

WAM550/WAM551

Wireless Audio - Multiroom M5 User Manual (iOS)

imagine the possibilities

Thank you for purchasing this Samsung product. To receive more complete service, please register your product at www.samsung.com/register

Safety Information

Regulatory Compliance Statements



The lighting flash and arrowhead within the triangle is a warning sign alerting you to dangerous voltage inside the product.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The explanation point within the triangle is a warning sign alerting you to important instructions accompanying the product.

Warning

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.
- Do not expose this apparatus to dripping or splashing.
 Do not put objects filled with liquids, such as vases on the apparatus.
- To turn this apparatus off completely, you must pull the power plug out of the wall socket. Consequently, the power plug must be easily and readily accessible at all times.

FCC Statement: (for U.S.A)

Federal Communication Commission Interference Statement

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 of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet that is on a different circuit than the outlet the receiver is connected to.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

For products available in the US and Canadian markets, only channels 1~11 are available. You cannot select other channels.

This device and it's antennas must not be co-located or operated in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures. This device operates in the 5.15~5.25GHz frequency range. It is restricted to indoor

environments only.

IMPORTANT NOTE

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated so there is at least 8 inches (20cm) between the radiator and your body.

IC Statement: (for Canada)

CAN ICES-3 (B)/NMB-3(B)

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

For products available in the US and Canadian markets, only channels 1~11 are available. You cannot select other channels.

This device and it's antennas must not be co-located or operated in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

This device may automatically discontinue transmission if there is no information to transmit, or an operational failure. Note that this is not intended to prohibit the transmission of control or signaling information or the use of repetitive codes where required by the technology.

To reduce potential for harmful interference to co-channel mobile satellite systems, this device operates in the 5150-5250 MHz band, and is for indoor use only.

IMPORTANT NOTE:

IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated so there is at least 8 inches (20cm) between the radiator and your body.

Important Safety Instructions

Read these operating instructions carefully before using the unit. Follow all the safety instructions listed below.

Keep these operating instructions handy for future reference.

- **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 block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including AV receivers) that produce heat.
- 9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where it exits the apparatus.
- 11 Only use attachments/accessories specified by the manufacturer.
- 12 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13 Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Safety precautions

Power Supply Precautions

- Do not overload outlets or extension cords.
 - This may result in abnormal heat or fire.
- Do not plug in or unplug the power cord with wet hands.
- Do not place the product near heating equipment.
- To clean the power plug blades, remove the plug from the wall outlet and wipe the blades with a dry cloth only.
- Do not bend the power cord or pull it forcefully.
- Do not put heavy objects on the power cord.
- Do not plug the power cord into a loose or damaged outlet.
- Fully insert the power cord's plug into the the wall outlet so that the plug is firmly attached to the outlet.
 - If the connection is unstable, there is a risk of fire.

Installation Precautions

- Do not install the product near equipment or objects that generate heat or produce fire (candles, mosquito coils, heaters, radiators, etc.). Do not install in direct sunlight.
- When moving the product, turn off the power and disconnect all cords (include the power cord) from the unit.
 - A damaged cord may cause a fire and poses a risk of electric shock.
- Installing the product in environments with high heat or humidity, dust, or extreme cold, can lead to quality problems or cause the product to malfunction. Before you install the product in an environment that is outside the norm, please contact a Samsung service center for additional information.
- When placing the product on a shelf, cabinet, or desk, make sure the top panel faces upwards.
- Do not place the product on an unstable surface (e.g. a shaky shelf, a tilted desk, etc.).
 - Dropping the product can cause it to malfunction and poses a risk of injury. Severe vibration or impact can also cause the product to malfunction and lead to a fire hazard.
- Install your product with enough space around it for ventilation.
 - Leave at least 4 inches (10cm) at the rear of the product and more than 2 inches (5cm) on each side of the product.
- Keep the plastic packing materials out of reach of your children.
 - Children playing with the plastic packing materials run the risk of suffication.

Usage Precautions

- Using for an extended time at high volume may cause serious damage to your hearing.
 - If you are exposed to sound louder than 85db for an extended time, you may adversely affect your hearing. The louder the sound is, the more seriously damaged your hearing may become. Note that an ordinary conversation is between 50 to 60 db and road noise is approximately 80 db.
- This product contains dangerous high voltage. Do not attempt to disassemble, repair, or modify it yourself.
 - Contact a Samsung service center when your product is in need of repair.
- Do not place any container that contains liquid on the product (e.g. a vase, beverages, cosmetics, chemicals, etc.). Do do not allow any metal objects (e.g. coins, hair clips, etc.) or flammable material (e.g. paper, matches, etc.) to enter the product (through the air vents, I/O ports, etc.).
 - If any harmful material or liquid enters the product, turn off the product immediately, unplug the power cord, and then contact a Samsung service center.
- Do not drop the product. In case of a mechanical breakdown, disconnect the power cord and contact a Samsung service center.
 - There is a risk of fire or electric shock.
- Do not hold or pull the product by the power cord or the signal cable.
 - A damaged cable can cause the product to malfunction, cause a fire, and poses a risk of electric shock.
- Do not use or keep flammable materials near the product.
- If the product emits an abnormal sound or a burnt smell or smokes, unplug the power-cord immediately and contact a Samsung service center.
- If you smell gas, ventilate the room immediately. Do not touch the power plug of the product. Do not turn the product off or on.
- Do not strike or subject the product to a sudden shock. Do not pierce the product with a sharp object.

Cleaning Precautions

- Never use alcohol, solvents, waxes, benzene, thinners, air freshener, or lubricants to clean the product, or spray insecticide on the product.
 - Using any of these materials can discolor the exterior coating or cause it to split or peel off, or remove the labelling on the product.
- To clean the product, unplug the power cord, and then wipe the product with a clean, dry, soft cloth (Microfiber, cotton).
 - Avoid leaving dust on the product. Dust can scratch its the surface.

Additional Information

About the Network Connection

- Depending on the wireless router used, some network operations may perform differently.
- For detailed information on networking with a wireless router or modem, refer to the router's or modem's documentation.
- Select one wireless channel that is not used currently. If the selected channel is used by another communication device nearby, radio interference may result in communication failure.
- In compliance with the newest Wi-Fi certification specifications, the HUB does not support WEP, TKIP, or TKIP-AES (WPA2 Mixed) security encryption in networks running in the 802.11n mode.
- By its nature, wireless LAN may experience radio interference depending on the environmental conditions (such as wireless router performance, distance, obstruction, interference with other wireless devices, etc.)
- WEP encryption does not work with WPS (PBC) / WPS (PIN).

Compatible products

• Mobile: iOS (4.3 or above)



✓ Some devices may not be compatible with the product.

Copyright

© 2014 Samsung Electronics Co.,Ltd.

All rights reserved; No part or whole of this user's manual may be reproduced or copied without the prior written permission of Samsung Electronics Co.,Ltd.

Contents

SAFETY INFORMATION

Regulatory Compliance Statements	2
Warning	2
FCC Statement: (for U.S.A)	2
IC Statement: (for Canada)	3
Important Safety Instructions	4
Safety precautions	5
Power Supply Precautions	5
Installation Precautions	5
Usage Precautions	6
Cleaning Precautions	6
Additional Information	7
About the Network Connection	7
Compatible products	7
Copyright	7
JNDERSTANDING YOUR M5	
Before you begin	12
Communication Basics	12
Basic Connection	12
How you can enjoy your M5	13

GETTING STARTED

Top Panel	14
Rear Panel	15
Accessories	16
Available Accessories (Not Included)	16
Connecting the Stand	17
Sleep Mode	17
Installing on a wall	17
CONNECTIONS	
Connecting with a HUB (Not Included)	18
Connecting the M5(s) to Your Network with a HUB (Not Included)	18
Connecting without a HUB (Not Included)	21
Connecting the M5 to Your Network with a LAN Cable (For a Single M5)	21
Connecting the M5 to Your Network via the WPS Method (For a Single M5)	23
Connecting the M5 to Your Network via the Wi-Fi Setup Method (For a Single M	5)25
Connecting the M5 to Bluetooth Devices	29
Disconnecting Bluetooth	30
Connecting with TV SoundConnect function	31
Disconnecting TV SoundConnect	32

Adding an M5	33
Adding an extra M5 to a HUB that is connected to an M5	33
Adding another M5 and Hub to a single M5 in use	34
Adding a HUB	36
Relocating the M5	36
FUNCTIONS	
Installing the Samsung Multiroom App	37
Accessing the Samsung Multiroom App	37
Using the Samsung Multiroom App	38
Renaming a connected M5	38
Switching the input source	38
Changing the sort order of listed M5s	39
Grouping M5s	4C
Playing a Song	42
Sorting the song	42
Adding tracks to a Playlist	43
Creating a Playlist	45
Listening to a radio station	47
Setting My Preset	47
Setting the Default Radio Stations in Speaker Preset	49
Searching for a Radio Station	49
Playing music from content providers	50
Playing music from the Amazon cloud player	50
Plaving music from a selected device	50

Using the Settings menu	51
Guide	51
Service	52
Speaker Settings	53
Clock	56
Support	57
Open source licenses	58
App Version	58
Reset your product	59
Resetting the M5	59
Resetting the HUB (Not Included)	59
APPENDIX	
Troubleshooting	60
Specifications	63
Open Source License Notice	64

Understanding Your M5

Before you begin

Communication Basics



- 1 Requirements: Wireless Router, Smart Device
- 2 The wireless router should be connected to the Internet.
- **3** The smart device should be connected to the router via a Wi-Fi connection.

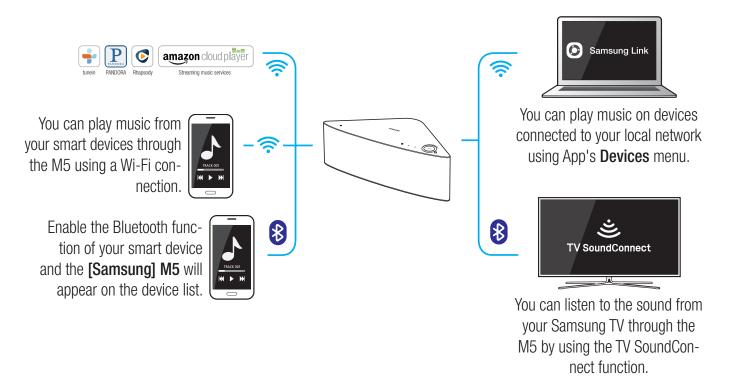
Basic Connection



• If you have a HUB, you can use two or more M5s in a multi-room configuration.

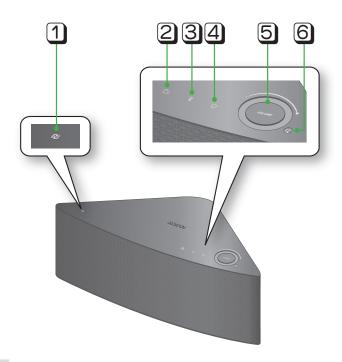
How you can enjoy your M5

- Stream music through Internet radio, music services, or from the cloud.
- Play music through a Wi-Fi connection from your smart device.
- Play music from your phone, PC, or smart devices via Bluetooth.
- Use the TV SoundConnect function to play sound from your Samsung TV.
- If you have connected a HUB, you can configure multiple M5s in a Multi-room set-up with Internet radio, music services, and Samsung Link.
 - Note that Bluetooth and TV SoundConnect are not configured for Multi-room set-ups.



Getting Started

Top Panel



1	NFC Tag	Connect your NFC compatible device via Bluetooth to the M5 using the simple NFC tagging procedure. (Android only)	
2	Internet Radio Preset	Press this button to listen to an Internet radio station. Each time you press the button, you change the radio station.	
3	Bluetooth button	Press this button to enable Bluetooth.	
4	TV SoundConnect button	Press this button to enable TV SoundConnect.	
5	Volume Control	Controls the volume level. Touch and drag softly with your finger to make adjustments. This will not work if you press with excessive force.	
6	Mute button	Mutes the sound from this M5. Press again to restore the sound to the previous volume level.	



- ✓ When you turn on the M5, touch buttons appear on its top panel.
- ✓ Press and hold the 🛱 Mute button for more than 5 seconds to place the M5 into Sleep Mode.
- ✓ Press and hold the ¬ TV SoundConnect button for more than 5 seconds to reset the TV SoundConnect and connect a new TV.
- ✓ You can listen to a radio station by pressing the ☐ Internet Radio Preset button on the top panel of the M5. Each time you press the button, the M5 changes the station.

Rear Panel

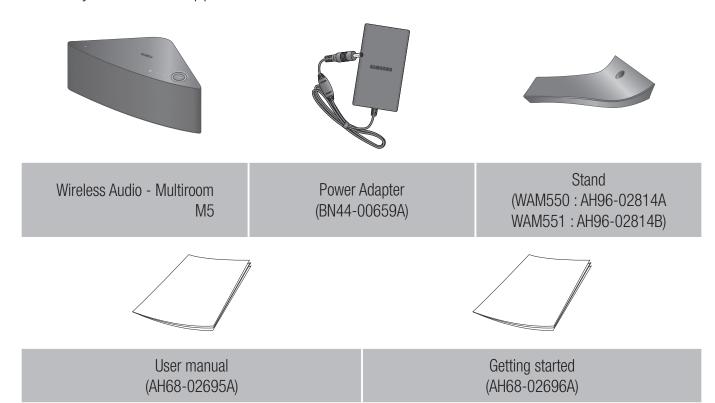


1	SPK ADD button (Speaker Add)	Press this button to add an M5 to your network.
2	WPS/Wi-Fi SETUP button	Press this button to connect your M5 to your network using WPS or Wi-Fi setup.
3	Wall Mount	You can purchase a wall-mount to hang your product on the wall. (For more information, please refer to page 17.)
4	SERVICE	For service only. Lets service technicians update the firmware of the M5.
5	ETHERNET	Lets you connect the M5 to your network using a LAN cable.
6	POWER	Connection for the M5's power adapter.

- ✓ **SPK ADD** Button: Press for 1 second to pair your M5 with a HUB.
- ✓ WPS / Wi-Fi SETUP Button:
 - Press for 1 second to connect the M5 to your wireless router using WPS.
 - Press and hold down for more than 5 seconds until you hear a fast, 3 note beep to connect the M5 to your network through your smart device using the Wi-Fi Setup method.

Accessories

Confirm you have the supplied accessories shown below.



Available Accessories (Not Included)

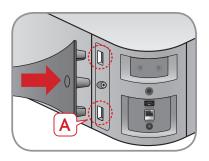


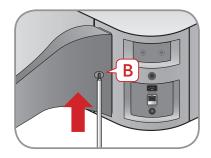
HUB: WAM250

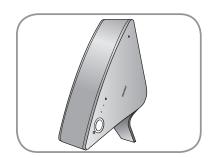


- ✓ Information on available accessories and their release dates can be found on the Samsung website.
- ✓ When purchasing an accessory, check whether it is compatible with the M5.
- ✓ Use authentic Samsung accessories. Damage and problems caused by unauthorized accessories can void your warranty.

Connecting the Stand







- Insert the stand into slot A of the M5. Tighten a screw at B.
- The M5 can now be installed vertically.



Caution

✓ Do not place the M5 on an unstable surface.

Sleep Mode

In Wi-Fi / Bluetooth / TV SoundConnect mode

- The M5 switches to the sleep mode if there is no music playback or no button operation (either from the top panel or from the app) for 25 minutes.



NOTES

- ✓ While playing music in the Wi-Fi, Bluetooth, or TV SoundConnect connection modes, the M5 will not switch to the Sleep mode.
- ✓ To switch to the Sleep mode manually, press and hold the
 ✓ Mute button for more than 5 seconds.

Installing on a wall

You can purchase your preferred wall-mount additionally to install the product on a wall if you want.

Considerations for purchasing

For weight and hole size, refer to page 62.

- Endurable load: Above 5.1 lbs
- Hole size: 1/4 20 threaded insert



NOTES

- ✓ Since Wall-mount installation is optional, you should additionally purchase corresponding accessories
- ✓ Please have a qualified installer install the Wall Mount Bracket.
- ✓ Ask professional installation company to mount your product on the wall.
- ✓ Check the strength of the wall before you install the Wall Mount Bracket. If the strength is insufficient, make sure to reinforce the wall before installing the Wall Mount Bracket and the M5 on the wall.
- ✓ For more information, please refer to the Wall Mount's manual.
- ✓ Samsung Electronics is not liable for any damage to the product due to the product being installed inappropriately.

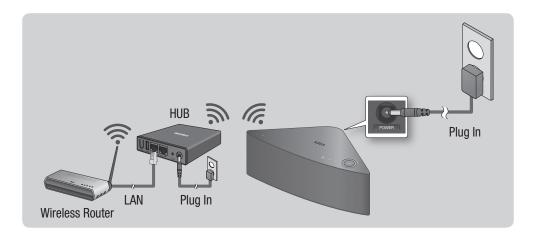
17

Connections

Connecting with a HUB (Not Included)

- If the M5 fails to connect to your network or its network connection operates abnormally, place the M5 closer to the HUB or your router and try again.
- The M5 is a wireless network device. Its communications with your network may be disrupted because of the distance between it and other devices on the network, obstructions, or interference from other wireless devices.

Connecting the M5(s) to Your Network with a HUB (Not Included)



1 Connect a LAN cable to the router and the **ETHERNET SWITCH** on the back of the HUB.



- ✓ You can connect the LAN cable to any **ETHERNET SWITCH** Port on the HUB.
- 2 Attach the HUB's power cord to the power port on the rear of the HUB, and then plug the power cord into an electrical outlet.
- 3 The power (∪) and the HUB (↑) indicators on the HUB's front turn on.
 When the pairing indicator (♠) begins to flash, plug the M5(s) into an outlet.
 The pairing indicator on the M5 starts to flash.
 If the HUB's pairing indicator does not flash, press the SPK ADD button on the rear of the HUB.

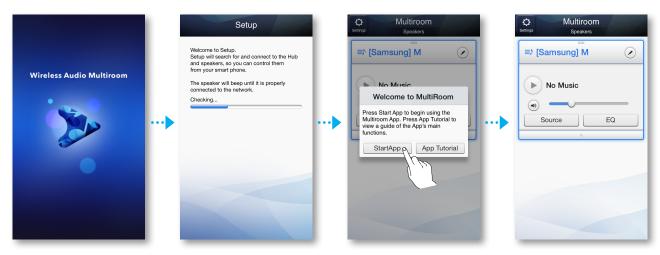
NOTE

- ✓ If you are adding multiple M5s, connect all the M5's to electrical outlets. If you are not connecting all the M5s, refer to pages 33~35. Press here
- 4 Wait until the pairing indicator on the M5 stops flashing. If the M5's LED indicator turns solid blue, pairing is complete. The M5 may also beep.

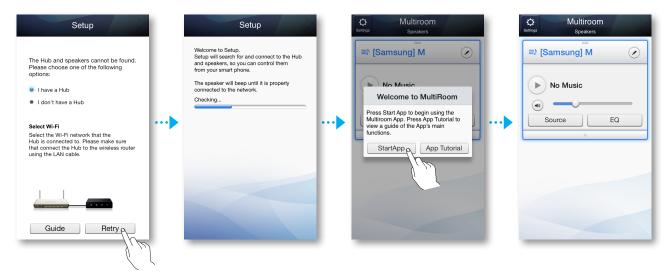


- ✓ Place each M5 at least 20 inches (50 cm) from the HUB when connecting them to the HUB.
- ✓ Your smart device cannot connect to the M5 or the HUB if there is no wireless router.
- ✓ To confirm you have a proper connection, check the pairing indicator on the front of the HUB.
 - When you turn on the HUB for the first time, there is a 20 minute pairing period.

 The pairing indicator () will blink for these 20 minutes or until pairing occurs. When you press the SPK ADD button to pair additional M5s, the pairing period is reduced to 10 minutes. The pairing indicator () flashes for 10 minutes or until pairing occurs. Turn on the M5 you want to pair while the pairing indicator is flashing.
 - If pairing mode has expired, press the **SPK ADD** button on the rear of the HUB to turn on pairing mode again. Then, turn the M5 off and then on or press the **SPK ADD** button on the rear of the M5 to link the M5 to the HUB.
- ✓ For a proper connection, connect the HUB to your router before turning on the M5.
 - Connecting the M5 to the HUB may take a few minutes.
 - There will be a brief sound when the connection is established.
- **5** Connect your smart device to your Wi-Fi network. (The HUB and the smart device should be connected to the same router.)
- 6 Download the **Samsung Multiroom** app from the App Store of your smart device.
- 7 On your smart device, select the **Samsung Multiroom** app. Setup starts.



8 If the automatic setup fails, run the App again and follow the instructions in the app guide on your device to connect the M5 and the HUB.



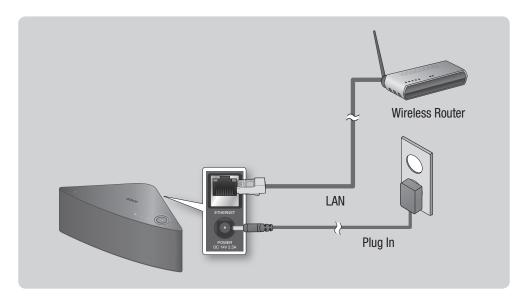


✓ After pairing is complete, the M5 naming screen appears. Edit the name or enter a name of your own choosing.

Connecting without a HUB (Not Included)

- If the M5 fails to connect to your network or its network connection operates abnormally, place the M5 closer to the HUB or your router and try again.
- The M5 is a wireless network device. Its communications with your network may be disrupted because of the distance between it and other devices on the network, obstructions, or interference from other wireless devices.

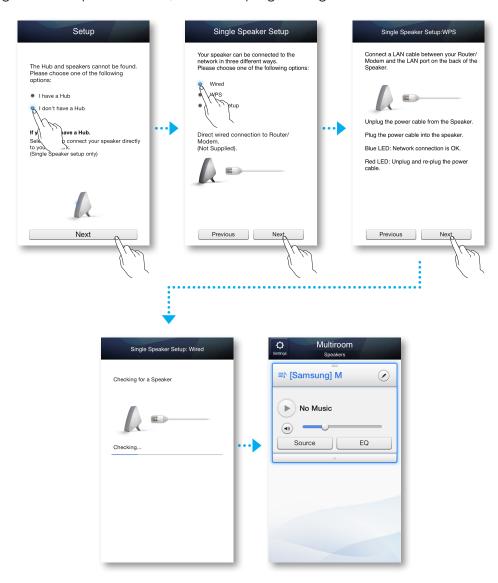
Connecting the M5 to Your Network with a LAN Cable (For a Single M5)



- 1 Connect one end of the LAN cable to the M5's **ETHERNET** port. Connect the other end to your wireless router. (You cannot use the M5 without a wireless router.)
- 2 Plug the M5 into an electrical outlet. The LED pairing indicator starts to blink.
- 3 Connect your smart device to your Wi-Fi network.
- 4 Download the **Samsung Multiroom** app from the App Store of your smart device.
- **5** On your Smart device, select the **Samsung Multiroom** app. Setup starts.



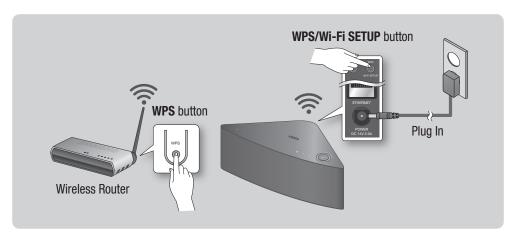
- 6 In the app, select "I don't have a Hub", and then press Next. On the next screen, select Wired, and then press Next.
- 7 Unplug the M5's power cable, and then plug it in again.





✓ After pairing is complete, the M5 naming screen appears. Edit the name or enter a name of your own choosing.

Connecting the M5 to Your Network via the WPS Method (For a Single M5)

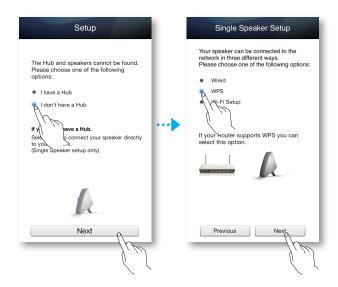


- ✓ The M5 does not support Wi-Fi Direct or Wi-Fi Setup (tethering).
- ✓ Some Wi-Fi devices may search for and find the M5, but not support the connection.
- ✓ For activation of the WPS function on a relevant AP, refer to the AP's manual.
- ✓ The WPS function may not be supported on some APs.

 In that case connect to the Internet using a wired network or the M5's Wi-Fi Setup.
- 1 Plug the M5 into an electrical outlet. The LED pairing indicator starts to blink.
- 2 Connect your smart device to your Wi-Fi network.
- 3 Download the **Samsung Multiroom** app from the App Store of your smart device.
- 4 On your smart device, select the **Samsung Multiroom** app. Setup starts.

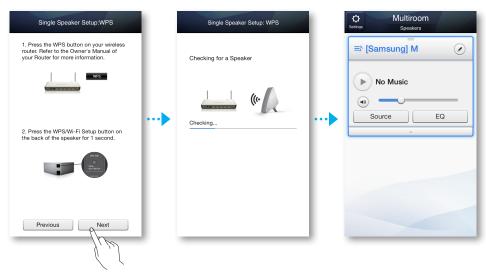


In the app, select "I don't have a Hub", and then press Next. On the next screen, select WPS, and then press Next.



Press the WPS button on your wireless router, and then press the WPS/Wi-Fi SETUP button on the back of the M5. Once the M5 is connected, the M5 produces a sound, and the LED pairing indicator on the front stops flashing.

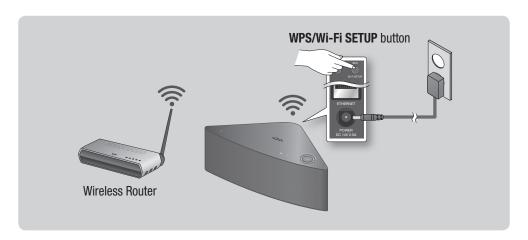
Press **Next** on your smart device when the LED pairing indicator stops flashing.



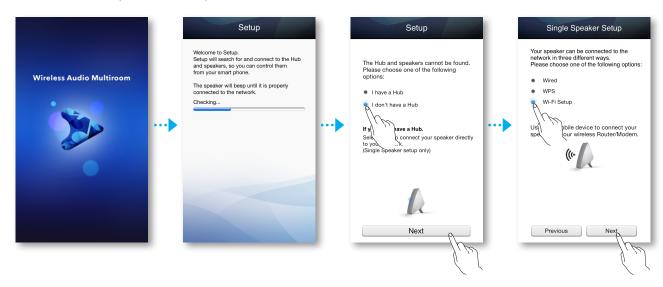


- ✓ The M5 goes into stand-by for 2 minutes when you press the WPS/Wi-Fi SETUP button. While the M5 is in stand-by, press the WPS button of your router.
- ✓ For the WPS stand-by duration and the specifications of your router, refer to the router's manual.
- ✓ After pairing is complete, the M5 naming screen appears. Edit the name or enter a name of your own choosing.

Connecting the M5 to Your Network via the Wi-Fi Setup Method (For a Single M5)



- 1 Plug the M5 into an electrical outlet. The LED pairing indicator starts to blink.
- 2 Connect your smart device to your Wi-Fi network.
- 3 Download the **Samsung Multiroom** app from the App Store of your smart device.
- 4 On your smart device, select the **Samsung Multiroom** app. Setup starts.
- In the app, select "I don't have a Hub", and then press Next. On the next screen, select Wi-Fi Setup, and then press Next.

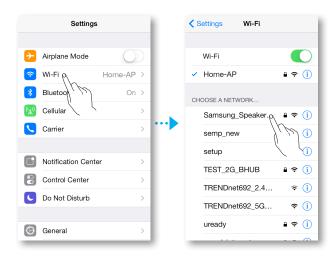


- 6 Press and hold the WPS/Wi-Fi SETUP button on the back of your M5 for 5 seconds. The indicator LED stops blinking and turns solid blue. You should also hear a notification sound.
- 7 Press Next.
- 8 Press OK.

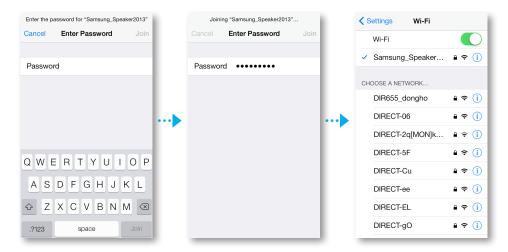


- 9 Press the smart device's Home button to leave app and select Settings.
- 10 Choose the M5's Wi-Fi point.
- 11 Select Samsung_Speaker2013. This is the default M5 name. The M5 connects to your smart device.

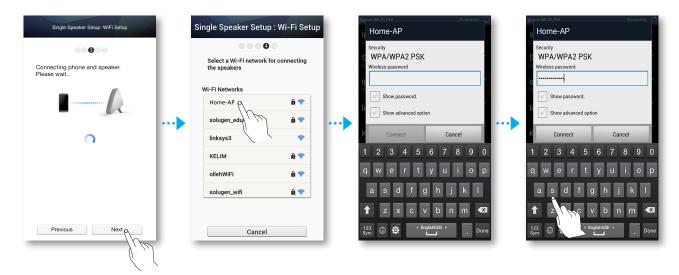
(The default security PIN is 1234567890.)



12 Use the keyboard that appears to enter your password.



- 13 Press the **Next** on the app screen. The smart device lists available networks. Select your network from the list.
- 14 If you have a password for your network, the Security screen appears on your smart device. Use the keyboard that appears to enter your password. When done, press Connect.



15 Your smart device connects to the same network your M5 is attached to. When the connection is complete, press **Next**.





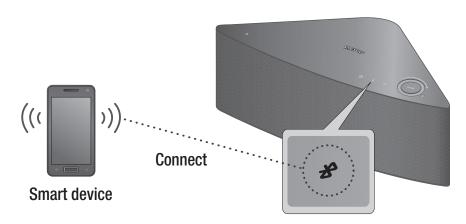
- ✓ Connecting to a secure wireless network requires the correct password.
 - For the password of your secured home or work wireless network, consult your Internet service provider or the network administrator.
 - For the password of a Wi-Fi network in a public place such as a cafe or theater, consult the location's general manager or information center.
- ✓ After pairing is complete, the M5 naming screen appears. Edit the name or enter a name of your own choosing.

Connecting the M5 to Bluetooth Devices

You can connect the M5 to Bluetooth devices and enjoy music with high quality stereo sound, all without wires.

Bluetooth technology lets Bluetooth-compliant devices interconnect easily with each other using a short, wireless connection.

To connect a Bluetooth device to your M5, follow these steps:



- 1 Plug the M5 into an electrical outlet, and then press the \$ Bluetooth button on its top panel.
- 2 Enable your smart device's Bluetooth function, and then select **Scan for Devices**.
- 3 Select the [Samsung] M5.
- 4 Select the desired track to play from your smart device's music list.
- 5 The M5 plays the track you selected.

- ✓ A Bluetooth device may cause noise or malfunction, depending on usage, when:
 - A part of your body is in contact with the receiving/transmitting system of the Bluetooth device or the M5.
 - It is subject to electrical variation from obstructions caused by a wall, corner, or by office partitioning.
 - It is exposed to electrical interference from same frequency-band devices including medical equipment, microwave ovens, and wireless LANs.
- ✓ Pair the M5 with the Bluetooth device while they are close together.
- ✓ The further the distance between the M5 and the Bluetooth device, the worse the quality. If the distance exceeds the Bluetooth operational range, the connection is lost.
- ✓ The Bluetooth connection only works when the Bluetooth device is close to the M5. The connection is
 automatically cut off if the Bluetooth device moves out of range. Even within range, the sound quality
 may be degraded by obstacles such as walls or doors.
- ✓ This M5 may cause electric interference during its operation.

- ✓ In Bluetooth connection mode, the Bluetooth connection will be lost if the distance between the M5 and the Bluetooth device exceeds 16.25 ft (5m).
- ✓ You may be required to enter a PIN code (password) when connecting the Bluetooth device to the M5. If the PIN code input window appears, enter 0000.
- ✓ The M5 supports SBC data (44.1kHz, 48kHz).
- ✓ The AVRCP feature is not supported.
- ✓ Connect only to a Bluetooth device that supports the A2DP (AV) function.
- ✓ You cannot connect to a Bluetooth device that supports only the HF (Hands Free) function.
- ✓ Only one Bluetooth device can be paired at a time.
- ✓ If you unplug the M5, the Bluetooth connection is terminated. To re-establish the connection, plug the M5 into an outlet, and then set the Bluetooth connection again.

Disconnecting Bluetooth

To disconnect the Bluetooth connection, turn off the Bluetooth function on your smart device. (For more information, please refer to the smart device's user manual.)

You can also disconnect the Bluetooth connection in the App.

- 1 On your smart device, select the **Samsung Multiroom** app.
- 2 Press the Source button.
- 3 Switch to another mode and the Bluetooth connection will terminate.





- ✓ To establish a Wi-Fi connection, see pages 18~28. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

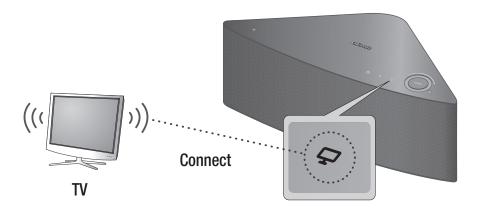
 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection, see page 31. Press here

 To establish a TV SoundConnect connection connec
- ✓ You can also terminate the Bluetooth connection by pressing the ¬ TV SoundConnect or □ Internet Radio Preset button on the M5.

Connecting with TV SoundConnect function

This section explains how to connect the M5 to Bluetooth compatible SAMSUNG TVs.



- 1 Plug the M5 into an outlet, and then press the TV SoundConnect button on its top panel.
- 2 Set Add New Device to On in the TV's TV SoundConnect Settings menu. (Refer to the TV's user manual for details.)
 A message asking whether to proceed with Bluetooth pairing appears.
- 3 Select Yes.
 The M5 pairs with the TV.
- 4 Select the desired track to play from your TV's music list.
- 5 The M5 plays the track you selected.

- ✓ Press and hold the ☐ TV SoundConnect button for more than 5 seconds to reset the TV SoundConnect.
- ✓ Optimal pairing distance is 3.3 feet or less.
- ✓ If you unplug the M5, the TV SoundConnect connection is terminated. To re-establish the connection, plug the M5 into an outlet, and then set the TV SoundConnect connection again.
- ✓ When the M5 is sleep mode, the TV SoundConnect connection is not terminated.
- ✓ Only one M5 can be connected to the TV via TV SoundConnect.
- ✓ Operational range of TV SoundConnect
 - Recommended pairing range: up to 1 m.
 - Recommended operating range: up to 2 m.
 - The connection may be lost or sound may stutter if the distance between the TV and the M5 exceeds 2 m.

- ✓ Before activating this function, be sure to activate the Samsung TV's SoundConnect or SoundShare mode.
- ✓ The SoundConnect feature is available on some Samsung TVs released since 2012. Check whether
 your TV supports the SoundShare or SoundConnect function.
 (For further details, refer to the TV's user's manual.)
- ✓ Instability in the network environment may cause connection to be lost or sound to stutter.

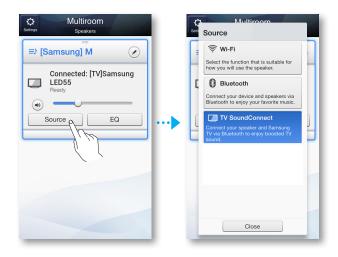
Disconnecting TV SoundConnect

To disconnect the TV SoundConnect connection, turn off the TV SoundConnect function on your TV.

(For more information, please refer to the TV's user manual.)

You can also disconnect the TV SoundConnect connection in the App.

- 1 On your Smart device, select the **Samsung Multiroom** app.
- 2 Press the Source button.



3 Switch to another mode and the TV SoundConnect connection terminates.



- ✓ To establish a Wi-Fi connection, see pages 18~28. Press here To establish a TV SoundConnect connection, see page 31. Press here
- ✓ You can also terminate the TV SoundConnect connection by pressing the ♣ Bluetooth or ☐ Internet Radio Preset button on the M5.

Adding an M5

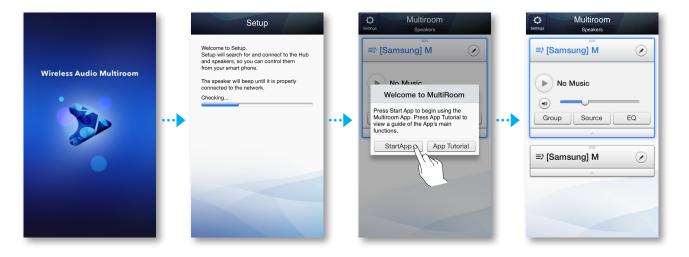
- Before adding an M5, unplug all M5s that are connected to the **Samsung Multiroom** app.
- If you add a new HUB and an extra M5 and connect them to the same wireless router that an existing M5 is connected to, the existing M5 will disappear from the **Samsung Multiroom** app. To re-connect the existing M5, connect it to the newly added HUB.

Adding an extra M5 to a HUB that is connected to an M5

1 Press the SPK ADD button on the back of the HUB. (The Pairing indicator on the front of the HUB will blink.)



- ✓ The pairing indicator (♠) flashes during the pairing mode. You plug in M5 whille the indicator is flashing.
- Plug the M5 you are adding into an electrical outlet, and then press the SPK ADD button on the back of the M5.
 When the M5 connects to the HUB, the M5 beeps or sounds, and the M5's LED indicator stops flashing.
- 3 On your smart device, select the **Samsung Multiroom** app. Setup starts.



NOTE

✓ After pairing is complete, the M5 naming screen appears. Edit the name or enter a name of your own choosing.

Adding another M5 and Hub to a single M5 in use

- When the M5 in use is connected to the router with a LAN cable
 - 1 Disconnect the LAN cable from the M5 in use.
 - 2 Connect the HUB to the wireless router with the LAN cable, and then plug in the HUB's power cable.
 - 3 Plug in the power cable of the new M5. The new M5's blue LED pairing indicator starts to flash. Wait until the pairing indicator on the M5 stops flashing. When the indicator stops flashing, pairing is complete. The M5 may also beep.
 - 4 Turn off the old M5 by disconnecting the power cable. Then, connect it again. Press the **SPK ADD** button on the back of the M5. The M5's blue LED pairing indicator starts to flash. Wait until the pairing indicator on the M5 stops flashing. When the indicator stops flashing, pairing is complete. The M5 may also beep.
 - **5** On your smart device, select the **Samsung Multiroom** app. Setup starts.



When the M5 in use is connected using WPS or the Wi-Fi Setup method

- 1 Connect the HUB to your wireless router with a LAN cable, and then plug the HUB's power cable into an electrical outlet.
- 2 Plug in the power cable of the new M5. The new M5's blue LED pairing indicator starts to flash. Wait until the pairing indicator on the M5 stops flashing. When the indicator stops flashing, pairing is complete. The M5 may also beep.
- Turn off the old M5 by disconnecting the power cable. Then, connect it again. Press the **SPK ADD** button the back of the old M5. The old M5's blue LED pairing indicator starts to flash. Wait until the pairing indicator on the M5 stops flashing. When the indicator stops flashing, pairing is complete. The M5 may also beep.
- 4 On your smart device, select the **Samsung Multiroom** app. Setup starts.



.... Adding a HUB

An M5 and a HUB may not pair successfully if the M5 and HUB are too far apart or are on different floors.

In such cases, you can link two HUBs together by setting the second HUB to Repeater mode. The additional HUB amplifies the signal and lets you pair the M5 to the closest HUB.

- Set the HUB that is connected to the wireless router to Pairing mode by pressing its SPK ADD button for 1 second.
- Plug in the new HUB you are using as an extender, and then press its SPK ADD button for 10 seconds.
- 3 The newly added HUB's LED indicators turn off and on, and it switches to Repeater mode.
- 4 Once the connection between the two HUBs has been established, the added HUB's (?) indicator stops blinking.

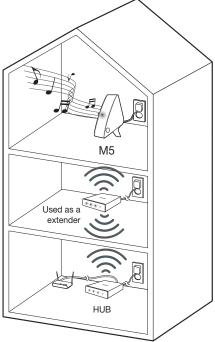


- ✓ If your smart device is not connected to the wireless router with a Wi-Fi connection, the M5 will not appear on the Samsung Multiroom app.
- ✓ Place the HUB that is in Repeater mode in an appropriate location between the M5 and the HUB that is connected to the wireless router.
- ✓ You can set only one HUB to Repeater mode.



When relocating your M5, refer to the below table.

Wireless router HUB	If you want to connect your M5 to the current wireless router.	If you want to connect your M5 to a different wireless router.
Without a HUB	Turn off the M5, relocate it and then turn it on.	Turn off the M5, relocate it, then establish the new connection as described in the installation instructions on pages 18 through 28. Press here
With a HUB		Connect a LAN cable between the HUB and the new wireless router, turn on the HUB, and then turn on the M5.



Functions

Installing the Samsung Multiroom App

To use the M5, you must download and then install the **Samsung Multiroom** App by accessing the app through the App Store.

With the **Samsung Multiroom** App installed, you can play music stored in your smart device, from connected devices and other content providers, and from Internet radio stations.

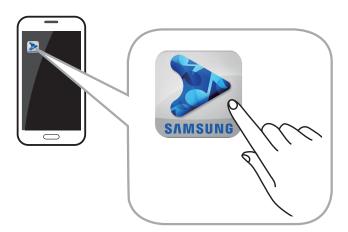
iOS

Market search : Samsung Multiroom



Accessing the Samsung Multiroom App

To access the **Samsung Multiroom** app, press the Multiroom app icon on your smart device.



Using the Samsung Multiroom App

Renaming a connected M5

You can rename M5s connected to your network.

1 Tap the 2 and then enter the name you want using the keyboard. When finished, select **Save**.



Switching the input source

You can switch the input source.

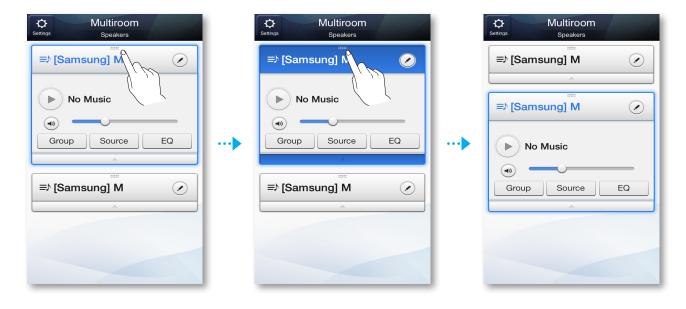
- 1 Press the **Source** button on the **Speaker List** screen.
- 2 Select a source from the list of sources that appears.



Changing the sort order of listed M5s

If you have added multiple M5s, this function is available. (See pages 33~35.) Press here

1 Drag the of the M5 you want to re-order up or down.



Grouping M5s

You can group multiple M5s linked to the App and play the same music on all connected M5s in the same group.

This function is available only If you have added multiple M5s. (See pages 33~35.) Press here

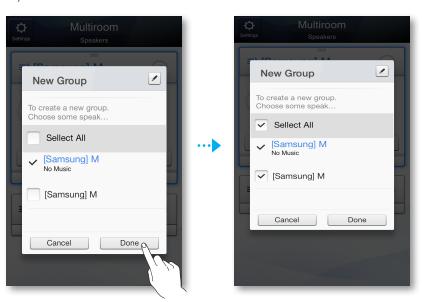


- ✓ This function is available only when M5s are connected to a HUB.

 If there are no M5s connected to a HUB, the Group button will not appear.
- ✓ The Group Play function is not available for Bluetooth, and TV SoundConnect connections.
- 1 Press the Group button on the Speaker List screen.



- 2 Select the M5's you want to group from the list that appears.
- **3** When finished, select **Done**.



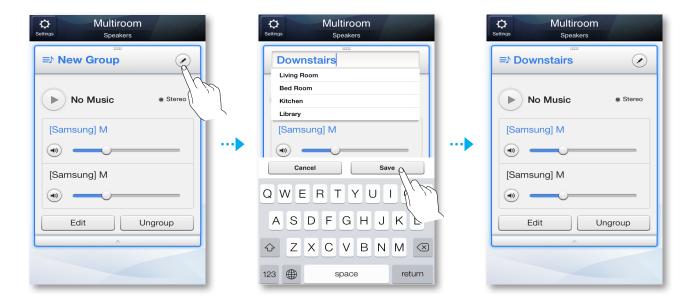


✓ You cannot assign an M5 to more than one group.

Renaming a Group

You can re-name a group of M5s.

1 Press the button, and then enter a name for the group using the keyboard. When finished, select **Save**.



Playing a Song

1 Press the ⇒ button.



2 Select My Phone.



3 Select the desired song from the list that appears. The song plays.

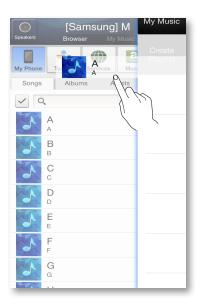
Sorting the song

You can list and sort the songs in your smart device by selecting one of the tabs on the My Music screen.

- **Songs**: Shows the list of music stored in the smart device.
- Albums: Shows the list of music stored in the smart device, sorted by album.
- Folders: Shows the list of music stored in the smart device, sorted by stored folder.
- More + : Shows the list of music stored in the smart device, sorted by artist and genre.

Adding tracks to a Playlist

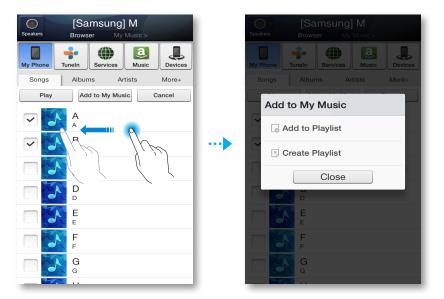
1 Touch and hold the desired file, and then drag it to the Playlist.



2 Enter a name for the playlist, and then select **Done**.



3 Swipe the screen with your finger right to left to move to My Music. The **Create Playlist** appears.

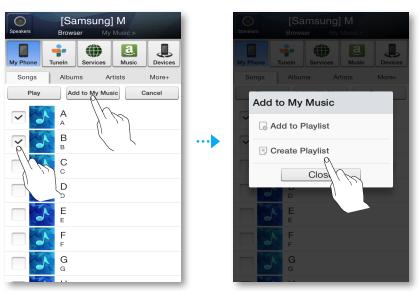


Creating a Playlist

1 Press the 🌣 button.



2 Select the desired tracks. When done, select Add to My Music, and then select Create Playlist.



Enter a name for the playlist, and then select **Done**.



Swipe the screen with your finger right to left to move to My Music. The Created Playlist plays.



Listening to a radio station

1 Select TuneIn.

The **TuneIn** screen appears with the following tabs:

• Favorites: Lists 3 default radio stations.

Browse: Lists all supported Internet radio stations.

• Search: Lets your search for a desired Internet radio station using keypad input.



2 Select the desired radio station from the displayed list. The selected radio station plays.



✓ You can listen to a radio station by pressing the ☐ Internet Radio Preset button on the top panel of the M5.

The M5 switches automatically to a default Internet radio station.

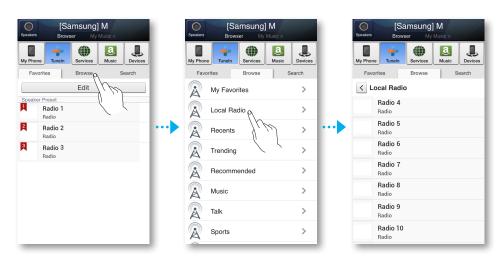
✓ Each time you press the ☐ Internet Radio Preset button, the M5 switches to the next default station, cycling through the 3 default stations.

To change the default stations, see page 49. Press here

Setting My Preset

Add a channel to the My Preset list so you can quickly find a desired station.

1 Search for the desired radio station using the **Browse** menu.



2 Select an item from the radio play list to display the selected radio station's front page. Touch ♥, and then select Save.



3 The selected radio station is added to the My Preset list.



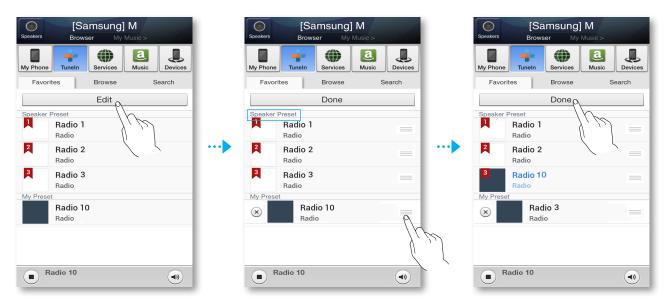
Setting the Default Radio Stations in Speaker Preset

Each time you press the Internet Radio Preset button on the M5's top panel, the M5 switches automatically to a default Internet radio station.

To replace the randomly selected default Internet radio stations with your own Internet radio stations, follow these steps:

Press the **Edit** button to open the edit box.

Press and drag for each selection up to **Speaker Preset**, and then select **Done**.





✓ If you press the ☐ Internet Radio Preset button and then run the App while listening to an Internet Radio station, the App jumps to the radio station editing page automatically.

Searching for a Radio Station

- Select TuneIn.The TuneIn screen appears.
- 2 Select Search to find the desired radio station. Touch the Search box, and then enter the name or call letters of the radio station you want to search for using the keyboard.

Playing music from content providers

- 1 Select Services.
- 2 You can play music from content providers.





- ✓ Depending on your region or manufacturer, supported contents service may differ.
- ✓ You may not subscribe to a service using your smart device.
 To use a for-pay service, first subscribe to the service through your computer.

Playing music from the Amazon cloud player

- 1 Select Music.
- 2 You can play music from the Amazon cloud player.



Playing music from a selected device

Displays a list of devices connected to your wireless router.

- You can play the music on devices connected to your local network using the M5's **Devices** menu.
 - 1 Select **Devices**.
 - 2 Select the desired device.
 - 3 You can play music from the selected device on the M5.



.... Using the Settings menu

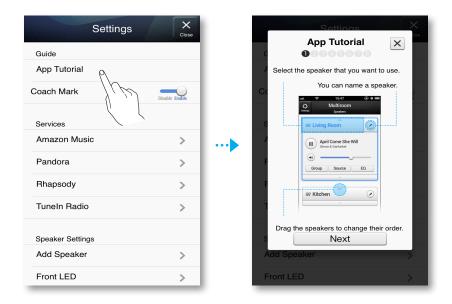
1 Press the 🌣 button.



Guide

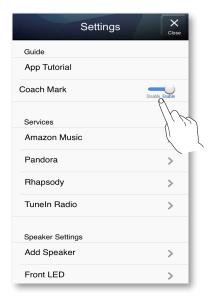
App Tutorial

Select App Tutorial to learn how to use the app.



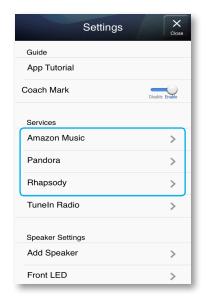
Coach Mark

- Disable: The Help text is not displayed.
- Enable: The app displays Help text as you navigate through the screens.



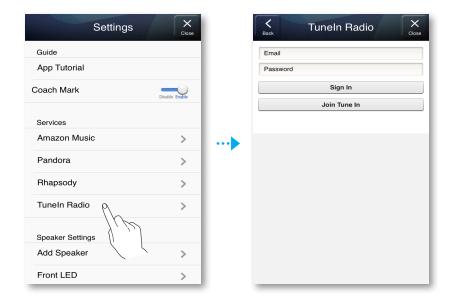
Service

Amazon Music, Pandora, Rhapsody Displays a list of available services.



Tuneln Radio

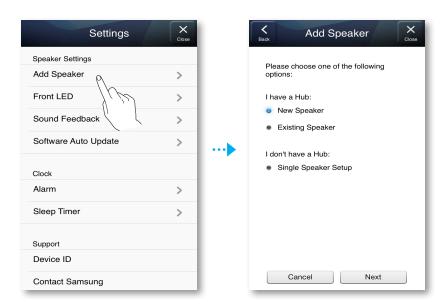
Gives you access to **TuneIn Radio**.



Speaker Settings

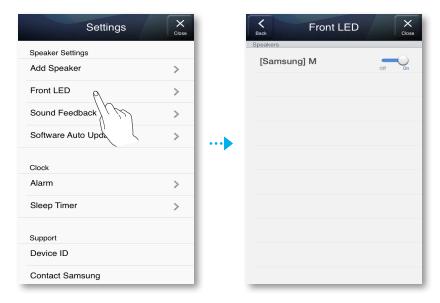
Add Speaker

Lets you can add one or more M5s to the App and enjoy the music stored in your smart device from one or more connected M5s.



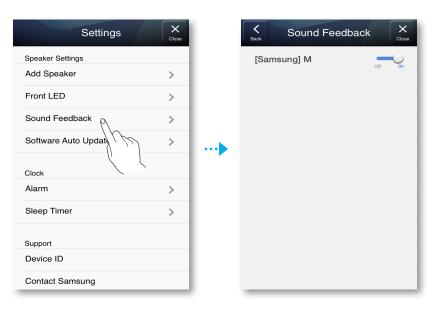
Front LED

- **Disable**: Turns off the M5's **Front LED** indicators.
- Enable: Turns on the M5's Front LED indicators.



Sound Feedback

- Disable: Turns off the Sound Feedback.
- Enable: Turns on the Sound Feedback.



Speaker Auto Update

Shows the M5's current software version, and lets you turn auto update on or off.

- On: When on, automatically updates the software when new firmware is released.
- Off: Turns off the auto update function.





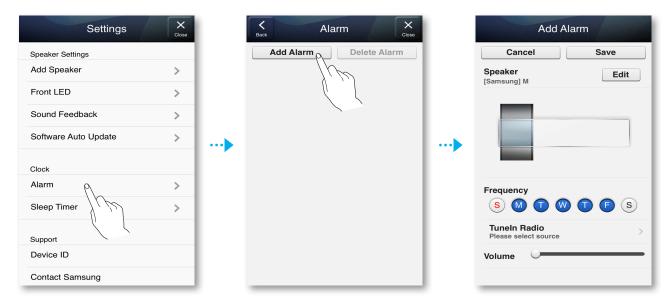
- ✓ Auto update is available when your M5 is connected to a network and the Speaker Auto Update function is set to On.
- ✓ It is strongly recommended that **Speaker Auto Update** settings on all the M5s used are set to **On**. Problems with networked functions (such as Group Play and Ear to Hear) may otherwise occur due to incompatibility issues when a variety of M5 software versions is used on linked M5s.
- ✓ For each M5 with an outdated software version.
 - 1) set the **Speaker Auto Update** setting to **On** and
 - 2) press and hold the **Mute** button for more than 5 seconds.

The M5 will then turn off and on so as to update its software automatically.

Clock

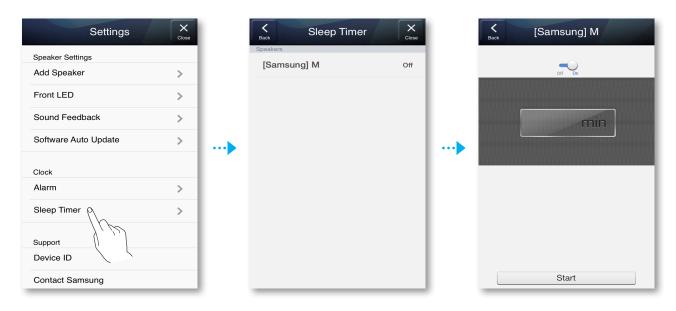
Alarm

Lets you set the Alarm.



Sleep Timer

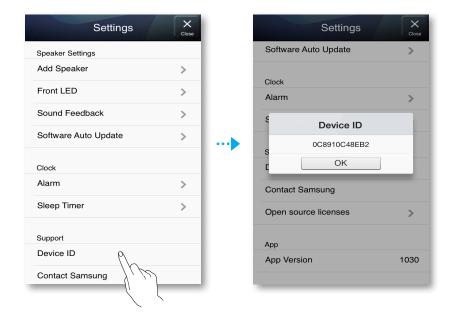
Lets you set the Sleep Timer.



Support

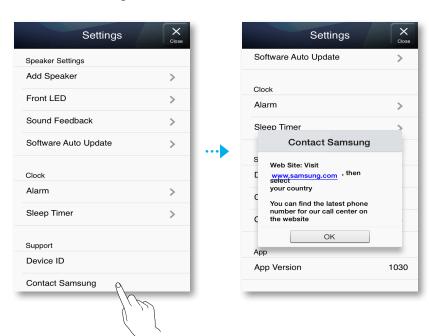
Device ID

Lets you check the **Device ID**.



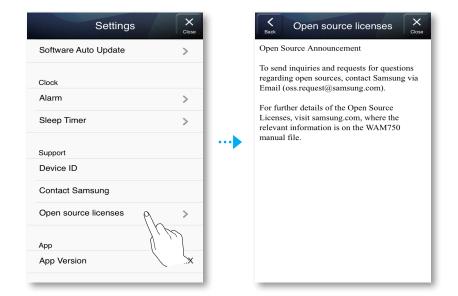
Contact Samsung

Provides a link to the Samsung website.



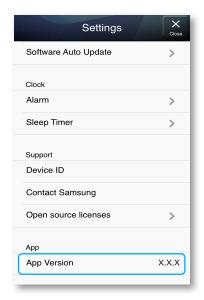
Open source licenses

Lets you view the **Open source licenses**.



App Version

Lets you view the **App Version**.



Reset your product

Resetting the M5

- 1 Press and hold both the 🗖 Internet Radio Preset and 🗸 Mute buttons for more than 5 seconds to reset the M5.
- 2 The Touch button on the M5 will blink twice.
- 3 Press and hold the filternet Radio Preset button for more than 5 seconds to reboot the M5.



✓ After resetting the M5, stored information will be lost.

Resetting the HUB (Not Included)

1 Press and hold the reset hole with a pen tip for 5 seconds, and wait for all LEDs to begin to flash.

Then, unplug the HUB and plug it in again.



2 Unplug and then plug in your M5s.



✓ If you have reset the HUB, you must unlug and plug in your M5s for a proper connection with the HUB.

Appendix

Troubleshooting

Before requesting service, please check the following.

Symptom	Check	Remedy
The unit will not turn on.	Is the power adapter plugged into the outlet?	Connect the power adaptor to the outlet.
A function does not work when the button is pressed.	Is there static electricity in the air?	Disconnect the power plug and connect it again.
Sound is not produced.	 Is the Mute function on? Is the volume set to minimum?	 Connect it correctly. Press the Mute button to cancel the mute function. Adjust the volume.
The TV SoundConnect (TV pairing) failed.	 Does your TV support TV SoundConnect? Is your TV firmware the latest version? Does an error occur when connecting? 	 TV SoundConnect is supported by some Samsung TVs released after 2012. Check your TV to see if it supports TV SoundConnect. Press and hold the TV SoundConnect button to reset the connection. Update your TV with the latest firmware. Contact the Samsung Call Center. Press and hold the TV SoundConnect button for more than 5 seconds to reset TV SoundConnect and connect a new TV.
HUB doesn't work properly	 Is the HUB plugged in? Is the LAN cable connected to the wireless router and the HUB properly? When the Hub is plugged in, do the HUB's front indicators show it's operating properly? 	 Plug in the HUB. Connect the LAN cable to the ETHERNET SWITCH on the back of the HUB and to your wireless router. Reset the HUB (see page 59). Press here If you experience troubles with connecting the HUB and M5, try relocating the M5 so that the M5 is closer to the wireless router or HUB.

Symptom	Check	Remedy
M5 doesn't work properly	 Is the M5 plugged in? Does the M5's front LED indicator remain red 5 minutes after turning on? 	 Plug in the M5. Check whether the Wi-Fi router you're using had been certified for Wi-Fi. Unplug the M5, plug it back in, and then reconnect it to the router. Reset the M5 (see page 59). Press here If used with a HUB Make sure the smart device and the HUB are connected to the same Wi-Fi network. Make sure the HUB's indicator LED's show that it is working correctly. (See page 18, item 3.) Press here If the problem persists, reset the HUB (see page 59). Press here Unplug, then plug in the HUB. Then, unplug and plug in the M5. If you experience troubles with connecting the HUB and M5, try relocating the M5 so that the M5 is closer to the wireless router or HUB.
I cannot group speakers.	Is the product connected to the network via Wi-Fi?	If the product is connected to the network via Bluetooth, or TV SoundConnect, you cannot use the group speakers function.

Symptom	Check	Remedy
App doesn't work properly	Does an error occur when accessing the app?	 Make sure your smart device is compatible with the app. (See page 7) Press here Make sure the app is the latest version. Make sure the M5's front LED turns from red to blue. If used with a HUB Make sure the HUB and the smart device are connected to same router. Make sure the HUB's indicator LED's show that it is working correctly. (See page 18, item 3.) Press here If you experience troubles with connecting the HUB and M5, try relocating the M5 so that the M5 is closer to the wireless router or HUB.



 $\checkmark\,$ If the problem persists, consult the service center for troubleshooting.

Specifications

	Power Requirements	- Input : AC 100~240V 50/60Hz - Output : DC 14.0V
	Power Consumption	15 W
General	Weight	5.1 lbs
	Dimensions	13,5 (W) X 6,6 (D) X 4,4 (H) inches
	Operating Temperature Range	+41°F to +95°F
	Operating Humidity Range	10 % to 75 %
Network	Ethernet	100BASE - TX Terminal
	Wireless LAN	Built-in
		WEP (OPEN)
	Security	WPA-PSK (TKIP)
		WPA2-PSK (AES)
	WPS(PBC/PIN)	Supported

- Network speeds equal to or below 10Mbps are not supported. (If using LAN cable, you'd better to use STP type.)
- Design and specifications are subject to change without prior notice.
- Weight and dimensions are approximate.
- Dispose unwanted electronics through an approved recycler.
 To find the nearest recycling location, go to our website: www.samsung.com/recyclingdirect or call, (877) 278 0799.
- This user manual is based on the product using the iOS operating system.
- For further details on using the product, visit www.samsung.com.

... Open Source License Notice

To send inquiries and requests for questions regarding open sources, contact Samsung via Email (oss.request@samsung.com).

- This product uses some software programs which are distributed under the Independent JPEG Group.
- This product uses some software programs which are distributed under the Freetype Project.
- This product uses some software programs which are distributed under the OpenSSL Project.
- This product uses some software programs which are distributed under the MPL.
- This product uses some software programs which are distributed under the GPL/LGPL.

GPL software: Linux Kernel, Busybox, Binutils, wireless_tools, iptables, gloox, rtnet5572sta, rtutil5572sta, iw, compat.ko, cfg80211.ko, ath6kl_usb.ko, e2fsprogs, TOMOYO, Binder Kernel driver, SnapMesh

LGPL software: Glibc, ffmpeg, libusb, libptp, libthai, libiconv, libmms, atk, gtk, cairo, pango, webkit, glib, libgcrypt, GNUTLS, libgpg-error, libsoup, LIBTASN1, xml2json, GIO, GAIL, GdkPixbuf, GtkPrinter, libsigc++, glibmm, getopt, GDBus, libxml++, nettle, libwbxml, RTSP, libnl, libintl To view unofficial translations of the GPL and LGPL, please visit the following link:

http://www.gnu.org/licenses/old-licenses/gpl-2.0-translations.html

http://www.gnu.org/licenses/old-licenses/lgpl-2.1-translations.html

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- 2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when

you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

- 3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

- 4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- 5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
- 6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
- 7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to

satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

- 8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
- 9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

- 11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
- 12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.> Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type 'show w'. This is free software, and you are welcome to redistribute it under certain conditions; type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than 'show w' and 'show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

GNU Lesser General Public License (LGPL)

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but

we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- 2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful. (For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when

you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and soon) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 7. You may place library facilities that are a work based on the Library sideby-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
- 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

- 12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
- 13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and an idea of what it does.> Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License , or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

signature of Ty Coon, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

Mozilla Public License Version 1.1

1. Definitions.

1.0.1. "Commercial Use"

means distribution or otherwise making the Covered Code available to a third party.

1.1. "Contributor"

means each entity that creates or contributes to the creation of Modifications.

1.2. "Contributor Version"

means the combination of the Original Code, prior Modifications used by a Contributor, and the Modifications made by that particular Contributor.

1.3. "Covered Code"

means the Original Code or Modifications or the combination of the Original Code and Modifications, in each case including portions thereof.

1.4. "Electronic Distribution Mechanism"

means a mechanism generally accepted in the software development community for the electronic transfer of data.

1.5. "Executable"

means Covered Code in any form other than Source Code.

1.6. "Initial Developer"

means the individual or entity identified as the Initial Developer in the Source Code notice required by Exhibit A.

1.7. "Larger Work"

means a work which combines Covered Code or portions thereof with code not governed by the terms of this License.

1.8. "License"

means this document.

1.8.1. "Licensable"

means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

1.9. "Modifications"

means any addition to or deletion from the substance or structure of either the Original Code or any previous Modifications. When Covered Code is released as a series of files, a Modification is:

- a. Any addition to or deletion from the contents of a file containing Original Code or previous Modifications.
- b. Any new file that contains any part of the Original Code or previous Modifications.

1.10. "Original Code"

means Source Code of computer software code which is described in the Source Code notice required by Exhibit A as Original Code, and which, at the time of its release under this License is not already Covered Code governed by this License.

1.10.1. "Patent Claims"

means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.

1.11. "Source Code"

means the preferred form of the Covered Code for making modifications to it, including all modules it contains, plus any associated interface definition files, scripts used to control compilation and installation of an Executable, or source code differential comparisons against either the Original Code or another well known, available Covered Code of the Contributor's choice. The Source Code can be in a compressed or archival form, provided the appropriate decompression or de-archiving software is widely available for no charge.

1.12. "You" (or "Your")

means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License or a future version of this License issued under Section 6.1. For legal entities, "You" includes any entity which controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. Source Code License.

2.1. The Initial Developer Grant.

The Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license, subject to third party intellectual property claims:

- a. under intellectual property rights (other than patent or trademark)
 Licensable by Initial Developer to use, reproduce, modify, display, perform,
 sublicense and distribute the Original Code (or portions thereof) with or
 without Modifications, and/or as part of a Larger Work; and
- b. under Patents Claims infringed by the making, using or selling of Original Code, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Code (or portions thereof).
- c. the licenses granted in this Section 2.1 (a) and (b) are effective on the date Initial Developer first distributes Original Code under the terms of this License
- d. Notwithstanding Section 2.1 (b) above, no patent license is granted: 1) for code that You delete from the Original Code; 2) separate from the Original Code; or 3) for infringements caused by: i) the modification of the Original Code or ii) the combination of the Original Code with other software or devices.

2.2. Contributor Grant.

Subject to third party intellectual property claims, each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license a. under intellectual property rights (other than patent or trademark) Licensable by Contributor, to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof) either on an unmodified basis, with other Modifications, as Covered Code and/or as part of a Larger Work; and

b. under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have made, and/or otherwise dispose of: 1) Modifications made by that Contributor (or portions thereof); and 2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).

c. the licenses granted in Sections 2.2 (a) and 2.2 (b) are effective on the date Contributor first makes Commercial Use of the Covered Code.
d. Notwithstanding Section 2.2 (b) above, no patent license is granted: 1) for any code that Contributor has deleted from the Contributor Version; 2) separate from the Contributor Version; 3) for infringements caused by: i) third party modifications of Contributor Version or ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or 4) under Patent Claims infringed by Covered Code in the absence of Modifications made by that Contributor.

3. Distribution Obligations.

3.1. Application of License.

The Modifications which You create or to which You contribute are governed by the terms of this License, including without limitation Section 2.2. The Source Code version of Covered Code may be distributed only under the terms of this License or a future version of this License released under Section 6.1, and You must include a copy of this License with every copy of the Source Code You distribute. You may not offer or impose any terms on any Source Code version that alters or restricts the applicable version of this License or the recipients' rights hereunder. However, You may include an additional document offering the additional rights described in Section 3.5. 3.2. Availability of Source Code.

Any Modification which You create or to which You contribute must be made available in Source Code form under the terms of this License either on the same media as an Executable version or via an accepted Electronic Distribution Mechanism to anyone to whom you made an Executable version available; and if made available via Electronic Distribution Mechanism, must remain available for at least twelve (12) months after the date it initially became available, or at least six (6) months after a subsequent version of that particular Modification has been made available to such recipients. You are responsible for ensuring that the Source Code version remains available even if the Electronic Distribution Mechanism is maintained by a third party. 3.3. Description of Modifications.

You must cause all Covered Code to which You contribute to contain a file documenting the changes You made to create that Covered Code and the date of any change. You must include a prominent statement that the Modification is derived, directly or indirectly, from Original Code provided by the Initial Developer and including the name of the Initial Developer in (a) the Source Code, and (b) in any notice in an Executable version or related documentation in which You describe the origin or ownership of the Covered Code.

3.4. Intellectual Property Matters

(a) Third Party Claims

If Contributor has knowledge that a license under a third party's intellectual property rights is required to exercise the rights granted by such Contributor under Sections 2.1 or 2.2, Contributor must include a text file with the Source Code distribution titled "LEGAL" which describes the claim and the party making the claim in sufficient detail that a recipient will know whom to contact. If Contributor obtains such knowledge after the Modification is made available as described in Section 3.2, Contributor shall promptly modify the LEGAL file in all copies Contributor makes available thereafter and shall take other steps (such as notifying appropriate mailing lists or newsgroups) reasonably calculated to inform those who received the Covered Code that new knowledge has been obtained.

(b) Contributor APIs

If Contributor's Modifications include an application programming interface and Contributor has knowledge of patent licenses which are reasonably necessary to implement that API, Contributor must also include this information in the legal file.

(c) Representations.

Contributor represents that, except as disclosed pursuant to Section 3.4. (a) above, Contributor believes that Contributor's Modifications are Contributor's original creation(s) and/or Contributor has sufficient rights to grant the rights conveyed by this License.

3.5. Required Notices.

You must duplicate the notice in Exhibit A in each file of the Source Code. If it is not possible to put such notice in a particular Source Code file due to its structure, then You must include such notice in a location (such as a relevant directory) where a user would be likely to look for such a notice. If You created one or more Modification(s) You may add your name as a Contributor to the notice described in Exhibit A. You must also duplicate this License in any documentation for the Source Code where You describe recipients' rights or ownership rights relating to Covered Code. You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Code. However, You may do so only on Your own behalf, and not on behalf of the Initial Developer or any Contributor. You must make it absolutely clear than any such warranty, support, indemnity or liability obligation is offered by You alone, and You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You

3.6. Distribution of Executable Versions.

You may distribute Covered Code in Executable form only if the requirements of Sections 3.1, 3.2, 3.3, 3.4 and 3.5 have been met for that Covered Code, and if You include a notice stating that the Source Code version of the Covered Code is available under the terms of this License, including a description of how and where You have fulfilled the obligations of Section 3.2. The notice must be conspicuously included in any notice in an Executable version, related documentation or collateral in which You describe recipients' rights relating to the Covered Code. You may distribute the Executable version of Covered Code or ownership rights under a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable version does not attempt to limit or alter the recipient's rights in the Source Code version from the rights set forth in this License. If You distribute the Executable version under a different license You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer or any Contributor. You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of any such terms You offer.

3.7. Larger Works.

You may create a Larger Work by combining Covered Code with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Code.

4. Inability to Comply Due to Statute or Regulation.

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Code due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be included in the legal file described in Section 3.4 and must be included with all distributions of the Source Code. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Application of this License.

This License applies to code to which the Initial Developer has attached the notice in Exhibit A and to related Covered Code.

6. Versions of the License.

6.1. New Versions

Netscape Communications Corporation ("Netscape") may publish revised and/or new versions of the License from time to time. Each version will be given a distinguishing version number.

6.2. Effect of New Versions

Once Covered Code has been published under a particular version of the License, You may always continue to use it under the terms of that version. You may also choose to use such Covered Code under the terms of any subsequent version of the License published by Netscape. No one other than Netscape has the right to modify the terms applicable to Covered Code created under this License.

6.3. Derivative Works

If You create or use a modified version of this License (which you may only do in order to apply it to code which is not already Covered Code governed by this License), You must (a) rename Your license so that the phrases "Mozilla", "MOZILLAPL", "MOZPL", "Netscape", "MPL", "NPL" or any confusingly similar phrase do not appear in your license (except to note that your license differs from this License) and (b) otherwise make it clear that Your version of the license contains terms which differ from the Mozilla Public License and Netscape Public License. (Filling in the name of the Initial Developer, Original Code or Contributor in the notice described in Exhibit A shall not of themselves be deemed to be modifications of this License.)

7. Disclaimer of warranty

Covered code is provided under this license on an "as is" basis, without warranty of any kind, either expressed or implied, including, without limitation, warranties that the covered code is free of defects, merchantable, fit for a particular purpose or non-infringing. The entire risk as to the quality and performance of the covered code is with you. Should any covered code prove defective in any respect, you (not the initial developer or any other contributor) assume the cost of any necessary servicing, repair or correction. This disclaimer of warranty constitutes an essential part of this license. No use of any covered code is authorized hereunder except under this disclaimer.

8. Termination

- 8.1. This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. All sublicenses to the Covered Code which are properly granted shall survive any termination of this License. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.
- 8.2. If You initiate litigation by asserting a patent infringement claim (excluding declatory judgment actions) against Initial Developer or a Contributor (the Initial Developer or Contributor against whom You file such action is referred to as "Participant") alleging that:
- a. such Participant's Contributor Version directly or indirectly infringes any patent, then any and all rights granted by such Participant to You under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively, unless if within 60 days after receipt of notice You either: (i) agree in writing to pay Participant a mutually agreeable reasonable royalty for Your past and future use of Modifications made by such Participant, or (ii) withdraw Your litigation claim with respect to the Contributor Version against such Participant. If within 60 days of notice, a reasonable royalty and payment arrangement are not mutually agreed upon in writing by the parties or the litigation claim is not withdrawn, the rights granted by Participant to You under Sections 2.1 and/or 2.2 automatically terminate at the expiration of the 60 day notice period specified above. b. any software, hardware, or device, other than such Participant's Contributor Version, directly or indirectly infringes any patent, then any rights granted to You by such Participant under Sections 2.1(b) and 2.2(b) are revoked effective as of the date You first made, used, sold, distributed, or had made, Modifications made by that Participant.
- 8.3. If You assert a patent infringement claim against Participant alleging that such Participant's Contributor Version directly or indirectly infringes any patent where such claim is resolved (such as by license or settlement) prior to the initiation of patent infringement litigation, then the reasonable value of the licenses granted by such Participant under Sections 2.1 or 2.2 shall be taken into account in determining the amount or value of any payment or license.

8.4. In the event of termination under Sections 8.1 or 8.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or any distributor hereunder prior to termination shall survive termination.

9. Limitation of liability

Under no circumstances and under no legal theory, whether tort (including negligence), contract, or otherwise, shall you, the initial developer, any other contributor, or any distributor of covered code, or any supplier of any of such parties, be liable to any person for any indirect, special, incidental, or consequential damages of any character including, without limitation, damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses, even if such party shall have been informed of the possibility of such damages. This limitation of liability shall not apply to liability for death or personal injury resulting from such party's negligence to the extent applicable law prohibits such limitation. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion and limitation may not apply to you.

10. U.S. government end users

The Covered Code is a "commercial item," as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of "commercial computer software" and "commercial computer software documentation," as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Code with only those rights set forth herein.

11 Miscellaneous

This License represents the complete agreement concerning subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. This License shall be governed by California law provisions (except to the extent applicable law, if any, provides otherwise), excluding its conflict-of-law provisions. With respect to disputes in which at least one party is a citizen of, or an entity chartered or registered to do business in the United States of America, any litigation relating to this License shall be subject to the jurisdiction of the Federal Courts of the Northern District of California, with venue lying in Santa Clara County, California, with the losing party responsible for costs, including without limitation, court costs and reasonable attorneys' fees and expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this

12. Responsibility for claims

As between Initial Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be deemed to constitute any admission of liability.

13. Multiple-licensed code

Initial Developer may designate portions of the Covered Code as "Multiple-Licensed". "Multiple-Licensed" means that the Initial Developer permits you to utilize portions of the Covered Code under Your choice of the MPL or the alternative licenses, if any, specified by the Initial Developer in the file described in Exhibit A.

Exhibit A - Mozilla Public License.

"The contents of this file are subject to the Mozilla Public License Version 1.1 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at http://www.mozilla.org/MPL/

Software distributed under the License is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License for the specific language governing rights and limitations under the License.

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org.

OpenSSL License

Copyright (c) 1998-2007 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
- 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.
- 5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.
- 6. Redistributions of any form whatsoever must retain the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)"

THIS SOFTWARE IS PROVIDED BY THE OPENSSL PROJECT "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OPENSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (eay@ cryptsoft.com). This product includes software written by Tim Hudson (tjh@ cryptsoft.com).

Original SSLeay License

Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com) All rights reserved.

This package is an SSL implementation written by Eric Young (eay@ cryptsoft.com).

The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are aheared to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/ or other materials provided with the distribution.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

"This product includes cryptographic software written by Eric Young (eay@ cryptsoft.com)"

The word 'cryptographic' can be left out if the rouines from the library being used are not cryptographic related :-).

4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The licence and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence.]

The FreeType Project LICENSE

2006-Jan-27

Copyright 1996-2002, 2006 by David Turner, Robert Wilhelm, and Werner Lemberg

Introduction

The FreeType Project is distributed in several archive packages; some of them may contain, in addition to the FreeType font engine, various tools and contributions which rely on, or relate to, the FreeType Project.

This license applies to all files found in such packages, and which do not fall under their own explicit license. The license affects thus the FreeType font engine, the test programs, documentation and makefiles, at the very least.

This license was inspired by the BSD, Artistic, and IJG (Independent JPEG Group) licenses, which all encourage inclusion and use of free software in commercial and freeware products alike. As a consequence, its main points are that:

- o We don't promise that this software works. However, we will be interested in any kind of bug reports. ('as is' distribution)
- o You can use this software for whatever you want, in parts or full form, without having to pay us. ('royalty-free' usage)
- o You may not pretend that you wrote this software. If you use it, or only parts of it, in a program, you must acknowledge somewhere in your documentation that you have used the FreeType code. ('credits')

We specifically permit and encourage the inclusion of this software, with or without modifications, in commercial products. We disclaim all warranties covering The FreeType Project and assume no liability related to The FreeType Project.

Finally, many people asked us for a preferred form for a credit/disclaimer to use in compliance with this license. We thus encourage you to use the following text:

Portions of this software are copyright ?<year> The FreeType Project (www.freetype.org). All rights reserved.

Please replace <year> with the value from the FreeType version you actually use.

Legal Terms

0. Definitions

Throughout this license, the terms 'package', 'FreeType Project', and 'FreeType archive' refer to the set of files originally distributed by the authors (David Turner, Robert Wilhelm, and Werner Lemberg) as the 'FreeType Project', be they named as alpha, beta or final release.

'You' refers to the licensee, or person using the project, where 'using' is a generic term including compiling the project's source code as well as linking it to form a 'program' or 'executable'. This program is referred to as 'a program using the FreeType engine'.

This license applies to all files distributed in the original FreeType Project, including all source code, binaries and documentation, unless otherwise stated in the file in its original, unmodified form as distributed in the original archive. If you are unsure whether or not a particular file is covered by this license, you must contact us to verify this.

The FreeType Project is copyright (C) 1996-2000 by David Turner, Robert Wilhelm, and Werner Lemberg. All rights reserved except as specified below.

1. No Warranty

THE FREETYPE PROJECT IS PROVIDED 'AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL ANY OF THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY DAMAGES CAUSED BY THE USE OR THE INABILITY TO USE, OF THE FREETYPE PROJECT.

2 Redistribution

This license grants a worldwide, royalty-free, perpetual and irrevocable right and license to use, execute, perform, compile, display, copy, create derivative works of, distribute and sublicense the FreeType Project (in both source and object code forms) and derivative works thereof for any purpose; and to authorize others to exercise some or all of the rights granted herein, subject to the following conditions:

- o Redistribution of source code must retain this license file ('FTL.TXT') unaltered; any additions, deletions or changes to the original files must be clearly indicated in accompanying documentation. The copyright notices of the unaltered, original files must be preserved in all copies of source files.
- o Redistribution in binary form must provide a disclaimer that states that the software is based in part of the work of the FreeType Team, in the distribution documentation. We also encourage you to put an URL to the FreeType web page in your documentation, though this isn't mandatory.

These conditions apply to any software derived from or based on the FreeType Project, not just the unmodified files. If you use our work, you must acknowledge us. However, no fee need be paid to us.

3. Advertising

Neither the FreeType authors and contributors nor you shall use the name of the other for commercial, advertising, or promotional purposes without specific prior written permission.

We suggest, but do not require, that you use one or more of the following phrases to refer to this software in your documentation or advertising materials: 'FreeType Project', 'FreeType Engine', 'FreeType library', or 'FreeType Distribution'.

As you have not signed this license, you are not required to accept it. However, as the FreeType Project is copyrighted material, only this license, or another one contracted with the authors, grants you the right to use, distribute, and modify it. Therefore, by using, distributing, or modifying the FreeType Project, you indicate that you understand and accept all the terms of this license.

4. Contacts

There are two mailing lists related to FreeType:

o freetype@nongnu.org

Discusses general use and applications of FreeType, as well as future and wanted additions to the library and distribution. If you are looking for support, start in this list if you haven't found anything to help you in the documentation.

o freetype-devel@nongnu.org

Discusses bugs, as well as engine internals, design issues, specific licenses, porting, etc.

Our home page can be found at http://www.freetype.org

W3C SOFTWARE NOTICE AND LICENSE

Copyright (c) 1994-2001 World Wide Web Consortium, (Massachusetts Institute of Technology, Institut National de Recherche en Informatique et en Automatique, Keio University). All Rights Reserved. http://www.w3.org/Consortium/Legal/

This W3C work (including software, documents, or other related items) is being provided by the copyright holders under the following license. By obtaining, using and/or copying this work, you (the licensee) agree that you have read, understood, and will comply with the following terms and conditions:

Permission to use, copy, modify, and distribute this software and its documentation, with or without modification, for any purpose and without fee or royalty is hereby granted, provided that you include the following on ALL copies of the software and documentation or portions thereof, including modifications, that you make:

- 1. The full text of this NOTICE in a location viewable to users of the redistributed or derivative work.
- 2. Any pre-existing intellectual property disclaimers, notices, or terms and conditions. If none exist, a short notice of the following form (hypertext is preferred, text is permitted) should be used within the body of any redistributed or derivative code: "Copyright (c) [\$date-of-software] World Wide Web Consortium, (Massachusetts Institute of Technology, Institut National de Recherche en Informatique et en Automatique, Keio University). All Rights Reserved. http://www.w3.org/Consortium/Legal/"
- 3. Notice of any changes or modifications to the W3C files, including the date changes were made. (We recommend you provide URIs to the location from which the code is derived.)

THIS SOFTWARE AND DOCUMENTATION IS PROVIDED "AS IS," AND COPYRIGHT HOLDERS MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF THE SOFTWARE OR DOCUMENTATION WILL NOT INFRINGE ANY THIRD PARTY PATENTS, COPYRIGHTS, TRADEMARKS OR OTHER RIGHTS.

COPYRIGHT HOLDERS WILL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY USE OF THE SOFTWARE OR DOCUMENTATION.

The name and trademarks of copyright holders may NOT be used in advertising or publicity pertaining to the software without specific, written prior permission. Title to copyright in this software and any associated documentation will at all times remain with copyright holders.

Apache License, Version 2.0

Foundation Projects People Get Involved Download Support Apache Home Licenses

Apache License Version 2.0, January 2004

http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

- 1. Definitions.
- "License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.
- "Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.
- "Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

- 2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
- 3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
- 4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

You must give any other recipients of the Work or Derivative Works a copy of this License; and

You must cause any modified files to carry prominent notices stating that You changed the files; and

You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided

along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License. You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

- 5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.
- 6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
- 7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
- 8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
- 9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

Copyright (c) 2007 KISA(Korea Information Security Agency).

Copyright (c) 2004 Kungliga Tekniska Hogskolan (Royal Institute of

Technology, Stockholm, Sweden).

Copyright (c) 2000-2003 Intel Corporation

Copyright (c) 2006-2007 Sony Corporation

Copyright (c) 2008-2009 Atheros Communications

Copyright (c) 2009-2010, Jouni Malinen <j@w1.fi>

Copyright (c) 2001-2006, Cisco Systems, Inc.

Copyright (C) 2008 The Android Open Source Project

Copyright (c) 2008, ZETETIC LLC

Copyright (c) 1997-2009 University of Cambridge

Copyright (c) 2000-2001, Aaron D. Gifford

Copyright (c) 2008, 2009, 2010 Qualcomm Incorporated

Copyright (c) 2007, Christophe Devine

Copyright (C) 2002-2006 Jean-Marc Valin

Copyright (c) 1998, 1999 Kungliga Tekniska Hogskolan(Royal Institute of

Technology, Stockholm, Sweden).

Copyright (c) 1997-2007 University of Cambridge

Copyright (C) 2002-2006 Jean-Marc Valin

Copyright (C) 2009 Adobe Systems Incorporated.

Copyright (c) 2005-2011, Google Inc.

Copyright (C) 2010 Lockless Inc.

Copyright (c)2002-2003 Mark K. Kim

Copyright (c) 2003, 2004, 2005 Lev Walkin <vlm@lionet.info>.

Copyright (c) 2006-2008 The Chromium Authors.

Copyright (c) 1997-2011 Netflix, Inc.

Copyright (C) 2000-2008 Julian Seward.

Copyright (c) 2003-2004, Artem B. Bityuckiy, SoftMine Corporation.

Copyright (c) 1983, 1987, 1988, 1993, 1994 Regents of the University of

Copyright 2003-2005 Colin Percival

Copyright 2002 Christopher Clark

Copyright 2005-2012 Nick Mathewson

Copyright 2009-2012 Niels Provos and Nick Mathewson

Copyright (C) 2011 Collabora Ltd.

Copyright (c) 2009-2010, Poly2Tri Contributors

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/ or other materials provided with the distribution.
- 3. Neither the name of the project nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE PROJECT AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

ARE DISCLAIMED. IN NO EVENT SHALL THE PROJECT OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Contact SAMSUNG WORLD WIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

	Area	Contact Center 🕿	Web Site
	CANADA	1-800-SAMSUNG (726-7864)	www.samsung.com/ca (English)
North America		1-000-5AM050NG (720-7004)	www.samsung.com/ca_fr (French)
	U.S.A	1-800-SAMSUNG (726-7864)	www.samsung.com/us
	MEXICO	01-800-SAMSUNG (726-7864)	www.samsung.com
	ARGENTINE	0800-333-3733	www.samsung.com.ar
	URUGUAY	000 405 437 33	www.samsung.com
	PARAGUAY	009 800 542 0001	www.samsung.com.py
	BRAZIL	0800-124-421 (Demais cidades e regiões) 4004-0000 (Capitais e grandes centros)	www.samsung.com.br
	CHILE	800-SAMSUNG(726-7864)	www.samsung.com/cl
	BOLIVIA	800-10-7260	www.samsung.com
	COLOMBIA	01 8000 112 112 Bogotá 600 12 72	www.samsung.com/co
	COSTA RICA	0-800-507-7267	www.samsung.com/latin (Spanish) www.samsung.com/latin_en (English)
	DOMINICA	1-800-751-2676	www.samsung.com/latin (Spanish) www.samsung.com/latin_en (English)
	ECUADOR	1-800-10-7267	www.samsung.com/latin (Spanish) www.samsung.com/latin_en (English)
Latin America	EL SALVADOR	800-6225	www.samsung.com/latin (Spanish) www.samsung.com/latin_en (English)
	GUATEMALA	1-800-299-0013	www.samsung.com/latin (Spanish) www.samsung.com/latin_en (English)
	HONDURAS	800-27919267	www.samsung.com/latin (Spanish) www.samsung.com/latin_en (English)
	JAMAICA	1-800-234-7267	www.samsung.com
	NICARAGUA	001-800-5077267	www.samsung.com/latin (Spanish) www.samsung.com/latin_en (English)
	PANAMA	800-7267	www.samsung.com/latin (Spanish) www.samsung.com/latin_en (English)
	PERU	0-800-777-08	www.samsung.com/pe
	PUERTO RICO	1-800-682-3180	www.samsung.com
	TRINIDAD & TOBAGO	1-800-SAMSUNG(726-7864)	www.samsung.com
	VENEZUELA	0-800-100-5303	www.samsung.com/ve
	AUSTRIA	0810 - SAMSUNG (7267864, € 0.07/min)	www.samsung.com
	BELGIUM	02-201-24-18	www.samsung.com/be (Dutch) www.samsung.com/be_fr (French)
	BOSNIA	051 331 999	www.samsung.com
	BULGARIA	07001 33 11 , share cost tariff	www.samsung.com/bg
	CROATIA	062 SAMSUNG (062 726 786)	www.samsung.com/hr
	CZECH	800 - SAMSUNG (800-726786)	www.samsung.com
Europe	DENMARK	70 70 19 70	www.samsung.com
	FINLAND	030-6227 515	www.samsung.com
	FRANCE	01 48 63 00 00	www.samsung.com/fr
	GERMANY	0180 6 SAMSUNG bzw. 0180 6 7267864* (*0,20 €/Anruf aus dem dt. Festnetz, aus dem Mobil- funk max. 0,60 €/Anruf)	www.samsung.com
	CYPRUS	8009 4000 only from landline	
	GREECE	80111-SAMSUNG (80111 726 7864) only from land line (+30) 210 6897691 from mobile and land line	www.samsung.com/gr

	Area	Contact Center 🖀	Web Site
	HUNGARY	06-80-SAMSUNG(726-7864)	http://www.samsung.com/hu
	ITALIA	800-SAMSUNG(726-7864)	www.samsung.com
	LUXEMBURG	261 03 710	www.samsung.com
	MONTENEGRO	020 405 888	www.samsung.com
	NETHERLANDS	0900-SAMSUNG (0900-7267864) (€ 0,10/Min)	www.samsung.com
	NORWAY	815 56480	www.samsung.com
	POLAND	0 801-172-678* lub +48 22 607-93-33 ** * (całkowity koszt połączenia jak za 1 impuls według taryfy operatora) ** (koszt połączenia według taryfy operatora)	www.samsung.com/pl
	PORTUGAL	808 20-SAMSUNG(808 20 7267)	www.samsung.com
Europe	ROMANIA	08008 SAMSUNG (08008 726 7864) TOLL FREE No.	www.samsung.com/ro
20.000	SERBIA	011 321 6899	www.samsung.com/rs
	SLOVAKIA	0800 - SAMSUNG(0800-726 786)	www.samsung.com
	SPAIN	902172678	www.samsung.com
	SWEDEN	0771 726 7864 (SAMSUNG)	www.samsung.com
	OWLDEN		www.samsung.com/ch (German)
	SWITZERLAND	0848 - SAMSUNG(7267864, CHF 0.08/min)	www.samsung.com/ch_fr (French)
	U.K	0330 SAMSUNG (7267864)	www.samsung.com
	EIRE	0818 717100	www.samsung.com
	LITHUANIA	8-800-77777	www.samsung.com/lt
	LATVIA	8000-7777	www.samsung.com/lv
			-
	ESTONIA	800-7267	www.samsung.com/ee
	RUSSIA	8-800-555-55-55	www.samsung.com
	GEORGIA	0-800-555-555	www.samsung.com
	ARMENIA	0-800-05-555	www.samsung.com
	AZERBAIJAN	088-55-55-555	www.samsung.com
	KAZAKHSTAN	8-10-800-500-55-500 (GSM: 7799)	www.samsung.com
	UZBEKISTAN	8-10-800-500-55-500	www.samsung.com
CIS	KYRGYZSTAN	00-800-500-55-500	www.samsung.com
	TADJIKISTAN	8-10-800-500-55-500	www.samsung.com
	MONGOLIA	+7-800-555-55-55	www.samsung.com
	UKRAINE	0-800-502-000	www.samsung.com/ua (Ukrainian) www.samsung.com/ua_ru (Russian)
	BELARUS	810-800-500-55-500	www.samsung.com
	MOLDOVA	0-800-614-40	www.samsung.com
	AUSTRALIA	1300 362 603	www.samsung.com/au
	NEW ZEALAND	0800 SAMSUNG (0800 726 786)	www.samsung.com/nz
	CHINA	400-810-5858	www.samsung.com
	HONG KONG	(852) 3698 4698	www.samsung.com/hk (Chinese) www.samsung.com/hk_en (English)
	INDIA	1800 3000 8282 1800 266 8282	www.samsung.com/in
Asia Pacific	INDONESIA	0800-112-8888 (Toll Free) (021) 56997777	www.samsung.com/id
	JAPAN	0120-327-527	www.samsung.com
	MALAYSIA	1800-88-9999	www.samsung.com/my
	PHILIPPINES	1-800-10-7267864 [PLDT] 1-800-8-7267864 [Globe landline and Mobile] 02-4222111 [Other landline]	www.samsung.com/ph
	SINGAPORE	1800-SAMSUNG (726-7864)	www.samsung.com/sg
	THAILAND	0-2689-3232, 1800-29-3232	www.samsung.com/th
	TAIWAN	0800-32-9999	www.samsung.com/tw
	VIETNAM	1800 588 889	www.samsung.com

	Area	Contact Center 🕿	Web Site
	U.A.E	800-SAMSUNG (726-7864)	www.samsung.com
	OMAN	800-SAMSUNG(726-7864)	
	KUWAIT	183-2255 (183-CALL)	www.samsung.com/ae (English)
	BAHRAIN	8000-4726	www.samsung.com/ae_ar (Arabic)
	QATAR	800-2255 (800-CALL)	
	EGYPT	08000-726786	www.samsung.com
	ALGERIA	0800 100 100	www.samsung.com/n_africa
MENA	PAKISTAN	0800-Samsung (72678)	www.samsung.com/pk/
IVILIVA	TUNISIA	80-1000-12	www.samsung.com/n_africa
	JORDAN	0800-22273 06 5777444	www.samsung.com/Levant (English)
	SYRIA	18252273	www.samsung.com/Levant (English)
	IRAN	021-8255	www.samsung.com
	MOROCCO	080 100 2255	www.samsung.com
	SAUDI ARABIA	920021230	www.samsung.com/sa
	TURKEY	444 77 11	www.samsung.com
	NIGERIA	0800-726-7864	
	CLIANIA	0800-10077	www.samsung.com/africa_en/
	GHANA	0302-200077	
	COTE D' IVOIRE	8000 0077	
	SENEGAL	800-00-0077	www.samsung.com/africa_fr/
	CAMEROON	7095- 0077	
	KENYA	0800 545 545	
	UGANDA	0800 300 300	
Africa	TANZANIA	0685 88 99 00	
AIIICa	RWANDA	9999	www.samsung.com
	BURUNDI	200	
	DRC	499999	
	SUDAN	1969	
	SOUTH AFRICA	0860-SAMSUNG (726-7864)	www.samsung.com
	BOTSWANA	8007260000	
	NAMIBIA	08 197 267 864	
	ZAMBIA	0211 350370	www.samsung.com
	MOZAMBIQUE	847267864 / 827267864	



QUESTIONS OR COMMENTS?

AREA	CALL	OR VISIT US ONLINE AT	WRITE
IN THE US	1-800-SAMSUNG (726-7864)	www.samsung.com/us	Samsung Electronics America, Inc. 85 Challenger Road Ridgefield Park, NJ 07660