



Artistic Aerobatics

Artistic Aerobatics Organiser's Guide

This Organiser's Guide is meant to help Artistic Aerobatics organisers set up a smooth running competition with minimal work, limited need for helpers and stewards and proper exposition to spectators.

1 – Before the competition

Artistic Aerobatics is a competition where pilots fly their aircraft to music. This means the meet organiser is responsible for payment of any public performance fees that may be due. "Public performance" is to be understood as any music broadcast outside of the family circle.

In practice, this varies from country to country according to local regulations but is usually limited to paying a small blanket fee (possibly even nothing) according to many variables, i.e. whether the entrance is free or subject to payment, the number of spectators, etc.

One should get in touch with the Rights Collecting Agency (see « Music Public Performance Guide ») as early as possible before the actual event (a minimum of 2 to 4 weeks is usually right) to obtain the necessary documents. Typically the form should be sent back within a week after the event.

Competitors check-in

When competitors arrive at the competition site, the Organiser shall:

- Check that the competitor holds a valid Sporting License (FAI Sporting Code, Section 4, Volume ABR § B.3.2.) and keep it in custody until the end of the competition ;
- Collect (if not done previously) the competitor's Entry form after checking that it is fully and accurately filled in (FAI Sporting Code, General Section § 3.12.1.) ;
- Collect the competitor's freestyle music CDs after checking that they are properly marked with the competitor's name and fitted with blank sticker(s) ;
- Check the competitor's CDs for proper music duration (see (3) – Time management).

2 – Flight space setup

Whatever the actual space available, its actual size should be detailed in the preliminary competition documents so that competitors can adapt their flight routines before coming to the competition site. This includes, but is not limited to, take off area size and orientation, location and height of obstacles (trees, buildings, etc.) surrounding the take off area and within the defined flight space, safety line location and flight orientation relative to the sun, etc.

The judges panel should be located along the flight space median line to enable the best possible view of the whole flight space and proper communication with the Flight Marshall and the Music Stewart. The Organiser shall place the judges in such a way that they cannot be distracted by

spectators, other people or events.

There is no need to locate the judges close to the pilot as, contrarily to airplane or helicopter precision aerobatics, the flight space is not defined with angular limits. Actually it is even beneficial to define a judges area further away, as this provides them with a better appreciation of the flight space as well as a view of the flight performance closer to what is actually seen by spectators. It is, however, necessary that the Organiser plans the setup in such a way as to enable quick and easy communication between flight line, judges and Contest Director.

The Organiser should make every effort to provide both competitors and spectators with the best possible sound system. It is necessary to make sure the operator (the Music Steward) has a full understanding of the available apparatus. Test well before the start of the competition to ensure error-free operation. Although the music system shall primarily be directed at spectators and judges (so, in effect, away from the pilot and flight line), it is essential that the competitor hears very clearly the music that drives his flight. This is best done with a small monitor located right behind him and directly linked to the master sound system.

The Organiser should make sure the sound system provides the proper uniformity over the whole area. It is essential that the competitor hears the music correctly and without distortion, but also judges and spectators, so as to enable them to precisely relate music and manoeuvres. In practice this means that one should try and place the audio speakers around the spectators area and centered on the pilot and judges. The audio speakers should be evenly placed along the spectators' line. Even if the competitor did not do it when preparing his recorded music, it is highly recommended to set the audio system to mono.

Whatever the Music Steward's location, the Organiser should make sure of proper direct communication (preferably visual) between the competitor at his flight location, the Field Marshall and the Music Steward.

Ancillary space

Whenever possible, only the actual flight space and action should be in direct spectators view, keeping the competitors preparation space, transmitter impound, music management apparatus etc. out of view. While a display of models may be of interest to spectators, these models should preferably not be the competition models to be used during the round, so as to prevent distracting activity in the course of this round.

If deemed necessary, the transmitter impound shall be fitted with a device (scanner, spectrum analyser) that enables detection of radio interference. The competitor's preparation space shall preferably have mains plugs for competitors' use or charging facilities. A description of such facilities should be included in the competition invitation documents.

3 – Time management

Timing procedures

Normally timing should not be necessary, provided the duration of each competitor's music is known. This is best checked at registration time before the actual competition starts. The easiest and quickest way is to do it with the help of a computer and a couple of small pieces of free software.

So as to avoid possible errors when playing competitors' music, request competitors to mark their name and put blank stickers on their CDs (NOT on the CD cases). The Organiser will use the stickers to write the competitor's starting order for each round, then make a pile of the CDs to be used for any round in the same order they are to be played. This procedure will greatly minimise any risk of error in the course of a round.

Checking the competitors' music duration

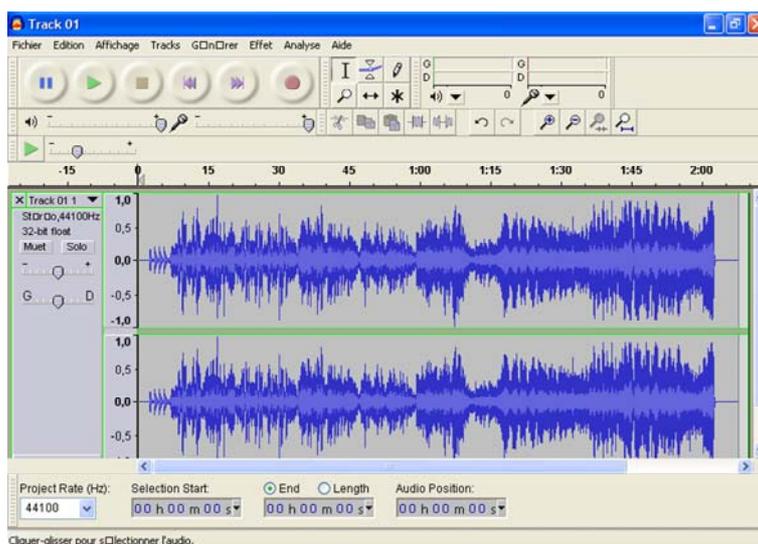
The principle is to « rip » the competitor's piece of music on the CD into a raw digital file (.WAV) and look at it with a music software to determine its duration. With some practice, no more than one minute is required to achieve this.

Although many commercial softwares are able to do it very efficiently, very simple and free software (« freeware ») are quite sufficient and even faster. As an example, from the many CD ripper software available, **Express Rip**¹ is a very small piece of software able to produce a .wav file from an Artistic Aerobatics music CD in a couple of seconds.

To visualise audio files, we recommend **Audacity**², a free, open source software very easy to use and available in several languages.

Examples:

Load the .WAV file you just got from the competitor's CD into the software. Here is a typical 2-minute Artistic Aerobatics music that includes starting signals at 1 second intervals. Note this is a stereo piece of music.



1 CD ripper (freeware) :

Express Rip by NCH Swift Sound (only 322 kb)

http://www.nch.com.au/rip/index_b.html?qclid=CJXdINmR1IsCFSYSQgodrC_5aw

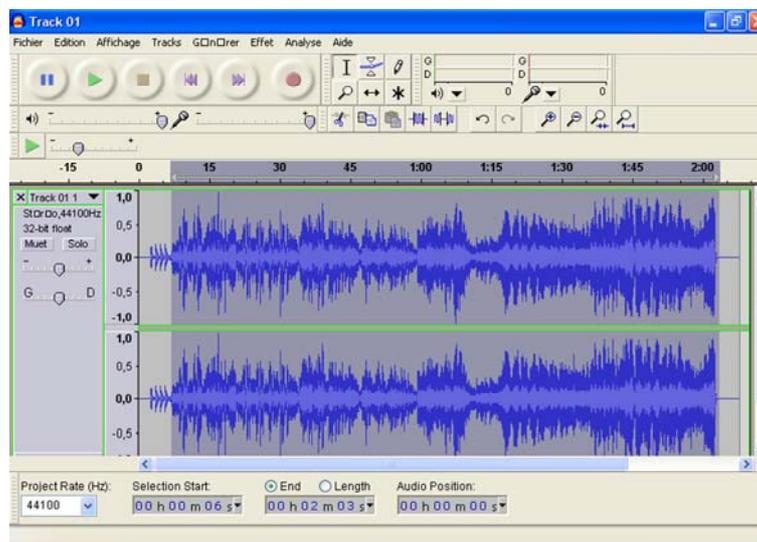
(direct download: <http://www.nch.com.au/rip/ripsetup.exe>)

2 Audio software (Open Source software) :

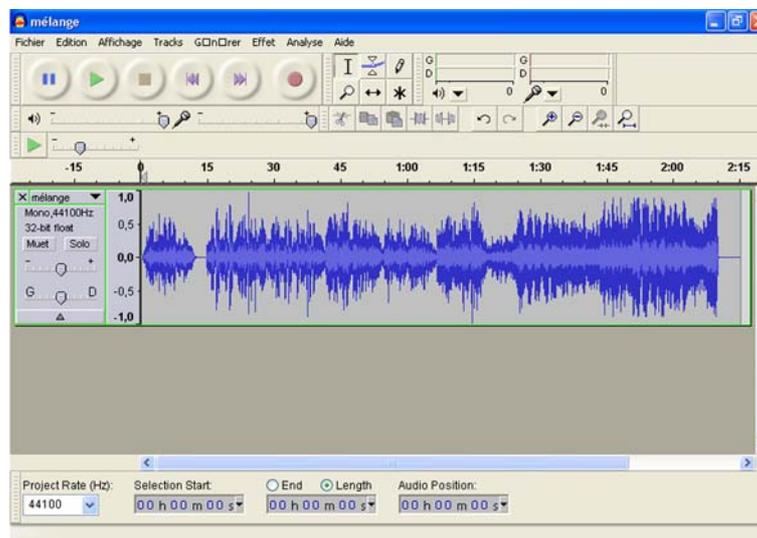
Audacity for Windows, Mac or Linux (approx. 2 to 3 Mo according to version)

<http://audacity.sourceforge.net/>

Now select the whole piece of actual music beginning after the start signals and up to the end. The actual duration is shown in the bottom window (here 2 minutes and 03 seconds less 06 seconds, so 1 minute and 57 seconds).



Here is another kind of music. One sees some length of sound (it could be voice, music or even a mixture of both) before the actual piece of flight music. This is permitted, provided there is a definite silence separating the opening piece of sound from the actual music so as to avoid any misunderstanding.



In this case, the Organiser should check that the length of time preceding the actual music does not last more than 30 seconds.

A competitor may do similarly at the end of the flight music. This is permitted under the same conditions, a clear separation from the actual music and coming to an end at the most 30 seconds past the actual flight music.

It may happen that competitors do not cut their music to the proper duration. Once the music is

started at the beginning of a competition flight, there should be no more action by the competitor, the Contest Manager nor the music Steward and the judges score the flight until the music ends. In this case, there are two options: the competitor may elect to let the music run to its end, in what case the flight's score should be reduced in proportion of the excess duration (i.e. If the music lasts 180 seconds in place of the required 120 seconds, the final score should be reduced by $(180 - 120)/120$ or 50 %) or he may ask the Organiser to cut the music to the required duration. This may be done (at a fee that should be specified in the contest invitation documents), but limited to a single cut of the excess music duration and a fresh burned CD.

Time schedule

Before every round, and as soon as the flight order is established, the time schedule shall be clearly visible and known, so that competitors have the full responsibility to be ready to fly at the specified time. The transmitter Impound Marshall shall make a competitor's transmitter available early enough before this competitor's flight time, provided there is no more possible frequency conflict up to the end of his flight.

The organiser should make every effort to keep a strict time schedule. Usually programming one start every 5 minute proves satisfactory and easy to manage. It is recommended to introduce in the time schedule a few minutes pause at approximately 30 minutes intervals. These pauses are meant to allow some rest for the judges and should be filled with demo flights or other entertaining activity. If any incident delays a flight, a pause may be shortened to keep up with the planned time schedule, but no flight shall be allowed ahead of the schedule, even if a previous competitor fails to start or under any other circumstance. The excess free time, however, shall be used to keep spectators entertained, either by a short demo or by additional comments from the speaker.

In practice, setting up a schedule with 5 flights every ½ hour (5-minute slots), followed with a 5-minute pause proves easily manageable.

Flight slots timing

In principle, no timing should be necessary during the actual flights if the duration of the competitors' music pieces have been checked beforehand. A stopwatch is, however, necessary to start the music at the specified 30-second limit, should the competitor fail to signal it before, as well as to check that the landing does not happen later than the specified 30-second after the end of the music.

As soon as the music stops, there is no need for the judges to follow the remaining of the flight up to landing. It is, however, the Field Marshall's responsibility to make sure the competitor does not infringe on the flight space boundary. In such a case, he shall inform the judges to zero out the corresponding scoring criterion.

4 – Music summary

At the same time the Organiser collects and checks the competitor's music CD he should as well collect the related Music Summary Form that shall be appended to the competition information documents and sent back with the entry form (one Music Summary Form per Flight Music). While this form may be use to list all the music performed during the event for the Music Rights Collecting Agency, it should also be used to inform the spectators before this competitor's flights.

5 – Starting order

The starting order is one of the prominent features of Artistic Aerobatics. It is designed to produce a constantly increasing interest level for spectators and Media. At the same time, it makes the judges' task easier and more fair as any two successive competitors are of roughly similar level

and may be easily compared using the same criteria.

When no international or national ranking is available, the Organiser should try and establish a starting order according to his experience and the perceived relative performance level of all competitors. This is valid for the initial round only as the starting order for any subsequent round is based on the previous round's classification.

Artistic Aerobatics rules allow Organisers to set up a system of direct and indirect qualification to access any round, except the Final one. It is highly recommended to limit this option to the second round qualification as this enables any competitor, even placed last, to fly at least twice during the competition.

6 – Results display

A quick display of scores and results is essential to maintain interest at a high level at any time through the competition. Spectators should understand what happens and have a proper view of the standings. It is recommended that judges display the score right after a competitor's flight. In addition, whenever possible, the standings should be displayed/announced at short notice (preferably after every flight) for everyone to see/hear.



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