

JUST TOYS OR GREAT LOOP NECESSARY

To some, modern Electronics are necessary navigation instruments while to others they are simply toys that few owners know how to use.

When equipping a boat to do the America's Great Loop Cruise, some of the often asked questions amongst the dreamers are: "Do I really need a GPS (global positioning system), a big unit or will a hand held unit do? Do I really need a Chart Plotter to help with the navigation or is a Lap Top Computer with navigation software and computer charts a better way to go? Is Radar really needed or just another gadget to impress ones friends with? What do I really need and what can I do without and still be safe?

First let's go back to the BASICS of Dead Reckoning Navigation within sight of land. What is needed are:

(1) A very good Ships Compass which has been properly calibrated for the boat and the helm location. The compass adjuster or skipper should also prepare a detailed Deviation Table (at least every 5 to 10 degrees) for the compass as this information (compass deviation) changes with the direction of the vessel. Probably fewer than 5 percent of boaters have a deviation table or even know how to convert a True Course on their chart to Magnetic Course and then to the Compass Course to be steered. *However, traveling at 7 knots per hour, each 5 degrees of error can result in your being over a 1/3 mile off course every hour (in 23 hours -- Carabelle to Tarpon Springs FL -- that amounts to being almost 8 nautical miles away from your destination point).*

(2) A good set of Plotting Tools consisting of a clear plastic Course Plotter, set of Parallel Rules, Dividers, sharp Pencils, a good Calculator (with extra batteries), and a very good Stop Watch to record hours, minutes and seconds, are absolute musts for accurate course plotting. Standard course labeling for course routes on the charts should always be used so that all who maintain a watch at the helm or help with navigation know what course(s) to steer.

(3) Up to date NOAA Paper Charts are preferred over many of the more economical chart books which do not always allow for gunk holing or finding a quiet anchorage off the main channel for the night. Whenever possible, download the Notices to Mariners at: <http://www.navcen.uscg.gov/lnm/default.htm> or check with marina operators, lock masters, etc. for up to date local information.

(4) A good ships Cruising Log should be maintained. Exact locations or fixes should be marked on the charts, entering data when there is a course change or at least every hour. As buoys or other landmarks are passed they should be checked off on the charts. When passing a major landmark such as a bridge, lock, town, etc. mark down the time it was passed and the speed being traveled or made good. Note, even if you do not have a GPS to give you an accurate speed, you can use

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the Distance between buoys or other landmarks (taken from your chart) and the Time it took to go from one to the other to calculate your Speed over the Ground using the formula: $60D=ST$.

(5) A good depth finder is also part of the essential equipment. Calibrate it by using a lead line to make sure that shallow depth readings are accurate. The depth finder is also useful as a navigational tool to follow contour lines on a chart and when going off the main channel.

(6) Binoculars - It has been said many times in various ways, but it is true. The best navigational aids on any boat are two sets of eyes looking forward! A lot of dead heads, crab traps, shoals, missed buoys, failure to make course changes could have been avoided by the second set of eyes. For the Great Loop, give at least one set of eyes the benefit of a good pair of self adjusting 10 power binoculars - they are worth every penny spent on them. Self adjusting so anyone can pick them up and quickly see clearly without having to change focus each time.

That's all you really NEED to get the job done. That and taking the time each night to plot your course for the next day and double check your math.

Now what about those expensive "toys"!! Are they necessary, are they time savers, do they provide greater safety, are they worth the investment? You decide!

Remember that most boaters only put about 50 to 100 hours on their engines a year. At 6 to 8 knots per hour, that amounts to between 300 and 800 miles cruising a year. Likewise, most boaters typically have not ventured more than a couple hundred miles away from their home port. The America's Great Loop Cruise is usually somewhere between 5,000 to 8,000 statute miles depending on the route taken. *Therefore, the Great Loop may well be the equivalent of 8 to 16 years of normal boating in just a year or a couple of boating seasons. It also means that over 95 percent of the Loop will typically be in unfamiliar waters and some that beyond the sight of land.*

If you think that we are laying a foundation for spending thousands of dollars on expensive electronic equipment, we are not. That is precisely why we started out with the basics of manual Dead Reckoning Navigation and recommend that one learn, practice and master the basics and manual methods FIRST. Then you will be prepared to advance to the electronic navigation tools and learn, practice and master their use.

(A) GPS -- far too many experienced boaters have a GPS, but can not enter way points and use it properly. We purchased two hand held units and mounted them both on our helm. One was used by the helmsman and was linked to the Computer Navigation system. The other was located by the navigator for way points and ships log information. Having two units also gave us a backup if one failed (and it did in the middle of Lake Erie in a fog).

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(B) Chart Plotters vs Computer Navigation. This is really a personal preference or choice issue as both have their benefits and limitations. Most Chart Plotters have the GPS built in, are compact and require less helm space. The downsides are if one function goes they both go, and in most cases the number of individual chips for the Great Loop are much more expensive. We opted to go with Computer Navigation with Nobeltec Visual Navigation Suite software (The CAPN software is also very good), and CD Charts by Soft Chart International (USA) and NDI (Canada). Note: SoftCharts International and the CAPN were bought by MAPTECH (Spring 2006) who now offer two software packages, Chart Navigator Pro or The CAPN, each with charts of all the U.S. coastal and most of the inland waterways included. <www.maptech.com/products/index.cfm>. The Laptop Computer can be used for other purposes such as keeping a diary or log, Email, storing digital photos, etc. The screen size is larger, the computer can be moved from the helm and taken to the salon or dinette for planning the next day's cruise.

(C) Extra VHF Radios - We found that having two VHF radios at the helm was a definite plus. We kept one tuned to Ch. 16 (an FCC requirement) and the other to the lock masters, towboat, marina or other local channel. Since we have a raised bridge cruiser we installed a third unit in the galley / salon area. The extra unit on the helm was a handheld which also could be used with the dinghy.

(D) Radar - far too many of the boaters who have Radar don't know how to read the blips and tell the difference between them - is it a big ship or a storm squall, is it a buoy or a small boat? At night, when a fog rolls in unexpectedly or a storm squall comes out of nowhere, radar is a very valuable tool. Keep in mind that the more range the unit has, the greater its ability to punch through a storm to the other side so you can determine how long you will have to wait for it to pass by you.

The cost of even the most expensive electronic navigation equipment rarely exceeds the cost of the boat's running gear (prop, shaft, skeg, and rudder). For the Great Loop, such equipment is an inexpensive insurance policy and worth the peace of mind that you have equipped yourselves to meet the challenges ahead the best you could. But, and it's a big but, you must study, learn and practice how to use these devices or they will really be a waste of money and give a false sense of security.

We would like to close this article by paraphrasing the late "Skipper Bob" who often said: "If you can afford it, then you positively need it". But, remember that even as accurate and dependable as electronics are today, they are "secondary" to the basics which should always be first and foremost.

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