

Date of Hearing: April 14, 2026

ASSEMBLY COMMITTEE ON JUDICIARY
Ash Kalra, Chair
AB 2047 (Bauer-Kahan) – As Introduced February 17, 2026

SUBJECT: FIREARMS: 3-DIMENSIONAL PRINTING BLOCKING TECHNOLOGY

KEY ISSUE: SHOULD THE LEGISLATURE REQUIRE MANUFACTURERS OF 3-DIMENSIONAL PRINTERS TO INSTALL TECHNOLOGY IN THOSE PRINTERS THAT BLOCKS THE PRINTING OF ILLEGAL GHOST GUNS?

SYNOPSIS

To stem the proliferation of “ghost guns” in California communities, the Legislature has enacted a series of common-sense measures to prevent manufacturing and distribution of these unlawful firearms. With the increase in the availability of three-dimensional printers, law enforcement agencies have noticed a significant increase in individuals using these printers to unlawfully manufacture their own ghost guns. While using a three-dimensional printer to manufacture a firearm without a license is unlawful, there are no true barriers to doing so in the first instance. This bill addresses this issue by requiring manufacturers of three-dimensional printers to install a “firearm blocking technology” on printers sold or transferred in the state to prevent a user from printing a firearm altogether.

Additionally, the bill requires the California Department of Justice or another relevant agency to develop performance standards and written guidance to ensure quality and consistency in connection with the use of the firearm blocking technology. Further, the bill makes these entities responsible for certifying that a manufacturer has complied with the bill. Finally, the bill would impose civil penalties on those found in violation of the bill’s provisions and provides a civil cause of action for those harmed as the result of a violation of the bill.

This bill, sponsored by Everytown USA, is supported by a number of gun violence prevention organizations, health professional organizations, district attorney offices, among others. These groups contend that this bill provides a means to prevent the further spread of unlawful and dangerous firearms. The bill is opposed by guns’ rights advocacy organizations, privacy experts, and many individuals. These groups contend that the bill is unconstitutional, impedes privacy rights, and is unlikely to be successful at reducing the spread of ghost guns. This bill was approved by the Assembly Public Safety Committee, where it passed out with 6 aye votes.

SUMMARY: Requires the installation of firearm blocking technology on three-dimensional printers sold or transferred in the state, and designates the Department of Justice or another state agency to develop performance standards, written guidance, among other things, to ensure the efficacy, quality, and consistency of firearm blocking technologies used for this purpose.

Specifically, **this bill:**

- 1) Requires the Department of Justice or other relevant state agency to engage in an investigation of known firearm blueprint design files and existing firearm blueprint detection algorithms.

- 2) Allows the Department of Justice or other relevant state agency to create, maintain, and regularly update a library of firearm blueprint files and illegal firearm parts blueprint files for use by firearm blueprint detection algorithm designers, or to coordinate with another government agency or major research institution, including, but not limited to, a University of California academic department, to create, maintain, and regularly update a library with safeguards to prevent unauthorized access to, or misuse of, the library.
- 3) Requires the Department of Justice or other relevant state agency, on or before July 1, 2027, to publish written guidance on performance standards for persons or entities engaged in the creation of firearm blueprint detection algorithms to be certified for three-dimensional printer manufacturer use in complying with this bill's provisions.
- 4) Allows the Department of Justice or other relevant state agency to seek input from relevant stakeholders and technical experts in the process of preparing written guidance on performance standards for firearm blueprint detection algorithms.
- 5) Provides that the performance standards described in 3) must require that firearm blueprint detection algorithms have the capacity, with a high degree of accuracy, to do all of the following:
 - a) Evaluate three-dimensional printing files, whether in the form of STL files or other computer-aided design files or geometric code.
 - b) Detect and identify any such files that can be used to program a three-dimensional printer to produce a firearm or illegal firearm parts.
 - c) Flag any disallowed files for rejection by a software control process.
- 6) Specifies that the performance standards described in 3) must require that, at a minimum, firearm blueprint detection algorithms have the capacity to utilize an inventory of disallowed firearm blueprint files that have been commonly downloaded or shared on public internet forums to detect those files and modified versions of those files.
- 7) Specifies that the Department of Justice or other relevant state agency cannot require that a firearm blueprint detection algorithm produce a perfect success rate at detecting disallowed files.
- 8) Requires the Department of Justice or other relevant state agency preparing the written guidance on performance standards described in 3) to include performance standards requiring that the firearm blueprint detection algorithm have the capacity to implement regular updates to the set of disallowed firearm files it has the capacity to detect, to an extent and with a frequency to be determined by the department that accounts for the rate of innovation for the design and availability of new firearm blueprint files.
- 9) Requires the Department of Justice or other relevant state agency preparing the written guidance on performance standards described above to periodically review emerging detection software techniques, including, but not limited to, advanced forms of image recognition and pattern analysis as well as volumetric search functionality.

- 10) Provides that if, at any time, the Department of Justice or other relevant state agency preparing the written guidance on performance standards determines that a novel technique with a substantially higher degree of performance is available to be utilized by algorithms already certified pursuant to the provisions of this bill the department or other relevant state agency preparing the written guidance on performance standards may require that previously certified algorithms update their technology to match or exceed the performance of that novel technique. Specifies that any vendor with a previously qualified algorithm who is required to make that update will have a reasonable period of time, not less than three months, to update their previously qualified algorithm.
- 11) Requires the Department of Justice or other relevant state agency that prepared the written guidance on performance standards described above to, on or before January 1, 2028, accept applications for certification of firearms blueprint detection algorithms and begin issuing certifications of algorithms that meet or exceed the performance standards.
- 12) Requires the Department of Justice or other relevant state agency that prepared the written guidance on performance standards described above, for purposes of evaluating applications for firearm blueprint detection algorithm certification, to require applicants to satisfy both of the following:
 - a) Identify the inventory of firearm blueprint files used to design the algorithm so that the department or other relevant state agency evaluating applicants may assess and confirm that the file inventory is sufficiently thorough.
 - b) Provide access for testing, as well as schematics or other detailed explanation of their technology sufficient for the department or other relevant state agency evaluating applicants to evaluate its suitability for certification.
- 13) Requires the list of firearm blueprint detection algorithms that have received certification as meeting or exceeding performance standards to be made publicly available on the internet website of the department or other relevant state agency issuing certification.
- 14) Requires the Department of Justice or other relevant state agency issuing the certification described in 11) to revoke certification for a firearms blueprint detection algorithm if, at any time, it fails to meet the performance standards for certification, including, without limitation, failure by a certified algorithm to implement regular updates to its inventory of disallowed files as required by the department or relevant state agency, or to update its technology to match the state-of-the-art performance of an emerging detection technique as required by the Department of Justice.
- 15) Requires the Department of Justice or relevant state agency, in the event of a revocation described in 14), to notify relevant printer manufacturers with printer models known to use that algorithm that an algorithm they have deployed is no longer certified. Provides that the manufacturer will have a reasonable period, not less than three months, to update their model and resubmit their attestation of use of certified blocking technology.
- 16) Requires the Department of Justice or relevant state agency to engage in an investigation of existing software controls processes available for use in three-dimensional printers for the purpose of preventing three-dimensional printing of firearms and illegal firearm parts.

- 17) Requires the Department of Justice or relevant agency to publish, on or before July 1, 2027, written guidance on performance standards for persons or entities engaged in the creation of software controls processes to be certified for three-dimensional printer manufacturer use in complying with the bill's provisions.
- 18) Allows the Department of Justice or other relevant state agency preparing the written guidance on performance standards described in 17) to seek input from relevant stakeholders and technical experts in the process of preparing written guidance on performance standards for software controls processes, including from persons who provide software, firmware, or other services integral to establishing software controls processes for three-dimensional printers.
- 19) Specifies that the performance standards described in 17) must require that software controls processes have the capacity, to a high degree of reliability, to effectively prevent a technically skilled user from evading a firearms blueprint detection algorithm.
- 20) Provides that the Department of Justice cannot require that a software controls process produces a perfect success rate at preventing a user from evading a firearms blueprint detection algorithm.
- 21) Requires the performance standards described in 17) to set out options for design forms that may be used for a software controls process integration into a three-dimensional printer, including all of the following:
 - a) Firmware design.
 - b) Integrated preprint software design.
 - c) Any other form, including, but not limited to, handshake authentication design, if the department first determines that the software controls process is both of the following:
 - 1) At least as effective in ensuring no print jobs can proceed unless they are evaluated by a firearm blueprint detection algorithm as the design forms described above 21 a) and b).
 - 2) At least as resistant to being defeated by a technically skilled user as the design forms described above 21 a) and b)
- 22) Requires the written guidance described in 17) to include both of the following:
 - a) For firmware design, guidance for how vendors are required to demonstrate that their technology will ensure a printer directs potential print jobs to the algorithm before printing can occur.
 - b) For integrated preprint software design, guidance for how vendors shall demonstrate that printers will accept print jobs exclusively from a single preprint software and will not accept print jobs from any other preprint software, including from a user seeking to evade a detection algorithm.
- 23) Requires the Department of Justice or other relevant state agency that prepared the written guidance on performance standards described in 17) to, on or before January 1, 2028, accept

applications for certification of software controls processes and begin issuing certifications of software controls processes that meet or exceed the performance standards.

- 24) Requires the Department of Justice or other relevant state agency, for purposes of evaluating applications for certification, to require applicants to provide software and hardware, as applicable, for testing by regulators, as well as schematics or other detailed explanation of their technology sufficient for the department to evaluate its suitability for certification.
- 25) Requires the list of software controls processes that have received certification as meeting or exceeding performance standards to be made publicly available on the internet website of the Department of Justice or other relevant state agency issuing certification.
- 26) Requires the Department of Justice or other state agency that issued certification to revoke certification for a software controls process if, at any time, it fails to meet the performance standards for certification.
- 27) Requires the Department of Justice or other state agency that issued a certification, in cases where the certification for a software controls process has been revoked for failure to meet performance standards, to notify relevant printer manufacturers with printer models known to use that software controls process that a software controls process they have deployed is no longer certified. Specifies that a manufacturer will have a reasonable period, not less than three months, to update their model and resubmit their attestation of use of certified blocking technology, in these cases.
- 28) Requires the Department of Justice or other relevant state agency to, on or before March 1, 2028, publish written guidance on performance standards for manufacturers of three-dimensional printers on how to equip printers with firearm blocking technology. This guidance must include all of the following:
 - a) Performance standards for equipping three-dimensional printers with a certified firearm blueprint detection algorithm and where to find updated lists of certified firearm blueprint detection algorithms published by the department.
 - b) Performance standards for equipping three-dimensional printers with a certified software controls process and where to find updated lists of certified software controls processes published by the department.
 - c) Performance standards on how to test functionality of the certified firearm blueprint detection algorithm and software controls process to meet a specified degree of reliability in blocking the printing of firearms or illegal firearm parts.
- 29) Requires the performance standards described in 28) to be made publicly available on the internet website of the Department of Justice or the state agency that prepared the written guidance on performance standards.
- 30) Requires any business that produces or manufactures three-dimensional printers for sale or transfer in California to, on or before July 1, 2028, submit to the Department of Justice an attestation form for each make and model of printer they intend to make available for sale or transfer in California.

- 31) Requires the self-attestation described in 30) to include all of the following information:
- a) The make and model of the three-dimensional printer.
 - b) Confirmation that the manufacturer has equipped that make and model with a certified firearm blueprint detection algorithm and which certified firearm blueprint detection algorithm from the list published was used.
 - c) Confirmation that the manufacturer has equipped that make and model with a certified software controls process and which certified software controls process from the list published was used.
 - d) Confirmation of testing the functionality of the certified firearm blueprint detection algorithm and software controls process once installed according to performance standards issued by the Department of Justice.
- 32) Authorizes the Attorney General to investigate and inspect the submission of a self-attestation form that is incomplete or contains information indicating the make and model of printer identified may not be effectively equipped with firearm blocking technology, including, but not limited to, requesting sample models from the manufacturer to verify the attestation of compliance.
- 33) Provides that any make and model of three-dimensional printer actively under investigation and inspection must be identified as having an incomplete attestation on the list.
- 34) Requires the Department of Justice to, on or before July 1, 2028, begin accepting applications from three-dimensional printer manufacturers for a voluntary verification of their self-attestation, allowing the department to inspect and confirm that a specific make and model of printer complies with the performance standards described above.
- 35) Requires the Department of Justice to issue to a manufacturer a written notice of compliance verification for a given make and model, if the department verifies a printer make and model is properly equipped with firearm blocking technology.
- 36) Provides that no manufacturer of a printer for which a written notice of compliance verification has been issued under this bill's provisions is subject to civil actions brought pursuant to this bill. Specifies that this does not apply to a manufacturer who received notice from the Department of Justice that the previously verified model contained a firearms blueprint detection algorithm for which certification was revoked or a software controls process for which certification was revoked, until the manufacturer updates their model and resubmits the model for an updated compliance verification.
- 37) Requires the Department of Justice to, on or before September 1, 2028, publish a list of all the makes and models of three-dimensional printers whose manufacturers have submitted complete self-attestations, any makes and models of three-dimensional printers that have an incomplete attestation on file, any makes and models that have submitted for and received the voluntary compliance verification, and any makes and models that have a pending submission for voluntary compliance verification.

- 38) Requires the lists to be updated no less frequently than on a quarterly basis and made accessible on the Department of Justice's internet website.
- 39) Requires retailers or distributors of three-dimensional printers to consult the lists posted on the department's internet website to ensure their inventory for sales in California consists of three-dimensional printers in compliance with this title.
- 40) Provides an affirmative defense to any action against a retailer, distributor, importer, wholesaler, or other individual transferor of a three-dimensional printer for an alleged violation of this bill that the retailer, distributor, or other individual transferor only sold or transferred the three-dimensional printer after verifying that the make and model was listed by the department on the published list described in this section, and not designated as having an incomplete attestation.
- 41) Requires any business that produces or manufactures three-dimensional printers for sale or transfer in California to do the following:
- a) Equip the three-dimensional printer with certified firearm blocking technology before any three-dimensional printer is offered, sold, transferred, or distributed to any person or business in California.
 - b) Submit a self-attestation of installation of firearm blocking technology to the Department of Justice before any three-dimensional printer is offered, sold, transferred, or distributed to any person or business in California.
- 42) Requires any business that sells, offers to sell, distributes, or transfers for consideration a three-dimensional printer in California to consult the list published by the Department of Justice.
- 43) Provides that it is unlawful to sell or transfer for consideration a three-dimensional printer in California that does not meet both of the following requirements:
- a) The three-dimensional printer is equipped with firearm blocking technology.
 - b) The three-dimensional printer is listed by the Department of Justice on the published list described above as having a complete attestation on file, having received a certificate of compliance verification, or having a pending application for a certificate of compliance verification.
- 44) Exempts the following products from specified provisions of the bill:
- a) Printers manufactured for and sold exclusively to a state-licensed firearms manufacturer.
 - b) Printers manufactured for and sold exclusively to the State of California or law enforcement agencies of the United States for the manufacturing of firearms for law enforcement or military purposes.

- c) Printers manufactured for and sold exclusively to aerospace, biomedical, automotive, or chemical or mechanical engineering companies or government contractors that are not also sold on the consumer retail market.
- 45) Allows a civil action to be brought against a person who does either of the following:
- a) Sells, offers to sell, or transfers for consideration a three-dimensional printer in California that is not equipped with firearm blocking technology.
 - b) Knowingly files an attestation containing false information. Specifies that the filing of this civil action does not preclude criminal prosecution for perjury.
- 46) Specifies that it shall be an affirmative defense to any action for violation of this paragraph that the department issued a written notice of compliance verification for the make and model of printer at issue.
- 47) Authorizes a person who has suffered harm in California as a result of a violation of this section to bring an action in a court of competent jurisdiction to establish that a person has violated specified provisions of this bill, and seek compensatory damages as well as injunctive relief sufficient to prevent the person and any other defendant from further violating the law.
- 48) Provides that the Attorney General, a county counsel, or a city attorney may bring an action in a court of competent jurisdiction to establish that a person has violated this bill's provisions, and may seek a civil penalty not to exceed twenty-five thousand dollars (\$25,000) for each violation, as well as injunctive relief sufficient to prevent the person and any other defendant from further violating the law.
- 49) Provides that a prevailing plaintiff is entitled to recover reasonable attorney's fees and costs.
- 50) Specifies that the remedies provided by this bill are cumulative and shall not be construed as restricting any other rights, causes of action, claims, or defenses available under any other law.
- 51) Provides that 42) through 50) will become operative on March 1, 2029.
- 52) Authorizes the Department of Justice to promulgate regulations and develop forms and publications necessary to implement this bill.
- 53) Prohibits knowingly disabling, deactivating, uninstalling, or otherwise circumventing any firearm blocking technology installed in a three-dimensional printer with intent to manufacture firearms or to distribute, sell, or transfer for consideration in California one or more modified versions of a three-dimensional printer identified on the Department of Justice's list of three-dimensional printers eligible for sale in California. Specifies that doing so is a misdemeanor.
- 54) Specifies that provisions of this bill are severable, and that if any provision of this bill or its application are held invalid, that invalidity does not affect other provisions or applications that can be given effect without the invalid provision or application.

55) Defines all of the following for the purpose of the bill:

- a) “Firearm blocking technology” to mean hardware, firmware, or other integrated technological measures capable of ensuring a three-dimensional printer will not proceed to any print job unless the underlying three-dimensional printing file has been evaluated by a firearms blueprints detection algorithm and determined not to be a printing file that would produce a firearm or illegal firearm parts.
- b) “Firearm blueprint detection algorithm” to mean a software service that evaluates three-dimensional printing files, whether in the form of stereolithography (STL) files or other computer-aided design files or geometric code, to determine if the files can be used to program a three-dimensional printer to produce a firearm or illegal firearm parts, and flag any such files to prevent their use to manufacture a firearm or illegal firearm parts.
- c) “Firmware design” to mean integration of a firearms blueprint detection algorithm directly into a three-dimensional printer’s firmware, such that any geometric code received by the printer must be evaluated by the algorithm before the printer will proceed to print, and such that the printer will reject print jobs identified by the algorithm because they would direct the printer to print firearms or illegal firearm parts.
- d) “Illegal firearm parts” to mean a firearm precursor part and any part designed and intended for use in converting a semiautomatic weapon into a machine gun, including, but not limited to, a pistol convertor.
- e) “Integrated pre-print software design” to mean a limitation of a three-dimensional printer’s operation to accept geometric code for printing exclusively from a single slicer or other preprint software, which may be the manufacturer’s proprietary software, and integration of a firearms blueprint detection algorithm into that preprint software, such that any STL file or other computer-aided design file must be evaluated by the algorithm before the software will proceed to produce geometric code, and such that the software will not produce geometric code for files that are identified by the algorithm because they would direct the printer to print firearms or illegal firearm parts.
- f) “Software controls process” to mean a system designed to stop a three-dimensional printer from initiating any print job unless the underlying three-dimensional printing file has been evaluated by a firearms blueprints detection algorithm and determined not to be a printing file that would produce a firearm or illegal firearm parts.
- g) “Three-dimensional printer” to mean a computer-aided manufacturing device capable of producing a three-dimensional object from a three-dimensional digital model through an additive manufacturing process that involves the layering of two-dimensional cross sections formed of a resin or similar material that are fused together to form a three-dimensional object.

EXISTING LAW:

- 1) Prohibits a person, other than a state-licensed firearms manufacturer, from using a computer numerical control (CNC) milling machine or three-dimensional printer to manufacture a firearm. (Penal Code Section 29185 (a).)

- 2) Provides that it is unlawful to sell, offer to sell, or transfer a CNC milling machine or three-dimensional printer that has the sole or primary function of manufacturing firearms to any person in this state, other than a state-licensed firearms manufacturer. (Penal Code Section 29185 (b).)
- 3) Provides that it is unlawful for any person in this state other than a state-licensed firearms manufacturer to possess, purchase, or receive a CNC milling machine or three-dimensional printer that has the sole or primary function of manufacturing firearms. (Penal Code Section 29185 (c).)
- 4) Authorizes a civil action to be brought against a person who knowingly distributes or causes to be distributed, by any means including the internet, any digital firearm manufacturing code to any other person in this state who is not a federally licensed firearms manufacturer, member of the Armed Forces of the United States or the National Guard, while on duty and acting within the scope and course of employment, or any law enforcement agency or forensic laboratory. (Civil Code Section 3273.61 (a).)
- 5) Provides a rebuttable presumption that a person has engaged in the sale, offering to sell, transferring, advertising, or marketing of a CNC milling machine or three-dimensional printer in a manner that knowingly or recklessly causes another person in this state to engage in conduct prohibited by 1) if both of the following are true:
 - a) The person offers to sell, advertises, or markets a CNC milling machine or three-dimensional printer in a manner that, under the totality of the circumstances, is targeted at purchasers seeking to manufacture firearms or that otherwise affirmatively promotes the machine or printer's utility in manufacturing firearms, regardless of whether the machine or printer is otherwise described or classified as having any other capabilities.
 - b) The person sells or transfers the CNC milling machine or three-dimensional printer without verifying that a purchaser or transferee in this state is a federally licensed firearms manufacturer or not otherwise prohibited from purchasing or using the machine or printer to manufacture firearms. (Civil Code Section 3273.62 (b).)
- 6) Provides that it is unlawful to knowingly, willfully, or recklessly cause another person to engage in the unlawful manufacture of firearms, or to knowingly, willfully, or recklessly aid, abet, promote, or facilitate the unlawful manufacture of firearms. (Civil Code Section 3273.625 (a).)
- 7) Defines the "unlawful manufacture of firearms" to include any of the following:
 - a) The manufacture of a firearm by a minor, or by a person who is prohibited from owning or possessing firearms under California law.
 - b) The manufacture of four or more firearms within the state in the same calendar year by an individual who is not licensed to manufacture firearms pursuant to California law.
 - c) The manufacture of any firearm using a three-dimensional printer or computer numerical control (CNC) milling machine by an individual who is not licensed to manufacture

firearms pursuant to California law. (Penal Code Section 29186 (b); Civil Code Section 3273.625 (b).)

FISCAL EFFECT: As currently in print this bill is keyed fiscal.

COMMENTS: “Ghost guns” or firearms manufactured without valid serial numbers by individuals not licensed to manufacture firearms have become an increasing threat to California communities. The ghost gun market allows individuals who are prohibited from accessing firearms to evade the background check process and more easily acquire firearms, ultimately hampering law enforcement efforts to disarm perpetrators of violence and abuse. From 2019 to 2021, California law enforcement agencies recorded a “1,236% increase in the number of ghost guns recovered from crimes involving violence or abuse against a family member.” (California Department of Justice, *California’s Fight Against the Ghost Gun Crisis: Progress and New Challenges*, (Oct. 2024).)

Unfortunately, with the widespread availability and use of three-dimensional printers, individuals are increasingly using them to print ghost guns in their own homes. Just this February, there have been multiple reports of individuals allegedly using three-dimensional printers to print ghost guns. In San Jose, an 18-year-old male is accused of using two three-dimensional printers to create 27 finished or almost finished firearms. (County of Santa Clara Office of the District Attorney, *DA task force seizes ghost gun arsenal from San Jose teen*, (Feb. 26, 2026), available at: <https://da.santaclaracounty.gov/da-task-force-seizes-ghost-gun-arsenal-san-jose-teen>.) In another case, Sonoma County police seized firearms, high-capacity magazines, multiple three-dimensional printers, as well as a laptop believed to be associated with the manufacturing of illegal firearms. (Tim Fang, *Santa Rosa police seize over 165 firearms, arrest suspected ghost gun manufacturer*, (Feb. 11, 2026), CBS News available at: <https://www.cbsnews.com/sanfrancisco/news/santa-rosa-167-guns-seized-cloverdale-suspected-ghost-gun-manufacturer-arrested/>.)

Because of stories like these and others, California has enacted a series of common-sense measures to stem the proliferation of these unlawful weapons. This bill is the latest in that series. According to the author:

California has set a standard for the country in creating commonsense gun regulations and gun violence prevention work. AB 2047 continues this work by requiring that all three-dimensional printers sold in California are equipped with firearm blocking features to prohibit the printing of dangerous gun parts. Specifically, it requires that they have a firearm detection algorithm and software controls that identifies files that would produce guns and illegal gun parts and block such printing requests.

There is alarming data showing that 3D-printed firearms have become an escalating public safety threat. A report from Everytown for Gun Safety shows that recoveries of 3D-printed guns increased by 1,000 percent between 2020 and 2024. Just last month, Santa Rosa police seized three 3D printers along with 167 firearms- including 150 guns with obliterated serial numbers- in an illegal ghost gun manufacturing operation that left weapons easily accessible to a young child.

As technology evolves, it’s important that consumer protections change with it to ensure the safety of our communities.

This bill adopts a comprehensive approach to preventing the further spread of ghost guns through three principal approaches.

First, the bill requires any business that produces or manufactures three-dimensional printers for sale or transfer in the state to equip those printers with firearm blocking technology to prevent users from printing their own firearms. These businesses and manufacturers would similarly be required to submit a self-attestation specifying that its printers were equipped with that technology. The bill also makes it a misdemeanor to knowingly disable, deactivate, or uninstall this technology when it is installed on a printer.

Second, the bill tasks the Department of Justice or another relevant agency with undertaking several steps to ensure quality and consistency in connection with the firearm detection technologies required by this bill. Specifically, the bill requires the Department of Justice or another relevant agency to, among other things, investigate the known firearm blueprint design files and existing firearm blueprint detection algorithms, publish written guidance and performance standards regarding those detection algorithms, periodically review emerging detection software techniques, and issue certifications of detection algorithms that meet or exceed the performance standards developed by these entities.

Finally, the bill provides for civil enforcement of the bill's provisions. Specifically, the bill allows for civil action to be brought if a person sells, offers to sell, or transfers a three-dimensional printer in the state that is not equipped with firearm blocking technology. The Attorney General, a county counsel, or a city attorney can bring an action to enforce specified provisions of this bill and may seek a civil penalty of up to \$25,000 per violation as well as injunctive relief, and may recover reasonable attorney's fees. Similarly, a person who has suffered harm because of a violation of this bill's provisions can bring an action to seek compensatory damages and injunctive relief.

The bill delays implementation of all of the above provisions until May 1, 2029, giving ample time for manufacturers to comply with its provisions.

Given the ease with which individuals can access three-dimensional printers and use those printers to create their own firearms or firearm precursor parts, the bill's preventative approach seems reasonable. While existing laws criminalize the use of three-dimensional printers for the printing of ghost guns, nothing in reality stops a user from doing so. Physically limiting the ability of users of three-dimensional printers from printing ghost guns may be one of the best ways to reduce the prevalence of ghost guns in our communities. Of course, as with any gun violence prevention legislation, opponents and critics have raised many constitutional concerns.

The Second Amendment & Ghost Guns. Because this bill seeks to prevent the production of firearms and firearm precursor parts, it arguably implicates the Second Amendment of the U.S. Constitution. However, under the test articulated by the U.S. Supreme Court in *New York State Rifle & Pistol Association v. Bruen*, ((2022) 597 U.S. 1, 24), it is unlikely that this bill violates the Second Amendment. First, to fall within the purview of the Second Amendment, a law must target conduct that is covered by the plain text of the amendment. (*Id.*) If the conduct is covered, then the government is required to justify the law by "demonstrating that it is consistent with the Nation's historical tradition of firearm regulation." (*Id.*)

In the first instance, the provisions of this bill are unlikely to be covered by the *plain text* of the Second Amendment, which simply provides individuals with the right to "keep and bear arms."

At its core, the bill prevents commercial manufacturers of three-dimensional printers from selling printers capable of printing firearms or firearm precursor parts, with some exceptions for specified industries. This commercial activity is likely outside of the conduct covered by the Second Amendment, as the plain text focuses on possession of an actual firearm, as opposed to the possession of one means of manufacturing a firearm. Because the bill's restrictions are arguably not covered by the Second Amendment's plain text, there is no need to analyze whether the law is consistent with this Nation's tradition of firearm regulation.

Moreover, existing California law already prohibits the unlawful manufacturer of firearms using three-dimensional printers. (Penal Code Section 29185 (a)), and courts have yet to strike this prohibition down on Second Amendment grounds.

Privacy & Surveillance Concerns. Finally, a number of opponents have expressed privacy concerns about the use of government-mandated technology on three-dimensional printers. Specifically, these groups appear to take issue with how firearm blocking technology will be used to scan and review print jobs in three-dimensional printers, and the potential for such technology to be exploited to conduct mass surveillance and censorship by government entities.

It is unclear whether the use of firearm blocking technology as proposed by this bill can be fully reconciled with these issues. Fundamentally, it seems like individual users of three-dimensional printers on the whole will have to endure some reduction in their privacy rights for this bill to achieve its purpose, though there may be ways to incentivize manufacturers and businesses to not abuse any additional access they may have to user's information, and similarly limit unreasonable government access to that information.

ARGUMENTS IN SUPPORT: This bill enjoys the support of several gun violence prevention organizations, district attorney offices, health-professional organizations, student organizations, and individuals, among others. In support of the bill, Everytown for Gun Safety, Moms Demand Action for Gun Sense in America, and Students Demand Action for Gun Sense in America state:

While California's recent laws have focused on prohibition and deterrence, AB 2047 provides an opportunity for prevention using new technology to stop 3D gun printing at its source. We can't fully address this emerging threat to our foundational gun laws and public safety without an intervention at the manufacturing stage. And there's good news on this front: the technology already exists to equip printers to identify and block these dangerous firearm print jobs. AB 2047 will simply ensure that printer manufacturers actually deploy these technological solutions and stop the spread of DIY firearms before it accelerates any further.

Similarly, the California Police Chiefs Association writes:

The rapid advancement and accessibility of 3D printing technology has fundamentally changed the landscape of firearm production. These 3D printers have become more affordable and capable, while digital blueprints for firearms and illegal conversion devices are widely accessible online. This combination creates a pathway for individuals—including those prohibited from possessing firearms—to manufacture dangerous weapons outside of California's regulatory framework.

From a public safety perspective, this trend is deeply concerning. Law enforcement agencies across California are encountering cases involving 3D-printed firearms, including those

produced by individuals engaged in criminal activity, firearm trafficking, and other illegal conduct. These weapons undermine California's comprehensive gun safety laws and increase risks to officers and the communities they serve.

AB 2047 takes a forward-looking and preventative approach to this problem. Rather than relying solely on enforcement after illegal firearms are produced, the bill seeks to intervene earlier in the process by requiring manufacturers to incorporate existing technology that can detect and block the printing of firearm components. This upstream solution is both practical and necessary to keep pace with evolving technology and emerging threats.

ARGUMENTS IN OPPOSITION: This bill is opposed by several guns' rights advocacy organizations. In opposition to the bill, the National Rifle Association – Institute for Legislative Action writes:

On the outset, the NRA has consistently opposed efforts to ban or restrict the use of 3D printing technology as it relates to the lawful exercise of the right to keep and bear arms. AB 2047 represents a significant expansion of such efforts, establishing an unprecedented regulatory regime that conditions the sale and use of 3D printers on state-approved software designed to detect and block firearm-related digital files.

As a matter of policy, this approach raises significant constitutional and practical concerns. The bill implicates the Second Amendment by placing prospective restrictions on self-manufacture of firearms. By conditioning access to commonly available tools on government-imposed technology, the bill further burdens and prohibits the ability of law-abiding individuals to exercise a constitutional right.

AB 2047 also raises serious First Amendment concerns. By mandating the use of state-approved filtering mechanisms to monitor and restrict digital files and code, the bill extends regulation into areas of protected expression. Requiring manufacturers to embed such controls, and penalizing their circumvention, introduces a government directed role in regulating the dissemination and use of information.

Additionally, several individuals and organizations oppose the bill, in part, because it presents a threat to the privacy of individual users of three-dimensional printers. For example, the Electronic Frontier Foundation and Privacy Rights Clearinghouse note:

What A.B. 2047 will demonstrably do, however, is create a system in which every 3D print job is scanned to determine if it is acceptable, implicating the privacy of all 3D printer users while also laying the groundwork for future censorship. Due to hardware limitations of 3D printers, this cannot be handled locally on-device. The only feasible ways to compare a print job to an updated database of prohibited files would be to give manufacturers access to prints through cloud-based or cloud-enabled first party software. That is, a system is created in which every print job an individual runs, whether that be for a medical device or protest equipment, becomes susceptible to surveillance by the vendor of their 3D printer. This mass surveillance is worrying on its own. Once the infrastructure is in place however, it can be broadened and abused by governments and corporations to prevent socially or politically sensitive 3D printed designs, or enable abusive enforcement of patents and copyrights that does not account for defenses like fair use.

As written, A.B. 2047 would not prevent the creation of ghost guns, violates the privacy

of users of 3D printers, and creates a dangerous precedent through which other actors may use to prevent legitimate forms of expression.

REGISTERED SUPPORT / OPPOSITION:

Support

American Academy of Pediatrics, California
Asian American Christian Collaborative
Beverly Hills High School Students Demand Action
Brady California
Brady Campaign
Brady United Against Gun Violence
CA Moms Demand Action
California Chapter of the American College of Emergency Physicians
California Police Chiefs Association
CFT – a Union of Educators & Classified Professionals, AFT, AFL-CIO
Chapman University Students Demand Action
Consumer Protection Policy Center/USD School of Law
Everytown for Gun Safety Action Fund
Former City Attorney Mike Feuer, City of Los Angeles
Giffords
GLMA: Health Professionals Advancing LGBTQ Equality
Moms Demand Action for Gun Sense in America
Newtown Action Alliance
Prosecutors Alliance Action
San Diego City Attorney's Office
Students Demand Action At UC Davis
Students Demand Action for Gun Sense in America
UCLA Students Demand Action
Youth Alive!
32 individuals

Opposition

ACLU California Action
California Rifle and Pistol Association, INC.
Californians United for a Responsible Budget
Community Manufacturing Initiative
Electronic Frontier Foundation
Gun Owners of California, INC.
National Rifle Association - Institute for Legislative Action
Pivotal Design, INC.
Privacy Rights Clearinghouse
254 individuals

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