
**TP LINK Router Setup
APP- 033****Theory:**

The purpose of a router is to interface the internet to a number of inside devices. The router has two sides, the inside or LAN (local area network) and the outside or WAN (wide area network).

The LAN IP number for BTU devices are broken down into the following blocks:

XT-70 control panel	192.168.1.51 to 192.168.1.90
HMI	192.168.1.99 to 192.168.1.91
Router	192.168.1.1
Tranzeo Wireless	192.168.1.100 to 192.168.1.124

The WAN is composed of the following:

Public Static IP
Subnet mask
Gateway
DNS 1
DNS 2

When requesting an internet connection, make sure to document the above numbers. If the internet connection from the provider is wireless make sure the unit is setup as a Bridge only. Sometimes the provider will set them up as a router or other devices and they will not work with the XT router.

The XT panels are being shipped with an internal TP LINK router instead of the switch. The routers being shipped have had the router portion turned off so it acts as just a switch. To use the router reset it to factory defaults or enable the wireless section.

Since the WAN is composed of one Static IP and the LAN could have many IP's and ports are used to route WAN request and data to each of the LAN devices. The XT panel uses an individual port for each panel starting at 4001. When the router sees WAN data coming in it will use the attached port number to route to the correct LAN ip address.

This app note will specifically cover the TP LINK router. There are many different types of routers and all have a similar setup.

Setup:

If you need to reset the router, power the unit down and press and hold the reset while powering up. Continue to hold the reset button in for fifteen seconds and the router should reset to factory defaults.

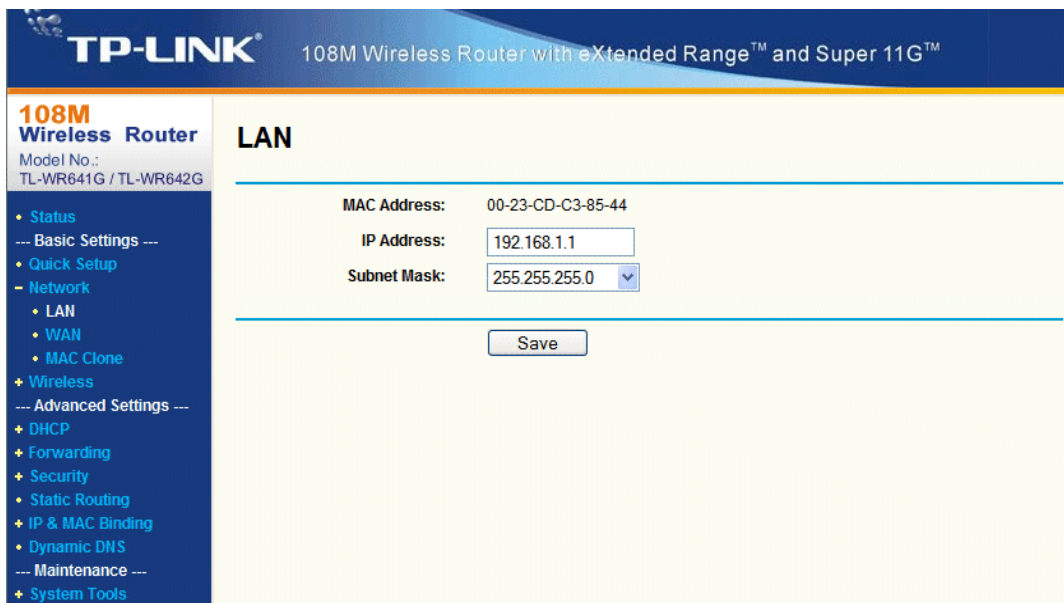


Plug an Ethernet cable any of the 1 to 4 jacks and into your lap top. Open your web browser and type in `http://192.168.1.1` The user name, password dialog box will appear.



The default user name is admin and the password is also admin. If you have previously changed it, use the new user name and password.

The TP_LINK will come up with the basic settings. Click on the Network link and then on the LAN link. This will show the inside or LAN settings. In most cases no changes should be needed.



Next click on the WAN link under the Network link. The default setting for the WAN is Dynamic IP. For BTU applications it needs to be set for Static IP. Click on the drop down and select Static IP.

The screenshot shows the WAN configuration interface for a TP-Link 108M Wireless Router. The left sidebar contains a navigation menu with options like Status, Basic Settings, Quick Setup, Network, Wireless, and Advanced Settings. The main area is titled 'WAN' and features a dropdown menu for 'WAN Connection Type' which is currently set to 'Dynamic IP'. The dropdown menu is open, showing options: Dynamic IP, Static IP, PPPoE, 802.1X + Dynamic IP, 802.1X + Static IP, BigPond Cable, L2TP, and PPTP. Below the dropdown are 'Renew' and 'Release' buttons, and a status indicator 'Obtaining network parameters...'. Other fields include 'MTU Size (in bytes): 1500', 'Use These DNS Servers' (checkbox), 'Primary DNS: 0.0.0.0', and 'Secondary DNS: 0.0.0.0 (Optional)'.

Once you select Static IP a new screen will appear to enter the WAN numbers.

This screenshot shows the WAN configuration page after selecting 'Static IP'. The 'WAN Connection Type' dropdown is now set to 'Static IP'. The form fields are: 'IP Address: 0.0.0.0', 'Subnet Mask: 0.0.0.0', 'Default Gateway: 0.0.0.0 (Optional)', 'MTU Size (in bytes): 1500 (The default is 1500, do not change unless necessary.)', 'Primary DNS: 0.0.0.0 (Optional)', and 'Secondary DNS: 0.0.0.0 (Optional)'. A 'Save' button is located at the bottom of the configuration area.

Enter the static IP address provide by the internet provider. Also enter the Subnet Mask, Default Gateway, primary DNS and secondary DNS. Click save when done.

Click on the Wireless link and then on the Wireless settings link. Make sure the setup is as shown and the Enable Wireless Router is checked.

108M Wireless Router
Model No.: TL-WR641G / TL-WR642G

- Status
- Basic Settings ---
- Quick Setup
- Network
- Wireless
 - Wireless Settings
 - MAC Filtering
 - Wireless Statistics
- Advanced Settings ---
- DHCP
- Forwarding
- Security
 - Static Routing
 - IP & MAC Binding
 - Dynamic DNS

Wireless Settings

SSID:

Region:

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

Channel:

Mode:

Enable Wireless Router Radio

Enable SSID Broadcast

Enable Bridges

Click on the DHCP link and change the starting address to 192.168.1.25. Next click on Save.

108M Wireless Router
Model No.: TL-WR641G / TL-WR642G

- Status
- Basic Settings ---
- Quick Setup
- Network
- Wireless
- Advanced Settings ---
- DHCP
 - DHCP Settings
 - DHCP Clients List
 - Address Reservation
- Forwarding
- Security
 - Static Routing
 - IP & MAC Binding
 - Dynamic DNS

DHCP Settings

DHCP Server: Disable Enable

Start IP Address:

End IP Address:

Address Lease Time: minutes (1~2880 minutes, the default value is 120)

Default Gateway: (optional)

Default Domain: (optional)

Primary DNS: (optional)

Secondary DNS: (optional)

Click on Forwarding and then on Virtual Servers. Next click on the Add New button.

108M Wireless Router
Model No.: TL-WR641G / TL-WR642G

- Status
- Basic Settings ---
- Quick Setup
- + Network
- + Wireless
- Advanced Settings ---
- + DHCP
- Forwarding
 - Virtual Servers
 - Port Triggering
 - DMZ

Virtual Servers

ID	Service Port	IP Address	Protocol
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Type in the LAN address for the panel and the port number. The first panel should be 192.168.1.51 and port 4001. Click on Save.

108M Wireless Router
Model No.: TL-WR641G / TL-WR642G

- Status
- Basic Settings ---
- Quick Setup
- + Network
- + Wireless
- Advanced Settings ---
- + DHCP
- Forwarding
 - Virtual Servers
 - Port Triggering
 - DMZ
 - UPnP
- + Security

Add or Modify a Virtual Server Entry

Service Port: (XX-XX or XX)

IP Address:

Protocol:

Status:

Common Service Port:

If there is more than one panel, click on Add and add the second panel which typically would be 192.168.1.52 and port 4002.

The user name and password should be changed from the default to the BTU standard. Click on the Advanced Settings link and then on Security. Type in the new user name and password and then click on Save.

The screenshot shows the control panel for a 108M Wireless Router. On the left is a navigation menu with the following items: Status, Basic Settings, Quick Setup, Network, Wireless, Advanced Settings, DHCP, Forwarding, Security, Static Routing, IP & MAC Binding, Dynamic DNS, Maintenance, and System Tools. The main content area is titled "Password" and contains five input fields: "Old User Name:" (with "admin" entered), "Old Password:", "New User Name:", "New Password:", and "Confirm New Password:". At the bottom right of the form are two buttons: "Save" and "Clear All".

The router should now be setup and ready to go.