R2D2 Modular control unit (MCU)

> [!NOTE]
>
> - My MKIII R2D2 is still **work-in-progress** therefore i some changes in the design are possible!

General

Motivation

- There are many good solutions for organizing all the control electronics for the whole selection of R2D2 bodys.
- However, none of these solutions fully met my requirements, so I designed my own interpretation of a modular control unit `the brain`.
  - Special thanks to everyone who inspired me, particularly John van Ohrs with his [R2D2 modular electronics panel by jfmvoers - Thingiverse](#) and Tim Eebel with his [MarkIII Hinged Electronics Panel](#).

Requirements

- The module must be completely removable as a single unit to allow work on it at the workbench.
  - Everything must be possible without any special tools, i.e., plug-and-play instead of screws (almost achieved)!
- To allow access when installed, the entire unit must be hinged (no tools required for this step).
- The design must be modular, allowing it to be adapted to specific requirements.
- The design must be based on a grid (60x60mm) and offers panels ranging from `1x1` to `1xX`.

Used Mods & Kudos

> [!NOTE]
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> - The following list contains an overview of the mods that I currently use in my Droid. It is not mandatory to use them as well, but I can confirm that they are compatible with each other.

- [Battery Tray for Baddeley MKIII Astromech](#) by [Jason Charlton | Printables.com](#) (he also has many other great mods!)
- Dome Motor Mount by [Gonz Pousada J Luis](#).
- Both Luis and Jason have other fantastic mods, and you should also check out [Jason's YouTube Channel](#).

- A special thanks to Ben from Printed Droid, who provided me with the electronic components, and to Norbert A. Richartz, who is developing the AstroCan System and BetterDuinoFirmwareV4. He answered nearly all my questions and integrated some cool features.

Images