**Icarus ONE**

SPI Rerouting

|  |  |  |
| --- | --- | --- |
| **SD Shield (Uno Compatible)** | **SPI Pin** | **Arduino Mega** |
| 10 | SS | 53 |
| 11 | MOSI | 51 |
| 12 | MISO | 50 |
| 13 | SCK | 52 |

GPRS Shield Software Power Pin Rerouting

|  |  |
| --- | --- |
| **GPRS Shield** | **Arduino Mega** |
| 9 | 22 |

Sensors

|  |  |
| --- | --- |
| **Internal** | **External** |
| Adafruit 11 DOF | MQ Gas Sensors |
| Adafruit GPS Breakout | DHT22 |
| DS18B20 | Light |

Cameras

|  |  |
| --- | --- |
| Logitech ???? | Up-facing |
| Logitech C615 | Down-facing |
| PiCam V2 | Out-facing |

Antennae

|  |  |
| --- | --- |
| GPS | Up-facing |
| GPRS | Up-facing |
| RTTY | Down-facing |

Tutorials Used

|  |  |
| --- | --- |
| Arduino RTTY |  |
| UKHAS |  |
| Dave Aikerman (MANY) |  |
| Adafruit DOF |  |
| Adafruit GPS |  |
| (?Sparkfun?) HAB Project - Heater |  |

Custom Boards

|  |  |
| --- | --- |
| 12V Voltage Regulator |  |
| 5V Voltage Regulator |  |
| Relay Junction |  |
| 5V Power Distribution |  |
| RTTY Radio Transmitter |  |
| DOF/GPS & LED/Switch Center |  |
| Heater |  |

Other Considerations to Mention:

* Weight
* Hot glue
* Balloon
* Parachute
* Hacking the PITS/RTTY setup
* SdFat library
* Adafruit Unified libraries
* Datasheets
* AdHoc WiFi network for debugging