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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CSPCWG Letter: 06/2011

UKHO ref: HA317/010/031-08

To CSPCWG Members Date 30 June 2011

Dear Colleagues,

Subject: Actions arising from 7th CSPCWG meeting:

Action 17 - Generic magenta light flare for use on multicoloured charts

Many of the 30 actions listed at CSPCWG7 required the Secretary (sometimes in consultation with others) to draft various papers. Work has started on most of these but it seems best to present them for consideration by Working Group members in small groups.

In the case of Action 17, this has proved to be complex, so we are sending this as a stand-alone action letter, details of which are at Annex A. The relevant extract from the Record of CSPCWG7 meeting heads the Annex, followed by an explanation of why the action has been widened and a series of questions and some answers from existing multicoloured chart producers.

Please study each carefully and let me have your comments by 25 August, using the response Form at Annex B. Responses are invited from all WG members, not just those who attended CSPCWG7.

Yours sincerely,

Andrew Heath-Coleman,
Secretary

Annex A Action 17: Generic symbol for lights in multicoloured charts
Annex B Response Form

CSPCWG7 - Action 17

8.9 Generic symbol for lights in multicoloured charts **(SE)**
Docs: CSPCWG7-08.9A Generic symbol for lights in multicoloured charts

(Go to: http://www.iho-ohi.net/mtg_docs/com_wg/CSPCWG/CSPCWG7/CSPCWG7-08.9A_Generic_light_symbol_multicoloured_charts.pdf).

The meeting decided that the traditional solid magenta flare should be used for drawing attention to light stars for multicoloured lights where the sectors are not charted, and also for signal stations. Small changes would be required to specifications to clarify this, at B-470 and B-494.

ACTION 17: Secretary to draft clarifications to specifications B-470 and B-494 for use of solid magenta flare.

Note:

a. In this context, the terms 'standard' is used to describe a chart of limited (usually 4) colours and 'multicoloured' to describe charts using, or potentially using, many more colours in its production.

b. The aim of the cartography in all the instances below should be to enhance the clarity of the presentation and to aid the mariner's understanding of the charted feature(s).

Since the meeting, UK has been widening the application of multicolour on its charts, including UK-produced charts in addition to the adopted charts already published. Consequently, this experience has brought to light several questions on the application of the 'generic magenta light flare', which can usefully be resolved through this WG.

We have consulted those members of the WG who already produce multicolour charts and provide their responses to the various questions. It is important to bear in mind that all these nations have been producing multicolour charts for some time, without the benefit of international guidance. Consequently, there are differences in their practices; our task is to consider these differences and produce standard guidance which will benefit the majority of HOs who do not yet produce multicolour charts, but may do so in the future; and also to encourage improved standardization of existing practices, ultimately for the benefit of the mariner.

The following is the list of questions already considered by the multicolour chart producers, with their responses immediately following:

1. Production platforms (L2/P1)**.** As multiple flares were considered to be unnecessary clutter at CSPCWG7, the options seem to be either

- a magenta flare (because there are white and red lights)
- a yellow flare (because the white light is the principal navigation light)
- a yellow circle (because the main navigation light is an all-round major light).

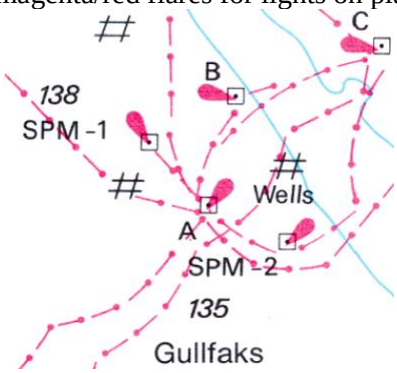
In deciding the policy, we should consider the following:

- Most platforms have multiple lights on the same platform structure. If not coincident, they are practically so at the scale of the chart. Use of a magenta flare would seem consistent with the decision at CSPCWG7.
- Charted platforms do not normally show light descriptions but usually have the signals detailed in chart notes. The prime navigation light is Morse(U)W.15M, while the red lights which just mark the extremities for vessels close to the platforms are Morse(U)R.2M. There are also red obstruction lights.
- If interpreted strictly, the INT1 symbol L2/P1 for a platform actually includes a magenta flare.
- The magenta flare has been associated with platforms in standard (not multicoloured) charts for more than 40 years.
- With a yellow flare, isolated platforms may be insufficiently prominent, especially as magenta safety zones do not appear on many charts where the scale is too small (including those positioned well off-shore where the obstruction nature of the platform is perhaps even more significant to the mariner).

- In many oil/gas fields, the platforms are so closely charted that putting a yellow circle around each platform could result in a confusing portrayal, especially at the typical smaller scales used for off-shore charts.
- A change to yellow would require a change to every platform flare depicted on all existing charts produced by pre-multicolour processes. (This would be many thousands for UK and others). The time span it will take to implement this would lead to inconsistency for very many years.

The balance of the arguments appears to be in favour of continuing to use a magenta flare to mark production platforms.

Comments by:
DE: In multicoloured charts a yellow flare is common for platforms. Besides you can find the red flare in charts where the air obstruction light (P61.1.) which is now obsolescent and charted by "(RLts)" is still shown. As I understood from CSPCWG7 the magenta flare solution is for small scales (for "standard" charts) to omit the clutter. The decision for us is from which scale we start with standard charts (our proposal is 1: 500 000) [* see Note at end]. I will also encourage to discuss this at the BSICC meeting in June. A yellow circle is not our choice, it is associated more to sector lights.
[Note by Chairman: I did not understand that the discussion regarding the generic magenta flare was only for small scale charts].
DK uses both red and yellow flare and will 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. If we were to choose another way of presenting lights on production platforms we would prefer the use of a magenta flare.
LV: We do not have experience of charting platforms, but on our charts we would chart the prime navigation light which is yellow flare, if the clutter is considered. Have to mention also, that we do not have smaller scale charts than 350000.
NO: Production platforms are situated so far away from the coast that they do not appear in the large scale charts of the Norwegian Main Chart Series. The largest scale where we show platforms are in the Coastal Charts, scale = 1:350 000. These charts are all older ED50 charts and therefore not multicoloured in the same way as the main chart series.
Due to the scale and the age of the charts affected we have not considered using any other colour than magenta/red flares for lights on platforms. Example from NO chart 307:

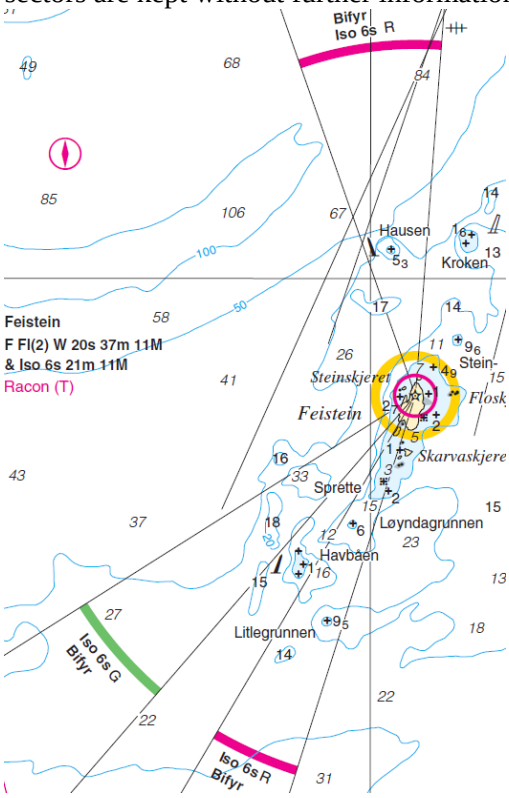


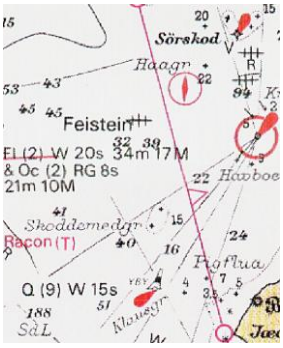
SE: In multi-coloured charts a yellow flare has been used (for more than 40 years) since the white light is the principal navigational light. SE is in favour of a yellow flare without a red flare. If there are red navigation lights, marking the platforms extremities, this could be explained in the chart notes our by inserting both light descriptions. Air obstruction lights should only be described as (R Lts) as described in P61.2 and should not influence the colour of the flare. In fact no flare at all should be inserted, due to air obstruction lights.

2. <u>All-round lights with subsidiary sector lights covering a danger</u> (P42). This is quite a common occurrence. Applying the rule that a 'solid magenta flare should be used for drawing attention to light stars for multicoloured lights where the sectors are not charted' would mean using a magenta flare. However, in reality this is two separate lights exhibited from the same structure, one of which is not sectored and the other (usually) has only one sector. The all-round light would usually be a major light, for use of off-shore shipping, whereas the sector light is for marking a danger closer in and would usually be of lesser range. A possible guide could be:

- Where there is a major all round light, with a separate red sector light covering a danger, this should be symbolised by an appropriately coloured 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 its associated light description should also be omitted.

Comments by:
DE: In the case when the chart is too small to show the red sector we chart 2 flares and 2 light descriptions (see e.g. DE 240 INT 1022). We should add an example for multicoloured charts to P42 in the next edition of INT 1.
DK already uses this option and therefore approves.
LV: We would chart two flares with 2light descriptions
NO: In Norwegian charts there are often more than one subsidiary sector. See example below from NO chart No 14. The same area in a smaller scale chart shows the use of a magenta flare. The subsidiary sectors are kept without further information.

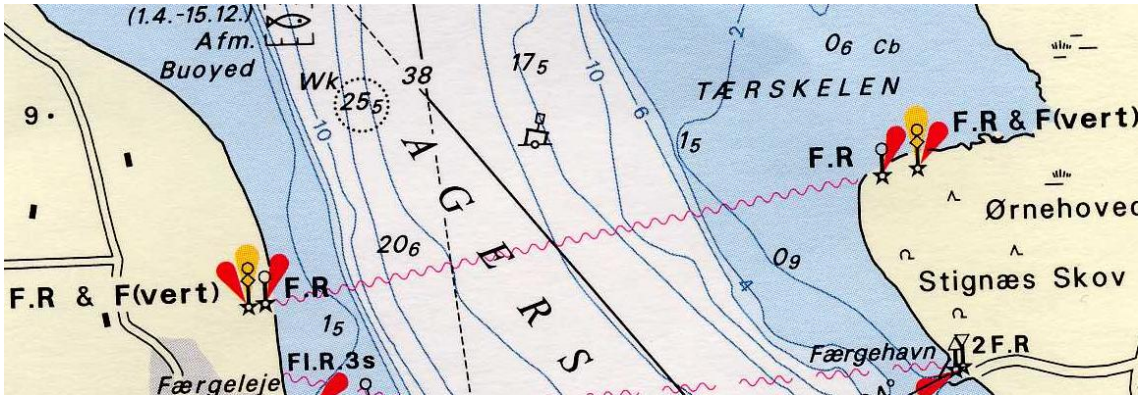




Light in existing NO. chart No 306, scale 1:350 000

SE agrees in principal. However if the scale is too small to show the sector an option should be to show a flare and retain the light description.

3. <u>Separate and different coloured lights charted at the same position</u> (because of scale or because they are on the same structure – as described in B-471.8). An example is shown below and another is at P20.3 in INT1. Should these be charted by a magenta flare? Or is there a case to have multiple flares after all, for unsectored separate lights on the same structure (as would happen on an ENC)? In this example, for those HOs using a combined red/magenta base, potential for confusion arises when a single magenta (showing as red) flare is used for the red and white light.

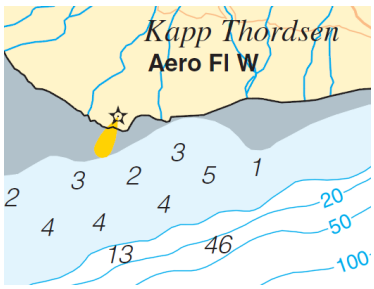


Comments by:
DE: The charting with the two flares in the above example is the same what we would do. In INT 1 we have not shown the multicoulored example yet. We should add it.
DK will continue to use multiple flares, as shown in example.
LV We would chart this way.
NO: Norway is not using a single magenta flare to chart multiple lights for marine navigation in separate positions charted in the same position.

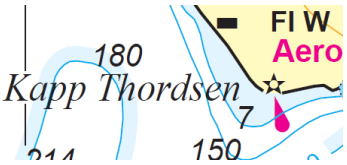
NO chart no 21, scale 1:50 000, showing lights in six positions using six coloured flares and one position star.
SE agrees that this is a case where two separate flares with separate colours would be needed.

4. <u>Aero navigation lights</u> (P60)**.** These may be single or multicolour (often alternating colours) and are assumed to be all-round. As they are not intended for marine navigation (and information may not be available as to the status of the light), it is not appropriate to apply all the rules which apply to marine navigation lights. It would be simplest to use the generic magenta flare (as currently depicted in INT1), rather than attempt to colour code any that do not exhibit alternating colours. A circle (or circles of two colours) will likely give undue prominence to these lights.

Comments by:
DE: We should describe the difference clearer between P60 and P61. Is it a matter of range? If the red flashes at the wind turbines are not of higher range than the navigational lights on it we should understand them as air obstruction lights. The example of P60 should get also a multicoloured addition. [Note by Chairman: it would be useful to amend the description in INT1 at P60 to 'Aero navigation light' (as used by DK below)].
DK shows aero navigation lights as full coloured circles wherever possible (have not been able to find any aero lights with alternating colours in our charts).
LV: Agree with DE comment.
NO: The generic magenta flare is only used in the smaller scale charts [* see Note at end].



NO chart 523, scale 1:100 000.



Same area NO chart 505, scale 1:700 000.

SE agrees that it would be simplest to use the generic magenta flare for aero navigation lights.

5. <u>Major floating lights</u> (P6)**.** These are all round lights; but presumably should have a yellow flare (assuming a white light), rather than a circle? When we refer to all-round lights, are we always considering only fixed lights? After all, every buoy has an all-round light.

Comments by:
DE: It is common that the floating navigational aids have flares in several colours depending on their light description but not circles.
DK uses yellow flare – as for all buoy lights.
LV We prefer them to leave as flare and with the appropriate colour.
NO: We agree that a flare is used, with the colour of the light (in this case yellow).
SE agrees that a flare should be used, with the colour of the light (in this case yellow).

6. <u>Lights without descriptions on small-scale charts</u> (S-4 C-414.1). Conventionally, on small-scale (<1:2 000 000) charts, only major lights (usually with range of 15M or more) are shown, by a light star with a flare, without description. Most of these are likely to be white lights. Should they be changed to yellow flares?

Comments by:
DE: No. We would not change these small scale charts with the standard magenta light colour.
DK has none but would show as yellow flares.
LV Have no experience of this scale, will align with the majority.
NO: Most of the major lights shown on smaller scale charts are 360° white lights. Some may be WRG. NO is using magenta/red flares for both in smaller scale charts (We do not have many charts in scale more than 1:2 000 000) [* see Note at end]. Norway is generalizing the presentation of light information in smaller scale charts when the chart is covered by other charts in a larger scale.
SE: Just the fact that some of these lights are WRG, makes SE would be in favour of a magenta flare. Otherwise we would need to insert three flares (one red, one yellow and one green) if the light is WRG and that was one of the reasons why SE wrote the paper (CSPCWG7-08.9A) to our last meeting. Using three flares in these cases clutter the chart with unnecessary information.

7. <u>Reserve lights</u>. Some nations chart reserve lights, which are a different colour from the main light. According to B-471.8 ‘Emergency lights should not be shown on paper charts’; it is assumed this is another term for reserve lights. I suggest that, even if the description is shown, it should be ignored for the purposes of deciding the flare colour.

Comments by:
DE: Ignore the colour of the reserve light.
DK agrees.
LV It should be ignored.
NO: We agree.
SE agrees with the proposal. Reserve lights should be ignored.

8. <u>Moiré effect lights</u> (P31). Should these continue to be charted by a magenta triangle, regardless of colour (if known)?

Comments by:
DE: No experiences with these lights in DE.
DK has none and has not considered this.

LV: No LV charts have Moire effect lights
NO: We do not have any knowledge of any moiré lights in Norway. Symbol P31 is not present in any NO chart.
SE: Yes, they should be continued to be charted in magenta.

9. <u>Finally</u>: do you agree that some kind of explanation of the use of a generic magenta flare on multicoloured charts should be provided for the chart user in INT1?

Comments by:
DE: We do not use a generic magenta flare on multicoloured charts, only in smaller scale charts which are "standard" charts. INT 1 does not show enough the use of multicoloured flares, some additions of examples should be considered.
DK agrees to explain the use of a generic magenta flare on multicoloured charts in INT1. DK is a bit reluctant to introduce the use of the generic magenta flare in Danish charts as long as the use of the true colours of the lights do not cause any clutter. We are concerned that the introduction of a magenta flare would cause unnecessary confusion instead. In spite of our reluctance we strongly favour the option to use the generic magenta flare.
LV Yes.
NO: Yes, some explanation would be useful in INT 1. The use of the magenta flare is closely connected to scale. We think scale 1: 2 000 000 (small scale) is too small to be a limit for the amount of lights to be shown. [* see Note at end]
SE: Yes, some kind of explanation in INT1 would be useful.

Note: There seems to be a view by some (at least DE and NO, see comments marked *) that there is a scale cut-off for the use of multicolour. This may be connected to the different (and older) specifications for small scale INT charts found in S-4 Part C. We had not made such a connection, which does not enhance standardization between small and large scale charts (although much of the detail shown in red and green what not be included on these small scale charts). Any comments on this concept would be welcome.

CSPCWG7 - Action 17
Use of generic magenta light flare on multicoloured charts

Response Form
(please return to CSPCWG Secretary by 25 August 2011)
andrew.coleman@ukho.gov.uk

Please carefully consider all the discussion points in Annex A, together with the statements of practice or preference given by the current multicolour chart producers in Annex A, before deciding your answer to the original questions, repeated below. For each question, please only answer yes to one option.

Question No	Question	Yes	No
1	**Production platforms** (L2/P1)**.** As multiple flares were considered to be unnecessary clutter at CSPCWG7, should platforms be highlighted by:		
	a) a magenta flare (because there are white and red lights and this is the traditional practice)		
	b) a yellow flare (because the white light is the principal navigation light)		
	c) a yellow circle (because the main navigation light is an all-round major light).		
2	**All-round lights with subsidiary sector lights covering a danger** (P42). Do you agree with the following guidance: • Where there is a major all round light, with a separate sector light (eg covering a danger), this should be symbolised by an appropriately coloured circle around the light, with the sector light symbolized separately by its sector, with coloured arc. If the chart scale is too small to show the coloured sector, then its associated light description should also be omitted.		
3	**Separate and different coloured lights charted at the same position.** Should these be highlighted by:		
	a) a magenta flare?		
	b) multiple coloured flares?		
4	**Aero navigation lights** (P60)**.** Should these be highlighted by:		
	a) a magenta flare?		
	b) a coloured flare?		
	c) a coloured circle?		
5	**Major floating lights** (P6). Do you agree that these should be highlighted by an appropriately coloured flare? (In accordance with the agreement at CSPCWG, a magenta flare would be used if, unusually, there is a multicoloured light).		
6	**Lights without descriptions on small-scale charts** (S-4 C-414.1). Should these be highlighted by:		
	a) a magenta flare?		
	b) a yellow flare?		
7	**Reserve lights.** Do you agree that, even if the description is shown, it should be ignored for the purposes of deciding the flare colour?		

Question No	Question	Yes	No
8	**Moiré effect lights** (P31). Do you agree that these should continue to be charted by a magenta triangle, regardless of colour (if known)?		
9	**INT1.** Do you agree that some kind of explanation of the use of a generic magenta flare on multicoloured charts should be provided for the chart user in INT1?		

Further comments (including on whether there should be a scale cut-off for multicolour charts):

Name:
Member State: