

## AM-FM STEREO RECEIVER

# **DRA-397**

**OPERATING INSTRUCTIONS** 

## **SAFETY PRECAUTIONS**



## **CAUTION:**

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



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



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

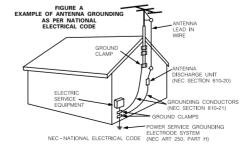
#### WARNING: TO REDUCE THE BISK OF FIE

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

- Read Instructions All the safety and operating instructions should be read before the product is operated.
   Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against
- 2. Retain Instructions The safety and operating instructions should be retained for future reference.
- 3. Heed Warnings All warnings on the product and in the operating instructions should be adhered to.
- Follow Instructions All operating and use instructions should be followed.
   Cleaning Unplug this product from the wall outlet before cleaning. Do not
- use liquid cleaners or aerosol cleaners. 6. Attachments – Do not use attachments not recommended by the product
- Attachments Do not use attachments not recommended by the product manufacturer as they may cause hazards.
- Water and Moisture Do not use this product near water for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
- Accessories Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with

the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

- A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
- 10. Ventilation Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- 11. Power Sources This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
- 12. Grounding or Polarization This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.



- 13. Power-Cord Protection Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- 15. Outdoor Antenna Grounding If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
- 16. Lightning For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
- 17. Power Lines An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- Overloading Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
- 19. Object and Liquid Entry Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- Servicing Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 21. Damage Requiring Service Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power-supply cord or plug is damaged,
  - b) If liquid has been spilled, or objects have fallen into the product,
  - c) If the product has been exposed to rain or water,
  - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation,
  - e) If the product has been dropped or damaged in any way, and
  - f) When the product exhibits a distinct change in performance this indicates a need for service.
- 22. Replacement Parts When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 23. Safety Check Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- 24. Wall or Ceiling Mounting The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
- Heat The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

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SAFFTY INSTRUCTIONS

## FCC INFORMATION (For US customers)

#### 1. PRODUCT

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this product may not cause harmful interference, and (2) this product must accept any interference received, including interference that may cause undesired operation.

### 2. IMPORTANT NOTICE: DO NOT MODIFY THIS PRODUCT

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

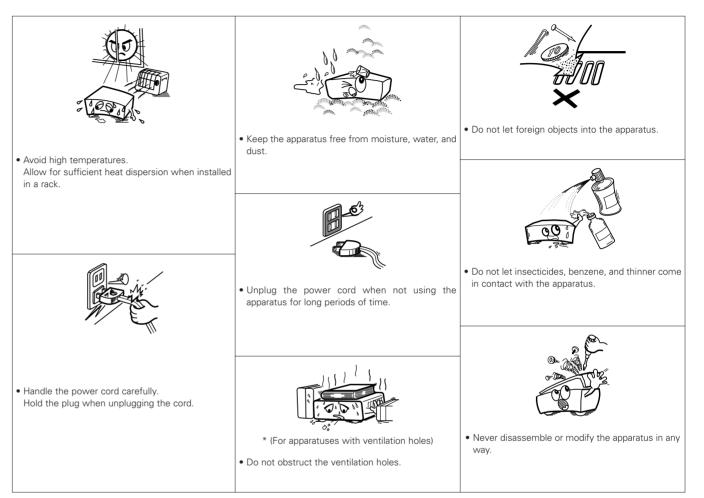
#### 3. NOTE

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This product generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the local retailer authorized to distribute this type of product or an experienced radio/TV technician for help.

## **NOTE ON USE**



Thank you for choosing the DENON DRA-397 AM-FM Stereo Receiver. This remarkable component has been engineered to provide outstanding high fidelity reproduction of your favorite music sources.

As this product is provided with an immense array of features, we recommend that before you begin hookup and operation that you review the contents of this manual before proceeding.

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-
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### Operating the remote control unit

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#### 

## **Getting Started**

## Accessories

Check that the following parts are attached in addition to the main unit:

<ul> <li>Warranty (for No.</li> <li>Service station</li> <li>System remote</li> <li>R6P/AA batterie</li> <li>ZONE remote of</li> <li>R03/AAA batterie</li> <li>AM loop antenio</li> </ul>	orth America moc list e control unit (RC es (For the RC-1 control unit (RC- ries (For the RC- na	lel only) C-1052) 052) 1056) 1056)	
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	(8)	9	
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## Before using

Pay attention to the following before using this unit:

#### • Moving the unit.

To prevent short-circuits or damaged wires in the connection cables, always unplug the power supply cord and disconnect the connection cables between all other audio components when moving the unit.

### Cautions on using mobile phones.

Using a mobile phone near this unit may result in noise. If so, move the mobile phone away from this unit when it is in use.

#### • Before turning the power operation button on.

Check once again that all connections are correct and that there are not problems with the connection cables. Always set the power operation button to the standby position before connecting and disconnecting connection cables.

#### **Getting Started**

• Store the operating instructions in a safe place.

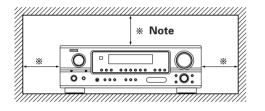
After reading the operating instructions, store them in a safe place as they could come in handy in the future.

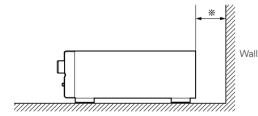
- Whenever the power operation button is in the STANDBY state, the unit is still connected to AC line voltage. Please be sure to turn off the power operation button or unplug the cord when you leave home for, say, a vacation.
- Note that the illustrations in these instructions may differ from the actual unit for explanation purposes.

## **Cautions on installation**

#### Note:

For heat dispersal, do not install this unit in a confined space such as a bookcase or similar enclosure.





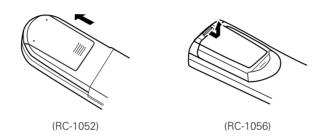
## About the remote control unit

In addition to controlling the DRA-397, the attached system remote control unit (RC-1052) can also be used to control the following products:

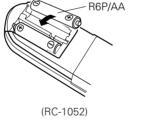
- ① DENON component products
- Component products other than DENON:
  - Set using the preset memory function (1277 page 20).

## Inserting the batteries

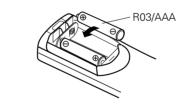
① Remove the remote control unit's rear cover.



 Set two batteries in the battery compartment in the indicated direction.



3 Put the rear cover back on.





# Approx. 23 feet/7 m

#### NOTE:

• It may be difficult to operate the remote control unit if the remote sensor is exposed to direct sunlight or strong artificial light.

(RC-1052)



#### Notes on batteries:

- Replace the batteries with new ones if the set does not operate even when the remote control unit is operated nearby the unit. (The attached batteries are only for verifying operation.)
- When inserting the batteries, be sure to do so in the proper direction, following the "⊕" and "⊖" marks in the battery compartment.
- To prevent damage or leakage of battery fluid:
- Do not use a new battery together with an old one.
- Do not use two different types of batteries.
- Do not short-circuit, disassemble, heat or dispose of batteries in flames.
- If the battery fluid should leak, carefully wipe the fluid off the inside of the battery compartment and insert new batteries.
- Remove the batteries from the remote if it will not be in use for long periods.
- When replacing the batteries, have the new batteries ready and insert them as quickly as possible.

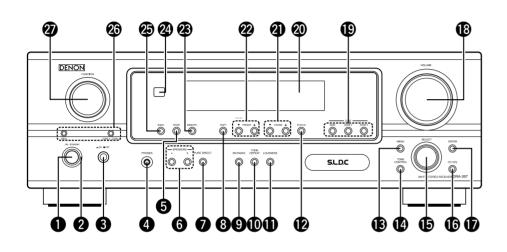
## Operating range of the remote control unit

- Point the remote control unit at the remote sensor when operating it.
- The remote control unit can be used from a distance of approximately 23 feet/7 meters, at a horizontal angle of up to 30° with respect to the sensor.

## Part names and functions

For details on the functions of these parts, refer to the pages given in parentheses ( ).

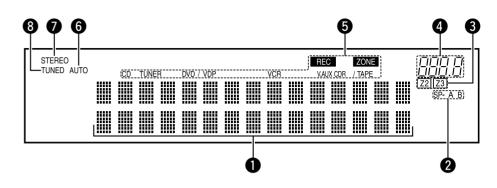
## Front panel



(11)
(11)
(11, 19)
(11)
(13, 16)
(11)
(12)
(13)
(14)
(12)
(12)
(12)
(15, 16)

TONE CONTROL button	(12)
B SELECT knob	(12, 16)
CH VOL button	(12)
DENTER button	(15, 16)
VOLUME control knob	(11)
CONE on/standby buttons	(18)
🕗 Display	
⑦ TUNING buttons (▲, ▼)	(13)
PRESET buttons	(12, 13)
MEMORY button	(13)
Remote control sensor	(2)
Ø BAND button	(13)
ZONE select buttons	(18)
FUNCTION knob	(11)

## Display



## **1** Information display

#### **2** Speaker indicators

This lights corresponding to the settings of the front speakers.

## **③** ZONE2/ZONE3 output indicators

4 Volume indicator This displays the volume level.

## **G** ZONE/REC SELECT indicators

Lights while selecting the ZONE or REC SELECT mode. (Off when the "SOURCE" is selected.)

## **G** AUTO indicator

This lights when the broadcast station is selected in the AUTO tuning mode.

### STEREO indicator

This lights when an FM stereo broadcast has been received.

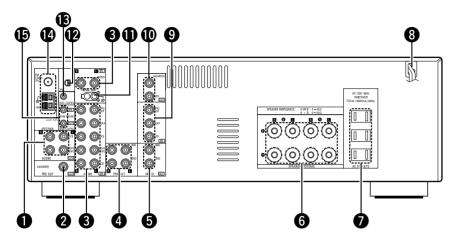
## **13** TUNED indicator

This lights when an FM/AM broadcast has been received.



**Getting Started** 

## **Rear panel**



AUDIO OUT terminals	
<b>2</b> SUBWOOFER PRE OUT terminal(7)	
<b>3</b> AUDIO IN terminals(7)	
<b>4 ZONE PRE OUT terminals</b> (10)	
<b>5</b> ZONE VIDEO OUT terminals(10)	
<b>6</b> Speaker terminals(7)	
<b>AC outlets</b> (10)	
Power supply cord (10)	

	IN terminals(7)
	OUT terminals(7, 8)
🕕 SIGN	L GND terminal(7)
🕑 XM t	rminal(9)
🚯 DOCH	CONTROL jack(9)
🕼 ANTE	NNA terminals(8)
🚯 REMO	TE CONTROL jacks(10)

## **Remote control unit**

□ System remote control unit (RC-1052)

#### [Front] Remote control signal transmitter .....(2) Indicator .....(20) - **M**E COPERATING CONTRACTOR Power buttons ......(11) SHIFT button .....(13) CHANNEL buttons .....(13) Function buttons .....(11) System buttons ......(21) Δ Volume control buttons .....(11) $\nabla$ MUTING button .....(11) $\cap$ MENU button .....(15, 16) MEN 5 $\frown$ DIMMER button ......(12) **Cursor buttons** $(\Delta, \nabla, \triangleleft, \triangleright)$ .....(15, 16) STATU **ENTER button**.....(15, 16) $\Theta$ £ RETUR STATUS button .....(12) VIDEO SELECT button ......(12) â PURE DIRECT/SET UP Mode selector button ......(12) switches ......(11, 18, 20) DENON RC-1052

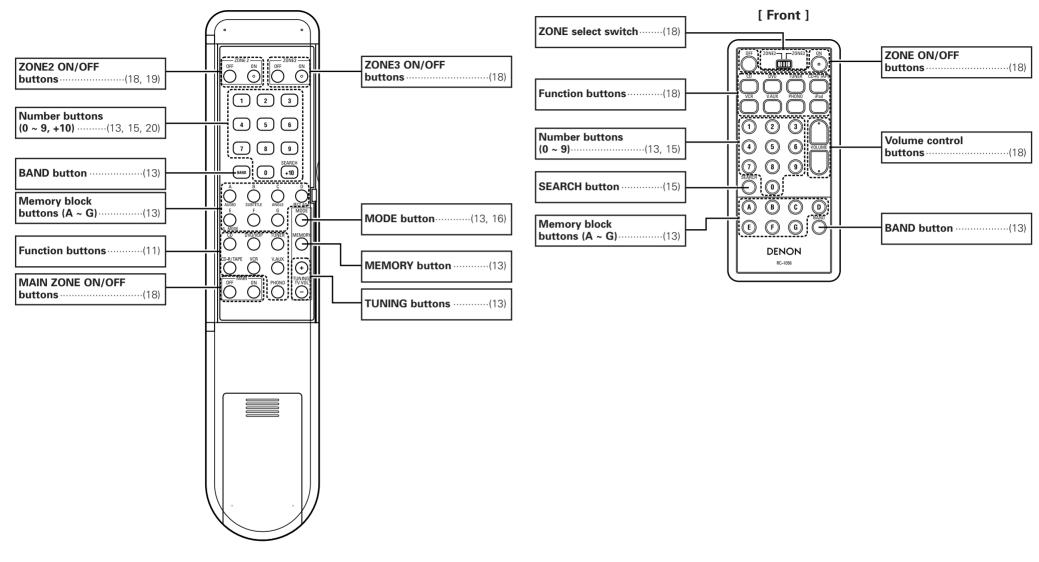
## NOTE:

• If buttons on the front or rear are pressed strongly, the button on the opposite side will be activated too.

4 ENGLISH



**ZONE** remote control unit (RC-1056)



### NOTE:

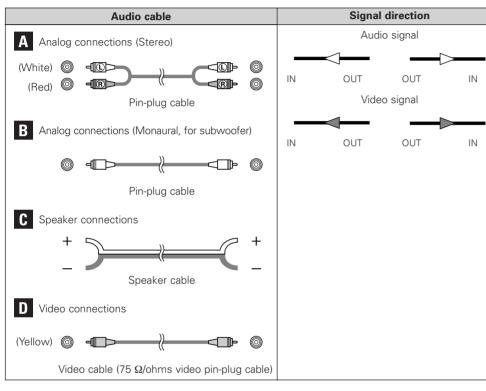
• If buttons on the front or rear are pressed strongly, the button on the opposite side will be activated too.

[Rear]



## **Cable indications**

The hookup diagrams on the subsequent pages assume the use of the following optional connection cables (not supplied).



## NOTE:

- Do not plug in the power supply cord until all connections have been completed.
- When making connections, also refer to the operating instructions of the other components.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Do not bundle power cords together with speaker cables. Doing so could result in humming or noise.

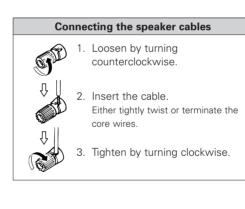
## **Speaker connections**

Connect the speaker terminals with the speakers making sure that like polarities are matched ( $\oplus$  with  $\oplus$ ,  $\ominus$  with  $\ominus$ ).

## NOTE:

When making connections, take care that none of the individual conductors of the speaker cable come in contact with adjacent terminals, with other speaker cable conductors, or with the rear panel and screws.

NEVER touch the speaker terminals when the power is on. Doing so could result in electric shocks.

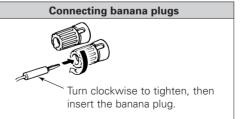


## Speaker impedance

Speaker	Impedance
А, В	4 ~ 16 Ω/ohms
A+B	8 ~ 16 Ω/ohms

## Note on speaker impedance

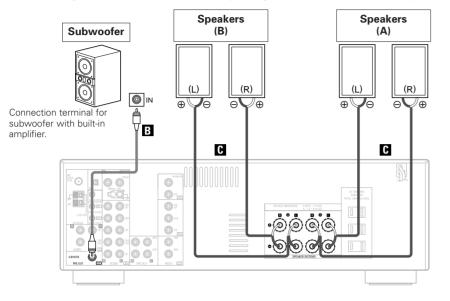
When using speakers with an impedance below the designated value (for example 4  $\Omega$ /ohms), playing for long periods of time with the volume high could cause the temperature to rise, activating the protection circuit. When the protection circuit is activated, the output to the speakers is cut off and the power indicator blinks. If this happens, unplug the power cord, wait for the set to cool off and improve ventilation around the unit. Also check the wiring of the input cables and the speaker cables. After doing this, plug the power cord back in and turn the unit's power back on. If the protection circuit is activated again even though there are no problems with the wiring or the ventilation around the unit, switch off the power and contact a DENON service center.



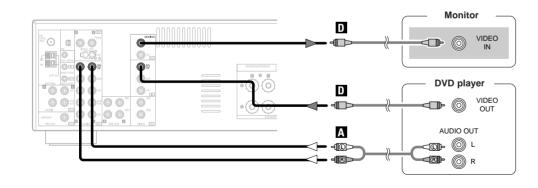


## **Connections**

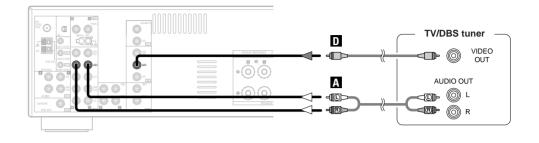
• When making connections, also refer to the operating instructions of the other components.



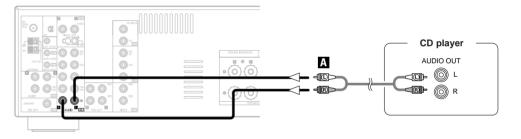
## Connecting a DVD player and monitor



## Connecting a TV/DBS tuner

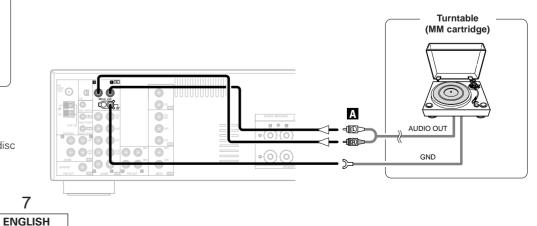


## **Connecting a CD player**



## Connecting a turntable

7



• Connect a non-DVD video disc player (such as a laser disc, VCD/SVCD, or future high definition disc player) to the DVD/VDP terminals in the same way.

## Connections

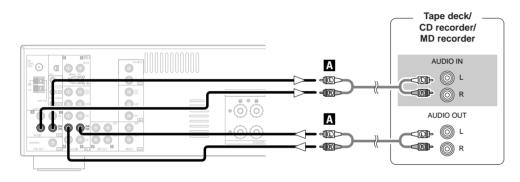
## Í

• The phono input can accept signals from moving magnet (MM) and high output moving coil (MC) phono cartridges. If your turntable is equipped with a low output MC cartridge, you will need to use a separate MC head amplifier or step-up MC transformer.

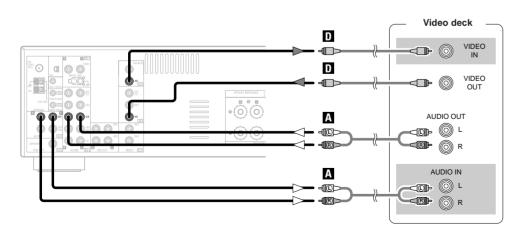
## NOTE:

• If humming or other noise is generated when the ground wire is connected to the SIGNAL GND terminal, disconnect the ground wire.





**Connecting a VCR** 



## Connecting the antenna terminals An F-type FM antenna cable plug can be connected directly. Direction of broadcasting station FM antenna AM loop antenna (Supplied) 75 Ω/ohms Coaxial cable 0 0. 0; FM indoor antenna (Supplied)

0 0 0 0 0

00.00

0

AM outdoor antenna

1. Push the lever.

2. Insert the conductor.

3. Return the lever.

#### Ground **Connection of AM antennas** AM loop antenna assembly Connect to the AM MD. antenna terminals. 1 2 Ŷ Ē Remove the vinyl tie Bend in the reverse and take out the direction. connection line. (4)a. With the antenna on top any stable NOTE: surface. • Do not connect two FM antennas Mount simultaneously. • Even if an external AM antenna is used, do not disconnect the AM loop antenna. b. With the antenna • Make sure the AM loop antenna lead attached to a wall. terminals do not touch metal parts of the panel. Installation hole Mount on wall, etc.

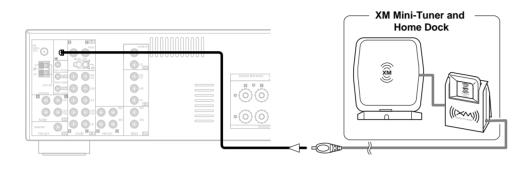
## Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.



- DRA-397 is the XM Ready<sup>®</sup> receiver. You can receive XM<sup>®</sup> Satellite Radio by connecting to the XM Mini-Tuner and Home Dock (includes home antenna, sold separately) and subscribing to the XM service.
- Plug the XM Mini-Tuner Home Dock into XM terminal on the rear panel.
- Position the Home Dock antenna near a south-facing window to receive the best signal.
   For details, see "XM Satellite Radio" (1977) page 14).

When making connections, also refer to the operating instructions of the XM Mini-Tuner and Home Dock.



## NOTE:

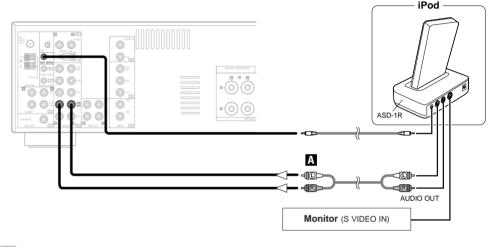
- Keep the power supply cord unplugged until the XM Mini-Tuner and Home Dock connection have been completed.
- The XM name and related logo are registered trademarks of XM Satellite Radio Inc. All rights reserved.
- XM Ready is a registered trademark of XM Satellite Radio Inc. All rights reserved.

## Connecting the iPod®

When using an iPod, you must connect the Control Dock for iPod (ASD-1R, sold separately) and the DOCK CONTROL jack on the DRA-397 with a mini-jack and assign the iPod to any AUDIO terminal(s).

The diagram below shows an example of connections for when the iPod is assigned to the CD-R/TAPE terminals.

- \* For instructions on assigning the iPod to a specific terminal, see "Setting the iPod Assignment" (127 page 15).
- st For instructions on playing the iPod, see "Playing the iPod" (12) page 15).



• The optional standard Control Dock for iPod is DENON ASD-1R sold separately.

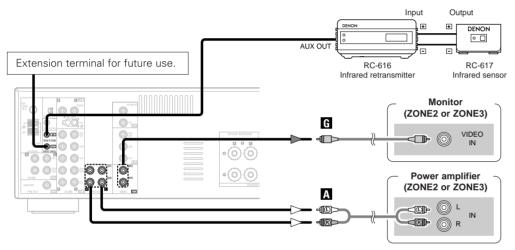
#### Connections

## **Connecting the MULTI ZONE terminals**

\* For instructions on operations using the MULTI ZONE functions (1) page 17).

## ZONE2 (or ZONE3) PRE OUT connections

- If another power amplifier or pre-main (integrated) amplifier is connected, the ZONE2 (or ZONE3) preout (variable or fixed level) terminals can be used to play a different program source in ZONE2 (or ZONE3) the same time (1277 page 17).
- The ZONE2 video out is only for the ZONE2.
- The ZONE3 video out is only for the ZONE3.
- When a sold separately room-to-room remote control unit (DENON RC-616, 617 or 618) is wired and connected between the MAIN ZONE and ZONE2 (ZONE3), the remote-controllable devices in the MAIN ZONE can be controlled from ZONE2 (ZONE3) using the remote control unit.



#### ß AC outlet AC 120V BOHe SWITCHED (wall) AC 120 V, 60 Hz •0 **AC OUTLETS** • SWITCHED (total capacity – 120 W (1 A)) The power to the outlet is turned on and off in conjunction with the POWER switch on the main unit, and when the power is switched between on and standby from the remote control unit. No power is supplied from this outlet when this unit's power is at standby. Never connect equipment whose total power consumption

## NOTE:

Connecting the power supply cord

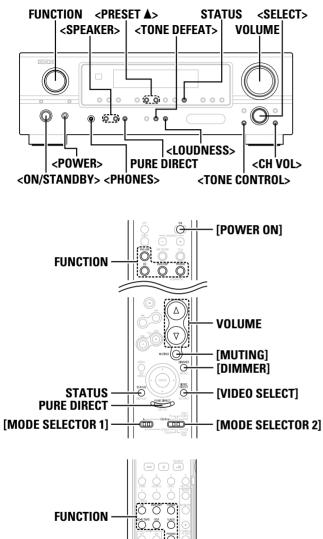
- Insert the plugs securely. Incomplete connections will result in the generation of noise.
- Only use the AC OUTLETS for audio equipment. Never use it for hair driers, monitors or other electrical appliances.

exceeds 120 W (1 A).

## 

- For the AUDIO output, use high quality pin-plug cables and wire in such a way that there is no humming or noise.
- For instructions on installation and operation of separately sold devices, refer to the devices' operating instructions.





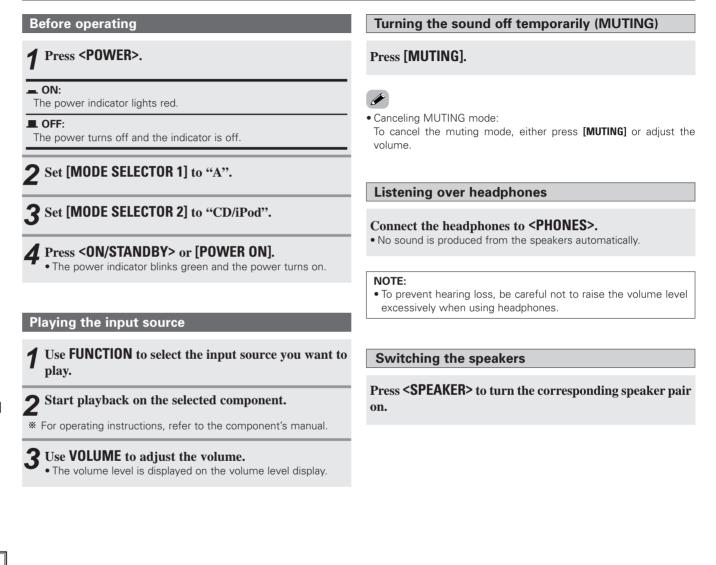
#### About the button names in this explanation

- < > : Buttons on the main unit
- [ ] : Buttons on the remote control unit

## Button name only



## Operation



11 ENGLISH

## Operation

Checking the currently playing program source, etc.

## Press STATUS.

• The current program source and various settings are indicated on the display.

## Switching the brightness of the display

## Press [DIMMER].

\* The brightness of the display can be adjusted in three steps. The display can also be turned off.

## Selecting the play mode (PURE DIRECT)

This mode reproduces the sound with extremely high quality. The display that could affect the audio signals are turned "OFF".

## Press PURE DIRECT.

## Setting the tone control

## Adjusting the tone

**1** Press **<TONE CONTROL>** to select "BASS" or "TREBLE".

## **2** Use **<SELECT>** to set the level.

\* Can be adjusted within the range of -10 dB to +10 dB.

U When you do not want to adjust the tone

Press **<TONE DEFEAT>** to select "TONE DEFEAT ON".

U When listening with the volume turned low

Press <LOUDNESS> to select "LOUDNESS ON".

## Adjusting the speaker volume

**Press <CH VOL>** to select the speaker.

\* The settable speaker switches each time this button is pressed.

**2** Use **<SELECT>** to adjust the volume.

 $\ast$  Can be adjusted within the range of –12 dB to +12 dB.

Combining the currently playing sound with the desired image (VIDEO SELECT function)

Press [VIDEO SELECT] until the desired image appears on the display.

- To cancel, press [VIDEO SELECT] to select "SOURCE".
- The video source selected with the video select function is stored in the memory for the different input sources.

## Listening to the radio

Check that the remote control unit is set to "A".

## Auto preset memory

This unit is equipped with a function for automatically searching for FM broadcast stations and storing them in the preset memory.

Press **<ON/STANDBY>** and set the DRA-397's power to the standby mode.

- Hold <PRESET ▲> and press <ON/STANDBY>.
- The unit automatically begins searching for FM broadcast stations.
- \* When the first FM broadcast station is found, that station is stored in the preset memory at channel A1.

Subsequent stations are automatically stored in order at preset channels A1 to A8, B1 to B8, C1 to C8, D1 to D8, E1 to E8, F1 to F8 and G1 to G8 for a maximum of 56 stations.

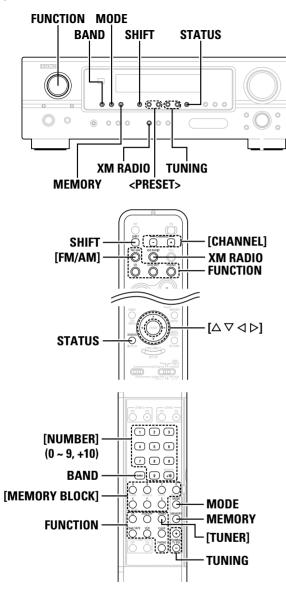
\* Channel A1 is tuned in after the auto preset memory operation is completed.

## ø

- If an FM station cannot be preset automatically due to poor reception, use the "Manual tuning" operation to tune in the station, then preset it using the manual "Preset memory" operation.
- To interrupt this function, press **<0N/STANDBY>**.

## Default settings

Auto tuner presets	
A1 ~ A8	87.5 / 89.1 / 98.1 / 107.9 / 90.1 / 90.1 / 90.1 / 90.1 MHz
B1 ~ B8	520 / 600 / 1000 / 1400 / 1500 / 1710 kHz, 90.1 / 90.1 MHz
C1 ~ C8	90.1 MHz
D1 ~ D8	90.1 MHz
E1 ~ E8	90.1 MHz
F1 ~ F8	90.1 MHz
G1 ~ G8	90.1 MHz



About the button names in this explanation

- > : Buttons on the main unit <
- ſ 1 : Buttons on the remote control unit

Button name only :

Buttons on the main unit and remote control unit

- Auto tuning **Preset memory** Use FUNCTION to select "TUNER" or press [TUNER]. Use the "Auto tuning" or "Manual tuning" operation to tune in the station to be preset in the memory. Press BAND to select "AM" or "FM". **?** Press MEMORY. **?** Press **MODE** to set the auto tuning mode. **?** Press [MEMORY BLOCK] (A to G) or SHIFT to select • The "AUTO" indicator lights. the desired memory block (A to G). Press TUNING. Press <PRESET>, [CHANNEL] or [NUMBER] to select Automatic searching begins. the desired preset channel (1 to 8). **5** Press **MEMORY** again. • Store the station in the preset memory. • If tuning does not stop at the desired station, use to the "Manual tuning" operation. • "AM" or "FM" can be selected directly by pressing [FM/AM]. • To preset other channels, repeat steps 2 to 4. A total of 56 broadcast stations can be preset - 8 stations (channels Manual tuning 1 to 8) in each of blocks A to G. Use FUNCTION to select "TUNER" or press [TUNER]. **Recalling preset stations** Press BAND to select "AM" or "FM". Press [MEMORY BLOCK] (A to G) or SHIFT to select the memory block. **?** Press **MODE** to set the manual tuning mode. \* Check that the display's "AUTO" indicator turns off.
  - Press <PRESET>, [CHANNEL] or [NUMBER] to select the desired preset channel.

## 13 ENGLISH

\* The frequency changes continuously when the button is held in.

• When the manual tuning mode is set, FM stereo broadcasts are received in monaural and the "STEREO" indicator turns off. • "AM" or "FM" can be selected directly by pressing [FM/AM].

Press TUNING.

Operation

#### Operation

## XM Satellite Radio

## □ ABOUT XM SATELLITE RADIO

XM Satellite Radio offers an extraordinary variety of commercial-free music, plus the best in sports, news, talk and entertainment. XM is broadcast in superior digital audio from coast to coast. From rock to reggae, from classical to hip hop, XM has something for every music fan. XM's dedication to playing the richest selection of music is matched by its passion for live sporting events, talk radio, up-to-theminute news, stand-up comedy, children's programming, and much more. For U.S. customers, information about XM Satellite Radio is available online at www.xmradio.com. For Canadian customers, information about XM Canada is online at www.xmradio.ca.

## **XM READY® LEGAL**

Hardware and required monthly subscription sold separately. Other fees and taxes, including a one-time activation fee may apply. Subscription fee is consumer only. All fees and programming subject to change. Channels with frequent explicit language are indicated with an XL. Channel blocking is available for XM radio receivers by calling 1-800-XMRADIO (US residents) and 1-877-GET-XMSR (Canadian residents).

For a full listing of the XM commercial-free channels and advertisingsupported channels, visit lineup.xmradio.com (US residents) or xmradio.ca (Canadian residents).

Subscriptions subject to Customer Agreement available at xmradio.com (US residents) and xmradio.ca (Canadian residents). Only available in the 48 contiguous United States and Canada. ©2006 XM Satellite Radio Inc. All rights reserved. All other trademarks are the property of their respective owners.

## **XM READY® SUBSCRIPTIONS**

Once you have installed the XM Mini-Tuner Dock, inserted the XM Mini-Tuner, connected the XM Dock to your XM Ready<sup>®</sup> home audio system, and installed the antenna, you are ready to subscribe and begin receiving XM programming. There are three places to find your eight character XM Radio ID: on the XM Mini-Tuner, on the XM Mini-Tuner package, and on XM Channel 0. Record the Radio ID in the following eight squares for reference.



Note: The XM Radio ID does not use the letters "I", "O", "S" or "F". Activate your XM Satellite Radio service in the U.S. online at http://activate.xmradio.com or call 1-800-XM-RADIO (1-800-967-2346). You will need a major credit card. XM will send a signal from the satellites to activate the full channel lineup. Activation normally takes 10 to 15 minutes, but during peak busy periods you may need to keep your XM Ready home audio system on for up to an hour. When you can access the full channel lineup on your XM Ready home audio system you are done. For more information or to subscribe in Canada, visit XM on the Web at www.xmradio.ca or call XM's Listener Care at 1-877-GET-XMSR (1-877-438-9677).

## Checking the XM signal strength and Radio ID

**1** Use FUNCTION to select "TUNER" or press [TUNER].

## **2** Press **BAND** to select "XM".

## **?** Press **STATUS** until "SIGNAL" is displayed.

• The display changes as shown below according to the receiving condition.

Display	Condition
GOOD	Signal strength is good
MARGINAL	Signal strength is marginal
WEAK	Signal strength is poor
NO	Loss of the signal

**4** Adjust the antenna location until "SIGNAL:GOOD" is displayed.

**5** Press **STATUS** until the XM channel (ex.XM001) is displayed.

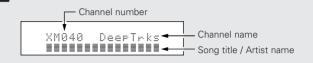
6 Press TUNING to select channel 0 (XM000).



## **Channel selection**

## Use FUNCTION to select "TUNER" or press [TUNER].

## **2** Press **BAND** to select "XM".



## **?** Press **TUNING** to reach the desired channel.

- \* The channel changes continuously when you press and hold **TUNING**.
- \* When the artist name and song title are received, they are displayed.

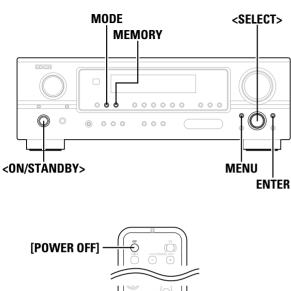
## **Category search**

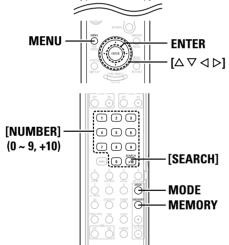
# Press [< ▷] in the XM mode.</p> • The current category name is displayed. XM006 60's CATEGORY SEARCH ↓ XM006 60's XM006 60's Channel category

**2** Press  $[\triangleleft \triangleright]$  to select the category, and press  $\triangle \bigtriangledown$  to select the channel within the selected category.

- "LOADING" is displayed while receiving the channel or information.
- "UPDATING" is displayed while updating encryption code.
- When the selected channel is not available, "XM --" is displayed.
- Information on the artist name, song title, category and signal level can be checked using **STATUS**.
- The XM Satellite Radio channels can be preset in the same way as AM/FM band.
- "XM" can be selected directly by pressing XM RADIO.







About the button names in this explanation

- < > : Buttons on the main unit
- [ ] : Buttons on the remote control unit

Button name only :

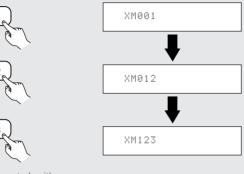
Buttons on the main unit and remote control unit

## Direct access of channels

Press [SEARCH] in the XM mode.

## **2** Press [NUMBER] to enter the desired channel.

\* For example, if you want to access channel 123 (ex.XM123) press [NUMBER] as shown below.



### (Remote control unit)

**3** Once all number have been input, press ENTER to change the channel.

\* If the next **[NUMBER]** is not pressed within several seconds, the channel automatically switches to the channel number that was input.

## Playing the iPod®

The music recorded on the iPod can be played when using a Control Dock for iPod (ASD-1R, sold separately). The iPod can be controlled using the buttons on the main unit and the remote control unit.



iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries.

\* With the iPod, non-copyrighted contents and contents that may be legally reproduced or played may be reproduced and played by individuals for their personal use. Violating copyrights is prohibited by law.

## Setting the iPod Assignment

It is possible to assign the Control Dock for iPod's (ASD-1R, sold separately) audio and video signals to any input terminals on the DRA-397 and play them.

Press MENU.

**2** Use  $\langle$ **SELECT** $\rangle$  or press  $[\triangleleft \triangleright]$  to select the input terminals.

## NONE:

This is the factory default setting.

## DVD, VCR, V.A, CDR, CD:

When using a Control Dock for iPod, it is possible to connect with the audio input terminal of the assigned function.

**3** Press ENTER.

## **.**

- The optional standard Control Dock for iPod is DENON ASD-1R sold separately.
- To assign to a different function after a function has already been assigned, switch to a function other than the one that is assigned then repeat the procedure.

## NOTE:

- DENON will accept no responsibility whatsoever for loss or damage of data on an iPod occurring when the iPod is used connected to the DRA-397.
- Some of the functions may not operate, depending on the type of iPod and the software version.





### Operation

## Listening to music

- **1** Connect the DRA-397 and iPod using the Control Dock for iPod (ASD-1R) (127 page 9).
- **2** Assign the input terminal at "Setting the iPod Assignment" (r page 15).
- **3** Use **FUNCTION** to select the function assigned in step 2.
- Display "Remote iPod" on the main unit's display.

## Remote iPod

\*\* If the screens above are not displayed, the iPod may not be properly connected. Check the connections and settings.

**4** Operate using MENU, **SELECT**>,  $[\triangle \bigtriangledown \lhd \triangleright]$  and **ENTER** while watching the iPod's screen.

 The optional standard Control Dock for iPod is DENON ASD-1R sold separately.

## Listening to music in the Browse mode

The mode switches between the Remote mode and the Browse mode if **MODE** is pressed for at least 2 seconds.

# **1** Use **SELECT>** or press $[\triangle \bigtriangledown]$ to select the music file, then press ENTER or $[\triangleright]$ .

\* Press [4] to return to the music menu screen.

## **2** Press ENTER or $[\triangleright]$ .

Playback starts.

#### Pause:

Press **ENTER** during playback. Press again to resume.

### Manual search:

- Press and hold in  $\ensuremath{\left[\Delta\,\nabla\right]}$  during playback.
- $\Delta$ : Fast reverse
- $\nabla$ : Fast forward

## Track search:

- Press  $[\Delta \nabla]$  during playback.
- $\Delta$ : Move to beginning of previous track

## Stop:

Press ENTER for at least 2 seconds during playback.

## Repeat play:

## Press MODE.

- The mode switches as follows each time **MODE** is pressed. • **Repeat One:** Single track repeat
- Repeat All: All track repeat

## Shuffle play:

## Press MEMORY.

- The mode switches as follows each time **MEMORY** is pressed. • **Shuffle Songs:** Single track shuffle
- Shuffle Albums: Album shuffle
- \*\* In the Remote mode, only **<SELECT>**, [ $\Delta \nabla \triangleleft \triangleright$ ], and **ENTER** can be used.

## ø

- When **STATUS** is pressed during playback, the front panel display switches between the title name, artist name and album name.
- Depending on the iPod's software version, it may not be possible to operate the iPod from the DRA-397. Use the latest version of the software. Information on the latest version of the software can be obtained on the Apple Computer website.
- With the DRA-397 it is possible to display folder names and file names on the screen like titles. The DRA-397 can display up to 64 characters, consisting of numbers, capital letters and small letters. A "?" mark is displayed in place of non-compatible characters.

## Viewing still pictures and videos (only for iPods equipped with the slideshow / video function)

Use this procedure to view photo and video data stored on the iPod on a monitor.

# Press **MODE** for at least 2 seconds to switch from the Browse mode to the Remote mode.

• "Remote iPod" is displayed on the DRA-397's display.

# Watching the iPod's screen, press $[\triangle \bigtriangledown]$ to select "Photos" or "Video", then press ENTER or $[\triangleright]$ .

• The iPod's photo and video data are displayed on the monitor.

## 

• To output photo or video data recorded on the iPod to the monitor, the iPod's "TV Out" setting (under "Video Settings") must be set to "ON".

For details, refer to the iPod's operating instructions.

## Disconnecting the iPod

# Press **<ON/STANDBY>** or **[POWER OFF]** and set the DRA-397's power to the standby mode.

\* The iPod can be disconnected after switching to a function other than the one to which the iPod input is assigned.



## Multi zone music entertainment system

- When the outputs of the ZONE2 (ZONE3) OUT terminals are wired and connected to power amplifiers installed in other rooms, different sources can be played in rooms other than the MAIN ZONE in which this unit and the playback devices are installed. (Refer to ZONE2 (ZONE3) on the diagram below.)
- When a sold separately room-to-room remote control unit (DENON RC-616, 617 or 618) is wired and connected between the MAIN ZONE and ZONE2 (ZONE3), the remote-controllable devices in the MAIN ZONE can be controlled from ZONE2 (ZONE3) using the remote control unit.
- \* To control playback devices other than the ones above, either use that device's remote control unit or preset a separately sold programmable remote control unit.

## 

• For instructions on installation and operation of separately sold devices, refer to the devices' operating instructions.

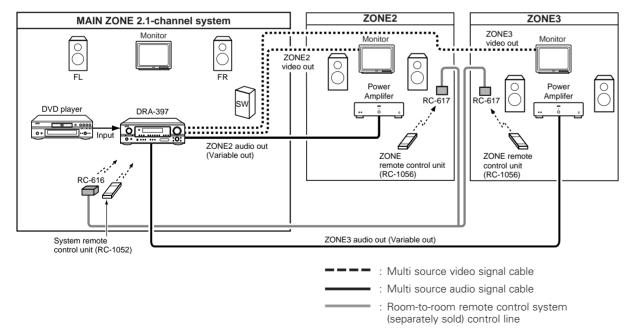
## Multi-zone playback using the ZONE2 and ZONE3 PREOUT terminals

## U When using the power amplifier as the MAIN ZONE output

• The DRA-397 is equipped with pre-out terminals for which the volume is adjustable and video output terminals (composite) as the ZONE2 (ZONE3) output terminals, and variable output level as the ZONE2 (ZONE3) output terminals.

## [System configuration and connections example]

Using external amplifier.



\* Refer to "Connections" ( Page 10).



## FUNCTION 0 0 0 000000 000 000 000 <ZONE/REC SELECT> [CHANNEL] FUNCTION $\bigcirc$ O O [VOLUME] [MODE SELECTOR 1] [MODE SELECTOR 2] [ZONE2 ON] [ZONE3 OFF] [ZONE2 OFF] ð [ZONE3 ON] FUNCTION [MAIN ON/OFF]

## About the button names in this explanation

< > : Buttons on the main unit

[ ] : Buttons on the remote control unit

Button name only :

Buttons on the main unit and remote control unit

Outputting a program source to amplifier, etc., in the ZONE2 (or ZONE3) room (ZONE2 or ZONE3 SELECT mode)

Press <**ZONE/REC SELECT**> to select "M-ZONE".

M-ZONE - RECOUT

**2** Use FUNCTION to select the source you want to output appears on the display.

• The " ZONE " indicator and the indicator for the selected source light.

## **2** Start playing the source to be output.

\* For operating instructions, refer to the manuals of the respective components.

• The signals of the source selected in the ZONE mode are also output from the VCR and CD-R/TAPE recording output terminals.

Remote control unit operations during multisource playback

Set [MODE SELECTOR 1] to the "B".

**2** Set [MODE SELECTOR 2] to the "ZONE2" or "ZONE3".

**3** Press [ZONE2 (ZONE3) ON] to turn on the zone power.

\* To cancel the ZONE2 or ZONE3 mode: Press [ZONE2 OFF] or [ZONE3 OFF].

# Use [FUNCTION] to select the input source you wish to output.

• The "ZONE" indicator and the indicator for the selected source light.

\* The MULTI ZONE source switches directly.

\* When the MULTI ZONE SOURCE function is set to "TUNER", the preset channel can be selected pressing [CHANNEL].

# **5** The volume of the outputs of the different zones can be adjusted with [VOLUME].

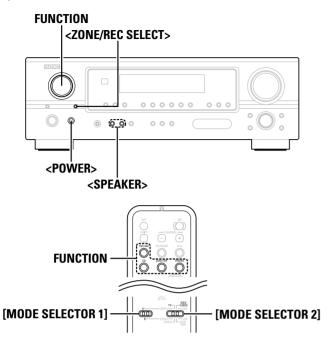
\* Default volume setting ZONE2/ZONE3 : - - - dB (Minimum)

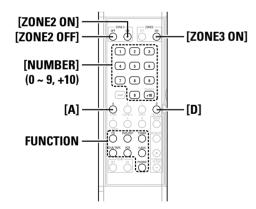
\* The zone volume can be adjusted within the range of -80 to 18 dB, in steps of 0.5 dB.

## **E**

• When using ZONE2 or ZONE3, it is possible to turn the power for the MAIN ZONE only on or off by pressing [MAIN ON/OFF].







#### About the button names in this explanation

- < > : Buttons on the main unit
- [ ] : Buttons on the remote control unit

#### Button name only :

Buttons on the main unit and remote control unit

## Recording (audio and/or video)

**1** Press **<ZONE/REC SELECT>** until "RECOUT" appears on the display.

M-ZONE - RECOUT

**2** Use FUNCTION to select the source to be recorded (audio and/or video).

• The " **REC** " indicator lights.

## Record (the audio or video signals).

For operations, see the operating instructions of the device from which you are recording (audio or video signals).

• To cancel, press <**ZONE/REC SELECT>** and set the function to "ZONE".

## NOTE:

• When the REC OUT mode is selected, [ZONE2 (ZONE3) ON] and FUNCTION (ZONE) cannot be operated.

## About the memory functions

## Last function memory

The various settings set when the DRA-397's power is switched to standby are stored in the memory. When the power is turned back on, the settings made when the power was switched to standby are recalled.

## Backup memory

The various settings are stored in the memory for about 1 week, even when the power is turned off or the power cord is unplugged.

## Initialization of the microprocessor

If the indication on the display is not normal or if the operation of the unit is not correct, then the microprocessor should be reset by the following procedure.

Switch off the unit using **<POWER>**.

**2** Keep both **<SPEAKER>** (A and B) depressed and turn on the unit by pressing **<POWER>**.

**3** Check that the entire display is flashing at 1-second intervals and release the buttons.

• The microprocessor will be initialized.

## ø

• If step 3 does not work, start over from step 1.

• If the microprocessor has been reset, all the button settings are reset to the default values (the values set upon shipment from the factory).

## Operating the remote control unit

**Operating DENON audio components** 

Set [MODE SELECTOR 1] to "A" or "B".

**2** Set [MODE SELECTOR 2] to the position for the component to be operated.

## **3** Operate the audio component.

- \* For details, refer to the component's operating instructions.
- \* While this remote control is compatible with a wide range of infrared controlled components, it may be the case that some component models cannot be operated with this remote control.

## Setting the preset memory function

- DENON and other makes of components can be operated by setting the preset memory.
- This remote control unit can be used to operate components of other manufacturers without using the learning function by registering the manufacturer of the component as shown in the list of preset codes (ICPF End of this manual).
- Operation is not possible for some models.

## Set [MODE SELECTOR 1] to "A" or "B".

\*\* Set to the A side for the CD/iPod, TV, DBS/CABLE or DVD position, and to the B side for the CD-R/TAPE or VCR position.

**2** Set [MODE SELECTOR 2] to the component to be registered.

**3** Press [ZONE2 OFF] and [ZONE3 ON] at the same time. The indicator starts flashing. **4** Referring to the included list of preset codes, press [NUMBER] to input the preset code (a 3-digit number) for the manufacturer of the component whose signals you want to store in the memory.

**5** To store the codes of another component in the memory, repeat steps 1 to 4.

## 

- The signals for the pressed buttons are emitted while setting the preset memory. To avoid accidental operation, cover the remote control unit's transmitting window while setting the preset memory.
- Depending on the model and year of manufacture, this function cannot be used for some models, even if they are of makes listed in the list of preset codes.
- Some manufacturers use more than one type of remote control code. Refer to the included list of preset codes to change the number and verify correct operation.
- The preset memory can be set for one component only among the following: CD/iPod, DBS/CABLE and CD-R/TAPE.

## Setting the punch through function

"Punch Through" is a function allowing you to operate ▶, ■, ◄, ■, ◀◀, ▶▶, I◀◀ and ▶▶I on CD, DVD/VDP, TAPE/CD-R/MD or VCR components when in the TV or DBS/CABLE mode. By default, nothing is set.

## Set [MODE SELECTOR 1] to "A".

Set [MODE SELECTOR 2] to the component to be registered (TV or DBS/CABLE).

**Press [A] and [D] at the same time.** • The indicator starts flashing.

## Input the number of the component you want to set.

	No.
CD	1
DVD/VDP	2
TAPE/CD-R/MD	3
VCR	4
No setting	0

Operating a component stored in the preset memory

## Set [MODE SELECTOR 1] to "A" or "B".

\* Set to the A side for the CD/iPod, TV, DBS/CABLE or DVD position, and to the B side for the CD-R/TAPE or VCR position.

2 Set [MODE SELECTOR 2] to the component you want to operate.

## **3** Operate the component.

\* For details, refer to the component's operating instructions.

\* Some models cannot be operated with this remote control unit.

Operating the remote control unit

□ Functions of buttons for the different devices

## [Front]

Device operated	CD player or iPod	TV (Monitor)	Satellite tuner	Cable TV	DVD player	CD recorder	Tape deck	MD recorder	Video deck
MODE SELECTOR 1	Α			1	B				
MODE SELECTOR 2	CD/iPod	τν	DBS/	CABLE	DVD		CD-R/TAPE		VCR
OFF	Power off	_	_	_	Power off	Power off	Power off	Power off	_
ON	Power on	Power on	Power on	Power on	Power on	Power on	Power on	Power on	Power on
CHANNEL –	Preset –	TV channels –	Channels —	Channels –	Preset –	Preset –	Preset –	Preset –	TV channels –
CHANNEL +	Preset +	TV channels +	Channels +	Channels +	Preset +	Preset +	Preset +	Preset +	TV channels +
►	Play	Punch through	Punch through	Punch through	Play	Play	Forward play	Play	Play
•	Stop	Punch through	Punch through	Punch through	Stop	Stop	Stop	Stop	Stop
II, A/B	Pause	Punch through	Punch through	Punch through	Pause	Pause	A/B switching	Pause	Pause
◀, SKIP +	Disc skip +	Punch through	Punch through	Punch through	Disc skip +	_	Reverse play	_	_
	Search (reverse)	Punch through	Punch through	Punch through	Search (reverse)	Search (reverse)	Rewind	Search (reverse)	Search (reverse)
••	Search (forward)	Punch through	Punch through	Punch through	Search (forward)	Search (forward)	Fast forward	Search (forward)	Search (forward)
I◀◀, VCR CH –	Skip (reverse)	Punch through	Punch through	Punch through	Skip (reverse)	Skip (reverse)	_	Skip (reverse)	Channel –
►►I, VCR CH +	Skip (forward)	Punch through	Punch through	Punch through	Skip (forward)	Skip (forward)	_	Skip (forward)	Channel +
MENU	Menu	Menu	Menu	Menu	Top menu	Menu	Menu	Menu	_
	Cursor operation	Cursor operation	Cursor operation	Cursor operation	Cursor operation	Cursor operation	Cursor operation	Cursor operation	_
DIMMER	Dimmer	Dimmer	Dimmer	Dimmer	Menu	Dimmer	Dimmer	Dimmer	Dimmer
ENTER	Enter	Enter	Enter	Enter	Enter	Enter	Enter	Enter	-
STATUS	Status	Display	Display	Display	Display	Status	Status	Status	-
VIDEO SELECT	Video selection	Return	Return	Return	Return	Video selection	Video selection	Video selection	-
PURE DIRECT	Pure direct	Pure direct	Pure direct	Pure direct	Set up	Pure direct	Pure direct	Pure direct	Pure direct



Operating the remote control unit

## Operating the remote control unit

## [Rear]

Device operated	CD player or iPod	TV (Monitor)	Satellite tuner	Cable TV	DVD player	CD recorder	Tape deck	MD recorder	Video deck
MODE SELECTOR 1			Α					В	
MODE SELECTOR 2	CD/iPod	TV	DBS/0	CABLE	DVD		CD-R/TAPE		VCR
NUMBER (0 ~ 9, +10)	Channels	Channels	Channels	Channels	Channels	Channels	Channels	Channels	Channels
BAND	FM/AM/XM switching	TV/VCR switching	TV/VCR switching	TV/VCR switching	TV/VCR switching	FM/AM/XM switching	FM/AM/XM switching	FM/AM/XM switching	TV/VCR switching
A, AUDIO	Memory block	_	_	_	Audio	Memory block	Memory block	Memory block	_
<b>B</b> , SUBTITLE	Memory block	-	_	_	Subtitle	Memory block	Memory block	Memory block	_
C, ANGLE	Memory block	-	_	_	Angle	Memory block	Memory block	Memory block	_
D, PICT ADJ.	Memory block	-	_	_	Picture adjust	Memory block	Memory block	Memory block	_
E, S.MODE	Memory block	-	_	_	Search mode	Memory block	Memory block	Memory block	_
TUNING +	Tuning +	TV volume +	Volume +	Volume +	TV volume +	Tuning +	Tuning +	Tuning +	TV volume +
TUNING –	Tuning —	TV volume –	Volume –	Volume —	TV volume –	Tuning —	Tuning —	Tuning —	TV volume –
Default setting (Preset code)	DENON (111)	HITACHI (134)	_	ABC (007)	DENON (111)	-	DENON (114)	_	HITACHI (108)
Special remarks	1	1), 3	1),	3	1), 2		1		1

#### Special remarks:

It is only possible to set the preset memory for one device per mode. When a new code is preset, the previous code is automatically deleted.
 Note that the function names of the DVD buttons on the remote control unit may differ for some brands. Check beforehand.

3 The CD, TAPE/CD-R/MD, VCR or DVD/VDP buttons can be assigned to a TV or satellite tuner (or cable TV) (IP page 20).



## Troubleshooting

If a problem should arise, first check the following.

- 1. Are the connections correct?
- 2. Have you operated the receiver according to the Operating Instructions?
- 3. Are the speakers and other components operating properly?

If this unit is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

Symptom	Cause	Measures	Page
Display not lit and sound not produced when POWER switch set to on.	Power supply cord not plugged in securely.	Check the insertion of the power supply cord plug.	10
Display lit but sound not produced.	<ul> <li>Speaker cables not securely connected.</li> <li>FUNCTION knob position is not appropriate.</li> </ul>	<ul><li>Connect securely.</li><li>Switch to the proper position.</li></ul>	6, 7 11
	<ul><li>Volume control set to minimum.</li><li>MUTING is on.</li></ul>	<ul><li>Turn volume up to suitable level.</li><li>Switch off MUTING.</li></ul>	11 11
Nothing is displayed on monitor.	<ul> <li>DRA-397's video output terminals and monitor's input terminals are not properly connected.</li> <li>Monitor's input setting is wrong.</li> </ul>	<ul> <li>Check that the connections are correct.</li> <li>Set the monitor's input selector to the terminals to which video signals are connected.</li> </ul>	7
Copying from DVD to VCR is not possible.	• Copying between a source such as DVD and a VCR is not usually possible, as DVDs are often encoded with copy-protection signals that prevent VCR recording.	Copying is not possible.	_
No sound is produced from subwoofer.	<ul> <li>Subwoofer's power is not on.</li> <li>Subwoofer's output is not connected.</li> <li>The subwoofer's channel volume level is set to "-12 dB".</li> </ul>	<ul> <li>Turn on the power.</li> <li>Connect properly.</li> <li>Turn the subwoofer's channel volume level up.</li> </ul>	

Cause	Measures	Page
Batteries dead.	• Replace with new batteries.	2
<ul> <li>Remote control unit too far from this unit.</li> </ul>	Move closer.	2
<ul> <li>Obstacle between this unit and remote control unit.</li> </ul>	Remove obstacle.	—

Troubleshooting

remote control unit is used.	<ul> <li>Obstacle between this unit and remote control unit.</li> <li>Different button is being pressed.</li> <li>⊕ and ⊖ ends of batteries inserted in reverse.</li> </ul>	<ul><li>Remove obstacle.</li><li>Press the proper button.</li><li>Insert batteries properly.</li></ul>	2
Power has turned off and the power indicator is blinking red.	• The set's internal temperature has risen and the protection circuit has been activated.	<ul> <li>Put the DRA-397 in a well-ventilated place.</li> <li>Turn off the power, then wait for the</li> </ul>	6 6
	• The core wires of the speaker cables are touching each other or the DRA-	<ul><li>set to fully cool off before turning the power back on.</li><li>Check the connections of all the speaker cables.</li></ul>	7
	<ul><li>397's rear panel, activating the protection circuit.</li><li>DRA-397 is malfunctioning.</li></ul>	• Turn off the power and contact a DENON customer service center.	6
"CHECK ANTENNA" is displayed in the XM mode.	• DRA-397's XM connectors and the XM Mini-Tuner and Home Dock is not properly connected.	Check that the connection are correct.	9
"NO SIGNAL" is displayed in the XM mode.	• The signal cannot be received.	Reposition your XM Mini-Tuner and Home Dock.	14
"OFF AIR" is displayed in the XM mode.	• The selected channel is not currently broadcasting.	Select the another channel.	14
Receiving only XM channels 0 and 1.	• The XM Tuner is not activated.	Contact XM Radio.	14

Symptom

This unit does not operate properly when

# Specifications

<ul> <li>Audio section</li> <li>Power amplifier Rated output: Output terminals:</li> <li>Analog (LINE input-PRE OUT) Input sensitivity / input impedance: Frequency response: S/N: Total harmonic distortion: Rated output:</li> </ul>	80 W + 80 W (8 Ω/ohms, 20 A or B 4 ~ 16 Ω/ohms A + B 8 ~ 16 Ω/ohms 200 mV / 47 kΩ/kohms 10 Hz ~ 100 kHz: +1, -3 dB (TO 98 dB (IHF-A weighted) (TONE 0.009 % (-3 dB at rated output 1.2 V	DEFEAT ON)
<ul> <li>Video section</li> <li>Standard video terminals Input / output level and impedance: Frequency response:</li> </ul>	1 Vp-p, 75 Ω/ohms 5 Hz ~ 10 MHz — +1, -3 dB	
☐ Tuner section	[FM]	[AM]
Receiving Range: Usable Sensitivity: 50 dB Quieting Sensitivity: S/N (IHF-A): Total Harmonic Distortion (at 1 kHz):	$\begin{array}{ll} (\text{note: } \mu\text{V at } 75 \ \Omega/\text{ohms, } 0 \ \text{dBf} = \\ 87.5 \ \text{MHz} \sim 107.9 \ \text{MHz} \\ 1.0 \ \mu\text{V} \ (11.2 \ \text{dBf}) \\ \hline \text{MONO} & 1.6 \ \mu\text{V} \ (15.3 \ \text{dB}) \\ \text{STEREO} & 23 \ \mu\text{V} \ (38.5 \ \text{dB}) \\ \hline \text{MONO} & 77 \ \text{dB} \ (\text{IHF-A w}) \\ \text{STEREO} & 72 \ \text{dB} \ (\text{IHF-A w}) \\ \hline \text{MONO} & 0.15 \ \% \ (1 \ \text{kHz}) \\ \hline \text{STEREO} & 0.3 \ \% \ (1 \ \text{kHz}) \\ \end{array}$	520 kHz ~ 1710 kHz 18 μV f) reighted)
General Power supply: Power consumption: Maximum external dimensions: Mass:	AC 120 V, 60 Hz 3.4 A 1 W Max (Standby) 434 (W) x 147 (H) x 417 (D) mm (17-3/32" x 5-25/32" x 16-27/64") 9.4 kg (20 lbs 11.6 oz)	
Remote control unit (RC-1052) Batteries: External dimensions: Mass:	2) R6P/AA Type (Two batteries) 52 (W) x 243 (H) x 21 (D) mm (2-3/64" x 9-9/16" x 53/64") 175 g (Approx. 6.2 oz) (included batteries)	
<b>ZONE remote control unit (R</b> Batteries: External dimensions: Mass:	<b>RC-1056)</b> R03/AAA Type (Two batteries) 54 (W) × 115 (H) × 23 (D) mm (2-1/8" × 4-17/32" × 29/32") 80 g (Approx. 2.8 oz) (included batteries)	

\* For purposes of improvement, specifications and design are subject to change without notice.



## ☐ List of preset codes

## DVD

Denon	014, <b>*[111]</b>
Aiwa	009
Hitachi	010
JVC	006, 011
Konka	012, 013
Magnavox	005
Mitsubishi	004
Panasonic	014
Philips	005, 015, 016, 017
Pioneer	003, 008
Sanyo	018
Sony	002, 019, 020
Toshiba	001, 021, 022
Zenith	023

## VDP

Denon	028, 029, 112
Magnavox	026
Mitsubishi	028
Panasonic	029, 030
Philips	026
Pioneer	028, 031
RCA	032
Sony	033, 034, 035, 036

## VCR

Admiral	081
Aiko	095
Aiwa	009
Akai	026, 027, 070, 072, 082,
	083, 084
Alba	055
Amstrad	009

ASA	042
Asha	087
Audio Dynamic	005, 085
Audiovox	088
Beaumark	087
Broksonic	086, 093
Calix	088
Candle	006, 087, 088, 089, 090
Canon	049, 057
Capehart	025, 055, 056, 071
Carver	015
CCE	095
Citizen	006, 007, 087, 088, 089,
	090, 095
Craig	007, 087, 088, 091, 115
Curtis Mathes	006, 049, 073, 080, 087,
	090, 092
Cybernex	087
Daewoo	025, 055, 059, 074, 089,
	093, 095, 096
Daytron	025, 055
DBX	005, 085
Dumont	053
Dynatech	009
Electrohome	001, 088, 097
Electrophonic	088
Emerson	001, 009, 017, 027, 086,
	088, 089, 092, 093, 097,
	100, 101, 102, 103, 104,
	117
Fisher	009, 028, 031, 053, 054,
	091, 099, 115
GE	007, 011, 049, 050, 051,
	052, 073, 080, 087

	Go Video	047, 048	Minolta	013, 023
Ì	Goldstar	000, 006, 012, 062, 088	Mitsubishi	001, 003, 008, 013, 014,
	Gradiente	094		017, 027, 029, 039, 040,
ĺ	Grundig	042		041, 045, 097
	Harley Davidson	094	Motorola	081
ĺ	Harman Kardon	040, 062	Montgomery Ward	001, 002, 007, 009, 049,
	Hi-Q	091		063, 081, 115, 117
	Hitachi	009, 013, 023, 026, 058,	MTC	009, 087, 094
		* <b>[108]</b> , 109, 110, 111	Multitech	007, 009, 011, 087, 090,
	JC Penny	004, 005, 007, 023, 028,		094
		049, 062, 085, 087, 088	NAD	038
	Jensen	013, 026	NEC	004, 005, 006, 018, 026,
	JVC	004, 005, 006, 026, 029,		029, 045, 061, 062, 085
		043, 044, 045, 046, 085	Nikko	088
ĺ	Kenwood	004, 005, 006, 026, 029,	Noblex	087
1		033, 045, 085, 090	Optimus	081, 088
	Kodak	088	Optonica	021
	Lloyd	009, 094	Panasonic	024, 049, 064, 066, 067,
	LXI	088		068, 069, 107
1	Magnavox	015, 016, 042, 049, 063,	Perdio	009
		106	Pentax	009, 013, 023, 058, 090
	Magnin	087	Philco	015, 016, 049
	Marantz	004, 005, 006, 015, 042,	Philips	015, 021, 042, 049, 105
		049, 085, 090	Pilot	088
	Marta	088	Pioneer	005, 013, 029, 036, 037,
	MEI	049		038, 045, 085
	Memorex	009, 033, 049, 053, 060,	Portland	025, 055, 090
	081, 087, 088, 091, 094,		Proscan	063, 080
l		115	Pulsar	060
	Metz	123, 124, 125, 126, 127,	Quartz	033
		128	Quasar	034, 035, 049
ļ	MGA	001, 017, 027, 041, 097	Radio Shack	001, 002, 021, 081, 087,
	MGN Technology	087		088, 091, 094, 097, 098,
ļ	Midland	011		115



Radix	088	Technics	024, 049	Bell & Howell	045, 118	Fujitsu	004, 062
Randex	088	Teknika	009, 010, 022, 049, 088,	Bradford	061	Funai	004, 062
RCA	007, 013, 019, 023, 058,		094	Brockwood	003, 047	Futuretech	004
	063, 064, 065, 073, 080,	ТМК	087, 092	Candle	003, 030, 031, 032, 038,	GE	020, 036, 037, 040, 044
	082, 087	Toshiba	013, 017, 020, 041, 059,		047, 049, 050, 122		058, 066, 088, 119, 120
Realistic	009, 021, 031, 033, 049,		089, 098, 099, 117	Capehart	003		125, 147
	053, 081, 087, 088, 091,	Totevision	007, 087, 088	Celebrity	046	Goldstar	000, 015, 029, 031, 039
	094, 097, 098	Unirech	087	Circuit City	003		048, 051, 056, 057, 067
Ricoh	055	Vecrtor Research	005, 062, 085, 089, 090	Citizen	029, 030, 031, 032, 034,		068, 069, 116
Salora	033, 041	Victor	005, 045, 046, 085		038, 047, 049, 050, 054,	Grundy	062
Samsung	007, 011, 051, 059, 070,	Video Concepts	005, 027, 085, 089, 090		061, 095, 122, 123	Hitachi	029, 031, 051, 052, 070
	083, 087, 089, 113	Videosonic	007, 087	Concerto	031, 047, 049		111, 112, 113, 124,
Sanky	081	Wards	013, 021, 023, 087, 088,	Colortyme	003, 047, 049, 135		*[134]
Sansui	005, 026, 029, 045, 061,		089, 091, 094, 097, 118,	Contec	013, 051, 052, 061	Hitachi Pay TV	151
	085, 114		119, 120	Cony	051, 052, 061	Infinity	017, 071
Sanyo	032, 033, 053, 087, 091,	XR-1000	094	Craig	004, 061	Janeil	122
	115, 116	Yamaha	004, 005, 006, 026, 062,	Crown	029	JBL	017, 071
SBR	042		085	Curtis Mathes	029, 034, 038, 044, 047,	JC Penny	020, 034, 039, 040, 041
Scott	017, 020, 086, 089, 093,	Zenith	060, 078, 079		049, 053, 095, 118		044, 048, 050, 058, 066
	117			Daewoo	027, 029, 039, 048, 049,		069, 076, 088, 090, 095
Sears	013, 023, 028, 031, 033,	TV			054, 055, 106, 107, 137		125, 136, 159
	053, 054, 088, 091, 098,	Admiral	045, 121	Daytron	003, 049	JCB	046
	099, 115	Adventura	122	Dimensia	044	JVC	019, 051, 052, 072, 073
Sentra	055	Aiko	054	Dixi	007, 015, 027		091, 117, 126
Sharp	001, 002, 021, 097	Akai	016, 027, 046	Electroband	046	Kawasho	018, 046
Shogun	087	Alleron	062	Electrohome	029, 056, 057, 058, 147	Kenwood	038, 056, 057
Sony	075, 076, 077, 078, 079,	A-Mark	007	Elta	027	Kloss	010, 032
	121, 122	Amtron	061	Emerson	029, 051, 059, 060, 061,	Kloss Novabeam	005, 122, 127, 131
STS	023	Anam	006, 007, 036		062, 118, 123, 124, 139,	KTV	074, 123
Sylvania	009, 015, 016, 017, 041,	Anam National	061, 147		148	Loewe	071
	049, 094	AOC	003, 007, 033, 038, 039,	Envision	038	Logik	144
Symphonic	009, 094		047, 048, 049, 133	Etron	027	Luxman	031
Tandy	009	Archer	007	Fisher	014, 021, 063, 064, 065,	LXI	008, 014, 017, 024, 040
Tashiko	009, 088	Audiovox	007, 061		118		044, 063, 071, 075, 076
Tatung	004, 026, 030	Bauer	155	Formenti	155		077, 118, 125
Теас	004, 009, 026, 094	Belcor	047	Fortress	012		

## ENGLISH

Magnavox	005, 010, 017, 030, 033,
	038, 050, 056, 071, 078,
	079, 085, 089, 108, 109,
	110, 127, 131, 132, 145
Marantz	015, 017, 071, 080
Matsui	027
Memorex	014, 027, 045, 083, 118,
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Metz	160, 161, 162, 163
MGA	001, 039, 048, 056, 057,
	058, 065, 081, 083
Midland	125
Minutz	066
Mitsubishi	001, 016, 039, 048, 056,
	057, 058, 065, 081, 082,
	083, 105
Montgomery Ward	011, 020, 144, 145, 146
Motorola	121, 147
MTC	031, 034, 039, 048, 095
NAD	008, 075, 076, 128
National	002, 036, 061, 147
National Quenties	002
NEC	031, 038, 039, 048, 057,
	084, 086, 135, 147
Nikko	054
NTC	054
Optimus	128
Optonica	011, 012, 093, 121
Orion	004, 139
Panasonic	002, 009, 017, 036, 037,
	071, 141, 143, 147
Philco	005, 010, 030, 050, 051,
	056, 079, 085, 127, 131,
	050, 079, 065, 127, 151,

Philips	005, 015, 017, 050, 051,
	056, 078, 087, 088, 089,
Pioneer	131, 132, 147
	124, 128, 142
Portland	054
Price Club	095
Proscan	040, 044, 125
Proton	035, 051, 092, 129
Pulsar	042
Quasar	036, 037, 074, 141
Radio Shack	011, 044, 063, 093, 118
RCA	040, 044, 125, 130, 137,
	151, 152
Realistic	014, 063, 093, 118
Saisho	027
Samsung	003, 015, 034, 053, 055,
	057, 094, 095, 136, 153
Sansui	139
Sanyo	013, 014, 021, 022, 063,
	064, 081, 096
SBR	015
Schneider	015
Scott	062
Sears	008, 014, 021, 022, 023,
	024, 025, 040, 052, 057,
	062, 063, 064, 065, 073,
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Signature Simpson	045, 144 050
Signature Simpson Sony	045, 144 050 043, 046, 138, 146, 150
Signature Simpson	045, 144 050

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Squareview	004	Eastern	015
Supre-Macy	032, 122	Garrard	011
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Sylvania	005, 010, 017, 030, 078,	General Instrument	030, 031, 032
	079, 085, 089, 101, 127,	Hytex	006
	131, 132, 145, 155	Jasco	011
Symphonic	004, 148	Jerrold	009, 016, 017, 026, 032
Tandy	012, 121	Magnavox	018
Tatung	036, 124	Movie Time	019
Technics	037	NSC	019
Teknika	001, 030, 032, 034, 052,	Oak	000, 006, 020
	054, 078, 083, 095, 144,	Panasonic	001, 005
	156, 157	Philips	011, 012, 013, 018, 021
Tera	035, 129	Pioneer	002, 003, 022
THOMSON	165, 166	RCA	029
Toshiba	008, 014, 034, 063, 075,	Regency	015
	076, 095, 097, 136, 158,	Samsung	014, 023
	159	Scientific Atlanta	004, 024, 025
Universal	020, 066, 088	Signal	014
Victor	019, 073, 126	SL Marx	014
Video Concepts	016	Starcom	009
Viking	032, 122	Stargate	014
Wards	005, 045, 066, 078, 085,	Teleview	014
	088, 089, 093, 102, 103,	Tocom	007, 016
	131, 132, 148	TV86	019
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	149	United Artists	006
Zonda	007	Universal	010, 011
		Viewstar	018, 019
CABLE		Zenith	027, 028
ABC	006, <b>*[007]</b> , 008, 009		
Archer	010, 011	DBS (SATELLI	TE)
Century	011	Alphastar	054
Citizen	011	Chaparral	035, 036
Colour Voice	012, 013	Dishnet	053
Comtronic	014	Drake	037, 038

Ε	NI	C H		
	L \ .	<b>U</b>		

Echostar Dish	062, 066
GE	048, 055, 056
General Instruments	039, 040, 041
Grundig	070, 071, 072, 073
Hitachi	058, 059
Hughes Network	063, 064, 065, 069
JVC	057
Kathrein	074, 075, 076, 083
Magnavox	060
Nokia	070, 080, 084, 085, 086
Philips	060
Primestar	051
Proscan	048, 055, 056
RCA	048, 055, 056, 068
Realistic	042
Sierra I	036
Sierra II	036
Sierra III	036
Sony	049, 067
STS1	043
STS2	044
STS3	045
SRS4	046
Technisat	077, 078, 079, 081, 082
Toshiba	047, 050
Uniden	061

0	n
C	υ

CD	
Denon	* <b>[111]</b> , 044
Aiwa	001, 035, 043
Burmster	002
Carver	003, 035
Emerson	004, 005, 006, 007
Fisher	003, 008, 009, 010
JVC	018, 019
Kenwood	011, 012, 013, 014, 017
	Denon Aiwa Burmster Carver Emerson Fisher JVC

Magnavox	006, 015, 035
Marantz	016, 028, 035
MCS	016, 024
Onkyo	025, 027
Optimus	017, 020, 021, 022, 023
Philips	014, 032, 033, 035
Pioneer	006, 022, 030
Sears	006
Sony	023, 031
Теас	002, 009, 028
Technics	016, 029, 036
Wards	035, 037
Yamaha	038, 039, 040, 041
Zenith	042
CDR	
Denon	* <b>[111]</b> , 112
Philips	112

#### Optimus 016, 017 Panasonic 021 Philips 011 Pioneer 016, 017, 018 Sony 022, 023, 024 Technics 021 Victor 013 Wards 016 Yamaha 019, 020

\*[ ]: Preset codes set upon shipment from the factory.

DVD preset codes					
	111 (defau	lt)	014		
DENON Model No.	DVD-555 DVD-755 DVD-900 DVD-910 DVD-955 DVD-1000 DVD-1200 DVD-1200 DVD-1500 DVD-1710 DVD-1910 DVD-2200 DVD-2800 DVD-2800 <b>II</b>	DVD-2900 DVD-2910 DVD-3800 DVD-3910 DVD-5900 DVD-5910 DVD-9000 DVM-715 DVM-1800 DVM-1805 DVM-1815 DVM-1815 DVM-2815 DVM-4800	DVD-800 DVD-1600 DVD-2000 DVD-2500 DVD-3000 DVD-3300		

1	<b>*[111]</b> , 112
;	112

## MD

Denon	113
Kenwood	003, 004
Onkyo	007
Sharp	005
Sony	006

## TAPE

	Denon	*[114]	
	Aiwa	010, 011	
	Carver	011	
	Harman/Kardon	011, 012	
	JVC	013, 014	
	Kenwood	015	
	Magnavox	011	
	Marantz	011	
7	Onkyo	025, 027	



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