

**NORTH ATLANTIC TREATY ORGANIZATION
ORGANISATION DU TRAITE DE L'ATLANTIQUE NORD**

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AIR BOARD

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See Distribution List Air N° 9

**STANAG 3530 AS (EDITION 6) – RADIO AND/OR NAVIGATIONAL AID FAILURE
PROCEDURES FOR OPERATIONAL AIR TRAFFIC (OAT) FLIGHTS**

Reference(s):

- a. MAS(AIR)0720-AS/3530 dated 20 June 2000 (Edition 6)(Ratification Draft 1)
- b. MAS(AIR)127-AS/3530 dated 9 May 1995 (Edition 5)

- 1. The enclosed NATO Standardization Agreement which has been ratified by nations as reflected in page iii is promulgated herewith.
- 2. The references listed above are to be destroyed in accordance with local document destruction procedures.
- 3. AAP-4 should be amended to reflect the latest status of the STANAG.

ACTION BY NATIONAL STAFFS

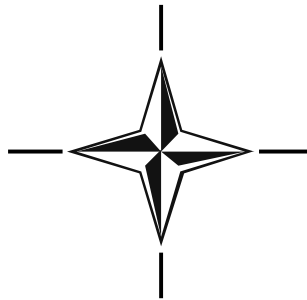
- 4. National staffs are requested to examine page iii of the STANAG and, if they have not already done so, advise the Air Board, MAS through their national delegation as appropriate of their intention regarding its ratification and implementation.

Jan H ERIKSEN
Rear Admiral, NONA
Chairman, MAS

Enclosure:

STANAG 3530 (Edition 6)

**NORTH ATLANTIC TREATY ORGANIZATION
(NATO)**



**MILITARY AGENCY FOR STANDARDIZATION
(MAS)**

**STANDARDIZATION AGREEMENT
(STANAG)**

SUBJECT: RADIO AND/OR NAVIGATIONAL AID FAILURE PROCEDURES
FOR OPERATIONAL AIR TRAFFIC (OAT) FLIGHTS

Promulgated on 30 January 2001

Jan H ERIKSEN
Rear Admiral, NONA
Chairman, MAS

NATO/PfP UNCLASSIFIED

RECORD OF AMENDMENTS

No.	Reference/date of amendment	Date entered	Signature
1	MAS(AIR)0458-AS/3530	2 May 2001	

EXPLANATORY NOTES

AGREEMENT

1. This NATO Standardization Agreement (STANAG) is promulgated by the Director NSA under the authority vested in him by the NATO Military Committee.
2. No departure may be made from the agreement without consultation with the tasking authority. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.
3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

DEFINITIONS

4. Ratification is "In NATO Standardization, the fulfilment by which a member nation formally accepts, with or without reservation, the content of a Standardization Agreement" (AAP-6).
5. Implementation is "In NATO Standardization, the fulfilment by a member nation of its obligations as specified in a Standardization Agreement" (AAP-6).
6. Reservation is "In NATO Standardization, the stated qualification by a member nation that describes the part of a Standardization Agreement that it will not implement or will implement only with limitations" (AAP-6).

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

7. Page iii gives the details of ratification and implementation of this agreement. If no details are shown it signifies that the nation has not yet notified the tasking authority of its intentions. Page iv (and subsequent) gives details of reservations and proprietary rights that have been stated.

FEEDBACK

8. Any comments concerning this publication should be directed to NATO/NSA - Bvd Leopold III - 1110 Brussels - BE.

Agreed English/French Text

STANAG 3530
(Edition 6)

NAVY / ARMY / AIR

NATO STANDARDIZATION AGREEMENT
(STANAG)

RADIO AND/OR NAVIGATIONAL AID FAILURE PROCEDURES FOR
OPERATIONAL AIR TRAFFIC (OAT) FLIGHTS

Related Documents:	STANAG 3817 AS	- STANDARD R/T PHRASEOLOGY TO BE USED FOR AIR TRAFFIC CONTROL
	ICAO Doc 4444 Part III, Part VI	- RULES OF THE AIR AND AIR TRAFFIC SERVICES – AREA CONTROL SERVICE, RADAR SERVICES
	ICAO Annex 2 Chapter 3	- RULES OF THE AIR – GENERAL RULES
	ICAO Annex 10 Vol II Chapter 5	- AERONAUTICAL COMMUNICATIONS - AERONAUTICAL MOBILE SERVICE

AIM

1. The aim of this agreement is to establish common radio communication failure procedures and navigational aid failure procedures for Operational Air Traffic (OAT) flights.

AGREEMENT

2. Participating nations agree that the procedures stated herein shall be used in cases of radio and/or navigational aid failure for aircraft flying as OAT. Aircraft flying as General Air Traffic (GAT) are to conform to the ICAO procedures published in the national Aeronautical Information Publication (AIP) concerned.

DEFINITIONS

3. The following terms and definitions are used for the purpose of this agreement.
- a. Operational Air Traffic (OAT). Flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate authorities.
 - b. General Air Traffic (GAT). Flights conducted in accordance with the rules and provisions of ICAO.

PROCEDURE TO BE FOLLOWED BY PILOTS IN CASE OF RADIO COMMUNICATION FAILURE

4. In case of radio communication failure, whether or not a flight plan has been filed, and whether in VMC or IMC, the pilot shall comply with radio communication failure procedures as published in the relevant ICAO documents.

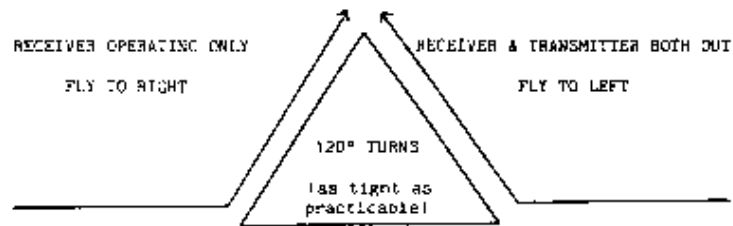
PROCEDURES TO BE FOLLOWED BY PILOTS IN THE CASE OF NAVIGATIONAL AID FAILURE

5. When lost or uncertain of position, the pilot shall:
- a. If the radios are functioning normally:
 - (1) Switch the IFF/SIF to Mode 3 Code 77/7700.
 - (2) Transmit an urgency message.
 - b. In case of transmitter failure:
 - (1) Switch the IFF/SIF to Mode 3 Code 77/7700.
 - (2) Switch radio receiver to emergency frequency.
 - c. In case of receiver/complete radio communication failure:
 - (1) Switch the IFF/SIF to Mode 3 Code 77/7700.
 - (2) Switch radio receiver to the emergency frequency.
 - (3) If possible maintain VMC and employ such visual signals and lighting as appropriate to the prevailing situation.
 - (4) If unable to maintain VMC comply with the procedure stated below.

NAVIGATION AND COMMUNICATION FAILURE – RADAR IDENTIFICATION PROCEDURE

6. If the pilot in the circumstances described above is able to fly a pattern which could be identified by a ground radar station, the following action should be initiated.
- a. In case of transmitter failure, fly equilateral triangular patterns to the RIGHT in accordance with Figure 1 and listen for instructions from a ground radar station.
 - b. In case of complete radio communication failure, fly equilateral triangular patterns to the LEFT and watch for interception by a shepherd aircraft

2 minute legs if TAS 300 knots or less Activate IFF/SIF to Mode 3
1 minute legs if TAS more than 300 knots Code 77/7700



Fly two patterns, resume course, repeat at 5 minute intervals. Guard emergency frequencies.

FIGURE 1 – NAVAID/COMMS FAILURE PROCEDURES

PROCEDURES TO BE FOLLOWED BY GROUND RADAR STATIONS

7. Ground radar stations observing an IFF/SIF Mode 3 Code 76/7600 or 77/7700 or Radar Distress Procedure shall confirm that the aircraft is receiving transmissions on the emergency frequency through selective use of IFF/SIF responses or an identifying turn. The controller will determine the pilot's intention and provide all necessary assistance possible. When receipt of transmission cannot be confirmed, the controller will take all action necessary in accordance with the observed track of the aircraft.

8. Ground radar stations shall be on the alert for emergency radar flight patterns and shall give whatever assistance they can, on a first priority basis, to any aircraft so found in emergency. Controllers observing emergency radar flight patterns shall make an on-the-spot accurate plot of the aircraft's track.

9. If necessary, the Air Traffic Services (ATS) unit responsible for the airspace shall be requested to take over control, continuing to control the traffic on the frequency in use wherever possible. If a transfer is not advisable, all actions shall be co-ordinated with the appropriate ATS unit.

ADDITIONAL PROCEDURES

10. Shepherd aircraft. Whenever possible, the shepherd aircraft will possess flight characteristics similar to those of the aircraft in emergency and it shall be fully IFR equipped. The request for a shepherd aircraft shall be addressed to the appropriate ATS unit which will then relay the request to a suitable flying unit, unless the ground radar station itself has direct telephone connections to such a unit. As soon as the shepherd aircraft is airborne and has entered the area of jurisdiction of the ground radar station concerned, it shall be transferred to this station. The ground radar station shall vector the shepherd aircraft so as to intercept the aircraft in emergency. When both aircraft have established visual contact with each other, they shall be vectored to the most suitable airfield.

PROCEDURES TO BE USED IN TIMES OF CRISIS AND WAR

11. Procedures as laid down in paragraphs 4 – 10 of this STANAG may be applied in times of crisis and war as far as circumstances permit.
12. Any other procedures in case of radio and/or navigational aid failure may be initiated whenever deemed helpful for the safety of the pilot.

IMPLEMENTATION OF THE AGREEMENT

13. This STANAG is implemented when the contents of this agreement have been included in appropriate national Air Traffic Services regulations or directives.