

**TP-LINK®**

# User Guide

**TL-WA7110ND**

**150Mbps High Power Wireless Access Point**



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## FCC STATEMENT



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

## FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

## CE Mark Warning



This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

## Canadian Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux normes CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes:

- (1) cet appareil ne doit pas provoquer d'interférences et
- (2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 5 dBi. Antennas not included in this list or having a gain greater than 5 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

## Industry Canada Statement

Complies with the Canadian ICES-003 Class B specifications.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## Korea Warning Statements

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## NCC Notice & BSMI Notice

注意！

依據 低功率電波輻射性電機管理辦法

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性或功能。

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## 安全諮詢及注意事項

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。
- 注意防潮，請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。
- 請不要私自打開機殼，不要嘗試自行維修本產品，請由授權的專業人士進行此項工作。



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## Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.

This product can be used in the following countries:

AT	BG	BY	CA	CZ	DE	DK	EE
ES	FI	FR	GB	GR	HU	IE	IT
LT	LV	MT	NL	NO	PL	PT	RO
RU	SE	SK	TR	UA	US		

## DECLARATION OF CONFORMITY

For the following equipment:

Product Description: 150Mbps High Power Wireless Access Point

Model No.: TL-WA7110ND

Trademark: **TP-LINK**

We declare under our own responsibility that the above products satisfy all the technical regulations applicable to the product within the scope of Council Directives:

Directives 1999/5/EC, Directives 2004/108/EC, Directives 2006/95/EC, Directives 1999/519/EC, Directives 2011/65/EU

The above product is in conformity with the following standards or other normative documents

**EN 300 328 V1.7.1: 2006**

**EN 301 489-1 V1.9.2:2011& EN 301 489-17 V2.2.1:2012**

**EN 55022:2010+AC:2011**

**EN 55024:2010**

**EN 61000-3-2:2006+A1:2009+A2:2009**

**EN 61000-3-3:2008**

**EN 60950-1:2006+A11 : 2009+A1:2010+A12:2011**

**EN 62311:2008**

*The product carries the CE Mark:*

**CE 1588**

Person responsible for marking this declaration:



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# CONTENTS

<b>Package Contents .....</b>	<b>1</b>
<b>Chapter 1. Introduction .....</b>	<b>2</b>
1.1    Overview of the Product.....	2
1.2    Features.....	2
1.3    Conventions .....	4
1.4    Panel Layout.....	4
1.4.1    The Front Panel.....	4
1.4.2    The Rear Panel .....	5
<b>Chapter 2. Connecting the Device.....</b>	<b>6</b>
2.1    System Requirements.....	6
2.2    Installation Environment Requirements .....	6
2.3    Connecting the Device.....	6
2.3.1    AP Client Router.....	6
2.3.2    AP Router.....	7
2.3.3    Access Point.....	7
2.3.4    Multi-SSID .....	8
2.3.5    Repeater and Universal Repeater.....	8
2.3.6    Bridge with AP .....	8
2.3.7    Client .....	9
<b>Chapter 3. Quick Installation Guide .....</b>	<b>10</b>
3.1    Configure the Device .....	10
3.2    Quick Setup .....	11
3.2.1    AP Client Router.....	14
3.2.2    AP Router.....	18
3.2.3    Access Point.....	22
3.2.4    Multi-SSID .....	25
3.2.5    Repeater (Range Extender) .....	28
3.2.6    Bridge with AP .....	31
3.2.7    Client .....	35
<b>Chapter 4. AP &amp; Multi-SSID &amp; Repeater (Range Extender) &amp; Bridge with AP &amp; Client</b>	
<b>Operation Mode .....</b>	<b>39</b>
4.1    Login .....	39
4.2    Status.....	39
4.3    Quick Setup .....	40
4.4    Operation Mode .....	40
4.5    WPS .....	41

4.6	Network .....	42
4.6.1	LAN .....	42
4.7	Wireless .....	43
4.7.1	Wireless Settings .....	44
4.7.2	Wireless Security .....	45
4.7.3	Wireless MAC Filtering .....	48
4.7.4	Wireless Advanced .....	50
4.7.5	Distance Setting .....	51
4.7.6	Throughput Monitor .....	52
4.7.7	Wireless Statistics .....	53
4.8	DHCP .....	53
4.8.1	DHCP Settings .....	53
4.8.2	DHCP Clients List .....	54
4.8.3	Address Reservation .....	55
4.9	System Tools .....	56
4.9.1	SNMP .....	57
4.9.2	Time Settings .....	58
4.9.3	Diagnostic .....	59
4.9.4	Ping Watch Dog .....	61
4.9.5	Speed Test .....	61
4.9.6	Firmware Upgrade .....	62
4.9.7	Factory Defaults .....	63
4.9.8	Backup & Restore .....	63
4.9.9	Reboot .....	64
4.9.10	Password .....	64
4.9.11	System log .....	65
4.9.12	Statistics .....	66
<b>Chapter 5.</b>	<b>AP Client Router &amp; AP Router Operation Mode .....</b>	<b>68</b>
5.1	Login .....	68
5.2	Status .....	68
5.3	Quick Setup .....	70
5.4	Operation Mode .....	70
5.5	WPS .....	71
5.6	Network .....	72
5.6.1	WAN .....	72
5.6.2	MAC Clone .....	80
5.6.3	LAN .....	81
5.7	Wireless .....	81

5.7.1	Wireless Settings.....	82
5.7.2	Wireless Security.....	86
5.7.3	MAC Filtering.....	88
5.7.4	Wireless Advanced.....	90
5.7.5	Distance Setting .....	91
5.7.6	Throughput Monitor.....	92
5.7.7	Wireless Statistics .....	93
5.8	DHCP .....	93
5.8.1	DHCP Settings .....	93
5.8.2	DHCP Clients List.....	94
5.8.3	Address Reservation .....	95
5.9	Forwarding .....	96
5.9.1	Virtual Servers.....	97
5.9.2	Port Triggering.....	98
5.9.3	DMZ.....	100
5.9.4	UPnP .....	100
5.10	Security .....	101
5.10.1	Basic Security.....	101
5.10.2	Advanced Security .....	103
5.10.3	Local Management.....	104
5.10.4	Remote Management.....	105
5.11	Parental Control .....	105
5.12	Access Control.....	107
5.12.1	Rule .....	107
5.12.2	Host .....	109
5.12.3	Target .....	110
5.12.4	Schedule .....	111
5.13	Advanced Routing.....	112
5.13.1	Static Routing List .....	112
5.13.2	System Routing Table .....	113
5.14	Bandwidth Control.....	114
5.14.1	Control Settings.....	114
5.14.2	Rules List.....	114
5.15	IP & MAC Binding .....	115
5.15.1	Binding Setting .....	115
5.15.2	ARP List.....	116
5.16	Dynamic DNS .....	117
5.17	System Tools .....	120

5.17.1	Time Settings .....	121
5.17.2	Diagnostic.....	122
5.17.3	Firmware Upgrade.....	123
5.17.4	Factory Defaults .....	124
5.17.5	Backup & Restore .....	124
5.17.6	Reboot.....	125
5.17.7	Password.....	125
5.17.8	System log.....	126
5.17.9	Statistics .....	128
<b>Appendix A:</b>	<b>FAQ .....</b>	<b>130</b>
<b>Appendix B:</b>	<b>Configuring the PC .....</b>	<b>134</b>
<b>Appendix C:</b>	<b>Specifications.....</b>	<b>138</b>
<b>Appendix D:</b>	<b>Glossary.....</b>	<b>139</b>

## Package Contents

The following items should be found in your package:

- One TL-WA7110ND 150Mbps High Power Wireless Access Point
- One power Adapter for TL-WA7110ND 150Mbps High Power Wireless Access Point
- One Power Injector
- Mounting Kits
- Quick Installation Guide
- One Resource CD for TL-WA7110ND 150Mbps High Power Wireless Access Point, including:
  - This User Guide
  - Other helpful information

 **Note:**

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact your distributor.

## Chapter 1. Introduction

### 1.1 Overview of the Product

The TL-WA7110ND 150Mbps High Power Wireless Access Point will allow you to connect your network with other wireless devices wirelessly, sharing Internet Access, files and fun, easily and securely. The high power design will also help you build a more stable link or cover more area indoors.

The TL-WA7110ND 150Mbps High Power Wireless Access Point provides 7 operation modes for multi-user to access the Internet: AP Client Router, AP Router, Access Point, Multi-SSID, Repeater (Range Extender), Bridge with AP and Client. In AP Client Router mode, it works as a WISP CPE and can access the Internet wirelessly via your WISP. In AP Router mode, it can access the Internet via an ADSL/Cable Modem, while sharing data wirelessly.

With the most attentive wireless security, the TL-WA7110ND 150Mbps High Power Wireless Access Point provides multiple protection measures. It can be set to turn off wireless network name (SSID) broadcast so that only stations that have the SSID can be connected. The AP provides wireless LAN 64/128/152-bit WEP encryption security, and WPA/WPA2 and WPA-PSK/WPA2-PSK authentication, as well as TKIP/AES encryption security. It also supports VPN pass-through for sensitive data secure transmission.

The TL-WA7110ND 150Mbps High Power Wireless Access Point complies with the IEEE 802.11n, IEEE 802.11g and IEEE 802.11b standards so that the data transmission rate is up to 150Mbps. The wireless transmission range can extend up to tens of kilometers.

### 1.2 Features

- Complies with IEEE 802.11n, IEEE 802.11g, IEEE 802.11b, IEEE 802.3, IEEE 802.3u standards.
- Wireless Data transfer rates up to 150Mbps.
- Supports AP Client Router, AP Router, Access Point, Multi-SSID, Repeater (Range Extender), Bridge with AP and Client mode.
- High output transmit power and receive sensitivity optimized.
- Supports Client Router Mode for WISP CPE.
- Supports passive power over Ethernet.
- Supports Wireless Distribution System (WDS).
- ACK timeout adjustment for long range transmission, up to 50km.
- Provides throughput monitor indicating the current wireless throughput.
- Supports Layer 2 User Isolation.
- Supports Ping Watch Dog.
- Supports link speed test.
- Output transmit power adjustable.
- Supports PPPoE, Dynamic IP, Static IP Internet Access.
- Built-in NAT and DHCP server supporting static IP address distributing.
- Provides WLAN ACL (Access Control List).

- Supports configuration backup/restore and firmware upgrade.
- Supports Web management.
- Supports Remote Management.
- Supports UPnP, Dynamic DNS, Static Routing, VPN Pass-through.
- Supports Virtual Server, Special Application and DMZ host.
- Built-in firewall supporting IP address filtering, Domain Name filtering, and MAC address filtering.

## 1.3 Conventions

The AP or TL-WA7110ND, or device mentioned in this User guide stands for TL-WA7110ND

150Mbps High Power Wireless Access Point without any explanations.

Parameters provided in the pictures are just references for setting up the product, which may differ from the actual situation.

You can set the parameters according to your demand.

## 1.4 Panel Layout

### 1.4.1 The Front Panel

TL-WA7110ND consists of several LED indicators, which is designed to indicate connections and wireless signal.

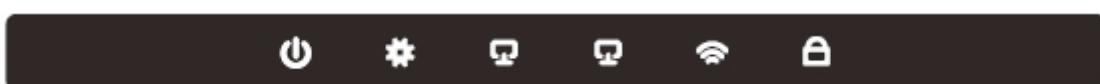


Figure 1-1 Front Panel sketch

#### LED Explanation

Name	Status	Indication
	Off	No Power
	On	Power on
	Off	The device has a system error
	On	The device is initialising
	Flashing	The device is working properly
	Off	There is no device linked to the corresponding port
	On	There is a device linked to the corresponding port but no activity
	Flashing	There is an active device linked to the corresponding port
	Off	The Wireless function is disabled
	Flashing	The Wireless function is enabled
	Slow Flash	A wireless device is connecting to the network by function. This process will last in the first 2 minutes.
	On	A wireless device has been successfully added to the network by function.
	Quick Flash	A wireless device failed to be added to the network by function.

Table 2-1

### 1.4.2 The Rear Panel



Figure 1-2 Rear Panel sketch

Viewed from left to right, the following parts are located on the rear panel of TL-WA7110ND.

**POWER:** The power port connects to the power adapter provided with the TL-WA7110ND.

**MAIN (PoE):** One LAN 10/100Mbps RJ45 port connects to a network device, such as a switch or a router, and is capable of 12V Power over Ethernet output.

**SECONDARY:** This port is used as a secondary Ethernet port to connect to a network device, such as a switch or a router.

**WPS/RESET:** This button is used for both WPS and Reset function. To use the WPS function, press it for less than five seconds; to use the RESET function, press it for more than five seconds.

- **Used as RESET button:**

There are two ways to reset to the Router's factory defaults:

- 1) Use the **Factory Defaults** function on **System Tools -> Factory Defaults** page in the Router's Web-based Utility.
- 2) Use the **WPS/RESET** button: With the Router powered on, press and hold the **WPS/RESET** button (more than 5 seconds) until the SYS LED becomes quick-flash from slow-flash. Then release the button and wait the Access Point to reboot to its factory default settings.

- **Used as WPS button:**

If you have client devices, such as wireless adapters, that support Wi-Fi Protected Setup, then you can press this button to quickly establish a connection between the Access Point and client devices and automatically configure wireless security for your wireless network.

**Wireless antenna:** The external antenna is used to transmit and receive wireless data.

## Chapter 2. Connecting the Device

### 2.1 System Requirements

- Each PC in the LAN needs a working Ethernet Adapter and an Ethernet cable with RJ45 connectors.
- TCP/IP protocol must be installed on each PC.
- Web browser, such as Microsoft Internet Explorer 5.0 or later, Netscape Navigator 6.0 or later.
- If the device is configured to AP Client Router mode, you also need:  
Wireless Internet Service Provider (WISP).
- If the device is configured to AP Router mode, you also need:  
Broadband Internet Access Service (DSL/Cable/Ethernet).
- One DSL/Cable Modem that has an RJ45 connector (you do not need it if you connect the router to the Ethernet.).

### 2.2 Installation Environment Requirements

- Operating temperature: -30°C~70°C
- Operating Humidity: 10%~90% RH, Non-condensing

### 2.3 Connecting the Device

To connect the AP, please follow the steps below:

1. Power off your PC, Cable/DSL Modem, and the AP.
2. Locate an optimum location for the AP. The best place is usually at the center of your wireless network. The place must accord with the [Installation Environment Requirements](#).
3. Adjust the direction of the antenna. Normally, upright is a good direction.

After finishing the steps above, please choose the operation mode you need and carry out the corresponding steps. There are seven operation mode supported by this AP: **AP Client Router**, **AP Router**, **Access Point**, **Multi-SSID**, **Repeater (Range Extender)**, **Bridge with AP** and **Client**.

#### 2.3.1 AP Client Router

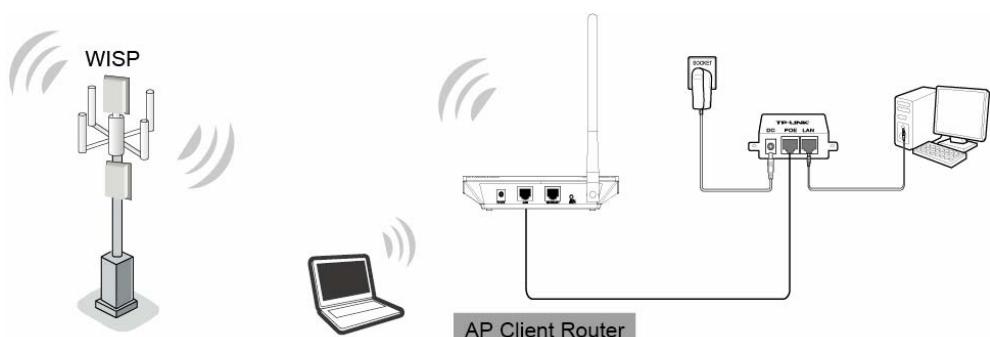


Figure 2-1 Hardware Installation of the TL-WA7110ND in AP Client Router mode

1. Connect the MAIN (PoE) port of TL-WA7110N to the POE port of the Power Injector with an Ethernet cable.
2. Connect the PC to the LAN port of the Power Injector with an Ethernet cable.
3. Plug one end of the Power Adapter into the DC jack on the Power Injector, and the other end in electrical wall socket.
4. Power on the PC(s) and notebook(s).

### 2.3.2 AP Router

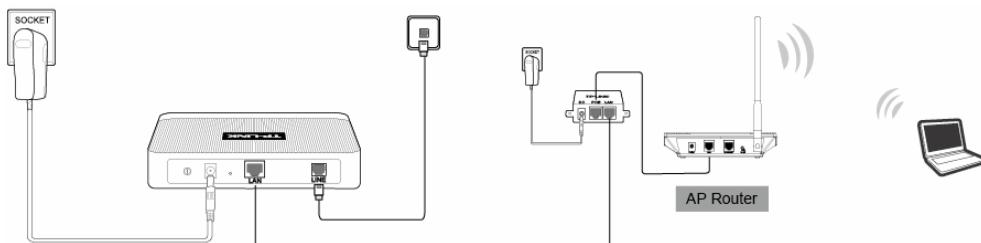


Figure 2-2 Hardware Installation of the TL-WA7110ND in AP Router mode

1. Connect the MAIN (PoE) port of TL-WA7110N to the POE port of the Power Injector with an Ethernet cable.
2. Connect the DSL/Cable Modem to the LAN port of the Power Injector with an Ethernet cable.
3. Plug one end of the Power Adapter into the DC jack on the Power Injector, and the other end in electrical wall socket.
4. Power on the PC(s) and other connected devices (such as the ADSL modem).

 **Note:**

In this mode, the LAN port of the Power Injector (connected to the LAN port of the Device) works as the WAN port.

### 2.3.3 Access Point

This operation mode allows wireless stations to access.

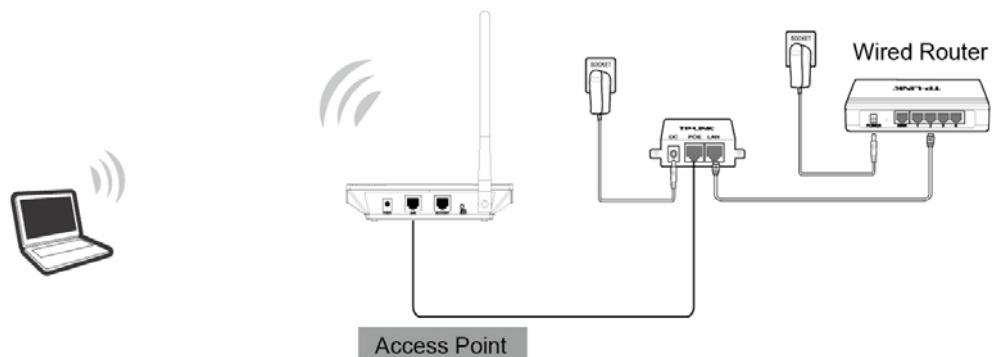


Figure 2-3 Hardware Installation of the TL-WA7110ND in Access Point mode

1. Connect the MAIN (PoE) port of TL-WA7110N to the POE port of the Power Injector with an Ethernet cable.
2. Connect the LAN port of the Power Injector to the wired network port with an Ethernet cable.
3. Plug one end of the Power Adapter into the DC jack on the Power Injector, and the other end in the electrical wall socket.
4. Power on the notebook(s) and other connected devices (such as the Wired Router).

### 2.3.4 Multi-SSID

In this mode, AP can support up to 4 SSID.

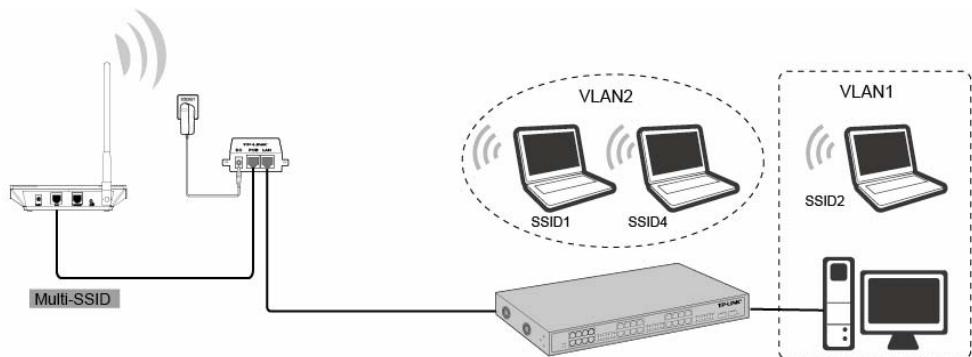


Figure 2-4 Hardware Installation of the TL-WA7110ND in Multi-SSID mode

1. Connect the MAIN (PoE) port of TL-WA7110N to the POE port of the Power Injector with an Ethernet cable.
2. Connect the LAN port of the Power Injector to the wired network port with an Ethernet cable.
3. Plug one end of the Power Adapter into the DC jack on the Power Injector, and the other end in the electrical wall socket.
4. Power on the notebooks and other connected devices (such as the Switch).

### 2.3.5 Repeater and Universal Repeater

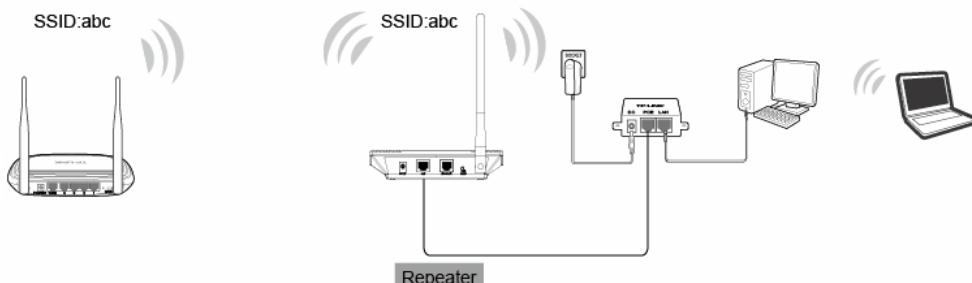


Figure 2-5 Hardware Installation of the TL-WA7110ND in (Universal) Repeater mode

1. Connect the MAIN (PoE) port of TL-WA7110ND to the POE port of the Power Injector with an Ethernet cable.
2. Plug one end of the Power Adapter into the DC jack on the Power Injector, and the other end in electrical wall socket.
3. Power on the PC(s) and other connected devices (such as the Router).

**Note:**

Both Repeater and Universal Repeater modes allow the AP with its own BSS to relay data to a root AP. The wireless repeater relays signal between its stations and the root AP for greater wireless range. However, in Repeater mode, the WDS associated is enabled, while in Universal Repeater mode, the WDS associated is disabled.

### 2.3.6 Bridge with AP

Two Devices are needed in this mode.

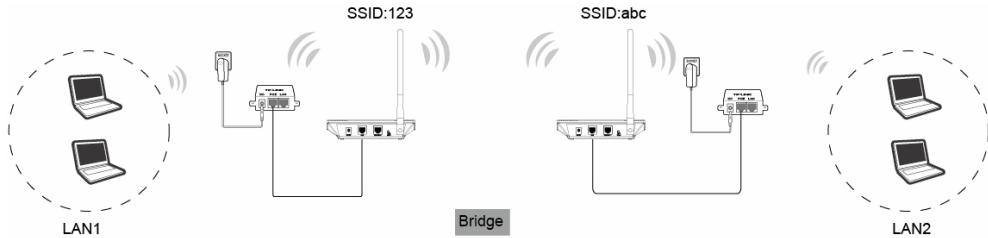


Figure 2-6 Hardware Installation of the TL-WA7110ND in Standard AP -- Bridge mode

1. Connect the MAIN (PoE) port of TL-WA7110N to the POE port of the Power Injector with an Ethernet cable.
2. Plug one end of the Power Adapter into the DC jack on the Power Injector, and the other end in electrical wall socket.
3. Power on the PC(s).

**☞ Note:**

It is recommended that you connect a PC/notebook to the LAN port of the Device with an Ethernet cable, and then login the Device from the PC/notebook to set the Device in Bridge with AP mode.

### 2.3.7 Client

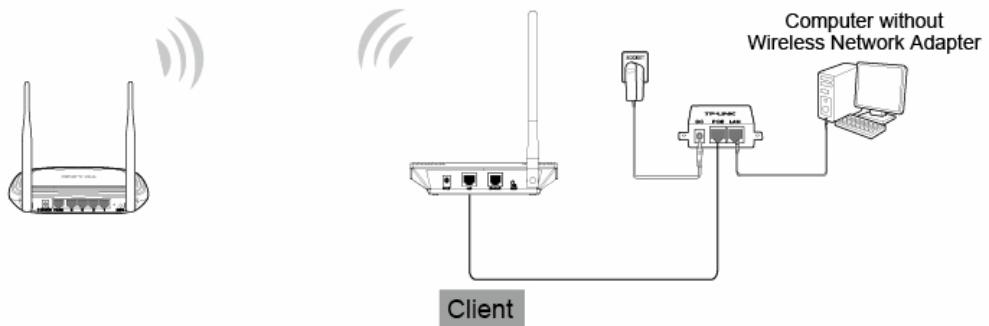


Figure 2-7 Hardware Installation of the TL-WA7110ND in Client mode

1. Connect the MAIN (PoE) port of TL-WA7110N to the POE port of the Power Injector with an Ethernet cable.
2. Connect the PC to the LAN port of the Power Injector with an Ethernet cable.
3. Plug one end of the Power Adapter into the DC jack on the Power Injector, and the other end in electrical wall socket.
4. Power on the PC(s) and other connected devices (such as the Router).

## Chapter 3. Quick Installation Guide

This Chapter will guide you to configure the AP to function in your network and gain access to the internet through your ISP immediately after successful configuration. More detailed description of the AP's web-based utility and functions can be found in "Chapter 4 Configuring the AP"

### 3.1 Configure the Device

The instructions in this section will help you configure each of your PCs to be able to communicate with the AP.

The default IP address of the TL-WA7110ND 150Mbps High Power Wireless Access Point is

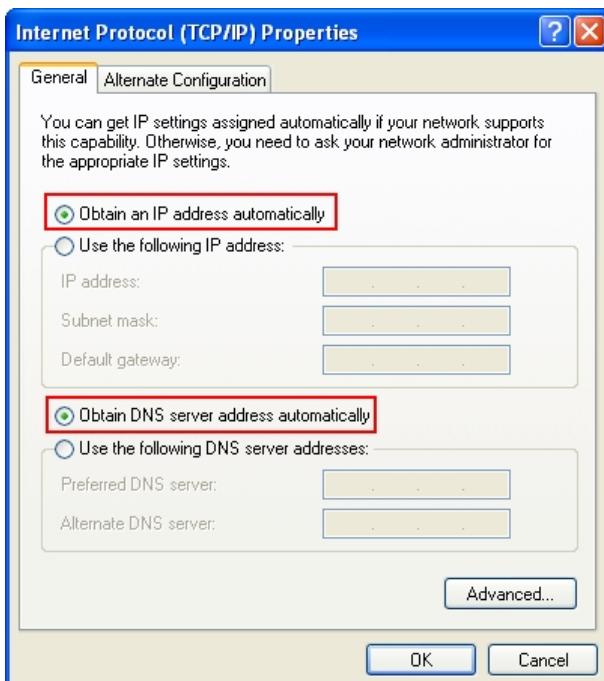
192.168.0.254. And the default Subnet Mask is 255.255.255.0. These values can be seen from the LAN. They can be changed as you desire, as an example we use the default values for description in this guide.

Connect the local PC to the LAN ports of the AP. There are then two ways to configure the IP address for your PC.

- Configure the IP address manually
  - 1) Set up the TCP/IP Protocol for your PC. If you need instructions as to how to do this, please refer to [Appendix B: Configuring the PC](#).
  - 2) Configure the network parameters. The IP address is 192.168.0.xxx ("xxx" is from 2 to 253), Subnet Mask is 255.255.255.0

 **Note:**

If you configure your device by this way, please remember to change the configuration of your PC to the figure as shown below to make your PC connect to the Internet successfully.



- Obtain an IP address automatically

This method can be available only when **DHCP** in [section 4.8.1](#) is enabled.

- 1) Set up the TCP/IP Protocol in "Obtain an IP address automatically" mode on your PC. If you need instructions as to how to do this, please refer to [Appendix B: Configuring the PC](#).

- 2) Power off the AP and PC. Then turn on the AP and restart the PC. The built-in DHCP server will assign IP address for the PC.

 **Note:**

For Windows 98 OS or earlier, the PC and AP may need to be restarted.

Now, you can run the Ping command in the **command prompt** to verify the network connection between your PC and the AP. The following example is in Windows 2000 OS.

Open a command prompt, and type *ping 192.168.0.254*, and then press **Enter**.

If the result displayed is similar to that shown in Figure 3-1, the connection between your PC and the AP has been established.

```
Pinging 192.168.0.254 with 32 bytes of data:
Reply from 192.168.0.254: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Figure 3-1 Success result of Ping command

If the result displayed is similar to that shown in Figure 3-2, it means that your PC has not connected to the AP.

```
Pinging 192.168.0.254 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
```

Figure 3-2 Failure result of Ping command

**Please check the connection following these steps:**

1. Is the connection between your PC and the AP correct?

 **Note:**

The LED of LAN port you link to on the AP and LEDs on your PC's adapter should be lit.

2. Is the TCP/IP configuration for your PC correct?

 **Note:**

If the AP's IP address is 192.168.0.254, your PC's IP address must be within the range of 192.168.0.2 ~ 192.168.0.253.

## 3.2 Quick Setup

The following instructions will guide you through a few easy steps to configure your AP and connect to Internet. With a Web-based (Internet Explorer or Netscape® Navigator) utility, it is easy

to configure and manage the TL-WA7110ND 150Mbps High Power Wireless Access Point. The Web-based utility can be used on any Windows, Macintosh or UNIX OS with a Web browser.



Open your web browser and enter the IP address of the AP (192.168.0.254) and a login screen will display (shown in Figure 3-3).



Figure 3-3 Login the router

Enter **admin** for Username and Password (both in lower case letters) on the following login screen. Click **OK** or press **Enter** of your keyboard, and the management page will display.



Figure 3-4 Login Windows

 **Note:**

- 1) If the above screen does not pop-up, it means that your Web-browser has been set to a proxy. Go to Tools menu>Internet Options>Connections>LAN Settings, in the screen that appears, cancel the Using Proxy checkbox, and click OK to finish it.
- 2) If the device has been restored, the Welcome page will appear as shown in Figure 3-5, please read the TERMS OF USE carefully. Then select I agree to these terms of use and click Login to continue.

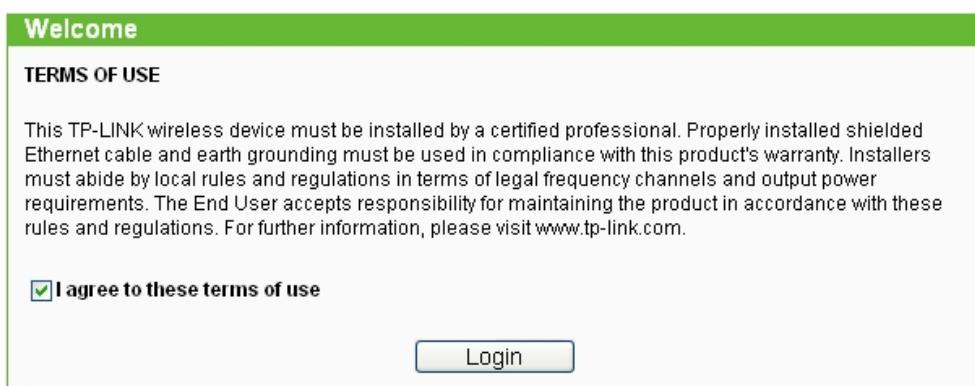


Figure 3-5 Welcome page

If the User Name and Password are correct, you can configure the AP using the Web browser. Please click the **Quick Setup** link on the left of the main menu and the Quick Setup screen will appear.

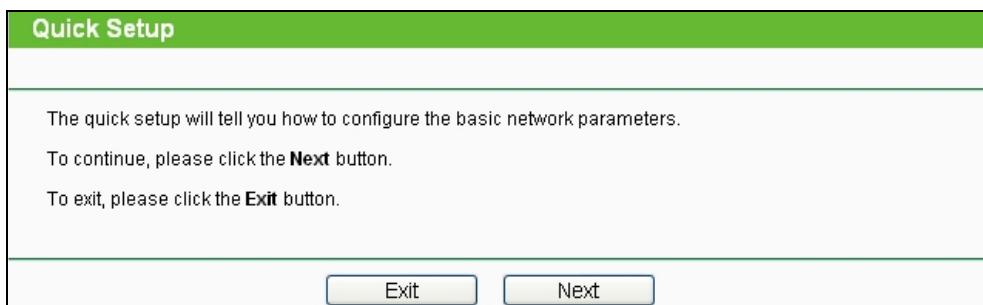


Figure 3-6 Quick Setup

Click **Next**, and then **Operation Mode** page will appear, shown in Figure 3-7:

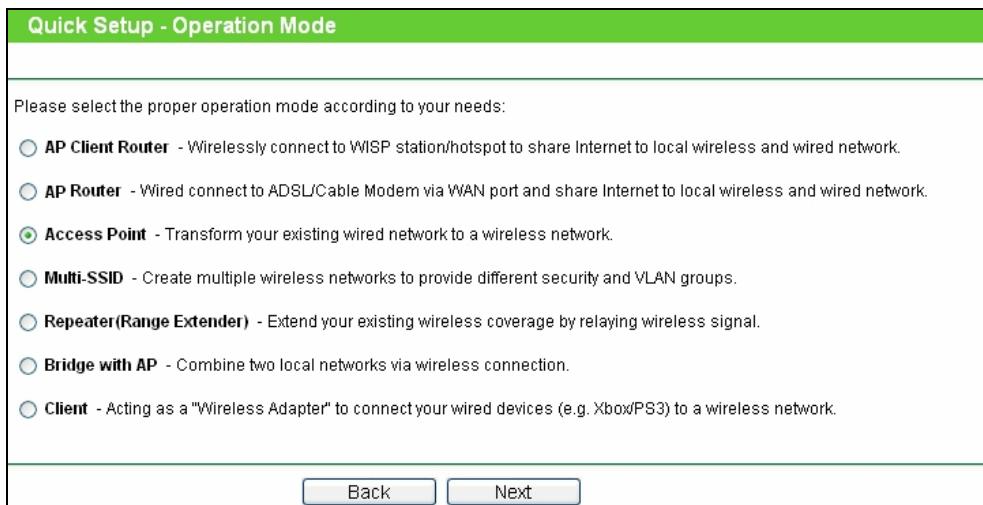


Figure 3-7 Operation Mode

- **AP Client Router** - In this mode, the device enables multi-users to share Internet from WISP. The LAN port devices share the same IP from WISP through Wireless port. While connecting to WISP, the Wireless port works as a WAN port at AP Client Router mode. The Ethernet port acts as a LAN port.
- **AP Router** - In this mode, the device enables multi-users to share Internet via ADSL/Cable Modem. The wireless port share the same IP to ISP through Ethernet WAN port. The Wireless port acts the same as a LAN port while at AP Router mode.
- **Access Point** - In this mode, the device can be connected to a wired network and transform the wired access into wireless that multiple devices can share together, especially for a home, office or hotel where only wired network is available.
- **Multi-SSID** - In this mode, the device can create up to 4 wireless networks labeled with different SSIDs and assign each SSID with different security or VLAN, especially for the situation when the various access policies and functions are required.
- **Repeater(Range Extender)** - In this mode, the device can copy and reinforce the existing wireless signal to extend the coverage of the signal, especially for a large space to eliminate signal-blind corners.
- **Bridge with AP** - In this mode, the device can be used to combine multiple local networks together to the same one via wireless connections, especially for a home or office where separated networks can't be connected easily together with a cable.
- **Client** - In this mode, the device can be connected to another device via Ethernet port and act as an adaptor to grant your wired devices access to a wireless network, especially for a Smart TV, Media Player, or game console only with an Ethernet port.

 **Note:**

When you change the operation mode to Client/Repeater, WPS function will stay disabled. Please manually enable this function if needed when you switch back to Access Point/Multi-SSID/Bridge mode.

### 3.2.1 AP Client Router

When you choose **AP Client Router Mode** on **Operation Mode** page in Figure 3-7, take the following steps:

1. Click **Next** in Figure 3-7, and then **WAN Connection Type** page will appear as shown in Figure 3-8.

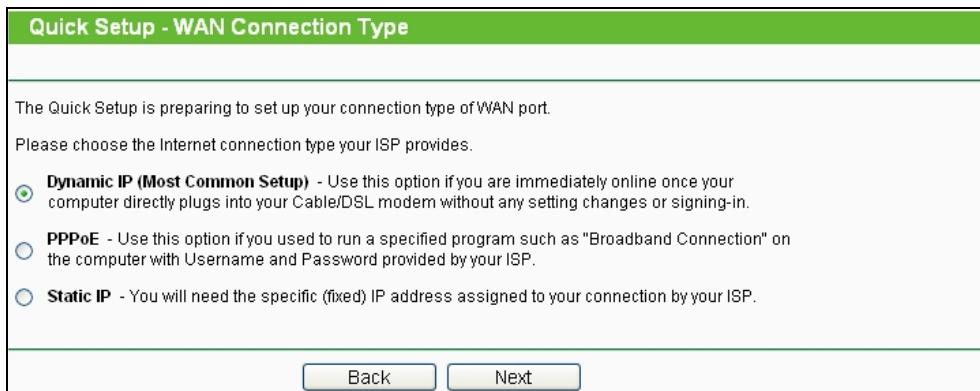


Figure 3-8 WAN Connection Type

- **Dynamic IP** - When the Device connects to a DHCP server, or the ISP supplies you with DHCP connection, please choose this type. The Device will get the IP address automatically from the DHCP server or the WISP if you choose the Dynamic IP type.

If you choose **Dynamic IP** in Figure 3-8 and then click **Next**, the wireless setting page as in Figure 3-10 will appear.

- **PPPoE** - If you have applied ADSL to realize Dial-up service, you should choose this type. In this condition, you should fill in both the User Name and Password that your ISP supplies.

- 1) If you choose **PPPoE** in Figure 3-8 and then click **Next**, Figure 3-9 will appear.

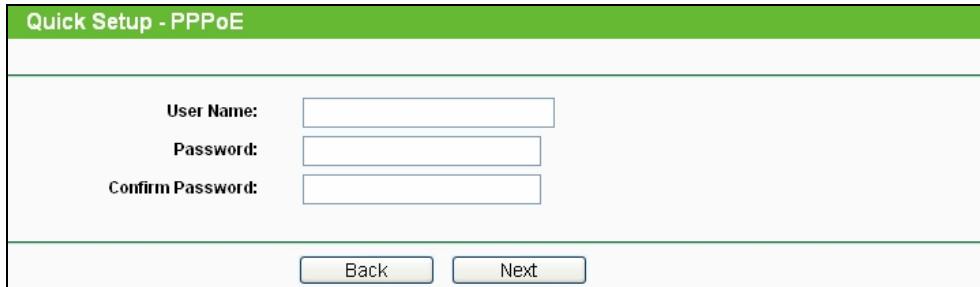


Figure 3-9 PPPoE

- 2) Enter the **User Name** and **Password** provided by your ISP, then click **Next**, Figure 3-10 will appear.

Figure 3-10 WISP Station Setting

- **Wireless Name of WISP Station** - The SSID of the AP your Device is going to connect to as a client. You can also use the search function to select the SSID to join.
- **MAC Address of WISP Station** - The BSSID of the AP your Device is going to connect to as a client. You can also use the search function to select the BSSID to join.
- **Survey** - Click this button, you can search the AP which runs in the current channel.
- **Region** - Select your region from the pull-down list. This field specifies the region where the wireless function of the Device can be used. It may be illegal to use the wireless function of the Device in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.

When you select your local region from the pull-down list, the Note Dialog of **TERMS OF USE** will pop up. Select **I agree to these terms of use**, and click **Accept** to continue.



Note Dialog

 **Note:**

Ensure you select a correct country to comply with local laws. Incorrect settings may cause interference. Limited to local law of the United States, selecting country code and channel function was disabled.

- **Transmission Power** - The available options of transmission power are determined by the region selected.

- **Wireless Security Mode** - This option should be chosen according to the AP's security configuration. It is recommended that the security type is the same as your AP's security type.
- **Wireless Password** - If the AP your Device is going to connect needs password, you need to fill the password in this blank.

➤ **Static IP** - In this type, you should manually fill in the **IP address**, **Subnet Mask**, **Default Gateway**, and **DNS** IP address, which are specified by your ISP.

- 1) If you choose **Static IP** in Figure 3-8 and then click **Next**, Figure 3-11 will appear.

Figure 3-11 Static IP

- **IP Address** - This is WAN IP address as seen by external users on the Internet (including your ISP). Enter the IP address into the field.
- **Subnet Mask** - It is used for the WAN IP address, which is usually 255.255.255.0.
- **Default Gateway** - Enter the default gateway in the blank if required.
- **Primary DNS** - Enter the DNS IP address in the blank if required.
- **Secondary DNS** - If your WISP provides another DNS IP address, enter it in this field.

 **Note:**

The IP parameters should have been provided by your WISP.

- 2) After you have entered the above necessary parameters and then click **Next**, the wireless setting page as shown in Figure 3-10 will then appear.
2. Click **Survey** in Figure 3-10 to scan the wireless networks, then the AP List page will pop up as shown in , choose the target one, click **Connect**. You will then return to the previous page. If the AP your Device is going to connect needs password, you need to fill the password. Click **Next**.

AP List						
AP Count: 7						
ID	BSSID	SSID	Signal	Channel	Security	Choose
1	02-01-00-13-02-AD	TP-LINK_1302AD	27dB	1	WPA/WPA2-PSK	<a href="#">Connect</a>
2	00-0A-EB-13-7A-FF	TP-LINK_7AFF	24dB	1	WPA2-PSK	<a href="#">Connect</a>
3	00-0A-EB-13-09-18	TP-LINK_NEW	13dB	1	WPA2-PSK	<a href="#">Connect</a>
4	28-2C-B2-79-29-94	TP-LINK_2994	10dB	6	OFF	<a href="#">Connect</a>
5	00-23-B1-FF-41-3A	wenson7788	12dB	6	WPA2-PSK	<a href="#">Connect</a>
6	E8-94-F6-36-E8-C8	TP-LINK_36E8C8	38dB	8	WPA2-PSK	<a href="#">Connect</a>
7	D8-5D-4C-10-FF-22	TP-LINK_TEST	38dB	11	WPA/WPA2-PSK	<a href="#">Connect</a>

Figure 3-12 AP List

3. The page below will appear. Create a name for the **Local Wireless Network**. The security settings for the local network will be set the same as your WISP by default. Then click **Next**.

Quick Setup - Local Wireless AP Setting	
Local Wireless Name:	<input type="text" value="TP-LINK_110305"/> (also called SSID)
<input checked="" type="checkbox"/> Use the same security settings for the local wireless network as the remote WISP station	
<input type="button" value="Back"/> <input type="button" value="Next"/>	

Figure 3-13 Local Wireless AP Setting

Ticking off **Use the same security settings for the local wireless network as the remote WISP station**, the page will show as below. You can choose the **Wireless Security Mode** and fill in **Wireless Password** for the **Local Wireless Network**.

Quick Setup - Local Wireless AP Setting	
Local Wireless Name:	<input type="text" value="TP-LINK_110305"/> (also called SSID)
<input type="checkbox"/> Use the same security settings for the local wireless network as the remote WISP station	
Wireless Security Mode:	<input type="button" value="Most Secure(WPA/WPA2-PSK)"/>
Wireless Password:	<input type="text"/>
You can enter ASCII characters between 8 and 63 or Hexadecimal characters between 8 and 64.	
<input type="button" value="Back"/> <input type="button" value="Next"/>	

Figure 3-14 Local Wireless AP Setting

4. When you have finished the wireless settings above, you will come to the **Finish** page shown as Figure 3-15. Please check the configurations you have made. If anything is wrong, please go **Back** to reset. When confirmed, please click **Finish/Reboot** button in Figure 3-15 to make all the configurations take effect.

Quick Setup - Finish																									
<p>Confirm the configuration you have set. If anything is wrong, please go BACK to reset. When confirmed, <b>please click Finish/Reboot button to make all configurations take effect.</b></p>																									
<p><b>Wireless Setting</b></p> <table> <tr> <td>Operation Mode:</td> <td>AP Client Router</td> </tr> <tr> <td>Internet Connection Type:</td> <td>Dynamic IP</td> </tr> <tr> <td>Wireless Name of Remote AP:</td> <td>TP-LINK_TEST</td> </tr> <tr> <td>MAC Address of Remote AP:</td> <td>D8-5D-4C-10-FF-22</td> </tr> <tr> <td>Wireless Security Mode:</td> <td>Most Secure(WPA/WPA2-PSK)</td> </tr> <tr> <td>Wireless Password:</td> <td>1234567890</td> </tr> <tr> <td>Local Wireless Name(SSID):</td> <td>TP-LINK_110305</td> </tr> <tr> <td>Wireless Channel:</td> <td>11</td> </tr> <tr> <td>Wireless Security Mode:</td> <td>Most Secure(WPA/WPA2-PSK)</td> </tr> <tr> <td>Wireless Password:</td> <td>1234567890</td> </tr> <tr> <td>Region:</td> <td>United States</td> </tr> <tr> <td>Transmission Power:</td> <td>19dBm</td> </tr> </table>		Operation Mode:	AP Client Router	Internet Connection Type:	Dynamic IP	Wireless Name of Remote AP:	TP-LINK_TEST	MAC Address of Remote AP:	D8-5D-4C-10-FF-22	Wireless Security Mode:	Most Secure(WPA/WPA2-PSK)	Wireless Password:	1234567890	Local Wireless Name(SSID):	TP-LINK_110305	Wireless Channel:	11	Wireless Security Mode:	Most Secure(WPA/WPA2-PSK)	Wireless Password:	1234567890	Region:	United States	Transmission Power:	19dBm
Operation Mode:	AP Client Router																								
Internet Connection Type:	Dynamic IP																								
Wireless Name of Remote AP:	TP-LINK_TEST																								
MAC Address of Remote AP:	D8-5D-4C-10-FF-22																								
Wireless Security Mode:	Most Secure(WPA/WPA2-PSK)																								
Wireless Password:	1234567890																								
Local Wireless Name(SSID):	TP-LINK_110305																								
Wireless Channel:	11																								
Wireless Security Mode:	Most Secure(WPA/WPA2-PSK)																								
Wireless Password:	1234567890																								
Region:	United States																								
Transmission Power:	19dBm																								
<input type="button" value="Save"/>	Save these settings as a text file for future reference																								
<input type="button" value="Back"/> <input type="button" value="Reboot"/>																									

Figure 3-15 Finish page

### 3.2.2 AP Router

When you choose **AP Router Mode** on **Operation Mode** page in Figure 3-7, take the following steps:

1. Click **Next** in Figure 3-7, and then **WAN Connection Type** page will appear as shown in Figure 3-16.

Quick Setup - WAN Connection Type	
<p>The Quick Setup is preparing to set up your connection type of WAN port.</p> <p>The Router will try to detect the Internet connection type your ISP provides if you select the <b>Auto-Detect</b> option. Otherwise, you need to specify the connection type manually.</p> <p> <input checked="" type="radio"/> <b>Dynamic IP (Most Common Setup)</b> - Use this option if you are immediately online once your computer directly plugs into your Cable/DSL modem without any setting changes or signing-in.         </p> <p> <input checked="" type="radio"/> <b>PPPoE</b> - Use this option if you used to run a specified program such as "Broadband Connection" on the computer with Username and Password provided by your ISP.         </p> <p> <input type="radio"/> <b>Static IP</b> - You will need the specific (fixed) IP address assigned to your connection by your ISP.         </p>	
<input type="button" value="Back"/> <input type="button" value="Next"/>	

Figure 3-16 WAN Connection Type

- **PPPoE** - If you have applied ADSL to realize Dial-up service, you should choose this type. In this condition, you should fill in both the User Name and Password that your ISP provides.

- 1) If you choose **PPPoE** in Figure 3-16 and then click **Next**, Figure 3-17 will appear.



Quick Setup - PPPoE

User Name:

Password:

Confirm Password:

Back Next

Figure 3-17 PPPoE

2) Enter the **User Name** and **Password** provided by your ISP and then click **Next**, Figure 3-18 will appear.

Quick Setup - Wireless

Wireless Network Name(SSID):

Region:

Warning: Ensure you select a correct country to comply local law. Incorrect settings may cause interference.

Transmission Power:

Wireless Security Mode:

Wireless Password:

You can enter ASCII characters between 8 and 63 or Hexadecimal characters between 8 and 64.

Back Next

Figure 3-18 Wireless

- **Wireless Network Name(SSID)** - Enter a string of up to 32 characters. The same Name (SSID) must be assigned to all wireless devices in your network. The default SSID is set to be **TP-LINK\_xxxxxx** (xxxxxx indicates the last unique six characters of each Device's MAC address), which can ensure your wireless network security. But it is recommended strongly that you change your networks name (SSID) to a different value. This value is case-sensitive. For example, **MYSSID** is NOT the same as **MySsid**.
- **Region** - Select your region from the pull-down list. This field specifies the region where the wireless function of the Device can be used. It may be illegal to use the wireless function of the Device in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.

When you select your local region from the pull-down list, the Note Dialog of **TERMS OF USE** will pop up. Select **I agree to these terms of use**, and click **Accept** to continue.

**TERMS OF USE**

This TP-LINK wireless device must be installed by a certified professional. Properly installed shielded Ethernet cable and earth grounding must be used in compliance with this product's warranty. Installers must abide by local rules and regulations in terms of legal frequency channels and output power requirements. The End User accepts responsibility for maintaining the product in accordance with these rules and regulations. For further information, please visit [www.tp-link.com](http://www.tp-link.com).

**I agree to these terms of use.**

Accept Cancel

Note Dialog

 **Note:**

Ensure you select a correct country to comply with local laws. Incorrect settings may cause interference. Limited to local law of the United States, selecting country code and channel function was disabled.

- **Transmission Power** - The available options of transmission power are determined by the region selected.
- **Wireless Security Mode** - You can select one of the following security options:
  - **WPA/WPA2-PSK** - Select WPA based on pre-shared passphrase.
  - **WEP** - Select WEP based on none pre-shared passphrase.
  - **No Security** - The wireless security function is disabled. The wireless stations will be able to connect the Device without encryption.
- **Auth Type** - This option should be chosen if the Security Mode is WEP. It indicates the authorization type of the Root AP.
- **Key Format** - This option should be chosen if the Security Mode is WEP. It indicates the format of the WEP key.
- **Wireless Password** - If the AP your Device is going to connect needs password, you need to fill the password in this blank.

➤ **Dynamic IP** - When the Device connects to a DHCP server, or the ISP supplies you with DHCP connection, please choose this type. The Device will get the IP address automatically from the DHCP server or the ISP if you choose the Dynamic IP type.

- 1) If you choose **Dynamic IP** in Figure 3-16 and then click **Next**, Figure 3-20 will appear.

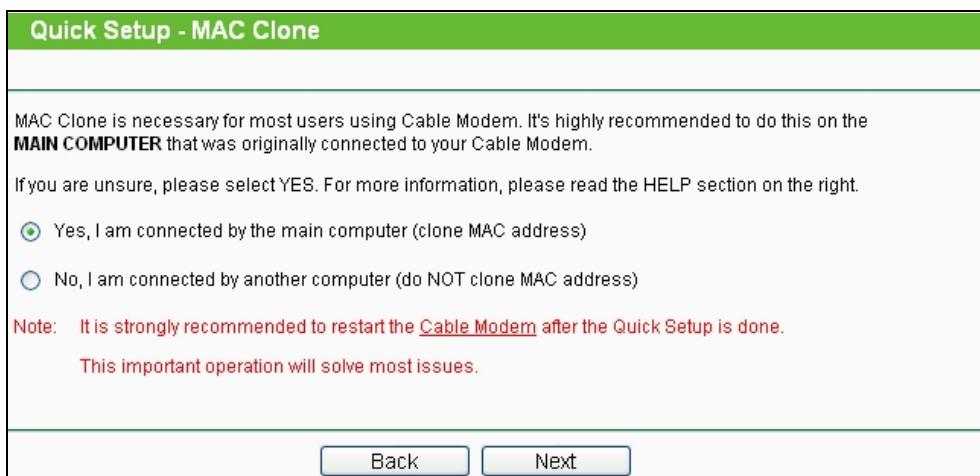


Figure 3-19 MAC Clone

Most Cable ISPs (Internet Service Provider) register the unique MAC Address from the wired connection on your MAIN COMPUTER - the last computer used to be connected with the Cable Modem and had Internet connection.

If you add a router to the network, your ISP may not recognize the MAC address of the router and not allow it to connect.

However, TP-LINK router can "clone" or replicate the registered MAC address of the MAIN COMPUTER. Then your ISP can release the Internet connection to the router and all the computers.

Click the **Next** button to continue, or the **Back** button to return to the previous page.

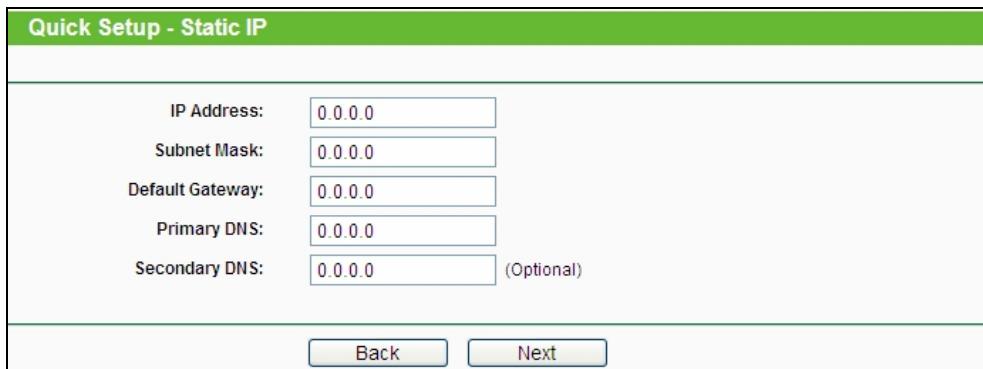
 **Note:**

It is strongly recommended to restart the Cable Modem after the Quick Setup is done. This important operation will solve most issues.

- 2) Choose to clone MAC address or not, if you are unsure, please select YES. Then click **Next**, and you will come to the page shown in Figure 3-18.

➤ **Static IP** - In this type, you should manually fill in the **IP address**, **Subnet Mask**, **Default Gateway**, and **DNS** IP address, which are specified by your ISP.

- 1) If you choose **Static IP** in Figure 3-16 and then click **Next**, Figure 3-20 will appear.



Quick Setup - Static IP	
IP Address:	<input type="text" value="0.0.0.0"/>
Subnet Mask:	<input type="text" value="0.0.0.0"/>
Default Gateway:	<input type="text" value="0.0.0.0"/>
Primary DNS:	<input type="text" value="0.0.0.0"/>
Secondary DNS:	<input type="text" value="0.0.0.0"/> (Optional)

[Back](#) [Next](#)

Figure 3-20 Static IP

- **IP Address**- This is WAN IP address as seen by external users on the Internet (including your ISP). Enter the IP address in the field.
- **Subnet Mask**- It is used for the WAN IP address, which is usually 255.255.255.0.
- **Default Gateway**- Enter the default gateway in the blank if required.
- **Primary DNS**- Enter the DNS IP address in the blank if required.
- **Secondary DNS**- If your ISP provides another DNS IP address, enter it in this field.

 **Note:**

The IP parameters should have been provided by your ISP.

After you have entered the above necessary parameters and then click **Next**, Figure 3-18 will then appear.

2. When you finish the wireless setting in Figure 3-18 and click **Next**, then Figure 3-21 will appear, where you can click **Finish** button to complete the **Quick Setup**.

**Quick Setup - Finish**

Confirm the configuration you have set. If anything is wrong, please go BACK to reset.  
When confirmed, **please click Finish/Reboot button to make all configurations take effect.**

---

**Wireless Setting**

Operation Mode:	AP Router
Internet Connection Type:	PPPoE
PPPoE User Name:	1
PPPoE Password:	1
Wireless Network Name(SSID):	TP-LINK_110305
Wireless Security Mode:	Most Secure(WPA/WPA2-PSK)
Wireless Password:	1234567890
Region:	Test Mode
Transmission Power:	27dBm

Save these settings as a text file for future reference

---

Figure 3-21 Finish page

### 3.2.3 Access Point

When you choose **Access Point** on **Operation Mode** page in Figure 3-7, take the following steps:

1. Click **Next** in Figure 3-7, and then **Wireless** page will appear as shown in Figure 3-22. Create an easy-to-remember name for your wireless network. Select **Most Secure (WPA/WPA2-PSK)** mode and enter a wireless password below to prevent unauthorized access to your AP. Then click **Next**.

**Quick Setup - Wireless**

Wireless Network Name(SSID):	TP-LINK_110305
Region:	Test Mode
Warning:	Ensure you select a correct country to comply local law. Incorrect settings may cause interference.
Transmission Power:	27 dBm
Wireless Security Mode:	Most Secure(WPA/WPA2-PSK)
Wireless Password:	<input type="password"/>

You can enter ASCII characters between 8 and 63 or Hexadecimal characters between 8 and 64.

---

Figure 3-22 Wireless

- **Wireless Network Name** - Enter a string of up to 32 characters. The same Name (SSID) must be assigned to all wireless devices in your network. The default SSID is set to be **TP-LINK \_xxxxxx**(xxxxxx indicates the last unique six characters of each Device's MAC address), which can ensure your wireless network security. But it is recommended strongly that you change your networks name (SSID) to a different value. This value is case-sensitive. For example, **MYSSID** is NOT the same as **MySsid**.
- **Region** - Select your region from the pull-down list. This field specifies the region where the wireless function of the AP can be used. It may be illegal to use the wireless function of the AP

in a region other than one of those specified in this file. If your country or region is not listed, please contact your local government agency for assistance.

When you select your local region from the pull-down list, the Note Dialog of **TERMS OF USE** will pop up. Select **I agree to these terms of use**, and click **Accept** to continue.



Note Dialog

 **Note:**

Ensure you select a correct country to comply with local laws. Incorrect settings may cause interference. Limited to local law of the United States, selecting country code and channel function was disabled.

- **Transmission Power** - The available options of transmission power are determined by the region selected.
- **Wireless Security Mode** - You can select one of the following security options:
  - **WPA/WPA2-PSK** - Select WPA based on pre-shared passphrase.
  - **WEP** - Select WEP based on none pre-shared passphrase.
  - **No Security** - The wireless security function is disabled. The wireless stations will be able to connect the Device without encryption.
- **Auth Type** - This option should be chosen if the Security Mode is WEP. It indicates the authorization type of the Root AP.
- **Key Format** - This option should be chosen if the Security Mode is WEP. It indicates the format of the WEP key.
- **WEP Index** - This option should be chosen if the Security Mode is WEP. It indicates the index of the WEP key.
- **Wireless Password** - If the AP your Device is going to connect needs password, you need to fill the password in this blank.

 **Note:**

The operating distance or range of your wireless connection varies significantly based on the physical placement of the Device. For best results, place your Device

- Near the center of the area in which your wireless stations will operate.
- In an elevated location such as a high shelf.
- Away from the potential sources of interference, such as PCs, microwaves, and cordless phones.
- With the Antenna in the upright position.
- Away from large metal surfaces.

Failure to follow these guidelines can result in significant performance degradation or inability to wirelessly connect to the Device.

2. The Network Setting page will appear then. It is recommended that you keep the default settings on this page. Click **Next**.

**Quick Setup - Network**

**DHCP Server:**  Disable  Enable  
In most of the cases your root AP/router has enabled DHCP server function, we highly recommended that you disable DHCP server function on this device to void any unpredictable problems.

**IP Address:** 192.168.0.254  
**Subnet Mask:** 255.255.255.0  
We recommend you configure this AP with the same IP subnet and subnet mask, but different IP address from your root AP/Router.

**Change the login account:**  NO  YES

**Back** **Next**

Figure 3-23 Network

3. When you finish the wireless setting in Figure 3-23 and click **Next**, then Figure 3-24 will appear, where you can click **Finish** button to complete the **Quick Setup**.

**Quick Setup - Finish**

Confirm the configuration you have set. If anything is wrong, please go BACK to reset.  
When confirmed, [please click Finish/Reboot button to make all configurations take effect](#).

**Wireless Setting**

Operation Mode: Access Point  
Wireless Network Name(SSID): TP-LINK\_110305  
Wireless Security Mode: Most Secure(WPA/WPA2-PSK)  
Wireless Password: 1234567890  
Region: Test Mode  
Transmission Power: 27dBm

**Network Setting**

Login Account: admin/ admin  
LAN IP Address: 192.168.0.254  
DHCP Server: Disabled

**Save** Save these settings as a text file for future reference

**Back** **Reboot**

Figure 3-24 Finish page

### 3.2.4 Multi-SSID

When you choose **Multi-SSID** on **Operation Mode** page in Figure 3-7, take the following steps:

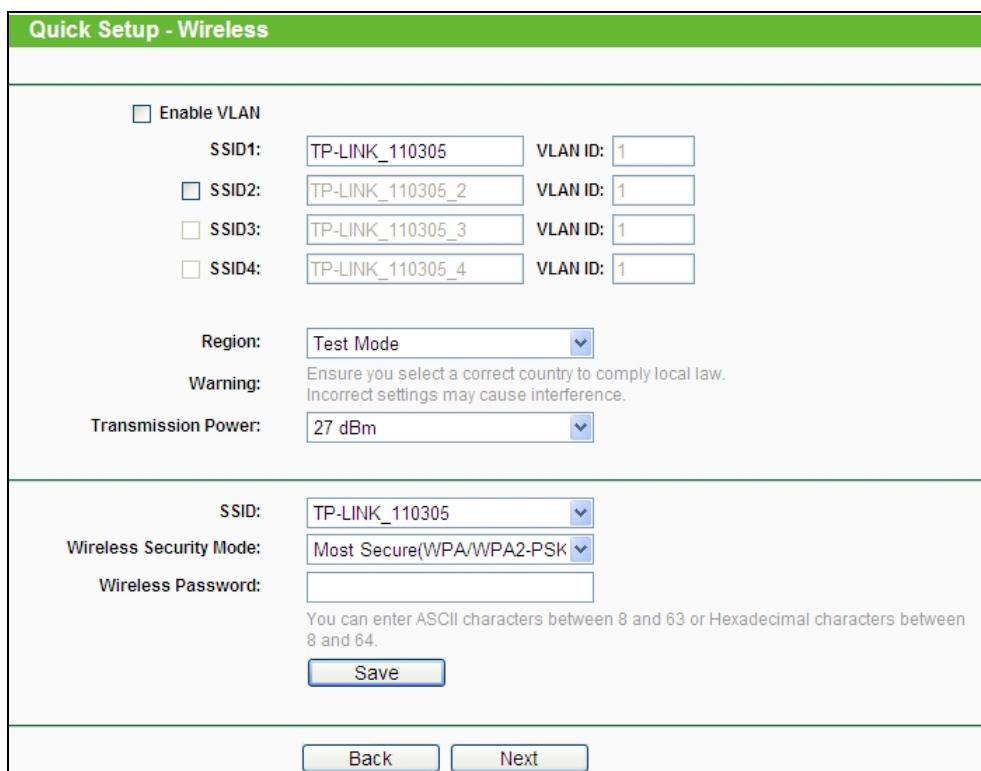
1. Click **Next** in Figure 3-7, and then **Wireless** page will appear as shown in Figure 3-25. Select **Enable VLAN**. Create different SSIDs and enter the password separately for your VLANs depending on the security requirements for your wireless networks. Click **Save** button to make each configuration take effect. Click **Next** to continue.

 **Note:**

The operating distance or range of your wireless connection varies significantly based on the physical placement of the Device. For best results, place your Device

- Near the center of the area in which your wireless stations will operate.
- In an elevated location such as a high shelf.
- Away from the potential sources of interference, such as PCs, microwaves, and cordless phones.
- With the Antenna in the upright position.
- Away from large metal surfaces.

Failure to follow these guidelines can result in significant performance degradation or inability to wirelessly connect to the Device.



**Quick Setup - Wireless**

**Enable VLAN**

SSID1:	TP-LINK_110305	VLAN ID:	1
<input type="checkbox"/> SSID2:	TP-LINK_110305_2	VLAN ID:	1
<input type="checkbox"/> SSID3:	TP-LINK_110305_3	VLAN ID:	1
<input type="checkbox"/> SSID4:	TP-LINK_110305_4	VLAN ID:	1

Region: **Test Mode**

Warning: Ensure you select a correct country to comply local law. Incorrect settings may cause interference.

Transmission Power: **27 dBm**

SSID: **TP-LINK\_110305**

Wireless Security Mode: **Most Secure(WPA/WPA2-PSK)**

Wireless Password:  You can enter ASCII characters between 8 and 63 or Hexadecimal characters between 8 and 64.

**Save**

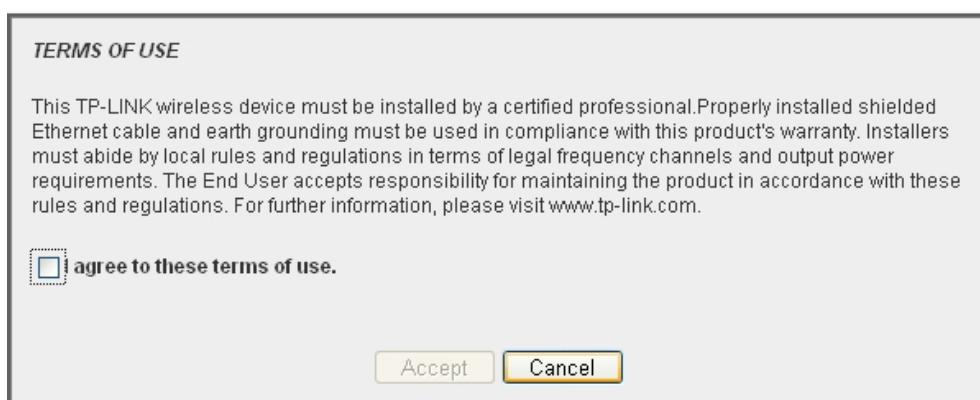
**Back** **Next**

Figure 3-25 Wireless

- **Enable VLAN - ON** or **OFF** the VLAN function. The AP supports up to 4 VLANs. All wireless PCs in the VLANs are able to access this AP. The AP can also work with an IEEE 802.1Q Tag VLAN supporting Switch. If this Switch enables the Tag VLAN function, besides all wireless PCs, only the PCs in the VLAN same with SSID1 are able to access the AP. If a PC is directly connected to the LAN port of the AP, please make sure that its adapter supports Tag function, or this PC will not be able to access the AP.

- **SSID** - Enter a value of up to 32 characters. The same Name (SSID) must be assigned to all wireless devices in your network. In Multi-SSID operation mode, enter SSID for each BSS in the field "SSID1" ~ "SSID4".
- **VLAN ID** - The ID of a VLAN. Only in the same VLAN can a Wireless PC and a wired PC communicate with each other. The value can be between 1 and 4095. If the VLAN function is enabled, when AP forwards packets, the packets out from the LAN port will be added with an IEEE 802.1Q VLAN Tag, whose VLAN ID is just the ID of the VLAN where the sender belongs.
- **Region** - Select your region from the pull-down list. This field specifies the region where the wireless function of the AP can be used. It may be illegal to use the wireless function of the AP in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.

When you select your local region from the pull-down list, the Note Dialog of **TERMS OF USE** will pop up. Select **I agree to these terms of use**, and click **Accept** to continue.



Note Dialog

 **Note:**

Ensure you select a correct country to comply with local laws. Incorrect settings may cause interference. Limited to local law of the United States, selecting country code and channel function was disabled.

- **Transmission Power** - The available options of transmission power are determined by the region selected.
- **Wireless Security Mode** - You can select one of the following security options:
  - **WPA/WPA2-PSK** - Select WPA based on pre-shared passphrase.
  - **No Security** - The wireless security function is disabled. The wireless stations will be able to connect the Device without encryption.
- **Wireless Password** - If the AP your Device is going to connect needs password, you need to fill the password in this blank.
- **Save** - Save the current security configurations for the selected SSID.

2. The Network Setting page will appear then. It is recommended that you keep the default settings on this page. Click **Next**.

**Quick Setup - Network**

**DHCP Server:**  Disable  Enable  
 In most of the cases your root AP/router has enabled DHCP server function, we highly recommended that you disable DHCP server function on this device to void any unpredictable problems.

**IP Address:** 192.168.0.254  
**Subnet Mask:** 255.255.255.0  
 We recommend you configure this AP with the same IP subnet and subnet mask, but different IP address from your root AP/Router.

**Change the login account:**  NO  YES

**Back** **Next**

Figure 3-26 Network

3. When you finish the wireless setting in Figure 3-26 and click **Next**, then Figure 3-27 will appear, where you can click **Finish** button to complete the **Quick Setup**.

**Quick Setup - Finish**

Confirm the configuration you have set. If anything is wrong, please go BACK to reset.  
 When confirmed, [please click Finish/Reboot button to make all configurations take effect.](#)

**Wireless Setting**

Operation Mode: Multi-SSID

SSID1: TP-LINK\_110305  
 VLAN ID: 1  
 Wireless Security Mode: Most Secure(WPA/WPA2-PSK)  
 Wireless Password: 1234567890

SSID2: Disabled

SSID3: Disabled

SSID4: Disabled

Region: Test Mode  
 Transmission Power: 27dBm

**Network Setting**

Login Account: admin/ admin  
 LAN IP Address: 192.168.0.254  
 DHCP Server: Disabled

**Save** Save these settings as a text file for future reference

**Back** **Reboot**

Figure 3-27 Finish page

### 3.2.5 Repeater (Range Extender)

When you choose **Repeater (Range Extender)** on **Operation Mode** page in Figure 3-7, take the following steps:

1. Click **Next** in Figure 3-7, and then **Wireless** page will appear as shown in Figure 3-28. Click **Survey** button to scan the wireless networks.

**Quick Setup - Wireless**

Enable WDS

Wireless Name of Root AP:  (also called SSID)

MAC Address of Root AP:

**Survey**

Click Survey button to scan the wireless networks, and choose the target one to setup.

Region: **Test Mode**

Warning: Ensure you select a correct country to comply local law. Incorrect settings may cause interference.

Transmission Power: **27 dBm**

Wireless Security Mode: **Most Secure(WPA/WPA2-PSK)**

All security settings, for example the wireless password should match the root AP/router.

Wireless Password:

You can enter ASCII characters between 8 and 63 or Hexadecimal characters between 8 and 64.

**Back** **Next**

Figure 3-28 Wireless

- **Enable WDS** - The AP client can connect to AP with WDS enabled or disabled. If WDS is enabled, all traffic from wired networks will be forwarded in the format of WDS frames consist of four address fields. If WDS is disabled, three address frames are used. If your AP supports WDS well, please select the option.
- **Repeater Mode** - Choose mode for repeater.
  - **WDS Repeater** - In WDS Repeater mode, the AP with WDS enabled will relays data to an associated root AP. AP function is enabled meanwhile. The wireless repeater relays signal between its stations and the root AP for greater wireless range. Please input the MAC address of root AP in the field "**MAC of AP**".
  - **Universal Repeater** - In Universal Repeater mode, the AP with WDS disabled will relays data to an associated root AP. AP function is enabled meanwhile. The wireless repeater relays signal between its stations and the root AP for greater wireless range. Please input the MAC address of root AP in the field "**MAC of AP**".
- **Wireless Name of Root AP** - The SSID of the AP your Device is going to connect to as a client. You can also use the survey function to select the SSID to join.
- **MAC Address of Root AP** - The Mac Address of the AP your Device is going to connect to as a client. You can also use the survey function to select the BSSID to join.
- **Survey** - Click this button, you can search the APs.
- **Region** - Select your region from the pull-down list. This field specifies the region where the wireless function of the AP can be used. It may be illegal to use the wireless function of the AP in a region other than one of those specified in this filed. If your country or region is not listed, please contact your local government agency for assistance.

When you select your local region from the pull-down list, the Note Dialog of **TERMS OF USE** will pop up. Select **I agree to these terms of use**, and click **Accept** to continue.



Note Dialog

 **Note:**

Ensure you select a correct country to comply with local laws. Incorrect settings may cause interference. Limited to local law of the United States, selecting country code and channel function was disabled.

- **Transmission Power** - The available options of transmission power are determined by the region selected.
- **Wireless Security Mode** - You can select one of the following security options:
  - **WPA/WPA2-PSK** - Select WPA based on pre-shared passphrase.
  - **WEP** - Select WEP based on none pre-shared passphrase.
  - **No Security** - The wireless security function is disabled. The wireless stations will be able to connect the Device without encryption.
- **Auth Type** - This option should be chosen if the Security Mode is WEP. It indicates the authorization type of the Root AP.
- **Key Format** - This option should be chosen if the Security Mode is WEP. It indicates the format of the WEP key.
- **WEP Index** - This option should be chosen if the Security Mode is WEP. It indicates the index of the WEP key.
- **Wireless Password** - If the AP your Device is going to connect needs password, you need to fill the password in this blank.

 **Note:**

The operating distance or range of your wireless connection varies significantly based on the physical placement of the Device. For best results, place your Device

- Near the center of the area in which your wireless stations will operate.
- In an elevated location such as a high shelf.
- Away from the potential sources of interference, such as PCs, microwaves, and cordless phones.
- With the Antenna in the upright position.
- Away from large metal surfaces.

Failure to follow these guidelines can result in significant performance degradation or inability to wirelessly connect to the Device.

2. The AP List page will appear shown as Figure 3-29. Find the BSSID (the same as the MAC address) of the remote AP that you want to repeat, and then click **Connect** on the right side of the line.

AP List						
AP Count: 7						
ID	BSSID	SSID	Signal	Channel	Security	Choose
1	02-01-00-13-02-AD	TP-LINK_1302AD	27dB	1	WPA/WPA2-PSK	<a href="#">Connect</a>
2	00-0A-EB-13-7A-FF	TP-LINK_7AFF	24dB	1	WPA2-PSK	<a href="#">Connect</a>
3	00-0A-EB-13-09-18	TP-LINK_NEW	13dB	1	WPA2-PSK	<a href="#">Connect</a>
4	28-2C-B2-79-29-94	TP-LINK_2994	10dB	6	OFF	<a href="#">Connect</a>
5	00-23-B1-FF-41-3A	wenson7788	12dB	6	WPA2-PSK	<a href="#">Connect</a>
6	E8-94-F6-36-E8-C8	TP-LINK_36E8C8	38dB	8	WPA2-PSK	<a href="#">Connect</a>
7	D8-5D-4C-10-FF-22	TP-LINK_TEST	38dB	11	WPA/WPA2-PSK	<a href="#">Connect</a>

[Back](#) [Refresh](#)

Figure 3-29 AP List

You will then return to the Wireless page as shown in Figure 3-28. The security mode will be selected automatically, please confirm it and enter the same password as is on your router or access point, then click **Next**.

3. The Network Setting page will appear then. It is recommended that you keep the default settings on this page. Click **Next**.

Quick Setup - Network						
<p><b>DHCP Server:</b> <input checked="" type="radio"/> Disable <input type="radio"/> Enable</p> <p>In most of the cases your root AP/router has enabled DHCP server function, we highly recommended that you disable DHCP server function on this device to void any unpredictable problems.</p> <p><b>IP Address:</b> <input type="text" value="192.168.0.254"/></p> <p><b>Subnet Mask:</b> <input type="text" value="255.255.255.0"/></p> <p>We recommend you configure this AP with the same IP subnet and subnet mask, but different IP address from your root AP/Router.</p> <p><b>Change the login account:</b> <input checked="" type="radio"/> NO <input type="radio"/> YES</p>						
<a href="#">Back</a> <a href="#">Next</a>						

Figure 3-30 Network

4. When you finish the wireless setting in Figure 3-30 and click **Next**, then Figure 3-31 will appear, where you can click **Finish** button to complete the **Quick Setup**.

Quick Setup - Finish															
<p>Confirm the configuration you have set. If anything is wrong, please go BACK to reset. When confirmed, <b>please click Finish/Reboot button to make all configurations take effect.</b></p>															
<p><b>Wireless Setting</b></p> <table> <tr><td>Operation Mode:</td><td>Universal Repeater</td></tr> <tr><td>Wireless Name of Root AP:</td><td>TP-LINK_TEST</td></tr> <tr><td>MAC Address of Root AP:</td><td>D8-5D-4C-10-FF-22</td></tr> <tr><td>Wireless Security Mode:</td><td>Most Secure(WPA/WPA2-PSK)</td></tr> <tr><td>Wireless Password:</td><td>1234567890</td></tr> <tr><td>Region:</td><td>Test Mode</td></tr> <tr><td>Transmission Power:</td><td>27dBm</td></tr> </table>		Operation Mode:	Universal Repeater	Wireless Name of Root AP:	TP-LINK_TEST	MAC Address of Root AP:	D8-5D-4C-10-FF-22	Wireless Security Mode:	Most Secure(WPA/WPA2-PSK)	Wireless Password:	1234567890	Region:	Test Mode	Transmission Power:	27dBm
Operation Mode:	Universal Repeater														
Wireless Name of Root AP:	TP-LINK_TEST														
MAC Address of Root AP:	D8-5D-4C-10-FF-22														
Wireless Security Mode:	Most Secure(WPA/WPA2-PSK)														
Wireless Password:	1234567890														
Region:	Test Mode														
Transmission Power:	27dBm														
<p><b>Network Setting</b></p> <table> <tr><td>Login Account:</td><td>admin/ admin</td></tr> <tr><td>LAN IP Address:</td><td>192.168.0.254</td></tr> <tr><td>DHCP Server:</td><td>Disabled</td></tr> </table>		Login Account:	admin/ admin	LAN IP Address:	192.168.0.254	DHCP Server:	Disabled								
Login Account:	admin/ admin														
LAN IP Address:	192.168.0.254														
DHCP Server:	Disabled														
<input type="button" value="Save"/>	Save these settings as a text file for future reference														
<input type="button" value="Back"/>	<input type="button" value="Reboot"/>														

Figure 3-31 Finish page

### 3.2.6 Bridge with AP

When you choose **Bridge with AP** on **Operation Mode** page in Figure 3-7, take the following steps:

1. Click **Next** in Figure 3-7, and then **Wireless** page will appear as shown in Figure 3-32. Click **Survey** button to scan the wireless networks.

Quick Setup - Wireless Bridge Setting	
<p><input type="checkbox"/> Enable WDS</p> <p>Wireless Name of Remote AP: <input type="text" value="TP-LINK_TEST"/> (also called SSID)</p> <p>MAC Address of Remote AP: <input type="text" value="D8-5D-4C-10-FF-22"/></p> <p><input type="button" value="Survey"/></p> <p>Click Survey button to scan the wireless networks, and choose the target one to setup.</p> <p>Region: <input type="button" value="Test Mode"/></p> <p>Warning: Ensure you select a correct country to comply local law. Incorrect settings may cause interference.</p> <p>Transmission Power: <input type="button" value="27 dBm"/></p> <p>Channel: <input type="button" value="11"/></p> <p>Wireless Security Mode: <input type="button" value="Most Secure(WPA/WPA2-PSK)"/></p> <p>Wireless Password: <input type="text"/></p> <p>All security settings, for example the wireless password should match the root AP/router.</p> <p>You can enter ASCII characters between 8 and 63 or Hexadecimal characters between 8 and 64.</p>	
<input type="button" value="Back"/>	<input type="button" value="Next"/>

Figure 3-32 Wireless Bridge Setting

- **Enable WDS** - The AP client can connect to AP with WDS enabled or disabled. If WDS is enabled, all traffic from wired networks will be forwarded in the format of WDS frames consist of four address fields. If WDS is disabled, three address frames are used. If your AP supports WDS well, please select the option.
- **Wireless Name of Remote AP** - The SSID of the AP your Device is going to connect to as a client. You can also use the survey function to select the SSID to join.
- **Mac Address of Remote AP** - The Mac Address of the AP your Device is going to connect to as a client. You can also use the survey function to select the BSSID to join.
- **Survey** - Click this button, you can search the APs.
- **Region** - Select your region from the pull-down list. This field specifies the region where the wireless function of the Router can be used. It may be illegal to use the wireless function of the Router in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.

When you select your local region from the pull-down list, the Note Dialog of **TERMS OF USE** will pop up. Select **I agree to these terms of use**, and click **Accept** to continue.



Note Dialog

**☞ Note:**

Ensure you select a correct country to comply with local laws. Incorrect settings may cause interference. Limited to local law of the United States, selecting country code and channel function was disabled.

- **Transmission Power** - The available options of transmission power are determined by the region selected.
- **Channel** - This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.
- **Wireless Security Mode** - This option should be chosen according to the AP's security configuration. It is recommended that the security type is the same as your AP's security type.
  - **WPA/WPA2-PSK** - Select WPA based on pre-shared passphrase.
  - **WEP** - Select WEP based on none pre-shared passphrase.
  - **No Security** - The wireless security function is disabled. The wireless stations will be able to connect the Device without encryption.
- **Auth Type** - This option should be chosen if the Security Mode is WEP. It indicates the authorization type of the Root AP.

- **Key Format** - This option should be chosen if the Security Mode is WEP. It indicates the format of the WEP key.
- **WEP Index** - This option should be chosen if the Security Mode is WEP. It indicates the index of the WEP key.
- **Wireless Password** - If the AP your Device is going to connect needs password, you need to fill the password in this blank.

**Note:**

The operating distance or range of your wireless connection varies significantly based on the physical placement of the Device. For best results, place your Device

- Near the center of the area in which your wireless stations will operate.
- In an elevated location such as a high shelf.
- Away from the potential sources of interference, such as PCs, microwaves, and cordless phones.
- With the Antenna in the upright position.
- Away from large metal surfaces.

Failure to follow these guidelines can result in significant performance degradation or inability to wirelessly connect to the Device.

2. The AP List page will appear shown as Figure 3-33. Find the BSSID (the same as the MAC address) of the remote AP that you want to bridge, and then click **Connect** on the right side of the line.

AP List																																																													
AP Count: 7																																																													
<table border="1"> <thead> <tr> <th>ID</th><th>BSSID</th><th>SSID</th><th>Signal</th><th>Channel</th><th>Security</th><th>Choose</th></tr> </thead> <tbody> <tr> <td>1</td><td>02-01-00-13-02-AD</td><td>TP-LINK_1302AD</td><td>27dB</td><td>1</td><td>WPA/WPA2-PSK</td><td><a href="#">Connect</a></td></tr> <tr> <td>2</td><td>00-0A-EB-13-7A-FF</td><td>TP-LINK_7AFF</td><td>24dB</td><td>1</td><td>WPA2-PSK</td><td><a href="#">Connect</a></td></tr> <tr> <td>3</td><td>00-0A-EB-13-09-18</td><td>TP-LINK_NEW</td><td>13dB</td><td>1</td><td>WPA2-PSK</td><td><a href="#">Connect</a></td></tr> <tr> <td>4</td><td>28-2C-B2-79-29-94</td><td>TP-LINK_2994</td><td>10dB</td><td>6</td><td>OFF</td><td><a href="#">Connect</a></td></tr> <tr> <td>5</td><td>00-23-B1-FF-41-3A</td><td>wenson7788</td><td>12dB</td><td>6</td><td>WPA2-PSK</td><td><a href="#">Connect</a></td></tr> <tr> <td>6</td><td>E8-94-F6-36-E8-C8</td><td>TP-LINK_36E8C8</td><td>38dB</td><td>8</td><td>WPA2-PSK</td><td><a href="#">Connect</a></td></tr> <tr> <td>7</td><td>D8-5D-4C-10-FF-22</td><td>TP-LINK_TEST</td><td>38dB</td><td>11</td><td>WPA/WPA2-PSK</td><td><a href="#">Connect</a></td></tr> </tbody> </table>						ID	BSSID	SSID	Signal	Channel	Security	Choose	1	02-01-00-13-02-AD	TP-LINK_1302AD	27dB	1	WPA/WPA2-PSK	<a href="#">Connect</a>	2	00-0A-EB-13-7A-FF	TP-LINK_7AFF	24dB	1	WPA2-PSK	<a href="#">Connect</a>	3	00-0A-EB-13-09-18	TP-LINK_NEW	13dB	1	WPA2-PSK	<a href="#">Connect</a>	4	28-2C-B2-79-29-94	TP-LINK_2994	10dB	6	OFF	<a href="#">Connect</a>	5	00-23-B1-FF-41-3A	wenson7788	12dB	6	WPA2-PSK	<a href="#">Connect</a>	6	E8-94-F6-36-E8-C8	TP-LINK_36E8C8	38dB	8	WPA2-PSK	<a href="#">Connect</a>	7	D8-5D-4C-10-FF-22	TP-LINK_TEST	38dB	11	WPA/WPA2-PSK	<a href="#">Connect</a>
ID	BSSID	SSID	Signal	Channel	Security	Choose																																																							
1	02-01-00-13-02-AD	TP-LINK_1302AD	27dB	1	WPA/WPA2-PSK	<a href="#">Connect</a>																																																							
2	00-0A-EB-13-7A-FF	TP-LINK_7AFF	24dB	1	WPA2-PSK	<a href="#">Connect</a>																																																							
3	00-0A-EB-13-09-18	TP-LINK_NEW	13dB	1	WPA2-PSK	<a href="#">Connect</a>																																																							
4	28-2C-B2-79-29-94	TP-LINK_2994	10dB	6	OFF	<a href="#">Connect</a>																																																							
5	00-23-B1-FF-41-3A	wenson7788	12dB	6	WPA2-PSK	<a href="#">Connect</a>																																																							
6	E8-94-F6-36-E8-C8	TP-LINK_36E8C8	38dB	8	WPA2-PSK	<a href="#">Connect</a>																																																							
7	D8-5D-4C-10-FF-22	TP-LINK_TEST	38dB	11	WPA/WPA2-PSK	<a href="#">Connect</a>																																																							
<a href="#">Back</a> <a href="#">Refresh</a>																																																													

Figure 3-33 AP List

You will then return to the Wireless page as shown in Figure 3-32. The security mode will be selected automatically, please confirm it and enter the same password as is on your router or access point, then click **Next**.

3. Create a name for the Local Wireless Network. The security settings for the local network will be set the same as your root AP by default. Click **Next**.

Quick Setup - Local Wireless AP Setting	
Local Wireless Name:	<input type="text" value="TP-LINK_110305"/> (also called SSID)
<input checked="" type="checkbox"/> Use the same security settings for the local wireless network as the root AP	
<a href="#">Back</a> <a href="#">Next</a>	

Figure 3-34 Local Wireless AP Setting

4. The Network Setting page will appear then. It is recommended that you keep the default settings on this page. Click **Next**.

**Quick Setup - Network**

**DHCP Server:**  Disable  Enable  
In most of the cases your root AP/router has enabled DHCP server function, we highly recommended that you disable DHCP server function on this device to void any unpredictable problems.

**IP Address:** 192.168.0.254  
**Subnet Mask:** 255.255.255.0  
We recommend you configure this AP with the same IP subnet and subnet mask, but different IP address from your root AP/Router.

**Change the login account:**  NO  YES

**Back** **Next**

Figure 3-35 Network

5. When you finish the wireless setting in Figure 3-35 and click **Next**, then Figure 3-36 will appear, where you can click **Finish** button to complete the **Quick Setup**.

**Quick Setup - Finish**

Confirm the configuration you have set. If anything is wrong, please go BACK to reset.  
When confirmed, [please click Finish/Reboot button to make all configurations take effect](#).

**Wireless Setting**

Operation Mode: Bridge with AP

Wireless Name of Remote AP: TP-LINK\_TEST  
MAC Address of Remote AP: D8-5D-4C-10-FF-22  
Wireless Security Mode: Most Secure(WPA/WPA2-PSK)  
Wireless Password: 1234567890

Local Wireless Name(SSID): TP-LINK\_110305  
Wireless Channel: 11  
Wireless Security Mode: Most Secure(WPA/WPA2-PSK)  
Wireless Password: 1234567890  
Region: Test Mode  
Transmission Power: 27dBm

**Network Setting**

Login Account: admin/ admin  
LAN IP Address: 192.168.0.254  
DHCP Server: Disabled

**Save** Save these settings as a text file for future reference

**Back** **Reboot**

Figure 3-36 Finish page

### 3.2.7 Client

When you choose **Client** on **Operation Mode** page in Figure 3-7, take the following steps:

1. Click **Next** in Figure 3-7, and then **Wireless** page will appear as shown in Figure 3-37. Click **Survey** button to scan the wireless networks.

Figure 3-37 Wireless

- **Enable WDS** - The AP client can connect to AP with WDS enabled or disabled. If WDS is enabled, all traffic from wired networks will be forwarded in the format of WDS frames consist of four address fields. If WDS is disabled, three address frames are used. If your AP supports WDS well, please select the option.
- **Wireless Name of Remote AP** - The SSID of the AP your Device is going to connect to as a client. You can also use the survey function to select the SSID to join.
- **Mac Address of Remote AP** - The Mac Address of the AP your Device is going to connect to as a client. You can also use the survey function to select the BSSID to join.
- **Survey** - Click this button, you can search the APs.
- **Region** - Select your region from the pull-down list. This field specifies the region where the wireless function of the Router can be used. It may be illegal to use the wireless function of the Router in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.

When you select your local region from the pull-down list, the Note Dialog of **TERMS OF USE** will pop up. Select **I agree to these terms of use**, and click **Accept** to continue.





Note Dialog

 **Note:**

Ensure you select a correct country to comply with local laws. Incorrect settings may cause interference. Limited to local law of the United States, selecting country code and channel function was disabled.

- **Transmission Power** - The available options of transmission power are determined by the region selected.
- **Wireless Security Mode** - This option should be chosen according to the AP's security configuration. It is recommended that the security type is the same as your AP's security type.
  - **WPA/WPA2-PSK** - Select WPA based on pre-shared passphrase.
  - **WEP** - Select WEP based on none pre-shared passphrase.
  - **No Security** - The wireless security function is disabled. The wireless stations will be able to connect the Device without encryption.
- **Auth Type** - This option should be chosen if the Security Mode is WEP. It indicates the authorization type of the Root AP.
- **Key Format** - This option should be chosen if the Security Mode is WEP. It indicates the format of the WEP key.
- **WEP Index** - This option should be chosen if the Security Mode is WEP. It indicates the index of the WEP key.
- **Wireless Password** - If the AP your Device is going to connect needs password, you need to fill the password in this blank.

 **Note:**

The operating distance or range of your wireless connection varies significantly based on the physical placement of the Device. For best results, place your Device

- Near the center of the area in which your wireless stations will operate.
- In an elevated location such as a high shelf.
- Away from the potential sources of interference, such as PCs, microwaves, and cordless phones.
- With the Antenna in the upright position.
- Away from large metal surfaces.

Failure to follow these guidelines can result in significant performance degradation or inability to wirelessly connect to the Device.

2. The AP List page will appear shown as Figure 3-38. Find the BSSID (the same as the MAC address) of the remote AP that you want to repeat, and then click **Connect** on the right side of the line.

AP List						
AP Count: 7						
ID	BSSID	SSID	Signal	Channel	Security	Choose
1	02-01-00-13-02-AD	TP-LINK_1302AD	27dB	1	WPA/WPA2-PSK	<a href="#">Connect</a>
2	00-0A-EB-13-7A-FF	TP-LINK_7AFF	24dB	1	WPA2-PSK	<a href="#">Connect</a>
3	00-0A-EB-13-09-18	TP-LINK_NEW	13dB	1	WPA2-PSK	<a href="#">Connect</a>
4	28-2C-B2-79-29-94	TP-LINK_2994	10dB	6	OFF	<a href="#">Connect</a>
5	00-23-B1-FF-41-3A	wenson7788	12dB	6	WPA2-PSK	<a href="#">Connect</a>
6	E8-94-F6-36-E8-C8	TP-LINK_36E8C8	38dB	8	WPA2-PSK	<a href="#">Connect</a>
7	D8-5D-4C-10-FF-22	TP-LINK_TEST	38dB	11	WPA/WPA2-PSK	<a href="#">Connect</a>

[Back](#) [Refresh](#)

Figure 3-38 AP List

You will then return to the Wireless page as shown in Figure 3-37. The security mode will be selected automatically, please confirm it and enter the same password as is on your router or access point, then click **Next**.

3. The Network Setting page will appear then. It is recommended that you keep the default settings on this page. Click **Next**.

Quick Setup - Network						
<p><b>DHCP Server:</b> <input checked="" type="radio"/> Disable <input type="radio"/> Enable</p> <p>In most of the cases your root AP/router has enabled DHCP server function, we highly recommended that you disable DHCP server function on this device to void any unpredictable problems.</p> <p><b>IP Address:</b> <input type="text" value="192.168.0.254"/></p> <p><b>Subnet Mask:</b> <input type="text" value="255.255.255.0"/></p> <p>We recommend you configure this AP with the same IP subnet and subnet mask, but different IP address from your root AP/Router.</p> <p><b>Change the login account:</b> <input checked="" type="radio"/> NO <input type="radio"/> YES</p>						
<a href="#">Back</a> <a href="#">Next</a>						

Figure 3-39 Network

4. When you finish the wireless setting in Figure 3-30 and click **Next**, then Figure 3-31 will appear, where you can click **Finish** button to complete the **Quick Setup**.