

WHY MORE EDUCATION WON'T FIX THE ECONOMY

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## HOW TO MAKE YOUR OWN AR-15

The Gun Congress Can't Ban

By *Dan Baum*

## THE SHINING PATH

Room 237 and the Kubrick Cult

By *Jay Kirk*

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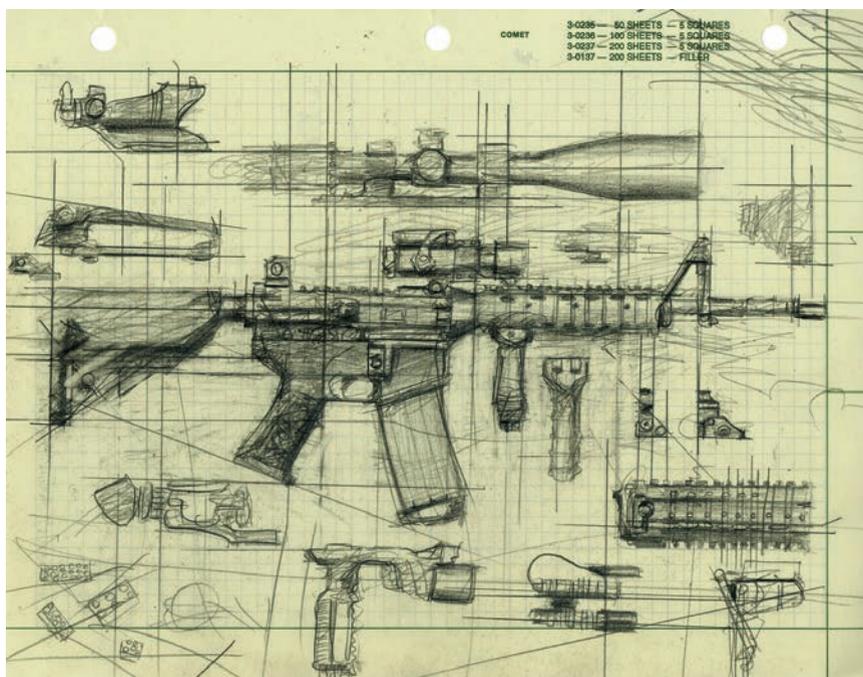
# HOW TO MAKE YOUR OWN AR-15

The gun Congress can't ban

By Dan Baum

Gun owners have long been the hypochondriacs of American politics. Over the past twenty years, the gun-rights movement has won just about every battle it has fought; states have passed at least a hundred laws loosening gun restrictions since President Obama took office. Yet the National Rifle Association has continued to insist that government confiscation of privately owned firearms is nigh. After the U.S. Supreme Court ruled in *District of Columbia v. Heller*, in 2008, that comprehensive gun bans were “off the table,” the NRA insisted that because gun owners were becoming complacent, “our firearms freedoms may be in greater danger.” The NRA’s alarmism helped maintain an active

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membership, but the strategy was risky: sooner or later, gun guys might have realized that they’d been had. Then came the shootings at a movie theater in Aurora, Colorado, and at Sandy Hook Elementary School in Newtown, Connecticut, followed swiftly by the nightmare the NRA had been promising for decades: a dedicated push at every level of government for new gun laws. The gun-rights movement was now that most insufferable of species: a hypochondriac taken suddenly, seriously ill.

So far, only laws at the state and local levels have been passed. New York, Connecticut, and Maryland instituted

expanded assault-weapons bans, placed limits on magazine capacity, and imposed new licensing and registration procedures on gun buyers. (In April, the Senate debated more limited measures, including a broader system of background checks,

but none of them passed.) The real goal for gun-control advocates, though, is a new federal assault-weapons and high-capacity-magazine ban to replace the one that expired in 2004.

But a federal ban won’t work. Modern firearms like the AR-15 rifle—the type of gun used at Aurora and Sandy Hook—aren’t really stand-alone weapons at all. They are a collection of integrated components, which makes controlling their proliferation almost impossible. Even if federal gun-control advocates got everything they wanted (already an unlikely scenario), they couldn’t prevent

America's most popular rifle from being made, sold, and used. Understanding why this is true requires an examination of how the firearm is made.

**T**he AR-15 is semiautomatic, meaning that, unlike a machine gun, it fires only one round with every pull of the trigger. (AR is short for ArmaLite, the company that first developed the weapon, not, as many assume, "automatic rifle" or "assault rifle"; the AR-15 is not a true assault rifle because it cannot fire continuously.) Part of the reason the gun is so popular is that it is modular; using only the tip of one of its bullets, you can snap it apart into a dozen pieces, including barrel, stock, bolt, and buttstock. AR-15 owners affectionately call it "Lego for grown-ups." Shooters endlessly transform their rifles by swapping out components—a new chrome-lined barrel, a more ergonomic tactical grip, a carbon-fiber forward hand guard, laser sights—even to the extent of changing the gun's caliber.

The only one of the AR-15's many parts that carries a serial number is the lower receiver, a flat, hollow box a little smaller than a VHS tape. The trigger mechanism fits inside, and everything else attaches to the outside. No ammunition passes through it. Because the lower receiver alone is stamped with a serial number, it is the only part that is considered a firearm under the law and the only part of the weapon whose purchase is subject to background checks and other gun regulations. Everything else that makes the AR-15 a gun—the barrel, grip, stock, magazine, trigger, bolt assembly, and more—can be bought and shipped through the mail without any need for paperwork or government approval. Once a shooter has a single lower receiver, he can build himself an almost infinite variety of guns without anyone knowing exactly what he's got. The paper record at the gun store where he acquired the rifle might say he bought a .223-caliber AR-15, but that means nothing; he might since have changed it to any of about thirty calibers—or even to a shotgun or a

crossbow—and he might be changing it every other week. In the six states that require AR-15s to be registered, records concerning the configuration of the guns in circulation are guesses.

The market for the AR-15 is enormously lucrative. There's always some new accessory to buy, and a gigantic components industry exists to feed the desire. (Another nickname for the rifle is "Barbie for men.") The AR-15 is popular for the same reason the latest iPhone is popular: it's the most advanced technology in its field. At a firearms-industry trade show in Las Vegas in January, which filled more exhibition halls than I was able to visit in two days, about two thirds of the booths sold parts and accessories for the AR-15. Visit a rifle range, and it's pretty much the only gun you'll see people shoot. Although it's often portrayed as something that only a mass killer could possibly want, it is practically the whole gun business—a favorite among hunters, sport shooters, and for home defense. One in five guns sold in America last year (and more than half of all rifles) was an AR-15. To the common post-Sandy Hook question "Who needs a gun like that?" millions of AR-15 owners reply, "Everybody."

**E**ven if Congress ignored the AR-15's enormous constituency and implemented a ban on future sales, the gun's modularity would provide a number of methods to circumvent new controls. One way to acquire a gun without the government knowing is to make it yourself—something that's permitted without a license under the federal Gun Control Act of 1968. When the law on homemade guns was written, widespread civilian ownership of the modular AR-15 was far in the future. Making a gun back then involved forging steel, rifling a barrel, and carving wood—all of which required specialized skills and expensive tools. But in November 2012, Cody Wilson, a twenty-five-year-old law student at the University of Texas at Austin, produced a prototype AR-15 receiver, made of plastic, using a 3-D

printer. He can legally build himself as many of those as he likes.

In December, Wilson dressed out one of his freshly made plastic receivers with the rest of an AR-15's components and fired it. The media went wild, breathlessly predicting a day when teenagers hiding in their bedrooms could print out plastic assault rifles. They didn't get it quite right; the parts of the AR-15 that come in contact with the cartridge—the bolt and barrel—need to be made of metal, because of the high pressure generated by ammunition as it fires. Wilson's receiver fired six shots but cracked—not from the blast pressure, but at the point where the stock attaches. After some modifications to the design and adjustments to the plastic formula, he achieved a model capable of firing at least 1,000 rounds. Wilson is distributing the design for free on the Web. Anybody with access to a 3-D printer—regardless of age, mental health, or criminal history—can make himself the very piece of an AR-15 that the government nominally controls. (Wilson has also developed a design to print thirty-round magazines; his ultimate aim is to print a working handgun.) This is not, he insists, a Second Amendment crusade—guns barely interest him—but he wants to make clear to the government that the Internet has critically weakened its hold on power. He compares his project to WikiLeaks. (Wilson recently applied for and received a federal firearms license—just in case.)

But those looking for an AR-15 free from federal oversight have better options than a printed receiver. In April 2009, the Montana State Legislature passed the Firearms Freedom Act, declaring exempt from federal regulation any new firearm manufactured in Montana and kept there. The federally mandated background check and paperwork—in addition to any restriction on assault weapons Congress might pass—would not apply. The legislators believed that since the Constitution gives Congress the authority to regulate only interstate commerce, a gun manufactured and kept within a state's borders is beyond Washington's reach. (The Department of Justice sent a



completing the federal background check. Conservatives have been filing challenges to Congress's power to regulate trade under the commerce clause for decades, and in most cases the courts have ruled that almost all forms of economic activity affect interstate commerce. But the Supreme Court under Chief Justice John Roberts has proved sympathetic to limiting Congress's commerce-clause authority and seems unlikely to lend its support to the regulation of firearms, which are constitutionally protected. Indeed, the Supreme Court has already found a limit to congressional authority under the commerce clause in a case involving firearms. In 1995, Chief Justice William Rehnquist wrote for the majority in *United States v. Lopez* that the Gun-Free School Zones Act—which made it a federal crime to carry a gun within 1,000 feet of a school—would have erased the “distinction between what is truly national and what is truly local.” The Court struck the law down. Montana’s Firearms Freedom Act affirms just the sort of local prerogative that Rehnquist and his colleagues were seeking to preserve. In 2009, the Montana Shooting Sports Association sued the federal government to defend the act. Their case is currently being heard by the U.S. Court of Appeals for the Ninth Circuit.

**N**ot every state is going to pass a Firearms Freedom Act. It will still be illegal to sell AR-15s in places like Connecticut, California, and New York, which already have bans in place. And there’s always the chance that, after years of appeals, the Supreme Court will rule the act invalid.

Even that, though, wouldn’t matter. The AR-15 would still be impossible to stamp out completely.

A home hobbyist who wants to manufacture his own AR-15 doesn’t need an \$80,000 CNC machine. He doesn’t even need a 3-D printer. Instead, he can visit the website of Richard Celata, who single-handedly runs a company called KT Ordnance out of his home in, yes, Montana.

Celata specializes in something called the “80 percent receiver”—that is, an AR-15 receiver that is

80 percent finished. Several other companies produce them as well. Celata’s production process is much like Mazurkiewicz’s, but he leaves just enough holes undrilled and sections uncut to keep his receivers from being considered firearms. He doesn’t need a license to make them, buyers don’t need to go through a background check to buy them, and they can be sent through the mail as freely as books. A buyer with a drill press and a hacksaw can finish the job in a couple of hours, and, once he’s assembled the rest of a gun’s components, will legally possess an untraceable semiautomatic rifle. Because an 80 percent receiver is not technically a firearm, no ban can touch it, and once the hobbyist finishes it and builds it into a working gun, he’s protected by the homemade-gun exemption as long as he doesn’t sell it or give it away. On his website, Celata was offering 80 percenters for \$250, with a footnote, next to an icon reading RON PAUL FOR PRESIDENT, that while he is required by law to accept Federal Reserve notes, he would prefer to be paid in gold or silver bullion.

**I**n February, I decided it was time to go to Montana. On my way out of Boulder, I stopped at a coin store and bought, for thirty-four dollars each, eight one-ounce silver pieces minted by a private company based in Orem, Utah. They were as big around as Oreos and thicker than quarters, with an Indian head on one side and a buffalo on the other.

Montana feels awfully far away from Washington, D.C. The valleys are broad, stretching to snowcapped peaks in the distance. “High, wide, and handsome” is the way Montanans like to describe it. Hours can go by on the highway without the appearance of a settlement bigger than a few dozen people, and many back roads seem to meander through the nineteenth century.

The state has always been politically complicated. Local 1 of the Western Federation of Miners was located in Butte, which was once one of the nation’s most thoroughly unionized cities. The Industrial Workers of the World, or Wobblies,

were active here in the early part of the twentieth century, as was the Communist Party—at least among radicalized farmers in the northeastern part of the state. Its last two governors have been Democrats. But it’s also home to the Militia of Montana, among the most prominent of the armed right-wing bands that coalesced in the Clinton era, and both gun culture and a certain brand of don’t-tread-on-me politics run deep.

On my way to visit Celata in a town called Dillon in the southwest corner of the state, I stopped in Deer Lodge, close to the Continental Divide, to talk with Sheriff Scott F. Howard of Powell County. Howard was one of the first sheriffs in the nation to announce that he would refuse to enforce any new gun laws passed after Sandy Hook. His office is in a squat cement-block building on 4th Street, but his jurisdiction includes 2,700 square miles of wooded mountains and rolling ranchland. Howard is popular in the county, which is home to Montana’s only maximum-security men’s prison, and by all accounts he does a good job. He’s been sheriff since 1995.

“They’ve had plans a long time to control guns and citizens owning guns,” said Howard, a powerfully built man of fifty-four with a Vandyke beard, a nose that looks like it was born broken, and a voice like a garbage disposal with a spoon in it. He slid a piece of paper across his desk, a letter he’d sent Vice President Joe Biden eight days earlier. “Any federal regulation enacted by Congress or Executive Order of the President offending the Constitutional rights of citizens shall not be enforced by me or my deputies,” it read.

We must not allow, nor shall we tolerate, the actions of criminals, no matter how heinous the crimes, to prompt politicians to enact laws that will infringe upon the liberties of responsible citizens who have broken no laws.

“Tough stuff,” I said.

“He isn’t going to listen to anybody from Montana,” Howard said, putting the letter back in his desk drawer. “We have nothing to offer.

But I took an oath. The same one he took. I don't think anybody in that position should be dinking with the Constitution."

Here was another way federal bans might fail: local law enforcement might simply look the other way. The number of sheriffs nationwide siding with Howard in opposition to new gun laws has risen to more than 400—about 14 percent of the country's total—with fifteen state sheriffs' associations joining them, and not just in predictable places like Utah and

Wyoming but in Illinois and California as well.

**F**rom Deer Lodge I turned south on I-15 toward Dillon, the gleaming white Pioneer Mountains rising over my right shoulder. I saw hardly another car for hours, but there were plenty of cows. It can be difficult to imagine needing an AR-15 for protection in a place that seems so utterly pastoral and safe. On the other hand, people in rural areas, in addition to being hunters, often live a long way from law enforcement, and a gun to them is just another tool of self-reliance. Driving Montana's roads in midwinter, never more than a skid away from spending a night or two stranded, I had my rental car packed with a sleeping bag, a stove, food, and a gun of my own.

Dillon sits in a high valley on the banks of the Beaverhead River. KT Ordnance turned out not to be in Dillon proper, though, but up a long, snow-covered dirt road that seemed determined to slide me into a ditch. The air was bright with blowing snow as I parked beside a big green corrugated-steel shed and was thoroughly sniffed by two big Labs.

The silver coins in my pocket clanked together as I walked up to Celata's door. I'd been expecting a flinty, taciturn man of the wilderness, but instead he was a short, stout fifty-two-year-old who, when he welcomed me, sounded incongruously like Click and Clack from NPR's *Car Talk*. "I was raised in a Republican house in Boston," Celata said with a shrug. He was wearing a belt with a seven-inch-wide buckle of his own making, etched with the words *MOLON LABE*—Greek for "Come and

take it," Leonidas' response to Xerxes' demand, at the battle of Thermopylae, that Leonidas lay down his spear. Celata's workshop, attached to his home, was cluttered with machinery, scrap metal, stacked lumber, and guns. "I come by it naturally," he said. "My father was a machinist."

He cleared off a couple of stools so we could sit. He was radicalized in 1999, he said, when he had had to sell his father's twenty-employee machine shop to pay estate taxes. The Internal Revenue Service, the Federal Reserve, and the Bureau of Alcohol, Tobacco, Firearms and Explosives are all, as Celata sees it, enemies of the Constitution. "The 80 percent," he said, "is my sticking the pointy stick in the eye of the ATF." On the wall above his shoulder, I noticed a bumper sticker: 9/11 WAS AN INSIDE JOB. Rather than disappear down that conversational rabbit hole, I asked about the market for 80 percent receivers; on the Internet I'd found about half a dozen other makers.

"I was one of three guys making them in 1999," he said. "Now there's lots of competition. My business really started to grow after 9/11. Before 9/11, it was hobbyists; after, it changed to 'I don't want them to know.'"

I handed over my stack of silver coins; he excused himself for a few minutes to squirrel them away. "Got a big safe?" I asked when he came back.

"God, no. A safe is the first place they look." He placed an 80 percent receiver in my hands. It took me a moment to discern the ways in which it differed from a completed one. The big difference, I could see, was that it had no hollow in which to fit the trigger mechanism. It came with instructions detailing exactly where and how big a cut should be made there, and where to drill about half a dozen bolt holes. "I've sold more than ten thousand of these," he said. None of them had been reported to the federal government as gun sales, nor did anybody know anything about the people who'd bought them—although I should note that I've never come across a report of a killing in which a homemade AR-15 was mentioned. The federal assault-weapons ban was in

effect for six of the years Celata has been making 80 percent receivers. But he might as well have been selling frying pans or shovels for all his business was affected.

"Do you have a drill press?" he asked. I shook my head. "Then you can use mine!" He stood at my shoulder, helping me interpret the instructions and giving me pointers, assiduously complying with the law by making me finish the receiver with my own hands. I drilled half a dozen holes of various sizes, carved out the oval slot through which the trigger would protrude, and used a band saw to remove a section about an inch square to make room for the trigger mechanism. The whole process took about half an hour.

"It's an American tradition to make your own guns," Celata said, clapping me on the shoulder. "We've always been innovators. Guns are part of America. You can't get rid of them."

**A**lthough the AR-15 was used in both the Aurora and Sandy Hook killings, nationwide it's involved in fewer than 3 percent of all murders; the figure for handguns is 50 percent. When it comes to crime, the AR-15's significance is mainly symbolic: by vilifying and banning the weapon, gun-control advocates register their general disapproval for gun culture. But AR-15s are also symbolically important because they demonstrate the outdated thinking brought to bear on the problem of gun violence.

We can try to envision changes in the law that would make obtaining an AR-15 more difficult, perhaps by defining more than just the lower receiver as a firearm or by making the purchase of any gun component subject to background checks and other regulations. But we're talking about dozens of parts made by hundreds of companies, some used in guns we don't necessarily wish to ban. We could prohibit the 80 percent receiver—because it's officially not a gun, it enjoys no Second Amendment protection—but that raises the question: At what percentage completion is an inert piece of metal a potential firearm, and who gets to decide? We could decide that it's a

crime to make one's own gun or to download digital designs for a receiver or high-capacity magazine, or we could simply outlaw the possession of the AR-15 no matter how one obtains the parts. But any of these measures would face constitutional challenges. More to the point, neither party's leadership seems tempted to press the issue.

It would be a serious mistake, however, to say that nothing can be done to reduce gun violence. For one thing, we are already doing so. Although it doesn't feel this way after the massacres at Aurora and Sandy Hook, the rates of firearm homicide are about half what they were twenty years ago. (During that same period, gun laws grew looser almost everywhere and the number of privately owned firearms is thought to have doubled.)

Further progress, though, will require a radical and perhaps painful rethinking of the assumptions of both sides in the gun-control debate. The big challenge for gun-control advocates is to accept that the country is already saturated with guns—there are an estimated 300 million in private hands. Banning firearms may have been worth discussing, say, seventy-five years ago. But it's too late now. (And there's no use saying that if we stop adding to the number the old ones will eventually wear out. They won't. "Tell me another thing I can buy for four hundred dollars," a big man in a Kentucky gun store once said to me, "that my grandchildren will be using.")

At the same time, gun owners need to accept that we have been criminally lousy stewards of the nation's civilian arsenal. Almost 8,600 people were murdered with firearms in the United States in 2011; more than 19,000 suicides and 70,000 injuries were tied to guns. Each of the weapons used in those tragedies started as a legal purchase. But gun owners leave their firearms in nightstands, closets, and glove compartments where children, mentally ill teenagers, and thieves find them. They sell them in private transactions to people they shouldn't. They use their clean records to buy guns

for friends or clients who couldn't pass a background check.

Gun owners don't like hearing this. Individually, most are careful. My guns never hurt anybody, they say. And many argue that their guns are nobody's business but their own, that the entire discussion begins and ends with the Second Amendment. But it's time for us to accept that our guns affect everybody around us. The NRA used to understand this, back when it was concerned primarily with gun safety. Now it argues that

gun owners have only rights, not responsibilities.

**T**he smart question is not "How can we ban more guns?" but "How can we live more safely among the millions of guns already floating around?" The antigun position has been based on the conviction that gun owners are a problem (or a threat) to be managed—and gun guys, for their part, have given the public plenty of reasons to feel that way. But gun owners are the ones who have the power to keep these weapons from getting into the wrong hands; they should be treated as allies in the gun-safety cause. Telling them they can be trusted with *this* gun but not *that* gun, with *this* many rounds in their magazines but not *that* many, only drives them into their NRA-inspired defensive crouch.

The single most effective step we gun owners could take to reduce gun-related injuries and deaths would be to get serious about locking up our guns. In a world of properly secured firearms, no children accidentally kill their playmates, no teenagers shoot themselves on a whim, no high school students mow down their classmates in the cafeteria. And the flow of guns to criminals gets pinched down to a trickle, because, as one survey found, as many as 70 percent of the guns used by violent felons are stolen.

A few states mandate safes; some even make gun owners criminally liable for felonies committed with guns left unsecured. A lot of gun owners hate such laws, but that's too bad. We haven't demonstrated, as a community, that we are careful enough with the guns that have been

entrusted to us. In return, those who dislike guns can help by supporting tax credits for the purchase of gun safes—a concrete way to strengthen their truce with gun owners.

States could also require those who apply for concealed-carry permits to be at least as well trained as the police, with regular requalification to maintain the permit. (To get my Colorado permit, which is valid in thirty states, I took a two-hour class that was mostly a recruiting session for the NRA, and I fired twenty rounds at a piece of paper—a joke. Five states require no training at all.) We could then relieve permit holders of a blizzard of fussy rules, and allow them to carry their guns anywhere police officers can. We don't worry about police officers walking through schools, restaurants, or post offices with their guns holstered. Why should we worry about private citizens—duly background-checked—doing the same?

We all wish a police officer had been at the Aurora theater and at Sandy Hook Elementary; why would we not want to increase the chance that, at the next mass shooting, an equally competent armed citizen might intervene? Seven million Americans are already licensed to carry guns. Let's benefit from them instead of worrying about them.

To those gun owners offended at the thought of having to be trained in order to exercise their Second Amendment rights: Training is not an infringement on your rights, it's an *enhancement* of your rights. A well-trained armed citizen is more effective in a crisis. If we are asking those who don't like guns to let us carry ours everywhere, developing professional firearm skills is the least we can do.

Our gun politics are frozen and stupid. Efforts to ban and restrict guns like the AR-15 are hopeless, and they drive gun owners away from a good-faith debate. But Second Amendment absolutism gets us nowhere. To be a gun owner in a democracy is a sacred trust. We who choose to own firearms have a responsibility to our fellow citizens to be better custodians of our guns—and better guardians of public safety. ■