

**LP-1521 Broadband Router, Manual 123
PtP, PtmP plus AP Modes Installation, (whithout PoE).**

LP1521_M123_END02W



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Manual 123
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- 1 Please check the package contents, please see Figure 1.



Figure 1

- 2 Screw the antenna as shown in figure 2.



Figure 2

- 3 Connect your PC to a LAN port of the LP-1521 as shown in figure 3.



Figure 3

- 4 The LP-1521 can be powered in two different ways:

A.- Via the Jack placed at the right of the LAN4 port. We have provided with this kit a way to power the LP-1521 by using a 120 VAC to 12 VDC Power Converter included in the box and shown in figure 4.

B.-Via active PoE: you can use the LP-PoE150 injector and LP-PoE151 splitter made by Lanpro. This arrangement will let you put the LP-1521 as far as 100 m from the injector. You must set the splitter to 12 VDC and power the LP-1521 through the power Jack.



Figure 4

- 5 You will need to know the MAC addresses of those equipments that are to be Point to Point or Multi-Point connected.

Please go to **Properties** of your NIC card and select: **Internet Protocol**, then select: **Properties** as shown in figure 5.

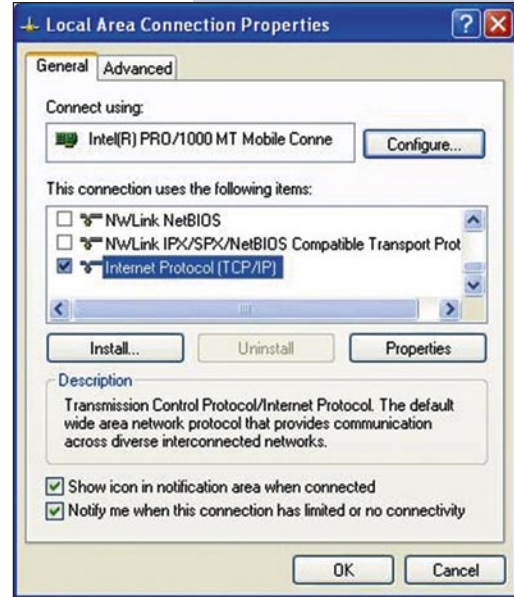


Figure 5

- 6 Please select an IP address inside the default range of your LP-1521 and outside of the range of addresses the LP-1521 DHCP server delivers. We have selected the address 192.168.1.201 as an example. The LP-1521 has a default address of 192.168.1.254, please input in: **Subnet mask** a value of: 255.255.255.0 as shown in figure 6.

Once finished, please select: **OK** and then: **Close**.

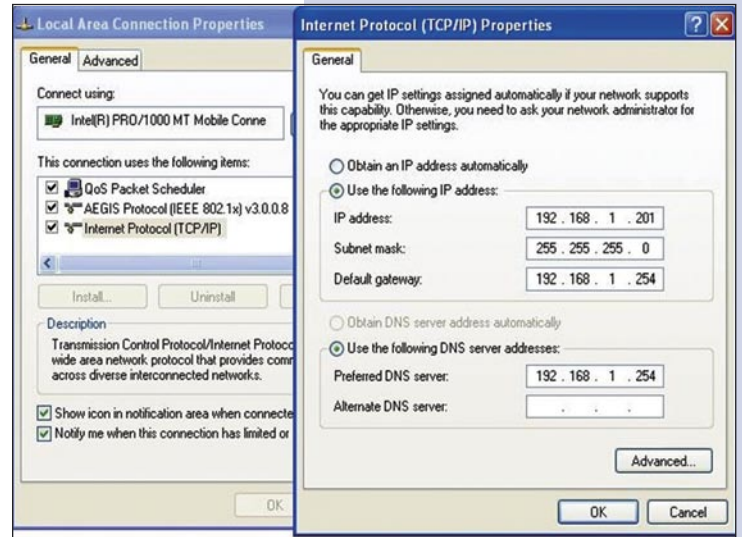


Figure 6

- 7 Please open your preferred browser and input the LP-1521's default IP address: 192.168.1.254 as shown in figure 7.



Figure 7

- 8 In the window shown in figure 8 please select options: **TCP/IP Settings, LAN Interface** in **DHCP** please select: **Disabled** and then select: **Apply changes**.

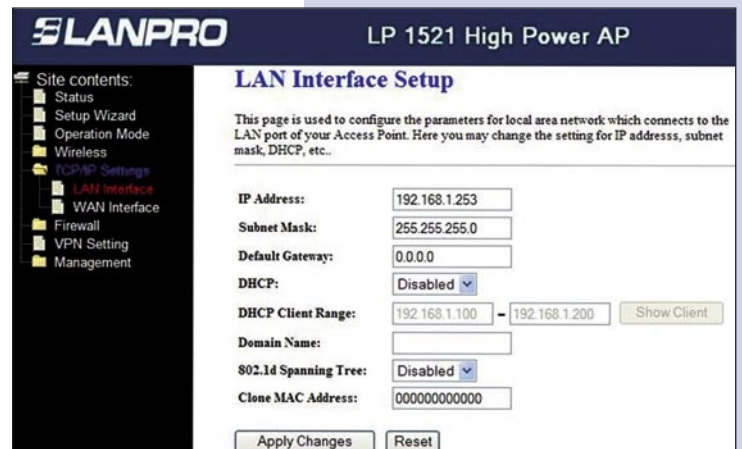


Figure 8

- 9 Please select: **Operation Mode**, in the window that pops up, shown in figure 9, please select: **Bridge**, then select: **Apply Changes**.

Figure 9

The screenshot shows the 'Operation Mode' configuration page. The left sidebar lists 'Site contents' with 'Operation Mode' highlighted. The main content area has the title 'Operation Mode' and a sub-header 'You can setup different modes to LAN and WLAN interface for NAT and bridging function.' There are three radio button options: 'Gateway', 'Bridge' (which is selected), and 'Wireless ISP'. Each option has a descriptive text block. At the bottom, there are 'Apply Change' and 'Reset' buttons.

- 10 Once the changes are successful, please select: **OK**, as shown in figure 10.

Figure 10

The screenshot shows a confirmation message box with the title 'Change setting successfully!' and an 'OK' button. The left sidebar shows 'Operation Mode' selected.

- 11 Please select: **Wireless**, and **Basic Settings**. Once the window pops-up as shown in figure 11, in Mode select: **AP+WDS**, please verify that the selected channel is the same for all the equipments to be connected. Check also that each AP access has a different SSID and then select: **Apply Changes**, the equipment will re-initialize itself.

Figure 11

The screenshot shows the 'Wireless Basic Settings' configuration page. The left sidebar lists 'Wireless' with 'Basic Settings' highlighted. The main content area has the title 'Wireless Basic Settings' and a sub-header 'This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.' There are several configuration fields: 'Band' (2.4 GHz (B+G)), 'Mode' (AP+WDS), 'Network Type' (Infrastructure), 'SSID' (LP-1521 1), 'Channel Number' (11), and 'Associated Clients' (Show Active Clients). There are also checkboxes for 'Disable Wireless LAN Interface', 'Enable Mac Clone (Single Ethernet Client)', and 'Enable Universal Repeater Mode (Acting as AP and client simultaneously)'. At the bottom, there are 'Apply Changes' and 'Reset' buttons.

- 12 Once the equipment re-initializes, select: **Wireless** and **WDS Settings** and once the window shown in figure 12 appears, please add the associated Routers LAN MAC addresses that will work under this mode, least the MAC address already configured. Remember to select: **Apply changes** for each one of them.

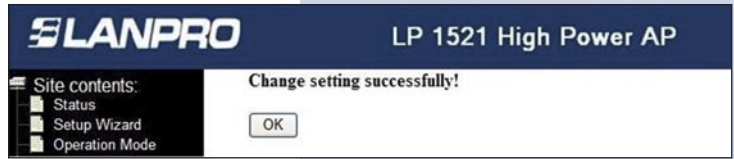
Figure 12

The screenshot shows the 'WDS Settings' configuration page. The left sidebar lists 'Wireless' with 'WDS Settings' highlighted. The main content area has the title 'WDS Settings' and a sub-header 'Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.' There is a checkbox for 'Enable WDS' which is checked. Below it, there is a form to 'Add WDS AP' with fields for 'MAC Address' (0023D301A220) and 'Comment' (AP2). At the bottom, there is a table for 'Current WDS AP List' with columns for 'MAC Address', 'Comment', and 'Select'. Below the table are buttons for 'Delete Selected', 'Delete All', and 'Reset'.

MAC Address	Comment	Select
0023D301A220	AP2	

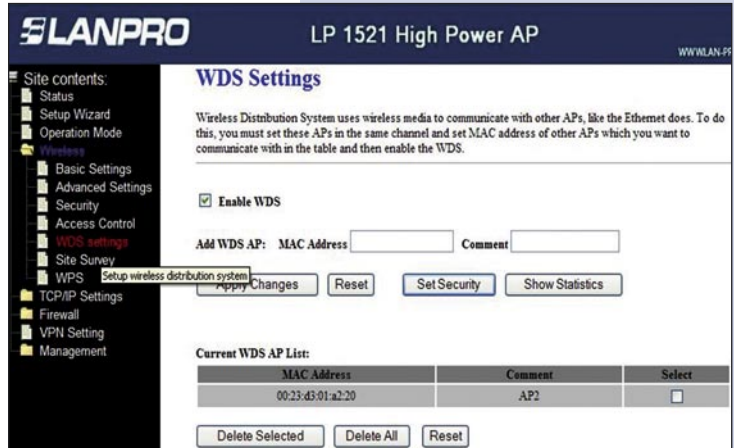
- 13 Once changes of settings are successful, and window shown in figure 13 appears, select: **OK** and the equipment will re-initialize.

Figure 13



- 14 You can now proceed to activate the WDS security. Select: **Wireless, WDS Settings**, and the Windows shown in figure 14 appears. Once in it, select: **Set Security**.

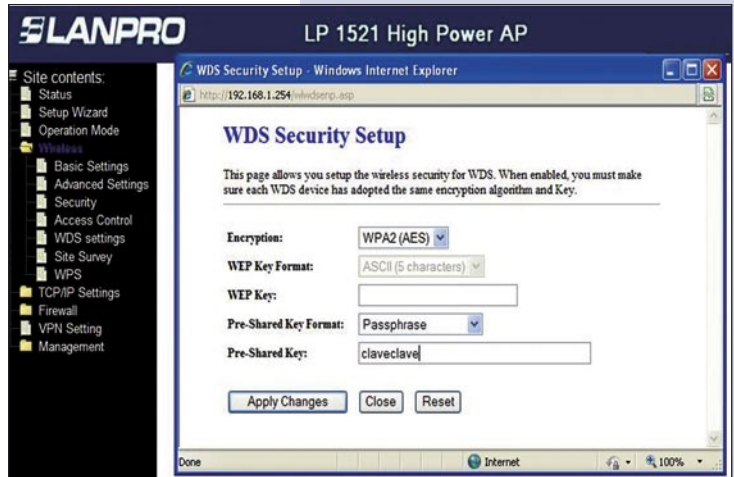
Figure 14



- 15 A window will pop-up as shown in figure 15. It lets you configure security in this mode. It is important to highlight that every equipment using these connections should have the same settings.

In **Encryption** please input the type of encryption desired. We recommend WPA2(AES), but, please verify that all equipments using these connections are able to support it. Then, input the 8 character (minimum) key shared by all of them, then select: **Apply Changes**.

Figure 15



- 16 You must now configure the Wireless connection as an AP by selecting: **Wireless, Security**, and once in the Windows shown in figure 16 pops-up, we recommend you to select: mode **WPA2 Mixed** in: **Encryption**, please verify that the clients of this Router with that mode. If not, choose another mode like WPA(TKIP) and proceed to input this network key in: **Pre-Shared Key**, it must be an 8 character long key minimum, the select: **Apply Changes** and the equipment will re-initialize.

Figure 16



- 17 You must repeat all the steps for each equipment , and it is recommended to use a different IP address and SSID for each AP Access. This will permit it 's administration: Select Option: **TCP/IP Settings, LAN Interface** and once the window shown in figure 17 appears, input an IP address in the segment like e.g: 192.168.1.253. This depends on your network design. Select: **Apply Changes**, and the equipment will re-initialize. You will have to access it through this new IP address.

Figure 17



- 18 It is important to highlight that one of the equipments must deliver the IP addresses inside their network for the clients connected to the AP, one of the LP-1521 's or another physical equipment can do this.

Please take a look at figure 18, in which a typical configuration as a point to point to multi-point and AP have been configured.

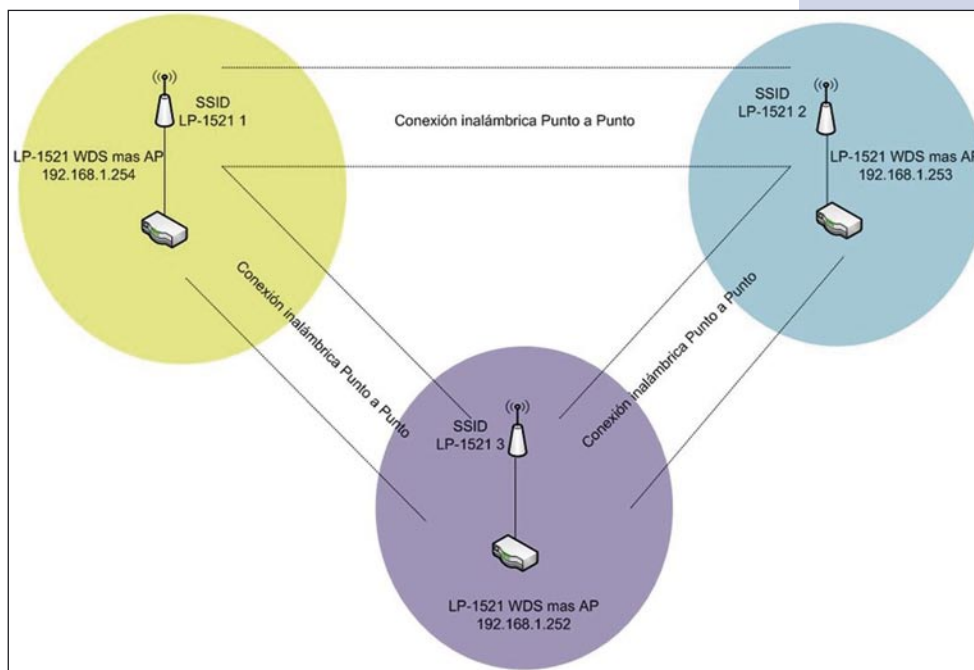


Figure 18

Recommendation (optional).

- 19 Please change the administrator password of your equipment. Select **Management**, then **Password**, input the user name: **admin**, input a new key in **New Password** and repeat it in **Confirmed Password**, select: **Apply changes**, please remember these username and password as the equipment will ask for them from now on.

Figure 19

