



# SkillsCompétences Canada Yukon

2026 Yukon Skills #16 Electronics

April 24, 2026

Project Assembly (120 mins)  
35% of overall mark

Name: \_\_\_\_\_

Competitor #: \_\_\_\_\_

# 2026 Yukon Skills Competition

## Project Assembly

The time allowed for this portion of the competition is **120 minutes**.

This event is worth **35%** of the total competition mark.

See below to find out how marks will be awarded for this competition.

You may use all the tools provided. Solder will be provided. Safety glasses must be worn.

**Care should be taken not to breathe in the smoke and fumes from the solder.**

You will be provided with a complete circuit assembly kit and instructions.

Using your best assembly and soldering techniques, neatly assemble and solder the project. Pay attention to **component orientation**, lead length, lead dress and soldering technique.

When you have completed the assignment please notify a staff member and have them verify that the project does function correctly.

Please:

- ensure that you label this document and the project with your competitor number.
- leave this paper and the completed project on the staff member's table
- leave the competition area.

## Evaluation Criteria

20% will be awarded if the component leads are neatly bent and inserted. 4 marks will be deducted for each component incorrectly bent and inserted to a maximum of 5.

20% will be awarded if the components are correctly soldered. (The connections are bright silver and volcano shaped). 4 marks will be deducted for each incorrectly soldered component to a maximum of 5.

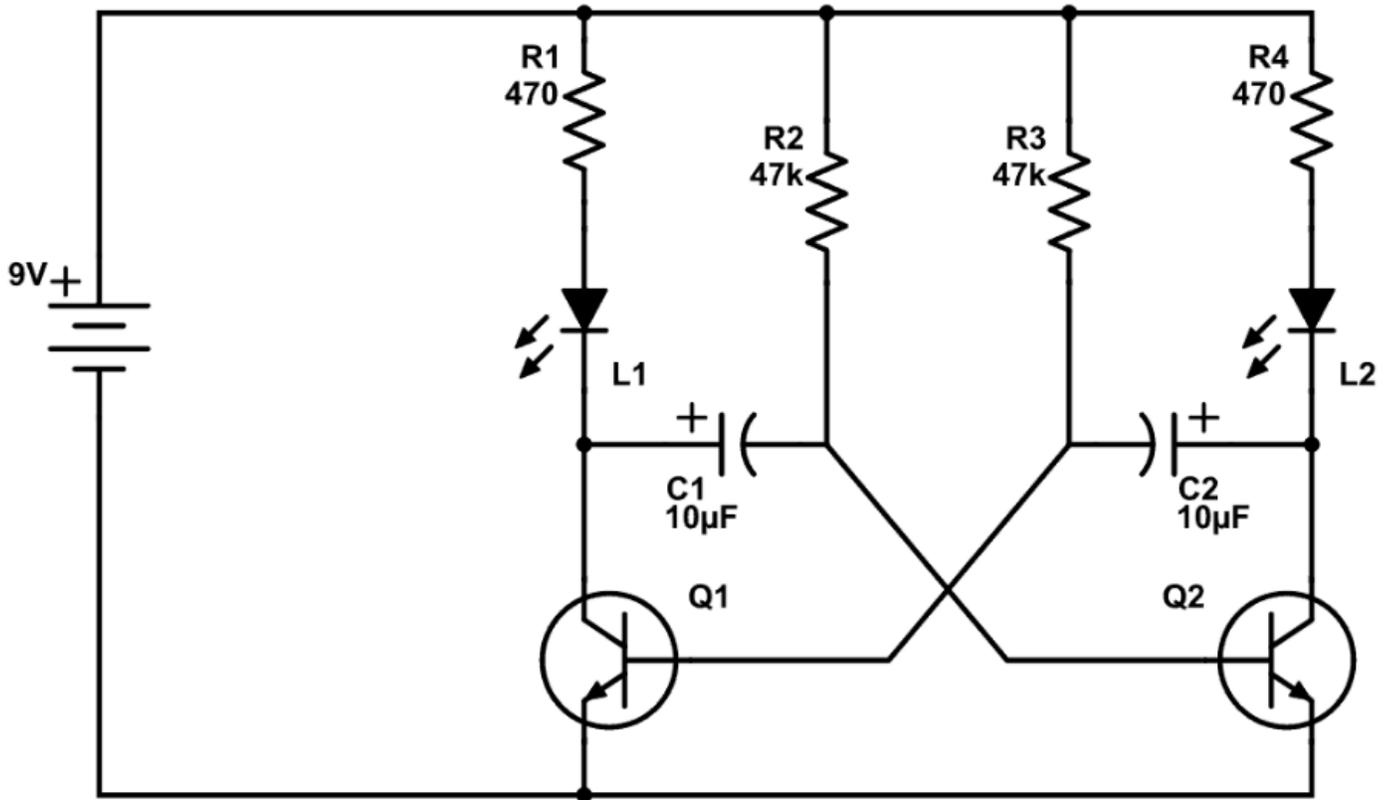
25% will be awarded if the circuit functions as designed.

10% will be awarded if no damage is done to the PC board. 5 marks will be deducted for each pad damaged to a maximum of 2.

10% will be awarded for correct component orientation. 5 marks will be deducted for each component misaligned to a maximum of 2.

15% will be awarded for correct waveform displays on the oscilloscope.

## Circuit Diagram



## Construction Notes

- 1) Solder two wires to the PCB, such that they can be plugged into a breadboard to provide power to the circuit, through the plug and socket.
- 2) 470 Ohm resistor can be replaced with 4.7K Ohm resistor.

## Oscilloscope Questions

Firstly, calibrate your oscilloscope using the internal calibration signal.

Next, set your oscilloscope so that the vertical divisions are 1V per square, and the horizontal time-based is set to display either 1 or 2 full wavelengths at the correct frequency. Set the trigger to ensure the waveform is stationary.

**Call over a judge to grade your waveform when completed.**

**[15 marks]**