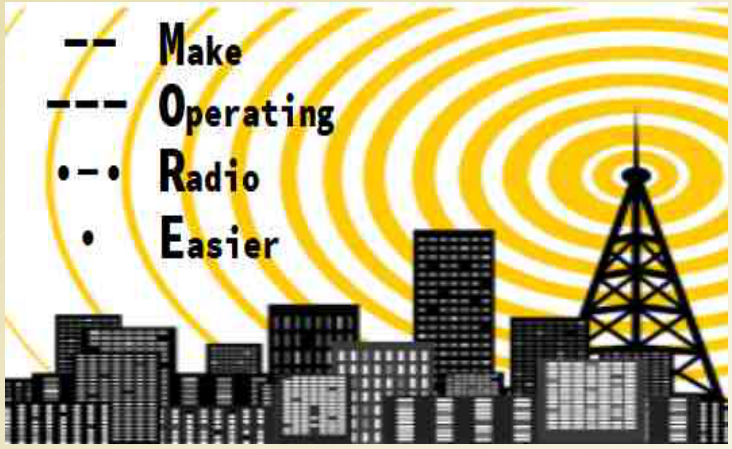
Technician Question Pool
July 2022 to June 2026

The MORE Project

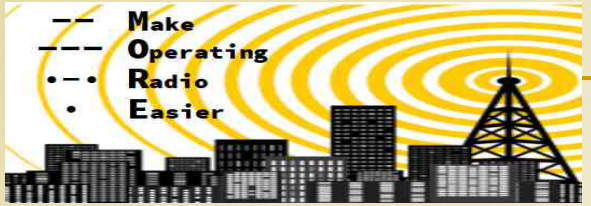
http://n2re.org/m-o-r-e-project



Electrical Safety
No-Nonsense pages 68 - 70

Power circuits and hazards, hazardous voltages, fuses and circuit breakers, grounding, and battery safety

BE SAFE! When operating or working on amateur radio equipment, one can come into contact with dangerous voltages and currents that can cause injury or even death. Because of this, it's important to know and always remember how to be safe when dealing with electricity.



T0A02

What health hazard is presented by electrical current flowing through the body?

A. It may cause injury by heating tissue
B. It may disrupt the electrical functions of cells
C. It may cause involuntary muscle contractions
D. All of these choices are correct

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T0A03

In the United States, what circuit does black wire insulation indicate in a three-wire 120 V cable?

A. Neutral
B. Hot
C. Equipment ground
D. Black insulation is never used

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T0A06

What is a good way to guard against electrical shock at your station?

A. Use three-wire cords and plugs for all AC powered equipment
B. Connect all AC powered station equipment to a common safety ground
C. Install mechanical interlocks in high-voltage circuits
D. All of these choices are correct

T0A06

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T0A04

What is the purpose of a fuse in an electrical circuit?

A. To prevent power supply ripple from damaging a component
B. To remove power in case of overload
C. To limit current to prevent shocks
D. All of these choices are correct

T0A04

What is the purpose of a fuse in an electrical circuit?

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T0A08

Where should a fuse or circuit breaker be installed in a 120V AC power circuit?

A. In series with the hot conductor only
B. In series with the hot and neutral conductors
C. In parallel with the hot conductor only
D. In parallel with the hot and neutral conductors

T0A08

Where should a fuse or circuit breaker be installed in a 120V AC power circuit?

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T0A05

Why should a 5-ampere fuse never be replaced with a 20-ampere fuse?

A. The larger fuse would be likely to blow because it is rated for higher current
B. The power supply ripple would greatly increase
C. Excessive current could cause a fire
D. All of these choices are correct

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T0A11

What hazard exists in a power supply immediately after turning it off?

A. Circulating currents in the dc filter
B. Leakage flux in the power transformer
C. Voltage transients from kickback diodes
D. Charge stored in filter capacitors

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T0A01

Which of the following is a safety hazard of a 12-volt storage battery?

A. Touching both terminals with the hands can cause electrical shock
B. Shorting the terminals can cause burns, fire, or an explosion
C. RF emissions from a nearby transmitter can cause the electrolyte to emit poison gas
D. All of these choices are correct

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T0A10

What hazard is caused by charging or discharging a battery too quickly?

A. Overheating or out-gassing
B. Excess output ripple
C. Half-wave rectification
D. Inverse memory effect

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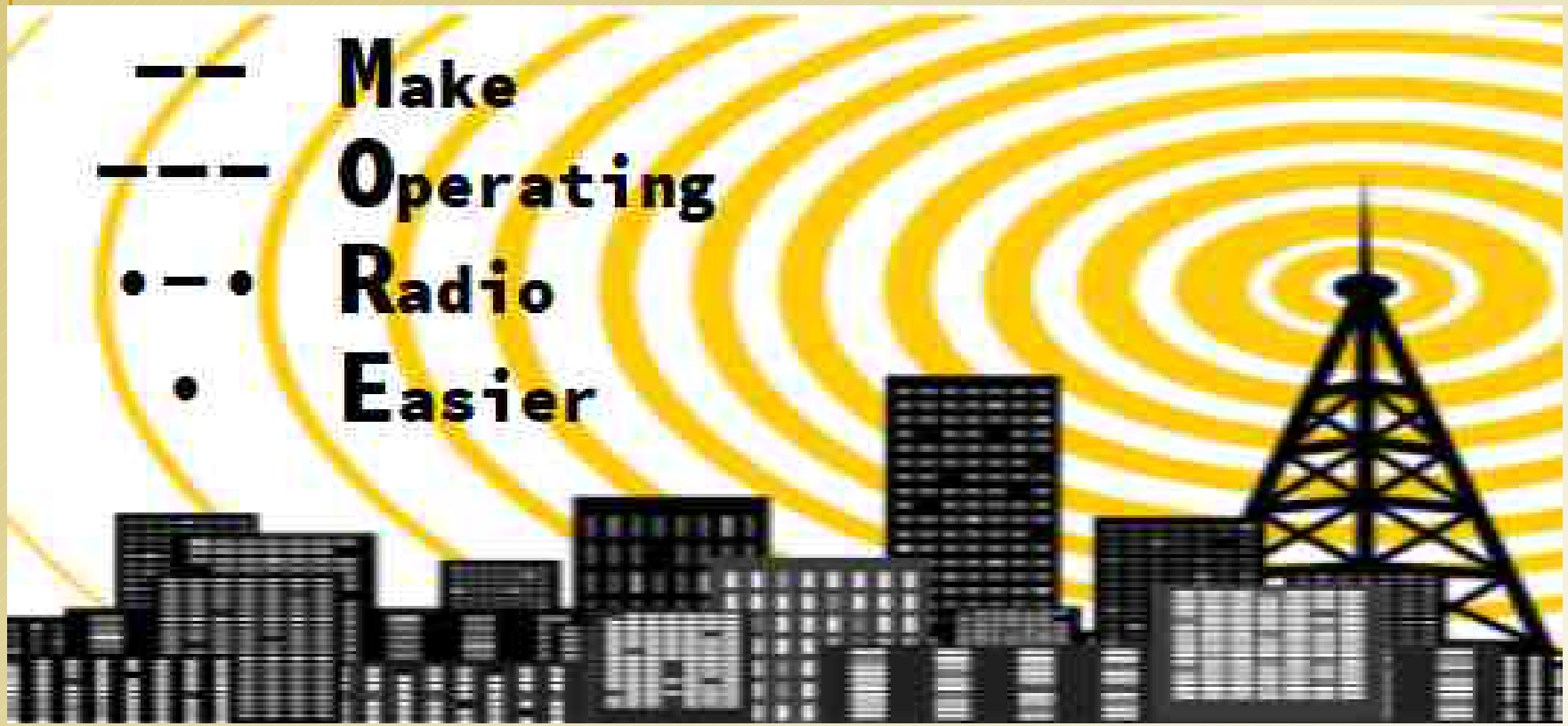

A non-profit initiative by the IEEE and ARDC to increase the numbers of youth (12-18) and non-males in Amateur Radio. Participants earn FCC licenses and receive free 2-way radios.

For MORE information: n2re.org/m-o-r-e-project
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