



3D Printing & Copyright

In this information sheet we give a brief overview of copyright law as it relates to 3D printing. 3D printing may involve other areas of law, such as designs, patents, trade mark, the law of passing off and competition and consumer laws.

The purpose of this information sheet is to give general information about copyright. If you need to know how the law applies in a particular situation, you will need to see a lawyer in private practice who has the relevant expertise.

We update our information sheets from time to time. For the most recent version, and for information about our other information sheets, publications and our seminar program, see our website at copyright.org.au.

Key points

- In some situations, 3D printing will involve exercising the rights of the copyright owner;
- A one-off 3D printed object may be protected by copyright as “artistic works”;
- Registered designs or designs that have been 3D printed more than 50 times have limited copyright protection and are instead likely to be protected under design law;
- Pre-licenced 3D print designs are likely to be subject to applicable terms of use.

How does 3D printing work?

3D printers work by layering cross-sectional slices to build up a 3D object, based off a digital 3D design file such as .STL. Design files for 3D printing are commonly made in one of two ways: they can be generated using 3D modelling software such as Computer Aided Design (CAD) or by scanning a physical object using a 3D scanner.

Some common examples of items that may be made using 3D printing include:

- Medical devices and prosthetics;
- Engine parts;
- Musical instruments;
- Food;
- Clothing and fashion accessories;
- Architectural models; and
- Prototypes for designer objects.

Is it a copyright issue?

Copyright protects “works” (literary, dramatic, artistic, and musical works) and “subject matter other than works” (sound recordings, films, broadcasts and published editions). In some situations, original 3D print design files will be protected by copyright as “artistic works”. In

other situations, 3D printing may involve exercising the rights of the copyright owner in third-party copyright material.

In relation to “works”, the copyright owner has exclusive rights to:

- reproduce the work in a material form;
- publish the work; and
- communicate the work to the public.

This reproduction right is very broad, and covers three-dimensional reproductions of two-dimensional works and three-dimensional reproductions of three-dimensional works. As such, it applies to making 3D prints and activities such as 3D scanning. The publication right is the right to make copies of the work available to the public for the first time. The communication right is the right to make material available online or to electronically transmit material.

In relation to “subject matter other than works”, the right to make a “copy” is narrower than the reproduction right, and is unlikely to apply to 3D printing. However, it is important to note that dealing with “subject matter other than works” may involve exercising rights in underlying copyright “works”, for example, a film may contain a script, musical score and artworks.

Artistic works

While it is possible to 3D print text and music scores (which are protected as “literary works” and “musical works”, respectively), it is more likely that 3D printing will involve the creation and use of “artistic works”.

Under the Copyright Act, there are three categories of “artistic works”:

- paintings, sculptures, drawings, engravings and photographs;
- buildings and models of buildings; and
- “works of artistic craftsmanship”.

Copyright protection for artistic works

“Artistic works” other than “works of artistic craftsmanship” are automatically protected by copyright as soon as they are created, provided there was sufficient human skill and effort directed towards making it. Some examples of “artistic works” include engineering and design drawings, architectural plans and 3D printing design files (ie., the digital .STL or .OBJ file from which a 3D object is printed).

“Works of artistic craftsmanship” are objects which display both aesthetic appeal and “craftsmanship”. Courts have said that something displays “craftsmanship” if the person making it displays skill, knowledge of materials and pride in their workmanship. Some examples of “works of artistic craftsmanship” include one-off jewellery items, clothing and fashion accessories – objects and markets in which 3D printing is being increasingly explored and used.

Copyright and designs law

There are some aesthetic objects that fall into what the law considers “the copyright/design overlap”, ie., the object is can be protected under copyright as a work of artistic craftsmanship, or it can be protected under designs law as a design. As such, creators of objects that fall into this overlap must choose whether to protect their creations under copyright law, or register it as a design under designs law – it cannot be protected by both.

People creating buildings or models of buildings can choose to register their designs. However, registering will generally result in losing the broader protection of copyright.

Similarly, “works of artistic craftsmanship” that are functional in nature that have been registered as a design or “industrially applied” (ie., more than 50 articles have been made) may no longer be protected by copyright and will instead be protected under design law.

In general, the registered owner of a design has the exclusive right to make the design. As design registrations are made public, you can find the owner of a registered design by searching IP Australia’s designs database.

For further information, see our information sheet [Design Objects & Copyright](#).

Designs review

While 3D printing is likely to pose challenges to design protection as 3D printers become increasingly cost-effective and accessible, a March 2015 report on the Australian designs system by the Advisory Council on Intellectual Property (ACIP) did not recommend changing design law to accommodate 3D printing.¹ Further information may be found on the ACIP’s website at acip.gov.au.

Infringement of copyright

Copyright will be infringed where someone other than the copyright owner uses a “substantial part” of their work in one of the ways reserved for the copyright owner without permission, and no exceptions applies to the particular use.

This will not only cover the unauthorised reproduction, publication or communication of digital files used for 3D printing, but will also extend to activities such as 3D scanning physical “works”. As “reproduction” is defined in the Copyright Act to include three-dimensional reproductions of two-dimensional works and three-dimensional reproductions of three-dimensional works, each 3D print will be a reproduction of any underlying copyright “works”.

For further information, see our information sheets [Infringement: What Can I Do?](#) and [Infringement: Action, Remedies, Offences & Penalties](#).

Pre-licensed material

Material sourced from the internet such as software and images will commonly come with a licence that sets out the terms of use. In some situations, material on the internet is pre-licensed; meaning that the copyright owner has set out standard terms setting out how third parties can use their material. It is important to keep in mind that even where the use of this material is free, it will be subject to the applicable terms of use.

If you want to use 3D print design files downloaded from websites such as Thingiverse, you should check to see if anything on the website sets out the terms of use (often found on the “Copyright” tab) and consider whether or not this covers your needs. Similarly, if you want to use copyright “works” or designs acquired under licence, you should check the terms of use in the licence.

If you are uncertain about whether or not your use is covered by the terms of use, or your use falls outside of the terms, you should contact the copyright owner to seek permission.

For further information, see our information sheets [Permission: How To Get It](#) and [Internet: Copying & Downloading](#).

¹ ACIP Report, *Review of the Designs System* (March 2015):
ipaustalia.gov.au/sites/g/files/net856/f/acip_designs_final_report.pdf

Who owns copyright in a 3D printed object?

The owner of copyright in a 3D printed object is likely to be the party who owns copyright in the underlying 3D print design file. In the absence of an agreement stating otherwise, this party is likely to be the person who created the 3D print design file in the first place.

Where a 3D print design incorporates underlying copyright material (eg., has been scanned from a pre-existing 3D object), the creator of the 3D print design will own copyright in their 3D print design to the extent that it is more than a mere copyright of any underlying copyright “works” and human skill and effort was directed towards its creation. For example, a creator who scans a standard chess piece as a base to design her own customised chess piece which she then prints using her 3D printer, will own the copyright in the .STL design file as an artistic work, and also the physical 3D printed customised piece as a work of artistic craftsmanship, as these are more than mere copies of the original standard chess piece.

For further information, see our information sheet [Ownership of Copyright](#).

Moral rights

In addition to copyright, the creator of a copyright protected work has “moral rights” in their creations. Moral rights are separate to the economic rights in the work, and always belong to the creator. The moral rights of the creator include the right to:

- be attributed as the author of their work;
- take action if authorship of their work is falsely attributed; and
- take action if their work is subject to a derogatory treatment that is prejudicial to their honour or reputation.

For more information, see our information sheet [Moral Rights](#).

Frequently asked questions (FAQs)

I make 3D printed jewellery and fashion accessories. Are these protected by copyright?

One-off 3D printed jewellery items and fashion accessories may be protected by copyright as “works of artistic craftsmanship”. In order to be protected it must be “original” in that it is more than a mere copy of something else, and it must involve “craftsmanship” and be intended to have aesthetic appeal. However, if you are making multiple copies and the item has been “industrially applied” (applied to more than 50 articles), copyright protection may be lost and you should consider first registering your item as a design.

For further information, see our information sheets [Design Objects & Copyright](#) and [Fashion & Costumes Designers](#).

Can I 3D print an item that I have purchased?

Purchasing an item will typically involve a grant of property rights. However, owning property rights in an item is not the same as owning the intellectual property in that item, and purchasing an item will not necessarily entitle the purchaser to exercise the rights of the intellectual property owner.

3D printing will often involve exercising intellectual property rights. To exercise someone else’s intellectual property rights, you will typically require permission from the intellectual property rights owner. Some common types of material that are likely to be protected by intellectual property include books, music and artworks (copyright), industrial designs (designs), inventions (patents), branding and aspects of packaging (trade marks).

Do I need permission to make 3D printed fan sculpture of my favourite character?

Creating fan art and 3D prints may involve a reproduction, which is one of the rights reserved for the copyright owner for which permission must be obtained. The general rule is that you will require permission to reproduce a “substantial part” of someone else’s work. The courts have indicated that a part will be considered to be a “substantial part” if it is *important, essential, material or distinctive* to the original work from which it was taken.

The use of characters may also involve other areas of laws such as trade marks. Further information may be found in our information sheet [Fanfiction & Copyright](#).

Who owns copyright in a 3D printed design prototype?

3D printed design prototypes that have not been registered as a design or “industrially applied” may be protected by copyright as “works of artistic craftsmanship”. The underlying designs may also be protected as “artistic works”. In the absence of an agreement stating otherwise, the general rule is that the creator of the 3D print design will own copyright in their creation. A common exception to this is where the work was created by an employee in the course of their employment, in which case the employer will likely own copyright.

For further information, see our information sheet [Ownership of Copyright](#).

Further information

For an overview of the different types of intellectual property, IP Australia’s website at ipaustralia.gov.au

For further information about the overlap between copyright and design law see our information sheet [Design Objects & Copyright](#). For information about trade marks see our information sheet [Logos: Legal Protection](#).

For our information sheets, publications and seminar programs, see our website: copyright.org.au

Reproducing this information sheet

Our information sheets are regularly updated. Please check our website to ensure you are accessing the most current version. Should you wish to use this information sheet for any purpose other than your reference, please contact us for assistance.

About Us

The Australian Copyright Council is an independent, non-profit organisation. Founded in 1968, we represent the peak bodies for professional artists and content creators working in Australia’s creative industries and Australia’s major copyright collecting societies.

We are advocates for the contribution of creators to Australia’s culture and economy; the importance of copyright for the common good. We work to promote understanding of copyright law and its application, lobby for appropriate law reform and foster collaboration between content creators and consumers.

We provide easily accessible and affordable practical, user-friendly information, legal advice, education and forums on Australian copyright law for content creators and consumers.



Australian Government



The Australian Copyright Council has been assisted by the Australian Government through the Australia Council, its arts funding and advisory body.

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