

The Safe Option

Chris Scoda - Advanced Arms, LLC

Whether it is fine English shotguns, custom big game rifles, registered machine guns, value climbing black rifles, or a varied collection in general, it is quite easy to eclipse the six-figure mark. Is your safe and security up to the task?

There are 4 major elements relative to the security of your firearms and valuables in a home or business environment: **The Safe, it's Location, an Alarm System, and Discretion.**

The Safe - the main focus of this article, should provide a lifetime of uncompromised security, service, and fire protection. In the world of gun safes, real security is often outpaced by the illusion of security. Somewhere along the way, general gun safe design has become aligned with residential security container (RSC) ratings and construction. This security container classification lacks the needed construction to be considered a real safe. Even the top models from the most respected gun safe manufacturers hold only a RSC rating

In addition to serving in the industry as a security advisor and being a full service firearms retailer, I have personally owned RSCs from half of the "top" gun safe manufacturers and examined safes from the other half. The information shared in this article is a culmination of years of experience coupled with intense research and investigation.

The many facets of a quality safe will be discussed in detail, but let's first examine the three other security elements: location, alarm, and discretion.

Safe Location – Why advertise your safe or make it easy for burglars to find? If possible, put your safe in a discrete location such as a closet or windowless room with a dead bolt on the door. If the weight or size of your safe limits its location to a garage, build blind or a closet for concealment. Any safe less than 3000 lbs can be moved with relative ease, so always anchor your safe to the floor.

Alarm Systems – The key to security in general is time; an alarm system can significantly reduce a burglar's operating time. Not all alarm systems are created equal. Most systems advertised on TV lack needed zone coverage to be truly comprehensive and charge far too much for monthly monitoring. If personally designing and installing an alarm system is out of your capabilities, seek a qualified professional.

Alarm systems should incorporate fire/smoke/heat/carbon-monoxide detectors. Do not skimp on sensors and zones; expect to spend at least \$1000 on hardware. In commercial applications, it is common to see door sensors installed on safes, don't be afraid to use it home application. A motion detector in the area where the safe is located is an absolute must. Over the long haul, the savings on homeowners insurance will pay for your alarm system.

My personal preference is DSC security products. They offer a host of panels, keypads, motion detectors, fire/smoke detectors, and other sensors. What is especially appealing about the DSC panels is the optional DSC link, which allows easy connection of the alarm panel to a laptop for initial system programming, updating, and maintenance via free software.

The weak link to any alarm system are the communication lines, even armature burglars know enough to sever your home phone lines rendering your alarm system useless. Move your phone lines underground or protect them with steel conduit disguised as gas line. Move the NID (network interface device) indoors. A cellular backup device can further safeguard alarm system communication and should be incorporated whenever possible. An exterior strobe light and siren near the highest point on your home can offer a visual and audible indicator to your neighbors and police of a problem. Secure your alarm panel and NID box, if the thieves can easily locate these critical components, the alarm system can be disabled

Stick with a UL listed/approved monitoring company, but there is no need to pay more than \$10/month for this service. A company called NEXT ALARM offers unique VOIP monitoring services. A VOIP alarm system module links your alarm system to your home or business high-speed Internet network, allowing the alarm system to communicate with the alarm monitoring company. This service features UL Approved monitoring and daily email reports. You can also log to their website to view system activity including arming/disarming dates, times, and users. If you plan on using this method for primary communication, it is important to utilize an UPS (uninterrupted power supply) for the modem, router and VOIP module. A UPS will not only protect your hardware from power surges, it will sustain communications during temporary power interruptions.

While not technically part of the alarm system, video surveillance can be a useful tool in not only prosecuting intruders, but in enhancing personal security as a whole. If your security budget can support video surveillance, do it. Newer standalone DVR and PC-DVR security system can also be connected to high-speed Internet network, allowing remote access and remote monitoring while away from home.

Discretion - Loose lips sink ships; refrain from chatting about your collection and showing it off. While your friends may be honest, they may inadvertently broadcast information about your collection to those who would gladly relieve you of your treasures. While at the shooting range, look for suspicious persons and anyone recording vehicle plate numbers. When returning home from a trip to the range, a gun show, or a gun auction take steps to ensure you are not being followed. If you notice someone following you - seek the nearest police station, fire station, or the busiest business you can find. Try to note as much information as possible.... vehicle make, model, color, approximate year, plate number, number of occupants, description occupants...then call the police.

THE SAFES

Real safes are referred to in terms of burglary construction ratings such as B,C,E,F and test ratings such as TL-15, TL-30, TLTR-15, TLTR-30, et cetera. The B-rated safes call for ¼” steel plate body and ½” steel plate door, the C-rated safes burglary safe call for ½” steel plate body and 1” steel plate door, the E -rated safes call for 1” steel plate body and 1½” steel plate door, and the F-rated safes call for 1” steel plate body and door composed of 1” steel + ½” of torch resistant plate. The challenge is to find a burglary fire safe suitable for firearms that is south of the typical \$20,000 to \$60,000 commercial price tag.

To help conceptualize the shortcomings of most RSCs, look for a You Tube video titled “Security on Sale”

The top models of the top gun safes are made from press-bent 3/16” mild steel. Some containers are made from even thinner 12 to 10 gauge steel that can be easily compromised.

Some manufacturers use a thin layer of steel on the inside to support the fire material. While the design is smart, some companies overstate the actual safe thickness by adding the outside body steel thickness with thickness of the inner liner into one figure. Another inaccurate specification is to quote the body thickness in overall thickness. Overall thickness is meaningless if the fire material and additional layers are not strong enough to act as a security barrier. The inference that overall thickness equals security thickness...is not accurate. The trend in semi-skilled burglaries is to focus on the sides or back of the safe. Cutting and peeling a thin body is often times easier than attacking the door. So don’t ignore true body thickness...B-spec ¼” plate is the ideal minimum.

The next critical structure in this analysis is the safe body is the doorframe. The doorframe must not only support the door for the rest of its life, but must also combat pry attacks on both the frame and the door. This area should be as ridged as possible. The doorframe on almost all gun safes is press bent U-shape design, not solid and not to true safe design specifications. True burglary-spec safes feature either a solid frame or a peg/hole design. The peg hole design features locking bolts that precisely match corresponding reinforced holes in the interior sidewalls of the safe.

Body thickness, design, and strength are paramount not only for security, but also in respect to fire protection. A safe should be able to withstand the impact of a falling beam and/or a drop through several floors. A true safe will have some serious mass and depending on their class/rating, weigh in at 500 to 5000 pounds MORE than similarly sized RSCs.

Door fit, lockup, and gap - play a major role in analyzing security, fire protection, smoke penetration, and build quality. A quality safe features a door that snugs tightly to the body. If any significant in/out motion of the door is detected when the door is closed and locking bolts extended, the safe lacks precision manufacturing. Some RSCs feature an adjustable inner jamb,

this “fix” is a definite improvement over other RSCs, but it should not be confused with a precision built safe. Most gun safes have a ¼” or greater gap around the door. This gap provides a prying point and further implicates a lack of precision. A snug fit also enhances fire and smoke protection. A precision safe will feature a gap measured in thousandths and quality hinges that will hold this precision for the rest of the safe’s life.

The Door Expounded – The main focal point of most safes resides within the door. Manufacturers put the bulk of their efforts into door security features including extra locking bolts and thickness claims. Just as with the safe bodies, the some manufacturers incorporate non-security layers into their door thickness claims. Most often the main door panel is formed around a few layers of drywall, giving the appearance of a 1” thick panel. The reality is that just like the safe body, the door steel is only 12ga to 3/16” steel. A ½” thick plate is the minimum door thickness for true safe specifications.

Hinges are sometimes a topic of debate, but usually it is a manufacture’s attempt to legitimize their use of internal hinges. Internal hinges are not as strong as external hinges and therefore have the potential to fail. Compounding matters, internal hinges are difficult to service; the design in general is quite poor as it limits the opening range to 90 degrees. Once 90 degrees of opening is reached any extra opening force is transferred to the hinges, door, and doorjamb. Over time this force will distort both the hinges and the body. This limited opening range also restricts access to a portion of your safe. Internal hinges also require clearance gaps in the fire insulation, therefore compromising fire protection. External hinges provide 180 degrees of opening and full access to your valuables. External hinges also afford the luxury of removing the door which may be an asset should the door require service or it’s removal facilitates moving the safe. One should note that external hinges pose no threat to the security of the safe. Locking bolts secure the door from the inside on both the hinge side and opening side. Hinges should never be part of the security measures of the safe. The hinge’s only duty should be to swing the door. If they are attacked, the burglar is misdirecting his or her efforts. Next time you are at a bank, take a look at their multi-ton vault door...note what type of hinges are used. All Commercial safes use external hinges. Why use an inferior design that limits access, stresses components, and impinges on fire protection?

Working inward let’s examine locking bolt design. Many of the RSC manufacturers claim that four-sided bolt coverage and a greater numbers of bolts are the key to security. If this is the case, why on average do true commercial safes only use only 5 to 12 bolts on just two sides? The truth is, RSCs require more bolts to compensate for thinner bolt frame structure, thinner doorjamb, and thinner doors. If the bolt framing lacks the necessary thickness, supports, and welding, it will give way to a pry attacks and in some cases the bolts will tear through said framing. In addition, beware of bolt guides, bolt guides are plastic sleeves installed in the bolt frame of the door to guide the door bolts and compensate for loose tolerances. Manufacturers’ who employ bolt guides either cannot achieve precision or such precision would be too costly and/or time consuming to implement.

Most RSCs advertise relockers, ball bearing/chip/ hard plate, and punch attack type security features, but an RSC rating only requires the safe to withstand a 5-minute attack by a non-skilled burglar with common hand tools. The many manufacturers utilize mounts, brackets, linkages that are flimsy, inexpensive, and quick to manufacture. Ideally, the lock should be protected from punch attacks by utilizing a thick steel backing plate securely mounted to the door. True safes have both thermal and mechanical relockers and these security components are truly randomized one safe to the next. Without randomization, skilled burglars can access industry publications and easily defeat the security implements of most gun safes. RSC grade safes cannot offer true randomization of security components or any level of personal customization.

The standard in gun safe fire protection is fireboard/sheetrock/gypsum board aka drywall. Increased fire protection is generally achieved by adding additional sheets of drywall in varying thickness. The drywall used is typically UL listed, but it does not mean the safe is UL fire rated. Drywall has a tendency to crumble during the stress of a fire; therefore an inner steel liner is a must to maintain the integrity to the fire material and protection, but only a few manufacturers provide an inner steel liner. **COMMERCIAL GRADE SAFES NEVER USE DRYWALL**; it is almost always a cement-based material. A poured or cast fire material provides complete body coverage and enhances the integrity of the safe. Most safes use high quality heat activated expanding door seal. Pausol is the most noted seal in the industry. Inspect the safe to insure the door seal is absent of any major gaps. If a unit exhibits poor fire seal installation or no seal at all, be wary.

The problem plaguing the safe industry is the difficulty comparing fire ratings as there are no standardized testing methods and specifications. Some manufacturers use Phoenix, Omega, ETL, ITR, or UL, while other manufacturers test their own safes. Aside from just temperature and duration, the tests can vary in respect to ramp-up time and temperature probe placement. In a real home fire temperatures climb rapidly. One manufacturer's test chart shows a half hour ramp-up time to 1200 degrees. If another manufacturer has a significant quicker ramp up time, therefore the duration will be shorter. If a different manufacturer uses a higher temperature, then the duration will be shorter. Safes with less fire material can be stated to have the same fire rating as a manufacturer with significantly thicker fire material, by simply conducting their test differently. The non-standardized testing methods allow manufacturers to make inaccurate or unbalanced claims.

Another aspect that consumers fall victim to is a safe warranty. A real safe manufacturer offers all the quality you deserve and at a price commensurate with security, materials, construction, innovation, and labor. Impressive warranties that offer free replacement safes in the case fire or burglary are a result of a high volume of manufacturing of a high profit margin product.

Do not let a replacement warranty cloud your judgment. Choosing a safe based on warranty does not secure or protect your treasures, although it may compromise both. Choose a safe via the merits of materials and construction. If the safe meets your quality, construction, and material standards...then look to see if the warranty sufficiently covers workmanship, mechanics, and finish.

If your collection has grown to the point a B, C, E or F rated safe is in order, but a commercial safe costing as much as a brand new luxury SUV is just not feasible. Is there an option?

According to 50+ year safe industry veteran Robert Stabley of Los Angeles Safe and Vault, YES... "The only safe designed for guns and built to commercial specs is a Graffunder".

Founded in 1968, Graffunder Safe and Vault is a quality over quantity safe company combining old world craftsmanship, heavy steel, true precision, and modern technology to offer a complete line of weapons storage vaults, multipurpose safes, and vault doors.

Their true craftsmanship provides:

- B,C, E, & F class construction
- Solid: ¾" thick door frames, ½" thick bolt guide framing and 1.5" stainless steel door bolts
- Solid plate bodies ranging from ¼" to 1" thick and solid plate doors ranging from ½" to 1.5" thick
- 1 hour/1750 degree 1.5 inch poured fire barrier comprised of high-density cement with special fire resistant additives, inner steel liner and double door fire/smoke seals
- Single and Double door units with left or right external hinge options and ultra tight door gap tolerances
- Thermal and mechanical relockers, various anti-drill plates, genuine randomization, multiple lock option, group 1 & 2 dial locks, electronic locks, and custom security options
- Custom interiors, custom sizes, and custom finishes

When your firearm collection and other treasures demand true security, but a \$30,000+ commercial unit is not feasible.....**The only safe option is Graffunder.**