MX1200
Range Extender
User Manual

Power

Too Far

Too Close

Good

Keeping you connected

motorola

NOTICE

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 MX1200 in or near water, since this is a shock hazard.
- The MX1200 should normally be installed indoors.   If you use it outdoors, protect it from moisture and be careful about temperature.
- Your MX1200 should be operated in an environment that's between 32 and 104° Fahrenheit (0 to 40° Centigrade).
- Your MX1200 should not be in a confined space. There should be room for air flow around the top, front, and sides.

Table of Contents

Introduction

The Motorola Model MX1200 is an 802.11ac Range Extender with a built-in Gigabit Ethernet port. This model connects wirelessly to any WiFi router to extend the range of your WiFi network. Model MX1200 can also connect Ethernet-capable devices back to the router through the MX1200's WiFi connection to the router, a big advantage for computers, HDTVs, game stations, and other devices when they don't have WiFi capability.

Basic installation instructions for Model MX1200 are in the Quick Start that comes with Model MX1200 and that is duplicated in Chapter 2 of this User Guide.

Model MX1200 has a Configuration Manager that provides technical information about Model MX1200 and that tells you how to do some useful things as summarized below. <u>Please note that some users will never need to use the Configuration Manager.</u>

Chapter 3: Connecting Devices to Your Range Extender
Chapter 4: Accessing the Configuration Manager by Using a Browser
Chapter 5: Changing Wireless Settings
Chapter 6: Blocking or Limiting Access to Your Range Extender
Chapter 7: Changing the Password or Resetting to Factory Defaults
Chapter 8: Troubleshooting Tips

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Quick Start

Let's get started

You can install your MX1200 with 3 easy steps.

- Make a wireless connection between the MX1200 and your WiFi router. Your WiFi router may be a stand-alone router, or it may be bundled with a cable modem, DSL modem, or other Internet access device.

- Find a good location for your MX1200.

- Set up a wireless connection between your wireless devices and the MX1200.

1   Make a wireless connection to your router

Which band to use?

The MX1200 has 2.4 and 5 GHz bands, and it can connect back to your router with either band if your router supports both bands. (Many routers only support 2.4 GHz, but that's okay.)   By default, the MX1200 is set for 2.4 GHz, and for most people this is the best choice.   In the unlikely event that you want to try 5 GHz, set the Host Switch on the side of the unit to 5.   Whichever band you select for connecting back to your router, each of your wireless devices is free to connect to the MX1200 on either band.

Most routers support WPS, so they have a WPS button.   If your router doesn't have a WPS button, please go to **Option B – Set up your MX1200 without using WPS.**   Otherwise use Option A below.

![motorola logo]

Option A – Set up your MX1200 using WPS

1. Check that your router is on, and that the MX1200's **On/Off** button is in the **On** position. Plug the MX1200 into an electrical power outlet that is near your router, preferably in the same room. (You will move it later.)

2. Wait for the MX1200 to have the **Too Close** and **Too Far** red lights flashing simultaneously. This may take up to 35 seconds after the MX1200 powers on.

3. Press the **WPS** button on your router.

4. Press the **WPS** button on your MX1200 for at least one second.

5. Wait until one of the MX1200 range lights is lit solid. When that occurs, go to **Choose the MX1200's location**. If the range lights continue to flash, please try **Option B** below.

Option B – Set up your MX1200 without using WPS

You only use Option B if you don't have a WPS button or if Option A didn't work. With Option B you set up the MX1200 by using an Ethernet or wireless connection from the MX1200 to a SETUP DEVICE - any computer, tablet, smartphone, or other device that has an Internet browser.

1. Make sure that the Setup Device is ON and is not connected to the Internet. You may need to unplug an Ethernet cable or disconnect a WiFi connection.

2. Be sure that the MX1200's **On/Off** button is in the **On** position. Plug the MX1200 into a power outlet that is near your router. (You will move it later.)

3. Wait until you see the **Power** light on steady white and the **Too Close** and **Too Far** red lights flashing simultaneously. This may take up to 35 seconds after the MX1200 powers on.

4. Now connect your Setup Device to the MX1200. If the Setup Device has an Ethernet port, you can connect the included Ethernet cable between the Setup Device's Ethernet Port and the MX1200's Ethernet jack.   If instead you want or need to use wireless for the connection, first look

for **MOTO-EXT** or **MOTO-EXT5G** in the list of wireless networks shown in the wireless settings section of your Setup Device. Select **MOTO-EXT** or **MOTO-EXT5G to connect your Setup Device**.

5. Your browser may open automatically to the WiFi Extender Login screen. If not, open the Internet browser of your Setup Device. Then, type **SetupExtender.net** in the address field and press **Enter**.

At the Login prompt, enter **motorola**.

6. The Quick Setup page will appear. Click **Start** at the bottom of the page.

7. A list of available wireless networks will be displayed. Select your router's wireless network and then click **Next**. Enter the **Wireless Key/Password** for your router's wireless Network and then click **Finish**, MX1200 lights will flash, and after about 15 seconds you should get a Congratulations message in your browser. Click **Ok** in the browser. Option B setup is successful!

Whether you used Option A or Option B above, your MX1200 should now be setup for linking to your router. Please continue to section 2 below.

2   Choose the MX1200's location

A good location for the MX1200 is typically between the router and a place where you want better WiFi reception. The location is not near your router, but not so far away from the router that there's a bad WiFi connection back to the router. In many cases a good place is close to the place where you want better WiFi reception.

1. Plug the MX1200 into a wall outlet in a place that you think should work best.

2. Wait about 20 seconds while the MX1200 starts up. The range lights will scroll back and forth, searching for and connecting to your router. After roughly another 20 seconds, the scrolling will stop and the signal quality will be shown.

Check the light status, using the chart below. Ideally the **Good** light will

be solid green and you can move on to step 3 below. If the Good light isn't solid green, move the MX1200 to a different wall outlet, using the MX1200 lights' advice. If the lights continue to scroll after 2 minutes, then you are out of range of your router; so you should move the MX1200 to an outlet closer to the router.

Your location does not need to be perfect. Good (green) is the ideal location. A Little Too Far (amber) and A Little Too Close (amber) will also work well. Sometimes even Too Close (red) works fine, but if possible you should move the MX1200 farther from the router. Too Far (red) means that you should move the MX1200 closer to your router if possible.

Note that it is normal for the lights to change occasionally. This is because wireless signals can vary due to factors such as interference from other wireless networks. However, the Too Far light means that you should move the MX1200 closer to your router if possible.

Light Indications
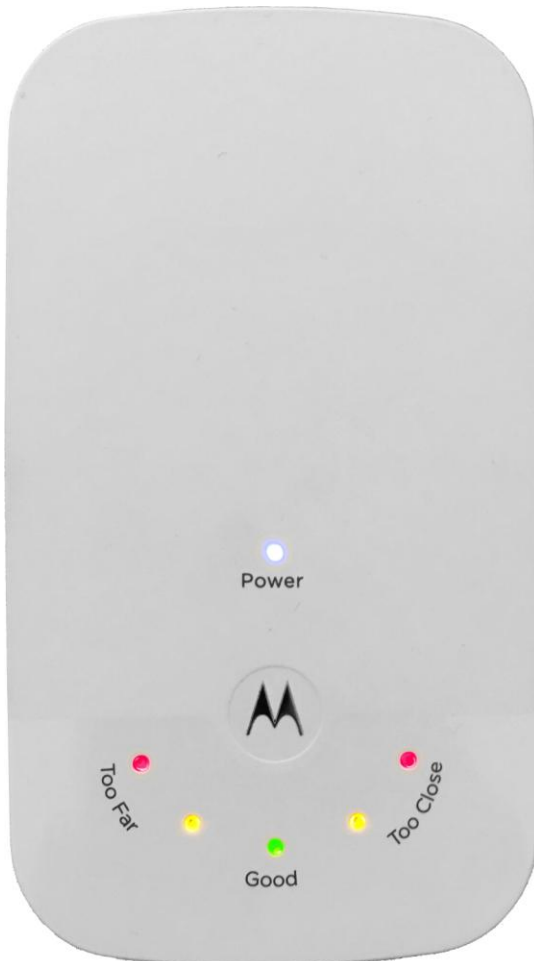
Too Close - red
Move the MX1200 away from your router.

A Little Too Close - amber
If possible, move your MX1200 a little farther from your router.

Good - green
Router signal strength is good. This is the ideal location/distance for your network.

A Little Too Far - amber
If possible, move your MX1200 a little closer to your router.

Too Far - red
Move the MX1200 closer to your router.

Note: the lights will not all be on at the same time.

Lights scrolling - trying to establish a connection to the router. If the lights continue to scroll and do not settle on one steady light, your MX1200 is too far away from the router. Move it to a power outlet that is closer to the router and try again.

Too Close and Too Far blinking simultaneously – The MX1200 is not configured to connect to your router. Go back to step 1 above.

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3   Connect with other WiFi devices

Go to the wireless setup section of your computer, smartphone, tablet, or other wireless device, and there you should select which of the two MX1200 wireless networks (2.4 or 5 GHz) you wish to use for that device. Here are some guidelines:

• If the device is a smartphone or tablet and you have a big home, 2.4 GHz may be a good choice.

• If the device is an HDTV or game station and it has 5 GHz wireless capability, 5 GHz is probably a good choice.

• Otherwise you should probably try 5 GHz first if your device support that, and try 2.4 GHz if 5 GHz doesn't work well.

Once you decide whether to use 2.4 or 5 GHz, it's easy to find the right network name in the wireless setup section. If your router's network name is MOTO15EC, for example, the network name for the MX1200's 2.4 GHz band is MOTO15EC-EXT and the connection for the MX1200's 5 GHz band is MOTO15EC-EXT5G. Select whichever network you want, and then enter the wireless password/key. This password/key is the same wireless password/key used for your router.

![motorola logo]

Some Useful MX1200 Controls, plus an Ethernet Port

WPS button

The WPS button was discussed in Option A of Step 1 above. The WPS button is used to establish a wireless connection to your router. It is not used to connect to your wireless devices.

Reset

Between the Host switch and the WPS button is a Reset button. If you have forgotten your password, or if your MX1200 stops working, you can reset to the original factory settings. With the MX1200 plugged in and switched on, press the Reset button for one second to restore it to factory defaults.

Host Switch

Next to the Ethernet port is a switch that sets the frequency band that your MX1200 uses to connect to the host router. By default, your MX1200 uses the 2.4 GHz band since almost all routers support 2.4 GHz. This frequency also works farther from the router. The downside of 2.4 GHz is that it's not as fast as 5 GHz when the router and MX1200 are near each other.

If you have a dual band router, the 5 GHz band may give enhanced performance. Often there is reduced wireless congestion on the 5 GHz frequency. Selecting the 5 GHz band may reduce the MX1200's range, so you may need to move the MX1200 closer to your router. To change bands, unplug the MX1200, move its Host Switch to 5, and follow the steps in Make a Wireless Connection above.

Ethernet Port

The MX1200 Gigabit Ethernet port can be used with the enclosed Ethernet cable during installation as described above. The Ethernet port can also be used to provide a router connection to an Ethernet-capable device.

Connecting Devices to Your Range Extender

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

You can connect these devices to the MX1200 either with an Ethernet cable (a wired connection), or via WiFi (a wireless connection). In either case, the MX1200 connects to your router using WiFi.

You typically connect smartphones and other WiFi-capable mobile devices to the MX1200 by using WiFi. You should use an Ethernet connection to the MX1200 for devices that have an Ethernet port but not WiFi. You may also want to use an Ethernet connection for a computer or HDTV that stays in one place.

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 Range Extender, plug the other end of the cable into the Range Extender's Ethernet jack.

Connecting a Smartphone, Tablet or Other Wireless Device via WiFi

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 your router's network name is MOTO15EC, for example, the network name for the MX1200's 2.4 GHz band is MOTO15EC-EXT and the connection for the MX1200's 5 GHz band is MOTO15EC-EXT5G. Select whichever network you want, and then enter the wireless password/key.

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This password/key is the same wireless password/key used for your router.

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 of the MX1200. Now enter the password for your wireless network. Make sure to turn WiFi ON for your wireless device. Normally that's all you need to do.

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 MX1200. If you want to connect wirelessly to the MX1200, you'll need to select its wireless network name and then enter its wireless password.

![motorola logo]

Accessing the Configuration Manager by Using a Browser

Model MX1200 has a Configuration Manager that provides technical information about Model MX1200 and that tells you how to do some useful things. <u>Please note that most users will never need to use the Configuration Manager.</u>

You can access the Configuration Manager from a computer or any other device that has a browser and that is connected via Ethernet or wirelessly to your Range Extender. 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.   Enter **SetupExtender.net** into your browser's address bar and press Enter.

You should see this page:
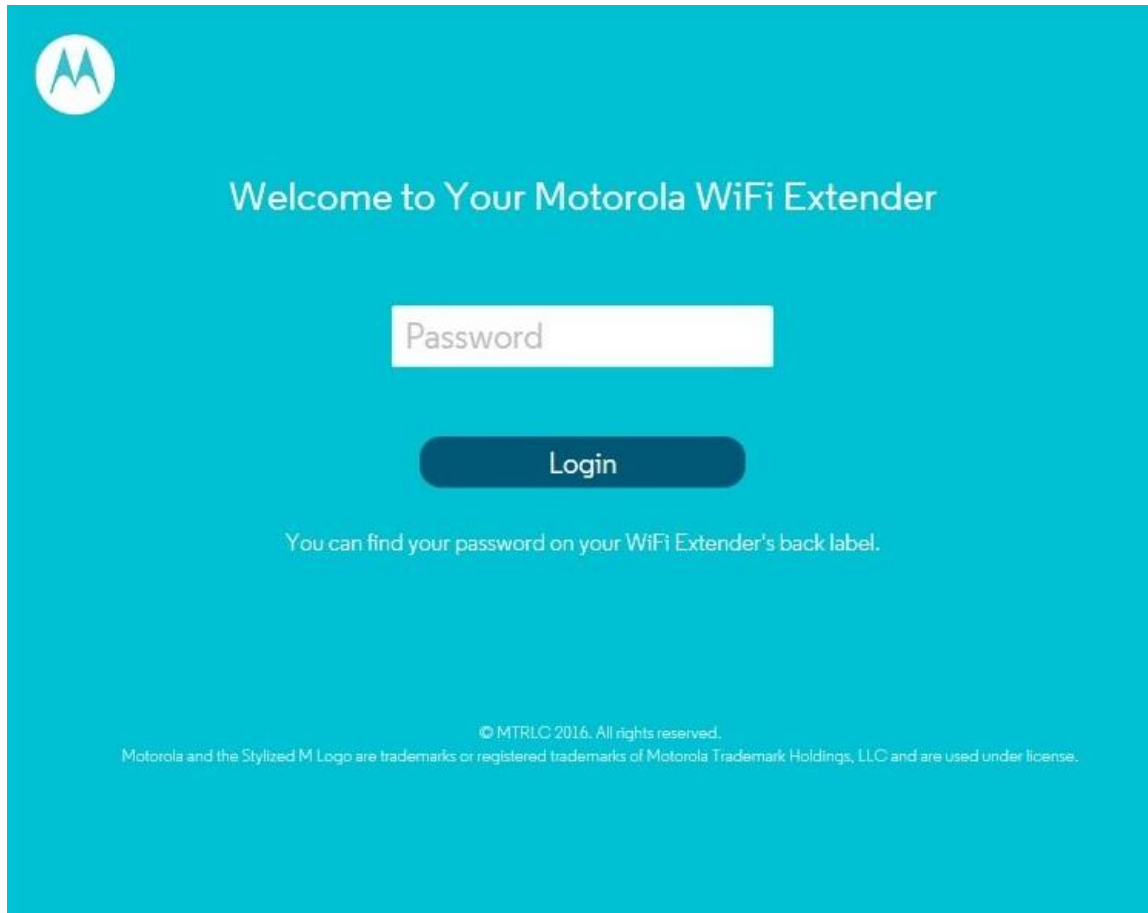
1. Type **motorola** in the Password field.
2. Click the Login button.

![Motorola logo]

This should bring you to the Quick Setup page shown below.

The Quick Setup page gives you information about your connection to your router and your extended wireless network settings. To logout of the Range Extender select Logout in the submenu.

The Advanced and System buttons at the top of the page takes you to pages with more information and options to configure your Range Extender.

Note the circled (i) 'information' icons to the right of the page. You can click an icon for descriptions of its entry:

Factory Default

This page allows you to restore the factory default configuration of your Extender.

Restore the Factory Default Configuration

Restore the Factory Default Configuration   **Restore**

Click the information icon for
a description of the entry

Click the Advanced button. Note the Menus and Submenus at the top of the page. The currently selected menu item is highlighted (top row), and submenu items corresponding to the selected menu item are displayed in the second row. The currently selected submenu item is indicated by a small white pointer underneath it.

In this screenshot, the menu item Advanced and submenu item Clients are selected.

	Quick Setup	Advanced	System
Host Network	Extended Network	WPS	Access Control	Clients

Connected Devices

Wired Devices ⓘ

#	IP Address	MAC Address	Device Name
1	192.168.1.2	BE:D4:D9:2E:71:24	Sams-PC

Wireless Devices using the 2.4 GHz Band ⓘ

#	IP Address	MAC Address	Device Name

Wireless Devices using the 5 GHz Band ⓘ

#	IP Address	MAC Address	Device Name
1	192.168.1.3	2C:0E:3D:BC:67:3D	Samsung-Gala

Refresh

The following sections in this guide will walk you through the features that users most often want to configure.

Changing Wireless Settings

When you connect the MX1200 to your router, it automatically creates a 2.4 GHz and a 5 GHz network using your wireless network name plus –EXT for the 2.4 GHz network and -EXT5G for the 5 GHz network. (It does this even if your router only supports 2.4 GHz.) For example, if your router's network name is MOTO15EC, the network name for the MX1200's 2.4 GHz band is MOTO15EC-EXT and the connection for the MX1200's 5 GHz band is MOTO15EC-EXT5G.

There's a good chance that you'll want to use these settings. However you may want to change the wireless network names to be the same as your router or you may want to have both the 2.4GHz and 5 GHz wireless network use the same name. Changing the wireless network name to the same one as your router means you don't need to configure any of your client devices to use the extended network. Changing the 2.4 GHz and 5 GHz networks to use the same name enables your client device to select the network that would give them the best performance.

To change the wireless settings, first log into the Configuration Manager as described in chapter 4. In summary, open your browser, and type **SetupExtender.net** into your browser's address bar and press Enter. On the login screen enter the password **motorola** and click the Login button.

On the main menu select Advanced and then select Extended Network.

To change the Wireless Network Name and Password

1. Select and delete the old Wireless Network/SSID, then type in the new Wireless Network/SSID.
2. Select and delete the old Password, then type in the new Password.
3. Click the Apply button.

![motorola logo] **motorola**

To use the same Wireless Network Name and Password for both bands

1. Check the box labeled Use the same SSID and security settings for both 2.4 GHz and 5 GHz bands. When you check the box, the 5 GHz Band settings will become grayed out.
2. If you want to change the Wireless Network Name and Password, enter the new settings in the 2.4 GHz Band Settings box.
3. Click the Apply button.

Blocking or Limiting Access to your Range Extender

Your Range Extender allows you to limit access to your extended wireless network. You may either block access to specific devices (Blacklist) or only allow specific devices on your network (Whitelist). Enabling Blacklisting or Whitelisting can be used to provide an extra layer of security to your device or to dedicate the full wireless bandwidth of your extender to one or more clients.

To enable blacklisting or whitelisting, first log into the Configuration Manager as described in Chapter 4. In summary, open your browser, and type **SetupExtender.net** into your browser's address bar and press Enter. On the login screen enter the password **motorola** and click the Login button.

This will bring you to the Quick Setup page. Select Advanced at the top of the screen, and then Access Control.

Blacklisting a device from accessing your Extended Wireless Network

1. The blacklist radio button should be enabled by default. If it is not, select it now.
2. Click the Add button to enter a device to blacklist. You will need to know the MAC address of the device you want to blacklist. If the device is connected to your Range Extender, you can find the MAC address by clicking on the Clients submenu.
3. Enter a name to identify the device in the Username text box and enter the MAC Address in the MAC Address text box.
4. Click the Save button.
5. Repeat steps 1-4 to add any other device you want to blacklist.

If you decide you want to delete the blacklist rule, click on the trash can icon next to the rule you just created.

Setting up a Whitelist of devices than can access your Extended Wireless Network

1. Click the Whitelist radio button.
2. Click the Add button to enter a device to whitelist. You will need to know the MAC address of the device you want to whitelist. If the device is connected to your Range Extender, you can find the MAC address by clicking on the Clients submenu. If you go to the Clients page you will need to click on the Whitelist button when you return back to the Access Control page.
3. Enter a name to identify the device in the Username text box and enter the MAC Address in the MAC Address text box.
4. Click the Save button.
5. Repeat steps 1-4 to add any other device you want to whitelist.

If you decide you want to delete a Whitelist rule, click on the trash can icon next to the rule you want to delete.

Changing the Range Extender's Password, and Resetting to Factory Defaults

Changing your Range Extender's Password

To change your Range Extender's Password, first log into the Configuration Manager as described in Chapter 4. In summary, open your browser, and type **SetupExtender.net** into your browser's address bar and press Enter. On the login screen enter the password **motorola** and click the Login button.

This will bring you to the Quick Setup page. Select System at the top of the screen, and then Set Password.

You will need to enter the Current Password, and then the New Password. Your New Password will have to be entered twice. The Password fields accept entries up to 15 characters long. Your new Password must be between 8-32 characters long.

Caution: Once you make this change, you will not be able to log into the Range Extender if you forget the new Password. To recover, you will have to reset the Range Extender to factory defaults. When you

![motorola logo]

reset the Range Extender to factory defaults, you will lose all changes you have made to the modem. In other words, you should do something to make sure you don't lose the password.

Resetting to Factory Defaults

There may be occasions when you need to reset your Range Extender to factory defaults -for example if you have changed the Password and lost the new value. 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 Range Extender is powered on.
2. Find the reset button on the unit. It is located between the Host switch and the WPS button.
3. Using a paper clip or something similar, press and hold the Reset button for 1 second.
4. The device will flash its LED lights and commence a reboot sequence.

Note that you will have to setup your Range Extender after the reset.

Troubleshooting Tips

I'm Unable to access the MX1200 when I enter SetupExtender.net

- First check that the MX1200's white Power light is on. If it is not on, the MX1200 is not receiving power.
- Check that your Setup Device is connected to the MX1200. If you are using an Ethernet cable to connect to the Setup Device, make sure it is securely plugged between the Setup Device and the MX1200. If you are using wireless to connect the MX1200 to the Setup Device, be sure no Ethernet cable connects the Setup Device to your router during this setup step. Next, make sure you are connected to one of the MX1200's wireless networks, whose network name ends with EXT or EXT5G
- Close your browser, then open it again, then enter **SetupExtender.net**
- If this doesn't work, try a different browser.

The Too Close and Too Far buttons are flashing red.

- The Range Extender has not been configured to connect to your router. Please configure it now. See Chapter 2 Quick Start for help configuring your Range Extender.

The Range lights are continuing to scroll.

- The Range Extender can't connect to the router. The Range Extender may be too far away from the router, so try moving the Range Extender closer.
- Your router may be powered off or its wireless may be turned off. Make sure your router is on and transmitting its wireless signal.

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When I connect to the MX1200, it is asking me for a Wireless Password. I don't know the password.

• Unless you change the password, the MX1200 password is the same wireless password used for your router. If you do not remember your router's wireless password, the password is usually printed on a label on your router.

None of the outlets in my house causes the good light to come on.

• Your MX1200 should still work properly. However, if the Too Far light is on, we recommend that you move the MX1200 closer to the router.

I can't access the Internet through the MX1200.

• Make sure that your Internet modem is on and has an Internet connection, and that your router is on and working. If the router is separate from the modem, check the router's connection to the modem.

• Check that your wireless device is connected to the MX1200. If your router's wireless Network name is MyNetwork then the MX1200 networks will be MyNetwork-EXT and MyNetwork-EXT5G.

• Check that one of the range lights on your MX1200 is solidly lit.

Can I connect more than on Range Extender to my Router?

• Yes, you can connect more than one Range Extender to your router. Of course you should put each Range Extender in a different location from the other Range Extenders.

Do you have any other questions? We have more information at
www.motorolanetwork.com/support

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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 Options:
In the US	800-753-0797
and most other countries	+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

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 nedoit 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.

Accessories connected to this device by the user must comply with FCC Class B limits. The manufacturer is not responsible for any interference which results from use of improper cables, or which results from unauthorized changes or modifications to the device. 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 conform aprés examen de ce matériel aux conformité ou aux limites d'intensité de champ RF, les utilisateurs peuvent sur l'exposition aux radiofréquences et la conformité et compliance d'acquiérir les informations correspondantes.

~ 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.

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