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<p>The Operators Mitigation flow chart is designed to help troubleshoot common error codes generated by the STREAM™ system. Refer to the STREAM™ Operations and Maintenance Manual for further explanation. If basic mitigation steps do not solve the issue and the problem persists, consult with your local technician or contact Aqua Research Tech Support—505.414.3929.</p>			
 BLINKING YELLOW	A Low power supply 	A.1. Check the power supply. Is the power supply plugged in? Is there power at the wall? If connected to a battery, is the battery dead, or low in power? A.2. Disconnect from current power source. A.3. Connect to a different wall outlet, or connect to an alternative power source, (i.e. car battery or solar panel inverter). A.4. Turn the STREAM™ system on.	
 SOLID YELLOW	B Low power supply 	B.1. Check the power source. Is there power from the wall outlet, car battery, or solar panel unit? B.2. Turn off the STREAM™ system. B.3. Connect to a different power source, wall outlet, car battery, or solar panel inverter. B.4. Turn the STREAM™ system on.	
	C. Brine salt concentration too high 	C.1. The brine solution could be too concentrated. Add water to the brine solution to reduce the salinity. C.2. Make sure the brine solution is mixed well (all salt is dissolved) and restart the STREAM™ system. C.3. Allow the system to run till it errors out, solid yellow light. C.4. Turn the system off and back on, repeating step C.3, 3-4 times to purge old brine.	
 BLINKING RED/ YELLOW/RED	D. Power supply is out of range 	D.1 Turn the STREAM™ system off. D.2. Disconnect the system from the power source, wall outlet, car battery, or solar inverter. D.3. Connect the STREAM system to a different, tested power source. D.4. Turn the STREAM™ system on.	
 BLINKING RED	E. Brine tank is empty 	E.1. Verify the system did not run out of brine. E.2. Make new brine solution. E.3. Turn the STREAM™ system on.	
	F. Brine salt concentration too high 	F.1. The brine solution could be too concentrated. Add water to the brine solution to reduce the salinity. F.2. Make sure the brine solution is mixed well (all salt is dissolved) and restart the STREAM™ system. F.3. Allow the system to run till it errors out, blinking red light. F.4. Turn the system off and back on repeating step F.3, 3-4 times to purge old brine.	
	G. Brine solution is too hot 	G.1. Verify that the brine solution is not too hot. Recommended brine temperature is 50-100°F (10-38°C) G.2. Make new brine solution using cool water. G.3. Turn on the system.	

STREAM MAINTENANCE AND REPAIR PROCESS GUIDE

OPERATOR

Problem Symptoms	Cause	Operator Mitigation Step	Video Tutorial
 CONTINUED BLINKING RED	H. Rupture disc is popped.	H.1. Verify the rupture disc is intact. H.2. If punctured replace the rupture disc. H.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual	
	I. Clogged tubing or cell	I.1. Verify brine flows through the system, up into the pump, through the cell, and into the oxidant tank. I.2. Check the plumbing fittings and tubing for clogs. I.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual	
 SOLID RED	J. Brine salt concentration too low. 	J.1. Verify all the salt in the brine tank is dissolved. J.2. If all the salt is dissolved, add salt to the brine solution. J.3. Mix the brine solution to dissolve the salt. J.4. Turn the STREAM™ system.	
	K. Brine tank is empty 	K.1. Verify the system did not run out of brine. K.2. Make new brine solution. K.3. Turn on the system.	
	L. Rupture disc is popped.	L.1. Verify the rupture disc is intact. L.2. If punctured replace the rupture disc. L.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual	
	M. Clogged tubing or cell	M.1. Verify brine flows through the system, up into the pump, through the cell, and into the oxidant tank. M.2. Check the plumbing fittings and tubing for clogs. M.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual M.4. Turn on the system.	
 BLINKING RED/ GREEN/RED	N. System is overheating 	N.1. Verify brine flows through the system, up into the pump, through the cell, and into the oxidant tank. N.2. Check the plumbing fittings and tubing for clogs. N.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual	
	O. Brine tank is empty 	O.1. Verify the system did not run out of brine. O.2. Make new brine solution. O.3. Turn on the system.	

Problem Symptoms	Cause	Operator Mitigation Step	Video Tutorial
PUMP NOT WORK- ING OR RUNNING SLOW	P. Clogged tubing, fittings, or cell with scale build up.	P.1. Verify brine flows through the system, up into the pump, through the cell, and into the oxidant tank. P.2. Check the plumbing fittings and tubing for clogs. P.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual P.4. Turn the STREAM™ system on.	
	Q. Debris in the pump head	Q.1. Remove the peristaltic tubing from the pump head, check for debris. Q.2. Force clean water through the peristaltic tubing. Q.3. Reinstall the peristaltic pump tubing in the pump head and re-position the blue cap. Q.4. Turn the STREAM™ system on.	
	R. Pump turns on, but the gears don't spin, pump squeals	R.1. Remove the peristaltic tubing from the pump head. R.2. Stretch the peristaltic tubing several times. R.3. With the peristaltic tubing out of the pump, turn the STREAM™ system on to see if the pump spins without the tubing. If the pump will not spin without the tubing in the pump, consult a technician. R.4. If the pump is working re-install the peristaltic tubing in the pump, replacing the blue pump cap. R.5. Turn the STREAM™ system on.	
	S. Punctured rupture disc	S.1. Verify the rupture disc is intact. S.2. If punctured replace the rupture disc. S.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual S.4. Turn the STREAM™ system on.	
MOISTURE IN THE STREAM CASE	T. Loose fittings, moisture in the case.	T.1. Identify the source of the leak. T.2. Turn off the system. T.3. Repair tubing or tighten fittings. T.4. Turn the STREAM™ system on.	
NO FLOW THROUGH THE CELL	U. Clogged tubing, fittings, or cell with scale build up.	U.1. Verify brine flows through the system, up into the pump, through the cell, and into the oxidant tank. U.2. Check the plumbing fittings and tubing for clogs. U.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual U.4. Turn the STREAM™ system on.	
	V. Rupture disc is popped	V.1. Verify the rupture disc is intact. V.2. If punctured replace the rupture disc. V.3. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual. V.4. Turn the STREAM™ system on.	
	W. Disconnect between the brine filter and tubing or coupler.	W.1. Verify brine filter is securely attached to the brine inlet tubing at the stainless-steel coupler. W.2. Tighten all the fittings. W.3. Verify the brine filter is submerged in the brine solution.	

Problem Symptoms	Cause	Operator Mitigation Step	Video Tutorial
LOW CHLORINE PRODUCTION	X. Brine salt concentration to low 	X.1. Verify all the salt in the brine tank is dissolved. The desired brine concentration is 15grams/L. X.2. If all the salt is dissolved, add salt to the brine solution. X.3. Mix the brine solution to dissolve the salt. X.4. Turn the STREAM™ system.	
	Y. Loss of power	Y.1. Verify the STREAM™ system didn't lose power. Y.2. Check the power supply. Is power supply plugged in? Is there power at the wall? If connected to a battery is the battery dead, or low in power? Y.3. Disconnect from current power source. Y.4. Connect to a different wall outlet, or connect to an alternative power source, i.e. car battery or solar panel inverter. Y.5. Turn the STREAM™ system.	
	Z. Calcium carbonate fouling	Z.1. A dirty cell can electrically short out, causing damage to the electrodes and reducing production. Z.2. Verify brine flows through the system, up into the pump, through the cell, and into the oxidant tank. Z.3. Check the plumbing fittings and tubing for clogs. Z.4. Remove carbonate scale build up out of the tubing and fittings. Z.5. Clean the system with vinegar or muriatic acid, see section 7.1.6 in the manual Z.6. Turn the STREAM™ system on.	
	AA. Cell life depleted	AA.1. Cell has reached end of life. AA.2. Check the cell amperage, should be between 12—21amps) AA.3. Check the flow rate out of the cell. Flow should be 4.2-5.4ml/min AA.4. Check the chlorine production, refer to Appendix C Chlorine Testing in the manual AA.5. Refer to section 7.2.3 in the Manual—Electrolytic Cell Replacement.	
POWER SUPPLY NOT DELIVERING POWER	AB. Power supply is damaged	AB.1. Turn the STREAM system off. AB.2. Disconnect the system from the power source, wall outlet, car battery, or solar inverter. AB.3. Verify that the connector between the power supply pack and the control box is firmly in place. AB.4. Verify that the power supply pack is not visibly damaged. AB.5. Connect the STREAM system to a different, tested power source. AB.6. Turn the STREAM system on. AB.7. If these steps don't correct the problem, the power supply pack may have been damaged due to a power surge.	

NO FLOW THROUGH THE WHOLE SYSTEM	AC. Clogged tubing, fittings, or cell with scale buildup.	<p>AC.1. Verify brine flows through the system, up into the pump, through the cell, and into the oxidant tank.</p> <ul style="list-style-type: none"> - If flow is uninterrupted [no clogs or leaks], clean the system with vinegar or muriatic acid for 3-5 cycles, see section 7.1.6 in the manual. If this corrects the problem, proceed to step AC.4. - If brine does not flow properly, proceed to step 2. <p>AC.2. Identify location of calcium scale buildup [tubing, fittings, or cell].</p> <p>AC.3. As possible, manually remove scale buildup; this may require massaging the tubes or some disassembly [disconnecting tubes and fittings].</p> <ul style="list-style-type: none"> - Contact a technician if the cell requires disassembly. <p>AC.4. Use one of the included water hardness test strips to measure the hardness of the water used to make the brine at this time and document the result.</p> <ul style="list-style-type: none"> - High measurements may indicate more frequent cleaning is necessary. <p>AC.5. Turn the STREAM system on.</p>
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