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Rongyuan RYYT020 Intelligent Sofa Audio Rhythm Haptic System

Specification Sheet & User Manual

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Part 1: Product Specification Sheet

1. Product Overview

The RYYT020 is an intelligent home system that integrates high-end audio playback with an immersive body haptic experience. It perfectly combines a 2.1-channel high-fidelity audio system with music vibrator. Through advanced signal processing technology, it transforms the low-frequency rhythms in music into vibrations perceivable by the body, allowing you not only to "hear" music with your ears but also to "feel" it with your whole body. It provides an unprecedented immersive experience for watching movies, gaming, and listening to music.

2. System Components

Component Name	Quantity	Description
1. Main Control Box	1 Unit	System core, responsible for audio processing, signal distribution, and power amplification.
2. Touchscreen Knob Controller	2 Units	Color touchscreen, integrated knob and buttons, provides audio & vibration control and status display.
3. Music Rhythm Transducer	4 Units	10W Vibrator, built into sofa seat cushions and backrests, produces precise, clean vibrations.
4. 2.1Channel Speaker System	1 Set	Includes 2 full-range speakers (L/R) and 1 subwoofer.
5. Connection Cable Pack	1 Set	Includes audio cable, transducer connection cable, controller connection cable and power cable.

*Note: The number of transducers and controllers depends on the sofa size and configuration.



3. Technical Specifications

3.1. Main Control Box

Input Interface: DC29V/3A

Output Interfaces:

Audio Output: Dedicated 6-pin interface

Transducer Drive Output: Dedicated 12-pin interface

Controller Output: Dedicated 10-pin interface

Audio Input: a 3.5mm input port, **Audio Output:** a 3.5mm output port

Processing Chip: BT8961B6, BT8922B2

Wireless Connection: BT+BLE

Power Supply: DC 29V

Standby Power Consumption: 2.6W

Bluetooth Version: 5.4

Bluetooth Frequency Range: 2.4 GHz - 2.4835 GHz

Wireless Range: 10m

Modulation Type: GFSK、 π 14-DQPSK、 8DPSK

3.2. Touchscreen Knob Controller

Screen: 2.1 inch, 480*480, FFT color touchscreen

Operation: Capacitive touch + encoder knob

Connection: Wired connection to Main Control Box

Functions: Volume/Vibration intensity adjustment, mode switching, EQ settings

3.3. Music Vibrator

Type: $\Phi 25$ core, $8\ \Omega$ Vibrator

Rated Power: 10W (each)

Frequency Response: 28Hz

Connection Method: Dedicated 12-pin interface

3.4. 2.1 Channel Speaker System

Full-range Speakers (x2):

Unit: 1.5-inch full-range unit x 2

Impedance: $4\ \Omega$

Power: 10W each

Subwoofer:

Unit: 2.5-inch woofer unit

Power: 25W

Crossover Point: 150HZ

Part 2: User Manual

1. Safety Instructions and Unboxing Check

Please read this manual before use.

Place the device in a well-ventilated, dry environment, avoiding direct sunlight.

After unboxing, check all components against the list to ensure they are complete and undamaged.

2. System Connection and Installation (Ensure all devices are powered off during operation)

2.1. Device Placement:

Place the Main Control Box and Subwoofer inside the sofa. Place the full-range speakers on either side of the sofa. Vibrators are built into specific locations within the sofa.

2.2. Connect Power:

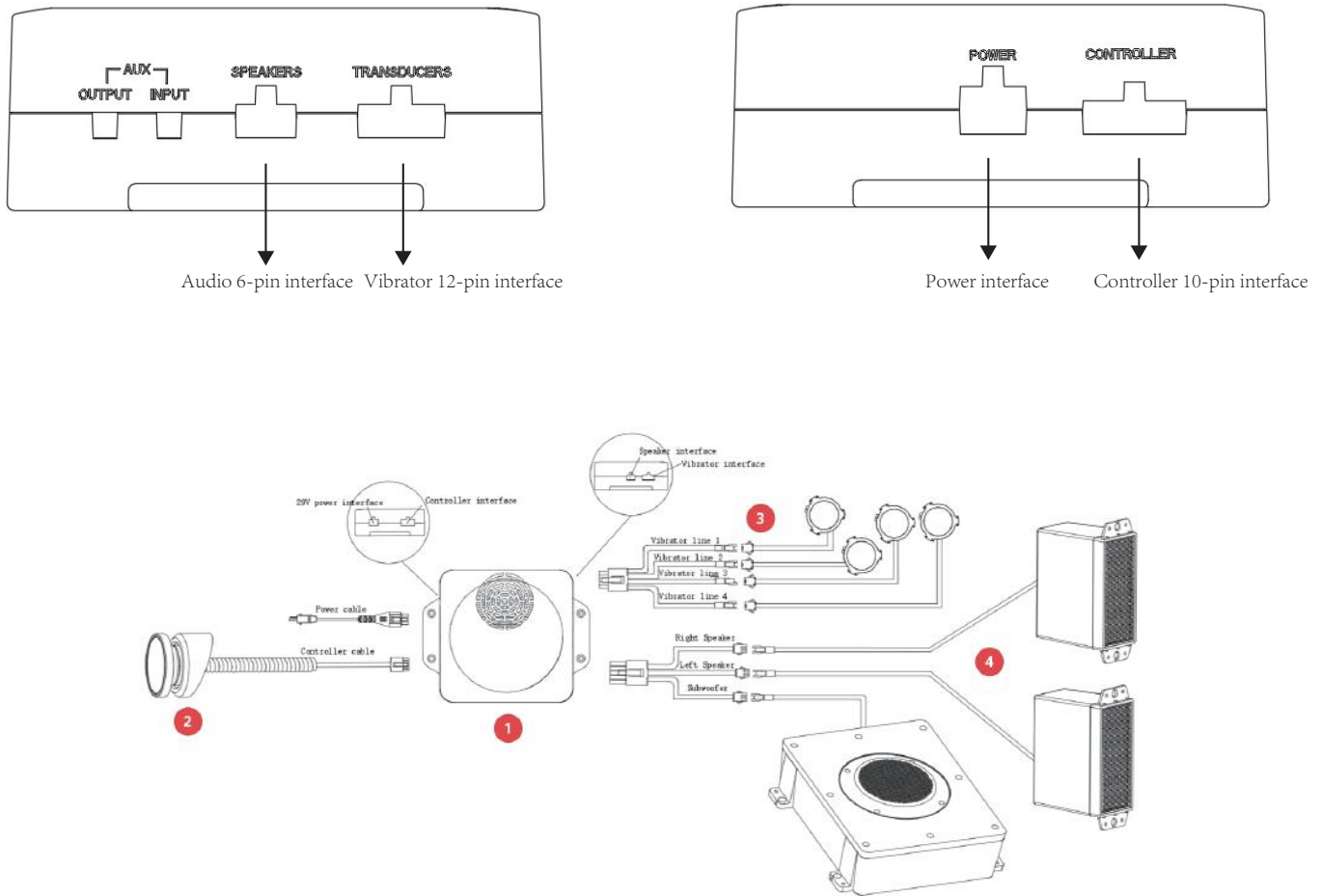
Plug the power adapter into a power outlet and connect the end of the power cable. Connect the other end firmly to the power input port on the Main Control Box.

2.3. Connect Audio Source: Pair via Bluetooth with "RYYT020" (name can be modified as needed).

2.4. Connect Speakers: Connect the speakers to the audio cable, then insert the audio cable connector into the dedicated 6-pin interface on the Main Control Box.

2.5. Connect Vibrator: Connect the wire of the vibrator to the vibrator cable, then insert the connector into the dedicated 12-pin interface on the Main Control Box.

2.6. Connect Controller: Connect the controller cable to the dedicated 10-pin interface on the Main Control Box.



Note: Media devices will automatically disconnect if they go out of range (approx. 10m from the product). When the device returns within range, it will automatically reconnect to the last connected device. To pair other devices, disconnect the first device in the "Settings" menu, then connect the new device.

3. Quick Start Guide

3.1. Power On: After power is connected, the controller screen will light up and enter standby mode.

3.2. Select Audio Source: Enable Bluetooth on your audio source device and connect to "RYYT020".

3.3. Adjust Volume: Rotate the knob or touch the screen in the music control interface on the controller to adjust volume.

3.4. Experience Vibration: Select a vibration mode, or play audio containing low frequencies and enable the Music Rhythm function to activate Vibrators. Vibration intensity can be adjusted separately in the vibration control interface.

4. Detailed Function Description

4.1. Controller Interface Navigation

4.1.1. Main Interface: Power On/Off, Vibration Adjustment, Audio Control



4.1.2. Audio Control:

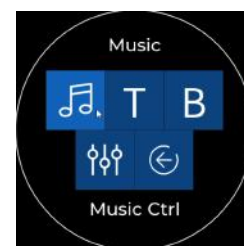
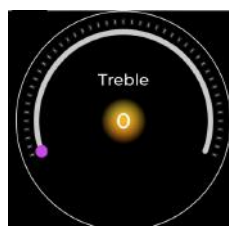
● Music Control

Volume Adjustment(Rotate knob clockwise: increase volume, counterclockwise: decrease volume. Or lightly touch and slide on screen to adjust)Play/Pause (Lightly touch screen to select Play/Pause).Previous Track, Next Track (Lightly touch screen to select).



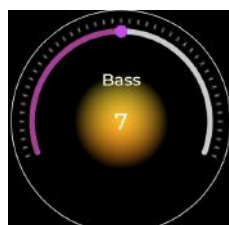
● Treble Adjustment

(Rotate knob clockwise: increase treble, counterclockwise: decrease treble. Or lightly touch and slide on screen to adjust).



● Bass Adjustment

(Rotate knob clockwise: increasebass, counterclockwise: decrease bass. Or lightly touch and slide on screen to adjust).



● SYNC / Balance

Balance Adjustment

(Clockwise: sound favors right speaker. Counterclockwise: sound favors left speaker.)

SYNC: After connecting to power, the device enables "Pairing" mode by default. Devices in pairing mode will automatically connect to the host (if a device is already connected to a media device with SYNC ON enabled, it will automatically become the host). Once paired, slave devices will disable wireless search function, and will not be discoverable by media devices.

After turning off "Pairing" via SYNC OFF, the device exits the pairing network and can be used individually. Devices with pairing turned off or not yet paired can be discovered and connected wirelessly via a media device.

The difference is: paired devices connected to a media device will automatically switch to host mode, while unpaired devices will maintain a standard connection.



4.1.3. Vibration Adjustment:

Left Side Vibration Intensity Adjustment

(Rotate knob clockwise: increase intensity, counterclockwise: decrease intensity.
Or lightly touch and slide on screen to adjust).



Right Side Vibration Intensity Adjustment

(Rotate knob clockwise: increase intensity, counterclockwise: decrease intensity.
Or lightly touch and slide on screen to adjust).



All Position Vibration Intensity Adjustment

(Rotate knob clockwise: increase intensity, counterclockwise: decrease intensity.
Or lightly touch and slide on screen to adjust).



● Vibration Mode

(Continuous/Wave/Pulse/Loop)
/ Frequency Adjustment (High/Normal)
- Lightly touch screen to switch between different modes.



● Sound Mode.

(Lightly touch to turn Sound Mode On/Off)



4.1.4 Power On/Off: Press the knob after power is connected to turn on. Press the power off button briefly to turn off.

4.1.5 Spectrum Mode: The system will enter Spectrum Mode after 30 seconds of inactivity. In this mode, rotating the knob adjusts the volume.



5. Troubleshooting

Phenomenon	Possible Cause	Solution
No Sound	Wrong source selected or low volume	Check input source settings, increase volume
	Cable not plugged in securely	Check all audio connection cables
No Vibration	Vibration intensity set to 0	Add intensity to the vibration adjustment function interface.
	Audio signal lacks low frequencies	Play audio source rich in bass
Bluetooth Connection Fails	Not in pairing mode	Restart the system until you hear "Bluetooth Mode"
	Too far away or interference	Bring device closer to the Main Control Box, restart Bluetooth

6. Maintenance and Care

Cleaning: Wipe the surfaces of the controller with a dry, soft cloth. Do not use chemical solvents.

Cables: Avoid pinching or excessive bending of cables.

Heat Dissipation: Ensure sufficient space around the vents of the Main Control Box for heat dissipation.

Long-term Non-use: Disconnect the device from power.

Disclaimer: This product is designed to provide an enhanced experience for home entertainment. Please enjoy at reasonable volume levels and avoid prolonged exposure to high-intensity vibrations to prevent discomfort or hearing damage. The manufacturer is not responsible for any damage caused by misuse, abuse, or unauthorized modifications. Specifications are subject to change without notice.

FCC WARNING

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

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.