

DTAG Quick Start Manual

Part 0 --- Introduction and Preparation:

This is a short tutorial to get the user started with DTAG deployment. More detailed information can be found at the *Sound & Movement Tags* website (<https://www.soundtags.org/dtags/dtag-toolbox/>).


To start, download software and drivers for the DTAG-3 from <https://www.soundtags.org/dtags/dtag-toolbox/>. The name of the package is **d3usb**. Extract **d3usb** to your favorite local directory. Inside the **d3usb** folder, important subfolder/executables are **install** (folder), **d3host.exe** (executable) and **d3read.exe** (executable), which will be used later to install the tag driver, communicate with the tag and offload data.

To process tag data with MATLAB, one will need to download: <1> The DTAG toolbox for Matlab: **tagmatlab**; <2> the latest tool set for DTAG-3: **d3matlab**; <3> X3 compressor and archive file writer/reader: **x3toolbox**. Together they form the supporting library to process DTAG data with MATLAB. However data processing is beyond the scope of this quick start manual.

Part I --- DTAG Driver Install:

1) Disable digital signature enforcement in Windows 10 using these steps (Source: [http://packard-bell-scandic.custhelp.com/app/answers/detail/a_id/38288/~windows-10%3A-disable-signed-driver-enforcement](http://packard-bell-scandic.custhelp.com/app/answers/detail/a_id/38288/~/windows-10%3A-disable-signed-driver-enforcement)):

Windows 10 enforces driver signatures by default. This can be disabled to install drivers that are not digitally signed. Use the following steps to disable driver signature enforcement.

1. Click the Start  menu and select **Settings**.
2. Click **Update and Security**.
3. Click on **Recovery**.
4. Click **Restart now** under **Advanced Startup**.
5. Click **Troubleshoot**.
6. Click **Advanced options**.
7. Click **Startup Settings**.
8. Click on **Restart**.
9. On the Startup Settings screen press 7 or F7 to disable driver signature enforcement.

Your computer will restart and you will be able to install non-digitally signed drivers. If you restart your computer again the driver signature enforcement will be re-enabled.

2) Plug the tag usb connector into computer. Open Device Manager and find the "Unknown usb device" (which is the Tag) in "Other devices", right click and click on "Update Driver Software". Then select "Browse my computer for driver software", navigate to ".../d3usb/install" (under the directory where **d3usb** was extracted in **Part 0**), and click "next". The software update should be successful.

3) Open **d3host.exe**, it should show "rebooting...", "D3 not found: try again? y/n", after that close **d3host.exe** for now.

4) Update drive software again using exact same procedure as step (2).

5) Run **d3host.exe** again, it would work this time. Done with DTAG driver installation.

Part II --- DTAG Deployment and Data Offload:

Start **d3host.exe**, a list of operations would be available.

1 - Get directory: shows all the files stored on the tag.

2 - Offload files: Initiates file offloading. User will be promoted to: <1> indicate which file(s) to offload, and <2> what naming convention (**filename base**) should the offloaded file(s) use. File(s) will be offloaded to the directory set by user under **d3usb** folder. To set data directory, follow option 5 in this list.

3 - Erase files: User will be promoted regarding whether or not to erase all recordings.

4 - Battery: checks the battery status.

5 - Set data directory: creates/selects a **directory** (subfolder) in **d3usb** folder that the file(s) will be offloaded to.

6--8: Do not worry about them.

C - Configure: Change tag deployment setting, sub-options are as follow:

s - **salinity trigger**: 0 (Set this to zero so that tag starts recording immediately after it is disconnected)

b - release by: no need to change.

r - release after: no need to change.

t - burn time: no need to change.

p - VHF pulse length (0=short): Literal meaning, no need to change.

z - VHF pulse rate (0=slow): Literal meaning, no need to change.

f - AUDIO sampling rate: Literal meaning, no need to change.

g - AUDIO gain ch 1 (0=low):

h - AUDIO gain ch 2 (0=low):

m - SENSOR sequence: No need to change.

v - VHF on-demand (1=on): VHF switch.

After done with setting, press letter "**q**" to quit configure mode. The user will be promoted with "**Arm tag? y/n**", type "**y**" if want to deploy the tag and "**n**" otherwise.

q - Quit: Quit user interface.

Part III --- Expanding the DTAG Data Files:

d3read.exe is used to convert **.dtg** file(s) into **.swv**, **.wav** and **.xml** files so they can be further process by MATLAB. Start **d3read.exe**, the current directory (name of the subfolder), where the program thinks the offloaded files are, will be displayed. Follow the program, type key "**y**" to change to another subfolder if the one displayed is not where you offloaded file(s) in **Part II** or "**n**" otherwise. Then key in the filename base, as asked by the program, to indicate which of the file(s) you want to convert. Hit enter and the files will be converted automatically inside the data subfolder.