

# User manual parallelization box

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## I. Safety instructions

- If one of the LEDs on the paralleling box lights up, this means that 230VAC voltage is present on the associated input connector. If one of the connectors is not wired and its LED is still lit, this means that there is also 230VAC on the non-wired connector. Please lower the circuit breakers on the paralleling box before connecting a device to avoid the risk of electric shock.
- Never disconnect a power socket without lowering the associated circuit breaker on the paralleling box and switching off the associated powerbank. Risk of electric shock
- Do not put your fingers in the sockets (risk of electric shock)
- Do not immerse the box
- The use of the paralleling box does not dispense with the use of the earth spike on each powerbank.
- Beware of heavy lifting (safety shoes and electrically insulated protective gloves for handling)

## II. Device presentation

### 1. General characteristics of the device

This device is a parallelization box that enables Flywatt zero emission generators to be linked in power and capacity. It comes in two boxes, a 2-pack for connecting two devices and a 6-pack for connecting up to 6 devices.

### 2. Technical characteristics of the device

| Caractéristiques            | Box of 2  | Box of 6  |
|-----------------------------|---|---|
| <b>Electrics</b>            |   |   |
| <b>Output</b>               | 1x Maréchal DS6 90A<br>or 1x P17 63A output<br>or 1x 125A P17 single-phase          | 2x sorties 90A Maréchal<br>or 2x 125A P17 single-phase output<br>or 1x Powerlock T+P+N (400A)   |
| <b>Input</b>                | 2x 50A 230V AC single-phase sockets   | 6x 50A 230V AC single-phase sockets   |
| <b>Electric protections</b> | - INPUT : 2P Type C iC60N 10kA 50A circuit breakers for protection of Input sockets | - INPUT : 2P Type C iC60N 10kA 50A circuit breakers for protection of Input sockets<br>- OUTPUT : Earth Leakage Circuit Breaker 80A 30mA 2P Type AC (By Marechal socket) OR Earth Leakage |




|                      |  |   |
|----------------------|--|---|
|                      | - OUTPUT : Earth leakage circuit breaker 80A 30mA 2P Type AC (per Marechal socket) OR Earth leakage circuit breaker 125A 30mA 2P Type AC | Circuit Breaker 125A 30mA 2P Type AC OR Earth Leakage Circuit Breaker 125A Type AC with adjustable selectivity Vigirex RH21M 0.03A to 0.3A 0.06s. |
| <b>Physical</b>      |  |   |
| <b>Dimensions</b>    | 21 x 48 x 19 cm  | 40 x 32 x 32 cm   |
| <b>Weight</b>        | 7 kg   | 25 kg   |
| <b>Physical</b>      | Shock-proof rubber, waterproof, black Handles, stackable Voltage presence indicators per socket  | Shock-proof rubber, waterproof, black Handles, stackable Voltage presence indicators per socket   |
| <b>Environnement</b> |  |   |
| <b>Waterproofing</b> | IP54   | IP54  |

|                                 | Box of 2            |                         |                          | Box of 6            |                          |                           |
|---------------------------------|---------------------|-------------------------|--------------------------|---------------------|--------------------------|---------------------------|
| Output                          | 1x 90A maréchal DS6 | 1x 63A P17 single-phase | 1x 125A P17 single-phase | 2x 90A maréchal DS6 | 2x 125A P17 single-phase | 1x Powerlock T+P+N (400A) |
| <b>Max power/socket</b>         | 21kW                | 15 kW                   | 29 kW                    | 21 kW               | 29 kW                    | 92 kW                     |
| <b>Max box power</b>            | 21 kW               | 15 kW                   | 22 kW                    | 42 kW               | 58 kW                    | 58 kW                     |
| <b>Output circuit breakers</b>  | 80A                 | 63A                     | 125A                     | 2x 80A              | 2x 125A                  | 1x 125A                   |
| <b>Differential selectivity</b> | 30mA                | 30mA                    | 30mA                     | 2x 30mA             | 2x 30mA                  | Adjustable (30mA to 5A)   |
| <b>Circuit breakers</b>         | 2x 50A              | 2x 50A                  | 2x 50A                   | 6x 50A              | 6x 50A                   | 6x 50A                    |

|  | Box of 2 |       |       | Box of 6 |       |       |
|--|----------|-------|-------|----------|-------|-------|
| Number of connected devices            | 1        | 2     | 3     | 4        | 5     | 6     |
| <b>Theoretical Pmax Flywatt output</b> | 11kW     | 22 kW | 33 kW | 44 kW    | 55 kW | 66 kW |

### III. Wiring

#### 3. Wires

| XLR male  | XLR female  | Adapter XLR mâle   | Adapter XLR female  | SUD male  | SUD female  |
|---|---|--|---|---|---|
|  |  |  |  |  |  |
| <b>Com1</b>   | <b>Com2</b>   | <b>Com1</b>  | <b>Com2</b>   | <b>Com3</b>   | <b>Com4</b>   |

#### 4. Wiring steps - switching on

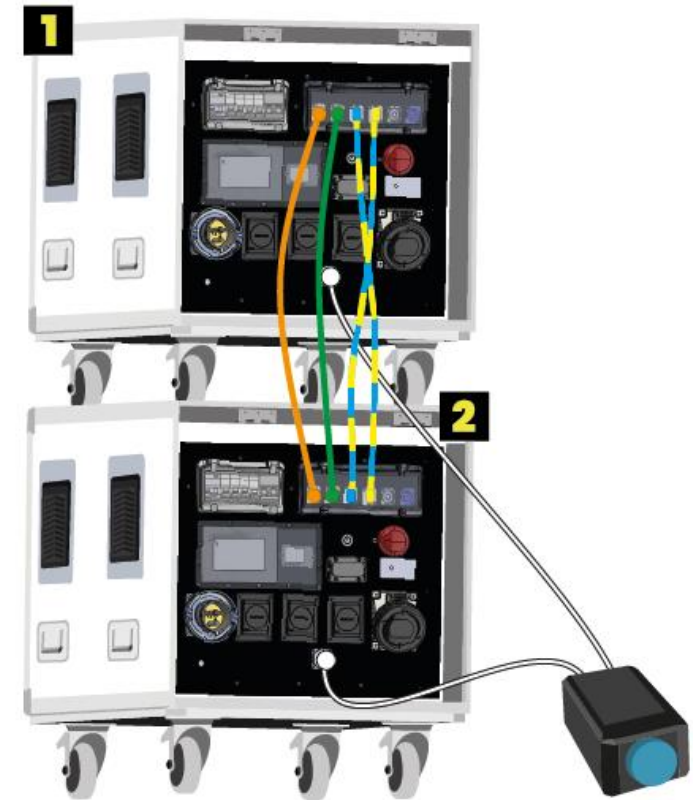
- 1- Lower all the circuit breakers on the parallelization box
- 2- Connect the communication cables between the powerbanks according to the diagrams above
- 3- Connect the power cables from the Weiland connector on the powerbank to the parallelization box.
- 4- Switch on the powerbank by pressing the power button on the powerbank
- 5- Once the powerbanks have started up, turn up the circuit breakers on the parallelization box.

#### 5. Wiring steps – switching off

- 1- Lower all the circuit breakers on the paralleling box
- 2- Switch off the powerbanks by pressing the power button
- 3- Disconnect the power cables from the Weiland connector on the powerbank to the paralleling box.
- 4- Disconnect the communication cables between the powerbanks

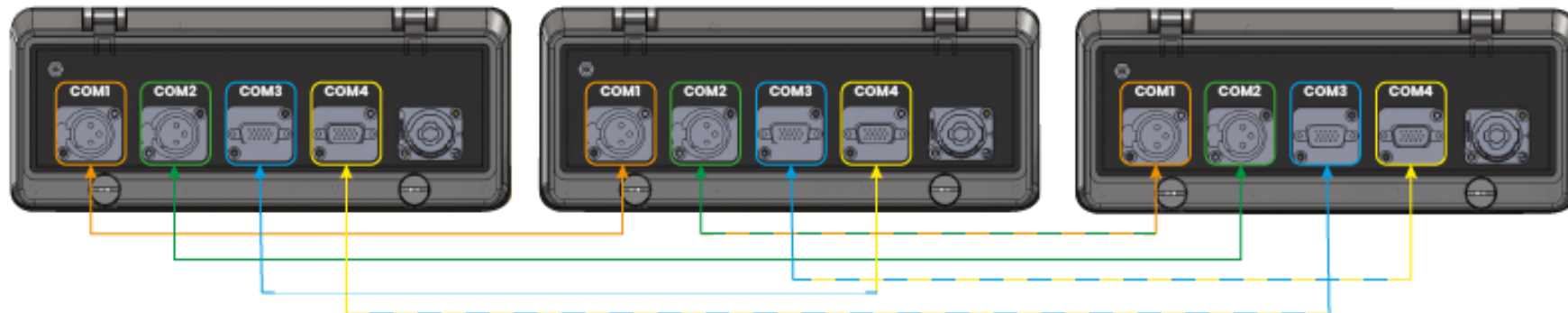
6. Parallelize 2 Powerbanks

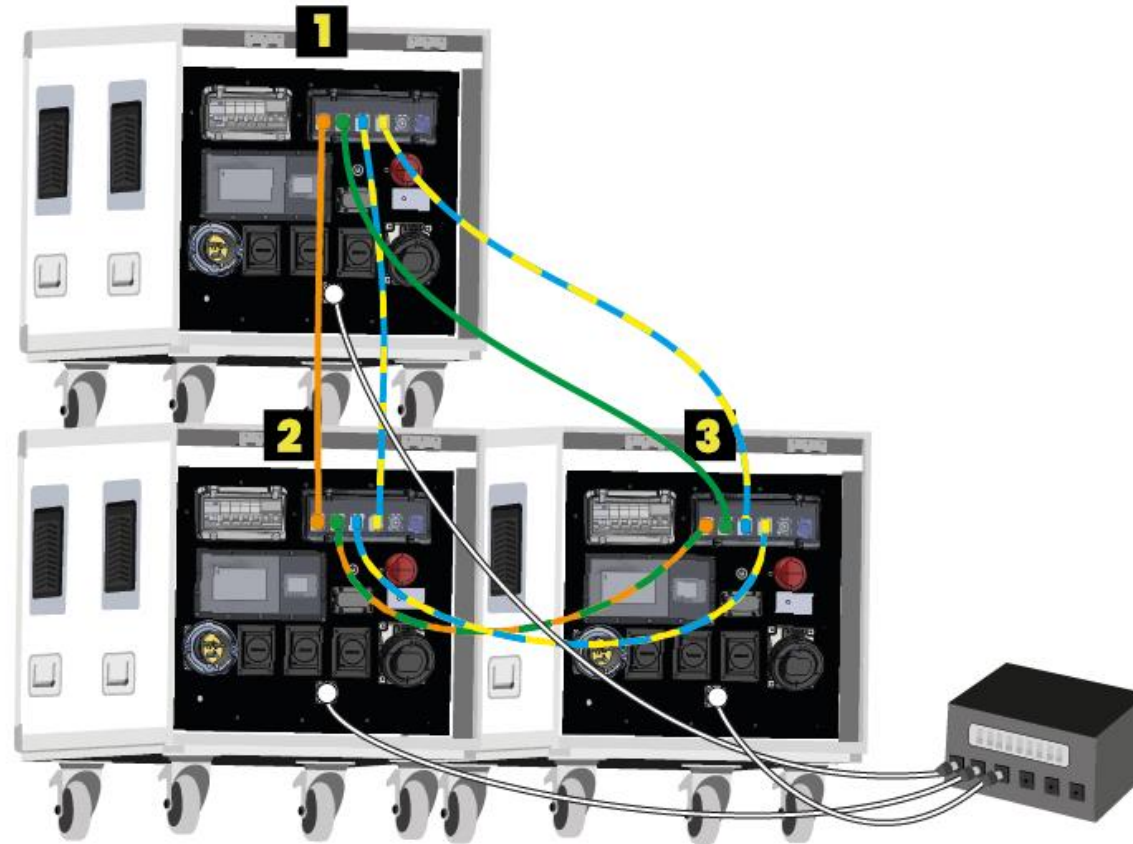
| Cable name        | Device 1 | Device 2 |
|-------------------|----------|----------|
| XLR mâle-mâle     | Com1     | Com1     |
| XLR female-female | Com2     | Com2     |
| SUD mâle-female   | Com3     | Com4     |
| SUD female-mâle   | Com4     | Com3     |



**7. Parallelize 3 Powerbanks**

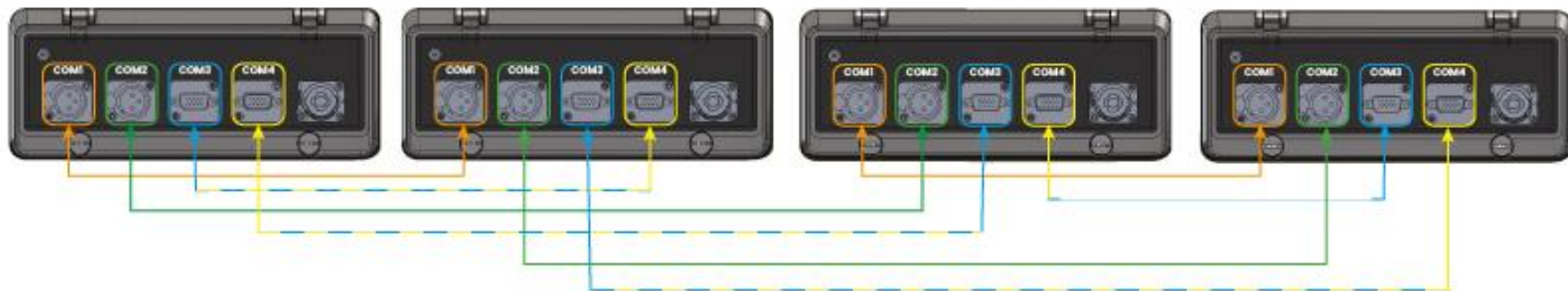
| Cable name          | Device 1 | Device 2 | Device 3 |
|---------------------|----------|----------|----------|
| XLR mâle-mâle       | Com1     | Com1     |          |
| XLR femelle-femelle | Com2     |          | Com2     |
| XLR femelle-mâle    |          | Com2     | Com1     |
| SUD mâle-femelle    | Com3     | Com4     |          |
| SUD mâle-femelle    |          | Com3     | Com4     |
| SUD femelle-mâle    | Com4     |          | Com3     |



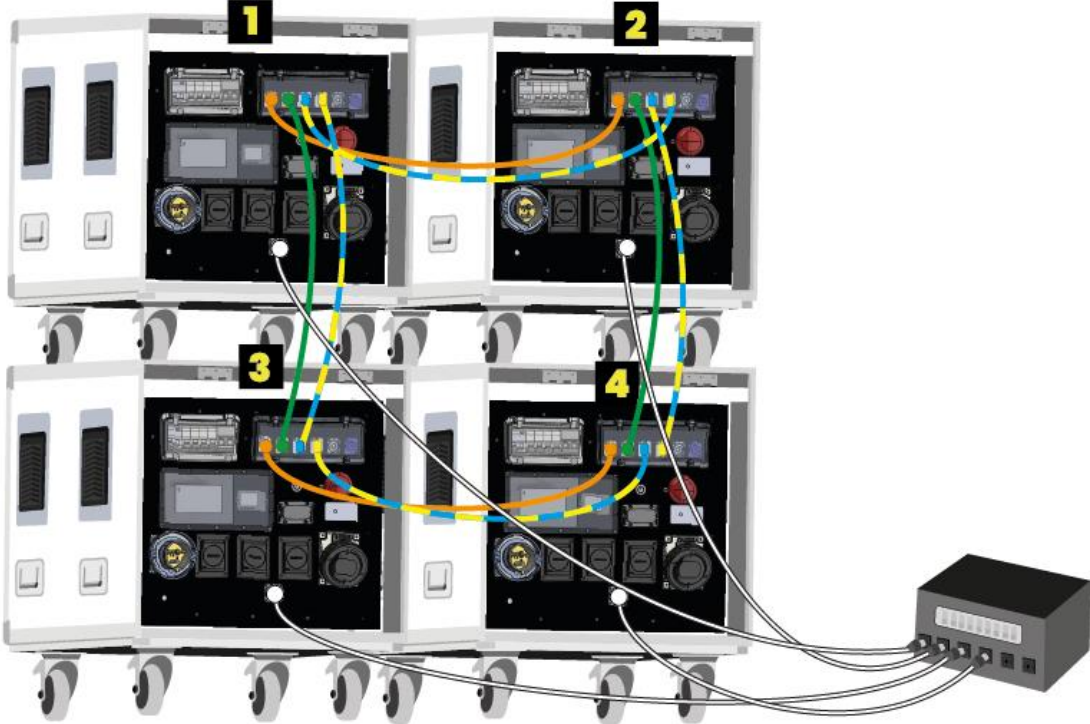


**8. Parallelize 4 Powerbanks**

| Cable name          | Device 1 | Device 2 | Device 3 | Device 4 |
|---------------------|----------|----------|----------|----------|
| XLR mâle-mâle       | Com1     | Com1     |          |          |
| XLR mâle-mâle       |          |          | Com1     | Com1     |
| XLR female - female | Com2     |          | Com2     |          |
| XLR female - female |          | Com2     |          | Com2     |
| SUD mâle- female    | Com3     | Com4     |          |          |
| SUD mâle- female    |          | Com3     |          | Com4     |
| SUD female -mâle    | Com4     |          | Com3     |          |
| SUD female -mâle    |          |          | Com4     | Com3     |

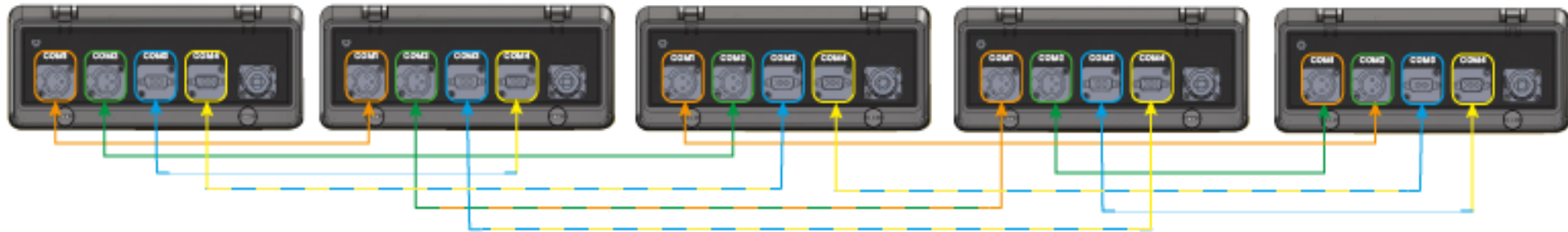


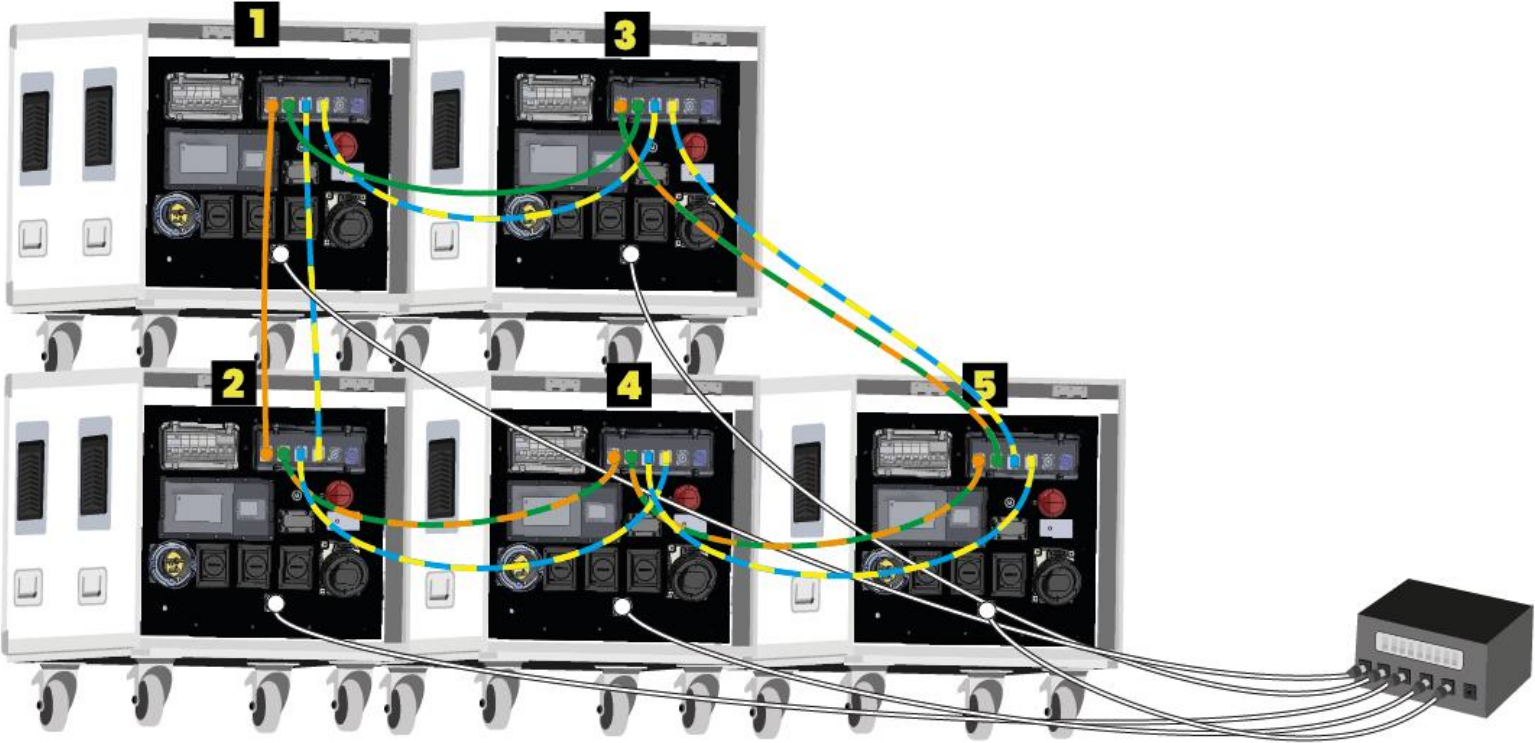




**9. Parallelize 5 Powerbanks**

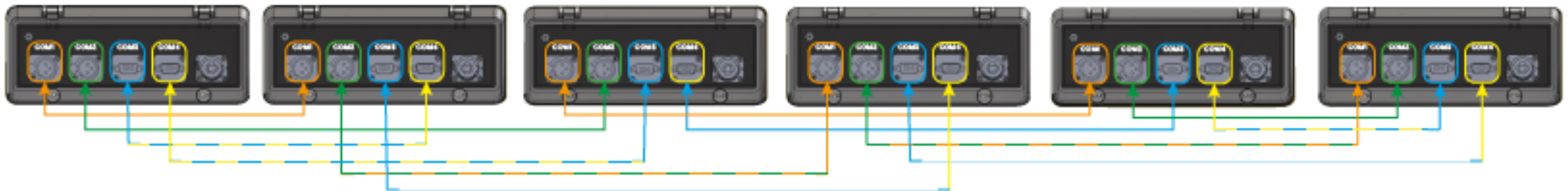
| Cable name          | Device 1 | Device 2 | Device 3 | Device 4 | Device 5 |
|---------------------|----------|----------|----------|----------|----------|
| XLR mâle-mâle       | Com1     | Com1     |          |          |          |
| XLR female - female | Com2     |          | Com2     |          |          |
| XLR female -mâle    |          | Com2     |          | Com1     |          |
| XLR female -mâle    |          |          |          | Com2     | Com1     |
| XLR mâle- female    |          |          | Com1     |          | Com2     |
| SUD mâle- female    | Com3     | Com4     |          |          |          |
| SUD mâle- female    |          | Com3     |          | Com4     |          |
| SUD mâle- female    |          |          |          | Com3     | Com4     |
| SUD female -mâle    | Com4     |          | Com3     |          |          |
| SUD female -mâle    |          |          | Com4     |          | Com3     |





**10. Parallelize 6 Powerbanks**

| Cable name          | Device 1 | Device 2 | Device 3 | Device 4 | Device 5 | Device 6 |
|---------------------|----------|----------|----------|----------|----------|----------|
| XLR mâle-mâle       | Com1     | Com1     |          |          |          |          |
| XLR female- female  | Com2     |          | Com2     |          |          |          |
| XLR female - female |          |          |          |          | Com2     | Com2     |
| XLR female -mâle    |          | Com2     |          | Com1     |          |          |
| XLR female -mâle    |          |          |          | Com2     |          | Com1     |
| XLR mâle-mâle       |          |          | Com1     |          | Com1     |          |
| SUD mâle- female    | Com3     | Com4     |          |          |          |          |
| SUD mâle- female    |          | Com3     |          | Com4     |          |          |
| SUD mâle- female    |          |          |          | Com3     |          | Com4     |
| SUD female -mâle    | Com4     |          | Com3     |          |          |          |
| SUD female -mâle    |          |          | Com4     |          | Com3     |          |
| SUD female -mâle    |          |          |          |          | Com4     | Com3     |



When parallelizing 6 devices, we recommend that you place them as follows to make wiring easier

