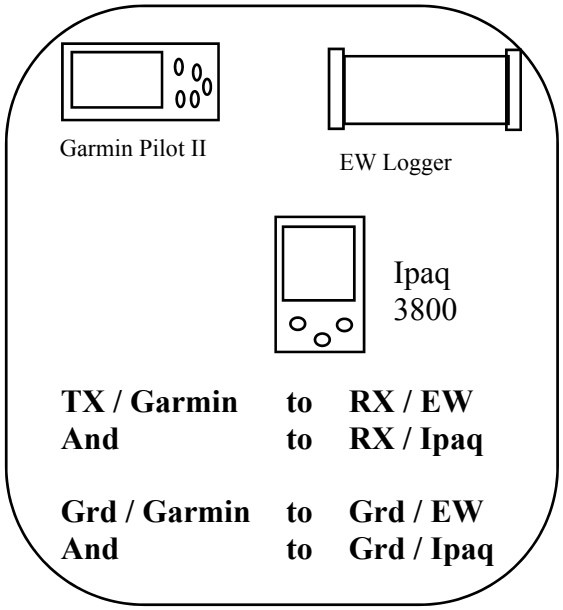
Example 2:-

Garmin Pilot II to EW Logger Model D and Ipaq 3800

In this case we follow the simple rule the GPS is the source and the EW and Ipaq are slaves thus the GPS is transmitting and the EW and Ipaq are receiving.



We can continue connecting slaves to the Garmin as long as we obey this simple system. However remember that the Ipaq will require a 5 volt power supply. These can be brought from us.

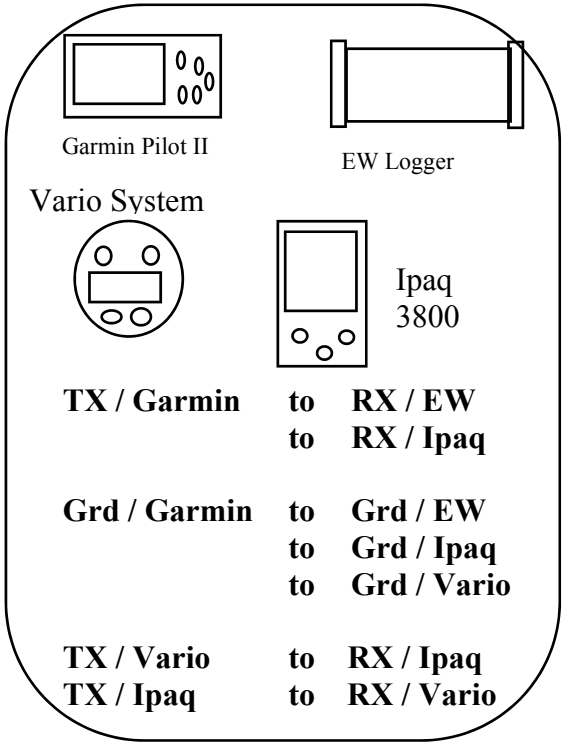
Example 3:-

Complex system with vario.

All the connections are as we have seen

However in this case we need to have bi-directional communication with the Palm. Varios like the latest LX7000 are capable of two way comms with the Palm and are in fact controlled by the Palm.

The thing to remember is that it is only the Palm and the Vario that are bi-directional thus:-



The data sentence from the GPS will be ignored by the vario and the data will be transmitted via the Ipaq. The data from the Vario will be ignored by the RX terminals on all the other units but will be read by the Ipaq thus we have bi-directional comms.

Connecting GPS, Loggers, PDA's and Vario Systems

Severn Valley Sailplanes
Passage Road
Arlingham, Glos
GL2 7JR
Tel 01452 741 463
sales@svsp.co.uk

In recent years the modern glider cockpit has taken on the look of a busy office. Every where you look there is a new instrument or screen vying for your attention.

With even more complex airspace and the desire to perform long cross country flights pilots are needing to bring all this information together and in order.

The relative low cost of modern Palm computers has been the catalyst behind some very clever software being written to interface with more conventional instruments like variometers.

With the acceptance of some loggers like the Volkslogger and Colibri by the IGC for badge flights the interconnection of these units is now common place.

The purpose of this leaflet is to outline the basic principles involved and to show by example some of the more common systems in use today.

Basic Principles:-

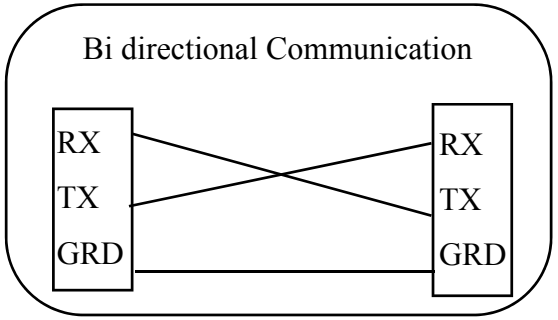
The whole of the above in general relies on the provision of data from a GPS. This can take the form of either a stand alone unit like the Garmin Pilot II or as a dedicated unit like the Volkslogger or Colibri both of which combine include a GPS engine.

The GPS in general is capable of transmitting its data in via its connector as a data sentence that can be read by other units like loggers and Palm computers. These unit then process the data and can provide among other things maps showing location and relative airspace.

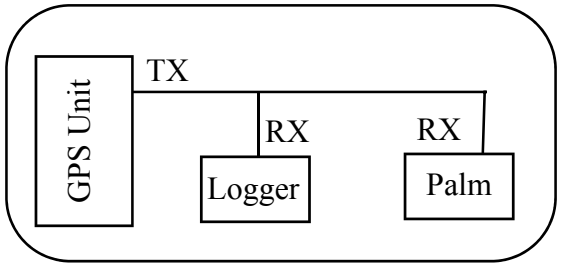
Data Transmission:-

To transmit and receive data you need 3 wires. One wire is ground and the other two are known as RX (receive data) and TX (transmit data).

To connect two items together so that both can talk to each other you have to cross the wires. i.e. the RX on one goes to the TX on the other



If however you only want to receive data then you can connect as many units as you like to the TX line of the GPS.



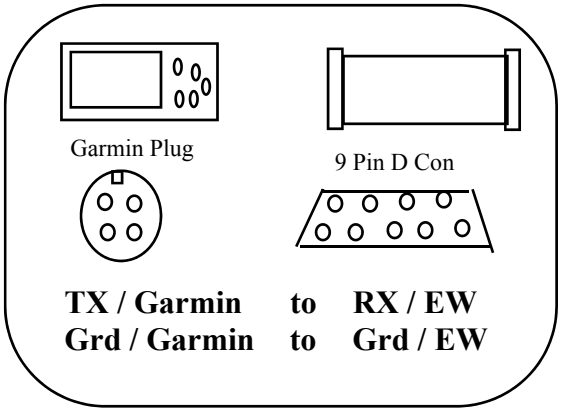
In Practice:-

In practice most glider pilots will fit a GPS and a logger for badge claims or competition flying. Some may also wish to fit a Palm to help with navigation using a software program like Winpilot or Glide Nav II.

Some of the more modern vario's will now allow you to complete the system by connecting into this line as well.

Basic System (example 1)

In this example we will connect a ***Garmin Pilot II to an EW Logger Model D.***



You will also need to supply a 12 volt power supply to both the Garmin and the EW. This should be fused, the Ground (Grd) or negative lead can be used as a common for both power and data without any lose in performance.