



1.5PTH NEXT-GEN
COMMERCIAL ULTRASONIC
OPERATING PROCEDURES & MANUAL

GEMORO[®]
POWERFUL ULTRASONICS

Congratulations on your purchase of a **GEMORO** Powerful Ultrasonics, the most trusted name in ultrasonic cleaning equipment for the professional. You've made a smart choice, as your new **GEMORO** NEXT-GEN ultrasonic is the culmination of decades of experience and technological breakthroughs in ultrasonic cleaning. **GEMORO's** proprietary TURBO SWEEP TECHNOLOGY frequency mode provides the most efficient and fastest cleaning possible. Simply put, the engineers at **GEMORO** designed the ultimate ultrasonic cleaners. They are well known to provide amazing power, workhorse reliability and unequalled performance that are built to last for years.

The Four Basic Steps

STEP 1 Add an appropriate mixture of tap water to the ultrasonic tank along with one of the specially formulated, super concentrated **GEMORO** ultrasonic cleaning solutions referenced in the back section of this manual, for the ultimate in cleaning and brightening of your jewelry. Fill it approximately to 1/2 inch or 13mm from the rim of the tank. **NEVER operate the ultrasonic when empty or damage may occur.**

Step 2 Connect to an electrical outlet or power source with the appropriate voltage of 110-120V.

STEP 3 Place the jewelry to be cleaned in the supplied basket or suspend it in the tank while using the supplied tweezers. **NEVER place items on the tank bottom or damage may occur.**

Step 4 Set the timer to the appropriate length of cleaning time, which will depend on the load, and the extent of dirt and grime on the items being cleaned.

Product Reference Guide

1. Heat ON/OFF Switch with Water Resistant Cover
2. Timer LED Indicator
3. 0-60 Minute Timer Knob
4. Heat Dispersion Vents
5. Power Entry Connector & Fuse Compartment
6. Product Information Sticker
7. Stainless Steel Cover
8. Stainless Steel Basket
9. Stainless Steel Soft Grip Tweezers



Safety Symbols

This manual is marked with the universal **HAZARD** ⚠ symbol to alert you of specific areas within the manual that the operator must carefully read in advance of using in order to prevent damage to the ultrasonic and/or injury to the operator.

Electrical Power Installation

Your **GEMORO** Powerful Ultrasonics unit has been factory preset for use with 110-120 volt operation. The ultrasonic unit is supplied with a three-prong electrical plug. **DO NOT remove the grounding prong from this connector, as it may cause an electrical shock!** ⚠ Plug into an electrical outlet that has a ground fault protection device (GFI, GFCI) for optimum safe operation. ⚠ When possible, plug the ultrasonic into a separate dedicated circuit/outlet. Some electrical circuits/outlets will not supply enough power to properly run more than one electrical appliance, especially if large appliances such as steamers, polishers, dust collectors, etc. are being operated at the same time. Reduction of cavitation in your ultrasonic could be the result of not enough power to your unit.

Water Solution Mixture in Ultrasonic Tank

To maximize the cleaning process, the proper cleaning solution must be added to the water in the ultrasonic tank. We recommend using any of the specially formulated, super concentrated **GEMORO** cleaning solutions referenced in the back section of this manual for the ultimate in cleaning and brightening of your jewelry. ⚠ **WARNING: Do not use flammable solutions (that contain alcohol, etc.) or acid-based solutions (such as Drano, etc.) or ammonia-based solutions in your ultrasonic.** ⚠ **Under any circumstances, NEVER TURN YOUR ULTRASONIC ON WHEN THE TANK IS EMPTY.** Place the water/cleaning solution mixture in the tank while filling the tank to approximately one inch from the tank's rim.

Submerge the jewelry to be cleaned in the tank no less than 1/2 inch or 13mm below the solution surface to obtain optimal cleaning and be certain not to place jewelry or anything being cleaned on the bottom of the tank, because it may damage the transducers and void the warranty. ⚠ Be careful not to clean heavily included stones (such as emeralds), because the ultrasonic sound waves and/or heat may crack the stone. ⚠ Be certain not to clean soft, water porous stones (such as pearls, opals, coral, turquoise, etc.) as they too may be damaged. Be certain not to clean any oil treated stones in any cleaning solution which may contain a degreasing agent, as the solution may revert the stone back to its untreated condition. Typically, items such as gold, silver, platinum, diamonds, rubies, sapphires etc. are safe for ultrasonic cleaning. **For more specific information on which stones are suitable for cleaning in an ultrasonic please refer to Page 11 of this manual and we also suggest you contact a gemologist or the GIA (Gemological Institute of America).** **Do not submerge watches in any ultrasonic, as damage to the watch may occur.** However, it may be safe to carefully submerge the metal watchband into the tank for a brief cleaning while being certain not to submerge the head of the watch as any time. At your own risk, before attempting this, always be certain the watches stem is fully inserted and/or tightened all the way in.

Turn Ultrasonic On By Turning the Timer Knob Clockwise

Depending on the load in the tank and how dirty the jewelry is that you are cleaning will determine the length of cleaning time required. **NEVER block the timer for continuous usage, as the GEMORO Powerful Ultrasonics unit has been designed to perform for many years and to do so would potentially damage the unit or shorten its life span, as well as void the warranty.** All the specially formulated GEMORO concentrated cleaning solutions are designed to work best with your GEMORO Powerful Ultrasonic cleaner. This feature allows the dirt, grime, etc. to be broken down and loosened from the jewelry much faster than other traditional cleaning solutions.

NOTE: Your heated ultrasonic has its internal thermostat preset to the optimal cleaning temperature of 140°F.

SAFETY FEATURE: For safety and additional prolonged heater life, the heater in your ultrasonic will automatically SHUT DOWN once it reaches 140° F. This temperature will typically be reached if the water level is too low due to evaporation. Immediately add water. After the temperature reduces, the heater will automatically begin operating again.

Turbo Sweep® Mode

GEMORO Sweep Frequency Technology has been recognized for years as the most powerful ultrasonic cleaning system available. This powerful technology is seen in the ultrasonic as significantly more aggressive ultrasonic cavitation within the ultrasonic tank, resulting in faster and more efficient cleaning in reduced time. (It should be noted that the majority of the ultrasonics produced by the various competitive ultrasonic manufacturers utilize the older non-sweep ultrasonic technology that can be seen by their relatively flat, non-aggressive cavitation within the ultrasonic tank.) Amazingly enough, while sweep technology has been considered the best for cleaning, the engineers at GEMORO have since developed an even more powerful cleaning technology with its proprietary Turbo Sweep. This powerful, remarkable cleaning technology is clearly visible in the ultrasonic tank with significantly greater and more aggressive cavitation. The result is the fastest, most effective cleaning available—period.

⚠ IMPORTANT: BE CERTAIN TO ADD WATER AS IT EVAPORATES FROM THE TANK AND DO NOT LET THE WATER LEVEL FALL BELOW APPROXIMATELY 1 INCH OR 25MM FROM THE RIM.

Sealed Switch with Water-Resistant Cover

GEMORO Powerful Ultrasonics feature a water-resistant rubber boot cover which seals the heater power switch from moisture penetration and allows for easy wash-down when cleaning and maintaining the ultrasonic after use.

Typical Degassing Period for Solution

Water that has not been degassed will cause the cavitation (action) of the ultrasonic to appear very slow or flat. Depending on the solution you are mixing with water in your unit, degassing time with most ultrasonics may vary from less than five (5) to as much as fifteen (15) minutes depending upon factors such as temperature and soap content. The rule of thumb is that the thicker and slimier the solution is, the less time the degassing process will take. Degassing is the natural process of removing gasses from any tank solution being affected by ultrasonic sound waves. Degassing occurs whenever you first use your ultrasonic with fresh water/solution and will recur each time you add to or change your water/solution.

Exclusive Instantaneous Auto-Degassing System

Unlike traditional ultrasonics, **GEMORO** Powerful Ultrasonics feature a proprietary system which provides almost instantaneous degassing, which gives users the ability to not only clean better, but faster too.

Cavitation

Inertial cavitation occurs in the presence of an acoustic field. Microscopic gas bubbles which are generally present in a liquid will be forced to oscillate due to an applied acoustic field. If the acoustic intensity is sufficiently high, the bubbles will first grow in size and then rapidly collapse or implode at which point the gas within dissipates into the surrounding liquid via a rather violent mechanism, which releases a significant amount of energy in the form of an acoustic shockwave and as visible light. At the point of total collapse, the temperature of the vapor within the bubble may be several thousand degrees Kelvin and the pressure several hundred atmospheres. Ultrasonic cleaning baths efficiently utilize the inertial cavitation of microscopic gas bubbles for the cleaning of dirt from materials such as jewelry, medical instruments, etc.

When the cavitation bubbles collapse or implode they focus liquid energy into very small volumes. Thereby, they create spots of high temperature and emit shock waves which are the source of the noise typically heard with ultrasonic cleaners. Although the collapse of the bubbles is a relatively low energy event, it is highly localized and can and does erode metals such as stainless steel over time. The pitting seen in ultrasonic tanks caused by the collapse of bubbles produces great wear on the stainless steel tanks in ultrasonics as well as ultrasonic components and can dramatically shorten the lifetime an ultrasonic cleaner, especially its tank. Because of this reality, every ultrasonic tank will eventually fail due to erosion and depending on the ultrasonics usage the lifespan of the ultrasonic and tank will vary from ultrasonic to ultrasonic. Ultrasonics systems that are operated excessively simply reach the end of their lifetime sooner than those that are not. In addition to the erosion caused by cavitation—the elevated bath temperatures from heavy or prolonged operation contributes dramatically in assisting with the speed in which erosion will naturally occur in this type environment. Further, with the understanding that acidic or caustic chemicals (as described and expressly warned against further in this document) will directly damage the tank causing quick erosion while voiding the ultrasonics warranty. It should be recognized that many buffing compounds like rouge contain abrasives that will also over time speed up

the erosion process of the stainless-steel tank as well. With this in mind and to slow down the process of erosion as a result of abrasives in the solution, it is highly recommended that users change their dirty cleaning solution and clean out the tank at minimum daily depending on usage.

Power Surge & Built-In Fuse Protection

⚠️ GEMORO Powerful Ultrasonics feature protection for the electronics from the unlikely event of a power surge or short circuit. This could otherwise cause severe damage to the electronics within the ultrasonic. **⚠️** In the event your ultrasonic shows no indication of power, you must first disconnect the power cord before attempting the basic service of fuse replacement. Then locate the external fuse holder that is conveniently located in the rear side of the ultrasonic housing, connected to the power-entry connector. With a small screwdriver, pull open the fuse drawer underneath the plug outlet on the power-entry connector. Carefully take out the fuse while noting its condition. A blackened glass window or broken fuse wire indicates that the fuse has blown. Replace it with a new fuse of the exact type and rating as indicated on the Unit Technical Specifications (located on Page 12). Once you have replaced the fuse, then plug-in the ultrasonic to its power receptacle and resume cleaning. **⚠️** If the fuse fails again or the ultrasonic still will not function, this is an indication that a more serious problem exists and that the ultrasonic needs service by the factory.

Turbo Sweep® Technology—Unmatched Cavitation

As you can clearly see, the visible cavitation produced by the **GEMORO** Turbo Sweep Technology is significantly greater than is seen in the traditional competitive ultrasonic cleaner. This more powerful cavitation offers the most effective ultrasonic cleaning available, and as a result it can clean much faster, while allowing dirt in even the smallest nooks and crannies to be removed very quickly and with ease.

Helpful Suggestions & Precautions



Please Follow Closely to Avoid Loss of Warranty Coverage!

- **⚠️** Always disconnect power cord before performing any maintenance on the ultrasonic unit. Position the ultrasonic unit so that there is easy, unobstructed access to the power connection.
- Regularly change the water or water/solution in your ultrasonic and clean out the tank.
- Cover your tank with the supplied lid to avoid evaporation and reduce noise levels.
- Use any of the superior concentrated **GEMORO** cleaning solutions mixed with water for optimal cleaning.
- **⚠️** Operate with the proper level of water/solution in tank.
- **⚠️** Never put your fingers into an active, running ultrasonic tank, as repeated exposure to ultrasonic sound waves may be harmful, as well as a heated ultrasonic may burn you!
- Be certain not to allow any item being cleaned to rest on the bottom of the tank.
- Be certain not to allow the water/solution in the tank to drop below two inches from the bottom.
- Be certain not to place flammable, acidic or ammoniated liquids in the

tank, as they may ignite and/or cause damage to you or others. Further, it may cause damage to your ultrasonic which will void the warranty.

- Do not install plug into an ungrounded electrical outlet.
- Do not block the timer for continuous usage. Units without a timer should not be used for long periods without an occasional 10 second break, as damage may occur and void the warranty.
- Never operate the ultrasonic without water/solution in the tank.
- For any problems or questions, please consult your supplier or contact **GEMORO** at **800.527.0719** or **214.351.0380**, or **sales@gemoroproducts.com**.


Why Does The Ultrasonic Get So Hot?

 Occasionally users of ultrasonic cleaners become concerned because the temperature of their ultrasonic cleaning solution within the tank becomes very hot. This is typically only experienced by high volume users who operate the heated ultrasonic throughout the day. The principle of ultrasonic cleaning is to cavitate a liquid medium (typically water mixed with an ultrasonic cleaning solution). When this is done it creates tremendous shock waves caused by millions of microscopic vacuum cavities imploding within the solution inside of the tank.  These vacuum cavities build to tremendous pressures and temperatures (above 10,000 degrees Fahrenheit) that are instantaneously released into the solution upon implosion. The release of this energy causes the solution temperature to elevate.

By simply turning the ultrasonic cleaner ON and OFF will cause the solution temperatures in the tank to fluctuate—rising from the energy caused by the cavitation and falling from evaporative losses when the ultrasonic cleaner is OFF. The longer an ultrasonic cleaner is ON—the hotter the solution will become and the more intense the cavitation is—the faster the solution temperature will rise. In addition, when the heater is also left on a higher temperature, the heat even further intensifies.

There are several variables that affect the rate of temperature increase such as length of cleaning cycles, the tank load size of each cycle, the rate of heat loss and the length of time between cleaning cycles. Additionally, the performance of the ultrasonic cleaner itself plays a huge part in the rate of temperature increase—cavitation density and power levels. **GEMORO** Powerful Ultrasonics, with their Power Sweep and Turbo Sweep technology are considered the most powerful, best performing ultrasonic cleaners available as evidenced by their extremely aggressive cavitation or action seen on the surface of the ultrasonic solution. Ultrasonics that operate poorly or that are inferior by comparison will not heat up nearly as fast as high-performance ultrasonic cleaners like **GEMORO**. So, the better the ultrasonic performs—the hotter the bath will become. **CAUTION should always be used when operating an ultrasonic cleaner, as the solution does become hot, and can cause injury to hands, etc.—to protect from possible injury, gloves must always be worn.**

Things to Know in Order to Address When Asked “Why Is the Ultrasonic Cleaner Getting So Hot?”

- Energy causes substances to rise in heat.
- Higher energy levels cause accelerated rise in temperature.
- Cavitation is energy.
- The principle of ultrasonic cleaning is to cavitate a liquid.
- Using an ultrasonic cleaner will cause the solution temperature to rise.
- An ultrasonic cleaner with high levels of cavitation will cause the solution temperature to rise at a faster rate than low level cavitation ultrasonics.
- **GEMORO** ultrasonic cleaning systems yield high powered, high-density cavitation through its proprietary Turbo Sweep technology.
- **Be certain to turn OFF the heater as the heat rises to excessive levels to avoid damage to the ultrasonic. If the solution in the tank becomes excessively hot or reaches boiling point, this is an indication that the heat level must be reduced immediately, as it is not designed to function in this environment and it will void the warranty.**
-  Gloves should be worn to prevent injury.


NOTICE: The heater/thermostat works independently from the cavitation functions. Leaving your heater turned on, even when the unit is not producing cavitation, will result in the eventual evaporation of the water/solution within the tank. This could burn out the heating element within the ultrasonic. If these instructions for overheating are not followed, you could void your warranty!

IMPORTANT FEATURE: For a prolonged heater life, your ultrasonic is equipped with an AUTO-OFF function that TURNS THE HEATER OFF AFTER 4 HOURS OF USE. Simply turn the heater knob off and then back on to reengage the heater.

Heater Auto-Off & Built-In Protection If Heater Is Accidentally Left On

To help safeguard your ultrasonic and prolong its life, an innovative new feature has been built-in to it that will automatically turn the heater function off if the water level gets too low and it overheats while reaching 140°F. This will help to prevent prematurely burning out the heating element in the event the water in the ultrasonic totally evaporates due to the heater accidentally being left on overnight. In the event the heater safeguard is activated, first fill the tank back up with water/solution. Then to reengage the heater, simply turn the heaters thermostat knob off and then back on again to the desired temperature.

The Following List of Hazardous Chemicals Can Attack the Stainless-Steel Tank of Your GEMORO Powerful Ultrasonics Unit:

 **IMPORTANT!** Do not use any of these hazardous chemicals in your ultrasonic or the warranty will be void! Please be advised that pin holes, rust, bluing of the metal and cracks appearing in this ultrasonic tank are caused using hazardous chemicals such as acid, ammonia, etc. Any ultrasonic tank returned for repair with these symptoms will not be repaired under warranty coverage.

Acetic Acid (70 + degrees F)	Hydrobromic Acid
Acetol Chloride	Hydrochloric Acid
Acetol Bromide	Hydrocyanic Acid
Aluminum Chloride	Hydrofluoric Acid
Aluminum Fluoride	Hydrofluosilicic Acid
Anhydrous Ammonia (70 + degrees F)	Iodine
Aniline Hydrochloride	Ketones
Antimony	Lactic Acid (70 + degrees F)
Antimony Trichloride	Magnesium Chloride
Benzene	Mercuric Chloride
Bromine	Methyl Alcohol
Calcium Hydroxide (50% + strength)	Muristic Acid
Carbon Disulphide	Oleic Acid
Carbon Tetrachloride	Oxalic Acid (70 + degrees F)
Chloroacetic Acid	Phosphoric Acid (70 + degrees F)
Chloric Acid	Silver Bromide
Chlorinated Water	Silver Chloride
Chromic Acid (70 + degrees F)	Sodium Hypochloride (5% +)
Citric Acid (70 + degrees F)	Stannic Chloride
Copper Chloride	Stannous Chloride
Ethers	Sulphur Chloride
Ethyl Bromide	Sulphuric Acid
Ethyl Chloride	Sulphur Monochloride
Ethylene Dichloride	Sulphurous Acid
Ferric Chloride	Trichloroacetic Acid
Ferrous Chloride	Zinc Chloride (70 + degrees F)
Fluorine	
Freon	

Unit Technical Specifications:

Note: Power consumption is typical for a unit with heat ON and Turbo ON.

	Tank Capacity	Line Voltage	Line Frequency	Power Consumption	Fuse Required
Model 1.5PTH NEXT-GEN	1.5 Pint (0.1875 Gal.)	110/120v	40 kHz	50w	1 Amp, 250v 5mm diameter (Φ), 20 mm long
<p><u>Overall Size:</u> 17.5cm x 11cm x 23.5cm <u>Tank Size:</u> 15cm x 8.5cm x 6.5cm Stainless steel lid, tweezers and basket included.</p>					

PRELIMINARY GUIDELINE FOR GEMSTONE CLEANING

GEMSTONE	TOUGHNESS	ULTRASONIC
Alexandrite	excellent	usually
Amazonite	poor	never
Amber	poor	never
Amethyst	good	usually
Aquamarine	good	usually
Citrine	good	usually
Coral	fair	risky
Diamond	good	usually
Emerald	poor	never
Garnet	fair	usually
Lolite	fair	risky
Lapis Lazuli	fair	risky
Opal	fair	never
Pearl	good	never
Peridot	fair	risky
Ruby	excellent	usually
Sapphire	excellent	usually
Spinel	good	usually
Tanzanite	fair	never
Topaz	poor	never
Tourmaline	fair	risky
Turquoise	fair	never
Variscite	fair	never
Zircon	fair	risky

WARRANTY

2.5 /10 Year Limited Warranty

Important Notice—Premature Tank Erosion & Component Failure

Congratulations on your purchase of a **GEMORO** Powerful Ultrasonics unit, the best, most powerful and effective ultrasonic cleaner available. Your complete ultrasonic is warranted for a period of two and one half (2.5) years, while the ultrasonics transducer is warranted for a period of ten (10) years from the date of purchase (as shown on the Warranty Registration Form and your Dealer Invoice) from defects in manufacturing and workmanship when used in accordance with the **GEMORO** Powerful Ultrasonics Operating Procedure (with the exceptions as noted in this document*). In the event your ultrasonic fails to perform to its specifications, please contact your supplier or **GEMORO** and make prompt arrangements for it to be returned for service. It is always wise to save your original shipping container for transporting your ultrasonic safely, but if it is not available, please be certain to properly pack to protect your ultrasonic during shipping. **If upon examination of the ultrasonic by the factory, the factory determines that the ultrasonic has been damaged due to misuse, this warranty is void.**

Please be aware that there are certain telltale signs of abuse, which will automatically void the warranty. Signs of abuse are: 1. Holes in the tank. 2. Bluing of the metal. 3. Specific odors associated with acid and ammonia exposure. 4. Burn marks on the tank are signs that an inadequate amount of water has been used in the tank. 5. Pitting or marks on the tank bottom are indications of items being placed on the tank bottom.

This warranty is limited to only the cost of any parts, materials, and labor required while repairing the unit. In the rare case of an “out-of-box failure,” immediately contact your supplier or **GEMORO**, as the unit may be returned for replacement.

In the event the owner has not registered their ultrasonic machine or provided a copy of their invoice for when they purchased their **GEMORO®** Powerful Ultrasonic, warranty service will be determined by the serial number tracking system as interpreted by the factory. In the event the specific model of **GEMORO®** Powerful Ultrasonic is no longer available or has been discontinued and warranty coverage is applicable, at the factory’s sole discretion, an equivalent ultrasonic machine may be substituted in place of the defective/discontinued unit. The purchaser shall incur the cost for postage, insurance and handling for all warranty and non-warranty repairs. Warranty repairs and/or replacements will be shipped back to the customer FOB Destination to the location of the customer’s choosing if within the continental United States. Non-warranty repairs and units coming from outside of the continental United States will be shipped back to the customer FOB Factory. Should the customer require the repair and/or replacement unit(s) to be shipped outside the continental United States, the customer will be required to pay any related shipping charges and any related taxes/duties for the respective destination country, regardless of whether it is a warranty or non-warranty claim.

All **GEMORO** ultrasonic units are pre-tested to help insure your receipt of a top quality ultrasonic. Pre-testing requires filling the ultrasonic with water and turning the heater on (if applicable). This action may leave a slightly visible ring or stain where the water level reached or where any water has touched as well as a discoloration on the bottom of the tank from testing the heater. This ring may show up on your unit anytime your water level gets below its normal full level. This ring or stain in many instances may be cleaned with many regular household cleaners or WD40 but can never be completely removed.

Please be certain to fill out the **GEMORO** Powerful Ultrasonics Warranty Registration Form online at sykessler.com/warranty-registration within 30 days of purchasing your ultrasonic to be eligible for warranty coverage. Without registering your ultrasonic as required, assuming the purchaser does not provide a copy of their invoice (bill of sale), it will automatically be warranted for a period not to exceed one year.

Note: If you have any questions concerning the operation of your ultrasonic, its warranty or would like to purchase a new ultrasonic, please contact your supplier or contact the factory at **214.351.0380** or **800.527.0719** or EMAIL sales@gemoroproducts.com to locate an authorized **GEMORO** Powerful Ultrasonics dealer near you. To view the complete line of **GEMORO** Powerful Ultrasonics and other products, please visit our website at www.gemoroproducts.com.

GEMORO SUPER CONCENTRATE CLEANING SOLUTION

To obtain the best general cleaning results out of your ultrasonic, we have the solution: **GEMORO** Ultrasonic Cleaning Solution! Economical to use, it dilutes 40 to 1 for light cleaning, 20 to 1 for heavy cleaning. Our solution is recommended for removing dirt, grease, buffing compounds, rouge, tripoli and oxides. Also used for cleaning instruments, burs, metal parts, gold and fine jewelry. **GEMORO** Super Concentrated Cleaning Solution is great for ultrasonics, glass and general cleaning. Non-ammoniated, no color additives, super concentrated, biodegradable, non-toxic and non-flammable. Instructions for use are imprinted on each bottle in both English and Spanish.

1-QUART BOTTLE

Item #0901

Each quart makes up to 40 quarts
(Case quantity-12)

1-GALLON BOTTLE

Item #0902

Each gallon makes up to 40 gallons
(Case quantity-4)





10455 Olympic Drive, Dallas, Texas 75220 USA
800.527.0719 or 214.351.0380
gemoroproducts.com
sales@gemoroproducts.com
service@sykessler.com