

JBER FIRE & EMERGENCY SERVICES

ELECTRICAL SAFETY



Did you know electrical safety hazards rank among JBER's top 5 most common write-ups? Nationally, they account for 52% of all office fires.

References:

AFI 91-203, Consolidated Occupational Safety Instruction

673 ABWI 32-2001, Fire Prevention Program

Contact the JBER Fire Prevention Office for further guidance.

*Look for us on Facebook
JBER Fire Prevention*

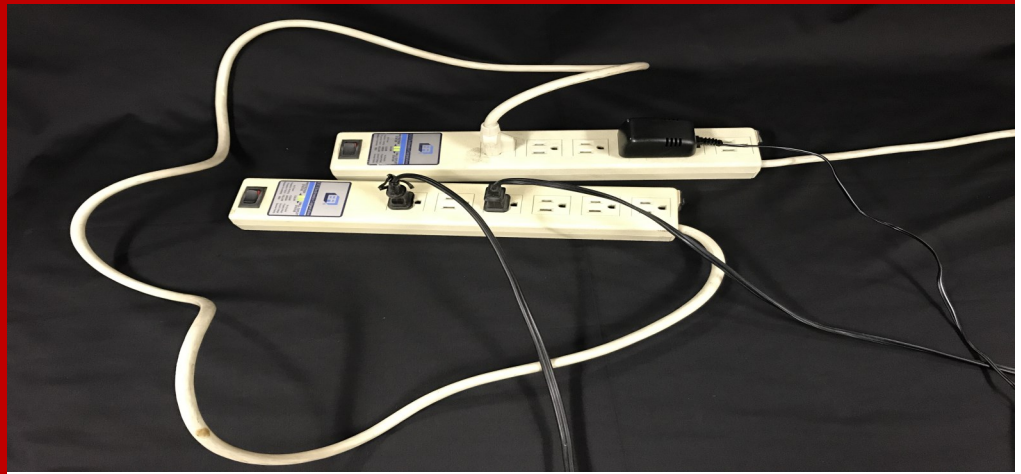


Fire Prevention Office
724 Quartermaster Rd
(NE Corner, 2nd Floor)

Phone: 907-384-5555

Fax: 907-384-3212

673ces.cef.fireprevention@us.af.mil



Example of a surge-to-surge (daisy-chained) configuration

Electrical hazards are one of JBER's **TOP 5 MOST COMMON WRITE-UPS**. During facility fire inspections we find on average 400 electrical hazards each year. This is an extremely high number and this safety handout was developed to inform supervisors, facility managers and occupants on common hazards in an effort to reduce the fire risk associated with them. The most common causes of electrical fires are from improper use and overloading of extension cords, power strips, power taps, and surge protectors. Below are some common electrical hazards to look out for.

MOST COMMON ELECTRICAL HAZARDS FOUND DURING FIRE INSPECTIONS

- ◆ Extension cords being used as permanent wiring
- ◆ Heat producing appliances plugged into surge protectors (coffee pot/Keurig, microwave, space heater, hot plate)
- ◆ Surge protectors being daisy-chained/piggy-backed (surge protector plugged into another surge protector, see picture above)
- ◆ Multi-plug adapters without surge protection
- ◆ Electrical cords ran through walls, doorways, under carpet/rugs, or taped to the floor.
- ◆ Electrical wires nailed or stapled to the building surface (Christmas lights)
- ◆ Frayed or exposed wiring
- ◆ Space heaters (unattended, within 3 ft of combustible materials, or located under desks)
- ◆ Missing cover plates on receptacles, switches, and outlet boxes
- ◆ Electrical panels (3 ft clearance maintained around panel, properly labeled, and secured fire alarm breaker switch to prevent accidental use)

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ADD IT UP!

Electrical outlets and most surge protectors are rated at 15 amps (1875 watts) and can be easily overloaded.



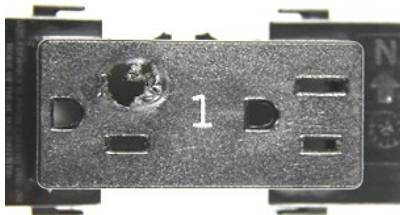
Computer	= 2.0 amps (250 watts)
Monitor	= 1.5 amps (190 watts)
Speakers	= 0.12 amps (15 watts)
Desk lamp	= 0.32 amps (40 watts)
Scanner	= 1.2 amps (150 watts)
Printer	= 9.4 amps (1,175 watts)

TOTAL = 14.54 amps (1,820 watts)



OTHER CONSIDERATIONS

Electrical appliances and wires shall be UL, ETL, or SA listed. Electrical cords will not be spliced and users shall inspect cords frequently for signs of fraying, cracking, wearing, or damage. Ground Fault Circuit Interrupters (GFCI) are required in damp areas (i.e. bathrooms, kitchens, garages, outdoors, crawl space, etc.). When plugging in electrical devices/appliances, be sure to check the connection is secure.



Receptacle damage from a loose connection.



Power Strip vs. Surge Protector

Can you tell the difference between a power strip and a surge protector? The main difference between them is surge protectors are designed to protect devices from voltage

spikes. Conversely, power strips do not provide any type of protection and are simply an extension of your electrical receptacle. To tell the difference, you have to look at the packaging or the device itself. A true surge protector will be labeled as such, contain an indicating light and are usually rated in joules, the amount of energy it can absorb before it fails.



Keurig/Coffee Makers use ~12.5 amps
Must be plugged directly into wall outlet

Microwaves use ~8-13 amps
Must be plugged directly into wall outlet



A 725-watt refrigerator uses 6 amps.
Must be plugged directly into wall outlet

Space heaters use 12.5 amps
Must be plugged directly into wall outlet, be UL listed and have tip-over protection



Electrical appliances that do not require continuous operation will be unplugged when not in use and this check should be accomplished when running your daily closing checklist. The facility manager should always make sure their facility is in a fire-safe condition at the end of each shift/day.