

Nexus Q Guidebook

Legal & safety information

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Edition 1.0

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FCC notice

This device complies with Part 15 of the FCC Rules. 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.

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.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications not expressly approved by Google may void the user's authority to operate the device.

RF Exposure: To comply with FCC RF exposure requirements for mobile transmitting devices, this transmitter should only be used or installed at locations where there is at least 20 cm separation distance between antenna and all persons.

This device is intended for indoor use only.

Important safety instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
9. Unplug this apparatus during lightning storms or when unused for long periods of time.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged; liquid has been spilled or objects have fallen into the apparatus; or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Nexus Q User Guide

About Nexus Q 4
Get ready 5
- Before purchasing 5
- Before it arrives 5

Compatibility 6
- Compatible Android phones & tablets 6
- Compatible routers 6

Network requirements 7
Hardware & cabling 8
- Speakers (banana plug cables) 8
- AV system or audio receiver (optical audio) 9
- TV or audio receiver (HDMI cable) 10

Set up Nexus Q 11
- Unpack carefully 11
- What's in the box 11

Run the Nexus Q app 12
LED colors 13
Volume controls 14
- Remote & direct controls 14
- Fixed volume output 14

Play music 15
- Change or add to the queue 16
- Select rooms 17
- Combine rooms 18

Play YouTube videos 19
Play movies & TV shows 20
Invite guests 21
- Before the party 21
- When your guests arrive 21
- Turn off guest access 21

About Nexus Q collections 22
Adjust settings 23
- Manual factory data reset 23
- Forget Nexus Q 23

Audio calibration 24
Specs 25
Warranty 27

For additional help and support, visit support.google.com/nexus

About Nexus Q

Nexus Q lets you instantly stream music, HD movies, and videos from Google Play to your home, using your Android phone or tablet and Wi-Fi to control what plays in which rooms.

You can use Google Play and YouTube apps as you normally would. Except now you can choose to stream entertainment through one or more Nexus Qs and the equipment attached to them.

Each Nexus Q is designed to function as a media source for one room: speakers, AV systems, TVs, and more. Each room shows up on your Android phone or tablet, where you can control what's playing and at what volume, or stream to multiple rooms at the same time.

And when friends come to visit, they can stream any of their own music or movies from Google Play through your Nexus Qs, using their own Android phones or tablets.



Get ready

Before purchasing

To play music, videos, and movies through a Nexus Q, you need:

1. A compatible Android device. See Compatible Android phones & tablets.
2. An active Wi-Fi network with a reliable connection to the Internet and a strong signal at the location where you plan to set up your Nexus Q. Where available, an Ethernet connection may provide a more reliable experience, but a good Wi-Fi network is still required. See Network requirements.
3. A compatible router for your Wi-Fi network.
4. Compatible stereo and TV equipment and the cables required to connect it. See Hardware & cabling.

To purchase Nexus Qs, speakers, cables, and other equipment, go to Google Play — Devices.

Before it arrives

After you've ordered your Nexus Q and any other equipment you need, start preparing for its arrival:

1. If you don't already have a Google Music account, set one up at play.google.com/music.
2. If you haven't yet uploaded your music to your Google Play music library, download Music Manager to your computer, open the application, and follow the instructions.
3. Decide where you want to keep your Nexus Q and what equipment you want to use with it, and make sure you have the right kinds of cables. For details, see Hardware & cabling.
4. Download and install the Nexus Q app on one of your compatible Android phones and tablets.
5. Make sure you know the name and password of the Wi-Fi network you want to use with your Android device and your Nexus Q. The Android device must use Wi-Fi. The Nexus Q can optionally use Ethernet that's on the same subnet as the Wi-FI network. For practical purposes with most home networks, this means the Ethernet should be plugged into the same router that's providing the Wi-Fi.

Compatibility

Compatible Android phones & tablets

To operate your Nexus Q, you can use any Android phone or tablet that supports Gingerbread (Android 2.3.3) or higher. Here are a few examples:

- Galaxy Nexus phone or Nexus 7 tablet running Ice Cream Sandwich (Android 4.0) or higher.
- Xoom or Galaxy tablet running Honeycomb (Android 3.2) or higher.
- Nexus S phone running Gingerbread (Android 2.3.3) or higher.

You also need the Google Play app, so you can download and install the latest Nexus Q app. If your phone or tablet supports Android Beam, just hold the back of the device near the top of your Nexus Q after it arrives. After a moment, Google Play opens to the page where you can download the app. (It's free.)

Or go to Nexus Q app.

Menu icons: This guide sometimes refers to the menu available on an Android screen. Because Nexus Q supports so many Android devices, the location and appearance of the menu icon varies. Here are a couple of examples:

- On a Galaxy Nexus phone, it may be located at the top or the bottom of the screen, and looks like this: ⋮
- On a Nexus S phone, it's one of the permanent navigation buttons built into bottom of the phone, and looks like this:  .

Whenever you need to choose something from this menu, this guide uses text like this: ⋮ **Menu > Q settings**.

Compatible routers

Most modern routers for home Wi-Fi networks should work with Nexus Q, as long as they produce a strong signal at the locations where you plan to use each device.

However, some routers and networks can be configured in a way that prevents Nexus Q from operating correctly. Here are some examples:

- Routers configured for some form of guest mode (to prevent guests from reaching sensitive parts of the network) won't work with Nexus Q.
- Routers configured for isolation mode (to prevent Ethernet and Wi-Fi controlled by the same router from communicating) won't work correctly if you're using Ethernet with any of your Nexus Qs.
- Wi-Fi networks in hotels, coffee shops, airports, and other public spaces often include security features that prevent Nexus Q from working.

Nexus Q is intended for home use, with home networks.

If you've already set up a Nexus Q but it shows up in the Nexus Q app as "Not available," touch its name and follow the on-screen instructions to troubleshoot.

For more information, see Troubleshooting Routers.

Nexus Q MAC addresses: If your router is locked to specific MAC addresses, you'll need to add the Nexus Q's MAC address to the list. During setup from your phone or tablet, you'll see a message if Nexus Q can't connect with Wi-Fi. The message includes that Nexus Q's MAC address, which you can then add to your router.

Network requirements

Your Android phone or tablet controls Nexus Qs in your home via a local Wi-Fi network. You need Wi-Fi with a strong signal in each room where you want to set up a Nexus Q.

You also need a reliable connection to the Internet. Nexus Q can use either Wi-Fi or Ethernet to stream music and videos directly from Google Play. It uses Wi-Fi by default. To use Ethernet for this purpose, connect an Ethernet cable to the Ethernet port.

Ethernet

Ethernet can't entirely replace Wi-Fi. When your Nexus Q is connected to an Ethernet network, it uses that network to stream music from your Google Music library, but your Android phone or tablet must use Wi-Fi to communicate with the Nexus Q. When a Nexus Q is connected to Ethernet, the Android device needs to be in range of a Wi-Fi access point rather than within range of the Nexus Q.

For Ethernet to work with Nexus Q, it must be on the same subnet as the Wi-FI network. For practical purposes with most home networks, this means it should be plugged into the same router that's providing the Wi-Fi.

Bluetooth

During setup only, Nexus Q requires Bluetooth. If your device has Bluetooth turned off, you'll have a chance to turn it on.

If your device still can't find a Nexus Q to pair with:

- Make sure you're in the same room with your Nexus Q. Bluetooth works best over short distances.
- Confirm that Bluetooth is turned on. For example, on a phone running Android 4.0 or higher, open Settings and make sure the Bluetooth switch is turned On.

Wi-Fi

Nexus Q uses Wi-Fi to communicate with your Android device and, via your router and ISP, with the Internet. The Wi-Fi network must support 802.11 a/b/g/n at 2.4GHz or 5GHz. To minimize interference from other devices, use 5GHz.

If your phone or tablet has Wi-Fi turned off, you'll have a chance to turn it on during setup.

If your device still can't find a W-Fi network:

- Confirm that Wi-Fi is turned on. For example, on a phone running Android 4.0 or higher, open **Settings** and make sure the **Wi-Fi** switch is turned **On**.
- Make sure your Wi-Fi is functioning correctly and has a strong signal at the Nexus Q's location.
- If your router is locked to specific MAC addresses, you'll see a message during setup that Nexus Q can't connect with Wi-Fi. The message includes that Nexus Q's MAC address, which you can then add to your router's list.
- If your router is locked to specific IP addresses, you may need to reconfigure it.
- Restart your router.
- If the signal remains weak at the Nexus Q's location, set it up somewhere else with a better signal. Use a phone or tablet to check the strength of the Wi-FI signal at a potential new location.

Hardware & cabling

You can connect a pair of speakers, an AV system, a TV, or all three to a single Nexus Q.

The following pages describe some of the most common configurations. Others are possible, depending on the equipment you have available.

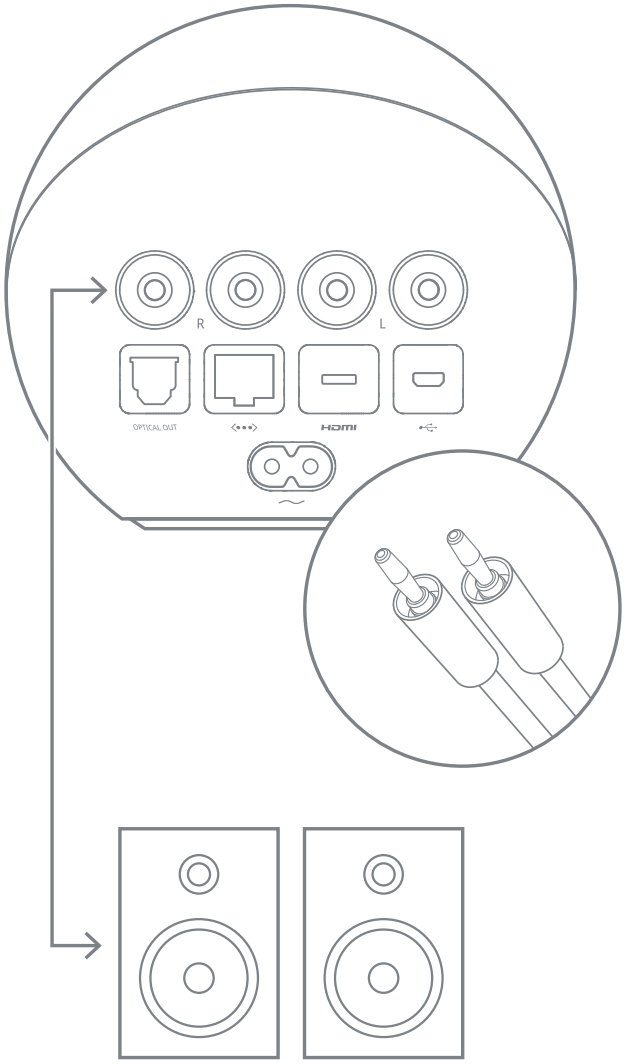
Because HDMI and optical audio can connect to a variety of equipment, their output may be delayed by a perceptible amount compared to the analog output directly to speakers. For information about synchronizing output from different ports (also known as delay compensation), see Audio calibration.

Speakers (banana plug cables)

What you need:

- Two speakers rated 15 watts RMS or higher @ 8 ohms.
- Speaker cables with banana plugs on at least one end for connecting the cables to your Nexus Q (and on both ends if your speakers use banana jack connectors).

Banana plugs are labeled R and L and color coded with a black or red dot.



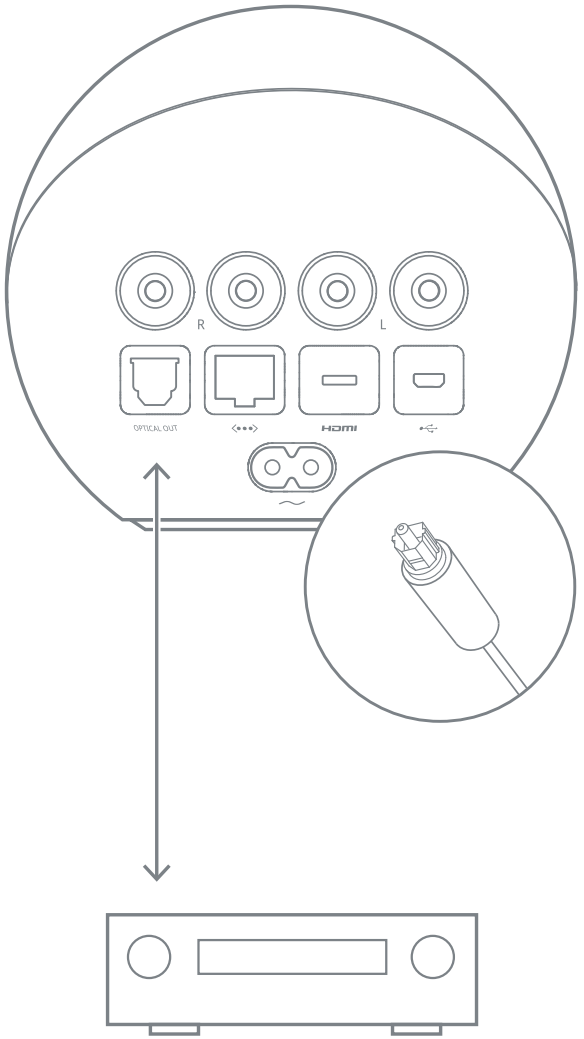
AV system or audio receiver (optical audio)

What you need:

- AV system or audio receiver with an available optical audio input.
- An optical audio cable.

You need just one cable, which has the same plug on both ends.

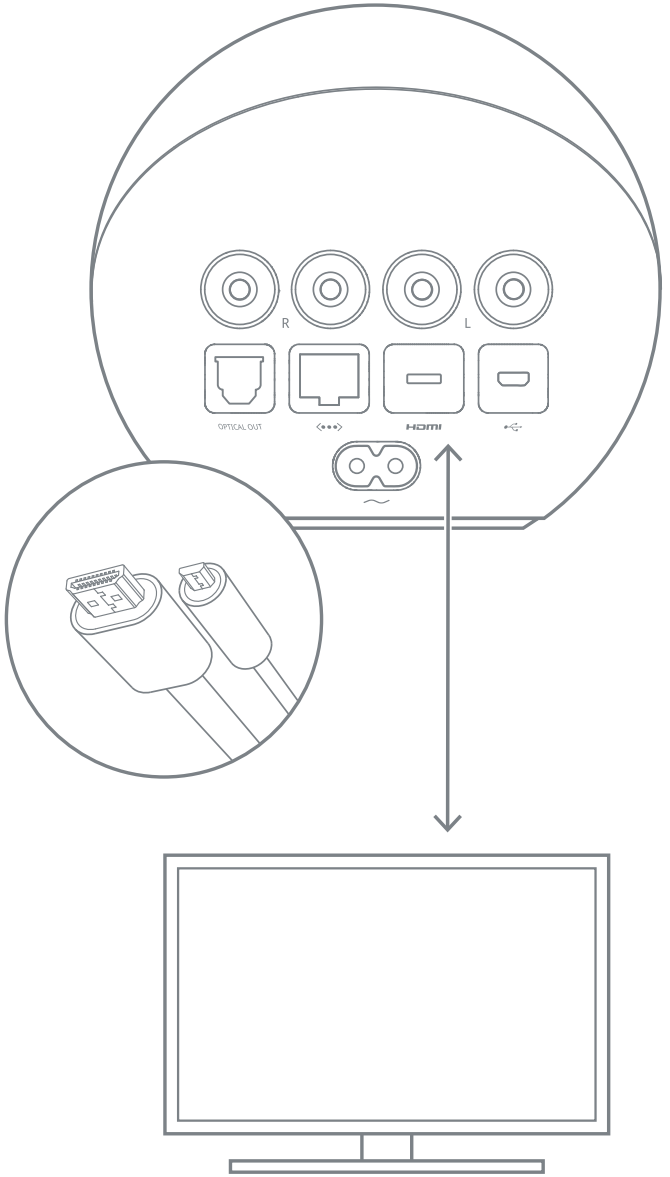
The A/V receiver to which you connect this cable maps the signal it receives from the Nexus Q to one of its input options. To hear music through speakers attached to your A/V system, you need to select the same option using the receiver's controls.



TV or audio receiver (HDMI cable)

- TV or audio receiver with an available HDMI input. Support for HDCP is required to play HD movies with the Play Movies app.
- A micro HDMI (Type D) to standard HDMI (Type A) cable.

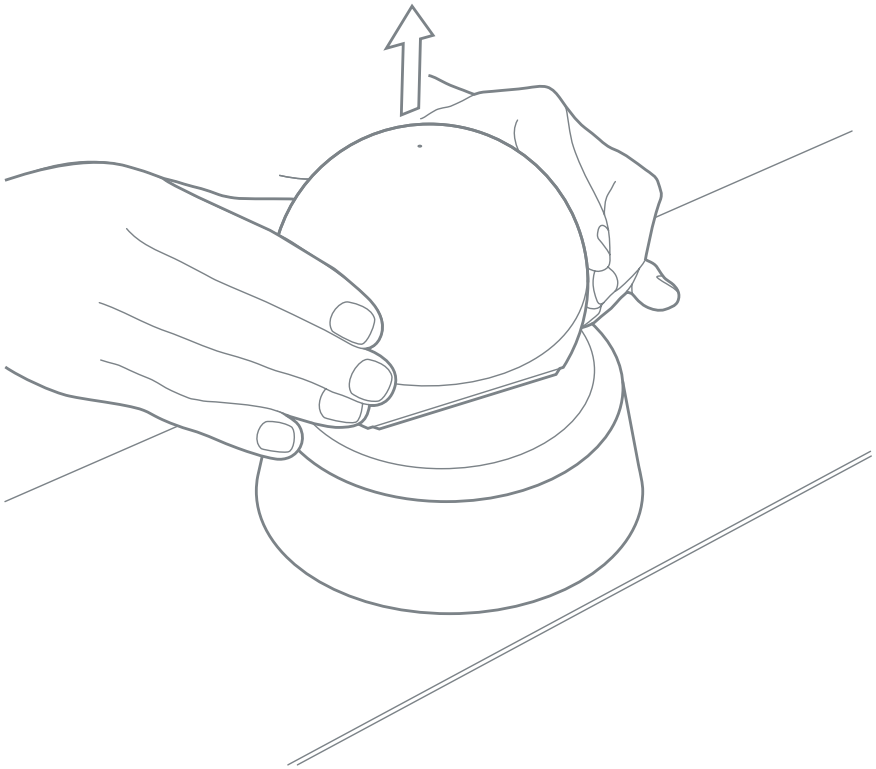
The TV or receiver to which you connect the cable maps the signal it receives from the Q to one of its input options. To hear music and watch videos, you need to select the input same option using the controls available for your equipment.



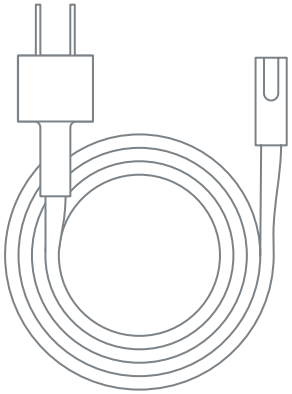
Set up Nexus Q

Unpack carefully

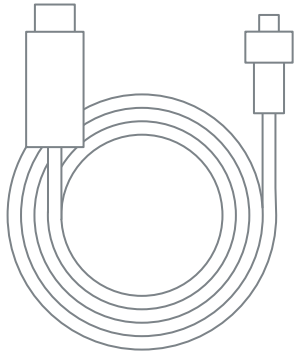
Using two hands, lift your Nexus Q from its packaging and place it near the equipment you plan to use it with.



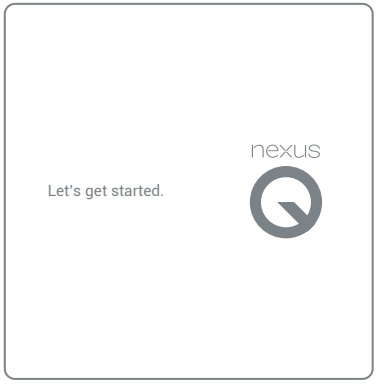
What's in the box



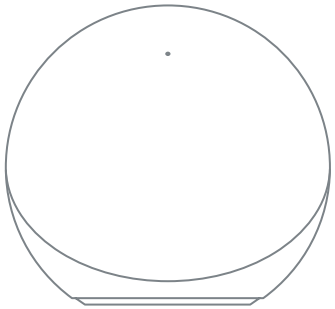
Power cable



HDMI cable



Quick Start Guide



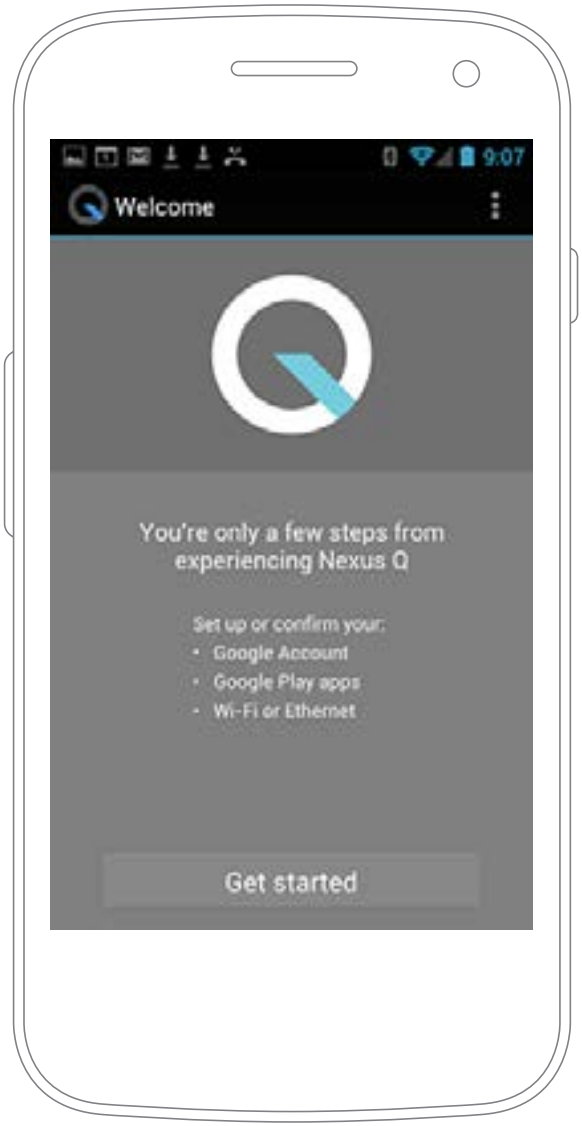
Nexus Q

Run the Nexus Q app

Important: Before setting up your Nexus Q, make sure you've completed the steps in Before it arrives.

After you've unpacked your new equipment and confirmed that you have everything you need, follow these steps:

1. Connect the Nexus Q to your equipment using the appropriate cables. For examples, see Hardware & cabling.
2. Connect the power cord.
   Nexus Q lights up immediately – there's no power button. Wait about a minute while it completes the startup process. When the Nexus Q is ready for setup, the circular LED turns a solid color.
3. Open the Nexus Q app.
   If you haven't yet downloaded the app to your Android phone or tablet, go to Nexus Q app. Or, if your phone or tablet supports Android Beam, just hold the back of the device near the top of your Nexus Q. After a moment, Google Play opens to the page where you can download the app.
4. Follow the on-screen instructions.
   If you get stuck, touch the ? Help icon.



LED colors

The colors displayed by the ring LED tell you what a Nexus Q is doing.

LED colors during startup & setup

Rotating blue spot:
Nexus Q is starting up (after setup or after plugging in).



Solid color:
Each available Nexus Q that hasn't yet been set up displays a different solid color, without pulsing, after successful startup.



Single color pulsing slowly:
The original solid color starts pulsing when setup is complete and Nexus Q is ready to use. After ten minutes, color fades to black.



Flashing yellow:
Nexus Q can't connect to Wi-Fi.



Flashing red:
Startup failed, or factory data reset is about to begin.



Rotating purple stripes:
Software update or factory data reset in progress.



LED colors during play

Animated rainbow colors:
Music is playing.



Blue of varying intensity:
Accompanies rotation of Nexus Q's top half to adjust volume.



Black:
Nexus Q has been idle for ten minutes or more.



Volume controls

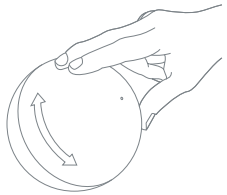
Remote & direct controls

You can adjust the volume simultaneously for all rooms currently selected in the dialog that appears when you touch ▶))):

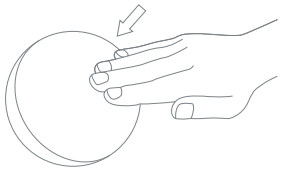
- Use the volume button on your phone or tablet. This works only when the Google Play app that's streaming content is open on the screen.
- Use the volume slider available from the dialog.

You can also adjust physical volume controls on each Nexus Q:

- To increase volume turn the upper half of the Nexus Q clockwise:



  The LED turns blue while volume is being adjusted, glowing more intensely as it gets louder.
- To mute or unmute your Nexus Q, touch the LED on its top:



  The LED on top dims when volume is muted.

Fixed volume output

Each Nexus Q has three types of audio output: HDMI, analog, and optical audio.

Because HDMI and optical audio cables can connect to a variety of equipment, you may sometimes find it more convenient to adjust volume using your equipment's volume controls rather than your Android phone or tablet.

For example, suppose you want to control your TV volume separately from the volume of speakers connected to the same Nexus Q. In situations like this, you can set the output for HDMI, optical audio, or both to a fixed volume:

1. From the Nexus Q app, touch the name of the room for the Nexus Q you want to adjust.
2. Touch **Advanced Settings > HDMI** or **Optical out.**
3. Check **Fixed volume out.**
4. In the dialog, type the level you want, and touch **Set.**

This won't affect the analog output to your speakers, which you can still control from your phone.

Depending on the equipment connected to the Nexus Q's HDMI or optical audio ports, audio output may be delayed by a perceptible amount compared to the analog output speakers connected to the same Nexus Q's analog port.

To compensate for such delays, see audio calibration.

If you have multiple Nexus Qs set up, the audio output from each (excluding delays introduced by other equipment) is kept in sync automatically. No calibration of separate Nexus Qs is required.

Play music

After you've set up one or more Nexus Qs, you can use the Google Play Music app to play music through them. If at least one Nexus Q is available on the Wi-Fi network, the icon appears near the top of the app's screens.

What you do next depends on how many Nexus Qs are available.

One Nexus Q

Touch to toggle between playing music through the Nexus Q and playing it on your phone or tablet.

Multiple Nexus Qs

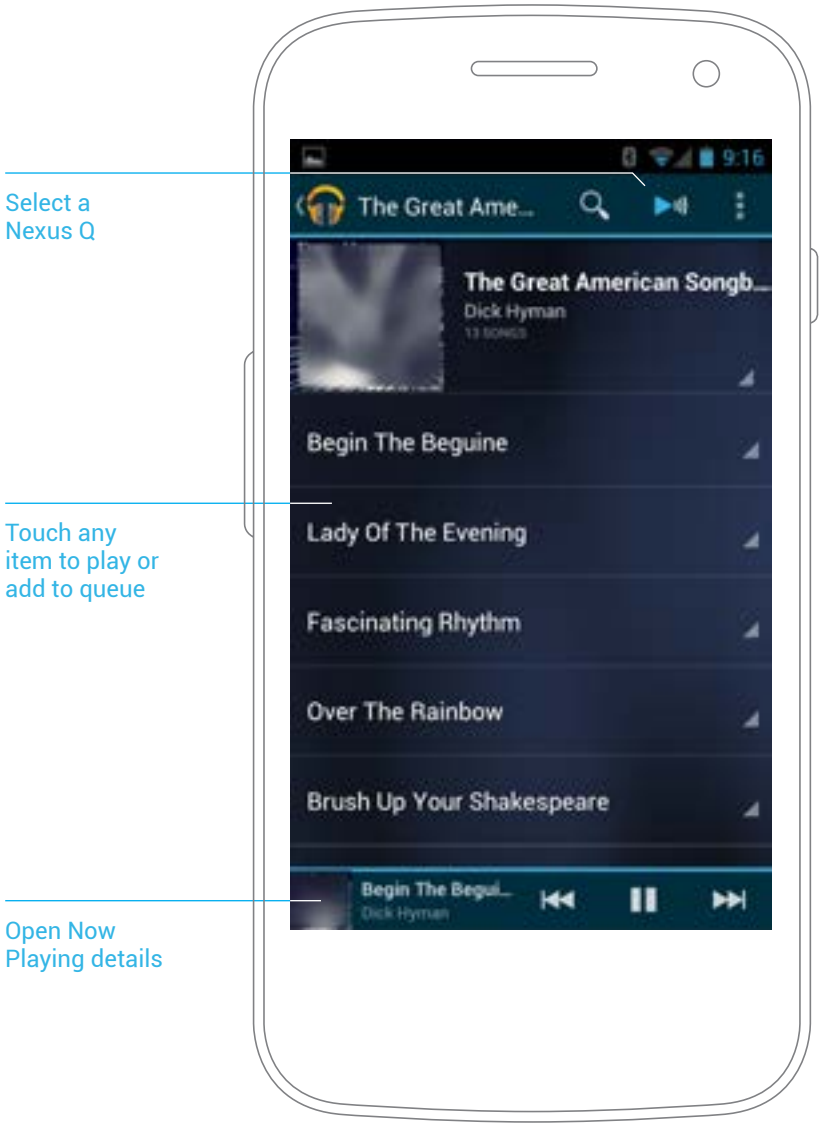
Touch to open a dialog that lists all rooms in which a Nexus Q is available. Then touch a room to play music there.

What's playing where

Each Nexus Q has its own music queue. When the left side of the icon is blue, the Now Playing queue for the selected Nexus Q plays. When the left side of the icon is gray, the Now Playing queue for your phone or tablet plays.

Otherwise, you choose and play music the same way no matter where the music is playing. For details, visit Google Play Music Help.

You can also combine Nexus Qs to play music in two or more rooms at the same time. For details, see the following pages.



Change or add to the queue

The Google Play Music app displays the Now Playing song at the lower left corner of the screen.

To view more information about that song, touch it. Then:

- To see the whole queue, touch the ☰ queue icon near the top right corner of the screen.
- To return to the detail view, touch the album art.

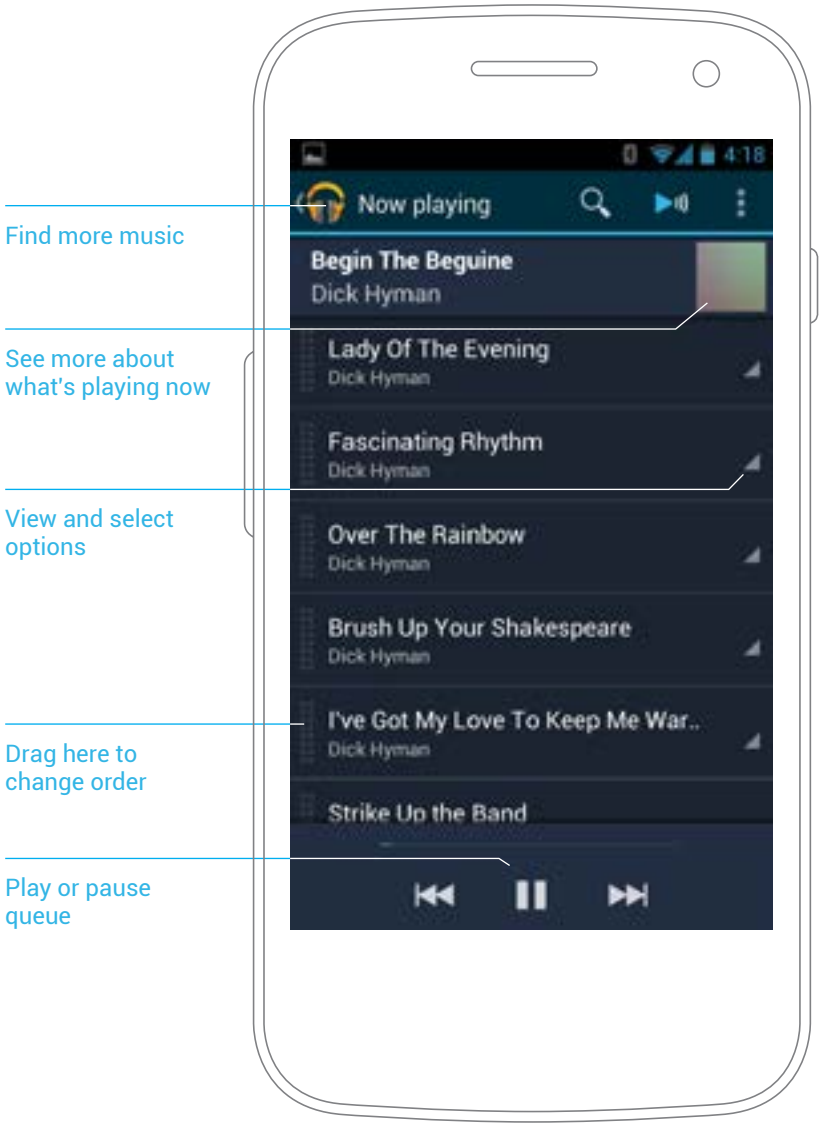
If you're sharing the queue with guests, a picture of the person who contributed each song appears beside it.

While you're viewing the queue, you can perform any of the actions shown on the right. In particular, you can:

- **Remove a selection.** Touch the triangle on the right, then **Remove from queue**.
- **Remove all selections**. Touch **Menu > Clear queue**.

You can add any of your music to the queue. To find more music, use the Google Play Music app as usual, and touch the album or song you want. Each new selection you add appears at the end of the queue.

When one of your guests adds a selection to a queue, that selection is also added to the end of the queue, and the Nexus Q starts playing the queue from that point. For more information, see Invite guests.



Select rooms

To choose where you want to stream music:

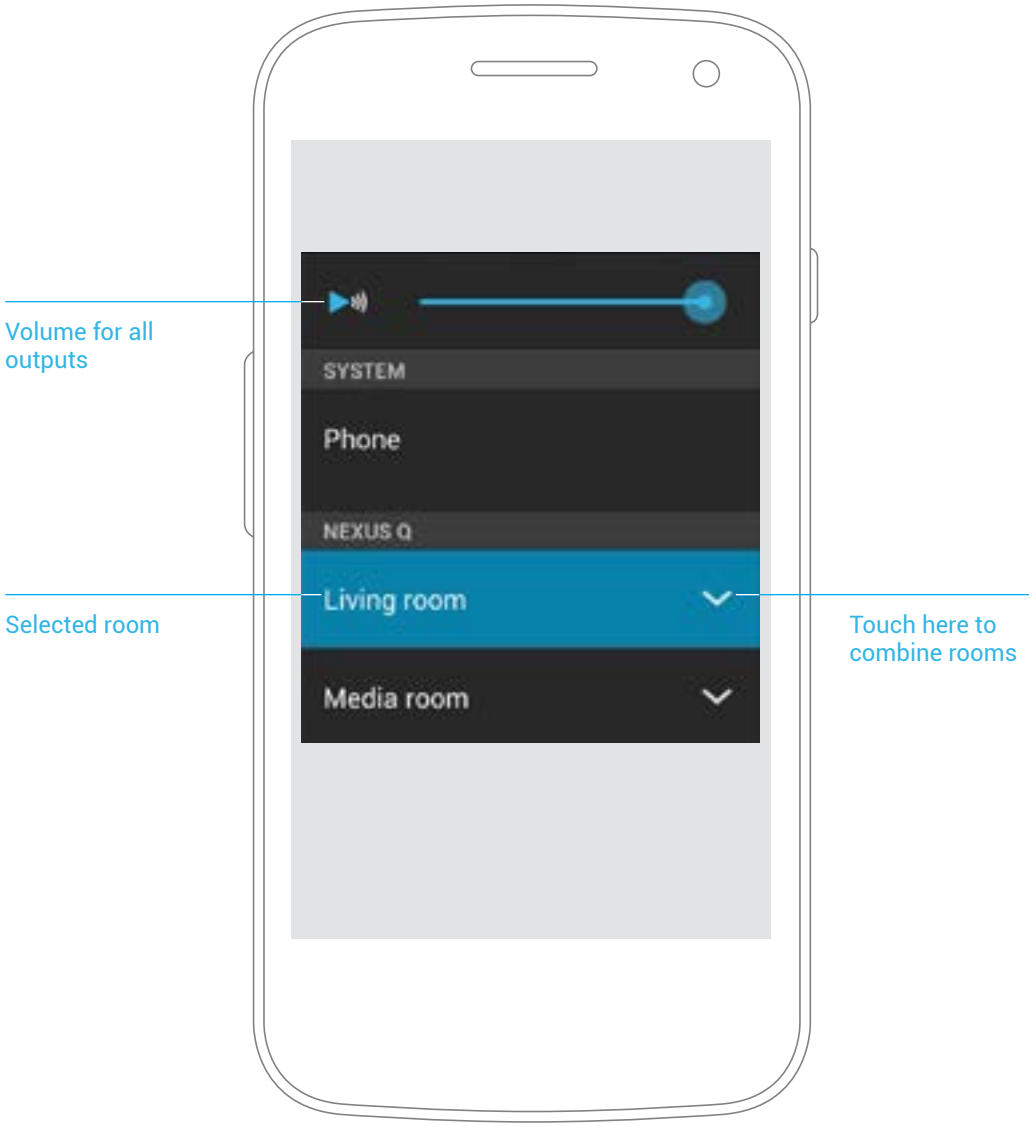
1. From the Google Play Music app, touch . The dialog shown on the right opens.
2. To select a room, touch its name. Or, to return to playing music from your Android device, touch **Phone** or **Tablet**.

In this example, the Nexus Qs in the living room and media room are both available, and the living room is selected. From here you can:

- Switch back to playing through the phone only.
- Switch to playing in the media room only.
- Combine the living room and media room and play through both at once. For details, see Combine rooms.

After you select a room and add some music to its queue, what happens next depends on the situation:

- If you're creating a new queue for the selected room, the first item in the queue begins playing.
- If the queue already exists, and you originally set it up, new items are added to the end of the queue. New items play after other items in the queue are finished.
- If the queue already exists, but someone else originally set it up, new items are added to the end of the queue and begin playing immediately. The rest of the queue remains in place, but the playhead jumps to the first newly added selection.



Combine rooms

Typically, one Nexus Q controls equipment in one room. If more than one Nexus Q is available, you can combine two or more or separate any that have been previously combined.

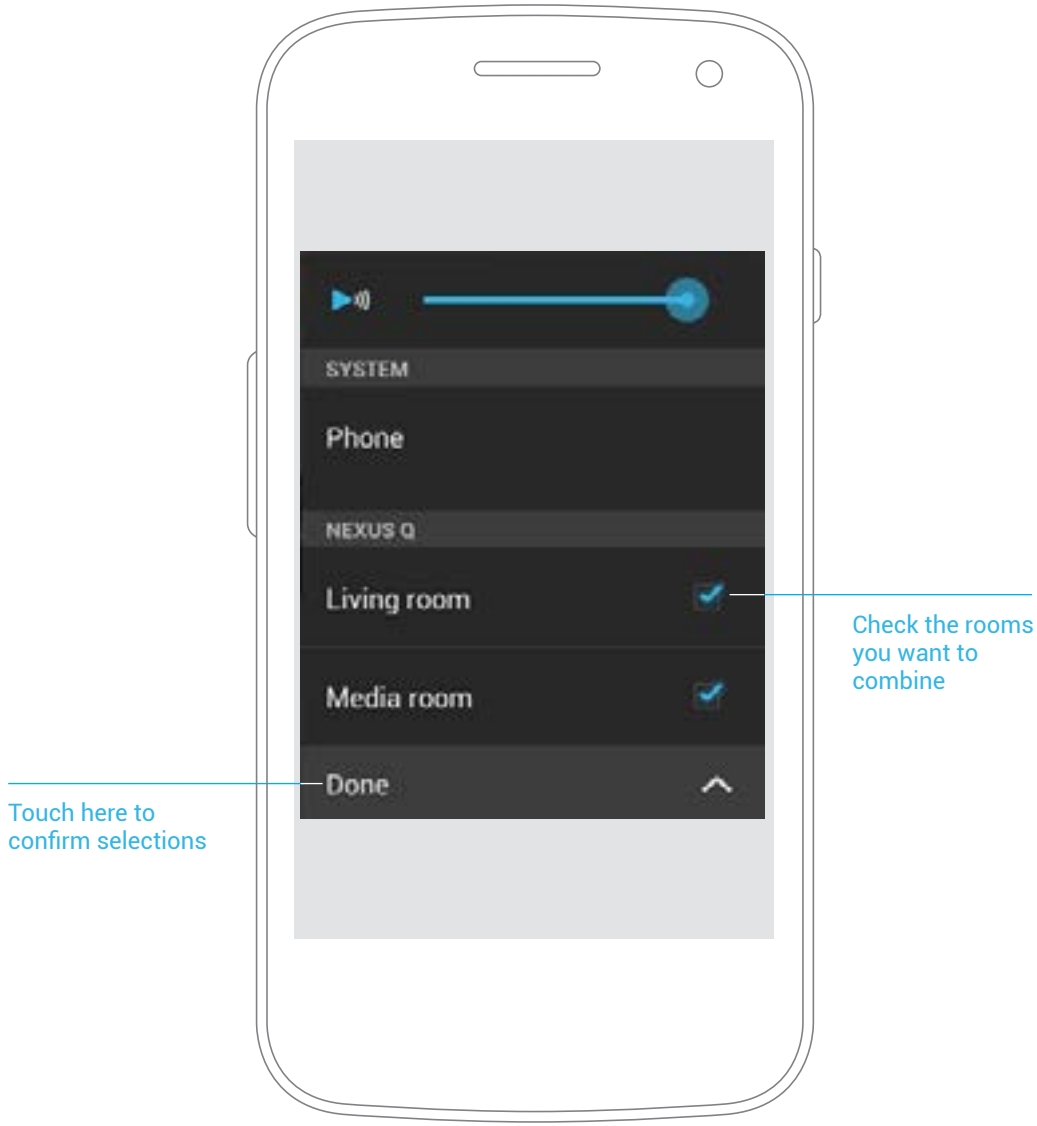
For example, suppose:

- You're streaming to the living room and the media room, and you want to turn off sound in the living room.
- You're streaming to the living room only, and you want play the same stream through the media room as well.

To combine or separate rooms:

1. Touch ▶)) .
2. Touch the down arrow beside one of the rooms you want to modify. You'll see a dialog similar to the one shown here.
3. Check or uncheck the rooms you want.
4. Touch **Done**.

The rooms you selected are now combined as a single item in the list of rooms, with a single queue that streams to both of them.

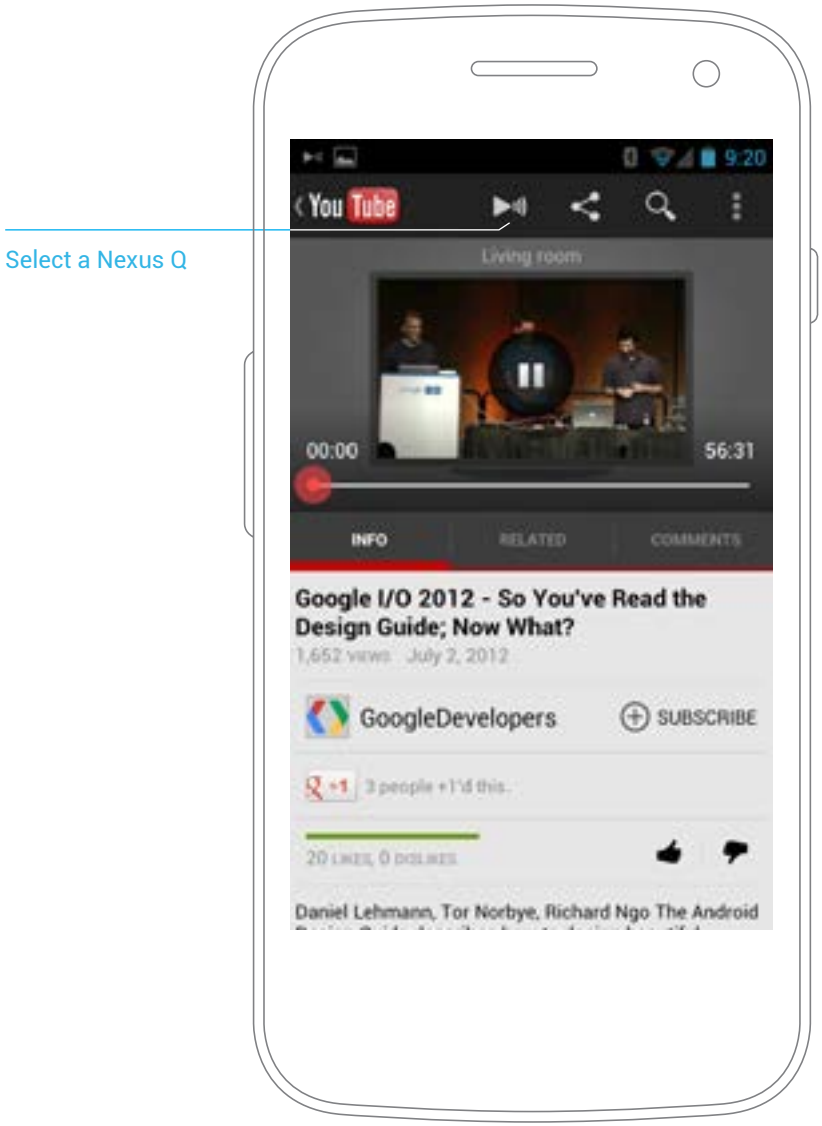


Play YouTube videos

After you've set up one or more Nexus Qs, you can stream videos through a single Nexus Q at a time using the YouTube app.

You can still play YouTube videos on your phone or tablet in the usual way. For details, visit YouTube Help.

When the play controls in the app are active, at least one Nexus Q on your network is connected to a TV with an HDMI cable, and the TV is on, your screen should resemble the one shown here. What you do next depends on how many Nexus Qs with TVs attached are available on your network.



One Nexus Q with one TV

Touch ▶)).

This toggles between viewing YouTube on the TV and viewing it on your phone or tablet. When the icon turns blue, videos will be streamed through the Nexus Q. Otherwise, they'll play on your phone or tablet as usual.

Multiple Nexus Qs with multiple TVs

Touch ▶)).

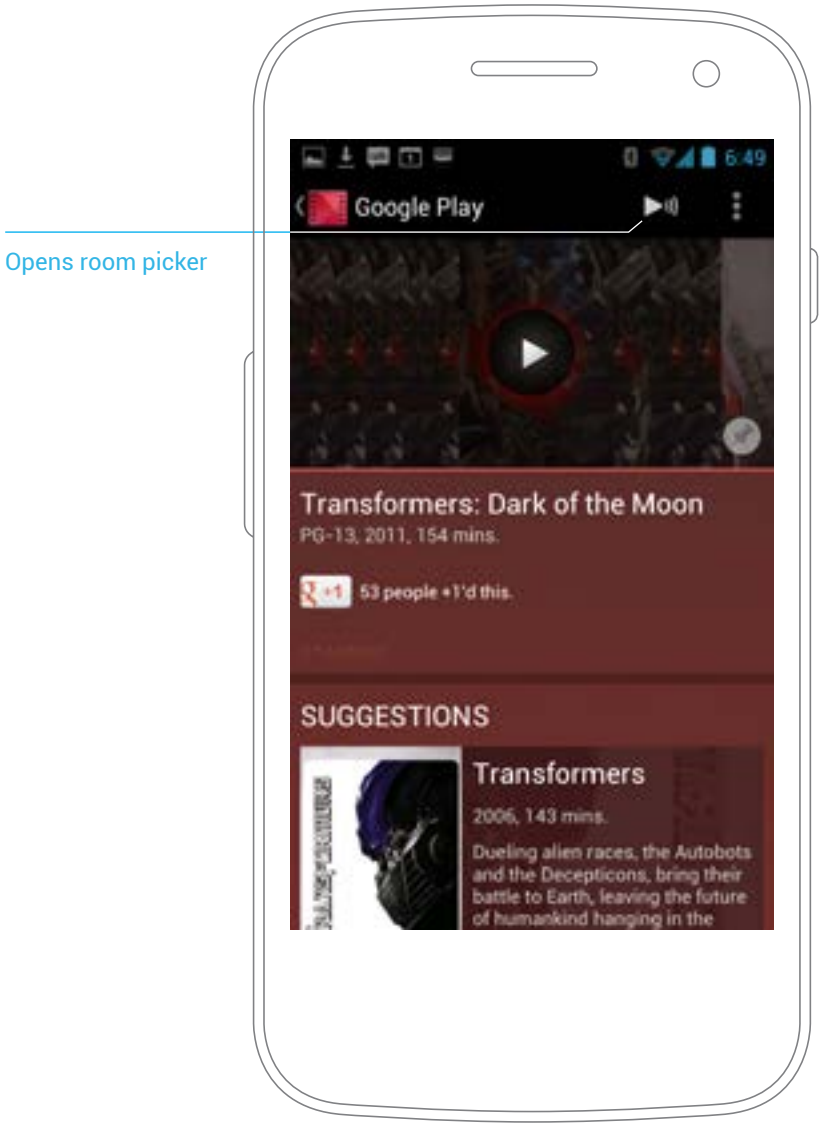
A list of rooms appears. Select one. It's not possible to stream YouTube videos to more than one Nexus Q at a time.

Play movies and TV shows

After you've set up one or more Nexus Qs, you can watch movies and TV shows through a single Nexus Q at a time using the Google Play Movies & TV app.

You can still play movies and TV shows on your phone or tablet in the usual way. For details, visit Google Play Movies & TV Help.

When the play controls in the app are active at least one Nexus Q on your network is connected to a TV with an HDMI cable, and the TV is on, your screen should resemble the one shown here. What you do next depends on how many Nexus Qs with TVs attached are available on your network.



One Nexus Q with one TV

Touch ▶)) .

This toggles between viewing on the TV and viewing on your phone or tablet. When the icon turns blue, movies and TV shows will be streamed through the Nexus Q. Otherwise, they'll play on your phone as usual.

Multiple Nexus Qs with multiple TVs

Touch ▶)) .

A list of rooms appears. Select one. It's not possible to stream movies to more than one Nexus Q at a time.

Content options

- Movies or TV shows can be streamed.
- Personal videos stored on your phone or tablet can't be streamed.
- Support for HDCP is required to play HD movies.

Invite guests

Before the party

To let your friends play their own music through your Nexus Qs, you first need to give them access:

1. Open the Nexus Q app.
2. Touch ⋮ **Menu > Settings**.
3. Make sure the **Open to guests** switch is **On**. When this switch is set to the **Off** position, nobody else can access your Nexus Qs.
4. Touch **Invite guests**.
5. Fill in the email with your friends' email addresses and edit the text of the message as needed.

The default email message tells them to visit play.google.com, download and install the Nexus Q app, and then open it and follow the instructions. They also need to have the following:

- A compatible Android phone or tablet.
- A Google Account.
- Music in their Google Play library. They can add any of their existing music with the Music Manager, or purchase new music from Google Play.

When your guests arrive

1. Give them the name and password for the Wi-Fi network you're using with your Nexus Qs.
2. Ask them to sign in to the network. Make sure they sign into the network before they run the Nexus Q app. Otherwise, the app won't work correctly for them.
3. Ask them to open the Nexus Q app. They may be asked to set up a Google Account (if they haven't yet already on their phone or tablet) or to choose one, if they have more than one. From this point on, your guests can use their own Android phones or tablets to choose collections, contribute to queues, and control your Nexus Qs the same way you do.

For more information about what your guests will see when they open their Nexus Q app, see About Nexus Q collections.

Turn off guest access

To prevent guests or anyone else from accessing Nexus Qs:

1. Open the Nexus Q app.
2. Touch ⋮ **Menu > Settings**.
3. Turn the **Open to guests** switch to **Off**.

About Nexus Q collections

All the Nexus Qs you set up on a single Wi-Fi network form your collection. After you set up one or more Nexus Qs, your collection's name appears at the top of the Nexus Q app's main screen ("My home" by default). To change this name, touch **Menu > Settings.**

If you live in a building with a single Wi-Fi network shared by many different people, some of them may have their own Nexus Qs set up, forming their own separate collections.

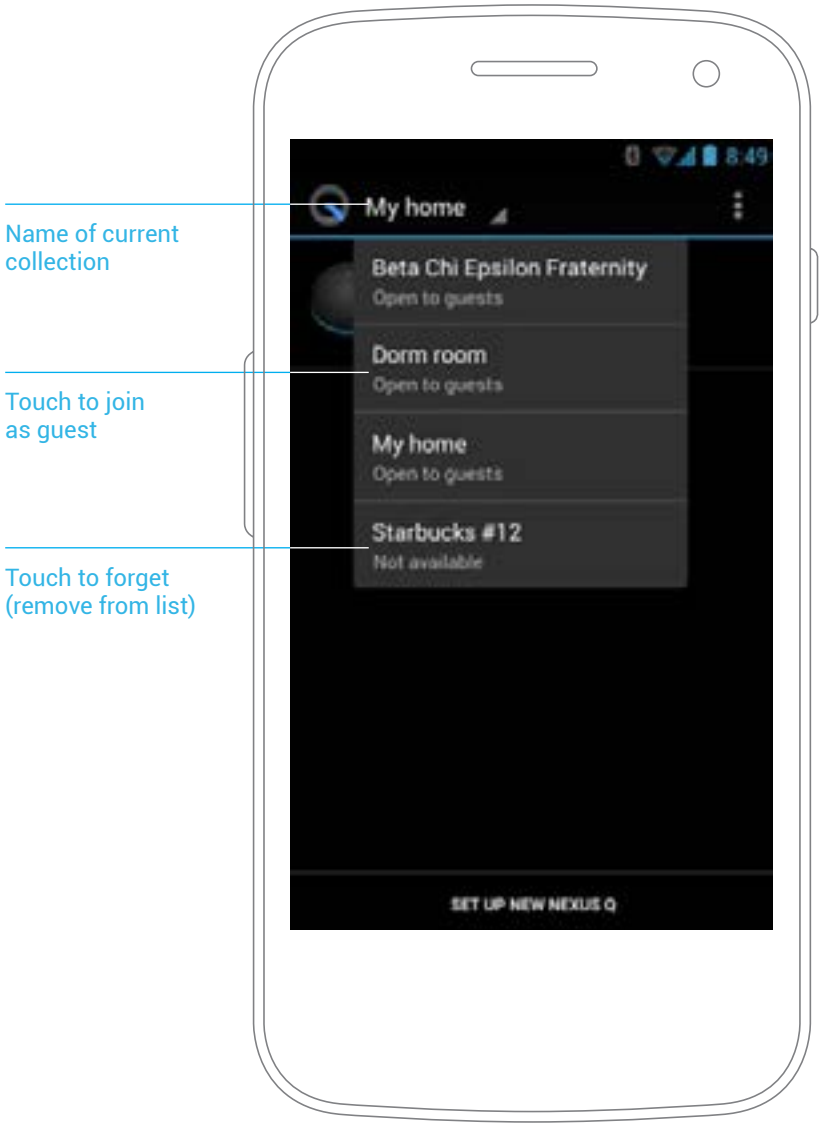
In this situation, your collection's name may be visible to other people on the same Wi-Fi network, and their collections' names may be visible to you — much as multiple separate Wi-FI network names may be visible on your phone or tablet in a given location.

To see the names of any other collections available on the same Wi-Fi network, touch & hold the name of yours at the top of the main Nexus Q screen.

To join a collection that's open to guests, touch it.

To dismiss a collection that's not available to you, so it no longer shows up in the list, touch it and choose **Forget.**

When you're connected to someone else's collection, you can see their Nexus Qs and play your music, movies, and TVs through their equipment. But you can't change any settings for their collection or their Nexus Qs.



Adjust settings

To adjust the settings for a Nexus Q that's already been set up:

1. Open the Nexus Q app. OR
   From the Play Music app, choose **Menu > Settings > Nexus Q Settings.**
2. Touch the name of the room where the Nexus Q is located.
   The main settings screen for that Nexus Q appears. From here, you can read version information and modify the brightness or theme used to animate the LED lights or TV screen during music playback.

Touch **Advanced** to modify any of these settings:

- Turn **HDMI or Analog** ports off or on. This can help save power if they're connected to equipment but not in use. You can also set the HDMI or optical outputs to a fixed volume. For details, see Fixed volume output.
- Adjust delay compensation for equipment attached to HDMI or Optical out ports. For details, see Audio calibration.
- **Factory data reset.** Wipes all setup data and restarts the Nexus Q. This means you'll need to set it up all over again from scratch.

Manual factory data reset

You can also factory reset your Nexus Q without using your phone or tablet:

1. Unplug the Nexus Q, then plug it in again.
2. As soon as the ring LED lights up, place your palm over the single LED on top.
   The ring LED starts flashing red. Keep your palm in place until the ring LED starts to display a rotating blue spot (about 10 seconds). If you lift your finger too soon, the LED turns solid red. If this happens, unplug and plug in the Nexus Q again to start over.

During a successful reset, the ring LED pulses purple to indicate that it's wiping all data. Once the reset is complete, the Nexus Q starts up again, displaying a rotating blue spot. After a short time, it displays a solid color to indicate it's ready to be set up again.

Forget Nexus Q

If for any reason a Nexus Q that you've previously set up can no longer communicate with your phone or tablet, it's possible to "forget" it, so that it no longer appears in the list of Nexus Q devices (labeled by room) in the Nexus Q app.

Forgetting a Nexus Q is useful only if you know you'll never use a particular device again. If you later decide you want it to show up once more in the list, you'll need to perform a factory data reset and set it up from scratch.

To forget a Nexus Q, open the Nexus Q app, touch the name of the device you want to forget, and touch **Menu > Forget Nexus Q.**

Audio calibration

Because HDMI and optical audio can connect to a variety of equipment, their output may be delayed by a perceptible amount compared to the analog output directly to speakers.

If a single Nexus Q is connected to both analog speakers and additional equipment, via either HDMI or optical output, you can adjust the output from either port to compensate for such delays.

Important: You can calibrate the HDMI and optical outputs with the analog output of a single Nexus Q. You don't need to calibrate one Nexus Q's analog output with another's. This is taken care of automatically.

Before you begin, make sure:

- The left analog outputs (those marked L) of your Nexus Q are connected to a speaker.
- The HDMI or optical audio output of your Nexus Q is connected to equipment that is turned on.
- Verify that both left channels (one analog and the other HDMI or optical) are working. Only the left channel from each output is used during calibration.

If possible, move the speaker connected to the Nexus Q's left analog output as close as possible to the left speaker of the TV or other equipment connected to the HDMI output.

Hold your phone or tablet midway between the analog speaker and the other sound source, and follow these steps:

1. From the Nexus Q app, touch the name of the room where the Nexus Q is set up.
2. Touch **Advanced > HDMI** or **Optical out**.
3. Touch **Auto calibrate** and follow the instructions.
   When you're finished, you can adjust the delay further manually.
4. When you're satisfied, touch **Save.**

You can also choose **Manual calibrate** in step 3 to jump directly to manual calibration.

Specs

Android control	
Phone or tablet	Android device running Gingerbread (Android 2.3.3) or later
Software	Latest versions of Google Play Music, Google Play Movies, YouTube, and Nexus Q apps, in countries where support is available
Audio	
Amplifier	Class D. 12.5W continuous average power into 8 ohms per channel; 25W total
Outputs	Stereo speaker-level analog audio from four banana jacks
	Digital audio from single optical audio output receptacle for S/PIDF cables
	Digital video and audio from single HDMI output receptacle for Micro HDMI male to HDMI male cable
	Micro USB receptacle for USB cable
Stream	Streams MP3 output to bitrate of 320 kbps
	One stream per Google Play Music account
Networking	
Ethernet	10/100Mbit RJ-45 standard LAN receptacle (actual throughput depends on network configuration) For streaming audio and video input from Google Play, and software updates
Wi-Fi	11a/b/g/n, 2.4 and 5 GHz For operation from an Android Phone or tablet, streaming audio and video input from Google Play, and software updates
Bluetooth	Required for initial device discovery

Specs

General	
Diameter	4.6 inches (116 mm)
Weight	2 pounds (923 g)
Power supply	Integrated 35W switching power supply World-ready 50/60Hz 85-265V AC input Automatic shutdown for audio amp supply when audio is not playing
Hardware controls	Rotating top dome volume control Capacitive touch sensor for mute on/off NFC (supports use of Android Beam)
Lighting	32 RGB perimeter LEDs indicate status 1 RGB LED mute indicator
	Connectivity indicator: Single LED on Ethernet receptacle.
CPU	OMAP 4460 (dual-core ARM Cortex-A9 CPU and SGX540 graphics core)
Memory	1 GB LPDDR RAM 16GB NAND flash memory
OS	Android 4.0 (Ice Cream Sandwich)
Supported apps	Google Play Music Google Play Movies & TV YouTube
Operating temperature	41º to 104º F (5º to 40º C). Device requires a free flow of air around it for ventilation. It does not contain a fan.
Material/Finish	Die-cast, precision machined zinc bottom housing. Injection-molded, interactive balanced top dome with precision bearing and satin touch coating.

Nexus Q limited warranty
Google warrants the Nexus Q against defects in materials and workmanship under normal use for one year from the date of original purchase by the end user ("Limited Warranty").

This Limited Warranty is only valid and enforceable in locations the Nexus Q is sold and will not apply if you purchased your Nexus Q from a party other than Google. This Limited Warranty only applies to hardware components but Google does not provide any warranty for damage caused by normal wear and tear, accidents, misuse (including failure to follow product documentation), neglect, disassembly, alterations and external causes such as but not limited to extreme thermal or environmental conditions. This Limited Warranty does not guarantee that use of the Nexus Q will be uninterupted or error free.

EXCUSIVE REMEDY: If a defect arises and you return your Nexus Q during the one year warranty period, we will in our sole discretion and to the extent permitted by law either repair your Nexus Q using new or refurbished parts or replace your Nexus Q with a new or refurbished Nexus Q functionally at least equivalent to yours. If Google repairs or replaces the Nexus Q, the repaired or replaced Nexus Q will continue to be warranted for the remaining time of the original warranty period. All returned parts for which you have received a replacement will become the property of Google.

To make a warranty claim, please contact Google Play Support. You must provide your name, contact information and the serial number of your Nexus Q to receive support. In certain situations, you may also be required to provide a purchase receipt.

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