SAC - Instructions to SRUs

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Search units must be given information and instructions prior to any search effort and at appropriate times during a search. This page looks at what should be included and how the information should be passed to SRUs.

TAPSIC

It is important that nothing is omitted or left to chance and the mnemonic TAPSIC (standing for Target, Area, Pattern, Search, Information, Communications) should be used when composing search instruction messages.

Target

The SRU must be given as much information as possible on the target or targets that the unit is to search for. This part of the message should include:

- Type of search & target – e.g. "visual search for...", "radar search for..."
- Description - size, main colour(s), distinguishing features etc
- Condition – e.g. semi-submerged, overturned, sinking, on fire etc
- Name, fishing number, sail number, side number
- Radio callsign & MMSI number (if vessel)
- Detection aids carried
- Number of persons in distress, or onboard if a vessel

Area

Each SRU must be given the identity e.g. 'Melita Sub Area A3' and the co-ordinates of the area they are required to search. If the unit is being tasked to search a sub-area, it will be helpful to provide brief information to the unit on the extent of the whole area coverage.

Co-ordinates can be passed in a variety of ways, depending on the shape of the area(s) to be searched.

Circular Area

The latitude and longitude of the centre point are given, plus a radius around this point

Corner Method

In this method the letter followed by the latitude and longitude of each corner are given, commencing with corner A

In the above example, the search area co-ordinates would be passed as follows:

A 49° 20' N 004° 00' W
B 49° 00' N 003° 40' W
C 48° 50' N 004° 13' W
D 49° 00' N 004° 23' W

Boundary Method

This method is used when the area is orientated North/South, East/West. Rather than passing the latitude and longitude of each corner, the two boundary latitudes and longitudes are given

In the above example, the search area would be passed as follows:

- *"Area bound by latitudes 49° 10.0' and 49° 20.0' North and longitudes 004° 00.5' and 003° 45.0' West"*

The boundary method can also be used when describing a river or estuary area. In this case, the boundaries will be given as the river/estuary banks and the up/down stream limits. For example:

- *"Area between East/West banks from Fairway Buoy to Town Bridge"*

Track Line

The latitude and longitude of the departure point, turn points and destination point are given, along with the maximum detection range (1/2 Sweep Width) appropriate for the search target. If the search is an expanding track line, the Track Spacing will also need to be given (twice the Detection Range for a 68% POD)

In the above example, the area to search would be passed as:

- *"From 48° 20' N 004° 00' W to 48° 10' N 003° 55' W to 49° 00' N 003° 30' W to 49° 00' N 003° 05' W, detection range for target 1.5 nautical miles"*

Search Pattern

The type of pattern required must be passed to each SRU. If the unit is not a SAR resource then reference may need to be made to the relevant section of IAMSAR or the pattern explained to the unit

- Sector Search
- Expanding Square Search
- Parallel Track
- Creeping Line Ahead
- Track Line Search

Search Details

The SRU needs to be told exactly where to go and what to do.

- Commence search position – latitude & longitude, bearing & distance, navigational mark etc.
- Direction of first leg
- Length of first leg (see Note below)
- Number of Legs (See Note below)
- Track Spacing / Detection Range
- Speed
- Height (if aircraft)

Note: When passing information from SARIS generated plans to RNLI (or other) lifeboats, the following should be noted:

1. Leg Length

- In the search forms the Leg length (Range) is the length in NM of the search track, NOT the length of the search area side
- Using SARIS report information, the Leg Length figure to use in the LB tasking form is:
    - the length of Leg 2 or
    - the length of the area side, minus one track spacing

2. Number of Legs

- The figure for the 'Number of Legs' in the LB tasking form is actually the number of primary search tracks, i.e. excluding inter-track legs (which may just be turn legs)
- Using SARIS report information, the number of search legs is:

- the number of 'SARIS Legs' (including the initial Leg 0) plus 2, divided by 2
    - e.g. If number of 'SARIS Legs' is 6, the number of primary search tracks is (6 + 2) / 2 = 4

Information

- Weather on scene and forecast
- Co-ordinating station
- On Scene Co-ordinator (if appointed)
- Air Co-ordinator (if appointed)
- Other SRUs / search facilities involved
- The big picture

Communications

- Mission Coordinator (MC) to OSC frequency (if OSC appointed)
- On scene channels
- Surface to air channels
- Contact/safety check schedules
- Relay units (if any)

Coastguard Helicopters

The navigation equipment fitted in the current CG helicopters varies and so a national standard format for passing search instructions is not possible.

Instructions should therefore be passed to CG helicopters in the format agreed between the SAR flight and their local Ops Centre.