

Electronics fishing glossary

SONAR—An abbreviation of SOUNd, NAVigation, and Ranging. Developed as a means of tracking enemy submarines during World War II. In simplest terms, sonar is an electrical impulse converted into a sound wave and transmitted into the water.

Distance to a target can be determined by measuring the amount of time it takes for the sound wave to reach the target and return.

TRANSDUCER—Converts electrical impulses into sound waves, which are transmitted into the water. The return echos are converted back into electrical impulses which are amplified by the receiver and displayed on the sonar unit.

DEPTH-FINDER—One of the many names applied through the years to a sonar unit. Actually, they can do more than measure the water depth. A powerful unit can also show fish, structure, and other underwater objects on the display, and is an excellent aid to navigation. Also called locators, scopes, depth gauges, depth sounders, echo sounders, fish-finders, sonar units, and other names. The first Lowrance sonar unit was named the Lo-K-Tor.

FLASHER—A type of sonar unit which displays the water depth, the depth of fish and other objects by means of a small source of light which is attached to a rotating disc.

GRAPH—A sonar unit which prints a picture, by means of a stylus burning into a carbon-impregnated paper. It provides the same information that is found in the flasher, but offers easier interpretation of the information, with the advantage of having a permanent record. Also called a recorder, chart, graph recorder, depth-recorder, and a range-recorder.

DIGITAL—A sonar that provides the depth information by using a digital display. Sonar units that use liquid crystal displays (LCD), such as the Lowrance LDD-1800, are considered superior over units that use Light Emitting Diodes (LED), since they can be read even in the bright sunlight.

RANGE—The maximum depth that a sonar unit is set to display. For example, a range setting of 0-60 feet on a graph means that the maximum depth that can be displayed before the bottom echo drops off the chart paper is 60 feet.

On a flasher unit, it is the maximum depth displayed before the bottom echo passes the zero reference mark.

ALARM—An audible warning system built into some sonar units to warn of danger areas, such as sandbars, rocks, or low water. It can also alert boat operators that fish are present within a preset range selected by the operator.

SCALES—Feet, fathoms or meter marks printed around or next to the display of sonar units. For instance, many sonar units have scales of 0 to 60 feet, 60-120 feet and 0 to 120 feet. Often confused with ranges.

RESOLUTION—The ability of a sonar unit to separate targets that are close together. Lowrance units typically have resolution of six inches on most of their units. This allows you to see two fish that are only six inches apart as two separate targets on the sonar display.

SENSITIVITY CONTROL—This works like the volume control on your radio. By rotating the knob clockwise, the receiver gain is increased, and weaker signals are amplified and displayed.

When cruising, or at times when just the bottom contour is desired, the sensitivity setting can be low. When looking for fish, or small detail, turn the sensitivity setting up very high for the best results.

The sensitivity control has no effect on the transmitter's power.

SUPPRESSOR CONTROL—This is used to reduce interference or false signals. Interference is generated by electrical sources, such as the boat's ignition system, trolling motor, bilge pump, etc; from air bubbles which pass under the transducer from boat strakes, rivets, or other hull protrusions; and from water on other objects striking the transducer.



WHEN CHOOSING THE RIGHT FOOTWEAR to compliment your vacation activities, it is important to consider comfort, function and fashion. These Wolverine® GEO™ boots (left) and Wilderness® handsewns (right) and sandals (above) can satisfy the footwear needs of most summer vacationers.

Footwear for active vacation

Your kids' clothes are packed. Their toys, fishing gear, your clothes are in the backpack and the boat equipment is secure and waiting. Now what about the footwear you will need for your active vacation?

The makers of Wolverine® and Wilderness® footwear suggest you consider your possible vacation activities as well as the amount of space left in your luggage or backpack.

Most importantly, your active summer vacation will require a great deal of walking in the campground, on the trail, and around town picking up supplies.

Rugged handsewn shoes, a popular versatile style of footwear this year, combine fashion, function and comfort. Wolverine's Wilderness® handsewns, for example, completely surround the foot in a slipper or envelope of leather. Handsewn construction provides comfort and flexibility combined with the popular "casual country" lifestyle look.

An added quality feature, such as Vibram® outsoles, makes rugged handsewns an excellent choice for walking in camp or around town.

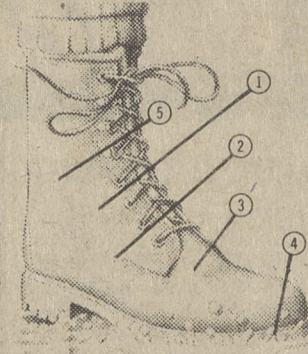
On trail, the lightweight hiker style may best fit your

needs for comfort and foot protection. Whether booting up on a chilly morning or day hiking, features such as ballistic nylon uppers, leather overlays, and insole inserts help provide the comfort and protection your feet deserve on vacation.

For those warm summer days, a new style of sandal for men and women may be your answer for foot comfort at the campsite or in town on a warm afternoon. Wilderness® sandals cradle the foot in a molded leather lined unit bottom. Quality leather strapping provides that "casual country" look so popular this year.

Making waterproof boot requires over 200 hands

How many hands does it take to make a good pair of waterproof boots? According to the makers of Wolverine® brand boots, more than 100 pairs of hands work on a single pair of waterproof boots for one pair of feet.



LOOK FOR these quality features in waterproof boots.

1. Silicote-tanned leather.
2. Silastic sealed seams.
3. Flexible molded sole, permanently bonded to the upper.
4. Ensolite® insulation in the vamp.
5. Double Ensolite® insulation in the quarter for comfort.

But the number of hands isn't what makes them waterproof. It takes a lot more. Wolverine experts suggest you look for the following technologically designed features:

• **Upper design.** The upper should be designed with a minimum of seams. Seams have stitches which can leak unless they are sealed with silastic adhesive. The upper

should also be made of silicone tanned leather.

• **Soles.** Even when exposed to cold, soles should be flexible. They must be molded to the upper with a water tight seal. Boots with welt construction, for example, can leak water where the sole is attached to the upper.

• **Insulation.** Insulation helps keep the foot warm and provides comfort. Ensolite® is a quality insulation which stands up to the coldest temperatures, yet it does not add unnecessary weight to the boot.

• **Leather linings.** Quality waterproof boots feature leather linings for added foot comfort. Vinyls will not breathe and can cause excessive foot perspiration and heat build-up.

• **Waterproof or water resistant?** Manufacturers continually test waterproof boot constructions under laboratory conditions to make sure both the style and materials are waterproof. Wolverine®, for example, uses dynamic waterproof tests. If the boot leaks during 25,000 flexes in water, that boot does not pass Wolverine's waterproof test.

Ask your footwear dealer what tests have been made on his waterproof boots. A boot can have water resistant uppers but if the construction does not keep out water, especially under flexing conditions, then it wouldn't be considered "waterproof."



MATCH YOUR FOOTWEAR to the outdoor activity you are planning for your outdoor vacation. These boots from Wolverine®, for example, include a rugged heavy duty hiking boot (left) for rocks or steep terrain and a lightweight hiker (right) for day hiking and light chores around the campground.

Choose the right boots

Nearly everyone taking to the outdoors for vacations this year will be faced with the decision on what equipment to take along, including footwear for comfort, protection and vacation gearing up.

The makers of Wolverine® boots and shoes offer the following hints on choosing the right footwear for your outdoor active vacation this year.

• **Don't overboot.** Match your selection of footwear to your activities on your outdoor vacation.

For rugged climbing on rocks or steep terrain, a heavy duty hiking boot with rigid Vibram® soles may be your choice.

Quality features to look for in a heavy duty hiking boot include a quality pigskin leather or cowhide upper, padded leather collar, full cushion insoles, leather quarter linings, and a durable construction such as Goodyear welt construction.

Prices of \$80 to \$100 or more are not uncommon for a quality heavy duty hiking or

sport boot. The price should be thought of as an investment. Quality is worth the price when foot comfort, durability and protection are at stake.

Unless you are hiking or climbing on extremely rugged outdoor terrain, a lighter weight boot may better fit your needs.

• **Lightweight is important.** It has been estimated that an extra pound of footwear translates into an extra five pounds of weight on your back.

Lightweight footwear is gaining in popularity among outdoor vacationers because it is important to have footwear which is functional and is appropriate for a variety of outdoor pursuits.

Whether day hiking or hunting, fabric upper boots may be the appropriate choice.

Features to look for in lighter weight rugged footwear include a durable one-piece fabric upper such as ballistic nylon.

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Boots: caring for your investment

The correct application of shoe care products is essential for preserving your footwear. Advise the makers of Wolverine® and Wilderness® footwear.

When quality boots and shoes can cost from \$80 to \$100 or more, it is important to know the basics of boot and shoe care. Wolverine® suggests the following tips on

caring for your investment in quality footwear.

The Cleaning—On smooth oil-tanned or silicone leathers, wipe away dirt. Knock off any caked-on mud. For suede leathers such as brushed pigskin, a stiff brush can be used to remove dried on dirt. Next, use a proper shampoo to clean the leather thoroughly.

Never use an animal fat or petroleum based product on silicone-tanned leathers. These products can interact chemically with the leather and destroy the silicone protection in the leather.

The Drying—If boots become wet in use or cleaning, be sure to allow the leather to dry naturally at room temperature. Never dry boots near sources of extreme heat such as fireplaces, radiators or ovens. Excessive heat dries out the leather's natural oils and could cause it to crack.

The Preserving—After cleaning, a quality boot or leather dressing should be applied to help preserve the leather. Ask your dealer or consult the care instructions packed with your footwear by the manufacturer.

A fluorocarbon rain and stain protector is ideal for brushed pigskin. A silicone spray helps preserve silicone tanned (waterproof) leathers.



A SILICONE SPRAY should be used on silicone tanned leathers.

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<p>Astra</p> <ul style="list-style-type: none"> Designed for your outdoor comfort The chair and the chair stack for easy storage Precision welded from heavy, seamless aluminum tubing - can't rust, easy to move, rugged and durable Cushion with thick polyurethane powder and baked for long lasting beauty - highly resistant to staining, abrasion, fading, fading, stains and weather - easy to clean 	<p>Take-It-Easy</p> <ul style="list-style-type: none"> Now Take-It-Easy patented knock-down construction - it's better suited for tight spaces Precision fabricated from heavy seamless aluminum tubing - can't rust, easy to move, rugged and durable Head-based acrylic finish provides years of outdoor service - resists peeling, fading, stains and weather - easy to wipe clean New cartridge cushion - more comfort, easy to clean, longer lasting 	<p>Summertime</p> <ul style="list-style-type: none"> Cushion covered in soft, supple Fibreair® an open-weave, vinyl coated coverable outdoor fabric - cool to the skin, soft in the hot sun Dacron filled cushions will dry in minutes after a summer shower - colorfast, non-fading, gentle, will not rot or mildew Each piece has removable, fold and incredibly comfortable Chair reclines to any position simply by leaning back - no rear bars or ratchets to adjust A perfect "trade-up" group 	<p>Summer</p> <ul style="list-style-type: none"> A welded cushion group that stacks the chair, the chair and the table - easy to store for the winter Precision welded from heavy, seamless aluminum tubing - can't rust, easy to move, rugged and durable New cartridge cushion - more comfort, easy to clean, longer lasting Cushion covered in soft, supple Fibreair® an open-weave, vinyl coated coverable outdoor fabric - cool to the skin, soft in the hot sun Dacron filled cushions will dry in minutes after a summer shower - colorfast, non-fading, gentle, will not rot or mildew Classic modern styling
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