MR1900 Router
User Guide

Keeping you connected
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SAFETY
This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

CAUTION:
- Do not put the router in water.
- Do not use the router outdoors if that exposes the router to rain, snow, ice, extreme temperatures, or other extreme conditions.
- Keep the router in an environment that is between 0°C and 40°C (between 32°F and 104°F).
- Do not place any object on top of the router since this may cause overheating.
- Do not place the router in a confined space that may cause overheating.
- Do not restrict the flow of air around the router.
- MOTOROLA and MTRLC assume no liability for damage caused by any improper use of the router.
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Introduction

The Motorola Model MR1900 is an 802.11ac Smart Wi-Fi router with 4 built-in Gigabit Ethernet ports. This router provides a high-speed intelligent link between all your local Wi-Fi and Ethernet devices and whatever Ethernet-capable modem or in-building network you choose for Internet access. Model MR1900 can provide shared Internet access to Ethernet-capable and Wi-Fi devices including computers, smartphones, tablets, HDTVs, game consoles, security cameras, and streaming media devices.

Basic Installation instructions for Model MR1900 are in the Quick Start that comes with Model MR1900 and that is duplicated in Chapter 2 of this User Guide.

Model MR1900 has a Configuration Manager that provides a lot of technical information about Model MR1900 and that tells you how to do some useful things as summarized below. Please note that some users will never need to use the Configuration Manager.

Chapter 3: Connecting Devices to Your Router
Chapter 4: Setting up an HDTV, Streaming Media Device, or Other Device
Chapter 5: Accessing the Configuration Manager by Using a Browser
Chapter 6: Configuring Your Router for a PPPoE or Static IP Connection
Chapter 7: Changing Wireless Settings
Chapter 8: Configuring File Sharing
Chapter 9: Using the MR1900 as a Media Server
Chapter 10: Parental Controls
Chapter 11: Tuning Wireless Performance
Chapter 12: Changing Your Login Password, and Resetting to Factory Defaults
Chapter 13: Troubleshooting Tips
Quick Start

Packaged with your MR1900 router

- Power Cube (varies by country)
- Wall Mounting Kit (2 screws and 2 wall anchors)
- Ethernet Cable
- Velcro® Cable Organizer

Your router arrives with an attached stand for convenient desktop use. See the enclosed Wall Mount flyer if you would like to mount your router on the wall.
Let’s get started

First connect the MR1900’s yellow Ethernet cable between the MR1900’s WAN port and the Ethernet port of a cable modem, DSL modem, fiber optic modem, or an in-building network that provides Internet access.

If you are using a modem, turn it off now. For some modems with telephone capability, this requires you to use the power switch or to remove the power backup battery. After the modem is off for at least 10 seconds, turn it back on. (If you removed a backup battery, replace that first.)

Power up your MR1900

Connect the supplied power cube between the MR1900’s power jack and a working electrical outlet.

Now power up your MR1900. To do this, the On/Off button on the side panel needs to be On (see image on the next page). Wait for the white Internet connection light \(\text{} \) to be blinking. This may take up to 2 minutes.
WPS button – The WPS button helps establish a secure wireless connection with your wireless devices.

Wi-Fi On/Off button – This can switch your wireless on or off to, for instance, prevent access to these devices from the Internet.

USB 3.0 – High-speed USB port for USB memory devices.

Power On/Off button – Switches power on or off.

Check that the following lights on the top of the MR1900 are on before continuing: Power, WAN, Internet, 2.4 GHz, and 5 GHz. If the 2.4 GHz and 5 GHz lights are off, press and hold the Wi-Fi On/Off button on the side panel for 1 second and then check the lights again.

Most users will plug into their cable or DSL modem or into an in-building network and use the router’s default settings. In the unlikely event that you are using a static IP address or want to terminate a PPPoE connection, see Chapter 6: Configuring Your Router for a PPPoE or Static IP Connection. If you do not know that you need these settings, then most likely you do not need them.
Connect Your Devices

**Wireless**
You can connect wirelessly by using the Wi-Fi SSID/Network Name and Wi-Fi Password/Key printed on the label on the back of the router. You can also use some other SSID/Network Name and/or Wi-Fi Password/Key if you like as discussed in chapter 7.

**Wired**
You can also connect your computer, game station, or other Ethernet-capable device with an Ethernet cable between the device and one of the Gigabit Ethernet LAN jacks on the router. This is a good idea if the device is near the router, since an Ethernet connection is normally better than a wireless connection.

Try to browse the Web using a device connected via Ethernet or Wi-Fi to the MR1900. If browsing works, Congratulations! Your MR1900 is working.

If your MR1900 is NOT working, see Troubleshooting Tips at the back of this manual.

**Motorola MR1900 Router App**
Now that you are all set up, you can download the free MR1900 Router app to manage your network. The app is available from the Google Play store or iTunes App store on your mobile device.

The app works with Android OS 5.x and greater and iOS 8.x and greater.
Configuration Manager

You may not need to use the Configuration Manager. Here are some reasons for using it:

- You want to change the wireless router setup. For instance, maybe you’re replacing a router and want to use your existing Wi-Fi SSID/Network Name and/or Wi-Fi Password/Key instead of the unique ones that come with the MR1900.
- You want to set up special Internet gaming settings.
- You want to set up parental controls to control when children or other users can access the Internet.
- You want to get performance information about the MR1900 router. This can be helpful in optimizing wireless performance.

If you need to access the MR1900 Configuration Manager, open your Web browser. Type 192.168.1.1 in the address bar and press Enter.

In the login dialog box, type the following User Name and Password in lower case, then click OK.
User Name: admin
Password: motorola

The status page will appear. If the Status page doesn’t appear, please see the Troubleshooting Tips at the end of this manual.
Improving Wireless Performance

As noted before, the MR1900 has a unique Wi-Fi SSID/Network Name and Wi-Fi Password/Security Key printed on the MR1900’s back label. If you don’t change these, you should set up your wireless devices to work with this SSID and password.

Note that wireless performance depends on a number of factors. Please keep these things in mind:

- Where possible, put the MR1900 in a central place so that it’s not too far away from your other wireless devices.

- Try to avoid interference from other wireless devices such as Bluetooth headsets and stereos, microwave ovens, printers with Wi-Fi capability turned on, and 2.4 GHz cordless phones and base stations. Try to avoid putting the MR1900 close to these interfering devices.

- Sometimes it helps to change the MR1900 wireless channel frequency to reduce interference with neighbors’ wireless networks. This is discussed in the Troubleshooting section of this Quick Start.

- The MR1900 router provides a powerful wireless signal that can help reach many corners of your house. However, many devices, such as phones, that you may use to connect to the MR1900 do not have as powerful a wireless signal. Although the MR1900’s advanced wireless technology can help improve the performance and range of the devices, often the weaker signal of your other devices can be a limiting factor. If this happens in your home, you may want to add a Range Extender to help boost your wireless signal for these devices. For more information, please see www.motorolanetwork.com/extenders
ETHERNET (LAN 4, 3, 2, 1)
You can connect a computer, HDTV, game station, or other Ethernet-capable device to any of these 4 LAN ports.

WAN
Connect your modem or in-building network to the WAN port with an Ethernet cable.

RESET
Press the reset button for 8 seconds in the unlikely event that you need to reset your modem to factory defaults.

USB 2.0
USB port for USB storage devices. There is also a faster USB 3.0 port on the side of the MR1900.

POWER
Connect the supplied power cube between the power jack and an electrical outlet.
## Top Panel Lights

<table>
<thead>
<tr>
<th>LIGHT</th>
<th>COLOR</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| Power  | White       | **ON:** MR1900 power on  
                   **OFF:** MR1900 power off                                               |
| WAN    | White or Green | **White:** Gigabit Ethernet connection to your modem  
                      **Green:** 10/100 Mbps connection to your modem  
                      **Blinking:** Data being sent  
                      **OFF:** No connection to your modem                                      |
| Internet | White or Red | **ON:** Router online  
                   **Blinking:** Data being sent  
                   **OFF:** Router offline  
                   **Red:** Authentication failed (PPPOE only)                               |
| USB 2.0 | White       | **ON:** USB device connected  
                   **Blinking:** Data being transferred to/from your USB device  
                   **OFF:** No device connected                                               |
| USB 3.0 | White or Green | **White:** USB 3.0 device connected  
                      **Green:** USB 2.0 device connected  
                      **Blinking:** Data being transferred to/from your USB device  
                      **OFF:** No device connected                                               |
| Wi-Fi 2.4 GHz | White | **ON:** 2.4 GHz Wi-Fi is enabled  
                   **Blinking:** Data is flowing  
                   **OFF:** Wi-Fi is not enabled                                              |
| Wi-Fi 5 GHz | White | **ON:** 5 GHz Wi-Fi is enabled  
                   **Blinking:** Data is flowing  
                   **OFF:** Wi-Fi is not enabled                                              |
| WPS    | Blinking    | WPS is in discovery mode  
                   **ON:** Light will remain solid after WPS configuration is successful |
| LAN 1 2 3 4 | White or Green | **White:** 1 Gigabit Ethernet connection  
                      **Green:** 10/100 Mbps Ethernet connection  
                      **Blinking:** Data being sent                                                                 |
Connecting Devices to Your Router

You can connect computers, smartphones, tablets, game consoles, security cameras, streaming media devices (like Roku, Chromecast & AppleTV), Internet-enabled HDTVs and other devices to your MR1900.

You can connect these devices either with an Ethernet cable (a wired connection), or via Wi-Fi (a wireless connection).

An Ethernet connection is normally a faster, more reliable connection than a wireless connection. To make an Ethernet connection, you need a device with an Ethernet connector and a cable to connect between that device and your router. In some cases, this may be impossible because of the location of the devices. In those cases, or if the device doesn’t have an Ethernet connector, you will need to create a wireless connection as described below.

Connecting a Device via Ethernet

To make the connection at the Ethernet-capable device, simply plug in one end of the Ethernet cable to an Ethernet jack on the device. At the router plug the other end of the cable into any of the router’s LAN jacks. You can connect up to four devices by using the four LAN jacks.

Connecting a Smartphone, Tablet or Other Wireless Device via Wireless

You will need to enter your wireless network name (SSID) and password into each client device that you want to connect to your network. If you haven’t changed the factory settings, you can find these on a label on the back of your router. If you have changed the network name and/or password, use your new values. (See Chapter 7 if you want to change your wireless settings).
If you want to connect devices to a Guest Network, use the Network Name and Password for that network. (See Chapter 7 if you want to set up a Guest Network).

Wireless devices vary, but they all have a Wireless Settings area. There you should first select the wireless network you want, namely the wireless network name or Guest network name of the MR1900. Now enter the password for your wireless network. Make sure to turn wireless ON for each client device.
Setting up an HDTV, Streaming Media Device, or Other Device

A typical HDTV, for instance, has an Input or Setup section. Within that section there’s normally a Network section. In that section you may need to specify that you have an Ethernet connection if that’s how you connect to the MR1900. If you want to connect wirelessly to the MR1900, you’ll need to select its wireless network name and then enter its wireless password.
Accessing the Configuration Manager by Using a Browser

Model MR1900 has a Configuration Manager that provides a lot of technical information about Model MR1900 and that tells you how to do some useful things. Please note that some users will never need to use the Configuration Manager.

You can access the Configuration Manager from a computer or any other device that has a browser if it is connected via Ethernet or wirelessly to your router. If you will be changing wireless settings, it's much better to use a device that connects via Ethernet while you make these changes.

To access the Configuration Manager, do the following:

1) Open your browser.
2) Type 192.168.1.1 into your browser's address bar and press Enter.
You should see this page:

Motorola MR1900

admin

Password

Sign in

You can find your username and password on your router’s back label.

3) Type motorola in the Password field.
4) Click the Sign in button.
The Dashboard page below appears:

The Dashboard page gives you information about your Internet connection, and the current throughput you are getting through your Internet and Wi-Fi connections.
Saving Your Changes

When you change settings, the Pending Changes message appears at the bottom of the browser window, showing the number of changes waiting to be applied. Click **Apply** to save and implement your changes. If you click **Cancel**, a confirmation dialog box appears at the top of the screen. Click **OK** or press **Enter** to close the box.

To view a list of your unsaved changes, click the message. The Unsaved Changes pop-up window appears.

![Unsaved Changes](image)

To remove changes from the list, click the trashcan icon next to the change. This will undo the change.

The following sections in this guide will walk you through the features that users most often want to configure.
Configuring Your Router for a PPPoE or Static IP Connection

Most users should not configure their router for PPPoE or Static IP connections.

If you do not know that you have a Static IP connection, than most likely you don’t. Typically you have to request and pay extra for a Static IP connection. If you know you have a Static IP connection and want to learn how to configure it, skip ahead to Configuring your Router for a Static IP connection.

If you have a VDSL or ADSL connection and are using PPPoE, you can either terminate the PPPoE connection in the modem supplied by your provider or in the router. Terminating the connection in the modem is easier and does not require any additional setup of the MR1900. If you experience problems connecting applications such as games, you may need to put your modem in bridge mode and terminate the PPPoE connection on your router. For instructions on how to do this, continue reading below.

Configuring Your Router for a PPPoE Connection

To configure PPPoE, first log into the Configuration Manager as described in chapter 5. In summary, you type 192.168.1.1 in the address bar of your browser, go to that address, enter the Password motorola then click the Sign in button.

Before configuring the Model MR1900 for PPPoE mode, it is necessary to make sure that the modem given to you by your provider is in Bridge mode. Refer to your modem’s documentation on how to do this. Before switching the modem from PPPoE mode to Bridge mode, write down the PPP username and password your modem is using. You will need to enter these values into your Model MR1900.
To setup a PPPoE connection for the MR1900, follow these steps:

1) The first time you login you should be taken to the Basic Setup page. If you are not on the Basic Setup page, click Admin then Basic Setup.
2) Click the Start Setup button to launch the setup program.
3) On the next page select PPP over Ethernet in the Configuration Method drop down box. A dialog box appears telling you to reboot the router after configuring PPPoE.
4) Click OK.
5) The Username and Password fields appear. Enter the username and password. If you were unable to get these values from your existing modem you should ask your service provider for them.
6) Click Apply.
7) On the next page you can change your wireless network name (SSID) and password. If you want to change your wireless network name and password, enter the new values and click Apply. If you want to keep the existing values, click Skip.
8) On the next page, you can change the password used to log into your router's Configuration Manager. For security reasons we recommend that you change this password. To do this enter motorola for the current password box and then your new password in the New Password box. Reenter the password in the Reenter password box. If you do not want to change the password you can enter motorola in both boxes to keep the existing password.
9) When the Congratulations box appears, click Done to complete your installation.
10) Go to Admin / Reboot and click the Reboot button to reboot your router. This activates the PPPoE connection.
Configuring Your Router for a Static IP Connection

In the unlikely event that you want to configure a Static IP connection, first log into the Configuration Manager as described in chapter 5. Go to that address, enter the Password motorola, then click the Sign in button.

Next select Network then Internet WAN. The following page appears:

To set your router up for a Static IP connection, change the Configuration Method drop down box to Static Address, then enter the IPv4 address and subnet mask provide to you by your service provider and click Apply.
Changing Wireless Settings

The MR1900 comes set up with WPA2 security, with a unique wireless network name (SSID) and a unique password. There’s a good chance that you’ll want to use these settings. In that case wireless devices connecting to the Primary Network on your MR1900 will use the same wireless network name and password. (You may want to enable a separate Guest Network for visitors and others for whom you want to provide Internet access without also providing access to your computers and other devices connected to your network.)

You may want to change the wireless settings on the Primary Network. The most common reason is that you’re replacing a router and you want to use the same wireless network name and password that you’ve had. If you change the wireless settings on your MR1900 to match your previous settings, you won’t have to change the settings of wireless devices that worked with your previous router.

Another reason might be because both the 2.4 GHz and 5 GHz wireless bands use the same wireless network name and Password. This allows your wireless device to select the best band for establishing a connection. Making the wireless network names unique to each band allows you to force certain devices - for example devices that are near the MR1900 and that stream video - onto the faster 5 GHz network and to have all other devices connect on your 2.4 GHz network. To do this, you will need to give each band a unique name.

Unless there’s a good reason to change your wireless SSID/Network Name and Password/Key settings, you should use the unique ones assigned at the factory.
To Change the Wireless Network Name (SSID) and Password

To configure your wireless settings, first log into the Configuration Manager as described in chapter 5. In summary, you type 192.168.1.1 in the address bar of your browser, go to that address, enter the Password motorola, then click the Sign in button.

To change the Wireless Network Name (SSID) and Password on the 2.4 GHz band click on WiFi than 2.4 GHz Wireless.

To change the wireless network name (SSID) and password for the 5 GHz band, select WiFi then 5 GHz Wireless.

Scroll down the page until you see the following section:

Enter the new name of your wireless network in the SSID box and your new password in Key field and click Apply.

Be sure to write down and save the new wireless network name and password in a place where you can easily find it. One approach is to write it on a small piece of paper and tape it on the bottom of your router. Some people like to take a picture of the settings with their phone, which is fine as long as long as they save it in a place where they are sure to find it when they need it.
Wireless Guest Network

You can enable the Guest Network to let friends use your Internet connection without giving them access to other devices on your network.

To set up a Guest Network, first log into the Configuration Manager as described in chapter 5. In summary, you type 192.168.1.1 in the address bar of your browser, go to that address, enter the Password motorola, then click the Sign in button.

Select WiFi then Guest Wireless. Click on the Enable button to enable the guest network. The following page will appear:

**Guest Wireless**
Configure your guest wireless network

**Guest SSID Configuration**

**Enabled**
Turn this wireless network on/off

**SSID**
Wireless network ID

**Encryption**
Choose between supported encryption modes and cyphers

**Key**
Preshared key/passphrase

You can change the Wireless Network Name (SSID) and Password for the guest network on this page. Click Apply to enable your guest network.
Configuring File Sharing

The MR1900 allows you to share files across your network. These files can be stored in the cloud using a Box.com account or on a USB drive attached to your router. To use Box.com, first set up the Box.com account on your router as described below. If you want to use a USB drive skip ahead to Configuring a USB Drive for File Storage.

Configuring Your Cloud Storage

To set up a Cloud Storage, first log into the Configuration Manager as described in chapter 5. In summary, you type 192.168.1.1 in the address bar of your browser, go to that address, enter the Password motorola, then click the Sign in button.

To configure your router to connect to Box.com, click on Services then Cloud Storage. The following page appears:

Cloud Storage
Cloud Storage by box.com. Don’t have a box.com account? Register here.

Cloud Storage Configuration

Enabled

Username

Password

If you have not set up an account with Box.com, click Register here to setup a free account on Box.com.

To connect to your Box.com account click on the Enabled button and enter your Username and Password. Click on Apply to save your settings.
Configuring a USB Drive for File Storage

To set up a USB Drive, first log into the Configuration Manager as described in chapter 5. In summary, you type 192.168.1.1 in the address bar of your browser, go to that address, enter the Password motorola, then click the Sign in button.

Select Services then File Sharing. The following screen appears.

To set up File sharing, first you need to know what devices you want to share. If you have a USB drive plugged into the USB 2.0 port on the back of your router enable USB1, and if you have a USB device plugged into the USB 3.0 port on the side of your device enable USB2. If you
have set up a Box.com account that you want people on your network to access, enable the Box drive. If you enable box.com, cloud storage must be set up and enabled as described above.

If you are using both USB ports, we recommend using the higher speed USB2 drive for videos or other files that you want faster access to, and using USB1 for files that you access less frequently.

When enabling your devices you can set the device to either Read access or Read/Write access. Set Read access if you want people on your network to be able to access your files but not change them. If you want to allow people on your network to be able to store or modify files on your drives, enable read/write access.

After you enable access to your USB devices you may want to change the username and password to protect these files. By default the username is **samba-user** and the password is **samba-pass**.

For most users, the default settings for Network Name, Device Name, and Description do not need to be changed.

Click on **Apply** to save your settings.

### Accessing Your Files from a Windows Computer

To access files from your windows computer, open File Explorer which is usually located on your task bar. On the left hand side of the window, click on **Network**. If file sharing is not turned on, Windows will pop up a message telling you that Network Discovery and File Sharing are not enabled (see page below), click on the yellow bar and select Turn on Network Discovery and File Sharing.
Once you enable File Sharing, the MR1900 will appear as a device on your network. Click on MR1900 to access the files stored on either the USB drives or Box.com.
If you select a USB drive you will be prompted for your username and password. Unless you changed these when setting up file sharing, enter the default values of samba-user and samba-pass.

**Accessing Your Files from a Macintosh**

To access your files from a Macintosh computer, on the Finder bar, select Go, then Network Devices. The MR1900 should appear under shared devices. To connect to the MR1900 select it, and the click on the Connect As button. A dialog box appears asking for your username and password. Unless you changed these when setting up file sharing, enter the default values of samba-user and samba-pass. You now have access to your stored files.
Accessing Your Files from a iPhone, iPad, or Android Phone

To access your files from your iPhone, iPad or Android phone you will need to install an app. We recommend using VLC Media Player. VLC Media Player is a free, open source app that can also serve as a DLNA client if you want to access multimedia files as described in Chapter 9 Setting up the MR1900 as a Media Server. The directions below are shown on an iPhone, but the same steps apply to an iPad.

Install the app from iTunes or Google Play. Launch the app and click the menu icon. The menu icon looks like this on your iPhone 📀, and like this 📁 on your android phone.

Select Local Network.
You will see MR1900 on the next screen. Select MR1900, and then a dialog box appears asking for your username and password. Unless you changed these when setting up file sharing, enter the default values of samba-user and samba-pass. You now have access to your stored files.
Using the MR1900 as a Media Server

By default, the MR1900 can act as a media server to devices on your network using either one of the USB drives. The MR1900 uses DLNA to allow multimedia files to be played from your USB drive.

Playing Media Files in Windows

To access media files in Windows, you can use Windows Media Player. Open Windows Media player, and you should see MR1900 DLNA player listed under Other Libraries. Click on MR1900 DLNA player to access and play media files stored on the drives attached to your MR1900.

Playing Media Files on a Macintosh, iPhone, iPad, or Android Phone

To access media files on your Mac, iPhone, iPad, or Android phone, you need to install a DLNA player. We recommend using VLC Media Player, which is a free, open-source DLNA player. Full documentation for using VLC Media Player can be found on www.videolan.org.

On a MAC, iPhone, or iPad, start VLC Media Player. Under Local Network click on Universal Plug ‘n’ Play and you will see MR1900 DLNA Player. Click on MR1900 DLNA Player. Now you can view or play any media files stored on your MR1900’s attached storage.

On an Android device start VLC Media Player. Under Local Network click on MR1900 DLNA Server. From here you can view or play any media files stored on your MR1900’s attached storage.
**Parental Controls**

The MR1900 allows you to set up time based access rules to block devices that you choose from accessing the internet during set times. To enable parental controls, first you set up the times that you want to block, than you create a group name, and finally you add the devices to the group.

To set up the access schedule, first log into the Configuration Manager as described in chapter 5. In summary, you type 192.168.1.1 in the address bar of your browser, go to that address, enter the Password motorola, then click the Sign in button.

Select **Network / LAN / File Sharing.** The following screen appears:

![Access Schedule](image)

Click + to add a new Access Schedule. A dialog box will appear asking you to give the schedule a name. Enter a friendly name for the Access Schedule and click OK. The screen below appears. You can set up the times to limit access on this screen.
### Access Schedule Details for Kids Devices

|       | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Monday|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Tuesday|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Wednesday|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Thursday|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Friday |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Saturday|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Sunday |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

### Daily Pause Times

- 09:00 - 10:00
- 09:00 - 10:00
- 09:00 - 10:00

### Monday Pause Times

- 07:00 - 07:59
- 09:00 - 10:00
- 09:00 - 10:00

### Tuesday Pause Times

- 09:00 - 10:00
- 14:00 - 15:00
- 09:00 - 10:00

### Wednesday Pause Times

- 09:00 - 10:00
- 09:00 - 10:00
- 09:00 - 10:00

### Thursday Pause Times

- 09:00 - 10:00
- 09:00 - 10:00
- 09:00 - 10:00

### Friday Pause Times

- 09:00 - 10:00
- 09:00 - 10:00
- 09:00 - 10:00

### Saturday Pause Times

- 09:00 - 10:00
- 09:00 - 10:00
- 09:00 - 10:00

### Sunday Pause Times

- 09:00 - 10:00
- 09:00 - 10:00
- 09:00 - 10:00
In this example, an Access Schedule named Kids Devices is created to block Internet access from 7 am to 7:59 am on Monday and from 2 pm to 4 pm on Tuesday. Times are entered on this screen in 24 hour format. For example 07:00 is 7 am, 14:00 is 2 pm, etc.

Time is blocked off in 1 hour increments. Setting 07:00 to 07:59 blocks off 1 hour. If you set 07:00 to 08:00 you would block off 2 hours, since 08:00 is the start of a second hour. If you want to block off all 7 days you can enter the time under Daily Pause Times. After entering the times you want to block off, click Apply to save your settings.

Once you have completed setting up the access schedule, the next step is to create a device group. To create a device group click on Device Groups to bring up the Device Groups page. Next click on the + symbol to add a new device group. Give your Device Group a friendly name, and assign it the schedule rule you just created. In the example below we created the Device Group Kids and assigned it the access rule Kids Devices. Click Apply to save your new Device Group.
The final step to setup your time based rule is to assign devices to your Device Group. First click on Devices. A list of Devices connected to your router will appear. For each device you want to add to your Device Group select the group from the drop down menu. In the example below the device SON-PC was added to the Device Group Kids. This PC will be blocked from accessing the Internet on Mondays from 7-7:59 am and on Tuesdays from 2-5pm. Devices that are not assigned to a group will be shown as unassigned.

<table>
<thead>
<tr>
<th>Label</th>
<th>Group</th>
<th>Hostname</th>
<th>Interface</th>
<th>IP Address</th>
<th>MAC Address</th>
<th>OUI</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kids</td>
<td></td>
<td>SON-PC</td>
<td>lan2</td>
<td>192.168.1.125</td>
<td>D4:8E:D9:24:BC:A6</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>unassigned</td>
<td></td>
<td>Samsung-Galaxy S7</td>
<td>wifi5G</td>
<td>192.168.1.188</td>
<td>2C:0E:24:67:2E:71</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
Tuning Wireless Performance

This chapter discusses steps to tune wireless performance. These steps can optimize wireless performance in many cases.

First, note that placement of your MR1900 can be very important. Make sure it is not too close to other wireless devices like Bluetooth transmitters (such as ones used for Bluetooth headsets), a microwave oven, or a neighbor’s wireless router. For example, in an apartment an MR1900 could be only feet away from a neighbor’s device on the other side of a shared wall. Be aware of other wireless devices located near your router. If you have a printer that supports wireless and you are not using the wireless feature of the printer, you should turn off the wireless signal on your printer so it does not interfere with your router.

There are also optimizations you can make by using the MR1900’s Configuration Manager.

To optimize wireless performance, check channel usage of neighboring devices. You can do this by performing a wireless scan to see what channels other wireless devices are using.

To perform a wireless scan, log into the Configuration Manager as described in chapter 5. In summary, you type 192.168.11 in the address bar of your browser, go to that address, enter the Password motorola, then click the Sign in button.
Select **WiFi then** Scan. Click on the scan button.

The wireless networks found by your device will be shown in Networks found table.

![Wireless Network Scan](image)

Note that as in these sample Scan Results, you may need to scroll down to see all neighboring networks.

**For the 2.4 GHz band:**

Look at the Channel column. This shows the channels that your neighboring networks use. Available channels are 1 through 11. Many installations use only channels 1, 6 or 11, because ideally wireless devices should be separated by 5 channels.

If there are very few neighboring wireless devices in your location, you should follow the rule of choosing a channel separated by 5 from all other channels. For example, if there are two neighboring networks using channels 6 and 11, you should choose channel 1.
If there are many neighboring networks, you may find that most use channels 1, 6 and 11. In that case, you may find you achieve better performance by choosing an unused channel between the most-used channels, for example one of channels 3, 4, 8 or 9. You may need to experiment to find the best channel. Note good candidate channels to use for your network.

Then, select WiFi / 2.4 GHz Wireless. Turn off Auto Channel to select a new channel. Select the desired channel from the Channel pulldown, and click Apply. Wait for a minute or so for client devices to resynchronize to the new channel.

Check to see whether wireless performance has improved. If not, you can try another channel selection or use Auto Channel.

For the 5 GHz band:

Look at the Channel column. This shows the channels that your neighboring networks use. Available channels include 36 – 48 and 149 – 165. Some channels from 52 – 144 may also be available; however, these channels may be allocated to uses including weather RADAR and other government sanctioned applications. Note that this channel list may change do to your country’s regulations.

As of this writing (Spring of 2017) it is unusual for the 5 GHz band to be crowded. If it is crowded in your location, choose a channel or channels that are unused or little used by neighbors. Then, navigate to the WiFi / 5 GHz Wireless page. Select the desired channel from the Channel pulldown, and click Apply. Wait for a minute or so for client devices to resynchronize to the new channel.

Check to see whether wireless performance has improved. If not, you can try another channel selection or use Auto Channel.
Changing Your Login Password, and Resetting to Factory Defaults

Changing Your MR1900’s Password

To change the password used to log into your router, first log into the Configuration Manager as described in chapter 5. In summary, you type 192.168.1.1 in the address bar of your browser, go to that address, enter the Password motorola, then click the Sign in button.

Click on Admin then Password. Next click on the Change Password button. You will need to enter the Current Password, and then the new Password. Your new Password will have to be entered twice. Click the Change Password button to go ahead and change your password.

Caution: Once you make this change, you will not be able to log into the modem if you forget the new password. To recover, you will have to reset the router to factory defaults. When you reset the device to factory defaults, you will lose all changes you have made to the modem. We suggest that you put a label on your router with the new password.

Resetting to Factory Defaults

There may be occasions when you need to reset your MR1900 to factory defaults, for example if you have changed the Password and lost the new values. Note that if you reset your device to its factory defaults, you will lose any changes you have made to settings in the device.

To reset to factory defaults:

1.) Make sure the MR1900 is powered on.
2.) Find the reset button on the rear of the unit. It is marked Reset.
3.) Use a paper clip to press the Reset button for at least 2 seconds.
4.) The device will flash its LEDs and commence a reboot sequence.

Note that you will have to manually re-enter any required changes.
Troubleshooting Tips

Why can’t I connect to the Internet after installing my router?

Check the lights on the top of your router. By default the Power, WAN, Internet, 2.4 GHz and 5 GHz lights should be on. If you plugged a computer into one of the 4 Ethernet ports, then the corresponding Ethernet light should be on.

If none of the lights is lit, then:

• Check that the power cube jack is correctly plugged into the router and that the power cube is plugged into a live outlet. Check that the power switch is On.
• Switch off your router for 8 seconds and then switch it back on. If the lights do not turn on, contact us as described in the “We like to help” section.

If both the WAN and Internet lights are off:

• Verify that the cable between the router and modem (or Ethernet jack if connecting to an in-building network) is plugged into the router’s WAN jack.
• If you’re using a modem, check that it’s powered up and connected to the Internet.
• Check that the modem that the router is plugged into is powered on and connected to the Internet.

If the MR1900’s WAN light is on but the Internet light is off:

• If the MR1900’s WAN light is on but the Internet light is off, you are connecting to your modem (or external network) but not to the Internet. Typically this means your router is not getting an IP address. To force the IP address, turn off your modem, router, and any computer
connected to the router. Now power on the modem and wait until it connects to the Internet. Next, power on the router and wait 2 minutes. Then, power on your computer.

- If you are installing the router at the same time as a new cable modem you may have to wait up to 15 minutes for the cable modem to connect to the Internet

**My 2.4 GHz and 5 GHz lights are off:**

- If these lights are off, it means the router’s wireless signal is off and any devices trying to connect to the Internet wirelessly will not work. To turn your wireless network on, press the Wi-Fi button on the side of your router.

**My lights are correct but I still can’t access the Internet.**

- Try using another device to access the Internet. If you are using a computer plugged into the router’s Ethernet port, try connecting to the router with a wireless device such as your mobile phone. As a reminder, the Wi-Fi SSID/Network Name and Wi-Fi Password/Key are printed on the label on the back of your router.
- Your computer might not be set up to use the router as its gateway. Restarting your computer will force it to receive the correct gateway information from the router.
- Verify that your modem or external network is connected to the Internet. Plug a computer directly into your modem or external network and check that your service is working.
What if I am connected wirelessly but my connection seems slow or keeps dropping?
Please re-read the Wireless Performance section earlier in this manual.

What if I don’t know my MR1900’s Wi-Fi SSID/Network Name or Wi-Fi Password/Key?
The default values are printed on the back label. Use these unless you changed them. If you changed them, and you have a device that connects wirelessly to the MR1900, it may show the Wi-Fi SSID/Network Name and Wi-Fi Password/Key. You can also find this information in the MR1900 Configuration Manager. Information about using this is in the Configuration Manager section above.

If all else fails, reset the device to factory defaults by holding the Reset button for 8 seconds. You can then use the default values.

What if I think that wireless devices are interfering with my MR1900 wireless router?
• Where possible, put the MR1900 as far away as possible from interfering devices such as microwave ovens, Bluetooth transmitters and neighbors’ Wi-Fi routers.
• Try to pick a less used wireless channel for your MR1900. See the Tuning Wireless Performance chapter in this manual.
Support

We like to help

Please visit our support Website or call our support specialists. Our Website has our Motorola Mentor information, and also provides returns and warranty information.

www.motorolanetwork.com/support

Email: support@motorolanetwork.com

Phone:
In the US and most other countries:
   800-753-0797 or +1 617-753-0562
UK:    +44 800 023 9083
Spain: +34 900 839 783

Limited Warranty
MTRLC LLC warrants this product against defects in material and workmanship for a warranty period of 2 years. To read the full warranty, please go to www.motorolanetwork.com/warranty
Compliance

Safety Precautions

These precautions help protect you and your MR1900.
This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

- Do not put the MR1900 or its power cube in water, since this is a shock hazard.
- Protect the MR1900 from moisture and be careful about temperature.
- Your MR1900 should be operated in an environment that's between 32 and 104° Fahrenheit (0 to 40° Centigrade).
- Your MR1900 should not be in a confined space. There should be room for air flow around the top, front, and sides of the MR1900.
- Make sure to use your MR1900's power cube and a compatible electrical outlet.
- MOTOROLa and MTRLC assume no liability for damage caused by any improper use of the router.

FCC and Industry Canada Statement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. This device complies with Class B Part 15 of the FCC Rules, Industry Canada ICES-003, and license-exempt RSS standards. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cet appareil numérique de la class B est conforme à la norme NMB-003 du Canada. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes: (1) l’appareil n’édit pas produire de brouillage, et (2) l’utilisateur de l’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

Note: this equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This
equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: reorient or relocate the receiving antenna, increase the separation between the equipment and receiver, connect the equipment into an outlet on a circuit different from that to which the receiver is connected, and/or consult the dealer or an experienced radio/TV technician for help.

FCC and IC Radiation Exposure Statement:
This equipment complies with radiation exposure limits and should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Le présent appareil est conforme aux limites d'immunité contre les interférences émises par les appareils de ce type.

~ Input supply voltage is from AC outlet (mains), disconnect device from outlet to remove power.

Double-insulated, does not require a connection to Earth ground.

WEEE is a directive in the EU that designates safe and responsible collection, recycling, and recovery procedures for electronic waste.

MTRLC LLC
PO Box 121147
Boston, MA 02112-1147

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