

just:in multi air



User Manual
for just:in multi 1.6.188 and later
Mac OS X 10.7, 10.8 and 10.9 only!

TOOLS air

broadcast engineering gmbh

Version:	Date:	Changes:
1.0.0	06.04.2012	Release version of just:in multi v1.6 manual.
1.0.1	29.06.2012	Updated infos on VTR preroll. Minor corrections.
1.0.2	13.08.2012	Updated infos on AJA compatibility.
1.0.3	28.11.2012	Updated System requirements
1.0.4	08.01.2013	Updated iCal (Calendar) infos, System requirements, Supported devices, and Known Issues
1.0.5	21.11.2013	Added Mac OS X 10.9 target

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INTRODUCTION

just:in is an innovative Apple Macintosh-based ingest solution that offers batch, scheduled and crash recording and provides for single or multi-camera video capture in both standard Apple QuickTime MOV and MXF container formats. Unlike other software design philosophies **just:in** multi unites single and multi-channel ingest into one flexible and therefore expandable application.

Supported Formats PAL, NTSC and HD	QuickTime		MXF (D-10, GC, XDCAM, Avid OP-Atom)	
	Supported FPS (vendor and card specific): 23.976, 24, 25, 29.97, 30, 50, 59.94, 60			
	DV, DVCPRO25/50		DV, DVCPRO50	
	DVCPRO HD (720 and 1080)			
	IMX MPEG 30/40/50 (625/50)			
	All Apple ProRes and Avid DNxHD (8-bit) codecs		Avid DNxHD (Avid OP-Atom)	
	Uncompressed SD/HD in either 8- or 10-bit		Uncompressed SD/HD in 8-bit	
VTR Control	Over RS-422			
Supported Capturing Devices (contact Tools on Air for devices not shown in this list)	IEEE 1394	AJA	Blackmagic	Matrox
	Basic support. No further development planned.	KONA 3 KONA 3G KONA LHi KONA LHe **	DeckLink HD Extreme 3 / 3D / Ultrastudio 3D / Express / MiniRecorder (Thunderbolt)	Multi-I/O
		KONA LHe Plus *	DeckLink SDI	
		Io Express	DeckLink Duo	Multi-Ingest
		Io XT * (Thunderbolt)	DeckLink Studio DeckLink Quad	
Corvid 22 Corvid 24	Intensity Pro (1) Intensity Extreme			
Recording Modes	Crash, Batch or Schedule (using iCal (Calendar))			
Other Features	<ul style="list-style-type: none"> ■ HighRes and LowRes (proxy) recording at the same time ■ True multi-card and multi-vendor support (AJA, Blackmagic Design, Matrox) ■ Edit-while-recording support in Final Cut Pro or Adobe® Premiere® Pro CS6 (Mac) with QuickTime MOV and MXF (including crash recording with undefined duration) ■ Split-While-Recording functionality ■ Support for customizable QuickTime and XML-Metadata. ■ * = AJA NDD 10.x drivers only **= version 1.5.174 only! ■ (1) Multiple cards setup not supported 			

Goals of this document

- Installation of **just:in multi** (**Just In QT, Just In Engine QuickTime, Just In Multi GUI**)
- Configuration
- Interface & usage

1.1

INTRODUCTION

THE APPLICATIONS



Just In Engine QuickTime

Just In Engine QuickTime is the engine responsible for ingesting one or more SDI signals attached to an input card or cards (e.g. AJA, BMD, Matrox) and writing these signals into a movie container (currently either QuickTime .MOV or .MXF). A single **Just In Engine** can support up to 8 channels in SD and 4 channels in HD depending on the framerate, TV-norm and codec used, the available Apple Mac Pro hardware and the storage attached to the system. The engine supports crash, batch and scheduled recording modes as well as RS-422 VTR machine control.

Just In Multi



Just In Multi is the interface intended for single or multi-channel ingest. It can control multiple channels coming from multiple instances of **Just In Engine QuickTime** on the network (e.g. two channels from one instance of **Just In Engine QuickTime**, two from another and a fifth channel from a 3rd instance of **Just In Engine QuickTime**). The user interface provides live feedback about the status of the channels (video and audio levels previews) and diagnostics about the systems on which the **Just In Engines** are running (available memory, space on the storage systems and so on). The user can then start and stop recording, build and execute batch lists, control any connected video tape machines (VTR control), view any pre-defined schedules to be recorded and add metadata.

2

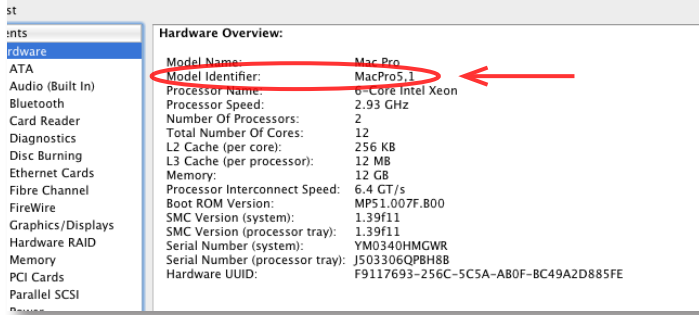
SETUP

2.1

SETUP
REQUIREMENTS

The number of channels that any given machine can record without dropping any frames will depend on the selected codec, the speed of the storage, and the number of CPU cores available. For multi-channel recording on a single machine we therefore recommend the highest specified CPU currently available and a storage device able to read and write at least twice the theoretical data rate required by the specific codec multiplied by the number of channels being recorded.

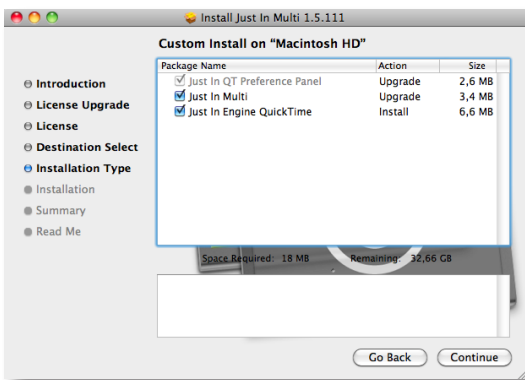
For example, recording high definition 1080i streams in ProRes HQ would require an Apple Mac Pro with the minimum specification as follows:

Macintosh Model	
<p>For PCI Cards: MacPro with Model Identifier “MacPro5,1” (12-core) or higher. Please contact ToolsOnAir for legacy Xserve compatibility as new installations on this End-of-Life platform are not recommended!</p> <p>For Thunderbolt: Mac mini Dual (5,2), Quad-Core (5,3) or Quad-Core (6,2) / iMac Quad-Core i7 (12,1 - 12,2 and 13,1 - 13,2). Currently the max. amount of recordables HD-channels on a Mac mini server (5,3) or a Mac mini i7 2012 (6,2) is 2!</p> <p>If you are having trouble to determine the Model Identifier then click the Apple Menu on the appropriate Mac Pro and select “About This Mac” while pressing the “option/alt” key. The System Profiler shows up and will look similar to this.</p> 	
RAM	At least 8 GB (12 GB recommended).
Operating System	Mac OS X 10.7.5 or later / Mac OS X 10.8.2 or later Administrator account required.
Other	Video input sources like iSight or FaceTime HD Camera are not supported!

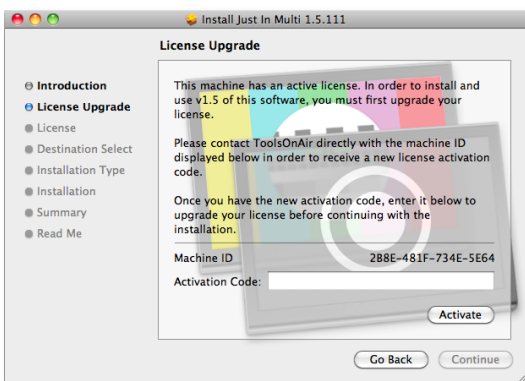
Before you begin installing **just:in multi**, please install your video card driver of choice.

- For **Blackmagic**: Use the latest drivers from the Blackmagic website.
- For **AJA**: Use the latest NDD drivers corresponding to the AJA card you are going to use and download it from the AJA website. Starting with version 1.5.176 of **just:in multi** you will need to download version 10.x. Drivers 9.1 and 10.0.1 are only compatible with **just:in multi** version 1.5.174. Version 1.6 of **just:in multi** runs on AJA NDD 10.x drivers only!
- For **Matrox**: Use the latest drivers for the Multi-Ingest or Multi-I/O product line.

Double click on the **Just In Multi 1.6** installer and click **Continue**.



In the custom install window make sure that all options are selected as shown in the screenshot. Click **Continue** and **Install** on the next screens. In order to complete the installation click on **Close** on the last screen.



Please note: In case of a previous activation of any version prior to version 1.5 or 1.6 you will need to enter a new activation code. Please contact ToolsOnAir to receive your updated activation code.

After installation the application parts are located at:

- **Just In Multi.app**: /Applications/Just In/
- **Just in Engine QuickTime.app**: /Applications/Just In/
- **TOA System Profiler.app**: /Applications/Just In/
- **Just In QT.prefPane**: /Library/PreferencePanes/
- **Tools On Air Preferences.prefPane** (starting with version 1.6.185): /Library/PreferencePanes/



Note for AJA KONA Users

- **just:in** multi 1.6 has been designed to take care of all sort of internal cabling between the KONA cards and **just:in**, so that the user doesn't necessarily have to configure the settings through the AJA Control Panel. For best audio performance use the option "**Line In**" in **System Preferences -> Hardware -> Sound -> Input**. Changing this setting to "AJA Kona (name of card)" might cause recordings with asynchronous audio!
- **just:in** multi 1.6 has been designed to take care of all sort of signal handling between the KONA cards and **just:in**. If the video card hardware you want to use to capture the incoming video signal provides a switchable reference signal input (commonly known as Ref In), you should attach a stable and continuous reference signal to that input and enable the "**Ref In**" option in the "**AJA Control Panel**" software provided by AJA. This implicates of course that the video source you want to capture needs to be synchronized to the same reference signal as well! Failing to provide a continuously stable signal, during a capture process could interrupt your ingest process or harm the file saved to disk by making them out-of-sync or even unusable at all. In order to stabilize the signal in advance, i.e. before it's sent to the video card input, you can use Audio/Video Frame Synchronizers from the **AJA FS** family of products.
- Starting with version 1.5.170 **just:in** multi will feature a dedicated visual information for Reference signal availability in combination with an AJA card.
- If you need to use driver versions 9.1 or 10.0.1 you will need to use version 1.5.174 of **just:in** multi. This is due to changes to the AJA SDK.
- Starting with **just:in** multi version 1.5.176 it will only support AJA cards with driver version 10.x. This is due to changes to the AJA SDK.
- Version 1.6 of **just:in** multi will support AJA NDD drivers 10.x only!
- AJA driver versions 10.3.2 and 10.3.3 will run with **just:in** multi 1.6.186 only!
- AJA driver versions 10.4.x will run with **just:in** multi 1.6.188 and later only!



Note for Matrox Multi (Ingest and I/O) Users

- Please make sure to feed your Matrox Multi video card with an SDI signal on each channel, that you will be using, before starting the **Just In QuickTime** engine.
- The Matrox Multi features only ONE RS-422 port. Therefore even if you apply a RS-422 preset to more than one channels, only the first channel will be getting timecode information from the deck and be able to control it.



Note for Blackmagic Decklink Duo Users

- We do NOT recommend the use of 2 DeckLink Duo card to achieve a 4 channel ingest station due to extended thermic problems and reported frame loss issues. Please use a DeckLink Quad card instead which is an approved setup!

3

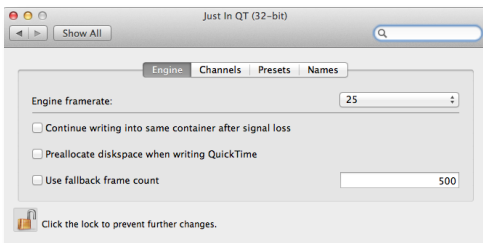
CONFIGURATION

3.1

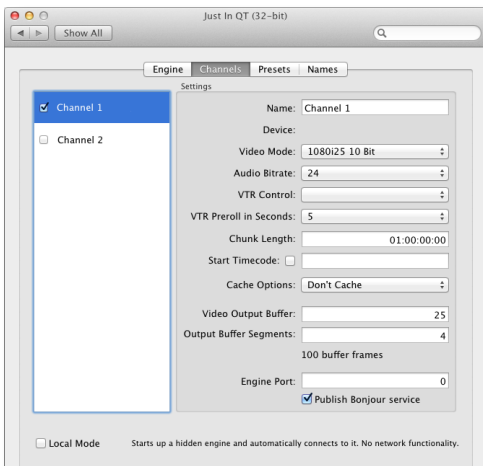
CONFIGURATION
ENGINE

Open the **System Preferences** and select the **Just In QT** preference pane under **Other**. Before you can continue, please authenticate yourself by clicking on the **lock** icon and entering the administrative credentials. In the **Just In QT** preference pane you will see five tabs.

- Under **Engine** select the desired framerate (23.976, 24, 25, 29.97, 30, 50, 59.94 or 60).
- Check “**Continue writing into same container after signal loss**” if you would like to keep the container opened during a signal loss and have **just:in multi** resume the recording into the same container as soon as a signal is fed again. If not checked and in the event of a signal loss, **just:in multi** will stop recording, close the container and resume recording into a new file as soon as signal is fed again. This applies to both QuickTime and MXF containers in **Crash** mode only.
- Check “**Preallocate disk space when writing QuickTime**” if you want **just:in multi** to preallocate disk space in order to prevent file fragmentation (extends). The amount of allocation needed is automatically calculated by **just:in multi** according to the capture preset (codec) selected.
- Check “**Use fallback frame count**” if you want to set a given amount of frames that should be buffered before switching to the fallback destination set in the **Just In QT** preference panel. If this limit has been reached, **just:in multi** will fallback onto the fallback storage.

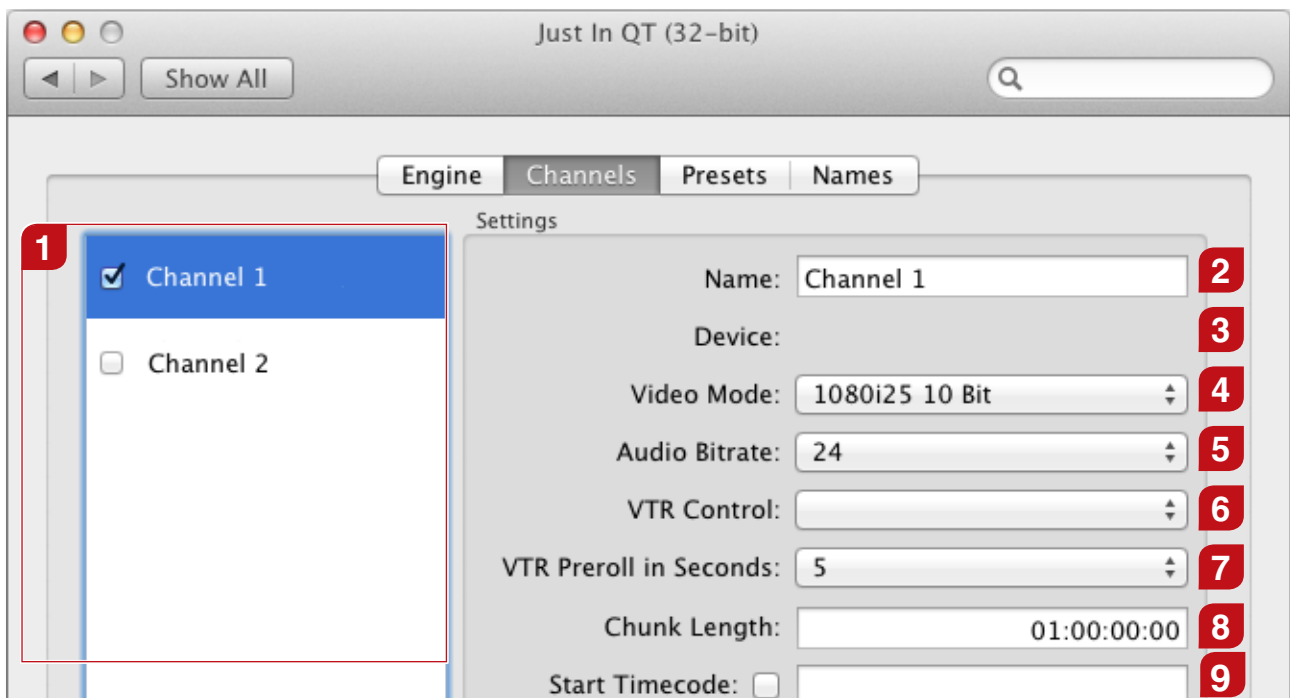


3.2

CONFIGURATION
CHANNELS

- Under **Channels** select the available channels that you would like to use by clicking on the appropriate **checkbox** and select the appropriate settings for the channel. The available video mode settings for the previously selected framerate will be displayed automatically.
- Choose **Publish Bonjour service** if you want to use Bonjour for network discovery. In case that Bonjour cannot be routed in your network, check **Local Mode** to run a network agnostic version. If you plan to re-use Bonjour again later in time, then make sure to enter “0” as the port number. Please consult your network administrator on port availability.

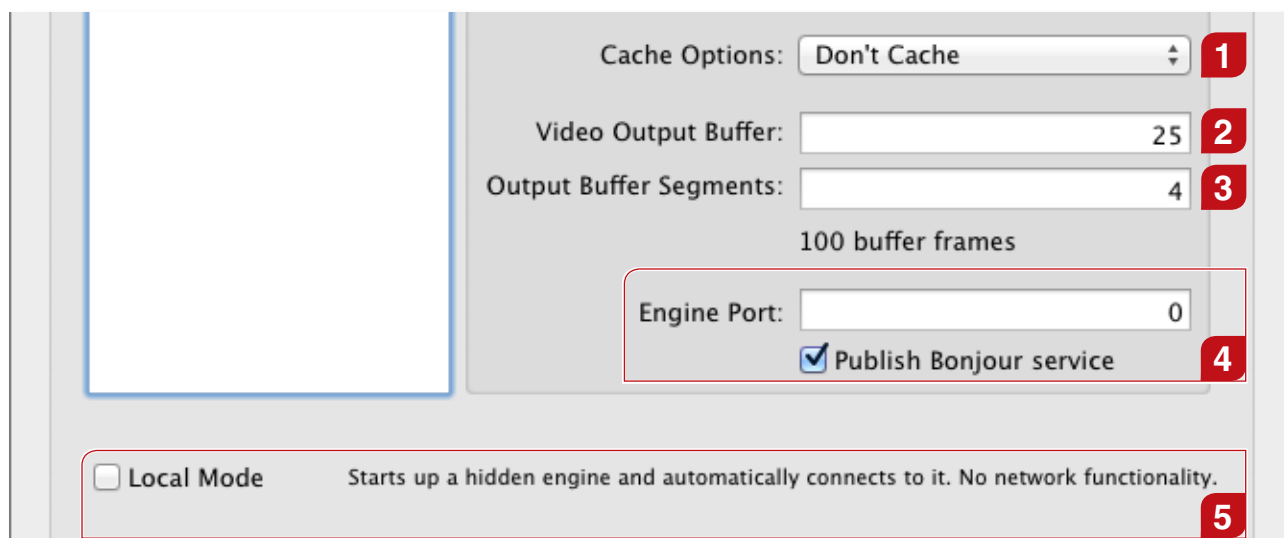
On the left side you can see all the video capture devices found by the engine, as well as the names given to those devices. Please select a device to configure it.



- 1** **Capture Devices:** Lists all video capture devices found by the engine.
- 2** **Name:** Define a channel name.
- 3** **Device:** Shows the manufacturer. Intentionally left blank.
- 4** **Video Mode:** Configure the video device. The available video mode settings for the previously selected engine framerate will be displayed automatically.
- 5** **Audio Bitrate:** native 24-bit for AJA and Matrox Multi-In or Multi I/O cards, selectable 16- or 24-bit for Blackmagic Design cards.
- 6** **VTR Control:** Select the connection you want to use to control your VTR.
- 7** **VTR Preroll in Seconds:** Set the desired VTR preroll value in seconds (1-10).
- 8** **Chunk Length:** The Chunk Length defines the maximum length of the container. If the recording does not reach the entered Chunk Length, the clips will be automatically truncated into the expected recorded length. If the recording exceeds the entered Chunk Length a new recording, generating a new clip, will automatically be started. When recording in crash recording mode, clips will be added after the maximum record length was reached. It is not required to enable this feature separately as it is enabled by default.
- 9** **Start Timecode:** By selecting this option and entering the appropriate timecode information, every new clip will start/will record with the given timecode preset.

Continued on next page.

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1

Cache Options: Normally files are written to disk in a stream (no caching, default). You can ask the HDD-Controller to cache data in order to flush them later to disk to improve write performance. Change this value to “**Cache**” if you experience low write performance, otherwise keep the default “**Don't Cache**” setting.

2

Video Output Buffer: Number of A/V frames to flush to the storage system at once. If you want to flush once a second, just enter your video framerate.

3

Output Buffer Segments: Number of buffer segments. The number of segments multiplied by the storage flush size is the total buffer size. Be careful when using that feature, as you can run out of RAM. It is recommended not to exceed a total buffer size of 500.

4

Engine Port: when using “**Publish Bonjour service**” it is “**0**” by default. Please enter a dedicated port number, if you want a channel to be accessed over IP (see also pages 14-15 of this manual for further explanations). Consult your network administrator for port availability. When selecting “**Local Mode**” it will default to port number **65010** and on.

5

Local Mode: This mode allows to run a network agnostic version whenever engine and GUI are on the same machine. Choose “**Local Mode**” and run **Just In Multi**. It will both automatically start the engine process and connect to the channels selected in the **Just In QT** preference pane.



Note on Xsan support

- Version 1.6 of **just:in multi** highly improves the writing frequency/load behavior on Xsan and other similar storage systems. This is done by the possibility to specify the frames per flush and storage buffer size. The frames per flush value defines after how many frames the chunk will be written to disk, the storage buffer size defines how many chunks are possible. The total size of the buffer is calculated by multiplying these two values (see **Video Output Buffer** and **Output Buffer Segments** settings on this page).



Important note on codecs availability and deployment on Mac OS X

- Due to licensing restrictions, we're not allowed to ship any Apple codecs along with our products. In order to obtain the appropriate professional Apple codecs (ProRes, IMX etc.) you need to have an already installed version of either Final Cut Studio 3 or Final Cut Pro X on the machine used for either ingest or playout.
- The professional codecs are also available via a Software Update upon a new installation of Final Cut Pro X or as an update installer under the following URL: <http://support.apple.com/kb/DL1396>. Please check regularly for new updates on Apple's support site or via the Software Update mechanism built into Mac OS X. Please note that this update installer will check for an already installed version of Final Cut Pro (7 or X)!
- The same applies to other codec vendors or readers: if you plan to either record or playout MXF files, please contact MXF4mac for licensing information under <http://www.mxf4mac.com>.
- If you plan to either record or playout DNxHD encoded files you need to install the Avid for QuickTime codecs. As of this writing actual Avid QuickTime codecs can be downloaded under the following URL: http://avid.force.com/pkb/articles/en_US/download/Avid-Codecs-LE-2-3-9?popup=true&NewLang=en&DocType=1450&q=Avid%20QuickTime%20codec&site=kbase&filter=0&subfilters=&ProductCategory=

PRESETS: CAPTURE PRESET

A capture preset consists of the following options: **Timecode Source**, **TV Norm**, **Container**, **Aspect Ratio**, **Codec** and **Audio Channels**. Once you have defined your preset of choice click **Save** and enter a descriptive name for it. Make sure that you save this preset into **/Library/Application Support/ToolsOnAir/Just In**. Before using **just:in multi** for the first time you will need to create a capture preset. To do this press the **Preset** pop-up and select **New...** When you're done selecting the options, click on the save button and you will be prompted to enter a preset name. **Do not use one or more of the following characters: / @ : | \ < >**. To speed up the process you can also duplicate an existing preset and change it according to your needs.



Preset

The name of the capture preset.

Timecode Source

Timecode sources can be Computer Time, VTR (over RS-422 or FireWire -> deprecated), LTC over Audio, Miranda Little Red LTC, Capture card LTC or SDI Embedded (best choice).

TV Norm

Set a TV norm here as required (PAL, NTSC, HD).

Container

Choose between either QuickTime or MXF. For MXF ingest other than Avid OP-Atom MXF please see the note in Chapter 3.7 with regard to the MXF activation steps.

Aspect Ratio

Configures the aspect ratio (4:3 or 16:9).

Codec

Choose from a list of available codecs for the selected container (QuickTime or MXF).

Audio Channels

Select the number of audio channels and the audio track alignment (Mono or Stereo) you would like to capture. If you're using MXF as a container you will not be able to choose between Mono or Stereo alignment. They will all default to Mono.

PRESETS: DESTINATION PRESET

When using **just:in multi** for the first time you will need to create a destination preset. To do this please select a path for each file you want to save and hit **Save**. You will then be prompted to enter a preset name. A destination preset consists of the following options:

Preset

The name of the destination preset.

Path / Proxy Path

Enter the path where you want to store the HiRes and Proxy movies respectively (please remember to select the checkbox “Proxy” in the **Just In Multi** GUI).

Reference Movie Path

Enter the path where you want to store the reference movies.

Path fallback

Enter the alternative path where you want to store the Hi-Res movies in case something happens with the primary storage.

Proxy Path fallback (disabled in first drop of v1.6)

Enter the alternative path where you want to store the proxy movies in case something happens with the primary storage.

About Fallback destinations: **just:in multi** features fallback destinations (Hi-Res, *Proxy* and XML files) for out-of-storage, network connection loss or even power outage scenarios on the storage side. **just:in multi** also ensures that you will still have your recordings available for later use, as long as a power outage didn’t affect any hardware components or caused any serious file system corruptions. In all scenarios **just:in multi** will try to keep its frame accuracy even while switching to another volume. The Fallback Destination mechanism will only work when a Fallback Destination Path has been entered in the Destination Presets section of the **Just In QT** preference pane.

Attention: due to technical reasons the Fallback support for proxies has been disabled in v.1.6. We are working on a stable fix for a future version of **just:in multi**!



Attention

Please make sure that you save both capture and destination presets into **/Library/Application Support/ToolsOnAir/Just In**



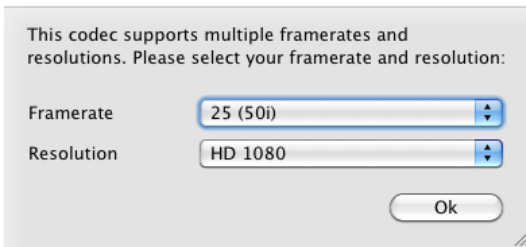
Note

- If you choose a different destination path for the HiRes and the Proxy, the resulting clip name will be the same. Otherwise “_PROXY” will be automatically added to the clip name.

3.5

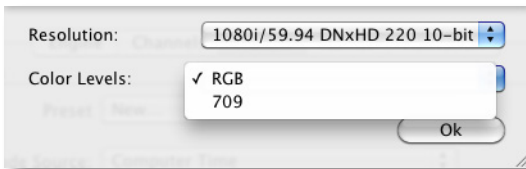
CONFIGURATION

PRESETS: APPLE PRORES 422, PRORES 4444 AND AVID DNxHD



Apple ProRes 422 or ProRes 4444

When using the Apple ProRes 422 or ProRes 4444 codec you will be prompted to select a framerate and resolution.



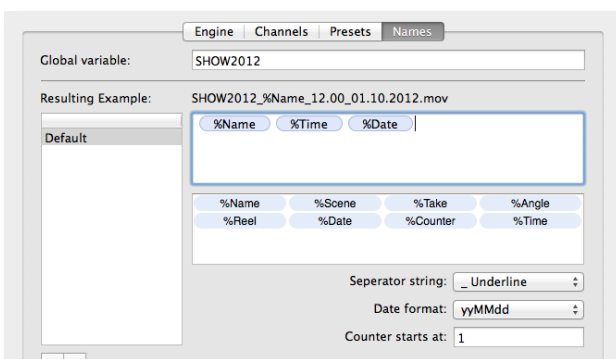
Avid DNxHD (8-bit)

When using the Avid DNxHD codec, you will be prompted to select a resolution and the appropriate Color Level (RGB or 709). Please make sure that you're using a recommended machine (see page 3), use a storage system with enough capacity and bandwidth and select an 8-bit video mode!

3.6

CONFIGURATION

NAMES



Naming Presets

Under Names you can define the naming conventions of your clips. You can add your own variables by entering the “%” prefix followed by the wanted naming expression as well as static text expressions (without the “%” prefix). The clips will be named accordingly. The customized “%” variables will be displayed as additional fields in **Just In Multi** in the **Clip** section.



Attention

- Naming presets are only visible on the machine on which they were created!
- The naming preset database is locally stored in the file:
/Library/Application Support/ToolsOnAir/Just In/nameconventions.db

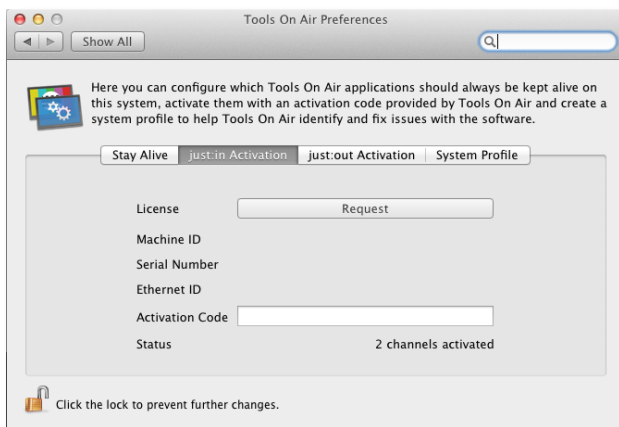
3.7

CONFIGURATION ACTIVATION



Note

- Please note that **just:in** multi will also work in full-featured mode without an activation key. You will then see a flashing logo watermark every four seconds.



just:in Activation panel

just:in can be activated by clicking on the **just:in** Activation tab of the **Tools On Air** Preference Pane (System Preferences).

Machine ID

The machine ID will be automatically generated by **just:in** and is needed to activate any number of ingest channels controlled by the engine in either demo or permanent activation mode (intentionally left blank on screenshot).

Key

After receiving the key from ToolsOnAir insert it into the **Activation Code** field. The activation will happen upon entry.



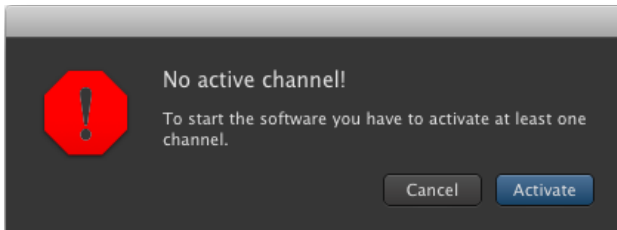
Note

- **just:in** multi has the ability to ingest into an MXF GC, D-10 or XDCAM (PAL) container already built-in. Because of license agreement contracts you will have to contact MXF4mac (licensing@mxf4mac.com) though, in order to receive a free of charge license to use their MXF generating technology in combination with **just:in** multi! Just take a screenshot of the **Activation** tab and send it to MXF4mac. They will be more than happy to issue you a license file promptly.
- **just:in** multi can ingest into an Avid OP-Atom MXF container right away without a dedicated license!

4

USING THE APPLICATION

Once you are done with the configuration of the presets, close the **Just In QT** preference pane, navigate to **/Applications/Just In** and double-click on **Just In Engine QuickTime**. The engine application will start up and display information about each channel that has been selected in the **Just In QT** preference pane. Congratulations! You are only a few steps away from your first recording!

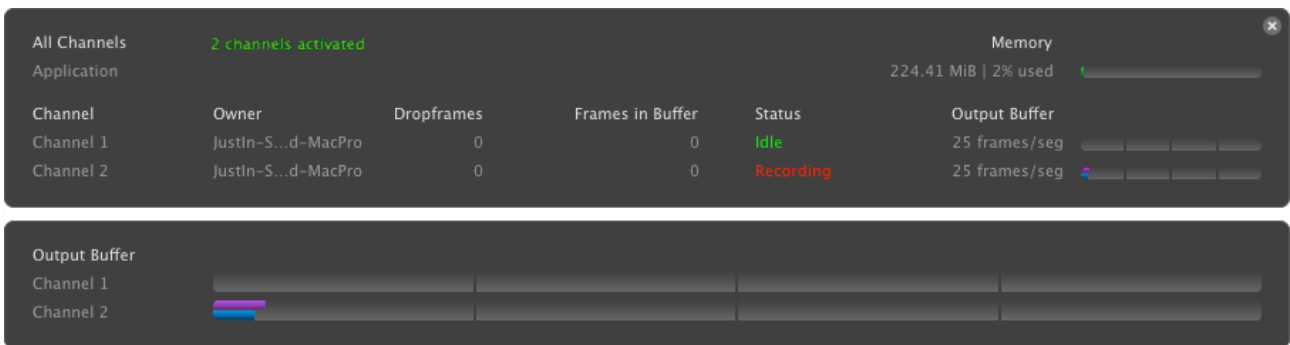


If there is no active channel this message will show up after launching **Just In Engine QuickTime**.

After pressing **Activate** the application will quit and the **Just In QT** preference pane appears.

Please read chapter 3 in order to properly setup **just:in multi**.

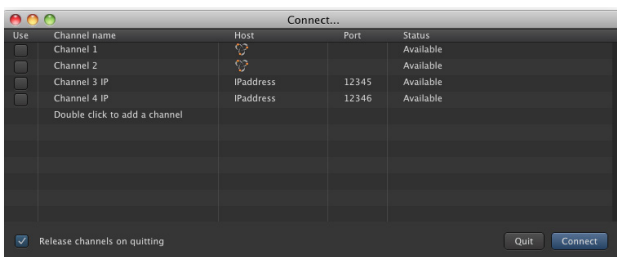
If everything has been configure properly, the **Just In Engine QuickTime** diagnostics window displays the number of available channels, as well as the owner of the channel and information about activation (activated vs. trial mode).



Arranging the Just In Engine QuickTime window to be in front of others

If you want to arrange the **Just In Engine QuickTime** diagnostics window in front of others, then select the option **“Always on top”** from the **Window Menu** of **Just In Engine QuickTime**.

Connecting to channels via Bonjour or over IP

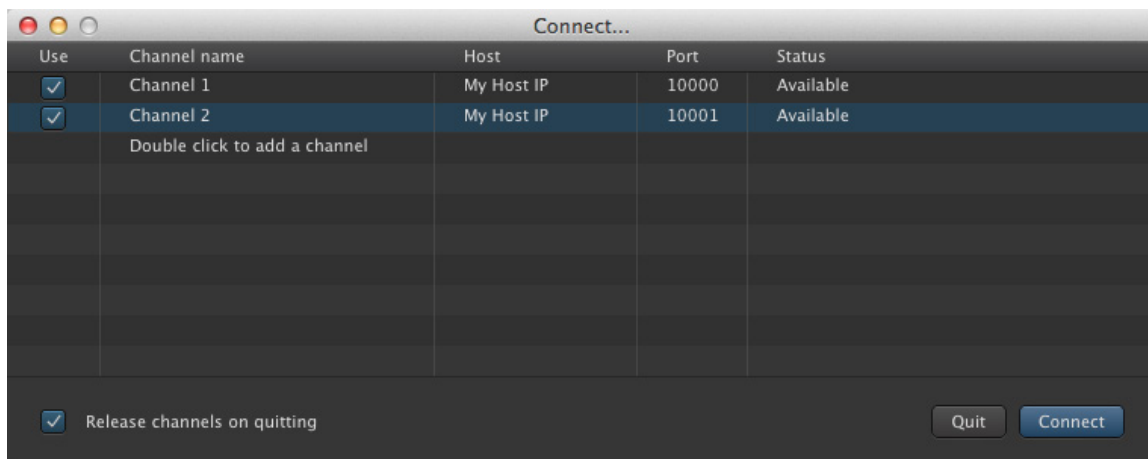


Start **Just In Multi** and select the channel(s) (Shift-Click a checkbox to select all available channels) you wish to control and record on. Activate **“Release channels on quitting”**, if you want that **Just In Multi** releases the selected channels upon quitting. Press **“Connect”** to open the user interface.

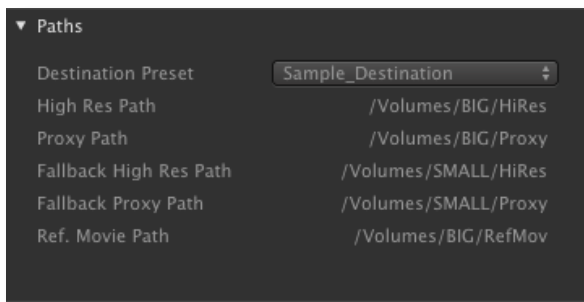
Engine-user interface interconnection using dedicated IP addresses

You can connect to your channel either via **Bonjour** (automatic discovery) or **IP address** (manual entry). The port number must match the one entered for each channel in the **Just In QT** preference pane (see Page 8). In order to connect to a channel over IP double-click on the text “**Double click to add a channel**” and enter your preferred **Channel name**, **Host IP address** and **Port** number.

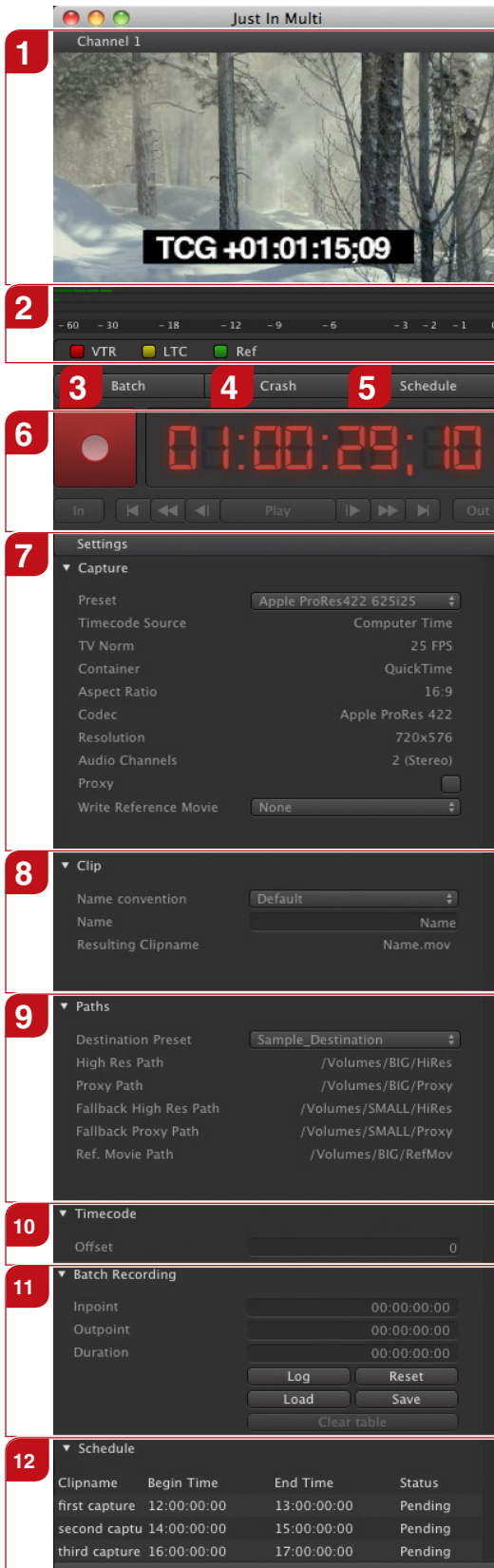
Don't forget to click on the checkbox **Use** to connect to the appropriate channel. You can sort by channel name(s) by clicking on the column header “**Channel Name**”.



You are now ready to proceed with your first recording. Select the appropriate capture and destination presets, then press the **Record** button. You will be recording in **Crash mode**.



Please read on to the next chapter explaining the detailed usage of the **Just In Multi** user interface.



1

Preview

Shows the video input.

2

Audio Levels + Reference

Represents the audio levels and indicates the presence of VTR, Ref. (AJA only) and LTC over audio signals.

3

Batch Digitize

Press this button to enter batch mode.

4

Crash Recording

Press this button to enter crash mode.

5

Scheduled Recording

Press this button to enter scheduled mode (Calendar events, see also chapter 6.4).

6

Record & VTR Control

Click on the timecode display to switch from timecode information to recording length.

7

Capture Settings

Select a previously defined capture preset from the dropdown-list before recording as well as the reference movie format if needed.

8

Clip Properties

Used to define the naming conventions and the resulting clip name.

9

Destination Paths

Select a previously defined destination preset from the dropdown-list before recording.

10

Timecode

If desired define an offset for the timecode here.

11

Batch Recording

Shows batch settings and a list of queued batch jobs. Only active and visible in batch mode.

12

Scheduled RecordingShows a list of the upcoming 10 events in the next 24 hours. Only visible in **Schedule** mode.

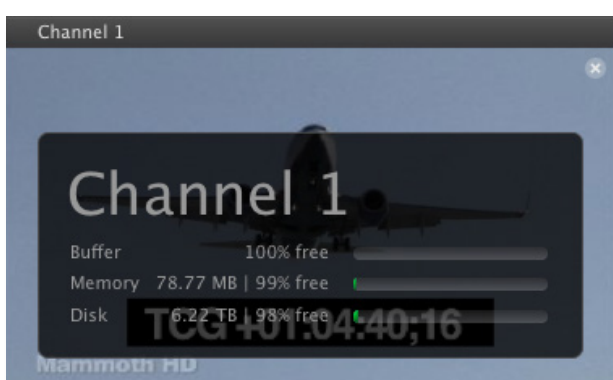
5.1

INTERFACE PREVIEW



When the mouse pointer resides in the preview area there is a small «i» sign in the upper right corner. Press it to switch to the info view.

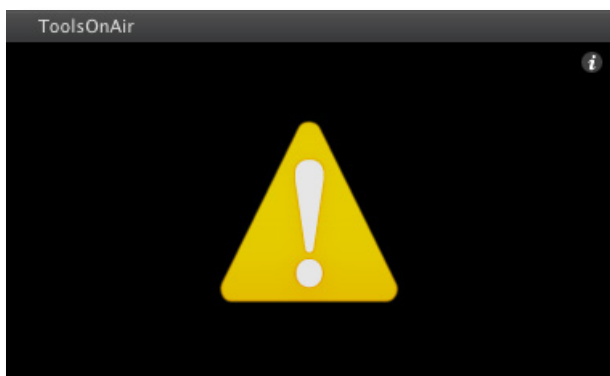
The info view can be closed in the same way (by clicking the «x» in the upper right corner).



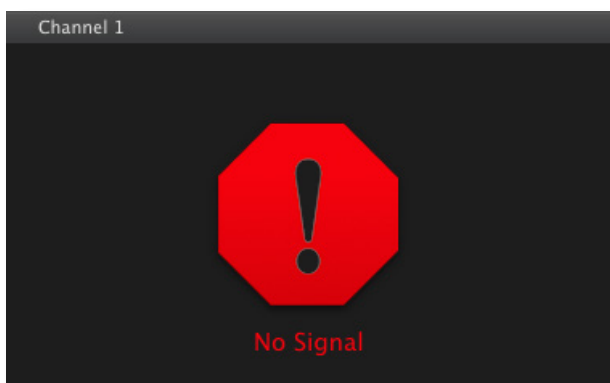
The large lettering on top is the **channel name**. After this the **buffer**, **memory** and **disk** state follow.

The memory and disk bars show the remaining free space in bytes. The percentage represents the free memory/disk space.

In this example 78.77 MB of memory is used and 98% of the disk is free.



If the info view is hidden and a problem occurs a large **attention** sign shows up in the preview area. You can then press the attention- or the I-sign to enter info view.



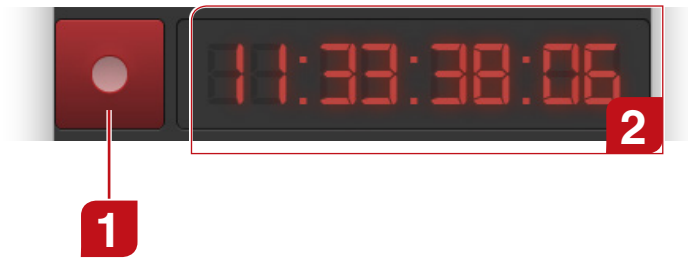
In the event of a signal loss or inconsistency, **Just In Multi** will display a “**No Signal**” alert to the user and stop the current recording in order to safeguard the recorded clip. Once the signal is back the user can restart the recording.

You can choose though to continue writing into the same container by checking this option in the **Just In QT** preference panel (see also Page 6).

5.2

INTERFACE

RECORD & TIMECODE



Record

Use the record button to start or stop capturing. Also use this button to start or stop the batch digitizing process.

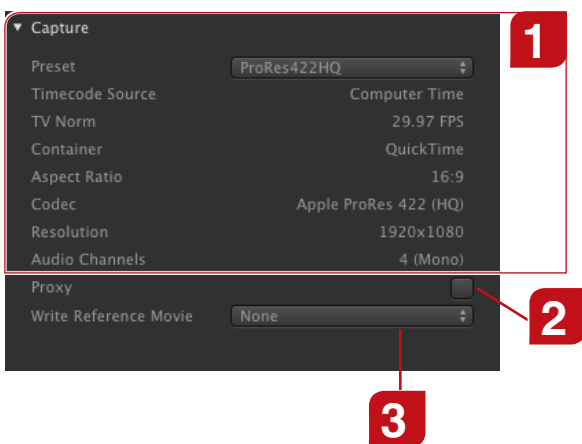
SMPTE Timecode

The timecode display has several states which are explained in the chapter “Record Button States”.

5.3

INTERFACE

CAPTURE SETTINGS



Capture Settings

After selecting a preset, the settings are displayed here.

Proxy Format

Proxy files are recorded in 320x240 Photo JPEG full frame.

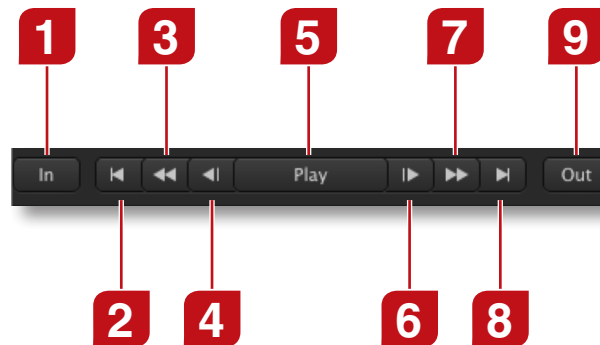
Reference Movie

You can choose between Final Cut Pro 7 and Final Cut Pro X compatible reference movies.

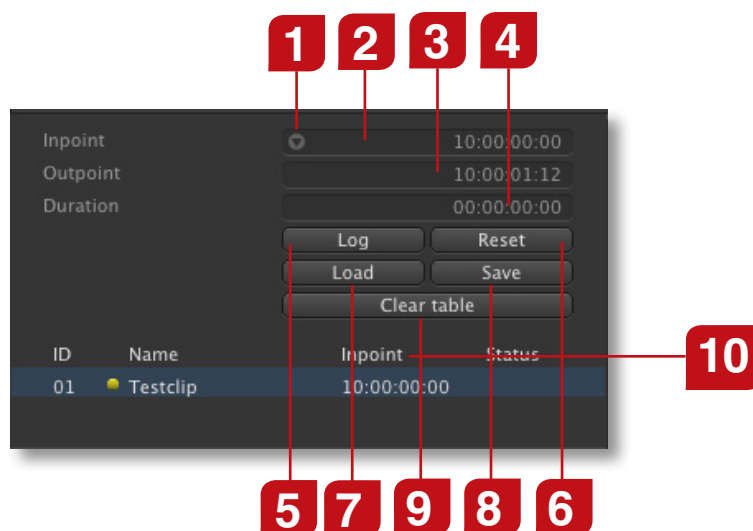
Note



- Presets are not bound to devices so you may select a preset which does not work on the selected device. Nevertheless it is not possible to select a preset where the frame rate does not match the frame rate of the selected input device.
- The last selected setting will be loaded automatically after **Just In Multi** has been launched.



- | | |
|--|--|
| <p>1 Set In Point
Defines the in-point, used in batch recording.</p> | <p>5 Play/Stop
Play or stop the tape.</p> |
| <p>2 Goto In
Cues the tape to the in-point.</p> | <p>6 Next Frame
Steps one frame towards the end of the tape.</p> |
| <p>3 Rewind
Tape stopped: Press once to rewind the tape. Press it again or press stop to stop rewinding.
Tape running: Tape rewinds while pressed.</p> | <p>7 Fast Forward
Tape stopped: Press once to fast forward the tape. Press it again or press stop to stop fast forwarding.
Tape running: Tape fast forwards while pressed.</p> |
| <p>4 Previous Frame
Steps one frame towards the beginning of the tape.</p> | <p>8 Goto Out
Cues the tape to the out-point.</p> |
| | <p>9 Set Out Point
Defines the out-point, used in batch recording.</p> |



1

Cue to ...

Cues to the selected in- or out-point. Only visible when the mouse is above the field.

2

In-Point

Defines the in-point of a batch item.

3

Out-Point

Defines the out-point of a batch item.

4

Duration

Defines the duration of a batch item. If the in- and out-point are set, the duration is calculated automatically.

5

Log

Adds a new batch item to the batch list.

6

Reset

Resets all three timecode fields to 00:00:00:00.

7

Load

Starts the Batch Import process of a text file.

8

Save

Saves the content of the Batch list into an editable/archivable text file for later use.

9

Clear table

Clears the entries of the Batch list table.

10

Batch List Header

Clicking this element of the batch list header switches through the following modes: *Inpoint*, *Outpoint* and *Duration*.

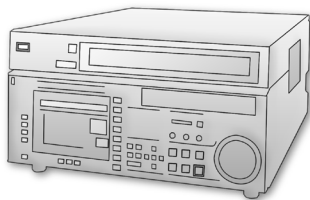
6

RECORDING

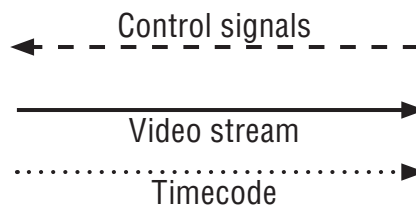
just:in multi offers three different recording/ingest modes:

- **Crash** record where you can capture video on the fly
- **Batch** digitize to record a predefined list of clips at once
- **Schedule(d)** recording to record clips based on entries in a local iCal (Calendar) calendar

just:in provides integrated machine control over RS-422. Note that the maximum record length is 12 hours in any case.



Sources: SDI signal from VTR,
Camera, Live or Satellite feed



Just In Engine QuickTime
Just In Multi GUI

6.1

RECORDING

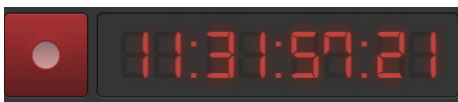
RECORD BUTTON STATES

The record button and timecode have different states. Each state is listed in the following.



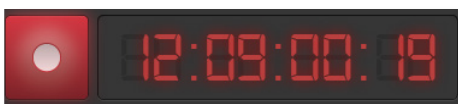
Connected (with no preset selected)

Indicates that there is a connection to a capture device but no recording is in progress. The record button is not active until all settings are valid.



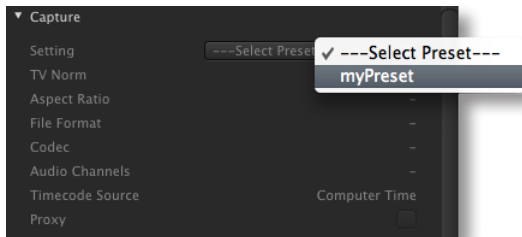
Ready To Record

If all settings are valid the timecode turns red and **Just In Multi** is ready to record. It also indicates that a record is in progress but no files are being written to disk. This may be the case while cueing the tape between batch jobs.



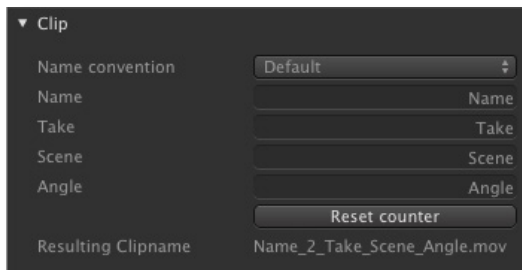
Recording + Writing

Indicates that a record is in progress and files are being written to disk.



Select Preset

Select the preferred preset from the **Setting** pop-up menu in the Capture section.



Specify Clip Name

Specify a clip name or select a name convention from the **Name convention** pop-up menu.



Clip Name Already Exists

If you use the same clip name twice or the file name already exists in the capture folder a number will be appended to the file name and the resulting clip name will be displayed in yellow.

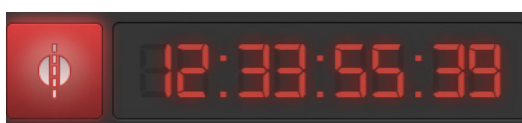


Capture

Press the **record** button to start or stop recording. While recording the preview is bordered with a red frame.

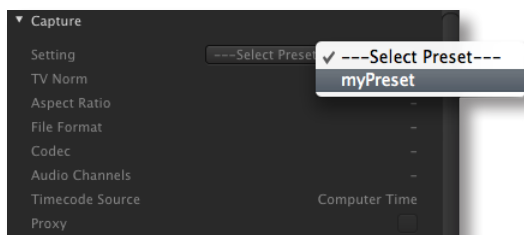
Reference Info

If a Reference In (AJA cards only) or LTC over audio signal is fed into the video card or the sound input of the computer, a LED will show the status accordingly.



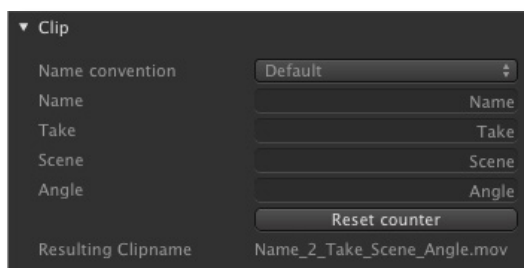
Split Clip Function

While recording you can hold down the Option key and the record button will turn to split mode (noticeable by a vertical line that crosses the record icon). Clicking on it or pressing the F3 key will generate a new file along with its companion XML.



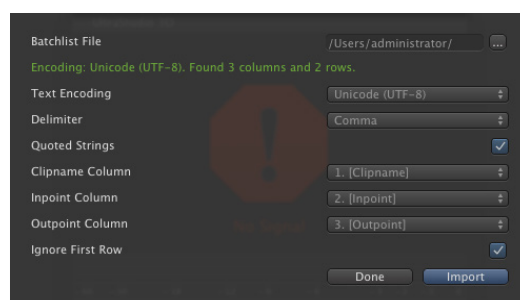
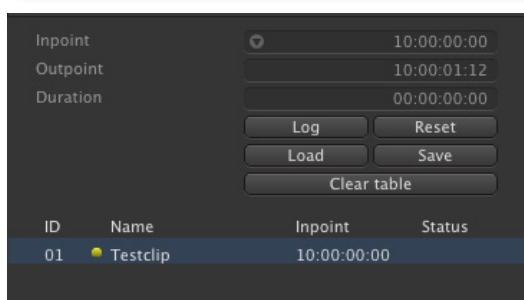
Select Preset

Select the preferred preset from the **Setting** pop-up menu in the Capture section. Remember to select a **VTR** preset (e.g. RS-422) previously created in **Just In QT** preference pane, otherwise machine control will not be activated.



Specify Clip Name

Specify a clip name. After editing the name press **return**. If desired fill out the other fields.




Define Batch List

Enter an in-point and an out-point in the appropriate fields and press **Log** to create a new entry in the batch table. Repeat this step until your batch list is complete. You may also use the **In** and **Out** buttons to set the current timecode as your in- or out-points. Alternatively you can import a predefined text file by pressing the **Load** button and adjust the import parameters (separate window) as needed. If you want to export your batch list for archiving purposes, then click the **Save** button. Click **Clear table**, if you want to get rid of the entries in the batch list table.



Note

- The batch table is not modifiable directly. If you want to edit a batch job, click on it and edit its parameters above and hit enter.
- You can jump to the in- or out point by pressing the  symbol. Note that the symbol only shows up when the mouse pointer is above the field.
- You will obtain the best results in terms of frame accuracy when using SDI embedded timecode in Batch recording.
- In order to allow for metadata flexibility, you can apply a metadata set for each clip logged by selecting the clip and choosing the appropriate metadata set in the clip section.



Capture

Press the record button to start or stop recording. While recording the record button glows and the preview is bordered with a red frame.

Reference Info

If VTR is detected a LED will show the status accordingly. Please make sure to select a capture preset with a timecode source set to **VTR (RS422)**.

VTR Preroll settings

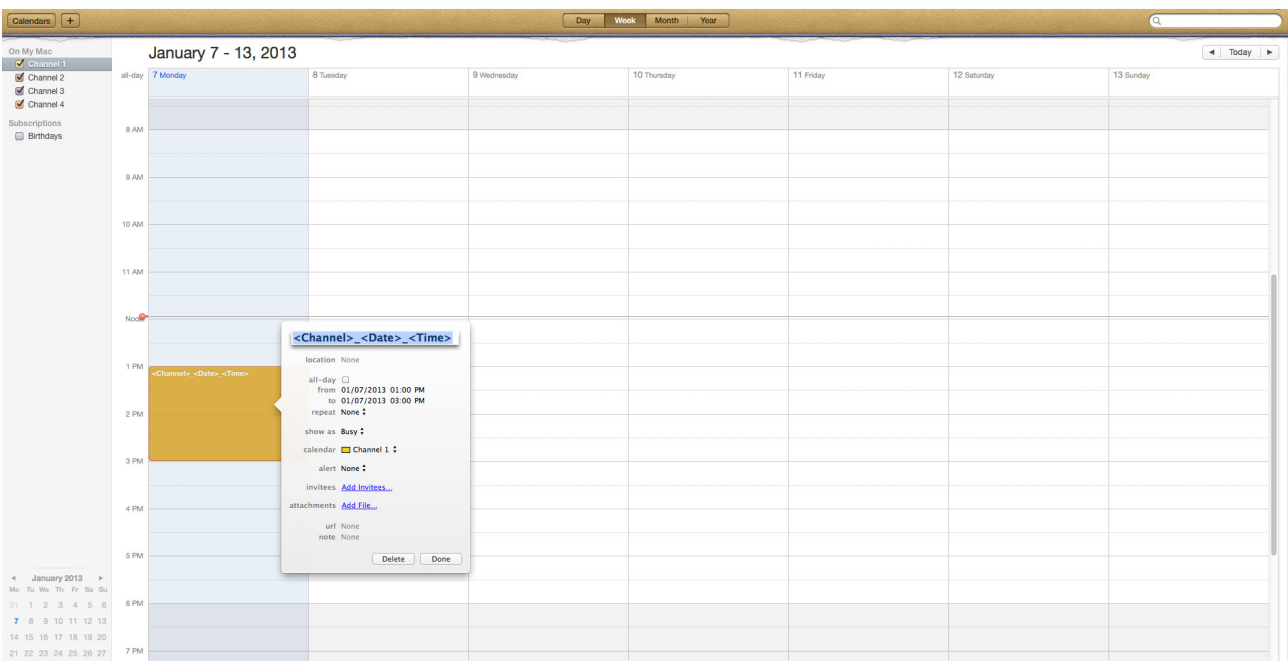
You can set the VTR preroll settings in the **Just In QT** preference pane. Values are from 1-10 seconds.

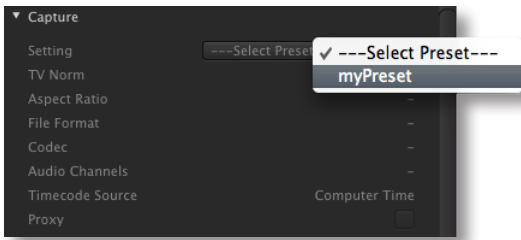
6.4

RECORDING

SCHEDULED RECORDING

One of the great features of **just:in** is that it uses all out-of-the-box features that Mac OS X can provide and iCal (Calendar) is used for scheduling because of that. The integration between **just:in** and iCal (Calendar) is very straightforward and easy to use. Once you select a channel in the **Just in QT** preference pane and name it according to your needs, a calendar with that same name will be automatically created for every channel. So, all you need to do is to set your calendar events in iCal (Calendar) and they will be instantly visible in the **Schedule** section of **Just In Multi**.





Select Preset

In the capture settings area select your preset from the “Setting” pop-up menu.



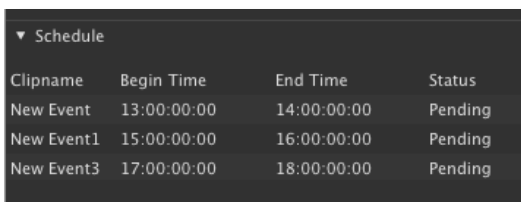
Clip Naming in iCal (Calendar)

The clip length will be based on the event’s duration, the clip name will be the event’s name. One can add <Channel>, <Date> and <Time> variables.

Note

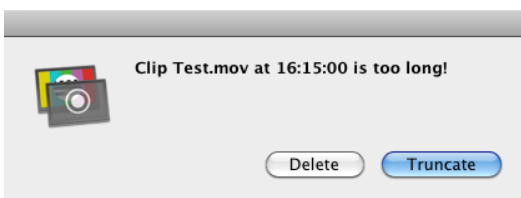


- Repeating an iCal (Calendar) event would result in a file which gets overwritten every time the same event is executed. To avoid this you can add the variables <Date> and <Time> to the clip name of the event. This automatically adds the date and time (= beginning of the corresponding iCal (Calendar) event) to the name of the clip.



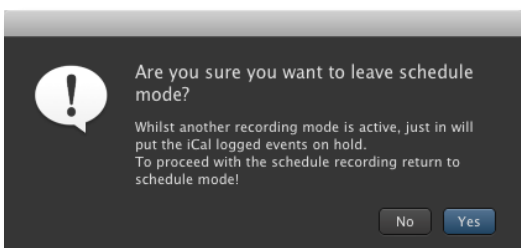
Event List in Just In Multi

The scheduled events show up immediately after creating them in iCal (Calendar).



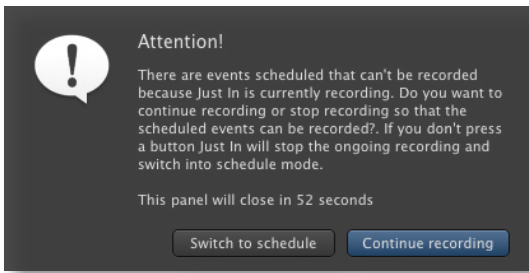
Maximum Record Length

Due to the maximum record length, **Just In Multi** will display a warning when a scheduled iCal (Calendar) event exceeds the maximum length of 12 hours even when using MXF.



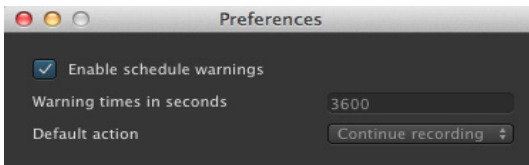
Schedule Warnings Panel

A handy new feature to the schedule mode is the ability to set specific reminders in the event of a mixed ingest operation. Let’s say that you have scheduled one or more recordings in the future, but would like to do some crash recordings in between. **Just In Multi** will ask, if you want to leave schedule mode and set the logged iCal (Calendar) events on temporary hold.



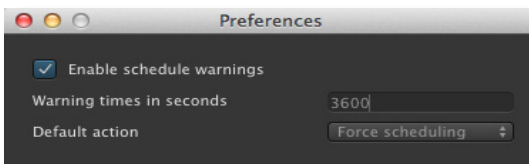
Once you're done with your crash recording you would then switch back again to schedule mode, but if you forget to do so, you can use the schedule reminder settings under the menu "**Just In Multi** → **Preferences**".

First check **Schedule warnings** then enter the intervals that you want these warnings to show up ahead in time (in seconds and values > 60) and choose one of the following wanted operations: **Force Scheduling** or **Continue Recording**.



Continue Recording

Select this option, if you want to continue recording, even when a scheduled event has been set. That schedule will then be disregarded.



Force Scheduling

Select this option, if you want to abort an ongoing crash recording and revert to the scheduled recording.

The first picture above shows the warning that will pop up as a visual support to the operator whilst in crash recording mode. There you can decide whether to directly switch into schedule mode or continue recording. If you press **Switch to schedule**, then **Just In Multi** will stop recording and switch to Schedule mode.

Gapless Scheduled Recording

In previous versions of **just:in** it was not possible to record two subsequent events where the end of the first clip was the start time of the second clip. Starting with version 1.5 of **just:in multi**, iCal (Calendar) events can now be used to perform gapless schedule recordings on a frame accurate level.

(1) Proxy file overwrite

If the High-Res file which is associated to a proxy file is missing the proxy file gets overwritten, if you capture a new High-Res file with the same name.

(2) Problems resulting from not running **just:in** with an administrator account

To avoid problems always run **just:in** with an administrator account.

(3) FireWire support

FireWire support will remain basic and will not be developed any further due to the technology change to Thunderbolt.

(4) Recording Limitation

The QuickTime and MXF container formats are limited to 12 hours. This is due to 32-bit limitation (SInt32).

(5) AJA NDD 10.x drivers

Versions prior to 1.5.176 will not be compatible with the newest driver versions 10.x. Version 1.6 of **just:in** multi will only run with AJA NDD 10.x drivers! Driver versions 10.3.2 and 10.3.3 will run with **just:in** multi version 1.6.186 only! Driver versions 10.4.1 and 10.4.2 will run with **just:in** multi version 1.6.188 only! Please download the latest according version of **just:in** multi from our website: <http://support.toolsonair.com>.

(6) Proxy Fallback mechanism issues

With the initial release of v.1.6 the Proxy Fallback mechanism has been disabled due to a technical issue. The Fallback mechanism for High-Res files is fully functional though!

(7) Mixing AJA and BMD cards may cause TC to TC asynchronicity

When using any combination of AJA and BMD cards with the latest drivers, an asynchronicity between TC information displayed on the relevant channels may occur. This issue has been reported to both card vendors.