

# Alex-Tronix Service Bulletin No. 2, Rev 0, as of 7-31-2003

Controller: BCS-5, BCS-10

Issue: Controller looks okay, valves not operating.

Controller seems to make clicking sounds and appears to be operating, but valves do not operate.

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Okay folks, let's have an F.A.Q. session....I'll ask the questions...

**Q1) Is this a new system? if no move on to Q2; if yes then:**

a) **Are you using the BCS-SOL's?** This is an electronic module connected to our latching solenoid (Baccara). If not-- you need to be. This is the only way to use the BCS, and the BCS-SOL is part of the system. A regular *latching* or *AC* solenoid directly connected to the BCS will not work properly and might damage the controller or blow the fuse; Check for these problems after system installation is corrected.

b) **Have you checked for shorts or opens on the outputs?** Preferably using a digital multimeter... Do the following:

- 1) Disconnect the harness connector from the back of the BCS panel.
- 2) Set your multimeter to "ohms" (omega symbol, or upside down horseshoe)
- 3) With the field wires still connected to the terminal strip, put one probe on the common and the other on each station.
- 4) Read the multimeter in K-ohms ... You should read a resistance from 2800-3200 ohms (2.8K-3.2K-ohms) on each station *assuming only one module connected per station.*

If any or all stations read "open" (infinite resistance), then you either have the wrong common wire selected or the field wiring is broken somewhere. You'll need to trouble shoot your field wiring further in depth. You can also verify the controller and BCS-SOL are working properly by removing the BCS-SOL from the valve, and wiring it back at the controller. Operate it using the "Manual" function. If it operates there, It's your wiring!

c) **Is the BCS-SOL module wired in reverse?** All black wires must go to "C" on controller terminal. Remaining red wires connect to each individual "Station" terminals.

d) **Does your valve require an adapter between the solenoid and valve?** Check the Alex-Tronix compatibility chart and see if you need an adapter or a special O-ring to make our Baccara solenoid operate your valve. Adapters are readily available from Alex-Tronix. Do not mistake a valve adapter for a BCS-SOL module.

e) **Is the rain switch on?** If you are not using a rain switch, the switch should be set to the "NOT USED" position. If you are using the rain switch, then the switch should be set to the "USED" position and the rain switch should be checked for correct installation and



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wiring. Older BCS units may have a blue, looped wire tucked in between the circuit board; this should either be tapped into a rain switch or left uncut, as is.

## Q2) System has been operating fine, but now not working.

a) **Are the batteries run down?** Check the count by setting the FUNCTION SELECTOR knob to "Rain delay & Count" If the count is above 10,000 then we suggest that the four 9-volt batteries be replaced, although the controller may continue to operate. *Metal jacketed* lithium batteries should be used for replacement, available only through Alex-Tronix. If immediate irrigation is needed, *regular lithium* or *alkaline* batteries can also be used available from drug stores, electronic shops, etc. The best way to test the batteries are to perform the following test:

- 1) Using a digital multimeter, set the meter to volts DC (VDC) and place the black (neg. or -) probe on the common and the red (pos. or +) probe on station 1.
- 2) Run the controller in manual (Station 1) and observe the voltage within 2 seconds. The reading should be 25 volts or above. The valve should turn on. If the voltage is below this reading, the batteries must be replaced for reliable operation.
- 3) perform the same operation by pressing the manual again to shut off the valve. The reading again should be 25 volts or above. If either voltage is below 25 volts, replace batteries.

b) **All valves not working? or some?** If any wires are suspected broken, run test Q1-C. You can also trade station wires with each other to see if the valve in question begins to operate. If so, send in controller for service.

c) **Main water line okay?** Check this by manually operating valve (at valve not controller). If main water pressured up okay-- Suspect valve.

d) **Test Controller/BCS-SOL--** Verify the controller and/or BCS-SOL are working properly by removing the BCS-SOL from valve and wiring it back at the controller. Operate it using the "Manual" function. You can also go "down the line" of all stations and to make sure all controller outputs are working.

e) **Is fuse blown?** Check fuse and replace if necessary. Run test Q1-B to make sure outputs are not shorted. Fuse is a 1 amp, normal blow 5 x 20 mm size, available at most hardware and electronic stores.

Questions??? Tech Support: Aram Tokatian 888-224-7630

