

TL-WN353G 54M Wireless PCI Adapter



• 2.4GHz • 802.11g/b

Rev: 1.0.0₊

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FCC STATEMENT

FC TE7WN353G

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.

Changes or modifications to this unit not expressly approved by the party responsible for compliance 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, the antenna 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

€€1588①

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.

Package Contents

The following contents should be found in your box:

- > One TL-WN353G 54M Wireless PCI Adapter
- > Quick Installation Guide
- > One Resource CD for TL-WN353G, including:
 - TP-LINK Wireless Utility and Drivers
 - User Guide
 - Other Helpful Information

P Note:

If any of the listed contents are damaged or missing, please contact the retailer from whom you purchased the TL-WN353G 54M Wireless PCI Adapter for assistance.

Conventions:

The 'Adapter' and 'PCI Adapter' mentioned in this User guide both stand for TL-WN353G 54M Wireless PCI Adapter without any explanations.

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COMMENT

Chapter 1. Introduction

1.1 Overview of the product

The TP-LINK TL-WN353G 54M Wireless PCI Adapter will provide you the flexibility to install your PC in the most convenient location available, without the cost of running network cables.

The Adapter's auto-sensing capability allows high packet transfer rate of up to 54Mbps for maximum throughput, or dynamic range shifting to lower speeds due to distance or operating limitations in an environment with a lot of electromagnetic interference. It can also interoperate with all 11Mbps wireless (802.11b) products. Your wireless communications are protected by up to 152-bit WEP and WPA encryption for high security.

1.2 Features

- > Complies with IEEE802.11g, IEEE802.11b standards
- Supports WPA/WPA2 data security, IEEE802.1x authentication, TKIP/AES encryption, 64/128/152-bit WEP encryption
- Supports 54/48/36/24/18/12/9/6Mbps or 11/5.5/2/1Mbps wireless LAN data transfer rates
- Provides 32-bit PCI interface
- Supports Ad-Hoc and Infrastructure modes
- > Supports roaming between access points when configured in Infrastructure mode
- > Ease to configure and provides monitoring information
- Supports Windows 98, ME, 2000, 2003, XP, Vista, XP64
- Supports fixed antenna

1.3 LED Status

LED Indications	Status	Working Status
		The adapter is in an electricity saving status or
Status Green	Intermittently	the adapter is already connected but is not
		transmitting or receiving data.
Status Green	On	The adapter is on wake up status.
Status Green Flashing The a		The adapter is transmitting and receiving data.

Chapter 2. Installation Guide

2.1 Hardware Installation

To install the Adapter, follow these steps listed below:

- 1. Turn off your desktop PC and disconnect the power.
- Open your PC case and locate an available PCI slot on the motherboard. Remove the metal slot cover on the back of the PC. Check with your computer manufacturer for instructions if needed.
- 3. Slide the PCI Adapter into the PCI slot. Make sure that all of its pins are touching the slot's contacts. Once the adapter is firmly in place, secure its fastening tab to your PC's chassis with a mounting screw. Then, close your PC case.
- 4. Reconnect your PC's power and turn on your desktop PC.

2.2 Software Installation

2.2.1 Overview

The Adapter's Setup Wizard will guide you through the Installation procedure for Windows XP and Vista. The Setup Wizard will install the TP-LINK Wireless Utility and drivers.

When you install the hardware before installing the software, the system will prompt "Found New Hardware Wizard", click **Cancel**, and run the Setup Wizard program on the CD-ROM.

The Setup steps for Windows operation Systems are very similar. The User guide takes the Windows XP and Vista for example to explain the installation.

2.2.2 Software Installation for Windows XP

Step 1: Insert the Resource CD into your CD-ROM drive, Click the Start button and choose Run. In the field that appears, enter F:\XXX\setup.exe (if "F" is the letter of your CD-ROM drive, XXX represents the setup program path, which is labeled on the Resource CD), then Figure 2-1 will appear; Click Cancel to end the installation in the screen. Otherwise, the installation will continue.

TP-LINK Wireless Adapter Driver & Utiltiy - InstallShield Wizard 💦 🔲 🔀
Preparing Setup Please wait while the InstallShield Wizard prepares the setup.
TP-LINK Wireless Adapter Driver & Utiltiy Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
InstallShieldCancel

Figure 2-1

Step 2: Click **Next** in the screen below (shown in Figure 2-2) to continue, you can click **Cancel** to end the installation.



Figure 2-2

Step 3: After that, the files will be copied as the next screen shown (shown in Figure 2-3). To end the Installation, click **Cancel**.

TP-LINK Wireless Adapter Driver & Utiltiy	×
Setup Status	
TP-LINK Wireless Adapter Driver & Utiltiy is configuring your new software installation.	
InstallShield Cancel)

Figure 2-3

During the installation, the system will warn about Windows Logo testing, please click **Continue Anyway** to continue the installation.

Hardwa	re Installation
1	The software you are installing for this hardware: TP-LINK 802.11b/g Wireless Adapter has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway

Figure 2-4

Step 4: Click the **Finish** button to complete.

TP-LINK Wireless Adapter Driver & Utiltiy			
	InstallShield Wizard Complete Setup has finished installing TP-LINK Wireless Adapter Driver & Utilitiy on your computer.		
	< <u>B</u> ack Finish Cancel		

Figure 2-5

2.2.3 Software Installation for Windows Vista

Step 1: Insert the Resource CD into your CD-ROM drive, Click the Start button and choose Run. In the field that appears, enter F:\XXX\setup.exe (if "F" is the letter of your CD-ROM drive, XXX represents the setup program path, which is labeled on the Resource CD), then Figure 2-6 will appear; Click Cancel to end the installation in the screen. Otherwise, the installation will continue.

TP-LINK Wireless Adapter Driver & Utility - InstallShield Wizard	
Preparing Setup	and the second
Please wait while the InstallShield Wizard prepares the setup.	
TP-LINK Wireless Adapter Driver & Utiltiy Setup is preparing the InstallSh guide you through the rest of the setup process. Please wait.	ield Wizard, which will
InstallShield	
	Cancel

Figure 2-6

Step 2: Click **Next** in the screen below (shown in Figure 2-2) to continue, you can click **Cancel** to end the installation.



Figure 2-7

Step 3: After that, the files will be copied as the next screen shown (shown in Figure 2-3). To end the Installation, click **Cancel**.

TP-LINK Wireless Adapter Driver & Utiltiy	X
Setup Status	Z
TP-LINK Wireless Adapter Driver & Utiltiy is configuring your new software installation	ı.
Installing	
C:\Program Files\TP-LINK\TL-WN310G_353G_353GD\gdiplus.dll	
InstallShield	Cancel

Figure 2-8

During the installation, the system will warn about Windows Security testing, please click "**Install this driver software anyway**" to continue the installation.



Figure 2-9

Step 4: Click the **Finish** button to complete.



Figure 2-10

Chapter 3. Configuration

TP-LINK Wireless PCI Adapter TL-WN353G can be configured by TP-LINK Wireless Utility. This chapter describes how to configure your TP-LINK Wireless PCI Adapter for wireless connectivity on your Wireless Local Area Network (WLAN) and use the data security encryption features.

After Installing the Adapter, the Adapter's tray icon **u** will appear in your system tray. It appears at the bottom of the screen, and shows the signal strength using color and the received signal strength indication (RSSI).

If the icon is gray, there is no connection.

- If the icon is red, there is poor signal strength and the RSSI is less than 5dB.
- If the icon is yellow, there is poor signal strength and the RSSI is between 5dB and 10dB.
- If the icon is green, there is good signal strength and the RSSI is between 10dB and 20dB.
- If the icon is green, there is excellent signal strength and the RSSI is more than 20dB.

Double-click the icon and the TP-LINK Wireless Utility will run. You can also run the utility by clicking the **Start>Programs>TP-LINK>RTWCU>TP-LINK Wireless Utility.** The utility provides a integrated and easy tools to:

- Display current status information
- > Edit and add configuration profiles
- Display current statistics information

The sections below take Windows XP for example to introduce these above capabilities.

3.1 Set Wizard

Choose the menu **Set Wizard** on the top of the utility screen, you can follow the steps below to configure the adapter quickly to connect to the wireless network.

Step 1: Click Refresh button to update the wireless network (show in Figure 3-1). Then select the wireless network and click Next.



Figure 3-1

Step 2: Click OK to continue.

Unsecured network
You are connecting to the unsecured network " test ". Information sent over this network is not encrypted and might be visible to other people.

Figure 3-2

Step 3: After that, Select the network authentication and data encryption, then click OK.

Wireless Network Properties:	×
Profile Name: test	
Network Name(SSID): test	
This is a computer-to-computer(ad hoc) network; wireless access points are not used. Channel: 6 (2437MHz) V Wireless network security This network requires a key for the following: Network Authentication: Open System V Data encryption: Disabled V	802.1× configure EAP TYPE : GTC Tunnel : Username :
ASCII	
Key index (advanced): 1 V	Identity : Password :
Confirm network key:	Certificate :
QK <u>C</u> ancel	



Step 4: Configure the IP information for the adapter. You can select "Obtain an IP address automatically" and "Obtain DNS server address automatically" to obtain an IP address.

P Note:

If you want use the method, the AP that the adapter connects should support DHCP function.

Set Wizard	
Setup TCP/IP Chooses automatic or manual obtains	
TCP/IP Obtain an IP address au	Itomatically
O Use the following IP add	lress:
IP Address:	
Subnet Mask:	255 . 255 . 255 . 0
Default geteway:	
DNS Obtain DNS server addr OUse the following DNS s	ress automatically server addresses:
Preferred DNS server:	• • •
Alternate DNS server:	• • •
< <u>B</u> ack	<u>Finish</u>

Figure 3-4

You can also select "Use the following IP address" and "Use the following DNS server addresses" to assign the specific address.

3.2 General Status

Choose the tab **General** as shown in Figure 3-5, the left filed displays the type of the adapter, the right field displays the status about the connection, including Status, Speed, Type, SSID, Signal Strength, Link Quality and other IP information.

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TP-LINK 11b/g Wireless	Utiltiy	
Refresh(<u>R</u>) Set Wizard(<u>S</u>) Mod	le(<u>M</u>) View(<u>V</u>) About(<u>A</u>)	
🖃 🍃 MyComputer	General Profile Available Network Advanced Status Statistics Easy Config	
TPELINK 602.11D/g v	Status: Associated Throughput:	
	Speed: 5.5 Mbps	
	Encryption: None Tx:0.00%,Total:0.00%	
	SSID: test	
	Signal Strength: 52%	
	Link Quality: 74%	
	Network Address:	
	Mac Address: 00:0A:EB:00:01:8F	
	IP Address: 192.168.1.103	
	Subnet Mask: 255.255.255.0	
	Gateway: 192.168.1.1	
	ReNew IP	
<		
Show Tray Icon	Disable Adapter	Close
🗌 Radio Off	🗌 Windows Zero Config	
Ready		NUM 1.3

Figure 3-5

- > Signal Strength This shows the strength of the wireless signal.
- > Link Quality This shows the quality of the wireless connection.
- **ReNew IP -** Click the button to get the IP address from the AP.
- Show Tray Icon Select the option to display the icon is on the bottom of the desktop. Otherwise, you can see the two icons.
- > **Disable Adapter -** If you select the option, the adapter can't work.
- **Radio Off -** If you select the option, the wireless function will be ineffective.
- Windows Zero Config Select the option to connect to the wireless network via the Windows Zero Config. In the event, the RTWCU does not take effect.

Click **Close** to close the screen.

3.3 Profile Management

Click the tab **Profile** as shown in Figure 3-6 to add, remove, edit, duplicate or set default for a profile.

🐨 TP-LINK 11b/g Wireless	Utiltiy	
Refresh(<u>R</u>) Set Wizard(<u>S</u>) Mod	le(M) View(Y) About(A)	
B WyComputer	General Profile Available Network Advanced Status Statistics Easy Config	
	Available Profile(s)	
	Profile Name SSID Add	
	Remove	
	Edit	
	Duplicate	
	Set Default	
<		
Show Tray Icon	Disable Adapter	lose
Radio Off	Windows Zero Config	
Ready	NU	M

Figure 3-6

3.3.1 Add or Edit a Configuration Profile

Click the button **Add** or **Edit** (you should select an existed profile first to edit it) on the screen above, you can configure the profile as shown in Figure 3-7.

We add a new profile and configure it for example here.

Wireless Network Properties:	
Profile Name: ProfileName	
Network Name(SSID): test	
This is a computer-to-computer(ad hoc) network; wireless access points are not used.	~ 802.1x configure
Channel: 6 (2437MHz) 🗸	EAP TYPE :
Wireless network security	GTC
This network requires a key for the following:	Tunnel :
	×
Data encryption: Disabled	Username :
ASCII PASSPHRASE	
	Identity :
Key index (advanced):	
Network key:	Password :
Confirm network key:	Certificate :
OK <u>C</u> ancel	



- Profile Name Please enter the Profile name which identifies the configuration profile. This name must be unique. Note that the profile names are not case-sensitive.
- Network Name (SSID) Please enter the IEEE 802.11 wireless network name. This field has a maximum limit of 32 characters.

The Profile Name and Network Name are necessary for the profile, you must configure it.

- Channel If you want to use the specific channel to connect to the wireless network, select the option "This is a computer-to-computer (ad-hoc) network; wireless access points are not used." If you don't select the option, the system will search the available channel to connect.
- > Wireless network security This configure the security for the adapter.

Solution Note:

You should configure the security for the adapter according with the wireless network that you want to connect. If the wireless network takes some security measure, you should configure the same security for the adapter accordingly. If the wireless network doesn't take security measure, you don't need to configure the security for the adapter.

- Network Authentication Select which mode the Wireless PCI Adapter uses to authenticate to an access point. These modes are: Open System, Shared key, WPA-PSK, WPA2-PSK, WPA 802.1X, WPA2 802.1X, WEP 802.1X.
- **Data encryption** Select the corresponding data encryption for the authentication. These encryptions are: Disabled, WEP, TKIP and AES.

- 1) Select different **authentications** and **data encryptions**, the security configuration is different.
- 2) When you select channel manually, the available network authentication are Open System, Shared key and WPA-None.
- **ASCII** Select this option, you can enter any ASCII characters to compose the password.
- PASSPHRASE Select this option, you can enter the characters from 0~9 to compose the password.
- Key Index Select the index of the password.
- Network Key & Confirm network key The fields configure the network key. The two should be the same.
- 802.1x configure This configures the 802.1x security, it is available when you select the data encryption as WPA 802.1X, WPA2 802.1X or WEP 802.1X.
 - **EAP TYPE -** Select the EAP type for the 802.1x configuration, the options are: GTC, TLS, LEAP, TTLS, PEAP.
 - Tunnel Select the tunnel: MD5, GTC, TLS, MSCHAP-V2. The option is necessary for the EAP type of TTLS and PEAP.
 - Username Enter the username for authentication. The option is necessary for the EAP type of TTLS and PEAP.
 - **Identity -** Enter the identity for the authentication.
 - Password Enter the password for the authentication. The option is necessary for the EAP type of LEAP, TTLS and PEAP.
 - **Certificate** Select the certificate you apply.

1. Open System authentication

When you select the **Open System** as the authentication, the Disabled and WEP can be available for the data encryption. If you select **Disabled**, you don't need to configure any passwords. If you select **WEP**, you can configure the password as follows.

For example: If the wireless network takes Open System authentication, WEP data encryption, the password is 64bit with the value of 0123456789. The index is 1.

Wireless Network Properties:	X
Profile Name: ProfileName	
Network Name(SSID): test	
This is a computer-to-computer(ad hoc) network; wireless access points are not used.	
Channel: 1 (2412MHz) 🗸	802.1× configure EAP TYPE :
Wireless network security	GTC 🗸
This network requires a key for the following:	Tunnel :
Network Authentication: Open System 💙	
Data encryption: WEP	Username :
ASCII PASSPHRASE 0123456789	
Key Length: 64 Bits 💙	Identity :
Key index (advanced): 1 👽	
Network key:	Password :

Confirm network key:	Certificate :
wakakakakakaka	
<u>Q</u> K <u>C</u> ancel	



- Step 1: Select the "Open System" as the Network Authentication.
- Step 2: Select the "WEP" as Data encryption.
- Step 3: Select the type for the password, you can select the ASCII or PASSPHRASE. For ASCII, you can enter any characters in the keyboard; For PASSPHRASE, you can enter the characters from 0 to 9.
- Step 4: Select "64 Bits" as the Key Length, then enter "0123456789" as the password value.
- **Step 5:** Select the Key index "1", and click the **OK** to save the configuration.

2. Shared Key authentication

When you select the **Shared Key** as the authentication, the only available data encryption is WEP.

P Note:

The configuration for Shared Key authentication and Open System are similar, you can refer to the Open System authentication to configure it.

3. WPA-PSK authentication

When you select the **WPA-PSK** as the authentication, the available data encryptions are TKIP and AES. Please select the one according your need.

For example: If the wireless network takes WPA-PSK authentication, TKIP data encryption, the network key is 0123456789. You can configure it for adapter as follows.

Wireless Network Pr	operties:	
Profile Name:	ProfileName	-
Network Name(SSID):	test	
This is a computer-t access points are no Channel:	o-computer(ad hoc) network; wireless ot used.	802.1x configure EAP TYPE :
Wireless network secu	urity	बाट 👻
This network requires	a key for the following:	Tunnel :
Netwo	ork Authentication: WPA-PSK 🛛 🗸	
	Data encryption: TKIP	Username :
ASCII PAS	SPHRASE 0123456789	
		Identity :
Key index (advanced)	1 🗸	
Network key:		Password :

Confirm network key:		Certificate :

<u>o</u> ĸ		



Step 1: Select the "WPA-PSK" as the Network Authentication.

- Step 2: Select the "TKIP" as Data encryption.
- Step 3: Enter the Network key and confirm it.

Step 4: Click the OK to save the configuration.

4. WAP2-PSK authentication

When you select the **WPA2-PSK** as the authentication, the available data encryptions are TKIP and AES. Please select the one according your need.

P Note:

The configuration for WPA2-PSK and WPA-PSK are similar, you can refer to WAP-PSK authentication to configure it.

5. WPA 802.1x

When you select the **WPA 802.1x** as the authentication, the available data encryptions are TKIP and AES. For the authentication, you should configure the 802.1x security. Select the EAP Type and configure the corresponding options.

Wireless Network Properties:	×
Profile Name: ProfileName	
Network Name(SSID): test	
This is a computer-to-computer(ad hoc) network; wireless access points are not used.	802.1× configure EAP TYPE :
Wireless network security	GTC 💌
This network requires a key for the following:	Tunnel :
Network Authentication: WPA 802.1X	
Data encryption: AES	Username :
ASCII ASCII ASSPHRASE 0123456789	
	Identity :
Key index (advanced):	Password :

Confirm network key:	Certificate :

Figure 3-10

Select different EAP types, the configuration are different.

6. WAP2 802.1x

When you select the **WPA 802.1x** as the authentication, the available data encryptions are TKIP and AES. For the authentication, you should configure the 802.1x security.

P Note:

The configuration for WPA2 802.1x and WPA 802.1x are similar, you can refer to WPA 802.1x authentication to configure it.

7. WEP 802.1x

When you select the **WEP 802.1x** as the authentication, the only available data encryption is WEP.

P Note:

The configuration for WEP 802.1x authentication and WPA 802.1x are similar, you can refer to WPA 802.1x authentication to configure it.

3.3.2 Remove a configuration profile

Follow the steps below to delete a configuration profile.

Step 1: Go to the Profile tab (shown in Figure 3-11).

Step 2: Select the profile name in the Profiles List.

Step 3: Click Remove.

TP-LINK 11b/g Wireless	Utiltiy	_ 🗆 🛛
Refresh(<u>R</u>) Set Wizard(<u>S</u>) Mod	le(M) View(V) About(A)	
🖃 🍯 MyComputer	General Profile Available Network Advanced Status Statistics Easy Config Available Profile(s)	
	Profile Name SSID Add	
	Remove	
	Edit	
	Duplicate	
	Set Default	
<		
Show Tray Icon	Disable Adapter	Close
🗌 Radio Off	Windows Zero Config	
Ready	NU	JM

Figure 3-11

3.3.3 Duplicate a configuration file

Follow the steps below to change the name of a configuration profile.

- Step 1: Go to the Profile tab (shown in Figure 3-11).
- Step 2: Select the profile name in the Profiles List.
- Step 3: Click Duplicate, and then enter the new name for the configuration profile.

3.3.4 Set default configuration profile

Follow the steps below to select a configuration profile as default. Once the adapter wants to connect a wireless network, it will select the default profile to connect firstly.

- **Step 1:** Go to the Profile tab (shown in Figure 3-11).
- Step 2: Select the profile name in the Profiles List.
- Step 3: Click Set Default.

3.4 Available Network

Click the tab **Profile** as shown in Figure 3-12 to view the wireless networks. You can follow the steps below to accede to a specific network.

TP-LINK 11b/g Wireless	Utiltiy	×
Refresh(<u>R</u>) Set Wizard(<u>S</u>) Mod	de(<u>M</u>) View(<u>V</u>) About(<u>A</u>)	
Refresh(R) Set Wizard(S) Mod	de(M) View(Y) About(A) General Profile Available Network Available Network(s) SSID Channel Encryption Network Automation Image: Contract of the second sec	
Show Tray Icon	Disable Adapter Close)
Ready	NUM	

Figure 3-12

Step 1: Click **Refresh** to refresh the list at any time.

Step 2: Highlight a network name and click Add to Profile to connect to an available network.
Fill in the Profile name and click OK to create the new configuration profile for that network.

3.5 Advanced

Click the tab **Advanced** as shown in Figure 3-13 to make further advanced configuration.

TP-LINK 11b/g Wireless	Utiltiy 📃 🗆 🔀
Refresh(<u>R)</u> Set Wizard(<u>S</u>) Mod	e(M) View(⊻) About(A)
TP-LINK 802.11b/g V	General Profile Available Network Advanced Status Statistics Easy Config Power Save None Min Max Wireless Mode: 802.11g/b PSP XLink Mode XLink Enable
< >	Set Defaults Apply
Show Tray Icon	Disable Adapter Close Windows Zero Config
Ready	NUM



- > Power Save Mode Select the power save mode.
 - **None** Turns power saving off, thus powering up the Wireless PCI Adapter continuously for a short message response time.
 - Min Normal mode uses max when retrieving a large number of packets, then switches back to power save mode after retrieving the packets.
 - Max Selects max mode to let the access point buffer incoming messages for the Wireless PCI Adapter. The Adapter will detect the access point if any messages are waiting periodically.
- Wireless Mode Select the wireless mode for the network: 802.11b, 802.11g/b. The Wireless PCI Adapter must match the wireless mode of the access point with which it associates.
- > **PSP XLink Mode -** If you want to enable the function, please select it.

Click Set Defaults to restore the configuration to defaults.

Click **Apply** to make all the configurations to be effective.

3.6 Status

Click the tab **Status** as shown in Figure 3-14 to view the information about the connection.

TP-LINK 11b/g Wireless	Utiltiy	
Refresh(<u>R</u>) Set Wizard(<u>S</u>) Mod	e(<u>M</u>) View(<u>V</u>) About(<u>A</u>)	
B WyComputer TP-LINK 802.11b/g V	General Profile Available Network Advanced Status Manufacturer NDIS Driver Version Short Radio Header Encryption Authenticate Channel Set MAC Address Data Rate (AUTO) Channel (Frequency) Status SSID Network Type Power Save Mode Associated AP MAC Up Time (hh:mm:ss)	Statistics Easy Config = TP-LINK 5.1097.201.2007 = Yes Disabled = Open FCC = 00:0A:EB:00:01:8F 18 Mbps = 11 (2462 MHz) Associated = test Infrastructure = None 00:19:E0:94:51:F4 = 0:26:09
Show Tray Icon	Disable Adapter	Close
Radio Off	Windows Zero Config	
Ready		NUM

Figure 3-14

3.7 Statistics

Click the tab **Statistics** as shown in Figure 3-13 to view the traffic statistics about the connection. Click the **Reset** to refresh the information.

TP-LINK 11b/g Wireless	Utiltiy				
Refresh(<u>R</u>) Set Wizard(<u>S</u>) Mode(<u>M</u>) View(<u>V</u>) About(<u>A</u>)					
MyComputer TP-LINK 802.11b/g V	General Profile Available Network Advanced Status Statistics Eas	sy Config			
	Counter NameTx OKTx ErrorTx RetryTx Beacon OKTx Beacon ErrorRx OKRx Packet CountRx RetryRx CRC Error(0-500)Rx CRC Error(500-1000)Rx CRC Error(>1000)Rx ICV Error	Value 2072 116 1822 0 0 0 19 19 19 5 0 1 1 0 1 0 0 0			
Show Tray Icon	Re Disable Adapter Windows Zero Config	eset			
Ready		NUM			

Figure 3-15

3.8 Easy Config

Click the tab **Easy Config** as shown in Figure 3-16 to configure the adapter.

🐨 TP-LINK 11b/g Wireless	Utiltiy	
Refresh(<u>R</u>) Set Wizard(<u>S</u>) Mod	e(M) View(V) About(A)	
P-LINK 802.11b/g V	General Profile Available Network Advanced Status Statistics Easy Config EasyConfig utility is used to set up TP-LINK AP easily. Please select one of following methods to set up your AP. Touch-Button Method Question-Answer Method 	
Ready	windows zero contig	NUM .;;

Figure 3-16

3.8.1 Touch-Button Method

Select the **Touch-Button Method** (shown in Figure 3-16), then click **Start**, you can connect to the wireless network quickly, follow the steps below (shown in Figure 3-17).

Selec	ct AP to Configure				X
			Refresh		
	BSSID	Channel	Signal		
	Wait for searching				
		< <u>B</u> ack	<u>N</u> ext >	Cancel	

Figure 3-17

- Step 1: Click the **Refresh** button to update the wireless network (shown in Figure 3-17), and then select the network you want to connect. Click **Next**.
- **Step 2:** Finally, enter the profile name for the network. Click **Ok** to complete.

3.8.2 Question-Answer Method

Select the **Touch-Button Method** (shown in Figure 3-16), then click **Start**, you can connect to the wireless network quickly, follow the steps below (shown in Figure 3-18).

Question-Answer Mode		×
🗹 First Time Configurati	on	
Question 1:		
Pick up one question:	Last 4 number of your ID?	
Answer:	1234	
Question 2:		
Pick up one question:	Your favorite country or place?	
Answer:	china	
	< <u>B</u> ack <u>N</u> ext > Cancel	



- Step 3: Answer the question as shown in Figure 3-18. Click Next to continue.
- **Step 4:** Click the **Refresh** button to update the wireless network (shown in Figure 3-19), and then select the network you want to connect. Click **Next**.

Sele	ct AP to Configure			
			Hetresh	
	BSSID	Channel	Signal	
	Wait for searching			
		< <u>B</u> ack	Next >	Cancel



Step 5: Finally, enter the profile name for the network. Click Ok to complete.

Appendix A: Specifications

	Normal					
Interface	32bit PCI Interface					
Standards	IEEE802.11b; IEEE802.11g					
Operating System	Windows 98, ME, 2000, 2003, XP, Vista, XP64					
Transmission Distance	Indoor up to 100m, outdoor up to 300m (Standard transmission					
	distance, it is limited to the environment).					
Radio Data Rate	54/48/36/24/18/12/9/6Mbps or 11/5.5/2/1Mbps					
	(Auto Rate Sensing)					
Modulation	1M DBPSK; 2M DQPSK; 5.5M, 11M CCK; 6M, 9M, 12M, 18M,					
Modulation	24M, 36M, 48M, 54M OFDM;					
Media Access Protocol	CSMA/CA with ACK					
Transmit Power	15dBm (Typical)					
Data Security	WPA/WPA2; 64/128/152-bit WEP; TKIP/AES					
Frequency	2.4 ~ 2.4835GHz					
Spread Spectrum	Direct Sequence Spread Spectrum (DSSS)					
Power Consumption	11g: 420mA in full Transmit (TX), 330mA in full Receive (RX)					
(Max)	11b: 520mA in full Transmit (TX), 325mA in full Receive (RX)					
Safety & Emissions	FCC, CE					
Environmental and Physical						
Operating Temp.	0°C~40°C (32°F~104°F)					
Storage Temp.	-40°C−70°C (-40°F~158°F)					
Humidity	10% - 95% RH, Non-condensing					
Dimensions	$5.2 \times 4.8 \times 9$ inch (133 × 121 × 22 mm)					
(W×D×H)	$\mathbf{S}_{\mathbf{Z}} \mathbf{A}^{T}_{\mathbf{U}} \mathbf{S}_{\mathbf{U}} \mathbf{S}_{U$					

Appendix B: Glossary

- 802.11b The 802.11b standard specifies a wireless product networking at 11 Mbps using direct-sequence spread-spectrum (DSSS) technology and operating in the unlicensed radio spectrum at 2.4GHz, and WEP encryption for security. 802.11b networks are also referred to as Wi-Fi networks.
- 802.11g specification for wireless networking at 54 Mbps using direct-sequence spread-spectrum (DSSS) technology, using OFDM modulation and operating in the unlicensed radio spectrum at 2.4GHz, and backward compatibility with IEEE 802.11b devices, and WEP encryption for security.
- Ad-hoc Network An ad-hoc network is a group of computers, each with a Wireless PCI Adapter, connected as an independent 802.11 wireless LAN. Ad-hoc wireless computers operate on a peer-to-peer basis, communicating directly with each other without the use of an access point. Ad-hoc mode is also referred to as an Independent Basic Service Set (IBSS) or as peer-to-peer mode, and is useful at a departmental scale or SOHO operation.
- DSSS (Direct-Sequence Spread Spectrum) DSSS generates a redundant bit pattern for all data transmitted. This bit pattern is called a chip (or chipping code). Even if one or more bits in the chip are damaged during transmission, statistical techniques embedded in the receiver can recover the original data without the need of retransmission. To an unintended receiver, DSSS appears as low power wideband noise and is rejected (ignored) by most narrowband receivers. However, to an intended receiver (i.e. another wireless LAN endpoint), the DSSS signal is recognized as the only valid signal, and interference is inherently rejected (ignored).
- FHSS (Frequency Hopping Spread Spectrum) FHSS continuously changes (hops) the carrier frequency of a conventional carrier several times per second according to a pseudo-random set of channels. Because a fixed frequency is not used, and only the transmitter and receiver know the hop patterns, interception of FHSS is extremely difficult.
- Infrastructure Network An infrastructure network is a group of computers or other devices, each with a Wireless PCI Adapter, connected as an 802.11 wireless LAN. In infrastructure mode, the wireless devices communicate with each other and to a wired network by first going through an access point. An infrastructure wireless network connected to a wired network is referred to as a Basic Service Set (BSS). A set of two or more BSS in a single network is referred to as an Extended Service Set (ESS). Infrastructure mode is useful at a corporation scale, or when it is necessary to connect the wired and wireless networks.
- Spread Spectrum Spread Spectrum technology is a wideband radio frequency technique developed by the military for use in reliable, secure, mission-critical communications systems. It is designed to trade off bandwidth efficiency for reliability, integrity, and security. In other words, more bandwidth is consumed than in the case of narrowband transmission, but the trade off produces a signal that is, in effect, louder and thus easier to detect, provided that the receiver knows the parameters of the spread-spectrum signal being broadcast. If a receiver is not tuned to the right frequency, a spread-spectrum signal looks like background noise. There are two main alternatives, Direct Sequence Spread Spectrum (DSSS) and Frequency Hopping Spread Spectrum (FHSS).

- SSID A Service Set Identification is a thirty-two character (maximum) alphanumeric key identifying a wireless local area network. For the wireless devices in a network to communicate with each other, all devices must be configured with the same SSID. This is typically the configuration parameter for a wireless PC card. It corresponds to the ESSID in the wireless Access Point and to the wireless network name. See also Wireless Network Name and ESSID.
- WEP (Wired Equivalent Privacy) A data privacy mechanism based on a 64-bit or 128-bit or 152-bit shared key algorithm, as described in the IEEE 802.11 standard.
- Wi-Fi A trade name for the 802.11b wireless networking standard, given by the Wireless Ethernet Compatibility Alliance (WECA, see http://www.wi-fi.net), an industry standards group promoting interoperability among 802.11b devices.
- WLAN (Wireless Local Area Network) A group of computers and associated devices communicate with each other wirelessly, which network serving users are limited in a local area.
- > WPA (Wi-Fi Protected Access) A wireless security protocol use TKIP (Temporal Key Integrity Protocol) encryption, which can be used in conjunction with a RADIUS server.

Appendix C: PSP Setting

Step 1: Choose "Network Settings"



Step 2: Choose "Infrastructure Mode"



Step 3: Establish a new connection , enter the name of this connection. (any is ok),we use TEST for example.

onnection Name	Enter the co	nnection	name.	
	ection Name			

Step 4: Select SCAN, and let PSP scan the nearer AP automatic, then choose the default network SSID WLAN_AP of TL-WN322G 54M Wireless USB Adapter.



Step 5: "WLAN Security Setting" If you haven't set pass phrase. select the first "None" .if you have set the pass phase, select the second "WEP", the pass phase must identical with WEP key that you have set.



Step 6: Select address settings mode-Easy



Step 7: In " IP Address Setting " screen ,we select " Manual"

	IP A	ddress Set	tting	
•		Automatic		1.1
		Manual		
		PPPoE		

Step 8: In "Address Setting" screen, please set IP address

	IP Address	192	168	0	2	
	Subnet Mask	255	255	255	0	
•	Default Router	192	168	0	1	,
	Primary DNS	202	96	128	166	
	Secondary DNS	202	96	134	133	

Step 9: "Proxy Server" select "Do Not Use"

 Proxy Server	
Do Not Use	
Use	

Step 10: Select "Test Connection"



Step 11: Test network connection. After the configuration that was set above, we can connect to web successfully. Till now, we have finished the configuration of PSP mode.



If you didn't startup WEP Encryption, any PSP could link in, and the wireless network won't be protected by encryption key.

Appendix D: Contact Information

For help with the Installation or operation of the TP-LINK TL-WN353G 54M Wireless PCI Adapter, please contact us.

http://www.tp-link.com