



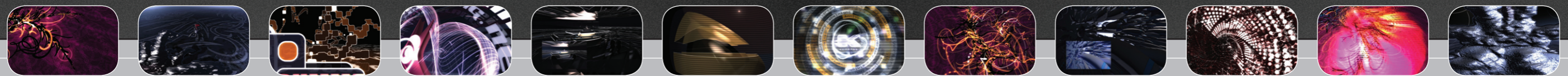
einklang.visuals

Danny von Mitschke Collande
Peter Cukierski

VJmachine.com

danny.vmc@VJmachine.com
peter.c@VJmachine.com

FULLY AUTOMATIC MUSIC VISUALISATION SYSTEM
FOR PRIVATE PARTIES OR MAJOR EVENTS



THE PERFECT ATMOSPHERE FOR YOUR EVENT



VJmachine is a fully automatic music visualisation system specifically for use at discotheques, bars, clubs as well as at events and concerts.

The system uses an audio input, such as the master output of the DJ's mixer, to analyse the played music and to independently create a suitable visual background of high-quality 3D animations. Apart from music speed and frequency, this also includes the beat build-up and basic tone. While conventional solutions simply mix video sequences, this system generates real-time 3D scenarios based on the information gained, which contextually also refer directly to the music.

This method creates a completely new and unique audio-visual experience, which in turn creates a unity between what the ear hears and the eye sees.

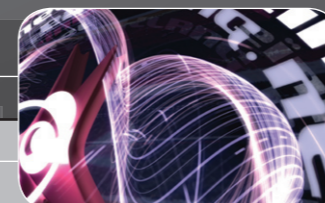
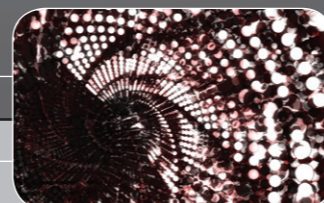
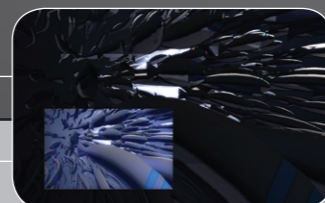
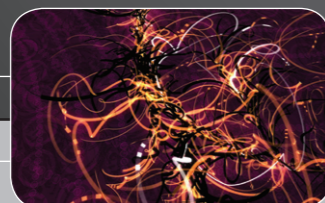
As the name already implies, the system works fully autonomously. Simply connect the VJmachine with the output of your sound system as well as to one or several projectors and switch VJmachine on to experience a symbiosis of image and sound.

Numerous additional functions and effects, which can either be preset or simply and intuitively managed during the operation, make VJmachine perfectly suitable for a variety of optional applications. You can determine the scope in which to use VJmachine: from the smallest private party to a major event with several thousand spectators.

Special additional functions make it easy for organisers and advertisers to strengthen customer affiliation and brand consciousness. This includes, among others, the integration and fully automated animation of logos and flyers as well as photo slide shows. Text messages on advertising campaigns, special "Happy Hour" offers, birthday greetings or any other messages can be superimposed during the operation. These functions are contained in the basic version and are easily operated by anyone.

VJmachine is a combination of software and hardware that unfolds its full potential in the interaction of its components. All components are high-quality and perfectly inter-coordinated.

VJmachine is the result of seven years of know-how and experience gained from live appearances and the creation of so-called 3D real-time demos under the VJ-label einklang.net, which has become nationally and internationally renowned. In practise however, VJmachine was continually improved and contextually expanded.



HARDWARE

VJmachine is based on a Shuttle Barebone with a multi-core processor and a high-performance 3D graphics card. It is operated by a high-quality and robust Elo Touchscreen monitor, which was optimised for application in dark and industrial surroundings. No keyboard, mouse or additional monitor are required.

VIDEO SIGNAL OUTPUT

The system is connected to output devices such as LCD television, projectors and conventional PAL TVs via digital (HDMI or DVI) as well as analogue interfaces (S-Video). The resolution automatically adapts to the output medium and ranges from PAL (720*576) to Full-HD (1920*1080).

The connection of several video output devices to VJmachine requires additional splitters not contained in the delivery scope. Every VJmachine produces an output signal. A further VJ machine can be connected to simultaneously create several different animations. Both VJmachines then synchronically produce different animations.

AUDIO SIGNAL INPUT

To enable the VJmachine to analyse the played music it must be connected to an audio output device such as a DJ mixer via a 3.5 mm jack input or a supplied jack-cinch adapter. Operation without audio signal is also possible.



SOFTWARE

VJmachine works with a 3D engine specially designed for this purpose. The programme fully utilises the 3D card's performance and generates all animations and effects with the help of complex Pixel and Vertex shaders in real-time - a technology also used in the most modern computer games. This ensures that the VJmachine can directly modify animations while being operated.

SOUND ANALYSIS

An important software component is sound analysis. VJmachine not only analyses the frequency bands and music speed, but also the tone and beat build-up. This allows the adaptation of all animations to the music speed and the visualisation of typical electronic music elements such as breaks or individual instruments such as base drum, snare drum and hi-hat. The spectator gets the impression that the animations are not only background but do in actual fact contextually elaborate on the music.

LATENCY COMPENSATOR

In order to ensure perfect synchronisation, VJmachine also has a latency compensator, which always guarantees that the rhythm perfectly matches that of the music.

USER INTERFACE

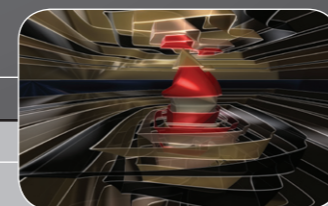
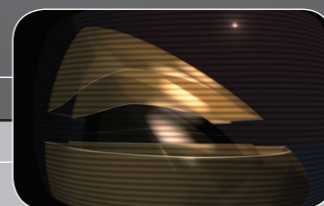
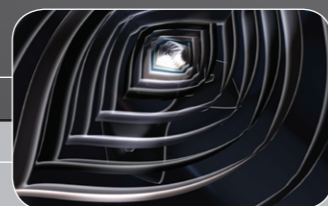
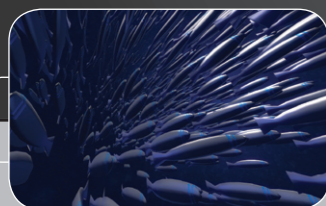
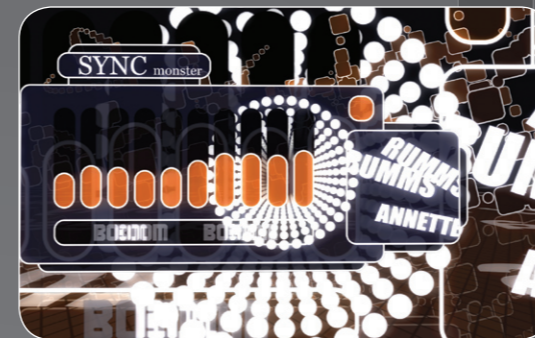
All of the system's functions are operated via a user-friendly and intuitive interface. The guiding design principle was: all functions are always displayed at the same position on the monitor and are accessible with a maximum of two touches on the touchscreen monitor, whereby the system status always remains within visual range.

Apart from basic operating elements such as programme and scenario selection, the user is provided with elaborate visual functions and effects with which the animations can be influenced live. The system also has an input lock to protect it from erroneous input.

CONTENT INTEGRATION

Logos, flyers and photos can be stored on VJmachine as image files or can be directly integrated from a USB stick. Contents do not require prior elaborate editing or conversion. Sponsor logos and photos for slide shows, such as any preceding events, are converted to the correct size in real-time and integrated into the animation.

Text can also be entered during the operation, whereby the system supports two message types: those immediately and uniquely faded in, like personal messages and announcements for example, as well as those displayed at recurring intervals, such as the announcement of campaigns.



SCENARIOS

The system has 20 different scenarios, which in turn can be started with varying presettings. Further scenarios can later be made available within the scope of updates.

The contextual bandwidth ranges from abstract art to object distortions to streetstyle, urban art and architecture, with the visualisation of varying topics such as flora and fauna, dance and movement, as well as design, fashion and style, whereby the reference to music is always in the foreground.

PROGRAMME GROUPS

All scenarios are subordinated to certain programme groups, which can be rapidly called up on the user interface. A change of style is therefore possible at any stage. The most important programme groups include: "Ambient" (preliminary programme), "Techno", "Funk", "Disco" and "Minimal". The direct selection or blocking of certain scenarios is also possible at any time. Own "user settings" permit new combinations stemming from all preliminary programmes for individual storage.

START FUNCTIONS

These are functions configured at system start.

Photo Slide Show: An animated photo slide show can be created with, for example, pictures of guests at preceding events. You can specify a photo index for the slide show when starting the programme. The photos do not have to be specially edited. The programme first determines the number of images and resulting slide show length and then checks to see if all images can be loaded.

Logo integration: Up to 16 logos can be integrated and automatically animated, such as the logo of a sponsor or the club. An index is specified first, as in the slide show.

Flyer integration: Up to eight flyers can be integrated. The difference to the logos is in the type of animation. For readability reasons the flyers are displayed more quietly and in close-up.

LIVE FUNCTIONS

Functions which are configured live during the operation.

Programme selection: A programme selection can be changed live, for example from Funk to Techno when the DJ changes.

Scenario selection: Scenarios can be selected or blocked live.

Brightness adaptation: Brightness can be adapted live, if you notice during the event that the projector is too bright, for example.

Mute: A function to enable immediate visualisation shut-down, for example when the light needs to be switched off during a laser show.

Interval messages: You can enter up to 16 messages moving across the screen at selectable intervals.

Short messages: You can display any individual once-off messages immediately.

Distortion: Here you can specify the degree of animation distortion. The scale ranges from 0 to 100. Effects such as feedback, kaleidoscope, superimposing and stylisation are automatically applied.

Stroboscope: A stroboscope can be additionally activated or deactivated. The speed is aligned to the rhythm and can be adjusted at random.

Screen distortion: In this case a distortion mode can be set and operated via controls and buttons in addition to the automatic distortion of animations.

Touchscreen mode: This mode was specially developed for the touchscreen monitor and permits you to create certain effects (e.g. lightning, particles or distortions) at those points of the monitor you are currently touching. Creativity knows no bounds.

Loading/Saving: All settings can be saved or reset to factory settings at any time.

Manual BPM: You can use this function to check the automatic BPM. It also serves to determine a speed if automatic BPM is not possible, whereby touching a field on the snare drum [every second beat] is sufficient.

Latency compensation: For technical reasons, the evaluation of information on the characteristics of a certain piece of music inevitably results in minimal delays which, in their totality, could have a negative impact on the synchronisation of the music and effects. Currently the only device of its kind, VJmachine permits latency setting via controls with which the system can adjust these delays.

MONITORING FUNCTIONS

Functions serving to control the system.

Video output: You can monitor the video output signal in a specially provided window. The window can also be used to pre-test certain functions such as the slide-show function, the ticker or the animated logos.

Audio input: Here you can monitor the audio signal input. Although the system does calibrate itself, it cannot operate with the desired precision below or above a certain volume level. In this case or if there is no signal at all, the system emits an error message until a level is reached with which the system can work. Although the system is also operable without an audio signal, it cannot adjust the visual effects to the music.

Speed (BPM): In certain cases the music speed cannot be determined correctly. The system emits an error message and deactivates the speed analysis after a certain period. In this case you can perform a manual speed analysis.

Next scenario: The system always informs you about the scenario that is displayed next. You can use this information to change the scenario, if desired.

