



AGENDA ITEM 5.3

REPORT OF THE CHIEF JUDGE

John Gaillard

VI. ADVANCED WORLD AEROBATIC CHAMPIONSHIPS Ljungbyhed, Sweden

5 – 13 August 2004

General Conclusion

This was a well-run contest, with no serious problems from a judging point of view. Some new systems were being tried which were new to me, namely the JPI judges rating system and methods of handling zeros with the introduction of “soft zeroes” being treated as scores. Comments and recommendations are made in this report for immediate consideration by CIVA.

In general it is necessary to keep procedures on the judging line as simple as possible. In recent years the introduction of computer software to reduce clerical work on the judging line has helped. We are now close to really streamlining the paperwork without any detriment to competitors.

Once again it was a pleasure to work with the International Jury, whose cooperation and guidance is always appreciated. The contest director LG Arvidsson also gave the judges his full support; there was certainly no cause to complain about our facilities or our lunches, both absolutely top class.

My personal thanks to Jürgen Leukefeld who liaised with the scoring room and ensured a supply of paperwork and Lars Frölander whose knowledge and good humour helped enormously at a Chief Judges workstation, which had the minimum of manpower.

The Judges

The following judges had applied and been selected by CIVA

Arvidsson, Christian	-	Sweden
Drokina, Valentina	-	Russia
Dungan, Greg	-	USA
Duras, Jiri	-	Czech
Hawthorne, Quintin	-	South Africa
Hill, Graham	-	Great Britain
Marengo, Aldo	-	Italy





Mecklin, Matti - Finland
Zumaglini, Jean - France

Judges Questionnaire

The Judges Questionnaire had been compiled at my request by Graham Hill in order to bring some variation into the questions; I thank him for his input. The questionnaire was issued at the first judges briefing and the results collected, prior to a general discussion.

The Judges Briefing

During the judges briefing, I explained the shortfalls of the previous JPF system which had rated judges and the way in which some judges had learned to blatantly manipulate the system, thus causing the system to be abandoned.

The new JPI system was outlined and it was explained that this was being used in the contest on a trial basis and that no JPI results would be issued to teams or published, but the judges themselves would see the results.

In addition I undertook not to make any cuts to the judging line based on the data obtained from the JPI system and asked that the judges went about their work in a natural manner according to the published judging criteria, using the full range of scores as required, so that the new system could receive a fair trial. I am of the opinion that the judges complied with this request in the contest.

The Judges Position

The judge's position was set out to the South of the performance zone and was almost ideal, situated on part of a golf course with lush lawn and an overview of the centre markings. The situation led itself to three columns of judges with the centre column set on the centre line. Lunch was taken at a building within walking distance of the judging line and was restricted to Judges and Jury only.

The Programmes

The Q, Free and two Unknown Programmes were flown without incident and with very few conferences on the judging line; some specific observations are dealt with in this report.

The JPI System

As previously stated it had been made clear to the judges that the new system was on a trial basis and would neither be published to teams or used against them. The results obtained from the system are however very encouraging, with a lot of meaningful data being issued. It was apparent that the typical values for the various elements as shown in Appendix 7, need to be adjusted, as the data received did not fall within those stated.



The most positive thing about this new JPI system is that it encourages judges to act as per our judging regulations and not remain in a narrow artificial range of scores, which had led to the downfall of the JPF system.

An aspect, which was most pleasing, was the general improvement in JPIs as the contest progressed, as we had a number of judges on the line for the first time. This could be put down to gaining experience and settling down as the contest progressed.

The Selection of figures for the Unknown Programmes

Although only an observer in the process of the selection of figures for the Unknown Programmes, a number of points became apparent as follows:

- a. Some competitors clearly were not prepared when they had to select a figure.
- b. Some competitors were in a position to select figures, when they knew that they would almost certainly not fly the programme.
- c. Some major teams did not get to select figures for some programmes.

I would recommend that the procedure for selecting the unknown figures be modified to ensure that those aero clubs with teams at a contest (minimum three pilots) get preference over those aero clubs represented by pilots competing on an individual basis.

Line Judges

From the outset it was apparent that the use of line judges was going to be a problem, due to a lack of volunteers as well as some awkward terrain at the corner positions. My advice to the organisers was to be realistic, if they were struggling for manpower at the outset the situation could only get worse as the contest progressed. The use of line judges would also mean an additional member at the Chief Judges workstation. The organisers elected not to utilise line judges.

This does once more raise the question of the general use of line judges. Contests are increasingly becoming more costly to organise, well in excess of 10 volunteers are required to operate line judging successfully, and in practice line judges are often rotated frequently using new volunteers as they arrive. Organisers have to feed, house and organise volunteers.

It is unfair to competitors not to know before they arrive on site whether line judges will be used or not. I recommend that we suspend the use of line judges at the Advanced Level and concentrate our efforts into training and briefing judges with regards to the awarding of their positioning scores.



The Contest Format

Since the inception of AWAC the number of unknown sequences has varied and cuts to participants have been left to the organisers or even changed in sequence. This often leads to an overload of the judges, who other than breaks and lunch times sometimes work fulltime for the duration of the contest. This contest was no exception. In addition, competitors do not know how many flights they will undertake and their view can change on this dependent of their position.

I recommend that we follow the Unlimited format of a Q Programme, a free programme and two unknown programmes.

This format would perhaps allow less workload on the judges and allow organisers not to be under pressure to make cuts for the 2nd unknown, giving all participants an equal number of flights in the contest.

The Handling of Zeroes

Many changes had been made to the Regulations concerning zeroes, this was my first contest using the new regulations and I recommend that we review the procedures once again. The paragraphs in the regulations, which have been modified, are as follows:

2.1.2, 2.4.7, 2.4.8, 2.4.9 & 2.4.10
&

Appendix 4 – Code of practice for the Chief Judge and Board of Judges at World and Continental Championships

1., 7., 8., 10., 11., 12. & 13.

The modifications have been made to introduce the possibility of a “Soft Zero” as opposed to a “Hard Zero”, in my opinion thus fixing a problem which we never had in the first instance.

Reference to the procedures required from the Chief Judge will show that a considerable workload has been added, for no particular purpose.

Since I have started acting as Chief Judge from AWAC 95 until the present time of AWAC 04, including all the WACs in that period, I cannot recall there being a problem with “Soft Zeroes”, yet we now have a fairly complex defined procedure in dealing with them. In addition, I believe that we have added an element in the form of the “Soft Zero”, which is potentially dangerous in so far as once such a “Soft Zero” is given it cannot be overridden.

To illustrate the point in this contest there was suddenly an issue with soft zeroes, there were probably four occasions in this contest where a mixture of “Hard Zeroes”, “Soft Zeroes” and scores led to a situation where five scores of zero were overridden by four scores.



The first example was in the Q Programme, where on one figure four judges scored a “Hard Zero”, one judge a “Soft Zero” (giving five zeroes) and four judges gave a score ranging from 3.0 to 7.0, lets say 3.0, 5.0, 6.0 and 7.0.

I called a conference. The judges giving the hard zeroes insisted they were correct, the judge giving the soft zero was equally adamant he was correct, and nobody else wanted to change their scores. I incidentally had also identified the figure as a hard zero. Following the set down procedure, the soft zero remains a score thus overriding the hard zeroes 5 to 4, these hard zeroes will be brought up to an average of the scores by the system, giving a final result on the pilots score print out of 4.0, 4.0, 4.0, 4.0, 3.0, 5.0, 6.0, 7.0, & 0.0

This cannot be desirable. The majority of judges agreed the figure was a zero but for different reasons, yet the pilot ends up with a score. In this instance the pilot concerned (a Czech pilot) asked me how he could end up with eight scores and a zero. So nobody is really happy with the system.

I am also concerned that a judge giving a soft zero cannot be overruled, whereas a judge giving a hard zero can. This could lead to abuse of the system, although I am not suggesting that this had taken place at this contest.

In addition to the problems concerning zeroes, certain procedures relating to reviews of scores and the procedure to be adopted need to be reviewed to reflect actual practice at the Chief Judges workstation and in order to keep the contest flowing.

Recommended Changes to the CIVA Regulations

A number of changes are recommended to the CIVA Regulations in order to simplify matters on the judging line and ensure that the contest flows, the Chief Judge should also become more actively involved in critical decisions and not be restricted to paper management.

There also needs to be a rethink on hard and soft zeroes. A figure which attracts a hard zero (as per 2.4.8) scores equally with a figure which whilst badly flown had all the elements intact. Surely such a figure deserves better. My recommendation is that a badly flown figure where a judge might have counted down to zero but could not award a “Hard Zero” i.e. all the elements of the figure were present and not off heading by over 45 degrees etc. be awarded a score of 2.5. This will eliminate the problem associated with soft zeroes, as the situation will be much clearer with either hard zeroes or scores and dealt with accordingly.

In addition the regulations have also been modified with regards to the treatment of “Hard Zeroes”. In the past, a zero in the minority was adjusted to the lowest score for the figure; this has now been modified to be adjusted to the average. I recommend that we revert to the former system.

I therefore recommend that the following changes be made to the regulations. Specific wording is provided:



- 2.4.7. *A mark of 2.5 (a soft zero) will be given to a figure if the deductions reflecting the imperfection of the execution of the figure lead to a value lower than the score of 2.5 and providing no element as described in regulation 2.4.8 has taken place.*
- 2.4.8. g) *any part of the figure was not visible as it was flown in or behind cloud. If the figure was visible to a minority of judges, then at the discretion of the Chief Judge an average may be taken.*
- 2.4.9. *When difficulties occur in interpreting the correct application of the “HZ” mark, the Chief Judge may call for a discussion on the spot by the International Judges. The official video may be used in these discussions to help determine matters of fact, but not perception. Such discussions shall not interfere with the subsequent flights. Form A shall be retained until the final decision is made at the next possible break.*
- 2.4.10. *When a mixture of hard zeroes, non-zero marks and/or “A” grades exists, the following resolution must take place:*
- 2.4.10.1. *“A” grades must be first set aside.. If there is an absolute majority for “HZ”, then all other grades must be reduced to “HZ”.*
- 2.4.10.2. *If there is a minority for “HZ” then these grades will be raised to the lowest score given for the figure.*
- 2.4.10.3. *In the event of a even split between scores and “HZ” grades, a conference as envisaged in 2.4.9 will be held, and if there is still no resolution the Chief Judge will cast a deciding vote.*
- 2.4.10.4 *“A” grades will then be taken into account either coming to zero or to the average of the resulting scores.*

Note: the scoring system software will normally carry out Actions 2.4.10.1, 2.4.10.2 and 2.4.10.4. following appropriate input on the score sheet at the Chief Judges workstation.



Recommended changes to:

APPENDIX 4 TO CIVA REGULATIONS (PART THREE)

CODE OF PRACTICE FOR THE CHIEF JUDGE AND BOARD OF JUDGES AT WORLD AND CONTINENTAL AEROBATIC CHAMPIONSHIPS

3. *It is essential that the Chief Judge follows each competitive flight, with a emphasis on recording hard zeroes, interruptions, insertions and height penaltie., Such infringements and comments should be recorded, as an aide-memoir, on a score sheet, which should be retained for reference prior to the judges score sheets being submitted to the workstation. The official recording of penalties will be on the appropriate section of the score sheet reserved for the use of the Chief Judge and entered prior to submission to the scoring system.*
7. *At the end of each flight, the Chief Judge should ascertain whether any of the judges has recorded a Hard Zero “HZ” mark, height penalty, interruption penalty or insertion penalty. This will be done by perusal of the score sheets collected from the judges, prior to entry into the scoring system.*
8. *In the event of there being a difference of opinion between the judges concerning a “HZ”, insertion penalty or interruption penalty the Chief Judge may at his own discretion either call a judging conference as soon as possible or follow CIVA regulation 2.4.10 at his workstation without further reference to the judges. From Programme 2 onwards (with flights in reverse order) a judging conference will always be held to resolve differences for the last 15 flights, removing the discretion of the Chief Judge to waive such a conference. The official video shall be available to assist in such discussion, when it concerns a matter of fact, for example the direction of a rolling turn, whether a negative or positive flick was performed or the omission of a figure or manoeuvre. If the discussion concerns a matter of perception, such as the extent of an error off heading or whether a figure was flicked or not, then the video shall not be used. Instead the majority view shall be determined by the grades given by the judges in real time, as per CIVA Regulation 2.4.10.*
10. *The awarding of a Hard Zero mark is determined by majority, with the Chief Judge having a casting vote (Sporting Code, Section 6, 2.1.16.). If should be noted that when a Judge’s vote is over-ruled, upward correction of a Hard Zero, must be to the lowest score of the scoring judges. When awarding a Hard Zero, Judges are not to give a ‘reserve mark’.*
11. *The Recommended procedure for handling Hard Zeroes and penalties on the judging line can be broken down as follows:*
 - 11.1 ***Hard Zeroes given by the majority of judges,** The score sheets go to the scanner unchanged, the Chief Judge having checked the Confirmed Hard Zero “CHZ” box on the score sheet, the computer system changes the minority scores and determines judges’ error points for Appendix 7.*

- 11.2 **Hard Zeroes given by the minority of judges or a 50/50% split decision,** The Chief Judge first determines by means of conferencing whether the hard zero is correct or not. If correct the Chief Judge will check the “CHZ” box on the score sheet. For those judges who have changed their score sheet following the conference, they will change their own score sheets and sign these sheets. The score sheets will then go to the scanner and the computer system will then change the minority scores and determine judges’ error points for Appendix 7.
- No account will be taken of those judges who have corrected their score sheets prior to submission to the scoring system.
- 11.3 **Hard Zeroes -Fact or Perception.** The only time that the difference between zeroes of perception or fact will be considered is when the Chief Judge calls a judging conference. If zeroes have been given for a matter of perception, then the video will not be used to determine the outcome but a straight majority given in real time or after discussion will prevail. The procedure as in 11.2 will apply in all other aspects.
- 11.4 **HZI (Hard Zero Index).** The Chief Judge will generally check the “HZI” box on each judges score sheet, when the judge is in the straight minority with or without a judging conference. However the Chief Judge does has the discretion of not checking the box in circumstances justifying this, such as where there has been a split of zeroes and scores amongst the judges and at least two judges give a minority zero. This can apply either after consideration at the Chief Judges workstation or after a conference, i.e. regardless of the final outcome, there was a genuine reason for doubt by those in the final minority.
- 11.5 **Height, Interruption and Insertion Penalties.** Each judge must record such infringements on their score sheet., Where there are no such infringements the words “Nil Penalties” or “NP” should be entered in the remarks box, thus giving a positive indication in either instance. The Chief Judge or his assistant will then enter the appropriate penalty based on the majority result, in the case of 50/50% split the Chief Judge may call a conference or cast his vote as appropriate. A copy of a typical score sheet is attached.
13. The Chief Judge must record when a contestant has exceeded the time limit for a programme (CIVA 1.4.6.1. This should not be brought to the judges’ attention whilst the flight is in progress, but immediately after the flight has ended and the scores brought to zero as appropriate (CIVA 2.3.1.1.) He should also confirm **which** figures should receive a Hard Zero because they have been started behind the judges (2.4.8f., This should also be dealt with immediately after the flight and scores brought to zero as appropriate.

The Judges

3. A judge may only reconsider his marks so long as his score sheet is still in his possession or if asked to do so at the request of the Chief Judge. Once entered into the scoring system the



scoring sheet comes under the jurisdiction of the International Jury. The judge himself must sign off any alteration on a judges score sheet.

6. *Judges shall not keep or make reference to a flight order sheet, or communicate to third parties by means of cellular phone/radio etc, whilst on the judging line or during breaks/lunches etc. Failure to adhere to this instruction, may lead to expulsion from the judging line.*

Recommended changes to:

APPENDIX 7 TO CIVA REGULATIONS (PART THREE)

JUDGING PERFORMANCE INDICES

Hard Zero Index (HZI)

Individual figures may be graded Hard Zero due to matters of perception (e.g. unclear auto-rotation in a flick roll) or of fact (e.g. an element of a figure omitted). Hard Zeroes are picked up for this analysis from the score sheet, where the Chief Judge has checked the “HZI” box against a figure (CIVA appendix 4 – 11.4).

In the event that an individual judge fails to identify a hard zero, then add one to that judge’s aggregate of errors (Ez) under this heading. Similarly, if a judge gives a grade of HZ when the majority did not, add one to that judge’s aggregate of errors (Ez) under this heading

Recommended changes to:

CIVA REGULATIONS Part 3 – Powered Aircraft

1.2.1 Competition Flights

- a) *Each competitor will make up to 4 competition flights (programmes Q, 1, 2 & 3), programme 3 may only be flown by the highest placed competitors in accordance with the Sporting Code, Section 6, Rule 1.3.1.1. (c)*

1.2.4. Programme 2 – The First Unknown Compulsory Programme

1.2.4.1 For the Unknown Compulsory Programme, figures will be chosen from Appendix 3. A representative of every National Aero Club, which has a team of at least three pilots competing in programme 2, may submit one figure with a coefficient of no less than 15 and no more than 35. A maximum of 10 figures may be submitted. If there are more than 10 Aero Clubs with teams of three or more, the International Jury will conduct a random drawing to determine which aero clubs will submit figures. If there are less than 10 Aero clubs with teams of three, the remaining figures will be submitted by those Aero Clubs with competitors with less than three pilots



competing, to be selected on a random draw basis also. Repetition of any figure with the same catalogue number is not allowed. The selection process will take place as part of a general briefing or at a special briefing called for the purpose; all competitors shall have the right to attend such a briefing.

1.2.4.4 If there are pilots from fewer than 10 Aero Clubs competing in Programme 2, a random draw will take place to determine the sequence of figures to be selected, each Aero Club will only select one figure. The remaining figures will be selected by the International Jury.

1.2.4.5 Figures shall be selected taking into account the performance characteristics of each competing aircraft and the safety of all pilots. Objections to a figure submitted in terms of 1.2.4.1, must be made within fifteen minutes of the figure being declared legal by the International Jury and before the briefing has ended. The International Jury will determine immediately whether such an objection is valid, should this objection be upheld the Aero Club which submitted the figure will be asked to submit a replacement figure. The new figure selected will then be subject to the same fifteen-minute objection period. Once the objection period has expired and the briefing ended, no further discussions will be entered into regarding the choice of figures, other than that set out in 1.2.4.8.

1.4.6 Duration of Flight and Signalling Start and Finish

1.4.6.1.

- a) The Chief Judge shall indicate by call or signal when judges must commence judging a programme. The Chief Judge must note when the time period for the programme has been exceeded and bring this to the attention of the judges after the flight, the judges will amend their own score sheets as appropriate.*
- b) If for some reason a general recall is necessary, this will be indicated to the competitor by radio or red pyrotechnic, the judges will be advised accordingly. A recall is, except in dangerous situations, allowed only up to the beginning of a programme.*

1.5 AWARDS

It is recommended that the following wording be added.

1.5.1.5. FAI Certificates confirming their role in the contest should be given to members of the International Jury, the Chief Judge, the panel of judges (including official assistants), the Chief of the Scoring Office and all specialists in the computer room and the Contest Director.

2.3.1 Time Limits for the Programmes

2.3.1.1. Figures of Programmes Q, 1, 2, and 3 finished beyond the prescribed time for climbing and flying the programme (i.e. after 10 minutes for programme Q and 15 minutes for 1,



2, and 3) will not be marked by the judges. The end of the time will be noted by the Chief Judge and brought to the attention of the judges after the flight; the judges will amend their own score sheets as appropriate.

Recommended changes to:

SPORTING CODE

Section 6

**GENERAL AND JUDGING RULES FOR
WORLD AND CONTINENTAL CHAMPIONSHIPS
AND
INTERNATIONAL AEROBATIC COMPETITIONS**

1.3.1.1. Programmes

“A”

- a)

<i>Programme Q:</i>	<i>The Known Compulsory Programme</i>
<i>Programme 1:</i>	<i>The Free Programme</i>
<i>Programme 2:</i>	<i>The 1st Unknown Programme</i>
<i>Programme 3:</i>	<i>The 2nd Unknown Programme</i>
- b) *Programme Q will be a qualification and training flight. The final results of this programme will not count towards the Championship, unless due to bad weather etc. only programme 1 has been completed, in these exceptional circumstances, the combined results of programmes Q and 1 would be used rather than to declare a non-event.*
- c)

<i>Programme 1:</i>	<i>All qualified competitors</i>
<i>Programme 2:</i>	<i>All qualified competitors</i>
<i>Programme 3:</i>	<i>A minimum of the 25 highest placed competitors after programmes 1 and 2, subject to Jury discretion.</i>

1.3.1.3. Champions “A”

- b) **Advanced World Champion in Programme 2**
The competitor who gains the highest number of points in the 1st Unknown Programme.
- c) **Advanced World Champion in Programme 3**
The competitor who gains the highest number of points in the 2nd Unknown Programme.



- d) **Overall Advanced World Champion**
The competitor who gains the highest combined points for programmes 1, 2 and 3.
- e) **Advanced World Championship Team**
Will be the team with the highest number of points in programmes 1,2, and 3 taking into account the three highest individual scores in that team.

1.3.1.5.1 Champions and Winners “A”

- a) *In addition to establishing World Champions, second and third will also be established in accordance with paragraph 1.3.1.3. (above), and these will be recognised by the award of medals and diplomas.*
- b) *In the event that programmes 1, 2 and 3 are not completed, the overall Advanced World Champion will be named on the basis of scores on programmes 1 and 2. Similarly this would apply to the World Team Championship. In the event that only Programme 1 is flown, the results for the Q Programme will be used retrospectively to declare an overall Advanced World Champion and World Team Champion.*

2.1.5. Timekeepers and Evaluators

- 2.1.5.1. *The Chief Judge and his assistant will record the timing of flights, ideally an evaluator checking paperwork will be appointed.*

2.1.11. Line Judges

- 2.1.11.2. *Line judges will be supplied with radio transmitters to enable contact with the Chief Judge’s Workstation, two frequencies will be utilised each diagonal having the alternate frequency. Performance zone infringements will be reported in real time and noted both by the line judges concerned and at the Chief Judge’s Workstation.*

Only box outs reported on both frequencies (independent confirmation) and observed at the Chief Judges Workstation to be realistic will be taken into account on the Chief Judge’s score sheet submitted to the scoring system. A record of each line judges recorded infringements and those verified at the Chief Judge’s Workstation will be kept and will be made available to competitors.

- 2.1.11.3. *Delete (now covered by 2.1.11.2.)*

2.1.12. Collection of Marking Sheets

- a) *Immediately after a competitor has completed a competition flight and the judges have completed their marking, the score sheets will be collected for perusal at the Chief Judges Workstation. Once any required actions are taken (conference,*



penalties added, indexes checked etc.) the score sheets will be forwarded to the scanner for entry into the scoring system. The individual judges themselves must sign off any changes to the score sheets.