

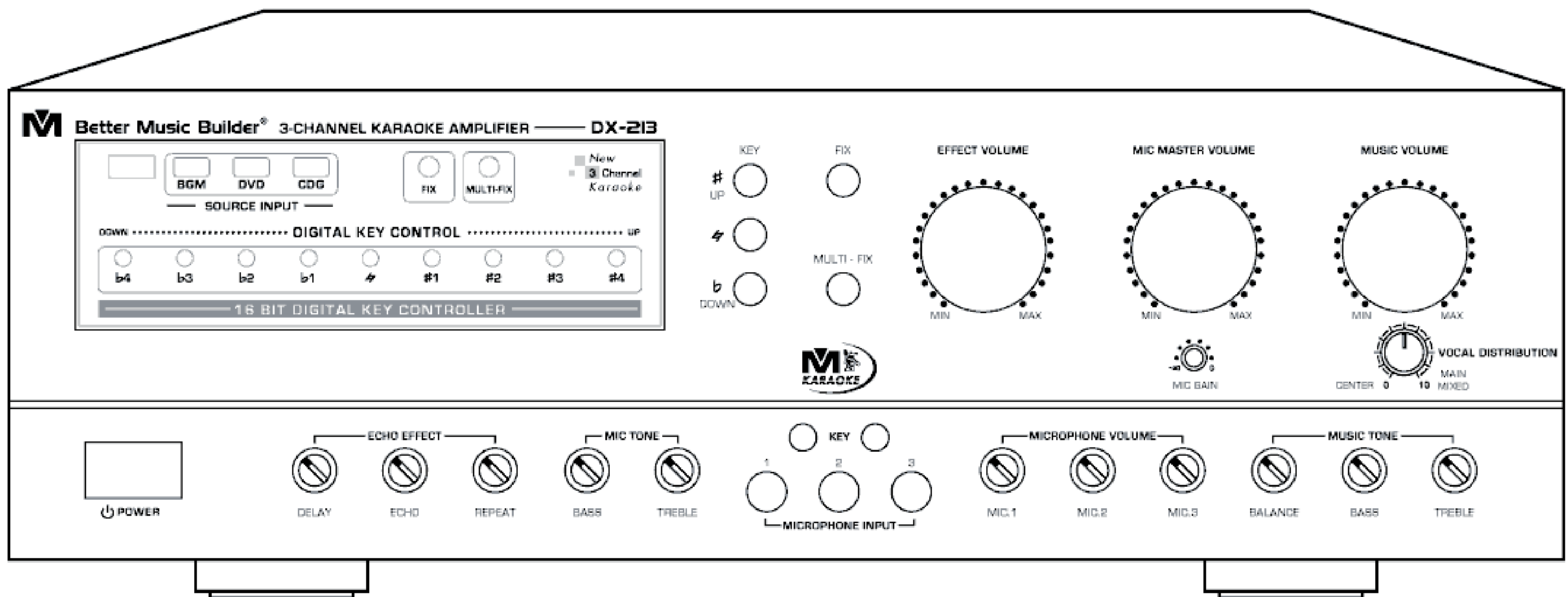


OWNER'S MANUAL

Better Music Builder is a leader in the Audio and Karaoke equipment industry. We are committed to offering you the high quality audio product. We may update our manual, so we highly recommend you to download the free update from our website www.BetterMusicBuilder.com.

3-Channel Mixing Amplifier

DX-213



Thank you for purchasing this unit. To make full and effective use of this unit, please read this Owner's Manual carefully before operating it. Please retain this manual for future reference.

Passionate about Music
www.BetterMusicBuilder.com

We will not notify you any errors or changes in this manual in advance. If there are any errors and changes in this manual, we will make the corrections in a timely manner. The corrections and changes will be appeared in our website. Therefore, please visit our website www.BetterMusicBuilder.com frequently to find out the most updated information, corrections on errors and changes in this manual. You may also contact us at toll free at 1-800-318-2218.



SAFETY INSTRUCTIONS

1. Read Instructions: All the safety and operation instructions should be read before this product is operated.
2. Retain Instructions: The safety and operating instructions should be kept for future reference.
3. Warnings: All warnings on this product in these operating instructions should be followed.
4. Follow Instructions: All operating and other instructions should be followed carefully.
5. Water and Moisture: This product should not be used near water, for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool, swamp or salivating St. Bernard dog, etc.
6. Cleaning: Clean only with a dry cloth.
7. Ventilation: This product should be situated so that its location or position does not interfere with its proper ventilation. For example, the Component should not be placed on a bed, sofa, rug, or similar surface that may block any ventilation openings, or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through ventilation openings.
8. Heat: This product should be stayed away from

heat sources such as radiators, or other devices producing heat.

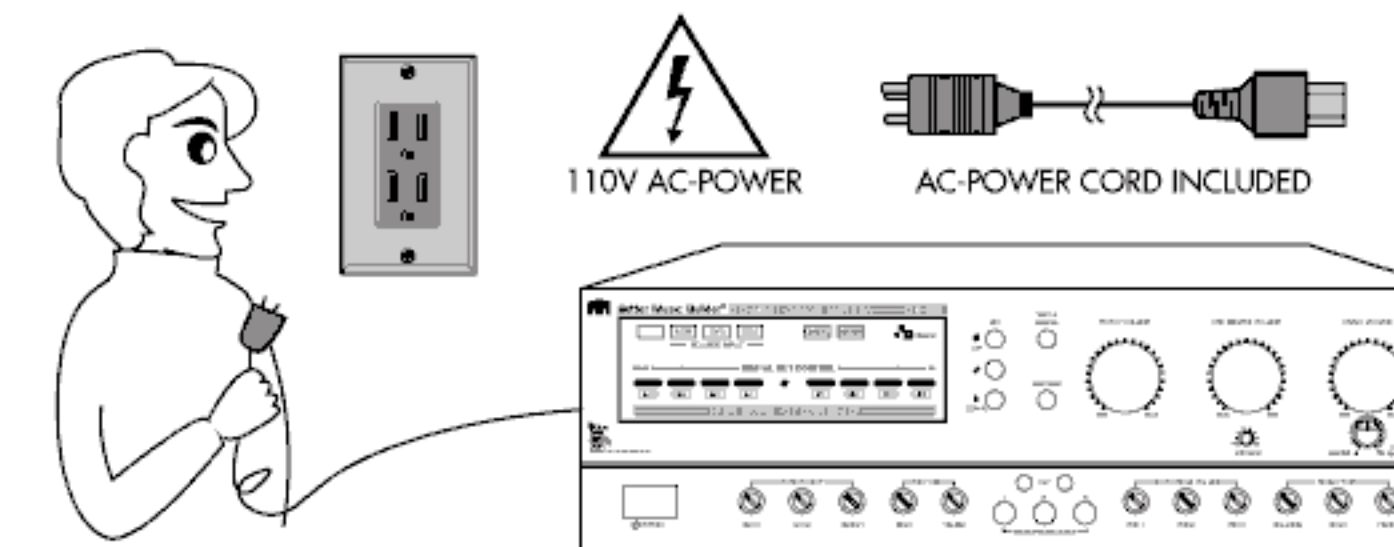
9. Power Sources: This product should be connected to a power supply only of the type described in these operation instructions or as marked on this product.
10. Power Cord Protection: Power supply cords should be routed so that they are not likely to be walked upon or pinched by items placed upon or against them. Please pay particular attention to cords plugs, convenience receptacles, and the point where they exit this product.
11. Object and Liquid Entry: Care should be taken so that objects do not fall on, or liquids are not spilled into this product.
12. Damage Requiring Service: This product should be serviced only by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has spilled into this product; or
 - C. This product has been exposed to rain; or
 - D. This product does not appear to operate normally or exhibits a marked change in performance; or
 - E. This product has been dropped, or its chassis has been damaged.
13. Servicing: The user should not attempt to service this product beyond those means described in this operating manual. All other servicing should be referred to the Service Department.
14. To prevent electric shock, do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.
15. Grounding or Polarization: Precautions should be taken so that the grounding or polarization means of this product is not defeated.
16. Power Precaution: Unplug this product during lightning storms or when unused for long periods of time. Note that this product is not completely disconnected from the AC power source when the power switch is in the OFF position.

17. This machine does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the US Department of Communications.

AC-POWER SOURCES

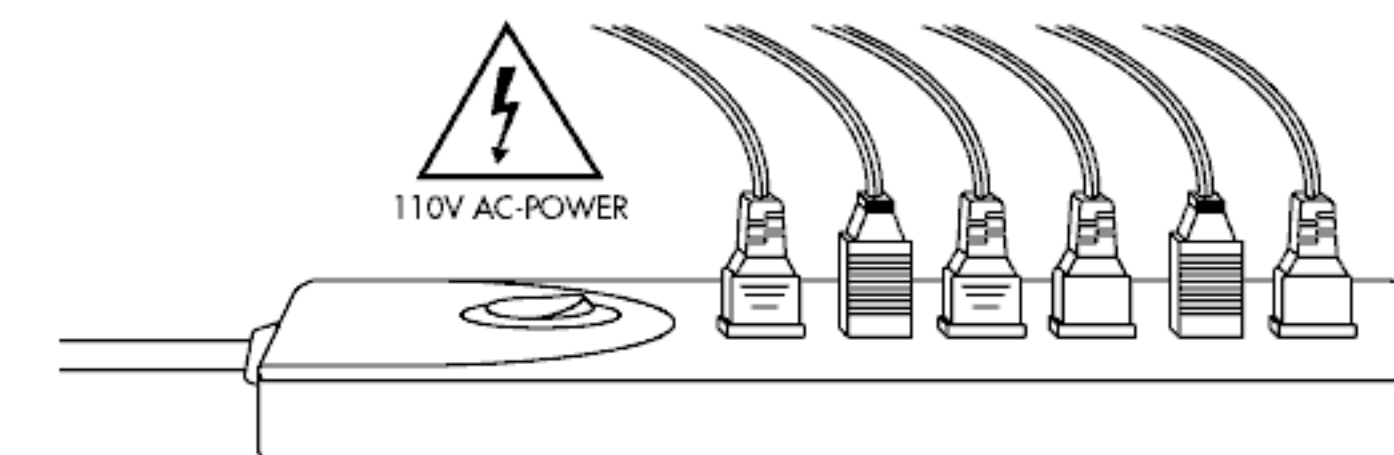
This set should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, or other sources, refer to the operating instructions.

This unit is designed for use with 120V/60Hz AC. If the area where you live have different power source, you may need to use a transformer to convert to 120 Volts AC.



OVERLOADING

Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.

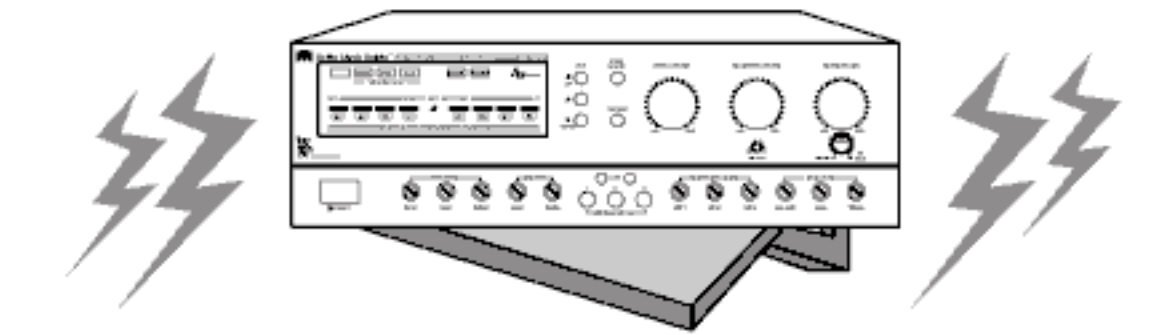


An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.

Do not place the electronic equipment onto the unstable table or stand. It is because it would fall easily from the unstable table or stand, so it may cause accident including personal injuries and damage the equipment. Please follow our instructions to install the equipment, or you may hire a professional technician to handle the installation for safety purpose.

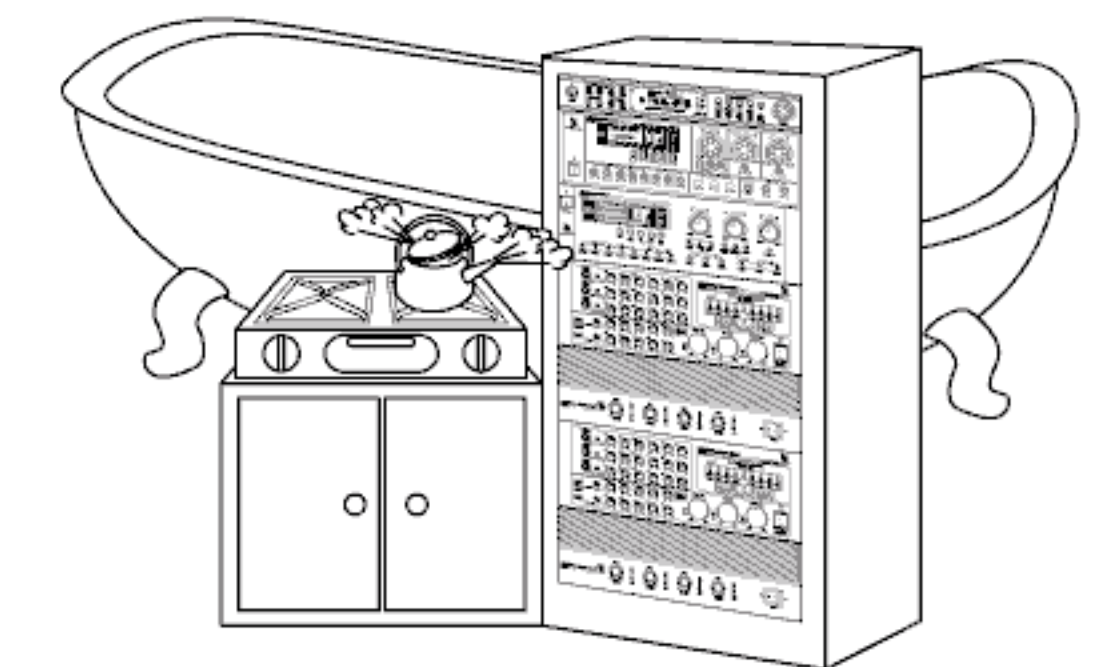


Do not place the set on an unstable cart, stand, tripod, bracket, or table. The set may fall, causing serious injury to a child or an adult, and serious damage to the set. Use only a cart stand tripod, bracket, or table recommended by the manufacturer.



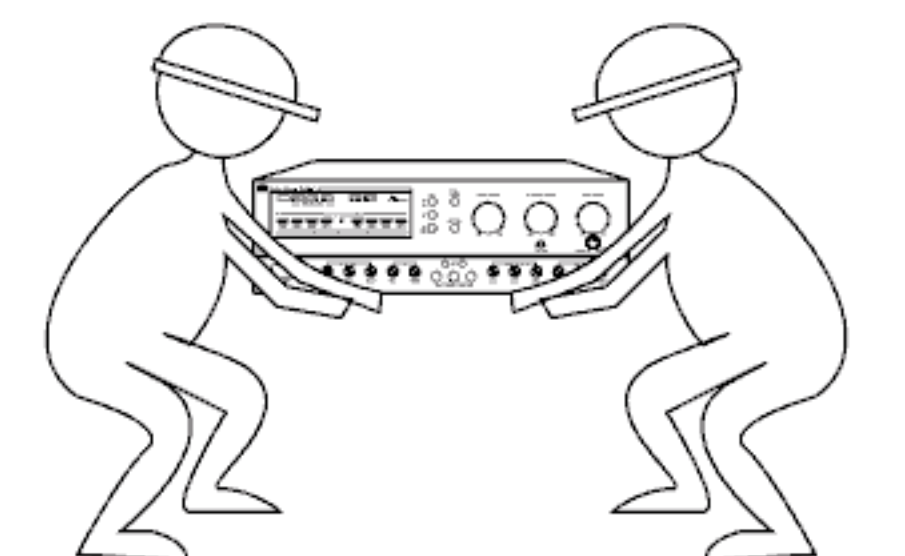
For the set with a three-wire grounding type ac plug: This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the grounding plug.

Do not store the electronic equipment near water or area with moisture such as bathroom, kitchen sink, laundry area and swimming pool, etc.

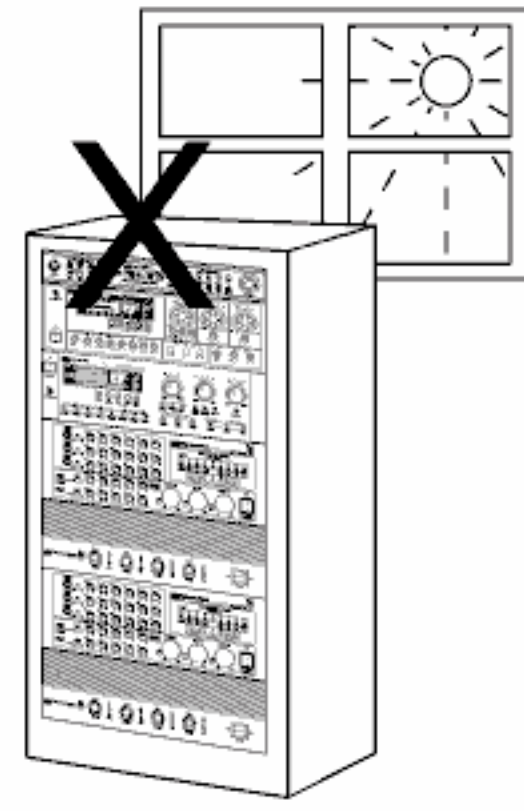


Do not transport the electronic equipment by yourself if its weight exceeds 70 pounds.

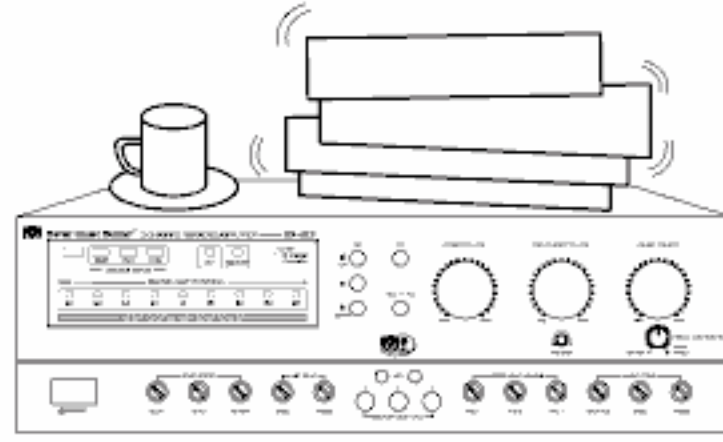
It is recommended that two people work together to transport the equipment or by using hand truck and the like.



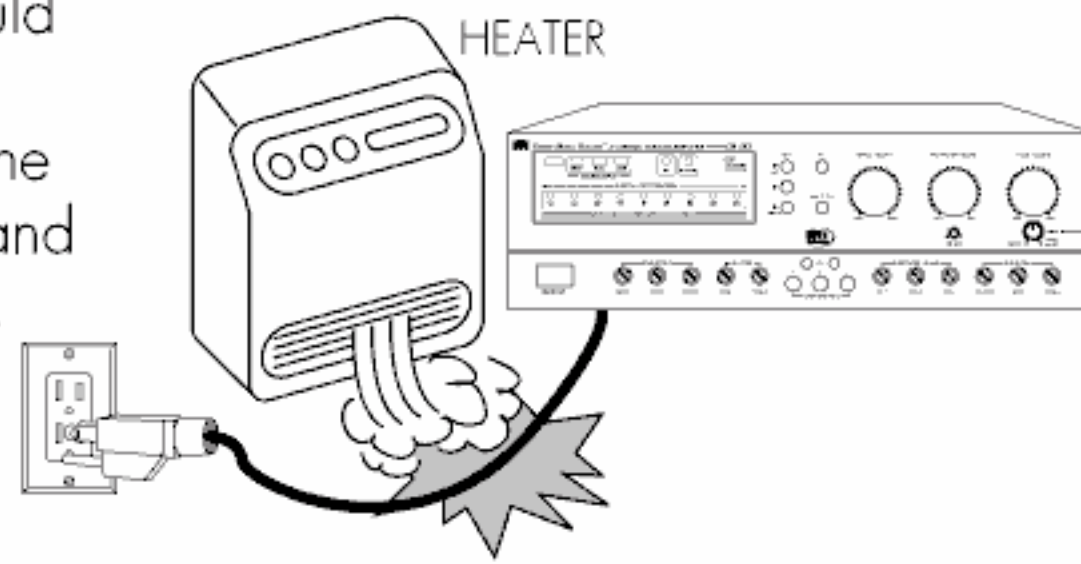
Do not place the electronic equipment directly under sunlight or close to the window. It may cause overheat on the electronic equipment by the sunlight.



Do not block the openings and vents in the cabinet which is designed for the ventilation of the electronic equipment. The blocking may cause overheat in the electronic equipment because of insufficient circulation of air, so it would damage the electronic equipment.

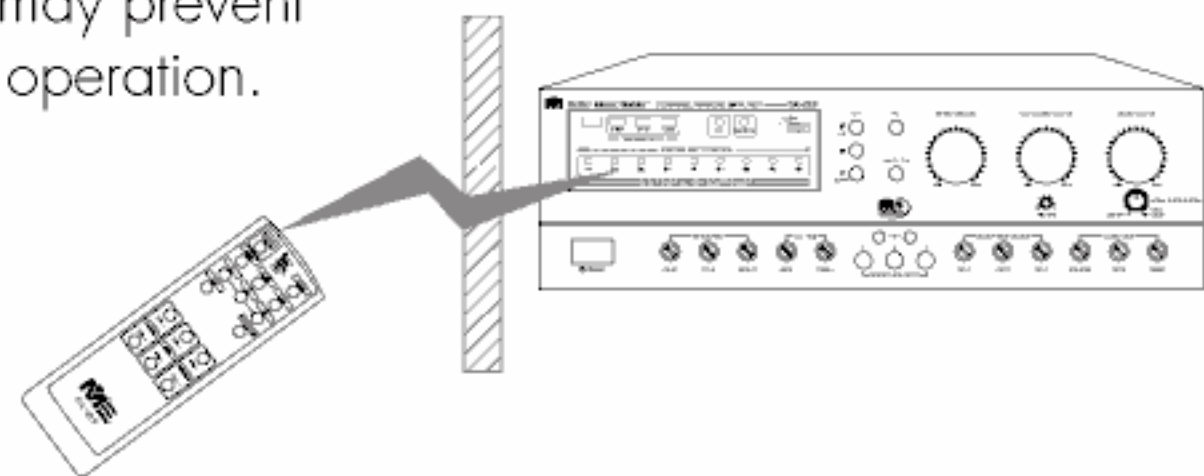


Do not place the electronic equipment near heat sources such as stoves, radiators and heaters, etc. Placing the electronic equipment too near to these heat sources would result in damaging the equipment and causing fire.



Using the Remote Control Unit

Use the remote control unit by pointing it towards the remote control sensor on the amplifier. Objects between the remote control unit and the remote control sensor may prevent proper operation.

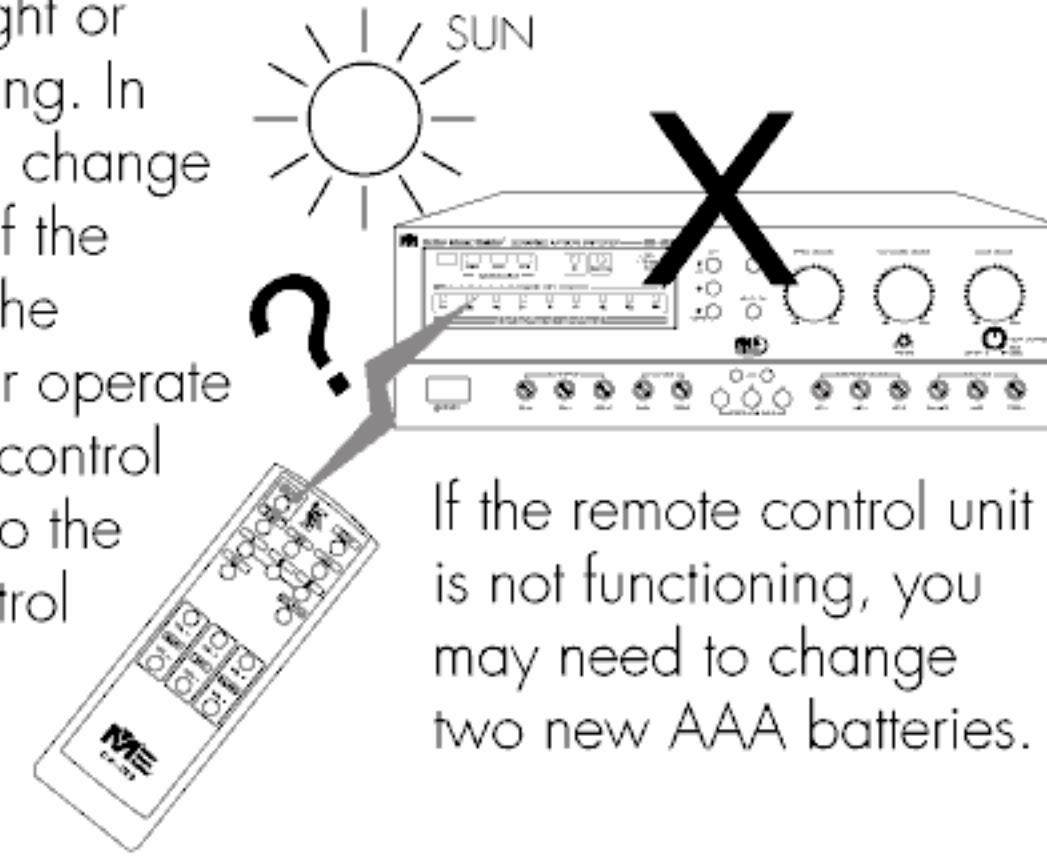


Cautions Regarding the Remote Control Unit

- Do not expose the remote control unit to shock. In addition, do not expose the remote control unit to liquids, and do not place in an area with high humidity.



- Do not install or place the remote control unit under direct sunlight. The heat may cause deformation of the remote control unit.
- The remote control unit may not work properly if the remote control sensor on the amplifier is under direct sunlight or strong lighting. In such cases, change the angle of the lighting or the amplifier, or operate the remote control unit closer to the remote control sensor.



If the remote control unit is not functioning, you may need to change two new AAA batteries.

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INTRODUCTION

Better Music Builder (BMB) Karaoke amplifier DX-213 is our latest mixing amplifier with the main feature of having three channels. It is designed by the engineering team of Better Music Builder. Our engineering team has spent many years to conduct the research and collect opinions and feedbacks from the customers to design this unique product.

Based on our past experience, when the singer is getting too close to the speakers with the microphone, it would create distortion and feedback, which can damage the speakers. With the 3-channel feature of DX-213, the music comes from the main speaker while the microphone vocal comes from the center speaker. This can reduce the microphone feedback substantially.

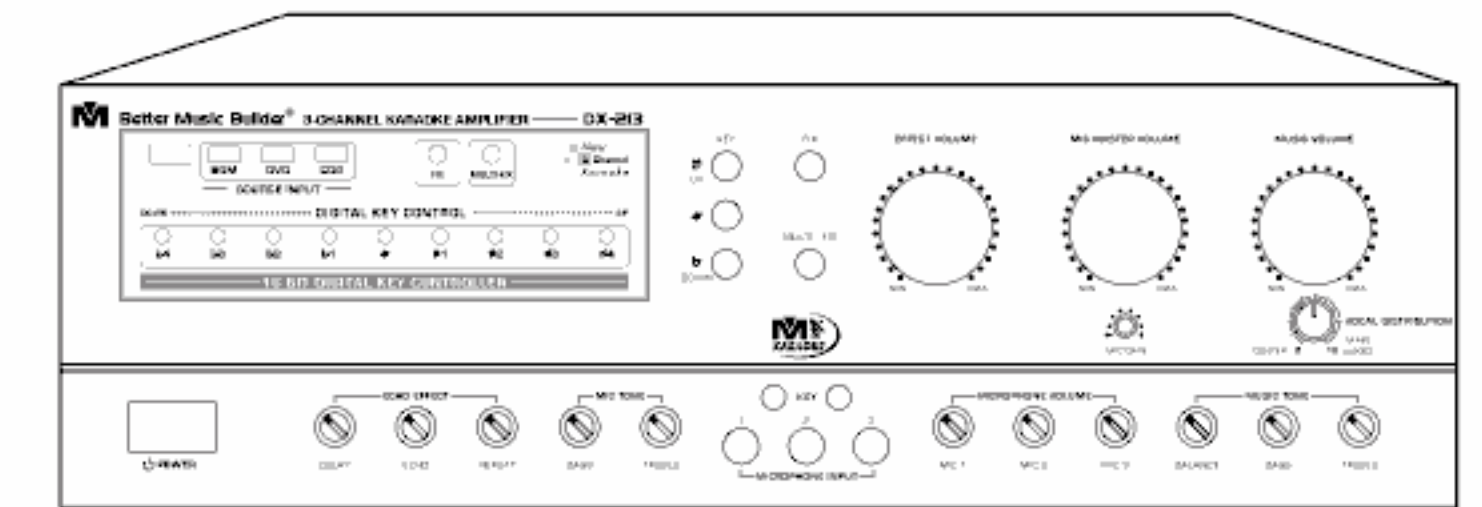
DX-213 has following special features:

- You can adjust the vocal and music effects from the center and main speakers (i.e. left and right speakers). DX-213 has a center button with a distinguished function to handle vocal signal distribution and complete control on microphone feedback.
- FIX Button:** It is designed for solo and duet singing. It does not serve the function of vocal cancellation. When this button is on, it can enhance the music tone. The voice of the original artist may either come from the left or the right speaker. To eliminate the voice of the original artist completely; use the DVD player remote control to cancel the vocal signal or music source.
- Multi-Fix Button:** It is designed for more than four people to sing together. It does not serve the function of vocal cancellation. When this button is on, it can enhance the music tone to a higher level than that of the FIX Button. The voice of the original artist may either come from the left or the right speaker. To eliminate the voice of the original artist completely; use the DVD player remote control to cancel the vocal signal or music source.
- It has three audio and video inputs including background music (BGM), DVD and CDG. BGM has the first priority for signal input. This special feature is especially good for KTV and Karaoke business.

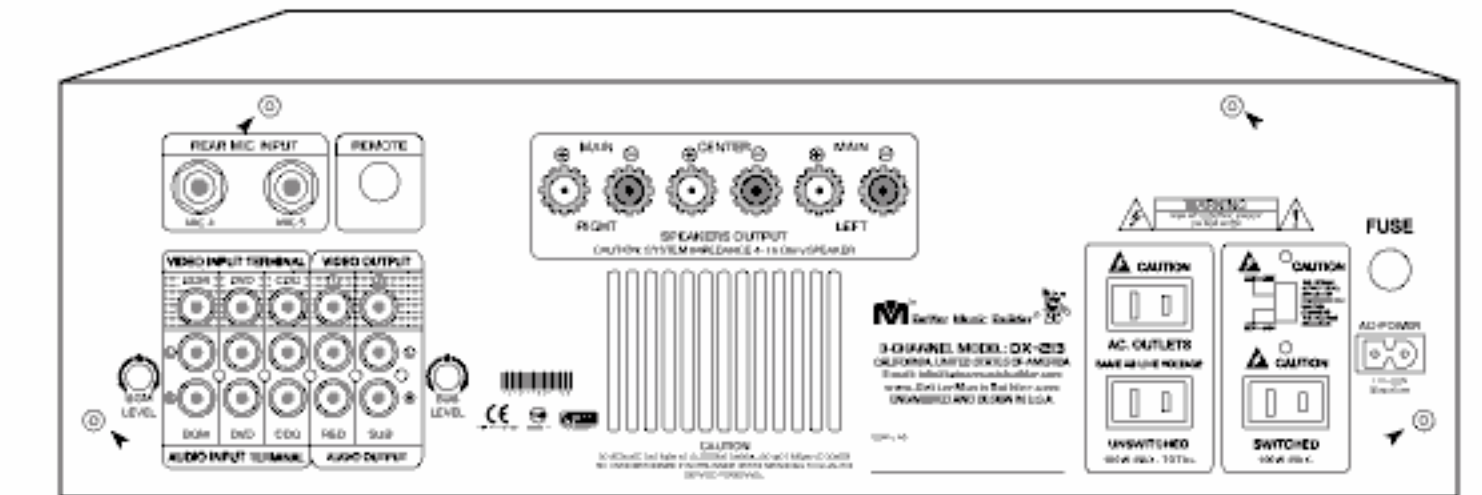
- It has five microphone inputs, with three inputs in the front panel and two inputs in the rear panel. This is a special design for connecting to wireless microphone system.
- It has vocal effect for improving the normal echo sound. It can cover a wider space and produce crystal clear sound.

In general, DX-213 is excellent for home entertainment. It has high value and good quality. It can be used any place in the world with AC power either 110V or 240V because of its adjustable feature. As mentioned earlier that DX-213 has three channels, we highly recommend you using CS-500 or CS-612 speakers for main output, and works with a center speaker CS-306 to achieve excellent Karaoke singing effect. This is even much better than that of the home theater sound system for singing. It is because the main speakers (left and right) produce music and the center speaker produces your singing vocal. Therefore, it can reduce feedback and distortions. For this reason, it can also protect your audio system from burning or related damage.

DX-213 Front View



DX-213 Rear View



SAFETY PRECAUTIONS

Selecting fine audio equipment such as the unit you've just purchased is only the first step to your musical enjoyment. Now it's time to consider how you can maximize the fun and the safety of your new equipment. We want you to get the most out of your equipment by playing it at a safe level without affecting your hearing. Sound can be very harmful. Over time your hearing "comfort level" adapts to higher volume of sound. What sounds "normal" can actually be loud and harmful to your hearing. Therefore, please guard against this by setting your equipment at a safe level before your hearing adapts. To establish a safe level, you can start your volume control at a low setting, then slowly increase the sound until you can hear it comfortably and clearly. If used wisely, your new sound equipment will provide you a pleasant experience in music. Since hearing damage from loud noise is often undetectable until it is too late, we recommend you avoid prolonged exposure to excessive noise. The following noises can be dangerous under constant exposure. Therefore, please be cautious with the dB level when playing your new equipment.

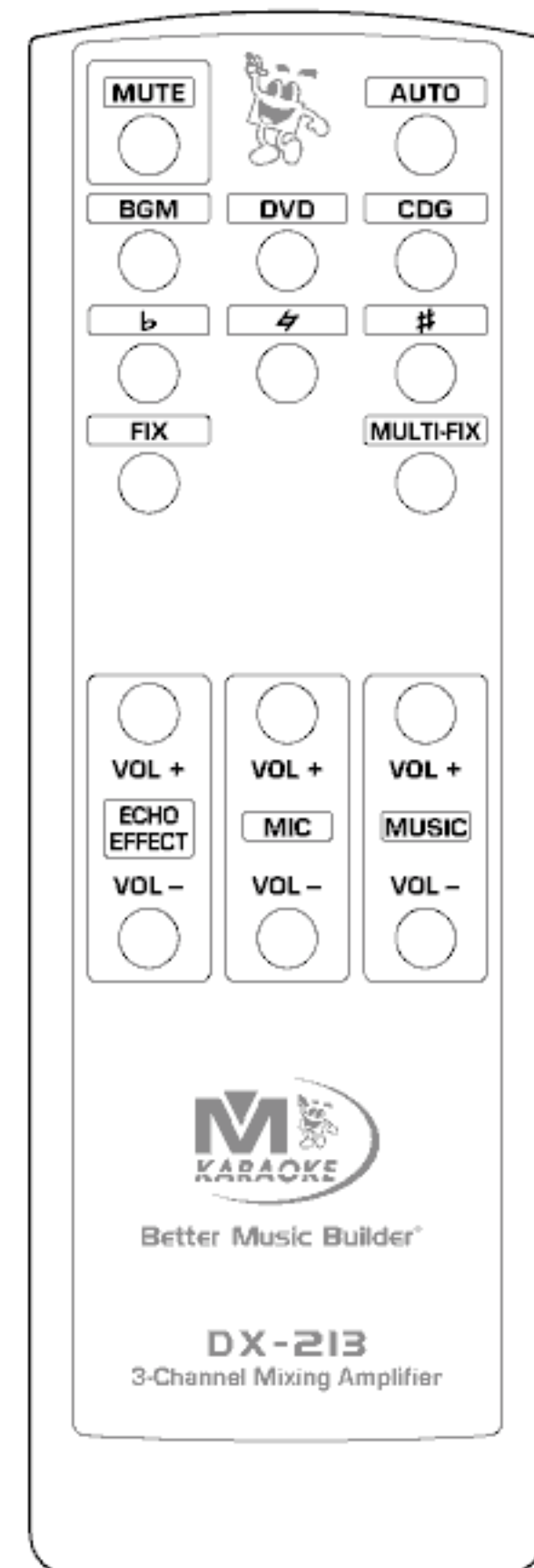
Decibel Level	Example
120 dB	Rock band concert in front of speakers, thunderclap
140 dB	Gunshot blast, jet plane
180 dB	Rocket launching pad

SPECIFICATIONS

Main Power Output (RMS): 200W+200W (8 ohm)
 Center Power Out: 200W (8 ohm)
 Input Sensitivity: 200mV
 Input Impedance: 47K ohm
 BASS Control: 100Hz ± 12dB
 TREBLE Control: 10kHz ± 12dB
 T.H.D.: <0.1%
 Frequency Response: 20Hz~20kHz, -1dB
 Noise Ratio: >83dB
 Microphone Connector: 1/4" TRS/unbalanced
 Microphone Input Sensitivity: 1mV~100mV
 Microphone Input Impedance: 1.5K ohm
 Microphone T.H.D.: <0.5%
 Microphone Frequency Response: 20Hz~15kHz, -3dB
 Digital Echo: Up to 300ms
 Video Input/Output: 1Vpp/75 ohm
 Standard Power: AC 120V/~60Hz (North America Market)
 AC 220V/~50Hz (Asia or Europe Market)
 Dimensions (WxHxD): 17x5.5x14.3(inches)/43x14x36.5(cm)
 Net Weight: 23 lbs / 10.5 kg
 Shipping Weight: 28 lbs / 12.7 kg

PACKAGE ACCESSORIES

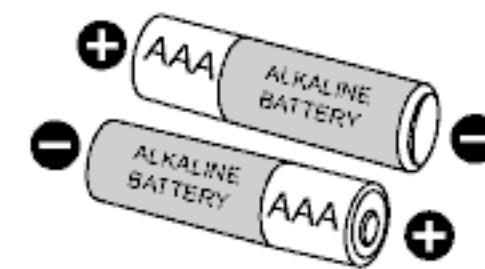
The Package accessories include a remote control and one AC power cord. All other accessories mentioned in the manual for installation purpose are not included. They are sold separately.



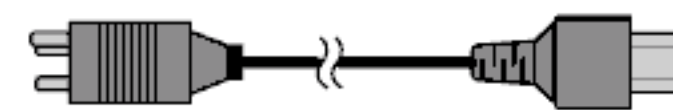
Remote control one unit



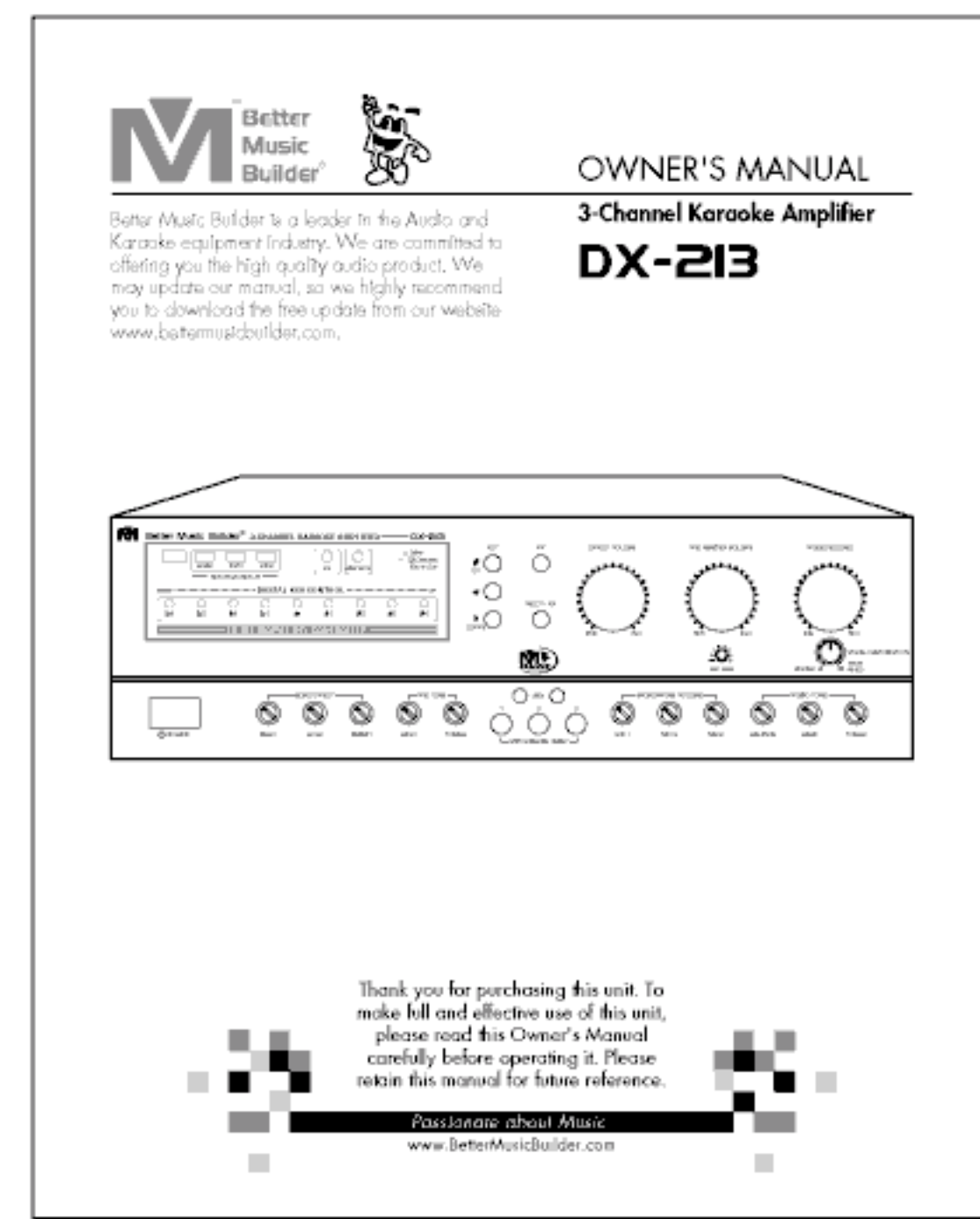
Consumer warranty and registration card
 <Mail in U.S.A. only>
 Consumers from Canada can get the warranty card by downloading it from our website www.BetterMusicBuilder.com.



Battery size: AAA (R6 1.5 V)

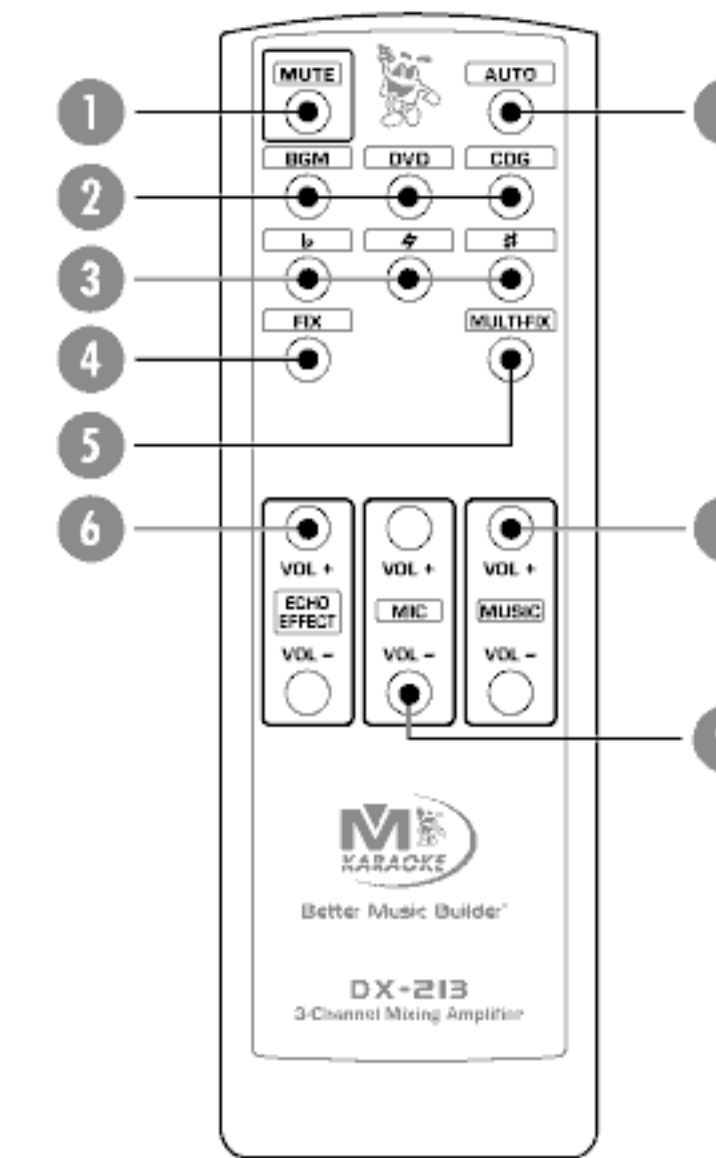


AC power cable (6 feet)
 United States (2M) to IEC (F)

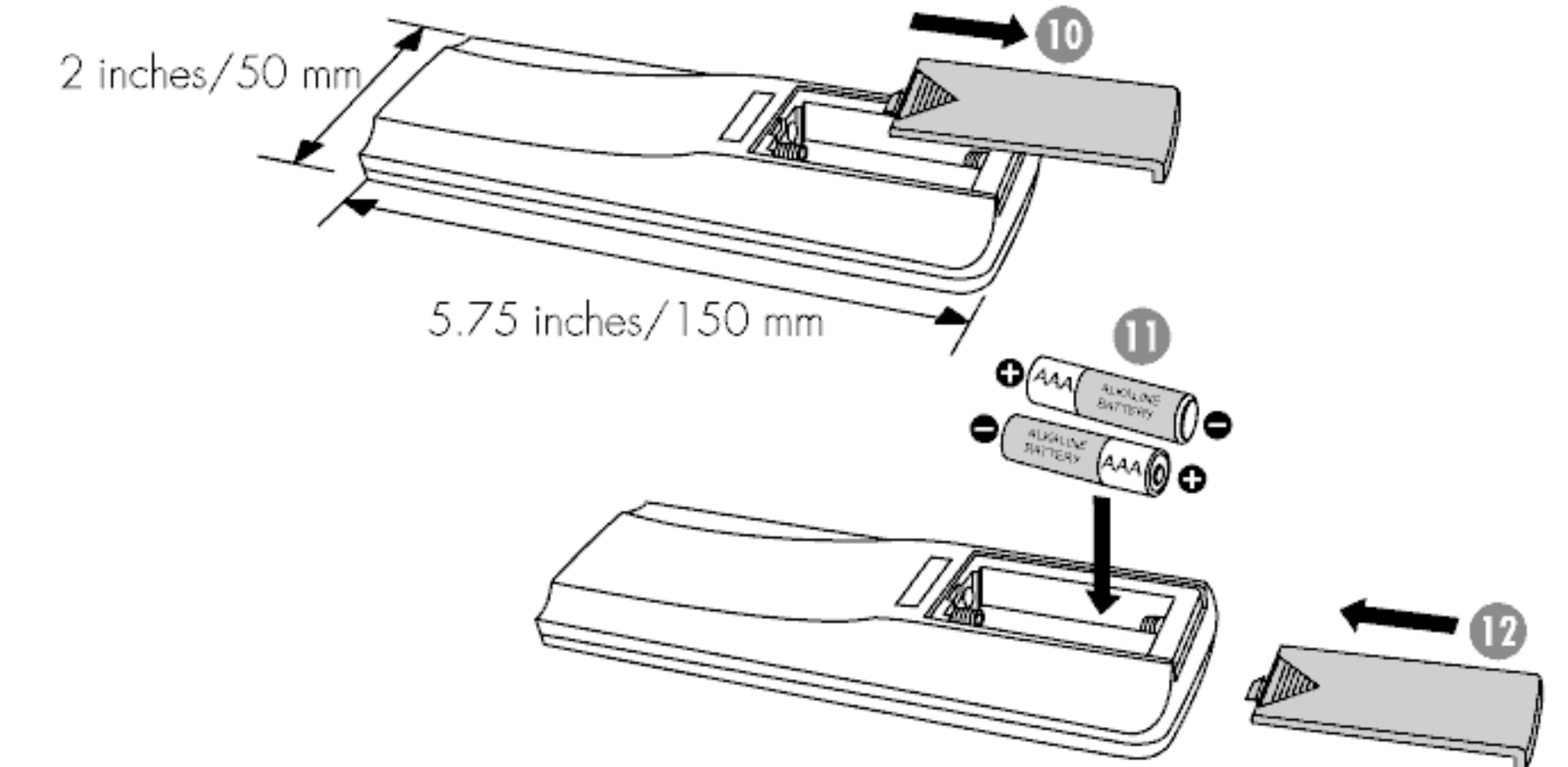


Owner's manual

REMOTE CONTROL BUTTONS



- MUSIC MUTE BUTTON**
- INPUT SELECT BUTTON: BGM, DVD, CDG**
- KEY CONTROL: ♭LOW, ⚡NATURAL, #HIGH**
- FIX BUTTON**
It is designed for solo and duet singing. It does not serve the function of vocal cancellation. When this button is on, it can enhance the music tone. The voice of the original artist may either come from the left or the right speaker. To eliminate the voice of the original artist completely; use the DVD player remote control to cancel the vocal signal or music source.
- MULTI-FIX BUTTON**
It is designed for more than four people to sing together. It does not serve the function of vocal cancellation. When this button is on, it can enhance the music tone to a higher level than that of the FIX Button. The voice of the original artist may either come from the left or the right speaker. To eliminate the voice of the original artist completely; use the DVD player remote control to cancel the vocal signal or music source.
- ECHO EFFECT VOLUME UP & DOWN BUTTON**
- AUTO INPUT SELECTOR REMOTE CONTROL**
- MUSIC MASTER VOLUME CONTROL UP & DOWN BUTTON**
- MICROPHONE MASTER VOLUME UP & DOWN BUTTON**

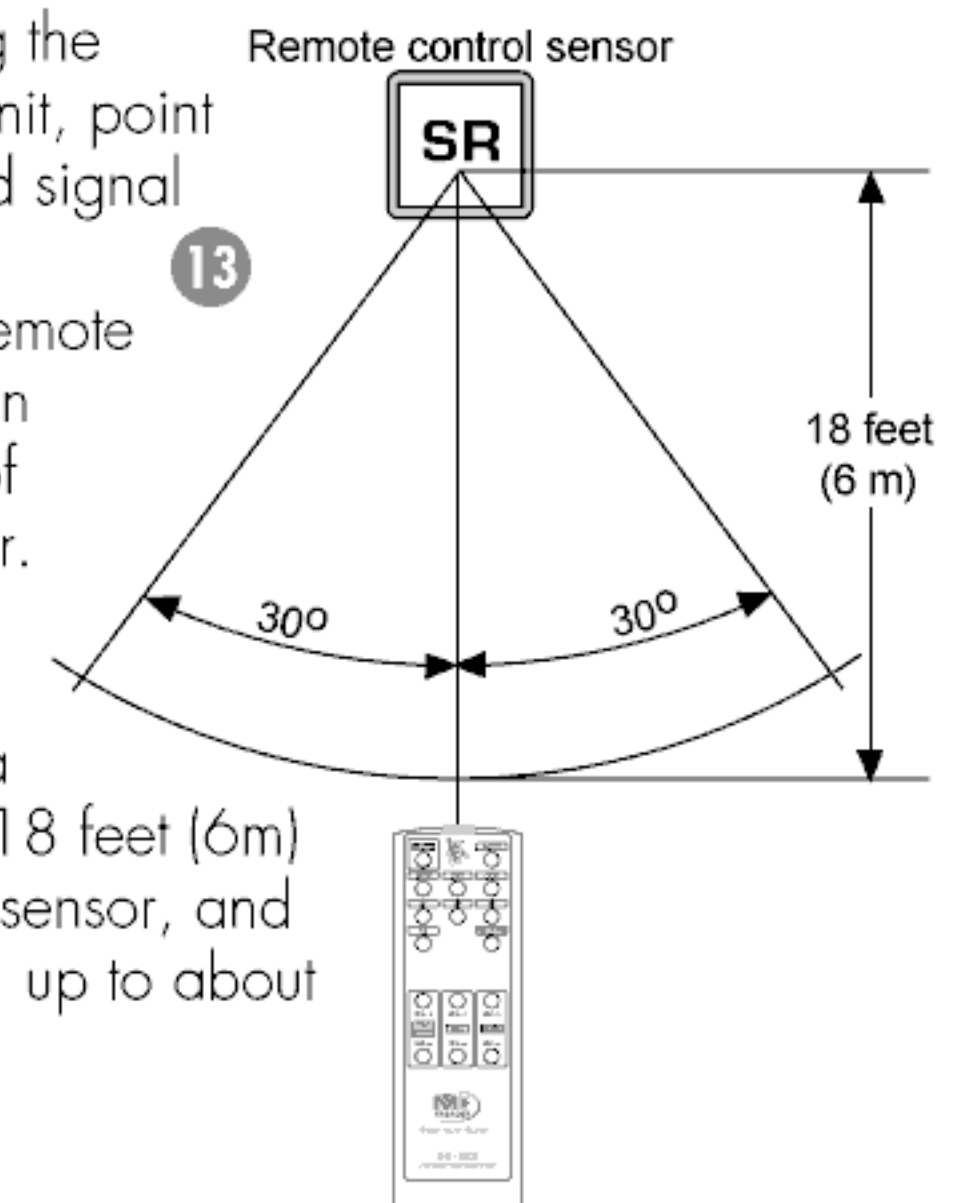


- OPEN BATTERY COVER**
Open the battery compartment cover on the back of the remote control unit. The cover should open easily if you press on it with your thumb while sliding it in the direction of the arrow.
- INSERTING BATTERIES**
Insert two size AAA 1.5V (R6) alkaline batteries as shown.
- CLOSE BATTERY COVER**
Close the cover of the battery case.
NOTE
Remove the batteries to avoid damage from possible battery leakage whenever you anticipate that the remote control will not be used for an extended period.

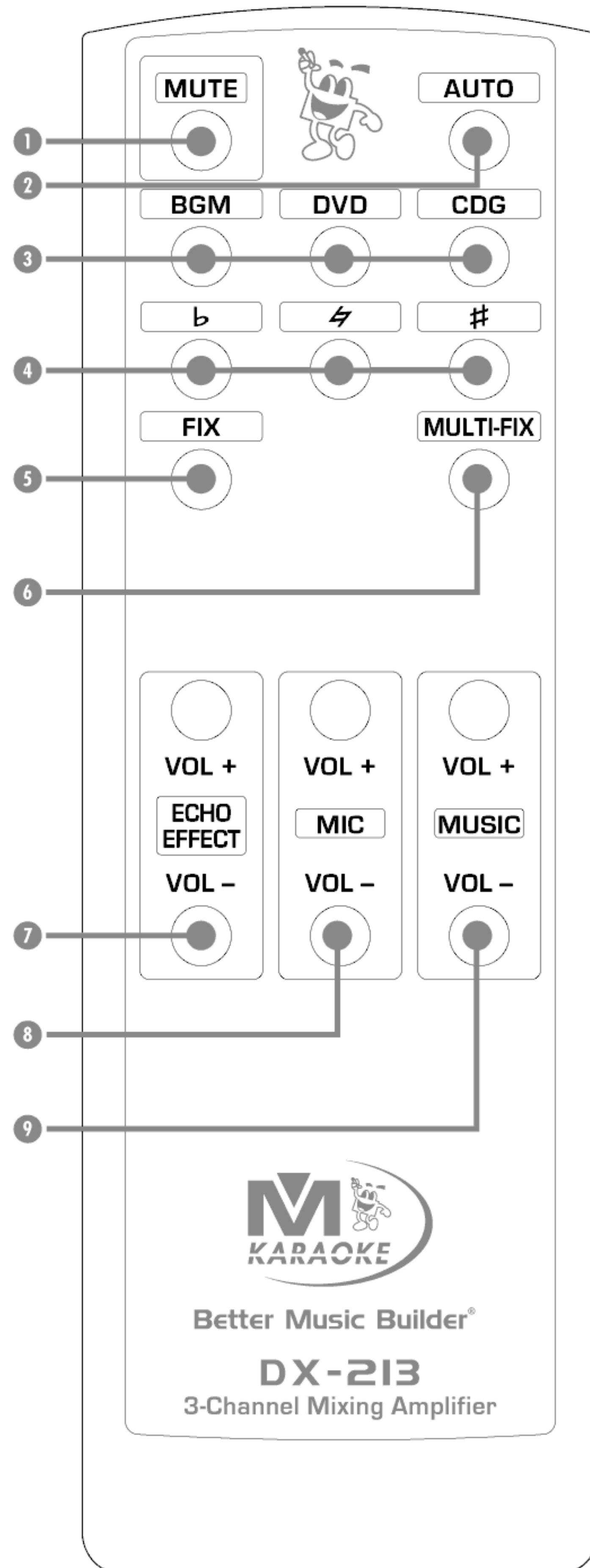
Handle the remote control with care. Avoid dropping it, getting it wet, or placing it in direct sunlight, near a heater, or where the humidity is high.

13 USING THE REMOTE CONTROL UNIT

When operating the remote control unit, point the unit's infrared signal transmitter at the remote control remote sensor "SR" on the front panel of the AV processor. The remote control unit can be used within a range of about 18 feet (6m) from the remote sensor, and within angles of up to about 30 degrees.



FUNCTIONS OF REMOTE CONTROL BUTTONS

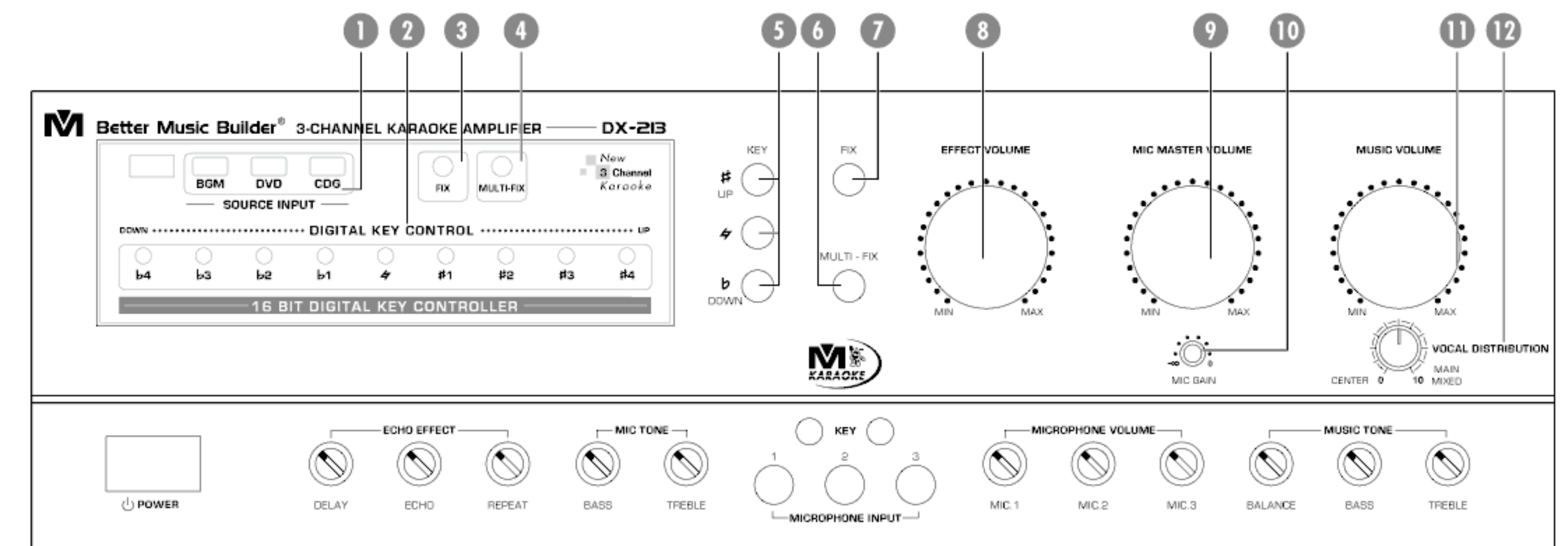


BASIC ADJUSTMENT SETTINGS

- 1 **MUSIC MUTE BUTTON**
Music Mute Button is for music only. The microphones are still active.
- 2 **AUTO INPUT SELECTOR REMOTE CONTROL**
Input selection for BGM, DVD and CDG automatically. BGM is the first priority input for selection.
- 3 **INPUT SELECT BUTTON: BGM, DVD, CDG**
BGM (Background Music) is designed for KTV business. Both manual and auto input for selection are allowed.
- 4 **KEY CONTROL: b LOW, natural NATURAL, # HIGH**
Key control button controls the music speed.
- 5 **FIX BUTTON**
It is designed for solo and duet singing. It does not serve the function of vocal cancellation. When this button is on, it can enhance the music tone. The voice of the original artist may either come from the left or the right speaker. To eliminate the voice of the original artist completely; use the DVD player remote control to cancel the vocal signal or music source.
- 6 **MULTI-FIX BUTTON**
It is designed for more than four people to sing together. It does not serve the function of vocal cancellation. When this button is on, it can enhance the music tone to a higher level than that of the FIX Button. The voice of the original artist may either come from the left or the right speaker. To eliminate the voice of the original artist completely; use the DVD player remote control to cancel the vocal signal or music source.
- 7 **ECHO EFFECT VOLUME UP & DOWN BUTTON**
Microphone Echo Effect Volume control up and down.
- 8 **MICROPHONE VOLUME UP & DOWN BUTTON**
Microphone Master Volume control up and down.
- 9 **MUSIC MASTER VOLUME CONTROL UP & DOWN BUTTON**
Music Master Volume control up and down.

NAMES AND FUNCTIONS OF FRONT PANEL COMPONENTS

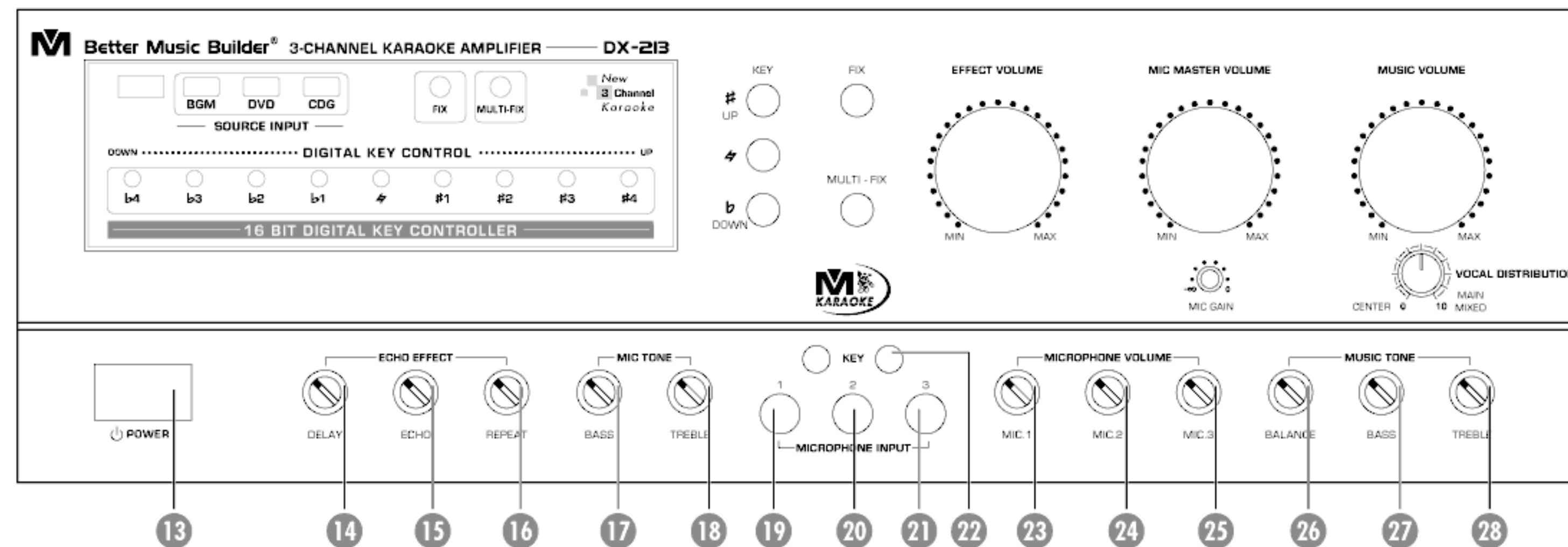
- 1 **INPUT TERMINAL**
BGM is the first priority input. BGM (Background Music) is designed for KTV business. Both manual and auto input for selection are allowed.
- 2 **DIGITAL KEY CONTROL PANEL**
- 3 **FIX INDICATE LIGHT** (Indicator for Display)
- 4 **MULTI-FIX INDICATE LIGHT** (Indicator for Display)
- 5 **KEY CONTROL: b LOW, natural NATURAL, # HIGH**
Key control button controls the music speed.
- 6 **MULTI-FIX BUTTON**
It is designed for more than four people to sing together. It does not serve the function of vocal cancellation. When this button is on, it can enhance the music tone to a higher level than that of the FIX Button. The voice of the original artist may either come from the left or the right speaker. To eliminate the voice of the original artist completely; use the DVD player remote control to cancel the vocal signal or music source.
- 7 **FIX BUTTON**
It is designed for solo and duet singing. It does not serve the function of vocal cancellation. When this button is on, it can enhance the music tone. The voice of the original artist may either come from the left or the right speaker. To eliminate the voice of the original artist completely; use the DVD player remote control to cancel the vocal signal or music source.
- 8 **EFFECT VOLUME CONTROL**
Same as ECHO volume. It will affect all microphones. The volume level starts from 1 to 20 units (not the dB level).
- 9 **MIC. MASTER VOLUME CONTROL**
To control all microphones output level. The volume level starts from 1 to 20 units (not the dB level).
- 10 **MIC. GAIN VOLUME ADJUSTMENT**
Microphones output level limiter. Use a screw driver to turn MICROPHONE GAIN to adjust the maximum output level (20Hz~1.5KHz, -3dB).
- 11 **MASTER MUSIC VOLUME CONTROL**
This control allows you to adjust the volume of the musical source. The volume level starts from 1 to 20 units (not the dB level).
- 12 **VOCAL DISTRIBUTION BUTTON**
A center button with a distinguished function to handle vocal signal distribution and complete control on microphone feedback. Please refer to page 19.



NAMES AND FUNCTIONS OF FRONT PANEL COMPONENTS

- 13 POWER SWITCH**
Press this switch button UP to turn the power ON. Press the switch button DOWN to turn the power OFF (I=ON, O=OFF). Light blue LED is ON when unit is powered.
- 14 DELAY**
This potentiometer affects the vocal echo effects.
- 15 ECHO**
This potentiometer affects the vocal echo effects.
- 16 REPEAT**
This potentiometer affects the vocal echo effects.
- 17 BASS (LOW)**
This potentiometer affects the tone of all microphones.
- 18 TREBLE**
This potentiometer affects the tone of all microphones.
- 19 MIC. 1 INPUT 1/4 INCH JACK**
- 20 MIC. 2 INPUT 1/4 INCH JACK**
- 21 MIC. 3 INPUT 1/4 INCH JACK**
MIC 1, 2, and 3 refer to the three front Mic. input jacks and MIC 4 and 5 refer to the two rear Mic. jacks. Adjusting 1/4 will affect both Mic 1 and Mic 4 at the same time. Adjusting the MIC 2/5 pot will affect both Mic 2 and Mic 5 at the same time. The two rear Mic. input jacks can be used for wireless microphone system for a neater appearance.

- 22 KEY CONTROL INPUT**
- 23 MIC. (MICROPHONE) 1 VOLUME CONTROL**
This control microphone 1 volume level.
- 24 MIC. (MICROPHONE) 2 VOLUME CONTROL**
This control microphone 2 volume level.
- 25 MIC. (MICROPHONE) 3 VOLUME CONTROL**
This control microphone 3 volume level.
- 26 MUSIC BALANCE CONTROL**
Music tone adjustment potentiometer.
- 27 MUSIC BASS CONTROL**
Music tone adjustment potentiometer.
- 28 MUSIC TREBLE CONTROL**
Music tone adjustment potentiometer.

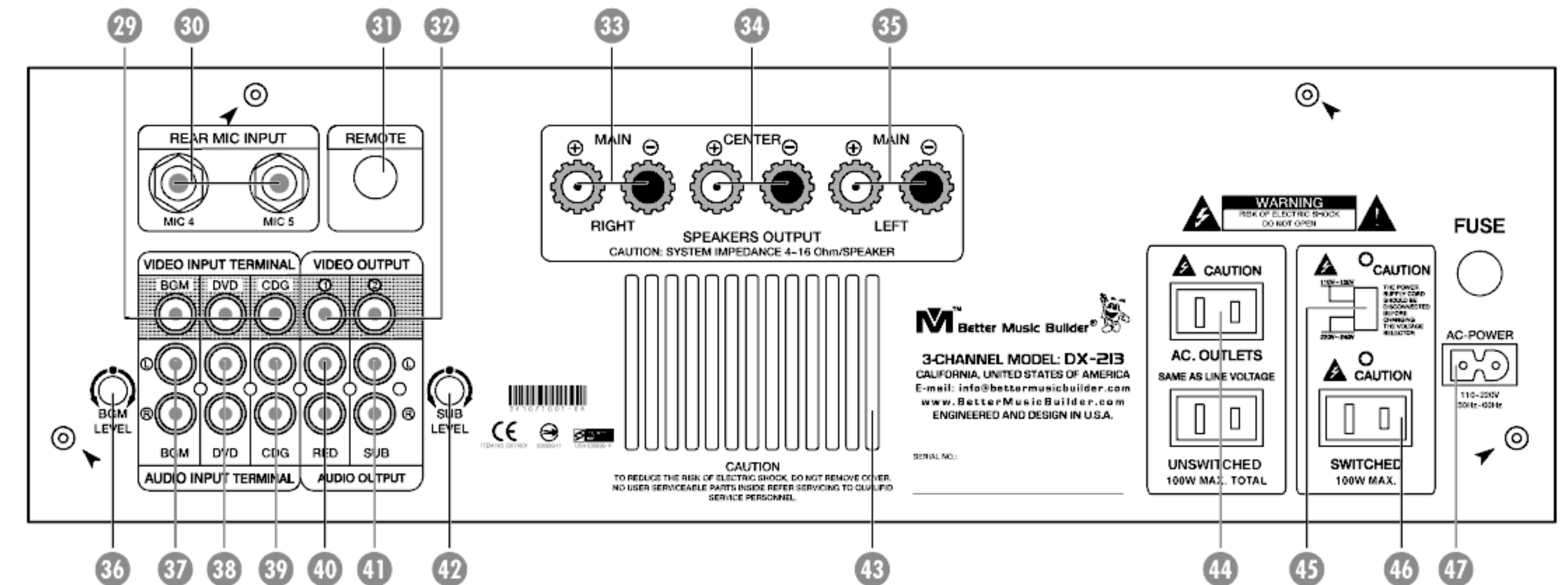


NAMES AND FUNCTIONS OF REAR PANEL COMPONENTS

- 29 SOUND EFFECT DEVICE SEND**
Enable connection to reverberation unit, equalizer and other assisting sound sources. Please do not remove the connector pin.
- 30 REAR MICROPHONE 4 & 5 INPUT JACKS**
The microphone signal is good for wireless system.
- 31 WIRED REMOTE CONTROL CONNECTOR**
- 32 VIDEO MONITOR 1 & 2 OUTPUT TERMINALS**
RCA composite video out.
- 33 SPEAKER (RIGHT CHANNEL) OUTPUT TERMINAL**
- 34 CENTER SPEAKER OUTPUT TERMINAL (MONITOR)**
You can adjust music and vocal separately, or mix them together.
- 35 SPEAKER (LEFT CHANNEL) OUTPUT TERMINAL**
- 36 BGM GAIN ADJUSTMENT POTENTIOMETER**
- 37 BGM AUDIO INPUT TERMINAL: Second priority**
- 38 DVD AUDIO INPUT TERMINAL: First priority**
- 39 CDG AUDIO INPUT TERMINAL: Last priority**
- 40 RECORD OUTPUT TERMINAL**
Line level output for connection to an external amplifier. This signal does not bypass.
- 41 SUBWOOFER AUDIO OUTPUT TERMINAL**
This is a low music frequency for bass.
- 42 SUBWOOFER GAIN ADJUSTMENT POTENTIOMETER**
- 43 SMART FAN**
It automatically turns on when the temperature reaches 60 degrees Fahrenheit. Therefore, if the fan is not on, it does not mean that it does not work.
- 44 AC OUTLETS**
This unit is equipped with two UNSWITCHED AC OUTLETS for connecting other audio. If you select 110V, the three outlets would have the same voltage. When you turn off the switch, the two unswitched outlets still have power.
- 45 VOLTAGE SELECTOR**
The Voltage Selector on the rear panel of this unit must be set for your local voltage before plugging the power cable into the AC wall outlet. Improper setting of the Voltage Selector may cause damage to this unit and create a potential fire hazard.

The switch is set to 110V~220V. If you move to an area where the voltage requirements differ, set under the responsibility of the user according to the local power voltage. Be sure to replace the fuse with the specified after changing the voltage setting.

Note: If your machine is not responding (such as no sound), one probable cause is that the Voltage Selector is not set for your local voltage.
- 46 AC OUTLETS**
This unit is equipped with SWITCHED AC OUTLETS for connecting other audio. If you select 110V, the three outlets would have the same voltage. When you turn off the switch, this outlet will have no power.
- 47 SUPPLIED POWER CORD (NORTH AMERICA)**
The voltage use in America is 110V. However, you need to change to a different power cord for 220V.

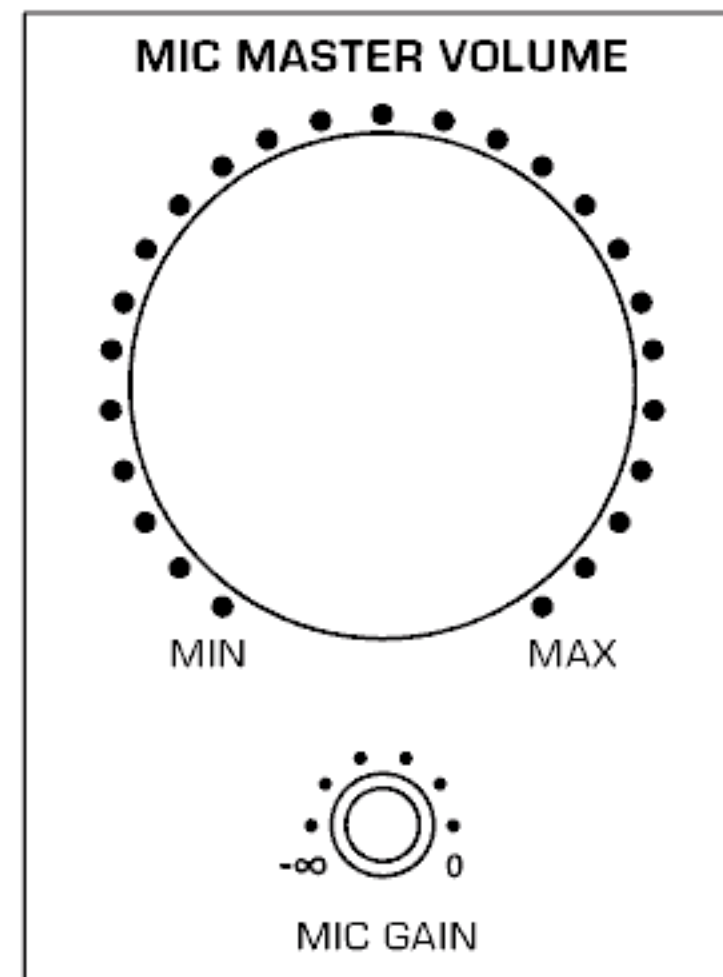


OPERATING INSTRUCTIONS

MODE ADJUSTMENT

1. Mic Master Volume Adjustment

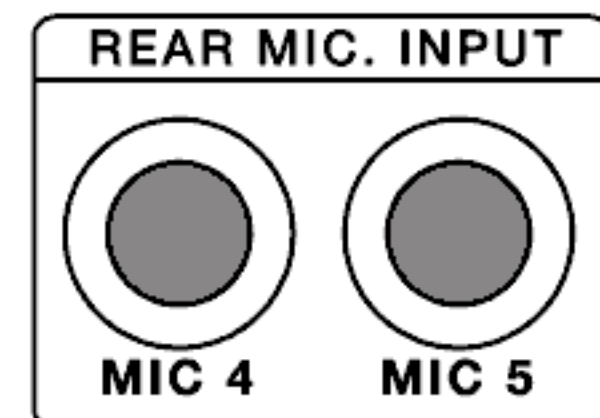
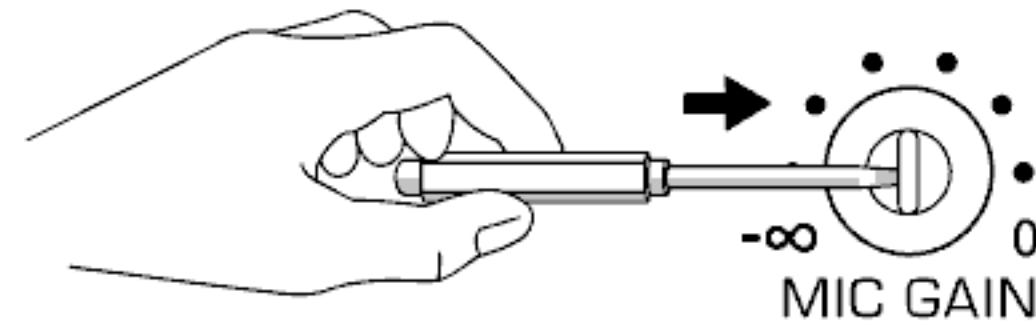
Turn MIC MASTER VOLUME clockwise to increase and counter clockwise to decrease mic. volume level.



2. Microphone Gain Adjustment

Turning each pot adjusts gain of the corresponding microphone limiter.

MICROPHONE GAIN is a limiter for microphone level. This feature is for limiting the output power for speaker protection. Its function is to protect your audio equipment from burning because of turning the master microphone volume too high.



NOTE

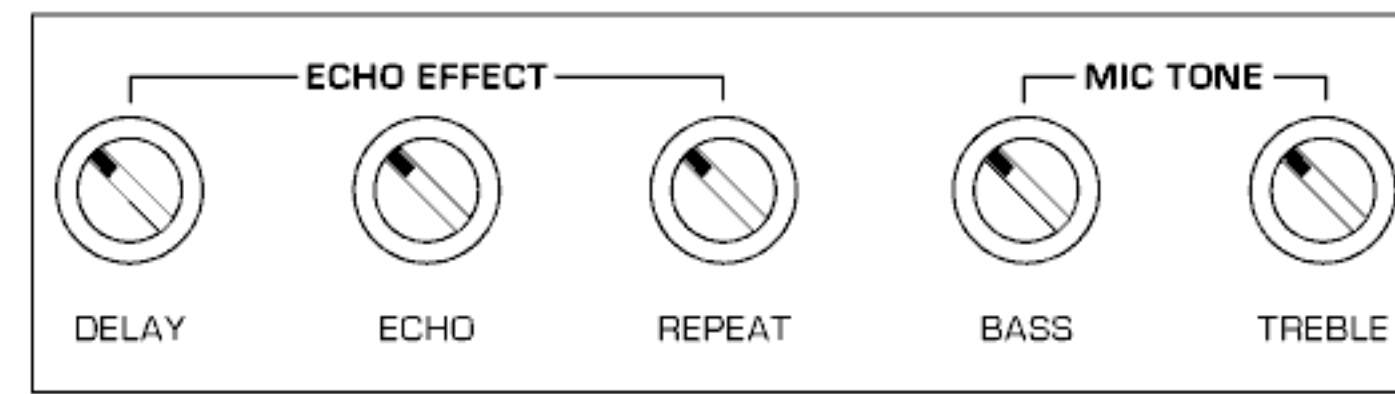
MIC 1, 2, and 3 refer to the three front Mic. input jacks and MIC 4 and 5 refer to the two rear Mic. jacks. Adjusting MIC 1/4 will affect both Mic 1 and Mic 4 at the same time.

Adjusting the MIC 2/5 pot will affect both Mic 2 and Mic 5 at the same time.

The two rear MIC input jacks can be used for wireless microphone system for a neater appearance.

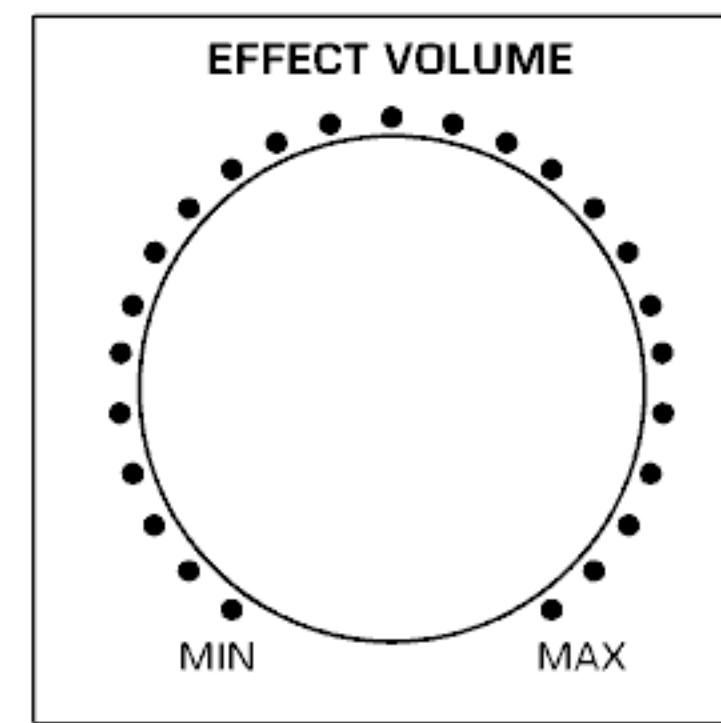
3. Microphone Tone Adjustment

DELAY, ECHO, REPEAT, BASS and TREBLE can be adjusted individually by turning each pot.



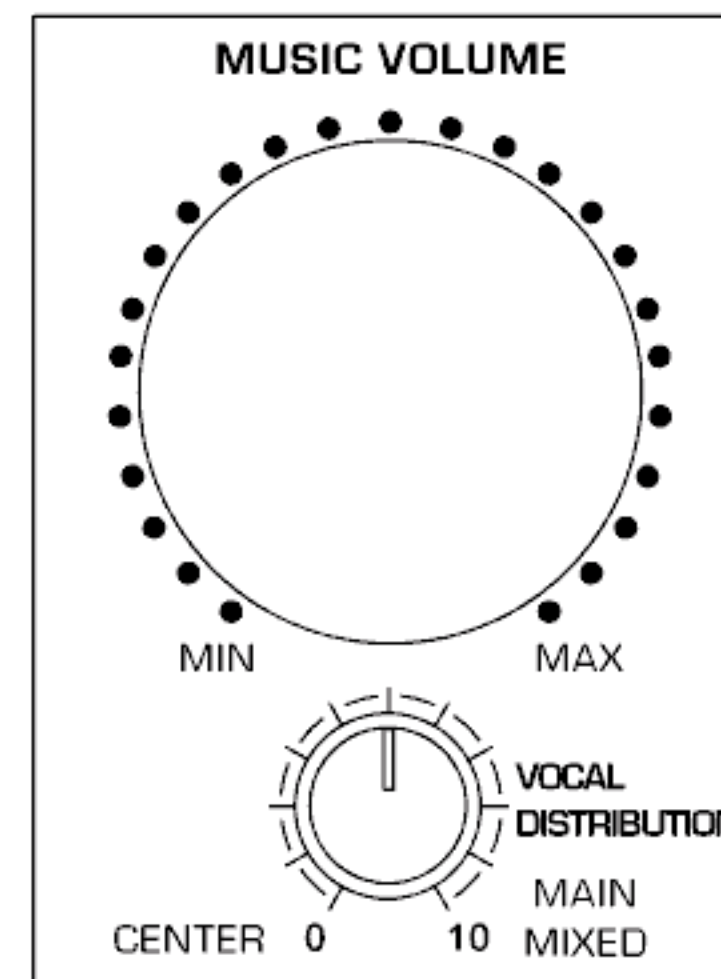
4. Effect Volume Adjustment

Turn EFFECT VOLUME clockwise to increase and counterclockwise to decrease the echo volume level.



5. Music Volume Adjustment

Turn MUSIC VOLUME clockwise to increase and counterclockwise to decrease the music volume level.



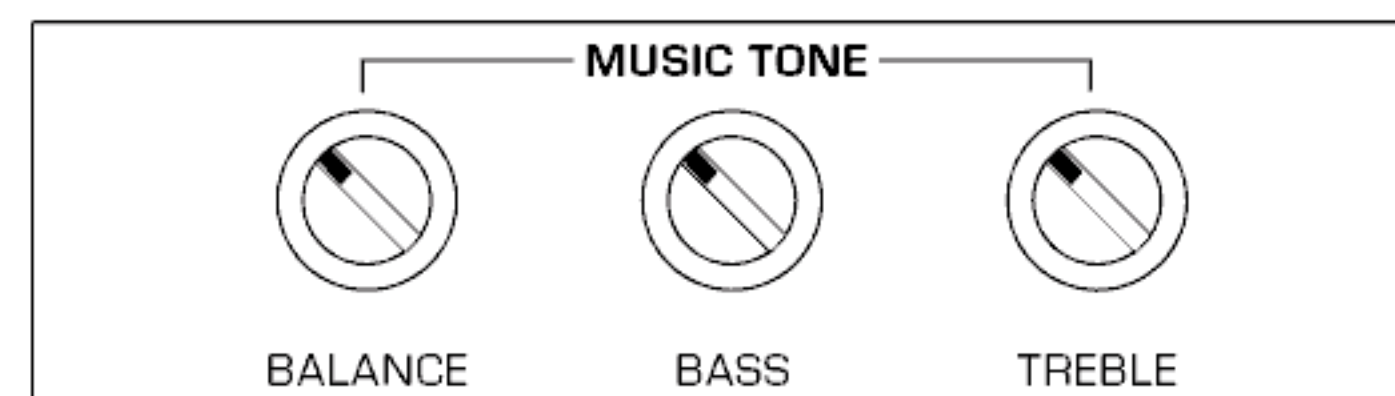
6. Vocal Distribution Button

a center button with a distinguished function to handle vocal signal distribution and complete control on microphone feedback. Please refer to page 19.

7. Music Tone

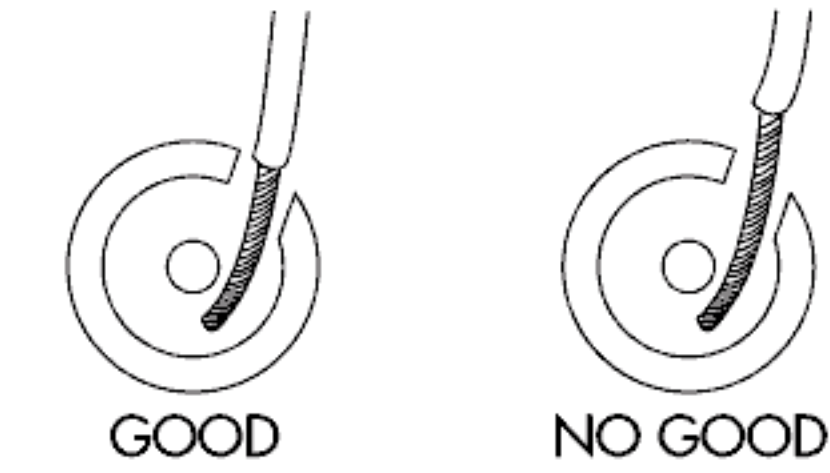
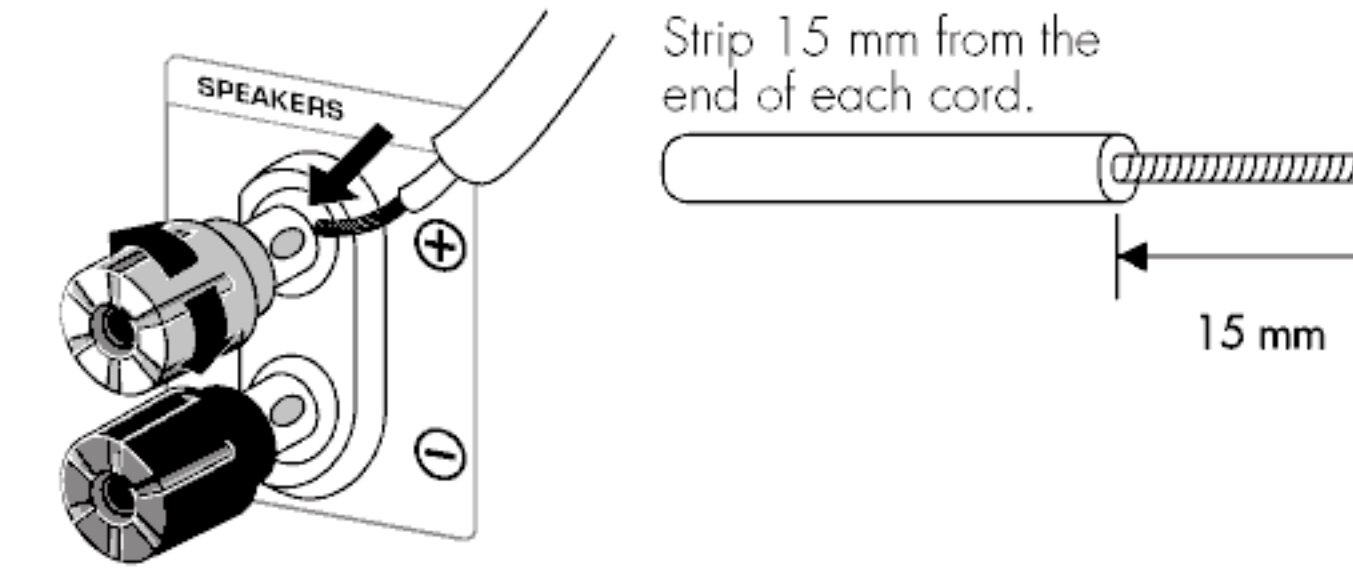
Bass Adjustment: turn BASS to adjust the bass output level.

Treble Adjustment: turn TREBLE to adjust the treble output level.

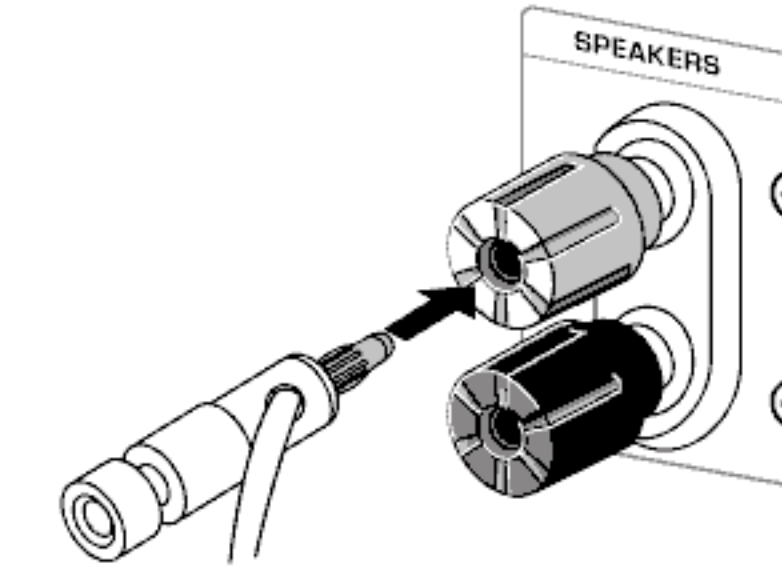


METHODS OF SPEAKER CONNECTION

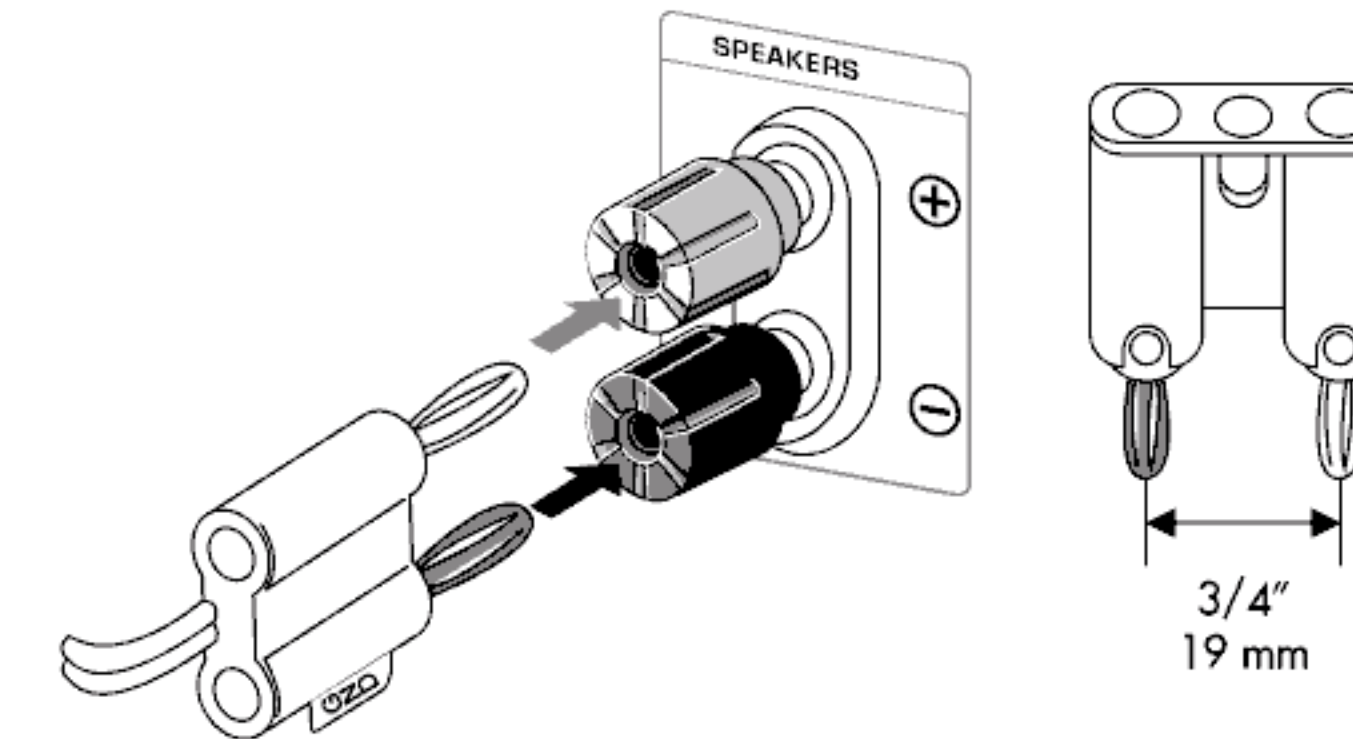
1. INSERT TYPE



2. SINGLE BANANA PLUG TYPE



3. DOUBLE BANANA PLUG TYPE MDP BANANA PREMIUM



Either banana plug or insert type can be used to connect the unit to speakers. Be sure to connect red (+) to red (+) and black (-) to black (-). Otherwise, the sound output would be 180° out of phase and distorted.

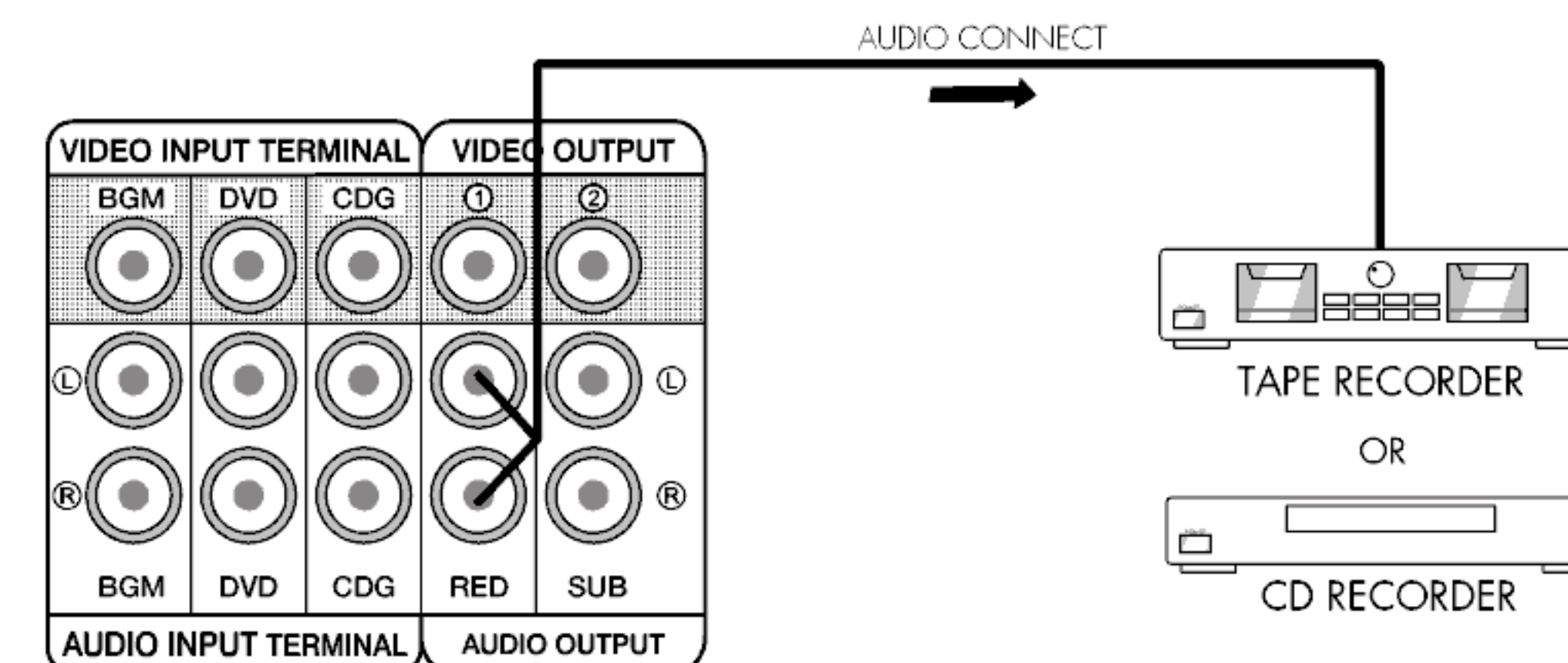
Follow these steps if you are inserting the wire directly into the speaker terminal.

1. Strip off the vinyl covering and twist the tip of the wire core.
2. Loosen the knob and insert the wire core into the terminal hole.
3. Tighten the knob to fix the wire core in place.

Do not allow the wire core to protrude or touch other terminals or wires.

If the cores of differing wires touch, damage may result to your components.

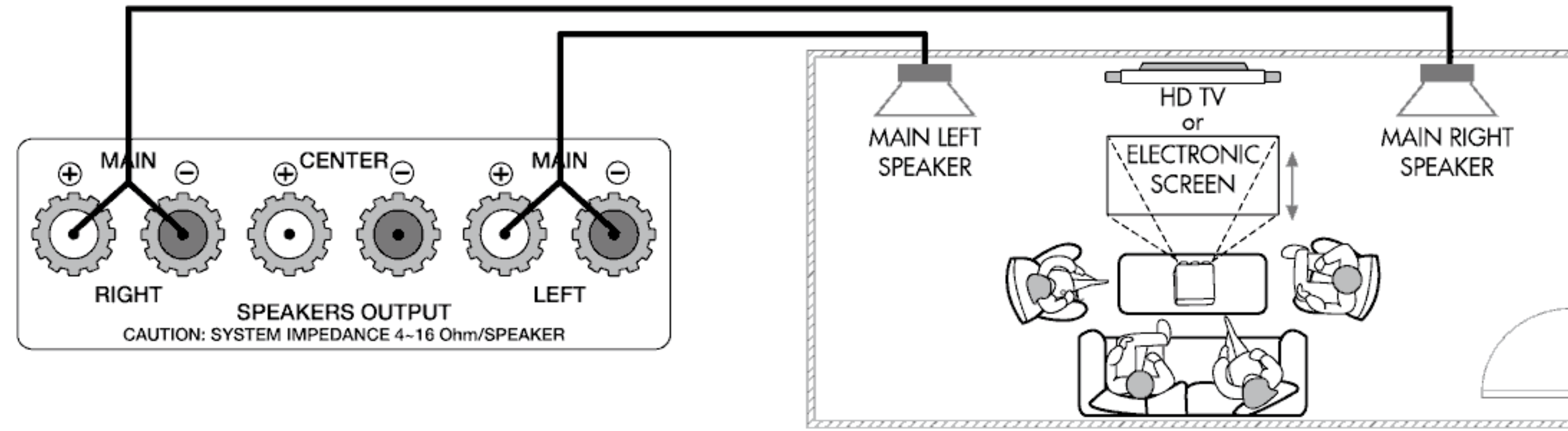
HOW TO CONNECT RECORDER



RED is the recording out. Any effects adjustment (such as microphone echo and music key control, etc.) in the front panel would affect the audio signal for recording.

HOW TO CONNECT MAIN SPEAKER

DX-213 is capable of driving two main speakers, which are left and right. We recommend you using center speakers for vocal monitor. Under this arrangement, main speaker can produce greater bass music output while center speaker can produce clear vocal or monitor. The mixing of music and vocal is important to produce quality sound for singing. Therefore, the audience can feel different three-channel speaker effects from main speaker and center speaker. You can also adjust the vocal in front panel, or you can adjust the vocal in either main out speaker by adjusting the balance. Please refer to page 22.



HOW TO CONNECT CENTER SPEAKER (MONITOR)

The center speaker is designed for monitoring the singer's voice. You can hook up one or two center speakers. In case of two speakers, please make sure that the speakers have a impedance of at least 8 ohms and are connected in parallel. Otherwise, this may damage your amplifier by overloading it. Please refer to page 22.

Diagram 1 (One Center Speaker)

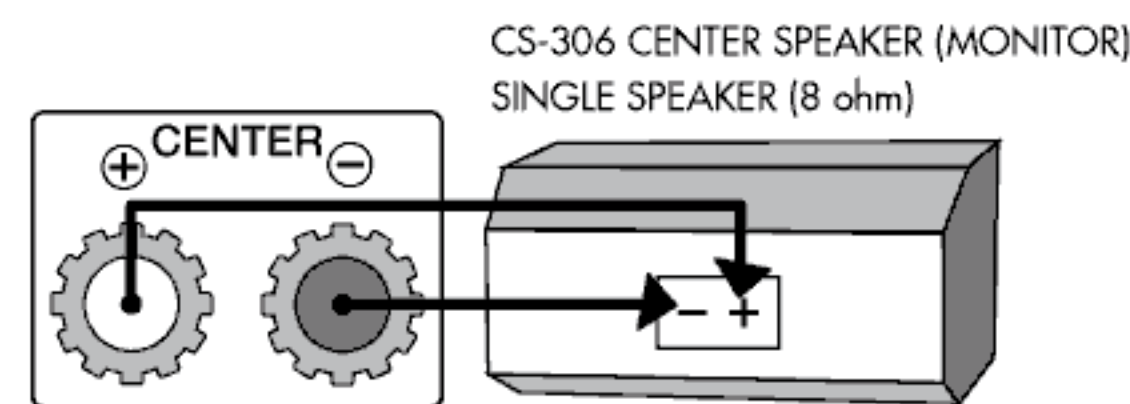
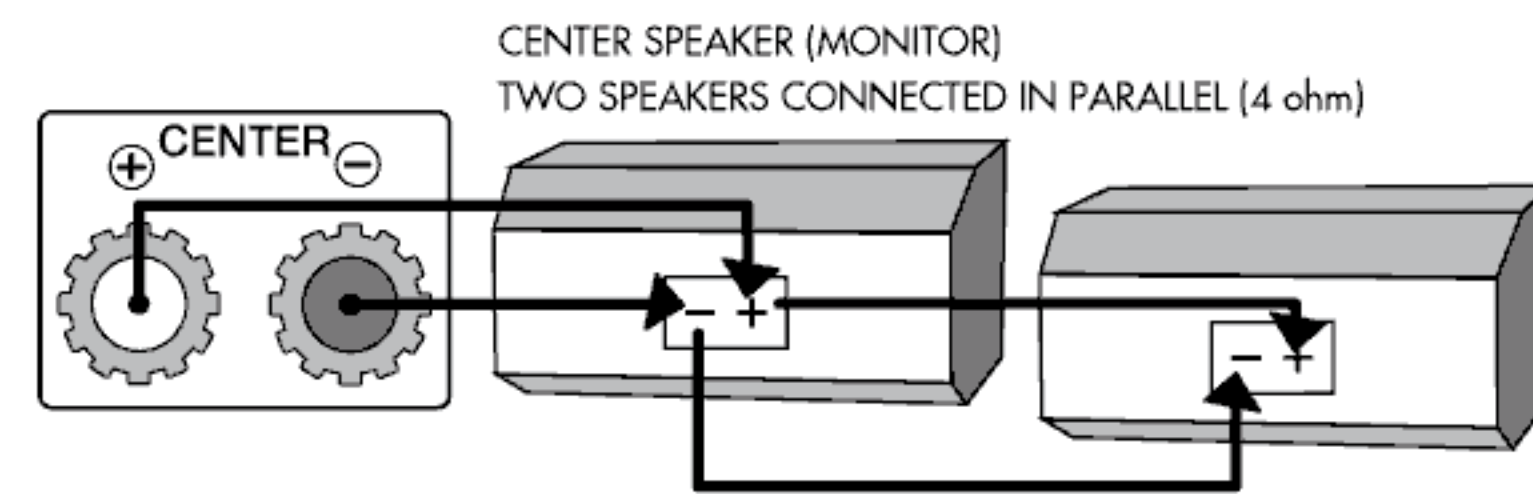


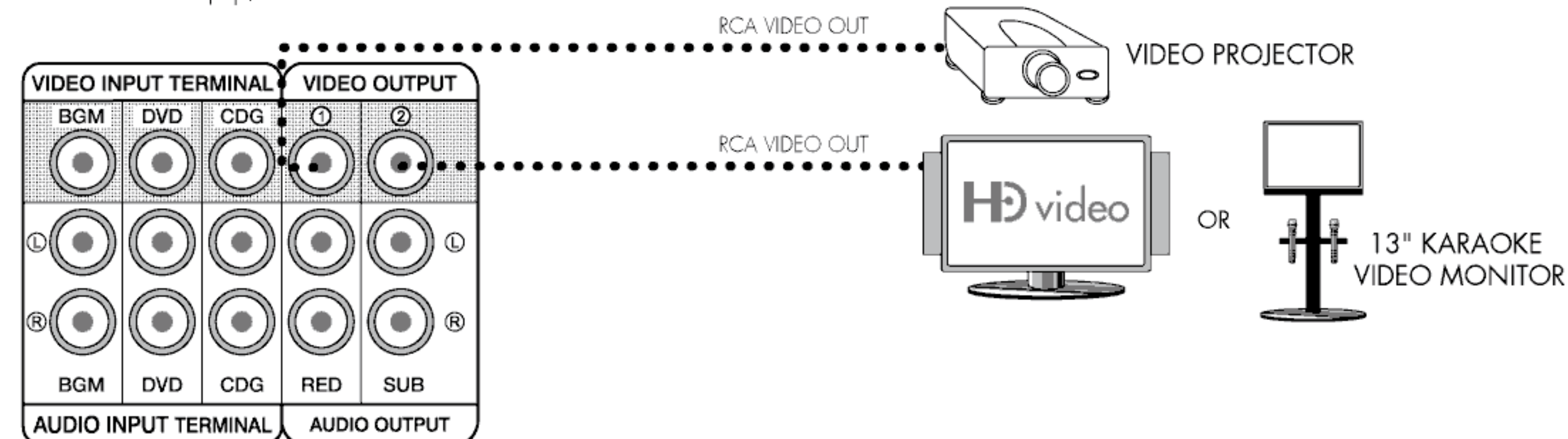
Diagram 2 (Two Center Speakers)



NOTE Please do not use speaker with impedance less than 8 ohms otherwise the amplifier may be damaged.

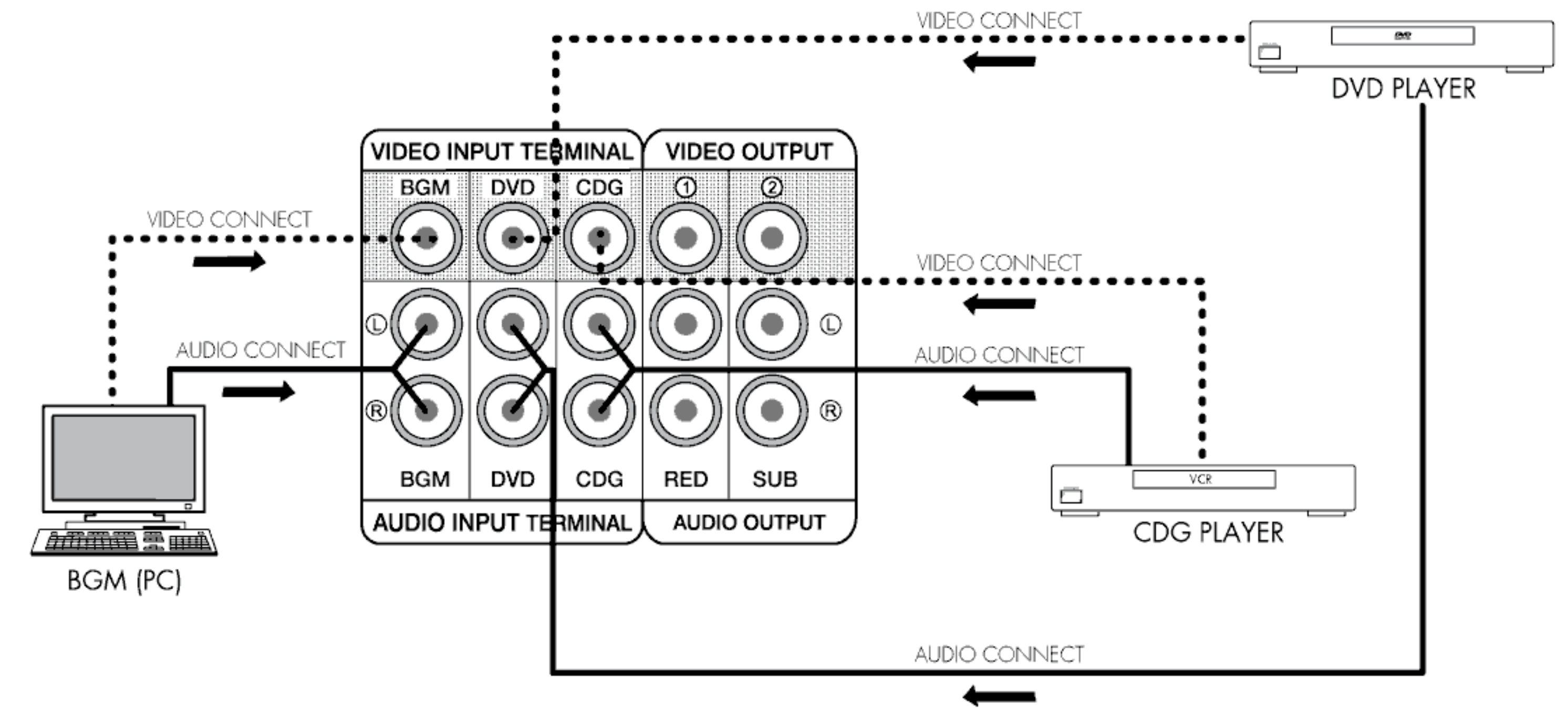
HOW TO CONNECT VIDEO MONITOR

Video Out: 1Vp-p/75 ohms

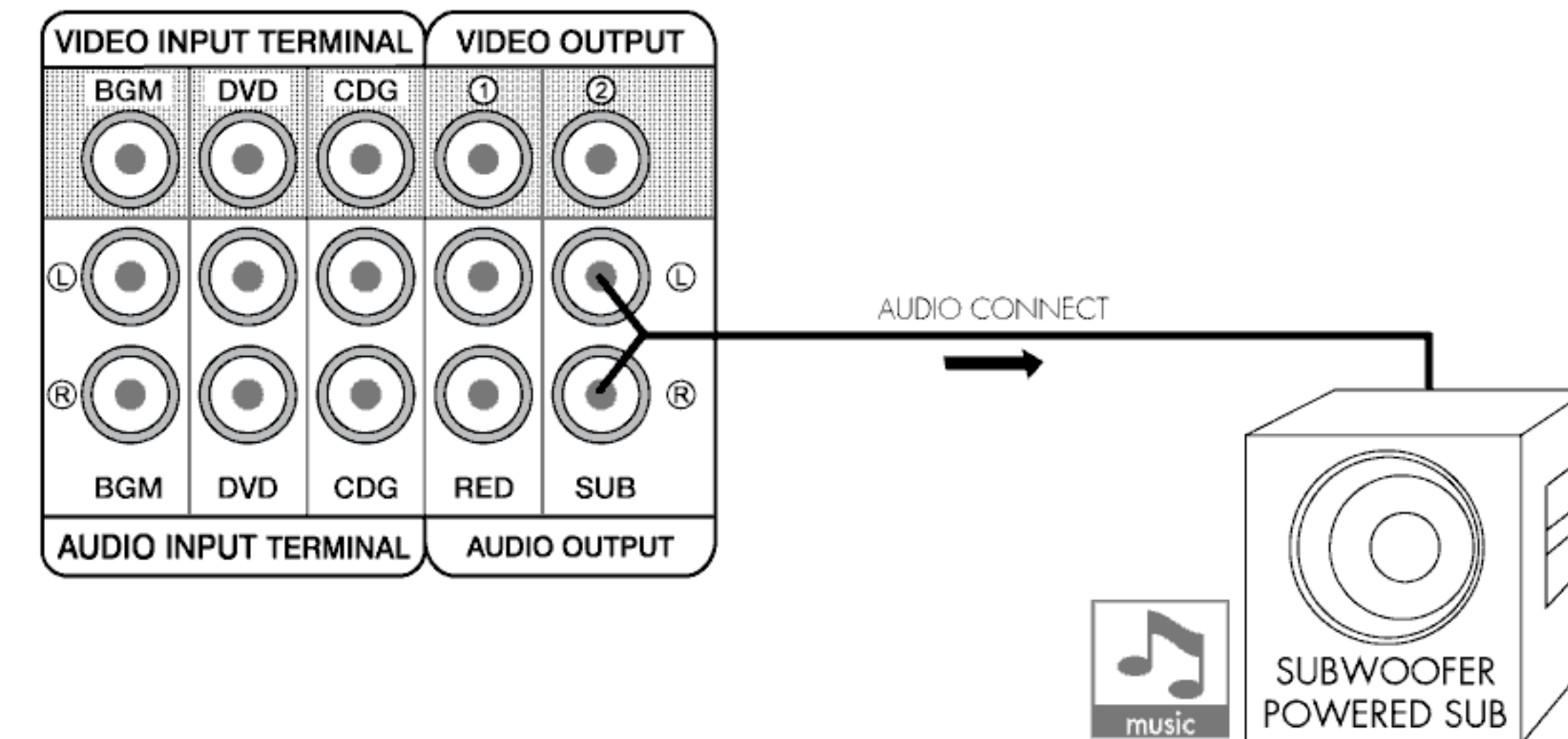


HOW TO CONNECT MUSIC A.V. SOURCE

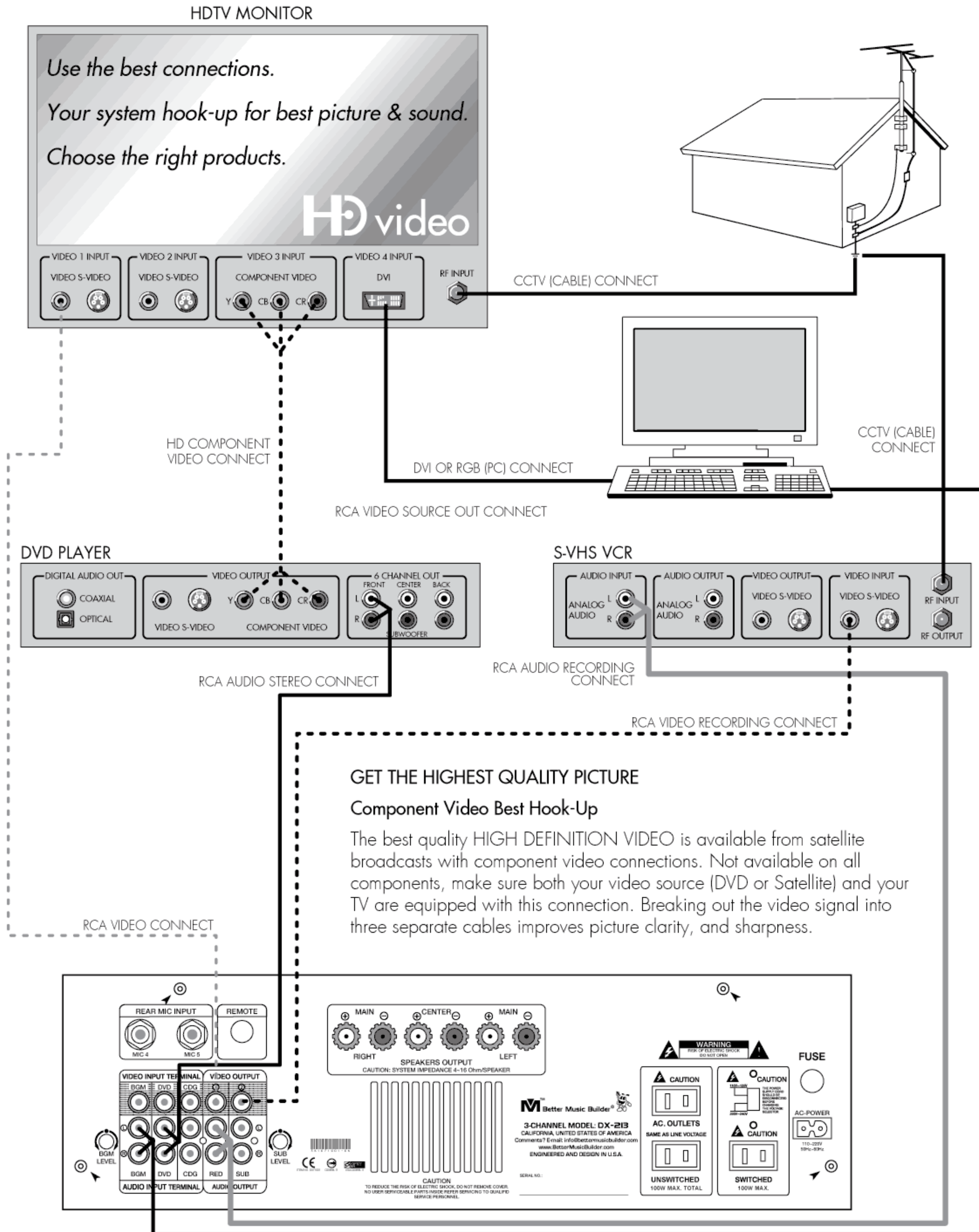
Before you connect the source (i.e. BGM, DVD, CDG Karaoke), you should turn off the power for all machine, so it would protect you from electric shock and prevent the equipment from damage. To connect the AV source, the first thing to do is to connect the audio source to the amplifier input. Then, you can connect the video source. Please refer to the following diagram. To ensure high quality sound and video, we recommend using high quality cables. To learn more about high quality cable, please refer to page 26.



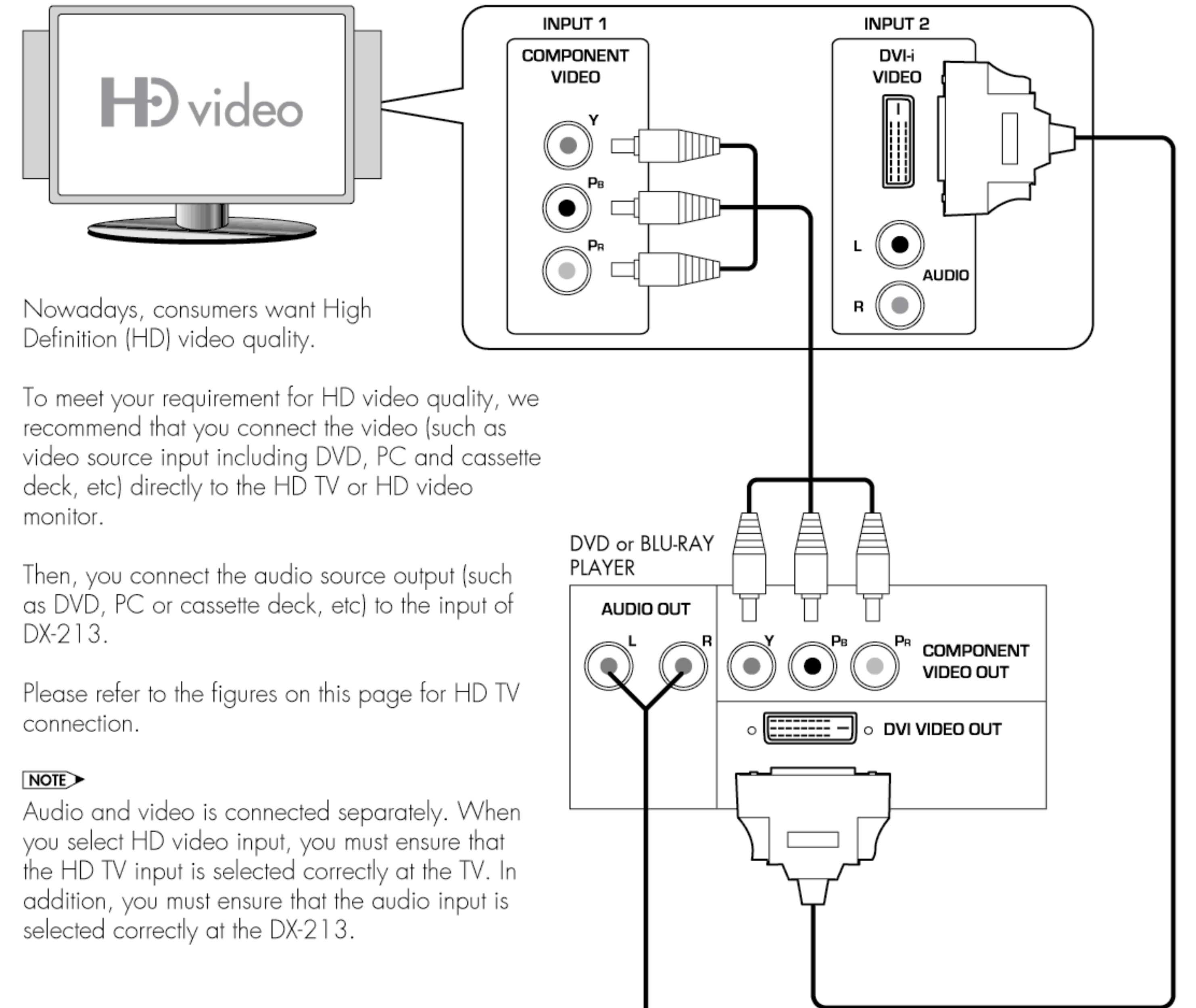
HOW TO CONNECT SUB WOOFER



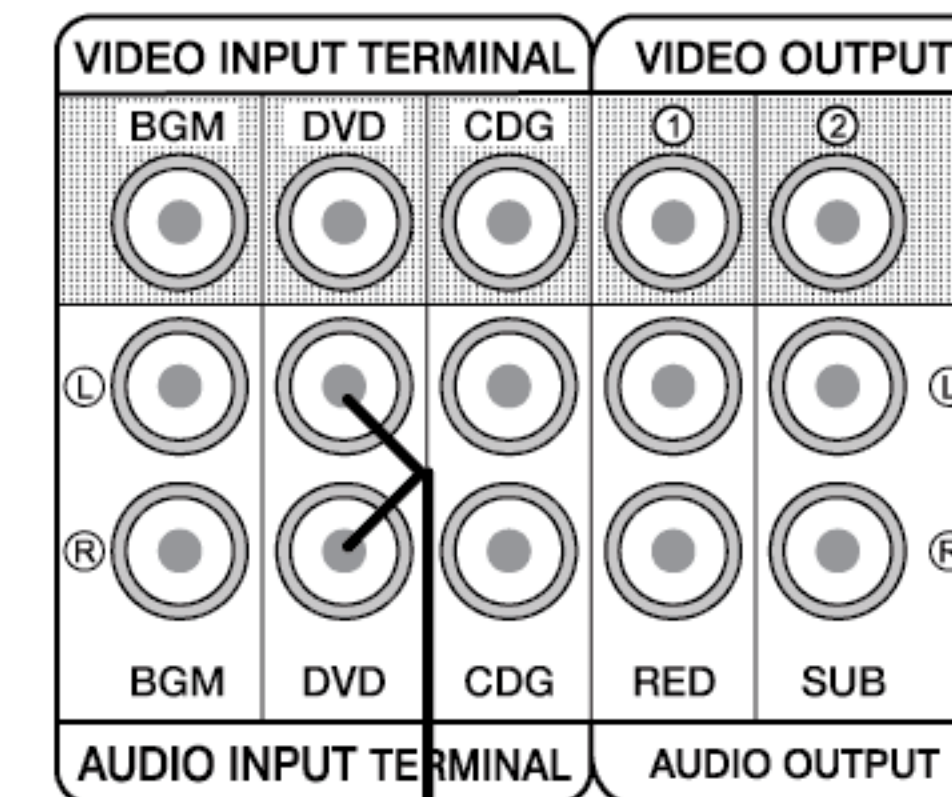
HOW TO CONNECT HIGH DEFINITION VIDEO



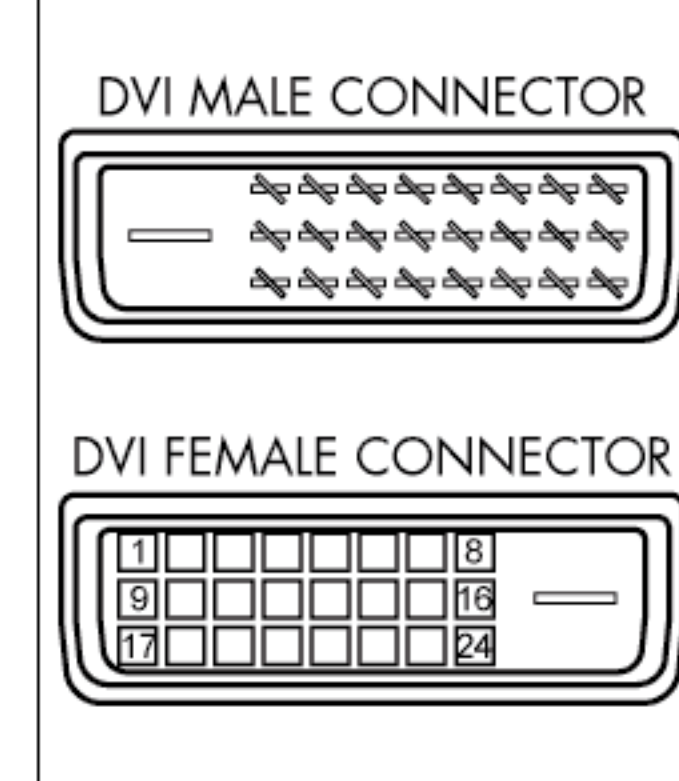
HOW TO CONNECT HIGH DEFINITION VIDEO



DX-213 REAR VIEW



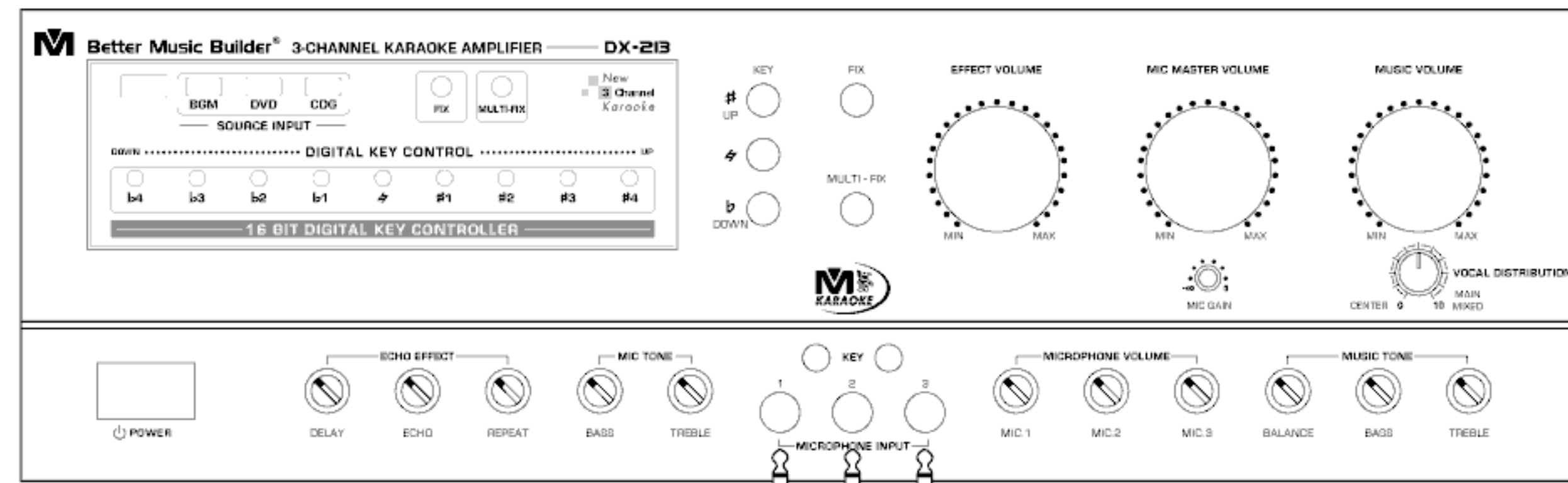
DIGITAL VIDEO



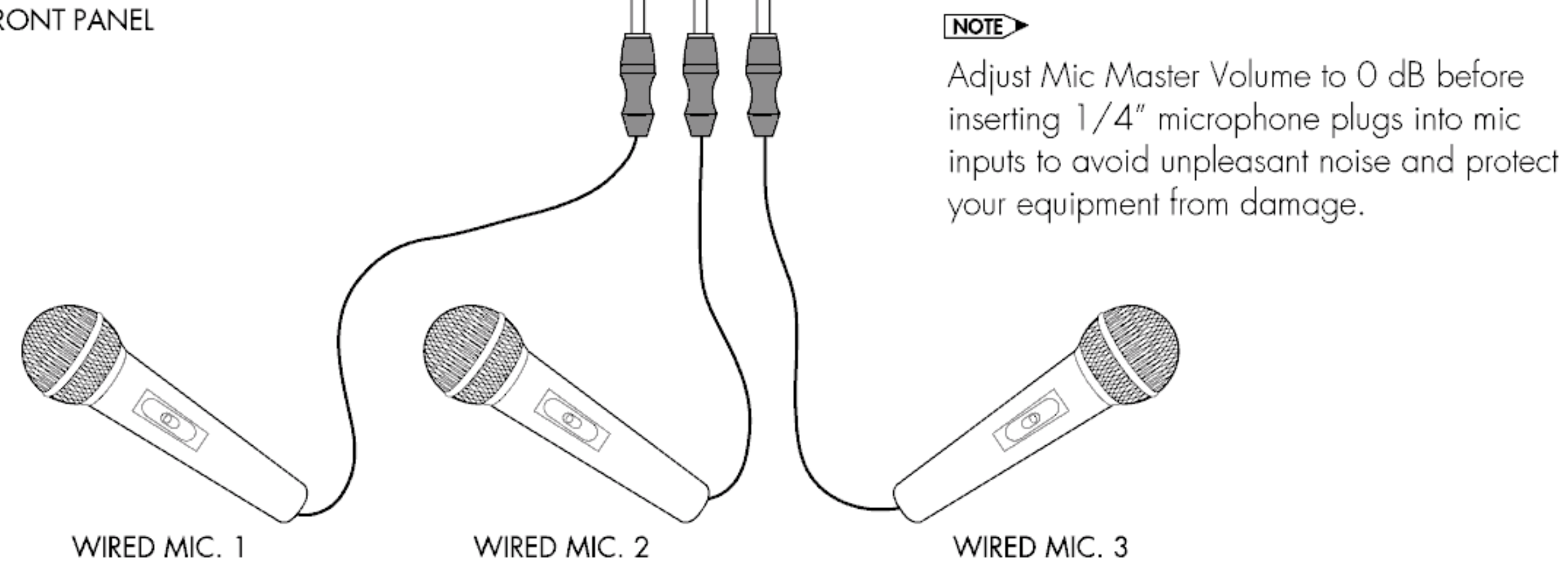
DVI and HDMI connection

Digital Video for high performance, ideal for connecting digital video signal source to digital signal processing distribution and display.

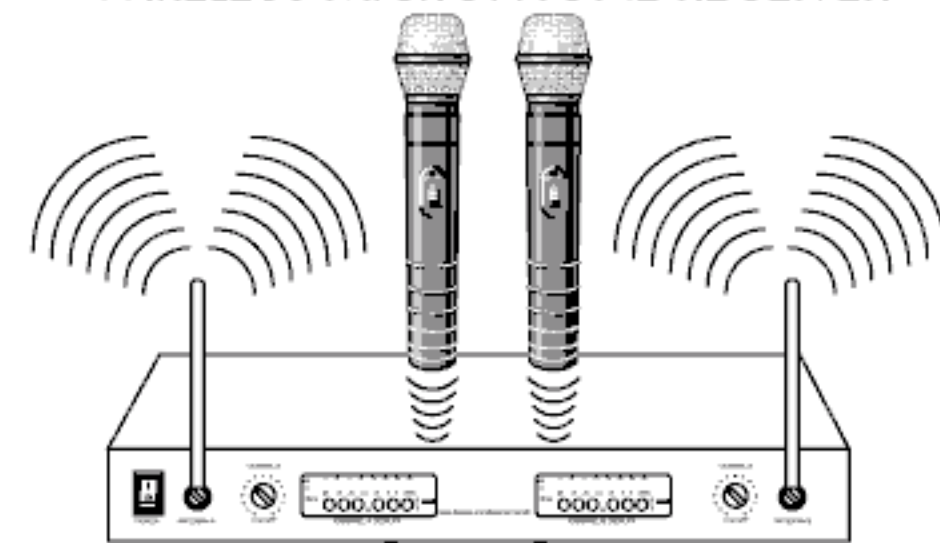
HOW TO CONNECT MICROPHONE



FRONT PANEL



WIRELESS MICROPHONE RECEIVER

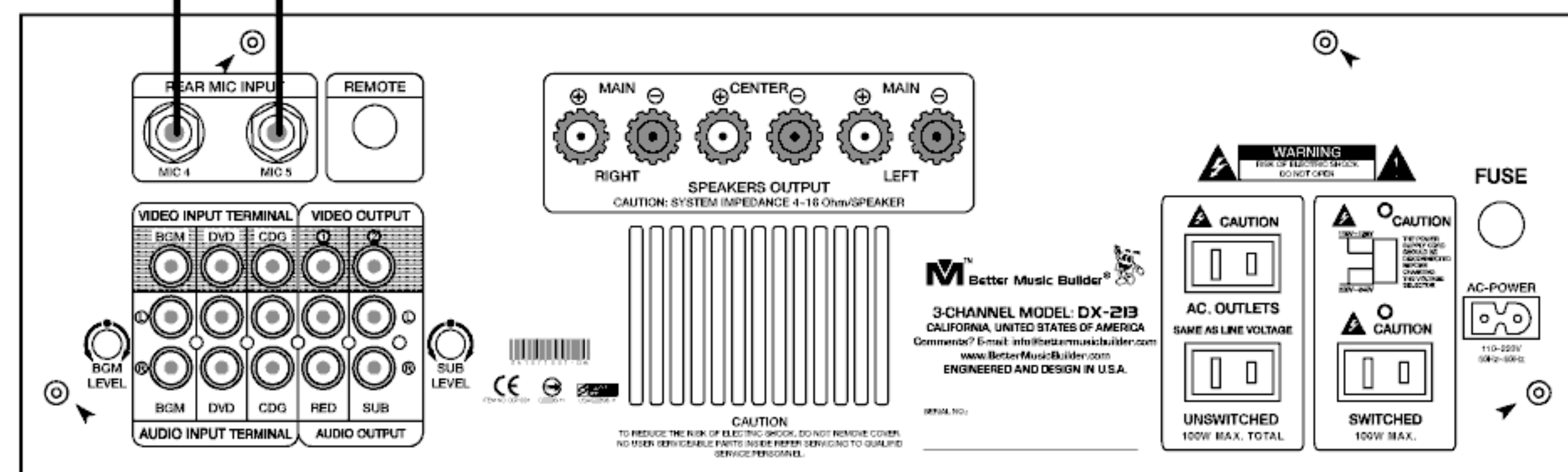


This jack is for connecting microphones to input 1 and rear MIC. Input 4. They are at the same terminal. Rear input is designed for wireless microphone.

connect to MIC. receiver (REAR MIC. 4)

This jack is for connecting microphones to input 2 and rear MIC. Input 5. They are at the same terminal. Rear input is designed for wireless microphone.

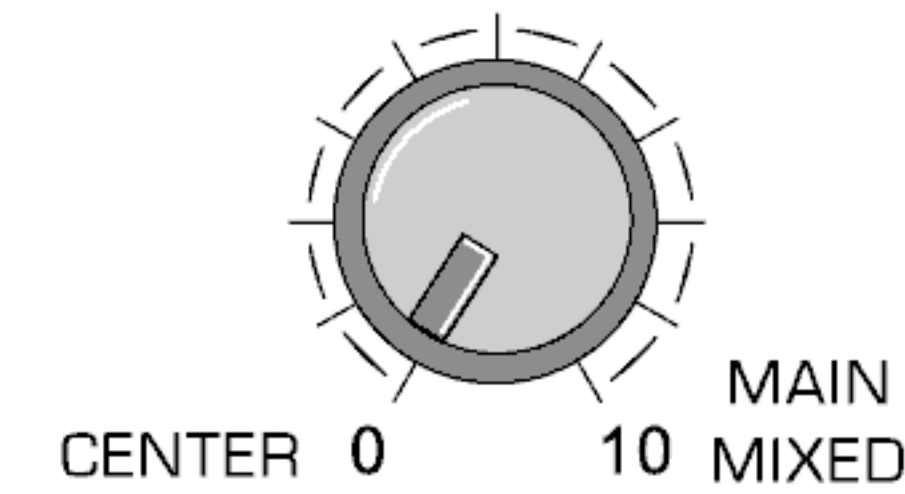
connect to MIC. receiver (REAR MIC. 5)



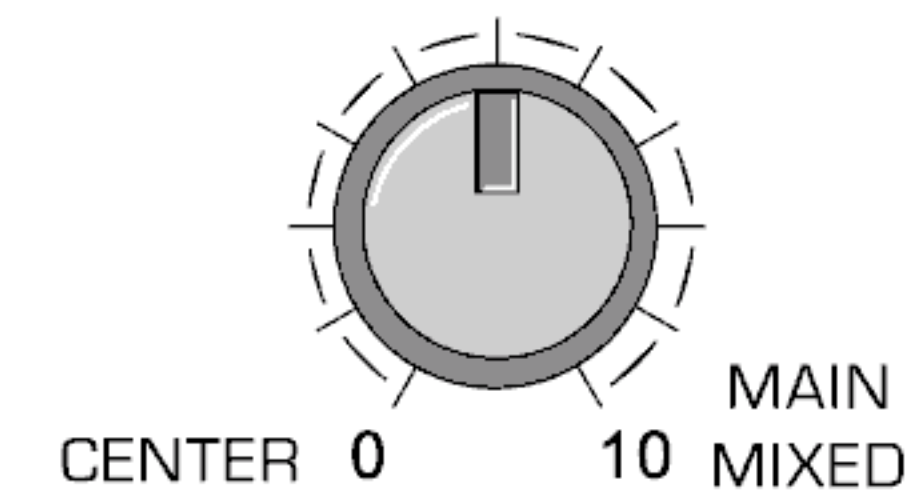
REAR PANEL

VOCAL DISTRIBUTION BUTTON

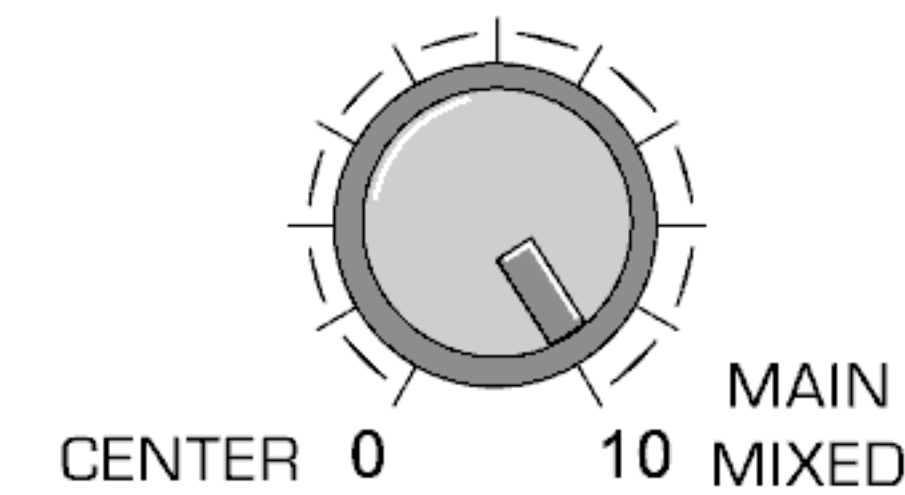
DX-213 has a center button with a distinguished function to handle vocal signal distribution and complete control on microphone feedback.



If the center button is turned to the far left (at minimum level), the system distributes all vocal signals to the center speaker. Therefore, there is no vocal signal from the main speakers (L/R). To increase or decrease the microphone volume, adjust the MIC Master Volume or each MIC volume control button. For the same token, to increase or decrease the music volume, adjust the Music Master Volume.



If the center button is turned to the center (at normal level), the system distributes 30% of the total vocal signal to main speakers (left and right speakers). Therefore, the center speaker has 70% of the total vocal signal. It is not the same as the microphone volume. It just produces special singing effect.



If the center button is turned to the far right (at maximum level), the system distributes the total vocal signal evenly to the center speaker and main speakers (L/R). Again, this is just a special singing effect. It is not the same as the microphone volume. To increase or decrease the microphone volume, adjust the MIC Master Volume or each MIC volume control button. For the same token, to increase or decrease the music volume, adjust the Music Master Volume.

COMMERCIAL APPLICATION

For commercial or large space setup, you may need two power amplifiers. The main amplifier is to monitor singing and the auxiliary amplifier is for audience. Please refer to the following diagram for hookup.

If you want to set up the DX-213 inside an auditorium or a commercial business of 2,000 square feet or more, we recommend you using an external power amplifier for output. In this case, you connect the "Audio Out" of DX-213 to a power amplifier and a speaker system (with a 12-inch woofer) with power rating of at least 1,000 watts.

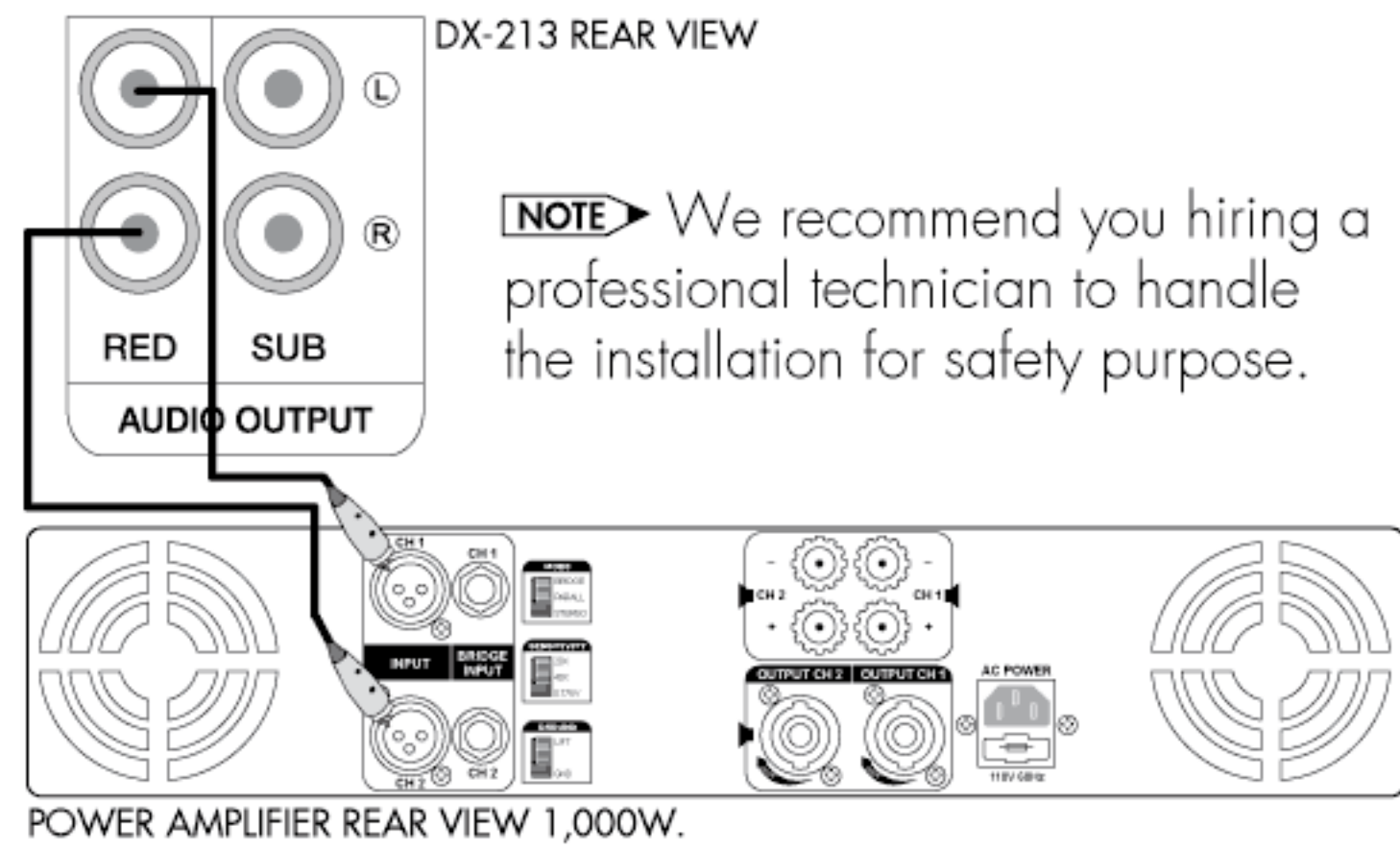


Figure 1

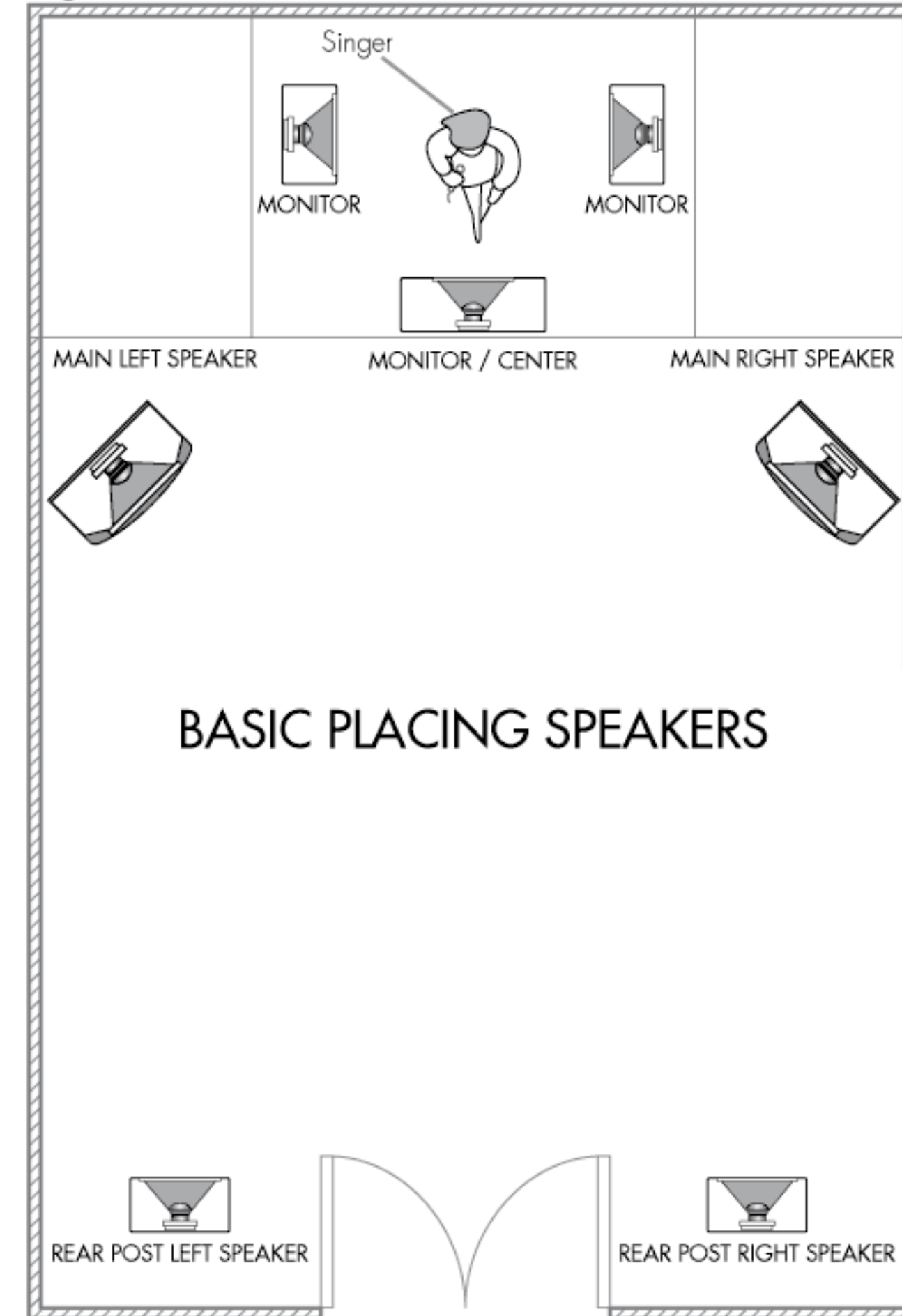
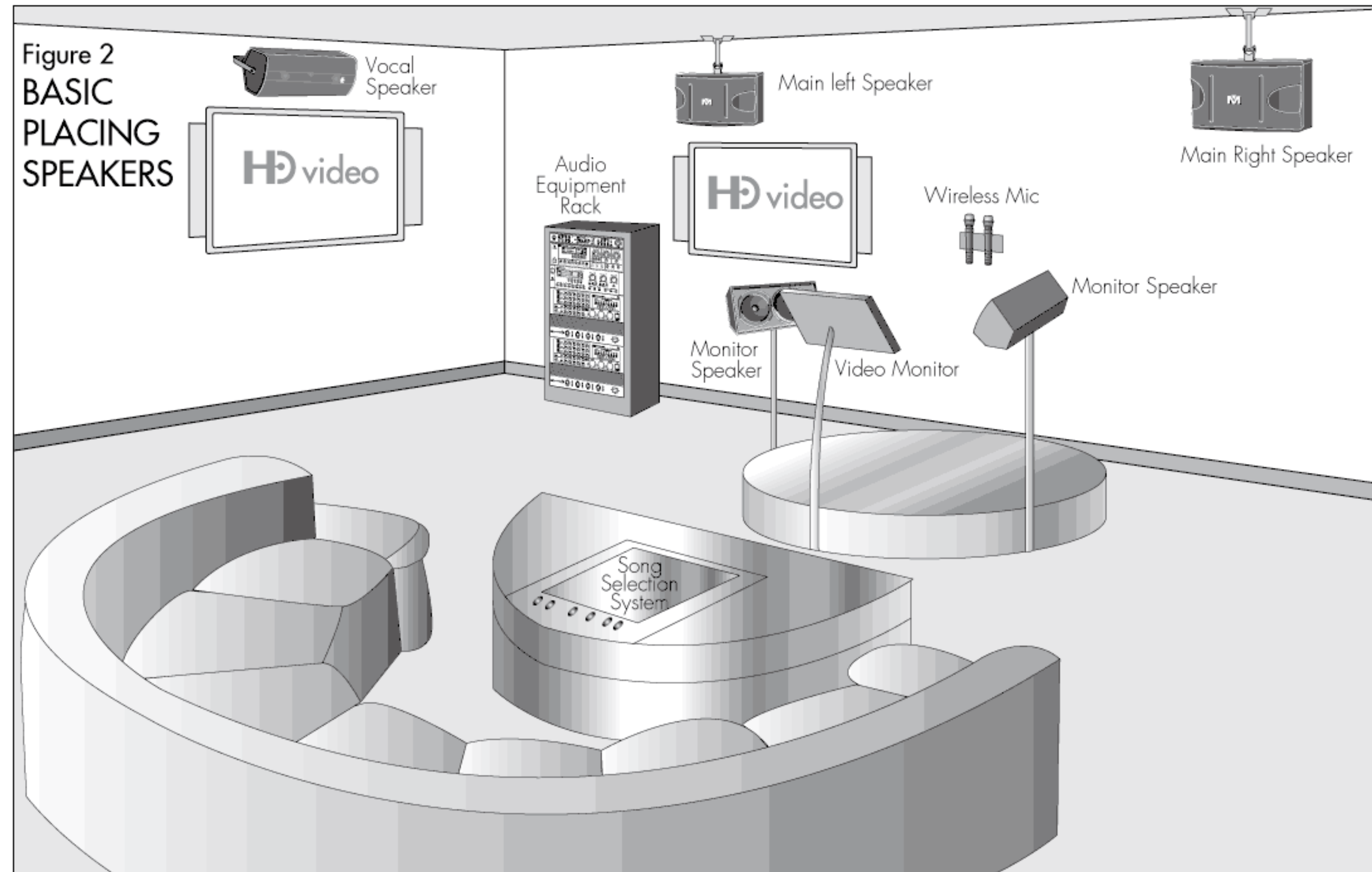


Figure 2
BASIC
PLACING
SPEAKERS

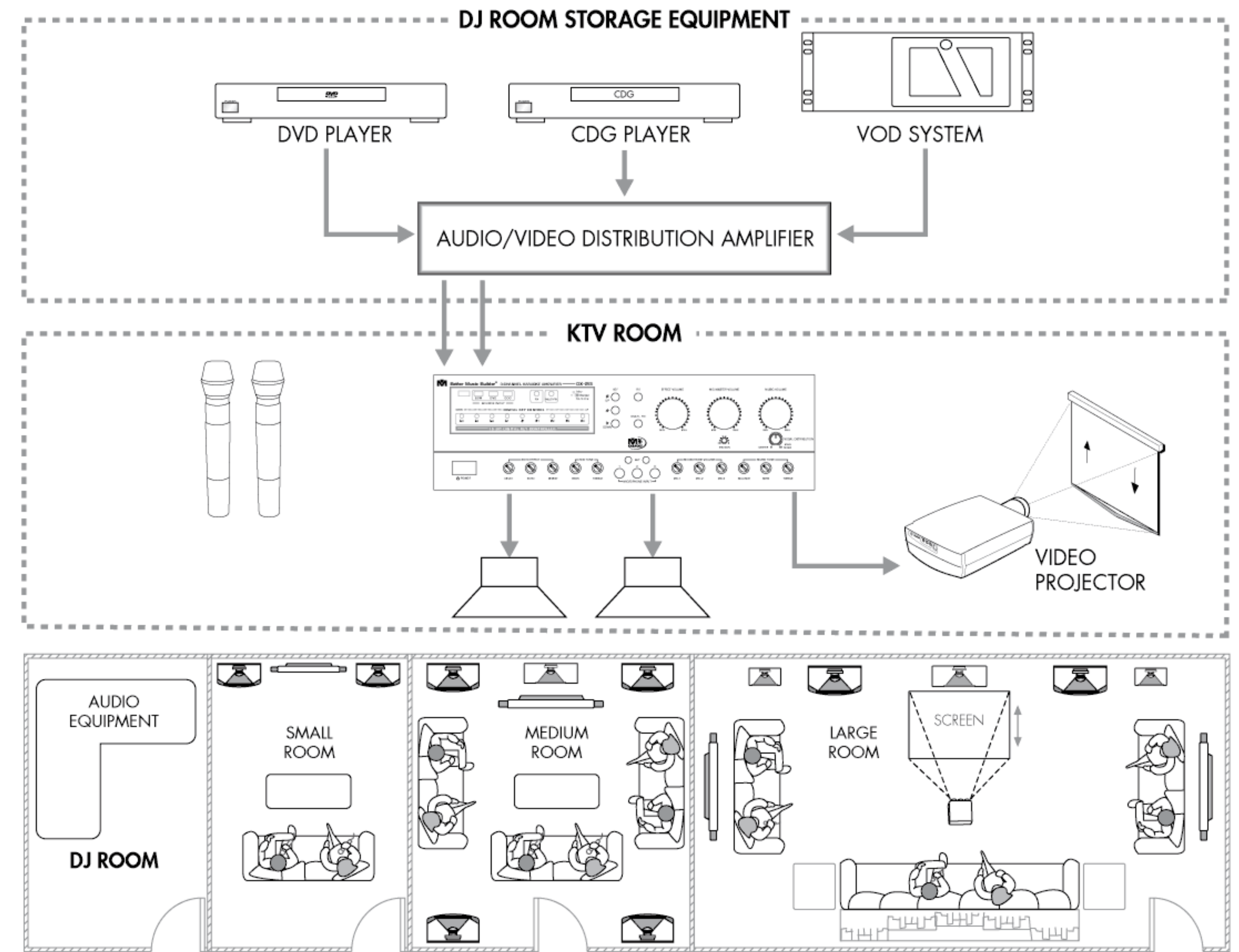


KTV COMMERCIAL APPLICATIONS

Our Better Music Builder engineering team is specialized in KTV equipment design and commercial applications. In KTV audio signal sources (i.e. computer, DVD, VCR and cassette deck) normally come from the DJ room. Each Karaoke room has independent power amplifier and speakers, so it can allow customers to freely make adjustments on music and microphone settings in the Karaoke room. For KTV business application, you need an audio/video distribution amplifier (or simply called AV Distribution amplifier) if the distance between the DJ room and Karaoke room is more than 25 feet to make up for the loss of original signal strength.

A/V Distribution Amplifier is the perfect solution for KTV commercial applications. It is compact, practical and convenient for installation. You can buy this equipment at any audio professional installation company. AV Distribution Amplifier can strengthen the original signals to each Karaoke room from the DJ room. It is also the ideal choice for high-quality and economical 3-channel Analog signal distribution from any HDTV (YPbPr) or RGBHV Video source including 1080p, as well as analog stereo or digital (PCM) Audio.

A/V Distribution Amplifier can deliver crystal-clear, color-rich, artifact-free, and pristine HDTV images to component HDTV-ready monitors in all video formats. It can also drive your HD source to plasma displays, front and rear projectors as well as direct view monitors. In addition, it can be adapted for Composite Video applications. Therefore, you definitely need the AV Distributor Amplifier for KTV commercial use. It would offer your customers excellent sound and video quality for entertainment, so it can enhance the image of your KTV and increase the business.

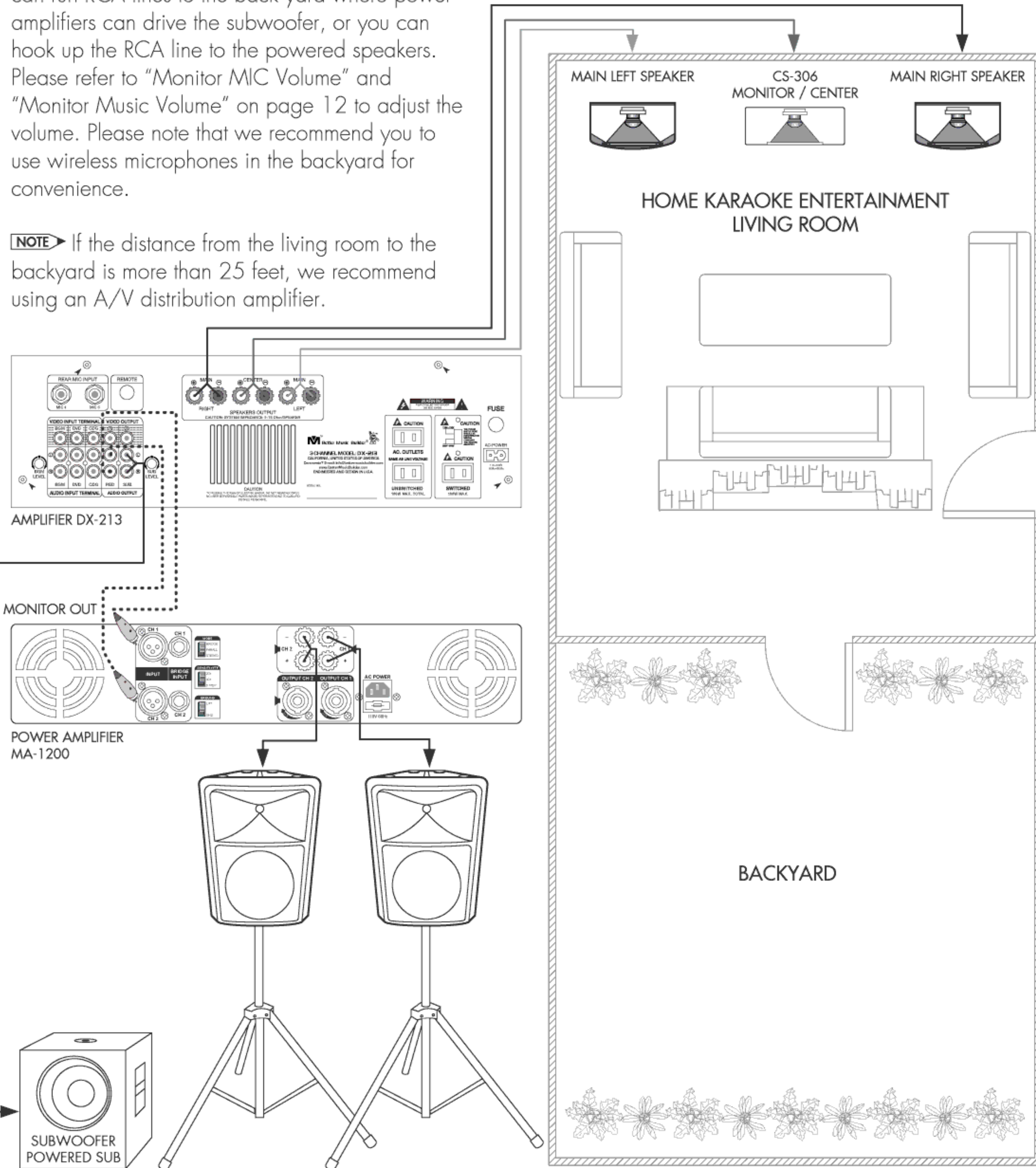


MONITOR OUT

The DX-213 is versatile. It has two line audio level outputs for recording and connection to external power amplifiers to drive subwoofers. This feature is useful because it's easy to expand.

For example, if you are having a party, you may have guests in the living room where the DX-213 and the 3 speakers are. At the same time, there are people in the backyard. That's when this feature comes in handy. You can run RCA lines to the back yard where power amplifiers can drive the subwoofer, or you can hook up the RCA line to the powered speakers. Please refer to "Monitor MIC Volume" and "Monitor Music Volume" on page 12 to adjust the volume. Please note that we recommend you to use wireless microphones in the backyard for convenience.

NOTE If the distance from the living room to the backyard is more than 25 feet, we recommend using an A/V distribution amplifier.



INSTALLATION SETUP

Through many years of experience in installation and design for Karaoke business in Asia, the engineering team of Better Music Builder has designed two installation setups as illustrated in figure 1 and figure 2 that can produce excellent sound performance. This design is specifically for North America.

DX-213 is a three-channel Karaoke mixing amplifier. The music comes from main and center speakers. You can mix the music and vocal together or by percentage (for example, 70% for music and 30% for vocal), and 100% original vocal comes from the center speaker. This setup can reduce the humming feedback to protect your audio equipment.

NOTE DX-213 with three-channel output would produce different effects from that of the 5.1, 7.1 and 7.2 home theater systems for playing movie.

In figure 1, main speakers and center speaker are set up in the front.

In figure 2, all speakers are positioned in parallel in the front. Therefore, we recommend using different size of speakers for main and center speakers. The reason is that main speaker has a bigger woofer (10-inch woofer or bigger) for music and center speaker has a smaller woofer (6-inch woofer) for clear vocal. In addition, the vocal comes independently from the center monitoring speaker. Therefore, the audience can feel the better sound performance and unprecedented experience.

Figure 1

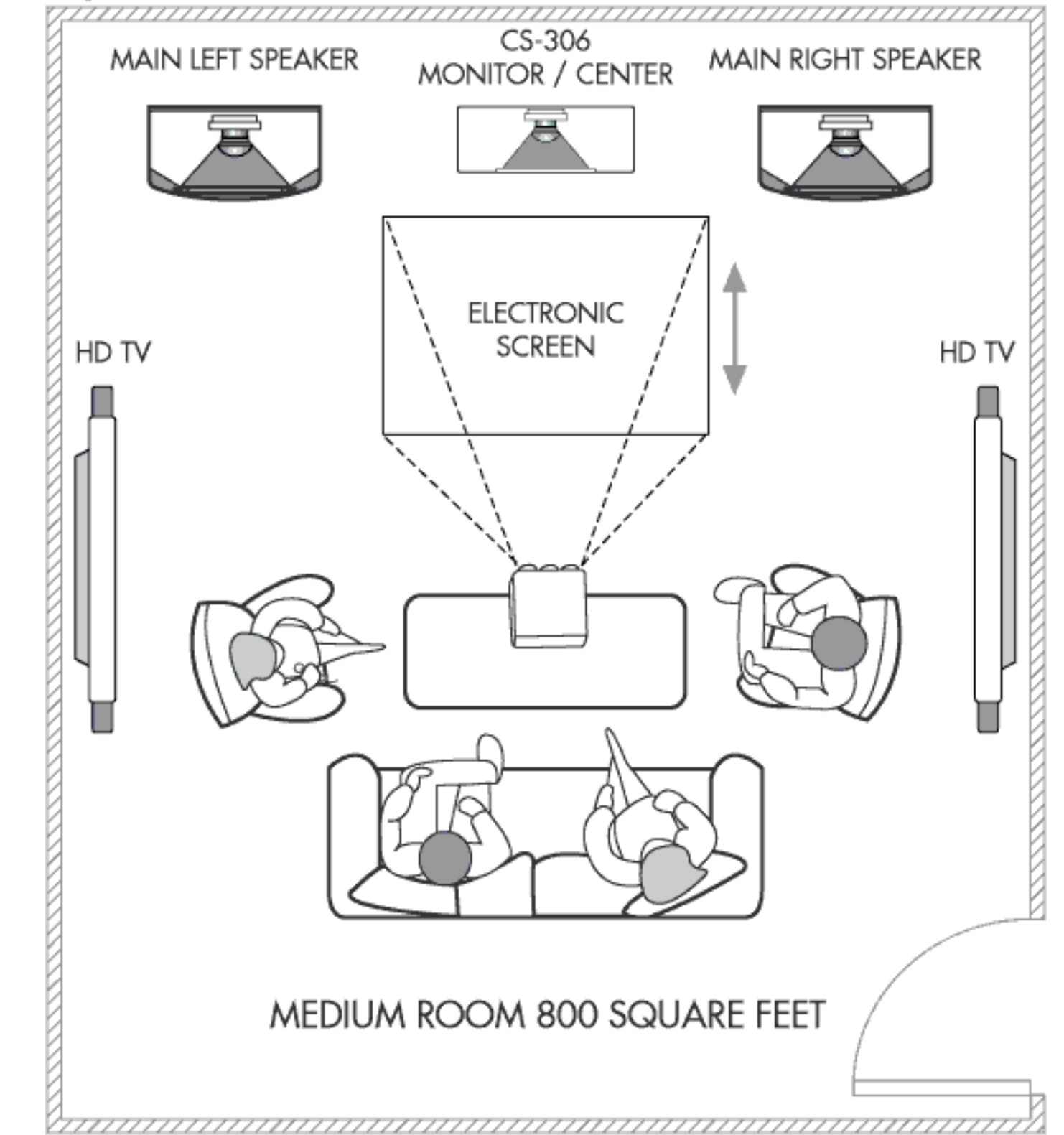
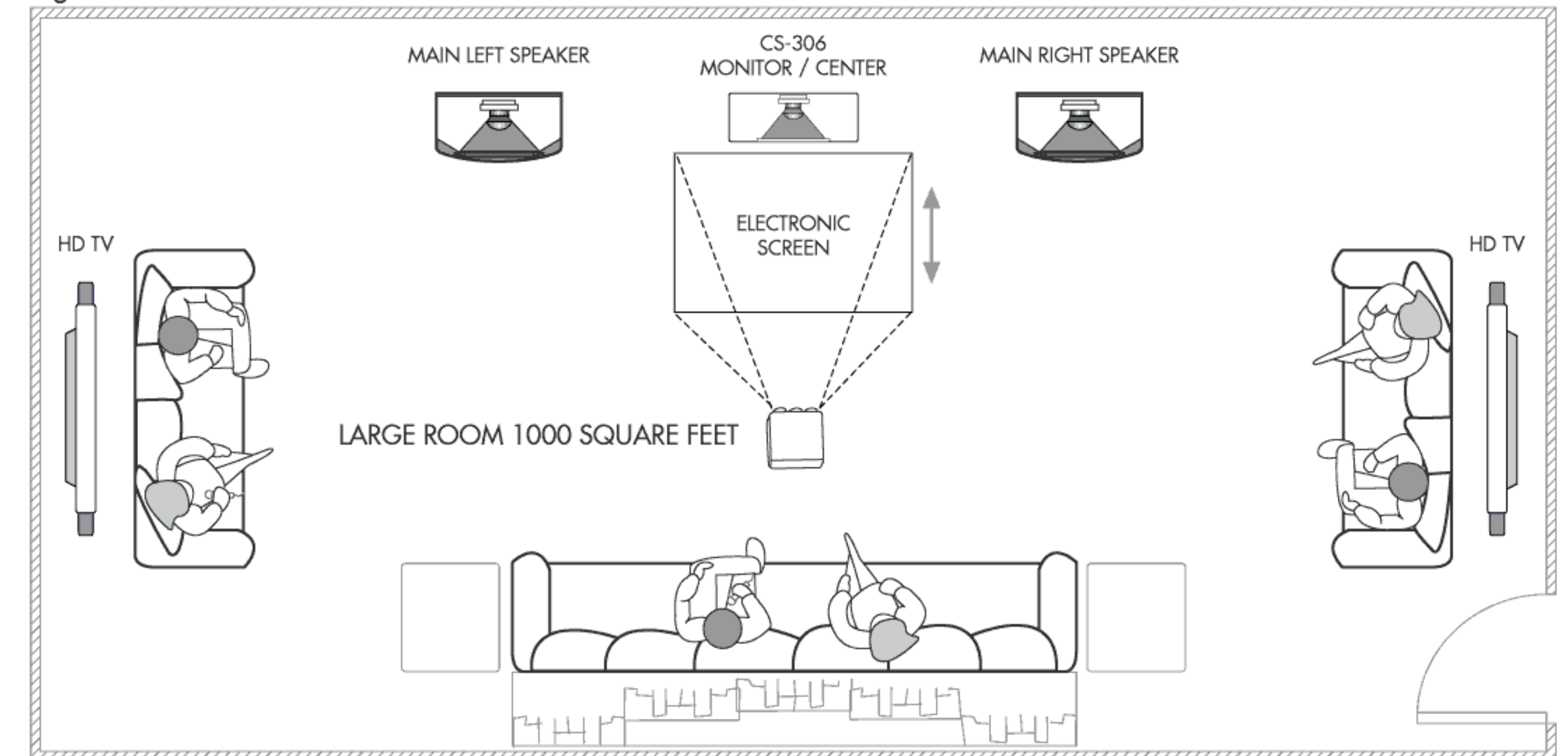


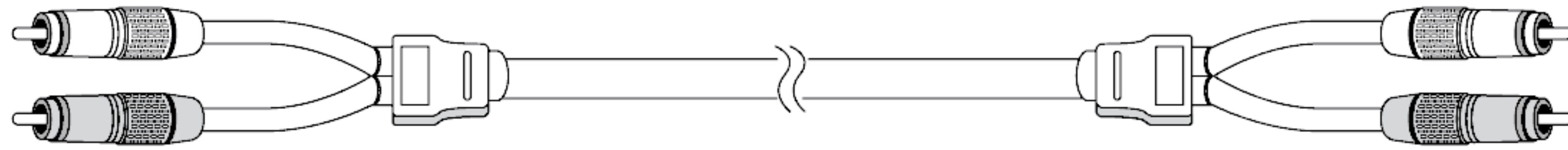
Figure 2



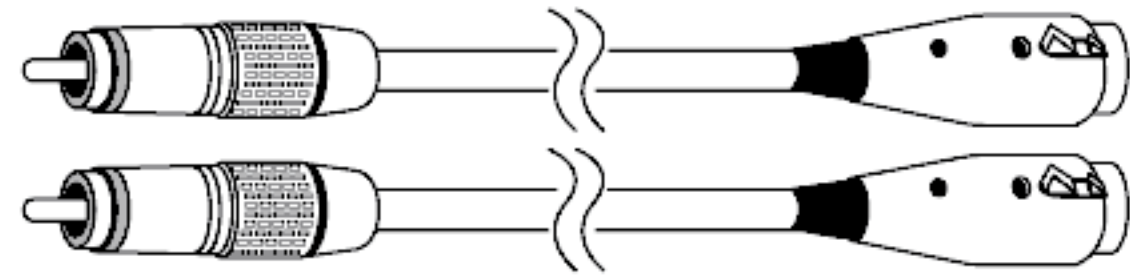
USING EXTERNAL CHANNEL EQUIPMENT

DX-213 is not only a Karaoke mixing amplifier, but it is also a pre-amplifier specially designed for using external equipment. When you connect other equipment to the mixing amplifier, you may need a different type of cable such as RCA to XLR cable. We highly recommend you using high quality cable for connection, so it can give you the crystal clear sound and sharp video image. Please refer to the following figures.

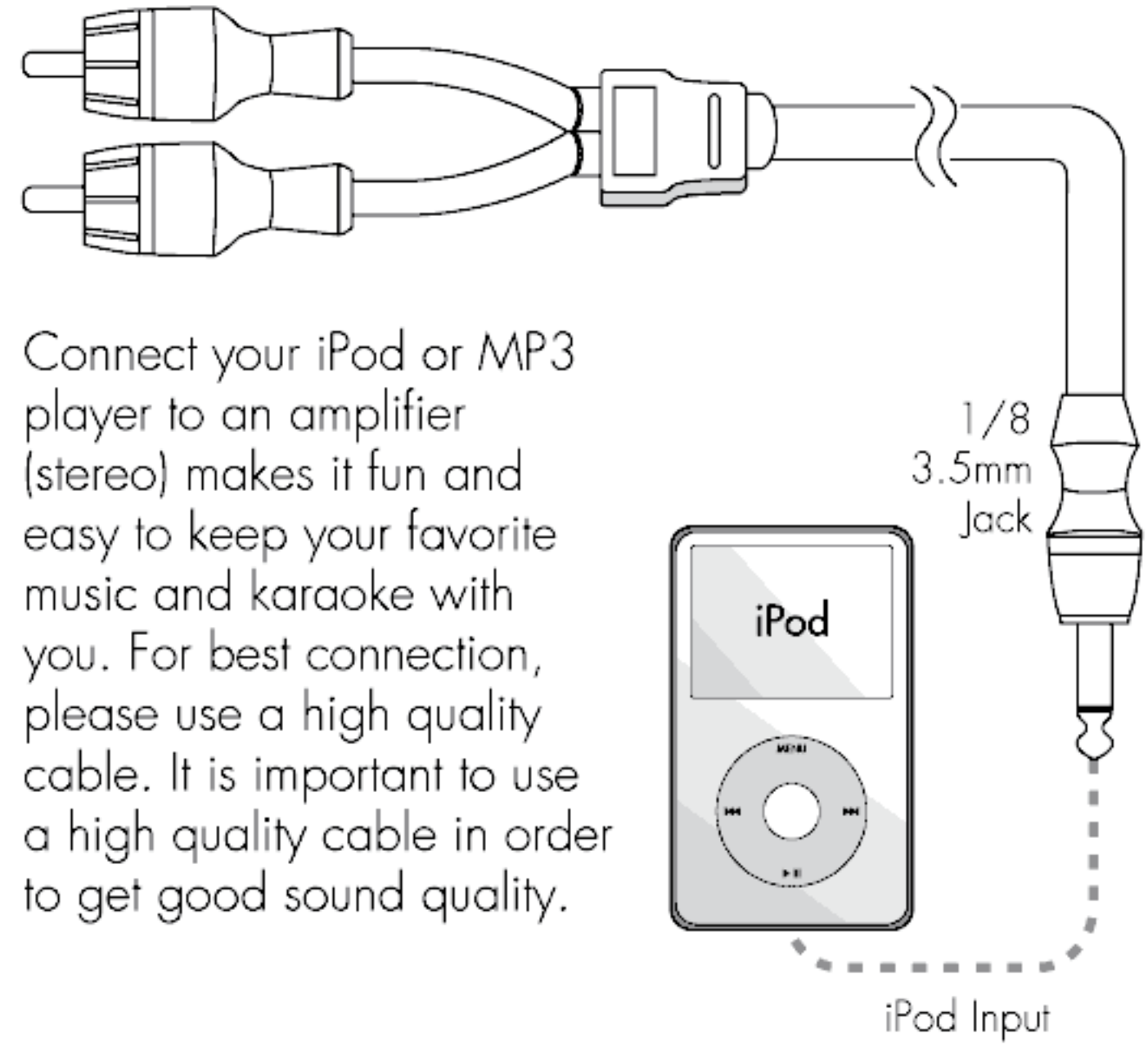
RCA TO RCA CABLE



RCA TO XLR CABLE

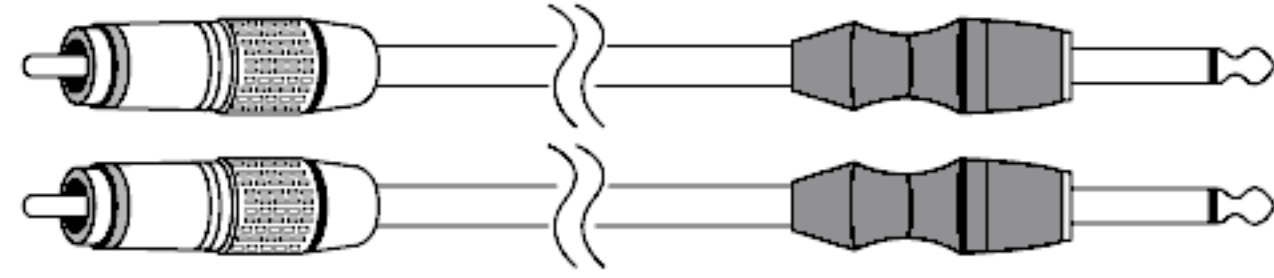


RCA TO MINI CABLE (3.5mm Jack)

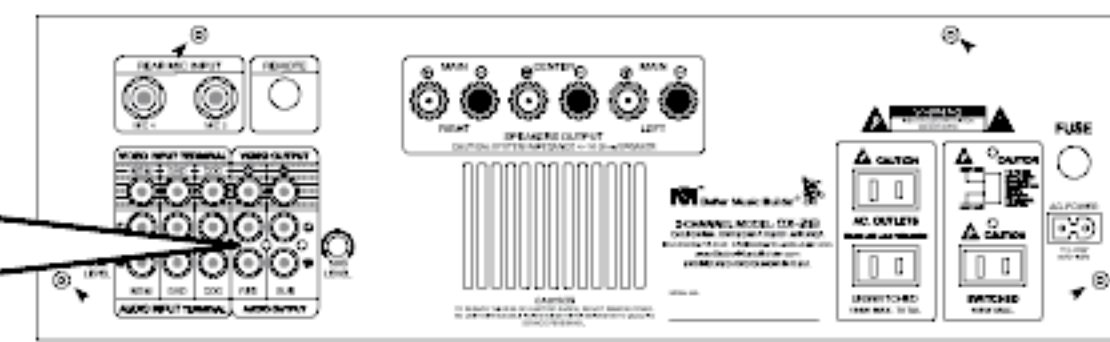
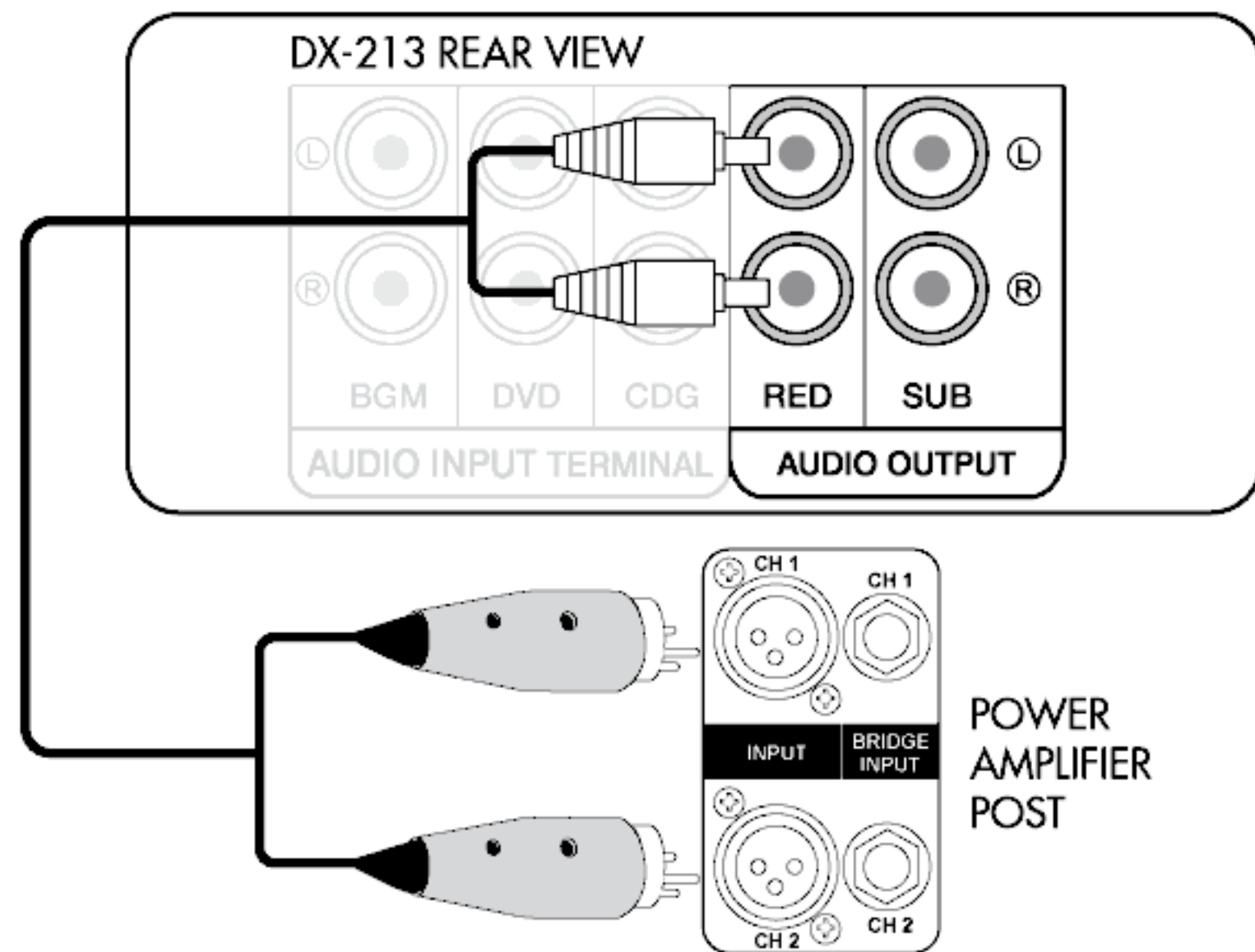


Connect your iPod or MP3 player to an amplifier (stereo) makes it fun and easy to keep your favorite music and karaoke with you. For best connection, please use a high quality cable. It is important to use a high quality cable in order to get good sound quality.

RCA TO 1/4 CABLE



AUDIO RECORD OUTPUT

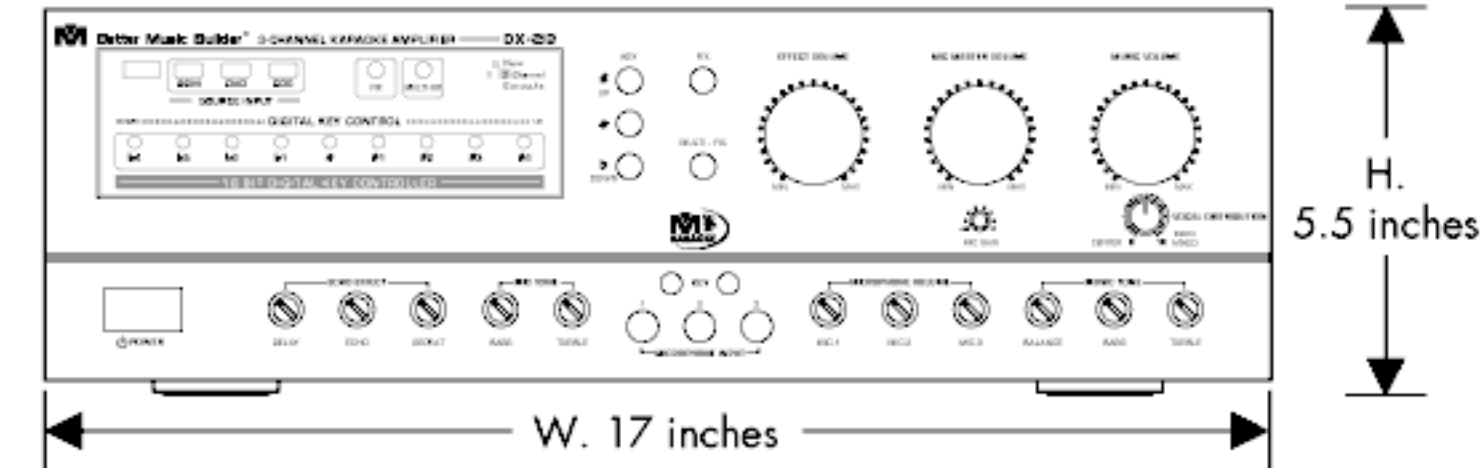


The "RECORD" of the Audio Output has the same signal as that of the main output, so you can use it to connect to external amplifier(s) to cover larger space such as coffee shop, restaurant and auditorium, etc. You can use only one amplifier to produce the same output signal for two different locations with independent volume level and/or tone control.

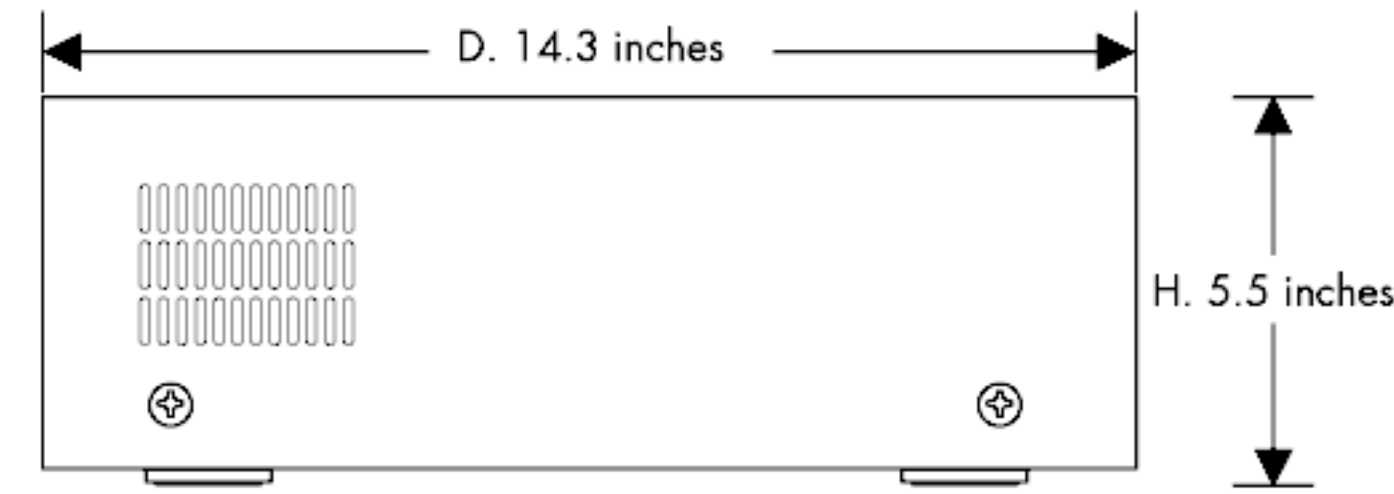
PHYSICAL

Height	5.5 inches / 14 cm
Width	17 inches / 43.2 cm
Depth	14.3 inches / 36.5 cm
Net Weight	23 LBs / 10.5 kg

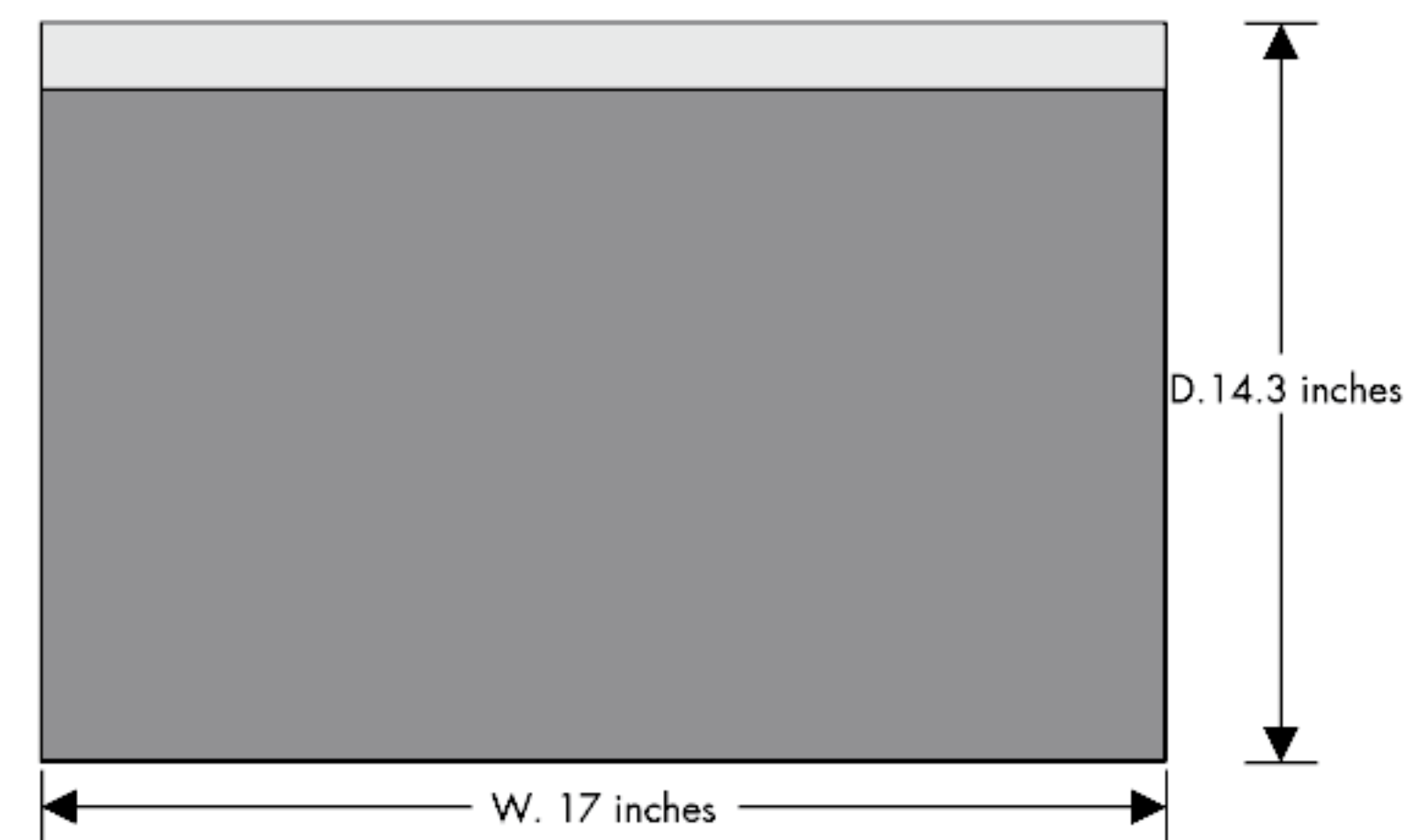
Front view



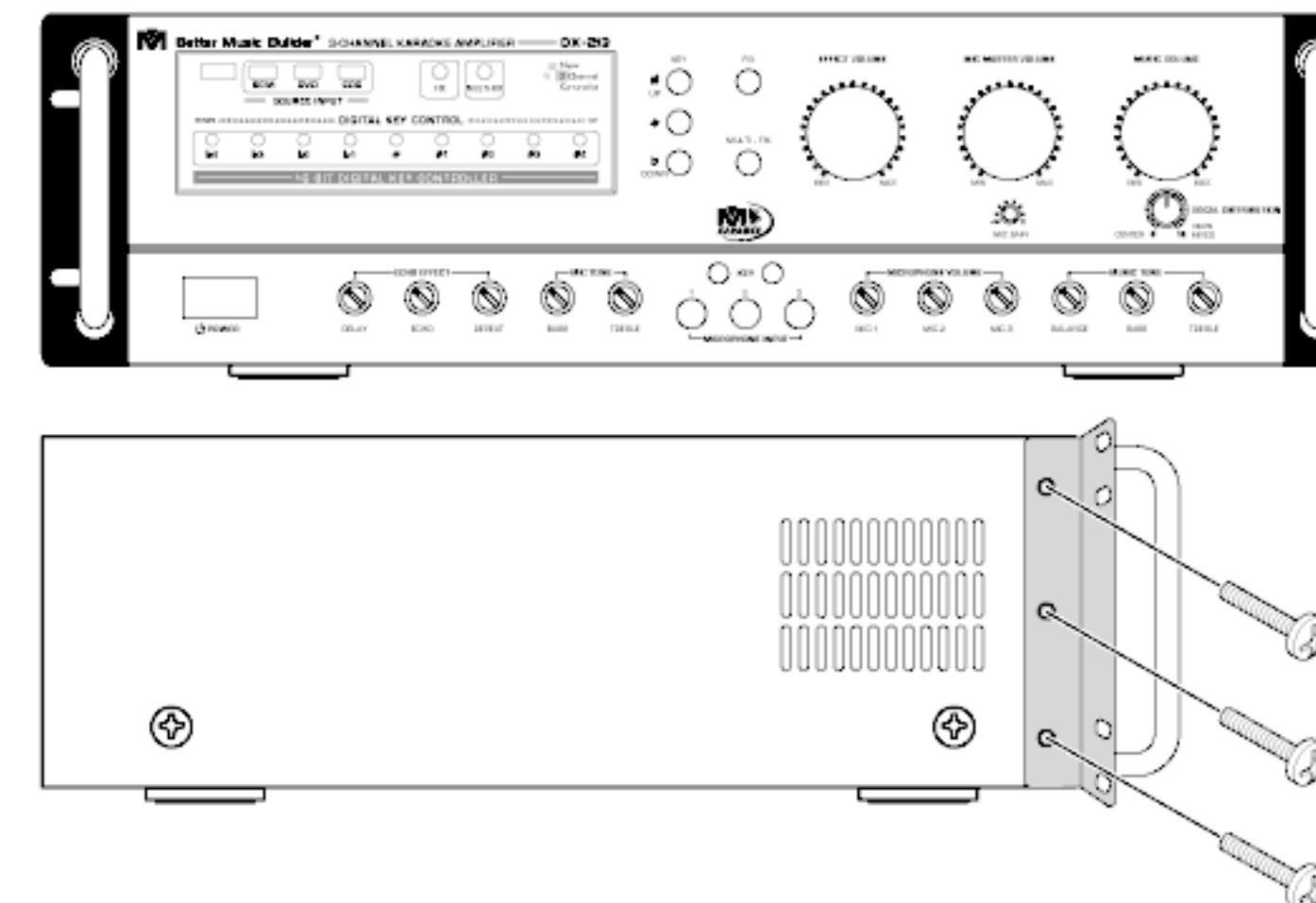
Side view



Top view



Optional for 19" rack mount kit



The standard kit is optional. Please make sure that you get the right kit for the size you want. Then, you can put the amplifier into the rack. The rack is used to protect the amplifier. If you have such portable equipment, you can have party at home anytime or use it for Karaoke rental business.

The Bracket/Handler in figure 1 is used to hold your audio/video equipment firmly in place, but not for transportation. If you need to transport the equipment, we recommend you using the heavy duty clamping rack shelf (optional) as illustrated in figure 2. You should place the heavy duty clamping rack shelf into the portable case. This would protect your equipment. There are different sizes of the heavy duty clamping rack shelves to suit your specific needs. Please note that the bracket/handler, rack shelf and case are not included in the package. They are optional items and sold separately.

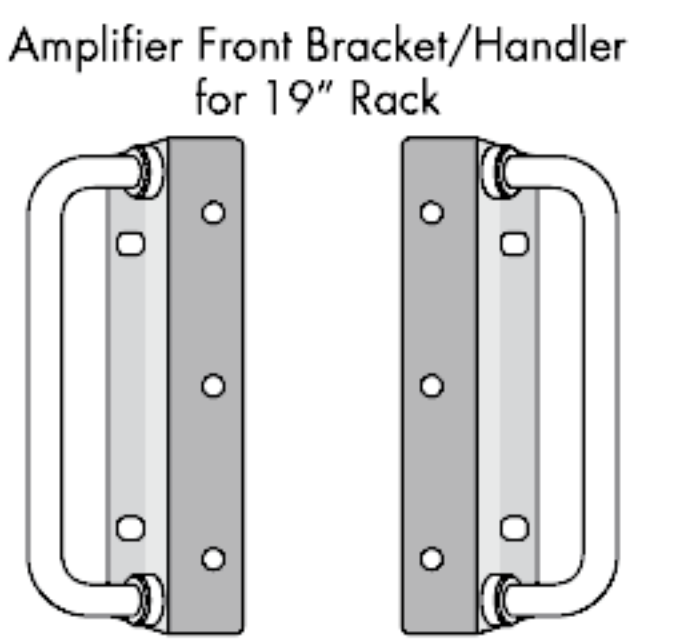


Figure 1

The heavy duty clamping rack shelf is used to hold the amplifier in place within a portable case. It consists of a metal shelf with clamping mechanisms on the sides. The diagram shows the shelf being inserted into a case to protect the amplifier.

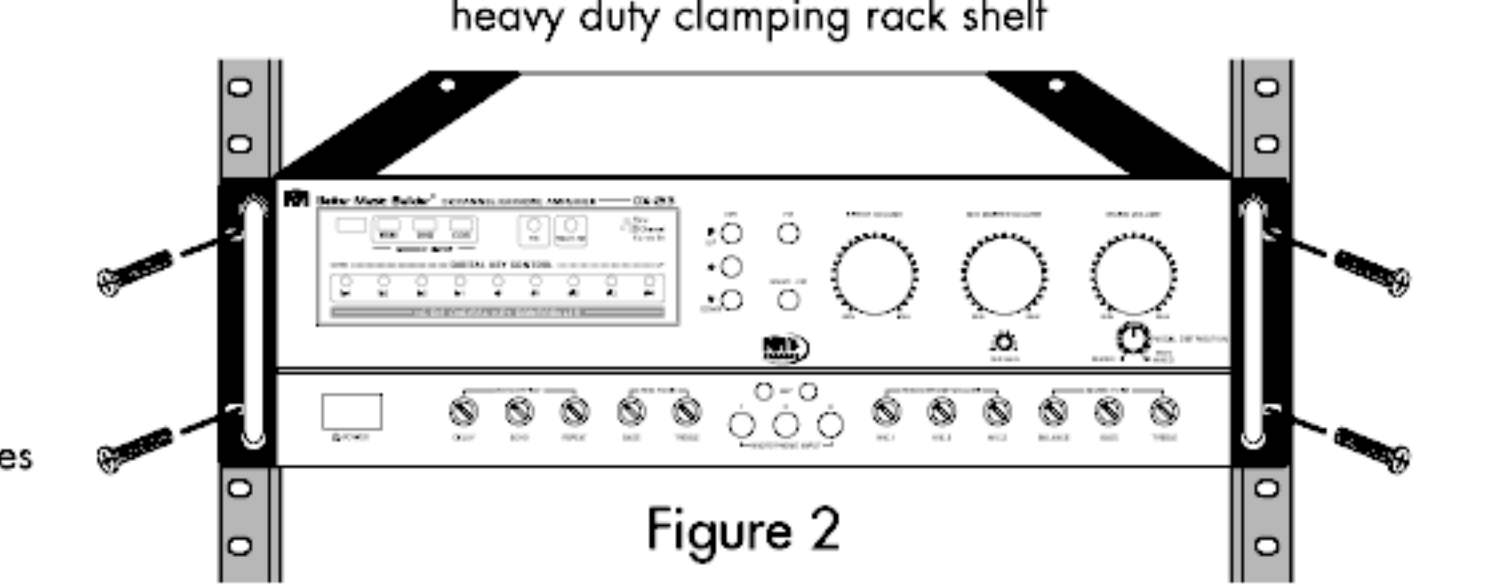
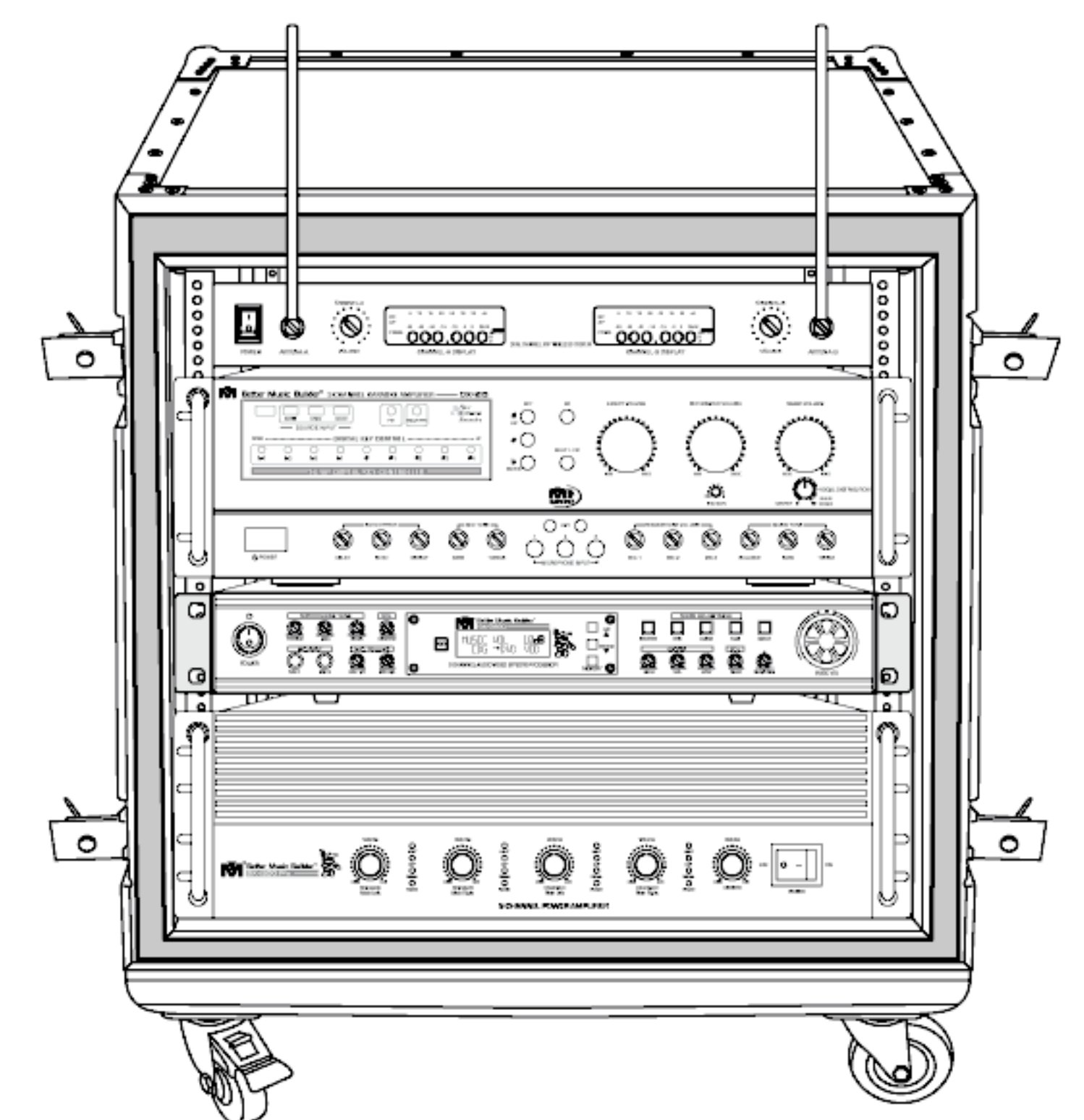


Figure 2

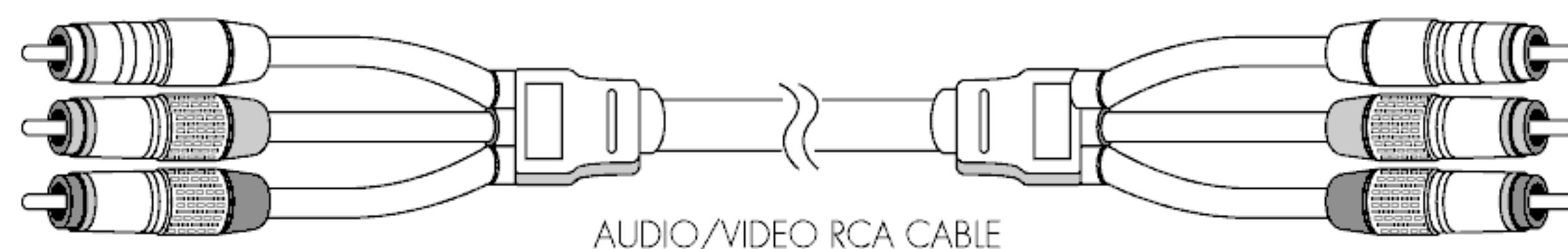
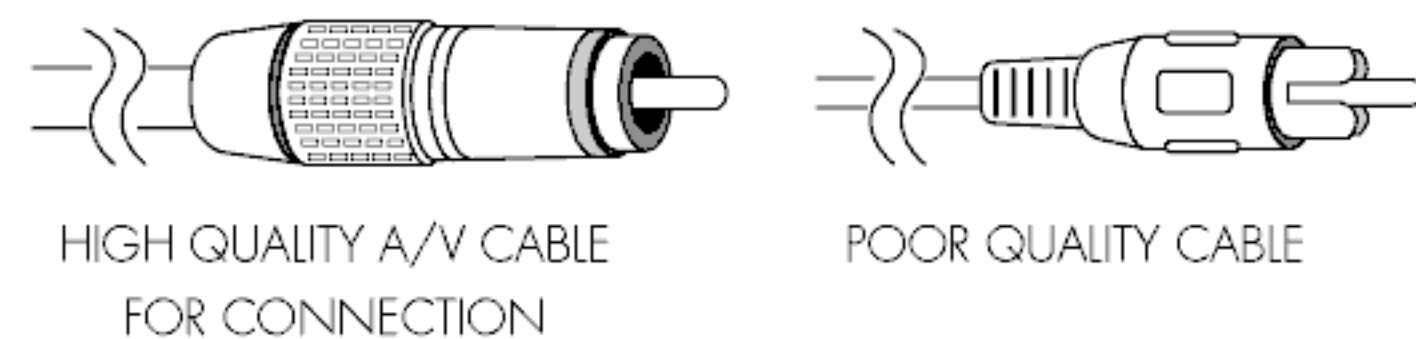


FINAL WORDS TO USER

The engineering team of Better Music Builder has many years of experience in audio equipment design. The team constantly develops new audio technologies, designs innovative audio and Karaoke equipment to suit your specific needs and provides you great ideas for home entertainment. For example, we offer you the great idea to modify your bedroom or basement to become an entertainment place for home theater and Karaoke, so you can have great party with your friends at home.

Our engineering team also designs audio equipment for commercial use by restaurants, coffee shops, churches, and school auditoriums, etc. If the commercial area for audio equipment installation exceeds 2,000 square feet, we highly recommend you to hire audio professionals to handle the installation for you in order to avoid risks in breaking the equipment with improper installation and protecting your own safety.

We also provide you free education and technical information on audio equipment and technologies. For example, we provide free installation diagrams to make it easier for you to connect the system. In addition, to get best connections for the sharpest image and good sound quality, we give you the hot tip for choosing the high quality type of A/V cable for connections. You can download the free information on audio equipment and technologies from our website www.BetterMusicBuilder.com.



Please do not remove the "Yellow Label" in the rear of your machine, otherwise, the warranty will become void automatically. We design it to protect your own safety. If you need repair and maintenance service, you may contact us directly or hire a professional technician to repair your machine. To learn more about the technical aspects, you can visit our website www.BetterMusicBuilder.com and download the relevant information for review.

NOTE

Before you hook up the system, you must turn off the AC powers on all machines including audio/video equipment and TV. Otherwise, it may damage your equipment, especially on the HDTV in which a spot appeared in the TV screen. After you have hooked up the system, you must double check the audio/video connections to ensure that they are connected correctly.

Sometimes the cable of poor quality would affect the microphone effects, picture quality, or even cause the machine to shut down suddenly.

Again, we must thank you for choosing Better Music Builder product. We hope you can make the best use of the machine and enjoy it for fun. If you have any questions regarding your machine, please feel free to contact us at www.BetterMusicBuilder.com.



TROUBLESHOOTING

1. Symptom: Vocal Distribution does not work

The original audio decoding of your disk is locked. Therefore, you need to use the remote control of your disk player to perform the vocal cancellation function. Please refer to page 19.

2. Symptom: Microphone volume is low

It is impossible that the MICROPHONE GAIN is set at a very low level. MICROPHONE GAIN is a microphone volume limiter, which is used to protect your audio equipment from burning because of turning the microphone volume too high.

3. Symptom: Excessive microphone feedback

Both the MICROPHONE GAIN button and the GAIN limiter are turning at high volume, so excessive feedbacks and unpleasant sounds are produced. To reduce it, press the MICROPHONE GAIN button down and adjust the MICROPHONE GAIN limiter to comfortable low volume.

4. Starting volume level too high

Symptom: when the machine is turned on, the starting volume (i.e. music, microphone and echo) is too high. Remedy: refer to page 25 under topic 23 "Setting the Memory for Your Favorite Volume Level" to reset the starting volume level.

5. Video Problem

Symptoms: The video display appears in black and white color only or it has unstable image.

Possible Causes:

1. Video source (i.e. DVD player) is in different formats like NTSC or PAL. Therefore, you should select the right "Video Format" in the "Output" of the DVD player. It is because the video display is incompatible with the video source.

2. The video out from the amplifier to the video display has a distance over 25 feet. Therefore, you should use a signal distribution amplifier to enhance the signals.

3. You may be using the wrong cable for connection.

The cable for video signal is different from the cable for audio, microphone and speaker. Therefore, you should use coaxial cable for connection.

4. You may be using a low quality cable with poor connection. We highly recommend you using high quality audio/video cable for connection. Please refer to page 26 for high quality cable.

6. Symptom: Bass on vocal sound not clear.

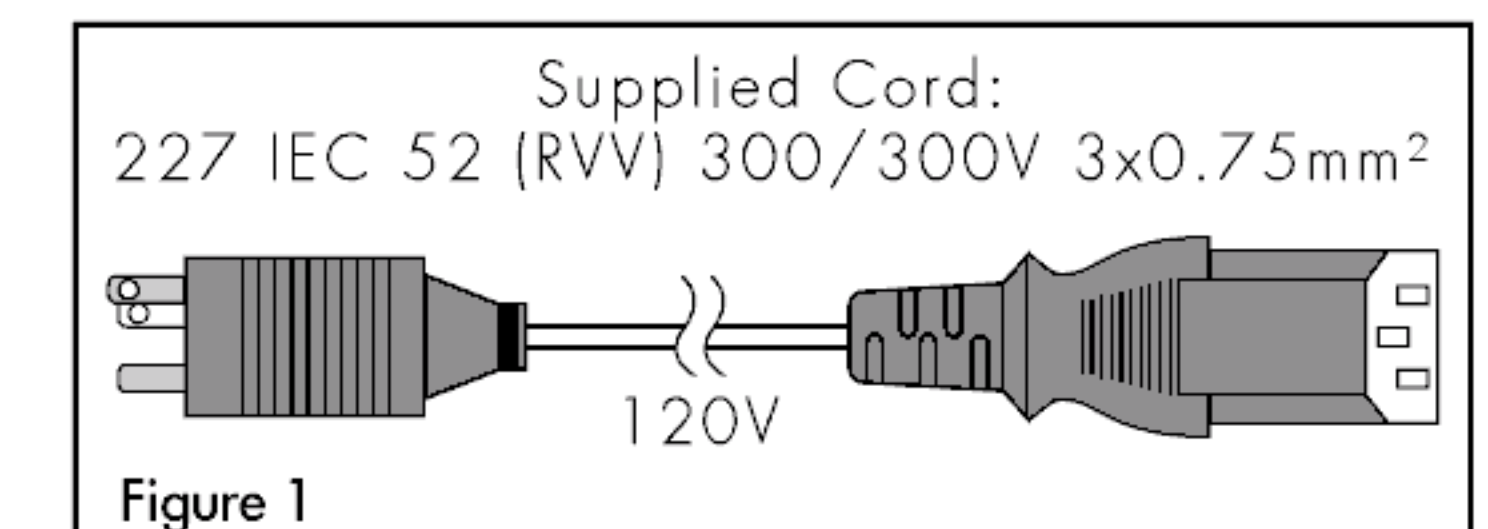
When you sing or make an announcement with the microphone, there is too much bass. You may connect to the subwoofer improperly. It is because the SUB OUT of this unit has two different functions: Music for bass and mixing for music and vocal. You may turn off subwoofer.

7. Amplifier Shut Down/Interference Noise

Symptom: the amplifier automatically shut down when playing at high volume or interference noise from the speaker output.

Probable cause: you are using a wrong AC power cord that is thinner than our supplied cord.

Remedy: only use the AC power cord supplied with the unit by our manufacturer or equivalent. See illustration below.



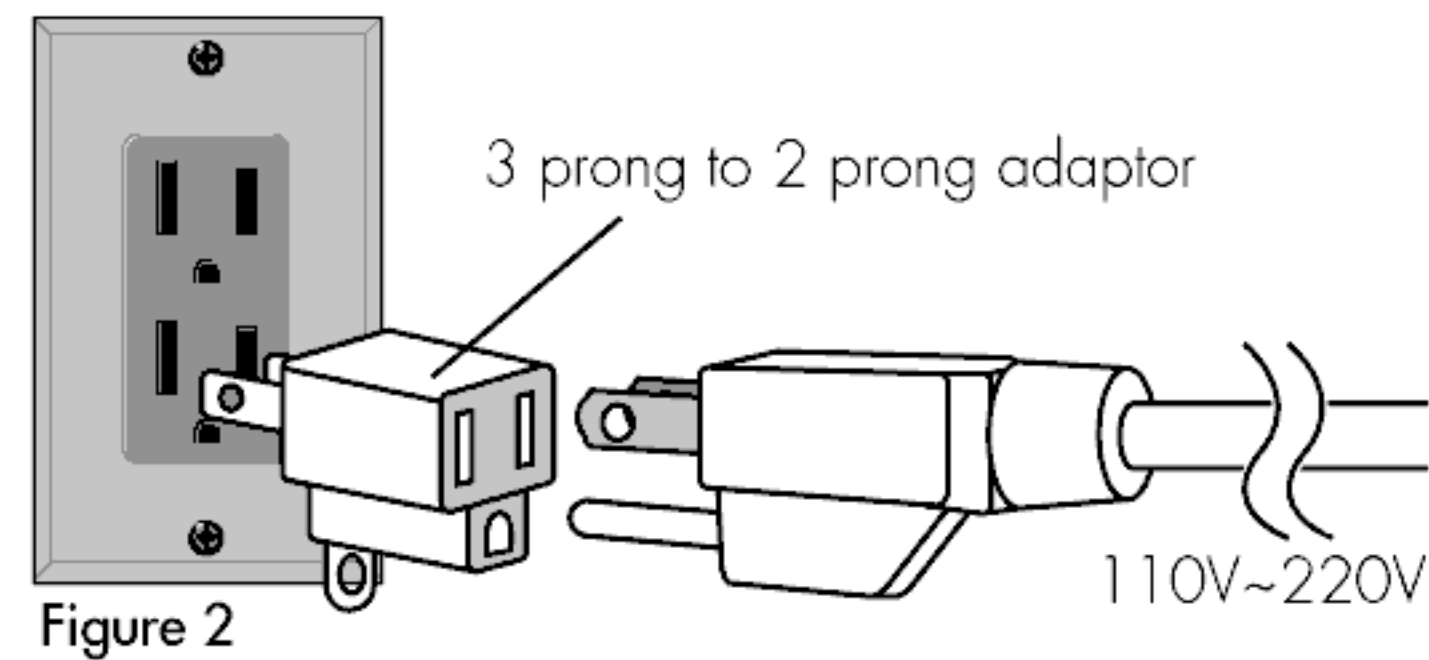
8. Noise and Distortion

When you hear humming noise or displeasing sound, you may do the following:

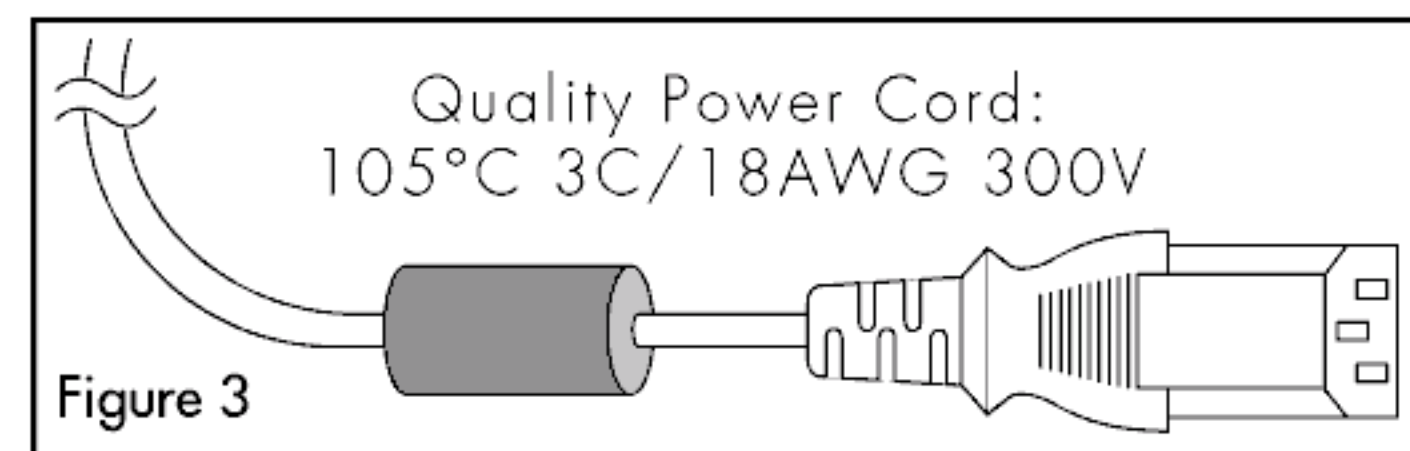
1. Use a 3 prong to 2 prong adaptor to connect to the power cord for eliminating the noise.
2. You may purchase an AC power cord with a magnetic device as shown in figure 3 to replace the supplied power cord.

NOTE

In North America many families own satellite TVs, HD TVs and cable TV receivers. They may cause interference which affect both audio and video equipment. The power cord as shown in figure 3 may help eliminate the humming sound and enhance TV picture quality.



The voltage use in North America is 110V. If you select AC-Power at 220V, you need to change to a different power cord for 220V.

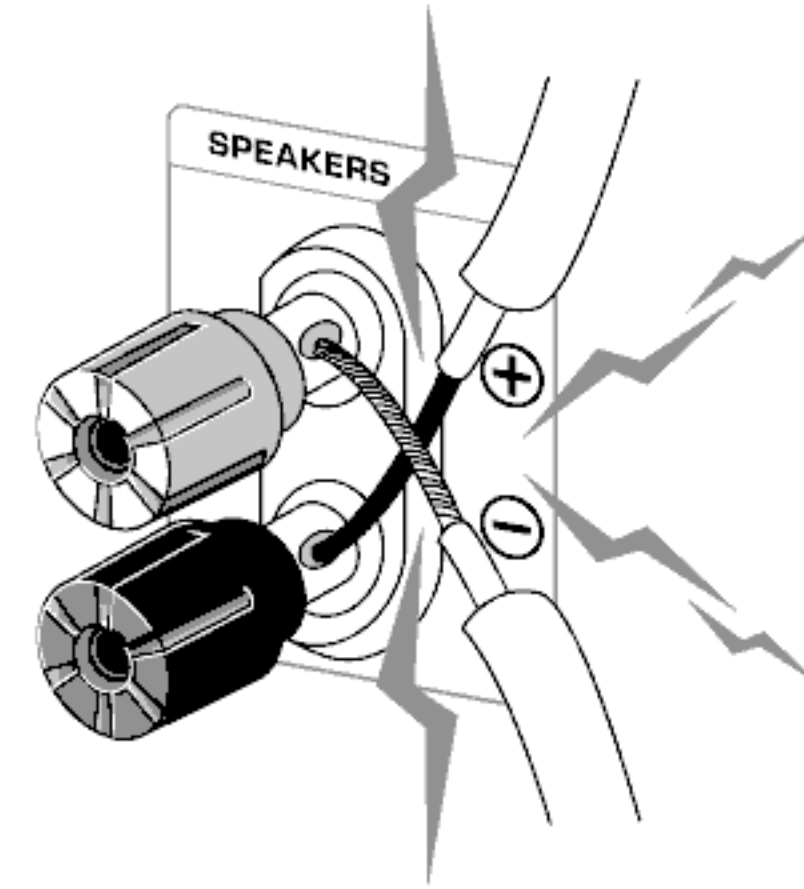


9. Sound Problem

Symptom: No sound.

Possible Cause:

1. Speaker wires positive and negative touch each other at the terminals. We recommend you using the double banana plug.



2. "Mute" is on.

WARRANTY

One-year Limited Warranty for Home Use Equipment

Our one-year warranty covers both parts and labors. The warranty becomes effective from the date of your purchase for one year.

Our warranty only covers defects due to product defectiveness with free of defects in materials or workmanship. However, our warranty does not cover defects due to normal wears, damage in transit, improper use, abuse or failure to follow the proper instructions for maintenance. This warranty is void in the event of unauthorized repairs, alternations, modifications and removing of the product label.

Please also note that our warranty does not cover any shipping cost for the return of defective products to us for inspection, repair and maintenance. Our warranty for Better Music Builder products can only be executed in North America.

90-day Limited Warranty for Public and Commercial Use Equipment

Our 90-day warranty applies to speakers, amplifiers, mixers and microphones for both public and commercial use such as restaurant, coffee shop, KTV nightclub, church and school, etc. It covers both parts and labors. The warranty becomes effective from the date of your purchase for 90 days.

Our warranty only covers defects due to product defectiveness with free of defects in materials or workmanship. However, our warranty does not cover defects due to normal wears, damage in transit, improper use, abuse or failure to follow the proper instructions for maintenance. This warranty is void in the event of unauthorized repairs, alternations, modifications and removing of the product label.

Please also note that our warranty does not cover any shipping cost for the return of defective products to us for inspection, repair and maintenance. Our warranty for Better Music Builder products can only be executed in North America.

Additional Notes:

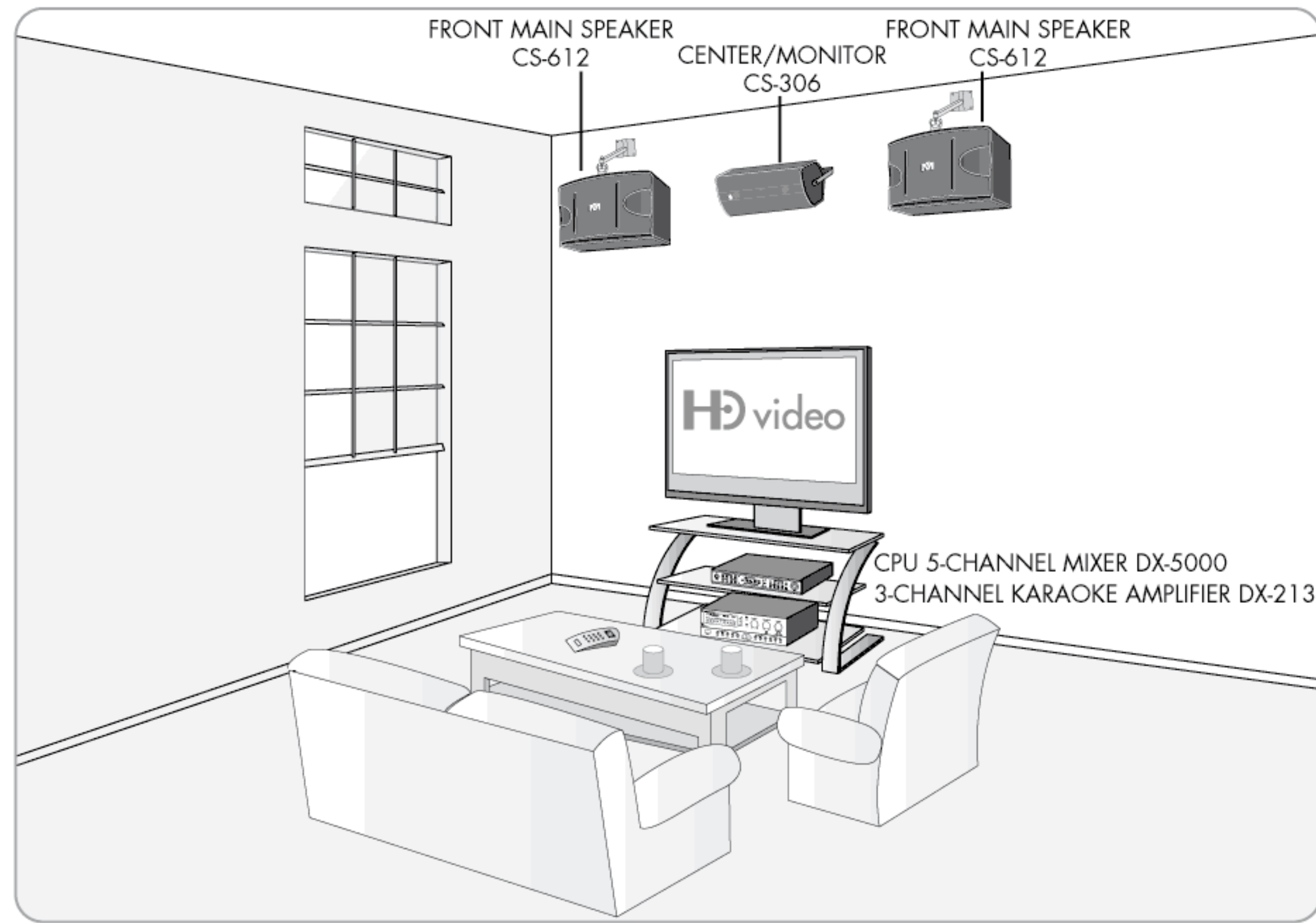
1. Limited warranty for home use equipment is only valid in North America.
2. Limited warranty is valid only if you purchase our products from our authorized dealers (including both regular retailers and online retailers) in North America. If you choose to purchase our products from an authorized dealer, we will not provide any limited product warranty for you. To protect your limited product warranty, please purchase our products from one of our authorized dealers in North America near you.
3. Limited warranty is automatically void if the yellow label stating "No Warranty After Opening" is removed from the product.

To Register Your Warranty

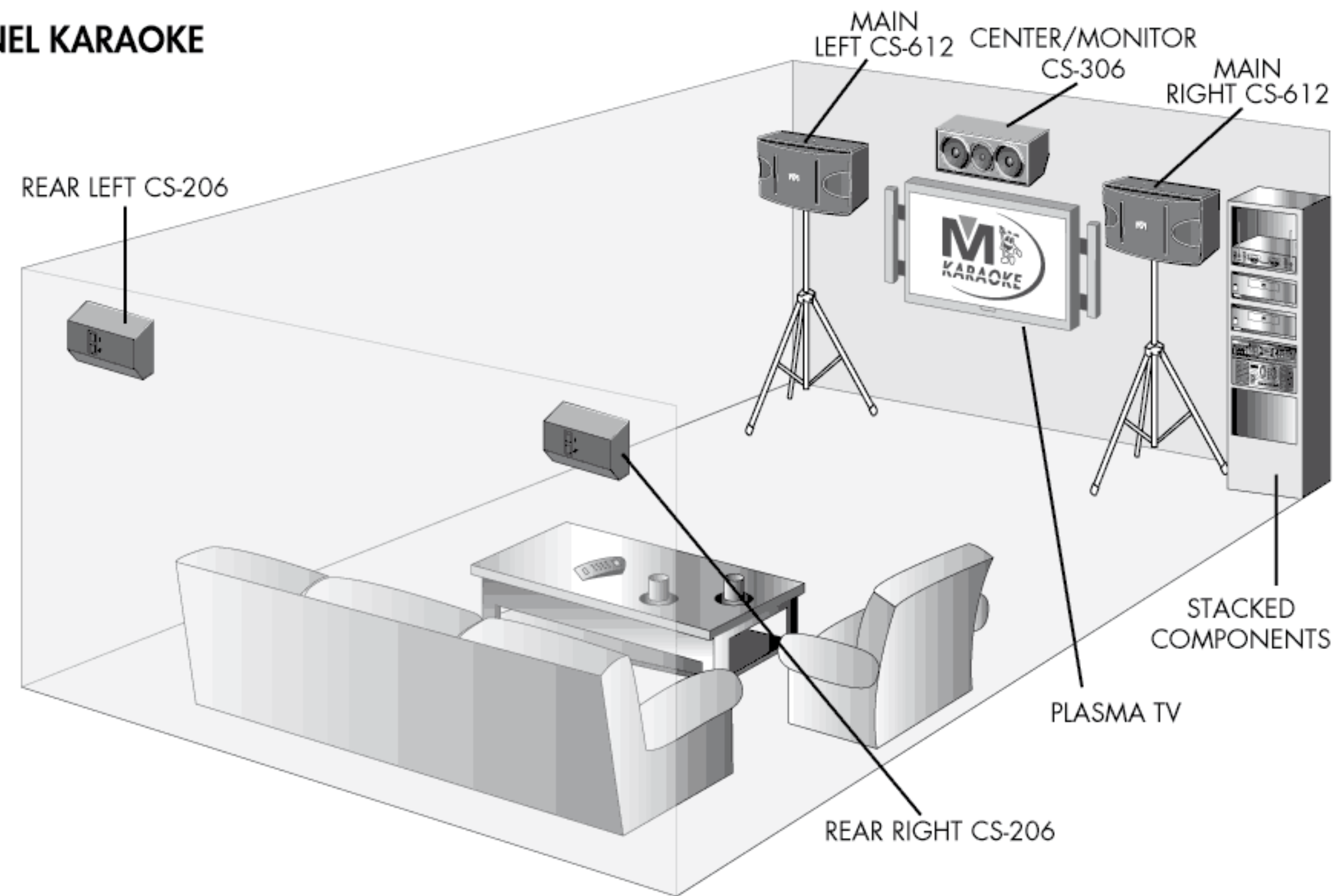
Please fill out the warranty card that came with your unit, download or submit online warranty form. However, we need the invoice for your purchase in order to process this warranty. You may also register your warranty online. Please visit our website at www.bettermusicbuilder.com.

BASIC PLACING SPEAKERS

3-CHANNEL KARAOKE

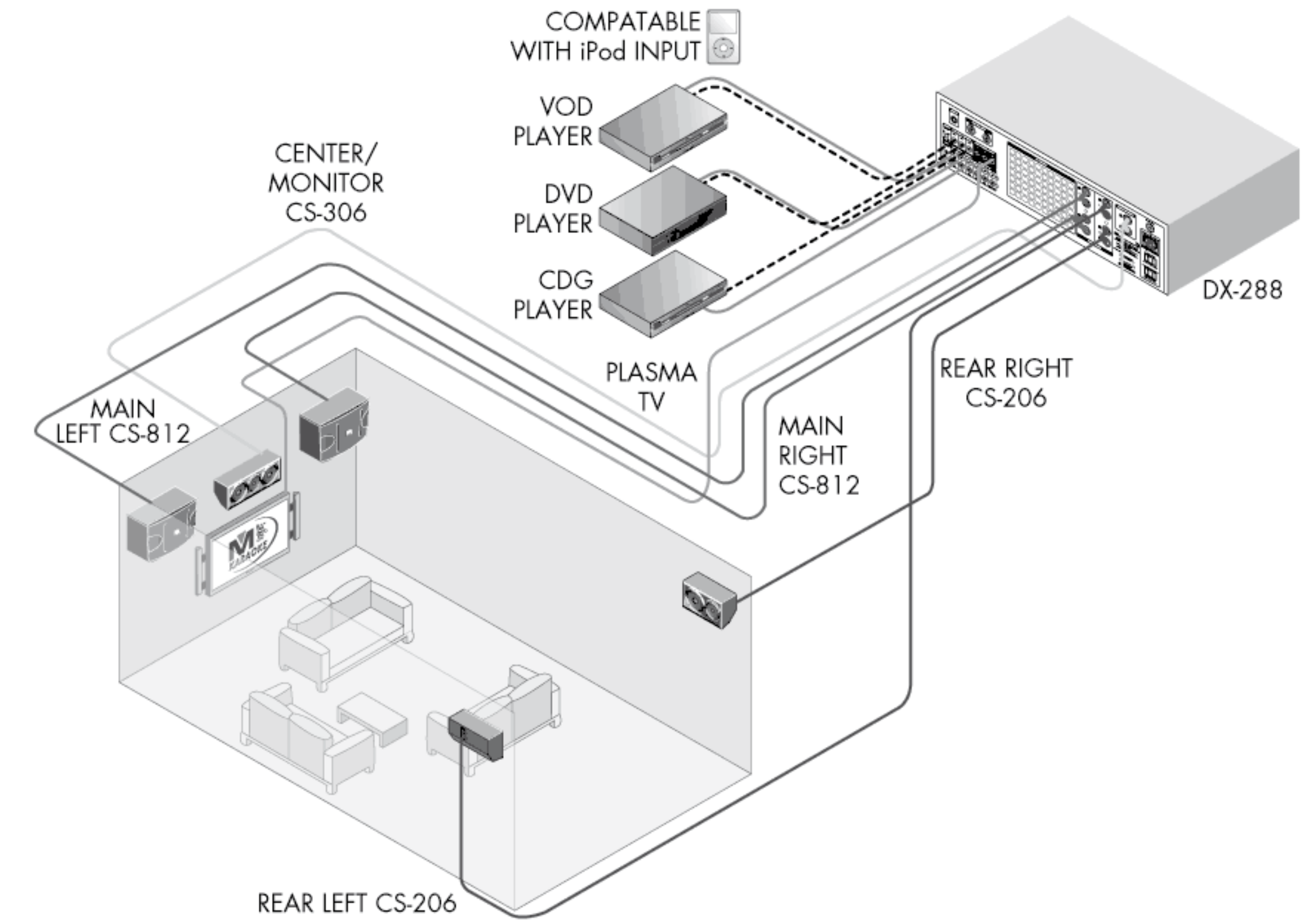


5-CHANNEL KARAOKE

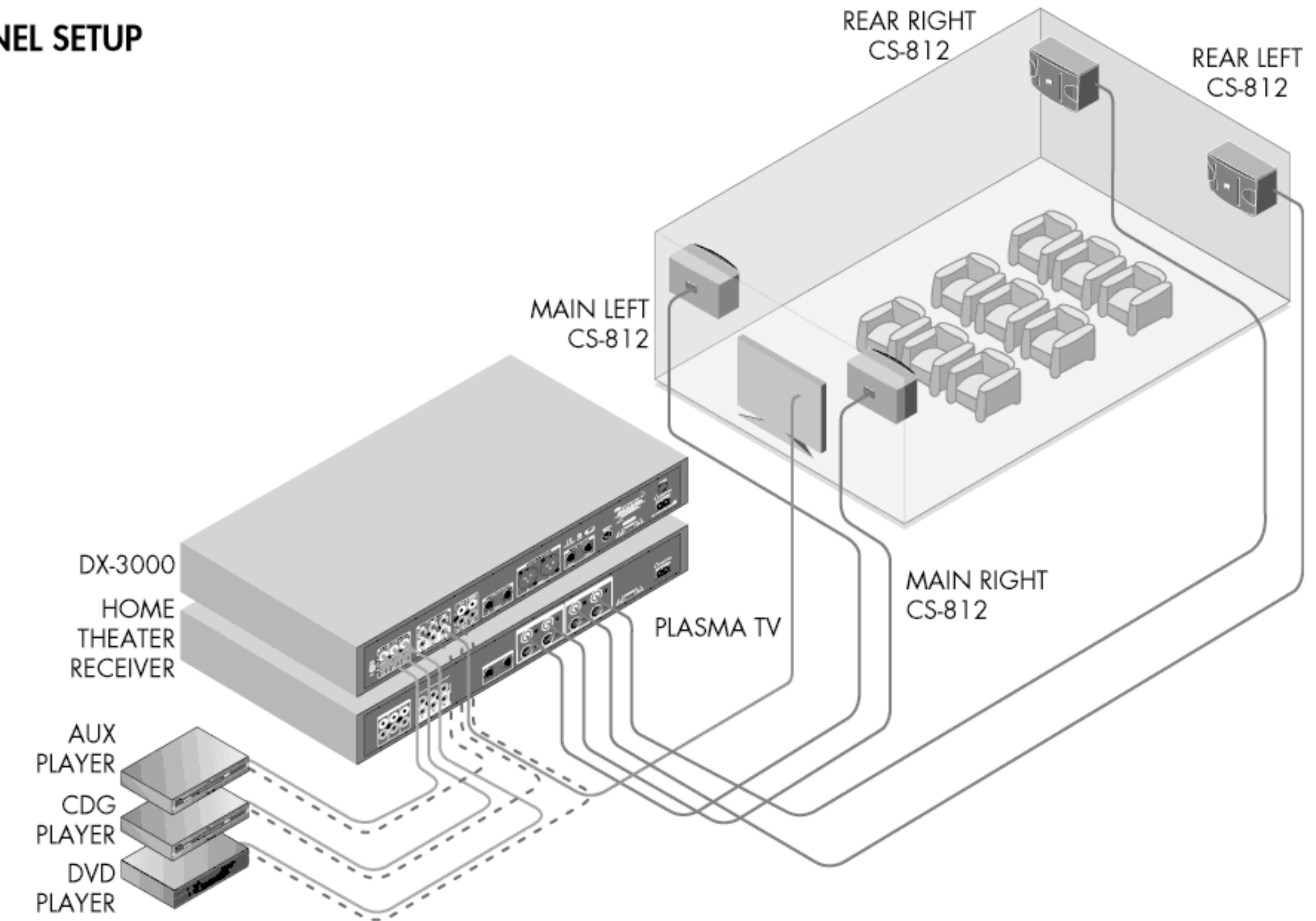


KARAOKE CONNECTION

5-CHANNEL SETUP



4-CHANNEL SETUP





Passionate about Music
www.BetterMusicBuilder.com