

Tutorial on Using SKM53 GPS with Arduino



By doing this tutorial you should have some sample output like this:

Latitude : 30.330136 :: Longitude : 31.057404

Latitude : 30.330092 :: Longitude : 31.057339

Latitude : 30.330059 :: Longitude : 31.057275

Latitude : 30.329994 :: Longitude : 31.057146

How to connect Skylab SKM53 GPS to Arduino

- 1)Connect RXD GPS Pin to Arduino Pin 3
- 2)Connect TXD GPS Pin to Arduino Pin 2
- 3)Connect GND GPS Pin to Arduino Ground
- 4)Connect VCC GPS to 5 VDC
- 5)Make sure to download TinyGPS.h library file to your Arduino/Libraries folder. You can download it from this link:

<http://arduiniana.org/TinyGPS/TinyGPS10.zip>.

- 6)Make sure to download NewSoftSerial.h library file to your Arduino/Libraries folder. You can download it from this link:

<http://arduiniana.org/libraries/newsoftserial/>

- 7)Upload the Arduino code below.

It is easy to get this data on character LCD, please check [Future Electronics Egypt Tutorial for connecting Arduino with LCD](#)

Arduino Code For Skylab SKM53 GPS

```
#include <TinyGPS.h>
#include <NewSoftSerial.h>

unsigned long fix_age;

NewSoftSerial GPS(2,3);
TinyGPS gps;
void gpstdump(TinyGPS &gps);
bool feedgps();
void getGPS();
long lat, lon;
float LAT, LON;
```

```

void setup(){
    GPS.begin(9600);
    Serial.begin(115200);
}

void loop(){
    long lat, lon;
    unsigned long fix_age, time, date, speed, course;
    unsigned long chars;
    unsigned short sentences, failed_checksum;

    // retrieves +/- lat/long in 100000ths of a degree
    gps.get_position(&lat, &lon, &fix_age);

    // time in hh:mm:ss, date in dd/mm/yy
    /*gps.get_datetime(&date, &time, &fix_age);
    year = date % 100;
    month = (date / 100) % 100;
    day = date / 10000;
    hour = time / 1000000;
    minute = (time / 10000) % 100;
    second = (time / 100) % 100;
    Serial.print("Date: ");
    Serial.print(year); Serial.print("/");
    Serial.print(month); Serial.print("/");
    Serial.print(day);
    Serial.print(" :: Time: ");
    Serial.print(hour); Serial.print(":");
    Serial.print(minute); Serial.print(":");
    Serial.println(second);
    */
    getGPS();
    Serial.print("Latitude : ");
    Serial.print(LAT/100000,7);
    Serial.print(" :: Longitude : ");
    Serial.println(LON/100000,7);
}

void getGPS(){
    bool newdata = false;
    unsigned long start = millis();
    // Every 1 seconds we print an update
    while (millis() - start < 1000)
    {
        if (feedgps ()){
            newdata = true;

```

```

    }
}
if (newdata)
{
    gpsdump(gps);
}
}

bool feedgps(){
    while (GPS.available())
    {
        if (gps.encode(GPS.read()))
            return true;
    }
    return 0;
}

void gpsdump(TinyGPS &gps)
{
    //byte month, day, hour, minute, second, hundredths;
    gps.get_position(&lat, &lon);
    LAT = lat;
    LON = lon;
    {
        feedgps(); // If we don't feed the gps during this long
        routine, we may drop characters and get checksum errors
    }
}

```