

Program Notes – LoRa Tracker EchoGPS

There are two Echo programs, one for a serial attached GPS and another for a Ublox I2C GPS. Serial defaults to 9600baud, for I2C an address of 0x42 is the default.

The serial Echo GPS program can send commands for a Ublox GPS to configure it out of a default GLONASS set-up, ensure the following option is selected in the Serial Echo program;

```
#define UBLOX                //comment in if using a UBLOX GPS
```

The I2C Echo program assumes a Ublox GPS is connected by default and sends the commands to configure it out of the default GLONASS set-up.

The I2C program requires the use of the Flash-5 library;

<https://github.com/mikalhart/Flash/releases>

There is an issue with the Flash-5 library, changes to the Arduino IDE since the Library was published cause a compile error; *'prog_char' does not name a type*. The solution to this is to edit the Flash.h file in the Flash-5 Library. Add the following lines in Flash.h, just after the `#include <avr/pgmspace.h>`:

```
#if ARDUINO >= 150
typedef char prog_char __attribute__((__progmem__));
#endif
```

The programs read the output of the GPS and send it without alteration to the Arduino console port. Thus you can see all the GPS output and check GPS is working. In addition the progress of a GPS acquiring a fix can be checked by observing the output of the GPGSV sentences, these list the number of satellites connected and the signal levels.

Stuart Robinson
August 2016.