

INTERNATIONAL HYDROGRAPHIC
ORGANIZATION



ORGANISATION HYDROGRAPHIQUE
INTERNATIONALE

CHART STANDARDIZATION & PAPER CHART WORKING GROUP (CSPCWG)

[A Working Group of the Hydrographic Services and Standards Committee (HSSC)]

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To CSPCWG Members

Date 9 July 2009

Dear Colleagues,

Subject: Draft revision of S-4* Section B-480 to B-499 – results of Round 2

*Please note that M-4 has been redesignated S-4 by IHB (CL13/2009 refers).

Thank you to 17 WG members who responded to CSPCWG Letter 05/2009, providing further comments on the draft revision of B-480 to B-499. Annex A shows how the members responded to the specific questions raised, plus numerous additional comments. Andrew and I have worked our way through all the responses, reviewing all the comments and amending the draft as we believe to be appropriate. Our conclusions on the specific questions are noted on Annex A.

In addition to the above, some other points were raised. These can be found in the second part of Annex A, or in the original 'track change' version by AU (which you will have seen via 'reply to all' emails).

We have studied all suggestions carefully and arrived at what we believe to be the appropriate decision, taking account of all the members' responses. We are now ready to produce a 'final draft' for IHO Member States to consider; this will be notified by IHO Circular Letter with the final draft posted on the CSPCWG page of the IHO website (www.iho-ohi.net > Committees & WG > CSPCWG > IHO Publication S-4).

This letter is for information only; there is no need to respond.

Yours sincerely,

Peter G.B. Jones,
Chairman

Annex A: Summary of responses to CSPCWG Letter 05/2009

CONSOLIDATED RESPONSES TO CSPCWG LETTER 5/2009

Specification	Question	YES	NO
B-486.5	<p>In order to simplify INT1, do you agree that the version of S3.5 showing both leading Racons and leading Lights should be deleted, as it is an intuitive combination symbol? (This would mean that the current 8 Racon symbols in INT1 S3 would be reduced to 5, deleting the existing 3.1, 3.2 and the second 3.5. The leading Racons, ie first graphic at 3.5, would be retained)</p> <p>AU: see comment below. DE: see comment below. GR agrees with the deletion of the existing 3.1, 3.2 and the second 3.5 Racon symbols in INT1 S3. Additionally we recommend that the remaining first 3.5 symbol should be amended so as to be in accordance with the leading lights symbols, by deleting the “Racon ≠” part. Chairman: I agree. Alternatively, in P20.1 and P21, “Lts ≠” should be added in the symbols, along the leading lines, right before the bearing values. US: The new draft of M-4 Section B-486.5 is greatly improved. That said, it seems strange that we would consider including a graphic representing the Racons in-line coincident with lights in- line situation for our own benefit in Section B-486.5 while deleting the same graphic from INT 1 S-3.5 where it serves no harm showing the chart user how such a situation would be charted. If the graphic in M-4 serves to help a cartographer to understand how this would be charted, the same graphic would help the mariner in INT 1. Chairman: A clear majority are in favour of removing the intuitive combination symbol from INT1. However, as the members of the INT1subWG are not all in accord on this, they will have to debate it further. I consider that it is useful in M-4 to explain to the compiler how to deal with the situation when racons and other objects in the same position are in line, but the result is intuitive for the user, who does not need the combination symbol shown in INT1. We have made some further rearranging in M-4 as a result of AU’s comments below. This includes the fact that we consider that where there is a combination, the legends rather than just the bearings should be shown (even if the marks are clearly identifiable on the chart) as two identical bearings in different colours may possibly confuse the chart user.</p>	CA, DK, ES, FI, GR, IN, JP, NL, NO, NZ, PK, SE, UK, ZA	AU, DE, FR, US

Specification	Question	YES	NO
B-489.1	<p>Not a question, but please note the marginal request to provide papers on AIS discussions and developments to the Secretary.</p> <p>Chairman: DK has provided a useful paper detailing outcomes in experiments in the use of AIS at AtoN. Noted for further discussion at CSPCWG6.</p> <p>FR: our references are mainly the two documents from AISM/AILA :</p> <ul style="list-style-type: none"> - recommendation (Dec. 2008) A-126 On the Use of the Automatic Identification System (AIS) in Marine Aids to Navigation Service - guideline (Dec. 2008) 1062 On The establishment of AIS as an AtoN 		
B-494 & B-495.4	<p>Do you agree that a half red/half green flare is suitable for indicating a SS on multicoloured charts?</p> <p>Please see comments in Annex A by FI and SE. The offered solution falls short of fully answering the problem, therefore we would appreciate comments and other solutions. We may need to discuss further at CSPCWG6, although we hope that we will be able to progress this section to IHO Member State approval before then.</p> <p>AU: see comment below</p> <p>DE: B-494 and B-495: We are not happy with flares at signal station if there is no light in the sense of nautical night orientation because this can confuse the chart user. To avoid cluttering BSH shows the special traffic “lights” including siding signals and their colours in the sailing directions of the special area or in pictures in the land area of the chart (e.g. DE 42 for Kiel Canal).</p> <p>FI: see comment below.</p> <p>IN: A double coloured flare may not be very distinctively discernable at its size on the chart. Flare in single colour (presently magenta) is considered a better option. India does not presently produce multicoloured charts.</p> <p>JP: I think flare is the best way for indicating the position. However, using two colours (red and green) in the same flare is too complicated to identify. Therefore, it is better to use single colour in one flare.</p> <p>NZ: We think that a combined red and green flare would not be obvious because of the similar shade of the colours and that a standard magenta flare would be better. However, as NZ does not produce multicoloured charts, we do not have a strong opinion on this.</p> <p>SE: see comment below.</p> <p>US: The United States only charts light flares in magenta and there is no current proposal to change, so this is primarily up to those nations that do use multi-colours. The solution proposed by Sweden would appear to be more intuitive than the never-before-used split flare symbol. Have any user groups (pilots, military, cruise industry) been contacted to see if this proposed divided flare symbol is at all intuitive to them? Should customer contact</p>	CA, DK, ES, GR, JP, NL, NO	AU, DE, FI, IN, NZ, PK, SE, UK, US, ZA

Specification	Question	YES	NO
	<p>regarding our decisions be a regular part of our working group's process?</p> <p>ZA: South Africa does not use multicoloured flares on our charts nor do we produce multicoloured charts. Those MS that do, are seeking assistance.</p> <p>1. Half red/half green flares is not a solution if there are more multicoloured lights. As a solution, consider a circle (say 2-3mm diameter) in replacement of the light star, divided into quadrants or segments indicating the different colours. However, it must be understood that the multicolours is not sector related unless the placement of colours are so selected to present a true representation, <i>or</i></p> <p>2. For 3 colours, consider a half circle with 3 colour segments, <i>or</i></p> <p>3. Show no flares at all. Simply indicate the different colours in the light description.</p> <p>Chairman: we made the tentative proposal of the 'split flare', knowing that it was not really a satisfactory solution, but hoping that it would stimulate better ideas. So far, no solution suitable for multi-coloured charts has emerged, so we have removed the sentence, replacing it with 'A standard form of presentation has yet to be developed for multicoloured charts (2009).' We would be grateful if those nations which produce multicoloured charts could continue to correspond on this, with a view to presenting possible solutions(s) at CSPCWG6.</p>		

We hope to be able to publish the B480-499 revision during this year, although we recognise there is outstanding work on AIS and multicoloured flares. If necessary, these can be addressed subsequent to publication.

Further comments

AUSTRALIA (See also track change copy) **Chairman:** all track changes considered and adopted as appropriate. These were mainly minor formatting changes.

B-485.1: The last 3 sentences are contradictory. The 3rd last sentence emphasises that the station must be charted in order to define a vessels position in terms of bearing and distance. The 2nd last sentence then states that these stations are of declining importance, and the last sentence begins "if required to be charted". Suggest re-wording this clause to read:

Coast radar stations (Ra) are shore-based stations which the mariner can contact by radio to obtain a position. **These stations are being increasingly replaced by other position fixing methods. If required to be charted, the position of the station must be shown, in order for a vessel's position to be given in terms of bearing and distance from the station, using the symbol S1:**

Chairman: agree and done.

B-486.5: If it is considered important enough to show a graphic in M-4 to demonstrate the combination symbol (as appears to be the suggestion in the comments in the text for round 2) for compilers, then why would you not show a similar graphic in INT1 for the chart user? Are we setting a precedent here if we remove the graphic from INT1 but retain the graphic for M-4?

Chairman: I do not agree with this reasoning; see comment in table above.

If the amended graphics without the "in line" symbol are inserted in the text as per comments, then it is suggested that the sentences related to the marks not being clearly identifiable (i.e. the last sentence of each paragraph) be moved to after the respective graphics in line with AU comments from Round 1, i.e.:

Leading racons are established such that, when their bearing lines are coincident on a vessel's radar display, the bearing serves to indicate the track to be followed. The leading line should be represented, in magenta, by a bold continuous line for the part of the track which may be followed, and a fine dashed line (approximately 6 dashes per 10mm) for the remainder of the line up to the rear mark. The bearing should be inserted in magenta above the line at the seaward end, eg:



S3.5

In accordance with B-433, if the marks are not clearly identifiable on the chart, a legend such as 'Racons ≠ 270°' should be shown in magenta at the seaward end of the line.

Where the leading line coincides with a leading line based on lights or visual objects (usually because the positions of the Racons coincide with visual features or lights also used to mark the leading line), the line should be shown in the usual style (see B-433) in black only, with the bearing indicated in black above the line, and in magenta below the line, eg:



S3.5

If the marks are not clearly identifiable on the chart, the bearing should be indicated with two legends, eg 'Lts ≠ 270°' in black and 'Racons ≠ 270°' in magenta.

Chairman: generally agreed and section rearranged accordingly, although not exactly as suggested by AU. Note that for INT1 Sub-Working Group the graphic(s) in INT1 S3.5 will need to be amended in line with M-4 accordingly.

B-486.5: Inconsistency in terms. In the 2nd last sentence of the first paragraph, the term is “at the seaward end” (of the line), while in the last sentence the term is “near the seaward end”. Suggest standardise to “at the seaward end”, which is closest to the text in B-433.2.

Chairman: agree and done.

B-488.1: In Australian waters, radio reporting points are becoming more common. Suggest therefore that the opening sentence to this clause read “**Radio reporting points** have been established in **many** waterways and port approaches to assist traffic control.”.

Chairman: agree and done

In the 4th paragraph it is stated that the alphanumeric designator must be placed within the circle, but in the next paragraph there is an alternative. Suggest therefore that the 4th paragraph be amended to read: “If the radio reporting point has an alphanumeric designator, it **must** be shown in **magenta** within the circle **where possible**, eg:”.

Chairman: agree and done

B-489.1: Suggest “An AIS-equipped Aid to Navigation (AtoN)” at the start of the clause be in bold text as in current Edition of M-4.

Chairman: agree and done

Regarding the SE clarifications mentioned in the comments and the new text. AU thinks the changed text in the first 2 sentences in the second paragraph should be “real and synthetic”, not “real and virtual”. For virtual AIS, there is no fixed or floating aid – there is nothing at all other than a signal that appears to be transmitted from a position, which is the subject of the last sentence in the paragraph. See also AU comments from Round 1.

Chairman: clarification included, although not exactly as suggested by AU.

AU is happy to hold off on further discussion on this section until CSPCWG6, and will supply any information on this subject as it becomes available.

B-491.1: AU coastal charts are at scales 1:150000, 1:300000 and a couple at 1:500000. To avoid any possible confusion, AU suggests that the second paragraph be amended to read “**The symbol should be shown on coastal navigation charts, with the additional details below shown on port approach and harbour charts.**”. The general scale ranges for coastal, approach and harbour charts are defined in B-126.

Chairman: agree and done

In the final paragraph, the bracketed text in the 2nd last sentence refers to meeting place. As the decision from Round 1 was to use the standard term “boarding place”, suggest this text be amended accordingly.

Chairman: agree and done

B-492.3: Suggest the text “Maritime Rescue and Coordination Centres” at the start of this new clause be in bold text.

Chairman: agree and done

B-494: AU would prefer multiple flares (i.e. a red flare and a green flare) be shown, but as we do not use multicoloured flares on its charts, this is not an issue for us, and showing multiple flares may be an issue for those that have multicoloured charts in regards to clutter. If the multicoloured flare is approved, B-470.4(a) would need to be amended, and there is a potential for such depiction to be used with other types of lights on multicoloured charts (e.g. alternating lights), so great care would need to be taken in the wording.

Chairman: see comment in table above.

Another alternative; lights that are traffic regulation lights only could include the international abbreviation “Lts”, (e.g. SS (Traffic) (Lts) Or SS (Bridge) (Lts)) in lieu of the flare. Is there any reason that the mariner needs to know what colours the lights are before he gets there, given that this is normally explained through signage at the signal station? If so, this could be expanded to include the light colours, similar to what is done for air obstruction lights of low intensity (e.g. SS (Traffic) (R Lts) Or SS (Bridge) (RG Lts)).

Chairman: this goes against the already agreed decision to include flares at light signal stations.

B-494.2: In referencing other parts of M-4 during this review, AU noticed a reference to the now removed B-490.4 in the revised B-473.2 in regards to descriptions of lights used for signalling purposes. As this clause has been relocated to B-494.2, the reference at B-473.2 will need to be changed.

Chairman: noted.

B-495: Suggest the first paragraph begin “Traffic signal stations generally exhibit lights by day ……”

Chairman: agree and done

AU has concerns over the second last paragraph. If a mariner sees a light star and flare on a chart, they expect to see a light description detailing the characteristics of that light. If they see a light star and only a legend ss (Traffic) or equivalent is this likely to cause confusion? AU suggests that in all cases where the traffic signals also perform the function of a navigational light a light description must be shown.

Chairman: I think they will get used to seeing a flare drawing attention to signal stations. The legend SS(Traffic) should be sufficient to tell them what sort of lighting system to expect. The actual, frequently changing, lights would be impossible to describe by a short description.

In checking the requirements for light stars, flares and light descriptions, AU referred to the last round of the CSPCWG review of B-450 – B-479 (Round 4). If the current wording of B-495 is approved, there will be an inconsistency with B-470.5: In the paragraph “Position of lights – special cases” it is stated that a light star must not be used for signal stations (last bullet point). AU suggests that this last bullet point will need to be amended to “Most signal stations” or “Some signal stations” or “Signal stations (having no navigational function)”. Note also that the reference given in this bullet point is B-490.2, which in this round of the review does not exist. A similar reference to B-490.2 is also given in B-470.6. AU suggests that the references be changed to B-494.

Chairman: noted

General comment for B-495.1 – B-495.4: In the official IHO English language version of INT1 (BSH), there is clearly a space between the “SS” and the opening bracket. There is no space in UKHO BA5011, which is the convention that has been used in M-4. Does there need to be some standardization here?

Chairman: while not of vital importance, standardization would be useful. M-4 and INT1(FR) have no space, INT1(DE & ES) have a space. The INT1 subWG will have to agree the standard, but I suggest that no space conforms to the practice in light, fog signal and radio aid descriptions and has the advantage of being more compact without causing any confusion.

B-495.4: In referencing other parts of M-4 during this review, AU noticed a reference to the amended B-495.4 at B-381 in regards to bridge signals and lights. As the original B-495.3 and B-495.4 have been merged, the reference to B-495.4 at B-381 will need to be removed.

Chairman: noted

B-495.4: See AU comments for B-494 above regarding multicoloured flares.

Chairman: as above

B-496.1: Regarding the comments in this section. The issue of using the word “tide” or “tidal” was discussed at CHRIS20 in relation to the old Tidal Working Group as it was considered to be too restrictive.

The decision at CHRIS20 was to use the term “Tidal and Water Level” as in “Tidal and Water Level Working Group”, as has been used in the heading at B-496. Perhaps this is an option that CSPCWG can consider?

Chairman: agree and done

GERMANY

B-486.5: We were a bit confused to understand the last version of the text and understood it better in the AU version if in the end will be added “at the seaward end of the line”.

Chairman: agree and done

Further we propose to retain both examples of S3.5 as explained in M-4 to let the user see the difference between the light star symbol and the normal Racon symbol.

Chairman: I consider this to be unnecessary and inconsistent with all the other S entries which do not show a racon circle surrounding a light star (or any other symbol, such as a radio mast). The symbol for a racon is the outer magenta circle and associated legend, the centre dot is simply inserted for positioning purpose where there is no other AtoN. This practice is surely understood by the mariner.

Although we have decided to delete the examples for S3.1 and S3.2 at CSPCWG5 my nautical colleagues in BSH informed me that there are still cases where the only remaining symbol S3.3 may lead to misunderstanding, e.g. when only one (X or S) band is provided and the Radar equipment can not easily provide to switch between the bands. For these mariners the indication of the band would be of good help. To short the examples in INT 1 we propose to add a sentence in the explanation for S3.3 (something like “band indication if only one band exists”) in INT 1 and M-4.

Chairman: this may rarely be true, but in so doing we return to the problem of potential confusion that led us to agree to remove the band letter. The only remaining solution would be to have 4 possible depictions: RaconX(3cm), RaconX (10cm), RaconX (3&10cm) and RaconX (the last meaning waveband unknown). I suggest it is better not to attempt to include wavebands in charted detail; if the mariner has radar which cannot find the Racon by switching channels, either manually or automatically he will have to assume that it uses the waveband he cannot access and he will be denied the use of that particular racon.

FINLAND

B-494 & B-495.4: *Even though the issue here is about signal lights we see a close connection to multicolour navigational lights. With the introduction of simplified flare presentation for multicolour signal light, we believe that it's only a matter of time when same has to be done for navigational lights too.* **Chairman: agree.**

We have been studying alternative ways to present multicolour lights since 2003 when we adopted the current multicoloured INT style presentation. In our case this mainly comes from the need to generalize minor sector lights in smaller scales.

So far we haven't found a satisfying solution. But what we have learnt is that if there is even a slightest resemblance with existing flare-like (or patch-like) symbols the user usually interprets the symbol incorrectly. In single colour approach, the users understand the colour wrong. They are not able to imagine that with one colour we would like mean many... And in multicolour approaches they try to identify the sectors even if we try to make it very obvious that the presentation does not contain sector information. For example, we had a trial where we used one flare per colour in cases where there were several sectors per colour. The flares were then obviously oriented in arbitrary angles. This led users to think those are the true orientations of the light sectors.

Based on this experience we also believe that the half red/half green flare would be understood as a light with red and green only. The good thing here is that it would hard to extract any sectors from one flare, though. Unfortunately, fitting all the colours of a signal station or a sector light inside one flare is quite impossible...

We would love to have a "light in general" symbol for multicoloured charts for use in generalized sector lights and signal stations, but we just can't come up with one. Declaring magenta flare as a generic light symbol also on multicoloured charts could be considered as a solution if there wouldn't be any risk of confusing it with red (or blue) flare.

Chairman: see comment in table above

SWEDEN

B-494 & B-495.4

At the Swedish Maritime Administration (SMA) we have been producing multicoloured charts at least 30 year. A similar problem has been discussed in many years when depicting sector lights in small scale charts. If the lighthouse had three different colours SE previously used one red, one white and one green flare. The problem was that the users sometimes thought that the angle of the flares was the actual bearing. The chart also became cluttered with non-important information. The solution has been to not use any flare at all in these cases and just show the colours in the text WRG (see picture below).



In the case of the Signal Station with lights SE supports AU:s proposal to use the abbreviation Lts, but not using a flare at all. If using a half red/half green flare the user might expect that there should be a green and red light, but it could of course be other colours at the signal station. SE agrees that this needs to be further discussed at CSPCWG6.

Chairman: see comment in table above, and following AU's suggestion.