



Chartplotters and Pilotage

Paul Glatzel tries to steer us through the various navigation options available today and create a realistic and practical way to navigate when close to shore.

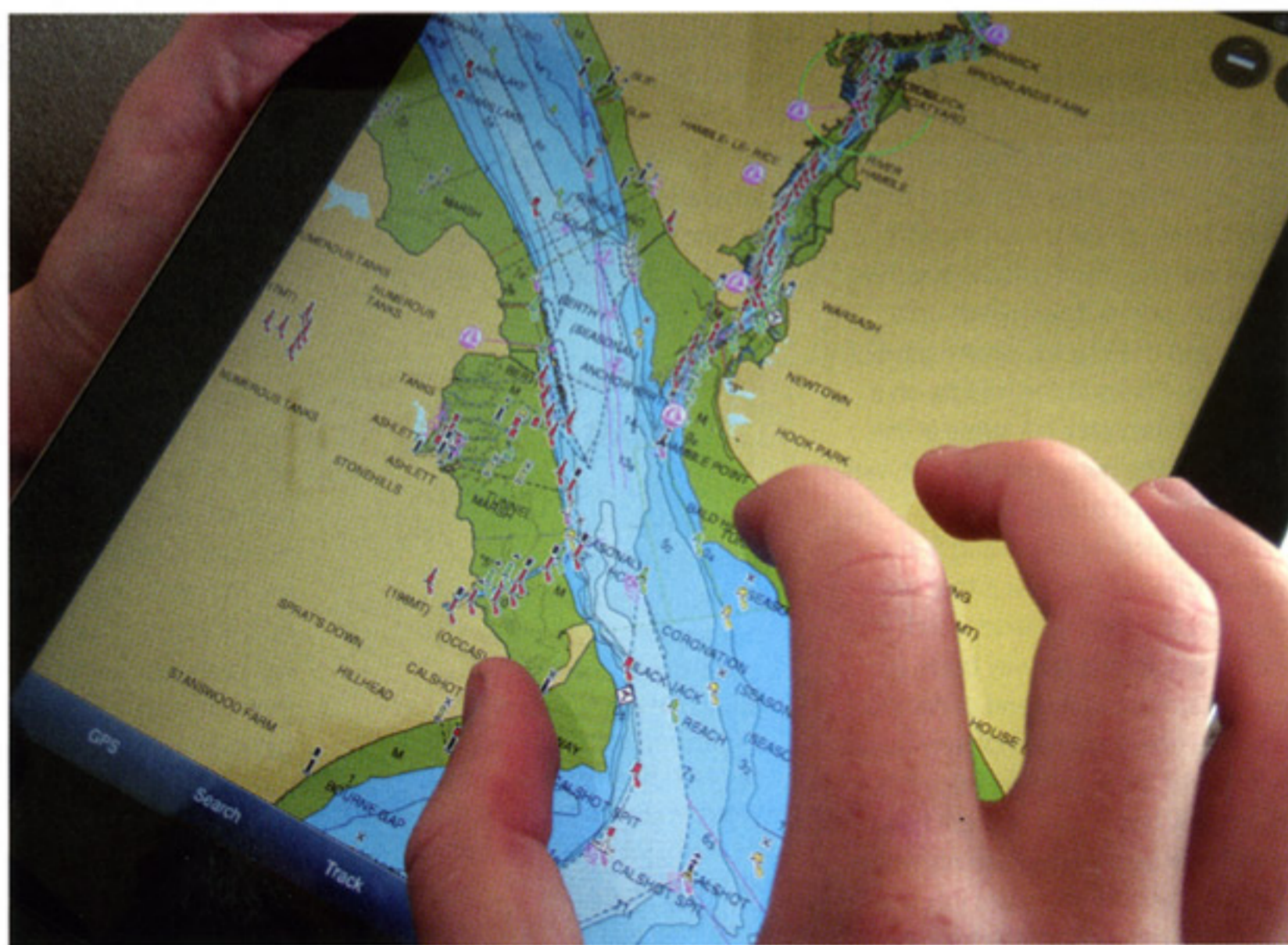
Just about every other discussion on a Web forum nowadays concerns using iPads or Android-based tablets for navigation or looks at the merits of Imray or Navionics apps on tablets or phones.

Without doubt this is a really fast-changing area and one where the products and options are evolving by the day. Ignoring at the moment the specifics of tablets versus installed chartplotters or the Apple IOS vs Android system, in what way should you be using these tools to navigate close to shore, perhaps into a harbour or estuary? Should you be using a plotter or ignoring it in favour of paper charts and traditional techniques?

First, though, some background which may influence our thinking. Traditional navigation techniques or electronic navigation? While there may be some boaters and instructors who favour a purely paper-based approach, the reality is that navigation today completely embraces the use of chartplotters, and the RYA have long since held this view. The question, though, is whether your navigation should be based exclusively around your chartplotter or utilise a range of techniques.

The answer is that the best, safest navigators utilise a range of techniques embracing the use of their chartplotter coupled to other methods that we could call 'traditional techniques'. This integrated approach is best referred to simply as 'navigation'!

So what is the issue with relying exclusively on a chartplotter? There is nothing wrong with chartplotters at all, and indeed I use them every day when navigating from place to place. The issue is that as boaters we should never rely simply on one method as it could fail – and indeed will tend to at the most inopportune moment. Good navigation is about mixing a range of techniques so that we have 'backups'



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and 'fail-safes'. It is no different from having the backup of another boat with you on a longer passage, or a small outboard in case your main engine fails – they are insurance policies.

Let's consider navigating into a harbour that you haven't been to before. Like many harbours there are likely to be narrow channels, lots of buoyage and shallow areas outside the channels. So what are the risks with using a plotter alone to enter our harbour? i) GPS/

chartplotter error – just like when your car satnav shows you driving through the house 100m to your left, our chartplotters go wrong just as often. It is harder to notice, though. ii) The electronic charts in our plotters are getting better and better but are more likely to have errors than a paper chart. (Just read the disclaimer you agree to as it loads!) iii) If you drive focusing on the plotter your head is down and you tend to keep a less good lookout.

So what is the solution? Definitely switch the plotter on and have it set up so you can watch your boat track through the harbour. However, before you enter the harbour (actually before you go out that day), draw up a plan of the entry, noting key points, buoyage, headings and distances.

Look at the little plan we have for just one part of the harbour. You will see us using various techniques:

Depth – The chart shows the channel is at least 3m deep, so including the tide (say 2m) we should see about 5m on our depth gauge. If it starts to get less than 5m we are outside the channel.

Heading – Our steering compass on the boat should read about 290°M as we progress along the channel.

Distance and time – From the cardinal mark to the turn is about half a mile. We've noted how long this will take at various speeds.

Transit – There is a really useful transit which makes the first part of the channel easy to navigate. Staying on the transit keeps us perfectly in the channel.

Back bearing – We've worked out the back bearing to the cardinal behind us. If we keep on this back bearing we won't be pushed off course by tide or wind. We will need a hand-bearing compass to use this technique.

Buoys – We've noted the buoys that we will pass as we head along the channel. We can tick these off as we pass them.

As you can see we now have a plan that we have produced from our chart. Drawing it out is quick and helps us remember some of the key points as we come into the harbour.

We can follow our little map (our 'pilotage plan') into the harbour and glance across to our chartplotter to check our position.

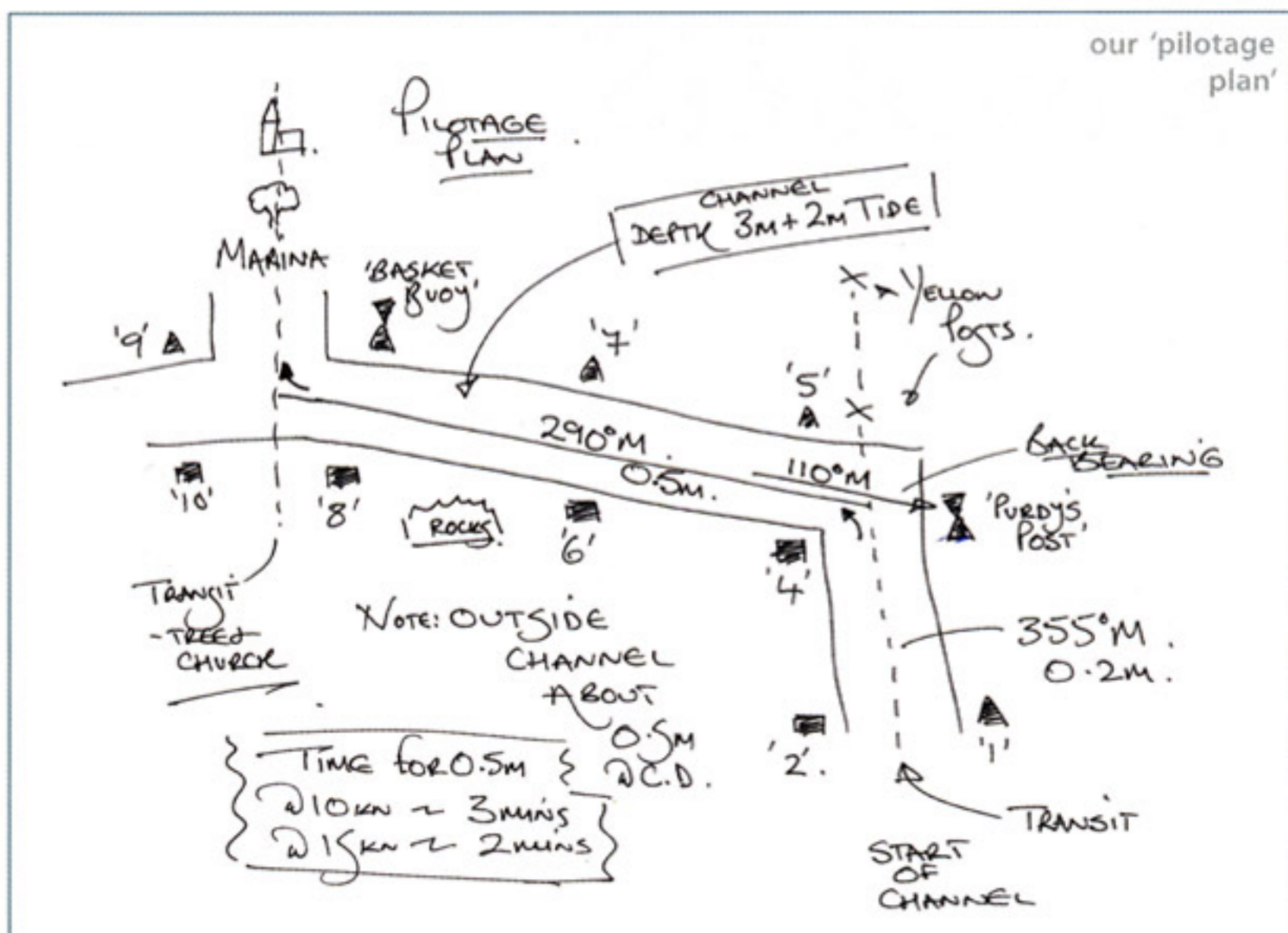
Working as a team on board, we have someone keeping an eye on the depth gauge, someone watching the plotter and everyone keeping a good lookout.

We have a few techniques in use in our plan and we won't need all of them, but they are simple and do the job.

So there is no doubt that a chartplotter plays a key role in navigating, but what are the pros and cons of using a tablet/smartphone as the plotter?

There are plenty of waterproof cases and mounts now available, so attaching your device to the console/boat is no longer really an issue. Those tablets with 3G typically have a GPS chip, so they no longer need a separate GPS unit, therefore there is no question that they have become a very realistic option as a large screen plotter even on smaller craft.

In terms of a smartphone, the screen is



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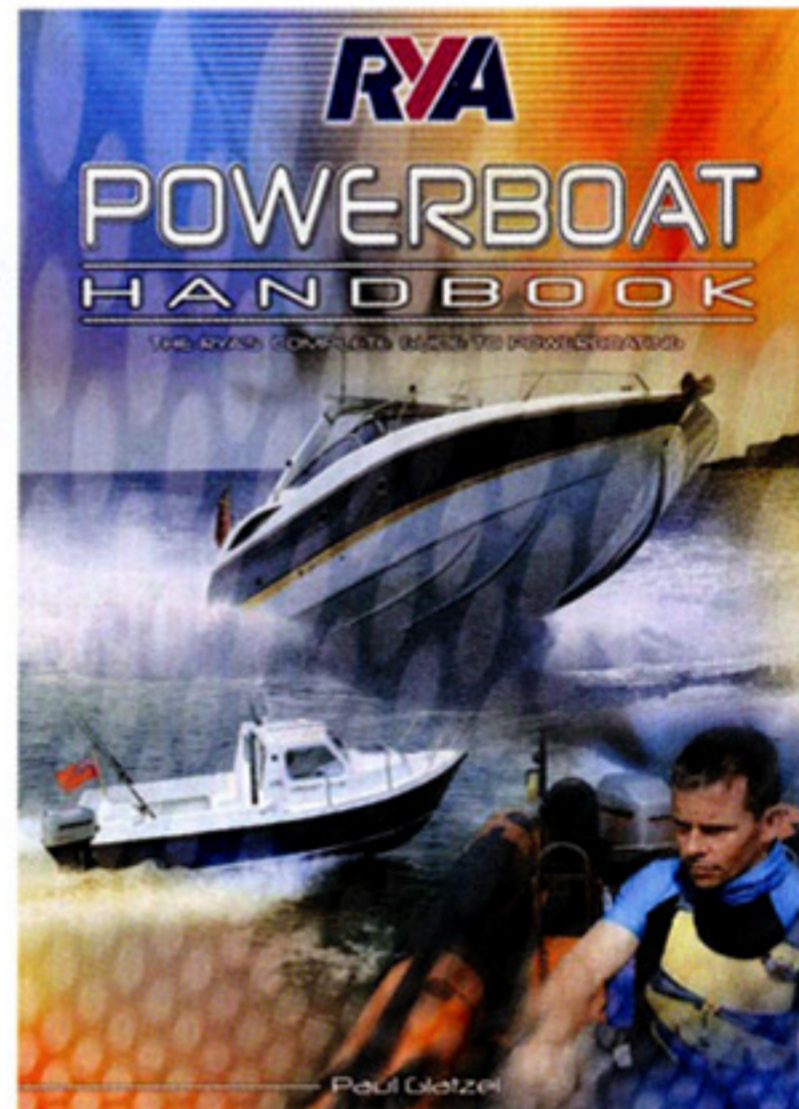
small, but then so too are some of the smaller chartplotters. In reality a small screen makes it pretty tough to navigate, so realistically a phone is probably only an extra resource rather than the centrepiece of your navigational tool kit. A tablet computer is obviously a different matter as the screen is far larger, and the ability to rapidly scroll in and out on the tablet and move the chart around is a real bonus. Not having a dedicated boat-based plotter isn't really an option to my mind, but there are plenty available for only a few hundred pounds, making a mix of a tablet and a fixed unit viable.

And if you are in the market to choose a new plotter?

For me, the ideal solution is to use the tablet-based plotter as a planning tool and then use Wi-Fi to transfer your waypoints and routes to your dedicated boat-based chartplotter – this is all available already on some plotters from Raymarine and works a treat!

In summary, I hope that I have made the case for not solely using a chartplotter for close inshore navigation and that you will use it alongside a pilotage plan. In terms of tablets and smartphones, you should definitely use them, but the benefit of a dedicated chartplotter on your boat used alongside a tablet is the way forward, not least because the tablet cannot be integrated for distress purposes to the VHF and is not yet as waterproof and robust as a dedicated unit.

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The RYA Powerboat Handbook contains many more useful insights into how to make handling your boat a whole lot easier. It is available for £15.50 from the RYA website or Amazon. It will also soon be available as an e-book using the RYA app.