OnTheAir Video
User Manual

To view the user manual, click on a topic in the drawer on the side. Otherwise, click a link below

Softron Media Services

Contents

Remarks

In this manual, we will indicate the pop-up menus as following : File > Save As. The first part before the sign ">" is the menu from the menu bar. The second is a command that you can choose within this menu.

You can visit our web site www.softronmedia.com for informations about the updates and to contact us for support.

Part I : About OnTheAir Video

In this first part, we will present you briefly OnTheAir Video. We will inform you about the different video Formats supported, the possible configurations and how to install the software and start it.

What is OnTheAir Video

OnTheAir Video (OTAV) is an OS X software that enables you to read and broadcasts almost any video clips exported directly from Final Cut Pro or any Editing software. It can be used by televisions for program broadcast, or as video player for news or live programs. It is also aimed to be used for live shows, exhibitions, trade shows and so on.

Simplicity The OnTheAir Video User Interface has been designed to be easy to use. A nice and easy to use Interface is the key of the success of OnTheAir Video.

Flexibility OnTheAir Video is also very flexible, it supports multiple formats in PAL and NTSC. None of the codecs supported are proprietary, which means an easier integration with past, present and up-coming systems. A simple Quicktime export from Final Cut Pro and your file is ready to be aired without having to compress or convert it.

OnTheAir Video doesn't need any proprietary Hardware neither. A recent PowerMac and a Video Card are just what you need to start broadcasting (and of course some videos!). For higher capacity needs, you will need a Fibre Channel RAID server (Apple Xserve Raid for example).

The playlists used by OnTheAir Video are in XML. OnTheAir Video can therefore easily be integrated to traffic or Automated systems. For these products, you can also have a look at other of our products. TVPlanner and TVScheduler are Traffic and Automation Softwares also based on the Mac Platform with the same spirit as OnTheAir Video.

Security OnTheAir Video is based on a Macintosh/Unix architecture known for their reliability and flexibility. All solutions developed by Softron Media Services are fully tested and approved before you get it. A fast and personalized support is also what we do best.

System Requirements 2

Computer

OnTheAir Video requests :
- Macintosh computer with a 1.8GHz or faster PowerPC G5 processor; not supported on Intel-based Mac computers with Rosetta.
- Minimum *1,5 Gb RAM*.
- Mac OS X v10.3.9 or Mac OS X v10.4 or later
- Quicktime 6.5.2 or later

Video/Audio output

Video Card Version
OnTheAir Video needs a Video Card for the output of the Video and Audio signals. Today, some cards have been fully tested :

- *Blackmagic Design cards* (DecklinkTM, Decklink ProTM, Decklink SPTM, Decklink ExtremeTM, + Decklink HD...)
- *Aurora Video Systems cards* (Aurora PipeTM, PipeProTM, PipeSDITM, PipeStudioTM, ...)

Other cards can be supported but have not been tested thoroughly. Other cards will be tested and approved compatibility will be updated on our web site: www.softronmedia.com.

Firewire Version
The Firewire Version of OnTheAir Video can work with any Firewire Convertor. You can even connect several convertors and get as much video output as you have convertors connected. However, you will be limited to your system, and specially Hard Disk limitations. Contact us to know how many convertors you can use on your system.

Withn this version, you have the advantage to be able to have several video streams on one machine and to implement this also on a PowerBook or even an iBook. But what you will not get with this version is: no support for other formats than dv stream, no logo overlay, no Scheduling function.

Storage

You can use OnTheAir Video with the internal disks of your Mac. But if you must use a large quantity of files or in High Definition, we would advise you to work with Apple's XServe Raids which are entirely supported by OnTheAir Video.

Supported Formats

At the redaction of this Manual, these formats have been entirely tested and are therefore entirely supported (all these formats can be used in the same playlist) :

- DV STREAM
- DV
- MPEG-4
- DVCPRO-25
- DVCPRO-50
- M-JPEG
- DVCPRO-HD
- IMX

A lot of other Quicktime Formats can be supported by OnTheAir Video. They are just not entirely tested yet. If you want to use another format than the ones specified, you can check on our web site if there has been any update and you can of course test it by yourself.

Today, only these 3 formats will not be supported:

- H.264
- MPEG-2
- HDV

Do not hesitate to test different formats and to keep us informed on your tests and comments by mail at: info@softronmedia.com

Getting started with OnTheAir Video

4

To install OnTheAir Video, double-click on the installer and follow the instructions on screen.

⚠️ A USB dongle will be required to use OnTheAir Video. Without this USB dongle, you will run in DEMO mode: only the first 15 seconds of the clips will be played and you will not be able to use the Schedule mode.

On the first use of OnTheAir Video, don't forget to check the settings of your video card in "System Preferences". To set these preferences, go to Chapter 6, page 21.

To start the application, just double-click on the icon situated in the Applications Folder.

Once started, check if the Application preferences in the Menu OnTheAir Video > Preferences are properly set up for your use. Be aware that some preferences like the "Logo Folder", have to be set in order for OnTheAir to work properly. For more details on these preferences, go to Chapter 7.

Examples of Configurations

Here are some examples of configurations. Of course, these are only examples and as OnTheAir Video uses non proprietary Hardware, there are a lot of possibilities from even simpler to much more complicated solutions.

Do not hesitate to contact us to validate your configuration at info@softronmedia.com.

	Configuration 1	Configuration 2	Configuration 3
PowerMac G5	X	X	X
Video Card (Decklink or Aurora)	X	X	X
XServe RAID (storage)		X	X
Fibre Channel Card		X	X
XServe (Server)		X	X
XSan			X
Switch Fibre Channel			X

Configuration 1 (Basic)

Configuration 1 can be used quickly with simply a PowerMac, a Video Card (Decklink or Aurora), the software OnTheAir Video and the USB dongle delivered on purchase of your license.

Configuration 2 (Normal)

Configuration 2 can improve the storage capacity, simply by adding in direct attach an Apple XServe RAID with capacities of several Terabytes.

In these first two configurations, you can connect the Mac to the Network with the built-in Ethernet Port. The Mac will be the bridge between the Xserve Raid and your local Network. Thus the users on your network will be able to drop files on your Xserve Raid.

> If you use the Mac as a bridge for access from the Network, beware that the activity of the Network might slow down your Mac, and therefore Video might drop frames with high activity of the Network. For higher availability, best performance, and a drop-frame proof option with Network access, we strongly recommend you to use Xsan with configuration 3. Anyhow, contact us to validate your configuration according to your use.

Configuration 3 (Advanced)

Configuration 3 adds a highly secured and efficient SAN. This configuration is required to users who needs a guaranteed playout of their clips AND a high availability of the same files through Network to other users such as editors.

With this configuration, you will be using Xsan which enables to share files on a Xserve RAID through Fibre Channel. With this solution, the playout Mac is not anymore a "bridge" for the network and cannot be influenced by activity on the Network. The playout Mac is a Client of the Xsan as the other machines are.

This solution requires the implementation of a Fibre Channel Network (Switch + Cables + Fibre Channel cards on each computer). The Fibre Channel Network is much more Fast than the Ethernet Network, specially for big files like Video Files. A Fibre Channel Network is dedicated to the transfer of these large files and, it is not open to all the computers on the NEtwork and therefor, can not be disturbed by the Network activity of the other computers using Mail, chat, internet, small file exchanges...

For all these reason consider your needs and your use before choosing a solution. Again, do not hesitate to contact us for your configuration, for more info and help at info@softronmedia.com. We will help you to figure out the best solution for you.

Part II : Setting up preferences

II

In this second part, we will explain how to set up the Video Cards Preferences as well as OnTheAir Video Preferences.

Please read attentively this part! Not only to set up correctly your Hardware and software before use, but also because some informations given here in the preferences will be helpful in your every day use of OnTheAir Video.

Video Cards Preferences

6

⚠️ As it is impossible for us to know at the redaction of this manual what will be the evolutions of the hardware in the future, the names, screen captures and set ups given here are only given for your information and help. However, we recommend you to check with your supplier for the latest info on the cards you will be using.

After having installed the latest drivers of the cards (check on the manufacturer's site), the first thing to do is to open the Display Preferences. For that, click on Apple Menu > System Preferences. Then select "Displays" and check the option: "Show displays in Menu Bar". Close this window and click on the icon representing a Display at the right of the Menu Bar. In the part named "Television", check that the card is set on 25Hz if you are working in PAL and on 30Hz if you are working in NTSC.

Aurora PipePro

To set up the preferences of the Aurora Card, click on the Apple Menu > System Preferences, and then click on the icon "Aurora" at the bottom.
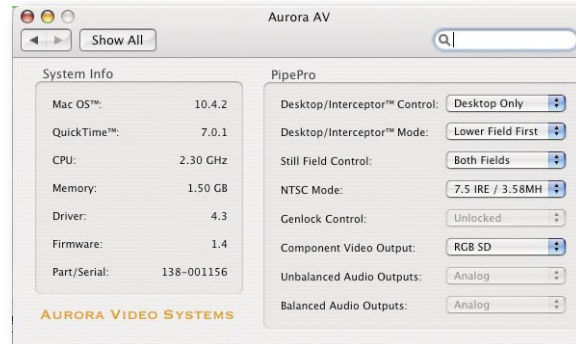
System Info

This part contains information about your computer. This data is useful to check if your system is up-to-date and to know quickly its main characteristics, such as RAM...

PipePro

Desktop/InterceptorTM Control

⚠ If used with OnTheAir Video, let this option set on "Disabled". Any other mode might generate interferences.

- *« Desktop Only»*, when no application requires the Video Output, the card will be used as a second Display output for your computer.
- *« Desktop & InterceptorTM »* with Interceptor mode on, as soon as a Quicktime application is launched, the card will try to output the video signal. Do not ever activate this mode when using it with OnTheAir Video!
- *« Disabled »*, when no application requires the Video Output, the outgoing signal will be black.

Desktop/InterceptorTM Mode

- *« Upper Field First - Full Bandwidth »* This is the setting to be used with OnTheAir Video. It sets the Field Order.
- *« Lower Field First – Half Bandwidth »*, *« Lower Field First – Half Bandwidth » and « Upper Field First – Half Bandwidth »*, are other field order and bandwidth settings to be used in other applications. Check with the application and/or format you use for the right settings to use.

Still Field Control

A video image is composed of two frames, so when you output video on pause, you can choose to output the two frames or to output only one frame. This last choice will avoid aliasing in moving elements.

NTSC Mode

In these settings, you can choose between the NTSC mode used in Japan and the one used in the United States.

Genlock Control

Indicates the Genlock mode :

- *« Unlocked »* if the Video card doesn't receive any Genlock signal, this setting is set by default on "Unlocked".
- *« Locked »* if the Video Card receives a Genlock signal, you will then be able to choose to synchronize your signal on the reference signal or not. This setting is widely recommended if you use OnTheAir Video in a production room in which the signal has to be in sync with others from cameras, VTRs…
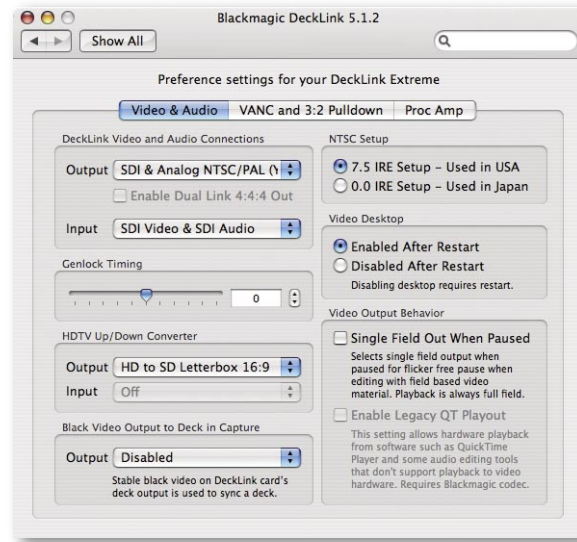
Component Video Output

- *« RGB SD »* sets the video output mode in RGB.
- *« YUV SD »* sets the video output mode in YUV.

Unbalanced/Balanced Audio Outputs

These settings will be activated only if you have a card with balanced and unbalanced audio outputs. The Aurora Pipe Studio for example has the possibility to output these two kinds of signal.

Blackmagic-design : Decklink Extreme

To set up the preferences of the Aurora Card, click on the Apple Menu > System Preferences, and then click on the icon "Decklink" at the bottom.

Video & Audio

Decklink Video Connections / Output

- *« SDI & Analog NTSC/PAL (Y, B-Y, R-Y) »* this setting must be used if you output Video on an analog Component and/or SDI output.
- *« SDI & Analog NTSC/PAL (Y Out) »* this setting must be used if you output Video on an analog Composite and/or SDI output.

If you output your signal in SDI, both setting will work fine.

Decklink Video Connections / Input

- *« SDI Video & SDI Audio »* use this setting to Capture footage through your SDI Video/Audio input.
- *« Y, B-Y, R-Y Video & Analog XLR Audio »* use this setting to Capture footage through the Analog Component Video input, and the Analog XLR Audio input.
- *« NTSC / PAL (Yin) & Analog XLR Audio »* use this setting to Capture footage through the Analog Composite Video input, and the Analog XLR Audio input.

Genlock Timing

This option can correct the synchro with an external Genlock.

HDTV Up/Down Convertor

It is possible here to downconvert a signal. For example, you can downconvert an HD signal to a SD signal so that you can monitor an HD signal on a SD monitor (with a loss of resolution of course).

Black Video Output to Deck in Capture
- *« ON SDI Digital Out »* choose this to output a Black stable synchro signal on the SDI output.
- *« On Analog Out »* choose this to output a Black stable synchro signal on the Analog Video output.

NTSC Setup
Whether you'll be using the card in the US or in Japan, change the settings here.

Video Desktop
BEWARE, switching from one Mode to another will require you to restart the computer for the changes to take place.
- *« Enabled After Restart »*, when no other application requires the Video output of your Decklink, the Video Card output will be used as a second monitor. You will then be able to configure de Desktop picture and the position of this second monitor in "System Preferences > Displays".
- *« Disabled After Restart »*, when no other application requires the Video output of your Decklink, the Card's video output will be black.

> ⚠️ When using you decklink card with OnTheAir Video,
> set this option on "Disabled after restart" because it
> might have interferences with OnTheAir Video.

Video Output from Legacy Applications
With this option enabled, as soon as an application using Quicktime will be launched, the card will try to output its Video signal.

> ⚠️ Again, be sure that this option is disabled, or you
> might have interferences with OnTheAir Video.

VANC & 3 :2 Pull Down

Please refer to the Decklink User Manual for the use of these options.

Proc Amp

Please refer to the Decklink User Manual for the use of these options.

Setting up OnTheAir Video

To access the OnTheAir Video preferences, open the application, then click on the menu "OnTheAir Video" and select "Preferences".

Defaults
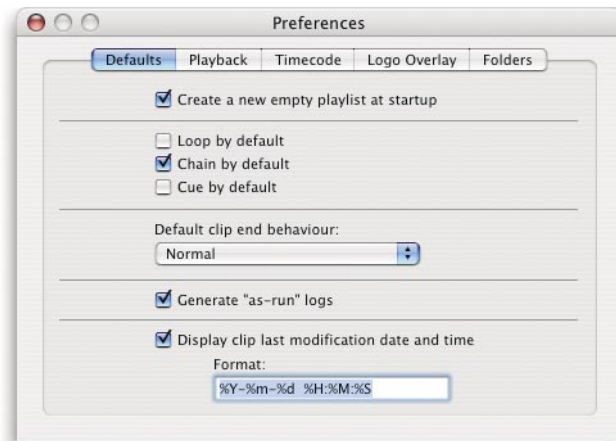
Here you can set the Default settings of the playlists and clips. Every new playlist created will have by default the settings indicated here.

> ⚠️ These default settings will only apply to the new playlist you will create and NOT to the ones already created.

Create a new empty playlist at startup
With this option checked, OnTheAir Video will create a new empty playlist when you will start the application.

Loop by default
When the Loop mode is checked, it means that every new playlist created will be in Loop Mode which means that at the end of the playlist, it will start again from the beginning. If unchecked, the playlist will stop at last clip.

Chain by default
When chain mode is checked, every new playlist will be in chain mode, which means that once a clip is finished, OnTheAir Video will play the next one. If unchecked, OnTheAir Video will stop playing at the end of each clip.

Cue by default

When a playlist is NOT in Cue Mode, when you double-click on a clip, it will start to play immediately. When this option is checked, when you double-click on a clip, it will pause on the first frame of the clip waiting for you to press the space bar or to click the play button to start playing. This mode is very useful when used in a production room for news or games. You can then prepare your subject and launch it once the journalist has announced it. If chain mode is NOT activated, it will stop at the end of the clip and select the next one. If chain mode is activated, it will play the next clip.

Default clip end behavior

This option sets the way OnTheAir Video must react at the end of a clip when you create the playlist:

- *Normal :* Follows the behavior set for the playlist: If the playlist is in chain at the end of the clip, the next clip will be played, if playlist is not in chain mode, it will stop at the end of the clip.
- *Stop At End :* stops playing at the end of the clip (even if the playlist is in chain mode.
- *Hold Last Frame :* pause on the last frame of the clip.
- *Play Next Clip :* play the next clip in the playlist (even if the playlist is not in chain mode).
- *Loop :* at the end of the clip, OnTheAir Video will play it back from the beginning.

> ⚠️ The individual clips settings will be applied whatever the playlist settings are: if your playlist is in chain mode BUT one of your clips is set to "Stop At End", the playlist will stop playing at the end of this clip.

Generate « as-run » logs

You can choose if you want OnTheAir Video to generate "As-run logs". They are generated in the same folder as the Application. One different file is generated every day. These "As-run logs" are referencing all the clips played by OnTheAir Video. You can use this as a report for your clients to know when their clips have been aired. What is referenced is: the date, hour, the name of the playlist and the action (if the clip was played next to a clip or if it was launched manually or with a schedule action).

Display Clip Last Modification Date and Time

This option allow you to show informations concerning the Clip last modification Date and Time. These Display of these informations can be personalized. For that you must enter in the "format" area the conversions specifiers corresponding to the information you'd like to see in your playlists.

Here is the list of the conversion specifiers:

Specifier	Description
%%	a '%' character
%x	Date using the local date format
%X	Hour using the local date format
%c	Shorthand for %X %x, Date and Time using the local format
%Y	Years with century (such as 2006)
%y	Years without century (00-99)
%B	Full month name
%b	Abbreviated month name
%m	Month as a decimal number (01-12)
%A	Full day name
%a	Abbreviated day name
%w	Day as a decimal number (0-6), where Sunday is 0
%d	Month as a decimal number (01-31)
%e	Same as %d but does not print the leading 0 for numbers 1 to 9
%j	Day of the year as a decimal number (001-366)
%H	Hour based on a 24-hour clock as a decimal number (00-23)
%I	Hour based on a 12-hour clock as a decimal number (01-12)
%p	AM/PM designation for the locale
%M	Minute as a decimal number (00-59)
%S	Second as a decimal number (00-59)
%F	Milliseconds as a decimal number (000-999)
%Z	Time zone name (such as Pacific Daylight Time)
%z	Time zone offset in hours and minutes from GMT (HHMM)

So, if for example, you'd like to see the name of day, the date, the time with milliseconds at which the clip was last modified, you'll have to enter in the "Format" area:

%A, %c:%F (this might show as: Monday 20-02-2006, 16:31:15:699)

Beware that these indications concern the Modification of the file in itself, not the clip in the playlist. If you modified the in/out points in the playlist, this won't modify the Modification Date. But if you modify your clip with QuickTime for example and save it, this will change the modification date and time informations.

Playback

In Playback, you can set the preferences of output of the Video and Audio Signal.

Video Standard

Sets the broadcast standard : PAL or NTSC.

Video Output

Sets the output on which the Video signal must be sent: you must set or Blackmagic Video Output, or Aurora Video Output.

Video Mode

Sets the Video Mode (8bit or 10bit, PAL or NTSC). Choose 8bit, PAL or NTSC.

Audio Output

Sets the output on which the Audio Signal must be sent: Or Blackmagic Audio, or Aurora Audio output, or the Built-In Audio output. If you choose "Built-In Audio" for your Audio output, beware that there will be a desynchro between the audio and the video due to the process time of the video signal.

Playback Buffer

Sets the length of the buffer. The more your connections with the video source files is stable, the more you can shorten the buffer length. However, we recommend to set this on 10 seconds.

When a clip is "buffered", it is then locked in the playlist. Which means it can not be moved or deleted. So, by default, the next clip will be locked during the last 10 seconds of the playing clip. If your buffer is longer, then the next clip will be locked for a longer time as well.

TimeCode

⚠️ Do NOT use the TimeCode option in association with a Schedule! It might have unpredictable effects.

It is possible to start playing an individual clip in sync with an external TimeCode. This TimeCode can be given or by the internal clock, or by an External Source. For an external source, you need a proper LTC-serial converter connected to the serial (RS-422) port of the Video card. OnTheAir Video currently only support the AEC-Box1 from Adrienne Electronics.

⚠️ Do NOT activate External TimeCode with no valid external TimeCode Connected!

TC Source
Sets the source of the TimeCode: or the internal Clock, or an external generator coming through the RS-422 port of the Video Card.

TC Offset
Sets the offset with which OnTheAir Video launches the clip. In the example below, OnTheAir Video will play the clip 13 frames before the TimeCode indicated in the playlist.

Show TC in a floating window
Shows a floating window with the TimeCode data in big.
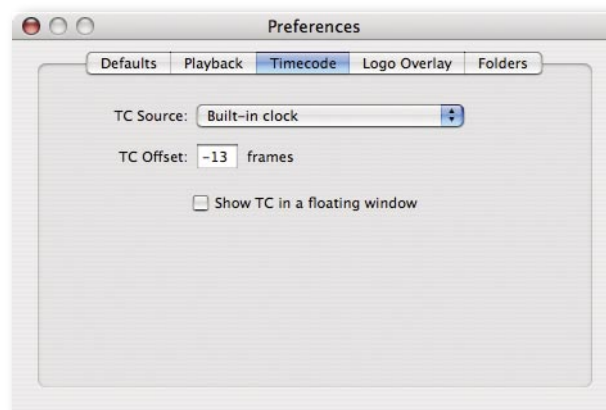
Logo

With OnTheAir Video, you can overlay logos and graphics files. These graphics must be saved in png format, RGB, with a resolution of 720 width, 576 height, 72 dpi. Beware that the File Name must end with .png, otherwise OnTheAir Video will not recognize it as a good file format and will not overlay it!

It is possible to associate automatically graphic files to video files. So that every time one clip is played, one particular logo will be overlaid. More info on this page 44.

This function name is "logo", but note that every kind of graphic can be overlaid. Therefore, you can use this option to overlay any kind of graphic as long as it is with transparency where you need it and in the right format.

⚠️ Place all your graphics in the folder indicated in the "Folder" preferences. And do not forget tho set the logo Folder path before using OntheAir Video. More info on this page 32.
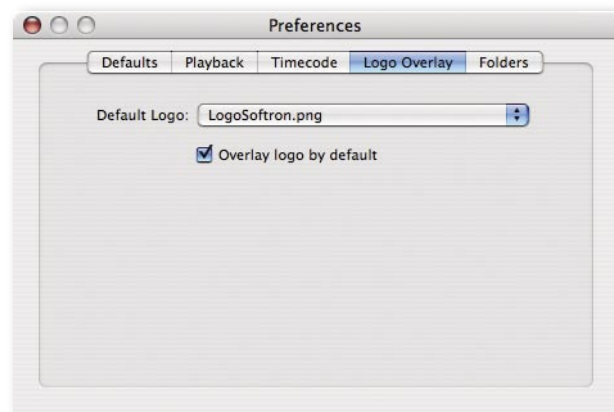
Default Logo
Indicates the logo that OnTheAir Video must overlay by default on the clips. It will often be your station's logo.

Overlay Logo by default
If this option is enabled, every time you'll add a clip in a playlist, the logo overlay option for this clip will be enabled. You can still deactivate the logo overlay by unchecking the option in the playlist.

Folders

Clip Folder

Use this preference if you want to create your playlists on a computer and air them with another. This is mainly the case for TV stations where the playlists are made on a different computer than the one airing the clips. Let's say you are preparing your playlists on a computer A in which all the video clips are located in the folder : « /Volumes/DiskComputerA/Videos/clips ».

Every time you will insert a clip in a playlist, it will be referenced with its entire path. So for computer A, the path referenced in the playlist when you save it will be : «Volumes/DiskComputerA/Videos/clipname. mov». Then if you open the same playlist on computer B on which all the videos are located in «Volumes/DiskComputerB/Clips», all clips in the playlist will of course be offline as the path referenced in the playlist is the one for Computer A.

To be able to go from one computer to another with different paths for the same files, we implemented this option: in preferences of computer A : «Folder > Clips Folder (root)», choose the folder in which all your video files are located. In our example : «/Volumes/ DiskComputerA/Videos/». After that, OnTheAir Video will not reference in the playlist this part of the path. So when you will add clips, instead of referencing the full path for the clip «/Volumes/ DiskComputerA/Videos/clipname.mov», OnTheAir Video will only reference: «clipname.mov».

Now in the preferences of computer B «Folder > Clips Folder (root)», you have to indicate the path where all the clips are located on this computer. In our example: «Volumes/DiskComputerB/Clips». When you will open the playlists created on computer A with computer B, OnTheAir Video will add the part referenced in the preferences. So the path referenced in the playlist was only : «clipname.mov», when you open it, OnTheAir video will add «Volumes/DiskComputerB/Clips». The full path will then be : «/Volumes/DiskComputerB/Clips/clipname. mov».

To be short, when opening a playlist made with computer A, in computer B, the part of the path referenced in the preferences of computer A is replaced by the part of the path referenced in the preferences of computer B.

Overlay Logos Folder

This is where is indicated the place where OnTheAir Video will find all the logos used by the user. This is from this folder that OnTheAir Video will constitute its list of logos when you will want to add a logo on a clip or set a default logo. Beware that subfolders are not supported yet.

Here also, as explained concerning "Clip Folder", you will be able to go from a computer A to a computer B without problem even if the path is not the same for the logos. You will just have to reference the path in this preference, and of course to have the same files in both computers.
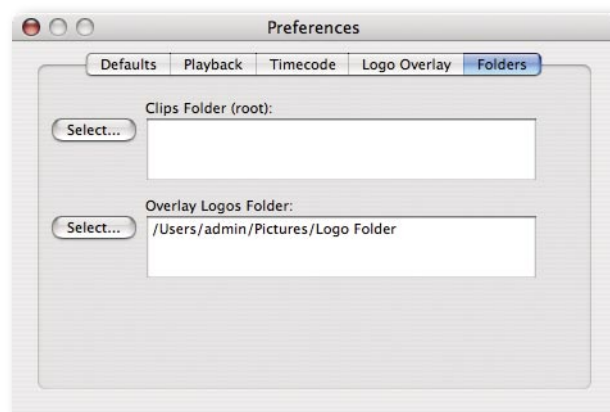
Part III : Using OnTheAir Video

III

In this third part, we will present the user Interface of OnTheAir Video and how to use its advanced features.

Overview of the User Interface

8

Time Indicators

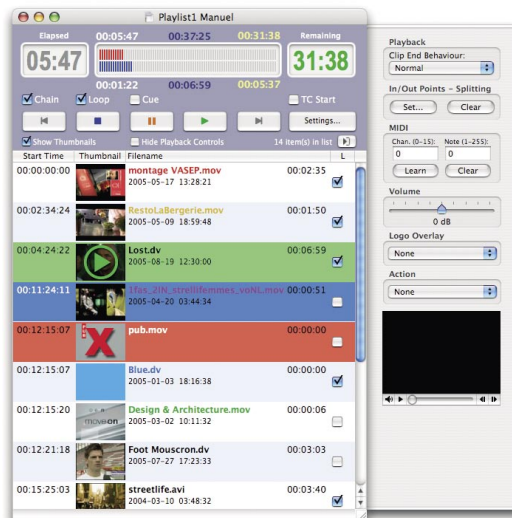The upper figures of the Timeline are giving informations about the time (Elapsed Time, Duration, Remaining Time) for the whole playlist. The lower numbers are indicating this time Information for the current clip.

- The Time indicated in *white* to the left is the Elapsed Time.
- The Time indicated in *yellow* to the right is the Remaining Time.
- The Time indicated in *blue* in the middle is the Duration of the playlist (up) or the clip (down).
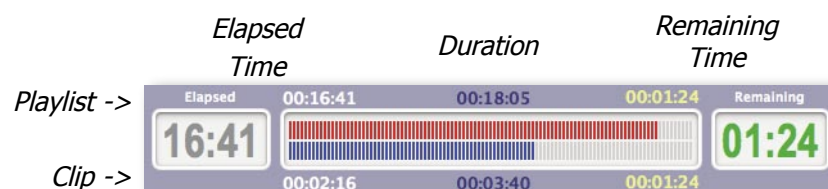
The two windows with bigger numbers on the left and on the right of this Timeline are Elapsed Time and Remaining Time indications. It is limited to 59 minutes 59 seconds, and above that limit, it indicates --:--. These windows can indicate the Remaining or Elpased Time for the playlist OR for the clip. To change that, right click on the numbers (or ctrl + click) and choose if you want these numbers to indicate the Elpased or Remaining Time for the Playlist or for the Clips..

The numbers in the left window (Elapsed Time) are in grey all the time, but the numbers in the right widnow (Remaining Time) are mainly in green, but 30 seconds before 0, it becomes orange and 10 seconds before the end it becomes red.

Play Modes, play control and View Modes

Play Modes ->
Play Control ->
View Modes ->

Play Modes

Here are the different play modes :

- *« Chain »* : in this mode, the clips will play one after the other in the order of the playlist. If unchecked, OnTheAir Video will stop after each clip.

- *« Loop »* : at the end of the playlist, OnTheAir Video will go back to the beginning and replay the playlist.

- *« Cue »* : when double-clicking on a clip or when selecting a clip and pressing on the space bar, or clicking on "Play", instead of playing immediately, the clip will be paused on the first frame. When pressing again the space bar (or clicking on "Play"), the clip will start being played. This is very useful for News and live shows as the subject is ready on the first frame! It should be used in combination with "Chain Mode": when "Chain Mode" is activated, the clips will play one after the other, when inactivated, OnTheAir Video will stop after each clip and select the next one, so that it is ready to be cued.

Playback Controls

The five Play controls are, in the order: Play next clip, Stop, Pause, Play, Play Next Clip.

Display

You can choose different Display Modes for your playlists:

- *« Show Thumbnails »* : you can show or hide the thumbnails of the playlist.

- *« Hide Playback Controls »* : you can also show or hide the Playback Controls. When they are hidden, it deactivates the Playback control for this playlist (even the space bar Play/Stop function), so that you can not stop a clip by error. This option is automatically enabled when a playlist is opened by the Scheduler.

TimeCode Start

> ⚠️ Before using this function, you must set the Source of the TimeCode in the preferences : or internal (The Mac Clock), or External (through the RS-422 port of the Decklink card).

If this option is checked it will add one more column in your playlist. In this column, you can enter the TimeCode at which you wish the clip to start.

Example: If you want a clip to start at 15:37:00:00, you just need to encode it in the column "Auto Start TC" and the clip will start at this exact TimeCode.

> ⚠️
> - The playlist *must be opened* for the clip to start playing at the right TimeCode.
> - *You must deactivate the Scheduling Option when using the TimeCode function*, because it might interfere one with another. The Scheduler opens playlists at defined Time, and the TimeCode Mode plays clips within an opened playlist at a certain Time.
> - *The clips are automatically sorted* by their "Auto Start TC" value. From the lowest to the highest value.

The Playlist

The playlist is simply a succession of Video Clips.

The different columns are indicating :

- *« Start Time »* indicates the relative Time at which each clip will start playing. It starts at 0 at the beginning of the playlist unless you indicate another start Time when clicking on "Playlist settings".

> ⚠️ It is not a real start Time! It is a relative time guessed by adding the duration of each clip. So it has nothing to do with the Scheduling or TimeCode Start. It is just an indication to tell you at which Time each clip will start.

- *« ? »* or *« Thumbnails »* : if the option *« Show thumbnails »* is activated, this column will show the thumbnails. If the option is not activated, it will only indicate the playing, offline, and locked logos.
- *« Filename »* : shows the name and duration of the clip.
- *« Logo »* : when checked, a logo will be overlaid. The logo overlaid will be by default the one specified in the preferences. But you can also choose a different logo for each clip. For more info, see p.31 for preferences settings, and p.44 for the logo options.
- *« Time Code »* : This column is shown only if the option "TimeCode Start" is checked. It indicates the TimeCode at which the clip should be started. See P. 39, for info on this option before using it!
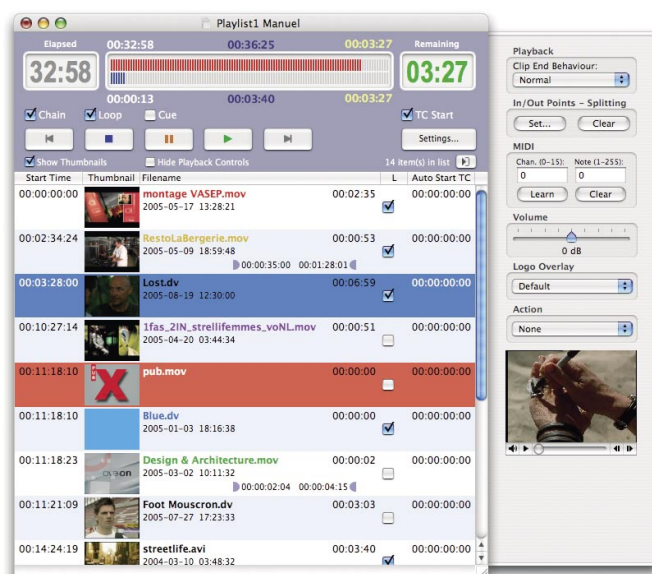
Color Codes

There are different color codes in a playlist:

- A clip tinted in *blue* indicates it is selected.
- A clip tinted in *green* (there will also be a green triangle on the Thumbnail) indicates that the clip is now playing.
- A clip tinted in *red* (there will also be a red round sign on the thumbnail) indicates that OnTheAir Video didn't find the clip. Maybe the clip (and/or the folder in which it was) has been moved or renammed. Be careful when you move, rename or delete Files and/or folders! OnTheAir Video checks for the clips in the playlist only when the playlist opens up. If you want to check it after the playlist has been open, press F1 or select "File > Check for missing clips" .
- A clip preceded by a *grey lock* is a clip locked because it is already buffered. It can not be moved, nor erased. The duration of the buffer can be set in the preferences, and is set by default on 10 seconds. It means that 10 seconds before the end of the playing clip, the next clip will be locked.

Operations in the playlist

Within the playlists you can do several operations :

- Inserting and ordering the clips by *drag-and-drop*. With drag-and-drop, the clips are inserted at the top of the clip where your pointer is. You can organize the clips, even in a playing playlist as long as the clip is not locked.
- *Copy-paste* one or more clips: Select one or more clips in a playlist then press " + C" or select "Edit > Copy", then in another playlist, or the same playlist, select a clip and then press " + V" or select "Edit > Paste". The copied clips will be pasted at the top of the selected clip. You can also Copy-Paste one or more clips by holding the "alt" key while moving a clip within a playlist.

The clips settings Drawer

This drawer enables you to change the settings of one ore more clips within a playlist. The settings are applied to all the selected clips (the ones in blue!). Beware that this setting doesn't change the file in itself! If you change the settings of a clip in a playlist, it doesn't change the settings of this same clip in other playlists. You can of course copy-paste the clip from a playlist to another and it will keep its clip settings.
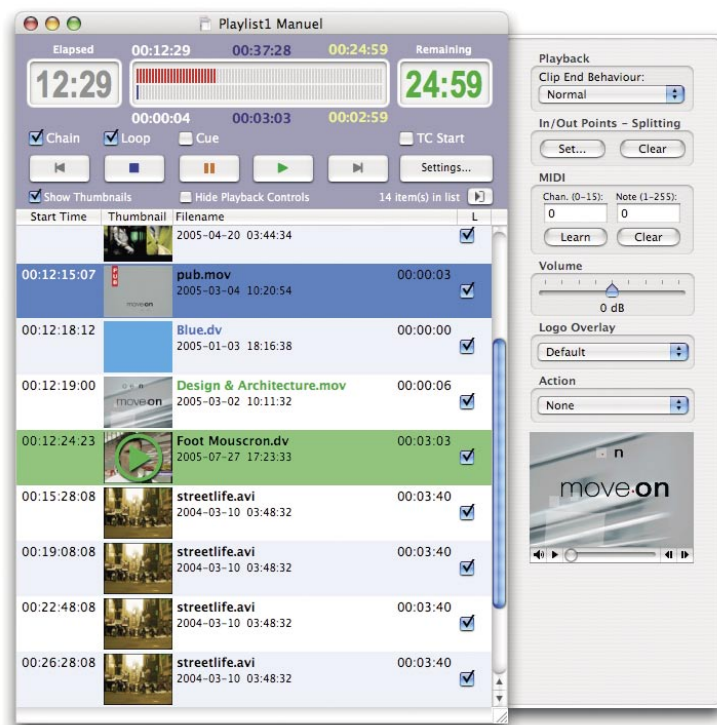
« Playback »

This option sets the way the selected clip(s) should end:

- *Normal :* the clip will end as it is set in the Playback Mode for the playlist. So if the playlist is in Chain Mode, OnTheAir Video will play the next clip, if it is not in Chain Mode, OnTheAir Video will stop after playing the clip. If the playlist is in cue Mode, OnTheAir Video will select the next clip, ready to be cued.
- *Stop At End :* totally stops playing at the end of the clip.
- *Hold Last Frame :* OnTheAir Video will stay on pause on the last frame.
- *Play Next Clip :* Play the next clip, even if chain mode is not active.
- *Loop :* OnTheAir Video will go back to the beginning of the clip and play it back again.

In/Out Points :

- When clicking on "Clear", you will erase the in and out points you might have set earlier.
- When clicking on "Set", OntheAir Video opens a window in which you can set the in and out points of the clip.

In this window, you'll have :

- A clip preview zone.
- « *Current Time* » : indicates the TimeCode where the cursor is located.
- « *Split Clip* » : when you click on "Split Clip", OnTheAir Video will split the clip in two clips in the playlist, the first one starting at the beginning and ending at the point where the cursor was located and the second one starting from the point where the cursor was located to the end of the clip. No New Files will be created on your discs. With that "Split Clip" Option, you can set different logos for two parts of the same clip.
- « *In Point* » : indicates the TimeCode where the In Point is set.
- « *Out Point* » : indicates the TimeCode where the Out Point is set.
- *M* for « *Mark* » : sets the in / out point.
- *C* for « *Clear* » : clears the in / out point.
- *G* for « *Go* » : goes to the in / out point.
- « *Save as DV File* » : exports the part between the in and out points you set as a dv File. You can save this file wherever you want and use it afterwards in your playlists without having to set its in and out points again.

Beware that these settings are set only for the selected clip in this playlist. It will not change the in and out points of all the occurrences.

« MIDI »

A MIDI interface can be used to control the playback of the clips. It can be interesting for live shows.

To use this functionality, you must have a MIDI interface properly installed. Then, select a clip in the playlist and click on the button "learn" in the drawer and press a MIDI note on your Interface. And it is set! Now the next time you will press the same MIDI note, the clip will start playing.

Volume

For every clip you can adjust the volume. To adjust the volume, select one or more clip and drag the slide bar in the drawer window.

Logo Overlay

It is here that you choose the logo to overlay on one or more clip. Don't forget that the logos or graphics files must be in the folder indicated in the preferences and that these files must be in png and in the resolution 720*576, 72 dpi, with extension .png at the end.

To choose which file has to be overlaid, select one or more clip and in the drawer, click on the logo overlay pull down menu and select the File you want.

You can also automatically overlay one png file on a movie file. You just need to name the graphic file exactly the same way as the movie file (except the extensions that will be different) and place it in the same folder as the movie file. OnTheAir Video is scanning the folders in which the movie files are and if it finds a graphic .png file with exactly the same name as a movie file, it will overlay it when playing it. You can still change the logo afterwards in the clip settings drawer.

Actions

OnTheAir Video can handle actions. These Actions are in fact AppleScripts which are started when the clips start playing. The scripts must be created in AppleScript Editor and be saved in the Folder "Actions" in the same folder than the Application itself.

But this option has been implemented specially to control External devices through GPI. This signal is sent via USB thanks to our GPICommander 2 Box which converts USB to GPI instructions. This Box is available as an option. It is compatible Mac and PC and can be used also by other softwares.

For more information on Actions and GPICommander, go to Chapter 12, page 55.

Preview

When you select a clip, you can preview it in this window. The sound will be output on the Built-in Audio port of your Mac.

Playlists Creation 9
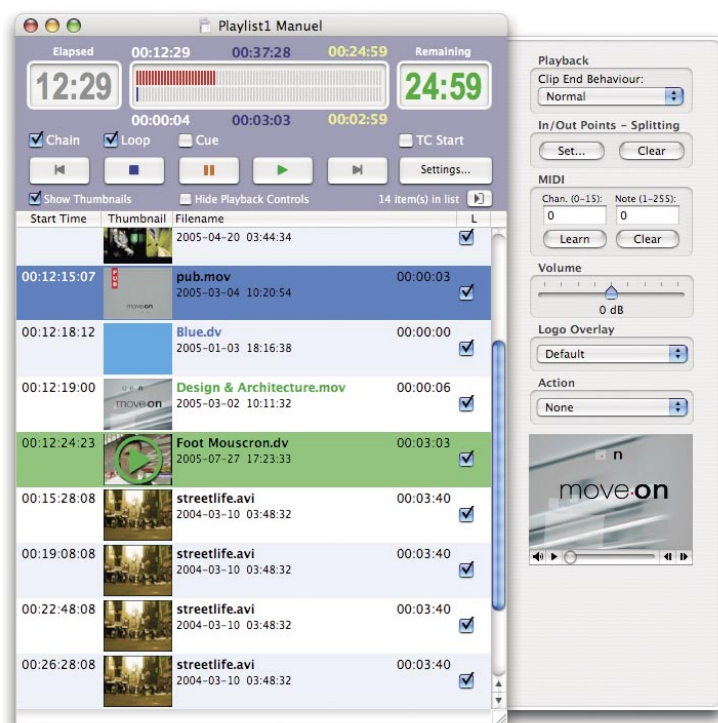
The playlist creation is relatively simple. You mainly achieve that using drag-and-drop between the finder and a playlist, or between two playlists. The advantage of drag-and-dropping clips between two playlists is that the clip settings (logo, volume, in/out points...) will be kept.

To create a new playlist, choose File > New Playlist or press + N. Then to place the clips you want where you want them, you have several options:

- Next to the playlist window, open a finder window (or another playlist window). From this window, find the clips that you want to use. Select a clip (or many clips), hold the click on it and move it in the playlist window, then release the mouse button when it is at the place you want it to be. This new clip will go at the top of the selected clip in the playlist where you dropped it.
- Open two playlists and select one or more clips, then press + C or choose "Edit > Copy". Then select the playlist in which you want to copy these files, and select the clip on the top of which you want to place them. Then press + V or choose "Edit > Paste".
- Select the clip on the top of which you want to place the new clips, then press + ⌥ + N, or choose File > Add. Then select the clip(s) you want to add and press OK.

⚠️ You can choose several clips by holding the apple key, and you can select different following clips by holding the shift key.

Menus Description 10

Beware that some of the Menus are created automatically for all MacOsX Applications and therefore are not always used by OnTheAir Video.

File

- *New Playlist* : Creates a new playlist.
- *Open* : Opens an existing playlist.
- *Open Recent* : Opens a list with the 5 last opened playlists among which you will be able to choose.
- *Close* : Closes the current playlist.
- *Save* : Saves the current playlist.
- *Save As* : Saves the playlist with another name or at another place.
- *Check for missing clips* : Check in the current playlist if all the clips can be found on the discs.
- *Import ASCII Playlist* : Imports playlists in ASCII format. This format is used for interchange with automation softwares.
- *Export Playlist as Movie* : Exports the playlist a QuickTime Sequence. Beware that the sequence exported will not be a self Contained Movie. Once exported, you will have to keep the original files at the same place otherwise, you won't be able to play the exported file anymore.
- *Export Playlist as Text* : Exports the playlist as a Text File. The export will be in the same folder as the playlist. You then have to save the playlist prior to Export it as Text.
- *Page Setup* : Set up the page for impression..
- *Print :* Prints the playlist. Only the clips will be printed, without the playback controls.

Edit

- *Undo* : Undo an action (this option is not activated yet).
- *Redo :* Redo an action after an Undo (not activated yet).
- *Cut* : Cut a clip from the playlist (removes it from the playlist and place it in the Clip-board).
- *Copy :* Copies the clip (leaves it in the playlist and place it in the clip-board).
- *Paste :* Pastes the clip from the Clip-Board. Place it on the top of the selected clip.
- *Clear :* Erases the selected clip in the playlist.
- *Select All :* Selects all the clips in the same playlist.

Scheduling

- *Edit Schedule :* opens the Graphic editor for the schedule (not available yet).
- *Re-read Schedule :* After a modification of the Schedule File, re-reads the Schedule and update the changes in the Schedule window.
- *Enable Scheduling :* Activate or deactivates the Scheduling function.

Window

- *Minimize :* Minimize the current Playlist window and place it in the Dock.
- *Bring All To front :* Shows all the Playlists that were eventually hidden by other Applications.
  At the bottom of this menu, you can also see all the opened Playlists. You can select and show them from here.

Help

OnTheAir Video Help : Opens the OnTheAir Video Manual.

Scheduling

The Scheduling option of OnTheAir Video is quite basic and will be developed in the future for it to become a graphic Scheduler. The Scheduler of OnTheAir Video is reading a text file in which is referenced the day and time start of a playlist. It is a simple text File with these info referenced: Date, Time and Playlist File Path.

Create a Schedule File

To create a Schedule File, you must have a Text Editor that can make Lines Seizures in Macintosh Code. The file must be saved in Tab-Separated Text Format.

Here are some examples of Applications with which you can create this Text File:
- TextEdit (delivered with Mac OSX)
- BBEdit (recommended)
- Excel

> ⚠️ This File must be formatted exactly and precisely as indicated here. Any change in the file, date and time format or any other change will result in an unreadable file for OnTheAir Video Scheduler.

Here is an example of Schedule information:

2005-10-24	10:00:00	/Volumes/Macintosh HD/Playlist1.vpls	1
2005-10-24	10:30:00	/Volumes/Macintosh HD/Playlist2.vpls	1
2005-10-24	12:00:00	/Volumes/Macintosh HD/PlaylistSérie.vpls	1
2005-10-24	12:55:00	/Volumes/Macintosh HD/PlaylistPUBS1.vpls	1
2005-10-24	13:30:00	/Volumes/Macintosh HD/PlaylistJT.vpls	1
2005-10-24	14:00:00	/Volumes/Macintosh HD/PlaylistPUBS2.vpls	1
2005-10-24	14:05:00	/Volumes/Macintosh HD/Playlistapresmidi.vpls 1
2005-10-24	17:00:00	/Volumes/Macintosh HD/Playlist3.vpls	1
2005-10-24	18:30:00	/Volumes/Macintosh HD/Playlist4.vpls	1
2005-10-24	20:00:00	/Volumes/Macintosh HD/Playlist20h00.vpls 1

In this example, you can see that the Schedule is made of these elements:

- **2005-10-24** = Date of the event formatted as follow: year-month-day (!Separators = Hyphen).
- **10:00:00** = Hour of the event formatted as follow: hours:minutes:seconds (!Separators = two points)
- **/Volumes/Macintosh HD/Playlist1.vpls** = The complete File Path of the Playlist.
- **1** = Indicates if the playlist is in LOOP mode or not: 1 means it is in LOOP, and 0 means it is not in LOOP.

These four elements are separated by a tab (ASCII 9). Every Line (and therefor every event) is separated by an « Enter ».

Save this file with the exact name: « Schedule.txt » at the root of the startup disk, and you are ready tuo use it!

Here is another example of Schedule:

2005-10-24	10:00:00	Volumes/Macintosh HD/Playlist1.vpls 1
→ı	→ı	Volumes/Macintosh HD/Playlist2.vpls 1
→ı	→ı	Volumes/Macintosh HD/PlaylistSérie.vpls 1
2005-10-24	12:55:00	Volumes/Macintosh HD/PlaylistPUBS1.vpls 1
→ı	→ı	Volumes/Macintosh HD/PlaylistJT.vpls 1
2005-10-24	14:00:00	Volumes/Macintosh HD/PlaylistPUBS2.vpls 1
→ı	→ı	Volumes/Macintosh HD/Playlistapresmidi.vpls 1
2005-10-24	17:00:00	Volumes/Macintosh HD/Playlist3.vpls 1
2005-10-24	18:30:00	Volumes/Macintosh HD/Playlist4.vpls 1
2005-10-24	20:00:00	Volumes/Macintosh HD/Playlist20h00.vpls 1

In this example, we didn't give any date or time start at lines 2, 3, 5, 7 (but we entered the 2 Tabs). When no start date or start time is set, OnTheAir Video will play the next Playlist at the end of the Preceding Playlist.

In this example, OnTheAir Video will start Playlist1 at 10:00 and will start Playlist2 at the end of Playlist1. In the first Schedule example, OnTheAir Video would have started Playlist2 at 10:30, even if Playlist1 was not finished.

Beware that if you do not indicate start date and start time, you still have to enter the first two tabulations. At the beginning of the line, press Tab two times and then enter the File Path of the Playlist.

Using the Schedule File in OnTheAir Video

Once you created and saved correctly this file, you can use the Scheduling function (Beware that the Scheduling function is an option that you have to order).

In OnTheAir Video, the Menu "Scheduling > Enable Scheduling" so that you activate the option. A window named "Scheduling" should sow up to the right of your Monitor with the list of all the events. The File path of the playlist is not shown, only the name of the Playlist.

If the dates are not good in this window or if OnTheAir Video warns you that:
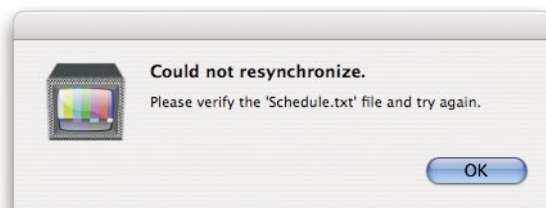
Check that the date and time formats are correct and that the lines seizures are in « Macintosh » (you need BBEdit to check that).

If the lines are tinted in red, it is because OnTheAir Video didn't find the requested playlists at the referenced File Path. Check that the File Path and/or the name of the playlists are the same as the one referenced in the Schedule File.

After every change in the Schedule file, you must select "Scheduling > Re-read Schedule" or press "⌘+ R" for OnTheAir Video to take into account the changes you made.

Actions and GPICommander

As indicated in the part concerning the Clips Settings Drawer, it is possible to start AppleScripts when a clip starts playing. These AppleScripts can do a lot of things and any AppleScript you made is supported (as long as you don't make mistake doing it).

The Actions we are interested in here are the ones used with the software GPICommander and the box GPICommander 2. The software "GPICommander" and the box are an option of OnTheAir Video and it can be used by other OSX softwares than OnTheAir Video. The box "GPICommander 2" can work also with PCs.

We are giving you here the Manual for using the software and the way to create AppleScripts for this software. For more info, contact us at: info@softronmedia.com.

GPICommander

The Application GPICommander can control one or more "GPICommander 2" boxes via USB. These boxes have 8 GPI outputs and 24 GPI inputs.

The boxes can be connected and disconnected while the Application is running. When a box "GPICommander 2" is connected, and if the software "GPICommander" is correctly installed, a window shows up, enabling to control the box. All inputs and outputs are seen and can react immediately.

Every GPICommander box has a unique Serial Number indicated at the top of the control window.

It is possible to control all the connected boxes manually, but you will surely control it via external Applications (like OnTheAir Video or TVPlayer).

For that use, GPICommander is entirely scriptable, which means that it will be controllable by other programs with AppleScripts. This language is widely documented and the example given here allows you to understand quite fast its syntax.

GPICommander and AppleScript

The general idea is that you set first to whom you want to talk (to which Application AND to which box, AND to which input or output) and then to give it a command with its arguments.

1. Tell Application
Every AppleScript talking to GPICommander will have to start with "tell application "GPICommander"". This command says to the Application GPICommander that you'd like to talk to it. The Script must end with "end tell" to specify that we are finished talking with it.

2. Tell Device
Then, as there might be several boxes connected, you must tell to which box you'd like to talk. This box can be defined by its serial number or by its position (if there's only one box, you can only specify its position). Here also, we start with "tell first device whose serial is "00002951"" and we finish by "end tell" (before the "end tell" for the Application).

3. Tell the action
Then you'll have to tell what action must be made on which input or output. Here are the actions that can be made:
* set state of output 1 to TRUE
* set state to input 1 to FALSE
* set state of every output to FALSE
* set state of every input to TRUE
* get state of input 2
* pulse output 3

You should know that:
* TRUE = relays closed
* FALSE = relays opened
* pulse = sends a "pulse" of 1/60 second on one of the outputs.

All these Actions can be combined and used in the same Script. In the examples above, you can replace the inputs and outputs number, or replace TRUE by FALSE. You should start doing and testing your own scripts with the examples given with the Application GPICommander, and with the examples page 57.

Examples

With two boxes GPICommander 2:
```
tell application "GPICommander"
        tell first device whose serial is "00002951"
                set state of output 3  to TRUE
        end tell
end tell
```

With one box GPICommander 2 (then you don't enter the serial number):
```
tell application "GPICommander"
        tell first device
                set state of output 3  to TRUE
        end tell
end tell
```

You can also read the state of any entry:
```
tell application "GPICommander"
        tell first device
                get state of input 2
        end tell
end tell
```

You can of course combine the commands to make actions on different outputs or inputs simultaneously:
```
tell application "GPICommander"
        tell first device
                set state of output 3  to TRUE
                set state of output 5  to FALSE
        end tell
end tell
```

or:
```
tell application "GPICommander"
        tell first device
                set state of every output  to TRUE
        end tell
end tell
```

or:
```
tell application "GPICommander"
        tell first device
                pulse output  3
        end tell
end tell
```

Informations and future evolutions

The syntax is not very complex and there are many Manuals on AppleScript so that you can learn more.

Among the coming functionnalities, it will be possible to attach different scripts to every input so that it will start actions according to the state of the inputs.

You will also be able to send informations on a serial port via AppleScript and the Application GPICommander (The box "GPICommander 2", will not be useful anymore then).

For more informations, feel free to contact us at:
info@softronmedia.com