



# GUIDE FOR NATIONAL RECORD FLYING USING BALLOON LIVE

Date: March 2023

## AIM OF THIS DOCUMENT

This document is based on several record flights organized and flown in Germany. Following the experience shared by the pilots, the official observers and the persons in charge of national records certification in Germany, the following recommendations and guidelines have been established to help any NAC in setting up procedures for pilots to fly records in their country.

The proposed procedures have been established in a way to make official observing of record flights easy and the checking and validation of the flight data secure and quick.

All necessary data can be transferred in real time and stored on Watchmefly. Setting individual permissions for each country will give the official observer and the organising NAC access to all the flight information and data needed.

## REQUIREMENTS AND PREPARATIONS

An NAC interested in setting up record flying using Balloon Live and WatchMeFly must first contact the Balloon Live team by filling out an "event" setup request using the form available on [balloonlive.org](http://balloonlive.org). No payment is needed to set it up.

The following steps and setups are required before a flight:

- If not yet done, create an account on [watchmefly.net](http://watchmefly.net).
- Register as a pilot by contacting the organising NAC or the coordinator nominated by the NAC
- Await confirmation from the organising NAC that you are registered in the NAC's record flying "event" in Watchmefly.
- Install the Balloon Live app and select the event in the competition mode.
- Pay the registration fee in the app.
- Check all pilot and balloon documents and licenses. You must have an FAI sporting license.
- Check if a internet connection is available at the planned take off site. Otherwise an online-coordination with the official observer is not possible.
- General coordination with the official observer regarding the planned flight.

## EQUIPMENT

The following equipment is necessary:

- Balloon Live sensor (BLS) with the latest firmware (see [balloonlive.org](http://balloonlive.org))  
The BLS provides the position and altitude data for the Balloon Live recording through a permanent connection to the recording device (see next item)



- Smartphone or tablet device with iOS or Android and Balloon Live app (latest version) installed. The app must have the Balloon Live app running in the foreground at all times during the flight.
- To ensure sufficient power reserve for the device, the use of an external power bank or other power supply is highly recommended.
- A device holder for the basket. Example: smartphone arm holder with transparent window for basket uprights.
- Simple tripod or other holding device to stream video of the inflation and take-off preparation.

## PROCEDURE

The following list can be used as a guide or checklist to make sure all flight data is properly recorded:

- Switch on BLS to ensure proper GPS initialization. As soon as the BLS is switched on, it will also start recording internally, unless the feature has manually been disabled in the BLS settings.
- Start the Balloon Live app and connect it to the BLS.
- Switch to the competition mode and select your national record flying "event".
- Before you start the cold inflation, you or a crew member will contact your official observer by video-call.
- Go through the check list with the official observer by showing the relevant data to the official observer. Reading the data is not acceptable.
- Shortly before cold inflation, start the recording in the Balloon Live app by using the "Start flight" button.
- Between the data check and the take-off, the video connection with the official observer must not be interrupted and all action must be viewed by the official observer live.
- The take-off time must be recorded by the official observer using his own GPS.
- Each change of a cylinder during the flight will be recorded as a marker drop.
- Each ATC clearance will be recorded as the goal declaration indicating the altitude of the clearance.
- 3-5 minutes before landing, the pilot or crew member will contact the official observer. The landing must be seen live and in video. The observer will note the time using his own GPS.
- After the landing, the flight recording will be stopped in the Balloon Live app and all remaining checklist items worked through with the official observer.
- The track recorded by the app has been stored on WatchMeFly. The track recorded by BLS is signed and stored on the SD card of the BLS.

## FLIGHT CHECKING

In order to ensure a proper verification and certification of the flight, these points must be observed:

- The official observer sends the checklist as pdf to the organising NAC or the coordinator nominated by the NAC.
- The track will be downloaded from WatchMeFly as IGC format.
- The track recorded internally by the BLS can be downloaded from the SD card.
- The signature of the IGC file from WatchMeFly will be checked using BLM software (see balloonlive.org).
- The signature of the IGC file from the BLS will be checked using BLS software.



**CHECKLIST**

GENERAL INFO				
Male/Female				
Balloon category				
Record type				
	TAKE-OFF	LANDING		CHK
	LIVE VIDEO CALL	LIVE VIDEO CALL		
Date		◀		
Time (local) of start of check				
Live Video Call with				
Name Pilot in command:		◀		
Name Copilot:		◀		
Names of additional crew		◀		
Balloon registration / serial nb.		◀		
Balloon manufacturer		◀		
Envelope color / advertising		◀		
Envelope volume	m <sup>3</sup> / ft <sup>3</sup>	◀	m <sup>3</sup> / ft <sup>3</sup>	
Fuel cylinders inside the basket		◀		
Fuel cylinders outside the basket		◀		
Temperature outside	°C / F		°C / F	
Balloon Live Sensor Nr.:		◀		
GPS fix	yes / no	yes / no		
Altitude	m / ft		m / ft	
Pressure	hPa / inHg		hPa / inHg	
Map datum	WGS84	◀		WGS84
Coordinates N/S	G/M/S		G/M/S	
Coordinates W/E	G/M/S		G/M/S	
UTC live of start/landing				
Additional information				
<b>OBSERVER INFORMATION</b>				
Name of observer online		◀		
Street address		◀		
City		◀		
E-Mail		◀		
Phone number		◀		
Signed				