



## **PLEASE READ THOROUGHLY PRIOR TO USING**

### **VILO – Vinyl Liner Leak Locator**



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## Overview

The VILO (Vinyl Liner Leak Locator) is a state-of-the-art electronic system used to locate tears, pinholes, or punctures in any vinyl liner, fiberglass, or composite pool.

## The Do's and Dont's

- 1) Fill the pool to the proper level before testing—It is always best to work in a clean and clear pool.
- 2) Remove any ladders, rails (if possible), pool covers and thermometers before starting.
- 3) Never swim in a pool being tested with the VILO or any other leak detection equipment.
- 4) Make sure that whomever is operating the VILO, is wearing rubber soled shoes (Sneakers or Workboots) and/or insulating rubber gloves when working the pole. Working barefoot or in flip-flops will throw off the results.
- 5) Never use the VILO for any other use other than finding leaks in swimming pools.
- 6) LeakTronics equipment may not be modified in any way! Opening or tampering with any LeakTronics components can be dangerous and will also void any warranties.

## How it Works

1. The user walks the pool using the LeakTronics PoolScope and the LT1000 Amplifier, listening to lights, skimmers, main drains, side suction, around return fittings, etc. This process will either rule in or rule out these leaks which often occur.

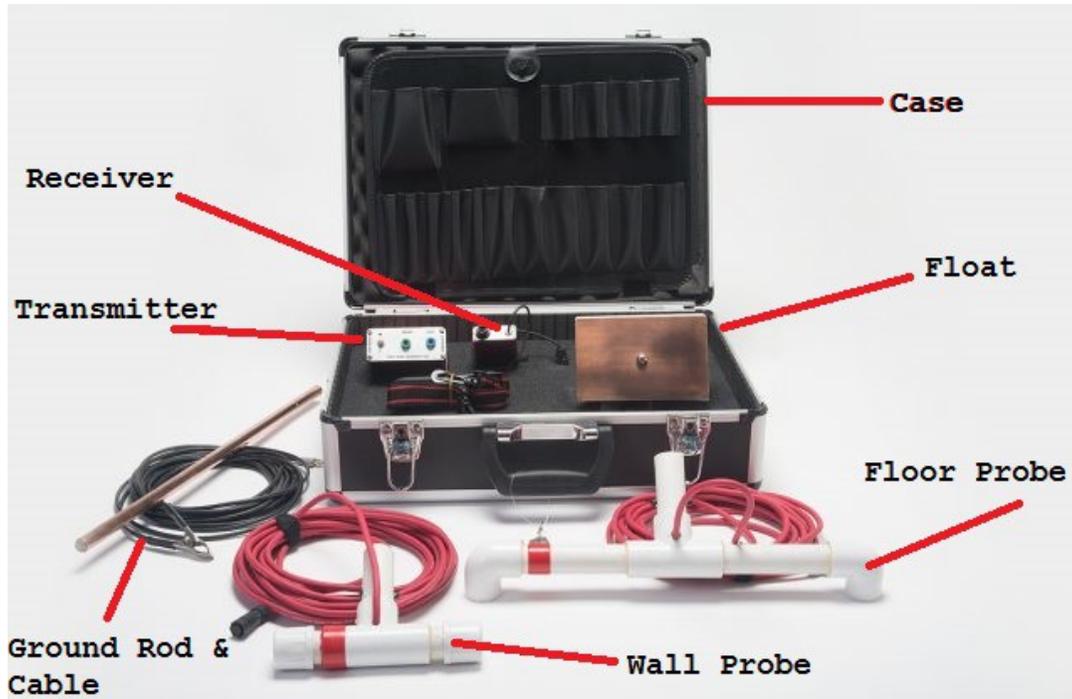
**NOTE:** If a leak is heard (located) in one of these areas, it is still recommended to continue checking the vinyl or composite surface to rule them out.

2. A small square voltage charge is introduced to the pool using a transmitter and a float.
3. A probe is hooked up to the pool pole and plugged into the VILO receiver. The user then proceeds to scan the pool with the probe.

a)The floor probe is designed to cover large areas with minimal false positives.

b)The wall probe is designated to listen to walls and radius with minimal false positives.

4. When a leak is found from a distance, the user will hear a series of clicks. They will then hone in on the area of the clicking until the clicks turn into a steady noise. This area, will be precisely where the leak is.



## VILO ADD-ON

### VILO Components

**Receiver** - The VILO receiver is powered by the LT1000 Amplifier and hooks up to either the floor probe or the wall probe. The receiver, in conjunction with the LT1000, will measure the signal and alert the user to the leak. It has both a high and low function switch for different sized pools.

**Transmitter**- The transmitter transfers a low square voltage charge to the pool through the float. It runs off 4 AA batteries.

**Float**- The float is a styrofoam block with a copper conductor on the bottom. It is used in conjunction with the transmitter to produce the flow of a low-square voltage into the pool.

**Floor Probe**- The floor probe gets hooked up to a pool pole and is designed to cover large areas of a pool floor. The floor probe is used in conjunction with the receiver to precisely locate floor and radius leaks.

**Wall Probe-** The wall probe gets hooked up to a pool pole and is designed to precisely locate leaks on walls and in coves. The wall probe is used in conjunction with the receiver.

**Ground Rod and Cable-** The copper ground rod is used to provide a good ground for the VILO circuitry. It can be pushed or slightly tapped into grassy or dirt areas and is then connected to the VILO transmitter using the provided ground cables.

**Carrying Case-** The VILO Kit (Complete or Add-On) comes with a rugged aluminum carrying case that is padded inside to protect its electronic components.

## Set Up

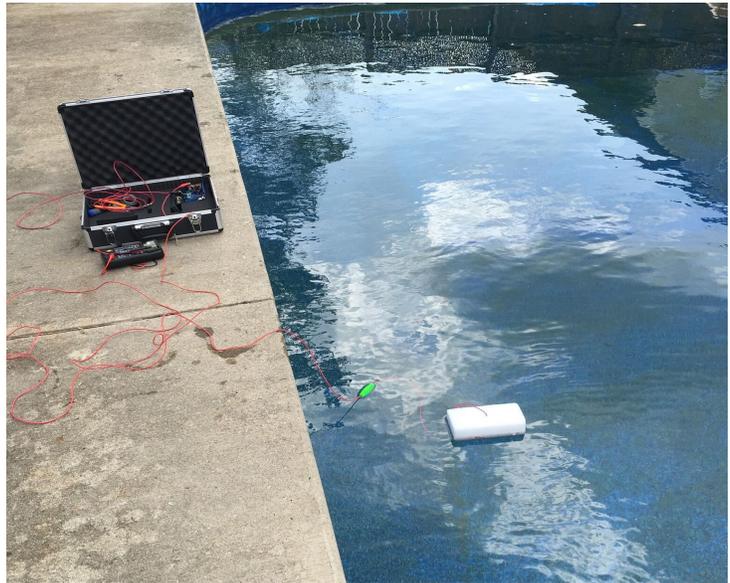
The VILO Complete comes completely assembled with batteries all ready to go.

The VILO Add-On comes ready to use, but there is a small step that needs to be completed before using. Included in the VILO Add-On is a 20 lb Velcro strap. Using an alcohol swab or light solvent on a rag, wipe the top of your LT1000 in the area where the Velcro will be installed. Then using the peel and stick provided, attach the Velcro to the amp. Now the receiver can be affixed to the amp.



## Directions For Use

- 1) Open the VILO case and set it at a safe distance from the pool.



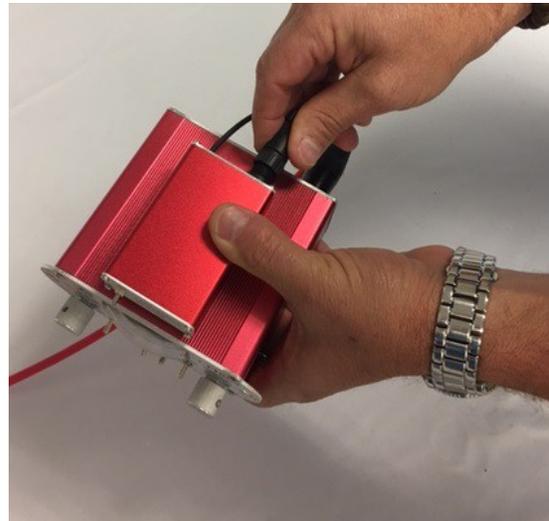
- 2) Using the LT1000 Amp and PoolScope, listen to all penetrations, step channels, lights, skimmers, main drains, side suction around lights, spas, etc. This procedure will find leaks or rule out these areas. This step cannot be done with the VILO.



- 3) Plug the green end of the ground cable into transmitter, and the blue end of the float into the transmitter. (Diagram left) The float can then be placed on the pool.

**NOTE:** It is not necessary to throw it in the center of the pool. The side of the pool will work the same way.

- 5) Then, using the alligator clip provided, attach the other end of the ground cable to a good ground outside of the pool. Rails, ladders and fencing should be good grounds. If they cannot be located, use the ground rod (included) pushing it into grassy or dirt areas—then clip the cable to it.
- 6) Clip in the floor probe to the end of a pool pole and attach a wire connector to the back of the VILO receiver.



- 7) Insert the floor probe into the pool and turn it upside down to release any air bubbles. After any air is released, you can rest the floor probe on the floor of the pool.
- 8) Turn on the transmitter using the toggle switch up until you see and orange LED light up. (There is now a low-square voltage flowing through the pool)
- 9) With the VILO receiver assembled on top of the LT1000, adjust the volume to about  $\frac{1}{4}$  from the “off” position. Leave the mute down and the filter on. Adjust the toggle switch on the VILO receiver to “Low” and turn on the LT1000 power. Plug in and use your headphones. Now your probe is live.

## Using the Floor and Wall Probe Properly

Both the floor probe and wall probe have a red cap that should be kept on the right side of the cable wire of each probe.



### Floor Probe

When using the floor probe, move the probe around until you hear a clicking noise. If you get to an area where the clicking noise gets faster, hone in on that area. The red side of the probe will start sounding like a steady pulse once you pinpoint the area of the leak.



### Wall Probe

The wall probe is shaped and designed to be used on radius and walls. The red side of the probe should be facing the wall or area being checked. Scan the wall vertically or horizontally with the red side until you hear a fast, clicking sound again. This sound is the pinpoint of the exact location of the leak.

### False Positives

You are always going to be hearing some clicking when moving either probes around the pool due to stray voltage. Some clicking is normal and fast clicking is usually pointing you toward a leak.



### Be Careful

There are many ordinary grounds in a pool that are going to give you false positives. Some of these grounds include:

- Rails and Ladders
- Returns, Skimmer Fitting Screws, Light Niches and Conduits
- Main Drain Screws
- Pipes that lead to grounded or bonded equipment

The best possible way to get around these grounds is to avoid them. These areas should have already been ruled out by the pool scope, but if false positives come about again, try not to point either side of the probe in their direction.

Also, try to always be pointing away from the float—for that, too, can give you false positives.

If you have pinpointed a leak and your receiver is buzzing, take note at which way your probes are pointing. Pivot your probe, keeping your red side on the leak location to see if there is a difference. If there is no difference, you are on the leak.

## Troubleshooting and Maintenance

### Batteries

When in doubt, check or change the batteries. Operating with quality batteries will make a big difference in how the VILO performs.

The receiver uses power from the LT1000 so check and replace them when needed.

The transmitter runs on 4AA batteries

**Note:** LeakTronics offers a free once yearly maintenance check-up on any of your LeakTronics equipment.

### Cleaning the Float

About once or twice a year, clean the float using a light sandpaper. Slightly sand the copper face on the float and check all wire connections.

About 2 times per season or as needed depending on rust, spray all plugs and connectors with WD-40.

### Trouble Shooting Symptoms

<b>Symptom</b>	<b>Possible Cause</b>
Unit Starts Clicking Fast and Uncontrollably when first turned on	Your probe is right over the leak or your passive side is pointing to a strong ground. Rotate the probe or move it over a few feet.
No clicking at all	Check all batteries-make sure both the LT1000 and transmitter are powered on. Use a voltmeter—set to AC—touching the negative side to the ground and positive side in the pool. The water voltage should peak between 15V down to 3 or 4 volts every ½ second. If this is not the case, call for technical support.
Light takes about 5 seconds to dim on the transmitter	This is totally normal.
When on a leak, clicking gets so fierce that it starts to cut out.	This is totally normal. The VILO circuitry is protecting itself from overloading.
No clicking in a particular area of the pool	There might not be any leaking or grounding in that area. Move on.
Random clicks when moving the probe around	Ignore them unless they start to get faster. This can be stray voltage.