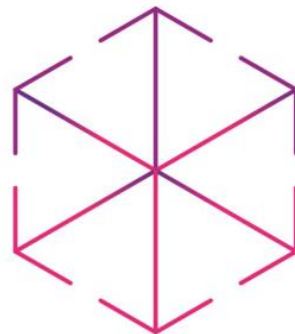


**COMMENTS TO THE CIVIL AVIATION REQUIREMENTS FOR OPERATION OF CIVIL REMOTELY
PILOTED AIRCRAFT SYSTEM (RPAS) ISSUED BY THE OFFICE OF THE DIRECTOR GENERAL OF
CIVIL AVIATION**



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Lawyers for Innovation



About the Commentator:

TRA is a law firm specialising in representing new-technology companies in the aerospace and aviation sectors and represents a number of RPAS design, manufacturing and operations companies.

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EXECUTIVE SUMMARY

The draft Civil Aviation Requirements dated November 2017 provide the terms and conditions for the ownership and operation of UAs. A summary of our major comments is provided below:

1. Micro weight category should be enhanced to 3 kg.
2. Single window clearance facility should be provided for UIN and UAOP. Police verification certificate and MHA clearance should be applicable for two years.
3. The DGCA should provide a list of standard, pre-approved RPAS and components of reliable make that may be imported without prior approval of the DGCA.
4. The altitude limit for Micro RPAs (for flying without UAOP) should be raised to 400 ft.
5. There should be no age requirement for pilots of Nano RPA and the age of remote pilots for Micro RPA should be relaxed to 13 years.
6. All RPA operations should be restricted to day operation with the exception of a. Nano RPA, b. Micro RPA intended to be flown upto 50 ft AGL, c. Micro RPA intended to be flown upto 200 ft AGL on private premises, but not over any human population, d. indoor operations, or e. with prior approval of the DGCA.
7. All RPA operations should be restricted to VLOS except with the prior approval of the DGCA.
8. Indoor operations should not require any permission from the local police.
9. Organisations having a UAOP / registered as "Startup" or MSME/ having industrial license from DIPP should be permitted to use the test sites. Eligible foreign organisations should also be allowed to use test sites.
10. RPAS operators except those operating Nano RPAs should have insurance.

DETAILED COMMENTS

S.NO.	ISSUE	RELEVANT PROVISION	TRA RECOMMENDATION
1.	Nomenclature – RPAS or UAS	<i>Para 1.1 (Introduction)</i> The CAR uses the nomenclature RPAS and UAS interchangeably.	The CAR should adopt either RPAS or UAS as nomenclature and use the same consistently.
2.	Definition of Unmanned Aircraft (UA)	<i>Para 2.2 (Definitions)</i> The CAR defines Unmanned Aircraft as “an aircraft which is intended to operate with no pilot on board.”	The definition of UA should be revised to read: <i>“An aircraft which is intended to operate with no pilot on board. <u>It is clarified that UA shall not include traditional balloons, tethered aircrafts, hot air balloons, unpowered gliders, rockets and other self-propelled vehicles.</u>”</i> The said aircrafts are to be regulated separately, and such exclusion would avoid confusion regarding the applicability of these guidelines.
3.	Definition of Model Aircraft	<i>Para 2.2 (Definitions)</i> “Model Aircraft” means Unmanned Aircraft without payload up to 2kg.	The weight limit for Model Aircraft should be enhanced to 3kg to encourage legitimate aeromodelling activity. In any case Model Aircraft are only permitted for limited-scope flying, such as up to 200 ft AGL and within premises of

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			educational institutions.
4.	"Micro" weight category	<p><i>Para 3.1 (Category of RPA)</i></p> <p>"Micro" weight category currently is "greater than 250 grams and less than or equal to 2 kg".</p>	Micro weight category should be enhanced to 3 kg.
5.	Aero-modelling	<p><i>Para 4 (Applicability)</i></p> <p>Aero-modelling activities carried out within premises of educational institutions alone are permitted.</p>	<p>The DGCA may register aero-modelling clubs and also premises that are identified by such clubs.</p> <p>Insert/amend the following paragraph in Para 4:</p> <p><u>"Aero-modelling clubs set up as a not-for-profit society, trust or company may be registered by the DGCA as a recognised aero-modelling club. Every such club registered by DGCA shall have identified a premises appropriate (and considered appropriate by the DGCA), and shall have secured permission from the owner of such premises, for aero-modelling activity and flying. Model aircraft (MTOW up to 2kg, without any payload) flown above 200 ft inside educational premises or the premises of a registered aero-modelling club will not require UIN and/or UAOP. Aero-modellers/recreational flyers shall be fully responsible for its operation, safety and security."</u></p>
		<p><i>Para 4 (Applicability)</i></p> <p>Aero-modellers are required to inform the policy authorities before undertaking activity</p>	Aero-modellers should not be required to inform police authorities in advance. This will severely restrict hobby-flying. Further, there is no reason to require information to police for indoor flying, nor can it be effectively enforced.

S.NO.	ISSUE	RELEVANT PROVISION	TRA RECOMMENDATION
		even for indoor operation.	
6.	Single Window Registration for UIN	<p><i>Para 6.2 (Requirements for Issue of UIN)</i></p> <p>As per the draft CAR, prior to applying for UIN, the registrant is required to obtain a character certificate from local police, security clearance from MHA and permission for use of frequencies from the WPC, DoT.</p>	<p>The Registration process should be a single window clearance from the MHA, WPC and local police. The DGCA may reconsider the need for a character verification.</p> <p>Furthermore, security clearance from MHA and character certificate from police should be applicable for two years. Para 6.2(h) and (i) should be replaced as below:</p> <p><i>"h) Security Clearance from MHA in case 6.1 (a), (c) & (d) (application format given in Annexure-I) obtained no earlier than two years from date of application for UIN.</i></p> <p><i>i) Verification of character and antecedents of the remote pilot(s) from local sub-divisional police office obtained no earlier than two years from date of application for UIN."</i></p>
7.	UIN Application	<p><i>Para 6.2(b) (Requirements for Issue of UIN)</i></p> <p>Applicant for UIN is required to specify purpose and area of operation.</p>	<p>This requirement should be deleted. The same RPA may be used for varied purposes, and it would be unreasonable to specify purpose and restrict the RPAs use at the application stage itself. Typically the RPA platform remains common and different payload is used for different applications. Similarly a RPA cannot be locked down for use at a particular area of operation at the application stage itself.</p>
8.	Single Window Registration for UAOP	<p><i>Para 7.3</i></p> <p>As per the draft CAR, prior to applying for UAOP, the applicant is required to obtain</p>	<p>The application process should be a single window clearance from the BCAS and ATS.</p>

S.NO.	ISSUE	RELEVANT PROVISION	TRA RECOMMENDATION
		permission from ATS provider and approval to security programme from BCAS.	
9.	Imports	<p><i>Para 6.4 (Requirements for Issue of UIN -- Imports)</i></p> <p>An importer is required to apply for imports to DGCA and then to DGFT.</p>	<p>The DGCA should provide a list of standard, pre-approved RPAS and components of reliable make that may be imported without prior approval of the DGCA. This will ensure that excessive permissions do not burden the regulator, developers or users of RPAs. We can provide a suggested list of RPAS and components that may be pre-approved by the DGCA.</p> <p>A paragraph may be inserted after the current Para 6.4 stating:</p> <p><u>"Notwithstanding anything in this Para 6.4, the DGCA may from time to time prescribe pre-approved RPAS and RPA components that may be imported without prior approval of the DGCA."</u></p> <p>For other parts and RPAS' a timeline of ten (10) days may be prescribed for approval from DGCA. A single window clearance from both DGCA and DGFT may be considered. The Indian RPAS industry will benefit from such access to foreign technology.</p>

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10.	Nano RPAS/ RPAS operated by Government security agencies	<p><i>Para 6.4 (Requirements for Issue of UIN)</i></p> <p>The Para currently reads: "RPA in Nano category with an intent to fly upto 50 ft AGL, those owned & operated by Government security agencies are exempted from obtaining UIN."</p>	The underlined and italicised "and" should be replaced with "or" to clarify the intent of this Para.
11.	Micro RPA – altitude limit	<p><i>Para 7.2(b) (Requirements for Issue of UAOP)</i></p> <p>Micro RPA operating below 200 ft AGL shall not require UAOP</p>	The altitude limit for Micro RPAs (for flying without UAOP) should be raised to 400 ft. It is to be considered that operations within 200 to 400 ft AGL are safer because of fewer obstructions. On an average buildings are not taller than 200 ft.
12.	Age and training for remote pilots	<p><i>Para 9 (Training Requirements for Remote Pilots)</i></p> <p>Remote pilots shall be at least 18 years of age.</p>	<p>There should be no age requirement for pilots of Nano RPA and the age of remote pilots for Micro RPA should be relaxed to 13 years, in order to encourage both hobby-flying as well as skill development and training amongst the youth to eventually take advantage of the job opportunities likely to be created by this industry.</p> <p>Accordingly Para 9.5 may be amended to read: "<i><u>The training and age requirements</u> contained in Para 9.1 through 9.4 of this CAR are not applicable for Nano and Micro category RPA, <u>provided that the age requirement for Micro category RPA shall be 13 years.</u> However, the user shall be fully aware of his/her responsibilities to fly these machines safely."</i></p>

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13.	Day operations and VLOS	<p><i>Para 12.6 (Requirements for Operation of RPA)</i></p> <p>Para 12.6 reads "Irrespective of weight category, all RPA operations are restricted to day operation and within Visual Line of Sight only."</p>	<p>This Para may be amended to include certain exceptions:</p> <p><u>"All RPA operations are restricted to day operation with the exception of a. Nano RPA, b. Micro RPA intended to be flown upto 50 ft AGL, c. Micro RPA intended to be flown upto 200 ft AGL on private premises, but not over any human population, d. indoor operations, or e. with prior approval of the DGCA. All RPA operations are restricted to VLOS except with the prior approval of the DGCA."</u></p> <p>Certain VLOS operations may be deemed to be safe and secure and be permitted on a case by case basis, for example, for use by PSUs for infrastructure projects in sparsely populated areas.</p>
14.	Rain/ Thunderstorm Warning	<p><i>Para 12.7 (c) and (d) (Requirements for Operation of RPA)</i></p> <p>The draft CAR lays down that the RPA should only be operated when there is no precipitation or thunderstorm and surface winds are below 10 knots.</p>	<p>The CAR should direct operators to an authoritative source for checking the weather online. This source shall be relied upon by the DGCA as well as operators to avoid any confusion/contention as to whether the existing meteorological conditions are satisfactory for operations or not.</p>
15.	Indoor operations	<p><i>Para 12.23 (Requirements for Operation of RPA)</i></p> <p>Indoor operations may be carried out subject to permission from police.</p>	<p>This requirement should be removed. There is no reason to require information to police for indoor flying, nor can it be effectively enforced.</p>

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16.	Test Sites	<p><i>Para 12.24 (Requirements for Operation of RPA)</i></p> <p>The CAR provides that Indian organisations involved in R&D, having obtained industrial license from DIPP, shall use the designated test sites.</p>	<p>The requirement of industrial license is restrictive. Further, currently Industrial License cannot be obtained for manufacture of civil RPAS.</p> <p>It is suggested that Para 12.24 be replaced with "To encourage new technology, Indian organisations involved in R & D related activity of RPAS, <u>having a UAOP / registered as "Startup" or MSME</u> industrial license from DIPP, shall use the test sites indicated in Annexure-VIII for testing/demonstration purpose." The words "involved in R&D related activity of RPAS" have been deleted since organisations should not have to establish their RPAS related research credentials to obtain the permission for conducting test sites. We should encourage even startups and companies starting RPAS activity or R&D activity for the first time.</p> <p>Further, the use of test sites need not be limited to Indian organisations. For instance, there is no nationality limitation to use test sites in the US. R&D activity in the country by nationals of other countries should be encouraged – this will strengthen the R&D environment in India.</p>
17.	Insurance	<p><i>Para 14.1 (Insurance)</i></p> <p>The CAR mandates all operators to have insurance for liability that they might incur for any damage to third parties resulting from the</p>	<p>"All civil RPAS operators <u>except those operating Nano RPAs</u> shall have insurance for liability that they might incur for any damage to third party resulting from the accident/incident."</p>

S.NO.	ISSUE	RELEVANT PROVISION	TRA RECOMMENDATION
		accident/ incident.	

- END -

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