



The Right to Repair Electronics

Executive Summary

Currently, digital devices and machines can only be repaired by technicians licensed by the original equipment manufacturer (OEM) or with parts available through exclusive manufacturer networks. The proposed “Right to Repair” (R2R) legislation in Missouri requires an OEM to make diagnostic, maintenance, and repair equipment available to independent repair providers or users. R2R legislation requires that OEMs provide independent repair providers and users with the required practical tools to repair digital devices such as laptops, phones, and printers in a *timely* and *reasonable manner*. Over the last three years, 27 states, including Missouri, have seen R2R legislation be proposed or adopted.

Highlights

- Granting access to electronic and medical devices expands consumer options for repair, but some of the methods of access could violate liability laws.
 - State and federal lawmakers have enacted R2R legislation in the domains of electronics, agriculture, medical devices, home products, and the U.S. Military.
 - Federal agencies are expanding the list of products and services that are allowed to be fixed by third-parties, including cars and medical devices.
- Device manufacturers from technology, agriculture, and medical device industries oppose R2R legislation.
- Because existing restrictions make electronics, or their repair, more expensive, it is likely that low-income populations and minorities are affected more by a lack of R2R legislation than the general population.

Limitations

- Research on the effects of R2R legislation on low-income and minority populations is lacking.

Research Background

Right to Repair Movement

Right to Repair (R2R) laws generally refer to the right of the consumer to have access to the tools, parts, documentation, and software that are required to fix the products they own, from smartphones to tractors. Proponents state that R2R legislation makes electronics easier and cheaper to repair, and also prolongs the life-cycle of such devices, therefore reducing hazardous electronic waste caused by limited repairability. Warranty and licensing restrictions make electronics repair more costly, and although research is scarce, it is likely that low-income

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populations and minorities are affected more than the general population by the existing repair restrictions.^{2,8}

Generally, R2R legislation requires the original equipment manufacturer (OEM) to:

- Provide manuals with detailed specifications, schematics, and software updates (all updates should be available to all owners, no subscription or fee required);
- Allow devices to be repaired without voiding the warranty;
- Give small repair shops access to the same kinds of diagnostic tools and original parts that the original manufacturer has.¹

Right to Repair Electronics at the Federal Level

U.S. House

The Fair Repair Act was introduced in the U.S. House in 2021. The bill ([H.R.4006](#)) requires OEMs “to make diagnostic and repair information, parts, and tools available to third-party repairers and owners in a timely manner and on fair and reasonable terms.” It additionally provides the Federal Trade Commission (FTC) and State Attorneys General enforcement measures.⁶ As of November 2021, the bill has not moved beyond introductory remarks.

Federal Trade Commission

Before H.R.4006 was introduced by the U.S. House this year, the FTC collected and summarized feedback from public hearings and comments and filed a report to Congress in May 2021 examining anti-competitive repair restrictions. The FTC’s [report](#) recommended expanding consumers’ repair options and found no evidence supporting the need for some of the manufacturer restrictions that are currently in place. Examples of these restrictions include: using adhesives that make parts impossible to replace, limiting the availability of spare parts and manuals, and making diagnostic software and tools unavailable. The Commission also reported ways in which it can support both the expansion of consumer repair options while also working with lawmakers at state and federal levels to ensure that consumers have choices when they need to repair products that they own.² Currently, the FTC’s policy statements on R2R are focusing on pointing out existing regulations and FTC is seeking consumer input for potential violations of warranty, antitrust, and consumer protections laws.

The Magnuson-Moss Warranty Act of 1975

The [Magnuson-Moss Warranty Act](#) is a federal law that governs *consumer product warranties*. The law prohibits manufacturers from telling consumers that a warranty is voided if the product has been altered or tampered with by someone other than the original manufacturer. Although the law requires manufacturers and sellers to provide clear and detailed information about warranty coverage, there is widespread misbelief by consumers and manufacturers that warranties are voided by simply opening a device.³

Despite federal warranty laws such as Magnuson-Moss Warranty Act, manufacturers are not prevented from creating warranty agreements that restrict repairs on devices. For example, two U.S. military vehicles, the Medium Tactical Vehicle Replacement truck and Joint Light Tactical

Vehicle, are subject to warranty limitations by Oshkosh (their producer) that prohibit troops from fixing the vehicles. As a result, military members may end up with vehicles and equipment that are potentially unworkable in conflict zones or during wartime despite having experience in vehicle repair.¹

Copyright and Patent Laws

Intellectual property broadly refers to ideas and concepts that are unique and potentially valuable and give the inventor the rights to exclusively manufacture or license an invention. The three types of intellectual property are copyrights, patents, and trademarks. *Copyright laws* protect original works of authorship, while *patent laws* protect inventions or discoveries. Patent laws give the inventors the exclusive right to sell their invention for 20 years. During this time period, inventors may choose to give other companies a license to manufacture and sell the invention in exchange for a fee.

Every three years, the U.S. Copyright Office updates its recommendations for the Register of Copyright in [Section 1201](#), which makes it unlawful to “circumvent a technological measure that effectively controls access to” a copyrighted work.⁴ In October 2021, the U.S. Copyright Office [announced](#) that it would allow new exemptions to the section on device repair.⁵ The itemized list of exemptions is replaced with broad protections for any consumer devices that rely on software to function, as well as land and sea vehicles and medical devices that are not consumer-focused. On the digital side, new exceptions are allowed for video streaming devices like the Apple TV and for routers and other networking hardware, and patients are now able to authorize third parties to access their medical device data. However, the new rules do not exempt all non-consumer devices and only allow device-modifications intended for “diagnosis, maintenance, and repair.”

Unfair or Deceptive Acts or Practices (UDAP) Law

The federal government has been enacting legislation to protect consumers from Unfair or Deceptive Acts or Practices (UDAP) since the early 2000s. UDAP was originally enacted as regulatory guidance for financial institutions to ensure that consumers who use financial products are being treated fairly. According to UDAP, an act is **unfair** “if it may cause injury to consumers, can’t be reasonably avoided by consumers and isn’t outweighed by countervailing benefits to consumers or competitions,”. An act is considered **deceptive** “if a representation, omission or practice misleads the customer”. The consumer’s interpretation of this deception must be reasonable and the representation, omission or practice must be material. The R2R legislation allows state governments to work on their fair and reasonable contracts laws and general business laws to determine how the regulations impact the existing business requirements within state borders.

State Level Right to Repair

In 2021, the Missouri General Assembly saw two bills regarding R2R, one in [electronics](#) (HB 1118), and one in [agriculture](#) (HB 975). Since 2018, 27 states, including Missouri, Iowa, Nebraska,

Kansas, and Illinois, have had R2R legislation introduced.¹ Several states, such as Massachusetts, have included R2R legislation language that does not specifically target one industry, while others have specifically addressed consumer technology, medical equipment, or home appliances.

Right to Repair Coalition and Opposition

The movement of R2R electronics is led by advocacy groups, such as the [U.S. Public Interest Research Group](#); private companies that sell gadget repair kits, such as [iFixit](#); NGOs, such as the [Electronic Frontier Foundation](#); and others, such as the American Farm Bureau Federation.

Opposition to R2R legislation has come from four major manufacturing industries: consumer technology, agriculture, home appliances, and medical equipment. The consumer technology industry has been represented by groups such as the Consumer Technology Association, TechNet, and the Entertainment Software Alliance. For the agricultural industry, large farming and construction equipment manufacturers have lobbied through the Association of Equipment Manufacturers and their dealership counterparts, the Equipment Dealers Association. Medical device manufacturers have lobbied through the associations Advamed and MITA. The home appliance industry has been represented by the Association of Home Appliance Manufacturers. Companies selling the products (e.g., John Deere & Co., Apple) have also lobbied against the R2R legislation.

Additional Information

Although the R2R concept originates from the U.S., R2R legislation has passed in countries outside the U.S. These laws are typically approached as a way to produce more energy-efficient and cleaner consumer devices and have been recently updated to reflect legal directives to reduce waste to the environment. Laws that have been passed in the European Union and the United Kingdom first addressed consumer appliances such as refrigerators and washing machines. Effective 2021, these laws require that manufacturers of these appliances **supply replacement parts to professional repairmen for ten years from manufacture**, and the companies have a two-year grace period to comply.⁷ As an effort to decrease disparities in accessing inexpensive, easily accessible repair facilities, France has mandated digital companies that manufacture smartphones, laptops, televisions, washing machines, and lawnmowers to provide **a reparability score with their products**, so that consumers know how easy it is to fix a device at the moment of purchase.⁷

References

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¹ Legislative action has been seen in the following states in date priority: South Dakota, New York, Minnesota, Massachusetts, Nebraska, Tennessee, Wyoming, North Carolina, Kansas, Illinois, Iowa, Missouri, New Hampshire, New Jersey, Oklahoma, Hawaii, Georgia, Virginia, Vermont, Washington, Oregon, Nevada, Indiana, Montana, Maine, Idaho, Alabama, Maryland, Pennsylvania, Colorado, Florida, Delaware, Texas, and South Carolina.

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