

Established on December 1, 2022 (KOKU-KU-MUKI-236963)

Aviation Safety and Security Department, Japan Civil Aviation Bureau, Ministry of
Land, Infrastructure, Transport and Tourism
Director of Unmanned Aircraft Systems Division

Manual for Handling Flight Logbooks of Unmanned Aircraft Systems

Note: It is noted that if there is a translation difference between English and Japanese, then Japanese should be the official language to refer to.

1. Purpose

The purpose of this Manual is to establish specific matters to be stated and the method of stating such matters etc., in flight logbooks that must be provided and recorded by a person flying an unmanned aircraft system (hereinafter, the "pilot") under the provisions of Article 132-89 of the Civil Aeronautics Act (Act No. 231 of 1952; hereinafter, the "Act") and Article 236-84 of the Ordinance for Enforcement of the Civil Aeronautics Act (Order of the Ministry of Transport No. 56 of 1952; hereinafter, the "Regulation"), thereby ensuring appropriate records to be made.

Records of flights, inspections, and maintenance work in the flight logbook contribute to ensuring flight safety in the event of unsafe events related to the flight of the unmanned aircraft system by way of enabling identification of causes, factor analysis, and other actions. For this reason, even in cases where the pilot is not required to fill out a flight logbook (i.e., where no specific flight under Article 132-87 of the Act is made), it is recommended that the pilot keeps records in a flight logbook in accordance with this Manual.

2. Applicability

This Manual applies to pilots and users of unmanned aircraft system who provide and keep records in flight logbooks in accordance with the provisions of Article 132-89 of the Act and Article 236-84 of the Regulation.

3. Definitions

(1) Flight logbook

"Flight logbook" refers to a set of Journey Log of UAS, daily inspection record of UAS, and inspection and maintenance record of UAS as set forth in the provisions

of Article 236-84, paragraph 1 of the Regulation. Matters to be stated in the flight logbook shall be as follows.

a) Journey Log of UAS

A Journey Log of UAS shall be prepared every time the pilot flies an unmanned aircraft system, stating the details of such flight event. The matters stated in the Journey Log of UAS is equivalent to those included in the items of Form 1 of this Manual or its equivalent form.

b) Daily Inspection Record of UAS

A daily inspection record of UAS shall be prepared, stating the results of a pre-flight inspection and other daily inspections conducted by the pilot before flying an unmanned aircraft system. The matters stated in the daily inspection record of UAS correspond to those included in the items of Form 2 of this Manual or its equivalent form.

c) Inspection and maintenance record of UAS

An inspection and maintenance record of UAS shall be prepared as a record of the fulfillment of the obligation to comply with the safety standards imposed on users of an unmanned aircraft systems under Article 132-7 or Article 132-14 of the Act. The matters to be stated in the inspection and maintenance record of UAS correspond to those included in the items of Form 3 of this Manual or its equivalent form.

(2) User of unmanned aircraft system

"User of unmanned aircraft system" refers to the user of an unmanned aircraft system (hereinafter, the "user") who is the person stated in the unmanned aircraft system registered under Article 132-4 of the Act and who is responsible for managing the unmanned aircraft system and the flight logbook therefor.

4. General Matters Concerning Flight Logbook

(1) Flight logbooks shall basically be in Forms 1 to 3 under this Manual or their equivalent forms. Other matters that are deemed necessary may be added to the logbook as necessary as long as all the matters to be stated are covered.

(2) A flight logbook shall be provided and filled out for each unmanned aircraft system, as it allows the chronological confirmation of the records of past flight events, inspection, maintenance, and modification of the unmanned aircraft system.

- (3) Under the UAS type certification and UAS certification system for unmanned aircraft systems, certification is performed and managed with respect to a pair of one controller and one unmanned aircraft system. In some cases, one controller is used to operate multiple unmanned aircraft system, or multiple controllers are used to operate multiple unmanned aircraft system. Whatever the case may be, one flight logbook shall be provided, filled out, and retained for each unmanned aircraft system. The concept taken herein is "one controller for one unmanned aircraft system "; that is, among the inspection items of daily inspection record of UAS and among those of inspection and maintenance record of UAS for each unmanned aircraft system, there is individually one inspection item relating to the controller. Despite this fact, however, it suffices for the user to conduct inspection on the controller actually used for the relevant flight and to state the results thereof in the Controller column. Considering the possibility that the user replaces the existing controller or unmanned aircraft system by purchasing a new one, etc., it may become necessary to keep track of past records with focus on the controller alone. In such a case, management with a flight logbook may be implemented for the controller alone. In this case, a unique format that covers all the contents of Forms 1 to 3 shall be established and used for such management.
- (4) The flight logbook for an unmanned aircraft system shall continue to be filled out and retained over the valid period of the unmanned aircraft system 's registration.
- (5) If there is a change in the user of the unmanned aircraft system due to a change in ownership, the lease contract, etc., necessary information and records shall be transferred without fail between the current and new users. More specifically, among Journey Log of UAS, the information on "Total Flight Time" shall be transferred, and daily inspection record of UAS and inspection and maintenance record of UAS shall be transferred either by paper or by means of electromagnetic method.
- (6) Entries in the flight logbook shall be accurate and written in Japanese or English using a black or blue ballpoint pen, etc. in black or blue ink. Flight logbooks may be filled out and retained by electromagnetic method provided that all the contents listed in Forms 1 to 3 are covered.
- (7) When flying an unmanned aircraft system, the pilot must always carry the relevant flight logbook in paper or electromagnetic method so that it can be referenced or presented when something arises that needs to be confirmed.

- (8) The pilot shall properly manage the flight logbook so that it will not be lost, torn, or soiled, and the user shall retain it in the same manner.

*Journey Log of UAS can be used as a means of managing and proving flight time and history of flights of the individual pilot. Daily inspection record of UAS and inspection and maintenance record of UAS can be used to show the results of past inspections and the maintenance and/or modifications conducted, if any, in chronological order. Record faces of these documents can be copied and used for various purposes.

5. Handling of Each Item in Flight Logbook

When filling out each item of the flight logbook, the following points must be kept in mind with respect to Journey Log of UAS, daily inspection record of UAS, and inspection and maintenance record of UAS.

(1) Journey Log of UAS

- a) A Journey Log of UAS shall be made each time the pilot has flown an unmanned aircraft system.
- b) In the case where Journey Log of UAS is created and managed in paper form, when flying an unmanned aircraft system, the pilot must carry the Journey Log of UAS that has been made since the most recent inspection and maintenance of the said unmanned aircraft system. It shall be the responsibility of the user to retain records of the unmanned aircraft system outside this period in a condition that they can be referenced or presented as necessary.

(2) Daily Inspection Record of UAS

- a) A Daily Inspection Record of UAS be filled out each time the pilot flies an unmanned aircraft system. In the case of an unmanned aircraft system that has previously obtained UAS Type certification or that has previously obtained UAS certification without having obtained UAS type certification (hereinafter, "UAS Type Certification, etc."), daily inspection items applicable to such unmanned aircraft system may be included in the document for UAS maintenance procedure. In the case of an unmanned aircraft system that has not obtained UAS Type Certification, etc., and an unmanned aircraft system for which daily inspection is not required, daily inspections shall be conducted according to the daily inspection list (which covers daily inspection items) specified in the Flight Manual. The

results of each daily inspection shall be recorded in the daily inspection record of UAS.

- b) The daily inspection items shall be recorded in Form 2. If the design manufacturer of the unmanned aircraft system has specified daily inspection items, daily inspections shall be conducted in accordance with such inspection items. Furthermore, if there is a daily inspection form designated by the design manufacturer, this can substitute for Form 2 as the form for daily inspection record of UAS.
- c) In the case where daily inspection record of UAS is created and managed in paper form, when flying an unmanned aircraft system, the pilot must carry Daily Inspection Record of UAS that has been made since the most recent inspection and maintenance of the said unmanned aircraft system. It shall be the responsibility of the user to retain records of the unmanned aircraft system outside this period in a condition that they can be referenced or presented as necessary.

(3) Inspection and maintenance record of UAS

- a) The user of an unmanned aircraft system and the design manufacturer, etc. with whom the user entrusts services related to the inspection and maintenance, etc. shall make a record each time a regular inspection/maintenance or modification is performed. In addition to the inspections and maintenance work instructed by the design manufacturer, etc., the user must also describe the implementation status of maintenance work related to troubleshooting and corrective measures, etc. conducted to deal with malfunctions, etc. of the unmanned aircraft system.
- b) Regardless of whether they are created and managed in paper or electromagnetic method, the pilot shall carry all inspection and maintenance record of UAS with other records when flying an unmanned aircraft system.
- c) If inspection and maintenance, etc. are performed by the design manufacturer of an unmanned aircraft system, and where records of the inspection and maintenance are made using a dedicated form, this form can substitute for Form 3 as the form for inspection and maintenance record of UAS.

6. Matters to Be Stated in and Method of Filling out Flight Logbook

(1) Journey Log of UAS

- a) A Journey Log of UAS shall be made for each flight.
- b) "One flight" or "a flight" as used herein means a period from when an unmanned aircraft system is turned on and takes off from the departure point until when the

unmanned aircraft system lands at the destination and is turned off. For example, when an unmanned aircraft system lands at a destination and is turned off for loading and unloading packages, etc., replacing the battery, or for other purposes, the flight event constitutes one flight. However, when the unmanned aircraft system departs for another destination with its power turned on, when it takes off and lands continuously, etc., then it is deemed that one flight ends when the unmanned aircraft system lands at the final destination and is turned off. When, after landing at the final destination, the unmanned aircraft system continues to make landings, including continuous take-off and landing, at another location before its power is turned off, then such another location shall be recorded as a stopover in the Journey Log of UAS. It is allowable for the user to respond flexibly in making a record, taking into consideration the operational situation, etc. In such a case, however, efforts shall be made to assess and manage the substantial flight time as accurately as possible.

- c) It is not necessarily necessary to ensure consistency with the reported flight plan (such as exact match in required time). The user shall simply record the flight events in the Journey Log of UAS. If multiple flights have been conducted under one flight plan notified, a Journey Log of UAS shall be made for each flight.
- d) Journey Log of UAS must include the matters listed below. Each of the matters described in items (i) through (iv) may be written together at the beginning of the Journey Log of UAS as an outline of the unmanned aircraft system, and does not need to be written on each page of the Journey Log of UAS.
 - (i) Registration ID of the unmanned aircraft system (or the notification number in the case of unmanned aircraft system that has not be assigned a Registration ID, such as test unmanned aircraft system; the same shall apply hereinafter), class, and model (only if the unmanned aircraft system is of a model that has obtained UAS type certification)
 - (ii) UAS Type Certificate Number of the unmanned aircraft system (only if the unmanned aircraft system is of a model that has obtained UAS type certification)
 - (iii) Class of UAS Certification and UAS Certificate Number (only if the unmanned aircraft system is of a type that has obtained UAS type certification)
 - (iv) Design manufacturer and serial number of the unmanned aircraft system
 - (v) The following records regarding this flight of the unmanned aircraft system
 - Flight date
 - Name of the pilot and his/her UA Remote Pilot Certificate number (if he/she

has received Pilot Certificate)

- Purpose and route of flight
- No-fly airspace in which the flight has been made and the method of flight
- Takeoff location and takeoff time
- Landing location and landing time
- Flight time
- Total flight time after manufacture
- Existence of events that affected flight safety and their details

(vi) The following records regarding a malfunction and the response thereto:

- Date of occurrence of the malfunction and its details
- Date of the response, its details, and the name of the person who confirmed it

(2) Daily inspection record of UAS

a) A daily inspection record of UAS must include the matters listed below. Each of the matters described in items (i) may be written together at the beginning of the daily inspection record of UAS as an outline of the unmanned aircraft system, and does not need to be written on each page of the daily inspection record of UAS.

(i) Matters listed in (i) to (iv) in (1) d)

(ii) The following records regarding the daily inspection:

- Date and location of implementation
- Name of the implementer
- Results of the daily inspection for each inspection item
- Other matters to be noted

(3) Inspection and maintenance record of UAS

a) A daily inspection record shall be filled out by the person who carried out the inspection, maintenance, etc. of the unmanned aircraft system. In order to facilitate in distinguishing the results of the current inspection and maintenance, etc. from those of the previous one, one blank line shall be provided and a "✓" mark shall be written on the blank line.

b) An inspection and maintenance record of UAS must include the matters listed below. Each of the matters described in items (i) may be written together at the beginning of the inspection and maintenance record of UAS as an outline of the unmanned aircraft system, and does not need to be written on each page of the inspection and maintenance.

- (i) Matters listed in (i) to (iv) in (1) d)
- (ii) The following records regarding inspection, repair, modification, or maintenance:
 - Date and location of implementation
 - Name of the implementer
 - Details of inspection, repair, modification, and maintenance (including the name of the replaced part, if any)
 - Reason for implementation
 - Total flight time since the most recent UAS certification
 - Other matters to be noted

7. Instructions for Filling out a Flight logbook

A flight logbook shall be prepared using the forms attached each form (Forms 1 to 3) according to the following instructions.

(1) Journey Log of UAS

a) Registration ID of the unmanned aircraft system

The Registration ID of the unmanned aircraft system notified by the Minister of Land, Infrastructure, Transport and Tourism under the provisions of Article 131-6, paragraph 3 of the Act shall be stated.

b) Flight date

The date of the flight shall be stated in western calendar.

c) Name of person who flew the flight

The name of the pilot shall be stated. If the pilot has obtained the UA Remote Pilot Certificate, the UA Remote Pilot Certificate number shall be stated in addition to their name.

d) Flight summary

A summary of the flight, including the purpose of the flight, route information such as stopover points, etc., shall be stated. Follow the example below when stating the purpose of the flight:

Examples: Aerial photographing, media coverage, security service, agriculture, forestry and fisheries, surveying, environmental surveys, equipment maintenance, infrastructure inspection and maintenance, materials management, transportation and delivery, nature observation, accidents and disasters, hobbies, research and development, etc.

If any specific flight has been made, the applicable flight mode shall be stated, following the examples below:

Examples: Flight around an airport, at an altitude of 150m or more above the ground or water surface, over an densely inhabited area (DID), at night, out of visual line of sight, at a distance of less than 30m from people or property, over an event area, for transporting dangerous goods, or for dropping objects

e) Takeoff location.

As the location of takeoff, information such as the latitude/longitude (under the World Geodetic System) of the takeoff point or the name of a place or the proper description of a facility from which the exact location can be identified shall be stated, following the examples below:

Examples: In the case of the name of a place, the prefecture name + city/ward/county name + town/village name (and more detailed information such as block and street address as necessary); in the case of the proper description of a facility, ○○ Playground, ○○ Park, ○○ Factory, etc.

f) Landing location

The landing location shall be stated, following the example of e) above.

g) Take-off time

The time of takeoff to the nearest minute on the 24-hour Japan Standard Time (JST) system (00:00 to 23:59) shall be stated.

h) Landing time

The landing time shall be stated, following the example of g) above. If the flight was made across days, information to facilitate understanding of this fact shall be added. It is not mandatory to state the landing time at a stop-over point.

i) Flight time

The time required from takeoff to landing shall be stated in 1-minute units.

j) Total flight time

The cumulative flight time shall be stated in 1-minute units.

k) Matters that affected flight safety

In the event of an event that affected or was likely to affect flight safety, the details of the event shall be stated and, in addition, the situation of the unmanned aircraft system before and after the flight related such event shall also be stated.

l) Special notes

In the event of any malfunction related to the flight of the unmanned aircraft system, the details of such malfunction and the actions taken shall be stated.

- Date of occurrence: The date on which the malfunction occurred shall be

stated in western calendar.

- Malfunction: A description (outline) of the malfunction shall be stated.
- Date of action: The date on which the action against the malfunction was taken shall be stated in western calendar.
- Action and others: A description (summary) of the action taken against the malfunction shall be stated.
- Confirmer: The person who confirmed the details of the action taken against the malfunction shall enter his or her name.

(2) Daily inspection record of UAS

a) Registration ID of the unmanned aircraft system

The Registration ID of the unmanned aircraft system notified by the Minister of Land, Infrastructure, Transport and Tourism under the provisions of Article 131-6, paragraph 3 of the Act shall be stated.

b) Inspection results

Each item on the daily inspection list shall be performed, and its results shall be stated using such word as "Normal" or "Abnormal."

c) Remarks

Supplementary information regarding the daily inspection shall be stated.

d) Special notes

Any malfunction, etc. found during the daily inspection shall be stated. If a post-flight inspection has been conducted, the results shall be entered, using such expression as "Post-flight inspection: No abnormalities." If any malfunction, etc. has been found, the location and details of the malfunction, etc. shall also be stated. Information on the malfunction, etc. found during daily inspection and the implementation of maintenance measures to correct such malfunction must be stated appropriately in the inspection and maintenance record of UAS.

e) Location of implementation

The location where the daily inspection was implemented shall be stated.

f) Date of implementation

The date on which the daily inspection was conducted shall be stated in western calendar.

g) Implementer

The person who implemented the daily inspection shall enter his/her name.

(3) Inspection and maintenance record of UAS

a) Registration ID of the unmanned aircraft system

The registration ID of the unmanned aircraft system notified by the Minister of Land, Infrastructure, Transport and Tourism under the provisions of Article 131-6, paragraph 3 of the Act shall be stated.

b) Date of implementation

The date on which the work was commenced shall be stated in western calendar.

c) Total flight time since the most recent UAS certification

The total flight time since the inspection and maintenance carried out prior to the previous inspection for UAS certification shall be stated. In the case of an unmanned aircraft system that has not obtained UAS Certification, the total flight time as of the time of the inspection and maintenance work shall be stated.

d) Details of inspection, repair, modification, and maintenance

The details of work conducted shall be stated.

- Record of replacement of equipment, etc. (the name of the replaced part, the site of such part on the unmanned aircraft system, etc.)
- Record of having implemented regular inspection
- Record of installation/removal of aerial cameras, chemical spray equipment, etc.
- Record of other inspection and maintenance, etc.

e) Reason for implementation

The reason for having implemented the inspection and maintenance shall be stated.

f) Location of implementation

The location where the inspection and maintenance was implemented shall be stated.

g) Implementer

The person who implemented the inspection and maintenance shall enter his/her name.

h) Other matters to be noted

Supplementary information regarding the deadline for the next scheduled inspection and maintenance shall be stated.

8. Others

Detailed matters necessary to implement this Manual is separately set forth. This Manual may not be followed if approved by the Director of Unmanned Aircraft Systems Division.

Supplementary Provision (December 1, 2022 KOKU-KU-MUKI-236963)

This Manual shall come into effect from December 5, 2022

(Form 1) Journey Log of UAS

無人航空機の登録記号 REGISTRATION ID OF UAS		無人航空機の飛行記録 JOURNEY LOG OF UAS								(NR.)
飛行 年月日 FLIGHT DATE	飛行させた者 の氏名 NAME OF PILOT	飛行概要 NATURE OF FLIGHT	離陸場所 FROM	着陸場所 TO	離陸時 刻 OFF TIME	着陸時 刻 ON TIME	飛行時間 FLIGHT TIME	総飛行時間 TOTAL FLIGHT TIME	飛行の安全に影響 のあった事項 MATTERS AFFECTED FLIGHT SAFETY	
記 事 R E P O R T	発生年月日 SQUAWK DATE	不具合事項 FLIGHT SQUAWK		処置年月日 ACTION DATE	処置その他 CORRECTIVE ACTION				確認者 CONFIRMER	

(Form 2) DAILY INSPECTION RECORD OF UAS

無人航空機の日常点検記録
DAILY INSPECTION RECORD OF UAS

無人航空機の登録記号 REGISTRATION ID OF UAS	
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(NR.)

点検項目 INSPECTION ITEMS		結果 RESULT	備考 REMARKS
機体全般 UAS GENERAL	機器の取り付け状態 (ネジ、コネクタ、ケーブル等) Condition of attached to the unmanned aircraft system (Screw, Connector and Cable)		
プロペラ PROPELLER(S)	外観 General Visual Inspection、損傷 Damage、ゆがみ Distortion		
フレーム FLAME	外観 General Visual Inspection、損傷 Damage、ゆがみ Distortion		
通信系統 COMMUNICATION SYSTEM	機体と操縦装置の通信品質の健全性 Soundness of communication System (Airframes and Flight systems)		
推進系統 PROPULSION SYSTEM	モーター又は発動機の健全性 Soundness of engines and propellers (rotors)		
電源系統 POWER SYSTEM	機体及び操縦装置の電源の健全性 Soundness of Electrical Power System (Airframes and Flight systems)		
自動制御系統 AUTOMATIC CONTROL SYSTEM	飛行制御装置の健全性 Soundness of Flight Control Unit		
操縦装置 FLIGHT CONTROL SYSTEM	外観、スティックの健全性、スイッチの健全性 General Visual Inspection、Soundness of Stick and Switch		
バッテリー、燃料 BATTERY, FUEL	バッテリーの充電状況 Battery Charging Status、 残燃料表示機能の健全性 Soundness of Remain Fuel Indication System		
特記事項 NOTES			
実施場所 PLACE	実施年月日 DATE	実施者 INSPECTOR	

(Form 3) INSPECTION AND MAINTENANCE RECORD OF UAS

無人航空機の登録記号 REGISTRATION ID OF UAS	
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無人航空機の点検整備記録
INSPECTION AND MAINTENANCE RECORD OF UAS

(NR.)

実施年月日 DATE	総飛行時間※ TOTAL FLIGHT TIME	点検、修理、改造及び整備の内容 DETAIL	実施理由 REASON	実施場所 PLACE	実施者 ENGINEER	備考 REMARKS

※ The total flight time since the inspection and maintenance carried out prior to the previous inspection for UAS certification shall be stated. In the case of an unmanned aircraft system that has not obtained UAS Certification, the total flight time as of the time of the inspection and maintenance work shall be stated.