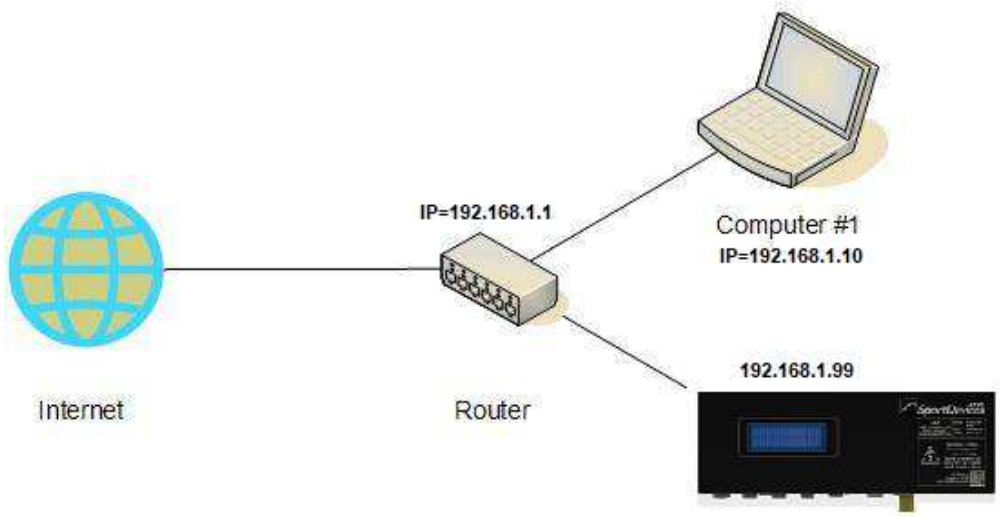
SP5/6 Ethernet Connection

Ethernet Configuration Types:

- DAQ to Router direct connection:
  - The DAQ **must be in the same subnet as the router**
  - The DAQ can be accessed by WIFI by a laptop
  - PC does NOT need a fixed IP, as the router provides it

- DAQ to PC Connection
  - PC must have a **fixed IP** at the Ethernet net
  - If PC accesses to the router by WIFI, then either both nets have **different subnets,** or the actual subnet is splited in two so Windows know which net to access depending on the IP **(see below)**

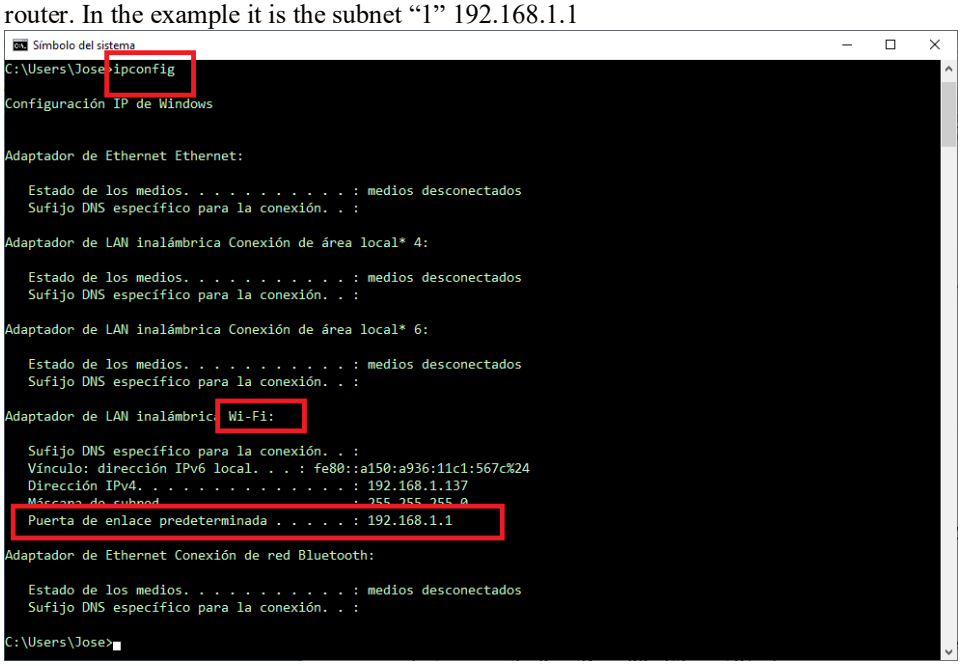
DAQ to Router direct connection



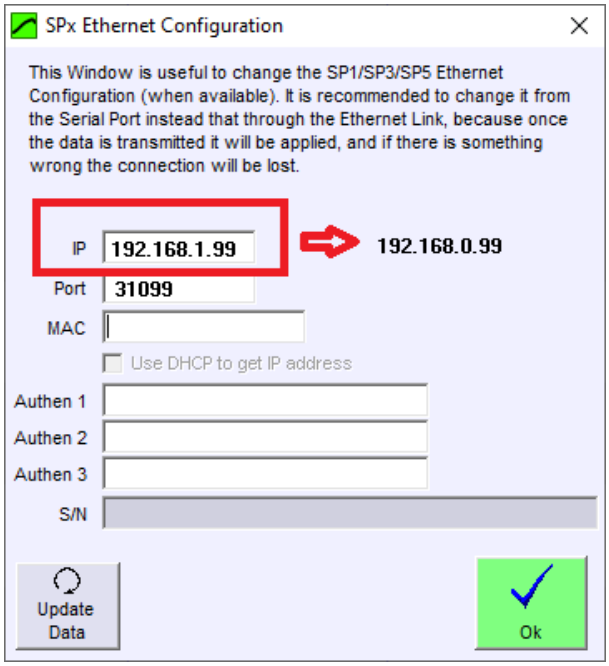
First of all we need to know the subnet at which the router is working. Typically it should be in one of the following subnets:

- "0": 192.168.0.x
- **"1": 196.168.1.x**

With the IPCONFIG command Windows will show a list of the computer adapters. The gateway points to the router. In the example it is the subnet "1" 192.168.1.1

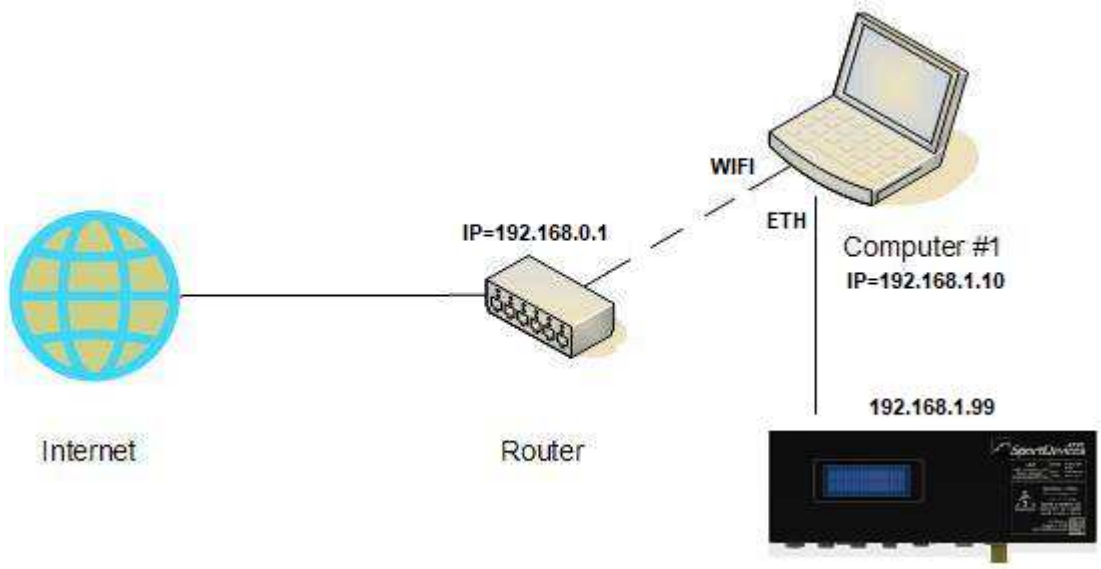


If the **router uses the subnet "0" (192.168.0.x)** as the DAQ comes configured for subnet "1" then the DAQ has to be configured firstly, with the USB-COM adapter, using the SportDyno SPx Ethernet Window. Typically we will use the same IP ".99" but in the "0" subnet →192.168.**0.**99



If the **router uses the subnet "1" (192.168.1.x),** then it is **NOT** necessary to do anything, as the DAQ comes in the same subnet (**192.168.1.99**)

DAQ to PC



*Note that the PC can have **two** or more **IPs**, one for **WIFI and other for Ethernet**

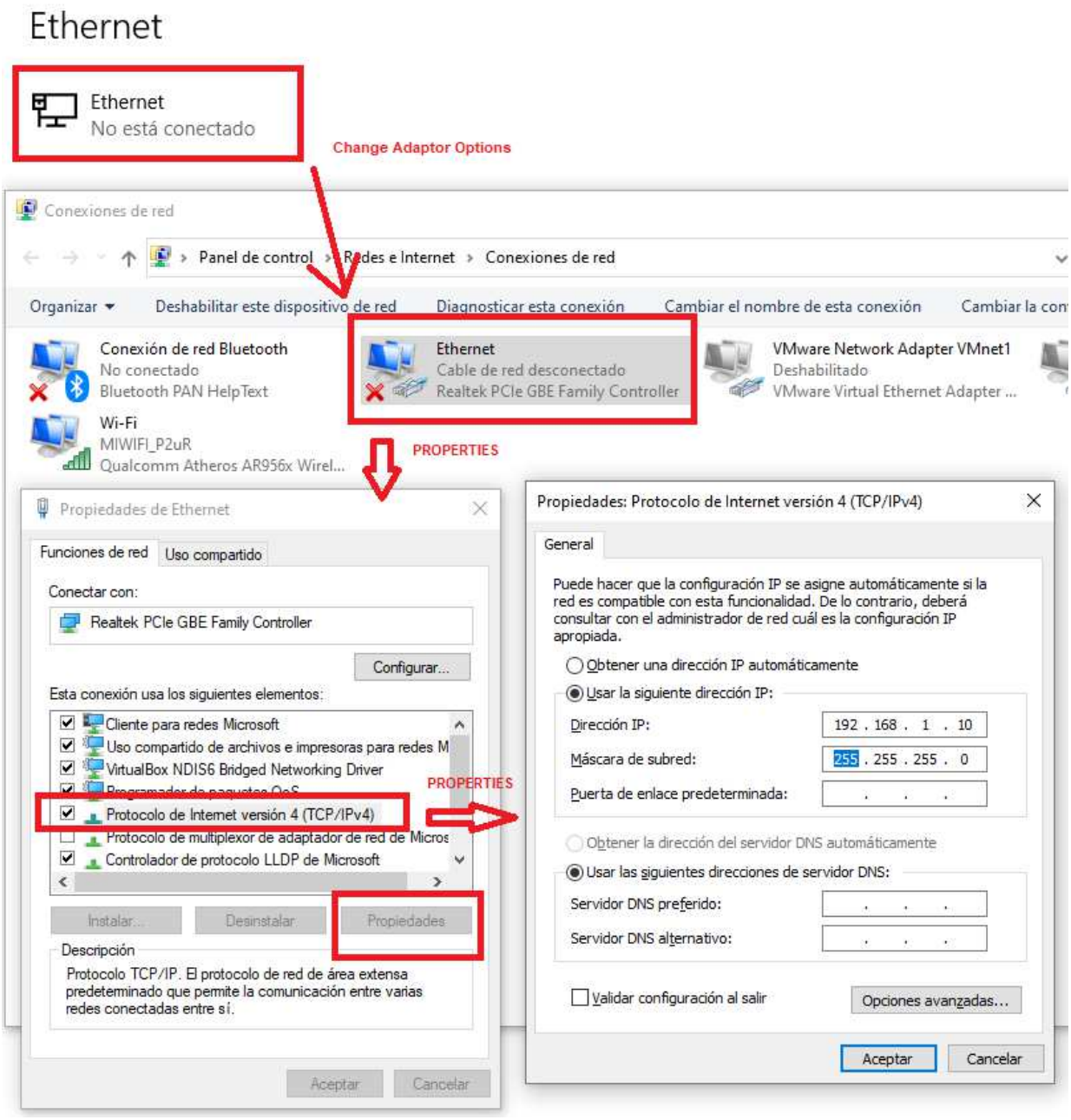
In the same way as in the other method, first of all we need to know the subnet at which the router is working. Typically it should be in one of the following subnets:

- "0": 192.168.0.x
- **"1": 196.168.1.x**

The PC must be configured with a **fixed IP,** for instance 192.168.1.10 (so it is in the same subnet as the DAQ: 192.168.1.99)

The best configuration is when the WIFI is configured at 192.168.0.x and the PC FIXED IP is configured at 192.168.1.x (for instance 192.168.1.10 as in the picture)

Configuring the PC Fixed IP (for Ethernet adapter)



Variants:

- In the case that **both the router and the DAQ are in the same subnet "1" (192.168.1.x),** in order to ease the Windows routing (what net does Window to use for each subnet), the subnet can be used to trim the routing using 255.255.255.192 instead of 255.255.255.192, then all IPs from 64 to 254 will be routed to the Ethernet, then it will include the DAQ: 192.168.1.99 (64 >= 99 >= 254), and all IPs below 64 will be routed to the Internet Router including the gateway 192.168.1.1 (1 < 64)
- Other solutions:
    - The Router IP could be changed to the subnet "0": 192.168.0.1
    - The DAQ IP could be changed to subnet "0" (keeping the router at "1") using the USB-COM adapter. Then the DAQ will have the IP 192.168.0.99, and the PC ETH IP: 192.168.0.10 (for instance)