

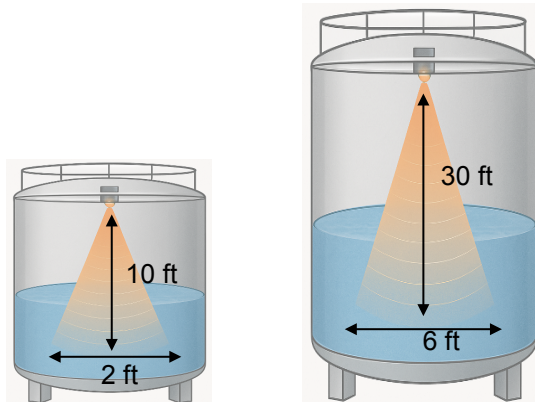
RADAR LEVEL SENSOR INSTRUCTION

1. GENERAL

This is the instruction for the Radar level sensor.

2. INSTALLATION

- The sensor should be mounted on your tank so its level. Use the bubble level on the top of the sensor assist with this.
- The sensor beam should not be obstructed. The beam angle is 6°. Use these tank images as a guide.



- Your tank depth is set on the sensor from our factory if you provided this information. If you want to change it, then download the phone app called “Radar-Tools”.



RADAR-TOOLS



APPLE

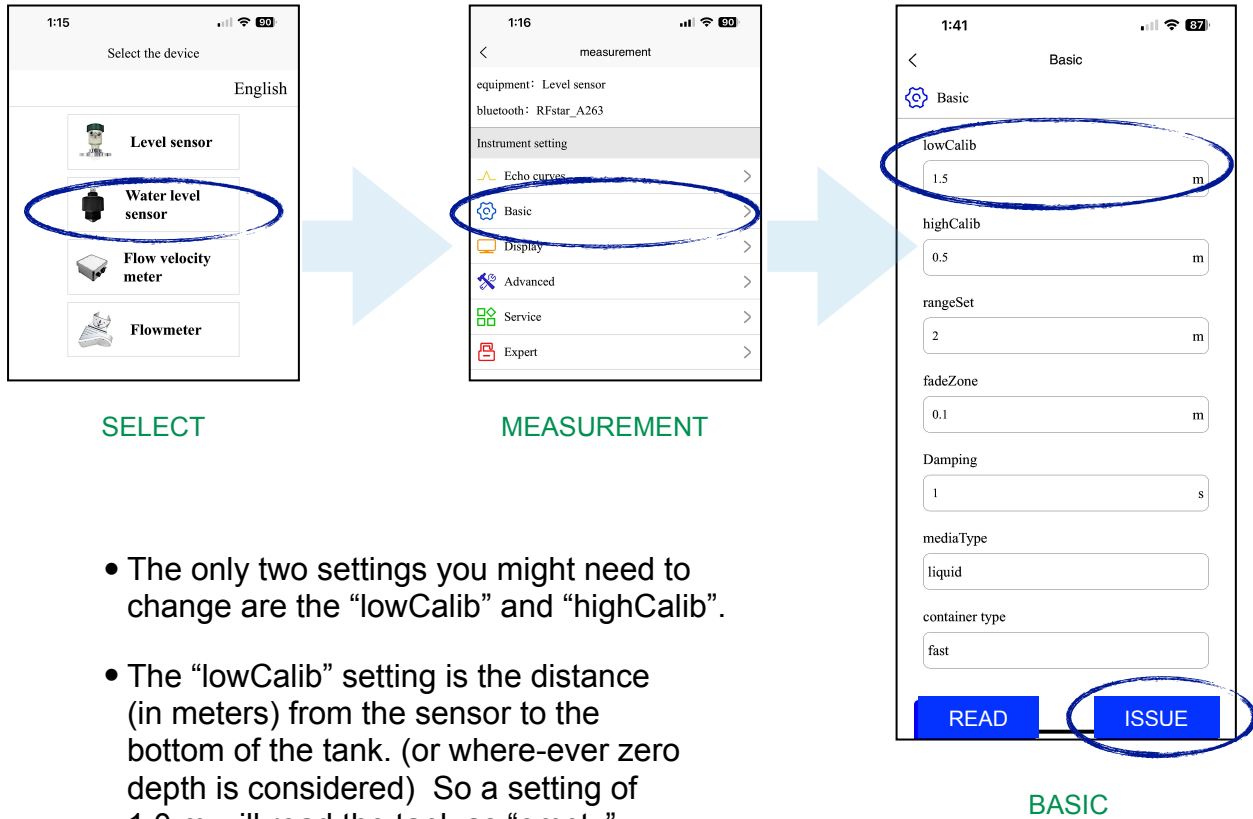


ANDROID

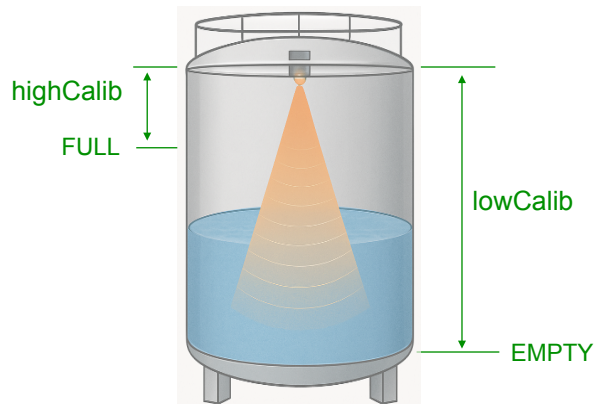
LG-R INSTRUCTIONS

3. OPERATION OF THE APP

- Open the App “Radar Tools” on your phone and select the device ID. (it will only be visible when there is power to the sensor)
- On the next screen (“SELECT”) choose the “Water level sensor”
- From the “MEASUREMENT” screen select “BASIC” where you can change the depth settings.



- The only two settings you might need to change are the “lowCalib” and “highCalib”.
- The “lowCalib” setting is the distance (in meters) from the sensor to the bottom of the tank. (or where-ever zero depth is considered) So a setting of 1.0 m will read the tank as “empty” when the depth reaches 39” below the sensor. Your new setting is communicated to the sensor by pressing the “ISSUE” button.
- The “highCalib” setting is depth where the tank is considered to be “full”. If “full” is actually lower than the top of the tank, where the sensor is mounted, or if the sensor is mounted *above* the tank, then this can be set to compensate.







LG-R INSTRUCTIONS

4. DIGITAL GAUGE

- There are two menus in the gauge: Alarm settings, and Parameters.


PARAMETERS

- This menu is entered from the home screen by pressing  so “PASS” (password) is displayed.
- Enter  then enter the password “0555”, and then  again to enter the menu.
- Advance through the parameters using the  button.
- The only parameters you might need to change is the range of the bar chart (OU-H) and the numeral reading of the liquid depth. (PU-H)








PARAMETER	DESCRIPTION	RANGE	SETTING
Sn	Signal type	0-22	4-20mA = 15
Id	RS485 address	0-31	0
bAUd	communication rate	0,1,2,3 (9600)	3
InPL	Input signal - low	only used if Sn=16,17	0
InPH	Input signal - high	only used if Sn=16,17	100
PLL	alarm type (hi/low)	1 (hi) ,2 (low)	2
PL	alarm type (hi/low)	0=off, 1 (hi) ,2 (low)	2
PH	alarm type (hi/low)	0=off, 1 (hi) ,2 (low)	1
PHH	alarm type (hi/low)	0=off, 1 (hi) ,2 (low)	1
OU-H	bar chart range	0-9999	example 120
OU-L	tank depth (low)	used if zero read is arb.	0
OU-A	alarm	4-20mA = 2	2
y1	Scale multilier		1.000
FILT	noise filtering	0.1-0.950	0.1
PbIA	zero correct	-100 to 100	0
PU-H	measurement units	inches	example 120
PUL	Alarm range low point	default = 0	0
dOt	decimal places	0,1,2,3	0
SUH			

Table 1: DIGITAL GAUGE PARAMETERS

LG-R INSTRUCTIONS

- PU-H is the depth in inches. If your tank is 60" deep, then set to 60.
- OU-H is normally set so the bar chart reads 100% when your tank is full. This is normally set to the same value as the PU-H parameter. When done with the setting, exit to the home screen by holding  for 2 seconds.

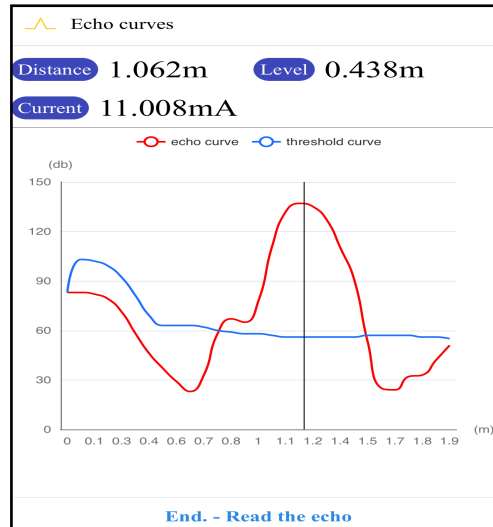
ALARM SETTINGS

- ALARM SETTINGS menu is accessed by holding the  button for 3 seconds.
- The first item of the menu "AH" will appear, (Alarm High) and you can adjust the value of the "High Alarm" point with the   buttons.
- To access other alarm points, use the  button. (A-L, A-HH, A-LL)
- Adjust each alarm point with the   buttons.
- To return to the home screen, hold the  button for two seconds.

LG-R INSTRUCTIONS

5. OTHER POINTS

- The quality of the beam can be viewed by pressing the “Echo Curves” button from the “Measurement” screen. Optimally, the red curve has higher signal than the blue curve.



ECHO CURVE

- The digital gauge has deviation settings as well as discrete high and low alarm points. (example dL = low deviation) These are found in the ALARM SETTINGS menu.
- Plastics are invisible to the radar sensor. This can be advantageous for mounting the sensor *above* plastic tanks. (rather than penetrating the tank)