

BACH MINUET/LIBERTY RELEASE NOTES

Welcome to the BACH Minuet/Liberty v4.5.3 Release Notes. Please read this document to find important information on areas of Minuet that may not be covered on our website.

CONTENTS

BACH MINUET/LIBERTY RELEASE NOTES	1
VERSION HISTORY.....	2
VERSION 4.5.3 – OCTOBER 2023	2
VERSION 4.5.1 – SEPTEMBER 2023	2
VERSION 4.4.14 – FEBRUARY 2023.....	2
VERSION 4.3.0 – JULY 2022.....	4
VERSION 4.2.23 – JULY 2021	4
VERSION 2.3.3 – MAY 2020	6
VERSION 2.3.2 – FEBRUARY 2020	7
VERSION 2.2.0 – DECEMBER 2018.....	7
VERSION 2.1.0 – SEPTEMBER 2018	8
VERSION 2.1.0 – JULY 2018.....	9
VERSION 2.0.0 – JULY 2018.....	10
GETTING HELP	11

VERSION HISTORY

VERSION 4.5.3 – OCTOBER 2023

BUG FIXES

- Fixed an issue with entering the IP Netmask values. The Netmask field for each interface now accepts any standard values described in RFC-1878 and no longer allows illegal values.
- Fixed the interface that saved advertisements when switching between redundant and non-redundant mode. The SDP for the saved session will now include the correct source interface information when switching between redundancy modes.

VERSION 4.5.1 – SEPTEMBER 2023

BUG FIXES

- When changing between non-redundant and redundant mode, the user is informed and asked to consider changing the IP settings of the corresponding ports to reduce IP errors upon reboot.
- When creating a talker stream, sending an empty channel list will prompt the user with an error message about an empty channel list.

KNOWN ISSUES

- When changing an interfaces subnet mask, the only valid value is 255.255.255.0. All other values are denied.
- The interface subnet mask fields accept illegal subnet masks, causing the board to crash upon reboot.

VERSION 4.4.14 – FEBRUARY 2023

WHAT'S NEW

- **NMOS ADVERTISED RECEIVER CHANNEL SIZE OPTION**

This option allows the user to configure the number of channels per receiver flow. The options are: 1, 2, 4, and 8.

- **NMOS IS04 AND IS05 PORT CONFIGURABILITY**

The new options allow the user to set the ports NMOS uses for IS04 and IS05. The default ports remain the same.

- **NMOS REGISTRY SERVICE DISCOVERY MANUAL OPTIONS**

New manual options for specifying the RDS were added. The user can now specify the API version, service IP address, and service port.

- **SDP SOURCE INTERFACE SELECTION**

A new menu option allows the user to select the ethernet interface to serve as the source port and be encoded in session SDPs as the source IP.

- **SOURCE SPECIFIC MULTICAST**

Source Specific Multicast (SSM) allows delivery of multicast packets to a receiver that originates only from a specific source using IGMPv3.

- **FOLLOWER ONLY PTP MODE**

The Sync tab now has a new mode for selecting a 'Follower Only' mode for the device. This ensures that the device will never assume a leader role.

BUG FIXES

- The ability for the board to recognize a non-availability of an RDS when NMOS is enabled and thereby shutting down the NMOS process to stop incessant polling and hampering performance has been added. A reboot is required to re-enable NMOS.
- Added the ability to handle larger amounts of mDNS avahi nodes in the network and process them without interrupting the audio quality and overall degradation of performance.
- NMOS receiver name containing 'Ross' prefix has been dropped from NMOS receivers.
- In the WebUI, the NMOS Connection interface is no longer misconfigured when switching to non-redundant mode from redundant mode
- The user is blocked from setting both media ethernet ports to the same subnet.
- Stale DANTE advertisements no longer linger after source session deletion.
- No audio resumption on receiver after rebooting a DANTE source was resolved.
- The ability to disconnect individual channels in the ANEMAN matrix was fixed.
- The "JSON Troubleshooting Page" was removed from the WebUI.
- A "Correct Error" message is now displayed when creating a source with the wrong multicast IP address.

VERSION 4.3.0 – JULY 2022

WHAT'S NEW

- **16 CHANNELS PER TDM LINE**

The user has the option of selecting I16S TDM mode which will allow a user to transmit and receive 16 channels on a single TDM line.

VERSION 4.2.23 – JULY 2021

WHAT'S NEW

- **NMOS IS-04, IS-05 COMPATIBILITY**

NMOS IS-04 is the Discovery and Registration Specification that allows for control and monitoring applications to find resources on a network.

NMOS IS-05 is the Device Connection Management Specification that provides a transport-independent way of connecting media nodes.

The One-to-Many mode enables the connection of one audio network stream to multiple outputs via NMOS.

- **NEW AND IMPROVED INTELLIGENT PTP TRACKING ALGORITHM**

A recently developed innovative system to allow the BACH Liberty to follow a PTP master with more accuracy in lower quality networks using predictive modeling and real-time statistical analysis.

- **ANEMAN CONNECTION MANAGEMENT COMPATIBILITY**

Audio Network Manager (ANEMAN) is a cross platform and cross vendor audio connection manager. The ROSS-BACH plugin can be downloaded via the plugin manager and enables audio network devices to connect with each other.

- **UPDATED USER INTERFACE PATCH PANEL**

The new web user interface patch panel allows users to connect network streams in an One-to-Many mode and the ability for channel shuffling thus providing full flexibility in routing channels.

- **ECDSA FAST ENCRYPTION**

The Elliptic Curve Digital Signature Algorithm (ECDSA) reduces the generation time of an SSH key at manufacturing from 20 minutes to 3 seconds.

- **USER DEFINED OEM CONFIGURATION**

A new utility called MOC allows a Windows® PC to program OEM configurations. This enables customizable names and configurations, allowing you to tailor the device to end user needs.

- **EXPANDED MULTICAST IP RANGE (225.X.X.X - 239.X.X.X)**

The device sends and receives multicast IP streams using the range 225.x.x.x to 239.x.x.x.

- **NEW CODEC ALLOWING ST-2110-31 AES3 TRANSPARENT AUDIO**

The new AM824-AES3 Transparent codec allows the transporting of AES3 metadata using the AM824 payload format.

- **DANTE - AES67 USING SAP ADVERTISEMENT**

The device transmits and receive AES67 multicast streams to / from Dante devices.

- **JITTER FREE CLEAN REFERENCE OUT CLOCK**

The ref-out clock provides a jitter free clock to drive your other audio devices.

- **MARVELL® 88E6350 SWITCH SUPPORT**

The Marvell 88E6350 switch for external VLAN based redundancy is supported and is automatically recognized by the software and its proper configuration is enabled.

- **DUAL BANK SOFTWARE UPGRADES**

The upgrade process is more secure with the use of dual bank upgrades, providing seamless field upgrades.

BUG FIXES

- **Advertisements from LAWO VSC:** Added the ability for BACH devices to recognize advertisements from a LAWO VSC and directly connect to them.
- **Update Sender and Destination Sessions:** Fixed an issue where the ability to update sender and destination stream parameters such as name, link-offset, and channel set was not working.

KNOWN ISSUES

- Following a reboot in redundant mode, streams that were created prior to the reboot and restart may see audio artifacts for the first few seconds as the PTP clock is stabilizing.
Workaround: After a reboot, wait a few minutes to allow for the PTP clock to stabilize before enabling audio.
- When a device is rebooted, it sometimes fails to show up in ANEMAN.
Workaround: Quit the ANEMAN client on your MAC or PC and start it again.

- Stale advertisements are present on the DANTE controller.
Workaround: Rebooting the device clears the stale advertisements.
- When NMOS is enabled, an IS-04 based RDS server must be available, or the device will not function properly.
Workaround: Include an IS-04 compliant RDS server on the network.

VERSION 2.3.3 – MAY 2020

- Build 100 targets the new QSPI chip (MT25QL256ABA8ESF-0SIT); not the N25Q256A13ESF40G old QSPI (RTL version: v.0.6.2-b40)
- Build 1 targets the old QSPI chip (N25Q256A13ESF40G); not the MT25QL256ABA8ESF-0SIT QSPI (RTL version: v.0.6.2-b41)

BUG FIXES

- Fix 100Hz lock in ATG RTL.

KNOWN ISSUES

- 96kHz mode has bit errors.
- 250us mode has bit errors.
- I8S mode has bit errors if more than one stream is created.

UPGRADE CONSIDERATIONS

- In 1ms/96kHz mode, the maximum number of streams is four.
- Using 100Mbps introduces a 3usec offset on the PPS with respect to 100Hz/7.2s signals.
- Must use PTP aware switch in transparent mode when using 100Mbps to send/receive audio.
- Stream advertisements will only be supported on the first VLAN on Minuet.
- Boot time is ~95sec.
- If IGMP enabled switch is misconfigured, stream recovery after link connect/disconnect may take ~30sec.

VERSION 2.3.2 – FEBRUARY 2020

- Build 103 targets the new QSPI chip (MT25QL256ABA8ESF-0SIT); not the N25Q256A13ESF40G old QSPI (RTL version: v.0.6.2-b36)
- Build 3 targets the old QSPI chip (N25Q256A13ESF40G); not the MT25QL256ABA8ESF-0SIT QSPI (RTL version: v.0.6.2-b35)

BUG FIXES

- Fixed an issue where TDM data bytes were misplaced
- Fixed an issue where the listener did not recognize PTP GM switches

KNOWN ISSUES

- 96kHz mode has bit errors
- 250us mode has bit errors

UPGRADE CONSIDERATIONS

- I8S mode has bit errors if more than one stream is created
- In 1ms/96kHz mode, the maximum number of streams is 4
- Using 100Mbps introduces a 3usec offset on the PPS with respect to 100Hz/7.2s signals
- A PTP aware switch in transparent mode is required when using 100Mbps to send/receive audio
- Stream advertisements will only be supported on the first VLAN on Minuet
- Boot time is ~95sec
- If the IGMP enabled switch is misconfigured, stream recovery after link connect/disconnect may take ~30sec

VERSION 2.2.0 – DECEMBER 2018

Build 104 targets the new QSPI chip (MT25QL256ABA8ESF-0SIT); not the N25Q256A13ESF4 0G old QSPI (RTL version: v.0.6.0-b13)

Build 4 targets the old QSPI chip (N25Q256A13ESF40G); not the MT25QL256ABA8ESF-0SIT QSPI (RTL version: v.0.6.0-b12)

WHAT'S NEW

- Added a customer specific clock (#14685).

VERSION 2.1.0 – SEPTEMBER 2018

Build 101 targets the new QSPI chip (MT25QL256ABA8ESF-0SIT); not the N25Q256A13ESF40G old QSPI (RTL version: v.0.6.0-b2)

Build 1 targets the old QSPI chip (N25Q256A13ESF40G); not the MT25QL256ABA8ESF-0SIT QSPI (RTL version: v.0.6.0-b1)

WHAT'S NEW

- Added Flexible Redundancy
- Support for 1-to-8 channels per stream
- Added I2S, I4S, and I8S modes

BUG FIXES

- Core after doing get_system_info json command
- Redundancy mode in minuet broken investigation
- AV Manager crash on Minuet
- Minuet: Ethernet interface is not accessible until AVMgr start
- PTP Locking on Minuet takes about 1 minute
- JSON Review (update_stream broken)
- 1ms packet time is broken
- Sending unicast packets to minuet during boot up locks the board
- Minuet would not PTP Lock
- Debug Redundancy
- Redundancy mode in minuet broken solution
- Sampling wrong data bytes while formatting AES67 packets
- Source streams opened after receiving a DHCP lease will still use the link-local IP as the source IP in the outgoing AES67 RTP packets
- PTP interval parameters are not saved with filecfg_save_running
- 100Hz does not lock even if PTP is stable
- Fix Minuet Redundancy

VERSION 2.1.0 – JULY 2018

Build 101 targets the new QSPI chip (MT25QL256ABA8ESF-0SIT); not the N25Q256A13ESF40G old QSPI (RTL version: v.0.6.0-b2)

Build 1 targets the old QSPI chip (N25Q256A13ESF40G); not the MT25QL256ABA8ESF-0SIT QSPI (RTL version: v.0.6.0-b1)

WHAT'S NEW

- Added a Source Synchronous Mode to the TDM Interface
- Added Flexible Redundancy
- Enabled 1-to-8 channels per stream
- Added I2S, I4S, and I8S modes

BUG FIXES

- Core after doing get_system_info json command
- Redundancy mode in minuet broken investigation
- AV Manager crash on Minuet
- Ethernet interface is not accessible until AVMgr start
- PTP Locking on Minuet takes about 1 minute
- JSON Review (update_stream broken)
- The 1ms packet time is broken
- Sending unicast packets to minuet during boot up locks the board
- Minuet would not PTP Lock
- Debug Redundancy
- Redundancy mode in Minuet broken solution
- Sampling wrong data bytes while formatting AES67 packets
- Source streams opened after receiving a DHCP lease will still use the link-local IP as the source IP in the outgoing AES67 RTP packets
- PTP interval parameters are not saved with filecfg_save_running
- The 100Hz does not lock even if PTP is stable
- Fix Minuet Redundancy

VERSION 2.0.0 – JULY 2018

- Build 100 targets the new QSPI chip (MT25QL256ABA8ESF-0SIT); not the N25Q256A13ESF40G old QSPI (RTL version: v.0.5.5-b13)
- Build 0 targets the old QSPI chip (N25Q256A13ESF40G); not the MT25QL256ABA8ESF-0SIT QSPI (RTL version: v.0.5.5-b12)

WHAT'S NEW

- This load ONLY targets the old QSPI chip (N25Q256A13ESF40G); not the MT25QL256ABA8ESF-0SIT QSPI.
- This version uses new JsonAPI. You can access the new Json-API through the board's IP connection at: <http://board-ip/JsonAPI.html> (e.g. <http://10.232.21.30/JsonAPI.html>)

BUG FIXES

- Minuet: RTL is sampling wrong data bytes while formatting AES67 packets

UPGRADE CONSIDERATIONS

If you are upgrading to this version from any version before v1.2.4, then use the following method:

1. Navigate to <http://boardip/cgi-bin/upgrade> (may need to give your device an IP visible on the network, udhpc works on DHCP enabled networks)
2. Choose the *.bin file
3. Click **Upload**.
4. Wait for the upload and script to finish.
The message **Status: OK Upgrade complete** displays.
5. Physically reset the board or type `reboot`.

If you are upgrading from version v1.2.4 or later, then use the following method:

- Follow the steps for Factory Reset configuration as outlined in the **BACH Minuet Reference Guide**.

GETTING HELP

- Our 24-hour hotline service provides access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel.
- During business hours (Eastern Standard Time), technical support personnel are available by telephone.
- After hours and on weekends, emergency technical support is available. A telephone-answering device will provide the names and phone numbers of technical support and field service personnel who are on call. These people are available to react to any problem and to do whatever is necessary to ensure customer satisfaction. For serious issue which need urgent attention and tracking, please ensure you are given a ticket number and refer to this in future communications.
 - **Technical Support: (+1) 613-652-4886**
 - **After Hours Emergency: (+1) 613-349-0006**