



**THE FORTY-EIGHTH MEETING OF THE
INFORMAL PACIFIC ATC COORDINATING GROUP
(IPACG/48)**

FAA Northwest Mountain Regional Office - Des Moines, Washington
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Agenda Item 5: Air Traffic Management (ATM) Issues

Implementation plan of Message Latency Monitor in the Fukuoka FIR

(Presented by JCAB)

SUMMARY

Japan Civil Aviation Bureau (JCAB) is in the implementation phase of Message Latency Monitor in the Fukuoka Flight Information Region (FIR). This paper presents the implementation plan of Message Latency Monitor.

1. Introduction

1.1. Based on the specification of RCP240 and RSP180 in Performance Based Communication and Surveillance (PBCS), reduced lateral and longitudinal separation minima are used in the Fukuoka oceanic data link airspace. One of the safety requirements in RCP240 which is allocated to the aircraft system, the Message Latency Monitor function provides an appropriate indication to the pilot when a delayed uplink message is received.

1.2. The intention of the Message Latency Monitor function is designed to prevent the pilot from acting on a CPDLC uplink message that has been delayed in the network. Aircraft equipped with the Message Latency Monitor function activate the function by manually entering the latency time value into the airborne system. The message aircraft receive is as follows:

“SET MAX UPLINK DELAY VALUE TO 300 SEC”

1.3. It is important for the pilot to respond to the [SET MAX UPLINK DELAY VALUE TO 300 SEC] uplink message to avoid having open unanswered CPDLC messages in the system. This message is sent to aircraft that have deficient message latency monitor functionality or no such functionality at all

1.4. The way of receiving the delayed uplink message in the Message Latency Monitor function varies depending on the aircraft type.

1.4.1. The airbus implementation and some general aviation aircraft implementations function in such a way that the aircraft automatically rejects the delayed uplink message by sending an error message to ATC and does not show the message to the pilot.
The message is as follows:

“ERROR INVALID DATA, UPLINK DELAYED IN NETWORK AND REJECTED RESEND OR CONTACT BY VOICE”

1.4.2. The Boeing implementation and some general aviation aircraft implementations function in

such a way that the delayed uplink message is displayed to the pilot with an indication that the message has been delayed.

1.5. JCAB is scheduled to initiate the use of Message Latency Monitor function in the oceanic airspace in the Fukuoka FIR on the AIRAC date of November 2, 2023.

2. Discussion

2.1. When aircraft logon or enter the Fukuoka oceanic data link airspace, equipped flights will receive the uplink CPDLC message [SET MAX UPLINK DELAY VALUE TO 300 SEC] advising crews to set the latency timer.

2.2. When aircraft receives the uplink CPDLC message [SET MAX UPLINK DELAY VALUE TO 300 SEC], a pilot needs to send a positive response to ATC as prompted by the avionics [ROGER] regardless of whether the aircraft supports the latency monitor. As for aircraft which is not equipped with the Message Latency Monitor function, it is not necessary to report its equipment status.

2.3. If aircraft is equipped with a correctly functioning message latency monitor, a pilot needs to manually enter the specified uplink delay value “300 SEC” into the avionics in accordance with the aircraft procedures. Some avionics will automatically set the delay value “300 SEC” in accordance with the uplink message and do not allow for a manual input.

2.4. If aircraft initiates another AFN logon in mid-flight, a pilot may receive the message [SET MAX UPLINK DELAY VALUE TO 300 SEC] again once the logon is completed.

2.5. A pilot is not required to report the position via CPDLC to confirm CPDLC connection when entering the Fukuoka FIR because JCAB will use the uplink CPDLC message [SET MAX UPLINK DELAY VALUE TO 300 SEC] as “Welcome message”.

2.6. When a pilot receives a CPDLC uplink message with an indication that the message has been delayed, the response the pilot shall make is as follows.

2.6.1. Revert to voice communications to notify the ATS unit of the delayed uplink message received and to request clarification of the intent of the CPDLC message.

2.6.2. Respond appropriately to close the message as per the instructions of the controller.

2.6.3. The pilot must not act on the delayed uplink message until clarification has been received from the controller.

Action by the meeting

3.1 The meeting is invited to note the information provided.