

# LASER ACADEMY APP User Manual



**TRAIN WITH LASER ACADEMY  
USING YOUR OWN FIREARM!  
AVAILABLE LASER BULLET CALIBERS:**

- 380 ACP
- 38 SPC
- 9mm
- 10mm
- 40 S&W
- 45 ACP
- 357 SIG
- 223/5.56



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# Laser Academy Overview

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## Train Smarter

The Laser Academy dry-fire system utilizes a laser training cartridge that drops into the chamber of your weapon, delivering a light beam down the barrel every time the firing pin strikes the round. Using physical targets, these laser “shots” are read by your phone or tablet and scored accordingly, per mode. The simplicity of the setup is what provides the flexibility for when and where you can practice.

## Train at Home

Mantis Laser Academy enables you to set up a dry fire laser range that is powerful, safe, convenient, and very inexpensive. Laser Academy drills are built to enhance your shooting performance in both marksmanship and speed. Test your skills against your friends using Dueling Drills that allow you to shoot side by side at the same time.

Included in the kits:

### Portable Kit

- Full Access\* code to Mantis Laser Academy (\$99 value)
- Pink Rhino laser cartridge
- Portable Case
- Mini tripod with smartphone holder
- Complete set of 5"x7" Laser Academy Smart Targets
- Laser cartridge extraction stick

### Standard Kit

- Portable Kit
- Complete set of 8"x11" Laser Academy Smart Targets
- Large tripod and smartphone holder
- A set of 5 target stand holders
- Phone Shades

Key Features:

- Automatic target detection
- Automatic shot detection
- Automatic scoring
- Marksmanship, speed, and reaction time drills
- Shooter-to-shooter dueling drills
- Tutorials
- Training Journey
- Save to history
- Online Training Profile with History and Analysis Charts

## What You Need

- Firearm with working action (blue guns do NOT have working actions)
- Smart device (phone or tablet) with good camera and Bluetooth

You can purchase any of the following training items, or a full training kit, from MantisX.com:

- The Mantis Laser Academy app, available for free from the app store on your device.
- [Smart Targets](#), which are available on heavy gray cardstock or can be downloaded for free
- A [Laser Cartridge](#) or [Blackbeard](#) or [BlackbeardX](#) for your firearm or a laser enabled training firearm.
- A [Tripod](#) with a phone mount.



## Compatibility

[MantisX Shooting Performance Systems](#) - YES, limited function. Full function of both apps require Split Screen Function or two smart devices to run in parallel

[TRT's](#) - bypass the slide lock feature on handguns - YES

[Blackbeard](#) and [BlackbeardX](#) - YES with the App

SIRT pistols - YES

CoolFire Trainer - Yes, if using the visible laser module available from CoolFire

DryFireMag - Yes, if using visible laser module available from DryFireMag

Android - Yes (OS v7.0 or greater) via the Apple App Store

iOS - Yes (OS v10.0 or greater) via Google Play Store

Older devices will have tighter lighting condition requirements due to camera hardware limitations.

Newer devices will perform better and allow for brighter lighting conditions.

Kindle - Yes

Chromebook - No

PC (Windows) - No

Mac Laptop/Desktop - No

Surface Pro - No (runs Windows)

Known Firearms not compatible with Pink Rhino Laser Cartridge:

- CZ P10 S - Longer chamber, turn the end cap ½ turn to lengthen cartridge
- FN 509 w/Apex firing pin - This Apex Tactical firing pin is about 1/16" shorter
- Hi Point -Sharp firing pin will quickly damage the button
- Laugo Arms Alien pistol - Laser stays on after each trigger press
- Ruger SR series - Loaded Chamber Indicator (LCI) causes the laser to stay on after pressing the trigger.
- S&W Bodyguard - The extractor pushes on the rim and may cause the laser to shift
- Tanfoglio pistols - Too tight for the 9mm laser cartridge

## Getting Started

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### Firearm Safety

Set up the training space for maximum safety to self and others every dry fire training session. Always recognize the following safety 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 sights are aligned and 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 to fire. Keep the finger on the frame until ready to shoot.

- **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. Bullets are designed to travel in the direction the muzzle is pointed.
- **ALWAYS be aware of your target and beyond,** including the space behind the target as well as between the target and the shooter. This applies to both dry-fire and live-fire training.

## Clearing the Firearm–Pistol

If you plan to train with your firearm at home and not fire any live ammunition, make sure that the firearm does not have any ammunition in or around it. Please consult the owner's manual for your pistol to ensure proper unloading instructions. If manufacturer instructions are not available, the steps below may be helpful for clearing your pistol of training or live ammunition. Note: The following example is demonstrated on a striker fired pistol. Other action and safety mechanism types may vary.



To clear the pistol, do the following:

1. Determine the safest direction to orient the muzzle (e.g. a set of ballistic plates, a 5-gallon bucket full of sand, or a wall with cement or earth backing).
2. Grip the pistol with your dominant hand. Make sure your finger is NOT on the trigger.
3. Press the Magazine Release with your primary hand while grasping and pulling the bottom of the magazine with your support hand.



4. Grip the rear of the slide with your support hand and pull back completely, then release. Repeat 3 times.



5. Grasp the rear of the slide with your support hand. With your primary hand thumb, press and hold the Slide Lock lever upwards (toward the sights). Pull the slide back completely.
6. While maintaining upward pressure with your support hand thumb, allow the slide to move forward. The Slide Lock lever should engage the slide. Release the upward pressure on the Slide Lock lever. The slide should be locked to the rear.
7. From the firing chamber end of the barrel, visually confirm that the firing chamber is empty. Do not point the muzzle of the firearm toward you to look down the barrel.



8. Visually and physically inspect to confirm that the firing chamber is empty.
9. Visually and physically inspect to confirm the magazine well is clear.
10. Return the slide into the battery by taking an overhand grip on the rearmost portion of the slide, pull back and then release the slide



forward. The rear of the slide should be flush with the rear of the frame when the cartridge is correctly seated.



11. Place the unloaded pistol on a flat and stable surface.
12. Move the magazine and any additional live ammunition in the area to another room.

The pistol and your training room should now be free of all live ammunition and safe for dry fire training.

### Laser Cartridge Setup

Pink Rhino Laser Cartridge Specifications	
Battery Type	LR626 <i>(LR66, SR626, SR66, AG4, 177/376, SR626SW)</i>
Laser Class	Class IIIA, Class 3R per IEC, IEC 60825-1 Edition 3.0 2014-05-15
Laser Type	Diode
Maximum Output	5mW 1mW - EU compliant available
Wavelength	630-670 nm
Blackbeard Laser Specifications	
Wavelength	650 nm (red); 520 nm (green); 780 nm (IR)

[Contact Customer Support](#) by email or phone (630) 318-4468) for EU-compliant laser options.

v2025-08-05

### Cartridge Installation

Laser cartridges shipped with Laser Academy have batteries pre-installed and a tiny non-conductive disc inserted between the batteries. This material is used to protect the batteries during shipment and must be removed prior to use. Confirm that the tiny non-conductive disc has been removed from the batteries inside of the Laser Cartridge.

Ensure that all three LR626 batteries are installed and facing the correct direction:



The positive side (*flat side with words*) of the battery should be facing down toward the laser end.

Verify the laser function, with the laser cartridge out of the firearm, by pressing the black rubber pad on the Laser Cartridge end cap, while pointing the laser end toward a darker surface. A fine point dot should be observed when the end cap button is pressed.

After you have verified that the Laser Cartridge is ready to be inserted into your firearm:

- Add a drop of gun oil to each of the O-rings. This enables the cartridge to be inserted into the firearm chamber with ease.
- Locate the firearm that has had ALL ammunition removed from it. *Please see the steps above for assistance.*
- Ensure that the slide is locked to the rear
- Load the laser cartridge into the chamber of your



firearm. Installation direction - laser points down the barrel with the end cap toward the firing pin.

- Press the back of the laser end cap with your finger to fully seat the cartridge into the barrel of the firearm
- Release the slide, allowing the slide to go into battery

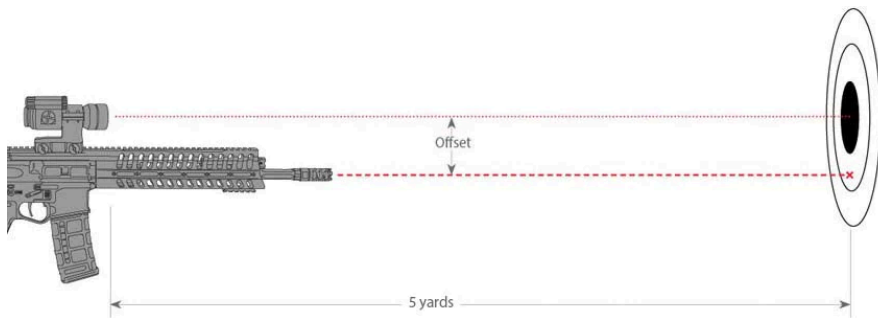
Remove cartridge with the wooden dowel - Cartridge Ejection Rod (*included in Laser Academy kits*).



Laser Cartridges have a visible red laser. Laser Academy does not work with IR lasers.

### Blackbeard and Laser Academy

The Blackbeard and BlackbeardX AR-15 Auto-resetting Trigger Instruction Guide will have the instructions for installation and laser alignment. Sight Over Bore or Sight Height Over Bore needs to be considered with most rifle optics. The Laser Offset in the drill settings can be used for scoring accuracy with sight over bore. Sight 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 laser or bullet impact to be lower vs. the point of aim, especially when shooting at close ranges.



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

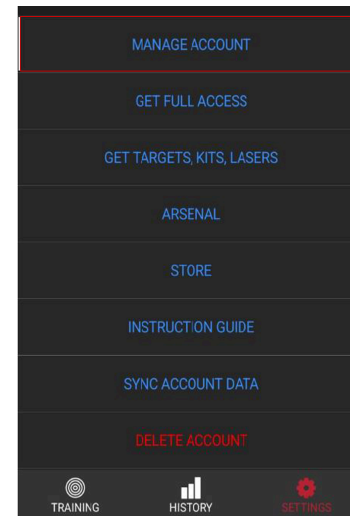
For example on an AR-type rifle, the standard distance from the center of bore to the top of rail is 30.76 mm. The mount height itself, that is the distance from the top of rail to the center of the scope, varies, but typically lies around 36–38 mm (higher and lower mounts are also readily available). In total, this gives a typical scoped AR-style rifle a height over bore of around 67–69 mm.

## App Setup

The Laser Academy app will use the device's camera. After installing the app, camera permission will be requested. Older devices will have tighter lighting condition requirements due to camera limitations. Newer phones with better cameras will perform better and allow for different lighting conditions.

### Minimum System Requirements

- Android: v 8.0
- Apple v 11.0
- Kindle Fire 8



Download the [Mantis Laser Academy app](#) from your app play store.

Open the Laser Academy app and select the **SETTINGS** on the bottom right corner of the screen.

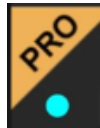
Sign In to your Mantis account or Sign Up to create a new Mantis account using your email address by tapping the **SIGN IN/SIGN UP** button and follow the instructions.

**SIGN IN / SIGN UP**

The [train.mantisx.com](https://train.mantisx.com) account profile can be accessed from multiple devices or computers. The profile allows you to view training history for all Mantis apps and has additional export options.

Laser Academy Kits come with a Full Access Code or Full Access may be purchased within the app. To enter a Full Access Code, go back to the SETTINGS screen and tap MANAGE ACCOUNT. The profile page opens with a blank field to enter the Full Access Code. After the code is entered, tap SUBMIT.

The yellow PRO triangles on the TRAINING drill list will change to black after the Full Access Code is entered into the profile. The dot indicates drills that have not been started.



## Smart Target Setup



Smart targets are detected automatically and scored by the Mantis Laser Academy App. Smart targets provide the most enjoyable and valuable training experience. The app can be used without Smart Targets by defining [Manual Hit Zones](#).

There are a variety of targets to add different challenges to your training. The Laser Academy Smart Targets have different hit zones that are scored accordingly in the app. Some drills require specific targets.

Laser Academy Standard Kits include 5 target holders that screw into the 5 bases. The target holders work like giant paper clips to hold the targets in an upright position. Place the target holder in the center of the



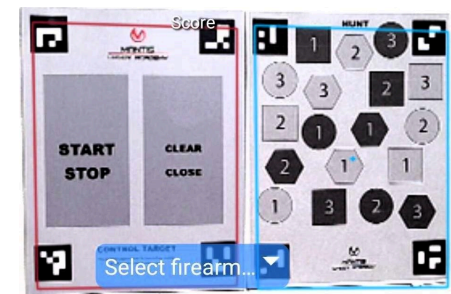
target. Make sure the corners of the Smart Targets, with the QR codes, are not bent or covered for an accurate reading. Targets do not have to be perfectly straight, but completely visible for the app to read the selected targets and score correctly.

Place the Smart Targets in the desired location on a wall with tape or sticky tack or place on the Target Stands. Apply the tape or sticky tack to the back of a target and then press firmly to the vertical surface.

The app uses the camera to read light, so avoid areas with glare from lights, windows, televisions, or mirrors that may reflect the laser and cause shot detection issues, which may lead to troubleshooting. Fluorescent lights and LED lights have light waves that may affect camera performance. Shadows between the camera and the targets may create a false positive shot sound. A red masking area indicates a brightness issue, and your lighting may need adjustment so the app reads and scores that area correctly.

The app illustrates a recognized target with a blue box perimeter around the outside of each target recognized. A red box perimeter indicates the control target when recognized.

The Control Target with Start/Stop and Clear/Close are shootable buttons that can be used to help control the app from a distance. Some targets will have a Control circle or box that has the same Start/Stop function as the Control Target.



# Phone Tripod Setup

For best results, place the tripod about 1 yard away from the target(s). The tripod/device camera setup too far away from the targets may prevent target recognition or cause false detections.

A device with a better camera will have better app performance with improved target recognition and shot detection.



- Twist to lock each shaft section at the desired height.
- Attach the phone holder in the horizontal or vertical position by rotating the vertical/ horizontal adjustment knob. Adjust the holder wide enough to insert the phone.  
*(Tablet tripod adapters are not included).*
- Point the rear camera at the target(s) but out of the line of sight. Do not place the tripod/ device in a position that blocks sight alignment.

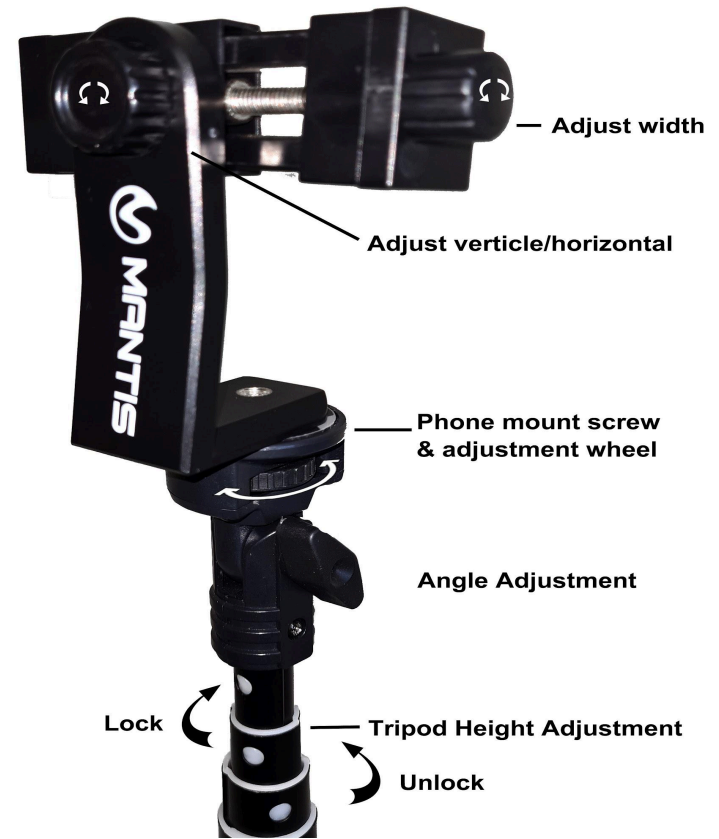


## Portable Tripod

- Attach the phone holder in the horizontal or vertical position by using the correct threaded hole to attach the phone holder to the tripod.
- Stretch the phone holder open wide enough to slide the phone in the holder.
- Unfold and the tripod legs to a desired stable position. Consider the weight of the phone when positioning the tripod.
- Adjust the angle to ensure targets are fully in view and recognized.

## Standard Tripod

- Unfold and extend the tripod to a desired height. Then twist the knob to lock the legs in a stable position.
- Twist the tripod sections to unlock the shaft sections and pull apart.



Distance may vary according to the quality of the device's camera. Use the least amount of zoom to capture your targets on the screen. Stand at your desired distance away.

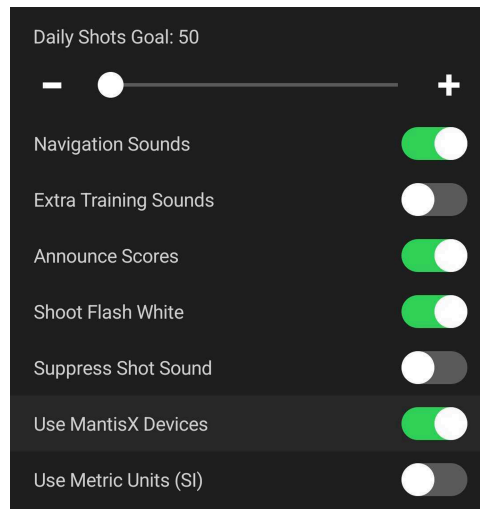
# Using the App

The Laser Academy app includes training drills, courses and videos. Settings for the app can be found on the main Settings screen and on the additional settings menu in each drill.

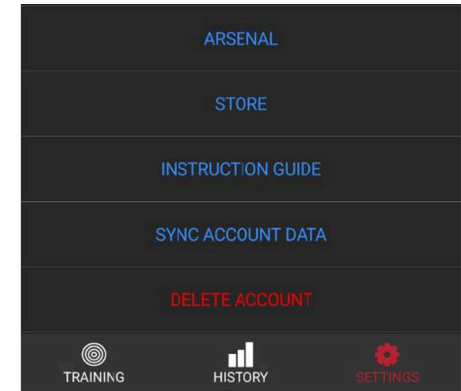
## App Settings

Daily Shots Goal allows the user to set a daily goal between 20 shots and 1,000 shots. The results are illustrated on a graph on the History Screen. See History Screen for more details.

- Navigation Sounds - Turn on to hear an audible sound when changing screens, selecting drills, or other app features within the app.
- Extra Training Sounds - Turn on to hear sounds such as applause, coins, racking the slide, etc.
- Announce Scores - Turn on to hear the score or hit announced while training.
- Shoot White Flash - Turn on for a visual queue of when to shoot. The screen will flash white when the "shoot" prompt is given.
- Suppress Shot Sound - Turn on to suppress or soften the sound of each shot.
- Use MantisX Devices - [Connect MantisX Sensor](#) (BETA only)
- Use Metric Units (SI) - Turn on to use metric units instead of US customary measurements.



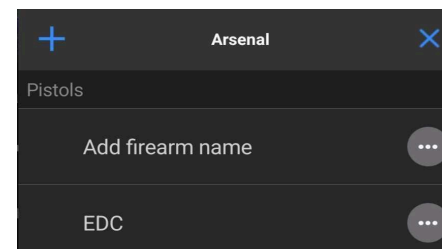
The Delete Account button allows users to **permanently delete** their Mantis training account profile. *This button does not remove/delete the app from your device.* To delete the app, go to your device settings - instructions for this can be found in the How To section of the Instruction Guide.



The Sync Account Data button ensures that all the recent training sessions are added to the Mantis training profile. This feature is beneficial when using multiple devices or when troubleshooting. Some devices may require the app to be closed or the device to be powered off and back on when syncing training records from multiple devices.

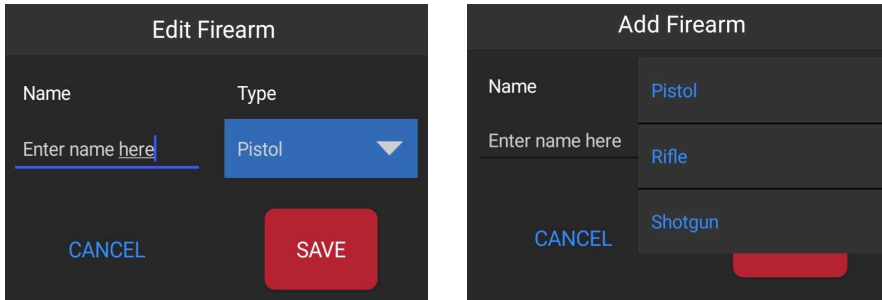
The Laser Academy Instruction Guide opens the in-app Instruction Guide in the app. The [PDF Version of the Instruction Guide](#) is available at the bottom of mantisx.com.

The Arsenal button on the Settings screen allows the user to add firearm make/models to the training sessions for personal records. The firearm information is found when reviewing sessions. Adding to the arsenal is an optional feature.



To manage Arsenal, tap on the blue + symbol to add a firearm and then enter the firearm Name and the firearm Type (Pistol, Rifle

or Shotgun) and then top SAVE. To edit or delete a firearm already in your arsenal click on the ... to the right of the firearm listed.



## App Training

The top of the Training screen will offer the Laser Academy Training Journey. Mantis merged instructions to accelerate improvement in shooting skills with training phases. The Journey phases begin with learning how to use the Laser Academy app. The Journey is designed to build shooting skills from the ground up, so no experience is required to begin the Training Journey.

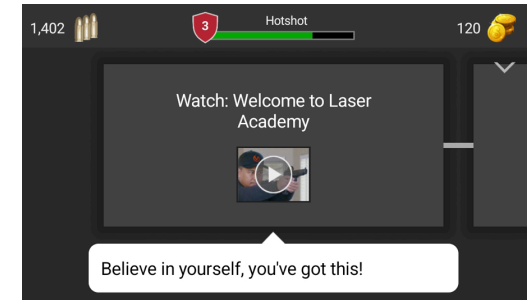
Choose between starting a drill from the Laser Academy drill menu, watch the many short videos from the video library or begin the Laser Academy Training Journey. The Journey assignments work through the training videos and drills together.

## The Training Journey

The Journey is a step-by-step process that begins with watching instructional videos. The arrow on the right side will expand or minimize the Journey Progress Bar. The progress will reset when a new rank is achieved. The Training Rank is indicated in the center at the top of the screen. The rank changes after the phases are completed.

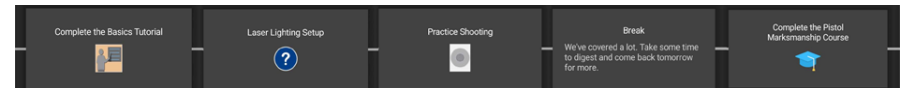


Experience points/shot count is indicated on the top left of the screen. Coins illustrated on the top right are earned while completing the Journey Phases. The coins can be used at MantisX.com or for special app features. Tap the coin icon to open the store and redeem credit.



300 coins = \$10 MantisX.com credit (redeem one credit per order)

The Training Journey walks you step-by-step through the Tutorials and other app features with required tasks to complete each phase. The Journey phases are linked across the top of the Training screen. The phases are locked until the required tasks are completed. Phases can be repeated as needed.



Quiz phases will ask a multiple-choice question from a previous video. Practice phases have a shooting assignment to practice the skills. The Break phases will keep the rest of the phases locked until the next day to prevent fatigue. However, if fatigue is not an issue, then use the time to practice your skills in the other drills listed in the drill menu. Any of the drills may be used at any time during the Journey without losing your Journey progress. The Journey also includes the Laser Academy course, which includes a course completion patch. The progress bar at the top will change to course progress instead of showing Journey progression until the course is completed.



Launch the Mantis Laser Academy Journey to begin your awesome adventure of dry fire training with lasers.

# Tutorials

The Laser Academy Tutorials are designed to help learn how to get the most out of the app. Look for the orange words and orange boxes to move on to the next step in the tutorial. The tutorials are included in the Laser Academy Journey or the drill list.

## Basics

This tutorial will walk you step-by-step through the features of the Laser Academy drills. You will need at least one [Smart Target](#) from your kit or download/print a Smart Target from mantisx.com. This tutorial will teach you how to zoom in on a target, adjust your distance away from the target setting, and how to review your shots on the session review screen.



Notice the orange box, words or prompts to complete the tutorials. There are 7 tasks to complete on the Basics Tutorial:

1. Move Zoom
2. Change Distance Slider
3. Take a couple of practice shots (at least 2 shots)
4. START
5. Take 3 Shots (only 3 shots)
6. Tap on SHOT ROW to highlight a shot region.
7. Tap the X to close the summary

## Laser Offset

The laser of your firearm may not align with your sights. The alignment depends on how your gun is sighted in and what optic you have on your gun. Setting the laser offset in the drill settings will ensure that shot placement in the app is scored accurately. The app will configure your shot placement from your zeroed shots. Check the laser offset setting when switching firearms. If your gun is sighted in at a close distance and correctly, then you may not need

any offset. If no offset is needed, then simply tap Clear Offset from the menu. Remember to clear the offset or will be applied again.

There are 5 tasks to complete the Laser Offset Tutorial:

1. Tap "Settings" in the upper right-hand corner.
2. Tap "SHOOT TO CALIBRATE" task highlighted
3. Drag the red crosshairs to your desired point of aim.
4. Touch the direction arrows to precisely position the crosshairs over your desired point of aim. Shoot at this point until you are confident that your firearm remains steady. The difference from your point of aim to the laser hits is the Laser offset..
5. Tap Apply to save the offset or Cancel to not use it.

The Laser offset should be saved and visible in other drills.

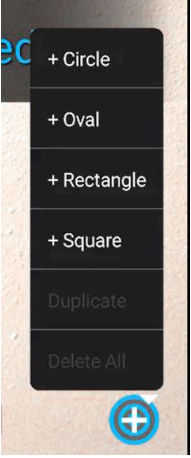
Defensive training involves mentally adjusting for sight height over bore, especially with rifles that are sighted in for further distances. Use the Laser Offset if you do not want to mentally adjust for the sight-over-bore difference. You always have the option to clear the offset to challenge yourself and figure out the difference mentally.

## Manual Targets

Smart Targets are the bomb, but sometimes you want to use your own targets. This tutorial will walk you step-by-step through creating and using manual targets.



Select a simple shape and draw hit zones for your own targets. The app will score the hits as one point in each zone. Remember to clear hit zones to prevent confusion.

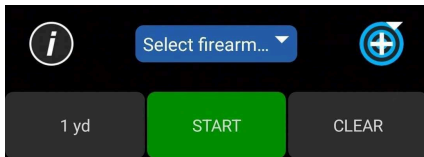


# Drills and Smart Targets

The Mantis Laser Academy app has a variety of drills focused on different aspects of shooting. Some drills require specific smart targets. Other drills work with any smart target. Several drills support multiple targets and allow local duel competition between shooters. Additional targets can be ordered or printed free from [mantisx.com](http://mantisx.com)

Mantis Laser Academy App has a selection of Free Drills available with the free download. The Pro Drills can be purchased in the app or unlocked with the Full Access Code.

The Mantis Laser Academy training kits include a Full Access code to unlock all drills in the Laser Academy app. You can also purchase a single drill or Full Access in the app. It is a one-time purchase, no subscription required.



Drill Information is shown on the screen the first time a drill is opened. To view the drill information on subsequent sessions, tap on the i button above the target distance button.

## Target Simulated Distance

[Portable Smart targets](#) | [Standard Smart targets](#) - The PDF files to determine the simulated distance of specific targets at different distances. For example the IDPA Standard Target placed 15 yards away simulates 48 yards away from the shooting position.

[LifeSize Targets](#) - The PDF documents include targets that have been scaled up to mimic the real-world size of a given target. Provide these documents to your local print shop and request that they be printed on matte paper and printed at the file size.

Drills That Do NOT Require Specific Targets

- **Open Shooting / Multi Target** - Flexible practice on a variety of targets. Take any number of shots at any pace.
- **Open Shooting / Single Target** - **FREE** Flexible practice on a single target. Take any number of shots at any pace.
- **Close contact from holster** - Fast and accurate shot from holster to close contact position. On the beep, draw onto the target and shoot immediately.
- **Compressed Surprise Break** - Fast and accurate reaction time. Shoot immediately after the beep. Repeat. Each shot is placed, scored, and timed.
- **Duel single shot** - **FREE** Fastest accurate shot against an opponent. Determine the starting position of the firearm. At the beep, both shooters draw and shoot. Fastest shot on target wins the round. *Two matching targets are needed.*
- **Duel 5 shot** - Fastest accurate shooting round against an opponent. Determine the starting position of the firearm. At the beep, both shooters draw and shoot. Fastest shot on target earns one point. Repeat. Shooter with the highest total score wins the round. *5 repetitions, two matching targets needed.*
- **Duel High score** - Fastest accurate shooting round against an opponent. Determine the starting position of the firearm. At the beep, both shooters draw and shoot. The fastest shot on target earns the shot score. Repeat. The shooter with the highest total score wins the round. *5 repetitions, two matching targets needed.*
- **Emergency/Speed Reload** - Start with the firearm pointed at the target with the slide locked to the rear. At the beep, eject

the magazine, insert a new magazine, and release the slide. Reassess target, aim and fire. *5 repetitions*

- **Holster Draw / Par time** - Fast and accurate shot from the holster against a part-time. Draw and shoot immediately after the beep. Shot must break before the par whistle. Repeat. Part-time 2.5 sec and 5 Repetitions
- **Holster Draw** - Fast and accurate shot from holster against a part time. Draw and shoot immediately after the beep. Repeat. 5 Repetitions of 1 shot
- **Multiple shots on Multiple targets** - Fast and accurate shots, multiple shots on multiple targets. Set the desired number of shots.
- **Shot from Low Guard/Low Ready Single** - Fast and accurate shot from guard/low ready position. Move on to the target and shoot immediately after the beep. Repeat. single shot
- **Shot from Low Guard/Low Ready Multiple Rep** - Fast and accurate shot from guard/low ready position. Move on to the target and shoot immediately after the beep. Repeat. 5 Repetitions of 1 shot
- **Type 1 Malfunction** - By simulating an empty chamber or bad round, your first shot on target will click instead of a gunshot sound, indicating a failure-to-fire or failure-to-feed malfunction. Clear the malfunction by Tap-Rack and Roll (tapping the magazine from the bottom, tilting the ejection port down and pull back the slide, and then release to simulate the ejection of the bad round and chambering of a new round). Reassess target, aim, and fire. 6 Repetitions
- **Type 1 Malfunction- Random** - During a series of shots, simulate random failure-to-fire or failure-to-feed malfunctions, clear the malfunction (Tap - Rack and Roll), then reassess target, aim, and fire. 6 Repetitions

## Drills That DO Require Specific Targets and Required Target

- **Bells** Bells 

Shoot the tune of the song when the notes are presented. Your musical performance will play at the end of the drill.

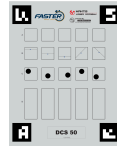
  - Frosty the Snowman
  - Jingle Bells FREE
  - Joy to the World
  - Open Play
  - Silent Night
- **Bullseye 5-shot** FREE Bullseye or B-27 

Marksmanship training, achieve the highest score of five shots at any pace. Shots are placed, scored and timed.
- **Bullseye 10-shot** Bullseye or B-27 

Marksmanship training, achieve the highest score of ten shots at any pace. Shots are placed, scored and timed.
- **Darts 01** Dartboard 

Single-player drill  
Player begins with a score (301, 501 or 701 selected in Settings). You must shoot a double (double in) to begin scoring in 301. Shots are scored in 3-shot turns, as if you have 3 darts. The score for each turn is subtracted from the current score. To win, bring the score down to exactly zero and end with a double score (double out). If the remaining score is negative or zero and the shot is not a winning shot, then the turn is lost. *Shots on the outer ring and the center bullseye are doubles. Shots on the inner ring are triples.*

- **DCS 50 Drills (aka Warmup drills)** DCS 50  
DCS recommends completing the Circles Drill before the DCS 50 Drills. Each goal must be achieved with each line to proceed to the next line. Trigger pressure begins when both hands join, and trigger breaks when extension is complete.



**DCS 50 A** DCS 50  
One draw, one shot for each box, repeat 3 times - 15 shots total. Focus should be on obtaining the correct grip from the holster, high straight presentation under the dominant eye, and building your support hand grip.



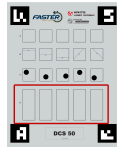
**DCS 50 B** DCS 50  
One draw, one shot for each box - 5 shots total. Sights touching the line to learn sight height over bore. Focus should be on the perfect sight alignment. All three sights are level and touch the line. Lean left on the left angle and lean right for the right angle as from behind cover/concealment. Red dots should also touch the line.



**DCS 50 C** DCS 50  
One draw, one shot for each box, repeat - 10 shots total. Confirmation test and confidence builder. This test is meant to boost morale. It confirms that with the knowledge and skills developed above.



**DCS 50 D** DCS 50  
Cadence drill - Starting on target, shoot each box in Row D multiple times in a row. The metronome sound will tick to help set the pace of 5 shots in each box, 1 - 4. Focus on trigger control and sight reset.  
Box 1: one shot per second, 60 beats per minute  
Box 2: two shots per second, 120 beats per minute



Box 3: three shots per second 180 beats per minute  
Box 4: four shots per second 240 beats per minute  
Box 5: one full magazine starting slow and gradually increasing speed as fast as you can safely go and get your hits. Loosen up and prove how fast you can go and control it. *(Challenge yourself with the MantisX Cadence drills in the Pistol/Rifle app with a MantisX sensor)*

- **DCS Circles Drill** DCS Circles  
FASTER Saves Lives Time standards: 5 seconds each shot, working your way toward 1 second. Distance: 3, 5, 7 yards. Practice “Perfect Myelination” of the holster draw, including trigger prep and break, on target, by full extension.

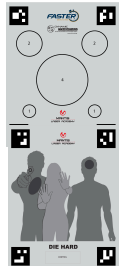


DCS suggests completing this drill before the “DCS Warmup Drill.” *(Combine with Mantis X10 Holster Draw Analysis to learn more and improve your draw stroke).*

- Baseline Objective: Keep all 5 rounds in the 4” circle before proceeding. Draw fire 5 rounds at the 4” target. Keep all 5 rounds in the 2” circle before proceeding. This is to establish a baseline on how you shoot cold.
- #2 Objective: Draw and fire 5 rounds at each 2” circle. This is meant to cause even the most advanced shooter to take more deliberate aim and controlled trigger press.
- #3 Objective: Draw and fire 5 rounds at 1” circles. This is meant for everyone to slow down and be more deliberate.

- **DCS Circles - Rapid Fire Drill** DCS Circles  
DCS Circles with the addition of speed. A double-action or resetting trigger is required.


- **Die hard** FREE Die Hard  
Tape your gun to your back, stand with your hands on your head facing the target. Remove one hand briefly to tap START, then immediately place back on




your head. At the beep pull the gun from your back and shoot one shot on each of the kill zones (chest and head). Save the hostage.

- Hunt** Hunt


Mindset drill: Identify and hit the called-out target zone as quickly as possible. On the callout, find and shoot once to the indicated target zone (shape, number, color). Adjust the settings for Easy, Medium or Hard. Each shot is placed, scored, and timed.


- Duel - Hunt** Hunt


Identify and hit the target faster than your opponent. Two Duel targets are needed. The fastest shot on target earns one point. The shooter with the highest total score wins the round.


- Konami Code** Konami FREE


Crack the code, then keep up with the callouts.


- Konami Hunt** Konami FREE


Visible after the Konami Code is completed. You know the code, now find and hit as many targets as possible in the allotted time. Drill will call out each intended target by sound. Bonus time is added for each hit.


- B8 Competition** B8



The 5 1/2 -inch bullseye is generous enough for fast work up close and small enough for challenging accuracy work out to 25 yards. The B8 target gets its name from being 8" in diameter. The 9 ring is 5.54", 10 ring is 3.36", and the X ring is 1.695" in diameter.


- Shapes 4** Hunt

Every shot is a hit, there are no misses



## Notes

Add Notes to add the training details or the names of the trainee to your training history by clicking on the  in the lower right corner. To complete the addition of the note, click on the up arrow on the right. The notes added will be displayed in your History List. Notes can be removed by tapping on the  icon and Remove Notes.


Select Firearm allows you to add your firearm details from your arsenal to your training notes.

## Shot Detection Feedback

If the app is not detecting all your shots, then complete the feedback and the tech support will try and help fix it. Follow the prompts to send data to be reviewed, and one of the technicians will be in contact with you.

## History

Training history can be viewed by clicking on the HISTORY tab in the bottom of the app or by logging into your training profile at [train.mantix.com](https://train.mantix.com). Timeline filters can be set at the top of the screen from 2 Weeks to 12 Months or ALL. The History filter may change the Daily Shots Graph (Drill and Shot count, Longest Streak, Longest Gap, and your Success Rate) that is displayed above your list of training sessions.

Review an individual training session by clicking on the session in the History List. The 3 dots  on the lower right of the screen opens the menu (Select Firearm, Add Notes, Delete Session). The Notes added will be displayed on the History Screen under the date/time of the session. Notes can be used to easily keep track of multiple shooters or training specifications.

## Courses

The courses are designed to train through a variety of drills with predetermined goals and minimum scores to pass. After the completion of a course, you can submit your mailing address for a training course patch.

### Pistol Marksmanship Course

Smart Targets needed: BT-5S, IDPA, ot Torture, IPSC, HUNT, and Bullseye

Course Challenges:

1. BT-5S 5 shots, minimum score 35
2. BT-5S PHO 5 shots, minimum score 35
3. BT-5S SHO 5 shots, minimum score 35
4. IDPA 5 shots, minimum score 35
5. IDPA PHO 5 shots, minimum score 35
6. Circles 10 shots, minimum score 55 (every shot is a hit)
7. IPSC 5 shots, minimum score 35
8. IPSC SHO 5 shots, minimum score 35
9. Shapes 18 shots, minimum score 36 (every shot is a hit)
10. Bullseye 5 shots, minimum score 40
11. Bullseye PHO, 5 shots minimum score 40
12. Bullseye SHO, 5 shots, minimum score 40
13. BT5S 20 shots, minimum score 200

### TEST

1. IDPA 10 shots
2. BT-5S PHO 10 shots
3. BT-5S SHO 10 shots
4. Bullseye 10 shots
5. Shapes 18 shots

The test will conclude the Journey, but can also be taken at any time to test your skills. Complete the test to complete the course and receive the course patch.

v2025-08-05

## Manage Account

**PROFILE**

**Email**  
current email address

**Username**  
current username

**Password**  
Password should be at least 6 characters long

**Privacy**  
Public

Public lets everyone view your profile.  
Private lets you approve followers, and only followers can view your profile.

**Profile Picture**

Choose File

SAVE

The User Account Profile on [train.mantix.com](https://train.mantix.com) will open up in a browser. The online profile allows you to edit your profile Email Address, Username, Password and Privacy settings. The username should be 150 characters or less. Letters, digits and these symbols @ . + - \_ may be used.

Share your training history with friends and family by using the Followers/Following options and by setting your Privacy:

- **Public** allows anyone to follow your profile.
- **Private** gives the option to approve or deny followers.

Followers and requests to follow are shown in the app and the online Training Profile

The Laser Academy Full-Access Code must be entered into the field on the User Account Profile to unlock all of the drills. This access doesn't unlock the Journey Phases at the top of the screen. Access codes for other MantisX apps are activated in the online profile settings. Similar to the password field, these fields will be blank and will not show an activated code.

**LASER ACADEMY**  
Full Access Code  
SUBMIT

**RAVEN ACCESS**  
Full Access Code  
SUBMIT

**PENDING REQUESTS**  
-- None --

# Troubleshooting

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

## Laser Cartridge doesn't seem to work

- Double-check the [Laser Cartridge Setup](#) steps
- Non-conductive disc is removed
- Three Batteries installed correctly
- Verify the cartridge is fully screwed together

## Smart targets not detected or not detecting shots

- Make sure the targets are posted, with the 4 corners and codes flat and easily visible to the camera
- Move the phone/tablet close enough so it takes up the majority of the screen on the device. Suggested distance is approximately 1 yard.
- Remove any shiny/reflective materials from the sight of the camera
- Have a single source of light in the room
- The light can be warm (4k kelvin) and if it is capable of being defused by a lampshade, that would be best
- Use an interior hallway or room to reduce additional light

## Too much red masking

- Adjust your lighting by reducing the amount of light on the target. Red masking indicates that the area is too bright and the app is not able to read those areas of the target correctly. Direct sunlight, reflective surfaces, fluorescent, and LED lights may cause brightness issues.
- Most device cameras work better with our Targets when set up 3-5 feet away from the target. If the target-to-tripod distance is too much, then extra red masking may occur

## The End Cap has a hole

Some guns with aggressive firing pins can penetrate the rubber pad quicker and may need to be replaced more often.

- Check if your gun is listed as [incompatible](#)
- Is your cartridge still under warranty?
- Replacement [End Caps](#) are available [mantisx.com](#) [Common Questions](#)

## Common Questions

### Laser Academy App

#### Q: Where can I find my Laser Academy access code?

A: The code card is included in the Laser Academy Kit. A card about the size of a postcard, located in the mesh pocket of the zippered case, will have the Full Access Code.

*Example* [Full Access card](#)

#### Q: Where/how do I enter my full access code?

A: Go to Laser Academy > Settings > Sign in to the app with a username, and on the same Settings screen, select **Manage Account**. This will open a browser window where you can enter the code. Contact [customer service](#) to troubleshoot code activation issues.

#### Q: Can I designate pistol vs. rifle training?

A: Yes, go to the Settings tab (lower right) and choose Manage Arsenal to add firearms. The [Note option](#) is great for noting which gun was used for the session.

**Q: Can the Laser Academy features be used without signing in or using a username?**

Yes. Mantis sign-in is not required; however, sign-in to a Play Store is required to download the app. Purchase full access from within the app. If you ever uninstall the app or switch phones, you will need to sign into the app store using the same app store account, re-download the app, then within Laser Academy go to SETTINGS and choose RESTORE IN-APP PURCHASES. If you choose not to use a username within the Laser Academy app, your data will not be backed up. If the app is uninstalled or the phone formatted or lost, all the training data will be lost as well.

**Q: Can I transfer my Laser Academy access (full access included in Laser Academy Kit, full access purchased in app, Individual drill access, etc.)?**

A: No. Laser Academy full access is non-transferable. The full access is associated with a single email address (User Profile).

**Q: How do I get a refund for an Apple/iOS app store purchase?**

1. Go to [reportaproblem.apple.com](https://reportaproblem.apple.com).
2. Sign in with your Apple ID and password.
3. Find the charge for Laser Academy and click the "Report" or "Report a Problem" button next to the charge.
4. Follow the instructions on the page to choose the reason why you want a refund and submit your request.

**Q: How do I get a refund for Android app store purchase?**

A: If it's been less than 48 hours since you bought full access or a drill on Laser Academy, request a refund through Google Play.

1. On your computer, go to [play.google.com/store/account](https://play.google.com/store/account).
2. Click the Order History tab (at the top).
3. Find the app purchase and to the right, select Request a refund or Report a problem, and choose the option that describes your situation.
4. Complete the form and note that you'd like a refund.

You'll get a message that says "Thank you for sharing your concerns." You'll then get an email with your refund decision. You'll usually get this within 15 minutes, but it can take up to 4 business days. If you need assistance, contact customer service by emailing a screenshot of the purchase and your UserID to [support@mantisx.com](mailto:support@mantisx.com)

Notes:

- If the purchase occurred more than 48 hours ago, please reply to this message with the email address associated with your Google Play account and the order number.
- If you have multiple refund requests, repeat these steps for each item you bought.
- If you don't find the order, you may have bought it on a different Google Account.

**Q: The point of impact of my laser does not match the point of aim, can I fix this in the app?**

A: Yes, this can be adjusted using the [Laser Offset feature](#). The app will automatically adjust for the laser offset.

**Q: How to uninstall/reinstall the app?**

A: If possible, sign out of your user account in the app:

1. Mantis app > Settings > SYNC Account Data
2. SIGN OUT next to your username
3. Go into device OS Settings > Apps > Mantis app > Uninstall
4. Turn off the device > Reboot after 10 seconds
5. Reinstall the Mantis app

**Q: Where can I delete a session or shot?**

A: HISTORY > Open Session > Click the three dots on the lower right, and choose "Delete Session"

Shots cannot be deleted at this time. This will be added at some point in the future.

**Q: Can I designate pistol vs. rifle training?**

A: Yes, go to the Settings tab (lower right) and choose Manage Arsenal to add firearms. The [Note option](#) is great for noting which gun was used for the session.

**Q: Can I use Laser Academy outside?**

A: Yes. As long as the camera can adjust to the lighting and the laser is bright enough to stand out above the ambient lighting, using the system outside should not pose a problem. Use our [Phone Shades](#) to help with brightness. However, even a slight wind may cause vibrations with the device/tripod, interrupting camera focus.

**Q: What is the max range Laser Academy supports?**

A: The max range is determined by the phone/tablet camera and lighting conditions. There is no arbitrary max defined by the software. We have tested the app at 50 yards at an indoor shooting range

**Q: Does Laser Academy work with the MantisX Shooting Performance System?**

A: The two systems can be used in conjunction with one another on two devices. The presence of another system does not change how the other system functions. Two smart devices are needed for both apps to have full function; one for each app unless your device has Split Screen capabilities.

Pink Rhino Laser Cartridges

**Q: What Lasers work with Laser Academy?**

A: We expect most laser cartridges that emit a visible Red or Green laser to be compatible with Laser Academy.

**Q: Does Laser Academy work with IR lasers?**

A: No.

**Q: I can only shoot one time, then I have to manually reset the trigger to shoot again; what is wrong?**

A: This is normal. The laser cartridge has no way to reset your trigger. As such, you may need to manually cycle the slide to reset the trigger.

**Q: How accurate are Pink Rhino laser cartridges?**

A: A deviation of 0.25" per yard is the max acceptable.

**Q: Can I get new o-rings or End Caps?**

A: Yes, end caps are available online. O-rings are available by custom orders. Please contact our [Customer Service](#).

**Laser Cartridge O-Ring Size Chart**

Caliber	Front O-ring	Back O-ring
9mm	Φ8x1.5 mm	Φ10x1 mm
45 ACP	Φ11x1.5 mm	Φ11x1.5 mm
40 S&W	Φ10x1 mm	Φ10x1.5 mm
380 ACP	Φ8x1 mm	Φ8x1 mm
223 Rem	Φ8x1 mm	Φ8x1 mm
38 Sp	Φ8x1 mm	Φ8x1 mm
357 Sig	Φ9x1.5 mm	Φ10x1 mm

*\*Note: Diameter (φ) in this chart is the outer diameter (OD)*

**Q: Can I adjust the laser cartridge point of impact?**

A: The laser position is fixed. There is no mechanism for adjusting the laser position.

**Q: How long does the Pink Rhino last?**

A: This varies from one firearm to the next based on firing pin design, spring pressure, and how far the firing pin protrudes from the breech face. Most firearms will allow thousands of rounds before maintenance or replacement of the end cap is required.

**Q: Can I use my DryFireMag trigger reset system with Pink Rhino or Laser Academy?**

A: DryFireMag does not work with Pink Rhino Laser cartridges because it disables the firing pin function, and the firing pin function is required to activate the laser cartridge. The 'DryFireMag with laser' is compatible with the Laser Academy app.

### Smart Targets

**Q: Are smart targets required with Laser Academy?**

A: No, but they make using the system a lot easier with automatic target detection and automatic scoring. [Manual Hit Zones](#) can be defined when Smart Targets are not used.

## Product Policies

### 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](mailto:support@mantisx.com) for assistance.