

What is a dedicated power circuit and why do I need one?

A dedicated home power circuit is an electrical circuit that is specifically reserved for a particular appliance or device in a home or office. It is intended to provide a consistent and reliable power source for the device, ensuring that it can operate at its full capacity without interference from other electrical devices on the same circuit.

Dedicated circuits help to ensure that the appliance or device connected to it receives a consistent power supply, which can improve its performance. For example, a dedicated circuit for a laser printer can help to ensure that the amount of power available to the printer is not reduced by other electrical devices. This allows it to print properly.

Some common examples of appliances and devices that may require a dedicated home power circuit include:

- Large appliances, such as refrigerators and ovens

- Laser printers

- Heat presses

- Home theater systems

- Home office equipment, such as computers and printers

- Electric tools and equipment, such as saws and drill presses

- Medical equipment, such as oxygen concentrators

Dedicated circuits should be installed by licensed electricians to ensure everything is done to code.

A normal power circuit is an electrical circuit that is used to power multiple outlets and devices. It is typically used to distribute power throughout a home/office and is not reserved for a specific appliance or device. A common misconception is that if only one item is plugged into an outlet that means it's dedicated but that is not the case. There are multiple outlets/lights spread throughout the home/office on a single circuit.

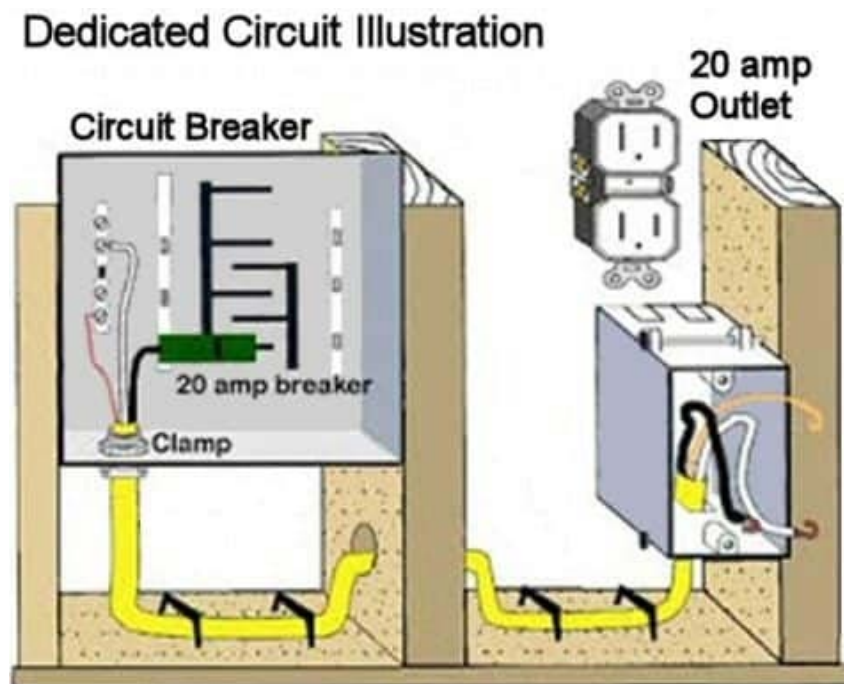
In contrast, a dedicated home power circuit is an electrical circuit that is specifically reserved for a particular appliance or device such as a laser printer. It is intended to provide a consistent and reliable power source for the device, ensuring that it can operate at its full capacity without interference from other electrical devices on the same circuit. In other words, it will not be starved for power.

Overall, the main difference between a normal home/office power circuit and a dedicated circuit is that the latter is designed to provide a consistent and reliable power source for a specific appliance or device, while the former is used to distribute power to multiple outlets and devices.

Here is an example of a normal home/office circuit diagram. Note that there are multiple outlets/lights on each circuit. In this diagram, each color is a different circuit. In some cases, a single circuit can be used in multiple rooms.



In contrast this diagram below shows a dedicated circuit. There is a direct line from the circuit breaker to the outlet with nothing else connected. No switches, no lights and no other outlets anywhere in the building:



How does all this relate to me?

Dedicated circuits are needed for most laser printers, notably specialty printers so that they have the full power they need in order to print properly on a variety of materials. Printers that are on normal circuits can be starved for power in that can have fusing issues where the toner does not fully melt into the paper, or ghosting can occur where offsets of an image show on the printed pages. If not corrected over time the power supply and/or the fuser assembly in the printer can be affected and may need to be replaced.

Printers that we recommend dedicated circuits for:

IColor 800

IColor 560

IColor 550

IColor 540

IColor 350

In addition to some laser printers, heat presses may also need a dedicated circuit to provide consistent even heat. (Not to be used on the same circuit as the printer, but a separate one). Check your press's user manual for more information on its requirements.