



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

1. INTRODUCTION

1.1 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.

1.2 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).

1.3 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).

2. 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
ARP	Aerodrome Reference Point (published in AIP)
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
IFR	Instrument Flight Rules
IPC	Indian Penal Code
MHA	Ministry of Home Affairs
MoCA	Ministry of Civil Aviation
MoD	Ministry of Defence
NOTAM	Notice to Airmen
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
WPC	Wireless Planning and Coordination Wing, DoT

2.2 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	Airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

¹Controlled 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.

Danger Area	Airspace of defined dimensions within which activities dangerous to the flight of aircraft exist at specified times. Such timings are notified through NOTAMs.
Geo-fencing	Feature in a software programme that uses the global positioning system or radio frequency identification to define geographical boundaries.
Operator ²	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	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.
RPA observer	A trained and competent person designated by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.

²In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.

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.

3. CATEGORIES OF RPA

3.1 Civil RPA is categorized in accordance with Maximum All-Up-Weight (including payload) 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. |
| iii) | Small | : | Greater than 2 kg and less than or equal to 25 kg. |
| iv) | Medium | : | 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.

5. APPLICATION PROCESS

5.1 For RPA imported to India:

- 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.
- 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.
- Upon receipt of import license, the applicant shall apply to DGCA for UIN/ UOAP, as applicable.

5.2 For RPA locally purchased in India:

- The applicant shall ensure that locally purchased RPAS shall have ETA from WPC Wing, DoT operating in de-licensed frequency band(s). Such approval shall be valid for a particular make and model.
- The applicant shall submit information as per format given in Annexure-IB along with application for issue of UIN / UAOP, as applicable.

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

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

6.1 Civil RPA except those indicated in Para 6.4 and 6.5 of this CAR, shall require 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
- 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:

6.2.1 General:

- a) Contact details of owner/ lessee with valid CIN, GSTIN and/ or PAN card.
- b) Purpose & base of operation.

6.2.2 Equipment Related:

- a) Specification of RPAS.
- b) Weight of compatible payload and maximum load carrying capacity of the RPA.
- c) RPA Flight Manual/ Manufacturer's Operating Manual (as applicable).
- d) Manufacturer's maintenance guidelines for RPA (as applicable).
- e) Manufacturer's Certificate of Compliance for NPNT.

6.2.3 Approvals/Clearances:

- a) ETA from WPC Wing, Department of Telecommunication for RPA operating in de-licensed frequency band(s), as applicable.
- b) Security Clearance from MHA in case of 6.1 (a), (c) & Indian company or corporate leasing RPAS from a company or corporate registered elsewhere

than in India under 6.1, (d) 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 employed by Indian entity as per para 6.1 (b), (c), and (d), DGCA shall forward documents for Security clearance to security agencies in accordance with the procedure being followed for Foreign Aircrew Temporary Authorization (FATA) pilots. The application form for security clearance is given at Annexure II/III of this CAR.

6.3 The applicant shall submit duly filled application (through Digital Sky Platform), as per Annexure IV of this CAR, along with requisite documents indicated in Para 6.2 and applicable fee to DGCA. The UIN shall be issued in 02 working days, as per the format given at Annexure-V, provided all the documents are complete.

6.4 RPA in Nano category intended to fly upto 50 feet (15 m) AGL in uncontrolled airspace/ enclosed premises for commercial / recreational / R&D purposes are exempted from obtaining UIN.

6.5 RPAs owned / operated by NTRO, ARC and Central Intelligence Agencies are also exempted from obtaining UIN.

6.6 In case of entity specified under Para 6.1 (d) of this CAR, the Indian organization, who has taken RPAS on lease, shall obtain the UIN.

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

7.1 Civil RPA operators other than those mentioned in Para 7.2 shall require UAOP from DGCA.

7.2 Following entities will not require UAOP:

- a) Nano RPA operating below 50 feet (15 m) AGL in uncontrolled airspace / enclosed premises.
- b) Micro RPA operating below 200 feet (60 m) AGL in uncontrolled airspace / enclosed premises. However, the user shall intimate to local police office 24 hours prior to conduct of actual operations.
- c) 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 through Digital Sky Platform along with requisite fees for issue of UAOP (Application format given in Annexure-VI) to DGCA at least 7 working days prior to actual commencement of operations along with following documents:

- a) SOP as indicated in Para 12 of this CAR;
- b) Permission of the land/property owner (only for area used for take-off and landing of RPA);

- c) 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 or Aadhar Card and copies of training records;
- d) Insurance details (as applicable);
- e) 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 the documents are complete. A copy of the UAOP shall be provided to MHA, BCAS, IAF, ATS Provider (AAI and 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.

7.5 Validity of the UAOP shall be for a period of five years from the date of issue.

7.6 The UAOP shall be non-transferrable.

7.7 Renewal of the UAOP shall be subject to fresh security clearance from MHA.

8. 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 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 the 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.

9. REMOTE PILOT TRAINING REQUIREMENTS

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

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

- 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 principles of flight and aerodynamics for fixed wing, rotary wing, and hybrid aircraft.
- e) Airspace Structure and Airspace Restrictions with knowledge of No Drone Zones
- f) Basic Aviation Meteorology.

9.3 The practical training shall comprise of RPA in flight having live component, and/ or simulated flight training to demonstrate control of RPA throughout its operating conditions, including safe recovery during emergencies and system malfunction. Minimum syllabus and curriculum for training capsule for Remote Pilot is given at Annexure-IX.

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 and user shall be fully aware of responsibilities for all aspects of flight safety during such operations.

10. RPAS MAINTENANCE REQUIREMENTS

10.1 Maintenance and repair of RPAS shall be carried out in accordance with the manufacturer's approved procedures, as applicable.

10.2 Maintenance of the ground control equipment shall be carried out in accordance with the manufacturer's 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 and Command & Control link are in working condition before the flight.

10.4 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-X.

11. EQUIPMENT REQUIREMENTS

11.1 All RPA (except for Nano category intending to operate up to 50 ft (15 m) AGL in uncontrolled airspace/ enclosed premises), shall be equipped with the following serviceable components/ equipment:

- a) GNSS for horizontal and vertical position fixing
- b) Autonomous Flight Termination System or Return Home (RH) option
- c) Flashing anti-collision strobe lights

- d) RFID and GSM SIM Card/ NPNT compliant for APP based real time tracking
- e) Fire resistant identification plate inscribed with UIN
- f) Flight controller with flight data logging capability

11.2 In addition to the equipment required under Para 11.1, all RPA (except Nano and Micro category operating in uncontrolled airspace) intending to operate in controlled airspace up to 400 feet (120 m) AGL shall be equipped with the following additional equipment/capabilities:

- a) SSR transponder (Mode 'C' or 'S') or ADS-B OUT equipment
- a) Barometric equipment with capability for remote sub-scale setting
- b) Geo-fencing capability
- c) Detect and Avoid capability

11.3 Remote pilot shall be equipped with communication facilities to establish two way communication with the concerned ATS unit.

11.4 The 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 Indian Air Force shall monitor RPA movements in the country in coordination with Airports Authority of India.

12. OPERATING REQUIREMENTS

12.1 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:

- 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 Irrespective of weight category, all RPA operations shall be restricted to day only, within Visual Line of Sight (VLOS), subject to conditions given in Para 12.3.

12.3 RPA operations except those in enclosed premises, shall be conducted 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 1500 feet (450 m).

- c) Surface winds of not more than 10 knots or as specified by the manufacturer.
- d) No precipitation (rain, hail or snow) or thunderstorm activities, or exceeding those specified by the manufacturer.

12.4 The operator [except Nano intending to operate up to 50 ft (15 m) AGL in uncontrolled airspace/ enclosed premises] shall obtain permission before undertaking flight through 'Digital Sky Platform'.

12.5 In addition to the requirement under Para 12.4, all RPA operators [except Nano and Micro category intending to operate up to 50 ft (15 m) AGL and 200 ft (60 m) AGL respectively in uncontrolled airspace/ enclosed premises] are required to file flight plan at least 24 hours before actual operations and obtain following:

- a) ATC briefing, Meteorological (MET) briefing, and ATC clearance from the nearest ATC Unit
- b) Air Defence Clearance (ADC) from the nearest IAF Unit
- c) FIC Number from the Flight Information Centre (FIC) concerned

12.6 Nano and Micro category RPA operators intending to operate beyond 50 ft (15 m) AGL and 200 ft (60 m) AGL respectively in uncontrolled airspace/ enclosed premises, shall not be exempted from the provisions of paragraphs 6 through 12 and 15 of this CAR.

12.7 All RPA operators (except Nano RPA operating below 50 ft), shall inform the concerned local police office in writing prior to commencing the operations.

12.8 RPA Operator shall carry out safety risk assessment [(a) hazard identification, (b) determination of severity and likelihood of hazard on the operation, (c) mitigation measures to reduce the risk identified, and (d) verification of mitigation actions] 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.

12.9 Designated safe areas should be established by the RPA operator for emergency RPA holding and flight terminations.

12.10 The take-off and landing areas should be properly segregated from public access.

12.11 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.

12.12 For operations in the controlled airspace, the remote pilot shall establish and maintain contact with ATC prior to entering the controlled airspace.

12.13 All communication between remote pilot station and ATS Unit shall be in prescribed ICAO phraseology.

12.14 No person shall act as a remote pilot for more than one RPA operation at a time.

12.15 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.

12.16 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.

12.17 RPA shall, at all times, give way to manned aircraft.

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 shall not be flown in a manner to cause danger to any person or property.

12.21 RPA operator/ remote pilot shall be liable to ensure that privacy norms of any entity are not compromised in any manner.

12.22 In the event of cancellation of operations, the operator shall notify the same to all appropriate authorities immediately.

13. OPERATING RESTRICTIONS

13.1 No RPA shall be flown:

- a) Within a distance of 5 km from the perimeter of airports at Mumbai, Delhi, Chennai, Kolkata, Bengaluru and Hyderabad;
- b) Within a distance of 3 km from the perimeter of any civil, private or defence airports, other than those mentioned in Para 13.1(a);
- c) 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) as amended from time to time;
- d) Within permanent or temporary Prohibited, Restricted and Danger Areas including TRA, and TSA, as notified in AIP;
- e) Within 25km 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 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;

- h) 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.
- i) Within 2 km from perimeter of strategic locations/ vital installations notified by Ministry of Home Affairs unless clearance is obtained from MHA;
- j) Within 3 km from radius of State Secretariat Complex in State Capitals;
- k) From a mobile platform such as a moving vehicle, ship or aircraft;
- l) 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-XI.

14. GENERAL REQUIREMENTS

14.1 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.

14.2 To encourage new technology, Indian Organizations/ Institutions involved in R & D related activity of RPAS shall use the test sites as indicated in Annexure-XII for testing/ demonstration purpose.

14.3 The organizations mentioned at Para 14.2, may alternatively utilize unused airstrips or Government educational institutions campus, provided adequate safety precautions are in place.

14.4 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.

14.5 Roles & responsibilities of Govt. Stakeholders on various aspects of operation of civil remotely piloted aircraft system are given at Annexure-XIII.

15. 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-XIV.

15.2 For Nano and micro categories of RPAS, the minimum standards for manufacturing as envisaged by designer/OEM, shall be considered.

15.3 For all categories of RPAS except Nano, the manufacturer shall provide a Certificate of Compliance along with NPNT compliance to DGCA.

16. LEGAL OBLIGATIONS

16.1 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.

17. INSURANCE

17.1 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.

18. ENFORCEMENT ACTION

18.1 In case of violation of provisions of this CAR/ approved operating conditions, the UIN/ UAOP issued by DGCA shall be suspended/ cancelled.

18.2 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).

18.3 Necessary actions shall be taken as per relevant sections of the Aircraft Act 1934 / the Aircraft Rules 1937 or any statutory provisions.



(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,
Provide 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. Fleet strength:

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

6. 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 all-up-weight	
Maximum height attainable	
Payload details	

7. 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

8. Purpose of Operation of RPA:
9. Proposed base of operation:
10. Copy of security clearance:

UNDERTAKING

1. The RPA shall be used only for the purpose for which it is being imported/ locally purchased and meets the regulations contained in CAR Section 3, Series X, Part I.
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 LOCALLY PURCHASED REMOTELY
PILOTED AIRCRAFT**

1. Name of Applicant/ Owner/ Operator:
*(In case of Company/ Corporation,
Provide 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. Fleet strength:

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

6. 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 all-up-weight	
Maximum height attainable	
Payload details	

7. 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

8. Purpose of Operation of RPA:
9. Proposed base of operation:
10. Copy of security clearance:

UNDERTAKING

1. The RPA shall be used only for the purpose for which it is being imported/ locally purchased and meets the regulations contained in CAR Section 3, Series X, Part I.
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

I. 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)

II. 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 & Tel. 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 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 4. Preventive detention proceedings (PSA/ NSA etc.) 5. 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 in India and in 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 :

APPLICATION PROFORMA FOR SECURITY CLEARANCE (INDIVIDUALS)

- 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.

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

7. Name and address of manufacturer
8. Model No.
9. Serial Number
10. Date and Year of Manufacture
11. Fixed Wing/ Rotary Wing
12. New/Used
13. Maximum all-up-weight (including Payload)
14. Category of RPA
15. Details of compatible payload
16. Place & region of operation as per AAI FIR
17. Purpose of operation
18. Engine/Motor : a) Type, b) Power Rating and c) Number of Engines/Motors
19. Total fuel capacity (kg)/ Battery capacity (mAh)
20. Propeller details
21. Overall dimensions (l x b x h)
22. Maximum Endurance
23. Maximum Range
24. Maximum Speed
25. Maximum Height attainable
26. Maximum Height of operations required
27. GNSS (GPS) for horizontal and vertical position fixing
28. Autonomous Flight Termination System or Return Home (RH) option
29. Flashing anti-collision strobe lights
30. RFID and GSM SIM Card/ NPNT compliance for APP based real time tracking
31. Fire resistant identification plate inscribed with UIN
32. Flight Controller with flight data logging capability
33. Particulars of previous or existing UIN, if applicable
34. Copy of Remotely Piloted Aircraft Flight Manual/ Manufacturer's Operating Manual (as applicable)
35. Copy of Manufacturer's 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. **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. All-up-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./ Existing UAOP Number (If applicable)
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:**

- (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 / 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.
- (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)

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 I.			
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	
2. Maximum Ceiling	
3. 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

BLOCK SYLLABUS FOR TRAINING CAPSULE - 05 WORKING DAYS

No.	Subjects	No. of Classes
Theory Classes		11
1.	Regulations of DGCA	01
2.	Basic Principles of Flight	01
3.	ATC Procedures & Radio Telephony	01
4.	Fixed wing Operations/Aerodynamics	01
5.	Multi rotor Operations/Aerodynamics	01
6.	Weather & Meteorology	01
7.	Drone equipment and maintenance	01
8.	Emergency Identification & handling	01
9.	Payload installation & utilization	01
10.	Image/Video interpretation	01
11.	Final Test Theory	01
Practical Training		24
1.	Flight Simulator training	08
2.	Practical lessons in Lab	01
3.	Practical flying lessons	15
Total Training		35

DETAILED CURRICULUM FOR TRAINING CAPSULE - 05 WORKING DAYS

Day 01:

- Regulations of DGCA , Civil Aviation Requirements (01 Class)
 - Classification
 - Basic Air Regulations
 - Salient points
 - Do's and Don'ts
- Basic principles of flight (01 Class)
 - Fundamentals of flight
 - Aerodynamics
 - Take-off, flight, and landing
 - Manoeuvres, turns and circuit pattern
- ATC procedures & Radio Telephony (01 Class)
 - Understanding ATC operations
 - Airspace Structure and Airspace Restrictions with knowledge of No Drone Zones
 - Communicating with ATC including Position and Altitude Reporting
 - Flight Planning Procedures
 - Collision avoidance
 - Radio Telephony (RT) techniques
 - Standard radio terminology and RT Phraseology
 - Practice Session in Radio Communication
- Fixed wing operations and aerodynamics (01 Class)
 - Types of fixed wing drones, make, parts and terminology
 - Operation and manoeuvres of fixed wing drones
 - Applications and operations
 - Advantages/disadvantages over multi rotor drones
- Multi rotor introduction (01 Class)
 - Basic drone terminology
 - Types of drones, material used and size of drones
 - Motors and propellers
 - Electronic Speed Controller (ESC), flight controllers
 - Operation and Applications of drones
 - Advantages/disadvantages over multi rotor drones
- Weather and meteorology (01 Class)
 - The standard atmosphere
 - Measuring air pressure
 - Heat and temperature
 - Wind
 - Moisture, cloud formation
 - Met Terminal Aviation Routine Weather Report (METAR)

- Drone equipment maintenance (01 Class)
 - Maintenance of drone, flight control box, ground station
 - Maintenance of ground equipment, batteries and payloads
 - Scheduled servicing
 - Repair of equipment
 - Fault finding and rectification

Day 02:

- Emergency identification and handling (01 Class)
 - In flight emergencies
 - Loss of link
 - Fly-aways(Straying)
 - Loss of power
 - Control surface failures
- Payload, installation and utilization (01 Class)
 - Types of payloads
 - Parts of payloads
 - Installation
 - Features of payloads
 - Utilization
- Image and video interpretation (01 Class)
 - Principles of observation
 - Interpretation of image/video
 - Analysis
- Final test - Theory (40 min)
- Introduction to flight simulator (01 Class)
 - Basic operating features of simulator
 - How to select different aircrafts and aerodromes
 - Demo flight
- Flight simulator training (02 Classes)
 - Pre-flight checks and start-up
 - Preparation cum coordination for flight
 - Take-off and flight stage
 - Approach and landing
 - After flight checks

Day 03:

- Flight simulator training (05 Classes)
 - Pre-flight checks and start-up
 - Preparation cum coordination for flight
 - Take-off and flight stage
 - Approach and landing
 - After flight checks

- Practical lessons in Lab (01 Class)
 - Assembling of drone
 - De-assembling
 - Integration of sub-sections/ modules
 - Integration of engine/propulsion system
 - Fault finding and rectification
 - Repair maintenance and documentation
- Practical flying with instructor (01 Class)

Day 04:

- Practical flying with instructor/solo flying (full day)

Day 05:

- Practical flying with instructor/solo flying (full day)

Annexure-X

SAMPLE OF RPA LOG BOOK

RPA LOG BOOK

Name of the Owner/Operator:

Address of Owner/Operator:

SAMPLE CONTENTS OF RPALOG 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-XI

**APPLICATION FOR GRANT OF PERMISSION FOR AERIAL PHOTOGRAPHY/
REMOTE SENSING 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.
 - a) Name (expanding Initials)
 - b) Father's name
 - c) Date and place of birth
 - d) Present address
 - e) Permanent address
 - f) Nationality (if foreigners, information at Sl. No. (g) & (h) may also be provided)
 - g) Passport No., date of issue & issuing authority
 - h) Visa particulars including type, No., date, validity & issuing office
3.
 - a) Purpose of aerial photography/aerial survey
 - b) Objects to be photographed with exact location i.e. latitude/ longitude
 - c) Scale of photography
 - d) Focal length of camera
 - e) Height of the flight
 - f) Format size
 - g) Type of camera/sensor being used
 - h) Type of data
4. Proposed date when aerial photography/aerial survey is to be undertaken
5. 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).
6. In case the task is to be carried out for State/ Central Government, copy of authority from the concerned Government be provided.
7. Undertaking to comply with the following conditions and any other conditions as prescribed, if permission is granted:
 - a) Photography/ remote sensing survey will be confined to the exact area as applied and cleared by the Ministry of Defence.
 - b) No photography/ survey will be undertaken in the area so specified by the Ministry of Defence.

- c) 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.
- d) The Security Officer of the Ministry of Defence will be positioned at the launching site of aerial photography, if considered necessary.
- e) 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.
- f) 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).
- g) 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.
- h) Government will not be liable for any loss or damages of films/digital data while in their custody.
- i) 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-XII

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-XIII

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

No.	Stakeholder	Responsibility
1.	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
2.	Directorate General of Foreign Trade	• Import license
3.	Ministry of Home Affairs	• Security clearance
4.	Ministry of Defence	• Permission for aerial survey/imageries/ videography/ still photography over the restricted/prohibited areas on case-to-case basis
5.	Indian Air Force	• Air Defence Clearance. • Monitoring of RPA movements in the country. • Monitoring RPA movements in the country
6.	Wireless Planning and Coordination Wing, DoT	• Equipment Type Approval
7.	Bureau of Civil Aviation Security	• Approval of Security Programme
8.	Airport Authority of India	• Publication of guidelines for operation of RPAS in civil airspace in AIP. • Approval of RPAS Flight Plan and issuance of ATC Clearance to RPAS, where applicable. • Issue of Drone NOTAM when required. • Segregation of RPAS operations from manned aircraft movements. • Reporting of incidents / accidents involving known or controlled RPAS to DGCA.
9.	Local Police Office	• Enforcement of violators as per applicable IPCs

Annexure-XIV

**MINIMUM STANDARDS FOR MANUFACTURING OF SMALL AND ABOVE
CATEGORIES OF RPAS (BOTH INDIAN & FOREIGN)**

Design/ Manufacturing Standards:

- a. All-up-weight
- b. Wing span/rotor diameter (as applicable)
- c. Stall speed
- d. Cruise speed (minimum and maximum speeds at which the RPA remains stable and operational need to be established)
- e. Range (maximum range travelled in still air, to be established)
- f. Endurance
- g. Operational altitude
- h. Ceiling height
- i. Propeller speed and pitch for safe operation
- j. 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).
- k. 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).
- l. Shock absorbing mechanism of RPA need to be established to ensure that in the event of rough landing, structure is not damaged.
- m. RPA must achieve sufficient energy and controllability at the end of the launch to ensure safe and controllable fly-away under any operating conditions.
- n. Type of data-link used for communication (frequency band etc.).
- o. Type of material for construction (to meet approved specifications for ensuring strength and other properties assumed in the design data).
- p. Fabrication Method (methods of fabrication used for designing RPA must produce consistently sound structure).
- q. Structure must be suitably protected against deterioration or loss of strength in operation due to any cause i.e. weathering, corrosion and abrasion.
- r. Fire resistant identification plate on RPA for inscribing UIN.
- s. Compliance to Digital Sky Platform Specifications for “No Permission – No Takeoff (NPNT)” for small and above RPA. (NPNT Specifications available in DGCA RPAS guidance manual).
- t. Instruments/ Equipment and Qualification Testing
 - i) 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.
 - RFID and GSM SIM Card.
 - Flight controller with flight data logging capability.
 - SSR transponder (Mode ‘C’ or ‘S’) or ADS-B OUT equipment.
 - Barometric equipment with capability for remote sub-scale setting.
 - Detect and Avoid capability.
 - ii) Qualification testing
 - Environmental tests
 - EMI/EMC test.
 - Any other tests carried out by the OEM.