

BLACKBEARD X

User Manual



Nov 2025

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Links within the document:

Red - other sections of this manual (*works in Adobe program*)

Blue - links to specific MantisX URL

Product Overview

Congratulations on joining the thousands of shooters now training with the MantisX Shooting Performance Systems. MantisX is a motion-based shooting system that analyzes movement during the firing process. While connected to the Mantis Pistol/Rifle app, the BlackbeardX generates real-time data based on the movement of the gun and analyzes this movement data to generate feedback after the full press of the trigger. The MantisX app muzzle trace data from the movement provides diagnostic feedback.



The feedback includes trigger control and hold control movement before, during, and after the complete trigger press. The sensor calculates a new point of aim with each shot, which allows the user to use any target. There are no specific targets or lighting conditions required for the MantisX sensors.

The [BlackbeardX](https://www.mantisx.com) system is compatible with a variety of rifles. The training system replaces the bolt-carrier group, charging handle, and magazine. Check out the available BlackbeardX models on [mantisx.com](https://www.mantisx.com) for more information.

BlackbeardX resets the trigger on the rifle, so the user does not have to manually operate the charging handle to reset the rifle trigger for dry fire training. The MantisX sensor is integrated in the magazine.

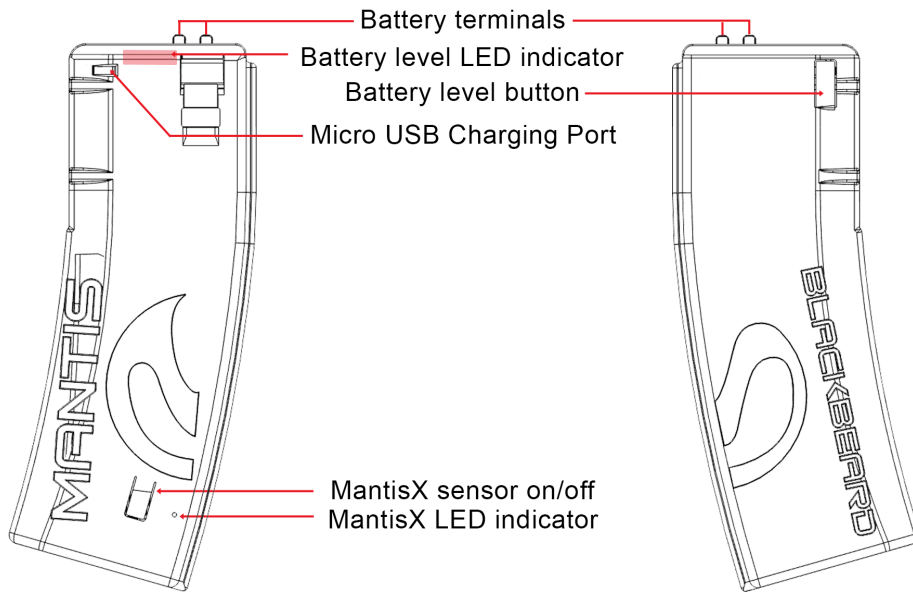
Firearm Safety

Firearm safety is the responsibility of every individual with a firearm. Keep in mind that every accidental discharge is a negligent discharge in which one of the standard safety rules was not followed. Always follow all of the firearm safety rules when you are training.

Not all firearms are the same. Check with the manufacturer of your firearm to determine the safest way to dry fire train with a specific make/model of firearm. Before starting each dry fire training session, set up the training space for maximum safety by following these rules:

- **ALWAYS treat the firearm as if it is loaded.** You must check your firearm to confirm that there is no ammunition in or around the training area including the firearm and the magazines. Remove all ammunition from the training area.
- **ALWAYS keep your finger off the trigger** until the conscious decision to fire has been made. Do not insert your finger into the trigger guard and make contact with the trigger unless you are ready.
- **ALWAYS keep the muzzle pointed in a safe direction.** Always be conscious of the direction the firearm is pointed, even if there is no ammunition in the firearm and you are the only one in the room. Do not point at any body parts (feet or hands). Remember bullets may travel through walls.
- **ALWAYS be aware of your target and beyond**, including the space behind the target as well as between the target and shooter. This applies to both dry-fire and live-fire training.

Charging the magazine



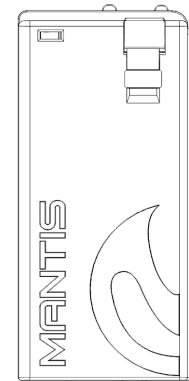
The parts diagram for other models are available on the [Installation Instructions](#) for each BlackbeardX model. The BlackbeardX has a rechargeable battery. A micro-USB or USB-C charging cable is included with BlackbeardX training systems.

It is recommended that you connect the cable and the MantisX to a dedicated charging block. Apple charging blocks are NOT recommended with MantisX sensors. A computer USB port may be used. The charging time may vary depending upon which charging block or source is used with the micro-USB/USB-C.

The BlackbeardX battery capacity is considerably larger than the MantisX sensors. The BlackbeardX may take 12-15 hours to fully charge the battery. A fully charged BlackbeardX is capable of approximately 50,000 trigger presses. *Batteries will drain over time when stored and not in use, be sure to charge when the battery is low.*

The battery level of the BlackbeardX can be checked by pressing the button located at the top of the magazine near the power terminals, the opposite side of the charging port. The magazine has five LEDs that may light up when you press the battery level button. One bar lit up indicates a very low charge and five bars lit up indicates a full charge. The LED indicator bars do not stop flashing when the battery is fully charged. A single LED will blink while the magazine is plugged into a power source.

BlackbeardX models with a USB-C, the charging indicator light will be yellow when charging and green when fully charged. When the magazine is initially plugged in, the light will flash 1 - 4 times to indicate the level of battery charge. One flash indicates the battery is low and four flashes indicate that the battery has a good charge.



The original Blackbeard does not have the MantisX sensor integrated into the shorter 20 round sized magazine, so it does not connect to the app. Charging timeframe and laser adjustment is the same as BlackbeardX. See the [Laser Adjustment](#) section for the instructions to align the laser in the rifle barrel.

Want to upgrade to a BlackbeardX model? Check with customer support if the [Trade-In Program](#) or the [Return Policy](#) is the best option for you.

The BlackbeardX is available with red, green or IR (infrared) lasers. Some models have a no laser option available. The IR laser is designed to work with night vision gear and infrared cameras. BlackbeardX lasers are compatible with many laser training systems.

The BlackbeardX connects to the MantisX - Pistol/Rifle app ([Android](#), [iOS](#), and [Fire](#)) on your smart device through Bluetooth connection.

The BlackbeardX lasers are compatible with the Laser Academy app. However, full access to the Laser Academy app is not included with the BlackbeardX system. If you would like the app feedback from a laser, then consider a Laser Academy kit or purchase [Laser Academy app](#) full access in the device the app store.

Mantis apps may be used together on different devices or with split screen function to offer a broader scope of feedback.

See the [MantisX User Manual](#) for complete details on the Mantis Pistol/Rifle app and app training features.

MantisX Pistol/Rifle app

The BlackbeardX connects to the MantisX - Pistol/Rifle app to view the training data from the integrated MantisX sensor. Download the MantisX app to your device from Google Play, Apple Store or Amazon app store: <https://mantisx.com/pages/app>

Minimum System Requirements

- Android: v 7.0*
- Apple v 13.0
- Kindle Fire 7

The Mantis apps are not available for computers or laptop operating systems.



MantisX Pistol/Rifle

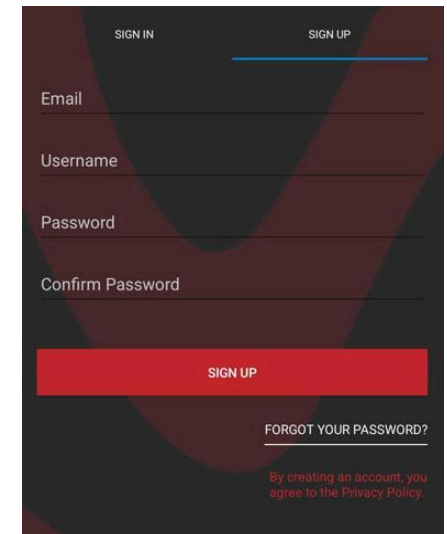
Bluetooth 4.1 or greater with a Bluetooth Low Energy profile is required. Bluetooth must be enabled and permission given to the app to connect to the MantisX sensor. When the app is installed, the app will prompt for the permission.

* Android OS versions 7-11 require location enabled and permission granted to connect to the app. *MantisX does not collect or store any location information.*

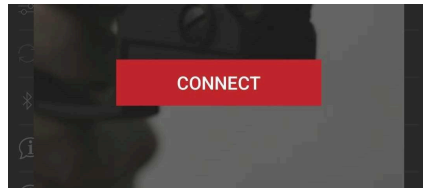
Connecting to the App

The integrated MantisX sensor needs to be connected to the app for each training session. To connect the BlackbeardX to the Mantis Pistol/Rifle app, do the following:

1. **Verify Bluetooth is enabled** - When the app has Bluetooth permission and the sensor is turned on, then the MantisX app will search for the MantisX sensor during connection prompt. MantisX will not appear in the available Bluetooth devices list on Android devices).
2. **Open the app** - MantisX Pistol/Rifle.
3. **Sign In/Sign Up** to your MantisX profile account (*The Sign In screen may be skipped, however the app features are limited without a training profile*). Sign In to your Mantis account or Sign Up to create a Mantis account that can be used with all Mantis apps.
4. **Review Firearm Safety** and clear your firearm before [installing the BlackbeardX](#) in your rifle.
5. **Turn on sensor** - With the BlackbeardX installed in the rifle. Press the tab to turn on the integrated sensor, at the bottom of the magazine powerbank, the blue LED light will start flashing.

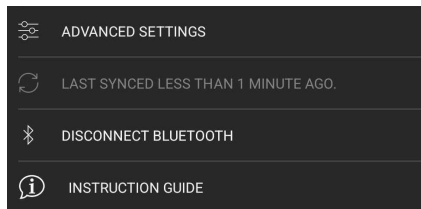


6. **Calibrate** - Place the rifle with the BlackbeardX installed on a steady surface to allow the app to calibrate after sensor connection.
7. **Connect** - In the Mantis app, press the red CONNECT button, near the center of the screen. The flashing LED will become a solid light when a connection has been established. The sensor may calibrate automatically during the connection process.



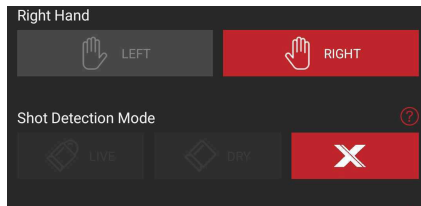
Alternate connection options:

- A. Open the SETTINGS screen of the MantisX app, scroll down and then select the CONNECT/DISCONNECT BLUETOOTH near the bottom of the screen.
- B. Starting a drill will prompt the red CONNECT button, if a sensor is not already connected.



App Settings

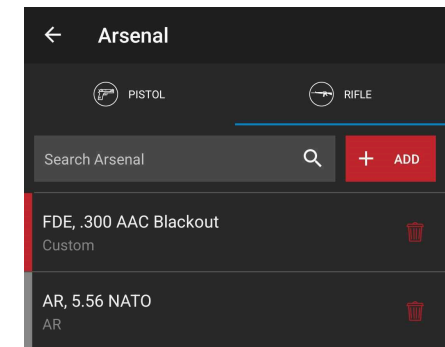
The correct training settings need to be selected before each training session. There is a red question mark, on the right side of the SETTINGS screen, to help identify the correct settings needed for the sensor/firearm setup being used.



The app should automatically recognize the BlackbeardX sensor when connected to the app. Verify the correct BlackbeardX settings are selected as illustrated to ensure the app functions correctly. When switching from a MantisX sensor to the BlackbeardX, double-check the settings for the correct gun type and the correct shot detection mode selected. The app will stay in rifle mode, so pistol mode will need to be selected when training with a MantisX sensor on a handgun.

Arsenal

The Arsenal allows you to label, track and filter your sessions by the firearm used. Selecting a gun in the arsenal does not impact shot detection. Add a Firearm to the arsenal list by tapping the “+ Add” button and selecting the manufacturer and model that matches the firearm. Adding the caliber provides a calculated ammo savings.




Firearms previously selected or entered will be shown at the top of the list.

To remove a make/model from the selected list, tap the trashcan icon on the right side of the Arsenal screen. Deleting a firearm doesn't remove its session history. To permanently remove a firearm from History, disassociate that firearm from all sessions in History.

If the make and model of the firearm is not listed, the app allows you to create your own when you enter the make, model, and caliber of your firearm. Tap the “+ Add” button, type the make name as you want to see it displayed in your arsenal list and tap "Create". Enter the model and select the caliber for that custom entry.

Shot Detection Mode

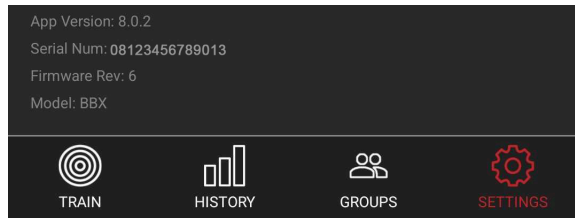
Shot Detection Mode determines the algorithm that is used to read the movements and determine when a shot occurs. The app will automatically select the BlackbeardX mode.

The additional Shot Detection settings used with handguns, the  buttons are not available with the BlackbeardX.

Sensor Information

The sensor and app information can be found at the bottom of the SETTINGS tab. Sensor details (serial and model info.) are shown when the sensor is connected to the app. This system information is helpful when contacting

Customer Support for troubleshooting. If you experience issues, then check out the [Troubleshooting](#) section of the manual.



The current available app version will be stated on the Play Store. Compare the version number on the Play Store to the version number listed to see if you have the latest version installed. If the installed app on the smart device is not the latest version, then tap update or reinstall the app to ensure the latest version is installed.

Customized Drill Settings

Each drill description screen has a configurable drill settings button which enables you to customize drills for your training needs. These drill settings are drill specific. Standard Drills and Dynamic Drills will have different setting options that can be configured. Access these settings after a drill is opened from the Drill menu, then tap DRILL on

the next screen and adjust the various configuration settings available for that drill.

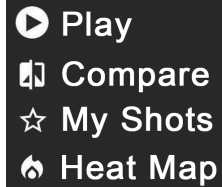
The drill-specific customized settings:

- **Delay** - The preferred time spent on target. Time spent beyond this amount will display as orange in the trace.
- **Buzzer Delay** - After the start button is pressed, the amount of time before the drill begins.
- **Shot Count** - Limits the number of shots the drill allows. The drill will end when the shot count is reached.
- **Repeat** - Number of times the drill is repeated.
- **Passing Score** - Minimum score for a shot for pass/fail analysis. Shots under the threshold will still be counted, but will show in red on the Charts screen.
- **Ready Position** - The muzzle orientation in relation to the target. The drill will prompt for Ready position and will not begin until the selected position is recognized.
 - Other [No Beep] - Start at your own discretion, no beep
 - Other [Beep] - Start on the beep
 - On Target - Point the firearm at the target
 - Low Ready - Firearm angled downward at least 35 degrees
 - High Ready - firearm angled upward at least 35 degrees
- **Par Time** - Sets a specified amount of time to complete the shots. The drill will begin at the beginning of the buzzer sound. It will end when the par time is reached. The buzzer duration is .3 seconds.
- **Score Floor** - Allows or ignores negative shot scores (not available in all drills)
- **Hostage Rescue** - Sets 85% to pass, 4.0 par time with a low ready position (not available in all drills)

Tap RESET to clear the settings and restore back to their default.

Trace View Settings

When a session is completed, icon buttons will be on the bottom left of the Trace View screen. The **Play** button animates the selected shot. This will automatically happen if the next selected shot transitions from the current shot.

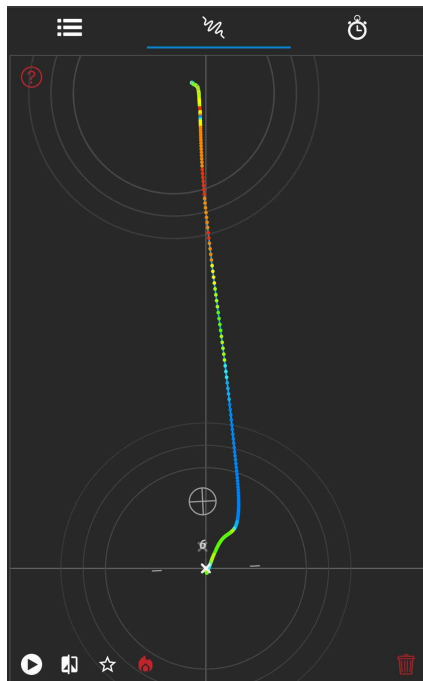


The **Compare** button allows the selection of a previously recorded and marked session to be viewed side by side with the current selected session. Tap the Star to add a session for comparison with other sessions. The Compare feature is not available on all drills. This feature is great to review sessions and see where improvements have occurred and what still needs improvement.

The **Heat Map** changes the trace colors to illustrate the movement velocity according to the color gradient scale with red as rapid acceleration, green is a constant speed and blue is slowing down.



The heat trace is a valuable training tool to review the consistency of your movement velocity. If the movement from target to target or ready position to target are jerky and rushed, then the heat trace will illustrate that issue. If the movement is slowing down too much and creating drag, then the heat trace will show that and much more.

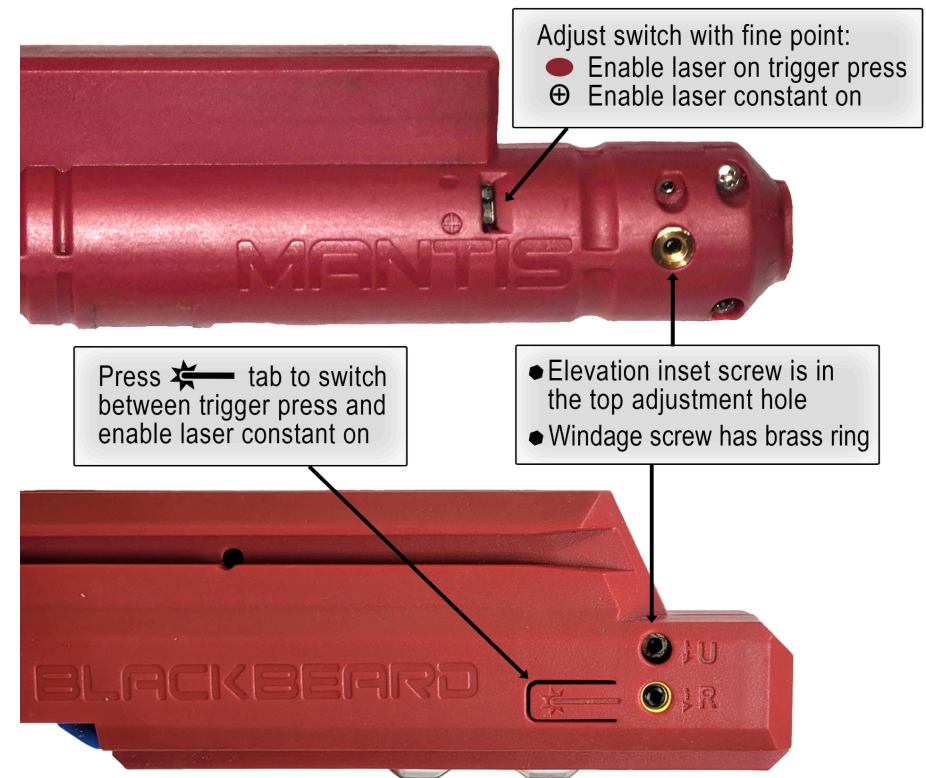


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Laser Adjustment

After the BlackbeardX is installed in the gun, the laser should be visible. However the laser may need to be adjusted to the crisp fine dot. When the laser reflects off the rifling, then you may see crescent lines. BlackbeardX models vary a little in different designs, see the [Installation Instructions](#) for the parts diagram for laser adjustment for a specific model.

The AR-15 and the Scar models are pictured in these steps:



To move the Laser Point of Impact use the included 1.5 mm hex key

Insert the hex key and turn slowly

Turn clockwise to move the laser up or right

Here is a [short video link](#) that illustrates how to adjust laser concentricity to the small dot that you want to see. If you have an IR laser, then use a good camera pointed at the wall to see the dim light of the laser. Most IR lasers are not visible without night vision gear. However, some good cameras will allow you to see the light enough for laser adjustment.

1. Insert the Blackbeard Bolt Carrier Group (BCG) into the rifle.
2. Toggle the switch on the Blackbeard BCG to the + sign so the laser stays on constantly. For the AR-15/MCX models use the included hex key or the tip of a pen to flip the adjustment switch from trigger press to constant on. For other BlackbeardX models press the tab to enable the laser constant on for laser adjustment.
3. Insert the Blackbeard Magazine into the rifle.
4. Point the muzzle end of the barrel toward a wall about eighteen inches away from the muzzle. Look for the light of the laser on the wall.
5. Rotate each of the adjustment screws in the direction that appears to be making the laser brighter (concentrated).
6. Continue adjusting by fine-tuning whichever screw makes the crescent smaller. - This is usually the hardest part. If



the movement is too fast, then the crisp dot may be missed. Make a 1/8 or 1/4 turn adjustment on that internal elevation screw in each direction of the position it was in, checking to see if the laser image gets finer or gets worse > Move to the windage screw and rotate an 1/8 turn in each direction of the position it was in, checking to see if the laser image gets finer or gets worse.



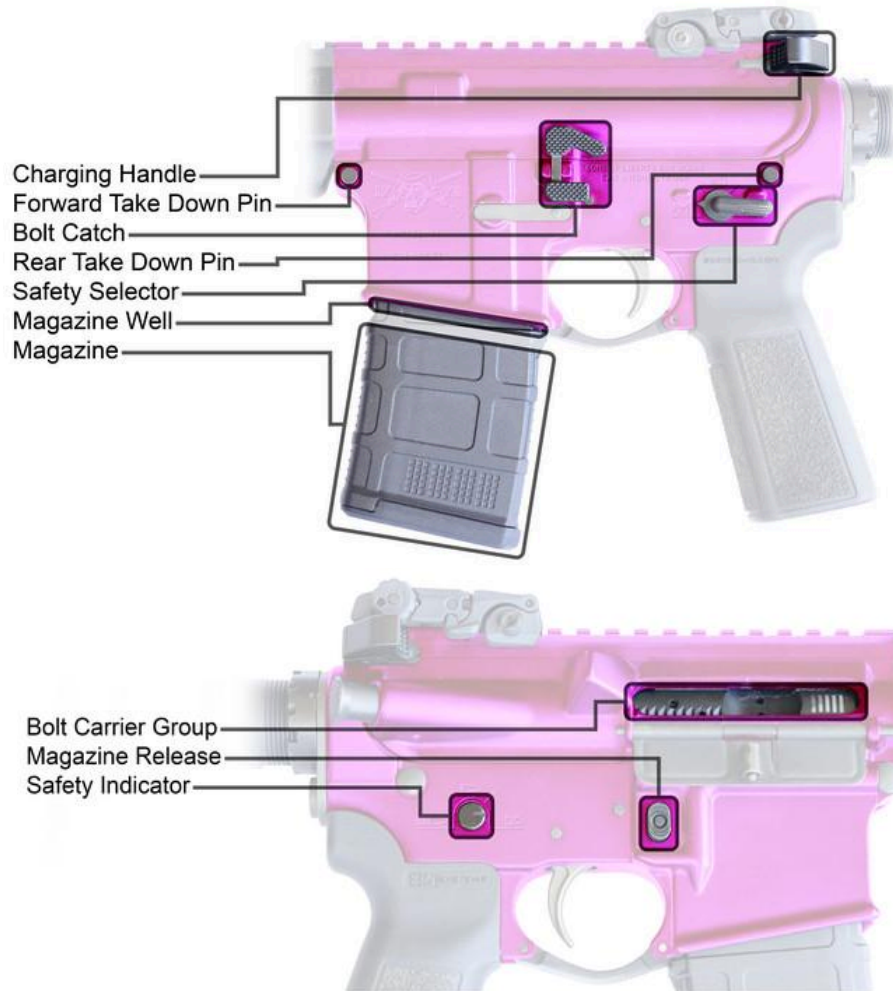
7. Continue adjusting with small movements until the laser is concentrated into the desired fine dot. Eventually, you should be able to get the laser down to just a dot. If your wall is glossy, then there may be a reflected light.
8. Back away from the wall five to ten feet and see if the laser needs additional fine tuning for the small dot.
9. If it doesn't seem to work, then turn the screws to the right and start from the beginning and turn slowly. **Don't tighten the screws too tight** or the screw will dig into the laser hardware.



If the screw feels locked or stuck on a new BCG, then the Loctite may have adhered a little too tight and give it a little extra pressure when twisting to break the Loctite

Clearing the Firearm

Firearm clearing instructions are given for the AR-15/AR-10 rifles as a guide for all models, however other rifle models will vary in parts and steps. Please consult the owner's manual for your rifle to ensure proper unloading instructions. If manufacturer instructions are not available, the following steps may be helpful for clearing your rifle of training or live ammunition.



To clear the AR-15, do the following:

1. Determine the safest direction to orient the muzzle as stated in the safety rules (a direction where there is no risk of injury or damage in case of an accidental discharge).
2. Grasp the rifle with your dominant hand, ensuring you have firm control of the rifle. Do NOT put your finger on the trigger.
3. Make sure that the rifle Safety Selector is set to the SAFE position.
4. Press the Magazine Release button on the rifle with your primary hand while grasping the bottom of the magazine with your support hand. Pull the magazine to remove the magazine from the rifle.
5. Pull the Charging Handle fully back before releasing it. This cycles the action of the rifle. Repeat and cycle the rifle 3 times to verify the chamber is empty.



- Pull the Charging Handle fully back. Push bolt catch down and hold to lock the charging handle in a disengaged position. Guide the Charging Handle all the way forward until you feel it catch.



- Visually and physically inspect to confirm that the firing chamber is empty and safe for dry fire training in the area that you have designated for safe training.



- Visually and physically inspect that there is nothing in the magazine well.

- Close the action of the rifle by retracting the Charging Handle fully to the rear. The Bolt Catch will disengage. Release the Charging Handle.



- Place the unloaded rifle on a flat and stable surface.

- Move the magazine and any additional live ammunition in the area to another room.

The rifle and your training room should now be free and clear of live ammunition and made ready for dry fire training.

BlackbeardX Installation Instructions

BlackbeardX model variations will have different installation steps according to the rifle take-down procedure. Please consult the rifle owner's manual for your rifle to ensure proper take-down steps.

Select the BlackbeardX Model from the list to view the installation instructions and parts diagrams for the specific model:

→ [AR-15/AR-10](#)

→ [MCX/NGWS](#)

→ [SCAR Light/Heavy](#)

BlackbeardX Drills

In addition to the standard drills found in the [Mantis Pistol/Rifle Manual](#), the BlackbeardX has exclusive drills for training with multiple targets and dynamic shooting. Get creative with your training. Your drills are unlimited, except for the need to stay within Bluetooth distance of your smart device. Review the BlackbeardX drill settings for each drill. Press DRILL to customize the settings. Check out this [BlackbeardX Detailed Dive video](#) to see how to use these drills and the customized settings to improve your skills using the BlackbeardX in your dry-fire training.

Dynamic Training

Goal: Control your speed, not too fast and not too slow - avoid over-travel and under-travel. Then increase speed while maintaining a good score.

Instructions: Dynamics is the Open Training drill for target transition drills. Shoot multiple targets (minimum 2) focusing on straight transitions, minimal overtravel, and eliminate delays. Silhouettes are suggested, however any target may be used. The Trace View will illustrate the movement between targets.

This drill is also great for training multiple targets in multiple rooms. *(just need to stay within Bluetooth range of your smart device with the app connected).*

Dynamic drills will illustrate and play the movement from target to target. Additional hits will be marked by the coordinating shot number as seen in the picture. The dotted line illustrates the most efficient path from the previous hit to the current shot - the shortest and fastest time between any two points is a straight line.

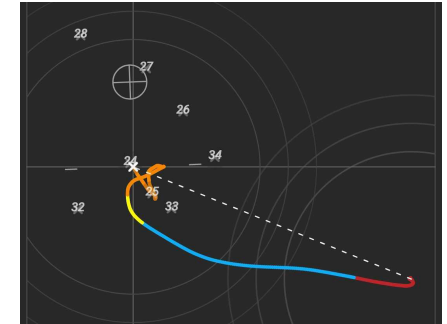
The Efficiency score is an average of the Delay, Over-Travel and Transition scores.

Previous Target (Red): Drag movement off the previous target

Transition (Blue): Straightness of the path between targets

Over-Travel (Yellow): Continued movement beyond the target.

Delay (Orange): Time spent on target beyond the drill setting.



There are four tabs at the top of the Summary to break down the average time by phase. The fastest and slowest scores and splits will change according to the Efficiency, Transition, Over-Travel or Delay is selected. The color will coordinate throughout all of the screens for dynamic drills.

	EFFICIENCY	TRANSITION	OVER TRAVEL	DELAY
	Score	Time		
	82.3	0.95		
Action	Score	Time		
#1	-	4.38		
#2	82.5	1.27		
#3	95.1	0.93		
#4	69.2	1.65		

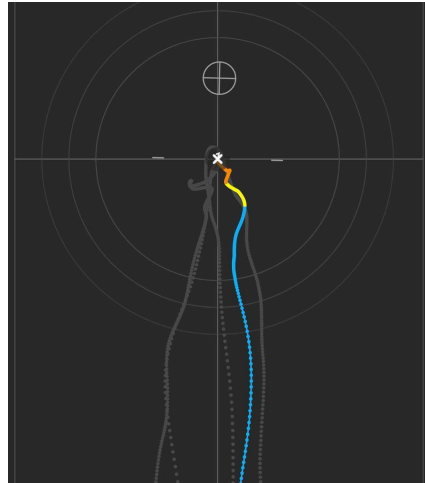
Ready Up

Goal: Focusing on sight alignment and smooth consistent movement to target, then increasing speed while maintaining a good score.

Instructions: 1 target; 1 shot total

From the starting position (low ready is the default position), present on target and take one shot to center as soon as sights are on target and aligned, then back to ready position.

The Trace View illustrates the path up from ready position to the target. The fastest movement between any two points is a straight line. Repeat this drill to build a consistent straight path to target and develop muscle memory for faster target acquisition.



This drill transitions from a non-threatening ready position to a position where it can be used defensively or offensively at a moment's notice.

The Ready Up drill can be used with many variations to improve your firearm presentation consistencies.

Transitions

Tap on Transitions to expand the Dynamic Drill menu. The following drills have pre-set drill configurations that may be adjusted to fit a variety of training needs.

The default shot count needs to be hit to complete the drills, otherwise your options are limitless. While silhouette and plate targets are recommended, any target may be used.

The illustrations on the drill introductions indicate target setup and default settings. Adjusting the Drill settings will change the illustration for some drills.



Get creative in your training by running the Box Drill counterclockwise instead of clockwise or increase target distances in the Pyramid Drill.

Failure to Stop Drill

Goal: Stop the threat by transitioning between two key hit zones and maintaining a good sight picture. Increase speed while maintaining a good score.

Instructions: 1,2 or 3 silhouette target; 3, 6 or 9 shots total
This defensive drill is sometimes called the Mozambique Drill. The default settings are one target and three shots, however changing the shot count also changes the target count. Select the starting position and round count; at the prompt take two chest shots, then one head shot at each target.

The standard Failure to Stop drill has one target at seven yards, but this drill can be practiced with a variety target variations.

Box Drill

Goal: Stop the threat by transitioning between two key hit zones and maintaining a good sight picture. Increase speed while maintaining a good score.

Instructions: 2 silhouette targets; 6 shots total

Left: 2 chest shots

Right: 2 chest shots

Right: 1 head shot

Left: 1 head shot

This defensive drill is a variation of the Mozambique Drill. The default settings are two targets and three shots on each target. Select the starting position; at the prompt take two chest shots on the left target, then right target, then one head shot on the right target then the left target.

The standard Box drill has targets of equal height at seven yards and the hits make a box shape.

V Drill

Goal: Increase speed while maintaining a good score.

Instructions: 5 targets; 18 shots total

Center: 2 shots

Left: 2 shots

Center: 2 shots

Right: 2 shots

Center: 2 shots

Far Left: 2 shots

Center: 2 shots

Far Right: 2 shots

Center: 2 shots

Place targets in a V shape. The center target is closest and the other targets are in a flanked formation at least one yard apart.

Make this V drill interesting by changing the order that the targets are hit or by running a variation similar to the 1-5 drill by changing the round count to each target. The drill ends when the eighteen shots are completed.

Pyramid Drill

Goal: Increase speed while maintaining a good score.

Instructions: 4 targets; 10 shots total

Left: 2 shots

Bottom Center: 2 shots

Right: 2 shots

Top Center: 2 shots

Left: 2 shots

Place targets in a pyramid formation. Choose the starting position and then shoot two shots at each target in a clockwise transition.

1-5 Drill

Goal: Increase speed while maintaining a good score.

Instructions: 3 targets; 15 shots total

Left: 1 shot

Center: 2 shots

Right: 3 shots

Center: 4 shots

Left: 5 shots

Place the three targets in a line, shoot a different round count on each target from left to right and then back to the left target.

Triple Threat

Goal: Stop the threat by transitioning between two key hit zones and maintaining a good sight picture. Increase speed while maintaining a good score.

Instructions: 3 targets; 15 shots total

Center: 3 chest shots, 1 pelvis shot, 1 head shot

Left: 3 chest shots, 1 pelvis shot, 1 head shot

Right: 3 chest shots, 1 pelvis shot, 1 head shot

Place three targets in a row, five yards away. Shoot five shots to each target beginning with the center target.

Six Plate

Goal: Increase speed while maintaining a good score.

Instructions: 6 plate targets; 6 shots total

Standard plate drills have eight inch round plate targets in a row, shoot one shot at a plate and then move on to the next plate. Plate sized targets or a plate rack may be used for this drill.

Three Plate

Goal: Increase speed while maintaining a good score.

Instructions: 3 plate targets; 3 shots total

Standard plate drills have eight inch round plate targets in a row, shoot one shot at a plate and then move on to the next plate. This drill emphasizes rapid target acquisition.

Plate Alternating

Goal: Increase speed while maintaining a good score.

Instructions: 6 plate targets, 6 shots total

Standard plate drills have eight inch round plate targets in a row, shoot one shot at a plate and then move on to the next plate. This drill emphasizes rapid target acquisition. Start with the outside plates and shoot one shot at each plate alternating from left and right working your way to the center.

Plate Transition

Goal: Increase speed while maintaining a good score.

Instructions: 2 plate targets and 1 silhouette target; 5 shots total

Standard plate drills have eight inch round plate targets in a row, starting with the left plate, shoot once at left plate then transition to the right plate for one shot, then transition to the silhouette for three shots.

Plate Transition Variation

Goal: Increase speed while maintaining a good score.

Instructions: 6 plate targets and 1 silhouette target; 18 shots total

Starting on the left plate, shoot plate once then transition to the silhouette target with two shots, then transition back to the next plate. Work your way across all six plates with the silhouette target transition after each plate

Rifleman Courses



These app courses and metrics are specific to rifles. Each previous level must be passed to unlock the next level. The rifleman courses may be completed using the MantisX sensors or the BlackbeardX.

Basic Rifleman Course Challenges

1. Perform the MantisX Benchmark drill.
2. Shoot one GREAT SHOT (score of 95+) in any drill.
3. Shoot 100 shots (across any drills).
4. Score an average of 75 or better, off hand, in the Secondary as Primary drill.
5. Shoot 2 GOOD SHOTS (score of 90+) in the Compressed Surprise Break Drill.
6. Score an average of 80 or above in the MantisX Benchmark Drill.
7. Shoot 200 shots (across any drills).
8. Shoot two GREAT SHOTS (score of 95+) in the same drill.
9. Score an average of 85 or above in the Kneeling drill.
10. Perform the MantisX Benchmark drill.

Advanced Rifleman Course Challenges

1. Complete the MantisX Benchmark Drill with at least 5 GREAT SHOTS (score of 95+).
2. Score an average of 90 or better, off hand, in the Secondary as Primary Drill.
3. Complete the Compressed Surprise Break Drill with 2 GREAT SHOTS (score of 95+) and time less than .35s.
4. Shoot 150 shots (across any drills).
5. Score an average of 93 or above in the MantisX Benchmark Drill.
6. Score an average of 95 or better in the Kneeling Drill.
7. Score an average of 93 or better, off hand, in the Secondary as Primary Drill.
8. Shoot 100 shots or more two days in a row.
9. Shoot 5 shots in Compressed Surprise Break with an average score above 92 and an average time less than .3s, TWICE in a row.
10. Complete the MantisX Benchmark with an average score of 96 or higher.

Elite Rifleman Course Challenges

1. Complete the MantisX Benchmark Drill with all 10 shots as GREAT SHOTs (score of 95+).
2. Score an average of 93 or better in the Secondary as Primary Drill, 3 times.
3. Complete the Compressed Surprise Break Drill with 4 GREAT SHOTs (score of 95+) with a split time of 0.30s or less.
4. Save all 5 hostages in the Hostage Rescue Custom Drill with a minimum score of 90 in 1.50s and no shots of the 'shouldering the rifle' category.
5. Score an average of 95 or better with an average time of 0.75s or less in the Shoot No Shoot Drill, 3 times.
6. Score an average of 95 or better in the Kneeling Drill, 3 times in a row.
7. Complete the MantisX Benchmark Drill as 3 shots, standing, with 90 or better; 3 shots, kneeling, with 93 or better; 4 shots, prone, with 96 or better
8. Complete the Compressed Surprise Break Drill with 4 GREAT SHOTs (score of 95+) with a split time of 0.28s or less.
9. Score an average of 95 or better with an average time of 0.70s or less in the Shoot No Shoot Drill, 3 times.
10. Shoot in open training until you have a shot with a score of 99.1 or higher and a minimum average shot score of 95

Troubleshooting

Support Phone: (630) 551-8171
Support Email: support@mantisx.com

Below are some of the most common troubleshooting steps for the BlackbeardX. When contacting customer support, please include all of the completed troubleshooting steps along with the description of the unit behavior when troubleshooting.

Connection Issues

Won't Connect - If the sensor is not connecting to the app, please do the following troubleshooting steps:

1. Verify Bluetooth is enabled on your phone/tablet. If Bluetooth is already enabled, disable and re-enable it.
 - Go to your phone Settings and verify Bluetooth is enabled. If not enabled, toggle to enable Bluetooth.
 - In device settings, verify that the Mantis app has Bluetooth permissions granted (iOS only).
2. Confirm the app (*MantisX Pistol/Rifle*) has Bluetooth enabled in your device app settings.
3. Verify Location is on, and that the app has Precise Location permissions granted (Android 7-11 only).
4. Confirm the Mantis app is the MantisX Pistol/Rifle app.
5. Verify the BlackbeardX is fully charged (see [Charging the Battery](#)).
6. Reset the MantisX sensor:

While watching the LED indicator light next to the power button on the slide, press and hold the power button until the light turns off and flashes purple, then release the power button.

7. Reboot the phone/tablet, then try connecting the sensor to the MantisX Pistol/Rifle app.
8. In the MantisX Pistol/Rifle app, go to the Settings screen, then scroll down and click CONNECT BLUETOOTH, then connect the MantisX sensor from the options.

If you have followed the previous steps and are still unable to connect the sensor to the app, do the following:

1. SYNC your training history using the SYNC button located at the bottom of the Settings screen in the MantisX app.

If you do not have a Mantis User Profile, then you will lose your data on your device with the following steps. SYNC is recommended.
2. Sign out of the MantisX Pistol/Rifle app (Settings > Sign Out) and uninstall the MantisX Pistol/Rifle app.
3. Power off the device for at least 10 seconds to clear the app cache and then reinstall MantisX Pistol/Rifle app and give permissions (see [Connecting to the App](#)).
4. Verify Location is enabled on your phone/tablet (*Android 7-11*). If Location is already enabled, disable and re-enable then check permissions.
 - Android: Settings > Apps > MantisX > Permissions > Location.
 - iOS/Apple: Settings > Privacy & Security > Location Services.
5. Open the app and connect to the sensor.

The previous steps resolve most connection issues. However, sometimes a third party device may interfere with Bluetooth connection. Complete the following steps if the previous troubleshooting steps did not resolve your connection issue.

1. Confirm no other Bluetooth devices are connected to the phone/tablet and causing interference (hearing aids, speakers, earphones, etc.).

Note: Hearing aids may not be listed under the operating system's Bluetooth management interface. In some cases, the connection and controls for hearing aids are found under the Accessibility controls in the operating system settings.

2. Check for, and apply, all stable and non-beta OS updates that may be available for your phone/tablet.

3. Clear the device Bluetooth cache, then restart the device

Note: *Clearing the Bluetooth Cache erases all paired Bluetooth connections.*

4. Try to connect the app to the sensor. If still unable to connect, try connecting the sensor to a different phone/tablet.

5. If issues still persist, tap the Report Issue button on the Settings screen to send an email report to the support team. Please explain the issue by providing a summary of the problem and all the completed troubleshooting steps. The Report Issue button sends the Sensor Information along with your response to speed up the troubleshooting process.



- Connection is frozen** - if the sensor is frozen on and won't disconnect or turn off. Allow the battery to fully drain. Do a Hard Reset - While watching the power light, press and hold the power button until it turns off and flashes purple, then release the button.

Function Check

[Function Check video](#) - With the BlackbeardX outside of the firearm, press the Magazine and BCG together to connect the contacts. The BlackbeardX should make the normal calibration sound. Additional sounds and behaviors during the function check should be reported to support@mantisx.com for assistance.

If a normal calibration sound occurs during the BlackbeardX function check, then install the Blackbeard BCG and Magazine into the firearm to check the function in the gun. Some function issues may be specific to one gun, so try the BlackbeardX unit in different guns to confirm the behavior installed:

- Does normal calibration sound occur?
- Does full auto sound occur?
If full auto sound occurs: STOP immediately. Remove the magazine from the rifle and allow the system to cool.
- Is NO calibration sound heard?

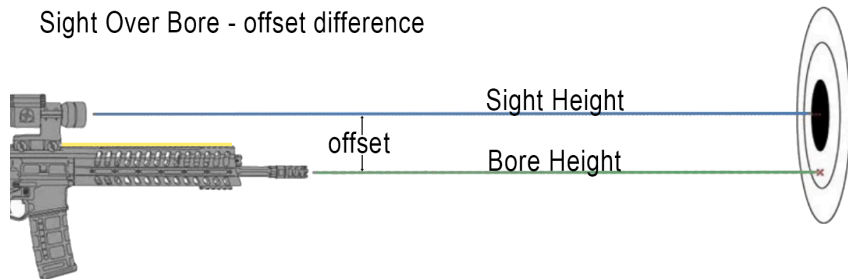
Email the behavior details to support@mantisx.com with additional information (how long has this behavior occurred, does the unit reset the trigger, does the behavior occur in other rifles, do you have any non standard parts on your gun - like CA compliant parts, does the rifle have a Triggertech Trigger). The detailed information provided will help the troubleshooting team identify and determine the cause of the behavior which can speed up the warranty replacement process.

Laser Troubleshooting

- Function check** - check the laser function outside the rifle by firmly pressing the BlackbeardX magazine and BCG contacts together outside the gun. Observe if the laser is visible as a dot on a nearby surface outside the gun.

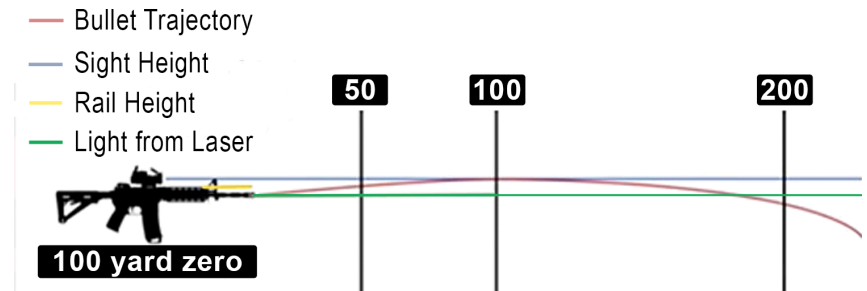
- Crescent circles instead of dot** - when installed in the gun laser is reflecting off the rifling in the barrel. See the [Laser Adjustment instructions](#). Use small adjustments to fine tune the laser to the center or near center of your barrel.
- Double flash** - when installed, rifle trigger may be incompatible.
- Constant laser** - check that the laser constant selector is all the way up or all the way down, as needed.
- Loses its zero** or moves similar to a loose laser - send a video to support@mantisx.com along with the details.
- Won't Zero my optic** - Due to sight height over rifle bore, sight over bore, lasers are not able to be zeroed to optics. Sight height over bore refers to the physical offset between the bore of the firearm and the aiming mechanism (iron sights, reticle in an optic, etc.). This offset will cause the bullet impact to be lower vs. the point of aim when shooting at close ranges.

Sight Over Bore - offset difference



On firearms with a Picatinny rail, the distance from the bore to the optical axis can be divided into distance from the bore axis to the top of the rail, and the distance from the top of the rail to the center of the optical axis.

The BlackbeardX can be used to get your shots on paper, but unfortunately the BlackbeardX will not zero your optic.



- No laser flash** - check that the laser model has a visible laser. Non-laser models will NOT have a laser eye on the nose of the BCG. IR lasers are not visible with the natural eye - use your device's camera to check for the light of the laser on a surface near the laser dot and device's camera.
 - Check if changing the laser constant on/trigger press function makes the laser visible.
 - Check if the laser selector switch on AR-15/MCX models is intact or do you .

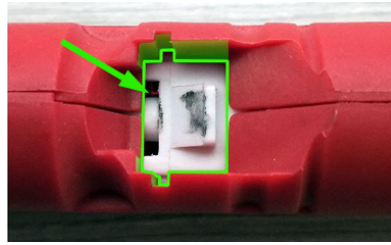
Trigger Reset

The BlackbeardX is designed to reset the trigger of your rifle for dry fire training. The reset may have a slight delay during dry fire practice compared to your live fire training with live ammo.

- Not resetting the trigger** - Complete the function check, then verify the following if the BlackbeardX functions good:
 - Verify the battery has at least 3 bars lit up.
 - Verify the magazine is fully seated.
 - Verify the Laser Constant is all the way up or down.
 - Try a different rifle. Some rifles with non-standard parts like CA-compliant parts may affect the reset function.

If the problem continues after verifying those steps, then email the not resetting the trigger behavior details to support@mantisx.com with additional information (how long has this behavior occurred).

- Trigger is sluggish** - Over time and *ONLY* after several thousands of shots, the BCG piston may become sluggish and need a tiny amount of gun grease to ease the mechanical piston. New units will NOT need additional grease added to the piston area.



- Trigger has a bounce** - Lower trigger hammers may be too low and not fully engage the BCG piston that allows a slight bounce in the trigger to be felt during the trigger pull.
- Trigger resets twice** - Please send a short video and behavior description with all other troubleshooting information to support@mantisx.com.

Shot Detection Issues

Shot detection issues happen when shots are not accurately recorded with the press of the trigger, or multiple shots are recorded with a single trigger press.

To troubleshoot shot detection issues, please make sure that the sensor is mounted to the firearm correctly and then go to the app Settings and check:

- Too Fast** - Some drills aren't designed for fast movement, slow down to check if the drill you are using is designed for smooth movements. Drills like Open Training or Shot Timer are better suited for faster drills and customizable for your training needs.
- Shot taken prematurely** - Drills like the Holster Draw Analysis are designed to take the shot after the holster draw and not during the

draw stroke movement. Slow down and try a complete presentation from the holster before pressing the trigger.

- Shot Detection Mode** - verify the app recognized the BlackbeardX and the correct Shot Detection Mode was selected when connected.

Shot Detection Troubleshooter

The BlackbeardX shot detection mode is automatically selected to the mode needed for the BlackbeardX. However, if shot detection issues continue after trying the above steps, the Shot Detection Troubleshooter may help identify the issue. The sensor must be connected to the app in order to troubleshoot. The app will walk you through screens to validate the shot detection settings that are active for the app.

Follow the instructions for ten shots. Each shot must be taken in a set window of time. After the ten shots are recorded, you will be prompted to send a report to our development team. This report will allow our developers to see how the sensor and app are interacting.

Charging Issues

If the sensor is not charging or powering on (blinking LED when the power button is initially pressed), do the following:

- Verify the unit is receiving adequate charge** - try a different charging block and cable to charge the sensor, preferably a non-Apple-branded charging block. A computer USB port can also be used. Try a new outlet.
- Magazine Reset internal breaker** - Plug the sensor in for 30 seconds and try again
- Sensor reset** - Plug in the USB charger, and while charging - While watching the power light, press and hold the power button for five seconds. When the light flashes blue, release the power button.

- Adequate Charge** - Allow the sensor to charge for 12-15 hours for a charger that has a slow trickle-charge.

Troubles with inserting the charging cable into the BlackbeardX:

- Doesn't fully insert** - The charging cables do not fully insert into this type of charging port.
- Charging port seems mis-aligned** - The cables may insert better when angled into the charging port, especially micro-USB cables. If the port is mis-aligned and the casing covers the hole, then send a picture to support@mantisx.com that illustrates the issue.
- Doesn't charge past 1 bar** - Verify the initial charging issue steps and if the magazine still doesn't charge more than 1 bar, then email support@mantisx.com with the description of the behavior and the troubleshooting steps completed.

Miscellaneous Issues

- BCG seems charred** - The BCG housings may have black sprayed on the inside as a protective barrier. Occasionally the spray is visible on the outside.
- BCG seam is wide** - The BCG's do not have a tight seal to allow for different weather conditions. If the BCG is not inserting into your rifle upper or fits really tight, then try a different rifle to verify the fitment. Email support@mantisx.com a video that illustrates the really tight fit.
- Continuous shots in the app** - Magazine not connected to BCG. The app is detecting shots while the magazine is outside of the rifle or the app is detecting shots with no sounds from hardware. Please email support@mantisx.com with a full description of the behavior.

Warranty and Returns

Mantis Tech is committed to meeting your training needs. [Customer support](#) is available by phone, email, or chat during business hours for assistance with any MantisX training system. We offer a solid warranty—see our [Warranty Terms](#) for details—and a [45-day return policy](#) to ensure your satisfaction. Please email support@mantisx.com for assistance.