Quick Installation and Configuration Guide
Ubiquiti airMAX Wireless Links (PtP)

📌 Objective

This guide provides the essential and critical steps for establishing a high-capacity **Point-to-Point (PtP)** wireless link using Ubiquiti airMAX (AC Gen2) devices, such as the PowerBeam 5AC, LiteBeam 5AC, or PrismStation 5AC (PS-5AC).

Link Role	Device Role	Suggested Management IP
Point A	**AP-WDS (Access Point WDS)**	192.168.1.20
Point B	**Station-WDS (Station WDS)**	192.168.1.21
Subnet Mask	N/A	255.255.255.0

I. Preparation and Initial Access

Step 1: Connection and Power

1. **PC Connection:** Connect the Ethernet cable from your PC's LAN port to the **LAN** port on the PoE injector.
2. **Radio Connection:** Connect the cable from the Ubiquiti device (e.g., PS-5AC) to the **PoE** port on the injector.
3. **PC IP:** Configure your PC with a static IP within the Ubiquiti management range, for example: 192.168.1.10.
4. **Access:** Open a browser (Chrome, Firefox) and access the default Ubiquiti management IP: **https://192.168.1.20**.

Step 2: Initial Security Setup

1. **Security Warning:** Accept the untrusted certificate warning to proceed.
2. **Login:** Enter the default username (ubnt) and password (ubnt).
3. **License:** Select your country and accept the license terms.
4. **Change Credentials (CRITICAL):** Immediately go to the **System** tab and change the device **password**. Save and apply.

II. Configuration of Point A (Access Point WDS)

This radio **transmits the signal** and connects to your main network (LAN).

Tab	Option	Setting	Notes
1. Wireless	**Wireless Mode**	**Access Point WDS**	This is the transmitting side of the link.
	Channel Width	20/40/80 MHz	Use 40 MHz or 80 MHz for high speed.
	Frequency	Select a clear channel.	Avoid saturated channels for best performance.
	airMAX AC	Enabled	Default setting for proprietary high-efficiency protocol.
	SSID (Network Name)	(e.g., LINK_MAIN_A_B)	The name must be unique.
	WPA2 Preshared Key	**Secure Password**	Must be identical on both radios.
2. Network	**Management IP**	Static: 192.168.1.20	Must be reachable on your LAN.
	Network Mode	Bridge	Keeps the network segment transparent.

➡️ **SAVE AND APPLY CHANGES.**

III. Configuration of Point B (Station WDS)

This radio **receives the signal** and extends the network.

Step 1: Key Settings

1. Wireless Mode | Station WDS | This is the receiving side of the link. |
	SSID (Network Selection)	Click Select and choose the SSID (LINK_MAIN_A_B)	Must find and select the signal from Point A.
	WPA2 Preshared Key	Enter the same password as Radio A.	
2. Network	Management IP	Static: 192.168.1.21	Unique IP for this radio.
	Network Mode	Bridge	Keeps the network segment transparent.

➡️ **SAVE AND APPLY CHANGES.**

IV. Alignment and Verification (The Crucial Step)

Step 1: Physical Alignment

1. **Mounting:** Install both radios on their masts with the best possible *Line of Sight*.
2. **Monitoring:** On Radio B, go to the **Main** tab and observe the **Signal Strength** value.
3. **Fine Tuning:** Make slow, small adjustments to the aiming (horizontal and vertical) of Antenna B.
4. **Target:** Look for the strongest value (closest to 0 dBm). A value between **-50 dBm and -65 dBm** is ideal.
5. **Secure:** Once the peak signal is reached, firmly tighten the mounting hardware to secure the orientation.

Step 2: Link Verification

1. **Connectivity:** Your PC should be able to ping both radios: ping 192.168.1.20 and ping 192.168.1.21.
2. **Statistics:** On the **Main** tab of both radios, check the following values:
   - **CCQ (Client Connection Quality):** Should be high (90% or higher).
   - **TX/RX Rate:** Should show high, symmetrical speeds (e.g., 300/300 Mbps or more).
   - **Latency:** Should be low (typically less than 5 ms).

Congratulations! Your Ubiquiti Point-to-Point wireless link is operational.