CAMERAPERSONS

CONTENTS

1 GENERAL

Skydiving provides a wealth of visual stimulation that can be readily captured through still and video photography.

Video and still images can serve to promote and educate others of the sport so it is important that a high level of quality and professionalism is maintained. A good camera flyer is a good ambassador to the sport.

Smaller and lighter cameras have made it easier and less expensive to take cameras on a jump. This does not make it inherently safer and so should be given due consideration.

Jumpers need to exercise caution with respect to camera flying and always prepare themselves, the equipment and each skydive well:

- Camera equipment and its interaction with the parachute system.
- Activities on the jump.
- Break-off procedures.
- Special emergency procedures for camera flyers.
- Canopy packing and deployment management techniques.
- The inherent danger of neck and spinal injuries from carrying extra weight on a helmet.

Once a camera flyer has become completely familiar with the equipment and procedures of the discipline, he will be able to experiment and perform creatively while keeping it safe.

Recommendations for flying cameras should educate potential camera flyers and those making jumps with them.

Jumpers should realise that flying a camera is a serious decision and that it requires additional effort and attention on each jump.

2 EQUIPMENT

A camera flyer should consult other experienced camera flyers, a rigger, and the DZ CI/SO before using any new or modified piece of equipment on any jump:

- Helmet.
- Parachute.
- Main deployment system modifications.
- Camera.
- Camera mount.
- Flash.
- Remote switch routing.
- Camera suit (wing type suits).

Prior to filming other skydivers, each new or additional piece of equipment should be jumped until the camera flyer is completely familiar with it and has adjusted all procedures accordingly.

2.1 CAMERA EQUIPMENT

- Small cameras are not necessarily safer to jump than larger ones.
- Regardless of location, any camera mount and remote switch should be placed and rigged with respect to the deploying parachutes and access to handles.

- All sharp edges and potential snag areas should be covered, taped, or otherwise protected.
  - Unavoidable snag points on helmet-mounted cameras should at least face away from the deploying parachute.
  - A pyramid shape of the entire camera mounting system may deflect lines better than an egg shape.
  - Deflectors can help protect areas that can't be otherwise modified to reduce problems.
  - All gaps between the helmet and equipment, including mounting plates, should be taped or filled.
  - Protrusions, such as camera sights, should be engineered to present the least potential for snags.
  - Ground testing should include dragging a suspension line over the camera assembly to reveal snag points.
- Sharp edges and protrusions can injure other jumpers in the event of a collision or emergency aircraft landing.
- Cameras mounted on a jumper's extremities need to be kept clear of handles and deploying canopies.
- Camera operation devices (remote switches, cables) need to be kept simple, secure and clear of handles.
- Each added piece of equipment needs to be analysed for its potential interaction with the overall camera and parachute systems.

2.2 HELMETS AND CAMERA MOUNTS

- All camera platforms, whether custom or off the shelf, should be evaluated for safety and suitability to the camera flyer's purpose:
  - by a rigger,
  - by an experienced camera flyer,
  - by the DZ CI/SO.
- The helmet should provide full visibility for the camera flyer:
  - in freefall,
  - under canopy,
  - during emergency procedures.
- Empty camera mounts should be covered and taped to prevent snags.

2.3 HELMET RELEASES

- An emergency release is recommended for camera helmets in the event of an equipment entanglement.
- Emergency helmet releases should be easy to operate with either hand.
- Using a reliable helmet closure or clasp that can also be used as an emergency release promotes familiarity with the system.

2.4 PARACHUTE AND HARNESS/CONTAINER SYSTEM

- Camera flyers should use a reliable parachute that opens slowly and on heading.
- The deployment system needs to be compatible with the camera suit, if used.
- Camera suit wings and lower connections must not interfere with the camera flyer's handles or main bridle routing in any freefall orientation.
- The pilot chute and bridle length must be sufficient to overcome the additional burble created by a camera suit, if worn.
- If the camera flyer generally opens higher than the other jumpers, a slower descending canopy may help reduce traffic conflicts.

• The camera flyer should weigh the advantages against the disadvantages of using a reserve static line (RSL).
  – Advantages: could assist after a low cutaway or when disoriented during cutaway procedures.
  – Disadvantages: could deploy the reserve during instability following a cutaway, increasing the chances for the reserve entangling with the camera system, or can cause a reserve activation while main is entangled with camera helmet.
• As always, proper attention to packing and maintenance, especially line stowage, helps prevent hard openings and malfunctions.

2.5 MANDATORY ACCESSORY EQUIPMENT

• Functioning altimeter.
• Audible altimeter.
• Hook knife.

A camera flyer must ensure they receive instruction in the use of both audible altimeters and hook knives if they are not all ready familiar with this equipment.

3 PROCEDURES AND RULES OF THE SKY

3.1 GENERAL

• Prior to jumping, a skydiver should have the minimum requirements as per Section 2 and enough general jump experience to be able to handle any skydiving emergency or minor problem easily and without stress.
• A camera flyer should possess freefall flying skills well above average and applicable to the planned jump:
  – Belly-to-earth.
  – Freeflying (upright and head-down).
  – Canopy formation.
  – Multiple (for skysurfing, filming student training jumps, etc.).
• The jumper should have made at least 20 recent jumps on the same parachute equipment to be used for camera flying.
• The camera flyer should know the experience and skills of all the jumpers in the group.
• Deployment:
  – The deployment altitude should allow time to deal with the additional equipment and its associated problems.
  – The camera flyer must remain aware of other jumpers during deployment.
  – The camera flyer is responsible for his own altitude awareness.
• Each camera flyer should conduct a complete camera and parachute equipment check before rigging up, before boarding the plane, and again prior to exit.
• Camera jumps should be approached procedurally, with the same routine followed on every jump.
• The priorities on the jump should be the parachute equipment and procedures first, then the camera equipment and procedures.
• Introduce only one new variable (procedure or equipment) at a time.
• A camera jump requires additional planning and should never be considered just another skydive.

3.2 AIRCRAFT

• Cameras should be worn or secured during take-off and landing to prevent them from becoming a projectile in the event of sudden movement. Attaching helmet to chest strap is an easy solution.
• A camera flyer needs to be aware of the additional space the camera requires:
  – Use caution when the door is opening to prevent getting hit by door components.
  – Practice climb-out procedures in each aircraft to prevent injury resulting from catching the camera on the door or other part of the aircraft.
  – The camera flyer should coordinate with the pilot before attempting any new climb-out position.

3.3 EXIT

• Unless the plan calls for the camera flyer to be part of the exit, he or she should remain clear of the group, being mindful of the airspace opposite the exiting jumpers' relative wind.
• A collision can be more serious with a jumper wearing a camera helmet.
• Student jumpers can become disoriented if encountering a camera flyer unexpectedly.
• A tandem parachutist in command requires clear airspace to deploy a drogue.
• Skydivers occasionally experience inadvertent openings on exit.

3.4 FREEFALL

• The jumpers should prepare a freefall plan with the camera flyer, to include:
  – The camera flyer's position in relation to the group
  – Any planned camera flyer interaction with the group
• The jumpers and the camera flyer should follow the plan.

3.5 BREAK-OFF AND SEPARATION

• All jumpers on the load should understand the camera flyer's break-off and deployment plan.
• Two or more camera flyers must coordinate the break-off and deployment more carefully than when only one camera flyer is involved.
• Filming other jumpers through deployment should be planned in consideration of the opening altitudes of all the jumpers involved and with their cooperation.

3.6 DEPLOYMENT

• The camera flyer must exercise added caution during deployment:
  – To prevent malfunctions
  – To ensure an on-heading deployment
  – To avoid neck injury
• New camera flyers should consult with experienced camera flyers for specific techniques to prevent accidents during deployment.
• Malfunction, serious injury or death could occur if the lines of a deploying parachute become snagged on camera equipment.

3.7 PARACHUTE EMERGENCIES

• The additional equipment worn for filming can complicate emergency procedures.
• Each camera flyer should regularly practice all parachute emergency procedures under canopy or in a training harness while fully rigged for a camera jump.

• Emergency procedure practice should include removing the helmet with either hand in response to certain malfunctions.
• When to release the helmet:
  - Equipment entanglements
  - Obstacle landings (water, trees, building, power lines)
  - Whenever a dangerous situation presents itself

3.8 CONSIDERATIONS FOR SPECIALISED CAMERA

• Refer to the PANAM MOPs Section 2 for restrictions on camera work and category requirements for group skydives.
• A skydiver should have extensive camera flying experience with experienced jumpers prior to photographing or videoing student jumps.
• For AFF camera the Instructor supervising the jump should conduct a thorough briefing with the camera flyer prior to boarding.
• The instructor's full attention is required to be on the student and the student is incapable of considering the movements and needs of the camera flyer.
• The camera flyer should avoid the area directly above or below a student or instructor(s).
• Students may deploy without warning.
• Disturbing the student's or instructors' air could compromise their performance and the safety of the jumpers.
• During the exit, students often give erratic exit counts, making exit timing difficult for the camera flyer.
• When filming tandem jumpers, the camera flyer must remain clear of the deploying drogue.
• The camera flyer needs to maintain independent altitude awareness and never rely on the student or instructor(s).
• The camera flyer is responsible for opening separation from the student and the instructor(s).
• While dramatic, aggressive filming of openings can compromise safety. This should always be planned and briefed for accordingly.
• When using larger aircraft, student groups typically exit farther upwind, which may require a higher opening for the camera flyer to safely return to the landing area.

4 EMERGENCY PROCEDURES

An example of a recommended cameraperson reserve drill:

ARCH
CHECK HANDLES AND CAMERAS CLEAR
CUTAWAY
CHECK CAMERA HELMET IS CLEAR OF MAIN CANOPY.
IF CLEAR - GET STABLE (time permitting) AND DEPLOY RESERVE.
IF NOT CLEAR - JETTISON HELMET, GET STABLE (time permitting) AND DEPLOY RESERVE.