

# Appendix A

## COMMUNICATION BEST PRACTICES

### 1. GENERAL

1.1 It is apparent from investigation reports and surveys regarding runway safety occurrences that communication issues are frequently a causal or contributory factor.

1.2 The demanding environment associated with runway operations requires that all participants accurately receive, understand and correctly read back all clearances and instructions being transmitted. While readback is not an ICAO requirement for vehicle drivers, it may be considered best practice to apply it to enhance safety.

1.3 If in doubt or uncertain of any clearance or instruction, or part of a clearance or instruction, flight crews should request clarification from ATC and subsequently read back all items of the clearance or instruction to ensure understanding.

1.4 At times, the volume, speed of delivery and complexity of radiotelephony (RTF) instructions can cause difficulty for controllers, vehicle drivers and/or pilots, especially when the language in use is not their native language. Transient crews not speaking in their native language are often susceptible to misunderstandings due to the use of colloquialisms. Therefore, the use of ICAO standard phraseology and phonetics is critical to enhancing the safety of operations.

1.5 The use of ICAO language requirements for air-ground radiotelephony communications (language normally used by the station on the ground or the English language)<sup>1</sup> will facilitate the establishment and maintenance of situational awareness for all participants associated with runway operations. To be effective, a limited set of phraseologies (15 to 20) could be identified for vehicle drivers. Annex 1 contains a Recommended Practice concerning the minimum language proficiency requirements for pilots and ATS personnel.

1.6 To maintain high levels of situational awareness, it is also recommended that communications for all operations on a runway (landing, departing and crossing aircraft, vehicles crossing and runway inspections, etc.) take place on the VHF channel assigned for that runway. To accommodate vehicles that are equipped with UHF radios only, channel/frequency “coupling” should be employed to ensure that all UHF communications associated with runway operations are simultaneously transmitted on the appropriate VHF frequency and vice versa.

1.7 The use of ICAO standard phraseologies for radiotelephony communications between aircraft and ground stations is essential to prevent misunderstanding of the intent of messages and to reduce the time required for communications. ICAO phraseology should be used in all situations for which it has been specified. When standard phraseology for a particular situation has not been specified, plain language is to be used.

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1. ICAO language requirements for air-ground radiotelephony communications are shown in Annex 10 — *Aeronautical Telecommunications*, Volume II, Chapter 5, and Annex 1 — *Personnel Licensing*, Chapter 1 and Appendix 1.

1.8 The use of full call signs for all traffic operating on or in close proximity to a runway has been identified as a critical element in enhancing the safety of runway operations. While the ICAO provisions in Annex 10, Volume II, Chapter 5, allow for the use of abbreviated call signs in certain circumstances, it is deemed best practice not to use abbreviated call signs in runway operations.

## 2. ICAO PHRASEOLOGIES

2.1 Annex 10, Volume II, 5.1.1.1, states:

“ICAO standardized phraseology shall be used in all situations for which it has been specified. Only when standardized phraseology cannot serve an intended transmission, plain language shall be used.”

2.2 Listed below are some of the key ICAO phraseologies that are applicable to operations on or in the vicinity of runways. These phraseologies apply to air traffic controllers, pilots and, when applicable, to vehicle drivers. For a complete listing of ATC phraseologies, refer to PANS-ATM (Doc 4444), Chapter 12, and Annex 10, Volume II.

*Note.— Words in parentheses ( ) indicate that specific information, such as a level, a place or a time, must be inserted to complete the phrase, or alternatively that optional phrases may be used. Words in square parentheses [ ] indicate optional additional words or information that may be necessary in specific instances.*

### TAXI PROCEDURES

#### DEPARTURE:

ATC: (call sign) TAXI TO HOLDING POINT [number] [RUNWAY (number)].

#### WHERE DETAILED TAXI INSTRUCTIONS ARE REQUIRED:

ATC: (call sign) TAXI TO HOLDING POINT [(number)] [RUNWAY (number)] VIA (specific route to be followed) [TIME (time)] [HOLD SHORT OF RUNWAY (number)] [or CROSS RUNWAY (number)].

ATC: (call sign) TAXI VIA RUNWAY (number).

Pilot: (call sign) REQUEST BACKTRACK.

ATC: (call sign) BACKTRACK APPROVED.

ATC: (call sign) BACKTRACK RUNWAY (number).

#### OTHER GENERAL INSTRUCTIONS:

ATC: (call sign) FOLLOW (description of other aircraft or vehicle).

ATC: (call sign) VACATE RUNWAY.

Pilot/driver: RUNWAY VACATED (call sign).

**HOLDING INSTRUCTIONS FROM ATC**

(call sign) HOLD (direction) OF (position, runway number, etc.).

(call sign) HOLD POSITION.

(call sign) HOLD (distance) FROM (position).

**HOLD AT A RUNWAY-HOLDING POINT:**

(call sign) HOLD SHORT OF (position).

**READBACK FROM PILOTS/DRIVERS**

(call sign) HOLDING (call sign).

(call sign) HOLDING SHORT (call sign).

2.3 It should be noted that aircraft/vehicles should not hold closer to a runway than at designated runway-holding points.

2.4 The procedure words ROGER and WILCO are insufficient acknowledgement of the instructions HOLD, HOLD POSITION and HOLD SHORT OF (position). In each case the acknowledgement shall be made using the phraseology HOLDING or HOLDING SHORT, as appropriate.

**TO CROSS A RUNWAY**

Pilot/driver: (call sign) REQUEST CROSS RUNWAY (number).

ATC: (call sign) CROSS RUNWAY (number) [REPORT VACATED].

ATC: (call sign) TAXI TO HOLDING POINT [number] [RUNWAY (number)] VIA (specific route to be followed), [HOLD SHORT OF RUNWAY (number)] or [CROSS RUNWAY (number)].

*Note 1.— If the control tower is unable to see the crossing aircraft or vehicle (e.g. night, low visibility), the instruction should always be accompanied by a request to report when the aircraft or vehicle has vacated the runway.*

*Note 2.— The pilot will, when requested, report “RUNWAY VACATED” only when the entire aircraft is beyond the relevant runway-holding position.*

**PREPARATION FOR TAKE-OFF**

(clearance to enter runway and await take-off clearance)

ATC: (call sign) LINE UP [AND WAIT].

ATC: (call sign) LINE UP RUNWAY (number — in multiple runway/intersection departures).

ATC: (call sign) LINE UP. BE READY FOR IMMEDIATE DEPARTURE.

## CONDITIONAL CLEARANCES

2.5 Conditional clearances must consist of the condition before the line-up instruction, and an acknowledgement of the correct (or otherwise) readback is required as part of the correct procedure.

ATC: SAS941, BEHIND DC9 ON SHORT FINAL, LINE UP BEHIND.

2.6 The acknowledgement of a conditional clearance must contain the condition in the readback.

Pilot: BEHIND LANDING DC9 ON SHORT FINAL, LINING UP BEHIND SAS941.

ATC: SAS941 [THAT IS] CORRECT.

2.7 The procedure makes no provision for vehicles to receive a conditional clearance.

*Note 1.— Conditional phrases such as “behind landing aircraft” or “after departing aircraft” shall not be used for movements affecting the active runway(s), except when the aircraft or vehicles concerned are seen by the appropriate controller and pilot.*

*Note 2.— The aircraft or vehicle that is the subject of a conditional clearance should be clearly identified, and the identification should always be read back in full.*

## TAKE-OFF CLEARANCE

ATC: (call sign) RUNWAY (number) CLEARED FOR TAKE-OFF [REPORT AIRBORNE].

*Note.— “REPORT AIRBORNE” is applicable in low visibility operations.*

### WHEN TAKE-OFF CLEARANCE HAS NOT BEEN COMPLIED WITH:

ATC: (call sign) TAKE OFF IMMEDIATELY OR VACATE RUNWAY [(instructions)].

ATC: (call sign) TAKE OFF IMMEDIATELY OR HOLD SHORT OF RUNWAY.

### TO CANCEL A TAKE-OFF CLEARANCE:

ATC: (call sign) HOLD POSITION, CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF (reasons).

Pilot: HOLDING (call sign).

### TO STOP A TAKE-OFF AFTER AN AIRCRAFT HAS COMMENCED TAKE-OFF ROLL:

ATC: (call sign) STOP IMMEDIATELY [(repeat aircraft call sign) STOP IMMEDIATELY].

Pilot: STOPPING (call sign).

## 3. READBACK

3.1 Equally important as the use of correct phraseologies is the need to obtain the required readback in the order required and accurately.

3.2 Reproduced below are the relevant provisions in Annex 11 pertaining to this safety-critical element of runway operations.

“3.7.3 Readback of clearances and safety-related information

3.7.3.1 The flight crew shall read back to the air traffic controller safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items shall always be read back:

- a) ATC route clearances;
- b) clearances and instructions to enter, land on, take off from, hold short of, cross and backtrack on any runway; and
- c) runway-in-use, altimeter settings, SSR codes, level instructions, heading and speed instructions and, whether issued by the controller or contained in ATIS broadcasts, transition levels.

3.7.3.1.1 Other clearances or instructions, including conditional clearances, shall be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.

3.7.3.1.2 The controller shall listen to the readback to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and shall take immediate action to correct any discrepancies revealed by the readback.”

#### 4. COMMUNICATION TECHNIQUES — GENERAL

4.1 Detailed below are the relevant provisions laid down in Annex 10, Volume II, and the PANS-ATM (Doc 4444), with regard to radio transmission guidelines and techniques.

*Issue of en-route clearance*

4.2 Whenever possible, an en-route clearance should be passed to an aircraft before the start of taxi. If this is not possible, controllers should try to avoid passing the clearance to a pilot engaged in complicated taxiing manoeuvres near the runway due to the possibility of distraction.

4.3 An ATC en-route clearance is *not* an instruction to take off or enter an active runway. The words “take off” are used only when an aircraft is cleared for take-off, or when cancelling a take-off clearance. At other times the word “departure” or “airborne” is used.

*Readback requirements*

4.4 The air traffic controller is responsible for checking the completeness and accuracy of the readback. An aircraft must include its call sign in the readback, and failure to do this shall be challenged by the controller.

*Taxi instructions*

4.5 Taxi instructions issued by a controller will always contain a clearance limit, which is the point at which the aircraft must stop until further permission to proceed is given. For departing aircraft the clearance

limit will normally be the holding point of the runway in use, but it may be any other position on the aerodrome depending on prevailing traffic circumstances. When intersection departures are used, the appropriate holding point shall be clearly identified by ATC.

4.6 When a taxi clearance contains a taxi limit beyond a runway, it shall contain an explicit clearance to cross that runway, or an instruction to hold short, even if the runway is not in use.

4.7 Communication with any aircraft using the runway for the purpose of taxiing should be transferred from the ground controller to the aerodrome controller prior to the aircraft entering/crossing a runway. It is strongly advised, when practicable, to use standard taxi routes.

4.8 For more complicated taxi instructions, it may be appropriate to divide the message into segments, placing the clearances and instructions in sequential order, to avoid the possibility of pilot misunderstanding.

For example:

An aircraft shall taxi to RWY 06R for take-off. The aircraft has to taxi via taxiways A and B and the taxi route will necessitate a runway crossing (RWY 06L). The holding point for RWY 06L on taxiway B is named B2.

ATC:            AFR375, TAXI TO HOLDING POINT B2 VIA TAXIWAY ALPHA AND BRAVO, HOLD SHORT OF RWY 06L.

A/C:            TAXI TO HOLDING POINT B2 VIA ALPHA AND BRAVO, HOLDING SHORT OF RUNWAY 06L, AFR375.

Subsequently:

A/C:            AFR375 AT HOLDING POINT B2.

ATC:            AFR375 CROSS RWY 06L, TAXI TO HOLDING POINT RWY 06R.

A/C:            CROSS 06L, TAXI TO HOLDING POINT RWY 06R AFR375.

4.9 Further guidance on this subject can be found in Appendix B, paragraph 7.

4.10 It should be noted that the ICAO phraseology “taxi to holding point ...” may be misunderstood by some pilots due to the use of non-ICAO phraseology within North America, where “position and hold ...” is used by ATC when issuing a line-up clearance. There have been a number of runway safety occurrences due to this misunderstanding, and the readbacks should be very carefully monitored.

#### *Multiple line-ups on the same runway*

4.11 In Europe, line-up instructions may be issued to more than one aircraft at different points on the same runway, using the ICAO criteria contained in Part 3 (Aerodrome Operations) of the EUR part of the *Regional Supplementary Procedures* (Doc 7030).

4.12 In addition to the standard phraseology in Chapter 12 of PANS-ATM (Doc 4444), the following ATC phraseology shall be used:

ATC: KLM123 LINE UP AND WAIT RUNWAY 22 INTERSECTION BRAVO NUMBER 2 FOR DEPARTURE NUMBER ONE AN AIR FRANCE B737 DEPARTING FROM ALPHA ONE.

A/C: LINING UP AND WAIT RUNWAY 22 INTERSECTION BRAVO NUMBER 2 KLM123.

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