HOW TO BEST USE YOUR ELECTRONICS: CHARTING, SONAR, AND IMAGING

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Introduction

• Computers everywhere
• Technology makes our lives easier but changes rapidly
• The 80 / 20 rule.
• Indicates where you have been (Trail) and your current position
• Waypoints have many uses.
• Navigation – where you are going and how best to get there

CHARTING: A TREMENDOUS FISH FINDING TOOL
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• Charting/Mapping identifies Lake Structures to include flats, deep holes, River and Creek Channels and topographical formations
  • a. Fishing on Flats in late Fall, Winter, and early Spring
  • b. Underwater humps are prime target areas for Umbrella Rigs
  • c. Certain underwater points present opportunities for fishing
  • d. Creek and River Channels – Down Lines and Trolling
  • e. Road Bed Identification – fish follow road beds
  • f. Deep bays and pockets – Ex: Shady Grove North and South
Significant charting and navigational aids

• Point-1 Antenna from Lowrance: Precision GPS Receiver with Electronic Compass
• AS GPS HS: Antenna from Humminbird: Precision GPS Receiver with Heading Sensor; also provides fast position fixes accurate within 2.5 meters.
• Navionics by Lowrance: Lake maps/charts on a card inserted into your unit. Navionics Gold, Platinum, HotMaps Platinum, etc.
• Lakemaster by Humminbird: Identified a range of water depth with
• Smartstrike by Humminbird: Conditions under which one or more fish are caught – apply the software and it will identify similar contours, depths, etc. within a certain distance of your location. color.
• I-Pilot Link by MinnKota/Humminbird: Access trolling motor through sonar unit allowing for functions such as spot-lock, cruise control, navigation to a way point, etc. When used in conjunction with Lakemaster chart allows for follow-the-contour feature
• Pinpoint GPS / MotorGuide Gateway by Lowrance: Similar to I-Pilot Link for Lowrance and Motor Guide Xi5 trolling motors except for follow-the-contour.
CHARTING – WAYPOINT UTILIZATION

• Most units will allow you to save one or more thousand waypoints.
• Waypoints – different pictures for different use – trees, underwater obstructions, etc.
• Waypoints may be used to mark trees and brush piles in more shallow water.
• When trolling with Lead Core/Down Riggers, waypoints may be used to mark fish. Waypoint the fish until you no long see them. This can help to avoid trolling over waters in which fish are not present.
• Apply one or more waypoints when finding fish for Down Line fishing.
• Application of waypoints in conjunction with your sonar and imaging may lead to a trolling chart for umbrella rig purposes.
CHARTING – WAYPOINT UTILIZATION

• How about a different waypoint for water temperature?
  • Example: Caught fish in Two Mile with surface water temperature of 80 degrees – why not establish a special waypoint for surface water temps linked to catching fish? Then, establish a chart with the specific waypoint linked to places where fish were caught.

• Use your creativity and imagination to establish waypoints for a specific purpose.
SONAR – WHERE IT WAS AND WHERE IT IS TODAY

• Sonar: **Sound, Navigation, Ranging**
• Developed during WW II to detect submarines
• Sonar: consists of a transmitter, transducer, receiver and display
• Sonar: transmitter emits sound pulses from your unit through the transducer. The sound pulses detect the bottom, fish, trees, etc. and this information is returned to the unit where it presents a display.
Sonar success: High power transmitter

- Efficient transducer - properly installed
- Sensitive receiver
- High resolution/contrast display
- The display of almost all units is in color.
TRANSDUCERS – A PRIMER

• Transducers: 50 kHz; 83 kHz; 200 kHz; 455 kHz:
• 200 kHz works fine on Lanier. (Helpful Hint: Using the transducer while it is out of the water will shorten its life.)
• Transducer: 50 kHz works well in deep saltwater.
• Transducers: Cone angles. The 200 kHz generally has a 20 degree cone angle – the shape is more elliptical than conical.
Chart for a 200 kHz, 20 Degree Transducer:

- CONE ANGLE
- DEPTH - FEET | DIAMETER – 20 DEGREES
  - 50          | 18 Feet
  - 100         | 35 Feet
  - 150         | 53 Feet
  - 200         | 71 Feet

- Rule of Thumb: To determine the approximate diameter for 200 kHz, divide depth by three.
- General Rule: higher frequencies are better suited for more shallow water.
SONAR – INTERPRETING DISPLAYS
• During the summer, photo plankton and other microorganisms will be on the surface during the early morning hours.

• This helps to explain why fishermen see schools of Threadfin Shad on the surface early in the morning during the summer. The Threads are feasting on the plankton.

• Note: Threads thrive and reproduce in warm water.

SONAR & DOWN IMAGING DISPLAY

Water Temperature: 83 Degrees F.
Month: July
Time: 7:00 A.M.

PLANKTON

Surface

Depth

100 Ft.
• During the summer, photo plankton and other microorganisms will be on the surface during the early morning hours. However, as the Sun casts its light on the water, plankton and microorganisms find their way to 30 to 40 feet where they many times appear as fish on your Display! The Display and Down Imaging can be very deceiving because in many cases your units are reporting arches. With its food source now at or near a thermocline, Threads usually retreat to deeper water.
During the warmest periods of summer in the morning, you will find Threadfin Shad on the surface feasting on plankton and micro-organisms. Some plankton is sensitive to light; therefore, Threads will follow these small critters to greater depths as more light is emitted on the water.

SONAR & DOWN IMAGING DISPLAY

THREADFIN SHAD

Water Temperature: 83 Degrees F.
Month: August
Time: 6:30 A.M.

Plankton – Black & Yellow
Threadfin Shad – Yellow and Red
During the fall and spring, Threadfin Shad can be found in shallow to fairly deep water – remember that they thrive best in warm water temperature – above 50 degrees F.
During the coldest periods of winter, Threadfin Shad are prime targets for Striped Bass as well as Spotted Bass. The Threads are very sensitive to water temperatures and will always seek the warmest water temperatures available to them. Because the Threads are a favorite for Stripers, it’s always a good idea to fish around them. However, your fishing method(s) (Boards, Down Lines, Flat Lines) should be influenced by the depth of the Threads.
• While Blueback Herring thrive in cold water, they are susceptible to death should water temperatures fall to 44 degrees F. With water temperatures in the range of 45 to 50 in the winter your display will show them as a thin horizontal band – usually red in color.
• Blueback Herring thrive in cold water. During the summer a thermocline forms on the lake around 32 feet or so. Translation— the water form the surface to 32 fee is too warm for them to be comfortable. So during this time you will find them in a deeper depth. Regarding their display, look for inverted “V”s.
SONAR DISPLAY – FISH
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SONAR DISPLAY – FISH
DOWN AND SIDE IMAGING: WHAT IS IT AND DO YOU NEED IT

- Benefits of Imaging: Down and side imaging or down scan/side scan encompass a very narrow beam, both straight down and side-to-side – this contrasts with the traditional transducer which provides for the traditional cone shape.

- The result: a much more detailed display image. Also, the imaging transducer operates at a higher frequency, which generally results in greater resolution.
Can down and side imaging be a part of a large unit that also has sonar and charting features? Yes, as a matter of fact, this seems to be the current trend.
When turned on and your boat is traveling 2.5 mph or higher, down imaging is extremely effective in the identification of submerged structure such as trees and brush piles. On the other hand, if you are using Spot Lock or a similar feature and there is very little boat movement, down scan is not very effective.
Down Imaging – A form of confirmation. Yep, down imaging confirms what your sonar picture is reporting or not reporting. On many days your down imaging will display both fish and bait that your sonar unit failed to report!
Side Imaging – uses the same transducer. In some cases, images may be captured 240 feet on either or both sides of the boat. Excellent fish-finding tool.
Do I need Imaging? Yes, if the cost is within your fishing budget, I recommend the purchase. Why? Imaging detects both bait and fish which some sonar may not always display. It also confirms fish, trees, and structure and in many cases clearly reports a tree while the sonar display could easily be interpreted to be fish!
Example of Down Imaging
SUMMARY: LET’S WRAP UP THIS PRESENTATION WITH AN INTERACTIVE DISCUSSION.
APPLICATION CRITERIA:

- Time of the year: July 30  
  Weekday

- Where: Six Mile Creek  
  Sunrise to 2:00 P.M.

- Water temperature at Six Mile #10 at sunrise: 85  
  Water temperature at Six Mile #1 at 1:00 PM: 83

- Wind: Light and variable  
  Full

- Weather: Bright Sun with very few clouds. High of 92 F.  
  Barometric Pressure: Steady

- Weather forecast for July 31: Same as July 30

- On July 29 you started at Six Mile #10 and caught two Stripers. After 10:00 AM, you had some difficulty finding more fish in Six Mile.

- What tools do you have available? Charting, Sonar, Imaging?

- Questions: Where will you start your search? Why? What tools will you use?
For your use and information, see copy of map of Six Mile.