1 **Install Win-Situ® 5** to your local hard drive from the In-Situ software CD or the In-Situ web site.   Optional: Use the In-Situ Software Manager program to update Win-Situ Mobile software on the RuggedReader® at your next ActiveSync® connection, if needed.

Tip: If using a USB TROLL® Com, be sure to select the option "Install USB TROLL Com Drivers" when installing Win-Situ.

2 **Attach** a TROLL Com to the Level TROLL or to its cable.

Tip: Mating the cable connectors is easy after you do it once. Detailed steps and photos are in the Aqua TROLL 100 and 200 Operator's Manual on the In-Situ software CD and web site.
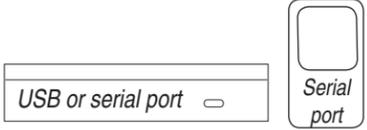
3 **Plug** the TROLL Com into a USB or serial port on a desktop/laptop PC, or into the serial port on a RuggedReader handheld PC.

Tip: After plugging in a USB TROLL Com, follow the prompts to install the drivers. Then use Windows®Device Manager to determine which COM port the USB TROLL Com is using.
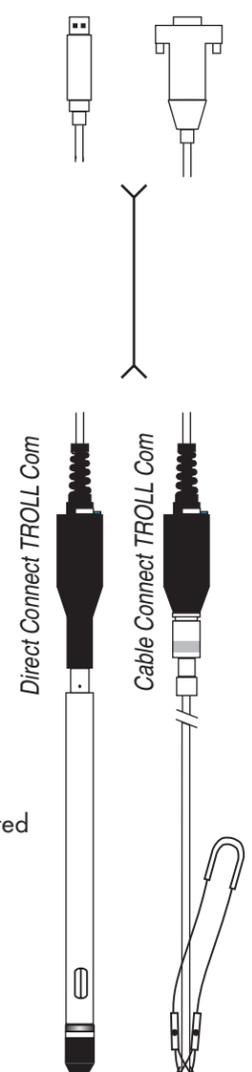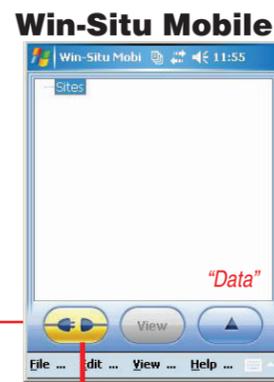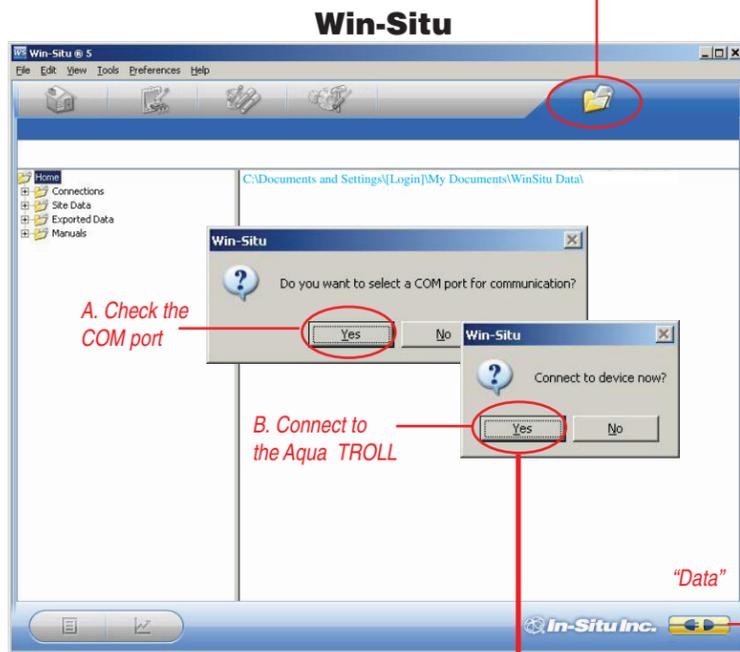
4 **Launch** the software:

Win-Situ: Double-click the desktop shortcut **WS**

Win-Situ Mobile: Tap the Start menu, tap Win-Situ Mobile **WM**
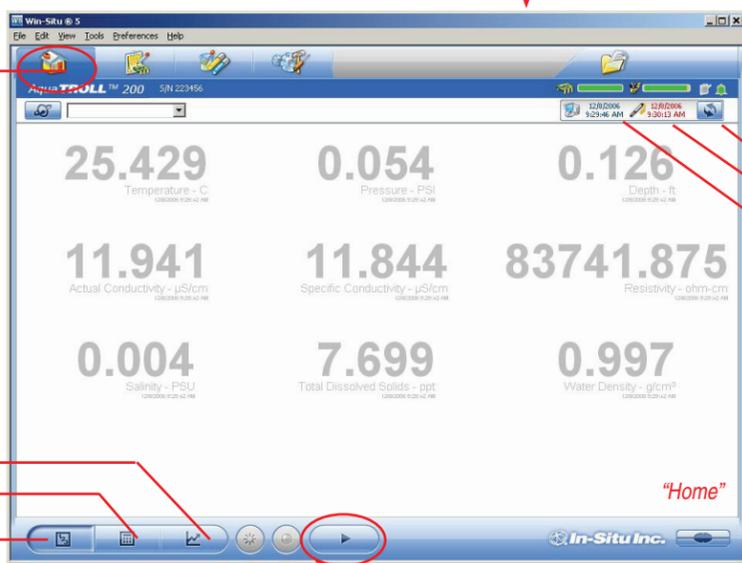
USB or serial port

Serial port

5 **Win-Situ** launches. The screen shows the Data tab. **A.** On first connection, be sure to select the correct COM port for a USB connection. **B.** Then connect to the device.

Win-Situ Mobile launches at the Data tab. Tap the Connect Button to connect to the Aqua TROLL.

Win-Situ

A. Check the COM port

Win-Situ — Do you want to select a COM port for communication?

B. Connect to the Aqua TROLL

Win-Situ — Connect to device now?

"Data"

Win-Situ Mobile

"Data"

Connect button

Not connected

Connected

Direct Connect TROLL Com

Cable Connect TROLL Com

When connected, focus shifts to the Home tab. Parameter readings are shown in "meter" view. Values in gray are not being updated in real time.

Aqua **TROLL** 200   S/N 223456

25.429 Temperature - C	0.054 Pressure - PSI	0.126 Depth - ft
11.941 Actual Conductivity - µS/cm	11.844 Specific Conductivity - µS/cm	83741.875 Resistivity - ohm-cm
0.004 Salinity - PSU	7.699 Total Dissolved Solids - ppt	0.997 Water Density - g/cm³

Clock sync button
Device clock
System (PC) clock

Graph view
List view
Meter view

"Home"

Press to update readings in real time

Aqua**TROLL** ™ 200   S/N

37.63 Pressure - PSI	8.37 Temperature - C
86.88 Depth - ft	3127.16 Actual Conductivity - uS/cm
4583.20 Specific Conductivity - uS/cm	2.43 Salinity - PSU
2979.08 Total Dissolved Solids - ppt	319.78 Resistivity - ohm-cm

"Home"

Read   Record

Readings update when button looks pressed in

"Expander"— tap to access Time sync

RuggedCable®

Aqua TROLL 200

6 **Set up a Site:** Click the Site Button, select the Default Site or click the New button to set up a custom site. The site name can have up to 32 characters. Location coordinates are optional.

All data logs are associated with the **site** where the data were logged. For more information, see Win-Situ Help, or Win-Situ Mobile Help.

Aqua **TROLL** ® 200   S/N 117165

Site button

Win-Situ Mobile

Aqua**TROLL** ™ 200   S/N

Site button

| 37.63 Pressure - PSI | 8.37 Temperature - C |

7 Calibrate the conductivity sensor:
If a field calibration is required, follow the steps below. Calibrate for the range and at the temperature you expect in the field. You will need:

- The In-Situ Cal Cup
- The calibration standard provided, or other solution of known specific conductivity in the range 100 to 60,000 µS/cm
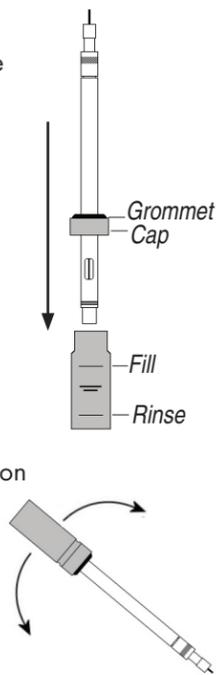
Prepare the sensor for calibration:

A Rinse:
- Aqua TROLL 200: remove nose cone — Do not touch the face of the pressure sensor!
- Remove Cal Cup cap
- Fill cup to Rinse line with calibration solution
- Insert Aqua TROLL through grommet, reattach cap
- Shake vigorously to rinse sensing cell
- Remove cap with Aqua TROLL attached
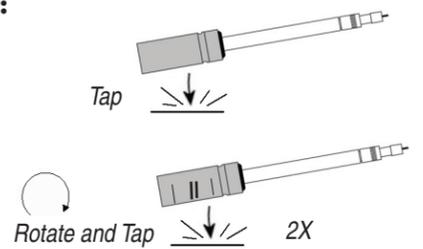- Discard calibration solution, repeat with fresh solution

B Stabilize temperature:
- Fill cup to Fill line with calibration solution
- Install Aqua TROLL and tighten cap
- Invert continuously for at least 30 seconds—longer if probe and solution are at different temperatures
- Soak 5-15 minutes after <u>initial</u> wetting for best results

Grommet Cap

Fill

Rinse

C Dislodge air bubbles from the sensor:
- Firmly tap Cal Cup on your hand or other convenient surface
- Rotate Aqua TROLL on its long axis about 45 degrees and tap again
- Rotate and tap again

Tap

Rotate and Tap   2X

D Calibrate:
- In Win-Situ or Mobile, go to Sensors tab, select sensor, click Calibrate
- In the next screen, select Conductivity, click **Calibrate...**
- In the next screen, enter Specific Conductivity of solution in µS/cm. Click **Start**
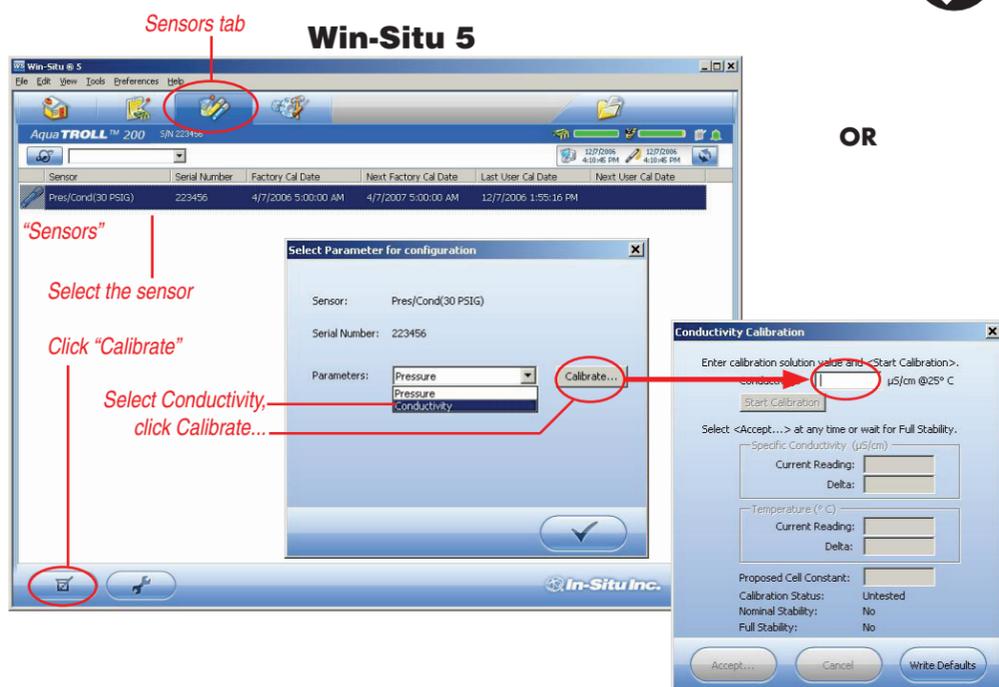- When response is stable, the cell constant should be 0.98 – 1.02

> *If the proposed cell constant (Kcell) is outside this range, check conditions and repeat the calibration.*

- When you are satisfied with the cell constant, click **Commit** to write it to the sensor.
- For immediate deployment, rinse the Aqua TROLL, discard the calibration solution, reinstall the nose cone (200 model only). Or, store it wet in the Cal Cup (in calibration solution or water) for later deployment.
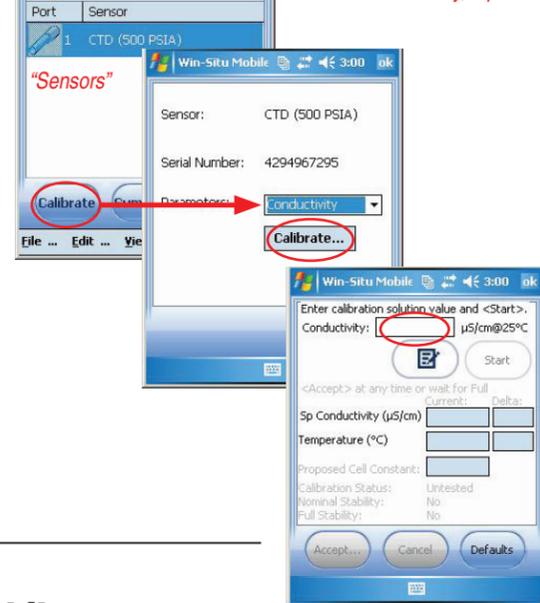
> *Much more information on conductivity calibration is in Section 6 of the Aqua TROLL 100 and 200 Operator's Manual on the In-Situ software CD and web site.*
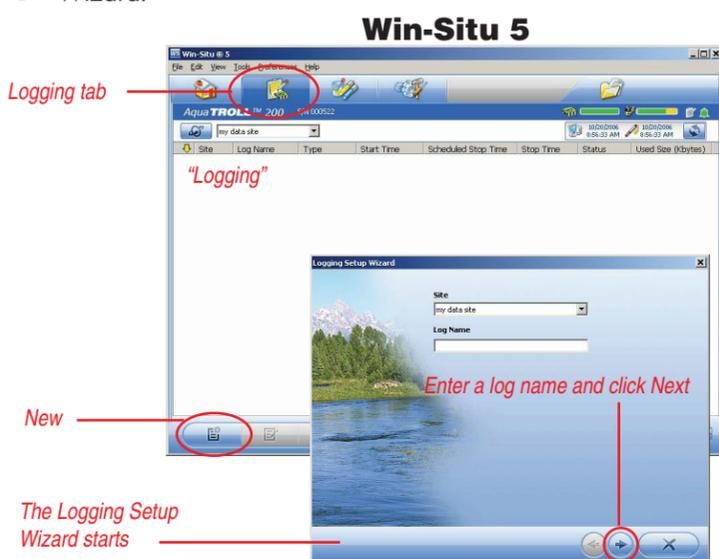
OR

Win-Situ 5

Sensors tab

"Sensors"

Select the sensor

Click "Calibrate"

Select Conductivity, click Calibrate...

Win-Situ Mobile

- From Home tab, select View menu > Sensors
- In Sensors tab, select sensor, tap Calibrate
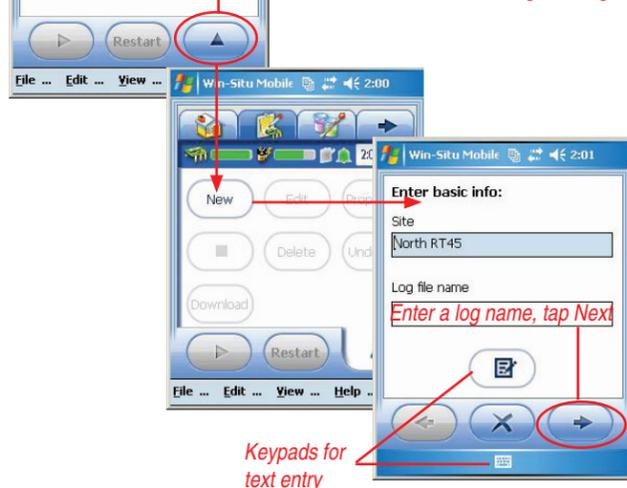- Select Conductivity, tap Calibrate

"Sensors"

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8 Set up a data log:
Follow the steps in the Logging Setup Wizard.

Win-Situ 5   OR

Logging tab

"Logging"

New

The Logging Setup Wizard starts

Enter a log name and click Next

> *For help setting up a data log, see Win-Situ Help, or Win-Situ Mobile Help.*

Win-Situ Mobile

"Logging"

Expander

- From Home tab, select View menu > Logging
- In Logging tab, tap Expander
- Tap New
- Follow the Wizard to configure a log

Enter a log name, tap Next

Keypads for text entry

Temperature
Conductivity
Pressure
Nose cone (Aqua TROLL 200)

9
For unattended deployment of the Aqua TROLL 200, disconnect the TROLL Com and reattach the desiccant to the cable. For the Aqua TROLL 100, attach a backshell hanger or non-vented cable. Install the Aqua TROLL in its deployment location. A scheduled start test will start without any user intervention. To start a manual log, click Start in the Logging tab while connected.

> *When deploying in shallow water, take extra care to remove air bubbles from the sensing cell. See recommendations in Section 5 or 7 of the Aqua TROLL 100 and 200 Operator's Manual.*

G
uidelines & Precautions: If the holes in the nose cone are plugged, swish the Aqua TROLL in water, or soak overnight in a mild acidic solution. *Don't dig or scrape in the pressure sensor opening.* Damage thus caused is not covered by the warranty! To remove fouling from the conductivity sensor, clean gently with a soft swab. For cleaning recommendations, see Section 9 of the Aqua TROLL 100 and 200 Operator's Manual.