**Power board and arduino shield bodges**

How it’s setup on nostromo:

|  |  |  |  |
| --- | --- | --- | --- |
| **line** | **Power board header** | **Arduino shield header** | **Arduino pin** |
| Radio power control | Vsense | VBAT | A4 |
| Servo power control | Raux | RAUX | A3 |
| Vbat control | Rmain | R5 | A2 |
| 12v control | R12v | R12 | A1 |
| Servo pwm | Servo | SRVO | A0 |
| gnd | Gnd | GND | GND |
| +5 | 5v | 5v | 5v |
| NC | 9v | Vin | Vin |

How it will be wired on new power boards and new arduino shields:

|  |  |  |  |
| --- | --- | --- | --- |
| **line** | **Power board header** | **Arduino shield header** | **Arduino pin** |
| Radio power control | Sense | unwired | A4 |
| Servo power control | 6v | RAUX | A3 |
| Vbat control | Not labeled | unwired | A2 |
| 12v control | 12v | R12 | A1 |
| Servo pwm | Servo | SRVO | A0 |
| gnd | Gnd | GND | GND |
| +5 | vin | 5v | 5v |
| vbat | Not labeled | VBAT | n/a |

Some additional notes on the new design:

* Power board:
  + Vbat must be jumped to pin next to vin
  + Vbat control (between 12v and 5v pins) must be wired to pin 1 of its optorelay
  + Radio power control must be manually wired on the power board (to a connector in the proto area along with 5v)
  + The optorelay for 6v must be doubled up for current carrying capacity, and it’s associated resistor (vertical just to the left) should be halved
* Arduino shield:
  + Radio power control and vbat control must be manually wired on arduino shield
  + There’s a transistor on the 12v control line that can be bypassed (arduino shield)

Arduino shield notes:

* motor driver is wired to serial uart 2
* gumstix is wired to serial uart 1
* tmp102 on i2c bus
* sbus wired to uart3
* current sensor should be wired to A14