

AERONAUTICAL INFORMATION CIRCULAR Y 135/2019

UNITED KINGDOM



UK Aeronautical Information Services
NATS Swanwick
Room 3115
Sopwith Way
Southampton SO31 7AY
aissupervisor@nats.co.uk
http://www.ais.org.uk
01292-692644 (Content - Prestwick Centre)
0191-203 2329 (Distribution - Communisis UK)

Date Of Publication

19 Dec 2019

Subject

Operational



FANS 1/A CPDLC UPLINK MESSAGE LATENCY MONITOR FUNCTION IN THE SHANWICK OCA

1 Introduction

1.1 A number of ICAO regions are in the process of implementing reduced lateral and longitudinal separation minima predicated on Performance Based Communication and Surveillance (PBCS) specifications RCP 240 and RSP 180. One of the safety requirements in RCP 240 that are allocated to the aircraft system is Safety Requirement #15 (SR-15):

Note: When the aircraft system receives a message whose timestamp exceeds ETRCMP, the aircraft system shall provide appropriate indication.

1.2 To support SR-15, ATC can uplink the CPDLC free text message SYSU-6 (UM169) SET MAX UPLINK DELAY VALUE TO 300 SEC to prompt the pilot to enter the specified latency value into the aircraft avionics (refer to the Global Operational Data Link Manual (GOLD) ICAO Doc 10037 Appendix A table A.4.13).

1.3 This document provides guidance to Aircraft Operators and pilots on how to react when receiving the message SET MAX UPLINK DELAY VALUE TO 300 SEC from Air Traffic Control (ATC).

2 Discussion

2.1 The intention of the message latency monitor function is to prevent pilots from acting on a CPDLC uplink message that has been delayed in the network. The most serious of such cases would be the pilot executing a clearance that was no longer valid.

2.2 There are variations between aircraft types in implementation of the message latency monitor function:

- a) The Airbus implementation and some General Aviation aircraft implementations function in such a way that the aircraft automatically rejects a delayed uplink message by sending an error message to ATC and does not show the message to the pilot. The message sent to ATC is normally this;

ERROR INVALID DATA. UPLINK DELAYED IN NETWORK AND REJECTED RESEND OR CONTACT BY VOICE.

- b) The Boeing implementation and some General Aviation aircraft implementations function in such a way that the delayed message is displayed to the pilot with an indication that the message has been delayed. It is then up to the pilot to act as appropriate, refer to section 3 below;

- c) Some aircraft have a deficient implementation that has not been designed in accordance to industry standards;

- d) Some CPDLC equipped aircraft do not have the message latency monitor function implemented at all.

2.3 Because aircraft implementations are varied, it is impossible for ATC to tailor the uplink of the message SET MAX UPLINK DELAY VALUE TO 300 SEC to different aircraft types. It has therefore been decided among the NAT Air Navigation Service Providers (ANSPs) to uplink this message to all CPDLC connected aircraft immediately after they enter each control area. An aircraft may therefore receive this message multiple times during a flight.

2.4 Aircraft have been receiving the CPDLC message THIS IS AN AUTOMATED MESSAGE TO CONFIRM CPDLC CONTACT WITH SHANWICK CENTER upon entry into the Shanwick Oceanic Control Area. This message will be discontinued and replaced with the message SET MAX UPLINK DELAY VALUE TO 300 SEC. This new message will therefore serve two purposes:

- a) To prompt the pilot to set the specified uplink delay value in the aircraft avionics; and
- b) To establish the Current DATA authority (CDA) for ATC.

3 Pilot Procedures

3.1 Pilots shall be familiar with aircraft functionality that concerns the CPDLC uplink message latency monitor.

3.2 When the pilot receives the uplink CPDLC message SET MAX UPLINK DELAY VALUE TO 300 SEC he/she shall:

- a) Send a positive response to ATC as prompted by the avionics (ACCEPT [ROGER]) regardless of whether the aircraft supports the latency monitor;

***Note 1:** It is important that pilots respond to the SET MAX UPLINK DELAY VALUE TO 300 SEC uplink message to avoid having open unanswered CPDLC messages in the system. This also applies to aircraft that have deficient message latency monitor functionality or no such functionality at all.*

***Note 2:** The Global Operational Data Link Manual specifies that the pilot should append the response downlink with the free text message TIMER NOT AVAILABLE when the message latency monitor function is not available in the aircraft (refer to GOLD Table 4-1).*

- b) If the aircraft is equipped with a correctly functioning message latency monitor, enter the specified uplink delay into the avionics in accordance with the aircraft procedures. Some avionics will automatically set the delay value in accordance with the uplink message and do not allow for a manual input.

***Note:** The Global Operational Data Link Manual specifies that the pilot should append the response downlink with the free text message TIMER NOT AVAILABLE when the message latency monitor function is not available in the aircraft (refer to GOLD Table 4-1).*

3.3 When a pilot receives a CPDLC uplink message with an indication that the message has been delayed the pilot shall:

- a) Revert to voice communications to notify the ATS unit of the delayed message received and to request clarification of the intent of the CPDLC message; and
- b) Respond appropriately to close the message as per the instructions of the controller.
- c) The pilot must not act on the delayed uplink message until clarification has been received from the controller.

4 Implementation and Further Information

4.1 Implementation of the SET MAX UPLINK DELAY VALUE TO 300 SEC message will start in the Shanwick OCA on or after **23 January 2019** or soon after. It is expected that the NAT Air Navigation Service Providers will not implement at the same date. The implementation date for each ANSP will be promulgated in their local AIC.

4.2 For further information please contact:

Mr. Iain C. Brown
Manager North Atlantic Coordination
Tel: 01292-692644
Mob: 07973-847091
E-Mail: iain.brown@nats.co.uk
NATS Prestwick
Fresson Avenue
Prestwick
KA9 2GX
www.nats.co.uk