****

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 II**

**ISSUE I, DATED DD MMMM 2018 EFFECTIVE: XXXXX**

F. No. 05-13/2014-AED Vol.VI

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

# INTRODUCTION

* 1. Remotely Piloted Aircraft (RPA), autonomous aircraft and model aircraft are various sub-sets of unmanned aircraft. Unmanned aircraft system (UAS) is an aircraft and its associated elements, which are operated with no pilot on board.
  2. Remotely piloted aircraft (RPA) is an unmanned aircraft, which is piloted from a remote pilot station. A remotely piloted aircraft, its associated remote pilot station(s), command and control links and any other components forms a Remotely Piloted Aircraft System (RPAS).
  3. This CAR is issued under the provisions of Rule 15A and Rule 133A of the Aircraft Rules, 1937 and 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).

# ACRONYMS & DEFINITIONS

2.1 Acronyms

AAI Airports Authority of India

ADC Air Defence Clearance

ADS-B Automatic Dependent Surveillance - Broadcast

AGL Above Ground Level

AIP Aeronautical Information Publication

ATC Air Traffic Control

ATS Air Traffic Service

ARC Aviation Research Centre

BCAS Bureau of Civil Aviation Security

CAR Civil Aviation Requirements

DGCA Directorate General of Civil Aviation

DGFT Directorate General of Foreign Trade

DIPP Department of Industrial Policy & Promotion

FIR Flight Information Region

FRTOL Flight Radio Telephone Operator's License

FTO Flying Training Organization

GNSS Global Navigation Satellite System

GPS Global Positioning System

IAF Indian Air Force

ICAO International Civil Aviation Organization

IPC Indian Penal Code

MHA Ministry of Home Affairs

MoCA Ministry of Civil Aviation

MoD Ministry of Defence

MTOW Maximum Take-off Weight

NPNT No Permission-No Takeoff

NTRO National Technical Research Organization

PPL Private Pilot License

RF-ID Radio Frequency Identification

RPA Remotely Piloted Aircraft

RPAS Remotely Piloted Aircraft System(s)

RPS Remote Pilot Station(s)

SARPs Standards and Recommended Practices

SIM Subscriber Identity Module

TSA Temporary Segregated Areas

TRA Temporary Reserved Areas

UA Unmanned Aircraft

UAOP Unmanned Aircraft Operator Permit

UAS Unmanned Aircraft System(s)

UIN Unique Identification Number

VFR Visual Flight Rules

VLOS Visual Line-Of-Sight

VMC Visual Meteorological Conditions

* 1. Definitions

|  |  |
| --- | --- |
| Command and Control (C2) Link | The data link between the UA and the remote pilot station for the purpose of managing the flight. |
| Controlled Airspace[[1]](#footnote-0) | An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification. |
| Danger Area | An airspace of defined dimensions within which activities dangerous to the flight of aircraft exist at specified times. Such times are notified through NOTAMs. |
| Detect and avoid | The capability to see, sense or detect conflicting traffic or other hazards and take appropriate action. |
| Geo-fencing | Feature in a software programme that uses the global positioning system or radio frequency identification to define geographical boundaries. |
| Operator[[2]](#footnote-1) | A person, organization or enterprise engaged in or offering to engage in an aircraft operation. |
| Owner | A natural or legal person who owns a remotely piloted aircraft and its remote pilot station. |
| Payload | All components of equipment on board the unmanned aircraft that are not needed for the flight or its control. Its transport aims exclusively to fulfill a specific mission. |
| Prohibited Area | An Airspace of defined dimensions, above the land areas or territorial waters of India within which the flights are not permitted at any time under any circumstances. |
| 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 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. |
| Restricted Area | Airspace of defined dimensions above the land areas or territorial waters of India within which the flight of aircraft is restricted. |
| Segregated Airspace | Airspace of specified dimensions allocated for exclusive use to a specific user(s). |
| 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. |

# CATEGORIES OF RPA

3.1 Civil RPA is categorized in accordance with MTOW (including payload) as indicated below:

1. Nano : Less than or equal to 250 grams.
2. Micro : Greater than 250 grams and less than or equal to 2 kg.
3. Small : Greater than 2 kg and less than or equal to 25 kg.
4. Medium : Greater than 25 kg and less than or equal to 150 kg.
5. Large : Greater than 150 kg.

# APPLICABILITY

* 1. This CAR is applicable to Civil Remotely Piloted Aircraft Systems, which are Remotely Piloted from a Remote Pilot Station.

# APPLICATION PROCESS

* 1. For RPA imported to India:
     1. Any entity intending to import RPAS in India shall obtain Equipment Type Approval (ETA) from WPC Wing, Department of Telecommunication for operating in de-licensed frequency band(s). Such approval shall be valid for a particular make and model.
     2. The applicant, other than Nano category, shall apply to DGCA for import clearance as per format given in Annexure-IA. Based upon the import clearance issued by DGCA, DGFT shall issue license for import of RPAS.
     3. Upon receipt of import license, the applicant shall apply to DGCA for UIN/ UOAP, as applicable.
  2. For RPA locally purchased in India:
     1. The applicant shall ensure that locally procured RPAS shall have ETA from WPC Wing, DoT along with de-licensed frequency band(s). Such approval shall be valid for a particular make and model.
     2. The applicant shall submit information as per format given in Annexure-IB along with application for issue of UIN/UAOP, as applicable.

5.4 All applications shall be processed on case-to-case basis through “Digital Sky Platform”.

# REQUIREMENTS FOR ISSUE OF UNIQUE IDENTIFICATION NUMBER (UIN)

6.1 Civil RPA, except those indicated in Para 6.4 of this CAR, shall require to obtain Unique Identification Number (UIN) from DGCA. UIN will be granted where the RPAS is wholly owned either:

* + 1. By a citizen of India; or
    2. By the Central Government or any State Government or any company or corporation owned or controlled by either of the said Governments; or
    3. By a company or a body corporate provided that:
       1. it is registered and has its principal place of business within India;
       2. its chairman and at least two-thirds of its directors are citizens of India; and,
       3. its substantial ownership and effective control is vested in Indian nationals;

or

* + 1. 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:

* + 1. General:

1. Contact details of owner/lessee with valid CIN, GSTIN and/ or PAN card.
2. Purpose & base of operation.
   * 1. Equipment Related:
     2. Specification of RPAS.
     3. Details of compatible payload along with its weight and maximum weight carrying capacity of the RPAS.
     4. RPA Flight Manual/Manufacturer’s Operating Manual (as applicable).
     5. Manufacturer’s maintenance guidelines for RPA (as applicable).
     6. Approvals/Clearances:
3. ETA from WPC Wing, Department of Telecommunication for RPA operating in de-licensed frequency band(s), as applicable.
4. Security Clearance from MHA in case 6.1 (a), (c) & (d) obtained not earlier than five years from date of application for UIN. However, individuals as indicated in Para 6.1 (a) shall either obtain security clearance from MHA or submit self-attested copies of at least two out of three valid identity proofs viz. Passport, Driving License or Aadhar Card. In case of foreign remote pilots, DGCA shall forward documents for Security clearance to security agencies in accordance with the procedure being followed for FATA pilots. The application form for security clearance is given at Annexure II/III of this CAR.
   1. The applicant shall submit duly filled application, as per Annexure IV of this CAR, along with requisite documents indicated in Para 6.3 and applicable fee to DGCA. The UIN shall be issued in 02 working days, as per the format given at [Annexure-V](#_tyjcwt), provided all documents are complete.
   2. The RPA in Nano category with an intent to fly upto 50 feet (15 m) AGL used for commercial or recreational purposes are exempted from obtaining UIN.
   3. RPAs owned/ operated by NTRO, ARC and Central Intelligence agencies are also exempted from obtaining UIN.

# REQUIREMENTS FOR ISSUE OF UNMANNED AIRCRAFT OPERATOR PERMIT (UAOP)

* 1. Civil RPA operators other than those mentioned in Para 7.2 shall require UAOP from DGCA.
  2. Following entities will not require UAOP:

1. Nano RPA operating below 50 feet (15 m) AGL in uncontrolled airspace and enclosed premises.
2. Micro RPA operating below 200 feet (60 m) 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 office 24 hours prior to conduct of actual operations.
3. RPA owned and operated by the agencies as indicated in Para 6.5 of this CAR. However, the agency shall intimate local police office and concerned ATS Units prior to conduct of actual operations.

7.3 Civil RPA operators except entities specified in Para 7.2 shall submit duly filled application along with requisite fees for issue of UAOP (Application format given in [Annexure-VI](#_3dy6vkm)) to DGCA at least 7 working days prior to actual commencement of operations along with following documents:

* 1. SOP as indicated in Para 12 of this CAR;
  2. Permission of the land/property owner (only for area used for take-off and landing of RPA);
  3. Details of remote pilot(s) along with security clearance from MHA or self-attested copies of at least two out of three valid identity proofs viz. Passport, Driving License/ Pilot License or Aadhar Card and copies of training records.;
  4. Insurance details (as applicable);
  5. Security programme as approved by BCAS.

7.4 The UAOP shall be issued by DGCA within 7 working days, as per the format given at Annexure-VII, provided all documents are complete. A copy of the UAOP shall be provided 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) of this CAR, the Indian organization, who has taken RPAS on lease, shall be issued the UAOP.

* 1. Validity of the UAOP shall be for a period of five years from the date of issue.
  2. The UAOP shall be non-transferrable.
  3. Renewal of the UAOP shall be subject to fresh security clearance from MHA.

# SECURITY/SAFETY REQUIREMENTS

8.1 The 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 the local police office, BCAS and DGCA.

8.2 The operator of all RPA except Nano RPA shall be responsible for notifying any incident/accident involving RPA to the Director of Air Safety, DGCA as per [Annexure VIII](#_1t3h5sf) who will further intimate to all concerned agencies.

8.3 In case, the RPA is damaged and cannot be restored to original condition, the same shall be notified to DGCA by owner/operator for cancellation of UIN.

8.4 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.

8.5 The ground control station (while in use or in store) shall be secured from sabotage or unlawful interference.

8.6 The RPAS (issued with UIN) shall not be sold or disposed-off in any way to any person or firm without permission from DGCA.

8.7 Any changes in the contact details specified in UIN shall be immediately notified to DGCA and all other concerned agencies.

# REMOTE PILOT TRAINING REQUIREMENTS

9.1 Remote pilot shall have attained 18 years of age, having passed 10th exam in English, and undergone ground training.

9.2 The training shall be obtained at any DGCA approved Flying Training Organization and include the following theory subjects:

* + 1. Basic Radio Telephony (RT) techniques including knowledge of radio frequencies.
    2. Flight Planning and ATC procedures.
    3. Regulations specific to area of operations.
    4. Basic knowledge of principles of flight and aerodynamics for fixed wing, rotary wing, and hybrid aircraft.
    5. No-fly zone awareness.
    6. Basic Aviation Meteorology.

9.3 Remote pilots shall also undergo practical training on the control of a RPA in flight, which may consist of live component and/ or simulated flight training to demonstrate control of RPA throughout its operating conditions, including safe recovery during emergencies and system malfunction.

9.4 The requirements contained in Para 9.1 through 9.3 of this CAR are not applicable for Nano and Micro category RPA pilots intending to operate in uncontrolled airspace. However, the owner/ user shall be fully aware of responsibilities for all aspects of flight safety during such operations.

# RPAS MAINTENANCE REQUIREMENTS

* 1. Maintenance and repair of RPAS shall be carried out in accordance with the manufacturer’s approved procedures, as applicable.
  2. Maintenance of the ground control equipment shall be carried out in accordance with the manufacturer’s recommended inspection and overhaul interval, as applicable.
  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 and Command & Control link are in working condition before the flight.
  4. The UAOP holder shall maintain records 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 [Annexure-IX](#_1t3h5sf).

# EQUIPMENT REQUIREMENTS

11.1 All RPA except Nano shall be equipped with the following serviceable components/ equipment:

* 1. GNSS (GPS) for horizontal and vertical position fixing
  2. Autonomous Flight Termination System or Return Home (RH) option
  3. Flashing anti-collision strobe lights
  4. RFID and GSM SIM Card/ NPNT compliant for APP based real time tracking (except for Nano and Micro category)
  5. Fire resistant identification plate inscribed with UIN
  6. Flight Controller with flight data logging capability
  7. RPA (except Nano and Micro category) intending to operate in controlled/ uncontrolled airspace up to 400 feet (120 m) AGL shall be equipped with the following additional equipment/capabilities:
  8. SSR transponder (Mode ‘C’ or ‘S’) or ADS-B OUT equipment
  9. Barometric equipment with capability for remote sub-scale setting
  10. Geo-fencing capability
  11. Detect and Avoid capability
  12. Remote pilot shall be equipped with communication facilities to establish and maintain continuous two-way communication with the concerned ATS unit.
  13. 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.
  14. Indian Air Force shall monitor RPA movements in the country in coordination with the Airports Authority of India.

# OPERATING REQUIREMENTS

* 1. The RPA operator shall prepare Standard Operating Procedures (SOP), which shall contain following procedures according to the provisions contained in relevant sections of AIP-India:

1. Take-off/landing
2. Collision avoidance
3. Noise abatement
4. Flight plan filing
5. Local airspace restriction
6. Right-of-way
7. Communications
8. RPA emergency including loss of C2 link
9. Safe recovery of RPA through controlled airspace in case RPA system failure precludes the ability to remain outside controlled airspace, etc.
   1. Irrespective of weight category, all RPA operations are restricted to day operation and within Visual Line of Sight only.
   2. RPA operations, except those in enclosed premises, shall be conducted only when the following meteorological conditions exist:
   3. During daylight (between sunrise and sunset).
   4. In Visual Meteorological Conditions (VMC) with a minimum ground visibility of 5 km and cloud ceiling not less than 1500 feet (450 m).
   5. Surface winds of not more than 10 knots or as specified by the manufacturer.
   6. No precipitation (rain, hail or snow) or thunderstorm activities, or exceeding those specified by the manufacturer.
   7. The operator (except Nano and micro categories) shall obtain permission before undertaking flight through ‘Digital Sky Platform’.

12.5 Nano and Micro RPA while operating inside enclosed premises upto 50 feet (15 m) and 200 feet (60 m) AGL respectively are exempted from filing the flight plan and obtaining ADC/FIC clearance.

12.6 Irrespective of height (up to 400 feet), operation of RPA in Small and above category shall be conducted only after filing flight plan at least 24 hours before actual operations and obtaining following:

1. ATC briefing, Meteorological (MET) briefing and ATC clearance from the nearest ATC Unit
2. Air Defence Clearance (ADC) from the nearest IAF Unit
3. FIC Number from the Flight Information Centre (FIC) concerned
   1. All RPA operators, except Nano RPA, shall inform the concerned local police office in writing prior to commencing the operations.
   2. RPA Operator shall carry out safety risk assessment ((a) Hazard Identification, (b) Determine the Severity and the Likelihood of the Hazard on the operation, (c) Develop mitigations to reduce the risk identified, and (d) Verify mitigations do not create new hazards to the operation) 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.
   3. Designated safe areas should be established by the RPA Operator for emergency RPA holding and flight terminations.
   4. The take-off and landing areas should be properly segregated from public access.
   5. 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 that no Radio Frequency Interference (RFI) is caused to air traffic operations and air navigation equipment.
   6. For operations in controlled airspace, the remote pilot shall establish contact with ATC prior to entering the controlled airspace.
   7. All communication between remote pilot station and ATS Unit shall be in prescribed ICAO phraseology.
   8. No person shall act as a remote pilot for more than one RPA operation at a time.
   9. 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.
   10. 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.
   11. RPA shall, at all times, give way to manned aircraft.
   12. RPA shall not discharge or drop substances unless specially cleared and mentioned in UAOP.
   13. RPA shall not transport any hazardous material such as explosives or animal or human payload.
   14. RPA shall not be flown in a manner to cause danger to any person or property.
   15. RPA operator/remote pilot shall be liable to ensure that privacy norms of any entity are not compromised in any manner.
   16. In the event of cancellation of operations, the operator shall notify the same to all appropriate authorities immediately.

# OPERATING RESTRICTIONS

* 1. No RPA shall be flown:

1. Within an area of 5 km radius from the centre of the airport in Delhi and other metro cities;
2. Within an area of 3 km radius from Aerodrome Reference Point (center) of all operations airports;
3. Above the Obstacle Limitation Surfaces (OLS) or PANS-OPS surfaces, whichever is lower, 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;
4. Within permanent or temporary Prohibited, Restricted and Danger Areas including TRA and TSA as notified by AAI in AIP;
5. Over densely populated areas or over or near an area affecting public safety or where emergency operations are underway, without prior approval,;
6. Within 25 km from international border which includes Line of Control (LoC), Line of Actual Control (LAC) and Actual Ground Position Line (AGPL);
7. Beyond 500 m (horizontal) into sea from coast line provided the location of ground station is on fixed platform over land;
8. Within 3 km from perimeter of military installations/ facilities/ where military activities/ exercises are being carried out unless clearance is obtained from the local military installation/facility;
9. Within 5 km radius from Vijay Chowk in Delhi. However, this is subject to any additional conditions/ restrictions imposed by local law enforcement agencies/ authorities in view of the security.
10. Within 2 km from perimeter of strategic locations/ vital installations notified by Ministry of Home Affairs unless clearance is obtained from MHA;
11. Within 3 km from radius of State Secretariat Complex in State Capitals;
12. From a mobile platform such as a moving vehicle, ship or aircraft;
13. Over eco-sensitive zones around National Parks and Wildlife Sanctuaries notified by Ministry of Environment, Forests and Climate Change without prior permission.

13.2 No RPA shall carry out aerial photography/remote sensing survey over the areas specified in Para 13.1 of this CAR. However, DGCA may authorize such operations on case-to-case basis subject to approval of MoD. In such a case, application shall be submitted to Director Regulations & Information, DGCA (seven copies) in the prescribed format as indicated at Annexure-X.

# GENERAL REQUIREMENTS

* 1. Operation of RPA beyond the conditions specified in Para 12.2 and 12.3 of this CAR may be authorised by DGCA on case-to-case basis subject to adequate justification provided by the applicant for safe conduct of RPAS operations.
  2. To encourage new technology, Indian Organizations/ Institutions involved in R & D related activity of RPAS shall use the test sites indicated in [Annexure-X](#_4d34og8)I for testing/demonstration purpose.
  3. The organizations mentioned above at Para 14.2, may alternatively utilize unused airstrips or Government educational institutions campus, provided adequate safety precautions are in place.
  4. It shall be the responsibility of operators/ R&D Institutions, to ensure that no manned or unmanned aircraft is flying during such operations in the intended test area.
  5. Roles & responsibilities of Govt. Stakeholders on various aspects of operation of civil remotely piloted aircraft system are given at Annexure-XII.

# Minimum Standards for manufacturing of RPAS (both Indian & Foreign)

15.1 The minimum standards for manufacturing of small and above categories of RPAS are given in Annexure-XIII. For nano and micro categories of RPAS, the minimum standards for manufacturing as envisaged by designer/OEM, shall be considered.

15.2 The OEM may provide a Certificate of Compliance, which shall be accepted by the DGCA.

# LEGAL OBLIGATIONS

* 1. UIN and/or UAOP issued by DGCA shall not:
  2. 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.
  3. Absolve the operator/remote pilot from compliance with any other regulatory requirement, which may exist under the State or local law.

# INSURANCE

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

# ENFORCEMENT ACTION

* 1. In case of violation of provisions of this CAR/approved operating conditions, the UIN/UAOP issued by DGCA shall be suspended/cancelled.
  2. Breach of compliance to any of the requirements and falsification of records/documents shall attract penal action including imposition of penalties as per applicable IPCs (such as 287, 336, 337, 338 or any relevant section of IPC) or Aircraft Act 1934 or Aircraft Rules 1937 or any statutory provisions.

(Sh. B.S. Bhullar)

Director General of Civil Aviation

# Annexure-IA

## APPLICATION FOR IMPORT OF REMOTELY PILOTED AIRCRAFT

1. Name of Applicant/Owner/Operator:

*(In case of Company/ Corporation,*

*give names of owners/directors and their nationalities)*

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

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

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

|  |  |
| --- | --- |
| Items | RPA details |
| Name and address of manufacturer |  |
| Nationality |  |
| Model No. |  |
| Serial Number |  |
| Date and Year of Manufacture |  |
| Fixed Wing/Rotary Wing |  |
| New/Used |  |
| Maximum take-off weight |  |
| Maximum height attainable |  |
| Payload details |  |

1. Mode of import (Lease/Outright Purchase):

|  |  |  |  |
| --- | --- | --- | --- |
| Outright Purchase | Lease | | |
| Name & Address of the owner (name of manufacturer in case of new RPA) | Name & Address of the owner | Name & Address of the Lessor | Name & Address of the Lessee |
|  |  |  |  |

1. Purpose of Operation of RPA:
2. Proposed base of operation:
3. Copy of 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 II.
2. RPA shall be maintained and 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. Certified that the information given above is correct.

Date: (Signature of the applicant)

Name :

Designation :

**Note:** Strikeout whichever is not applicable.

# Annexure-IB

## PROFORMA FOR INFORMATION FOR LOCAL ACQUISITION OF REMOTELY PILOTED AIRCRAFT

1. Name of Applicant/Owner/Operator:

*(In case of Company/ Corporation,*

*give names of owners/directors and their nationalities)*

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

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

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

|  |  |
| --- | --- |
| Items | RPA details |
| Name and address of manufacturer |  |
| Nationality |  |
| Model No. |  |
| Serial Number |  |
| Date and Year of Manufacture |  |
| Fixed Wing/Rotary Wing |  |
| New/Used |  |
| Maximum take-off weight |  |
| Maximum height attainable |  |
| Payload details |  |

1. Mode of acquisition (Lease/Outright Purchase):

|  |  |  |  |
| --- | --- | --- | --- |
| Outright Purchase | Lease | | |
| Name & Address of the owner (name of manufacturer in case of new RPA) | Name & Address of the owner | Name & Address of the Lessor | Name & Address of the Lessee |
|  |  |  |  |

1. Purpose of Operation of RPA:
2. Proposed base of operation:
3. Copy of 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 II.
2. RPA shall be maintained and 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. Certified that the information given above is correct.

Date: (Signature of the applicant)

Name :

Designation :

**Note:**

* + 1. Strikeout whichever is not applicable.
    2. Filled proforma to be submitted along with duly filled application for UIN.

# Annexure-II

## APPLICATION PROFORMA FOR SECURITY CLEARANCE

1. **Details of Company/Firm (Indian/Foreign)**

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

1. **Details of Directors**

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

1. **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 |
|  |  |  |  |  |  |  |  |  |

1. **Details of criminal cases, if any, against the Company/Director(s) as per Annexure IIA**

Date: (Signature of the applicant)

Name :

Designation :

# Annexure-IIA

## 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 have   * + 1. Preventive detention proceedings (PSA/NSA etc.)     2. Criminal proceedings | Yes/No  Yes/No |
| d) | If Yes, please provide following details   1. Detention/Case/FIR/Warrant Number 2. Police Station/ District/ Agency 3. Section of law 4. Name & place of the court |  |
| e) | The above mentioned details are in respect of both India and foreign country, if any. |  |

Note: The above self-declaration is required to be filled and signed by the authorized signatory of the company.

Date: (Signature of the applicant)

Name :

Designation :

# Annexure-III

## APPLICATION PROFORMA FOR SECURITY CLEARENCE (INDIVIDUALS)

1. (a) Name of Applicant in full (in block letters) Surname Name Aliases, if any

(b) Parentage:

Surname Name Aliases, if any

2. Present address in full, including nearest Police Station:

3. (a) Permanent address in full, including nearest Police Station:

(b) If originally a resident of a country other than India, address in that country and the date of migration to India.

4. Nationality:

5. Date and place of birth, with full address:

6. Profession/ occupation after the age of 18 years:

7. Particulars of places, with full address, where the applicant has resided for more than a year during the preceding five years:

8. Has the applicant ever been arrested, prosecuted, kept under detention, or convicted by a court? Give details:

Certified that the information furnished in this proforma is correct and complete to the best of my knowledge and belief. I am aware that furnishing of wrong information or suppression of factual or material information will dis-entitle me from grant of the license/ permit.

Date: (Signature of the applicant)

Name :

Designation :

# Annexure-IV

## APPLICATION FOR UNIQUE IDENTIFICATION NUMBER (UIN) OF REMOTELY PILOTED AIRCRAFT (RPA) - (USE ONE APPLICATION PER RPA)

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

1. Copy of import permission / filled proforma for information of local acquisition
2. Valid CIN, GSTIN and PAN Card
3. Copy of security clearance from MHA or self-attested copies of at least two out of three valid identity proofs viz. Passport, Driving License or Aadhar Card (in case of individual/Indian remote pilot)
4. Copy of Permission/ license from WPC Wing, Department of Telecommunication for usage of licensed frequencies used in RPA. (as applicable)
5. Copy of ETA from WPC Wing, Department of Telecommunication for RPA operating in de-licensed frequency band(s) (as applicable)
6. Details of fees paid\*

**Section B: Specification of Remotely Piloted Aircraft**

1. Name and address of manufacturer
2. Model No.
3. Serial Number
4. Date and Year of Manufacture
5. Fixed Wing/Rotary Wing
6. New/Used
7. Maximum take-off weight (including Payload)
8. Category of RPA
9. Details of compatible payload
10. Place & region of operation as per AAI FIR
11. Purpose of operation
12. Engine/Motor : a) Type, b) Power Rating and c) Number of Engines/Motors
13. Total fuel capacity (kg)/Battery capacity (mAh)
14. Propeller details
15. Overall dimensions (l x b x h)
16. Maximum Endurance
17. Maximum Range
18. Maximum Speed
19. Maximum Height attainable
20. Maximum height of operations required
21. GNSS (GPS) for horizontal and vertical position fixing
22. Autonomous Flight Termination System or Return Home (RH) option
23. Flashing anti-collision strobe lights
24. RFID and GSM SIM Card/ NPNT compliant for APP based real time tracking (except for Nano and Micro category)
25. Fire resistant identification plate inscribed with UIN
26. Flight Controller with flight data logging capability
27. Particulars of previous or existing UIN, if applicable
28. Copy of Remotely Piloted Aircraft Flight Manual/Manufacturer’s Operating Manual (as applicable)
29. Copy of Manufacturer’s Maintenance guidelines (as applicable)
30. History of incidents/accidents (if any) along with nature and extent of damage sustained by the RPA and details of any repairs carried out.
31. **Undertaking:**

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.

Date: (Signature of the applicant)

Name :

Designation :

**\*Note:** The fee for issue of unique identification number for a remotely piloted aircraft shall be ₹1000/- only.

# Annexure-V

## FORMAT FOR ISSUE OF UNIQUE IDENTIFICATION NUMBER

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DIRECTORATE GENERAL OF CIVIL AVIATION**  **OPP. SAFDARJUNG AIRPORT,**  **NEW DELHI-110003, INDIA**  **UNIQUE IDENTIFICATION NUMBER** | | | | | | |
| Unique Identification Number | | Manufacturer and Manufacturer’s designation of Remotely Piloted Aircraft System | | Remotely Piloted Aircraft Model No. | |  |
| Max. Take-off Weight (kg). | |  |
| U-XX-XXXX | |  | | Category | |  |
| Type of Aircraft | | Fixed Wing/ Rotary Wing |
| Name of owner | |  | | | | |
| Address of owner | |  | | | | |
| E-mail ID &  Contact No. of Owner | |  | | | | |
|  | | | | |
| Name of Operator | |  | | | | |
| Address of Operator | |  | | | | |
| E-mail id &  Contact No. of Operator | |  | | | | |
|  | | | | |
| It is hereby certified that the above mentioned Remotely Piloted Aircraft System has been duly entered in the Indian Civil Unmanned Aircraft database. | | | | | | |
| Date of Issue |  | | Signature | |  | |
| Name | |  | |
| Place of Issue |  | | Designation with Seal | |  | |

# Annexure-VI

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

1. UIN No.
2. Details of Remote pilot(s) and training records
3. Security programme approved by BCAS
4. Permission of land/ property owner (area used for take-off and landing of RPA)
5. Insurance details (as applicable)
6. Standard Operating Procedures
7. Details of fees paid\*
8. **Undertaking:**
9. 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.
10. I shall keep RPA Flight Manual /Manufacturer’s 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.
11. 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)

Name :

Designation :

\***Note**:

1. Fees for issue of Permit is ₹25,000/-

2. Fees for renewal of Permit is ₹10,000/-

# Annexure-VII

## FORMAT FOR ISSUE OF UNMANNED AIRCRAFT OPERATOR PERMIT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DIRECTORATE GENERAL OF CIVIL AVIATION**  **OPP. SAFDARJUNG AIRPORT,**  **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 II dated ---------2018 | | | | |
| Date of Issue |  | | Signature |  |
| Date of Expiry |  | | Name |  |
| Place of Issue |  | | Designation with Seal |  |

|  |  |
| --- | --- |
| **DIRECTORATE GENERAL OF CIVIL AVIATION**  **OPP. SAFDARJUNG AIRPORT,**  **NEW DELHI-110003, INDIA**  **RPAS OPERATIONS SPECIFICATIONS** | |
| UIN Number |  |
| Type of operations |  |
| Area of base of operations |  |
| Approved personnel for RPAS operation |  |
| **Operating limitations** |  |
| * + 1. Maximum Endurance |  |
| * + 1. Maximum Ceiling |  |
| * + 1. Compatible Payloads (with weight), etc. |  |
| Date of Issue |  |
| Signatures |  |

# Annexure-VIII

## OCCURRENCE REPORT FOR REMOTELY PILOTED AIRCRAFT (RPA)

|  |  |
| --- | --- |
| Date of occurrence |  |
| Time of occurrence |  |
| Place of occurrence |  |
| Latitude/Longitude |  |
| Phase of flight | Take-off/cruise/landing/hover |
| Type of operation | Commercial/recreational/survey/photography/ R&D/Other (please specify) |
| Colour of RPA |  |
| Category of RPA | Nano/ Micro/ Small/ Medium/ Large |
| Make/Model No. |  |
| UIN No. |  |
| Year of manufacture |  |
| Damage details | RPA/property |
| Details of injury to persons |  |
| Name of operator/company |  |
| Details of remote pilot |  |
| UAOP No. |  |
| Brief description of occurrence |  |
| Was RPA flying near aircraft?   * If yes, provide approx. distance |  |
| Was RPA flying near airport/helipad?   * If yes, provide approx. distance |  |
| Was RPA last seen near prohibited/ restricted areas? | Please specify |
| Date: (Name & Signature) | |

# Annexure-IX

## SAMPLE OF RPA LOG BOOK

RPA LOG BOOK

Name of the Owner/Operator:

Address of Owner/Operator:

## SAMPLE CONTENTS OF RPA LOG BOOK

|  |  |  |
| --- | --- | --- |
| 1. | UIN |  |
| 2. | Category of RPA |  |
| 3. | Date of flight |  |
| 4. | Name of Remote Pilot |  |
| 5. | Place & time of commencement of operation |  |
| 6. | Place & time of termination of operation |  |
| 7. | Hours of flight (00:00 hrs) |  |
| 8. | Remote pilot observation (if any) |  |
| 9. | Record of maintenance as prescribed by manufacturer |  |
| 10. | Compliance record of other instructions issued by manufacturer |  |

Date: (Signature of Remote Pilot)

**Annexure-X**

**APPLICATION FOR GRANT OF PERMISSION FOR AERIAL PHOTOGRAPHY/REMOTESENSING SURVEY**

**(To be submitted in seven copies)**

1. Name and details of the company/agency seeking permission for aerial photography/Remote Sensing Survey with its registered office address.
2. Detail of person(s)/company intends to undertake photographs/aerial survey on behalf of agency at Para 1 above.
3. Name (expanding Initials)
4. Father’s name
5. Date and place of birth
6. Present address
7. Permanent address
8. Nationality (if foreigners, information at Sl. No. (g) & (h) may also be provided)
9. Passport No., date of issue & issuing authority
10. Visa particulars including type, No., date, validity & issuing office

1. a) Purpose of aerial photography/aerial survey
2. Objects to be photographed with exact location i.e. latitude/ longitude
3. Scale of photography
4. Focal length of camera
5. Height of the flight
6. Format size
7. Type of camera/sensor being used
8. Type of data
9. Proposed date when aerial photography/aerial survey is to be undertaken
10. Description of RPA, along with the name and address of the owner and the remote pilot (if owner/pilots are foreigner, information in Sl. No. 2 (g) and (h) be also provided).
11. In case the task is to be carried out for State/Central Government, copy of authority from the concerned Government be provided.
12. Undertaking to comply with the following conditions and any other conditions as prescribed, if permission is granted:
13. Photography/remote sensing survey will be confined to the exact area as applied and cleared by the Ministry of Defence.
14. No photography/survey will be undertaken in the area so specified by the Ministry of Defence.
15. The exact date and time of actual photography/remote sensing survey will be intimated to Air Hqrs. (Directorate of Intelligence) at least two weeks in advance to enable them to detail a Security Officer.
16. The Security Officer of the Ministry of Defence will be positioned at the launching site of aerial photography, if considered necessary.
17. Air Hqrs. (Directorate of Intelligence) will be intimated on completion of photo/survey task and for detailing another Security Officer to check the cover plots/photo products/digital data as required.
18. In cases where it is not considered necessary to depute security officer by the Ministry of Defence, the exposed film will be processed and plotted but not issued for use till security vetted by a representative of the Air Hqrs. (Directorate of Intelligence).
19. In case so specified by the Ministry of Defence in their clearance letter, the film/digital image after exposure will be processed in the presence of Air Force representative designated who will vet them from security angle before releasing them.
20. Government will not be liable for any loss or damages of films/digital data while in their custody.
21. Where exposed films/digital data have to be conveyed outside India because facilities to develop/process them do not exist in the country, Ministry of Defence will be informed of this fact at the initial stage of application.

Date: (Signature of the applicant)

Name :

Designation :

**Note**: Strikeout whichever is not applicable

# Annexure-XI

## LIST OF IDENTIFIED AREA FOR TESTING/DEMONSTRATION OF RPAS

|  |  |  |
| --- | --- | --- |
| **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:**

The above list of Identified Area for Operation of RPAS excludes the restricted areas notified by various Government agencies.

# Annexure-XII

## ROLES & RESPONSIBILITIES OF GOVT. STAKEHOLDERS ON VARIOUS ASPECTS OF OPERATION OF CIVIL REMOTELY PILOTED AIRCRAFT SYSTEM

|  |  |  |
| --- | --- | --- |
| **No.** | **Stakeholder** | **Responsibility** |
|  | Directorate General of Civil Aviation | * Import clearance * Issuance of UIN * Issuance & renewal of UAOP * Enforcement (Cancellation/Suspension of UIN/UAOP) in case of violations of regulation |
|  | Directorate General of Foreign Trade | * Import license |
|  | Ministry of Home Affairs | * Security clearance |
|  | Ministry of Defence | * Permission for aerial survey/imageries/ videography/ still photography over the restricted/prohibited areas on case-to-case basis |
|  | Indian Air Force | * Air Defence Clearance * Monitoring of RPA movements in the country |
|  | Wireless Planning and Coordination Wing, DoT | * Equipment Type Approval |
|  | Bureau of Civil Aviation Security | * Approval of Security Programme |
|  | Airport Authority of India | * Flight Plan Approval * Monitoring of RPA movements in the country |
|  | Local Police Office | * Enforcement of violators as per applicable IPCs |

**Annexure-XIII**

**Minimum Standards for manufacturing of small and above**

**categories of RPAS (both Indian & Foreign)**

Design/ Manufacturing Standards:

1. All-up-weight
2. Wing span/rotor diameter (as applicable)
3. Stall speed
4. Cruise speed (minimum and maximum speeds at which the RPA remains stable and operational need to be established)
5. Range (maximum range travelled in still air, to be established)
6. Endurance
7. Operational altitude
8. Ceiling height
9. Propeller speed and pitch for safe operation
10. Powerplant - engine/battery operated (utility of source of supplying power to the RPA, and its adequacy to support the RPA during its entire operational phase, must be demonstrated).
11. Payload (strength requirements to be specified in term of limits loads i.e. maximum loads to be expected in operation. Simplified structural design criteria may be used for RPA. The structure must be able to support limit loads without detrimental, permanent deformation).
12. Shock absorbing mechanism of RPA need to be established to ensure that in the event of rough landing, structure is not damaged.
13. RPA must achieve sufficient energy and controllability at the end of the launch to ensure safe and controllable fly-away under any operating conditions.
14. Type of data-link used for communication (frequency band etc.).
15. Type of material for construction (to meet approved specifications for ensuring strength and other properties assumed in the design data).
16. Fabrication Method (methods of fabrication used for designing RPA must produce consistently sound structure).
17. Structure must be suitably protected against deterioration or loss of strength in operation due to any cause i.e. weathering, corrosion and abrasion.
18. Fire resistant identification plate on RPA for inscribing UIN.
19. Compliance to Digital Sky Platform Specifications for “No Permission – No Takeoff (NPNT)” for small and above RPA.
20. Instruments/Equipment and Qualification Testing
21. Instruments/Equipment
    * Global Navigation Satellite System (GNSS) receivers for horizontal and vertical position fixing.
    * Geo-fencing capability.
    * Autonomous Flight Termination System or Return Home (RH) option.
    * Flashing anti-collision strobe lights.
    * SSR transponder (Mode ‘C’ or ‘S’) or ADS-B OUT equipment.
    * Detect and Avoid capability.
    * Flight controller with flight data logging capability.

ii) Qualification testing

* Environmental tests
* EMI/EMC test
* Any other tests carried out by the OEM

1. *Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E as described in ICAO Annex 11, Para 2.6.* [↑](#footnote-ref-0)
2. *In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.* [↑](#footnote-ref-1)