Migration Guide

24-Track Digital Binloop to 32-Track Digital Binloop

By

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Overview

The Digital Binloop product family has been an incredibly unique high-quality audio playback solution ever since its inception 20 years ago. Due to its popularity, Alcorn McBride is devoted to maintaining the Digital Binloop as a cutting-edge product. Over the years, this has required us to update the hardware design on a few occasions to avoid electronic part obsolescence and keep up with modern technologies. Realizing that these products are often deployed in attractions with long life-cycles, we design them to last as long as possible (*some of the original 20-year-old equipment is still in service today!*). However, as hard as we try we all know that nothing lasts forever. For that reason, we also design the newer models to be backward compatible to create a seamless upgrade experience for customers when it's time to replace older generation models.

The purpose of this guide is to provide all of the information necessary to upgrade from our 24-track Digital Binloop systems to our modern 32-track Digital Binloop systems.

About the 24-track Digital Binloop

Production Period: 1996-2005
Reproducer Slots: 12
Reproducers: REPRO5 (16-bit), REPRO24 (24-bit)
Media Type: PCMCIA Flash, or CompactFlash (up to 2GB) /w PCMCIA Adapter
File Types: Raw PCM (AMS, SFD, A24, S24), WAV (16-bit Only)
Control Interfaces: SMPTE, RS232(2), MIDI, Parallel IO

This generation of the Binloop was the first to implement 24-bit audio playback thanks to the REPRO24 reproducer card. The primary storage media was typically PCMCIA Flash cards, though in later years it was commonplace to use CompactFlash cards with PCMCIA adapters. This product has no local configuration interface, so all configuration is performed using the Binloop Config application.

About the 32-track Digital Binloop

Production Period: 2006-Present
Reproducer Slots: 16
Reproducers: REPRO24D (24-bit)
Media Type: CompactFlash (up to 128GB)
File Types: Raw PCM (AMS, SFD, A24, S24), WAV, AIFF, MPEG2 PS
Control Interfaces: SMPTE, RS232(2), MIDI, Parallel IO, Ethernet

This generation of the Digital Binloop was first introduced in 2006. Since many of the key electronics used in the 24-track Digital Binloop design had become impossible to procure, this new generation was a complete redesign with modernized electronics and metal. Knowing that this product would someday directly replace older 24-track systems, Alcorn McBride took careful steps to maintain backward compatibility between this system and the old system. You'll notice from the pictures below that the connectors (and their pin-outs) are identical to the 24-track system.

Redesigning the hardware provided an excellent opportunity to implement some newer features in the Digital Binloop. These improvements included Ethernet for remote control and configuration, Standard-Definition (SD) video playback, Component Video output, Optional SD-SDI output, 24-bit Independent Left/Right playback, and a front-panel menu interface for control and configuration. On top of this, 4 extra reproducer slots were added to the design to allow for a maximum of 32 channels of audio playback per cage.

Important Ordering Information

The first step of replacing a 24-track Digital Binloop is ordering a comparable 32-track Digital Binloop with the same quantity of reproducers. If you have 12 reproducers installed in the old Binloop, you should order a new Binloop with at least 12 reproducers.

Another important factor in ordering is the CompactFlash storage media. Each reproducer requires a CompactFlash card to store audio files so these should be ordered along with the Binloop. To ensure compatibility, performance, and reliability we strongly recommend that SanDisk brand CompactFlash cards are used.

To simplify this process as much as possible, we also highly recommend that the following items be purchased from Alcorn McBride:

- **USBSER** - A USB→RS232 Adapter that supports 9-bit communication
- **CFAUSB** – A USB→CompactFlash Card Reader
- **PCAUSB** – A USB→PCMCIA Flash Card Reader

USBSER

CFAUSB

PCAUSB

For assistance with choosing the correct product, CompactFlash, and accessories, please contact Alcorn McBride directly at 407-296-5800 or sales@alcorn.com.

Migrating the Audio Files

The 32-track Digital Binloop is directly compatible with all types of PCM and WAV media files used by prior generations of the Digital Binloop. This means that all that you need to do is transfer the files from the old PCMCIA media to the new CompactFlash media. To ensure a successful transfer, please follow these step-by-step directions:

1. Interface one of the PCMCIA flash cards of the old Binloop to a computer using a PCMCIA adapter. These adapters are built directly into older laptops, but can also be obtained as USB→PCMCIA adapters from several sources (Alcorn McBride, Amazon, NewEgg, etc.).

   NOTE: Sometimes, PCMCIA adapters are used in conjunction with CompactFlash cards in the 24-track Binloops. If this is the case, than you can interface using a USB→CompactFlash Adapter instead.

2. Copy the entire contents of the PCMCIA flash card to a temporary folder on your computer. These files will likely have names similar to **SND00001.S24.** It is common for audio files stored on different reproducers to have the same file name, so it would best to name this temporary folder after the reproducer in which the PCMCIA card belongs (i.e. "Reproducer 1") and store each reproducer's audio files in their own separate folders.

3. Repeat this process for all reproducer cards (as many as 12). Once you are finished, your computer will have a backup copy of every audio file on the 24-track Binloop. The next goal is to transfer this content to the CompactFlash cards of the new 32-track Binloop.

4. Prepare the new CompactFlash cards by formatting them in the new 32-track Digital Binloop using this method:
   a. Remove all CompactFlash cards from the 32-track Digital Binloop
   b. Power on the 32-track Digital Binloop
   c. Press-and-hold the black test-button of Reproducer 1.
   d. While continuing to hold this button, insert a CompactFlash card into Reproducer 1
   e. Wait for Reproducer 1's status LED to turn Orange (formatting) and release the button
   f. When the LED turns off, the format is complete.
   g. Repeat this process for all CompactFlash cards and power down the 32-track Binloop

5. Interface one of the new CompactFlash cards to the computer with the backup copies of the PCMCIA files. This can be done using a USB→CompactFlash card reader.

6. Copy the audio files for Reproducer 1 to the CompactFlash card.

7. When the copy is complete, properly "eject" the CompactFlash card from the computer.

   NOTE: For Windows, this proper ejecting can be performed by right-clicking on the CompactFlash drive in Windows Explored and selecting "Eject". Windows will indicate when the device is safe to remove.

8. Insert the CompactFlash card into Reproducer 1 of the new 32-track Digital Binloop.

9. Repeat this process for all reproducers. (up to 12…unless you are taking advantage of the 4 extra slots provided on the 32-track Digital Binloop)

Congratulations! If you're here, you've successfully transferred all of your audio content from the old 24-track Digital Binloop to the replacement 32-track Binloop. You're almost finished…

Migrating the Binloop Configuration

In addition to the audio content, the Digital Binloop stores important configuration data in non-volatile memory inside of the product. This includes information like group assignments, SMPTE playback triggers, SMPTE Mode (Generate/Read), SMPTE times (Preroll, Start, End), etc. This configuration data can be easily transferred using our Binloop Config software running on a computer with an RS232 port (or a USB→RS232 Adapter).

Please follow these instructions to transfer the configuration:

1. Download and install our Binloop Config software located on this page (http://www.alcorn.com/support/software.html)

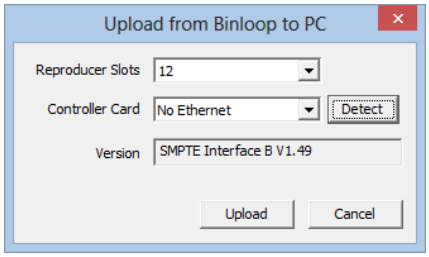
2. Connect a straight-through RS232 cable (included with the 32-track Digital Binloop) from your computer's RS232 port to the "Programmer" port of the 24-track Digital Binloop.

3. Power on the 24-track Binloop and launch the Binloop Config application on your computer.

4. Click on **File→New Upload From Binloop…**

5. Select 'Serial' as the connection method, choose the correct COM port for the RS232 port connected to the Binloop, and then click the **OK** button.

6. Another window will appear. Select **12** as the number of reproducer slots, and then click on the **Upload** button.



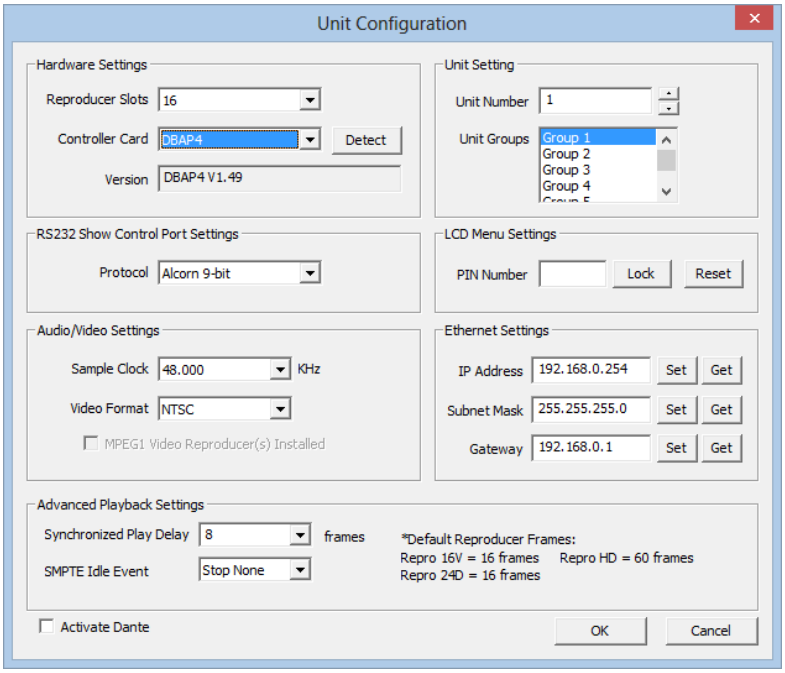
7. When the upload is complete, click on **File→Save As…** to store a backup copy of this configuration to your computer. Leave Binloop Config as it is and proceed to the next step.

8. Disconnect the RS232 cable from the Programmer port of the 24-track Binloop, and connect it to the Programmer port of the 32-track Binloop

9. Power on the 32-track Binloop and wait for it to complete its initialization sequence.

10. Click on **Binloop→Settings→Unit…**

11. Configure the reproducer slots to **16,** select **DBAP4** as the Controller Card, select a Synchronized Play Delay of **8 Frames**, and then click **OK**.



12. Click **File→Save As…** and save this file under a different name than the previous save (this is the modified 'New' Binloop configuration).

13. Now it's time to transfer this configuration to the new Binloop. Click on **Binloop→Download To Binloop…**

14. Disconnect the RS232 cable from the Binloop's Programmer port.

You have now successfully transferred all audio content and configuration settings from the old 12-track Digital Binloop to the new 32-track Digital Binloop. Since all of the connectors on the new system are identical, all you need to do is install the new Binloop in place of the old one and reconnect the cables.

If you have any trouble during this migration, please don't hesitate to contact us at support@alcorn.com or 407-296-5800. Enjoy your new Digital Binloop!