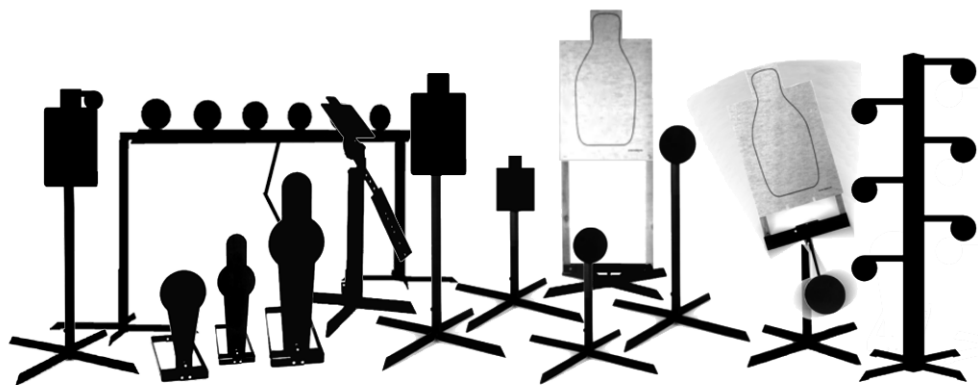




# STEEL TARGET RESOURCE GUIDE



# WHY ARE STEEL TARGETS IMPORTANT?



Instant feedback programs muscle memory and reinforces positive behavior. Just like hitting a baseball, your body subconsciously remembers how to orchestrate all the variables required to be successful. If you do not get instant feedback, your mind and body are not able to accurately correlate which variables produced positive results, and which produced negative results. The more senses you involve in the process, the more powerful and more rapid the conditioning becomes.

## SIGHT

The target should bounce, spin, rock, wobble, explode, fall, or give some other visual indicator when hit. High contrast paint on the shooting surface will increase visual feedback, but paint must be reapplied frequently. Paint can also be used to reduce visibility if desired.

Targets do not have to be made of steel to provide visual feedback. Plastic can provide some of the same effects, and cardboard targets can be equipped with various types of hit sensors. Balloons by themselves can be simple reactive targets, and they become even more effective when used with a three dimensional cardboard torso like our reactive "3D Target." For the greatest efficiency, use targets that can be reset easily or do not require manual resetting at all.

## SOUND

Steel is required for a target to produce a "gong" when hit. The size and thickness of the steel will affect the quality of the gong produced, as will the method with which the target is mounted or suspended. If the target is mounted so it is not too restricted and can move when hit, the gong will be louder and more effective. Although quality steel targets will cost more upfront, the savings in training time and ongoing cardboard and paper target replacement will more than pay for your original investment.

## SHOOT MORE, WASTE LESS TIME

In addition to providing effective visible and audible indicators when hit, steel targets greatly enhance the efficiency of your training as well. Instead of changing out paper or cardboard targets, you can spend more time actually shooting. The 30 or so minutes you save each day really add up over the course of a year, especially if you are working with a large department.

## IF YOU BUILD IT, THEY WILL COME

A final benefit of reactive targets is the pure entertainment factor. This may seem frivolous, but it can provide an enormous benefit to your training program. Would you rather shoot holes in paper all day, or would you rather participate in tactical shooting scenarios that involve movement, communication, and targets that drop, fall, spin, dodge, or charge you? Your trainees feel the same way. The more enjoyable you make the training, the more often people will come to the range

# THE TRUTH ABOUT STEEL AND STEEL TARGETS



With more and more companies and individuals manufacturing steel targets, the water has become increasingly muddy where accurate information is concerned. With technical data provided by the *American Iron and Steel Institute* in Washington D.C., this report is designed to cut through the recent hype and establish a basis of fact for accurate evaluation and comparison.

## WHAT IS STEEL?

Steel is an alloy metal composed of iron and varying amounts of carbon and/or other elements such as chromium, nickel, tungsten, manganese, and so on. Steel with specific properties and characteristics is created by adjusting the overall chemical composition or by altering the various production processes such as rolling, finishing, and heat treatment. Because each of these factors can be modified, there is potentially no limit to the number of different steel recipes that can be created. Currently there are over 3,000 catalogued grades or chemical compositions of steel available. Steel can utilize a wide variety of alloying elements and heat treatments to develop the most desirable combination of properties.

## STEEL HARDNESS AND QUALITY

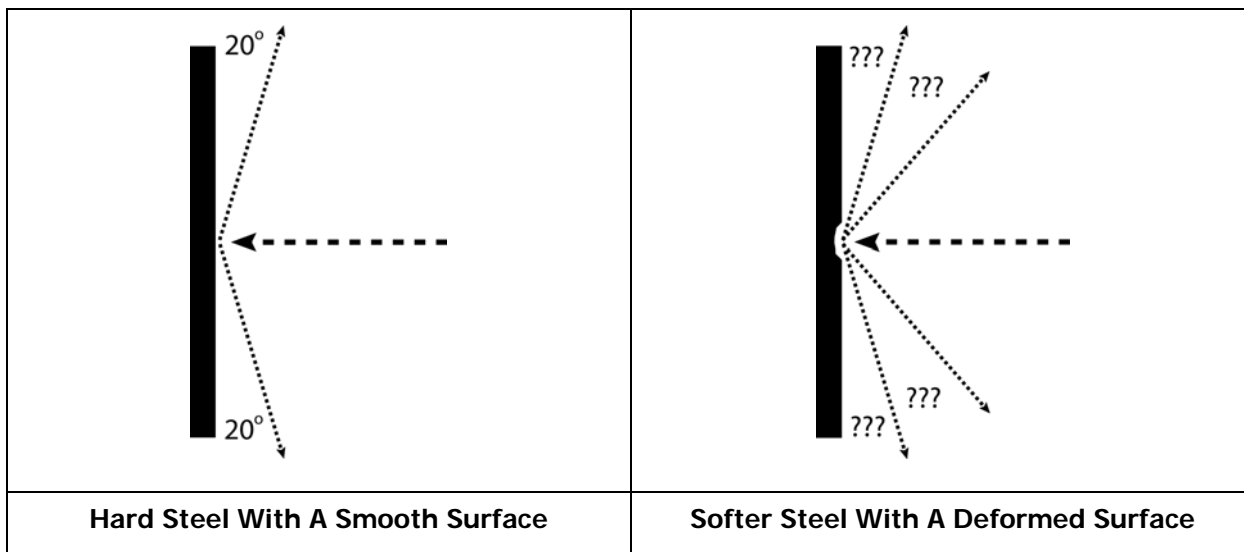
For steel targets to be functional and safe, they should be made of high quality through hardened steel that has a Brinell hardness number (BHN) of at least 500. The steel must also provide sufficient strength, toughness, and impact resistance. The Brinell hardness test depends upon the resistance offered to the penetration of a carbide steel ball (1.6 mm diameter) when subjected to a weight of 12.6 kg. The resulting hardness value is computed as the ratio of the applied load to the area of the indentation produced. This test is accepted as a worldwide standard for measuring the hardness of steel.

### TRUTH - THERE ARE 2 FACTORS THAT AFFECT THE HARDNESS OF STEEL

The first is the amount of carbon and other alloying elements in its chemical composition, and the second is the manner in which the heating and cooling of the steel is manipulated. These factors are determined at the most fundamental level, and affect the finished steel as a whole.

### TRUTH - STEEL HARDNESS IS A CRITICAL SAFETY ISSUE

The hardness of the steel is so critical because only a smooth surface will generate predictable splatter patterns. Steel that is not sufficiently hard can develop pits, craters, dimples, and other hazardous deformations. When a bullet hits one of these deformations, it is impossible to predict where the splatter will go, thereby creating an unacceptable training environment.



There are many steel mills located around the world, but only a select few are able to produce steel that is hard enough and of sufficient quality to be safely used for steel targets. HARDOX / SSAB, Bethlehem-Lucas, Oregon Steel Mills, and NKK are major producers of such steel. Each of these companies may have minor proprietary differences in their production methods, but they all must make sheets of hard steel in essentially the same way.

Nevertheless, some suppliers of targets and shooting range equipment attempt to muddy the water and create perceived differences in steel quality where none exist. One particularly misleading claim refers to a certain company's use of through hardened steel as opposed to merely surface hardened AR500 steel allegedly used by everyone else. We state the following with all possible force:

1. Action Target uses only high quality, through hardened steel with a Brinell hardness rating of at least 500, and we use it in every one of our ballistic steel products.
2. Action Target can also provide through hardened steel targets and other steel products with certified Brinell hardness ratings of 550 and even 600.
3. Despite the inaccurate claims, AR500 steel is NOT surface hardened. It is through hardened. Witness the quotes listed below from steel suppliers around the country.
  - \* **Chapel Steel** - AR500 is a quenched & tempered, through hardened, wear-resistant grade of abrasion resistant steel plate used for severe impact.  
<http://www.chapelsteel.com/ar500-ar500f.html>
  - \* **Heflin Steel** - Heflin REM 500 abrasion resistant plate is a premium grade wear plate, ideal for extreme abrasion coupled with resistance to impact. REM 500 plate is through hardened up to a 3" thickness for maximum hardness and abrasion resistance.  
[http://www.escocorp.com/heflin\\_steel/wear/materials.html](http://www.escocorp.com/heflin_steel/wear/materials.html)
  - \* **Benco Steel** - AR500 is a through hardened steel with high hardness for use where there is severe impact and abrasion.  
<http://bencosteel.thomasnet.com/category/plates>

(These companies are steel suppliers, not manufacturers or producers. They buy steel from the actual manufacturers like HARDOX / SSAB, and then re-sell it to their own customers.)

4. Any statements contrary to those above are simply untrue.

Be careful not to get caught up in the "more is better" mindset. Just because a Brinell hardness number (BHN) of 500 is good, it doesn't mean a rating of 700 is better. While you must use steel that is hard enough for the task, going overboard only impacts your checkbook and not the product durability. For example, ballistic tests have shown that the performance difference between steel with a 500 BHN and steel with a 535 BHN is so small that you can't tell the difference with a bullet, but only with a gauge. Also be aware that you can actually use steel that is too hard and too brittle for ballistic training purposes.

## STEEL PROPERTIES AND USES

Grade	Brinell Hardness BHN	Maximum Thickness	Applications and Type of Service
T-1 Type A	321min. 340min. 360min.	1¼" (32) 1 (25) ¾" (19)	Combination of high-resistance to sliding and impact abrasion and good weldability. For applications where formability and weldability are more critical than with the above steels.
T-1	321min. 340min. 360min.	2½" (63) 2 (50) 1½" (38)	Same as "T-1" type A but with better resistance to impact abrasion and available in greater thickness.
AR 350	321min.	1 (25)	Good sliding abrasion and light impact abrasion, buckets, chutes, hoppers, conveyors.
AR 400	360/444min.	< ¼"- ¾" ¼"-1 5/8" >1 5/8"-2½"	Mining and material handling buckets, chutes, hoppers. Additional applications where improved formability, weldability and toughness are required.
AR 450	400/480min.	2	
AR 500	477min.	1 (25)	Suggested for severe abrasion applications requiring very high hardness.

## WHO USES THE BEST STEEL?

When it comes to steel targets, important and ironic truths exist on both sides of this common question. It is important to understand these truths in order to make an educated decision when purchasing steel targets.

### TRUTH - THERE IS A SIGNIFICANT DIFFERENCE IN THE QUALITY OF STEEL BEING USED

Unfortunately, there are steel targets out there that are poorly designed and are made of inferior steel. Homemade targets from local welding shops are usually the culprits, but some commercial target manufacturers use inferior steel as well. Because these targets are vulnerable to cratering, pocking, and general deformation, they are very dangerous and should be avoided. Any steel with a Brinell hardness rating much under 400 falls into this category, including standard "T-1" steel with a hardness rating in the 300 range.

### TRUTH - THERE IS NOT A SIGNIFICANT DIFFERENCE IN THE QUALITY OF STEEL BEING USED

This is not as big a contradiction as it may seem. After many years of experimenting to find the best solution, most major manufacturers of dependable, high quality steel targets now use steel with a Brinell hardness rating of at least 400. A few premium quality manufacturers even use steel with a higher Brinell hardness rating of 500 or even 550. Again, there are only a few plants that make this kind of heavy-duty steel, and all the target manufacturers must get their supply from one of these plants. Steel of this quality and reputation is always certified by the plant that created it, regardless of which target manufacturer the steel is shipped to. Other certifications like "Magnum Steel" or "Extreme Steel" are added by the manufacturer and are merely cosmetic.

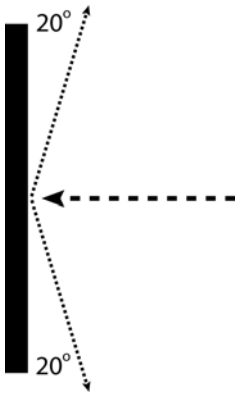
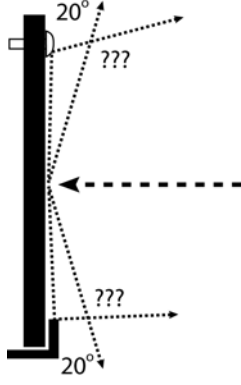
When all the rhetoric is boiled away, there are manufacturers who use steel that is not appropriate for targets, and there are those who use steel that is. Make sure you know the difference.

## PROPER DESIGN IS CRITICAL

Even the best steel can't compensate for poorly designed targets. There are several unavoidable truths that must be followed to create targets that are as safe and durable as possible.

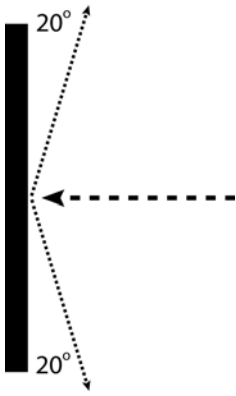
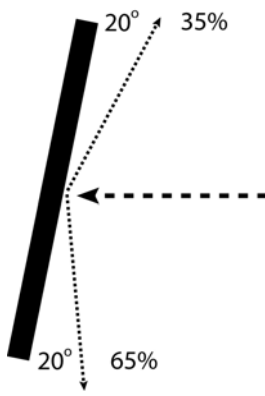
### TRUTH - SMOOTH AND TOTALLY FLAT SHOOTING SURFACES ARE ESSENTIAL FOR CONSISTENT SPLATTER PATTERNS

There are 2 things manufacturers can do to ruin the smoothness and flatness of a steel target. First, they can use inferior steel that will crater, pock, and deform. Second, they can put brackets, clamps, or bolts in the way. Remember, anything that can be shot will be shot. Why is this an issue? Because you can do a reasonable job of predicting and protecting against a bullet's splatter pattern when it hits a flat, uniform surface. If the steel is damaged or if anything else is in the way, all bets are off. Bullet fragmentation and ricochet are inherent and acknowledged issues when shooting on steel targets. Proper target design helps you address those issues with the highest degree of safety possible.

	
<p><b>Steel With A Smooth, Flat Surface</b></p>	<p><b>Steel With Brackets And Bolts</b></p>

### TRUTH - DISSIPATING A BULLET'S ENERGY IS SAFER AND HELPS YOUR TARGETS LAST LONGER

When a bullet strikes a steel target that is completely stationary at a 90-degree angle, all the bullet's energy goes directly to weakening that point on the steel. If the target is completely stationary but is positioned at less than a 90-degree angle, a portion of the bullet's energy at impact is deflected rather than absorbed. If the target is positioned at slightly less than a 90-degree angle AND the target is able to move on impact, a much larger portion of the bullet's energy is deflected rather than absorbed.

	
<p><b>Steel Target Mounted Vertically</b></p>	<p><b>Steel Mounted At An Angle</b></p>

## **NO STEEL TARGET IS INDESTRUCTIBLE**

Without exception, every steel target out there today can be damaged. Steel hardness and proper design can both be defeated by misuse and/or abuse of the target.

### **TRUTH – THE BASIC DESTRUCTIVE FORCE GENERATED BY BULLETS STRIKING STEEL TARGETS IS HEAT**

Excessive concentrated heat alters the steel's hardness properties and results in damage to the target's face. The amount of heat generated is proportional to the speed of the bullet, which is why rifles cause more damage to steel targets than handguns.

### **TRUTH – RIFLE DISTANCE ON STEEL TARGETS IS NOT AN EXACT SCIENCE**

No matter what anyone tells you, shooting a steel target with a rifle - *even at 100 yards* - can damage your target, even if it has a Brinell hardness rating of 550. You must be very careful about your choice of steel and ammunition! Even with 550 Brinell steel and the target mounted at a significant angle, some damage is still possible, even at 100 yards. For best results, use only steel targets that are specifically designed for use with rifles.

With so many complex variables like ammunition type, rifle manufacturer, barrel length, bullet velocity and so on, it is virtually impossible to establish a set distance for shooting rifles on steel targets. To determine what works best with your specific equipment, we suggest the following: Fire a test shot from 100 yards and then examine the target. If there is no damage, move in a few yards and fire another test shot. Repeat the process until you find the optimal distance for your combination of rifle and ammunition. Some people may be comfortable with a certain amount of dimpling on the steel. Some may be comfortable with more, and some with less. Regardless, always remember to keep your rifle targets separate from your handgun targets. Even if your steel targets have only minimal rifle damage, they should never be used for closer distance handgun training.

### **TRUTH – SHOTGUN SLUG DISTANCE ON STEEL TARGETS MEANS 100 YARDS MINIMUM**

Shotgun slugs have the greatest potential for bodily harm to the shooter due to the sheer volume of lead that can be returned from damaged or poorly designed steel targets. Stay back!

### **TRUTH – FRANGIBLE AMMUNITION REQUIRES THE SAME QUALITY STEEL AS REGULAR AMMUNITION**

Many types of frangible ammunition, particularly for rifles, are lighter than regular lead ammunition. Remember that lighter bullets can mean greater speed, which means more heat, which can mean damage to your steel target. Frangible ammunition can work very well with steel targets. Just make sure it designed specifically for that purpose.

## **TRUTH – ALL ACTION TARGET STEEL TARGETS....**

- are made exclusively of the finest through hardened 500 and 550 Brinell steel with proper alloy elements to produce the required toughness and depth of hardening. They last.
- are designed with totally smooth and flat shooting surfaces for consistent and predictable bullet splatter patterns. No dangerous brackets, clamps, or bolts to get in the way.
- are designed to rest at a downward sloping angle to allow for dissipation of bullet impact energy.
- are designed to move when struck to allow for even greater dissipation of bullet impact energy.
- are easy to assemble and easy to use.
- provide challenging, realistic training on a tight budget.
- are extremely affordable. There is no better value in steel targets.
- come with a 100% satisfaction guarantee.

# STEEL REACTIVE TARGETS: SAFETY AND USE

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## FIREARMS SAFETY RULES

1. Treat all firearms as though they are loaded.
2. Keep your finger outside the trigger guard until you are on target and have decided to fire.
3. Point the muzzle in a safe direction at all times.
4. Be sure of your target and what is beyond it.

## STEEL TARGET SAFETY RULES

1. Always obey the Firearms Safety Rules listed above.
2. Always wear hearing protection and wrap-around shatter resistant eye protection
3. Always stand at least 10 yards from the target when using handgun calibers.
4. Always stand at least 100 yards from the target when using shotgun slugs.
5. Always stand at least 100 yards from the target when using rifle calibers like .223 and .308.
6. Never use rifle calibers on handgun rated targets.
7. Never use ammunition that exceeds 3,000 feet per second at the muzzle.
8. Never use ammunition that travels below 750 feet per second.
9. Never shoot BB's, steel shot, or air gun pellets at steel targets.
10. Never use more powerful ammunition than the target is rated for. (Green tip, armor piercing, etc.)
11. Never shoot on steel that is cratered, pitted, or damaged in any way.
12. Hard ground surfaces under the target should be covered with plywood or boxed pea gravel.
13. Targets should be placed with a 3 foot lateral and deep offset from the adjacent target.
14. If shooting multiple targets, angle of engagement should not exceed 20 degrees.
15. Use only non-toxic paint on steel targets.
16. Inspect all targets before using for damage, functionality, etc.
17. Shooters and observers must wear long pants (no shorts), long sleeve shirts, a cap or hat with a brim, and closed toed shoes.
18. Instructors and observers should stand behind the shooter and observe all safety rules.
19. If using frangible ammunition, it is the responsibility of the Rangemaster to test fire all frangible rounds to determine the following:
  - (1) that the projectile pulverizes completely on contact
  - (2) that the projectile does not damage the steel target at the distances you intend to shoot from

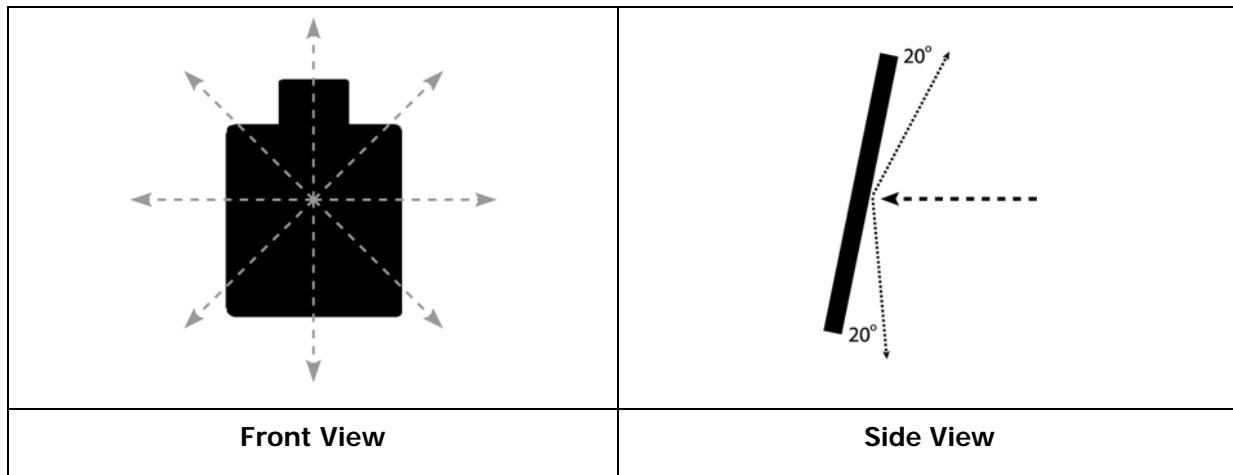


## STEEL TARGET DESIGN

There are presently a variety of steel targets on the market allowing a wide range of firearms training techniques. However, many of these targets do not provide adequate protection from bullet splatter (the bullet fragments that are reflected when a target is hit), so accidents can occur. It is important, therefore, that the user know what factors make training on steel targets as safe and effective as possible. When shooting steel targets, a "splatter zone" appears. This zone is the area in which the great majority of bullet fragments eventually wind up. The total amount of splatter in this zone is primarily dependent on the following four key issues: 1) Angle of deflection, 2) Target hardness, 3) Bullet design and 4) Target placement.

## ANGLE OF DEFLECTION

The type and design of a steel target determines the angle of deflection. Testing for angle of deflection is done by shooting a steel plate target surrounded by a plywood box. After shooting numerous rounds, the path of the bullet fragments is assessed by examining the marks left on the plywood. As the bullet shatters on impact, the majority of the fragments spread out at 20-degree angles from the plate surface. This area, which forms thin triangular shapes to the left and right of the target, is referred to as the "splatter zone." It is not a safe place to be as a full 95% of all bullet fragments can end up here. The remaining area, including the shooter, is referred to as the "safety zone," and receives only a small portion of bullet fragments. Although the safety zone is not absolutely safe, with proper protection, normal training can be carried on without undue risk.



## TARGET HARDNESS

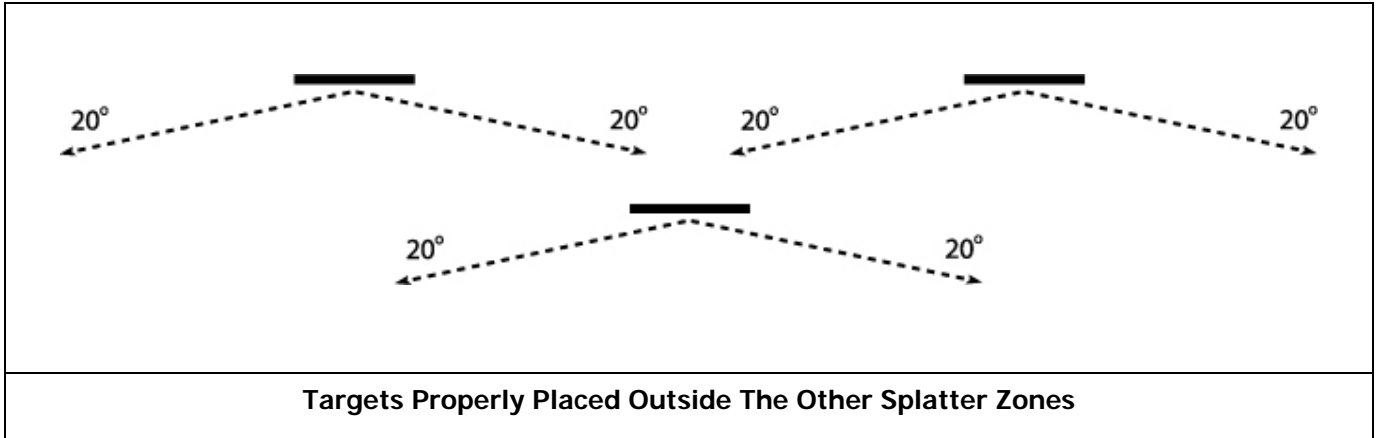
The hardness, or tensile strength, of a target measures the amount of force that can be applied to the steel before deformation or damage occurs. Hardness is most commonly measured by a Brinell number ranging from 150 on the soft side, up to 700 on the hard extreme. While the average target is made of the cheaper steel with a Brinell number of 265, some targets have a Brinell number over 500 and can withstand repeated .308 rounds without deformation or damage. Intuitively, it is apparent that a harder steel target will last longer. More importantly, a harder steel target is actually safer. In repeated testing, hard targets produced very consistent splatter patterns and returned little or no bullet material back to the shooter. Softer targets deformed sooner and often resulted in extremely unpredictable splatter patterns. Specifically, many fragments were larger and traveled in virtually every direction, effectively rendering the safety zone non-existent. It is recommended, therefore, that steel targets be made of the harder steel. Initially they will be more expensive, but, based on longevity and safety, they will be more cost effective in the end.

## BULLET DESIGN

A high quality, higher power factored ammunition is essential to reduce splatter. Simply stated, to minimize the size and pattern of splatter, drive the projectile harder. Consequently, a lead bullet with a low velocity is the worst option for steel target training. For safe training, it is recommended that only higher power factored bullets be used. A desirable round to produce consistent splatter is a jacketed hollow-point with a velocity of 1225 fps. Another issue is the "correlation factor." This generally refers to how well a bullet holds together to give controlled expansion and penetration. In the case of steel target training, the best bullet is a frangible style round. The high velocity, frangible design of such bullets creates a predictable shattering effect on impact.

## TARGET PLACEMENT

Even with the best targets and bullets, training can be dangerous if targets are placed incorrectly. Metal targets should not be placed parallel to each other without a barrier between them. Splatter from one target could ricochet off another target (secondary splatter), and return to the shooter. Metal targets that are used in a grouping pattern should be staggered so as not to be in the 20 degree angle of deflection splatter zone of another target. Placing plywood to the sides of each target easily solves both of these problems. Because the wood is soft, it will absorb the splatter and not cause dangerous secondary splatter. The wood will, however, need to be replaced frequently to be an effective barrier. Another cause of secondary splatter can be large rocks or concrete. The best surfaces are made of sand or fine gravel. If concrete is used, it should be covered by wood or pea gravel.



## OTHER SAFETY ISSUES

Since splatter can only be minimized and never totally eliminated, proper eye protection must be mandatory on all firing ranges. Eye protection should be OSHA tested and have side protection built in. Long sleeves and hats are optional but recommended. Instructors and observers should stand behind the shooter and obey all safety precautions as well. In short, training on steel targets can be safe if done properly. Buy your targets from a reputable manufacturer, use high velocity, frangible ammunition, place targets correctly, and take proper safety precautions.

# TRAINING ON REACTIVE STEEL TARGETS FOR SPEED & ACCURACY



More than thirty years ago, Jeff Cooper identified the three equivalent elements of defensive pistol craft as: accuracy, power, and speed. The point being, when it suddenly becomes necessary to shoot someone in order to preempt a lethal assault you have to hit, you have to hit hard enough to stop the fight, and you have to hit before getting hit. The "power" element of this equation is a function of the chemical energy encapsulated in the cartridge, but the elements of speed and accuracy depend upon the skill of the individual gunman. In today's firearms training world, one of the best ways of developing these critical skills and achieving an effective balance of accuracy and speed is by training on reactive steel targets.

As we learn more and more about the human dynamics involved in armed confrontations, we understand that physical skills which require conscious thought or intellectual processing tend to break down rapidly under high levels of arousal or stress. If our defensive skills and responses are not programmed at a subconscious level, the sudden stress of a combat situation may cause us to fumble, freeze, or panic. It is in this environment that reactive shooting skills are needed.

Such shooting skills - skills that are not dependant on conscious thought processes - can be taught through the use of extremely short time limits, thus pushing the shooter to function at the limits of reaction and response time. This can be compared to learning how to hit a fast moving ball with a bat or racket, or developing the reflexes to block a punch or kick at full speed.

Our subconscious mind can learn to reflexively control the shooting process through the use of positive instant feedback. Automated reactive steel targets (like the Action Target Bobbers) are designed and engineered with this training goal in mind. These systems allow us to set target exposures in reaction time. They also provide positive instant feedback in a couple of ways. There is instant visual feedback when the bullet impacts the stationary steel plate and when a moving plate falls or retracts when hit. At the same time, audible feedback is generated by the "clang" of lead on steel.

The subconscious mind is capable of processing this input in mere fractions of a second. Consistent repetition in this kind of high-speed training, compressing our basic marksmanship skills into reaction-time, effectively programs our reflexes to achieve that sought after balance of speed and accuracy. Just like riding a bicycle, once you understand the technique you really have to develop a "feel" to make it all work. And like riding a bike, these reflexive shooting skills are learned and retained at a subconscious (rather than an intellectual) level, so we are less likely to "forget" how to do it.

Firearms Instructors who have been using reactive steel targets systems like this for years now, report excellent results. Their shooters achieve impressive levels of skill, learning to hit quickly and reliably in half the training time typically required for more conventional techniques.

The concepts of precision shooting and reaction shooting are not mutually exclusive of one another. Rather, they are complimentary, and a well-rounded program of defensive pistol craft will teach the appropriate application of both. But when deciding what to emphasize during our precious and limited training time, we must keep in mind the importance of training "at the speed of life" to prepare us for the fast-paced encounters of the real world.

# PRACTICAL FIREARMS TRAINING



Practical firearms training.....we're not talking so much about actual exercises as we are how to design a firearms training program that is practical and applicable given your goals and limitations.

As a firearms instructor you are likely struggling daily with the challenge of creating and maintaining a stimulating training program for your agency. Time constraints, physical range limitations and available budget dollars (or lack of) all conspire to make your job more difficult. Fortunately, that's the bad news. The good news is that you really can achieve the ultimate goal of advancing your firearms training program to the point that it prepares an officer for the day we all fear... an officer involved shooting.

Contrary to popular belief, it is actually possible to have both a regulated qualification process *and* a dynamic training program for just a moderate investment. In fact, the single biggest limiting factor is your own imagination. Your existing facility combined with a healthy dose of enthusiasm and the proper set of portable targets can get your program on the move in short order.

For too many years, law enforcement firearms training has not kept pace with the challenges facing officers on the street. They typically consist of 'mass qualification' exercises rather than individual exercises that focus on one officer at a time and expose both equipment and technical deficiencies.

Can't do it you say? Wrong. Having employed this system for 25 years with agencies as small as 25 officers and as large as 2,500, I can tell you from personal experience that it works. The idea is based on a few simple concepts.

1. You *must* get the student out of their comfort zone.
2. It is vital to induce as much stress as possible, as often as possible.
3. Remove the 'excuse factor'. There will be no excuses allowed on the street. The brain and equipment *must* be in good working order to survive.
4. Always change the scenario. You will *never* be involved in a confrontation where the rules are explained *before* the shooting starts.
5. Other than safety, there are no rules. What you required of them yesterday means nothing today.

Getting people to understand that qualification is one thing and training them to survive a lethal attack is another is the real key. By adhering to the five principals listed above and by making the investment in an affordable (but high quality) portable target system, you can make a difference. Changing the mindset of the average agency regarding what exactly constitutes a practical firearms training program will not be easy. It will mean endless arguments with some in administration, as well as fielding many complaints from the officers you put through the ringer during training.

Having fought these battles in the past, I can honestly say I know the challenges that await you. I can also say your reward will be the day an officer comes by to tell you the training you imposed on them, made it possible for them to survive a gunfight. Isn't that the real reason you became a firearms instructor in the first place?


# “PT” PORTABLE TARGETS




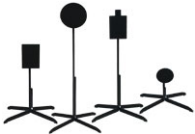
Advanced firearms training is always possible, even for departments on extremely tight budgets. Our full line of superior portable targets gives you the critical tools you need to incorporate modern firearms training standards and techniques into your program, even on the most undeveloped ranges. If you are fortunate enough to have an established range facility, your training program still needs the flexibility and versatility that high-quality portable targets provide.

Nobody gives you better quality and value in basic steel targets like static plates, pepper poppers, swinging and rocking targets, plate racks, dueling trees, paper and cardboard target stands, and portable running man systems.

All shooting surfaces in the Action Target portable or "PT" line are made of the very best through-hardened 500 and 550 Brinell steel with no exposed bolts or brackets for maximum safety and durability. Because the steel is so hard, you won't have to worry about the hazards of inconsistent splatter patterns or ricochet caused by pits and craters. Our regular steel targets easily withstand typical handgun ammunition with no damage, and can be ordered for use with high-power rifles like .223 and .308 at appropriate distances.

	<p><b>PT POPPERS™</b></p> <ul style="list-style-type: none"><li>- Reactive knock-down action</li><li>- Through hardened 500 Brinell steel (550 available)</li><li>- Multiple shapes &amp; sizes</li><li>- Adjustable pitch angle</li><li>- Reversible target plate</li><li>- Fall forward option</li></ul> <p>PT Poppers™ are simple knockdown targets designed for long life and reliability. They are so popular and effective because the clanging steel and falling plate immediately reinforce accurate shots. For increased flexibility, you can adjust the pitch angle of the target to require multiple hits, or to compensate for ammunition power. You can also incorporate our fall-forward option to avoid launching rounds over the backstop during multiple shot drills.</p> <p>PT Poppers™ can be easily reversed to allow shooting on both the front and back surfaces. Rotating the target like this not only extends its life, but also protects your equipment investment. However, it is extremely important to note that rotating the shooting surface is a preventative measure only! Never rotate any target that is already damaged or bowed in any way.</p>
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	<p><b>PT FLIP - POPPER™</b></p> <ul style="list-style-type: none"><li>- Reactive knock-down action</li><li>- Through hardened 500 Brinell steel (550 available)</li><li>- Secondary moving target attachment</li><li>- Target falls or stops at vertical</li><li>- Fast time limits</li><li>- Requires accurate threat recognition</li></ul> <p>The PT Flip-Popper™ is a simple but effective way to induce the stress of time limits and threat recognition into your training. As the steel plate falls, an attached cardboard target leaps from the ground and either stops in the vertical position, or flips over backwards. You can make the cardboard hostile or friendly to require good decision making under pressure.</p>
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## PT STATIC™

U.S. Patent 5277432

- Reactive bounce action
- Through hardened 500 Brinell steel (550 available)
- Low profile, bullet shedding stand
- Multiple shapes and stand heights
- Interchangeable components
- Ideal for tactical training scenarios

The PT Static™ family is a set of steel head plates and stands that combine to create a wide variety of targets. By changing the stand height or head plate, you can alter the targets to meet your specific training needs. The unique mounting system allows the head plates to bounce when they are hit, giving you immediate visual feedback and positive reinforcement.

All shooting surfaces are made of through hardened 500 or 550 Brinell steel for maximum safety and durability, and they are completely flat and smooth with no exposed bolts, clamps, or brackets to cause unpredictable splatter when they are inevitably hit. A variety of common head shapes and sizes are available.

The stands are available in several different heights and are made of high-quality steel to withstand the punishment of everyday use. We put a bullet-shedding bend up and down the front edge of each stand to eliminate the dangerous flat leading edge without requiring additional components or welding.



## PT TORSO™

- Reactive bounce action
- Through hardened 500 Brinell steel (550 available)
- Low profile, bullet shedding stand
- Multiple stand heights
- Larger, more realistic target
- Ideal for tactical training scenarios

The PT Torso™ is based on the same concept as the PT Static™ family, except the smaller head plate is replaced with a full sized silhouette torso or competition IPSC torso. The larger target is particularly helpful at longer distances or in more realistic tactical scenarios.

Because the steel clangs loudly when it is hit, it makes a great no-shoot target when mixed in with a bunch of bad guys targets.

The shooting surface of the PT Torso is made of through hardened 500 or 550 Brinell steel for maximum safety and durability, and it is completely flat and smooth with no exposed bolts, clamps, or brackets to cause unpredictable splatter when they are inevitably hit.

\*\* Official IPSC / USPSA size and shape now available



## PT HOSTAGE™

- Reactive swing-around action
- Through hardened 500 Brinell steel (550 available)
- Low profile, bullet shedding stand
- Great stress inducer
- Builds realistic expectations
- Ideal for tactical training scenarios

The only thing worse than missing what you shoot at is hitting something you were not supposed to. The PT Hostage™ is a simple but powerful reactive steel tool that simulates a hostile threat hiding behind an innocent bystander. To provide instant and obvious feedback to the shooter, the target plate will swing over to the opposite shoulder each time it is hit.

If deadly force is warranted based on the situation, an officer may be forced to adjust his tactics and make the shot. The results of that shot in a training environment can help the officer understand what actions may or may not be realistic with regards to marksmanship under stress.



### PT SWINGER™

- Lateral swinging action
- Smooth action
- Low profile, bullet shedding stand
- Multiple trigger options
- Stable platform
- Ideal for tactical training scenarios

The PT Swinger™ lets you economically incorporate moving targets into your training program. It provides side-to-side motion that simulates a dodging suspect or a suspect hiding behind cover.

The counter-balance mechanism provides smooth motion with just a simple pull on the attached cord, or you can increase the challenge by rigging a PT Swinger™ to activate by knocking down a PT Popper™.

For greater efficiency and less mess, the new target holder option eliminates the need for wood and staples to hold the target.



### PT ROCKER™

- Back and forth rocking action
- Through hardened 500 Brinell steel (550 available)
- Low profile, bullet shedding stand
- Great long distance target
- Multiple actions
- Ideal for tactical training scenarios

The PT Rocker™ is another way to enjoy the benefits of training on reactive steel without draining your budget. The counter-weight system can be adjusted to produce various actions, so the head plate can rock back and forth when hit, or it can function as a knock-down target and remain down until reset.

Because the PT Rocker™ can reset itself automatically using gravity alone, it also makes a great long distance target.

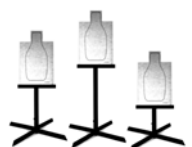


### PT HOLD™

- Stable platform
- Simple assembly
- Easy to pick up and move
- 1x2 wood strips required
- Works with any target size
- Ideal for tactical training scenarios

Paper and cardboard targets are a great way to teach accuracy or threat recognition techniques. Unfortunately, there often is not a convenient way to mount them.

The PT Hold™ target holder combines a sturdy foot assembly with a simple clamp that holds 1-by-2 strips of wood to provide a portable and reliable way to mount your paper and cardboard targets anywhere you need to. You can also order special mounting rods to use our 3D Targets with your PT Hold™ stands.



### PT HOLD PLUS™

- Stable platform
- Simple assembly
- Easy to pick up and move
- No wood or staples required
- Works with any target size
- Ideal for tactical training scenarios

The PT Hold Plus™ also holds your cardboard targets and target backers simply and reliably, but it does so without the need for wood or staples. We use the same target clamp found on the PT Swinger™ and the PT Drop-Turn™ to grab the cardboard directly and not let go.

Because the PT Hold Plus™ mounts to the top of a standard PT Stand, you can mount your targets at different heights to increase the realism of your training scenarios.



### **PT DUELING TREE™**

**U.S. Patents 6994348 & 6994349**

- Reactive back and forth dueling action
- Through hardened 500 Brinell steel (550 available)
- No-weld target plates
- Leans forward to control splatter
- Gravity reset
- Great stress inducer

Two shooters begin, each with three targets on their side of the tree. At the start command, they fire at the targets on their respective sides.

When a target is hit, it swings over to the opposite side. Trouble is, the other guy is knocking them back over to your side at the same time. The first one with all the targets resting on his side loses. Forget the white gloves and 20 paces because this duel is in your face. If you miss, you lose. If you don't reload fast enough to keep up, you lose. No excuses.

Six target paddles, gravity reset, and a splatter reducing design combine to make this the best dueling tree ever made.



### **PT PLATE RACK™**

- Reactive knock-down action
- Through hardened 500 Brinell steel (550 available)
- No-weld target plates
- Smooth cable-pull reset
- Angled splatter deflector plate
- Variable target plate shapes

The deflector plate and target heads on the PT Plate Rack™ are made of the finest through hardened 500 or 550 Brinell steel, and our innovative "no-welds" design means there is nothing to break. After you knock the targets down, set them up again by pulling the cable attached to the reset lever.

With simple yet innovative engineering, we have reduced the cost and complexity of the unit without sacrificing strength or performance. The result is a superior plate rack at a dramatically lower price.

\*\* Pneumatic reset option now available



### **PT DROP-TURN™**

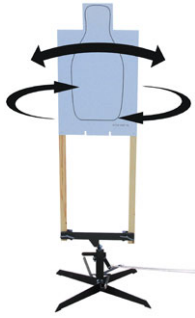
- Gravity powered turning action
- Adjustable exposure times
- Simple reset and multiple trigger options
- Simple reset and multiple trigger options
- Simple reset and multiple trigger options
- Great for shoot/no shoot scenarios
- Ideal for tactical training scenarios

The PT Drop-Turn™ is a gravity-operated portable turning target that doesn't require additional power of any kind. It is the perfect way to increase the stress and realism of your training exercises in a simple and inexpensive manner.

A cardboard target mounts to the frame and begins in the edged position, unavailable to the shooter. When activated, the target begins its vertical drop and then suddenly turns 90 degrees to face the shooter. As the target continues to drop, it turns back 90 degrees and finishes in the edged position once again. Simply lift the target straight up to reset it, and then repeat the scenario as needed. The speed of the drop-turn motion can be easily adjusted, and a simple pull on the trigger cable is all that is required to initiate the action.

The PT Drop-Turn™ lets you train for spontaneous threat situations and high-speed combat reaction with extreme simplicity and portability. By using 3 or 4 units in the same scenario, you can mix no-shoot targets in with the bad guys and train for multiple adversaries and threat recognition.





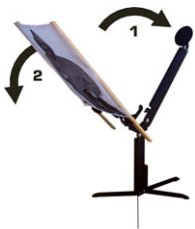
### PT TURN-SWING™

- Both turning and lateral swinging actions
- No power required
- Simple pull cable controls
- Link multiple units together
- Pulley, anchor stakes, and rope included
- Ideal for qualification or tactical training

With the PT Turn-Swing™ you will enjoy the benefits of training on turning targets, even on the most remote and undeveloped ranges. Because the target is driven by 2 simple pull cables, no additional power of any kind is required.

In addition to the 90 degree turning action, you can also use the PT Turn-Swing™ as a lateral swinging target - just pull on the second control cable instead. No adjustment or reconfiguration is required to switch between turning and swinging, and both actions are spring-loaded to return automatically to their original positions.

For more challenging scenarios or to accommodate more shooters, up to 6 units can be linked together to function simultaneously from a single control point.



### PT DROPPER™

- Reactive dropping action
- Responds only to accurate shots
- Better training with paper & cardboard targets
- Stable platform
- Adjustable hit zone
- Great with photo combat targets

Training on paper or cardboard targets has its place, but you need something to make the exercise more realistic. You need the target to react. When you first look at the front of the PT Dropper™, all you see is your cardboard or paper target. If you don't hit that target in the right place, all you get is a little hole. If you *do* hit the target in the right place, it will drop forward and out of sight.

What you don't see at the beginning of the exercise is the 8-inch, 500 Brinell steel plate positioned behind the intended hit zone of the paper or cardboard target. When the steel plate is hit, it will fall backwards slightly and release the cardboard target that then falls forward and disappears.

The position of the cardboard target's intended hit zone can be adjusted in relation to the steel plate for either center-mass or failure-drill options. The PT Dropper™ is a perfect tool to condition your officers to make good decisions and shoot accurately, to engage the threat until the problem is solved, and to change tactics if what they are doing is not working.



### VERSATARGET™

- Highly portable pneumatic target actuator
- Turning, swing-up, and pop-up motions
- Easily mounts to walls, barricades, etc.
- Works with any standard cardboard target
- Multiple target activation requirements
- Ideal for shoothouses and tactical scenarios

The Versatarget™ is one of the most innovative products in the field of portable firearms training. The Versatarget's™ mechanism combines three separate tactical functions into one multipurpose actuator by using the ACTION 2-in-1, the ACTION-90 SU, and the ACTION-90 target clamp systems.

When you buy the Versatarget™ you get a single piston/base assembly and all three of the separate target clamps. Depending on which clamp you use, you get a turning motion, a swing-up motion, a pop-up motion, or a flanking motion.



## PT RUNNER™

- Highly portable design
- 12 volt DC battery power
- Sets up in minutes with 2 people
- Lateral and charging motions
- Use with any cardboard target
- Add a runner rod to use our "3D" targets
- Simple handheld controller
- 80 foot maximum span
- Two 8 foot 2x4's required
- Carrying case included

Many agencies lack the dedicated range space required to install a permanent moving target system. The Action Target Runner™ solves this problem by being extremely portable, easy to assemble, and easy to use. In fact, two people can set up the entire system in just ten minutes.

The Runner™ is ruggedly simple and well designed, and it easily stands up to the punishment of heavy-duty firearms training. A steel cable runs horizontally between a pair of 2-by-4 studs that are secured to the ground with stakes and steel cable tie-downs. Using steel cables instead of rope or nylon straps keeps everything tight and prevents sagging or stretching. The motor is attached to the top of one of the 2-by-4's, and pulls a rolling trolley along the horizontal steel cable. Targets are attached to the trolley, and a simple handheld controller gives you precise control over the direction of the target.

The Runner™ has an 80-foot maximum span, so you will have plenty of room for lateral-threat movement drills, and even charging drills where the target rushes directly at you. The entire training experience can be dramatically elevated by using our reactive "3D" cardboard targets that only fall when hit in the right spot.

This version of the Runner™ can be used in undeveloped or remote locations because it doesn't require the use of AC power. Instead, the unit draws power from one of three battery sources. The first is a direct connection to a car battery, the second is the power outlet inside your car, and the third is a battery pack you wear on your belt. The necessary hardware for all 3 options is included with your Runner™.

The affordability and practicality of the Runner™ make it an excellent tool for use in tactical combat scenarios, charging drills, and other dynamic training applications.



## **PT RUNNER-120™**

- Highly portable design
- 120 volt AC power (outlet)
- Sets up in minutes with 2 people
- Lateral and charging motions
- Variable speed control
- Use with any cardboard target
- Add a runner rod to use our "3D" targets
- Simple handheld controller
- 80 foot maximum span
- Two 8 foot 2x4's required
- Carrying case included

Many agencies lack the dedicated range space required to install a permanent moving target system. The Action Target Runner-120™ solves this problem by being extremely portable, easy to assemble, and easy to use. In fact, two people can set up the entire system in just ten minutes.

The Runner-120™ is ruggedly simple and well designed, and it easily stands up to the punishment of heavy-duty firearms training. A steel cable runs horizontally between a pair of 2-by-4 studs that are secured to the ground with stakes and steel cable tie-downs. Using steel cables instead of rope or nylon straps keeps everything tight and prevents sagging or stretching. The motor is attached to the top of one of the 2-by-4's, and pulls a rolling trolley along the horizontal steel cable. Targets are attached to the trolley, and a simple handheld controller gives you precise control over the direction of the target.

The Runner-120™ has an 80-foot maximum span, so you will have plenty of room for lateral-threat movement drills, and even charging drills where the target rushes directly at you. The entire training experience can be dramatically elevated by using our reactive "3D" cardboard targets that only fall when hit in the right spot.

The whole system operates on 120-volt AC power, and the unit can be plugged directly into a standard electrical outlet. A portable generator may also be used in more remote locations. Because the Runner-120™ is built with strength in mind, it is a better choice for applications using larger and heavier targets or longer runs. Additional benefits of the Runner-120™ include variable speed control, electric braking, and increased speed and responsiveness. With its additional benefits, the Runner-120™ gives you all the performance you need to take your training program to the next level.

The affordability and practicality of the Runner-120™ make it an excellent tool for use in tactical combat scenarios, charging drills, and other dynamic training applications.



## THE 3D TARGET™

- Reactive falling action
- Responds only to accurate shots
- Each target lasts hundreds of rounds
- Arms included (weapons & empty hand)
- Great for moving target drills
- Ideal for tactical training scenarios

Criminals on the street are not flat sheets of paper or cardboard taped to a wall. They are three-dimensional threats that run, dodge, and don't always go down when you think they will. Our 3D Targets™ are the perfect way to simulate these factors in your training program right now, with very little expense.

The concept of the 3D Target™ is simple: Provide inexpensive, realistic reaction to accurately placed shots. When an officer shoots one or more of the three strategic hit zones, the target will fall. Shots that do not hit the mark will have no effect. Sound familiar?

Use 3D Targets™ in basic drills to add stress and realism, or you can really turn up the heat by mounting them on our Running Man system for charging and attack scenarios! Still stuck in two dimensions? Get real. Get 3D.



## PT PORTABLE TRAP™

- Portable bullet containment
- Through hardened 500 Brinell steel (550 available)
- Shoothouse & tactical applications
- Steel walls on all sides
- Sliding track mount available
- Rifle capable

This device is designed primarily for use in shoothouses and other tactical environments where shots are less frequent and more precise.

The Portable Trap is essentially a steel box with a plywood front. Bullets fired at the trap pass through the plywood, shatter on the steel and fall harmlessly to the bottom of the box. When the plywood face becomes too full of holes to safely contain the splatter, simply remove it, clean out the steel box and attach a new piece of plywood.

To function safely and effectively, a portable trap must not only have a steel back, but steel sides as well. Designs that do not incorporate steel sides should be avoided as bullet splatter eating through wooden sides creates an obvious hazard. All Action Target Portable Bullet Traps have steel sides and are made of the finest through hardened 500 Brinell steel (550 available) for maximum safety and durability.



## PT CLEARING TRAPS™

- Safely check handguns or long guns
- Stand alone or tabletop models
- Retrieve bullets whole if necessary
- Attractive, heavy-duty designs

Dry firing a gun is often necessary to check its status and insure all rounds have been removed. Our PT Clearing Traps™ make this a safe and simple process. Check your firearm with complete confidence that the 500 Brinell steel chamber filled with chopped rubber will safely contain any unexpected shots fired.

The PT Clearing Traps™ are perfect for shooting ranges, locker rooms, armories, courthouses, gunsmiths, and correctional facilities.

Similar devices on the market can cost as much as \$900, but both of the PT Clearing Traps™ cost significantly less than that. This technology does not have to be expensive.