

TIME-KEEPING PROCEDURES OPERATING IN NORTH ATLANTIC REGION

1. INTRODUCTION

1.1 This advice details the new time-keeping procedures which are to be used whilst operating in the North Atlantic (NAT) region. These new procedures are effective immediately.

1.2 The North Atlantic Systems Planning Group (NAT SPG) has completed a series of preliminary studies to support reductions in separation minima. Reductions in separation minima not only improve system capacity but also provide benefits to operators.

1.3 However, before any reductions can be implemented, a safety assessment must be carried out. This will involve the monitoring of any changes in traffic "performance" which result from the new time-keeping procedures.

1.4 NAT SPG preliminary studies have shown that time-keeping has not been as accurate as required to sustain further reductions in longitudinal separation minima. Therefore, the procedures described below were developed to improve time-keeping in the NAT.

1.5 In order to determine whether time-keeping of aircraft operating in the NAT improves, a data collection exercise commenced on 31 Jan 99. The data collected will be used by the NAT SPG to carry out a safety analysis in the second half of 1999. The results of this analysis will determine whether further reductions in longitudinal minima can be approved and safely implemented.

2. OPERATORS/AIRCRAFT APPROVED FOR OPERATIONS IN THE NAT MINIMUM NAVIGATION PERFORMANCE SPECIFICATIONS (MNPS) AIRSPACE

2.1 Because of the importance of accurate time-keeping when longitudinal separation is reduced, the NAT SPG has agreed that the new procedures should become part of the MNPS approval. This approval is given by the State of Registry or State of the Operator.

2.2 All operators who hold an MNPS approval from Australian authorities should revise their operations manuals to include the new time-keeping procedures described below in Section 3.

2.3 Operators should then submit the revision to their CASA District Office as soon as possible. An updated approval will be issued by CASA.

2.4 Irrespective of whether an operator has been able to update their MNPS approval, he/she should, nevertheless, strictly adhere to the new procedures.

2.5 Operators should note that failure to acquire an updated MNPS approval before any reductions in longitudinal minima are implemented will result in their being excluded from MNPS airspace.

3. NEW TIME-KEEPING PROCEDURES

3.1 Prior to entry into NAT MNPS airspace, the time reference system(s) to be used during the flight for calculation of the way-point Estimated Times of Arrival (ETAs) and way-point Actual Times of Arrival (ATAs) shall be synchronised to UTC. All ETAs and ATAs passed to ATC shall be based on a time reference that has been synchronised to UTC or equivalent. Acceptable sources of UTC include the following:

- a. WWV - National Institute of Standards and Technology (NIST - Fort Collins, Colorado). WWV operates 24 hours a day on 2 500, 5 000, 10 000, 15 000, 20 000KHZ (AM/SSB) and provides UTC voice every minute.
- b. GPS (corrected to UTC) - Available 24 hours a day to those pilots who can access the time signal through on board GPS equipment.
- c. CHU - National Research Council (NRC) - Available 24 hours a day on 3 330, 7 335, and 14 670KHZ (SSB). In the final ten second period in each minute, a bilingual station identification and time announcement is made. Since April 1990, the announced time is in UTC.
- d. BBC - British Broadcasting Corporation (United Kingdom) - The BBC transmits on a number of domestic and world-wide frequencies and transmits the Greenwich time signal (referenced to UTC) once every hour on most frequencies, although there are some exceptions.
- e. Any other source shown to the State of Registry or State of the Operator (as appropriate) to be an equivalent source of UTC.

END
