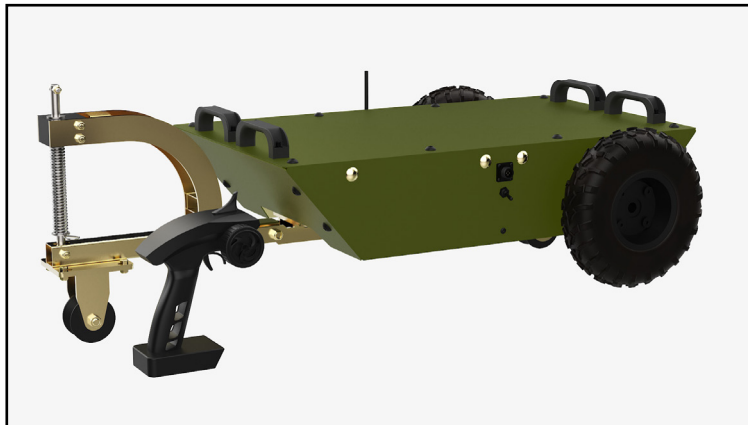


RANGE SYSTEMS™

Pro-Bot Rover 2WD Guided Moving Target Operation and Maintenance Manual

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Introduction

The Pro-Bot Rover is an all-terrain mover designed for improved range sites like Hogan's Alleys, UACs, MOUTs, combat villages, sniper training areas. It offers easy battery replacement for extended use and supports various target mounts, including military E, F, IVAN, 3D Manikin Mike™, steel reactive plates, and law enforcement backers. With rugged, steel construction, durable gearing, and "plug and play" field-serviceable components, it's built for tough conditions.

Thank you for choosing the Range Systems Pro-Bot Rover moving target system.

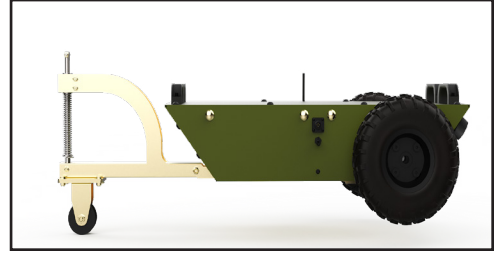
WARNING:

- Failure to follow the instructions in this manual may result in bodily harm to yourself or others.
- Turn the power OFF when not in use.
- Keep all personnel and obstructions clear of the target area.
- The target is not 100% waterproof or weatherproof. Prolonged exposure to the elements may result in damage to the unit, and any needed repairs may not be covered under warranty.
- Do not ride on the target. The platform is not designed to carry passengers.
- Due to the target's nature as a radio-controlled device, it is possible that interference from an outside source could cause unwanted movements.
- The target platform moves fast and is heavy. Avoid slamming the bumpers into people or stationary objects. This can cause bodily harm or substantial damage to a target or object.
- The target does not have towing or plowing capabilities. It can be severely damaged by pulling or pushing heavy objects.
- The target platform is considered stuck when at least one wheel is not turning. Continuing to apply power to the unit when stuck could damage the electronics. A stall condition will cause the motors and electronics to overheat, and could lead to permanent damage.
- Do not drive the target off jumps and ramps, drop the unit, or jump onto the unit. Any of these actions could cause the chassis to bend or damage the motors and motor shafts.

Basic Components of the System

Rover

Versatile 2WD moving target system designed for flexible training setups while operating smoothly on a track.



Controller

Simple, user-friendly wireless controller that gives you precise smooth speed control in both forward and reverse for realistic movement.



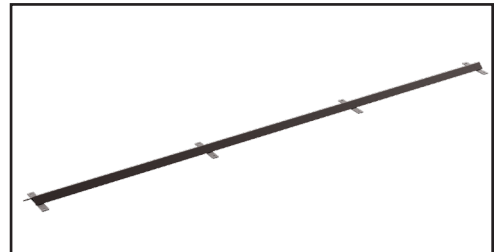
Charger

Dual bank charger designed to efficiently charge the rover battery packs.



Track (sold separately)

Expandable, modular track system designed to guide the rover with precision, delivering smooth, consistent movement while allowing full customization to match your specific training needs.



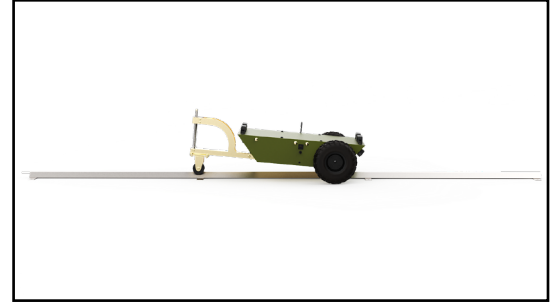
Features and Specifications

- Track system for consistent operation
- Wireless variable speed control
- Standard effective range: up to 100-300 meters line of sight
- Full running man speeds
- Swappable Battery packs for extended runtime with optional part XA5063

Setup

1. Rover Track

The Rover is designed to be used on a track system, which is sold separately. The track must be assembled to provide a continuous rail for the Rover to follow. During the set up of the track, adjustments to the Rover guide wheels may need to be made based on surface conditions and track mounting height to ensure the guide wheels contact the track. This allows the drive wheels to make sufficient contact to ensure they can propel the Rover. **(This adjustment is covered in Step 4)**



2. Charge the Rover Batteries

- A. Although the Rover is shipped with batteries that have some charge, it is best to fully charge the batteries prior to using.
- B. Ensure the platform power is OFF by flipping the switch on the side of the unit to the OFF position.
- C. Remove the rear back plate of the Rover by loosening the knobs.
- D. Disconnect the two battery cables from the two power cables.
- E. Attach the two cables from the dual battery charger to the corresponding color plugs coming from the battery. The plugs are color matched and will only connect to the same color plug.

Tip: You can tell which ones are the battery connectors as they are bolted together.

Tip: Do not connect both battery cables to a single charger. Use either two individual chargers or a dual-bank charger like the one supplied with the unit.



- F. Charge the batteries fully.
- G. Once the batteries are fully charged, disconnect the battery charger and reconnect the two power cables to the battery cables. The plugs are color matched and will only connect to the same color plug.
- H. Replace the cover by reinstalling the knobs to fasten it in place.
- I. Turn the power back ON by flipping the switch on the side of the unit.
- J. The unit is now ready to be used.

3. Transmitter Batteries

- A. Remove the transmitter from its box and install the 4 AA batteries (included) into the transmitter controller.
- B. If needed, additional instructions can be found in the transmitter box.

Mount the Target Holder and Your Desired Target

The Rover can be outfitted with multiple target options that are sold separately. Adapter brackets and other target options will be shipped separately and will need to be attached to the Rover platform at setup. Most of the time, these will need to be bolted on and wires connected using the included parts.

If you have questions during this step in the setup process please call us at 888-999-1217.

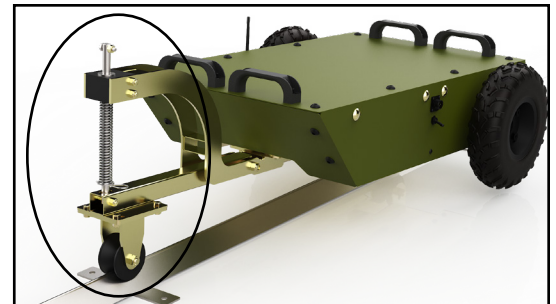
4. Placing the Rover on the track

- A. Guide the Rover onto the track
- B. Ensure that the front wheel is centered on the track and the guide wheel under the main body of the Rover is centered on the track.
- C. Next, adjust the drive tire and guide wheel relationship as needed.

Note: To ensure the drive tires are making contact with the drive surface, the guide wheel under the main body of the Rover can be adjusted up and down. The correct setting ensures the drive tires have enough traction to propel the Rover while the guide wheel keeps the Rover on the track.

1. If the guide wheel is set too low, the Rover will rock side to side and the drive wheels will not propel the Rover
2. If the guide wheel is set too high, the Rover will come off the track when traveling.

D. For proper operation, the Rover platform should be sitting relatively level front to back. If it is not, adjust the spring/cotter pin at the front of the Rover up or down.



Operating the Pro-Bot Rover

Before proceeding to use the target, perform the following pre-checks:

- Ensure the platform and transmitter batteries are fully charged.
- Ensure that there are no visual signs of damage to the platform and target holder.
- If you are using a hit-reactive target with the Pro-Bot platform, ensure there are no visual signs of damage.

WARNING: Ensure all personnel and obstructions are clear of the target unit at all times!

Preparing the Target for Training

Powering On the Unit

Power on the transmitter first. Do not use the trigger or steering wheel.

The transmitter display will show the unit's battery voltage. If "Low" is displayed, replace the batteries.

The Rover is shipped "pre-paired" with its transmitter. If you have ordered multiple Pro-Bot Series targets at once, they will come labeled with an ID number on the base near the antenna. Each ID corresponds to a single transmitter which controls only that target. However, transmitters are interchangeable between units if necessary.

Once the transmitter is powered on, flip the power switch on the platform to the ON position. You should hear a second mechanical "click" from the power control relay inside the unit.

During Training

Driving the Unit (Forward and reverse)

Most driving operations are controlled by the transmitter's bi-directional trigger. Pull the trigger to drive the unit forward, or push to reverse. The unit has linear speed control; the further you push/pull the trigger, the faster the platform will go.

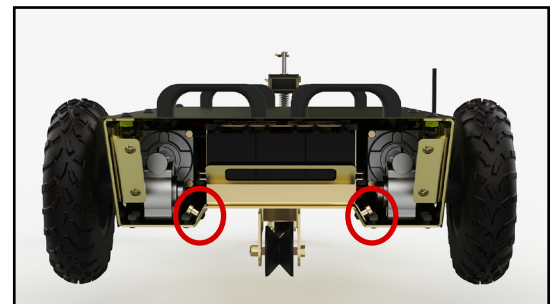
In a setting where a track has an end stop, the Rover will not sense or stop automatically. It is important that the operator stops the Rover without hitting the stops or going off the end of the track. Excessive hitting of stops will damage the Rover.

When the Rover is on a track, DO NOT USE the wheel on the side of the transmitter to steer.

Battery Pack Swapping for Extended Training

The Rover is designed to support quick battery pack replacement, allowing for extended training sessions with minimal downtime.

To swap the battery pack, first power down the Rover and ensure it is on a stable surface. Locate the rear cover and remove it by unscrewing the four retaining knobs. Set the cover aside. Inside, you will see the battery connectors, disconnect them. The battery pack is secured by brass retaining knobs. Loosen these brass knobs until the battery is free to move. Carefully slide the depleted battery pack out of its compartment. Take a fully charged battery pack and slide it into the compartment, ensuring it is properly aligned and fully seated. Once in place, tighten the brass knobs to secure the battery firmly. Before reinstalling the rear cover, reconnect the battery connection securely. Finally, reinstall the rear cover by aligning it correctly and tightening the four knobs.



The Rover is now ready to resume operation with the new battery pack.

After Training

When finished using the Rover, perform the following post-checks:

- Turn the platform power switch and transmitter OFF.
- Ensure that there are no visual signs of damage to the platform, or other accessories.
- Check the battery level as displayed on the transmitter. If the transmitter reads 9 volts or less, charge the battery.
- It is best practice to recharge the Rover batteries after usage.

Maintenance

Storing and Transporting the Pro-Bot Rover

With Rover powered off, safely remove loose debris from the target and platform. Wipe down the platform if needed to prevent dirt and debris from entering the inside.

When not using the Rover, store it indoors in a clean, dry space. The target is not 100% waterproof or weatherproof, and may be damaged by extended exposure to the elements.

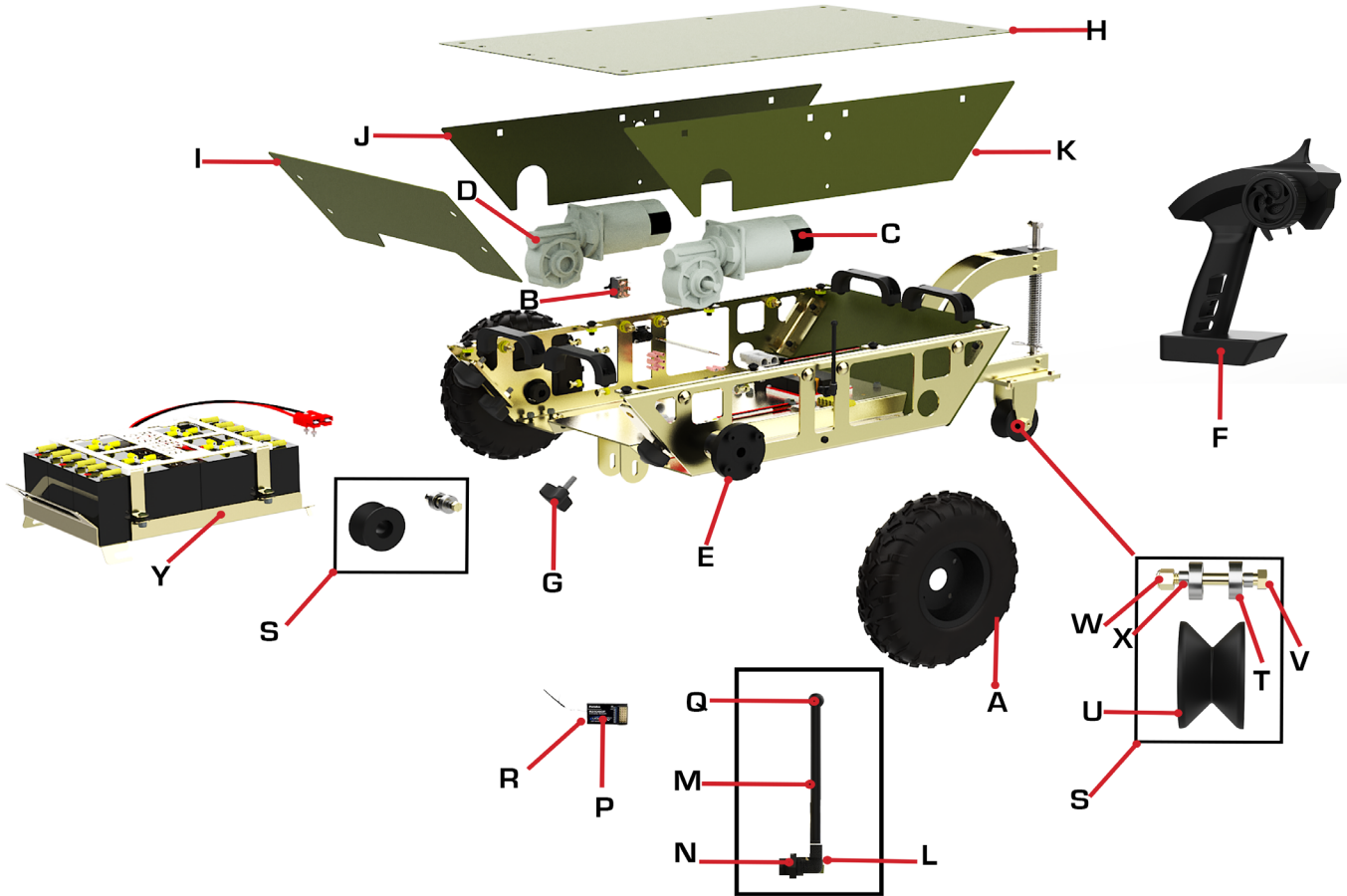
When transporting the Rover, grab it by the edges, not by the target holder or other optional accessories as this can cause damage to the unit.

WARNING: Do not allow the batteries to become deeply discharged. Running the unit on low batteries can cause decreased battery life or even battery failure. If the batteries are low, charge the unit as soon as possible.

The motor control is housed under the center of the platform. There are no serviceable parts for either of them, so you do not need to remove this cover.

The receiving antenna is located at the center of the platform. Keep the antenna vertical at all times to ensure the best reception of the radio signals. Do not bend or damage the antenna; this will affect the platform's effective control range.

Recommended Replacement Parts



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
A	HC0039	10" Wheel	2
B	HM0451	Toggle Switch	1
C	HM1152	RH Drive Motor	1
D	HM1151	LH Drive Motor	1
E	XA2334	Wheel Hub	4
F	HM0462	Controller and Receiver	1
G	HM0489	Knob	4
H	XA1015	Top Plate	1
I	XA1086	End Plate	2
J	XA1099	Side Plate - Left	1
K	XA1100	Side Plate-Right	2
L	HM0613	Elbow	1
M	HM0648-04	Tubing	1
N	MP1032	Nut	1
O	XA5343	Adapter	1
P	HM1155	Receiver	1
Q	HM1153	Plastic Cap	1
R	HM1154	Velcor Tape	1
S	XA5198	Track Wheel Assembly	2
T	HM0837	Bearing	4
U	HM0916	Guide Wheel	2
V	HF0471	Bolt	2
W	HF0526	Nut	2
X	HM1116	Spacer	4
Y	XA5063	Battery Pack	1