Setup Instructions for Barrel Tender v2, Neptune Apex version

Congratulations on your purchase of an AVAST Barrel Tender! By following these simple instructions, you will have your RO/DI water management system up and running in a short time:

1. Install the Barrel Tender on your RO/DI reservoir lid. See the installation video for details. The Apex-compatible Barrel Tender requires two pins on your Apex's digital input connection. This means you will need to install a Breakout Box if you do not already have one.

2. Once the Breakout Box is installed, connect the Barrel Tender wires as follows:
    1. The white wire is the Low water level sensor. Connect it to an input pin of your choice. For our example, we'll use Pin 1, which corresponds to Switch1.
    2. The red wire is the High water level sensor. Connect to pin 2, which corresponds to Switch 2 in our example.
    3. The black wire is the common. Connect it to one of the common ports on the breakout box.

3. In your Apex dashboard, you should see both switches report as Closed. Test the system by blowing on each pressure sensor tube; this will cause the switch to open and report to the controller the open state. It may take a few seconds for the Apex dashboard to show the change, even though the Apex recognizes the state change nearly instantly.

4. Plug in the Barrel Tender's DC power adapter to one of the Energy Bar outlets. Name that outlet something obvious, like BarrelTender.

5. Programming the Barrel Tender in it's most basic functionality is a simple matter of adding these three lines to the BarrelTender outlet:
    1. Fallback OFF
    2. If Switch1 CLOSED Then ON
    3. If Switch2 OPEN Then OFF

6. This program will turn on the outlet that controls the solenoid when the water level falls below the low water level sensor. Then, when the water gets high enough to Open the high level sensor, the solenoid is turned off. The solenoid won't open again until the low water sensor is triggered by the water level falling below it's level. There are many different variations on this program, such as limiting the run time of the solenoid with an OSC command, or sending an email alert when the solenoid opens. Please refer to the Neptune Comprehensive Reference Manual for examples and other advanced programming ideas.

7. You should now test the Barrel Tender by lifting it up so the low sensor is out of the water (if using a previously full reservoir). The solenoid should click open. The solenoid will then close once the high level sensor is pressurized, either by blowing on it, or dipping it in a cup of water.