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> TP-Link Archer AX50 AX3000 Wireless Dual-Band Gigabit Router User Manual

## TP-Link Archer AX50-cr

# TP-Link Archer AX50 AX3000 Wireless Dual-Band Gigabit Router User Manual

Model: Archer AX50-cr

## 1. INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, maintenance, and troubleshooting of your TP-Link Archer AX50 AX3000 Wireless Dual-Band Gigabit Router. This device is designed to provide high-performance wireless connectivity for your home network needs. Please read this manual thoroughly to ensure proper installation and optimal performance.

## 2. PACKAGE CONTENTS

Before you begin, please verify that your package contains the following items:

- TP-Link Archer AX50 AX3000 Wireless Dual-Band Gigabit Router
- Power Adapter
- Ethernet Cable
- Quick Installation Guide
- CD (containing resources and utilities)

## 3. PRODUCT OVERVIEW

The TP-Link Archer AX50 AX3000 Router features a sleek, modern design with multiple external antennas for enhanced signal coverage. The front panel includes LED indicators for power, internet connectivity, Wi-Fi status, and LAN port activity. The rear panel houses the power input, WAN port, LAN ports, and other functional buttons.



Figure 3.1: Front view of the TP-Link Archer AX50 AX3000 Wireless Dual-Band Gigabit Router, showcasing its four external antennas and front-facing LED indicators.

## 4. KEY FEATURES

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- **Wi-Fi 6 Technology (802.11ax):** Achieves up to 3x faster speeds, 4x capacity, and 75% lower latency compared to Wi-Fi 5.
- **Next-Gen 3 Gbps Speeds:** Dual-Band router reaches speeds up to 3 Gbps (2402 Mbps on 5 GHz band and 574 Mbps on 2.4 GHz band) for enhanced streaming and gaming.
- **OFDMA Technology:** Simultaneously communicates more data to more devices, improving network efficiency.
- **Reduced Lag:** Experience ultra-smooth entertainment with up to 75% reduced lag for 4K videos, online gaming, and video chatting.
- **Target Wake Time (TWT):** Reduces device power consumption to extend battery life.
- **Advanced Security (TP-Link HomeCare™):** Includes lifetime subscription for antivirus, robust parental controls, and QoS.
- **Easy Setup:** Set up the router in minutes using the TP-Link Tether app.
- **Backward Compatibility:** Supports all previous 802.11 standards and all Wi-Fi devices.
- **Gigabit Ports:** Equipped with one Gigabit WAN port and four Gigabit LAN ports for fast wired connections.
- **External Antennas:** Features multiple external antennas for long-range coverage and stable connections.
- **Smart Features:** Supports Alexa for voice command management of your home network.
- **Advanced Networking:** Includes VPN server, parental control, and Quality of Service (QoS) features.

## 5. SETUP GUIDE

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1. **Unpack the Router:** Carefully remove the router and all accessories from the packaging.
2. **Position the Router:** Place the router in a central location in your home, away from obstructions and devices that may cause interference (e.g., microwaves, cordless phones). Ensure the antennas are oriented vertically for optimal signal.
3. **Connect the Hardware:**
  - Connect your modem's Ethernet cable to the **WAN port** (usually blue) on the router.
  - Connect your computer to one of the **LAN ports** (usually orange) on the router using an Ethernet cable, or connect wirelessly using the default Wi-Fi name (SSID) and password found on the router's label.
  - Connect the power adapter to the router's power input and plug it into a power outlet.

4. **Power On:** Press the power button on the router. Wait for the LED indicators to stabilize, indicating successful startup.
5. **Configure the Router:**
  - Open a web browser on your connected computer or mobile device.
  - Enter the default access address (e.g., <http://tplinkwifi.net> or 192.168.0.1) in the address bar and press Enter.
  - Follow the on-screen instructions of the Quick Setup Wizard to configure your internet connection and Wi-Fi settings. You will be prompted to create a new login password for the router.
  - Alternatively, download and use the **TP-Link Tether app** on your smartphone for an intuitive setup process.
6. **Test Connectivity:** Once configured, test your internet connection on various devices.

## 6. OPERATING INSTRUCTIONS

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### 6.1 Connecting to Wi-Fi

- On your device (smartphone, laptop, tablet), open your Wi-Fi settings.
- Select your router's Wi-Fi network name (SSID) from the list.
- Enter the Wi-Fi password you set during the setup process.
- Your device should now be connected to the internet.

### 6.2 Managing Router Settings

You can manage your router's settings via the web management page or the TP-Link Tether app.

- **Web Management Page:** Access by typing <http://tplinkwifi.net> or 192.168.0.1 into a web browser. Log in with your router password. Here you can configure advanced settings like port forwarding, VPN server, QoS, and parental controls.
- **TP-Link Tether App:** Provides a user-friendly interface for basic management, including viewing connected devices, setting up parental controls, and managing guest networks.

### 6.3 Using Smart Features

- **Alexa Integration:** Enable the TP-Link skill in your Alexa app to manage your home network using voice commands. For example, "Alexa, ask TP-Link to turn on the guest network."
- **Parental Controls:** Set time limits and block inappropriate content for specific devices on your network.
- **Quality of Service (QoS):** Prioritize bandwidth for certain applications or devices (e.g., gaming consoles, streaming devices) to ensure smooth performance.

## 7. MAINTENANCE

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- **Firmware Updates:** Regularly check for and install firmware updates through the router's web management page. Updates often include performance improvements, security patches, and new features.
- **Router Placement:** Ensure the router is in a well-ventilated area to prevent overheating. Avoid placing it in enclosed spaces or near heat sources.
- **Rebooting:** Periodically reboot your router (unplug and replug after 10 seconds) to clear its memory and refresh network connections, which can resolve minor performance issues.
- **Cleaning:** Keep the router clean and free of dust. Use a soft, dry cloth to wipe the exterior.

## 8. TROUBLESHOOTING

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Problem	Possible Solution
No Internet Access	<ol style="list-style-type: none"> <li>1. Check all cable connections (modem to router WAN port, router to computer LAN port).</li> <li>2. Reboot your modem and router.</li> <li>3. Verify your internet service provider (ISP) connection is active.</li> <li>4. Check the WAN LED indicator on the router; it should be solid green.</li> </ol>
Weak Wi-Fi Signal or Dead Zones	<ol style="list-style-type: none"> <li>1. Relocate the router to a central, open area.</li> <li>2. Adjust the antennas for optimal coverage.</li> <li>3. Minimize interference from other electronic devices.</li> <li>4. Consider adding Wi-Fi extenders or a mesh system for larger homes.</li> </ol>
Cannot Access Router Management Page	<ol style="list-style-type: none"> <li>1. Ensure your device is connected to the router's network (wired or wireless).</li> <li>2. Verify you are typing the correct address (<a href="http://tplinkwifi.net">http://tplinkwifi.net</a> or 192.168.0.1).</li> <li>3. Try a different web browser.</li> <li>4. Clear your browser's cache and cookies.</li> </ol>
Forgot Wi-Fi Password or Router Login Password	<ol style="list-style-type: none"> <li>1. Check the label on the bottom of your router for the default Wi-Fi password.</li> <li>2. Perform a factory reset (press and hold the reset button for 5-10 seconds) to revert to default settings. <i>Note: This will erase all custom configurations.</i></li> </ol>

## 9. SPECIFICATIONS

- **Brand:** TP-Link
- **Model Name:** Archer AX50-cr
- **Wireless Communication Standard:** 802.11ax (Wi-Fi 6)
- **Frequency Band Class:** Dual-Band (2.4 GHz and 5 GHz)
- **Max Wireless Speed:** Up to 3000 Mbps (2402 Mbps on 5 GHz, 574 Mbps on 2.4 GHz)
- **Antennas:** Multiple External Antennas
- **Ethernet Ports:** 1x Gigabit WAN, 4x Gigabit LAN
- **Special Feature:** WPS (Wi-Fi Protected Setup)
- **Compatible Devices:** Smartphones, Laptops, Tablets, Gaming Consoles, Smart Home Devices
- **Recommended Uses:** Gaming, 4K Streaming, High-Bandwidth Applications
- **Product Dimensions:** 12.99 x 2.95 x 9.65 inches
- **Item Weight:** 1.2 pounds

## 10. WARRANTY AND SUPPORT

This TP-Link Archer AX50 AX3000 Wireless Dual-Band Gigabit Router is a renewed product. Renewed products are professionally inspected and tested to work and look like new. If not satisfied with the purchase, renewed products are eligible for replacement or refund under the Amazon Renewed Guarantee, typically for 90 days from the date of receipt. For technical support, warranty claims, or additional information, please visit the official TP-Link support website or contact their customer service. Refer to the Quick Installation Guide for specific contact details.

## 11. LEGAL DISCLAIMER

Claims about 802.11ax Wi-Fi technology are based on comparisons of the expected maximum theoretical data rates for one spatial stream using 802.11ax at 160 MHz (1201 Mbps) as opposed to one spatial stream using 802.11ac at 80 MHz (433 Mbps) as documented in IEEE 802.11ax draft 3.0 spec and IEEE 802.11-2016 wireless standard specifications, and require the use of similarly configured 802.11ax wireless network routers. Use of 802.11ax Wi-Fi standard requires clients to also support the 802.11ax Wi-Fi standard. Actual wireless data throughput, wireless coverage and number of connected devices are not guaranteed and will vary as a result of network conditions, client limitations, and environmental factors, including building materials, obstacles, volume and density of traffic, and client location. HT160 requires client device that supports 160 MHz bandwidth on Wi-Fi. 802.11ax 2x2 160MHz enables 2402Mbps maximum theoretical data rates, 3X faster than standard 802.11ac 2x2 80MHz (867Mbps) and nearly 6x faster than baseline 1x1ac (433Mbps) Wi-Fi as documented in IEEE 802.11 wireless standard specifications, and require the use of similarly configured 802.11ax wireless network routers. "Up to 75% lower latency" is based on Intel simulation data of 802.11ax with and without OFDMA using 9 clients. Average latency without OFDM is 36ms, with OFDMA average latency is reduced to 7.6ms. Latency improvement requires that the AP and all clients support OFDMA. Intel and the Intel logo are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Saving clients' battery power requires clients to also support the 802.11ax Wi-Fi standard. Actual power reduction may vary as a result of network conditions, client limitations, and environmental factors. Use of OFDMA requires clients to also support OFDMA. \*Free lifetime subscription to TP-Link HomeCare™ is included with purchase on select TP-Link models at no additional cost. "Lifetime Subscription" refers solely to the life of the purchased device and can not be transferred. TP-Link reserves the right to modify the service and feature at anytime.