**General Risk Assessment Form**



| **Date:** (1) | **Assessed by:** (2) | **Checked / Validated\* by:** (3) | **Location:** (4) | **Assessment ref no:** (5) | **Review date:** (6) |
| --- | --- | --- | --- | --- | --- |
| **Task / premises:** (7)  Use of a Soldering station. Users should be competent to use a soldering station. | | | | | |

| **Activity** (8) | **Hazard** (9) | **Who might be harmed and how** (10) | **Existing measures to control risk** (11) | **Risk rating** (12) | **Result** (13) |
| --- | --- | --- | --- | --- | --- |
| Before you start | Inhalation of fumes | User | Check for any damage to equipment. If any damage is visible, do not switch the soldering station on and report the damage to the line manager/supervisor. Ensure all electrical equipment has been PAT tested and is in date.  Ensure work area is free from obstructions.  Food and drink is prohibited in labs.  Do not work on live equipment.  Use an earthed mat if the job requires this.  Do not start any work if the LEV is not functioning. Do not use the soldering LEV if it is out of its statutory inspection date. If the LEV does not work then inform the School Safety Advisor or Line Manager/supervisor immediately. Stop draughts interfering with the extraction. Don’t use bench-mounted filtration units that return air to the workroom unless fitted with HEPA filters.  Watch the soldering videos “basic soldering techniques” and “soldering – best practice” on the Physics intranet in the “Poster and Information” section.  <https://www.staffnet.manchester.ac.uk/physics-and-astronomy/health-and-safety/videos/> | Low | A |
| Soldering | Burns | User | Soldering tip can reach 450 °C. Do not touch the heated area of the iron.  Area being soldered will remain hot after the iron has been removed for a short time. Be aware of touching the work area until it has cooled down.  Heat will travel along conducting material, e.g. wire and copper tracks. Take care not to hold any heat conducting components whilst soldering. Use clamps or heatsinks.  If you burn yourself, you should inform someone in the area then run the burn area under cold water for at least 10 mins. If the burn is more serious, contact a first aider immediately. Burns dressing are available in all first aid boxes. The nearest first aid box is …….. | Low | A |
| Soldering | Tool | User | Ensure the iron is clean before you start. Ensure the sponge is wetted before use.  Clean the tip frequently, this reduces smoke, then clean again when the job is finished. | Low | A |
| Soldering | Fumes | User / Area | Always use the fume extractor provided. Ensure the fume hood is located to draw the fumes and smoke away from you into the extraction unit. The maximum capture distance for this unit is …… from the tip of the iron, if the extraction is further away it will not provide adequate protection.  A separate COSHH is required for the solder used.  Users should familiarise themselves with the operation of their soldering extractor: there is a fan speed control on the rear of the unit; LEDs and an audible alarm indicate the need to change the filter. If a filter change is required do not use the LEV. Inform the School Safety Advisor or your Line Manager/Supervisor immediately.  Change the filter every…………. | Low | A |
| Soldering | PPE | User | Wear EN166 safety glasses. Wash hands after use. Ensure arms and legs are covered to avoid burns form “spitting” solder flux. | Low | A |
| Soldering | Lead poisoning / Rosin – respiratory issues and sensitiser | User | Be aware that whilst lead solder is not normally used, there may be lead present if you are repairing an older piece of equipment. Extra care should be taken to avoid exposure to lead. Ensure you wash your hands as soon as the soldering job is finished. Avoid biting nails.  Lead free solder should be used at all times unless there are exceptional reasons for using leaded. Do not use lead based solder if you are pregnant.  Exposure to rosin can cause eye, throat and lung irritation, nose bleeds and headaches. Repeated exposure can cause respiratory and skin sensitisation, causing and aggravating asthma. Use rosin-free solder when possible. | Medium | A |
| Soldering | Fatigue | User | Ensure the seating and lighting is adequate for your needs. If the job is taking longer than expected take regular breaks. | Low | A |
| Soldering | Fire | User / Area | Ensure you work on a fire retardant surface.  Be aware of the location of the nearest fire extinguisher. | Low | A |

I confirm that I have read this Risk Assessment and that I understand the hazards and risks involved and will follow all of the safety procedures stated.

| **Name (please print)** | **Signed** | **Line Manager / PI countersignature** | **Date** |
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