DICE WINDOWS DRIVER RELEASE NOTES

Requirements:

Operating System:

Windows XP (32-bit) with Service Pack 3 *(see Note 1)*
Windows Vista (32 and 64-bit) with Service Pack 2
Windows 7 (32 and 64-bit) with Service Pack 1
Windows 8 (32 and 64-bit)

Note 1: If you had already installed an S800 1394b FireWire interface in your computer and applied the hotfix for XP Service Pack 2 (http://support.microsoft.com/kb/885222), and then upgraded to XP Service Pack 3, you will need to apply a hotfix from Microsoft. http://support.microsoft.com/kb/955408

Hardware:

Minimum:
Intel or AMD 1.6GHz processor
512MB RAM

Recommended:
Intel Pentium 4 2.8GHz EM64T or better
AMD Athlon 64 XP 3000+ or better
1GB or more RAM

Please also consult your audio applications' requirements.

Version 4.1.0

Issues resolved:

CASE	DESCRIPTION	OS
889	Audio streaming could become distorted when using a FireWire hard drive on a computer using an LSI FW643 OHCI with revision 0x06. Higher	XP/Vista/Win7

	revisions were not affected.	
1027	A workaround has been added to avoid an intermittent BSOD that could occur in Microsoft's new 1394 OHCI bus driver on Windows 7 when freeing isochronous resources.	Win7
1051, 1091	The driver could leak resources when an unexpected error condition occurred.	XP/Vista/Win7
1070, 1102	A device could become unresponsive after sleeping and waking the computer.	XP/Vista/Win7
1071	When configured to use WDM/KS, Sonar X1 would report that the audio engine had stopped when recording.	XP/Vista/Win7
1087	A WDM input or output audio channel could become distorted after a change to the channel's mapping.	XP/Vista/Win7
1092	A rare BSOD could occur when playing WDM 24-bit audio.	XP/Vista/Win7
1093	WDM audio playback could become distorted after leaving the system inactive for awhile.	XP/Vista/Win7
1094	A WDM audio application was able to change the sample rate even though the sample rate was locked.	XP/Vista/Win7
1097	WDM audio could become distorted when a 24-bit format was used.	XP/Vista/Win7
1100, 1113	A new checkbox has been added to the Control Panel which allows user control over whether WDM applications are allowed to change the sample rate on Windows Vista and later. This is for users who primarily use WDM audio applications. Users who use ASIO audio applications should leave this unchecked to prevent an issue where WDM audio could fail to play when an ASIO application is active.	Vista/Win7/Win8
1103	A rare BSOD could occur when waking the computer from sleep.	Win7
1107	When attaching a device for the first time after installing the driver, a delay could occur before the WDM audio and MIDI ports were published.	XP/Vista/Win7
1116	A rare BSOD could occur after connecting a device.	XP/Vista/Win7
1120, 1132	A BSOD could occur if an application was accessing a device while it was being removed.	XP/Vista/Win7
1121	When using stacked devices, after changing the sample rate a slave device's input channels could be incorrectly sample-aligned.	XP/Vista/Win7
1129	A BSOD could occur if a device was already attached to another computer on the FireWire bus.	XP/Vista/Win7

1134	Improved performance when using more than two stacked devices on Windows 7 and later.	Win7/Win8

Version 4.0.0

Issues resolved:

CASE	DESCRIPTION	OS
22	MIDI latency has been improved.	XP/Vista/Win7
277, 1009	MIDI data throughput has been improved.	XP/Vista/Win7
368, 827, 962, 1000	The driver's streaming engine has been rewritten to improve performance, stability, and reduce latency. It is optimized to work on both Microsoft's new and legacy 1394 OHCI bus drivers. ASIO performance when using small buffer sizes is vastly improved.	XP/Vista/Win7
412	The driver's ASIO interface has been refactored to improve performance and compatibility with ASIO host applications.	XP/Vista/Win7
455	The driver's handling of DPC delays has been greatly improved. The driver will also no longer send a kASIOResetRequest event to ASIO host applications when a streaming discontinuity occurs due to a DPC delay.	XP/Vista/Win7
705, 739, 806	Added support for Dynamic Format Change on Windows 7. The sample rate used by WDM audio will now follow the sample rate set in the Control Panel.	XP/Vista/Win7
714	MIDI output is now more accurately aligned with the audio.	XP/Vista/Win7
744	The driver's ASIO interface now supports buffer sizes starting at 32, 64, or 128 (depending on the current sample rate) and increasing by a power-of-two.	XP/Vista/Win7
777	On Windows 7, the WDM audio input's gain was too sensitive and could cause clipping.	Win7
794	The driver's new streaming engine avoids almost all of the performance issues that are present in Microsoft's new 1394 OHCI bus driver in Windows 7.	Win7
805	A rare BSOD could occur when a system would wake from sleep.	XP/Vista/Win7
815	The driver could stop responding after switching to 176.2kHz or 192kHz.	XP

<table>
<tr><td>833</td><td>The driver would incorrectly take a second longer to initially start streaming when a device was first connected.</td><td>XP/Vista/Win7</td></tr>
<tr><td>838, 867, 910, 919, 921, 935</td><td>The WDM audio driver has been rewritten to use a new Windows streaming model in order to improve performance and to take advantage of newer features.</td><td>XP/Vista/Win7</td></tr>
<tr><td>857</td><td>A rare BSOD could occur when a device was attached.</td><td>XP/Vista/Win7</td></tr>
<tr><td>920</td><td>A WDM output's audio could become silent when the Front L or Front R channel was remapped to another channel.</td><td>XP/Vista/Win7</td></tr>
<tr><td>931, 938</td><td>A WDM input or output audio channel could become distorted after a change to the channel's mapping.</td><td>XP/Vista/Win7</td></tr>
<tr><td>934</td><td>Fixed a minor memory leak in the MIDI driver.</td><td>XP/Vista/Win7</td></tr>
<tr><td>940</td><td>The WDM audio input can now be configured as either a mono or stereo source.</td><td>XP/Vista/Win7</td></tr>
<tr><td>990</td><td>The performance of the WDM audio driver has been optimized.</td><td>XP/Vista/Win7</td></tr>
<tr><td>999</td><td>The ASIO driver could be delayed up to 8 seconds in starting up.</td><td>XP/Vista/Win7</td></tr>
<tr><td>1007</td><td>Support for AC3 audio was not fully implemented.</td><td>XP/Vista/Win7</td></tr>
<tr><td>1008</td><td>The Operation Mode settings have been renamed. On both platforms there are four modes available: Low Latency, Normal, and Safe Mode Levels 1 to 2.
<table>
<tr><th>Old Setting</th><th>New Setting</th></tr>
<tr><td>Normal</td><td>Low Latency</td></tr>
<tr><td>Safe Mode Level 1</td><td>Normal</td></tr>
<tr><td>Safe Mode Level 2</td><td>Safe Mode Level 1</td></tr>
<tr><td>Safe Mode Level 3</td><td>Safe Mode Level 2</td></tr>
</table>
On Windows, the Operation Mode setting no longer affects the minimum ASIO buffer size.</td><td>XP/Vista/Win7</td></tr>
<tr><td>1013</td><td>The Control Panel could crash if an exception occurred during the initial connection to the driver.</td><td>XP/Vista/Win7</td></tr>
<tr><td>1017</td><td>The Control Panel could take up to 50 seconds to launch if an exception occurred during the initial connection to the driver.</td><td>XP/Vista/Win7</td></tr>
</table>

1019	The driver's streaming engine would not recover correctly after a large DPC delay (>24ms) resulting in distorted audio.	XP/Vista/Win7
1020	A BSOD could occur when playing or recording WDM audio.	XP/Vista/Win7
1025	The driver was not correctly enabling a workaround that decreases CPU usage on Windows 7.	Win7
1029	The Control Panel's Event Log window is now wider by default, and is now resizable.	XP/Vista/Win7
1033	The ASIO driver now reports the correct ratio of input latency and output latency.	XP/Vista/Win7
1034	When using stacked devices, the driver could send invalid packets for a short duration that would cause the slave devices to take longer to lock.	XP/Vista/Win7
1035	Fixed a minor memory leak in the AC3 encoded audio driver.	XP/Vista/Win7
1038	The Control Panel's DPC graph could be only partially drawn.	XP/Vista/Win7
1039	The Control Panel's DPC tab now indicates that it is not available when there is no device attached.	XP/Vista/Win7
1041	AC3 encoded audio was not being streamed correctly.	XP/Vista/Win7
1042	The Control Panel's DPC tab was not using the correct DPC delay thresholds when recommending an Operation Mode.	XP/Vista/Win7
1043	Improved performance when using stacked devices on Windows 7.	Win7
1049	The Control Panel could crash when moving the mouse wheel over another application's window.	XP/Vista/Win7
1050	The performance of the driver when using stacked devices has been improved.	XP/Vista/Win7
1053, 1059	AC3 parameters are now locked when an ASIO or WDM application is using the driver.	XP/Vista/Win7
1054	A BSOD could occur when detaching a device while an ASIO host application was using it.	XP
1060, 1062	An ASIO host application's audio could become distorted if it was using a large percentage of CPU time to process its audio.	XP/Vista/Win7
1066	WDM audio could stutter when paused in some WDM audio applications.	XP/Vista/Win7
1072	An ASIO host application's audio could become silent after changing the sample rate.	XP/Vista/Win7

Version 3.5.6

Issues resolved:

CASE	DESCRIPTION	OS
914	To work around issues in Pro Tools 9's ASIO host implementation, the driver no longer allows Pro Tools to change the ASIO buffer size; instead the Control Panel must be used. Other ASIO host applications are not restricted.	XP/Vista/Win7

Version 3.5.5

Issues resolved:

CASE	DESCRIPTION	OS
885	A BSOD could occur when the driver unloaded in low memory conditions.	XP/Vista/Win7

Version 3.5.4

Issues resolved:

CASE	DESCRIPTION	OS
799	Optimized the driver's processing of MIDI data.	XP/Vista/Win7
840	Added a partial workaround to minimize the performance issues that are present in Microsoft's new 1394 OHCI bus driver in Windows 7.	Win7
845	Improved how the driver starts isochronous streaming.	XP/Vista/Win7
855	Improved how the driver allocates isochronous bandwidth.	XP/Vista/Win7

Version 3.5.3

Issues resolved:

CASE	DESCRIPTION	OS
512	A rare BSOD could occur when receiving MIDI input data.	XP/Vista/Win7
703	The driver could exhibit audio dropouts and large spikes of CPU usage on some Windows 7 systems.	Win7
726	On Windows 7, the "Safe Mode Level 1 - 3" Operation Modes are now better at allowing the driver to operate on a system with a high DPC latency (at the expense of additional audio latency). The minimum ASIO buffer size has increased when using one of the Safe Modes on Windows 7.	Win7
734	The Control Panel's System tab now reports more details about the system configuration and an OHCI chipset's capabilities.	XP/Vista/Win7
736	A BSOD could occur when changing WDM settings with certain WDM channel mapping configurations.	XP/Vista/Win7
748	A workaround has been added to avoid an intermittent BSOD that could occur in Microsoft's new 1394 OHCI bus driver on Windows 7 64-bit systems with a quad-core processor.	Win7
767	A BSOD could occur because of an error in the driver's WDM channel mapping logic.	XP/Vista/Win7
769	The Control Panel application could sometimes crash when quit.	XP/Vista/Win7
776	A BSOD could occur when attempting to view the WDM Microphone's properties.	XP/Vista/Win7
786	The driver's clock synchronization logic has been improved.	XP/Vista/Win7
791	A rare BSOD could occur when an ASIO host application was opening its connection to the driver.	XP/Vista/Win7

Version 3.5.2

Issues resolved:

CASE	DESCRIPTION	OS
723	WDM audio streaming was non-operational in the 3.5.1.7616 release.	XP/Vista/Win7
724	A rare BSOD could occur when receiving MIDI input data.	XP/Vista/Win7

Version 3.5.1

Issues resolved:

CASE	DESCRIPTION	OS
663	The ASIO driver now reports the correct digital latency on Windows 7.	Win7
716	Improved streaming performance on systems with 4GB or more of RAM installed.	XP/Vista/Win7
717	Improved ASIO performance when using small buffer sizes on Windows XP or Vista.	XP/Vista

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Version 3.5.0

Issues resolved:

CASE	DESCRIPTION	OS
565	The driver has been updated to include support for Windows 7.	Win7
618	The driver's performance on a system with high DPC latencies has been improved.	XP/Vista/Win7
636	On Windows 7 64-bit, Microsoft's new 1394 stack would sometimes fail to deallocate the isochronous bandwidth, requiring a system restart to restore the driver's functionality.	Win7
647, 664	A BSOD could occur on multi-processor/core systems when the audio streaming configuration was changed or when it recovered from a dropout.	XP/Vista/Win7
661	In the Control Panel application's Event Log window, the device lock changed bits were displayed in reverse order.	XP/Vista/Win7

662	On Windows 7, the driver's minimum buffer size was not reported correctly.	Win7
668	An ASIO host application's audio could become distorted after a large DPC latency spike occurred on the system.	XP/Vista/Win7
674	After putting a Windows 7 system to sleep, Microsoft's new 1394 stack was causing the driver to hang when the system was resumed.	Win7
685	When using stacked devices, the order of the ASIO input channels could be flipped depending on the order that the devices were attached.	XP/Vista/Win7
689	ASIO streaming performance on Windows 7 has been improved.	Win7

Version 3.4.2

Issues resolved:

CASE	DESCRIPTION	OS
316, 543	A BSOD could occur on multi-processor/core systems when the audio streaming configuration was changed or when it recovered from a dropout.	XP/Vista
577	A WDM application's audio could glitch or stop after remapping WDM output channels.	Vista
590	The Control Panel's WDM Channel Mapper window's scroll position would reset after each channel assignment.	XP/Vista
598	A rare BSOD could occur during installation during the New Found Hardware Wizard.	XP
608	Changes to the WDM channel mapping would fail on some devices.	XP/Vista
627	Installation would fail on some Vista 64-bit systems, with Windows reporting that the driver was not digitally signed.	Vista

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Version 3.4.1

Issues resolved:

CASE	DESCRIPTION	OS
523	If a device was removed while being used by an ASIO host application and then reattached, the device would not become available until the ASIO host application was quit.	XP/Vista
551	After launching the Control Panel, the Speaker Setup field on the WDM tab would sometimes be blank.	XP/Vista
557	WDM audio could glitch or become distorted after a large DPC latency spike occurred on the system.	Vista
558	With a device that only publishes a single sample rate, the Control Panel's sample rate field would not refresh when the sample rate was changed on the device.	XP/Vista
559	With a device that only publishes a single sample rate, the buffer size would not get set to the minimum when the sample rate was changed on the device.	XP/Vista
560	If there was not enough FireWire bandwidth available to allocate the channels required for two stacked devices at a particular sample rate the driver would disable the second device, but it would not attempt to re-enable the second device if the sample rate was changed.	XP/Vista
562	A rare BSOD could occur when changing the sample rate with two stacked devices.	XP/Vista
567	When using stacked devices, the driver could incorrectly report the lock status of a device after it was re-enabled by the driver.	XP/Vista
569	A BSOD could occur after changing WDM channel mapping during playback.	XP/Vista
570	Changing the WDM channel mapping could result in WDM playback stopping and requiring a reboot to restore WDM audio.	XP/Vista
574	WDM audio could glitch or become distorted when using two stacked devices.	XP/Vista
575	Attaching a second device could result in WDM audio stopping and requiring a reboot to restore WDM audio.	XP/Vista
576	WDM audio would not stream when using two stacked devices if the WDM channels were only mapped to the second device.	XP/Vista
578	The driver's Buffer Size and Operation Mode could not be changed when an ASIO host application was using the driver. It is now possible to change the Buffer Size and Operation Mode when there is only one ASIO host application active and no WDM applications active.	XP/Vista

581	It was not possible to map a WDM channel if the device's channel name was longer than 16 characters.	XP/Vista
587	WDM audio would not stream if only one WDM channel was mapped to an output on Vista.	Vista
588	If two stacked devices both had the same nickname, it was not possible to change which device was the Master.	XP/Vista
594	The ASIO driver now returns the correct minimum allowed buffer size to ASIO host applications based on the current Operation Mode.	XP/Vista

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Version 3.4.0

Issues resolved:

CASE	DESCRIPTION	OS
170, 225, 275, 301, 376, 377, 429, 434, 452, 453, 493	The driver's WDM audio interface is now always presented as 8 in/out channels, regardless of the number of total audio channels available on a device or on a number of stacked devices. An 8 channel interface provides support for Mono to 7.1 Surround configurations for WDM audio applications. This resolves many issues since the WDM Audio model does not handle dynamic configuration changes very well.	XP/Vista
316, 485	When using a Mac with Boot Camp, users should try disabling the KbdMgr.exe process if their computer is experiencing high DPC system latency. The KbdMgr.exe process is known to cause high DPC system latency, leading to audio dropouts and in some cases BSOD's.	XP/Vista
322	The DPC latency checker did not work on Vista 64-bit.	Vista
325	On a 64-bit version of Windows with 4GB or more of RAM installed, the driver's audio streaming would constantly lock and unlock.	XP/Vista
328	A 64-bit ASIO host application, running on Vista 64-bit, that provided a user interface to open the driver's Control Panel would fail to open the driver's Control Panel.	Vista
329	A 32-bit ASIO host application, running on a 64-bit version of Windows, that provided a user interface to open the driver's Control Panel would fail to open the driver's Control Panel.	XP/Vista

357	In the Control Panel's WDM tab, the WDM enable/disable checkbox has been removed.	XP/Vista
369	In the Control Panel's WDM tab, the Speaker Configuration has been removed. The speaker setup should now be configured using Window's Sound Control Panel.	XP/Vista
375	In the Windows Vista Sound Control Panel, some of the speaker configurations weren't available in the device's Speaker Setup window.	Vista
430	A reset button has been added to the WDM Channel Mapper window. This maps the WDM channels to the first device channels.	XP/Vista
438, 448, 462	WDM applications are now limited in their ability to change the sample rate.	XP/Vista
441	If the Control Panel's error log window was open, it would always become the front-most window whenever a new log message was received.	XP/Vista
443	The Control Panel application could crash if the Event Logger window was open while exiting the application.	XP/Vista
461, 479, 480, 481	WDM applications, like Skype, now work correctly at all sample rates when the device is the default audio device for recording and playback.	XP/Vista
468	The default height of the Control Panel window is slightly smaller, and still allows up to 5 devices in the device list before scrolling.	XP/Vista
476	In the Windows Vista Sound Control Panel, the Advanced tab would sometimes not be shown in the device's Properties window.	Vista
483	A BSOD could occur on Vista 64-bit when the system was shutting down.	Vista
488	On rare occasions, an ASIO host could sometimes fail when initializing or resetting its ASIO connection to the driver.	XP/Vista
504	A WDM application's audio would glitch or stop after remapping WDM output channels during playback on Vista.	Vista
515	During device installation, a BSOD could occur if the driver's MIDI interface was accessed before the device installation was completed.	Vista
516, 547	On Vista 64-bit, a rare BSOD could occur when booting the computer with a device attached.	XP/Vista
525	The driver was not recovering from a large spike in the computer's DPC system latency, resulting in no audio.	XP/Vista
538	A BSOD could occur when opening a project in Cubase SX4 with two stacked devices.	XP

544	The driver could hang when a device was removed in a stacked configuration, requiring the PC to be restarted.	XP/Vista
546	A WDM application's audio would play at 2x speed on a device that only supports a 96kHz sample rate.	XP/Vista
550	On Vista 64-bit, installing over an existing driver was not properly uninstalling the old driver.	Vista

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Version 3.3.4

Issues resolved:

CASE	DESCRIPTION	OS
449	The ASIO driver no longer returns an error code when an ASIO host application requests to set the sample rate to the same value as the current sample rate.	XP/Vista
467	When the operation mode is set to Normal, the driver now returns the correct minimum buffer size for the Control Panel's combo box display.	XP/Vista

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Version 3.3.3

Issues resolved:

CASE	DESCRIPTION	OS
48, 283, 361	Each device supported by the driver may now have unique MIDI port names.	XP/Vista
220, 315, 406	The Control Panel's buffer combo box now only shows the buffer sizes that are currently available. The minimum buffer size is dependent on the current sample rate and operation mode.	XP/Vista
309	SONAR 8 would hang for 20 to 30 seconds at the start of recording when configured to use its new WASAPI driver mode.	XP/Vista

341	The Control Panel's WDM channel mapper window would truncate channel names to 32 characters.	XP/Vista
352	The Control Panel would crash if the speaker setup was set to "7.1 home theater speakers" in the Sound and Audio Control Panel.	XP/Vista
366	In a rare case, the Control Panel firmware update could fail and would update the device with an incomplete firmware image.	XP/Vista
374	When a test tone was being played in the Sound and Audio Control Panel, the speaker configuration dialog could not be accessed.	XP/Vista
380	A WDM audio application could force the sample rate to change even though an ASIO application was already active. The driver's parameter locking logic was not correctly preventing this.	XP/Vista
401	The Control Panel would induce high CPU usage when the Bus tab was visible.	XP/Vista
444	After closing a WDM audio application, the driver's parameter locking logic could incorrectly leave the parameters in a locked state.	XP/Vista

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Version 3.3.2

Issues resolved:

CASE	DESCRIPTION	OS
71	Control Panel Look and Feel overhaul, including layout, icons and color schemes. Improved visibility of various items and events for the user. Look and Feel • Flatter look, with concentric rounded-rectangles. • New Control shapes along the lines of the flatter look. • New Device item layout. • Native-looking title bar buttons. • Updated color scheme. Layout • Added Info tab, displaying versions and vendor info.	XP/Vista

	• Reorganized the Bus tab, added more visible alert when lock is lost. • Simplified Device Nickname controls. • The Master Device Unique ID is now shown in a ToolTip when hovering over selected master. • Removed Sample Rate Change Restriction setting. • Moved Operation Mode from Advanced to Bus tab for Windows (matches Mac OS X). • When there is only one Sample Rate or one Sync Source, the GUI controls are made invisible. • Changed alignments and highlighting in some areas to make it easier to find values quickly. Events • Added Parameter Locking support. GUI elements are disabled when Audio clients are active, replaces Sample Rate restriction setting. • Improved error reporting for driver version mismatch, no devices, low resources, etc. When a low resources error occurs on Windows, some text appears explaining that the user may need the 1394b hotfix from Microsoft. • Warning icon over the device shows when an event has happened, info icon stays visible for a while after that, indicating that the device's TootTip will show accumulated recent events. • Added event log window, which appears with shift+click on the active device. This shows all recent events and some status messages. WDM • Renamed the Advanced tab to WDM since it now only has WDM controls. • The WDM Channel Mapper Dialog now responds appropriately to parameter locking. • Removed Direct Out from WDM Out Speaker Configurations. • Removed Input Mapping from WDM Channel Mapper Dialog. Other • Only one instance of the Control Panel is allowed to run.	

Version 3.3.1

Issues resolved:

CASE	DESCRIPTION	OS
289	The second MIDI port on an isochronous stream was not working at 176kHz and 192kHz.	XP/Vista
292	The Control Panel DPC latency checker will now continue to run when switching to another page in the UI.	XP/Vista
298	A BSOD could occur when removing a device.	XP/Vista
302	When the sample rate parameter is locked (more than one ASIO or WDM client is active) the ASIO driver now correctly reports that the only supported sample rate is the current sample rate.	XP/Vista
311	Added support to the ASIO driver's API so that an ASIO host can indicate that it will not attempt to change any parameters and therefore should not affect parameter locking.	XP/Vista

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Version 3.3.0

Issues resolved:

CASE	DESCRIPTION	OS
7, 250, 252, 258, 264	The control panel and driver now disable parameter changes when a parameter change request cannot be honored without disturbing ASIO or WDM applications. The control panel will dynamically grey-out parameters that cannot currently be changed. This has superseded the sample rate change permission feature which has been removed from the control panel and driver.	XP/Vista
238	The original XP SP2 problem with 1394b devices (KB885222) still persists with SP3. Microsoft has recognized this and they are working on an SP3 compatible hotfix for the problem.	XP SP3
244	The installer now also copies the control panel customization file if there is an .defs file provided for this customization.	XP/Vista

253	A Windows catalog file has been added to the distribution and to the installer.	XP/Vista
254, 255	The control panel is now able to show a better fatal device or driver error description.	XP/Vista
268	Improved support for the WASAPI driver mode in Vista.	Vista
282	A rare BSOD could occur when the device's MIDI port configuration changed.	XP/Vista
290	Testing for XP32 SP3 is now part of the standard regression test. This release is also tested with SP2 but future releases will not be fully tested under SP2.	XP SP3

Version 3.2.1

Issues resolved

CASE	DESCRIPTION	OS
23, 217	MIDI dropouts could occur when large amounts of MIDI data was output.	XP/Vista
171	ASIO clients are now allowed to change the buffer size using the ASIO API, but only if there are no other ASIO clients open.	XP/Vista
267	For devices that have multiple MIDI ports, some applications would show duplicate listings of the first MIDI port.	XP

Version 3.2.0

Issues resolved

CASE	DESCRIPTION	OS
10, 195	A BSOD could occur when using the WDM/KS audio interface.	XP/Vista
107	Test scripts have been added to the dice command line binary folder to run automated streaming tests on Windows.	XP/Vista
109	The new JUCE and PAL based Control Panel is now installed by default.	XP/Vista

113	A Control Panel hang was fixed. A deadlock could occur when handling the device lock state callback.	XP/Vista
122	If the buffer size is below the minimum value required for the selected operation mode, the buffer size will now be set to the minimum value required for the selected operation mode.	XP/Vista
123	Preliminary and local builds are now marked to avoid their distribution.	XP/Vista
141	There was a small, constant discrepancy to the latency reported by the ASIO driver.	XP/Vista
147	When using Sony Vegas with ASIO the WDM driver gets in the way when trying to change sample rates. Previously this could result in a BSOD but that has been fixed. The workaround is to either disable WDM in the Device control panel or use Vegas with WDM instead of ASIO.	XP/Vista
153	When the previous master device is removed, the new master device's sync source is now set to Internal.	XP/Vista
154	An attempt to install on Vista 64-bit would fail because of a missing installation helper application - that is now included.	Vista
156	The 64-bit DICE driver is now compatible with 32-bit applications running under Wow64 on a Windows 64-bit OS.	XP/Vista
163	The Windows installer now displays the release notes.	XP/Vista
169	ASIO streaming performance on Vista has been improved.	Vista
173	The new Control Panel checks for atomic delete+program capability of downloaded image data. If the firmware is capable, the explicit delete step is skipped.	XP/Vista
185	The display name of the ASIO driver now starts with "ASIO" to better distinguish between WDM and ASIO drivers in applications showing both in one setup dialog element.	XP/Vista
191	A 32-bit ASIO host was unable to connect to the ASIO driver on a Windows 64-bit OS.	XP/Vista
192	The new JUCE and PAL based Control Panel is registered by the installer as the default ASIO control panel for the DICE ASIO driver.	XP/Vista
200	The ASIO driver could cause problems with multi-processing in host applications.	XP/Vista
209	The installer no longer copies its Uninstall.dll into the system folder. A previous installation will still be removed completely.	XP/Vista
210	A Control Panel application crash was fixed. This was due to an unhandled divide by zero in meter region size calculations.	XP/Vista

Version 3.1.2

Issues resolved

CASE	DESCRIPTION	OS
3, 6, 9, 36	A BSOD could occur when changing the driver configuration: sample rate, channel configuration, WDM speaker configuration, enabling/disabling WDM.	XP/Vista
4	Improved ASIO performance, particularly on multi-core systems.	XP/Vista
5	On rare occasions, ASIO streaming would not start.	XP/Vista
8	On Vista, a BSOD could occur when removing multiple stacked devices at the same time.	Vista
43	A BSOD could occur when assigning WDM channels with a stacked devices configuration.	XP/Vista
49	ASIO/WDM channel ordering could be presented incorrectly in a stacked devices configuration.	XP/Vista
72, 44, 108	A BSOD would occur while changing sample rates from the device using the development CLI (Command Line Interface). The BSOD could also occur during device removal.	XP/Vista
93	A BSOD could occur when changing channel configuration while iTunes was playing.	XP/Vista
101	A bug was introduced in the version 3.1.1 Windows driver installer such that the installer did not correctly remove the previous driver. The result was that after install and reboot the "Found New Hardware" dialog would not appear automatically and the previous driver version would remain installed.	XP/Vista
116	On Vista, the audio input streams could remain unlocked after connecting a device.	Vista
117	Using multiple devices on Vista, the "Found New Hardware" dialog could incorrectly appear indicating a new WDM device when changing the master device.	Vista
118	The driver could hang when a device was removed in a stacked devices configuration.	XP/Vista

120	A BSOD could occur when disconnecting a device.	XP/Vista

Version 3.1.1

Issues resolved

DESCRIPTION	OS
The driver now defaults to using Safe Mode 1 and a buffer size of 512 if no driver settings are found in the registry (fresh installation).	XP/Vista
Selecting a small ASIO buffer size in Cubase may result in a BSOD.	XP/Vista
Fixed a problem with ASIO reset being sent in case of user mode CPU overload. Now the BufferSwitch call is skipped and SamplePosition incremented.	XP/Vista
The driver now reports consistent latencies for a given buffer setting and sample rate. There is still a small discrepancy to the reported latency but it is constant.	XP/Vista
Problem with WDM channel mapping with stacked devices fixed. In some cases the control panel would not allow changes.	XP/Vista
Phase alignment when locking to external clocks has been further improved.	XP/Vista

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Version 3.1.0

Issues resolved

DESCRIPTION	OS
Rare micro alignment errors where multiple isoc streams exhibit different latency. Multiple streams will now be sample accurately aligned. This will also fix issues reported earlier when having multiple ASIO clients open in high channel count configurations (VST plugins).	XP/Vista
Improved phase alignment of output streams in relation to master stream. This will fix problems with locking to external sync where audio might become garbled.	XP/Vista

Version 3.0.1

Issues resolved

DESCRIPTION	OS
Speaker Mapping changes cause system hang if performed in stacked configuration while iTunes is open.	XP/Vista
DTM tests related BSODs.	XP/Vista