

## Chat #11 Electronic Basics:

Following are several items to consider when planning a cruise, and the electronic and paper-based assets available to assist you in this task:

### 1. Plan route; plot courses & waypoints

- a. Deck Logbook planning notes
- b. PDF paper charts
  - i. No longer updated by NOAA
  - ii. Available as NOAA historical charts (out-of-date)
- c. NOAA ENC Database
  - i. Displayed as an interactive marine chart
  - ii. Design configuration of NavAids system
  - iii. International symbols used
  - iv. Temporary changes not shown
- d. NOAA NCC
  - i. NOAA online custom chart tool
  - ii. USCG symbols
  - iii. Mariner selects area and detail level
  - iv. Create a PDF Chart; 8.5x11 up to 42x60
  - v. Print PDF chart (Staples and others)
  - vi. Temporary changes not shown
- e. USCG Light List
  - i. Annual online
  - ii. Weekly online
  - iii. Annual hard copy (Amazon and others)
  - iv. Temporary changes not shown
- f. NOAA Coast Pilot
  - i. Cruising guide
  - ii. Annual online
  - iii. Annual hard copy (Amazon and others)

- g. Temporary changes including
  - i. NavAids
  - ii. Restrictions
  - iii. Channels
  - iv. Dredges
  - v. Obstructions
  - vi. Events
  - vii. Rocket launches
  - viii. Military operations
- h. USCG Notices show temporary changes
  - i. LNM
  - ii. BNM
  - iii. MSIB
  - iv. VHF
  - v. Subscription service via email
  - vi. RSS feed
- i. USCG MSI App shows
  - i. Design configuration and temporary changes
  - ii. Discrepancies such as buoy light extinguished
  - iii. Discrepancy corrections
  - iv. Updated a few times per hour
  - v. USCG Notices (as above)
  - vi. Federal and private NavAids
  - vii. Bridge detail
  - viii. Advance notice of future changes
  - ix. Marine construction projects
  - x. Several additional sub-layers
  - xi. Provides printable lists of your selection
- j. MFD- Multi Function Plotter

## 2. Tracking route progress

- a. Ondeck observations and lookout
- b. MFD chart plotter
  - i. GPS Waypoints
  - ii. Course lines
  - iii. Boat position
  - iv. Times; distances; speed
  - v. AIS
    - 1. Other vessels course, speed, CPA
    - 2. AIS NavAids- Physical, Virtual & Synthetic
    - 3. AIS MOB device
  - vi. Radar
    - 1. Collision avoidance
    - 2. Storm tracking
    - 3. RACONS on NavAids
- c. Paper charts
  - i. Planned route, courses, waypoints, distances
  - ii. Channels, depths, shoals, bridges, obstructions
- d. Deck Logbook planning notes
  - i. Courses, waypoints, distances
  - ii. NavAids
  - iii. Cautions and restrictions
  - iv. USCG Notices
  - v. USCG MSI

### 3. Chart Plotters

- a. OpenCPN
  - i. Download free program
  - ii. Windows, Mac & others; not iPad
  - iii. Directly uses free NOAA ENC charts
  - iv. Uses various other electronic charts
  - v. Plot routes, set waypoints, displays boat location, etc
- b. Coastal Explorer
  - i. Purchase program; about \$400 for 3 computers
  - ii. Windows, iPad & Android
  - iii. Mac with Windows App
  - iv. Directly uses free NOAA ENC charts
  - v. Uses various other electronic charts
  - vi. Plot routes, set waypoints, displays boat location, etc
- c. Garmin MFD
  - i. Purchase Garmin proprietary charts
  - ii. Does not directly use NOAA ENC charts
  - iii. Plot routes, set waypoints, displays boat location, etc
  - iv. AI says that NOAA ENC charts can be used after conversion to GPX file
- d. Navionics on mobile device
  - i. Proprietary charts
  - ii. Updateable but updates are suspect
- e. Other MFDs
  - i. Furuno
  - ii. Simrad
  - iii. Lowrance
  - iv. Raymarine
  - v. Many others

#### 4. Weather forecasts

- a. NOAA online
- b. Commercial online
- c. Weather Bureau online
- d. VHF
- e. Sirius XM
- f. On-deck observations
- g. Radar observations