



§ 7.3 Glider Aerobatic Committee (GAC) Report

SUMMARY

GAC has met at Oschatz just before WGAC/WAGAC and held 2 online meetings.

The rules proposals that survived GAC will be voted at agenda § 8.2.

The CHZ HMD was not calibrated and could not be used this summer. This project will not be continued. GAC has created a new rules section for HMD which can be found at the end of this document. GAC wishes to put this on the Plenary table (if Plenary agrees) despite this is proposed too late.

GAC asks all delegates to inform the glider country in each country that we need a new HMD. GAC is aware of projects in Germany, France, Italy and Holland. There may be more and the Acrowks system may be useful.

The GAC meeting was held at Oschatz on July 30

Participants

Pekka Havbrandt SWE– Chairman

Ferenc Toth HUN

Jerzy Makula POL

Madelyne Delcroix FRA was not present and was replaced by Thierry Fraize FRA.

Eugen Schaal GER

Philippe K uchler SUI

Observers were present from Austria, Romania, USA, Australia, Italy, Switzerland and the Czech Republic.

HMD

Two systems were discussed during the last online GAC meeting.

Erwin Vorenhout had announced that he will develop a system. The system was supposed to be tested during the German nationals. Erwin did not show up and did not respond to communication. The latest information is that he has economical and personal issues that had made him stop the work. The system consist now of one ground station and two aircraft prototype units.

Vladimir Machula has a system and have brought his system with 14 aircraft boxes to the competition. This system will be used during this competition.

The future of the HMD system was discussed and the conclusion is that GAC wishes to have control of a future system as owner or with an agreement with a system



provider. FAI has a fund belonging to CIVA which must be used in a very short term since it may not later be available.

Italy reported that there is an Italian system that may be applicable. France has also an existing system and asked to participate to the specification redaction.

Action plan

Germany volunteered to create a specification of the HDM system requirements.

France has also an existing system and asked to participate to the specification redaction.

GAC will issue a request for proposal in order to give different interested parties the opportunity to suggest a system and indicate the purchase and operation cost.

GAC will create a request to FAI in order to secure funding for this project.

GAC will have a Zoom meeting to discuss this on September 2 at 19.00.

§5 The new “Sportsman” event

This event has been cancelled due to low interest. Too few participants.

The proposal of adding an Excellence category between Advanced and Unlimited is not adopted.

§6 Rules proposals

NP2025-15 FRA

Glider rules various GAC 19

The first part regarding adding flick possibilities was approved.

Proposal

Rule A21.1.1

Add AND 1.1.1.1 Rule A.21.1.2 Positive half flick on negative line 9.9.8.2 only with catalogue numbers 7.2.2.2 and 7.2.4.1. Add also 8.5.3.4 and 8.5.4.3 Rationale: Speeds and configuration on the second line of 8.5.3.4 and 8.5.4.3 is similar to conditions on the second line of 7.2.2.2 and 7.2.4.1

Rule A.22.1.2

Negative half flick on positive line 9.10.8.2 only with catalogue numbers 7.2.2.1 and 7.2.4.2. Add also 8.5.3.3 and 8.5.4.4 Rationale: Speeds and configuration on the second line of 8.5.3.3 and 8.5.4.4 is similar to conditions on the second line of 7.2.2.1 and 7.2.4.2



Decision

This proposal was **accepted**.

The second part

Add rolling circles in advanced.

Add 2.2.1.2 add figure 2.1.2.1 in Appendix A add 2.1.2.1

Decision

This proposal was **rejected**.

The third part

Modify rule 3.7.1.10 (Wind measurement)

Decision

This proposal was **rejected**.

The fourth part

Rule 2.3.1.4 (Add a requirement of a reversing figure at figure selection)

Decision

This proposal was **rejected**.

The fifth part

Rule 2.3.1.6

... If it is obvious that with the proposed figures no reasonable sequence can be composed, the jury will encourage ask NACs to modify their figures accordingly. If none of the NAC is willing to change their proposed figures, the International Jury is entitle to make the decision.

Decision

This proposal was **accepted**.

NP2025-16 GER 1

Frequency of World championships the championships

Proposal

Paragraph 1.2.1.1 World Championships actually mentions in point a): "World Championships will be held every year." We propose to change this to: "World Championships will be held every two years."

No decision

The vote was 3-3 and no conclusion could be made.



The issue is referred to the decision of the plenary meeting.

We need to think about a proposal for the year between 2 World Championships

NP2025-17 GER 2

Figures in Programmes 2 to 6 Remove optional roll on 45 degree downline.

Proposal

Appendix A, list of figures for programmes 2 through 6, A.14, remove the optional roll on the 45° downward line of figures 8.4.15.2 and 8.4.17.1

Decision

This proposal was **accepted**.

NP2025-18 GER 3

Figures in Programmes 2 to 6

This proposal has an appendix with a Part 2 rules with yellow markings on the rules affected by this proposal. Already today the rules says that if an Acro or a Fox enters an unlimited competition the performance of the glider must be taken into account.

This suggestion only precisely clarifies what performance restriction is to be considered.

This proposal do not change the existing rules but adds clarity.

Proposal

Appendix A, list of figures for programmes 2 through 6 includes figures allowed for the unknown programmes in glider competitions. Add restrictions to the use of certain figures, or optional elements, if there are gliders SZD59 or MDM1 Fox, or similar types, are participating.

Add a paragraph 2.3.1.7 to section 6 part 2:

2.3.1.7

If gliders SZD59 Acro, MDM1 Fox or gliders with comparable characteristics and performance participate in a contest, the respective limitations in figure selection for programmes 2 to 6 apply.

Decision

This proposal was **accepted**.

NP2025-19 GER 4

Figures in Programmes 2 to 6

Remove optional full slow roll on the 45 degree down line on 8.7.5.1 and 8.7.5

Decision



This proposal was **accepted**.

NP2025-20 GRE 1

Removal of Interm. and Advanced from Cat.1

This is not proposed for Gliders but still discussed. The GAC do wish to continue with both UL and ADV as category 1 events as it is today.

NP2025-23 HUN 2

Jury On/Off site

Proposal

Reduce the number of jury members present on site to the Jury President only but keep the number of members as it is.

1.3.1.3. Appointment

b) At World and Continental Championships, only the president of the International Jury must be physically present on site for the whole event duration (from General Briefing to Award Ceremony). The other members must be available for online consultation called by the president of the International Jury for the whole event duration (from General Briefing to Award Ceremony) with a maximum delay of 12 working hours.

1.3.1.4 All members of the International Jury must be included into the process to hear appeals or protests submitted by competitors. A jury decision always has to be taken through a vote including all members.

Decision

This proposal was **accepted**.

NP2025-28 NED 1

Stall turn downgrades

Decision

This proposal was **rejected**.

NP2025-31 SWE 1

Proposal

New wording (Part 1, same correction to be made to Part2) 1.2.6.3. Non-NAC Entries
a) The Organiser is also obliged to accept entries from FAI Applicants as described in paragraph § 4.2 of Sporting Code, General Section. 1.2.6.3. Individual Entries a) The



Organiser is also obliged to accept entries from individual pilots. b) Individual pilots shall possess a current FAI Sporting Licence.

Decision

This proposal was **rejected**.



Glider Aerobatic Committee (GAC) Meeting Zoom Meeting 2024-09-02

Participants

Pekka Havbrandt SWE– Chairman
Jerzy Makula POL
Madelyne Delcroix FRA
Thierry Fraize FRA.
Eugen Schaal GER
Philippe K uchler SUI
Steffen Engel GER
Remy Lechelon FRA

Absent

Ferenc Toth HUN

§1 Opening

Pekka Havbrandt opened the meeting and wished everybody welcome

§2 French HDM project

Remy Lechelon presented the French system. (presentation will be included in the mail)

The system is intended only for training. It beeps at the prescribed altitudes but do not transmit any signals to the ground. This system can with moderate effort be modified to a functional HMD.

§3 GER proposal for HMD requirements

The proposal was presented by Steffen Engel GER. The GER system is developed into a functional prototype stage.

Se the proposal as an enclosure to these minutes.

The following items should be added;

- A. The signal should be recorded on an SD card. The information should be available in case of protest or interrupted radio transmission.
- B. The signal volume should be defined. No adjustable signal is required.



C. The mounting tray should be defined. The installation of the mounting tray should be the responsibility of the pilot or aircraft owner.

Pekka Havbrandt will send this proposal to the delegates and propose it to the delegates at the plenary meeting.

The idea is to have this system developed as “open source” so that everyone may produce a system.

NOTE

Philippe K uchler has talked with Vladimir Machula. The CHZ system will not be available in the future.

§4 Funding

Both Remy and Steffen claimed that the development may be performed as a hobby project but they would like to be paid for the production of systems rather than rent them to an organizer. A very rough estimate is that the aircraft mounted boxes would cost 100-200  per box. Since we need 10-20 boxes this ends up as 1000-4000  + a ground station.

Pik explained that FAI do have fundings that may be released for investments. He is against FAI-CIVA ownership of systems. If CIVA owns systems no one else will develop a second system and when the individual responsible for the system loses interest we are again in trouble. The responsibility for systems should be with the organizer.

Steffen claims that if the system is open architecture anyone may produce a system.

If this should be included in the budget it must be done within days from now.

§5 5 figures

Pekka reminded the GAC that the deadline for submission is September 8.

GAC will review the proposals and report to plenary.

§6 Minutes from the last meeting.

No further comments. Pekka will publish.



Proposal for definition and thereby improve availability of HMD for aerobatic contests.

Scope

To improve safety during aerobatics competitions especially for height infringements, there is a need of a widely open available HMD system.

To allow easier development of HMDs, the needed functionality and the way of approval should be described precisely, but without assumption of ways of solution.

Proposal

Appendix C: RULES FOR THE USE OF ELECTRONIC HEIGHT MEASURING DEVICES (HMDs)

C.1. Types of HMD

C.1.1.1 Height Measurement devices to be used in competition, have to be approved by CIVA by the approval process described in C.6

C.3 Technical characteristics

Add:

The main signal to transfer is the information if the HMD is beeping or not. The analysis of an actual height infringement lies in the HMD in the aircraft. The ground station is for recording and displaying purpose only.

Additional data to transfer by radio is optional and welcome.

Flight data shall be logged internally to provide for analysis in case of radio or ground station malfunction.

C.6. Approval of HMDs

To use an HMD during competition, the approval shall be conducted before beginning of competition flights.



For approval the HMD has to show compliance with:

C.6.1.1 Height infringement information transfer is mandatory. This is to be considered as ‘HMD in cockpit is now beeping’. The infringement information should be sent about 10 times per second during infringement situation to fit in with bandwidth limitations and get data to the ground station within time limits of C.3.1.1.

In height situations away from infringement a transfer rate of once per second is adequate to save band width.

C.6.1.2 Radio range should be at least 3 km within line of sight. Compliance can be shown by test flights (e.g. by tow planes) at upper height limit at 2500m radius around ground station.

C.6.1.3 Altitude test and infringement warning test can be shown by HMD tests in simple vacuum chambers, e.g. an exsiccator with a calibrated altimeter connected.

No more than 3 HMDs shall be used in one test to avoid bandwidth collision.

If no calibrated altimeter is available, an incline tube manometer can be used.

A deviation bandwidth of 10m is considered worthy.

The water column is

Altitude/m	water column/mm
0	0
150	175
200	234
750	876
800	934
1200	1401
1250	1459

C.6.1.4. Ground station operation

The ground station shall be able to easily put the supervising focus to one HMD transmitter and to validate the correct selection. Transfer and display of altitude and position of device in focus is considered compliant.

C.6.1.5. Fixture

The glider shall provide a fixture for quick mount and release of HMD. The proposed dimensions to reuse older HMD fixtures is a footprint of maximum 104mmx200mm.

Deviations have to be announced for contests with HMDs with different dimensions.

The fixture bracket can be released to service with use of an EASA Standard Change.



Suitable standard changes are
CS-SC051d, CS-SC058a, CS-SC061a, CS-SC062a