



Pulsar DigiTape User Manual



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Introduction

This manual describes the features and operation of the Pulsar DigiTape effect processor. To be sure you understand how to use your plugin and appreciate all its subtleties, please read it completely.

The information contained in this manual is believed to be correct at the time of publication. However, if an error has unfortunately crept into its contents, please let us know.

IMPORTANT: The prolonged use of amplified instruments, speakers or headphones may cause permanent hearing loss. Ensure you monitor your exposure level, and take regular breaks. In case of tinnitus or suspected hearing loss, please consult an ENT specialist.

Welcome

Our experience

Thank you for choosing Pulsar Audio quality!

With more than 15 years' experience in plugin development for the biggest names in the industry, we decided to create Pulsar Audio to push the quality requirements of our products even further.

For each product, our quest for excellence requires us never to rest on our technical achievements, and to expand our knowledge ever further.

Sound and science

Our expertise in audio signal processing, electronics, sound engineering and musical practice and theory guides the design of our plugins. We develop algorithms whose response to dynamics and spectral content serves the musical result. Listening and measurement inform every stage of development.

In addition, our close collaboration with music production professionals requires us to be rigorous in order to produce professional quality tools.

Our user interfaces

The user interface of a plugin is the link between the creative drive and the technical implementation; it must therefore be clear, intuitive, and as pleasant as possible to use. We take great care to create the most beautiful and fluid interfaces possible, with an emphasis on intuitiveness.

A final word

We hope you will enjoy this plugin as much as we enjoyed creating it. Be sure to visit our website www.pulsar.audio and find out about updates, new products, tips and other resources. There, you will also be able to contact us to ask for help or simply to tell us about your experience!

The Pulsar Team

Pulsar DigiTape: the colour of early digital tape effects

During the 2000s, digital treatments inspired by tape became a familiar part of studio production. They could give a track more body, soften transients or subtly change the balance of a mix. Their algorithms had a personality of their own: sometimes quite different from a real tape machine, yet musically valuable in its own right.

Today's tape emulations reproduce analogue machines with greater precision. That progress has not replaced every sonic quality of the early digital treatments. DigiTape celebrates this other interpretation of tape, bringing two complementary approaches together in a free plugin with low CPU consumption.

Contour offers more detailed control over density, transients, and high-frequency saturation and compression. It is particularly useful on buses, complete mixes and mastering chains.

Grain provides more immediate, pronounced saturation for adding character to individual tracks or groups of instruments.

These inspirations have been reworked for a modern workflow: coherent gain staging, Drive compensation, continuous colour and amount controls, and adjustable oversampling. The character of the original treatments at 44.1 kHz served as the sonic reference during development. DigiTape invites you to explore colours ranging from gentle harmonic enrichment to a distinctly saturated texture.

Instance grouping also lets you adjust several DigiTapes together while processing each track separately. This brings back a way of working associated with a console feeding a multitrack tape machine.

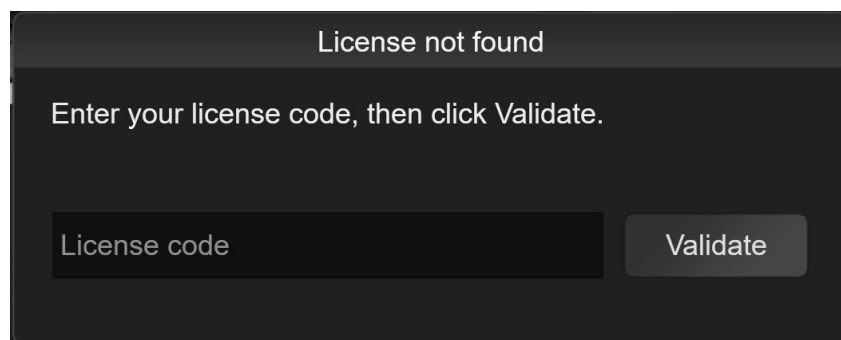
Quick start

Installation

Run the Pulsar DigiTape installer and follow its instructions. On Windows, choose a folder scanned by your DAW for VST2. Then restart your workstation and scan for new plugins if necessary.

Pulsar activation

Pulsar DigiTape uses Pulsar's activation system. Activate the plugin directly in its interface using the code supplied when you obtain your license. This step also applies to a product distributed free of charge. No external license manager is required.



The Pulsar activation window

On first opening, if no valid license is found on the computer, the **License not found** window appears:

- Copy your complete license code into the **License code** field.
- Make sure the computer has an Internet connection, then click **Validate**.
- The window displays **Validating your license...** while checking the license. Wait for the result before attempting again.
- Once the license has been validated and saved, the window closes and processing becomes available.

The license saved on this computer is checked on subsequent openings. Keep your code so you can activate again if needed.

If activation fails

The message identifies the problem. Check the Internet connection if the server is unreachable, or the complete code and correct product if the license is rejected. If saving fails, check write permissions for the product's data folder.

If the activation limit is reached or the problem persists, contact Pulsar support with the exact message, your operating system and your DAW.

Getting started

Insert DigiTape on a track and start with the **Default** preset. It selects Contour, the Gasoline Type, Drive at 3, Brightness in the centre, Mix at 100% and Volume at 0 dB.

- Play a representative passage, preferably with clearly audible transients.
- Gradually increase **Drive**. Listen to the changing texture and the way transients become rounded, until the contribution of the processing is easy to recognise.
- Then slowly lower **Mix** to bring the effect back to the amount you want. In Contour, this control also changes how the saturation stages operate.
- Compare Contour's five **Types**, or switch to **Grain** for a more explicit colour. The Type selector is disabled in Grain.
- Adjust **Brightness** by ear. In Grain, it can compensate for the high-frequency balance changes introduced by Drive.
- Use **Volume** to fine-tune the level, then compare with and without processing using **Power**. Comparing at a similar loudness helps you judge the colour being added.

Start with moderate changes on a complete mix. On an individual track, you can push Drive harder and return to a more discreet result using Mix.

The user interface



DigiTape in Contour mode

The interface has two main areas:

- The toolbar at the top provides presets, Undo/Redo, A/B comparison and the options shared by Pulsar plugins. The **Group** button adds instance grouping.
- The main panel contains the mode buttons, saturation, colour and level controls, and the LED level display.

The handle in the lower-right corner resizes the interface. Knob values appear while you adjust them; click a value to enter it numerically.

Use of parameter controls

The parameter control knobs have several modes of use:

- The normal editing mode (use a classic mouse drag, or the mouse wheel)
- The fine editing mode (hold the Ctrl or Cmd key while dragging or while using the mouse wheel, or drag with the right mouse button)
- The « reset to default » action (double-click, or click while holding the Alt key)
- The « menu » action (right-click, or click while holding the Ctrl key)
- Only for some controls, the alternate edition mode (hold Shift while dragging), which can have various functions, for example to temporarily link two parameters

Parameter locking

It is possible to lock certain parameters, so that they are not changed when loading a preset. For example, one possible use of this feature is to set the input and output gains of a compressor to achieve the desired amount of gain reduction, lock these parameters, and then scroll through the list of factory presets to find the most appropriate tone.



Parameter locking

To lock a control, right-click it with the mouse, or click while holding down the Ctrl key on the keyboard. If the control can be locked, a menu will appear offering to lock it. When a parameter is locked, a small padlock icon appears next to the control.

Control surface and multi-channel parameter edition

If you are using a control surface, such as AVID S1/S6 or Mackie HUI, to control your Pulsar plug-in, and the plug-in allows independent control of L/R or M/S channels:

- When the "link" option for the controls of the two channels is disabled, automation reading/writing and parameter control via the control surface operate as expected, with each control functioning independently.
- When the link option is enabled, only channel A parameters are utilized, corresponding to either the Left or Mid channel based on the selected stereo mode. Adjusting channel A parameters via the control surface or reading automations from channel A automatically synchronizes the parameters of channel B. **Automations for channel B parameters are ignored, as are changes to channel B parameters made via the control surface.** In addition, channel B automations are not recorded.
- **Note :** In Pro Tools, contrary to the information stated above, automations are written to both channels A and B. Even with the link option enabled, playing an automation on channel A does not synchronize channel B. This behavior occurs because, when recording an automation for a linked parameter in Pro Tools, both channels are recorded separately. During playback, the automation tracks for channels A and B are read independently, without interacting with the link feature.

Using the GUI resize control

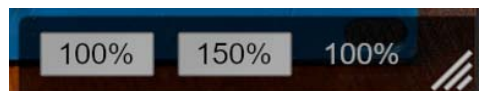
Located at the bottom right of the interface of all Pulsar Audio plugins, this control allows you to resize the plugin's interface to your liking. It comes in the form of three lines, like a classic resizing handle:



Resizing handle

Note that in some DAWs, this resizing can be problematic, depending on how the DAW developer has designed its windowing.

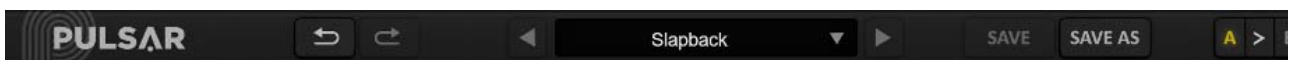
It is also possible, by clicking in the corner, to open a small popup window with buttons offering a choice of fixed size resizing (100% - 150%):



Resizing window

The Toolbar

Located at the top of the plugin interface, it contains all the functions relating to parameters, presets, communication with Pulsar Audio, etc.



The toolbar

Undo / Redo

The two arrow buttons on the left of the toolbar have the function Undo and Redo, i.e. respectively the cancellation and restoration of the last action. All parameter changes and more generally the state of the plugin are stored in a history. You can click on « Undo » at any time to return to the previous state (or to the nth previous state) and on « Redo » to return to the current state.

Note: right-clicking on any of these buttons provides access to the list of stored operations, allowing you to undo or redo multiple actions at once.

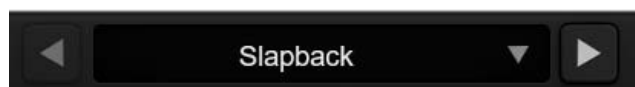


Undo / redo buttons

Preset Selection

The preset selection area, located in the center of the bar, allows you to:

- Read the name of the current preset. If an asterisk appears after the preset name, it means that the state of the plugin no longer matches the saved preset
- Select a preset from the list of available presets, arranged in sub-banks
- Delete the current preset (« Delete Preset » option)
- Rename or move a preset to another sub-bank (« Move / Rename Preset » option)
- Set the current preset as the one that will be loaded by default when creating a new instance of the plugin (« Set This Preset As Default » option)
- Open the presets directory. This can be handy for making backups of your preset files and restoring them. Note that renaming and reorganizing presets must be done from the plugin menu, not by using your system's file explorer.
- Restore factory presets. This will also overwrite any changes you have made to your factory presets
- Quickly navigate between the presets to find inspiration, using the left and right arrows



The preset selection area

Save / Save As

The Save button saves the current preset.

The Save As button saves the current state of the plugin under a new preset name.



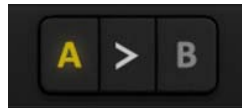
Save and Save As buttons

A / B

This section allows you to compare 2 different states of the plugin, or 2 different presets. Slots A and B, accessible through these 2 buttons, represent 2 completely independent states.

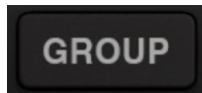
For example, when state A is active, you can load a preset and/or make settings from the interface, then click on button B; then load another preset and/or make other settings; buttons A and B now allow you to quickly switch between the two states and easily compare the 2 presets or sets of settings.

It is also possible to copy the state A to B or vice versa using the > or < buttons located between A and B.



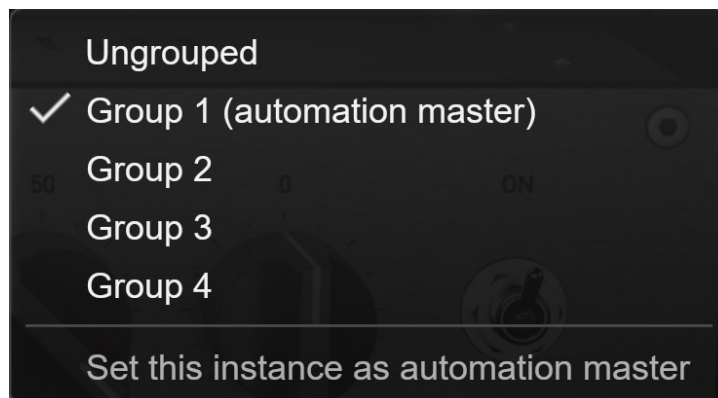
A, B and Copy buttons

Group



The Group button in the preset bar

The Group button links DigiTapes across tracks in your DAW. Mode, Drive, Type, Brightness, Mix, Volume and Power are shared: a change made from any member's interface is applied to the other members.



The Group menu and automation master indication

To create a group, choose **Group 1**, **Group 2**, **Group 3** or **Group 4** from the menu. The first instance supplies the initial settings; later members adopt the group's settings when they join. Select **Ungrouped** to make an instance independent. The four groups let you control different sets of tracks separately.

This is useful when you place DigiTape on several channels and want to change their Drive together. Each track is saturated before summing. The result differs from saturation on the master bus: sources on separate tracks do not generate the cross-track intermodulation products that a shared saturation stage could create. Components within an individual track still interact through that track's own processing.

Choosing the automation master

A non-empty group always has one master instance, identified as **automation master**. Only automation from this instance controls the shared settings. Automation on other members is ignored while they belong to the group; manual edits remain available from every interface.

To transfer this role, open the desired instance's menu and select **Set this instance as automation master**. If the master leaves the group or is removed, another member automatically takes over.

Group membership and the master role are saved in the session, but not in presets or A/B states. Loading a preset or switching between A and B therefore changes the group's sound without changing its membership. Grouping operates between instances sharing the same plugin environment; instances in separate processes or different plugin formats are not linked.

Menu Button

The button located on the far right of the bar encompasses various options.



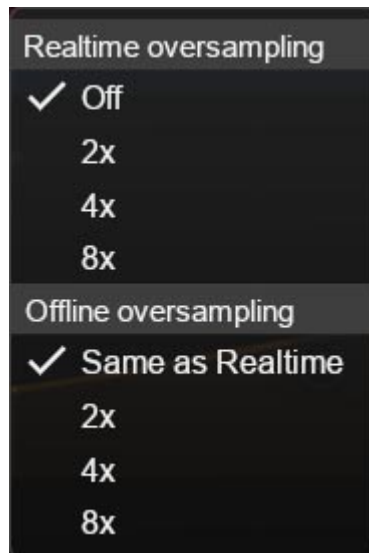
The Menu button

Oversampling settings

The first menu item is used to set the oversampling. Oversampling allows the sound to be processed at a higher sampling rate within the plugin, in return for higher latency and CPU consumption. Oversampling is disabled by default, as all Pulsar Audio products use advanced technologies that allow in most cases to process the sound without oversampling, with no compromise on quality. This makes oversampling useful mainly when you saturate a lot.

The maximum available oversampling rate is not the same in all Pulsar Audio plug-ins and depends on a trade-off between the need for oversampling and the CPU consumption induced by oversampling in this plug-in.

Please note that Pulsar Audio products use very high-quality linear phase upsampling and downsampling filters. This means that the x2 oversampling will generally be of higher quality than the x2 setting in a competitor's product, but will also be more CPU intensive.



Oversampling options

The "Offline oversampling" option allows you to choose an oversampling setting for final rendering (and other non-real-time processing) independent of the setting applied in real time. This enables to reduce the CPU consumption during the use of the plugin, while having the best quality during the final rendering.

Other options

Other functions accessible through this menu are:

- Enabling / disabling the help balloons
- Access to the website
- Access to social media
- Access to communication with technical support
- Link to this user manual

The control panel



The control panel

DigiTape combines two saturation engines with a common set of controls. Their intensity depends on the source level as well as the Drive setting. The same preset may provide subtle enrichment on a quiet recording and more obvious saturation on a loudly recorded track.

Mode: Contour and Grain



The Contour and Grain buttons

The two buttons on the left select the engine. They offer complementary ways of colouring audio, responding differently to dynamics and frequency content. Switching modes preserves the common settings; take time to readjust the amount by ear.

Contour

Contour progressively changes the texture of a sound. Its saturation stages can increase density, round off attacks and enrich the top end without necessarily producing obvious distortion. It is particularly interesting when you want to gently shift a mix's spectral balance or sense of presence.

On a bus or mastering chain, increase Drive until the added colour is clearly recognisable, then lower Mix for a more delicate result. The five Types offer different responses; their contrast is easier to hear on attacks and at higher Drive or Mix settings.

Grain

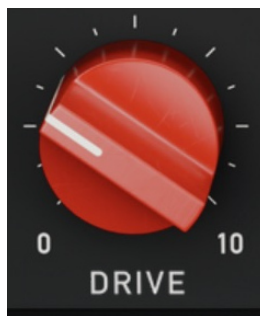


Grain: the Type selector is dimmed

Grain delivers more immediate saturation. It can thicken a bass, bring a vocal forward or give drums a more pronounced texture. The way it processes different spectral regions creates a distinctive balance: increasing Drive changes both the saturation and the prominence of the high frequencies.

Use Brightness to restore the clarity you want after choosing the saturation intensity. Then lower Mix to bring back the original signal, for example to preserve more attack while retaining a strongly coloured layer.

Drive



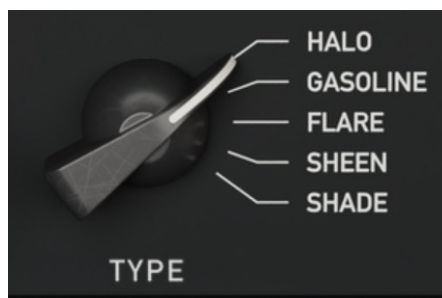
The Drive knob

Drive sets how strongly the signal excites the processing, from 0 to 10. Higher values make the nonlinear effects more apparent: harmonic enrichment, transient shaping and, at stronger settings, distortion. The 0 position is the minimum Drive setting and is not a bypass.

The gain introduced by Drive is compensated by an inverse gain after saturation. This lets you explore colour without increasing the level in the same proportion. Compensation does not guarantee identical perceived loudness: processing changes the waveform and can reduce its peaks. Use Volume to fine-tune the comparison.

In Grain, Drive also changes the balance between the highs and the rest of the signal. A Brightness adjustment may therefore be useful after a substantial Drive change.

Type: Contour's five colours



The Type selector

The Type selector offers five colours of the Contour engine, with different saturation curves, compression responses and spectral balances. Gasoline is selected by default.

- **Halo:** The most neutral of the five Types, adding Contour's colour with a more restrained effect on the signal's balance.
- **Gasoline:** A colour close to Halo, with more weight in the bass and midrange.
- **Flare:** A more assertive compression curve, with a stronger effect on transients and density.
- **Sheen:** A gentler response at low amounts that becomes stronger as Mix increases. At the maximum amount, its character becomes as pronounced as Shade's.
- **Shade:** Even stronger compression than Flare, with colour extending across a wider frequency range. On vocals, it can make sibilance less prominent by increasing the perceived level of the rest of the signal.

Start by comparing them on the same passage at identical Drive and Mix settings. Listen to density, attacks and spectral balance, then adjust Mix: in Contour, this control also contributes to the resulting colour. The result depends on the source and excitation level; a Type that sounds subtle at low levels can become much more pronounced as you push Drive.

In Grain, Type is dimmed and has no effect. Its value is retained when you return to Contour.

Brightness

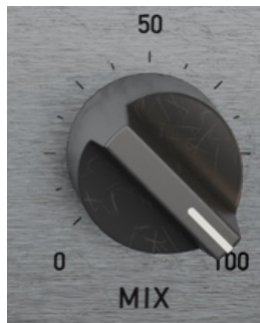


The Brightness knob

Brightness controls the high-frequency colour. Turn towards **Dark** for a darker result, or towards **Bright** for more top end. Its range is -100% to +100%, with 0% at the centre.

This control is part of the saturation engine's operation. Adjust it while listening to cymbals, vocal consonants or instrumental attacks. In Grain, it also compensates for spectral-balance changes caused by Drive. When comparing saturation intensities, rebalance the highs if necessary before choosing your final setting.

Mix



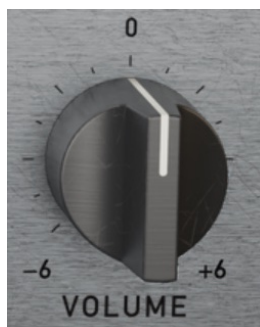
The Mix knob

Mix sets the processing amount from 0% to 100%. At 0%, both engines return the original signal; Volume still applies. At 100%, processing is at its maximum amount.

In Grain, Mix performs a conventional blend between the original and saturated signals. This is useful for applying strong saturation while keeping some of the original dynamics.

In Contour, Mix also affects excitation and interaction between the saturation stages. Lowering Mix therefore does more than turn down an already-processed signal: the colour and response to transients evolve as well. This makes the approach of pushing Drive and then lowering Mix particularly useful in this mode.

Volume



The Volume knob

Volume adjusts the output gain from -6 dB to +6 dB. Its centre position is 0 dB. It operates after processing and Mix, so you can compensate for a level difference without changing saturation intensity.

Strong saturation can reduce peaks and lower the level despite Drive compensation. Adjust Volume to restore a suitable level. This parameter is called **Output Trim** in your DAW's automation list.

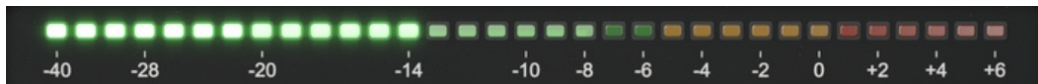
Power



The Power switch

Power enables or disables the complete treatment. In the Off position, the plugin returns the input signal and the LED display goes dark. Use it to compare with and without DigiTape. Its position is saved in the session but is not recalled by presets or A/B states.

The level display



The excitation display and peak hold

The LED row shows excitation at the saturation input, after Drive. It visualises the combined effect of track level and the Drive setting. It is not an output meter: Mix and Volume do not directly change its reading.

The scale runs from -40 to +6 dBFS. Green LEDs cover levels through -6 dBFS, amber LEDs cover -5 to 0 dBFS, and red LEDs indicate positive levels. A peak-hold indicator briefly retains the highest reading. On a stereo track, the higher of the two channels is displayed.

A red LED indicates strong excitation of the processing; by itself, it does not mean the DAW output is clipping. Listen to the result and also watch your workstation's meters. When you change modes, the display follows the transition between engines.

Minimum Configuration

This plugin is compatible with all major sequencers on the market (Cubase, Nuendo, Pro Tools, Logic Pro, FL Studio, Ableton Live, Bitwig, Digital Performer, Studio One, Reaper, Adobe Audition...)

Available formats:

- VST 2.4 (64-bit only)
- VST 3 (64-bit only)
- AAX (64-bit only)
- Audio Unit (64-bit only).



Windows

- CPU: Intel Core i3 / i5 / i7 / Xeon
- Memory: 4 GB RAM / 1 GB free disk space
- Graphics card: OpenGL 2.0 compatible GPU
- Operating system: Windows 10 and higher
- Screen resolution: minimum 1024×768 / recommended 1280×1024 or 1600×1024

MacOS

- CPU: Intel Core i3 / i5 / i7 / Xeon / Apple Silicon (M1, M2, etc.)
- Memory: 4 GB RAM / 1 GB free disk space
- Operating system: 10.13 and higher
- Screen resolution: minimum 1024×768 / recommended 1280×1024 or 1600×1024

License agreement

This license agreement concerns and describes your rights and the conditions under which you may use your Pulsar Audio software. We recommend that you read the entire agreement. By accepting the present agreement or by using Pulsar Audio software, you accept all these conditions.

This license agreement applies to all Pulsar Audio software, plugins and programs that you may use during the evaluation period and/or thereafter subject to the acquisition of a license, for any version, update, or supplement.

License

The software is not sold to you: you are granted a license to use it. You are allowed to install and use the software on as many machines as you wish. You may not rent, lend, or license this software. You may not alter, decompile, disassemble, or reverse engineer this software.

Updates

This license gives you the right to all minor updates (e. g. 1.1 to 1.2), but excludes major versions (e. g. 1.x to 2.x).

License transfer

You may transfer all your rights to use the Software to another person provided that you transfer this Agreement and the Software to that other person; and that the recipient accepts the terms and conditions of this Agreement and any other provisions pursuant to which you have acquired a valid license to use this Software.

Activation

Pulsar Audio will not be held responsible for any failure to activate the protection or licensing system used by the product.

Trial

For products offering a 14-day trial license, this period starts upon activation. After expiration, the plugin can no longer be used and, if no permanent license is acquired, it must be deleted.

Third-Party Software

VST is a registered trademark of Steinberg Media Technologies GmbH. AAX is a registered trademark of Avid Technology, Inc. Audio Units is a registered trademark of Apple Computer, Inc.

Disclaimer

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