

V37 Electronic Assembly (Basic Course)



1. Allocated time: 3h30

3 hours and 30 minutes of competition.

2. Requirements

- Contestants must verify the provided components.
- They will respect the safety rules as well as the jury's instructions.
- They will keep their workstation clean and organized for the duration of the competition.
- It is each contestant's responsibility to bring all of the tools and equipment specified in chart n°6 in the pre-task assignment. The organization will not be able to provide it for them.

3. Procedure

Day -1 (March 24th): On the day before the competition, contestants will be welcomed on the contest stand by members of the jury. A briefing about the organization of the competition and the safety rules will be arranged. Contestants will draw lots in order to be assigned to a work station.

Day 1 (March 25th): Contestants will go on an organized trip.

Day 2 (March 26th): Contestants will have 3 hours and 30 minutes to complete the task.

4. Final Task Assignment

The task consists in installing a printed circuit board and components in an ABS rectangular case. To do so, contestants must drill the case according to the diagram and the Production sheet to be provided to them on the day of the competition.

Contestants will establish the wire connections between the various components and the circuit board by soldering from the wire of the component to the circuit board (according to the instructions specified in the Production sheet below).

Production sheet (to be handed to contestants on the day of the competition)

Indication	Designation	Diameter of the hole to drill in the case (in mm)	Instructions
<i>PO1</i>	Potentiometer 47kΩ	10	To connect to the circuit board using the green wire (indication RV4)
<i>PO2</i>	Potentiometer 22kΩ	10	To connect to the circuit board using the bleu wire (indication RV1)
<i>PO3</i>	Potentiometer 22kΩ	10	To connect to the circuit board using the yellow wire (indication RV2)
<i>PO4</i>	Potentiometer 10kΩ	10	To connect to the circuit board using the purple wire (indication RV3)
<i>ET1</i>	20 mm insulating spacer M3 threaded insert	3,5	To attach to the case to support the printed circuit
<i>ET2</i>	20 mm insulating spacer M3 threaded insert	3,5	To attach to the case to support the printed circuit
<i>ET3</i>	20 mm insulating spacer M3 threaded insert	3,5	To attach to the case to support the printed circuit
<i>ET4</i>	20 mm insulating spacer M3 threaded insert	3,5	To attach to the case to support the printed circuit
<i>P1</i>	Black rubber feet	3,5	To attach to the case
<i>P2</i>	Black rubber feet	3,5	To attach to the case
<i>P3</i>	Black rubber feet	3,5	To attach to the case
<i>P4</i>	Black rubber feet	3,5	To attach to the case
<i>DO1</i>	Black female test socket	8	To connect with the Black wire to the circuit board on the – terminal of the 9V marker
<i>DO2</i>	Red female test socket	8	To connect with the red wire to the circuit board on the + terminal of the 9V marker
<i>B1</i>	Lever switch	6	To connect with the brown wire to the circuit board on the SW1 Power marker

N°	5. Evaluation criteria	Scoring Scale
01	Respect of the layout for potentiometer 1	2
02	Respect of the layout for potentiometer 2	2
03	Respect of the layout for potentiometer 3	2
04	Respect of the layout for potentiometer 4	2
05	Respect of the layout for the switch	3
06	Respect of the layout for the red banana jack connector	3
07	Respect of the layout for the black banana jack connector	3
08	Respect of the layout for the 4 feet (2 points per foot)	8
09	Respect of the layout for the circuit board	10
10	Exactness of the wiring for potentiometer 1	2
11	Exactness of the wiring for potentiometer 2	2
12	Exactness of the wiring for potentiometer 3	2
13	Exactness of the wiring for potentiometer 4	2
14	Exactness of the wiring for the switch	2
15	Exactness of the wiring for the red banana jack connector	1
16	Exactness of the wiring for the black banana jack connector	1
17	General aspect of the wiring	13
18	Respect of the connections for the potentiometers (1 point per potentiometer)	4
19	Respect of the connections for the switch	1
20	Quality of the welding	10
21	Cleanliness of the drilling	10
22	General aspect of the product	15
TOTAL POINTS		100



Abi wishes you a good competition!