MAGIC SOFT

Description

Hardware specifications

Video tutorials

MagicSoft Playout Broadcast Automation Software

MagicSoft Playout software is designed as an intuitive and powerful multi-format playout solution for professional environments such as broadcasting stations and production studios. It's suitable for 24/7 playout for news, music and movie channels, allowing to insert commercials and to switch between multiple live video.
It works under Windows 7 / 8 and 10 and equivalent Windows Server OS (64-bit only).

MagicSoft Playout accepts any type of media files with a size between 8K (7680 x 4320) and 320 x 240 and the frame-rate accepted range is between 3 and 120 fps.

Supported LIVE inputs and outputs :
   - BlackmagicDesign devices (Decklink & Intensity)
   - NDI streams
   - UDP streams

Output streaming supports resolutions between 4k and 360 x 288.
Some of the RTMP / RTMPS servers that work for 24/7 streaming are :
YouTube, Twitch, Wowza, Vimeo, Facebook and DaCast

There is also support for UDP (supporting unicast and multicast by
using H264 with AAC, AC3 or MP2)

The supported video input and output modes are :

4K UHD	**23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60**
HD1080p	**23.98 / 24 / 25 / 29.97 /30 / 50 /59.94 /60**
HD1080i	**50 / 59.94**
HD720p	**50 / 59.94**
SD	**PAL / NTSC**

The internal video engine will automatically resize, match aspect ratio and
transcode the media files and the live inputs in order to match the
characteristics of the output.

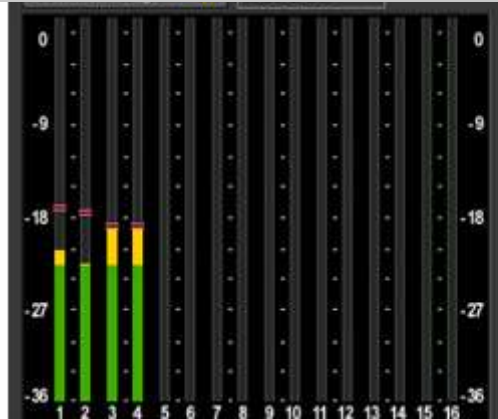|				
Maasai Mara in 5K.mp4		29.97519	6144	3160
Istanbul City in 4K.mp4		25.00499	3840	2160
GEALAN_S9000_10sec.mxf		25	720	576
CLIPES_ZECA_PAGODINHO_ATUA...		29.97003	856	480
news insert .avi		29.97003	720	480

Up to 4 video inputs and 4 video outputs are supported and the inputs and outputs depend on the capability of the used devices :

   - SDI with audio embeded

   - SDI with audio AES

   - YUV with analog audio

   - Composite with analog audio

   - HDMI

MagicSoft Playout client allows you to schedule a certain clip or live input to be started at the pre-establish time.

The skipped events or gaps that may appear will be marked as such.

By using the "advanced audio" module, you can :
   - set up to 16 audio output channels
   - apply real-time audio loudness normalization

The sound module allows applying loudness normalization for playout files
(EBU, NTSC, YouTube or custom normalization settings are supported)
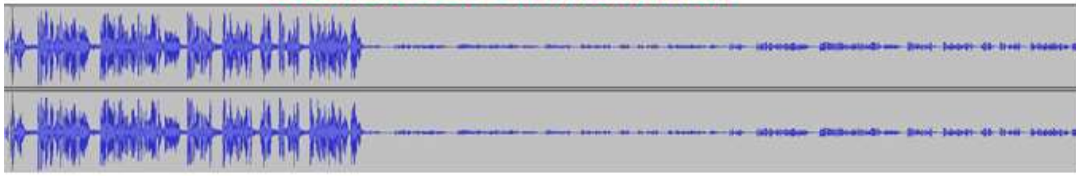
Allows using media without requiring a manual adjustment of the sound
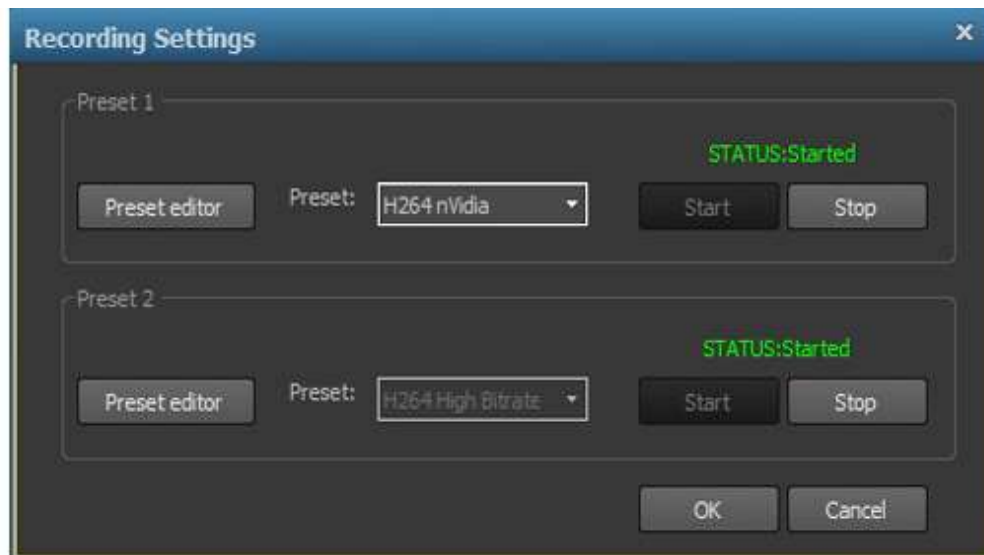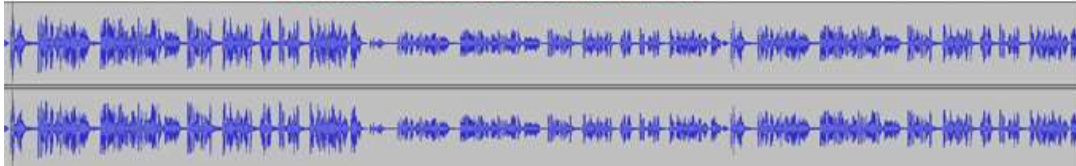level.
   Other advantages:
      - real-time automatically processing, without compression or distortion
      - offers the best results even if the audio has a high dynamic range
      - possibility to achieve a predictable loudness level
      - guarantees that a signal does not clip

Sound before normalization

Sound after normalization

The conformance recorder module allows you to record the output of the Playout and it can work with two profiles simultaneously.

The timeline is flexible and intuitive, it allows scrubbing, marking and

Multiple consecutive rows can be selected and transformed into a collapsible group. Working with multiple level grouping is supported.

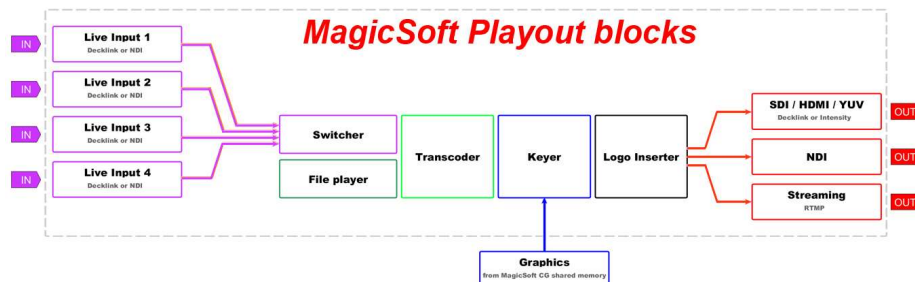**The trimming feature allows you to easily create segments and manage the properties of each segment.**

The list of video codecs and containers tested in a broadcast environment :

- **H264 AVC Intra 50 and AVC Intra 100** .mxf
- **H264 8 bit and 10 bit** .mp4 / .mov / .avi / .mkv and transport stream (4:2:0 and 4:2:2)
- **HEVC 8 bit and 10 bit** .mp4 / .mov / .avi / .mkv and transport stream (4:2:0 and 4:2:2)
- **XdCAM 35 and XdCAM 50** .mov and mxf
- **ProRes** .mov
- **DNxHD 8 bit and 10 bit** .mov and .mxf
- **DNxHR** .mov and .mxf
- **Mpeg2** program stream and transport stream (4:2:0 and 4:2:2)
- **DV** .avi /.mov /.mxf and rawDV
- **DVCPRO** .avi and .mov
- **DVCPRO HD** .mov

The functional blocks of the MagicSoft Playout are represented in the diagram.

The software has a watch-dog application that ensures the functionality of the MagicSoft Playout and sends the status and alerts by SMTP email.

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The recommended configurations are based on Intel motherboards with socket 1151 / 2011 / 2066 / 3647
and AMD processors Ryzen series.
The list of compatible hardware is open. The hardware vendors update their systems on a regular basis and it is difficult to evaluate every new systems that come to market.
The most important thing to consider is that the video frame-buffer must be compatible with the motherboard and the rest of your system. Our software will work for sure if the systems are configured correctly.

4K UHD / Quad channel HD

Type	MotherBoard	Processor	RAM Memory	Blackmagic Card
Socket 2066 / 3647 / 2011 v3 nVidia GTX	Asus, Gigabyte, MSI for socket 2066 Supermicro for socket 3647	Intel processor with 8 core or better	4 X 8 GB (socket 2066)	DeckLink / Intensity driver ver 11 or newer

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Quad channel SD / dual channel HD

CPU Socket	MotherBoard	Processor	RAM Memory	Blackmagic Card
Intel socket 2011 / 1151 nVidia video card GTX 750 or newer	SuperMicro, Gigabyte, Asus, MSI	Intel Core i7 with 6 core and 12 threads or better	4 X 8 GB	Decklink / Intensity driver ver 11 or newer
AMD socket AM4 nVidia video card GTX 750 or newer	Gigabyte, Asus, MSI	AMD Ryzen 8 core and 12 threads or better	4 X 8 GB	Decklink / Intensity driver ver 11 or newer

Single channel HD

CPU Socket	MotherBoard	Processor	RAM Memory	Blackmagic Card
Socket 1151 with integrated graphics	Gigabyte, Asus, MSI	Intel Core i7 with 4 core and 8 threads	2 X 8 GB	DeckLink / Intensity driver ver 11 or newer
Socket AM4 GTX 750 or newer	Gigabyte, Asus, MSI	AMD Ryzen 7	2 X 8 GB	DeckLink / Intensity driver ver 11 or newer

Single channel SD

CPU Socket	MotherBoard	Processor	RAM	Blackmagic

with integrated graphics	MSI	Core i5	GB	Intensity driver ver 11 or newer
Socket AM4 GTX 750 or newer	Gigabyte, Asus, MSI	AMD Ryzen 5	2 X 4 GB	DeckLink / Intensity driver ver 11 or newer

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