

# ELECTRIC

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**ALL DIVISIONS:** Include an explanation card on how your exhibit is to be used. Equipment wiring boards should be a maximum of 3' x 3'. **Note:** Complete all levels sequentially. Start this project with Division I no matter what grade you are in.

## POSTER REQUIREMENTS

See general poster guidelines and requirements

### DIVISION 1

Exhibit the following:

1. A circuit board **labeled parallel or series circuit**. The board must be square, measuring **no larger than 6" x 6"** (approximately)
2. "What I Have Done and Learned" 4-H 421B is to be turned in at judging along with your exhibit.

### DIVISION 2

Exhibit one of the following:

1. Make a magnetic-powered flashlight.
2. A poster/display board on one of the topics listed in your manual.

### DIVISION 3

Exhibit one of the following:

1. Make one of the following:
  - a. Build an extension cord using all new parts.
  - b. Build an incandescent trouble light using all new parts
  - c. Build a fluorescent trouble light using all new parts
  - d. Repair an extension cord or trouble light by replacing the cord, plug, connector body or socket handle with a new part(s).
  - e. Create a poster – see poster guidelines. Use these as topics:
    - Wire size
    - Wire type
    - Current carrying capacity
    - The parts of an extension cord or trouble light
    - An important safety-related topic
    - Any topic covered in the Division III manual

Note: For parameters on any of the above project options, see Division III electric manual. If the exhibit is not a poster, attach a note explaining how it is to be used.

### DIVISION 4

Exhibit one of following:

1. Made or remade lamp.
2. Display board on any topic covered in manual - **Display boards should be appropriately sized for the displayed equipment.**
3. Poster on any topic covered in manual.

Note: If the exhibit is not a poster, attach a note explaining how it is to be used.

## ADVANCED DIVISION 5-10

Advanced Divisions 5-10 - Electricity & Electronics (This book is being updated and you may find other resources at your local library, electricians, instructors, internet, etc. to provide guidance for your project.)

The Advanced Division is split into two different categories. One area is “Advanced Electric 5-10” and the second is “Advanced Electronics 5-10.” You may choose one category for your Advanced 5-10 exhibit

Exhibit ONE of the following:

1. An article based on wiring around the home, farm, or facility, etc.
2. An article made in the area of heating and cooling
3. An article made in the area of lighting
4. An article made in the area of electronics (advanced division electronic projects may contain and use molded plugs if they are part of the electronic kit)
5. An article made in the area of power
6. A written report on: consumer buying, better electrical methods, or electrical careers.
7. A written notebook report with photos of individual steps (close-up) and overall work, illustrations, explanation of each step performed, explanation of overall work done, reasons for performing work, reasons for selecting materials used, list of materials used and prices (budget), schematics, etc. of electric project. This option allows you to use your imagination and complete any electrical project that you cannot physically bring to the fair to exhibit. You could wire a room in a house, the barn, outdoor lighting, indoor lighting, control systems, alarm systems, etc.
8. Display board showing home wiring (3-way switch, 4-way switch, GFCI Grounding, Circuit Protection, etc.) or any topic covered in the Advanced Division manual. **Display boards should be appropriately sized for the displayed equipment.**
9. Create a video showing the work accomplished and skills learned. This video should include the same type of information as required in written notebook listed above. This video is to be no more than ten minutes in length and formatted as MP3 or MP4 and submitted on a thumb drive. This video can also be uploaded to a YouTube account with the video being made public and the link submitted for evaluation.

**\*\*For other exhibit ideas, refer to the Advanced Electric Project Ideas resource available on the Indiana 4-H Electric project page.**

Note: If the exhibit is not a poster, attach a note explaining how it is to be used. Please also attach any other kit instructions or book/manuals if you feel they will help explain the operation of the exhibit. This may be important for advanced electronic projects.

STATE FAIR ENTRY: One from each of Electric 1, Electric 2, Electric 3, Electric 4. Each county may also submit one advanced electric and one advance electronic exhibit for the state fair.