The new way of AV-programming

IMAGIX 5

User Manual

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Content

The AV-Software Imagix 5

General information

Imagix 5 is based on a strongly object oriented operating surface. It is not a development of our previous commandline structured programs, butba complete new development. Once the general oerating principles are understood Imagix will become a tool with which,slide shows can be create intuitively. This handbook is designed to help in this process.

Introduction

The handbook has tree parts.

In the first part we will produce some dissolves and add audio. We call this "the first experience". An initial feeling for the program will be developed without getting lost in it's depth.

Part two, the AV programming with Imagix 5, is the main part of this handbook. Step by step we will explore the different elements and windows of Imagix. It is like a workshop, designed to try out immediately. You will be given additional tips and tricks, which will make the use of Imagix easier. We will also cover special subjects, such as Speaker Support Shows and File Safety. Through some technical explanations we will help you understanding this part.

The third part, the Settings of Imagix, will cover all adjustments and the operation. Every subject and point will be discussed. Reading this part will help the further understanding of Imagix.

Freiburg, Germany - January 1999

– space for your own notes –

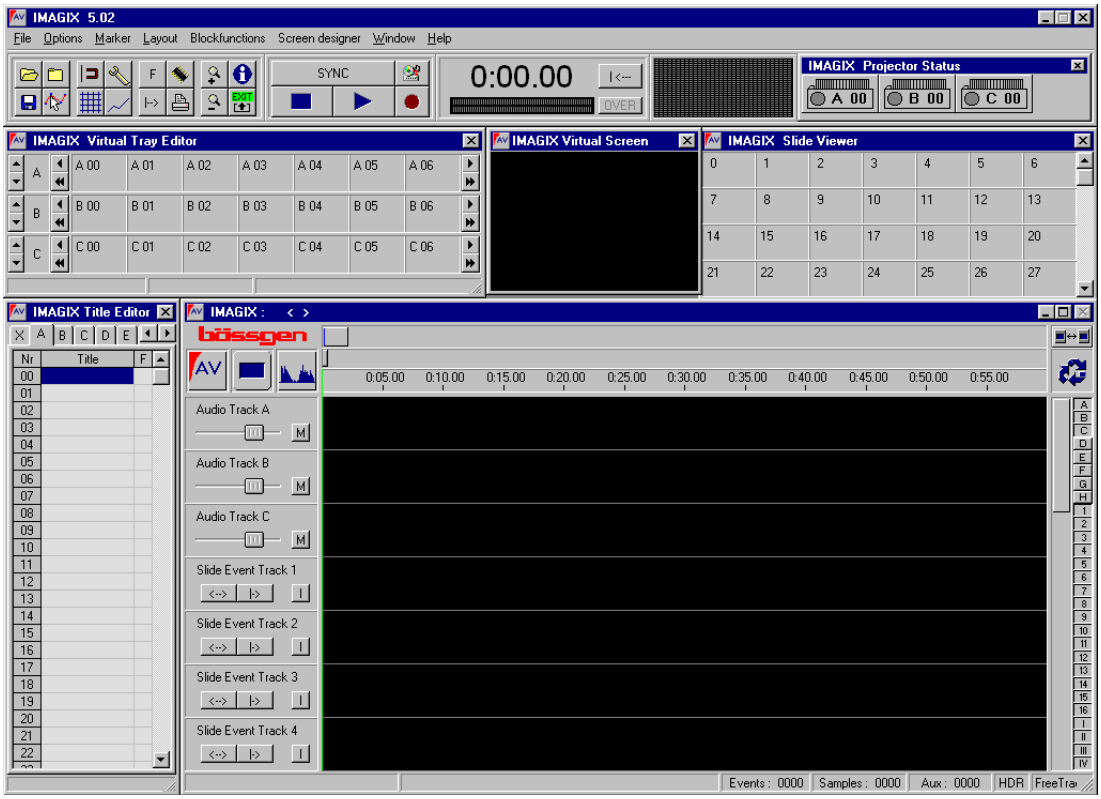
The first experience

To provide you with an overview about the concept of Imagix 5, we will provide you with a small example.

We will create a dissolve with some sound track added. All the individual steps will be explained later.

The Beginning

Please start Imagix 5. The initial screen should look like this:



Imagix 5 is object oriented. Therefore we want to introduce the two most important objects, which have to do with slides: The "slide-object' and the "slide-event".

The 'slide-object' represents the real slide, which you will have later in the projector. A slide-event is always in a virtual tray or on the virtual-light box. It can have a name or be combined with a bitmap. Each slide which will be used in the projectors must be represented in Imagix through a "slide-object".

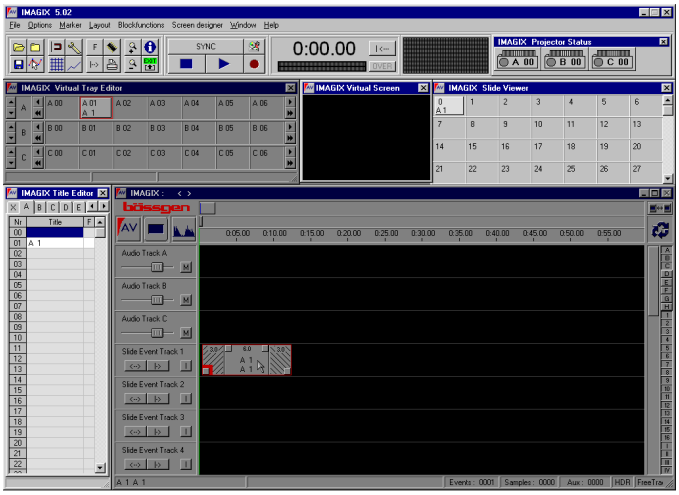
The "slide-event" on the other side, explains the appearance and disappearance (dissolve up and down) through the time, fade-up rate, on-screen time, etc.. The slide-events will appear in Imagix in the arranger tracks on the common timeline. A "slide-event" without a corresponding slide-object is not possible, since it makes no sense to describe a fade-up of a non existing slide. However there can be several "slide-events" which use the same slide, i.e. multiple fade-up [of the same slide]. The most time during programming you will spend with the manipulation of the slide-events.

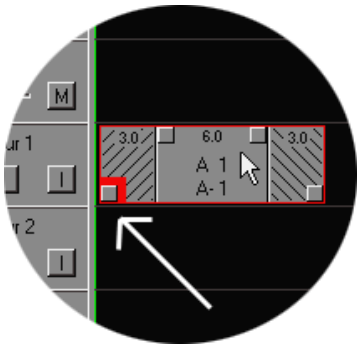
The first Slide Event

We will now produce a slide-event: Using the "Drag and Drop" (click the item with the left hand mouse button, hold it down and pull to the required location and release the button) move a slide to the slide tracks. There are three sources from which we can create a "slide-event".

1) You pull the required slide-event from the virtual light box to a slide track. This is most logical if you work with scanned images. The order of the pictures on the virtual lightbox has no bearing for the order of the slides in the slide trays or the projector assignment. This process is later done automatically by Imagix.

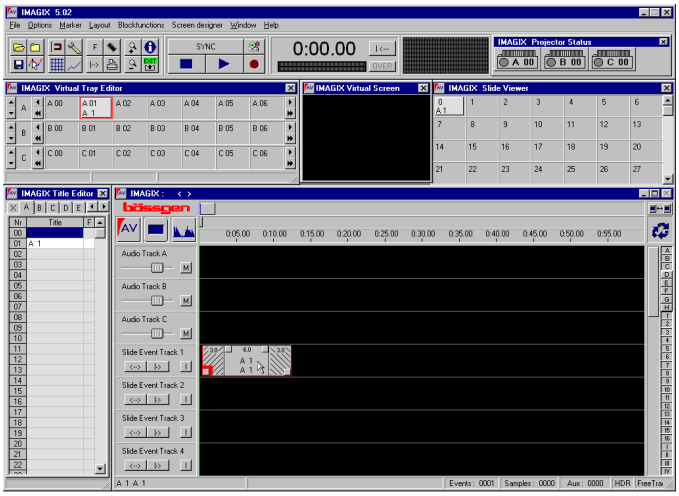
2) You pull the required slide per "drag and Drop" from the virtual tray editor. This method allows the specific selection of slides from the slide trays. If Imagix discovers that the required slide can not be shown, due to conflicts with the projector stepping time or because the slide is currently being projected, a red bar will be shown at the beginning of the fade-up of the slide-event in the timeline (see picture).





3) You pull the slide via the function "creating slide-event" on to the time line.

This function automatically selects the next available projector. In case of a 2 projector show the order is always A-B-A-B-A, etc. .

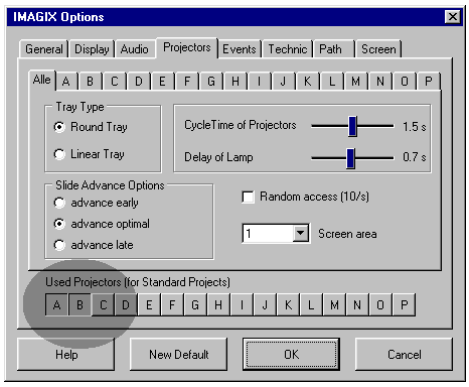


This method is ideal for fast operation. Imagix creates automatically "empty" slide-objects, if there is no actual slide in the required position. (Slide-Events without a slide-Object is not possible.)

To ensure that this automatic positioning works well, the correct number of projectors must be entered in the menu " Options"! (During the first installation of Imagix three projectors ABC are set.)

The key with the tool symbol will provides a short cut to the menu "Options".

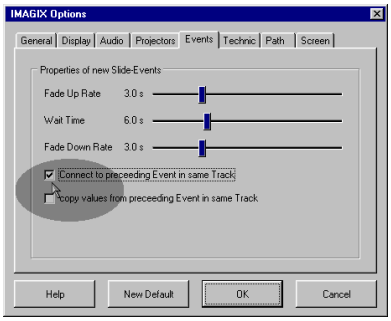
In the menu Options under Projectors, you have to select which type of projectors you will use for the presentation. If your event tracks are still empty, Imagix will start with a event for projector A. If there are already events placed in the tracks, than the positioning of further events will depend on these. As you 'drop" the event from the computer mouse, Imagix will determine the positioning. If you want, you can later change this, i.e. through the changing of the slide order in the trays.



Note:

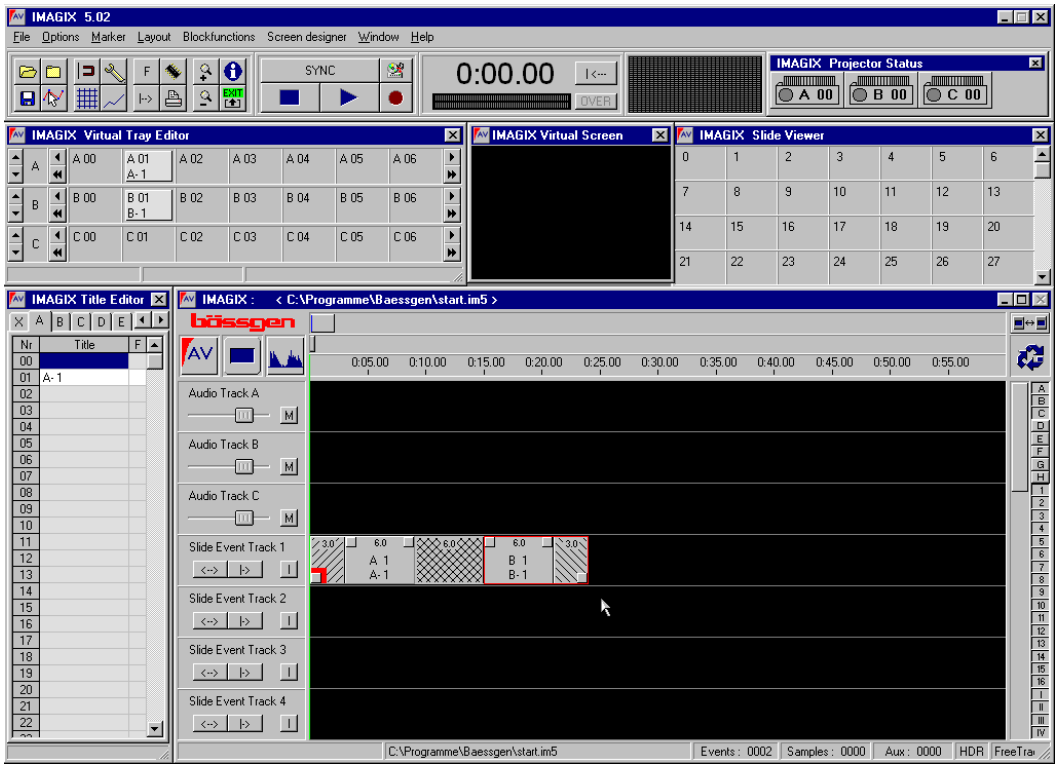
The slide event tracks do not have a projector designation. You can place events for any projector on any event track at your discretion. Imagix operates exclusively time based. This means, that anything, which is located at a specific time event on any of the tracks, will be executed. If you produce a conventional 2 projector AV, all dissolves could be on just one event track.

If you connect the second slide event to the first one, Imagix will automatically create the dissolve if under "Settings" in the "Option Menu" the "connect to the left neighbour" option has been selected. Is this point not activated, the dissolve must be set manually. To do this, click over the right-hand slide event the right-hand mouse button. From the menu select the function "Connect".



You have completed the first dissolve! Alternatively you could position the two slide-events on to two different event tracks. If you now slide the fade-up phase of one event over the fade-down of the other a dissolve will also be created.

Your monitor screen should now look like this:



If you now press the button Play in the Imagix software, the "locater" will start to move and our dissolve will be executed. You can monitor this without any projectors connected. The projectors in the status window top right hand always display the current condition and therefore the dissolve.

If everything you did as instructed, projector A will fade up in 3 seconds, holds for 6 seconds and fades in 6 seconds to projector B. This one will also hold for 6 seconds and than fades out in 3 seconds.

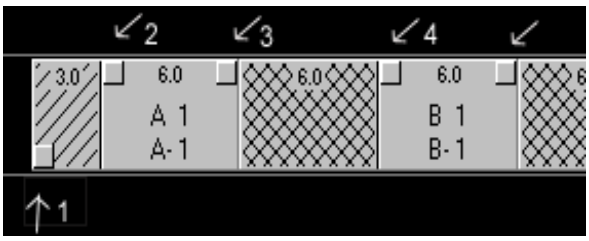
Any further dissolves will be produced according to this example.

These early slide-events have been produced without the use of digitised images. How we can later add bitmap's or how we can work with digital images right from the start will be explained later.

Modification of dissolve and standing times.

Place approx. 4 dissolves as explained previously, with 'connect' on to the event track 1.

To change any of these dissolve or standing times you will use the handle located on all events.



Slide events are positioned on the slide event track according to time, any change in the dissolve rate will change the standing (hold) time of the slide. If you move, for example, the handle of event 4 to the left, you will reduce the dissolve from slide A1 to B1. At the same time you increase the standing time of slide B1. This allows corrections within the slide show without effecting the programming of following sequences. If you wish to retain the standing time of the slide you can click the centre of the slide-event and move it left or right. Now the time adjustment will take place at the next dissolve (increase or decrease). If you move, for example one slide event to the left, you will shorten the dissolve from the previous slide and increase the dissolve to the next.

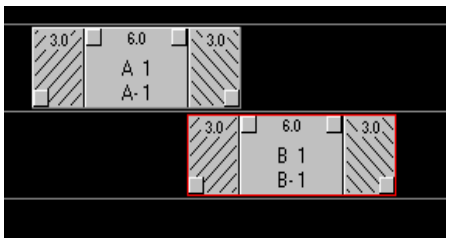
The duration of the dissolve and standing times will be displayed in seconds. The most important work in the production of a slide show is the adjustment of dissolve and standing times. Therefore you should play a little bit with the event handles and observe the results.

Summary: Working with slide events.

A slide-event can be created via "drag and drop" mode. As a source we can use the virtual light box, the virtual tray editor or the automatic function "create a slide event".

The created slide-event can be positioned on any event track. Activating the function "connect" between two slide events on the same slide track will create dissolves. This is done either automatically through the Imagix Option "connect to the left neighbour" or via the right-hand mouse button and the selection "connect".

All tracks in Imagix are played simultaneously; it is possible to create dissolves across two slide event tracks. To achieve this both slides must be located with s side shift, so that the fade-down of the first slide corresponds with the fade-up of the second slide. At fist sight this method appears to be more complicated, since any change of the dissolve time must be done individually for both events. However this method allows for asynchrone dissolves, during the fade up and fade down rates are not identical.



Clicking the right hand mouse button at the function "Connect" can do the release of previously 'connected' dissolves.

If the dissolve time has been changed using the handle, so will the time correction be done via the standing time (increase or decrease) of the event.

All slide-events have a handle with which the stand- and dissolve time of the events can be varied. If through movement of the total event the dissolve time has been increased or decreased, the corresponding adjustment will be done by increasing or decreasing the dissolve time of the next event. To change the total event, click with the mouse in the centre of the event and drag it.

In all cases applies the absolute time scale in the top of the arranger window.

Audio Events

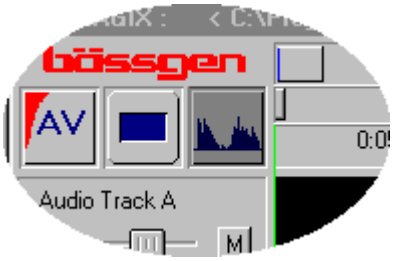
Now, that we have understood the basic principle of a "slide-event", we can look at the audio-event. Analog to the slide-event describes the audio-event the appearance or disappearance of a 'sound-element', which in hard disk recording we call a sample. In Imagix the audio event is located in the sound tracks of the arranger and is indicated through the Wave-data mark, a datafile of digitised sound.

The Audio-Event also includes a volume curve and fade-in and fade-out information. The audio-object related to this event is in fact a Wave-File. As in the slide tracks it is possible to have several audio-events, which relate to the same wave-file. This means that several samples of the same sound (wave file) can be used in the show.

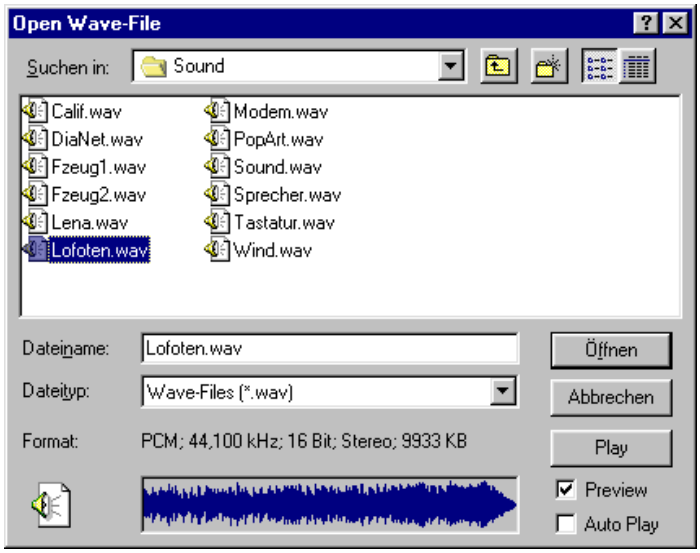
The First Audio Event

Now let's bring sound to our first trial project. First we need the sound we want to use as a datafile in our computer. It is possible to record sound, via the sound card into data files. If you have, however, a suitable CD-Rom drive, it is also possible transfer Audio-CD data, without any quality loss directly in Imagix to the hard disk. Further it is possible to use in Imagix Wave files which have been recorded with other programs. The recording of a wave file will be discussed at a later stage. We will use a wave file, which is already on your hard disk.

If you have installed Imagix 5 and the samples and examples from a CD-Rom, you will find in the folder C:\Programs\Baessgen\Sound the Wave-files. All wave files you want to use in Imagix must be in the following format: Stereo, 16 Bit, Sample rate 44.1 kHz.



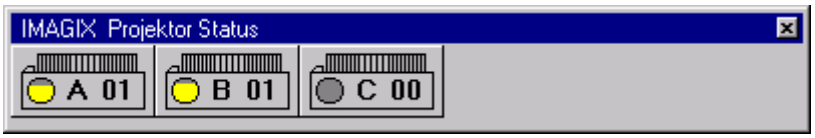
To create audio-events we use the right hand of the 3 switching surfaces. As soon as we click this switch appears the dialog for the wave-files.



The selected wave file from this window hangs on the mouse pointer and can be positioned in any of the audio tracks.

After a short time the volume graph becomes visible. Through the selection of "Preview" it is possible to see the file.

Now we can see the sound and image elements in the tracks, Through selection with the mouse we can move them on the common timescale. We can also move the "Locater", green, to a particular location and play the selection by activating the Play button. The sound can be heard through the sound card and the condition of the projector can be observed in the status window,



Conclusion

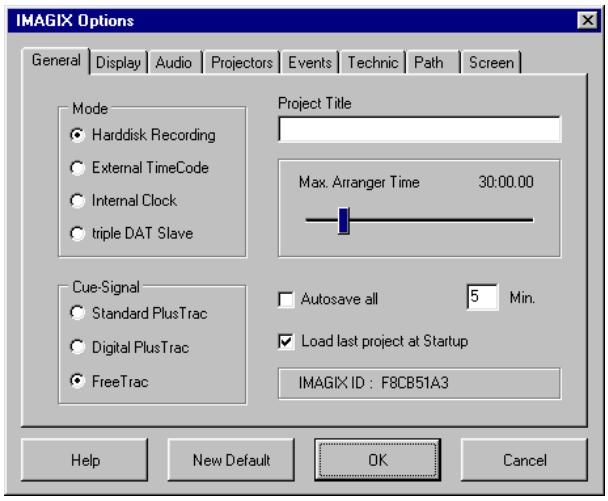
Through this basic example, we have made contact with the working surface of Imagix 5. We have learned about the basic-objects, which enable us to create a slide show. In the next chapter we will discuss the individual elements of Imagix in more detail. After a short overview of the operating elements, we will start with the "Arranger", that is the complete time management of all events and tracks in which we arrange everything we want to hear and see.

See + listen is AV. Imagix 5 is a tool to create AV visually.

AV Programming with Imagix 5

The Operating Modes

Imagix 5 can be operated in several operating modes. The most common one you are going to use is "hard disk recording". In the window "options", which you can reach through "Options" - "Settings", you can select the operations mode.



In the mode "hard disk recording" the sound operation is active, and sound and control of the slide is synchronised and simultaneously played. The three remaining operation modes are only here to maintain backward compatibility to older Imagix versions. With all these operating modes is the sound operation inactive. "External TimeCode" means, that the playback position will be synchronised to the timecode provided externally to the control unit. (The control unit must be connected to the PC). "Internal Clock" means that Imagix is controlled from the internal PC clock. This operations mode will also work on PC's without any sound card installed. The mode "Triple DAT slave" has been included for use in conjunction with the hard disk recording system 'triple DAT Version 2.3' by the company Creamware. If both systems are operating simultaneously, Imagix will synchronise to the sound of triple DAT.

In most cases you will use the standard operating mode "Hard disk recording", which is pre-set.

The Control Signals

Imagix 5 knows three types of control signals:

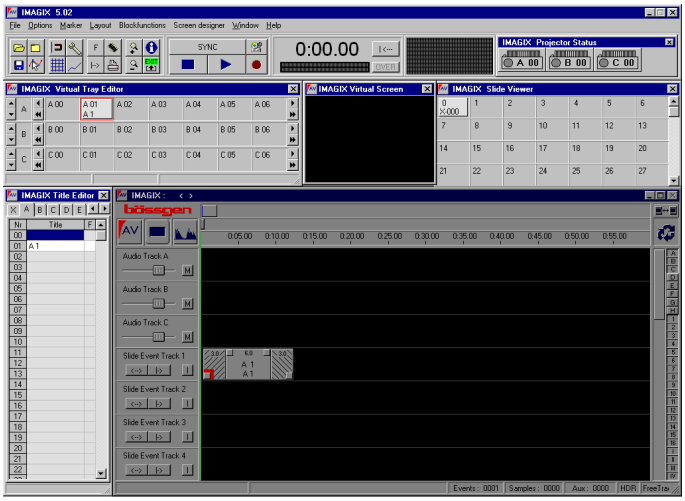
"Standard PlusTrac" - the control signals will be transferred via the RS 232, serial connection to the control unit, which than will generate the cue signal for recording on to compact cassette. In this setting Imagix 5 will also work with older units, such as TCX-4040, UX-Time, TXQ-2020 and UX-Mega.

"Digital PlusTrac" - uses the same control signal, which also is compatible to earlier control units. But instead of sending the control command through the serial port, the signal will be encoded into the last bit of the sound-data. It can only be used if a sound card with digital-output (i.e. SoundBlaster AWE 64 Gold) is installed. If, at the end of the production, you 'burn' a CD and use older control units together with the Digital Decoder DX-1 is this the correct operating mode.

"FreeTrac" - is the universal digital signal, which can be directly encoded into the 16th Bit of the audio signal. If Imagix is used together with a unit of the series BASIX, TRIPLEX or QUATRIX, and the playback medium is CD or DAT, this mode should be used.

"Standard PlusTrac" should be used with the memory function in the control units. See also the chapter "speaker support".

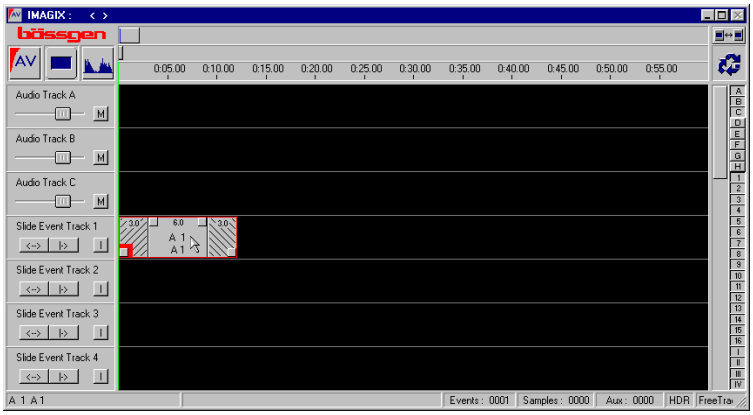
The Arranger



The arranger of Imagix is the working platform on which you create you slide show. The arranger works along a time line. This means the timeflow is from left to right. The time scale applies to all tracs. Here you compile the production visually, using the different events. Exactly, you formulate your ideas and Imagix tries to realise them together with the real hardware.

The time sector you can see in the arranger can be adjusted with the slider above the fist line in the arranger.

The Basic Function of the Arranger



Up to 8 Audio tracks (stereo), 16 slide event tracks and 4 AUX event tracks (for relays and 10V control) can be activated in the main arranger field.

The tracks can be made visible or hidden through the buttons on the right side of the arranger. The tracks can be switched on and off at any time during the production. Events on the tracs not visible are not lost and will be played back. If you want to change the order of the tracks, just "drag and drop" the buttons to any other position.

The buttons will be arranged in the new order and the tracs will be sorted accordingly. If you want to erase (Danger!) all events on one track, just pull the button into the recycler. Imagix will query you again if you agree to erase all events. If you agree they will be lost.

These functions work for all types of events. Imagix 5 tries, as far as possible, to treat audio, slide and accessories equally.

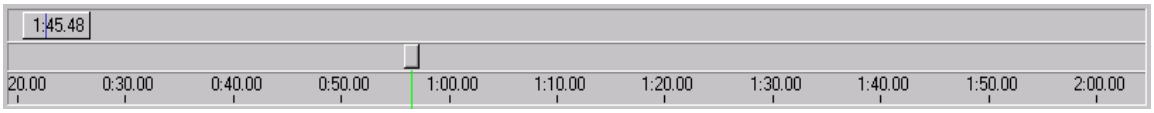
The Navigation within the Arranger

The vertical navigation

You can switch all tracks visible or invisible with the buttons on the right hand side of the arranger. However often all the tracks will not fit onto the screen. At the left hand side of the arranger is a slide, which allows sliding the tracks up and down within the visible window.

The horizontal navigation

The arranger window always displays a certain part from the time scale. This part can be adjusted in a wide range. Sometimes you will need a very high resolution, a detailed view, at other times you will want to have a general overview over a broad time scale, without the need to see details. At the top of the arranger are three scales:



The lowest one always contains the time scale. The scale applies to all tracks in the arranger. Imagix 5 always tries, depending on the resolution, to display even numbers. (Lines displayed are the basis for the raster function). In the centre field you can grab the locator and move it. (This is also possible in the remaining arranger tracks, but only outside the events). The top scale uses a different time scale. You can always see 0:00 on the lest hand border to the max. arranger time. Of the totally available time, the slider always shows the proportion of the currently visible time.

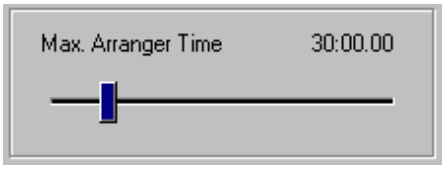
If you move the slider you select a different display in the same scale. If you grab the slider at the ends you can also extend or reduce it in size. This changes the scale. The changes are immediately displayed in the timescale. At the release of the mouse button the arranger tracks will be re-drawn.

It is possible to achieve an even more detailed view, than with the slider. Within the time scale you can pull a sector open with the right mouse button. This sector is marked in blue. After release of the mouse this sector will become the view in the arranger.

Another navigation possibility is possible by double clicking the slider (careful!). Your total arrangement becomes visible. Repeating the double click and the previous view is restored.

The display can easily be enlarged and reduced with the two zoom buttons. Imagix tries as far as possible to maintain the locater position. Before you use the zoom button, position the locater to the point you are interested in.

The max. arranger time can be preselected under "options" at the page "General". Here you can preselect the approx. length of your production. You can change the time at any time afterwards.



The different Track types

Imagix uses three different track types. Audio tracks, slide tracks and relays (AUX) tracks. To the left of each track is a field at which the characteristics of the track can be adjusted. With the right hand mouse button it is possible to open the setting menu for each track for adjustments.

The Audio Track

With the slider it is possible to adjust the volume of the audio track or with the switch M it is possible to mute to whole track.

Muting allows the easy trial of two different sound passages together with a narration. To achieve this, the different sound tracks have to be positioned on two adjacent tracks. Each track will than be muted alternatively during playback. This feature is also ideal for multilingual productions.

With the right hand mouse button it is possible to open the setting menu.

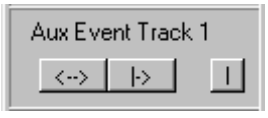
The volume and the balance can be adjusted. Muting is also possible. The reset button will reset the volume exactly back to 0 dB. In the entry field it is possible to enter a track name.

The Slide Track

All events of the track can be selected with the left-hand button. With the centre button all events from the position of the locator will be selected. The selected events are marked with a red frame. By clicking any event the selection will be cancelled. With the right hand mouse button you can switch the track inactive. It will than be ignored during playback.

In the entry field it is possible to give the track a name.

The AUX-tracks



Similar to the slide tracks it is possible to select certain segments. The track can be given a name via the entry menu.

Creating Events

On the left top side of the arranger window you will find three further buttons.

The first "AV" is used to create a relays or 10V command. With "Drag and Drop" you can create a new relays event on a relays track.

The second button creates a new slide event. You press the left hand mouse button and hold it down. Than you drag the mouse to the point in the track where you want to place the event. It is defacto a "drag and drop" procedure, which drags a symbolized slide into a slide event. Imagix also creates at the same time a new slide-object and paces it into the tray of the next available projector. The projector selection is fully automatically.

You can also create a slide event if you drag with the mouse from the virtual tray editor or from the virtual light box into the slide track. In this case the slide-object must have been created beforehand. Slide-objects can be created either manually through the context menu of the tray editor/light box, or through importing of a digitized picture, which creates the slide-object automatically.

With the third button you can load Wave Data (Audio-Events) from the hardisk into the arranger. A communications window will be opened automatically to enable you to select the Wave file. Once you have selected the file, it will defacto 'hang' onto the mouse until you drop it into a free space in the audio track.

*If you load a wave file for the very first time into Imagix, a wave graphic will be calculated by Imagix, for the control of the volume levels. This can take a few moments. In the lower left hand corner of the arranger window you will see a subsequent information. The wave-image data has the extension *.sdd. If you should erase this, Imagix can recalculate it at any time again.*

To the right of the arranger you will find two buttons. With the top one the slides will be distributed from the arranger into the trays if the slide vents have been created from the virtual light box. The distribution is done automatically and will consider availability of projectors according to the selected transport speed of the units.

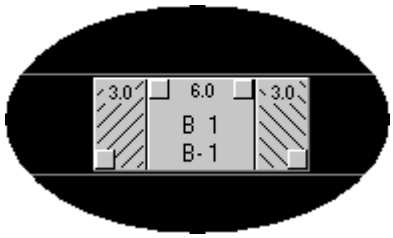
The recycle symbol stands for exactly that. Via drag and drop you can pull events from the arranger onto this symbol and subsequently erase the event. It is effectively the opposite to the three buttons on the other side.

If you click with the right hand mouse button at any event in the arranger, the context menu appears. You will require this function from time to time. With the menu " properties" you can open the event-ditor. Before we describe the individual menu points, we want to start another practice example.

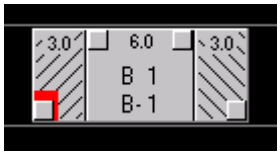
Workshop Arranger

The use of Slide-Events

We have now discovered how to create slide events. Now move some slide events into the slide tracks. We have also seen how to 'connect' several slide events together. With the handles we can change the stand time and dissolve rate.

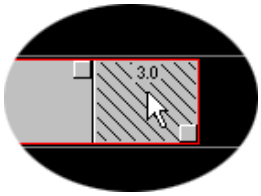


Now place a single slide event into a track. You see the fade-up phase, the stand time and fade-down phase. Now grab the slide-event at any of the four handles and move it a little bit. You will see how the size of the field will change. This is how events can be changed according to our requirements. If you grab one of the fields with the diagonal lines in the centre, you can move the whole field. The centre part of the event is the handle for the whole event. With this the vent can be moved along the timeline. If you grab the centre area at the top between the two handle, where you can see the number 6.0, only the centre part will move. Through some trials you can see how to manipulate an event. The good thing is that you don't have to worry about the slide change command. With the slide-event we program our requirements and Imagix automatically will add the required slide change events. If this should not be possible, Imagix will show us this by adding a red mark within the vent. If you now play a bit with the slide-events you will see that it is very easy.

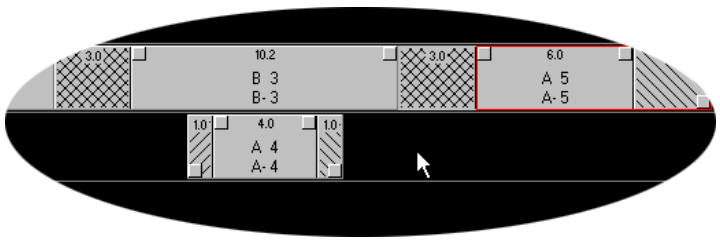


Slide Superimpositions

At first we will create a simple superimpose of a title and refine it with the lowering of the lightlevel of the background slide.



First we extend the stand time of the last slide to 10 sec. To do this you click with the mouse in the cross haired field of the last slide-event and move it by holding the left mouse button down to the right. By doing this we extend the stand time without changing the fade down rate. Next you drag the next slide from the tray editor of the next projector (in this case a slide from projector A) on to the slide vent track and further the fifth of the projector A on to the slide vent track 1.



If a red bar should appear in any of the slide vents, the transport cycle of the projector is insufficient. In this case you need to change the dissolve rates and stand time to allow more time for the projector to step.

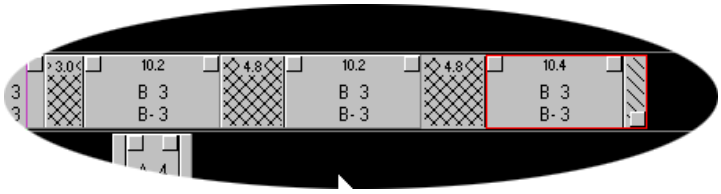
Since Imagix operates simultaneously on all tracks, the slide A-4 in our example will be faded into slide B-3.

Since superimpositions of slides into images with full brightness level are hard to view, we need to reduce the brightness of the background slide.

To do this we first remove the slide A-5 in our example. Click on the slide vent and drag it on to the recycle symbol. It will now be removed from the arranger.

Since we want to reduce the brightness of the background slide only during the superimposition, we need two additional 'duplicates' of the slide event. We create these by clicking with the right mouse button on the vent and selecting "duplication". The dupes are being dropped onto the slide vent track 1 after the original event. Connect these with the command "connect".

The screen should now look about like this.

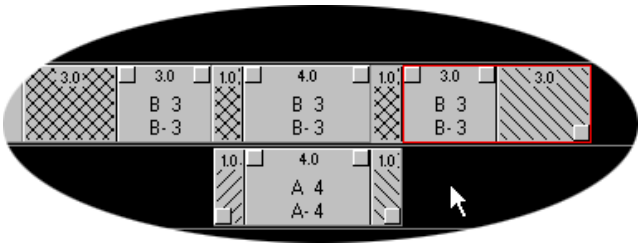


Since the background slide should only be on the screen for 10 sec. we must now adjust the timing. After the adjustment the screen should like this:

The background slide stands initially for 3 sec.

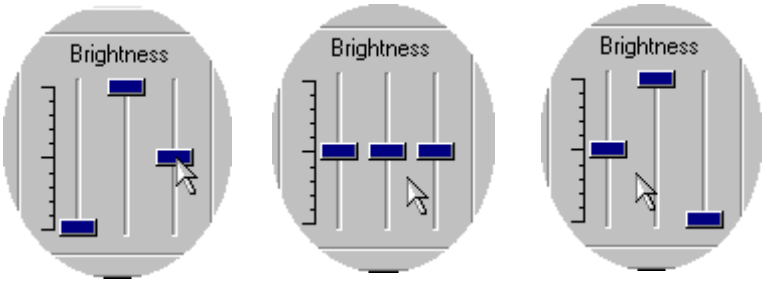
Than the superimposition runs for 4 sec.

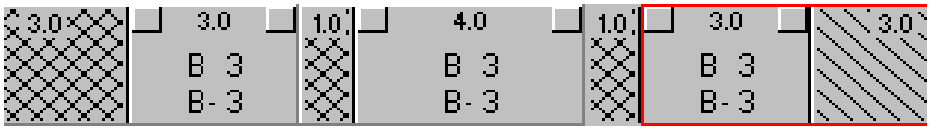
At the end the slide stays again for 3 sec.



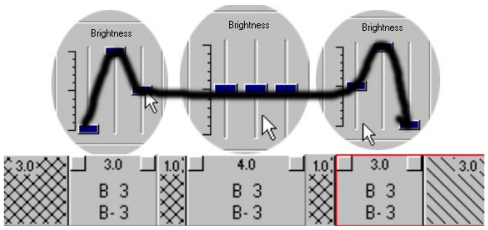
The fade-up and fade-down time for the title is 1 sec. respectively.

Now we must only reduce the light level f the background slide. With a double click on the first of the three of the B-3 events you open the slide-event-editor and adjust the brightness with the slider to 50%. Therefore the slide will be faded to 50% in the next dissolve phase.





The three sliders in the second slide-event-editor will be set to 50% and the third to 50%, 100% and 0%.



If you now draw a line in your imagination along the brightness slider you can see the lightlevel flow of the slide.

We will discuss the slide-event-editor and it functions later in detail.

We insert Sound

In the following exercise we will insert sound into our project. For this we will require some audio recording as a WAVE file on the hard disk. Imagix 5 offers you two alternatives to aquire sound from outside the computer.

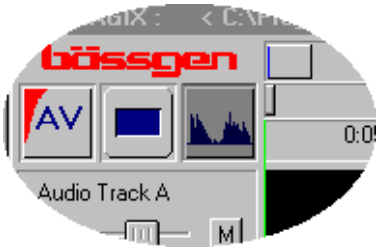
1) Recording through the sound card
2) Direct digital copying from an Audio CD

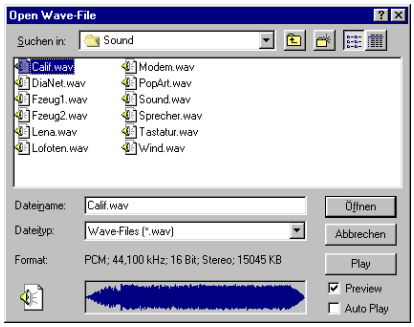
You can also insert Wave files, which you may have created with another program into any Imagix 5 arrangement.

Please note that Imagix 5 will only accept sound files in Stereo, 16 bit resolution and 44.1 khz sampling rate. If you record sound files with Imagix 5 these prerequisites are automatically met. If you transfer files from other programs you have to watch out for this.

Both recording techniques will be discussed later. For our example we will use the files, which we installed from the Imagix CD.

Through the button "Create Audio Events", you can select a Wave-file.





After opening the file will be attached to the mouse pointer and can be positioned at any free location in the audio track. If there is not enough space in the audio track the cursor will change to a crossed-out circle. It does not matter at which audio track you drop the Audio Event, as all audio tracks are equally rated.

In our example we will drop the event on to audio track A, at the location where the audio track should start. After a short delay, during which Imagix calculates the graphic display, the waveform becomes visible. Next to the tile we can also see the length of the file and the graphical display of the volume.

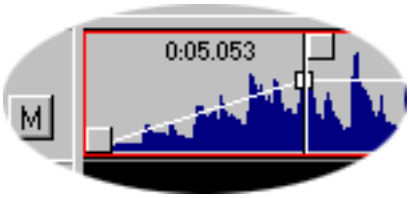
To help the overview we will now give the audio track A a new name. Altogether we will use in this example 3 audio tracks for the sound production and one as a deposit track.

To change the name we click with the right mouse button at the text "audio Track A". After clicking with the left mouse button on "properties" we get to the properties window of the audio track. In the text field we can now change the track name into 'Music Track 1". Clicking OK will accept the change and we get back to the arranger.

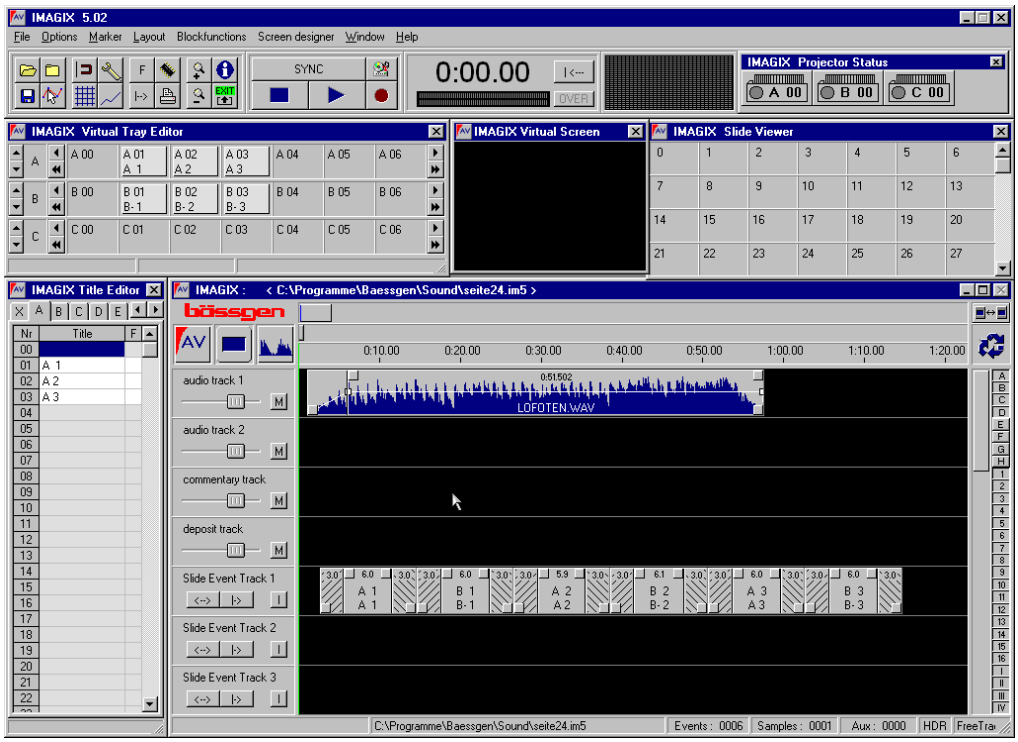
In the same way we change the audio tracks 2,3,4 into 'music track 2', 'commentary track' and 'deposit track'.

Note: The deposit track is used to place music tracks for later selection. If we want to listen to a track, we may have to MUTE other tracks temporarily.

With the handles on the Audio-Event we can, as with the slide-events, change the fade-up and fade down time and the length of the audio event. This way we can work very fast and comfortable. For more extensive audio work we can also switch into edit mode and the cutter.



Our screen should now look like this:



Summary: Insert Sound

To insert sound elements into Imagix 5, we use the function "create audio events". This creates a new event, which relates to a wave file, which is on your computer hard disk. The wave file can be created with Imagix 5 or another program.

The audio event indicates a wave file. You can, for example, create 5 audio events, which use the same wave file. The wave file needs only to exist once on your hard disk. Imagix will than access the same wave files at the different locations in the show. The audio event is in this case a decription of when which part of the audio object will be played. It is similar to the slide event.

The created audio event can further be worked upon.

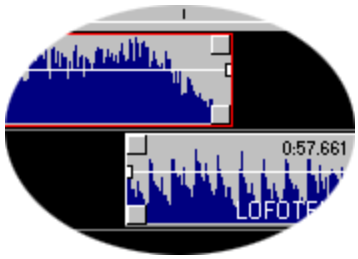
Sample Sound Adjustments

Next we will import a second sound sample for sound cross fade and insert of a command track.

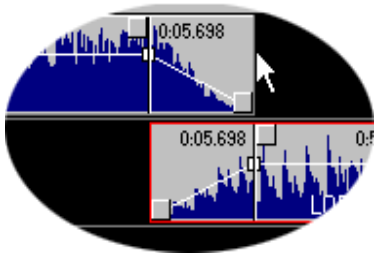
The second sound file is to be positioned on audio track 2 and a commentary file on to the deposit track.

Now you mute the commentary file by using the "M" button at the deposit track, since we only later insert the commentary into the right place. The second music file will be cross-faded with the first music on track 1 over 5 seconds.

Music Cross Fade



Its is very easy to create cross fades using the handles of the audio event. Since Imagix cross fades the sound in real time during play back, you can place the locater directly in front of the cross fade and press the play button.

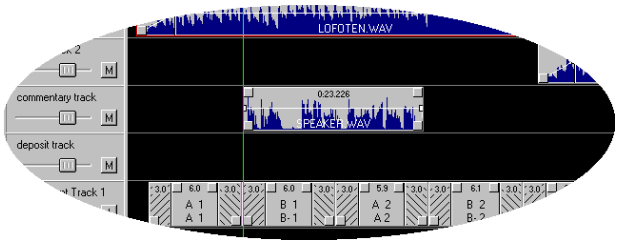


If the cross fade is either to long or to short or at the wrong place, you can move the music sample or change the cross fade using the handle.

Insert Commentary and reduce music level

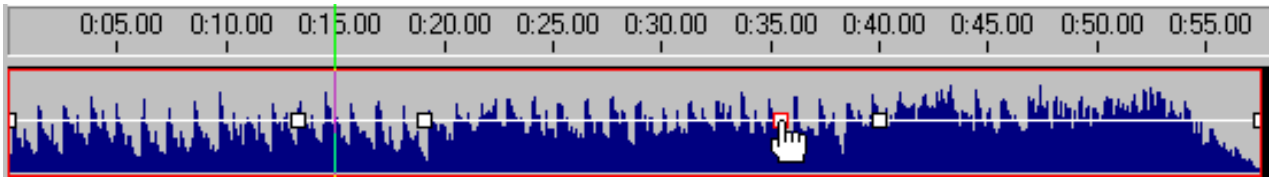
After we have mixed the music we can insert the commentary. The commentary should be faded in with slide "B-1". To achieve this we slide the sound from our deposit track to the commentary track.

When the commentary starts we want the music to be reduced, so that the intelligibility is improved.



To achieve this we use the edit-mode of the audio tracks.

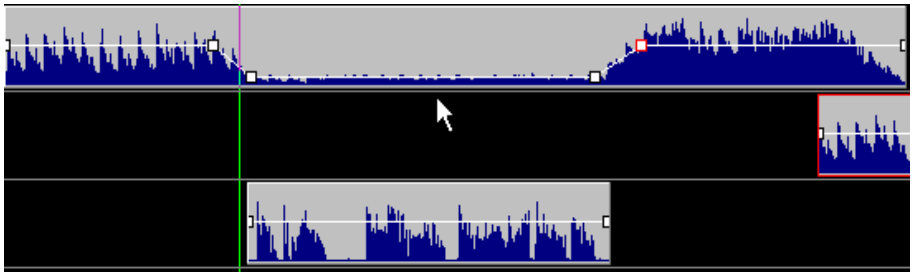
Clicking with the right mouse button on the music sample on audio track 1 the context menu will be opened. Now select the "edit mode".



In edit mode the display of the audio file will be slightly changed. The handles at the corners are missing, but we can create special handles by double clicking on the white line (the sound level curve). These handles can be moved up for volume increase (careful danger of over modulation) or down for volume reduction.

To reduce the volume for our commentary we need 4 handles. These don't need to be created at the right spot, since it is possible to move them along the volume level curve. When the mouse indicator with the hand appears you can move the points while pressing the left mouse button.

Pulling the two innermost handles down, you can create the sound level drop of the music. Place the locater in front of the reduction and press play.



If you discover during the test play that the volume level is still too high, you can move the handles further down. You can also group all handles by opening a field using the right mouse button and move them all together. This is very practical if you move the commentary to a different location. You only need to mark the level drop in the edit mode and slide them. To relocate an audio event in the edit mode is not possible. For this you must leave the edit mode first.

You can create as many handles as you like and create some very complex volume flows.

The handles can be erased with a double click on the selected handle.

Using the button you can get very quick into the edit mode. 

As long as you are in the edit mode is the effect of the track volume level temporarily switched off. In volume level curve for each audio event is displayed in the edit mode. In the normal mode you can see the result of the cross fade, the volume curve and the track volume level. It is possible that optically a 'jump' is seen when the edit mode is switched on. If the track volume level is set to exactly 0 dB (the buttons "Reset" in the track adjustments) both curves are identical.

Summary: Working in the Edit Mode

Over the context menu at the right mouse button or via the special switch you select the Edit mode.

Wit a double click handles can be created on the white volume level line.

Volume levels can be changed by sliding the handles up or down. Handles can be marked (grouped) with the right mouse button and moved together.

A selected handle can, in edit mode, be removed with a double click.

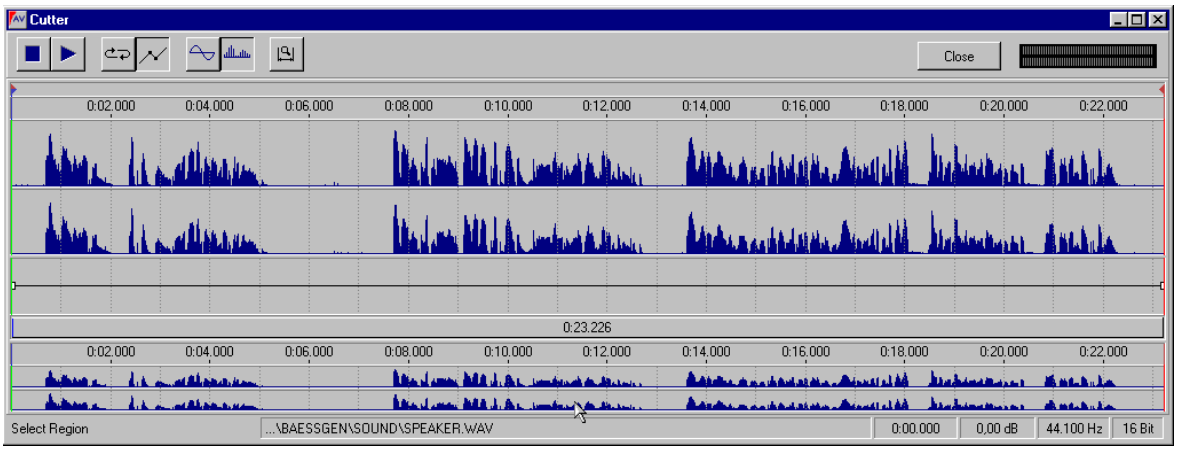
The adjustment of the track volume level is not active in Edit mode.

Cutting of Audio Events

Often it is required that only a part of a music sample is needed or that a commentary must be split to fit the slides. For these functions Imagix has a "Cutter".

To use the cutter you must not be in the Edit mode.

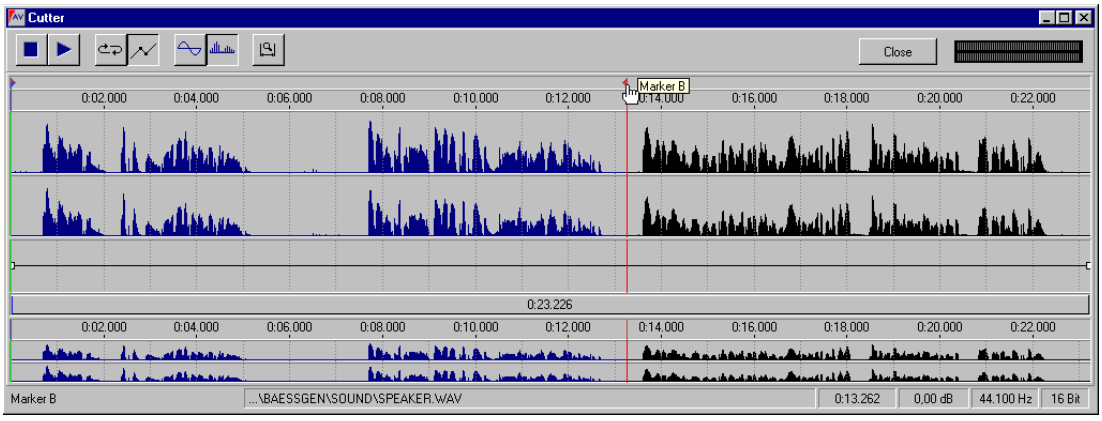
To switch to the cutter you double click on to the sample to be edited or select 'properties' from the context menu.



We will try the audio cut out with the 'speaker' file, which is included with IMAGIX.

The wave display shows you that the text is arranged in three parts. We now want to split the text after the second part. The 'splitted' part will be used at a different location.

Left and right in the cutter you can see two red marker. These will be used to select the entry and exit points of the audio event.

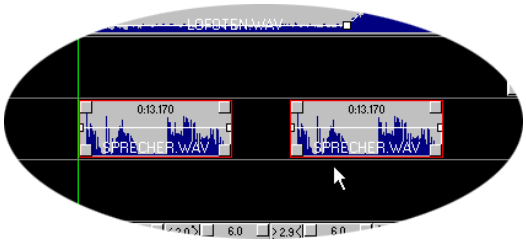


First lets split of the third part. Slide the red marker, while holding the right mouse button down, toward the end of the second part. The black part will not be played any more. Using the play button you can try this immediately.

Now press on 'close'. If you now accept the changes, the audio event in the arranger will also be changed.

Note: Sound work in Imagix is non-destructive. This means your original sample on the hard disk remains unchanged. Even during cutting of an event in the cutter, the original file remains unchanged. Therefore you can reverse any change without having to re-record.

Obviously we are now missing the third part of the commentary. To reactivate this, we make a copy of the audio event. With mouse click right we go into the context menu and select 'duplication'. Now we have a duplicate of the audio event 'sticking to the finger' and can position it at any place of the audio track.



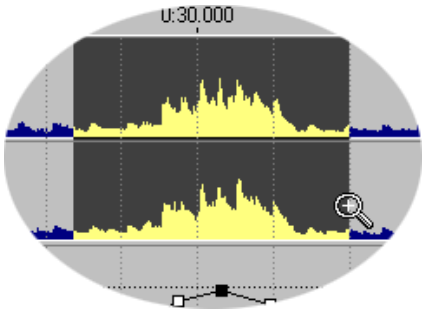
Since we want to stretch the commentary we will place it short after the first part.

Since the duplicate is an exact copy, we need to edit the second part out, using the cutter. Otherwise we would have the second text twice.

With double click on the second commentary wave file can we open the cutter and slide both markers so that the third segment is positioned in between the two.

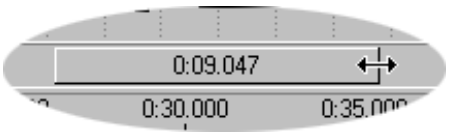
To achieve more exact edits it is possible to zoom within the cutter down to individual sounds within the audio event.

To zoom you press the magnifier button and pull with the right mouse button a field over the required zoom segment.



This will than be displayed over the full window in the cutter. How big the segment is can be read at the timescale.

To change the view size you can also use the time slider under the volume curve. With it you can extend the display again over the whole audio event.



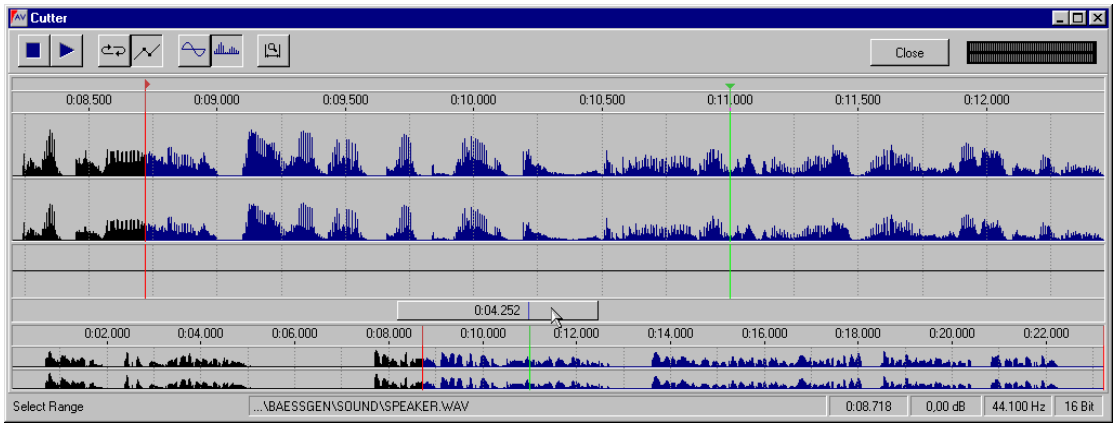
The two windows in the cutter always display the whole wave file, which belongs to the audio event. Including all edited segments. The top display shows the selected segment. In between is the volume curve.

Soundpreparation: The Cutter

In the previous segment we learnt how to use the essential elements of the arranger. Now we want to explore the further possibilities in sound and editing functions.

In the arranger we can now slide the "audio-event" from side to side. Just as a reminder, an audio event describes how a wave file will be played back. Through double click or the selection of the menu point "Properties" in the context menu we can open the cutter. As with the slides, we can go into the details using the double click.

The cutter in overview



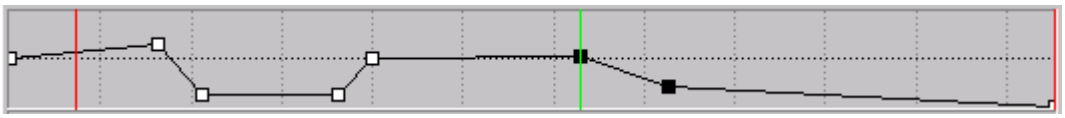
The cutter has two views. The lower part shows always the complete wave file that corresponds to the audio event. The top view displays a selectable segment of this file. Between them we find a slide for the navigation and the volume curve. With the slider the top part can be selected. This works similar to the arranger. If you extend the slider you will increase the visible segment and visa versa. Through sliding to the side a different segment can be made visible.

All manipulations that are done in the cutter are non-destructive. This means that the original wave file will not be changed. As already discussed, the audio event is a description how the wave file will be played. All changes in volume, editing etc, will be calculated only when the file is played. Equally the mixing of the 8 tracks is done in a similar fashion. IMAGIX considers at playback all settings of the audio event and than calculates the settings relative to the individual tracks. Than all 8 tracks will be added up, a time code and cue signal inserted into the 16th bit and the total information set loaded into the sound card. The wave files on the hard disk will only be read. Segments that have been edited out (cut) will simply not be read. Imagix only reads data that are required.

In the cutter are two red markers, the 'start point' and the 'end point' of the wave file. With these parts at the beginning or end of the wave file can be cut away. Just move the markers with the mouse and the parts outside the will not be played anymore. Since this feature is used very often a separate function is available for this. In the arranger are two 'lower' handles. If these are used to shorten the sound, the markers will be adjusted at the same time.

The Volume Level Curve

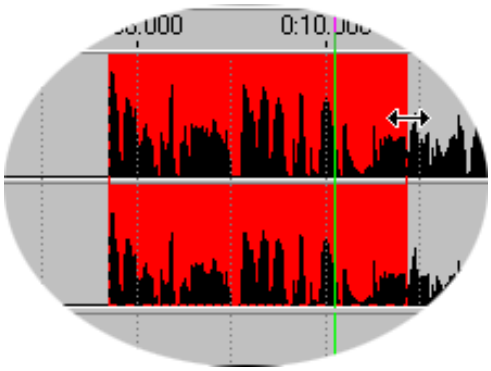
We don't always want to play back our audio at a constant volume level. Often we require fade-ins, fade-out's and inserts. This can be achieved with the adjustable volume level curve.



Through double click in the area of the curve you can create volume knots. The knots can be grabbed with the mouse and moved. With these points you can create an almost totally variable sound level. With the right hand mouse button you can open the context menu of the curve. There you have the option to add or remove knots. You can also reset or delete a curve. With the two volume adjusters you can change the total volume in small steps without changing the form of the curve.

The cutter function

In reality it is often required to edit out certain passages of a wave file. Obviously you can also in these places reduce the volume to zero, but than you create a pause. The cutter in IMAGIX offers with the edit function the opportunity to pass unwanted passages. Also these functions are non-destructive.



Through pull and push of the right mouse button an area can be marked. This area is displayed in red and can be changed or moved with the right mouse button. If you use the right mouse button without movement the context menu will be opened.

If you now select the function "jump selection" the area, which will be displayed dark, will not be played. This area will be listed in the edit report. You can now mark any other sections and jump, move or change them. These sections will be displayed darkened in the cutter. By recalling the point 'jump selection' (which is now marked), you can add the section again.

You can change the display with the function "zoom selection", so that the cutter only shows the selected area.

With the function 'play back section' you can play the selected area.

To determine critical edit points within a selection it is helpful to play a selection in an endless loop. Press the loop button in the cutter mode and select the function play back selection of the marked area. Now you can listen to the marked area in an endless loop.

During closing of the editor you will be asked if you want to transfer all the changes into your project. If you agree, than you will find all the changes in the Arranger.

Note:

Once you have marked one or more segments in the cutter to be ignored, you will have variations in the loudness curve. Imagine a slowly rising volume level out of which you have cut some seconds. At this point a loudness step will be created. This is an 'imaginary' point, which will be noticed during playback, but is actually not there. In the arranger we will always see these points for the sake of continuity. It is not possible to change these points in the arranger using the 'edit mode'. Audio events, which have 'cut out' points do not allow 'edit mode'. These volume curves can only be edited in the cutter mode.

Other buttons in the cutter:

Next to the loop function is a button which will switch the volume curve invisible.

After selecting the zoom button with the right mouse button, a new section will be displayed.

These two buttons will change the display of the sound. By opening the cutter, the display is active, which is being used in the arranger.

Play and stop button for test playback in the cutter

Summary: Cutter

Via double click we can call up the edit mode of the audio event. The beginning and the end of the wave file can be 'virtually cut' by moving the start and end marking.

You have two vies of the wave file: The total view and the selection, which can be accessed via the slider.

With the right hand mouse button you can mark sections, which can be edited out using the context menu. All changes in the cutter are non-destructive.

All changes in the cutter will be transferred into the arranger after confirmation during closing.

Following the sound preparation in the cuter we now have to answer the question in how we can get the sound on to the hard disk.

The Recording of Sound on to the Harddisk

Imagix 5 provides two options to transfer the audio from external sources to the harddisk. The first option is the recording via the sound card in your computer. For this we use the Imagix Wave recorder. The second option is the direct reading of Audio-CD's in your CD-Rom drive (audio grabbing).

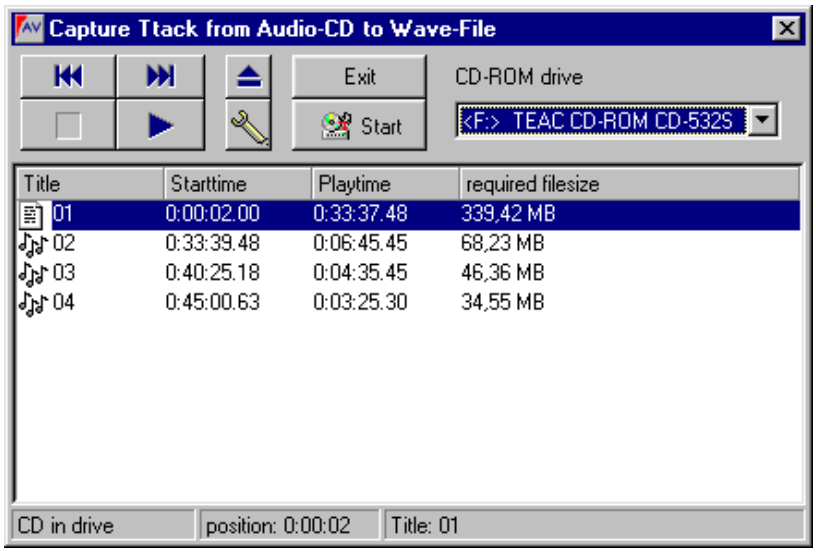
You can also record wave files with other programs and insert these into your Imagix 5 projects. The recordings must be in 16-bit resolution and a sample rate of 44.1 kHz. Usual programs, which allow the copying of CD's from their CD player as a wave file, use your CD drive only as a playback device. The sound will be transferred via a cable in analogue format to your soundcard for recording to the harddisk. The sound quality that can be achieved this way is only so good as the quality of the sound card. The direct procedure, which we use in Imagix, produces a complex 1:1 copy of the audio data on to the harddisk. Unfortunately not all CD-Rom drives support this type of audio data transfer. SCSI drives and most CD recorder almost always support this mode, newer IDE drives mostly. You need to try to find out. On our demo CD we have 3 audio tracks you can use for experimentation. (This function can be used with the demo version of Imagix).

Direct copying of an Audio CD

A good slide show lives from the perfect combination of image and sound. Because of this we want now to transfer a music track from a CD into Imagix. Imagix can record tracks directly from an ordinary music CD onto the computer harddisk.

Insert a music CD into your computer CD drive and select "convert a audio CD into a wave file".

Attention: Most windows systems start the application by inserting a CD into the CD-Rom drive automatically. Inserting a music CD will start the windows CD player. If this is placed below the Imagix window, you will not see this, but you can not access the music CD. Switch the CD player into the foreground with the task bar and close it.



In the selection menu you can see all titles of the CD and play them via the play function buttons. Apart from the titel number and the playtime of the individual music tracs the memory requirements on the harddisk will also be displayed.

Using the start button you can start the copying of the selected music title.

You can now enter a name for the music track and select a directory for the track.

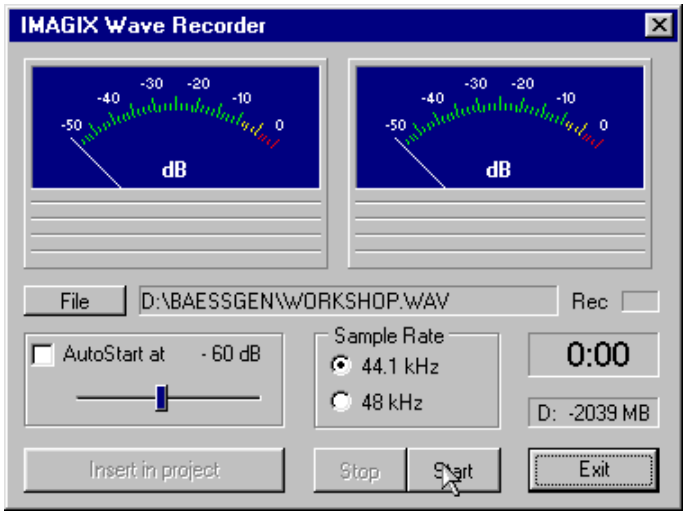
Note: To maintain a good overview with larger projects we recommend to use separate directories for each project.

If you have several CD drives you can select individual ones using the selection field.

If during copying you get an error message, click the tool button. Here you can preselect different manufacturer of CD drives. The position 'ATAPI" or 'Autodetect' may solve the problem. If you hear drop outs in the copied selection choose 'sectorsynchronisation'. The remaining selection options have only influence on the tranferspeed, which in most cases is without consequence.

Once the music track has been copied, it cam be imported into the project using the "create audio event' function.

Recording via sound card



The alternative option to create a wave file is by using the Imagix wave recorder.

Connect the playback device, such as a CD player, cassette recorder or other to the line input of your sound card and start the wave recorder in Imagix. After the entry of a file name, you ca start manually or select an auto-start-volume setting. After selecting the 'auto-start' function, the recording will commence automatically once the preselected recording level is exceeded. Since the incoming signal is place in a cache memory, there is no risk that you will miss the first beat of a music.

On the VU meter you can see the volume level and if required re-adjust it externally or via the window or sound card volume control.

Please note that over modulation in digital recording will create immediate distortions.

We recommend keeping the max. volume in digital recordings in the green field.

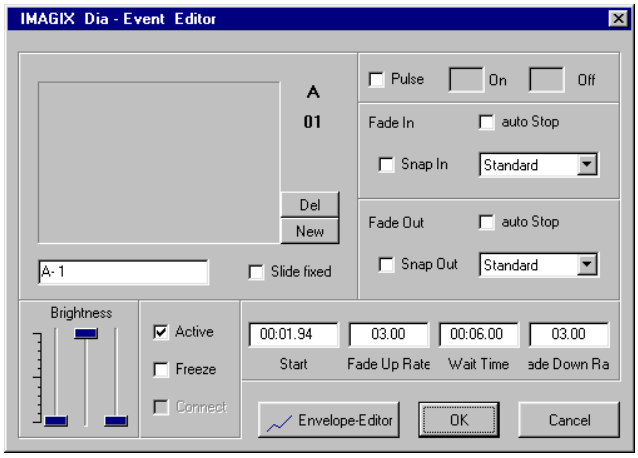
The wave recorder will display continuously the remaining space on the hard disk and the recording time. Active recording are shown with the red recording indicator. With the stop button you can interrupt a recording and later continue at the same place with the 'start button into the same file.

By direct recording with the wave recorder, you can import the file immediately into the arranger or use it later.

For the user of DAT recorder and the sound card 'triple DAT' is also the possibility to record DAT cassettes with a 48 kHz sample rate via the digital input. Imagix will file initially the 48 kHz file and later convert the sample rate via the software. Please note that space for both files (48 and 44.1 kHz) must be available on the hard disk.

Next we want to look again at slide-events.

The Slide Event Editor



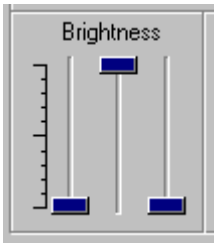
To be able to work with the individual slide-events in the arranger in detail we use a special dialog, the slide-event-editor, which we will now introduce in more detail.

We can open the slide-event-editor through a double click on a slide event. In the tracks of the arranger we work visually, but in the slide-event-editor we can also work numerically and special functions, such as flash, change of dissolve curves or Min-max. brightness level can be set.

In detail:

With the buttons remove and new we can delete or insert bitmaps (scanned images) to a slide. The picture belongs to the slide and not to the slide event. (It is possible to have several slide-events, which use the same slide.)

In the white text field under the picture, you can give the image a name. This will later be displayed in the slide-event and the virtual tray editor and title editor. In particular if you work without scanned images the title is of importance.

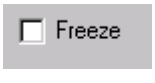


Through three brightness level slider you can adjust the brightness level of the slide-event, with which the respective slide should be projected.

With the left one you select the minimal brightness, which with the fade-up of the slide starts. With the middle one the max. brightness to which we can fade up and with the right one the Min. brightness to which we fade down.

An example for the use of the brightness adjustment we find in the chapter "Titelsuperimpose".

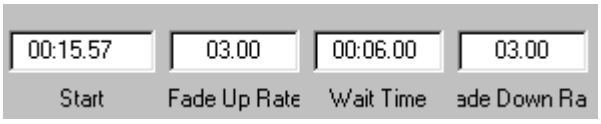
The field "Active" is normally activated. If the tick sign is removed is the event deactivated and will not appear in the flow of the slide show. A typical example would be the use of a text slide in a two-language version show. In this case you just place the two slides beneath each other on different tracks and activate alternating the one or the other event. On the projection screen you can see the two variants of the show. Both slides would be inserted in the tray and you would make two CD's for of the two versions.



The field "Freeze" is normally deactivated. If it is activated the slide event can not be moved in the arranger any more. This secures the event against accidental movement.

In the arranger you can freeze longer segments in your slide show. Mark with the right mouse button the required events though opening of a selection field and press again the right mouse button. In the selection menu select freeze. All selected events are now secured against moving. You can through freezing, secure several sections of the slide show.

The field "Connect" shows if a selected event is connected with the left neighbour. Through activating/ deactivating you can change the condition in the slide event editor.

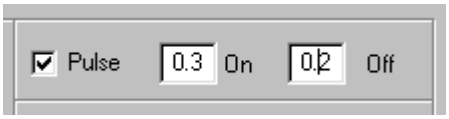


The number fields "Start", "Fade UP rate", "Standtime" and "Fade DOWN time" correspond with the actual times in the arranger. If you change the times in the arranger, the times in the editor will be updated. You can equally change the times in the editor and the arranger will be updated.

You can in the fields "Fade UP" and "Fade Down" change the light curve with modified ones, which are created in the curve-editor. This only works, though, if Freetrack has been selected as the control signal in the Imagix option menu. (Free Track can only be recorded to CD or DAT).

In the selection field "auto. Stop" you can force the program to stop before the fade-up or fade-down of this particular slide event. After downloading of the program into the memory of the Baessgen control unit, the stop command becomes a holding point for the speaker-support-control.

Through the fields "Snap In" and "Snap Out" you can address the shutter of some of the Carousel-projectors.



Through the field "Flash" you can let you projectors flash in a freely selectable ratio. The dark/bright steps are selectable in 1/10-sec. step. Flash extends over a complete event. If you only want a slide to flash for a particular time you can place two events, which address the same slide, after each other on the same track and let only one 'flash'.

Working on the events in the arranger

Context menus allow working fast and efficient with Imagix. Press with the right mouse button on any event in the arranger and the context menu will be displayed.

Now you can activate further functions to this event. Over time you will be using this often. We will now describe step by step the individual menu points in the arranger.

Context Menu at all events

"Freeze" fixes one event or all selected events on the time line in the arranger. The frozen events can not be moved until the freeze status has been removed. Freeze in independent from the event. You can freeze several events within a show.

"Group" will combine selected events into one group which than can be moved together without changing time within the group. Groups can include mixtures of slide-; audio- and relais events.

"Release Group", releases an existing group.

"Inactive" or "Mute" (audio), switches the event inactive. The event will be displayed in the arranger, but not be used in the slide show. It display will be darkened.

"Duplicating" copies an event. The copy 'hangs' on the mouse and can be placed freely in the arranger.

"Remove" takes an event out of the arranger.

Special Context Menu Points at slide events:

"Connect" combines the slide-event with its left neighbour. An event already connected can be released through a repeated activation of "Connect". Connect can not be used in the very first event of each track as there is no left neighbour.

"Snap IN and Snap OUT" triggers a mechanical up-; or down-fade using the shutter in the projector for extremely hard fades. Can only be used with some Carousel-Projectors.

"Properties" opens the slide-event-editor of the respective slide event. The slide-event editor can also be opened through double click on the slide event.

Special Context Menu Points in the audio-event:

"Wave Form" switches the display form of the audio-event in the arranger. Is waveform display active, the waveform will be displayed. Is waveform display inactive only the name of the event will be displayed.

"Edit Mode" switches the audio-event into the edit-mode in which the loudness level curves can be freely edited.

"Properties" opens the cutter for the selected audio-event.

Special Context Menu Points in AUX-events:

"Relais-Command" permits to select if a selected relais be switched on or off.

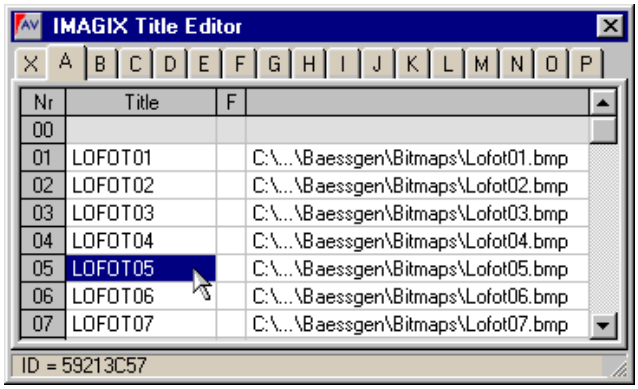
"Relais-Address" selects which relais should be used by the AUX-event.

"Properties" opens a special AUX-Event-Editor for the selected AUX event. 10V or relais commands can now be assigned.

Context menus which are not selectable to not make sense in a particular constellation and therefore are blocked.

The Title Editor

The title editor allows for the easy management of the slide titles and some other properties of the slide-objects. Via the register cards at the top border you can select the projectors A-P or through the 'X' the light box. Slide objects, automatically created by IMAGIX always have the projector letter and the slide tray number, when the object has been created the first time, as a title. This title remains, even after resorting of the slides.



Through double click on the title you get into the write mode.

The title can consist of letters, numbers and special signs. Empty spaces are also permitted. The new title will be taken over into the arranger and as well into the virtual lightbox / tray editor.

If you give a name to a non-existent slide, a slide object will automatically created in the virtual tray editor or the light box.

Clicking on 'F' in the title editor, you can fix or release a slide.

The fixing of an object blocks automatically the sorting algorithm and should not be confused with the 'Freeze' of a slide event. Please note the difference between a slide-object and a slide-event!

If you pull the title-editor further open to the right, you can see a third column. In this column you will find a reference to the original bitmap name.

With the small knob in this column you can open a dialog in which you can assign the slide a new original bitmap file.

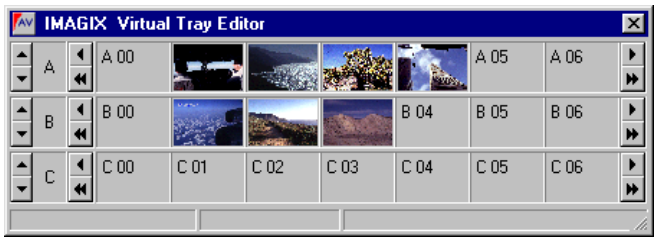
Note:

Imagix will automatically create at any import of a digital image a file with the .imc fix. This file will have the image reduced to 192x128 pixel. This file will normally be used for the virtual projection screen. If you select for the screen a large, processing intensive image (see "options"), the original bitmap will be selected. The path to the original bitmap can be changed in the right hand column of the title editor.

Attention! If you change this file, the IMC file will not be recreated. The virtual screen may in some instances show a different image than in use with the IMC files. To ensure that both images are identical it is recommended to import the new image through the "picture import" menu point in the virtual tray editor or the virtual light box. In this case the reference to the original-bitmap and the IMC file will be recreated.

For the normal use, if you only use the virtual screen for a pre-view, you don't need to use the right hand column. Imagix manages this automatically.

The Virtual Tray Editor



The virtual tray editor shows the distribution of the slides over the projectors. In total you can manage 16 projectors with 250 slides each. If you work without digitised images, the display of the slides will be shown as a raised, grey coloured rectangle with the slide number and possible title. If scanned images have been imported, they will be displayed in the placeholder.

With the arrow buttons you can move within the trays and between them. Resorting of slides between trays through drag and drop is possible.

If you position the mouse pointer over a slide, the status bar will display additional information. You will see there the title and the selected projection screen. Further you can see how many times this slide is being used in the arranger.

Through mouse click the slide will get a red frame around. It has been selected. If you hold the ALT key while you click, you can select several slides. Similar to Windows-Explorer you can with the shift key select sectors.

The Context Menu of the tray editor

With the right mouse button you can call up a context menu for the virtual tray editor.

"Insert Slide" inserts a new slide in front of the slide for which you selected this function. (Note: The slide will not be inserted in front of a selected slide, but in front of the position where the mouse pointer was when you called the function up.) All slides past this point will be moved back. Imagix 5 will automatically consider this with the transport steps. A manual correction in the arranger is not required.

"Remove slides" takes the slide out over which the command has been called up. All remaining slides will move forward. Imagix 5 will automatically consider this with the transport steps. A manual correction in the arranger is not required.

"Create space for slide" inserts a gap for a slide in the tray.

"Fix slide" fixes the slide. The slide is secure against automatic move by Imagix. If you want to use a particular slide in a particular location of the slide tray, you can secure the location. Though you still can move it manually.

"Destroy Slide" removes the slide from the virtual tray and, if already used in the arranger, from that as well. The respective ICM file, though remains on the hard disk. Any successive slides in the virtual tray will not be moved up.

"Duplicate slide" creates a copy of the slide. This copy will hang on the mouse pointer and can be positioned freely in any virtual tray. A second ICM copy will also be created. It is as if you have a second slide in the tray and would have used it.

The next four menupoints select a number of slides.

"Fix selected slides" gives to all slides, which are currently, selected the status 'fixed'. If for example a part of the slide show is already completed and you want to distribute the slides in the trays, than it is recommended to fix these, so that IMAGIX later on will not redistribute the slides and recommends a resorting. Also if your show reaches over several trays, should the automatic assignment not be used, as the algorithm will only work within one tray.

"Un-Fix selected slides"- is the opposite of the previous point.

"Erase selected slides" will remove the slides and the respective ICM files.

"Give slides a standard title" will give the selected slides the title, which consists of the tray letter and the slide number, divided by hyphen.

"Sort not fixed slides on the light box". This command moves all slides (where this is permitted) onto the lightbox. Normally this is the first step of a new sorting.

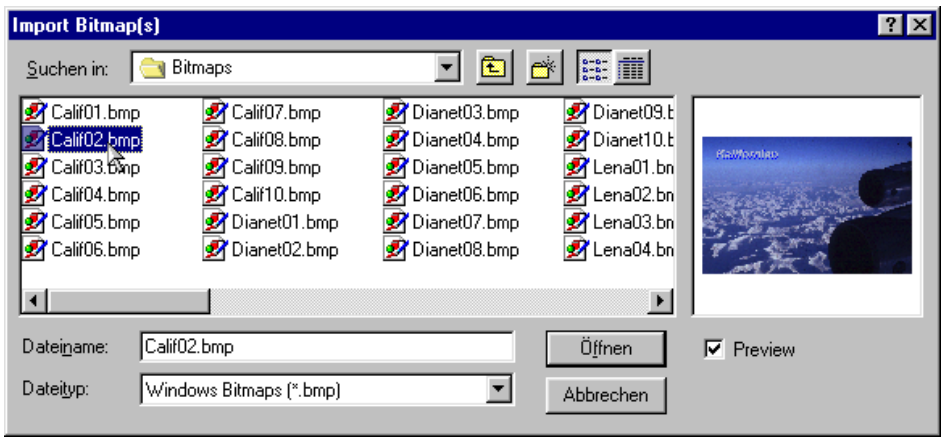
"Sort slides from the light box into the trays" moves all slides of which a slide-event exists in the arranger, into a free position in the tray. This is the second step of an automatic sorting.

"Sort slides completely new" combines the previous two steps.

"Image import" permits to add new bitmap data to the slides. This we will discuss no a bit closer.

The picture import

It is an important feature of Imagix to be able to simulate the dissolves with digitised images. For this the pictures must be imported from a Windows-Bitmap file into Imagix. After double click on a tray slot the following import-dialog will appear:



Now you can select one or more bitmapped files. The selected bitmaps will be imported after closing the dialog.

You can start the import directly in the tray editor or in the virtual light box. If several files have been selected they will be imported from the selected slot in ascending order. If a slot is free, a new slide-object will be created, if the slot is already used; only the bitmap will be added.

Imagix automatically created an IMC file, which consists of a reduced 192x128-pixel size. If you import on to an existing image a bitmap, the data will be exchanged, but retains the same name. The previous version will be rewritten. The filename is a cryptic number, which IMAGIX needs as an intern ID.

All images that are imported must exist in Windows-Bitmap format. To convert other formats, use one of the many freely available programs or shareware programs. You can also import images, which have been previously used by Imagix, as long as you know the ID.

The windows dialog however will not show you this format in preview. It can only show you standard-windows formats, which is not the case with the IMC file.

As soon as pictures have been imported, they can be viewed in the small 48x32 format.

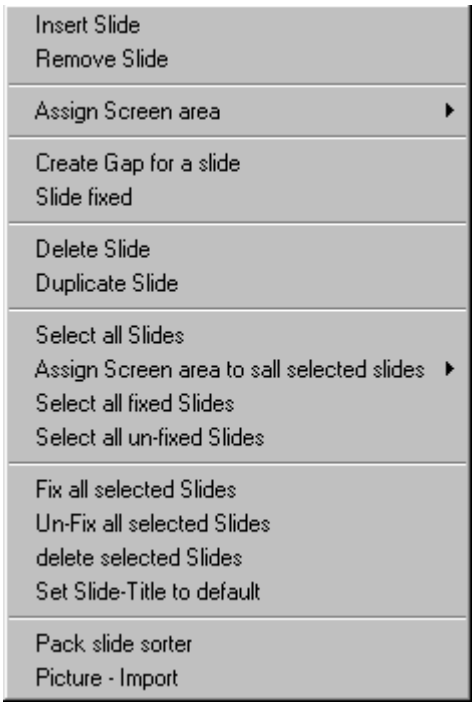
With the arrow buttons left and right under the tray all slides can be moved horizontally. With the arrow buttons top and bottom you select for this row a different tray. It is possible and practical to select sometimes two trays so move i.e. a slide from position A 60 to position A 04. For this you need two rows since the screen is not wide enough to display 60 slides side by side.

The virtual light box

The virtual light box is in many areas similar to the virtual tray editor. You can sort slide via drag and drop. Slides can be exchanged between trays and light box. The lightbox can hold up to 4000 slides.

The slots have numbers from 0-4000. Everything we have said about selections in the tray editor applies here as well.

The Context Menu - Lightbox



Again we have a number of functions available in the context menu. Many we have discussed in the tray-editor. New points:

“Assign projection area" assigns the correspondent slide to one of max. 8 projection screen areas within the projection screen. The slide will be projected on the right place within the virtual screen. In addition Imagix will during the automatic tray loading function, assign this slide only to the projector which points to the correct screen area. See also "The screen designer".

"Lightbox packing" removes the excess gaps on the virtual lightbox. All slides will be moved up.

The remaining menu points work identical to the similarly named commands in the tray editor.

Combination Arranger - Tray Editor - Lightbox

Now we just want to repeat the relationships of the different windows:

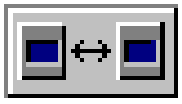
In the arranger are all the slide events. This shows how and when you want to project a slide. The relating slide-(object) must be either in the relating tray or on the light box. If it is on the lightbox, will it be displayed on the virtual screen, but connected projectors will show nothing, since the slide has not been assigned to the tray. If the slide is in the tray editor, than connected projectors will also be active and you can see in the status window the fade function of the projector.

Two slide-events from the light box can always be dissolved. Two slide-events in the trays, only if they are in different projectors.

If you have digitised slides, it is advisable to start always with the light box. In this case you can design freely without having to consider restrictions related to transport speeds of the projectors.

The automatic sorting algorithm will now try to sort the slides across the projectors that there will be no conflicts. Here is the arrangement of the event of importance. If the arrangement is changed, Imagix recommends possibly a new sorting order. Therefore it may be advisable to 'fix' already completely programmed parts.

If, for example, you want to insert a slide into the tray, you can do this in the tray editor. The programming will be changed internally that in the end still the same slide show will be run.



In addition to the context menu of the tray editor, you can also trigger the complete new sorting through the knob in the top right of the arranger.

The virtual Projection screen

The virtual projection screen simulates the actual running of the slide show. Slides for which we have no bitmap will be displayed in black.

After the initial start of IMAGIX the screen has the size of 192x128 pixel and all projectors are assigned to one screen area. The screen shows the slide under the position of the locator.

If you click a slide in the tray editor or the lightbox, this slide will be shown for reference.

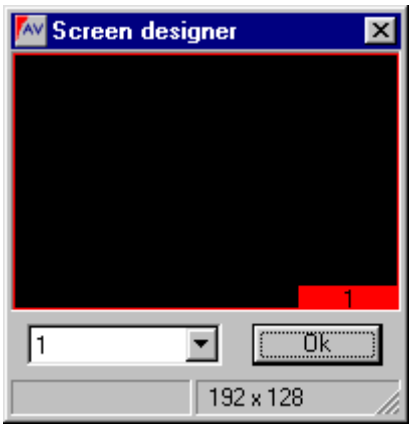
You can increase the screen to a ratio of 3:1. In this case the resolution of 192x128 will not be increased, only displayed larger. You can achieve this by increasing the screen with the mouse or though a slider in the option window.

How you can create Panorama images or work with higher resolution will be discussed in the next segment.

Panorama projection - The screen designer

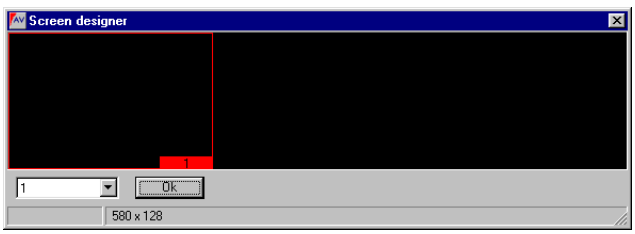
As a standard Imagix assumes one screen to which all projectors are assigned. Through the screen designer, you can configure a slide show with up to 8 projection screens and assign these to the projectors.

Through mouse click right on the virtual screen you can call up the screen/ area designer.



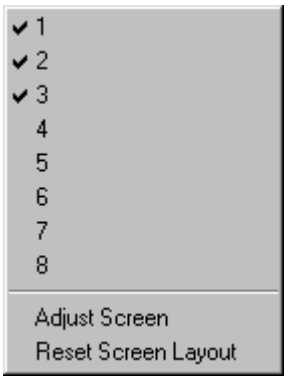
Initially you will see the basic setting; one projection area. To create for a panorama projection or similar, several projection areas, you better pull the window to a larger size.

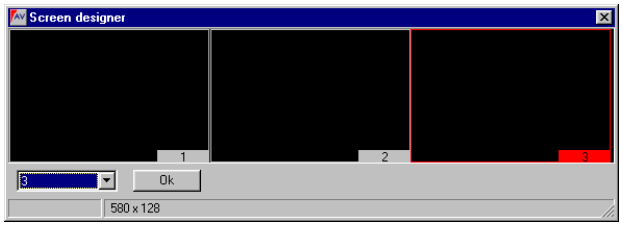
For easier understanding, we will explain the windows on the example of a 3-field panorama show with 9 projectors.



First we pull the screen/ area designer to a suitable size. Rather bigger, so that we have room to play.

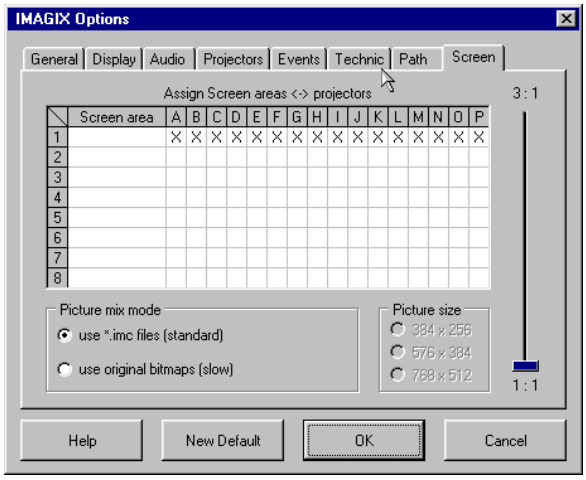
Via the selection window or mouse click right you can now activate a second and third area. The selected area will be displayed in red and can be moved freely. To enhance the display, Imagix will only show areas which have been selected or are actually be used.





Since we want to create a 3-field panorama show, slide the three projection areas next to each other. With mouse click right and the function 'adjust the screen' you can now with in the frame of the virtual screen adjust the distribution of the areas.

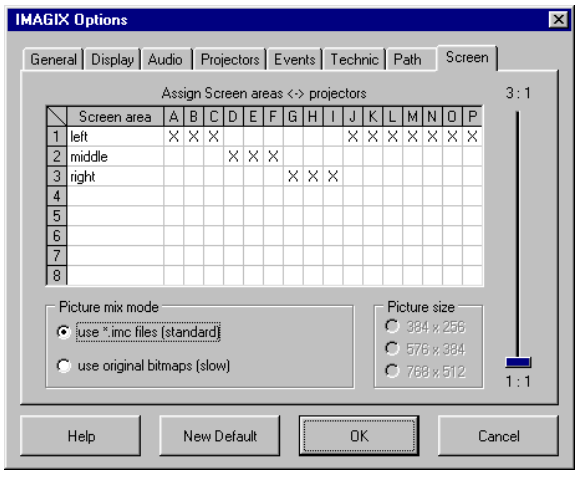
After accepting you entries with 'OK', Imagix will adjust the virtual screen according to your layout.



With multi screen shows it is important to fix the projector assignment to the screens.

The projector assignment is done through the folder "screen" in the Imagix options.

As a standard all projectors have been assigned to the first projection area. With a simple click you can change the assignment. Since we want to assign 9 projectors over three areas, a possible assignment will look like this:



Projector ABC assigned to field 1

Projector DEF assigned to field 2

Projector GHI assigned to field 3

In the field of the areas you can insert your own titles, which than will be used in the scree/ area designer.

With the slider right you can adjust the scale of the virtual screen.

Assignment of slides to the projection screens

Each slide must be assigned to a projection screen. At a panorama show for example, it would be impossible for Imagix to know if a slide should be shown on the left or right screen. This is your decision. Once a slide is on the lightbox, you can assign it (also simultaneously for all marked slides). Normally Imagix recommends screen 1. In the tray editor however the slide will take on the surface to which projector is oriented (Assignment in the options window). This is logical: If a slide, which is designed for the right side, be put in the left projector, it will be projected left. If the slide is put back on to the light box it will retain the last assigned projection area. You can therefore change the screen assignment by resorting the slide.

High Resolution Virtual Screen

The format of 192 x 128 pixel and the specially calculated IMC files are used to allow processing intensive realtime dissolves on the computer. Normally this resolution is sufficient to judge the effect of a slide show. For specific applications though, a greater resolution is required. Imagix offers three further image sizes for this.

For this the image data are read from the original image file. Therefore this must still be available. Imagix remembers during importing the name of the original bitmap file together with the complete path. This is visible in the title editor and can be changed there.

Select under the "option" register card "screen" the use of the original bitmaps and the image size.

The screen will than be shown in the selected size and the complete image mix will be done in the new resolution. Obviously requires this more computer processing and more hard disk loading time.

With the function "merge to AVI" the AVI video file will be calculated in the selected size.

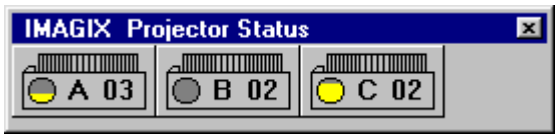
The size of the original bitmap

To ensure good results with the high resolution screen, it is recommended that the size of the original bitmap, which should be dissolved, equals the size of the virtual screen. If you, for example import an image with 1500 x 1000 pixel, Imagix must read in the high resolution mode the whole 4 MB of the image from the hard disk and recalculate it to the target resolution and do the dissolve.

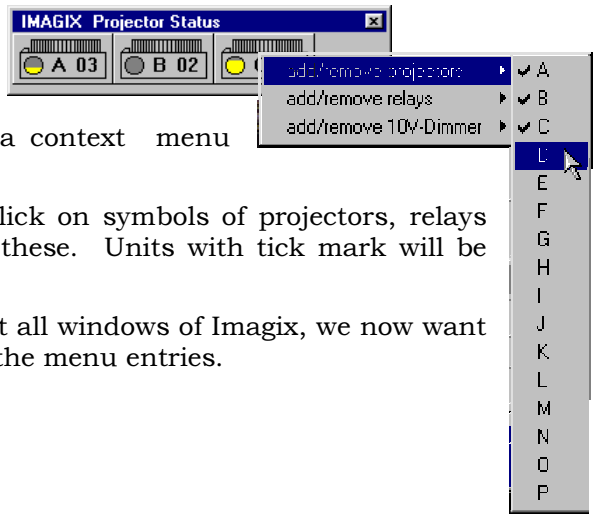
Has the image however been reduced to the right size, the access time is reduced. The original image however should not be smaller than the final format, since otherwise the quality will not be reached. 192 x 128 resolution and ICM files will only be used for the image mix and all recalculations of the size are not required and only 73 kB are transferred from the hard disk. With this, good results can be achieved on slower processors.

The Projector Status Window

The projector status display shows the actual brightness and the tray position of the projectors at the current locator position. Also the condition of the 10V outputs and the AUX relays can be observed. If you close the window the calculations will be made in the background.



To add or remove to the standard display of three projectors additional projectors, dimmer of relays symbols, you can call up a context menu with the right hand mouse button.

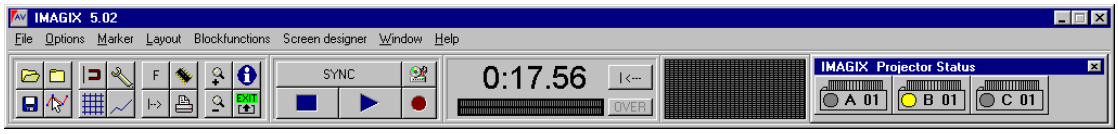


At several menupoints, you can click on symbols of projectors, relays and dimmers and add or remove these. Units with tick mark will be displayed, without not.

Now that we have discussed almost all windows of Imagix, we now want to focus on the main window with the menu entries.

The Main Window of Imagix 5

The main window of Imagix 5 is the uppermost of all windows. If it will be close, you will leave Imagix. If it will be reduced in size, all windows will be reduced.



It consist of 5 subsections and the main menu.

The speed buttons help the faster operation of Imagix 5. Almost all of these functions can be recalled through the main menu and will be described closer.

The Speed Buttons

The speed buttons combine a series of functions in one segment together.

 Open an existing Imagix project.

 Create a new project

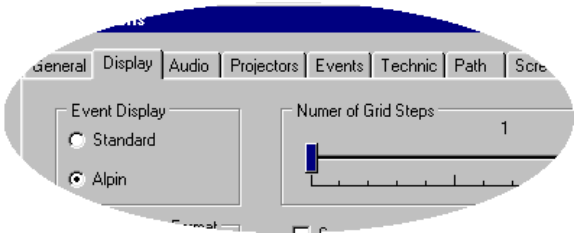
 Save a current project

Switched to the edit mode for audio work

Switches the locator magnetic. Events will be automatically from an certain distance to the locator. Therefore it is possible, to position events very precisely.

Opens the window with the Imagix-Options.

Positions a magnetic grid over the arranger. Events lock into the grid. The grid size can be adjusted at "Imagix Options" in the folder " Display".



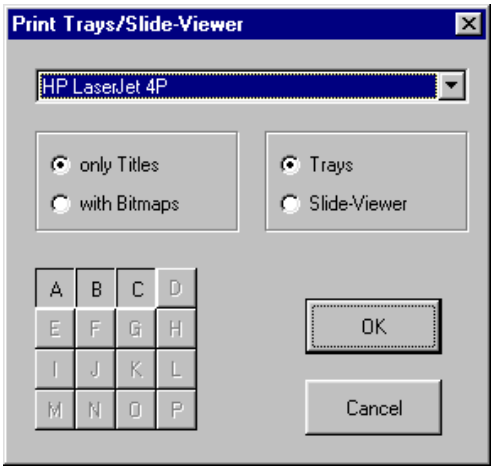
Switches on the curve - editor, through which you can create your own light curves.

Opens the marker management.

Opens the memory function.

Marks all events from the locator.

Opens the printer function of Imagix. In a later version of Imagix it is planned to replace the printer function with a Text-Export function.



Zoom in and zoom out increase or decrease the displayed segment in the arranger.

Calls up the Imagix Info window. It shows the version number, software ID number and address of the manufacturer.

Closes Imagix. If you have changed your project, a safety message will appear.

Audio Control

The audio control window includes the central playback/recording functions.

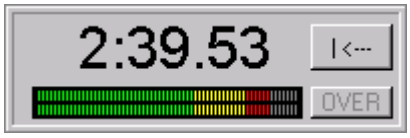
Switches the projector control on. The projectors will be fully synchronized during any work on Imagix.

Stop and Play. During Play, the show will be played from the locator position in the arranger. Stop will halt the show.

"Convert Audio-CD into a Wave File", calls up the copy function for audio-CD's. See also "Direct copying of a Audio CD".

Record function for wave files (via a sound card).

Time / Level Display



The time display shows the actual time on the locator position.

The volume display shows the total volume, after the mixing of all tracks, including the consideration of all level adjustment curves, etc. . The signal level, which will be passed to the sound card will be displayed. Overmodulation/ overflow in the digital sound domain will lead to significantly increased of distortions. It will sound distorted. Overmodulation will be displayed with a red signal "Over". A single appearance of overmodulation will be recorded by Imagix and must be reset by a click on the button "over". Repeated pressing of the Play button will also reset the indicator.

This button set's the locator and arranger segment to 0:00.00.

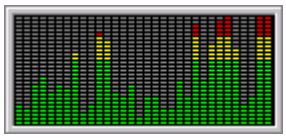
Displays possible overflow.

Note:

If you should encounter a overflow during a recording, this can afterwards not be noted within Imagex. During recording via a sound card, the D/A converter must convert the analog signal into values between -32768 to + 32767. Is this value exceeded, it must be cut (clipping). This leads to distortions. After the conversion all values are within the valid amount and therefore will not be recognized as too large. During a recording via a digital input or from a CD, overmodulation can not appear. But basically the problem has only been moved. During a digital recording, the conversion from an analog value took place much earlier. If overmodulation was present in the digital signal it will be passed on.

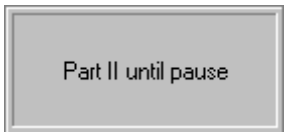
The Spectrum Analyser

The spectrum analyser displays the sound spectrum of the audio across the total frequency range.



This window can be switched off through the menu ' Window" to gain space in the main window. This will help the display of the commentary windows.

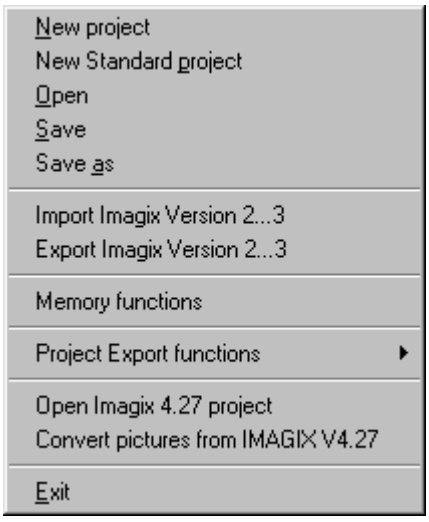
The Commentary Window



This area shows the commentary which is assigned left of the marker. If you want to add a notification, you set a marker (with the enter key) and assign these to a commentary (see also "Marker"). As soon as the locator goes over the marker, the notification will be displayed.

The Main Menu of Imagix

Here we want to review the main menu of Imagix point by point and provide a short explanation.



"New Project" clears all current events and prepares for a new, empty project.

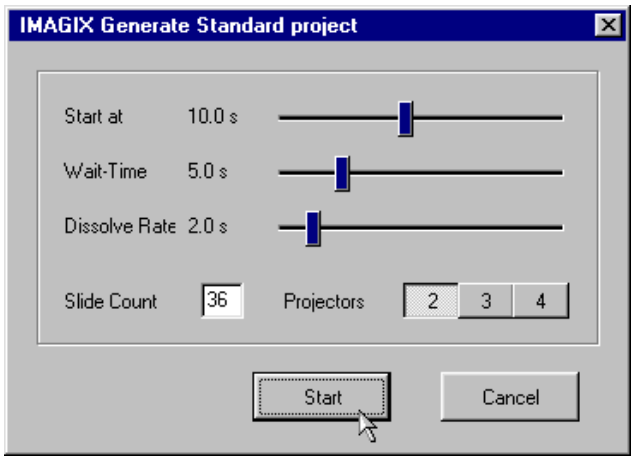
" Open " opens an existing project from the hard disk.

" Save" records the current project under the current name. If no name has been assigned, Imagix will request one.

" Save as" will record the current project under a new name. This is ideal if you want to safe for security a current status of your slide show and to be able to continue later.

Please note that " Save as" will not safe a complete copy of your project, but only the event-data and the configuration. The wave-files and bitmaps will not be copied, since they are large data files. Details about the used files and the backup options you will find under " The Files of IMAGIX".

"Create New Standard Project" will create a new, empty project, which is filled with a simple dissolve show. You provide how many slides are to be used and over how many projectors these should be distributed. Imagix creates the slides and slide-events, which are located in one track. Through moving of the times, you can easily create a simple dissolve show.



"Import Imagix version 2/3" permits importing programs, which have been made with earlier versions of Imagix, into Imagix 5. Imagix 5 can import files which have been created with Imagix 2.12 and all versions of Imagix 3. These files are full compatible.

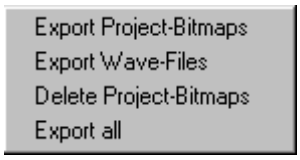
Older projects must be imported first into Imagix 2.12. There are plenty of import options.

"Export Imagix Version 2/3" allows to create from slide events and their configuration files in Imagix 3 format, which also can be used in the DOS version of Imagix 2,12. This can be useful for users of earlier versions.

"Memory function" allows the downloading of slide-event-data into the memory of the control units UX-MEGA, TRIPLEX and QUATRIX. This is required for speaker support. The same can be achieved by converting data first in Imagix 3 and than downloading into the hardware. In Imagix 3 you can also make numerical changes.

Please note that the memory in TRIPLEX and QUATRIX can hold more data if they are loaded directly from Imagix 5 as via Imagix 3. Imagix 3 is limited to 2000 commands due to the 16-Bit limit of Windows 3.11, for which Imagix 3 has been programmed. By internal conversion of Imagix 5 to the memory format, up to 3000 Imagix 3 steps can be loaded into the memory storage of TRIPLEX and QUATRIX. With UX-MEGA the storage capacity is always the same, since the limit is related to the memory capacity

"Project Export Function" is used for the complete back-up of Imagix projects to an external data carrier such as CD if you want to clear the hard disk after completion of a project but do not want to delete the data. Since the submenu of Imagix will ask you for a new folder, you should created this first. Into this folder Imagix will now copy all files. You can select between pictures, which are required, or audio files only or all together. If you select "Export Everything" the project file and the configuration file will also be copied. Please refer also to "The Files of Imagix". The point "Erase the project bitmaps" removes all IMC files which have been used for this project.



"Open Imagix 4.27" project" will open a project which has been created with that particular Imagix version. Between this version and Imagix 5, we have had to change the datafile a bit. Please note that Imagix 5 projects can not be opened or only with errors in Imagix 4.xxx!

"Convert Images from V4.27" converts the picture files IMB from Imagix 4 into IMC, so that you can continue to use these.

Imagix 5 operates with a much more precise image algorithm than Imagix 4. Internally everything will be calculated in 16.7 mil. colours. The structures, which have been appearing in Imagix 4, due to the rounding errors, are removed in Imagix 5.

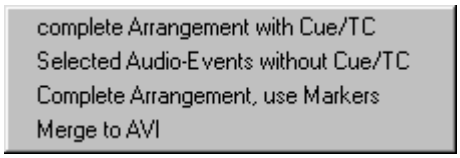
"Exit" leaves IMAGIX 5. A security request will appear if you have not saved your data/

"Select Options" will be discussed in the chapter "Options".

"Option Merge-Functions" will follow in the next chapter.

Merge Function

The merge functions in Imagix play the arrangement totally or partly back, but not into the sound card, but into a new file. A totally new wave file (at "Merge to AVI" a new AVI file) be created, which includes a complete mixdown including all level settings, cuts etc. Each merge function starts with a question for a file designation in which the result will be saved. Please note that this file can get very large. You can observe the progress of the function on the locator.



These functions must be applied if you want to burn you completed slide show on to a CD. You practically play everything into a wave file. Every burner (writer) software allows it create an audio CD from the mix.

"complete arrangement with cue/TC" creates a single wave file from you complete arrangement and integrates also the cue signals and (if you have marked in "options"-audio) also SMPTE Timecode. For normal playback of a show time code is not required, only for speaker support.

Please note that during the merge function with the signal type "Digital PlusTrac" the Sync button must be pressed to ensure the correct control signals ! The merge function always starts with the time 0:00.00 and finishes when all events have been executed and 5 sec. have lapsed after the last slide-command.

"selective samples without TC/Cue" create from the selected samples a mixdown wave file. With this you can create a new sound mix, you may want to re-use, in a new wave file.

Another typical appplication: You have a large wave file i.e. 30min with 360MB on the harddisk. From this one you only need a segment of 10 sec. Since we edit undestructive, the large file would otherwise remain on the disk, even that you are only using a small part. Now you 'cut' away the unused parts and select the much smaller selection and merge this into a new wave file, which is much smaller. If you only use this small segment you could erase the large file from the disk. Attention! Ensure that you will not use the file again.

"complete arrangement with marker" mixes the total arrangement from the beginning to the end into several wave files. Here the features of the markers will be observed. If Imagix finds markers with the feature "Start Wave" or "Stop Wave" the locator will jump to the first marker with the feature "Start Wave" and from there to the marker "Stop Wave". The wave file will be created between the two markers. From the last marker the locator will again jum to the next marker with Start Wave and start a new wave file etc. Imagix will start every time a new wave file. Imagix will add a two digit continuing number to your selected file name. If two marker with "start wave" follow consecutively a new wave file will be started. The reason for this function is the creation of several smaller wave files, which later will be burned on to the CD as individual tracks. During speaker support shows, these tracks will be started individually and at the end be replaced by a manually controlled sequence. Uder "Options" you should select that timecode data be incorporated into the wave files, since these are required for the synchronisation of the control unit.

AVI-Creation

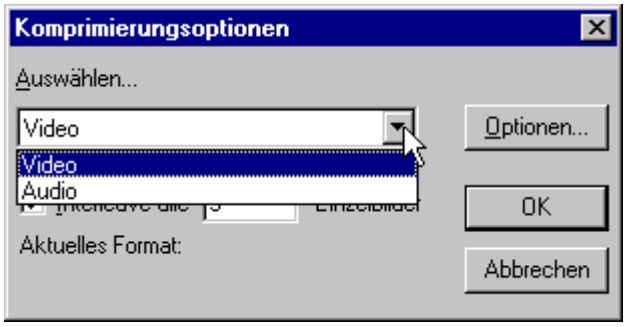
"Merge to AVI" is a special merge function which creates a video file. This should provide the opportunity to pass on slide shows in the development stage. Imagix is not required to view a AVI file. It is also possible to integrate this into multi-media programs.

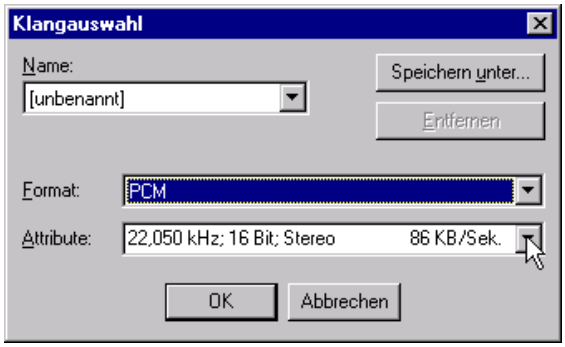
Note:

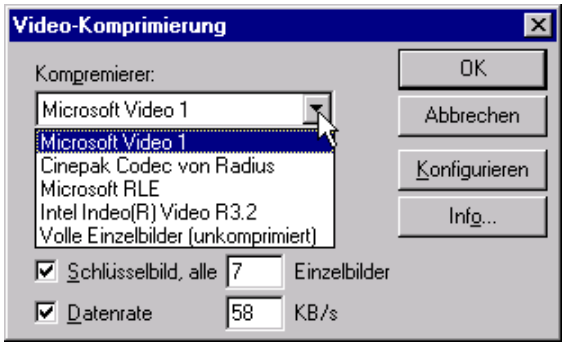
The way how the dissolve is created in Imagix is clearly a simulation of the slide projection. This is very processor intensive since during a dissolve phase in 10 pictures/sec all pixels of the image must be recalculated 10 times per second and redrawn. This sometimes is event too much for fast processors with a good graphic card. For multi-media applications, such as the interactive CD, are many more different dissolves modes available which essentially require only to draw a pixel once and do not calculate a mix image. Basically all pixels will be exchanged one after another. There a apparently coincidental order of pixels will be selected. Such dissolves can run on slower processors and look interesting. The purpose of Imagix however is not in such dissolves, but in the simulation of slide shows. Therefore are such effects not available in Imagix.

After the selection of this menu point we will be asked for the name of the AVI file.

Following this is a dialogue during which we can select the compression. We select these separate for audio and video to limit the massive amount of data.







Which algorithms can be used, depends on the "Codex which have been installed at your system. Some are standard in Windows. The uncompressed image and sound quality is always the best. But in this case a CD may store less, depending on the image size, than 5 min and can not e played on any processor. Compression is always required. Which algorithm is best suited and which quality/quantity is created can not be discussed at this place. We recommend that you refer to the appropriate literature or experiment.

Imagix always creates AVI files in the current image format. The rate in images/sec can be adjusted under "Options" in the register card "AV Technique".

Other Main Menu Points

Now we want to discuss the remaining points in the main menu of Imagix.

The submenu "Marker" will be discussed in the chapter "The Marker in Imagix".

The submenu "Layout" allows the adjustment of the screen to your personal requirements and your monitor size. You can select between 5 standard layouts, which are pre-selected or create your own layout. Just move a window to where you want it and adjust its size. In "Save as Standard" you can save it and recall it later. You can also restore the window through Standard layout. From here you also get into the screen designer.

Through the menu "Window" you can switch the different windows of Imagix on and off. A tick mark indicates that this window is open.

"Screen / Surface Designer" opens the projection screen designer for the definition of the projection areas.

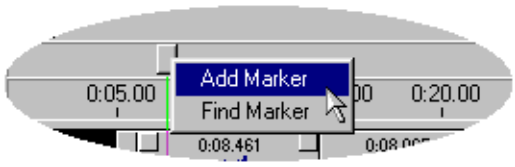
The menupoint "Help" gives you access to the online-reference and to the info-window. In the info window you will find the serial number and the ID number of your version of Imagix 5.

The Info-Function you can find under 

The Markers in IMAGIX

The easiest to set a marker is to use the Enter key. This function can be used if you want to set marking points, i.e. for the rhythm of music. The magnet function will later lock the events to it.

Via a mouse click right on the locator track you can also open a context menu to the marker functions. Marker in Imagix have a number of functions. They can easily be used to mark different places to which you want to have fast access. They are also to be used for remotely controlling CD-players for speaker support shows or to underlay commentary.

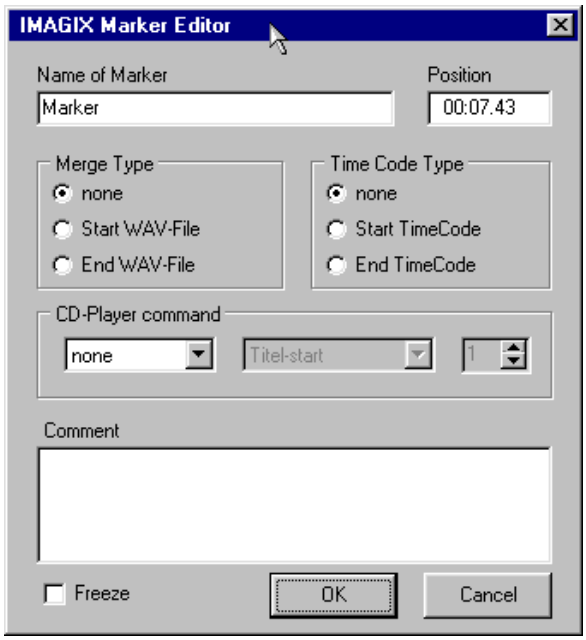


"Add marker" adds a marker at this location. At the same time the marker editor opens.

"Find marker" opens the marker-window for fast access for the set marker.

The Marker Editor

The marker-editor opens automatically by adding a marker.



In the left textfield you can give the marker its own name which is than managed by Imagix.

In the right textfield will the exact timely position of the marker displayed. This can be overwritten. The marker will than take on the new time position in the arranger. Alternatively you can move the marker in the arranger with the left mouse button.

In the commentary field you can add a text to the marker. This will than appear in the marker administration and during the playback of the slide show.

Is the freeze field active, the marker can not be moved any more. A new positioning through the positioning filed in the marker-editor is however still possible,

The field "Merge Type" controls the merge function. Is "non" marked, this marker has no importance in the merge function. Otherwise either a new wave file will be started or it will be jumped to the next marker which has the merge type 'start wave-file". The merge-type will only be observed if the function "Merge with Marker" has been selected. (see also chapter "Merge-Functions").

The field "Time Code Type" controls the integration of the timecode into the 16th bit of the digital audio data. "Start Time-Code" switches the integration on, "End Time-Code" stops the integration of the time code. By "non" this marker has no influence to the encoding of the time code.

This is a very special function, which is only required if one wishes that in the middle of an audio track the music continues, but the time code stops. For special synchron technique, i.e. with a film projector, can this be needed. For a normal speaker support application will continuous timecode be required, since the synchronised passages should run completely automatically and at the end of the tracks be replaced by a life passage.

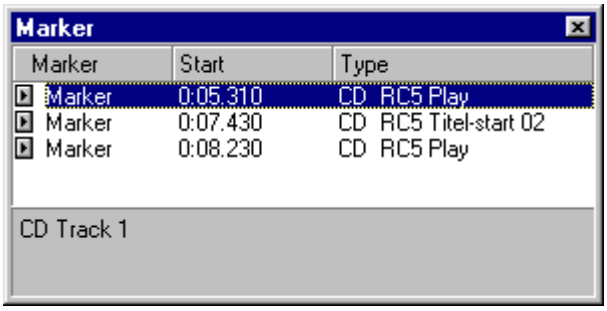
The field "CD-Player Command" adds to this marker a command, which by use of a Quatrix, switches a CD-Player. There are both protocols ESI and RC5. Phillips and Marantz CD-player usually can be controlled with these commands (not always outside Europe). If title selection is switched, you can give a title number, which than be started. In addition to the title selection you can also select the commands Stop, Pause and Play.

Please note that after the completion of a CD title the next one will be started automatically by the CD player. You have to integrated Stop or Pause commands in your arrangement. To avoid the individual start up times in a CD it is possible to set first the Pause command and than to start. But this is different with the individual CD players and you need to try the individual sequences yourself.

The Marker Window

"Find Marker" opens the marker administration. This can remain, the same as the projector status display, be kept open at all times.

You can open the marker window also through the speed button.

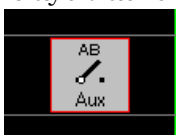


If a marker is clicked on in the marker administration, the locator will jump immediately to the relevant location and the displayed segment will be adjusted, if required, accordingly. Through the small play button in the marker administration goes the project from the selected marker into the play-back mode. Repeated clicking will stop the play-back and puts the locator back to the marker position.

Through the "Bksp /Del." button on the PC can a selected marker in the marker administration be removed. Alternatively you can call up a context menu through mouse-click right in the administration which includes commands such as: "Rework Marker" and "Remove Marker". "Rework Marker" opens the marker editor (see above). "Remove Marker" deletes the marker.

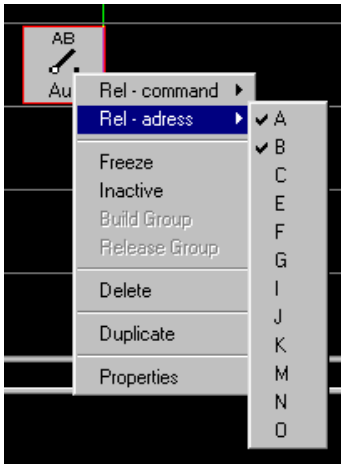
Working with Relays and 10V Technology.

In the arranger we already got to know the AUX-Event. In IMAGIX there are 4 relays tracks or "AUX-Tracks". These can carry "AUX-Events".



A Aux-event can switch one or several relays on or off. In addition can a Aux-event set one or several 10V outputs to a selectable speed and a selectable voltage level.

The assignment of relay commands and the selection of the relay (s) can be done through the context menu. The relays which are being addressed by the command will have a tick mark.

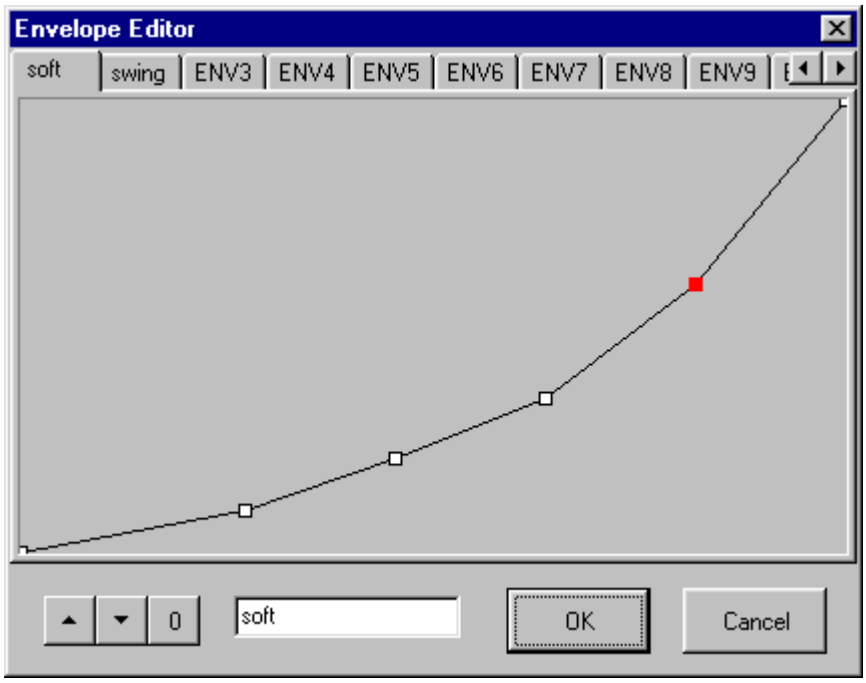


The properties of the Aux-events can easily be set in the Aux-Events-Editor. There you can select the 10V Outputs and relays. Also you can select if the relay should close or open. The fade speed and the voltage can be adjusted with the slider.

With Freeze you can secure the event against accidental adjustment. In addition you give the event a name. If the resolution of the slider not enough you can adjust the last used slider through the arrow buttons by +/-).1 V steps.

The Curve-Editor of IMAGIX

If you work with Imagix 5 and use the control signal "FreeTrac", you have the possibility to design your own fade-up and fade-down curves. The curves are worked upon in the curve editor.



You can use up to 15 different curves. Each curve can consist of up to 12 points. The curves always start from left down and finish at top right. The most outer points can not be adjusted.

If you open the curve editor first you will only see a straight line from left down to top right. Through double click you can set new points. These points can be grabbed with the mouse and moved freely.

To work on a new curve you select from the register cards a new curve. In the textfield below you can give each curve a name. Replace the given name ENV1 to ENV15.

With the aid of the two arrow buttons on the lower edge you can extend or shrink a complete curve. The button "0" erases all curve points and returns to the starting position.

If you now leave the curve editor with "OK", you will be asked if you wan t to accept the change. If you agree the curves will be integrated into the project. To activate the curves in the project, select in the slide event editor one each curve for fade-up and fade-down. There you will see the names of the curve. Please note that the fade-down curves run back to front ! You design all curves as fade-up curves, but you can use them for fade up and down.

In the arranger the curves will be subsequently shown.

The Files of IMAGIX - Securing Data

Often you have the problem to have to remove a complete IMAGIX project from the hard disk. Either because the slide show is complete and you do not want to erase everything and maybe want to work on it later again, or you have a new or different computer and want to transfer the data.

Therefore it is important to know what files IMAGIX writes to your hard disk.

We assume that you have a project called: "Holiday".

The project file is called "holiday.im5" and contains all information where the events are, what properties they have and so on. This is the central file which contains the main project and must be saved.

The configuration file is called "Holiday.cfg" and contains all settings which you adjusted in the dialogue "Options", i.e. the arrangement of the windows, the locator position etc.. This should also be saved. If this file gets lost, you must repeat the adjustments again. IMAGIX saves all adjustments for each project in this file.

The used wave files could be anywhere on your hard disk. They must all be saved as well. If you use the menu point "Project Export Function", Imagix will copy all files into one folder.

In addition to every wave file, also exists a file with the same name, but with the extension *.sdd. This is the stereo-display-data file, which contains information about the volume flow in the wave file. This file must not be saved, as Imagix can always recreate it.

Note:

*Due to technical reasons it is not practicable to read the volume flow from the wave file. Imagine a wave file of 30 min duration with 360 MB. If you select the scale in IMAGIX accordingly so that the complete file is visible, Imagix would have to read always the complete 360 MB from the hard disk to be able to draw the volume curve. This is too slow. Therefore IMAGIX reads the information from the *.sdd file. If the wave file has been changed through an external program, IMAGIX will recognize this and the new display data will have to re-calculated. You can do this by switching the wave display in the context menu of the relevant audio-event on.*

Available Bitmap-data will usually only be needed as IMC-file. These all have cryptic names and can not easily be recognized. With the "Project Export Function", you can copy the required IMC files into a specific folder. These data have always an 8 digit name consisting of numbers and letters and the fix .imc.

Now we know how to export a project from IMAGIX. We use the "Project Export Function" and copy all required data into a new empty folder. This one we now burn for example onto a CD. The next segment will deal with how we can read the data back into another processor.

The Recreation of an IMAGIX project

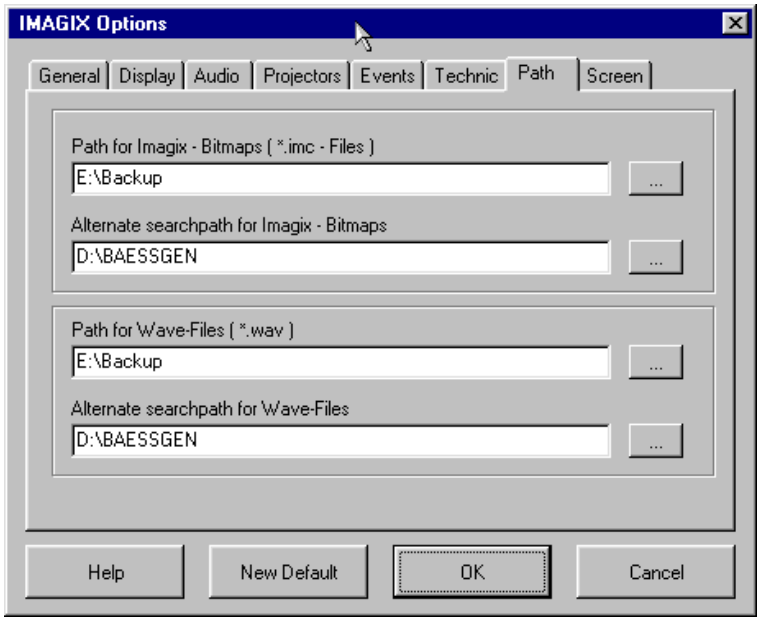
Once all data have been copied back on to their original place, it is very easy to open a project and everything is back. More difficult it is if the hard disk on your new computer i.e. suddenly is called E: instead of C:.

We copy now all data from our safe data source into a new folder on our hard disk E:. During the first opening of the project we will now receive an errorpage message "xx Audio Events could not be loaded" since IMAGIX can naturally not find the wave file.

Now we open the dialogue "Options" and go to the register card "Paths". Now we select from the "Folders for wave files" the new folder from the disk E: and leave the dialogue with OK.

IMAGIX will make after any change of the search-path automatically a new loading attempt and will reload the audio events.

Never save you project if the audio events have not been found. This will be lost forever since IMAGIX will save the active condition without these events !!



The same applies for bitmaps. Once you loaded the project, only the bitmaps are missing. Now you need to select the correct path and press "OK". Now IMAGIX will look for the available bitmap-files and will display them. The "folder for Bitmap-files" will also be used to write all IMC files. If you want to select at the start of a new project a particular folder, you can do this here. The information, such as all settings for every project will be saved separately in the configuration file.

Wave-files will be searched by IMAGIX under the initial path first and than under the selected path's.

IMC-files will always be searched on both path's.

Original bitmaps will be searched by IMAGIX under the original path and than under the selected two path's.

IMAGIX deliberately allows the storage of wave files in different locations. Therefore it will be possible to store project across several hard disk's. With large projects and small hard disk's this can be necessary. This appeared to us more logical than to request a global folder for the wave files.

How to get Bitmaps for IMAGIX ?

This question is often asked. This question can not completely be answered at this place, since it actually is outside IMAGIX.

IMAGIX requests generally for every slide a windows BMP file. These can be imported singularly or several at one time. The size of the bitmap is basically irrelevant, since every format will be converted in Imagix into the 2:3 aspect ratio. To avoid to larger distortions it is advisable if the start format has a similar aspect ratio.

Scanners are now available in large numbers and are continuously being released. Digital cameras and video grabber appear steadily and all can create bitmap files. Free and shareware tools which convert image formats are easily available. For these subjects we have to refer you to PC-magazins.

Speaker Support

Under "speaker support" we understand generally the assistance of life presenters with presentation technology. Presenters with slide shows, means that the spoken work is life presented and not from a sound carrier. This appears more natural for the audience and the presenter is more flexible and can adjust to the mood in the theatre. Technically there are several methods to achieve this.

Continuously programmed slide show.

This is the easiest. You program a normal tape-slide show and leave the audio away. This will be spoken life in the auditorium. There is not much to say from the programming. It is the same as producing a normal slide show. Possible one could add the spoken text to the audio tracks in IMAGIX and than mute the audio. It is than possible to write a 'non-life' version of the presentation to tape or CD. This may be an advantage if, at the time of your presentation, your voice is a bit scratchy.

The disadvantage of this method is the inflexibility of the presentation speed. The D runs and you must always speak each part at the same length and speed. The presenter must be reactive and can not be active. Selected stopping of the CD may help, the image stays and therefore you can influence your speed. This still does not require a remotely controllable CD or cassette player.

In the auditorium the CD/ Cassette player will be positioned next to the presenter at the front of the audience. The control signal will be transmitted through a long cable back to the equipment.

Please note that for digital transmission from CD or DAT the digital-audio-signal must be send through a 75 Ohm cable, since several need to be transmitted !

Sequentially Programmed Slide Shows

More freedom for the presenter, but requiring a more complicated way of programming, provides the sequentially programmed slide show.

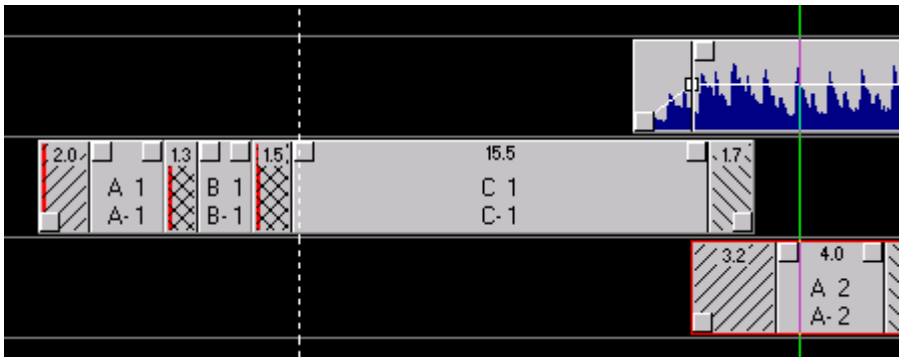
Thereby the recorded audio come from a CD player and the projectors will be controlled automatically within these passages. Live passages come from the memory of Quatrix. The presenter can release each passage or part-sequnce via the press of a button. The best is if in addition to QUATRIX also a remotely controllable CD player is used, since than the start/ stop commands for the CD player can be programmed into the memory of QUATRIX. The presenter has actually only one button to press to go step by step through the program. This provides a freedom, which the audience will feel.

With the control unit MPEX, which is in preparation, the CD player is not more required and programming will even be easier since next to the MPEG-3 coded sound also the control signals be incorporated.

With the sequentially programmed slide show, all control signals are in the memory of TRIPLEX/QUATRIX. The CD contains the audio and the time code. During play-back of the data from the memory of TRIPLEX/QUATRIX the function "Control unit should run without internal time code" must be selected or during loading of the memory with Imagix 3, the internal clock must be selected. The control unit will now tun without an external signal, also during the live parts of the presentation.

The slide show consist now of alternating automatically running and manually triggered sequences.

We now create an example of a show, which starts with 3 single steps which will than be replaced with a recorded sequence:



We start with the programming of the first three dissolves. With double click on the slide-events, we open the slide-event-editor and tick "Stop before fade-up". This guarantees that during play-back from the memory of TRIPLEX/QUATRIX, the internal clock stops on the red marker. The white, marked line is a marker which contains a CD player command. Each marker which contains a CD player command will be displayed in white. In our example the marker starts the first title of the CD. Approx. 1.5 sec. after the third slide C-1 appears on the projection screen, the CD player will be started. No it will take, a non exactly definable time, until the sound of the CD will appear. Once the title 1 runs, the timecode from the CD will reset the internal clock of TRIPLEX/QUATRIX. The timecode, which Imagix 5 has placed into the audio data, relates exactly to the time in the arranger. In the picture from Imagix 5 it shows that as soon as the title from the CD starts, that the locator will be pulled to the beginning of the wave file. The 15.5 sec. standing time, we see for slide C-1, will in reality be much shorter and contains a reserve for later changes.

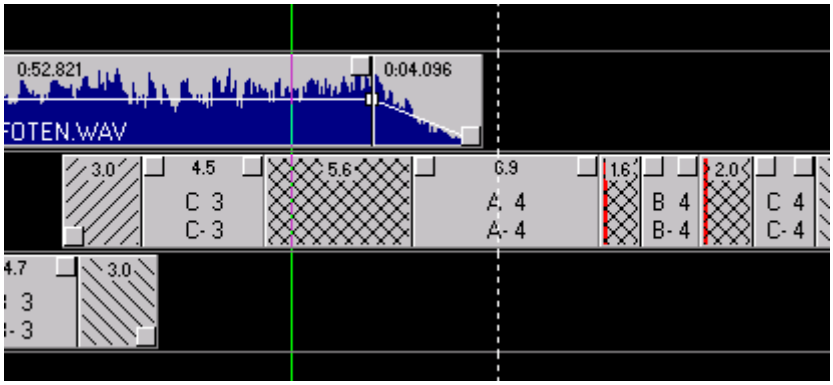
A buffer for the start up time the CD requires.

The following events of this show, will no be called syncron from the memory of TRIPLEX/QUATRIX. The synchronized part always runs exactly to the synchronisation.

Should there be a stop programmed during the part which is controlled by the timecode, it will be ignored. TRIPLEX/QUATRIX have clear priority order. Timecode is stronger than an X step. X steps are commands before the internal clock will stop. In Imagix 3 this will be shown as an X in front of the command line. Imagix 3 is ideal to review what is programmed into the memory of the control unit. If you want to have a look, just export your project into Imagix 3. You project in Imagix 5 will not be changed.

Now you have got to know the transition from a live-sequence to a recorded sequence. Now we need to learn about the transition from a recorded sequence to a live sequence.page 57

Have a look at the following example:

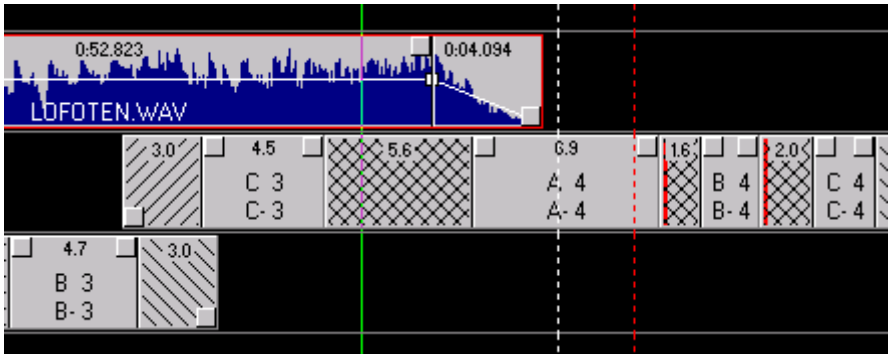


The sound runs out and a short time later a marker follows, which contains the command "Stop CD-player". A very short time later the CD-Player stops and the timecode as well. QUATRIX/TRIPLEX however continue to run, since it had been configured during the loading of the memory this way. ("Control unit should run without time code"). A short time later the play-back position will reach the next stop marking. At this the control unit will stop and wait for the command from the IR remote or the enter-key. With a further button press we will release the dissolve from A-4 to B-4 and after a short standing time of B-4 the control unit will wait for the next manual command.

The stand times can be programmed very short, since they are not real standing times, which are run. QUATRIX/TRIPLEX are always stopped at the min, standing time.

One problem can occur here. Normal CD players will start immediately at the end of one title with the next one. Herewith comes new timecode, which will pull the actual play-back position forward. The projectors will advance accordingly. This must never happen !! We will show you now what you have to observe to avoid this problem.

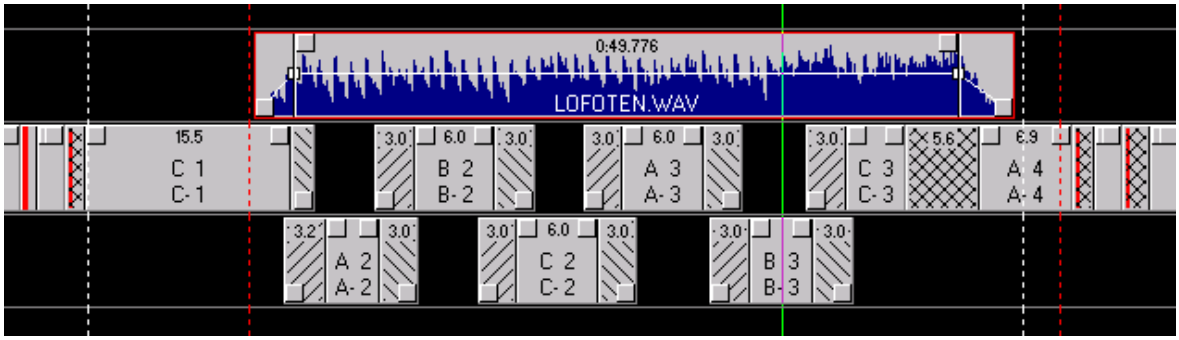
We did not consider the markers in our example above, which are required for the creation of the individual wave files.



We see now a red marker, which contains the feature "End Wave File". This one we set specifically after the end of our sound. Herewith our sound-track on the CD will be extended. We add virtually some digital silence. At this point the CD will contain some timecode, but after the last white marker the CD will be stopped and the last bit of the track will never be played since at the next synchronized passage, the next title will be selected.

Alternatively we could also use only every 2nd CD title and have in between a title with an empty wave file, which contains 5 sec. silence.

Summary:



The first marker starts the CD Player. Shortly after the time code will arrive at TREIPLEX/QUATRIX and pull the internal play-back position of the control unit to the position on which in our picture is our second marker. The synchronized sequence now runs. The timecode runs continuously into the control unit and releases the program steps. At the end of the sequence is a marker, which stops the CD player. The rest of this track will never be played. The internal clock of the control unit keeps running and will be stopped by the next stop marker. Through push button on the IR, a cable remote or on the control unit a next step will be released until the next stop marker holds the clock again etc. .

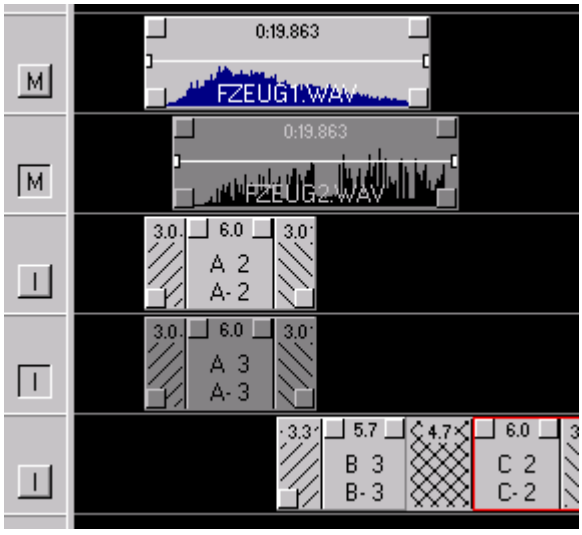
If a QUATRIX unit is used, which can remotely control the CD player, the presenter has only to press one button. The attention can remain focussed on the audience.

Tips and Tricks

Multilingual presentations/variations

It is very easy to create different versions of a slide show in Imagix 5. Multilingual applications are only one example for it.

Each event can be switched singularly inactive. Equally is a trackwise muting of the audio tracks possible. All inactive events are displayed in dark and will be ignored by the internal logic.



This example shows how via the buttons on the left hand side of the arranger, complete tracks can be switched inactive.

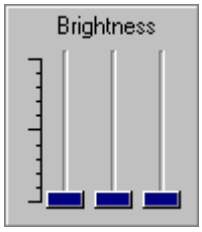
The events will now be shown in "night design".

Slide shows with several trays

Often the problem appears that one tray per projector is not sufficient. A tray change becomes necessary. If it is a very big project, we are in the opinion that it is better to separate it into several parts, which run as individual shows, In this case you also have the opportunity to play only one part. If however a change from one to another tray without a dark phase is required, than the traychange must be programmed.

Imagix 5 generally counts each tray from 0-250. More than 250 slides per projector is currently not possible. During the programming of the show, you program further than the boundaries of the tray. If in the case of a tray change a step required, as it is with standard and carousel trays, than you must jump over that specific slide. With standard trays this is no problem. In this case IMAGIX will just step one after another. You can just feed one tray after the next. With digital PlusTrac the situation can arise with carousel trays that the change from 80 to 0 and 0 to 1 is too close time wise to change the tray.

In this case it is necessary to create manually slide 81 in the tray editor and to place a slide event which brightness level is set to 0. (!) Now Imagix must hold this slide in the gate without having to project it. In reality there is no slide in the gate.



Note:

Please note that the sorting algorithm only works correctly within one set of 80 slide trays. If you produce shows, which have several trays, you need absolutely after the first set of trays has been sorted, to fix these slides so that IMAGIX later does not resort these images. The algorithm works for each single tray. Also there could be warning signals appearing at slide 80, since IMAGIX always assumes a tray change at the 80 limit. You can ignore these warnings.

Also a note to universal tray and QUATRIX/ TRIPLEX.

Since the control signals sometimes prefer 80 slides, it is possible that the control unit decides at slide 80 differently than you would expect.

Example: There is a change programmed from slide 75-82. The control unit is set to universal tray. slide 82 is identical in the control signal to slide 1, therefore the control unit will do 74 backward steps. You would not expect this, since slide 75 to 82 are in 50th universal trays are somewhere in the middle of the second tray. There helps a small trick. Switch your control system to carousel trays, even that you are using universal trays. With QUATRIX/ TRIPLEX, this is called STANDARD2 or STANDARD4 instead of STANDARD1 and STANDARD3. The problem will not appear, since 75 to 1 will be achieved with carousel trays through 6 forward steps. It will always work as long as no slide is accessed, which is more than 40 steps away, regardless forward or back ward. This situation is unlikely to be programmed with universal tray projectors.

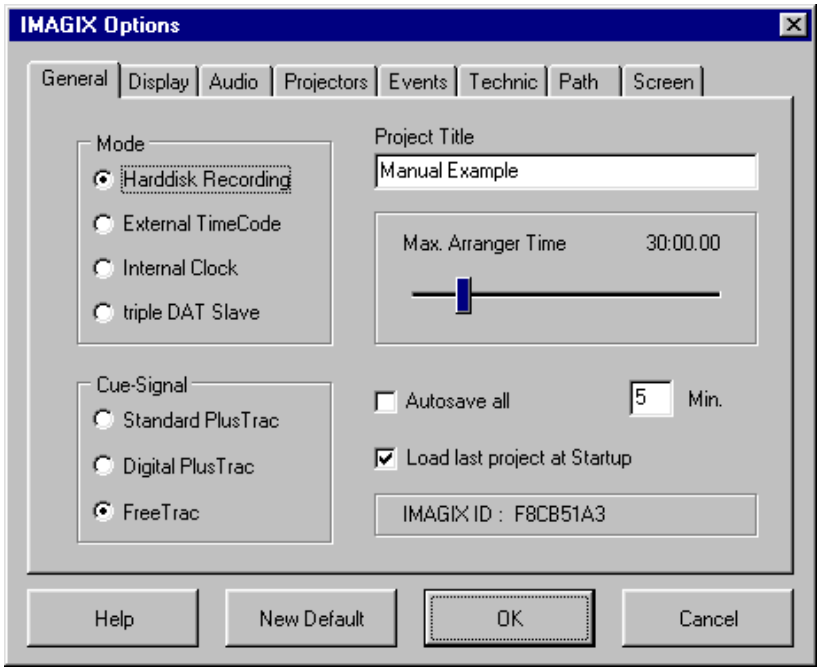
Summary:

If you use standard trays 50, work as if you were using carousel trays. With QUATRIX/ TRIPLEX select STANDARD2 or STANDARD4.

The Settings of IMAGIX

In this chapter we want to cover all settings. It is a tabulated overview, which is sorted according to the register pages of the dialogue window. It is recommended to read the total chapter once, as many of the options which are available in IMAGIX become clear.

All settings will be saved separately for each individual project. If you leave the dialogue with "cancel", all changes you have made are cancelled. With "OK", you will accept the changes. With "New Entry" you will also accept the changes and at the same time, create new common settings.



Page "General"

The page "General" contains all basic settings in Imagix 5.

Function

The global operational functions of Imagix 5. In most cases "Hard Disk Recording" will be selected. The functions "External Time Code" and "Internal Clock" are basically maintain backward compatibility with earlier Imagix versions. "Triple DAT Slave" is a function for users of the harddisk recording system from Creamware.

Control Signal

The setting of the control signal has a central importance for the use of IMAGIX 5.

With "Standard PlusTrac" the control unit will be connected to the serial interface of the PC. All control information will be send through the interface together with the sound. The control unit will than create analogue signals, which generally is designed to be recorded on a multi track cassette recorder. In this mode IMAGIX 5 can also be connected (incl. older Baessgen units) to: UX-Time, UX-Mega, UX-CDIX, TCQ-2020 PC, TCX-4040PC, BASIX, TRIPLEX, QUATRIX.

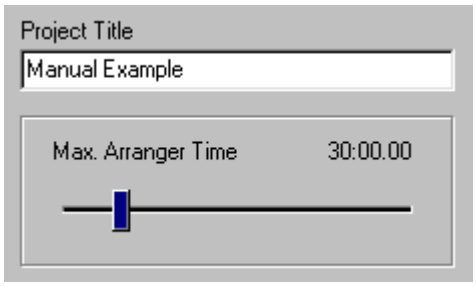
In selecting " Digital PlusTrac" the signal will not be send to the serial interface but be integrated into the digital audio data. While it is the same control signal, it is now, instead of being created analog by the control unit, calculated into the 16th bit of the audio signal. Therefore it is possible to record it on CD or DAT. However older units could under certain conditions still be used. With the help of the Digital Decoder DX-1 can the PlusTrac signal be extracted from the digital audio signal.

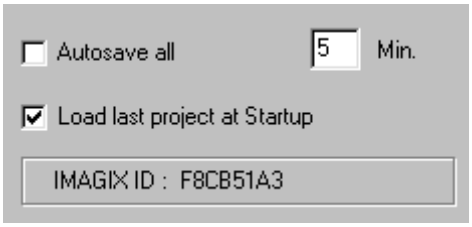
Digital PlusTrac should be used if old and new units are being combined. It is possible to use a TRIPLEX/BASIX/QUATRIX as the first unit and than, with the correct setting, to send an analogue signal from the output of these units to the older control devices.

The setting "FreeTrac" uses the signal FreeTrac, which generally be integrated into digital audio tracks. FreeTrac is a signal which supports all fade-up and fade-down curves and has no limitation in the fade-up and down rates. FreeTrac is supported by BASIX/TRIPLEX/QUATRIX and is the initial setting once you start up IMAGIX 5 the first time.

In the text field " Project Title" you can enter your production name. The name appears in the title of the arranger.

The max. arranger time indicates the right hand end of the horizontal slider, with which you select the sector in the arranger. Here you should set the approx. length of your project. The navigation with the slider is than a bit easier. The setting can afterwards be changed at any time.





The option, automatic save, writes after the pre-selected time a file into "autosave.im5" with your project data. You actual project will not be overwritten, but in case of a crash, you can get back to this particular file.

Note:

After a crash do not keep working in the file "autosave.im5", but rename it. If the name "autosave.im5" would be kept, no further back-up is possible.

"Load last project after program start" opens immediately the last worked upon project. IMAGIX remembers the name in the registry of Windows.

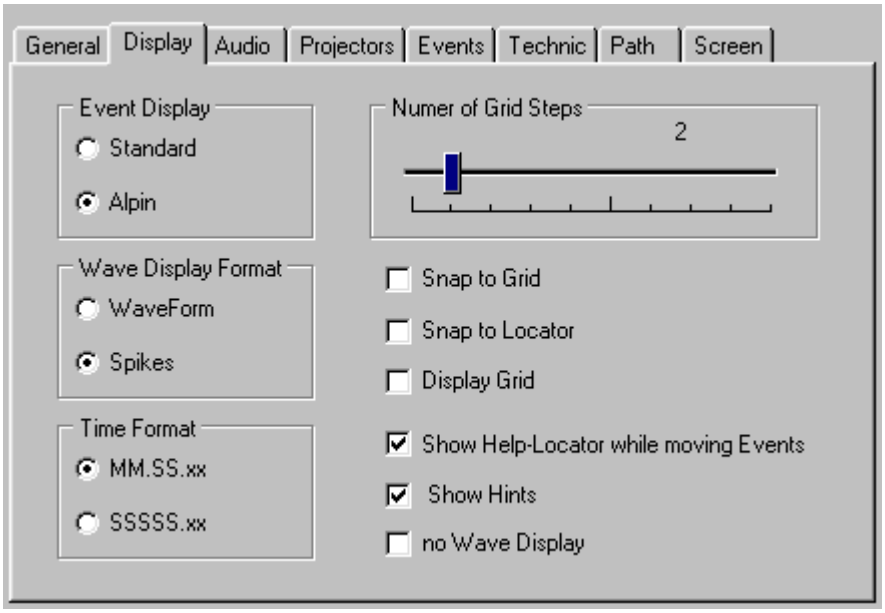
Note:

If IMAGIX 5 has a problem during the loading of a program, i.e. if a wave file, which has been created by a different program has an error, it would create a program problem. This would make it impossible to start IMAGIX correctly, since it will always try to open the faulty project. This option could not be de-activated, since IMAGIX is needed for this. In this case you can re-install IMAGIX into the same folder and the registry will be reset to the standard values. Your projects however will not be changed

The IMAGIX ID-number shows the serial number of your IMAGIX version. This number is saved in hard lock. If you work with a demoversion, the number 00000000 will appear.

Page :Display"

This page contains the most important visual aids for the programming:



"Event Display" standard shows the events in a simpler form. The shading in the fad-up and fade-down phase is removed. This saves processor time. though is less important with modern PC's.

"Wave Display Format" selects one of 2 different display formats. The best is that you have a look at these. "Spikes" shows only the absolute volume level of the audio, while "Wave" displays the correct current flow. The pre-selection is "Spikes".

The time format can be changed from the standard setting to a pure display in second's. For particular application it is easier to just work with numbers.

"Grid Steps" sets the density of the activated grid. The grid is not oriented upon a absolute scale, but adjusts automatically to the time scale. According to the selected display segment, the time scale on the top edge of the arranger, will always display straight numbers. If the number of "Grip Steps" is set to 1, each timeline of the time scale shows a gridline. If the setting is at 5, the points in the timescale are divided into 5 even segments. So you can adjust the grid almost ideally.

"Grid Magnetic" will fix the outer ends of the event to the gridlines.

"Marker Magnetic" will fix the marker to the gridlines.

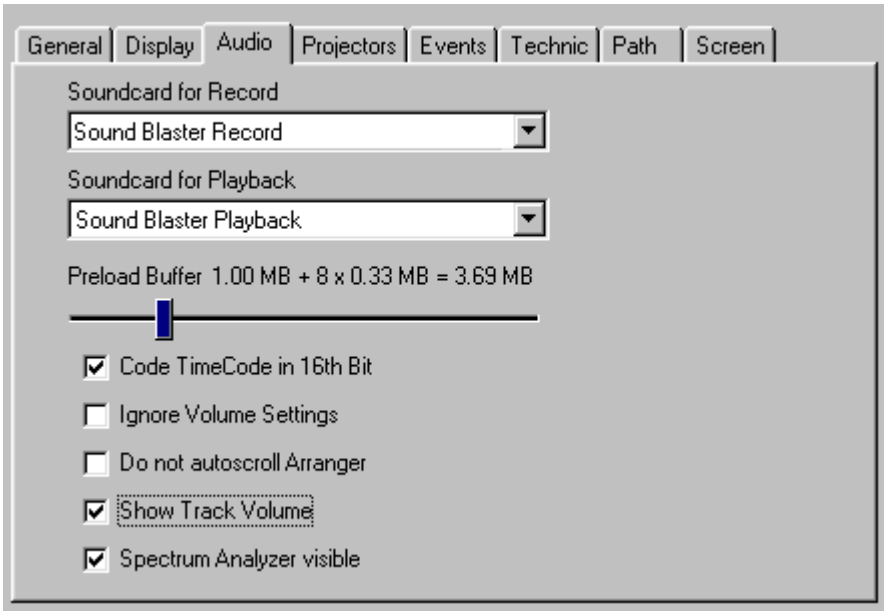
"Show Grid", makes the grid visible. It is also possible to switch the grid magnetic, but without making it visible. The speed button in the main window switches "display grid" and " grid magnetic". 

"Display help line during move" displays always a line, once you move an event at the active edge, over all tracks. With this you can arrange events better to each other.

"Helptext at the mouse pointer" activates small yellow help pads at the pointer, which will give you all over IMAGIX small aids over switching areas etc.

"Wave Display off" switches the display of the wave form off. This setting can be used during play-back with less powerful processors. Sometimes play-back will be possible this way, which otherwise may not function.

Page "Audio"



With the top two selection fields you can select from several installed sound cards, which one is used for record and play-back.

The size of the pre-load buffer will show the size of the buffer, which will be loaded from the hard disk, before given to the soundcard. There is a global buffer and a buffer for each track. If you have a relative slow hard disk it can be advisable to select a larger buffer. Occasional loading difficulty during sound play-back may be solved this way. A large buffer however makes the functions of IMAGIX a bit slower, since during play-back the buffer must be filled first, before IMAGIX can send data to the soundcard. Normally the standard setting is a good value. With little memory and a large buffer this can be detriment, since Windows will than substitute missing memory with hard disk memory.

"Calculate TimeCode into the 16th bit", creates in the 16th bit of the audio track a SMPTE timecode with 25 frames/sec. For speaker support applications, this timecode is required to synchronize the connected control unit. For a completely synchronized slide show, the time code is not required unless you want to synchronize external hardware which expects time code.

"Ignore Volume Settings" switches all volume curves and track volumes off. This switch is required for diagnosis with slow processors.

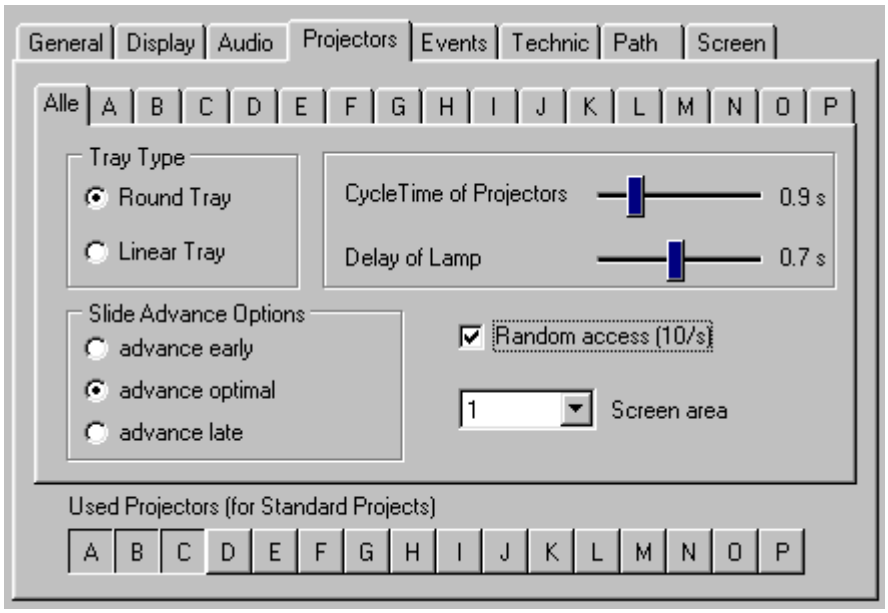
"Don't Scroll Arranger" is also a measure to save processing power. During play-back the arranger picture must be re-drawn once the locator reaches the right hand edge. If you record a complete show to a DAT-Recorder for example, you could use this setting. You only will not see the play-back position. With slower processors it is better, than having IMAGIX to go down, because the audio data do not come through fast enough.

"Show Track Volume" has currently no function and should remain switched on at all times.

"Show Spectrum Analyzer, can be switched off to save processor time.

Page "Projectors"

The settings which concern the projectors, can be set basically separate for each projector. Since in most cases identical projectors will be used, the register card "All" is available. All settings are than identical for all 16 projectors. In any other case you can make individual settings.



The setting "Tray Type" influences in general the time for the change of a slide, which IMAGIX calculates in the background, Here is the same, as with the settings in the control units: As long as there is no slide change programmed over more than 40 pictures, you can retain the setting "carousel tray", even with the use of universal trays. (see also our notes at 'Slideshows with several trays").

The "Slide Transport Time", determines if during the dark phase of the projector, a slide early, in the centre or late in the dark phase be changed. Normally you would leaves this at "optimal".

"Cycle Time of the Projector" requires the setting after which the projector will have completed safely the slide change. The manufacturers data for this are often not available. In doubt measure the time the projector needs to change 10 slide and than divide this figure by 10.

"Afterglow of the lamp" has only an influence on the display of the warning markings in IMAGIX.).7 sec. is normally a good value. If after a very light slides, follows a very dark one, the value).7 sec. is too short. Imagix will however always use, if there is enough time, 1.5 sec. before the projector will be advanced.

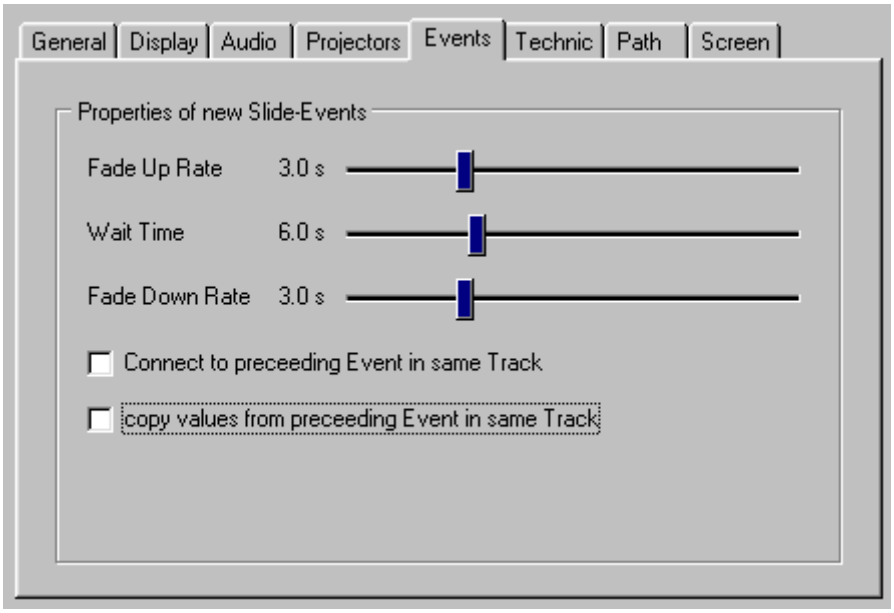
"Random Access" should be selected if Carousel-Projecvtors with fast access (Kodak, Leica RT, Simda) are being used. During the sorting of slides, this could generate a different sorting order.

"Screen area" allows the assignment of a projector to a screen area. This assignment can also be done on the page "Projection screen".

At the lower end of this page you will find a selection of the used projectors:

The here selected projectors will automatically being used by IMAGIX. If you create a "Slide Event", Imagix will only use one of the selected projectors. Equally the sorting algorithm will use the these projectors. You can manually use projectors which are not cleared here. IMAGIX however will only suggest projectors, which have been selected here.

Page "Slide Events"



With the settings in this page you indicate the values, newly created slide events should have. Since Imagix can not know how long you want to show the selected slide, it will use only standard settings.

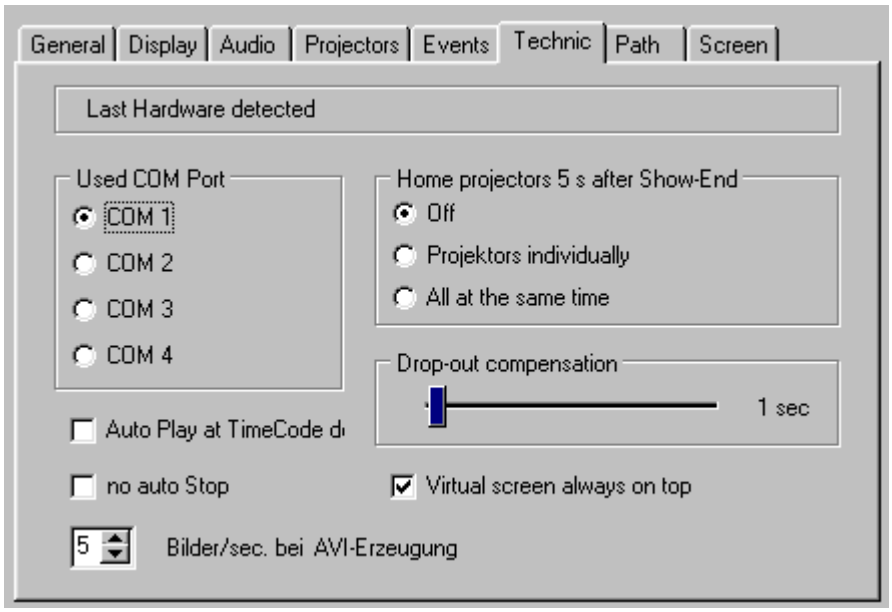
"Connect to the left neighbour" will set automatically the feature "Connect".

Sometimes you have several events with the same properties. In this case select "Take Values from the Left Neighbour". IMAGIX will than copy the properties of the left neighbour in this track.

Page "AV Technique"

In the top filed of this dialogue IMAGIX shows the version of the connected control unit in the operating mode "Standard PlusTrac", which connects via the RS 232 port.

To obtain the information the button "SYNC" must at least be used once. The modes "Digital PlusTrac" and "FreeTrac" do not provide any feedback, since the signals are encoded into the sound.



"Used COM Port" selects the interface, which is used for the mode 'Standard PlusTrac".

"Autoplay at time code" is only in the modes with external timecode active. IMAGIX will switch to play-back once timecode is available. In use with hard disk recording, this field is not active.

"No automatic stop" - IMAGIX will ignore all stop marker. This feature is useful for trials of speaker support programs.

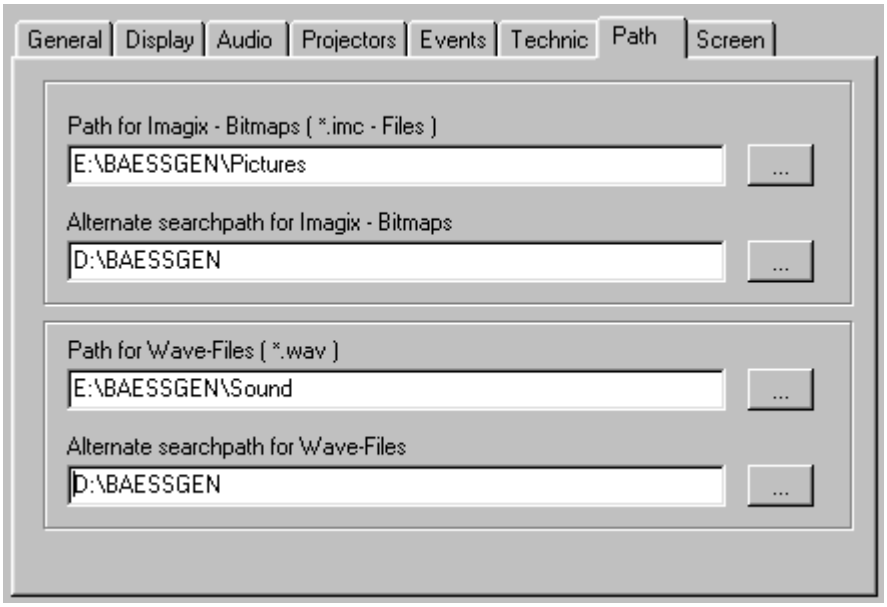
"Pictures/sec during AVI creations" sets the video frame rate. As higher the rate, as better will be the AVI file.

"Autom. Zero Positioning after 5 sec", adds at the end of the slide show a zero return command. You can select if all projectors simultaneously should go to zero after 5 sec. past the last slide event or if unused projectors can reset earlier.

"Time Code Tolerance" is the time the internal clock will simulate a disrupted time code. This is important in the mode "External Time Code". This value will also be transferred in the memory function. Even if Quatrix is set to memory play-back with external timecode, the unit will cover the timeframe even if there is no more time code. This feature may be handy if you want to complete / continue a show for up to 60 sec., while in the meantime the tape recorder rewind's.

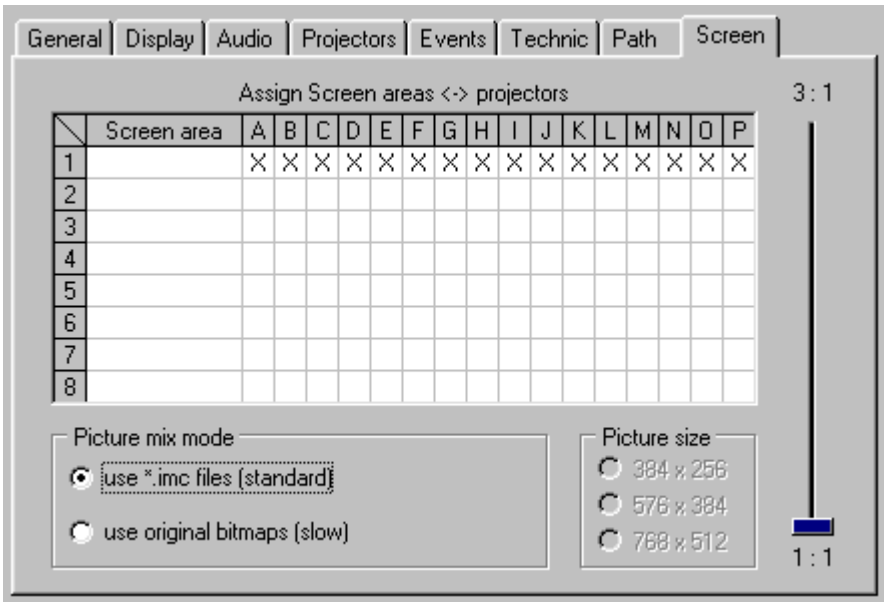
"Virtual screen always on top" allows it to configure the screen so, that other IMAGIX windows will not cover it. The marker administration has also this feature.

Page "Path's"



In this page you can pre-determine the search path's under which Imagix will look for image and wave files. This is discussed in more details at " The Files in IMAGIX".

Page "Projection Screen"



This page allows you assign the projection areas to the projectors. Also you assign names to the projection areas and determine the image mix mode. If you select the mode, which uses the original bitmaps, the image size can also be set. The slide allows an enlargement of the screen to 3:1 after the image mix. This will not improve the quality, but the screen becomes larger.

This function has the same effect, as if you drag the virtual screen larger by use of the mouse. (see also the chapter "Panorama Projection").

All settings are saved in the configuration file of the project.page

- space for your own notes -