

GP14 Cruiser Training Course

Shore Session/s

Communications & Distress Signals

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Distress Signals

- **Three broad types**
 - **Electronic Distress Signals**
 - **Pyrotechnic Flares**
 - **Others**
 - **Last resort, for when nothing else is available, e.g.**
 - **Flames on vessel (!!)**
 - **Morse SOS, by any method**
 - **Slowly raising and lowering arms**
 - **Continuous sounding of any gun or fog signal apparatus**
 - **Etc.**

Distress Signals

- **Electronic Distress Signals**
 - The standard recommendation nowadays

Distress Signals

- **Pyrotechnic Flares**
 - Old and well proven technology
 - Distress only (plus white for collision avoidance)
- **Limitations / Problems**
 - May or may not be seen
 - May or may not be recognised even if seen
 - Very limited burn time
 - Potentially very dangerous
 - Only 3 year shelf life, then very expensive to replace
 - Major problems of disposal at end of life

Distress Signals

- **Pyrotechnic Flares - Problems**

- **May or may not be seen**

- Short burn time
- Pure chance whether anyone happens to be looking in the right direction
- ... and visibility may be impaired by weather - including low cloud

- **May or may not be recognised even if seen**

- Especially if only person to see it is a lay person

- **Very limited burn time**

- 1 to 3 minutes, depending on type of flare

- **Potentially very dangerous**

- Especially if flare malfunctions
 - Has happened even when well within date
- Fire / explosion / burns / shooting oneself; all possible - and all have happened!
 - Even with professionally trained and expert users!

- **Only 3 year shelf life, then very expensive to replace**

- **Major problems of disposal at end of life**

Distress Signals

- **Pyrotechnic Flares**

- **Problems**

- Distress only (plus white for collision avoidance)
 - May or may not be seen
 - May or may not be recognised even if seen
 - Very limited burn time
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 - Only 3 year shelf life, then very expensive to replace
 - Major problems of disposal at end of life

- **Electronic alternatives have many advantages!**

Distress Signals

- **Electronic alternatives have many advantages!**
 - **Potential for two-way communication**
 - So you then know when call has been received
 - And can discuss / liaise with Coastguard, etc.
 - **Relatively long transmitting time**
 - EPIRB at least 48 hours; PLB at least 24 hours
 - Handheld VHF radio typically several hours of two-way communication
 - Not just a couple of minutes
 - **No safety hazard**
 - (fire, explosion, burns, shooting oneself, etc)
 - **Indefinite lifetime**
 - No need to replace every three years
 - Just need periodic replacement of batteries
 - **No end of life disposal problems**

Communications, & Distress Signals

- By far the best 2-way short range communications system is a hand-held marine VHF.
 - Can be used for distress communications, but also for much else.
 - Ideally worn on the person; if you go MOB, a radio still in the boat may not be much help!
 - Entry level sets are currently around £60 (e.g. the cheapest of the Cobra range)
 - Market leaders are probably Icom (the professionals' choice) and Standard Horizon (cheaper than Icom, but still very good).
 - At the top end, modern sets offer a vast array of additional features, at a price.
 - You personally will need an Operating Licence, for which you will need the appropriate certificate.
 - Many sailing clubs offer courses for this qualification, or the RYA do an online course - but you still then need to do the examination.
 - You also need a separate licence for the set itself (Ship Portable Radio Licence); free if you apply online.

Communications, & Distress Signals

- **By far the best 2-way short range communications system is a hand-held marine VHF.**
- **Can be used for distress communications, but also for much else.**
 - **Port Control: Information on shipping movements**
 - **Port Control and Coastguard: Navigational warnings**
 - **Port Control and Coastguard: Weather forecasts**
 - **Liaison with Coastguard / harbours / (marinas)**
 - **Liaison with sailing club / escort boats / other dinghies in fleet**
 - **Etc., etc.**
 - **The standard means of short-range communication (up to a few miles between dinghies, up to 25 miles between boat and Coastguard)**

Communications, & Distress Signals

- By far the best (one-way) long-distance distress alert system is a Personal Locator Beacon (PLB) or an Electronic Position Indicating Radio Beacon (EPIRB).
 - PLBs are specifically designed to be worn on the person. EPIRBs are designed to be carried aboard the boat.
 - This is one-way only. Once activated it broadcasts a continual distress signal for at least 24 hours (for a PLB, 48 hours for an EPIRB) to a satellite, which is then forwarded to the appropriate rescue co-ordination centre.
 - It can take much longer to alert the authorities than calling the Coastguard direct on VHF, up to 2 hours (because it may have to wait for a satellite), but there is a guarantee that the signal will get through and that a rescue will be triggered.
 - An excellent back-up if you are out of range of VHF (unlikely in a dinghy), or in a VHF black-spot (which is entirely possible)

Communications, & Distress Signals

<u>VHF</u> Immediate, but not guaranteed	<u>PLB / EPIRB</u> Guaranteed, but not immediate
Two way	One way
Short range (Up to about 25 miles)	Long distance (World wide)
All communications	Distress only
Will <u>probably</u> be picked up	<u>Will definitely</u> be picked up
Immediate response, provided it is picked up at all	Can take up to 2 hours to raise the alert
Alerts all vessels within range	Alerts rescue authority only

Communications, & Distress Signals

- The RYA SAFE-TRX system
 - A smartphone app which monitors your boat journeys and alerts designated emergency contacts should you fail to arrive on time.
 - Runs your phone's GPS continuously, so potentially very heavy battery drain ...
 - ... so you may need a backup power source or a means of recharging battery onboard
 - Designed for small boat users, and particularly for those who don't carry VHF and PLB/EPIRB
 - Of limited use (perhaps no use) in areas of poor phone signal.
 - Potential for false alerts if you had signal when you set off but none on arrival.
 - Phone needs to be in water proof case at all times
 - Free to download, and free to use.
 - <https://www.rya.org.uk/knowledge-advice/safe-boating/keep-in-touch/Pages/safetrx.aspx>

NB: Second-best

Communications, & Distress Signals

- **Very much the poor relation; a mobile phone**

- **Absolutely must either be a waterproof model (which is a very rare beast, although they do exist) or be kept at all times in a waterproof case - even when in use.**
- **Mobile phones drown very rapidly when immersed !!!**
- **Conversations are intrinsically private - so other boat owners in your immediate area who may be in a position to assist don't get to know that you are in trouble.**
- **Signal coverage of coastal areas has improved in recent years, but it is still patchy.**

Communications, & Distress Signals

- The “Final Mile”

- When rescue asset is in sight, to enable them to find you.

- By Day:

- Liaise by radio, give them a bearing (if you have a compass), and make a visual signal -

- Orange smoke flare

- Hand-held red flare

- High intensity LED safety “flare”, such as ODEO, or (very much perhaps) cheaper non-marine alternatives

- Wave oar or paddle in the air (you will normally have one or other available).



Communications, & Distress Signals

- The “Final Mile”
 - When rescue asset is in sight, to enable them to find you.
 - By Night:
 - Liaise by radio, give them a bearing (if you have a compass), and make a visual signal -
 - Hand-held red flare
 - High intensity LED safety “flare”, such as ODEO, or (very much perhaps) cheaper non-marine alternatives
 - Powerful torch

Communications, & Distress Signals

- **The “Final Mile”**
 - **When rescue asset is in sight, to enable them to find you.**
 - **If you are MOB and separated from boat:**
 - **Liaise by radio; an excellent reason for wearing it on your person!**
 - **Wave an arm as near vertical as possible**
 - **Light on your buoyancy device**
 - **Personal day/night flare, carried permanently on your person.**

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