Water Tank Level Monitor
INSTRUCTION MANUAL

MODEL NO: WTL001

Table of Contents

This Operation Manual is part of this product and should be kept in a safe place for future reference. It contains important notes on setup and operation.

1. INTRODUCTION

Please read this instruction manual thoroughly to fully understand the correct operation of your Water Tank Level Monitor. The following user guide provides step by step instructions for installation, operation and troubleshooting.

1.1 Package Contents
- 1 x Indoor receiver
- 1 x Water tank transmitter
- Mounting screws
- Instruction manual

1.2 Features
- 12/24 hour time display
- Time alarm
- Indoor temperature
- Tank temperature
- Monitors water tank level
- Level displayed on a 10 element LCD bar graph for water level
- Records min. and max. for indoor and tank temperature/level
- TANK level high/low alarm mode
- All alarm ON/OFF option system
- TANK empty alert
- Transmitter low battery indicator
- Tank level updated 30 seconds or 3 minutes

2. INSTALLATION

2.1 Water Tank Sensor Battery Installs

Note: Please note the polarity when inserting/replacing batteries in the unit, failure to do so may result in permanent damage. Use good quality alkaline batteries or rechargeable batteries.
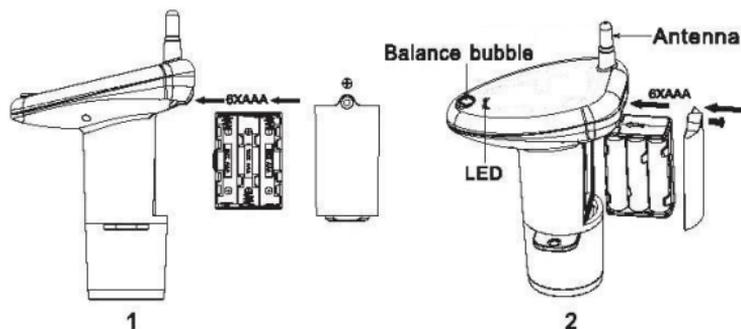
1) Open the battery door, remove the battery box；

2) Insert 6 x AAA 1.5V alkaline batteries into the battery box, observing the correct polarity. Then put back the battery box according to the marking direction.

2.2. Set Up Sketch

The following picture illustrates transmitter installation:

1. Antenna
2. Balance bubble
3. Screw
4. Bracket
5. Sensor
6. Tank

NO	R(m)	H3(m)
1	0.1	≤1
2	0.2	≤3
3	0.3	≤5
4	0.5	≤10
5	0.8	≤15
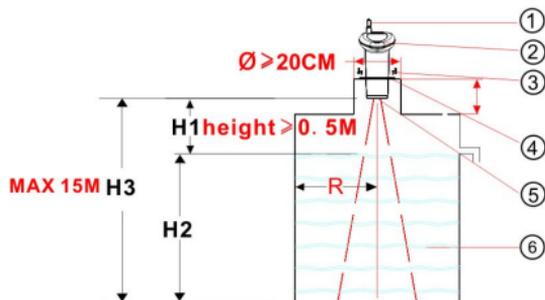
H3: The exact distance sensor can measure.

R: The sensor from the tank wall distance.

Note: the sensor from the tank wall distance will affect the measurement range and precision of depth

Please pay attention to the following issues in installation:

1) The distance between transmitter bottom and highest water surface must be 0.5m (1.64ft) or more.

2) The maximum depth the unit can measure is 15m (49.2ft).

3) Observe the balance bubble on the sensor to ensure it is installed at a level horizontal position.

2.3 Examples of Wrong Installation
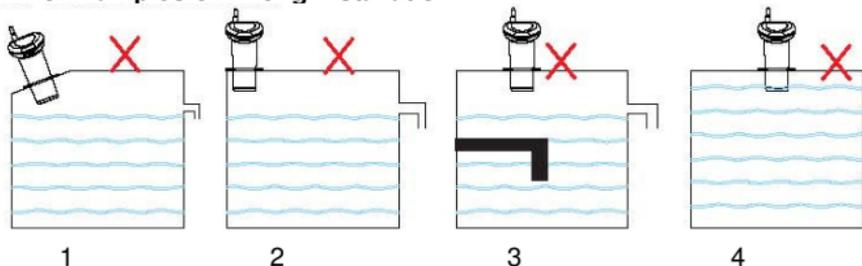

1) The sensor is not installed at a level horizontal position.
2) The sensor is too close to the TANK wall.
3) There are solid objects in the tank.
4) The transmitter bottom is dipped in the water (or other liquids in tank)

2.4 Indoor Receiver Battery Installation

FRONT VIEW   **BACK VIEW**
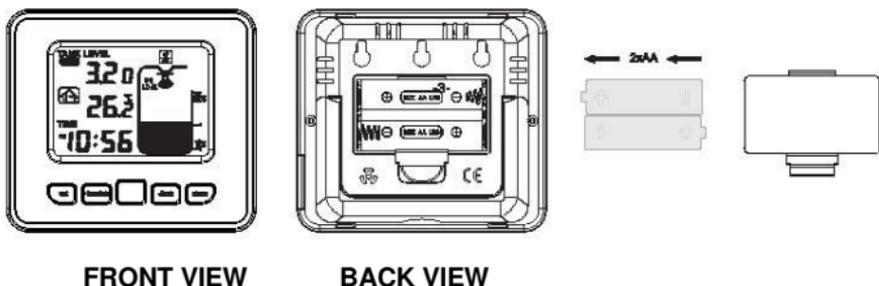
Open the base station's battery cover located at the back of the unit and insert

2 x AA, 1.5V alkaline batteries into the battery compartment and close the battery cover.

2.5 Initial Set up

First, insert the batteries into the wireless outdoor transmitter (6 x AAA) and then insert batteries immediately into the LCD display monitor (2 x AA). Once the batteries are in place, all segments of the LCD will light up briefly.

3. OVERVIEW

The following illustration shows a normal LCD display for description purposes only
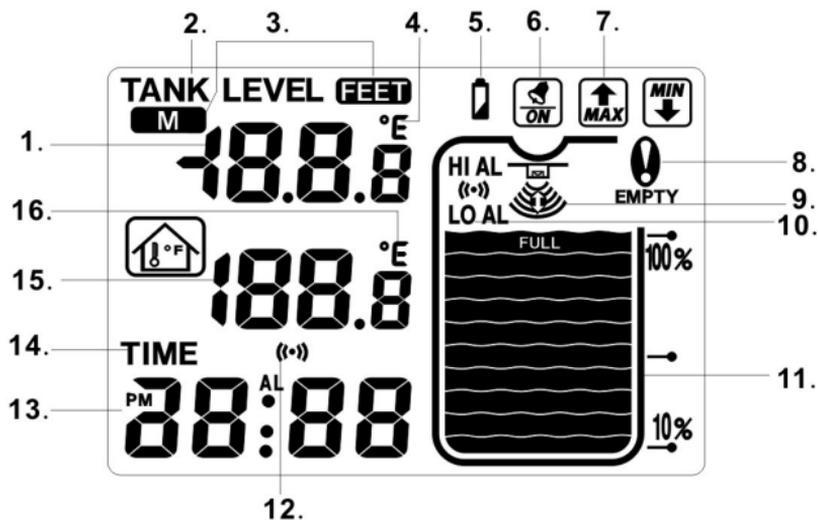
1. Value display area (Fig. 1 & 2)

Fig.1   Fig.2

2. Tank temperature and water level icon

3. Water level unit
4. Tank temperature unit (ºC/ºF)
5. Outdoor low battery indicator
6. Alarm activation icon
7. Min. and max. indicator icon
8. Empty alert icon
9. RF signal indicator
10. Tank level high and low alarm indicator
11. Water tank depth icon
12. Time alarm indicator

TIME DAY●)YEAR

$$18:37$$

Fig.3

13、Time and alarm value area (Fig 3)
14、Time icon
15、Indoor temperature value display area
16、Indoor temperature unit

4. PROGRAM MODE

4.1 SET TANK DEPTH

When the display unit is powered up, the LCD display activates for 3 seconds and makes a "Beep". The unit is now in Set Tank Depth mode and displays the tank depth value as a flashing "0.00" as well as a flashing empty tank icon (Fig.4).

TANK LEVEL

$$0.00$$
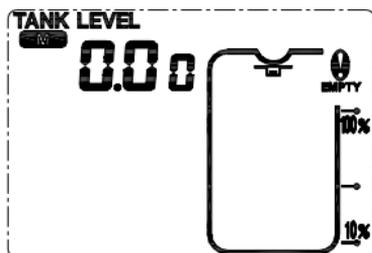
Fig.4

Press **+**/**MAX**/**MIN** key or **-**/**TANK** key to increase or decrease tank depth. Pressing and holding the keys will change the value at a much faster rate. Press the **SET** key to save the Tank Depth value.   The LCD monitor now enters into Set Air Gap mode.

● **NOTE:** To record correct measurement of tank depth (see H1+H2 in sketch of 2.2 *on page 3*), calculate from the bottom of the tank transmitter to bottom of your tank.   Distance: 0.5m (min) - 15.0m (max) or
1.64" (min) - 49.2" (max)

4.2 SET AIR GAP

The monitor is now in Set Air Gap mode and displays "**0.00**" and full tank icon flashing（**Fig.5**）. Press **+**/**MAX**/**MIN** key or **-**/**TANK** key to increase or decrease air gap. Hold **+**/**MAX**/**MIN** key or **-**/**TANK** key to increase or decrease air gap at greater step. Press the **SET** key to exit depth setting
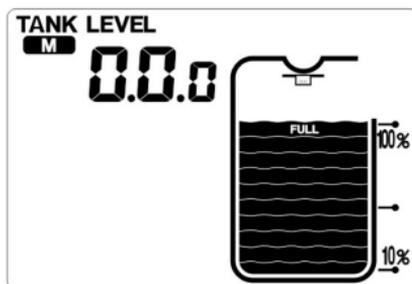
Fig.5

Display of "**0.00**" and full tank icon flashes（**Fig.5**）. Press **+**/**MAX**/**MIN** key or **-**/**TANK** key to increase or decrease air gap. Pressing and holding the keys will change the value at a much faster rate. Press the **SET** key to save the Air Gap value.

● **NOTE:** To record correct measurement of Air Gap (see H1 in sketch of 2.2 *on page 3*), calculate from the bottom of the tank transmitter to the maximum fluid level of tank.   Distance: 0.5m (min) - 15.0m (max) or 1.64" (min) - 49.2" (max)

If there's no key operation in depth setting mode for longer than 15 seconds the unit will switch to normal display mode automatically. (There will be measurement errors if the tank depth and air gap are not set correctly).

If you miss this step, Tank Depth and Air Gap can be set later. In normal operation mode, press and hold **SET** and **ALARM** keys for 5 seconds to set Tank Depth and Air Gap values. The setting steps are the same as above described.

4.3 SET TIME

In normal display mode press **SET** key for 3 seconds to enter **SET** mode.

● **12/24H:** 12Hr or 24Hr will flash. Press **+/MAX/MIN** or **-/TANK** key to select 12H or 24H. Press **SET** key to move to hour setting.

● **HOUR:** Hour value will flash. Press **+/MAX/MIN** or **-/TANK** key to increase or decrease hour value. When hour value is set press **SET** key to set minute value.

● **MINUTE:** Minute value will flash. Press **+/MAX/MIN** or **-/TANK** key to increase or decrease minute value. When minute value is set press **SET** key to set temperature unit.

4.4 SET TEMPERATURE UNIT

● Temperature unit will flash. Press **+/MAX/MIN** or **-/TANK** key to select temperature unit of **°C** or **°F**. After temperature unit is set press **SET** key to set tank level unit.

4.5 SET TANK LEVEL UNIT

● Tank level unit will flash. Press **+/MAX/MIN** or **-/TANK** key to select water level unit of **M** (metre) or **FEET**. After tank level unit is set press **SET** key to exit.

4.6 CHECK AND RESET MIN/MAX VALUE

● In normal display mode press **+/MAX/MIN** key once to check the max value of indoor temperature and tank level or tank temperature.

● Press **+/MAX/MIN** key again to check the min value of indoor temperature and tank level or tank temperature.

● Press **+/MAX/MIN** key again to exit.

● In the MIN/MAX mode press **SET** key, the min or max icon and value will flash. Press the **+/MIN/MAX** key once, the displayed minimum or maximum record will be reset to current value. Press **SET** key to reset the next minimum or maximum record.

4.7 TANK LEVEL AND TANK TEMPERATURE SWITCH

● In normal display mode press **-/TANK** key to switch from tank level display to tank temperature display or switch from tank temperature display to tank level display.

● **NOTE:** If the tank level and tank temperature display "--.--", this means the transmission signal is lost and needs to be reconnected to the LCD monitor. Press the **-/TANK** key for 5 seconds. The tank transmitter icon with double-ended arrow will be displayed on the LCD monitor indicating the transmitter and monitor are reconnecting. This can take up to 3 minutes before a tank reading appears.

4.8 ALARM
4.8.1 SET ALARM TIME

In normal display mode press **ALARM** key. Previously set alarm time will display. Press **SET** key 3 seconds to set alarm hour. Alarm hour will flash. Press **+/MAX/MIN** or **-/TANK** key to increase or decrease alarm hour. After alarm hour is set press **SET** key to set alarm minute. Press **+/MAX/MIN** or **-/TANK** key to increase or decrease alarm minute.

During alarm hour or minute flashing press **ALARM** key to enable or disable time alarm. When alarm time is enabled the icon ((•))is visible. When alarm time is disabled the icon ((•)) is invisible. Press **SET** key to confirm alarm time setting and start to set level high or low alarm.

4.8.2 SET TANK LEVEL HIGH AND LOW ALARM

After finishing alarm time setting previously, now set tank level alarm value will flash. Press **+/MAX/MIN** or **-/TANK** key to increase or decrease HIGH alarm value. After tank level HIGH alarm is set press **SET** key to set tank level LOW alarm. Press **+/MAX/MIN** or **-/TANK** key to increase or decrease LOW alarm value. During high or low alarm value flashing press **ALARM** key to enable or disable water level alarm. When high or low alarm is enabled the icon ((•)) is visible. When high or low alarm is disabled the icon ((•)) is invisible. After tank level low alarm is set press **SET** key to exit.

4.8.3 ENABLE OR DISABLE ALARM BUZZER

In default setting the alarm buzzer is enabled. To disable the alarm buzzer press **ALARM** key for 5 seconds. The alarm icon ⏰ will disappear. Press **ALARM** key 5 seconds again to enable alarm buzzer. The alarm icon will appear.

4.8.4 EMPTY ALERT

When water level is less than 20% of tank depth the icon 🛢 EMPTY will display.

5. DEFAULT VALUE

1. Time：0:00—23:59 (default: 0:00)
2. 12HR/24HR format：(default: 24HR)
3. Temperature unit：°C/°F (default: °C)
4. Water level：metre/feet (default: m)
5. TANK LEVEL/TANK TEMP display: (default: TANK TEMP)
6. Alarm set：0:00—23:59 (default: 12:00, disabled)

7. Water level HI-alarm：0 – 15m（0 feet - 49.2 feet）(default: 10m, OFF)

8. Water level LO-alarm：0 – 15m（0 feet - 49.2 feet）(default: 2m, OFF)

6. SPECIFICATIONS

Transmission distance: max.100 metres (in open space)

Frequency: 433MHz

Indoor temperature range: 0 - 50℃,

      Resolution: 1℃,

      Accurate：+/-1℃,

Tank temp measure range：-40 - 60℃,

      Resolution: 1℃,

      Accurate：+/-1°

Water level measure range：0 - 15m,

      Resolution: 0.01m,

      Accurate: +/-0.03m

Alarm duration: 120 seconds

Power consumption

- ● Indoor receiver: 2 x AA 1.5V batteries
  Life: Minimum 12 months
- ● Tank transmitter: 6 x AAA 1.5V batteries
  Life: Minimum 24 months

Need assistance with set-up or operation?
Before you return this product to the retailer,
<u>CALL US FIRST TOLL FREE</u>:
1800 653 238
Monday – Friday 7.30am – 4.00pm (WST)
<u>EMAIL YOUR QUESTIONS TO</u>: sales@sontax.com.au