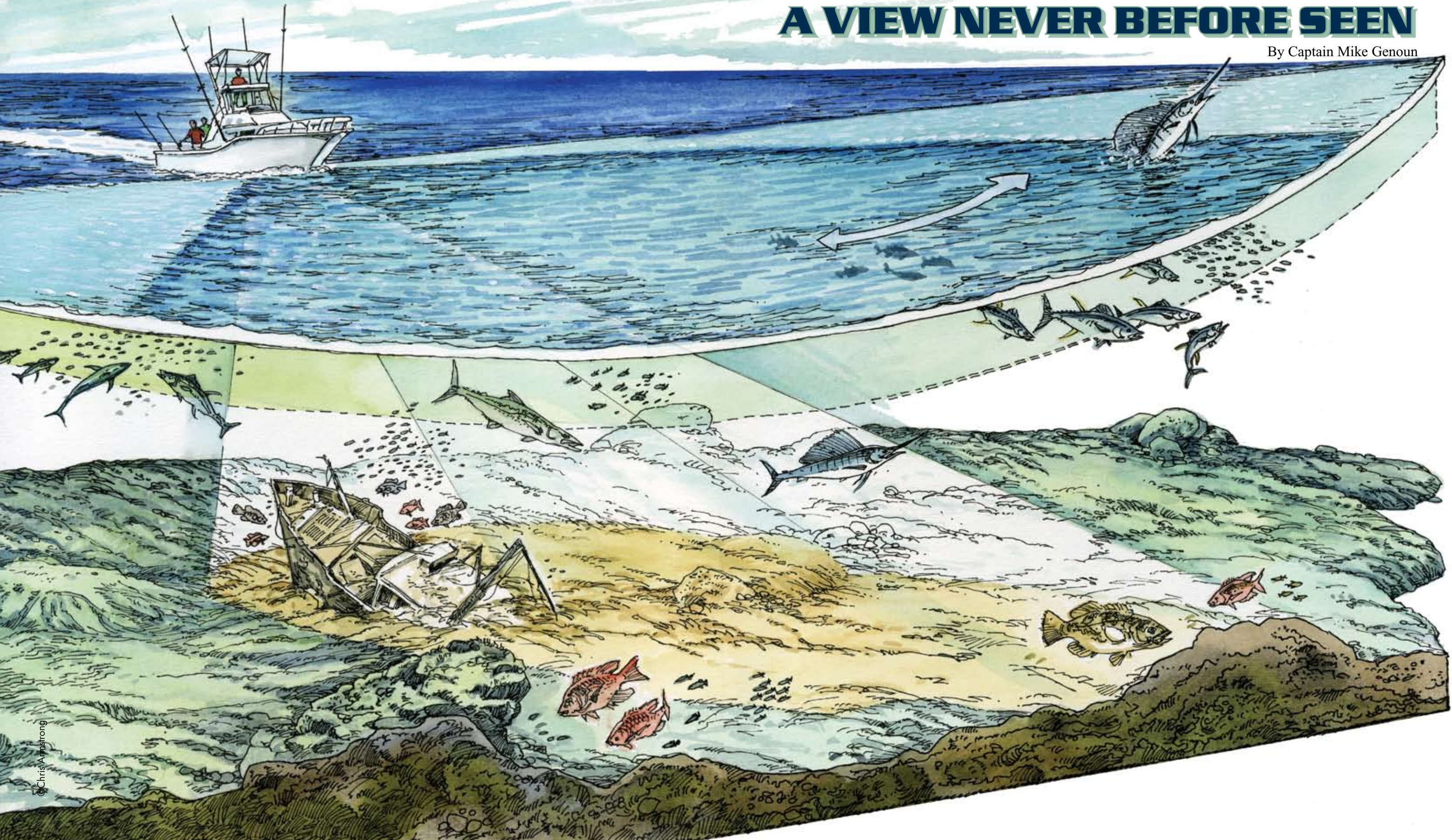
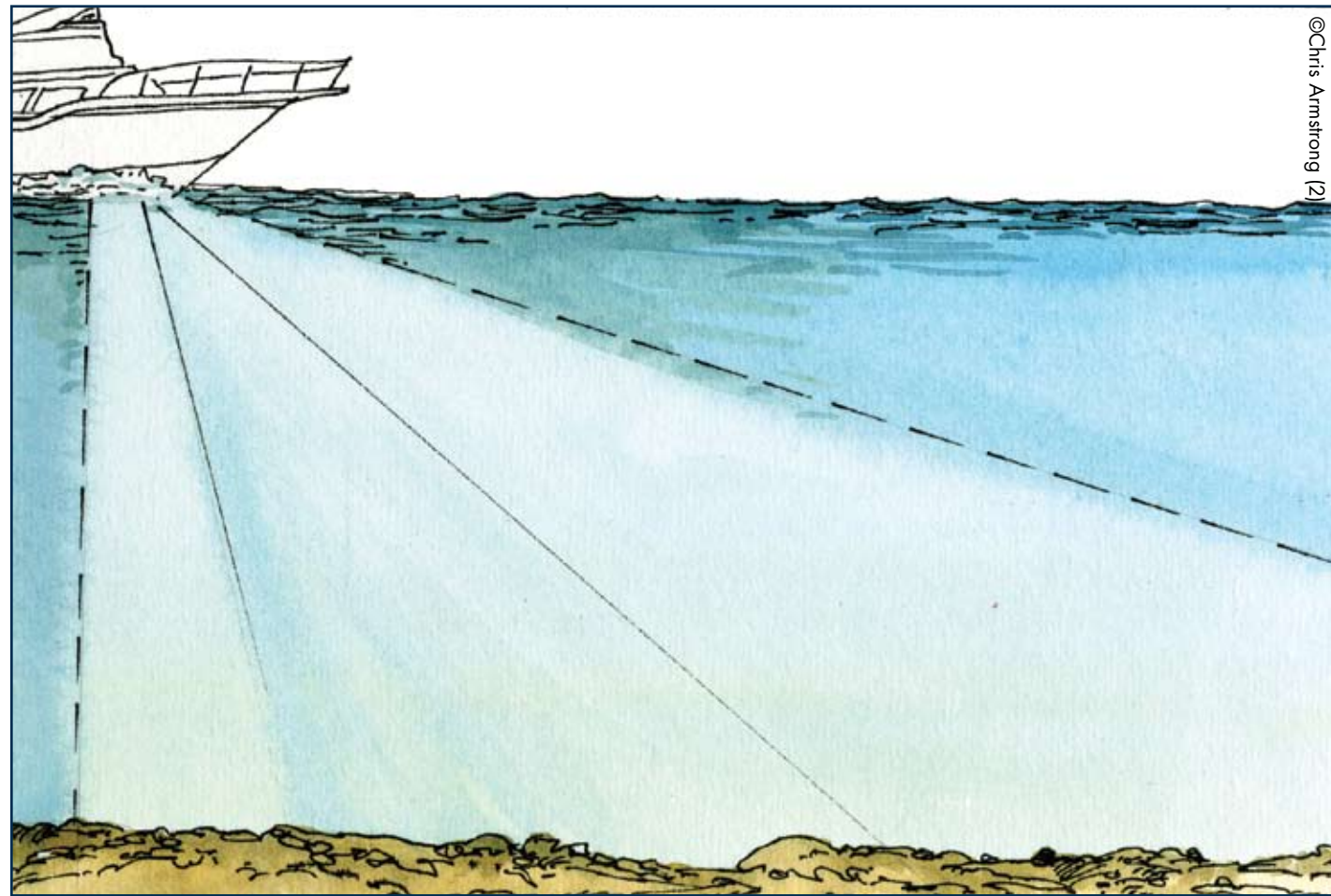


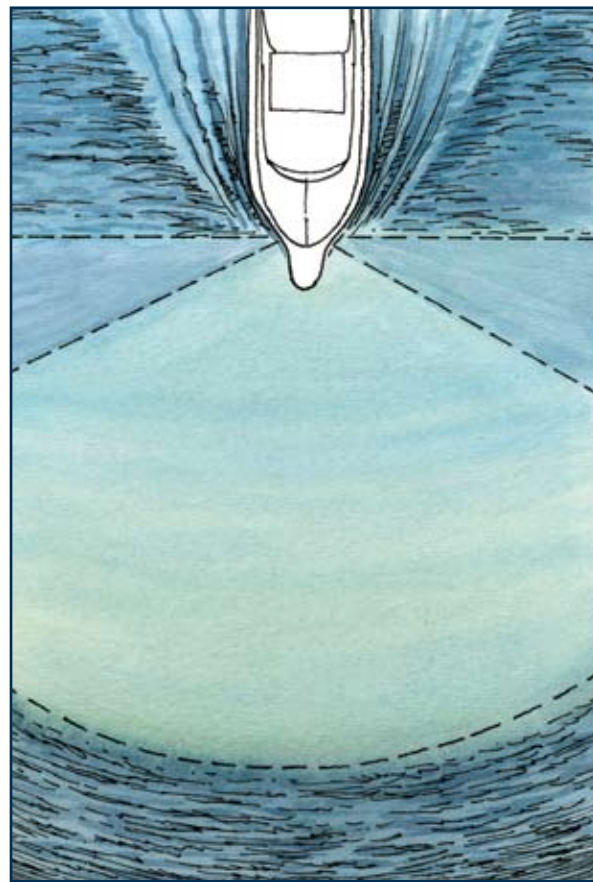
Scanning sonar provides anglers the ability to see the future.  
**A VIEW NEVER BEFORE SEEN**

By Captain Mike Genoun





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We've all had the fantasy of wondering what it would be like to see into the future. Even if we could see only a few seconds forward, it would change our entire lives. Can you imagine having such skill at a roulette table or in the stock market? Better yet, can you imagine having the ability to see your immediate future while out chasing you're favorite gamefish?

How much would you pay for such a gift? Would being able to anticipate strikes while competing in a tournament be worth a couple grand? If so, then break out your wallets, because cutting-edge developments in sonar technology are currently available for small to mid-size boaters in the form of forward looking and side scanning sonar. The science provides you, the helmsman, with a real-time look of not only what's directly below the boat like traditional sounders, but what activity is occurring around and directly in front of your vessel. Can you imagine the possibilities?

Conventional sonar (Sound Navigation & Ranging) as most of us know it today, is really nothing new, though you might be surprised to find out that 360 degree scanning sonar has also been in use for decades. Over the last twenty or so years, scanning sonar and its accompanying equipment has for the most part, been bulky, priced way over most small boater's budgets, and primarily geared toward the commercial sector. Today, with huge advancements in mini-micro-processors and state-of-art transducer technology, things are different. An entire line of affordable, user friendly scanning sonar units are now available for all recreational boaters for little more than a modest investment. Considering how much we spend outfitting our boats with specialized gear, custom tackle, and the array of standard navigation and communication equipment, investing a couple paychecks towards a sophisticated fish-finding machine that could potentially double our catch ratio, seems like a justified investment. Not too mention the important safety benefits that come along with utilizing such equipment, which none of us can put a price tag on.

Charles Hicks, the brainchild behind Interphase Technologies Inc., a pioneer in scanning sonar designed for small to mid-size recreational applications, was cordial enough to help shed some light on this technological breakthrough. Hicks indicated his company's signature scanning sonar, the iScan 180, hinges on a pair of thru-hull or transom mounted phased array transducers. Unlike yesteryears bulky 'coffee can' thru-hull transducers which literally had to be deployed to transmit sound 'pings', today's scanning transducers require no moving parts. One is mounted on the port side of your centerline and a second, starboard. The resulting view eliminates keel interference and provides a seamless 180-degree horizontal scan sector (90-degrees on each side of the vessel's bow). The technology can somewhat be compared to acoustic forward looking underwater radar.

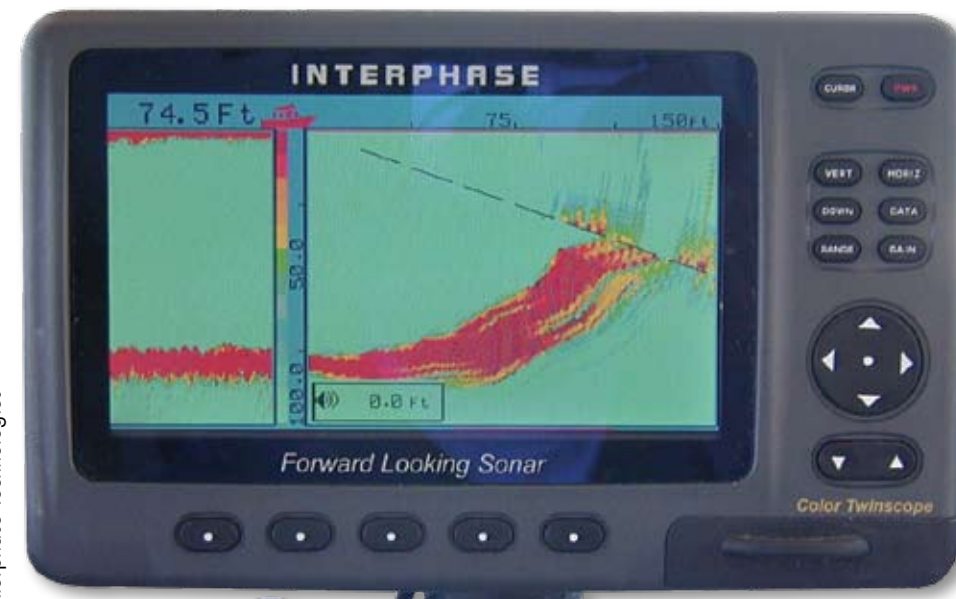
In the horizontal scanning mode, the two electronically linked transducers which are angled at 10° downward from the surface to minimize wave clutter, steer a continuous searchlight-like sonar beam from port to starboard. The resulting view detects targets on either side or directly in front of your vessel's current position. The horizontal mode is ideal for open water fishing, revealing a broad view of the vastness in front and to the sides of your vessel. Although there are many methods for locating 'fishy' water, none could be as efficient as actually having a clear picture of the activity taking place right around you. With scanning sonar, you'll quickly be able to identify if concentrations of bait or gamefish are holding to the left or right or up-current or down-current of your present position.

The horizontal scan also provides boaters with great capabilities for following channels, finding passages through treacherous reefs, and identifying unfamiliar shoals before running aground. When you think about, a single grounding incident alone could cost thousands in towing and repair bills, not to mention time lost and the inconvenience factor.

Push a button, and the forward looking vertical scanning mode takes over and sweeps a 12 degree cone from directly ahead of the vessel, down to the ocean floor. The vertical mode is extremely useful for monitoring changing bottom contours such as sharp drop-offs and high profile mounds and hills. The forward scan also does an excellent job of identifying oncoming submerged obstacles and detecting concentrations of bait and/or fish in the path of your intended route. The resulting view is a unique real-time picture never before seen.

By aiming your bow at a wreck and slowly maneuvering around the structure, you'll be able to determine if the entire area is worthy of your efforts or completely void of life. The operator will have the ability to view the actual debris, any fish and/or bait readings surrounding the structure, and any targets in the middle and upper portions of the water column directly ahead of the boat. This is a huge leap toward saving time and fuel, resulting in greater success on the water and substantial savings at the fuel pump. The view is perfect for determining exactly how baitfish and target species are suspended in relation to their surroundings. All of this useful data is displayed on a sunlight viewable screen which takes up less dash space than a typical sounder.

We all know gamefish tend to orient to structure for a constant food source and for protection from ambush by larger predators.

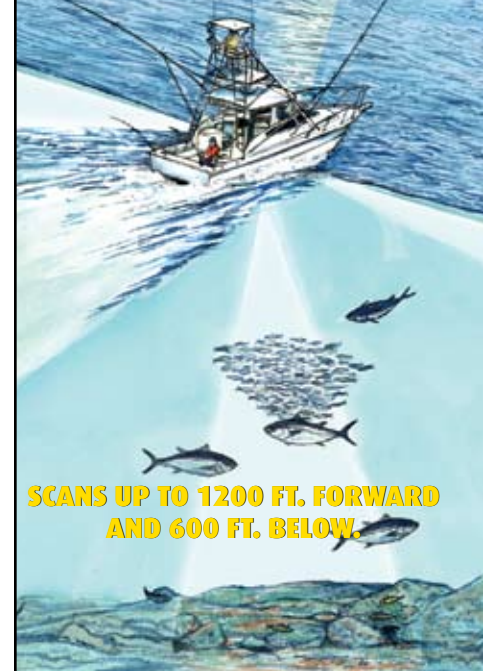


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# NEW INTERPHASE iSCAN 180

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The iScan 180 lets you see up to 1200 ft. ahead - scanning both sides of the hull in a 180° arc. Great for deep keel powerboats and sailboats. Plus, if you want to see directly below, press the key to view the bottom, obstacles, fish, etc. up to 600 ft. below the surface - it's that accurate.

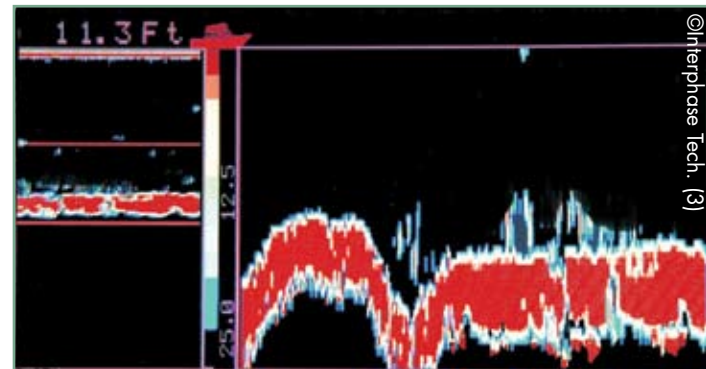
Features brilliant sunlight color screen with a 16:9 aspect ratio for viewing brightly in daylight or at night. The iScan 180 is designed for system integration and expandability. It even has inputs and outputs for live video or TV.

Best of all, this amazing forward looking scanner is only a fraction of what you would expect to pay. Check out our website; better still, visit your Interphase dealer now.

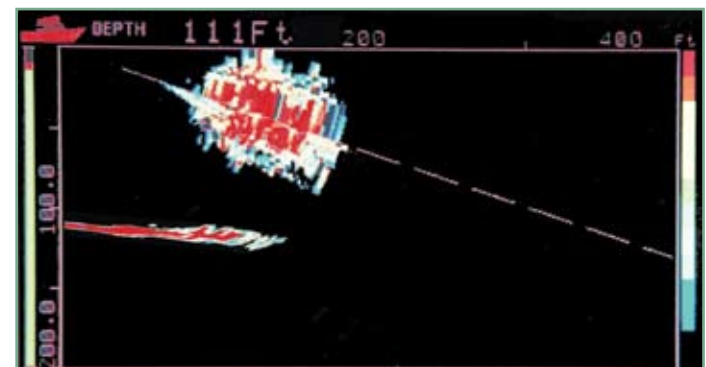
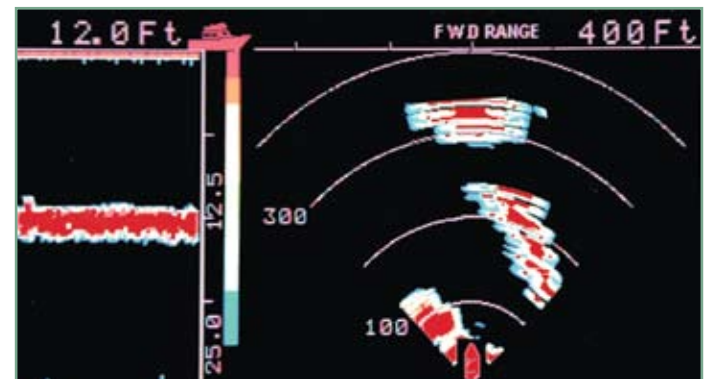
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To evolve into a better fisherman, you need to understand these basic principles and consistently utilize structure to improve your overall catch ratio. Scanning sonar provides boaters with a view of the underwater world never before imagined. Using your forward looking and side scanning technology, you can position your boat to fully understand the nature of a particular piece of structure and get an excellent view of exactly how baitfish and predators are situated, without the risk of disturbing the local fish population.

As you head offshore over the edge, both the vertical and horizontal scanning modes become new tools in searching out free swimmers near the surface and concentrations of bait located deeper in the water column. The horizontal view is exceptionally useful for 'trollers' attempting to thoroughly work well formed weed-lines, warm water eddies, and distinct current rips. All of these offshore 'structure' elements can be scanned from afar to determine their overall value as potential targets for concentrating your valuable fishing time.

As you become more familiar with the scanning sonar equipment, you will learn that either the vertical or horizontal sweep sectors can be adjusted to accommodate your particular needs. ie: you're trolling parallel to a sharp ledge and would prefer to only scan the port side of the boat, or you're looking for dolphin on the surface and are only interested in seeing the activity from directly under the surface down to 45 degrees. In either mode, the transducer beam can also be pointed straight down to view either a split or full-screen conventional depth sounder view. The iScan 180 also features all the bells & whistles you would expect with any top-of-the-line sounder. Fish alarms, depth alarms, and video input and output are just a few of the long list of added value elements.

The more I familiarize myself with this equipment, the more I realize scanning sonar is truly a unique tool, not only for its fish-finding abilities, but as I mentioned earlier, for avoiding navigational hazards. The view provided to the helmsman is ideal for detecting oncoming submerged debris, shallow reefs, and foreign obstructions which could ultimately jeopardize the safety of your vessel and its passengers. Once invisible to the naked eye, all of these hazards can now be detected with enough advanced warning to avoid collision. Side scanning sonar also identifies unmarked channels and helps route safe passage through uncharted territories. It's a must-have tool for all remote island adventurers.

As far as installation is concerned, various hull configurations may generate different views; however, the rule is that the forward scanning horizontal array scans a sector from your 9 o'clock to 3 o'clock position. The vertical view covers the swath of water directly off your bow straight down to 90 degrees. You can adjust the distance parameters which will change the view to accommodate the existing depth. In either mode, setting the distance parameters and interpreting the display does take a little getting use, but after just a few uses you should be able to quickly adjust the settings to suite the existing conditions.

Similar to radar, effectively utilizing scanning sonar does require a bit of a learning curve. The more sensitive the settings, the more likely you are to receive echoes and ghosts. These are reflections of the signal off the bottom or even off the hull, which will present an image on the screen which isn't an actual target. For example, if you turn the sensitivity up too high, an arc may appear from the bottom and extend ahead of the boat to the surface. When the boat is moving forward the arc will move at the same speed and remain dead ahead. This is just like a 'ghost ship' blip on a radar display. It is the edge of the beam (cone) touching the bottom and rebounding back before the center of the beam actually passes the

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same spot. It is called a "side-lobe". This side lobe is a characteristic most common in shallow water which experienced scanning sonar operators have become accustomed to. If you wish to squelch it out, simply turn down the sensitivity.

Does all of this great technology mean that you should throw away your traditional fish-finders? Absolutely not! There is something very comforting in knowing the information you're receiving from your scanning sonar corresponds with that from your traditional sounder. It drastically increases your confidence level when you read a concentration of bait or fish at about 100 yards ahead at 10 o'clock off your port bow, then run over it and see the same readings on your conventional 'down' sounder.

Even with these never before seen views, anglers should never lose sight of the fact that there is no substitute for paying your dues and fishing efficiently. However, extraordinary tools such as forward looking and side scanning sonar, when used in conjunction with your traditional fish finder and GPS plotter, will greatly increase your opportunities and ultimately your overall success. To be a consistent winner on the water you first have to get the bites, and by utilizing the sophisticated equipment available for today's consoles and bridges, the ability to increase strikes is essentially right at your fingertips. Quality baits and effective lures will help you catch fish, but your offerings will never even be seen if you're not in an area where the fish are.

Let us also not forget that fish are wild creatures that live and swim on their own set of rhythms and it is very difficult to predict exactly how they might react to the baits and lures that we use to entice them. Finding fish is one thing, getting them to eat is another story altogether. I am just glad that this new technology is available to help anglers solve the salty mystery of, "Which way to I go now?"



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