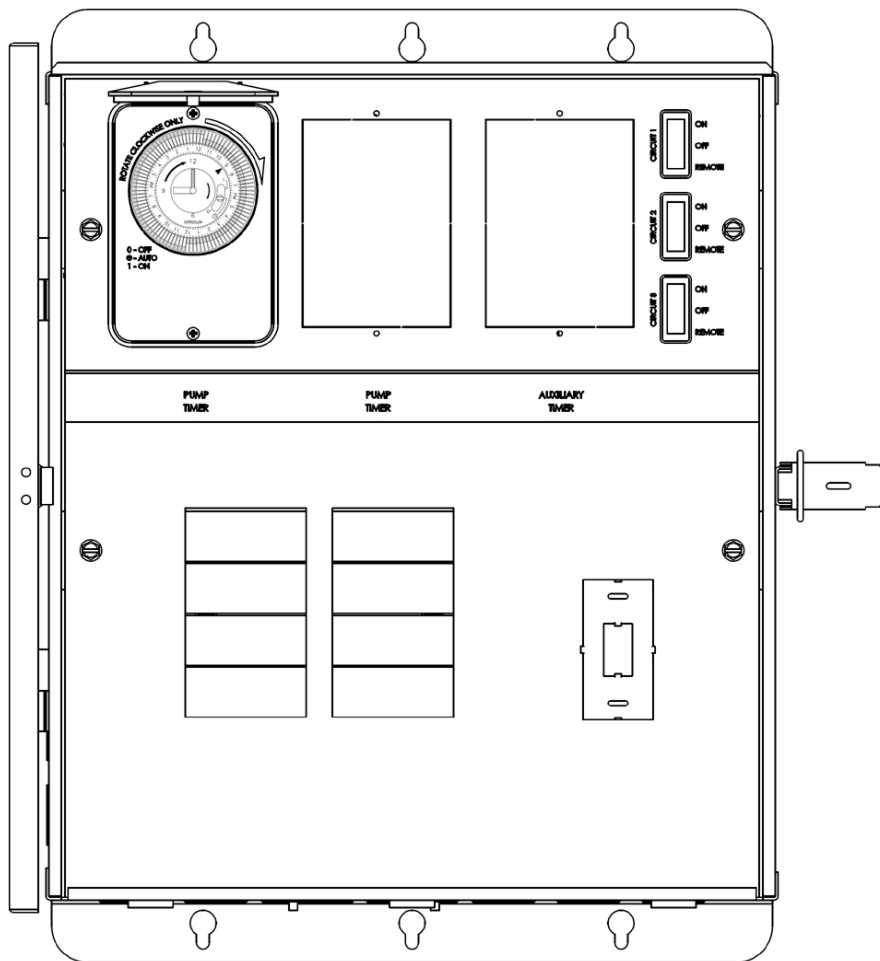


WPC-3

Rated for use on 110/120VAC 60Hz and 220/240VAC 60Hz applications

Installation Instructions: Read these instructions in their entirety before performing any installation work.

FOR USE WITH POOL AND SPA PRODUCTS

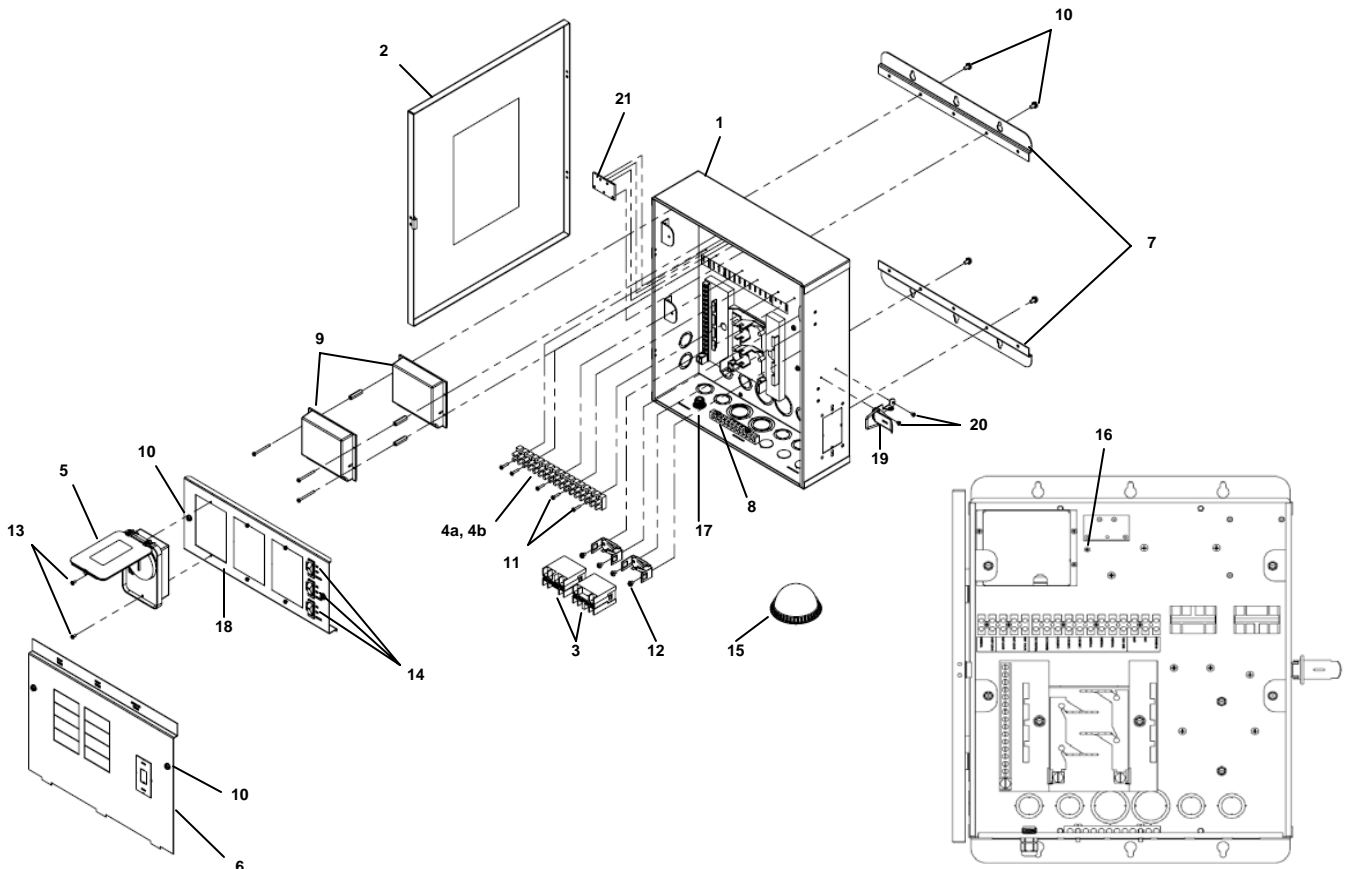


ETL LISTED
Conforms to UL STD 508;
Certified to CSA STD
C22.2 No. 14



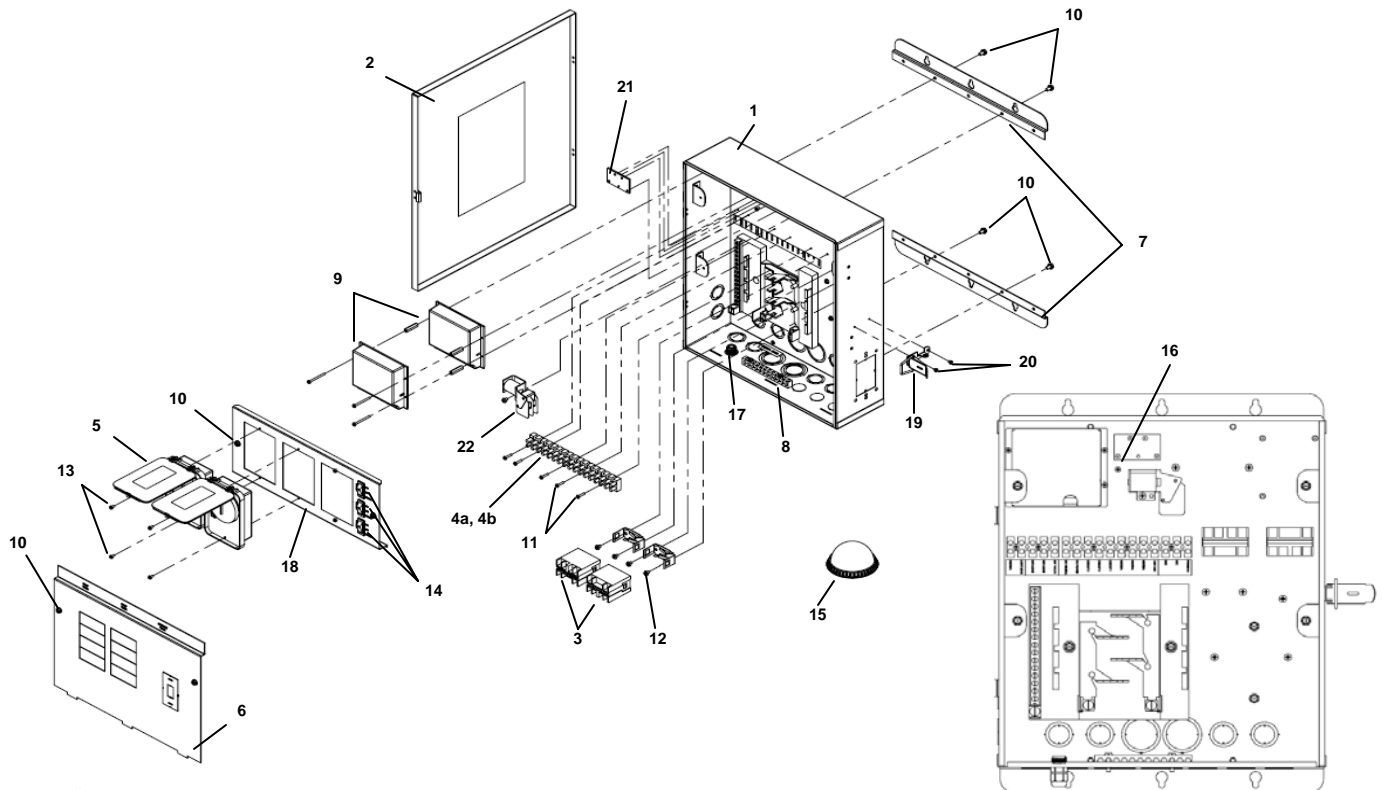
The WPC-3 single speed consists of the following parts:

Item	Qty.	Component part No.	Description
1	1	94-15106-00	WPC-3 Enclosure
2	1	94-15089-00	WPC-3 Enclosure Door
3	2	37-15000-00	Relay
4a	1	41-15004-12	12-Position Terminal Block
4b	1	41-15004-05	5-Position Terminal Block
5	1	42-15032-00	Timer
6	1	02-15269-00	Load Center Cover Plate
7	2	02-15267-00	WPC-2 Mounting Bracket
8	1	41-15003-00	Grounding Bar
9	2	94-15090-00	WPC Receiver
10	6	10-15086-04	Load Center Cover Plate, Switch Bracket, and Mounting Bracket Screws
11	5	10-15089-06	Terminal Block Mounting Screw
12	4	10-15060-01	Relay Mounting Screw
13	2	10-15089-03	Timer Mounting Screws
14	3	38-15012-00	3-Position Rocker Switch
15	1	94-15092-00	WPC Repeater
16	1	10-15089-02	Freeze Device Mounting Screw (Optional equipment)
17	1	20-15013-00	Strain Relief
18	1	02-15283-00	WPC-3 Timer and Switch Bracket
19	1	17-15005-00	Latch
20	2	10-15089-01	Latch Mounting Screws
21	1	43-15021-00	WPC-3 Antenna Splitter



The WPC-3 dual speed consists of the following parts:

Item	Qty.	Component part No.	Description
1	1	94-15106-00	WPC-3 Enclosure
2	1	94-15089-00	WPC-3 Enclosure Door
3	2	37-15000-00	Relay
4a	1	41-15004-12	12-Position Terminal Block
4b	1	41-15004-05	5-Position Terminal Block
5	2	42-15032-00	Timer
6	1	02-15269-00	Load Center Cover Plate
7	2	02-15267-00	WPC-2 Mounting Bracket
8	1	41-15003-00	Grounding Bar
9	2	94-15090-00	WPC Receiver
10	6	10-15086-04	Load Center Cover Plate, Switch Bracket, and Mounting Bracket Screws
11	5	10-15089-06	Terminal Block Mounting Screw
12	4	10-15060-01	Relay Mounting Screw
13	4	10-15089-03	Timer Mounting Screws
14	3	38-15012-00	3-Position Rocker Switch
15	1	94-15092-00	WPC Repeater
16	1	10-15089-02	Freeze Device Mounting Screw (Optional equipment)
17	1	20-15013-00	Strain Relief
18	1	02-15283-00	WPC-3 Timer and Switch Bracket
19	1	17-15005-00	Latch
20	2	10-15089-01	Latch Mounting Screws
21	1	43-15021-00	WPC-3 Antenna Splitter
22	1	37-15001-00	DPDT Relay



Accessory Items:

FP 1/2	Temperature Freeze Device
WE-65	65 ft Repeater Cord Extension Kit
WPC-2/3 ST	GFCI Mounting Kit
DL-HUB	Direct Light Hub Connection Kit
TC-2	Additional Timeclock/Dust Cover
WPC-TRANS	24V Transformer for Fiberstars Light Streams LED Products or JVA Control



SAVE THESE INSTRUCTIONS!

IMPORTANT SAFETY INFORMATION

Basic safety precautions should be observed when operating the WPC-3 product and other associated equipment.

1. A qualified electrician must install the WPC-3 in accordance to the National and Local Electrical Codes.
2. The WPC-3 must not be less than 5 feet (3 meters in Canada) from inside edge of pool. **ONLY USE COPPER CONDUCTORS.**
3. Do not exceed the maximum ratings of individual components, wiring devices, and current carrying capacity of conductors.
4. For the bonding, grounding, installing, and wiring of underwater lights to the WPC-3, refer to Article 680 of the National Electrical Code or Section 68 of the Canadian Electrical Code.
5. This device should never operate an equipment that could cause property damage, bodily injury, or death should it be activated unexpectedly.
6. Never allow children to operate the WPC-3 unsupervised.

FCC WARNING

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by Fiberstars Inc. could void the user's authority to operate the equipment.

ELECTRICAL RATINGS

Do not exceed the maximum electrical ratings of the WPC-3. A circuit breaker rated at 20Amps at 120VAC must installed in the breaker panel to connect to the WPC-3 power input. Circuit 1 and Circuit 2 are each rated for use of up to 8Amps @ 120VAC. The Pump Relay is rated at a maximum of 3HP @ 240VAC.

SUITABLE LISTED BREAKERS						
MANUFACTURER	CIRCUIT BREAKER					FILLER PLATE
	SINGLE	DOUBLE	TWIN	QUAD	GFCB	
Thomas & Betts	TB	TB	TBBD	TBBQ	GFB	FP-1C-TB
Cutler-Hammer	BR	BR	BRD	BRD	GFCB	BRFP
Square D	HOM	HOM	HOM T	HOM T	HOM-GFI	HOMFP
Murray	MP-T	MP-T	MH-T	MH-T	MP-GT	LX100FP
Siemens/ITE	QP	QP	QT	QT	QPF	QF-3
Challenger	C	-	A-CT	-	HAGF	# FC-1C
Westinghouse or Bryant	BR	-	BQ	-	GFCB	FP-1
Crouse Hinds	MP	-	TRIPLEX	-	MP-GF	-
GE Regular	THOP	-	-	-	THOP-GF	TQLFP-1

Wiring Information - Copper Conductors Only							
Wire Size 75°C min. Insulation	Supply Circuit Breaker Rating	Terminal Torque*		Max Motor Load (Continuous Duty)		General Purpose Branch Circuit Breaker Rating	General Purpose Branch Circuit Maximum Current Capacity
		Line and Neutral Main Lugs	Neutral and Ground				
		AWG	AMP	LB-IN	LB-IN	HP	HP
14	15	35	20	1/2	1	15	12
12	20	35	20	1	2	20	16
10	30	35	20	1 1/2	3	30	24
8	50	40	25	2	5	40	32
6	65	45	35	-	-	60	44
4	85	45	35	-	-	-	-
3	100	50	-	-	-	-	-
2	100/125	50	-	-	-	-	-

WARNING

- TURN OFF INCOMING POWER BEFORE SERVICING EQUIPMENT.
- ALL INSTALLATION AND MAINTENANCE WORK MUST BE PERFORMED BY QUALIFIED ELECTRICAL PERSONELL ONLY.
- VERIFY ALL ELECTRICAL RATINGS BEFORE INSTALLATION IS COMPLETE.

LOCATION

Install the WPC-3 enclosure using the mounting plates included with each enclosure. The WPC-3 is housed in a Type 3R rainproof enclosure and can be mounted anywhere between the pool equipment and the breaker panel.

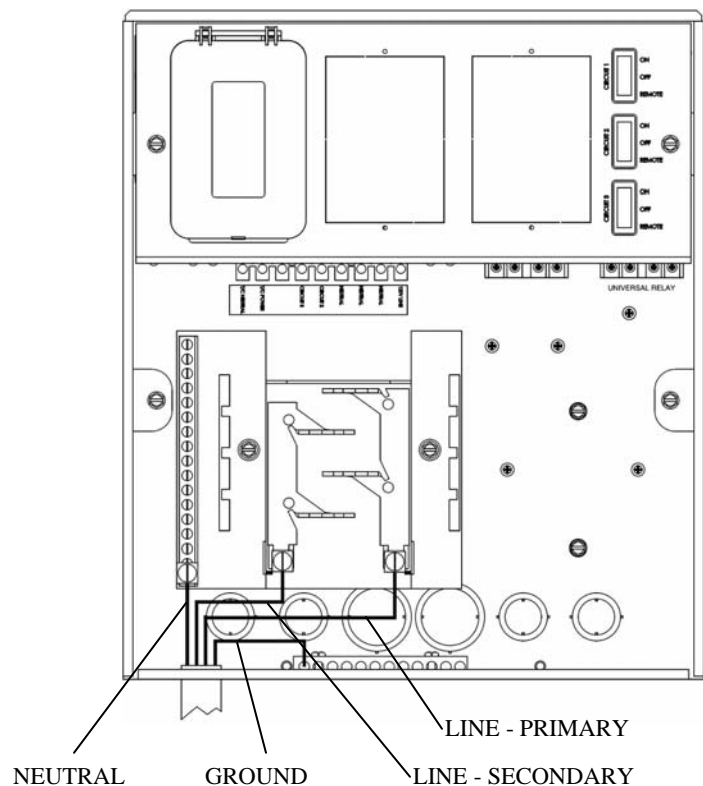
NOTE: If a freeze protect device is required, please see Fiberstars part no. FP 1/2.

WIRING INSTRUCTIONS

FOLLOW PROPER WIRING PRACTICES IN ACCORDANCE WITH ALL LOCAL REGULATORY REQUIREMENTS.

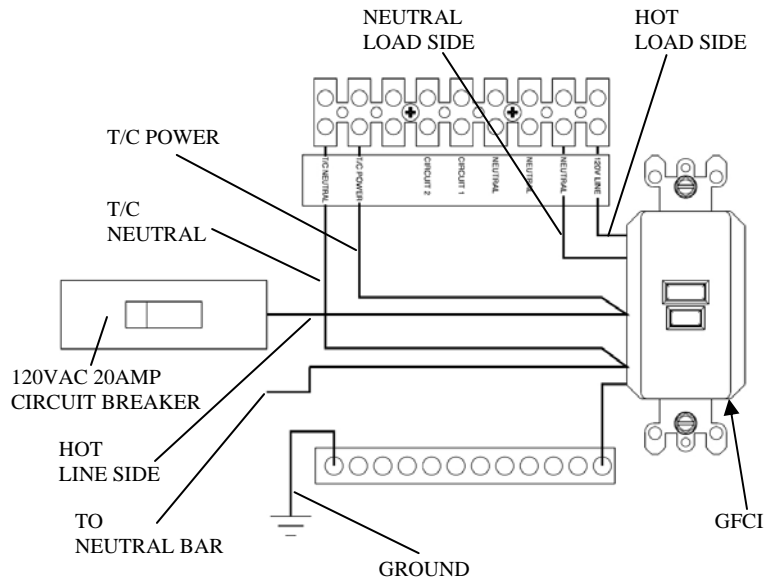
Power Connections:

To wire the WPC-3 use insulated COPPER wire only, 12 gauge minimum. Run a ½” to ¾” conduit from the main breaker panel to the WPC-3. Pull appropriate wires from the main breaker panel to the WPC-3 unit. To make power connections remove 3/8 inches of insulation from wire ends. Connect bare wires to the Load Center as illustrated. Tighten terminal screws firmly (20 lb-in minimum). Connect the common to the Neutral bar (tighten to 20 lb-in minimum).



Power Connection with a GFCI

To wire the WPC-3 with the use of a GFCI, punch out the GFCI knockout on the side of the WPC-3 enclosure. Install an outdoor rated GFCI. Using COPPER wire only, 12 gauge minimum, connect the GFCI from the LOAD side to the 120V LINE terminal. Connect the NEUTRAL from the LOAD side of the GFCI to the NEUTRAL terminal. Connect the GROUND of the GFCI to the EQUIP. GND. bar. Wire the HOT from the GFCI's LINE side to the 20 Amp circuit breaker. Connect the NEUTRAL from the GFCI's LINE side to the Neutral bar on the Load Center. Connect a wire from the 20 Amp circuit breaker to the T/C POWER as shown on the diagram. Connect a wire from the Neutral Bar to the T/C NEUTRAL.

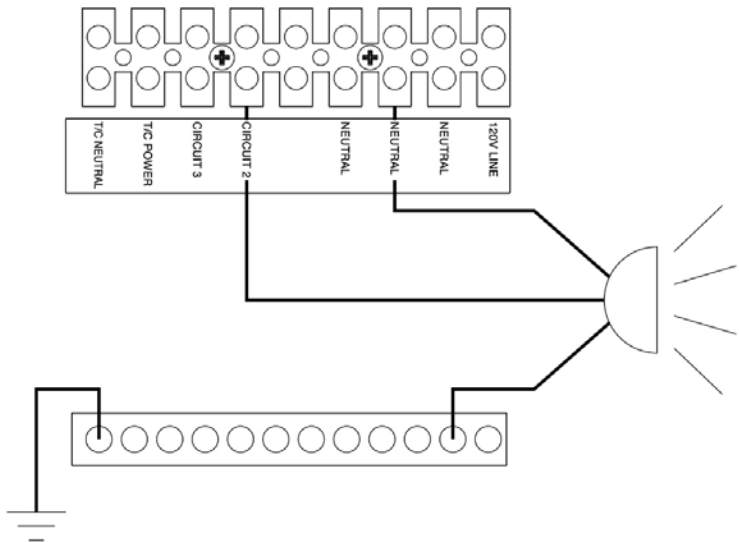


NOTE: DO NOT connect the T/C POWER and T/C NEUTRAL to the GFCI's LOAD side.

Hooking up Lights to Circuit 2 and Circuit 3

To connect a lighting product to the Circuit 2 and Circuit 3 switch, pull wires from the products to the WPC-3 through conduits connected to the bottom of the WPC-3. As illustrated, connect lights that will be operated by the Circuit 2 Switch to the Circuit 2 terminal. Connect the Neutral to the Terminal Block marked Neutral. Connect the Ground to the Equip. GND. bar. Repeat for Circuit 2.

NOTE: Do not exceed 8 Amps per circuit.

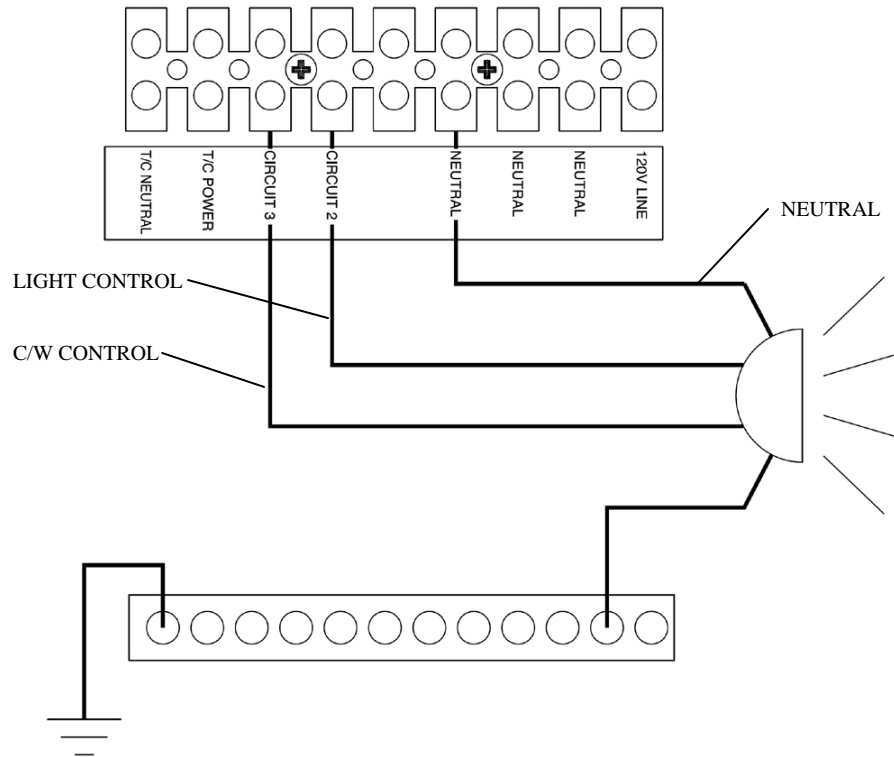


NOTE: The WPC-3 is approved for use with the Intermatic Metallic Hub Kit (156PA14336A) and Fiberstars DL-HUB for direct connection of underwater lights. Refer to NFPA 70 Article 680 or C22.1 Section 68 for details.

Connecting Jazz, Jazz-Spa, System 6004, and System 6004-AS*

For proper operation of these products both Circuit 2 and Circuit 3 must be wired so that the power is controlled through Circuit 2 and the color wheels functions are controlled through Circuit 3. Follow each products installation manual for proper installation. Run appropriately rated wires from the unit to the WPC-3 no less than 12 Gauge COPPER wires. Connect the Power to the Circuit 2 terminal at one end and to the BLACK wire on the Fiberstars unit. Connect the neutral to the NEUTRAL terminal in the WPC-3 and to the WHITE wire on the Fiberstars unit. Connect the grounding cable to the EQUIP. GND. and on the other end to the GREEN cable. Finally, for synchronization operation, connect the C/W CONTROL cable to the Circuit 3 terminal and on the other end to the RED wire on the Fiberstars unit.

NOTE: Do not exceed 8 Amps on Circuit 2.



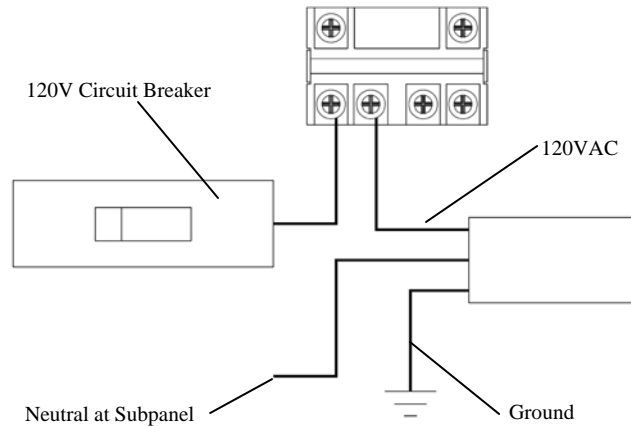
NOTE: The WPC-3 is approved for use with the Intermatic Metallic Hub Kit (156PA14336A) and Fiberstars DL-HUB for direct connection of underwater lights. Refer to NFPA 70 Article 680 or C22.1 Section 68 for details.

* Or other two button Power/Color system, ie. Pentair, Supervision, Fiberworks...

CONNECTING A 120VAC DEVICE TO CIRCUIT 1

To wire a 120VAC device to the Relay, connect the LOAD wire from the device (as illustrated) to the Relay and a 120VAC power from an appropriately rated circuit breaker using no less than a 12 gauge COPPER wire. Connect the NEUTRAL from the device directly to the NEUTRAL bar at the breaker panel (as illustrated). Alternately, you may connect the NEUTRAL from the device to the Relay and from the Relay to the NEUTRAL bar.

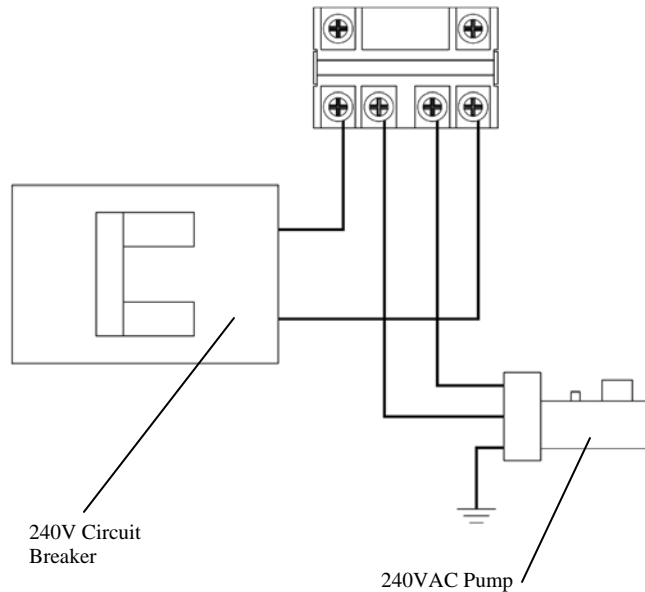
NOTE: The 120VAC device is not to exceed 15Amps nor 1.5HP.



CONNECTING A 240VAC PUMP TO CIRCUIT 1

Connect the 240VAC pump to the relay as illustrated. Connect a 240VAC Circuit Breaker to the Load Center. Wire the Relay from the 240VAC Circuit Breaker as illustrated.

NOTE: 240V Pump not to exceed 30amps nor 3HP.



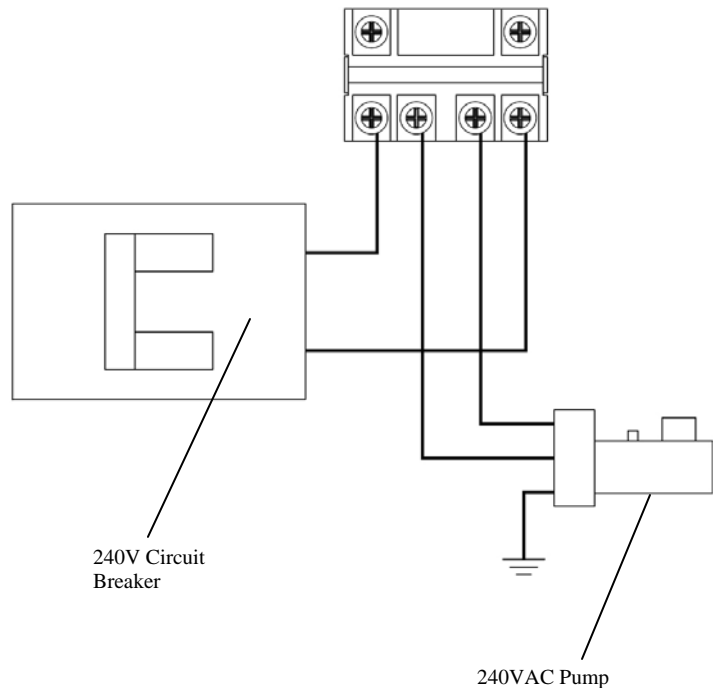
PUMP CONNECTIONS

NOTE: Some models are ONLY equipped with Single Speed OR Dual Speed pump connections.

CONNECTING A 240VAC PUMP

Connect the 240VAC pump to the relay as illustrated. Connect a 240VAC Circuit Breaker to the Load Center. Wire the Relay from the 240VAC Circuit Breaker as illustrated.

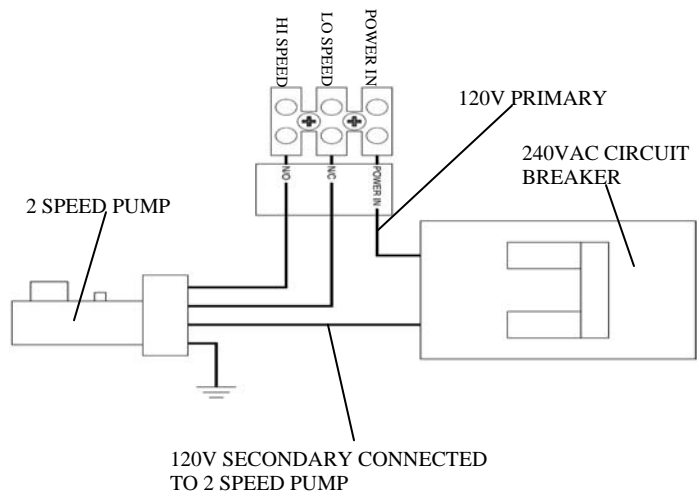
NOTE: 240V Pump not to exceed 30amps nor 3HP.



CONNECTING A 2-SPEED PUMP

As illustrated, connect the Low Speed wire to the Low Speed Load terminal on the terminal block. Connect the High Speed wire to the High Speed Load terminal on the terminal block. Connect the 120V Primary from the 240V Circuit Breaker to the 120V PRI INPUT terminal. Directly connect the 120V Secondary from the Circuit Breaker to the 2 Speed Pump.

NOTE: The Secondary 120V must be directly connected to the pump for 240V operation.

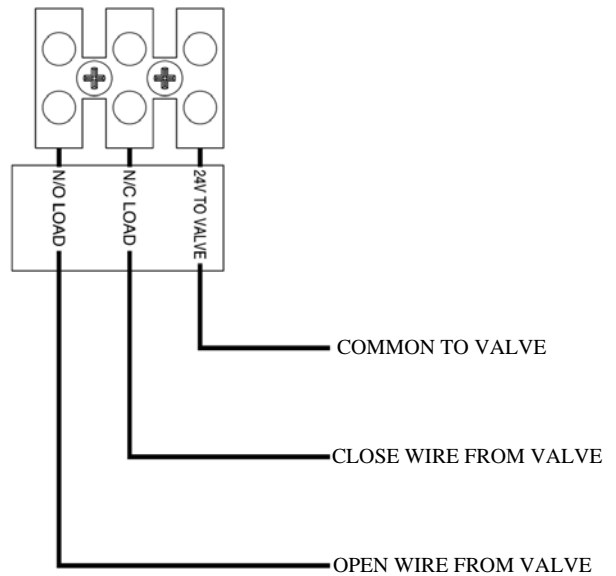


NOTE: Pump Breaker MUST be turned OFF before servicing as 2nd leg of 240V circuit is HOT at all time!

24V Valve Wiring (Optional Equipment).

To connect a 24V Valve, follow diagram as shown. Connect one leg of the 24V common to the 24V TO VALVE terminal. Connect the Close wire to the NC LOAD terminal and the Open wire to the NO LOAD terminal.

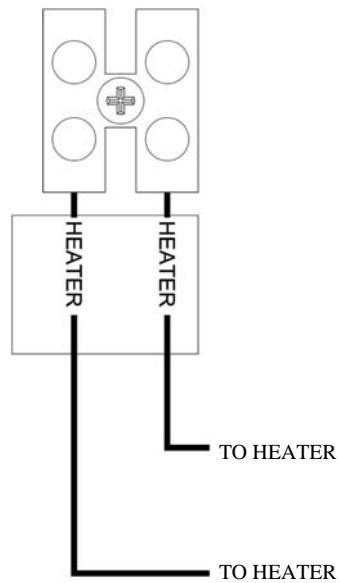
NOTE: In the Pool/Spa Combo units (WPC3-??4?-?, where ? = any number), there maybe two (2) JVA connections. See JVA Installation and Operational manual for JVA synchronization methods.



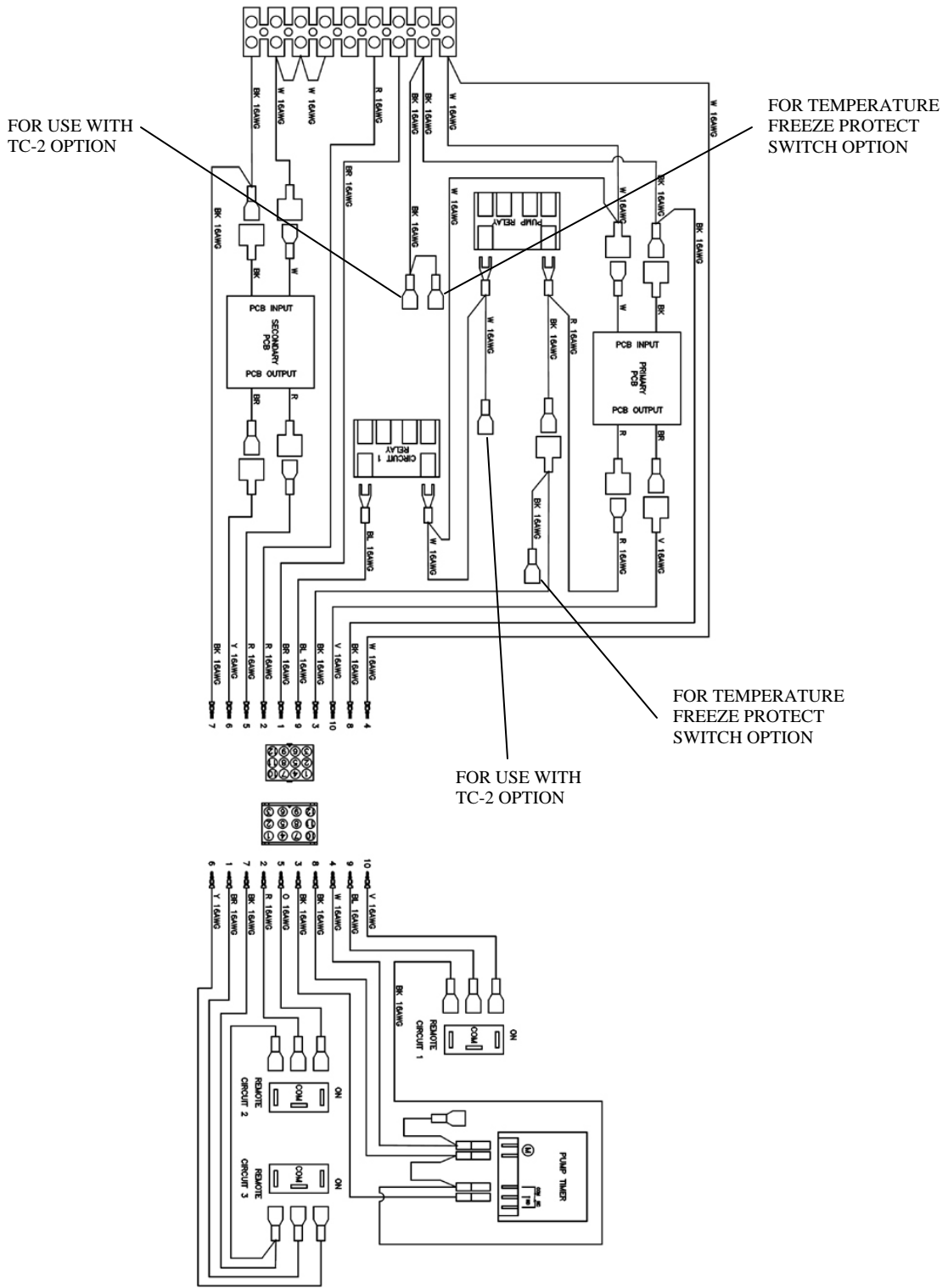
Heater Connection (Optional Equipment).

To connect a heater, run the pilot wires from the heater to the WPC unit. Connect the wires to the terminal block labeled Heater.

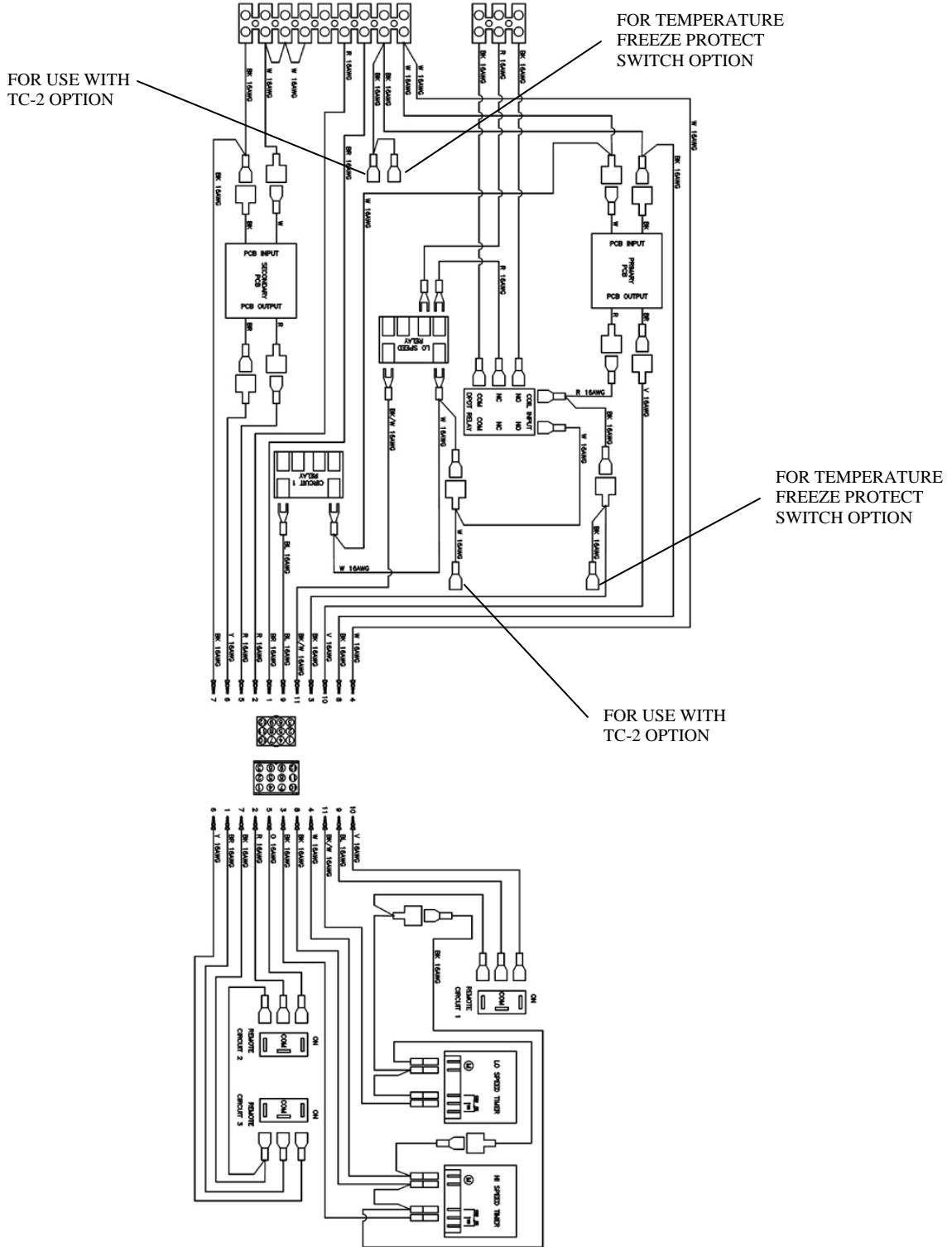
NOTE: The Heater circuit only completes the circuit of the Heater terminals when the 24V Valve control is energized to the NO Load circuit.



SINGLE SPEED INTERNAL WIRING SCHEMATIC



DUAL SPEED INTERNAL WIRING SCHEMATIC

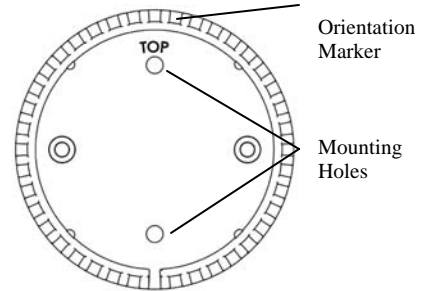
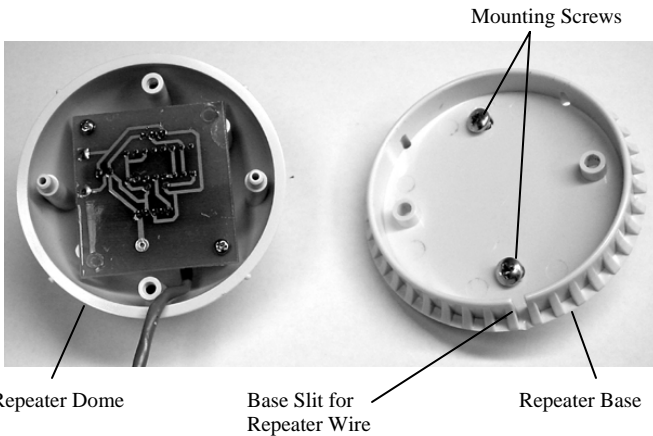
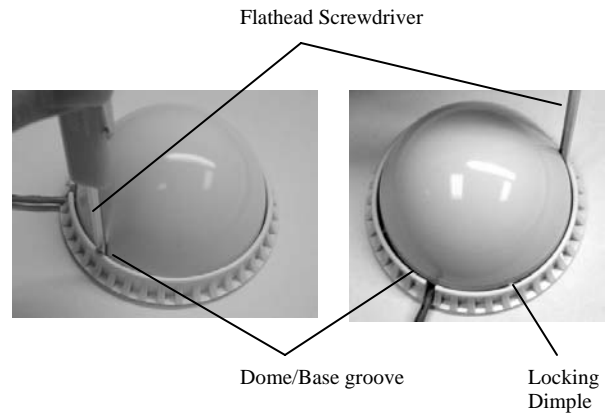
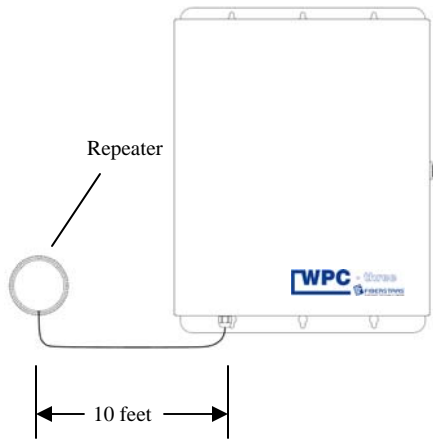


Repeater Mounting

The WPC-3 is equipped with a signal repeater that can be mounted up to 10 feet from the WPC-3 unit. This repeater receives signals from the wireless remote and sends that signal to the WPC-3 via the 10 foot cable. Establish a location for the Repeater that is in line of sight from where the wireless remote will be used most frequently and that is no more than 75 feet from furthest where the remote will be used. **NOTE: If extension is needed, use Fiberstars part number WE-65 and follow installation instructions supplied with the Repeater Extension.**

To mount the Repeater, carefully insert a small flathead screwdriver into groove between the Dome and Base approximately where the locking dimples are located. Pry the Dome out of the locking dimples. Then carefully insert the small flathead screwdriver into the groove between the Dome and the Base in an adjacent locking dimple and pry the Dome out. Then separate the Dome from the Base by hand. Using the supplied self-drilling screws, locate a suitable mounting surface and screw the base to this surface. Note that the marking “TOP” must be in the 12 o’clock position and the wire slit must be in the 6 o’clock position. Do not over tighten the screws as it may damage the Repeater base. Realign the Repeater Dome to the Base and ensure that the wire is exiting the base through the slit and the Locking Dimples are aligned with the locking holes. Apply enough pressure so that the Dome “snaps” into the base.

NOTE: Do not stuff the remainder of the Repeater wire into the WPC unit.



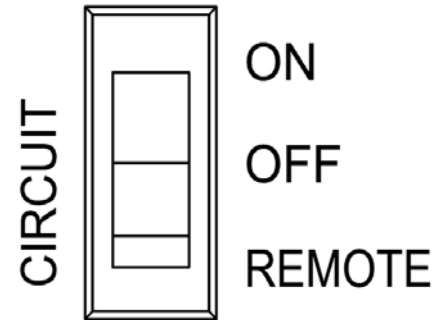
OPERATING INSTRUCTIONS

WPC-3 ROCKER SWITCH OPERATION

The WPC-3 receiver box houses three rocker switches. For operation with the wireless transmitter, the switches need to be in the DOWN or REMOTE position. To manually turn ON the devices connected to Circuit 1, Circuit 2, or Circuit 3, flip the rocker switches UP or to the ON position. When a circuit is in the ON position, the Wireless Remote will not be able to turn OFF the respective circuit. To turn OFF the devices manually, flip the respective toggle switch to the MIDDLE or OFF position.

NOTE: In the OFF position, the wireless remote operation will be bypassed. To re-enable the wireless remote operation, flip the toggle switch back to the BOTTOM or REMOTE position.

NOTE: If the units turn ON when the switch is returned to the REMOTE position, simply use the wireless remote to turn OFF the units if desired.



NOTE: Switch is shown in the ON position.

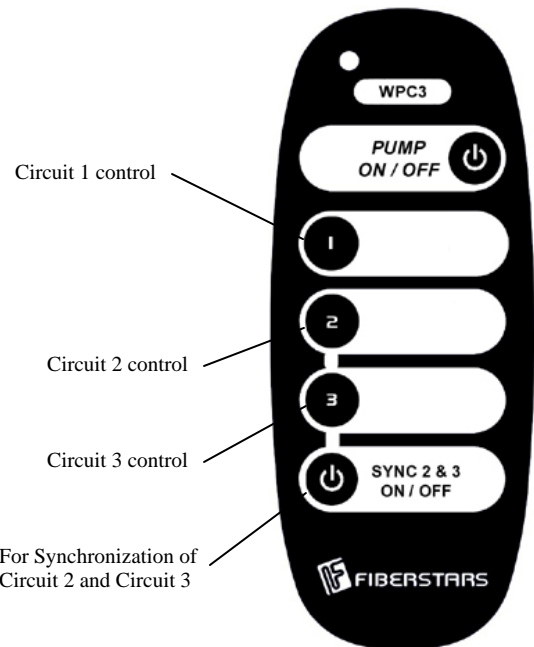
WIRELESS REMOTE OPERATION

NOTE: The rocker switches on the WPC-3 must be set to REMOTE for wireless operation. The POWER ON/OFF buttons control the individual circuits independently. With each push of the button, the WPC-3 toggles the individual circuits from ON to OFF and vice versa. For Synchronization operation, simply push the SYNC ON/OFF button.

NOTE: If all circuits are off when the SYNC ON/OFF button is pressed, all circuits will be turned to ON. If any one of the circuits are in the ON state by the wireless remote, then when the SYNC ON/OFF button is pressed all circuits will be turned OFF and the SYNC ON/OFF must be pressed to turn all circuits on simultaneously.

NOTE: Synchronization is for Circuits 2 and 3 only.

NOTE: For Dual Speed models, Pump switch operates Hi Speed only.



OPERATION INSTRUCTIONS FOR POOL/SPA COMBO OPTION

WIRELESS REMOTE OPERATION

NOTE: The rocker switches on the WPC-3 must be set to REMOTE for wireless operation. The SPA ON/OFF button actuates the JVA valves and the Filter pump as well as turn on the Heater. If the Filter pump is already in the ON position by the time clock, then just the JVA valves will be actuated to the SPA position and the Heater will be turned ON.

The Pool Light button turns ON and OFF the Pool Light with each push of the button.

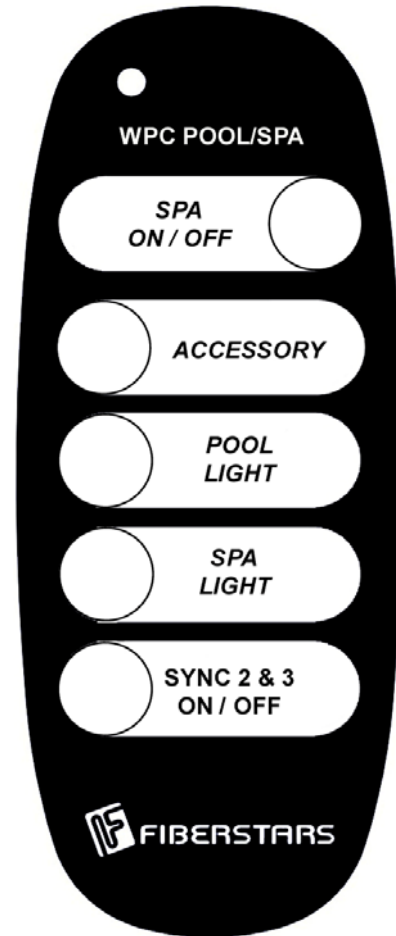
The SPA Light button turns ON and OFF the SPA Light with each push of the button.

For Synchronization operation, simply push the SYNC ON/OFF button to turn ON and OFF the SPA Light and the Pool Light simultaneously. If one of the lights is on when the SYNC button is pressed, that light will turn OFF and the SYNC button will have to be pressed once again to turn both SPA and Pool Lights ON.

NOTE: If all circuits are off when the SYNC ON/OFF button is pressed, all circuits will be turned to ON. If any one of the circuits are in the ON state by the wireless remote, then when the SYNC ON/OFF button is pressed all circuits will be turned OFF and the SYNC ON/OFF must be pressed to turn all circuits on simultaneously.

NOTE: Synchronization is for Pool Light and Spa Light only.

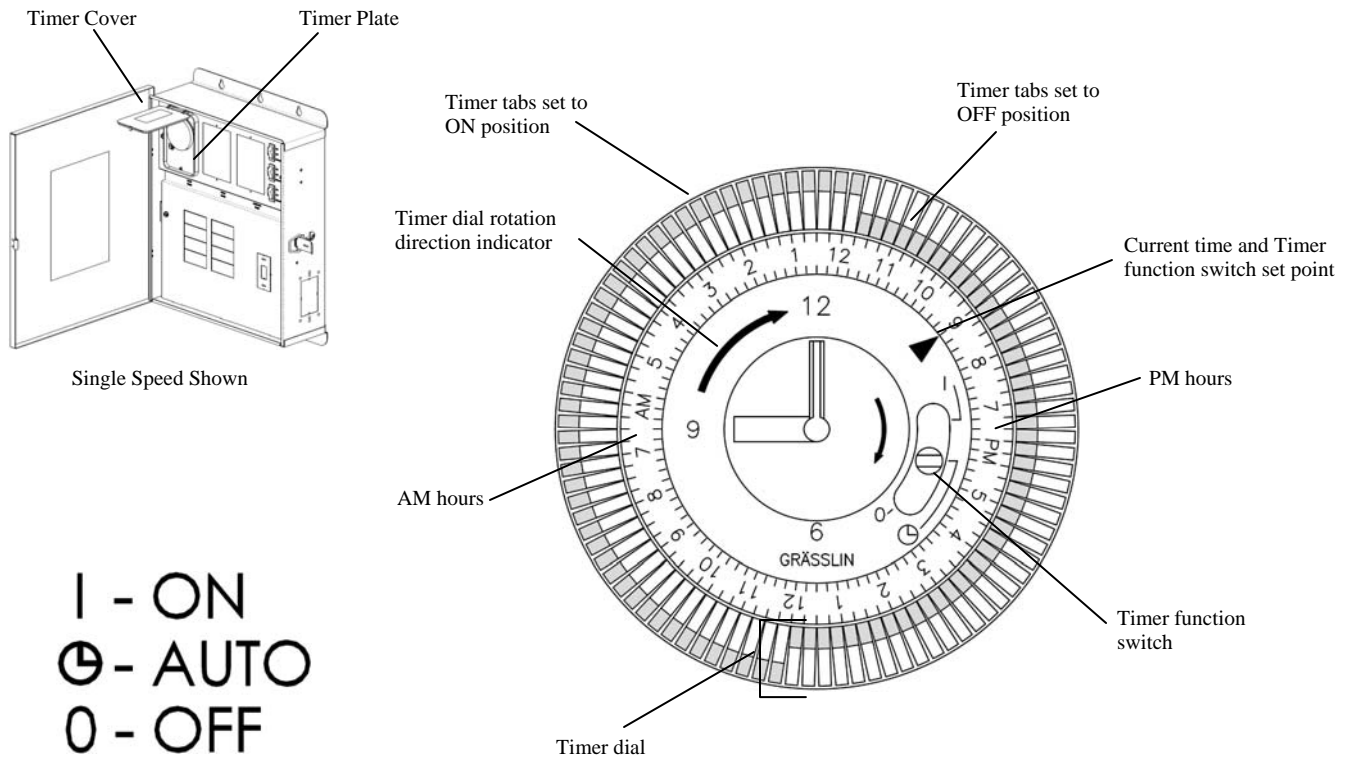
NOTE: For Dual Speed models, the SPA ON/OFF button actuates the Hi Speed pump while actuating the JVA valves.



TIMER OPERATION

Set time to current time. Open timer cover by lifting from the bottom towards you. In the example below, the current time is set for 9:00 pm. **NOTE: Only turn the Timer dial clockwise or the timer will be damaged.** Once the time has been set to the current time, set the hours of the Pump operation by “snapping” the timer tabs inwards towards the center. **NOTE: Each tab represents 15 minutes of operation and tabs set inwards towards the center is for OFF operations and ON when the tabs are set outwards as illustrated.** In the example below, the Pump will be off from 12:00 pm to 11:45 pm.

Once the time and time of operation has been set, ensure that the Timer function switch is set to Auto for timer control of the Pump as illustrated below. To turn off timers automatic functions, set the Timer function switch to OFF. To manually turn on the Pump, set the Timer function switch to the ON position. **NOTE: When in the ON position, the Pump will continue to run until the Timer function switch is set to Auto where the tabs at the Set Point is in the OFF position or if the Timer function switch is rotated to the OFF position.** Apply the timer label to the timer cover plate. Close the timer cover firmly after timer is set.



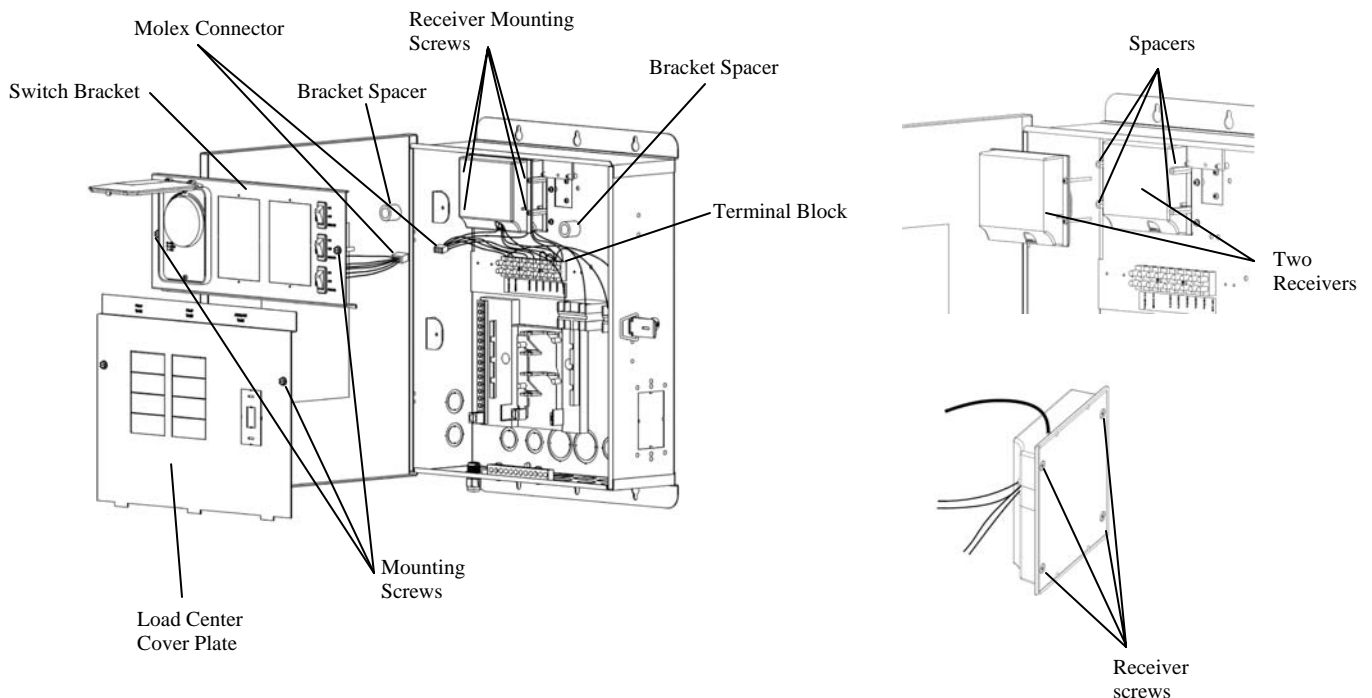
CODE ADJUSTMENTS

If it is necessary to change the transmission code on the WPC-3 an adjustment to the two receivers AND the transmitter DIP switches must be performed.

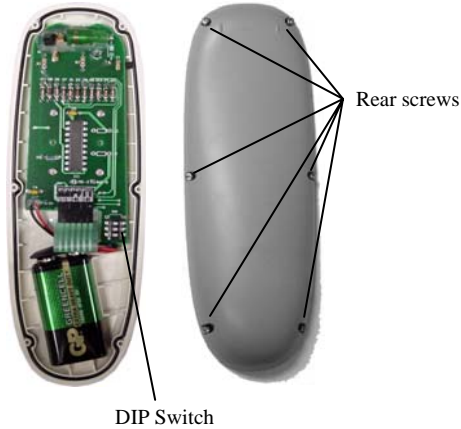
RECEIVER DIP SWITCHES – Turn OFF power to the WPC-3 from the circuit breaker on the Load Center or from Main Power. Open the enclosure door. Unscrew and remove the Load Center Cover Plate. Place the Cover Bracket in a safe location. Unscrew and remove the Switch Bracket. Disconnect the Molex connector that connects the Switch Bracket controls to the receiver unit and set the Switch Bracket in a safe location where it will not be bent, scratched, or impact forces applied to the components or the face plate itself **[Notes: There maybe more then one Molex connector that must be disconnected]**. Unscrew the four (4) screws holding the two Receivers to the base of the WPC-3 enclosure **[NOTE: Do not lose the spacers]**. Unscrew the four (4) screws located on the back of each receiver to release the cover. **NOTE: Take notice of how the wires enter and exit the receiver and which receiver is connected to the Circuit 2 and Circuit 3 terminals on the terminal block. Remove the cover and look on the PCB to locate the DIP switch as illustrated.**

TRANSMITTER DIP SWITCHES – Remove all screws from rear of remote. Separate the bottom cover from the top cover.

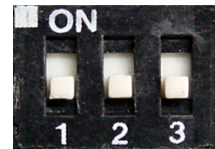
DIP SWITCH ADJUSTMENT – On each Receiver, there is a four (4) position DIP switch and on the Transmitter there is a three (3) position DIP switch. On the receivers, the DIP switches 1 through 3 must be set identically to each other and the Transmitter. Changing just one DIP switch will change the code. The fourth (4th) DIP switch on the receivers determine the Primary and Secondary roles of the PCB's. The two receivers **MUST** have the fourth (4th) DIP switch set differently from one another. When the fourth (4th) DIP switch is in the ON position, then it will receive the Pump and Circuit 1 signal and when in the OFF position, it will receive the Circuit 2, Circuit 3, and Synchronization signals from the remote. Ensure that the Receiver with the fourth (4th) DIP switch ON is connected to the Pump and Circuit 1 Relays and that the Receiver with the fourth (4th) DIP switch OFF is connected to the Circuit 2 and Circuit 3 terminals on the Terminal Block.



DIP SWITCH SETTINGS



DIP SWITCH



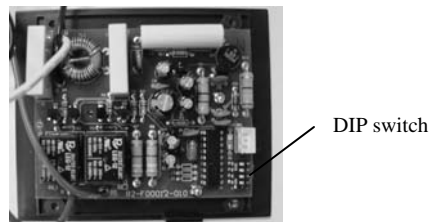
Note: Sample shown is of Channel 8.

DIP SWITCH	1	2	3
Channel 1	OFF	OFF	OFF
Channel 2	ON	OFF	OFF
Channel 3	OFF	ON	OFF
Channel 4	ON	ON	OFF
Channel 5	OFF	OFF	ON
Channel 6	ON	OFF	ON
Channel 7	OFF	ON	ON
Channel 8	ON	ON	ON

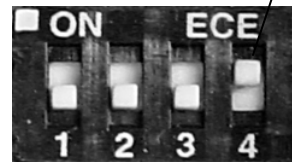
CHANNEL

1	5	9	13
2	6	10	14
3	7	11	15
4	8	12	16

NOTE: ONLY CHANNELS 1 THROUGH 8 ARE AVAILABLE FOR THE WPC-3.



Fourth (4th) DIP switch



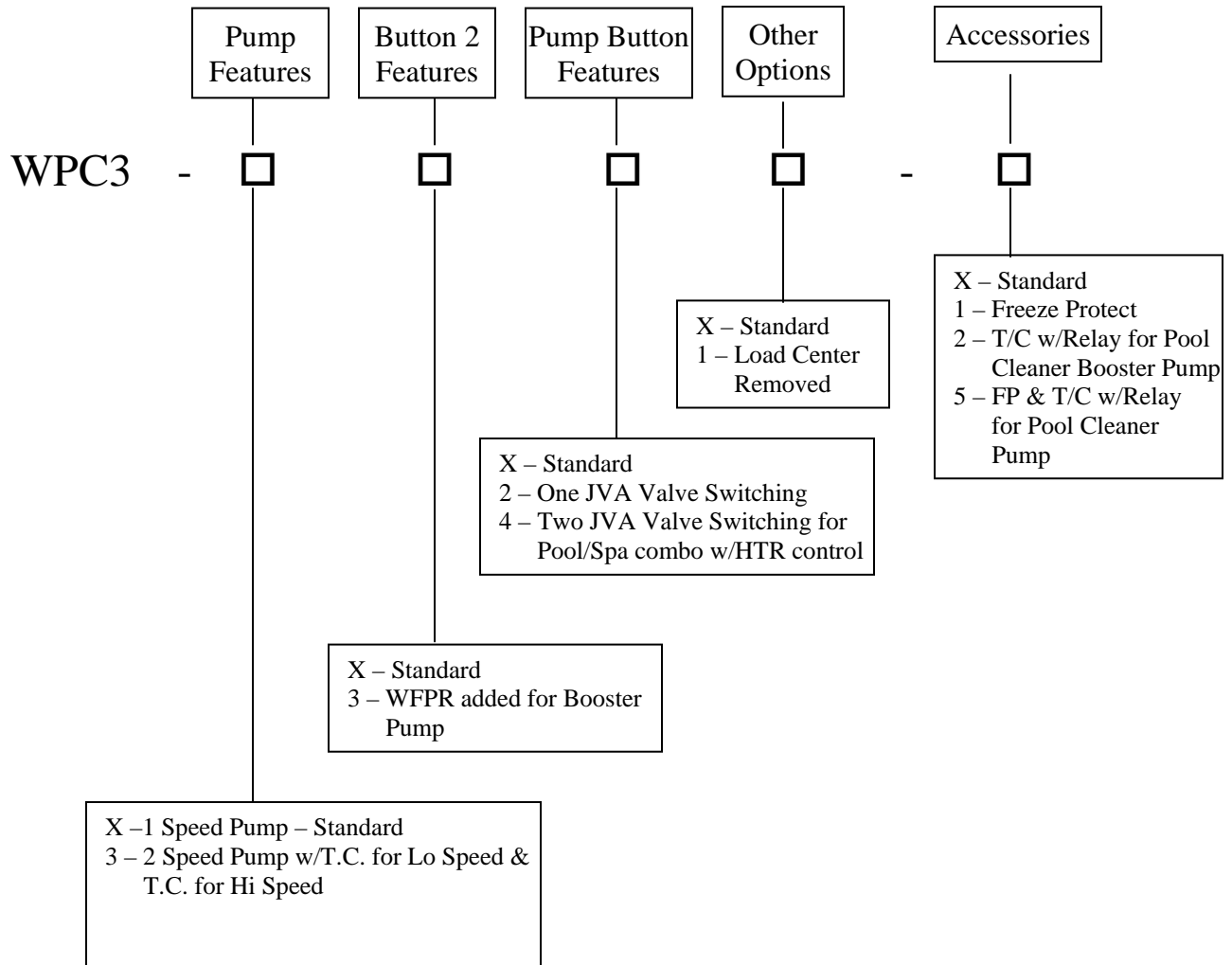
Optional Equipped Units

WPC3-XXXX-1 : Single Speed with Freeze Protect.
WPC3-2XXX-1 : Dual Speed with Freeze Protect.

No additional wiring required.
No additional wiring required.

WPC FUNCTION CHART

Below is a chart of the WPC functionality based on the model number.



EXAMPLE:

WPC3-3X2X-1 is a 2 speed pump model with two time clocks (one to control High Speed and one to control Low Speed). Pump Button turns ON High Speed pump regardless of timer position and activates the JVA valve. This unit is also equipped with a Freeze Protection device that will activate High Speed pump operation at 34°F and resume normal operation at 39°F.