

GOVERNMENT OF INDIA OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION TECHNICAL CENTRE, OPP. SAFDARJUNG AIRPORT, NEW DELHI

CIVIL AVIATION REQUIREMENTS SECTION 3 – Air Transport SERIES 'X ', PART I ISSUE I, DATED DD MMMM 2017

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Subject: Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS)

1. INTRODUCTION

- 1.1 The Unmanned Aircraft System (UAS) consists of an Unmanned Aircraft (UA), a Remote Pilot Station (RPS), Command and Control (C2) Link, the maintenance system and the operating personnel. Remotely Piloted Aircraft (RPA), autonomous aircraft and model aircraft are various sub-sets of UAS.
- 1.2 Civilian use of UAS includes but not limited to agriculture, damage assessment of property and life in areas affected with natural calamities, surveys (infrastructure monitoring including powerline facilities, ports, and pipelines; commercial photography; aerial mapping), etc. They are also increasingly proliferating into recreational field and are likely to be used in many other domains.
- 1.3 UAS operations present problems to the regulator in terms of ensuring safety of other users of airspace and persons on the ground. However, in view of technological advancements in UAS over the years and their increased civil applications, it has become necessary to develop regulations for operations of this activity.
- 1.4 This CAR is issued under the provisions of Rule 15A and Rule 133A of the Aircraft Rules, 1937 and it lays down requirements for obtaining Unique Identification Number (UIN), Unmanned Aircraft Operator Permit (UAOP) and other operational requirements for civil Remotely Piloted Aircraft System (RPAS).

2. ACRONYMS & DEFINITIONS

2.1 Acronyms:

AAI Airports Authority of India

SECTION 3 – AIR TRANSPORT DD MMMM 2017

ADC Air Defence Clearance

ADS-B Automatic Dependent Surveillance - Broadcast

AGL Above Ground Level

AIP Aeronautical Information Publication

ATS Air Traffic Service

BCAS Bureau of Civil Aviation Security Civil Aviation Requirements CAR

DGCA Directorate General of Civil Aviation **DGFT** Directorate General of Foreign Trade

DIPP Department of Industrial Policy & Promotion

Flight Information Region (AAI) FIR

Flight Radio Telephone Operator's License FRTOL

GPS Global Positioning System

IAF Indian Air Force

ICAO International Civil Aviation Organization

IPC Indian Penal Code

MHA Ministry of Home Affairs MoD Ministry of Defence

MTOW Maximum Take-off Weight

PPL Private Pilot License **RPA** Remotely Piloted Aircraft

RPAS Remotely Piloted Aircraft System(s)

RPS Remote Pilot Station(s)

SARPs Standards and Recommended Practices

TSA **Temporary Segregated Areas** TRA **Temporary Reserved Areas**

UA **Unmanned Aircraft**

UAOP **Unmanned Aircraft Operator Permit**

UAS **Unmanned Aircraft System** UIN Unique Identification Number

Visual Flight Rules VFR **VLOS** Visual Line-Of-Sight

Visual Meteorological Conditions **VMC**

2.2 Definitions:

Autonomous aircraft¹ An unmanned aircraft that does not allow pilot intervention

in the management of the flight.

Command and The data link between the UA and the remote pilot station Control (C2) Link

for the purposes of managing the flight.

¹have no official status within ICAO Annexes.

SECTION 3 – AIR TRANSPORT DD MMMM 2017

Controlled Airspace² An airspace of defined dimensions within which air traffic

control service is provided in accordance with the airspace

classification.

Model Aircraft Unmanned Aircraft (UA) without payload up to 2 kg.

Payload All components of equipment on board a UA that are not

needed for the flight or its control. Its transport aims

exclusively to fulfill a specific mission.

Remote Pilot A person charged by the operator with duties essential to

the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight

time.

Remote Pilot Station

(RPS)

The component of the remotely piloted aircraft system

containing the equipment used to pilot the remotely piloted

aircraft.

Remotely Piloted

Aircraft (RPA)

An unmanned aircraft which is piloted from a remote pilot

station.

Remotely Piloted

Aircraft System

(RPAS)

A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any

other components as specified in the type design.

Unmanned Aircraft

(UA)

An aircraft which is intended to operate with no pilot on

board.

Unmanned Aircraft

System (UAS)

An aircraft and its associated elements which are operated

with no pilot on board.

Visual line-of-sight

(VLOS) operation.

Operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely

piloted aircraft.

3. CATEGORY OF RPA

3.1 Civil RPA are classified in accordance with Maximum Take-off Weight (MTOW) as indicated below:

i) Nano : Less than or equal to 250 grams.

ii) Micro : Greater than 250 grams and less than or equal to 2 kg.

²Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E as described in Annex 11, Para 2.6.

SECTION 3 – AIR TRANSPORT DD MMMM 2017

iii) Mini : Greater than 2 kg and less than or equal to 25 kg. iv) Small : Greater than 25 kg and less than or equal to 150 kg.

v) Large : Greater than 150 kg.

4. APPLICABILITY

- 4.1 This CAR is applicable to civil Remotely Piloted Aircraft Systems which are remotely piloted from a Remote Pilot Station.
- 4.2 Provisions of this CAR are not applicable to manufacturing of RPAS.
- 4.3 Operation of autonomous aircraft are strictly prohibited.

Note: Model aircraft (MTOW upto 2kg, without any payload) flown below 200 ft inside educational institution premises will not require UIN and/or UAOP. Aeromodellers/recreational flyers under this category shall be fully responsible for its operation, safety and security. They shall inform the local police authorities before undertaking such activities even for indoor operation.

5. APPLICATION PROCESS

- 5.1 Upon receipt of the application along with necessary documents, DGCA shall examine the request for issuance of UIN, UAOP and/or import clearance.
- 5.2 The application will be processed on case-to-case basis.

6. REQUIREMENTS FOR ISSUE OF UNIQUE IDENTIFICATION NUMBER (UIN)

- 6.1 All civil RPA, except those indicated in Para 6.6 of this CAR, shall require to obtain Unique Identification Number (UIN) from DGCA. UIN will be granted where the RPAS is wholly owned either:
- a) By a citizen of India; or
- b) By the Central Government or any State Government or any company or corporation owned or controlled by either of the said Governments; or
- c) By a company or a body corporate provided that:
 - i) it is registered and has its principal place of business within India;
 - ii) its chairman and at least two-thirds of its directors are citizens of India; and.
 - iii) its substantial ownership and effective control is vested in Indian nationals; or

SECTION 3 – AIR TRANSPORT DD MMMM 2017

- d) By a company or corporation registered elsewhere than in India, provided that such company or corporation has leased the RPAS to any organization mentioned in Para 6.1 (b) or (c) above.
- 6.2 Following documents shall be required for issue of UIN:
- a) Contact details of Operator with valid identity & address proof;
- b) Purpose & area of operation;
- c) Specification of RPAS (manufacturer name, type, model number, year of manufacture, weight and size, type of propulsion system, flying capabilities in terms of maximum endurance, range and height, etc. including details of equipment);
- d) Details of compatible payload along with its weight and maximum weight carrying capacity of the RPAS;
- e) Copy of RPA Flight Manual/Manufacturers Operating Manual (as applicable);
- f) Copy of Manufacturers maintenance guidelines for RPA (as applicable);
- g) Permission for all frequencies used in RPA operations from Department of Telecommunication (Wireless Planning and Coordination Wing);
- h) Security Clearance from MHA in case 6.1 (a), (c) & (d) (application format given in Annexure-I);
- i) Verification of character and antecedents of the remote pilot(s) from local subdivisional police office.
- 6.3 The identification plate (made of fire proof material) inscribed with UIN, RF ID tag and SIM shall be affixed to the RPA.
- 6.4 The applicant shall submit the application for import/ acquisition of remotely piloted aircraft (application format given in <u>Annexure-II</u>) to DGCA along with a copy of the security clearance. Import clearance shall be given by DGCA based on which DGFT shall provide license for import of RPAS.
- 6.5 Duly filled application & documents as per Annexure III along with requisite fees as per Rule 15A of Aircraft Rules 1937 for UIN shall be submitted to DGCA. UIN shall be issued by DGCA in 02 days provided all documents are complete. After satisfactory scrutiny of the documents, UIN shall be issued by DGCA as per the format given at Annexure-IV.

6.6 RPA in Nano category with an intent to fly upto 50 ft AGL, and those owned & operated by Government security agencies are exempted from obtaining UIN.

7. REQUIREMENTS FOR ISSUE OF UNMANNED AIRCRAFT OPERATOR PERMIT (UAOP)

- 7.1 All civil RPA operations for any purpose whatsoever other than those mentioned in Para 7.2 will require UAOP from DGCA.
- 7.2 Following entities will not require UAOP:
- a) Nano RPA operating below 50 ft AGL in uncontrolled airspace & indoor operations.
- b) Micro RPA operating below 200 ft AGL in uncontrolled airspace and clear of prohibited; restricted and danger areas; Temporary Segregated Areas (TSA) and Temporary Reserved Areas (TRA) as notified by AAI in the AIP. However, the user shall intimate the local police authorities before conduct of actual operations.
- c) RPA owned and operated by Government security agencies. However, the agency shall intimate local police authorities and concerned ATS Units before conduct of actual operations.
- 7.3 All civil RPA operators except entities specified in Para 7.2 shall submit duly filled application along with requisite fees as per Rule 15A of Aircraft Rules 1937 for issue of UAOP (Application format given in Annexure-V) to DGCA at least 7 days prior to actual conduct of operations along with following documents:
- a) Permission from ATS provider (civil/defense);
- b) Permission of the land/property owner (area used for take-off and landing of RPA);
- c) Details of remote pilot(s) and training records;
- d) Insurance details (as applicable);
- e) Security programme as approved by BCAS.
- 7.4 The UAOP shall be issued by DGCA as per the format given at <u>Annexure-VI</u> with a copy to MHA, BCAS, IAF, ATS Provider (AAI/MoD), and district administration (Superintendent of Police) for information. In case of UIN issued under Para 6.1 (d) above, the Indian organization will be issued with UAOP.
- 7.5 Validity of the UAOP shall be for a period of five years from the date of issue. Renewal of the UAOP shall be subject to fresh security clearance from MHA. UAOP issued by DGCA shall be non-transferrable.
- 7.6 DGCA may impose additional requirements depending upon justification on case-to-case basis.

8. SECURITY/SAFETY ASPECT

SECTION 3 – AIR TRANSPORT DD MMMM 2017

- 8.1 The owner/operator shall be responsible for the safe custody, security and access control of the RPAS. In case of loss of RPA, the operator shall report immediately to local administration/police, BCAS and DGCA.
- 8.2 The RPAS operator shall ensure that all security measures as enumerated in the Security Programme (approved by BCAS) are in place before operation of each flight.
- 8.3 The ground control station (while in use or in store) shall be secured from sabotage or unlawful interference.
- 8.4 The owner/operator of all RPA except Nano RPA shall be responsible for notifying any incident/accident involving RPA to the Director of Air Safety, DGCA who will further intimate to all the concerned agencies.
- 8.5 The RPAS (issued with UIN) shall not be sold or disposed-off in any way to any person or firm without permission from DGCA. In case, the RPA is damaged and cannot be restored to original condition, the same shall be intimated to DGCA by owner/operator for cancellation of UIN.

9. TRAINING REQUIREMENTS FOR REMOTE PILOTS

- 9.1 Remote pilot shall have attained 18 years of age with thorough ground training equivalent to that undertaken by aircrew of manned aircraft or a PPL holder (Aeroplanes/Helicopter) with FRTOL.
- 9.2 Remote pilots shall undergo thorough practical training on the control of a RPA in flight, which may consist of a proportion of simulated flight training.
- 9.3 The training shall include the following:
- a) Basic Radio Telephony (RT) techniques including knowledge of radio frequencies.
- b) Flight Planning and ATC procedures.
- c) Regulations specific to area of operations.
- d) Basic knowledge of multi rotors and fixed wing operations.
- e) No-fly zone awareness.
- 9.4 The training shall enable the remote pilot to demonstrate that he/she can control the RPA throughout its operating conditions, including safe recovery during emergencies and system malfunction.
- 9.5 The training requirements contained in Para 9.1 through 9.4 of this CAR are not applicable for Nano and Micro category RPA. However, the user shall be fully aware of his/her responsibilities to fly these machines safely.

10. RPAS MAINTENANCE

SECTION 3 – AIR TRANSPORT DD MMMM 2017

- 10.1 Maintenance and repair of RPAS shall be carried out in accordance with the manufacturers approved procedures, as applicable.
- 10.2 Maintenance of the ground control equipment shall be carried out in accordance with the manufacturers recommended inspection and overhaul interval, as applicable.
- 10.3 The remote pilot/user shall not fly the RPA unless he/she is reasonably satisfied that all the control systems of RPA including the radio link are in working condition before the flight.
- 10.4 The UAOP holder shall maintain records (till the RPAS is in service) of each RPA flight and make such records available to the DGCA on demand. Such records shall be maintained as per the format given in <u>Annexure-VII</u>.

11. EQUIPMENT REQUIREMENTS

- 11.1 All RPA except Nano shall be equipped with the following serviceable components/ equipment:
- a) Identification Plate
- b) GPS for horizontal and vertical position fixing
- c) Autonomous Flight Termination System or Return to Home (RH) option
- d) Flashing anti-collision strobe lights
- e) RFID and GSM SIM Card Slot for APP based tracking
- 11.2 The RPA intending to operate at or above 200 ft AGL shall carry the following equipment/capabilities in addition to those specified in Para 11.1 of this CAR:
- a) SSR transponder (Mode £qor £g) or ADS-B OUT equipment
- b) Barometric equipment with capability for remote subscale setting
- c) Geo Fencing capability
- d) Detect and Avoid capability
- 11.3 Remote pilot shall be equipped with communication facilities to establish and maintain continuous two-way communication with the concerned ATS unit.
- 11.4 The GPS tracking system of the RPA shall be self-powered and tamper/spoofing proof to ensure data relay even in the event of RPA accident.
- 11.5 Airports Authority of India and Indian Air Force shall monitor RPA movements in the country.

12. REQUIREMENTS FOR OPERATION OF RPA

- 12.1 The RPA operator shall prepare SOP, which shall contain following procedures according to the provisions contained in relevant sections of AIP-India:
- a) Take-off/landing
- b) Collision avoidance
- c) Noise abatement
- d) Flight plan filing
- e) Local airspace restriction
- f) Right-of-way
- g) Communications
- h) RPA emergency including loss of C2 link
- i) Safe recovery of RPA through controlled airspace in case RPA system failure precludes the ability to remain outside controlled airspace, etc.
- 12.2 Nano and Micro RPA while operating upto 50 ft and 200 ft AGL respectively are exempted from filing the flight plan and obtaining ADC.
- 12.3 Irrespective of height, operation of RPA in Mini and above category shall be conducted only after filing flight plan and obtaining following clearances:
- a) Nearest ATC Unit
- b) Air Defence Clearance (ADC)
- c) Flight Information Centre (FIC)
- 12.4 All RPA operator except Nano RPA shall inform the concerned local police authority in writing prior to commencing the operations.
- 12.5 In the event of cancellation of operations, the operator shall notify the same to all appropriate authorities immediately.
- 12.6 Irrespective of weight category, all RPA operations are restricted to day operation and within Visual Line of Sight only.
- 12.7 RPA shall be operated only when the following meteorological conditions exist:
- a) During daylight (between sunrise and sunset).
- b) In Visual Meteorological Conditions (VMC) with a minimum ground visibility of 5 km and cloud ceiling not less than 450 m (1500 ft).
- c) Surface winds of not more than 10 knots.
- d) No precipitation (rain, hail or snow) or thunderstorm activities.
- 12.8 Remote pilots shall prefix RPA call-sign with the word UNMANNED during voice communications between ATC and the remote pilot station. RPA operator shall ensure

SECTION 3 – AIR TRANSPORT DD MMMM 2017

that no Radio Frequency Interference (RFI) is caused to air traffic operations and air navigation equipment.

- 12.9 For intended operations of RPA in controlled airspace, the remote pilot shall establish contact with ATC prior to entering the controlled airspace.
- 12.10 RPA Operator shall carry out safety assessment of the RPA operations including that of launch/recovery sites. The site (including emergency operation zone and any safety zone for the operations of the RPAS) shall be under the full control of the operator.
- 12.11 The take-off and landing areas should be properly segregated from public access.
- 12.12 Designated safe areas should be established by the RPA Operator for emergency RPA holding and flight terminations.
- 12.13 No person shall act as a remote pilot for more than one unmanned aircraft operation at a time.
- 12.14 If two or more persons are available as remote pilots for a flight, at any given moment, there shall be only one person acting as a remote pilot-in-command.
- 12.15 RPA Operator shall be responsible for ensuring that the RPA is operated safely and remains clear of all manned/unmanned air traffic, terrain and obstacles.
- 12.16 RPA shall, at all times, give way to manned aircraft.
- 12.17 RPA shall not be flown in a manner to cause danger to any person or property.
- 12.18 RPA shall not discharge or drop substances unless specially cleared and mentioned in UAOP.
- 12.19 RPA shall not transport any hazardous material such as explosives or animal or human payload.
- 12.20 RPA operator/remote pilot shall be liable to ensure that privacy norms of individuals are not compromised in any manner.

12.21 No RPA shall be flown:

- a) Within an area of 5 km (2.7 NM) from Aerodrome Reference Point of operational airports;
- Above the Obstacle Limitation Surfaces (OLS) of an operational aerodrome specified in Ministry of Civil Aviation (Height Restrictions for Safeguarding of Aircraft Operations) Rules, 2015 notified through Gazette of India notification GSR751(E) or its amendments;

SECTION 3 – AIR TRANSPORT DD MMMM 2017

- c) Within permanent or temporary Prohibited, Restricted and Danger Areas including TRA and TSA as notified by AAI in AIP;
- d) Without prior approval, over densely populated areas or over or near an area affecting public safety or where emergency operations are underway;
- e) Within 50 km from international border which includes Line of Control (LoC), Line of Actual Control (LAC) and Actual Ground Position Line (AGPL);
- f) Beyond 500 m (horizontal) into sea from coast line provided the location of ground station is on fixed platform over land;
- g) Within 5 km radius from Vijay Chowk in Delhi;
- h) Within 500 m from perimeter of strategic locations notified by Ministry of Home Affairs:
- i) Within 500 m from perimeter of military installations/ facilities;
- j) From a mobile platform such as a moving vehicle, ship or aircraft; and
- k) As an autonomous flight, unless it is following an Autonomous Flight Termination (AFT) or Return to Home (RH) procedure.
- Over eco-sensitive zones around National Parks and Wildlife Sanctuaries notified by Ministry of Environment, Forests and Climate Change without prior permission.
- 12.22 Operation of RPA beyond the conditions specified in Para 12.7 and 12.21 may be authorised by DGCA for Government Agencies. Such operations shall be approved by DGCA on case-to-case basis.
- 12.23 Operation of Nano and Micro RPA inside covered premises beyond the conditions specified in Para 12.7 and 12.21 may be carried out subject to permission from local police authorities.
- 12.24 To encourage new technology, Indian organisations involved in R & D related activity of RPAS, having obtained industrial license from DIPP, shall use the test sites indicated in Annexure-VIII for testing/demonstration purpose.

13. LEGAL OBLIGATIONS

- 13.1 UIN and/or UAOP issued by DGCA shall not:
- a) Confer on RPAS operator any right against the owner or resident of any land or building or over which the operations are conducted, or prejudice in any way the rights and remedies which a person may have in respect of any injury to persons or damage to property caused directly or indirectly by the RPA.
- b) Absolve the operator/remote pilot from compliance with any other regulatory requirement, which may exist under the State or local law.

14. INSURANCE

14.1 All civil RPAS operators shall have insurance with the liability that they might incur for any damage to third party resulting from the accident/incident.

15. ENFORCEMENT ACTION

- 15.1 The UAOP issued by DGCA shall be cancelled or suspended at any time if in its opinion, the performance of the remote pilot /maintenance of RPAS is no longer acceptable.
- 15.2 Breach of compliance to any of the requirements shall attract penal action including imposition of penalties as per applicable IPCs.
- 15.3 Breach, if any noticed by any Govt. authority shall be intimated to the concerned state authority for taking necessary action including imposition of penalties under the applicable statutory provisions.

(Sh. B.S. Bhullar) Director General of Civil Aviation



Annexure-I

APPLICATION PROFORMA FOR SECURITY CLEARANCE

I. Details of Company/Firm (Indian/Foreign)

SI.	Full Name of the	Date of	Address of Head		Details of earlier
No.	company and its	registration	Office, Regional	of company, if	approvals, if any
	foreign collaborator,	of company	Offices &	any	(Ref. No. &
	if any		Registered Office		date)

II. Details of Directors

SI. No.	Full Name of Board of	Position	Date of	Parentage	Permanent	Nationality	Passport No. and	Contact Address &
	Directors	held with date (since when)	Birth		Address		Date of Issue	Telephone No.

III. Details of Shareholders of Applicant Company (All firms/companies/entities/ individuals having shareholding more than 10%)

No.	Full Name	Parentage Father/ Mother	Date of Birth	Permanent Address	Present Address	Present Position held in the company, if any	Nationality (if holding dual nationality, both must be clearly mentioned)	% of shares held in the company

IV. Details of criminal cases, if any, against the Company/Director(s) as per Annexure IA

(Signature of the Applicant/Authorized Signatory)

Annexure-IA

SELF-DECLARATION FOR COMPANY AND DIRECTOR(S) FOR WHOM SECURITY CLEARANCE IS SOUGHT

a)	Name & address and registration no. of the company:
b)	Name & address of owners, promoters and directors of the company :
	1. 2. 3. 4.
c)	Is the company owners, promoters or directors listed above, the subject of any
	 Preventive detention proceedings (PSA/NSA etc.) : Yes/No Criminal proceedings : Yes/No
d)	If Yes, please provide following details :
	 Detention/Case/FIR/Warrant Number Police Station/ District/ Agency Section of law Name & Place of the court
e)	The above mentioned details are in respect of both India and any other foreign country.
Note:	The above self-declaration is required to be filled and signed by the authorized signatory of the company.
	(Signature of Applicant/ Authorized Signatory)

Annexure-II

GOVERNMENT OF INDIA DIRECTORATE GENERAL OF CIVIL AVIATION OPP. SAFDARJUNG AIRPORT, NEW DELHI-110003, INDIA

APPLICATION FOR IMPORT/ACQUISITION OF REMOTELY PILOTED AIRCRAFT

1.	Name of Applicant/Owner/Operator:
	(In case of Company/ Corporation,
	give names of owners/directors and their nationalities)

- 2. Contact details (Address, E-mail id, Phone No.):
- 3. Nationality:
- 4. Category: Existing UAOP holder/ UAOP applicant/ Without UAOP
- 5. Existing fleet strength:

No.	RPA type	UIN	Mode of acquisition (Owner / lease)

6. Details of RPA proposed to be imported/ acquired:

No.	Items	RPA details
1.	Name and address of manufacturer	
2.	Nationality	
3.	Model No.	
4.	Serial Number	
5.	Date and Year of Manufacture	
6.	Fixed Wing/Rotary Wing	
7.	New/Used	
8.	Maximum take-off weight of RPA	
9.	Maximum height attainable by RPA	
10.	Payload details	

7. Mode of import/acquisition (Lease/Outright Purchase):

Outright P	urchase		Lease	
Name & A the owner manufactu case of ne	(name of rer in	Name & Address of the owner of aircraft	Name & Address of the Lessor	Name & Address of the Lesse
	,			

SECTION 3 – AIR TRANSPORT DD MMMM 2017

- 8. Purpose of Operation of RPA:
- 9. Proposed base of operation:
- 10. Enclose copy of security clearance/ application for security clearance:

UNDERTAKING

- 1. The RPA shall be used only for the purpose for which it is being imported/acquired and meet the regulations contained in CAR Section 3, Series X, Part I.
- 2. It is confirmed that after obtaining UIN in India, the RPA shall be maintained, operated in accordance with the regulation specified by DGCA from time to time and there is no binding or limitation of any kind in this regard in the lease agreement for the acquisition of the RPAS.
- 3. The RPA shall not be flown above 200 ft AGL without UAOP as prescribed in CAR Section 3, Series X, Part I.
- 4. Certified that the information given above is correct.

Date:	(Signature of the Applicant/ Authorized Signatory)
	Name :
	Designation :

Annexure-III

GOVERNMENT OF INDIA DIRECTORATE GENERAL OF CIVIL AVIATION OPP. SAFDARJUNG AIRPORT, NEW DELHI-110003, INDIA

<u>APPLICATION FOR UNIQUE IDENTIFICATION NUMBER (UIN) OF REMOTELY PILOTED AIRCRAFT (RPA) - (USE ONE APPLICATION PER RPA)</u>

Section A: Particulars of Applicant/Owner/Operator of RPA

- Name of Applicant/Owner/Operator (In case of Company/ Corporation, give names of owners/directors and their nationalities)
- 2. Contact details (Address, E-mail id, Phone No.)
- 3. Nationality
- 4. Valid ID/Address proof details
- 5. Copy of security clearance/verification of character and antecedents of the remote pilot(s)
- 6. Copy of permission from WPC for use of all frequencies in RPAS operations
- 7. Details of fees paid
- 8. Declaration from Indian entity in case RPAS is wholly owned by a company or corporation and has given the said aircraft on lease to any person mentioned in Para 6.1 (a), (b) or (c) of this CAR.

Section B: Specification of Remotely Piloted Aircraft

- 9. Name and address of manufacturer
- 10. Model No.
- 11. Serial Number
- 12. Date and Year of Manufacture
- 13. Fixed Wing/Rotary Wing
- 14. New/Used
- 15. Maximum take-off weight of RPA (including Payload)
- 16. Category of RPA (Please refer Para 3 of this CAR)
- 17. Details of compatible payload
- 18. Place & region of operation as per AAI FIR
- 19. Purpose of operation of RPA
- 20. Engine/Motor: Type/Power Rating/Number of Engines/Motors
- 21. Motors: Type/Power Rating/Number of Motors
- 22. Propeller details
- 23. Dimensions of RPA (I x b x h)
- 24. Maximum Endurance of RPA
- 25. Maximum Range of RPA
- 26. Maximum Speed of RPA
- 27. Maximum Height attainable by RPA
- 28. Maximum height of operations required
- 29. GPS and Geo-fencing details
- 30. RFID and SIM details
- 31. Payload details
- 32. Total fuel capacity (kg)/Battery capacity (mAh)
- 33. Particulars of previous or existing UIN, if applicable
- 34. Copy of Remotely Piloted Aircraft Flight Manual/Manufacturercs Operating Manual (as applicable)

- 35. Copy of Manufacturer Maintenance guidelines (as applicable)
- 36. History of incidents/accidents (if any) along with nature and extent of damage sustained by the RPA and details of any repairs carried out.
- 37. Insurance details (as applicable)

38. Undertaking:

- (a) I hereby declare that the above particulars are true in every respect and that nothing has been concealed or withheld by me. I have studied the relevant regulations issued by DGCA from time to time and shall abide by them.
- (b) I shall not operate RPA above 200 ft AGL without UAOP as prescribed in the CAR Section 3, Series X, Part I.

Date:	(Signature of the applicant/ authorized signatory)
	Name :
	Designation :

Annexure-IV

FORMAT FOR ISSUE OF UNIQUE IDENTIFICATION NUMBER



DIRECTORATE GENERAL OF CIVIL AVIATION OPP. SAFDARJUNG AIRPORT, NEW DEL HI-110003 INDIA

		INEV	V DELMI-TTUUUS, IN	IDIA	
	ι	JNIQUE	IDENTIFICATION I	NUMBER	
Unique Identi	ification Number	Ma N desigr	nufacturer and lanufacturers nation of Remotely Aircraft System	Remotely Piloted Aircraft Model No. Max. Take-off Weight (kg).	
11.50	K-XXXX			Category	
0-87	\- ^^^			Type of Aircraft	Fixed Wing/ Rotary Wing
Name of owner	er				
Address of ow	vner				
E-mail ID &					
Contact No. o	f Owner				
Name of Oper	rator				
Address of Op	perator				
E-mail id &			>		
Contact No. o	f Operator				
	ertified that the a Indian Civil Unma			Piloted Aircraft System	has been duly
Date of			Signature		
Issue			Name		
Place of Issue			Designation with Seal		

Annexure-V

GOVERNMENT OF INDIA DIRECTORATE GENERAL OF CIVIL AVIATION OPP. SAFDARJUNG AIRPORT, NEW DELHI-110003, INDIA

APPLICATION FOR ISSUE/ RENEWAL OF UNMANNED AIRCRAFT OPERATOR PERMIT (UAOP)

Section A: Particulars of Applicant/Owner/Operator of RPA

- 1. Copy of security clearance from MHA verification of character and antecedents of the remote pilot(s)
- 2. Details of fees paid

Section B: Details to obtain Unmanned Aircraft Operator Permit

- 3. UIN No.
- 4. Details of Remote pilot(s) and training records
- 5. List of personnel for operation of RPA (copies of security clearance to be enclosed)
- 6. Copy of permission from ATS provider (Civil/defense)
- 7. Security clearance of firms/operator of RPA from MHA
- 8. Security programme approved by BCAS
- 9. Permission of land/ property owner (area used for take-off and landing of RPA)
- 10. Insurance details (as applicable)
- 11. History of incidents/ accidents (if any) along with nature and extent of damage sustained by the RPA and details of any repairs carried out

12. Undertaking:

- (a) I hereby declare that the above particulars are true in every respect and that nothing has been concealed or withheld by me. I have studied the relevant regulations issued by DGCA from time to time and shall abide by them.
- (b) I shall keep RPA Flight Manual /Manufacturercs Operating Manual (as applicable) up to date at all times. I shall specify procedures to be followed by remote pilots and other relevant persons to ensure safety of RPA operations and shall produce the same as and when demanded by DGCA.
- (c) I shall maintain RPAS as per maintenance system established by manufacturer and details of the same shall be kept up to date at all times and shall produce relevant records of maintenance as and when demanded by DGCA.

Date:	(Signature of the applicant/ authorized signatory)
	Name :
	Designation :

Annexure-VI

FORMAT FOR ISSUE OF UNMANNED AIRCRAFT OPERATOR PERMIT



DIRECTORATE GENERAL OF CIVIL AVIATION OPP. SAFDARJUNG AIRPORT, NEW DEL HI-110003 INDIA

NEW DELHI-110003, INDIA UNMANNED AIRCRAFT OPERATOR PERMIT Unmanned Aircraft Operator Permit Name of operator Address of operator E-mail & Contact No. of operator This certificate certifies that <operator name> is authorized to perform RPA operations as defined in the attached operations specifications and in accordance with the regulations prescribed in CAR Section 3, Series X, Part I dated -----2017 Date of Issue Signature Date of Name Expiry Place of Designation with Issue Seal



DIRECTORATE GENERAL OF CIVIL AVIATION OPP. SAFDARJUNG AIRPORT, NEW DELHI-110003, INDIA

UNMANNED AIRCRAFT OPERATIONS SPECIFICATIONS

UIN Number	
Type of operations	
Area of base of operations	
Approved personnel for RPAS operation	
Operating limitations	
Maximum Endurance	
Maximum Ceiling	
Compatible Payloads (with weight), etc.	
Date of Issue	
Signatures	

Annexure-VII

SAMPLE OF RPA LOG BOOK

RPA LOG BOOK

SAMPLE CONTENTS OF RPA LOG BOOK

- 3. Date of Flight õõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõ
- 5. Place & Time of Commencement of operation $\tilde{0}$ $\tilde{0}$
- 6. Place & Time of Termination of operation... o .o o o o o o o o o o
- 7. Hours of Flight (00:00 hrs) $\tilde{0}$ $\tilde{0}$
- 8. Remote pilot observation (if any)...õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ ...
- 9. Record of maintenance as prescribed by manufacturer .. $\tilde{0}$ $\tilde{0}$ $\tilde{0}$ $\tilde{0}$.
- 10. Compliance record of other instructions issued by manufacturer õ õ

Place: õ õ õ õ õ .

Date: õ õ õ õ õ . Signature of Remote Pilot

Annexure-VIII

LIST OF IDENTIFIED AREA FOR TESTING/DEMONSTRATION OF UAS

State	Name of Place	Coordinates
North		
Punjab	Phagwara	31° 17' 00" N 75° 48' 00" E
Uttarakhand	Sakkhanpur Farm	29° 18' 15" N 79° 03' 05" E
Uttar Pradesh	Lucknow, Shivgarh Resorts	26° 36' 27" N 81° 00' 42" E
Uttar Pradesh	Sultanpur	26° 14' 52" N 82° 02' 33" E
South		
Karnataka	Chitradurga	14° 23' 17" N 76° 34' 19" E
Karnataka	Ganimangala Village	12° 13' 02" N 76° 37' 33" E
Kerala	Munnar,Devikulam	10° 03' 23" N 77° 07' 11" E
Kerala	Idukki	09° 55' 08" N 77° 06' 08" E
Tamil Nadu	Vellore	12° 54' 31" N 79° 04' 00" E
Tamil Nadu	Coorg, Choudigudi Estate	12° 07' 25" N 76° 03' 42" E
Tamil Nadu	Salem, Pullagoundanpatti	11° 28' 49" N 77° 43' 19" E
Tamil Nadu	Erode, Nambiyur	11° 21' 28" N 77° 19' 14" E
Tamil Nadu	Coimbatore, Chettipalayam	10° 54′ 47″ N 77° 02′ 12″ E
Telangana	Hyderabad, Mulugu Village	17° 43' 41" N 78° 42' 02" E
East & NE		
Assam	Sonapur, Betkuchi	26° 08' 29" N 91° 57' 17" E
Assam	Sivasagar	26° 58' 57" N 94° 38' 32" E
Arunachal Pradesh	Daporijo Airfield	27° 59' 07"N 94° 13' 18" E
West		
Gujarat	Surendranagar	22° 46' 26" N 71° 40' 02" E
Maharashtra	Shirpur Airport	21° 19' 43" N 74° 57' 40" N
Maharashtra	Amravati	20° 53' 48" N 77° 46' 30" E
Maharashtra	Aurangabad	19° 57' 00" N 75° 15' 00" E
Maharashtra	Ahmednagar	19° 05' 42" N 74° 44' 58" E
Maharashtra	Satara	17° 40' 49" N 74° 01' 05" E

Note:

- 1. The above list of Identified Area for Operation of UAS excludes the restricted areas notified by various Government agencies.
- 2. It is the responsibility of such Indian operators, as indicated in Para 12.24 of this CAR, to ensure that UAS manufacturers to ensure that no manned or unmanned aircraft is flying during the intended timeframe in the intended test area.