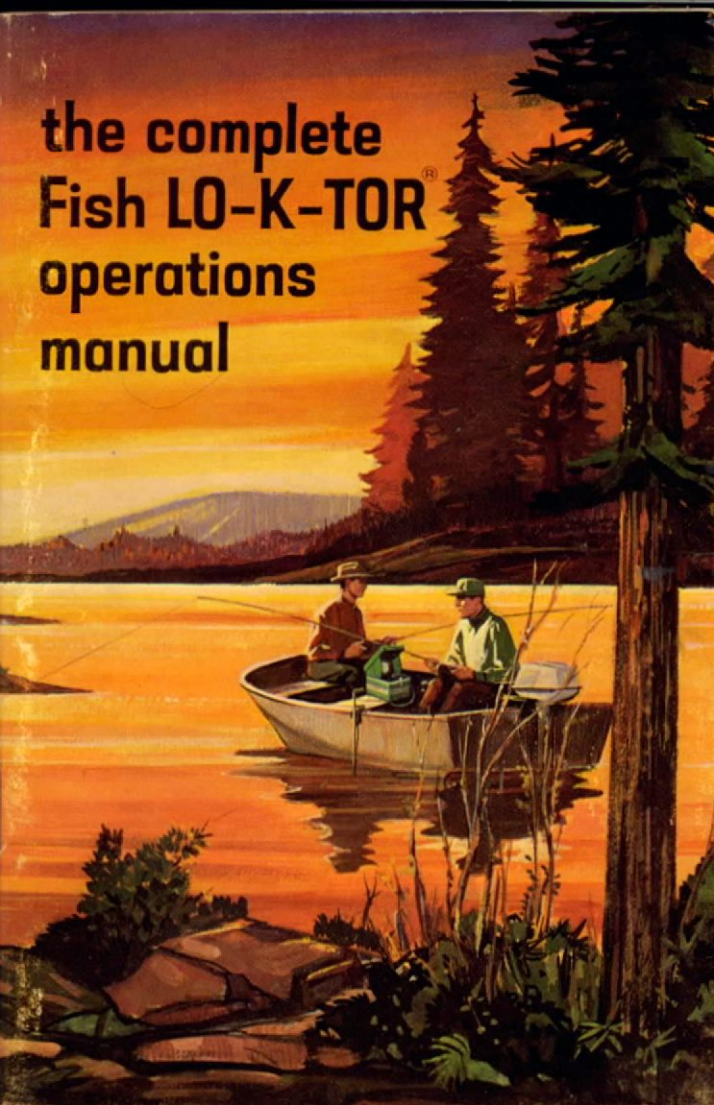
the complete Fish LO-K-TOR® operations manual



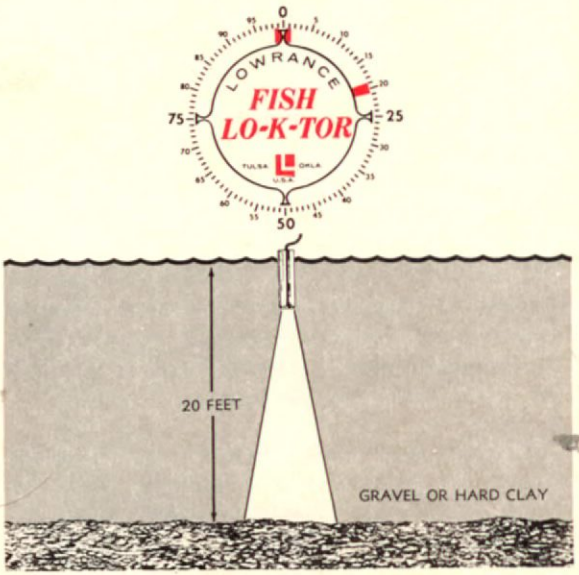
INTRODUCTION

This little book tells you how to operate your new FISH LO-K-TOR. Study it carefully. Your LO-K-TOR can tell you many things, but all the information it gathers from the mysterious world beneath the surface of the water is reported in signals on the dial. You must learn to interpret them correctly in order to enjoy all the advantages this precision instrument brings you.

We suggest that you take your LO-K-TOR and this manual out on the lake and devote a few hours to studying the various signals, adjusting the gain, learning to place the transducer correctly, and mastering the other points that will insure your getting the most good out of your investment. Clear water will help; then you can see some of the objects returning the various signals.

We know your LO-K-TOR will soon become your most valued item of fishing equipment!

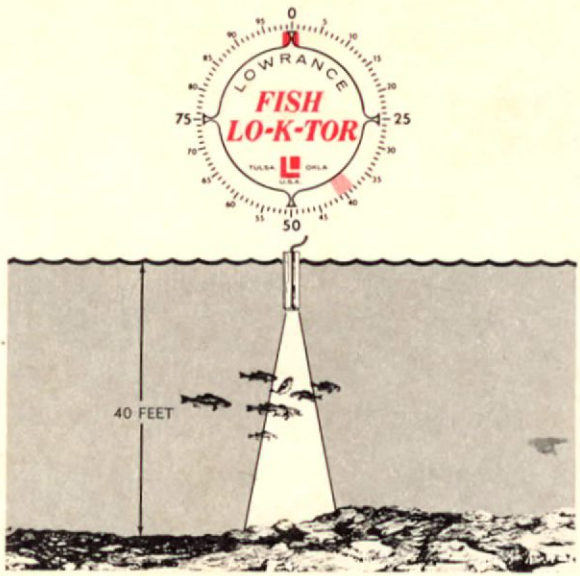
DETECTING FISH ON A SMOOTH BOTTOM



The nicest bottoms to survey with your LO-K-TOR are those that return a clear, bright signal, with no spikes either above or below it from scattered rocks. This is the easiest bottom signal of all to read and fish at any depth above it show up plainly on the dial. Nothing is more gratifying than to find a big school of largemouth bass over clean gravel or walleyes over a smooth sandbar – places that these two popular fish like and that are easy to fish by the bottom-bumping technique.

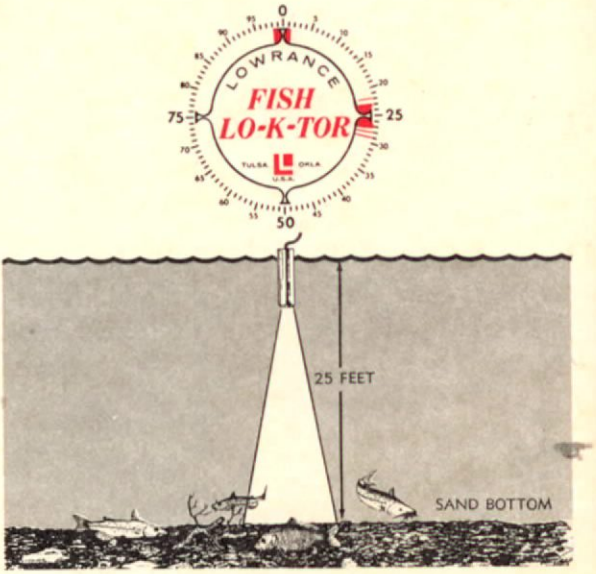
It is easy to get multiple signals on the dial from bottoms of this type. If you are over water 20 feet deep, for example, and turn up the gain you'll get signals at 20, 40, 60, and 80 feet.

WEAK SIGNAL INDICATES GAIN TOO LOW



The gain button on your LOWRANCE FISH LO-K-TOR might be compared to the volume on a radio. Turn the gain button to the right and you increase the power; turn it to the left and you reduce the power. This feature is provided so that you can use your LO-K-TOR over both deep and shallow water and you should always adjust the gain so that a bright bottom signal shows on the dial, regardless of depth. If you fail to do so and have only a faint bottom signal the dial will fail to show fish in the water between the transducer and the bottom. This condition is shown in the drawing above – the fish are there but they aren't shown on the dial because the gain is set too low.

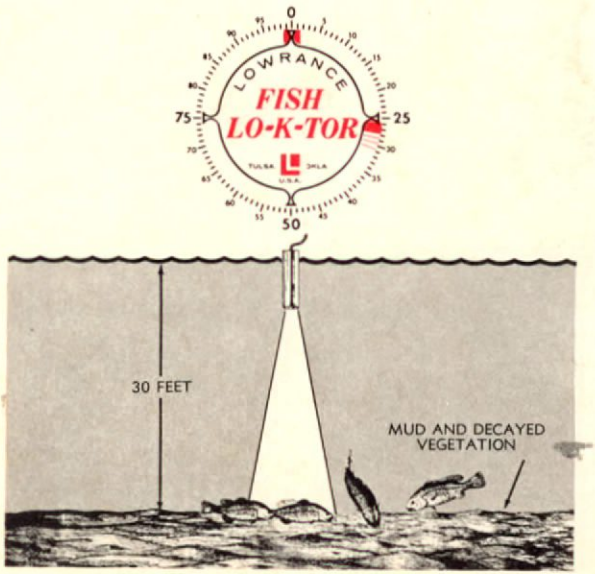
HARD CLAY, SAND, GRAVEL, SHELL BOTTOMS



Some fish, including bass, catfish, walleyes, and crappies, occasionally lie right on the bottom. Even here the LO-K-TOR will show them as you pass over, provided the bottom is smooth sand, shell, or gravel. Signals will appear on the dial both above and *below* the clear bottom signal, just the same as over a rocky bottom.

The reason for this is that the signal returning from a fish near the center of the cone of sound doesn't travel so far as the signal that hits a fish near the outer edge of the cone. Consequently, the signal from the fish in the middle shows *above* the bottom while the signal from the fish near the edge shows *below* the bottom.

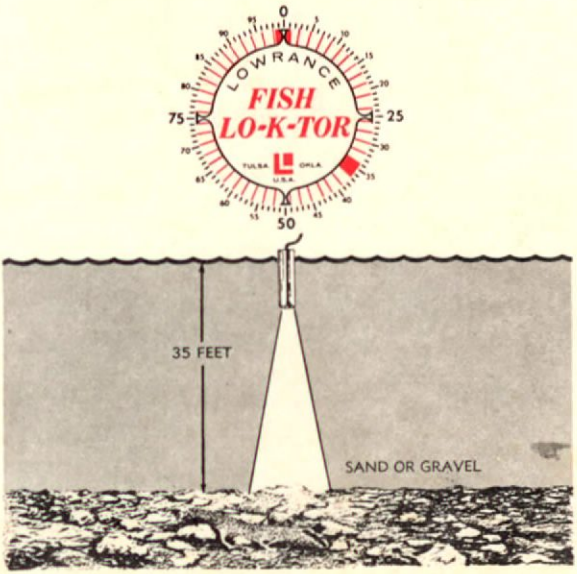
MUD BOTTOM CAUSES THE SIGNAL TO FADE



When you are hunting fish, with the gain adjusted properly to return a clear, bright signal from a bottom of gravel, sand, or shell, you will sometimes see the signal disappear. This doesn't mean that you have suddenly come to extremely deep water — the dial would have shown the drop-off with a wide band of signals in this case.

Instead, your boat is now above a mud bottom. Mud absorbs the sound waves. Turn up the gain. The bottom signal may be faint or not show at all from a bottom of decaying vegetation under deep water. Fish will still show on the dial, however. Back over a hard bottom, you'll get multiple signals. Reduce the gain.

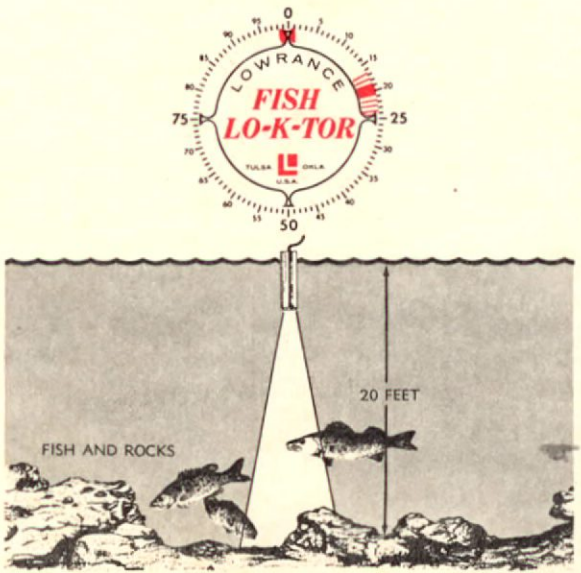
TOO MUCH SPEED; TRANSDUCER TOO SHALLOW



If you run your boat too fast for good surveying or trolling — more than seven to ten miles per hour maximum — excessive water pressure on the face of the transducer will cause the bulb to fire all around the dial. You can simulate this condition by turning the gain to maximum and rubbing the transducer face against your coat sleeve.

You will get the same kind of erratic signals if the face of the transducer is not submerged at all times. When they appear, slow down a little. If this doesn't eliminate them, lower the transducer. It is completely waterproof, so submerging it completely won't hurt — and remember to keep the face tilted slightly forward.

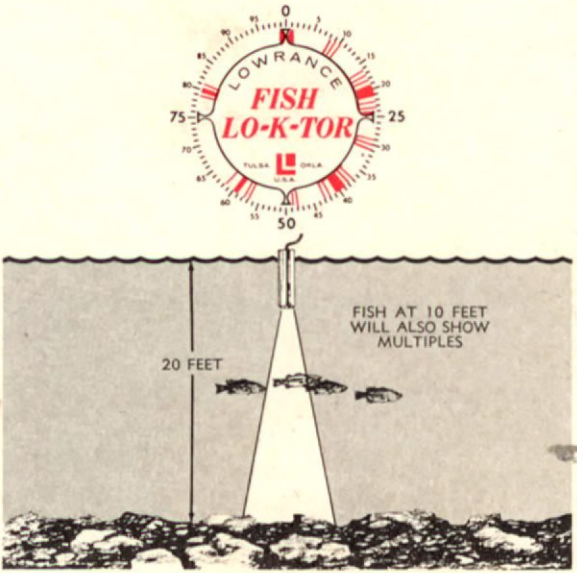
HOW YOU CAN TELL FISH FROM ROCKS



Many game fish like a rocky bottom, but smallmouth bass and walleyes are especially fond of it because the crawfish they love to eat occur there. Obviously, the signal on the dial returned by a fish a few inches off the bottom will look the same as the signal sent back by a rock of the same height. Fortunately, there is a simple solution to this problem and solving it requires only a little time.

Choose a good area with a bottom of broken rock or boulders of various sizes. Anchor your boat bow and stern, then watch the signals on the LO-K-TOR dial closely. Signals that come and go or move up and down, even slightly, are fish. Signals returned by rocks hold still.

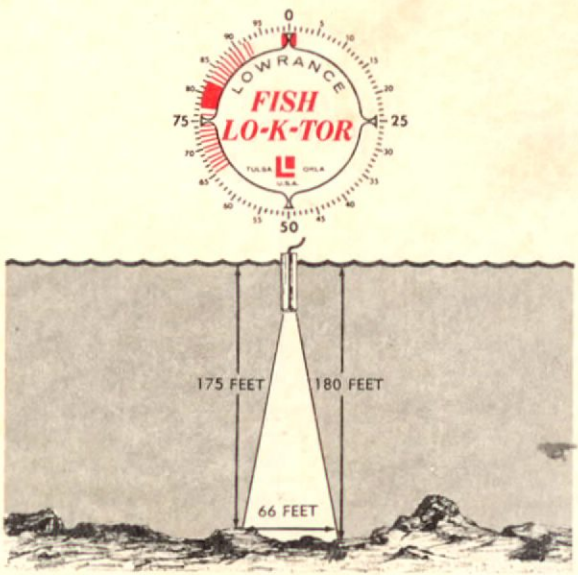
MULTIPLE SIGNALS FROM GAIN TOO HIGH



Due to the extreme power and sensitivity of the LOWRANCE FISH LO-K-TOR, you can increase the gain until you see as many as four bottom signals at multiples of the true depth. You need this power at a depth of 300 feet, where the high-frequency sound waves have to pass through 600 feet of water from the transducer to the bottom and back again. But where the water is only 20 feet deep the sound waves hit the bottom, bounce up to the boat, hit it, return to the bottom and then come up again. This may be repeated up to four times.

You should always keep the gain adjusted so that it returns a clear bottom signal as bright as the surface signal, but no multiples.

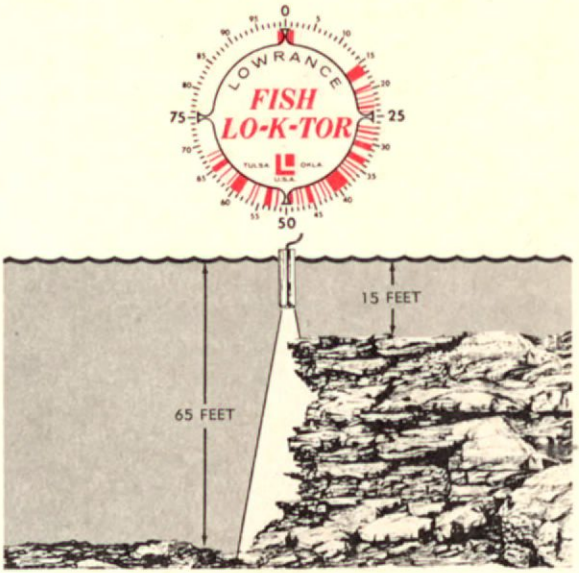
CHECKING WATER MORE THAN 100 FEET DEEP



To learn the depth in mid-lake, turn the gain control up. In water less than 100 feet deep, with a firm bottom, you will get readings at the true depth and multiples of it — for example, 40, 80, and probably 120 feet. If you don't get a double reading you are very likely over water that is more than 100 feet deep.

In this case, turn the LO-K-TOR off. Let the motor stop. Then quickly turn the gain all the way to the right. Watch the signal go around the dial. If it makes one revolution and stops at 80, the water is 100 feet, plus 80, or 180 feet deep. The deeper the water, the wider the signal because the base of the cone of sound is wider.

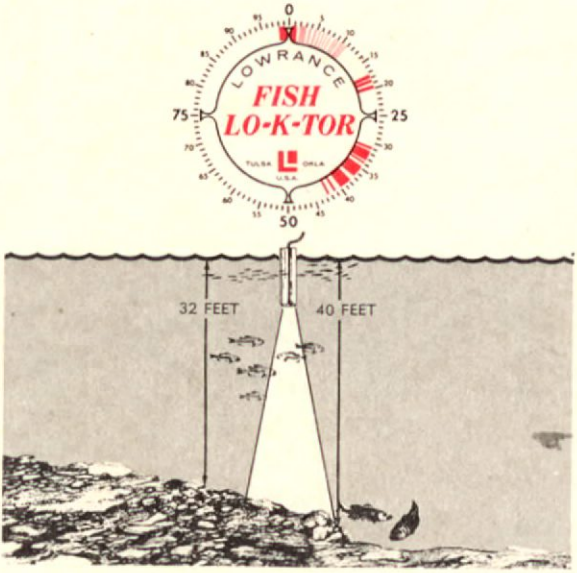
SIGNALS FROM STEEP, ROCKY LEDGES



Your FISH LO-K-TOR translates time into distance — the farther the sound waves go, the longer it takes them to return to the transducer and the greater the depth shown on the dial. Nowhere is this shown more clearly than when your boat passes over a steep, rocky underwater ledge or cliff, either vertical or inclined at a steep angle.

Assume the top of the cliff is 15 feet beneath the surface of the water, and the bottom is 65 feet deep. Sound waves will hit rough spots on the cliff all the way down. As the result, the signals on the dial will cover an area extending from 15 to 65 feet — a condition that could easily lead to confusion until you understand it.

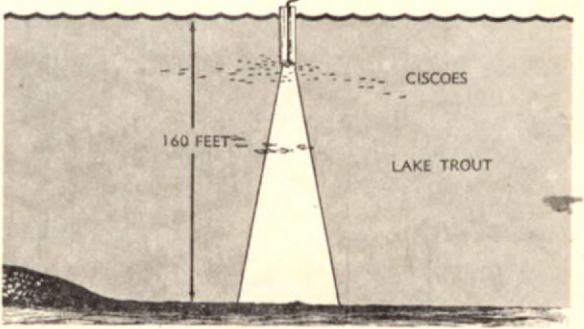
WIDTH OF SIGNAL INDICATES SIZE OF FISH



Small minnows or bait fish appear on the dial as thin, pale lines. If they are tightly schooled they may cover a depth of from five to ten feet on the dial with a few pale lines for individual minnows at the bottom of the school. Your LO-K-TOR will indicate even a single minnow 30 feet beneath the surface of the water.

Obviously, the back of a big fish offers a larger surface to reflect the signal than the back of a small fish. Consequently, you get a wider and brighter signal on the dial and, even though you can't tell the exact size of the fish from the signal, it does give you a good clue so that you can instantly tell big ones from little ones.

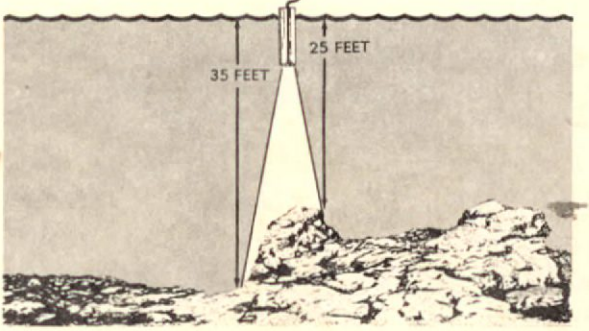
LAKE TROUT AND OTHER DEEP-WATER FISH



Lake trout prefer cold water – 45 to 55 degrees – and from late June until late September this temperature range is usually found at depths between 65 and 150 feet. Their food fish, such as ciscoes, also prefer cold water and suspend above the level of the trout, though still far deeper than do the bait fish on which bass feed.

We hunt lake trout in the deepest areas and when we find them we mark the school with a buoy, then move 100 feet upwind. With a lure on the end of the line and a three-ounce sinker two feet above it, let the lure sink freely until it hits bottom, then reel in ten feet. When the LO-K-TOR shows the trout again, we reel the lure up past them.

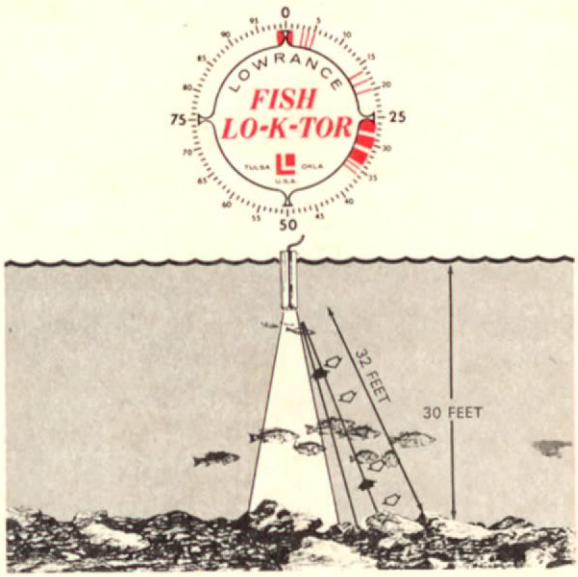
SPARK PLUG INTERFERENCE ON THE DIAL



Large, evenly spaced spikes all around the dial, moving in either direction according to the rpm of the motor, are a sure sign of spark plug interference. This is most likely to occur with motors of more than 30 horsepower, but it never happens when they are properly shielded and grounded for marine radio. Many enthusiastic anglers use small motors for fishing and surveying; big motors only for traveling.

Lacking a three — or five — horsepower motor, try mounting the transducer as far from the motor as possible. Or use a small transistor radio to locate the hot spots for electrical interference in your boat while running, then move both transducer and LO-K-TOR out of them.

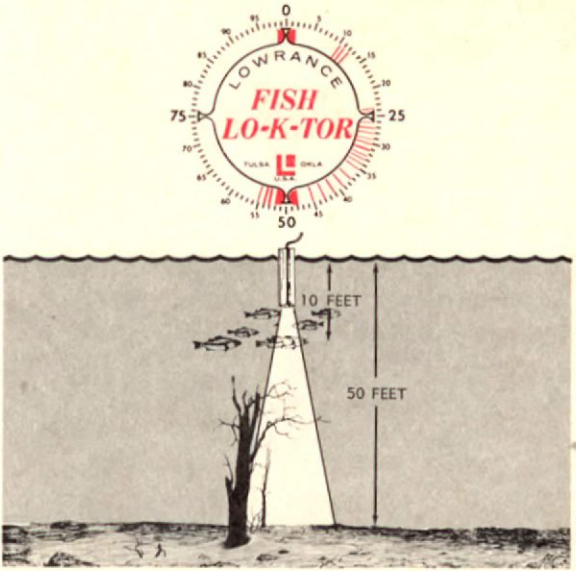
SIGNALS RETURNED BY A ROCKY BOTTOM



The signals returned from a rocky bottom are quite confusing when you first see them. The LO-K-TOR dial will indicate the level of the bottom at the correct depth, but it will also show clear, thin signals both above *and* below the wider main bottom signal. This is explained by the fact that the rocks near the outer edge of the cone of sound waves are farther from the transducer than those in the center, while the tops of the latter are closer than the bottom.

This drawing also shows the typical signals indicating a school of white bass or bluegills at a depth of twenty feet. The signals are brighter than those returned by bait fish, but not so bright as bass.

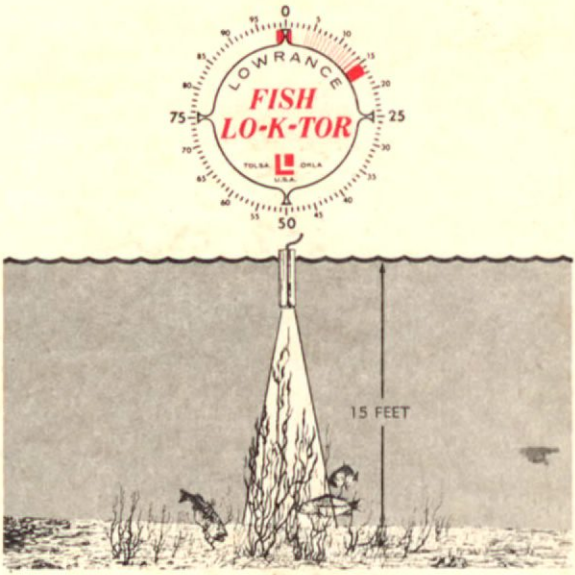
THE PROBLEM OF TREES IN THE WATER



The signals on the dial shown here indicate an underwater tree with a few fish above it. The water is 50 feet deep, the tree 25 feet tall, and the fish are between ten and 13 feet deep. Limbs at various depths return individual signals and account for the wide band of signals on the dial. Brush appears similar, though not so tall.

Bass and panfish often hang around submerged vegetation, not only near the surface but down to depths of 25 or 30 feet, depending on the thermocline. To detect them, anchor bow and stern so your boat can't move. Constant signals indicate tree limbs. Signals that come and go or shift up and down are fish — limbs don't move.

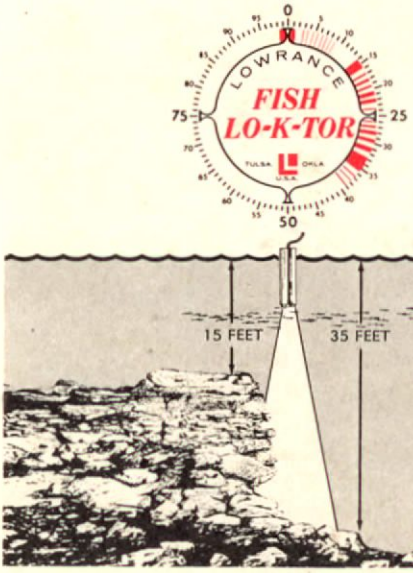
WEEDS RETURN THIN, PALE SIGNALS



Weeds don't grow in water more than 12 to 15 feet deep in most lakes because of the lack of sunlight. They make a great many thin, pale signals on the FISH LO-K-TOR dial. As the boat approaches underwater weeds the faint signals climb up toward the zero signal; as the boat leaves, they go back down the dial toward the bottom signal. You will also observe these same climbing and descending signals as your boat approaches and leaves trees or brush. Their signals are brighter.

Muskies, northern pike, and pickerel are likely to be widely scattered throughout a lake, but they all love the underwater weed beds. Use your LO-K-TOR to follow the edges of the weeds while hunting them.

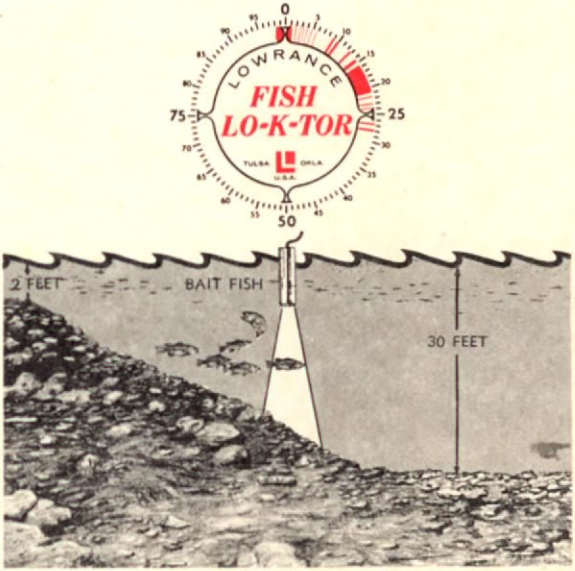
BAIT FISH OVER AN UNDERWATER CLIFF



Time is distance. Part of each transmitted signal is returned as it progresses deeper and deeper into the water. In this drawing the small bait fish or minnows near the surface are indicated by thin signals on the dial – near the surface as usual for these little fellows.

Below the bait fish, the cone of sound transmitted downward by the transducer encompasses the steep slope of an underwater cliff. The first sound waves strike bottom at 15 feet; the last at 35 feet. Consequently, these two depths are shown. In addition, sound waves also hit the cliff at various depths between and this results in the many signals that occupy a wide area on the LO-K-TOR dial.

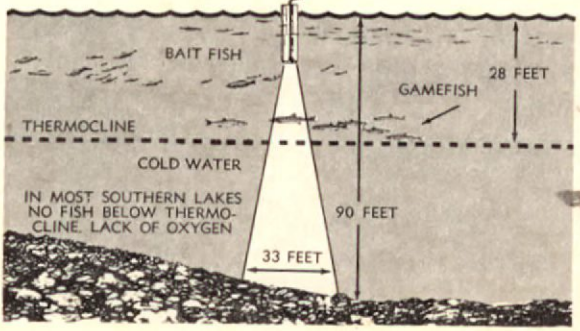
PLANKTON, BAIT FISH, GAME FISH, WIND



It is hard to over-emphasize the importance of schools of bait fish such as gizzard and threadfin shad and the young of bluegills, crappies and other panfish. They are usually concentrated within ten feet of the surface and the game fish are often either directly under them or else somewhere nearby, though usually deeper. This rule is so nearly infallible that we always hunt the bait fish first.

When the wind blows steadily from one direction, the plankton begins to drift with it. The bait fish, which feed on plankton, follow their food and the game fish follow theirs. Look for bait fish from mid-lake to where the waves hit shore. Game fish will be nearby.

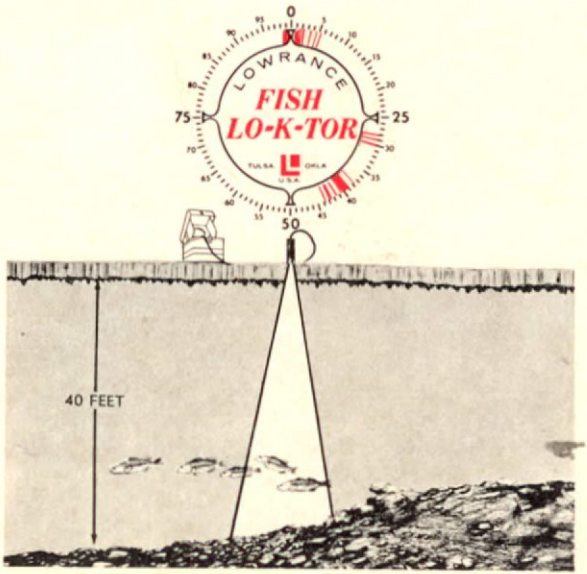
LOOK FOR BIG FISH OVER DEEP WATER



Our many years of experience with the FISH LO-K-TOR and scuba gear have proven that almost all game fish school over deep water immediately after the spawning season. This usually means the deepest water in any given lake, whether it is 30 or 300 feet deep. Likewise, bait fish prefer feeding over the channel or the deepest area of the lake – perhaps due to a current or slight difference in temperature.

When you find bait fish over deep water, remember that game fish follow them. Search the area carefully with your LO-K-TOR. You may find game fish directly under the bait fish or somewhere nearby, perhaps within 50 feet, although usually somewhat deeper.

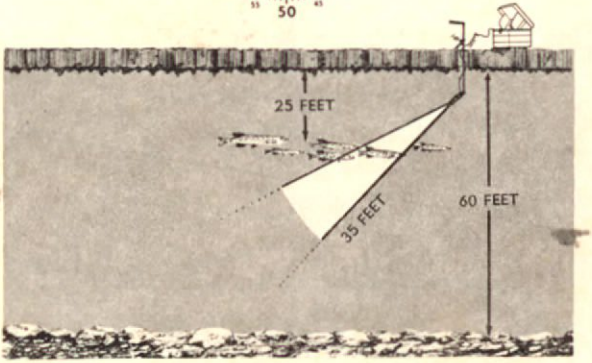
USING THE FISH LO-K-TOR THROUGH ICE



Your LO-K-TOR works as well through ice as in open water, but the ice must be free of bubbles (which would return confusing signals) and the face of the transducer must have a wet contact. A few drops of anti-freeze on the surface of the ice will establish it.

Set the transducer upright on the wet ice and turn up the gain until you get a clear, bright bottom signal. Any fish between the ice and the bottom will show. You will notice that the zero signal is somewhat wider than usual. This is caused by the under surface of the ice, which is sometimes quite rough. The efficiency of dry cells falls off rapidly in cold weather. Use Magnum 44 batteries and keep them warm.

SURVEYING ALL AROUND YOUR POSITION



You can use the transducer like a flashlight to survey the water all around your boat or the hole you have cut through the ice. Set the gain only high enough to show bottom at 35 feet and point the transducer down at approximately a 45-degree angle. Any fish within 35 feet of your position will show on the dial. You'll have a zero signal, but no bottom signal. The handiest way to hold the transducer is with the Lowrance DeLuxe Transducer bracket.

If the cone of sound waves hits the surface or bottom you'll get a wide band of signals on the dial because of the long angle. And don't set the gain too high; you might pick up the shore!

"THE FUN OF ELECTRONIC FISHING"

If you are interested in learning still more about the use of your LO-K-TOR you might like to send for a copy of the book, "The Fun of Electronic Fishing," $2.00 postpaid, from . . .

Lowrance Electronics Mfg. Corp.
7809 East Admiral Place
Tulsa, Oklahoma 74115

(P.S. If you are now the proud owner of a FISH LO-K-TOR, why not buy "The Fun of Electronic Fishing" for a friend?)

Additional subjects covered are:

Research
Temperature
Stratification—the Thermocline
Light
Spawning
Why Fish Suspend
Favorite Depths
Schooling Habits
Bottom
Surveying a Lake
Using a Thermometer
Hunting Fish
Deep Water
Bait Fish
Fish the Windward Shore
Fishing the Right Depth
Marking Line
Using the Marked Line
Lake Trout on Light Tackle
Bottom Bumping
Counting as Lure Sinks
Lets All Do Our Part
Testimonials

HOW TO OBTAIN SERVICE

Please follow these instructions carefully:

Write to Lowrance Electronics Mfg. Corp., for return authorization and shipping instructions. In your letter, please detail the problem you are experiencing and our service department may be able to save you the inconvenience of returning your unit.

If it is determined that your unit must be returned full shipping instructions will be sent to you.

OUR SERVICE DEPARTMENT WILL PROCESS YOUR UNIT AND RETURN IT TO YOU WITHIN 48 HOURS.

Address all correspondence to:

LOWRANCE ELECTRONICS
MFG. CORP.

Attn: Service Department
7809 E. Admiral Place
Tulsa, Oklahoma 74115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