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**SAFETRX**
*Tracking you home safely*



**7**
**SAR AUTHORITIES ALERTED**

**5** **CELL SIGNAL RESTORED**

**B** **FAILURE TO CLOSE SAIL PLAN**

**A** **SUCCESSFULLY CLOSES SAIL PLAN ON COMPLETION**

**4** **IF CELL SIGNAL LOST**

**6**

**3** **TRACKING BEGINS**

**2** **LAUNCHES SAFETRX**

**1** **BOATER REGISTERS**

# Search & Rescue – SafeTrx, CG66 and all that

**The old CG66 tracking system allowed you tell the UK Coastguard where you were going so they could check if anything went wrong. It has now been replaced by RYA SafeTrx. RATS assesses the advantages and disadvantages of the new system**

In July 2018 the Maritime and Coastguard Agency announced that the voluntary safety information scheme known as CG66 (after the form that owners completed) was nearing the end of its life. Existing data about vessels, owners and shore contacts will be retained on the old system for two years, until July 2020.

The replacement system is RYA SafeTrx. This aims to provide a similar Search and Rescue (SAR) database to the CG66 scheme with the added advantage of extra methods of adding data and of communication. The system is managed by the RYA but open to all boat users – you don't have to be an RYA member.

## Data entry

Details of vessels, their communications and safety equipment and of emergency contacts are entered in one of two ways. The first is by using the RYA SafeTrx website at safetrx.rya.org.uk. You must register to enter data. The website also has some useful, customisable checklists

covering Sail Plan (for a voyage), Season Start and Winter Storage. These are pre-populated with items (eg search for and plot potential alternative ports; consult relevant pilots and nautical charts; check weather forecast for destination area) that can be selected or not, to produce a personalised list by vessel. At the time of testing the Export function for these lists was not working.

The second way to enter data is by using the RYA SafeTrx App. This is available on Apple iPhones and iPads with iOS 8.0 or later and on Android phones with Android OS 4.2 and above. It is not available on Windows phones or Android tablets. RYA SafeTrx is based on SafeTrx developed by 8 West Consulting and licensed by them to various SAR authorities around the world. We discussed these platform limitations with 8 West Consulting who told us that they had decided not to offer the product on Windows phones due to their declining market share or on Android tablets

as the app is primarily intended for smartphones and a decision had been made not to develop the specific tablet layouts required on Android.

Even with an Android tablet or windows phone it is possible to enter data into RYA SafeTrx using the website at safetrx.rya.org.uk. However, the tracking and reporting functions will not be available.

Entry of a vessel's details into RYA SafeTrx supersedes any information on the SAR database entered by CG66. There is no requirement for existing users to remove or update their data in CG66, but you can remove your information from the existing CG66 database by emailing: CG66.Enquiries@mcga.gov.uk

## Communication & positioning

The RYA SafeTrx app uses wireless broadband and the device's mobile connection to communicate and GPS to determine its location. Note that wireless-only Apple iPads (ones which cannot take a SIM or make a cellular connection) do

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## SafeTrx – Pros
- Straightforward data entry by web or app.
- In appropriate circumstances Sail Plan mode tracks vessel with automated reporting.
- Non-core functions (Track Only, Divers Down, Emergency Call button).

## SafeTrx – Cons
- Apart from data entry, not intended for use by cruisers.
- No app for Windows phones or Android tablets.
- Over-strict timing stipulations. Danger of shore contact being advised vessel is overdue when only 30 minutes late.
- Sail Plan and Track Only mode are dependent on mobile coverage and battery power.
- Potential heavy battery drain.

not have built in GPS, and in any case a cellular connection is required to operate the app.

To begin vessel tracking over a voyage using the app, you touch Sail Plan mode, then enter an Estimated Time of Arrival (ETA), a destination and optional waypoint and then touch Set Sail. RYA SafeTrx then tracks your vessel and sends your position to the RYA SafeTrx server at five-minute intervals. If your device loses signal the app continues to store position data and transmits it as soon as it recovers signal.

If the app fails to report its safe arrival by the logged ETA, the system sends an escalating series of SMS messages, initially to the boater but culminating 30 minutes after the logged ETA in an SMS to the designated emergency contact telling them to contact the vessel and, if they are unable to do so, to contact HM Coastguard to initiate SAR. The 30 minutes permitted late arrival is fixed. While this may be appropriate for a two or three hour passage it seems inappropriately short for a 12 or 24 hour passage. We think this time span should be user configurable. As a workaround where a greater margin of error in the

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mca Maritime and Coastguard Agency

(If possible, please enclose a photograph of your ve...)
Alternatively, this form can be completed online at www.mcg...
DETAILS OF VESSEL  (PLEASE PRINT IN BLOCK CAPITALS THROUGHOUT IF COMPLE...
Name _____ Callsign _____
Small Ships Registration No. _____ Length (m) _____

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ETA is desired, the ETA could be made later than planned. For example: if a cruise plan has an ETA of 1600 the RYA SafeTrx ETA could be entered as 1700; this will give a margin of error of 90 minutes before the system's SMS is sent to the emergency contact.

The other problem with automatic overdue notifications is that, for the system to work, the device must be able to communicate once it reaches its destination. If there is no communication then the escalating series of SMS will be initiated and RYA SafeTrx will message your emergency contact to advise them to call the coastguard. You need to be certain that you will have an internet connection and a powered up device at your destination before implementing a SafeTrx Sail Plan. Otherwise you may find you have been reported overdue.

Ofcom's coverage checker is at: www.ofcom.org.uk/phones-telecoms-and-internet/advice/advice-for-consumers/advice/ofcom-checker and a coverage app can also be downloaded.

The RYA has pointed out that SafeTrx is not designed as a substitute for the Global Maritime Distress and Safety System (GMDSS) but rather supplements it by filling the gap between zero and GMDSS. It is aimed at those sailing locally. We're not sure that their publicity makes this sufficiently clear. The CG66 scheme was used extensively by cruisers. The fact that SafeTrx succeeds it leads, not unreasonably, to the assumption that it should be used as a whole, not just for initial data entry. This also means that cruisers should continue to report their voyages to the UK Coastguard by VHF. One of RATS' concerns is to lower the workload on HMCG so that they can concentrate on SAR. We think that RYA SafeTrx may have missed a trick here.

RYA SafeTrx has a Track Only mode, that records the vessel's position continuously or at intervals of every 5, 10 or 30 minutes (you choose) and transmits this at similar intervals to the RYA SafeTrx server. In Track Only mode, an SMS is only sent to emergency contacts when the device's battery falls below 10% of full charge.

We have some concerns about battery

drain. In operation the device may use considerable power in seeking to reach a possibly distant mast. In addition SafeTrx requires location services to be operating and consequently GPS to be turned on. All these factors may produce heavy battery drain so it is probably advisable to have the device on charge while in operation.

The app has adequate protections for low battery. In both Sail Plan and Track Only modes it ceases operation once the battery falls to 10% in order to preserve power for emergency calls.

The app also has some other functions such as sharing a location or trip with family and friends, a "Divers Down" function, an "Incident Photo" feature and an emergency call button. These may well be useful for some cruisers.

## RATS' view

Overall, and subject to the caveats below, **we think that RYA SafeTrx is only a moderate improvement on the outgoing CG66 scheme**. However, we strongly encourage all boat owners to at least register details of their vessel and its equipment. As we have said, this can be easily done at safetrx.rya.org.uk. Registration means that, if you are involved in an incident, the SAR authorities will have easy access to details of your vessel.

We are **less enthusiastic about the mobile app**. The fundamental problem is the current limitation on mobile coverage. The RNLI in their guidance on the use of mobile phones in SAR state that, although a mobile phone may be used as a means of notifying others of an emergency situation, it should only ever be considered as a secondary device. They highlight the limitations of battery life, one-way communications, waterproofing and the lack of universal coverage. All these limitations apply to SafeTrx. In particular we think that Sail Plan mode must be used judiciously and only when you are certain that you will have mobile coverage when you arrive at your destination.

**Robin Baron**