Checklist to go through if having Kestrel Bluetooth Problems:

1) **Does your Kestrel have Bluetooth on it?**

   To check if your Kestrel has Bluetooth on it, there should be a Bluetooth symbol on the front window of the device and Bluetooth should be a menu option on the Main Menu.


2) **Do you have fresh batteries in the Kestrel (Low batteries will display 50% until Bluetooth is turned on, then they will rapidly drain shutting Bluetooth off due to Bluetooth taking a lot of energy)?**

   Please make sure you have fresh batteries in your Kestrel if you experience Bluetooth issues as low power may create an intermittent Bluetooth connection.

3) **Does the device that you are pairing the Kestrel to have Bluetooth on it?**

To see if your computer has Bluetooth on it, please check the by clicking on the device tray, shown as a triangle on the lower right portion of the Windows task bar. A Bluetooth symbol should appear. You can right click on this Bluetooth icon to "Add a Device" or check the COM port number by right clicking and selecting "Open Settings" and going to COM port tab.
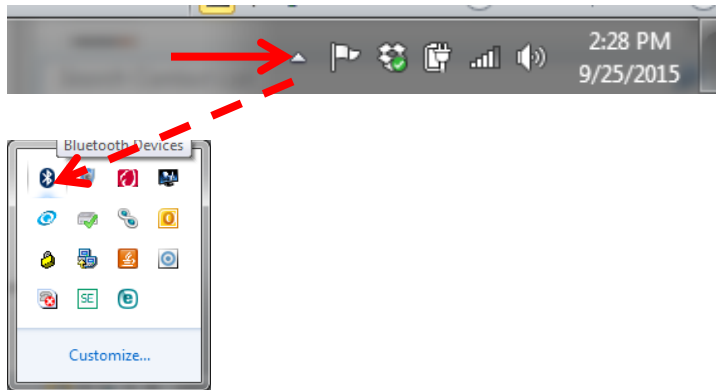
4) **Are you trying to connect to an iOS device?**

Unfortunately the Kestrel 4000 series is not compatible with iOS devices.   The Kestrel 4000 series can only connect using Bluetooth Classic which limits its connectivity to Windows or Android devices. Kestrel Connect, found on the iTunes store, only works with our DROP products.

5) **Have you been able to pair the Kestrel to your device?**

You should click on Add a Device as mentioned in Step 2.   Please have the Bluetooth turned ON on the Kestrel and in close proximity to the device that you are pairing to. The Kestrel SN should eventually appear to allow for you to pair the device.

6) **Are all four of the fields (ID, Ver, Adr, and PIN) populated on the Kestrel->Bluetooth->Info screen or are some blank or show "****"?**

If any of the fields are not populated or shows "****", please contact techsupport@nkhome.com to send this unit in for repair as the Bluetooth is not working properly.   Also the ID field should show the model and serial number of the device. For example: K4500-729035.   If something other than that appears, please contact tech support as well.

7) **Have you been able to enter the PIN found on the Kestrel ->Bluetooth->Info screen on the device that you are pairing to?**

If the device was found when trying to pair, but you were never prompted to enter the PIN, the connection will not work.   First you can try to forcing this connection by going to the device tray (see question 2), right clicking on **Show Bluetooth Devices** and double clicking on the Kestrel device shown. This should force you to enter the PIN. If not, please try un-pairing and then re-pairing the Kestrel again.

8) **If you have paired and entered the PIN, are you selecting the correct COM port that the Kestrel is connected through?**

   You can find the COM port number by going to the device tray (see question 2), right click on Bluetooth symbol and select Open Settings and going to the COM port tab.   If two COM ports are listed, please use the Outgoing COM port.   If you are getting a "Cannot determine state of device" error, you are using the wrong COM port number.

9) **Are you using an internal Bluetooth module or an External USB Bluetooth module?**

   If you are using an internal Bluetooth module, please do a Google search for "Bluetooth Driver" and specify the make and model of the device that you are using. If you find a newer version of the Bluetooth driver online, please download and install it and try again.   This is also recommended for external Bluetooth dongles as there may have been updates since it was installed.   It is recommended to search the computer model for the driver instead of the manufacturer of the Bluetooth dongle, but this is a secondary option as well.

10) **If using an External dongle, have you tried inserting it into a different USB Port?**

    Sometimes USB ports can become unresponsive. Using a different USB port to insert the Bluetooth dongle can help with the connection sometimes.

11) **Is the Bluetooth module you are using a Bluetooth SMART or Bluetooth Low Energy only module? Or does it support Bluetooth Classic?**

    Kestrel 4000 series models use Bluetooth Classic.   If a Bluetooth devices is 2.0, 3.0 or 4.0, this connection should work. If instead the Bluetooth dongle is labeled as BLE (Bluetooth Low Energy) or Bluetooth SMART only, this Bluetooth device is not compatible. Please purchase a different dongle. NK can recommend Kensington 4.0 as a reliable Bluetooth device.

12) **If you click on the Properties of the Bluetooth connection, is the Device working properly?**

    Please search for Control Panel and open that up. In the top right corner, make sure the "View By" is either Large or Small Icons. Click on Device Manager to open it up. Open up the Ports tab and you should see your Bluetooth Connection listed. Right click on the Bluetooth device and click on Properties.   Device status should be shown indicating whether the connection is working properly. If it is not, please search for a Bluetooth driver as explained in Question 8.

13) **Is there a driver assigned to the Bluetooth connection or is there a Yellow Exclamation Point on this connection?**

Follow the instructions in Question 11. After opening up the Properties of the Bluetooth device, go to the Driver tab to see if there is a driver assigned. You can try to update driver software automatically but more likely will need to find one on the internet as mentioned in Question 8.

14) **Do you have any Windows (or Android) updates that are pending?**

Windows (or Android) sometimes will disable COM ports when a new update is waiting to be applied.   The easiest way to troubleshoot this is to go to Windows Explorer and right click on Computer and select Properties, then select Windows Updates (see picture below).   Rebooting the computer will apply these updates.
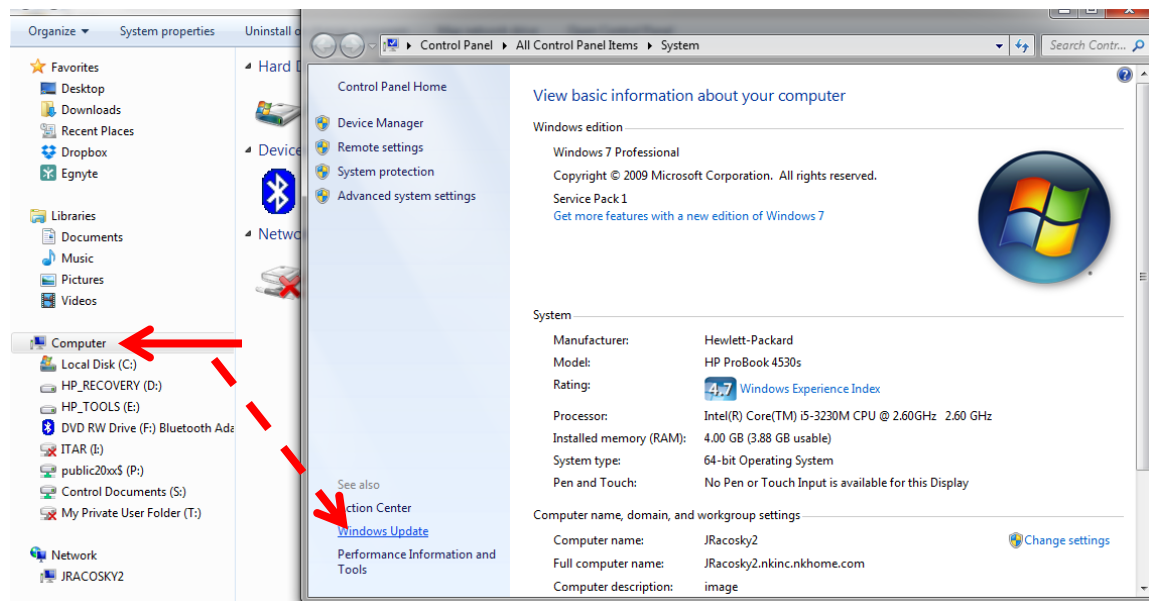
15) **Have you tried a hard reset on the Kestrel and then re-pairing the device and trying again?**

Sometimes issues will occur if the Kestrel will not release the COM port correctly. In order to force this to happen, please do a hard reset of the Kestrel by doing to following:

- o Pull the batteries out of the Kestrel.
- o With the batteries out, hold down the power button on the Kestrel for at least 30 seconds (please note: there will be no indication that anything happened on the Kestrel)
- o Put the batteries back in the Kestrel after 30 seconds and try to connect again.

16) **Have you tried rebooting the computer to see if that resolves the issue?**

Sometimes rebooting the computer will release the COM ports and apply Windows updates to make this connection work again.

17) **Are there any conflicting Bluetooth devices that could be interfering with this connection?**

If you have other Bluetooth devices connected, there could be a conflict between two of them. It is recommended to try and disable these Bluetooth devices until the Kestrel is able to connect. To disable devices, please search for Control Panel and open that up. In the top right corner, make sure the "View By" is either Large or Small Icons. Click on Device Manager to open it up. Open up the Ports tab and you should see your Bluetooth Connections listed. Right click on the Bluetooth device you want to disable and select Disable. You can also Re-enable these devices in a similar manner.

18 **Are there any conflicting Bluetooth devices that could be interfering with this connection (Including an Android/iPhone app) or have you back out of or actually closed the previous app on your mobile device that you had connected?**

A lot of the time when you back out, the app is still running in the background, and not actually shut down. Try to close all applications completely and disable any Bluetooth devices that may be interfering and please try connecting again.

19 **Does the Bluetooth connection work with Kestrel Communicator? AB Proflie Loader? Or Neither?**
If the Bluetooth connection works with one application but not the other, please make sure you are using the most recent revision of the application. All the current application revisions can be found here: http://www.nkhome.com/support/kestrel-support/manuals-and-downloads. Please also ensure you are using the same COM port for the non-working application as you are for the working application. If neither program is working, then the issue would need to be resolved through one of the other questions listed in this checklist. You cannot have both applications open at once as this will cause a conflict with the COM ports.

20 **Do you have Kestrel Communicator and AB Profile Loader (or two concurrent applications communicating with the Kestrel) open at the same time?**

If you have two applications open at the same time, this can create a conflict with the COM ports. Please close all applications except the one you are trying to connect to in order to ensure there is no COM port conflicts.

21 **Have you tried toggling the Bluetooth Range from HI to LO and then back to HI again and then re-pairing the Kestrel?**

It is rare but the Kestrel Bluetooth communication can get "stuck". If the hard reset didn't work in question 14, please try toggling the Bluetooth Range (under Main Menu->Bluetooth) on the

Kestrel and try connecting again. You may have to un-pair and re-pair the Kestrel for this troubleshooting technique to work.

22 Have you recently updated your firmware?

If you have recently updated the firmware and all of a sudden are having issues, please make sure you have the latest software applications installed as certain firmware revisions only work with the latest software applications. Also please try toggling the Range as mentioned in question 19.   And lastly make sure the Bluetooth Properties are populated correctly as shown in Question 5.

23 Are you using the latest version of Kestrel Communicator (v 2.1.1) or AB Profile Loader (v 33)?

Again the latest versions of these applications can be found here: http://www.nkhome.com/support/kestrel-support/manuals-and-downloads

24 What firmware version are you using on the Kestrel (found on the startup screen by the battery percentage in the form of "Iss. 4.xx"?

If trying to connect to an Android device with OS 4.4 or greater, you will need to have firmware version 4.83 or higher on your device.   Please go here or contact techsupport@nkhome.com for upgrading your firmware on your device. If you device has 4.76 or higher on it, the firmware can be updated using our NK Bootloader program. If not, it would have to be sent in to NK to have it updated. NOTE: If your device has 4.70 or earlier on it, the firmware can only be updated to 4.70 at most due to the internal board used in that model.