

13 ON SCENE COMMAND

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Overview

With the advent of more than one vessel involved in a SAR operation, there will be one vessel and its Skipper appointed by the IMT as On Scene Command. The On Scene command vessel will normally be the most appropriately equipped CRV, or the vessel with the most experienced Skipper and crew. Sometimes Police or Navy vessels will be appointed as On Scene Command.

This appointment should be clearly communicated to them, and to all the resources delegated to them. The On Scene Command (OSC) carries out the delegated responsibility of the IMT, communicating closely with them and co-ordinating with other vessels or aircraft at the scene.

On-Scene Command -Duties and Responsibilities

- Carrying out instructions given by the IMT.
- Managing and co-ordinating the on-scene response to the incident until 'stood down'.
- Advising the IMT of circumstances or scene conditions that may necessitate modifying the above instructions.
- Regularly updating the IMT with situation reports (sit-reps).
- Managing effective and appropriate communications with all resources.
- Appointing a Line Command when appropriate to co-ordinate multi-vessel search patterns. A Line Command is a vessel tasked to organise and control the search pattern (maintenance of speed and vessel spacing; regular appraisal of vessel status; sit-reps to On-Scene Command). Delegating this task will significantly reduce the workload of the On Scene Command and their crew.

On Scene Management

- Appraise the local conditions and incident status to provide a sit-rep to the IMT.
- Establish communications with and provide detailed briefing to all resources.
- Assess resources i.e. vessel type and status, in particular fuel duration, equipment available (radar, spotlights, night sights, first aid) and number/ specialist skills of crew.
- Task resources to best suit the demands of the incident.
- If appropriate delegate the responsibility for control of search vessels to a Line Command vessel
- Ensure all debris is retrieved and recorded, noting time, location and type. The IMT should be advised immediately whenever significant debris is found.
- Sit-reps to the IMT as requested, or at least at regular intervals, detailing weather conditions, incident progress, resource status (fuel state, mechanical problems and crew welfare) and prognosis.

Actions upon arriving at the incident:

- Assess the situation, including number and condition of persons in distress.
- Sit-rep to IMT.
- Carry out necessary action (tow, repair, evacuation, etc.).

Actions at conclusion of the incident:

- Sit-rep to IMT and request 'stand down'.
- Roll call of resources and confirm 'stand down'.
- Ensure that any emergency radio restrictions are lifted formally.

The above is a list of the On Scene Commands responsibilities, but how does the on scene command actually put them into practice?

Establishing communications with the other resources is the first step. Then the On Scene Command should assess the other resources as to their capabilities, and best use for them.

For the vast majority of Coastguard units around the country any multi vessel operation will probably include non Coastguard vessels, so it is vital that an accurate assessment is made of their capabilities, and they are adequately briefed on what is expected of them.

The most common type of operation in which an On Scene Command is appointed is in search operations. For the purposes of this module we will look at role of the On Scene Command in a multi vessel search.

Multi Vessel Searches

The following text lists the various components that may make up both the assessment & briefing of other resources. It may not be necessary to go through the whole list when a vessel joins the search as some of the information may not be relevant at that point.

If there are eight hours of daylight left, establishing whether a vessel has a searchlight(s) and briefing them on its use is hardly relevant, but it may become so later.

Assessment

Assessing the capabilities of another vessel in terms of its general size, speed, equipment carried and number of crew is usually fairly straight forward (in daylight at least). How you best use them is a different matter.

Requesting a shallow draft vessel to carry out a shore line search at night while the rest of the vessels are engaged in a creeping line search is all very well, but if the smaller vessel is only carrying one small hand torch rather than a decent searchlight it will be of limited use.

A large cabin cruiser with all the electronics you could wish for, but only two crew on board will have a limited capability in terms of effective visual observation.

Vessel's General Suitability (size, speed & draught)

The vessel's overall suitability for the prevailing conditions should be assessed, as should its possible use for different tasks, i.e. as a vessel to carry out a shore line search or act as ferry boat to bring out fresh crew and equipment. Any vessel tasked to go at a speed that will be uncomfortable for its crew is unlikely to be an effective resource in a search.

Number of Crew in (number of crew Coastguard trained)

The number of crew will have a direct bearing on the effectiveness of the vessel in a search, and the search pattern may need to be adapted to accommodate this. Any Coastguard trained crew must be considered a bonus – as they at least will be familiar with search operations. Lack of Coastguard crew means the On Scene Command must be especially careful to ensure briefings and instructions are clear and comprehensive. ***The numbers of crew on each vessel need not be fixed. If practical, and with the agreement of all concerned, crew can be transferred to other vessels to even up the numbers.***

Height of Eye for Observers (effective beam sighting distance)

The spacing between vessels in a visual search should be such that each vessel is effective. If the pattern is based just on the lowest height of eye available the full potential of vessels with a greater height of eye will be lost. A pattern based on the highest height of eye will obviously leave gaps in the search pattern for the smaller vessels. Using a standard distance between vessels may be easier to organise, but it may not be the best use of the resources available.

Endurance of Resource (time)

One basic thing to establish is how much fuel each resource has. As On Scene Command you don't really want to have to organise a tow home for one of your own resources, so an ongoing assessment of other vessels' status is important. It will give you time to think ahead as regards alterations to the search pattern if a vessel has to pull out, or give you time to arrange a replacement vessel.

This assessment of vessels endurance should not just be limited to fuel reserves but also to how much food, water and shelter there is on board. Does the crew have adequate clothing for an extended search at night or in deteriorating conditions?

Communications

The type - base unit or hand held. If the vessel only has a handheld, you will have to bear in mind its limited range and battery power. Some Coastguard units have UHF which should be used for communicating sensitive / private information. With private vessels assisting in the operation cell phone may be the only available alternative.

Navigation Instruments

As On Scene Command you may have overall responsibility for the management of other resources, but this doesn't relieve the Skipper of any other vessel from their responsibility to their vessel and crew. Any vessel involved in an operation is responsible for its own navigation and personal safety. It must be emphasised to other resources that any safety concerns should be reported to the OSC.

- **Compass** – many small vessels do not have a compass. Even if equipped the Skipper / crew may not be used to steering to a compass course. Instructing vessels of opportunity to turn to starboard or port (right or left may be more appropriate for some resources), and maintain their position in the search by reference to another vessel may be far more effective than giving compass courses to steer.
- **Echo Sounder** - A reliable echo / depth sounder or fish finder must be considered one of the most basic and essential of navigation aids.
- **GPS / Chart Plotter** - In the case of a vessel equipped with a chart plotter rather than just a basic GPS receiver or no GPS at all, they may be better suited to be on the 'outside edge' of a search pattern near any hazards.
- **Radar** - If a search is to use Radar then an assessment of each vessel's Radar capabilities must be made. The abilities of different Radar sets and the skill of their operators vary hugely. You may only be able to ask the Skipper of the vessel their opinion as to the effective range they would (not possibly could) detect an object of that size and type in the prevailing conditions. The vessel spacing should be set up accordingly.

Searchlights / Torches

Does the vessel have a searchlight(s) or suitable torches?

Recovery Equipment

Does the vessel have a boarding ladder / swimming platform? Is its free board suitable for recovery of persons in the water? Does it have any specialised recovery equipment?

First Aid Equipment / Training

Does the vessel carry any first aid equipment, and are any of its crew trained in first aid or have medical training?

Vessels may leave or new vessels join the search at different times. The role of On Scene Command may change to a different Skipper and crew (if they are replaced by fresh crew) or be assigned to a completely different CRV.

A checklist such as the one detailed below will help the On Scene Command to gather and most importantly, retain the relevant information for future reference.

VESSEL'S NAME		
Length		
Max speed (for conditions)		
Draught		
No of crew total		
No of crew Coastguard trained		
Sweep Width		
Estimate of fuel available (time)		
Supply of food /water		
Is crew clothing and shelter adequate		
VHF		
Cell phone number		
GPS		
Chart plotter		
Radar		
Sounder		
Searchlight/torches		
Recovery equipment		
First aid equipment		

With the information gathered, a plan of how to best utilise resources can be made, and the IMT kept informed. The IMT may not need or want every detail (such as which vessels have Radar and which don't). It is the On Scene Commanders job to organise and manage the vessels effectively.

What the IMT will need to be kept informed of is details relevant to the overall effectiveness of the search; in effect the tactical details i.e. Speed, course, Total Sweep Width / Total Track Spacing etc. The IMT must also be kept informed as to any subsequent changes to the tactical details, and any change in conditions – sea state, visibility etc.

Briefing

The other vessels briefing as to how the search is to be conducted must cover all the relevant information. A checklist of the information to be covered in any briefings will ensure that no important information is left out. Vessels may join the search at different times and use of a check list will ensure that every vessel receives the same information.

If conditions and time allow, going alongside the other vessels to conduct your assessment and briefing, may be preferable to just communicating on the radio. This will ensure that all the crew of the other vessels hear your briefing, and the On Scene Command has the opportunity to view the vessel and crew.

Avoid using 'Coastguard 'speak' or technical jargon in any briefing to vessels of opportunity - Keep it simple and concise.

Description of Target

All the relevant information concerning the object of the search should be relayed to the other vessels. Any updates on information should also be passed on.

Type of Search

The general pattern of the search, and each vessels position within the search should be explained. A copy of a search template (to show the general pattern) given to each vessel could be a useful aid.

On Scene Command

The role of On Scene Commander should be explained.

Line command

If a Line Command is appointed, their role should be explained.

Individual Skipper's Responsibility

It should be made clear that while the On Scene Command has responsibility for the operation as a whole; the Skipper of every vessel is still responsible for the safety of their vessel. It should be stressed that if the Skipper of another vessel has at any time doubts as to the safety or welfare of their crew during the operation, they should make this immediately clear to the On Scene Command.

Communication

VHF channels for communication and procedures established. Appropriate simplex channels for on-scene use; duplex for longer range and IMT communications.

It may be for example that a regular inter ship channel such a Ch 6 or 8 could be used for any communication within the search pattern, leaving the dedicated Coastguard frequency free for communications between CRVs and the IMT. Any vessels involved should be instructed to keep communications brief and to the point.

Observation

The other vessels must be briefed on how to carry out their observation, i.e. designated sectors, try to scan with the head not the eyes, etc. (See Module Observation Techniques)

Rotation of Observers / Crew

The need for rotation of observers should be explained. A set time for all vessels could be used, every ... minutes or at the end of each second leg of the search – whatever is appropriate.

Actions on Sighting Objects

If an object of interest is spotted by another vessel, then their initial actions must be made clear. For example;

- The crew member should alert the rest of the vessel, maintain eye contact with the object and have arm outstretched pointing at the object. The vessel that spots the object of interest is to immediately contact the OSC or Line Command and head towards the object.
- At this point the remaining vessels will slow down (enough to maintain steerage) and continue to hold their relative stations until told otherwise.
- Any vessel of opportunity that has sighted an object, is not to attempt recovery of debris or persons from the water, but must await instruction from the OSC or Line Command vessel.

Searchlights and Torches

In the case of a multi vessel search operation, care must be taken to ensure that everyone involved is fully aware of operational procedures at night, and that observers' night vision is not spoilt by inappropriate use of torches / searchlights.

Stopping and Listening

Cries for help or the blowing of a lifejacket whistle are likely to be hidden by your own vessels engine noise. If appropriate to the target and conditions, and especially at night, searches should be stopped periodically to listen.

Use of Radar

Depending on the Radar set, and also the operator's preference the display may be in a different mode (Head up, North up etc) to the Radar on the CRV. If any vessel reports a target of interest by range and bearing, then to avoid confusion you will have to know if the bearings are true, magnetic or relative. (See Module Observation Techniques)

Approx Speed of Search

The approx speed of the search should be established (all vessels will register a slightly different speed, either with a log or GPS), and it must be made clear that it is the On Scene Command or the Line Command vessel that sets the speed.

Maintaining Station (distance & course)

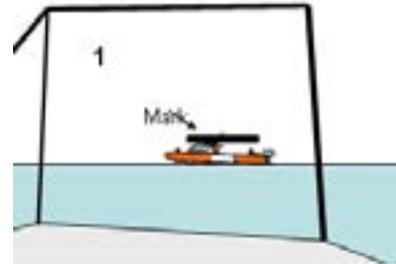
Every vessel's compass course will vary, and it is the On Scene Command or Line Commander that sets the course. What is vitally important is the spacing between each vessel and who to keep station on as reference.

Radar is a very effective for maintaining the correct spacing in a multi vessel search pattern. Using the Radars VRM (Variable Range Marker), one vessel either side can be tracked. With two VRMs available, a total of four vessels can be monitored on the one Radar.

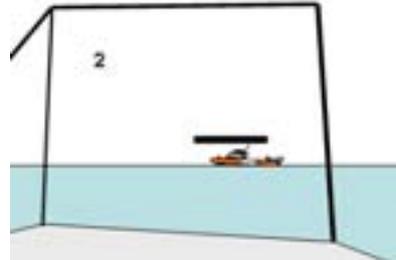


For those vessels with Radar your briefing should include distances to set on their VRM, i.e. 200m is 0.108nm (practically the VRM would probably be set to 0.1nm).

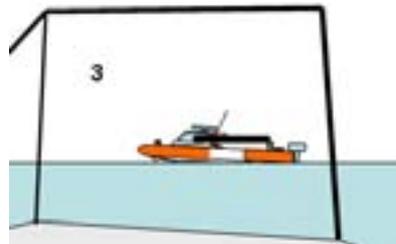
Without Radar maintaining a constant spacing between vessels can be a problem. A visual aid that can help for vessels without Radar is to mark on their wheelhouse windows, or fix something on their vessel that will give a gauge of their distance from adjacent vessels.



For example to help a vessel maintain its correct distance from the CRV a mark is placed on its side windows (with marker pen or tape) when it is the required distance off as confirmed by the CRV. The mark corresponds with an identifiable feature on the CRV- in this case the top of its wheelhouse (1).



The helmsman need only look to their right to confirm the distance. Too far away and the mark will be above the CRV's wheelhouse (2). Too close and the mark will be below the CRV's wheelhouse (3).



Turning the Search Pattern

How to turn the search pattern at the end of each search leg needs to be addressed

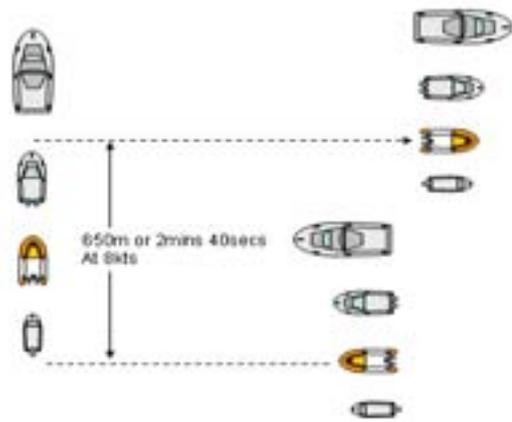
There are two common methods in use. One is simply to;

- Instruct all the vessels to turn together 90° (to starboard in the example on the next page) and line up on the stern of the vessel ahead.
- The column of vessels then runs the required distance (the total sweep width of 650m) which in this example at 8kts would be timed at 2mins and 40 seconds.
- All vessels then again turn 90° to starboard and resume their search stations.

The vessels can be instructed to either maintain speed, or to slow down just before making the turn, and then accelerate again afterwards. Different vessels have different rates of turn, and if in close proximity and especially at night it may be more prudent to slow down to execute the turn.

The advantage of this method is its simplicity; the disadvantage is that each vessel's position in the line is now reversed. The vessel that was on your starboard side is now on your port side.

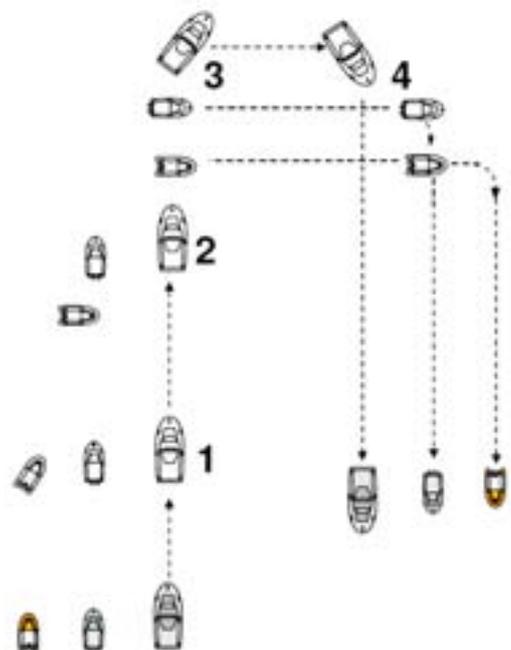
This can lead to confusion identifying other vessels in the search pattern, especially at night. A record of each vessel's position in the line should be kept throughout to avoid such confusion.



There is another method sometimes used to turn a search pattern. It has only one advantage over the previous method – every vessel returns to its original position in the line. Its disadvantage comes from it being a more complex manoeuvre to carry out, and judging when to start the turn when in proximity to hazards can be difficult

For sake of clarity only three vessels are show in the diagram below.

- All vessels maintain speed (1), and at the OSC's or Line Command instruction the outer vessel turns 90°. In this case the outer vessel is on the port side of the line for a turn to starboard.
- As the outer vessel crosses the wake of the middle vessel in the line, it to turns 90° to starboard (2).
- As the first and second vessels cross the wake of the third vessel, the last vessel then turns to starboard (3).
- The last vessel to turn runs for a distance equivalent to its individual sweep width, then turns 90° to starboard again (4). As it crosses the wake of the middle vessel, that vessel also turns to starboard, and the pattern is repeated until the line is restored.



In a multi vessel search vessels may join the operation at different times. It is essential that every vessel receive the same briefing as to the plan and procedures of the search. A checklist such as the one detailed below (and contained in the SAR Boat Book) will ensure that no important information is left out of a briefing.

VESSEL'S NAME	
Description of casualty	
Type of search	
Identified On Scene Command	
Identified line commander (if appointed)	
Navigational safety/Skippers responsibility	
Approx speed of search	
Distance between each vessel	
Maintaining position	
VHF channel for inter vessel communications	
Cell phone use (for sensitive communications)	
Observation techniques	
Rotation of observers	
Actions on sighting objects of interest	
Turning the search pattern	
Use of searchlights/torches	
Stopping and listening	
Use of radar	

Summary

Every operation will be different, and the On Scene Command must remain flexible in the planning and execution of their duties.

On a CRV the Skipper's job is to manage the vessel and crew, and that often requires stepping back from a 'hands on' position. As On Scene Command this requirement to be able to see the 'big picture' is even more important. Effective and appropriate delegation plus good communication are essential.

For example, as On Scene Command you may decide the most effective position to take is behind the line of searching vessels to concentrate purely on the command and co-ordination of the search.

As On Scene Command you are the eyes and ears of the IMT, and in particular the Marine SAR Controller. ***Any change in circumstances or organisation of the resources under your command must be communicated to the IMT.***