NATO STANDARD

ATP-3.3.2.2

JOINT TERMINAL ATTACK CONTROLLER PROGRAM

Edition B Version 2

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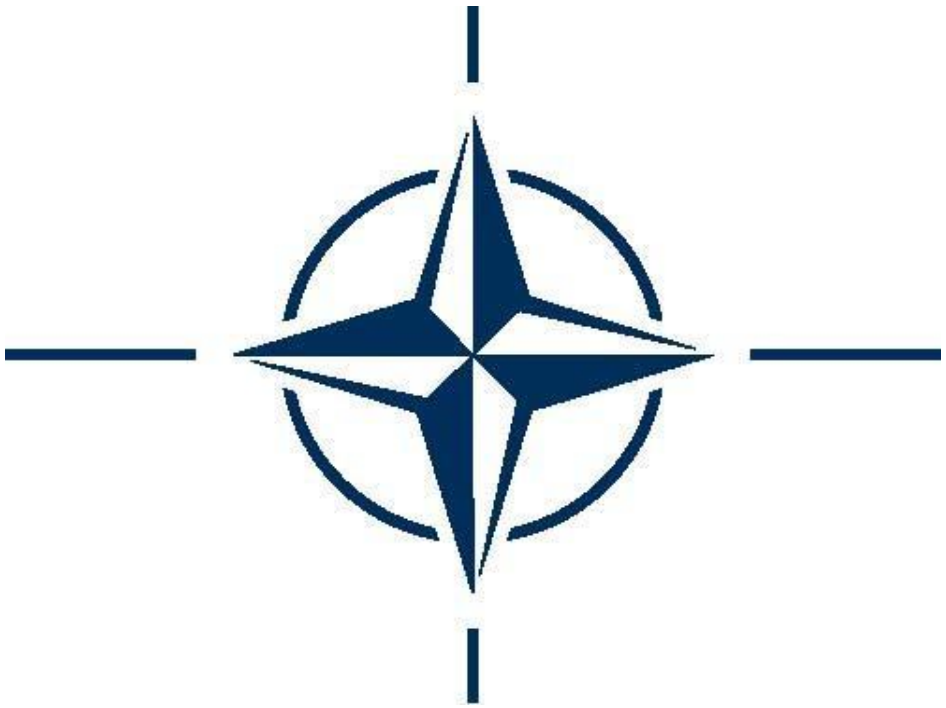

NORTH ATLANTIC TREATY ORGANIZATION

ALLIED TACTICAL PUBLICATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

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NATO LETTER OF PROMULGATION

10 January 2018

1. The enclosed Allied Tactical Publication ATP-3.3.2.2, Edition B, Version 2, JOINT TERMINAL ATTACK CONTROLLER PROGRAM, 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 3797.

2. ATP-3.3.2.2 Edition B, Version 2 is effective upon receipt and supersedes ATP-3.3.2.2 Edition B, Version 1 which shall be destroyed in accordance with the local procedure for the destruction of documents.

4. This publication shall be handled in accordance with C-M(2002)60.

Edvardas MAŽEIKIS
Major General, LTUAF
Director, NATO Standardization Office

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RESERVED FOR NATIONAL LETTER OF PROMULGATION

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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 RESERVATION
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CHAPTER 1 INTRODUCTION

1.1. PREAMBLE

This Allied Tactical Publication covers the requirements for Joint Terminal Attack Controller (JTAC) programs. The term JTAC has replaced the previously used term Forward Air Controller (FAC).

1.2. AIM

The aim of this Allied Tactical Publication is to set the minimum requirements under which JTACs obtain certification and maintain qualification in order to successfully support the ground force commanders through the application of CAS for NATO Operations. This publication defines the minimum criteria under which JTACs must accomplish certification, maintain qualification and the responsibilities and framework of a national JTAC program.

1.3. SCOPE

This Allied Tactical Publication covers NATO's requirements for a JTAC program to include pre and post qualification aspects, instructor and evaluator designations, and program management.

1.4. AGREEMENT

The participating nations agree:

a. To acknowledge that a JTAC certified and qualified IAW the requirements defined in this Allied Tactical Publication is authorized to perform terminal attack control.

b. To train all JTACs IAW the minimum requirements for qualifications given in this Allied Tactical Publication.

c. To recognize that NATO's operational commanders may stipulate specific additional training requirements for qualified JTACs prior to deployment to their Area Of Operation (AOO).

d. To implement a national regulation which outlines policies and personnel responsibilities for certification and qualification training of JTACs, JTAC - Instructors and JTAC - Evaluators.

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CHAPTER 2 DEFINITIONS

2.1 DEFINITIONS

1. NATO Terminology Management System (NTMS) is the main NATO reference for definitions and terms.

2. In addition to the terms and definitions in ATP-3.3.2.1, the following terms and definitions are applicable within the context of this Allied Tactical Publication:

a. CAS Aircraft. Aircraft capable of executing CAS TTPs in accordance with ATP-3.3.2.1.

b. CAS Qualified Personnel. Personnel capable of proficient execution of CAS TTPs IAW ATP-3.3.2.1. In order to log controls, CAS qualified personnel are required during simulated TACs. Nations will specify the requirements for these personnel within their national regulations.

c. Certified. An individual who completes the established minimum certification requirements.

d. Control. In regards to CAS, a control consists of at least one live or simulated aircraft attacking a surface target. The control will be conducted IAW ATP-3.3.2.1 TTPs. An actual weapons release is not required. No more than two controls (Lead aircraft and wingman) can be counted per CAS briefing per target. Immediate re-attacks may count as a control for a one-aircraft sortie when the initial attack was unsuccessful. For currency, re-attacks are limited to one.

e. Forward Air Controller (Airborne) [(FAC(A)]. A certified/qualified aircrew member, who from an airborne position, exercises control of aircraft engaged in CAS IAW TTPs.

f. Forward Observer (FO). An observer with forward troops trained to call for and adjust supporting fire and pass battlefield information. A FO is not considered qualified to perform terminal attack control.

g. Joint Terminal Attack Controller (JTAC). A certified/qualified individual who directs the action of aircraft engaged in close air support IAW CAS TTPs and provides terminal attack control.

h. Joint Terminal Attack Controller - Instructor (JTAC-I). A certified/qualified individual who has met the associated requirements and performs the instruction of personnel IAW CAS TTPs, national and NATO regulations.

i. Joint Terminal Attack Controller - Evaluator (JTAC-E). A certified/qualified individual who has met the associated requirements and performs the evaluation of personnel IAW CAS TTPs, national and NATO regulations.

j. JTAC Trainee. Individual identified to attend the appropriate JTAC training program with the intent of being certified as a JTAC.

k. JTAC Training Program. A program designed to address all aspects of JTAC training, to include certification, qualification and administrative requirements of a JTAC program.

l. National JTAC Program Manager. Representative of national forces on all matters concerning procedures, certification and qualification of national JTACs and the lead agent for the national JTAC program.

m. Practical Exercise (PE). A training event which allows JTACs and JTAC trainees to demonstrate the skills associated with correct use of equipment, tactics, techniques and procedures.

n. Proficient. Individual is able to accomplish all items in the tasks correctly, efficiently and repeatedly without assistance.

o. Qualified. A certified individual who completes the established minimum recurring training and evaluation requirements.

p. Remote Observer. Any individual who is integral to the success of the CAS attack based on the contributor's ability to provide target location, target marking, terminal guidance or BDA.

q. Simulated – Live Environment (SIM-LE). Simulation in a real environment in which assets are simulated. Example: Conducting Type 2 BOC attacks on a training range with aircraft simulated via a third party.

r. Simulated – Virtual Environment (SIM-VE). Simulation in a virtual environment in which assets and environment are simulated. Example: Conducting CAS in a computer simulation with aircraft generated by the simulator.

s. Simulated Terminal Attack Control (SIMTAC). Control of a simulated aircraft conducting CAS in a live or virtual environment. In order to log controls, CAS qualified personnel are required during simulated TACs.

t. Simulation. The use of a live or virtual environment designed to take the place of weapon systems or aircraft in order to train to a specific task(s).

u. Subject Matter Expert (SME). Designated individual who possesses the expertise in a given subject matter and has the ability to provide related instruction.

v. Successful Terminal Attack Control. A terminal attack control is to be considered successful if the JTAC performs the control in accordance with ATP-3.3.2.1. TTPs while meeting the ground force commander's intent.

w. Standard. Desired outcome of how well a task or learning objective must be performed. The standard specifies how well, completely, or accurately a process must be performed or product produced.

x. Task. A clearly defined and measurable activity accomplished by individuals and organizations. It must be specific; usually has a definite beginning and ending; may support or be supported by other tasks.

y. Terminal Attack Control (TAC). Terminal attack control is the application of the authority to control the maneuver of and grant weapons release clearance to attacking aircraft.

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CHAPTER 3 JTAC PROGRAM MANAGEMENT

3.1. NATIONAL PROGRAM MANAGEMENT

3.1.1. National JTAC Program Manager

1. In regard to this regulation, the National Program Manager, or designated equivalent, is the focal point of the national JTAC program. While duties and responsibilities within a national program will vary, the national program manager will be the main point of contact between the national program and the FAC Capabilities Section. The performance of duties and responsibilities will be aligned with NATO and national regulations.

2. The National JTAC Program Manager manages a program that will:

   a. Establish policy and provide guidance for the execution of the national JTAC program in coordination with senior military staff and agencies in defining requirements and capabilities.

   b. Review compliance of national regulations governing JTAC training with NATO and national directives and operational requirements.

   c. Review and process all change requests to national JTAC program regulations.

   d. Identify both positive and negative trends in the national program. Provide corrective actions as required to reverse negative trends.

   e. Identify, mitigate and manage, within their scope of responsibility, resource shortfalls such as manning and equipment capabilities.

   f. Resolve identified program issues within their scope.

   g. Communicate safety and program related issues to the appropriate audience.

   h. Have visibility on the numbers and qualification status of all JTACs and fielded JTAC equipment.

   i. Establish policy for contracted services in support of CAS training.

   j. Validate contracted services' ability to adhere to CAS TTPs.

k. Designate or propose the designation of STANEVAL personnel as authorized by the national program.

3.2 NATIONAL STANDARDIZATION AND EVALUATION (STANEVAL) PROGRAM

3.2.1. STANEVAL Program

1. The purpose of the national STANEVAL program is to ensure that JTAC training, evaluations and documentation is standardized and maintained at the level described in national regulations by all units and services. The STANEVAL program's structure and execution is flexible and will vary from nation to nation due to the related factors such as authority, delegation, organization, and size. Nations will decide at what levels STANEVAL personnel will be assigned (service, unit).

2. As part of the national JTAC program, the JTAC STANEVAL program provides commanders and staffs with meaningful indicators reflecting the program's ability to accomplish its training and combat responsibilities.

3. Objectives. The STANEVAL Program ensures that service/unit JTAC training programs support the successful and safe execution of the unit's missions.

4. Standardization. Standardization ensures that common JTAC training and programs support close air operations based upon proven tactics, techniques, and procedures and are in accordance with established standards.

5. Evaluation. Evaluations ensure that training is assessed against applicable criteria and serve as a method of validation. JTAC evaluations will emphasize combat scenarios that are based on TTPs in accordance with ATP-3.3.2.1 and national guidance. To the maximum practical extent, JTAC evaluations will use joint training exercises to include the use of live or inert ordnance, air delivered weapons, artillery or mortar fire support, threat simulators, countermeasures, and target marking techniques.

3.2.2. Chief of STANEVAL

1. This key position manages the JTAC STANEVAL program. While duties and responsibilities within a national program will vary, the Chief of STANEVAL manages the standardization and evaluation within the assigned scope.

2. The Chief of STANEVAL must be a qualified JTAC-E with a minimum of one year of continuous experience as a JTAC-E.

3. Chief of STANEVAL will manage a program that:

   a. Develops a formal evaluation system to evaluate individual JTAC qualifications based upon NATO, national and operational unit training standards.

   b. Provides guidance on the evaluation system to subordinate units.

   c. Ensures review of JTAC evaluation records are conducted by authorized personnel in order to validate training and qualifications.

   d. Manages JTAC evaluations in coordination with JTAC-Es.

   e. Standardizes administrative procedures for documenting individual JTAC qualifications.

   f. Enforces safe and effective conduct of close air support training and operations.

   g. Provides feedback to senior, lateral, and subordinate headquarters.

   h. Provide recommendations for improvement of the national JTAC program.

   i. Provide recommendations on candidates for JTAC-I and JTAC-E.

3.2.3. JTAC-Evaluators (JTAC-E)

The STANEVAL program will be assisted through the use of qualified JTAC-Es as required by the national program. JTAC-Es, as a minimum, will:

   a. Implement the standardized procedures for terminal attack control.

   b. Ensure JTAC evaluations are conducted IAW the established evaluation system.

   c. Conduct reviews of evaluation records of assigned JTAC personnel in order to validate training and qualifications.

   d. Enforce safe and effective conduct of close air support training and operations.

   e. Provide feedback to senior, lateral, and subordinate personnel as appropriate.

f. Provide recommendations for improvement of the national JTAC program.

g. Provide personnel recommendations JTAC-I and JTAC-E upgrade.

3.3 SUBJECT MATTER EXPERTS (SME)

1. Subject matter experts can provide knowledge and/or instruction on the METLs in Annex A as determined by the national program and this regulation's requirements. This regulation recognizes that SMEs can be utilized in multiple ways to include role-playing and instruction.

2. The selection process for SMEs should ensure personnel are selected and evaluated on criteria such as subject matter education, expertise and subject knowledge. It is desirable to have role-playing personnel as closely aligned to those who actually perform the duties real-world. For example, rated CAS aircrew would be optimal over personnel possessing less qualifications.

3. SMEs, as a minimum, will:

a. Be designated by an approved authority IAW national JTAC program.

b. Be restricted to teaching in a classroom or virtual environment.

c. Be assessed on a recurring basis to ensure knowledge and instruction is in line with national and/or NATO regulations.

d. SMEs who will instruct individuals will also need to complete an approved instructor program or be assessed as being capable of providing instruction. The use of contractors is permitted with the knowledge base and ability to instruct assessed IAW the national JTAC program. It is a national responsibility to ensure that the quality of a SME meets the national and NATO requirements to include NATO doctrine and directives.

CHAPTER 4 JTAC CERTIFICATION AND QUALIFICATION

4.1 MISSION ESSENTIAL TASK LIST (METL)

A strict adherence to standards established in the Mission Essential Task List (METL), Annex A, is required during the certification and qualification processes. The METL is divided into duty areas and listed by tasks and sub-tasks. Demonstrating accomplishment of the tasks is essential.

4.1.1. Method

The method describes how the task can be accomplished. The following are the different conditions in which tasks can be performed:

a. A: Academic Lessons (lectures, tests)

b. L: Live aircraft

c. PE: Practical Exercise

d. SIM: Simulation

4.1.2. Level of Performance

1. The JTAC trainee and the JTAC must be proficient in each task on the appropriate METL. At no times may unqualified personnel conduct their own training without the required supervision of a JTAC-I or SME for the unqualified task.

2. Nations that do not possess the equipment required for a task must accomplish the identified tasks in Annex A in the manner specified in the 'method' column. This ensures that a minimum interoperability exists between alliance members in performing joint operations. This is an interim solution until successful fielding enables the full training of the task as it exists without caveats. Those trained to this caveat cannot perform this task unsupervised until such time that the equipment has been fielded and trained to the standard.

4.2. JTAC CERTIFICATION REQUIREMENTS

1. Nations will certify JTACs in accordance with NATO publications and national regulations. The instruction must be based on the principles for CAS IAW ATP-3.3.2.1. Certification requirements are:

a. Successful completion of a nationally approved JTAC training course.

b. Successful completion of all METLs per Annex A.

c. Successful completion of all controls IAW Table 4.2. under the instruction of JTAC-Is.

d. Satisfactory completion of the initial JTAC evaluation conducted by a JTAC-E IAW NATO and national requirements. This includes an evaluation against all criteria corresponding to the certification being evaluated as shown in Annex D.

2. The following requirements are mandated for the minimum 12 certification controls, which meet the collective requirements in Table 4.2. Six of the twelve controls required must utilize live aircraft. The remaining six controls may be accomplished through a combination of live or simulated attack controls.

Table 4.2 Minimum JTAC Certification Controls

Successful Terminal Attack Controls	Minimum Required	Conditions for Accomplishment	
		Live A/C	Simulated TAC
			SIM–VE
Type 1	2	Yes	1 Maximum
Type 2	2	Yes	1 Maximum
Type 3	1	Yes	Yes
BOT	2	Yes	1 Maximum
BOC	2	Yes	Yes
FW CAS Aircraft	2	Yes	--
RW CAS Aircraft	1	Yes	Yes
Laser control[1*]	1	Yes	Yes
IR Pointer [2*]	1	Yes	Yes
Night	2	Yes	1 Maximum
Remote Observer	1	Yes	Yes
Full Motion Video (FMV)[3*]	1	Yes	Yes
Live/Training Munitions	1	Yes	--
Low Level[4*]	2	Yes	Yes
Day	2	Yes	--

[1] Ground Laser Target Designator (GLTD) shall be utilized to mark/designate a target for an aircraft or weapon. Intent is to utilize GLTD, laser TTPs and terminology.

[2] IR pointer shall be utilized to mark a target for a NVG equipped aircrew. Intent is to utilize IR equipment and IR terminology.

[3] FMV will include the use of remote video feed from a transmitter situated in an overhead or near overhead perspective with an associated video receiver. Intent is to use associated equipment and terminology.

[4] LL control must be executed in a tactical situation that dictates the aircraft must maintain standoff distance from the target area prior to attack (for example due to airspace saturation, threat, weather or artillery activity) and the aircrew is not able to observe the target area and correlate the target prior to commencing the attack run. Control must include run from the IP/BP (full 9-line) and use enhanced target description correlation technique.

***** Note – Nations without the appropriate equipment will accomplish the task through an academic lesson and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.

4.2.1. Training documentation and deficiencies

JTAC courses will provide course completion documentation. At a minimum, course completion documentation must address completion of the requirements listed in paragraph 4.2. sub para 1 a through c. When required training has not been accomplished, the JTAC course will provide a deficiency letter. The deficiency letter will list the training requirements that were not accomplished and specify the reason why. Nations will determine the method of completing these deficiencies. Any discrepancies must be completed IAW course manager guidance.

4.2.2. Instruction

Only JTAC-Is will instruct JTAC trainees in terminal attack controls. Subject Matter Experts who meet the requirements in para 3.3 for instructing may instruct JTAC trainees on course topics which support CAS operations in Annex A but only in a classroom or virtual setting. During certification, when instructing JTAC trainees in terminal attack controls, the instructor will be co-located with the individual being trained and be able to assume control of the mission.

4.3. JTAC QUALIFICATION REQUIREMENTS

1. Nations will qualify JTACs in accordance with NATO and national regulations and the requirements of the METLs in Annex A and the minimum control requirements in the Table 4.3. Unless the national program directs otherwise, JTACs are considered to be qualified when certified, provided they meet all qualification requirements outlined below. The JTAC must maintain all qualification requirements.

2. These requirements are:

   a. Successful completion of all qualification METLs as listed in Annex A.

   b. Successful completion of all controls, including category and number, per Table 4.3.

   c. Possession of a documented English SLP - LSRW of 3.3.3.2 IAW STANAG 6001 when the individual is not a native English speaker.[1]

   d. Successful completion of the JTAC evaluation conducted by a JTAC-E IAW para 4.3.1.

[1] The use of operational and technical language in the development of English proficiency of the JTAC is highly recommended due to its inherent ability to improve successful accomplishment of the mission.

e. Successful completion of a minimum of 12 controls within the last 12 months

In order for the JTAC to retain qualification, all controls (category and number) and METLs per Annex A must remain current. The expiration of any controls or METL will result in the loss of qualification. The control (category and number) and METLs have a one year currency period. After the first year of qualification the JTAC must remain current for the controls (category and number) and METL in order to be qualified. The period between controls will not exceed 6 months in order to retain qualification.

3. This publication does not require that a qualified JTAC must be supervised when accomplishing METL training. An unqualified JTAC requires supervision from a JTAC-I when performing tasks in which the individual is unqualified.

4. The following requirements are mandated for the minimum 12 qualification controls which meet the collective requirements in Table 4.3. Six of the twelve required controls must utilize live aircraft. The remaining six controls may be accomplished through a combination of live or simulated attack controls. Simulated TAC are further broken into two categories: live and virtual environment conditions. In simulated – live environments, the maximum allowable controls that can be used for qualification is three with limitations on category per Table 4.3.

5. Categories marked with an asterisk (*) are waived for those programs that do not possess the required equipment. This does not change the 12-control minimum requirement, just the categories that can be performed via controls.

Table 4.3 Minimum JTAC Qualification Controls

Successful Terminal Attack Controls	Minimum Required	Conditions for Accomplishment		
		Live A/C	Simulated TAC	
			SIM–LE	SIM–VE
Type 1	2	Yes	--	1 Maximum
Type 2	2	Yes	1 Maximum	
Type 3	1	Yes	Yes	Yes
BOT	2	Yes	1 Maximum	
BOC	2	Yes	Yes	Yes
FW CAS Aircraft	4	Yes	--	--
RW CAS Aircraft	1	Yes	Yes	Yes
Laser control [1*]	2	Yes	1 Maximum	
IR Pointer [2*]	2	Yes	1 Maximum	
Night	2	Yes	1 Maximum	
Remote Observer	2	Yes	Yes	Yes
Full Motion Video (FMV)[3*]	1	Yes	Yes [3]	Yes

Live/Training Munitions	1	Yes	--	--
Low Level[4*]	2	Yes	--	Yes
Day	2	Yes	--	--

[1] Ground Laser Target Designator (GLTD) shall be utilized to mark/designate a target for an aircraft or weapon. Intent is to utilize GLTD, laser TTPs and terminology.
[2] IR pointer shall be utilized to mark a target for a NVG equipped aircrew. Intent is to utilize IR equipment and IR terminology.
[3] FMV will include the use of remote video feed from a transmitter situated in an overhead or near overhead perspective with an associated video receiver. Intent is to use associated equipment and terminology.
[4] LL control must be executed in a tactical situation that dictates the aircraft must maintain standoff distance from the target area prior to attack (for example due to airspace saturation, threat, weather or artillery activity) and the aircrew is not able to observe the target area and correlate the target prior to commencing the attack run. Control must include run from the IP/BP (full 9-line) and use enhanced target description correlation technique.

***** Note – Nations without the appropriate equipment will accomplish the task through an academic lesson and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.

4.3.1. Recurring Evaluation

1. To retain qualification, the qualified JTAC must pass a recurring evaluation. This evaluation is separate from any training controls and consists of two parts: practical (live aircraft or simulated TAC) and academic. All areas related to the evaluated qualifications, as described in Annex D, must be evaluated through the appropriate means.

2. An example of evaluating a task through appropriate means is as follows: A mission flown over a civilian area prevents actual use of a GLTD, however the GLTD can be set-up and aspects of a laser control demonstrated without firing such laser - such tasks evaluated through simulation.

3. The evaluation will expire on the last day of the 18th month after the evaluation is dated. The evaluation must be conducted by a JTAC-E. Nations are responsible for the conduct of the evaluation. Annex D provides an example of a JTAC evaluation form. Nations may use a national equivalent evaluation form covering, as a minimum, all the information specified in the sample.

4. Grades are assigned for each area evaluated and the overall qualification:

   a. “Q”: Qualified. The evaluated JTAC demonstrated a satisfactory knowledge of all required information, performed JTAC duties IAW national regulations and accomplished the assigned mission.

b. “Q-”: Qualified minus. The evaluated JTAC is qualified to perform the assigned area/subarea tasks, but requires debriefing or additional training in the dedicated area.

c. “U”: Unqualified. The evaluated JTAC is unqualified to perform the assigned task area and requires additional training.

The overall evaluation grade is an overall evaluation of the JTAC by the evaluator and is not necessarily related to the number of grades received on the evaluated tasks. In all cases, the grade of “U” on any task will result in an overall “U.” Furthermore, the grade of “Q-” is not acceptable in the areas designated as CRITICAL. Any grade less than a “Q” in the CRITICAL areas will result in an overall grade of “U” and will result in a failed evaluation.

4.3.2. Deployments

Only qualified JTACs will be allowed to perform terminal attack controls in support of NATO operations. After a qualified JTAC deploys, the commander may consider a JTAC qualified per this publication even if the JTAC is unable to maintain all qualification requirements in theatre. Upon redeployment, JTACs who do not meet qualifications will be considered unqualified. It is a national responsibility to manage and complete the re-qualification training of this individual in the immediate period thereafter.

4.4. LOSS OF CERTIFICATION / QUALIFICATION

4.4.1. Loss of qualification

If a qualified JTAC fails to meet the requirements per para 4.3.1, the JTAC is considered unqualified and must re-qualify in accordance with national and the following NATO guidance:

a. A JTAC whose evaluation has expired or who has not successfully completed an evaluation, must successfully complete an evaluation prior to being qualified. The JTAC may conduct terminal attack controls under the supervision of a JTAC-I.

b. If the JTAC is unqualified due to a failure to successfully complete the required number and types of qualification controls, as per table 4.3., the deficient number/types of controls must be accomplished under the supervision of a JTAC-I to be qualified.

c. If the JTAC is unqualified due to a failure to successfully complete any task per Annex A**,** the individual must requalify under the supervision of a JTAC-I. While unqualified, the JTAC must control live aircraft while under the supervision of a JTAC-I until re-qualified to increase both the

safety of all involved parties as well as to ensure that the most current TTPs are being utilized.

d. The unqualified JTAC with a current evaluation can control unsupervised only for those control categories that have not expired.

For example: A JTAC is unqualified due to an expired laser control. This individual must be supervised by a JTAC-I when performing a laser control until re-qualified. However, this individual is current in their training for night controls and so may conduct night controls without the presence of a JTAC-I.

4.4.2. Loss of certification

Certification will be removed:

a. Based on reasons dictated by national regulations.

b. If the appropriate authority has made the determination that the JTAC lacks the skills or abilities to continue providing terminal attack control.

c. If the JTAC is unqualified for more than 24 months

d. The individual must complete approved refresher training in order to regain certification IAW NATO and national regulations.

4.5. JOINT TERMINAL ATTACK CONTROLLER - INSTRUCTOR

4.5.1. Requirements

The JTAC-I is the designation given to those individuals who have met the associated requirements and instruct personnel IAW CAS TTPs, NATO and national regulations. As a minimum, a JTAC-I will:

a. Possess a minimum of one year experience as a qualified JTAC.

b. Maintain qualified JTAC status IAW NATO and national regulations.

c. Complete a nationally approved instructor upgrade program that includes position-related specifics (i.e., course/units).

d. Be designated by an approved authority IAW national regulations.

4.5.2. Certification and Qualification

1. A JTAC-I will receive an initial and recurring evaluations based on the 18-month window mentioned previously for JTACs. JTAC-Is will receive evaluations IAW Annex D, Areas 1 through 26.

2. The loss of qualification as a JTAC will result in the loss of qualification as a JTAC-I until such time that all associated training and evaluation requirements have been successfully accomplished for all designations.

4.5.3. Contractor JTAC-I

Contractors are able to perform as JTAC-Is when authorized by the national regulation. These requirements are:

a. Certified previously as a qualified JTAC or JTAC-I while having served as a military service member.

b. Meet and maintain certification and qualification requirements paragraph 4.5.1.

4.6. JOINT TERMINAL ATTACK CONTROLLER - EVALUATOR

4.6.1. Requirements

The JTAC-E is the designation provided to those individuals who have met the associated requirements and evaluate personnel IAW CAS TTPs, national and NATO regulations. As a minimum, a JTAC-E will:

a. Possess a minimum of one year experience as a qualified JTAC-I.

b. Maintain qualified JTAC and JTAC-I status IAW NATO and national regulations.

c. Complete a nationally approved evaluator upgrade program.

d. Be designated by an approved authority IAW national regulations.

4.6.2. Certification and Qualification

1. A JTAC-E will receive an initial and recurring evaluations based on the same 18-month mentioned previously for JTACs. JTAC-Es will receive evaluations IAW Annex D, Areas 1 through 27.

2. The loss of qualification as a JTAC or JTAC-I will also result in the loss of qualification as a JTAC-E. Requalification will not occur until such time that all

associated training and evaluation requirements have been successfully accomplished for all designations.

4.6.3. Contractor JTAC-E

1. Contractors are able to serve as JTAC-Es when authorized by the national regulation. The requirements are:

a. Certified previously as a qualified JTAC while having served as a military service member.

b. Meet and maintain the requirements in paragraphs 4.5.1 and 4.6.1.

c. Receive evaluations only from military service member JTAC-Es.

4.7. JTAC EVALUATION FOLDER

1. To properly document JTAC training an individual JTAC evaluation folder will be issued in accordance with national directives. National regulations will ensure the control and accountability of the JTAC evaluation folders in order to ensure records are accurate and up-to-date. This JTAC evaluation folder will be taken by the individual to each duty assignment and deployment in order to provide reference of the individual's JTAC certification and qualification status. It will contain reference to this Allied Tactical Publication, details of training, date of issue, number of controls, additional qualifications and designations and must be in the English language.

2. The evaluation folder will contain the following six-part documentation system:

Part I: TABLE OF CONTENTS

Part II: DESIGNATION LETTERS – This section contains a copy of the JTAC's current designation letters and a copy of any previous designation letters as applicable (see example at Annex E).

Part III: JTAC CAS LOG – This section must contain records of all controls performed since training was initiated. Annex B shows an example of a CAS Log. Nations may use a national equivalent covering, as a minimum, all the information mentioned. The log entry must contain details sufficient to prove that required categories of controls per Table 4.2 and/or Table 4.3 were performed.

Part IV: DOCUMENTATION OF TRAINING – All continuation training and requalification training must be documented in Part IV to include academics, testing and qualification METL accomplishment per Annex A. Changes to qualification/certification status must be documented by the appropriate authority. Certification training

documentation is not required to be maintained after certification with the exception of the CAS log.

Part V: DOCUMENTATION OF EVALUATIONS – This section contains documentation of all evaluations conducted since certification. The certificate of English language proficiency must be in the Part V and state the STANAG 6001 equivalence in SLP format (LSRW).

Part VI: JTAC FORMAL COURSE DIPLOMAS – This section contains copies of any certificates received from attending a CAS related course.

ANNEX A: JTAC MISSION ESSENTIAL TASK LIST

Unqualified personnel will require the instruction by either a JTAC-I or SME, depending on the nature of the task. Qualified personnel may consider the task to have been accomplished by performing the tasks associated with the METL(s) unless otherwise stated in the national program.

The successful completion of academic testing is a test score of 80% or greater.

A: Academics (lesson/test) L: Live aircraft PE: Practical Exercise SIM: Simulation

A.1. DUTY AREA 1 - CAS Planning

TASK	SUBTASK	DEFINITION	METHOD
1.1		**Advise ground force commander / battle staff on aspects of close air support.**	
	1.1.1	**Advise ground force commander on Fixed-Wing (FW) / Rotary-Wing (RW) platform capabilities / limitations / employment.** Demonstrate knowledge of the capabilities, limitations, and employment of fixed wing/rotary wing platforms. JTAC will be able to successfully answer questions on capabilities, limitations, and employment of FW/RW CAS platforms.	**A**
	1.1.2	**Advise ground force commander on FAC(A) capabilities / limitations / employment.** Demonstrate knowledge of the capabilities, limitations, and employment of fixed wing/rotary wing FAC (A) platforms. Clearly define the roles and responsibilities of supporting and supported forces when integrating FAC(A). JTAC will be able to successfully answer questions on the capabilities, limitations, and employment of FW/RW FAC (A).	**A**

TASK	SUBTASK	DEFINITION	METHOD
	1.1.3	**Advise ground force commander on remote observer capabilities / limitations / employment.** Demonstrate knowledge of the capabilities, limitations, and employment of a remote observer (e.g., scout, FO, SOF), Clearly define the roles and responsibilities of supporting and supported forces when integrating a remote observer. JTAC will be able to successfully answer questions on remote observer capabilities, limitations, and employment.	**A**
	1.1.4	**Advise ground force commander on Unmanned Aerial Systems (UAS) capabilities/limitations/employment.** Demonstrate knowledge of the capabilities, limitations, and employment of UAS platforms. JTAC will be able to successfully answer questions on the capabilities, limitations, video downlink (FMV) and employment of UAS.	**A**
	1.1.5	**Advise ground force commander on aviation munitions capabilities / limitations / employment.** Demonstrate knowledge of air delivered weapon's capabilities, limitations, and employment methods. (general purpose bombs, cluster munitions, laser guided munitions, inertially aided munitions, aircraft guns, rockets, flares, air to ground missiles). JTAC will be able to successfully answer questions on weapons capabilities, limitations, and employment.	**A**
	1.1.6	**Advise ground force commander on effects of weather, terrain, and threat on CAS capabilities.** Demonstrate knowledge of weather, terrain and threats when employing CAS assets. JTAC will be able to successfully answer questions on mission impacts of weather, terrain and threats when employing CAS assets.	**A**
	1.1.7	**Advise ground force commander on effects of electronic warfare on CAS capabilities.** Demonstrate knowledge of airborne and ground base electronic warfare (EW) effects. JTAC will be able to successfully answer questions on EW effects, location of electronic warfare planners, the request process and how to request EW in support of CAS operations.	**A**

TASK	SUBTASK	DEFINITION	METHOD
	1.1.8	**Advise ground force commander on the use and timely submission of joint tactical air strike requests (JTAR).** Demonstrate knowledge of the Air Tasking Order planning cycle and its effects on JTAR submission. Address what an ATO is, the information listed and how to access the document. The JTAC should also understand the process to get a preplanned mission on the ATO. JTAC will be able to successfully answer questions on the Air Tasking Order planning cycle and its effects on JTAR submission.	**A**
	1.1.9	**Advise ground force commander on Battle Damage Assessment (BDA) and Mission Reporting (MISREP) procedures.** Demonstrate knowledge of the information required to successfully complete a BDA (e.g. observed damage (enemy/civilian)), re-attack recommendation, BDA log, and MISREP procedures. JTAC will be able to successfully answer questions on the information required to successfully complete BDA report to CAS aircraft that includes: Size, Activity, Location, Time, Remarks — Munitions expended, observed damage (number of tanks destroyed, number still active, and recommendation), mission number, and mission accomplishment (SUCCESSFUL, UNSUCCESSFUL or UNKNOWN).	**A**
1.2		**Advise ground force commander on the minimum components of a game plan (types of Terminal Attack Control and Method of Attack).** Demonstrate knowledge of how tactical situation, aircrew, aircraft, and weapons capabilities/limitations determine appropriate type of terminal attack control and method of attack contained in the game plan. JTAC will be able to successfully answer questions on the types of CAS control and the factors that determine the type of control and method of attack to be used in a given situation.	**A**
1.3		**Advise ground force commander on integration of CAS with indirect fires.** Demonstrate knowledge of the integration of indirect fires (surface to surface) with CAS. Address deconfliction methods which facilitate simultaneous multi-ship/platform CAS and indirect fire operations. Must be well versed in ACoA terminology and have knowledge of all applicable ACoAs in use. JTAC will be able to successfully answer questions on separation techniques that deconflict airspace to provide a reasonably safe operating space for aircraft to maneuver and attack targets.	**A**

TASK	SUBTASK	DEFINITION	METHOD
1.4		**Advise ground force commander on the impact of fire support coordination measures (FSCM) on CAS mission planning.** Given a tactical scenario (e.g. operations order) assess the impact of FSCMs on CAS operations in support of the ground force commander's concept of operations. Address, at a minimum, the definition and proper employment of permissive and restrictive FSCMs to expedite the attack of targets. JTAC will be able to successfully answer questions on FSCMs used during CAS operations.	**A**
1.5		**Advise ground force commander on airspace command and control (Joint and Component) procedures and their impact on CAS mission planning (supporting documents - Airspace Control Order (ACO), Airspace Coordination Means (ACM), Air Tasking Order (ATO), and Special Instructions (SPINS).** Demonstrate knowledge of airspace command and control components, the definition and application of ACO, ACM, ATO, and SPINS and their impact on CAS mission planning. JTAC will be able to successfully answer questions on the primary command and control agencies and their roles and responsibilities within the associated Command and Control System and the functions of the ACO, ACM, ATO, and SPINS. This includes the ability to use NATO message text format (MTF) based messaging.	**A**
1.6		**Apply intelligence products to CAS mission planning.** Apply intelligence products to support CAS mission planning in support of the ground force commander's concept of operations.	**A**
1.7		**Apply the products of the targeting process to CAS mission planning.** Demonstrate knowledge of the targeting process. Address the process that the supported commander selects, prioritize targets, and match appropriate effects. Address the products the JTAC will use when planning the employment of CAS (tactical level). JTAC trainee will be able to successfully answer questions on the targeting process products.	**A**
1.8		**Plan CAS missions with precision and non-precision weapons, in support of the ground scheme of maneuver.**	

TASK	SUBTASK	DEFINITION	METHOD
	1.8.1	**Plan a laser guided weapon delivery and use of a ground and airborne Laser target designator (LTD)** Address the standard laser brevity terms and procedures for ground and airborne designating, marking and the proper employment of laser guided weapons. JTAC will be able to successfully answer questions on laser guided weapons employment, safety zone, optimal attack zones, hellfire designator exclusion zone and proper laser terminology.	A
	1.8.2	**Plan inertial aided munitions employment.** Demonstrate knowledge of inertial aided munitions employment. Address the unique characteristics and limitations of inertial aided/GPS guided weapons. Lesson will also cover target location error (TLE), Bomb on Coordinate (BOC), and Bomb on Target (BOT). JTAC will be able to successfully answer questions on inertial aided munitions employment.	A
	1.8.3	**Plan non-precision weapons deliveries.** Demonstrate knowledge of non-precision weapons employment. Address the capabilities, limitations and employment of general purpose weapons. Consideration must be given to host aircraft navigation/weapons system accuracy. JTAC will be able to successfully answer questions on non-precision weapons employment.	A
1.9		**Plan engagement with appropriate weapon in order to achieve desired effects, proportional response, and minimize collateral damage.** Demonstrate knowledge of aviation ordnance capabilities and effects. Scenarios will be utilized where ordnance is appropriately matched to targets to achieve ground force commanders' desired results and comply with Rules of Engagement (ROE) and restrictions (e.g., SPINS, national caveats, etc.). Theatre specific ROE, restrictions and lessons learned should be briefed. Reinforcement through practical application is required during simulated, dry and/or live controls. JTAC will be able to successfully answer questions on aviation ordnance capabilities and effects.	A
1.10		**Plan day CAS missions in support of the ground scheme of maneuver.**	

TASK	SUBTASK	DEFINITION	METHOD
	1.10.1	**Plan day CAS missions utilizing FW assets.** Demonstrate knowledge of day, FW CAS planning factors. JTAC will be able to successfully answer questions on day, FW CAS planning factors.	**A**
	1.10.2	**Plan day CAS missions utilizing RW assets.** Demonstrate knowledge of day, RW CAS planning factors. JTAC will be able to successfully answer questions on day, RW CAS planning factors.	**A**
1.11		**Plan night CAS missions in support of the ground scheme of manoeuvre.**	
	1.11.1	**Plan night CAS missions utilizing FW assets.** Demonstrate knowledge of night, FW CAS planning factors. JTAC will be able to successfully answer questions on FW CAS planning factors.	**A**
	1.11.2	**Plan night CAS missions utilizing RW assets.** Demonstrate knowledge of day, night RW CAS planning factors. JTAC will be able to successfully answer questions on RW CAS planning factors.	**A**
	1.11.3	**Plan Illumination in support of night CAS missions.**	
	01.11.3.1	**Plan ground-delivered Illumination.** Demonstrate knowledge of ground-delivered illumination, in support of CAS. Address techniques and procedures on how to employ illumination via surface based fire support systems in support of CAS missions (Artillery, Mortars, and Naval Surface Fires). JTAC will be able to successfully answer questions on surface-delivered illumination, in support of CAS.	**A**

TASK	SUBTASK	DEFINITION	METHOD
	01.11.3.2	**Plan aviation-delivered Illumination.** Demonstrate knowledge of aviation-delivered illumination, in support of CAS. Address techniques and procedures on how to employ illumination via aviation assets in support of CAS missions (e.g. Airborne delivered flares, Illumination rockets). JTAC will be able to successfully answer questions on aviation-delivered illumination, in support of CAS.	A
1.12		**Incorporate CAS mission planning factors for operations in limited visibility/adverse weather.** Demonstrate knowledge of limited visibility and adverse weather and its effects on CAS. Address techniques and procedures on how to execute a CAS mission during limited visibility and adverse weather conditions. JTAC will be able to successfully answer questions on limited visibility/adverse weather effects on CAS.	A
1.13		**Incorporate CAS mission planning factors for operations in an urban environment.** Demonstrate knowledge of CAS mission planning factors for operations in an urban environment. Address planning factors, techniques and procedures on how to execute a CAS mission in the urban environment JTAC will be able to successfully answer questions on urban CAS planning factors.	A
1.14		**Plan FW gunship fire missions in support of the ground scheme of maneuvre.** Demonstrate knowledge of gunship employment and fire missions. Address planning factors, techniques and procedures on how to employ the gunships. JTAC will be able to successfully answer questions on FW gunship capabilities, Call for Fire procedures and proper employment.	A
1.15		**Plan integrated attack by multiple fire support assets to support CAS.**	
	1.15.1	**Plan target marking for CAS assets.**	

TASK	SUBTASK	DEFINITION	METHOD
	1.15.1.1	**Plan target marking for CAS with indirect fire assets.** Demonstrate knowledge to effectively plan visual target marking for CAS with indirect fire. Address techniques and procedures on how to use indirect fire (e.g. artillery, mortars) to provide visual marks (e.g. smoke, illumination) to execute a CAS mission. JTAC will be able to successfully answer questions on target mark timing, airspace management (deconflicting fires from CAS platforms) and use of smoke, high explosive, illumination or other visual means.	A
	1.15.1.2	**Plan target marking with ground IR pointer for CAS assets.** Demonstrate the ability to effectively plan ground IR pointer target marking for CAS. Address the standard IR pointer brevity terms, procedures for ground IR pointer marking, and the proper employment of IR pointer. JTAC will be able to successfully answer questions on IR Brevity and IR pointer safety.	A
	1.15.2	**Plan surface to surface Suppression Enemy Air Defenses (SEAD) for CAS attack.** Demonstrate the ability to effectively plan SEAD for CAS. Address techniques and procedures on how to use indirect fire (e.g. artillery, mortars) to provide SEAD in support of a CAS mission. JTAC will be able to successfully answer questions on definition of SEAD, timing, and airspace management (deconflicting fires from CAS platforms).	A
	1.15.3	**Plan coordinated attacks by multiple flights of aircraft to support CAS.** Demonstrate knowledge to effectively coordinate attacks by multiple flights of aircraft and deconflict them from each other during simultaneous and sequential attacks to support CAS. Address type of attack (Combined/Sectored), timing and procedures on how to deconflict flights. JTAC will be able to successfully answer questions on methods of deconflicting CAS platforms from each other during simultaneous and sequential attacks.	A
1.16		**Plan terminal attack control in support of CAS attack.** Demonstrate knowledge of terminal attack control procedures in support of CAS planning. Address planning factors, techniques and procedures on how to conduct terminal attack control of a CAS mission. JTAC will be able to successfully answer questions on established terminal attack control procedures, Situation update, game plan and CAS Attack Brief.	A

TASK	SUBTASK	DEFINITION	METHOD
1.17		**Plan target location procedures with the understanding of target location errors (TLE) in support of attack.** Demonstrate knowledge of target location procedures and target location errors (TLE) in support of CAS planning. Address planning factors, techniques and procedures on how to most efficiently and effectively locate targets; stress the importance of a targets associated TLE. JTAC will be able to successfully answer questions on procedures, equipment used to determine target location, and TLE categories.	**A**
1.18		**Request CAS via JTAR.** Demonstrate knowledge of the JTAR. Address the proper routing and processing of pre-planned and immediate request through the command and control system. JTAC will be able to successfully answer questions on the procedures to fill out and route a JTAR.	**A**
1.19		**Plan the use of digital systems in support of CAS.** Demonstrate knowledge of digital systems to facilitate the planning and execution of CAS mission.	**A**

A.2. DUTY AREA 2 - CAS Preparation

TASK	SUBTASK	DEFINITION	METHOD
2.1		**Operate organic JTAC equipment.**	
	2.1.1	**Operate organic JTAC communications equipment.** Demonstrate the ability to operate all required organic communications equipment necessary for requesting, coordinating and controlling CAS missions. JTAC will demonstrate proficiency in operating communications equipment as designated by their programs. JTACs will have the skills to operate in the required frequency bands in secure voice, anti-jam and digital information exchange capabilities.	**L/PE/SIM**

TASK	SUBTASK	DEFINITION	METHOD
	2.1.2	**Operate organic JTAC target marking equipment.** Demonstrate the ability to operate target marking equipment in support of CAS. JTAC will demonstrate the ability to operate laser target designators (LTD), IR pointers, radar beacons and other designated target marking equipment designated by their programs. *(Note – Nations without the appropriate equipment will accomplish the task through an academic lesson and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.)*	**L/PE/SIM**
	2.1.3	**Operate organic JTAC target location equipment.** Demonstrate the ability to operate target location equipment and knowledge of its accuracy in support of CAS. JTAC will demonstrate the ability to operate Laser Range finders, GPS systems, Targeting Software and other target location equipment designated by their programs.	**L/PE/SIM**
	2.1.4	**Operate organic JTAC full motion video equipment.** Demonstrate the ability to operate full motion video equipment in support of CAS. JTAC will demonstrate the ability to operate full motion video equipment designated by their programs. *(Note – Nations without the appropriate equipment will accomplish the task through an academic lesson and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.)*	**L/PE/SIM**
	2.1.5	**Operate organic CAS-related digital systems.** Demonstrate the ability to operate fielded digital systems (e.g., information, targeting, etc.) in support of CAS mission as designated by their programs. *(Note – Nations without the appropriate equipment will accomplish the task through an academic lesson and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.)*	**L/PE/SIM**

TASK	SUBTASK	DEFINITION	METHOD
2.2		**Apply the products of operational planning in support of CAS execution.**	
	2.2.1	**Apply intelligence products in support of CAS execution.** Demonstrate the ability to apply intelligence products (e.g. ISR support, ground order of battle, air order of battle, missile order of battle, maps, charts (1:50K, 1:250K, GRG)). JTAC will understand which products of the intelligence/deliberate planning cycle are available to him in order to devise a plan to ensure CAS resources are used against appropriate targets based on the commander's intent. (e.g., target lists).	**L/PE/SIM**
	2.2.2	**Apply the products of the fire support plan in support of CAS execution.** Demonstrate the ability to apply the products of the fire support plan (e.g., FSCMs). JTAC will understand what role they play in developing a fire support plan, ensuring CAS is fully integrated and be able to use the products that result from fire support planning (e.g. target lists, FSCMs).	**L/PE/SIM**
	2.2.3	**Apply the products of the Airspace Control Order in support of CAS execution.** Demonstrate the ability to apply the products of the ACO (e.g. ACMs). JTAC will be able to extract and apply the applicable information contained in the ACO required to safely and effectively conduct a CAS mission.	**L/PE/SIM**
	2.2.4	**Apply the products of communications planning in support of CAS execution.** Demonstrate the ability to apply a communications plan utilizing common communication networks to include extraction from applicable sources. JTAC will establish and maintain all applicable communications nets required to plan, coordinate and execute a CAS mission. JTAC will understand communications plans and be able to extract communications network data from applicable sources.	**L/PE/SIM**
	2.2.5	**Apply the products of the ATO in support of CAS execution.** Demonstrate the ability to apply the ATO (e.g., aircraft, time on station, SPINS). JTAC will read an ATO and be able to identify and extract the information needed to execute a CAS mission to include those in a Message Text Format (MTF).	**L/PE/SIM**

A.3. DUTY AREA 3 - CAS Execution

TASK	SUBTASK	DEFINITION	METHOD
3.1		**Targeting**.	
	3.1.1	**Target Acquisition.**	
	3.1.1.1	**Execute target acquisition via aided and unaided during daytime conditions.** Demonstrate the ability to visually acquire targets based on ground force commander's CAS target nominations aided (e.g. binoculars, LRF, LTD, electro-optical (EO), IR) and unaided eyes. JTAC will visually identify CAS targets based on ground force commander's CAS target nominations under day conditions.	**L/PE/SIM**
	3.1.1.2	**Execute target acquisition via aided and unaided during night conditions.** Demonstrate the ability to visually acquire targets aided (e.g., binoculars, NVGs, IR, thermal) and unaided eyes during night. JTAC will visually identify CAS targets based on ground force commander's CAS target nominations under night conditions. Unaided acquisition may involve the use of artificial illumination methods such as air/ground delivered methods (e.g., covert/overt).	**L/PE/SIM**
	3.1.1.3	**Execute target acquisition via remote observer.** Demonstrate the ability to target via remote observer (e.g., scout, FO, SOF). JTAC will demonstrate the ability to work successfully with a remote observer to acquire targeting information (e.g. target location, threats, friendlies) and other critical information needed to build situational awareness in order to successfully conduct a CAS mission.	**L/PE/SIM**
	3.1.1.4	**Execute target acquisition via remote real-time sensor full motion video information.** Demonstrate the ability to acquire targets via remote real-time sensor full motion video (e.g., ROVER, targeting pod). JTAC will demonstrate the ability to successfully use full motion video to receive full motion video, still photos, imagery or other media to acquire targeting information (e.g. target coordinates, threats, friendlies, etc.) needed to build situational awareness in order to successfully conduct a CAS mission. *(Note – Nations without the appropriate equipment will accomplish the task through a practical exercise and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.)*	**L/PE/SIM**

TASK	SUBTASK	DEFINITION	METHOD
	3.1.2	**Target Location.**	
	3.1.2.1	**Determine target location via map plot.** Demonstrate the ability to determine target location via map plot. JTAC will demonstrate the ability to successfully determine target coordinates within specified accuracy.	**L/PE/SIM**
	3.1.2.2	**Determine target location via coupled GPS/LRF system.** Demonstrate the ability to determine target location via coupled GPS/LRF. JTAC will demonstrate the ability to successfully determine target coordinates using a coupled GPS/LRF to a specified accuracy. *(Note – Nations without the appropriate equipment will accomplish the task through an academic lesson and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.)*	**L/PE/SIM**
	3.1.2.3	**Determine target location via tactical targeting system.** Demonstrate the ability to determine target location using digital targeting system. *(Note – Nations without the appropriate equipment will accomplish the task through an academic lesson and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.)*	**L/PE/SIM**
3.2		**Match target location accuracy / format to desired weapons system.** Demonstrate the ability to determine accuracy of target location (e.g. TLE) and proper coordinate format to desired weapons system. JTAC will determine target location error (TLE) associated with the procedure or equipment used to determine target location coordinates. Match coordinates format and best weapon to target based on accuracy and capability.	**L/PE/SIM**
3.3		**Coordinate CAS missions.**	

TASK	SUBTASK	DEFINITION	METHOD
	3.3.1	**Integrate CAS missions with ground scheme of manoeuvre.** Demonstrate the ability to integrate CAS missions with ground scheme of maneuver. JTAC will demonstrate the ability to effectively integrate CAS into the ground scheme of maneuver by meeting the commander's intent for CAS.	**L/PE/SIM**
	3.3.2	**Integrate CAS missions with surface-based fires.** Demonstrate the ability to integrate CAS missions with surface-based fires. JTAC will demonstrate the ability to effectively integrate CAS with supporting or complementary surface fires into the ground scheme of maneuver by meeting the commander's intent for Fire Support.	**L/PE/SIM**
	3.3.3	**Integrate CAS missions with existing fire support and airspace control means.** Demonstrate the ability to integrate CAS missions with fire support and airspace coordination means. JTAC will demonstrate the ability to effectively use fire support and airspace coordination means to deconflict CAS with all fire support and aviation assets, to meet the commander's intent for maneuver and fire support.	**L/PE/SIM**
3.4		**Execute deconfliction of aviation assets.**	
	3.4.1	**Execute procedural control of aircraft to provide safe separation.** Demonstrate the ability to effectively deconflict aircraft. JTAC will demonstrate the ability to use appropriate airspace management procedures to ensure safe operation of aircraft in the battlespace during CAS operations.	**L/PE/SIM**
	3.4.2	**Execute procedural control of aircraft to provide safe separation from fires.** Demonstrate the ability to effectively deconflict aircraft from fires. JTAC will demonstrate the ability to combine appropriate airspace management procedures with active fire support coordination measures to ensure safe operation of aircraft in the battlespace during CAS operations.	**L/PE/SIM**
3.5		**Coordinate CAS target engagement.**	

TASK	SUBTASK	DEFINITION	METHOD
	3.5.1	**Receive aircraft check-in and provide situation update to CAS aircraft.** Demonstrate the ability to receive aircraft check-in and provide situation update. JTAC will demonstrate the ability to receive CAS aircraft check-in and provide situation update and apply information to the CAS mission as required. This includes authentication via authentication tables (e.g., AKAC, AMSL).	**L/PE/SIM**
	3.5.2	**Provide Game Plan and CAS Attack Brief.** Demonstrate the ability to provide game plan and CAS attack brief. JTAC will demonstrate the ability to pass a game plan and CAS attack brief to CAS aircraft in order to attack a surface target.	**L/PE/SIM**
	3.5.3	**Provide weapon recommendation to achieve desired effects.** Demonstrate the ability to provide a weapon recommendation, based on ground force commander's intent, to achieve desired effects. JTAC will demonstrate the ability to make appropriate weapons recommendations to CAS aircraft to ensure effects achieve the ground force commander's desired intent and comply with ROE and restrictions.	**L/PE/SIM**
3.6		**Execute target correlation and marking for CAS assets.**	
	3.6.1	**Execute visual target marking for CAS with indirect fire assets.** Demonstrate the ability to effectively target mark via visual means with indirect fire. JTAC will demonstrate the ability to mark a target using a visual indicator (e.g. smoke (WP, RP), high explosive (HE), illumination) to allow a CAS aircraft to visually acquire the target area.	**L/PE/SIM**
	3.6.2	**Execute target marking for CAS with a ground laser target designator.** Demonstrate the ability to effectively target mark or designate with a ground based LTD. JTAC will demonstrate the ability to successfully mark or designate a target using a ground based LTD to allow a CAS aircraft to acquire the target or deliver a laser guided weapon. Laser shall be utilized to designate for a weapon delivery or to mark a target for an aircraft. Intent is to utilize laser equipment and proper terminology. *(Note – Nations without the appropriate equipment will accomplish the task through a practical exercise and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.)*	**L/PE/SIM**

TASK	SUBTASK	DEFINITION	METHOD
	3.6.3	**Execute target mark for CAS with a ground IR pointer.** Demonstrate the ability to effectively target mark with a ground based IR pointer. JTAC will demonstrate the ability to successfully mark a target using an IR pointer to allow a CAS aircraft to acquire the target. IR pointer shall be utilized to mark a target for aircrew with NVG. Intent is to utilize IR pointer equipment and proper terminology. *(Note – Nations without the appropriate equipment will accomplish the task through a practical exercise and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.)*	**L/PE/SIM**
	3.6.4	**Execute target correlation through talk on and enhanced target description.** Demonstrate the ability to effectively correlate targets through narrative description to include the use of talk on and enhanced target description methods under various environmental and tactical conditions.	**L/PE/SIM**
3.7		**Integrate SEAD during the execution of CAS missions in a medium to high threat environment.** Demonstrate the ability to effectively integrate SEAD with CAS in a medium to high threat environment. JTAC will demonstrate the ability to successfully integrate SEAD during a CAS mission.	**L/PE/SIM**
3.8		**Execute appropriate terminal attack control procedures and method of attack.**	
	3.8.1	**Execute Type 1 terminal attack control procedures.** Perform Type 1 terminal attack control of CAS aircraft. JTAC will demonstrate the ability to successfully perform a Type 1 CAS control.	**Per Table 4.2/4.3**
	3.8.2	**Execute Type 2 terminal attack control procedures.** Perform Type 2 terminal attack control of CAS aircraft. JTAC will demonstrate the ability to successfully perform a Type 2 CAS control.	**Per Table 4.2/4.3**

TASK	SUBTASK	DEFINITION	METHOD
	3.8.3	**Execute Type 3 terminal attack control procedures.** Perform Type 3 terminal attack control of CAS aircraft. JTAC will demonstrate the ability to successfully perform a Type 3 CAS control.	**Per Table 4.2/4.3**
	3.8.4	**Execute BOT method of attack during a terminal attack control.** Perform BOT method of attack during terminal attack control of CAS aircraft. JTAC will demonstrate the ability to successfully perform a BOT method of attack.	**Per Table 4.2/4.3**
	3.8.5	**Execute BOC method of attack during a terminal attack control.** Perform BOC method of attack during terminal attack control of CAS aircraft. JTAC will demonstrate the ability to successfully perform a BOC method of attack.	**Per Table 4.2/4.3**
3.9		**Control day and night CAS missions, in support of the ground scheme of maneuver.**	
	3.9.1	**Control day FW CAS missions.** Perform a day fixed-wing control. JTAC will demonstrate the ability to successfully perform a day fixed-wing control.	**Per Table 4.2/4.3**
	3.9.2	**Control night FW CAS missions.** Perform a night fixed-wing terminal attack control. JTAC will demonstrate the ability to successfully perform a night fixed-wing control.	**Per Table 4.2/4.3**
	3.9.3	**Control RW CAS missions.** Perform a rotary-wing terminal attack control.. JTAC will demonstrate the ability to successfully perform a day or night rotary-wing control.	**Per Table 4.2/4.3**

TASK	SUBTASK	DEFINITION	METHOD
	3.9.4	**Control CAS missions with the support of a remote observer.** Perform a terminal attack control with the support of a remote observer. JTAC will demonstrate the ability to successfully perform a day or night terminal attack control with the support of a remote observer.	**Per Table 4.2/4.3**
	3.9.5	**Control CAS missions with the support of a FAC(A).** Perform a control with the support of a FAC(A). JTAC will demonstrate the ability to successfully perform a day or night control with the support of a FAC(A). *(Note – Nations without the FAC(A) will accomplish the task through academic class.)*	**L/PE/SIM**
	3.9.6	**Control low-level CAS missions.** Perform a control using low-level TTPs. JTAC will demonstrate the ability to successfully perform a day or night control with aircraft utilizing low-level TTPs.	**Per Table 4.2/4.3**
3.10		**Control a CAS mission in an urban environment in support of the ground scheme of maneuver.** Perform a CAS terminal attack control in an urban environment. JTAC will demonstrate the ability to successfully perform a CAS control in an urban environment.	**L/PE/SIM**
3.11		**Conduct Battle Damage Assessment (BDA).** Demonstrate the ability to provide accurate BDA (e.g. observed damage (enemy/civilian)), re-attack recommendation and maintain a log of all BDA collected, using appropriate reference material when required. JTAC will demonstrate the ability to provide BDA report to CAS aircraft that includes: Size, Activity, Location, Time, Remarks — Munitions expended, observed damage (number of tanks destroyed, number still active, and recommendation), mission number, and mission accomplishment (SUCCESSFUL, UNSUCCESSFUL or UNKNOWN).	**L/PE/SIM**

ANNEX B: JTAC CLOSE AIR SUPPORT LOG (PART III) - EXAMPLE

JOINT TERMINAL ATTACK CONTROL (JTAC) MISSION LOG								
DATE	RANGE NAME & LOCATION	NUMBER & A/C TYPE	TYPE OF ORDNANCE	NUMBER OF CONTROLS	TYPE OF CONTROL/ METHOD OF ATTACK/ SUPPORTING ELEMENT/ TACTICS/MARK/ DAY or NIGHT/ ENVIRONMENT[1*]	CONTROLLER SIGNATURE	SUPERVISOR INITIALS	REMARKS[2*]
02 Feb 2017	Baumholder Range, DEU	2xF-16	20mm	1	1/T/LL/IR/N/L		Capt. Bismarck DEU JTAC-E	ASR/JTAR sent to DEU NRF JFAC by HF 18 Months Practical evaluation
28 Feb 2017	Simulator, Guidonia AGOS ITA	2xF-16	GBU-12	1	2/C/RO/MH/D/SV			SIM NATO ACCREDITATION May/2016
10 Mar 2017	Torun, POL	2xRafale	Dry (GBU-12)	1	2/C/MH/LD/D/SL			A/c simulated by JTAC-I
22 Mar 2017	Camp Bitche, FRA	2xF-16	Dry (20mm)	1	2/T/LL/IR/N/L			DRY TAC simulated GUN employment

1*This column (column 6) should be completed in the following order: TYPE OF CONTROL: Type 1 = 1, Type 2 = 2, Type 3 = 3; METHOD OF ATTACK: BOT = T, BOC = C; SUPPORTING ELEMENT: Forward Air Controller (Airborne) = FAC(A), Remote Observer = RO; TACTICS: Low = LL, Med to High = MH; MARK: Laser Designation = LD, IR = IR, Full motion video = FMV; DAY OR NIGHT: Day = D, Night = N; ENVIRONMENT: Live = L, Sim VE = SV, Sim LE = SL;

2*This column (column 9) should report METL accomplishments and specify training requirements: other marks (White Phosphorous = WP, Red Phosphorous = RP, Illume = IL, Indirect Fire or Artillery = IF, No Mark = NA, Direct Fire = DF), Talk On = TO

Example: 2 Feb - Type 1, BOT, Low Tactics, IR pointer, Night CAS mission, Live aircraft. TAC evaluated by JTAC-E. 18th months practical evaluation.

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ANNEX C: JTAC EVALUATION FORM - EXAMPLE

JOINT TERMINAL ATTACK CONTROLLER EVALUATION								
Part I – Personal Data								
Name (Last, First, MI)			Unit			Overall Qualification		
						__ JTAC __ JTAC-I __ JTAC-E		
Part II – Evaluation Data								
Evaluation Location			Evaluation Date			Evaluation Type		
						__ JTAC __ JTAC-I __ JTAC-E		
Qualification Date	Type		Evaluation Expiration Date					
	__ Initial __ Recurring							
Part III – Evaluation								
A. Event Description:								
B. Evaluation Tasks and Grades:								
Task	Grade			Task		Grade		
	Q	Q-	U			Q	Q-	U
1. Mission Planning				25. Safety (CRITICAL)				
2. Equipment Preparation				26. JTAC-Instructor Evaluation Criteria				
3. Communications Equipment Operations				26.1 Equipment Preparation				
4. GPS Operations				26.2 Lesson Overview w/ Statement of Obj.				
5. Transmit/Receive Procedures				26.3 Instruction Effectiveness				
6. CAS Request Submission				26.4 Identified Procedures vs. Techniques				
7. Target Analysis				26.5 Training Aids				
8. Threat Analysis				26.6 Knowledge of Subject Matter				
9. Ground Force Staff Coordination				26.7 Communication				
10. Ground Force Commander Coordination				26.8 Time Management				
11. Fire Support/Airspace Management				26.9 Live Aircraft CAS Control Instruction				
12. Airspace Management				26.10 Administered Student Grade and Documentation				
13. Use of Signaling Devices				26.11 Safety (CRITICAL)				
14. JTAC to CAS Aircraft Briefing				27. JTAC-Evaluator Evaluation Criteria				
15. Attack Weapons Utilization				27.1 Compliance w/ Pertinent Manuals				
16. CAS Aircraft Control				27.2 Evaluation Briefing				
17. Ordnance Adjustment				27.3 Identification of Discrepancies and Assignment of Area Grades				
18. Post Attack Assessment				27.4 Assessment of Overall Performance				
19. Area Procedures				27.5 Appropriate Assignment of Additional Training				
20. FAC(A)/RO/JTAC Interface				27.6 Mission Debrief				
21. Laser Operations				27.7 Briefing the Supervisor on the Evaluation				
22. IR Pointer Operations				27.8 Completed Evaluation Documentation				
23. Inertial Aided Munitions Operations				27.9 Safety (CRITICAL)				
24. Night CAS Operations								
C. Items Requiring Additional Training:								
Training Due Date:				Training Completion Date:				

Part IV – Remarks

JTAC-E Name and Rank	JTAC-E Signature	Evaluation Grade
		Q Q- U

Part V – Certification

Position	Name and Rank	Concur	Do Not Concur	Signature	Date
Reviewing Official					
Approving Official					
Evaluated Individual					

ANNEX D: JTAC, JTAC-I and JTAC-E EVALUATION CRITERIA

	Q	Q-	U
AREA 1. Mission Planning.	Checked all factors applicable to mission (i.e. ATO, weather, timing, frequencies, map datum, range procedures, call signs, airspace and special requirements). Aware of alternatives if mission cannot be completed as planned.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Major error of omission/ commission precluded mission accomplishment or unnecessarily endangered personnel or equipment.
AREA 2. Equipment Preparation.	All equipment needed for mission accomplishment properly prepared and inspected. Unsatisfactory items identified and appropriate corrective actions taken.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Major error of omission or commission precluded mission accomplishment or unnecessarily endangered personnel or equipment.
AREA 3. Communications Equipment Operations.	Able to operate all required communications equipment secure and non-secure necessary for requesting, coordinating and controlling CAS missions.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Major errors that precluded mission accomplishment or unnecessarily endangered personnel or equipment.
AREA 4. Global Positioning System Operations.	Successfully turned on, initialized and performed operator checks. Able to determine individual location using MGRS and Latitude/longitude in seconds and decimal minutes. Able to determine distant location using slant range calculations from a known point to an unknown point. Properly loaded waypoints. Able to properly load or verify encryption fill. Able to configure GPS to proper map datum/ ellipsoid and convert coordinates between map datum. Demonstrates complete knowledge of battery fault conditions/ procedures.	Minor errors of omission/commission that did not detract from mission effectiveness or safety. Need for study in some areas is indicated.	Unsuccessfully turned on, initialized and/or operated GPS. Unable to determine individual location using MGRS and Latitude/ longitude in seconds and decimal minutes. Unable to determine distant location using slant range calculations from known point to an unknown point. Unable to properly load waypoints. Unable to properly load or verify encryption fill. Unable to configure GPS to proper map datum/ ellipsoid or unable to convert coordinates between map datum. Unable to explain battery fault conditions or procedures.
AREA 5. Transmit/ Receive Procedures.	Communications clear, concise, and understandable. Promoted mission effectiveness.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Deviation from acceptable communications procedures impaired mission effectiveness.

AREA 6 **CAS Request Submission.**	Demonstrated in-depth knowledge of CAS request procedures. Submitted the request in a timely, thorough, and effective manner.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Unfamiliar with CAS request procedures. Unable to properly or effectively compile, prepare, and transmit CAS requests.
AREA 7 **Target Analysis.**	Analysed target for CAS employment procedures (i.e. ID, description, location, suitability, and collateral damage,).	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Could not recommend appropriate CAS employment procedures for the target. Errors that precluded mission accomplishment or unnecessarily endangered personnel or equipment.
AREA 8 **Threat Analysis.**	Recognized ground to air threats capable of engaging CAS aircraft. Plan mitigated threat to the survivability of the aircraft.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Failed to recognize ground to air threats capable of engaging CAS aircraft. Plan did not mitigate threat to the survivability of the aircraft.
AREA 9. Ground Force Staff Coordination.	Demonstrated timely coordination procedures with appropriate ground force staff agencies (i.e. S-2, S-3, FSE, ADA, Aviation LNOs, etc.).	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Coordination with appropriate agencies not completed before attack commenced. Delays caused by untimely coordination degraded or prevented successful mission accomplishment.
AREA 10 **Ground Force Commander Coordination.**	Demonstrated timely coordination with ground force commander or designated representative. Accurately explained to the ground force commander CAS mission data and dangers to friendly forces. Understood ground force commander's scheme of manoeuvre. Requested timely ground force commander attack clearance.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Did not adequately coordinate with ground force commander/designated representative. Provided inaccurate data regarding CAS mission data/dangers to friendly forces. The information provided or not provided impacted mission effectiveness or exposed friendly forces to hazards. Did not request or receive ground force commander attack clearance prior to munitions release.
Area 11 **Fire Support and Airspace Management.**	Demonstrated timely coordination for fire support (i.e. SEAD). Recognized and deconflicted attack aircraft with formal or informal airspace coordination measures.	Slow to coordinate fire support. Recognized but did not deconflict attack aircraft with formal or informal airspace control measures. Did not affect mission or aircraft survivability.	Did not coordinate fire support. Did not recognize or deconflict attack aircraft with formal and informal airspace control measures.

AREA 12 Airspace Management.	Integrate attack aircraft with formal or informal airspace coordination measures.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Did not recognize or integrate attack aircraft with formal and informal airspace control measures.
AREA 13 Use of Signalling Devices.	Thorough working knowledge of signalling devices day/night. Selected most appropriate device for tactical situation. Enhanced mission effectiveness.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Not familiar with signalling devices. Use of signalling device inappropriate to tactical situation.
AREA 14 JTAC to CAS Aircraft Briefing.	Provided the attack aircraft, via voice or data transmission, with a complete, concise, and effective briefing with enhanced mission effectiveness i.e., CAS Brief or theatre specific briefing, and mission check-in.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Briefing compromised safety or mission effectiveness due to erroneous information or errors of omission/commission. Tactics briefed inappropriate to situation and precluded effective mission completion and jeopardized survivability.
AREA 15 Attack Munitions Utilization.	Demonstrated thorough knowledge of munitions characteristics, capabilities, and effects. Used munitions most suitable to target. Employed munitions in the correct manner. Considered aircraft and ground forces survivability. Delivery sequence of ordnance enhanced mission effectiveness. Understood risk-estimate distances.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Discrepancies in knowledge and/or employment with impact on mission effectiveness. Did not understand risk-estimate distances, and exposed friendly forces to unacceptable risk. Failed to achieve desired results (due to JTAC's action/inaction). Mission resulted in unwanted collateral damage.
AREA 16 CAS Aircraft Control.	Exercised thorough situational awareness and control of assigned aircraft throughout mission. Clearance or aborts issued in a correct and timely manner. Re-established abort code after aborting an attack.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Control instructions were not timely, clear, and accurate or were unsafe. Loss of situational awareness or actions resulted in either degraded or ineffective mission.
AREA 17 Ordnance Adjustment.	Ordnance adjust instructions were clear, concise, and timely. All attack restrictions placed on attack aircraft were appropriate and necessary.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Adjustment instructions were not timely, clear, and accurate or were unsafe. Actions resulted in either degraded or ineffective mission.

AREA 18 Post Attack Assessment.	Battle damage evaluation was realistic, accurate, and timely. Attack flight and appropriate agencies were provided a concise report in accordance with governing directives.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Unrealistic. Reports contained major errors or omissions. Reports were not timely.
AREA 19 Area Procedures.	Complied with all area procedures, range safety requirements and restrictions. Knowledgeable of emergency procedures (i.e. hung bombs, off range release, fire on range, MEDEVAC, etc.). Ensured aircraft briefed on applicable restrictions.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Violated range procedures. Was not knowledgeable of range requirements. Incomplete knowledge of emergency procedures. Gave incomplete restrictions to aircraft.
AREA 20 FAC(A)/ RO /JTAC Interface.	Readily understood FAC(A)/RO/JTAC requests and promptly provided information in a concise and timely manner. Successfully functioned as an air-ground interface to enhance mission effectiveness.	Minor errors of omission/commission that did not detract from mission effectiveness. Need for study in some areas is indicated.	Failed to understand FAC(A)/ RO/JTAC requests. Did not provide required data. Hampered the mission effectiveness of the FAC(A)/ RO/JTAC.
AREA 21 Laser Operations.	Readily understood laser procedures (target distance, safety zone, etc.) from an effective location, using proper LTD code, terminology and timely coordination.	Minor errors of omission/commission that did not detract from mission effectiveness or safety. Need for study in some areas is indicated.	Actions caused unsafe terminal environment or deficiencies noted precluded mission success.
AREA 22 IR Pointer Operations	Readily understood and utilized IR Pointer procedures from an effective location, using proper IR Pointer terminology and timely coordination.	Minor errors of omission/commission that did not detract from mission effectiveness or safety. Need for study in some areas is indicated.	Actions caused unsafe terminal environment or deficiencies noted precluded mission success.
AREA 23 Inertial Aided Munitions Operations.	Readily understood inertial aided munitions procedures (coordinate format, coordinate reliability, target elevation, final attack clearance, and final attack headings/angle).	Minor errors of omission/commission that did not detract from mission effectiveness or safety. Need for study in some areas is indicated.	Actions caused unsafe terminal environment or deficiencies noted precluded mission success.
AREA 24 Night CAS Operations.	Readily understood night CAS procedures and tactics that enhanced mission effectiveness.	Minor errors of omission/commission that did not detract from mission effectiveness or safety. Need for study in some areas is indicated.	Actions caused unsafe terminal environment or deficiencies noted precluded mission success.

AREA 25 Safety. (CRITICAL)	Employed all available methods to ensure safety of flight and ground personnel. Analysed emergency situations and implemented emergency procedures. Used equipment, to include signalling devices, laser target designators and IR marking devices, in a safe manner.		Any dangerous act. Disregarded safety procedures. Did not use equipment in a safe manner. Did not comply with safety requirements.
AREA 26. JTAC-I Evaluation Criteria. Use the following grading criteria when conducting both the initial and the recurring JTAC-I Evaluations.			
AREA 26.1 Equipment Preparation.	All equipment needed for mission accomplishment properly prepared and inspected. Unsatisfactory items identified and appropriate corrective actions taken.	Minor errors did not detract from mission / training effectiveness.	Major error precluded mission accomplishment or unnecessarily endangered personnel or equipment.
AREA 26.2 Lesson Overview with Statement of Objectives	Thoroughly briefed the lesson overview and clearly stated the objective.	Minor errors did not detract from mission / training effectiveness.	Major omissions precluded mission / training success.
AREA 26.3 Instruction Effectiveness	Assured student understood material and relationship to job performance	Minor errors did not detract from mission / training effectiveness.	Instruction was ineffective, precluded mission / training success.
AREA 26.4 Identified Procedures vs. Technique.	Thoroughly explained instructions as procedures and technical methods as techniques.	Minor errors did not detract from mission / training effectiveness.	Confused procedures with techniques, precluded mission / training success.
AREA 26.5 Training Aids	Training aids were used in a manner that enhanced the training outcome.	Minor errors did not detract from mission / training effectiveness.	Training aids were omitted, precluded mission / training success.
AREA 26.6 Knowledge of Subject Matter	Demonstrated thorough knowledge of the subject matter and used examples to clarify / enhance subject areas.	Minor errors did not detract from mission / training effectiveness.	Lack of knowledge or could not provide examples, precluded mission / training success
AREA 26.7 Communication	Communications clear, concise, and understandable. Promoted effective training.	Minor errors did not detract from mission / training effectiveness.	Unacceptable communications impaired mission / training effectiveness.
AREA 26.8 Time Management.	All objectives covered with no time wasted.	Minor errors did not detract from mission / training effectiveness.	Did not cover all objectives or manage time wisely.
AREA 26.9 Live or Dry CAS Control Instruction.	Provided proper instruction and feedback throughout the live-fly CAS mission.	Minor errors did not detract from mission / training effectiveness.	Improper CAS instruction and incorrect feedback precluded mission effectiveness.
AREA 26.10 Administered Student Grade and Documentation	Assigned proper grade and completed training documentation correctly.	Minor errors did not detract from mission / training effectiveness.	Failed to assign proper grade when appropriate. Unable to complete training documentation correctly.

AREA 26.11 Safety (CRITICAL)	Employed all available methods to ensure safety of flight and ground personnel. Used equipment, to include signalling devices, laser target designators and IR marking devices, in a safe manner.		Any dangerous act. Disregarded safety procedures. Did not use equipment in a safe manner. Did not comply with safety requirements.
AREA 27. JTAC-E-Evaluation Criteria. Use the following grading criteria when conducting both the initial and the recurring JTAC-E Evaluations.			
AREA 27.1 Compliance with Pertinent Manuals.	Complies with all manuals pertaining to the administration of a JTAC evaluation.	Complied with most manuals. Deviations did not jeopardize the effectiveness of the evaluation or safety.	Failed to comply with manuals or allowed safety to be jeopardized.
AREA 27.2 Evaluation Briefing.	Thoroughly briefed the examinee on the conduct of the evaluation.	Omitted items during the briefing causing minor confusion. Did not fully brief the examinee as to the conduct and purpose of the evaluation.	Failed to adequately brief the examinee.
AREA 27.3 Identification of Discrepancies and Assignment of Area Grades.	Identified all discrepancies and assigned proper area grade.	Most discrepancies were identified. Failed to assign Q- grade when appropriate. Assigned discrepancies for performance that was within standards.	Failed to identify discrepancies related to discipline or deviations that merited an unqualified grade. Assigned Q- grades that should have been U or assigned U grades for performance within standards.
AREA 27.4 Evaluation of Overall Performance.	Awarded the appropriate overall grade based on the examinee's performance.	Awarded an overall grade without consideration of cumulative deviations in the examinee's performance.	Did not award a grade commensurate with overall performance.
AREA 27.5 Appropriate Assignment of Additional Training.	Assigned proper additional training if warranted.	Additional training assigned was insufficient to ensure the examinee would achieve proper level of qualification.	Failed to assign additional training when warranted.
AREA 27.6 Mission Debrief.	Thoroughly debriefed the examinee on all aspects of the evaluation.	Failed to discuss all deviations and assigned grades. Did not advise the examinee of additional training, if required.	Did not discuss any assigned area grades or overall rating. Changed grades without briefing the examinee.
AREA 27.7 Briefing the Supervisor on the Evaluation.	Thoroughly debriefed the examinee's supervisor.	Debriefed supervisor, but failed to discuss all discrepancies, grades, or additional training.	Failed to debrief the examinee's supervisor on an unsatisfactory evaluation.

AREA 27.8 Completed Evaluation Documentation	Correctly completed all documentation required in accordance with manuals	Completed documentation with minor errors.	Failed to properly document evaluation in accordance with manuals.
AREA 27.9 Safety (CRITICAL)	Employed all available methods to ensure safety of flight and ground personnel. Used equipment, to include signalling devices, laser target designators and IR marking devices, in a safe manner.		Any dangerous act. Disregarded safety procedures. Did not use equipment in a safe manner. Did not comply with safety requirements.

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ANNEX E: JTAC/I/E, SME DESIGNATION LETTER - EXAMPLE

Official Letter Head

_____ *Date - dd.mm.yyyy*

To: (*rank, name and position title)*

Subject: (Insert Designation) Designation Letter.

References: (a) STANAG 3797 current edition and related documents;
(b) National training regulation / National JTAC Certification/ Qualification requirements [*specify if available*].

1. You are hereby designated as a (Insert Designation in support of [*specific Unit or Mission*].

2. Duties, responsibilities, etc. while referencing applicable regulations or elements as applicable to designations.

[Signature block]
Rank, name of appropriate authority

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ANNEX F: ABBREVIATIONS

This lexicon contains abbreviations relevant to this Allied Tactical Publication and is not meant to be exhaustive. The definitive and more comprehensive list of NATO agreed abbreviations is documented in NTMS.

A/C	Aircraft
AAP	Allied Administrative Publication
ACO	Airspace Control Order
ACoA	Airspace Coordination Area
ACM	Airspace Control Means
AOO	Area Of Operations
ASR	Air Support Request
ATO	Air Tasking Order
AJP	Allied Joint Publication
ATP	Allied Tactical Publication
BDA	Battle Damage Assessment
BOC	Bomb on Coordinate
BOT	Bomb on Target
CAS	Close Air Support
CDE	Collateral Damage Estimate
CFF	Call for Fire
ETD	Enhanced Target Description
EO	Electro Optical
EW	Electronic Warfare
FAC(A)	Forward Air Controller-Airborne
FMV	Full Motion Video
FO	Forward Observer
FSCM	Fire Support Coordination Measure
FW	Fixed-Wing
GLTD	Ground Laser Target Designator
GPS	Global Positioning System
GRG	Grid Reference Graphics
HE	High Explosive
IP	Initial Point
IR	Infrared
ISR	Intelligence, Surveillance, Reconnaissance
JST	JTAC Standardization Team
JTAC	Joint Terminal Attack Controller
JTAC-I	Joint Terminal Attack Controller - Instructor
JTAC-E	Joint Terminal Attack Controller – Evaluator
JTAR	Joint Tactical Airstrike Request
LGB	Laser Guided Bomb
LRF	Laser Range Finder
LST	Laser Spot Tracker
LTD	Laser Target Designator

MCASB	Military Committee Air Standardization Board
METL	Mission-Essential Task List
MISREP	Mission Report
MGRS	Military Grid Reference System
NATO	North Atlantic Treaty Organization
NSO	NATO Standardization Organization
NTMS	NATO Terminology Management System
NVD	Night Vision Device
NVG	Night Vision Goggle
PE	Practical Exercise
ROE	Rules of Engagement
RW	Rotary-Wing
SEAD	Suppression of Enemy Air Defences
SIM	Simulation
SIM-LE	Simulated-Live Environment
SIM-VE	Simulated-Virtual Environment
SIMTAC	Simulated Terminal Attack Control
SLP	Standardized Language Profile
SME	Subject Matter Expert
SOF	Special Operation Forces
SOP	Standard Operating Procedure
SPINS	Special Instructions
STANAG	Standardization Agreement
STANEVAL	Standardization and Evaluation
TAC	Terminal Attack Control
TACP	Tactical Air Control Party
TLE	Target Location Error
TTPs	Tactics, Techniques and Procedures
UAS	Unmanned Aircraft System

ANNEX G: RELATED DOCUMENTS

a. AAP-6, NATO Glossary of Terms and Definitions (English and French)

b. AAP-15, NATO Glossary of Abbreviations Used in NATO Documents and Publications

c. AAP-42, NATO Standardization Glossary

d. STANAG 3736 / AJP-3.3.2, Air Interdiction and Close Air Support

e. STANAG 7144 / ATP-3.3.2.1, Tactics, Techniques and Procedures for Close Air Support and Air Interdiction

f. STANAG 6001, Language Proficiency Levels

g. AD 75-12 NATO Forward Air Controller (FAC) Standardization Program

h. NATO FAC Standardization Team SOPs (AIRCOM)

i. AD 80-65 Concept of Operations for Air Operations Coordination Centres Land Maritime in Allied Command Operations

j. STANAG 7189 / ATP-3.3.5.1, Joint Airspace Control Tactics, Techniques and Procedures

ATP-3.3.2.2(B)(2)