



THE INTERNATIONAL BODYFLIGHT ASSOCIATION

Competition Rules

**Vertical Formation
Indoor Skydiving
2-way**

*2018-2019 Edition
Effective 01 April 2018*

International Bodyflight Association

6200 Bridgepoint Parkway, Bldg 4 Suite 400, Austin TX 78730, USA

Copyright ©2018

All rights reserved. Copyright in this document is owned by the International Bodyflight Association (IBA). Any person acting on behalf of the IBA or one of its members is hereby authorized to copy, print, and distribute this document, subject to the following conditions:

- 1. The document may be used for information only and may not be exploited for commercial purposes.**
- 2. Any copy of this document or portion thereof must include this copyright notice.**

Note that any product, process or technology described in the document may be the subject of other intellectual property rights reserved by the International Bodyflight Association or other entities and is not licensed hereunder.

The IBA would like to thank the International Parachuting Commission (IPC) for granting permission to adapt the IPC competition rules.

The 2018-2019 edition differs from all previous editions as indicated by vertical bars in the left-hand margin.



Table of Contents

<u>QUICK GUIDE</u>	4
<u>1 INTRODUCTION</u>	4
1.1 THE IBA AUTHORITY	4
1.2 OBJECTIVE OF THE EVENT	5
<u>2 DEFINITIONS OF WORDS AND PHRASES USED IN THESE RULES</u>	5
<u>3 GENERAL RULES</u>	8
3.1 PERFORMANCE REQUIREMENTS AND CLASSES	8
3.2 FLIGHT ORDER	8
3.3 THE DRAW	9
3.4 USE OF SKYDIVING AND TUNNEL	10
3.5 ROUNDS	10
3.6 WORKING TIME	10
3.7 VIDEO RECORDING	11
<u>4 JUDGING</u>	11
4.1 JUDGE REQUIREMENTS	11
4.2 SCORING	12
4.3 RE-FLIGHTS	13
4.4 TIES	13
ADDENDUM A – 2-WAY VFS RANDOM FORMATIONS DIVE POOL	14
ADDENDUM B – 2-WAY VFS BLOCK SEQUENCE DIVE POOL	15



QUICK GUIDE

For each round, time on the clock is 1 minute and formations are scored within a working time window of 35 seconds. Working time begins based on class: For Rookie and Intermediate when both feet of a team member leave the net (effectively, launching off the net) and for Advanced and Open when both feet of a team member leave the floor of the staging area and enter the wind (performing a door entrance). [ref 3.7]

Grips consist of a handhold on an arm or leg or foot of another flyer, while a dock does not require a handhold, for example “foot to foot” or “foot to shoulder.” Both grips and docks require stationary contact. [ref 2.2]

Description of classes [ref 3.1.5]

- *Rookie* - All members must be signed off to back-fly and make IBA Level II transitions. Each round contains 3-4 possible points.
- *Intermediate* - All members must be signed off to sit-fly and make IBA Static Level III transitions. Each round contains 3-4 possible points.
- *Advanced* – At least one member must be signed off to fly head-down and make IBA Static Level IV transitions. The other member must be checked off to sit-fly and make IBA Static Level III transitions. Each round contains 4-5 possible points.
- *Open* - All members must be signed off to fly head-down and make IBA Static Level IV transitions. Each round contains 5-6 possible points.

No ‘fun’ or training flights are allowed after the release of the official draw, excluding the official practice flight. [ref 3.5]

Every team receives an official practice flight before the start of round 1 in order to determine their appropriate speed setting. Taking grips during the practice flight is grounds for disqualification from the competition. [ref 3.6]

A minimum of one (1), but recommendation of three (3), official judge(s) is required. Judging can either be live or through video recording. [ref 4.1]

1 INTRODUCTION

1.1 THE IBA AUTHORITY

The competition will be conducted under the authority granted by the IBA, per the regulations of the IBA and these rules. All participants accept these rules and the IBA regulations as binding by registering in the competition.



1.2 OBJECTIVE OF THE EVENT

The objective of the event is for each team to complete as many scoring formations as possible within the scoring time, while correctly following the sequence for the round. The accumulated total of all rounds completed is used to determine the placing of the teams. The team with the highest number of points will be declared the champions.

2 DEFINITIONS OF WORDS AND PHRASES USED IN THESE RULES

2.1 FORMATION

A formation consists of flyers linked by grips in the correct orientation.

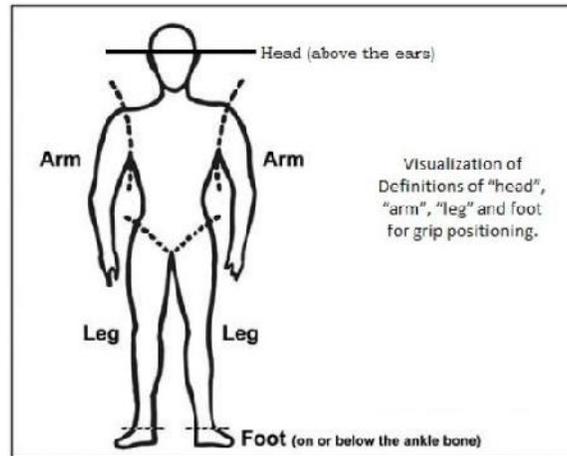
2.2 GRIPS AND DOCKS

Grips consist of a handhold on an arm or leg or foot of another flyer while a dock does not require a handhold, for example “foot to foot” or “foot to shoulder.” Both grips and docks require stationary contact.

Grips can be taken and docks can be placed on specified body parts, as follows:

- Head: the part of the body above the line that goes around the head passing at the tip of the ears.
- Shoulder: the upper part of the body between the neck the upper arm. The shoulder blade is excluded.
- Torso: the body, including the shoulder, but excluding arms, legs, head and neck.
- Arm: the whole arm, including the upper arm, lower arm, wrist and hand. The shoulder is excluded.
- Upper arm: the part of the arm between the shoulder and the elbow
- Lower arm: the part of the arm between the elbow and the wrist. The elbow is excluded.
- Hand: from the wrist to the fingers tips.
- Leg: the whole leg, including the upper leg, knee, lower leg and foot.
- Upper leg: the part of the leg between the hip and the knee.
- Lower leg: the part of the leg between the knee and the ankle.
- Foot: from below the ankle to the toes. The ankle is excluded.
- Sole: that part of the foot on which a person stands.





Orientations

- “Relative wind” is defined as the direction from which the air appears to be coming due to the relative speed of the competitors in flight.
- “Head-down” orientation consists of the competitor’s head having advanced further into the relative wind than the competitor’s feet by a significant amount, i.e., the length of the competitor’s torso. All distances and lengths are in terms of what is shown on the judging screen.
- “Upright” orientation consists of the competitor’s head trailing behind the average position of the competitor’s feet by more than the length of the competitor’s torso. All distances and lengths are in terms of what is shown on the judging screen.
- “Belly-flying” or “Belly-to-Earth” orientation consists of the competitor’s chest region facing the relative wind and the competitor’s head being neither above nor below the average position of the competitor’s feet by more than the length of the competitor’s torso. All distances and lengths are in terms of what is shown on the judging screen.
- “Back-flying” orientation consists of the competitor’s back region facing the relative wind and the competitor’s head being neither above nor below the average position of the competitor’s feet by more than the length of the competitor’s torso. All distances and lengths are in terms of what is shown on the judging screen.

2.3 GRIP LINE

This is the line linking the torsos of two competitors via their arms or legs and the grip that joins them.

2.4 BODY

The body refers to the entire competitor and his or her equipment.



2.5 DIVE POOL

The dive pool consists of the random formations and block sequences depicted in the addenda to these rules.

2.6 TOTAL SEPARATION

Total separation is achieved when all competitors show at one point in time they have released all their grips and no part of their body has contact with another body.

2.7 SEQUENCE

The Sequence is the series of random formations and block sequences which are designated to be performed on a flight.

2.8 SCORING FORMATION

A scoring formation that is correctly completed and clearly presented either as a random formation or within a block sequence as depicted in the dive pool, and which, apart from the first formation after entry, must be preceded by a correctly completed and clearly presented total separation or inter, as appropriate.

2.9 INFRINGEMENT

An infringement is one of the following:

1. An incorrect or incomplete formation which is followed within working time by either
 - a total separation or,
 - an inter, whether correct or not.
2. A correctly completed formation preceded by an incorrect inter or incorrect total separation.
3. A formation, inter or total separation not clearly presented.

2.10 OMISSION

An omission is one of the following:

1. A formation or inter missing from the drawn sequence.
2. No clear intent to build the correct formation or inter is seen and another formation or inter is presented and there is an advantage to the team resulting from the substitution.



2.11 FLIGHT TIME

Flight time is the period of time, as specified in 3.7, during which a team performs one round.

2.12 WORKING TIME

Working time is the period of time within the flight time during which a team is scored and terminates a number of seconds later, as specified in 3.7.

3 GENERAL RULES

3.1 PERFORMANCE REQUIREMENTS AND CLASSES

3.1.1 Each round consists of a sequence of formations depicted in the dive pools of the appropriate addendum, as determined by the draw.

3.1.2 It is the responsibility of the team to clearly present the start of working time, correct scoring formations, inters and total separations to the judges. Judges are asked to do their best to look for points, but it is ultimately the competitors' responsibility to show the points to the judges.

3.1.3 Scoring formations need not be presented perfectly symmetrically, but they must be presented in a controlled manner. A hand slap is not a controlled grip and will result in a non-scorable formation.

3.1.4 Mirror images of random formations and whole block sequences are permitted.

3.1.5 Requirements for flying ability are as follows:

3.1.5.1 Rookie - All members must be signed off to back-fly and make IBA Level II transitions.

3.1.5.2 Intermediate - All members must be signed off to sit-fly and make IBA Static Level III transitions.

3.1.5.3 Advanced – At least one member must be signed off to fly head-down and make IBA Static Level IV transitions. The other member must be checked off to sit-fly and make IBA Static Level III transitions.

3.1.5.4 Open - All members must be signed off to fly head-down and make IBA Static Level IV transitions.

3.1.6 IBA Transitions, as defined by the IBA Flight Chart, are:

3.1.6.1 Static Level II: Belly to Back Barrel Roll, Back to Belly Barrel Roll, Full Barrel Roll, Belly to Back Back Flip, and Back to Belly Front Flip.

3.1.6.2 Static Level III: Back to Sit Transition

3.1.6.3 Static Level IV: Head to Sit Front Flip, Sit to Head Front Flip, Sit to Head Back Flip, Head to Sit Back Flip



3.1.7 Minimum time between rounds shall be no less than ten (10) minutes.

3.2 SAFETY

3.2.1 For safety reasons, if an individual flyer demonstrates unsafe or less than the minimum flying skills expected, he or she might be disqualified during the event.

3.2.2 Questions regarding your suitability for this competition contact the event organizer or communicate with your wind tunnel coach.

3.3 FLIGHT ORDER

3.3.1 The flight order for the competition will be determined by a draw prior to the start of the competition.

3.4 THE DRAW

3.4.1 The draw of the sequence will be done via the IBA Draw Generator on tunnelflight.com or via an approved judging software and announced publicly to all participants.

3.4.2 Teams will be given not less than 30 minutes' knowledge of the results of the draw before the start of competition round one (1).

3.4.3 Draw Specifications by Class

3.4.3.1 *Rookie* - All rounds will be drawn from the Belly/Back dive pool with 3 to 4 possible points.

3.4.3.2 *Intermediate* - The first two rounds will be drawn from the Belly/Back dive pool and the remaining rounds will be drawn from the Head-Up dive pool, excluding HU-03. There shall be 3 to 4 possible points.

3.4.3.3 *Advanced* - The first two rounds will be drawn from the Belly/Back dive pool and the remaining rounds will be drawn from the Head-Up and Head-Down dive pools, excluding those marked only as Open. There shall be 4 to 5 possible points.

3.4.3.4 *Open* - The first two rounds will be drawn from the Belly/Back dive pool and the remaining rounds will be drawn from the Head-Up and Head-Down dive pools, with no exclusions. There shall be 5 to 6 possible points.

3.5 USE OF SKYDIVING AND TUNNEL

3.5.1 Competitors are not allowed to skydive (freefall from an aircraft) nor use a wind tunnel for training after the draw has been released.



3.6 ROUNDS

- 3.6.1 All rounds consist of a series of 2-way formations to be flown against the clock with flight time lasting no more than 1 minute and a working time of 35 seconds.
- 3.6.2 Each team will receive one official practice flight prior to round one.
- 3.6.3 The competition wind tunnel and configuration will be used for the official Practice flight.
- 3.6.4 In the official Practice flight - The nominated team captain shall communicate with the tunnel instructor to request the speed to be increased, reduced or to confirm that it is ok. The speed reached will be used as the default speed for the team. The tunnel driver shall select the default speed for each team prior to that team entering the tunnel. If no signals are given, then the default speed is assumed by the tunnel driver to be satisfactory.
 - 3.6.4.1 No grips of any kind are to be taken between team members during the official practice flight.
- 3.6.5 A minimum of three (3) rounds constitutes a competition wherein a winner can be determined.
- 3.6.6 Total number of rounds is determined by event organizer and released no less than sixty (60) days prior to the competition.

3.7 WORKING TIME

- 3.7.1 The driver will apply the proper speed setting for each team. When set, the driver will signal the instructor that the airspeed is correct for that team. The driver will then place flight time of 1 minute on the clock and the instructor will allow the team to enter.
- 3.7.2 Working time of 35 seconds will commence based on class:
 - 3.7.2.1 For Rookie and Intermediate: Teams begin their round from within the flight chamber. The clock will start when both of a team member's feet leave the net.
 - 3.7.2.2 For Advanced and Open: Teams must perform door entrances. The working time will start when both of a team member's feet leave the staging area floor and enter the wind. Competitors can be leaning into wind with one foot inside the tunnel without the working time starting as long as one foot is still on the floor of the staging area.
- 3.7.3 The chronometer will be operated by the person appointed by the chief judge and/or event organizer.



- 3.7.4 If any team does not complete their working time within the allocated 60 seconds, the score will be restricted to the points achieved in the remaining time.
- 3.7.5 It is the responsibility of the team to clearly present the start of working time, correct scoring formations, inters and total separations to the judges. Judges are asked to do their best to look for points, but it is ultimately the competitors' responsibility to show the points to the judges.

3.8 VIDEO RECORDING

- 3.8.1 Video evidence is required to judge each flight and to show the team's performance to third parties.
- 3.8.2 For the purpose of these rules, "video equipment" refers to the equipment installed by the hosting wind tunnel or by the event organizer specifically for the competition. No other video is allowed for judging.
- 3.8.3 Video is to come from a bottom-view camera wherein the entirety of the flight chamber is in view. This camera can either be net-mounted or in the plenum.
- 3.9.3.1 A top-down view camera is recommended as a primary back-up and a side-view camera as the secondary back-up.
- 3.8.4 Camera must record all video in high definition 1080 with 25 frames per second.
- 3.8.5 A video controller will be appointed by the chief judge prior to the start of the judges' conference. The video controller is responsible for the functionality of the video equipment to ensure it is usable for the competition.
- 3.8.6 A video review panel will be established prior to the start of the official training flights, consisting of the chief judge and the IBA controller. Decisions rendered by the video review panel shall be final and shall not be subject to protest.
- 3.8.7 If the video review panel determines that the video equipment has been deliberately tampered with, the team will receive no points for all competition rounds involved with this tampering.

4 JUDGING

4.1 JUDGE REQUIREMENTS

- 4.1.1 A judging panel of three (3) judges is recommended, with a minimum of one (1) judge to evaluate each team's performance.
- 4.1.2 Judging shall be undertaken live or using video evidence. The event organizer will determine which method is to be used prior to the start of competition and all teams must be judged using the same method.



- 4.1.3 Live judging will be undertaken on the flight deck with full view of the flight chamber.
- 4.1.4 Judging from video recording must be undertaken using approved cameras as established in 3.8. Judging from video recording can occur in real time.
 - 4.1.4.1 Judges will watch the video evidence of each flight once at normal speed to determine points in time. The moment of freeze frame at the end of working time will be determined at the first viewing.
 - 4.1.4.2 A second viewing of the performance will be conducted at normal or reduced speed between 50-90 percent of normal speed. A third view of parts of the performance can be conducted at normal or reduced speed.
- 4.1.5 If, after the viewings are completed, and within fifteen seconds of the knowledge of the result, the chief judge, event judge or any judge on the panel considers that an incorrect assessment has occurred, the chief judge or event judge will direct that only that part(s) of the flight in question be reviewed. If the review results in a unanimous decision by the judges on the part(s) of the performance in question, the score for the flight will be adjusted accordingly. Only one review is permitted for each flight.
- 4.1.6 Judges shall have either previous experience in competing and coaching VFS events or be currently certified to judge at the FAI or National level in VFS events, and who are acceptable to the meet director.

4.2 SCORING

- 4.2.1 A team will score one (1) point for each scoring formation performed in the sequence within the allotted working time of each round. Teams may continue scoring by continually repeating the sequence.
 - 4.2.1.1 Each Random correctly performed within the allotted working time will receive one (1) point. Each Block correctly performed within the allotted working time will receive two (2) points.
- 4.2.2 For each omission one (1) points will be deducted. If both the inter and the second formation in a Block sequence are omitted, this will be considered as only one (1) omission.
- 4.2.3 Any incorrectly performed or non-judgeable Random will result in zero (0) points. Any random performed while either competitor is touching the net will result in zero (0) points.



4.2.4 Any incorrectly performed or non-judgeable Block will result in zero (0) points. If the top or bottom of a Block is performed incorrectly, but the rest is performed correctly the team will receive one (1) point for the portion performed correctly. If the inter is performed incorrectly the team will not receive a point for the bottom of the Block. Touching the net during any portion of the block will result in a zero (0) for that portion of the Block.

4.2.5 Total separation is required between Blocks and Random formations. Failure to meet the requirement of total separation will result in an incorrectly performed formation. If the formation is a Random, the team will get a zero (0) for the formation. If the formation is a Block, the team will not get a point for the top of the block.

4.2.6 The minimum number of points for any round is zero (0) points.

4.3 RE-FLIGHTS

4.3.1 In a situation where the video evidence will be considered insufficient for judging purposes, the video review panel will assess the conditions and circumstances surrounding the occurrence. In this case a re-flight will be given unless the video review panel determines that there has been an intentional abuse of the rules by the team, in which case no re-flight will be granted and the team's score for that flight will be zero (0).

4.3.2 Contact or other means of interference between competitors in a team and the flight-chamber shall not be grounds for the team to request a re-flight.

4.3.3 Problems with a competitor's equipment shall not be grounds for the team to request a re-flight.

4.4 TIES

4.4.1 If two or more teams have equal scores, the following order of procedures will be applied until the first three placings are determined:

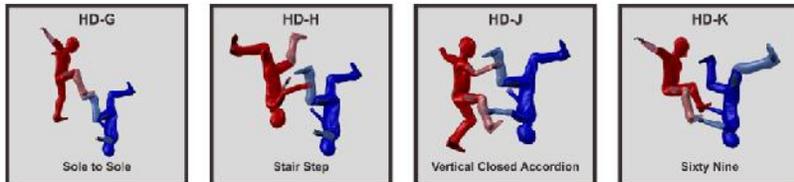
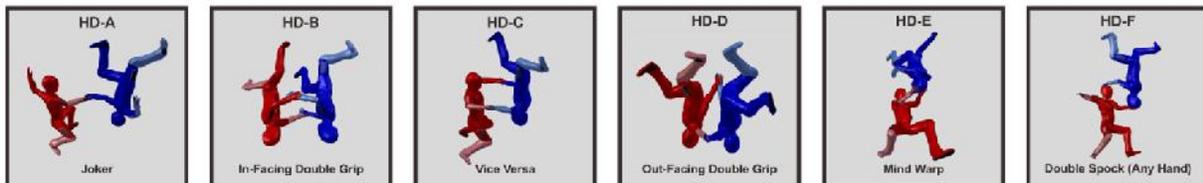
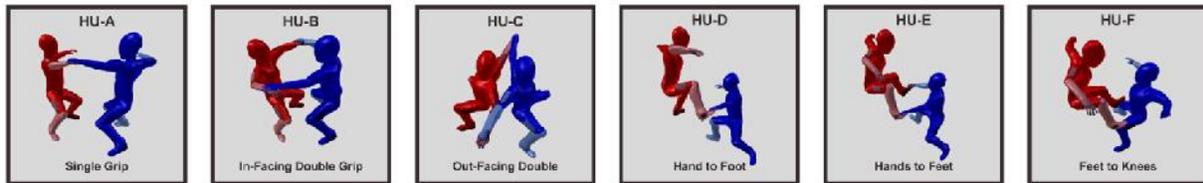
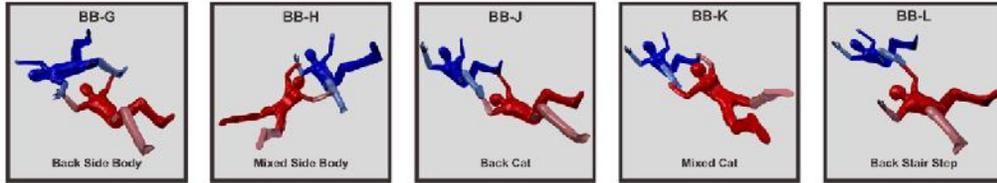
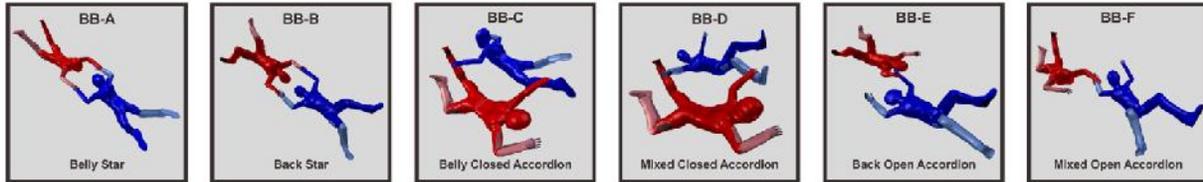
4.5.1.1 One tie-break round: The tie-break round will be the next drawn round of the competition, or if all scheduled rounds are complete, one additional round drawn by the Chief Judge.

4.5.1.2 The highest score in any completed round.

4.5.1.3 The fastest time (measured to hundredths of a second) to the last common scoring formation in the last completed round.



Addendum A – 2-way VFS Random Formations Dive Pool



Addendum B – 2-way VFS Block Sequence Dive Pool

