HeliStorm COMMUNITY™

CONTEST PACKAGE

V1.2 - 2026

INTRO

CONTEST PACKAGE

HeliStorm® Contest Kit

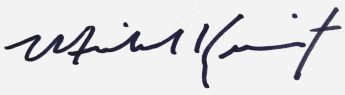
Dear Contest Director,

With the input of some of the hobby's best and most experienced pilots and contest directors, I have created what I hope will be a turnkey "kit" for anyone who wants to host or participate in a fun scale helicopter competition.

Both contest directors and pilots will find a full contest structure, scoring rubric, maneuver diagrams and easy-to-use software needed to run or participate in a HeliStorm®-style scale helicopter contest that tests both flying and static skills. We used full-scale helicopter maneuvers and adopted many others from the current AMA rules, but we changed the emphasis from precision to **realism**. In addition, we relaxed many standards around who can compete and with what models. In the end, it is my hope that the HeliStorm® Contest Kit will become a free, widely-used asset in our community. With events, we all benefit by upping our skills and enjoying the camaraderie of friendly competitions. This package makes hosting those kinds of events much easier than ever before.

The HeliStorm® Contest Kit works hand-in-glove with LiveJudge™ software, which automates pilot registration, live pilot's choice voting, and judging while allowing a worldwide audience to see the models, pilots, votes and scores from your event. Be sure to review Section 5 of this package to see how LiveJudge™ can substantially simplify everything about your event whether it's a high-level contest or a simple fun fly.

Good luck!



Michael Kranitz, CEO
HeliStorm, Inc.

1.0

SAFETY — SECTION 1

AMA Safety Rules

Incorporates AMA safety rules in all HeliStorm® events.

1

AMA Safety Rules Apply

Except as modified herein to be more strict than safety rules promulgated by the Academy of Model Aeronautics (“AMA”), all safety rules of the AMA are hereby incorporated by reference as if fully set forth in this document.

2

High Inertia Maneuvers

All high inertia maneuvers performed close to the flight line must be directed away from the pilot, judges and spectators.

3

LMH Compliance

All large model helicopters (as that term is defined in the AMA rules) must have appropriate documentation per Rule 521-A.

4

Rotary Turbinę Waiver

All pilots flying turbine-powered models must possess an AMA rotary turbine waiver per Rule 510-A.

1.2

SAFETY — SECTION 1

Flight Line Layout

Defines the required spatial separation between flight operations, pilots, judges and spectators during all HeliStorm® sanctioned events.

1

Helipad Takeoff & Landing Zone

All models shall take off and land within a 3-meter square area designated by the contest director as the “Helipad.” The center of the Pilot Box will be no less than **8.5 meters** from the center of the Helipad in an area designated as the “Pilot Box.”

Pilot Box

2

Judge Positioning

Judges will be situated behind the Pilot Box at a distance of no less than **5 meters.** The judge area is wider than the Pilot Box to enable judges to see around the pilot if needed. Judges are free to stand in order to get a better view of the flight.

Pilot Box

3

No-Fly Boundaries

Any pilot who flies their model behind the NO FLY line will be immediately asked to land and shall be disqualified for that round. Flags are recommended for accurate visualization. Judges are advised to confer if there is uncertainty. **There are no exceptions to this rule.**

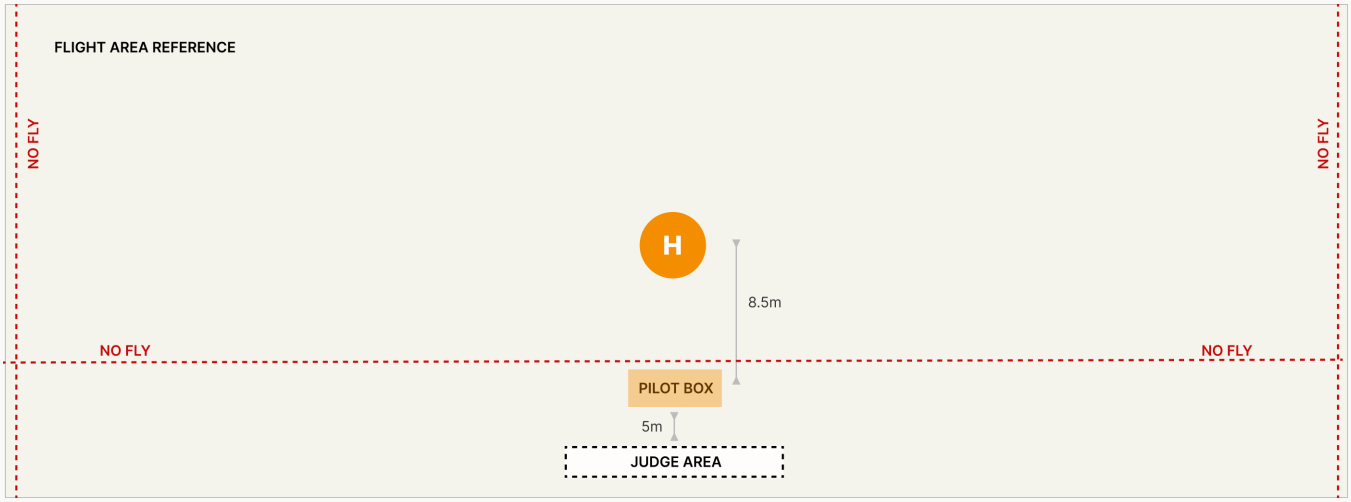
Disqualification Risk

1.2

SAFETY — SECTION 1

Flight Line Layout

Defines the required spatial separation between flight operations, pilots, judges and spectators during all HeliStorm® sanctioned events.



4

Flight Area Configuration

The overall designated flight area dimensions may vary by venue but the configuration must remain the same. The contest director will brief all pilots on specific boundaries before flying begins. All relative distance rules between Helipad, Pilot Box, and Judges Area remain constant regardless of venue size.

Pre-Flight Briefing

5

Judging Philosophy

The overall thrust of the HeliStorm® contest format is realism over precision. Although accuracy in maneuvers is important, realism is the primary goal so measuring precise altitude, angles, etc., is not a priority for judges. Realism is a subjective concept based on how well the model mimics its full-scale counterparts. Jerky movements, excessive speed and violent changes in altitude, orientation or air speed are all indicators of non-realistic flight.

2.0

GENERAL FLIGHT RULES - SECTION 2

Official Flight Rules

This section defines what constitutes an official flight for scoring purposes along with constraints and variations.

1

Takeoff & Landing

All flights must begin and end in the Helipad except as otherwise provided in this section. Any UNPLANNED landings will immediately terminate the flight.

Official Flight

2

Commencement of Official Flight

The timer or head judge will call the pilot for their flight. The pilot has 5 minutes from the call to have their model inside the helipad and ready for engine start. It is within the discretion of the judge to either disqualify or bump the pilot whose model will not start during the 5-minute period. If bumped, the pilot must take their turn at the end of the list of pilots for that round. If the engine fails to start again within the new 5-minute period, the pilot will be disqualified for that round, but may compete in subsequent rounds.

Official Flight

3

Flight Time

The flight time for each class will be designated in the LiveJudge™ scoring app and may vary from event to event or class to class (within the same event) at the discretion of the contest director. Time limits should remain constant once set and published for a specific event.

Official Flight

2.0

GENERAL FLIGHT RULES - SECTION 2

Official Flight Rules

This section defines what constitutes an official flight for scoring purposes along with constraints and variations.

4

Official Flight Definition

A flight is deemed official and subject to scoring once the helicopter leaves the ground. There are no exceptions unless, during the judged flight, circumstances beyond the pilot's control interfere with the completion of the flight (such as outside interference or severe weather conditions that make completion of the flight unsafe). These circumstances do not include loss of power.

Official Flight

5

Caller as Narrator & Coach

Each pilot may be accompanied in the Pilot Box by a caller. The caller may also stand near the judges. The caller may act more like a narrator for both judges and the crowd similar to a play-by-play announcer indicating what maneuvers occur next (e.g. figure skating). The pilot and caller may wear two-way head sets. The caller can coach the pilot if they want to.

6

Flight Philosophy

The overall thrust of the HeliStorm® contest format is **realism** over precision. Although accuracy in maneuvers is important, **realism** is the primary goal of the contest. Pilots and judges should not be overly concerned about precise altitude and angle guidelines. They are simply guidelines. There is no need for the pilot to return to the helipad before executing any maneuver. Pilots will be rewarded (artistic merit) for connecting maneuvers in a smooth manner even if the model must be flown to a particular point in order to begin the next maneuver.

Philosophy

3.0

STATIC JUDGING RULES - SECTION 3

Official Static Rules

This section defines the parameters around static judging.

1

Presentation & Documentation

The contestant shall have up to 5 minutes to demonstrate their model to the judging team. Contestants may cover any topic they believe will interest the judges. For safety, the power plant must be disconnected during this demo. There are no specific requirements for the presentation. Documentation will be considered during the presentation.

2

Proof of Flight

In order to qualify for a static award, the pilot must conduct a 1-2 minute hover flight during which the model demonstrates that it can fly out of ground effect (minimum of approximately 2 meters). The pilot is free to perform small left-to-right slides or simply hover.

Official Flight

3

Static Judging Guidelines

Masters class models should evidence a high level of craftsmanship as evidenced by fit, finish and attention to detail. Scale accessories, cockpit detail, landing gear setup, rotor head, tail rotor, weathering, paint, livery, fuselage detail and pilot figures will all figure into the score. Challenger models will be judged on a similar basis, taking into account how much the model improves on what is delivered by the manufacturer. To put it simply, successful models are ones that look most like full-scale helicopters. Specific criteria and weighting is shown in section 4, below.

Static Scale

4.0

COMPETITION - SECTION 4

Judging Classes

The HeliStorm® rubric is designed to accommodate hobbyists of virtually all skill and experience levels. This is reflected in our scoring rules and methods.

1

Flying, static or both

All HeliStorm® sanctioned contests must permit pilots to separately compete in classes that feature flying only, static only or “Top Pilot” combinations of the two. A “Top Masters” class, for example, will consist of combined scores from the static and flying sub-classes within that class. A standard competition setup includes two classes; **Challenger** and **Masters**.

Open Classes

2

Challenger Class - General

Challenger is designed for pilots to showcase smooth, fundamental flight control. Challengers can fly anything other than a GPS-controlled model. Gyros are permitted, but the pilot must be flying their model. No experience threshold.

Challenger

3

Challenger Class - Flying

The flying rubric is a flexible "build-your-own" affair. Pilots must perform **2 mandatory maneuvers,** which will include a scale liftoff and hover component and a horizontal fly-by, along with **3 freestyle maneuvers**, which the pilot will select from a catalog within the LiveJudge app.

Challenger

4.0

COMPETITION - SECTION 4

Judging Classes

The HeliStorm® rubric is designed to accommodate hobbyists of virtually all skill and experience levels. This is reflected in our scoring rules and methods.

4

Challenger Class - Static

Pilots may enter any ARF, kit, or scratch-built model, regardless of who built the model. Pilots will make a 5-minute presentation. Documentation is not required, but will help improve the final score. A "proof of flight" hover is required to qualify for an award. All models must be present at the same time for static judging. Judges may not commence scoring until they have examined each model once.

Challenger

5

Masters Class - General

This class is for more experienced pilots and builders who don't mind mixing it up with other skilled pilots. Pilots must demonstrate full control of their machine in flight.

Masters

6

Masters Class - Flying

The flying rubric is a 100% flexible "build-your-own" affair. Pilots will perform **4 freestyle maneuvers,** which they can choose from a catalog within the LiveJudge™ app.

Masters

4.0

COMPETITION - SECTION 4

Judging Classes

The HeliStorm® rubric is designed to accommodate hobbyists of virtually all skill and experience levels. This is reflected in our scoring rules and methods.

7

Masters Class - Static

Pilots may enter any ARF, kit, or scratch-built model, regardless of who built the model. Pilots will make a 5-minute presentation. Models should have at least ONE photo or drawing of the type of helicopter being modeled (not the exact one). Models with more thorough documentation will be rewarded with higher scores. A "proof of flight" hover is required to qualify for an award. All models must be present at the same time for static judging. Judges may not commence scoring until they have examined each model once.

Masters

8

Class Disclosure and Timing

Before or at the time the contest director opens registration for the event within LiveJudge™, they should publish the final class structure and freestyle maneuver options available so that pilots can properly prepare for the contest. Contest directors must prioritize disclosure of the freestyle and mandatory maneuvers to provide the most possible advanced notice.

4.1

COMPETITION - SECTION 4

Scoring Rubric

Unlike paper rubrics with varying point scales, HeliStorm® uses the LiveJudge™ platform exclusively in order to give judges a more accurate way to score.

Every event host using this rulebook may alter the weights assigned to each judging factor. The following rubric is recommended for **Challenger** classes.

Challenger

Challenger - Flying

Each factor is judged on realism and precision. Pilots choose their freestyle maneuvers from the LiveJudge app and judges can see the choices instantly.

Scoring Protocol

Normalization	Scaling	Max Flight Time
Raw Average	Top Pin 1000	5:00

Judging Factors

M	Scale Liftoff & Hover	10%
F	Freestyle #1	20%
M	Horizontal Fly By	10%
F	Freestyle #2	20%
F	Freestyle #2	20%
M	Overall Artistic Impression	10%

Challenger - Static

Each factor is mandatory. All types of models are welcome. ARF's, kits, scratch built, whatever.

Scoring Protocol

Normalization	Scaling	Rounds
Raw Average	Top Pin 1000	1

Judging Factors

M	Presentation & Documentation	10%
M	Scale Fidelity	30%
M	Build/Assembly Quality - Challenger	40%
M	Proof of Flight	10%
M	Overall Artistic Impression	10%

4.1

COMPETITION - SECTION 4

Scoring Rubric

Unlike paper rubrics with varying point scales, HeliStorm® uses the LiveJudge™ platform exclusively in order to give judges a more accurate way to score.

Every event host using this rulebook may alter the weights assigned to each judging factor. The following rubric is recommended for **Masters** classes.

Masters

Masters - Flying

Each factor is judged on realism and precision. Pilots choose their freestyle maneuvers from the LiveJudge app and judges can see the choices instantly.

Scoring Protocol

Normalization	Scaling	Max Flight Time
Raw Average	Top Pin 1000	5:00

Judging Factors

F	Freestyle #1	20%
F	Freestyle #2	25%
F	Freestyle #3	25%
F	Freestyle #4	20%
M	Overall Artistic Impression	10%

Masters - Static

Each factor is mandatory. All types of models are welcome. ARF's, kits, scratch built, whatever.

Scoring Protocol

Normalization	Scaling	Rounds
Raw Average	Top Pin 1000	1

Judging Factors

M	Presentation & Documentation	10%
M	Build Quality - Masters	35%
M	Scale Fidelity	35%
M	Paint & Weathering - Masters	35%
M	Proof of Flight	10%

4.2

COMPETITION - SECTION 4

Flying Maneuvers

The HeliStorm® maneuver list is not exhaustive. Event hosts may use the LiveJudge software to add or remove maneuvers from their list of mandatory and freestyle elements.

Diagrams of each maneuver are included in Appendix A

1.0 Value Maneuvers

Climbout & Hold	K: 1.0	High Hover	K: 1.0
Hovering Auto	K: 1.0	Low & Slow Fly By	K: 1.0
Low Approach Landing	K: 1.0	Scale Takeoff & Hover	K: 1.0
Scale Descent & Touchdown	K: 1.0	Simple Takeoff	K: 1.0
Standard Traffic Pattern	K: 1.0		

1.1 - 1.5 Value Maneuvers

Adv. Takeoff & Transition to FF	K: 1.1	Backout Turn	K: 1.4
Constant Altitude Figure 8	K: 1.2	Hammerhead Stall Turn	K: 1.2
Hover Across	K: 1.3	Hover Rotations	K: 1.2
Military Strafing run	K: 1.4	Precision Spot Landing	K: 1.2
Quick Stop	K: 1.3	Steep Approach (confined landing)	K: 1.2

4.2

COMPETITION - SECTION 4

Flying Maneuvers

The HeliStorm® maneuver list is not exhaustive. Event hosts may use the LiveJudge™ software to add or remove maneuvers from their list of mandatory and freestyle elements.

Diagrams of each maneuver are included in Appendix A

1.1 - 1.5 Value Maneuvers - continued

Sustained Sideways - Nose In	K: 1.4	Sustained Sideways - Tail In	K: 1.2
Lazy 8	K: 1.2	Run-On Landing	K: 1.2
Obstruction Takeoff	K: 1.5	Nose-In Hover	K: 1.2
S-Turn	K: 1.3	Precision Spot Landing	K: 1.2
The Bump	K: 1.2	Circle	K: 1.4
Fast Fly By	K: 1.2	180 Descent to Landing	K: 1.5
Hover Taxi - Normal Takeoff	K: 1.1	Gross Weight Takeoff	K: 1.2

4.2

COMPETITION - SECTION 4

Flying Maneuvers

The HeliStorm® maneuver list is not exhaustive. Event hosts may use the LiveJudge software to add or remove maneuvers from their list of mandatory and freestyle elements.

1.6 - 1.9 Value Maneuvers

Attack Orbit - Semi Circle	K: 1.8	Backout Climb to Dive	K: 1.6
Chandelle	K: 1.8	Teardrop Turn	K: 1.7

2.0+ Value Maneuvers

Attack Orbit - Full Circle	K: 2.2	Autorotation to Landing	K: 2.5
Rescue Hoist / Sling Load	K: 2.2	Tactical Quick Stop	K: 2.0

4.3

COMPETITION - SECTION 4

Static Model Criteria

The HeliStorm® static model criteria is not exhaustive. Event hosts may use the LiveJudge™ software to add or remove criteria and evaluation standards from their list of elements.

Build Quality - Masters

Evaluate the overall construction and finish quality against established modeler standards. Scale (hardware/size), cleanliness of wiring/build, attention to detail.

Masters Only

Build/Assembly Quality - Challenger

Grade the overall execution of the build/assembly taking into account what is expected of the builder. For ARF modernizing/detailing, consider dry structures, finish or other modifications to the factory kit.

Challenger Only

Fit & Finish - Challenger

Judge the quality of the paint, markings and weathering given the subject type. Consider how the model is weathered based on its real-world counterpart. Reward extra work on the exterior. Award an average (5) for a model with no additional finish.

Challenger Only

Paint & Weathering - Masters

Judge the fidelity of the paint and weathering given the subject type. Military models are mostly flat and drab, for example. On all models, consider how they are weathered.

Masters Only

Presentation & Documentation

What is the story behind the model? The documentation does not need to be of the precise livery of the model; just the same helicopter so the judge can determine how well the features match up. Reserve high scores for thorough documentation.

All Classes

Proof of Flight - Challenger

Pilot lifts the helicopter into a hover with skids 6-8 feet off the deck. Pilot holds the hover sufficiently to demonstrate control.

Challenger Only

Overall Artistic Impression

This is the “wow” factor of the model.

All Classes

Scale Fidelity

Evaluate scale fidelity of the model based on fuselage outline & detail, cockpit, landing gear, rotor head and overall craftsmanship in the model.

All Classes

5.0

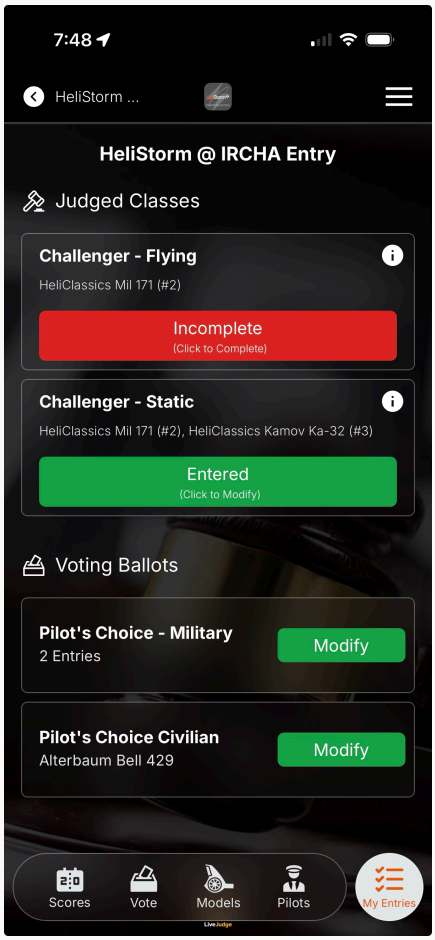
TECHNOLOGY - SECTION 5

LiveJudge™ Pilot Experience

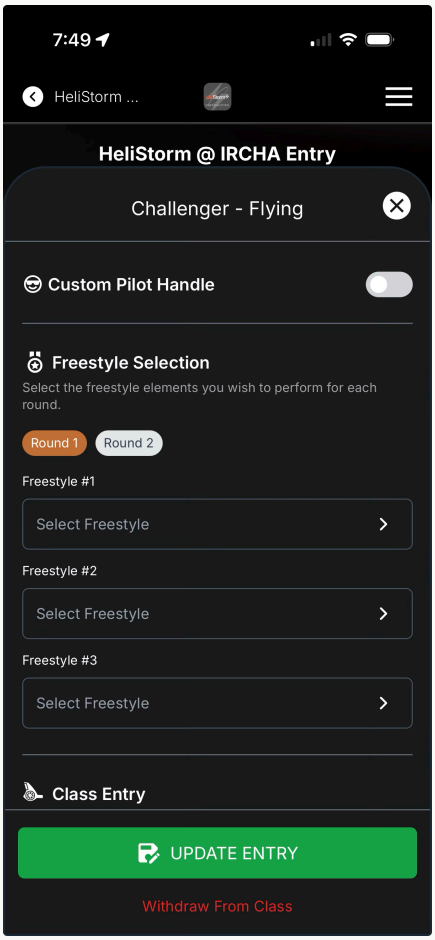
To run a HeliStorm-sanctioned event, the host must use the LiveJudge™ platform to achieve the precision weighting and efficient pilot selection of maneuvers during the contest.

Contestants can sign into LiveJudge™ with NO PASSWORDS OR DOWNLOADS. By scanning the event QR code, contestants can see the classes they entered and select their freestyle maneuvers.

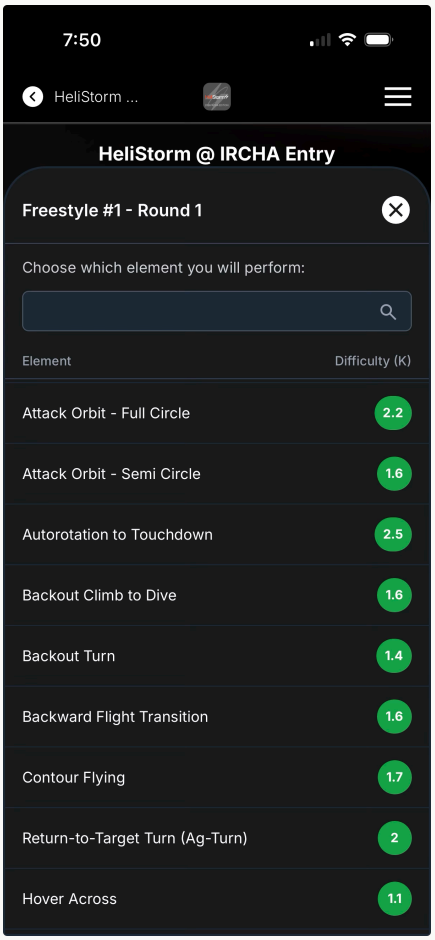
User taps “Incomplete”



User selects round & freestyle slot



User chooses from catalog



5.0

TECHNOLOGY - SECTION 5

LiveJudge™ Pilot Experience

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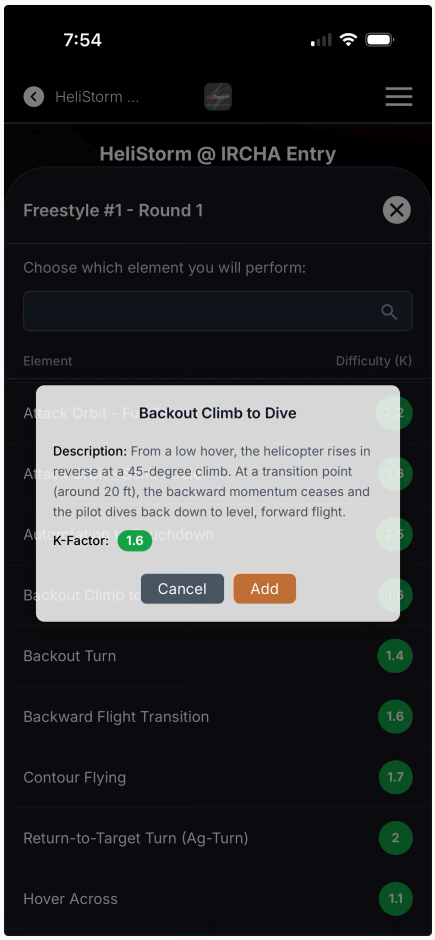
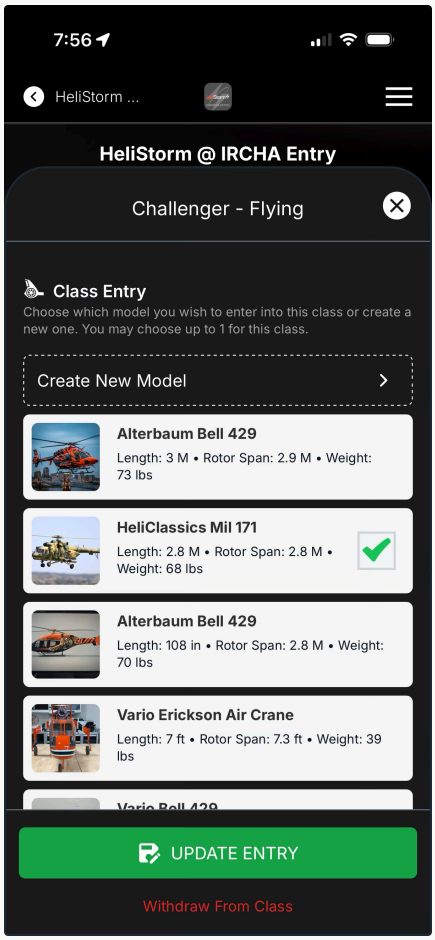
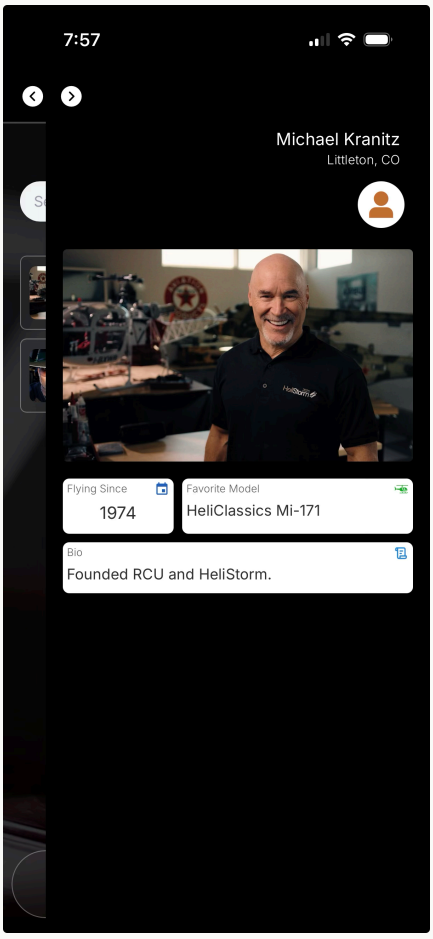
Maneuver confirmation



User creates or chooses model



Pilot adds optional bio data



5.1

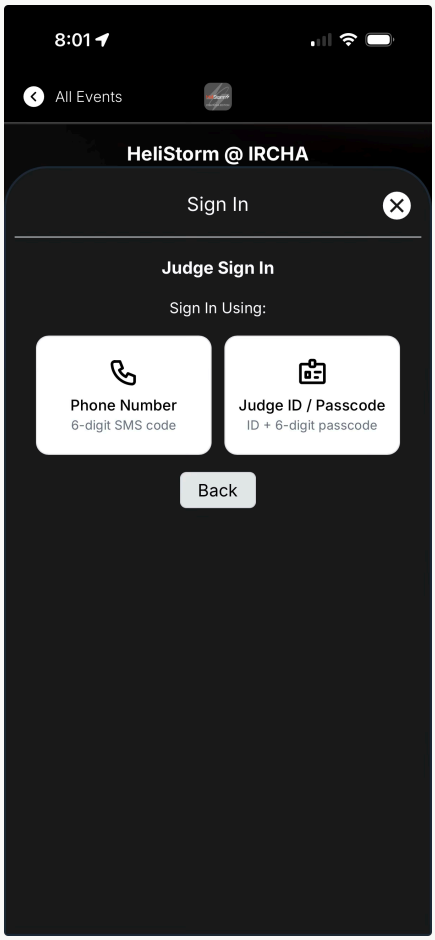
TECHNOLOGY - SECTION 5

LiveJudge™ Judge Experience

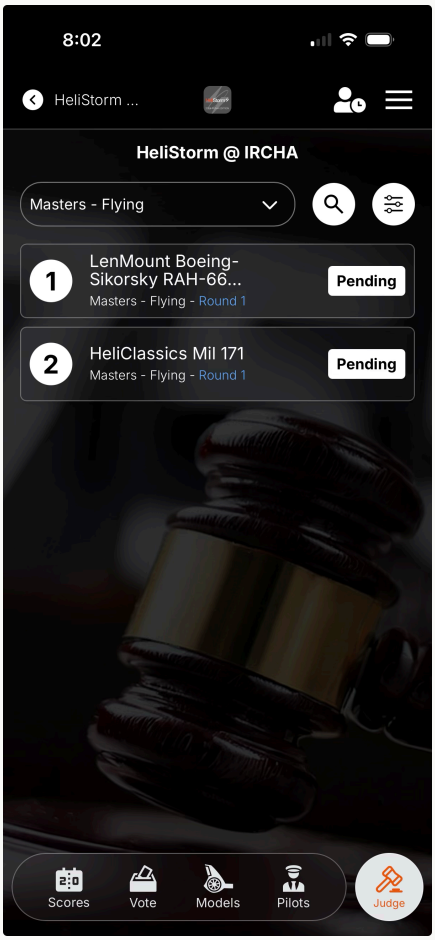
To run a HeliStorm-sanctioned event, the host must use the LiveJudge™ platform to achieve the precision weighting and efficient pilot selection of maneuvers during the contest.

Assigned judges can sign into LiveJudge™ with NO PASSWORDS OR DOWNLOADS. By scanning the event QR code, judges can immediately begin scoring or look over pilot routines.

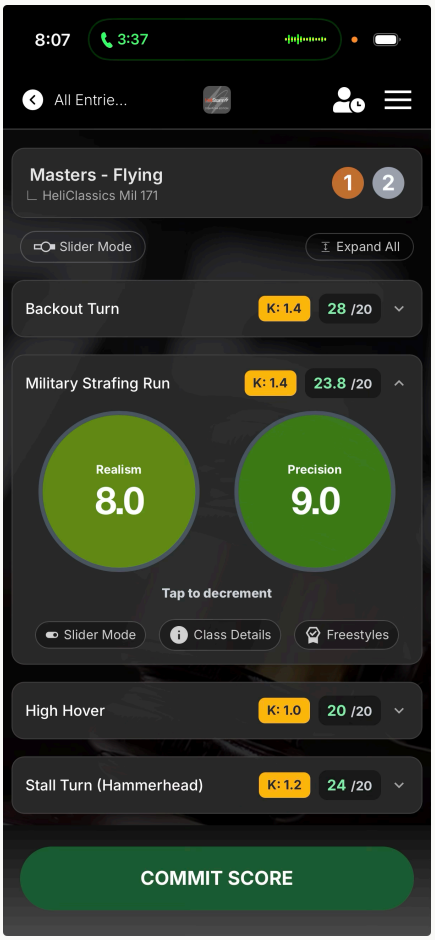
Simple sign-in



Goes right to the pilot list



Heads-up tap to decrement



5.1

TECHNOLOGY - SECTION 5

LiveJudge™ Judge Experience

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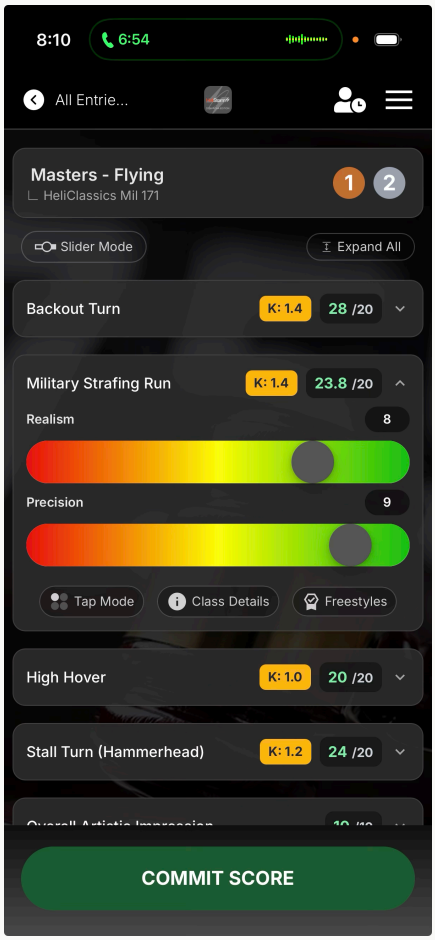
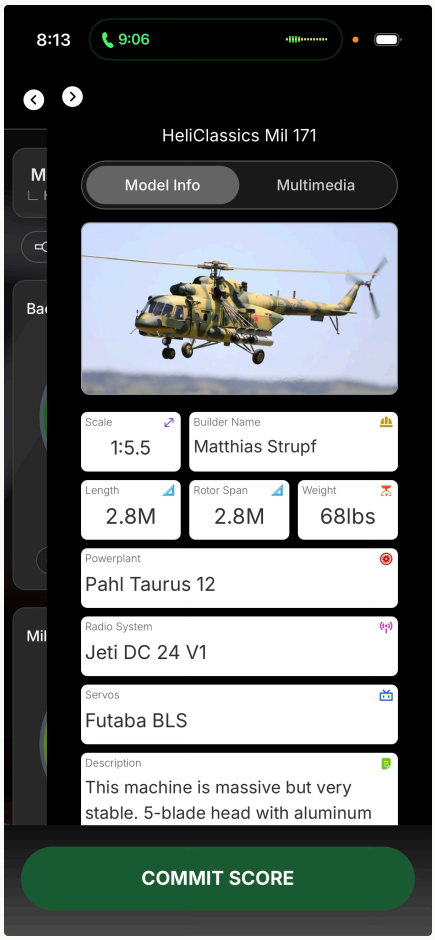
Assigned judges can sign into LiveJudge™ with NO PASSWORDS OR DOWNLOADS. By scanning the event QR code, judges can immediately begin scoring or look over pilot routines.

Sliders for adjustments



Judge can see model details



5.2

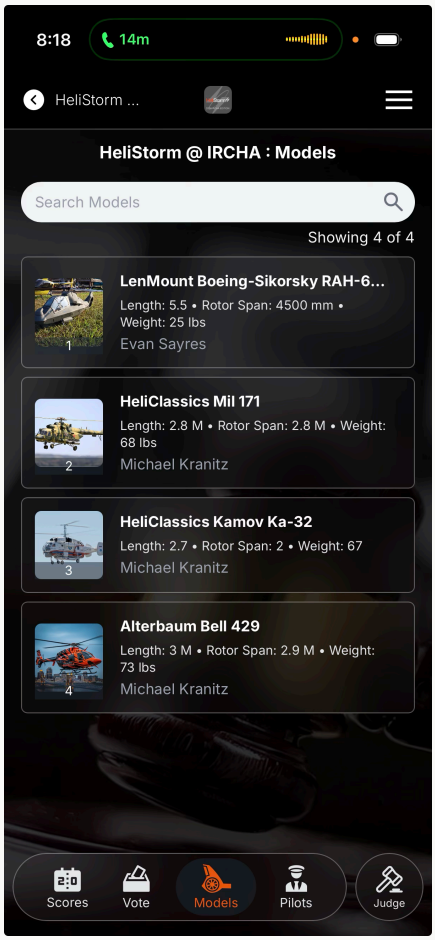
TECHNOLOGY - SECTION 5

LiveJudge™ Fan Experience

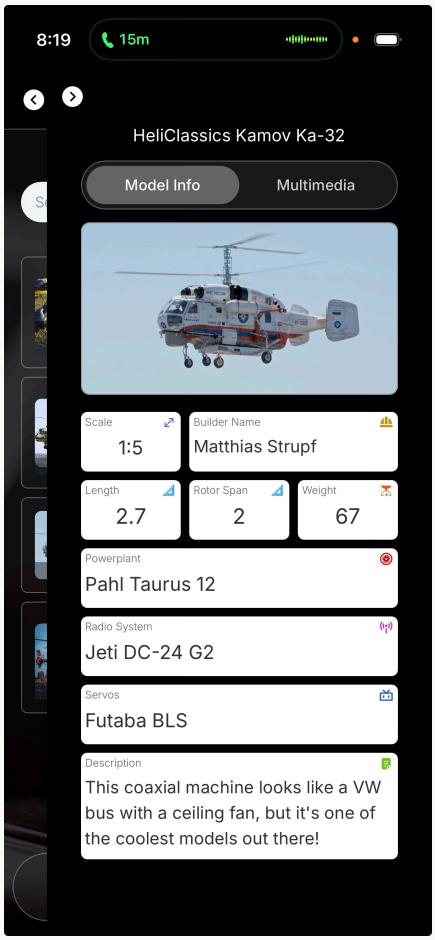
Engaging fans is key to growing interest in the hobby. LiveJudge™ allows event hosts to enable fans and pilots to vote on “favorite” ballots. Fans can also view models, pilots, specs and scores (when

Spectators can scan the event QR code and enjoy all of the action (and vote) with NO DOWNLOAD AND NO LOGIN.

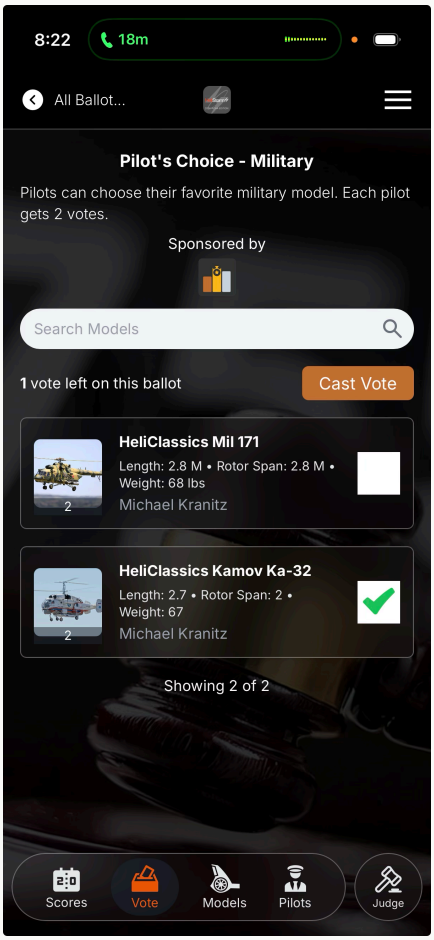
Model list



Judge can see model details



Fans & pilots can vote



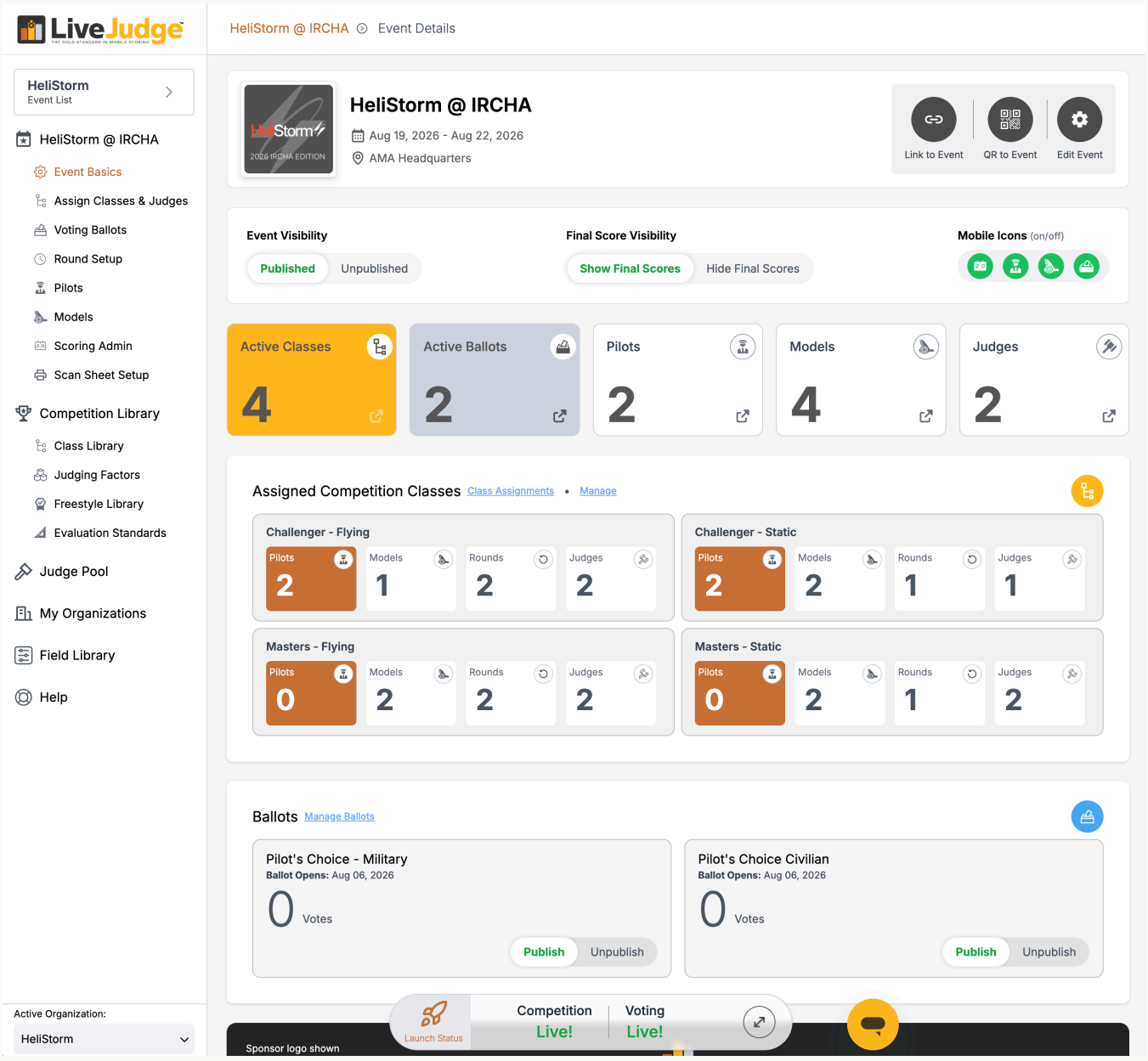
5.3

TECHNOLOGY - SECTION 5

LiveJudge™ Admin Experience

When creating a new organization and event in LiveJudge™, most of the work is finished within the first 90 seconds. The admin area must be accessed using a desktop or laptop computer.

The dashboard is your event cockpit. Your maneuver library and competition classes are made for you.



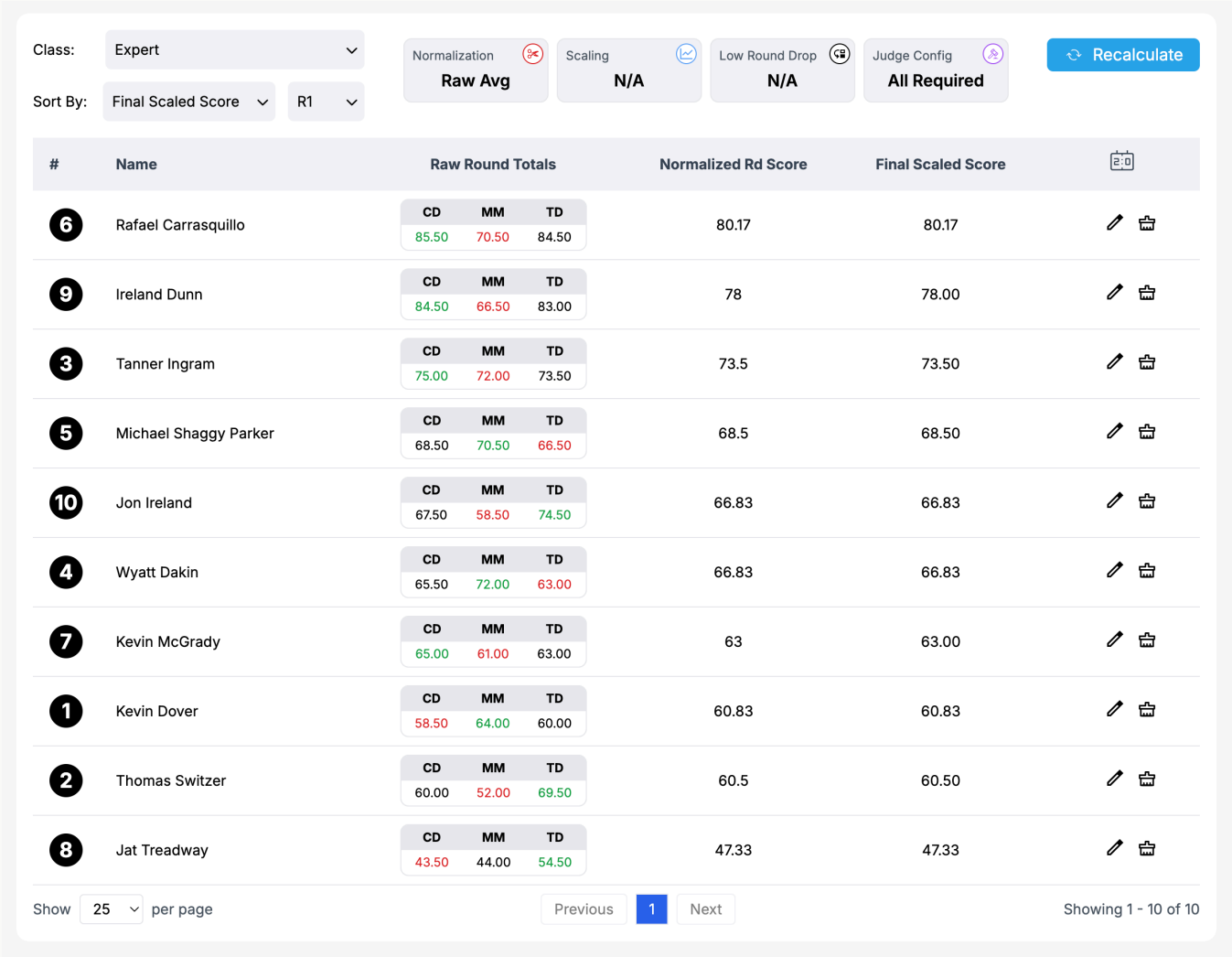
5.3

TECHNOLOGY - SECTION 5

LiveJudge™ Admin Experience

When creating a new organization and event in LiveJudge™, most of the work is finished within the first 90 seconds. The admin area must be accessed using a desktop or laptop computer.

The scoring admin gives you full control over scoring results, changes and audits.



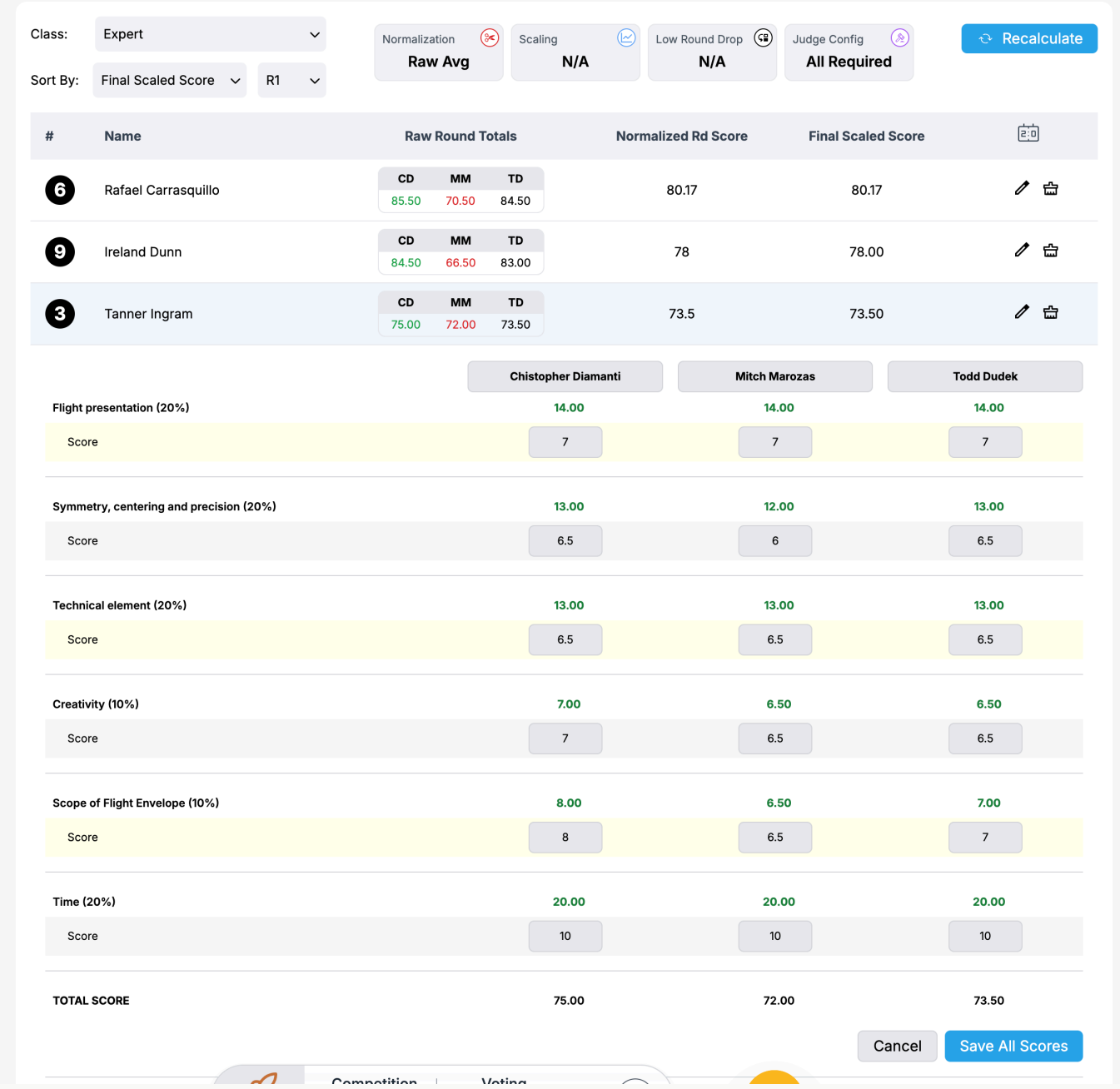
5.3

TECHNOLOGY - SECTION 5

LiveJudge™ Admin Experience

When creating a new organization and event in LiveJudge™, most of the work is finished within the first 90 seconds. The admin area must be accessed using a desktop or laptop computer.

Every judge. Every maneuver. Every score.



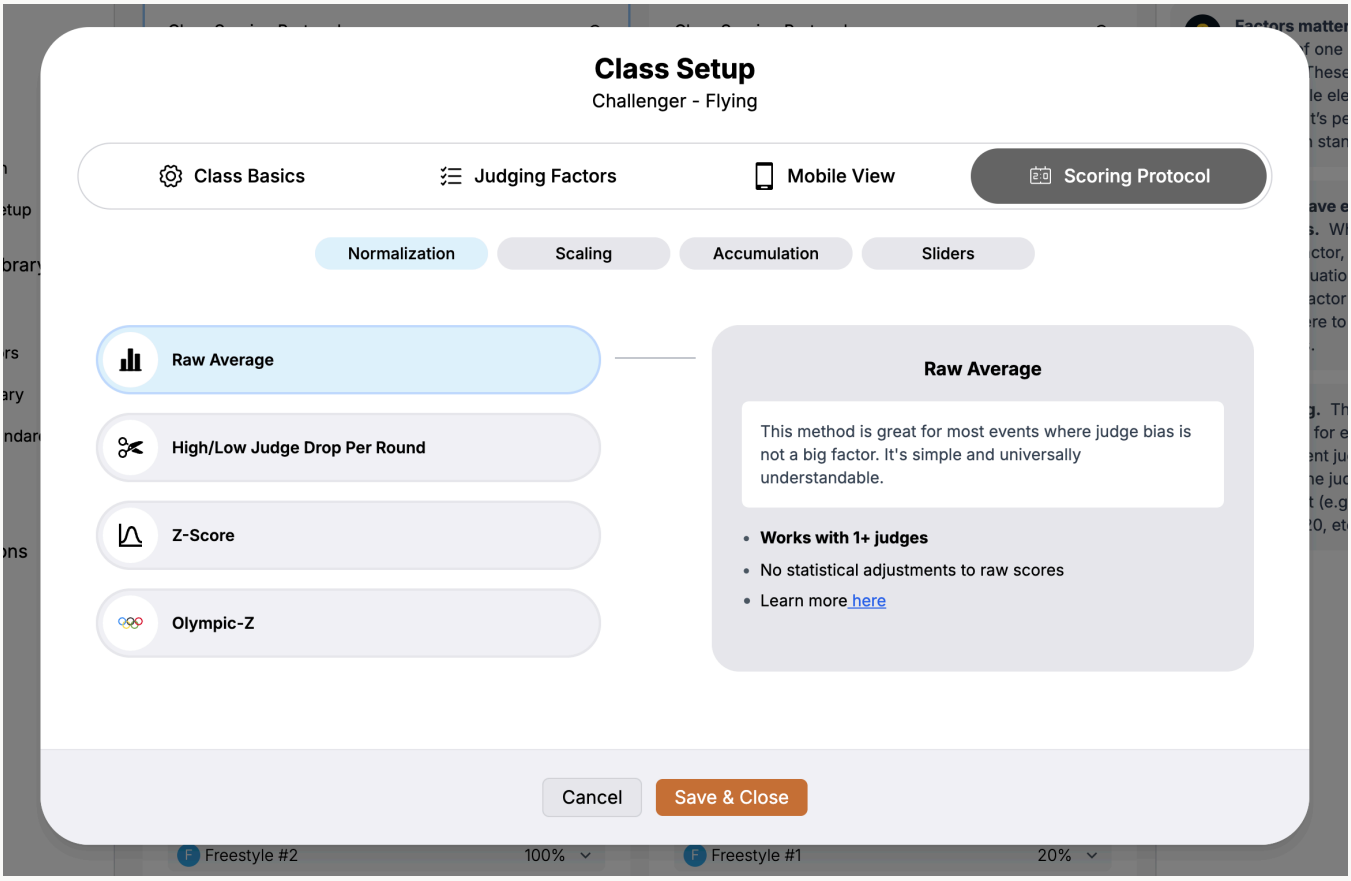
5.3

TECHNOLOGY - SECTION 5

LiveJudge™ Admin Experience

When creating a new organization and event in LiveJudge™, most of the work is finished within the first 90 seconds. The admin area must be accessed using a desktop or laptop computer.

You decide normalization, scaling, round accumulation and judge scoring scales.



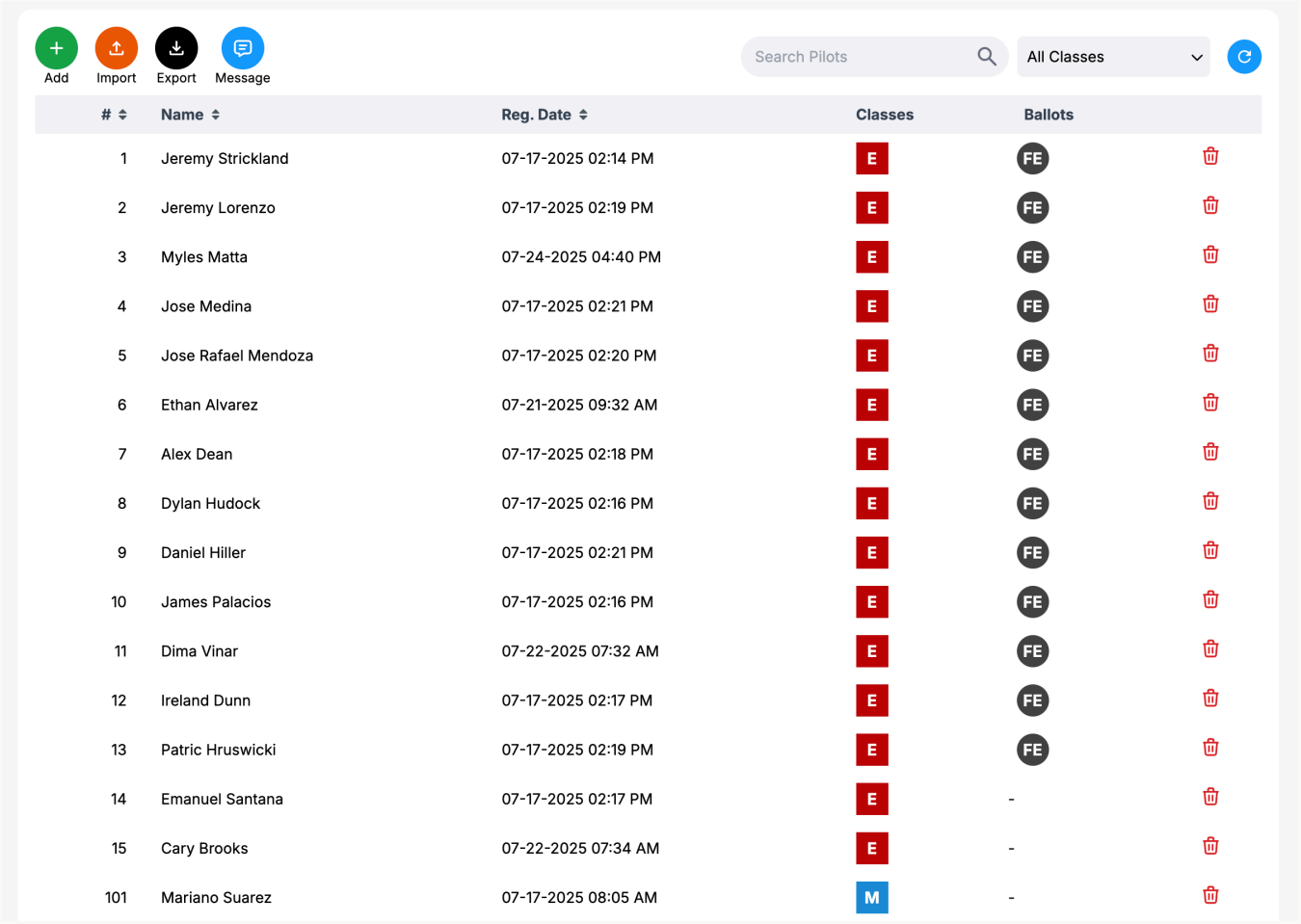
5.3

TECHNOLOGY - SECTION 5

LiveJudge™ Admin Experience

When creating a new organization and event in LiveJudge™, most of the work is finished within the first 90 seconds. The admin area must be accessed using a desktop or laptop computer.

Full pilot management screen. Import pilots or allow self-registration. Text message some or all.



#	Name	Reg. Date	Classes	Ballots
1	Jeremy Strickland	07-17-2025 02:14 PM	E	FE
2	Jeremy Lorenzo	07-17-2025 02:19 PM	E	FE
3	Myles Matta	07-24-2025 04:40 PM	E	FE
4	Jose Medina	07-17-2025 02:21 PM	E	FE
5	Jose Rafael Mendoza	07-17-2025 02:20 PM	E	FE
6	Ethan Alvarez	07-21-2025 09:32 AM	E	FE
7	Alex Dean	07-17-2025 02:18 PM	E	FE
8	Dylan Hudock	07-17-2025 02:16 PM	E	FE
9	Daniel Hiller	07-17-2025 02:21 PM	E	FE
10	James Palacios	07-17-2025 02:16 PM	E	FE
11	Dima Vinar	07-22-2025 07:32 AM	E	FE
12	Ireland Dunn	07-17-2025 02:17 PM	E	FE
13	Patric Hruswicki	07-17-2025 02:19 PM	E	FE
14	Emanuel Santana	07-17-2025 02:17 PM	E	-
15	Cary Brooks	07-22-2025 07:34 AM	E	-
101	Mariano Suarez	07-17-2025 08:05 AM	M	-

5.3

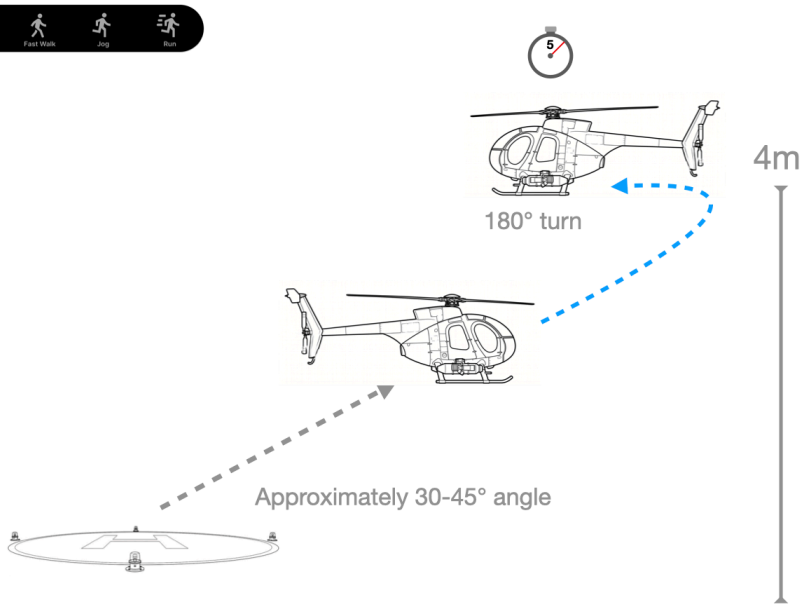
TECHNOLOGY - SECTION 5

LiveJudge™ Admin Experience

When creating a new organization and event in LiveJudge™, most of the work is finished within the first 90 seconds. The admin area must be accessed using a desktop or laptop computer.

Printed pilot sheets for static display. Scan to judge. Scan to vote.

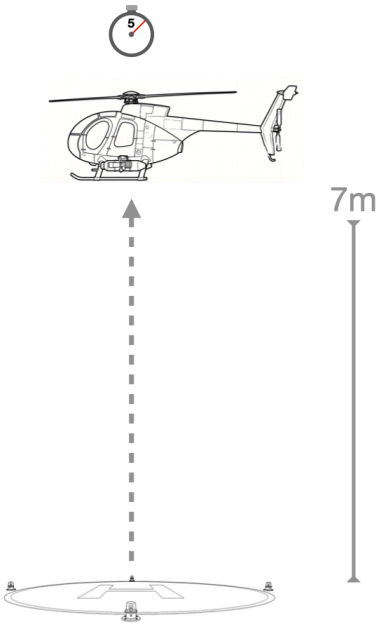
CLIMBOUT & HOLD



- Climb out at 35-45 degrees to the left or right.
- At about 4 meters, yaw 180-degrees to face the helipad.
- Hold high hover for 5 seconds

K: 1.0

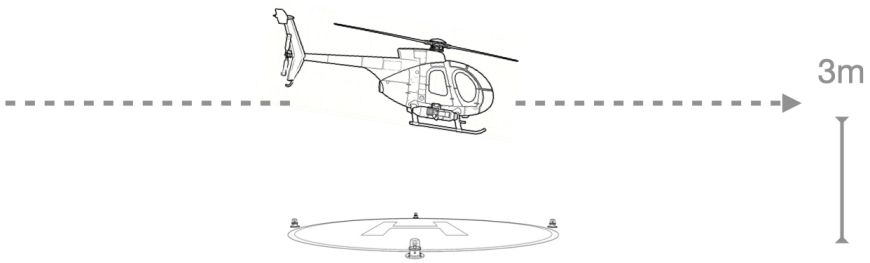
SURVEILLANCE HOVER



- Helicopter faces either tail-in or left/ right orientation. (Nose-in is a separate maneuver).
- May begin from anywhere.
- Ascend to 7m and hold hover for at least 5 seconds.
- Simulates news helicopter and recon hovers.

K: 1.0

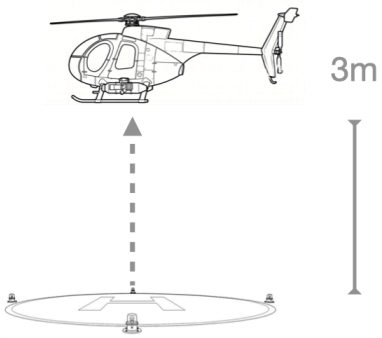
LOW & SLOW FLY BY



- Fast walk speed
- Maintain consistent altitude
- Parallel to flight line

K: 1.0

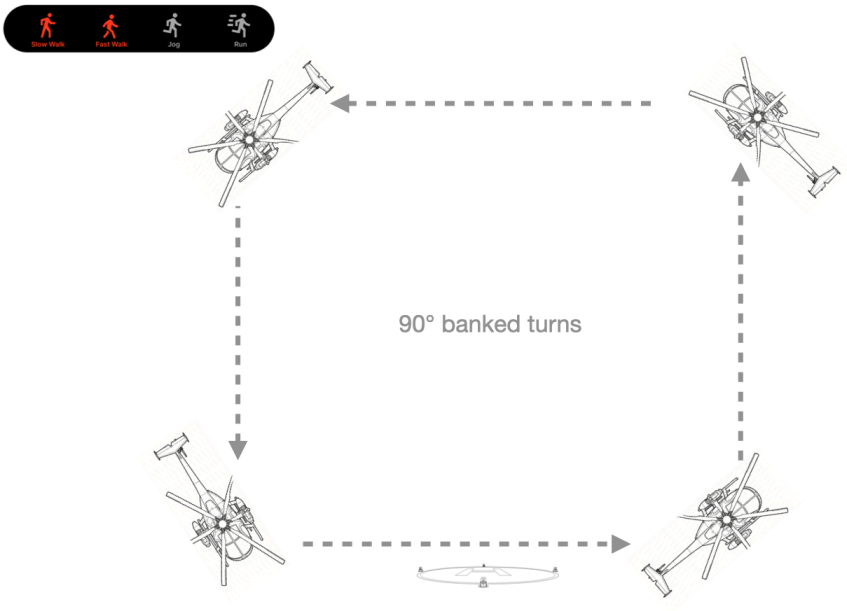
SCALE LIFTOFF & HOVER



- Ascend smoothly to 3m
- Hold hover for at least 8 seconds.

K: 1.0

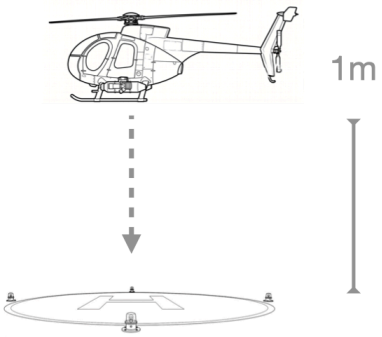
STANDARD TRAFFIC PATTERN



- Rectangular pattern chosen by pilot.
- 4 distinct 90-degree turns.
- Constant altitude of 2-3 meters.
- Slight bank in turn.
- Base leg across helipad.

K: 1.0

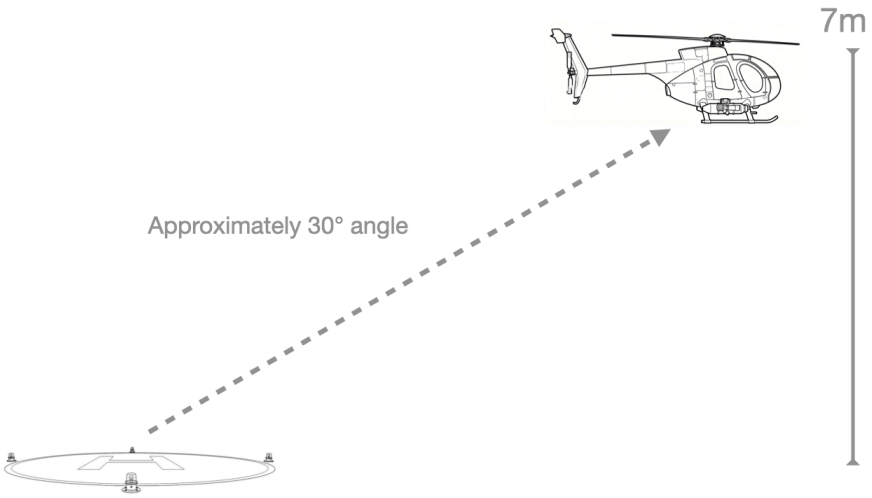
HOVERING AUTOROTATION



- Power off at 1m
- Soft landing

K: 1.0

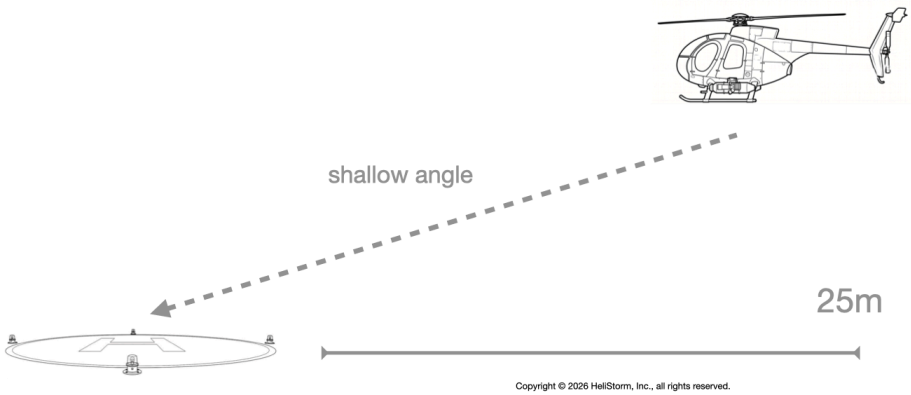
SIMPLE TAKEOFF



- Climb out at 35-45 degrees to the left or right.
- Level off into forward flight at approximately 7 meters.

K: 1.0

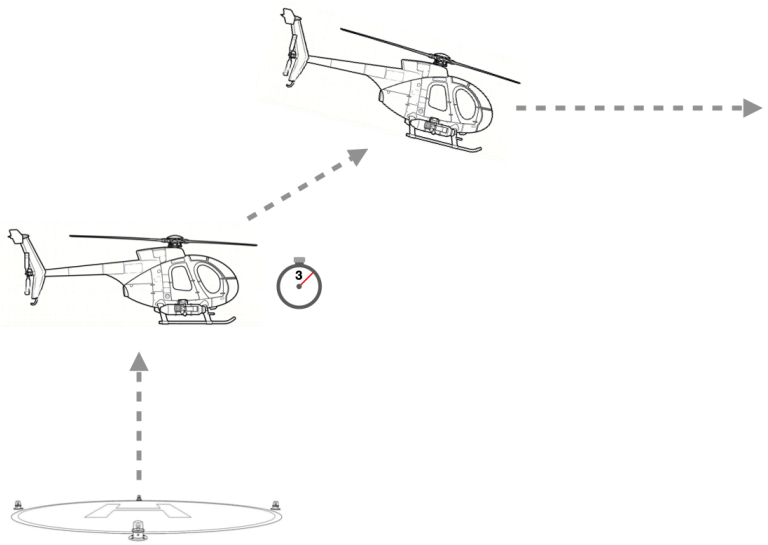
LOW APPROACH LANDING



- Walking speed approach.
- Shallow angle.
- Start approximately 25 meters out from the Helipad.

K: 1.0

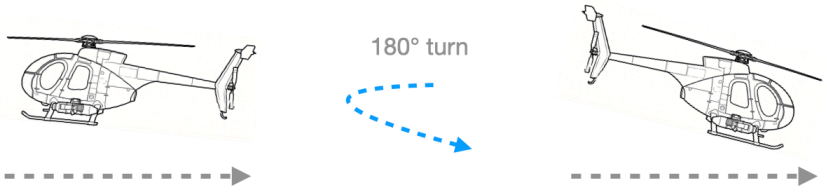
VERTICAL TAKEOFF & TRANSITION TO FORWARD FLIGHT



- Smooth liftoff to a low hover.
- Hold hover for 3 seconds.
- Gradual ascent and acceleration into forward flight.

K: 1.1

BACKOUT TURN

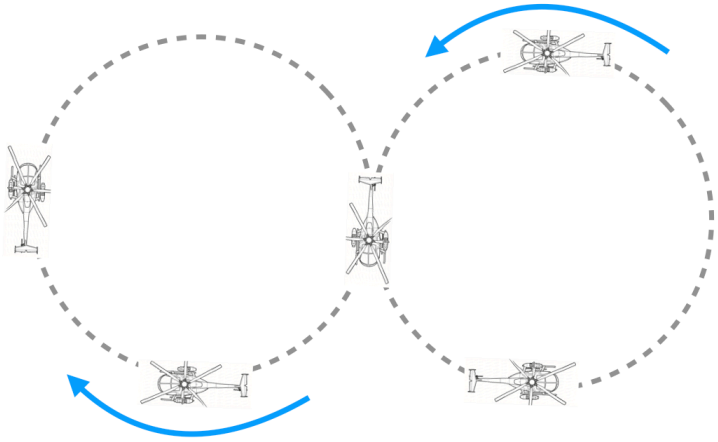


- From any altitude.
- Smooth 180-degree turn from backward to forward flight.
- Maintain directional vector throughout.

K: 1.4

Flight Maneuvers

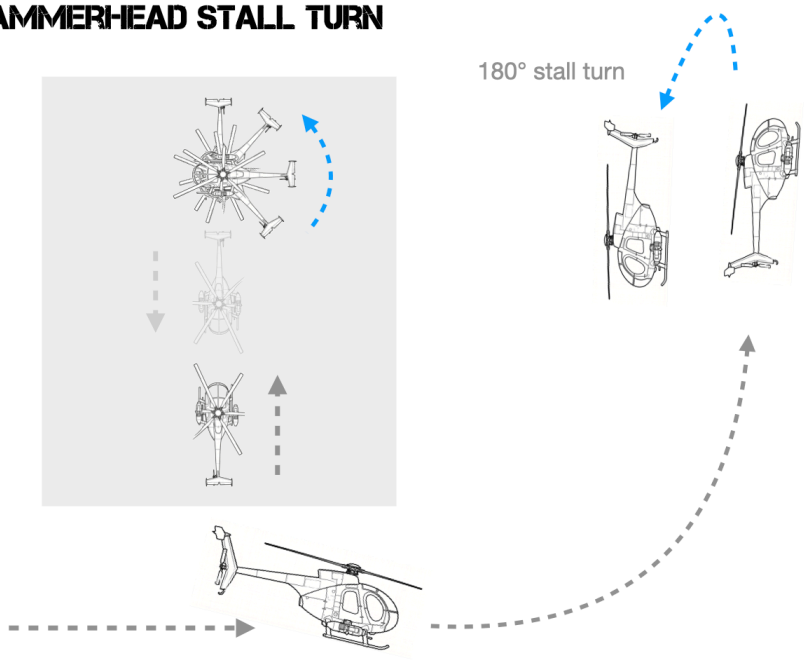
CONSTANT-ALTITUDE FIGURE 8



- Large sweeping figure 8.
- Smooth banking.
- Maintain altitude.
- 3-4 meter altitude.

K: 1.2

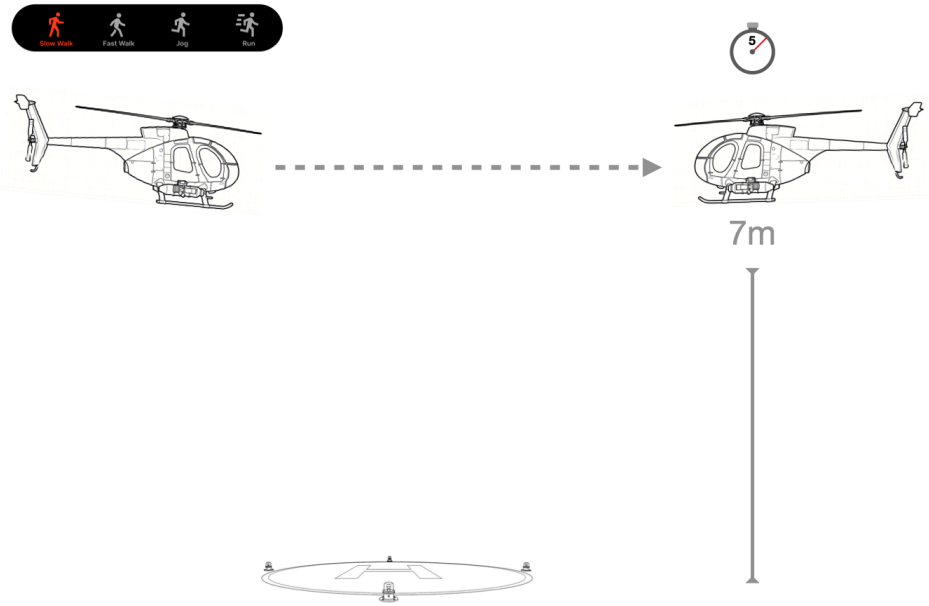
HAMMERHEAD STALL TURN



- Steep angle climb to a stall. Vertical orientation is optimal.
- 180-degree rotation on the yaw axis. Descend for a beat straight down.
- Pull out and level off approximately 3-4 meters altitude.

K: 1.2

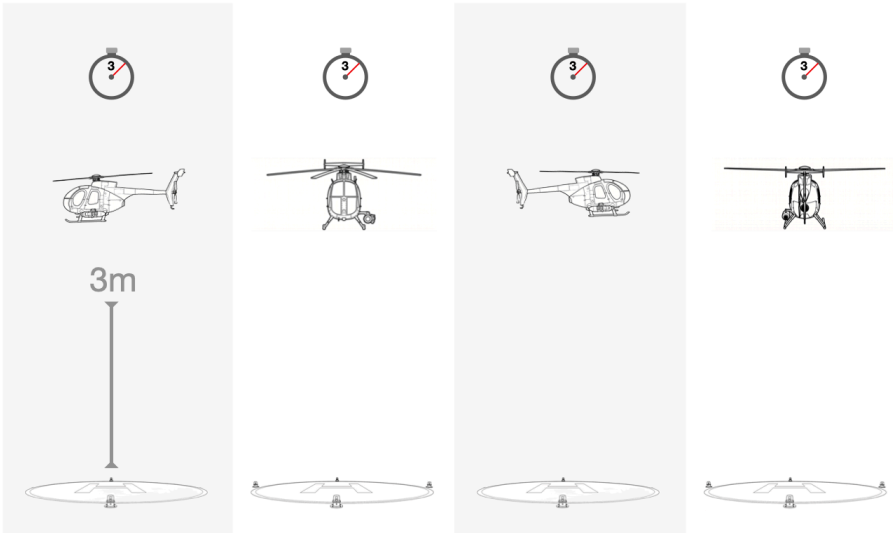
HOVER ACROSS



- Slowly cross the flight line at a higher altitude (around 7m).
- Fly past the helipad, rotate 180-degrees and hold the high hover for 5 seconds.

K: 1.3

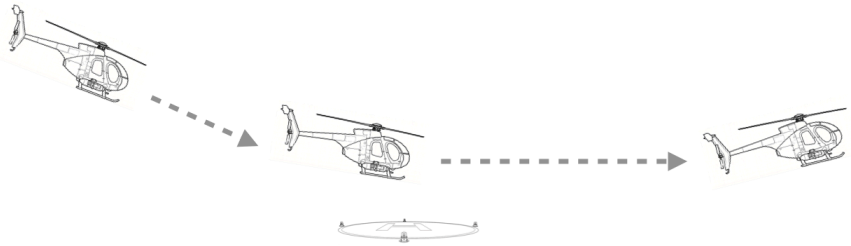
HOVER ROTATIONS



- Slowly rotate the helicopter in 90-degree increments.
- Hold each position for at least 3 seconds.
- Maintain altitude of approximately 3m over the pad.
- Start in any orientation and from any entry point over the helipad.

K: 1.2

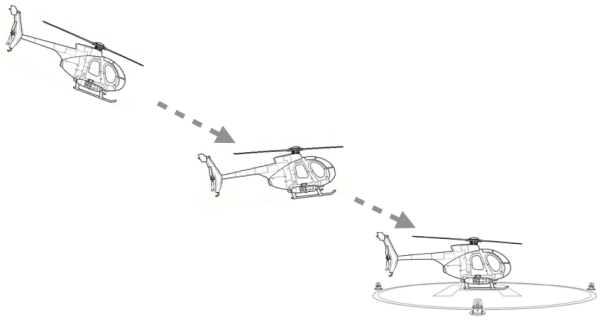
MILITARY STRAFING RUN



- Fast, low-level dive and speed run across the flight line, followed by a climbing departure.

K: 1.1

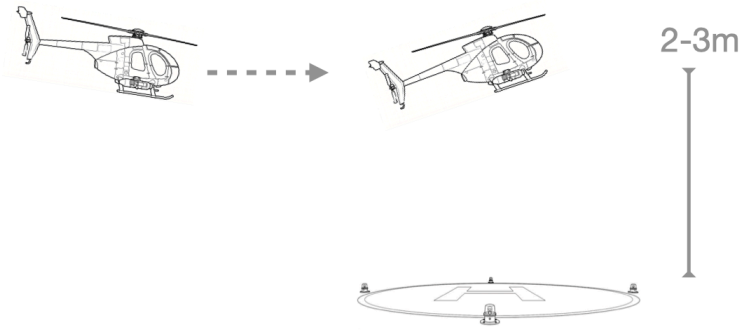
PRECISION SPOT LANDING



- Touch down as closely as possible on a designated marker or helipad.
- For wheeled helis, this could be a run-on landing coming to a stop at a specific point. This tests complete spatial awareness and pinpoint final control.

K: 1.2

QUICK STOP

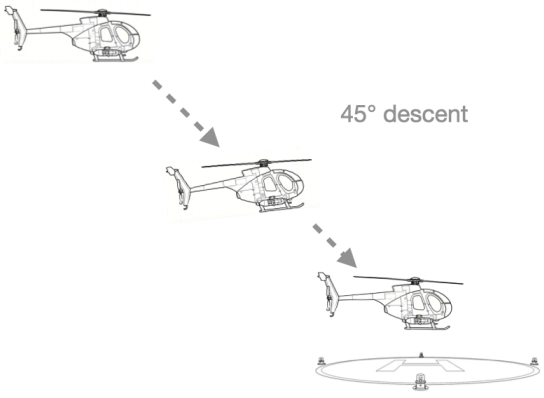


HeliStorm COMMUNITY

- Come in at a slow (fast walk) speed parallel to the flight line.
- Flare the nose up to arrest forward momentum, adding collective to prevent descending, and settling into a perfectly stationary hover at the same altitude.
- Altitude approximately 2-3 meters.

K: 1.3

STEEP APPROACH (CONFINED LANDING)

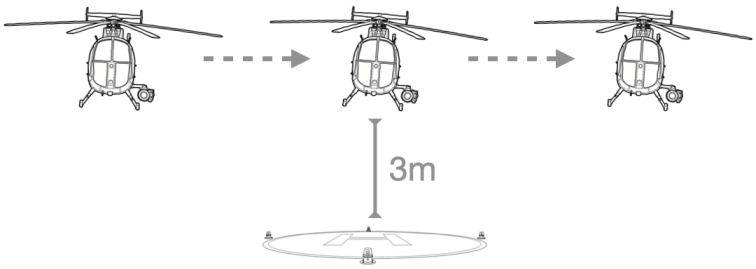


HeliStorm COMMUNITY

- Approach the landing zone from a high altitude at a steep angle (e.g., 45 degrees).
- Maintain a constant descent rate until reaching a hover just above the pad.
- Tests settling with power and precise collective control on the way down.

K: 1.2

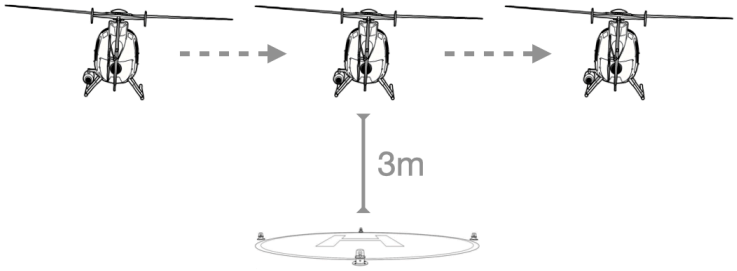
SUSTAINED SIDEWAYS - NOSE IN



- Steady lateral flight parallel to the flight line with the nose pointed perpendicular to travel and facing the pilot.
- Approximately 3 meters in altitude.

K: 1.4

SUSTAINED SIDEWAYS - TAIL IN



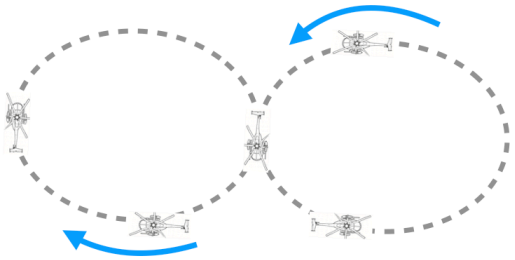
- Steady lateral flight parallel to the flight line with the tail pointed perpendicular to travel and facing the pilot.
- Approximately 3 meters in altitude.

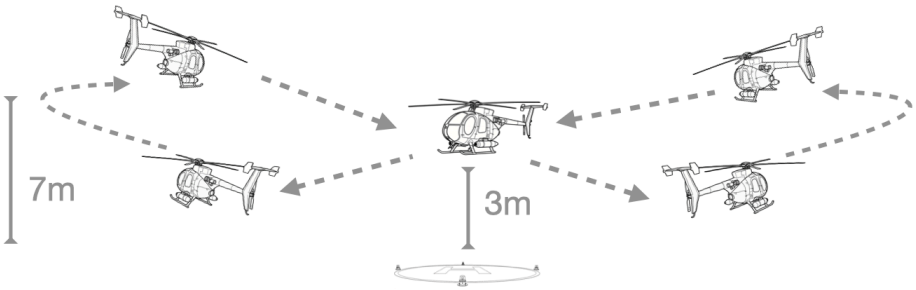
K: 1.2

Flight Maneuvers

LAZY FIGURE 8

Slow Walk | Fast Walk | Jog | Run



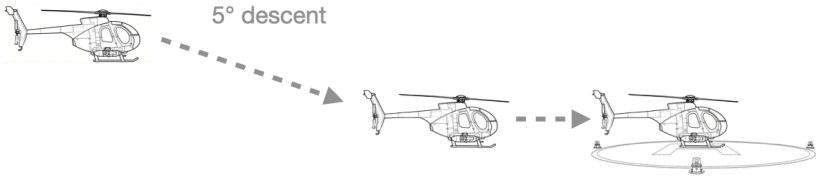


- Pilot performs an elongated figure 8 parallel to the ground while rising at the edges, sinking in the middle but also while maintaining speed.
- Both "loops" of the figure 8 should be similar in size and shape.
- Altitude varies from approximately 3-7 meters during the maneuver.

K: 1.2

RUN-ON LANDING

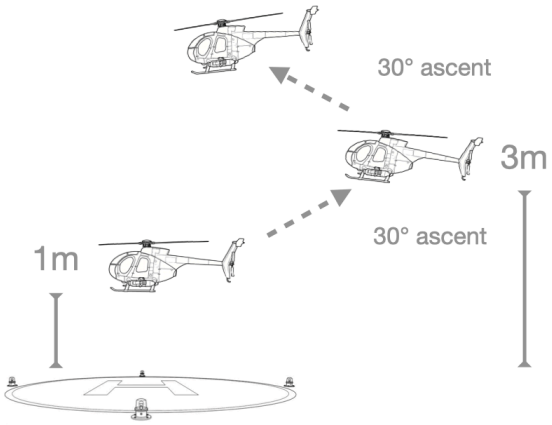
Slow Walk | Fast Walk | Jog | Run



- Helicopter approaches (from 25 meters at walking speed) from a shallow angle (5 degrees or so) and causes the helicopter to slide after reaching the ground.
- May also be performed with machines that have landing wheels.

K: 1.2

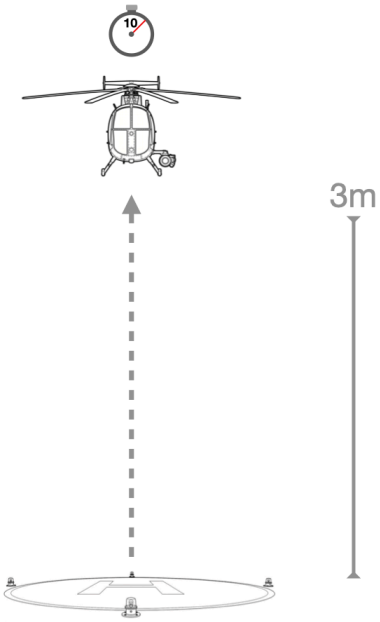
OBSTRUCTION TAKEOFF



- The helicopter faces into the wind at walking speed approximately 1 meter of the deck.
- May begin from the ground or hover in over the helipad to begin the maneuver.
- Climb backward at roughly 30-degrees to approximately 3 meters before arresting the backward momentum and climbing out forward at 30 degrees.

K: 1.5

NOSE-IN SURVEILLANCE HOVER

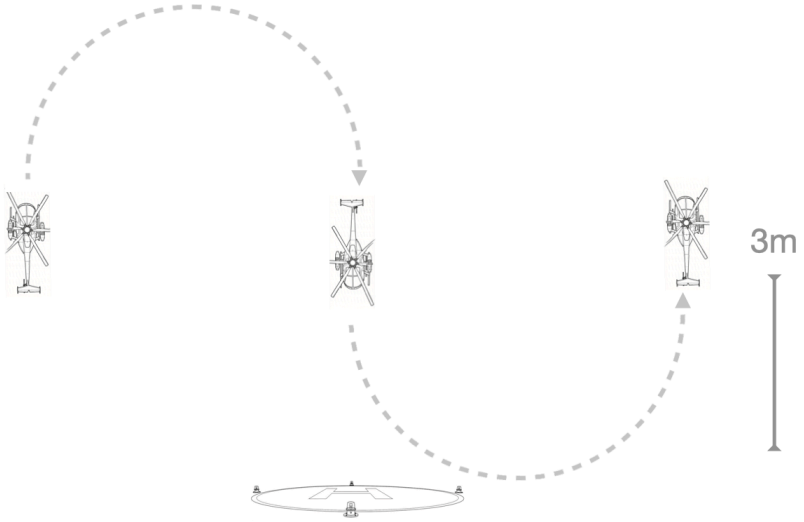


- At approximately 2 meters, hold the helicopter in a nose-in hover for 10+ seconds.
- Simulates a news or recon helicopter.
- Steady wins the day here.

K: 1.2

Flight Maneuvers

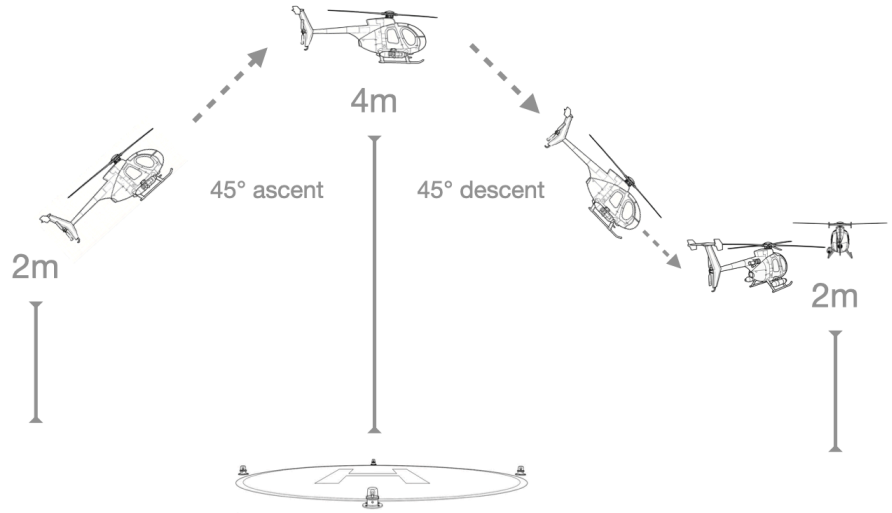
S-TURN



- Beginning on either the left or right and 7 meters out from the flight line, the helicopter will turn in toward the pilot and form a symmetrical semi-circle that flows into a turn away from the pilot in the same-sized circle in the opposite direction.
- Altitude approximately 3 meters.
- Nose-in portion roughly in front of helipad.

K: 1.3

THE BUMP

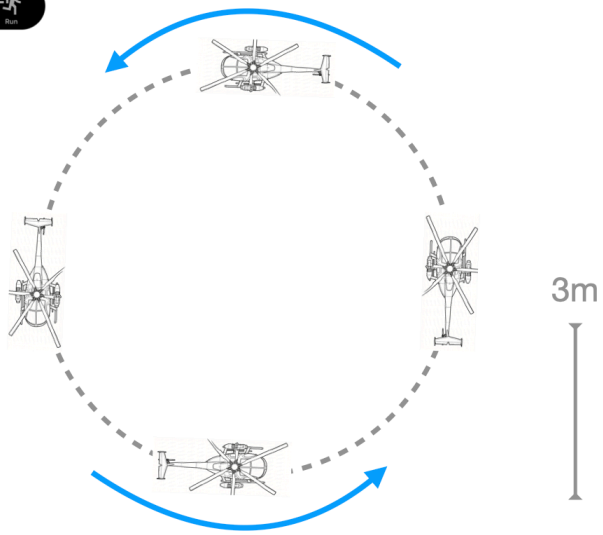


- Helicopter enters parallel to the flight line at walking speed approximately 2 meters off the deck.
- Quick 45-degree climb at center to 4 meters, followed by a 45-degree descent and 90-degree turn at exit altitude of 2 meters.

K: 1.2

Flight Maneuvers

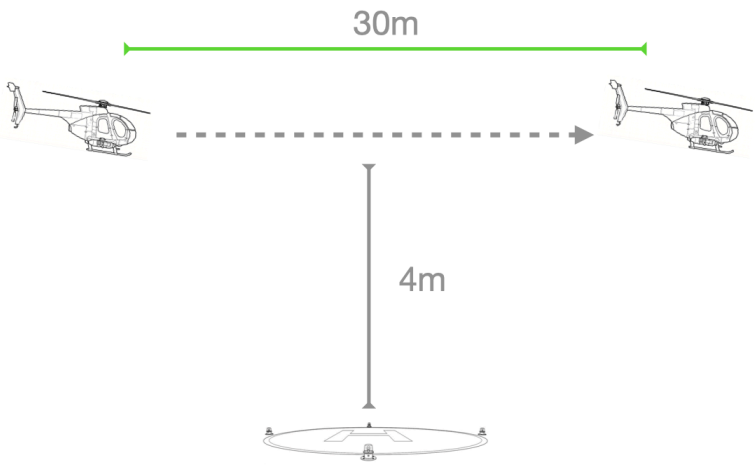
CIRCLE



- Large circle out away from the helipad (for safety).
- Smooth banking.
- Maintain altitude and speed.
- Approximately 3 meters in altitude.
- Centered on an imaginary point in line with and forward of the helipad.

K: 1.4

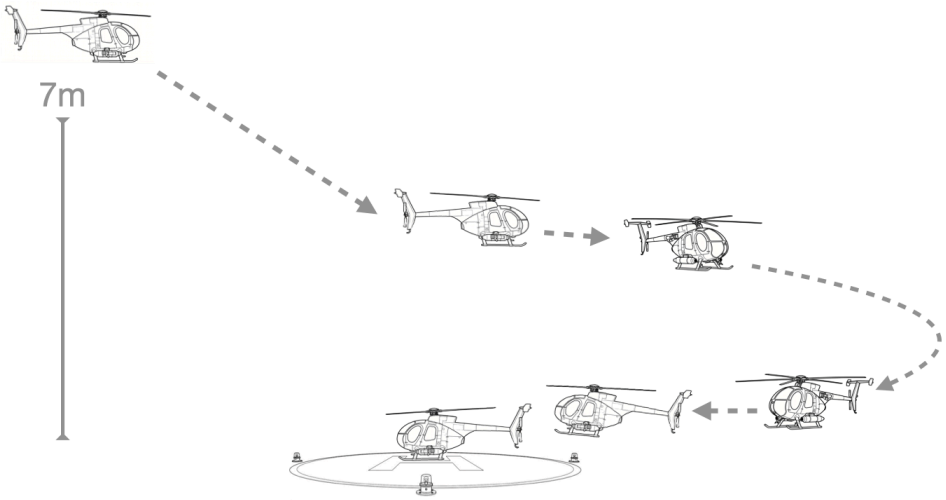
FAST FLY BY



- At a consistent speed of roughly 20 mph, and at a consistent altitude of roughly 4 meters, the helicopter will fly parallel to the flight line for approximately 30 meters.

K: 1.2

180-DEGREE DESCENT LANDING



- Start from a roughly 7 meter altitude to the left or right of the helipad.
- The helicopter performs a simultaneous descent and approach past the helipad that concludes with a broad and smooth 180-degree return approach to a landing.
- The turn must be nose in to avoid flying between the helipad and the pilot.

K: 1.5

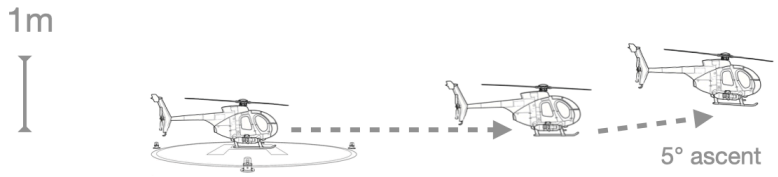
HOVER TAXI TO NORMAL TAKEOFF

- Starting at 1 meter altitude and at a slow walking speed, hover out away from the helipad 3-9 meters before arresting forward motion and rotating 90-degrees. Hold for a few seconds before climbing out at 30-degrees to 6-7 meters.

K: 1.1

GROSS WEIGHT TAKEOFF

HeliStorm COMMUNITY

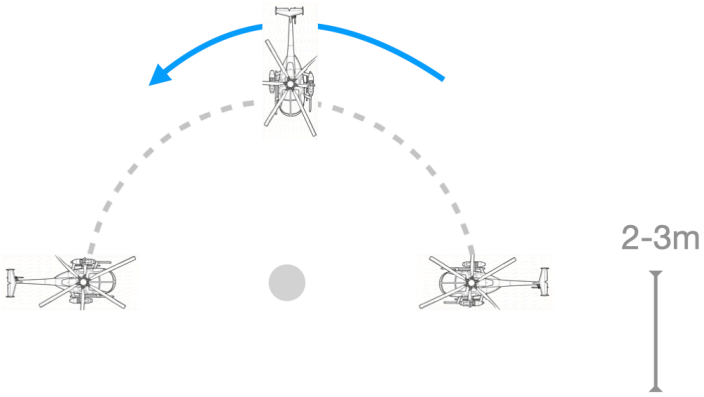


- Helicopter must slide or roll before taking off in a shallow climb angle (e.g. 5-degrees). Walking speed.

K: 1.2

ATTACK ORBIT - SEMI CIRCLE

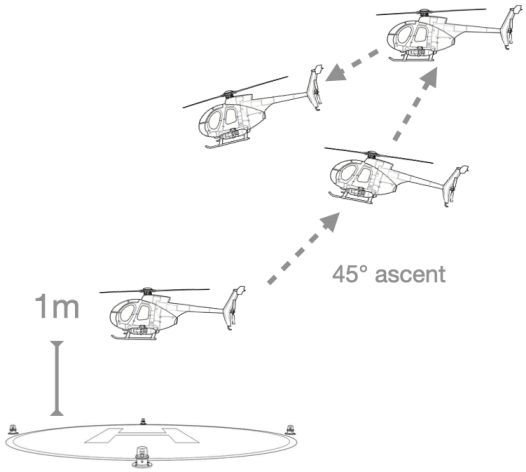
HeliStorm COMMUNITY



- Also called a pedal turn.
- The helicopter flies a continuous half-circular path around a central target while keeping the nose pointed at the center.
- Pilot may enter from anywhere.
- Altitude approximately 2-3 meters.

K: 1.8

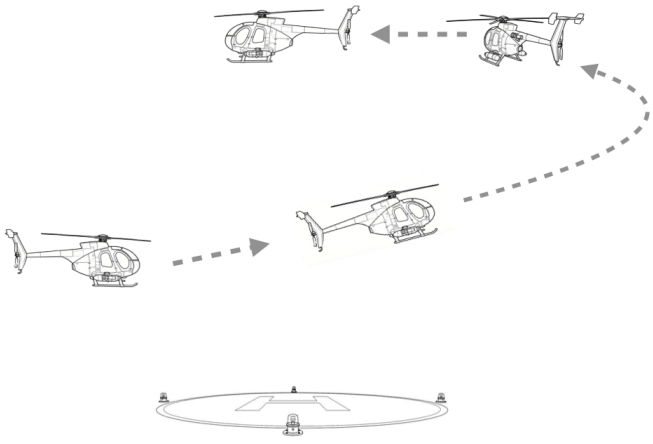
BACKOUT CLIMB TO DIVE



- From a low hover, the helicopter flies in reverse at a 45-degree climb before diving back down to level forward flight.

K: 1.6

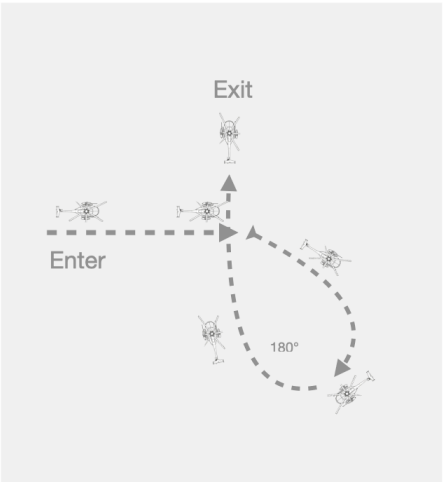
CHANDELLE

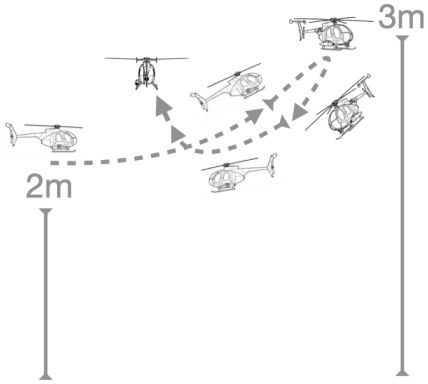


- From fast forward flight, the pilot executes a climbing 180-degree turn with a 30-degree bank.
- The helicopter bleeds off speed as it climbs, reaching maximum altitude at the apex of the turn before diving slightly to regain scale speed in the opposite direction.

K: 1.8

TEAR DROP TURN

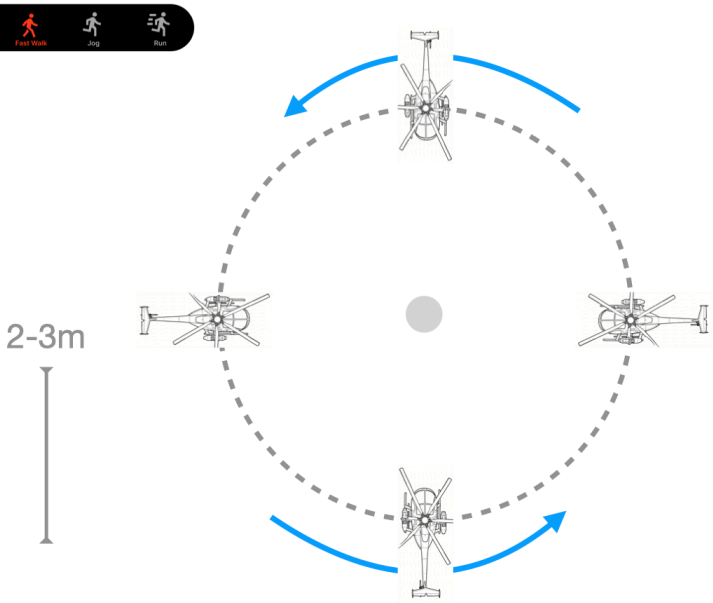




- Often used in missed approaches, the teardrop turn has the helicopter fly along the flight line roughly 15 meters “north” of the helipad.
- A bit past the pad, the pilot executes a climbing turn 45 degrees to the entry and completes a 180° turn in a teardrop shape.
- Pilot may descend after the peak of the turn.

K: 1.7

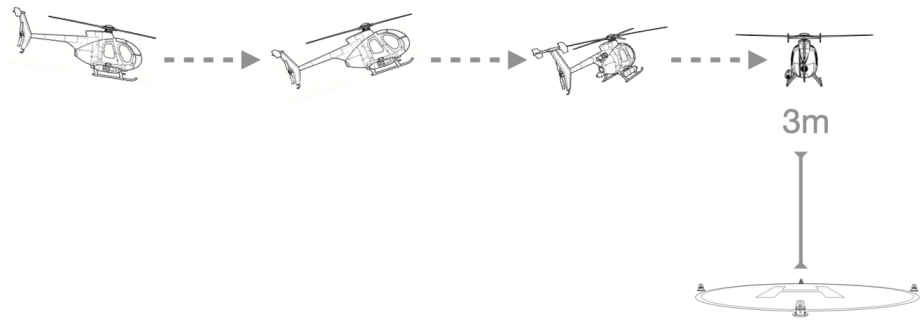
ATTACK ORBIT - FULL CIRCLE



- Also called, a pedal turn.
- The helicopter flies a single continuous circular path around a central target while keeping the nose pointed at the center.
- Pilot may enter from anywhere.
- Altitude approximately 2-3 meters.

K: 2.2

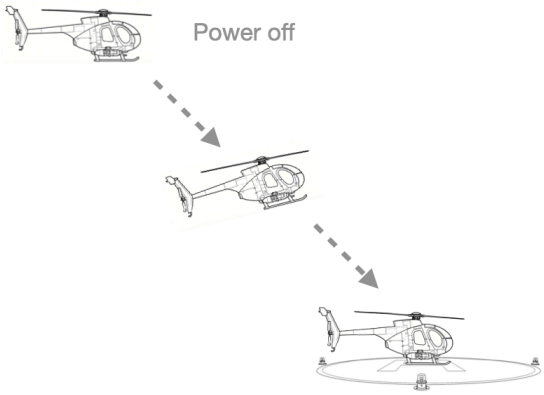
TACTICAL QUICK STOP



- Come in at cruising (walking) speed parallel to the flight line.
- Arrest forward momentum with a flare and 90-degree yaw to a dead halt in under 2 seconds.
- Settle into a perfectly stationary hover at the same altitude.
- Approximately 3 meters in altitude.

K: 2.0

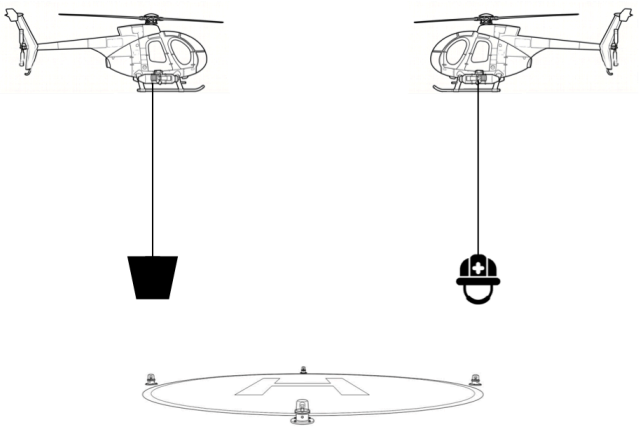
AUTOROTATION TO TOUCHDOWN



- Pilot cuts power at altitude, maintaining a controlled glide using upward airflow to a smooth, unpowered touchdown.

K: 2.5

RESCUE HOIST OR SLING LOAD



- Functional winch or sling load operation involving raising/ lowering payload onto a specific marker.
- Altitude determined by relative reference to full scale.

K: 2.2