



COPPER/SILVER ION SYSTEM



OPERATION OVERVIEW:

The following information outlines the procedure for operating the TPS™ Copper/Silver Ion System

The lights and functions on the control panel are as follows:

“IONIZING” light indicates the status of the system. It will be on or flashing when the system is working properly. If the light is off, there may not be enough water around the electrodes, the pink connector for the electrodes may not be plugged in all the way, or the electrodes might be worn away and need to be replaced.

“ION/ACTION” setting is the percentage of time that the controller is adding ions to the water. Set this value according to the table below. Set this value **FIRST** and then set the **LARGE DOSE** setting described below.

“LARGE DOSE” setting is a ramp-up feature that speeds up loading the ions into the water when the spa is refilled. The number value for this setting indicates the number of hours that the controller will output ions at maximum output. Once the **LARGE DOSE** setting expires, the controller will switch automatically to the **ION/ACTION** setting.

Gallons	Liters	Ion/Action	Large Dose
200	750	8	8
400	1,500	14	16
500	1,900	18	20

OPERATION DETAIL:

When the controller is plugged in, the digital readout on the control panel will light up. The following steps provide details on how to set up the controller for your spa.

- 1) Press the “ION/ACTION” button
- 2) Use the “+” and “-” keys to set the value for “ION/ACTION”. The numbers on the screen will increase or decrease each time the “+” or “-” button is pressed. Cycle through to reach the correct number according to the table above. When the “ION/ACTION” setting is chosen, the “IONIZING” light will be on or flashing.
- 3) Press the “LARGE DOSE” button
- 4) Use the “+” and “-” keys to set the value for “LARGE DOSE”. The numbers on the screen will increase or decrease each time the “+” or “-”

button is pressed. Cycle through to reach the correct number according to the table above. When the “LARGE DOSE” setting is chosen, the “IONIZING” light will be on.

- 5) Once the “LARGE DOSE” value has counted down to 00, the controller will switch automatically to the “ION/ACTION” setting set in steps 1) and 2).
- 6) When the “LARGE DOSE” has expired, test the copper level using the test kit. Make sure to follow the instructions for the test kit carefully. The recommended range is between 0.2 and 0.4 parts per million (ppm). If the level is below 0.2ppm, use the “LARGE DOSE” setting again to boost it up. Repeat Steps 3) to 6) until the copper ion level reaches 0.2ppm.

Once you reach the recommended range of 0.2ppm to 0.4ppm, the “ION/ACTION” setting will keep it stable at the level reached. It is recommended that you test the water weekly to ensure a proper copper level. If the level is not within range adjust the controller accordingly.

WATER BALANCE & MAINTENANCE:

For optimum performance of the Copper/Silver Ion System, it is important to maintain correct water balance. You can purchase test kits separately or bring a water sample to your local pool or spa retailer. Test your water regularly and maintain the following levels:

pH: 7.2 to 7.6

Alkalinity: 80 to 120 ppm

Calcium Hardness: 200 to 300 ppm

Copper: 0.2ppm to 0.4 ppm

CLEANING AND CARE

Ion System Electrodes: Some deposits may form on the electrodes depending on the water conditions. Clean the flat face of the electrodes using a smooth metal file and some water. The surface does not have to be polished; simply remove any traces of oxidization and other sediments. When replacing the cell, remove the old Teflon tape, use new tape and wrap it around six to twelve times, or until the threads are completely covered.

Electrode Replacement: As the copper and silver ions are released into the water, the electrode bars wear down. They will need to be replaced every 2-3 years. It is best to drain the spa before changing the cell.

Unscrew the old cell from the tee and unplug it from the pink connector on the controller. Wrap the threads of the new cell with Teflon tape six to twelve times or until the threads are completely covered. Screw the cell into the tee until it is hand tight. **Do not use a wrench or other tools as it may crack the tee. It is okay if the cell does not screw all the way in.**

Plug the pink plug into the pink connector on the controller and refill the spa. Once the spa is refilled, the “IONIZING” light will be on or flashing if everything is connected properly.

As long as the ‘IONIZING’ light is on or flashing, there is enough material left on the electrodes to continue ionizing the water and it is not necessary to clean the electrodes.



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