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S&G**

**SAFECRACKER  
BOXMAN**

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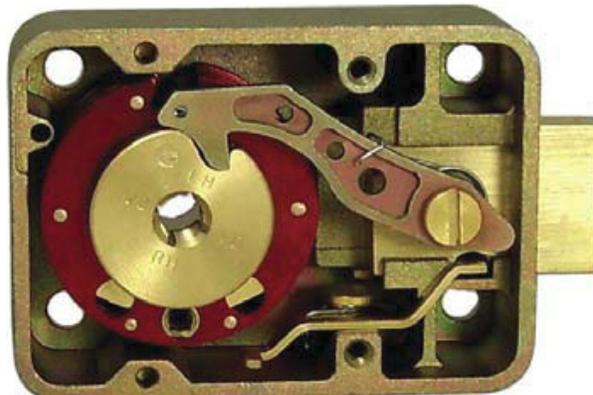
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## Meet **Big Red**™



This will be Boxman's promised look at a relatively new-to-the-scene UL rated mechanical combination lock. **Big Red** locks are being made by Mike Walsh, a man with a long history in the safe industry (Armadillo Safe, Armor Safe, et. al.). Now he operates Michael J. Walsh & Associates, Inc.

The first one we'll look at is the Group 2 Model 2030. The 2030 succeeded the earlier 2020. You might already have encountered one of these during routine service work. Eclipse Industries in Escondido CA uses them. I've also seen them on Amsec containers. I mean, you *do* remove lock covers during service, don't you? Especially when you see something new and different, right?



*Aside from the jump-right-out-and-grab-you-by-the-eyeballs red wheels, Big Red has other identifiers. The lever is distinctive, and the gold-toned diecast case is, too.*

Okay, first thing that holds your attention when you remove the cover is the red combination wheels. No technical reason I know of, but you're not going to forget **red wheels**, are you? Hence the name. The red outer sections are anodized aluminum

Of necessity, **Big Red** locks match the existing standard mounting footprint with respect to dimensions, case and bolt profile, and mounting screw hole placement. This is an unwritten, unofficial, but all-too-real law of the worldwide safe making industry.

The machined brass driver in this lever fence lock is four-way



*Dial Sampler: I counted 25 varieties offered in the catalog.*

splined to accommodate all mounting orientations. You have choices in the dial department: order from a variety of front- and top-reading OEM dials with machined brass spindles (all factory splined at 41), or, if you prefer, you can use any La Gard or S&G dial and ring assembly with **Big Red**. The driver has a compatible 5/16-40 threading. Interestingly, the **Big Red** spline keys are stainless steel.

I'm of course thinking of manipulation here, but it's worth telling you the D6000 and D7000 series OEM dials and rings have a real nice-feeling rubberized grip, which a lot of safe users will also like. Speaking as a manipulator, the rubberized dials feel friendlier to the touch. In fact, the first thing that came to mind when I first laid hands on one was something I've done to enhance finger friction in order to approach a contact very softly while manipulating, which is to wrap a thick rubber band or two around overly smooth dial grips. Try it sometime; it can make a difference. I'm getting off track now; more about manipulating further on here.

**Big Red** wheels are a familiar riveted-together sandwich of aluminum outer wheel and machined brass inner hub. Outer-to-inner wheel hub clenching and locking by change key is accomplished by a mechanism similar to what is used in a number of other previous locks from other makers. However, when designing **Big Red** Mike Walsh took pains to ensure that the Big Red wheels would have tighter hub clenching and thus more torque and slippage resistance than other mechanical locks. He even trademarked that part of his design: **DeadLoc Technology**™

While an OEM change key does come with new locks, the **Big Red** product catalog also tells us we can use an S&G change key on **Big Red** wheels with no fear of wrong fit or inaccurate settings. Mike's product catalog (in PDF form) is very informative, and worth a look.

The Group 2 version of **Big Red** comes in both three and four wheel versions. This was the first time I've seen a mechanical safe lock blister-packed in clear plastic hard shell. Nice touch.

The back side of the Big Red cover has a recessed area around the change key hole. If a safe maker or lock installer desires, an (optional) anti-tamper plug snaps into this recess to cover the change key hole. Adding a tamper plug adds a step to change key hole scoping.

Each lock comes with two stainless steel spline keys, four long and four short 1/4-20 case mounting screws.

**ENDURANCE:** According to Mike Walsh and as depicted in a video I watched, a mounted sample Big Red was fully machine-dialed (scrambling the wheels then dialing the full combination numbers in the standard 4L-3R-2L-1R sequence) with full lock bolt retraction, extension, and rescrambling over 80,000 times without problems. The arithmetic for this would be a safe that is dialed open, fully locked and redialed 219 times every day for 365 days. Or about 110 times daily for two years.

Manipulating these locks will be interesting. Before I saw my first Big Red, friend and avid manipulator Mike Sen (Senetics in Honolulu) asked what I thought of them. With no previous hands-on experience, I had no valid opinion. Mike obligingly sent me a couple of the earliest versions (Model 2020) to mount and check out. The samples dialed very smoothly. Contacts were apparent, but I was hard put to wring usable indications from them. Later I encountered one in the field on an Amsec depository unit. I wasn't able to get much from it at first. Not a fair test, because the people who used it needed a quick opening, and that one got drilled and side scoped.

Mike Walsh wasn't satisfied with his first design, the 2020. He sent me a couple of samples of the latest **Big Red** (redesigned and designated **Model 2030**). I mounted it for testing and review, and it also has a smooth action. It took me longer than my average La Gard time.

Maybe that's just me, though, because Max Salz in Honolulu told me he hadn't

experienced huge manipulation difficulties, but I don't know if Max was working with the 2020 or the redesigned 2030.

My conclusion so far is that I need to spend more time on manipulating this lock.

**Big Red** does bear close first-glance resemblance to the S&G 6730 design, but a closer look shows differences. A few:

At **just over 17 ounces** (case, wheels, driver, cover, and cover screws), **Big Red** Model 2030 is a bit heavier than other current Group 2 locks. Probably owing to the thicker-walled die cast body.

**S&G lever fence .7oz (approximate)**  
The S&G lever fence is comprised of two pieces of brass, in which the fence is (looks like silver-soldered) attached to the lever section.

**Big Red lever fence .3oz (approximate)**  
This fence is one piece die cast. Besides reducing the overall weight, the holes and relieved surface areas visible on the length of the lever section, create an increase in overall surface area, which adds component strength.

**Lock Bolts**  
**S&G Bolt 1.8oz, 1.28" (approximate)**  
**Big Red Bolt 2.1 oz, 1.49" (approximate); more bolt in the case when extended.**  
**Both bolts are .310 thick x 1" wide (approximate)**  
**Big Red's standard brass bolt protrudes .134" (approximate) from the lock case at full bolt retraction.**  
**Big Red offers 8 different bolt types.**

**MORE REASONS TO GET FAMILIAR:**  
According to Mike Potter, who runs the Manipulation Contests, Mike Walsh has donated samples of Big Red (Group 2 format) for the **SafeTech 2011 Manipulation Contest**, where some contestants will meet their first Big Red locks.

**Big Red** locks will also be present in the **Safe Lock Servicing Class** scheduled earlier in the week. **Martin Stinson of Eclipse Industries** will be showing **Big Red** to interested visitors at his exhibit once the exhibits open. Some contestants will meet their first **Big Red** at SafeTech 2011.

If you plan to enter the contest, this issue of Boxman might not reach you in time for you to lay hands on a Big Red for a practice go-round of the dial.

However, contest or no contest, every serious safe tech (especially manipulators) should get at least one of these locks and take a close look. As the saying goes, you will see this material again.

**Drilling Big Red:**  
These locks have an interior layout that's familiar. Everything you know about drilling an S&G 6730 can apply to **Big Red** if you must drill to open one. Wheel diameters, drop-in point, change key hole locations, all are close enough to what you're already familiar with to serve your needs.

**Installation:** Not a lot different than standard installation procedure for Group 2 locks you're already familiar with. Note: the flag of the **Big Red** spline key goes over the spindle end, not the other way.

Except for special orders, dials from Big Red are splined at 41, which translates to a Forbidden Zone of 90-10.

For more info, go to the web site: [www.bigredsafelocks.com](http://www.bigredsafelocks.com) and download product catalogs and pricing information, or call 877-423-8073.



**Built-in goof-proofing:** The Big Red cover has a casting that only allows the change key to turn in the correct direction for unlocking the wheels during combo changes.

Next issue we'll look at at Big Red 2M