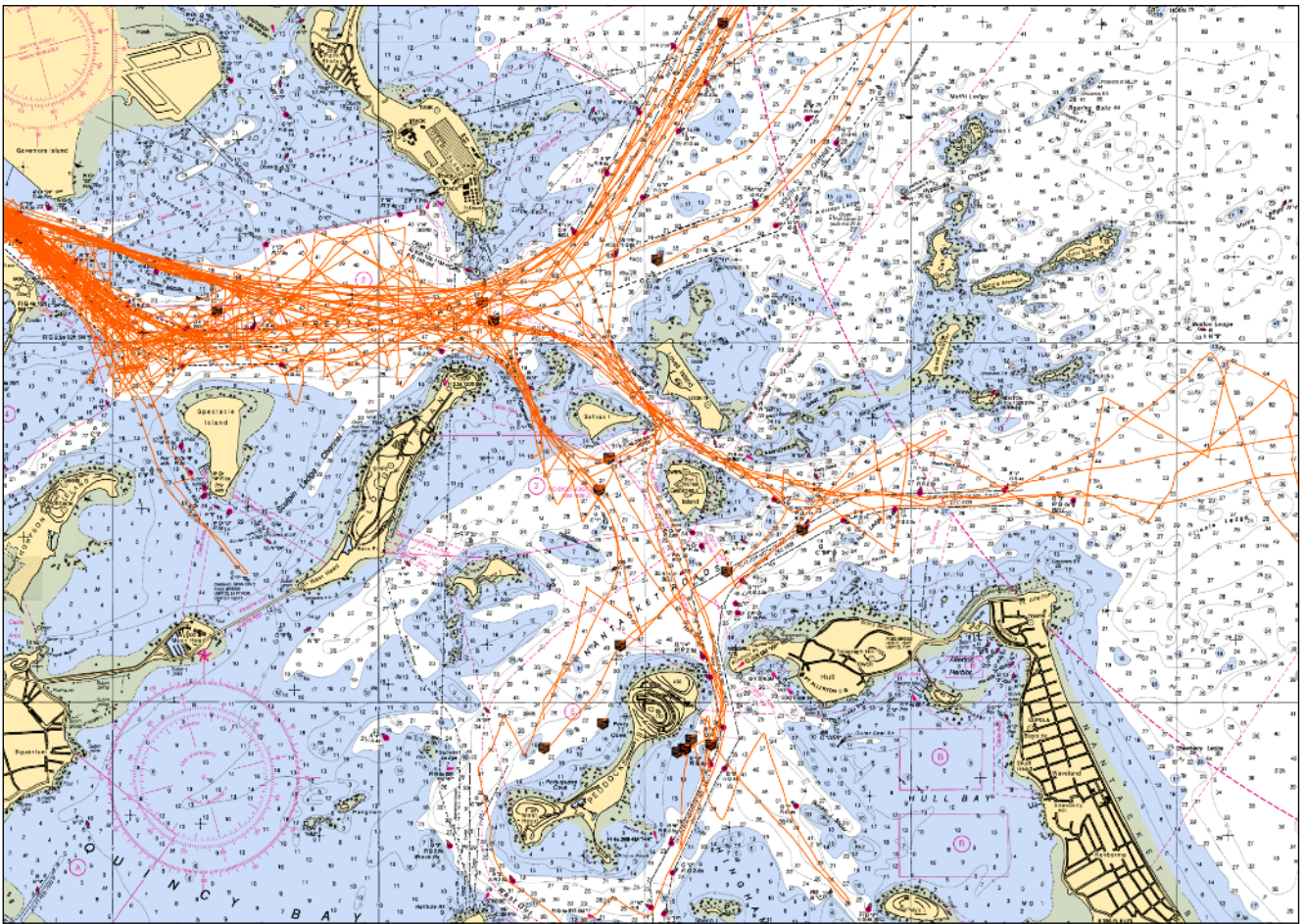

Your Handheld, Self-Contained Navigation Station

Android Edition

TJ - January 12, 2018



An Ounce of Prevention is Worth a Pound of Cure

Navigation is the art of keeping your vessel clear of trouble while getting where you're going. At sea, navigation is your ounce of prevention.

These days the tools available for navigation are portable, inexpensive and make keeping out of trouble easier than ever - but only if you prepare correctly. With the right inexpensive upgrades your smartphone becomes a handheld navigating dynamo. This guide will get you the tools you'll need whether you're a beginner navigator or an expert looking for an edge.

How to use this guide

This guide is best followed from on the device you intend to use for navigation. All of the app links should take you directly to the Google Play app store so you can simply click install. Where available I have provided the links to the free trial version so that you can try before you buy.

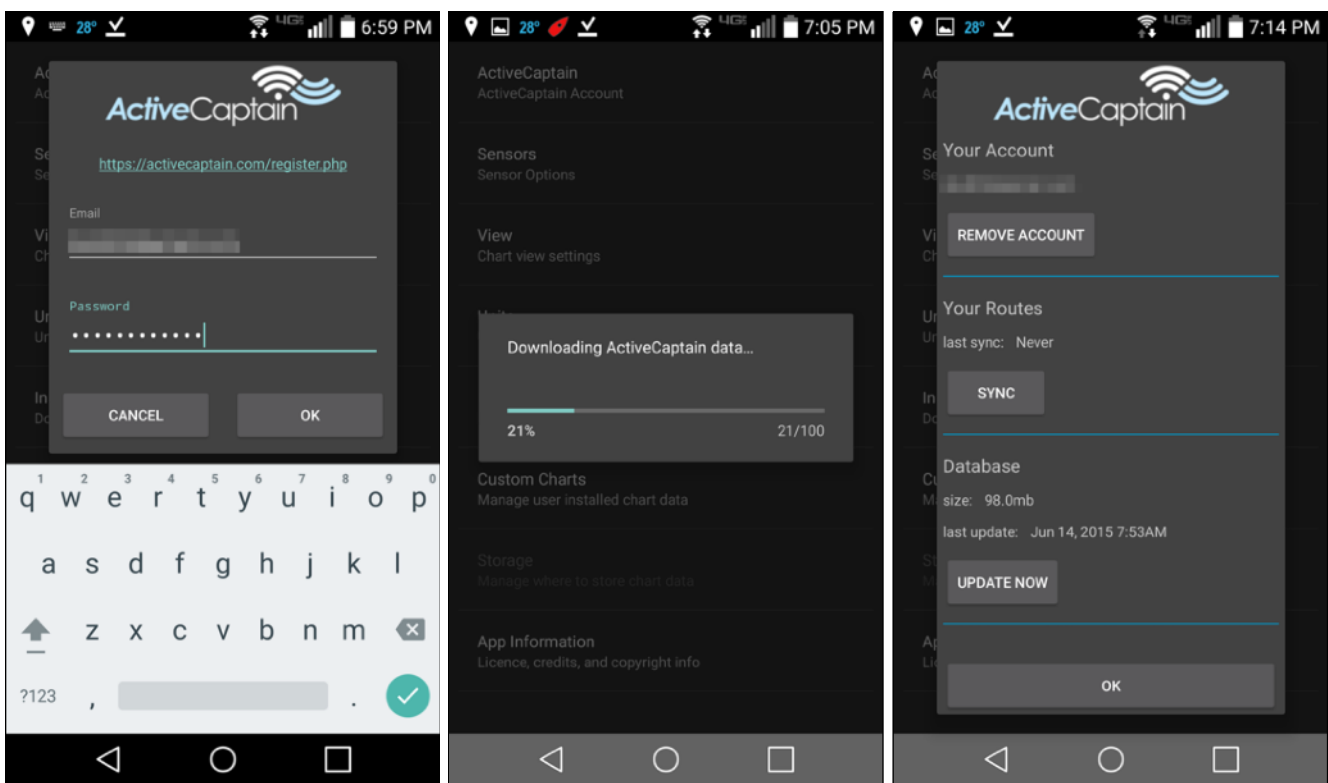
The apps and data that you'll download using this guide could use multiple gigabytes of data. You should connect to Wi-Fi unless you're lucky enough to have an unlimited plan; and even so Wi-Fi will likely be faster. The downloads will still take a while.

If you're in a rush look for [the blue](#) links. Clicking the links and downloading the apps will get you most of what you need; in addition to that make sure you download the charts that you need.

Chartplotter App Selection

The most important navigation app is your chartplotter app.

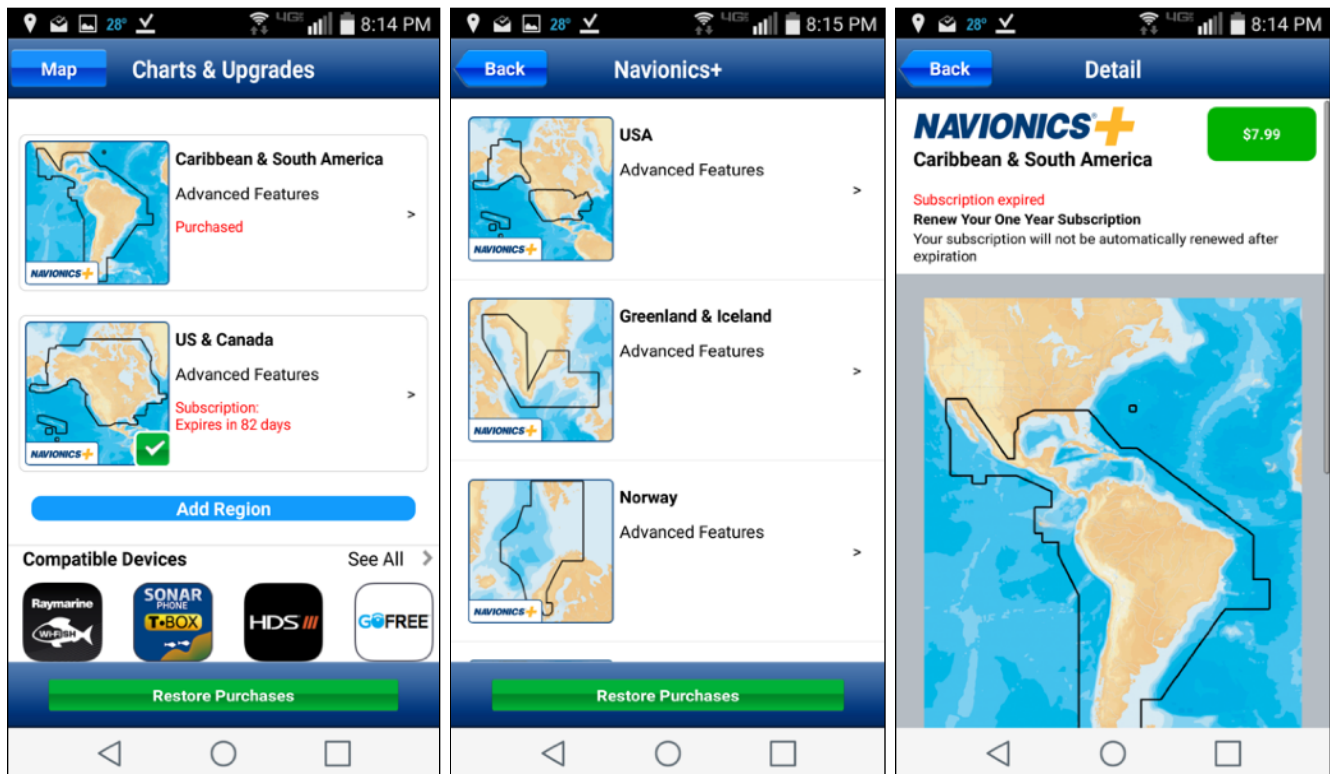
My favorite chartplotter app by far is MX Mariner - \$9.99 - [download here](#). I suggest you go with MX Mariner and link it to an ActiveCaptain database. This database is a great supplemental addition to the charts. I've often found the free ActiveCaptain information more useful and up to date than the information found in expensive cruising guides. You can create an ActiveCaptain [account here](#) for free. Then you download the ActiveCaptain database through the app at "Settings > ActiveCaptain Account:"



If you want to get a feel for MxMariner before you buy check out [this 3 minute demo](#).

I also have the Navionics app; for areas that aren't covered by MX Mariner and for tide and current information. For your phone you'll need the standard version of Navionics (*free - [download here](#)*). The free Navionics apps have some features and data but they're not suitable for navigation unless you subscribe to some of the chart regions. You purchase them in-app:

[This three minute video introduction](#) demonstrates the most important features of Navionics.



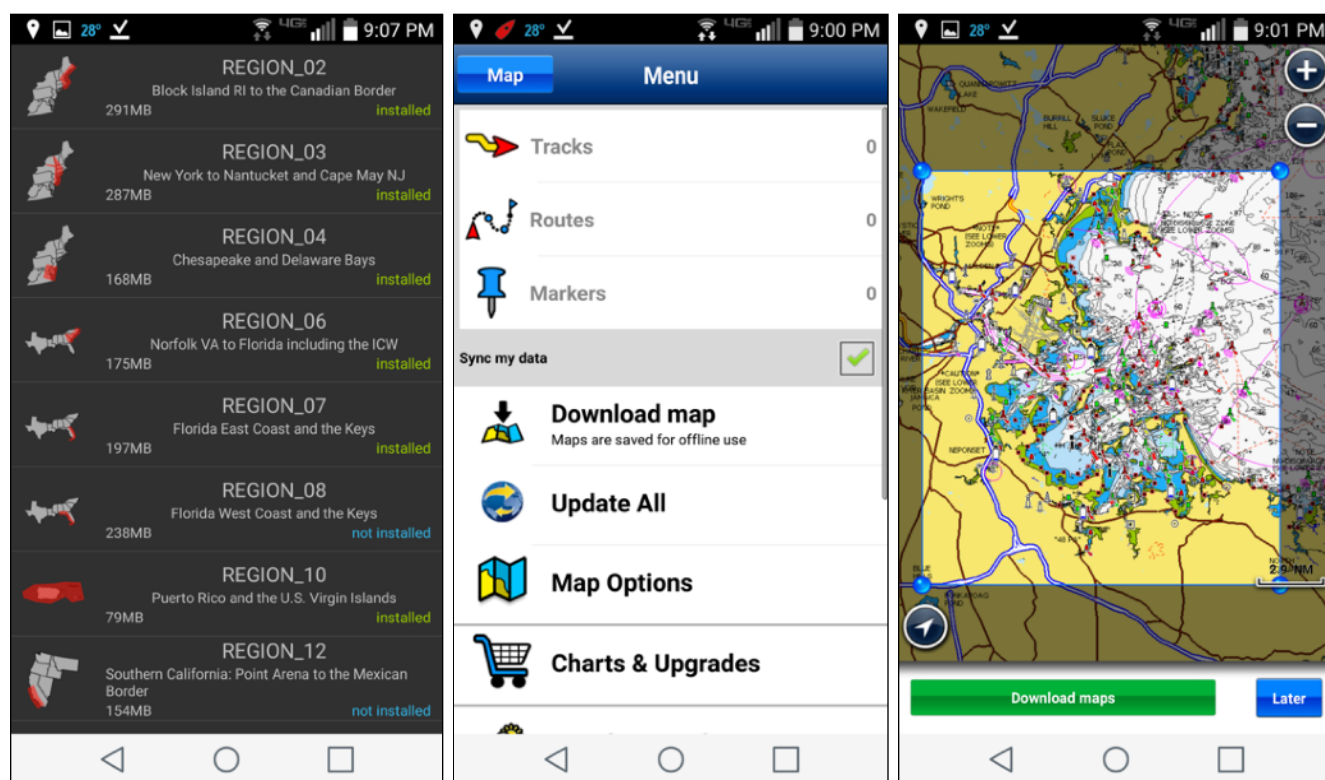
The in-app purchases of the “standard” edition will be cheaper than the “HD” version. The prices change too; the last time I bought the “Caribbean & South America” it cost \$14.99 not \$7.99 so, fortunately, they’re not always going up.

Chartplotter Chart Downloads

The chartplotter apps can't be relied upon for navigation without downloading charts to your phone or tablet's local storage. Download charts for the areas that you'll be sailing.

Download charts for areas that you'll pass by while sailing. Download charts for any areas that you could possibly have to divert to while sailing. **MAKE SURE THESE CHARTS ARE DOWNLOADED** and not just accessible while your phone is connected to the network. Mr. Safety likes redundancy so I downloaded the US East coast charts in Navionics as well.

In MX Mariner you can find the charts under "Settings > Install Chart Regions." In Navionics you have to select the region you want downloaded. Go to "Menu > Download Map" and select the area of the charts you want downloaded.



Between these two chartplotter apps I've always had up to date charts on my phone since I got started navigating; I use MX Mariner whenever I can, Navionics everywhere else and often both if it doesn't cost extra money. *The best way to check if the charts are downloaded is to put your device into airplane mode and review the charts and anchorages within the areas you think you downloaded.* Be sure to zoom as far in as you can.

Other Apps and Utilities

Download an app that has tide information. I use Navionics for this. The other app that I liked for tides is now discontinued; there are dozens of options.

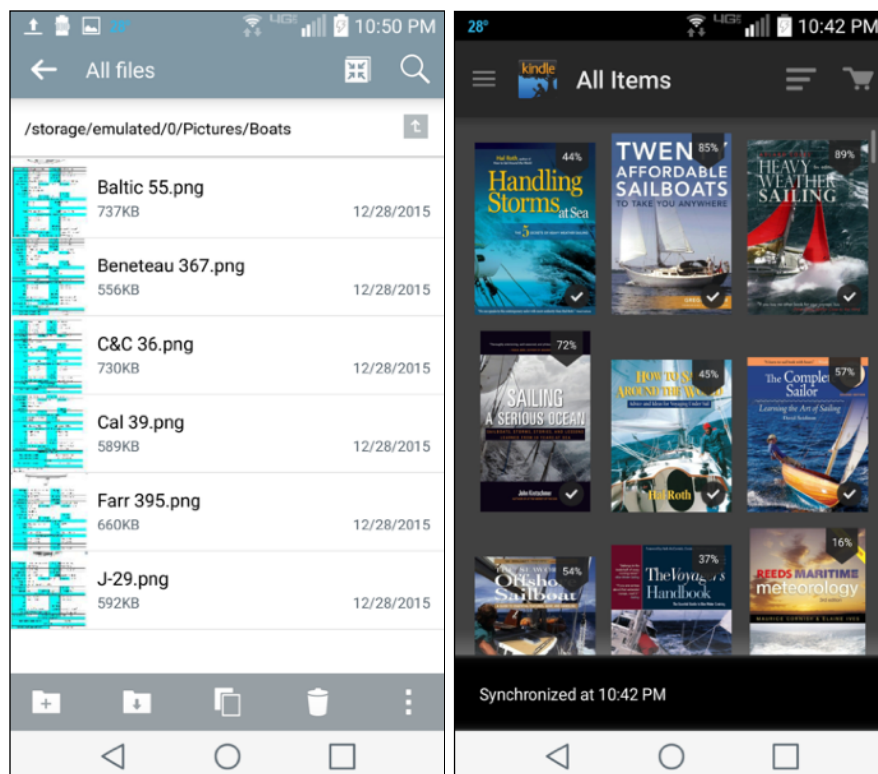
[Download NOAA Chart One \(SavvySalt cached copy\)](#) so you'll always have a way to figure out what the squiggles on the charts mean.

[Download this Cheat Sheet of Rules of the Road and Navigation Lights \(SavvySalt cached copy\)](#). (Lights and Rights.pdf)

[Download the Coast Guard App](#). There's no reason not to have this available.

[Download a flashlight app](#) if you don't have one already. I absolutely had to get one after my first offshore delivery; it's immensely useful to usually have a flashlight in your pocket.

Make sure you know how to use your phone's calculator. I recommend [RealCalc](#) which goes beyond a basic calculator.

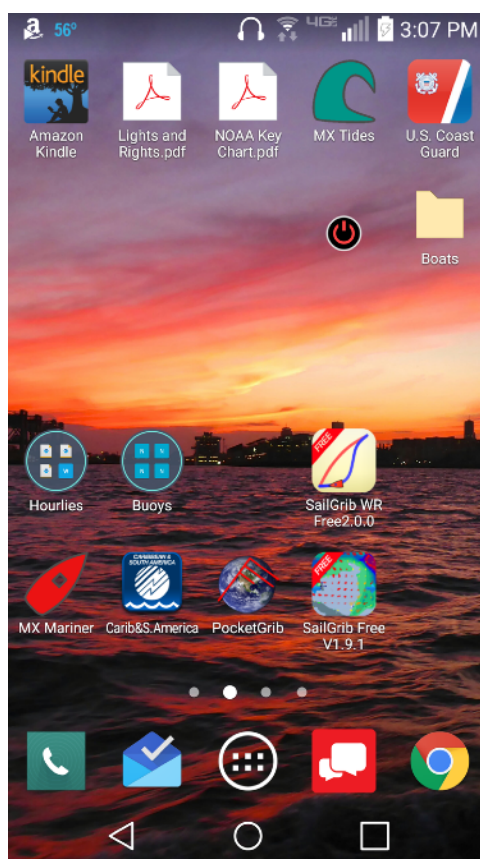


If you have any sailing E-books download them to your phone. Local copies of your sailing books could come in handy out there.

Take a screenshot of your boat's key dimensions from it's sailboatdata.com page. I have screenshots for every boat I sail on regularly in one folder. Take them on your phone so they fit the screen just right when you need them.

If you sail offshore where you don't have access to other weather apps you should download a GRIB app. I am enamored with SailGrib WR; I use it for all of my offshore passages. You can get a feel for SailGrib using the *free* [trial weather app](#). You have to work at it a bit to get wave estimates using SailGrib (use model WW3 Global: NOAA Global) but it is a powerful and reliable tool once you get it figured out.

At this point you've got a lot of resources that can be used for navigation and more. This is much more than I can remember so I setup a home screen on my phone with everything I just collected so that, someday when I'm in a rough spot, if the solution happens to be on my phone it's right in front of me.



Preserving your Handheld Chartplotter

Disadvantages of using your phone as a chartplotter are that you can drop it, lose it overboard, ruin it with saltwater or run out of batteries. Fortunately there are ways to ameliorate these problems:

- Start with a waterproof rugged case. I have [this guy](#) which I've taken snorkeling without leaks; the lanyard makes it difficult to drop your phone.
- Get a [DC adapter](#) and a [cord](#) that will work onboard. If you chose white or black it's really easy for somebody else to accidentally think it's theirs.
- Get a [backup charging pack](#) or two.
- If you're paranoid get a [portable solar panel](#); this was very useful back when I adventured on boats without batteries.

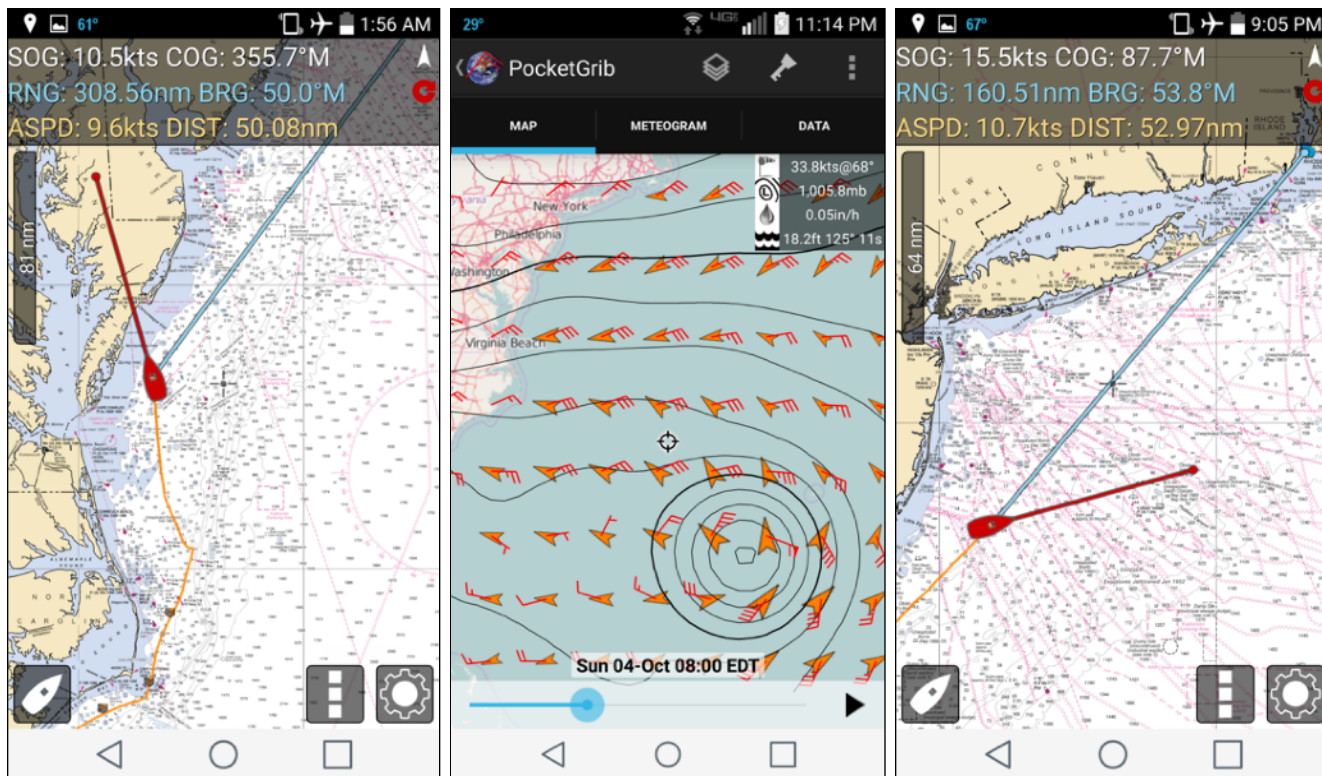
Your backup backup handheld, self-powered, waterproof navigation station

Do you have an old smartphone? With a wifi connection and the steps above you can turn this old phone into a backup backup chartplotter. Does Mr. Safety bring a backup backup chartplotter? You bet I do!

If you're super paranoid store your backup backup chartplotter in a [faraday cage](#).

Wrap-up

Your phone now has more navigation capability and data than all but the most well appointed onboard navigation stations. You have the necessary equipment and data to keep your vessel clear of trouble during the trip in the palm of your hand. As you start to become proficient with these tools you're on your way to being a savvy navigator!



Sometimes my phone is even useful as a camera

