

LEAKTRONICS

ELECTRONIC LEAK DETECTION EQUIPMENT



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IRRIGATION KIT TECHNICAL MANUAL



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SAFETY AND CARE

PLEASE NOTE:

- USE CAUTION WHEN PRESSURE TESTING:
Never inflate pressure to more than 15 PSI
Do NOT stand in front or above a compression plug, or any plug, when under pressure.
- It is extremely important to always turn down the volume, remove headphones, use the MUTE Button or turn down the volume on the amplifier when moving the Multi-Purpose Soil Probe, Deck Plate or Listening Disc from one location to another. FAILURE TO DO SO CAN CAUSE SERIOUS HEARING INJURY.
- AVOID STORING CABLES WITH TANGLES OR KNOTS. Always store cables in a loosely wrapped coil. Please use extreme care and keep a printed copy of this manual available for all users.
- When treated with care, your Irrigation Kit will last many years. Each until is made in-house at LeakTronics. Hand assembled in the USA. While all components are constructed to withstand use in harsh environments, the LT1000 Amplifier and Multi-Purpose Probe can never be submerged. Doing so will void the products warranty.

ALL PRODUCTS SHOULD BE WIPED DOWN WITH A DRY RAG BEFORE STORING.

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IMPORTANT INFORMATION REGARDING THE LT1000 NOISE REDUCING METERED AMP

AMPLIFIER REQUIRES TWO (2) AA BATTERIES TO FUNCTION

Thank you for purchasing your new LT1000. The LT1000 is the only state of the art amp made specifically for the leak detection industry. The LT1000 can be used in conjunction with the Side Mic, Pool Scope, Deck Plate, Pipe Mic, Listening Disc, Soil Probe and all LeakTronics brand listening equipment.

SPECIFICATIONS:

Input

- Connector: XLR Female Unbalanced
- Noise: EIN better than -107 dBV.
- Input Impedance: 3.3kQ nom.
- Plug-In-Power: 12V maximum via 4.7kQ resistor.
- Filter Switch: Filtering capabilities below 700Hz.
- Compatible Accessories: LeakTronics - PipeMic, SlideMic, Soil Probe, Listening Disc, Flash, Pool Scope, DeckPlate. (SEE THESE ITEMS AT WWW.LEAKTRONICS.COM)

Headphones Output

- Connector: 3.5mm
- Gain: -inf to 66dBV nom.
- Output impedance: 41.7Q.
- Distortion: 0.1 % no load, 2% at full load.
- Mute Switch: Attenuation better than 60 dB when switch is ON

Auxiliary Output

- Connector: 2.5mm
- Gain: 30 dBV constant.

Meter

- Sense Switch: Select high sensitivity (10: 1 power ratio) or low sensitivity (1 000: 1 power ratio).3
- Meter Null: Set needle to center of meter to gauge baseline noise.
- Sensitivity: -80 dBV.

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Power

- Batteries: 2x AA battery.
- Minimum voltage: 2.25V.
- Run Time: Better than 8 hours.
- Change batteries with #2 Phillips screwdriver

Power ON/OFF, LED display:

Power ON & OFF is a simple toggle switch. Up is power on, down is power off. The LED will light up when amp is turned on and will flash when battery power is low. When battery power is very low light will go off, however amp will work. At this point, battery must be replaced as soon as possible. ***PLEASE NOTE: Mute button MUST be in on position (up) when powering LT1000 amplifier on.

Battery installation and type:

We highly recommend using high quality alkaline battery, Energizer max or Duracell Coppertop are recommended. To install battery, remove one set screw and pivot door open by loosening other screw. Hold amp upside down, tap lightly and battery holder should pop out. If it does not come out easily, grab with fingers and edge it out, being careful not to pull too hard on two wire leads which attach battery compartment to amp. Using a flat head screwdriver, pop batteries out of holder and replace properly as marked. Gently push battery compartment back into amp, DO NOT FORCE IT. Pivot battery door closed and retighten screws.

Mute button makes it easy to go from on location to another without having to adjust volume or meter null. By placing the mute toggle switch in the up position, all sound will be muted out, until it is switched off (put in the down position).

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Meter Null / Sensitivity / Meter

Meter null is an adjustment knob which is used to get a baseline for background noise. In order to use properly, with the sensitivity switch down, choose the listening device, start listening and watch the meter to see if there is any background noise. A 100 reading indicates that what you're hearing is inundated with background noise, or you're hovering over the leak itself. Starting with the meter null notch facing up, turn the null to the left to establish a noise baseline (low). You can then turn the meter to the right to get a noise baseline (high). Turning the sensitivity switch on (up) will allow for a higher and lower range.

Always be sure to turn the volume on the amplifier to the left (lowest setting) prior to each use or to powering on.

Volume

Turn to the right to increase volume, turn to left to decrease.

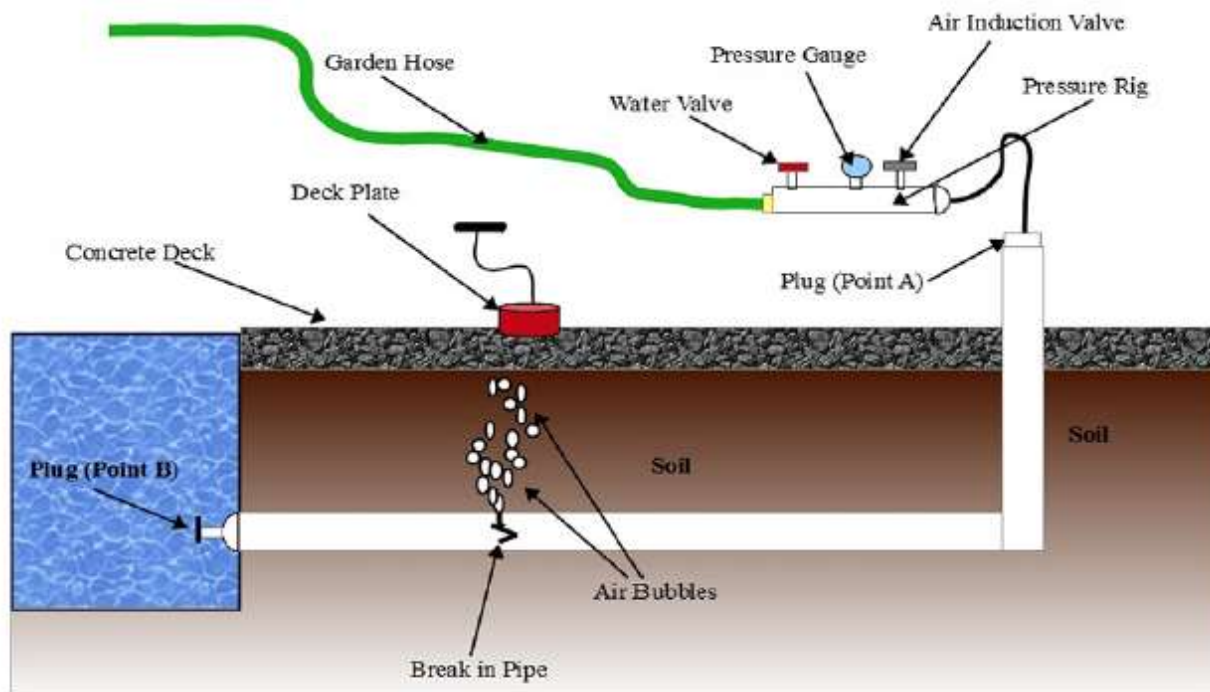
USEFUL TIPS: The LTI000 comes with 2 round rings located on either side to be used with the strap (included). It is important to use this feature when using around construction sites and wet locations to avoid dropping and becoming damaged. Always carry a supply of fresh batteries. Once the batteries fall below the required voltage, the signal to the headphones will cut out intermittently and/or distort. This is an indication that the batteries should be replaced. All troubleshooting should begin by replacing batteries with new, high quality alkaline batteries. If using noise reducing headphones, always keep replacement batteries. As the batteries in noise reducing headphones (such as Bose or JBL) expire, the signal heard will be intermittent and distorted.

Pressure Rig

The most effective method for pressure testing and pinpointing leaks involves using the Leaktronics Pressure Rig along with our various components, i.e. deck plate, soil probe, listening disc, and slide mic. The LeakTronics Pressure Rig was designed to induce both air and water. This mixture is combined at the rig and evenly flows through the line being tested. When water alone is used, it is virtually impossible to hear this distinct sound. The combination of air and water is what enables the sound to be heard clearly.

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Please visit the [LeakTronics website](http://www.leaktronics.com) to view video instructions on the proper way to use the LeakTronics Pressure Rig.

Soil Probe

The LeakTronics Soil Probe is ideal for listening through grassy, rocky, or dirt areas. Assemble by screwing threaded rod into coupler ***PLEASE NOTE: Pointed end points away from the coupler. ALSO NOTE: The soil probe does not need to be inserted into ground by more than an inch. **DO NOT INSERT FULLY INTO GROUND!** **DO NOT FORCE SOIL PROBE INTO GROUND.** The Soil Probe should always be wiped off with a dry rag when storing, disassembled, and wire should be recoiled neatly.

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THE PULSE GENERATOR: PG-2 USER GUIDE

For in-depth video, visit www.leaktronics.com and the LeakTronics YouTube page.

IT IS IMPORTANT TO FULLY CHARGE THE UNIT BEFORE USE. IT WILL NOT ARRIVE CHARGED.

BATTERY DEPLETED (Red light appears) •

BATTERY FULLY CHARGED (Green light appears) •

WILL NEED CHARGE SOON (Red and Green lights appear) ••

Charge Time: 3 hours to full / Use Time: 3 hours on a full charge

LET THE UNIT COOL 20 MINUTES BEFORE RECHARGING.

Prior to using the Pulse Generator PG-2, make sure there is a controlled water pressure flowing through the pipe. If there is no water pressure, it's fine to hook up water using a garden hose.

The Pulse Generator can be connected at hose bibs, sprinkler heads, water meters, fire hydrants and other water sources.

It is recommended to always

flush water with rust or debris from the pipe before use.



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Connect the PG-2 at the spigot or water source: if on a swimming pool or other plumbing, plumb in a spigot for lines to be traced with a 3/4 inch MHT. Connect to the inlet of the PG-2.



If desired, attach a waste hose to the outlet of the PG-2 to run water away from the working area.



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When unit is operating, water will "pulse" from the outlet. This pulse creates an audible pulsing sound throughout the pipe that can be heard underground using listening equipment.



Start by getting a base sound by listening at the pipe closest to the area where the _PG-2 is located



When listening, go wide around the area of the pipe to hear the sound dim, and closer to hear it at its loudest point to precisely and accurately locate the pipe under soil, grass, concrete or other solid surfaces, floors, decking, walls, tile and landscaping. Mark the area with flags, chalk or tape on interiors.

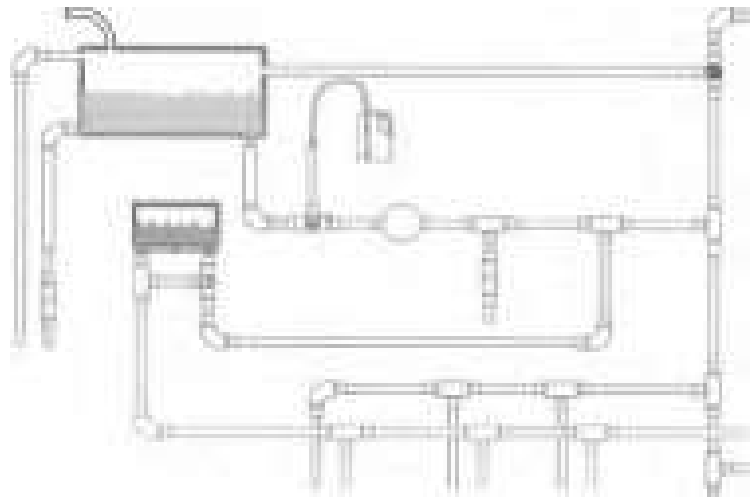


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Any pipe tied to the pipe you are working with will also generate the pulsing sound. It can be used on large and commercial water systems, residential systems, irrigation, pools and pipes of any material, including PVC, copper and other metals and more.



Troubleshooting

In the case that the DeckPlate, Listening Disc or Soil Probe begin to not function properly or if you experience problems, always replace the batteries in the LT1000 Amplifier with new high quality AA batteries. If you are using noise canceling headphones, always replace them with new batteries if you begin to experience problems. As the battery's power fades, the signal will become intermittent and subject to interference. New batteries will solve the problem. If problems persist, test the unit with a new or another set of headphones. If a different set of headphones corrects the problem, then the headphones or headphone cable are faulty. Replace headphones. If the problem continues after replacing the headphones, contact LeakTronics for assistance.

Warranty

LeakTronics warrants its products from defects in workmanship for a period of two years following the date of purchase. Warranty claims or repairs can be made directly through LeakTronics. Shipping costs to LeakTronics are the responsibility of the user.