



LY INTERNATIONAL ELECTRONICS

Multi-room Music System HS-6818

# User's Manual

Home Central Audio System HS-6818



Sound Box Series



Room Controller HS-80R



Sound Box Series

IR Remote Controller HS-21



Welcome to use the Multi-room Music system. For better use of this equipment, please read this manual thoroughly before use.

<http://www.lyintlcorp.com>

# Contents

※ General Description.....	1
1. About the Multi-room Music System.....	1
2. Functional Characteristics of System Host.....	1
※ Appearance and Functions of Host Device.....	2
1. Functions of Front Panel.....	2
2. Functions of Back Panel.....	4
※ Connection Instructions.....	6
1. Schematics of Input Connection.....	6
2. Connection Schematics for Tuner Module.....	6
3. Connection Schematics for Infrared Learning Transmitter and Central Controller.....	8
4. Connection Schematics for Zone 1 Output.....	8
5. Connection Schematics for Other Zone Output.....	10
※ Operating Instructions for Host.....	11
1. Power On State.....	11
2. Operating Instructions for Manual Control of Zone 2-12.....	11
3. Operating Instructions for Manual Control of Zone 1.....	12
4. Instructions for Manual Operation of MP3 Player.....	15
4.1 Mode Selection.....	15
4.2 Time Display.....	15
4.3 Music Selection.....	15
5. Instructions for Manual Operation of Tuner.....	15
5.1 Band Selection.....	16
5.2 Search Radio.....	16
5.3 Store Radio.....	16
5.4 Mute Mode.....	16
5.5 Load Radio Frequency.....	16
6. Timer Programming.....	17
6.1 Timer Setting.....	17
6.2 Time Calibration.....	20
6.3 Infrared Learning.....	20
6.4 Copy Timer Point.....	21
6.5 System Setting.....	21
※ Functions of Infrared Remote Controller.....	22
※ Fabrication of Wired Remote Controller Wires.....	23
※ About the Format of USB Disk File.....	24
※ Packing List.....	27
※ Performance Specifications.....	28
1. MP3 Player.....	28
2. AM/FM Tuner.....	28
3. Timer.....	28
4. General Index.....	29

## ※ General Description

### 1. About the Multi-room Music System

The HS-6818 is a set of modern Multi-room Music system to your desire.

Except all the functions of the traditional family audio systems, this system is also provided with: **1) Timer function**, that is, preset the specific time and the task to be executed at that time. **2) The function that different rooms can hear different music at the same time.** This system has another important function. That is, you can control the working status of the host from the room. For example, from the remote controller installed in the room, you may select the program played by the host, or control the volume and tone for your room.

The control host of this system has integrated the functions of MP3 player, radio, zone divider, timer and pre / post amplifier. It is provided with DVD, PC, TV and AUX input ports for peripheral audio equipment, and line audio signal output port for zone 1 and 2. There are 12 zones, among which the 1<sup>st</sup> zone is of 5.1 channel and the others are of dual channel. The 5.1 channel is available with two input modes, i.e. line input and fiber optical input. There are 12 remote control data interfaces connected to the wired remote controllers for 12 zones, so that the host and remote controller set up an interactive dual-way control, providing high convenience for the users.

### 2. Functional Characteristics of System Host

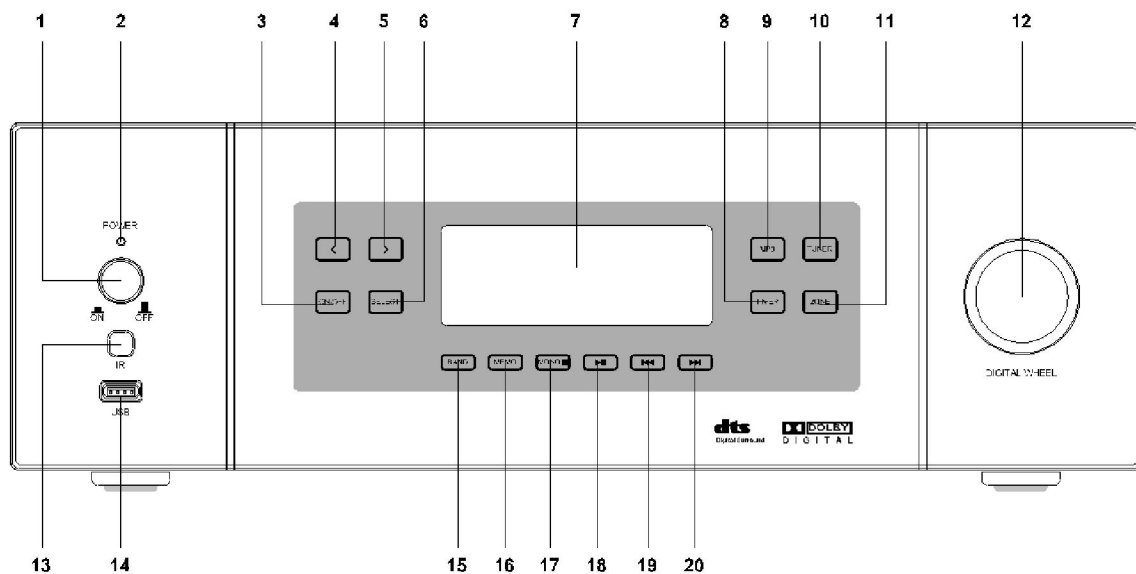
- Modern Multi-room Music system with plentiful functions.
- There are 12 zones, among which the 1<sup>st</sup> zone is of 5.1 channel (Front Left, Front Right, Rear Left, Rear Right, Center and SW ) and the others are of dual channel.
- The 1<sup>st</sup> zone has 5.1 channel (Front Left, Front Right, Rear Left, Rear Right and Center; SW without PA but output from the line), with each channel having 60W output power. The 2<sup>nd</sup> and 3<sup>rd</sup> zones have 2 x 60W output power, and the 4<sup>th</sup> ~ 12<sup>th</sup> zones have 2x20W output power.
- The 1<sup>st</sup> zone is provided with 5.1 channel line input and fiber optical input function, as well as Dolby and DTS decoding functions. DSP surround processing function is provided, and different sound field effects are available for selection.
- AM/FM radio function is provided. This function is realized in form of modular design, and can be separated from the host for installation at a position with better receiving effect. The module is connected to the host via T568A network cable.
- MP3 play function and USB port are provided. Support the music files of MP3 format stored in USB disc, MP3 player, mobile HDD, card reader and other storage devices.
- Provided with DVD audio input port, PC audio input port, TV audio input port and one auxiliary audio input port. Also provided with line audio signal output port for zone 1 & 2, DVD/TV video input port and 12-zone video output port.
- Timer control function provided. The user may edit 100 timing points. With one week as a cycle, it is possible to execute timer control over the ON/OFF switching, audio source, volume, clock, AM/FM radio, MP3 play and output power ON/OFF for 12 zones.
- One AC220V power socket provided, with its switching state interlinked to the switch of zone.

You may switch on any of the zones to switch on this power output. This power output is switched off when all the zones are switched off. Timer control over its switching state is provided.

- Infrared learning function provided, so that it can learn the remote controller of any brand.
- RS232 remote control port provided, so that the user may control the functions of this device via central control equipment.
- Inductive touch keys are designed for the panel, with two control modes available, i.e. local control and remote control.
- Video switching function provided. The video is switched in synchronization with the audio input.

## ※ Appearance and Functions of Host Device

### 1. Functions of Front Panel



#### 1) Power Switch (POWER)

Press this key to switch on the power and release it to switch off the power.

#### 2) Power Indicator (POWER)

This indicator is bright when the power is switched on. And it is dark when the power is switched off. This indicator is red under standby state and turns green under working state.

#### 3) Zone ON/OFF Key

- ① Execute ON/OFF control to the zone directly from main interface.
- ② Return to main interface from any of

Level I menu.

#### 4) Key for Moving Cursor / Quick Search of Radio Station

This is a multifunctional key:

- ① It is generally used to move the cursor forward or load the options for selection. In some operations, it is equivalent to a digital wheel rotating counterclockwise.
- ② Under radio working state, it can be used to search the radio station from high frequency to low frequency and will be stopped

automatically when searching a station.

#### 5) Key for Moving Cursor / Quick Search of Radio Station

This is a multifunctional key:

- ① It is generally used to move the cursor backward or load the options for selection. In some operations, it is equivalent to a digital wheel rotating clockwise.
- ② Under radio working state, it can be used to search the radio station from low frequency to high frequency and will be stopped automatically when searching a station.

#### 6) Enter / Confirm Key (SELECT)

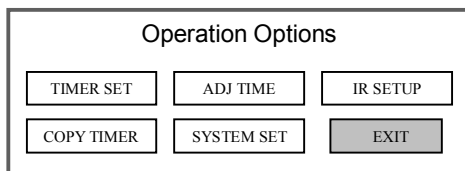
Enter the setting interface or confirm the operating result. In some operations, it is equivalent to a digital wheel.

#### 7) LCD Screen

Display the functions and state of the equipment.

#### 8) Operation Option Control Key (TIMER)

Enter the operation option interface. This interface includes such operation options as the timer setting, time calibration, infrared learning, timer copy and system setting. The interface is as shown below:



#### 9) Key for Controlling MP3 (MP3)

Enter MP3 setting interface.

#### 10) Key for Controlling Tuner (TUNER)

Enter tuner setting interface.

#### 11) Key for Displaying Zone State (ZONE)

Press this key to enter the main interface that displays the state of 12

zones. It can also used to enter the standby interface (time interface) from main interface. The main interface is below:



#### 12) Multifunctional Digital Wheel

- ① Used to search the radio frequency under tuner mode.
- ② Used to search the program under MP3 mode, and select and confirm the play mode.
- ③ Used to direct the options, select the desired options and confirm the result of current operation under timer mode.
- ④ Used to direct the options under zone control mode and enter the zone control interface; also used to perform operations and confirm the result of current operation.

#### 13) Infrared Window (IR)

#### 14) USB Port (USB)

Used for inserting USB disk, mobile HDD or card reader.

#### 15) Key for Switching Tuner AM/FM Band (BAND)

#### 16) Key for Radio Storage (MEMO)

#### 17) MONO/■

This is a multifunctional key:

- ① Under tuner state, it serves as a key for switching between mono / stereo.
- ② Play / stop key under MP3 state.

#### 18) ►|| Key

This is a multifunctional key:

- ① Mute key under tuner state.
- ② Play / Pause key under MP3 state.

#### 19) ◀◀ Key

This is a multifunctional key:

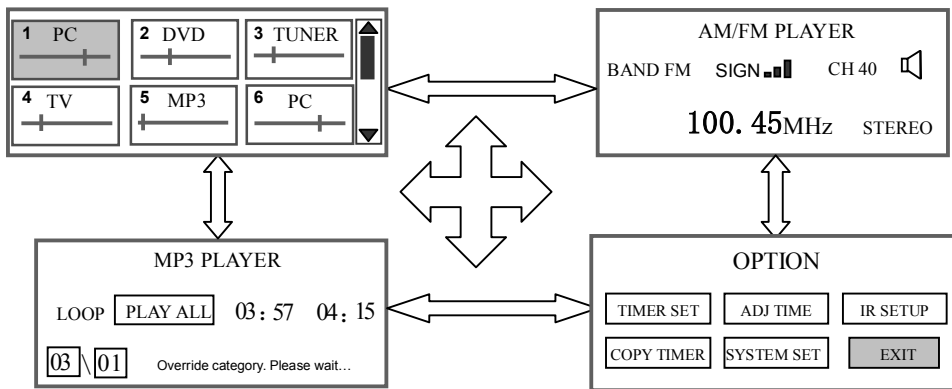
- ① A key for searching the radio station forward under tuner state.

- ② A key for searching the desired program forward under MP3 state.
- 20) **▶▶** Key  
This is a multifunctional key:
- ① A key for searching the radio station

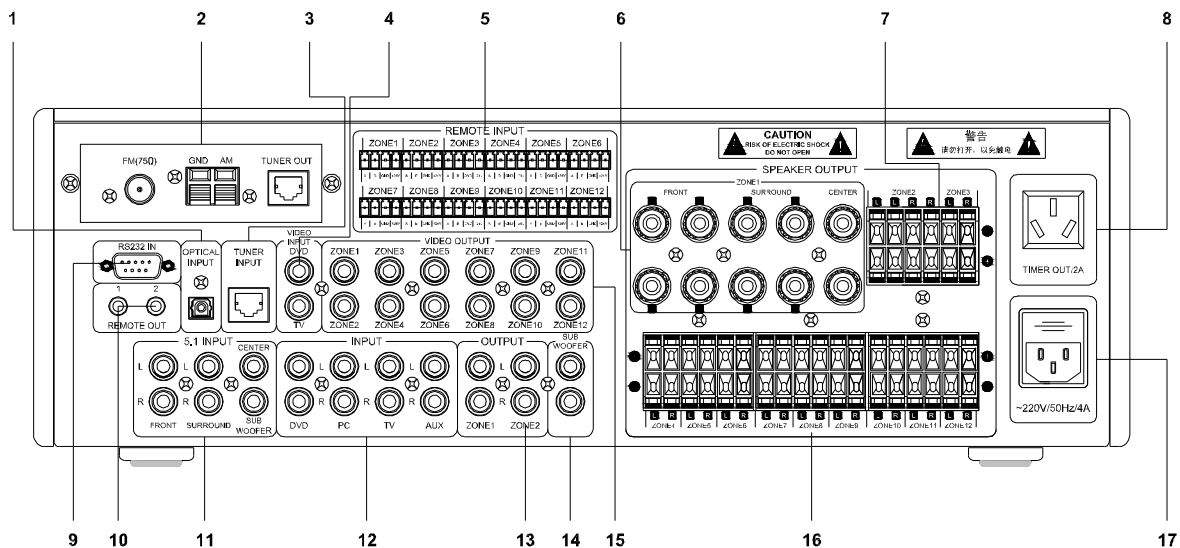
- backward under tuner state.
- ② A key for searching the desired program backward under MP3 state.

**Forced Switching of Key Functions**

The function keys on the host panel can be forcibly switched of their functions under Level I menu (interface). For example, you may touch MP3 key on the panel under tuner state interface, so that the screen will change from display of tuner state to MP3 state, in which case you can operate MP3 state. You may touch TIMER to enter operation option interface, touch ZONE or zone ON/OFF key to enter the zone state display (main interface of equipment system). The interface that can be directly switched is as shown below:



**2. Functions of Back Panel**



- 1) Optical Input Port for 5.1 Channel (OPTICAL INPUT)

For connection and description, please refer to the Connection Instructions (on

page 5).

- 2) Tuner Mode (Page 5)**  
The tuner function is realized in form of modular design, and can be separated from the host for installation at a position with better receiving effect. The module is connected to the host via T568A network cable.
- 3) Tuner Module Port (TUNER INPUT)**  
For connecting the tuner module signal.
- 4) DVD/TV Video Input Port (VIDEO INPUT DVD) Page 5**
- 5) Wired Remote Controller Port for Zone 1 ~ 12 (REMOTE INPUT) Page 8 and 9**
- 6) Zone 1 PA Output Port (ZONE1 SPEAKER OUTPUT) (Page 7)**
- 7) Zone 2/Zone 3 PA Output Port (Page 9) (ZONE2/ZONE3 SPEAKER OUTPUT)**
- 8) AC220V Timer Power Output Socket (TIMER)**  
The switching state of timer power output socket is interlinked to the switch of zone. You may switch on any of the zones to switch on this power output. This power output is switched off when all the zones are switched off. Timer control over its switching state is provided. (Page 15)
- 9) RS232 Port (RS232)**

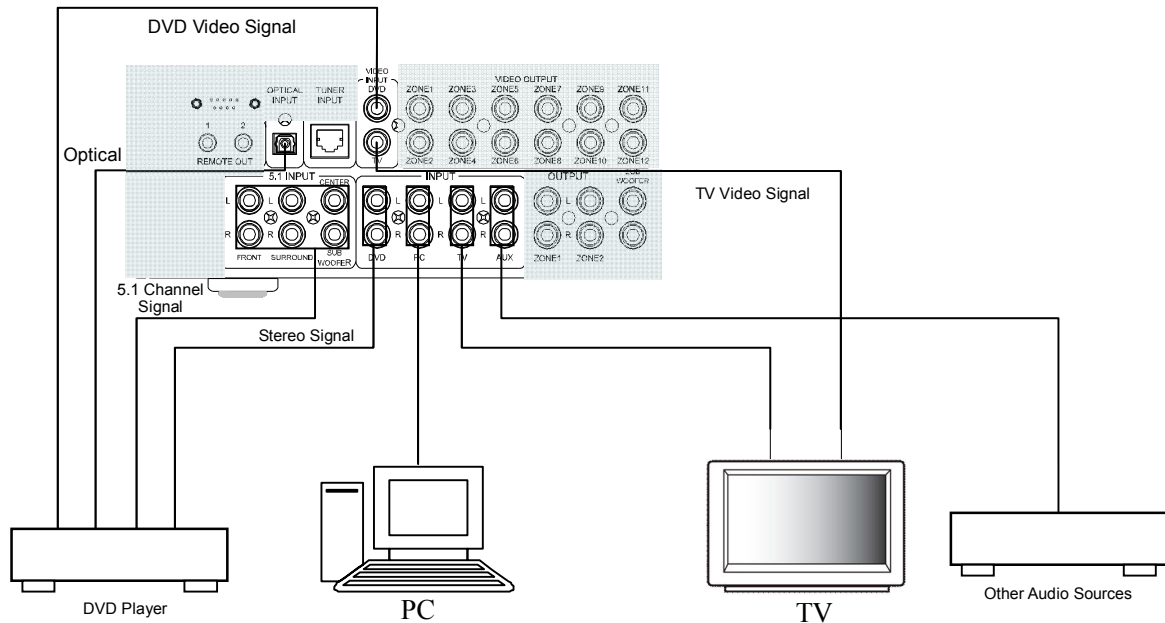
RS232 remote control port is provided, so that the user may control the

functions of this device via central control equipment.

- 10) Remote Control Output Port (REMOTE OUT) Page 7**  
Connected to infrared receiver for infrared learning of the function controls over external DVD and TV.
- 11) 5.1 Channel Input Port for Zone 1 (5.1 INPUT)**  
For connection and description, please refer to the Connection Instructions (on page 5).
- 12) DVD/PC/TV/AUX Audio Input Port**
- 13) Line Signal Output Port for Zone 1 / Zone 2**
- 14) 5.1 Channel Sub Woofer Output for Zone 1 (SUB WOOFER) (Page 7)**  
This signal has no PA and it is output via line directly.
- 15) Zone 1 ~ 12 Video Output Port (Page 8)**  
For transmitting the DVD/TV video signals to 12 zones, with its distribution changing synchronously with the audio signal.
- 16) Zone 4 ~ 12 PA Output Port (Page 9)**
- 17) AC220V Working Power Input**

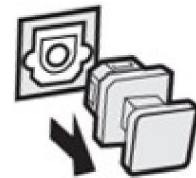
## ❖ Connection Instructions

### 1. Schematics of Input Connection



#### Notes :

- The 5.1 channel input and optical input on DVD player provide audio signal to zone 1 only. When connecting the optical port, please remove the dustproof cap as directed. Please keep the dustproof cap properly. To keep the optical port clean, please cover up the dustproof cap when this port is long put out of use.
- The video signals input from DVD and TV are transmitted to 12 zones respectively via 12 video output ports on this device.
- Except optical input, the other inputs above are connected by using lotus connector.



Optical Port

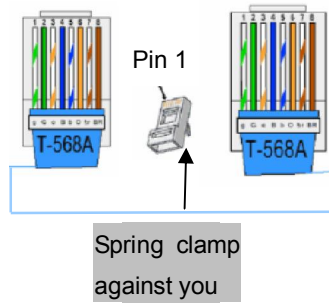


Lotus Connector

### 2. Connection Schematics for Tuner Module

The tuner function is realized in form of modular design, and can be separated from the host for installation at a position with better receiving effect. Installation of the tuner module on a better place can improve the receiving effect. The tuner module is connected to the host via T586A network cable. Even the module is installed on the host, it can also be connected to the back panel on this device.

**Notes: To separate the tuner module from this device, the extension wire, if needed, shall be fabricated as follows:**

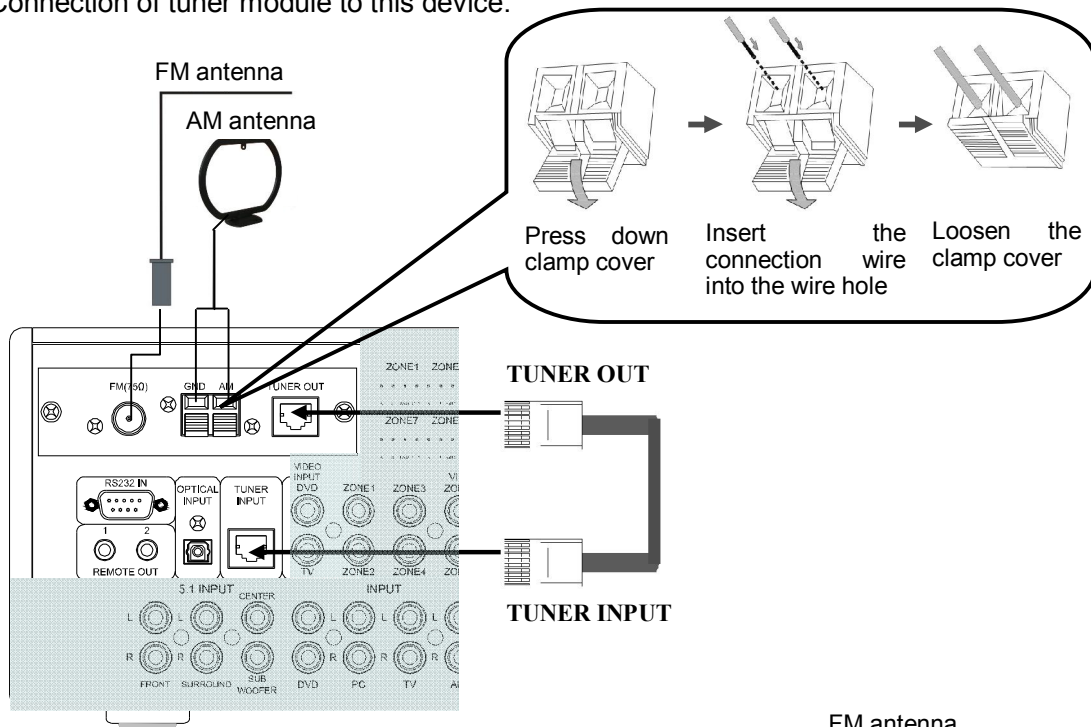


**RJ45 Port**

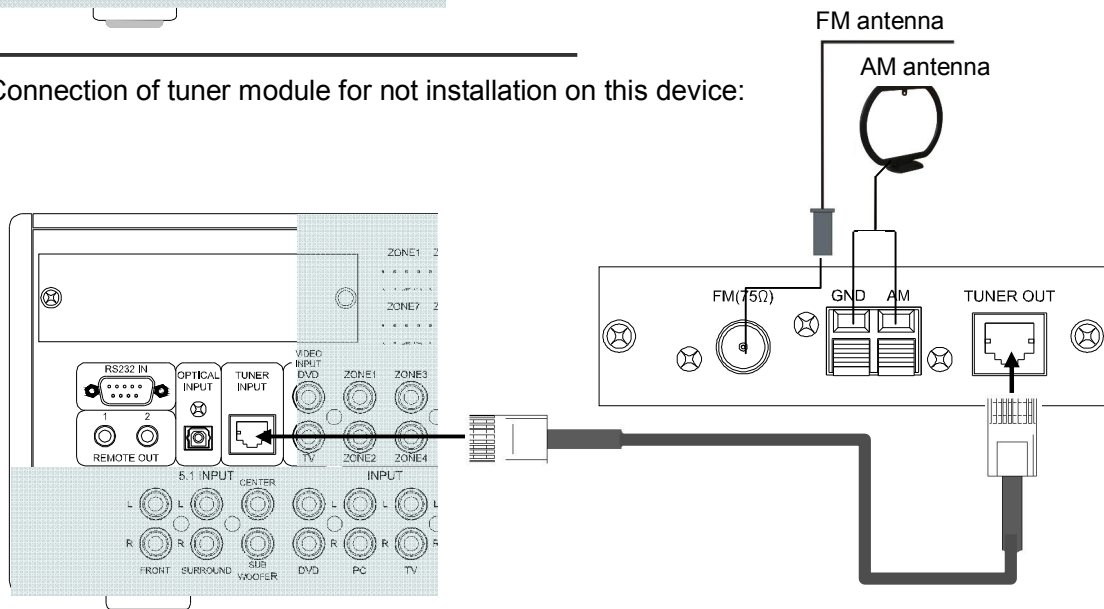
The colors from left to right are:  
**Green white, green, orange white, blue, Blue white, orange, brown white and brown.** The two ends match each other.

**The tuner connection is as shown below:**

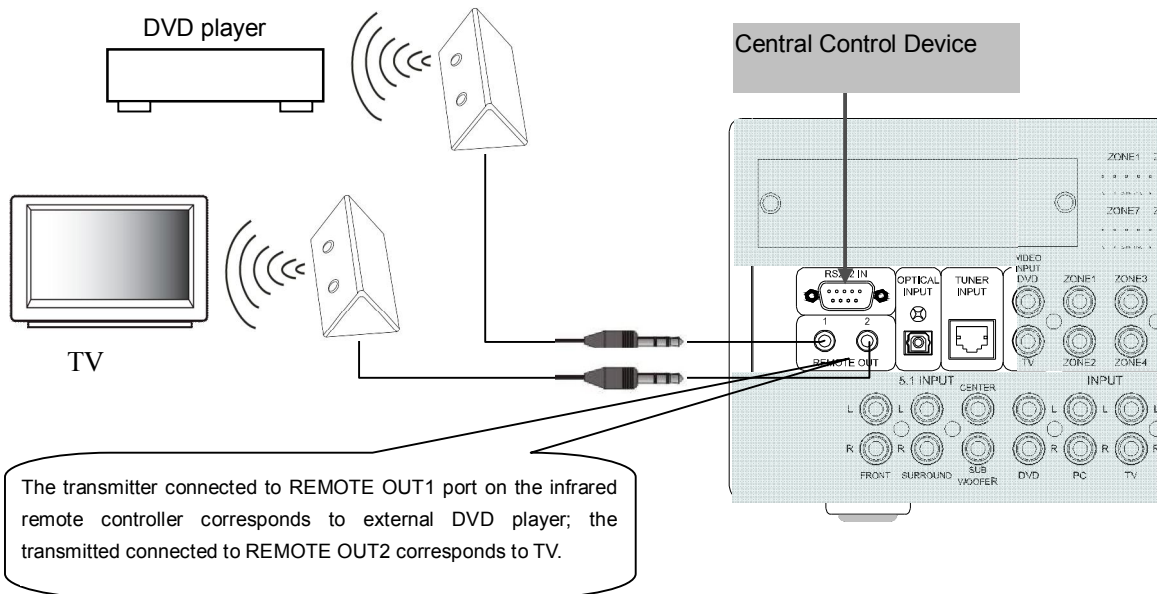
Connection of tuner module to this device:



Connection of tuner module for not installation on this device:

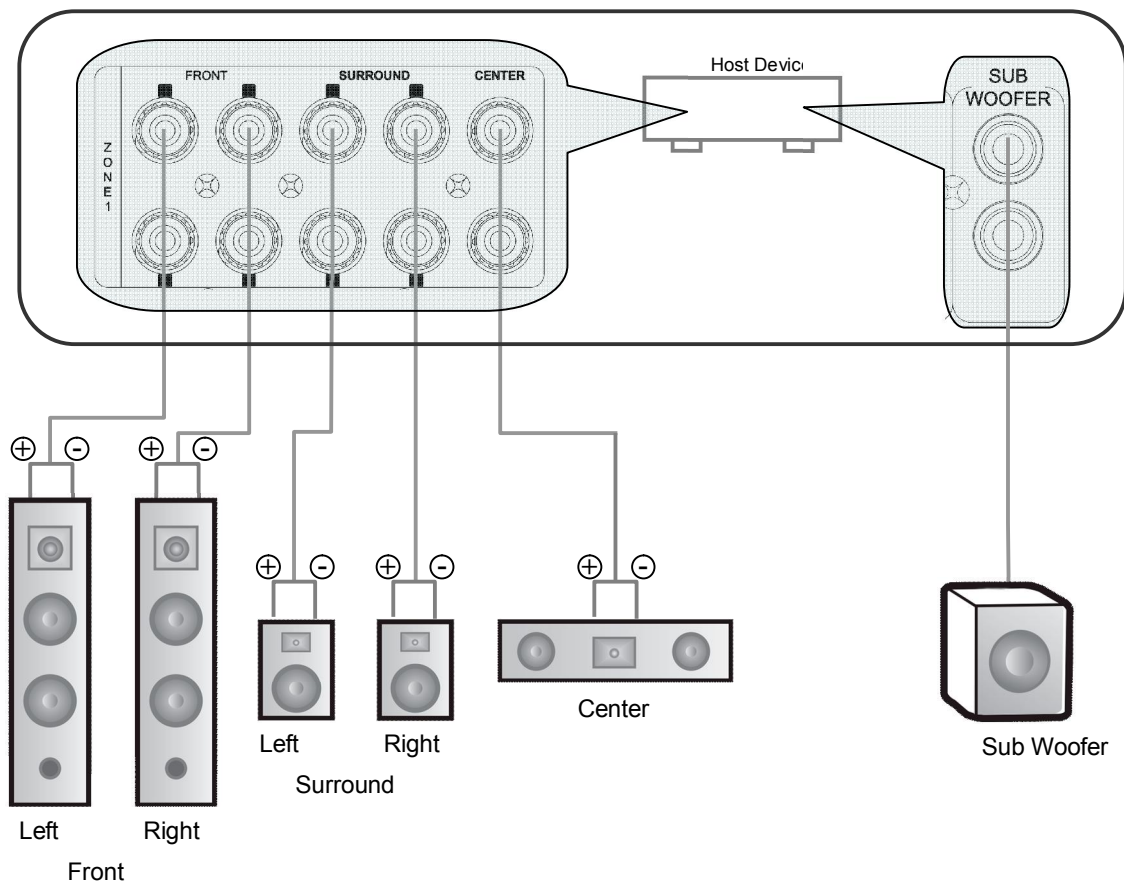


### 3. Connection Schematics for Infrared Learning Transmitter and Central Controller



### 4. Connection Schematics for Zone 1 Output

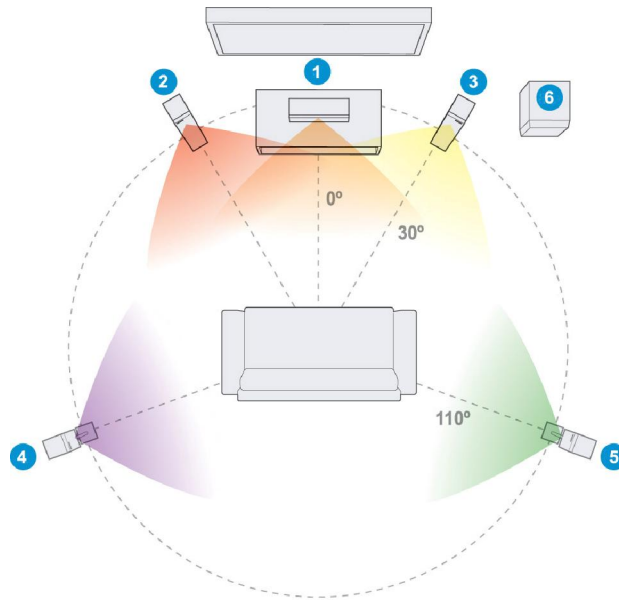
#### Connection Schematics for 5.1 Channel Output



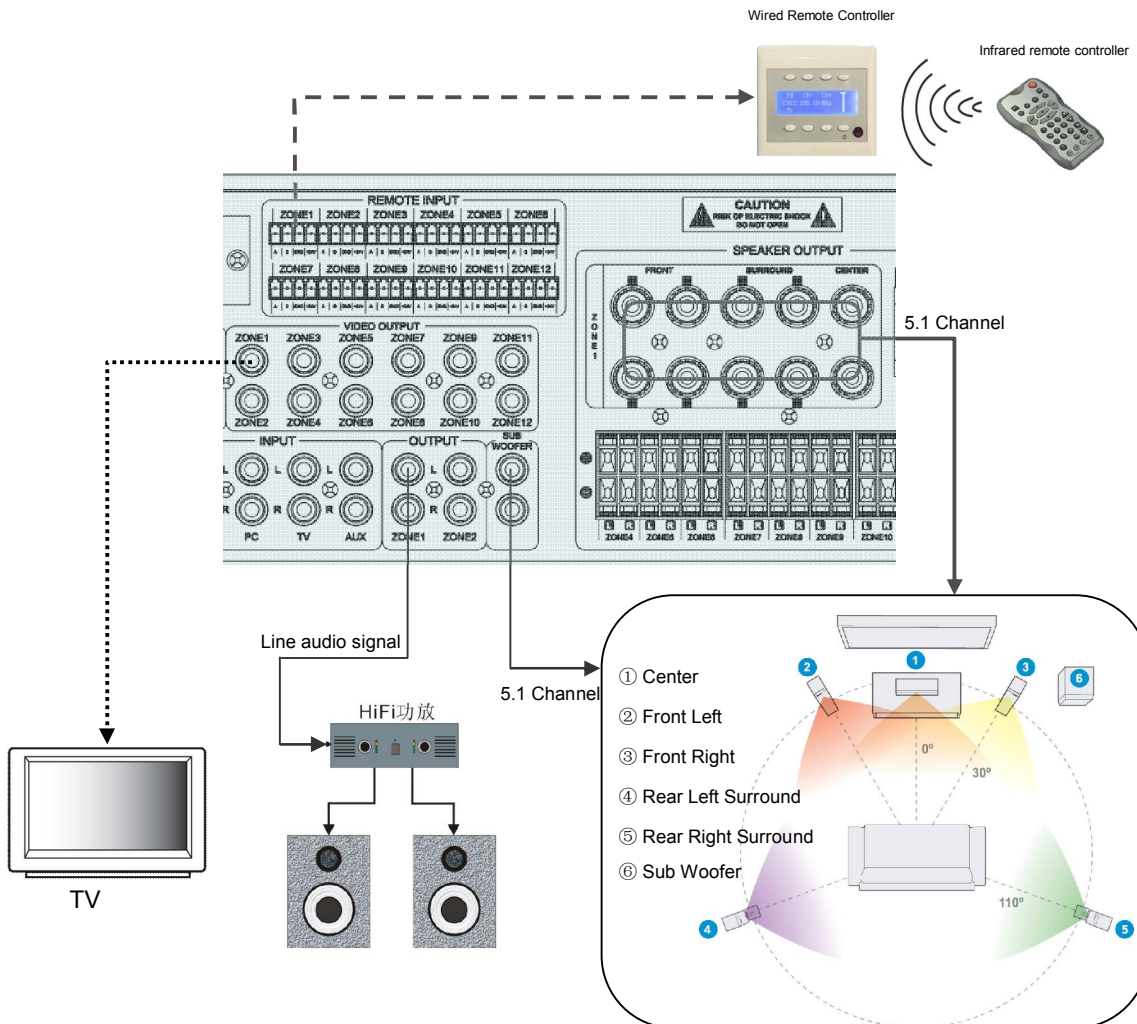
## Placement Schematics for 5.1 Sound Box

- ① Center
- ② Front Left
- ③ Front Right
- ④ Rear Left Surround
- ⑤ Rear Right Surround
- ⑥ Sub Woofer

The PA output power of each channel ①-⑤ is 60W  
Line signal output from ⑥ channel

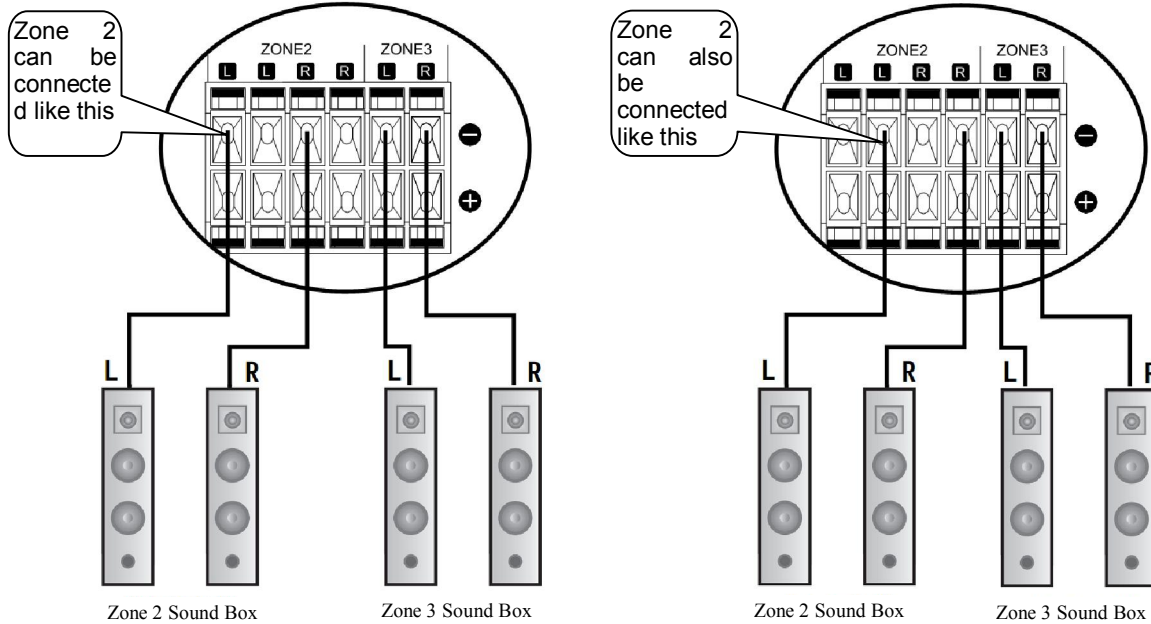


## Integrated Connection Schematics for Zone 1 Output

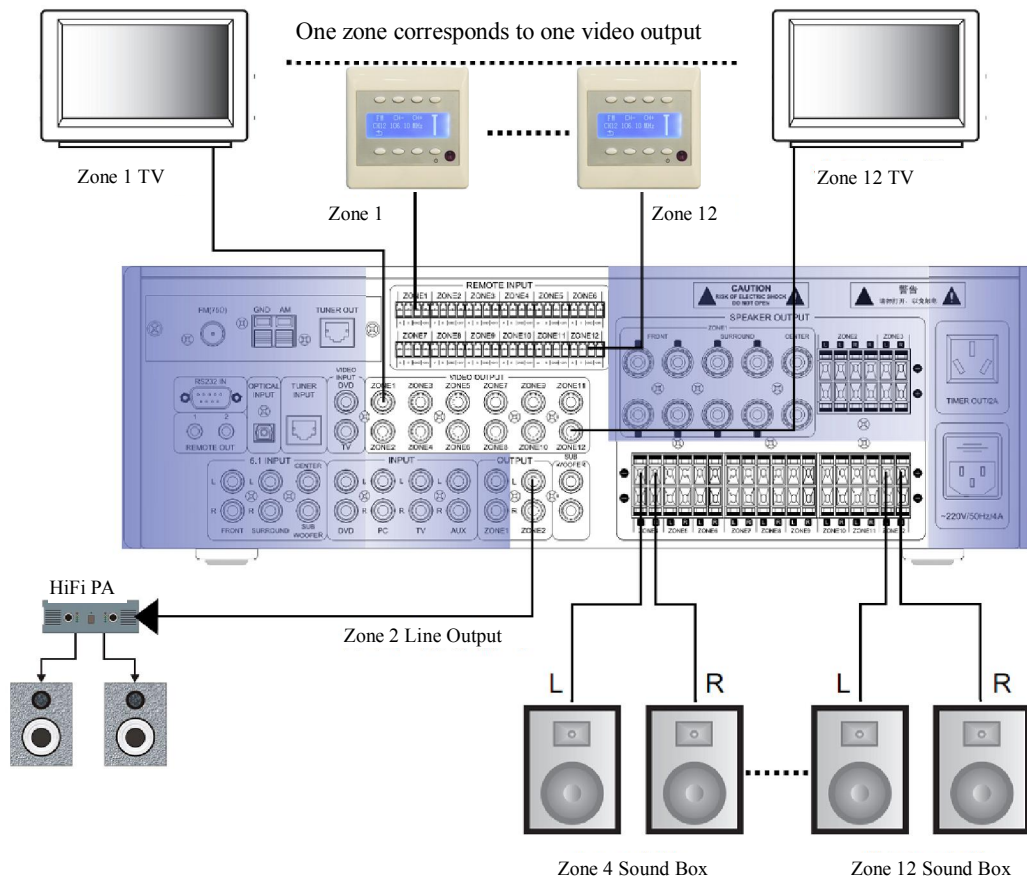


## 5. Connection Schematics for Other Zone Output

Connection schematics for Zone 2 and Zone 3 output: The zone 2 and zone 3 are of stereo dual-channel output, with each channel at 60W. The zone 2 has two groups of ports, and the signals are output in parallel. You may connect one of them, or connect two sound boxes at the same time. Take care that the total resistance shall not be lower than  $4\Omega$ .



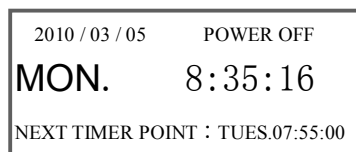
Integrated connection schematics for other zones: The zone 4 ~ zone 12 of this device are of stereo dual-channel output, with each channel at 20W.



## ✂ Operating Instructions for Host

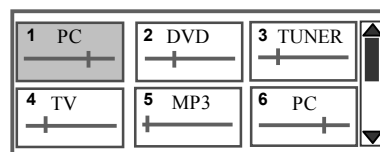
### 1. Power On State

Connect all the wires correctly and check for no error. Then, connect the power supply. Press down Power On/Off key to switch on the device. If there is no zone opened, the system will be under standby state and display the standby interface on the screen (Fig. 1-1). The power indicator is red. In this case, the timer power output is off. Under standby state, you may press ON/OFF key or ZONE key to enter the main interface (Fig. 1-2). After a zone is opened, the current state of switching, audio source and volume in this zone will be immediately displayed. In this case, the power indicator will be green, while the timer power output will be opened. (Note: If all the zones are closed, the timer power output will also be closed. If one of the zones is opened, the timer power output will be automatically opened).



(Fig. 1-1)

ON/OFF key  
➔



(Fig. 1-2)


### 2. Operating Instructions for Manual Control of Zone 2-12

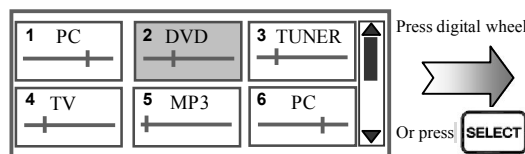
The control of zone 2 ~ 12 includes the selection of audio source, adjustment of volume and tone, and testing of clock sound for each zone. The operating procedures are as follows:

#### Notes

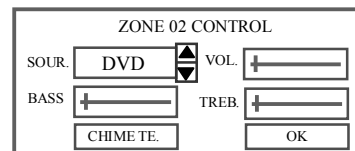
In the operations marked \* below, the functions for rotating the digital wheel can also be done by using the key . In the operations marked #, the functions for pressing the digital wheel can also be done by using the key .

- Enter Zone Operation Interface Under the main interface, rotate the digital wheel \* to select a zone (Fig. 2-1) and press digital wheel once # to enter the zone operation interface (Fig. 2-2). Under this interface, you may carry out the above operations to the opened zones.
- Select Audio Source There are two ways for selecting the audio source:
  - ① From zone operation interface, rotate the digital wheel \* to move the cursor to pane behind the “Program” (Note: The cursor herein refers to the dark grey icon when an option is selected). Press the digital wheel # once, so that the icon will appear behind the pane. Rotate the digital wheel \* to display the 6 types of audio source in turn. When the desired audio source is on display, stop rotating the digital wheel and press the digital wheel # again, so that the selected audio source will be allocated to this zone.
  - ② Select the audio source from remote controller. You may select by directly pressing the source name key or SOURCE+/SOURCE- key on the remote controller.

- Volume / Tone Control There are two ways for controlling the volume and tone:
  - ① From zone control interface, you may rotate the digital wheel \* to move the cursor to the sliding pane behind the "Volume" option. Press the digital wheel # once, so that the icon  will appear behind the pane. Then, rotate the digital wheel \* clockwise or counterclockwise to move the slider left and right, so that the zone volume will be increased or decreased accordingly. Adjust the treble or bass tone in the same way.
  - ② Use the wired remote controller or infrared remote controller to control the zone volume / tone under the interface except "Operation Option". For control of the zone volume / tone from wired remote controller, please refer to the Operating Instructions for HS-80R (Wired Remote Controller).
- Ringer Testing Rotate the digital wheel \* to move the cursor to "Ringer Testing" option and press the digital wheel # once, so that a set of ringers will be output from the output port. (Note: The remote controller does not provide the "Ringer Testing" function)
- After completion of the above operations, rotate the digital wheel \* to move the cursor to "CONFIRM" checkbox. Then, press the digital wheel # once to confirm and exit. The other zones from zone 2 to 12 may be controlled according to the method above.



(Fig. 2-1)

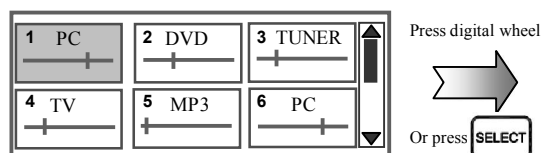


(Fig. 2-2)

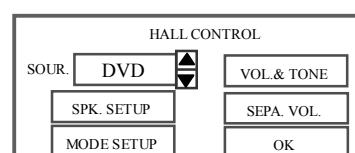
### 3. Operating Instructions for Manual Control of Zone 1

Zone 1 is different from other zones. Except the 6 audio sources in other zones, the zone 1 also has 5.1 channel and optical input source, totaled 8 types of audio sources for selection. Meanwhile, it differs from other zones in view of zone output mode and tone / volume control. The detailed operations are as follows:

Under the main interface, rotate the digital wheel \* to move the cursor to zone 1 state pane (Fig. 3-1). Then, press the digital wheel # once to enter the zone 1 control (hall control) interface (Fig. 3-2).



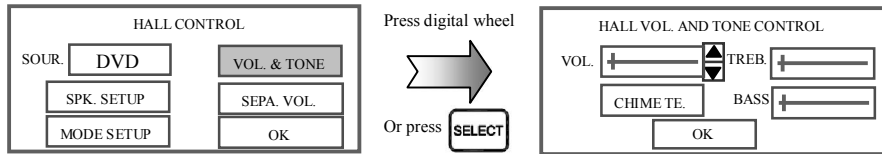
(Fig. 3-1)



(Fig. 3-2)

- 1) Select Audio Source The selection of audio source for zone 1 is same as that for other zones. The only difference is that the zone 1 has two more options, i.e. 5.1 channel (5.1LINE) and optical (OPTICAL) source. Except that the 5.1 channel (5.1LINE) and optical (OPTICAL) can be manually selected from the host panel, they can also be selected by pressing the **SOURCE+ / SOURCE-** on infrared remote controller.
- 2) Total Volume / Tone Rotate the digital wheel \* to move the cursor to "Total Volume/Tone"

option and press the digital wheel # once to enter "Hall Total Volume / Tone Control" interface (Fig. 3-3), where you can control the total volume and tone of zone 1 (hall) and carry out ringer testing. For control of the volume and tone, please refer to the Operating Methods for Control of Zone 2~12 Volume and Tone. It will not be repeated here.

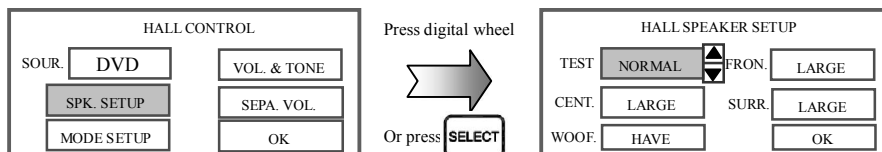


(Fig. 3-2)

(Fig. 3-3)




3) Speaker Setting Rotate the digital wheel \* to move the cursor to "Speaker Setting" option and press the digital wheel # once to enter the "Hall Speaker Setting" interface (Fig. 3-4) (Next page). Among the setting options:

- Testing: Used for testing if the speakers work normally. The "Normal" option refers to the current program being played. Then, exit the test state.
- Front: It is provided with two options, i.e. Big and Small, used for setting big sound box or small sound box.
- Center: It is provided with three options, i.e. Big, Small and None. Except for setting the big sound box or small sound box, it is also used for setting the center signal YES or No under AUTO and Dolby Pro mode. If setting to "No", the center signal is distributed to the two loudspeakers on left and right.
- Surround: It is provided with three options, i.e. Big, Small and None. Except for setting the big sound box or small sound box, it is also used for setting the surround signal YES or No under AUTO and Dolby Pro mode. If setting to "No", the surround signal is canceled.

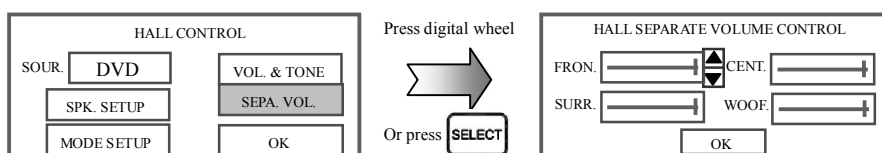


(Fig. 3-2)

(Fig. 3-4)




- Sub Woofer: It is provided for setting sub woofer signal YES or No under AUTO and Dolby Pro mode. If setting to "No", the sub woofer signal is distributed to the two loudspeakers on left and right.
- The above settings can be done by using the digital wheel, or by using the key   and . After setting, press "Confirm" to confirm and exit the setting interface.

4) Independent Volume Rotate the digital wheel \* to move the cursor to "Independent Volume" option and press the digital wheel # once to enter the "Hall Independent Volume Control" interface (Fig. 3-5).

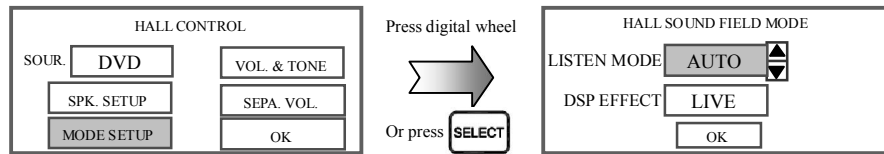


(Fig. 3-2)

(Fig. 3-5)


The hall independent volume control refers to independent control over the volume of several channels, e.g. front and surround. The operation is same as that for zone volume control. It may be done by using digital wheel or by using the keys   and .

- 5) Mode Setting Rotate the digital wheel \* to move the cursor to “Mode Setting” option and press the digital wheel # once to enter the “Mode Setting” interface (Fig. 3-6).



(Fig. 3-2)

(Fig. 3-6)

- Listening Mode: Three options are provided, namely: AUTO, Dolby Pro Logic and STEREO. Rotate the digital wheel to move the cursor to the pane behind "Listening Mode", and press the digital wheel. When the icon  appears in pane, rotate the digital wheel to adjust the option. Select the desired option and press the digital wheel again to confirm. The **effect under three modes is respectively:**
  - ① **STEREO:** Forcibly there is output from the speakers on front left and front right only, but no signal output from other channels. It is effective for all program types.
  - ② **AUTO:** Auto mode. If the input is Dolby digital AC-3, the listening mode will be AC-3 DIGITAL. If the input is DTS, the listening mode will be DTS DIGITAL.
  - ③ **Dolby Pro Logia:** Dolby Pro Logic processing mode, which can process the stereo (dual-channel) movie and music of any quality into surround output with 5 full-range channels.
- DSP Effect: Operate as above by using the digital wheel. Its function is to simulate the effect of different fields from internal DSP, including: HALL, CHURCH, DISCO, THEATER, LIVE, MOVIE, MUSIC and SIMULATE.
  - ① HALL: Simulate the hall effect.
  - ② CHURCH: Simulate the church effect.
  - ③ DISCO: Simulate the disco hall effect.
  - ④ THEATER: Simulate the theater effect.
  - ⑤ LIVE: Simulate the live effect.
  - ⑥ MOVIE: Simulate the cinema effect.
  - ⑦ MUSIC: Simulate the music hall effect.
- After setting, select “Confirm” and press the digital wheel to confirm the setting and exit the setting interface.

#### Notes:

**The 5.1 channel input and output have corresponding through mode. Therefore, when you have selected the program of 5.1 channel source in zone 1,**


- ① The “Speaker Setting” option will be disabled;
- ② The “Mode Setting” option will be disabled.

## 4. Instructions for Manual Operation of MP3 Player

Press “MP3” key on the panel to enter the MP3 player setting interface (Fig. 4-1) (Next page).

### 4.1 Mode Selection

This operation is used for selecting the play mode of MP3. Three modes are available for selection, i.e. “Play All”, “Play One” and “Repeat One”. The “Play All” mode refers to sequential play of all the music files stored in the memory. The “Play One” mode refers to play of the currently selected music only. The “Repeat One” mode refers to repeated play of the currently selected music.

How to Set: Rotate the digital wheel to the pane behind the “Mode” option and press the digital wheel until the icon  appear behind the pane. Rotate the digital wheel to select. After selection, press the digital wheel again to confirm and exit.

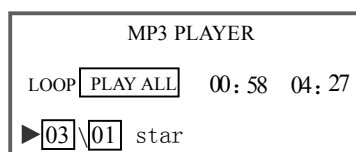
### 4.2 Time Display

As shown in Fig. 4-1 (next page), the time “00:00” in front indicates the time progress of the music being played, and the time “00:00” behind indicates the total time length of the music being played.

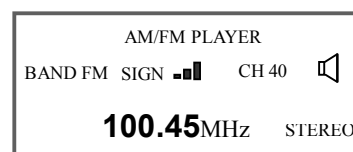
### 4.3 Music Selection

As shown in Fig. 4-1, move the cursor to the pane “ 03 \ 01 “. Press and rotate the digital wheel to select. The number in the front pane represents the directory. Selecting 03 indicates that you have selected the third director in USB disk. The number in the rear pane represents the serial number of the music in this directory. The name of the selected music is displayed behind the pane. When selecting the music, please watch the notes on the lower of the screen. If the screen displays “No USB disk. Please insert USB Disk”, this indicates that there is no USB disk inserted into USB port, or you have inserted an USB disk that cannot be recognized by the equipment. If you have inserted an USB disk and the equipment has accessed it, the note “USB disk inserted. Please wait...” will appear on the lower of the screen. If there is no music under a directory in USB disk, the note “No music found under this directory. Please select another directory” will appear if this directory is selected. After that, the equipment automatically turn to another directory and display the names of the music on that directory.

For manual control of MP3 player, you may use the “◀◀” and “▶▶” key on the equipment panel to select the music, and use the “▶||” key to control the play and pause. You may also control by using the wired remote controller and infrared remote controller. For detailed operating methods, please refer to the introduction of key functions in the Operating Instructions.



(图 4-1)



(图 5-1)

## 5. Instructions for Manual Operation of Tuner

Press the “TUNER” key on the panel to enter the tuner control interface (Fig. 5-1). From this interface, you can control the tuner band, radio frequency and channel. In zone 1, the tuner



effect is best set to STEREO mode from the "Listening Mode" of "Hall Sound Field Mode Setting".

### 5.1 Band Selection

From the panel, you may press the BAND key under the screen to switch between AM and FM. You may use the band switching key on the wired remote controller and infrared remote controller to switch between AM and FM. The frequency range of AM band is 522kHz-1620kHz; and the frequency range of FM band is 87.00MHz-108.00MHz.

### 5.2 Search Radio


From the panel, you may press the " ◀◀ " and " ▶▶ " key under the screen to search the radio storage number forward or backward and load the saved radio. You may also search the radio by rotating the digital wheel. Rotate the digital wheel clockwise to search toward the high band, with slow rotation of the digital wheel for one grid to increase the frequency by one step (One step is 50kHz for FM band and 9kHz for AM band). When searching the radio station, the black message indication bar as shown in Fig. 5-1 will be displayed behind "Signal" option. The indication bar will become wider if the signal is strong, and will become narrow if the signal is weak. Quick rotation of the digital wheel for one turn can enter the auto search state. It will be stopped when searching the radio frequency or reaching the highest band. Rotate the digital wheel counterclockwise to search toward the low band, with slow rotation of the digital wheel for one grid to decrease the frequency by one step (One step is 50kHz for FM band and 9kHz for AM band).

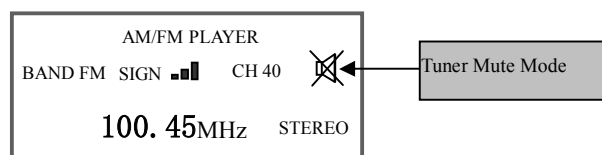
The signal display and auto search are same as above. You may also use the key   on the panel to search the radio frequency automatically.

### 5.3 Store Radio

The radio frequencies, no matter searched manually or automatically, can be stored into 40 radio storage numbers by pressing MEMO key in combination with the key ◀◀ or ▶▶. When storing the radio, the storage number behind the "Storage" option on screen will blink with the first press of "MEMO" key. After adjusting the storage number properly with ◀◀ or ▶▶ key, you can press "MEMO" key again to store the searched radio frequency to the current storage number.

### 5.4 Mute Mode

By pressing "▶||" key on the panel, the icon  on the screen will change to  (Fig. 5-2), indicating that the radio is set to mute mode. Press ▶|| again to return to voice state. Upon arrival of the timer point, the setting for the timer point will be executed.



(Fig. 5-2)

### 5.5 Load Radio Frequency

- In the timer point, you may load the stored radio frequency. For the operating methods, please refer to the instructions for setting of timer point.
- You may use wired remote controller and infrared remote controller to load the stored radio

frequency directly. For the operating methods, please refer to the key functions of remote controller.


## 6. Timer Programming

Press the TUNER key on the panel to enter the operation option interface (Fig. 6-1) (next page). From this interface, you may set five functions, i.e. timer setting, time calibration, infrared learning, time copy and system setting.

### 6.1 Timer Setting

From "Operation Option" interface, rotate the digital wheel to move the cursor to "Timer Setting" option, and press the digital wheel once to enter the timer setting interface (Fig. 6-1-1) (next page). Then, rotate the digital wheel to carry out different settings for the timer point.


#### 6.1.1 Week Setting:

Rotate the digital wheel to move the cursor to "Week" option and press the digital wheel. When the icon  appears, rotate the digital wheel to load the week to be selected (e.g. Wednesday). Then, press the digital wheel to confirm and exit.

#### 6.1.2 Add Timer Point:

Adjust the date of Week option to display of a specific day (e.g. Monday). In this case, the other options on the interface will display all the information of the first timer point on that day. If there is no display for other options on the interface (Fig. 6-1-2) (next page), it indicates there is no timer point on that day. To add a timer point, firstly press "Add" option and then set the other options. If there is a timer point on this day, it is needed to add a new timer point. In this case, please firstly press "Add" option and then program the other information for this timer point. The serial number of the added timer point will be always sorted at the end of all timer points on that day. But the execution of the timer point will be automatically in accordance with the time sequence.

#### 6.1.3 Serial Number Setting:

Rotate the digital wheel to move the cursor to the number pane behind the "Serial Number" option and then press the digital wheel once, so that the icon  will appear behind the pane. Then, rotate the digital wheel to load the number to be selected. After that, press the digital wheel once to confirm and exit.


#### 6.1.4 Power Setting:

This operation is used for timer control over the power output socket on the rear panel of the equipment (Item 8 on Page 4). The socket provides AC220V output for other equipment. Setting the power to "ON" indicates that the output socket will have power output upon arrival of timer point. Setting to "OFF" indicates that the output socket will have no power output upon arrival of timer point. Setting to "..." indicates default, that is, keep the last setting. The operating method is same as that for serial number.


#### 6.1.5 Time Setting:

This is used for setting the start time of timer point. The time may be accurate to second based on 24-hour system. The method for time setting is same as that for serial number.

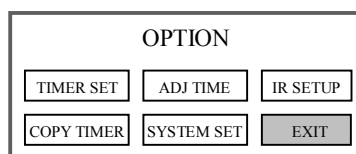
#### 6.1.6 Ringer Setting:

This is used for setting the ringer type on timer point, available with four options, i.e. “1, 2, 3 and –”. “1” refers to note “1 3 5 1”; “2” refers to note “1 5 3 1”, “3” refers to note “1 5 1 5”; and “-” refers to no selection of ringer. To set the ringer, rotate the digital wheel to move the cursor to “Ringer” option and press the digital wheel once, until the icon  appears. After that, rotate the digital wheel to select and then press the digital wheel again to confirm and exit.

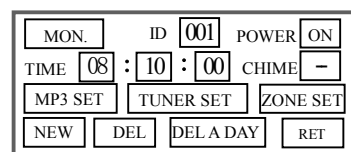
#### 6.1.7 Timer Setting for MP3 Track

- Rotate the digital wheel to move the cursor to “MP3 Setting” option. Then, press the digital wheel once to enter MP3 Timer Setting interface (Fig. 6-1-3). Under this interface, you may select 3 tracks for play on MP3 player at the timer point. “00/00” represents the music to be played, with the first two numbers indicating the directory of the music and the last two numbers indicating the serial number of the music in this directory. Setting the directory to “00” indicates no directory, and setting the music to “00” indicates no selection of music.
- Move the cursor to the small pane displaying the number. Then, press the digital wheel once until the icon  appears behind the number pane. Rotate the digital wheel to select between “Not Cycle”, “Cycle” and “Sequential”. This setting is used for controlling the play sequence of 3 tracks selected.
- After completing the above operations, press “Confirm” to confirm the setting and exit the MP3 timer setting interface.

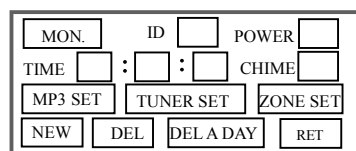
The MP3 program set for each timer point is valid for corresponding timer point only. Upon arrival of the next timer point, the system will execute the setting of the next timer point, which will override the MP3 setting at current timer point. If there is no setting to MP3 at the next timer point, the MP3 will not activate upon arrival of next timer point.



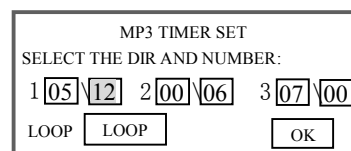
(Fig. 6-1)



(Fig. 6-1-1)




(Fig. 6-1-2)



(Fig. 6-1-3)

#### 6.1.8 TUNER Timer Setting

Rotate the digital wheel to move the cursor to “TUNER Setting” option, and press the digital wheel once to enter TUNER timer setting interface (Fig. 6-1-4). Under this interface, you may select the TUNER band and frequency.

- Move the cursor to the pane behind the “Band” option. Then, press the digital wheel once, until the icon  appears. After that, rotate the digital wheel to select. Then, press the digital wheel to confirm the selection and exit. Select the “Frequency” option according to the method above.

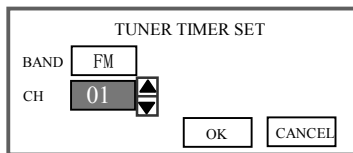
**Note:** The “...” appearing during band selection indicates that this setting is

**defaulted, and the “STOP” indicates that the TUNER program will be stopped upon arrival of the timer point.**

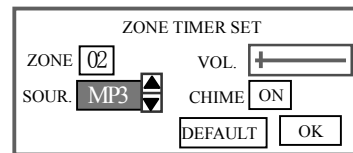
- For frequency selection, there are 40 options respectively for AM band and FM band. The serial number represents the storage number of radio frequency. For manual operation of TUNER, the radio frequency received has been saved in the storage number. During timer setting, we have just loaded the radio frequency saved during manual operation.
- After completion, press “Confirm” to confirm the setting and exit.

#### 6.1.9 Zone Setting


Rotate the digital wheel to move the cursor to “ZONE TIMER SET” option. then, press the digital wheel to enter the zone timer setting interface (Fig. 6-1-5). Under this mode, you can select a zone and set the volume, program and ringer of this zone.



(Fig. 6-1-4)



(Fig. 6-1-5)


- **Zone Selection:** Rotate the digital wheel to move the cursor to the number pane behind the "Zone" option and then press the digital wheel once, so that the icon  will appear behind the pane. Then, rotate the digital wheel to select. After that, press the digital wheel once to confirm and exit.
- **Volume Adjustment:** For this operation, please refer to the description of Volume Adjustment under zone control.
- **Program Selection:** Select the audio source allocated this zone by using the method for selecting the zone as above. The symbol “...” indicates default setting, and “OFF” indicates that this zone will close the previous programs upon arrival of the timer point. The zone 1 of this system is provided with 8 audio sources, and the other zones are provided with 6 audio sources. **The audio sources “5.1Line and “Optical” in zone 1 are not subject to timer control.** You may select one audio source at the same time for all the zones, or select different audio sources. If the MP3 or tuner is playing the program before arrival of the timer point, but there is no setting to MP3 or tuner at the timer point, then the MP3 and TUNER will maintain the play state before.
- **Ringer Setting:** This operation is used for setting the ON/OFF state of ringer at the timer point. Rotate the digital wheel to move the cursor to the pane behind the “RINGER”. Then, rotate the digital wheel to select. After that, press the digital wheel once to confirm the selection and exit.
- **Default:** If set to default, this zone will keep the state prior to arrival of timer point.
- After setting, press “Confirm” once to confirm the above operations and exit the zone timer setting interface. Then, return to the timer setting interface.

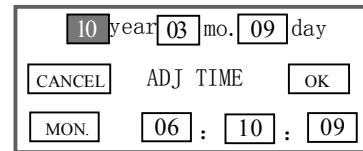
**Note: One timer point can control all the zones. For example, after setting of zone 1 at a time point, you may continue to repeat the above operations under this interface to set the other zones without pressing “Confirm”.**

6.1.10 Delete: What is deleted in this operation is a specific timer point at present.

6.1.11 Delete All Day: What is deleted in this operation is the timer point of the full day on a specific date (e.g. Wednesday) currently displayed.

## 6.2 Time Calibration

Under "Operation Option" interface, rotate the digital wheel to move the cursor to "Time Calibration" option. Then, press the digital wheel to enter the time calibration interface (Fig. 6-2). Rotate the digital wheel to move the cursor to the desired time number. When the letters become white, press the digital wheel again until the icon  appears behind. Rotate the digital wheel to change the number. After that, press the digital wheel to confirm the selection and exit. Complete the other settings by using the same method.




(Fig. 6-2)

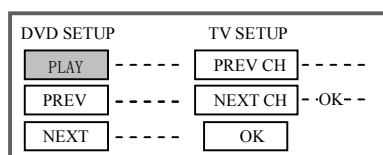
After completion, move the cursor to "Confirm" option and

press the digital wheel once to confirm the current operation and exit the time calibration interface.

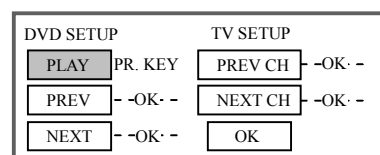
Or, you may move the cursor to "Cancel" option and press the digital wheel to cancel the current operation and exit the time calibration interface.

## 6.3 Infrared Learning

- The infrared learning refers to that the host device shall learn the key code of the remote controller for the machine to be learnt from, so that the external infrared transmitter of REMOTE OUT1 (for DVD) and REMOTE OUT2 (for TV) on the host device can recover the key code of remote controller to the control the machine to be controlled, thus to realize the purpose of centralized control. The host device can learn 5 function keys on infrared remote controller, and may learn the remote controller of any brand. After learning, it can establish relation with HS-80R.
- Under "Operation Option" interface, rotate the digital wheel to move the cursor to "Infrared Learning" option. Then, press the digital wheel to enter the infrared learning interface (Fig. 6-3-1). Under infrared learning interface, rotate the digital wheel to move the cursor to the function key to be learnt. For example, to learn the "Play" function on DVD, firstly select the "Play" function and press the digital wheel once. When the characters "Please press" appear behind the "Play" option, direct the infrared remote controller toward the host and press  (Play/Pause) key once, so that the character "Set" will be displayed behind the "Play" option, indicating that the "Play" function has been learnt. The method for learning of other key functions is same as that for learning of "Play" function.



(Fig. 6-3-1)




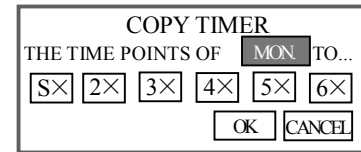
(Fig. 6-3-2)

- After infrared learning of a function, you may use the infrared remote controller to directly control the appropriate functions of DVD or TV from the wired remote controller. For example, after learning the DVD "Play" function, you may point the infrared remote controller toward the wired remote controller and control the "Play/Pause" function of the



DVD player. You may also control the “Play/Pause” function of DVD player from “DVD Control Interface” on the wired remote controller.

## 6.4 Copy Timer Point

Under "Operation Option" interface, rotate the digital wheel to move the cursor to “Copy Timer” option. Then, press the digital wheel to enter the Copy Timer interface (Fig. 6-4). Under this interface, you may copy the timer points of a full day (e.g. Monday” to one day or several days show in the pane . In this case, the timer points for these several days will be same. The operation is as follows:




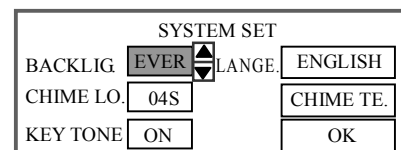
(Fig. 6-3-4)

- Rotate the digital wheel to move the cursor to the selected “Week” option. Press the digital wheel once, until the icon  appears behind the week option. Then, rotate the digital wheel to select. After that, press the digital wheel to confirm the selection and exit.
- Rotate the digital wheel to move cursor onto the pane , and press the digital wheel. When the original symbol “x” changes into “√”, it indicates that it has been selected. The symbol “x” means not copy and the symbol “√” means copy required.
- After completion, press “Confirm” to confirm the current operation and exit the Copy Timer interface. Or, press “Cancel” to cancel the current operation and exit the Copy Timer interface.

## 6.5 System Setting

Under “Operation Option” interface, rotate the digital wheel to “System Setting” option and press the digital wheel to enter the system setting interface (Fig. 6-5). Under this interface, you may set the lighting state of the screen background lamp (auto and normally bright), time length of ringer at timer point, switching state of key alert, language of system menu and ringer testing. The operation is as follows:

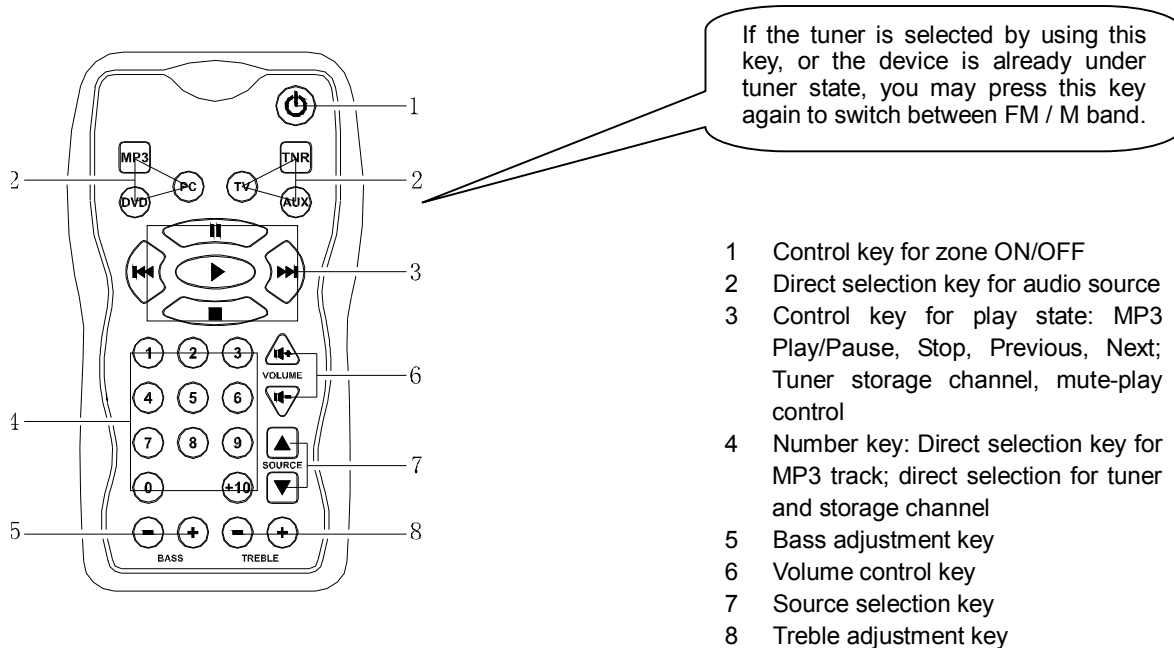
- Background Lamp: Rotate the digital wheel to move the cursor to the pane behind “Background Lamp”, and press the digital wheel once, until the icon  appears behind the pane. Press the digital wheel again and select between "Normally Bright" and "Auto". After selection, press the digital wheel again to confirm and exit. If there is no operation to the equipment within 20 seconds after setting to AUTO, the screen will become dark automatically. Set the other options by using the same method.
- Ringer Length: Set the time length of ringer at the timer point. The length ranges from 04 seconds to 40 seconds.
- Key Alert: The device may give out “DI” alert when operating the key and infrared remote controller. You may turn it on or off at your option.
- Language: Language selection menu, with Chinese and English available for selection.
- Central Control Setting: Backup function of the system, not activated yet.
- After setting, press “Confirm” to confirm and exit the setting interface.



(Fig. 6-5)

## ✂ Functions of Infrared Remote Controller

**Note:** When pointed to the host, the infrared remote controller can only control the manual control functions of zone 1 and control the MP3 player and tuner.

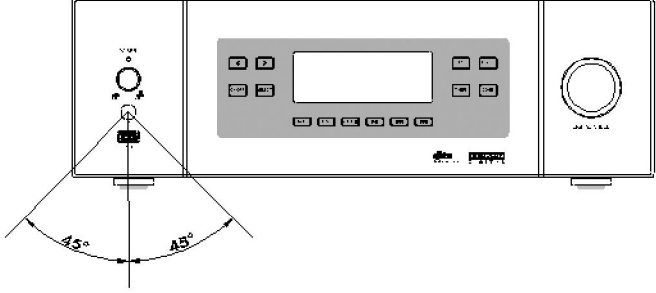
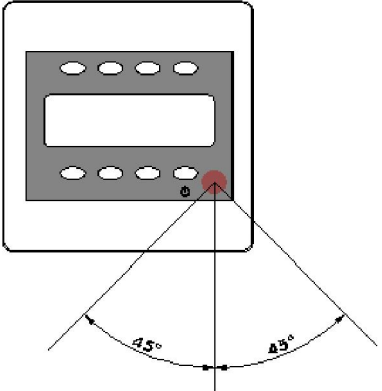


- 1 Control key for zone ON/OFF
- 2 Direct selection key for audio source
- 3 Control key for play state: MP3 Play/Pause, Stop, Previous, Next; Tuner storage channel, mute-play control
- 4 Number key: Direct selection key for MP3 track; direct selection for tuner and storage channel
- 5 Bass adjustment key
- 6 Volume control key
- 7 Source selection key
- 8 Treble adjustment key

To control MP3 player and tuner with this remote controller, firstly select the audio source MP3 or tuner. And under play state, you may press any of the key or number key to enter the state operation interface of this audio source. Under any state, you may press one of 6 source keys or "SOURCE" selection key to return to the main interface. Under any state, you may press the volume / tone control key to enter the zone control interface. Under tuner play state, you may press "TUNER" key, so that the equipment will switch between AM and FM band.

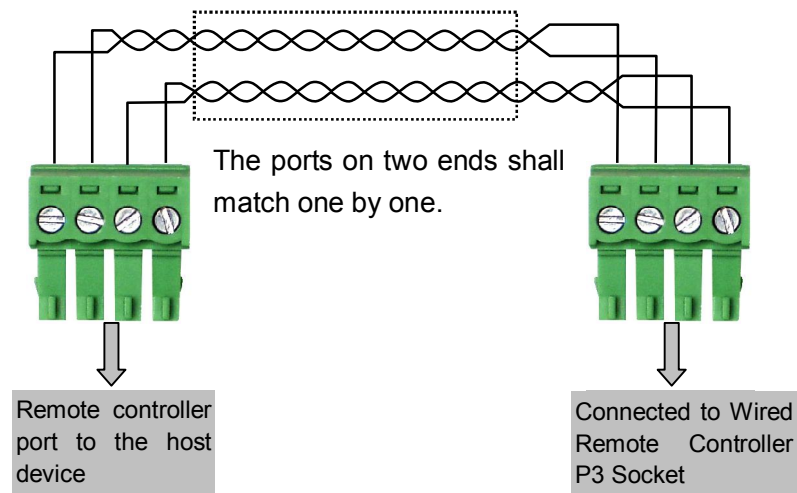
The control distance of this remote controller to HS-6818 device and wired remote controller is 10m.

## Schematics for Receiving Angle of Infrared Remote Controller

<p>The range of receiving angle for the host device is 90°.</p>  <p>Note: The infrared remote controller is only valid for zone 1 when it is directly used for operating the host device. When using the "SOURCE" key on infrared remote controller to select the audio source for zone 1, it is available to select "5.1Line" and "OPTICAL". But on the remote controller, no direct selection keys are provided for these two sources.</p>	<p>The range of receiving angle for wired remote controller is 90°.</p> 
---	--

## ※ Fabrication of Wired Remote Controller Wires

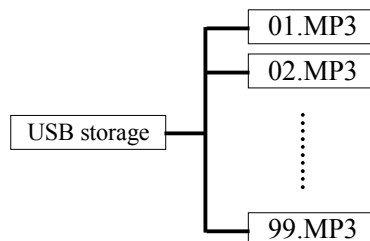
The host is connected to wired remote controller via twisted pair. The fabrication of the connection wires is as shown below.



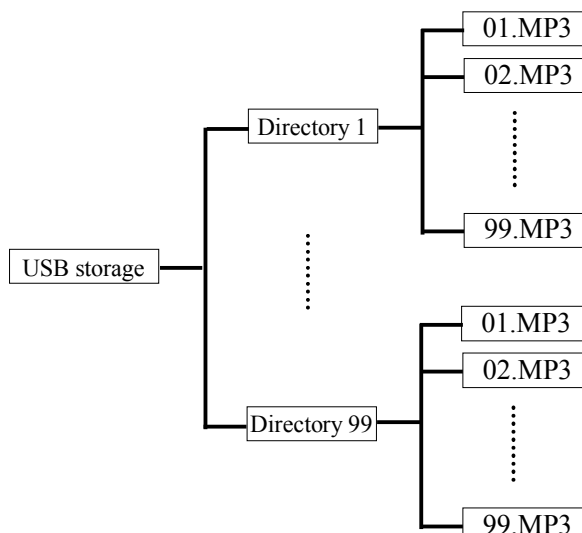
Note: For the operation of the wired remote controller, please refer to the Operating Instructions for HS-80R (Wired Remote Controller).

## ✘ About the Format of USB Disk File

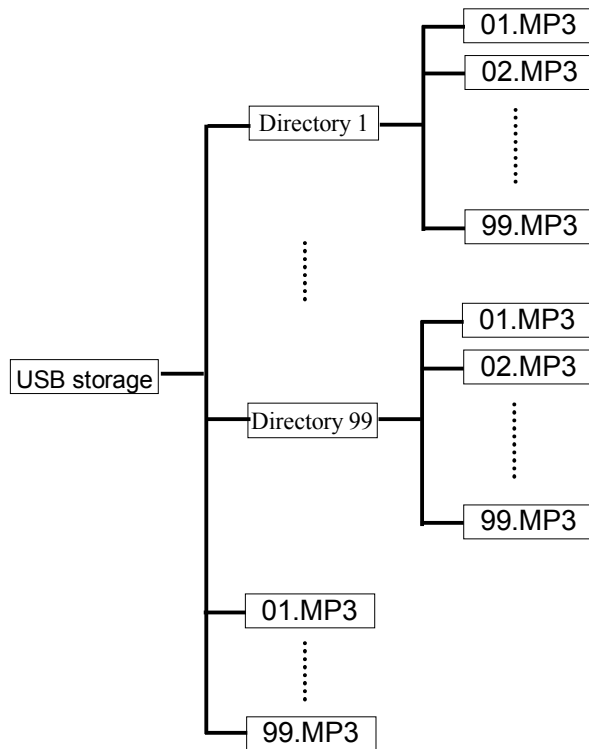
1. The USB disk and memories on market are developing fast, while their state on market is complicated. Therefore, this product cannot be compatible with all types of USB disks on market. This system can only support MP3 file format, with max. bit rate at 320KBPS. It cannot play the audio files of other formats. If finding that some music cannot be played, please check if that music conforms to the above requirements.
2. Supports FAT12, FAT16 and FAT32 file system.
3. To improve the operation speed and optimize management, it is recommended that the USB disk or mobile HDD used only store MP3 files other than files in other format, so as to facilitate the access of files and schedule programming.
4. Up to 99 primary directories can be created in the root directory, in each of which up to 99 tracks can be stored. Also, up to 99 tracks can be stored in the root directory. It is not necessary to create a secondary directory in a primary directory; otherwise, tracks in the secondary directory cannot be read. Tracks can be stored in a USB disk by three methods as follows:
  - Create no directory, and store all tracks in the root directory. This method facilitates track selection, but only 99 tracks can be stored. Note: To select a track in the root directory, the directory number should be set as "00", e.g. 00 \ 03.



- Store all tracks in primary directories. By this method, tracks can be stored by classification, and up to 99x99 tracks can be stored.



- Store tracks in root and primary directories. Up to 99+99x99 tracks can be stored.



## ※ Precautions

### 1. Safety Precautions

- Disconnect the power plug of the console from the mains before wiring the system.
- Ensure that the input voltage to the console is as specified to avoid a risk of damage to the console.
- Never open the casing of the console to avoid electric shock from inside.
- Always disconnect the power plug from the mains when the console is not used, because the console is not disconnected from the mains even when the power switch is turned to the off position.
- Do not leave the console in a too hot or too cold place.
- Keep the console well ventilated to avoid damage to the console due to excessively high temperature.
- Disconnect the power plug if the air is moist or the console is not used for a long period.
- Remove the power plug from the outlet to disconnect the console from the mains before removing or reinstalling any part, or disconnecting or reconnecting any plug or cable.
- Do not open the casing for maintenance by yourself or unauthorized personnel in case of failure, so as to avoid an accident or further damage.
- Never place any corrosive on or near the console.

### 2. After-sales Service Precautions

- We will provide a three-year charge-free warranty (including replacement of parts) from the date when you purchase provided that the product is installed and operated as specified.
- The user should show the warranty card copy kept by the user and the sales invoice for repair.
- The warranty is invalid in the cases as follows:
  - (1) The product is damaged due to wrong installation, operation or handling.
  - (2) The product is damaged due to abnormal situations (e.g. excessively high mains voltage or ambient humidity).
  - (3) The product is damaged due to disasters and accidents.
  - (4) The ID number on the product body is changed, modified or removed.
  - (5) The product is repaired or modified by unauthorized personnel.
- Please store the manual and warrant card well.
- For problems or precautions not referred in this manual, please contact our distributor or visit our site at <http://www.lyintlcorp.com>.

- Please contact our technician (or distributor) in case of failure within the warranty period. We will take no responsibility in case that the product is disassembled or repair by unauthorized personnel.

## ※ **Packing List**

HS-6818 Device, 1 set

Power cord, 1 pc

Connection wire 1.5m for 2-2 lotus socket, 1 pc

Network cable T585A-T585A, 1 pc

FM antenna, 1 pc

AM antenna and antenna holder, 1 set

Instruction Manual, 1 copy

Compliance Certificate and Warranty Card, 1 for each

HS-21, 1 pc

USB disk, 1 pc

## ※ Performance Specifications

### 1. MP3 Player

Item	Index
Compatible File	MP3 format, bit rate<320kbps
Compatible Storage Device	Compatible with most mobile disks with USB port
Frequency Response	20Hz-20kHz(±0.5dB)
Total Harmonic Distortion	<0.1%

### 2. AM/FM Tuner

Item		Index
AM	Range of Receiving Frequency	522-1620KHz
	Sensitivity	52dB $\mu$
	Signal-noise ratio (SNR)	35dB
	Passband	6kHz
	Total Harmonic Distortion	1.0%
FM	Range of Receiving Frequency	87.0MHz-108.0MHz
	Sensitivity	26dB $\mu$
	Signal-noise ratio (SNR)	Mono 75dB; Stereo 70dB
	Passband	15kHz
	Total Harmonic Distortion	0.6%
	Stereo Crosstalk	35dB

### 3. Timer

Item	Index
Programmable Control Power	1-channel (real-time grid voltage)
Socket Capacity	220V/2A
Time System	24-hour system
Programmable Timer Counts	100 points every day, unrepeated for the whole week
Programmable Items for Zone	a. Zone ON/OFF b. Selection of audio source c. Volume control d. Treble / bass control e. MP3 play control f. AM/FM control g. Ringer ON/OFF h. Output power ON/OFF
Programmable Ringer Types	3 types

## 4. General Index

Item		Index
Number of zones		12 zones. The zone 1 is of 5.1 channel, with 5 channels having PA and SW channel having line output. The zones 2-12 are of dual-channel.
Communication Port for Wired Remote Controller		RS475. Class 5 wires adopted.
Central Control Port		Type-D socket RS232
Audio	Line input sensitivity	250mV( $\pm$ 25mV)
	Line input resistance	>10k $\Omega$
	Zone output frequency	5 channels for zone 1: 60W/4 $\Omega$ for each channel
		2 channels for zone 2 and zone 2: 60W/4 $\Omega$ for each channel
		2 channels for zone 4 – 12: 20W/4 $\Omega$ for each channel
		Total power of all outputs not over 400W
	Frequency response	20Hz-20kHz( $\pm$ 0.5dB)
	Total Harmonic Distortion	Less than 0.2%. 1/3 rated output power at 1kHz
	Output Adjustment Ratio	Less than 3dB from full load to no load
	Tone control	Bass: $\pm$ 10dB(100Hz) Treble: $\pm$ 10dB(10kHz)
Signal-noise ratio (SNR)	Over 76dB	
AUX audio output	Stereo output for zone 1 and zone 2: 1V ( $\pm$ 0.3V)	
PA Output Protection		The zones 1, 2 and 3 are provided with output short circuit protection, overload protection and DC protection as well as protection lock. The zones 4 – 10 are provided with output short circuit and overload protection.
Power supply		AC220-240V/50-60Hz
Power Consumption		<400W
Power Supply Protection		AC220V/F6A
Size (mm)		(L×W×H)430×345×132
Net weight		10kg

The specification is subject to change without prior notification.



## **LY INTERNATIONAL ELECTRONICS**

---

<http://www.lyintlcorp.com>