

**LP-288ai, 5.8GHz Band Fractional Bandwidth 5/10/20MHz OFDM Radio, 123 Manual for installation in Point to Point to Multi-Point.**

LP288ai\_M123\_END01W



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**By following the instructions given in the next paragraphs, you will be able to install the LP-288ai in Point to Point to Multi-Point Mode.**

- 1 Please check package contents shown in figure 1.

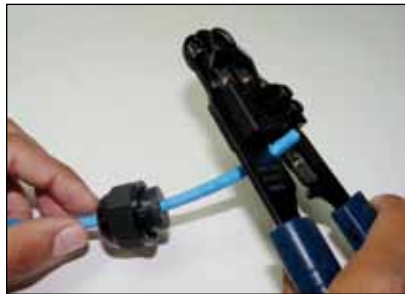


**Figure 1**

- 2 Please prepare the cable with the connector as shown in figure 2a, 2b and 2c.



**Figure 2a**



**Figure 2b**



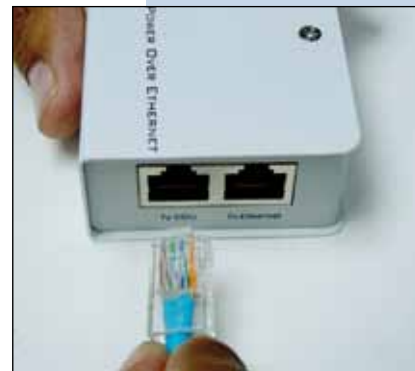
**Figure 2c**

- 3 Connect the cable as shown in figure 3.



**Figure 3**

- 4 Connect the **To ODU** output of the PoE injector to your LP-288AI as shown in figure 4.



**Figure 4**

- 5 Connect one of your PC's or Switch's Ethernet ports to the **To Ethernet** input of the PoE injector of the LP-288ai as shown on figure 5.



**Figure 5**

- 6 Connect the DC Power to the PoE's Injector Jack as shown in figure 6.



Figure 6

- 7 Go to the Properties window of your Network Interface card (NIC): **Local Area Connection Properties** and select: **Internet Protocol**, then select: **Properties** as shown in figure 7.

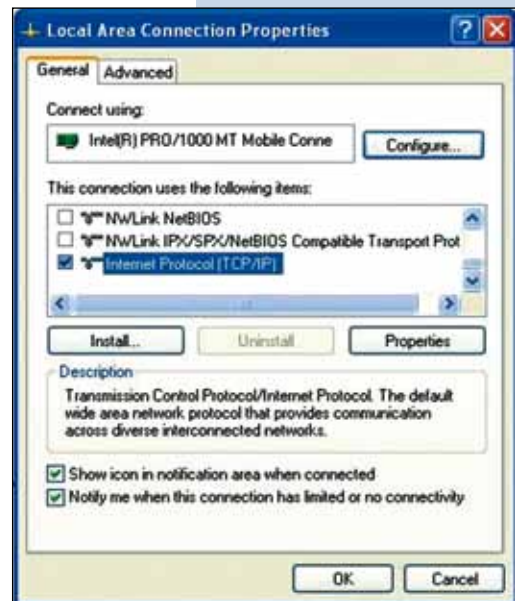


Figure 7

- 8 In the window: **Internet protocol (TCP/IP) Properties** of figure 8, select: **Use the following IP address** and input an IP address in the default IP range of the LP-288ai, in this example we have selected the address: 192.168.1.201. The LP-288ai has a default address of: 192.168.1.2, input in: **Subnet mask**: 255.255.255.0 and in: **Default gateway**, the destination router address, in: **DNS** you will have to input your ISP's **DNS** or the destination router address, the one that provides the Internet service, in order that any queries are routed to the destination network's router. Please take a look at the diagram shown in figure 40 at the end of the document, once finished select: **Ok** and then: **Close**.

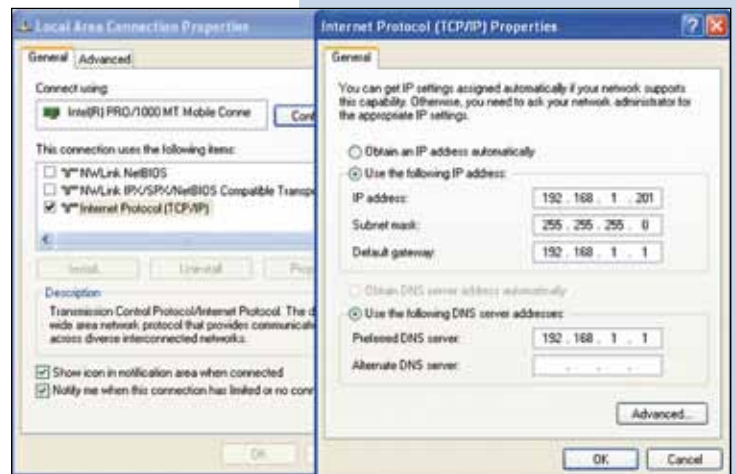
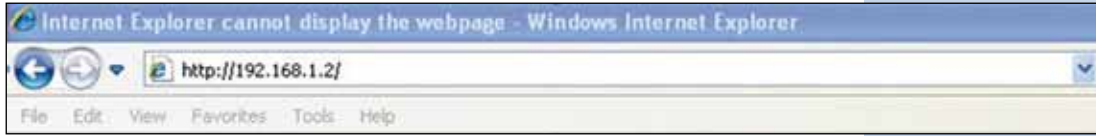


Figure 8

You will need the MAC addresses of all equipment that will be involved in this Point to Point configuration, besides that, we will need two different IP addresses inside the range for their administration.

- 9 Open the browser application of your choice and input the default address: 192.168.1.2, please see figure 9.



**Figure 9**

- 10 The LP-288ai will ask that you input a User and a Password. The LP-288ai has two user levels, one with all the privileges named by default: **super**, whose password is: **super** and another with less privileges named: **admin** with a password: **admin**. Now please input as user: **super** and a password: **super** and hit: **OK**, as shown in configuration in figure 10.



**Figure 10**

- 11 In the window shown in figure 11, select: **Operation Mode**, then select: **Wireless Bridge**, then select the channel in the input field: **Radio frequency**, now add the radios MAC addresses that will take part of the Point to Point or multi-point scheme, except the equipment you are now configuring and select: **Update**.



**Figure 11**

- 12 The equipment will save the changes but they will not take effect until you reboot the equipment. For rebooting, go to the window in figure 12 and select: **Reboot**.

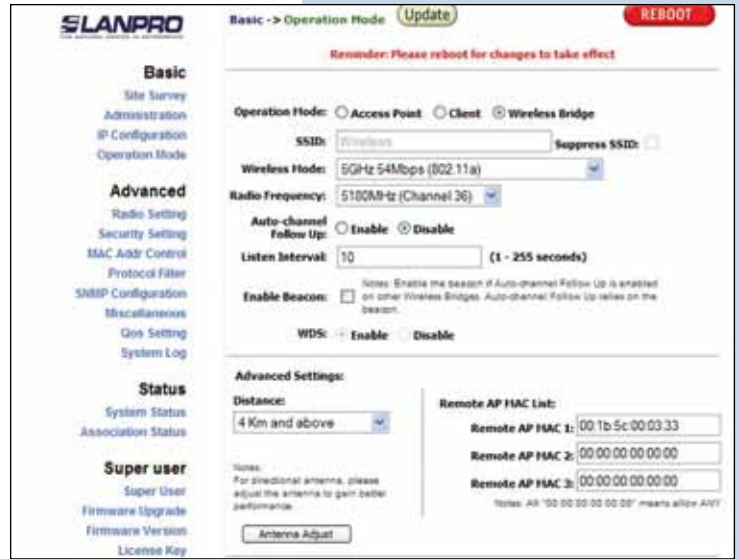


Figure 12

- 13 In figure 13, a window will pop-up showing the progress of the reboot function.

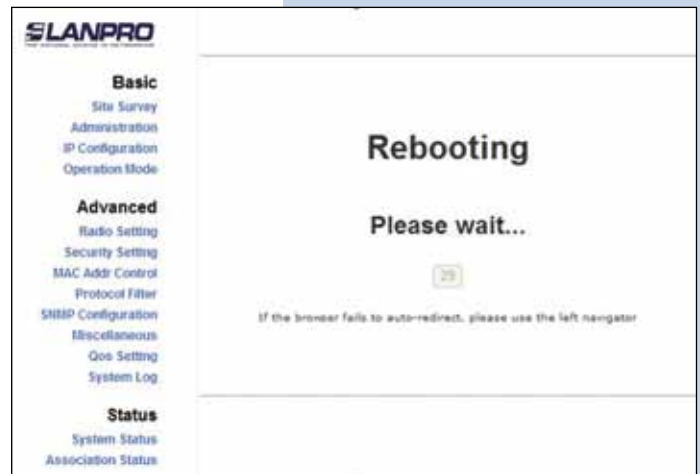


Figure 13

- 14 In the window of figure 14 select: **Click here**.



Figure 14

- 15 In the window of figure 15, select: **Security setting**, in: **Security mode** select the **WEP** encryption mode. It is important to mention that in bridge mode only the WEP type is permitted, remember that for a larger encryption level the link speed is lower. Select the authentication method, the key method and key or keys and key length, then select: **Update**.



Figure 15

- 16 Once changes are saved, proceed to select: **Reboot** for the changes to take effect.

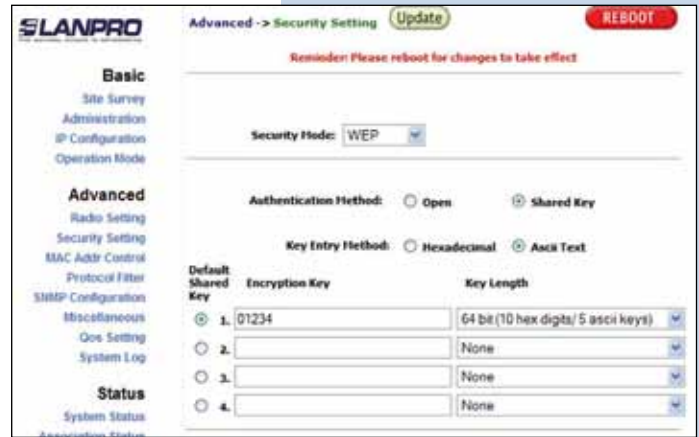


Figure 16

- 17 In figure 17 you can watch the equipment doing the reboot function.



Figure 17



- 18 Once rebooted, select: **Click here**, as shown in the window shown in figure 18.

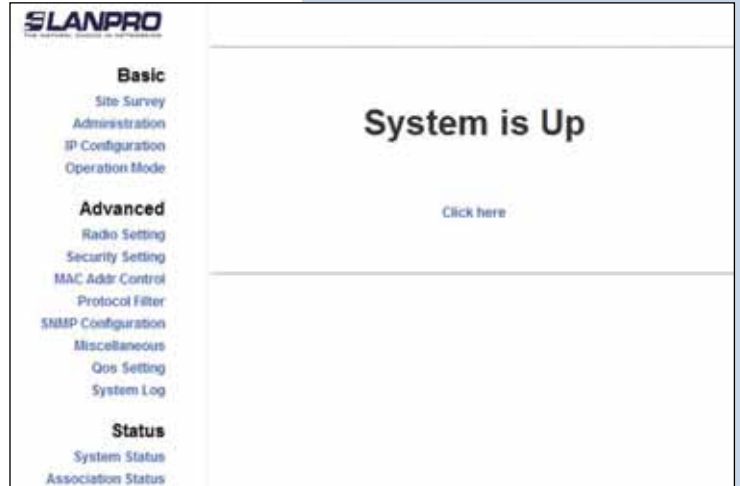


Figure 18

- 19 Important recommendation (Optional): Proceed to change the User password: **admin** and the **super** user password: **super** of your equipment, In order to change the User: **admin**, password, select: **administration** input the new **password** in the field named: **password**, then select: **Update as shown in figure 19**.



Figure 19

- 20 For the changes to take effect, please select: **Reboot** in the window shown in figure 20.



Figure 20

- 21 The progress of the reboot function is shown in the window of figure 21.

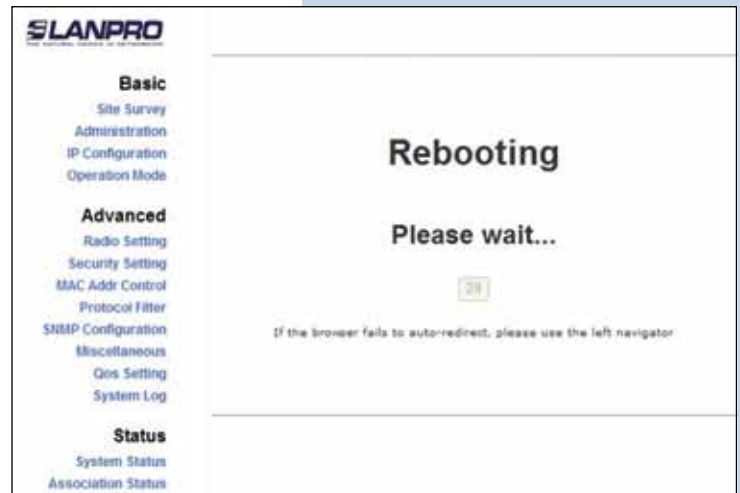


Figure 21

22 The equipment will ask again for the User and Password. If you are authenticated as **admin**, input the value you changed and select: **OK**, then select: **click here**, please see figure 22.



Figure 22

23 Proceed to change the password of the user: **super**, in order to be able to make this change you must be authenticated as **super user**, now select option: **super user** and input a new password, then select: **update**, please see figure 23.

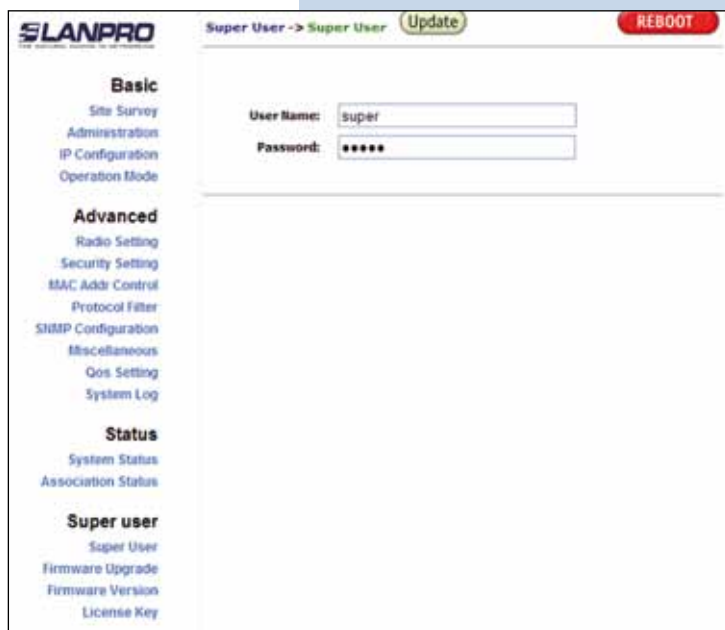


Figure 23

24 For the change to take effect, please select: **Reboot** in the window shown in figure 24.



Figure 24



- 25 Watch now the progress of the reboot function, please see figure 25.

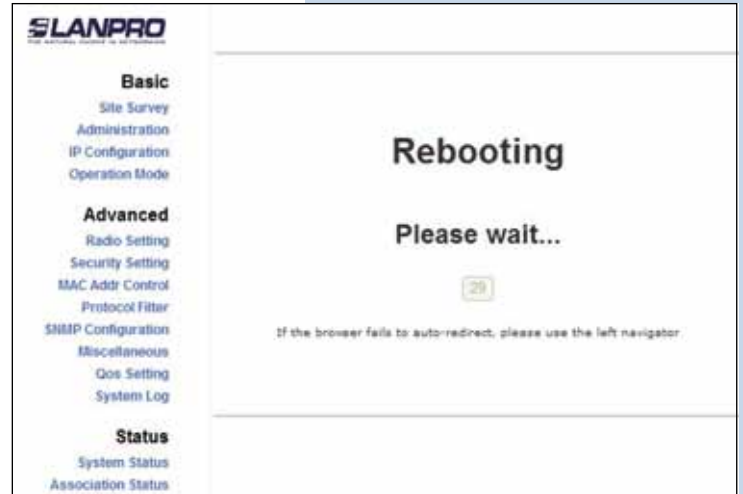


Figure 25

- 26 In the window shown in figure 26, please select: **Click here.**

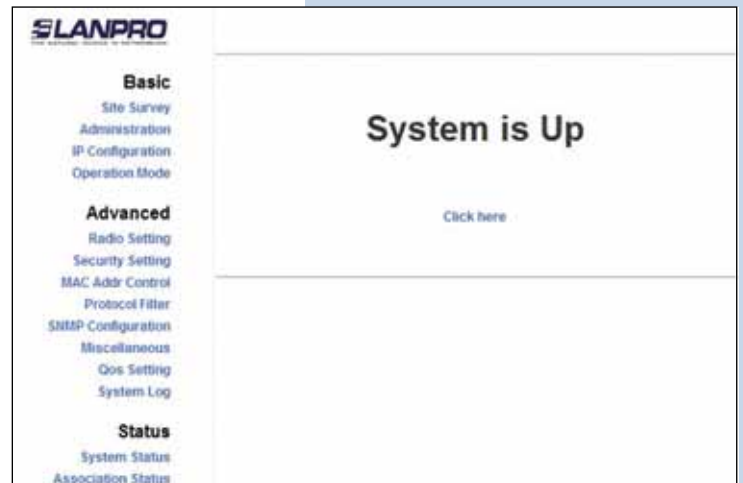


Figure 26

- 27 The equipment will ask you to input the new user and password, input the new values to proceed and select: **OK**
- 28 Disconnect the first equipment and proceed to configure the second equipment, configure it like the first, by first changing the IP Address in its configuration console. Important: you must select the same channel for all the equipment.
- 29 Please open your preferred browser and input the default address: 192.168.1.2 as shown in figure 27.

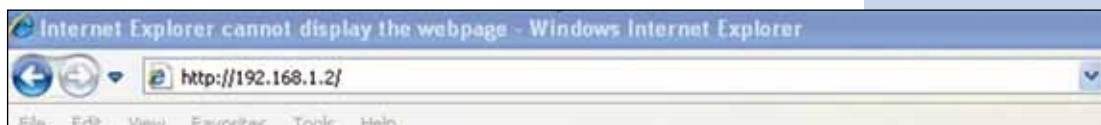


Figure 27

- 30 In the window shown in figure 28 the equipment will ask for validation, please input user: **super** and in password: **super**. In the window shown in figure 29, select: **IP configuration** and change the IP, we recommend to use another from the same segment not assigned by the DHCP; in this example we will use: 192.168.1.3. Once done, select: **Update**.



Figure 28



Figure 29

- 31 For the changes to take place, you must select: **Reboot** in the window of figure 30.

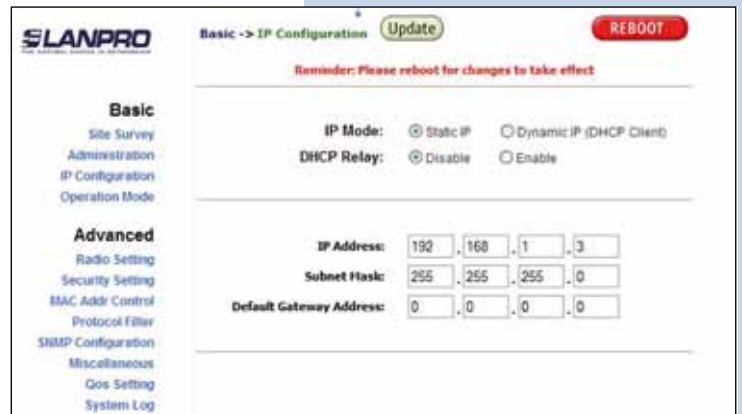


Figure 30

- 32 In the window of figure 31 an indication of the reboot function progress will be shown.

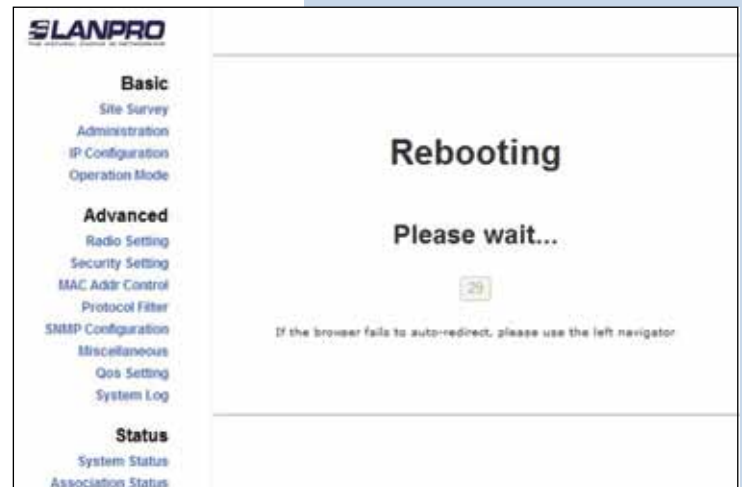


Figure 31

- 33 You will have to access now your equipment through the new IP, in order to do this, input the address: 192.168.1.3 in the web browser as shown in figure 32.



Figura 32

- 34 Please input user: **super** and password: **super** and select: **Ok**, as shown in the window of figure 33.



Figure 33

- 35 In the window of figure 34, select: **Operation Mode**, select: **Wireless Bridge**, and now select one channel in the field named: **Radio frequency**. Now add the MAC addresses of the radios that will form part of the point to point to multi-point configuration, excluding the MAC address of the radio you are configuring now and then select: **Update**.



Figure 34

36 The equipment will save the changes, but they won't take effect until the equipment reboots. In order to do this, select: **Reboot** as shown in the window of figure 35.



Figure 35

37 In the Window of figure 36 the reboot progress will be shown.

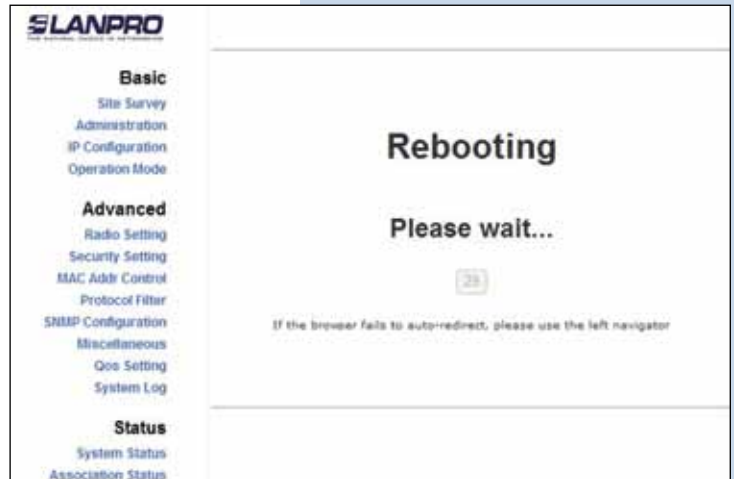


Figure 36

38 In the window shown in figure 37, select: **Click here.**

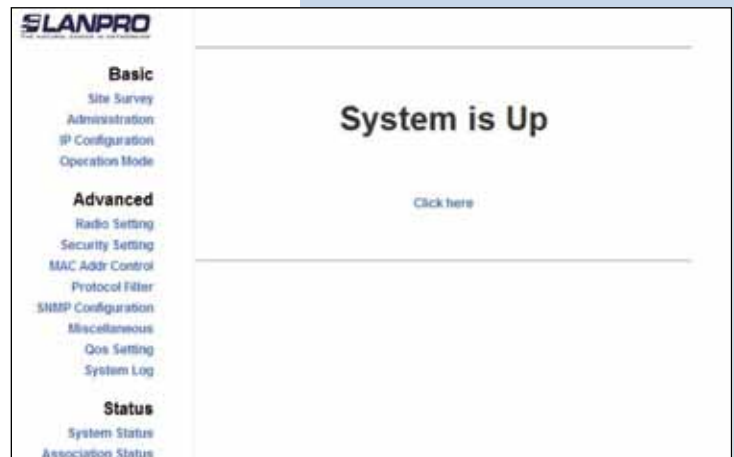


Figure 37

39 In the window shown in figure 38, select: **Security setting**, in: **Security mode**, select the encryption mode WEP, it is important to mention that that in the bridge mode only the WEP type is permitted, remember that for more encryption the less the speed of the link. Now select the authentication mode, the key method, the key or keys and the key length. Select: **Update**, remember that the values should be the same values you used with the equipment you configured before.

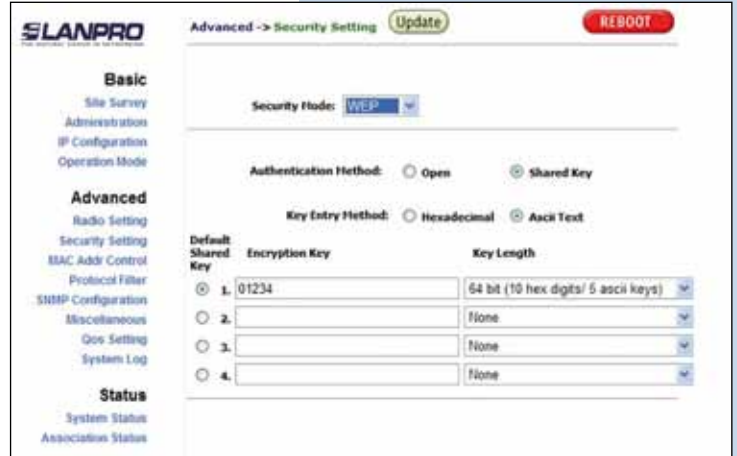


Figure 38

40 Once changes are saved please select: **Reboot** in the window shown in figure 39 for the changes to take effect.



Figure 39

41 The progress of the Reboot function will be shown in the window of figure 40.

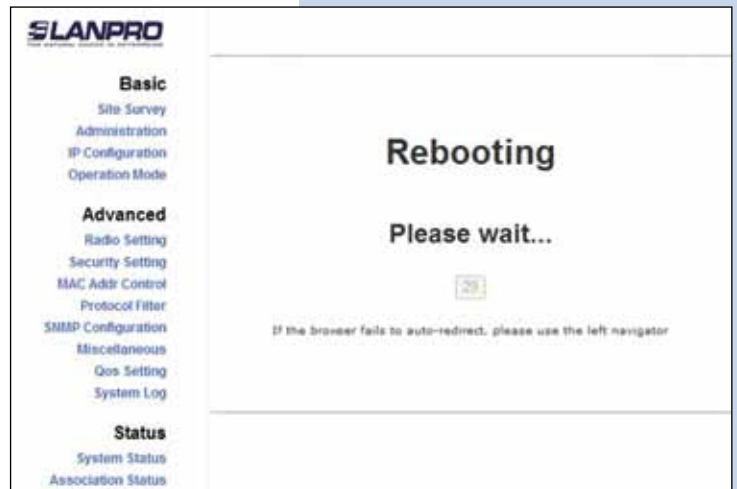
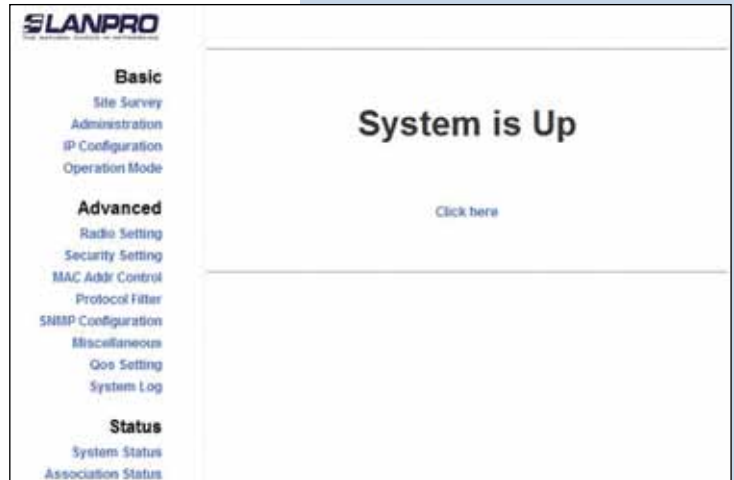


Figure 40

42 In the window of figure 41, please select: **Click here.**



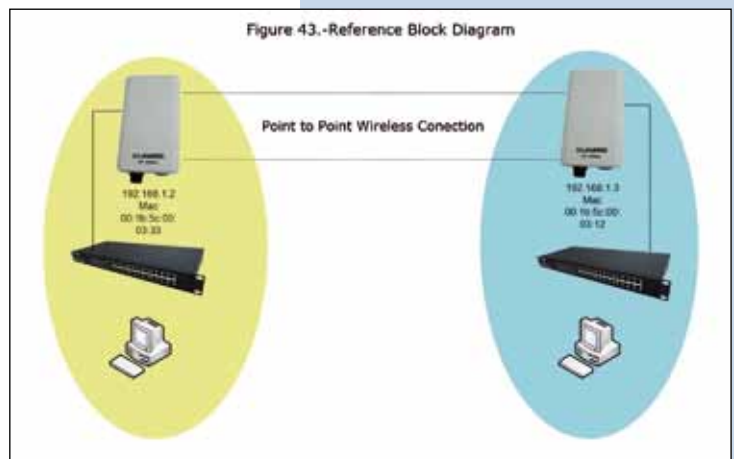
**Figure 41**

43 In order to verify the connection status, select: Association Status and watch the value presented in: signal strength, as shown in figure 42. This value depends on the distance and quality of the link.



**Figure 42**

44 Proceed to connect both equipment, one to the destination network and the other to a PC and proceed to test the connectivity between them with a PING command.



**Figure 43. Reference block diagram**