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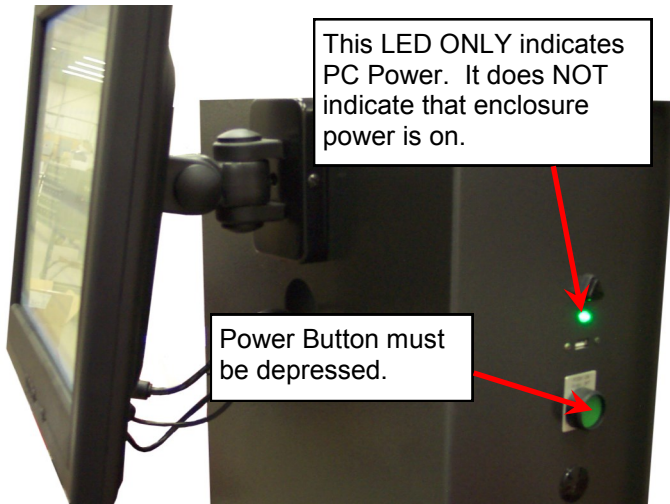
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Since the PC power is separate from the control power the first step is to ensure both are ON. The following pictures show the RazorGage Power button on various models. On Fujitsu tablets ensure the WiFi slider switch is ON (right). On tablet models re-pair the Bluetooth by following the pairing Instructions starting on page 8 of this manual.

## Tablet and MiniTouch:



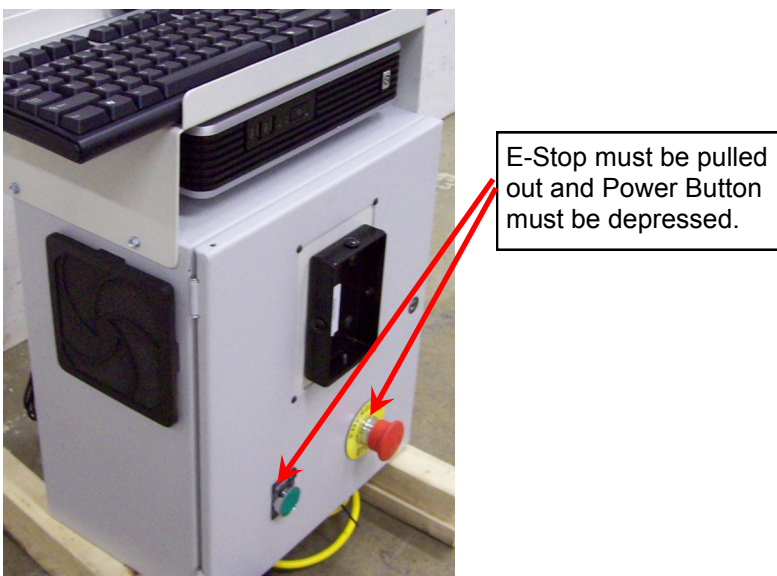
## Tower PC Enclosure:



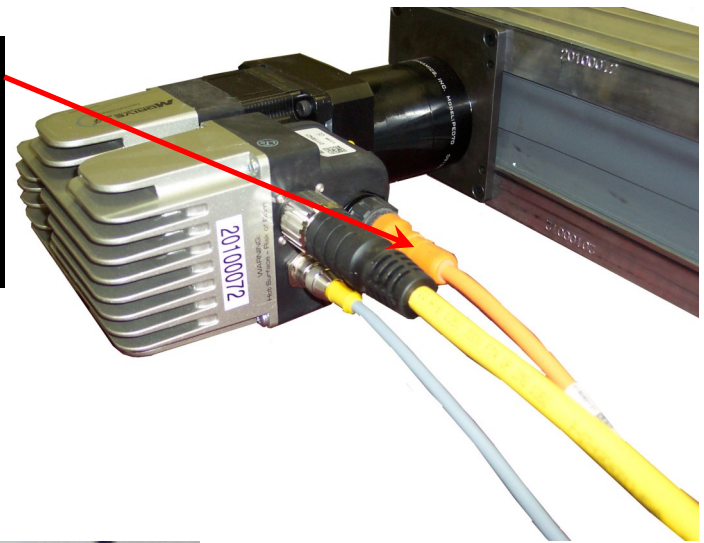
## RazorOptimals & Automatic Pusher Systems:



## All RazorGages & Systems with the beige enclosure:



Next we must make sure AC power is getting to the MDrive. Remove the cable indicated at right and then use an electrical meter set to measure 120 VAC and test as shown below.



If the MDrive has power then there is one more test we must perform before moving on. With the power on, start up the RazorGage software. If you're reading this manual then it is assumed you will get a communication error. Now try to move the RazorGage positioning carriage by hand. It should not move. If you can move it by hand and your RazorGage shipped from the factory after January 2013 then the MDrive may need to be replaced.

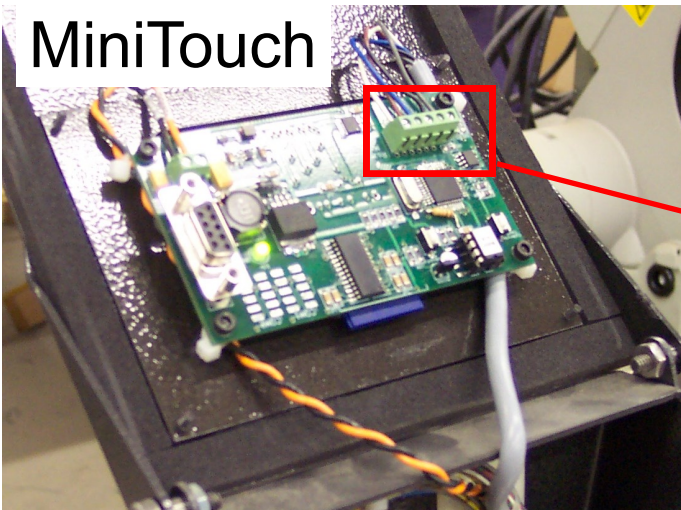


Once you have verified that the power is on the next step is to check the MDrive communication cable. The ferrule on the connector must be wiggled as you turn it to make sure it seats all the way down. The color of the connector and cable will vary among RazorGages.



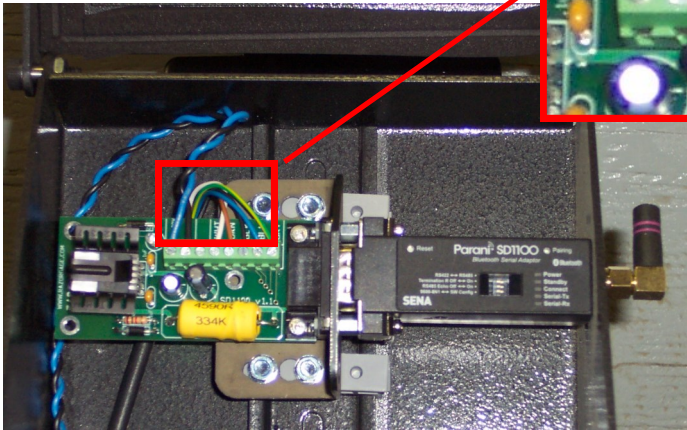
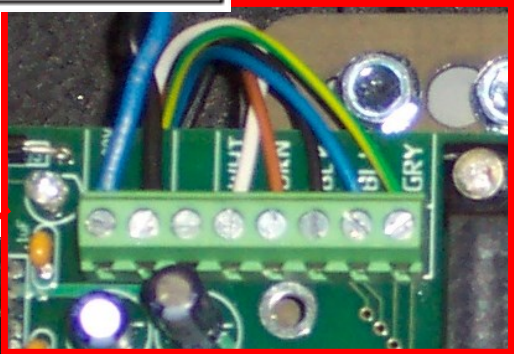
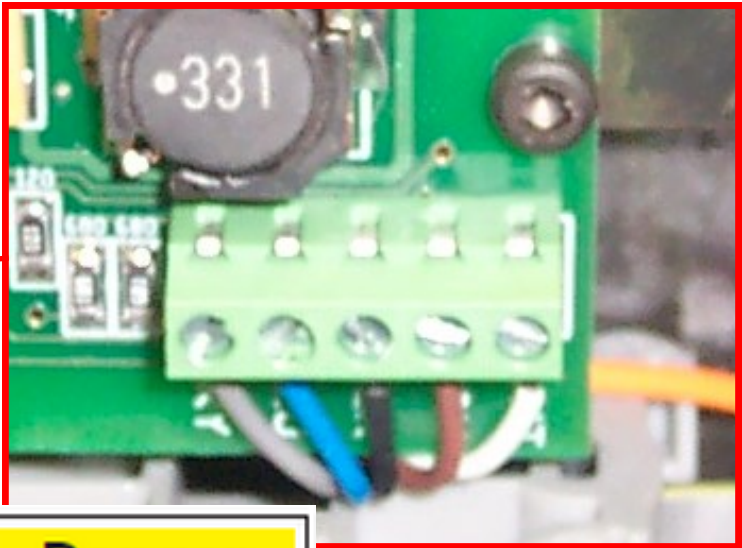
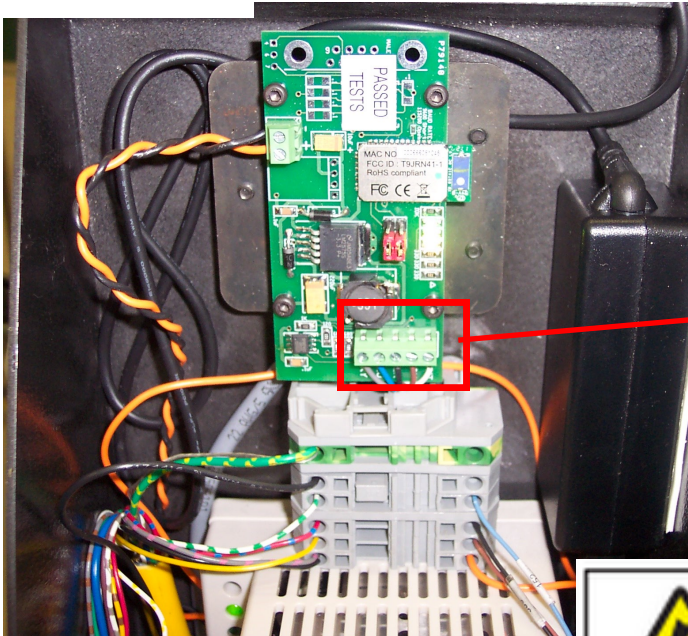
The next step is to make sure the other end of the communication cable is seated. On newer RazorGages, the other end of the MDrive communication cable lands on screw terminals. The following pictures show the location of these terminals. Make sure there are no loose wires and that the terminals are not clamping on the insulation.

MiniTouch



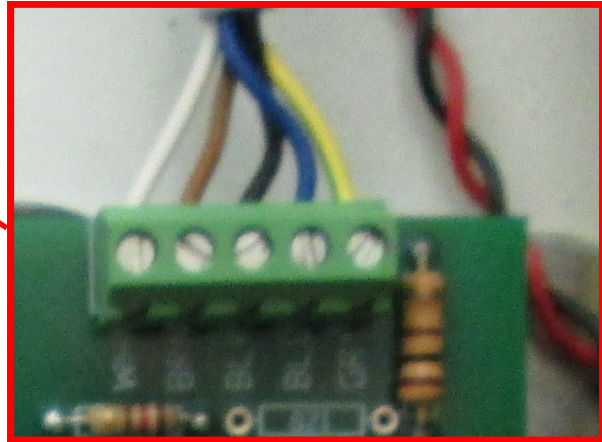
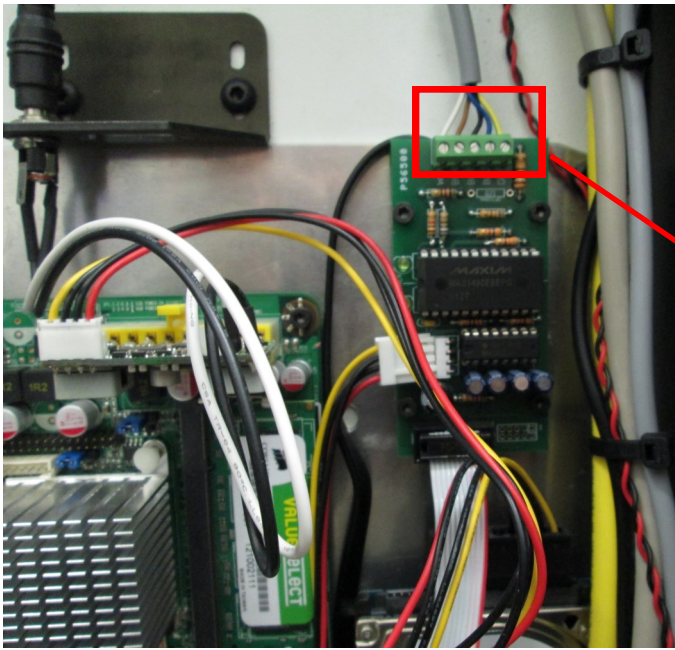
**Danger**  
Live wires

Tablets





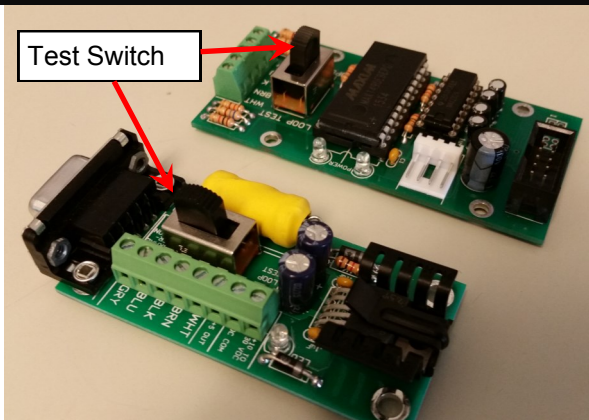
# Control Tower



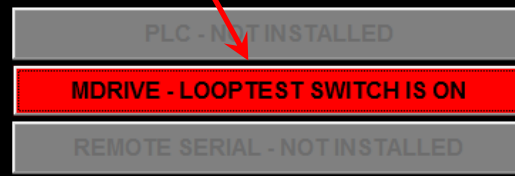
Make sure the wiring connections on the communication board are tight and not pinching the insulation of the wire.

If your comm board has a test switch like those below, shut down the RG software, flip test switch on, & restart the RG software.

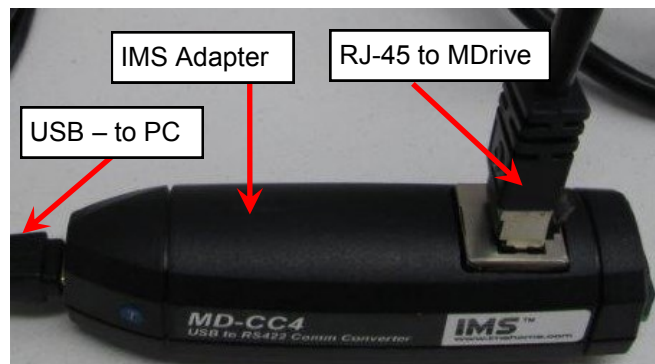
If, upon restarting the RG software the message in red is displayed as shown below stating that the loop test switch is on, then communication is working between the PC through to the terminal blocks on the board. This indicates that the problem is in the comm cable or the MDrive.



Could not communicate with devices in red. Make sure power is on.



Some towers will use an IMS adapter. Make sure the USB cable is plugged into the adapter and your PC. Also make sure the RJ-45 connector is plugged into the adapter and the other



The IMS adapter also requires a particular driver. The driver installation can be verified in Device Manager. To get to Device Manager go to the Start menu, then Control Panel, then Device Manager.

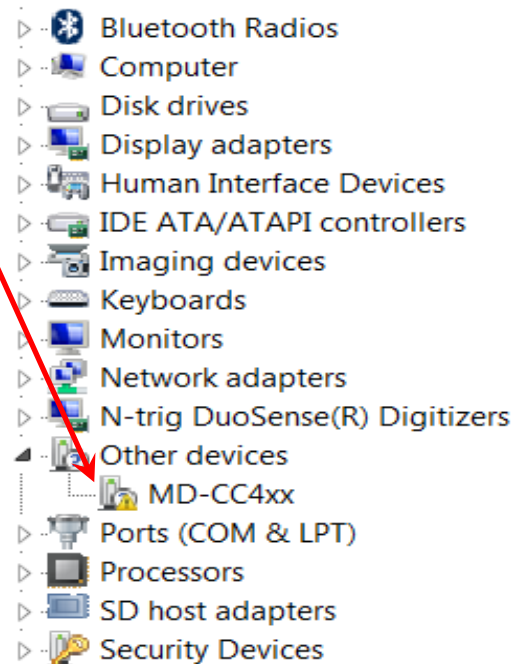
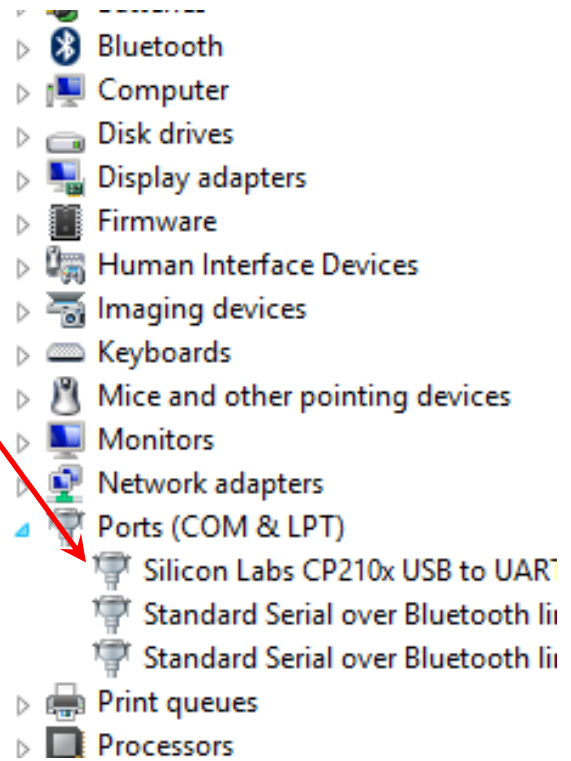
For Windows 8 right click on the Windows icon in the lower left corner of the screen, then select Device Manager.

If the driver is properly installed it will show up under Ports and be named Silicon Labs CP210x USB UART BRIDGE(COM ...)


If the driver is not properly installed it will show up under the Other Devices category and be listed as MD-CC4xx.  
If your driver looks like this try right clicking on MD-CC4xx then select update driver, then search automatically. You must have a working internet connection for this update.

If your driver does not show up in either of these places the adapter is most likely defective and will need to be replaced.

If the IMS driver will not automatically download it can be found online at this address:  
<http://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx>  
At the page click on the link below to download the driver. Once it's done install the driver and verify in Device Manager that it installed properly.

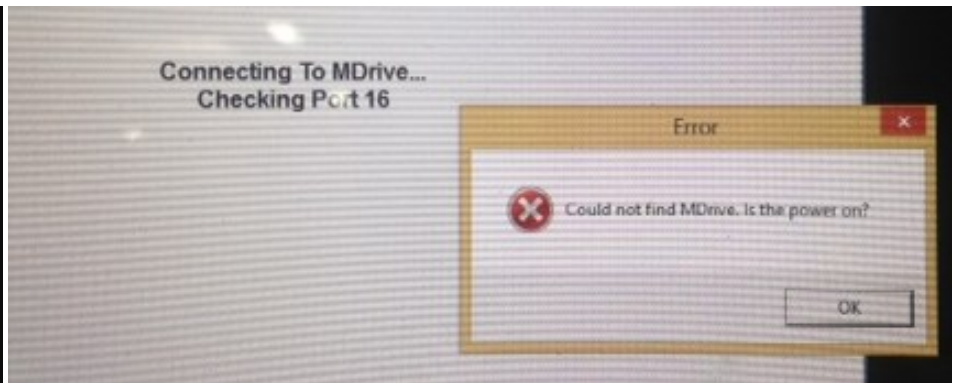


Download for Windows XP/Server 2003/Vista/7/8/8.1 (v6.7)

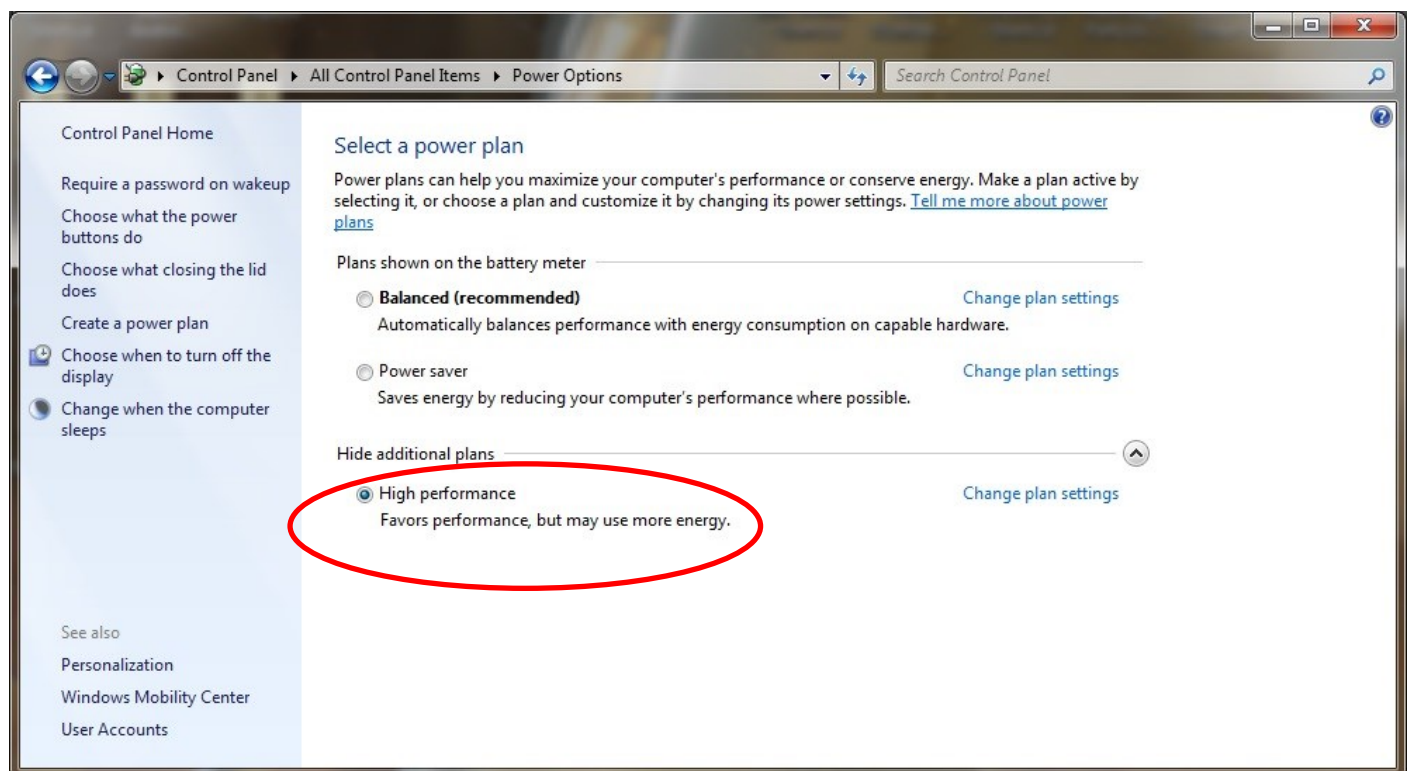
Platform	Software	Release Notes
 Windows XP/Server 2003 Vista/7/8/8.1	<a href="#">Download VCP (3.66 MB)</a>	<a href="#">Download VCP Revision History</a>

# Bluetooth loosing communication with M-Drive

Here are some tech tips that may help if you are experiencing loss of communication between your Tablet and the M-Drive with the error screen at right:



First, confirm that there is power applied to the M-Drive. You can move the carriage left or right by hand fairly easily if the M-Drive does not have power applied. If the carriage will not move, you have confirmed that power is applied. The next thing to check is the power settings that can be found in the Windows Control Panel under Power Options. Make sure the “plan” is set to High Performance.

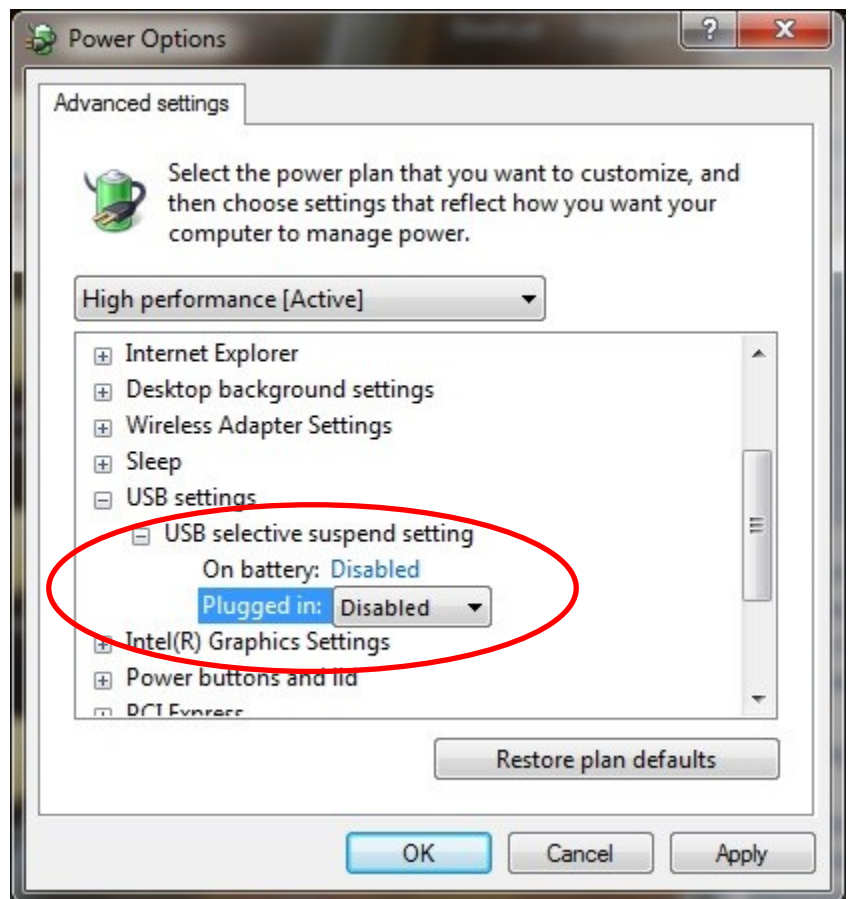




Ensure the drop down boxes are set to 'Never', then click the "Change Advanced power settings"  
In the advanced Settings form, double check all of the settings to make sure it will not go to sleep, or enter suspend mode.  
(Set to Never).



Also, make sure the USB suspend setting is set to Disabled.



**After making changes, it would be best to restart the PC and double check these settings again just to be sure Windows saved them.**

# Pairing the Tablet PC with the Bluetooth Adapter

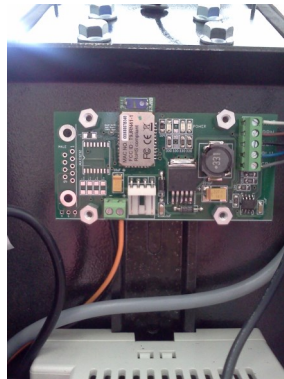
Step 1) Open the RazorGage electrical enclosure by removing the two screws indicated by the arrows and swinging the door up and over.



**Danger**  
Live wires

Use caution inside the enclosure while power is on. Live wires present.

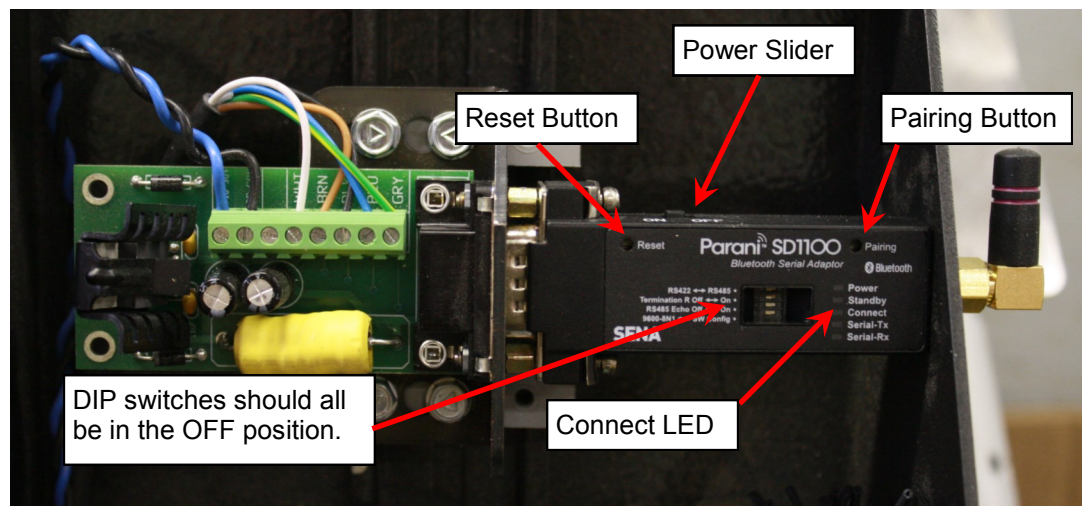
Step 2) Locate the Bluetooth Adapter. It is inside the electrical enclosure near the top. If your adapter looks like one of the examples below, **SKIP TO STEP 7.**



Step 3) If your Bluetooth adapter looks like the example below, continue to Step 4.

Step 4) Using the Power Slide switch turn the Bluetooth adapter off, wait 3 seconds and then turn it back on.

Step 5) Reset the adapter by using a paper clip to press the Reset button



Step 6) Press & hold the Pairing button for 2 seconds until the Connect LED blinks 3 times every 3 seconds. Leave the power on. The Bluetooth adapter is now ready to be discovered by your tablet.



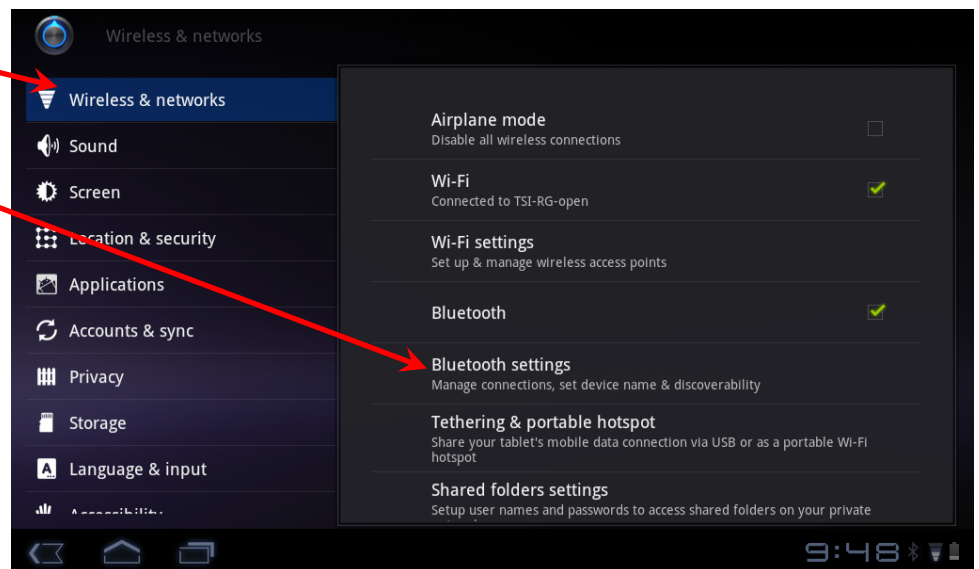
Step 7) If you're pairing with a Windows 7 tablet **SKIP TO STEP 17**

Step 8) If you're pairing with an Android tablet, make sure the RazorGage software is closed then find and click the Settings icon on the Android Desktop.

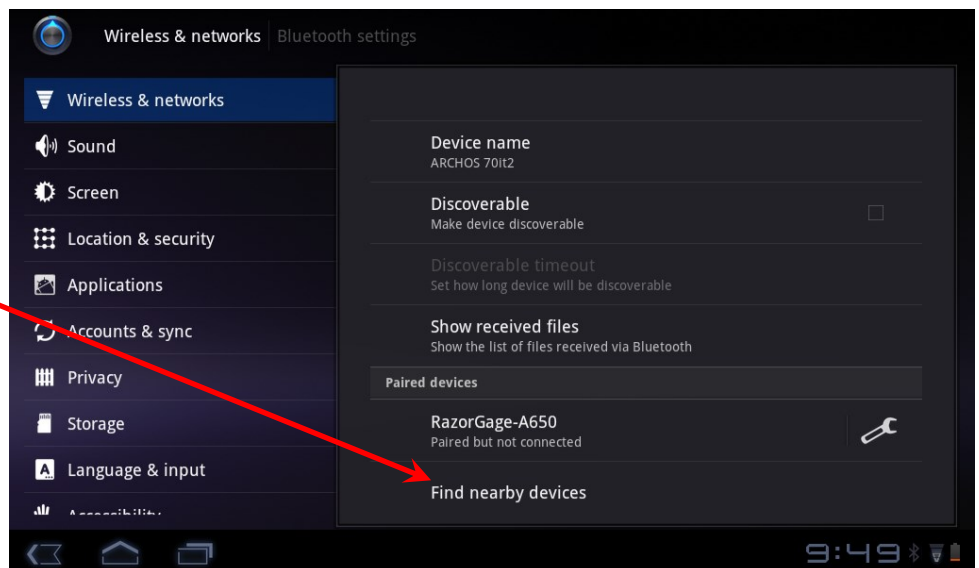


Step 9) Click Wireless & Networks

Step 10) Click Bluetooth Settings

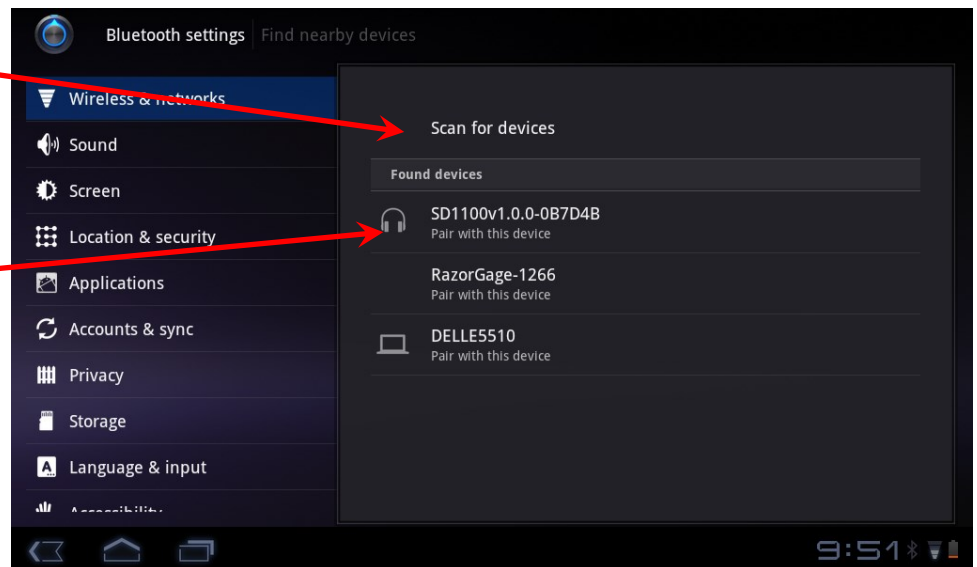


Step 11) Click Find Nearby Devices

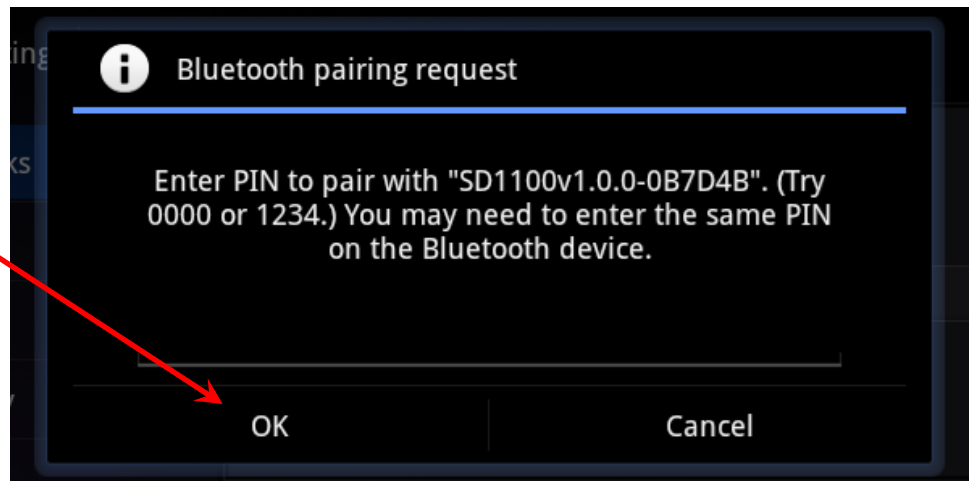


Step 12) Click Scan for Devices.

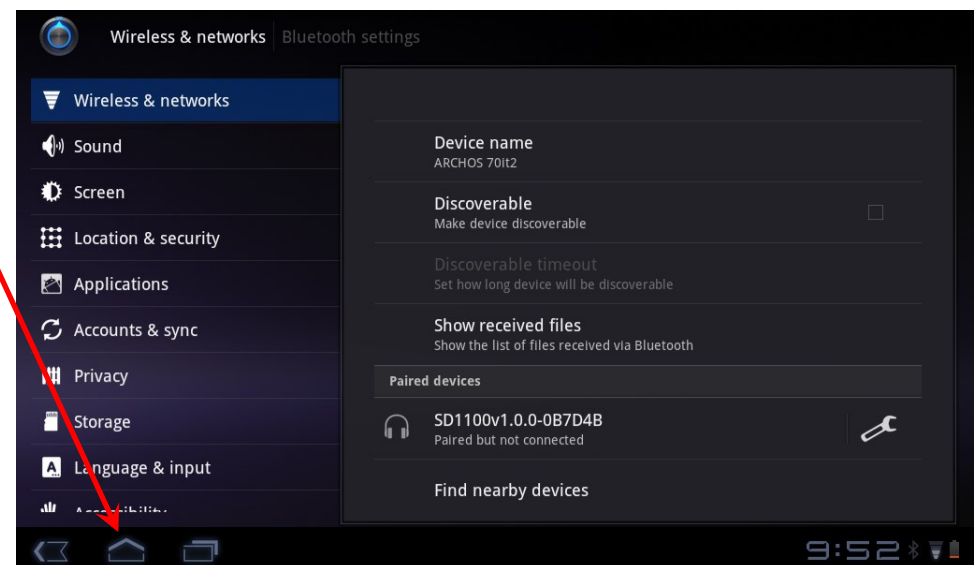
Step 13) When it finds "SD1100v...." click on that device to pair it with the tablet.



Step 14) Type in "1234" for the PIN number and click OK.



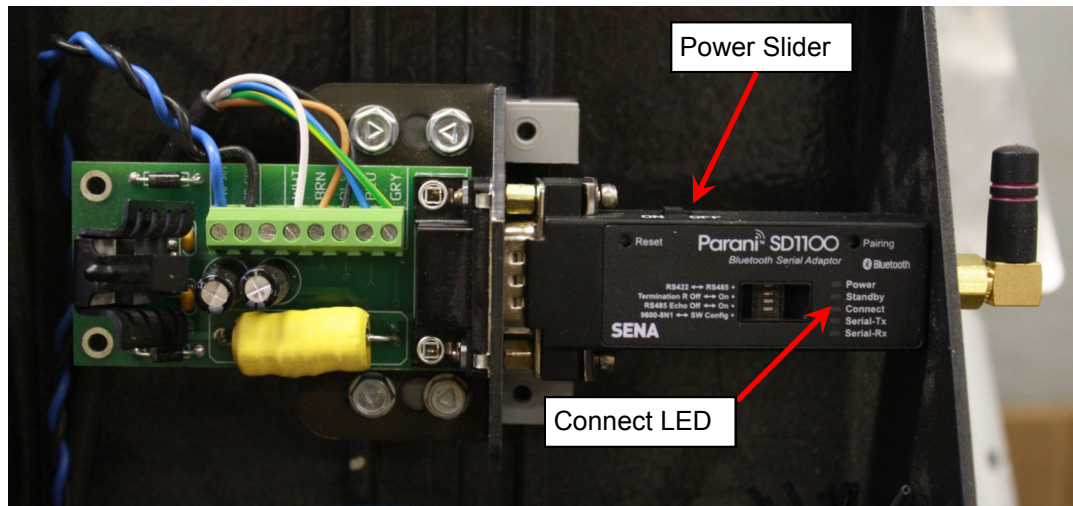
Step 15) Device should now be paired. Click the Home button to return to the Android Desktop







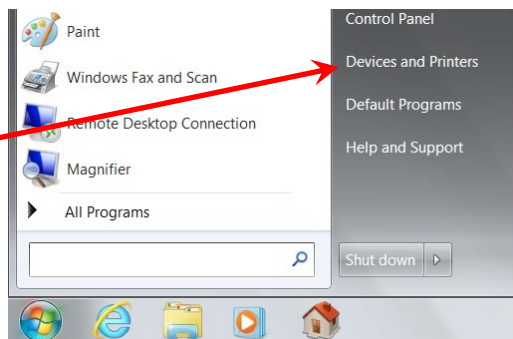
Step 16) Now look at the Bluetooth adapter inside the electrical enclosure. When it is paired with the tablet the Connect LED blinks once per second. Turn the unit off using the power slider switch then turn it back on. The Bluetooth adapter is now ready to connect with the RazorGage. Close the enclosure door and secure it with the two screws, start up the RazorGage software and it should connect. The following steps are for a Windows Tablet. If you are using an Android tablet, you are finished pairing and connecting the tablet with the RazorGage.



Step 17) If you have a **Windows 8 Tablet** skip to step 25. For **Windows 10** skip to step 32. Follow these steps for pairing and connecting with a **Windows 7 Tablet**. First verify that the Wireless switch on the right side of the tablet is in the ON position.



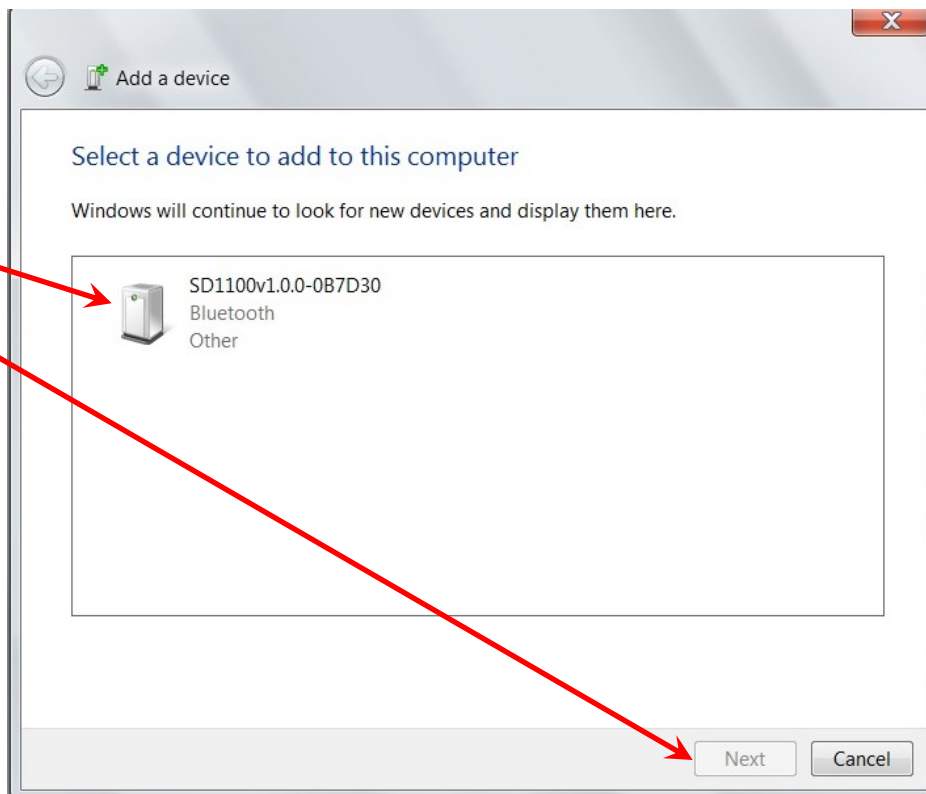
Step 18) Click the Start button in the lower left corner of the Windows desktop. Then click Devices & Printers.



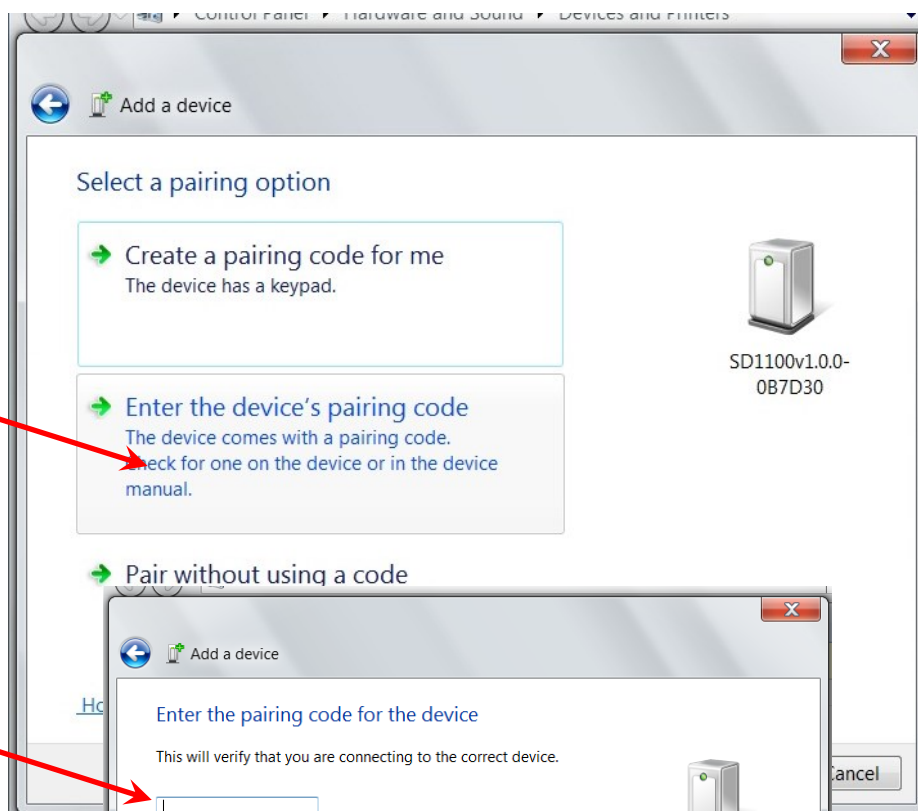
Step 19) Click Add a Device



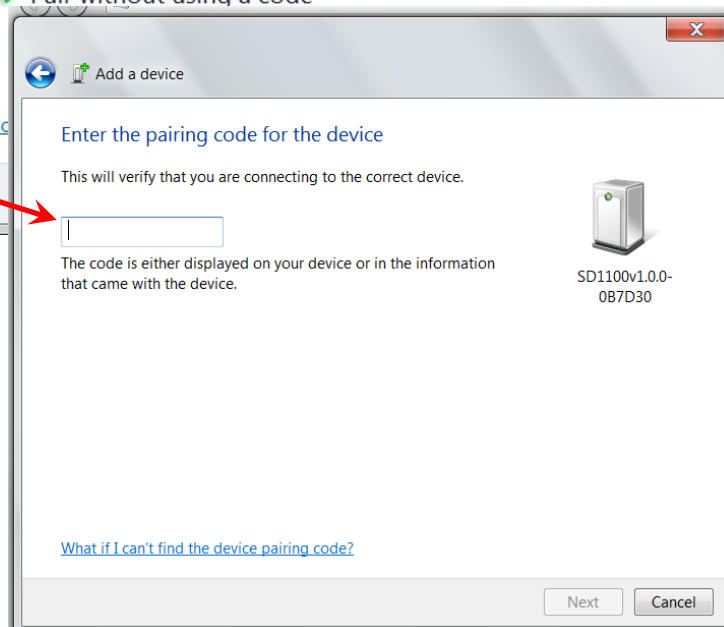
Step 20) Select SD1100v...  
and click Next



Step 21) Select Enter the  
device's pairing code.

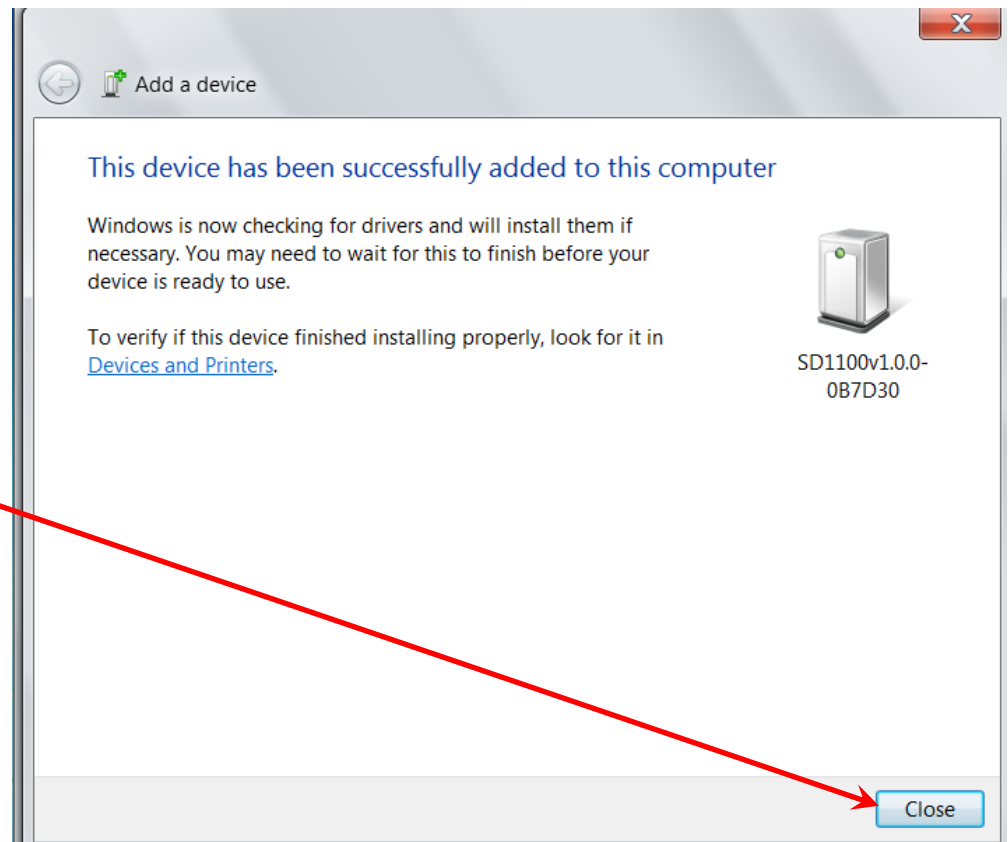


Step 22) Enter 1234 as the  
code and click Next.

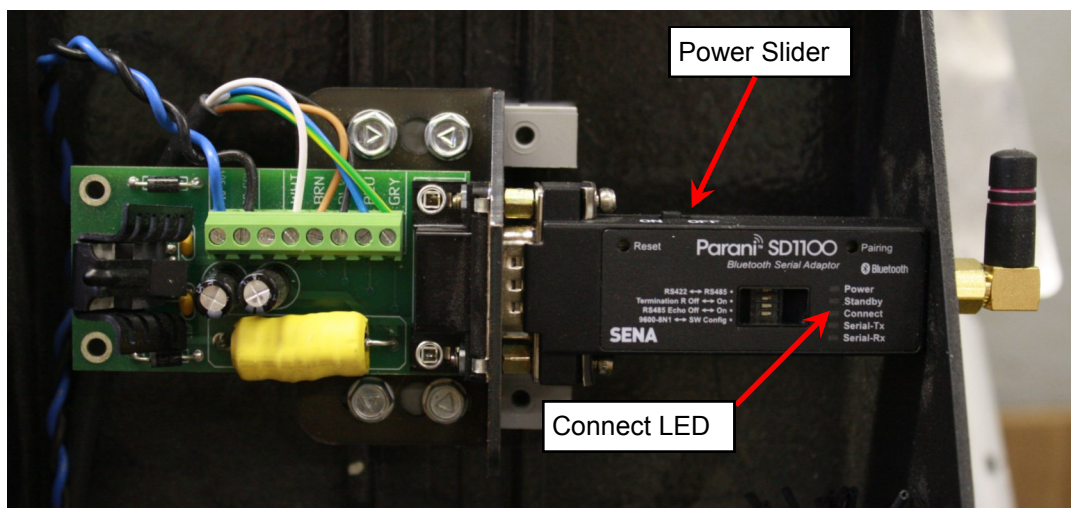




Step 23) Device should now be paired. Click Close.

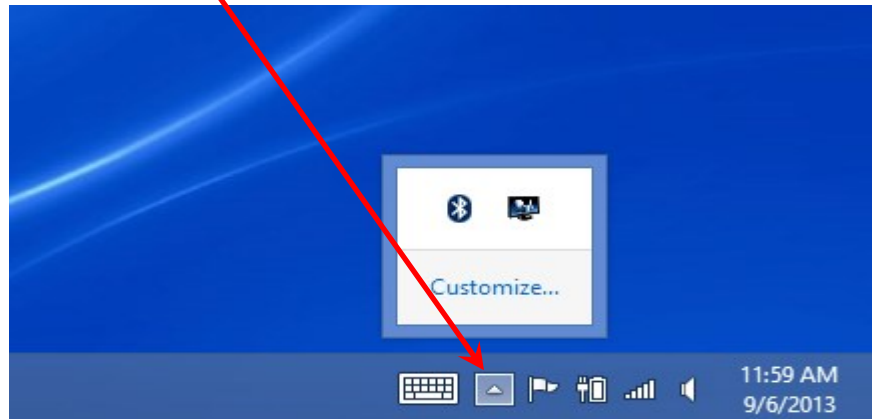


Step 24) Now look at the Bluetooth adapter inside the electrical enclosure. When it is paired with the tablet the Connect LED blinks once per second. Turn the unit off using the power slider switch then turn it back on. The Bluetooth adapter is now ready to connect with the RazorGage. Close the enclosure door and secure it with the two screws, start up the RazorGage software and it should connect. If you are using an Windows 7 tablet, you are finished pairing and connecting the tablet with the RazorGage.

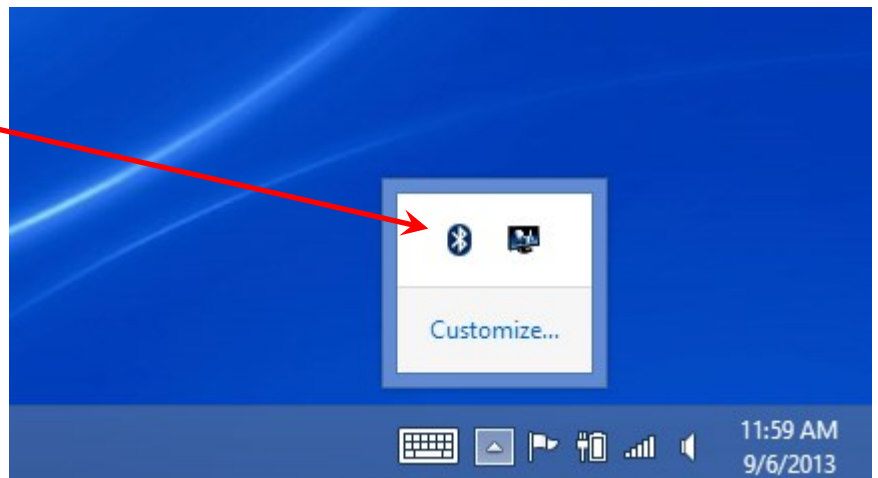


# Pairing Instructions for Windows 8

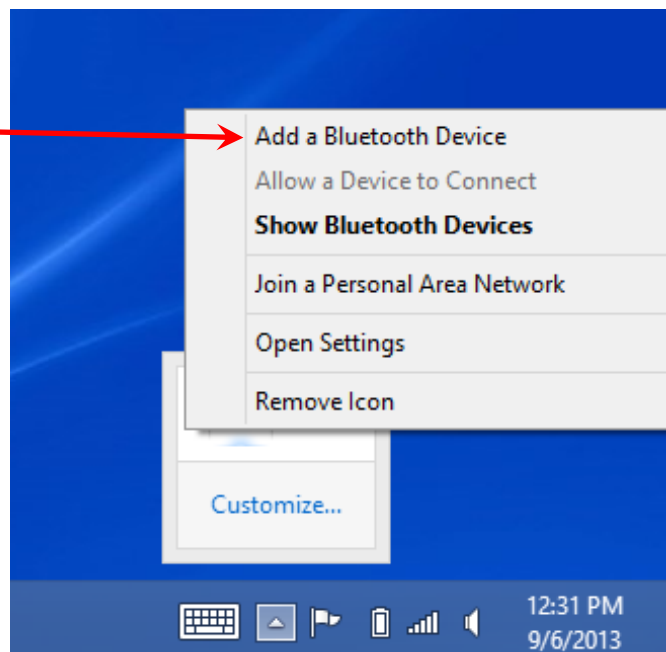
Step 25) Follow these steps for pairing and connecting with a Windows 8 tablet. First follow steps 1 thru 6 on page 10. Next click on the hidden icons button on the lower right corner of the tablet.



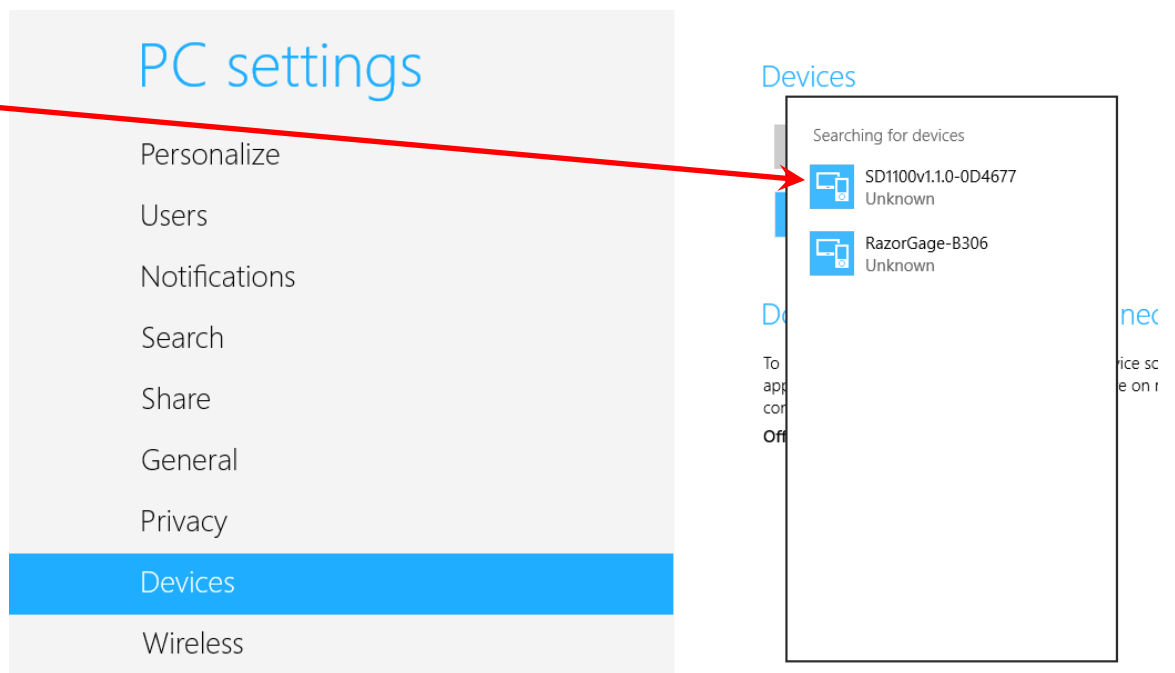
Step 26) Next select the Bluetooth icon from the hidden icons pop-up menu.



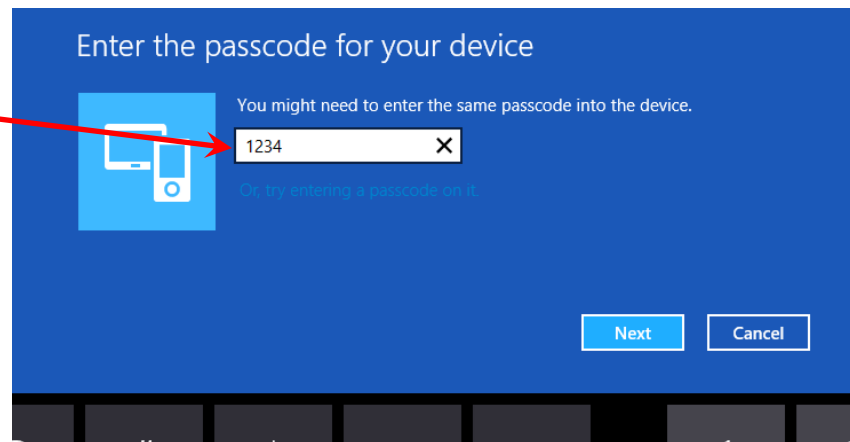
Step 27) From the Bluetooth pop-up menu select Add a Bluetooth Device.



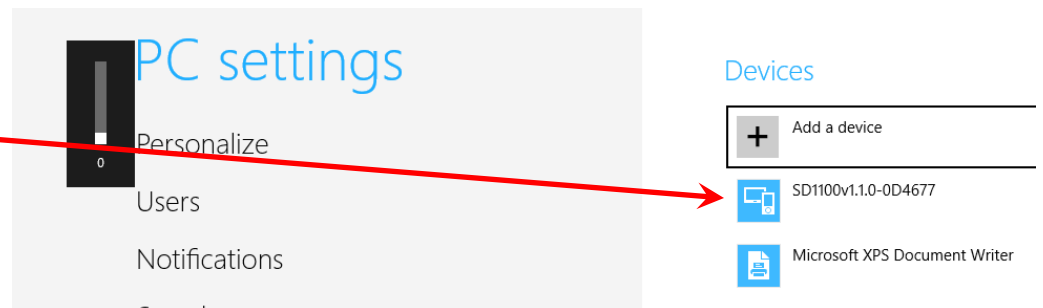
Step 28) Select SD1100v...



Step 29) Click inside the text box to enter the pairing code. Your tablet will not pair correctly without entering the code. Enter 1234 and



Step 30) SD1100... should now be listed under devices.



Step 31) Pairing is now finished. Press the window button at the bottom of the tablet to exit the PC settings





# Pairing Instructions for Windows 10

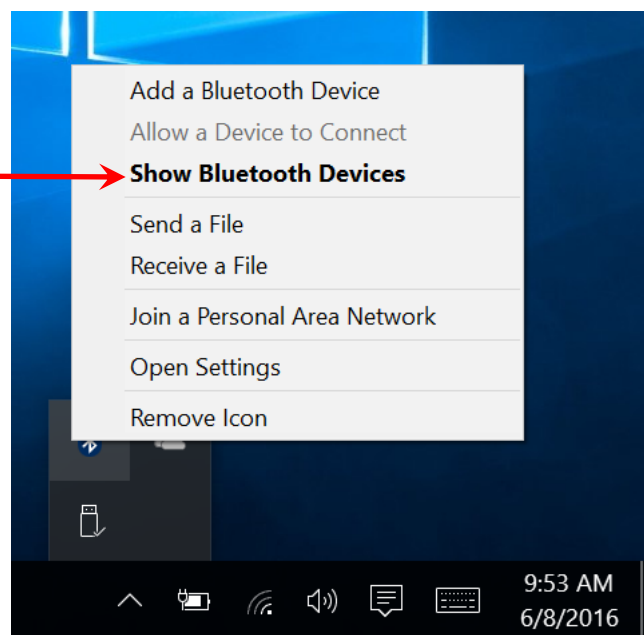
Step 32) Follow these steps for pairing and connecting with a Windows 10 tablet. First follow steps 1 thru 6 on page 10.

Bluetooth Symbol

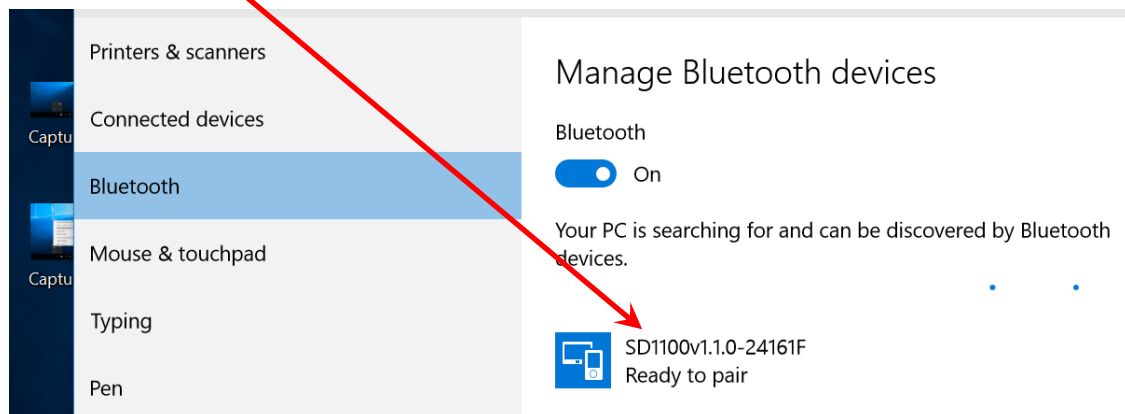
Step 33) Click the Show Hidden Icons arrow in the system tray



Step 34) Click the Bluetooth symbol to reveal the menu at right. Click Show Bluetooth Devices




Step 35) If Bluetooth isn't ON click the slider to turn it on. If you followed steps 1 thru 6 it should find the Bluetooth Adapter as evidenced here.



Step 36) Enter the passcode '1234' as shown below and click Next.

Enter the passcode for your device

## Enter the passcode for your device



You might need to enter the same passcode into the device.

Or, try entering a passcode on it.

**Next** Cancel

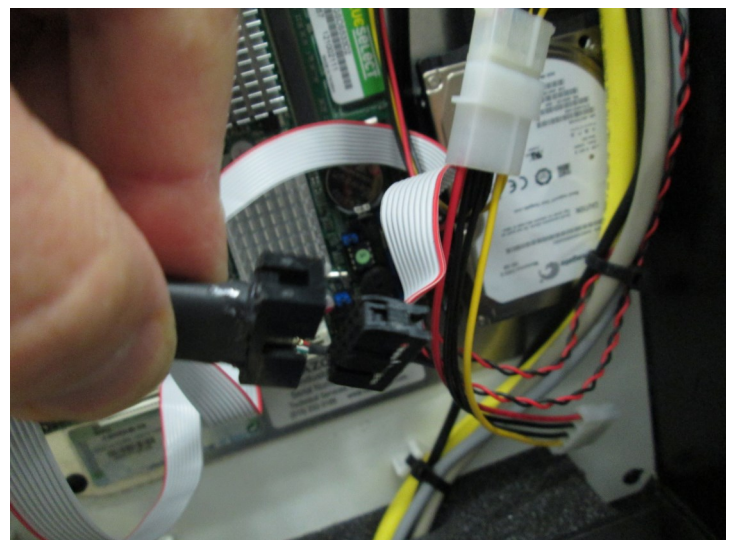
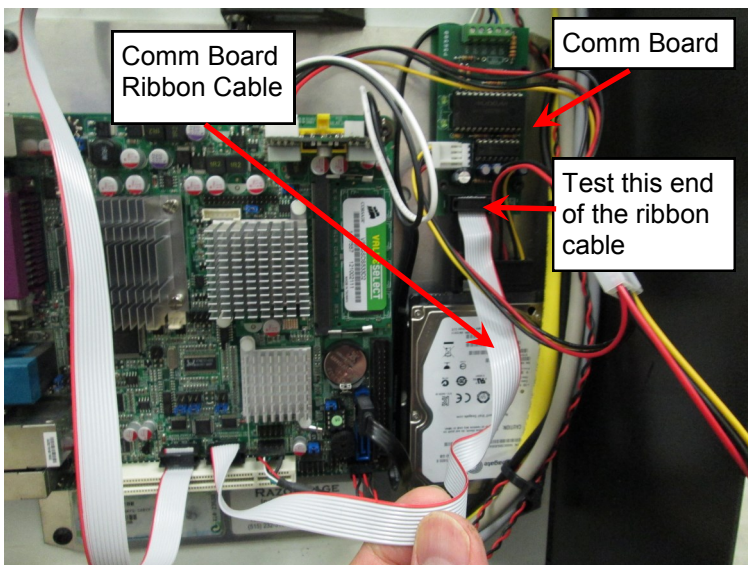
That's it! The tablet should now be paired with the Bluetooth adapter on the RazorGage

If you've confirmed that there is power at the end of the MDrive Power Cable and checked all the previous connections, then the next step is to use the RazorGage Communication tester to help isolate the problem. Call RazorGage and ask to have the Communication Tester sent to you. When it arrives perform the tests below.

Make sure you've re-installed the power cable to the MDrive then remove the communication cable called out on page 1. Install the tester on the end of the cable as shown at right & start up the RazorGage software. Keep an eye on the LED as the software is starting up. On newer RazorGages you will see the LED flash as the software searches the ports for the MDrive. On older software you will see the error screen and you can press Try Again and, the LED should flash. If communication signals are making to the end of the communication cable then the MDrive needs to be replaced. If no communication is detected at the end of the MDrive communication cable then proceed to the next step.



Remove the ribbon cable from the comm board as shown at lower left. Plug it into the mating connector on the Communications Tester and start the RazorGage software, watching the LED as the software starts up. If the communication error screen appears click Try Again and watch the LED. If it does not flash then the problem is either the PC motherboard or the ribbon cable. If you do have communication here then the problem is with the comm board or the MDrive Comm Cable.

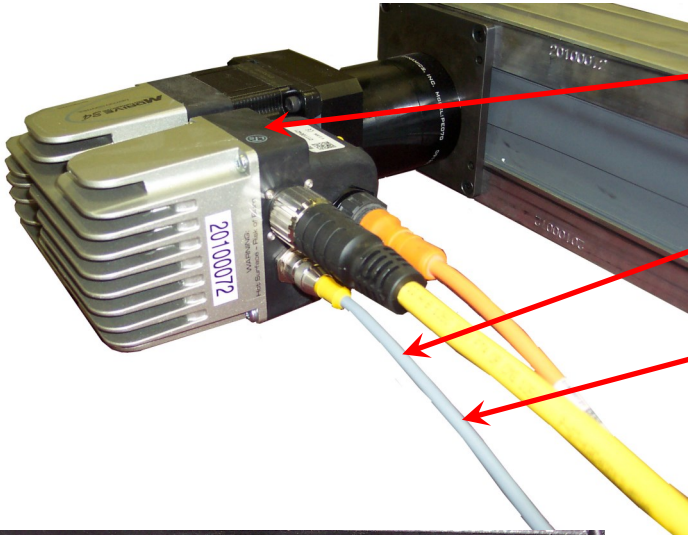


SEE NEXT PAGE FOR PART NUMBERS



# Replacement Part Numbers

To order parts visit [www.razorgage.com](http://www.razorgage.com) and click REPLACEMENT PARTS to access our online store.

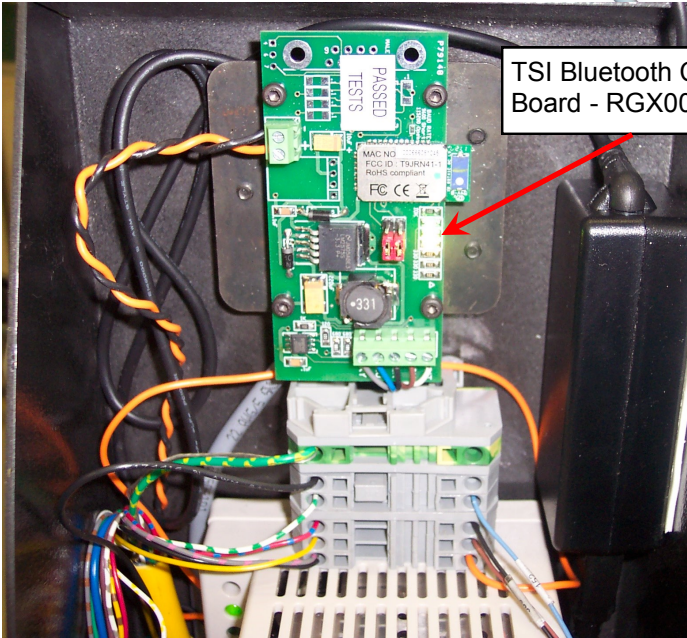


Rotary MDrive - RGX00009

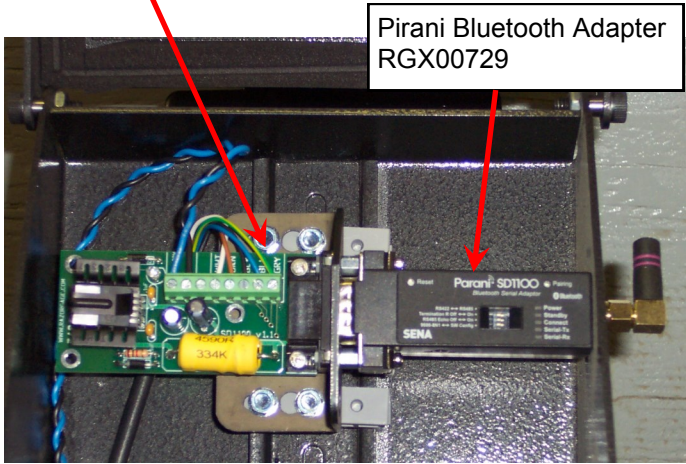
Comm Cable with Connector on one end and flying leads on the other - RGX01154

Comm Cable with Connector on both ends (Used on Solid State RazorGage Fanless PCs and as extension cables - RGX00074

Breakout Board for use with Pirani Bluetooth Adapter- RGX01068

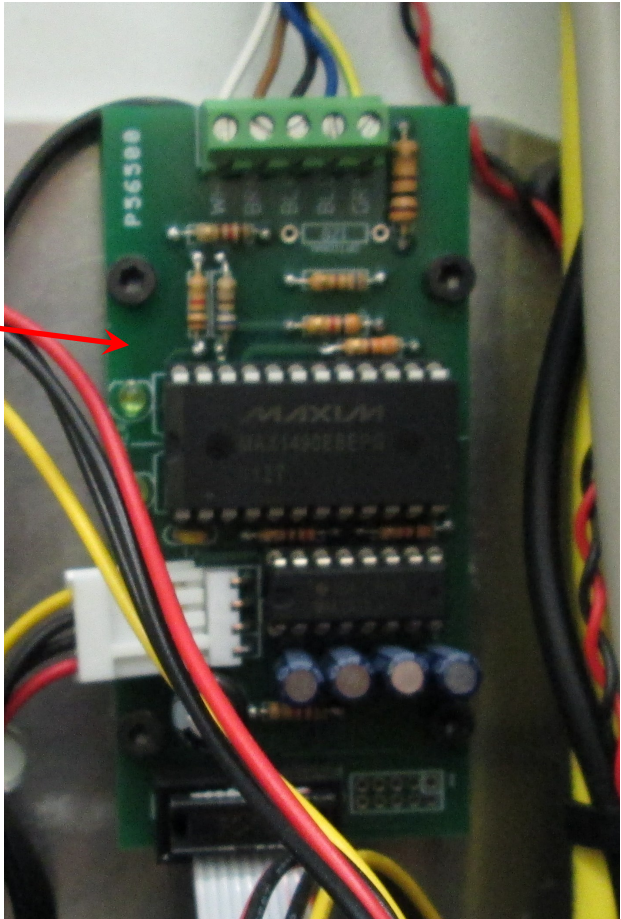


TSI Bluetooth Comm Board - RGX00819



Pirani Bluetooth Adapter RGX00729

Hard wired Comm Board for Tower and RazorGage Fanless PC- RGX00692



IMS Communication adapter RGX00681



MD-CC4  
USB to RS422 Comm Converter

IMS