MAAC POLICY AND PROCEDURES DOCUMENT (MPPD)

This Policy and Procedure Document describes official MAAC policy for a given subject and provides direction to the membership on recommended procedures to be followed in compliance with stated policy. To ensure that you have the latest version always check the MAAC Web Site.

1.0 Title. MPPD 26 – MAAC Crew Roles, Responsibilities, Training and Fitness Policy.

2.0 Purpose. To ensure uniform compliance with the Canadian Aviation Regulations, the MAAC Special Flight Operations Certificate (SFOC) and MAAC Safety Code.

3.0 Definitions Glossary of Terms.

Air Boss – is a MAAC member(s) assigned responsibility for coordinating any group or event model flying activities (normally RPAS) with external agencies (normally Air Traffic Control) and **shall be always available on site for immediate external (ATC) communication** purposes whenever the site is expected/coordinated as active. This member has complete authority to commence, suspend or restrict any airborne modelling activities per ATC permission, request, or relay. The Air Boss position **may** assume or assist in any other roles except the following:

1. Shall not conduct active modelling including as mRPAS or RPAS pilot.
2. Shall not assume Event/Contest Director responsibilities.

By-stander – is any person who is unaware of the modeling activities or has otherwise not consented to be near the modeling activity.

Contest Director (CD) – is a MAAC member assigned responsibility for overseeing the competition and officiating at any event where competition is occurring. A CD may also assume Event director roles and responsibilities. This person(s) shall not assume the duties of Air Boss, RPIC or Visual Observer while exercising CD duties but otherwise has complete authority to commence, suspend or restrict any modelling activities.

Crew – in general terms is any person, whether a MAAC member or not, who is involved in the modelling activity of their own free will. The crew can include non-modelling/flying/operational support staff such as ground/event/parking staff, family/friends as “helpers/spotters”, emergency/first aid providers or food vendors provided they are briefed on and aware of the modeling or RPAS activities occurring.

Demonstration (flight) - means a one-on-one interaction between a MAAC member, and a person, usually a non-MAAC person, who is provided an opportunity to manipulate the controls of a model under instruction/supervision of a member who can

assume **direct control** of the model with no delay. This may be accomplished in any number of means such as a “buddy-box” or otherwise at the members discretion.

Direct supervision – means an interaction between a MAAC member with full authority and legal responsibility for the overall operation of a model, and another person, usually a student, who is manipulating the controls of the model. This may be accomplished in any number of means such as a “buddy-box” or otherwise, provided in all cases the person providing direct supervision can assume control or authority for the safe operation of the model with no delay.

Event Coordinator/Director (ED) – is a MAAC member(s) assigned responsibility for the organizing of, or day of administration of an event, and whose duties usually include pilot/modeler registration, conducting daily pilot/modeller briefings, general oversight of the event, concessions, scrutineering, or any other non-modelling activities. This person(s) shall not assume the duties of Air Boss, RPIC or Visual Observer while exercising ED duties but otherwise has complete authority to commence, suspend or restrict any modelling activities.

Helper/mechanic – any person who assists a modeler in the preparation of a model for modeling activities but has no other specific duties.

Modeller – is the most generic term to mean any MAAC member operating any category of model – model aircraft (RPAS), tethered, free flight, space models or surface vehicles.

Operator – is a generic interchangeable term for non-RPAS modelers. When used with RPAS Operator, it has the same meaning as RPAS Pilot – the member responsible for the overall RPAS operation.

RPAS/mRPAS pilot – is the MAAC member directly responsible for the operation of the RPA and system, regardless of TC certification levels. This includes not only the actual operation/flying, but also includes all pre and post flight and regulatory responsibilities.

RPIC – RPAS Pilot In Command – is a MAAC member, who agrees to provide direct supervision only, to “Students” in accordance with MAAC policy and who possesses:

1. A valid RPAS Advanced pilot certificate **or**
2. A valid or previously issued Canadian Private pilot license (PPL) or higher (RPL, GPL, ATC and AME are not acceptable) **and**
3. If required in the Site Operation Certificate or Site rules, a Restricted Operator Certificate – Aeronautical issued by ISED (ROC-A).

Spotter – is a person assigned the role of coordinating model movements with other modellers, for member and model safety. Normally a single spotter is assigned to each modeller, however a single spotter per flight line or modelling station is acceptable. The spotter watches the models and cannot normally be assigned the role of Visual Observer (VO). A spotter **can** be assigned the role of watching for approaching bystanders.

Student – is any person who is not directly responsible for the overall operation of the model, including any person who does not have the appropriate rating/certification for the type or location of model operation. Generally, this person is manipulating the controls of a model in varying degrees of competency under the direct supervision of another member (example instructor, flight reviewer, RPIC) who assumes all responsibility for safety and any regulatory compliance items.

Visual Observer (VO) – is a trained crew member who assists the modeller/pilot in ensuring the safe conduct of a flight under MAAC VLOS. They are assigned the role of scanning the sky in all directions for approaching full-scale aircraft and providing timely warnings or advisories to any other modellers (Detect and Avoid responsibilities (DAA)). RPAS VO must be trained or briefed to the standard listed in the SOC or site rules. In some instances, a VO must be a MAAC member with RPAS Certification. A VO may also be assigned the role of RPIC for a flight line, Air Boss or other communication duties with ATC but cannot be assigned any other roles if RPAS are airborne.

Spectator – are any persons attending a model site, of their own free will to watch the models or otherwise spectate but not participate in the modeling activity.

4.0 Statement of MAAC Policy.

4.1 This policy in and of itself does not assure safety – Clubs or individuals are still fully responsible to ensure they conduct their operations in manners that assure safety for full-scale aircraft operations and the public.

5.0 Process and Procedures

MAAC Crew Roles and Responsibilities

The purpose of well-defined crew roles and responsibilities is to ensure our regulatory and safety responsibilities are met in a consistent fashion. Whether a few modellers are just gathering on a sunny afternoon, or holding a mega-multi zone gathering, having everyone understand who is responsible for what, and who has authority to do what, helps make for a safe, fun, and relaxing gathering.

5.1 Air Boss

The term “Air Boss” is taken directly from full-scale airshows and is the **single person/point of contact** assigned the responsibility of coordinating the individual airshow flights/acts with Air Traffic Control (ATC) among other duties. MAAC has reached agreements with various ATC providers to also use a single point of contact, the **MAAC Air Boss**, for some of our MAAC flying events or sites. To be clear, this includes not only one-off events, but authorized MAAC sites in controlled airspace on a day-to-day basis.

Where **specified in the site SOC rules**, instead of each individual Club pilot obtaining an individual NAV DRONE or individual flight authorization each day/flying session, we have agreements for a single flight authorization for the entire site/event for whatever time ATC agrees to. This is however contingent upon the site making 100% sure whoever has been assigned the Air Boss responsibility to maintain contact with ATC

does! In practice, here are the key points to consider if your site/event is authorized to use an Air Boss:

1. Whatever ATC communication system is used (cellphone, land line, radio) **when ATC contacts this number/person someone MUST answer/respond – no delay no exceptions**. Generally, ATC wants a single point of contact for their emergency situations – we will not get second chances if we miss emergency calls/situations.

2. MAAC wants this person involved in the flight line area. Except for flying a model themselves and Event/Contest Director roles, this person is encouraged to assume other roles associated with the site/event- be actively involved in the flying helps maintain situational awareness and ward off boredom. Sitting within shouting reach of the flight line and watching the flying activities is also perfectly acceptable.

3. Sites and events are free to add other flying related duties to the Air Boss, provided they do not distract from maintaining communication with ATC, or otherwise violate this policy. (Flight line safety officer etc.)

4. The role can be handed-off to other members as the day progresses, or for breaks or lunch etc. So long as whomever has been assigned this critical task is fully briefed and understands the nature of this job – when ATC calls you must answer and then relay their instructions **immediately**. Also see position hand-off rules.

5. The importance in this document is for participants and especially RPAS pilots to understand that if an **Air Boss** gives any instructions, please follow this simple aviation safety phrase - **obey now debate later.**

5.2 Event or Contest Directors

Ensuring safety and regulatory compliance is very important for our continued enjoyment of the hobby and MAAC has a full guidance document for organizing events or Contests. The importance in this document is for participants and especially RPAS pilots to understand that if an event or contest director gives instructions related to modeling activities, please follow this simple aviation safety phrase - **obey now debate later**. If an Event/contest director yells out commands related to safety – please follow them as safely and quickly as possible.

The same goes for daily pilot briefings – all participants must understand that under the current MAAC SOC process, every site can have very different rules for regulatory or safety reasons – **please pay attention to any event or contest pilot briefings**.

5.3 Crew

Per the definition, crew can literally be anyone involved in the modelling activity, which introduces additional risks and responsibilities. As the goal of all our modelling activities is safe fun, members need to keep in the back of their minds that accidents are no fun - Hospital trips especially. This is very true when you invite non-members to a modelling site – what experienced modellers take for “common sense” may be completely foreign concepts to visitors. Each pilot (RPAS and others) is responsible for visitor safety so

please take time to brief any non-modellers or visitors to your site on the more important safety features/concerns of your modeling site such as:

- Areas on site that are a no-go zone (flight lines, pits etc.)
- Parts/areas on a model that pose a personal injury risk along with any procedures to assure their safety.
- Location of emergency aids – first aid kits, fire extinguishers
- Conduct items to avoid distracting active pilots/modellers.
- General procedures after an accident or serious incident.
- 9-1-1 availability or similar emergency contact information/locations.
- Any housekeeping items like washrooms, photography or similar
- Any other items you deem important for their safety and continued enjoyment while at your modeling site.

5.4 Visual Observers (VO)

Many of MAAC regulatory "freedoms" are based on the MAAC background supporting documentation submitted to Transport Canada or NAV CANADA that indicate MAAC RPAS operations will provide CAR/JARUS compliant "Detect and Avoid" (DAA) assurances. In years past, MAAC called this "see and avoid" which is essentially the same concept as DAA and requires all MAAC RPAS pilots to maintain VLOS (visual line of sight). MAAC VLOS is defined as the ability to:

a. maintain operational control of the aircraft,
b. know its location, and
c. be able to scan the airspace to decisively see and avoid traffic.

MAAC detailed study in the summer of 2022 revealed MAAC VLOS is obtainable by most members using traditional modeling techniques, for all model operations below 400'AGL. For operations above 400'AGL, and in other circumstances where required by regulations, **additional DAA methods are required to decisively see and avoid traffic**. While every site will have SOC specific roles, responsibilities, and other additional procedures in support of the DAA outcome, in practical terms the VO role is mostly the same:

a. Unless the SOC/site rules state otherwise, any responsible person can be trained/briefed to be a VO. This includes spouses, children of appropriate maturity, or friends.
b. VO must not watch the models – their sole role is to scan the surrounding sky for approaching full-scale aircraft.
c. Recall/explain right of way rules – **MAAC models/RPA give way in all circumstances – no exceptions**. There is never any onus on full-scale pilots to yield to models – ever.
d. Positioning the VO where they have unobstructed sight lines is important – sitting in the shade beside a camper/structure is not acceptable. Equally they must be situated to have a reasonable communication ability with all pilots/modellers.
e. Use visual aids as required – sunglasses, wide brim hats, sunshades, binoculars or similar. If positioned far from pilot stations, provide suitable notification means such as air horns, lights, radios etc.

f. Use of other situational aids, such as monitoring Aviation radios is encouraged but must not be relied upon – many aircraft operate legally with no radio (NORDO) including inside controlled airspace.
g. Auditory detection means may help, but in all cases external noise should be kept to a minimum (music, generators etc.)
h. Ensure a clear command/response protocol is in place – there is no time for debates or confusion. MAAC has adopted the following minimum:
    i. Upon spotting any airplane that might pose a hazard with modeling activities, yell in a loud clear voice “AIRPLANE”. **If in doubt, issue the warning**.
    ii. Equally for operations in controlled airspace, if the VO or the person monitoring communications with ATC were to yell “AIRPLANE” the response by RPA pilots is expected to be the same.
    iii. Upon hearing this command, all pilots shall descend to as low as altitude as safely possible, and if required land. The goal is to vacate the airspace vertically and then determine if RPA can continue to operate safely. Descending to 60’agl (tree top level) is the accepted Transport Canada initial response. Members operating near/off aerodromes have different specific response requirements.
    iv. Upon determining the full-scale aircraft is no longer a threat, the VO or other persons shall yell in a loud clear voice “ALL CLEAR”.
    v. Thereafter modeling activities may resume as normal.

5.5 Spotters

The traditional MAAC role of spotter remains and should be used in conjunction with a VO, but never in lieu of as the roles are very different. The spotter is there to coordinate model movements and assure safety amongst modellers. The spotter should be watching the models and otherwise focused on the modeling activity occurring around them. Typically, where spotters have been stipulated, there is a one-on-one Spotter per pilot requirement. The more common spotter duties are as follows:

a. Assisting the pilot with pre-flight or start up duties.
b. Carrying or helping taxi the model from startup area to flight line area.
c. Calling out permission to taxi on to the flight line area.
d. Calling out/coordinating take off with other pilots flying/hand launching or similar.
e. Monitoring the flight, calling out potential collision risks, calling out/coordinating maneuvers with other pilots.
f. Calling out emergencies such as DEAD STICK
g. Coordinating or calling out landing and clear of runway
h. Recovering the model, sometimes from on the flying area, sometimes to help taxi/carry the model back to the pits.
i. Any other duties as requested by the pilot flying.

5.6 RPIC – RPAS Pilot in Command

This is a new (2024) MAAC process created to specially enhance RPAS regulatory requirements related to controlled airspace and certain SFOC requirements. The MAAC concept is - **in some circumstances, a properly qualified/certified member (RPIC) may** provide direct supervision to the person(s) manipulating the RPA controls

(flying the model), and they do not necessarily need to be "hands on" or using a "buddy-box" or similar while doing so.
The concept is taken directly from full scale aviation, a Transport Canada RPAS standard and has full Transport Canada acceptance when used according to MAAC policy which is the same as in full-scale pilot training. For example, a licensed Private pilot who is seeking a higher rating, perhaps an instrument rating, is still perfectly capable of flying the airplane, but they do not have the proper accreditation or rating to legally fly the airplane as an "instrument rated **pilot in command**". So long as a qualified "instrument rated **pilot in command**" is on board and providing direct supervision, the private pilot may fly the airplane, in controlled airspace, as though he was fully qualified.

NOTE - While able to provide direct supervision (only), RPIC members cannot operate an RPAS on their own, unless meeting the CAR RPAS Pilot certification level (Basic or Advanced). Meaning a member with a PPL **only** cannot legally fly an RPAS in Canada, unless supervised by a Basic or Advanced RPAS Certificate holder. Equally, two PPL holders do not equal one RPAS Certificate holder and cannot supervise one another – one of them must have a valid RPAS certificate for the airspace/scenario being conducted.

To keep this as simple and easy to apply as possible, anytime another person does not **fully** meet the "requirements" of the airspace or scenario, we may deem them a student and can use the RPIC concept to provide additional flying flexibility. In practice, a "student" is **any** member who does not independently meet the RPAS pilot certification requirements for the site/operation, and a RPIC may supervise their RPAS operation. The following are some examples.

a. Basic RPAS certificate holder (Canadian or Foreign) wanting to operate an RPAS in **controlled airspace** where an Advanced RPAS certificate is required – one on one RPIC supervision permitted (RPIC must be Advanced RPAS certificate holder or PPL).
b. Basic RPAS certificate holder (Canadian or Foreign) wanting to operate an RPAS in **uncontrolled airspace** where an Advanced RPAS certificate is required – one RPIC per flight line permitted. (3nm of Airport/1nm heliport, 400'+, 25kg+) (RPIC must be Advanced RPAS certificate holder or PPL)
c. MAAC Member, no RPAS certification - limited to a demonstration flight(s) or one-on-one instruction which must be conducted by an appropriate RPAS certificate holder. See Instructing section below.
d. Non-member, no RPAS certification – limited to a demonstration flight(s) only and must be conducted by an appropriate RPAS certificate holder.

When using the RPIC provision, members must ensure the terms of the site SOC are followed. Every site and scenario are different and will be spelt out in clear terms. Equally important for all "students" – **the RPIC is in command.** Whatever instructions they issue shall be followed by all RPAS students immediately and without hesitation.

5.7 Instructing/Demonstration flights

MAAC has not changed the past practices related to Club/site instructors, instruction, or demonstration flights. Equally, MAAC does not officially endorse or recognize the MAAC Wings or Blades program currently. MAAC will continue to analyze and make any changes as time progresses, after restoration of flying freedoms is deemed adequate and stable. MAAC does however provide the following regulatory clarity for Clubs and members:

Sites in Controlled Airspace

- Members under age 16 may operate RPAS under the direct supervision of a RPIC on a **one-on-one basis**. A buddy box is not required – members may use their own judgement.
- Demonstration flights to a non-member may occur, **one-on-one**, from an advanced RPAS holder.
- All other instruction, including upgrading for obtaining an advanced operator's certificate, may occur **one-on-one** under the RPIC program. There is no time limit – a "student" may never progress to advanced – perfectly acceptable so long as there is direct supervision.
- Any SFOC operation approved in a MAAC SOC, such as above 400'AGL or above 25kg, must meet the "direct supervision" provisions or restrictions listed in the SOC- every site can be different, so no set rules are possible.

Uncontrolled Airspace – non-Advanced operations

- Members under age 14 **may** operate RPAS under the direct supervision of a basic RPAS holder or RPIC on a **one-per-flight line basis**. A buddy box is not required – members may use their own judgement.
- Demonstration flights to a non-member may occur, **one-on-one**, from a Basic RPAS holder.

Uncontrolled Airspace – Advanced Operations

- Members under age 14 may operate RPAS under the direct supervision of an RPIC on a **one-per flight line basis**. A buddy box is not required – members may use their own judgement.
- Demonstration flights to a non-member may occur, **one-on-one,** from an Advanced RPAS holder.
- Any SFOC operation approved in the MAAC SOC, such as above 400'AGL or above 25kg, must meet the "direct supervision" provisions or restrictions listed in the SOC- every site can be different, so no set rules are possible.

5.8 Incidents and Accidents

MAAC has a separate "Reportable Occurrence Policy" that outlines the expectations of all members for reporting safety issues to MAAC. Briefly those expectations, which are also a CAR requirement are as follows:

a) **Accident** – someone got hurt, something got damaged – **reporting is mandatory**. NOTE if you are operating RPA under an SFOC, some accidents also require mandatory reporting to Government authorities. While MAAC is fully aware of what needs reporting to whom, you are still responsible as the RPAS

certificate holder to ensure those reports are made. The full reporting requirements are contained in the MAAC SFOC.

b) **Incident** – someone almost got hurt, something almost got damaged. Any time you are involved in an "occurrence" where you think safety was not assured or compromised, please report that to MAAC. Also understand, MAAC has fully adopted a Just Culture and will not punish or take any punitive action against members reporting genuine safety concerns.
c) **Hazard** – "*one of these days*, *something bad will happen*" – please report any practice or event you personally feel will cause an incident or accident to your MAAC leadership. In this regard, MAAC can look for safety issues before an accident or incident occurs and make our safe hobby even safer.

If there is an actual accident, please ensure all evidence is secured. Take photos, notes, obtain contact info for witnesses and **contact MAAC as soon as possible**.

General MAAC Crew Training

The following items are required training items per some of our RPAS SFOC. These are aviation standard teaching points, which MAAC has adopted in a universal manner for all MAAC modeling activities. Members are encouraged to research these topics on their own for additional information.

5.9 **Leadership, teamwork, and self-management**

Anytime there is more than one person at a modeling site, member safety and societal norms dictate we adopt some forms of structure. A few well-acquainted club members enjoying models on a nice evening generally don't require anything more formal than a "gentlemen's agreement" to honor the pit area, flight lines and basic safety code. Common courtesy takes care of the rest. However, when MAAC Clubs or sites want to operate in more complex scenarios, such as large events, controlled airspace, or under a TC SFOC, more strict compliance with various rules and procedures becomes not only mandatory, but critical for safety. The following are guidelines to ensure regulatory compliance with the various MAAC safety codes and rules that allow MAAC members certain flying freedoms – most notably in controlled airspace and per our various SFOC.

Leadership – once we have additional safety or regulatory considerations, someone must be in charge. There needs to be that single voice that can make decisions – often unpopular – in the heat of the moment to ensure everyone's safety and regulatory compliance. The MAAC hierarchy in descending order is as follows:

a. RPAS pilot - legal responsibility trumps all (CAR compliance remains an individual responsibility – you cannot "blame" anyone else at the end of the day)
b. RPIC/Visual Observer/Instructor
c. Airboss/Event Director/Contest Director.
d. Club/site leadership.
e. Most senior member present.

A good leader does not need to be overbearing – they can be quite conciliatory and even friendly – but they must accept the role of leading. More importantly, all modellers

must accept that for this to work, they must agree to follow the leader. As the saying goes, lead, follow or get out of the way.

Transport Canada and the various airspace controlling agencies expect us as an organization to not only have National leadership, but for that to work down to the Club and site level. MAAC has established a policy for Events and contests to not only meet regulatory requirements but make it so members can show up and have safe, responsible organized fun.

Teamwork – the leader doesn't have to do everything – in fact that rarely works out. Teamwork makes the dream work. All modelers at a site can and should step up and do the various support roles for those actively modelling. Having readily available helpers, mechanics, spotters, and VO's is as critical to our success and enjoyment as are nice runways, Club facilities and good parking. If you have time to help others with these roles, please do so to make sure we are compliant with these safety critical jobs.

Self-management – perhaps better termed as self-discipline. MAAC is not a police organization. Your fellow modellers have volunteered countless hours to obtain various flying freedoms in many manners. The responsibility to try, in good faith, to meet all these rules and requirements rests with every single modeller. Fear of a fine should not be the motivator to follow the rules – continued flying freedoms and personal enjoyment should be. Our 75-year-old safety record was built on members voluntarily following the MAAC safety code and policies.

5.10 Problem Solving and Decision Making

Problem solving is the act of defining a problem, determining the cause, identifying, prioritizing, and selecting alternatives for a solution, and then implementing a solution. A good follow-up to problem solving is making sure the solution implemented did in fact solve the problem.
Problem solving in the MAAC sphere can vary from how you diagnose an engine problem at the field, to gear that won't come down in flight, to settling a disagreement between two modellers. The important point is that we don't jump to actions without first taking some time to follow the steps listed above. Perhaps equally important is we look for solutions that maximize safety – for aviation, public and member concerns. In this regard the best decisions are ones that place aviation, public and member safety first – intentionally deciding to crash a model to ensure others safety might be the only acceptable solution to the problem.

For interpersonal problem solving, always remember you belong to a National organization that has the funding and access to professional assistance, such as mediation services. In cases of unresolvable personality issues, MAAC leaders have additional tools to remedy the situation. At the end of the day, interpersonal disputes should never be allowed to spill over into affecting flight safety or MAAC regulatory compliance – **ever**.

5.11 Situational Awareness

Situational awareness (SA) is having an accurate understanding of 'what is going on' around the situation or system in context related to you. At all our MAAC SOC sites we tend to lean towards complacency because very little changes day to day. Good SA merely requires you look around when you arrive at the site to make sure nothing has changed and be mindful of any issues that may arise while you model.

The same applies while you are actively modeling. We also tend to focus exclusively on our models and their operation – which makes good sense for safe model operation. Excellent SA however asks that we reserve maybe 5% of our mental capacity to pay attention to our surroundings while modelling. This can be especially important at locations that are accessible by the public – what is going on around you?
SA also requires you think about other external influences before modeling and how they might affect you as you model. Factors could be weather related, model serviceability, your fitness, potential distractions, or anything else that could turn an enjoyable flight into something less desirable.

5.12 **Workload Management**

Workload management is the process of assigning work to an entire team in a way that distributes the load optimally among the available resources. It considers team members' skill sets, availability, capacity, throughput, and anything else that affects how much and what kind of work a team member should get. Much like teamwork, this is about **not** overloading yourself to the point where model operation safety might be compromised.
Think of this in reverse – are you doing too many other duties to the point you are distracted from focusing on safe model operation? Are you rushed to pre-flight because you were running the pilot registration table, and the fun fly is almost over? We all want to help but try to make sure the workload is evenly spread and not affecting safety protocols. When you are actively modeling/flying, should you have a helper/spotter or VO even though the rules don't require it? For instance, on a maiden flight your workload might be very high with an out of trim model – that might be a good time to enlist a helper to "help out" however you see fit.

5.13 **Coordination and handover**

This is more of a commercial RPAS concern but can have applications in MAAC. At larger events with multiple people in various roles it's important to give them a break – let them model instead of spending hours "volunteering". It is important to make sure whoever is taking over your role understands what is happening – especially if you are in a safety critical role such as Air Boss or VO. Larger events might want to consider having a position handover checklist to make sure nothing critical gets missed.

If you are instructing or providing a demonstration flight, having clear coordination rules on who is responsible for what is critical. If you are not using a buddy-box type set up and instead rely on physically handing over the transmitter, it is imperative you coordinate how that will happen before takeoff – dropping the transmitter during "handover" is not a good outcome. In all cases, full-scale instructors and students often use "my-control – your control" verbal notices to make sure each knows who is flying the model! In practice the instructor/RPIC will brief the student with something like this:

For today's flight I will be the instructor and am responsible for our safety and the safety of your model. I will always tell you when you are going to be responsible for flying the model, starting with a simple question, and maybe some control setting instructions:

- ***Are you ready?*** *Sticks neutral - throttle to half.*

When I state this, make sure you are physically ready to assume control and that the settings are correct. When you are ready respond clearly:

- ***Ready.***

*I will then state, "**your control**", give you control via the buddy-box or hand you the transmitter and at that point you are flying the model. You will respond with a clear verbal "**my control**".*

*During the flight, I may give you verbal tips and pointers, I may reach over and make minor adjustments on the transmitter, but **you keep flying the model until I say otherwise**.*

*I am responsible for safety, and I will NOT ask for control back if safety is an issue – **I will take it**. IF I reach over to take the transmitter back – release the transmitter into my hands – do not drop it. If using a buddy-box, I will not ask, I will take control back and state "**MY CONTROL**" at which point I am flying the model. When the situation is stable, I will go back to step one and ask "**are you ready?**" You respond as before.*

Is all of this clear?

Whatever you decide to use, make sure it's clear among all affected parties before the model is even started.

5.14 CRM – Crew Resource Management

Crew Resource Management (CRM) is the effective use of all available resources for flight crew personnel to assure a safe and efficient operation, reducing error, avoiding stress and increasing efficiency. In the MAAC world it's as simple as the modeler being receptive to accepting input from others around him. However, those around the modeler must be extremely careful **not** to distract or bombard the active modeler with unnecessary information – especially opinion of their "performance".

Really good CRM at the MAAC flying field comes from a spotter providing timely info to the pilot, the VO only making the calls when required, the Air Boss maintaining close coordination with ATC, the Event director running the event in the background – good CRM is about open teamwork.

Poor CRM is when people are not receptive to proper input, feedback or expressing safety concerns before the accident. Poor CRM distracts people at critical times with unnecessary information, or information overload. Try to think of it like being the Captain of the Titanic – was the crew trying to warn him about going slower at night in a

known iceberg lane? Once they hit the iceberg, what information is important and not required.

Crew Fitness policy and requirements.

5.15 Fitness policy

All MAAC members shall strive to ensure they are mentally and physically fit for the modeling activities or support roles they are conducting. Further, all MAAC crew members shall ensure appropriate rest times have occurred before or between assuming crew duties. MAAC recommends a minimum of 8 hours rest time between each consecutive 12 hours performing crew duties.

Lastly, the CAR does require logging of any crew members' duty time per RPAS operation session. This may be logged in the RPA logbook.

5.16 Fitness requirements

The regulations (CAR901.19) regarding alcohol and drug use only provide the barest of "fitness" concerns. MAAC encourages all members to use the aviation norm of IMSAFE as follows:

Illness – are you suffering from any illness or symptom of an illness which might affect your ability to model in a safe manner?

Medication – are you currently taking any drugs (prescription or over-the-counter)?

Stress – are you overly worried about other factors in their life? The psychological pressures of everyday living on modeler fatigue can be a powerful distraction and consequently affect a modeler's performance.

Alcohol/cannabis – Have you consumed alcohol within the last 8 to 24 hours and does it still affect you? A bad hangover can equally affect your judgement. Cannabis use in Canadian aviation is prohibited within 28 days of assuming legal responsibilities.

Fatigue – Have you had sufficient sleep and adequate nutrition? Are you sufficiently fed to maintain energy and concentration levels for the duration of the modeling activity?

Emotion – Have you fully recovered from any extremely upsetting events such as the loss of a family member?

6.0 Version

Version 1. Approved by the Board of Directors, May 6, 2024.