# Configuring a Router

To set your router with a manual address, gateway, and DNS, follow these steps. This guide assumes you are configuring the router's WAN (Wide Area Network) interface with a static IP configuration provided by your Internet Service Provider (ISP), as this is a common scenario for such settings. Additionally, it includes basic LAN (Local Area Network) configuration to ensure everything works smoothly.

## Step 1: Access the Router's Web Interface

- **Find the Router's IP Address**: This is typically something like `192.168.0.1` or `192.168.1.1`. Check the label on your router or the user manual for the exact address.
- **Open a Browser**: Launch a web browser on a device connected to the router (via Wi-Fi or Ethernet).
- **Enter the IP Address**: Type the router's IP address into the address bar and press Enter. This should bring up the router's login page.

## Step 2: Log In

- **Enter Credentials**: You'll be prompted for a username and password. Default credentials are often listed on the router or in the manual (e.g., username: `admin`, password: `password` or `admin`).
- **Security Tip**: If you haven't changed these defaults, consider updating them later to secure your router.

## Step 3: Navigate to WAN or Internet Settings

- **Locate the Section**: In the router's interface, look for a tab or menu labeled **WAN Settings**, **Internet Settings**, or similar. This is where you configure the router's connection to the internet.

## Step 4: Select Static or Manual IP Configuration

- **Choose the Option**: By default, many routers use DHCP (automatic IP assignment). Switch this to **Static IP** or **Manual** to enter your own settings.

## Step 5: Enter the Manual Settings

- **Input the Details**: Your ISP should have provided the following:
  - **IP Address**: A unique address for your router on the ISP's network (e.g., `203.0.113.5`).
  - **Subnet Mask**: Defines the network range (e.g., `255.255.255.0`).
  - **Gateway**: The IP address of the ISP's gateway that connects your router to the internet (e.g., `203.0.113.1`).

- **DNS Servers**: At least one, often two, DNS server addresses (e.g., `8.8.8.8` and `8.8.4.4` for Google's DNS).

- **Fill in the Fields**: Enter these values exactly as provided into the corresponding fields in the WAN settings.

## Step 6: Save the Changes

- **Apply Settings**: Click **Save**, **Apply**, or a similar button. The router may restart to apply the new configuration. Wait for it to reconnect to the internet.

## Step 7: Configure LAN Settings (Optional but Recommended)

- **Check LAN Settings**: Go to the **LAN Settings** or **Network Settings** section.
- **Set LAN IP Address**: Assign the router a LAN IP (e.g., `192.168.1.1`) with a subnet mask (e.g., `255.255.255.0`). Ensure this is in a different range from the WAN IP to avoid conflicts.
- **DHCP Configuration** (if used):

  - **Enable DHCP**: If you want the router to assign IP addresses to devices automatically.
  - **Set IP Range**: Define a range (e.g., `192.168.1.100` to `192.168.1.200`).
  - **Gateway**: Set this to the router's LAN IP (e.g., `192.168.1.1`).
  - **DNS**: Use the ISP's DNS servers or alternatives like `8.8.8.8` and `8.8.4.4`.

- **Save Changes**: Apply these settings as well.

## Notes

- **Variation by Router**: The exact menu names and options may differ depending on your router's brand and firmware (e.g., TP-Link, Netgear, ASUS). Refer to your router's manual if the steps aren't clear.
- **Test the Connection**: After saving, check if your internet works by loading a webpage on a connected device.
- **Contact ISP**: If unsure about the IP, gateway, or DNS values, contact your ISP for the correct static configuration details.

By following these steps, your router should be set up with a manual address, gateway, and DNS, ensuring a stable and customized network connection.