



harman/kardon®

MS 100

MUSIC SYSTEM
OWNER'S MANUAL

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not 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 amplifiers) 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 is 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 they exit from 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.



Instructions for users on removal and disposal of used batteries. Specification of included battery types.

These symbols shown on the product, the packaging or in the manual or separate information sheet mean that the product itself, as well as the batteries included or built into the product, should never be thrown away with general household waste. Take them to applicable collection points, where proper treatment, recycling and recovery takes place, in accordance with national or local legislation, or European Directives 2002/96/EC and 2006/66/EC.

Correct handling of the product and batteries to be disposed helps saving resources and prevents possible negative effects on the environment or human health.

The batteries included with your equipment may be Alkaline, Carbon Zink/ Manganese or Lithium (button cells) type. All types should be disposed of according to the above instructions.

To remove the batteries from your equipment or remote control, reverse the procedure described for inserting batteries in the Owners Manual.

For products with a built-in battery that lasts for the lifetime of the product, removal may not be possible for the user. In this case, recycling or recovery centers handle the dismantling of the product and the removal of the battery. If, for any reason, it becomes necessary to replace such a battery, this procedure must be performed by authorized service centers.



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 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.
15. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. The mains plug of the power supply cord shall remain readily operable.
18. Do not expose batteries to excessive heat such as sunshine, fire or the like.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Declaration of Conformity



We, Harman Consumer Group, Inc.
2, route de Tours
72500 Château du Loir
France

declare in own responsibility that the product described in this owner's manual is in compliance with technical standards:

EN 55013:2001+A1:2003
EN 55020:2002+A1:2003
EN 61000-3-2:2000
EN 61000-3-3:1995+A1:2001
EN 60065:2002

Jurjen Amsterdam
Harman Consumer Group, Inc.
Château du Loir, France 3/09

TABLE OF CONTENTS

2	SAFETY INFORMATION
4	INTRODUCTION AND FEATURES
4	SUPPLIED ACCESSORIES
5	FRONT-PANEL CONTROLS
6	REAR-PANEL CONNECTIONS
7	REMOTE CONTROL FUNCTIONS
9	INSTALLATION
10	OPERATION
10	Using the Remote Control
10	Setting the Clock
10	Turning On the MS 100
10	Setting the Alarm
10	Volume Control
10	Source Selection
10	FM Radio
11	Program Station Presets
11	CD
11	Playback Control
12	Data Discs
12	Auxiliary Inputs
12	Dock for iPod
12	Photo and Video Playback
12	Undocking the iPod
13	Troubleshooting Guide
14	Technical Specifications
14	Trademark Acknowledgements

INTRODUCTION AND FEATURES

More than 50 years ago, Harman Kardon, Inc., sold the very first audio receiver, a high-performance component that combined the functions of several products that had previously only been available separately. Our mission was and is to deliver high-fidelity sound in an easy-to-use package, and we are confident that you will enjoy the quality and convenience of the MS 100 music system for many years to come.

The MS 100 is a complete high-performance audio system with a CD player, FM tuner, dock for iPod (not included), auxiliary

inputs for other audio products and built-in loudspeakers for a complete audio solution.

To obtain the maximum enjoyment from your new system, we urge you to read this manual and refer back to it to familiarize yourself with the MS 100's features and operation.

If you have any questions about this product, its installation or its operation, please contact your retailer or custom installer, or visit www.harmankardon.com.

Harman Kardon® MS 100 High-Performance Audio System

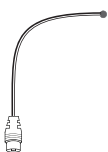
- Universal dock for iPod (not included) charges iPod touch, iPod nano 3rd generation, iPod classic, iPod nano 2nd generation, iPod 5th generation, iPod nano 1st generation, iPod 4th generation, iPod mini; video and still-image playback requires a compatible iPod that supports video browsing
- Slot-loaded CD player with CD, CD-R, CD-RW, enhanced CD, MP3 and WMA playback
- FM tuner with RDS text display and six presets
- Four auxiliary audio inputs: front-panel stereo mini-jack (3.5mm), rear-panel stereo mini-jack (3.5mm) for line-level or optical-digital audio, rear-panel dual RCA jacks (line-level)
- Two 2-way, 125mm built-in bass-reflex speakers
- Subwoofer output (low-pass filtered)
- Stereo headphone output (3.5mm)
- Composite and S-video outputs for photo- and video-capable iPod models that support video browsing
- Clock with alarm and memory backup



iPod not included

Supplied Accessories

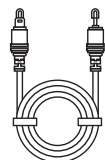
The following accessory items are supplied with the MS 100. If any of these items are missing, please contact Harman Kardon customer service at www.harmankardon.com.



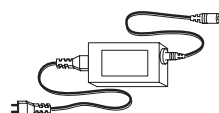
FM wire antenna



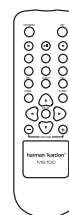
Stereo mini-plug (3.5mm) male-to-male cable (1m)



Mini (3.5mm) optical-digital audio cable (1m)



External power supply (24V, 5.0 amps) with detachable power cord



System remote control with two AAA batteries



Detachable dock for iPod with five adapters

Message Display: The time and messages are displayed on top of the unit.

On/Standby: Press to turn the MS 100 on or to place it in Standby mode. Press and hold for 2 seconds to disarm the alarm. To completely power off the unit, unplug the power supply.

Source: Each press changes the current source in this order: FM, CD, AUX LINE IN 1 (rear-panel 3.5mm analog input), AUX LINE IN 2 (front panel), AUX LINE IN 3 (rear-panel dual RCA jacks), AUX DIGITAL IN, iPod.

Volume Controls: Increases or decreases the volume. Press and hold to change the volume more quickly. Press both together to mute.

Play/Pause/Memory: This button functions differently, depending on which source has been selected:

- **iPod or CD:** Each press toggles between the Play and Pause functions. Press and hold to fully stop playback.
- **FM Radio:** If the current station has not been programmed into a preset, the station is stored as a preset. If all of the preset positions have been used, the new preset will overwrite the existing one. If the current station has previously been programmed as a preset, the preset will be erased after 2 seconds.

Skip/Scan Forward/Reverse: These buttons function differently, depending on the current source:

- **iPod or CD:** Press and release to skip to the next track. Press the reverse button twice to skip to the previous track. Press and hold to scan forward or reverse within a track.
- **FM Radio:** Press and release to tune to the next higher or lower station by one frequency increment. Press and hold to scan quickly through the stations. When you release the button in Auto tuning mode, the tuner continues to scan until it finds a station of acceptably strong signal quality, and then it stops. In Manual tuning mode, the tuner stops immediately at the current frequency.

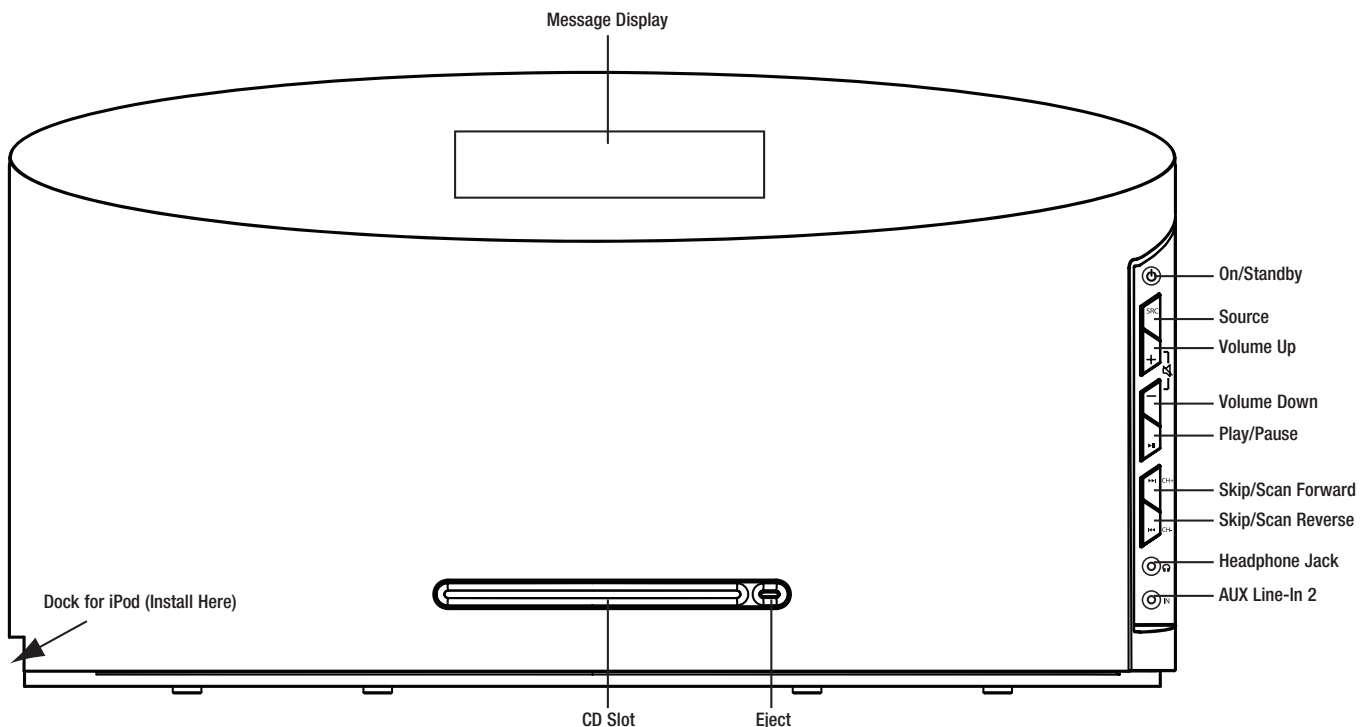
Headphone Jack: Outputs a stereo signal for private listening through most headphones that are equipped with a 3.5mm plug.

AUX-IN Jack (Analog Input 2): Connect the included 3.5mm male-to-male cable to the headphone or line-level output on a portable player or other device.

CD Slot: Load compatible discs here.

Eject: When a CD is loaded, press this button to eject it.

Dock for iPod: Gently insert the dock into the opening on the left side of the MS 100, snap in the correct adapter (or use the one supplied by Apple, Inc., with the iPod) and install a compatible iPod (see page 4).



REAR-PANEL CONNECTIONS

DC Power Input: After making all other connections, plug in the power supply. Plug the included region-specific power cord into the power supply and into an unswitched wall outlet.

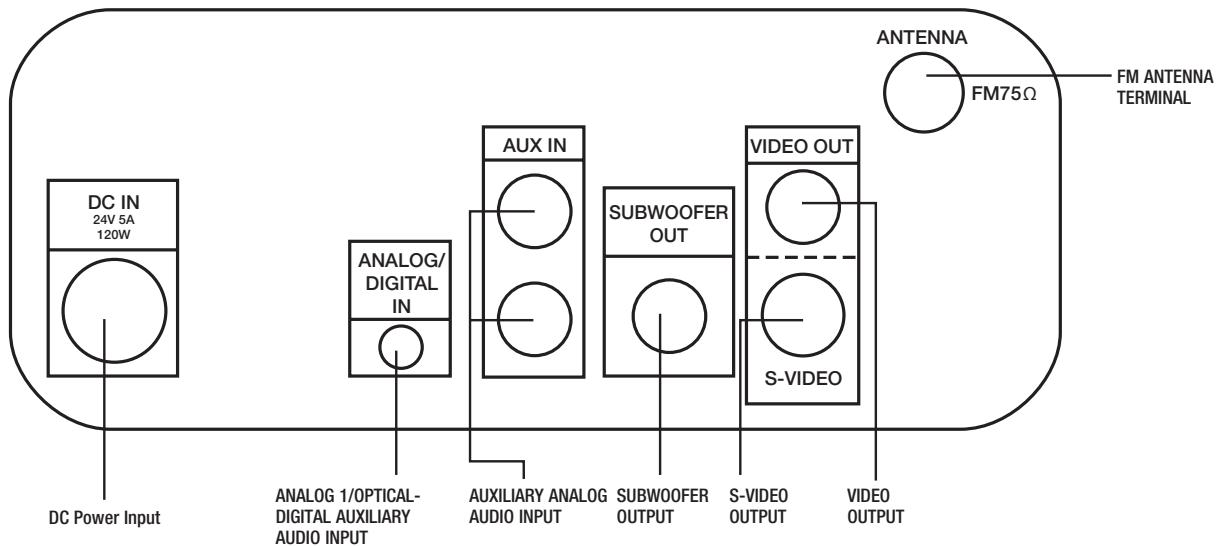
Analog 1/Optical-Digital Auxiliary Audio Input: Connect either the stereo mini-plug cable or the optical-digital audio cable (both cables included) here, and connect the other end of the cable to a source device, such as a portable CD player. Connect the stereo mini-plug cable only to the player's line-level analog audio output or headphone jack, and connect the optical cable only to an optical-digital audio output. Select the Analog 1 or Digital Audio source.

Auxiliary Analog 3 Audio Input: Connect one end of a two-lead analog audio RCA-type interconnect cable (not included) here, and connect the other end to the analog-audio outputs on a source device, such as a tape deck.

Subwoofer Output: Connect this low-pass filtered output to a powered subwoofer (not included) for improved low-frequency (bass) reproduction.

Composite and S-Video Outputs: Connect either of these outputs to a TV or video display for viewing videos or photos stored on a compatible iPod that supports video browsing. As of this writing, only the iPod nano 3rd generation, iPod classic and iPod 5th generation models support video browsing. No other displays are available through these outputs.

FM Antenna Terminal: Connect the included FM antenna wire here.



Standby: Powers down the MS 100 to Standby mode, where power is only available to the clock and alarm functions. To completely power off the unit, unplug the power supply.

Power On: Turns the MS 100 on.

Track-Skip/Scan/Tuning Up/Down: These buttons function differently, depending on which source has been selected:

- **iPod or CD:** Press and release to skip to the next track. Press the reverse button twice to skip to the previous track. Press and hold to scan forward or in reverse within a track.
- **FM Radio:** See Tuning on this page.

Play/Pause/Memory: This button functions differently, depending on which source has been selected:

- **iPod or CD:** Each press toggles between the Play and Pause functions. Press and hold to fully stop playback.
- **FM Radio:** If the current station has not been programmed into a preset, the station is stored as a preset. If all of the preset positions have been used, the new preset will overwrite the existing one. If the current station has previously been programmed as a preset, the preset will be erased after 2 seconds.

Source Select: Each press changes the current source in this order: FM, CD, AUX LINE IN 1 (rear-panel 3.5mm analog input), AUX LINE IN 2 (front panel), AUX LINE IN 3 (rear-panel dual RCA jacks), AUX DIGITAL IN, iPod.

Tuning Mode: Used with FM radio, each press toggles between Auto and Manual tuning.

Playback Mode: Used only for iPod or CD playback, each press changes the repeat and random (shuffle) playback mode. See page 12 for the modes available with each source. When the MS 100 is turned off or when the source is changed, the playback mode returns to Normal.

Sleep: Each press increases the time until turn-off, from 10 to 90 minutes, in increments of 10 minutes. The next press after the 90 minutes setting turns off the Sleep function.

Clock Adjust Mode: With the MS 100 in Standby mode, press this button to adjust the clock. Use the ▲/▼ Navigation Buttons to adjust the hour, minute and 12/24 settings. To change between AM and PM, increase or decrease the hour. Press the ◀▶ Buttons to move the cursor to the previous or next position. Press this button again at any time when finished.

Alarm Adjust Mode: With the MS 100 in Standby mode, press this button to adjust the alarm. Use the ▲/▼ Navigation Buttons to adjust the hour, minute and wake-up source settings. To change between AM and PM, increase or decrease the hour. Press the ◀▶ Buttons to move the cursor to the previous or next position. Press this button again at any time when finished.

Preset Search: Used for FM radio to select the next or previous preset station, if any have been programmed.

Eject: When a CD is loaded, press this button to eject it.

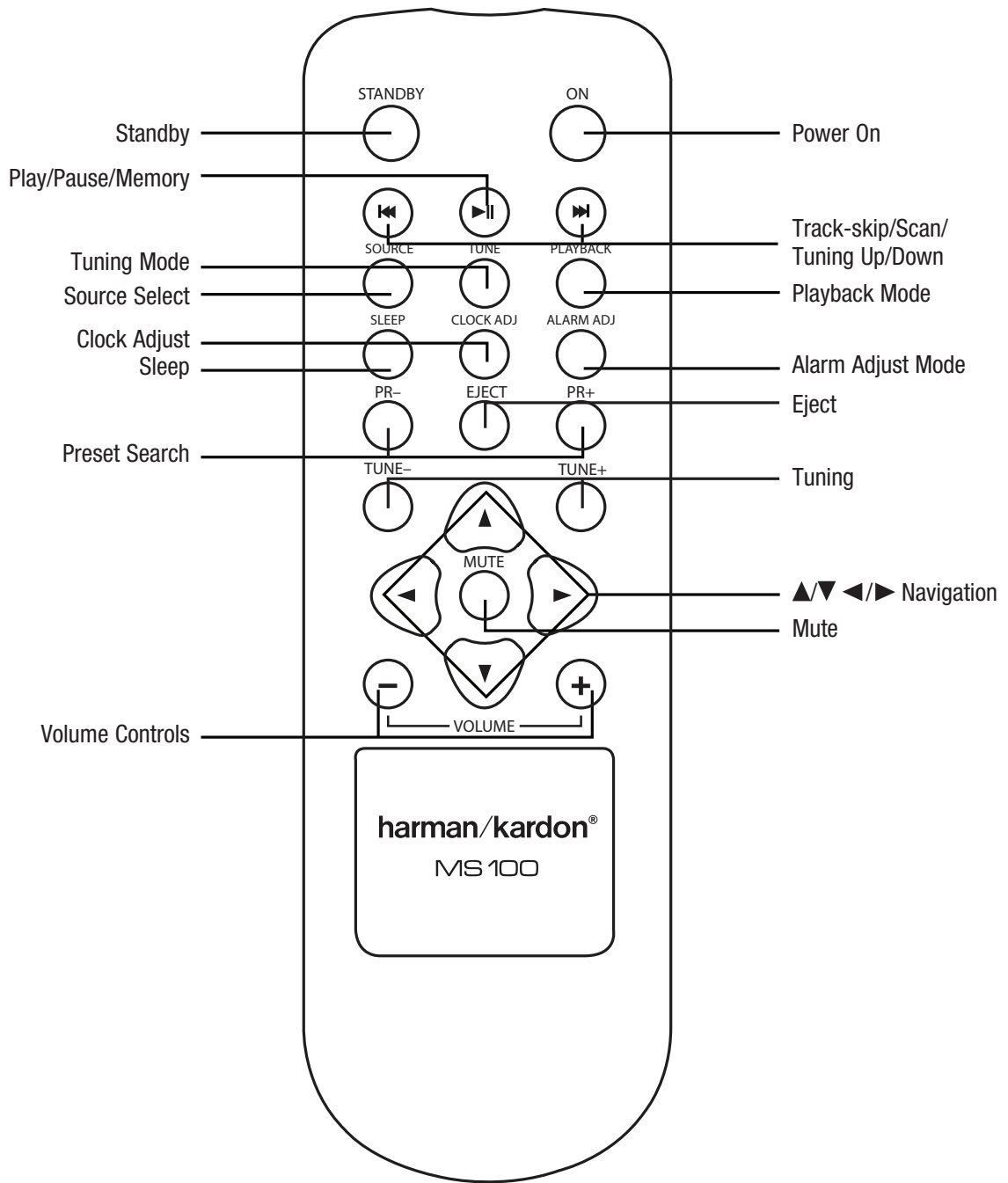
Tuning: Used for FM radio. Press and release to tune to the next higher or lower station by one frequency increment. Press and hold to scan quickly through the stations. When you release the button, if Auto tuning mode is active, the tuner continues to scan until it finds a station of acceptably strong signal quality, and then it stops. In Manual tuning mode, the tuner stops immediately at the current frequency.

▲/▼/◀▶ Navigation Buttons: Used with the iPod to navigate its menus, or in Standby mode to adjust the clock or alarm. The ▲/▼ Buttons are used for scrolling. Press the ▶ Button to select the current item, and the ◀ Button to display the menu or return to the previous menu screen.

Mute: Press to temporarily silence the speakers. Press again to restore audio. Muting is canceled if the MS 100 is turned off.

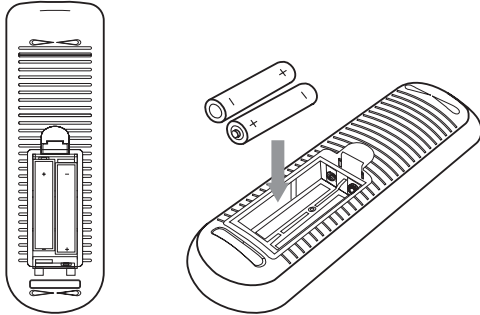
Volume Controls: Increases or decreases the volume. Press and hold either button to change the volume more quickly.

REMOTE CONTROL FUNCTIONS

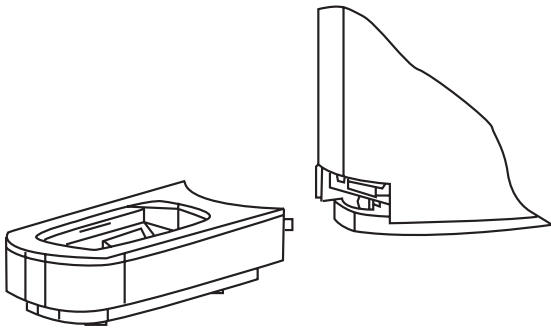


1. Carefully unpack the MS 100, the FM antenna, the analog and digital audio cables, the power supply and detachable cable, the dock for iPod and inserts, and the remote control and batteries.
2. Install the batteries in the remote control, following the “+” and “-” symbols in the battery compartment to maintain the correct polarity.

Caution: Danger of an explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.



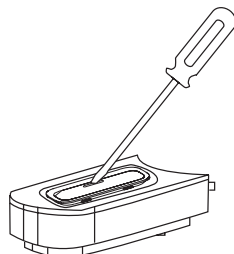
3. Connect the FM antenna to its terminal.
4. Plug the detachable dock for iPod into the connector on the left side of the MS 100.



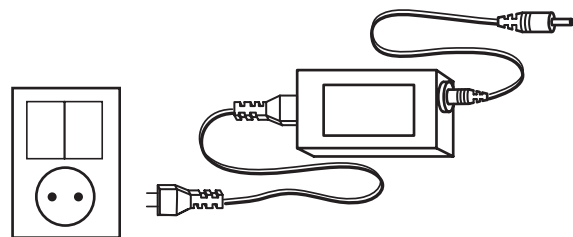
Snap in the adapter that matches your iPod, referring to the table below.

Adapter	iPod Model
NANO	iPod nano, 1st and 2nd generations
5G (VIDEO 60GB)	iPod, 5th generation (60GB, 80GB) and iPod classic (160GB)
5G (VIDEO 30GB)	iPod, 5th generation (30GB) and iPod classic (80GB)
13	iPod nano, 3rd generation
12, 14	iPod touch – install large bumper

To remove an adapter, insert a flathead screwdriver into the slot at the rear of the adapter and pry it up.



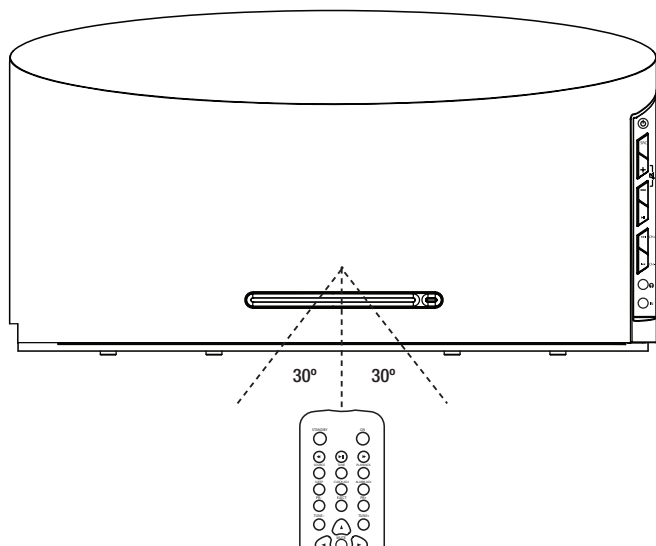
5. The MS 100 features four audio inputs for other devices, such as portable players. This step is optional, and may be skipped if you have no external devices. If your player has:
 - **3.5mm Analog audio output or headphone jack:** Plug included analog audio cable into the output or headphone jack and either the front- or rear-panel mini-jack on the MS 100. Both inputs may be used simultaneously for different devices. A second cable must be purchased.
 - **Pair of RCA-type analog audio outputs:** Plug one end of a two-conductor interconnect cable (not included) into the player, and the other end into the Auxiliary Input jacks on the rear-panel of the MS 100. Use the same color connector for each channel (usually red for right and white or black for left).
 - **Optical-digital audio S/P-DIF output:** Plug one end of the included digital audio cable into the player, and the other end into the Analog/Optical Input on the rear panel of the MS 100. Remember to select the digital input as the source.
6. If you have purchased an optional powered subwoofer that is equipped with a line-level input, connect it to the Subwoofer Output (cable not included). The Subwoofer Output is filtered, and only passes low-frequency signals. Do not connect this output to full-range speakers.
7. If you will be viewing photos or videos stored on a compatible iPod that supports video browsing, connect either the Composite or S-Video Output (but not both) to a display monitor.
8. Plug all power cords into unswitched AC outlets.



Using the MS 100 is simple and intuitive.

Using the Remote Control

Point the remote at the front of the MS 100. The remote IR sensor is located in the middle of the front panel, behind the mesh grille, about 25mm above the CD slot. Do not block the sensor. The remote has a range of approximately 6m, up to 30 degrees off center. If the batteries require replacement, see Step 2 of the Installation section. Use caution and dispose of batteries according to environmental requirements. Never throw the batteries into fire, and remove them from the remote if it will be unused for a long period of time.



Setting the Clock

Before turning the unit on, set the clock: Press the Clock Adjust Mode Button on the remote, and use the ▲/▼ buttons to set the correct hour and minute settings when they flash. To change between AM and PM, increase or decrease the hour setting. Use the ◀/▶ Buttons to move the cursor to the previous or next position, and press the Clock Adjust Mode Button again when you are finished. See Figure 1.

Turning On the MS 100

To turn on the MS 100, press the Power On Button on the remote, or press the On/Standby Button on the main unit. The FM Radio will begin to play.

Setting the Alarm

For automatic turn-on at a programmed time, set the alarm. First, press the Standby Button to turn the unit off; the alarm may not be set while the unit is on.

Press the Alarm Adjust Mode Button on the remote, and use the ▲/▼ Buttons to set the alarm time (hour and minute settings) and alarm source (FM radio, CD player, iPod in dock) as they flash. To change between AM and PM, increase or

decrease the hour setting. Use the ◀/▶ Buttons to move the cursor to the previous or next setting. To arm the alarm, use the ▲/▼ Buttons to change the Alarm message to “Alarm On”, and press the Alarm Adjust Mode Button again when you are finished. The Timer indicator will appear in the Message Display when the alarm has been set. See Figure 2.

At the set time, the MS 100 will automatically turn on and begin playing the selected source. If CD or iPod was selected and there is no disc loaded or iPod docked, the MS 100 will switch to the FM radio source.

Play will begin at volume level 8, and steadily increase to a volume level of 20 within 3 minutes. It will continue to play at level 20 for 45 minutes, and then shut off automatically.

Press any key to place the unit in Snooze mode. It will remain off for 9 minutes, then the alarm will resume.

Press and hold the Standby Button while the alarm is playing to turn it off and return to normal play.

Volume Control

Use the front-panel or remote Volume Controls to raise or lower the volume. The default setting at turn-on is 8, and the maximum setting is 30. Use caution with volume levels to avoid damage to your hearing or equipment. The volume level appears in the Message Display when the Volume Controls are used.

To temporarily silence playback, press the Mute Button on the remote, or simultaneously press the front-panel Volume Up and Down Buttons. “Mute” will flash in the Message Display. Press the Mute Button or either Volume Control to resume normal volume. Source playback will continue during muting.

Source Selection

The first time the MS 100 is turned on, it will default to FM Radio. Each press of the Source Selector switches to the next source in this order: FM, CD, AUX LINE IN 1 (rear-panel 3.5mm analog input), AUX LINE IN 2 (front panel), AUX LINE IN 3 (rear-panel dual RCA jacks), AUX DIGITAL IN, iPod.

Subsequently, the MS 100 will select the last source used before turn-off.

FM Radio

Press the Tuning Mode Button to select Automatic or Manual tuning. The AUTO indicator appears when Auto tuning is active.

In Auto tuning mode, pressing the Tuning Up or Down controls causes the tuner to scan in the selected direction for a signal with acceptable strength, then stop. The tuner will also stop if you press the Tuning controls.

In Manual tuning mode, each press of the Tuning Up or Down controls causes the tuner to move to the next frequency in the selected direction.

Figure 1: Setting the Clock

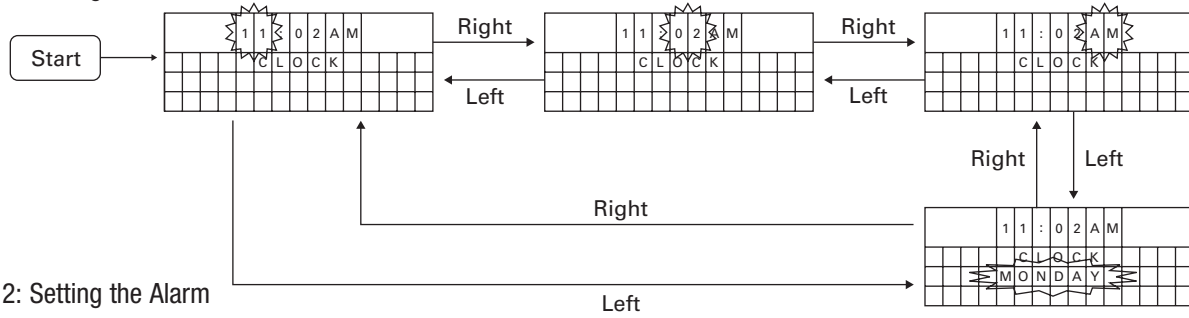
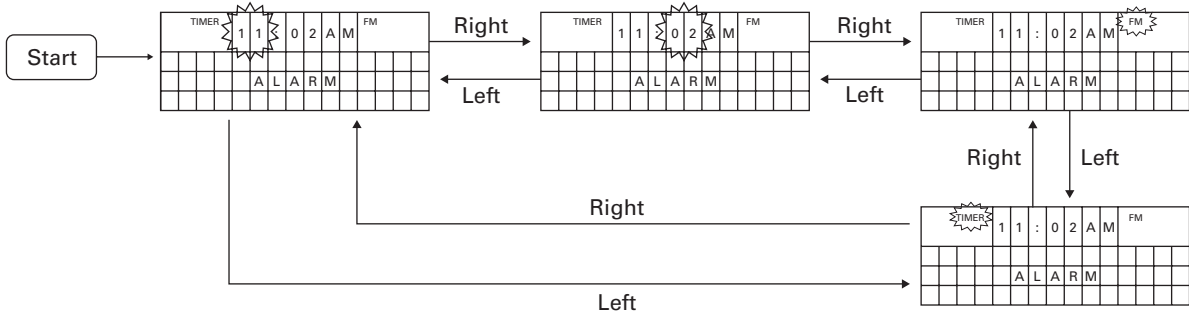


Figure 2: Setting the Alarm



If a stereo signal is detected, the STEREO indicator will light. Monaural stations, or weak stereo stations, will be played in mono (one channel).

If the station is broadcasting RDS information, it will be displayed. The second line of the Message Display may show the station's call letters, a name, the Program Type (PTY), or other information, depending on what the station broadcasts. The third line indicates the Radio Text (RT) when broadcast. When no RDS information is available, only the frequency will be displayed.

Program Station Presets

To program a preset for quick access to favorite stations, tune to the station's frequency and press and hold the Play/Pause/Memory Button for 2 seconds. The P01 preset will appear. If no station has been programmed into the preset, the current station will be stored.

If a different station was previously programmed, it will be overwritten by the new station. To select a new preset, use the Preset Up/Down Buttons; six presets are available. If all six have been programmed, you must overwrite or erase one to program a new station preset.

If the current station was stored in the preset position, the preset will be erased.

NOTE: To cancel programming or erasing of a preset, press any other key.

To select a preset station, use the PR +/- Buttons.

CD

First press the Eject Button to ensure that no disc is already present. Then gently insert a CD, CD-R, CD-RW, enhanced CD, MP3 or WMA disc, label-side up, partway into the slot loader. The mechanism will detect the disc and pull it the rest of the way in. Do not attempt to force the disc. If the disc will not load, turn off the MS 100, unplug it and bring it to an authorized Harman Kardon service center for inspection.

If another source is playing, the MS 100 will not automatically switch to the CD. Press the Source Selector repeatedly until "CD" is selected.

The "Reading" message will appear for a few moments while the MS 100 identifies the disc type. The correct indicator will appear in the Message Display.

NOTE: If the "Error" message appears, the disc is not compatible with the MS 100, or its data may be damaged. Press the Eject Button to remove it.

In normal operation, the disc will automatically begin playing. The Play icon will appear, along with the current and total track numbers and the elapsed track time. When the disc has finished playing, the Stop icon will appear, with the total number of tracks and total disc time.

Playback Control

To momentarily pause playback for later resumption at the same point, press the Play/Pause Button. Press it again to resume play. The Pause icon will be displayed. Press and hold the Play/Pause Button for 2 seconds to fully stop playback.

- To search at 4x speed through the current track, press and hold the Skip/Scan Forward or Skip/Scan Reverse Button. When the track's beginning or end is reached, normal play will begin.
- To skip to the next track, tap the Skip/Scan Forward Button. If the current track is the last one on the disc, the MS 100 will skip to the first track.
- To return to the beginning of the current track, tap the Skip/Scan Reverse Button. Tap it twice quickly to skip backwards to the previous track.
- For repeat or random (shuffle) play, press the Playback Mode Button. Each press changes the playback mode as follows: Repeat 1 Track, Repeat All Tracks, Shuffle, Shuffle with Repeat All and Normal Playback.

Data Discs

JPEG discs are not compatible with the MS 100, and the display will indicate that they have no files and no folders.

When an MP3 or WMA disc is loaded, the disc type indicator will light up, and the number of folders and tracks in the current folder will be displayed, up to a limit of 999 tracks. Play will begin automatically. If the disc has both MP3 and WMA tracks, both indicators will light.

For MP3 discs, the track name and artist will alternate in the display. For WMA discs, the album and track number will alternate in the display.

For both disc types, the Skip and Scan functions and Repeat and Random play are the same as for audio CDs.

Auxiliary Inputs

The MS 100 is equipped with three analog audio inputs and one digital audio input. If you have connected a compatible device, such as a portable audio player or a cassette deck, select the corresponding auxiliary input as the source and use the device's own controls.

- **AUX LINE IN 1 (Analog):** rear-panel 3.5mm jack, shared with Digital Input
- **AUX LINE IN 2 (Analog):** front-panel 3.5mm jack
- **AUX LINE IN 3 (Analog):** dual rear-panel RCA-type jacks
- **DIGITAL LINE IN:** rear-panel 3.5mm jack

Dock for iPod

The MS 100 dock is compatible with most docking iPod models, 4G and later (see page 4). Photos and videos may be viewed with compatible iPod models that support video browsing, at this time limited to the iPod nano 3rd generation, iPod classic and iPod 5th generation.

Install the detachable dock and appropriate adapter as described in the Installation section, then dock the iPod. Use the Source Selector to select the iPod source.

Playback will begin automatically with the first track stored on the iPod.

The transport controls work as they do for CDs:

- To pause or restart play, press the Play/Pause Button.
- To search forward or reverse through a track, press and hold the Skip/Scan Forward or Reverse Button.
- To skip forward or reverse through the tracks, tap the Skip/Scan Forward or Reverse Button.

Repeat and Random Play are available. Each press of the Playback Mode Button switches the mode as follows: Repeat 1 Track, Repeat All Tracks (in the current playlist), Shuffle Albums, Shuffle Albums with Repeat All, Shuffle Tracks, Shuffle Tracks with Repeat All, and Normal Play.

To navigate the menus on the iPod:

- Press the ◀ Button to display the menu or return to the previous menu level.
- Press the ▶ Button to select the current item.
- Press the ▲/▼ Buttons to scroll up or down.

During play, the current track and total number of tracks in the current playlist will display alternately with the elapsed and total times. If available, the artist and track name will also appear.

Photo and Video Playback

If the iPod supports video browsing, navigate its menu system to select a video for viewing on a TV connected to one of the MS 100's video outputs. Make sure the TV Out setting on the iPod is turned on. Press the ▶ Button, and the video will begin playing.

To view photos, navigate to the desired library or image and press the > Button three times. After a few moments, a slide-show of the images in the selected library will appear on the TV.

Undocking the iPod

Undock the iPod at any time, as long as playback has been stopped.

To remove the dock adapter, e.g., to switch adapters for a different iPod model, insert a flathead screwdriver into the slot at the rear of the adapter and pry it up. Refer to the illustration in the Installation section.

TROUBLESHOOTING GUIDE

SYMPTOM

SOLUTION

Unit does not function when Power On Switch is pushed.

- Make sure the AC power cord is securely plugged into an unswitched outlet. If the "PROTECT" message appears, turn off the MS 100 and unplug it. Do not use it without first bringing it to an authorized Harman Kardon service center for inspection.

Display lights, but there's no sound.

- Press the Mute Button to make sure the system is not muted.
- Turn up the volume.
- Check that the correct source was selected. If the source is an external device, make sure it is plugged in, turned on and playing, and that it is properly connected to one of the auxiliary inputs.
- If the headphones are in use, unplug them.

There is sound on only one side, or the sound is distorted.

- There may be a problem with one of the built-in speakers. Bring the MS 100 to an authorized Harman Kardon service center for inspection and service.

The MS 100 does not respond to remote commands.

- The batteries in the remote control may require replacement.
- The IR sensor may be blocked. The sensor is located in the middle of the front grille, about 25mm above the CD slot.

The tuner is buzzing intermittently.

- Adjust the placement of the antenna to improve reception.
- Check that the antenna is securely connected to the rear-panel terminal.

No video image.

- Check that the TV is securely connected to either the S-Video or Composite Video Output, but not both.
- Video is only available when the dock for the iPod has been selected as the source, and then only when a compatible iPod model that is capable of video browsing is docked.
- The TV Out setting on the iPod must be turned on.
- There must be photo or video content stored on the iPod.
- Select the correct video input on the TV.
- To view photos, press the ► Button *three* times.

MS 100 TECHNICAL SPECIFICATIONS

SYSTEM:

Power output: 30 watts per channel, 20Hz – 20kHz, THD < 0.07%, into 6 ohms, both channels driven

Bandwidth: 57Hz – 27kHz, –6dB

System frequency response: 65Hz – 20kHz, ± 3 dB

Signal-to-noise ratio, A-weighted: 75dB

Channel separation: ≥ 60 dB

Crosstalk between sources: ≤ 60 dB

Line-level input sensitivity at 1kHz: 1.0V RMS, ± 1 dB

LOUDSPEAKERS:

Low-frequency transducers: Two 125mm felted-paper drivers, ported

High-frequency transducers: Two 19mm titanium-laminate domes

Nominal impedance: 6 ohms

Sensitivity (2.83V/1m): 87dB

Frequency response: 80Hz – 20kHz (± 3 dB)

FM TUNER SECTION:

Frequency range: 87.5 – 108.0MHz

Usable sensitivity: IHF 1.3 μ V/13.2dBf

Signal-to-noise ratio: mono/stereo 70/65dB

Distortion: mono/stereo 0.15/0.3%

Stereo separation: 35dB @ 1kHz, 100% deviation @ 65dBf

Selectivity: ± 300 kHz: 65dB

Image rejection: 80dB

IF rejection: 90dB

Tuner output level: 1kHz, ± 50 kHz, Dev 500mV

Number of presets: six

RDS capability: PTY (program type), PS (program service), Text (radio text)

CD SECTION:

Disc compatibility: CD, CD-R, CD-RW, enhanced CD, MP3, WMA

THD+N (20Hz – 20kHz): <0.01%

Frequency response: 0dB ± 0.5

Channel separation: ≥ 65 dB

Signal-to-noise ratio:

- “A” WTG > 100dB
- 22kHz filter > 100dB

VIDEO OUTPUTS:

Composite video: 1.0V (pk-pk), 75 Ω , negative sync

S-video:

(Y) 1.0V (pk-pk), 75 Ω , negative sync

(C) 0.286V (pk-pk), 75 Ω

GENERAL:

Power requirement: DC 24V, 5A power supply; works for AC 230V/50Hz

Power consumption: <1W standby, 80W maximum (both channels driven)

Operating temperature: 0°C to 35°C

Dimensions (H x W x D): 252mm x 488mm x 194mm

Weight: 8.2kg



Features, specifications and appearance are subject to change without notice.

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Please register your product at www.harmankardon.com. You’ll need your product’s serial number. At the same time, you can choose to be notified about new products and/or special promotions.



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