Handle

Handle can be made of any material and must be horizontal.

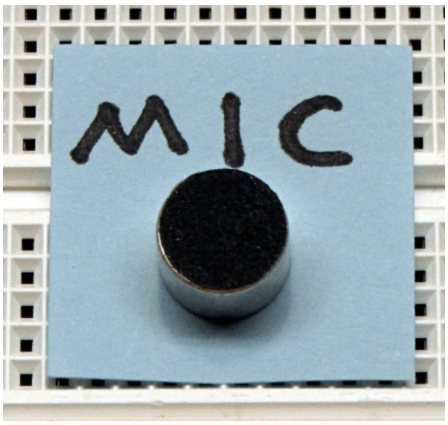
Control panel

Control Panel should be connected horizontally to the handle of the robot.

sample control panel set-up

Microphone

- Microphone must be accessible from above.
- Microphone must be above highest fan tip.
- Microphone must be less than 2 cm below any other mechanical part.
- Microphone must be on a blue background labelled “MIC.”



sample microphone set-up

Blue LED

- Blue LED will light up when the activation frequency is detected by the microphone, but not at any other time.
- Blue LED must be on white background labelled “SA-OK.”

Red flame detect LED

- Red LED will light up when the flame is detected and will turn off when the flame is extinguished.
- Red LED must be on white background labelled “FLAME.”

Kill motor switch

- Kill motor switch controls the control, drive, and sensor systems.

- Kill motor switch must be on bright yellow background labelled "KILL_POWER."
- Kill motor switch should have a ~10 cm extension to grab onto.
- Kill motor switch needs to be disconnected during the inspection.
- Kill motor switch needs to be part of handle assembly.

A possible design for the Kill Motor Plug would have four pins. Two of the pins would power the robot's logic, sensing, and control circuitry, and the other two would power the drive system. When the plug is removed, all robot systems are turned off. For example, a suitable Kill Motor Plug may be constructed from any standard 4-pin square post with pins 1-2 short-circuited and 3-4 short-circuited. Current for the robot's control and sensor circuits may be routed through the Pins 1-2 circuit. The Pins 3-4 circuit would disable the robot's motors; for example these pins may be used to remove power from the motors only or to disable the motor control system.

Possible set-up for kill motor switch

Main power switch

Should be on prominent part of the robot, but not on the handle, and control power to all parts of the robot.

Start button

A start button is allowed for testing, but it must not be on the robot's handle or its control panel. If it is there, is must be labelled and be put onto a green background.