Joint Robotics Repair Training Team NTC SOP

1. Our Mission- The Joint Robotic Repair Training Team (JRRTT) NTC is to provide on-site training, sustainment, repair and support for robotic platforms on site. The mission includes, but is not limited to training, sustainment, assessment, repair and accountability, inventory control and asset visibility. Provide training units the necessary robotic equipment to ensure they are proficient in the proper way to operate and sustain a robotic platform.

2. Our goal- To ensure every Rotational Training Unit (RTU) is familiar with all aspects of robotic operations. The process begins with the brigade S3, S4 and the Brigade Combat Team (BCT) leadership and culminating with the successful employment of a robot by the operator. At the conclusion of training units will be familiar with the robot request process, employing a robot and unit level maintenance by ensuring that none mission capable robots (NMC) can be serviced by the nearest JRRTT.

3. Hours of operation- The JRRTT NTC will be open for business Monday thru Friday 0730-1600 hours except during Federal holidays. During rotation units may still contact the JRRTT NTC via phone at (586) 219-4609 or they can also email the team lead currently Mr. Alfredo Ruiz, alfredo.a.ruiz2@us.army.mil

4. JRRTT NTC Chain Of Command- The JRRTT NTC reports directly to the Robotic Systems Joint Project Office (PM-RSJPO) who falls under Program Executive Office Ground Combat Systems (PEO GCS). Command and control of the JRRTT NTC is held by the RSJPO headquarters office POC is USMC LtCol John G Corbett john.g.corbett.mil@mail.mil

5. Requests of information/ Reports- In order to avoid spillage of proprietary information or in any case incorrect information. Any request of RSJPO internal information i.e. training plans, robot costs, robot usage etc. must be submitted via email by an authorized government employee (this excludes third party contractors) to the JRRTT NTC Team Lead. Absolutely no verbal requests will not be considered or honored.

- The request should have a detailed explanation of why the information is needed, keep in mind that the more information we obtain in your request the easier it will be to determine the course of action by higher headquarters.
- The Team Lead will present the requests to the chain of command for guidance on how to proceed. This is in accordance with RSJPO higher headquarters policy of processing requests for internal information.
- Once a decision is obtained from RSJPO higher head quarters a reply will be furnished back to the individual who submitted the inquiry via email format.

6. During RSOI the JRRTT NTC will report to the NTC G3 Government liaison and the designated rotational manager the number of soldiers trained (along with a copy of the current day sign in roster) and number of robot systems issued at the end of each RSOI day.

7. RSOI Operations- During RSOI the JRRTT NTC will ensure that units requesting training are provided the best operator level training possible. This is accomplished with the support from a mobile training team MTT from our Michigan headquarters. The RSJPO staff will ensure that each training group has enough hands on training with the robotic platform that they will be using during the training rotation.

8. Determining the number of students and systems- The number of students required per training class is dependent on the number of systems that will be issued. The brigade S3, S4 and the Brigade Combat Team (BCT) must coordinate with their units number of personnel slotted for robotics training. This ensures that all the appropriate individuals who will form part of a Route Clearance Package (RCP) receive the appropriate training and robot assets.

- There must be "2" personnel slotted for robotics training per every robot allocated for each unit. Robots and accessories exceed 50lbs thus are a two man carry by military standards. This also ensures that there is always a backup operator for every robot.
- Each Combat Engineer Company will be issued two Talon Engineer systems along with one Fastac robots. Adjustments can be made depending on the mission but must be coordinated with the S3, S4 and supporting EOD element if any.

- Infantry and Cavalry Scout companies are issued 2 Fastac vehicles if the mission requires them. EOD will be issued a combination of Talon, PackBot Fastac EOD, and Mini EOD. Unit leadership will identify the appropriate personnel to attend the robotics training course. Robots will only be issued to units whose personnel attend the robotics training class. Every group of students from each unit **will include an NCO**.

9. Signing for robots- Leadership within the rotational unit S4 and S3 will ensure contact is made between their subordinate units and the JRRTT NTC. It is highly recommended that the S3 and S4 leadership inform the companies of what their role will be during the exercise. This information is a key factor specially when determining Talon robot distribution among Combat Engineer and EOD units.

- Each company identified to sign for robots will need to make sure the company supply sergeant is available to sign for the equipment.
- A signature card DA form 1687 accompanied by an assumption of command memorandum must be submitted directly to the JRRTT NTC and it must read "Request, receive and turn-in robotic equipment and accessories from the JRRTT NTC".
- Robots will be issued to the companies on a DA form 2062 that will have a detailed inventory of each subcomponent issued with the robot i.e. batteries, long range antennas, shipping cases etc.
- The RTU leadership will submit all robotics training and equipment requests directly to the JRRTT NTC by emailing the team lead.

10. Servicing NMC robots during rotation- Upon verification of a non mission capable robot, rotational units are required to return the complete robotic system to the JRRT NTC, located at bldg 851c Langford Lake Road. It is recommended they contact the JRRT NTC at 586 219 4609 Mr. Ruiz or Mr. Martinez will answer the call.

- Robot operator must complete a DA form 2404 detailing the nature of the problem/s with the robot and will proceed to clean the robot off all loose dirt and debris IAW robot operator manual. JRRTT personnel will verify on site what is making the robot NMC. If repairs are determined to exceed time constraints (More than 4hrs), based on availability a replacement system will be issued.
- If replacement systems are unavailable JRRTT personnel will repair the existing system and contact the unit when it is available for pick-up.

11. End of rotation Robot turn in- Robots will be turned in free from debris such as large rocks and dust. Compressed air should be used to ensure that all dust is removed from the robot as best as possible.

- Robot operators will complete a form DA 2404 to be submitted with every robot deemed to be NMC due to faults resulting from normal wear and tear i.e. snapped tracks, no video feed from cameras where no wires are damaged, grippers do not open or close etc
- Robots that have been deemed NMC due to the result of severe damage not related to normal wear and tear I.E. snapped arm chain due to overloading, broken wires, broken cameras where wires and protective glass display physical damage, punctures to the chassis, bent arms etc. Need to be accompanied by a memorandum signed by the company commander 0-3 and above and a completed DA 2404.
- Robots that have been identified as lacking or missing parts from the robot or the set that was issued with them on the 2062 will also need to be accompanied by a Financial Liability Investigation of Property Loss (FLIPL), a memorandum signed by the company commander 0-3 and above explaining what happened to the robot and a completed DA 2404.

12. All memorandums will include the following information:

A. Robot serial number.
B. Robot type (Talon, PackBot Fastac, PackBot Fastac EOD or Mini EOD)
C. Reason and circumstances as to why the equipment was damaged or lost

No Robot will be accepted if it is incomplete or without the proper documentation (i.e. statements, parts etc.).

13. Non- Rotational Training- the JRRTT NTC is capable of providing training to units who request robotic training directly with the JRRTT NTC staff or via the NTC G3.

- Training request must be turned into the JRRTT NTC no less than 5 working days before the required training day.
- Each group of soldiers **will have an NCOIC** and a clear description of what they intend to accomplish with the training.
- Requests coming from any third parties and not the government customer directly will not be honored.

14. VIP Brief Support- the JRRTT NTC supports VIP briefings with robotics platforms and subject matter experts ready to answer any question or concern.

- VIP brief support needs to be submitted via email no less than 5 business days before the brief is to take place. This ensures that the JRRTT NTC does not have any conflicting events during the scheduled VIP brief. Requests coming from any third parties and not the government customer directly will not be honored.

`15. Special Event Support- The JRRT NTC supports special events i.e. parades, conferences, or any other event that requires robotics participation and support. Requests need to be submitted via email no less than 5 working days or 2 business weeks if travel is required.

- The request will be forwarded to the RSJPO headquarters for final approval and review of the request. RSJPO headquarters will have the final decision on how to best support each request.
- The JRRTT NTC does not have authority to approve travel or commit any assets.
- Requests submitted by anyone other than an authorized government employee (this excludes third party contractors) will not be honored.

16. FT Irwin/NTC Support- The JRRTT NTC is committed to provide Ft Irwin NTC with all robotics related support in accordance with RSJPO Headquarters policies and procedures. This includes but it is not limited to participating in all meetings, briefings i.e. CG rollout brief, planning conferences, and all other events where robotic operations may be discussed. This will ensure any and all comments questions or concerns are addressed by the RSJPO SMEs.

17. OC Academy- The JRRTT NTC is committed to provide the NTC OC Academy the necessary support in accordance with RSJPO Headquarters policies and procedures. This support will be in the form of "train the trainer" training.

- The OC Academy and the JRRTT NTC will schedule this training event no less than 5 working days in advance, the location will be the NTC OC Academy.

18. LTP Support- The JRRTT NTC will brief LTP attendees on the procedures needed to execute a successful robotic operation. In addition they will be briefed on the capabilities and limitations of the robotic platforms here at the NTC. Attendees will also be provided contact information for the JRRTT NTC for any further comments, questions or concerns.

19. CI2C - The JRRTT NTC is committed to provide the NTC Counter Improvised Explosive Device (IED) Cell with all robotics related support, in accordance with RSJPO Headquarters policies and procedures. We will provide them with our robotics expertise in order to plan, synchronize, coordinate, and facilitate C-IED robotics training for units throughout their ARFORGEN cycle. In addition to all the rotational related procedures previously covered at the beginning of this document, and any additional requests for support from the CI2C cell. Requests submitted by anyone other than an authorized government employee (this excludes third party contractors) will not be honored P.O.C for this memorandum is The JRRTT NTC Team Lead and may be reached at (586) 219-4609.

20. Robotics System Joint Project Office (RSJPO)

Headquartered in Warren, Michigan, the Robotic Systems Joint Project Office (RSJPO) is the materiel solution provider for United States Army and Marine Corps unmanned ground vehicle (UGV) needs.

Manage the development, systems engineering, integration, acquisition, testing, fielding, sustainment and improvement of unmanned systems for Warfighters to ensure safe, effective and supportable capabilities which will form the background of the future force.

The RSJPO has been designated by the DoD to serve as stewards of national resources to meet operational needs in the most efficient manner to accomplish assigned tasks. Implementing DoD guidance for acquisition reform and streamlining, optimizing development, acquisition, and logistics business processes.

On November 2009, the Principal Deputy Assistant Secretary of the Army for Acquisition, Logistics and Technology signed a memorandum redefining the role of the RSJPO and its parent organization, the Program Executive Office Ground Combat Systems (PEO GCS). This memorandum, effective December 2009, defines the responsibility of the RS JPO as the centralized Army organization for the acquisition life-cycle, to include budgetary and Program Objective Memorandum execution, for all Army UGVs and robotic appliqu2 kits.

In addition the recently published revision of AR 70–1 Development, acquisition, and fielding of unmanned ground systems and integration of mission capability packages dated 22 July 2011
Chapter 8 section 12 reads as follow

a. The Robotic Systems Joint Project Office (RSJPO) PM is responsible for the acquisition life cycle for unmanned ground systems. The RSJPO will coordinate, manage, and integrate unmanned system life-cycle activities. This includes budgetary and POM execution, identification of all milestone and master program activities, integration interfaces (to include an open system architecture), and responsibility for all program acquisition strategies.

b. The PM RSJPO will establish MOAs with each PEO; the rapid equipping force; the Joint Improvised Explosive Device Defeat Office; and U.S. Research, Development and Engineering Command to ensure implementation of this policy.

c. The PEOs (to include subordinate PMs) and DRPMs will establish a continuing relationship with the PM RSJPO.

d. Unmanned ground systems include—
    (1) Any robotic platform (regardless of size or mission) characterized by a ground mobility platform with sensors, computers, software (including modules for perception, navigation, learning, adaptation, behaviors, and skills), human-robot interaction, communications, power and a separate mission package depending on the unmanned systems mission role.
    (2) Any robotic appliqué kit applied to a manned combat support, combat service support, tactical wheeled vehicle or ground combat system.

e. The responsible TRADOC organization will develop and coordinate all requisite DOTMLPF considerations with the PM RSJPO.

The RSJPO works with various commands, labs and organizations within the Army and Marine Corps to focus efforts on improving Soldier support with UGVs. Additionally, the RSJPO works with other Department of Defense (DoD) organizations such as the Joint Ground Robotics Enterprise and Joint Improvised Explosive Device Defeat Organization to ensure that the best practices within the DoD are being utilized to enhance our Soldier's and Marines' capabilities.

The RSJPO is committed to building strategic and tactical relationships throughout the Army and Marine Corps to support the Joint Warfighter through the life cycle management of UGVs now and in the future. As the use and capabilities of our unmanned systems continue to grow, and as our fundamental warfighting doctrine adjusts to the inclusion of these systems.

RSJPO is ready and capable of providing and supporting the equipment that the Warfighter needs to succeed on, and safely return from, the modern battlefield.

RSJPO has developed and refined the Joint Robotic Repair and Fielding (JRRF) mission.

The JRRF is designed to provide continental U.S (CONUS) and outside the continental U.S. (OCONUS).

- Support for fielded robotic platforms to include training, sustainment, assessment, repair and accountability. Continuous improvement efforts within the JRRF include enhanced inventory control and asset visibility; integrating Radio-Frequency Identification Devices; Condition Based Maintenance; and standardizing processes for Commercial Off-The-Shelf and Non-Standard Equipment repair and sustainment.

Additionally, the JRRF has the capability of deploying Mobile Training Teams (MTTs) to support CONUS units preparing to deploy. Over 6,000 Army and Marine Corps personnel have been trained on UGVs at various locations by JRRF trainers. The JRRF is located at Selfridge Air National Guard Base in Michigan and manages all of our Joint Robotics Repair Training Teams (JRRTTs) worldwide. We work closely with the original equipment manufacturers to ensure that our trainers and technicians have the most current repair and procedure information available.

- The JRRTTs are subsets of the JRRF that provided on-site CONUS and OCONUS training, sustainment, repair and support for robots from all branches of service and multiple Coalition partners. There are currently eight JRRTTs OCONUS locations: one in Germany, one in Iraq, one in Kuwait and five in Afghanistan. JRRTTs have also been established at multiple CONUS Combat Training Centers (CTCs), to include Fort Irwin, Fort Leonard Wood, Fort Polk, Fort Hood, and the Marine Corps Air-Ground Combat Center 29 Palms.

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Contact information

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