



SafeChurch® Electrical: Temporary Wiring

The use of temporary wiring can most likely be found in every religious organization due to increased electrical demands and lack of available electrical outlets, especially in older buildings. Temporary wiring for definition purposes will include extension cords, power strips, multiple outlet adapters and inadequate wiring. Temporary wiring is an easier and less expensive solution than having additional electrical services installed however; “temporary” usually becomes the permanent solution, and can lead to electrocution, short circuit, overloading and fire. Take this recent loss for example:

During a funeral service, the church’s electronic carillon system was not tolling properly. The pastor returned to the church later that afternoon only to find the driveway blocked by fire trucks and a fire burning in the sanctuary. Investigation found that a lightweight extension cord was run under the carpet of a doorway and was supplying power to the carillon control box for the past 20 years. Years of foot traffic slowly broke down the insulation on the cord, allowing the wires to come in contact with each other. This caused a short circuit and arc, which started the carpet on fire and spread quickly to the sanctuary. Estimated dollar loss was \$1.4 million.

Extension Cords

- Never cut off the ground pin to connect a three-prong appliance cord to a two-wire extension cord or receptacle. Use only three-wire extension cords for appliances with three-prong plugs.
- If an extension cord’s insulation has been damaged, remove the cord from service. Never try to repair a damaged extension cord with electrical tape.
- Never plug multiple extension cords into each other.
- If the cord feels hot or if there is a softening of the plastic, the cord is drawing too much power and the plug wires or connections are failing, which could present a fire or shock hazard. The extension cord should be discarded and replaced.
- Extension cords should never be nailed down, stapled, run through walls, under rugs or across doorways.
- Avoid placing cords where someone could accidentally trip over them.
- Never use an extension cord while it is coiled, looped or tied in a knot.
- Never place an extension cord where it is likely to be damaged by heavy furniture or foot traffic.
- Use special, heavy-duty extension cords that are designed for high wattage appliances, such as air conditioners and freezers.
- Purchase extension cords from reputable distributors and retailers, and check the product to ensure that a nationally recognized testing laboratory, such as Underwriters Laboratories (UL) or Canadian Standards Association (CSA) has certified the product.
- Outside, use extension cords rated for outdoor use.



Power Strips

Power strips are really an extension cord with multiple receptacles. These are most commonly used where multiple outlets are needed such as for office and audio/visual equipment. The safety precautions outlined for extension cords also should apply for power strips. Additional precautions for power strips include:

- Only use power strips that have a built-in circuit breaker that will trip if overloaded or shorted.
- Do not plug high power demand appliances, such as refrigerators, microwave ovens or wall air conditioning units, into power strips. These types of appliances should each have a separate electrical outlet.
- If the power strip feels hot, it should be discarded and replaced. This is a good indication that the electrical load is too high and should be evaluated.
- Do not locate a power strip in any area where the unit would be covered with a rug, furniture, or any other item that would inhibit air circulation.
- Under no circumstances should one power strip be plugged into another power strip, also known as daisy chaining. If the electrical demand gets to that point, it is definitely time to call an electrician.



This image shows two power strips that have been plugged into each other, also called daisy chaining. This practice should not be permitted.

Multiple Adapters

Multiple adapters also allow for plugging in several appliances at once and more often than not are not protected with a built in breaker. This can cause overloading and overheating of the circuit. Multiple adapters are not recommended for use.



Inadequate Wiring

Do it yourself temporary wiring is never recommended. Consider these reasons:

- Wiring extension cords directly into electrical panels is in violation of national and local electrical codes.
- Making your own extension cords or power strips has no testing conducted by nationally recognized testing laboratories and may not be properly sized for the voltage and current.
- Improperly installed electrical equipment or spliced wiring also should be identified as temporary.
- Any condition that will involve creating your own temporary wiring solutions should be immediately removed from use.



This image shows several wiring hazards; a “homemade” extension cord on the floor that is run under a doorway, which has an outlet installed at the end, that has a power strip plugged into it that is supplying power to a window air conditioning unit. This is a fire just waiting to occur.

Temporary wiring should be just that, temporary. The use of extension cords, power strips, multiple adapters and homemade variations of such, indicate that additional electrical services are needed. They are not designed to be installed in a permanent manner, and if this becomes the case, a licensed electrical contractor should be hired to install additional electrical services.