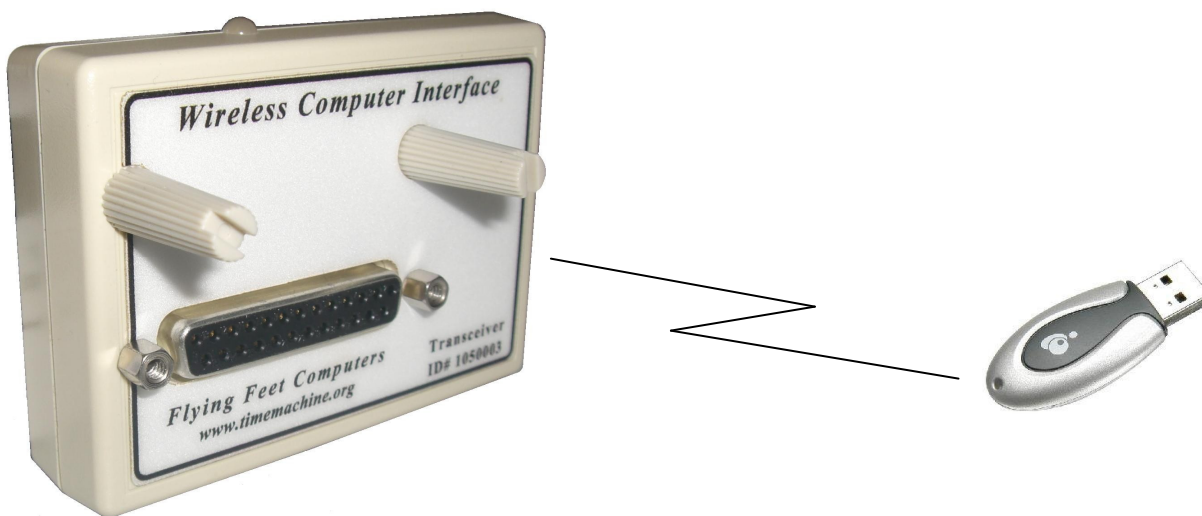


Wireless Computer Interface User's Guide

For use with the Time Machine Sports Timing Systems

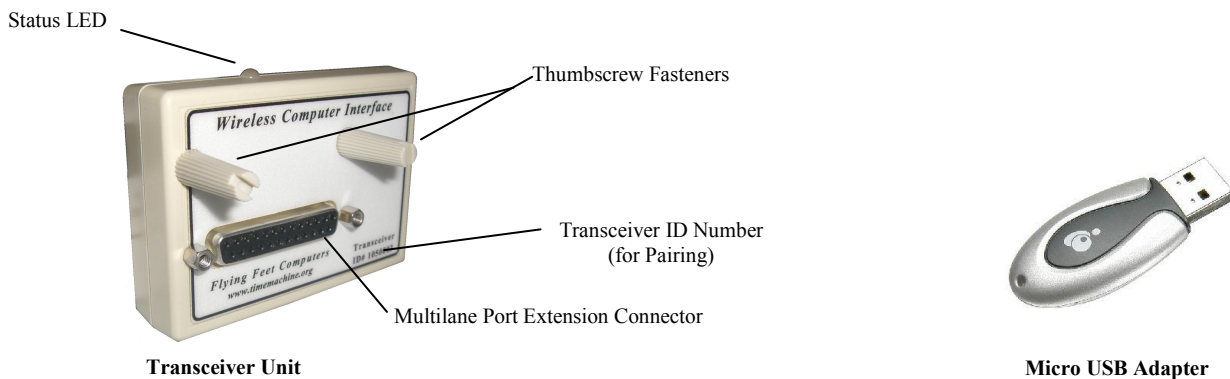


Developed and maintained by
Flying Feet Computers, Inc.
www.timemachine.org

Thank you for purchasing the Wireless Computer Interface for use with your Time Machine sports timing system. The Wireless Computer Interface provides you with a convenient wireless data link between your Time Machine and a host computer for distances of up to 330 feet. The wireless data link utilizes high quality Bluetooth technology to provide you with a secure and error free transfer of data. It can be used as a direct replacement of the standard Time Machine Interface Cable, however instead of connecting to a computer serial port, it conveniently connects to any available USB port on your computer. The interface emulates a standard serial COM port connection, allowing you to utilize your favorite software scoring program in the same way that you are familiar with.

In addition to replacing the cable connection between your computer and a single Time Machine, the Wireless Computer Interface can enhance your operation by providing wireless connectivity to multiple Time Machines at the same time. If you use more than one Time Machine to collect data into a computer, the Wireless Computer Interface will now allow you to connect up to 7 Time Machines to a single USB computer port. Each Time Machine is assigned a different COM port number and the system will buffer data coming from up to 7 COM ports (Time Machines) simultaneously – no data is lost. Note: The system can only buffer data into the com ports that are being controlled by the scoring software – for example, if only 3 com ports can be controlled by the software, then only the data from the corresponding three Time Machines would be buffered.

I. Description



The Wireless Computer Interface (WCI) system consists of two components: a Transceiver Unit and a Micro USB Adapter. The Transceiver unit plugs onto the multi-lane port connector of your Time Machine. Power for the Transceiver unit is supplied by the Time Machine through the multi-lane port and **must be connected to the Time Machine before turning the Time Machine’s power switch on** in order to avoid causing a glitch on the Time Machine’s internal power supply. When powered on, the Transceiver unit attempts to make a wireless connection to the Micro USB Adapter at the computer end. The Time Machine/Transceiver may be turned on either before or after the computer is on. When turned on, the Transceiver’s status LED will blink red until the unit has established a connection with the Micro USB Adapter. The LED will turn green after the connection is established. The Micro USB Adapter may be plugged into any available USB port on your computer at any time.

Each Transceiver unit contains a unique ID number which is printed on the front label of the unit and located at the lower-right corner. This ID number is used to “pair up” the Transceiver unit with the Micro USB Adapter. Once the “pairing” operation is complete, a COM port number will be assigned to the Transceiver and will be valid each time the Micro USB Adapter is used with that Transceiver – provided the Adapter is connected to the same USB port each time. If the Micro USB Adapter is plugged into a different USB port, then a different COM port number will be assigned. The “pairing” operation should only be required once. After the initial pairing is complete, the Transceiver unit should always respond to its assigned COM port number.

The Transceiver unit also extends all of the Multilane Port signals out to a 25-pin connector allowing you to use all of the common accessories that connect to the Multilane Port.

II. Pairing The Transceiver Unit With The Micro USB Adapter

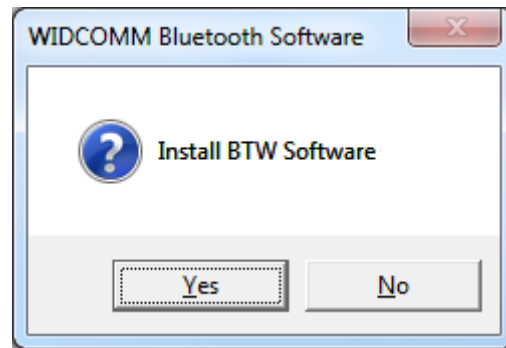
Each Transceiver unit must be paired with a Micro USB Adapter. Once they have been paired, it will usually not be necessary to pair them again unless you have problems with them “auto connecting” to each other.

The Micro USB Adapter provided with your wireless interface system uses Bluetooth technology and is designed to work with the standard Bluetooth support software that is embedded in many of the common operating systems, however a Widcomm Bluetooth Driver is also provided with your USB adapter on a CD.

We recommend that you use the Widcomm Bluetooth driver provided on the CD that came with your Micro USB Adapter for operation systems prior to Windows 10. If your computer is running Windows 10, then simply plug the Micro USB adapter into an available USB port.

A. Driver Installation - Non-Windows 10 Operating System

1. Load the Bluetooth USB Adapter CD into your computer. The Installation Guide will automatically start up. Click on the **Yes** button.



2. Follow the instructions contained on the pamphlet that came with the IO Gear GBU321 Adapter.

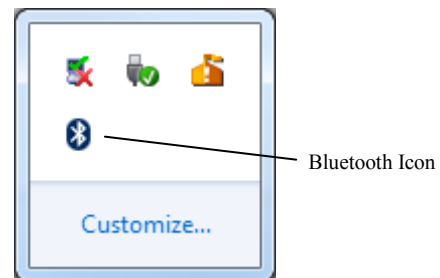
The instructions will vary depending on the operating system that your computer is running.

After the installation has finished you will find a Bluetooth Icon in the system tray located at the lower-right side of your computer screen.

Note:

For Windows7, you may need to click on the “Show Hidden Icons” button to reveal the Bluetooth Icon.

Now double-click on the Bluetooth Icon.



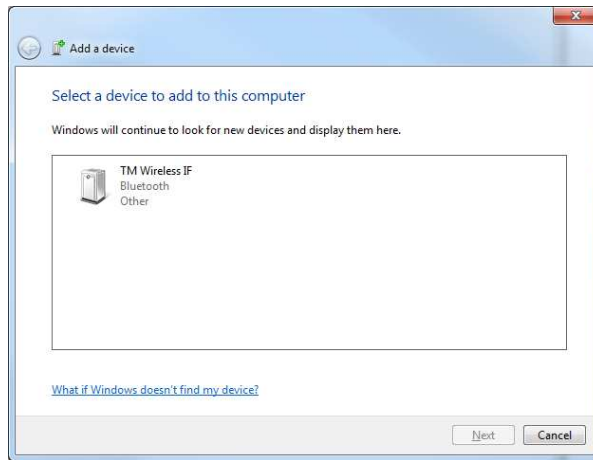
3. The “Bluetooth Devices” window will appear. At this point you need to plug your Transceiver Unit onto the Time Machine’s Multilane port and turn the power switch on. The LED on top of the Transceiver Unit should be blinking Red.

From the Bluetooth Devices window, click on the “Add a device” text located at the upper-left of the window .



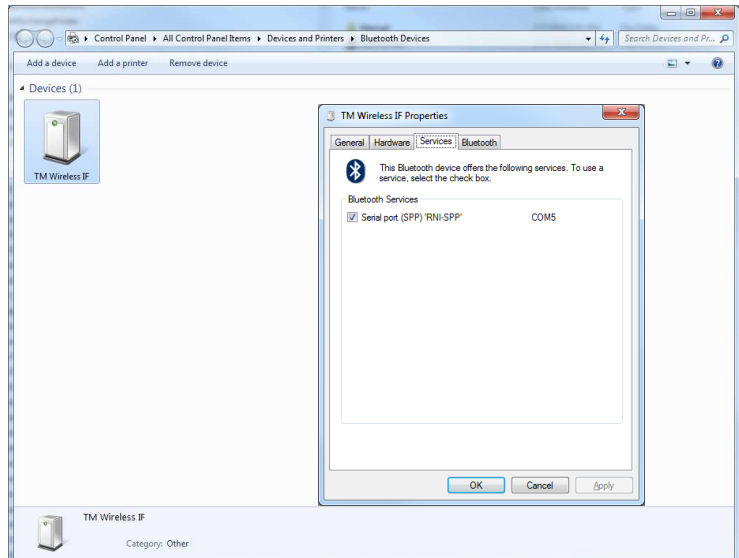
4. After a few seconds the Transceiver Unit will be detected and an icon with the title “TM Wireless IF” will appear in the “Add a device” window.
5. Click on this icon and then click the **Next** button. The window will now show a pairing code and ask if this code matches the code of the device. Just choose the “yes” option and click **Next**.

The window should show that the device was successfully added. Click on the **Close** button.



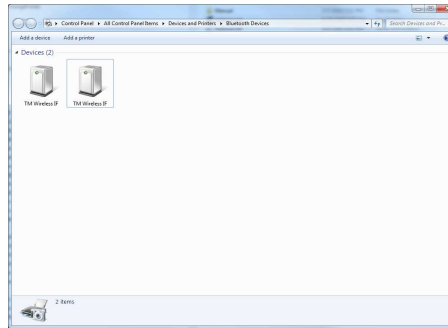
6. Scroll your mouse cursor over the “TM Wireless IF” icon and right-click your mouse. A menu window will pop up with some menu items. Click on the **Properties** menu item and the “TM Wireless IF Properties” window will appear. Now click on the **Services** tab to display the COM port number that has been assigned to this TM Wireless IF.

You can now use this COM port number in your scoring software to designate which COM port to use when communicating with the Time Machine.



7. Repeat steps 3-6 to add additional Time Machines with Wireless Transceiver Units. Each one will have a different COM port number assigned.

Up to seven Time Machines may be added using a single Micro USB Adapter.



B. Driver Installation for Windows 10 Operation Systems

1. Insert the IO Gear GBU321 Micro USB Adapter into one of your computer's available USB ports.

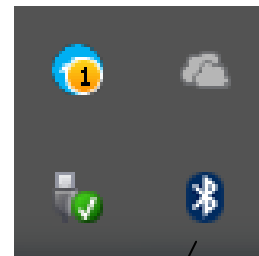
Your Windows 10 operating system will automatically install the Bluetooth software driver to support the adapter.

2. After the installation has finished you will find a Bluetooth Icon in the system tray located at the lower-right side of your computer screen.

Note:
You may need to click on the "Show Hidden Icons" (^) button to reveal the Bluetooth Icon.

At this point you need to plug your Transceiver Unit onto the Time Machine's Multilane port and turn the power switch on. The LED on top of the Transceiver Unit should be blinking Red.

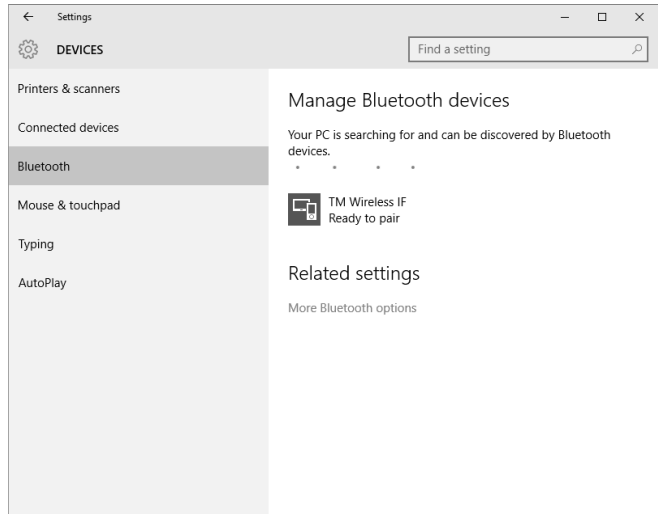
Now double-click on the Bluetooth Icon.



Bluetooth Icon

- The “Devices” window will appear. The embedded Bluetooth driver will now search and discover the Time Machine’s Transceiver Unit.

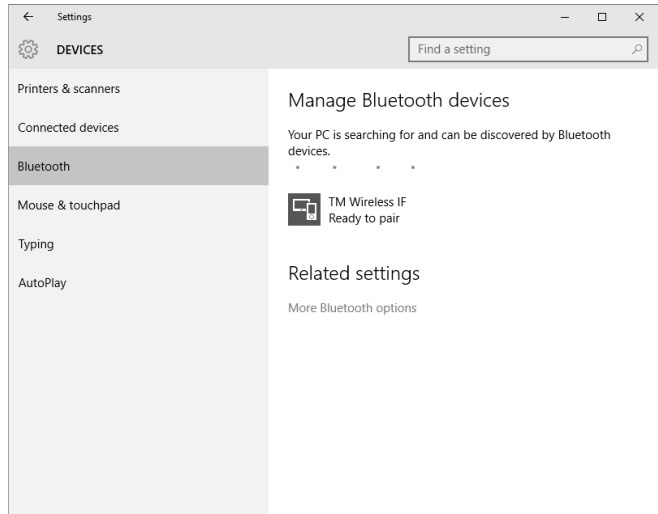
The TM Wireless IF icon will appear with the text “Ready to pair”



- Click on the TM Wireless IF icon and a **Pair** button appears. Click on the **Pair** button. A “Compare the passcodes” window pops up asking if the displayed passcode matches the TM Wireless IF passcode – Just click the Yes button.

The TM Wireless IF icon will now appear with the text “Paired”

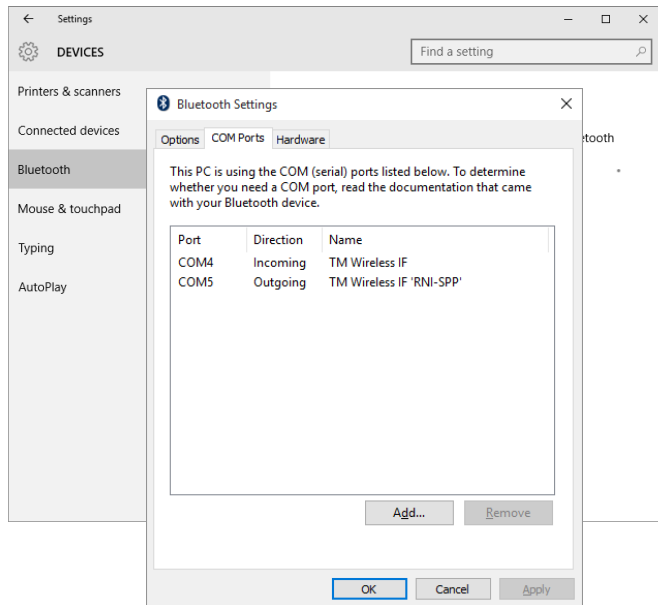
Click on the “More Bluetooth options” text located in the Devices window under **Related settings**.



- The “Bluetooth Settings” window will pop up. Now click on the center **COM Ports** tab to display the Incoming and Outgoing COM port number assignments.

The Outgoing COM Port is used by your PC to communicate with the Time Machine (COM5 in this example)

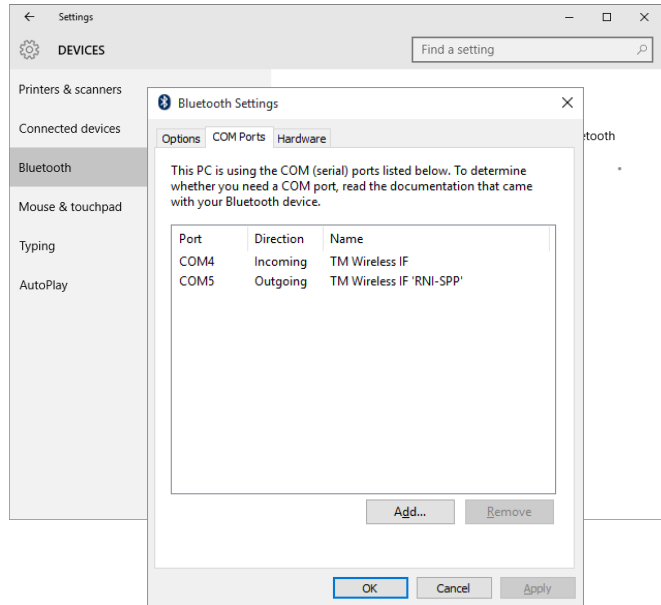
You can now use this COM port number in your scoring software to designate which COM port to use when communicating with the Time Machine



- The “Bluetooth Settings” window will pop up. Now click on the center **COM Ports** tab to display the Incoming and Outgoing COM port number assignments.

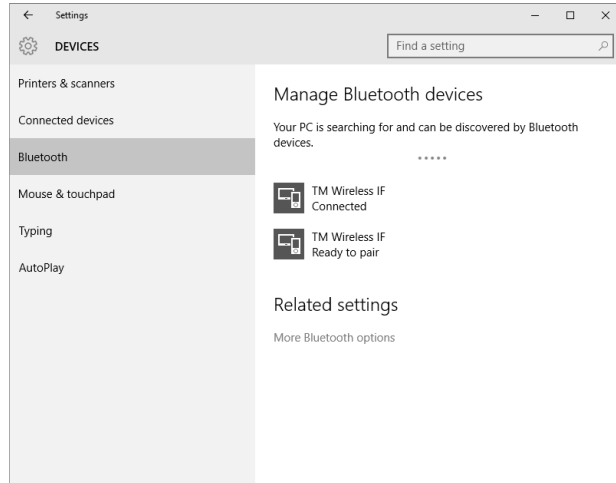
The Outgoing COM Port is used by your PC to communicate with the Time Machine (COM5 in this example)

You can now use this COM port number in your scoring software to designate which COM port to use when communicating with the Time Machine



- To add additional Time Machines, just power them up with their Transceiver Units installed and repeat steps 3-6. Each one will have a different COM port number assigned.

Up to seven Time Machines may be added using a single Micro USB Adapter.



III. Using the Wireless Computer Interface with Scoring Programs

After you have performed the “pairing” operation (see section II), the Wireless Computer Interface system is ready to be used with your favorite software scoring program. Use the COM port number that was assigned to the Transceiver Unit to set up the serial port in your scoring software.

Turn the Time Machine (with Transceiver installed) on and test your interface by starting up your scoring software. Most software scoring programs will immediately initiate a connection to the COM port and this will be indicated by the status LED on the Transceiver Unit turning green. However some programs, such as *The Race Director*, only connect to the COM port when it is necessary to transmit and receive data from the Time Machine. So for programs that operate like *The Race Director*, you will not see the LED turn green until you perform an operation such as “Import Times”.

The LED will turn green when the wireless connection is established and will turn orange when data is being transferred. It is a good idea to test this operation with some sample data to make sure the system is operating properly. If you are not seeing a connection established as it should, then please refer to the Troubleshooting section below.

IV. Troubleshooting

A wireless connection between the Transceiver Unit and the Micro USB Adapter is indicated by the status LED on the Transceiver. When the status LED turns green, the connection is established. If you have determined that a connection is not being established, then first make sure you are using the correct COM port number (Refer to section II). The assigned COM port number will be displayed

If you are still unable to get a connection after following the above suggestions, then you may need to perform the “pairing” operation over again. To do this, you should first delete the “TM Wireless IF” icon from the Bluetooth Settings window and then perform the “pairing” steps outlined in section II. The “TM Wireless IF” icon can be deleted by clicking on the icon, then clicking on the **Delete** button.

For Windows XP users, it can be particularly helpful to utilize HyperTerminal as a troubleshooting aid. Information about using HyperTerminal can be found on the Flying Feet Computers website at www.timemachine.org – click on the Downloads button, then click on “Time Machine-to-Computer Interface Using HyperTerminal and Importing the Data into Excel”. HyperTerminal can also be used on all of the newer operating systems – however it is not included as a standard accessory with the operating system anymore.

V. Specifications

Operating Temperature Range:	-40 °C to 85 °C (-40 °F to +185 °F)
Transceiver Operating Range:	Up to 400 feet (depending on obstacles)
Transceiver Power Input:	5 volts, 30mA typical, 100mA max (from Time Machine)
Micro USB Adapter Power Input:	5 volts, 930mA max (From USB Port)
RF Transmit Power	16dBm Typical
RF Frequency	2.402Ghz – 2.480Ghz
Data Security	128 bit Encryption
Status LED	Red, Green, Orange – Connection & Data Indicator
Transceiver Unit Weight:	80 grams
Micro USB Adapter Weight:	2 grams
Transceiver Unit Dimensions:	Approximately 2.32”H x 3.25”W x 0.85”D
Micro USB Adapter Dimensions	0.26”H x 0.55”W x 0.93”D (protrudes 1/2”out of USB port)

Compliance Information:

USA Compliance	FCC CFR47 Part 15 C, para 15.247
FCC ID	T9J-R41-1
European Compliance	EN 300 328-1, EN 300 328-2 2.4GHz
Canadian Compliance	IC RSS-210 low power comm. Device
IC Canada ID	6514A-RN411
Environmental	RoHS Compliant

VI. Warranty Statement

The manufacturer warrants the original purchaser of the WIRELESS COMPUTER INTERFACE (WCI) that it shall be free of defects resulting from faulty manufacturer of the product or its components for a period of one year from the date of sale. Defects covered by this warranty shall, at the option of the manufacturer, be corrected either by repair or by replacement. The replaced components will be warranted for the remainder of the original one year period.

The sole obligation of the manufacturer under this warranty is limited to repair or replacement of products pertaining to the WCI only, which prove to be defective within one year of purchase. The manufacturer shall not, in any event, be liable for any consequential damages or loss of profits of any kind resulting from the use of the WCI or the technical information enclosed in this document.

Please fill out the Product Registration Form and fax or mail it to Flying Feet Computers, Inc. This product must be registered within thirty (30) days from the date of purchase in order to activate your warranty coverage.

Product Registration Form

Please fill out the following information and fax or send it to:

Flying Feet Computers, Inc.
11112 204th Ave Ct. East
Bonney Lake, WA 98391
(800) 328-4070 ph.
(253) 863-1689 fax
www.timemachine.org

By sending this form back to us, we can let you know of additional products and upgrades as they become available. This form is also used to activate your warranty coverage.

Name	Company Name	
Phone	Address	
TM Wireless Computer Interface ID Number	City	
Purchased From	State	Zip
Date Purchased	Email	