

***Small is beautiful, but  
... terribly complex!  
... terribly expensive!***

***We all have to take great  
care!***

## **Lab matters**

- 1. A few electrical points*
- 2. Miscellaneous points about the LCO labs*

Simon Levasseur, Nelson Landry  
Nathalie Bacon  
2021-01-07

## **LCO lab organization**

*Sharing knowledge and good practices !*

# The CASES

**Today's concern -> Your electrical setup setting. (Because small setups grow...)**

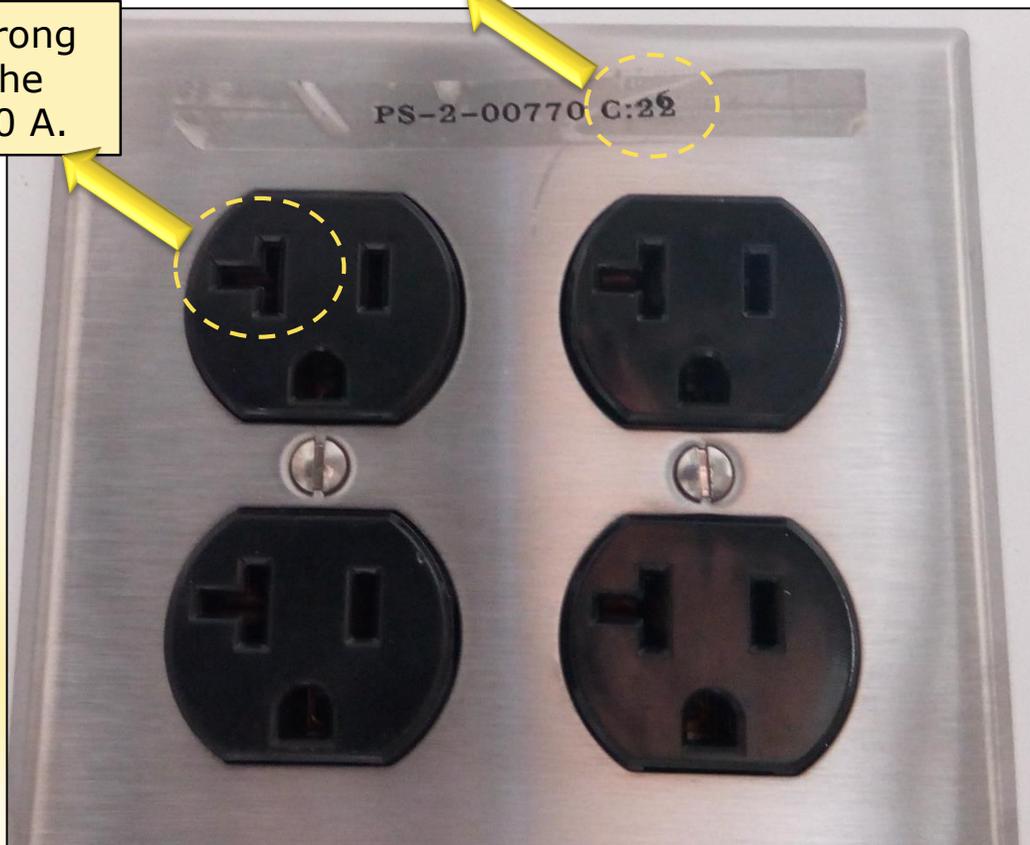
- Distribute power load among available circuits
- Organize cables (and patchcords)
- Avoid the «christmas tree» setting

(A *power bar* plugged to another *power bar*, again plugged to another power bar... )

## CASE #2 : Power cables of 63 GHz RTO

C26 : Circuit 26 – There might be another outlet on the same circuit in your lab. Check if anything is connected.

This type of prong indicate that the circuit is for 20 A.



Some outlets could be connected to 2 circuits. There will be 2 sequences of numbers. (Left and right)

## The case of the RTOs



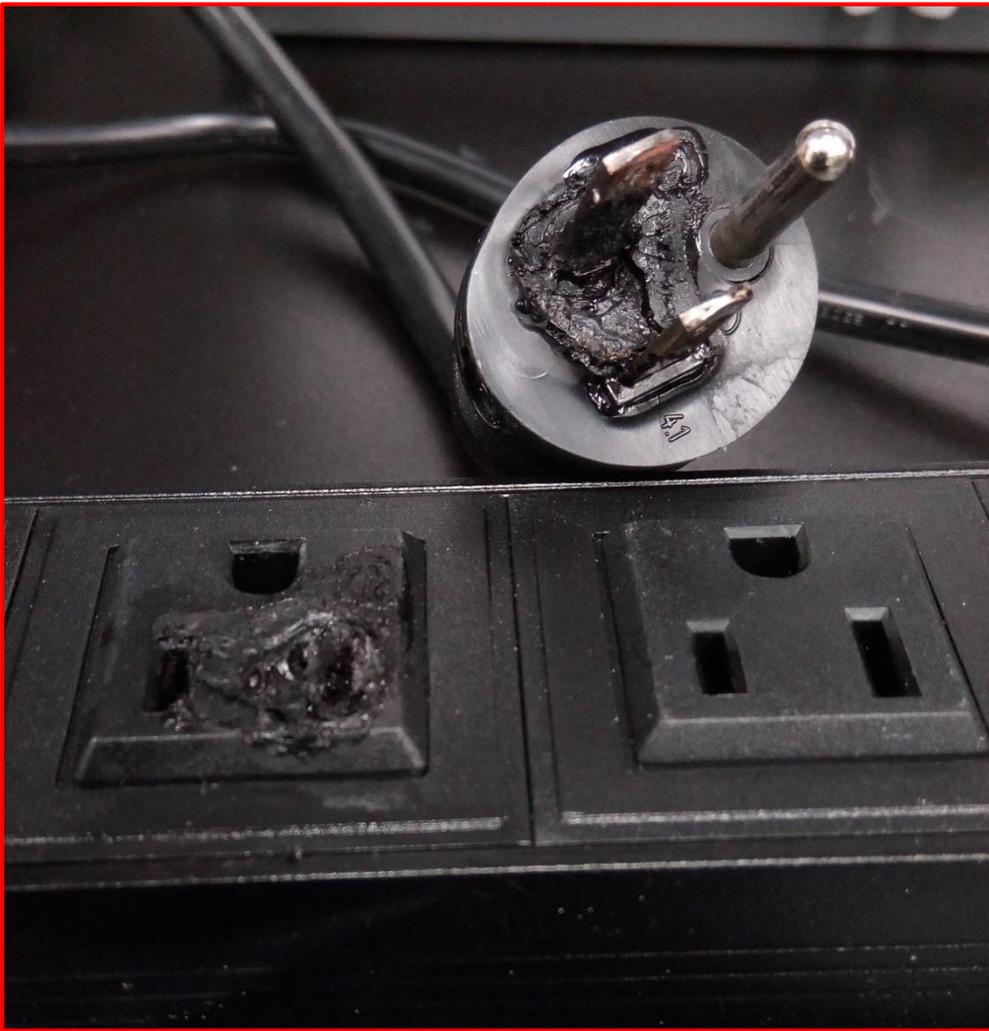
### Do NOT use with 63GHz RTOs:

- Power strip
- Extension

### What to do:

- Plug directly in a **wall or ceiling outlet**. Do not put any other equipment on the same circuit.
- If in the middle of the lab, use the ceiling outlet. Power cord is 8 feet long.

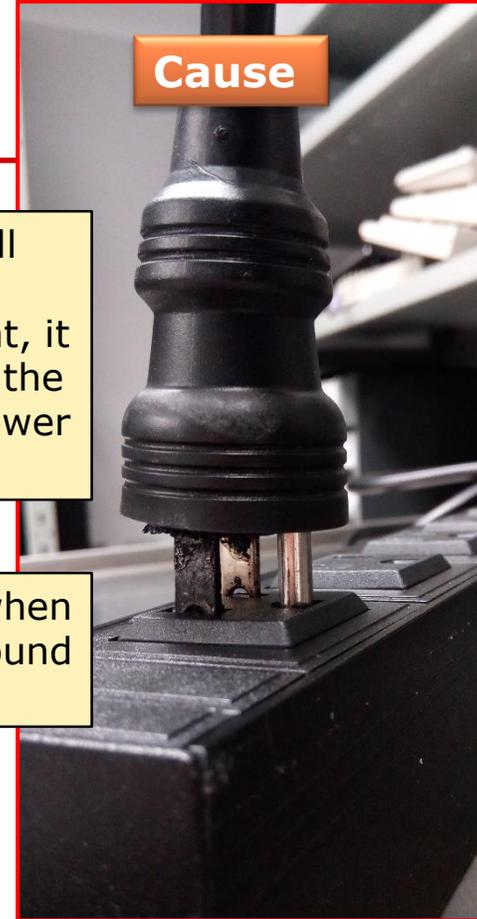
## CASE #1 : 63 GHz RTO power cord



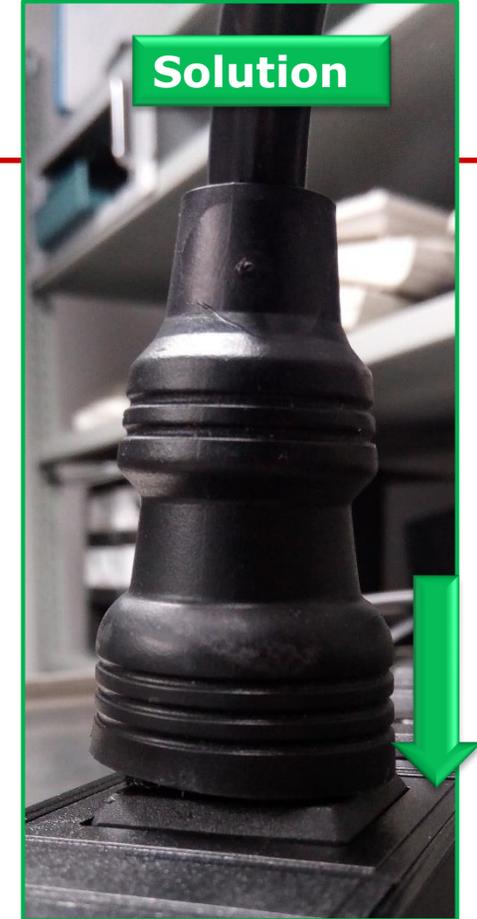
Due to the small contact surface and high current, it heated up, and the plug and the power strip melted !

Be careful when you move around equipments!

### Cause



### Solution



### Do NOT use with 63GHz RTOs:

- Power strip
- Extension

### What to do:

- Plug directly in a **wall or ceiling outlet**. Do not put any other equipment on the same circuit.
- If in the middle of the lab, use the ceiling outlet. Power cord is 8 feet long.



## 2. Miscellaneous points about the LCO labs

---

### 1. Covid – Not again !

1. Do not focus on how « painful » it is to get new rules again.
  - **Take good habits, stick to them, and focus on your work – more fun.**  
(Examples)
2. Current rule about the **mask**.
  - All shared areas -> wear mask at all time
  - 2 or more persons in a lab ->
    - If both work at > 2m -> Fabric/personal mask is ok.
    - If both work at around 2m or less -> PROCEDURAL MASK
  - Alone in a lab ? -> You can work without one, but be ready to put it back on if someone enters.
3. Be careful today about any UL and COPL update, if any...

## 2. Miscellaneous points about the LCO labs

---

### 2. Teaching lab equipment in Pouliot

1. Before borrowing anything from the teaching lab in Pouliot in order to bring them to the LCO Labs in COPL,
  - **Please notify Simon Levasseur**
    - **Why?**
      - Borrowed equipment will be registered
      - Teaching equipment and research equipment have to be separated. (funding, use, etc)
      - Any damage equipment must be reported, repaired, and ready for the next semester.

## 2. Miscellaneous points about the LCO labs

---

### 3. EPIDEMIC : Everything is urgent !!!!

*All your projects are important, and the goal is to help all of you as fast as possible.*

- BUT professors set priorities.

### A few hints about how to make efficient short requests

1. Keep «urgent words » for « real urgent cases »; so the day your case will be really urgent, it will be given extra attention.
2. Describe just what you really need.  
(Analyze your needs first. Read carefully. Anticipate what should happen at each step.)
  1. What ?
  2. Which specs are really important, relevant ? (Wavelength range, Max power, transmission, etc)
  3. When do you need it ? (approx.)
  4. For how long ? (approx)

## 2. Miscellaneous points about the LCO labs

---

### 4. Requests / Need something ?

#### 1. Self-service in the storage (00518)

- Current things are available in the storage: tape, CLETOP tapes, batteries, etc. You do it yourself. It is part of being autonomous in a lab. You are not a visitor !

#### 2. What to do if you need help ? (To whom should you send your requests?)

Simon L or Nelson or Nathalie ?

##### a. If you have started working with one person, keep that same person.

- If the problem cannot be solved by that person, it will be discussed, transferred, or whatever is necessary.

##### b. \*\*\*TEAM: LAB matters / Channel: **A- Online help for short requests**

*b. Advantages:*

- *you could be answered by anyone working from home.*
- *a different person will be responsible to answer requests posted in that channel, at different time slots.*

#### What NOT to do ?

1. Do not send 3 separate requests. This is the less efficient way !

## 2. Miscellaneous points about the LCO labs

---

### 5. Reservation for setups

1. Please keep the **Shedule Tab** updated with your real use of the setup.
  - **General rules:** (*automatic setup*)
    1. Prepare before your time slot
    2. Make full time use of the setup during your time slot
    3. Clean the setup. Remove your things.
    4. Notify the next person after you.

### 6. Trainings

They will re-start next week.

Those who haven't completed the polishing training, please contact me.