



# Download data from a SensorGnome

**2018 May 4: a simpler approach to downloading, with no update needed!**

- install [Filezilla](#) on your laptop
- attach to your Beaglebone SG via a USB cable (you must [install drivers](#) )  
**or**  
attach to your Raspberry Pi SG via ethernet cable or the SG's WiFi hotspot (for RPI3, RPIZ)
- in FileZilla, connect like this:

	Beaglebone	Raspberry
Pi		
◦ Hostname:	<a href="sftp://192.168.7.2">sftp://192.168.7.2</a> <a href="sftp://sgpi.local">sftp://sgpi.local</a>	
◦ Username:	<b>bone</b>	<b>pi</b>
◦ Password:	<b>bone</b>	<b>raspberry</b>

- your files can then be found in the subfolders of /media, e.g. /media/internal\_SD\_card/SGdata

Many thanks to Adam Smith for reporting this.

The rest of this page can now be ignored.

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Data are stored on whatever USB drives are attached to the USB hub, in order from the first drive on port 1 to the last drive on port 7 (as drives fill up). To get your data, you can simply remove the USB drive and plug in another. However, you may want to download data without removing the drive. Once you have [connected to your SensorGnome](#), data are available on a shared network drive, which you can access as follows:

- **Windows 8:** tap the Windows key and search for the word "**Computer**". Click on that and select "**Map Network Drive**", then follow instructions for Window 7
- **Windows 7:** open the location

\\192.168.7.2\data

from either the windows Start menu, or from the windows file browser. In some versions of Windows, you might need or want to do this via "Mapping a Network Drive". To map a network drive:

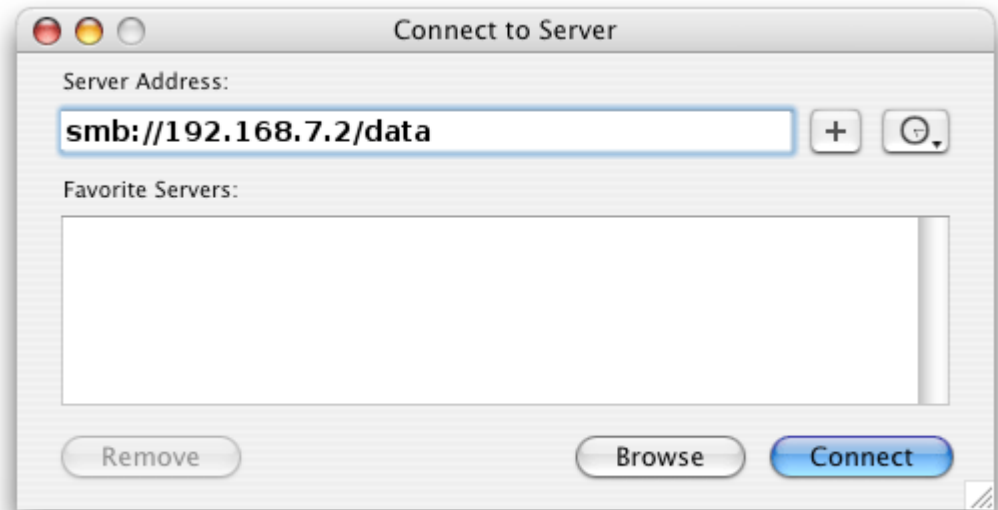
Open Windows Explorer, right click on Computer, and select 'Map network drive' from the dropdown menu. Add \\192.168.7.2\data to the folder field in the Map Network Drive window and click finish.

Map Network Drive.png

Map Network Drive 2.png

- **Mac:**

- From the Finder's **Go** menu, choose **Connect to Server...** then fill in the details like this:



- **Linux:** using the File Brower, Go to the location

smb://192.168.7.2/data

or use the smbclient command line tool.

## The Data File Hierarchy

Currently, we store data in compressed flat files.

**These files contain raw pulse data, and so must be post-processed to obtain tag detections.**

An R package is in the works which will let you post-process data yourself, but for now, you can create .ZIP files of any data you download from a sensorgnome, and upload it to your wiki page, then notify us by email to have us process it for you. You can also use a service like [wetransfer.com](http://wetransfer.com) to send your .ZIP'd files to us, especially if they are more than 200 MB in size.

This will change in the future!!

Data are stored in folders with names like:

**disk\_port7-1:** external disk connected to port 7 of the USB hub (the "-1" indicates the first "partition" or "drive letter" on that disk)

**internal\_SD\_drive:** the internal micro SD card. This is used if no other storage is available. Space is limited to the size of the SD card

minus approximately 1.1 GB (occupied by the SensorGnome software and development tools). For the standard 4 GB card, you have approximately 2.9 Gigabytes available.

You should simply drag each of the above folders to your desktop, or use some similar approach to make sure you get a complete copy of all files in all subfolders. The data are in a hierarchy, with names like this:

```
disk_port7-1 / SGdata / 000026 / 2013-06-17 / ACON-1012BB012090-0000
```

Here's what the pieces represent:

- **disk\_port7-1**: the first partition on the disk plugged into USB Hub port 7
- **SGdata**: the complete folder of sensorgnome data on this disk
- **000026**: boot count; data recorded during the 26th power cycle of the SensorGnome; this value increases by 1 after each SensorGnome restart
- **2013-06-17**: all datafiles recorded **starting** on June 17, 2013 UTC. (some of those files might data from up to an hour into the next day)
- **ACON-1012BB012090-000026-2013-06-17T13-11-47.9750Z-all.txt.gz**: horrible filename, with these components:
  - **ACON**: short label for the deployment (from deployment.txt)
  - **1012BB012090**: beaglebone serial number
  - **000026**: boot count, as above
  - **2013-06-17T13-11-47.9750**: timestamp when first record was written to file; Year-Month-Day T Hour - Minute - Seconds
  - **Z**: timestamp is in UTC, and GPS has already set clock; alternatively **P**: timestamp is from before GPS set beaglebone clock; may be very wrong (e.g. from year 2000)
  - **all**: data from all antennas; if doing acoustic monitoring, this is replaced by '1', '2', etc. according to which USB port the microphone is plugged into
  - **txt.gz**: this is a compressed text file; if the ".gz" is missing, the file is a partial uncompressed form

## The "Boot" Drive (starting with 17 April 2013 software release)

The SensorGnome micro SD card also contains a small Windows-compatible (VFAT, to be precise) drive, labelled **SENSORGNOME**, which is what you'll see if you pop that card into your own computer. (Linux users will also see the ext4 partition labelled **SensorGnomeLinux**.) This drive is not used to store data; rather, it:

- holds [drivers](#) and documentation for the beaglebone computer
- [software updates](#) are performed by saving a file named `sensorgnome_update.tar.bz2` here, then restarting the system.
- this is the first location the SensorGnome looks for its [deployment.txt](#) file
- holds the the [SG\\_tag\\_database.csv](#) file, which lets the web interface display live tag detections