

# DICE MAC OS X DRIVER RELEASE NOTES

## Requirements:

### Operating System:

Mac OS X 10.5.8

Mac OS X 10.6.0 or higher (32-bit and 64-bit kernel supported)

Mac OS X 10.7.0 or higher (32-bit and 64-bit kernel supported)

### Hardware:

Minimum:

PowerPC G4 1.25GHz or Intel Core Solo 1.5GHz processor

512MB RAM

Recommended:

PowerPC G5, Intel Core 2 Duo, or Intel Xeon processor

1GB or more RAM

**Please also consult your audio applications' requirements.**

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## Version 3.5.6

### Issues resolved:

CASE	DESCRIPTION	OS
905	A device could sometimes appear in Audio MIDI Setup with 0 input channels and would require a reboot to restore functionality.	10.5.x/10.6.x
843, 911, 922	A device that was detached from the computer could remain listed in Audio MIDI Setup.	10.5.x/10.6.x
915	When loading Pro Tools 9 projects that used different sample rates, the driver would sometimes not switch to the correct sample rate or Pro Tools 9 would complain of a sample rate mismatch.	10.5.x/10.6.x
923	The driver has been upgraded for Mac OS X 10.7 "Lion" compatibility.	10.7.x

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## Version 3.5.5

### Issues resolved:

CASE	DESCRIPTION	OS
876	The Control Panel application could crash at startup if the driver preference file was inaccessible.	10.5.x/10.6.x

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## Version 3.5.4

### Issues resolved:

CASE	DESCRIPTION	OS
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855	Improved how the driver allocates isochronous bandwidth.	10.5.x/10.6.x
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## Version 3.5.3

### Issues resolved:

CASE	DESCRIPTION	OS
746	If a device was attached while certain applications were active (iTunes and applications that use QuickTime, including web browsers), the CPU usage would increase and these applications' audio playback could become distorted.	10.5.x/10.6.x
747	The uninstaller application would not correctly detect and uninstall the driver on a Mac running OS X 10.6 if the driver had been installed before the Mac was upgraded to Mac OS X 10.6.	10.6.x
756	If the user's language was set to a non-English language, the MIDI plugin could crash resulting in OS X's MIDIServer process continuously restarting.	10.5.x/10.6.x
769	The Control Panel application could sometimes crash when quit.	10.5.x/10.6.x
798	Channel names were not displayed in Audio MIDI Setup's speaker configuration window.	10.6.x

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## Version 3.5.2

### Issues resolved:

CASE	DESCRIPTION	OS
721	The driver could fail to load at system bootup with a device attached.	10.5.x/10.6.x

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## Version 3.5.1

### Issues resolved:

CASE	DESCRIPTION	OS
706	The driver would hang when used with a device that used a large channel count and a particular channel configuration.	10.5.x/10.6.x
711	A Kernel Panic could occur in low memory conditions.	10.5.x/10.6.x
713	MIDI output is now more accurately aligned with the audio.	10.5.x/10.6.x
715	The driver will now ignore any devices that are not on the same firewire bus as the master device.	10.5.x/10.6.x

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## Version 3.5.0

### Issues resolved:

<b>CASE</b>	<b>DESCRIPTION</b>	<b>OS</b>
38	Using large Core Audio buffer sizes on PowerPC Macs would often result in audio glitches.	10.5.x
261	The driver's streaming engine has been improved to minimize CPU usage.	10.5.x/10.6.x
450, 637	The driver has been updated to include Mac OS X 10.6 "Snow Leopard" 64-bit driver support.	10.6.x
520	Audio could become silent or distorted if other realtime processes delayed the driver's streaming engine from processing its firewire audio.	10.5.x/10.6.x
539	The driver is now much faster at reconfiguring its streaming engine, for instance after selecting a new sample rate.	10.5.x/10.6.x
612	When loading Cubase projects that used different sample rates, the driver would sometimes not switch to the correct sample rate.	10.5.x/10.6.x
643	After attaching a device for the first time, a device could sometimes appear in Audio MIDI Setup with 0 input channels and 0 output channels and could not be used for audio input or output. The workaround was to toggle the sample rate or clock source to get it to be republished correctly.	10.5.x/10.6.x
649	On rare occasions, the driver could hang when a device was removed.	10.5.x/10.6.x
661	In the Control Panel application's Event Log window, the device lock changed bits were displayed in reverse order.	10.5.x/10.6.x
665	The driver's streaming engine would unnecessarily restart twice when a device's channel configuration would change because of a change to the sample rate.	10.5.x/10.6.x
666	The driver's clock synchronization logic has been improved.	10.5.x/10.6.x
682	A device's nickname could become corrupted when it was shortened.	10.5.x/10.6.x
683, 684	On rare occasions, a device's nickname would not be restored correctly after a system power-cycle.	10.5.x/10.6.x

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## Version 3.4.2

### Issues resolved:

<b>CASE</b>	<b>DESCRIPTION</b>	<b>OS</b>
249	At sample rates of 88.2kHz and higher, MIDI dropouts could occur when large amounts of MIDI data was output.	10.4.11/10.5.x
616	The uninstaller application has been updated to work on Mac OS X 10.6 "Snow Leopard".	10.6.x

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## Version 3.4.1

### Issues resolved:

<b>CASE</b>	<b>DESCRIPTION</b>	<b>OS</b>
573	The driver had a kernel memory leak that would occur whenever streaming was restarted.	10.4.11/10.5.x

580	In a rare situation, changing the sample rate in a Core Audio application could result in no audio being passed until the application's driver connection was reset.	10.4.11/10.5.x
583	The driver would not load on some PowerPC Macs running 10.4.11.	10.4.11

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## Version 3.4.0

### Issues resolved:

CASE	DESCRIPTION	OS
295	The driver could fail to instantiate a device properly after attaching and detaching devices many times.	10.4.11/10.5.2
443	The Control Panel application could crash if the Event Logger window was open while exiting the application.	10.4.11/10.5.2
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.	10.4.11/10.5.2
494	The MIDI driver's input parser has been improved and its memory usage has been reduced.	10.4.11/10.5.2
495	On rare occasions, the MIDI driver would not publish the device's MIDI port when the device was attached.	10.4.11/10.5.2

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## Version 3.3.4

### Issues resolved:

CASE	DESCRIPTION	OS
477	The firmware file info fields were not correctly endian swapped on the Mac PowerPC platform.	10.4.11/10.5.2

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## Version 3.3.3

### Issues resolved:

CASE	DESCRIPTION	OS
48, 144	Each device supported by the driver may now have unique MIDI port names.	10.4.11/10.5.2
347	A crash could occur when the Control Panel was quit.	10.4.11/10.5.2
389	When attempting to change the Clock Source in the Audio MIDI Setup application, the Clock Source would revert back to Internal.	10.4.11/10.5.2
398	The MIDI driver now dynamically enables or disables the MIDI ports when a device is attached or removed.	10.4.11/10.5.2
399	A bus reset would occur when the Control Panel was quit, resulting in an interruption to the audio streaming.	10.4.11/10.5.2

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## Version 3.3.2

### Issues resolved:

CASE	DESCRIPTION	OS
71	<p>Control Panel Look and Feel overhaul, including layout, icons and color schemes. Improved visibility of various items and events for the user.</p> <p>Look and Feel</p> <ul style="list-style-type: none"><li>• Flatter look, with concentric rounded-rectangles.</li><li>• New Control shapes along the lines of the flatter look.</li><li>• New Device item layout.</li><li>• Native-looking title bar buttons.</li><li>• Updated color scheme.</li></ul> <p>Layout</p> <ul style="list-style-type: none"><li>• Added Info tab, displaying versions and vendor info.</li><li>• Reorganized the Bus tab, added more visible alert when lock is lost.</li><li>• Simplified Device Nickname controls.</li><li>• The Master Device Unique ID is now shown in a ToolTip when hovering over selected master.</li><li>• Removed Sample Rate Change Restriction setting.</li><li>• Moved Operation Mode from Advanced to Bus tab for Windows (matches Mac OS X).</li><li>• When there is only one Sample Rate or one Sync Source, the GUI controls are made invisible.</li><li>• Changed alignments and highlighting in some areas to make it easier to find values quickly.</li></ul> <p>Events</p> <ul style="list-style-type: none"><li>• Added Parameter Locking support. GUI elements are disabled when Audio clients are active, replaces Sample Rate restriction setting.</li><li>• 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.</li><li>• 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 ToolTip will show accumulated recent events.</li><li>• Added event log window, which appears with shift+click on the active device. This shows all recent events and some status messages.</li></ul> <p>WDM</p> <ul style="list-style-type: none"><li>• Renamed the Advanced tab to WDM since it now only has WDM controls.</li><li>• The WDM Channel Mapper Dialog now responds appropriately to parameter locking.</li><li>• Removed Direct Out from WDM Out Speaker Configurations.</li><li>• Removed Input Mapping from WDM Channel Mapper Dialog.</li></ul> <p>Other</p>	10.4.11/10.5.2

	<ul style="list-style-type: none"> <li>• Only one instance of the Control Panel is allowed to run.</li> </ul>	
351	Optimized the streaming performance in the driver.	10.4.11/10.5.2

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## Version 3.3.1

### Issues resolved:

CASE	DESCRIPTION	OS
42, 50	In some situations, the displayed sample rate could differ between the Control Panel, a DAW, and Audio MIDI Setup.	10.4.11/10.5.2
219	Changing the sample rate in Cubase could result in no audio being passed until Cubase's driver connection was reset.	10.4.11/10.5.2
289	The second MIDI port on an isochronous stream was not working at 176kHz and 192kHz.	10.4.11/10.5.2
297	Audio playback could become distorted after changing the sample rate in a DAW.	10.4.11/10.5.2
304	The Control Panel's Operation Mode field could incorrectly display "Normal" after making a change to the Sample Rate field.	10.4.11/10.5.2

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## Version 3.3.0

### Issues resolved:

CASE	DESCRIPTION	OS
244	The installer now also copies the control panel customization file if there is an .defs file provided for this customization.	10.4.11/10.5.2
254, 255	The control panel is now able to show a better fatal device or driver error description.	10.4.11/10.5.2
263	The sync source names were not correctly endian swapped on the Mac PowerPC platform.	10.4.11/10.5.2
286	The permission of the persistent storage file generated by a PAL based control panel was user dependent and access could therefore fail when generated by another user.	10.4.11/10.5.2

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## Version 3.2.1

### Issues resolved:

CASE	DESCRIPTION	OS
262	Only the first MIDI port on a device would be available.	10.4.11/10.5.2

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## Version 3.2.0

## Issues resolved:

CASE	DESCRIPTION	OS								
11	A Kernel Panic could occur when unplugging stacked devices.	10.4.11/10.5.2								
25	When the previous master device is removed, the new master device's sync source is now set to Internal.	10.4.11/10.5.2								
37	When changing a device's nickname, it would sometimes not be updated in the UI.	10.4.11/10.5.2								
107	Test scripts have been added to the dice command line binary folder to run automated streaming tests on OS X.	10.4.11/10.5.2								
109	The new JUCE and PAL based Control Panel is now installed by default.	10.4.11/10.5.2								
123	Preliminary and local builds are now marked to avoid their distribution.	10.4.11/10.5.2								
131	The driver will now only send the interface ready notification to the client which is registering itself.	10.4.11/10.5.2								
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.	10.4.11/10.5.2								
199	A Control Panel hang has been fixed. A thread deadlock was possible under certain situations.	10.4.11/10.5.2								
202, 218	A bug in the application driver interface (PAL) has been fixed avoiding a kernel panic "zalloc: \"ipc kmsgs\"", a result of exhausting kernel resources. This could occur after adding or removing devices many times while a control panel application was open.	10.4.11/10.5.2								
203	The operation mode settings available on OS X have been updated to match the settings available on Windows. On both platforms there are four modes available: Normal, and Safe Mode Levels 1 to 3. <table border="1" data-bbox="272 1189 737 1415"><thead><tr><th>Old Setting</th><th>New Setting</th></tr></thead><tbody><tr><td>DAW</td><td>Normal</td></tr><tr><td>Normal</td><td>Safe Mode Level 1</td></tr><tr><td>Slow</td><td>Safe Mode Level 3</td></tr></tbody></table>	Old Setting	New Setting	DAW	Normal	Normal	Safe Mode Level 1	Slow	Safe Mode Level 3	10.4.11/10.5.2
Old Setting	New Setting									
DAW	Normal									
Normal	Safe Mode Level 1									
Slow	Safe Mode Level 3									
210	A Control Panel application crash was fixed. This was due to an unhandled divide by zero in meter region size calculations.	10.4.11/10.5.2								
241	In rare conditions it was possible for an older driver to still be active after installation because the OS X kext cache was not rebuilt.	10.4.11/10.5.2								

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## Version 3.1.2

### Issues resolved:

CASE	DESCRIPTION	OS
12	A rare Kernel Panic could occur while changing the speaker configuration in the Audio MIDI Setup application.	10.4.11/10.5.2
30	Ableton Live (demo) version 7 crash. After quitting Live with the sample rate set to either 176k or 192k, then opening the Dice Control Panel and/or the Audio MIDI Setup application and switching the sample rate to a lower/different sample rate, Ableton Live will	10.4.11/10.5.2

	crash when it is launched again. This has been reported to Ableton, and confirmed as an Ableton issue. It should be resolved in a future release of Ableton.	
31	Using multiple devices, removal of one device could result in iTunes no longer being able to play until all devices were removed or until the computer was restarted.	10.4.11/10.5.2

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## Version 3.1.1

### Issues resolved:

DESCRIPTION	OS
Inconsistent latencies - the latencies will vary when disconnecting and reconnecting the device.	10.4.11/10.5.2
Fixed rare micro alignment errors where multiple isoc streams exhibit different latency. Multiple streams will now be sample accurately aligned.	10.4.11/10.5.2
The driver now defaults to using OP_MODE_SLOW if the driver settings file does not exist (fresh installation).	10.4.11/10.5.2
Persistent storage of driver settings such as operation mode and NickName will now be stored even when changed from PAL based control panel.	10.4.11/10.5.2

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## Version 3.1.0

### Issues resolved:

DESCRIPTION	OS
Driver Installer modified to install without reboot	10.4.11/10.5.2

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## Version 3.0.1

### Issues resolved:

DESCRIPTION	OS
Bug related to notification handling and locking.	10.4.x/10.5.x
System crash related to device arrival/removal.	10.4.x/10.5.x
Protocol fix: driver was writing to improper location at startup.	10.4.x/10.5.x
Phase offset not proper after losing/regaining lock on external sources.	10.4.x/10.5.x
Device Communication Protocol fix.	10.4.x/10.5.x
Driver writing to invalid space (overwriting Nicknames in some devices).	10.4.x/10.5.x
Driver reading extra memory for channel names.	10.4.x/10.5.x
Skype not working on various machines.	10.4.x/10.5.x