NATO STANDARD

ATP-3.3.5.2

NATO QUALIFICATIONS FOR FIXED WING ABOVE WATER WARFARE/AEROSPACE SURVEILLANCE AND CONTROL SYSTEM (AWW/ASACS) AIRCRAFT CONTROLLERS

Edition B, Version 1

[date]

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NORTH ATLANTIC TREATY ORGANIZATION

ALLIED TACTICAL PUBLICATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

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NATO LETTER OF PROMULGATION

[Date]

1. The enclosed Allied Tactical Publication ATP-3.3.5.2, Edition B, Version 1, NATO QUALIFICATIONS FOR FIXED WING ABOVE WATER WARFARE/AEROSPACE SURVEILLANCE AND CONTROL SYSTEM (AWW/ASACS) AIRCRAFT CONTROLLERS, which has been approved by the nations in the Military Committee Air Standardization Board (MCASB), is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 1183.

2. ATP-3.3.5.2, Edition B, Version 1, is effective upon receipt and supersedes ATP-3.3.5.2, Edition A, Version 1, which shall be destroyed in accordance with the local procedure for the destruction of documents.

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Director, NATO Standardization Office

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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.

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RECORD OF SPECIFIC RESERVATIONS

NATION	DETAIL OF RESERVATIONS

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TABLE OF CONTENTS

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CHAPTER 1 DETAILS OF ALLIED PUBLICATION

1.1. AIM

The aim of this agreement is to establish standard qualifications for Fixed Wing Above Water Warfare/Aerospace Surveillance and Control System (AWW/ASACS) Aircraft Controllers in Air Combat Element (ACE) units and embarked on NATO ships or aircraft.

1.2. AGREEMENT

Participating nations agree the minimum requirements for Fixed Wing AWW/ASACS Aircraft Controllers are in accordance with the qualifications laid down in Para 1.3.

1.3. QUALIFICATIONS

1. Close Control and Positive Control are taken to be the most prescriptive degree of control in mission and safety situations respectively. Annex A outlines the agreed level of Control Services as detailed within STANAG 7189/ATP-3.3.5.1 (Joint Airspace Control - Tactics Techniques and Procedures). A higher grade endorsement implies competence in all lesser grade missions.

a. **Mission Control**. The following table indicates the minimum[1] capability to provide mission Control Services to which Controllers are to be trained prior to the award of Grade 1, 2 or 3 status. A Grade 1 endorsement implies competence in all Grade 2 and 3 group missions too, and Grade 2 implies competence in all Grade 3 missions.

Controller Grade	Mission Type
1 Combat Ready (Advanced) Controller	Large Force Employment (LFE) and Composite Air Operations (COMAO), including mission planning. Air Combat operations involving more than 10 aircraft. Complex Air-to-Air Refuelling (AAR).[2] Operations in an Electronic Warfare (EW) environment, including degraded C2 sensors and communications.

[1] Where required for national operational output or where extant national training structures dictate, initial qualification may be higher than Grade 3.

[2] Multiple tankers on different AAR Areas (AARA) and/or multiple tankers in one AARA.

Controller Grade	Mission Type
	Operations involving the following number of lead aircraft[3]: Close Control: Maximum 2 Loose Control: 5+ Broadcast Control[4]: 5+
2 Limited Combat Ready (Intermediate) Controller	Quick Reaction Alert (Interceptors) Air Policing Missions. Air Combat operations involving up to 10 aircraft. AAR operations (single Tanker). Operations involving the following number of lead aircraft: Close Control: Maximum 2 Loose Control: Maximum 4 Broadcast Control: 5+
3 Basic Certificate of Qualification	Area airspace monitoring and military aircraft transits. Air Combat training missions involving up to 4 aircraft (day and night). Responses to basic EW codewords Training missions involving the following number of lead aircraft: Close Control: Maximum 2 Loose Control: Maximum 2 Broadcast Control: Maximum 4

[3] For the purposes of this ATP, the term 'lead aircraft' refers to the aircraft leading a formation/section using the same discrete callsign.

[4] Broadcast Control is a fall-back procedure during which 'Picture' only at best effort is broadcast with no tactical direction given to (or expected) by aircrew. The difference from loose control being that loose control implies support to the tactic being employed and a degree of advice and battle-management provided.

b. **Safety Control**. The following table indicates the capability to provide Safety Control Services to which Controllers are to be trained prior to the award of Grade A, B or C status:

Controller Grade	**A**	**B**	**C**
Type of Safety Control Service	Positive	Advisory	Flight Information
Description	The highest form of information and direction that an individual can provide to pilots according to national regulations; the Controller is responsible for the safety of the aircraft and provides heading, speed and level instructions to deconflict from other aircraft.	A service that in which, according to national regulations, the Controller may advise the pilot of the location of conflicting traffic together with the advice needed to deconflict; however the pilot is ultimately responsible for aircraft safety.	The lowest form of information that an individual can provide according to national regulations; it may not require the use of a radar.

2. Controllers unable to provide (or having to limit) any given type of control due to equipment limitations should declare the fact to aircrew on handover in accordance with national regulations.

3. The management of currency maintenance, supervision, disqualification and re-qualification of a Fixed Wing AWW/ASACS Controller is a national responsibility.

1.4. TRAINING

The minimum standard of initial training required by Fixed Wing AWW/ASACS Controllers should be such that each Controller should satisfactorily demonstrate theoretical and practical competence to the level described below. Controllers are, in the first instance, expected to be competent to operate within their national boundaries. Controllers expecting to operate outside their national boundaries should undergo sufficient pre-employment training to satisfy the foreign nation's local control requirements.

1.5. THEORETICAL TRAINING

1. Fixed Wing AWW/ASACS Controllers should possess the following:

a. A working knowledge of the English Language.

b. A thorough knowledge of:

(1) The Threat.

(2) The capabilities and limitations of aircraft and associated weapons systems, tactics, combat profiles and configurations for aircraft which the controller might reasonably be expected to control.

(3) Air Control Terms and Definitions.

(4) Air Traffic Control (ATC) procedures.

(5) Control and Co-ordination Procedures and Rules (ATP-1 and AJP-3.3.3).

(6) Communications Procedures and Phraseology used in Aircraft Control.

(7) Applicable Air Combat Rules and Safety Procedures.

(8) Rules of Engagement and Combat ID.

(9) Search and Rescue (ATP-3.3.9.2).

(10) Doctrine and Procedures for Airspace Control in the Joint Operations Area (AJP-3.3.5/ATP-3.3.5.1).

(11) Air-Maritime Co-Ordination Doctrine (AJP-3.3.3).

(12) Joint Air & Space Operations Doctrine (AJP-3.3).

(13) Air-Maritime Co-Ordination Procedures (ATP-3.3.3.1).

(14) Close Air Support Procedures (ATP 3.3.2).

(15) Tactical Data Links and their use.(ADAT-P16)

(16) Control of Unmanned Aircraft (in line with national procedures)

(17) Air-to-Air Refuelling (ATP 3.3.4.2)

c. A working knowledge of:

(1) AWW Principles (ATP-31) and Procedures (ATP-1/AJP-3.3.3/ ATP-3.3.3.1).

(2) Capabilities and limitations of ASACS and ship-borne AWW systems as relevant.

(3) Electronic Warfare in Air Operations (ATP-3.6.3 and ATP-1).

(4) Air Defence principles and procedures, where relevant.

(5) Air Defence weapons systems and airspace management, where relevant.

(6) Capabilities and limitations of radar and communications equipment.

d. A general knowledge of:

(1) Environmental conditions (e.g. meteorology) as they affect air operations.

(2) Local plotting and positional recording procedures when/where applicable.

2. A graded NATO Fixed Wing AWW/ASACS Aircraft Controller whose qualification has been limited by training to one specific geographic area or operating environment will be required to satisfy their national authorities that they are current and competent in any new geographic area or operating environment before assuming control of fixed wing aircraft in the new circumstances.

1.6. PRACTICAL TRAINING

1. Each Controller must demonstrate the capability for practical aircraft control in EW and non-EW environments, including homing procedures and emergency procedures, based on live and simulated experience. The minimum number of hours for both Mission Control Training and Safety Control Training may vary significantly due to the aptitude of each individual Controller. The figures below are not prescriptive but are designed to afford sufficient time to ensure all Training Objectives are achieved and the controller has sufficient opportunity to consolidate training before a formal practical and theoretical check. The practical qualifications for the award of Fixed Wing AWW/ASACS Aircraft Control are specified below:

a. **Mission Control Initial Training**.[5]

[5] Mission Control Initial Training does not apply to training/conversion onto AEW/AWACS aircraft where Controllers have already previously received their Initial Controller training.

(1) **Grade 1 Controller**. Each Controller must be trained to satisfy national authorities that they have the ability to tactically control aircraft effectively to provide the services laid down in Para 1.3. In order to achieve the NATO Grade 1 standard, a Controller should successfully complete sufficient additional sorties (minimum 20 following the award of Grade 2 status, including routine non-instructed missions) to satisfactorily control mission types of the increased complexity detailed in Para 1.3 Row 1. The mix of live versus simulation sorties is at national discretion according to availability of resource.

(2) **Grade 2 Controller**. Each Controller must be trained to satisfy national authorities that they have the ability to tactically control aircraft effectively to provide the services laid down in Para 1.3. In order to achieve the NATO Grade 2 standard, a Controller should complete sufficient additional sorties (minimum 30 following the award of Grade 3 status, including routine non-instructed missions) to satisfactorily control mission types of the increased complexity detailed in Para 1.3, Row 2. The mix of live versus simulation sorties is at national discretion according to availability of resource.

(3) **Grade 3 Controller**. Each Controller must be trained to satisfy national authorities that they have the ability to tactically control aircraft effectively enabling them to provide the services laid down in Para 1.3. This is the equivalent of the award of an initial (national) certificate of qualification. The mix of live versus simulation sorties is at national discretion according to availability of resource, though trainees should complete at least 20 missions prior to Grade 3 endorsement.

b. **Safety Control Training**. In all cases, the total number of control hours required to achieve a specific Safety Controller status will be dependent upon aptitude. However, minimum requirements are as follows[6]:

(1) **Grade A (Positive) Controller**. The minimum requirement for achievement of Grade A Controller status is the higher of either: 40 Positive Control hours; or the national minimum requirement where different from the above. Positive Control hours are in addition to those required to achieve Grade B

[6] The hours quoted assume a beginner student without any previous experience.

and C status. Positive Control hours may be accrued in the live and simulated environments according to availability of resource or the national training regime.

(2) **Grade B (Advisory) Controller**. The minimum requirement for achievement of Grade B Controller status is the higher of either: 20 Advisory Control hours; or the national minimum requirement where different from the above. Advisory Control hours are in addition to those to achieve Grade C status. Advisory Control hours may be accrued in the live and simulated environments according to availability of resource or the national training regime.

(3) **Grade C (Flight Information) Controller**. The minimum requirement for achievement of Grade C Controller status is the higher of either: a minimum of 10 hours (mixed live and simulated control); or the national minimum requirement where different from the above.

1.7. CONTINUATION TRAINING

1. Mission Control. The following table indicates the continuation training necessary for the retention of Grade 1, 2 or 3 status. Training relates to a rolling 12 month period annualised and initiated from the date of initial qualification in which both Close and Loose Control requirements, together with any additional national requirements, if applicable, are achieved. Should an Aircraft Controller fail to meet the annual currency requirement, a standards proficiency sortie is to be conducted by a suitably qualified examiner in order to re-validate the individual's previous Mission Control Grade. Continuation training may be conducted in either the live or simulated environments according to the availability of resource.

Controller Grade	**1**	**2**	**3**
Close Control (Control Events)[7]	12	24	36
Loose Control	24	36	48

[7] The term Control Event refers to situations where the **Controller is responsible for the positive outcome of the intercept**; the event may involve intercepts with opposing forces/elements or activities such as tanker joins.

(Missions)[8]			

2. **Safety Control**. Due to the widely differing nature of individual national airspace constructs and the operational endorsements granted by national authorities, the continuation training necessary for the retention of Grade A, B or C status is a national responsibility; and should be in-line with those requirements defined by the relevant national Safety Assurance regulatory body.

3. **Evaluation**. In order to evaluate Controllers' practical and theoretical competence national authorities should examine and record for audit purposes Controllers' operational performance and theoretical knowledge at least annually, with questions from each area outlined in section 1.5.

1.8. RECORDS

National authorities are to ensure that Fixed Wing AWW/ASACS Aircraft Controllers maintain a record of their operational activities. The record should contain details of qualifications gained or relinquished and of every control sortie/mission. The latter should include the number and type of aircraft, plus the type and duration of all category of live and simulated control.

[8] A Mission is defined for the purposes of this ATP as any tactical training Period during which the controller passes target information, tactical support and/or target allocation but is **not responsible for the positive outcome of the intercept/engagement**. Missions may include individual Control Events should specific directive help be requested by the aircrew.

ANNEXE A AIR CONTROL TERMS

1. ATP-3.3.5.1 (Chapter 6) details the agreed terms and definitions for the following Mission Control terms: Close Control; Loose Control; and Broadcast Control. Operationally these may be combined with Positive and Advisory Safety Control to tactically control aircraft as detailed below:

MISSION	SAFETY	
	POSITIVE	**ADVISORY**
CLOSE	A form of aircraft Mission Control in which the aircraft is continuously controlled, for altitude, speed and heading, to a position from which the mission can be accomplished. This is routinely defined as within 10nm of the target aircraft, or earlier if the controlled aircraft is able to take control of the intercept based on radar/system situational awareness. The controlling unit is responsible for taking actions for collision avoidance, such as ordering the necessary alterations to heading, speed and altitude to maintain separation criteria.	A form of aircraft Mission Control in which the aircraft is continuously controlled, for altitude, speed and heading, to a position from which the mission can be accomplished. This is routinely defined as within 10nm of the target aircraft, or earlier if the controlled aircraft is able to take control of the intercept based on radar/system situational awareness. The controlling unit will provide adequate warnings of hazards affecting aircraft safety. The aircraft's commander is responsible for the aircraft's navigation and collision avoidance.
LOOSE	A form of aircraft Mission Control in which the aircraft commander selects his own speed, altitude, heading and the appropriate tactics required to accomplish the assigned task. The controlling unit will advise the aircraft commander of the current tactical picture and will provide further tactical support and advice, if and when available (for example, quality-checking the targeting plan). The controlling unit is responsible for taking actions for collision avoidance, such as ordering the necessary alterations	A form of aircraft Mission Control in which the aircraft commander selects his own speed, altitude, heading and the appropriate tactics required to accomplish the assigned task. The controlling unit will advise the aircraft commander of the current tactical picture and will provide further tactical support and advice if and when available (for example, quality-checking the targeting plan). The controlling unit will provide adequate warnings of hazards affecting aircraft safety. The aircraft commander is

	to heading, speed and altitude to maintain separation criteria.	responsible for the aircraft's navigation and collision avoidance.
BROADCAST	A form of aircraft Mission Control used in the absence of full capability or if the tactical situation precludes Close or Loose control, in which tactical/target information is passed to enable the aircraft to accomplish the assigned task. The controlling unit, when possible, provides adequate warnings of hazards, but the aircraft commander(s) is (are) responsible for aircraft navigation and collision avoidance. Two-way communications are not a pre-requisite for this type of control.	

2. Of note, national regulations may prevent the application of a specific control combination as laid down in ATP-3.3.5.1.

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