

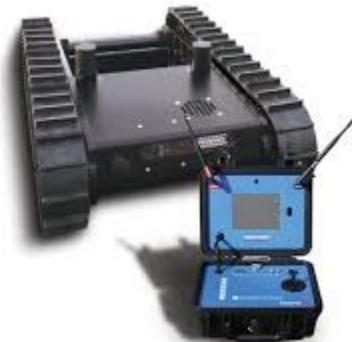
## ROBOTICS (UNMANNED GROUND SYSTEMS) CHECKLIST

NAME OF COUNTRY: \_\_\_\_\_ DATE OF SUBMISSION: \_\_\_\_\_

**CURRENT ROBOTIC SYSTEMS AVAILABLE & BRIEF DESCRIPTIONS (for more information, please GOOGLE them):**



**MV-4 Mine Clearing VEHICLE** is tracked, remotely-controlled light demining system designed to clear all types of Anti-Personnel (AP) mines and UXO-s, and is survivable to all types of Anti-Tank (AT) mines. It is suitable for demining of house yards, orchards, forest paths, river banks, and other types of terrain that is inaccessible to larger machines. The various operating tools for mine clearance and soil processing destroy even the smallest Anti-Personnel blast pressure mines and the most dangerous types of bouncing fragmentation mines. The machine is remotely controlled from an armored vehicle or from a safe distance (NOT INCLUDED). The engine and vital components of the machine are protected by steel plates. There is also a similar fire fighting system (**MVF-5**) and a medium weight remotely controlled demining system (**MV-10**) available for wider use.



**FIRSTLOOK** is a throw able, rugged, and expandable robot that provides immediate situational awareness, performs persistent observation and investigates dangerous and hazardous material while keeping its operator out of harm's way. [Weighs 5.2 pounds](#), can survive drops up to 16 Feet onto concrete, has four day and night cameras with zoom and illumination and two-way audio. Supports cameras, sensors, manipulators and disrupters. Can reach speed of 3.4 MPH, climbs obstacles up to 7" high, overcomes curbs, turns in place, and self-rights itself when flipped over.



Dragon Runner

**DRAGON RUNNER** is similar to the FIRSTLOOK robot built for urban combat, [weighing approximately 30 pounds](#) and is light enough to be carried and thrown. It comes in two sizes, DRAGON RUNNER 10 AND DRAGON RUNNER 20.

The **Dragon Runner 10 (DR-10)** Micro Unmanned Ground Vehicle (MUGV) is a modular, lightweight, compact, multi-mission remote platform developed for supporting small unit dismounted operations. While using a wearable controller, the warfighter sends the DR-10 ahead of his small unit to gain situational awareness and take action. DR-10's day and night sensors allow it to serve as the forward eyes of the team while also being used to deliver remote sensors, emplace counter-IED charges, and more. [Weighs about 10 pounds.](#)

The **Dragon Runner 20 (DR-20)** is a highly specialized unmanned system that provides situational awareness. The DR-20 is uniquely suited for ordnance disposal, reconnaissance, security, military operations and first responder applications. Originally designed for the U.S. Marine Corps, the basic model of the Dragon Runner 20 SUGV weighs in at only 20 pounds, measuring just 12.2 inches wide, 16.6 inches long and 6 inches high. Although not much larger than a child's remote-controlled vehicle, this powerful robot packs an array of mission-ready capabilities. Can lift up to 10 pounds with its manipulator arm. [Weighs about 20 pounds.](#)



**SUGV** is a portable, single-person-lift robot with dexterous manipulation for dismounted and mobile operations. The SUGV provides operators with a highly mobile, robot solution that climbs stairs and

manipulates objects. Portable, can be easily carried and deployed. Can fit into packs with 9" by 28" clearances. Can lift up to 22 pounds. Has four day and night cameras with zoom and illumination. Can reach speed of 6.2 MPH, and supports cameras, sensors, manipulators and disruptors. [Weighs about 45 pounds.](#)



**PACKBOT** is modular, adaptable and expandable. It can perform bomb disposal, surveillance and reconnaissance, CBRNE detection and HazMat handling operations. Quickly configured based on mission needs, PackBot easily climbs stairs and navigates narrow passages with sure-footed efficiency, relaying real-time video, audio and sensor data while the operator stays at a safer, standoff distance. It is man-transportable, deployable in less than 2 minutes, and can overcome stairs, obstacles and debris. It has four day and night cameras with zoom and illumination and can reach speed of 5.8 MPH. Supports cameras, sensors, manipulators and disruptors. [Weighs about 53 pounds.](#)



The **KOBRA** has a lift capacity of 330 pounds and integrates numerous payloads to expand your operational area. It can reach as high as 11 Feet, climb stairs, fit through doorways or down aisle ways. It deploys from the back of a small 4x4 vehicle (NOT INCLUDED), and is able to reach speeds of 8 MPH while carrying 150 pound payloads. It maintains mobility on rough terrain in all weather conditions and [weighs about 367 pounds.](#)

Note: There is a common controller currently compatible with the SUGV and PackBot. The FirstLook compatible version will be available after August 2018 and the Kobra compatible version will be available in 2019.



**TALON** features modular design incorporating a broad array of sensor packages. It is quick, durable and easy to use. The robot has a high payload-to-weight ratio and can be deployed in all environmental and terrain conditions. It **weighs between 115-140 pounds** and offers enhanced safety to infantry units. It features a disruptor-ready manipulator arm, 360° rotating wrist, gripper, microphone and a loudspeaker. It is equipped with intuitive joystick controls for 180° pitch lower arm and 270° pitch upper arm. The robot can be configured with a number of sensors to detect gas, chemical, radiation and temperature in HAZMAT duties. It can also be fitted with a heavy-duty rotating shoulder, longer reach for heavy lift operations and a range of weapons for special weapons observation reconnaissance detection system (SWORDS) duties. The robot can be additionally installed with GPS compass, two isolated firing circuits, RE12-12 disrupter mount, portable X-ray mount, recoilless PAN disrupter mount, shotgun mount, wire cutting tool, heavy-duty tracks and sprockets, and reusable shipping / storage containers.

## QUESTIONNAIRE

**Specify mission(s) and location(s) where item is to be used:**

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**How many of each system do you require?**

MV-4 \_\_\_\_\_  
 MV-5 \_\_\_\_\_  
 MV-10 \_\_\_\_\_

FIRSTLOOK \_\_\_\_\_  
 DRAGON RUNNER 10 \_\_\_\_\_  
 DRAGON RUNNER 20 \_\_\_\_\_  
 PACKBOT \_\_\_\_\_  
 KOBRA \_\_\_\_\_

TALON \_\_\_\_\_

## TRAINING:

1. TYPE OF TRAINING REQUIRED (For each System):
  - a. OPERATOR \_\_\_\_\_ NO. OF STUDENTS \_\_\_\_\_ (detailed questions in #8 below)
  - b. MAINTENANCE \_\_\_\_\_ NO. OF STUDENTS \_\_\_\_\_ (detailed questions in #9 below)
2. \_\_\_\_\_
3. CONUS OR IN-COUNTRY? \_\_\_\_\_
  - a. If in country, specific location where training is to be conducted and provide Point of Contact (e-

mail): \_\_\_\_\_

- b. Is customer supplying the facility and/or equipment (i.e., vehicles) for the training, or is the contractor required to rent a facility? \_\_\_\_\_

4. PRIMARY LANGUAGE OF STUDENTS: \_\_\_\_\_

5. ARE STUDENTS CONVERSANT IN ENGLISH (Can class be taught in English?) \_\_\_\_\_  
a. If students cannot be taught in English, will customer provide interpreter(s), or will contractor be required to hire instructors/interpreters who can communicate in that language? \_\_\_\_\_

6. TYPICAL "WORK DAY/WORK WEEK" IN HOST COUNTRY: \_\_\_\_\_

7. OPERATOR TRAINING: (from question 1a)

- a. Students' level of experience operating the equipment he is being trained to operate:  
i. No experience \_\_\_\_\_  
ii. Some (\_\_\_\_\_ months) of experience with this general type of equipment.  
iii. Years (\_\_\_\_\_) of experience with this general type of equipment.  
iv. Months/years of experience with the specific type of equipment being acquired. \_\_\_\_\_

8. MAINTENANCE TRAINING: (from question 1b)

- a. Students' level of experience maintaining the equipment he is being trained to maintain:  
i. \_\_\_\_\_ Operator level (Operate robotic systems)  
ii. \_\_\_\_\_ Maintainer level (Maintain robotic systems)

## CONTRACTOR-FURNISHED SPARES, ANCILLARY ITEMS & PUBLICATIONS

1. CONCURRENT SPARE PARTS (For each System Requested):

- a. Are spare parts desired: \_\_\_\_\_ Yes \_\_\_\_\_ No  
If yes, specify how many year's-worth: 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_

2. PUBLICATIONS:

One set of commercial Operator's manuals is typically provided with each end item (in English). Does customer wish to purchase additional publications? \_\_\_\_\_ Yes \_\_\_\_\_ No

If Yes, identify types of publications desired, and quantities: .

- |          |                 |       |               |
|----------|-----------------|-------|---------------|
| a. _____ | Operator's      | _____ | No. of copies |
| b. _____ | Maintenance     | _____ | No. of copies |
| c. _____ | Parts Lists     | _____ | No. of copies |
| d. _____ | Service Manuals | _____ | No. of copies |

3. LANGUAGE: All manuals are typically supplied in the English language. Does the customer wish to have above manuals translated in another language, if available? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, in what language? \_\_\_\_\_

## OTHER:

Will this be Sole Source to a particular Original Equipment Manufacturer (OEM) for their equipment only desired by the customer? \_\_\_\_\_ **Yes** \_\_\_\_\_ **No**

- a. If yes, please specify name of contractor: \_\_\_\_\_  
(i.e., Endeavor, QinetiQ, etc.)
- b. Forward justification document to USASAC prior to LOR submission.
- NOTE:** Sole Source only applies to Country funded cases.