

MINUTES OF SCALE TECHNICAL COMMITTEE MEETING
HELD AT HONILEY ON 8th MARCH 2008

The meeting commenced at 1 pm. Present were Gordon Warburton FSMAE, David Knott, Richard Crapp, Mike Goldby, Ian Pallister, Chris Allen and Martin Fardell.

1. Apologies

Apologies were received from Bill Dennis.

2. Co-option

David Knott was co-opted to represent our F4C team on the committee.

3. Minutes of Previous Meeting

The minutes for 1st December 2007 were accepted as a true record.

4. Matters Arising

All matters arising are covered elsewhere.

5. Possible hosting of a future World Championships

Ian said that applications to host F4B and F4C World Championships were likely to be welcomed for both 2010 and 2012. There was enthusiasm from the station commander at Cranwell to make Barkston Heath available. Richard said that there was considerable goodwill towards us internationally and a bid for either 2010 or 2012 was likely to succeed. He suggested other possible venues, including Sywell and Goodwood Racecourse. A prolonged discussion then ensued, and it became clear that finance was likely to be the major stumbling block. It was felt that an enthusiastic and competent committee could be found to organise the event, but unless massive sponsorship was forthcoming, the event did not look remotely viable financially. The very large overall costs would need to be underwritten, and from rough calculations it looked as though the event might well not break even, especially if unfavourable weather reduced spectator numbers.

We agreed that before our next meeting

- (i) Mike and Ian will look more closely at the finances
- (ii) Chris will write a short piece for BMFA News explaining the situation and asking for sponsorship suggestions.

6. FAI

6.1. We agreed that it was very important that Chris attended the CIAM meeting at the end of March as UK rep on the Scale Technical Committee. Chris would sort this out with Jim Andrews.

6.2. We went through the proposals on the CIAM agenda in detail. The relevant rules, possible changes and our decisions and comments are given at the end of these minutes as an appendix.

7. January Full Council Meeting

Mike's report has already been circulated. There were no further comments.

8. March Technical Council Meeting.

Gordon's report has already been circulated. Mike will make a list of all winners in F4B and F4C at World Championships, as requested.

9. Finance.

9.1. Ian reported the balances in each of our accounts as follows:

Technical Committee	£1138
Interscale	£2963
Contest	£1149
Team Training	£1250
Team Travel	£8833

9.2. We agreed to give each of the three team members going to Poland £500 from the Team Travel fund.

10. Team Training.

10.1 Martin circulated a draft programme for the team training day on 24th May, which was agreed.

Judges will be Martin, Ian, Graham Kennedy and possibly Chris Allen.

10.2. We agreed to pay travel mileage for the participants at standard BMFA rate, and to distribute any remaining money equally to those needing overnight accommodation.

11. Scale Free Flight.

Bill had sent the chairman a complete list of all Scale FF events this year, which Ian will circulate. Bill had nothing further to report.

12. Scale Indoor.

12.1. The event at Digby in February had been very successful, with 30 paying entries. There was a surplus of £10.60. Next year we may be able to obtain the licence more cheaply.

12.2. Everything is in hand for the Nationals at Nottingham. We sorted out the judges, but we are short of people to man the door and sell raffle tickets.

13. Scale RC.

All events are now finalised. We decided to go ahead with Colerne in September; the licence will cost £240, but the loss should be covered by other events. In future years we may find a cheaper way of using this venue.

14. BMFA Scale Rules.

14.1. Steve Ogden's proposal to exclude all previous winners from Flying Only events was discussed at our previous meeting. We rejected the proposal, and Mike will now respond to RC Power Technical Committee.

14.2. All rule changes for this year are now in the rule book.

14.3. We discussed Richard Crossley's proposal to give extra points in Peanut and Pistachio for mid-wing prototypes (rules 6.8.4 and 6.14.4). We decided to make no change.

14.4. We discussed the documentation requirements for Peanut and Pistachio. At present, the requirements are more stringent for Pistachio, as a photograph is required. In Peanut, a printed reproduction is acceptable. (Rules 6.8.2. and 6.14.2). This seems illogical and we decided to relax the rule for Pistachio, bringing it into line with Peanut. 6.14.2 will be re-written to match 6.8.2.

15. AOB.

There have been reports that the links on our website do not work with some versions of Internet Explorer. Gordon will investigate.

16. Next Meeting.

The next meeting was fixed for June 28th.

APPENDIX.

Proposed CIAM rule changes

11.11 Section 4C Volume **F4 - Scale**

Scale General Rules and Standards for Static Judging

a) **6.1.4** **Scale Subcommittee**

Add to the second paragraph

For Continental Championships with less than 40 competitors in the class, the organisers are allowed to use 2 set of 2 static judges instead of one set of three judges to speed up static judging.

Reason: To speed up the static judging when the entry is below 40 competitors in the class.

STC COMMENT - If there are less than 40 competitors, there should be no need to speed up static judging. 2 sets of 2 is more than 3 and the need is to keep costs down !

Change the fourth paragraph as follows

Within each class (F4B & F4C) all the judges (static and flying) must be of a different nationality and **preferably** selected from a list submitted by their **the NACs for guidance** and approved by the CIAM Bureau).

Reason: To be in line with the current definition of the judges list.

STC COMMENT - Why is the original rule being 'watered down' ? The reason given is not clear. The definition of the judges list has not been changed !

STC DECISION - REJECT

b) **6.1.4** **Scale Subcommittee**

Brought forward from the 2007 Plenary Agenda Deferred Section

Add to the end of the paragraph:

The organiser of a Scale C/L World or Continental Championship (F4B) shall appoint five judges, of whom three will be nominated to do the static judging, but all five will judge the flying once static judging is complete. **If the number of entries by the official closing date is less than 20, the organisers only need to appoint three judges to do both static and flying.**

Reason: To reduce organiser's cost when the number of entry is very low.

STC COMMENT - agree

STC DECISION - ACCEPT

c) **6.1.4** **Scale Subcommittee**

Brought forward from the 2007 Plenary Agenda Deferred Section

Add to the end of the paragraph:

The organiser of Scale R/C World or Continental Championship (F4C) shall appoint three (or six for two panels) judges to do static judging, plus a

separate panel of five to judge the flying. **If the number of entries by the official closing date is less than 20, the organisers only need to appoint three judges to do the flight judging.**

Reason: To reduce organiser's cost when the number of entry is very low.

STC COMMENT - agree
STC DECISION - ACCEPT

d) **6.1.4** **USA**

Change 6.1.4 from – The organizer of a Scale C/L World or Continental Championships (F4B) shall appoint five judges, from whom three will be nominated to do the static judging, but all five will judge flying once static judging is complete.

Change – The organizer of a Scale C/L World or Continental Championship (F4B) shall **appoint three judges, all of whom will do both static and flight judging.**

The organizer of Scale R/C World or Continental Championships (F4C) shall appoint three (or six for two panels) judges to do static judging, plus a separate panel of five to judge the flying.

The organizer of Scale R/C World or Continental Championship (F4C) shall appoint four judges to do static judging in two panels, plus a separate panel of four flight judges and the chief flight judge to judge on two flight lines. Teams of two flight judges will judge, while the Chief Judge over-sees the competition scoring.

Reason: None

STC COMMENT - This submission is not presented in accordance with Volume ABR Sect 4 para A.6. and the Scale Sub-committee version at b) and c) above is preferred.

The last paragraph introduces the concept of two flight lines which has not been debated. There is also a more serious problem with this proposal in that if only one round is flown (rule 6.3.10 refers) then the flight score will be based on only two judges; which is in conflict with rule 6.3.9. No reason is given for the submission.

STC DECISION - REJECT

e) **6.1.10 Judging for Fidelity to Scale and Craftsmanship** **Scale Subcommittee**

Replace the K-factor table with the new one

	K-factor
1. Scale Accuracy	
a. Side view	13
b. End view	13
c. Plan view	13
2. Colour	
a. Accuracy	3
b. Complexity	2
3. Markings	
a. Accuracy	8
b. Complexity	3
4. Surface texture and scale realism	12
a. <u>Surface texture</u>	7
b. <u>Scale Realism</u>	7
5. Craftsmanship	
a. Quality	12
. Complexity	5
6. Scale Detail	

a. Accuracy
b. Complexity
Total K Factor K = 100

9
5

Reason: A better balance between the different parts of the judging.

STC COMMENT - The consensus is that outline accuracy is paramount for scale models and k factors for scale accuracy should not be reduced. The stated reason is not understood, in fact the opposite is true; the balance is worse. This has greater impact when there are two static judging panels, (iaw Rule 6.1.3. Para 4), because this proposal increases the difference between the total marks scored by each judging panel. (the split was 45 : 55 and this proposal changes it to 39 :61). Also no reason is given for separating Surface texture and realism, neither is a reason given for insertion of the word 'scale' in front of realism. This is not necessary, we do not have 'scale colour' or 'scale craftsmanship' this is a "Scale" competition !

STC DECISION - REJECT

f) 6.1.2 USA

Proposed alteration or addition :

For transmitter and frequency control see Volume ABR Section 4b, Para B.10. 4th paragraph down.

The second flight round will start one-third the way down the flying order.

The third flight round will start two-thirds the way down the flying order. The fourth and final round will be flown in ascending order with regard to the preliminary placings after three flight rounds and static.

Reason: None

STC COMMENT - This submission is not presented in accordance with Volume ABR Sect 4 para A.6. and the paragraph reference should be 6.1.12 and not 6.1.2. The proposal also introduces the concept of four rounds which has not been debated and conflicts with rule 6.3.3. There is currently no justification for four rounds and no reason is given for the submission.

STC DECISION - REJECT

F4B Control Line Scale

g) 6.2.2. Control Mechanism Scale Subcommittee

Change Add text to paragraph c) and replace paragraph d) as follows

c) These may include (but are not limited to) control of engine(s), landing gear, landing flaps. Secondary Control Functions may be controlled by the pilot via wires/cables, or may function completely automatically **or via 2.4 GHz "park radio" with maximum 20mW output power.** The frequency of any electro-magnetic

d) No control of Primary Control Functions other than through wires/cables shall be permitted. For Secondary Control Functions the use of 2.4 GHz "park radio" with maximum power output of 20 mW is allowed.

Reason: To take advantage of the modern radio with spread spectrum and low output power that will not disturb the RC part of the championship.

STC COMMENT - F4B is for Control Line Models !

STC DECISION - ABSTAIN

h) 6.2.9

USA

Proposed alteration or addition:

At World and Continental Championships, or whenever **using three flight judges all three scores will count toward the final score.**

Reason: None

STC COMMENT - This submission is not presented in accordance with Volume ABR Sect 4 para A.6. It is not clear whether this is an alteration or an addition ! No reason is given for the submission which makes it difficult to understand what is intended. If it is an alteration then the rule applying to five judges will be removed. If it is an addition, then why is half of it in bold text ? However, co-incidentally it does complement the Scale Sub Committee proposal for reducing the number of flight judges to 3 for low entries at c) which we support.

STC DECISION - ACCEPT

F4C Radio Control Scale

i) 6.3.1. General Characteristics

Scale Subcommittee

Delete the following sentence

b) ~~The maximum thrust for a turbine engine shall be 10 kg (100 Newton)~~

Reason: Turbines are now included in the general model aircraft definition in the ABR section and the present note at the end of 6.3.1. also covers the turbine definition.

Note also that the 2007 Plenary Minutes Deferred Section proposal m) for 6.3.1. for turbines at 15 Kg is now redundant.

STC COMMENT - Agree

STC DECISION - ACCEPT

j) 6.3.3

USA

Proposed alteration or addition :

a) Each competitor will be **called to fly four times**, and must execute an official flight within the required time limit (see 6.3.4) on each occasion to be eligible for flight points for that flight.

Reason: None

STC COMMENT - This submission is not presented in accordance with Volume ABR Sect 4 para A.6. Flying four rounds would normally require another day and a half which would make competitions even more expensive. No reason is given for the proposal.

STC DECISION - REJECT

k) 6.3.6. Flight

Scale Subcommittee

Change the K-factor table as follows

Flight Scoring:

6.3.6.1. Take-off

K-factor

11

<u>6.3.6.2. Option 1.</u>	<u>7</u>	
<u>6.3.6.3. Option 2.</u>	<u>7</u>	
<u>6.3.6.4. Option 3.</u>	<u>7</u>	
<u>6.3.6.5. Option 4.</u>	<u>7</u>	
<u>6.3.6.6. Option 5.</u>		<u>7</u>
<u>6.3.6.7. Option 6.</u>	<u>7</u>	
<u>6.3.6.8. Option 7.</u>	<u>7</u>	
<u>6.3.6.9. Option 8.</u>	<u>7</u>	
6.3.6.10. Approach and Landing		<u>11</u>
6.3.6.11. Realism <u>in</u> flight		
a. Engine sound (realistic tone and tuning)	<u>4</u>	
b. Speed of the model aircraft		<u>7</u>
c. Smoothness of flight		<u>7</u>
d. Choice of options	<u>4</u>	

Reason: A better balance between manoeuvres and prototype scale behaviour scoring.

STC COMMENT – The reason given is a little vague but the revision of K factors and the increase in the number of options at the expense of the compulsory straight flight is applauded.

In paragraph 6.3.6.11 it is noted that "Realism of flight" appears to have been changed to "Realism in Flight". No reason is given for this but in any event the change should be shown in the submission as 'Realism of in flight'.

STC DECISION - **ACCEPT**

l) 6.3.6. Flight Scale Subcommittee

Add a new note below the Flight Scoring Table and above the two existing paragraphs

The flight schedule must include the two manoeuvres "Figure Eight" and the "Descending 360° Circle" to be accepted as complete.

Reason: To allow the competitor to plan his flight schedule to best present his model.

STC COMMENT - agree

STC DECISION - **ACCEPT**

m) 6.3.7. Optional Demonstrations Scale Subcommittee

Add the following text as a new first paragraph

The manoeuvres "Figure Eight" and "Descending 360°" are mandatory manoeuvres to be included in each flight, to be positioned at the competitor's discretion.

Reason: Consequential change from 6.3.6 Flight, above.

STC COMMENT – The proposed text is badly worded and open to misinterpretation, i.e. All manoeuvres must be "positioned" in front of the judges. Clearly what is intended is that these two compulsory manoeuvres may be flown in any order in the flight schedule. Suggest an amendment to the wording to avoid ambiguity.

STC DECISION - **ACCEPT** but with revised wording.

n) **6.3.9** **USA**

Proposed alteration or addition :

At World or Continental Championships, or whenever using four flight judges in teams of two, both of the flight judges scores count towards the final score.

The flight score shall be the sum of the points awarded **by both judges** in 6.3.6.

Reason: None

STC COMMENT - The submission is not presented in accordance with Volume ABR Sect 4 para A.6. It is not clear whether this is an alteration or an addition and it appears to be an amendment to a change which has not been implemented. i.e. "using four flight judges in teams of two".. This is clearly linked to another USA proposal at para d) although there is no cross reference. No reason is given for the submission.

STC DECISION - REJECT

o) **6.3.10** **USA**

Proposed alteration or addition :

Add points earned in 6.1.10 to the average score of the two best flights under 6.3.9. If the competitor has achieved only one flight, the points awarded for that flight will be divided by two.

If for any cause beyond the control of the organizers (e.g. B.11.1) less than **four** official rounds are flown, the scoring shall be completed as follows:

a) If two rounds are flown, the average of the two flights as in 6.3.9 is used.

b) If only one round is flown, the single flight score of that one round is recorded.

c) The scores in an official round can be recorded only if all competitors had equal opportunity for a flight in that round.

Reason: None

STC COMMENT - The submission is not presented in accordance with volume ABR Sect 4 para A.6. No reason for the change is given and as with the previous submission at para j) above, flying four rounds will increase costs. This proposal offers no advantages and will have a negative effect on the sport.

STC DECISION - REJECT

Scale Annexes

Annex 6A Judges Guide for Static Judging

p) **6A.1.10.4** **Scale Subcommittee**

Change the title and paragraph as follows:

6A.1.10.4 Surface Texture and **Scale** Realism

Realism is a question of how well the model captures the character and surface texture of the full size aircraft. The judges should

Reason: To bring the text in line with the new scoring table.

STC COMMENT - The STC has rejected the proposed change to the scoring table at para e) above, because no explanation is given for insertion of the word "scale".

STC DECISION - REJECT

Annex 6C Judges Guide for Radio Control Flight

q) 6C.1

USA

Proposed alteration or addition :

After each flight, **the flight judges will record any non-standard event that causes downgrading or loss of flight points. The Chief Flight Judge will review all score sheets for fairness as well as any zero scores before the score sheets are taken to scoring.** As examples:

Missed figures, figures flown out of order, out of flight time, flying behind the "Judges Line", missing dummy pilot or crash landing.

Reason: None

STC COMMENT - This submission is not presented in accordance with Volume ABR Sect 4 para A.6. and no reason is given for the submission. The STC agrees with the sentiment of this proposal, but what is the Chief Flight Judge supposed to do if he considers a judge has awarded an unfair mark ? Also this change would need to be read across to F4B at Annex 6B.

STC DECISION - REJECT

r) 6C.3.7 Optional Demonstrations

Scale Subcommittee

Relocate the entire paragraph and diagrams to the end of the annex.

Reason: The paragraph numbers in Annex 6C relate to the appropriate rule in the rules section of the F4 volume. The relocation of 6C.3.7 will put the paragraphs in the Annex into the correct sequence according to the rules sequence.

STC COMMENT - Agree the sentiment but for consistency para 6C.3.6.2 (straight flight) will also need to be relocated if the submission at para k) is adopted.

STC DECISION - ACCEPT

s) 6C.3.7.V – Lazy Eight

United Kingdom

Replace existing description and diagrams of the Lazy 8 manoeuvre with that detailed below:

V Lazy Eight

The model approaches in straight and level flight on a line parallel with the Judges' line. After passing the judges' position **When the model is in line with the judges (the centre) a smooth curving climb is commenced which progresses to a smooth climbing turn of constant radius is commenced** away from the judges. At the apex of the turn the bank should be at least 60 deg **and the model shall be on a heading of 90 degrees to the judges' line.** The nose of the model then lowers and the bank comes off at the same rate as it went on. The turn is then continued beyond 180 deg to cross in front of the judges with **intercept the centre** with the wings level **and at the same height as the entry height into the manoeuvre.** ~~before joining and turning on to the reciprocal of the original approach track. This completes half of the figure, which is then repeated in the opposite sense to give the full manoeuvre.~~

At the centre another smooth climbing turn is immediately

commenced away from the judges, the shape of which should be the same as the first turn. The second turn is then continued beyond 180 deg to cross the centre with wings level and at the same height as the entry height into the manoeuvre. The Lazy Eight is completed by maintaining this height and heading with wings level before turning to intercept intercepting the original approach track to exit the manoeuvre parallel with to the judges' line in straight and level flight. A low powered aircraft would be expected to execute a shallow dive at full throttle in order to pick up speed before commencing the manoeuvre. The figure should be symmetrical each side of the judges' position.
~~This manoeuvre is essentially two wingovers in opposite directions and should be capable of being flown by most aircraft.~~

Reason: The existing diagram and description is ambiguous and unclear.

STC COMMENT - agree

STC DECISION - ACCEPT

New Provisional Class

t) **6.8. Class FG Large Scale Model Aircraft (Provisional)** **Scale Committee**

Insert the rules as follows:

6.8.1. General Rules,

Maximum weight including fuel 25Kg. (Maximum Take-off weight)

All other rules as in F4C.

Reason: To reintroduce the Large Scale RC Class as a Provisional Class
 Renewed interest in expanding the Scale classes to heavier models and giving the organisers more competitors to spread the costs. To get more people involved in Scale competition.

STC COMMENT - In the UK and other countries, models over 20Kg require an FAA certificate to fly. This is a thinly disguised attempt to raise the maximum weight limit. The increased cost of operating and transporting larger models will result in fewer countries being able to compete in this class. There is also the question of whether the various national CAA certificates will be transferable to other countries.

STC DECISION - REJECT

u) **New Class for R/C Scale F4** **USA**

F4X Scale

1. The weight limits, as well as engine requirements and aircraft requirements etc. are the same as F4C scale.
 2. Scale Drawings-should be limited to one 3-view or set of scale drawings of normal size.
 3. Photographic evidence – one photo of the aircraft modelled, it does not have to show the complete aircraft. Other photos are strongly suggested for maximum points.
 4. Proof of Colour – colour photographs, black & white photographs as well as colour chips can be used.
 5. Competitor's declaration – the competitor is required to only finish the model in a scale colour scheme, no other declaration is needed.
- Judging for Fidelity to Scale and Craftsmanship.

1. Scale Accuracy

Side View

End View	10
Plan View	10
2. Colour Accuracy	10
3. Marking Accurac	10
4. Craftsmanship Quality	10

5. Scale Detail-limited to surface details and engine details, the cockpit is not judged.

Total K factor is only 70 it could as well be eliminated for this class.

Flight routine for this class would be the same as for F4C scale with the following changes:

Flight

Take-off K 7

Straight Flight K 4

Figure Eight K 4

Descending 360 K 4

Option K 10

Option K 10

Option K 10

Option K 10

Approach and Landing K 7

Realism in Flight K 4

Speed of the model, Smoothness of flight

Total K of 70

Reason: This new class is intended to increase the amount of competitors who would be interested in F4 Scale. We as a sub-committee must make positive attempts to increase participation in the area of scale or within a few short years others and myself are concerned that it will disappear and international participation in scale contests will also disappear. It is not a Fun Scale type of event but it is an event where the static rules are extremely relaxed. Some may consider it Fun Scale or ARF scale but it is intended to increase participation in scale competition as well as bring new modelers to F4C scale. The hope for results of this being passed is that organizers will be increasingly interested in hosting a Scale World Championships. This new event should once again bring an event, which will make money for organizers worldwide. This one item to many of us on the sub-committee is the most urgent business at hand.

STC COMMENT - The proposed F4X rules, in particular the static rules need a lot more work before they could be used without controversy and this submission is not the answer to the problem defined in the "Reason". The BMFA/STC believes there is a much simpler solution to attracting competitors to scale competition and at the same time minimizing costs for competition organisers.

STC DECISION - REJECT

GENERAL COMMENT

It should be noted that eight of these proposals (from the USA), do **not** conform to the requirements for submission of proposals to the CIAM as defined in Volume ABR Sect 4A paragraph A.6. Specifically sub-paragraphs c) and d).

Additionally the rules for scrutinizing proposals as defined in Volume ABR Sect 4A paragraph A.12. (sub-paragraph 4) have clearly not been adhered to.

This calls into question whether or not the agenda was prepared correctly as defined in Volume ABR Sect 4A paragraph A.1.3.

It should be stressed however, that the STC decision for rejection of these proposals is not based on their validity but on their content.

Regarding the proposed new class F4X:

The BMFA/STC supports the need to stimulate participation in competitions for scale models and if the need to make money for competition organizers is seen as the "most urgent business at hand", it is a pity that the Scale Sub-committee did not make this known or ask for proposals earlier.

Income is clearly generated by increasing the number of competitors and costs can be reduced by minimizing (where possible) the number of officials.

In the UK the BMFA does not have a problem attracting sufficient numbers to compete in RC Scale competition. The principle reason for this 'success' is the inclusion in the Annual competition program of a number of 'Flying Only' competitions. In simple terms these Competitions are flown to F4C flying rules but there is no static judging and the requirement for the entrant to have constructed his own model is waived. Models used must be clearly recognizable as models of full size prototypes.

It is recommended that the CIAM Scale Sub-Committee consider such a Flying Only competition as an alternative to the proposed F4X class.

Chris Allen
Scale Technical Committee CIAM Rep.

11 March 08