

## RESIDENTIAL WIRING



### PURPOSE

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of residential wiring.

First, refer to General Regulations, Page 9.

### CLOTHING REQUIREMENT

Official SkillsUSA khaki work shirt and pants, black or brown leather work shoes, and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.) To purchase official work clothes, contact Midwest Trophy Manufacturing Co. Inc. by calling 800-324-5996 or order online at [www.mtmrecognition.com/skillsusa/](http://www.mtmrecognition.com/skillsusa/).

**Note:** Contestants must wear their official contest clothing to the contest orientation meeting.

### ELIGIBILITY

Open to active SkillsUSA members enrolled in programs with residential wiring or electrical trades as the occupational objective.

### EQUIPMENT AND MATERIALS

1. Supplied by the technical committee:
  - a. All wiring panels, electrical supplies and materials as required by the problem assigned
2. Supplied by the contestant:
  - a. Arc-joint pliers
  - b. Assorted flat blade and Phillips screwdrivers
  - c. \*Coaxial cable stripper
  - d. \*Communications cable cutter
  - e. \*Conduit bender, 1/2" EMT
  - f. Conduit reamer
  - g. \*Cordless electric hand drill with extra battery (**Note:** The use of AC power-operated tools will not be permitted)
  - h. \*Crimp tool for RG-6 coaxial cable connectors
  - i. \*3/4" spade or ship auger bit
  - j. Diagonal pliers
  - k. Electrician's hammer
  - l. Electrician's knife

(**Note:** The use of razor knives [box cutters] will not be permitted for wire stripping)

- m. \*Electrician's scissors
- n. \*Hacksaw
- o. Hex key wrenches - sizes 1/16" through 3/8"
- p. Keyhole (compass) saw with wood and wallboard blade
- q. Measuring tape or folding ruler
- r. Multimeter (volt, ohm, amp) or equivalent voltage and continuity testers
- s. \*Latest edition of the National Electrical Code and the TIA/EIA-570 Residential and Light Commercial Telecommunication Wiring Standard as of the January prior to the SkillsUSA Championships.
  - t. Needle nose pliers
  - u. Non-programmable scientific calculator
  - v. Pencil
  - w. Side cutting pliers
  - x. Tool pouch or medium size tool box or bag
  - y. Torpedo level
  - z. \*Twisted-pair cable stripper
  - aa. Wire strippers
  - bb. \*110-type punch-down tool
  - cc. One-page, typewritten résumé

\* The items *may* be supplied by the technical committee. Check the SkillsUSA Championships update annually at [skillsusa.org/compete/updates.shtml](http://skillsusa.org/compete/updates.shtml).

### SCOPE OF THE CONTEST

The contest will assess the ability to perform jobs or skills selected from the following list of competencies as determined by the SkillsUSA Championships technical committee.

### Knowledge Performance

The contest will include a written knowledge exam assessing general knowledge of residential wiring. Written portions may also exist during the skills portion of the contest. Knowledge of terms and principles used in residential wiring will be required for the skill demonstration portion of the contest.

### Skill Performance

The skills portion of the contest will include a series of work stations that have information and instruction sheets for wiring a residence or completing a light commercial installation.