Turbo™ iDDR Version 2.3.1 Release Notes and Installation Instructions

Table of Contents

Grass Valley Product Support

To get technical assistance, check on the status of a question, or to report new issue, contact Grass Valley Product Support via e-mail, the Web, or by phone or fax. Contact Grass Valley first regarding problems with third party software on Grass Valley products, such as the Microsoft® Windows® operating system, Windows Media® player, Internet Explorer® internet browser, and SQL Server™.

Web Technical Support

To access support information on the Web, visit the product support Web page on the Grass Valley Web site. You can download software or find solutions to problems by searching our Frequently Asked Questions (FAQ) database.

World Wide Web: http://www.thomsongrassvalley.com/support/
Technical Support E-mail Address: gvgtechsupport@thomson.net.

Phone Support

Use the following information to contact product support by phone during business hours. Afterhours phone support is available for warranty and contract customers.

International (France)	+800 80 80 20 20 +33 1 48 25 20 20	Italy	+39 02 24 13 16 01 +39 06 87 20 35 42
International (United States, Canada)	+1 800 547 8949 +1 530 478 4148	Belarus, Russia, Tadzikistan, Ukraine, Uzbekistan	+7 095 258 09 20 +33 (0) 2 334 90 30
Hong Kong, Taiwan, Korea, Macau	+852 2531 3058	Indian Subcontinent	+91 11 515 282 502 +91 11 515 282 504
Australia, New Zealand	+61 1300 721 495	Germany, Austria, Eastern Europe	+49 6150 104 444
Central, South America	+55 11 5509 3440	Near East, Africa	+33 1 48 25 20 20
China	+861 066 0159 450	Netherlands	+31 (0) 35 62 38 421
Belgium	+32 (0) 2 334 90 30	Northern Europe	+45 45 96 88 70
Japan	+81 3 5484 6868	Singapore	+65 6379 1313
Malaysia	+603 7805 3884	Spain	+41 487 80 02
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Authorized Support Representative

A local authorized support representative may be available in your country. To locate the support representative for your country, visit the product support Web page on the Grass Valley Web site.

Version 2.3.1 new features and introductions

Version 2.3.1 includes performance improvements and support for all Turbo iDDR models. Features and performance improvements introduced by previous releases are also included in version 2.3.1.

The following features and introductions are new in this release:

- The Turbo iDDR now has more integrated operation functionality with the Grass Valley Indigo AV Mixer. The Indigo AV mixer controls the TURBO iDDR via AMP protocol for clip loading, playback, transport control, and clip queries.

- The following enhancements have been added to the AMP protocol. Refer to the AMP SDK documentation for details.

    - Applications can request and obtain clip thumbnails.

    - Transfers can be performed using the MPEG format, in addition to AVI and GXF.

    - Clips and playlists can be played in Loop mode.

- A software installation program is now available for upgrading Turbo iDDR system software. Refer to "Upgrading to software version 2.3.1" on page 6. This allows you to upgrade software without replacing the entire disk image. However, you can still replace the disk image using the system installer CD as explained in "Restoring the Turbo iDDR disk image" on page 8.

NOTE: Make sure that you keep your current system installer CD in a safe place, so that it is available in the future for system recovery purposes or other events that require you to replace the disk image.

- This version of system software supports Type II motherboards (manufactured by Fujitsu-Siemens) installed in Turbo iDDRs now shipping from the factory. Service replacement motherboards (provided by Grass Valley Support) are also Type II motherboards.

Refer to the *Turbo User Manual* for information on the features. You can access all Turbo iDDR documentation at http://www.thomsongrassvalley.com/docs. Follow links to product documentation for broadcast products servers/media storage.

Operational considerations

Use the following information in your operational planning for the iDDR.

Turbo streaming and GXF file support

Turbo can stream clips to and from any device that supports the SMPTE 360M General Exchange Format (GXF).

GXF streams and file operations do not modify the compression format of the material. You can bring in standard definition MPEG Long GoP 4:2:0 clips up to 15 Mb/s and play them on your Turbo. The same is true for any format your Turbo supports. Refer to the *Turbo Quick Start Guide* for supported file formats.

However, you can store **but not play** GXF material that was recorded in a format that is not supported by Turbo. For example, if a streamed clip was recorded on a PVS 1106 with DVCPRO25 compression and streamed to a Turbo, the clip is stored in that format, but cannot be played. Similarly, clips that exceed the data rate supported on Turbo should not be played, as they may exceed the bandwidth capabilities of your Turbo system. Refer to the *Turbo User Guide* for supported data rates.

Avoid bringing in clips that include ancillary data. These clips include data that the Turbo cannot play or delete.

Playing a clip that is still recording

There is a 5 second minimum record to play time when playing a clip that is still recording. For most operations this is enforced by the Player application. However, do not fast forward to the end of a clip that is still recording. This operation can violate the minimum record to play time.

To play a clip that is still recording, start record, then wait at least 5 seconds before starting playback.

Composite analog video input performance

The iDDR can record signals from most non-timebase corrected signal sources such as color under video playback devices, i.e. VHS or U-Matic VTRs, and low cost cameras. However, for reliable recording performance some devices may require external signal conditioning products, i.e. timebase correction.

Remote control protocol support

You can use remote control devices and automation software developed for the Turbo iDDR that use industry-standard serial protocols. For each supported protocol, the iDDR provides a protocol-specific application. Be sure to contact your 3rd party automation system or software provider to ensure that the iDDR is supported. Contact your Thomson Grass Valley sales representative for a list of companies that provide certified applications for the Turbo iDDR.

Using BVW protocol

To record using BVW protocol, you must manually load a new clip in BVW Recorder before the record channel can respond to the start record command. The BVW Recorder must be in "Local and Protocol control mode" to allow you to create the new clip locally. If the recording is stopped, you must eject the current clip and then create a new clip, since BVW Recorder does not support append record.

In order for clips to be cued to a specific time code under BVW control, the clip must reside in the default bin.

Using USB devices

The USB connectors can be used to connect a USB drive, mouse, keyboard, or other USB device. Do not plug or unplug these devices while the iDDR is being used for critical playout activity.

Do not transfer while recording or playing

Transfer only while record or play operation are not underway. The system resources required for the transfer could disrupt recording or playout.

Playing lists containing GPI output triggers

You can assign GPI output triggers to events and sections in a playlist. The GPI outputs can be used to trigger external equipment when the list plays. Before you can use GPI output triggers in a list, you must assign GPI outputs to the play channel using Configuration Manager. If you want to play a list that was created on another play channel, you must ensure that GPI triggers assigned to the play channels use the same names, otherwise the GPI triggers will not occur.

Virus software support

Thomson Grass Valley does not recommend installing third party software on your iDDR. However, if you must install virus scanning software, configure it for manual virus scan only. Automatic virus scanning could disrupt iDDR operation and should not be used.

Continuous record program length

A continuous recording is stored in the iDDR as a program. When the program is stored, its duration will be 3-6 minutes longer than the continuous record length specified. Take this into consideration when operating the iDDR with the media disks nearly full.

Selecting grayed-out clips

In the AppCenter workstation clips pane, clips are disabled (grayed-out) if the clips are not currently available for use, as in the following examples:

• Clips with a different video standard (NTSC/PAL) than the current system setting are disabled. To use these clips, change the video standard setting.

• If the Recorder application—which records standard definition (SD) only—is currently selected, all high definition (HD) clips are disabled. To select HD clips, first select a Player or Playlist application.

Upgrading to software version 2.3.1

Turbo iDDR system software version 2.3.1 was installed on your new iDDR at the factory. In normal operation, you do not need to reinstall system software.

Perform the following installation procedure if:

• You are updating the iDDR system software.

• You are instructed by Thomson Grass Valley product support to re-install system software.

To install Turbo system software:

1. Download Turbo system software as follows:

   a. On a computer that is connected to the Internet, go to the following URL:
   http://www.thomsongrassvalley.com/downloads
   The Downloads page opens.

   b. On the Downloads page, click **Broadcast Products**.
   A list of broadcast products appears.

   c. From the list of broadcast products, click **Servers/Media Storage**.
   A list of products appears.

   d. From the list of products, click **Turbo**.
   A list of Turbo software versions available for download appears.

   e. From the list of software, select the version to which you are upgrading.

   f. Continue to follow on-screen instructions to download the software package, save it to known location, and complete the process.

2. If you have not already done so, connect keyboard, monitor, and mouse to the iDDR and switch to Workstation mode.

3. Access the Turbo system software package that you downloaded in step 1 and copy it to the Turbo iDDR hard drive. Use a USB drive, CD, network drive, or other method as appropriate for your facility.

4. Uninstall Turbo system software, as follows:

   a. If AppCenter is open, on the AppCenter toolbar select **System**, then choose **Exit to Windows**. AppCenter closes and the Windows desktop appears.

   b. Click **Start | Control Panel | Add or Remove Programs**. The Add or Remove Programs window opens.

   c. Select **C-Vdr** and then click **Remove**. Confirm when prompted. The software uninstalls.

   d. When prompted, restart the iVDR.

5. After startup processes are complete, access the Turbo system software package on the local hard drive and run *setup.exe*. The installation wizard opens.

NOTE: If you did not uninstall Turbo system software, a "…must be uninstalled…" message appears and forces you to close the install wizard without installing software.

6. In the Welcome dialog box, click **Next**, then follow onscreen instructions to install software.

7. After clicking **Finish** to close the install wizard, click **No** when prompted to restart the iDDR.

8. Power cycle the iDDR. This is necessary to update (flash) the codec board.

NOTE: You must do an orderly power cycle to ensure the codec board is updated.

To power cycle the iDDR, do the following:

a. Click **Start | Turn off computer | Turn off**.

b. Wait for the iDDR to power off, then push the standby switch to start up.

The iDDR goes through normal Windows and AppCenter startup processes and AppCenter opens.

9. Wait for the front panel to complete its software update processes. This takes several minutes. On the front panel a "Receiving new software…" message is displayed and the transport control buttons flash in a repeating pattern. When the front panel completes its processes and restarts, the Turbo system software update process is complete.

10. Confirm that the correct software versions are installed as follows:

a. In AppCenter, click **Help | About AppCenter**. The About window opens. Software versions are listed.

b. Verify that the correct versions are installed.

11. Before initiating any media operations, you should additionally run the *checkOpenGop* utility. This utility scans all movies on your iDDR and marks them closed or open GoP, as some previous software versions did not do this.

To run this utility, do the following:

a. If you have not already done so, connect keyboard, monitor, and mouse to the iDDR and switch to Workstation mode.

b. From the Windows taskbar, click **Start | Run**. The Run dialog box opens.

c. Click **Browse** and browse to the utility. You can find the utility at the following location on the iDDR:
C:\profile\checkOpenGop.exe

d. Select *checkOpenGop.exe* and click **Open**. The utility runs and marks all your video for GoP structure.

This concludes the software installation procedure.

Restoring the Turbo iDDR disk image

If you need to restore the Turbo iDDR disk image, use the system installer process, as explained in the following section.

In normal operation there is no need to restore the disk image. To upgrade Turbo iDDR system software, you can do so with the *setup.exe* file, as explained in the previous procedure "Upgrading to software version 2.3.1". However, in some cases, restoring the disk image might be necessary, as in the following examples:

• There is a major system fault that renders the iDDR inoperable

• iDDR system performance is compromised and you want to purge the system of any foreign software or files that could be a problem.

• You are instructed by Grass Valley product support to restore the disk image.

When you use the system installer process, it replaces all the contents of the system drive, including the Windows operating system.

The system installer process runs from the Turbo system installer CD. You received this CD along with your Turbo iDDR when it was shipped from the factory. You might also have a system installer CD that you received as a means to upgrade system software.

Make sure the system installer CD is correct for the type of motherboard in the Turbo iDDR, as explained in the following procedure. Turbo iDDRs shipped prior to January 2007 had a Type I motherboard installed at the factory. Turbo iDDRs shipped in January 2007 or later have a Type II motherboard.

NOTE: The system installer process overwrites all files on the system (C:) drive.

To use the system installer process, do the following:

1. Make sure that you have a correct version of the system installer CD. If you have more than one version that is correct, use the most recent correct version. Determine correct versions as follows:

   • If the Turbo iDDR has a Type I motherboard, you must use a version 2.2.2 or lower system installer CD.

     NOTE: If you own a Turbo iDDR with the Type I motherboard, keep your most recent correct version of the system installer CD in a safe place, so you can use it in the future if needed.

   • If the Turbo iDDR has a Type II motherboard, you must use a version 2.3.1 or higher system installer CD.

2. If you are not sure of the motherboard type, locate the serial number on the rear of the iDDR near the fan, and proceed as follows:

   • If the serial number is a series "BB" or later, the unit has the Type II motherboard. For example, the following serial numbers are of series "BB" and later:

   ```
   CH – 01BBXXXXX              CH – 02BBXXXXX
   CH – 01BCXXXXX              CH – 02BCXXXXX
   CH – 01BDXXXXX              CH – 02BDXXXXX
   CH – 01BEXXXXX              CH – 02BEXXXXX
   ```

   • If the serial number is prior to the "BB" series, and the Turbo iDDR has never had its motherboard replaced, the unit has the Type I motherboard. For example the following serial numbers are prior to the "BB" series:

   ```
   CH – 01AAXXXXX              CH – 02AAXXXXX
   CH – 01ABXXXXX              CH – 02ABXXXXX
   CH – 01ACXXXXX              CH – 02ACXXXXX
   CH – 01BAXXXXX              CH – 02BAXXXXX
   ```

   • If the serial number is prior to the "BB" series and the Turbo iDDR has had its motherboard replaced, determine when you received the replacement motherboard from Grass Valley Service. Motherboards received prior to January 2007 are Type I motherboards. Motherboards received in January 2007 or later are Type II motherboards. If you are not sure, refer to the *Turbo Service and Troubleshooting Guide* dated January 2007 to identify the motherboard.

3. If you have not already done so, connect keyboard, monitor, and mouse to the iDDR.

4. Insert the system installer CD in the iDDR CD drive.

5. Restart the iDDR.

6. During the black screen boot up process, when prompted to start the system installer CD, press the space bar before the five second countdown expires.

   As guided by on-screen messages, wait for the system installer application to open.

7. In the system installer application, select one of the following options:

   • **System Update/Repair** — This overwrites the C: drive, which gives you a fresh Windows operating system along with the iDDR software. When the Update/ Repair process finishes, you must reconfigure any Windows settings, such as networking. Media clips and iDDR configuration files are saved.

   • **Reset to Factory Condition** — This overwrites all data and media files on the iDDR, which includes the C:, D:, and V: drives.

8. A warning message appears that further explains the action for the selected option. Click **Yes** to continue.

9. One or more message boxes appear that report progress. If you selected the Reset option, the system automatically restarts. When the **Success** message box appears,

click **OK** to restart the iDDR.

10. During startup processes, when prompted to start the system installer CD, allow the five second countdown to expire. The iDDR starts up in normal operating mode.

11. Remove the system installer CD from the iDDR CD drive.

12. If necessary, reconfigure Windows settings.

13. If necessary, upgrade system software. For example, if the disk image version of system software is lower than the version at which you were previously running the Turbo iDDR, you will likely want to upgrade the iDDR to its previous version.

14. Before initiating any media operations, you should additionally run the *checkOpenGop* utility. This utility scans all movies on your iDDR and marks them closed or open GoP, as some previous software versions did not do this. You can find the utility at the following location on the iDDR:

    C:\profile\checkOpenGop.exe

    To run this utility, do the following:

    a. From the Windows taskbar, click **Start | Run**. The Run dialog box opens.

    b. Click **Browse** and browse to the utility.

    c. Select *checkOpenGop.exe* and click **Open**. The utility runs and marks all your video for GoP structure.

This concludes the disk image restoration procedure.

Known issues

The following limitations are present in this Turbo iDDR Software 2.3.1 release. If you wish to obtain more information about these limitations, please mention the reference numbers that follow the description of each limitation. These known issues will be resolved the future.

Audio

AC-3 audio sliders are not disabled

Description	For AC-3 audio, the audio gain sliders can be moved. This behavior is incorrect, since the iDDR does not support AC-3 audio gain adjustments. (CR53627)
Workaround	Do not use the audio gain sliders for AC-3 audio.

AC-3 audio causes noisy outputs

Description	When playing back a clip with AC-3 audio, the analog audio outputs are noisy. (CR53617)
Workaround	This is as designed, as the iDDR does not decode AC-3 audio. Use external equipment to decode AC-3 audio.

Recorder

Preview does not load into P2

Description	The Preview feature does not load the clip being recorded into P2 when P1 is not available. (CR53087)
Workaround	Make sure P1 is available when using the Preview feature.

Player

WMV file playout problems

Description	When playing a Windows Media file (WMV), there can be repeated frames and/or missing frames. (CR57411)
Workaround	The problem is due to Windows Media encoder settings. The recommended settings for WMV files are as follows: Video: - Codec: Windows Media Video 9 - Bitrate: 15000000 - Quality: 70 - Size: 100 Audio: - Codec: Windows Media Video 9.1 - Format: 128 kbps, 44kHz, stereo CBR

Playlist

Video glitches in playlists created with AMP applications

Description   In 1080i output timing, if a playlist was created in a third-party application that controls the iDDR through AMP, there can be video glitches at transitions between clips in the playlist. (CR55210)

Workaround   Make your playlist in the native Turbo iDDR playlist application, then control that playlist with the third-party AMP application.

Playlist does not playback correctly after being re-imported

Description   If a saved playlist with mixed resolution/type is exported and then re-imported it can have corrupted video on playout. (CR58461)

Workaround   Exported playlists must contain clips of all the same resolution and type.

Front panel

Transport controls do not work

Description   When in playlist mode, navigation functionality using the transport control combinations (Play+FF, Play+Rew, etc) does not work.

Workaround   Navigate using single transport controls.

Audio level change is not saved

Description   In front panel, when adjusting the audio level of a clip in Player that is still recording, the level change is undone when you select **Save**. This is because the Recorder application still has control of the clip. (CR55720)

Workaround   When adjusting the audio level of clips in Player, do so only on clips that are no longer loaded in Recorder.

AppCenter workstation

Edit menu selections do not work

Description   On the Edit menu, the Cut, Copy, and Paste selections are not implemented. (CR55941)

Workaround   Use keyboard shortcuts or the right-click pop-up menu for editing operations.

Interface response can become faulty

Description   After extended right-click "Send To | Bin" activities in the clips pane, the AppCenter interface can exhibit unpredictable behavior. This is a rare occurrence. Symptoms include the inability to change the currently selected channel by clicking in the channel or clips pane, and no response from keyboard shortcuts. (CR55778)

Workaround   Restart the iDDR to restore normal interface response.

Transfer/Import/Export

Transfer failure not reported on front panel

Description   If you attempt to transfer a continuous record clip while still recording (which is not a supported procedure) on the front panel there is no indication that the transfer has failed. (CR54698)

Workaround   No workaround.

On exporting an AVI to a full disk, Transfer Monitor hangs

Description   When transferring an AVI file to an external disk with the size of the file being larger than the capacity of the disk, the Transfer Monitor progress bar eventually reports 100% and then becomes inoperable. A partially transferred AVI file is created on the destination disk. (CR53019)

Workaround   Abort transfer manually.

Long file name causes failure

Description   Sending a clip with a long file name to WMV fails. (CR57247)

Workaround   Reduce the file path length.

System

USB device not visible when previous drive letter mapped

Description   Under the following conditions, when you connect a USB device to the iDDR, the USB device is not visible in Windows Explorer (CR56575):
1. Connect a USB device. The USB device is visible in Windows Explorer.
2. Disconnect the USB device.
3. Map a network drive to the drive letter previously used by the USB device.
4. Reconnect the USB device. The USB device is not visible in Windows Explorer

Workaround   Disconnect the network drive to see the USB device. To prevent this problem from occurring, map all your network drives consecutively at the top of the drive letter list. This allows USB devices, when connected, to obtain drive letters below those used for network drives.