DAM

Decal Application to Mainsails
at
Disabled Sailing Championships and Paralympic regattas

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Introduction

The 2008 Olympic and Paralympic Regattas will be organised by the Sailing Sub-committee Qingdao (SSCQD) of the Beijing Organising Committee of the Olympic Games (BOCOG). Following receipt of a set of instructions for the application of decals at the Olympic Regatta, SSCQD asked IFDS Technical Delegates (TDs) to prepare a similar document for the Paralympic Regatta. Rather than prepare a document that relates to only one event, the TDs decided to prepare a generic document that can be used at any regatta. This is that document.

DAM has currency for the 2008 Paralympic Regatta and is submitted to IFDS in the expectation that the Technical Committee might use it as the basis for something more definitive. Most of DAM discusses flags and names, but the principles apply to national letters, numbers, logos etc.

Vexillography

Terms

Bunting  The translucent woven material from which most flags (to be flown from flagpoles) is made.
Canton  Any quarter of a flag, but commonly the upper hoist (left) quarter, such as the field of stars in the USA flag.
Fly  The half or edge of a flag furthest away from the flagpole.
Hoist  The half or edge of a flag nearest to the flagpole.
Length  The span of a flag along the side at right angles to the flagpole.
Obverse  The reverse side of (a bunting) flag with the flagpole on the right.
Width  The span of a flag along the side parallel to the flagpole.
**Proportions**

Different flags have different proportions. The flags of Australia, Canada, Hungary, USA etc. are twice as long as they are wide. The flags of other nations are proportionally shorter e.g. the Danish flag is 37:28; the Swiss flag is 1:1 (square).

To ensure uniformity at a regatta, authorities (e.g. IPC) often mandate that national flags be identically proportioned. Before ordering flags, check the proportions specified by the authority. If no proportion is specified, 3:2 is an acceptable compromise.

**Colour**

Each nation specifies the exact colour of its flag e.g. the blue of the French tricolor is Pantone 282c, and the red is Pantone 186c. The supplier of flags will do his/her best to match the colour of printed flags with national specifications. However, due to variation in dye lot and background fabric, the match is rarely perfect. Reject any flag that is likely to cause offence to nationals.

**Profile**

The design of a flag is specified as below – with the flagpole on the left. On sails, however, identical flags are affixed to the port and starboard sides i.e. no flag is printed in the obverse.

![Flag Diagram]

**Fabric & glue**

Great care should be taken with the choice of material on which to print flags. Vinyl is sometimes unsuitable because of its weight and (poor) adhesiveness. Transparent and translucent material is also generally unsuitable because it permits the image on one side of the sail to pollute the image on the other side. It may be necessary to specify that flags be printed on material with a grey-white backing so as to prevent ‘see-through’.

Great care should also be taken with the choice of adhesive used to affix flags to sails. Regatta organizers are advised to experiment with fabric and adhesive (adhesive fabric?) before ordering a set of flags. White woven adhesive sailcloth made by the following company or equivalent is recommended:
Orientation

Pay particular attention to which part of a flag should be uppermost. Any person is offended by the sight of his/her nation’s flag upside down. The following notes refer to the flags of the 34 nations whose RNAs belonged to IFDS in mid 2008.

Argentina (ARG)
Affix so that the face at the centre of the sun is right-way-up.

Australia (AUS)
Do not confuse with the New Zealand flag. Affix so that the Union Jack (UK flag) is in the upper hoist canton (top left).

Austria (AUT)

Brazil (BRA)
Affix so that the script is right-way-up.

Canada (CAN)
Affix so that the stem of the maple leaf is in the lower half of the flag.

China (CHN)
Affix so that the stars are in the upper hoist canton (top left).

Croatia
Affix so that the red band is uppermost.

Czech Republic
Do not confuse with the Philipino flag. Affix so that the blue triangle of the Czech flag is in the hoist half (left).

Denmark (DEN)
Affix so that the intersection of the cross is in the hoist half (left).

Finland (FIN)
Affix so that the intersection of the cross is in the hoist half (left).

France (FRA)
Do not confuse with the Italian flag. Affix so that the blue band of the French flag is in the hoist half (left).

Germany (GER)
Affix so that the black band is uppermost.

Greece (GRE)
Affix so that the cross is in the upper hoist canton (top left).
Hungary (HUN)
Do not confuse with the Dutch (Netherlands) flag. Affix so that the green band of the Hungarian flag is lowermost.

Ireland (IRL)
Do not confuse it with the Italian flag. Affix so that the orange band of the Irish flag is in the fly half (right).

Israel (ISR)

Italy (ITA)
Do not confuse with the Irish flag. Affix so that the red band of the Italian flag is in the fly half (right).

Japan (JPN)

Malaysia (MAS)
Affix so that the crescent and star are in the upper hoist canton (top left).

Netherlands (NED)
Do not confuse with the Hungarian flag. Affix so that the blue band of the Dutch (Netherlands) flag is lowermost.

New Zealand (NZL)
Do not confuse with the Australian flag. Affix so that the Union Jack (UK flag) is in the upper hoist canton (top left).

Norway (NOR)
Affix so that the intersection of the cross is in the hoist half (left).

Philippines (PHI)
Do not confuse with the Puerto Rican or Czech flags. Affix so that the white triangle of the Philippino flag is in the hoist half (left).

Poland (POL)
Do not confuse with the Singaporean flag. Affix so that the white half is uppermost.

Portugal (POR)
Affix so that the green band is in the hoist half (left).

Puerto Rico (PUR)
Do not confuse with the Philipino flag. Affix so that the blue triangle of the Puerto Rican flag is in the hoist half (left).

Russia (RUS)
Do not confuse with the Dutch (Netherlands) or Hungarian flags. Affix so that the white band of the Russian flag is uppermost.

Singapore (SIN)
Affix so that the moon and stars are in the upper hoist canton (top left).

Spain (ESP)
Affix so that the coat-of-arms is in the hoist half (left).
Sweden (SWE)
Affix so that the intersection of the cross is in the hoist half (left).

Turkey (TUR)
Affix so that the crescent is in the hoist half (left).

United Kingdom (of Great Britain and Ireland) (GBR)
Pay particular attention to the Union Jack (flag of the UK): it is not symmetrical. Affix so that a wide white band is uppermost in the upper hoist canton (top left).

United States (USA)
Affix so that the stars are in the upper hoist canton (top left).

Placement
At Paralympic regattas, contestants should submit mainsails each bearing only the manufacturer’s label (of a size permitted by the Organising Committee of the Olympic Games) and the class insignia as per class regulations. At other championships, contestants should submit mainsails as specified in the Notices of Race.

Where unauthorized decals are attached to mainsails, they should be carefully removed, either by staff/volunteers or by the contestants themselves. Excess glue should be removed with a clean rag moistened with acetone.

Whether Paralympic regatta or other championship, contestants should be advised that it might be necessary to remove tell-tails and draft strips in order to affix decals.

Flags are placed back-to-back on each side of a sail, midway between the two lowest battens. The following descriptions are for the port side. Exercise caution when using these instructions for the starboard side of a sail.

Equipment needed

- Sponges
- Clean rags
- Acetone
- Acetone-proof gloves
- Glue (any compatible type - for adhering corners/edges of decals that fail to stick to sails)
- Masking tape
- Gaffer tape
- Scissors (Caution: Do not place where they might cut sails)
- Heat guns/hair dryers
- Knee pads and/or cushions on which to kneel/lean
- Expired credit cards (for smoothing out flags on sails)
- Rollers
- HB pencils
- Rubber erasers
- Large builder’s square (a device to measure right angles)
- Measuring tapes
- Stainless steel graduated rule (one metre in length) (for cutting straight lines)
- String (to tension across a table so as to create straight lines)
- Scalpels or ‘Stanley’ knives (Caution: Do not place where they might cut sails)
- Sheets of hard cardboard or plastic board (on which to cut flags).

**Affixation of a flag to a sail curved across one axis**

There is little difficulty in affixing a flag to a sail that is curved across one axis (‘in one direction’).

1. Lay the sail on a suitably-sized table. Tension the sail so as to remove wrinkles but not so as to stretch the sailcloth.
2. Ensure that the area of application is clean and dry. If dirty and/or or wet, wipe with a rag moistened with alcohol\(^1\) or acetone\(^2\), both of which are miscible with water and volatile.
3. Measure the distance between the upper seam of the lowermost batten pocket and the lower seam of the next upper batten pocket.
4. Mark the midpoint between the battens.
5. With a pencil, draw a line from luff to leech, *through the midpoint, parallel with the lower batten pocket*.
6. Select the appropriate flag; check with a national.
7. Ascertain the orientation of the flag *i.e.* check (preferably with a national) which edge of the flag should be uppermost.
8. Mark the midpoint of the left edge and the midpoint of the right edge of the flag.
9. Place the flag (with backing attached) so that the midpoints lie immediately over the luff-leech line. Draw a line on the sail marking the position of the lower border of the flag.
10. Keeping the lower edge of the flag aligned as above, move the flag (left-right) so that the corner nearest the leech is 50mm\(^3\) from it. Mark, on the sail, the position of the lower corner of the flag.
11. Peel a few centimeters of backing film from the lower edge of the flag and apply the peeled edge of the flag to the sail so as to position the flag as above.
12. Simultaneously peel off the backing and press the flag to the sail, neither stretching the flag so that the underlying sailcloth is puckered nor stretching the sailcloth so that bubbles and creases are left in the flag. Different teams use different methods to ensure perfect application. Some individuals work a used credit card in a radial fashion to press the flag to the sailcloth. Others work a roller in a linear fashion to achieve the same end. Exhaustive instruction is not given here because

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\(^{1}\) Ethyl alcohol (ethanol) or methylated spirits, a blend of ethanol and methanol.

\(^{2}\) Caution: Acetone will dissolve the resin used in GRP (Glass reinforced plastic, ‘fiberglass’). Acetone extracts the oil from skin; gloves are recommended. Before using gloves, test that they will not be affected by acetone.

\(^{3}\) As measured at right angles to the leech.
• Teams evolve methods appropriate to local conditions, and
• Sailors observing and/or assisting with the application of flags might insist on a particular method that they have used in the past.

**Note.** The above description assumes that all sails within a class are similar. In reality, this is not always the case. Two (2008) examples:

1. **Sonar.** The lowermost batten of a Starvoiles mainsail is (slightly) higher than that on a North mainsail. The application of the above method across a Sonar fleet using both North and Starvoiles mainsails results in flags set at different heights.
2. **International 2.4mR.** Battens on different sails subtend different angles to the leech. The application of the above method across a 2.4mR fleet using different mainsails results in flags set at different angles.

To avoid such variation, staff/volunteers tasked with applying flags should (during measurement, before the application of flags) survey the mainsails that will be used and ascertain which design is the most popular. Staff/volunteers should adopt the above method for the most popular sails and then decide whether to adopt a similar or dissimilar method for the less popular sails. Such a decision is based on aesthetics.

**Affixation of a flag to a sail curved across two axes**

It is difficult to apply a flag to a sail curved across two axes (‘in two directions’). ISAF recommends that, prior to application, each flag be divided into sections. Such division may

- Increase the length of edging liable to peel during a regatta,
- Result in imperfect alignment of sections, and
- Increase the likelihood of faulty application.

To apply a flag to a bi-axially curved sail, staff/volunteers are advised to explore one of the following variations of the above method.

1. **Apply the flag uncut (recommended);**
2. **Cut the flag (into sections) in sympathy with its design (e.g. cut each of the French, Irish, and Italian flags into three vertical strips, and the Austrian, German, Hungarian and Dutch flags into three horizontal strips. Exercise caution when adopting this method – because different sectioning might result in different sail performance); or**
3. **Section the flag so that each cut lies immediately above a seam marking a change in sail planarity.**

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5 Perfect alignment is not important for flags of simple design e.g. Austria, France, Germany etc.; however, the same can not be said for flags of complex design e.g. Australia, Brazil, UK, USA etc.


**Affixation of names**

Family names only shall be located above the foot of the sail in a position corresponding with the position of the sailor within the boat:

**International 2.4mR**

1. The lower edge of the row of letters spelling the name shall be set 20mm above the level of the Cunningham’s eye and parallel with a line drawn between tack and clew. If a window is located near the foot of the sail (rare), affix the name immediately above the window.
2. The middle letter (or the space between the middle letters) of the name shall be immediately above the midpoint of the line between tack and clew.

**SKUD 18**

In the following description, the helmsperson is assumed to be astern of the for’ard hand. Check entry lists very carefully to ascertain who sits where.

1. The lower edge of the letters spelling the names of the crewmembers shall be parallel with the rear (sternmost) half of the foot of the mainsail.
2. The lower edge of the letters spelling the family name of the helmsperson shall be 50mm distant from the foot of the mainsail.
3. The lower edge of the letters spelling the name of the for’ard hand shall be aligned with that of the letters spelling the name of the helmsperson.
4. On the port side, the terminal edge of the final letter of the name of the for’ard hand and the leading edge of the first letter of the name of the helmsperson shall each be 200mm distant from the midpoint of the foot of the mainsail.
5. On the starboard side, the leading edge of the first letter of the name of the for’ard hand and the terminal edge of the last letter of the name of the helmsperson shall each be 200mm distant from the midpoint of the foot of the mainsail.

**Sonar**

In the following description, the helmsperson is assumed to be astern of the sheet hand (middle person) who is assumed to be astern of the for’ard hand (front person). Check entry lists very carefully to ascertain who sits where.

1. The lower edge of the letters spelling the names of the crew shall be parallel with a straight line drawn between the tack and the clew.
2. The lower edge of the row of letters spelling the names shall be 30mm above the window near the foot of the sail. Where a window is not incorporated (rare), affix letters so as to match sails with windows incorporated.
3. The middle letter (or the space between the middle letters) of the name shall be the following distance from the luff.
   - One quarter of the tack-clew distance for the for’ard hand,
   - One half of the tack-clew distance for the sheet hand (middle person), and
   - Three quarters the tack-clew distance for the helmsperson.

**Note.** It might be convenient to print the names of Sonar crewmembers (double space between names) on a single strip of fabric. If this practice is adopted, affix the middle letter (or the space...
between the middle letters) of the middle name halfway between tack and clew. Alternatively, it might be convenient to print names on a strip of transparent material that can be laid against the sail and peeled away leaving (only) letters attached to the sail.

**Affixation of tell-tails and draft stripes**
After affixation of decals required by regatta organizers, contests are free to affix tell-tales and draft stripes. No restriction applies to the placement of tell-tales. Draft stripes may not be placed across or near any part of a decal. What constitutes ‘near’ is a matter for the Measurement Committee of the event or its nominee(s).

**Specifications**
All the above relates to methodology. Specifications as to what might be applied (Flags, names, country codes, numbers, logos *etc.*) is the subject of other documents.

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