

# **Technician Amateur Radio License Class**

Saturdays, March 19 to April 30, 2022

1:00 PM to 4:00 PM

via Zoom

David Bern, W2LNX and friends

[instructors@marcclub.org](mailto:instructors@marcclub.org)

# Zoom policy

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- waiting room
- mikes are muted
- will record sessions for students in class
- will pause to take questions
  - use Chat box to ask a question – goes to host
  - use Raise Hand under Reactions
  - use space bar as push-to-talk (PTT) button

# course syllabus and schedule

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 [course syllabus and schedule](#)

<https://www.marcclub.org/mweb/education/Technician/syllabus.html>

 means "show"

# agenda

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Lesson 1 – [Joe, AC3JM](#):

- module 4 – Electricity

break and demonstration – David, W2LNX

Lesson 2 – Joe, AC3JM:

- module 5 - Ohm's Law, Power and the Metric System

break and demonstration – David, W2LNX

Lesson 3 – Joe, AC3JM:

- module 6 - Electronic Components

break and demonstration – David, W2LNX

## preparing for the Technician test

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- take a practice test every day – 85% score or better – 30 questions correct
  - [ARRL Exam Review for Ham Radio™](#)
- [study resources](#)

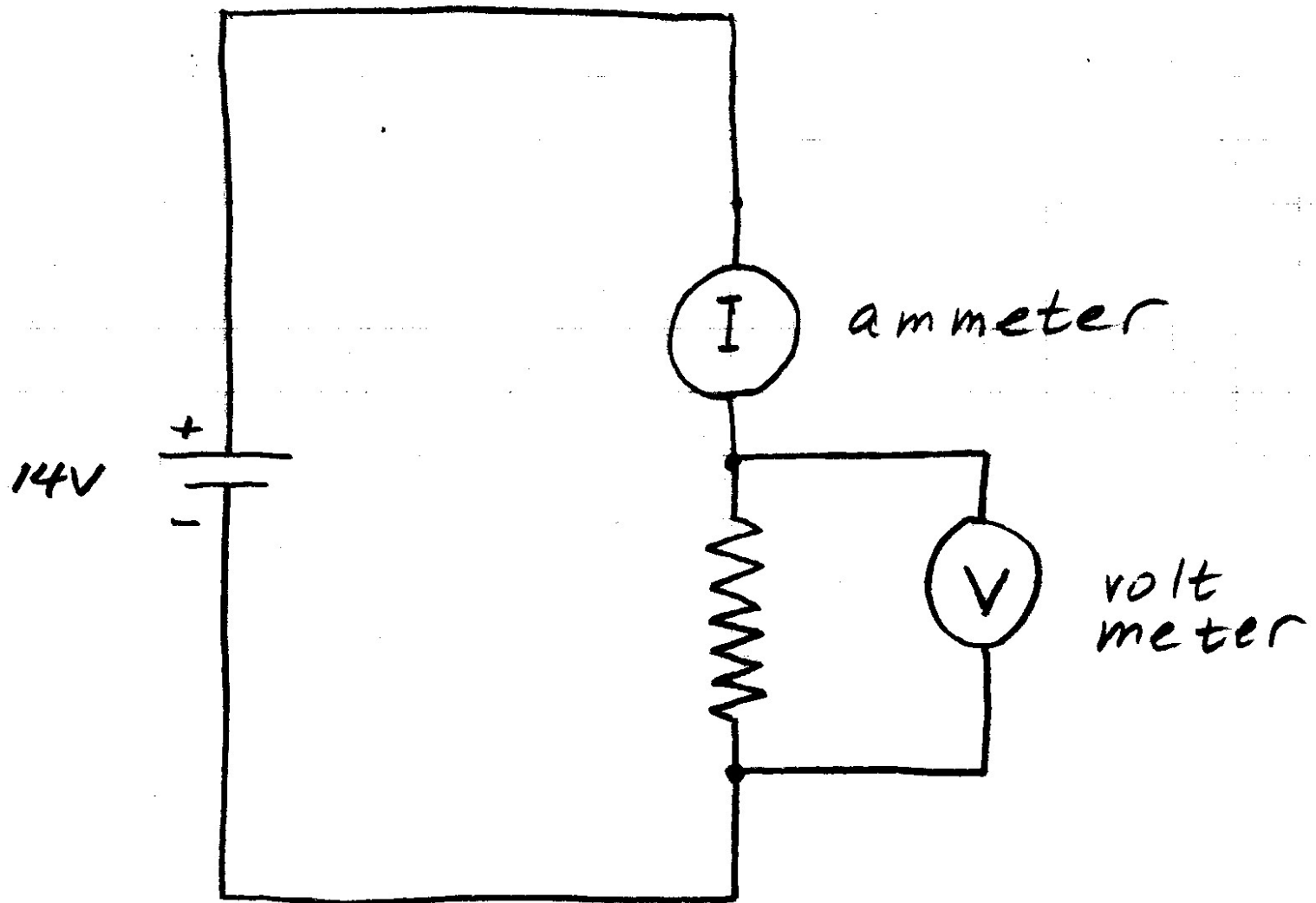
# module 4 - Electricity

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- HRLM [module 4 - Electricity](#)

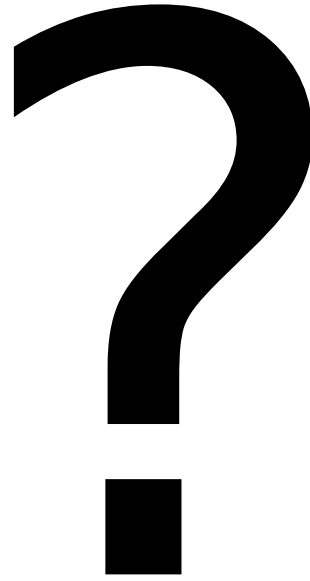
## module 4 - Electricity

☞ demonstration - voltage and current



# Questions

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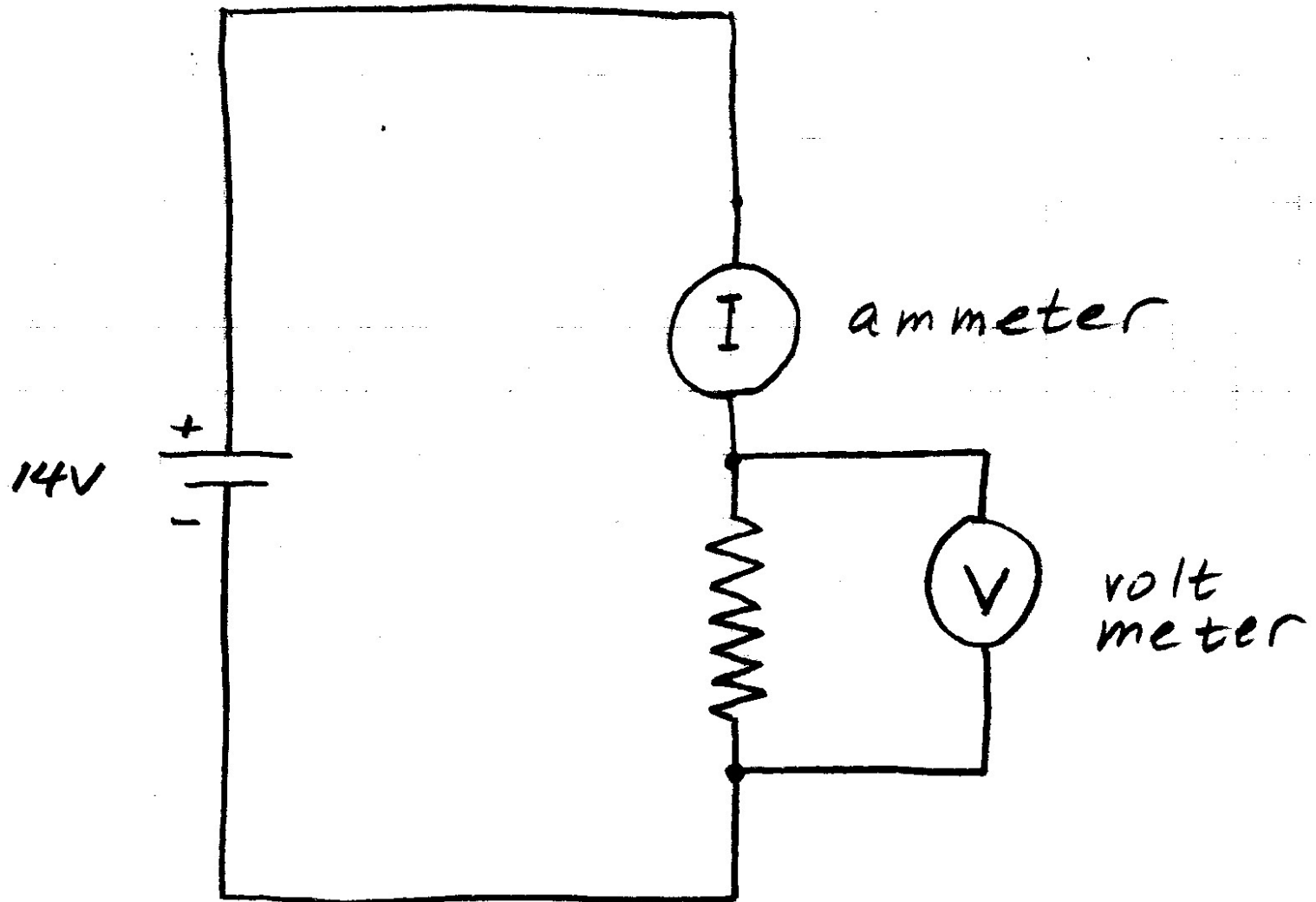
# module 5 - Ohm's Law, Power, and the Metric System

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- HRLM [module 5 - Ohm's Law, Power and the Metric System](#)

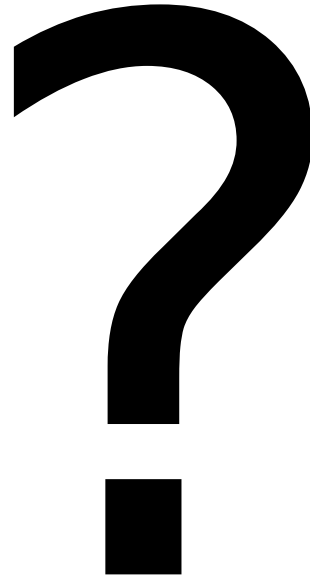
# module 5 - Ohm's Law, Power, and the Metric System

☞ demonstration - Ohm's law and power law



# Questions

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# module 6 - Electronic Components

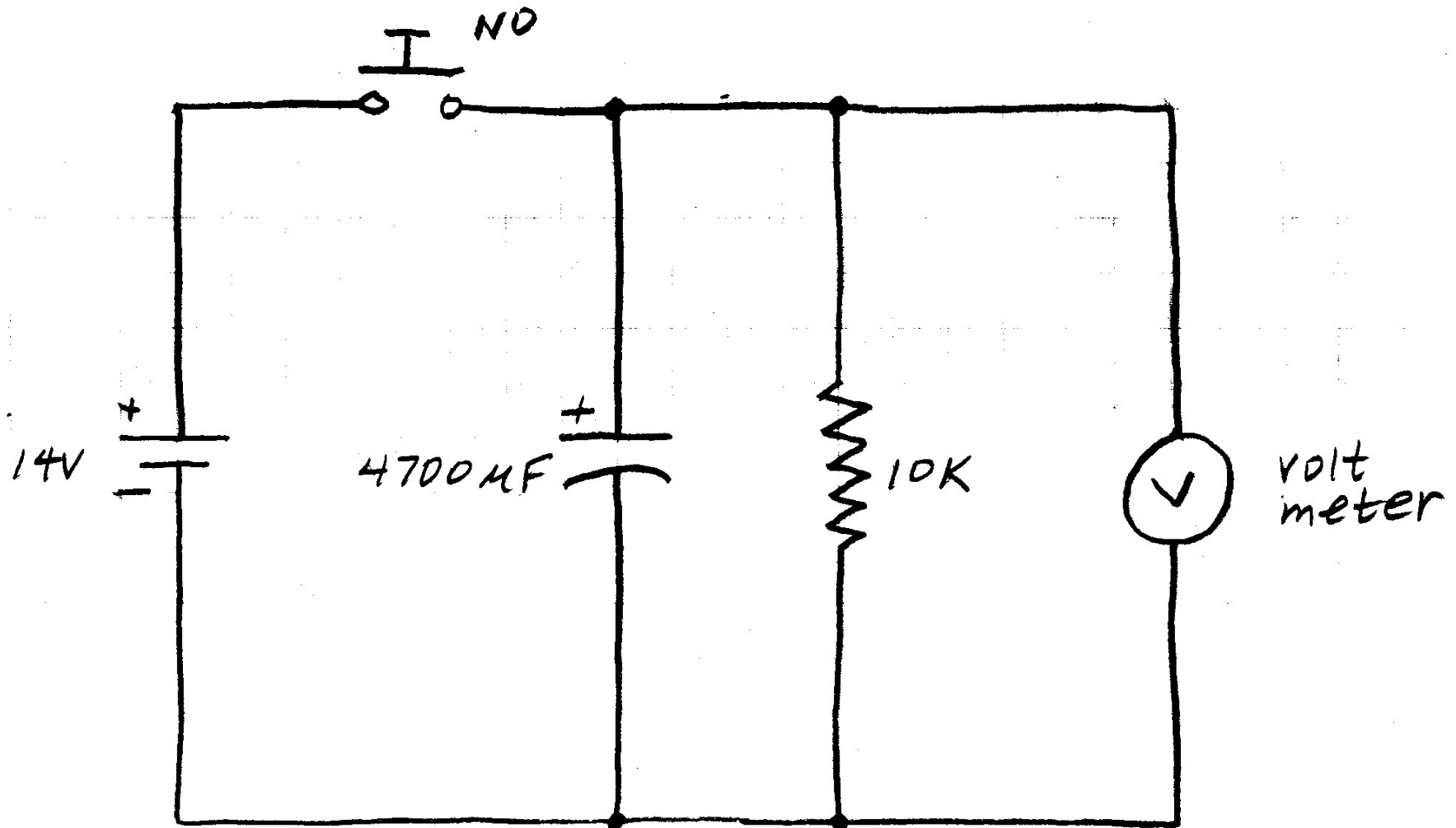
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- HRLM [module 6 – Electronic Components](#)

- ☞ demonstrations – David, W2LNX

# module 6 - Electronic Components

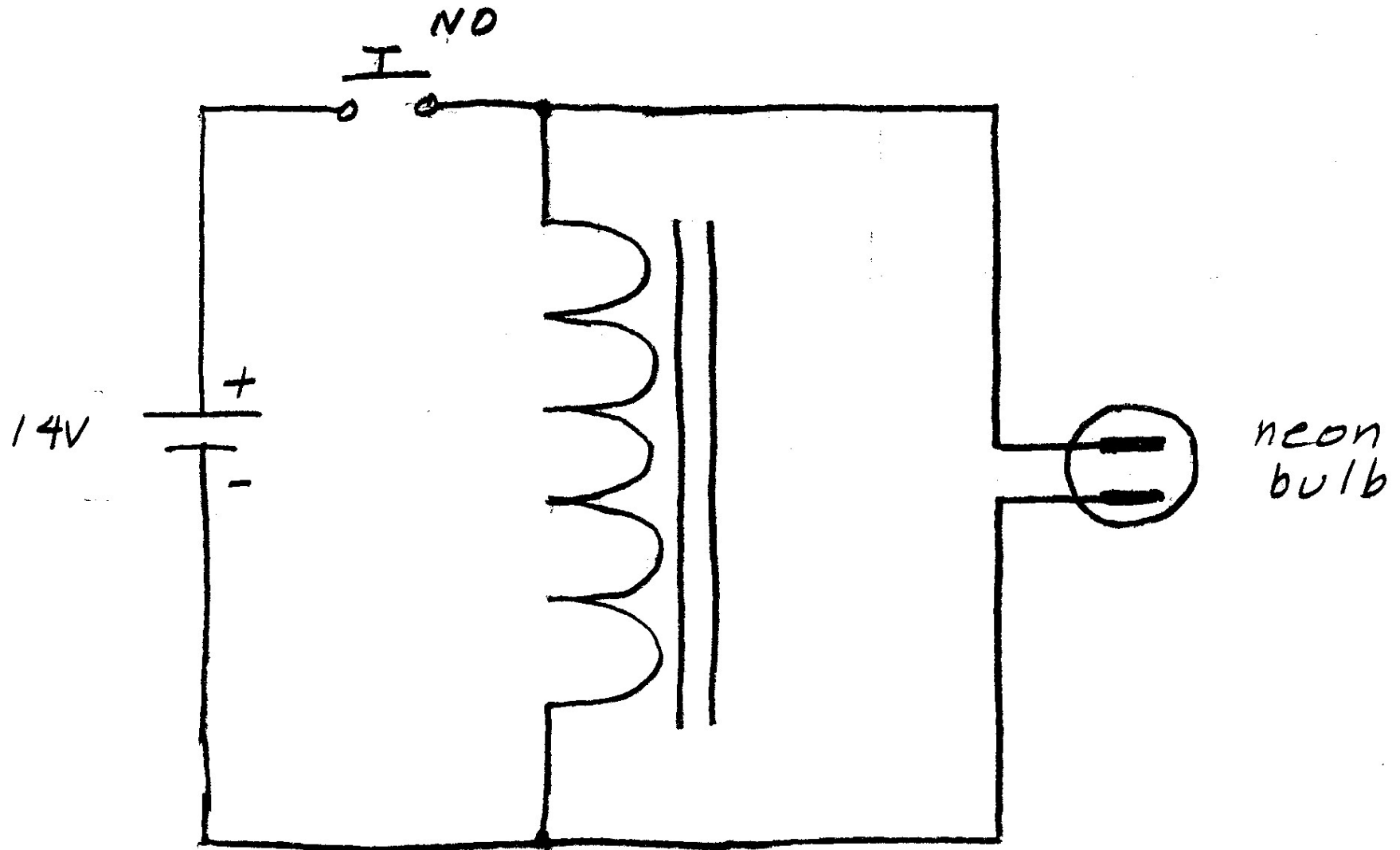
☞ demonstration - capacitor discharge



resource: [RC Time Constant Calculator](#)

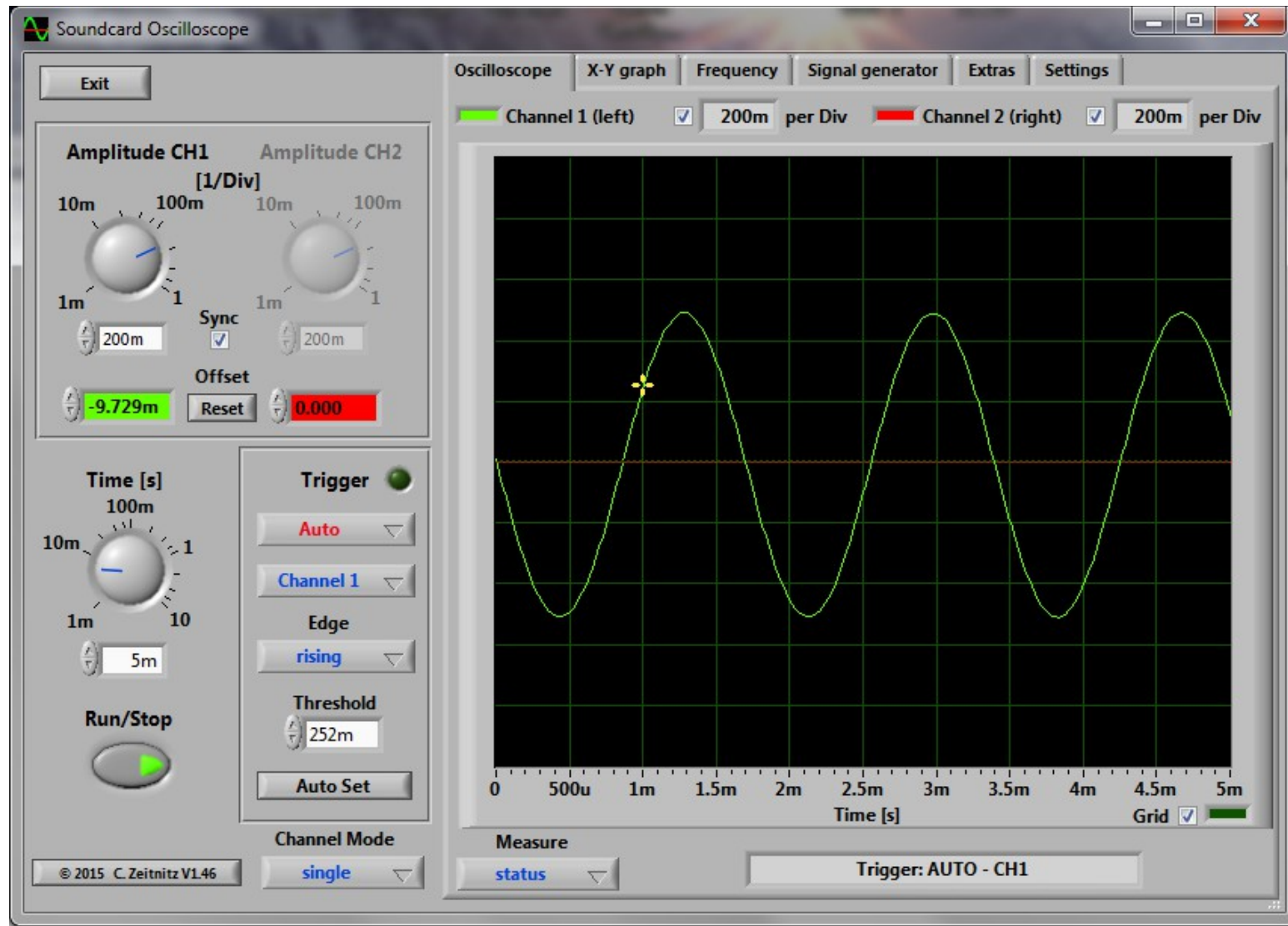
# module 6 - Electronic Components

☞ demonstration - inductive discharge



# module 6 - Electronic Components

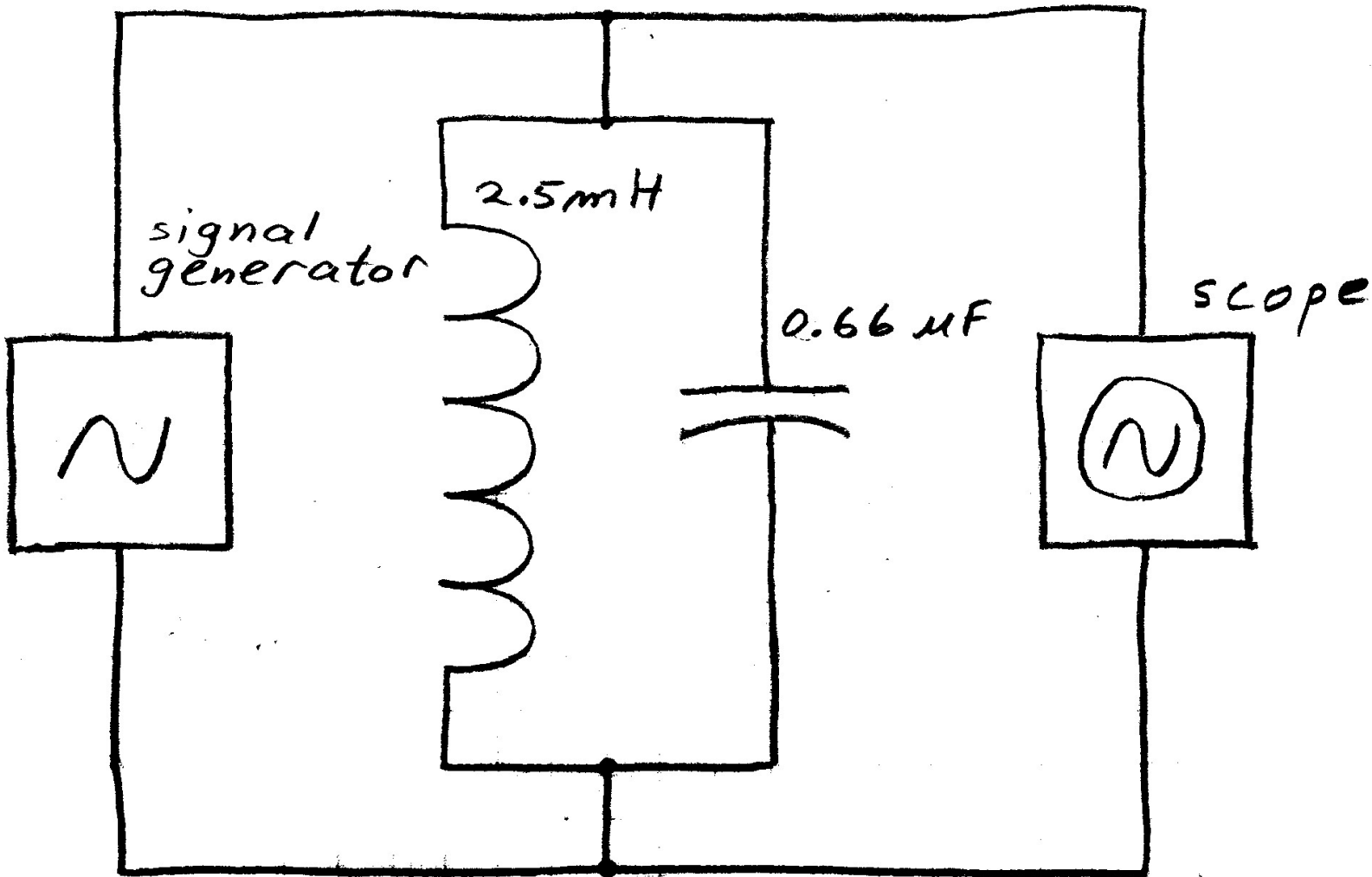
☞ demonstration - frequency, wavelength, amplitude, phase



resource: [Soundcard Oscilloscope](#)

## module 6 - Electronic Components

☞ demonstration - parallel resonant circuit



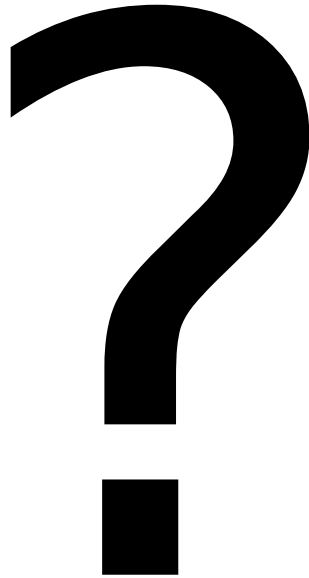
resource: [LC Tuned Circuit Resonant Frequency Calculator](#)

resource: [USB C-Media CM119 sound interface used](#) as an analog-to-digital converter



# Questions

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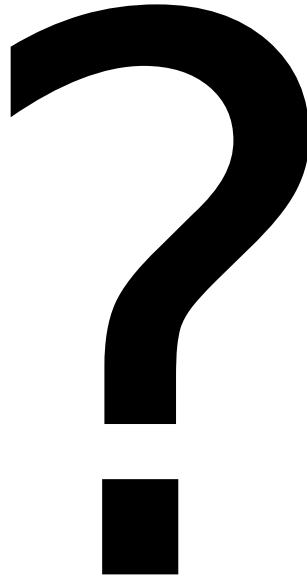
# homework

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- read chapters in HRLM for session 2 for modules 4, 5, 6
  - review test questions for these HRLM chapters using [ARRL Exam Review for Ham Radio™](#)
- [register a Username with the FCC](#) using your email address
  - [login and register a new FCC Registration Number \(FRN\)](#)
    - for yourself – an **individual**, not an organization
    - for family members – **individuals**

# questions

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