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Best Practices for Installation and Operation of a Stealth 3D Mouse with DAT/EM Applications

October 6, 2021

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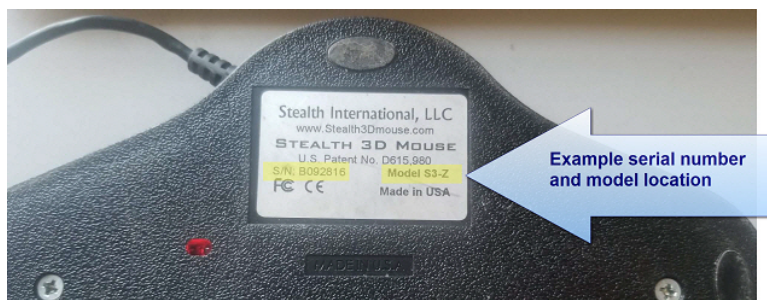
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Introduction

Congratulations on your ownership of a Stealth mouse by Stealth 3D Mouse. This document shows what you can do to keep your Stealth mouse working well with DAT/EM Summit Evolution and LandScape products. This document is intended for both new users and those who have an older Stealth mouse.

How to Find the Stealth Mouse Model and Serial Number

To find the model and serial number of your Stealth mouse, turn it over and look at the manufacturer’s information panel on the bottom surface of the mouse. Note the “S/N” (serial number) and Model.



If your Stealth mouse is very well worn and the text is no longer readable, and if you purchased it from DAT/EM or a DAT/EM reseller, contact support@datem.com. We may have the mouse type and serial number in our database.

Install a Specific Stealth Mouse Driver ****Very Important!****

These instructions are for **V** and **Z** models only. Stealth **E** and **S** models do not use a special driver.

When you plug in a Stealth V or Z mouse for the first time, *it always fetches the wrong driver automatically!* Or, if the computer is not connected to the Internet, it won't install any driver. In either case, you need to install a Stealth-brand driver manually. Do not use the generic, default driver.

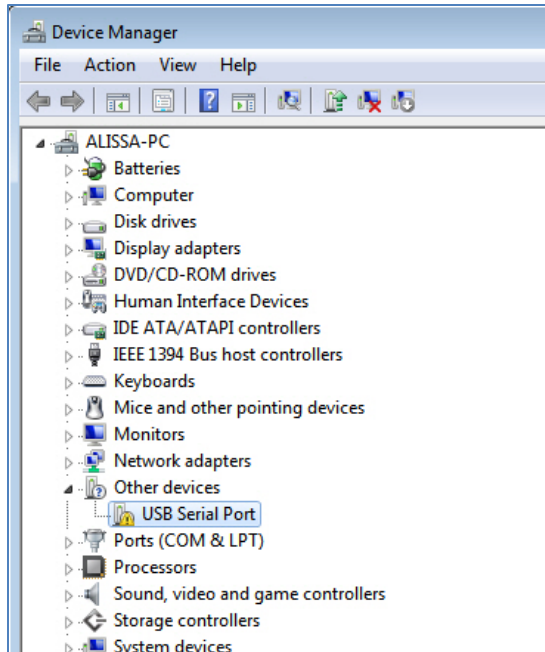
You may not realize it has the wrong driver, because the default driver seems at first glance to work with Summit and LandScape. If you test it quickly, it will communicate and move the cursor, but over time, you may notice that it stops often, moves strangely, or high-numbered or shifted buttons don't work. To get it to work perfectly, you need to install a specific Stealth-brand driver.

Perform the following:

1. Determine which V or Z mouse driver you have now and download a driver if necessary.
 - a. Plug in the Stealth V or Z mouse to a USB port, preferably directly on the computer case. If it is the first time you plugged in the mouse, the Windows message area may show a message such as, "Device driver software installed successfully," however, it probably isn't the right driver. Even if a mouse has been used before, it may not have the right driver. Check the driver version number.
 - b. Start the Windows Device Manager. Expand the **"Universal Serial Bus controllers"** section. If you are lucky, the Stealth mouse will appear with its "Stealth" name; however, it often appears as a more generic name, such as "USB Serial Converter", "USB Root Hub", "Unknown device", or "Other device".

It is often difficult to tell which device it is. The easy solution is to unplug the mouse and see what disappears from the Device Manager lists. First, count or take a screen shot of the number of items that appear under **Universal Serial Bus controllers**. Unplug the mouse, let Device Manager refresh, and count again. What has disappeared? If you plug it in again, does it reappear? If the USB controllers list does not change, look in other categories in Device Manager, such as **Other Devices**, **Unknown Devices**, **Human Interface Devices**, or some other category. Again, unplug and replug to see what might disappear and reappear.

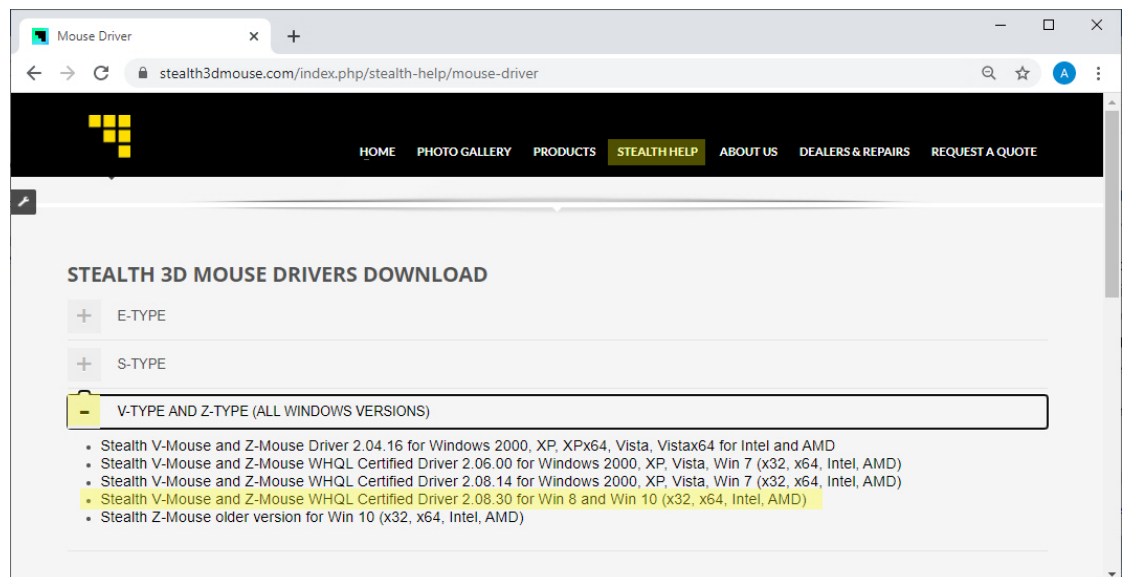
If the computer is not connected to the Internet, it might appear in Device Manager with a yellow exclamation mark, which means it doesn't have any driver installed. In this case, you know for sure you need to install the Stealth driver.



Example of the Stealth Mouse without any driver

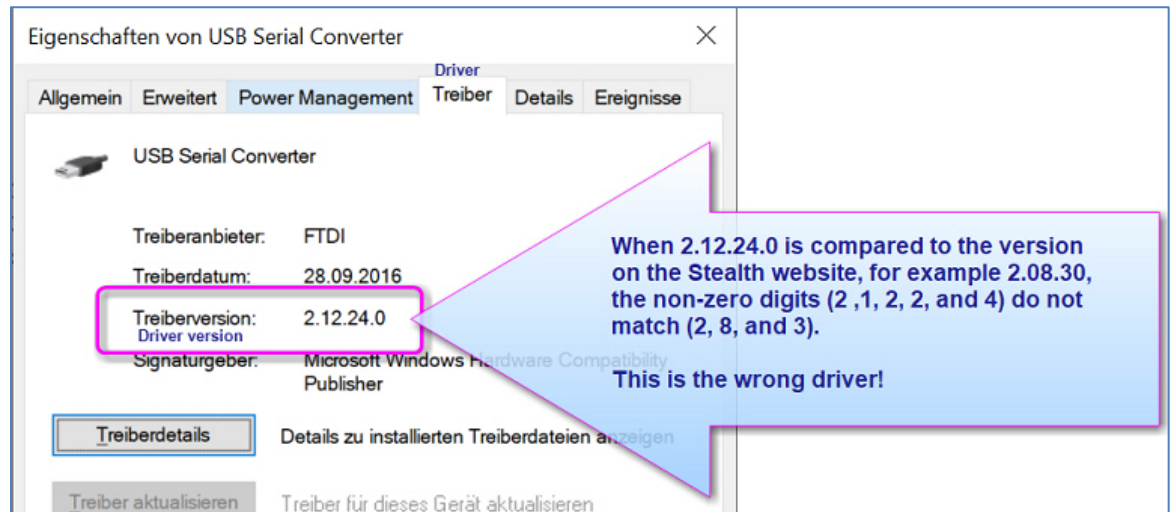
Once you have located the Stealth V or Z mouse in Device Manager, continue.

- c. Right click on the device in Device Manager and select the **Properties** > **Driver** tab. Note the driver number. (Skip this if it has a yellow exclamation mark.)
- d. Now visit the Stealth website at <http://www.stealth3dmouse.com/index.php/stealth-help/mouse-driver>. (This is the “Stealth Help” > “Mouse Driver” menu item.)



Stealth website and driver version numbers subject to change at any time

Locate the driver for your Stealth model and operating system. Look at the number, such as **2.08.30** shown here (subject to change at any time). Ignore all zero (0) characters and decimal places. All the remaining digits should match the driver number you saw in Device Manager. If any of the non-zero digits do not match, then you do not have the right driver installed.

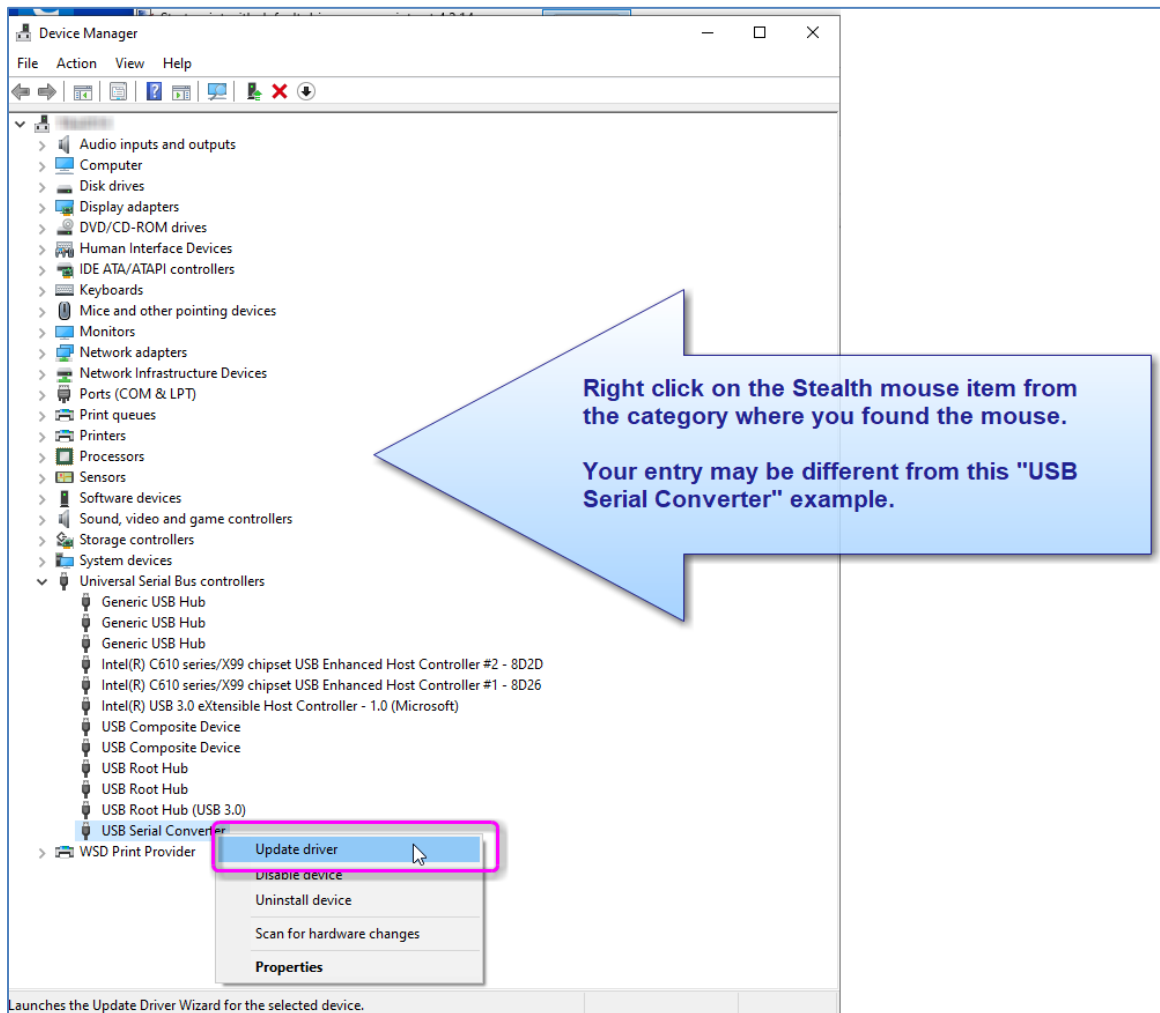


- If the non-zero numbers match, the right driver is already installed. If you are having trouble with your mouse, see the Troubleshooting sections below.
 - If the non-zero numbers don't match, continue with the next step.
2. Download the correct Stealth V or Z driver from the Stealth website. Get the newest driver for your operating system. (Don't get any driver called "older" unless advised by Stealth Support.)
 3. Make a folder on the local drive. This folder will be permanent and must not be deleted later, so choose a good location. Folder names such as "Downloads", "Temp", or "Test" may not be good folder names, because someone might clear them later. "Stealth driver in use" may be a better folder name, for example. Unzip the driver files into the folder.

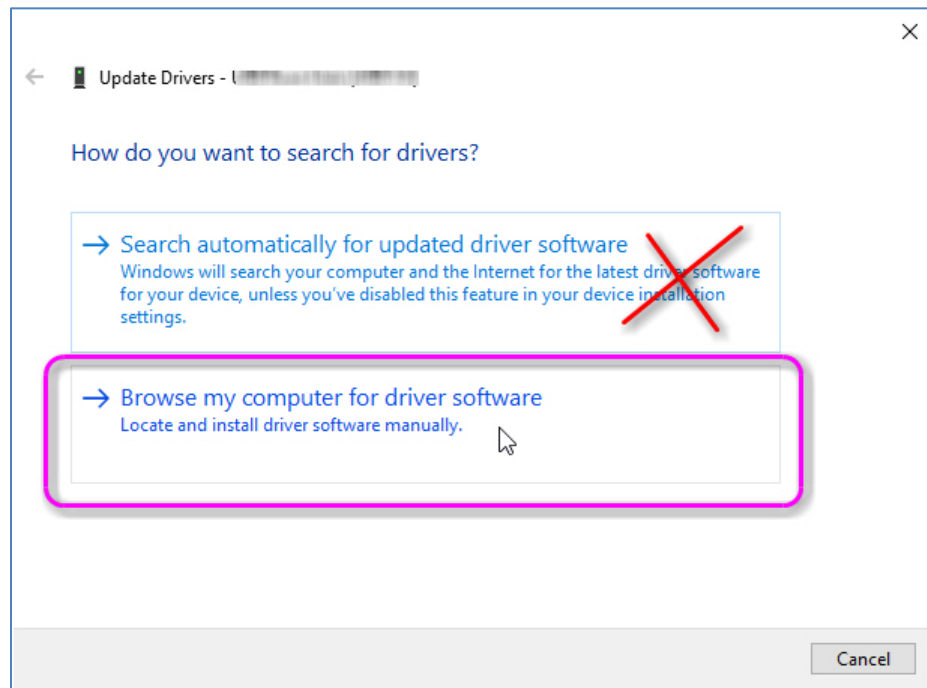
Note: It must be unzipped. The driver will not install correctly from inside a .zip file!

4. Close all other applications. This helps prepare for the reboot at the end.

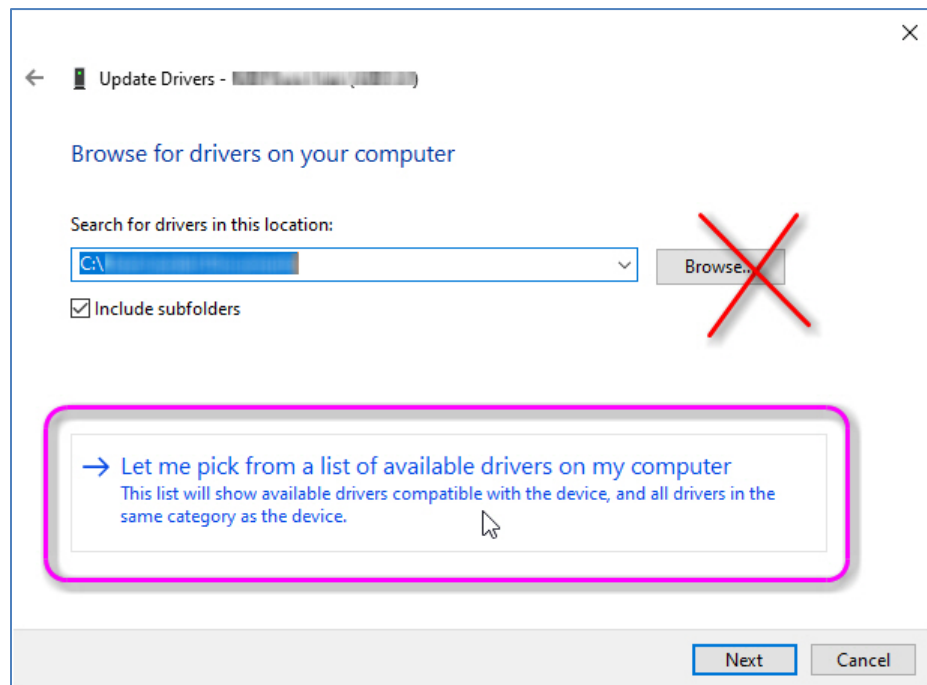
5. Right click on the item you determined to be the Stealth mouse and select **Update Driver**:



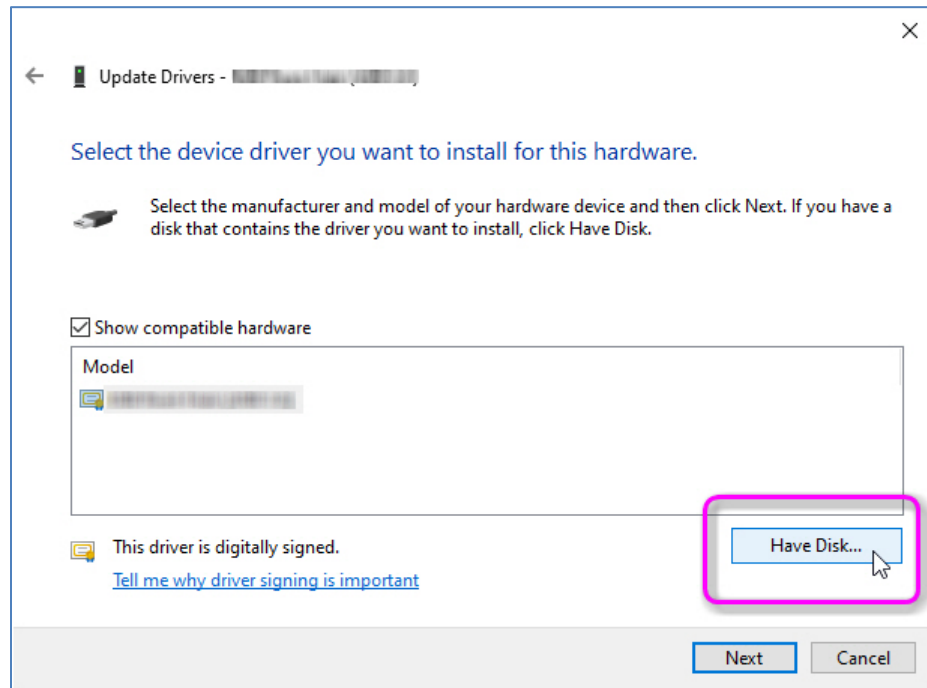
6. Answer the following Windows dialogs as indicated:
- a. Select **Browse my computer for driver software**:



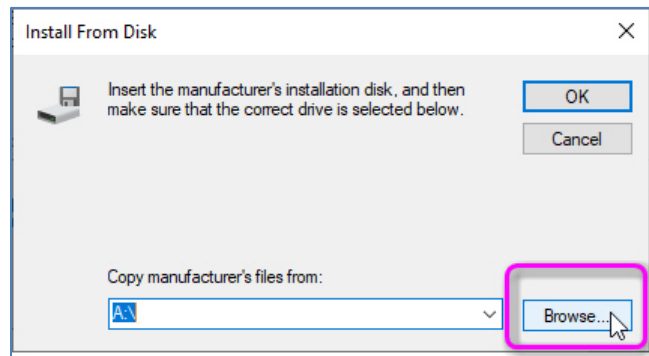
- b. Select **Let me pick from a list of available drivers on my computer**:



- c. Select **Have Disk**. (Don't change the highlighted item in the list.)

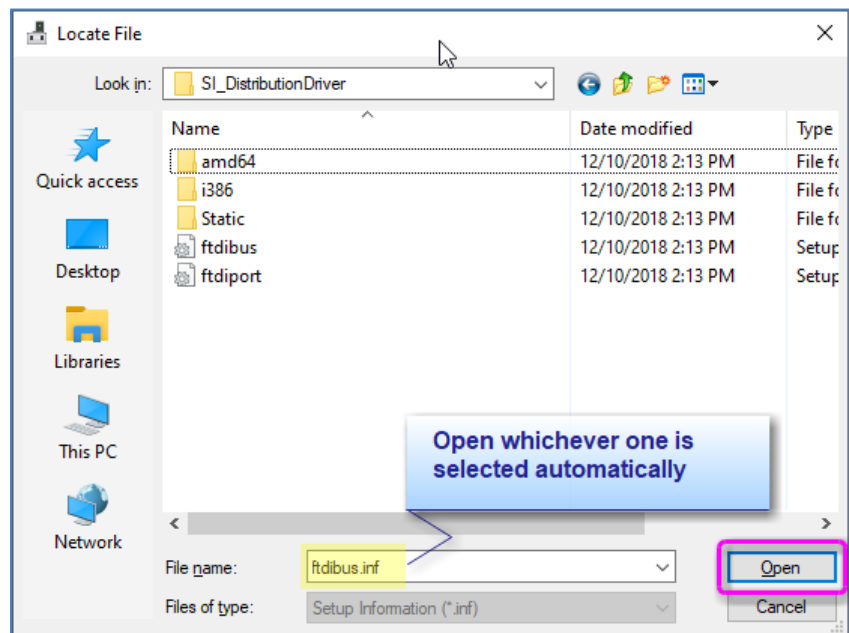


- d. Select **Browse** and browse for the folder that contains the unzipped driver files.

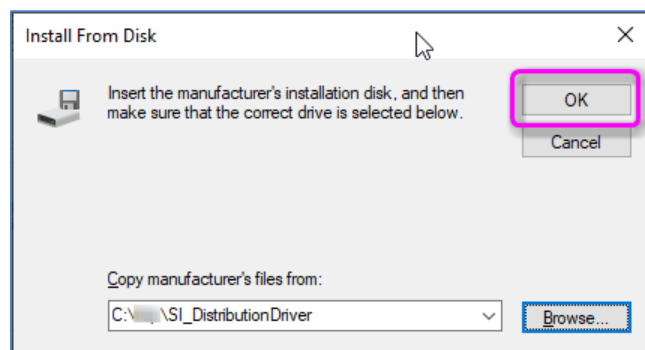


Note: You should only need to browse to a folder. If you find you must pick a .zip file to see what's inside, stop! Use Windows File Explorer to unzip the files before you continue!

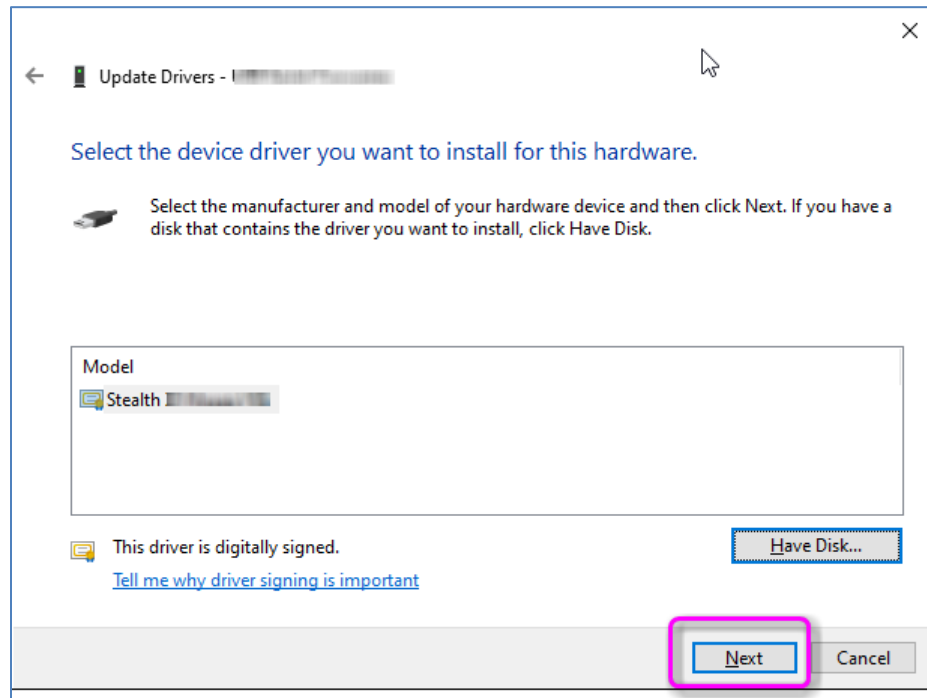
- e. It will automatically select either “**ftdiport.inf**” or “**ftdibus.inf**”. Accept the file that it found automatically. (Do not select the other one. Do not browse inside the subfolders.)
Select **Open**:



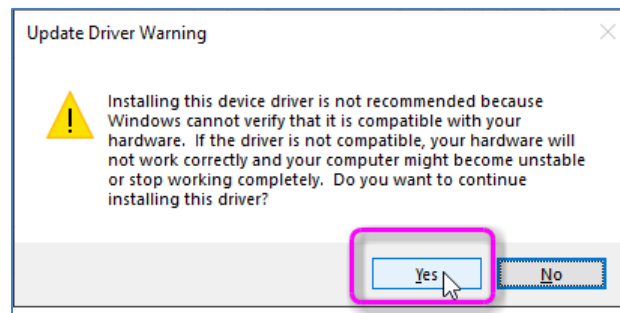
- f. Select **OK**:



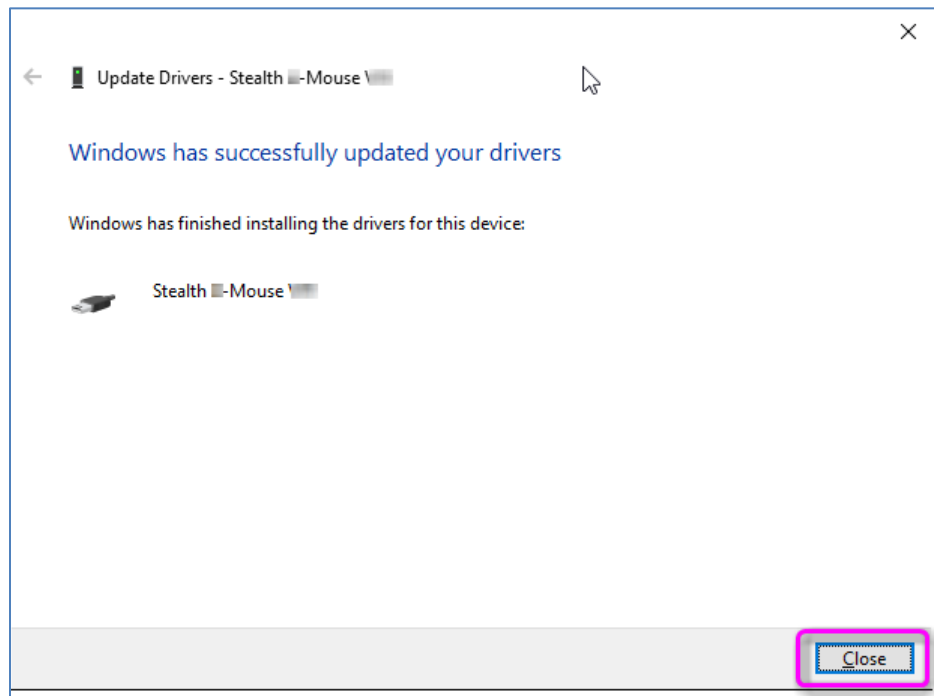
- g. Select **Next**. (Do not change anything else in this dialog.)



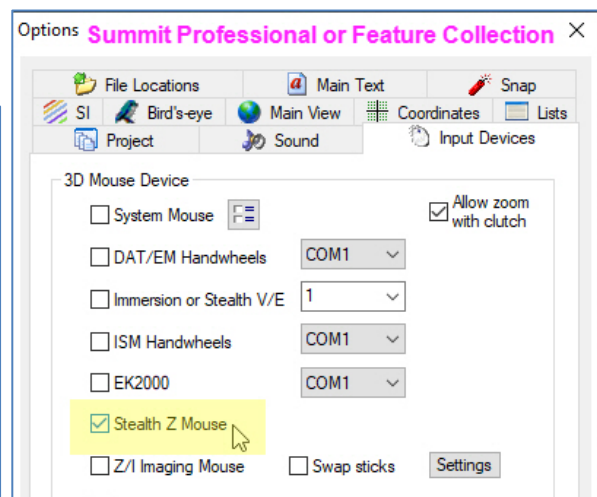
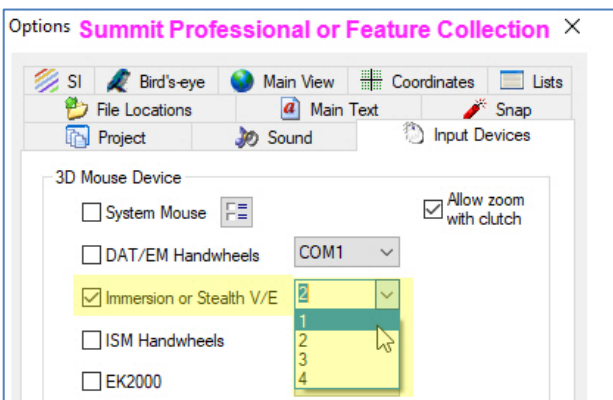
- h. A warning will appear. This is expected. Select **Yes**:



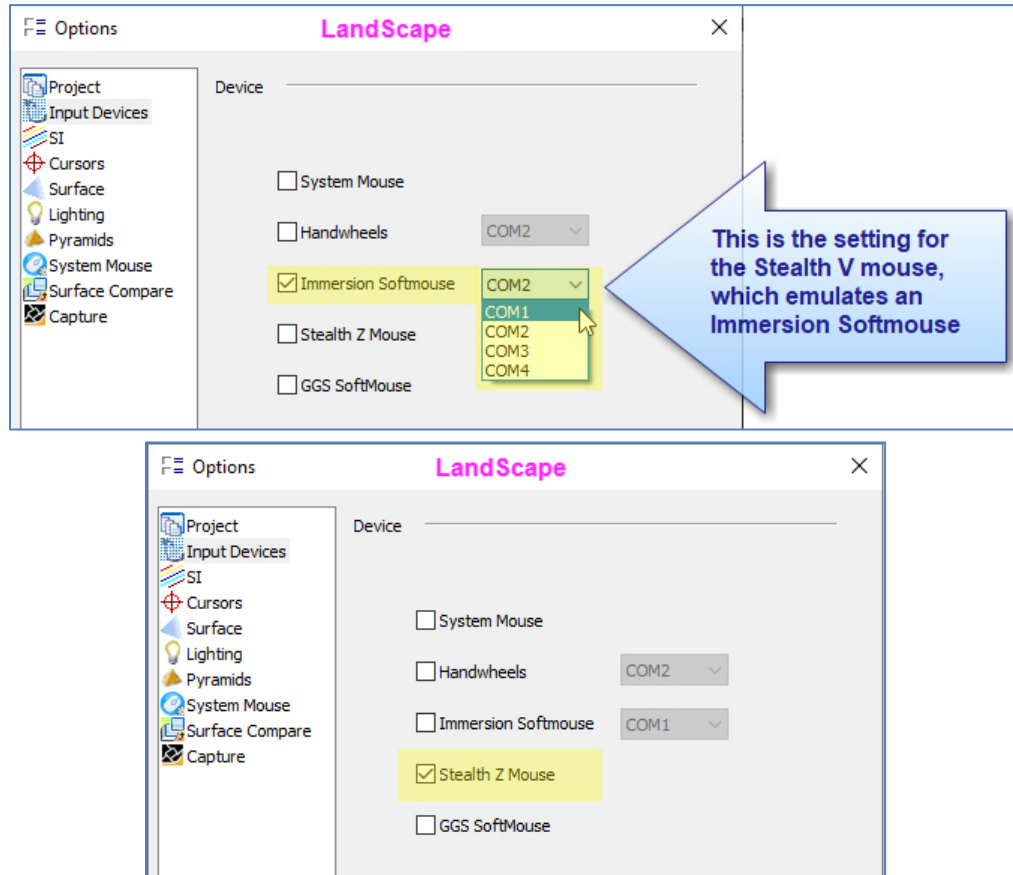
- i. Now if all goes well, it reports “Windows has successfully updated your driver software.” Select **Close**:



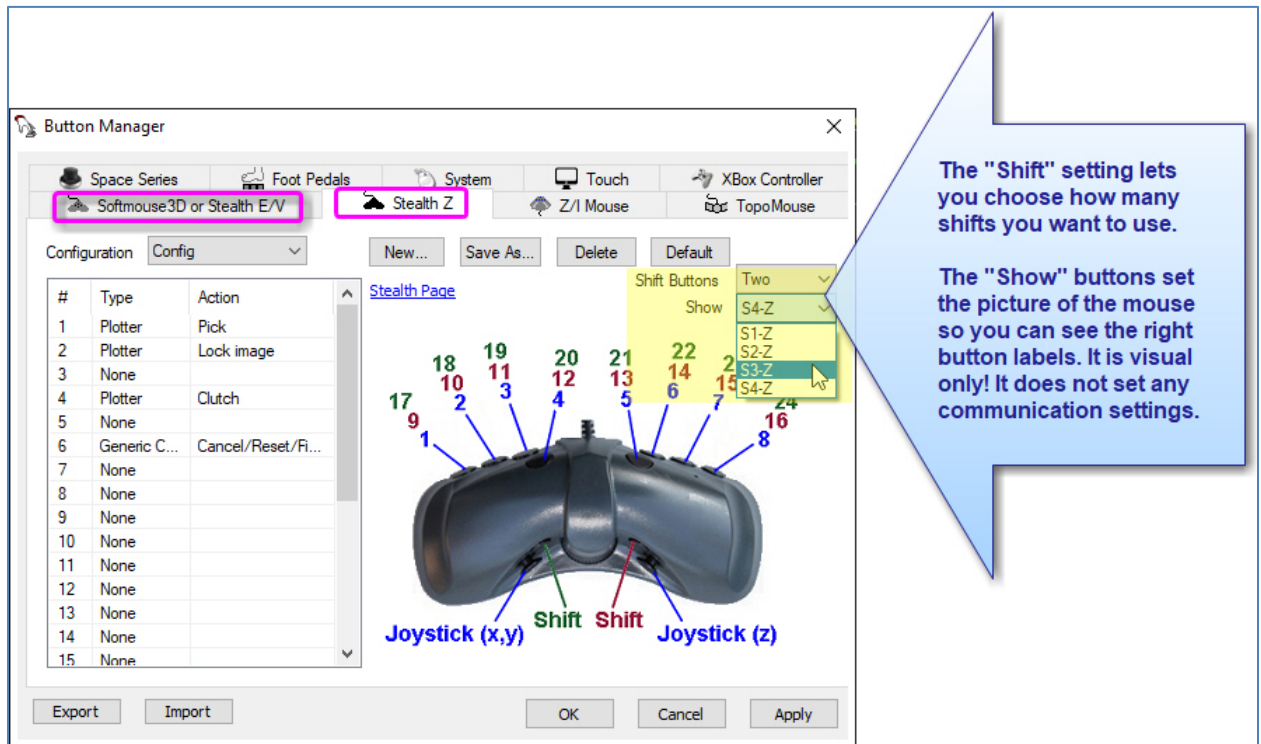
- j. It may prompt you to reboot, but even if it does not prompt, **reboot now**.
7. After rebooting, set Summit and/or LandScape to use the correct Stealth mouse.
- **Summit > Tools > Options > Input Devices:** For a V or E model, check on **Immersion and Stealth V/E** and set the COM port that you know is the Stealth V or E mouse. For a Z model, check on **Stealth Z**.



- **LandScape > Tools > Options > Input Devices.** For a V or E model, check on **Immersion Softmouse** (the V and E models emulate this device) and set the COM port that you know is the Stealth V or E mouse. For a Z model, check on **Stealth Z Mouse**.



- Set buttons as desired in either **Summit > Tools > Button Manager** or **LandScape > Tools > Button Manager**. The Button Manager is the same for both applications, and offers certain special buttons for either Summit or LandScape in the **Type** column.



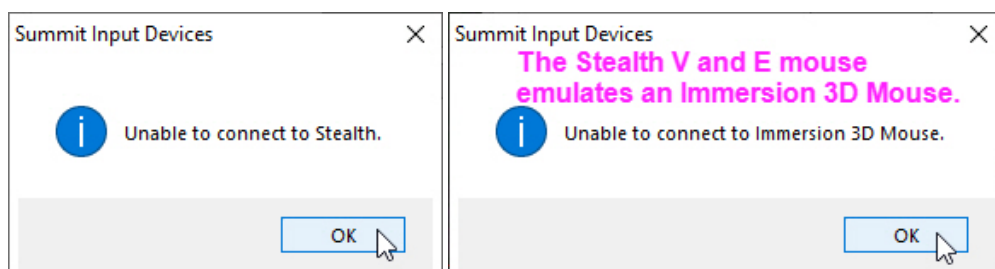
Now you're ready to use the mouse in Summit Professional, Summit Feature Collection, or LandScape.

Troubleshooting

The following sections show how to solve the most common Stealth mouse problems.

COM Port Configuration Conflicts

Your Stealth mouse may connect by a USB cable, but its driver also sets up a virtual COM port. If you have already installed the right driver, but your Stealth mouse isn't found when you set **Summit > Tools > Options > Input Device** or **LandScape > Tools > Options > Input Devices**, there could be a COM port number conflict. You might see a message like this:

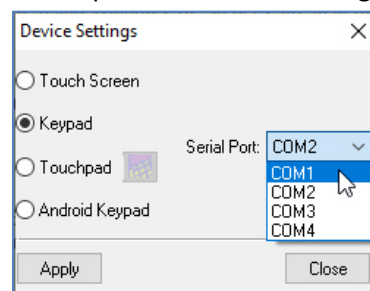


If the same COM port is configured twice by different applications, the device on that port will not work. COM ports are not “plug and play”; any COM port configuration conflict should be resolved and followed by a reboot.

COM port conflicts could happen between the Stealth **V**, **E**, or **Z** mouse and any other COM-configured device, including the DAT/EM Keypad Controller. Check the DAT/EM Keypad Controller settings for all new installations, whether you have any DAT/EM Keypad hardware or not.

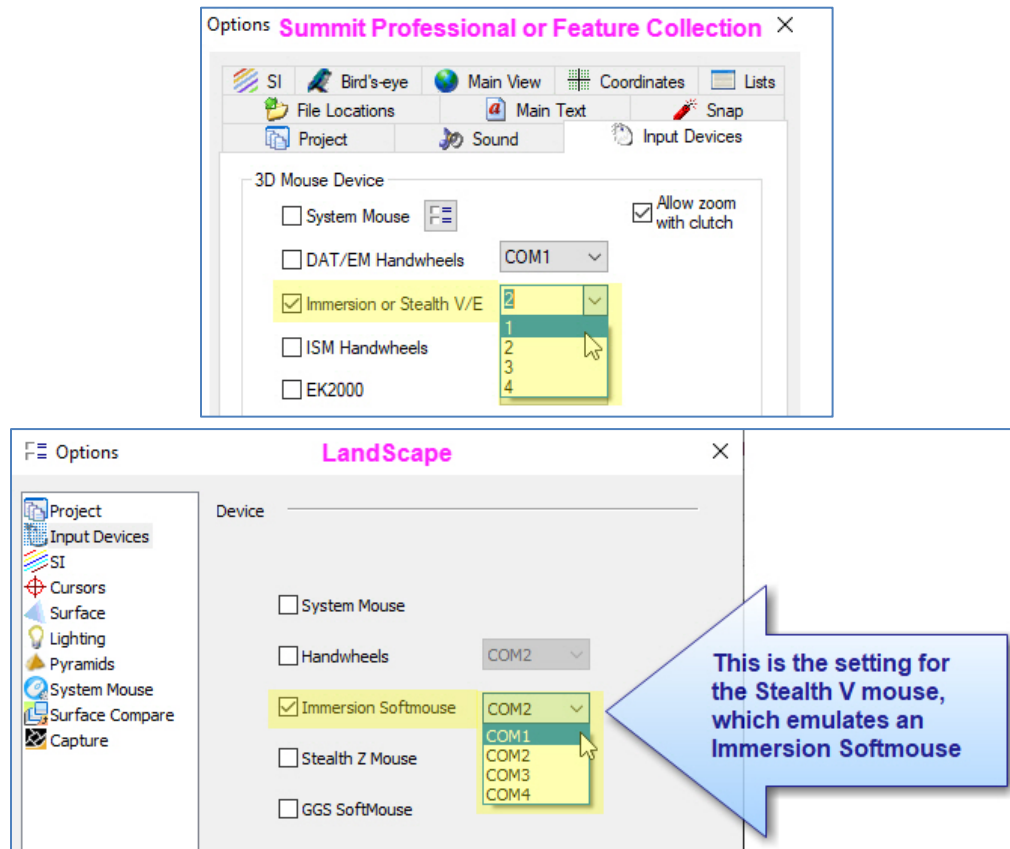
Installations that selected “DAT/EM Keypad” during DAT/EM setup will automatically start the DAT/EM Keypad Controller application. It appears as a blue grid “blue waffle” icon, , in the Windows Taskbar notification area. If you see this Keypad icon, if you run the application, or if you have any other third-party COM devices connected, perform the following steps:

1. Review the COM port number for each COM device in Windows Device Manager.
 - a. In Device Manager, expand the “Ports (COM & LPT)” list.
 - b. View the devices shown there and note the COM number listed in each label.
 - c. If you are not sure which device is which entry in the Device Manager, unplug one and see which one disappears. Plug it back in and watch it reappear. Note its COM number.
 - d. *Advanced Settings (rarely necessary, but sometimes it happens!):* If the COM port for either a Stealth Mouse or DAT/EM Keypad hardware is higher than 4, right click on the COM device in Device Manager and select **Properties** > **Port Settings** tab > **Advanced** button > **COM port**. Set it to a COM port number in the range 1-4, making sure that the number is not already used by another device. Reboot and return to these instructions.
 - e. Once you know which COM port belongs to which device, continue.
2. Double click the Keypad icon in the Windows notification area, , if it is there, or use Windows Start or Search to run the DAT/EM Keypad. Select **DAT/EM Keypad Controller** > **Tools** > **Device Settings**. Set it as follows:
 - If you do not have a hardware keypad device, set it to **Touch Screen**. Set this for either an actual touch-sensitive screen or if you use the system mouse on a regular screen.
 - If you have a hardware keypad device, set it to the type of device: **Keypad** for the DAT/EM Keypad, **Touchpad** for the DAT/EM Touchpad, or **Android Keypad** for the Keypad Advantage.
 - If you have set it to **Keypad** or **Touchpad**, it requires the correct COM port to be set. Set the COM port you discovered in step 1 above. After setting, select **Apply** and **Close**.



(DAT/EM Keypad Controller) **Keypad** or **Touchpad** will offer a COM port setting

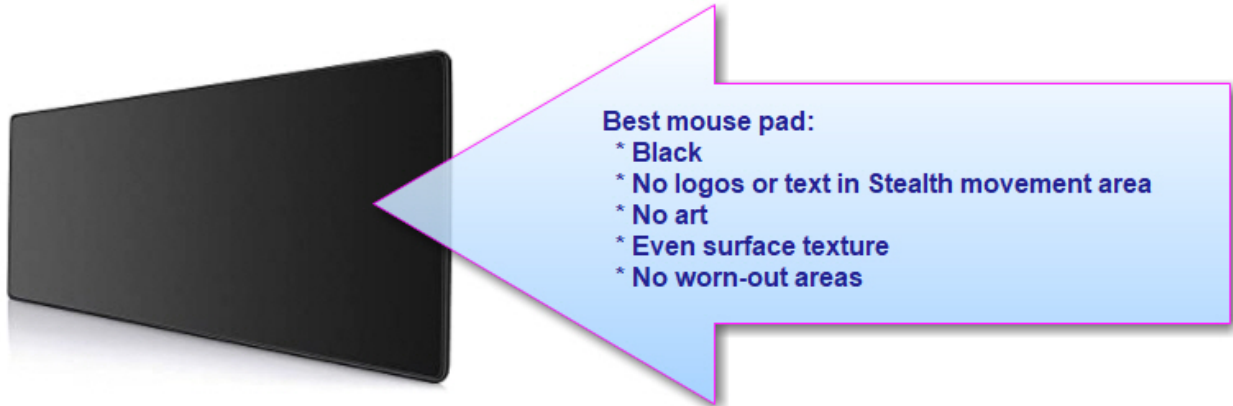
3. If it is a Stealth **V** or **E** mouse, check the COM port number set next to **Summit** (Professional or Feature Collection editions) > **Tools > Options > Input Device > Immersion or Stealth V/E** and/or **LandScape > Tools > Options > Input Devices > Immersion Softmouse**:



4. Check the COM port number set for any other third-party COM device you might have connected. Use the manufacturer's instructions.
5. If any COM port setting has been changed in any of the applications, reboot the computer. Rebooting is necessary to clear all the previous COM port configurations. Do not delay or skip the reboot!
6. Try the Stealth mouse in Summit or LandScape again.

Mouse Pad and Lighting

The surface color and texture under the Stealth mouse is very important. **The best surface is a large, black mouse pad without any text or logos on it.** It should have a uniform surface texture. If it becomes worn, replace it.



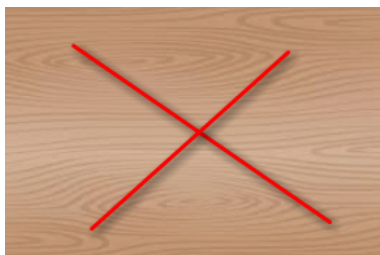
Search your favorite online computer supply store for “large black mouse pad” or your language equivalent. Choose one that has no text or logos on it. Get the largest one that fits on your desk. Your keyboard may also go on top if it is large enough.



DAT/EM Customer’s recommendation: “Steelseries” black cloth gaming mouse pads: <https://steelseries.com/gaming-mousepads>. Some are plain black and some have a white logo. If you get one with a logo, the logo should not be positioned where the Stealth mouse can ever reach it, because it will lose index if it runs over the white area. You can buy one that is too big and use a razor blade or craft knife to cut it to fit your desk.

A Stealth mouse should never be used on a multi colored, light colored, shiny, worn, patterned, or unevenly lighted surface. Examples of bad surfaces would be a white mouse pad, a promotional mouse pad with logos and writing, a dark mouse pad with a shiny spot worn in the middle, a clear plastic or glass desk protector, a spotted or wood-patterned desk surface, or any surface with direct sunlight or a very strong electric lamp shining on it.

Examples of BAD conditions for a Stealth mouse





Stealth Mouse Stops Moving the Summit/LandScape Cursor

Many users report that their Stealth mouse works for a while and then suddenly stops moving the Summit or LandScape cursor. It may do this once or twice or even many times per day. **This is not normal and you should not get used to it or ignore it!** Your Stealth mouse should never stop communicating coordinates to Summit or LandScape.

In most cases, **the problem is simply the wrong surface under the mouse.** See the section called “Mouse Pad and Lighting” on page 15. Even if you think you already have the right mouse pad, review that section. Don’t assume your Stealth mouse has a hardware problem unless you have tried it with the right mouse pad. If your long-time good mouse pad now has a worn spot in the middle, you may need a new mouse pad.

Other causes could be: Wrong driver, a broken wire inside the mouse’s cable, or obstructed optics. If you already installed the right driver and have the ideal mouse pad and no direct sunlight, and you suspect a hardware problem, see “Cleaning and Repairs” on page 19.

If Your Stealth Mouse “Runs Away” in Summit or LandScape

Your older Stealth mouse may need a firmware update if it “runs away” while using Summit or LandScape. When this happens, Summit’s or LandScape’s coordinates display will change rapidly while the mouse is physically sitting still on the mouse pad. In Summit, it will seem to run in one direction, usually diagonally with respect to the screen direction. It runs across the model, continues on outside the model, and keeps going. Summit or LandScape may seem locked up. To recover, you may need to unplug the mouse, stop the application using the Task Manager, or even reboot.

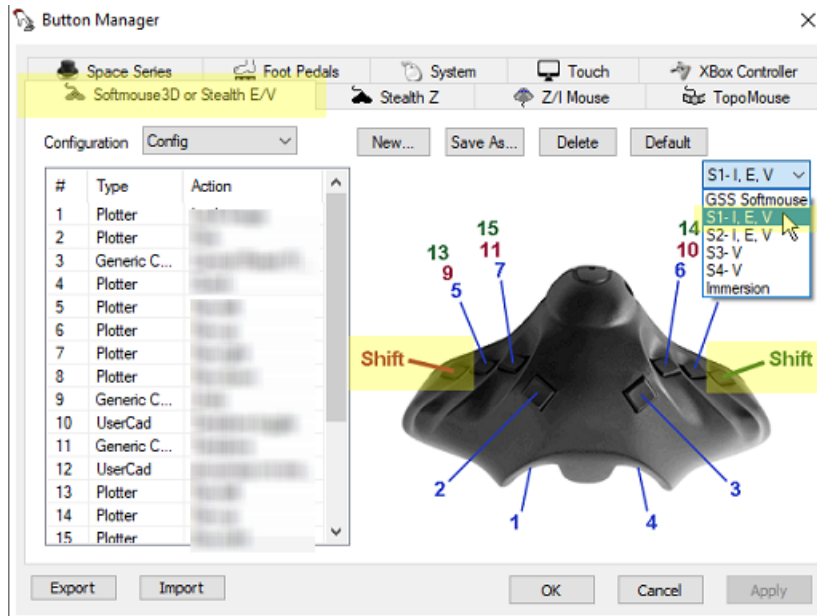
If your Stealth mouse runs away, send the model and serial number (page 1) to the manufacturer. They know which serial numbers require the firmware update (sorry, DAT/EM does not know this!). The Stealth support contact information is at the bottom of all the Stealth website pages at: <https://stealth3dmouse.com/>. They will confirm whether the firmware update is needed and give you instructions.

Why Can’t I Configure the Shift Buttons?

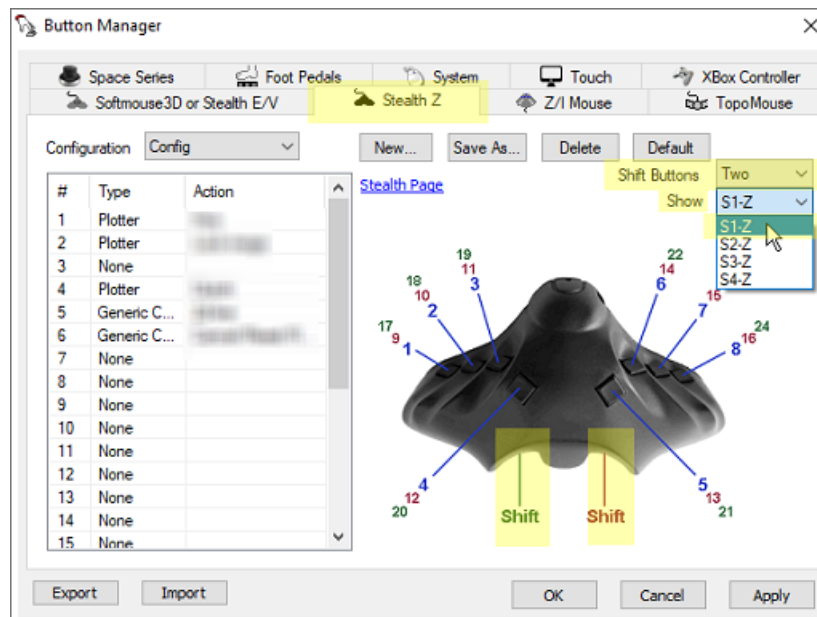
The shift buttons for each Stealth model are preset by the manufacturer. Shift button positions have never been configurable in DAT/EM applications. The only configuration available is setting the number of shifts (none, one, or two) on a Z mouse, but even then, their button locations are still preset.

Some users find that the shift buttons seem to be on different buttons than they remember using in the past. It could be that they now have a different Stealth model, such as “Z” rather than “V”, but in the same “S1, S2, S3, or S4” case design as their previous mouse. The shift buttons for the V/E and Z mouse models are in different places.

The following example screen captures show the preset shift button positions on a Stealth S1-V compared to the Stealth S1-Z. Both are in the “S1” case design and look the same from the outside, but the electronics inside them are different and they are configured on different tabs in the DAT/EM Button Manager:



The Stealth S1-V is set on the “Softmouse3D or Stealth E/V” Button Manager tab, because it is an Immersion emulation device. It always has the highlighted shift button positions.



The Stealth S1-Z is in the same case as the S1-V, but it is not the same inside. It is set on the “Stealth Z” Button Manager tab, can have the number of shift buttons selected, and has the highlighted shift button positions when set to “Two” shifts.

If the user is unhappy with the shift button positions, it is best to exchange the mouse for that person’s preferred model. Users who have memorized their button positions will be much more productive with their familiar mouse model. To help determine which mouse is needed, use the DAT/EM Button Manager’s “Softmouse3D or Stealth E/V” and “Stealth Z” tabs to view the shift button positions for each option until the preferred model is located.

Cleaning and Repairs

If your mouse already has the best driver and the best type of mouse pad and lighting, but it still stops moving the Summit or LandScape cursor consistently, it may need cleaning or other repairs.

- First, clean the optics. Wipe them carefully with a dry, soft cloth. Don't put water or other cleaning liquid in the aperture.
- Keep the mouse pad clean and free of dust and liquid for best long-term results.
- See the "Mouse Pad and Lighting" section on page 15. Replace the mouse pad or block direct sunlight, if necessary.
- Do not to put strain or force on any part of the mouse's cable. A broken wire inside the cable requires factory repair.
- If the mouse is an old S1 or S2 that was not repaired for several years, the illumination may be too weak. Send it for factory repair.
- No matter what optics it has, the optics or illumination could be dirty or blocked somehow inside. DO NOT OPEN THE MOUSE CASE. Send for factory cleaning and repair.
- Any internal cleaning or repairs require factory service. To coordinate the service, use the contact information at the bottom of the Stealth website pages at: <https://stealth3dmouse.com/> . Send them the mouse type and serial number and a description of the problem. They will research its age, illumination type, and optical chip type, then give you information for the closest approved repair center.