NATO STANDARD

ATP-3.3.2.2

JOINT TERMINAL ATTACK CONTROLLER PROGRAMME

Edition C, Version 1

MONTH YEAR
RATIFICATION DRAFT 1

NORTH ATLANTIC TREATY ORGANIZATION

ALLIED TACTICAL PUBLICATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

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NATO LETTER OF PROMULGATION

[Date]

1. The enclosed Allied Tactical Publication ATP-3.3.2.2, Edition C, Version 1, JOINT TERMINAL ATTACK CONTROLLER PROGRAMME, 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 C, Version 1, 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..

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

Dimitrios SIGOULAKIS
Lieutenant General, GRC (A)
Director, NATO Standardization Office

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RECORD OF RESERVATIONS

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

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RECORD OF SPECIFIC RESERVATIONS

NATION	DETAIL OF RESERVATION
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CHAPTER 1 - INTRODUCTION

1.1 AIM

This Allied Tactical Publication covers the requirements for Joint Terminal Attack Controller (JTAC) programmes in NATO.

This publication contains vignettes to give amplifying remarks, examples of best practises witnessed during NATO Standardization Visits or to explain the rationale behind the requirements for change between ATP-3.3.2.2(B) and ATP-3.3.2.2(C).

1.2 AGREEMENT

The participating nations agree:

a. To acknowledge that a JTAC qualified in accordance with the requirements defined in this Allied Tactical Publication is authorized to perform Terminal Attack Control (TAC).

b. To train all JTACs in accordance with the minimum requirements 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 recognize that JTAC instructors and evaluators being part of any NATO accredited JTAC programme have the same authorities as their national JTAC instructors and evaluators.

e. To implement a programme regulation(s) outlining policies and personnel responsibilities for qualification of JTACs, JTAC-Instructors and JTAC-Evaluators.

1.3 IMPLEMENTATION

Due to the inherent risk of fratricide conducting CAS missions (close proximity to friendly forces, detailed integration), the implementation of this Allied Tactical Publication will be verified through accreditation. ACO Directive 075-012 is the governing document to standardise the accreditation process of national JTAC programmes throughout NATO and Partner Nations.

1.4 INTERPRETATION

This publication should be interpreted in good faith in accordance with the ordinary and specific meanings to be given to the terms in their context and in the light of their objective and purpose.

Shall any question arise about existing or missing content, nations agree to designate COM AIRCOM as the adjudication authority. When officially requested, the CAS Capabilities Section (CCS) will assess the matter and staff AIRCOM Supplements to ATP-3.3.2.2. These supplements will be binding to all signatories until incorporated or dismissed in the next review cycle of the publication.

CHAPTER 2 - DEFINITIONS

NATOTerm is the main NATO reference for definitions and terms.

2.1 GENERAL DEFINITIONS

a. Close Air Support (CAS): Air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.

b. CAS Aircraft: Aircraft (manned or unmanned) capable of conducting CAS.

Due to their performance, some aircraft (including but not limited to civilian contract air) may not be suitable for certain types of attack profiles. JTAC-Instructors are responsible for creating control environments compatible with CAS Aircraft performance.

c. Control: In regards to CAS, a control consists of at least one actual 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 separate control for a single-aircraft sortie when the initial attack was unsuccessful. For logged controls, re-attacks are limited to one.

d. Digitally Aided CAS (DaCAS): Is defined as a machine-to-machine exchange of close air support mission data (e.g. aircraft check-in, CAS briefing, BDA) between JTAC (or FAC(A)) and CAS platform (or C2 node).

e. JTAC Training Programme: A programme designed to address all aspects of JTAC training, to include initial/recurring qualification and administrative requirements of a JTAC programme.

f. Practical Exercise (PE): A training event (e.g., sand table, tabletop or field exercise) which allows trainees to practice the skills associated with correct use of equipment, tactics, techniques and procedures. Although these events may include terminal attack control, only accredited simulation may be used to fulfil currency requirements.

g. Proficient: Able to accomplish all items in the task correctly and repeatedly without assistance, in accordance with signatory standards.

h. Simulation: The use of a live or virtual environment designed to replace weapon systems aircraft, equipment or other assets, in order to train to specific events. Specifically, the two kinds of simulation are simulation-live environment (SIM-LE) and simulation-virtual environment (SIM-VE).

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

j. Simulated - Virtual Environment (SIM-VE): Simulation in a virtual environment in which assets and environment are digitally simulated (including augmented reality). E.g. Conducting CAS in a computer simulation with aircraft generated by the simulator.

Distributed Mission Operations combined with mixed reality will play a pivotal role in JTAC/Aircrew training in the coming years. Nations and industry partners are encouraged to develop new solutions IOT reduce costs while improving overall training.

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

l. 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.

m. Terminal Attack Control (TAC): Terminal attack control is the authority to control the manoeuvre of, and grant weapons release clearance (or aborting) to, attacking aircraft.

n. Live TAC: Control of an actual aircraft where air-to-ground munitions (live, inert, or training ordnance) are employed, also known as "Live".

o. Dry TAC: Control of an actual aircraft where air-to-ground munitions are not employed, also known as "Dry".

p. Designation letter: The JTAC Commander's Designation Letter authorizes the individual to perform JTAC/JTAC-I/JTAC-E duties during training and combat deployments. Designation Letter(s) must be signed by the current responsible authority.

2.2 CAS KEY PLAYERS

a. CAS Aircrew: An aircrew member, whose training and experience is sufficient to execute aircraft attacks on surface targets according to ATP-3.3.2.1. Nations may develop CAS aircrew proficiency standards in line with JTAC training requirements.

b. Forward Air Controller (Airborne) [FAC(A)]: FAC(A) is a specifically trained and qualified aviation officer who exercises control from the air of aircraft engaged in CAS of ground troops.

A JTAC on board an aircraft is not considered to be a FAC(A).

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

d. Joint Terminal Attack Controller (JTAC): A qualified individual who, from a forward position, directs the action of combat aircraft engaged in close air support and other offensive air operations.

e. Joint Terminal Attack Controller - Instructor (JTAC-I): A qualified JTAC who has met the associated requirements and instructs JTACs IAW national and NATO regulations.

f. Joint Terminal Attack Controller - Evaluator (JTAC-E): A qualified JTAC-I who has met the associated requirements and evaluates JTACs IAW national and NATO regulations.

g. National JTAC Programme Manager (PM): Representative of national forces on all matters concerning procedures and qualification of national JTACs and the lead agent for the national JTAC programme.

h. JTAC Trainee: Individual identified to attend the appropriate JTAC training programme with the intent of becoming qualified as a JTAC.

i. Remote Observer (RO): 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.

j. Subject Matter Expert (SME): Individual who possesses expertise in a given subject matter and has the ability to provide related instruction.

CHAPTER 3 - JTAC NATIONAL PROGRAMME MANAGEMENT

3.1 NATIONAL PROGRAMME MANAGEMENT

In regard to this regulation, the National Programme Manager, or equivalent, is the focal point of the national JTAC programme. While duties and responsibilities within a national programme will vary, the national programme manager will be the main point of contact between the national programme and the CAS Capabilities Section.

The National JTAC Programme Manager manages a programme that will:

a. Establish policy and provide guidance for the execution of the national JTAC programme 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 programme regulations.

d. Identify both positive and negative trends in the national programme. 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 programme issues within their scope.

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

h. Have visibility on:

   a. Number and qualification status of JTACs,

   b. JTAC equipment.

i. Standardizes administrative procedures for documenting individual JTAC qualifications.

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

k. Ensure contracted services' ability to adhere to CAS TTPs.

Validation of contract CAS providers is a national responsibility. JTAC Programme Managers must be able to prove that contracted services comply with this publication.

l. Designate or propose the designation of STANEVAL personnel as authorized by the national programme.

3.2 NATIONAL STANDARDIZATION AND EVALUATION PROGRAMME

3.2.1 STANEVAL Programme

a. Aim: The purpose of the national STANEVAL programme is to ensure that JTAC evaluations and documentation is standardized and maintained at the level described in national regulations by all units and services. The STANEVAL programme'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).

b. Metrics: As part of the national JTAC programme, the JTAC STANEVAL programme provides commanders and staffs with meaningful metrics reflecting the programme's ability to accomplish its training and combat responsibilities.

c. Objectives: The STANEVAL Programme ensures that service/unit JTAC training programmes support the successful and safe execution of the unit's missions.

d. Standardization: Standardization ensures that common JTAC training and programmes support CAS operations based upon proven tactics, techniques, and procedures and are in accordance with ATP-3.3.2.2.

e. 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. The JTAC evaluation form in ANNEX C/D or national equivalent will be used to record the evaluation.

3.2.2 Chief of STANEVAL

This key position manages the JTAC STANEVAL programme. While duties and responsibilities within a national programme will vary, the Chief of STANEVAL manages the standardization and evaluation within the assigned scope. The Chief of STANEVAL must be:

- a qualified JTAC-E with a minimum of one year of continuous experience as a JTAC-E,
- or a non-qualified JTAC-E, with a subordinate qualified JTAC-E with a minimum of one year of continuous experience as a JTAC-E.

Chief of STANEVAL will manage a programme 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 reviews of JTAC evaluation records are conducted by authorized personnel in order to validate training and qualifications.

d. Manages and/or delegates JTAC evaluations to JTAC-Es.

e. Enforces safe and effective conduct of close air support training and operations.
f. Provides feedback to senior, lateral, and subordinate headquarters.
g. Provides recommendations for improvement of the national JTAC programme.
h. Provides recommendations on candidates for JTAC-I and JTAC-E.

3.2.3 JTAC-Evaluators (JTAC-E)

The STANEVAL programme will be assisted by qualified JTAC-Es as required by the national programme. JTAC-Es, as a minimum, will:

a. Ensure JTAC, JTAC-I and JTAC-E evaluations are conducted IAW ATP-3.3.2.2 and national directives.
b. Review records of assigned JTAC personnel in order to validate training and qualifications.
c. Enforce safe and effective conduct of close air support training and operations.
d. Provide feedback to senior, lateral, and subordinate personnel as appropriate.
e. Provide recommendations for improving the national JTAC programme.
f. Provide personnel recommendations for JTAC-I and JTAC-E upgrade.

3.3 NATIONAL INSTRUCTION PROGRAMME

3.3.1 Instruction of Terminal Attack Control

Only qualified JTAC-Is will instruct JTAC trainees in terminal attack controls. When instructing JTACs or trainees in terminal attack controls, the instructor will be co-located with the individual being trained and must be able to assume control of the mission.

3.3.2 Subject Matter Expert (SME)

Subject Matter Experts can provide knowledge and/or instruction on the METL items in Annex A as determined by the national programme and this regulation's requirements. This regulation recognizes that SMEs can be utilized in multiple ways to include role-playing and instruction. Typical SMEs are (but not limited to) CAS aircrew, Special platform specialists, Air Traffic Controllers, Legal Advisors, Weapon specialists, Artillery specialists, Target analysts…

The selection process for SMEs should ensure personnel are selected based 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, CAS aircrew would be optimal over JTAC-Is in the cockpit of a SIM-VE.

SMEs, as a minimum, will:

a. Be restricted to teaching classroom academics and participate in practical exercises in SIM-LE or SIM-VE as role players.

b. The use of contractors with the knowledge base and ability to instruct when assessed IAW the national JTAC programme. It is a national responsibility to ensure that the SMEs meet the national and NATO requirements to include NATO doctrine and directives.

3.4 NATIONAL WAIVER

Waivers which reduce minimum qualification or evaluation requirements will be staffed to COS AIRCOM for concurrence and results will be provided to the requester. Waiver authority for JTAC qualification requirements (excluding evaluation portion) will be in accordance with signatory directives, but should reside no lower than O-6/OF-5 and the signatory will provide CCS with an information copy. Evaluation and qualification waivers will be used only to address a temporary issue and for a limited period with a specified end-date. Deploying JTACs will comply with paragraph 4.2 of this document without exception.
A record of all waivers granted will be presented by the PM at every accreditation visit.

CHAPTER 4 - JTAC QUALIFICATION

4.1 JTAC (INITIAL) QUALIFICATION REQUIREMENTS

Accredited nations will qualify JTACs in accordance with NATO publications and national regulations. To become qualified, JTACs shall at a minimum:

a. Successfully complete a NATO or JFS ESC accredited JTAC course.

b. Possess a documented English SLP 3332 (LSRW) IAW STANAG 6001 at a minimum, when the individual is not a native English speaker.

c. Successfully complete all Tasks per Annex A (METL).

d. Successfully complete all categories of controls per “Table 4.1 Minimum JTAC Qualification Controls” under the instruction of JTAC-Is.

e. Complete a successful initial evaluation (IAW Annex C/D or national equivalent).

Qualification process is continuous and is achieved when all abovementioned items are completed and documented.

Table 4.1 Minimum JTAC (Initial) Qualification Controls		
Successful Terminal Attack Controls	**Minimum Required**	**Accredited Simulated TAC**
Type 1	2	None
Type 2	2	Yes
Type 3	1	Yes
BOT	2	None
BOC	2	Yes
FW CAS Aircraft	4	2 Max
RW CAS Aircraft	1	Yes
Laser control[1*]	2	1 Max
IR Pointer[2*]	2	1 Max
Remote Observer	2	Yes
FMV/VDL[3*]	1	Yes
Live/Training Munitions	1	None
9-Line Attack brief[4]	2	1 Max
SEAD	1	Yes
Urban	1	Yes
Day	2	None
Night	2	1 Max

[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. Acquiring laser energy via LST is recommended.

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

[3] Full Motion Video (FMV)/Video Down Link (VDL); the control 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]Must use IP to target attack (Lines 1-3 may not be abbreviated, e.g.: from the overhead or N/A).

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

4.2 JTAC RECURRING QUALIFICATION REQUIREMENTS

To retain qualification, JTACs shall:

a. Complete all controls per Table 4.2 “Recurring JTAC Qualification Controls” within a 12-month period.

b. Complete all tasks per Annex A (METL) within an 18-month period.

c. Maintain evaluation requirements (IAW Annex C/D or national equivalent) within an 18-month period.

d. Execute a control every 6 months.

e. Be designated as a JTAC by national authority (Annex F).

Table 4.2 Recurring JTAC Qualification Controls		
Successful Terminal Attack Controls	**Minimum Required**	**Accredited Simulated TAC**
Type 1	2	1 Max
Type 2	2	Yes
Type 3	1	Yes
BOT	2	1 Max
BOC	2	Yes
FW CAS Aircraft	4	2 Max
RW CAS Aircraft	1	Yes
Laser control[1]*	2	1 Max
IR Pointer[2]*	2	1 Max
Remote Observer	2	Yes
FMV/VDL[3]*	1	Yes
Live/Training Munitions	1	None
9-Line Attack brief[4]	2	1 Max
Day	2	None
Night	2	1 Max

[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. Acquiring laser energy via LST is recommended.

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

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[4]Must use IP to target attack (Lines 1-3 may not be abbreviated, e.g.: from the overhead or N/A).

**Note - Nations without the appropriate equipment will accomplish the task through a simulated event or 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 LOSS OF JTAC QUALIFICATION

4.3.1 Loss of qualification

Nations are responsible for managing their JTACs' Qualification status. Qualification shall be removed:

a. If the evaluation has expired, or in case of a failed evaluation.

b. When the period between two consecutive controls exceeds 6 months.

c. When JTAC fails to meet the control requirements per Table 4.2.

d. If a JTAC fails to complete a task(s) or if individual task(s) expire.

e. At national authority's discretion based on a report of safety violation during national or international exercises/operations or other criteria dictated by national regulation.

A JTAC who is qualified, with a valid evaluation at the commencement of deployment on combat or contingency operations, including when embarked at sea, shall be considered qualified for the duration of that deployment. JTACs who fail to maintain currency requirements while deployed shall be considered unqualified upon redeployment to home nation and must satisfy the criteria at para 4.2 in order to regain qualification.

4.3.2 Unqualified JTAC

An unqualified JTAC must regain qualification by completing:

a. All missing or expired task(s) per annex A.

b. All missing or expired control(s) as per Table 4.2, under the supervision of a qualified JTAC or JTAC-I.

c. If the evaluation has expired, or in case of a failed evaluation, successfully complete an evaluation by a JTAC-E IAW Annex C/D.

At national authority's discretion, an unqualified JTAC can be assigned to a signatory approved refresher programme (refresher programme training requirements should be tailored to the individual's skills and previous experience).

An unqualified JTAC with a current evaluation can only control unsupervised for those control categories that have not expired. For all expired controls an unqualified JTAC must be supervised by a qualified JTAC-I, or a qualified JTAC if noted in program regulation/instruction.

If a JTAC is unqualified due to an expired evaluation he must be supervised by a qualified JTAC-I to perform any Terminal Attack Control.

In any case the minimum requirements need to be fulfilled per para 4.2 to be qualified as JTAC. See Annex H (JTAC phases – Re-qualification).

If the 6-month period has expired since the previous control, then the next control needs to be supervised.

4.4 EVALUATION

Evaluations will ensure compliance with qualification requirements and Mission Essential Task List (METL), and verify that the JTAC Training and Evaluation Folder is up to date. JTAC evaluations will assess performance using JTAC Evaluation Criteria IAW annex D. JTAC must successfully complete an evaluation in the previous 18 months to maintain qualification.

To be eligible for an initial or recurring evaluation, a JTAC must achieve:

- All controls per table 4.2 (see Table 4.1 for initial evaluation).
- All tasks per annex A.
- Possess a documented English SLP 3332 (LSRW) IAW STANAG 6001 at a minimum, when the individual is not a native English speaker.

To retain qualification, a qualified JTAC must pass a recurring evaluation. This evaluation can be done during currency controls. Areas related to the evaluated qualifications, as described in Annex D, must be evaluated through the appropriate means.

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.

Control will expire on the last day of the 12th Month from the control date.
The evaluation will expire on the last day of the 18th month from the evaluation date.

CHAPTER 5 - JTAC INSTRUCTOR AND JTAC EVALUATOR

5.1 JTAC INSTRUCTOR

5.1.1 Qualification requirements

To become a JTAC-I, a JTAC shall:

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

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

c. Be designated in writing as a JTAC-I by an approved authority IAW national regulations.

To retain qualification JTAC-I shall:

a. Maintain JTAC qualification IAW NATO and national regulations.

b. Maintain JTAC-I evaluation IAW ANNEX C/D (Area 26) or national equivalent.

When instructing trainee JTACs, a JTAC-I may count and log up to 4 of the trainee's controls per 12 month period towards their own currency requirements.

The "one year experience" criterion does not need to be directly preceding the JTAC-I course. Former experienced JTACs coming back to JTAC duties after a career break can follow a JTAC refresher programme and be upgraded to JTAC-I subsequently.

5.1.2 Contractor JTAC-I

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

a. Having previously qualified as a JTAC-I while serving as a member of a nation's Armed Forces.

b. Meet and maintain JTAC and JTAC-I qualification requirements described in this publication.

5.2 JTAC EVALUATOR

5.2.1 Qualification requirements

The JTAC-E is the designation provided to those individuals who have met the associated requirements and evaluate personnel IAW 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. Complete a nationally approved evaluator upgrade.

c. Be designated in writing as a JTAC-E by an approved authority IAW national regulations.

To retain qualification JTAC-E shall:

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

A JTAC-E will only require the initial JTAC-E evaluation. The current JTAC-E designation letter will indicate the time frame for this qualification. A JTAC is considered a JTAC-E during this period as long as JTAC and JTAC-I qualifications are maintained. At the end of this period, a JTAC-E will revert to JTAC or JTAC-I status.

5.2.2 Evaluation requirements

JTAC-E qualification requirements are a national responsibility. After initial evaluation as a JTAC-E, no more formal evaluations are required by NATO.

JTAC-Es are already evaluated as JTACs and JTAC-Is every 18 months. A good practice for evaluators consists in sharing lessons identified during exercises or operations in order to inform the STANEVAL chain. A national JTAC-E symposium, conference or equivalent is a good way to do so.

5.2.3 Contractor JTAC-E

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

a. Previously qualified as a JTAC-E while having served as a military service member.

b. Meet and maintain JTAC, JTAC-I and JTAC-E qualification requirements described in this publication.

c. Contractor JTAC-E may not conduct evaluations on other contractor JTAC-I or JTAC-E.

CHAPTER 6 - JTAC TRAINING AND EVALUATION FOLDER

To properly document JTAC training, an individual JTAC evaluation folder will be issued in accordance with national directives. National regulations will address the control and accountability of the JTAC evaluation folders to ensure records are accurate and up-to-date. It will contain details of training, additional qualifications and designations and must be in the English language (or covered by a courtesy translation signed by a nationally approved authority).

The paper version of the training jacket will contain the following documentation system:

Part I: TABLE OF CONTENTS

Part II: DESIGNATION LETTERS – This section contains a copy of the JTAC's current designation letter (see examples at Annex F).

Part III: CAS LOG – This section must contain records of all terminal attack controls performed (Annex B shows an example of a CAS Log) and METLs accomplishment per Annex A/B. Nations may use a national equivalent.

Part IV: DOCUMENTATION OF TRAINING – Continuation training and refresher training must be documented here to include the certificate of English language proficiency in SLP format (LSRW) IAW STANAG 6001, qualification status and re-qualification must be documented.

Part V: DOCUMENTATION OF EVALUATIONS – This section contains documentation of all evaluations.

Part VI: JTAC FORMAL COURSE DOCUMENTATION – This section contains diplomas and copies of course completion documentation received from attending a CAS related course.

Note: Copies of waivers will be placed in applicable sections.

Digital training jackets are perfectly acceptable:

a. If they meet the same requirements as the paper versions (including signatures).

b. If they can be printed when requested.

ANNEX A: JTAC Mission Essential Task List

A.1 MISSION ESSENTIAL TASK LIST (METL)

A strict adherence to the METL standards is required during the qualification processes. The METL is divided into 3 duty areas (planning, preparation and execution) and listed by tasks and sub-tasks. Demonstrating accomplishment of the tasks is essential.

A.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: Academic Lessons (lectures, tests)

L: Live/dry aircraft

PE: Practical Exercise

SIM: Simulation

A.1.2 METL Tracking

METL is the assurance of a minimum level of JTAC competence. Monitoring the completion of each METL area is essential and mandatory. Ensure that METLs are checked in the following way:

a. Before completing an evaluation, the JTAC-E will check the JTAC's logbook to ensure that all METL areas are completed (see annex B and C).

b. The successful completion of a comprehensive tests with a score of 80% or greater will suffice for all of Duty Area 1 requirements.

c. Tasks/Sub-tasks labelled "per table" are completed by the controls as per table 4.1 and/or 4.2.

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

A.2 DUTY AREA 1 - CAS Planning

TASK	SUBTASK	DESCRIPTION	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**
	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**

TASK	SUBTASK	DESCRIPTION	METHOD
	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 threats 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**
	1.1.8	**Advise ground force commander on the use and timely submission of Air Support Request (ASR).** Demonstrate knowledge of the Air Tasking Order planning cycle and its effects on ASR 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 ASR 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**

TASK	SUBTASK	DESCRIPTION	METHOD
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 ACA terminology and have knowledge of all applicable ACAs 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 manoeuvre and attack targets.	**A**
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 Control 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**

TASK	SUBTASK	DESCRIPTION	METHOD
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. Describe how intelligence supports air operations, available intelligence products (e.g. order of battle, maps, ISR imagery) and the importance of including Intel early in the planning process. JTAC will be able to successfully answer questions on the intelligence products used to support CAS mission planning.	**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 manoeuvre.**	
	1.8.1	**Plan a laser guided weapon delivery and use of a ground and airborne Laser target designator (LTD)** Demonstrate knowledge of laser guided weapons employment and use of a ground and airborne LTD (Acft targeting pod and UAS). 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**

TASK	SUBTASK	DESCRIPTION	METHOD
1.9		**Plan engagement with appropriate weapon in order to create 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 manoeuvre.**	
	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.**	

TASK	SUBTASK	DESCRIPTION	METHOD
	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
	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 manoeuvre.** 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	DESCRIPTION	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	DESCRIPTION	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 ASR.** Demonstrate knowledge of the ASR. 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 an ASR.	**A**
1.19		**Employ service DACAS/Fires systems** Demonstrate knowledge of DACAS/Fires systems to facilitate weapons employment. Address the capabilities, limitations and proper use of signatory-fielded DACAS systems. JTAC will be able to successfully answer questions on the use of DACAS systems to request, CAS brief and BDA.	**A**
1.20		**Plan CAS employment in a contested environment** Demonstrate knowledge of CAS employment in a contested environment. Address planning factors for threats and tactical situation that dictate attacking aircraft use counter-tactics, countermeasures, and/or vertical and/or lateral standoff during target attack. Include planning for surface based indirect fire and/or EW assets (lethal and/or non-lethal) to provide SEAD, degraded/denied GPS/communications, and enemy direction-finding capabilities, as applicable.	**A**

A.3 DUTY AREA 2 - CAS Preparation

TASK	SUBTASK	DESCRIPTION	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 programmes. 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**
	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 programmes. *Note – Nations without the appropriate equipment will accomplish the task through an academic lesson or simulated event 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 programmes.	**L/PE/SIM**

TASK	SUBTASK	DESCRIPTION	METHOD
	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 programmes. *Note – Nations without the appropriate equipment will accomplish the task through an academic lesson or simulated event 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 programmes. *Note – Nations without the appropriate equipment will accomplish the task through an academic lesson or simulated event and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.*	**L/PE/SIM**
2.2		**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**

TASK	SUBTASK	DESCRIPTION	METHOD
	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.4 DUTY AREA 3 - CAS Execution

TASK	SUBTASK	DESCRIPTION	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**

TASK	SUBTASK	DESCRIPTION	METHOD
	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 an academic lesson or simulated event 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	**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.	**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 or simulated event 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	DESCRIPTION	METHOD
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.**	
	3.3.1	**Integrate CAS missions with ground scheme of manoeuvre.** Demonstrate the ability to integrate CAS missions with ground scheme of manoeuvre. JTAC will demonstrate the ability to effectively integrate CAS into the ground scheme of manoeuvre 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 manoeuvre 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 control means. JTAC will demonstrate the ability to effectively use fire support and airspace control means to deconflict CAS with all fire support and aviation assets, to meet the commander's intent for manoeuvre 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**

TASK	SUBTASK	DESCRIPTION	METHOD
	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.**	
	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.	**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 create desired effects.** Demonstrate the ability to provide a weapon recommendation, based on ground force commander's intent, to create 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**

TASK	SUBTASK	DESCRIPTION	METHOD
	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 an academic lesson or simulated event and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.*	**L/PE/SIM**
	3.6.3	**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 an academic lesson or simulated event and such personnel are not considered fully trained to this task until required equipment has been fielded and trained to standard.*	**L/PE/SIM**
3.7		**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 4.1/4.2**

TASK	SUBTASK	DESCRIPTION	METHOD
	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 4.1/4.2**
	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 4.1/4.2**
	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 4.1/4.2**
	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 4.1/4.2**
3.9		**Control day and night CAS missions, in support of the ground scheme of manoeuvre.**	
	3.9.1	**Control day FW CAS missions.** Perform a day terminal attack control. JTAC will demonstrate the ability to successfully perform a day terminal attack control.	**Per Table 4.1/4.2**
	3.9.2	**Control night FW CAS missions.** Perform a night terminal attack control. JTAC will demonstrate the ability to successfully perform a night control.	**Per Table 4.1/4.2**

TASK	SUBTASK	DESCRIPTION	METHOD
	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 4.1/4.2**
	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 4.1/4.2**
3.10		**Control a CAS mission in an urban environment in support of the ground scheme of manoeuvre.** 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		**Employ service DACAS/Fires systems.** Demonstrate the ability to control CAS missions (e.g. Friendly deconfliction, A/C check in, ON STATION REPORT, CAS 9-Line brief, and BDA) using DACAS systems. JTAC will demonstrate the ability to successfully perform a digital aided CAS control.	**L/PE/SIM**
3.12		**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**

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ANNEX B: JTAC Close Air Support LOG - EXAMPLE

No.	Date	Location	No. + Type ACFT	T1	T2	T3	BOT	BOC	F W	R W	LC	IR	9L Ab	R O	FMV	HOT	N	D	Supervisor	Remarks
336	29/01/19	BAUMHOLDER, DE	2 x A-10		X			X	X						X	X		X		2xGBU-54
337	06/06/19	NANCY SIM, FRA	1 x AH-1	X			X			X								X	Sup by JTAC-I XXX	SIM-VE
338	26/09/19	KONYA, TUR	1 x F-16	X			X		X					X				X		2019 CAS CONF

METL tracking example					
	Area 1 – CAS Planning		Area 2 – CAS Preparation	Area 3 – CAS Execution	Authority
Result/Date	01/03/2020	82%	01/06/2020	01/07/2020	Signature
Result/Date	01/06/2021	94%	01/04/2021	01/09/2021	Signature
Result/Date	…	…	…	..	Signature

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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
Kaalmi Maibi, #	2nd REP	X JTAC __ JTAC-I __ JTAC-E

Part II – Evaluation Data

Evaluation Location		Evaluation Date	Evaluation Type
Antarctic		April 1st 2021	X JTAC __ JTAC-I __ JTAC-E
Qualification Date	Type	Evaluation Expiration Date	JTAC FOLDER Review date
N/A	X Initial __ Recurring	October 2022	28 February 2021

Part III – Evaluation

A. Event Description:
Capt MAIBI was embedded with SOF. His mission was to provide CAS to SOF, performing an assault on a submarine during night. This Evaluation relies on its ability to provide CAS during night, within danger close situation.

B. Practical Evaluation

Task	Grade			Task	Grade		
	Q	Q-	U		Q	Q-	U
1. Mission Planning (R)	X			24. Night CAS Operations (NR)	X		
2. Equipment Preparation (R)	X			25. Safety (CRITICAL) (R)	X		
3. Communications Equipment Operations (R)	X			26. JTAC-Instructor Evaluation Criteria			
4. GPS Operations (NR)	N/A			26.1 Equipment Preparation (R)			
5. Transmit/Receive Procedures (R)	X			26.2 Lesson Overview w/ Statement of Obj. (R)			
5.1. Authentication procedures (R)	X			26.3 Instruction Effectiveness (R)			
6. CAS Request Submission (R)	X			26.4 Identified Procedures vs. Techniques (R)			
7. Target Analysis (R)	X			26.5 Training Aids (NR)			
8. Threat Analysis (R)	X			26.6 Knowledge of Subject Matter (R)			
9. Ground Force Staff Coordination (R)	X			26.7 Communication (R)			
10. Ground Force Commander Coordination (R)	X			26.8 Time Management (R)			
11. Fire Support/Airspace Management (R)	X			26.9 Live Aircraft CAS Control Instruction (R)			
12. Airspace Management (R)	X			26.10 Administered Student Grade and Documentation (R)			
13. Use of Signaling Devices (NR)	N/A			26.11 Safety (CRITICAL) (R)			
14. JTAC to CAS Aircraft Briefing (R)	X			27. JTAC-Evaluator Evaluation Criteria			
14.1 DACAS (NR)	N/A			27.1 Compliance w/ Pertinent Manuals (R)			
15. Attack Weapons Utilization (R)	X			27.2 Evaluation Briefing (R)			
16. CAS Aircraft Control (R)	X			27.3 Identification of Discrepancies and Assignment of Area Grades (R)			
17. Ordnance Adjustment (NR)				27.4 Assessment of Overall Performance (R)			
18. Post Attack Assessment (R)		X		27.5 Appropriate Assignment of Additional Training (NR)			
19. Area Procedures (R)	X			27.6 Mission Debrief (R)			
20. FAC(A)/JTAC Interface (S)(NR)				27.7 Briefing the Supervisor on the Evaluation (R)			
21. Laser Operations (S)(NR)				27.8 Completed Evaluation Documentation (R)			
22. IR Pointer Operations (NR)	X			27.9 Safety (CRITICAL) (R)			
23. Inertial Aided Munitions Operations (NR)				CAS Mission Additional Evaluation Requirements (NR)			X

NOTES: Required “R” - Required Evaluation Area. Not Required “NR” - These areas may be assessed and graded by the SEE, but they are not required for the evaluation to count.
C. Items Requiring Additional Training: Capt MAIBI, must be prepared to jump into a new 12-step template when the situation calls for it. During this evaluation, he demonstrated great knowledge and skills in making decisions quickly. However, he did not take into account the information from the GFC during post attack assessment preventing him from anticipating the appearance of a new threat.

Training Due Date:	N/A	Training Completion Date:	

Part IV – Remarks

Plan:
Capt MAIBI, planned and prepared all the necessary equipment and knows how to operate his communication systems.

GFC:
He back briefed GFC about all mission aspects.

Assets: 2x AH64 PT60' Night capable

Routine, safety: Applied, airspace management was done Capt MAIBI deconflicts AH & Tactical UAV.
Check-in and authentication: Applied correctly.
Etc.

GAMEPLAN…
9Line…
Clearance/Safety…

You can add here any relevant documents (Map, OPO, FRAGO, Intel, GRG, etc.).

Evaluation Grade

~~Q~~ Q- ~~U~~

Part V – Certification

Position	Name and Rank	Concur	Do Not Concur	Signature	Date
Reviewing Official	XX				
Approving Official	XX				
Evaluated Individual	Capt MAIBI	X			

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

Grades are assigned for each evaluated area 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 (METL) 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.

All required areas will be evaluated during evaluation, not required areas can be added at JTAC-E’s discretion.

	Q	Q-	U
AREA 1. **Mission Planning. (Required)**	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. (Required)**	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.

	Q	Q-	U
AREA 3. **Communications Equipment Operations. (Required)**	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. (Not Required)**	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. (Required)**	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.

	Q	Q-	U
AREA 5.1. **Authentication Procedures. (Required)**	Successfully authenticated CAS aircraft IAW pre-coordinated methods.	Successfully authenticated CAS aircraft, with minor errors, timely fixed by JTAC.	JTAC failed, or was unable to authenticate CAS aircraft due to insufficient pre-mission coordination.
AREA 6. **CAS Request Submission. (Required)**	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. (Required)**	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. (Required)**	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. (Required)**	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.

	Q	Q-	U
AREA 10. **Ground Force Commander Coordination. (Required)**	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. (Required)**	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. (Required)**	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. (Not Required)**	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.

	Q	Q-	U
AREA 14. **JTAC to CAS Aircraft Briefing. (Required)**	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 14.1. **Digitally aided CAS systems. (Not Required)**	Thoroughly understood and utilized digital systems to aid the Fires delivery process. Able to generate target coordinates, receive on station report, send 9-line, track A/C, send BDA, conduct CFF and integrate applicable FSCMs, ACMs and closest friendly position on equipment display.	Minor deficiencies observed, did not preclude mission success. Equipment was utilized to some level.	Failed to understand and/or utilize Digitally Aided CAS/Fires equipment in any capacity.
AREA 15. **Attack Munitions Utilization. (Required)**	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.

	Q	Q-	U
AREA 16. **CAS Aircraft Control. (Required)**	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. (Not Required)**	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. (Required)**	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. (Required)**	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.

	Q	Q-	U
AREA 20. **FAC(A)/ RO /JTAC Interface. (Simulated)**	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. (Simulated) (Not Required)**	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. (Simulated) (Not Required)**	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. (Not Required)**	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. (Not Required) 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.

	Q	Q-	U
AREA 25. **Safety. (CRITICAL) (Required)**	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. (Required)**	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. (Required)**	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. (Required)	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. (Required)**	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. (Required)**	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.

	Q	Q-	U
AREA 26.6. **Knowledge of Subject Matter. (Required)**	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. (Required)**	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. (Required)**	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. (Required)**	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. (Required)**	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) (Required)**	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 Initial Evaluation Criteria. Use the following grading criteria when conducting the initial JTAC-E Evaluation.			
AREA 27.1. **Compliance with Pertinent Manuals. (Required)**	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.

	Q	Q-	U
AREA 27.2. **Evaluation Briefing. (Required)**	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. (Required)**	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. (Required)**	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. (Required)**	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. (Required)**	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. (Required)**	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 (Required)**	Correctly completed all documentation required in accordance with manuals	Completed documentation with minor errors.	Failed to properly document evaluation in accordance with manuals.

	Q	Q-	U
AREA 27.9. **Safety (CRITICAL) (Required)**	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.
CAS Mission additional evaluation requirements (Optional)	JTAC-E must detail this part in remarks section IV.	JTAC-E must detail this part in remarks section IV.	JTAC-E must detail this part in remarks section IV.

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ANNEX E: DEPLOYMENT - EXAMPLE

JTAC QUALIFICATION

Name	**Surname**	**JTAC #**	**Qualification date**		**Authority** (Unit/National level)
X	Y	0985	JTAC	10/10/2020	Signature
			JTAC-I	10/10/2021	Signature
			JTAC-E	10/10/2022	Signature

JTAC DESIGNATION

Operation	**UNIT**	**Period**	**Level**	**Authority** (Unit/National level)	**Review** (Operation authority)
Joint Guard	3rd Mechanized	10/12/20 – 10/12/21	JTAC	Signature	Date/Signature
Unified Protector	101st Airborne	10/12/22 – 10/12/23	JTAC-E	Signature	Date/Signature

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ANNEX F: DESIGNATION LETTER - EXAMPLE

"Standard"
Designation Letter

To: _____
(*Rank, Name and Position Title)*

References: (a) STANAG 3797 current edition and related documents;
(b) National training regulation
(c) Any relevant document

As of XXXXXXX you are hereby designated to work as a JTAC/JTAC-I/JTAC-E in the following Unit:

_____

You are responsible to keep your immediate Unit Commander informed about your currency status. If any issues, with reference to your capability to perform as a JTAC/JTAC-I/JTAC-E arise, you are responsible to immediately inform your chain of command.

As your Commander, I commit to providing you with the support and means necessary to maintain your qualification and achieve the previously stated duties.

JTAC: _____
Rank, Name and Signature

Unit Commander: _____
Rank, Name and Signature

By signing Unit commander is responsible for ensuring that all JTACs/Instructors/Evaluators listed on the Commander's Designation Letters receive a proper training and a recurring evaluation in accordance with NATO ATP-3.3.2.2 Publication.

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ANNEX G: NATIONAL WAIVER REQUEST

NATIONAL JTAC PROGRAMME WAIVER REQUEST

From (OF5 minimum)
XX

To COS AIRCOM
XX

References: (a) STANAG 3797 current edition and related documents
(b) National training regulation
(c) Any relevant document

1. **Context**: Explain here the reason of your request.

2. **Issue**: Explain here which requirement(s) you cannot fulfill.

3. **Proposition**: Explain here your suggestion to solve the situation.

4. **Timeframe**: Desired waiver application period.

Date: dd/mm/yyyy

National authority: XX
Rank, Name and Signature

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ANNEX H: JTAC PHASES – Re-Qualification - Examples

Unqualified JTAC situation	Requirements
Night control expired	Perform night control under supervision of JTAC/JTAC-I
No TAC within 6 months	Perform next TAC under supervision of JTAC/JTAC-I
Fail to meet minimum currency control within 12 months	Perform missing controls under supervision of JTAC/JTAC-I
Failed evaluation	Perform new evaluation
Expired evaluation (METLs and TAC up to date)	Perform new evaluation
Expired METL(s) within 18 months	Perform missing METL(s). (Until completed all controls are performed under JTAC/JTAC-I supervision)
Commanders' decision	National decision + complete para 4.2
No TAC within 12 months+ (Eval and METLs less than 18 months)	Perform Table 4.2 supervised National refresher tailored
No TAC within 12 months+ no METLS (Eval less than 18 months)	Perform METLs + Table 4.2 supervised National refresher tailored
No TAC within 12 months+ no METLS no Eval	Perform METLs + Table 4.2 supervised + evaluation National refresher tailored

In any case, the minimum requirements need to be met per para 4.2 to be qualified as JTAC
(National refresher is tailored to the individual and can be added/removed by national authority)

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ANNEX I: 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 NATOTerm.

A/C	Aircraft
AAP	Allied Administrative Publication
ACO	Airspace Control Order
ACA	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
JFO	Joint Fires Observer
JST	JTAC Standardization Team
JTAC	Joint Terminal Attack Controller
JTAC-I	Joint Terminal Attack Controller - Instructor
JTAC-E	Joint Terminal Attack Controller – Evaluator
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
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 J: RELATED DOCUMENTS

a. AD 075-012 NATO Forward Air Controller (FAC) Standardization Programme

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

c. STANAG 6001, ATrainP-5, Language Proficiency Levels

d. NATO FAC Standardization Team SOPs (AIRCOM)

ATP-3.3.2.2(C)(1)