

Determining Your Flarm's¹ Radio ID.

Introduction

All Flarm units transmit their ID over the radio as part of the protocol. The ID is a 24 bit code that is usually represented as six hexadecimal characters, e.g. x'DD8E39'.

Three types of ID are defined:

- Stateless random-hopping pseudo-ID (chosen by FLARM). Intended for international championships – this option is greyed-out in FlarmTool V2.0.
- Official ICAO aircraft address (allocated in the UK by the CAA when a glider is registered). The owner can set this, but there seems little point.
- Stable FLARM pseudo-ID (chosen by FLARM). This shows up in FlarmTool as 'Automatic'. It is related to the device's serial number by some sort of unpublished algorithm. This is the default.

It seems probable that the vast majority of units transmit the 'Stable FLARM pseudo-ID' if the owner has not changed it.

Some Flarm devices, such as the LX7007 IGC Flight Computer with Flarm, are capable of displaying information about other gliders whose Flarm signals are being received. Typically this includes:

- ID of Flarm unit being received. (First two hex. digits seem to be displayed as x'00' instead of x'DD'.)
- Bearing.
- Range.
- Relative altitude.
- Rate of climb/sink.

In 'competition' or 'privacy' modes some of this data is suppressed.

¹ Flarm is a trademark of Flarm Technology GmbH.

Determining Your Flarm's ID

There are several ways to find out the ID that your Flarm Unit transmits. They are listed in no particular order. It is likely that the next version of FlarmTool, that is expected to be available from October 2010, will display the ID and make some other methods obsolete.

1. Use application on FlarmNet web site

If your unit is a genuine Flarm, that is also a flight recorder, then Flarm records are added to the IGC file. For you the easiest method is to upload an IGC file from your Flarm to FlarmNet's web site. They have an application that will determine the ID from the IGC file.

- Go to www.flarmnet.org
- Select 'Questions & Answers'
- Find the text: "*The easiest method is to upload an igc-file, which was logged by your Flarm™, on [this site](#). Your Flarm™-ID will be filled into the form automatically.*" and click on [this site](#). It will take you to a page where you can upload the IGC file and obtain the ID.

2. Ask a friend.

If one of your friends has a device that displays the Flarm IDs of the received aircraft, you can put your aircraft next to your friend's and read your Flarm ID on their display.

3. Ask the supplier/manufacturer.

The manufacturer will know the algorithm to translate the Flarm device's serial number to its Radio ID. If the Flarm is built into a Flight Computer the Flarm serial number will probably be different to that of the Flight Computer. Cannot promise that they will be helpful.

4. Read it with a PC

Connect your Flarm to a PC and read the Flarm ID with a terminal program. You can find out how in the attachment.

5. Use the Flarm Range Analyser

If your Flarm is also a flight recorder you can choose a Flarm IGC File, recorded with firmware version 4.00 (March 2008) or newer, for analyse by the Flarm on-line "Range Analyser" at:

http://www.flarm.com/support/analyze/index_en.html

to check the performance of your FLARM. While it does that it will also show you the FLARM ID.

Attachment: Obtaining Flarm ID using a PC

These notes are based on instructions on FlarmNet that are, in part, in German. LX Avionics provided similar guidance to me for their units. They assume a PC running Windows. The examples are from Windows XP Professional.

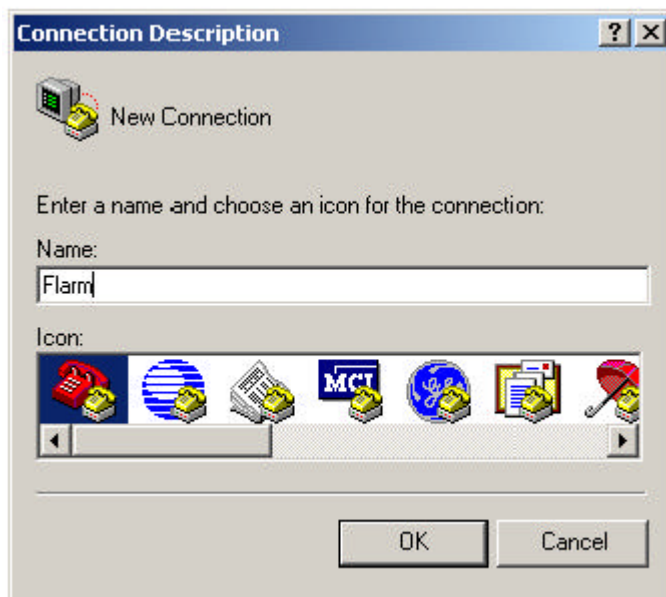
To read out your Flarm ID with a PC, you need:

- A Flarm with Software Version 4.0 or later.
- A Flarm update cable.
- A PC with an enabled serial communications port.
- A PC with a terminal program. You can use HyperTerminal, which is included in Windows.

The first step is to connect your Flarm to your PC with the update cable. The Flarm must still be switched off!

Open HyperTerminal and enter any name for the new connection.

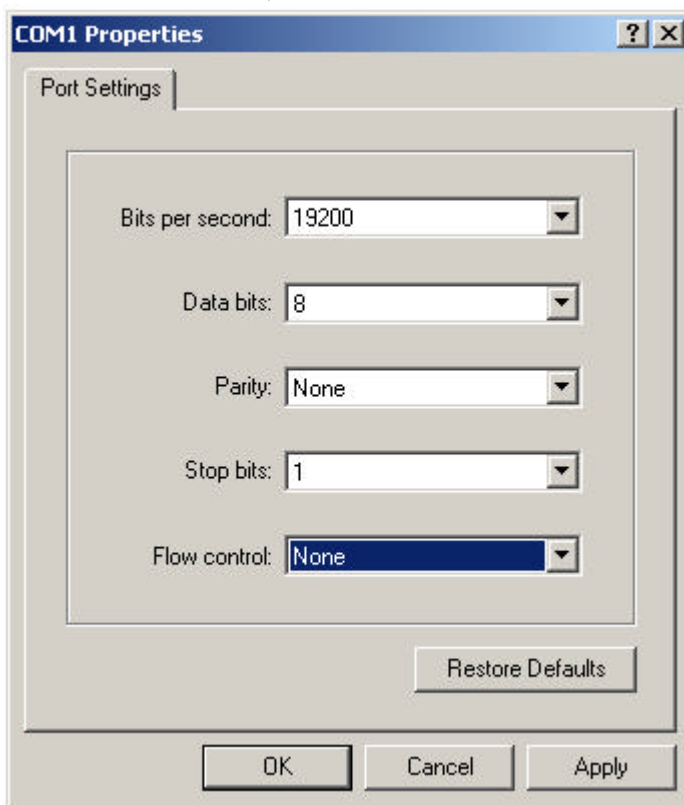
- Start – All Programs – Accessories – Communications - HyperTerminal



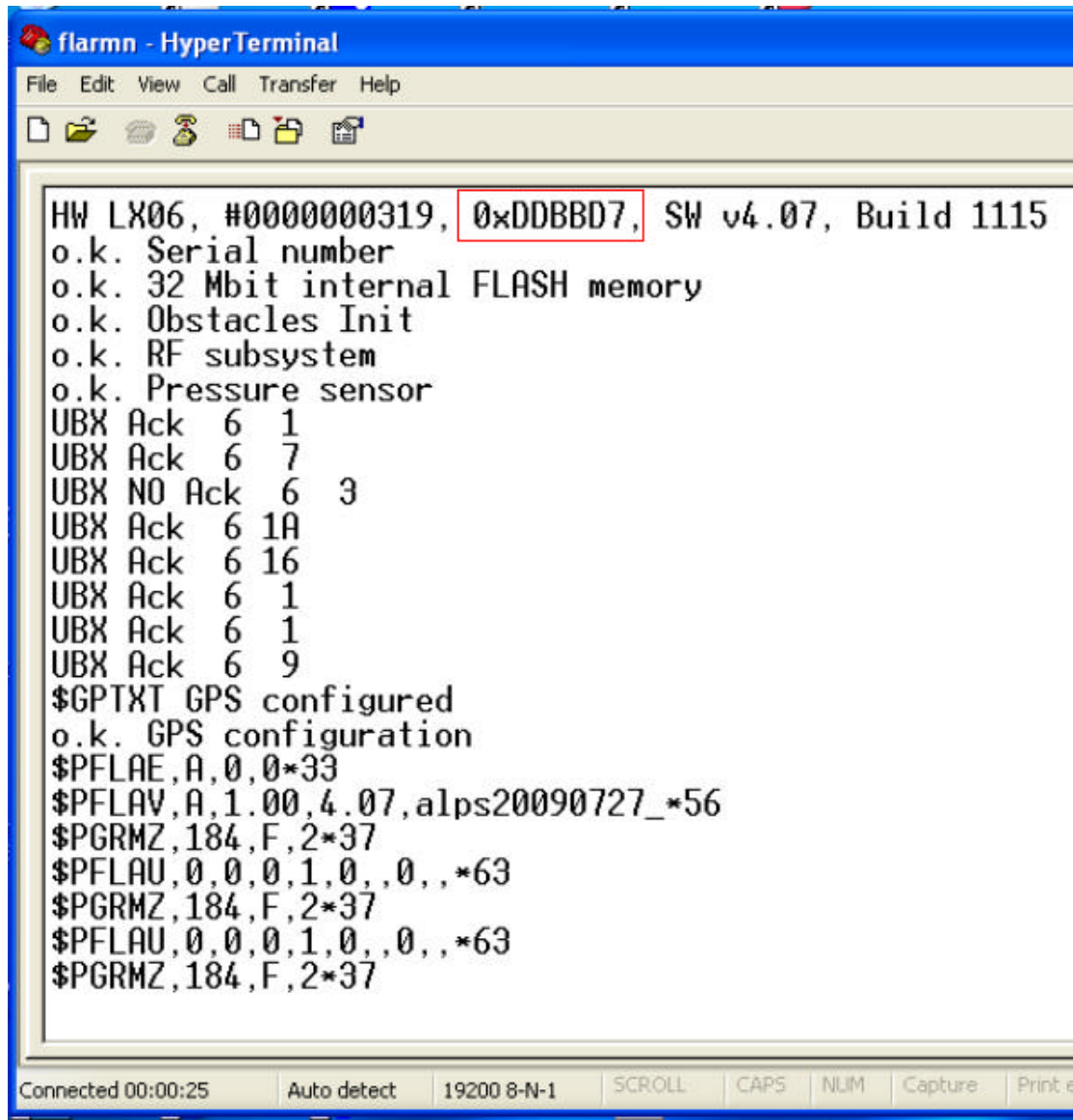
Choose the serial port to which your Flarm is connected.



Set a baud rate of 19,200 without flow control.



That's all for the configuration. Press OK and switch on your Flarm. When it starts up the Flarm will send data to the serial port that will be displayed in the HyperTerminal window. You may need to stop the connection quickly if other Flarms are being received since the HyperTerminal window may fill with messages quite fast.



```
flarmn - HyperTerminal
File Edit View Call Transfer Help
HW LX06, #0000000319, 0xDDBBD7, SW v4.07, Build 1115
o.k. Serial number
o.k. 32 Mbit internal FLASH memory
o.k. Obstacles Init
o.k. RF subsystem
o.k. Pressure sensor
UBX Ack 6 1
UBX Ack 6 7
UBX NO Ack 6 3
UBX Ack 6 1A
UBX Ack 6 16
UBX Ack 6 1
UBX Ack 6 1
UBX Ack 6 9
$GPTXT GPS configured
o.k. GPS configuration
$PFLAE,A,0,0*33
$PFLAV,A,1.00,4.07,alps20090727_*56
$PGRMZ,184,F,2*37
$PFLAU,0,0,0,1,0,,0,,*63
$PGRMZ,184,F,2*37
$PFLAU,0,0,0,1,0,,0,,*63
$PGRMZ,184,F,2*37
Connected 00:00:25 Auto detect 19200 8-N-1 SCROLL CAPS NUM Capture Print e
```

The first line in the terminal window contain your Flarm ID. It is the marked text, without the leading '0x'. In this example, the Flarm ID is 'DDBBD7'.

End.