International Civil Aviation Organization

Eleventh Meeting of the Air Traffic Management Sub-Group (ATM/SG/11) of APANPIRG

Singapore, 2 – 6 October 2023

Agenda Item 8: Any other business

PROPOSAL ON IMPROVE THE EXSITING RADIO COMMUNICATION FAILURE PROCEDURES

(Presented by China)

SUMMARY

ICAO introduced the communication failure procedures in Annex 2, the voice communication failure procedures in Annex 10, Volume II, and the AIR-GROUND COMMUNICATION FAILURE procedures in DOC 7030. In order to maintain a high level of safety, it is necessary to further improve the existing radio communication failure procedure. CAAC has issued GENERAL PROCEDURES for INSTRUMENT FLIGHT RULES AIRCRAFT with AIR-GROUND TWO-WAY RADIO COMMUNICATIONS FAILURE on April 23,2023. The detail content of this procedures has been reflected in the discussion.

1. INTRODUCTION

1.1 When an aircraft has lost two-way radio communication after lift-off at some airport and is flying directly to another airport (not an alternate airport) without ATC clearances, to fully demonstrate the aircraft's further flight intentions in the event of radio communication failure, and to avoid the occurrence of such case, GENERAL PROCEDURES have been issued by CAAC which some changes to the existing procedures included.

1.2 Based on the general procedures introduced in Annex and Documents of ICAO, the following GENERAL PROCEDURES are used to clarify the timing of transponder code 7600 setting, subsequent flight path selection rules and relevant disposition procedures for aircraft operating under IFR and experiencing an air-ground two-way radio communications failure in the territory of China. The GENERAL PROCEDURES are based on the regulations of Part CCAR-91 and Part CCAR-93, in reference to Annex 2, Annex 10, Annex 11, PANS ATM Doc 4444 and similar foreign regulations. The key and main content of the GENERAL PROCEDURES is shared below.

2. DISCUSSION

2.1 The transponder identification procedures for other flight path intentions are specified as follows:

a) Return to the departure aerodrome for landing, the transponder code is adjusted twice at 30 second intervals between 7600 and 7601, and finally set to 7600 until landing;

b) Proceed to the take-off alternate for landing, the transponder code is adjusted twice at 30 second intervals between 7600 and 7602, and finally set to 7600 until landing.

2.2 Implementation of other flight path intentions.

a) When chooses other flight path, the aircraft should first indicate the intention by transponder code (if applicable) before executes the chosen flight path.

b) Flight path of returning to departure aerodrome: Follow the Standard Instrument Departure (SID) at least to the last waypoint on the SID, and then select the nearest landing runway notified by the last ATIS and join the Standard Instrument Approach (STAR) at its first waypoint. If STAR is not available at the aerodrome, the shortest path should be chosen to the nearest Initial Approach Fix and join the arrival procedure. In which case, the aircraft should maintain the minimum flight altitude.

c) Flight path to the take-off alternate: Follow the SID to the last waypoint on the SID, and then join the flight plan route to the take-off alternate. In which case, the aircraft shall above minimum flight altitude. Note: If the aircraft chooses the take-off alternate, the aircraft operator should indicates the take-off alternate in the current flight plan.

d) Flight path to the destination alternate: After initiating a missed approach procedure at the aerodrome of destination, the aircraft shall clime to minimum flight altitude at Holding Fix and then proceed current flight plan to the first destination alternate. Note: The path and minimum flight altitude to the destination landing site, the control unit can learn from the aircraft operator. Note: The information of the flight path and minimum flight altitude to the destination alternate, air traffic control unit can get from the aircraft operator.

2.3 Requirements of air traffic control unit’s disposition. In case of radio communications failure, the air traffic control unit shall follow the procedures to ascertain the intentions of the aircraft pilot as soon as possible, and maintain a safe separation between the aircraft with radio communications failure and other aircraft based on the assumption that the aircraft will operate other flight paths in accordance with published general procedures for radio communication failure. The air traffic control unit shall notify the relevant air traffic control unit of the radio communication failure and the aircraft pilot’s intentions. Note: There is uncertainty about the diversion points and subsequent path to alternate aerodrome of the aircraft with communications failure, so the relevant control units should be prepared for monitoring and avoiding action.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) in order to fully demonstrate the aircraft's further flight intentions in the event of radio communication failures, relevant guidelines can be developed by ICAO and promoted for use in the Asia Pacific region at first; and

c) discuss any relevant matters as appropriate.

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