

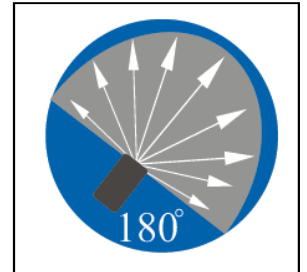
STEP 1: Determine the optimal location of the transducer within the water body.



The transducer transforms the electrical signals produced by the control panel into ultrasonic sound signals. These signals are inaudible. The transducer is a very sensitive instrument that needs to be handled with great care during the installation process. When the transducers are on land, always place / rest it flat down. The ultrasonic sound waves are issued by the transducer in a 180 degree spread from the front of the transducer head.

The transducer head needs to be placed in such a manner that as much of the water surface as possible comes into direct contact with the sound waves.

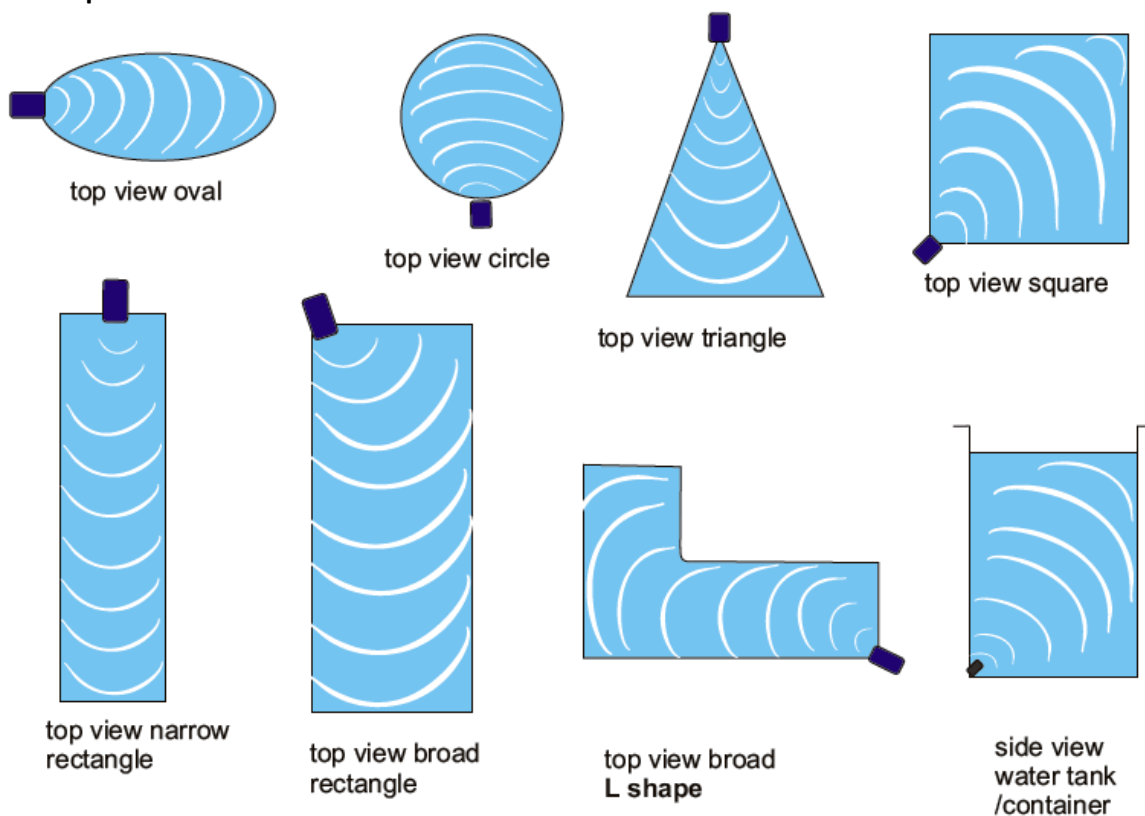
The strongest ultrasonic signals are those that come straight out of the transducer head.



Also refer to sections 4.2, 4.3, 4.4, 4.5 & 4.6 of LG eLine User Manual

<p>1. Determine the optimal location of the transducer:</p>		
<p>a. Where as much of the water surface comes into direct contact with the sound waves</p>		
<p>b. Where the front of the unit follows the water current and/or wind direction (for larger water surfaces above 5-10m²)</p>		
<p>c. Where there are no corners outside the reach of the transducer, as this will greatly reduce the effectiveness of the device</p>		
<p>d. With its backside as close to the water edge as possible</p>		
<p>2. Place the transducer in the water</p>		
<p>3. Ensure that the transducer is always completely below water surface</p>		
<p>4. Always ensure a horizontal position of the transducer</p>		
<p>* Dark area remains untreated</p>		

Installation examples



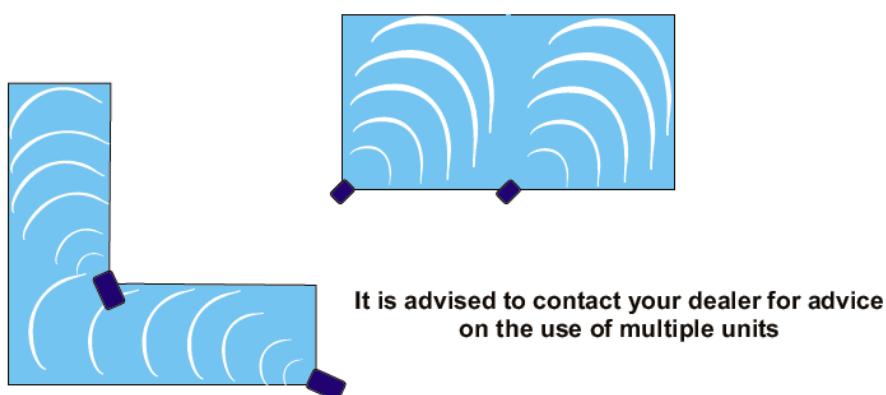
Notes for when installing two or more units in one water body:

Use multiple transducers when the water surface cannot be covered with one transducer:

- Never place the transducers facing each other
- Never use multiple units if one unit can suffice
- It is advised to contact your Aquatic Technologies for advice on the usage of multiple units.

For free placement assistance email us at terry@aquatic.net.au . Make sure that you have a site-plan with the accurate dimensions and configurations of your water reservoir.

Installation examples two units in one water body:



The cable between the transducer and the electronic box can NOT be lengthened. If you require a longer cable please contact LG SOUND

Spare cable should NOT remain winded. Due to the high frequencies, induction might be caused which could negatively influence the direction and quality of the sound waves. Leave the (transducer) cable un-winded, as this example shows.



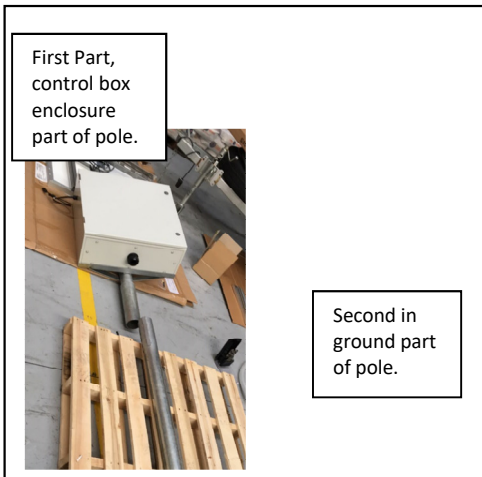
STEP 2: Determine the location of the control panel and pole mounted solar set up.



The pole for the mounting the solar set up and control panel needs to be placed within a maximum distance of 15 to 17 meters of the location of the transducer head (this is because the transducer cable length is 17 meters in length, unless you have ordered additional transducer cable lengths).

Prior to concreting the pole into the ground, layout the transducer cable, with the transducer in its optimum location to ensure the correct distances are achieved.

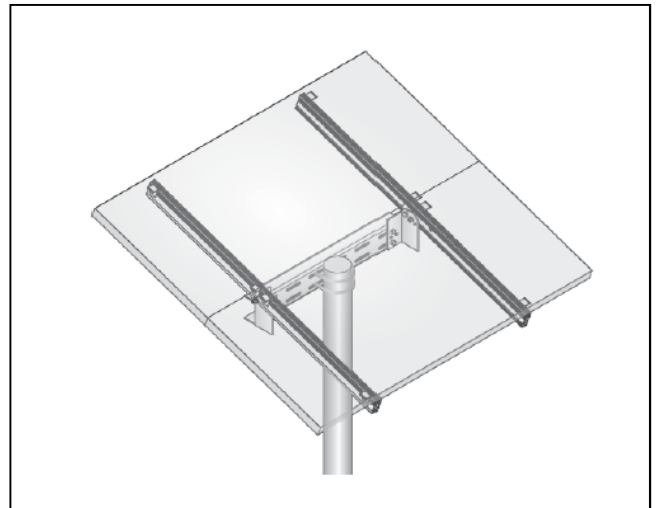
When concreting in the pole, ensure that the enclosure front face is pointing in the direction of south, this is so when the solar panels are fitted they face north.



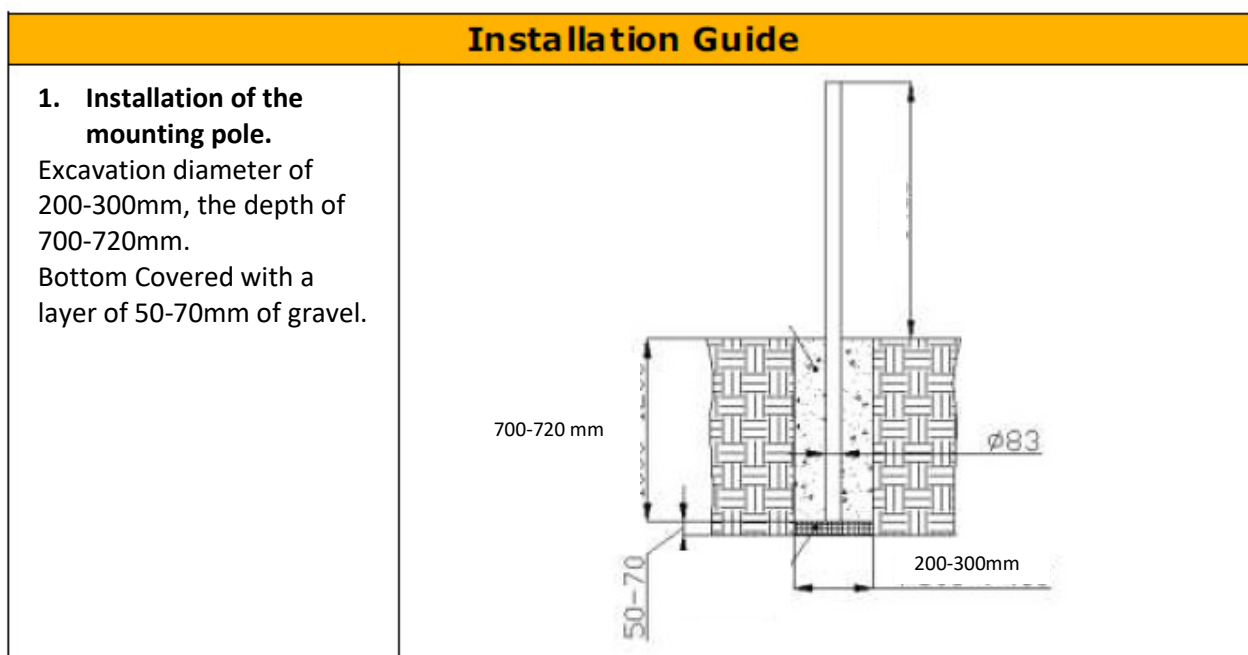
First Part, control box enclosure part of pole.

Second in ground part of pole.

The mounting pole is shipped in two sections. The first section has the control box enclosure and the second half is for placing in the ground.



Pole footing instructions below.

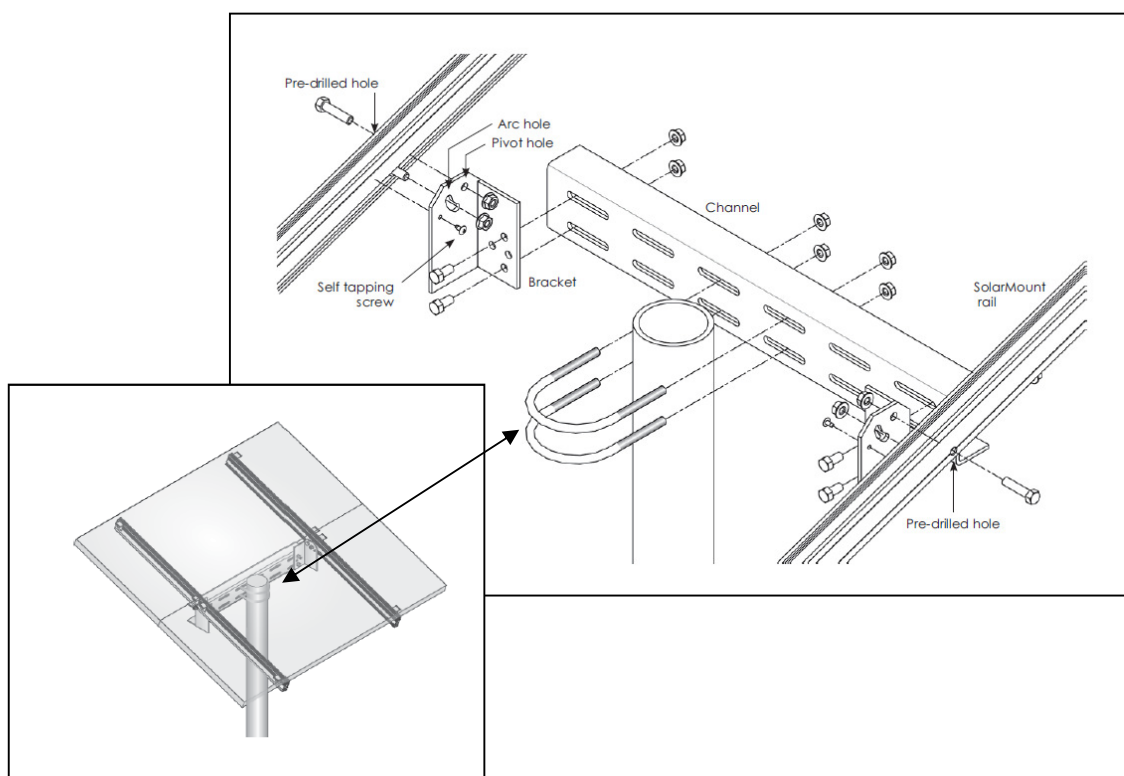


STEP 3: Fixing the control box enclosure part of the pole and the solar panels to the pole:

Once the pole has been concreted in and has set, the next step is to connect the control box enclosure part of the pole to the in ground part of the pole.

The solar panel array is already partially assembled, with 2 x 60 watt solar panels mounted onto its platform.

The partial assembled solar array is then mounted to the top of the pole, above the enclosure box, using the two U-bolts provided.



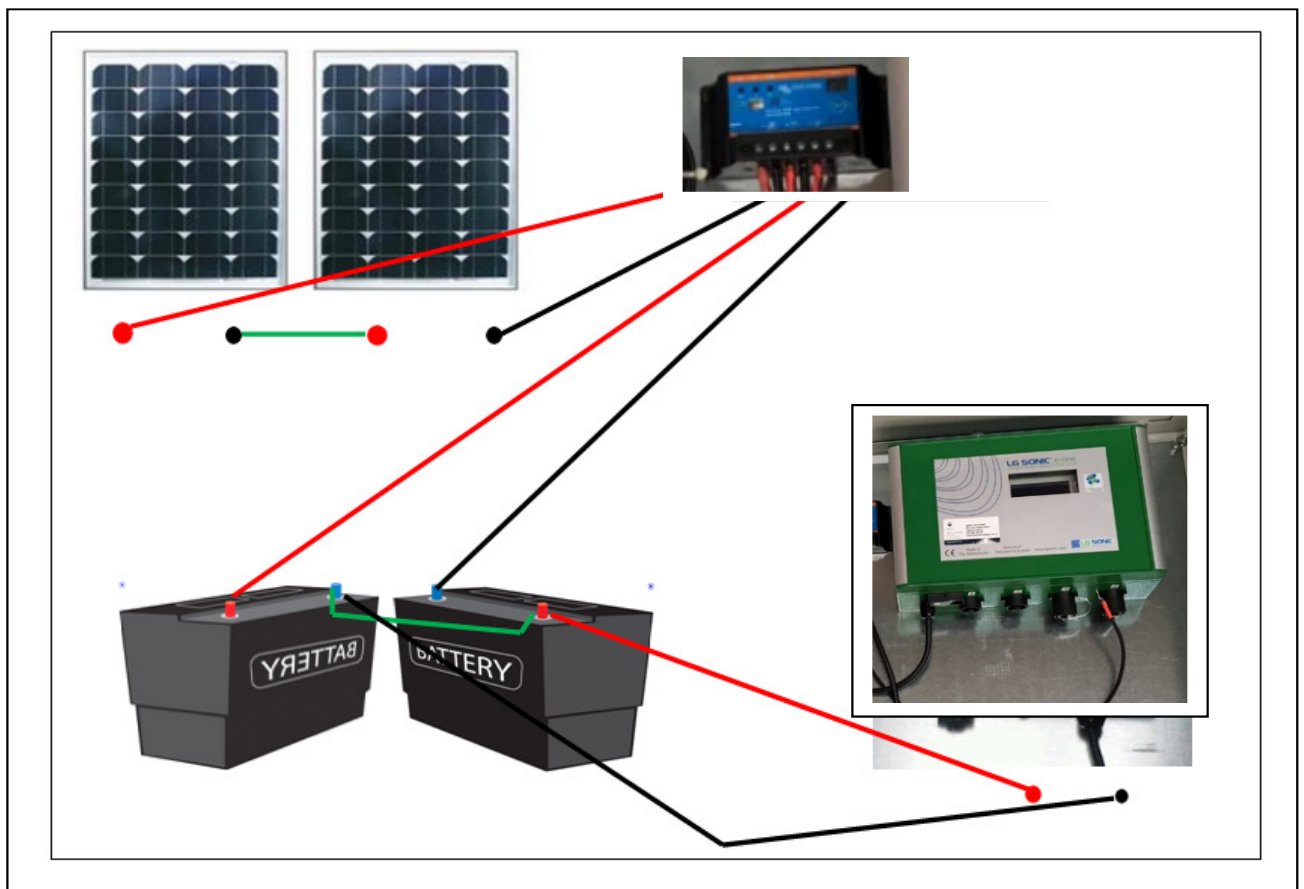
STEP 5: Enclosure Waterproof Glands:

The side gland is where the wires from the solar panels enter into the enclosure and connect to the solar regulator.

The bottom gland is where the ultra sonic transducer cable exits the enclosure.



STEP 6: Wiring Configuration diagram



STEP 7: Wiring Notes:

Notes: Pre wiring for most items has already been done. Wiring should be done by a person knowledgeable in 24volt power / solar or a licensed electrician. Caution needs to be used when any connection to the solar panels are made because when solar panels are exposed to sun light, they immediately begin to generate power.

WARNING AND NOTES

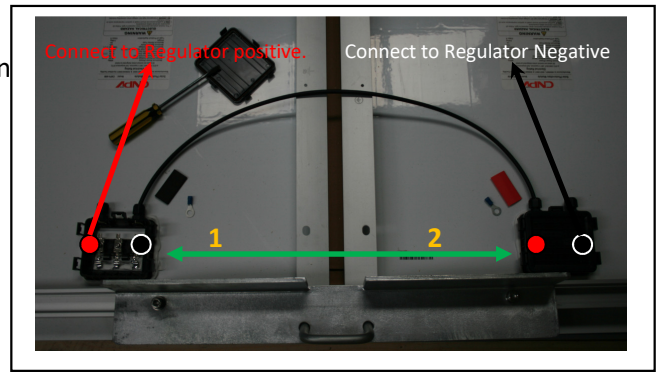
The SPV Modules generate electricity when exposed to light. Array of many Modules can cause lethal electrical shock and burn hazards. Only authorized and trained personnel should have access to these Modules. To reduce the risk of electrical shock or burns, modules maybe covered with an opaque material during installation to avoid electrical shocks or burns. Do not touch live terminals with bare hands. Use insulated tools for electrical connections.

STEP 8: Wiring the solar panels;

Each individual solar panel generates power based on 12volt power. As the ultra sonic units require 24volt power, two 12volt solar panels are connected to provide 24volt power.

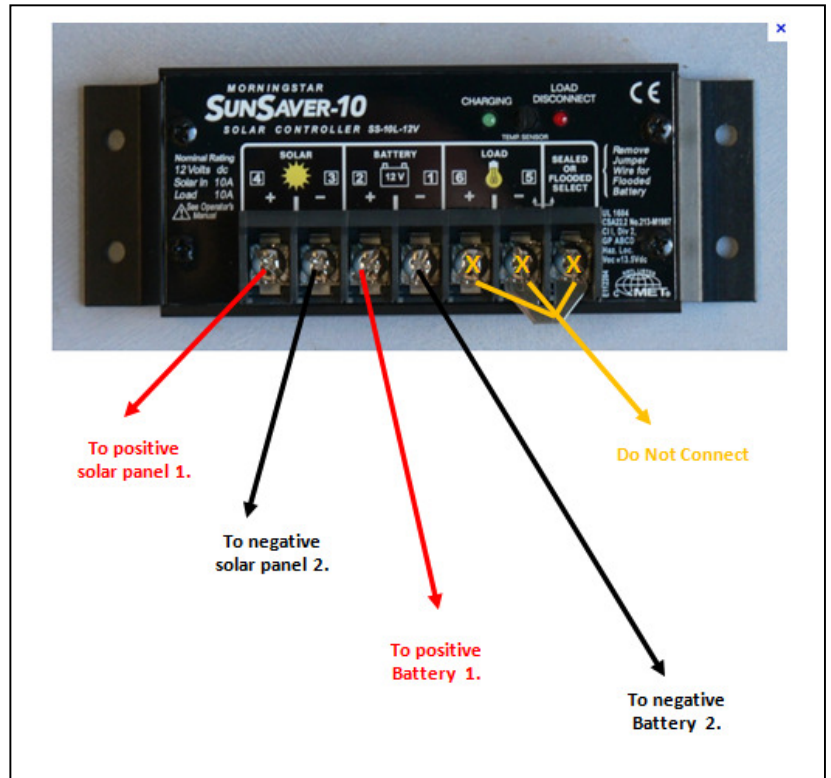
The negative on solar panel 1 is connected to the positive on solar panel 2.

The positive on solar panel 1 is connected to the positive on the solar regulator and the negative on solar panel 2 is connected to the negative on the regulator.



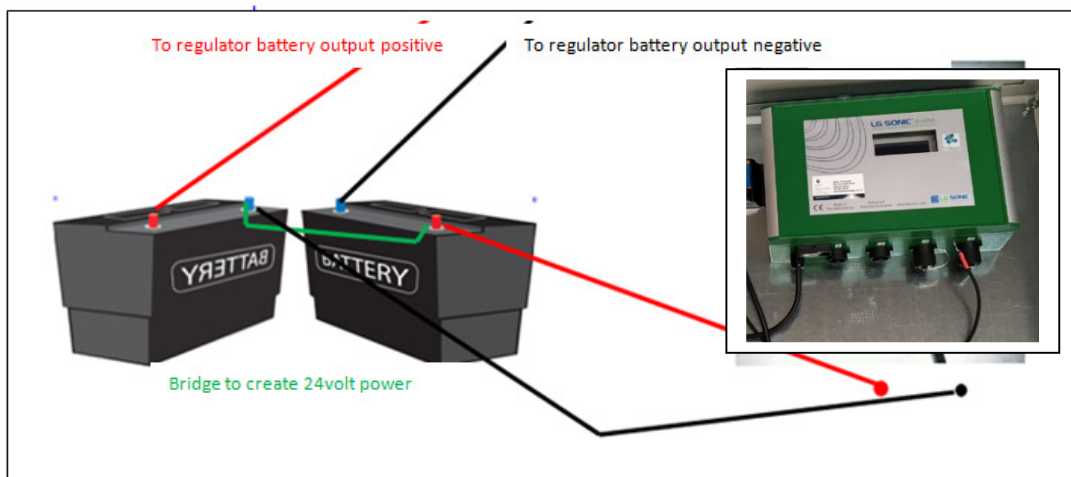
STEP 9: Wiring the Regulator;

The regulator takes in power from the two solar panels and this power is then regulated and used to charge the batteries.



STEP 10: Wiring the Batteries;

Just like the solar panels, the two 12volt batteries are joined together to create 24volt power.



STEP 11: Wiring the LG sonic power;

Taking the positive terminal from battery one and connect it to positive on the LG ultra sonic unit.

Take the negative terminal from battery two and connect to the negative on the LG ultra sonic unit.

For trouble shooting items, refer to the LG Sonic user manual section 7.