

# Integra®

Audio Network Receiver

# NAC-2.3

Instruction Manual

Thank you for purchasing the Integra Audio Network Receiver.

Please read this manual thoroughly before making connections and plugging in the unit. Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new Audio Network Receiver.

Please retain this manual for future reference.

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## WARNING:

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

## 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.



**WARNING**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN

**AVIS**  
RISQUE DE CHOC ELECTRIQUE  
NE PAS OUVRIR



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.

# Important Safeguards

1. **Read Instructions** – All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions** – The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** – All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow Instructions** – All operating and use instructions should be followed.
5. **Cleaning** – Unplug the appliance from the wall outlet before cleaning. The appliance should be cleaned only as recommended by the manufacturer.
6. **Attachments** – Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
7. **Water and Moisture** – Do not use the appliance 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.
8. **Accessories** – Do not place the appliance on an unstable cart, stand, tripod, bracket, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the appliance. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
9. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
10. **Ventilation** – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the appliance and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. The appliance should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided. There should be free space of at least 20 cm (8 in.) and an opening behind the appliance.
11. **Power Sources** – The appliance 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 appliance dealer or local power company.
12. **Grounding or Polarization** – The appliance 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 appliance.

PORTABLE CART WARNING

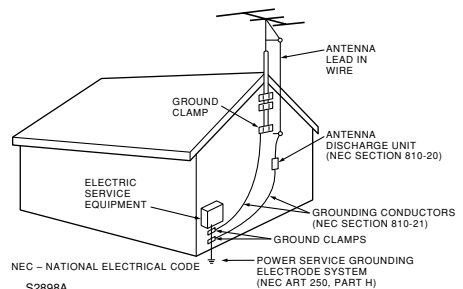


S3125A

## Important Safeguards

14. **Outdoor Antenna Grounding** – If an outside antenna or cable system is connected to the appliance, 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 1.
15. **Lightning** – For added protection for the appliance 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 appliance due to lightning and power-line surges.
16. **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.
17. **Overloading** – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
18. **Object and Liquid Entry** – Never push objects of any kind into the appliance 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 appliance.
19. **Servicing** – Do not attempt to service the appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
20. **Damage Requiring Service** – Unplug the appliance 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 appliance,
  - C. If the appliance has been exposed to rain or water,
  - D. If the appliance 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 appliance to its normal operation,
  - E. If the appliance has been dropped or damaged in any way, and
  - F. When the appliance exhibits a distinct change in performance – this indicates a need for service.
21. **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.
22. **Safety Check** – Upon completion of any service or repairs to the appliance, ask the service technician to perform safety checks to determine that the appliance is in proper operation condition.
23. **Wall or Ceiling Mounting** – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
24. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
25. **Liquid Hazards** – The appliance shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the appliance.

FIGURE 1:  
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE, ANSI/NFPA 70



# Precautions

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## 1. Recording Copyright

Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

## 2. AC Fuse

The fuse is located inside the chassis and is not user-serviceable. If power does not come on, contact your Integra/Onkyo authorized service station.

## 3. Care

From time to time you should wipe the front and rear panels and the cabinet with a soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.

## 4. Power

### **WARNING**

**BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.**

The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit will be used meets the required voltage (e.g., AC 120 V, 60 Hz) written on the rear panel.

Setting the Standby button to standby does not shut off the power completely. So the power cord should be removed from the AC outlet when the unit is not used for a prolonged time.

## **Note to CATV system installer:**

This reminder is provided to call the CATV system installer's attention to Station 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.

## **FCC Information for User**

### **CAUTION:**

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

### **NOTE:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

## Precautions

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### For Canadian models

**NOTE:** THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

For models having a power cord with a polarized plug:

**CAUTION:** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

### Modèle pour les Canadien

**REMARQUE:** CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA.

Sur les modèles dont la fiche est polarisée:

**ATTENTION:** POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA.

### Memory Preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in order to charge the back-up system.

The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

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# Features

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The NAC-2.3 is a network audio client that is connected via a LAN to the Audio Network Server with Net-Tune System Protocol such as NAS-2.3 and allows you to enjoy music files saved on the server, as well as Internet radio, from anywhere in your home. The NAC-2.3 is integrated with the Audio Network Server that helps you to take full advantage of your home networking and also to seamlessly integrate the NAC-2.3 with existing audio devices.

## Net-Tune features

Connecting the NAC-2.3 and the Audio Network Server through a network allows you to enjoy digitally recorded music everywhere. It is also possible to set up a network in which the Audio Network Server and existing audio system are interconnected via the NAC-2.3.

By operating the Audio Network Server in conjunction with the NAC-2.3, you can take full advantage of the NAC-2.3. For example, you can:

- Save various music files on the Audio Network Server, and digitally play back them through your audio system
- Play digitally recorded music files in MP3 and WAVE formats
- Easily search for custom playlists by title, artist, album, or genre

## Internet radio features

The NAC-2.3 provides enhanced support for Internet radio and allows you to:

- Listen to both WMA and MP3 audio streamed from Internet radio stations
- Select stations by genre
- Preset up to 20 Internet radio stations

## Receiver features

- An innovative circuit, VLSC (Vector Linear Shaping Circuitry), is adopted that generates pure analog signals from digital signals.
- The preset memory feature allows you to preset up to 40 FM and AM stations.
- Three ports are available for interaction with external audio devices: an AUX input port that can connect to a CD player or similar device, an Audio Line FIXED OUT port that can connect to a receiver with volume control, and an Audio Line VARIABLE OUT port that can connect to an amplifier without volume control.

## Other features

- Alarm feature that allows you to play as the alarm sound a music file contained in the music library on the server and can be easily enabled/disabled
- Sleep timer
- Large-sized 20 × 4 dot matrix display
- OSD (On Screen Display) feature that allows you to easily view playlists and select tracks

\* VLSC and the VLSC logo are registered trademarks of Onkyo Corporation.

\* NET-TUNE is a registered trademark of Onkyo Corporation.

# Supplied accessories

## Supplied accessories

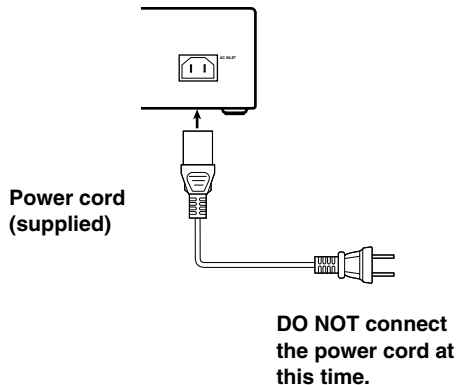
The package include the following (note that the quantity of each item is shown between parentheses):

NAC-2.3 (1)	
IR remote controller RC-509S (1)	Infrared remote controller.
Batteries - AA or R6 (2)	Batteries for the remote controller.
AC power cord	
AM antenna	Antenna for receiving AM broadcasts
FM antenna	Antenna for receiving FM broadcasts

## Connecting the power cord

Plug the supplied power cord into this AC INLET.

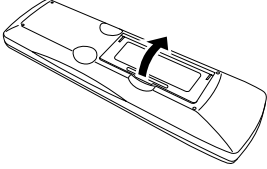
- Do not use a power cord other than the one supplied with the NAC-2.3. The power cord supplied is designed for use with the NAC-2.3 and should not be used with any other device.
- Never have the power cord disconnected from the NAC-2.3 while the other end is plugged into the wall outlet. Doing so may cause an electric shock. Always connect by plugging into the wall outlet last and disconnect by unplugging from the wall outlet first.



## Supplied accessories

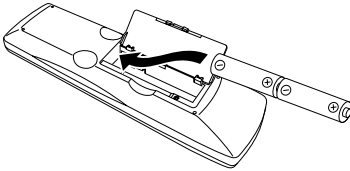
### Installing the remote controller batteries

1. Detach the battery cover by pressing the tab and pulling up the cover.

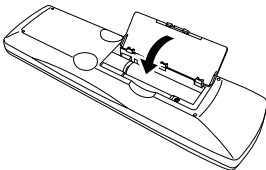


2. Insert two AA-size batteries into the battery compartment.

Carefully follow the polarity diagram (positive + and negative – symbols) inside the battery compartment.



3. After batteries are installed and seated correctly, attach the compartment cover.

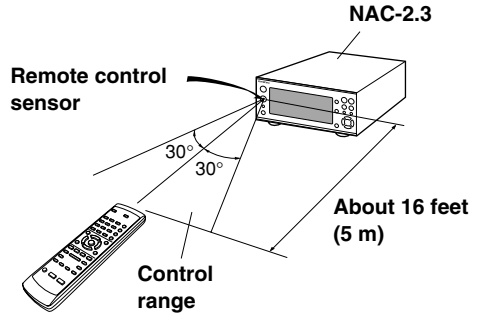


#### Notes:

- Do not use a new battery and an old battery together or different kinds of batteries.
- To avoid corrosion, remove the batteries if the remote controller is not to be used for a long time.
- Remove dead batteries immediately to avoid damage from corrosion. If the remote controller doesn't operate smoothly, replace both the batteries at the same time.
- The life of the batteries supplied is about six months but this will vary depending on usage.

### Using the remote controller

Point the remote controller toward the remote control sensor.

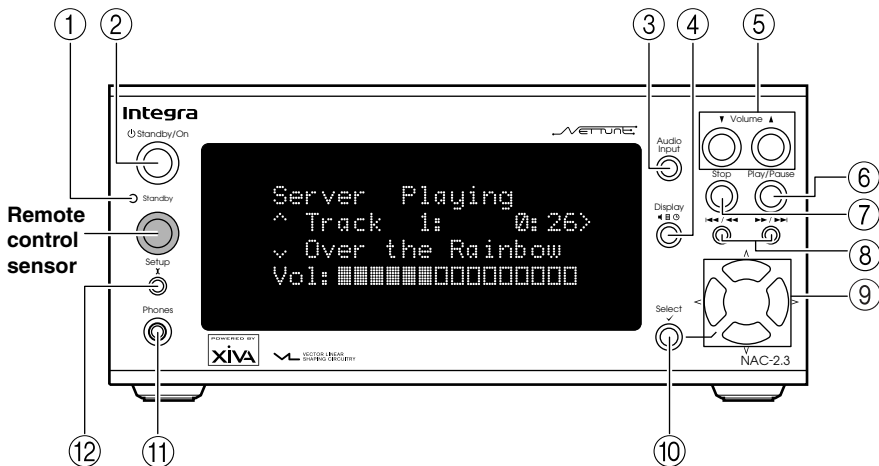


#### Notes:

- Place the unit away from strong light such as direct sunlight or inverted fluorescent light which can prevent proper operation of the remote controller.
- Using another remote controller of the same type in the same room or using the unit near equipment which uses infrared rays may cause operational interference.
- Do not put any object such as a book on the remote controller. The buttons of the remote controller may be pressed by mistake and drain the batteries.
- Make sure the audio rack doors do not have colored glass. Placing the unit behind such doors may prevent proper remote controller operation.
- If there is any obstacle between the remote controller and the remote control sensor, the remote controller will not operate.

# Index parts and facilities

## Front Panel



① **Standby indicator**

Lights when the NAC-2.3 is in the Standby mode.

② **Standby/On button**

Switches the power mode between Standby and On.

③ **Audio Input button**

Changes the playback source.

④ **Display button**

Changes the screen content.

⑤ **Volume ▲/▼ buttons**

Adjusts the volume.

⑥ **Play/Pause button**

Starts or pauses playback.

⑦ **Stop button**

Stops playback.

⑧ **◀◀/▶▶-Skip buttons**

Moves to the previous or next track. Holding down the either button fast-forwards or fast-rewinds the current track.

⑨ **Cursor Up/Down/Right/Left buttons**

Use these buttons when navigating through various settings, change a value, or move to another menu.

⑩ **Select button**

Determines your selection or saves a new setting.

⑪ **Phones jack**

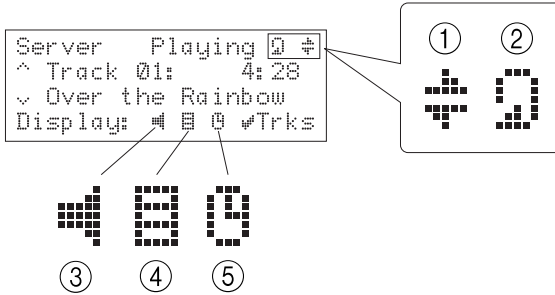
Connects the stereo headphones mini plug.

⑫ **Setup button**

Activates Setup/Menu mode.

## Display

### (1) Status display icons



① **Random**

This icon is displayed to indicate that the NAC-2.3 is in random playback mode.

② **Repeat**

This icon is displayed to indicate that the NAC-2.3 is in repeat mode.

③ **Status**

This icon is enclosed in square brackets to indicate that the NAC-2.3 is in normal mode.

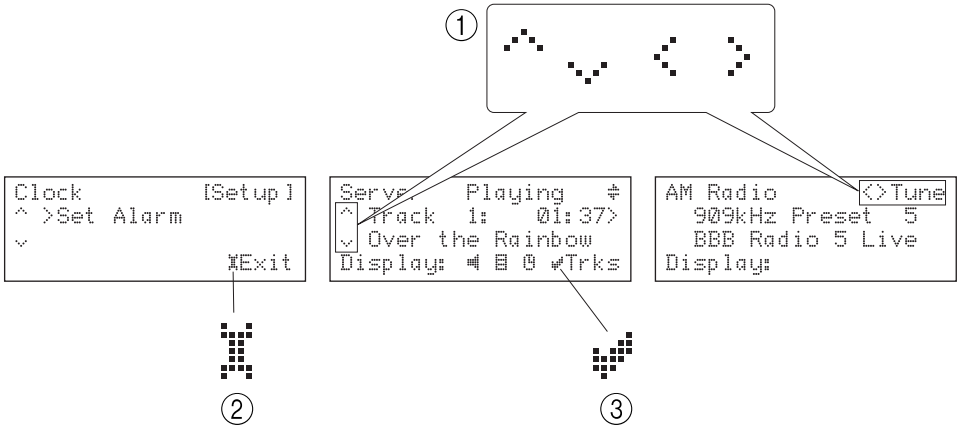
④ **Browse**

This icon is enclosed in square brackets to indicate that the NAC-2.3 is in browse (title selection) mode.

⑤ **Clock**

This icon is enclosed in square brackets to indicate that the NAC-2.3 is in clock display mode.

## (2) Operation guide icons



### ① Up Arrow/ /Down Arrow/Left Arrow/Right Arrow

These icons are displayed to indicate that the corresponding cursor buttons are enabled to perform specific actions.  
Example: “<>Tune” indicates that you can use the Cursor Left and Right buttons to perform tuning when the FM/AM radio feature is selected.

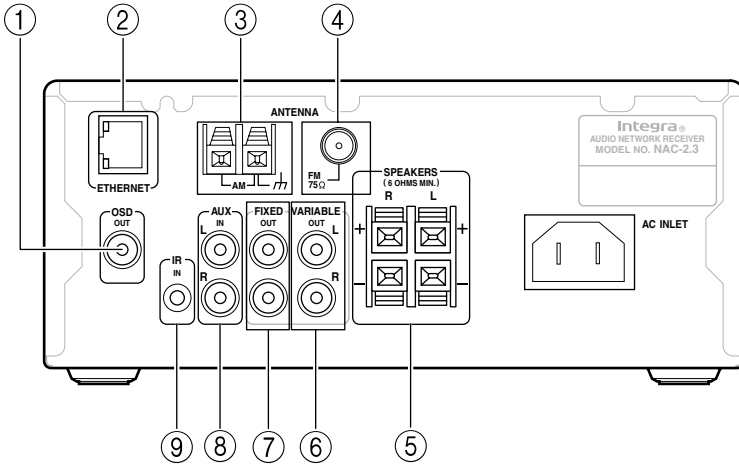
### ② Setup

This icon is immediately followed by the command you can execute by pressing the Setup button.  
Example: When the Setup icon is immediately followed by “Exit”, you can press the Setup button to exit from the current menu.

### ③ Select

This icon is immediately followed by the command you can execute by pressing the Select button.

## Rear Panel



### ① OSD OUT

This port can be used to redirect screen output from the front panel display to a television screen for quick and easy large-screen viewing.

### ② ETHERNET

This port connects to a broadband mode, router, hub, etc.

### ③ AM

This port connects to the AM radio antenna.

### ④ FM

This port connects to the FM radio antenna.

### ⑤ SPEAKERS

The terminals connect to the speakers.

### ⑥ VARIABLE OUTPUT

This port connects to an amplifier without volume control.

### ⑦ FIXED OUT

This port connects to the input port of a receiver with volume control.

### ⑧ AUX

This port connects to an auxiliary device.

### ⑨ IR IN

If the NAC-2.3 is located inside a rack or a cabinet that will not allow infrared beams to reach its IR sensor, you will need to relay beams with an external sensor.

Connect the external sensor to IR IN input. Then, place the sensor in an unblocked location at which you can easily point with the remote controller.



### ⑪ Display button

Press to change the display mode.

### ⑫ Cursor ▲/▼/◀/▶ buttons

Press to locate your selection.

### ⑬ Select button

Determines your selection or saves a new setting.

### ⑭ Setup button

Press to set up the NAC-2.3.

### ⑮ Operation buttons

#### ◀◀, ▶▶ (FR/FF) buttons

Press to fast-rewind or fast-forward the current track.

#### ⏸ (Pause) button

Press to pause the playback.

#### ▶ (Play) button

Press to start playback.

#### ■ (Stop) button

Press to stop the playback.

#### ◀, ▶ B/F-Skip buttons

Press to move to the previous or next track.

### ⑯ Random button

Press to play the selected track list at random.

### ⑰ Repeat button

Press to repeat the selected single track or track list.

### ⑱ Volume ▲/▼ buttons

Press to adjust the volume.

## Changing the remote controller mode

When you use any Integra/Onkyo products other than the NAC-2.3 in the same room, the operations made with the NAC-2.3's remote controller may also cause the other Integra/Onkyo products to operate. To avoid this, you can change the remote controller mode both for the NAC-2.3 and its remote controller choosing from three modes (1, 2 or 3).

To change the remote controller mode for the remote controller, hold the Standby button on the remote controller and press the Select button, then release these buttons simultaneously. Within 5 seconds after releasing the buttons, enter the appropriate mode (1, 2 or 3) using the numeric keys. The default mode is 1 for both the remote controller and NAC-2.3.

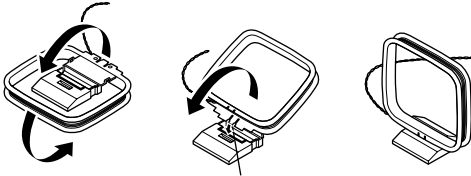
After changing the remote controller mode, make sure that the remote control "Remote ID code" on the NAC-2.3 is set to the same mode as the remote controller. (see Page 57)

# Connecting the NAC-2.3

## Connecting the AM antenna

### Assembling the AM loop antenna

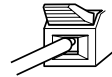
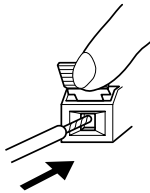
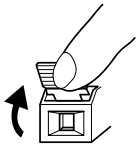
Assemble the loop antenna as shown in the illustration.



Insert into the hole

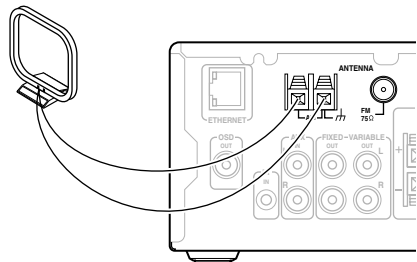
### Connecting the antenna cable

1. Press down the lever.
2. Insert the wire into the hole.
3. Release the lever to replace it.



### Connecting the AM loop antenna

The AM loop antenna is for indoor use only. Set it in the direction and position where you receive the clearest sound. Put it as far as possible away from this unit, TV, speaker cables, Audio Network Server, hub, router, power cords, and other units of NAC-2.3.



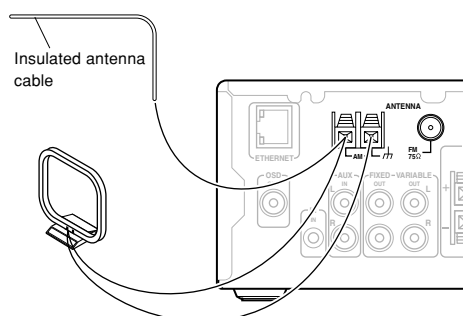
### Connecting an AM outdoor antenna

When reception is not satisfactory with the supplied AM loop antenna alone, connection of an outdoor antenna is recommended.

The outdoor antenna will be more effective if it is stretched horizontally above a window or outside.

- Do not remove the AM loop antenna.
- To avoid the risk of lightning and electrical shock, grounding is necessary. Follow item 14 of the “Important Safeguards” on page3 when you install the outdoor antenna.

### Outdoor antenna

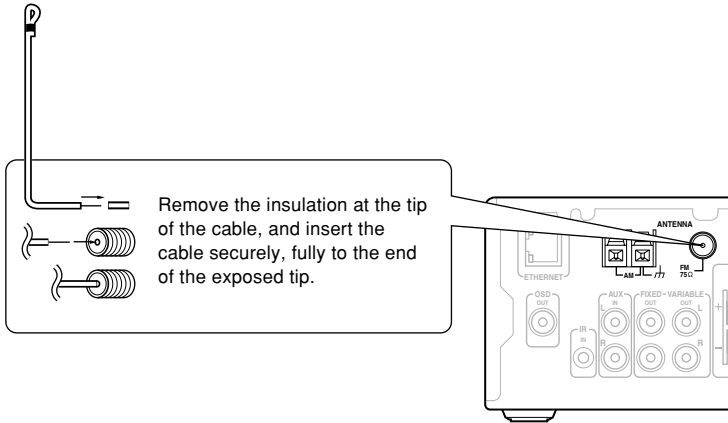


## Connecting the NAC-2.3

### Connecting the FM antenna

#### FM indoor antenna

The supplied FM antenna is for indoor use only. Move the antenna in various directions until the clearest signal is received. Fix it with push pins or similar implements in the position that will cause the least amount of distortion.

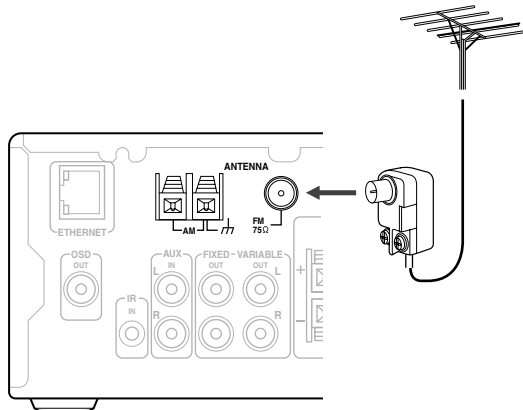


#### FM outdoor antenna

If the reception is not very clear with the supplied FM antenna, the use of an outdoor antenna is recommended.

Please make sure that you follow the considerations below regarding the location.

- Keep the antenna away from noise sources (neon signs, busy roads, etc.)
- It is dangerous to put the antenna close to power lines. Keep it well away from power lines, etc.
- To avoid the risk of lightning and electrical shock, grounding is necessary. Follow item 14 of the “Important Safeguards” on page 3 when you install the outdoor antenna.



## Connecting the NAC-2.3

---

### Connecting for listening to Internet radio and the Audio Network Server

Listening to Internet radio stations requires the following:

■ **Modem** (a device that provides Internet connections via leased lines; e.g., a cable modem, xDSL modem, terminal adapter)

\* To have access to Internet, you typically need to make a contract with an Internet service provider (ISP). Modem requirements differ from ISP to ISP; for detailed information, consult with your ISP or PC retailer.

■ **Router (gateway)** (gateway) (a device that enables multiple PCs or devices to connect to the Internet simultaneously)

An IP address can be obtained automatically by using the router's DHCP function.

\* Some routers have built-in modem functionality. Router requirements differ from ISP to ISP; for detailed information, consult with your ISP or PC retailer.

■ **Ethernet CAT-5 cable**

■ **Minimum Internet Connection Requirements:**

- Broadband Internet Connection
- DHCP (Dynamic Host Configuration Protocol) based network (requires a DHCP-enabled router)
- 100Base-TX switch built-in broadband router (recommended)

Connecting for listening to both Internet radio stations and music files saved on Audio Network Server such as NAS-2.3 requires setting up the Audio Network Server as well as completing connections and meeting the requirements described above.

### What is Audio Network Server with Net-Tune System Protocol?

Audio Network Server streams digitally recorded music files over a LAN so that they can be played by NAC-2.3 functionality. One server can stream to multiple units of NAC-2.3 at the same time.

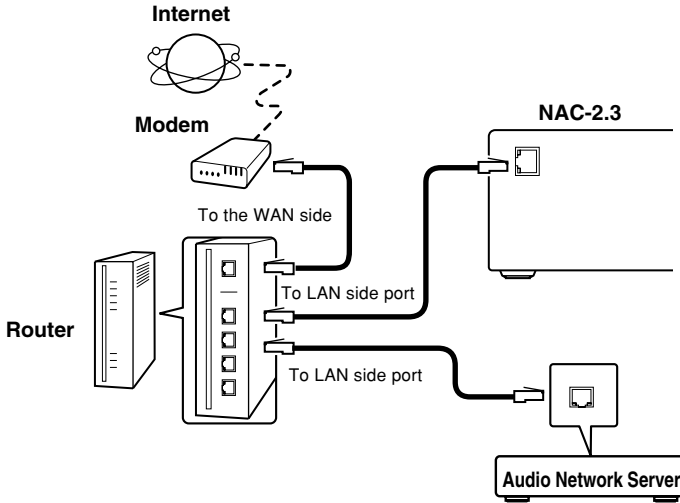
The music streaming service is build on Onkyo's proprietary NTSP protocol, which is an extension to TCP/IP, thereby providing high response times.

In addition to providing the music streaming server functionality, the Audio Network Server allows you to automatically searches music files saved on its hard disk, then easily register the files with the server.

Supported music formats include WAVE (PCM) and MP3. The WAVE (PCM) format provides non-compressed high-quality audio data. The MP3 format, widely used over the Internet, accomplishes data compression at near-CD sound quality.

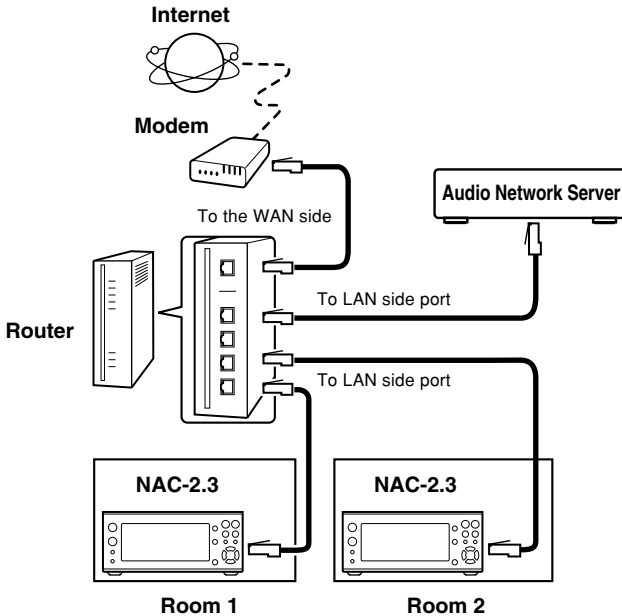
## Connecting the NAC-2.3

---



### Tips:

Connecting more than one unit of NAC-2.3 to a router enables several users to listen to Internet radio or music pieces contained on the Audio Network Server.



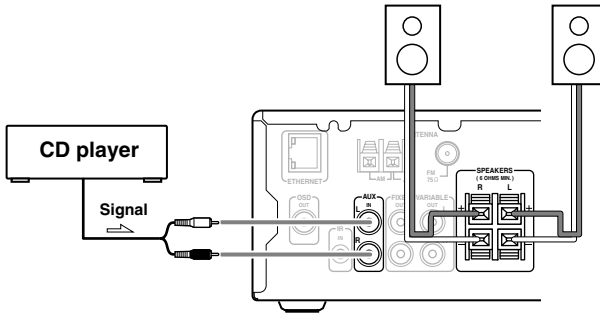
## Connecting the NAC-2.3

### Connecting audio devices to the NAC-2.3

#### Connecting a player

The NAC-2.3 supports various audio player devices.

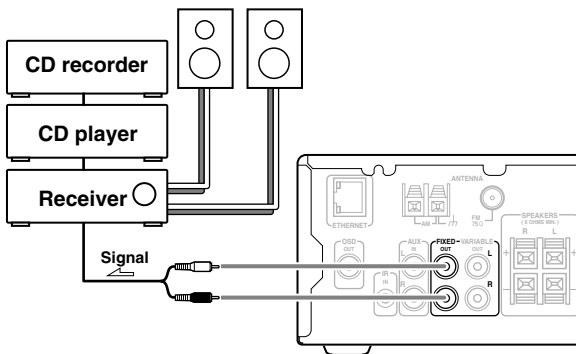
To use a player in conjunction with the NAC-2.3, connect the audio connection cable between the NAC-2.3's AUX IN port and the player's AUDIO OUT port.



#### Advanced techniques for connecting external devices

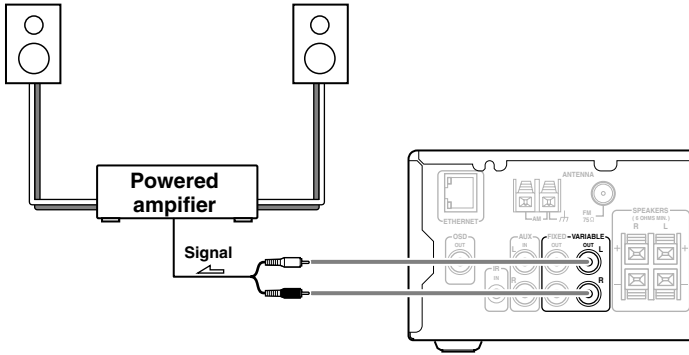
The NAC-2.3 can also be connected with a receiver that is already connected with a speaker set, player, or recorder.

If the receiver is complete with volume control, connect the audio connection cable between the NAC-2.3's FIXED OUT port and the receiver's input port. In this case, use the receiver to adjust the volume.



## Connecting the NAC-2.3

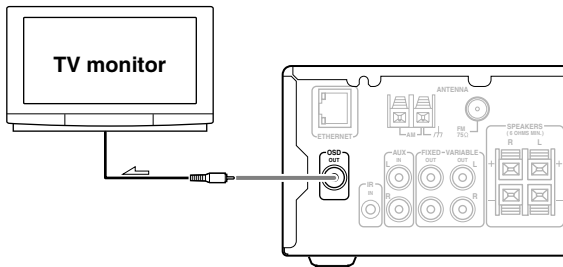
If the powered amplifier does not have volume control, connect the audio connection cable between the NAC-2.3's VARIABLE OUT port and the powered amplifier's input port. In this case, use the NAC-2.3 to adjust the volume.



### Connecting the NAC-2.3 with a television monitor

You can connect the NAC-2.3 with a television receiver to redirect screen output from the front panel display to the television screen for quick and easy large-screen viewing.

To do so, connect the NAC-2.3's OSD OUT port to the television receiver's VIDEO IN port.

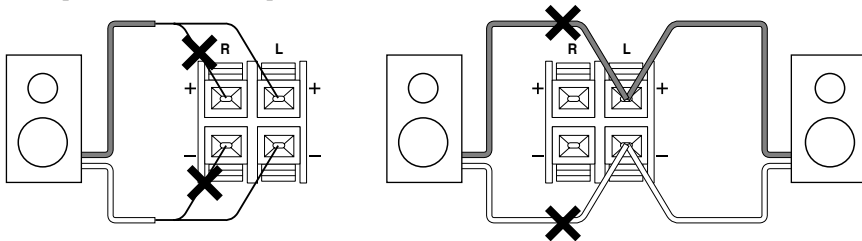


## Connecting the NAC-2.3

### Connecting speaker systems

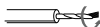
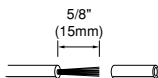
#### Before connecting

- The load impedance of each speaker must be at least 6  $\Omega$ .
- Do not use unnecessarily long or extremely thin speaker cords. Otherwise, the DC resistance of the speaker cords may become too high, lowering the damping factor and causing the sound quality to deteriorate.
- Do not connect the speaker cord to the L and R connectors at the same time and do not connect two or more speakers to the same speaker connectors.



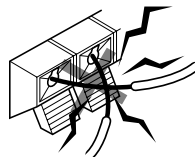
#### Preparing the speaker cords for connection

1. Strip 15 mm from the end of each cord.
2. Twist the stripped end of the cord.

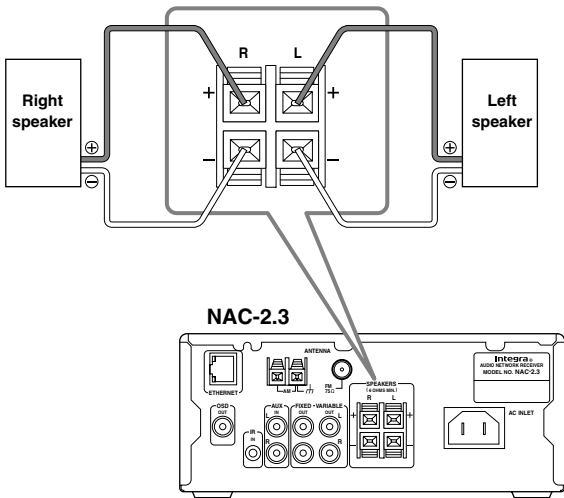


#### Note:

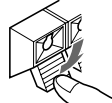
To prevent damage to circuits never short-circuit the positive (+) and negative (-) speaker wires.



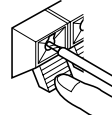
#### Connecting the speaker cords to the speaker connectors



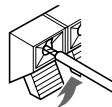
1. Press down the lever.



2. Insert the wire into the hole.



3. Release the lever to replace it.



## Connecting the NAC-2.3

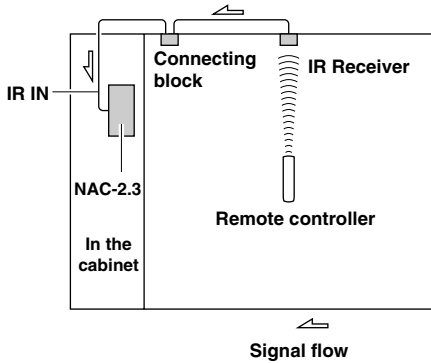
### Operating components not reached by the remote controller signals (IR IN)

The following equipment (sold separately) is essential for operation:

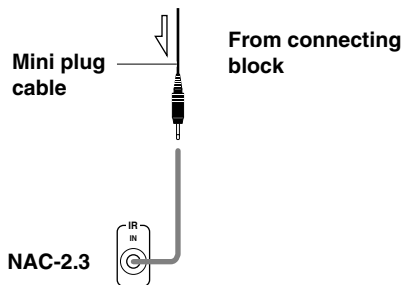
Onkyo's Multi-Room System kits (IR Remote Controller Extension System), or Multiroom A/V distribution and control systems from Niles® and Xantech® to name a few.

### If the remote controller signal does not reach the NAC-2.3 remote sensor

If the NAC-2.3 is located inside a cabinet or other enclosure where the infrared rays from the remote controller cannot enter, then operation with the remote controller will not be possible. In such a case, it will be necessary to install a remote sensor at a location outside of the cabinet for the infrared rays from the controller to reach.



Make connection as shown below. Do not plug the equipment into the power source until the connection is complete.



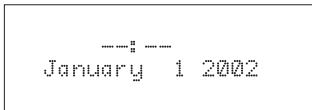
# Understanding the basic operations before using the NAC-2.3

## Connecting the power cord

Plug the power cord into wall socket.

## Turning on the power

When the power cord is connected, the display shown below appears.



Press the Standby/On button on the NAC-2.3 or remote controller to turn on the power.

### NAC-2.3

Standby/On



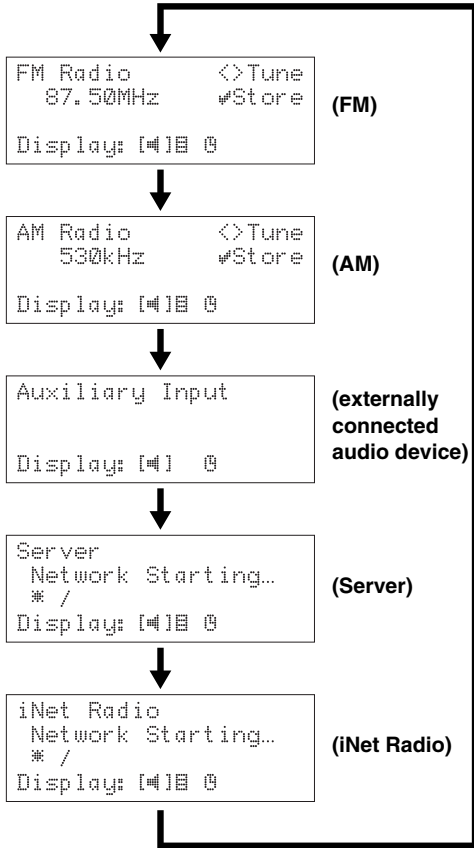
### Remote controller



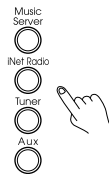
## Selecting your desired source

You can press the Audio Input button to switch among the available input sources as follows:

FM → AM → AUX → Server → iNet Radio



You can also switch among the input sources using the selector on the remote controller.



- Music Server ..... Net-Tune server
- iNet Radio ..... Internet radio
- Tuner ..... FM/AM tuner.  
The button toggles between FM and AM.
- Aux ..... External input

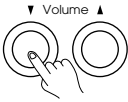
## Understanding the basic operations before using the NAC-2.3

### How to adjust the volume

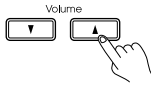
Use the Volume ▲/▼ buttons on the main unit or remote controller of the NAC-2.3.

The volume display appears when a volume button is pressed and disappears 2 seconds after the volume button is pressed or immediately after the other button is pressed.

NAC-2.3



Remote controller



Remote controller



```
Server  Playing
^ Track  1:   0:26>
v Over the Rainbow
Vol: ██████████
```

### Temporarily turning off the sound

To turn off the sound momentarily, press Mute button on the remote controller. When pressed “Muting” is displayed on the NAC-2.3. Press the Mute button again to turn the sound back on. You can also turn the sound back on by pressing the Volume ▲/▼ buttons.

# Setting the clock

## Setting date and time

### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.

NAC-2.3



Remote controller



```
Setup
^ >Clock
v
                                     XExit
```

### 2. Press the Select button.

### 3. Press the Cursor ▲/▼ button to display “Set Clock” in the display area.

```
Clock      [Setup]
^ >Set Clock
v
                                     XExit
```

Press Select button.

### 4. Press the Cursor ▲/▼ button to set the time.

### 5. Press the Cursor ► button to display “Mins”.

Press the Cursor ▲/▼ button to set the minute.

```
Clock      [Set Clock]
          9:00 AM Mins >
January    1 2000
^Adjust  #Set  XExit
```

### 6. Press the Cursor ► button to display “AM/PM”.

Press the Cursor ▲/▼ button to select either “AM” or “PM”.

```
Clock      [Set Clock]
          9:15 AM AM/PM>
January    1 2000
^Adjust  #Set  XExit
```

### 7. Press the Cursor ► button to display “Month”.

Press the Cursor ▲/▼ button to set the month.

```
Clock      [Set Clock]
          09:15 PM Month>
January    1 2000
^Adjust  #Set  XExit
```

### 8. Press the Cursor ► button to display “Day”.

Press the Cursor ▲/▼ button to set the day of the month.

```
Clock      [Set Clock]
          09:15 PM Day >
September  1 2000
^Adjust  #Set  XExit
```

### 9. Press the Cursor ► button to display “Year”.

Press the Cursor ▲/▼ button to set the year.

```
Clock      [Set Clock]
          09:15 PM Year >
September  1 2002
^Adjust  #Set  XExit
```

#### Note:

Press the Select button to save the settings you have just made.

To return to normal display, press the Setup button.

# Setting the clock

## Displaying the date and time

The display changes each time you press the Display button.

NAC-2.3



Remote controller



(Ex.)

```
Server Playing
^ Track 1: 0:10>
v Over the Rainbow
Display: [M] [0] [Trks]
```



```
Server [Library]
^ >Albums
v
Display: [M] [0]
```



```
Clock
10:41 AM
January 1 2002
Display: [M] [0]
```

## Changing the Clock Display

You can select the clock display mode from the “12H AM/PM” or “24H” type.

### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.

NAC-2.3



Remote controller



```
Setup
^ >Clock
v
[Exit]
```

### 2. Press the Select button.

```
Clock [Setup]
^ >Alarm On/Off
v [Off]
[Exit]
```

### 3. Press the Cursor $\uparrow/\downarrow$ button to display “Mode[12Hour]” in the display area.

Press the Select button.

```
Clock [Setup]
^ >Mode [12Hour]
v [12Hour]
[Exit]
```

### 4. Press the Cursor $\uparrow/\downarrow$ button to select the “12H AM/PM” or “24H” type.

```
Clock [Mode 12Hour]
^ 12Hour
v
[Set] [Exit]
```

### 5. Press the Select button to save the change.

To return to normal display, press the Setup button.

# Listening to Music Saved on the Audio Network Server

The Audio Network Server with Net-Tune System Protocol connected with the NAC-2.3 via a LAN enables you to use the NAC-2.3 to listen to any music track contained in the music library residing on the server.

**Listening to a music track contained in the music library on the server**

### 1. Make sure that the Audio Network Server is turned on.

For more information, refer to the instruction manual of the server used for the Audio Network Server.

### 2. Set the NAC-2.3's input source to "Server":

Press the Audio Input button repeatedly or the Music Server button on the remote controller to display "Server".

```
Server
Network Starting..
* /
Display: [F1] 0
```



```
Server
[INAS-2.3 ]
Press: DISPLAY
Display: [F1] 0
```

### 3. Select a key for searching tracks:

Press the Display button to switch to browse mode.

```
Server [Library]
^ >Albums
v
Display: [F1] 0
```

Press the Cursor **▲/▼** button repeatedly to browse to one of the available search modes (Albums, Artists, Genres, Playlists) and then press the Select button.

### 4. Select your desired album, artist, genre, or playlist.

Choose your desired album, artist, genre, or playlist respectively according to your selected search mode using the Cursor **▲/▼** button.

```
Server [Albums]
^ >Standard Jazz
v [1 of 5]
Display: [F1] 0
```

Press the Select button.

### 5. Choose your desired track.

Press the Cursor **▲/▼** button repeatedly to select the track you want to play.

```
Server [Tracks]
^ >Over the Rainbow
v [1 of 5]
Display: [F1] 0 [Play]
```



Indicates that the selected track is the first of five tracks contained in the current album.

```
Server Playing
^ Track 1: 0:06>
v Over the Rainbow
Display: [F1] 0 [Trks]
```

### 6. Press the Select button to play.

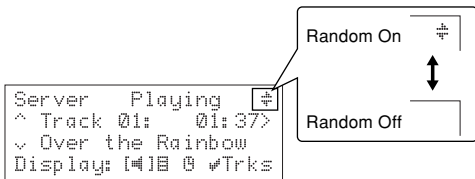


# Listening to Music Saved on the Audio Network Server

## Various Playback Modes

### • Random mode

You can press the Random button on the remote controller to switch to Random mode, in which the NAC-2.3 plays the tracks contained in your selected album or track list at random. To exit from Random mode, press the Random button again.

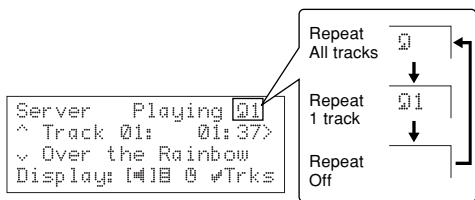


### • Repeat mode

You can press the Repeat button on the remote controller to switch to Repeat mode, in which the NAC-2.3 repeatedly plays all the tracks in your selected album or track list. You can use Repeat mode combined with Random mode.

Pressing the Repeat button once will repeat the all the tracks, and then pressing the Repeat button again will repeat the current track.

To exit from Repeat mode, press the Repeat button repeatedly until "Repeat Off" displayed.

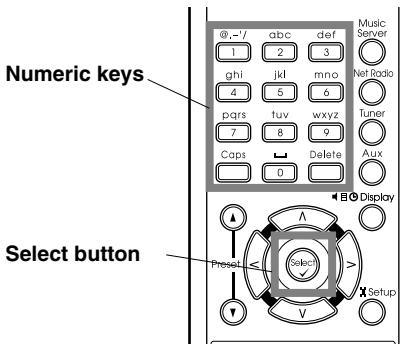


## Searching for a track

### Search by track number

When the NAC-2.3 is in the browse mode after pressing the Display button, you can use the numeric keys on the remote controller to directly specify the number of your desired track.

Just type in the number of your desired track and press the Select button to start playing the track.



# Listening to Music Saved on the Audio Network Server

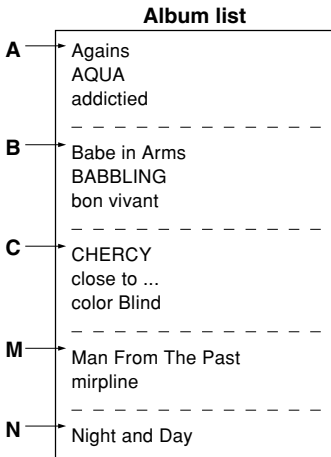
## Search by initial letter

You can search for a Album title, Artist name, Genre, or Playlist name by just typing in its initial letter using a numeric button on the remote controller.

Pressing a numeric button on the remote controller jumps to the first track or album that begins with that letter. If there is no item beginning with the letter, the display remains the same. Note that this feature is case-insensitive.

For example, each press of the 2 button cycles through the letters assigned to the button in the following order:

A → B → C → 2 → A ...



## Viewing Information on the display

### Status Messages

Different status messages appear on the display, depending on the playback status.

```
Server  Playing
^ Track 01: 01:10>
v Over the Rainbow
Display: [M] [B] [C] [2] Trks
```

Playing: ..... The current track is playing.

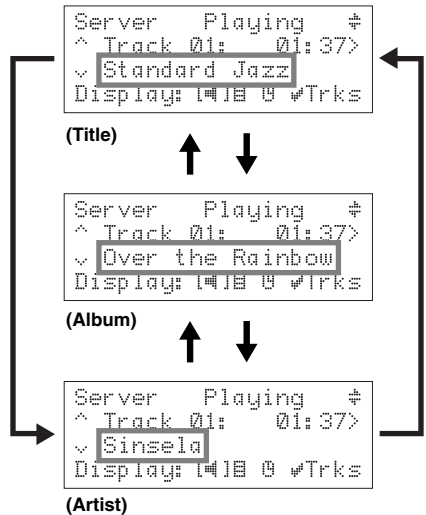
Stopped: ..... The current track is stopped.

Paused: ..... The current track is paused.

Seeking< ..... The current track is fast-rewinding or fast-forwarding.

### Playback Information

While a track is playing, you can press the Cursor ▲/▼ button to cycle through three types of playback information: Title, Album, and Artist.



# Listening to Music Saved on the Audio Network Server

---

## Track Information

While a track is playing, you can press the Cursor ► button to cycle through the elapsed time and remaining time of the current track.

The elapsed time of the playback track

```
Server   Playing  +
^ Track  1:    1:30>
v Over the Rainbow
Display: [M] 0 #Trks
```



The remaining time of the playback track

```
Server   Playing  +
^ Track  1:   -0:07>
v Over the Rainbow
Display: [M] 0 #Trks
```

# Listening to Radio Broadcasts

You can listen to radio broadcasts either by manually tuning to a station or by selecting a preset station.

## Manually tuning to a station

### 1. Press the Audio Input button repeatedly to display “FM Radio” or “AM Radio”.

When using the remote controller, press the Tuner button repeatedly to switch between “FM Radio” and “AM Radio”.

### 2. Press the Cursor ◀/▶ button repeatedly until your desired station’s frequency is selected.

#### Autotuning

For FM broadcasts, you can press and hold the Cursor ◀ or ▶ button for a while and then release it to have the NAC-2.3 search for a station by tuning the frequency up or down.

(Note autotuning does not store stations in memory.)

With “<>Tune” displayed the frequency is tuned up or down until an receivable station is found. While the scanning is in progress, a “Scanning” message are displayed on screen.

Indicates stereo reception.

Indicates that pressing ◀ or ▶ will scan through frequencies.

(Ex.)

```
FM Radio [ST] <>Tune
98.2MHz Preset 01
BBB Radio 1
Display: [4]E 0
```

Frequency counts up.

```
FM Radio <>Tune
100.0MHz
Scanning..
Display: [4]E 0
```

## Presetting FM/AM stations

The NAC-2.3 provides a preset memory feature that allows you to preset up to 40 FM and AM stations by tuning to your desired station and then assigning the station your desired preset number. You can define a station name of up to 15 characters for each preset station.

**Caution:** Leaving the NAC-2.3 unpowered (e.g., with the power cable disconnected) for 2 weeks or longer may result in losing all the memory contents including your preset stations and text information. If this occurs, you will need to preset your desired stations over again.

### 1. Set the NAC-2.3’s selector to FM Radio or AM Radio.

### 2. Tune to your desired station (frequency) by pressing the Cursor ◀/▶ button repeatedly.

✓Store; indicates that you can preset the station by pressing the Select button.

Press [Select] to store.

```
FM Radio <>Tune
102.40MHz #Store
Display: [4]E 0
```

### 3. Press the Select button.

You are prompted to enter the station name.

```
Name FM Preset
[ ]
√ [+]a b c d e f g h
Display: Caps [OK] [ ]
```

(continued on next page)

# Listening to Radio Broadcasts

## 4. Press the Display button to select which type of characters to enter.

Each time you press the Display button, the character type cycles as follows.

```
ABCDEFGHIJKLMNPOQRSTUVWXYZ
↓
abcdefghijklmnopqrstuvwxyz
↓
1234567890 !"#%&'()*+,-./:;<=>?@[`~]^
_`{ }~
```

Also, you can switch between the former and latter halves of the character groups by pressing the Cursor ▲/▼ button.

```
Name FM Preset
^
↓ + A B C D E F G H I
Display: Caps XOK #[]
```

### Tips:

Pressing the Select button after selecting # on the display deletes the blinking character.

When using the remote controller, press the Caps button to switch the character type.

## 5. Select your desired character by pressing the Cursor ◀/▶ button repeatedly.

```
Name FM Preset
[
↓ + A B C D E F G H
Display: Caps XOK #[]
```

### To enter characters using the remote controller:

Each time you press a numeric button on the remote controller, the button cycles through a number of assigned letters as shown in the following example: A → B → C → A → ... You can press the numeric key "1" on the remote controller to enter a symbol. To enter the next character, press the ▶▶ button.

## 6. Press the Select button to enter the selected character.

```
Name FM Preset
[BB# ]
↓ + A B C D E F G H
Display: Caps XOK #[]
```

Repeat the step 5 and 6 until you enter all the character for the station name. You can enter up to 14 characters for a station name.

## 7. Press the Setup button.

An available preset number appears.

If all the preset numbers are already in use, the NAC-2.3 displays preset number 1.

Automatically displays first empty preset number.

```
Store: BBA
^ >FM Preset 1
↓ [
#Set XExit
```

## 8. Select your desired preset number and assign it to the station.

Press the Cursor ▲/▼ button to display your desired preset number.

To cancel the preset operation, press the Setup button.

## 9. Press the Select button to save the preset station.

If your selected preset number is already in use, the new station overwrites the existing station.

```
FM Radio <>Tune
102.40MHz Preset 1
BBB
Display: [4]B 0
```

# Listening to Radio Broadcasts

## Listening to a preset station

### 1. Set the input selector to FM Radio or AM Radio

Press the Audio Input button repeatedly to display “FM Radio” or “AM Radio”.

When using the remote controller, press the Tuner button repeatedly to switch between “FM Radio” and “AM Radio”.

### 2. Press the Display button to switch to browse mode.

#### NAC-2.3



#### Remote controller



### 3. Select the preset number of your desired station using the Cursor ▲/▼ button.

(Up/Down arrows appear on the left side of the display.)

Preset Up/Down

```
FM Radio  [Presets]
^ >CCC
v [Preset 3]
Display:  [1]0
```

With the remote controller, you can use the Preset Up/Down feature to directly select your desired preset number without having to change the display mode.

## Switching among display modes

The display changes each time you press the Display button.

```
FM Radio  <>Tune
102.40MHz Preset 3
CCC
Display:  [1]0
```

```
FM Radio  [Presets]
^ >CCC
v [Preset 3]
Display:  [1]0
```

```
Clock
10:41 AM
September 1 2002
Display:  [1]0
```

## Switching between FM Auto and FM Mono modes

When you are receiving FM broadcasts, you can switch between Auto and Mono modes:

### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.

```
Setup
^ >Clock
v
                                     %Exit
```

### 2. Press the Cursor ▲/▼ button to display “FM Radio” in the display area.

You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, AM Radio, and System.

```
Setup
^ >FM Radio
v
                                     %Exit
```

# Listening to Radio Broadcasts

3. Press the Select button.
4. Press Cursor **▲/▼** button to display “FM Mode”. Press the Select button.

```
FM Radio      [Setup]
^ >FM Mode
v   [Auto]
                                [Exit]
```

5. Press Cursor **▲/▼** button to select either “Auto” or “Mono”.

```
FM Radio      [FM Mode]
^   Mono
v
                                #Set [Exit]
```



```
FM Radio      [FM Mode]
^   Auto
v
                                #Set [Exit]
```

6. Press Select button to save the change.

To return to normal display, press the Setup button.

## Stereo display mode

Indicates stereo reception.

```
FM Radio [ST] <>Tune
          98.20MHz Preset 01
          BBB Radio 1
          Display: [4]10 0
```

## Monaural display mode

Indicates mono reception.

```
AM Radio [T] <>Tune
          990kHz Preset 05
          BBB Radio 5 Live
          Display: [4]10 0
```

## • Renaming a preset station

You can enter or edit the name of a preset channel:

1. Activate menu mode. Press the Setup button to display the setup items in the display area.

```
Setup
^ >Clock
v
                                [Exit]
```

2. Press the Cursor **▲/▼** button to display “FM Radio” or “AM Radio” in the display area. You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, AM Radio, and System.

```
Setup
^ >FM Radio
v
                                [Exit]
```

Press the Select button

3. Press the Cursor **▲/▼** button to display “Rename Preset” in the display area.

```
FM Radio      [Setup]
^ >Rename Preset
v
                                [Exit]
```

Press the Select button.

4. Use Cursor **▲/▼** button to select the preset station whose name you want to change.

```
FM Radio      [Rename]
^ >Preset3
v   BCCC
                                #Sel [Exit]
```

Press the Select button.

5. Press the **◀◀/▶▶** or **▶▶/◀◀** button to select the character to be replaced and press the Cursor **◀/▶** button to select the new character. Press the Select button to enter the new character. After you have made all the necessary changes, press the Setup button.

To return to normal display, press the Setup button.

# Listening to Radio Broadcasts

---

## • Deleting a preset station

You can delete a preset station:

1. Activate menu mode.  
Press the Setup button to display the setup items in the display area.

```
Setup
^ >Clock
v
                                #Exit
```

2. Press the Cursor ▲/▼ button to display “FM Radio” or “AM Radio” in the display area.  
You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, AM Radio, and System.

```
Setup
^ >FM Radio
v
                                #Exit
```

Press the Select button.

3. Press the Cursor ▲/▼ button to display “Delete Preset”.

```
FM Radio      [Setup]
^ >Delete Preset
v
                                #Exit
```

Press the Select button.

4. Use the Cursor ▲/▼ button to select the preset station you want to delete.

```
FM Radio      [Delete]
^   Preset3
v   CCC
      #Del #Exit
```

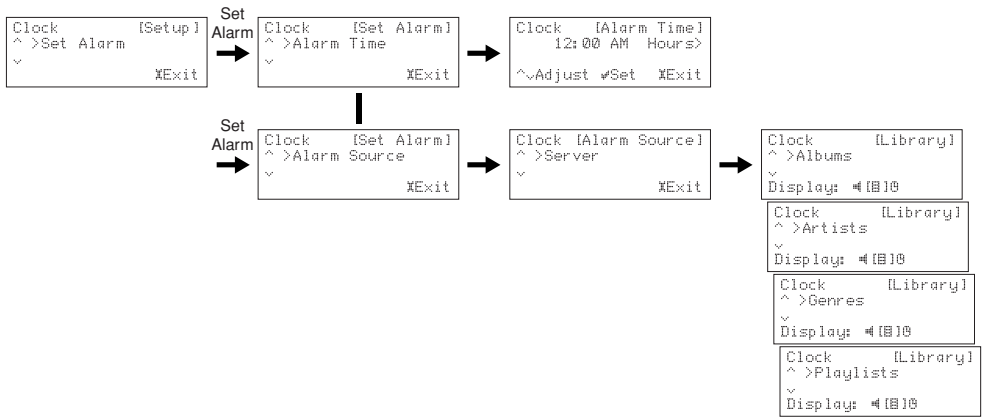
Press the Select button.

The preset station is deleted.

To return to normal display, press the Setup button.

# Using timer functions

The following flow chart presents the setup menu screens you navigate through when setting up the alarm:



## Alarm feature

### Alarm Settings

When the set time is reached, the NAC-2.3 will be turned on and start playing audio from the specified input source. The alarm feature works in standby power mode only. Once you have configured the settings, switch to standby power mode.

#### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.

```

Setup
^ >Clock
v
XExit
  
```

#### 2. Press the Select button.

```

Clock [Setup]
^ >Alarm On/Off
v [Off]
XExit
  
```

#### 3. Press the Cursor **▲/▼** button to display “Set Alarm” in the display area.

Press the Select button.

```

Clock [Setup]
^ >Set Alarm
v
XExit
  
```

#### 4. Set the alarm start time and alarm source.

For details, see “Setting the alarm start time” and “Setting the alarm source” on page 41.

#### 5. Press the Standby/On button to allow the NAC-2.3 to enter the standby mode.

While the NAC-2.3 is turned on, the alarm function will not be activated.

#### The clock display while the timer function is set

```

[Alarm Set]
10:17 AM
September 1 2002
  
```

## Using timer functions

### Setting the alarm start time

After completing the step 3 on page 40, do the following procedures.

1. Press the Cursor ▲/▼ button to display “Alarm Time” in the display area.

Press the Select button.

```
Clock      [Set Alarm]
^ >Alarm Time
v
                                     ¶Exit
```

2. Press the Cursor ▲/▼ button to set the hour.

```
Clock      [Alarm Time]
          12:00 AM Hours>
^~Adjust ¶Set ¶Exit
```

3. Press the Cursor ► button to display “Mins”. Press the Cursor ▲/▼ button to set the minute.

```
Clock      [Alarm Time]
          08:00 AM Mins >
^~Adjust ¶Set ¶Exit
```

4. Press the Cursor ► button to display “AM/PM” when you use the 12-hour format. Press the Cursor ▲/▼ button to select either “AM” or “PM”.

```
Clock      [Alarm Time]
          08:30 AM AM/PM>
^~Adjust ¶Set ¶Exit
```

5. Press the Select button to save the settings you have just made.

To return to normal display, press the Setup button.

### Setting the alarm source

After completing the step 3 on page 40, do the following procedures.

You can select the server, Internet radio, or FM/AM radio as the playback source.

1. Press the Cursor ▲/▼ button to display “Alarm Source” in the display area.

Press the Select button.

```
Clock      [Set Alarm]
^ >Alarm Source
v
                                     ¶Exit
```

2. Use Cursor ▲/▼ to select the playback source. Press the Select button to save the settings you have just made.

```
Clock [Alarm Source]
^ >FM Radio
v
                                     ¶Exit
```

3. Select a track (server) or preset station (AM/FM radio/Internet radio) to play.

- When using the server as the playback source, you can select the title to play with the Cursor ▲/▼ button, just as you do in normal play mode selection.
- When using Internet radio as the playback source, you can select your desired preset station number with the Cursor ▲/▼ button.
- When using FM/AM radio as the playback source, you can select your desired preset station number with the Cursor ▲/▼ button.

Press the Select button to save the settings

To return to normal display, press the Setup button.

### Note:

If you select a title on the server or an Internet radio title and the title cannot be played for some reason (such as the Audio Network Server being turned off), the NAC-2.3 will automatically choose the FM or AM station that was used the last time.

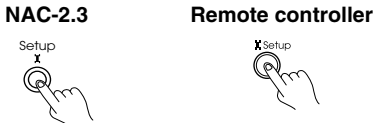
# Using timer functions

## Turning on or off the alarm function

You can turn on or off the alarm function.

### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.



```
Setup
^ >Clock
v
#Exit
```

Press the Select button.

### 2. Press the Cursor $\blacktriangle/\blacktriangledown$ button to display "Alarm On/Off" in the display area.

```
Clock [Setup]
^ >Alarm On/Off
v [Off]
#Exit
```

Press the Select button.

### 4. Press the Cursor $\blacktriangle/\blacktriangledown$ button to select "On" or "Off".

```
Clock [Alarm On/Off]
^ On
v
#Set #Exit
```

### 5. Press the Select button to save the change.

To return to normal display, press the Setup button.

## Stopping the activated alarm

Press the Standby button either on the NAC-2.3 or the remote controller, and then the NAC-2.3 is turned off.

If you press the Display button instead of the Standby button, the timer function is disabled and the NAC-2.3 remains to be turned on.

To stop the activated alarm, press the Standby/On button to let the NAC-2.3 enter the standby state. (When the time you set comes on the next day, the alarm will be activated again.)

## Snooze feature

While the timer playback works, the NAC-2.3 provides a snooze feature that temporarily silences the alarm and sounds the alarm again after 5 minutes.

### Enabling the snooze feature

Pressing the Select button while the timer is operating puts the NAC-2.3 into snooze standby mode.

After 5 minutes, the snooze feature sounds the alarm again.

```
Clock [Alarm!!]
07:00 AM
February 23 2002
Display #Snooze
```

## Using timer functions

---

### Sleep timer

The sleep timer puts the NAC-2.3 into standby mode when the set time elapses.

The sleep timer can be configured from the remote controller only.

Press the Sleep button to set the time that must elapse before the NAC-2.3 is put into standby mode.

When you press the Sleep button on the remote controller for the first time, the “Sleep 90 Min” appears in the display, meaning that the NAC-2.3 will be put into standby mode after 90 minutes. Subsequently, each time you press the button, the time setting is reduced in decrements of 10 minutes.

You can use the Cursor ▲/▼ button to change the time setting in minutes.

While the sleep timer function is set, “[Sleep]” appears in the display.



To disable the sleep timer setting, press the Sleep button repeatedly until “Sleep” indication disappears.

# Listening to Internet radio

Internet radio refers to radio stations that broadcast music and other programs via streaming audio access on the Internet. The NAC-2.3 allows you to enjoy Internet radio at a high sound quality.

When you turn on the NAC-2.3 from the standby mode, the NAC-2.3 will connect to the station last time you listened to.

## Listening to Internet radio

### 1. Make sure that you are connected to the Internet.

For information on configuring the NAC-2.3's network settings, see "Configuring Various Settings" (see page 51).

### 2. Set the NAC-2.3's input source to "Internet Radio":

Press the Audio Input button repeatedly or the iNet Radio button on the remote controller to display "Internet Radio".

```
iNet Radio
Network Starting...
* /
Display: [M]B 0
```



```
iNet Radio
^ No Station
v Press DISPLAY
Display: [M]B 0
```

### 3. Select a key for searching your desired programs:

Press the Display button to switch to browse mode.

Press the Cursor ▲/▼ button repeatedly to select one of the available search keys (Genres, Location, Language) and then press the Select button.

```
iNet Radio [Library]
^ >Genres
v
Display: [M]B 0
```

```
iNet Radio [Library]
^ >Location
v
Display: [M]B 0
```

```
iNet Radio [Library]
^ >Language
v
Display: [M]B 0
```

#### • Genre

Press the Cursor ▲/▼ button repeatedly to select "Genre" and then press the Select button.

```
iNet Radio [Genres]
^ >Classical
v 11 of 51
Display: [M]SubGnr
```

Press the Cursor ▲/▼ button repeatedly to select "Sub Genres" and then press the Select button.

```
iNet Radio [SubGnrs]
^ >Classical
v 11 of 51
Display: [M]Stations
```

# Listening to Internet radio

---

Press the Cursor **▲/▼** button to select your desired station.

```
iNet Radio [Station]
^  WCHY FM
v  [1 of 5]
Display:          #Play
```

To return to normal display, press the Setup button.

## • Location

Press the Cursor **▲/▼** button repeatedly to select your desired country and then press the Select button.

```
iNet Radio [Location]
^  >United States
v  [1 of 5]
Display:          #Stations
```

Press the Cursor **▲/▼** button to select your desired station.

```
iNet Radio [Station]
^  WCHY FM
v  [1 of 5]
Display:          #Play
```

## • Language

Press the Cursor **▲/▼** button repeatedly to select your desired language and then press the Select button.

```
iNet Radio [Language]
^  >English
v  [1 of 5]
Display:          #Stations
```

Press the Cursor **▲/▼** button to select your desired station.

```
iNet Radio [Station]
^  WCHY FM
v  [1 of 5]
Display:          #Play
```

## 4. Start receiving Internet radio:

Press the Select button to start receiving Internet radio.

```
iNet Radio
^  WCHY FM
v  Buffering 10%
Display: [4]E 0
```

The NAC-2.3 starts buffering the radio data, and after the buffering status comes to “100%”, the NAC-2.3 starts playing the Internet radio.

It will take few tens of seconds to complete buffering.

### Tip:

While the Internet radio station service is not available, “Stream Access Error” is displayed.

# Listening to Internet radio

## Presetting Internet radio stations

The NAC-2.3 allows you to save your favorite Internet radio station in the preset memory. Once you have saved your favorite stations in the preset memory, you can directly select one of the preset stations using the Preset ▲/▼ button on the remote controller. You can preset up to 20 stations.

**Caution:** Leaving the NAC-2.3 unpowered (e.g., with the power cable disconnected) for 2 weeks or longer may result in losing all the memory contents including your preset stations and text information. If this occurs, you will need to preset your desired stations over again.

### 1. Tune to your desired station.

```
iNet Radio
^ WCHY FM
v WCHY FM
Display: [4]B 0#Store
```

### 2. Press the Select button.

You are prompted to enter the station name.

```
Name iNetR Preset
WCHY FMD
v [+ ]a b c d e f g h
Display: Caps #OK #[]
```

If you don't need to enter the station name, press the Setup button.

### 3. Press the Display button to select which type of characters to enter.

Each time you press the Display button, the character type cycles through uppercase letters, lowercase letters, and numerals/symbols.

Also, you can switch between the former and latter halves of the character groups by pressing the Cursor ▲/▼ button.

```
Name iNetR Preset
WCHY FMD
v [+ ]A B C D E F G H
Display: Caps #OK #[]
```

### Tips:

Pressing the Select button after selecting # on the display deletes the blinking character.

When using the remote controller, press the Caps button to switch the character type.

### 4. Select your desired character by pressing the Cursor ◀/▶ button repeatedly.

```
Name iNetR Preset
WCHY FMD
v + A B CIDIE F G H
Display: Caps #OK #[]
```

### To enter characters using the remote controller:

Each time you press a numeric button on the remote controller, the button cycles through a number of assigned letters as shown in the following example: A → B → C → A → ... You can press the numeric key "1" on the remote controller to enter a symbol.

### 5. Press the Select button to enter the selected character.

```
Name iNetR Preset
WCHY FMD
v + A B CIDIE F G H
Display: Caps #OK #[]
```

Repeat the step 4 and 5 until you enter all the character for the station name. You can enter up to 14 characters for a station name.

### 6. Press the Setup button.

An available preset number appears.

If all the preset numbers are already in use, the NAC-2.3 displays preset number 1.

```
Store: WCHY FMD
^ > iNetR Preset 1
v []
#Set #Exit
```

### 7. Select your desired preset number and assign it to the station.

Press the Cursor ▲/▼ button to display your desired preset number. To cancel the preset operation, press the Setup button.

## Listening to Internet radio

---

### 8. Press the Select button to save the preset station.

If your selected preset number is already in use, the new station overwrites the existing station.

```
iNet Radio      P-01
^ WCHY FMD
v WCHY FM
Display: [4] [8] 0#Store
```

### • Renaming a preset Internet radio station

You can enter or edit the name of a preset channel:

1. Activate menu mode.

Press the Setup button to displays the setup items in the display area.

```
Setup
>Clock
                                     #Exit
```

2. Press the Cursor **▲/▼** button to display “iNet Radio” in the display area.

You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, Am Radio, and System.

```
Setup
>iNet Radio
                                     #Exit
```

Press the Select button

3. Press the Cursor **▲/▼** button to display “Rename Preset” in the display area.

```
iNet Radio [Setup]
>Rename Preset
                                     #Exit
```

Press the Select button.

4. Use Cursor **▲/▼** button to select the preset station whose name you want to change.

```
iNet Radio [Rename]
^ Preset 1
v WCHY FMD
                                     #Set #Exit
```

Press the Select button.

5. Press the **◀◀ / ◀◀** or **▶▶ / ▶▶** button to select the character to be replaced and press the Cursor **◀/▶** button to select the new character. Press the Select button to enter the new character. After you have made all the necessary changes, press the Setup button.

To return to normal display, press the Setup button.

# Listening to Internet radio

---

## • Deleting a preset station

You can delete a preset station:

1. Activate menu mode.  
Press the Setup button to display the setup items in the display area.

```
Setup
>Clock
                                     #Exit
```

2. Press the Cursor **▲/▼** button to display “iNet Radio” in the display area.  
You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, AM Radio, and System.

```
Setup
>iNet Radio
                                     #Exit
```

Press the Select button.

3. Press the Cursor **▲/▼** button to display “Delete Preset”.

```
iNet Radio [Setup]
>Delete Preset
                                     #Exit
```

Press the Select button.

4. Use the Cursor **▲/▼** button to select the preset station you want to delete.

```
iNet Radio [Delete]
^  Preset1
v  WCHY FMD
    #Del #Exit
```

Press the Select button.  
The preset station is deleted.

To return to normal display, press the Setup button.

## Listening to Internet radio

### Listening to a preset Internet radio station

1. Set the input selector to Internet Radio.
2. Select the preset number of your desired station using the Preset ▲/▼ button on the remote controller.

```
iNet Radio      P-01
^ WCHY FMD
v WCHY FM
Display: [M] 0wStore
```

### Viewing information on the display

For some Internet radio stations, you can change the station information using the Cursor ▲/▼ button.

```
iNet Radio      P-01
^ WCHY FMD
v
Display: [M] 0wStore
```



```
iNet Radio      P-01
^ WCHY FMD
v WCHY FM Radio Live
Display: [M] 0wStore
```

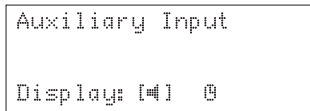
### Supported Music Formats

The NAC-2.3 supports both WMA and MP3 audio streamed from Internet radio stations.

# Listening to Music from an External Player

---

1. Set the input source to Auxiliary Input.



2. Start the external player connected to the NAC-2.3.

External player



# Configuring Various Settings

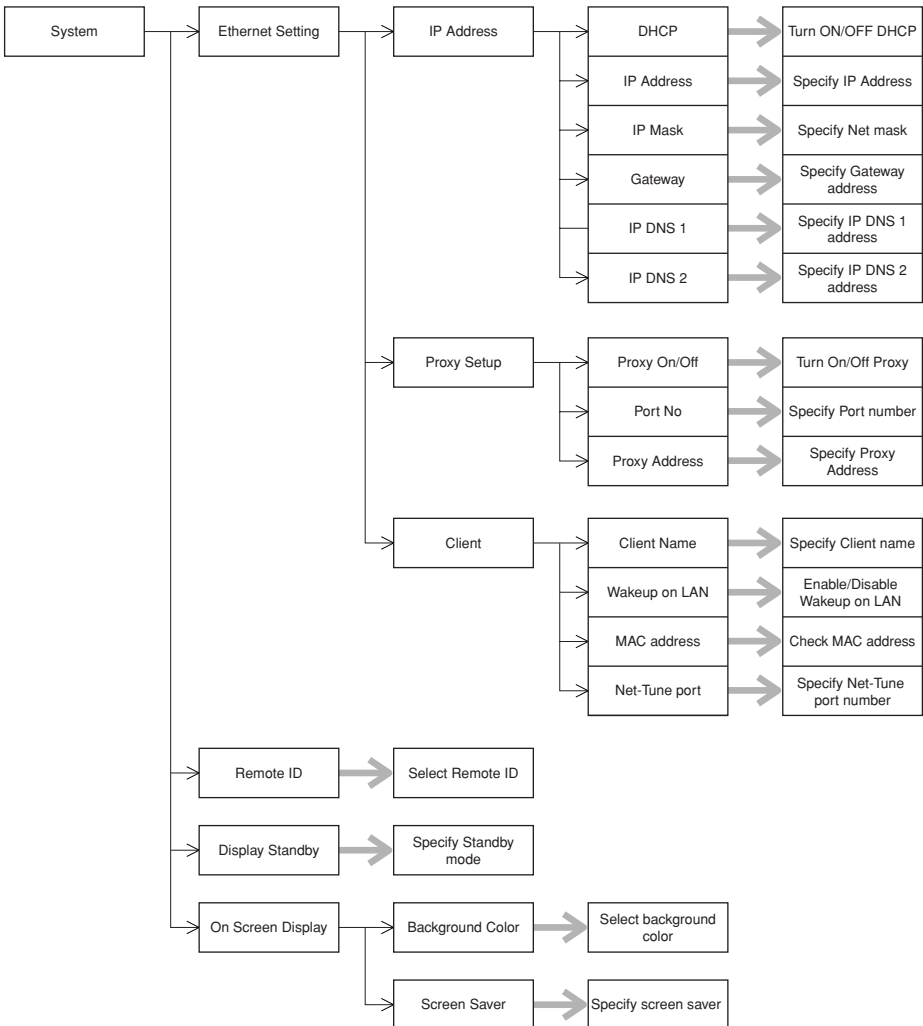
## Network Settings

Before you can use the NAC-2.3 to play music contained in the music library on the Audio Network Server and listen to Internet radio, you must correctly configure the NAC-2.3's network settings so that it can connect to your LAN and the Internet.

It is strongly recommended to use a broadband connection (via an xDSL or CATV leased line) and a router. If you are connected to the Internet via a narrowband dialup connection, you may not be able to enjoy Internet radio as you expect or at all.

Before setting up the NAC-2.3, make sure that you are already using a router that provides Internet access and that the NAC-2.3 is correctly connected with your router or hub via a LAN cable.

For more information on Internet connectivity, consult with your ISP (Internet Service Provider) or refer to the documentation of your router.



# Configuring Various Settings

## Ethernet settings

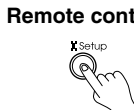
If you use broadband router, you do not have to perform the Ethernet settings because the DHCP function on the broadband router is enabled by default. To use the NAC-2.3 with the DHCP function disabled, you are required to be familiar with network.

After your setting completes, it will take about two seconds to write the setting to the NAC-2.3.

If you turned off the NAC-2.3 before completing writing the setting, the setting will be lost. In such case, do the necessary setting again.

### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.



```
Setup
^ >Clock
v
#Exit
```

### 2. Select the System setting menu.

Press the Cursor  $\blacktriangle/\blacktriangledown$  button repeatedly to display “System” in the display area.

You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, AM Radio and System.

```
Setup
^ >System
v
#Exit
```

Press the Setup button.

### 3. Select “Ethernet Setting.”

Select “Ethernet Setting” using the Cursor  $\blacktriangle/\blacktriangledown$  button, and press the Select button.

```
System [Setup]
^ >Ethernet Settings
v
#Exit
```

### Note:

The display shown above may not appear immediately after the power is turned on.

## IP Address settings:

From the “System” → “Ethernet Settings,” select “IP Address” using the Cursor  $\blacktriangle/\blacktriangledown$  button, and press the Select button.

- **Turning on or off the DHCP feature:**

From the “System” → “Ethernet Settings” → “IP Address” setup menu, select “DHCP” using the Cursor  $\blacktriangle/\blacktriangledown$  button. Then press the Select button.

```
IP Address [Setup]
^ >DHCP
v [On]
#Exit
```

Set this setting to On if your router is enabled for DHCP using the Cursor  $\blacktriangle/\blacktriangledown$  button.

With the DHCP feature set to On, the NAC-2.3 automatically configures all the network settings. This means that you do not have to configure the following IP Address settings.

If you opt to turn off the feature, then you need to configure the following IP Address settings manually.

```
System [DHCP]
^ On
v
#Set #Exit
```

Press the Setup button to confirm the new setting.

# Configuring Various Settings

- **Specifying the IP address:**  
(This setting is required only when you turn off the DHCP function.)

From the “System” → “Ethernet Settings” → “IP Address” setup menu, select “IP Address” using the Cursor ▲/▼ button. Then press the Select button.

```
IP Address [Setup]
^ >IP Address
v [000.000.000.000]
                                %Exit
```

Enter the IP address using the Cursor ◀/▶ button to select the digit to change and the Cursor ▲/▼ button to change the number. Press the ▲ to increment and ▼ to decrement the number. Then press the Select button to confirm the new setting.

```
IP Address [Setup]
      000.000.000.000
^ \Adjust #Set %Exit
```

Specify the IP address within the following range:

CLASS A: 10.0.0.0 to 10.255.255.255

CLASS B: 172.16.0.0 to 172.31.255.255

CLASS C: 192.168.0.0 to 192.168.255.255

Because the most of the routers commercially available is set to the CLASS C IP address, specify the CLASS C IP address for the NAC-2.3. If you set the IP address out of the ranges shown above, you cannot use the Net-Tune function.

- **Specifying the IP mask:**  
(This setting is required only when you turn off the DHCP function.)

From the “System” → “Ethernet Settings” → “IP Address” setup menu, select “IP Mask” using the Cursor ▲/▼ button. Then press the Select button.

```
IP Address [Setup]
^ >IP Mask
v [000.000.000.000]
                                %Exit
```

Enter the IP mask using the Cursor ◀/▶ button to select the digit to change and the Cursor ▲/▼ button to change the number. Press the ▲ to increment and ▼ to decrement the number. Then press the Select button to confirm the new setting.

```
IP Mask [Setup]
      000.000.000.000
^ \Adjust #Set %Exit
```

- **Specifying the gateway address:**  
(This setting is required only when you turn off the DHCP function.)

From the “System” → “Ethernet Settings” → “IP Address” setup menu, select “Gateway” using the Cursor ▲/▼ button. Then press the Select button.

```
IP Address [Setup]
^ >Gateway
v [000.000.000.000]
                                %Exit
```

Enter the gateway address using the Cursor ◀/▶ button to select the digit to change and the Cursor ▲/▼ button to change the number. Press the ▲ to increment and ▼ to decrement the number. Then press the Select button to confirm the new setting.

```
Gateway [Setup]
      000.000.000.000
^ \Adjust #Set %Exit
```

- **Specifying the DNS address:**  
(This setting is required only when you turn off the DHCP function.)

From the “System” → “Ethernet Settings” → “IP Address” setup menu, select “IP DNS1” using the Cursor ▲/▼ button. Then press the Select button.

```
IP Address [Setup]
^ >IPDNS1
v [000.000.000.000]
                                %Exit
```

## Configuring Various Settings

Enter the DNS1 address using the Cursor ◀/▶ button to select the digit to change and the Cursor ▲/▼ button to change the number. Press the ▲ to increment and ▼ to decrement the number. Then press the Select button to confirm the new setting.

```
IPDNS1      [Setup]
  000. 000. 000. 000
^vAdjust #Set #Exit
```

From the “System” → “Ethernet Settings” → “IP Address” setup menu, select “IP DNS2” using the Cursor ▲/▼ button. Then press the Select button.

```
IP Address  [Setup]
^ >IPDNS2
v [000. 000. 000. 000]
#Exit
```

Enter the DNS2 address using the Cursor ◀/▶ button to select the digit to change and the Cursor ▲/▼ button to change the number. Press the ▲ to increment and ▼ to decrement the number. Then press the Select button to confirm the new setting.

```
IPDNS2      [Setup]
  000. 000. 000. 000
^vAdjust #Set #Exit
```

### Proxy settings:

From the “System” → “Ethernet Settings” setup menu, select “Proxy Setup” using the Cursor ▲/▼ button. Then press the Select button.

```
Ethernet    [Setup]
^ >Proxy Setup
v
#Exit
```

### • Turning On/Off Proxy

From the “System” → “Ethernet Settings” → “Proxy Setup” setup menu, select “Proxy On/Off” using the Cursor ▲/▼ button. Then press the Select button.

```
Proxy       [Setup]
^ >Proxy On/Off
v [Off]
#Set #Exit
```

When you use the proxy server for security enhancement, set this setting to “On” to specify the Port No. and URL. When you do not use the proxy server, set this setting to “Off”.

```
Proxy       [On/Off]
^ On
v
#Set #Exit
```

# Configuring Various Settings

- **Specify Port number**

(This setting is required only when you turn off the DHCP function.)

From the “System” → “Ethernet Settings” → “Proxy Setup” setup menu, select “Port No” using the Cursor ▲/▼ button. Then press the Select button.

```
Proxy          [Setup]
^ >Port No
v [000000]
                                %Exit
```

Enter the port number using the Cursor ◀/▶/▲/▼ button, and then press the Select button to confirm the new setting.

```
Proxy          [Port No]
Port No: 08080
~Adjust #Set %Exit
```

- **Specifying Proxy Address**

(This setting is required only when you turn off the DHCP function.)

From the “System” → “Ethernet Settings” → “Proxy Setup” setup menu, select “Proxy Address” using the Cursor ▲/▼ button. Then press the Select button.

```
Proxy          [Setup]
^ >Proxy Address
v
                                %Exit
```

Select the character to enter using the Cursor ◀/▶/▲/▼ button, then press the Select button to enter the selected character.

```
Proxy Address [Setup]
v [+]a b c d e f g h
Display: Caps %OK #[]
```

After completing entering the Proxy Address, press the Setup button.

## Client Settings:

From the “System” → “Ethernet Settings” → setup menu, select “Client” using the Cursor ▲/▼ button. Then press the Select button.

```
Ethernet      [Setup]
^ >Client
v
                                %Exit
```

- **Specifying the client name (a name used to identify your NAC-2.3 on the network)**

You can specify the name for the NAC-2.3 as the client name.

From the “System” → “Ethernet Settings” → “Client” setup menu, select “ClientName” using the Cursor ▲/▼ button. Then press the Select button.

```
Client        [Setup]
^ >Client Name
v [NAC-2.3]
                                %Exit
```

Press the Display button to select the character type to enter. Each time you press the Display button, the character type cycles. Press the Cursor ◀/▶ button repeatedly to select your desired character. Press the Select button to enter the selected character.

```
System       [ClientName]
NAC-2.3
v [+]a b c d e f g h
Display: Caps %OK #[]
```

After entering the client name, press the Setup button to confirm the new setting.

**Note:**

If you connect two or more NAC-2.3 to the same LAN, use the separate client name for each of the NAC-2.3s.

## Configuring Various Settings

---

- **Turning on or off the WOL (Wakeup On LAN) feature**

WOL (Wakeup On LAN) allows you to turn on or off the NAC-2.3 from some other device on the network.

This setting is reserved for future extension and not currently available. Leave the setting at its default, “Disable”.

From the “System” → “Ethernet Settings” → “Client” setup menu, select “Wakeup on LAN” using the Cursor ▲/▼ button. Then press the Select button.

```
Client          [Setup]
^ >Wakeup on LAN
v [Disable]
                               #Exit
```

Select either “Enable” or “Disable”.

Press the Select button to confirm the new setting.

```
System          [WUP LAN]
^ Disable
v
                               #Set #Exit
```

- **Checking the MAC address**

Open the “System” → “Ethernet Settings” → “Client” setup menu, and press the Cursor ▲/▼ button repeatedly to display the MAC address of the NAC-2.3 (the address specific to the network-interface of NAC-2.3).

```
Client          [Setup]
^ >MAC address
v [0009B0-00001A]
                               #Exit
```

(The MAC address shown in the display differs for respective NAC-2.3s.)

The MAC address cannot be modified.

- **Specifying the Net-Tune port**

From the “System” → “Ethernet Settings” → “Client” setup menu, select “Net-Tune Port” using the Cursor ▲/▼ button. Then press the Select button.

```
Client          [Setup]
^ >Net-Tune Port
v [160096]
                               #Exit
```

Enter the Net-Tune Port using the Cursor ◀/▶/▲/▼, and then press the Select button to save the entered number.

Press the Setup button again to confirm the new setting.

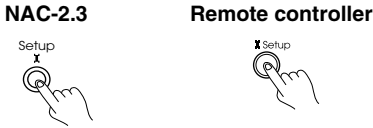
# Configuring Various Settings

## Changing the remote control code to resolve conflicts

When you use multiple NAC-2.3s, you can change the remote control code to avoid multiple Integra/Onkyo products from operating simultaneously with one remote controller.

### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.



```
Setup
^ ^>Clock
v
                                ¶Exit
```

### 2. Select the System setting menu.

Press the Cursor  $\blacktriangle/\blacktriangledown$  button repeatedly to display “System” in the display area. You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, AM Radio and System.

```
Setup
^ ^>System
v
                                ¶Exit
```

Press the Select button.

### 3. Press the Cursor $\blacktriangle/\blacktriangledown$ button to display “Remote ID” in the display area.

```
System      [Setup]
^ ^>Remote ID
v  [1]
                                ¶Exit
```

Press the Select button.

### 4. Press the Cursor $\blacktriangle/\blacktriangledown$ button to change the remote ID.

```
System      [Remote ID]
^ ^>1
v
                                ¶Set ¶Exit
```

Press the Select button to save the change.

To return to normal display, press the Setup button.

### Tips:

- Make sure to use the same remote ID as the one for the remote controller (see page 17). If the remote IDs do not match between the NAC-2.3 and remote controller, the NAC-2.3 will not work properly when operating with the remote controller.
- If you leave the remote controller with the batteries removed for a while, the settings you made will reset to the default settings.

# Configuring Various Settings

## Setting the Brightness in Standby Mode

You can change the brightness in the display while the NAC-2.3 is in the standby mode.

### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.

**NAC-2.3**



**Remote controller**



```
Setup
^ >Clock
v
#Exit
```

### 2. Select the System setting menu.

Press the Cursor  $\uparrow/\downarrow$  button repeatedly to display “System” in the display area. You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, AM Radio and System.

```
Setup
^ >System
v
#Exit
```

Press the Select button.

### 3. Press the Cursor $\uparrow/\downarrow$ button to display “Display Standby” in the display area.

```
System [Setup]
^ >Display Standby
v [Dim]
#Set #Exit
```

Press the Select button.

### 4. Press the Cursor $\uparrow/\downarrow$ button to select your desired brightness setting.

Bright: bright  
Dim: dimmed  
Off: turned off

```
System [Display]
^ Dim
v
#Set #Exit
```

Press the Select button to save the change.

To return to normal display, press the Setup button.

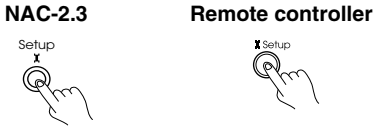
# Configuring Various Settings

## Changing the On Screen Display Background Color

You can change the On Screen Display background color. If you use multiple NAC-2.3s, it is easier to identify each NAC-2.3 by using different colors.

### 1. Activate menu mode.

Press the Setup button to display the setup items in the display area.



```
Setup
^ >Clock
v
                                %Exit
```

### 2. Select the System setting menu.

Press the Cursor  $\blacktriangle/\blacktriangledown$  button repeatedly to display “System” in the display area. You are presented with the following menu items in this order: Clock, Server, iNet Radio, FM Radio, AM Radio and System.

```
Setup
^ >System
v
                                %Exit
```

Press the Select button.

### 3. Press the Cursor $\blacktriangle/\blacktriangledown$ button to display “On Screen Display” in the display area.

```
System      [Setup]
^ >On Screen Display
v
                                %Exit
```

Press the Select button.

### • Changing the background color

Press the Cursor  $\blacktriangle/\blacktriangledown$  button to display “Background Color.”

```
System      [Setup]
^ >Background Color
v
                                %Exit
```

Press the Select button.

Press the Cursor  $\blacktriangle/\blacktriangledown$  button to select your favorite color.

You can choose a background color from seven colors: Blue 1, Blue 2, Green 1, Green 2, Magenta, Red 1, or Red 2.

```
System      [Background]
^ Blue 1
v
                                %Exit
```

Press the Select button to confirm the new setting.

## Setting the duration before the screen saver activates

Press the Cursor  $\blacktriangle/\blacktriangledown$  button to display “Screen Saver.”

```
System      [Setup]
^ >Screen Saver
v [Off]
                                %Exit
```

Press the Select button.

Press the Cursor  $\blacktriangle/\blacktriangledown$  button to select the desired duration.

You can choose from the following duration setting: “Off” or 1-60 minutes (in minutes).

```
System [Screen Saver]
^ Off
v
                                %Set %Exit
```

Press the Select button to confirm the new setting.

To return to normal display, press the Setup button.

# Configuring Various Settings

---

## Net-Tune Server Settings

If multiple Audio Network Servers exist on the same LAN, you have to select the Audio Network Server to which the NAC-2.3 is connected. (Be sure to use the NAC-2.3 and the Audio Network Server within the same network. If they reside on different networks, the NAC-2.3 cannot recognize the Net-Tune Audio Network Server.) The NAC-2.3 searches for a server when it is connected to the network for the first time, and sets the preferred server parameter to the first server found; however, you can change this setting any time from the setup menu. Once you have selected a server from the menu, that server will be used as the preferred server; that is, the NAC-2.3 will first attempt to access your selected server next time it is connected to the network. If there is no server accessible on the network, the NAC-2.3 displays a “Server Timeout” message.

1. Make sure that the Audio Network Server is running.
2. Make sure that the NAC-2.3 is connected to the same network as the server in the step 1 above is connected to.
3. Choose your desired server.

Press the Setup button, select “Server” using the Cursor ▲/▼ button, and press the Select button.

You are presented with the “Select Server” setup menu.

```
Server          [Setup]
^ >Select Server
v
                                     ¶Exit
```

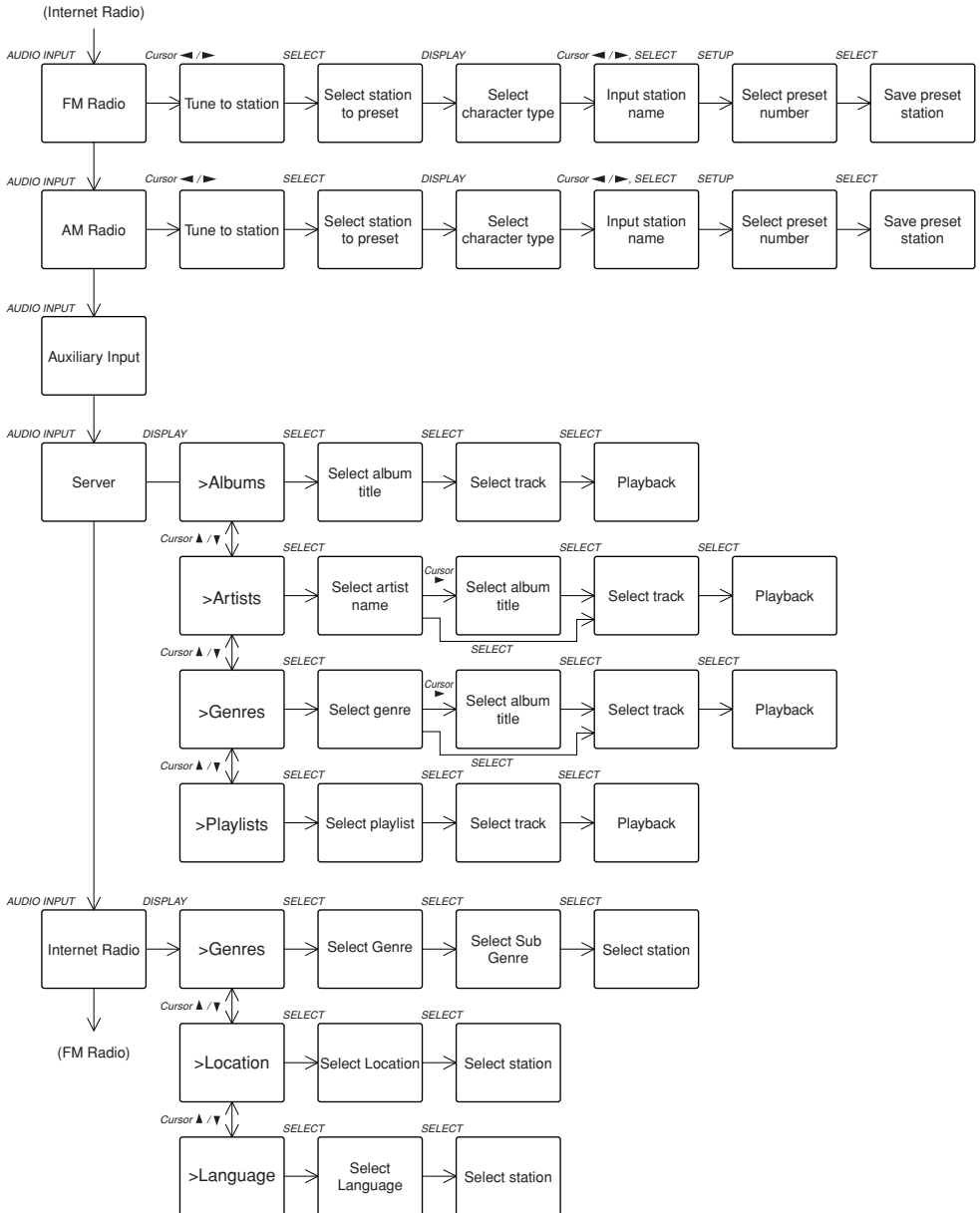
Press the Select button to list the names of available servers.

Press the Cursor ▲/▼ button repeatedly to select your desired server and then press the Select button.

```
Server          [Setup]
^  Thickpad-R30
v
                                     ¶Exit
```

# On Screen Display (OSD)

## OSD menu flowchart



# Troubleshooting

## POWER

### The power to system is not turned on.

- Make sure that power cable is plugged into the AC outlet (see pages 10, 26).
- Unplug the power cable from AC outlet, wait for five seconds or more, then plug the cable in again (see page 26).
- The top cover may become hot, but this is not failure.

## SPEAKER

### The sound is not heard

- Make sure the speakers are connected correctly and the speaker cables' core wires touch the speaker connectors (see page 24).
- Check to see if the volume level is set to minimum (see page 27).
- If the Muting indicator is flashing, the sound is muted. Cancel the muting function (see page 27).

## FM/AM TUNER

### Noise is heard during broadcast, or too much white noise is heard during an FM stereo broadcast.

- Change the location of the antenna (see page 19).
- Locate the unit further from the TV or computer (see page 19).
- Driving cars nearby or flying airplanes could cause noise.
- The broadcasting radio signal may be weak if a concrete wall obstructs the signal path .
- Try to setting FM mode to 'Mono' (see page 38).
- Noise may be heard when you operate the remote controller during AM reception.
- If nothing can improve the reception, install an outdoor antenna (see pages 18, 19).

## REMOTE CONTROLLER

### The remote controller does not function correctly.

- Make sure that the batteries have been installed in the correct direction (polarity +/-) (see page 11).
- Replace both batteries with new ones. (Do not mix different types of batteries or new and old batteries.) (See page 11.)
- The distance between the remote controller and the remote control sensor may be too far. Or, there may be an object between them (see page 11).
- The remote control sensor on the unit may be receiving a strong beam of light (inverter fluorescent light or sunlight) (see page 11).
- Make sure to use the same Remote ID code both for the remote controller and NAC-2.3 (see pages 17, 57).
- If you leave the remote controller with the batteries removed for a while, the Remote ID code setting for the remote controller will reset to the default settings.

## TIMER

### Timer playback does not work.

- The clock should be set correctly. If the clock is not set, timer playback does not work. Make sure you program the current day and time (see page 28).
- If you select "Server" or "iNetRadio" and the media cannot be played for some reason (such as the server being turned off), the NAC-2.3 will automatically receive FM or AM radio (see page 41).

### ETHERNET NETWORK

#### **The unit fails to activate the Internet radio or music server feature.**

- Imperfect network connection.
  - Check the connection between this unit and the LAN side port of your router (gateway) (see pages 20, 21).
  - Make sure that the modem and router (gateway) are correctly connected. Also, make sure that the power is on (see pages 20, 21).

#### **The unit fails to obtain a station list from an Internet radio site.**

- The radio site is now out of service or otherwise inaccessible due to some other reason such as maintenance.
  - Try to access the site after a while.

#### **Selecting the “Server” fails to play music or fails to connect to the server.**

- The Audio Network Server is not turned on.
  - Turn on the Audio Network Server.
- No audio files found on the server.
  - Create MP3, and/or WAVE audio files on your server.

#### **Search by album returns no match**

- The audio file list of the Audio Network Server contains no files that have album names.
  - Assign album names to the files contained in the audio file list of the Audio Network Server.

#### **Search by artist returns no match.**

- The audio file list of the Audio Network Server contains no files that have artist names.
  - Assign artist names to the files contained in the audio file list of the Audio Network Server.

#### **Search by genre returns no match.**

- The audio file list of the Audio Network Server contains no files that have genre names.
  - Assign genre names to the files contained in the audio file list of the Audio Network Server.

#### **No playlist can be selected.**

- You have not yet created any playlist in the Audio Network Server.
  - Create playlists in the Audio Network Server.

## Troubleshooting

Error messages		
Input source	Client FL display message	Meaning
Server	<b>No Albums</b>	Unable to find the album information during searching the music library.
Server	<b>No Artists</b>	Unable to find the artist information during searching the music library.
Server	<b>No Genres</b>	Unable to find the genre information during searching the music library.
Server	<b>No Playlists</b>	Unable to find the playlist during searching the music library.
Server	<b>No Tracks</b>	Unable to find the track during searching the music library.
Server	<b>Unsupported Format</b>	The track using unsupported format was selected during searching the music library.
Server	<b>List Changed</b>	The music library on the Net-Tune server is updated. The selected list is discarded and the selecting operation is reset. Select tracks for new playlist again.
Server	<b>Server Timeout</b>	The Net-Tune server does not respond. Check the operation status for the Net-Tune server.
Server	<b>Server not available</b>	The Net-Tune server function is not available. A global IP address may be set for the IP address setting.
Server	<b>Stream Error</b>	There is an error for playing the audio stream. The server load may be increased, which may result from too many client connections, too much PCM stream distribution, any other applications on the Net-Tune server, and so on. Take the appropriate measures
Server	<b>TrackList Over → [1 of 999]</b> <b>AlbumList Over → [1 of 999]</b> <b>ArtistList Over → [1 of 999]</b> <b>PlaylistList Over → [1 of 999]</b>	The list you selected contains 1,000 or more tracks. You can add up to 999 tracks per list. Divide the list into several lists so that each list contains 999 or fewer tracks, which enables you to play all tracks in a list (see the Net-Tune Central Help).
Internet Radio	<b>No Genres</b>	Unable to retrieve the genre information during searching the Internet radio stations.
Internet Radio	<b>No Languages</b>	Unable to retrieve the language information during searching the Internet radio stations.
Internet Radio	<b>No Countries</b>	Unable to retrieve the country information during searching the Internet radio stations.
Internet Radio	<b>No Sub Genres</b>	Unable to retrieve the sub-genre information during searching the Internet radio stations.

## Troubleshooting

---

Input source	Client FL display message	Meaning
Internet Radio	<b>No Stations</b>	Unable to connect the station during searching the Internet radio stations.
Internet Radio	<b>Stream Access Err</b>	Unable to receive the streaming data from the selected Internet radio station.
Internet Radio	<b>No Stream</b>	Unable to play the selected Internet radio station. Select other Internet radio stations.
Internet Radio	<b>iNet Radio Timeout</b>	Receiving the streaming data from the Internet radio station is timed out.
FM/AM/ Internet Radio	<b>No Presets</b>	There are no preset radio stations for FM, AM and Internet radio.
Server/ Internet Radio	<b>Playback Denied</b>	Tried to play the content with protection. Cancel the protection before ripping the content.

This product used a microcomputer to perform various advanced functions. However, noise, radio interference, or static electricity could occasionally cause the unit to malfunction. In this case, unplug the power cable from the AC outlet, then plug it in again in five seconds.

Integra/Onkyo is not responsible for damages (such as CD rental fees) due to unsuccessful recordings caused by the unit's malfunction. Before you record important data, make sure that the material will be recorded correctly.

### **Restoring the factory default settings:**

To reset all the stored settings to the factory default conditions, while the power to the NAC-2.3 is on, press and hold down the STOP button on the unit, and press Standby/On button.

# Specifications

---

## Amplifier Section

### Power output

FTC **15 watts per channel, min RMS, at 8 ohms, both channels driven 1 kHz, with no more than 0.1%**

DIN  $2 \times 17$  watts at 6  $\Omega$ , 1 kHz  
 $2 \times 15$  watts at 8  $\Omega$ , 1 kHz

### Dynamic power output

$2 \times 27$  watts at 6  $\Omega$   
 $2 \times 24$  watts at 8  $\Omega$

### Total harmonic distortion

0.1% at rated power

### IM distortion

0.6% at rated power

### Damping factor

30 at 8  $\Omega$

### Input Sensitivity and Impedance

AUX: 150 mV, 50 k $\Omega$

### Output Level and Impedance

FIXED: 150 mV, 2.2 k $\Omega$   
VARIABLE: 2 V, 470  $\Omega$

### Frequency and response

10 to 50,000 Hz +0 /-3 dB

### Signal to noise ratio

100 dB (IHF-A)

### Muting

-40 dB

### AC Inlet

IEC type  $\times 1$

## Tuner Section

### Tuning range

FM: 87.50–108.00 MHz (100 kHz steps)  
(U.S. & Canadian models)  
87.5–108.00 MHz (50 kHz steps)  
(Other area models)  
AM: 530–1710 kHz (10 kHz steps)  
(U.S. & Canadian models)  
522–1611 kHz (9 kHz steps)  
(Other area models)

### Usable sensitivity

FM: Mono 11.2 dBf,  
1.0  $\mu$ V (75  $\Omega$  IHF)  
0.9  $\mu$ V (75  $\Omega$  DIN)  
Stereo 17.2 dBf,  
2.0  $\mu$ V (75  $\Omega$  IHF)  
23.0  $\mu$ V (75  $\Omega$  DIN)  
AM: 30  $\mu$ V

### 50 dB Quieting sensitivity

FM: Mono 17.2 dBf, 2.0  $\mu$ V (75  $\Omega$ )  
Stereo 37.2 dBf, 20.0  $\mu$ V (75  $\Omega$ )

### Capture ratio

FM: 2.0 dB

### Image rejection ratio

FM: 40 dB (U.S. & Canadian models)  
85 dB (Other area models)  
AM: 40 dB

### IF rejection ratio

FM: 90 dB  
AM: 40 dB

### Signal to noise ratio

FM: Mono 73 dB, IHF  
Stereo 67 dB, IHF  
AM: 40 dB

### Selectivity

FM: 50 dB DIN  
( $\pm 300$  kHz at 40 kHz Devi.)

### AM Suppression Ratio

50 dB

### Harmonic distortion

FM: Mono 0.2%  
Stereo 0.3%  
AM: 0.7 %

### Frequency response

FM: 30–15,000 Hz ( $\pm 1.5$  dB)

### Stereo separation

FM: 45 dB at 1,000 Hz  
30 dB at 100 to 10,000 Hz

### Stereo threshold

FM: 17.2 dBf, 2.0  $\mu$ V (75  $\Omega$ )

# Specifications

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## General

### Sound format supported by the Net-Tune

WAVE (PCM), MP3, WMA

### Clock precision

monthly error:  $\pm 30$  seconds  
(at 25 °C (77 °F) )

### Power supply

AC 120 V, 60 Hz

### Power consumption

58 W (120 V, 60 Hz)

### Standby power

8 W

### Dimensions (W × H × D)

205 × 91 × 279 mm  
8-1/16" × 3-9/16" × 11"

### Weight

3.9 kg, 8.6 lbs

Specifications and external appearance are subject to change without notice as a result of product improvement.

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