



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 18 October 2012

Dear Colleagues,

Subject: Actions arising from 8th CSPCWG meeting – Group 2; follow-up to Letter 08/12

CSPCWG Letter 08/12 dealt with CSPCWG8 actions 12, 14, 36 and 37 (all to do with lights); thank you to the 19 WG members who responded. A table of the responses, with a summary of outstanding issues, is at Annex A. All the supporting comments, with my responses added in red, are at Annex B.

As you will see from the 'Yes' columns in the table at Annex A, there was a good consensus agreeing with most of the proposed changes. However, there were some suggestions for improving on the draft wording of B-470.5 (Action 12). Most of these can usefully be included and are not controversial; details are in Annex B. Two of the comments require further consideration. There was also a significant minority view in the response to question 37b.

I believe these outstanding issues will be most easily resolved by discussion at the CSPCWG9 meeting in Korea. We already have various 'lights' issues to discuss at agenda item 08.1 and I have decided that we can usefully include these issues in that discussion. Our Secretary will therefore convert the Annexes into paper 'CSPCWG9-08.1D'. However, as not all of you are able to attend that meeting, I invite you to let me have any comments **BEFORE 8 November** (the last day Andrew will be in office before travelling).

Yours sincerely,

Peter Jones, Chairman

Annex A Consolidated responses to WG Letter 08/2012 and outstanding issues
Annex B Consolidated comments on WG Letter 08/2012 and Chairman's responses

CSPCWG8 ACTIONS 12, 14, 36 and 37

CONSOLIDATED RESPONSES

CSPCWG8 Action No	Question	Yes	No
12	Do you agree with the draft rewording of B-470.4a?	BR, CA, ES, FR, IN, JP, LV, NL, NZ, SE, UA, UK, ZA	AU, DE, DK, FI, GR, NO, TR, US(NOAA),
	Do you agree that these changes are 'clarifications' in accordance with TR 2/2007?	BR, CA, DE, DK, ES, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UA, UK, US(NOAA), ZA	AU, FI,
14	Do you agree that nothing further should be done about defining 'major' lights, until IALA provide more advice?	AU, BR, CA, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UA, UK, US(NOAA), ZA	
36	Do you agree that nothing further should be done about defining 'Dir' light sector widths, until IALA provide more advice?	AU, BR, CA, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UA, UK, US(NOAA), ZA	
37	a. Do you agree that no specific symbol should be invented for the 'arc-pointer' light?	AU, BR, CA, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UA, UK, US(NOAA), ZA	
	b. Is there a need to devise a generic method to show on charts that a navigation light is 'highlighted'? If you answer 'Yes', please provide your suggestion(s) in the comment section below.	ES, GR, LV, NO, NZ, TR, US(NOAA)	AU, BR, CA, DE, DK, FI, FR, IN, JP, NL, SE, UK, ZA
	c. Should detail of any 'highlighters' be described in an associated publication (eg Lights List or Sailing Directions)?	AU, BR, CA, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UA, UK, US(NOAA), ZA	

SUMMARY OF OUTSTANDING ISSUES

In conclusion, the two areas where there seem to be mixed views are Actions 12 and 37b. See details of comments and responses at Annex B.

Action 12: most suggested changes are useful but minor detail, which can be easily resolved. The following stand out as requiring further consideration:

- The use of the generic magenta flare:
 - Is not yet approved by MS
 - Some WG members still have reservations. A potential solution may be to change 'must' to 'should' at vi: '*a single magenta flare should be used*'.
- Precedence of small dashes or coloured arcs for sector arcs (suggested by DK, GR, NO, SE)

Note: all the changes seem to be accepted as 'clarifications' apart from the 'generic flare'.

Action 37: although a small majority were content that no chart action is required for 'highlighted' lights (ie rely on List of Lights), there is a significant minority who consider that some legend adjacent to the light (or its description) would be useful. Whatever the outcome, some guidance should be given in S-4.

I propose a short discussion at CSPCWG9 could resolve these.

Further comments from respondents to CSPCWG Letter 08/12
with Chairman's responses

AUSTRALIA

Action 12: Remove text "IHO Specs" from last sentence of black text in first paragraph. Suggest that the new last sentence of the first paragraph be amended to read "Note that charts of scale 1:2 000 000 and smaller should be" to be consistent with the heading of S-4 Part C.

Chairman: Agree

The statement at paragraph a(ii) 5th bullet point - "For another use of magenta flares on multicoloured lights, see (vi) below" - is applicable for all colours of lights. Suggest a separate paragraph after the bullet points (see comment for paragraph a(vi) below).

Chairman: This is simply to point out to the reader that magenta flares have an additional meaning to a violet light; it is therefore useful to retain where it is.

Amend paragraph a(ii) 5th bullet point to read "Magenta **should** be used for violet lights." to be consistent with strength of language in previous bullet points.

Chairman: Agree

Paragraph a(iv) 2nd bullet point: In the first bullet, the bracketed words used are "(or circles for all-round, ie 360°, lights; see (v) below)", and in the 4th bullet, the bracketed words are "(or circles for all-round, ie 360°, lights)", while the 2nd bullet merely states "(or circles for all-round lights)". Suggest that either the 2nd bullet be amended to read "(or circles for all-round, **ie 360°**, lights)", or the 4th bullet be amended to read only "(or circles for all-round lights)" to be consistent. Alternatively make all 3 instances of bracketed text read the same (as in 2nd bullet).

Chairman: Agree; we will amend all three to agree with 1st bullet.

Paragraph a(iv) 3rd bullet point: There appears to be a discrepancy between this bullet point and B-475.2. In B-475.2 it is stated that "Where sectors are differentiated by colour only, the abbreviations for colours **must** be inserted on the sector arcs, (including on 'multicoloured' charts where coloured arcs may be used **in addition** to the abbreviations, see B-470.4a)". Both the current published edition of S-4 and the new draft text state that the international abbreviation for the colour or character of the light **should** be added on the arc. Suggest that the bullet point be amended to read "See B-475.2 for legends on sector arcs.", and relocated to be the last bullet point.

Chairman: Good spot! We will change 'should' to 'must'. I think it is useful to retain the instruction here, rather than rely on a cross reference.

[Additional note from Australia: This discrepancy may need to be looked at in terms of other clauses in S-4. For instance, B-472.3 states: "**On multicoloured charts**, the colour may be omitted from the light description, provided the colour abbreviation is shown on the sector arcs." – Australia's interpretation of B-475.2 would suggest that this be re-worded: "**On multicoloured charts**, the colour may be omitted from a **sector** light description, provided the **sectors are shown (see B-475.2)**".]

Chairman: I think the existing paragraph is OK, because it only applies if the colour abbreviation is shown on the sector arcs; this means that it is clearly a sectored light and that the sectors are charted.

Paragraph a(v) 3rd bullet point: This bullet is an expanded repetition of the new words added at the introductory paragraph, and given that S-4 part B is for medium and large scale charts consider that this bullet point is not required.

Chairman: The reason for including it here is to provide a complete list of the exceptions referred to just before the bullets. It should be retained.

Paragraph a(vi): While the first part of this paragraph describes a single multicoloured (sector) light (except for the reference to all-round lights), the bullet points following describe multiple lights exhibited from the same structure or from the same charted light star due to chart scale, which is a different circumstance. Australia suggests the following amendments to this paragraph:

- Move the first sentence to paragraph a(ii), after the bullet points as a separate (non-bulleted) paragraph reading: “If a light is multicoloured and the sectors are not charted, a single magenta flare must be used.”.
- Amend the start of the paragraph to read: “Multiple lights of different colours exhibited from the same structure (or charted at the same light star due to scale) should be shown as described above. ~~For instance~~ except as follows:”.
- First bullet: Amend “all round” to “all-round” for consistency. Amend “symbolised” to “symbolized”. Amend last sentence to read: “If the scale of the chart is too small to show the red sector, the associated light description at the light star must also be omitted (see B-472.4).”.
- Second bullet: Amend to read: “Where two or more separate and different coloured ~~all-round~~ lights are charted at the same light star, separate flares for each colour should normally be shown. If this would obscure other charted detail, then a single ‘generic’ magenta flare may be shown.”. (I do not think this would only apply to all-round lights)
- Third bullet: Amend to be a separate (non-bulleted) paragraph after the 2nd bullet, reading: “Where lights include subsidiary ‘reserve’ lights of a different colour, the main light only should normally be shown; reserve lights should not be charted.”. (I do not agree that this should not be a bullet)

Chairman: Agree in general that your suggestions will make this section more readable. I have inserted some minor comments in red in the proposed text.

Action 12: The concept of the use of a magenta flare as a generic flare for multicoloured sector lights on multicoloured charts where the sectors are not shown is new, and therefore cannot be classified as a “clarification” as defined in TR 2/2007. Australia considers that this is new specification, and as such constitutes a “revision” in terms of TR 2/2007 and should be presented to MS for approval, particularly as the statement at paragraph a(vi) in the draft is a “must”.

Chairman: Agree – we had missed the fact that this has not yet been through the approval process. It will also affect B-494 and B-495.4. Of course, a generic magenta light flare has been used from at least when IHO chart specs were first developed.

Action 14: Discussions at TSMAD and DIPWG in regard to “major” lights reflects the discussions at CSPCWG8 and the summary of this discussion in the Minutes. As stated, the decision to define a “major” light in terms of ECDIS display as a light having a nominal range of 10M or more was made solely to improve the identification of these lights by the mariner, due to S-57 being frozen. For S-101 ENC’s, a new Boolean attribute (major light) has been added in order to allow encoders to individually identify a light as a “major” light, regardless of other attribution for the light, which will contribute to the way the light will be displayed in ECDIS. This is consistent with the CSPCWG Secretary conclusion that the decision of whether a light is a “major” light comes down to cartographic judgement, considering all relevant factors. Any future modelling of lights for S-101 in this regard will also be based on further consideration by IALA.

Chairman: We will discuss this further at WG9. We are consulting with IALA.

Action 37: Given that, although it is stated that these pointer lights are not considered to be aids to navigation, but may be used as such as stated for the “arc pointer” type light, a reference to a chart Note would be appropriate. In terms of devising a generic method for indication of “pointers”, given that IALA have identified numerous methods of increasing the conspicuity of lights other than those currently used indicates that a generic symbol is not appropriate. The widely varying methods described could not be adequately described using a generic symbol, unless accompanied by a chart Note, and the reference to the chart Note itself would be considered to be sufficient.

Chairman: The ‘vote’ is 13/7 against a generic method of showing that a light is ‘highlighted’. Presumably the majority consider that a note in the List of Lights is sufficient. However, perhaps there should be an option to add ‘(see Note)’ adjacent to the light description. In S-4, we could add ‘highlighting’ as an example in B-478.2 plus a brief explanation and the option of a note at the currently empty space at B-478.4.

CANADA

As Canada does not produce multicoloured charts with coloured light flashes, it is hard for us to comment on these specifications not having practical experience in their use. Having reviewed the comments of others, we feel we are comfortable with the general direction these revisions are taking place.

DENMARK

Action 12: **iii.** and **iv.:** DK agrees with the comments from NO and GR that the options should be ‘reversed’...

Chairman: See response to GR.

v.: DK uses both the red and the yellow flare on lighted platforms and will probably continue to do so in the future. Production platforms are shown in only one Danish chart (INT 1044) in scale 1:375000 and we have not yet experienced problems with clutter in this chart.

Chairman: The WG agreed to magenta flares for platforms, although it was by no means unanimous (10/7 – see responses to WG Letter 6/11). The phrase about adopted charts will be removed.

In general DK is a bit reluctant to introduce the use of the generic magenta flare in Danish charts as long as the use of true colours do not cause any clutter. We are concerned that the introduction of a magenta flare would cause unnecessary confusion instead.

Chairman: In smaller scale charts in many offshore parts of the world (eg W Africa, Caribbean) clutter is a real issue and would be cartographically ‘incontinent’ where the lighting of platforms is uniform. The task for the majority of chart producers to overturn decades of precedent in their charts would be impossible to justify.

FINLAND

Action 12: **v.** and **xi.** – FI recognises that this has been agreed on previously, but we still are not comfortable with such a direct guidance to substitute the true colour flare with a generic magenta flare just based on the nature of the light. As stated by DK, why change if the true colours do work? We would rather see the generic magenta flare as an alternative in these cases.

Chairman: See response to DK. We understood previously from FI that using several different coloured flares at a single light star was ‘misinterpreted by chart users’ (FI response to WG Letter 6/11).

vi. – FI feels that, as pointed out by AU also, the first sentence (one light) and bullet points (more than one light) in this paragraph do not match.

Chairman: See response to AU.

FRANCE

Action 12:

a. v.

- *Lighted platforms usually have a 15M white light, but also have lower power red lights.(*). They should have a single magenta flare; where necessary, the flare(s) on adopted charts should be changed accordingly. Note that renewable energy devices, such as wind turbines, marked according to IALA convention have only yellow navigation lights and therefore should have yellow flares.*

(*). FR suggests to add at the beginning of this sentence “*When scale permits, they should have...*”

Chairman: All platforms (except ‘Fla’) should have a light flare; it is part of the symbol: L2, L10, P2... The question was over what colour it should be.

a. vii.

FR suggests to add a picture to illustrate the case when a light alternates between blue and green in order to show how a visible but small gap should be left, to assist perception that there are two separate colours.

Chairman: Agree.

Action 37: France considers that the main information is the characteristics of the navigational light. How the light is made visible, considering all the possible devices, is not the purpose of the charts but of the lists of lights (“It does not seem appropriate to try and devise methods of separately charting all these (and future) possibilities”).

Chairman: Agree. See also response to AU.

GERMANY

Action 12: From our experience a scale cut-off of 1: 2 000 000 is too small for our area of charting. Already in scales of 1: 750 000 (e.g. for INT 1043 or INT 1042) “generic” colours are appropriate. That depends on the depiction in the area in the case of concentrated offshore industry. If we all cannot agree to a special cut-off scale it should be a matter of cartographic judgement. In DE charts we have used “generic” colours already in charts of the scale 1: 500 000 but we have decided to convert these charts to multicoloured for the next editions.

Chairman: We agreed that multicolour should not be used for 1:2M and smaller. It is the prerogative of any HO whether any other charts are multicolour or not.

We still have a problem to chart a magenta flare on a multicoloured chart if the principle navigational light is a white light. In this case we would chart a yellow flare. With the first and the last point under v) we only confuse the cartographer and therefore we propose to delete them. Also we have problems with the restriction vi) – we chart several flares together where sectors are not appropriate. Perhaps we have misunderstood the case of vi) and therefore need some chart examples. Attached you find an example of a combined light with multicoloured flares and sectors (chart DE 1622).

Chairman: I cannot see anything confusing about the points in ‘v’. The first point was agreed in response to Letter 6/2011. The last point is no change from existing practice, in accordance with S-4 Part C. With regards to vi, we could consider changing ‘must’ to ‘should’ – see summary. [need to send the DE example as a separate attachment]

Action 37: We should not invent a new symbol but if helpful for navigation in the light description could be added an attribute abbreviation like illum for illuminated.

Chairman: ‘illuminated’, or equivalent, or the symbol P63 would certainly be an option in some cases, but perhaps not for all – including the arc-pointer.

GREECE

Action 12: **iii.** Sector limits should be fine continuous line, but may be shown as fine dashed lines.

Chairman: sector limits have always been charted as fine dashed lines, except where the limits are emphasised by a continuous line to represent fairway limits (B-475.1 refers). There has not been any proposal to change it and I cannot see any reason to do so.

iv. Sector arcs should be solely coloured arcs, but may be shown as fine dashed lines.

Chairman: sector arcs have always been charted as fine dashed lines (B-475.1 refers) on standard charts. However, the purpose of multicoloured charts is to show coloured sector arcs but we have not made that clear in the text. I agree therefore that the coloured arcs should be given priority, the black dashes as an optional extra. We will amend to ‘Sector arcs should be shown by coloured arcs, which may be supplemented by fine black dashes.’

JAPAN

Action 37: (b, c)

When a navigation light is installed, Japan choose its colour and intensity considering its surroundings. Its detailed information is described in the List of Lights. The method to show ‘highlighted’ navigation lights on charts should depend on conditions in each country, due to indefiniteness of ‘highlighted’ or ‘highlighters’.

Chairman: Agree.

LATVIA

Action 37b: Could be with the additional legend.

Chairman: See response to AU.

NETHERLANDS

Action 37: only use an abbreviation, no new symbol

Chairman: See response to AU.

NORWAY

Action 12: iii. Sector limits should be **shown as fine continuous lines, but may be fine dashed lines.**

Emphasis may be provided by 1mm wide colour bands where marking the sides of a fairway (see B-475.1, B-475.5 and INT1 P41.2).

Chairman: See response to GR.

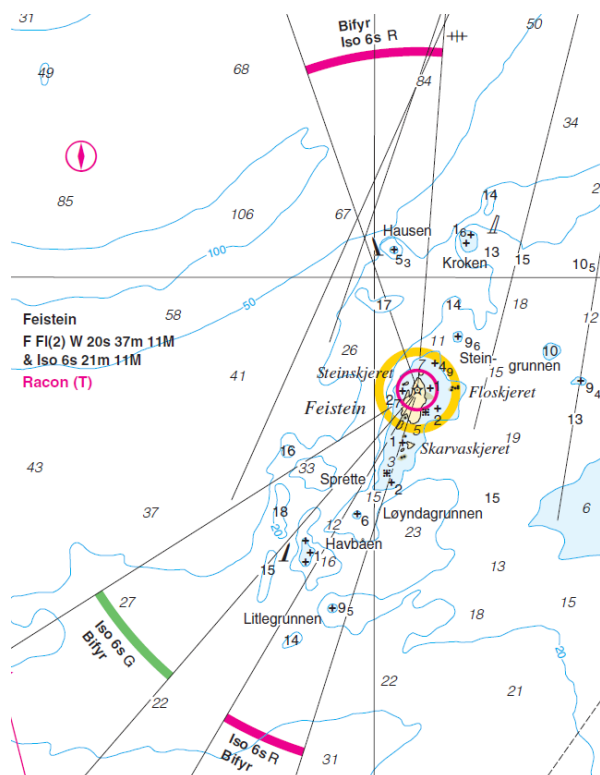
iv. Sector arcs should **be shown solely by coloured arcs, but may be fine dashed lines.**

Chairman: See response to GR.

vi. **Multicoloured lights.** If a light is multicoloured and the sectors (or circles for all-round lights) are not charted, a single magenta flare must be used, except as follows:

- Where there is a major all round light, with **a separate red sector light covering a danger**, this should normally be symbolised by the all round light circle around the light, with the red light symbolized separately by its sector, with red arc, covering the danger. If the chart scale is too small to show the red sector, then omit the associated light description too.

There may be more than one separate sector on an all round light. Feistein light have one green and two red sectors (NO charts 14, 16 and 475. See further down).



Chairman: This depiction seems sensible. We will change bullet to read ‘...with separate sectors, eg a red sector covering a danger,...

- **NO Comments to General rules on ‘multicoloured’ charts:**

In small scale Mercator charts one specific scale is not covering the whole sheet. The scale may be considerably different in northern and southern parts of the chart. The actual Latitude of scale may not be found inside the chart, as in INT 10, NO 300.

- Note that charts of scale smaller than 1:2 000 000 should be produced in the standard four colours and conform to the specifications in Part C.

What about charts at scale exactly 1:2 000 000? NO charts 514, 515, 550

Chairman: See response to AU.

- Norwegian multicoloured charts are produced with CMYK colours. We can reduce the number of colours used, but we do not have production device for old traditional 4 colour production.

Action 37: a Not relevant in Norwegian charts at the moment.

b: In Norway we have a lot of highlighted structures that also *may* include a navigational light on the very top of the structure. Highlighted parts are the rock on which the structure is situated, and the white board with a number (two last figures in List of lights if the installation also is an AtoN light).



If *navigation light is 'highlighted'* means that the navigation light is intensified, we should maybe write it in other words.

Chairman: We are not talking about 'intensified', which can only apply to a sector – that is already covered (P46). The light supports you illustrate above are really floodlit, which you show correctly by P63. That may be a suitable symbol in some cases of 'highlighting', but would not work for the arc-pointer, for example. See response to AU.

Further comments:

Use of full stop (.) in light characteristics and abbreviations.

The text is understandable without any full stops. With the amount of small islands along the coast of Norway we do not like the charts to be filled up with a lot of unnecessary points/dots.

Chairman: this is covered by B-471.9.

NEW ZEALAND

Action 37b. We would like to see these added to charts as they are designed to be highly visible from seaward. We have not been able to come up with any clever suggestion of how to chart them. Our only suggestion is to add the text '(with pointer)' at the end of the light description.

Chairman: See response to AU.

SPAIN

We agree to insert a text legend (arc-pointer) next to the light description and a note in the List of Lights or Sailing Directions, rather than a new symbol.

Chairman: See response to AU.

SWEDEN

Action 12: SE agrees in general with the draft rewording, but would prefer (as already commented by NO, DK and GR) a revised order regarding dashed and continuous lines in iii. We also agree with NO, DK and GR to change iv. to something like 'Sector arcs should be shown solely by coloured arcs, but may be shown additionally with fine dashed lines'.

Chairman: See response to GR.

TURKEY

Action 12: A circle that has approximately 10mm radius might cause some conflicts around the light symbol. The text under “Major all-round navigational lights” should be changed as below :

Major all-round navigational lights should normally be surrounded by a circular 1mm band of the appropriate colour, and should be situated to avoid conflict with significant detail. No attempt should be made to make the radius of the circle proportional to the range of the light. The circle should continue across land and be unbroken if possible, including through dark sectors invisible from the sea. The following exceptions are marked by flares instead of circles:

Chairman: Agree. We will change accordingly.

Action Item 37 : It might be put a legend close to the light which is highlighted.

Chairman: See response to AU.

US(NOAA)

Action 12: subpart vi, second bullet- NOAA does not produce multi-coloured charts, so I’m still somewhat baffled by the standards for them; so please bear with me. According to B-470.4a, subpart ii, a magenta light flare represents a red light or a violet light on a multi-coloured chart. So I suppose, the mariner has a reasonable expectation that when he/she sees a magenta flare on a multi-coloured chart, the colour of the light is red or violet.

Now, look at B-470.4a, subpart vi, second bullet. I’ve lost this argument before, but I still think that when a generic magenta flare is used on a multi-coloured chart in association with two different coloured lights on the same light star, a note, such as (*see note*) should be referenced clarifying to the chart user that the generic magenta flare does not represent the red or violet light expected at first glance at the chart, since magenta is generally used on multi-coloured charts for a red or violet light. Subpart vi strays from the practice expected from subpart ii. The mariner might not immediately recognize the textual characteristics of the light. This is a multi-coloured chart. Isn’t he or she looking primarily for the colour of the flare? The flare is magenta, but the lights aren’t necessarily red. A note would be helpful.

Chairman: See response to DE and summary. If we need to put ‘see Note’ to explain a symbol, then the symbol is not very useful. We have already agreed to include a note about the generic flare in INT1 (at next edition).

Action 37: Text may be added to the navigation light [such as “highlighted”, “arc-pointer” or “(see note)”] to assist the mariner in identifying which charted aid to navigation is being highlighted. Captain: “I see an arc of light pointing to a navigation light. Pull the List of Lights. What do you mean, you can’t find it? Is it on the web? I’d look it up in the Sailing Directions but this class of vessel isn’t required to carry one. I’ll look at the nautical chart to see which aid it is pointing to. I hope the chart does not show a non-intuitive symbol. Oh, look, my chart shows the word “highlighted” next to Harbour Light #2. Thank goodness for cartographers.”

Chairman: I think this means you would like to see a legend adjacent to the light description either describing succinctly the type of highlight, eg ‘(arc-pointer)’ or ‘(see Note)’ with more details in the note. This agrees with AU (and others) view.