Manuals+ — User Manuals Simplified.

Hi-Res AUDIO SU-9 MQA Full Decoder User Manual

Contents

Hi-Res AUDIO SU-9 MQA Full Decoder

Safety Notes

- Install this unit in a well ventilated, cool, dry, clean place-away from direct sunlight, heat sources, vibration, dust, moisture, or cold..
- Use the voltage specified on this unit Only. Using this unit with a higher voltage than specified is dangerous and may cause fire , damage to this unit, or personal injury. Our company will not be held responsible for any damage resulting from the use of this unit with a voltage other than that specified.
- Do not attempt to modify or fix this unit by yourself. Contact alesperson or customer service when any service is needed. The cabinet should never be opened for any reason.
- When not planning to use this unit for long periods of time (i.e. when going on vacation), disconnect the power cable from the AC wall outlet.

   Important note:

   The product specifications and information mentioned in this manual are for reference only. The content of this manual is subject to change without notice.

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 repair (only the product does not affect the second sales can be returned). Repairing for free in one year if you use it normally.
2. The date of purchase is in accordance with the date on the invoice or receipt used by the seller, and if you buy it online, you can show the screenshot of the trade.
3. If an inappropriate usage causes the unit damaged, the warranty will be void. As below.
   1. All damages by inappropriate use, including using it in a non-normal working environment or without following the instructions.
   2. Dismantling, refitting, repairing by the user in private.
   3. 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.

Features

- Supports MQA decoding;
- The newly developed intelligent temperature compensation system(ITS) ensures that the product is always in the best performance state;
- The top performance D/A chip ES9038PRO from ESS Technology;
- The high-performance power supply chip ES9311, the noise of ES9311 is as low as 1uVrms, to push ES9038PRO to the limit;
- XMOS XU-216, true 32bit audio processing, supports DoP and Native DSD, and reaches 32bit/768kHz and DSD512;
- Ultra-low phase noise and optimized clock processing circuit are used to achieve ultra-low clock jitter;
- All inputs support DSD streaming, including coaxial and optical (DoP64);
- Use tempered glass display panel for higher light transmission and longer service life;
- Built-in shielded, low noise power supply processing, while improving power efficiency,lower power consumption;
- Specially designed discrete component linear regulated power supply and multiple low noise regulated power supplies to provide low noise power for analog circuits.
- The latest Bluetooth supports LDAC, APTX / HD, SBC, AAC and the industry's highest specification 24bit / 192kHz UAT format!
- High quality gold-plated input and output jacks;
- 3 high-end dual op-amps OPA1612 and a lot of audio grade components are used;
- 1.9 inch TFT LCD display;
- JAS Hi-Res certification;
- Equipped with remote control and full-function remote control.

Specifications

- Input …………………………………………….. USB / Optical / Coaxial / Bluetooth
- Output ……………………………………………………………………………. RCA /XLR
- THD+N …………………………………………………………….0.00009%(-121dB)
- Dynamic range …………………………………………………… XLR 130dB RCA 123dB
- SNR …………………………………………………………………………… 130dB
- Output impedance …………………………………………..XLR 207Ω RCA 142Ω
- USB transmission ……………………………………………….Asynchronization
- USB compatibility ………………………Windows 7 / 8 / 8.1 / 10, Mac OSX Linux
- Bit depth ………………………………USB 1bit 16 ~ 32bit
- Optical / Coaxial 1bit 16 ~ 24bit
- Sampling rate …………………………USB PCM 44.1 ~ 768kHz DSD 2.8224 ~ 22.5792MHz
- Optical / Coaxial PCM 44.1 ~ 192kHz DSD DSD64(DoP)
  Bluetooth specification
- UAT …………………………………………24bit/192kHz (1200kbps/900kbps/600kbps)
- LDAC …………………………………………..24bit/96kHz (990kbps/660kbps/330kbps)

- aptX-HD …………………………………………………………..24bit/48 kHz_576kbps
- aptX ……………………………………………………..16bit/44.1 kHz_352kbps
- SBC …………………………………………………………16bit/44.1 kHz_328kbps
- AAC …………………………………………………………16bit/44.1 kHz_320kbps
- Power Consumption …………………………………………………………….5W
- Standby power ………………………………………………………………… <0.5W
- Size ………………………………………………………….187.5X154X40mm (WxHxD)
- Weight ………………………………………………………………….. 0.79kg

Note
Firmware and driver download: **http://www.smsl-audio.com/cn/download.asp**.
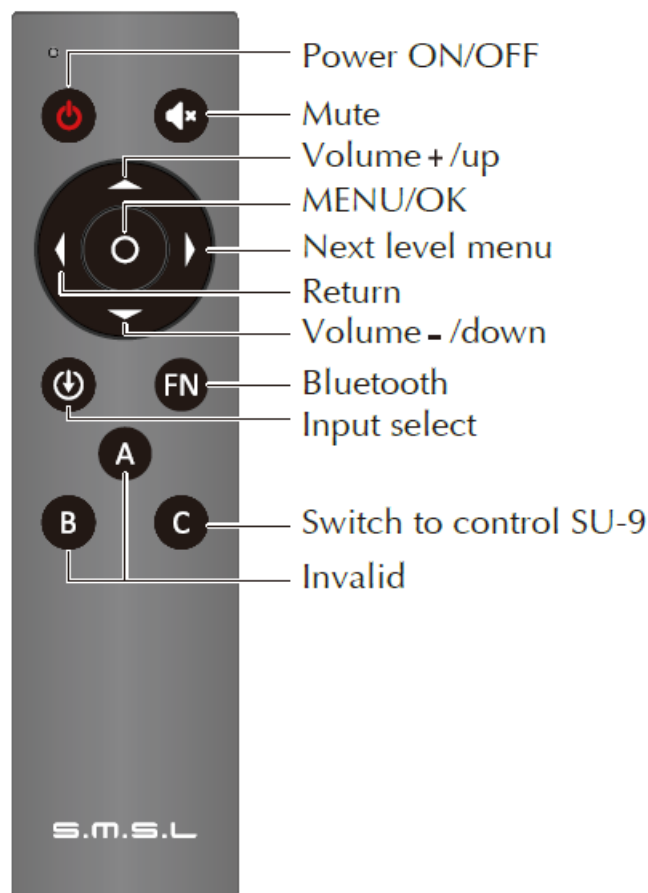
Remote control

- Install 2 x AAA batteries 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.
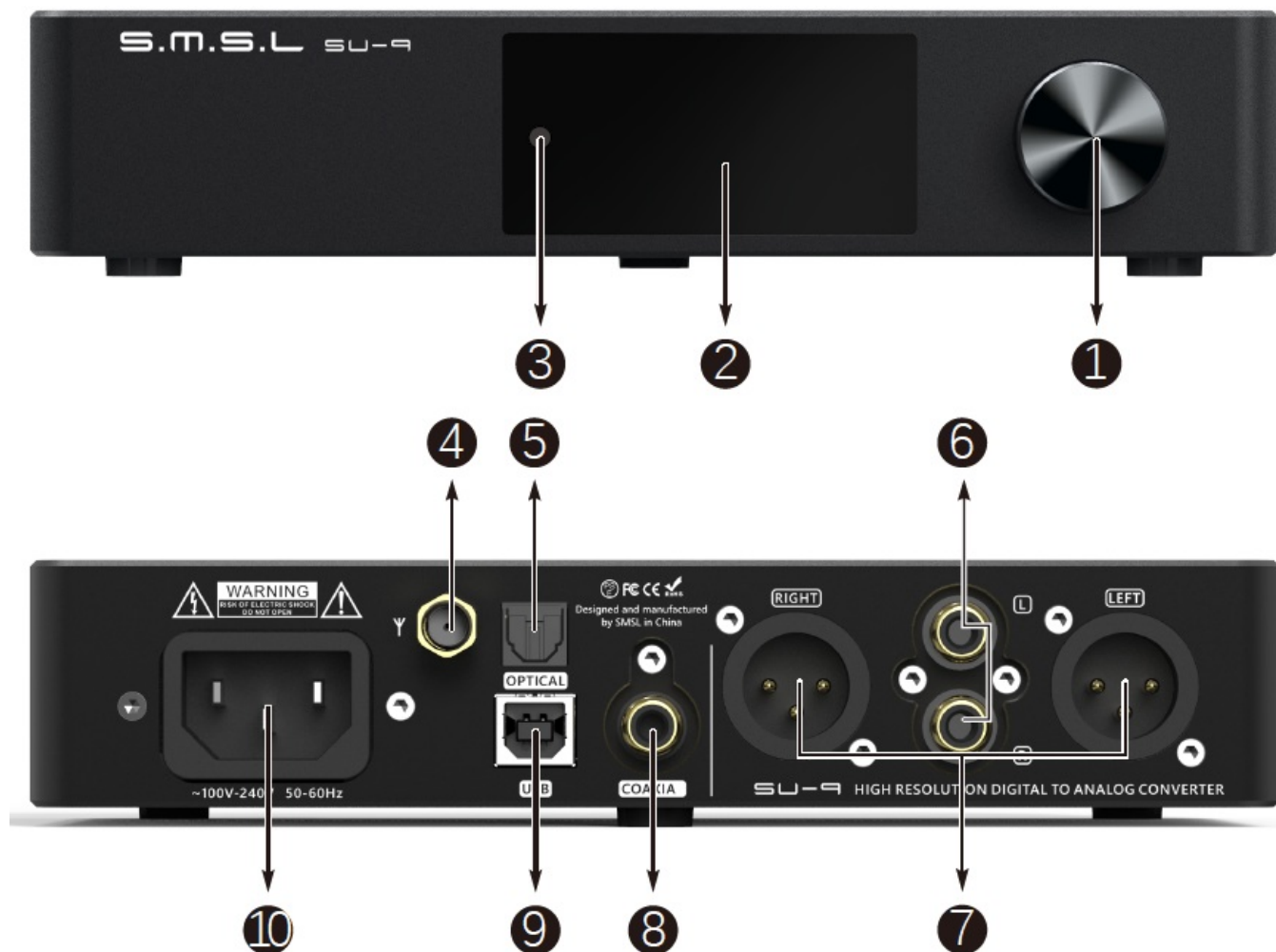
Operating the remote control

Note

1. This remote controller use 2 x R03/AAA batteries.
2. When you first operate SU-9, press the C key first.

Display Interface and Instructions

1. Knob
2. Display
3. Remote window
4. Bluetooth antenna
5. Optical input
6. RCA output
7. Balanced output
8. Coaxial input
9. USB input
10. AC IN

Note: Knob

- Kona: Volume/Menu up or down
- Button: Press to Menu/Enter
- Hold to Return or Power ON/OFF

Bluetooth operating instructions

Connection:

- Step 1: Switch the input source in the SETTING MENU or press the Bluetooth button of the remote;
- Step 2: Turn on the Bluetooth function of the mobile phone, search for "SMSL SU-9", and tap to pairing. When the mobile phone displays "connected", it has been successfully connected.
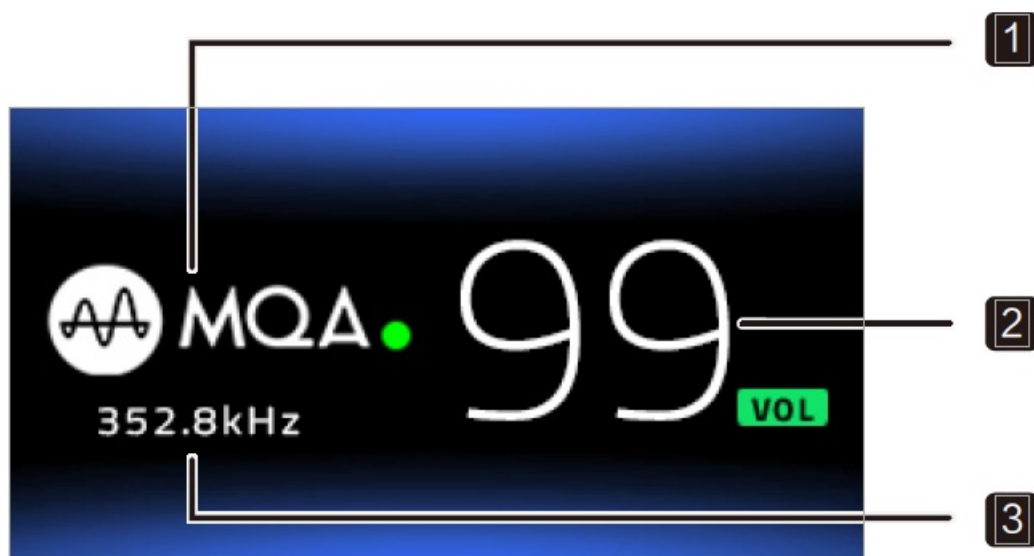
Re-connection:
When you had lost the connection with the SU-9, for example,going out, and back home, some phones will not re-connect the SU-9 if the SU-9 has not been re-boot, so you can press the Bluetooth button on the remote to Re-connect.

Clear pairing:
Long press the "Bluetooth" button on the remote control. After clearing the pairing, some phones may no longer be able to search for "SMSL SU-9". In this case, you need to delete the Bluetooth device "SMSL SU-9" which is saved in the phone, and then search and pair again.
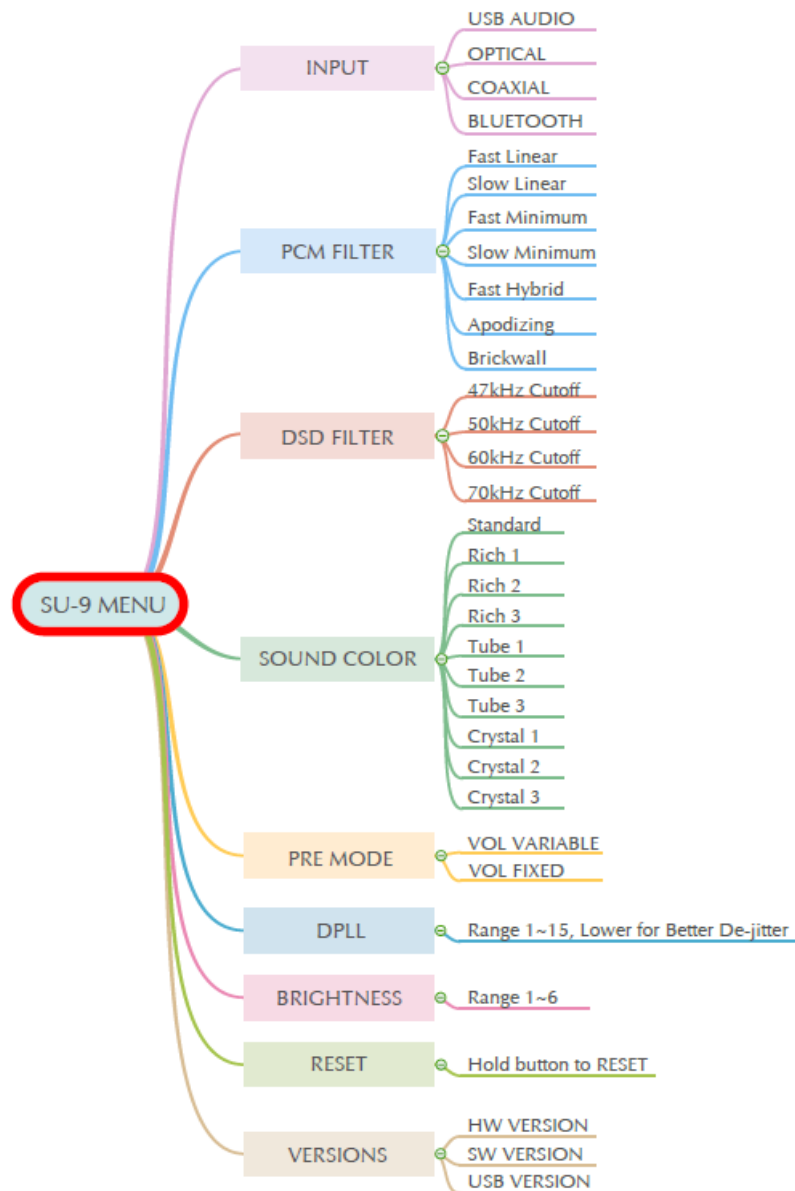
User interface

Main

1. Audio format
2. Volume Level
3. Sampling rate

MENU TREE

SU-9 MENU

- **INPUT**
  - USB AUDIO
  - OPTICAL
  - COAXIAL
  - BLUETOOTH
- **PCM FILTER**
  - Fast Linear
  - Slow Linear
  - Fast Minimum
  - Slow Minimum
  - Fast Hybrid
  - Apodizing
  - Brickwall
- **DSD FILTER**
  - 47kHz Cutoff
  - 50kHz Cutoff
  - 60kHz Cutoff
  - 70kHz Cutoff
- **SOUND COLOR**
  - Standard
  - Rich 1
  - Rich 2
  - Rich 3
  - Tube 1
  - Tube 2
  - Tube 3
  - Crystal 1
  - Crystal 2
  - Crystal 3
- **PRE MODE**
  - VOL VARIABLE
  - VOL FIXED
- **DPLL**
  - Range 1~15, Lower for Better De-jitter
- **BRIGHTNESS**
  - Range 1~6
- **RESET**
  - Hold button to RESET
- **VERSIONS**
  - HW VERSION
  - SW VERSION
  - USB VERSION

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. The SU-9 includes MQA technology, which enables you to playback MQA audio files and streams, delivering the sound of the original master recording. Visit How it works **https://www.mqa.co.uk/how-it-works** for more information.

MQA files playback

- The SU-9 supports MQA decoding on the USB interface.
- SU-9's MQA playback does not require additional software. You can use foobar2000 or Audirvana for MQA playback as it supports ASIO or WASAPI audio output. When playing MQA audio, it is suggested to adjust the volume of the computer to the maximum for the best audio output.
- The SU-9 LED next to MQA logo glows green or blue to indicate that the unit is decoding and playing an MQA stream or file, and denotes provenance to ensure that the sound is identical to that of the source material. It glows blue to indicate it is playing an MQA Studio file, which has either been approved in the studio by the artist/producer or has been verified by the copyright owner.The SU-9 LED next to MQA logo glows magenta to

indicate that the unit is rendering an MQA stream or file. This delivers the final unfold of the MQA file.

- When playing an MQA file, the sampling rate of the original master recording is displayed.

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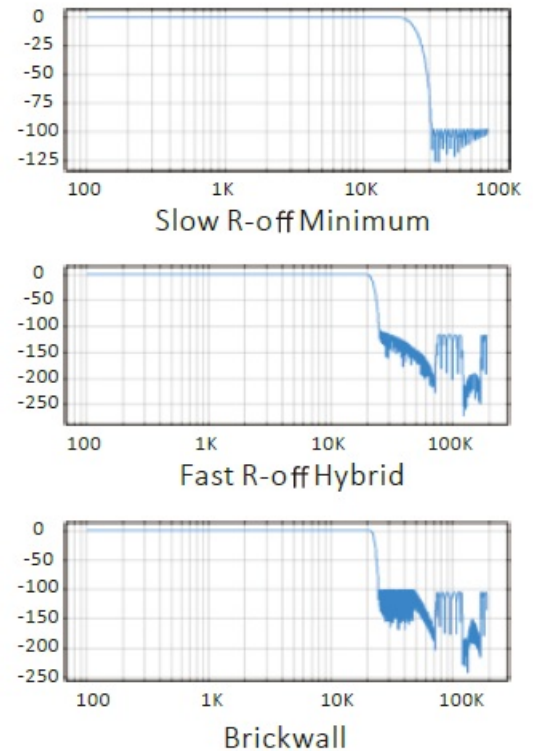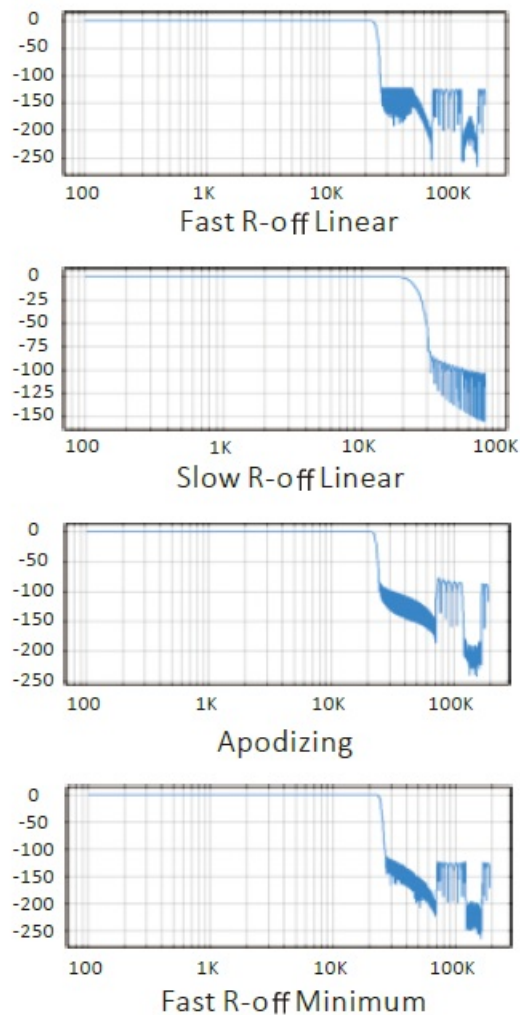
Instructions

INPUT

- USB
- OPTICAL
- COAXIAL
- BLUETOOTH

FILTER
(This setup is only valid for non-MQA PCM format. Products with a full MQA Decoder unfold the file to deliver the highest possible sound quality. At this level of playback you are hearing what the artists created in the studio – with precise file and platform-specific DAC compensation and management.).

- Fast Linear.
- Slow Linear
- Fast Minimum
- Slow Minimum
- Fast Hybrid
- Apodizing
- Brickwall

Fast R-off Linear

Slow R-off Linear

Apodizing

Fast R-off Minimum

Slow R-off Minimum

Fast R-off Hybrid

Brickwall

Instructions

DSD FILTER
There are 4 kinds of digital filtering in total.It's the way that the digital operation means the clutter outside the audioFilter out,respectively.

- 47kHz Cutoff
- 50kHz Cutoff
- 60kHz Cutoff
- 70kHz Cutoff

SOUND COLOR
There are 9 sound color settings in SU-9.

- Rich1 Rich2 Rich3
- Tube1 Tube2 Tube3
- Crystal1 Crystal2 Crystal3

This setting is usingthe DSP of ES9038PRO,to make some different sound color, all of these settings will not change the frequency res ponse curve.When set to "Standard", this setting will be bypassed.

PRE MODE
Volume control enable or disable.

- V ol Fixed : In this mode, volume is fixed on max output level, and the SU-9 will ignore the volume operations.
- Vol Variable: In this mode, volume can be adjust by remote controller, and make SU-9 a pre-amplifier.

DPLL

MIN ~ MAX
(A total of 15 kinds, the default is 7 kinds. The larger the number is, the stronger the range to adapt to jitter, and the smaller the number, the better the performance against clock jitter.)
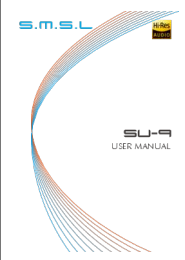
BRIGHTNESS

- LEVEL 1 ~ LEVEL 6

RESET

- In this interface, press and hold the button of the knob, the system will reset all settings, including Bluetooth pairing status.

SYSTEM

- This page shows the system infomations, model name, version.

Documents / Resources

Hi-Res AUDIO SU-9 MQA Full Decoder [pdf] User Manual
SU-9 MQA Full Decoder, SU-9, MQA Full Decoder

References

- **SMSL Audio Official -English**
- **MQA Explained | How MQA Audio Technology Works | MQA**