EMBRY-RIDDLE Aeronautical University PRESCOTT, ARIZONA

SEE AND AVOID TIPS

The primary means to avoid damage, injury or collisions between aircraft while flying within our National Airspace System (NAS) is "See and Avoid." Vigilance must be maintained by each person operating an aircraft (unmanned or manned) so as to "see and avoid" other aircraft. The following are unmanned aircraft system (UAS) tips to help maintain efficient "see and avoid" practices:

Have a "Spotter" or Visual Observer (VO)- Make every effort to bring a spotter/VO to assist in monitoring the surrounding airspace for manned aircraft for any flight especially if the operation is expected to be in proximity to known manned aircraft traffic or within three miles of an airport. A VO must have sufficient visual keenness, must take this responsibility very seriously and be prepared to assist his/her unmanned pilot in the event that another aircraft or persons become endangered or are perceived to be a danger by the unmanned aircraft. Before every flight, the pilot should insure the VO/spotter understands their duties and expectations.

Unmanned aircraft must avoid manned aircraft- Our privilege to fly unmanned aircraft in the NAS depends on our commitment to remain well clear of manned aircraft. A "near miss" is not acceptable, simply avoiding an actual collision is not enough.

Remain vigilant and well clear- Unmanned aircraft flying must not only be safe; it must be perceived to be safe by the greater manned aviation community. Unmanned aircraft must fly sufficiently far away from manned aircraft so as not to create a collision hazard.

UAS always give way to manned aircraft- Whenever a potential conflict arises between unmanned aircraft and manned aircraft, the pilot of the UAS must always give way to the manned aircraft. UAS pilots should never place the well-

Reference *"SEE AND AVOID" GUIDANCE. Academy of Model Aeronautics*. Retrieved 10 April 2017, from http://www.modelaircraft.org/files/540-D.pdf

being of an unmanned aircraft above the safety of manned aircraft. Maneuvering to avoid the conflict may require that the unmanned aircraft be sacrificed.

Assume the UAS can not be seen by other aircraft- The pilot of an unmanned aircraft must never assume the pilot of a manned aircraft can see the unmanned aircraft or will perform any maneuver to avoid it. UAS should not be launched with relatively low altitude manned aircraft in sight and downwind or headed downwind from the launch site.

Maintain Visual Line of Sight- Visual contact with UAS must be maintained without enhancement other than by corrective lenses prescribed for the unmanned aircraft pilot. All unmanned operations must remain clear of clouds smoke or any other obstruction to line of sight.

Use "Blue Sky" method- This method is used to increase separation between UAS and a manned aircraft in the same vicinity. The operator should maneuver the aircraft in such a way as to increase the amount of blue sky perceived between the UAS and the manned aircraft. By increasing the blue sky separation, the question about depth perception is taken out of the equation and the modeler need not worry whether the UAS is closer to him than the manned aircraft or further away. Increasing the blue sky between the model and the manned aircraft automatically increases separation between them.

WHEN IN DOUBT - DON'T FLY !!!

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