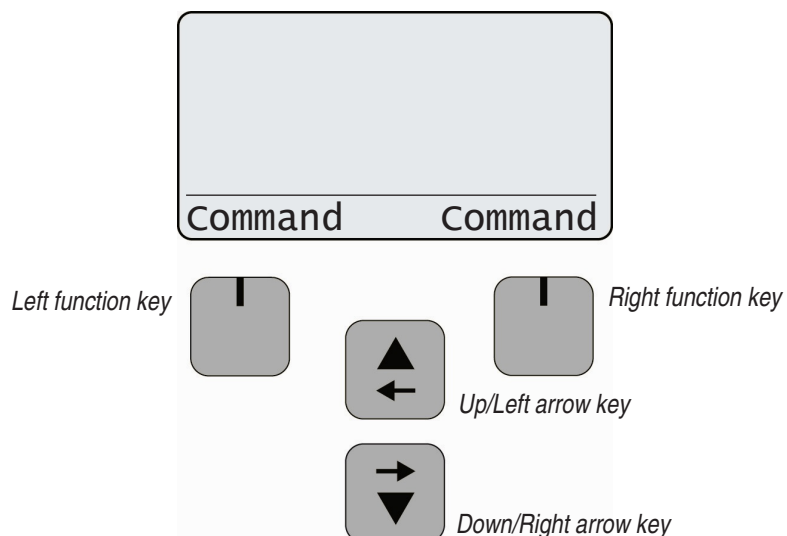


Before making any electrical connections between the probes and the module, make sure that the sensors are set to their factory-default communication settings! If you are using brand new sensors, you do not need to do anything. If you are using pre-existing sensors, use Win-Situ software to reset the default communication settings.

## Keypad and Display Window

The keypad consists of a display window and four keys:



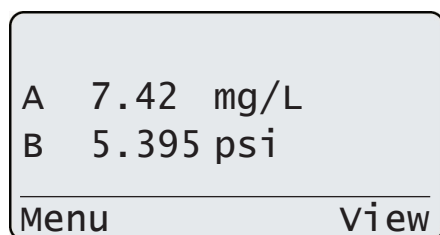
- Use the Left and Right function keys to choose the command shown on the screen directly above each key.
- Use the Up/Left arrow key as the primary button for scrolling through options on the main display area of the screen.
- Use the Down/Right arrow key to move down or across through lists of options.

## Getting Started

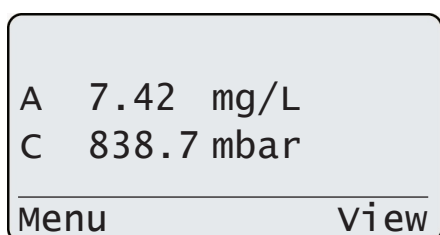
After your Con TROLL® PRO module has been completely installed by a qualified professional, you can begin operating the keypad. If you have an AC-powered model, the display will always be "on". If you have a DC model, push any key to turn on the screen.

1. You will first be asked to select a language. Use the arrow keys to move up or down to the appropriate language. Select Enter to accept the language.
2. Use the arrow keys to adjust the Contrast level. Select Enter to accept the contrast.
3. Use table on the back of the Quick Start Guide to determine your UTC time. Use the Up/Left arrow key to enter a positive or negative value. Press the Down/Right arrow key to move the appropriate numeric position. Use the Up/Left arrow key to enter the correct numeric value. Repeat for additional digits as needed. Press Enter to accept the time.
4. Enter the date using the Up/Left arrow key. Select Enter to accept.
5. Enter the time using the Up/Left arrow key. Select Enter to accept.
6. The Add Probe A screen appears. The name of the sensor that is wired in this position also appears. Select Enter to configure this sensor.
7. The Add Probe B screen appears. The name of the sensor that is wired in this position also appears. If there is no Probe B, the display will tell you that no probe is connected. Select Enter to configure this sensor if it exists, or to proceed to the next screen if it does not.
8. If you have only one probe connected, a row labeled "C" appears. References to Probe C refer to the Con TROLL PRO.

## Main Screen



2 probes connected



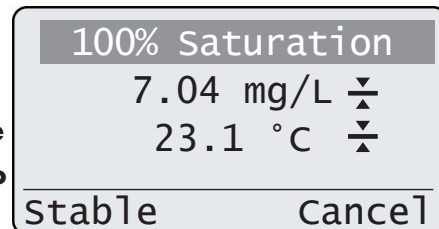
1 probe connected

## View Option

1. Select the View option. An arrow ← will point to the first menu item.
2. Select View again to move the arrow ← to the next menu item.
3. With the arrow pointing to a menu item, use the Up and Down arrow keys to toggle through all the available parameters on both sensors and the control module.

## 1-Point Calibration of the RDO® PRO Probe

1. Refer to the RDO PRO Operator's manual to set up your calibration solutions, vessels, and sensor for a 1- or 2-point cal.
2. From the Con TROLL PRO Main menu, select Calibrate, then Saturation, then RDO PRO.
3. Select One-point cal. The calibration begins immediately, so make sure that your sensor and solutions are set up in advance.
4. You will see the Calibration Beginning icon next to the mg/L value. When the calibration is complete, the Calibration Complete icon will appear. Select Stable to accept the calibration or Cancel to return to the old calibration.



**Note:** In-Situ Inc. recommends against zeroing the offset (recalibrating the sensor) for Level TROLL® and Aqua TROLL® level sensors. For more information, see Zeroing a Gauged Pressure Sensor in the Level TROLL or Aqua TROLL Operator's Manual.

**Note:** The Aqua TROLL 200 factory calibration with NIST traceable standards guarantees a high degree of linearity across the entire operating range of 5 to 100,000 µS/cm. A user calibration is only advised if you must conform to a standard operating procedure or if the cell has undergone physical change (e.g., deposits on cell walls that cannot be removed; physical damage to cell walls).

## Administrator and User Password Access

The "User"(s) can access the Calibrate, Log Data, Hold Options, and Diagnostics menus. The "Administrator" can access all functions, most notably, the Settings menu. If there is no administrator code set, the User becomes the default Administrator and can access all functions. To remove pass code-protected access, enter "0000" for all codes.

1. On the Main menu, select Settings, Security Code, Administrator.
2. Set a 4-digit code for the Administrator using the arrow keys. Select Enter.
3. Select User. Set a 4-digit code for the User using the arrow keys. Select Enter.

On-screen Icons	
	Error with parameter
	Battery remaining
	Calibration stabilizing
	Calibration nominally stable
	View
	Bluetooth® wireless communications turned on
	Communication ongoing
	System locked
	System not locked
	Factory calibration for Level or Aqua TROLL probe has expired or RDO cap has expired.
	User calibration has expired, based the "Calibrate Interval".
	Probe A not talking
	Probe B not talking
	Relay 1 active
	Relay 2 active

Main Menu Navigation Tree	
1	Calibrate
	A Probe Type
	B Probe Type
2	Data Log
3	Hold Outputs
	Resume
	View
4	Settings
	1 Probes
	A Probe Type
	B Probe Type
	2 Outputs
	1 Current Loops
	2 Relays
	3 Date & Time
	1 Date
	2 Time
	3 UTC Correction
	4 Display
	1 Lock View
	2 Contrast
	3 Language
	5 Power Save
	1 External
	2 Battery
	6 Polling Interval
	Intervals of 1 min through 12 hours
	7 Communication
	1 Address
	2 RS485
	3 Bluetooth®
	8 Security Code
	1 Administrator
	2 User
	9 Defaults
	Restore default settings?
5	Diagnostics
	A Sensor Type
	1 Serial Number
	2 Firmware
	3 Hardware
	B Sensor Type
	C Con TROLL Pro

**Note:** Press and hold "Back" for a few seconds to return to the Main screen.

## Probe Settings Options

- A RDO PRO Options**
- Barometer
    - Fixed
    - Automatic
  - Salinity
    - Fixed
    - Automatic
  - Calibrate Interval
    - Off
    - 1 week . . . 12 months
  - Parameters
    - Concentration
      - Disable/Enable
      - Units
        - mg/L
        - µg/L
      - Resolution
      - Sentinel
    - Temperature
      - Disable/Enable
      - Units
        - °C
        - °F
      - Resolution
      - Sentinel
    - Saturation
      - Disable/Enable
      - Units
        - % sat
      - Resolution
      - Sentinel
    - Pressure
      - Disable/Enable
      - Units
        - Torr
      - Resolution
      - Sentinel
  - Replace Probe
  - Delete Probe

- B Level TROLL Options**
- Level Mode\*
    - Depth
    - Level-DTW
    - Level-SE
    - Specific Gravity
  - Calibrate Interval
    - Off
    - 1 week . . . 12 months
  - Parameters
    - Pressure
      - Disable/Enable
      - Units
        - psi, kPa, bar, mbar, mmHg, inHg, cmH2O, inH2O
      - Resolution
      - Sentinel
    - Temperature
      - Disable/Enable
      - Units
        - °C
        - °F
      - Resolution
      - Sentinel
    - Depth
      - Disable/Enable
      - Units
        - mm, cm, m, in, ft
      - Resolution
      - Sentinel
  - Replace Probe
  - Delete Probe

- B Aqua TROLL Options**
- Alpha Coeff.
  - Ref. Temp.
  - TDS Factor
  - Level Mode
    - Depth
    - Level-DTW
    - Level-SE
  - Specific Gravity
  - Calibrate Interval
    - Off
    - 1 week . . . 12 months
  - Parameters
    - Pressure
      - Disable/Enable
      - Units
      - Resolution
      - Sentinel
    - Temperature
      - (same sub-menu as Pressure)
    - Depth
      - (same sub-menu as Pressure)
    - Actual Conductivity
      - (same sub-menu as Pressure)
    - Specific Cond.
    - Salinity
      - (same sub-menu as Pressure)
    - TDS
      - (same sub-menu as Pressure)
    - Resistivity
      - (same sub-menu as Pressure)
    - Density
      - (same sub-menu as Pressure)
  - Replace Probe
  - Delete Probe

- \* Level Mode Definitions for Level TROLL and Aqua TROLL 200 Instruments**
- **Depth:** Pressure exerted by the column of water above the sensor.
  - **Level-DTW (depth to water):** The distance from the top of a well casing or other level reference A user-entered starting point (offset) for level readings point down to the water surface.
  - **Level-SE (surface elevation):** Relates the probe measurements to a user-selected level reference.

- C Con TROLL PRO**
- Barometer
    - Disable
    - Units
      - psi, Pa, kPa, bar, mbar, mmHg, inHg, cmH2O, inH2O
    - Resolution
    - Sentinel
  - Temperature
    - Disable
    - Units
      - °C
      - °F
    - Resolution
    - Sentinel

**Download data before adding/removing a probe or disabling/enabling new parameters. All logged data will be deleted!**





### Determining your time in Coordinated Universal Time (UTC), formerly known as Greenwich Mean Time (GMT)

1. Choose the appropriate time zone as shown on the table. Find the corresponding time zone number.
2. If you are in a time zone not listed here, go to <http://tycho.usno.navy.mil/tzones.html>.

Region	UTC Value (± numeric value)
Australia Northern Territory:	+9.5
Australia Lord Howe Island:	+10.5 (Daylight saving time +11)
Australia New South Wales:	+10 (Daylight saving time +11)
Australia Queensland:	+10
Australia Victoria:	+10 (Daylight saving time +11)
Australia Australian Capital Territory:	+10 (Daylight saving time +11)
Australia South:	+9.5 (Daylight saving time +10.5)
Australia Tasmania:	+10 (Daylight saving time +11)
Australia Western:	+8
Canada Central:	-6 (Daylight saving time -5)
Canada Eastern:	-5 (Daylight saving time -4)
Canada Mountain:	-7 (Daylight saving time -6)
Canada Yukon & Pacific:	-8 (Daylight saving time -7)
Canada Atlantic:	-4 (Daylight saving time -3)
Canada Newfoundland:	-3.5 (Daylight saving time -2.5)
England:	0 hours (Daylight saving time +1)
USA Puerto Rico:	-4
USA Central:	-6 (Daylight saving time -5)
USA Eastern:	-5 (Daylight saving time -4)
USA Mountain:	-7 (Daylight saving time -6)
USA Arizona:	-7
USA Indiana East:	-5
USA Pacific:	-8 (Daylight saving time -7)
USA Alaska:	-9 (Daylight saving time -8)
USA Aleutian:	-10
USA Hawaii:	-10

### Adding or Replacing a Probe

If you want to replace a probe with the same model and type of probe (i.e., Level TROLL® 300 with a Level TROLL 300 or Aqua TROLL® 200 with an Aqua TROLL 200) you can do this directly and maintain existing settings. **Note that any logged data will be deleted! Download all data before adding or removing a probe.**

-  **Danger: Only properly trained and qualified personnel should install the sensors used by the Con TROLL Pro instrument.**
-  **Danger: Make sure that the power to the instrument is disconnected before making any wiring connections.**
-  **Danger: L'installation de l'appareil "Con TROLL" décrite dans le guide d'utilisateur doit impérativement être réalisée par des personnes qualifiées.**
-  **Danger: Débrancher toute alimentation à l'appareil avant de connecter les fils.**

1. Refer to the Con TROLL PRO Installation Manual, Chapter 5, Input/Output Connections for directions on safely disconnecting the existing probe and replacing it with the same model of sensor.
2. Replace the sensor as instructed in the Con TROLL PRO Installation Manual.
3. Select Main Menu, Settings, Probes, the probe type, Replace Probe, Enter. The controller will configure the probe. Hold down Back to return to the Main menu.

### Logging Mode and Data Download

Con TROLL PRO Models AC-L and DC-L have logging capabilities. The logging rate is the same as the polling rate. The logged data are the parameters that you have enabled.

#### Viewing Logged Data

1. From the Main menu, select Data Log.
2. Select the probe and parameter that you wish to view.
3. Use the arrow keys to scroll through the data.

#### Downloading Logged Data Using Win-Situ® 5

For more information regarding downloading data using Win-Situ 5, see the Con TROLL PRO Operator's Manual.