RCA

user **manual**

RT2870

EXPORTER
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RT2870 IB V1.3 (EN)

It is important to read this instruction book prior to using your new product for the first time.

FCC Information

WARNING
RISK OF ELECTRIC SHOCK.
DO NOT OPEN

To reduce risk of electrical shock, do not remove cover or back (no user serviceable parts inside). Refer servicing to qualified personnel.

⚠ This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.

⚠ This symbol indicates important instructions accompanying the product.

FCC INFORMATION
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.

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This class B digital apparatus meets all requirements of the Canadian Interference–Causing Equipment Regulations.

The Shock Hazard Marking and Associated Graphical Symbol is provided on the bottom panel of unit.

Refer to the identifi cation/rating label located on the back panel of your product for its proper operating voltage.

IMPORTANT: The power cord can be unplugged to turn off the main power to the unit. It should also be easily accessible in an emergency.
• Leave sufficient space around the appliance to allow adequate ventilation: 10cm on either side and at the back, as well as 7cm above it are ideal.

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

For Your Safety
The AC power plug is polarized (one blade is wider than the other) and only fits into AC power outlets one way. If the plug won't go into the outlet completely, turn the plug over and try to insert it the other way. If it still won't fit, contact a qualified electrician to change the outlet, or use a different one. Do not attempt to bypass this safety feature.

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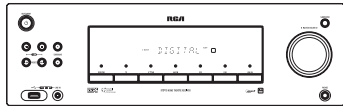

FCC Information

Service Information
This product should be serviced only by those specially trained in appropriate servicing techniques. For instructions on how to obtain service, refer to the warranty included in this user manual.

Connecting for Power
Make sure you connect all your other electronic components and the speakers before plugging your unit into the outlet. Plug the power cord in the wall outlet, matching the wide blade of the plug with the wide slot in the outlet. Be sure to insert the plug completely.

Headset Safety
• Do not play your headset at a high volume. Hearing experts warn against extended high-volume play.
• If you experience a ringing in your ears, reduce volume or discontinue use.
• You should use extreme caution or temporarily discontinue use in potentially hazardous situations.
• Even if your headset is an open-air type designed to let you hear outside sounds, don't turn up the volume so high that you are unable to hear what is around you.
• Excessive sound pressure from earphones and headphone can cause hearing loss.

Technical Specification
Product: Audio Receiver with Dolby Digital
Brand: RCA
Model: RT2870

Electrical Consumption
Power Supply: 120V ~ 60Hz
Power consumption: 90 Watts

This audio system has earned the ENERGY STAR.

Important Safety Instructions

Please read and save for future reference
Some of the following information may not apply to your particular product; however, as with any electronic product, precautions should be observed during handling and use.

• Read these instructions.
• Keep these instructions.
• Heed all warnings.
• Follow all instructions.
• Do not use this apparatus near water.
• Clean only with dry cloth.
• Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
• Do not install near any heat sources such as radiators,heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
• Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized or grounding-type plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
• Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
• Only use attachments/accessories specified by the manufacturer.
• Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

⚠ Portable Cart Warning

• Unplug this apparatus during lightning storms or when unused for long periods of time.
• Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Additional safety information
• Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
• Always leave sufficient space around the product for ventilation. Do not place product in or on a bed, rug, in a bookcase or cabinet that may prevent air flow through vent openings.
• Do not place lighted candles, cigarettes, cigars, etc. on the product.
• Connect power cord only to AC power source as marked on the product.
• Care should be taken so that objects do not fall into the product.
• Do not attempt to disassemble the cabinet. This product does not contain customer serviceable components.

If your product operates on batteries, adhere to the following precautions:
A. Any battery may leak electrolyte if mixed with a different battery type, if inserted incorrectly, or if all batteries are not replaced at the same time.
B. Any battery may leak electrolyte or explode if disposed of in fire or an attempt is made to charge a battery not intended to be recharged.
C. Discard leaky batteries immediately. Leaking batteries can cause skin burns or other personal injury. When discarding batteries, be sure to dispose of them in the proper manner, according to your state/provincial and local regulations.
D. Battery shall not be exposed to excessive heat such as sunshine, fire or the like

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Connections and Setup

Content of Box
• One main unit
• One remote control with batteries
• One pair of front speakers, one pair of rear speakers, one center speaker and one subwoofer
• One pig-tail antenna wire
• One AM loop antenna
• One coaxial digital cable
• One 3.5mm stereo cable for line-in
• One User Manual
• One Quick Start Guide

Main unit

Left and right front speakers

Left and right rear speakers

Center speaker

Subwoofer

Coaxial digital cable

Remote control with batteries

Pig-tail antenna wire

3.5mm stereo cable for line-in

User manual

Quick Start Guide

AM loop antenna

Set up and Maintenance of the Unit
Provide spaces for sufficient ventilation as indicated:

Front View — 10 cm*

Side View — 5 cm* — 18 cm*

• Do not connect to the AC power cords until all connections are completed.
• Do not use your set immediately after transferring it from a cold place to a warm place: there is risk of condensation.
• Do not expose your set to water and excessively high temperatures.
• After having disconnected your set, clean the case with a soft cloth, or with a slightly damp leather chamois. Never use strong solvents.
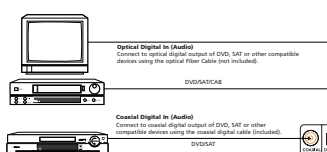
Protect your Components from Overheating
• Do not block ventilation holes in any component. Arrange the components so that air can circulate freely.
• Do not stack components directly on top of each other.
• Do not place the unit near other components that generate heat such as heating vents.
• Allow adequate ventilation when placing your components in a stand.
• Place an amplifier near the top shelf of the stand so heated air rising from it will not affect other components. If you have a satellite receiver, you should place it on the top shelf.
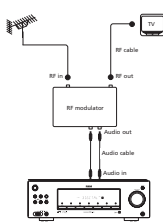

Connections and Setup

Connecting to Audio Components

Digital input
Connect components capable of outputting Dolby digital (e.g. DVD or SAT) or standard PCM (CD) format digital signals. Read section on "Input Signal Setting" under "Advanced Sound Control" carefully to adjust the matching input settings.

Digital Connection
• This unit provides one optical and one coaxial digital input jacks for the connection of your components.
• To connect a SAT receiver or DVD player with a digital output, use an optical digital cable (not included) or coaxial digital cable (included) to carry the audio signal and enjoy Dolby Digital sound quality.
• One optical or coaxial cable is needed for each SAT receiver or DVD player.

Note: Optical and coaxial cables carry only the audio portion of the signal.

Connections and Setup

Connecting the Speakers
Speaker wires are color-coded to match the terminals. Connect the speaker wire from the back of each speaker to the corresponding color terminal at the back of the unit. Press down the tab to open the terminal and insert the wire. Release the tab to lock wire in the terminal.

When connecting the speakers, make sure the polarities ("+" speaker wire to "+" on the unit. For example, red wire to red terminal on the unit) of speaker wires and terminals match.

If the cords are reversed, the sound will be distorted. Do not let the speaker wires touch each other, it will damage the speaker.

When connecting subwoofer, connect subwoofer control cable (red/black striped) at the back of the subwoofer to the subwoofer control jack on the unit's rear panel, then press POWER ON/OFF on the subwoofer speaker to turn it on.

Center Speaker

Front Speakers — Right / Left

Green/grey or black striped

Red/grey or black striped

With red/grey or black striped

Purple/grey or black striped

Use this jack on the rear panel to connect to another active subwoofer other than the one supplied.

Blue/grey or black striped

Grey/black striped

Subwoofer

Use this jack on the rear panel to connect to the subwoofer control cable (red/black striped) of the subwoofer.

Rear Speakers (Surround Sound) — Right / Left

Connections and Setup

Digital Connections
The digital audio jacks can accept Dolby Digital (AC-3) or PCM signals when compatible components are connected.

Optical Digital In (Audio)
Connect to optical digital output of DVD, SAT or other compatible devices using the optical Fiber Cable (not included).

DVD/SAT/CAB

Coaxial Digital In (Audio)
Connect to coaxial digital output of DVD, SAT or other compatible devices using the coaxial digital cable (included).

DVD/SAT

TV Connections
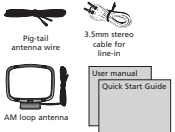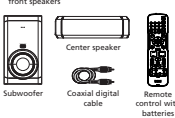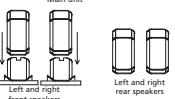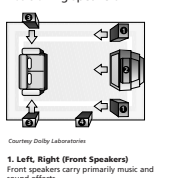TVs with RF input may need a RF modulator (not included) for inputting audio signals.

The illustration shown above may varies from your actual RF input model, please refer to your RF modulator manual.

Connecting the Antennas
Connect the AM and FM antennas to the AM and FM terminals on the system's back panel.

They must be hooked up in order to receive clear reception. For FM reception, extend antenna to its full length. For AM reception, rotate the antenna horizontally to get better reception.

AM Loop Antenna and FM Indoor Antenna
1. Uncoil the antenna wire and locate the base end of the AM antenna.
2. Press down on the antenna tab to open the terminal.
3. Insert the antenna wires into the terminal and release the tabs to secure the wires in place.
4. Make sure the white wire on the AM loop antenna is inserted into the AM LOOP terminal and other wire is inserted into the ground loop terminal.

Connections and Setup

Positioning Speakers

Courtesy Dolby Laboratories

1. Left, Right (Front Speakers)
Front speakers carry primarily music and sound effects.

2. Center
In surround mode, the center speaker carries most of the dialog as well as music and effects. It should be set between the left and right speakers.

3. Surround (Rear Speakers)
The rear speakers' overall sound balance should be as close as possible to the front speakers. Proper placement is vital to establish an evenly distributed sound field.
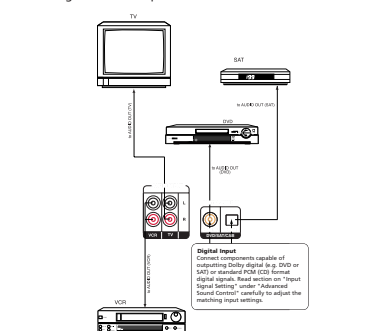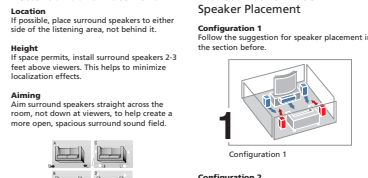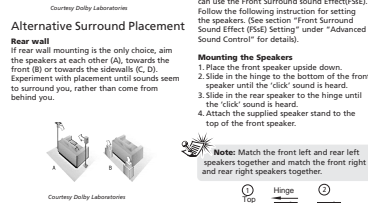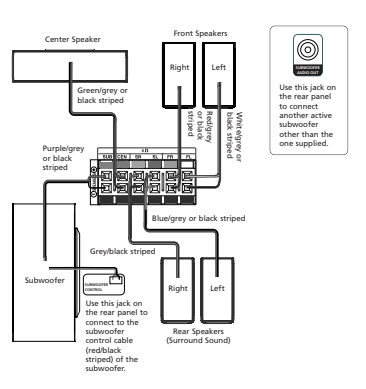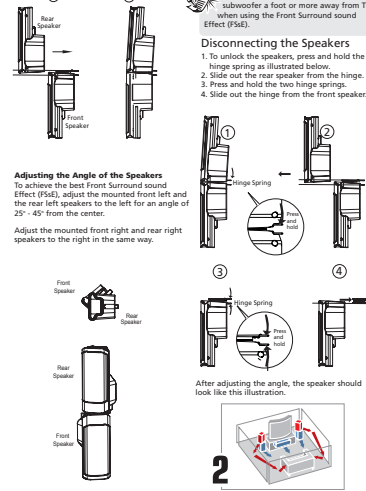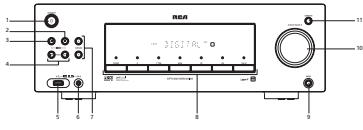
Subwoofer
A subwoofer is designed to reproduce powerful low bass effects (explosions, the rumble of spaceships, etc.) which dramatically heighten the action on the screen.

Magnetic Shielding
Speakers placed less than two feet from the TV set must be magnetically shielded in order to prevent picture distortion. Front speakers provided with this unit are magnetically shielded to protect your TV set.

Note: Place the rear speakers and subwoofer a foot or more away from TV when using the Front Surround sound Effect (FSsE).

Connections and Setup

Front Speaker Placement
Follow the suggestions for speaker placement below to get the best results.

Courtesy Dolby Laboratories

Alignment
Align the center speaker evenly with (A) or slightly behind (B) (the left and right speakers), but not ahead of them.

A

B

Courtesy Dolby Laboratories

Angle
Place the left and right speakers to form a 45-degree angle with your favorite viewing position to duplicate the soundtrack mixer's perspective.

Height
The mid- and high-frequency drivers of the three front speakers should be as close as possible to the same height. This often requires placing the center speaker directly on top (A) or beneath (B) the TV set.

Courtesy Dolby Laboratories

Connections and Setup

Better Surround Placement
Location
If possible, place surround speakers to either side of the listening area, not behind it.

Height
If space permits, install surround speakers 2-3 feet above viewers. This helps to minimize localization effects.

Aiming
Aim surround speakers straight across the room, not down at viewers, to help create a more open, spacious surround sound field.

Courtesy Dolby Laboratories

Alternative Surround Placement
Rear wall
If rear wall mounting is the only choice, aim the speakers at each other (A), towards the front (B) or towards the sidewalls (C, D). Experiment with placement until sounds seem to surround you, rather than come from behind you.

Courtesy Dolby Laboratories

No adjacent walls
Surround speakers can go on stands facing each other to approximate sidewall mounting (A), or to the sides or rear of the viewing area, aimed upwards; they can go right on the floor, or preferably, a few feet off the floor such as on end tables (B).

Connections and Setup

Front Surround Mode Speaker Placement
Configuration 1
Follow the suggestion for speaker placement in the section before.

Configuration 1

Configuration 2
If placing the rear speakers (surround speakers) at the back is not a good choice for you, you can use the Front Surround sound Effect(FSsE). Follow the following instruction for setting the speakers. (See section "Front Surround Sound Effect (FSsE) Setting" under "Advanced Sound Control" for details).

Mounting the Speakers
1. Place the front speaker upside down.
2. Slide in the hinge to the bottom of the front speaker until the 'click' sound is heard.
3. Slide in the rear speaker to the hinge until the 'click' sound is heard.
4. Attach the supplied speaker stand to the top of the front speaker.

Note: Match the front left and rear left speakers together and match the front right and rear right speakers together.

① Hinge ② Front Speaker / Bottom

Connections and Setup

Note: Place the rear speakers and subwoofer a foot or more away from TV when using the Front Surround sound Effect (FSsE).

Disconnecting the Speakers
1. To unlock the speakers, press and hold the hinge spring as illustrated below.
2. Slide out the rear speaker from the hinge.
3. Press and hold the two hinge springs.
4. Slide out the hinge from the front speaker.

Adjusting the Angle of the Speakers
To achieve the best Front Surround sound Effect (FSsE), adjust the mounted front left and the rear left speakers to the left for an angle of 25°- 45° from the center.

Adjust the mounted front right and rear right speakers to the right in the same way.

After adjusting the angle, the speaker should look like this illustration.

Configuration 2

General Controls

Main Unit

1. **ON/STANDBY**
Turns on/off the unit. When the unit is turned on, the unit will go to the mode it was in before powered off.

2. **▶II**
Starts and pauses playback in USB mode.

3. **■**
Stops playback in USB mode.

4. **I◄◄/►►I (PRESET buttons)**
Selects preset stations in AM/FM mode. Directly accesses the previous or next track in USB mode.

5. **USB jack**
Connects USB devices.

6. **LINE IN**
Connects components for audio input.

7. **▲/▼ (SURROUND buttons)**
Selects among digital sound processors. (STEREO, HALL, CHURCH, CLUB, STADIUM, STUDIO, 3 STEREO, DOLBY PL EMULATION, DOLBY PL II MUSIC, DOLBY PL II MOVIE)

8. **DVD/DVR, TV, SAT,CAB, AM/FM, VCR, USB and LINE-IN (SOURCE buttons)**
Selects sound source.

9. Headphones jack

10. **MASTER VOLUME**
Adjusts the volume.

11. **SUBWOOFER**
Selects among subwoofer output levels. (SOFT SUBWOOFER, BALANCE SUBWOOFER, STRONG SUBWOOFER, POWERFUL SUBWOOFER)

Remote Control

Install "AAA" ("UM-4"/"R03") batteries to the remote control prior to use.

1. **ON/OFF**
Turns on/off the unit.

2. **Number buttons**
Directly accesses a preset station in AM/FM mode.

3. **MEMORY**
Stores station in AM/FM mode.

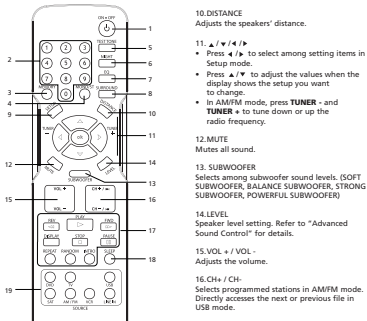4. **MONO/ST**
Selects between Stereo and Mono sound in FM mode.

5. **TEST TONE**
Speaker test tone setting. Refer to "Advanced Sound Control" for details.

6. **NIGHT**
Selects among night mode options (DRC OFF, SOFT and ON) which compresses the volume difference between normal voices and sounds such as explosions. (Available only during Dolby digital signal playback)

7. **EQ**
Selects among preset equalizer mode (FLAT, POP, JAZZ, ROCK, CLASSIC, BASS and TREBLE).
Press ▲/▼ to adjust the bass or treble level. This function is only available in Stereo mode.

8. **SURROUND**
Selects digital sound processors. (STEREO, HALL, CHURCH, CLUB, STADIUM, STUDIO, 3 STEREO, DOLBY PL EMULATION, DOLBY PL II MUSIC, DOLBY PL II MOVIE)

9. **SETUP**
Enters Setup mode. Use ◄/► to select among setup options. (DIMMER,CENTER SPK YES/NO,SURROUND SPK YES/NO, COAXIAL/OPTICAL, FRONT SURROUND, ROOM SMALL/MID/LARGE).

10. **DISTANCE**
Adjusts the speakers' distance.

11. **▲/▼/◄/►**
Press ◄/► to select among setting items in Setup mode.
Press ▲/▼ to adjust the values when the display shows the setup you want to change.
In AM/FM mode, press **TUNER -** and **TUNER +** to tune down or up the radio frequency.

12. **MUTE**
Mutes all sound.

13. **SUBWOOFER**
Selects among subwoofer sound levels. (SOFT SUBWOOFER, BALANCE SUBWOOFER, STRONG SUBWOOFER, POWERFUL SUBWOOFER)

14. **LEVEL**
Speaker level setting. Refer to "Advanced Sound Control" for details.

15. **VOL + / VOL -**
Adjusts the volume.

16. **CH+ / CH-**
Selects programmed stations in AM/FM mode. Directly accesses the next or previous file in USB mode.

17. **Operation Buttons (In USB mode only)**
Press **PLAY, STOP** and **PAUSE** to access the relative functions.
Press **REV** or **FWD** starts reverse or forward accelerated play.
Press **DISPLAY** to access MP3/WMA ID3 information and current play time,current play Folder and Track number,Play Mode.
Press **REPEAT** to access the repeat function.
Press **RANDOM** to turn on/off random playback.
Press **INTRO** to enter intro mode.

18. **SLEEP**
Enters sleep mode and selects sleep time.

19. **SOURCE buttons**
Selects audio sources.

Operating Your Unit

Selecting Source

When one of the SOURCE buttons on the front panel or on the remote control is pressed, the input corresponding to the name will be activated.

The unit acts as a switching device between all the sources that are plugged into it.

Example 1:
If you have connected a DVD player to the DVD input on the unit, press **DVD/DVR** on the front panel or on the remote control to receive the sounds transmitted by the DVD.

Example 2:
Based on the example 1, the DVD is playing , if a VCR is connected to the VCR input of the unit, press **VCR** on the front panel or on the remote control. The sound from the VCR source will replace the DVD.

You can connect up to 6 audio sources to this amplifier:

SOURCE buttons on the front panel	SOURCE buttons on the remote control	Corresponding connector at the rear panel
DVD/DVR	DVD	DVD
TV	TV	TV
SAT•CAB	SAT	SAT/CAB
AM/FM	AM/FM	built-in
VCR	VCR	VCR
USB	USB	USB jack at front panel
LINE-IN	LINE IN	Line in jack at front panel

The source name selected shown on the display.

Note:
Your unit has a built in tuner. Just connect the appropriate antenna to the back of the unit and you will be able to listen to radio stations. (See details in Radio section)
Other sources can be connected to the above standard source.
Connections at the back panel can be interchanged if sources have the same audio input. Example, you can connect a TV to VCR inputs and connect a VCR to TV input.

Playing a DVD with the unit

1. Connect a DVD player to the unit.
2. Press **ON/STANDBY** on the main unit or press **ON•OFF** on the remote control to switch on the unit.
3. Press **DVD/DVR** on the main unit to select the DVD source.
4. Switch ON the DVD player and start playback.
5. Set the sound mode if needed (see "Advanced Sound Control" for details).

Example:
To play Dolby Prologic II Movie sound, press the **SURROUND** buttons until "Dolby PL II MOVIE" appears on the Display.

To play Dolby Digital sound, the source must be connected to the unit via the optical or coaxial terminal. Refer to "Input Signal Setting" of "Advanced Sound Control" for details.

Radio

The unit has a built-in tuner that allows for AM/FM radio function.

Manual Tuning
1. Connect the FM antenna and the AM loop antenna at the back of the unit. Rotate the AM loop for better reception.
2. Press **AM/FM**.
3. Tune a station by pressing **TUNER+/-** repeatedly until the desired station is found. Alternatively, you can press and hold the same buttons down for about one second to activate the automatic search function. In this mode the unit will automatically tune frequencies until it finds a station.
4. Repeat step 3 to tune to another radio station.
5. Press **AM/FM** to select between FM and AM.

Storing Radio Stations
The unit can store up to 40 radio stations (30 preset stations for FM and 10 preset stations for AM) in its memory. You can enter every single radio station yourself or the unit can store all available radio stations automatically in ascending order.

Tips:
When the FM station broadcasts Stereo sound is found, STEREO is displayed.
When you tune at a weak FM station manually, press **MONO/ST** on remote control to switch from Stereo to Mono mode. This will reduce the background noise.
If there is any interference, change the antenna's position until ideal sound reception is obtained. TV and other electronic devices could be the cause of interference, so try to position the antenna away from them.
A weak signal can affect the "Automatic preset programming" function's efficiency. Adjust the antenna for better reception and a more efficient search.

USB Mode

This unit allows you to connect your own USB storage devices such as mp3 players and USB flash memory. Connect the USB device first then you can start playback.

Operating Your Unit

Automatic Preset Programming
1. Press **AM/FM** to enter the AM/FM mode.
2. Press and hold **AM/FM** for two seconds to start automatic preset programming.
3. Radio frequencies will be browsed and radio stations stored automatically. When all the available radio stations are stored or all 40 (30 preset stations for FM and 10 preset stations for AM) memory locations are full, the auto preset programming function will stop.

Manual Preset
1. Tune to a radio station (see "Manual tuning" for details).
2. Press **MEMORY**. While the Program Preset number is still flashing, input your desired preset number using the numeric buttons or press **CH+/-**, then press **MEMORY** to store it.

Retrieving Preset Stations
1. Press **AM/FM** to enter the Tuner mode.
2. Press **CH +/-** to search up or down for the preset stations or directly press the numeric buttons.

Connecting/Disconnecting USB Device to the Main Unit
Insert the USB device's port into the USB jack of the unit. Unplug the device to disconnect.

USB Device Playback Features (Only support MP3/WMA file)
1. Press **USB** on front panel or remote control to select USB mode.
2. Press **▶II** to start playback or press **▶II** to pause playback.
3. Press **■** to end playback.
4. Press **CH+/-** on the remote control or press **I◄◄/►►I** on the front panel to skip to the previous or next file.
5. Press **REPEAT** on the remote control to select repeat mode. (REPEAT ONE, REPEAT FOLDER, REPEAT ALL, REPEAT OFF)
6. Press **RANDOM** on the remote control to select random play mode. (RANDOM ON, RANDOM OFF)
7. Press **INTRO** on the remote control to turn on/off intro mode. The unit will play the first ten seconds of each track on the USB device.
8. Press **DISPLAY** on the remote control to select among mp3/WMA ID3 information, elapsed time,current play Folder and Track number and Play Mode.

Line in Mode
1. Connects one end of the 3.5mm stereo cable to the line in connector on the front panel of the unit and the other to the line out or headphone jack on an external source.
2. Press **LINE-IN** on the front panel or the remote control to select line in mode.

Tips:
The songs in the root directory will be played first before all the sub-folders and songs under the first folder is played.
This unit supports over 64K WMA bitrate.
Maximum ID3 characters that can be displayed are 30 characters
Only English characters are supported. Other characters may not be shown properly.

Advanced Sound Control

Sound Enhancement Systems
This unit is equipped with several built-in sound enhancement systems.

Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", and the double-D symbol are trademarks of Dolby Laboratories.

Dolby Digital
The Dolby Digital mode lets you enjoy full digital surround from software processed in the Dolby Digital format. Dolby Digital provides better sound quality and more powerful presence than conventional Dolby Surround.

This unit is equipped with Dolby Digital 5.1-channel so that you can enjoy enhanced full digital surround sound. Being different from Dolby Pro Logic in which only four channels (Front Left, Front Right, Center and Rear) are used, the new system provides stereo separation of the rear speakers (Rear-Right, Rear-Left). These 5 channels, together with the subwoofer channel for bass sounds (counted as 0.1 channel), constitute as 5.1-Channel (or 6 Channels) Input for Dolby Digital that brings you the most sophisticated sound enjoyment.

Dolby Pro Logic II
The Pro Logic II mode uses the built-in circuit to steer the Left, Center, Right and Surround left and right channel audio signals and uses all five speakers to play both stereo and Dolby Pro Logic program source, such as TV and VCR. Dolby Pro Logic II includes Dolby Pro Logic II Movie, Dolby PL II Music and Dolby Pro Logic Emulation.

You can use this mode with any stereo program source (such as VCR/SAT) to enjoy multi-channel sound experience.

Dolby 3 Stereo
The 3 Stereo mode will redirect the Surround signals to the front left and right speakers when only the front and center speakers are used.

Stereo

The Stereo mode uses the two main channel outputs from the front speakers. Use this mode if you have connected the front speakers only.

DSP (Digital Sound Processor)
These digital sound effects resemble sounds in a real environment such as (STEREO, HALL, CHURCH, CLUB, STADIUM, STUDIO, 3 STEREO, DOLBY PL EMULATION, DOLBY PL II MUSIC, DOLBY PL II MOVIE). DSP automatically converts analog audio signals to digital ones which enables you to adjust the sound without degrading the sound quality. Different modes will give you different feels of size and types of listening environment.

Dynamic Bass Amplified System (dBas)
With "Dynamic Bass Amplified System" (dBas), the discrete amplifier is located in the unit so the subwoofer keeps the power needed to reproduce powerful effects. Four settings are available: SOFT, BALANCE, STRONG and POWERFUL.

Press **SUBWOOFER** to select the subwoofer (dBas) effects level according to your needs.

Advanced Sound Control

Fine Setting of the Components
You can select the surround mode by pressing **SURROUND** repeatedly to select among different options. (STEREO, HALL, CHURCH, CLUB, STADIUM, STUDIO, 3 STEREO, DOLBY PL EMULATION, DOLBY PL II MUSIC, DOLBY PL II MOVIE)

The default surround modes for different components are listed in the table below The unit will keep the last selection in memory.

Source Input	If digital input is (optical or coaxial) is selected	If analog input is selected
DVD/DVR	Dolby Digital	N/A
TV	N/A	Pro Logic II Movie
SAT•CAB	Dolby Digital	N/A
AM/FM	AM/FM	Stereo
VCR	N/A	Pro Logic II Movie
USB	N/A	Stereo
LINE-IN	N/A	Analog

Input Signal Setting
The unit defaults to the most convenient settings for your easiest use (see table).

If your connection is different from the default setting,
1. Select the source
2. Press the **SETUP** button to show setup options.
3. Press ◄/► until OPTICAL or COAXIAL is displayed.
4. Press ▲/▼ to select among optical/coaxial to match your connection. Your selection will be stored automatically.

Fine Setting of the Speakers
All the basic settings have already been pre-set for the speakers included in the box.

Also, to make the surround sound more effective and suit the acoustic conditions in your listening room, you may need to delay the signal coming from some of the speakers. Channel delay compensates for center or surround speakers that are closer to the listening position than the front speakers.

Testing Speaker Loudness
You can listen to the loudness of the individual speakers.

1. Press **TEST TONE** on the remote control. A short noise will be heard in the speakers one by one. The speaker having the noise at that moment will be shown in the display.
2. Turn the **VOLUME** knob or press **VOL +** or **VOL -** on the remote control to adjust the master volume (if necessary).
3. Press **TEST TONE** to exit.

Adjust Individual Speaker Volume
1. To adjust individual speaker volume level, press **LEVEL** on the remote control.
2. Continue to press **LEVEL** on the remote control to select the channel to be adjusted, then press ▲/▼ to adjust the level.

Digital Input
Select this setting to play digital signals from a DVD or SAT.

Source	Default input
DVD/DVR	Coaxial (DVD/COAX)
TV	Analog (TV/ANL)
SAT•CAB	Optical (SAT/OPT)
AM/FM	Built-in tuner
VCR	Analog (VCR/ANL)
USB	Digital
LINE-IN	Analog

Analog Input
This unit is defaulted to play analog signals from TV, VCR and line-in.

Advanced Sound Control

Speaker Configurations
You can also change the setup of the speakers. Use a subwoofer to enjoy optimum sound.

For optimum surround experience measure the distance between the speaker and your favorite listening position. Press **DISTANCE** to adjust the speakers' distance.

1. Press the **DISTANCE** button to show setup options.
2. Press the **DISTANCE** until the speaker you want is displayed.
3. Press ▲ / ▼ to change the speaker settings. Your selection will be stored automatically.
4. Repeat step 2 and 3 to set up the next speaker. You may adjust the distance within the following ranges:
   Front Speaker distance (FRNT): 0-30 ft
   Center Speaker distance (CNTR): 0-30 ft
   Rear Speaker distance (SURR): 0-30 ft
5. When set up is done, wait for five seconds to automatically save your settings or press any buttons to save your selection and set up mode.

Factory defaulted Advance setting indication from VFD
The unit has defaulted the following distances:
Front speakers (FRNT)   15 ft
Center speaker (CNTR)   15 ft
Rear speakers (SURR)   10 ft

Front Surround Sound Effect (FsE) Setting
1. Press **SETUP** button on remote control to show setup options.
2. Press ◄/► until **F SURR N** is displayed.
3. Press ▲ / ▼ to select between Y(Yes) and N (No).
4. Press ▲ / ▼ until ROOM is displayed.
5. Press ◄/► to select among S (SMALL), M(MID), L(LARGE).

Your selection will be stored automatically. You can use this function if placing the rear speakers (surround speakers) at the back is not a good choice for you. See "Speaker Configurations/Front Surround Mode Speaker Placement" for details)

You can use this function to control different levels of surround sound. You can select among SMALL, MID, LARGE according to your room size:
SMALL: room size below 12ft x12 ft (3.6m x3.6m)
MID: room size between 12ft x12ft – 16ft x16 ft (5m x5m)
LARGE: room size over 16ft x16ft.

Center/Surround Speaker Setup
1. Press **SETUP** button on remote control to show setup options.
2. Press ▲ / ▼ until **CTR YES** or **SURR YES** is displayed.
3. Press ▲ / ▼ to select between **YES** and **NO**.

Notes:
CTR stands for Center Speaker selection while SURR stands for Surround Speaker selection.
By default, the Center and Surround Speakers are set to YES. If you decide not to use, set the ones you do not intend to use to NO so the sound performance is not affected.

VFD Dimmer Setup
1. Press **SETUP** button on remote control to show setup options.
2. Press ◄/► until **DIMMER 0** is displayed.
3. Press ▲ / ▼ to select between **0** and **1**.

Troubleshooting Tips

Unit/AM/FM Operation

ST indicator is off.
Adjust the antenna.
Press **MONO/ST** button to insure you are not outputting in mono.

The signal is Mono. Severe hum or noise.
The signal is too weak. Connect an external antenna.
Adjust antenna.
Reposition antenna away from any electronics.

There is interference to FM reception.
Turn off other electrical units (e.g. DVD, CD player) near the unit

Remote Control Operation

The remote control does not operate the unit.
No batteries installed. (included with your system) Install the batteries before attempting to operate the remote. Be sure to match the + and - ends of each battery to the symbols shown in the remote battery compartment.
The batteries are weak. Replace all batteries.

Noise occurs when the TV is turned on.
The TV is too close to the audio system.

The remote is not pointed at the remote control sensor on the main unit or there is an obstacle between the remote and the main unit.
The remote control is too far from the main unit, move closer.

General

No audio.
Make sure the speakers are connected.
Check the input connections.
Check the power cord connections.
Make sure MUTE is off.
Make sure the digital setting (optical, coaxial or analog) is correct.
Check that the headphone is not inserted.

No audio from one channel.
Check the speaker level setting.
Check the speaker wire or external source cable connections.

Care and Maintenance

Disconnect the audio system from the power source before performing any maintenance.

Cleaning the Exterior
Disconnect the system from AC power before cleaning the exterior of the system with a soft dust cloth, or with a slightly damp leather chamois. Never use strong solvents.

Important Battery Information
Remove the batteries to avoid leakage if you do not use your remote control for more than one month.
Discard leaky batteries immediately as leaking batteries may cause skin burns or other personal injuries.

Dispose of batteries in the proper manner, according to provincial and local regulations.
Any battery may leak electrolyte if mixed with a different battery type, if inserted incorrectly, if all batteries are not replaced at the same time, if disposed of in fire, or if an attempt is made to charge a battery not intended to be recharged.

Care and Maintenance

Safety Precautions
Never open the cabinet under any circumstances. Any repairs or internal adjustment should be made only by a trained technician.
Never operate this product with the cabinet removed.
Do not touch the player with wet hands. If any liquid enters the player cabinet, take the player to a trained technician for inspection.

The apparatus shall not be exposed to dripping and splashing.
No object filled with liquids, such as vases, shall be placed on the apparatus.
No naked flame sources such as lighted candles, shall be placed on the apparatus.

Technical Specifications

Amplifier Section
RMS Output Power: Dolby Digital Mode with 10% Total Harmonic Distortion
Front, Rear and Center Channels:
167 Watts per Channel (1KHz, 8 Ohm)
Subwoofer Channel: 167 Watts (100Hz, 8 Ohm)
Total RMS Output Power,
Dolby Digital mode : 1000 W

FTC Output Power: Dolby Digital Mode with 10% Total Harmonic Distortion
Front Channels (L and R) : 75 Watts per channel (1KHz, 8 Ohm)
Rear Channels (L and R): 75 Watts per channel (1KHz, 8 Ohm)
Center Channel: 155 Watts (1KHz, 8 Ohm)
Subwoofer Channel: 155 Watts (80Hz, 8 Ohm)
Total FTC Output Power,
Dolby Digital mode: 610 Watts

Muting Attenuation: 65dB
Frequency Response: 200Hz/-3dB, 1kHz ref.
Subwoofer Frequency Response:
10 Hz / -3db, 80Hz ref.
Signal to Noise Ratio: 65dB
(Dolby digital mode)

AM Tuner Section
Frequency Response: 2kHz +/-6dB, 1kHz ref.
Usable Sensitivity: 800uV/m @ S/N 20dB
Signal to Noise: 38dB
IF Rejection: 35dB

FM Tuner Section
Frequency Response: 15kHz +/-3dB, 1kHz ref.
Quieting: 24dBu
Signal to Noise: 60dB(stereo) / 65dB(mono)
IF Rejection: 50dB

Dimensions (H x W x D mm)
Unit: 430 x 140 x 347
Front and Surround Speakers: 200 x 77 x 85
Center Speaker: 85 x 300 x 77
Subwoofer: 360 x 195 x 328.5

Limited Warranty (U.S.)

Limited Warranty

Note