

## Vernier Sensor Interference Tables

The following tables were constructed by testing pairs of sensors in a 1L beaker containing 600 mL of water. The water was at 22°C and had a conductivity of approximately 6,000  $\mu\text{S}/\text{cm}$ .

**Good** = no interference

**OK** = minimal interference; probably OK to use

**Bad** = interference on one or both sensors

**Table 1a: One LabQuest as a standalone (on AC power)**

	<b>CON</b>	<b>DO</b>	<b>pH</b>	<b>ISE</b>	<b>SAL</b>	<b>ODO</b>
<b>CON</b>	Bad	OK	Bad	Bad	Bad	Good
<b>DO</b>	OK	Good	OK	Good	OK	Good
<b>pH</b>	Bad	OK	Good	Bad	Bad	Good
<b>ISE</b>	Bad	Good	Bad	Bad	Bad	Good
<b>SAL</b>	Bad	OK	Bad	Bad	Bad	Good
<b>ODO</b>	Good	Good	Good	Good	Good	Good

**Table 1b: One LabQuest as a standalone (on battery)**

	<b>CON</b>	<b>DO</b>	<b>pH</b>	<b>ISE</b>	<b>SAL</b>	<b>ODO</b>
<b>CON</b>	Bad	Good	Bad	Bad	Bad	Good
<b>DO</b>	Good	Good	Good	Good	Good	Good
<b>pH</b>	Bad	Good	Good	Bad	Bad	Good
<b>ISE</b>	Bad	Good	Bad	Bad	Bad	Good
<b>SAL</b>	Bad	Good	Bad	Bad	Bad	Good
<b>ODO</b>	Good	Good	Good	Good	Good	Good

**Table 2a: Two LabQuests as standalones (on AC power)**

	<b>CON</b>	<b>DO</b>	<b>pH</b>	<b>ISE</b>	<b>SAL</b>	<b>ODO</b>
<b>CON</b>	Good	OK	Bad	OK	OK	Good
<b>DO</b>	OK	Bad	Bad	Bad	Bad	Good
<b>pH</b>	Bad	Bad	Bad	Bad	Bad	Good
<b>ISE</b>	OK	Bad	Bad	Good	OK	Good
<b>SAL</b>	OK	Bad	Bad	OK	OK	Good
<b>ODO</b>	Good	Good	Good	Good	Good	Good

**Table 2b: Two LabQuests as standalones (on batteries)**

	<b>CON</b>	<b>DO</b>	<b>pH</b>	<b>ISE</b>	<b>SAL</b>	<b>ODO</b>
<b>CON</b>	Good	OK	Good	Good	Good	Good
<b>DO</b>	OK	OK	OK	OK	OK	Good
<b>pH</b>	Good	OK	Good	Good	Good	Good
<b>ISE</b>	Good	OK	Good	Good	Good	Good
<b>SAL</b>	Good	OK	Good	Good	Good	Good
<b>ODO</b>	Good	Good	Good	Good	Good	Good

**Table 3: One LabQuest attached to one computer or Chromebook (on AC or battery)**

	<b>CON</b>	<b>DO</b>	<b>pH</b>	<b>ISE</b>	<b>SAL</b>	<b>ODO</b>
<b>CON</b>	Bad	Bad	Bad	Bad	Bad	Good
<b>DO</b>	Bad	Good	Bad	Bad	Bad	Good
<b>pH</b>	Bad	Bad	OK	OK	OK	Good
<b>ISE</b>	Bad	Bad	OK	Bad	Bad	Good
<b>SAL</b>	Bad	Bad	OK	Bad	Bad	Good
<b>ODO</b>	Good	Good	Good	Good	Good	Good

**Table 4: Two LabQuests attached to one computer or Chromebook (on AC or batteries)**

	<b>CON</b>	<b>DO</b>	<b>pH</b>	<b>ISE</b>	<b>SAL</b>	<b>ODO</b>
<b>CON</b>	Bad	OK	Bad	Bad	Bad	Good
<b>DO</b>	OK	Good	Bad	Bad	Bad	Good
<b>pH</b>	Bad	Bad	OK	OK	OK	Good
<b>ISE</b>	Bad	Bad	OK	Bad	Bad	Good
<b>SAL</b>	Bad	Bad	OK	Bad	Bad	Good
<b>ODO</b>	Good	Good	Good	Good	Good	Good

**Table 5: One LabPro (on AC power or batteries) attached to one computer or Chromebook**

	<b>CON/SAL</b>	<b>DO</b>	<b>pH</b>	<b>ISE</b>	<b>ODO</b>
<b>CON/SAL</b>	Bad	Bad	Bad	Bad	Good
<b>DO</b>	Bad	OK	Bad	Bad	Good
<b>pH</b>	Bad	Bad	Bad	Bad	Good
<b>ISE</b>	Bad	Bad	Bad	OK	Good
<b>ODO</b>	Good	Good	Good	Good	Good