Many mariners use charts that have been ‘remanufactured’ for use in chart plotters. However, they are all marked as ‘Not For Navigation’ or ‘Aid to Navigation’ in the user agreement, so you need to know their limitations in order to take advantage of their features.

Which charts are the official ones?
The official charts are those published by the Australian Hydrographic Office (AHO). Paper charts covering Australian, Papua New Guinea and Australian Antarctic Territory waters have “Aus” ahead of the chart number in the corners. Paper charts covering Solomon Islands waters have “SLB” ahead of the chart number in the corners. Official electronic charts are distributed primarily within Australia under the AusENC service. ENC covering Australian, Papua New Guinea and Australian Antarctic Territory waters have chart numbers prefixed with “AU” whereas ENC covering Solomon Islands have chart numbers prefixed with “SB”. Each official chart results from months of painstaking work to ensure they are as accurate as possible, and all are covered by a fortnightly update service.

In contrast, a number of companies are licensed to reproduce content from the official charts for use in smaller chart plotters. These ‘unofficial’ charts are not considered suitable for safe navigation by either the Commonwealth or the manufacturer. While the manufacturer may claim they contain additional data to meet specific purposes, these claims must be considered carefully as much of this additional data, particularly where it claims to show additional seabed detail, has previously been rejected by the AHO as unfit for use for safe navigation.

Do I need to carry an official chart?

‘ASOLARE’, a $1.7M yacht, was destroyed when it hit Moore Reef in 2008. The reef was missing from the unofficial chart. Other instances of dangers missing from unofficial charts have been reported.
Most commercial vessels over 12m in length, irrespective of State of registration, are required to use official charts. For recreational users it is recommended good practice when going off-shore or in unfamiliar areas.

**Why should I be cautious using unofficial charts?**

‘Unofficial’ electronic charts are tailored products – while they are extremely popular, and many recreational mariners use them without incident, they are not intended to support safety of navigation. This is clearly stated in each product’s user agreement.

This is because unofficial charts occasionally omit key features, while almost all omit the quality indicators that permit mariners to assess how close they should pass to a feature. Finally, charts are living documents – navigation aids move and change, while the seabed in many areas is dynamic. Adhering to a frequent update cycle is therefore more important than when using a land map, where any changes, such as street signs, are easily visible ahead.

**How should electronic charts be used in conjunction with paper charts?**

To address these issues, there are a few practices worth following:

- Firstly, carry a copy of the official chart, even if only for reference.

- Make sure your official chart is up to date, or at least the current edition. To do this, see Chapter 4 of the *Australian Chart & Publication Maintenance Handbook*. The handbook is available as a free download from the AHO website under “Products and Services” then “Publications”.

- Step through your unofficial charts before commencing your day trip or each leg of your planned voyage. Compare them to the official ones, then note any differences. In particular, note any areas shown as poorly surveyed or unsurveyed on the official charts - the unofficial ones frequently (and incorrectly) gloss over these areas in the interests of appearance and marketing. If there really is reliable survey data in these areas, the official charts will include it.

- Make sure your GPS is set to display position in relation to the WGS84 mapping system. Most electronic charts, whether official or unofficial, are referenced to this datum. However, if your position appears out by around 200 metres, generally in a north-east to south-west direction, then your chart and GPS have a compatibility problem and you will need to apply the datum shift yourself. For further information, see the *AHO Fact Sheet – GPS Receivers and Chart Datums*.

- Keep a good lookout, particularly in any unfamiliar area. Slow down in shallow areas so that your stopping or turning distance is less than the distance at which you can potentially see any submerged obstruction ahead. Remember, visibility of reefs and other obstructions at night is effectively non-existent.

- Finally, compared to the cost of supplies for even a short cruise, an official chart is cheap. When compared to the cost of replacing an expensive yacht, it’s an absolute bargain.