

CHARTPLOTTERS

In today's world a chartplotter is the useful pieces of electronics that a boat owner can have on his craft. They are now very affordable dependant on what your requirement is. The screens on the displays have improved drastically over the last few years with bright sunlight viewable color screens the norm.

In this issue we would like to cover the basic functions and features of chartplotters to help you make an informed decision on purchase of a unit.

A basic chartplotter consists of a display which will have a chip loaded in it to display the charts of the area you are boating in and connected to a GPS receiver showing the position of your boat on the screen. Therefore you will know where you are as you watch your boat traveling across the chart on the display.

NOTE: A chartplotter is and aid to navigation and should not be your sole method of navigation. Electronic failure or loss of GPS signal can leave you in a bad situation.

Considerations before Purchasing a Chartplotter

There are many manufactures of chartplotters on the market. Therefore we have to look at what we really need to compare units prior to purchase.

Budget

Since units can range from \$500.00 up to thousands of dollars we have to look at how much we are willing to spend and what features we require.

Size of Boat

We have to look at the size of the boat. One unit may be fine for a smaller single station boat but not suitable for a larger craft. If you have multiple stations then you will need displays that are capable of being connected together or networked.

Display Size

The display size is important. It is always best to get the largest display you can afford and have the room to mount it. You will want to be

able to view the details displayed on the screen. Too small a screen is difficult to see, especially if you require glasses.

Present and Future Requirements

How long are you going to keep the boat and what are your future plans? Do you plan to expand the system? Most chartplotters today are multi functional displays and features such as fish finders and radar can be added.

Basic Chartplotter

A basic chartplotter will consist of a display and a GPS (Global Position Satellite) receiver. Most GPS, s now are WAAS (Wide Area Augmentation System) which provides position corrections from satellites to provide position accuracy of one meter or less. The unit will require an electronic chart which will have all the navigation charts loaded on it for a specific area. Many different sizes of chartplotters are available. Handheld units are available suitable for canoes and small boats. Most permanent mounted displays have screens ranging from 3 to 12 inches in size. Sunlight viewable screens are becoming the norm. These screens are super bright and can be viewed with no problem in direct sun.

Chartplotter Functions

The following functions are available on most chartplotters.

- With an electronic chart loaded in the unit and GPS connected we will see our boat icon displayed on the screen. When under way we will be able watch our progress and the boat icon will move relative to our position on the chart. We can zoom in to get more chart information and detail or out to view more area on the chart. All the buoys and navigation aids will be displayed on the chart as well as all detail found on a paper chart.
- **Go To Cursor.** This is a nice feature to use. You can move your cursor ahead of the boat to a location you want to navigate to. You activate this by pressing the “go to key” and a line will be drawn on the chart from your present location to the cursor. The latitude and longitude and distance to the cursor will be displayed. Ensuring the line is in safe water to navigate in you can steer your boat on this line to the waypoint location. As you proceed it will show you heading, speed and time to go. This is a great feature in limited visibility or navigating to a buoy that you cannot see.

- **Routes and Waypoints** is a feature that allows us to build a navigation routes to a destination. Most units will store 50 routes and 200 waypoints or more. To build a route we can move the cursor along the chart and at each point that we want change or alter our course we enter a waypoint. For example you may want to go from Midland to Killarny. You can create a route with as many waypoints as you require to arrive there. When your route is completed you will see a line drawn to each waypoint. Ensuring that the lines in the route are all in safe navigable water you can now follow the route. As you approach a waypoint an arrival alarm will sound to warn you that you are approaching a waypoint and have to alter course. If you are returning on the same route the unit will have a method to reverse route and you can follow it back. Each route can be named and stored. You will have a route list in the unit which gives the details of all the waypoint of the route
- **Find Places** is a feature that will allow you to find marinas and places of interest. If you need to get fuel, you can open the find marinas list. All the marinas near you will be shown on a list. Clicking on one of the marinas will show you all the facilities they have and then you can enter and the unit will bring up the marina on the chart and show you where it is located, distance and bearing to the marina.
- **Marks** is a feature that allows you to create a mark on your chart of specific places you want to return to. For example you favorite fishing spots. You can choose an icon such as a fish for this. You may want to mark down an anchorage you found and use an icon for that.

These are just some of the basic features found with many more available.

Additional Features

Most chartplotters to day are multifunctional and can be used to display much more than just a navigation chart. We now have split screen capabilities that allows up to 4 different applications to be displayed at the same time. Dependant on what product you purchase you can display any of the following in addition to the navigation charts.

Radar can be connected on some units and radar overlay is available. This allows the radar image to be displayed overtop of your charts. This is a nice feature that makes picking up targets easier. This requires a fast heading sensor.

AIS Receivers are available to display AIS information. This allows you to receive the position identification of commercial craft which have AIS transmitters.

Fishfinders Blackbox fishfinders are available with transducers ranging from 600 watts to 2000 watts. You can get very high definition fish finding capabilities and excellent detail of the bottom structure. Also speed and temperature can be added

Cameras Some units have video inputs which allow you to install cameras in different locations on the boat. You can have reverse image back up cameras, engine room infa red, night vision and any application you can imagine.

Television SVGA inputs and outputs allow you to connect to a TV and you can watch TV on the navigation screen or watch the navigation screen on your TV.

Engine and Other Boat Data NMEA 2000 which is a whole topic in itself allows us to display any information from any NMEA 2000 equipment on the boat. You can now have your full engine gauge data displayed.

VHF Chartplotters are available with built in VHF which are nice for a boat with limited space.

SELECTING A UNIT

- The first thing we have to do is to look at all the features that we require. No use purchasing a unit if we do not want or intend to use the capabilities of the unit. For single station Standard Horizon is an example of what is available www.standardhorizon.com There are also many other manufactures units available.
- Do you have multiple stations? Certain units are standalone units only. Other units have multiple screen capabilities that allow as many units as required to be interconnected and share information and inputs. The following websites are great for researching info Furuno www.furuno.com , www.raymarine.com and www.simradusa.com.
- What electronic charts are required or you prefer. C-Map www.c-map.com and Navionics www.navionics.com are the most common and offer many features.

- What size of screen do you need? For large screens computerized systems are available with sunlight viewable screens, fast processors and seamless integration charts. The following websites are informative. www.nauticomp.com and www.nobletec.com
- What method of information sharing. Are they NMEA 2000 compatible?
- Are you doing a lot of traveling? Does the supplier have a network of service depots and certified technicians?
- There are many suppliers of chartplotters on the market and constant changes happening. Personal research is the only way to find what suit your needs. Websites mentioned are all related to the products shown.

Good luck on your new chartplotter and happy boating.