

# DIY LOGGER

## Description

The DIY "Do it yourself" logger is the simplest version on the market. It extends a Davis console capabilities with the ability to record data like other data loggers on the market, but it provides a Universal Asynchronous Receiver-Transmitter (UART) universal communication interface for advanced configurability with many devices as demonstrated below.

The DIY logger utilizes an ADUM1201 insulator system which serves as a protective function and allows the use of different voltage levels with the communication interface. The internal voltage of the console is 3.0V and is not directly involved with the transmission of data. The UART can be used in TTL (5V) and CMOS (3.3V) configurations for increased versatility. A 3.3V voltage regulator has been installed for CMOS operations.

The DIY Logger has a 5V output and a special cable to connect to the console's DC socket to minimize cables running to the console (one for data, the other for power). This configuration works well with the console's internal battery backup. In the event of a power failure, the batteries are used to power the console and the memory in the data logger. New batteries in the console typically last a minimum of 3 months in the absence of power.

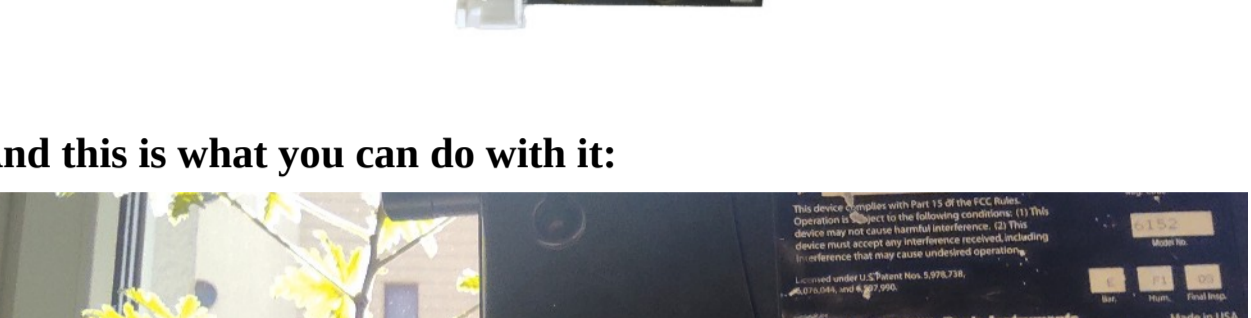
## Setup

To install the DIY logger in to your Pro2, Vue, or Envoy devices, you must power down your device and remove the batteries. Once powered down then plug the DIY logger into the communication port and plug the included power jack into console power jack. Next you will likely want to attach some type of computer to the DIY logger as shown below. For this you will need to connect 4 wires: 3.3V, TX, RX, GND. To supply power to the console, you need to connect 5V to the "5V Power" connector and ground to "Power GND".

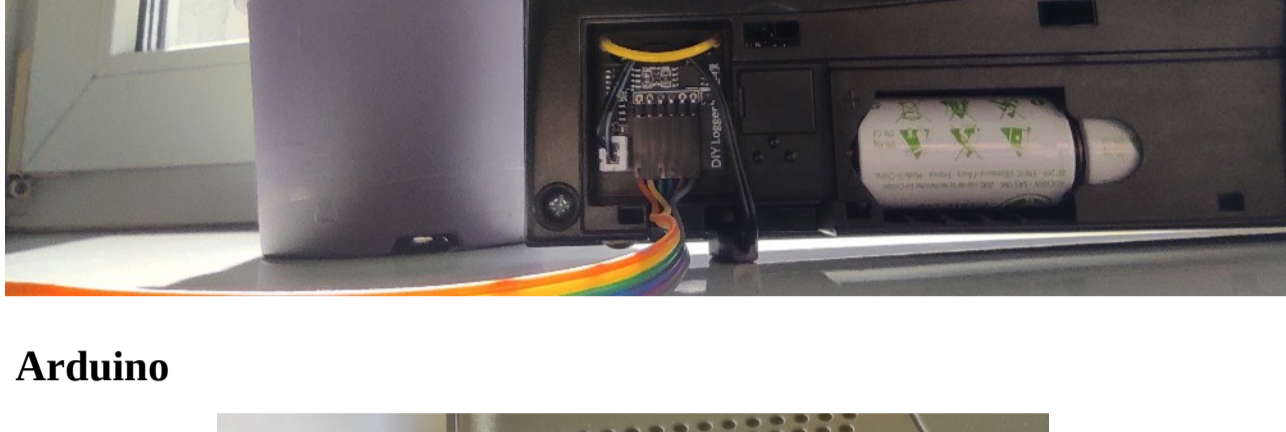
For simplicity and the elimination of needing both a 5V and 3.3V power supply the DIY Logger will allow you to connect 5V to the "5V Power" connector, the built-in voltage regulator will lower the voltage to 3.3V and provide 3.3V to the communication circuit. However, the 5V and 3.3V inputs do not share a common ground. If you rely on using the 5V power supply only the include "Power GND to GND" must be in place. Please refer to the attached circuit diagram for further understanding.

We hope that with our DIY Logger your passion and hobby for weather observation will provide further enjoyment.

## This is what you get:



## And this is what you can do with it:



## Arduino



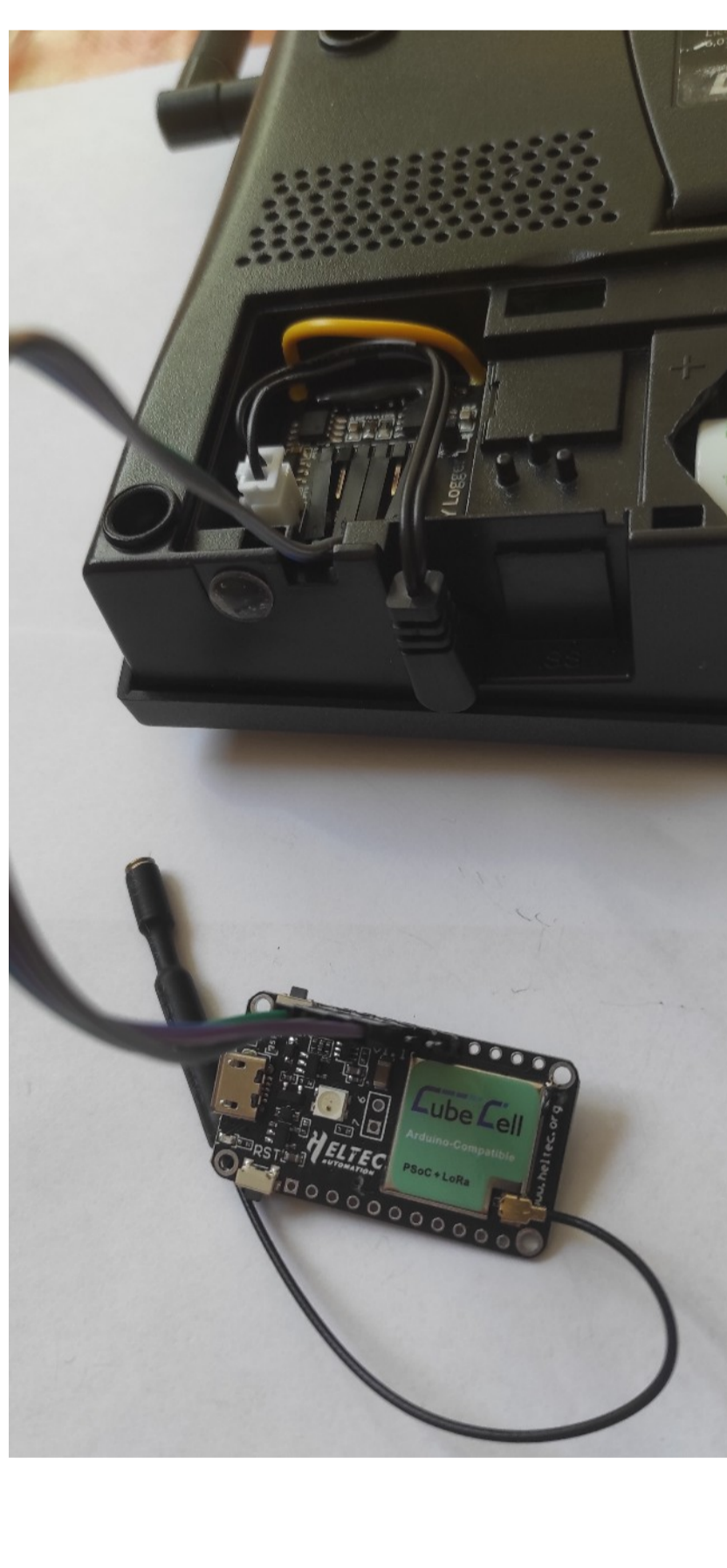
## Raspberry Pi



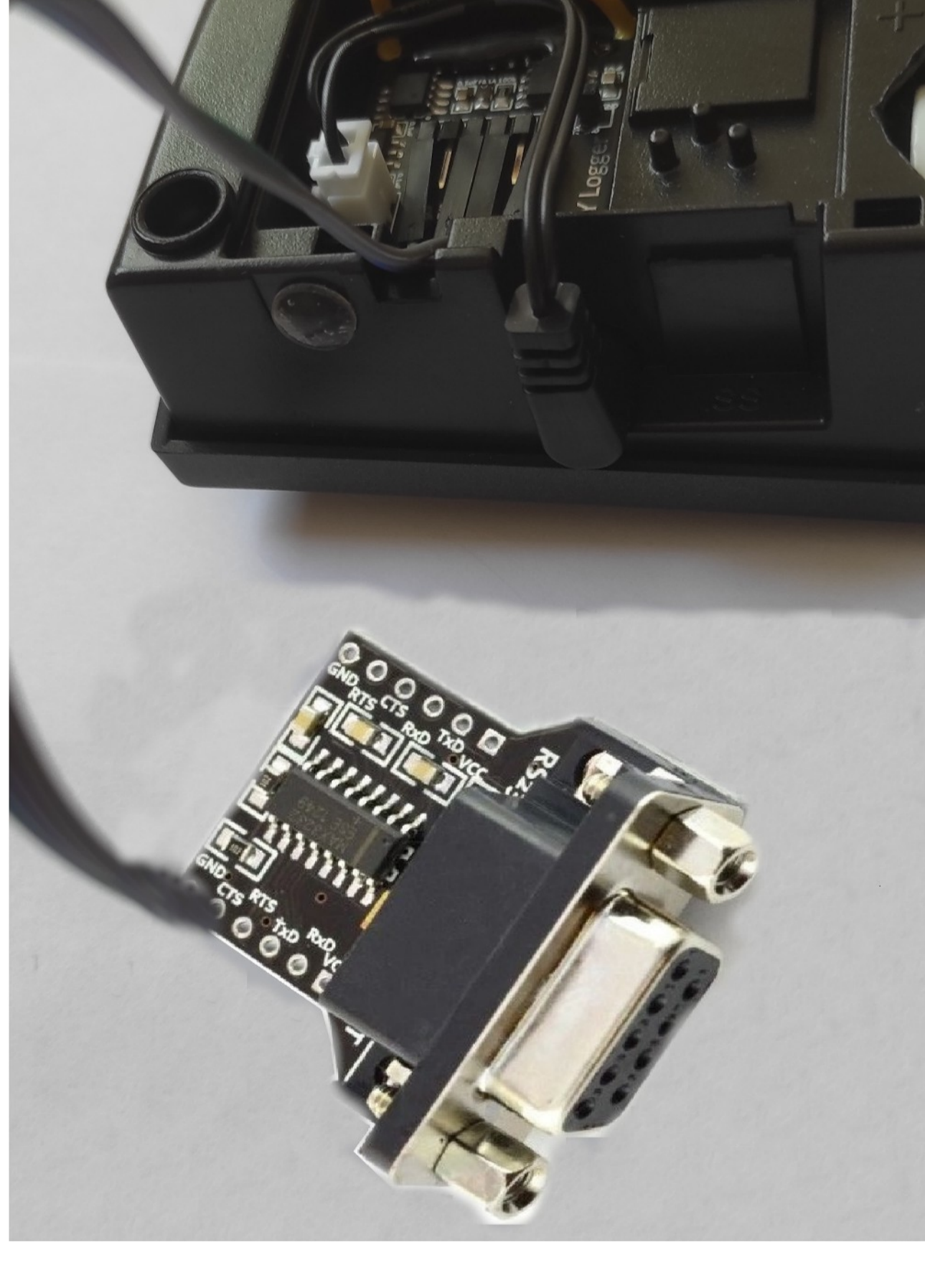
## USB logger



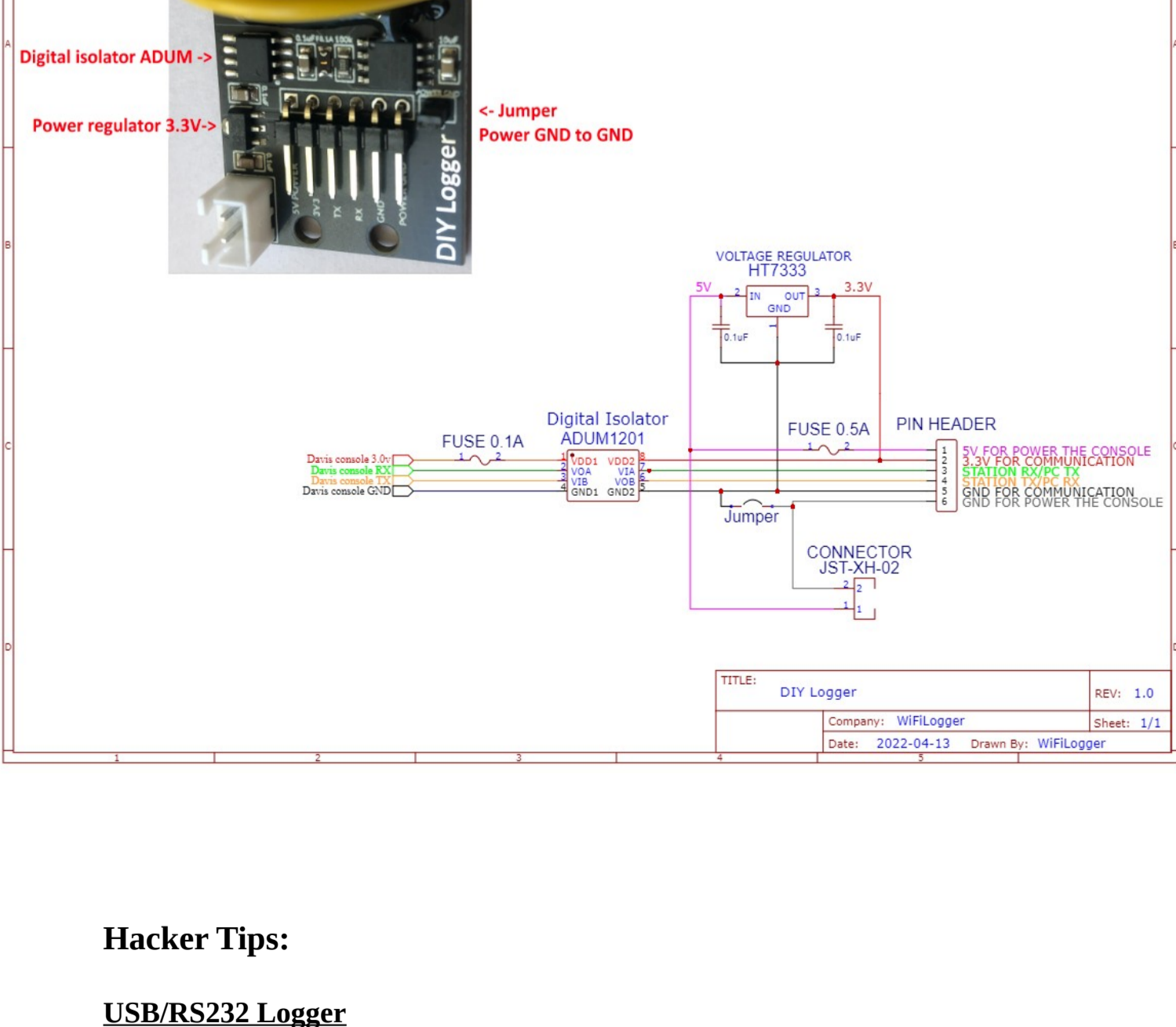
## LoRa



## RS232



## Scheme



## Hacker Tips:

### USB/RS232 Logger

WeatherLink® PC software will not work with USB, or RS232 while you don't make proper config of RS232 connector for hardware control.

If you would like to prepare USB,RS232 logger, then you have to connect (short) lines:  
DTR – DSR  
RTS – CTS

If your USB converter will not have those pins exposed, then you have to find another one.

The USB-UART chips we recommend are: CP2102, CH340. Please beware of fake chips.

