



Model Aeronautics Association of Canada

Safety Code

This document contains mandatory safety rules and forms part of the MAAC Safety Code for all activities described here in.

MAAC Safety Document # MSD 6 - USE OF FIRST PERSON VIEW DEVICES

Definition: First Person View or FPV is a video system consisting of a video camera and video transmitter installed in a radio control model aircraft which transmits wirelessly to a ground station display or monitor a streaming video image generated by the camera. The camera is positioned near the front of the model and facing forward so that the FPV pilot views an image which provides him or her with the illusion of actually flying an aircraft from an on board pilot's perspective.

All members flying a radio control model aircraft by means of an FPV device shall adhere to all of the Safety Guidelines pertaining to the class of model he or she is flying in the same manner as if the model were being controlled by conventional RC line of sight control.

In addition all members flying any RC model aircraft using an FPV device shall adhere to the following.

- 1) All members flying FPV shall appoint a dedicated Spotter/Helper who must remain next to the pilot throughout the entire flight.

Continued on next page.

- 2) The spotter/helper shall, unaided by any optical device other than corrective lenses, maintain direct visual contact with the model aircraft at all times and must advise the FPV pilot of the model's position and altitude in relation to the field and other models. This rule is necessary to satisfy Canadian Air Regulations requiring continuous visual line of sight control of an RC model aircraft and must never be broken.
- 3) The spotter/helper must be a qualified RC pilot capable of taking control of the model in any emergency and flying it by conventional RC line of sight control until such time as the emergency is resolved or if necessary safely landing it.
- 4) The spotter/helper does not have to be FPV qualified.
- 5) All Members learning FPV flight must do so utilizing the Buddy-Box system where the spotter/helper holds the master transmitter and the FPV pilot holds the secondary or trainer box.
- 6) If and when the FPV pilot reaches a stage where he or she feels competent enough to eliminate the Buddy-Box he or she must pass a qualifying FPV flight test with a designated examiner (or committee) before doing so.
- 7) The designated flight test examiner (or Committee) does not have to be FPV qualified.
- 8) Once having passed the FPV test a member may fly the model using FPV from the master transmitter and without a Buddy-Box connected but the spotter/helper must still be present at all times to satisfy Air Regulations.
- 9) All models to be flown using an FPV must first be proven airworthy by a test flight or series of test flights using conventional RC line of sight control. In the event of a crash resulting in damage to the model it must be re-tested by conventional RC line of sight control before further FPV flight.
- 10) All members are advised to consult the FPV Committee on the choice of a satisfactory trainer model and a compatible FPV system.

Continued on next page.

- 11) All members wishing to pursue FPV flight with more sophisticated models such as helicopters or higher performance fixed wing craft shall consult with the FPV Committee before doing so. FPV technology is advancing rapidly but current systems do have some limitations that may result in them not providing sufficient visual imagery to control the model in all flight regimes. For this reason it is important to consider all factors when contemplating installation in a different model to insure that the member has the best up to date information on system capability and its compatibility with the type of model being considered.
- 12) Further to Paragraph 11, when FPV is installed in the model for the first time at least the first take off and climb to a safe altitude shall be conducted by the spotter/helper using conventional RC line of sight control before handing the transmitter to the FPV pilot.
- 13) Once qualified as an FPV pilot a member may fly FPV at any venue which permits operation of the category of model he is flying, providing that the spotter/helper rule is met and providing there are no local venue rules prohibiting FPV.
- 14) All members flying FPV should be licensed according to Industry Canada regulations for use of these frequencies or be flying only when another MAAC Member, who is licensed is present at the same location and assumes responsibility over the operation of the FPV transmitter. All members should consult the FPV Committee for the latest information on licensing requirements.
- 15) All members contemplating FPV shall consult the FPV Committee on issues concerning frequency and radio spectrum, particularly as they apply to frequency selection for the FPV system. Certain combinations of frequencies are not recommended as they may result in interference with other FPV equipped models. Present technology is limited in this regard and 2.4 GHz is not currently recommended for the video signal. It is also important that two FPV Models be verified for compatibility before flying them together.
- 16) At venues where several FPV models may be present an FPV frequency control board or impound similar to those used for 72 MHz RC radios shall be used .

Continued on next page.

- 17) Clubs and Event organizers wishing to promote FPV at their venues shall first make themselves familiar with FPV systems, the above guidelines and the current capabilities and limitations of FPV systems and make the necessary adjustments to their venue to accommodate their special needs.
- 18) For additional information on FPV contact the FPV Committee or go to the FPV Committee documents on the MAAC Website.
- 19) For additional information on radio licensing and allotted frequencies for video transmission contact the Frequency Spectrum Committee or go to the Frequency Committee documents on the MAAC Website.