# **TP-LINK TD-W8901G**

# **Wireless Modem Router**

# **Advanced Troubleshooting Guide**

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## Summary

This document attempts to provide the basic procedures for troubleshooting TD-W8901G modem router problem.

## **Troubleshooting Flow Chart and Resolutions**



## Check 1

- 1. Make sure that the original power adapter is correctly connected from the modem to the wall socket and it is not damaged;
- 2. Make sure that the telephone line is correctly connected from the modem's LINE port to the filter's ADSL Modem port;
- Make sure that the Ethernet cable is connected from PC to any LAN ports (1/2/3/4) of the ADSL modem router;



## Check 2

The indicator lights on the front panel of the modem router are used to verify the unit's operation and status between your modem, PC and ISP's network.

	Power	ADSL	Internet	WLAN	1	2	3	4
TD-W8901G 54M Wireless ADSL2+ Modem Router	ወ	φ	Ø	ଚ	Ø	Ø	Ø	Φ.

The table below describes what the lights mean.

Label	State	Description	Resolution
Power	On (Steady Green)	Power On	Check ADSL light.
	Off	No Power	Resolution 3
	On (Solid Green)	Synchronized	Check Internet light
ADSL	Flashing Green	Attempting Synchronization	Wait 2 minutes, if the light does not turn a solid green, refer to the Resolution 3.
	Off	Not Synchronized	Resolution 3
	On (Solid Green)	The PPP (Internet) connection is successfully established	Check LAN lights
Internet	Off	There is no successful PPP connection or the Router works on bridge mode	Check the PPP username and Password, VPI/VCI values or refer to <u>Resolution 5</u>
	Flashing Green	Traffic being transmitted over the Internet	Check LAN lights
	On (Solid Green)	Link between your computer and your DSL modem is established	The physical connection between the DSL modem and PC is working properly.
LAN 1/2/3/4	Off	No link between your PC and your DSL modem	The physical connection between the DSL modem and your PC is disconnected or NOT working properly
	Flashing Green	Traffic being transmitted over the LAN	The physical connection between the DSL modem and PC is working properly.

## Check 3

Check the **Data Rate** at the bottom of the **Status** page.

If the numbers are approximately matched with the ADSL profile provided by your ISP (e.g. downstream 2Mbps and upstream 512kbps), that means the device is synchronized properly with the ISP and the quality of the ADSL line is essentially normal.

If the Data Rate number is N/A, it stands for the modem router is not synchronized with your ISP. Please go to <u>Resolution 3 – For ADSL Light Off</u>.

<b>TP-LINI</b>	<°							A	SL Router
Status	Quick Start	c Into S	erface etup	Advanced Setup	Acces Manager	s nent	Maintenance	Status	Help
	Devi	ce Info	Syster	n Log	Statistics			Step 1	
	St	ep 2							
Device Information		Firr	nware Versi MAC Addre	on : TMNet_TP ss : 00:25:86:c	_20090827 #8:10:9e				
LAN			IP Addre Subnet Ma DHCP Serv	ss : 192.168.1 sk : 255.255.2 /er : Enabled	.1 55.0				
WAN									
	PVC	VPI/VCI	IP Addres	s Subr	net Gai	teWay	DNS Server	Encapsulation	Status
	PVC0	0/35	N/A	N//	4	N/A	N/A	Bridge	Up
	PVC1	8/35	N/A	N//	۹	N/A	N/A	Bridge	Up
	PVC2	0/32	N/A	N//	۹	N/A	N/A	Bridge	Up
	PVC3	8/32	N/A	N//	ц.	N/A	N/A	Bridge	Up
	PVC4	0/100	N/A	N//	۹	N/A	N/A	Bridge	Up
	PVC5	8/81	N/A	N//	۹.	N/A	N/A	Bridge	Up
ADSL -	ADSL ADSL Firmware Version : FwVer:3.11.2.172_TC3086 HwVer:T14.F7_5.0 Line State : Showtime Modulation : ADSL2 PLUS Annex Mode : ANNEX_A Downstream Upstream SNR Margin : 38.5 26.7 db Line Attenuation : 15.3 4.2 db Data Rate : 2048 508 kbps Max Rate : 23964 1158 kbps POWER : 16.6 11.3 dbm CRC Down.Up(db) : 0 0 db								

## Note 1

Open a web browser (either of Windows Internet Explorer, Mozilla Firefox, Apple Safari, Google Chrome, Opera or any other web browser), key in <u>192.168.1.1</u> in the address bar and press enter. The default username and password are both "admin" (all in lower case).

Refer to the following link for more details: <u>http://www.tp-link.com/support/showfaq.asp?id=87</u>

## Note 2

- Go to Quick Start, select the correct connection type (PPPoE/PPPoA or the others), and then enter your local VPI/VCI value and PPP username\password (provided by your ISP), click Save; Refer to the Quick Installation Guide or <u>http://www.tp-link.com/support/showfaq.asp?id=204</u> for more details;
- Disable any firewall/wireless MAC filtering/wireless security in the configuration page;
   Please refer to the User Guide or <u>Resolution 5</u> for more details.

## **Resolution 1**

Some software or games requires the special ports to be opened on the modem router, for example: Web Server (TCP Port 80), FTP Server (TCP Port 21), Xbox Live (UDP Port 88\3074, TCP Port 3074), etc. Refer to the following link for the configuration: <u>http://www.tp-link.com/support/showfaq.asp?id=205</u>

## **Resolution 2**

- 1. If the customer's problem is not mentioned by this troubleshooting guide, please send an Email to <a href="mailto:support@tp-link.com">support@tp-link.com</a> for further assistance.
- 2. Call local technical support hot line, please refer to <u>Appendix Q5</u> for details;

## **Resolution 3**

- 1. **For Power Light Off:** Make sure that the power supply converter is plugged into a properly working electrical outlet. Check your power cable. Are you connected to a live electrical outlet? Are the connections secured? Is the modem turned on?
- For ADSL Light Off: Verify that the ADSL modem router is correctly connected to the wall jack or the filter and that the cable does not have any visible damage. Replace any cable that appears damaged. Check the activity of the ADSL service with your ISP;

## **Resolution 4**

- 1. **Check the physical connection** (Ethernet cable or wireless connection) between the PC and the modem router, make sure they are correctly connected.
- 2. Check the IP address of the PCs, ensure it is in the same subnet range (192.168.1.x) with the modem router.

For Windows XP: <u>http://www.tp-link.com/support/showfaq.asp?id=145</u> For Windows Vista: http://www.tp-link.com/support/showfaq.asp?id=94

Hard Reset: if the custom forgot the login account of the modem router or the default username & password were rejected by the device, please try the Hard Reset as follow:
 While the modem router is powered on, press and hold the reset button on its rear panel

with a pin for 8s-10s, and then release the reset button.

Wait for 2 minutes, try to login to the device (http://192.168.1.1) again by the default username and password (admin/admin); Refer to the <u>Appendix Q1</u> or the link below for more details: <u>http://www.tp-link.com/support/showfag.asp?id=140</u>

<u>Please Note: The modem router needs to be re-configured after the Hard Reset as the</u> <u>previous configurations were removed.</u>



## **Resolution 5**

 Go to the Status page, click System Log, and check the log whether reports "PAP: login to remote failed; please check user/pswd" which means the PPP username and password are incorrect. If so, please go through the Quick Start again and enter the correct PPP username/password and VPI/VCI values.

<b>TP-LIN</b>	K					ADSL	Router
Status	Quick Start	Interface Setup	Advance Setup	d Access Management	Maintenance	Status	Help
	Step:4in	fo S	ystem Log			Step 1	
	-	_	Step 2				
System Log							
	1/1/2000	0:7:23>	SNMP TRAP	3: link up		*	
	1/1/2000	0:7:23>	Quick brid	ige not allow mu	lti-channel	_	
	1/1/2000	0:7:23>	bridge on	ly stop			
	1/1/2000	0:7:23>	SNMP TRAP	3: link up			
	1/1/2000	0:7:23>	Quick brid	ige not allow mu	lti-channel		
	1/1/2000	0:7:23>	bridge on	ly stop			
	1/1/2000	0:7:23>	SNMP TRAP	3: link up			
	1/1/2000	0:7:23>	Quick brid	ige not allow mu	lti-channel		
	1/1/2000	0:7:23>	bridge on	ly stop			
	1/1/2000	0:7:23>	SNMP TRAP	3: link up			
	1/1/2000	0:7:23>	Quick brid	ige not allow mu	lti-channel		
	1/1/2000	0:7:23>	bridge on	ly stop			
	1/1/2000	0:7:23>	SNMP TRAP	3: link up			
	1/1/2000	0:7:26>	PAP: login	n to remote fail	ed; please.		
	check use	er/pswd.					
	1/1/2000	0:7:32>	Last errom	rlog repeat 1 Ti	mes		
Step 3	1/1/2000	0:7:34>	PAP: login	n to remote fail	.ed; please		
Step 5	check use	er/pswd.					
	1/1/2000	0:7:44>	Last erron	rlog repeat 3 Ti	mes		
	1/1/2000	0:7:46>	PAP: login	n to remote fail	ed; please.		
	check use	er/pswd.					

 Check the Access Management – Filter page, check the active IP/MAC filter rules, you can remove all the rules or change them to "Active – No" for troubleshooting purpose.

<b>TP-LIN</b>	< 8			:	Step 1	54M V	Vireless AD	SL2+ Mod	em Router
Access	Quick Start	Interface Setup	Advano Setu	ced p Ma	Access nagemen	t Main	tenance	Status	Help
management		. Filter		SNMP		D	DNS	CWMP	
IP / MAC Filter Rule Editing	I₽ / I <b>S</b>	Step MAC Filter Rule Inde Rule Typ tep 3 Activ	2 ex:1♥ e:IP ♥	• • No					
	Source IP Address : (0.0.0.0 means Don't care) Subnet Mask : Port Number : (0 (0 means Don't care)								
	D	estination IP Addres Subnet Mas Port Numbe	s:: sk:: er::0	(0 mear	(0.0.0.0 mean ns Don't care	ns Don't care; )	)		
IP / MAC Filter Listing		Protoc Rule Unmatche	ol: TCP v ed: Forward	•					
	IP / M/	AC Filter Set Inde	x 1 🗸	h	nterface	-	D	irection	-
	# Act	tive Src Addres	s/Mask	Dest IP/	Mask	Src Port	Dest Port	Protocol	Unmatched
Step 4	1			-		-	-	-	-
Step 4	3					-			-

3. Check the **Access Management – Filter** page, check the active **URL filter** rules, you can remove all the rules or change them to "**Active – No**" for troubleshooting purpose.

<b>TP-LINI</b>	K			Step 1	54M Wireless Al	DSL2+ Mode	m Router
Access	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
management	ACL	Filter	SNMP	UPnP	DDNS		
		Step 2	2				
Filter							
Filter Type	Ste	ep 3					
	Filte	r Type Selection	: URL Filter	~			
URL Filter Editing	Ste	p 4 Active	: OYes 💿 No	]			
		URL Index URL	: 1 💌				
URL Filter Listing	Index 1 2	UR	L				
	4						

4. Go to the Interface Setup – Wireless page, make sure that Access Point is Activated, SSID is broadcasted, Authentication is correct or deactivated, Wireless MAC Address Filter is Deactivated

<b>TP-LIN</b>	K	Step 1			54M Wireless ADS	L2+ Modem Router
Interface	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance S	Status Help
	Internet	LAN	Wireles	s		
Access Point Settings			Step	2		
	Step 3	Access Point	t: 💿 Activated (	Deactivated		
	- ·	Channel	I: UNITED STATE	S 🗸 Auto	Current Channel: 12	
		Transmit Power	r : High 💌			
	Bea	con Interval(ms)	): 100 (r	ange: 20~1000)		
	RTS	CTS Threshold	I: 2347 (r	ange: 1500~2347)		
	Fragmen	tation Threshold (bytes)	: 2346 (r	ange: 256~2346, even	numbers only)	
		DTIM(ms)	): 1 (r	ange: 1~255)		
		802.11 b/g	ı : 802.11b+g 🗸			
Multiple SSIDs Settings						
	_	SSID Index	c 1 💌	_		
	Step 4	Broadcast SSID	: 💿 Yes 🔿 No	1		
		SSID	: TP-LINK_DF9A	E4		
S	tep 5 Aut	nentication Type	: Disabled	*		
Wireless MAC Address						
	Ster	6 Active	CActivated	Deactivated		
		Action	: Allow Associa	ation 💙 the follow Wir	eless LAN station(s) asso	ciation.
		/ac Address #1	: 00:00:00:00	:00		
		/ac Address #2	2 : 00:00:00:00	:00		



# **Appendix - FAQ**

#### Q1. How do I restore my modem's configuration to its factory default settings?

With the Router powered on, press and hold the **Reset** button on the rear panel for 8 to 10 seconds before releasing it.

Press it for 8 to 10 seconds



Note Once the Router is reset, the current configuration settings will be lost and you will need to re-configure the router.

#### Q2. What can I do if I don't know or forgot my password?

- 1) Restore the Router's configuration to its factory default settings. If you don't know how to do that, please refer to section **Q1**.
- 2) Use the default user name and password: admin, admin.

#### Q3. Why can't I open some websites like www.msn.com or it opens very slowly?

Some website or routers requires lower MTU size, please change the default 1480 bytes to lower and try again.

- 1) Login to the Web-based configuration page and go to Interface Setup Internet;
- 2) Locate the **TCP MTU Option** and change the default MTU size to 1440 or lower.

TP-LIN	IK <sup>°</sup>	Step 1			54M Wireless A	DSL2+ Moder	m Router
Interface	Quick Start	Interface Setup	Advanced Setup	Access Management	Maintenance	Status	Help
	internet	LAN	Wireles				
-	Step 2	Connection	O Always Or     Connect Or	i (Recommended) n-Demand (Close if idle	for minutes	:)	
		TCP USS Option	Connect Ma	anually			
IP Address		TCP M35 Option	- TCP MSS(0:det	auit) 1400 bytes			
		IP Versions		6			
		Get IP Address	Static 💿 D	ynamic			
		Static IP Address	0.0:0.0				
		IP Subnet Mask	0.0.0				
		Gateway	0.0.0				
		NAT	Enable 💙				
	17 19 19 19 19 19 19 19 19 19 19 19 19 19	Default Route	Yes O No	Chage t	he default M	TU size	
	Step 3	TCP MTU Option	: 1440 byte	es to	1440 or low	er	
	10	Dynamic Route	RIP2-B	Direction : Both	*		
		Multicast	: Disabled 💙				
		MAC Spoofing	Enabled ()	Disabled			
			SAVE				
			(SAVE)				



#### Q4. What can I do if I cannot access the web-based configuration page?

#### 1) Configure your computer's IP Address (TCP/IP settings);

#### For Windows XP OS







OK

	🚣 Local Area Connection Properties 🛛 🔗 🔀
	General Authentication Advanced
	Connect using:
	Realtek RTL8139 Family PCI Fast Etł <u>Configure</u>
	This connection uses the following items:
Double-click Internet Protocol (TCP/IP)	QoS Packet Scheduler      QoS Packet Scheduler      Schetwork Monitor Driver      Internet Protocol (TCP/IP)
	Install Uninstall Properties
	Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
	<ul> <li>Show icon in notification area when connected</li> <li>Notify me when this connection has limited or no connectivity</li> </ul>
	Internet Protocol (TCP/IP) Properties
	General Alternate Configuration
	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Select Obtain an IP address	Obtain an IP address automatically
automatically	C Use the following IP address:
	IP address:
	Subnet mask:
	Default gateway:
Select Obtain DNS server	Obtain DNS server address automatically
audiess automatically	C Use the following DNS server addresses:
	Preferred DNS server:
	Alternate DNS server:
	Advanced



	🕹 Local Area Connection Properties	? 🔀
	General Authentication Advanced	
	Connect using:	
	👜 Realtek RTL8139 Family PCI Fast Etł	<u>C</u> onfigure
	This connection uses the following items:	
	QoS Packet Scheduler	
	✓ Thetwork Monitor Driver ✓ Thetronet Protocol (TCP/IP)	
	I <u>n</u> stall	Properties
	Description	The defends
	wide area network protocol that provides commun across diverse interconnected networks.	nication
	Show icon in notification area when connected	
	✓ Notify me when this connection has limited or no	connectivity
Click OK	ОК	Cancel
For Windows Vista OS		





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	🕴 Local Area Connection Status
	General
	Connection
	IPv4 Connectivity:
	IPv6 Connectivity:
	Media State: Enabled
	Duration: 03:45:22
	Speed: 100.0 Mbps
	Details
	Activity
	Sent — Received
	Bytes: 4,222,308   34,994,388
Click Properties	Properties Properties Diagnose
	Close
	Local Area Connection Properties   Networking   Connect using:   Marvell Yukon 88E8056 PCI-E Gigabit Ethemet Controller   Configure   This connection uses the following items:
Double-click Internet Protocol Version 4 (TCP/IPv4).	File and Printer Sharing for Microsoft Networks A Network Magic Device Discovery Driver A Realtke RtlProt WLAN Utility Protocol Driver A Internet Protocol Version 6 (TCP/IPv6) A Internet Protocol Version 4 (TCP/IPv4) A Link-Layer Topology Discovery Mapper I/O Driver A Link-Layer Topology Discovery Responder Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
	OK Cancel



	Internet Protocol Version 4 (TCP/IPv4) Properties
	General Alternate Configuration You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings
Select Obtain an IP address automatically	O Use the following IP address:
	IP address:
	Subnet mask: , , , ,
	Default gateway:
Select Obtain DNS server address automatically	Obtain DNS server address automatically
	O Use the following DNS server addresses:
	Preferred DNS server:
	Alternate DNS server:
	Ad <u>v</u> anced
Click OK	OK Cancel

#### 3) Configure your IE browser

Click Internet Options

Open your Internet Explorer web browser, click **Tools** tab and you will see the following screen.

🚰 about:blank - Microsoft Internet Explorer			
File Edit View Favorites	Tools Help		
Back - O - X	Mail and News  Pop-up Blocker Manage Add-ons Synchronize Windows Update		
ſ	Windows Messenger Diagnose Connection Problems Internet Options		



	Internet Options	? ×
	General Security Privacy Content Connections Programs	Advanced
	To set up an Internet connection, click Setup.	
	Dial-up and Virtual Private Network settings	
	Add.	
	Remov	'e
Select Never dial a	Choose Settings if you need to configure a proxy Settings server for a connection.	s
connection	Never dial a connection     Dial whenever a network connection is not present	
	C Always dial my default connection	
	Current None Set Def	ault
	Local Area Network (LAN) settings LAN Settings do not apply to dial-up connections. Choose Settings above for dial-up settings.	ngs
Click OK	OK Cancel	Apply

Now, try to log on to the Web-based configuration page again after the above settings have been configured. If you still cannot access the configuration page, please restore your modem router's factory default settings and reconfigure the device again.

#### **Q5.** How to get the technical support from TP-LINK?

■ To download the latest Firmware, Driver, Utility and User Guide, please go to

www.tp-link.com/support/download.asp

■ For basic configuration, more FAQs, please go to

www.tp-link.com/support/faq.asp

For all other technical support, please contact us by using the following details:

<u>Global</u>

Tel: +86 755 26504400 E-mail : <u>support@tp-link.com</u> Service time:24hrs, 7days a week <u>Singapore</u> Tel: +65 62840493 E-mail: <u>support.sg@tp-link.com</u> Service time: 24hrs, 7days a week <u>USA/Canada</u> Toll Free: +1 866 225 8139 E-mail: <u>support.usa@tp-link.com</u> Service time: 24hrs, 7days a week Australia & New Zealand Tel: AU 1300 87 5465 NZ 0800 87 5465 E-mail: support@tp-link.com.au Service time: Monday to Friday 9:00 AM to 9:00 PM AEST Germany / Austria / Switzerland Tel :+49 1805 875465 (German Service) E-mail: support.de@tp-link.com Service time: GMT+ 1 or GMT+ 2 (Daylight Saving Time in Germany) Except bank holidays in Hesse