circuit assignments, and is not assigned to unused circuits.
	Incorrect configuration or button setup.	See page 49 to setup the iS4 Remote buttons.
	Defective iS4 Remote	Replace defective iS4 Remote
iS4 fails to operate only some of the switches, but others work fine.	Defective wiring on one or more iS4 leads	Verify wiring on main circuit board and iS4.
	Incorrect configuration or circuit to switch assignment.	Verify circuit board connection.

Problem: The QuickTouch® II Wireless Remote will not work, or will not work dependably.

Symptom	Possible Cause	Solution
POWER LED does not light on the Receiver board located in the plastic clam shell.	EasyTouch PL4/PSL4 Control System 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 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 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
Unit functions, but some circuits do not work, or operate the incorrect circuit	QuickTouch® II configuration is incorrect	See page 50 to setup buttons
Unit fails to operate, or fails to operate dependably at range	Excessive electrical noise	Relocate the receiver away from "noisy" electrical equipment such as blower motors
	Too many obstructions between the transmitter and receiver	Relocate the receiver away from ground metal and obstructions
	Receiver unit is too near the ground	Relocate the receiver to maximize the distance between the receiver antenna and the ground

Problem: The QuickTouch® II Wireless 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 an alternate address code for the transmitter and receiver. Change the switches on both receiver and remote 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 motors. Relocate 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 (type 2032 3V).
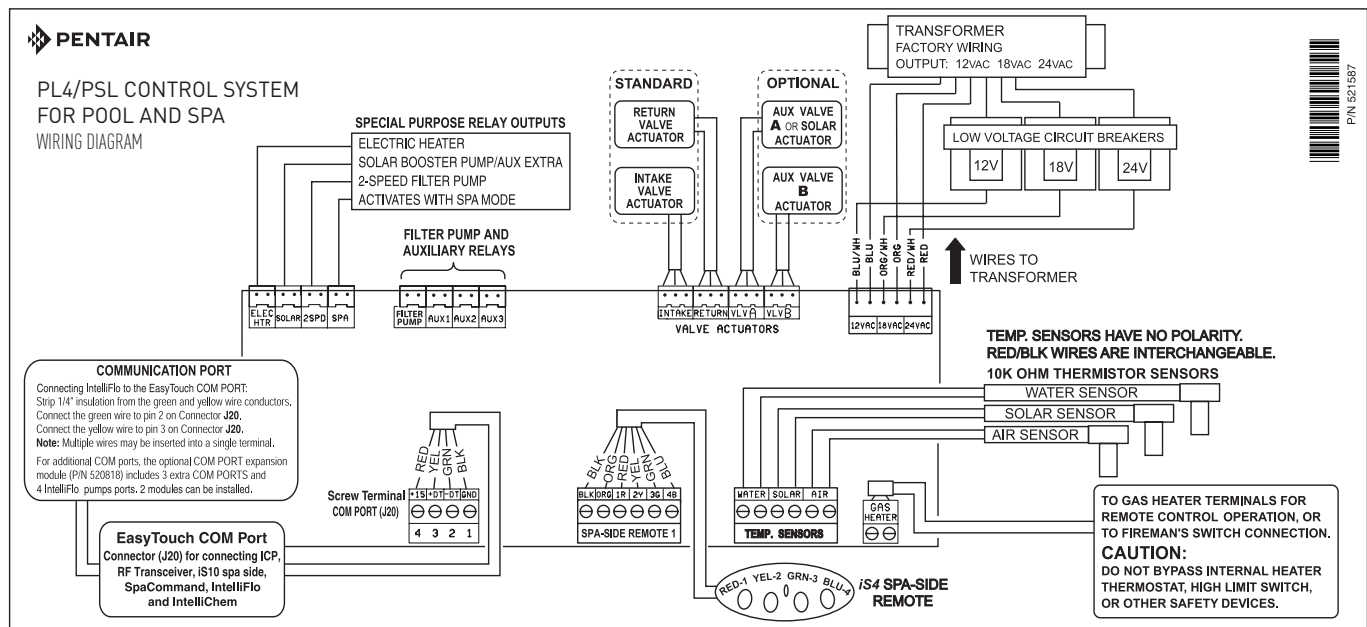
EasyTouch PL4/PSL4 Control System Wiring Diagram
(Outdoor Control Panel)

First Time System Start-Up

The following information describes a basic system start-up procedure. Before you power up the EasyTouch PL4/PSL4 Control System at the Power Center first check the following:

Check Electronics

Check that the following plugs are seated correctly on the EasyTouch PL4/PSL4 Control System Power Center main circuit board. For connector locations, refer to the EasyTouch PL4/PSL4 Control System Wiring Diagram on page 60.

- Relay connectors - **FLTR PUMP** - **AUX 1 - 3**
- Temperature sensors connectors - **WATER, SOLAR, AIR**
- Transformer wire harness **- J1**
- Heater control connector **- ELEC HTR** and **GAS HEATER (J19)**

System Test

Follow the steps below to test the EasyTouch PL4/PSL4 Control System control panel to activate the heater, valves and pumps. This test assumes that all system equipment has been properly installed and connected to the EasyTouch PL4/PSL4 Control System Power Center.

Testing Valve Actuators and Pumps:
Use the following steps to test the valve actuators (CVA24T) for proper rotation.

To test the valve actuators and pump:

1. Switch on the electrical power at the house breaker.
2. Switch on the EasyTouch PL4/PSL4 Control System Power Center. You may need to switch on the breakers on the Power Center.
3. Press the **Mode** button to enable "Service" mode.
4. Press the **Valve (V)** button to select "Pool" mode.
5. Press the **Filter Pump (F)** button to activate the filter pump. Water will be removed from the pool and returned to the pool. A spa bypass line divert a small amount of water to the spa. Make sure the filter pump turns on correctly. If the pump has two speeds: Press the button 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 in the 2-Speed menu (see page 46).
6. Set both valve actuators (CVA-24T) for suction and return. Use the toggle switch on the rear of the CVA-24T to withdraw and return water from the pool.
7. Press the **Valves (V)** button. Step through all four valve positions: Pool, Spa, Fill, Drain. Make sure the valves turn on correctly 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.

   Note: With the filter pump operating, if water is not being removed and returned to the pool, it may be necessary to reverse the **RETURN** with **VLV A** (or **VLV B**) plugs on the EasyTouch PL4/PSL4 Control System main circuit board.

Testing the Auxiliary Relays

Affix the auxiliary relay labels to the appropriate buttons on the EasyTouch PL4/PSL4 Control System Outdoor panel and/or the Indoor Control Panel. If necessary, write the function on the control panel.

1. Step through the rest of the auxiliary buttons. Notice which button turns on which equipment. You may need to walk the property to find what each button turns on.

2. Write down what each button switches on, including the number of the circuit. You need this information when you set up the Indoor Control Panel.

3. Label the circuit buttons on the outdoor control panel and the EasyTouch PL4/PSL4 Indoor Control Panel.

Setting up the Wireless Controller for the first time

Setting up the EasyTouch® PL4/PSL4 Control System Wireless Controller

In order for the EasyTouch PL4/PSL4 Control System Wireless Controller to communicate with the EasyTouch PL4/PSL4 Control System Outdoor Control Panel, the first time the wireless device is powered up it must first be assigned a unique communication address. For this process you need to access the menu for each control panel. For convenience it's easier to setup the wireless device at the outdoor control panel.

From the EasyTouch PL4/PSL4 Control System Power Center outdoor control panel

1. Switch power on to the Power Center.

2. Press **Menu** button, and select **Settings > Address** and press the **Right** arrow button.

Address Wireless Scanning ...	Address Wireless Sending Address.. <MENU>

The outdoor control panel will display "Scanning..." for about five seconds while it searches for the Wireless Controller within range of the transceiver antenna. After the scanning process has finished, "Sending Address" is displayed. The system is now waiting to lock on to the Wireless Controller. Proceed to step 3.

From the Wireless Controller

3. Press the **Power On** button located on the front of the Wireless Controller.

   Note: After replacing depleted batteries a check battery message is displayed on the screen. Press the **MENU** button twice to continue.

4. Press **Menu** button, and select **Settings > Address** and press the **Right** arrow button.

5. Select "Address" and press the **Right** arrow button to lock on to the unique address that is being transmitted from the outdoor control panel.

NO ADDRESS ▶ Address   Abort

   Note: If you choose "Abort," the device can continue to operate using the factory default address. If the outdoor control panel has been previously addressed, the wireless may not operate the system. Each time the device is switched on the "NO ADDRESS" will be displayed. This mode is not recommended for permanent use.

6. After selecting "Address" the wireless device unit will lock on to a unique address and display "Found ADDRESSED." Press the **Menu** button to save and exit this mode. The device is ready for operation.

Address Lock
  Found
   ADDRESSED
    <MENU>

Note: "Unit Mismatch" displays if the outdoor control panel has an existing system image. See page 12 for details.

7. **On the outdoor control panel:** Press the outdoor control panel **MENU** button three times to exit the "Sending Address" mode and return to the main screen. The system will continue to transmit an address until the Menu is button is pressed to stop the process.

   Note: To readdress the Wireless Controller, repeat steps 2 through 7 on the Wireless Controller to restart the address process.

Unit Mismatch   ▲
  Download from
    Outdoor
 	
               ▼

Synchronizing control panels

If the EasyTouch® PL4/PSL4 Control System Outdoor Control Panel was previously setup with specific pool and spa information and an additional indoor or wireless control panel with factory default information is installed, during the installation process the outdoor control panel will automatically download the system information to the connected control panel. If the outdoor, indoor or wireless control panels have different revision levels or contain previous setup information, you can choose which system image to upload or download.

Synchronizing control panels is initiated from the indoor or wireless control panel. The following describes how to synchronize an indoor or wireless control panel.

Download from outdoor control panel to indoor control panel

- Press the **Menu** button to download the system image from the EasyTouch PL4/PSL4 Control System outdoor control panel.

```
Unit Mismatch     ▲
 Download from
   Outdoor
                  ▼
```

Upload to outdoor from indoor control panel

1. Press the **Up/Down** button to access the "Upload" screen.
2. Press the **Menu** button to upload the system image from the indoor or wireless control panel to the EasyTouch PL4/PSL4 Control System outdoor control panel.

```
Unit Mismatch     ▲
  Upload to
   Outdoor
                  ▼
```

Note: To erase existing control panel system information, use the "Erase EEPROM" feature. Refer to "Erase EEPROM" on page 52 for more information.

Wiring UltraTemp® Heat Pump to EasyTouch PL4/PSL4 Control System

Be sure to check the UltraTemp Heat Pump terminal block wire colors and pinouts (located on the back of the Auto Set board) before connecting it to the EasyTouch PL4/PSL4 Control System COM port on the main circuit board. The See the wiring table below for the pin configuration. For UltraTemp Heat Pump setup information, see page 41.

IMPORTANT: On the UltraTemp Heat Pump AutoSet board ONLY CONNECT PIN 3 (YELLOW) and PIN 2 (GREEN) to the EasyTouch PL4/PSL4 Control System COM port pins YELLOW and GREEN respectively. Do not use pin 1 or pin 4 on the AutoSet board or the EasyTouch PL4/ PSL4 Control System main circuit board. These pins are not used.

Wiring Description

EasyTouch PL4/PSL4 Control System COM port wire color	Description	UltraTemp Heat Pump pin number and wire color
PIN 4 (RED) **NOT USED**	+15 VDC	**PIN 4 (RED) NOT USED**
PIN 3 (YELLOW)	+ DATA	PIN 3 (YELLOW)
PIN 2 (GREEN)	- DATA	PIN 2 (GREEN)
PIN 1 (BLACK) **NOT USED**	GROUND	**PIN 1 (BLACK) NOT USED**

Glossary

Control Panel: The EasyTouch® PL4/PSL4 Control System Outdoor Control Panel with flexible hinge. Installed in upper portion of EasyTouch PL4/PSL4 control system Power Center.

Feature Circuits: Programmable circuits that may control relays and/or valve actuators. For details, see the EasyTouch PL4/PSL4 Control System Systems User's Guide (P/N 522461)

High Voltage Panel/Compartment: Removable panel for the high voltage compartment of EasyTouch PL4/PSL4 Power Center. The high voltage wiring including 18 V and 24 V circuit breakers, relays and GFCI.

Indoor Control Panel: This wall mounted remote controller with LCD (liquid crystal display) is wired to the control circuit board in the EasyTouch PL4/PSL4 control system Power Center. The control panel can be wall mounted inside a house to control the EasyTouch PL4/PSL4 control system.

IntelliChlor® Salt Chlorine Generator (SCG): Uses a process called electrolysis to produce sodium hypochlorite (liquid chlorine) from a low concentration of salt added to the pool water. Model IC 20 Cell (P/N 520554) for pools up to 20,000 U.S. gallons (75 liters) and model IC 40 Cell (P/N 520555) for pools up to 40,000 U.S. gallons (151 liters). The external IntelliChlor Power Center (P/N 520556).

iS4 Wireless Controller: Four function spa-side remote. Spa wall or deck mounted.

Outdoor Control Panel: Control panel with flexible hinge installed in upper portion of Power Center to control EasyTouch PL4/PSL4 control system.

Power Center: Metal enclosure with power relays, transformer, and 18 V and 24 V internal circuit breakers. Used for distributing power for controlling EasyTouch PL4/PSL4 control system.

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

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

Main Circuit Board: The circuit board mounted behind the EasyTouch PL4/PSL4 control system control panel.

Relay Circuits: The circuits that control the relays on the circuit 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 6) to receive conductors from controllers and sensors; conductors held by screw terminals; multiple conductors of a small enough gauge (usually 22 AWG) may be coupled to a single socket of a terminal connector.

Salt Chlorine Generator: Automated pool chlorinator that sanitizes using salt to produce free chlorine.

Transceiver: Circuit board with attached antenna that can send and receive radio frequency (wireless) transmissions. Used with QuickTouch® II Wireless Controller.

Wireless Controller (QuickTouch® II Controller): Wireless controller for the EasyTouch PL4/PSL4 Control System with all the functionality of the Indoor Control Panel. Connected to a transceiver which is connected to the COM port on the main circuit board. (see IntelliChlor SCG above).

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