

# ROLA-CHEM CONTROLLER INSTALLATION CHECK LIST

Keep at Installation Property

- ORP/pH Digital Controller**
  - Liquid Chlorine & Acid pumps**
  - Di-chlor/Tri-chlor Erosion Feeder & soda ash**
  - Other: \_\_\_\_\_**

- Read and refer to all the information presented in the 'Operating Manual' before proceeding with this check. Check that controller & manifold are properly installed. Install new probes in the manifold and connect them to controller- probes must be vertical. Verify that pH probe is connected to pH terminal. ORP probe is connected to ORP terminal.
- Verify that Globe flowcell (manifold) grounding screw is connected to ground.
- The pool's main circulating pump should be 'ON' and circulating water through the system. Water recirculation valves should be set to set code (i.e. main drain & perimeter/skimmer).
- Water chemistry must be tested & adjusted within NSPI guide lines. **Record actual chemistry.**

Free chlorine (1.0-3.0 ppm)	-test reading	_____
Combined chlorine (0-0.1 ppm)	-test reading	_____
pH (7.4-7.6)	-test reading	_____
Alkalinity (80-120 ppm)	-test reading	_____
TDS (300-2000 PPM)	-test reading	_____
Calcium Hardness (200-400 ppm)	-test reading	_____
Cyanuric Acid (20-30 ppm, when used)	-test reading	_____
- Check that flow through manifold is not restricted. Fully open left & right valve under manifold- the flow indicator (float) must be at top of its chamber. Reset flow by closing and then slowly opening the right valve until the float is at the top of its chamber. (Leave left valve full open). Do not open valve too much. Note: The flow rate may be too high if the float is at the top of chamber-closing valve a little should lower float. If the float will not rise to the top position, there is insufficient flow through the manifold or the flow is backwards.
- When controller has power the FLOW light should illuminate. This light is also an indicator of flow (see Flow Switch below). Controller are initially shipped with a 'jumper' that allows the light to indicate power. Turn power 'OFF' to the pool's main circulating pump. The controller must loose power. This verifies that controller power is connected to the circulating pump circuit. Turn the main circulating pump back 'ON' and the light should illuminate.
- Flow Switch feature shuts down controller if the flow though manifold is interrupted. The flow switch leads should be installed and the jumper removed. Check flow switch operation by closing left manifold valve. The FLOW light should go off. Open the left valve- the FLOW light should illuminate.
- Note the pH and ORP readings along with set levels, feed times and limits:

Setting	Factory preset:	Initial reset
ORP Set Level	650 mV	_____
ORP Feed Time	0.6 sec	_____
ORP High/Low Alert Limits	900/100 mV	_____
ORP Consecutive Feed Alert Limit	20 timed cycles	_____
	20 min continuous feed	_____
pH set level	7.4	_____
pH Feed Time	0.6 sec	_____
pH High/Low Alert Limits	8.0/7.0	_____
pH Consecutive Feed Alert Limit	20 timed cycles	_____
	20 min continuous feed	_____

Note: **Feed time is in 'seconds on' and then a 5 minute delay.** Factory preset is appropriate for solenoid valve/erosion feeder type systems. Longer feeds times are needed for systems with peristaltic pumps.



# ROLA-CHEM CONTROLLER INSTALLATION CHECK LIST

Keep at Installation Property

- Note the Dip switch setting for control functions/options :

Switch	Factory preset:	Initial reset
#1 ORP/pH Interlock	on	_____
#2 Consecutive Feed Alert limit	on*	_____
#3 Acid/Base pH feed	off (acid feed)	_____
#4 Keypad Lockout	off	_____

Note: It is recommended that switches #1 & #2 be in the ON position after start-up.

\*Setting #2 Consecutive Feed Alert Limit to OFF voids NSF certification.

- Troubleshooting required: YES \_\_\_ NO \_\_\_

Troubleshooting procedure:

Note-pH must be correct for proper ORP operation.

\*Check pH of water samples at pool and at manifold with test kit - both samples must read the same.

\*Check controller pH using 7.2 buffer solution. Remove probe from manifold, rinse with tap water, shake off water and place probe in buffer. The pH test kit reading should be within 0.1 of the reading on the controller.

\*If controller reading matches buffer solution, then the controller/probes are good and the water chemistry is causing a bad test kit reading. The pool chemistry will need to be corrected.

\*Check ORP probe by preparing a test solution of potable water and household bleach. Use 16 oz of water (7.2 – 7.6 pH) and two drops bleach (5.25%). Remove probe from manifold, rinse with tap water, shake off water and place probe in test solution. The ORP should have a reading between 400 & 800 mV. If not, check the test solution with the test kit to ensure it has 1-2 ppm free chlorine. Adjust the solution by adding water or bleach and retest probe.

\*If controller ORP reading is between 400 & 800, then the controller/probe is good and water chemistry is causing a bad test kit reading. The pool chemistry will need to be corrected.

- Check that the circulation system is functioning properly.
- Check the chemical feeder connections to the controller, ORP pump to ORP cord, etc.
- Check that chemical containers are filled.
- Check that the pumps are operable.  
Use 'FEED ONCE' functions on controller to run pumps. Prime pumps if required.
- Check that the feed times/chemical feed pumps are sized correctly.

The pumps should run several cycles and then satisfy demand.

Long feed cycles/oversized pumps will cause over- feed of chemical and overshoot set levels.

Short feed cycles/undersized pumps will cause under- feed of chemical and failure to meet set levels.

The high chemical feeding caused by an oversized pump or feeder may be corrected by diluting the chemical being pumped or restricting the flow through tab feeders and using larger sized tablets.

**CAUTION!** The strength of the chemical used should not cause a harmful concentration of chemical in the pool, spa or hot tub if the chemical feeders feed continuously for up to two hours.

- Note: If all the items have not operated as stated, call Rola-Chem at 800-549-4473 before leaving the site. When calling have the following data: pool size (gallons), chemical feeder size (GPD), size of each chemical container (gallons), strength of chemicals by percent (%).

- NOTE: Explain the controller operation to the on-site service person including indicator lights and alerts.

- Check pH & Alkalinity.

The Controller will not function properly if the pH is not maintained within 7.2-7.8 at all times.

This is important when pH control is automated and manually maintained.

Alkalinity must be between 80-120 ppm to get correct pH readings.

Rola-Chem Corporation  
5858 Centerville Road  
St. Paul, MN 55127-6804  
Phone: 800-549-4473 www.rola-chem.com