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SMSL BD34301 Decoding Chip User Manual

BD34301 Decoding Chip
USER MANUAL

http://www.smsl-audio.com/

The contents of this manual may be changed with the edition, and are subject to change without notice.
Ver 1.0

Contents

Features

- Use Rohm's flagship DAC chip BD34301EKV, and fully optimize its performance to make its THD+N as low as-117dB;
- USB uses XMOS XU-316, a real 32bit USB solution, PCM supports up to 768kHz, and DSD supports up to DSD512
- The all-new CK-03 clock processing circuit achieves ultra-low clock jitter, making the clock jitter of fiber coax as excellent as USB;
- Customized low noise porcupine linear power supply;
- The specially designed discrete component stabilized power supply and multiple low-noise stabilized power supplies provide low-noise power supply for analog circuits;
- Qualcomm's latest Bluetooth chip supports SBC, AAC, aptX, aptX HD, LDAC;
- High-quality gold-plated input and output connection terminals;
- Newly designed high-quality knobs;
- Use tempered glass display panel, higher light transmittance, longer service life;
- Equipped with remote control and full function remote control.
- Japan Audio Society (JAS) Hi-Res certified.

Specification

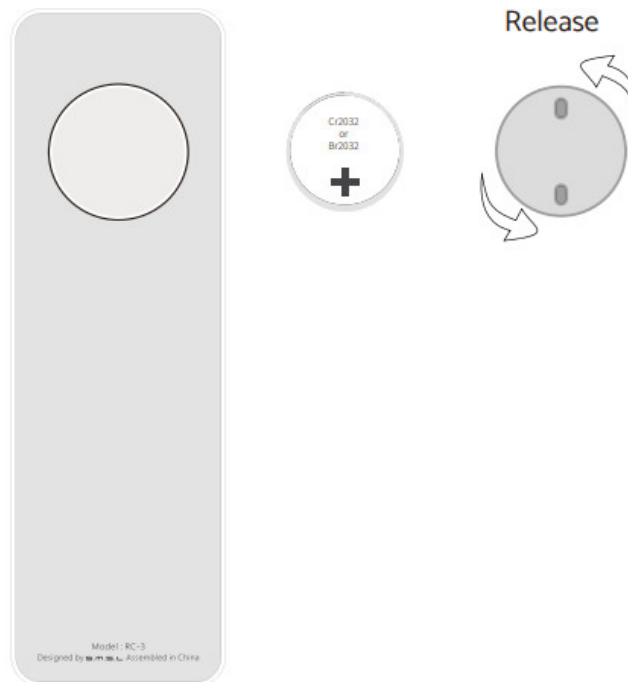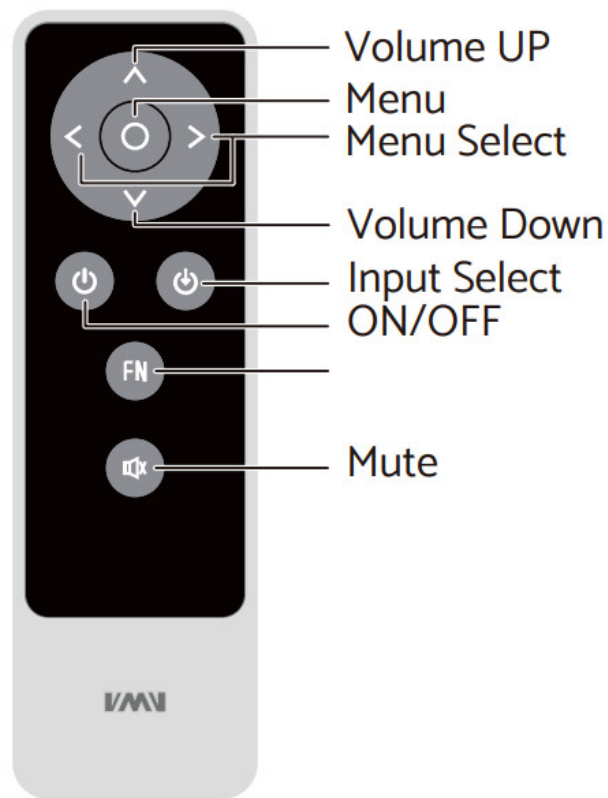| Input		USB/Optical/Coaxial/I2S/Bluetooth/AES	
Output		RCA/XLR	
Output Level	XLR	4.0Vrms(Vol Fixed) 5.1Vrms(Vol variable) 2.0Vrms(Vol Fixed) 2.6Vrms(Vol variable)	
THD+N	RCA	0.00014% (-117dB)	
Dynamic range	XLR RCA	129dB 125dB	
SNR	XLR RCA	129dB 124dB	
Output impedence	XLR RCA	200Ω 100Ω	
USB transmission		Asynchronization	
USB compatibility		Windows 7 / 8 / 8.1 / 10 / 11, Mac OSX, Linux	
Bit depth	USB Optical/Coaxial	1bit 16~32bit b1it 16~24bit	
Sampling rate	USB	PCMDSD	44.1~768kHz 2.8224~22.5792MHz
	Optical/Coaxial	PCM	44.1~192kHz
Bluetooth specification		5.1 (Supports SBC,AAC,aptX,aptX HD,LDAC)	
Power consumption		5W	
Standby power		<0.5W	
Size		280×235.5x43mm(WxHxD)	
Weight		3.2kg/7.05lbs	

Specifications are subject to change without notice.

Remote Control

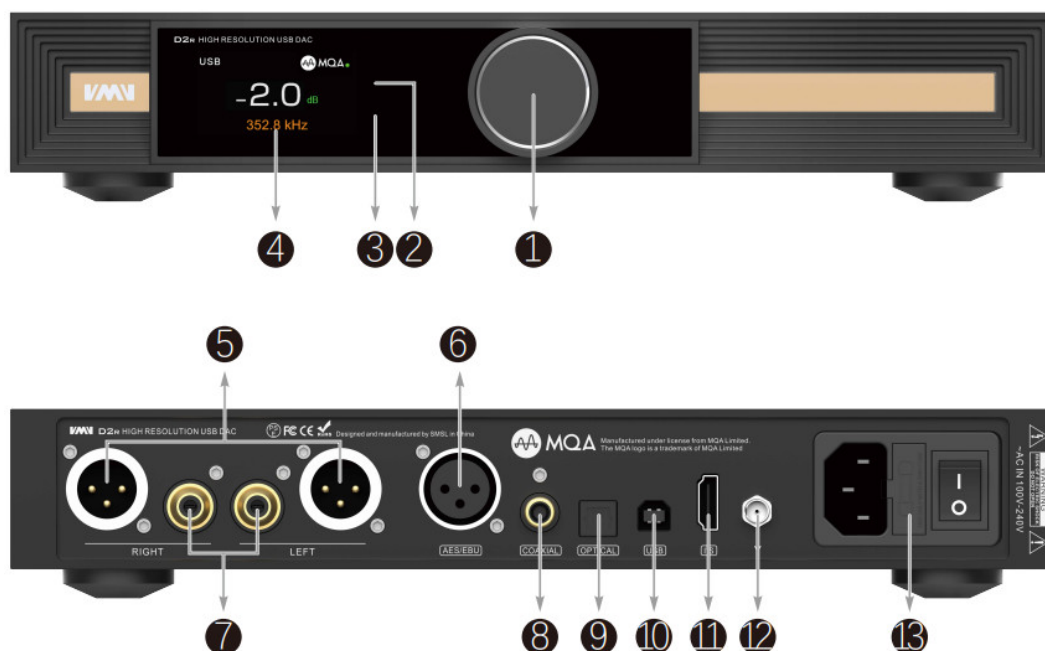Install CR2032 or BR2032 lithium 3V coin battery as instructions
When using the remote control, point it toward the remote con-trol signal receiver on the main unit from a distance of 5 m (16 ft) or less. Do not place obstructions between the main unit and the remote control.
The remote control might not work if the remote control signal receiver on the unit is exposed to direct sunlight or bright light. If this occurs, try moving the unit. Beware that use of this remote control could cause the unin-tentional operation of other devices that can be controlled by infra.

1. Find the battery component on the back of your Remote.

2. Turn the battery door counterclockwise until the door opens

3. Remove the old battery.

4. With the positive side facing up toward you, put in the newCR2032 or BR2032 lithium 3V coin battery (available at mostelectronic and drug stores).

Functions

1. Multi-function knob 2. Remote window 3. Indicator light 4. Display 5. XLR output 6. AES/EBU input 7. RCA output	8. Coaxial input 9. Optical input 10. USB input 11. I²S input 12. Bluetooth antenna 13. AC IN 100V-24V AC

Bluetooth operating instructionst

This product is equipped with a Bluetooth button, which is the FN button on the remote control,The functions of this button include:

- Short press: Switch directly to Bluetooth input, if Bluetooth loses connection, it is a reconnect;
- Long press: Disconnect the current device and allow pairing with other devices.

Connection:

1. **Step 1:** Switch the input source in the SETTING MENU or press the Bluetooth button of the remote;
2. **Step 2:** Turn on the Bluetooth function of the mobile phone, search for "VMV D2r", and tap to pairing. When the mobile phone displays "connected", it has been successfully connected.

Re-connection:
When you had lost the connection with the D2r, for example,going out, and back home, some phones will not re-connect the D2r if the D2r has not been re-boot, so you can press the Bluetooth button (FN) on the remote to Re-connect.
Clear pairing: Long press the "Bluetooth" button(FN) on the remote control. After clearing the pairing, some phones may no longer be able to search for "VMV D2r". In this case, you need to delete the Bluetooth device "VMV D2r" which saved in the phone, and then search and pairing again.

About MQA

MQA (Master Quality Authenticated) is an award-winning British technology that delivers the sound of the original

master recording. The master MQA file is fully authenticated and is small enough to stream or download. Includes MQA technology, which enables you to playback MQA audio files and streams, delivering the sound of the original master recording.

MQA files playback

- D2R supports MQA decoding with USB, optical fiber and coaxial!
- D2R's MQA playback does not require the use of special playback software, such as foobar2000, Audirvanaplus only needs to support ASIO or WASAPI audio output, and when playing MQA audio, it is best to adjust the volume of the computer to the maximum,so that the audio output of the computer is in the best condition.
- When playing an MQA file, the sampling rate of the original master recording is displayed.

MQA and the Sound Wave Device are registered trade marks of MQA Limited.© 2016

Notes on playing MQA-CD

- Please make sure that what is being played is a genuine MQA-CD.
- Verify that the optical or coaxial signal output of the CD player is an unprocessed source code.

Instructions

INPUTS

- USB
- BLUETOOTH
- OPTICAL
- COAXIAL
- AES/EBU
- I²S(HDMI)

Note: The I²S interface is not a real HDMI interface. It just uses the HDMI cable to transmit it, so it cannot connect the real HDMI interface.

OUTPUTS

- ALL LINE OUT
- BALANCED
- UNBALANCED

PCM FILTER

- SLOW ROLL-OFF
- SHARP ROLL-OFF

DSD FILTER

- 13K CUTOFF
- 26K CUTOFF
- 52K CUTOFF

SOUND COLOR

- LOW OSR+HPC ON
- LOW OSR+HPC OFF
- HIGH LOW OSR+HPC ON
- HIGH LOW OSR+HPC OFF

OSR (oversampling rate), a high oversampling rate can more effectively filter out the out-of-band noise of digital audio.

PRE MODE
PRE MODE is the volume adjustment function switch for the output interface.

- VARIABLE: The output interface volume is controlled.
- FIXED: The output interface volume is fixed.

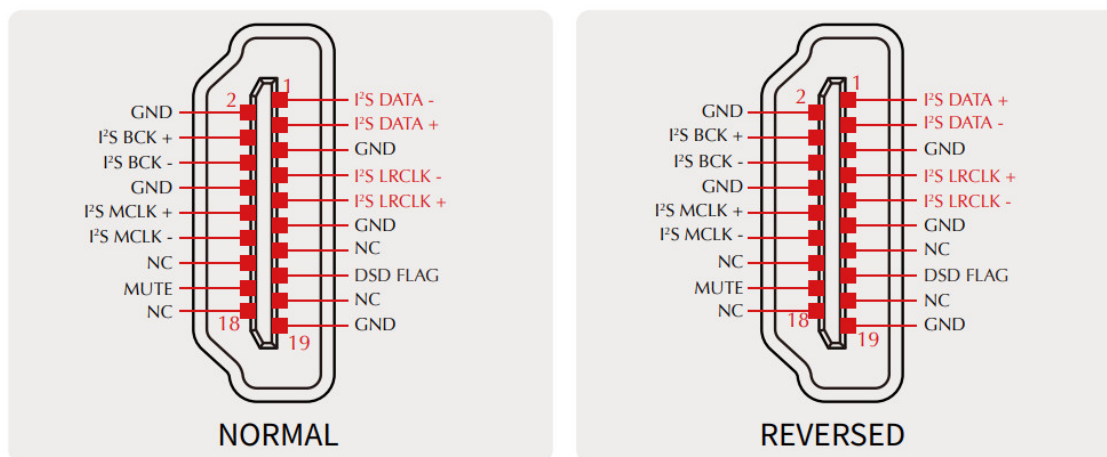**FN KEY FOR**

- OUTPUTS
- BLUETOOTH
- PHASE

I2S DSD CHANNEL

- DSDL = PCM DATA(The DSD left channel using the PCM DATA pin)
- DSDL = PCM LRCK(The DSD left channel using the PCM LRCK pin)

Note: When using the I²S input to streaming DSD audio, if you find that the left and right channels are incorrect, you can use this option to correct it.
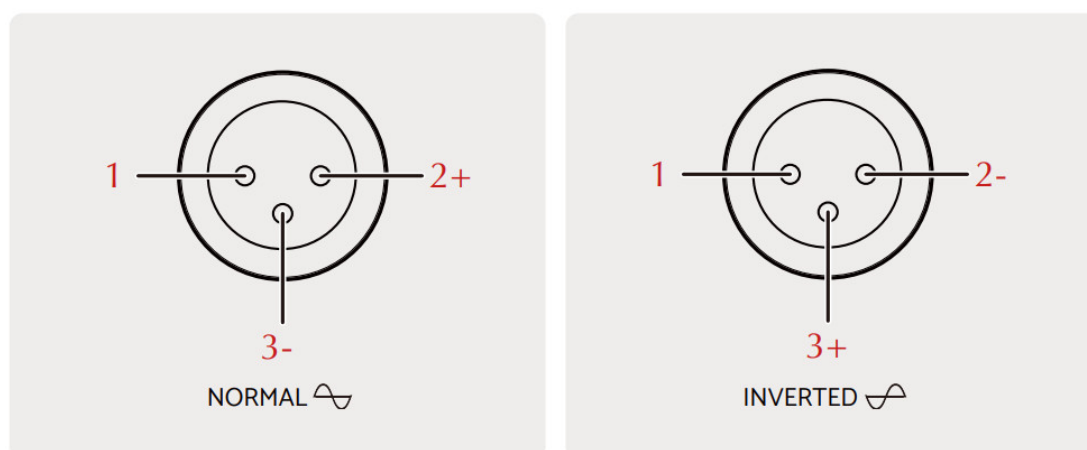
I²S MODE

- NORMAL (NORMAL, PS AUDIO FORMAT)
- REVERSED (INVERTED, DATA AND LRCK INVERTED)

Note: This option is used to match different I²S interface standards, please check the interface definition of the signal source before use.

AUDIO PHASE

- NORMAL (2+,3-)
- INVERTED (2-,3+)

DIMMER

- 5 second ~ 60 second

(The range is 5 seconds-60 seconds. After setting, the screen will automatically go off within this time, and the screen will re-light up if you operate the remote control or the knob at any time.)

BRIGHTNESS

- LEVEL 1 ~ LEVEL 6

RESET

- During Bluetooth input, long press the middle button of the knob, the system will only reset the Bluetooth pairing status;
- During other input, long press the middle button of the knob, the system will clear all settings, including

Bluetooth.

Safety notes

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK).

⚠️ **CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN ⚠️

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

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

🔺 Safe use only under elevation 2000m.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions,the function of the product shall prevail!

Warranty Terms

1. The Term of Service

   Foshan Shuangmusanlin Technology Co., Ltd promises to offer good-quality products. If the product is broken in 7 days after purchasing when you use it normally, you can choose to send it back for return, replacement or repairing (only the product does not affect the second sales can be returned). Repairing for free in one year if you use it normally.

2. Date of purchase is in accordance with the date on invoice or receipt uesd by seller, and if you buy it on line, you can show the screenshot of trade.

3. If an inappropriate usage causes the unit damaged, the warranty will be void. As below.

   ● All damages by inappropriate use, including using it under non-normal working environment or without following the instructions.

   ● Dismantling, refitting, repairing by user in private.

   ● Causing damage by using some fittings instead of the designative or accredited ones.

   ● Cannot provide credible proof of purchase.

4. Sending it back to our company for repairing.

5. Contact your S.M.S.L Audio reseller for a return or replacement.

S.M.S.L

Documents / Resources

SMSL BD34301 Decoding Chip [pdf] User Manual
BD34301 Decoding Chip, BD34301, Decoding Chip, Chip

References

- **SMSL Audio Official -Professional audio product manufacturer**

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