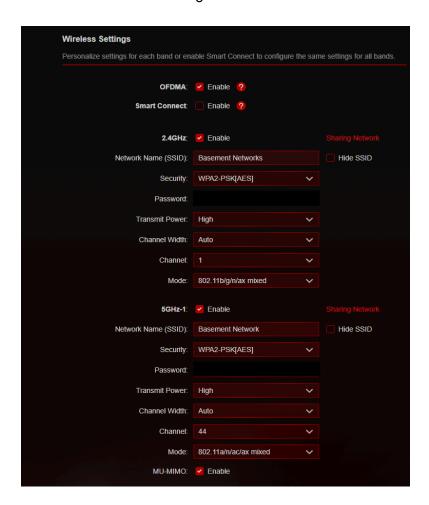# Wireless Optimization Tips

**Network Details:**
- Router Model: TP-Link Archer AX11000
- Wi-Fi Network Names (SSIDs):
    - 2.4GHz: Basement Networks (WPA2-PSK[AES])
    - 5GHz: Basement Network (WPA2-PSK[AES])
- Wi-Fi Channels: Auto (pre-optimization)

Wi-Fi Analyzer App Used:
- App Name: N/A
- Results: N/A (no Wi-Fi extenders used)

Optimization Steps Taken:
1. **Wi-Fi Channel Optimization:**

- Changed Wi-Fi channels based on router settings.
    - 2.4GHz: Changed from Auto to Channel 1.
    - 5GHz: Changed from Auto to Channel 44.

2. **DNS Configuration:**
- Updated DNS settings to improve network performance.
  - Primary DNS: 8.8.8.8
  - Secondary DNS: 8.8.4.4

Speed Test Results:
- **Before Optimization:**
  - Download: 500 Mbps, Upload: 300 Mbps
- **After Optimization:**
  - Download: 800 Mbps, Upload: 400 Mbps

Observations and Improvements:
- **Improved Wi-Fi Stability:**
  - Router settings adjustments led to more stable Wi-Fi connections.
- **Enhanced Speeds:**
  - Achieved faster download and upload speeds after DNS and channel optimizations.
- **Consistent Performance:**
  - Reduced instances of network drops and lag during peak usage times.

Recommendations for Ongoing Maintenance:
- **Regular Checks:**
  - Periodic review of Wi-Fi channel conditions.
- **Router Reboots:**
  - Continue scheduled router reboots for optimal performance.
- **Stay Updated:**
  - Monitor network performance metrics within router settings.

Conclusion:

The Wireless Optimization Tips have brought notable improvements to the home Wi-Fi network. By adjusting Wi-Fi channels for both 2.4GHz and 5GHz bands and updating DNS settings, we have achieved faster speeds and enhanced stability. These optimizations ensure a smoother online experience for all connected devices.