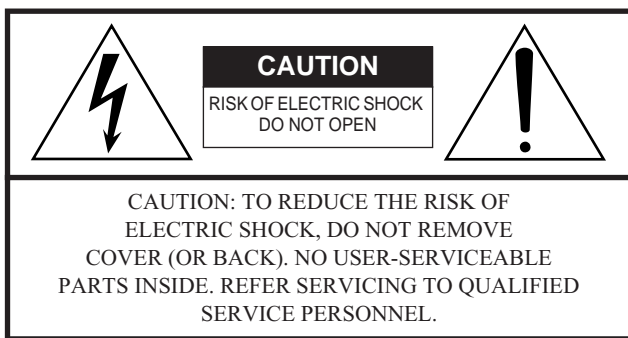


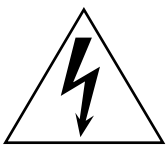


DIGITAL AUDIO SERVER
MCX-2000

IMPORTANT SAFETY INSTRUCTIONS



• Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you 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 you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

- 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 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 are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where 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.
- 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.



We Want You Listening For A Lifetime

YAMAHA and the Electronic Industries Association’s Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion — and, most importantly, without affecting your sensitive hearing. Since hearing damage from loud sounds is often undetectable until it is too late, YAMAHA and the Electronic Industries Association’s Consumer Electronics Group recommend you to avoid prolonged exposure from excessive volume levels.



COMPLIANCE INFORMATION STATEMENT

(DECLARATION OF CONFORMITY PROCEDURE)

Responsible Party: Yamaha Electronics Corporation, U.S.A.
Address: 6660 Orangethorpe Avenue
Buena Park, CA 90620
Telephone: 714-522-9105
Fax: 714-670-0108
Type of Equipment: Digital Audio Server
Model Name: MCX-2000

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following conditions:

- 1) this device may not cause harmful interference, and
 - 2) this device must accept any interference received including interference that may cause undesired operation.
- See the "TROUBLESHOOTING" section at the end of this manual if interference to radio reception is suspected.

FCC INFORMATION (for US customers only)

1 IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2 IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3 NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices.

This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices.

Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Electronics Corporation, U.S.A. 6660 Orangethorpe Avenue, Buena Park, CA 90620.

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

CAUTION: READ THIS BEFORE OPERATING THIS UNIT

- To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.
- Install this unit in a well ventilated, cool, dry, clean place — away from direct sunlight, heat sources, vibration, dust, moisture, and/or cold. Avoid ventilation space of at least 30 cm on the top, 20 cm on the left and right, and 10 cm on the back of this unit.
- Locate this unit away from other electrical appliances, motors, or transformers to avoid humming sounds.
- Do not expose this unit to sudden temperature changes from cold to hot, and do not locate this unit in a environment with high humidity (i.e. a room with a humidifier) to prevent condensation inside this unit, which may cause an electrical shock, fire, damage to this unit, and/or personal injury.
- Avoid installing this unit where foreign object may fall onto this unit and/or this unit may be exposed to liquid dripping or splashing. On the top of this unit, do NOT place:
 - Other components, as they may cause damage and/or discoloration on the surface of this unit.
 - Burning objects (i.e. candles), as they may cause fire, damage to this unit, and/or personal injury.
 - Containers with liquid in them, as they may fall and liquid may electrical shock to the user and/or damage to this unit.
- Do not cover the rear panel of this unit with a newspaper, tablecloth, curtain, etc. in order not to obstruct heat radiation. If the temperature inside this unit rises, it may cause fire, damage to this unit, and/or personal injury.
- Do not plug in this unit to a wall outlet until all connections are complete.
- Do not operate this unit upside-down. It may overheat, possibly causing damage.
- Do not use force on switches, knobs and/or cords.
- When disconnecting the power cord from the wall outlet, grasp the plug; do not pull the cord.
- Do not clean this unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.
- Only voltage specified on this unit must be used. Using this unit with a higher voltage than specified is dangerous and may cause fire, damage to this unit, and/or personal injury. YAMAHA will not be held responsible for any damage resulting from use of this unit with a voltage other than specified.
- To prevent damage by lightning, disconnect the power cord from the wall outlet during an electrical storm.
- Do not attempt to modify or fix this unit. Contact qualified YAMAHA service personnel when any service is needed. The cabinet should never be opened for any reasons.
- When not planning to use this unit for long periods of time (i.e. vacation), disconnect the AC power plug from the wall outlet.
- Be sure to read the “TROUBLESHOOTING” section on common operating errors before concluding that this unit is faulty.
- Before moving this unit, first check that there is no disc in the disc tray. Finally, press **STANDBY/ON** to turn off this unit, and disconnect the AC power plug from the wall outlet.
- The Socket-outlet shall be installed near the equipment and shall be easily accessible.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

IMPORTANT!

Please record the serial number of this unit in the space below.

Model: _____

Serial No.: _____

The serial number is located on the rear of the unit. Retain this Owner's Manual in a safe place for future reference.

SPECIAL INSTRUCTIONS FOR U.K. MODEL

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

GREEN-and-YELLOW: Earth

BLUE: Neutral

BROWN: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows: The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \perp or coloured GREEN or GREEN-and -YELLOW. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

For U.K. customers

If the socket outlets in the home are not suitable for the plug supplied with this appliance, it should be cut off and an appropriate 3 pin plug fitted. For details, refer to the instructions described above.

Note: The plug severed from the mains lead must be destroyed, as a plug with bared flexible cord is hazardous if engaged in a live socket outlet.

For Canadian Customers

To prevent electric shock, match wide blade of plug to wide slot and fully insert.

This Class B digital apparatus complies with Canadian ICES-003.

Do not remove the connector of built-in antenna from the MCX-2000.

For US customers

FCC WARNING

Change or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with FCC radiation exposure limits set forth for uncontrolled equipment. This equipment should be installed and operated with a minimum distance of at least 20cm between the radiator and the persons body (excluding extremities: hands, wrists, feet, and legs) and must not be co-located or operated with any other antenna or transmitter.

For Canadian customers

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2), this device must accept any interference received, including interference that may cause undesired operation of the device.

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population: consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rpb

For U.K. and European customers



AT	BE	CY	CZ	DK
EE	DE	GR	FI	FR
HU	IE	IT	LV	LT
LU	MT	PL	PT	SK
SI	ES	SE	NL	GB
CH	IS	LI	NO	

We, the manufacturer YAMAHA hereby declare that the MCX-2000 is in compliance with the essential requirements and other relevant provisions of Directive 1999 / 5 / EC.

Vi, tillverkaren YAMAHA, betygar härmed att MCX-2000 är i överensstämmelse med de erforderliga krav och andra tillämpliga bestämmelser som anges i direktivet 1999/5/EC.

Noi, il fabbricante YAMAHA, con questo dichiariamo che MCX-2000 si trova in osservanza dei requisiti essenziali e delle altre normative pertinenti della direttiva 1999 / 5 / EC.

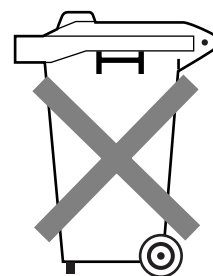
Nosotros, el fabricante YAMAHA, declaramos por el presente testamento que el MCX-2000 cumple con los requisitos esenciales y otras provisiones pertinentes de la Directiva 1999/5/EC.

YAMAHA verklaart hierbij dat de MCX-2000 voldoet aan de essentiële vereisten en andere relevante voorzieningen van Richtlijn 1999/5/EC.

This apparatus shall be connection of a MAINS SOCKET outlet with aprotective earthing connection.

Allen voor klanten in Nederland

Bij dit product zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooiden maar inleveren als KCA.



"Music recognition technology and related data are provided by Gracenote and the Gracenote CDDB® Music Recognition ServiceSM. Gracenote is the industry standard in music recognition technology and related content delivery. For more information visit www.gracenote.com."

"CD and music-related data from Gracenote CDDB® Music Recognition ServiceSM © 2000, 2001, 2002 Gracenote. Gracenote CDDB Client Software © 2000, 2001, 2002 Gracenote. U.S. Patents Numbers #5,987,525; #6,061,680; #6,154,773, and other patents issued or pending. CDDB is a registered trademark of Gracenote. The Gracenote logo and logotype, the Gracenote CDDB logo and logotype, and the "Powered by Gracenote CDDB" logo are trademarks of Gracenote. Music Recognition Service and MRS are service marks of Gracenote."



Fraunhofer Institut Integrierte Schaltungen

MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.

Supply of this product does not convey a license nor imply any right to distribute content created with this product in revenue-generating broadcast systems (terrestrial, satellite, cable and/or other distribution channels), streaming applications (via Internet, intranets and/or other networks), other content distribution systems (pay-audio or audio-on-demand applications and the like) or on physical media (compact discs, digital versatile discs, semiconductor chips, hard drives, memory cards and the like). An independent license for such use is required. For details, please visit <http://mp3licensing.com>

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'emploi de commandes, de réglages ou un choix de procédures différents des spécifications de cette brochure peut entraîner une exposition à d'éventuelles radiations pouvant être dangereuses.

ACHTUNG

Die Verwendung von Bedienungselementen oder Einstellungen oder die Durchführung von Bedienungsvorgängen, die nicht in dieser Anleitung aufgeführt sind, kann zu einem Kontakt mit gefährlichen Laserstrahlen führen.

OBSERVERA

Användning av kontroller och justeringar eller genomförande av procedurer andra än de som specificeras i denna bok kan resultera i att du utsätter dig för farlig strålning.

ATTENZIONE

Uso di controlli o regolazioni o procedure non specificamente descritte può causare l'esposizione a radiazioni di livello pericoloso.

PRECAUCIÓN

El uso de los controles o los procedimientos de ajuste o utilización diferentes de los especificados en este manual pueden causar una exposición peligrosa a la radiación.

VOORZICHTIG

Gebruik van bedieningsorganen of instellingen, of uitvoeren van handelingen anders dan staan beschreven in deze handleiding kunnen leiden tot blootstelling aan gevaarlijke stralen.

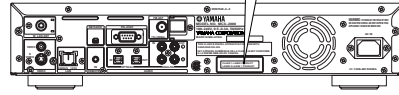
VARO!

AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

WARNING!

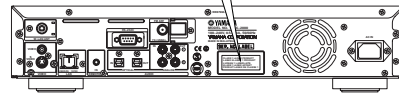
OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRakta EJ STRÅLEN.

**CLASS 1 LASER PRODUCT
PRODUIT LASER DE CLASSE 1**



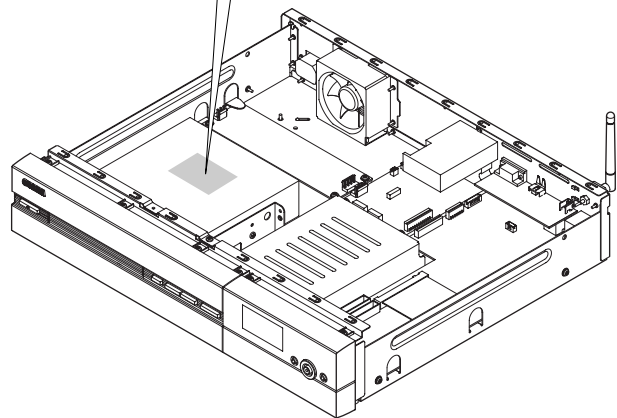
(For Canada model)

**CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT
PRODUIT LASER DE CLASSE 1**



(For U.K. and Europe models)

CAUTION CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO THE BEAM.
 WARNING KLASSE 3B OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK ATT UTSÄTTA DIG FÖR STRÅLEN.
 VARD! AVATTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LUOKAN 3B LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
 ATTENTION RADIATIONS LASER INVISIBLES DE CLASSE 3B QUAND OUVERT. ÉVITEZ TOUT EXPOSITION AU FAISCEAU.
 ADVARSEL KLASSE 3B USYNLIG LASERSTRÅLNING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
 VORSICHT BEI GEÖFFNETER ABDECKUNG IST UNSICHTBARE LASERSTRÄHLUNG DER KLASSE 3B IM GERÄTEINNEREN VORHANDEN. AUGEN NICHT DEM LASERSTRÄHL AUSSETZEN!



Preface

Thank you and congratulations on your purchase of the Yamaha MCX-2000 Digital Audio Server!

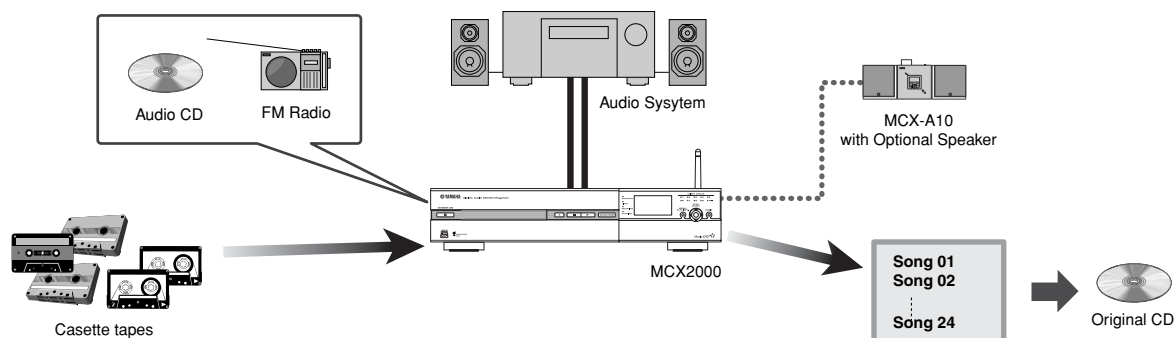
The MCX-2000 is an advanced music server system that utilizes the convenient MusicCAST system, providing digital music delivery over a personal network.

MusicCAST delivers a new listening style for the digital era. It allows you to record various audio sources, including music CDs, onto the music server, and enjoy streamed playback on a client device (MCX-A10 or MCX-C15, sold separately) placed anywhere in your home, using wired and wireless computer networking technologies.

There are many ways to use the MusicCAST network and the MCX-2000 music server.

Use the MCX-2000 to collect and centralize all music sources in your home. Then, simply place a client device in every room of your house--instead of buying a separate stereo or audio set for each of your family members. This setup lets each member of the family enjoy their own favorite music--in any room at the same time. Naturally, the music server can also be set to stream the same music to each client, so that you can walk around your house and have the same music play no matter where you go.

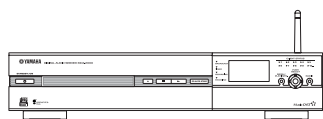
The MCX-2000 has other great features. It can also stream music or audio programs from the built-in FM radio tuner anywhere in your home via the MusicCAST network. Locally on the MCX-2000, you can also enjoy Internet radio programs (not streamed). You can also use the MCX-2000 to record audio content from old analog tapes. Once recorded, they can be streamed via the MusicCAST network and burned onto CD-R/RW media for storage purposes, together with songs from music CDs.



The above are just a few examples to show how you can use the MusicCAST network and the MCX-2000 music server. You'll find additional ones throughout this manual, too--so, keep the manual in a safe place and read it thoroughly in order to get the most out of your new MCX-2000.

What's Included

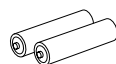
The MCX-2000 product package contains the following items. When you open the box, first check they have all been included. If something is missing, please contact the dealer from whom you purchased the product.



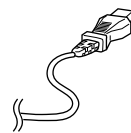
MCX-2000 unit (1)



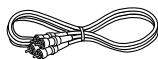
Remote control (1)



AAA batteries (2)



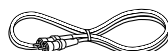
Power cord (1)



Analog stereo audio cable (1)



Optical digital audio cable (1)



Analog video cable (1)

- Startup Guide (1)
- MCX-2000 Owner's Manual (this manual; 1)
- Client manuals (electronic documents)
- CD-ROM (containing software and electronic manuals; 1)

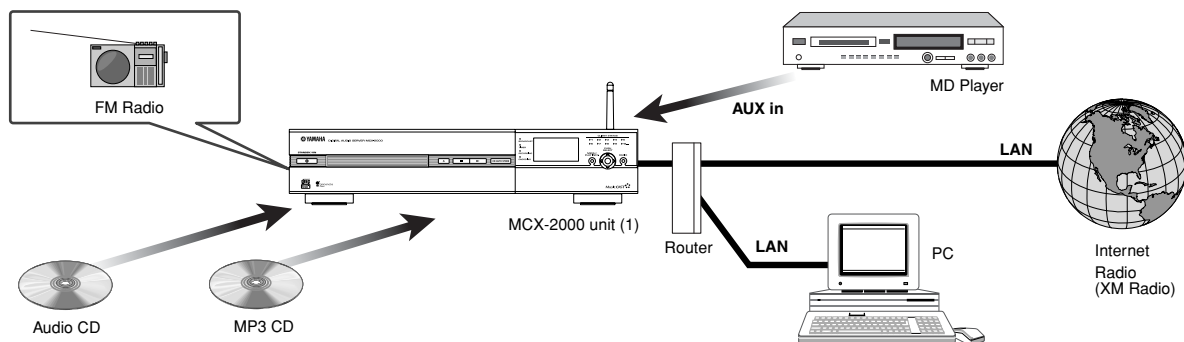
Feature Overview

Designed to be a comprehensive, ultimate audio center for your home, the MCX-2000 incorporates a wide variety of features and functions. Here, we'll take a look at some of ways you can use these features.

Audio Playback Functions

The MCX-2000 lets you play a wide variety of audio sources, including commercial music CDs, your own original MP3 CDs (CD-ROM), external audio signals, and radio programs from the built-in FM tuner. You can also listen to audio content stored on your Windows computer if you connect the MCX-2000 to your computer network (LAN). Since the MCX-2000 can access the Internet through your computer network, you can even enjoy music from your favorite Internet radio stations. When you play these audio sources on the main MCX-2000 itself, connect a speaker system (power amplifier and speakers, or powered speakers) to the unit.

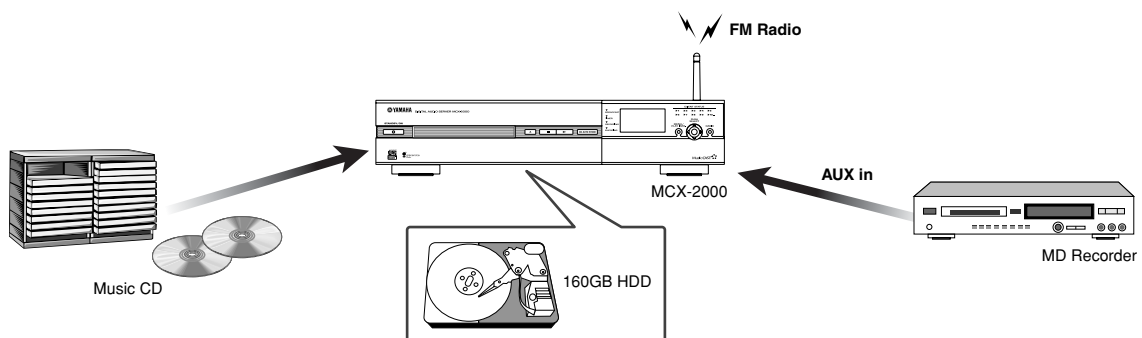
- Playing Archived Music
- Playing a Music CD
- Playing an MP3 CD
- Listening to FM Radio
- Listening to Internet Radio
- Playing External Audio Signals
- Playing Audio Content on the Computer



Audio Recording Functions

The MCX-2000 incorporates a large-capacity 160GB hard disk drive, allowing up to 200 hours of digital recording in linear PCM format (16-bit/44.1kHz) or up to 2,000 hours in MP3 format (160kbps bit rate). Recordable audio sources include commercial music CDs, external audio signals, and radio programs from the built-in FM tuner.

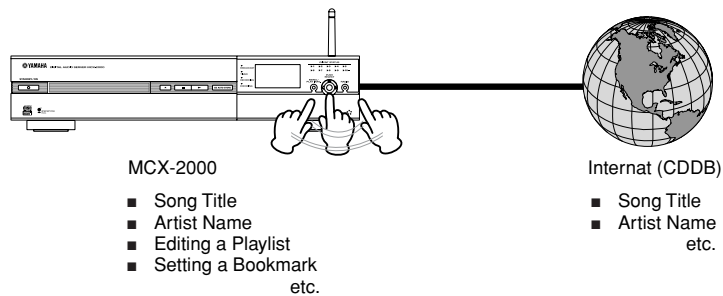
- Recording Songs from a Music CD
- Recording from the FM Radio
- Recording External Audio Signals



Music Archiving Functions

When recording audio sources, you can add information to each song--such as the song title, artist name, album name and genre--then store it to the music archive in the MCX-2000 hard drive. This information can then be used to find specific songs you want to play. Because the MCX-2000 incorporates a special song database system (based on Gracenote CDDB), this information will be set automatically if your songs are from popular music CDs. Other useful functions include Playlist and Bookmark, letting you create custom song lists appropriate to specific occasions (such as parties, morning "wake-up" music, etc.) and allowing you to mark your favorite tunes for quick access.

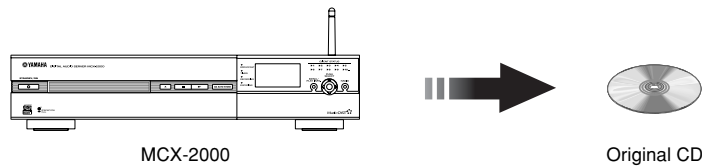
- Adding Song Information Automatically using CDDB
- Adding Song Information Manually
- Selecting a Song using Song Information
- Editing a Playlist
- Setting a Bookmark



CD Recording Functions

This function lets you create a music mix CD of your own selections by arranging archived songs in your favorite order. You can also use this function to duplicate existing music CDs, allowing you to copy your personal mixes to CD and give it to your friends.

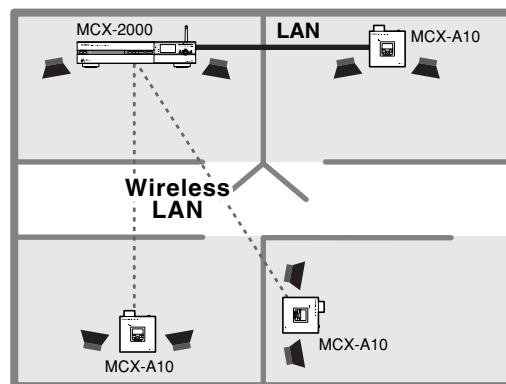
- Recording Archived Songs to a CD
- Duplicating a Music CD



Music Streaming Functions

Once songs are archived (recorded) on the MCX-2000 hard drive, you can stream them to up to 15 clients via the MusicCAST network. The MCX-2000 can deliver the same music to each client simultaneously (broadcast). It can also deliver different songs to different clients at the same time, at the request of each client. In addition, the MCX-2000 supports remote control of clients via the MusicCAST network, allowing you to operate them without having to go to each unit individually.

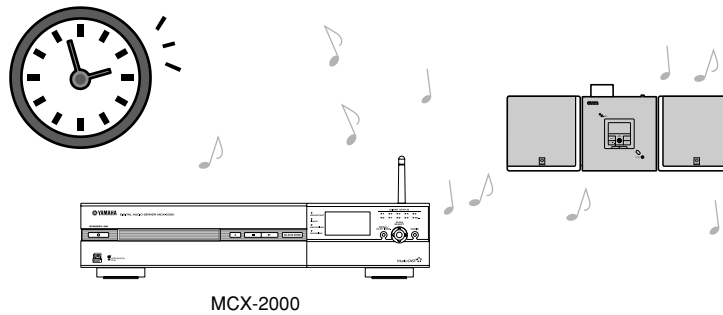
- Streaming the Same Music to All Clients
- Operating a Client Remotely



Timer Function

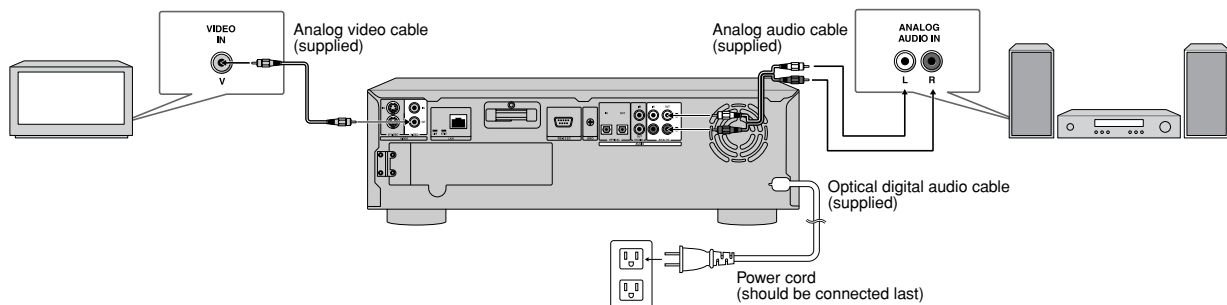
The MCX-2000 and clients incorporate a timer that enables song playback at a specified time. You can program up to ten playback timer instances for each MusicCAST device.

- Using the Timer Playback



Connecting External Devices

Connect all relevant devices referring to the section "Panel Descriptions" and the setup illustration below. Make sure each device is turned off before making connections.



- The MCX-2000 is designed to connect to a TV monitor for easy operation. Though you can still operate the unit while viewing its front panel display, a large TV display offers more operation information at a time.
- The MCX-2000 accepts a generic PS/2 keyboard. This enables faster, more convenient operation than the remote control or front-panel buttons, especially when you edit song information or other text data.
- The MCX-2000 is designed to be turned on immediately after the power cord is connected to the AC power source. Make sure to connect to the AC power source only in the last step after all other devices are connected.

Connecting to the AC Power

When relevant external devices are all connected, turn on these devices first, and then connect the MCX-2000 power cord to the AC power source.

The front panel STANDBY/ON button indicator will light up in green. On the TV monitor, switch the video input source to the MCX-2000 video output (VIDEO or S-Video). If the following screen is shown on the TV display, connection to the TV monitor has been successful.



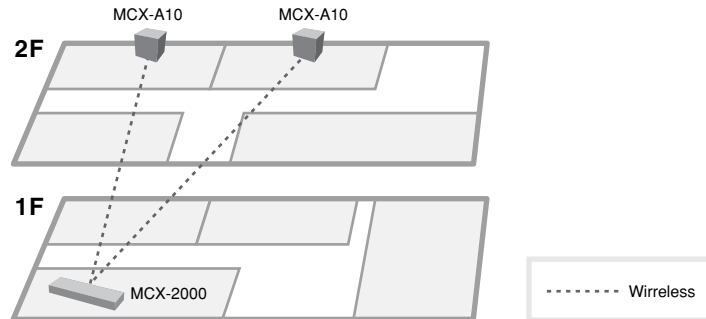
Top menu

All necessary operations can be called up by selecting a menu item from the Top Menu. Since you'll learn how to make sure each connected device is working properly in the relevant sections, simply continue reading this manual in the order given.

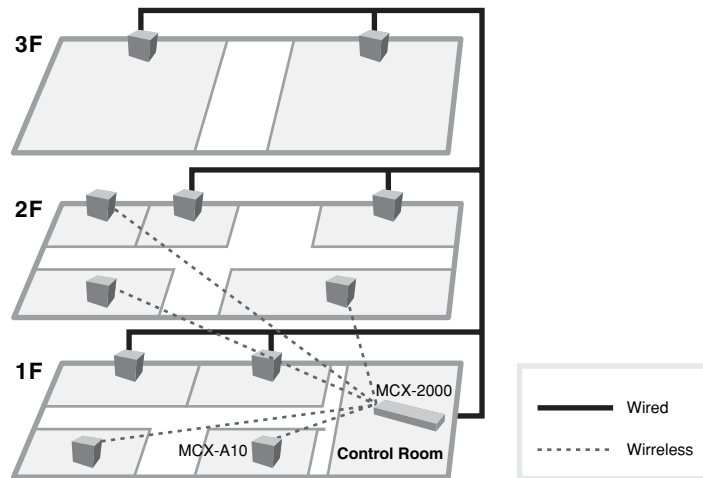
NOTE If the indicator light of the STANDBY/ON button turns amber, press the button to continue working on the MCX-2000. The unit is designed to automatically go into an energy saving mode if no operations have been performed for a while. Read the following column for more information.

Configuring a MusicCAST-only Network

The simplest and easiest way is to network the MCX-2000 and its clients in a wireless configuration. In a wireless MusicCAST network, the MCX-2000 can stream music to up to five clients within a range of thirty meters from the server. This is ideal for most houses, since the MusicCAST network can extend to any room without using a single network cable. With the wireless setup, you don't need to place the MCX-2000 and clients on the same floor. However, if there is an obstacle that blocks radio signals between the MCX-2000 and clients, music streaming may fail even though the devices are theoretically placed closely enough.



If you are planning to use the MusicCAST systems in a multi-floor shop (for example, in building larger than a family house), you may want to connect more clients using network cables. In addition to the five wireless clients, the MCX-2000 can support up to ten wired clients at the same time. The server can stream a different song or playlist to each client, or broadcast the same music to several clients. You can use these functions to create different moods in different rooms by streaming separate music to clients on each floor, all the while broadcasting the same music to maintain a unified image for the shop. You can even use the timer playback feature to stream the same audio message to all clients at the specified time while they normally play different music.



These two MusicCAST networks are easily configured using the Setup Wizard.

NOTE The most important thing in configuring a MusicCAST-only network is to enable the MCX-2000's built-in DHCP server feature. The Setup Wizard automatically enables the feature if you specify "MusicCAST-only" for your network. However, there is another situation in which you still need to use an external DHCP server for your MusicCAST-only network. If you create a large MusicCAST network using multiple MCX-2000 servers, you must set up each MCX-2000 to act as a unique server. (This is because each MCX-2000's factory settings are identical and duplicate settings in the same network are not allowed.) To make this process easier, you may need an external DHCP server. For more information, see the section "Manual Configuration of a MusicCAST Network".

SPECIFICATIONS

AUDIO PERFORMANCE

Frequency response	5 to 20,000 Hz, ± 0.5 dB
S/N ratio (EIAJ)	
Playback	105 dB
Recording	92 dB
Total harmonic distortion (1 kHz)	
Playback	0.004%
Recording	0.006%
Dynamic range	
Playback	99 dB
Recording	92 dB

LASER DIODE PROPERTIES

Material	GaAlAs
Wavelength	780 to 787 nm
Pulse durations and max. output at the objective lens of the laser pickup unit	
DC erase mode	Max. 12 mW (Continuous)
Write mode	Max. 70 mW

(Max. Cycle 98 ns, Min. Cycle 27 ns at Max. Speed)

INPUTS

ANALOG IN	
Type	Pin jack
Standard input level	500 mV/24 k Ω
OPTICAL IN	
Type	Square optical connector jack

OUTPUTS

ANALOG OUT	
Type	Pin jack
Standard output level (1 kHz, 0 dB)	2.0 \pm 0.5 Vrms
OPTICAL OUT	
Type	Square optical connector jack
PHONES	
Standard output level (Input 150V shorted, -20 dB)	330 mV/150 Ω

STORAGE

Hard disk drive	160 GB
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NETWORK

LAN interface	Ethernet 10/100 Base-T
Wireless network interface	IEEE 802.11b

GENERAL

Power supply	
[U.S.A. and Canada models]	AC 120 V, 60 Hz
[Australia model]	AC 240 V, 50 Hz
[U.K. and Europe models]	AC 230 V, 50 Hz
Power consumption	53 W
Power consumption in IR standby mode	
[U.S.A. and Canada models]	3.3 W
[U.K., Europe, and Australia model]	2.9 W
Operating environment	
Temperature	+5 to 35 $^{\circ}$ C
Humidity	30 to 90 % RH (No condensation)
Dimensions (W x H x D)	435 x 95.5 x 408.5 mm (17-1/8" x 3-3/4" x 16-1/16")
Weight	11.5 kg (25 lbs 6 oz)

Specifications are subject to change without notice.