



UHD Player Manual

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AV Stumpfl GmbH | Austria | www.AVstumpfl.com

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1. USAGE NOTICE

1.1. SAFETY INFORMATION

Safety information for storage, installation and usage

- Read the entire manual to ensure safe and proper usage.
- All warranty claims become void once you open or damage the device.
- During transport and storage, temperatures may differ considerably. In order to avoid defects resulting from condensation, do not begin to operate your device until the difference in temperature has been levelled out.
- Please ensure that the voltage supply meets the specification. Use only the supplied power adapter. The device will not function with an incorrect voltage supply. Incorrect voltage supply may damage the UHD Player.
- Avoid overheating the UHD Player. Direct sunshine, heat sources in the immediate vicinity of the UHD Player, a location without ventilation or several UHD Players mounted on top of one another may cause damage.
- Avoid any soiling of the device and its ports. Soiling may cause limited functionality of the UHD Player.
- Avoid high humidity in the vicinity of the UHD Player. Humidity may damage the device and cause port corrosion.
- Protect the UHD Player from liquids and water splashes, in order to prevent damage.
- Never connect a SCNET Show Control device to the LAN port of the UHD Player. This may damage the UHD Player.
- Check the plug direction and do not apply force when connecting the devices or cables to the UHD Player, as this could cause irreparable damage to the port pins.
- If peripheral devices are not recognized or functions are not available, check whether or not the UHD Player firmware is up to date.
- Please note the difference in the USB ports: The USB peripheral ports support peripheral devices, and the USB data port supports USB data carriers.
- The UHD Player is only ready for operation after booting has been completed. (LED lights up red → Device is booting. LED lights up in green → device is ready for operation.)
- The UHD Player will only play supported file formats. Media files with a size of up to 30 GB have been tested.
- After enabling the write protection of the SD Card, changes can no longer be saved or files deleted.

1.2. WARNING

Danger of electric shock!

Touching defective cables or any other open electrical components may cause electric shock. The degree of injury ranges from slight burns to lethal cardiac dysrhythmia.

- Do not use defective cables or devices.
- Do not touch any open electrical components.

1.3. MAINTENANCE TIPS

- Do not use any abrasive or corrosive cleaning products.
- Avoid wet cloths.

2. TECHNICAL DATA

2.1. SUPPORTED FILE FORMATS

Here is a list of all file formats that are supported by the UHD Player.
For additional information and tips on how to create content that works best with the UHD Player, please see the [content](#) chapter.

2.1.1. VIDEO

The UHD Player supports the following video formats:

Video Codec:	The video must be encoded as a h.265 (HEVC) or VP9 (webm) file with a maximum resolution of 4096x2160@60p. h.264 that can be used up to 1920x1080@60p.
Resolution:	The maximum supported resolution is 3840x2160@60p or 4096x2160@60p for h.265 or VP9 files and 1920x1080@60p using h.264 files.
Color Depth:	All video must be encoded at 4:2:0 chroma subsampling with 8 bits (Main Profile) or 10 bits (Main 10 Profile) of color depth using h.265 codec and a color depth of 8 bits using h.264 codec.
Frame Rate:	The maximum supported frame rate is 60 frames per second, and it is also affected by your display hardware. We recommend using exactly the same or an integral fraction of the frame rate that is shown on the display. So, if your display has a refresh rate of 60 frames per second, it is recommended to render the video with 30p or 60p.
Container Format:	The following container formats are supported: .mov, .mp4, .mkv, .webm
Bitrate:	A constant bit rate (CBR) of between 25 and 30 Mbps is recommended.
Playback Media:	All videos must be played from a Class 10 SD Card. If you are using a USB drive or a USB stick, please ensure that the read capability is at least 30 MB/s.
Seamless Loop:	Seamless Loop function works for all supported container formats: .mov, .mp4, .webm, .mkv

2.1.2. IMAGES

The UHD Player supports the following image formats:

Image Format:	JPG, PNG.
Resolution:	The maximum resolution for still images is 8192x8192 pixels.
Color Depth:	The UHD Player supports 8 Bit color depth and a chroma subsampling of 4:4:4.

PLEASE NOTE:

Due to the capability of the Still Image Decoder, all images will be displayed with a maximum resolution of 1920x1080px, regardless of their native resolution. To avoid this downsizing and to take full advantage of your display's resolution, you may create a video out of the images by using an external video editing software, e.g. ffmpeg (see [content](#) chapter).

2.1.3. AUDIO

The UHD Player supports the following audio formats:

Audio Codec: AAC and MP3 up to 320 KB/s, PCM via WAV, FLAC

Sample Rates: 32 kHz, 44.1 kHz and 48 kHz are supported

2.2. DATA CARRIER


SD / SDHC Cards (Class 10),

USB Sticks or USB Drives with a read capability of at least 30 MB/s

2.3. SD CARD / USB FILE SYSTEM

NTFS, FAT32, exFAT

2.4. POWER SUPPLY

8V to 16V DC wide-range input, 12W for SD Card, DC polarity 

2.5. DIMENSIONS

238 mm / 177,5 mm / 39,7 mm

(Length / Width / Height)

2.6. WEIGHT

940 g, metal housing

2.7. AMBIENT CONDITIONS

Description	in operation	out of operation
Temperature	-10 to +40 °C	-20 to +60 °C
Humidity	10 to 80 % RH max. 27 °C wet bulb	max. 90 % RH max. 35 °C wet bulb
Elevation	max. 3 000 m	max. 12 000 m
Vibration	0.08 G (Z-axis) 0.06 G (X/Y-axis) 5 to 500 Hz	0.30 G (z-axis) 0.15 G (X/Y-axis) 5 to 500 Hz

3. SCOPE OF DELIVERY



Fig. 1: UHD Player and accessories

- 1x UHD Player
- 1x Power adapter 12V / 2A
- 1x 8 GB SDHC Card
- 1x UHD Player Manual
- 1x Retaining clip for SD Card slot

FILES ON THE SD CARD UPON DELIVERY

The following files will be on the SD Card upon delivery:

- Sample media file (AVS Story.mkv)
- UHD Player Manual (Manual.pdf)
- Code.ini (comes with UHD Player Pro only, and it contains the Avio Pro approval code)
- Initialization File (UHDPlayerSetting.ini)
- Serial number information (Serial.txt)

4. HARDWARE OVERVIEW

Here is an overview of the ports of the UHD player's front and rear panels:

4.1. FRONT PANEL VIEW AND PORTS



Fig. 2: UHD Player front panel

- 1 LEDS
- 2 SD CARD SLOT
- 3 USB DATA PORT

(1) LEDS

The LEDs indicate from left to right:

POWER | LAN | STATUS | USB | SD

POWER

- Green: UHD Player is powered and ready for operation
- Orange/Red: LED turns from orange to red while UHD Player is booting
- Off: UHD Player is not connected to power

LAN

- Green: Network connection available
- Off: No network connection available

STATUS

- Green: UHD Player is ready for operation
- Off: Player is still booting or an error occurred

SD

- Blue: Indicates that an SD Card is recognized at the SD Card port and flashes when the player reads from this device
- Off: No SD Card data recognized at the SD Card port

USB

- Blue: Indicates that a USB data carrier is attached to the USB data port and flashes when the player reads from this device
- Off: No USB data carrier recognized at the USB data port

(2) SD CARD SLOT

The SD Card slot works with class 10 SD / SDHC Cards that use the FAT32, NTFS or exFAT file system.

SD Cards with up to 16 GB of memory are tested. SD Cards with a read speed of minimum 30 MByte/s are recommended.

To prevent the SD Card from being ejected by mistake, you can use the enclosed retaining clip. Place it over the SD Card and attach it to the player using the two enclosed screws.

(3) USB DATA PORT

The USB 3.0 port on the front side is a USB data port. Insert your USB data stick or USB drive (formatted with FAT32, NTFS or exFAT file system) here. USB sticks with up to 16 GB of memory and USB drives with up to 400 GB memory are tested. USB data carriers with a read speed of minimum 30 MByte/s are recommended.

For USB peripheral devices, e.g. a keyboard, please use the USB peripheral port on the side panel. Please note that a USB drive may need an external power supply.

4.1.1. REAR PANEL VIEW AND PORTS

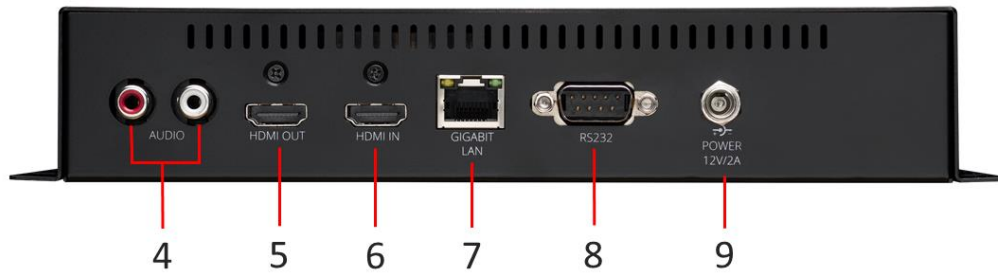


Fig. 3: UHD Player rear panel

- 4 ANALOG STEREO AUDIO RCA CONNECTORS
- 5 HDMI OUT Port
- 6 HDMI IN Port
- 7 LAN PORT
- 8 RS232 SERIAL PORT
- 9 POWER CONNECTOR

(4) ANALOG STEREO AUDIO RCA CONNECTORS

To use the stereo analog audio out, please connect your audio devices to these RCA female connectors.

RED connector = right audio channel

WHITE connector = left audio channel

(5) HDMI OUT PORT

Connect your digital output device, e.g. a display or projector, to the player and send out digital video and audio via this HDMI 2.0 out port.

(6) HDMI IN PORT

The HDMI 2.0 Input port on the rear panel enables you to use an external video/audio source as (live) input. The external video/audio source may then be displayed just like media content that is stored on the attached data carrier.

The HDMI Input port supports incoming video signals of up to UHD 3840x2160@60p.

See the [HDMI Input](#) chapter and [Playlist](#) for details of how to integrate this input port.

(7) LAN PORT

The UHD Player's LAN Port is a standard RJ-45 connector for 1000 Base-T Ethernet communications. Connect the UHD Player to your network if you want to use its web interface, to sync several players or to control it, e.g. via an Avio Master Device.

(8) RS232 SERIAL PORT

The RS232 serial port is a serial communication interface that allows you to control the player from a PC or other control devices. Use a standard DE-09 connector to connect your device to the player.

Communication settings:

The default baud rate is 9600, 8 data bits, with no parity bit and one stop bit.

The baud rate may be changed via the Web Interface or the Initialization File.

(9) POWER CONNECTOR

Please use the provided power supply (12V / 2 A) to power the UHD player.

4.1.2. LEFT SIDE PANEL VIEW AND PORTS

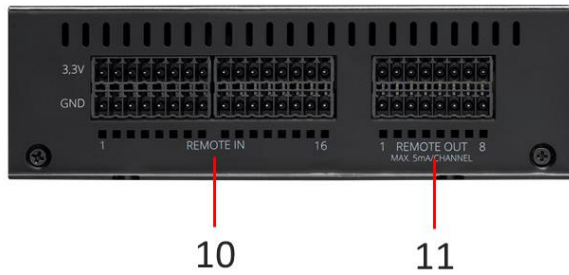


Fig. 4: UHD Player left side panel

- 10 REMOTE IN
- 11 REMOTE OUT

(10) REMOTE IN

The UHD Player provides 16 GPIOs (General-purpose input/output) that can be used with a default key assignment but may also be customized to perform special actions. The GPIOs will trigger when the integrated circuit (Ground to 3,3V) is closed.

(11) REMOTE OUT

- Currently without function -

4.1.3. RIGHT SIDE PANEL VIEW AND PORTS

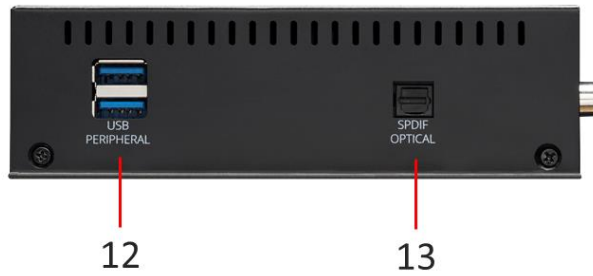


Fig. 5: UHD Player right side panel

(12) USB PERIPHERAL PORTS

The two USB 3.0 ports on the right side are USB ports for PERIPHERAL DEVICES only. Insert your USB peripheral device here, e.g. a keyboard / presenter.
A USB data carrier containing video or audio content must be connected to the USB data port on the front panel!

(13) SPDIF OPTICAL PORT

This port is used for digital-audio transmission. Use an optical fiber cable with a TOSLINK connector to send digital audio to your audio devices.

5. FIRST STEPS

5.1. INSTALLATION

Remove the UHD player and its accessories from the packaging.

Place the player on a flat surface or mount it on a wall. Use the brackets on both sides.

Make sure there is sufficient ventilation and, to avoid overheating, do not place several players on top of one another.

5.2. CONNECTING OUTPUT DEVICES

5.2.1. VIDEO

Connect the UHD Player to your display device via the [HDMI Out Port](#) on the UHD Player's rear side.

By default, the player is set to Auto EDID "On". As soon as the player is connected to a display, it recognizes the incoming EDID and the display can be used immediately without the need to adjust any further display configuration. Having no data carrier plugged into the player, the display will then show the player's settings screen as soon the player is powered and ready for operation.

For information about further video settings, refer to the [Display Configuration](#) chapter.

5.2.2. AUDIO

You have three options for using audio ports:

- Digital via the [HDMI OUT port](#) on the UHD Player's rear side
- Digital via the [SPDIF optical port](#) on the UHD Player's right side
- Analog via the [stereo audio RCA connectors](#) on the UHD Player's rear side

The digital and analog audio connectors transmit stereo (analog: white connector = left channel, red connector = right channel).

In case you want to use audio, be sure to connect your speakers to one of the player's audio ports. There is no need for further configuration, as the audio is transmitted via all output ports at the same time.

5.3. CONNECTING THE PLAYER TO THE NETWORK

For the following functions, the UHD Player needs to be integrated into your network:

- Configuration via the Web Interface
- Syncing several players
- UDP Control
- AVIO Control
- FTP Server
- Auto Download Content from an FTP Server
- NTP Time Synchronization

The UHD Players default network settings are as follows:

DHCP:	Disabled
IP address:	See the label at the bottom of the UHD Player
Subnet:	255.0.0.0
Gateway:	Same as IP address
DNS:	Same as IP address

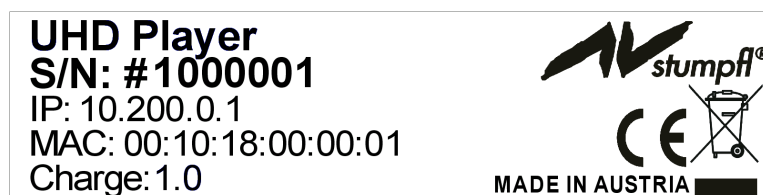


Fig. 6: Example of a type label attached to the bottom of the UHD Player

Please follow these steps to connect to the UHD Player to your local network:

STEP 1: CABLE CONNECTION

Connect a Cat5 Ethernet cable to the [LAN port](#) on the UHD Player's rear side and your computer or network switch in order to prepare the player for network access. The cable length should not exceed 100 meters. Distance may be extended with a repeater.

STEP 2: IP ADDRESS

The UHD Player and your computer must be in the same IP range, otherwise they will not be able to communicate. Proceed with one of the following possibilities:

(A) CHANGE THE COMPUTER'S IP ADDRESS:

Set the computer's IP address to the same IP range of the player's IP address.

Example: If the UHD Player's IP address is 10.200.0.123, you could set your computer to the IP address 10.200.0.1, so long as this one is not used by another device.

(B) CHANGE THE PLAYER'S IP ADDRESS - DIRECTLY AT THE PLAYER:

Set the player's IP address to the same IP range of the computer's IP address. To do so, connect a mouse (additional keyboard is not necessary) to the player's USB data port. When there is no data carrier plugged into the player, the settings screen of the player's [Web Interface](#) will be shown on the display. Click on [BASIC SETTINGS] in the [menu bar](#) and the [Wired Network Settings] will appear. Edit all necessary settings (see [Network Settings](#) chapter for detailed description) and press [APPLY SETTINGS] at the bottom of the Web Interface.

(C) CHANGE THE PLAYER'S IP ADDRESS – USING A TEXT EDITOR:

Each player is delivered with an SD Card containing an initialization file. To set the player's IP address into the same IP range of the computer's IP address, modify the player's initialization file by changing the default IP address to a new, unique IP address (see [Initialization File](#) and [Network Settings](#) for detailed information). Plug the SD Card containing the modified initialization file back into the player or save the file to a USB data carrier if you want to use this device instead of an SD Card. The Player will immediately accept the changes.

STEP 3: WEB BROWSER

Open your web browser and enter the UHD Player's IP address in the address bar. The [Web Interface](#) will now appear.

5.4. POWERING THE PLAYER

Plug the power adapter into the [power connector](#) on the UHD Player's rear side. When the player boots up, the [Power LED](#) on the UHD Player's front side will first light up orange and then red. As soon as the player is ready for operation, it will turn green.

If no SD Card or USB Data Stick is plugged in, the player's Web Interface Info Screen will show up on your HDMI output device and display information about the network and video settings, sync mode, current firmware, serial number, etc.

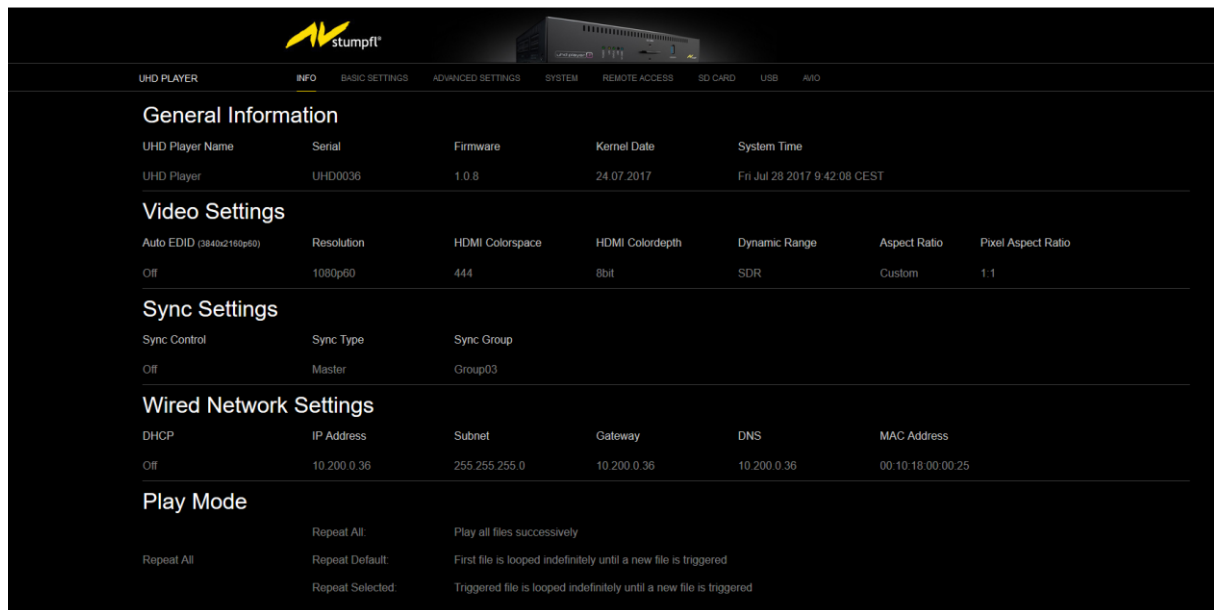


Fig. 7: The UHD Player's Web Interface Info Screen is displayed when there is no data carrier inserted.

5.5. PLAYBACK MEDIA FILES

The simplest way of playing back media files with a UHD Player in Standalone Mode is as follows:

- Save your [video, audio and image files](#) to the root folder of the supplied SD Card or any other USB data carrier (e.g. SD:/ or USB:/).
- Plug the data carrier into the [corresponding port on the player's front side](#).

The player is set to Play Mode “Repeat All” by default, and it will play your media files successively in alphanumeric order.

The UHD Player is designed for 24/7 operation. If you want to stop playback, just interrupt the power supply or remove the data carrier.

See the [Media File Playback](#) chapter for detailed playback options.

PLEASE NOTE:

Only one data carrier at a time can be used. The SD Card always has priority. So long as it's plugged into the player, no additional USB data carrier will be recognized.

6. UHD PLAYER CONFIGURATION

The UHD Player can be configured in two different ways:

1. Via the player's [Web Interface](#)
2. Via the [Initialization File](#) that you can find on the delivered SD Card

Web Interface vs. Initialization File: Which to choose?

This depends on your situation and personal preference. However, we recommend using the Web Interface because:

- It gives you a good visual overview of all settings.
- You get the information about the current playback.
- You can upload new files or change the configuration, in case it's installed in a place that's difficult to access.
- You need a network connection anyway, if you wish to sync several players or upload content via ftp servers.

If you only have a few players installed running as standalone devices, you may want to use the text-based initialization file for configuration instead. Please note that the data carrier on the player's front panel should always be physically accessible in order to modify the initialization file or the media content.

After explaining the general configuration handling of the player via the Web Interface and the Initialization File respectively in the next two sections, all available functions will be listed and specified for both ways of configuring the UHD Player—see [Web Interface](#) and [Initialization File](#) chapters.

6.1. WEB INTERFACE

Using the Web Interface is a fast and intuitive way of configuring the UHD Player. You need a network connection to access the UHD Player via its web interface. Refer to the [Connecting the Player to the Network](#) and [Network Settings](#) chapters for network details.

Open your web browser and enter the UHD Player's IP address in the address bar. The Web Interface will now appear.

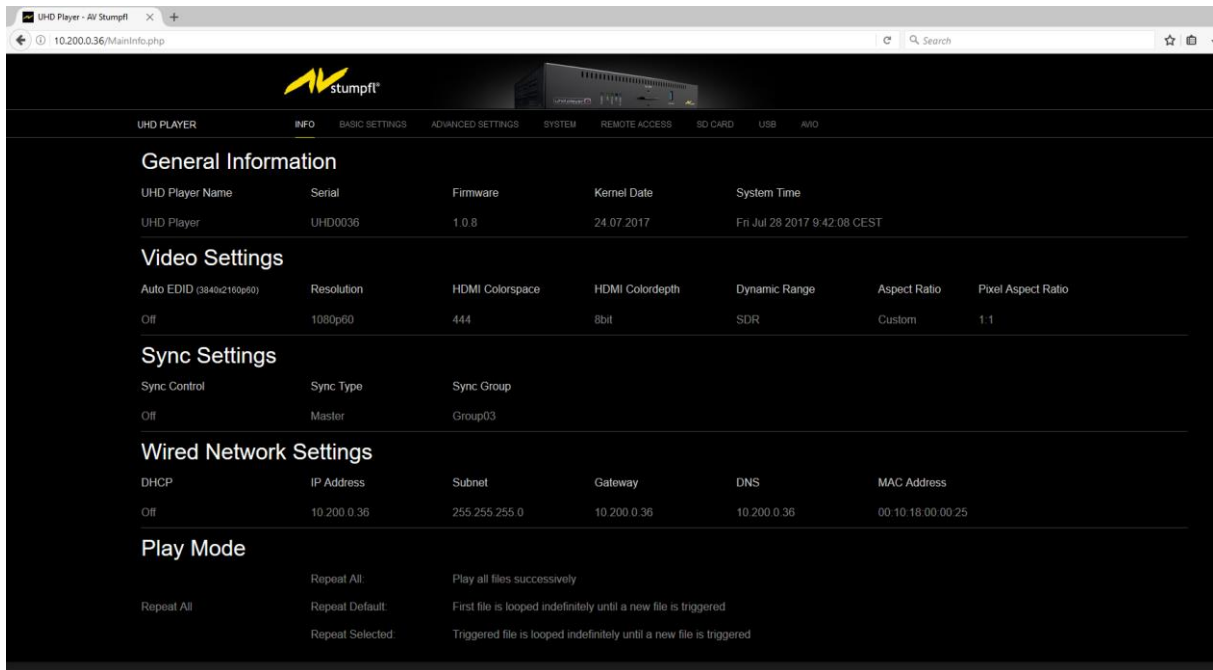


Fig. 8: The UHD Player's Web Interface shows the Info Page.

Alternatively, the UHD Player's Web Interface may be directly accessed with a mouse (and keyboard) connected to the player's [USB peripheral ports](#), e.g. when no LAN connection is available. Make sure that your HDMI output device is attached to the player and that the player is powered. If there is only a mouse connected, all settings where text fields need to be filled can be modified using the on-screen keyboard.

PLEASE NOTE:

If your output device does not show anything, it may be that it does not support the current resolution. With the following keyboard shortcuts, two different resolutions can be set and tested:

Ctrl+F2 or Ctrl+F Sets the resolution to 1920x1080p60

Ctrl+F3 or Ctrl+U Sets the resolution to 3840x2160p60

PLEASE NOTE:

If the playback is active, remove the data carrier or use the following keyboard shortcut to toggle between the Web Interface and the Playback:

Ctrl+F5 or Ctrl+S Toggles Settings/Playback

See all available keyboard shortcuts in the [Keyboard](#) chapter.

6.1.1. WEB INTERFACE OVERVIEW

Open your web browser and enter the UHD Player's IP address into the address bar. The main page of the Web Interface will then be displayed in the web browser.

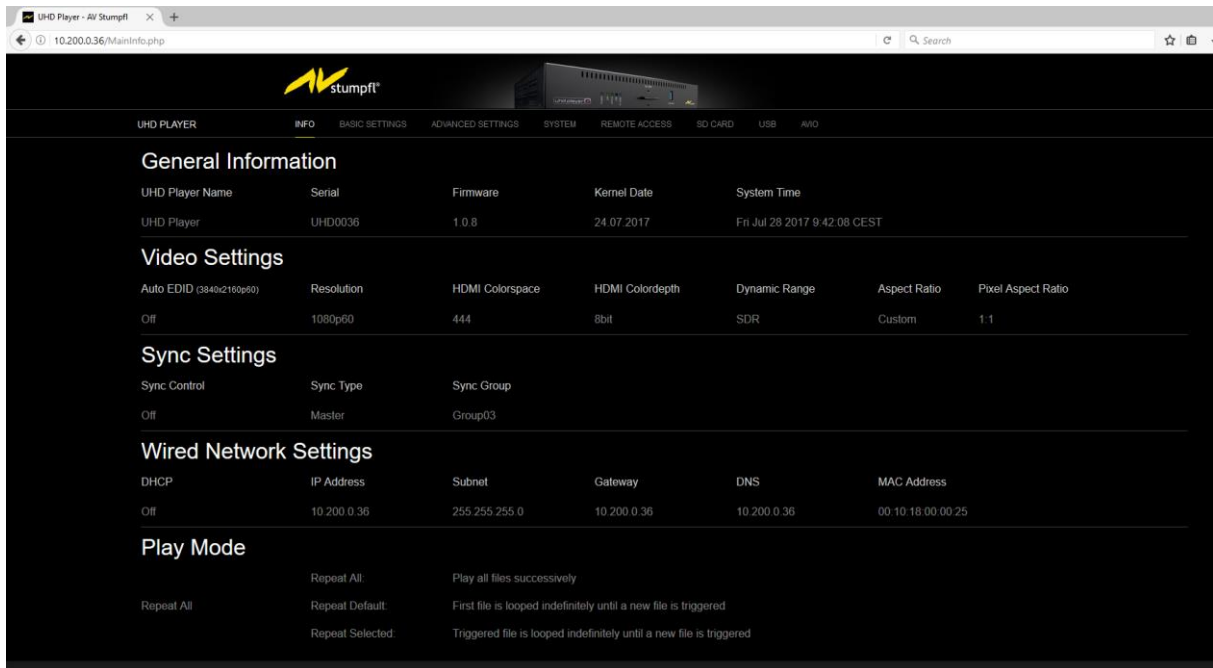


Fig. 9: Main page of the UHD Player's Web Interface with IP address in the web browser's address line

Info:

Compared to the illustrations in this manual, the Web Interface may be displayed in a slightly different way, depending on the web browser used.

MENU BAR

In the upper area of the Web Interface, the menu bar allows access to all available functions.

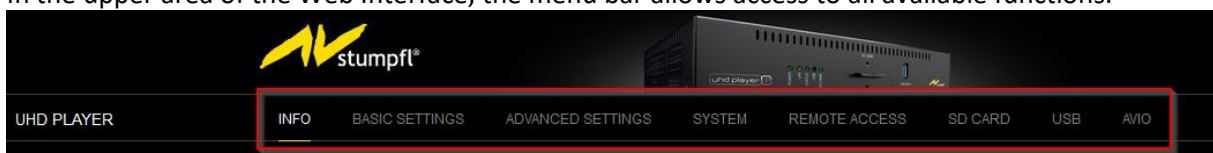


Fig. 10: Menu Bar in Web Interface

It consists of eight different tabs. You can see all subsections of each tab listed in the site map below:

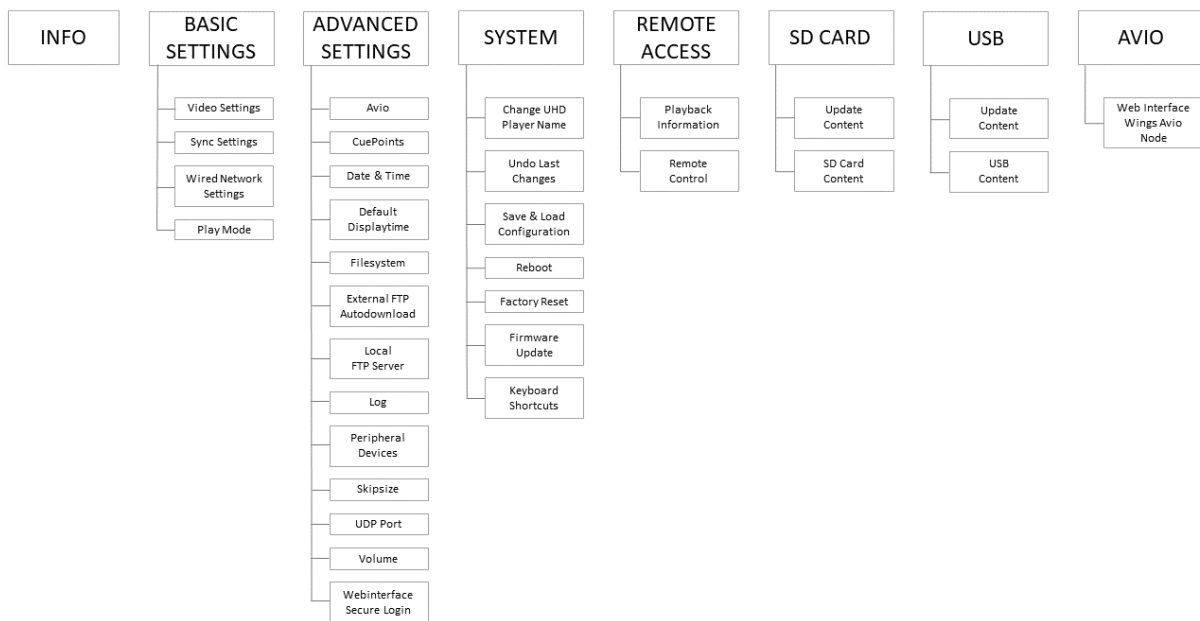


Fig. 11: Sitemap of the Web Interface

[INFO] gives a quick overview of the player's basic settings.

[BASIC SETTINGS] and [ADVANCED SETTINGS] allow access to all settings that refer to the playback.

[SYSTEM] enables all system-relevant settings to be modified.

[REMOTE ACCESS] gives information about the player's current state and lets you control the playback.

[SD CARD] and [USB] allow the viewing and modification of the data carrier's media content and playlists.

[AVIO] gives access to the Wings Avio Node settings.

6.1.2. CONFIGURING THE WEB INTERFACE

After having edited one or several settings in the [Basic Settings] or [Advanced Settings] tab, these changes need to be applied. To do this, press [Apply Settings] at the bottom of the Web Interface. To restore the previous configuration, press [UNDO].

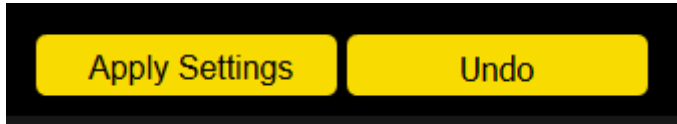


Fig. 12: [Apply Settings] and [Undo] buttons in the Basic Settings and Advanced Settings tab

PLEASE NOTE:

Only the last five configurations are stored until reboot.

By changing the configuration via the Web Interface, a new [initialization file](#) will be automatically saved to the data carrier after clicking on [Apply Settings]. The original initialization file will be renamed to *UHDPlayerSetting.old*.

PLEASE NOTE:

Automatic saving of an initialization file is only possible if the SD Card is not write-protected.

Attention:

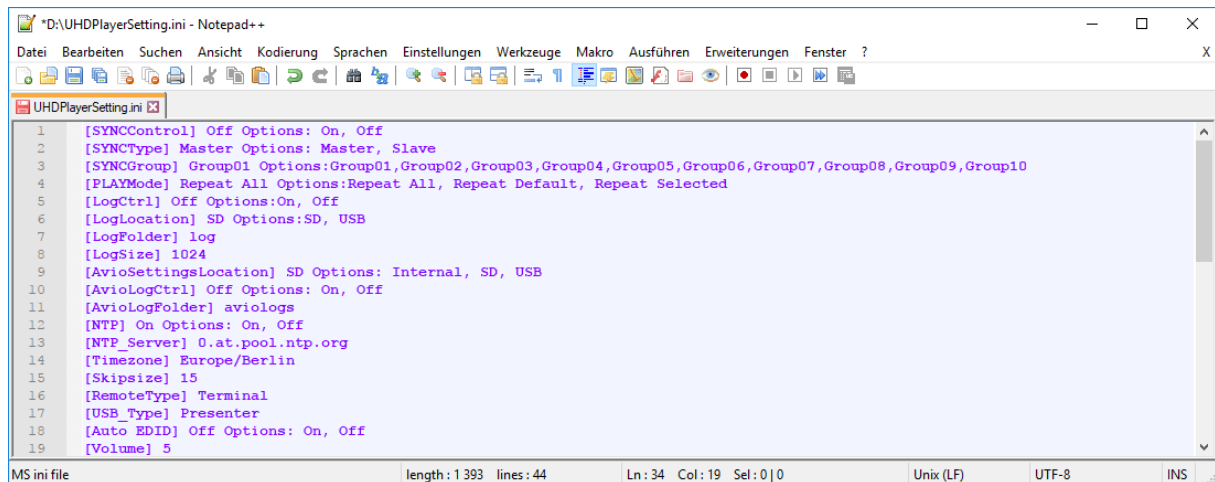
It is recommended to only change the configuration when a data carrier is plugged into the player. If there is no data carrier present while changing the configuration, the new settings will be stored internally.

By inserting a data carrier already containing an initialization file, all internal settings will be overwritten by the newly inserted initialization file!

In case you applied new settings without a data carrier present, insert a data carrier that does NOT contain any initialization file, browse to one of the functions in the basic or advanced settings menu, click inside one of its parameters to activate it, and press [Apply Settings] again. A new initialization file will now be saved on the data carrier.

6.2. INITIALIZATION FILE

Instead of configuring the UHD Player via the [Web Interface](#), all settings can also be edited within the player's Initialization File. The initialization file "UHDPlayerSetting.ini" can be found on the supplied SD Card. This file contains the current configuration of the UHD Player, with all possible options. It can be edited on a computer by using any text editor.



```
1 [SYNCControl] Off Options: On, Off
2 [SYNCType] Master Options: Master, Slave
3 [SYNCGroup] Group01 Options:Group01,Group02,Group03,Group04,Group05,Group06,Group07,Group08,Group09,Group10
4 [PLAYMode] Repeat All Options:Repeat All, Repeat Default, Repeat Selected
5 [LogCtrl] Off Options:On, Off
6 [LogLocation] SD Options:SD, USB
7 [LogFolder] log
8 [LogSize] 1024
9 [AvioSettingsLocation] SD Options: Internal, SD, USB
10 [AvioLogCtrl] Off Options: On, Off
11 [AvioLogFolder] aviologs
12 [NTP] On Options: On, Off
13 [NTP_Server] 0.at.pool.ntp.org
14 [Timezone] Europe/Berlin
15 [Skipsize] 15
16 [RemoteType] Terminal
17 [USB_Type] Presenter
18 [Auto EDID] Off Options: On, Off
19 [Volume] 5
```

Fig. 13: The UHD Player's Initialization File opened in a text editor

After a file is edited, it always needs to be saved without its name being changed, in order to be accepted by the player.

Once the SD Card has been plugged into the [SD card slot](#), the UHD Player automatically accepts the configuration changes.

Instead of the SD Card, you can also use a USB data carrier to do the job. To do this, please save the initialization file in the root folder of your USB data carrier.

PLEASE NOTE:

Data transfer is usually faster via an SD Card than via a USB data carrier. When using a USB data carrier, please ensure that the read speed is minimum 30 MByte/s.

The UHD Player will only read from the USB data carrier (use the [USB data slot](#)) if the SD Card has been removed.

6.2.1. OVERVIEW INITIALIZATION FILE

The initialization file contains the following data:

- [Auto EDID] On Options: On, Off
- [Resolution] 3840x2160p60
- [Color Space] Auto Options: Auto, RGB, 420, 422, 444
- [Color Depth] 8bit Options: Auto, 8bit, 10bit
- [Dynamic Range] SDR Options: Auto, SDR, HDR10, HLG
- [Pixel Aspect Ratio] Auto Options: Auto, Custom
- [Sync Control] Off Options: On, Off
- [Sync Type] Slave Options: Master, Slave
- [Sync Accuracy] Low Options: High, Medium, Low, Off

[Sync Group] Group01 Options: Group01, Group02, Group03, Group04, Group05, Group06, Group07, Group08, Group09, Group10
[DHCP] On Options: On, Off
[IP Address] 192.168.3.177 Options: IP Address of UHD Player
[Subnet] 255.255.255.0 Options: Subnet of UHD Player
[Gateway] 192.168.3.1 Options: Gateway of UHD Player
[DNS] 192.168.3.1 Options: DNS of UHD Player
[Play Mode] Repeat All Options: Repeat All, Repeat Default, Repeat Selected, Stop Mode (last Frame), Stop Mode (black Frame)
[Avio Settings Location] SD Options: Internal, SD, USB
[Avio Log Control] On Options: On, Off
[Avio Log Folder] Log Options: Subfolder for Avio Log-File
[Cue-Points] Off Options: On, Off
[NTP Control] Off Options: On, Off
[NTP Server] 0.at.pool.ntp.org Options: IP Address of NTP Server
[Timezone] CET Options: Time zone of the UHD Player
[Default Display Time] 5 Options: Time in seconds
[SD Card Auto Repair] Off Options: On, Off
[FTP Auto Download] On Options: On, Off
[FTP Auto Download Server] deactivated
[FTP Auto Download Username] deactivated
[FTP Auto Download Password] deactivated
[FTP Auto Download Serverfolder] deactivated Options: Server Subfolder Name, Off
[FTP Auto Download Mode] active Options: Passive, Active
[DelayedContentChange] Off Options: On, Off
[FTP Auto Download Date] 1.1.2015
[FTP Auto Download Time] 0:0:59
[FTP Auto Download Intervall] 0 Options: Value in seconds
[FTP Auto Download Hourly] Off Options: On, Off
[FTP Auto Download Daily] Off Options: On, Off
[FTP Auto Download Weekly] Off Options: On, Off
[FTP Auto Download Monthly] Off Options: On, Off
[FTP Auto Download Overwrite] Off Options: On, Off
[FTP Server] On Options: On, Off
[FTP User] AVS Options: Username for FTP Login
[FTP Password] AVStumpfl Options: Password for FTP Login
[Resume From Bookmarks] Off Options: On, Off
[Bookmark Interval] 30 Options: 10, 30, 60, 120 Seconds
[Log Control] On Options: On, Off
[Log Location] SD Options: SD, USB
[Log Folder] log Options: Subfolder for Log-File
[Log Size] 512 Options: Maximum size of Log-File in kb
[Serial Device] Term Options: Term, Avio
[Baud] 2400 Options: 2400, 4800, 9600, 19.200, 38.400, 57.600, 76.800, 115.200
[USB Device] Logitech-Presenter Options: Logitech-Presenter, Jade-Presenter
[Skipsize] 5 Options: Value in seconds
[UDP Port] 4950 Options: UDP Port of UHD Player
[Volume] 5 Options: Value range from 0 (mute) to 10 (highest)
[Web Interface Login] Off Options: On, Off
[Web Interface Username] AVS Options: Username for Web Login
[Web Interface Password] AVStumpfl Options: Password for Web Login
[Web Interface Settings] Expert Options: Simplified, Expert

The entry in squared brackets names the function. The options available for the function follow after a space character. Possible options are listed (most of the time) after another space character.

6.2.2. CONFIGURING THE INITIALIZATION FILE

Open the initialization file with any text editor, for example, the freeware “Notepad++”, which can be downloaded here: <https://notepad-plus-plus.org/>.

Browse to find the function you want to modify and replace the current option by another one.

Example:

[Auto EDID] On Options: On, Off

The function “Auto EDID” is enabled. To disable Auto EDID, change the option from “On” to “Off”:

[Auto EDID] Off Options: On, Off

After all changes are made, save the file under the same name, and then eject the SD Card / USB data carrier and insert it into the UHD Player again.

7. NETWORK SETTINGS

For the following functions, the UHD Player must be integrated into your network:

- [Configuration via Web Interface](#)
- [Syncing several players](#)
- [UDP Control](#)
- [AVIO Control](#)
- [FTP Server](#)
- [FTP Auto Download](#)
- [NTP Time Synchronization](#)

The factory default network settings of the UHD Players are as follows:

DHCP:	Disabled
IP address:	See label attached to the bottom of the player
Subnet:	255.0.0.0
Gateway:	Same as IP address

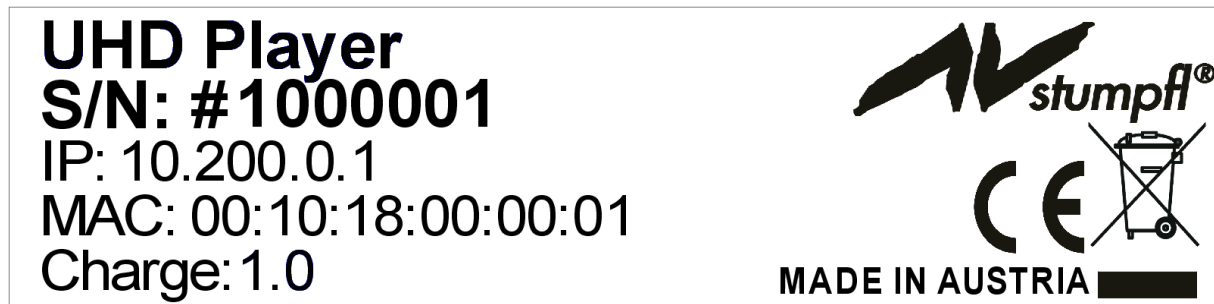


Fig. 14: Example of a type label attached to the bottom of the UHD Player

Please refer to the [Connecting the Player to the Network](#) chapter if you need guidance on how to communicate with the UHD Player via Ethernet.

TIP

How to determine the IP address of a UHD Player on the local network:

- A) Remove the data carrier from the UHD Player and it will display its Web Interface Info Screen, including the current network configuration on the local display.
- B) Check the player's [initialization file](#). You will find it on the player's data carrier.

To edit the player's network settings, open its [Web Interface](#) in your browser, click on [BASIC SETTINGS] in the [menu bar](#) and the [Wired Network Settings] with all editable options will appear.

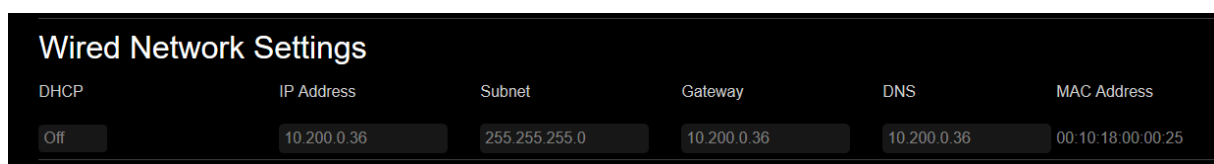


Fig. 15: Wired Network Settings in the Web Interface

Modify these settings, if need be:

[DHCP]

You can manually assign an IP address for the player when DHCP is turned off (this is the default setting), or you can have the player use DHCP to obtain an IP address automatically if there is a DHCP server set up in the local network. Please note that with DHCP set to “On”, the IP address is not permanently assigned and unprecedented interruptions may occur.

[IP address]

Upon delivery, the UHD Player’s IP address is pre-configured to a unique IP address that can be found on the label attached to the bottom of the player. You can assign a suitable IP address manually by entering a new one here. DHCP needs to be turned off first.

[Subnet]

Upon delivery, the subnet mask is set to the same value as the UHD Player’s IP address. You can change the subnet mask by entering a new one here. DHCP needs to be turned off first.

[Gateway]

Upon delivery, the default gateway is set to the same value as the UHD Player’s IP address. Change this parameter by entering a new one here. DHCP needs to be turned off first.

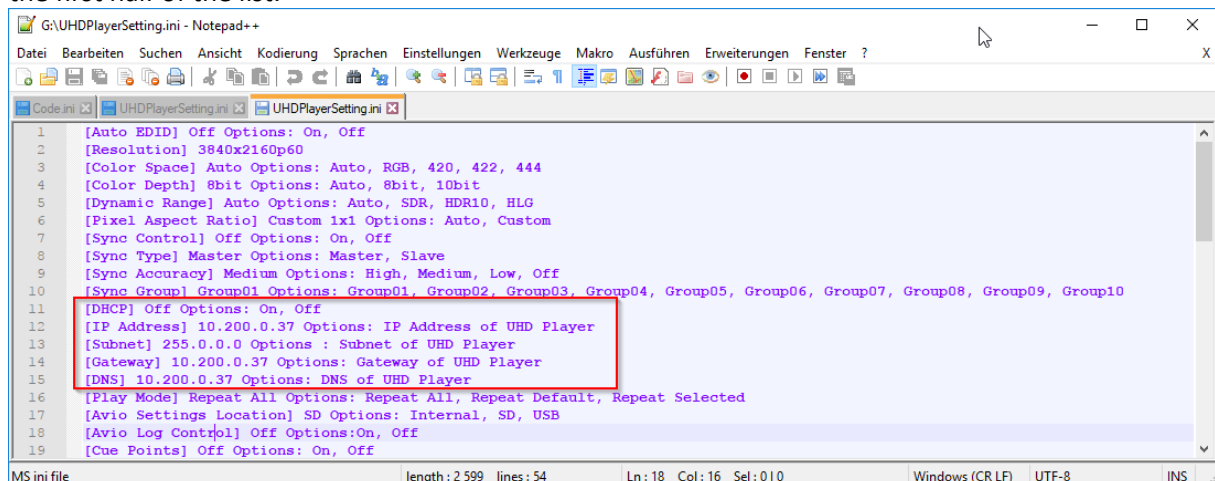
[DNS]

Upon delivery, the default Domain Name Server (DNS) is set to the same value as the UHD Player’s IP address. Change this parameter by entering a new one here. DHCP needs to be turned off first.

After all changes are made, press [Apply Settings] at the bottom of the web page.

As soon as a new IP address is set and applied, it will be entered into the browser’s address line automatically, and you may continue the configuration via the Web Interface.

In the initialization file (“UHDPlayerSetting.ini”), the player’s network settings can be found within the first half of the list.



```
1 [Auto EDID] Off Options: On, Off
2 [Resolution] 3840x2160p60
3 [Color Space] Auto Options: Auto, RGB, 420, 422, 444
4 [Color Depth] 8bit Options: Auto, 8bit, 10bit
5 [Dynamic Range] Auto Options: Auto, SDR, HDR10, HLG
6 [Pixel Aspect Ratio] Custom 1x1 Options: Auto, Custom
7 [Sync Control] Off Options: On, Off
8 [Sync Type] Master Options: Master, Slave
9 [Sync Accuracy] Medium Options: High, Medium, Low, Off
10 [Sync Group] Group01 Options: Group01, Group02, Group03, Group04, Group05, Group06, Group07, Group08, Group09, Group10
11 [DHCP] Off Options: On, Off
12 [IP Address] 10.200.0.37 Options: IP Address of UHD Player
13 [Subnet] 255.0.0.0 Options : Subnet of UHD Player
14 [Gateway] 10.200.0.37 Options: Gateway of UHD Player
15 [DNS] 10.200.0.37 Options: DNS of UHD Player
16 [Play Mode] Repeat All Options: Repeat All, Repeat Default, Repeat Selected
17 [Avio Settings Location] SD Options: Internal, SD, USB
18 [Avio Log Control] Off Options: On, Off
19 [Cue Points] Off Options: On, Off
```

Fig. 16: Network Settings in Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

8. DISPLAY CONFIGURATION

In the Web Interface, click on [BASIC SETTINGS] in the [menu bar](#) and the [Video Settings] topic with all editable options will appear below.

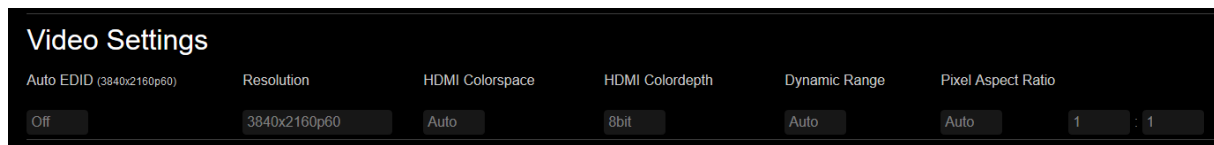


Fig. 17: Video Settings in the Web Interface

By default, Auto EDID is set to “Off” and the resolution 1080p60 (1920x1080@60) will be used. [HDMI Color Space], [Dynamic Range] and [Pixel Aspect Ratio] are set to “Auto” and [HDMI Color Depth] is set to 8bit.

If you need to edit these default settings, please see the description of all options below.

[Auto EDID] Typically, the output devices send their EDID to the connected video source via the HDMI cable. By enabling Auto EDID, the UHD Player will automatically attempt to detect the native resolution of the attached output device.

If [Auto EDID] is set to “On”, entering any value for [Resolution] will be ignored.

[HDMI Color Space], [HDMI Color Depth], [Dynamic Range] and [Pixel Aspect Ratio] are not linked to the Auto-EDID function and can be edited independently.

[Resolution]

To change the resolution for your output device manually, Auto EDID needs to be set to “Off” first. Then you may choose the desired resolution from the drop-down list. Most common resolutions are supported.

[HDMI Color Space]

The following color spaces are supported by the UHD Player: RGB, 420, 422, 444.

By default, it is set to “Auto”: The color space is chosen based on receiver and transmitter preferences and capabilities. If you want to define the color space instead of using the value reported by the HDMI receiver, choose it from the drop-down list.

[HDMI Color Depth]

The default setting of the color depth is “8bit” in order to ensure that the player’s video signal can be displayed, because all HDMI devices must have this setting implemented. Alternatively, the color depth can be set to “10bit” if the attached output device supports this option. “Auto” will select the highest quality supported color depth as reported by the output device.

PLEASE NOTE:

Some HDMI display devices do not support true 10bit color space but do support 8-bit+FRC (Frame Rate Control). This may lead to problems when using the “10bit” color depth. In case a video signal cannot be displayed on your output device and the color depth is set to “Auto” or “10bit”, set it back to “8bit”.

[Dynamic Range]

The default setting for dynamic range is “Auto”, which means that the video source forces this setting. For example, when playing a H.265 video with High Dynamic Range (HDR), the output device will automatically be set to “HDR”. Having this playback followed by a video with Standard Dynamic Range (SDR), the display switches to “SDR” on the fly.

Alternatively, you may set a fixed dynamic range. To do so, choose between the following options: “SDR”, “HDR10”, “HLG” (Hybrid Log-Gamma).

[Pixel Aspect Ratio]

The value for [Pixel Aspect ratio] should typically remain set to “Auto”. This means that square pixels are used for the video files (pixel aspect ratio = 1:1), which means that all common video files will be displayed in their correct aspect ratio on the output device.

Choosing a “Custom” pixel aspect ratio should be done in very special cases only, e.g. to process a pre-distorted video file so that it’s displayed in the correct way on the output device.

Example:

When the Pixel Aspect Ratio is set to “Auto”, a 16b:9 video file will be displayed correctly, filling the whole screen of a 16b:9 display. When the Pixel Aspect Ratio is changed to “Custom 2:1”, the file will be distortedly displayed, reducing the file’s height by factor 2.

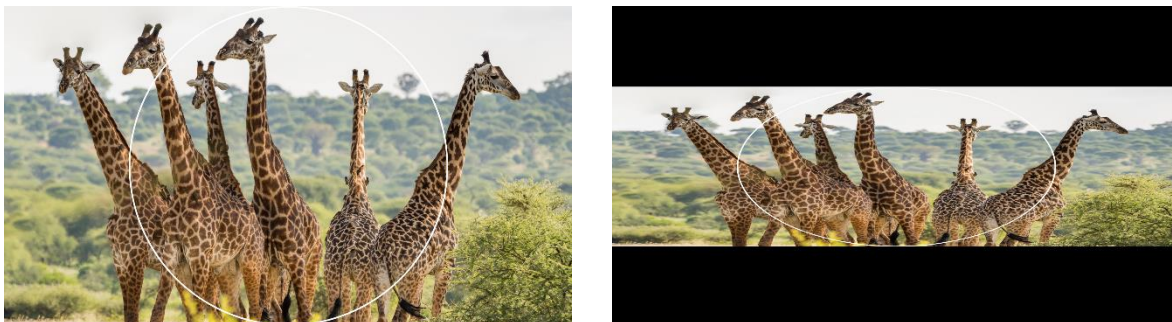


Fig. 18: Left—a 16:9 video file with Pixel Aspect Ratio set to “Auto”
Right—the same video file with Pixel Aspect Ratio set to “Custom 2:1”

PLEASE NOTE:

This function only affects video files; it does not apply for image files! For more details on how media content is displayed and handled by the player, refer to the [Media File Playback](#) chapter.

[Force Display Activation]

Usually, the EDID detection works well and [Force Display Activation] can remain disabled. If problems occur, it can be set to “On”, then the EDID detection that is done while the player is booting will be done once again, after fifteen seconds.

After all changes are made, press [Apply Settings] at the bottom of the web page.

In the initialization file (“UHDPlayerSetting.ini”), the player’s network settings can be found at the beginning of the list.

```
1 [Auto EDID] Off Options: On, Off
2 [Resolution] 3840x2160p60
3 [Color Space] Auto Options: Auto, RGB, 420, 422, 444
4 [Color Depth] 8bit Options: Auto, 8bit, 10bit
5 [Dynamic Range] Auto Options: Auto, SDR, HDR10, HLG
6 [Pixel Aspect Ratio] Custom 1x1 Options: Auto, Custom
7 [Sync Control] Off Options: On, Off
8 [Sync Type] Master Options: Master, Slave
9 [Sync Accuracy] Medium Options: High, Medium, Low, Off
10 [Sync Group] Group01 Options: Group01, Group02, Group03, Group04, Group05, Group06, Group07, Group08, Group09, Group10
11 [DHCP] Off Options: On, Off
12 [IP Address] 10.200.0.37 Options: IP Address of UHD Player
13 [Subnet] 255.0.0.0 Options : Subnet of UHD Player
14 [Gateway] 10.200.0.37 Options: Gateway of UHD Player
15 [DNS] 10.200.0.37 Options: DNS of UHD Player
16 [Play Mode] Repeat All Options: Repeat All, Repeat Default, Repeat Selected
17 [Avio Settings Location] SD Options: Internal, SD, USB
18 [Avio Log Control] Off Options: On, Off
19 [Cue Points] Off Options: On, Off
```

Fig. 19: Display Configuration in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration the Initialization File](#) chapter.

9. CONTENT

THE UHD Player can playback videos, images and audio files in various formats. To be sure to create media files that run with the best playback performance, please see our content guidelines below for video, image and audio files.

9.1. VIDEO

The UHD Player supports the following video formats:

Video Codec:	The video must be encoded as a h.265 (HEVC) or VP9 (webm) file with a maximum resolution of 4096x2160@60p. A h.264 file can be used for up to 1920x1080@60p.
Resolution:	The maximum supported resolution is 3840x2160@60p or 4096x2160@60p for h.265 or VP9 files, and 1920x1080@60p, if using h.264 files.
Color Depth:	All video must be encoded at 4:2:0 chroma subsampling with 8 bits (Main Profile), or 10 bits (Main 10 Profile) of color depth using a h.265 codec and 8 bits of color depth using a h.264 codec.
Frame Rate:	The maximum supported frame rate is 60 frames per second, and it is also affected by your display hardware. We recommend using exactly the same or an integral fraction of the frame rate as on the display. So, if your display has a refresh rate of 60 frames per second, we recommended rendering the video with 30p or 60p.
Container Format:	The following container formats are supported: .mov, .mp4, .mkv, .webm
Bitrate:	A constant bit rate (CBR) of between 25 and 30 Mbps is recommended.
Playback Media:	All videos must be played from a Class 10 SD Card. If you are using a USB drive or a USB stick, please ensure that the read capability is at least 30 MB/s.
Video Loop Function:	Video Loop function works for all supported container formats: .mov, .mp4, .webm, .mkv

9.2. IMAGES

The UHD Player supports the following image formats:

Image Format:	JPG, PNG.
Resolution:	The maximum resolution for still images is 8192x8192 pixels.
Color Depth:	The UHD Player supports 8 Bit color depth and a chroma subsampling of 4:4:4.

PLEASE NOTE:

Due to the capability of the Still Image Decoder, all images will be displayed with a maximum resolution of 1920x1080px, regardless of their native resolution. To avoid this downsizing, and to take full advantage of your display's resolution, you may create a video out of the images using an external video editing software, e.g. ffmpeg (see [Rendering Guideline](#) chapter).

9.3. AUDIO

The UHD Player supports the following audio formats:

Audio Codec: AAC and MP3 up to 320 KB/s, PCM via WAV, FLAC

Sample Rates: 32 kHz, 44.1 kHz and 48 kHz are supported

9.4. RENDERING GUIDELINE

We recommend using one of these software solutions to encode/transcode your video content: ffmpeg, Adobe Media Encoder, Handbrake, AnotherGUI (<http://www.stuudio.ee/AnotherGUI/>).

We supply our customers with Adobe Media Encoder presets (=AME Presets), Handbrake presets and AnotherGUI presets for common resolutions and frame rates. These can be downloaded here: www.AVStumpfl.com/EncodingPresets.

If you have complex content, we recommend using 2-pass encoding to ensure the best video quality. This can be done very easily using ffmpeg (see the description below) and AnotherGUI with our supplied presets: www.AVStumpfl.com/EncodingPresets.

If you need 10 Bit support, the only option on windows PCs is to use Adobe Media Encoder, because ffmpeg or Handbrake do not have 10 Bit support for h.265 files. On Linux systems, there is a ffmpeg build with 10bit support. If you want to use Linux for encoding your videos, we supply a bootable USB Stick for this purpose. The image can be downloaded from here:

www.AVStumpfl.com/EncodingPresets.

However, while testing h.265 with 10 Bit support, we did encounter some rendering problems when using Adobe Media Encoder, so please make sure that you review your content after rendering. The maximum resolution Handbrake can render is 3840x2160 pixels.

If you want to encode VP9 videos using Adobe Media Encoder or Adobe Premiere, you need to install the following plugin: <http://www.fnordware.com/WebM/>.

PLEASE NOTE:

ffmpeg, Handbrake, AnotherGUI or Adobe Media Encoder are not products of AV Stumpfl and, therefore, we cannot support these software solutions.

FFMPEG

Here is a short guide on how to install ffmpeg on a windows operating system:

Download an ffmpeg build from this site: <https://ffmpeg.zeranoe.com/builds/>.

Unzip the downloaded file and copy the entire content of the folder to C:\ffmpeg\.

Define C:\ffmpeg\bin in your path environmental variable—see image below.

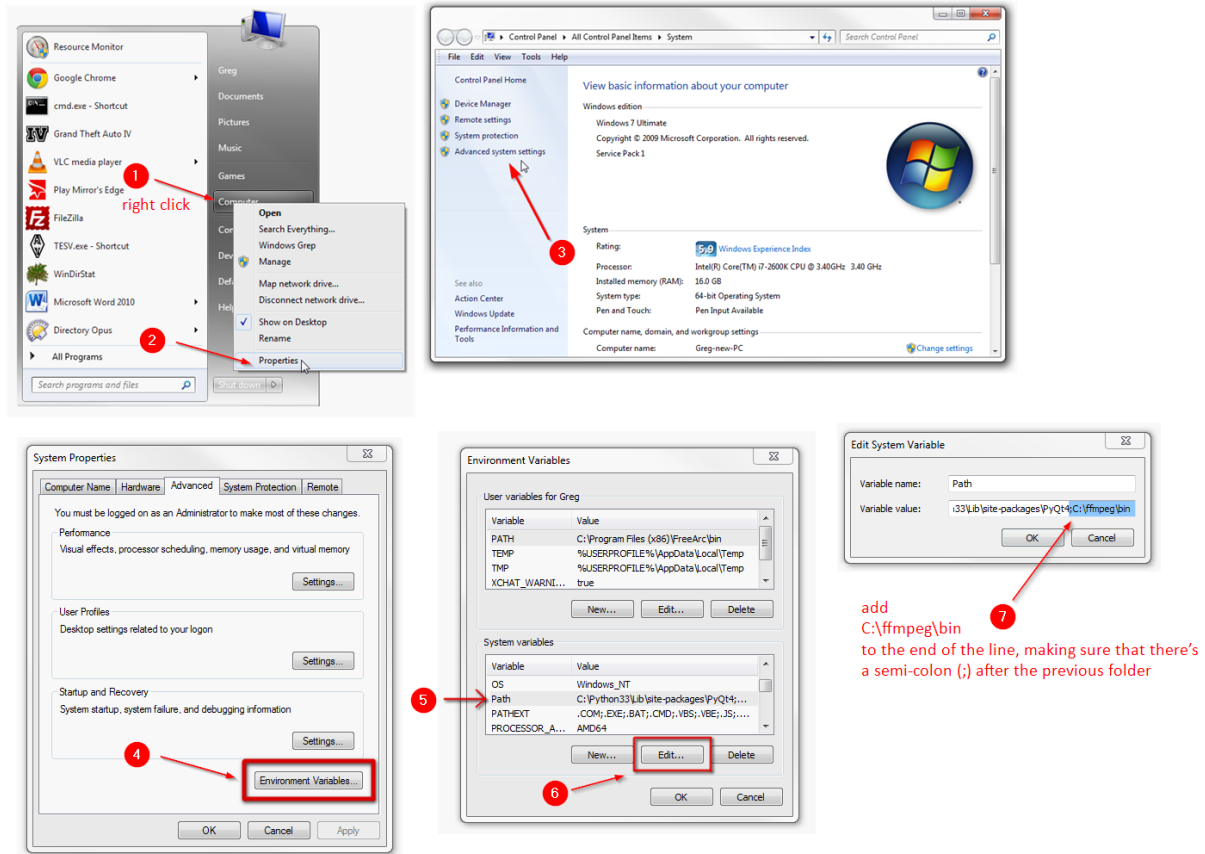


Fig. 20: Short instructions on how to define the `C:\ffmpeg\bin` in your path environmental variable

USING FFMPEG

VP9:

```
ffmpeg -i input.mp4 -c:v libvpx-vp9 -minrate 30M -maxrate 30M -b:v 30M output.webm
```

h.265:

```
ffmpeg -i input.mp4 -c:v libx265 -minrate 30M -maxrate 30M -b:v 30M output.mp4
```

Create a video from a set of images (image sequence):

```
ffmpeg -framerate 60 -i input%04d.tif -c:v libx265 -minrate 30M -maxrate 30M -b:v 30M -r 60 output.mp4
```

h.265 2-pass coding and use Video Buffer Verifier:

```
ffmpeg -framerate 60 -i input%04d.tif -c:v libx265 -b:v 35M -x265-params pass=1:vbv-maxrate=35000:vbv-buftype=70000 -pix_fmt yuv420p -f mp4 -y NUL
```

```
ffmpeg -framerate 60 -i input%04d.tif -c:v libx265 -b:v 35M -x265-params pass=2:vbv-maxrate=35000:vbv-buftype=70000 -pix_fmt yuv420p output.mp4
```

Definition:

ffmpeg	Calls the program
-i	Defines an input file
-c:v	Defines the codec used for video encoding (libx265 for h.265 and libvpx-vp9 for VP9)
-minrate	Defines the minimum bitrate (in that case 30 Mbit)
-maxrate	Defines the maximum bitrate (in that case 30 Mbit)
-b:v	Defines the average bitrate
-i input%04d.tif	Defines the leading zeros of the picture sequence (e.g.: input0001.tif, input0002.tif, ...)
-x265-params	Uses the x265 CLI interface for advanced x265 settings
pass=	Defines the encoder pass
vbv-maxrate=	Defines the maximal bitrate for the video buffer verifier feature
vbv-bufsize	Defines the maximal buffer size for the video buffer verifier feature
-pix_fmt	Defines the pixelformat. Needs to be YUV 4:2:0. For 10Bit encoding you need to specify yuv420p10le.
-f	Defines the container format for the first encoder pass
-y	Allows overwriting existing files
NUL	Write the first encoder pass to NUL (no file will be encoded). If you are using Linux or a Mac, please use /dev /null && instead of NUL.
-framerate	Defines the framerate of the input file. If you do not set the frame rate, ffmpeg will use the default framerate of 25fps.
-r	Defines the framerate of the output file. If you do not set the frame rate, ffmpeg will use the default framerate of 25fps.

If your source material is complex, it is highly recommended to use 2-pass encoding to archive a stable bitrate with no peaks so that the decoder does not get a buffer overflow. Another benefit is that normally the file size will shrink on second encoder pass. It is recommended to use an uncompressed source file for the best output results.

9.5. MUXING MULTIPLE AUDIO STREAMS

The UHD Player is able to play videos containing more than one audio stream. Like on a DVD, you can switch between languages without stopping the video playback. The different audio tracks can be switched either by using AVIO or UDP commands. The player can use up to 10 audio streams. ffmpeg can mux several audio streams into one video file. This cannot be done with Handbrake or Adobe Media Encoder.

This can be achieved by the following command:

```
ffmpeg -i input.mp4 -i language1.mp3 -i language2.mp3 -map 0:v -map 0:a:0 -map 1:a -map 2:a -metadata:s:a:0 language=ger -metadata:s:a:1 language=eng -metadata:s:a:2 language=fre -c copy -shortest output.mp4
```

Definition:

ffmpeg	Calls the program
-i	Defines an input file
-map 0:v	Maps the first video stream of the first input file (in this case, the input.mp4)
-map 0:a:0	Maps the first audio stream of the first input file (in this case, the input.mp4)
-map 1:a	Maps the audio stream of the second input file (in this case, the language1.mp3)
-map 2:a	Maps the audio stream of the third input file (in this case, the language2.mp3)
-metadata:s:a:0	Defines the metadata for the first audio stream (in this case language=ger for German)
-c copy	Just copies all streams—there is no transcoding going on
-shortest	Interrupts the encoding after the first input file has finished. So please be sure that all of your streams are of the same length.

For a detailed description or more examples, take a look at the ffmpeg documentation:

<https://ffmpeg.org/ffmpeg.html>

If you want to tweak your h.265 stream to bleeding edge features or search for more detailed information, you should take a look at the x265 documentation:

<http://x265.readthedocs.io/en/default/>.

ffmpeg will interpret most of the CLI commands when using the following prefix:

-x265-params followed by the CLI command of x265.

10. MEDIA FILE PLAYBACK

As described in the [First Steps](#) chapter, the simplest way of playing back media files with the UHD Player in Standalone Mode is as follows:

- Save your [video, audio and image files](#) to the root folder of the supplied SD Card or any other USB data carrier (e.g. SD:/ or USB:/).
- Plug the data carrier into the corresponding port on the player's [front panel](#).

The player is set to Play Mode “Repeat All” by default and will play your media files successively in alphanumeric order. All image files will be displayed for 5 seconds, and the volume for audio playback is set to 50%.

There are several possibilities for a more customized playback of your media files. Please see the following sections for further information:

- [Play Mode](#) – How the file playback is handled without a playlist on the data carrier
- [Default Display Time](#) – How to define a general display time for image files
- [Volume](#) – How to define a general volume for media files containing audio
- [Playlist](#) – How to take advantage of the various playback possibilities and individual settings for each media file
- [HDMI Input](#) – How to display an external video/audio source via the HDMI Input port
- [Synchronized Playback](#) – How to sync several players

UHD Players can play video contents in Loop Mode, which means that there is no gap when the playback loops from the last to the first video frame. Of course, this is also possible when multiple players are operating in Network Synchronization Mode.

PLEASE NOTE:

The SD Card (or the USB data carrier) must remain installed in the player during playback and networking operations. The player cannot play presentations or receive content over the network without a storage device connected because it has no internal storage.

10.1. PLAY MODE

The default Play Mode “Repeat All” will play your media files successively in alphanumeric order, whereby media files with uppercase file names will be processed before media files with lowercase file names. After the last item, the playback will restart again from the first item.

See here for an example of how the alphanumeric playback order works, with the following files saved on the data carrier:

- 01_video.mp4
- 02_video.mp4
- House_inside.jpg
- House_outside.jpg
- handshake.mp4

When working with triggers from external devices, like buttons (via GPIO Remote In) or RS232/UDP/Avio Control, you may want to use a different play mode. Either “Repeat Default” or “Repeat Selected” can be chosen.

PLEASE NOTE:

The Play Mode in use will always be overwritten when a [playlist](#) is added to the data carrier!

To edit the Play Mode via the Web Interface, click on the [BASIC SETTINGS] tab in the Menu Bar and the [Play Mode] function will appear. Choose one of the options from the drop-down list on the left.

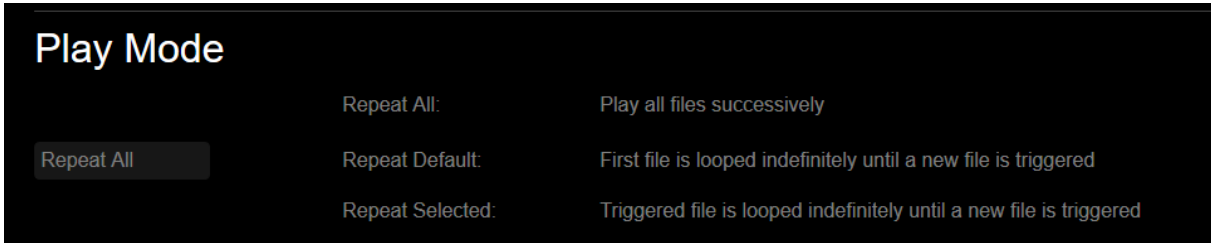


Fig. 21: Play Mode settings in the Web Interface

[Play Mode]

Choose a Play Mode from the drop-down list.

“Repeat All”: Plays your media files successively in alphanumeric order, whereby media files with uppercase file names will be processed before media files with lowercase file names. After the last item, the playback will restart again from the first item.

“Repeat Default”: The first file in the playback order loops indefinitely until a new file is triggered.
Example:

The first file is a short video showing an overview of all available video files. It loops indefinitely until one of the other files is triggered via [external control](#). When the playback of the triggered file ends, the first file showing the overview will again loop indefinitely until another file is triggered.

“Repeat Selected”: The triggered file is looped indefinitely until a new file is triggered.
Example:

A venue displays a looping video file showing the current menu on a screen. If there is an exclusive event taking place, the prices for food and drinks will be more expensive. Via buttons attached to the [Remote Input Port](#), the organizer can trigger different menu video files for different events.

“Stop Mode (black frame)”: Playback stops at the end of each file with a black frame. This can be used for presentations where you don’t want the next file to be started.

“Stop Mode (last frame)”: Playback stops at the end of each file with the last frame. This can be used for presentations where you don’t want the next file to be started.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

In the initialization file (“UHDPlayerSetting.ini”), the player’s Play Mode setting can be found within the first half of the list.

```

1 [Auto EDID] Off Options: On, Off
2 [Resolution] 3840x2160p60
3 [Color Space] Auto Options: Auto, RGB, 420, 422, 444
4 [Color Depth] 8bit Options: Auto, 8bit, 10bit
5 [Dynamic Range] Auto Options: Auto, SDR, HDR10, HLG
6 [Pixel Aspect Ratio] Custom 1x1 Options: Auto, Custom
7 [Sync Control] Off Options: On, Off
8 [Sync Type] Master Options: Master, Slave
9 [Sync Accuracy] Medium Options: High, Medium, Low, Off
10 [Sync Group] Group01 Options: Group01, Group02, Group03, Group04, Group05, Group06, Group07, Group08, Group09, Group10
11 [DHCP] Off Options: On, Off
12 [IP Address] 10.200.0.37 Options: IP Address of UHD Player
13 [Subnet] 255.0.0.0 Options : Subnet of UHD Player
14 [Gateway] 10.200.0.37 Options: Gateway of UHD Player
15 [DNS] 10.200.0.37 Options: DNS of UHD Player
16 [Play Mode] Repeat All Options: Repeat All, Repeat Default, Repeat Selected
17 [Avio Settings Location] SD Options: Internal, SD, USB
18 [Avio Log Control] Off Options: On, Off
19 [Cue Points] Off Options: On, Off

```

Fig. 22: Play Mode Options in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

10.2. DEFAULT DISPLAY TIME

The duration of video and audio files is defined through their individual file length. Image files do not have a fixed display time, as such. It is set to 5 seconds by default and can be changed.

In the Web Interface, click on [ADVANCED SETTINGS] in the [menu bar](#) and then on [Default Display Time]. The drop-down menu opens and the current value for the default display time will appear.

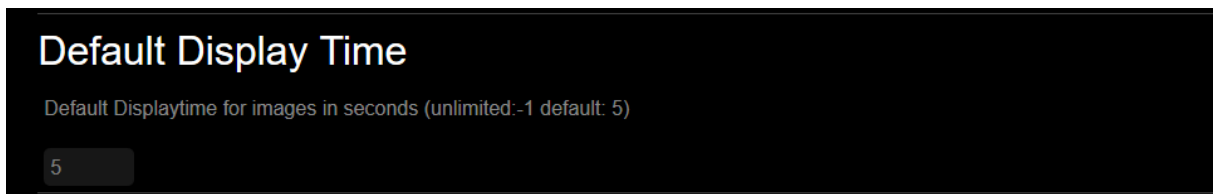


Fig. 23: Default Display Time setting in the Web Interface

The “Default Display Time” of images is set to 5 seconds by default. You may enter a different value (in seconds) in the text field on the left.

By entering “-1”, the image will be displayed for an indefinite time, unless another media file is triggered from an external control.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

PLEASE NOTE:

The default display time applies to all image files on your data carrier, so long as there is no additional playlist used in which every single item may have a different display time. For details, see the [Playlist](#) chapter.

In the initialization file (“UHDPlayerSetting.ini”), the player’s default display time setting can be found in the middle of the list.

```

10 [Sync Group] Group01 Options: Group01, Group02, Group03, Group04, Group05, Group06, Group07, Group08, Group09, Group10
11 [DHCP] Off Options: On, Off
12 [IP Address] 10.200.0.37 Options: IP Address of UHD Player
13 [Subnet] 255.0.0.0 Options : Subnet of UHD Player
14 [Gateway] 10.200.0.37 Options: Gateway of UHD Player
15 [DNS] 10.200.0.37 Options: DNS of UHD Player
16 [Play Mode] Repeat All Options: Repeat All, Repeat Default, Repeat Selected
17 [Avio Settings Location] SD Options: Internal, SD, USB
18 [Avio Log Control] Off Options:On, Off
19 [Cue Points] Off Options: On, Off
20 [NTP Control] Off Options: On, Off
21 [NTP Server] Off
22 [Timezone] Europe/Vienna
23 [Default Display Time] 5 Options: Time in seconds
24 [FTP Auto Download] Off Options: On, Off
25 [FTP Auto Download Server] deactivated
26 [FTP Auto Download Username] deactivated
27 [FTP Auto Download Password] deactivated
28 [FTP Auto Download Serverfolder] deactivated Options: server subfoldername, Off

```

Fig. 24: Default Display Time Setting in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

10.3. VOLUME

Basically, there is one volume value (default: 7/approx. 0 dB) set up for all media files containing audio. If you wish to assign an individual volume value to a media file, a [playlist](#) needs to be created.

In the Web Interface, click on [ADVANCED SETTINGS] in the [menu bar](#) and then on [Volume]. The drop-down menu will open and the current value for the volume will appear.

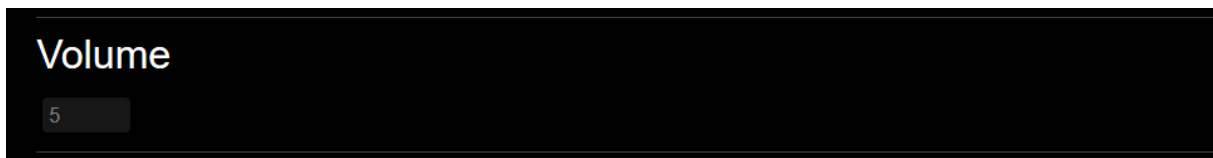


Fig. 25: Volume settings in the Web Interface

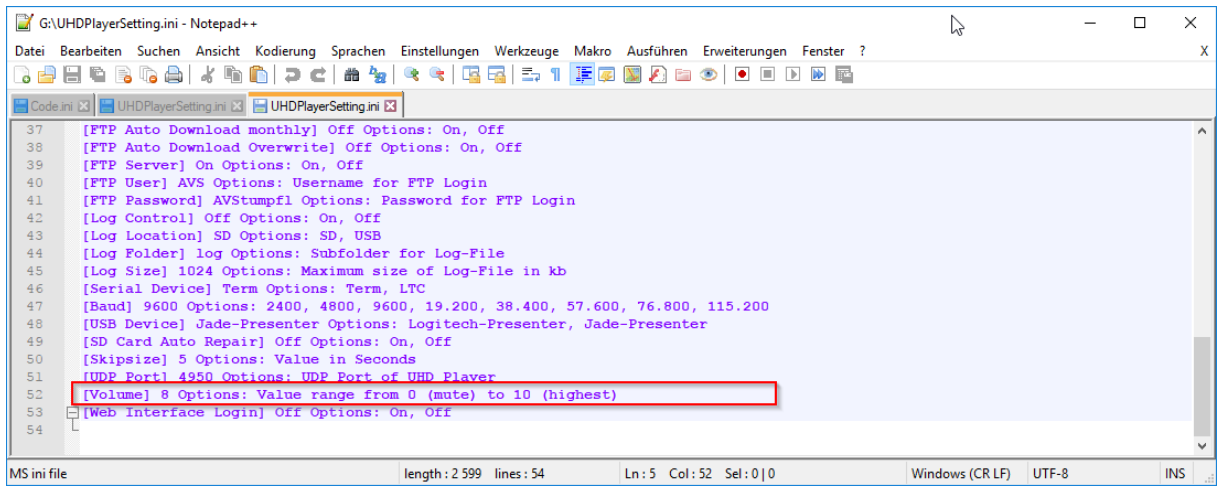
Click on the volume value below the heading and you can choose a different value from the drop-down list.

The value range extends from 0 (muted, 0%) to 10 (100%).

Volume Value	0	1	2	3	4	5	6	7	8	9	10
Approx.	Mute	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

In the initialization file (“UHDPlayerSetting.ini”), the player’s volume setting can be found at the end of the list.



The image shows a Notepad++ window titled "G:\UHDPlayerSetting.ini - Notepad++". The window contains an INI file with various configuration options. The option "[Volume] 8 Options: Value range from 0 (mute) to 10 (highest)" is highlighted with a red rectangular box. The status bar at the bottom indicates "MS ini file", "length: 2.599", "lines: 54", "Ln: 5", "Col: 52", "Sel: 0 | 0", "Windows (CR LF)", "UTF-8", and "INS".

```
37 [FTP Auto Download monthly] Off Options: On, Off
38 [FTP Auto Download Overwrite] Off Options: On, Off
39 [FTP Server] On Options: On, Off
40 [FTP User] AVS Options: Username for FTP Login
41 [FTP Password] AVStumpf1 Options: Password for FTP Login
42 [Log Control] Off Options: On, Off
43 [Log Location] SD Options: SD, USB
44 [Log Folder] log Options: Subfolder for Log-File
45 [Log Size] 1024 Options: Maximum size of Log-File in kb
46 [Serial Device] Term Options: Term, LTC
47 [Band] 9600 Options: 2400, 4800, 9600, 19.200, 38.400, 57.600, 76.800, 115.200
48 [USB Device] Jade-Presenter Options: Logitech-Presenter, Jade-Presenter
49 [SD Card Auto Repair] Off Options: On, Off
50 [Skipsize] 5 Options: Value in Seconds
51 [UDP Port] 4950 Options: UDP Port of UHD Player
52 [Volume] 8 Options: Value range from 0 (mute) to 10 (highest)
53 [Web Interface Login] Off Options: On, Off
54
```

Fig. 26: Volume setting in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

10.4. SKIPSIZE

Via [External Control](#) it is possible to jump within the currently played media file. The number of seconds that can be skipped forward or backward is defined as “Skipsize”.

In the Web Interface, click on [ADVANCED SETTINGS] in the [menu bar](#) and then on [Skipsize]. The drop-down menu will open and the current skipsize value will appear.

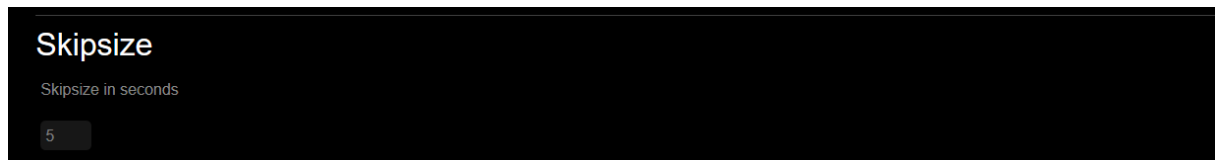


Fig. 27: Skipsize settings in the Web Interface

[Skipsize]

By default, the skipsize is set to 5 seconds. You may enter any other value in the text field.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

In the initialization file (“UHDPlayerSetting.ini”), the player’s skipsize setting can be found at the end of the list.

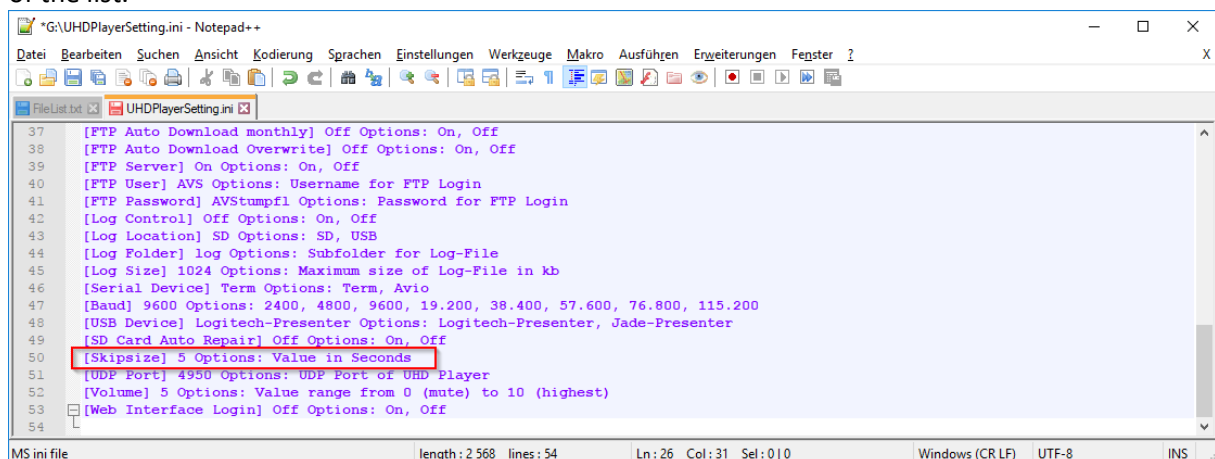


Fig. 28: Skipsize setting in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

10.5. RESUME FROM BOOKMARK

The player can save its actual position in a file. If the power is cut the player will start from the last saved bookmark when it is started again.

10.6. PLAYLIST

The media files on your data carrier can be organized via a playlist. This is a text file named “playlist.txt”, in which a variety of options for each playlist item may be set. A short overview is given below:

An individual [display time](#) can be defined for each image file, and each media file containing audio can be set to an individual [volume](#). Define the [next item to follow](#) if special playback order is needed. In order to avoid interruptions to the playback that are triggered from external controls, use the [scheduler](#) and define—via date and time—the entries for when a certain media should be displayed. It is also possible to activate the [HDMI input port](#) via the playlist in order to handle the incoming HDMI signal, just like a media file that is stored on the data carrier.

ATTENTION:

The Playlist always overwrites the alphanumeric playback order that is valid if NO playlist is stored on the data carrier!

The playlist always overwrites the current [Play Mode](#)!

When syncing several players, the playlists on each involved player must be harmonized or deleted, otherwise the sync will fail! This is valid for the master and all slave devices.

10.6.1. HOW TO CREATE AND USE A PLAYLIST

Create a text file using any text editor.

The items of your playlist must always contain the three obligatory parameters as described and listed below. After these obligatory parameters, optional parameters can be added in any order.

PLEASE NOTE:

Every parameter (including the last one) must be terminated by pressing the ENTER key.

Every item must be separated from the next item by a blank line.

No blank lines are allowed between the individual parameters.

If your playlist is completed, save it as “PLAYLIST.txt” on the data carrier. As soon as the player’s data carrier contains a playlist file, the playback order will be performed as defined in this playlist. If the playlist is removed from the data carrier, the playback will continue in alphanumeric order again.

10.6.2. OBLIGATORY PLAYLIST ENTRIES

[ITEM <no.>]	
Description:	Every item in the playlist must be started with this start parameter. The start parameter can be numbered from 0 to 2047 in an ascending order. Please note the capital letters, the space between "ITEM" and "number", and the square brackets.
Example:	[ITEM 3]

File=<filename>	
Description:	Enter the name of the media file you want to allocate to the item. Make sure the name is entered correctly. The UHD Player differentiates between capital and small letters (case sensitive) and reads every space.
Example:	File=sample.mp4 The media file with the name "sample.mp4" will be allocated to the Item.

Displaytime=<seconds>	
Description:	This entry is obligatory for image files as they do not have a defined file length. An entry of "5" results in an image file being displayed for 5 seconds before the next item is called. If you want an image file permanently displayed, enter "-1". For video and audio files, the display time entry will be ignored and, therefore, may be omitted.
Example:	Displaytime=10 The current image file will be displayed for 10 seconds, then the next one in the playlist will be called.

EXAMPLE

```
[ITEM 0]
File=Sample.jpg
Displaytime=3
```

```
[ITEM 1]
File=03_nature.mp4
```

Sample.jpg is assigned to ITEM 0. It is displayed for 3 seconds, followed by the video file 03_nature.mp4. After the video ends, the playlist starts from the beginning again.

10.6.3. OPTIONAL PLAYLIST ENTRIES

Loop=<amount>	
Description:	<p>The parameter “Loop” is required to play single media files in a loop.</p> <p>“Loop=-1” causes permanent loop operation. Any media file following this item will not be played any longer. This permanent loop operation can only be interrupted by a trigger from an external control (compare Play Mode “Repeat Selected” when no playlist is present).</p> <p>“Loop=5” causes the corresponding media file to be played 5 times before the UHD Player continues executing the playlist. You can use any number to define the number of repetitions.</p>
Example:	<p>Loop=3</p> <p>The item will be looped three times, then the playlist will continue with the next item.</p>

Succ=<item no.>	
Description:	<p>This parameter allows you to define the item that follows the current one. An entry of “0” means that [ITEM 0] will be executed after the current item has been finished. If no “Succ” entry is defined, the next item on the playlist follows automatically.</p> <p>Please note: If using the “Loop=” entry, the file will be looped first before “Succ=” will be executed.</p>
Example:	<p>Succ=3</p> <p>The current item will be followed by the media file allocated to Item 3.</p>

Interruptible=<TRUE/FALSE>	
Description:	<p>This entry defines whether the current media file may be interrupted by an external trigger.</p> <p>FALSE means that this item cannot be interrupted. The media file is always played to its end and further triggers are ignored.</p> <p>TRUE means that this item can be interrupted at any time by a new trigger (e.g. to start a new media file).</p> <p>No entry corresponds to TRUE. Please remember to use capital letters.</p>
Example:	<p>Interruptible=FALSE</p> <p>The current item cannot be interrupted. The media file will always be played to its end and further triggers will be ignored.</p>

Volume=<value>	
Description:	<p>This parameter allows you to set a customized volume temporarily for the duration of this item, and the player’s default volume will remain unchanged. The value range extends from 0 (muted) to 10 (100%)—see Volume chapter. No entry means that the default volume of the UHD Player will be applied.</p>
Example:	<p>Volume=4</p> <p>The volume of the current media file is set to 40%. The volume of the media file following the current one will remain unchanged and be played with the player’s default volume.</p>

EXAMPLE

Precondition: The player's default [volume](#) is set to "8".

```
[ITEM 0]
File=Sample.jpg
Displaytime=-1
```

```
[ITEM 1]
File=01_nature.mp4
Displaytime=0
Succ=0
Interruptible=FALSE
Volume=4
```

```
[ITEM 2]
File=02_nature.mp4
Loop=3
Displaytime=0
Succ=0
```

ITEM 0 will be displayed continuously ("Display Time=-1") until ITEM 1 or ITEM 2 are triggered via external control.

ITEM 1 is too loud, so the volume is temporarily reduced to the value "4". ITEM 1's playback cannot be interrupted by any trigger ("Interruptible=FALSE"), and it will be followed by ITEM 0 ("Succ=0"). Therefore, ITEM 2 can only be triggered while ITEM 0 is displayed.

ITEM 2 will be played with the "master" volume (value "8", see precondition) again. After being looped 3x, it will also be followed by ITEM 0.

SCHEDULER

In the following, all scheduler entries are listed.

Please make sure that the date and time of your UHD Player are correctly set!

Start Date=<dd.mm.yyyy>	
Description:	This parameter allows the definition of a start date for the item. Before that, the item will be skipped.
Example:	Start Date=30.10.2017 From October 30, 2017 onward, this item will be included in the playback.

End Date=<dd.mm.yyyy>	
Description:	This parameter allows the definition of an end date for the item. After that, the item will be skipped.
Example:	End Date=31.10.2017 After October 31, 2017 onward, this item will be skipped in the playback.

Start Time=<HH:MM:SS>	
Description:	This parameter allows the definition of a start time for the item. Earlier in the day, the item will be skipped.
Example:	Start Time=10:00:00 From 10 am onward, this item will be included in the playback.

End Time=<HH:MM:SS>	
Description:	This parameter allows the definition of an end time for the item. Later in the day, the item will be skipped.
Example:	End Time=18:30:00 After 6.30 pm onward, this item will be skipped in the playback.

Weekdays=<weekday>	
Description:	This parameter allows the definition of the weekdays on which the item is to be played. Possible entries are "Mon", "Tue", "Wed", "Thu", "Fri", "Sat", and "Sun". For several weekdays, separate the days by using commas but without using any space characters, e.g. "Weekdays=Mon,Wed,Fri".
Example:	Weekdays=Mon,Tue The item will be included in the playback on Mondays and Tuesdays. On all other weekdays, this item will be skipped in the playback.

EXAMPLE

[ITEM 0]

File=logo.jpg

Displaytime=30

Start Date=04.08.2017

End Date=31.12.2017

[ITEM 1]

File=opened.mp4

Displaytime=0

Start Date=04.08.2017

End Date=31.12.2017

Start Time=10:00:00

End Time=18:00:00

[ITEM 2]

File=special.png

Displaytime=10

Weekdays=Wed,Thu

A museum runs an exhibition from 04.08. to 31.12.2017.

ITEM 0, the exhibition's logo will be displayed while the exhibition is running, but before and after that, it will not be included in the playback.

ITEM 1 follows ITEM 0 during the same period, but only during the museum's opening times: 10 am to 6 pm. Earlier or later in the day, ITEM 1 will be skipped in the playlist.

ITEM 2 will be included in the playback every Wednesday and Thursday throughout the day, no matter the current date and time.

HDMI INPUT	
Description:	To assign an incoming HDMI video or audio signal to a playback item, the entry "HDMI INPUT" needs to be used instead of "File=". Contrary to video or audio files in your playlist, it is obligatory to define the display time for this HDMI Input.
Example:	[ITEM 0] File=test.mp4 [ITEM 1] HDMI-INPUT Displaytime=600 The playlist starts with the video file "test.mp4". Afterward, the HDMI Input is displayed for 600 seconds.

10.6.4. CUSTOMIZED ASSIGNMENTS

Customized Assignments for external control devices will overwrite the default key assignment. For example, the first [GPIO](#) of the [remote input port](#) triggers [Item 1] in the playlist by default, no matter which item is currently being played. To assign a different command to this trigger, the new and customized assignment must be entered for every item in the playlist for which it should be valid.

PLEASE NOTE:

In the playlist, you have to disable the default key assignment for every item by entering “KeyOff” before adding the customized assignments. This is also needed if you want to use the inputs exclusively in AVIO.

The following attributes can be assigned to a key:

Attribute	Name	Function
.d	Distance	Allows you to jump a certain amount of items forward or backward in the playlist
.t	Trick Mode	Toggles the playback between pause and play. “1” pauses the playback and “-1” resumes the playback.
.v	Volume	Increases or reduces the volume by a certain amount of values (volume’s value range extends from 0 (muted) to 10 (approx. 0 dB))
.j	Jump	Allows you to jump a certain amount of seconds forward or backward within the current playback
.x	Random	Enables a random playback order (value is always “1”)

The entry for the customized assignment will be composed by the following elements:

KeyOff <Key Name>=<Value><Attribute> <Key Name>=<Value><Attribute> ...	
Description:	The “KeyOff” needs to be entered first in order to disable the default Key Assignment. Enter the Key Name and the newly assigned action, as in the table above: <Value>.d triggers a jump of x items forward or backward in the playlist. <Value>.t toggles between Play and Pause: “1” pauses the playback and “-1” resumes the playback. <Value>.v triggers a toggle between Play and Pause. <Value>.j jumps a certain amount of seconds forward or backward within the current playback. <Value>.x enables a random playback order (value is always “1”).
Example:	KeyOff Key1=-2.d Key2=1.v Key3=-1.v When Key1 is triggered, the current playback (e.g. of Item 5) is interrupted, jumps two items backward in the list (e.g. to Item 3) and plays the media file that is assigned to this item. When Key2 is triggered, the volume of the current media file will be increased by 1 value (=10%) and Key3 will decrease the volume by 1 value.

To call a certain playlist item when the default key assignment is turned off by adding “KeyOff”, use the following syntax:

KeyOff <Key Name>=<Item number> ...	
Description:	When “KeyOff” is used in a playlist item to disable the default key assignment, <Key Name>=<Item number> will allow you to start a certain playlist item during the current playback. Enter the Key Name and the Item number of the media file that should be triggered.
Example:	KeyOff Key1=1 Key2=2 Key3=1.t Key4=-1.t When Key1 is triggered, the current playback (e.g. of Item 5) is interrupted, and the media file that is assigned to Item 1 will be started. When Key2 is triggered, the media file that is assigned to Item 2 will be started. A trigger of Key3 pauses the playback and a trigger of Key4 resumes it again.

DEFAULT KEY ASSIGNMENTS OF AVAILABLE DEVICES

GPIO / REMOTE IN

The GPIO1 ... GPIO16 are specified as Key1 ... Key16 or GPIO1 ... GPIO16.

The default key assignment is:

“Key1” or “GPIO1” starts the playback of [Item 1], “Key2” or “GPIO2” starts the playback of [Item 2], etc.

LOGITECH PRESENTER

The buttons are specified as Key19 ... Key23.

For the default key assignment, please see [Logitech Presenter](#) in the [External Control](#) chapter.

JADE PRESENTER

The inputs are specified as Key36 ... Key43

For the default key assignment, please see [Jade Presenter](#) in the [External Control](#) chapter.

EXAMPLE

[ITEM 1]
File=show1.mp4
KeyOff
Key1=1
Key2=2
Key3=1.t
Key4=-1.t

[ITEM 2]
File=show2.mp4
KeyOff
Key3=1.t
Key4=-1.t

Four buttons are connected via the GPIO Input Ports, triggering GPIO1 to GPIO4.

Button presses while ITEM 1 is running:

When Button1 is pressed, the playback of ITEM 1 starts again.

When Button2 is pressed, ITEM 2 starts.

Button3 pauses and Button4 resumes the playback of ITEM 1.

Button presses while ITEM 2 is running:

When Button1 or Button2 are pressed, nothing will happen because the default key assignment is turned off and there is no action defined for Key1 and Key2.

Button3 pauses and Button4 resumes the playback of ITEM 2.

11. MEDIA FILE MANAGEMENT

The media content that is played by the UHD Player needs to be stored on the player's SD Card or USB device; there is no internal storage for media files.

There are several possibilities to manage the content of the player's data carrier:

- Via a [file browser on your computer](#), having the data carrier inserted
- By automatically downloading the files from an external FTP Server ([FTP Auto Download](#))
- By using the player's [local FTP Server](#)
- By [using the Web Interface](#) to delete files.

The different ways are explained below.

PLEASE NOTE:

Precondition for changing the content over network is that the used data carrier is plugged into the player and that the SD Card (if using this device as data carrier) is not write-protected.

11.1. .. VIA COMPUTER'S FILE BROWSER

Insert the player's data carrier (SD Card or USB device) into your computer. Save your [video, audio and image files](#) and, if appropriate, a [playlist](#) to the root folder of this data carrier (e.g. SD:/ or USB:/). Then plug the data carrier into the [corresponding port on the player's front side](#).

11.2. .. VIA FTP AUTO-DOWNLOAD

The content of the player's data carrier can be automatically updated via the FTP Auto-Download function. The automatic update can be proceeded hourly, daily, weekly, monthly (every 28 days), or after an individually selected interval (in seconds).

To copy all files from the specified folder of the external FTP server to the player's data carrier, you just have to configure the external FTP Auto Download.

If all or certain files on the player's data carrier should be deleted when new files are transferred from the FTP server, or if you just want to transfer certain files from the FTP server, a "FileList.txt" must be used. See the [How to create and use a FileList](#) section below.

In the Web Interface, click on [ADVANCED SETTINGS] in the [menu bar](#) and then on [EXTERNAL FTP AUTO DOWNLOAD]. The drop-down menu will open and the settings for the FTP Auto Download will appear.

External FTP Auto Download

Activation	Off
Server address	deactivated
Username	deactivated
Password	deactivated
Server folder	deactivated
Start date	1 10 2017
Start time	8 0 0
FTP Mode	passive
Overwrite	Off
Delayed Content Change	Off
Hourly Interval	Off
Daily Interval	Off
Weekly Interval	Off
Monthly Interval	Off
Custom Auto Download Interval in seconds	0

Fig. 29: External FTP Auto Download settings in the Web Interface.

[Activation]

Enable the External FTP Auto Download by setting [Activation] to “On”. If you do not need this function any more, set it back to “Off”.

Enter the FTP Server’s login data in the corresponding text fields right of the item, consisting of:

[Server address] e.g. ftp.dummy.com

[Username] e.g. “User1”

[Password] e.g. “secret”

[Server folder] e.g. “/UHD Player content”

[Start date] & [Start time]

Set a [start date] in the format (dd:mm:yyyy) and a [start time] in the format (hh:mm:ss) by choosing the values from the corresponding dropdown menus. This is needed to define the beginning of the External FTP Auto Download.

[FTP Mode]

The FTP Mode defines how a data connection between FTP server and client is established.

By default, the FTP mode is set to “passive”. Alternatively, “active” can be chosen from the drop-down list.

[Overwrite]

Overwrite is set to “Off” by default. If there is a file with the same name on the player’s data carrier and on the external FTP server as well, the file on the player’s data carrier won’t be overwritten. Set [Overwrite] to “On” in order to always copy all files from the external FTP server.

[Delayed Content Change]

By default, this function is set to “Off”. This means that all files that will be copied from the external FTP server will directly be written on the player’s data carrier. This may interrupt the playback of a running media file.

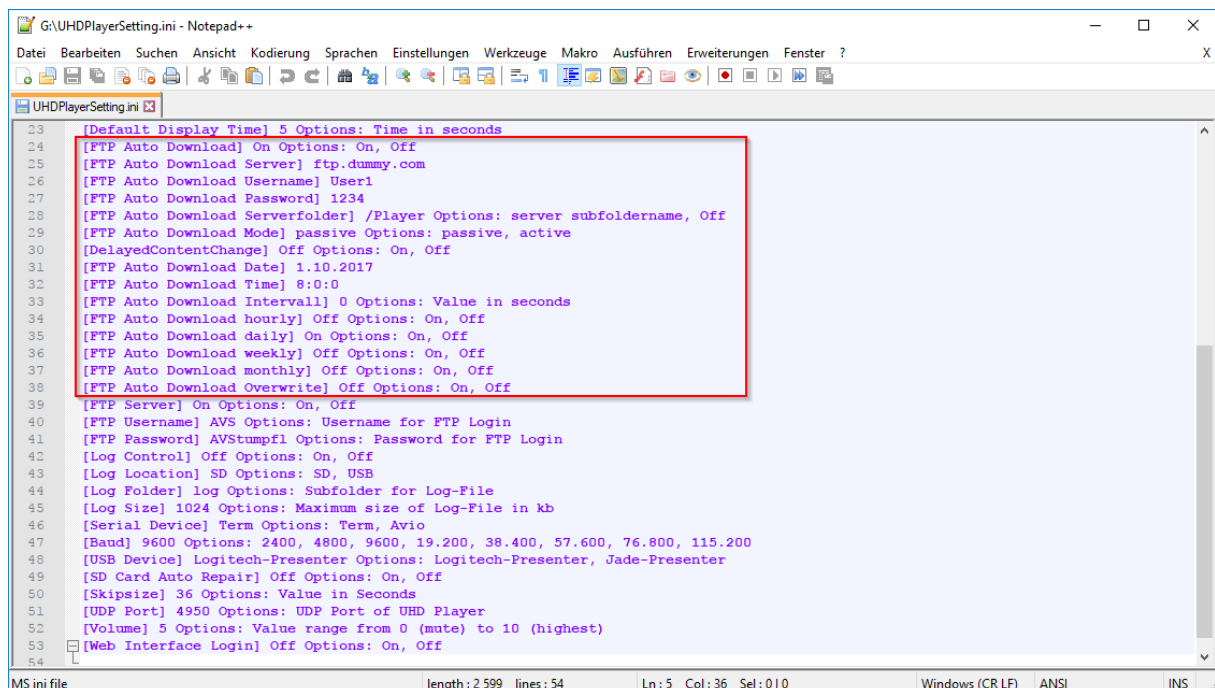
Set this function to “On” and all files will be downloaded into a temp folder first, before they are copied from the temp folder to the data carrier’s root folder. This minimizes the interruption of running media files.

[... Interval]

When the defined start date and start time is reached, the UHD Player tries to establish a connection to the FTP server and starts the Auto Download process. Based on the initial time, you can define whether this procedure will be repeated hourly, daily, weekly, monthly (every 28 days), or after an individually selected interval (in seconds). Set the desired interval to “On”, or enter the individually selected interval into the corresponding text field.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

In the initialization file (“UHDPlayerSetting.ini”), the settings for the player’s External FTP Auto Download can be found at the lower end.



```
23 [Default Display Time] 5 Options: Time in seconds
24 [FTP Auto Download] On Options: On, Off
25 [FTP Auto Download Server] ftp.dummy.com
26 [FTP Auto Download Username] User1
27 [FTP Auto Download Password] 1234
28 [FTP Auto Download Serverfolder] /Player Options: server subfoldername, Off
29 [FTP Auto Download Mode] passive Options: passive, active
30 [DelayedContentChange] Off Options: On, Off
31 [FTP Auto Download Date] 1.10.2017
32 [FTP Auto Download Time] 8:0:0
33 [FTP Auto Download Intervall] 0 Options: Value in seconds
34 [FTP Auto Download hourly] Off Options: On, Off
35 [FTP Auto Download daily] On Options: On, Off
36 [FTP Auto Download weekly] Off Options: On, Off
37 [FTP Auto Download monthly] Off Options: On, Off
38 [FTP Auto Download Overwrite] Off Options: On, Off
39 [FTP Server] On Options: On, Off
40 [FTP Username] AVS Options: Username for FTP Login
41 [FTP Password] AVStumpf1 Options: Password for FTP Login
42 [Log Control] Off Options: On, Off
43 [Log Location] SD Options: SD, USB
44 [Log Folder] log Options: Subfolder for Log-File
45 [Log Size] 1024 Options: Maximum size of Log-File in kb
46 [Serial Device] Term Options: Term, Avio
47 [Baud] 9600 Options: 2400, 4800, 9600, 19.200, 38.400, 57.600, 76.800, 115.200
48 [USB Device] Logitech-Presenter Options: Logitech-Presenter, Jade-Presenter
49 [SD Card Auto Repair] Off Options: On, Off
50 [Skipsize] 36 Options: Value in Seconds
51 [UDP Port] 4950 Options: UDP Port of UHD Player
52 [Volume] 5 Options: Value range from 0 (mute) to 10 (highest)
53 [Web Interface Login] Off Options: On, Off
54
```

Fig. 30: External FTP Auto Download options in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

11.3. .. VIA USB AUTOCOPY

The content of the player's data carrier can be updated via the USB Autocopy function. The content of a USB stick connected to the player while a SD card is connected forces the player to copy the content of the USB stick to the SD card. The FileList.txt can be used to assign specific files.

HOW TO CREATE AND USE A FILE LIST

Use a file list ("FileList.txt") if you want to do one of the following things while executing the External FTP Auto Download or USB Autocopy function:

- Delete files from the player's data carrier
- Copy only certain files from the external FTP server / USD data carrier

Create a text file using any text editor.

Every file that should be deleted from the player's data carrier must be listed in a single line, using the syntax as described below for DELETE FILES.

Every file that should be downloaded from the external FTP server / USB data carrier must be listed in a single line, using the syntax as described below for COPY FILES.

If your file list is completed, save it as "FileList.txt" in the specified folder of the FTP server or on the USB data carrier. As soon as the player is connected to the FTP server or reads the USB data carrier, it checks the file list and manages the content as defined in there. Without any FileList.txt on the external FTP server or USB data carrier, the player will just download all files from the specified server folder or USB data carrier.

PLEASE NOTE:

Every delete or copy command in the file list (including the last one) must be terminated by pressing the ENTER key.

No blank lines are allowed between the delete or copy commands.

DELETE FILES

Delete_<data carrier>:<filename>	
Description:	Deletes the specified file from the root folder of the player's data carrier. For <data carrier> enter "SD" or "USB", depending on the data carrier that is currently used by the player. For <filename> enter the complete name of the file, including the file extension, e.g. "01.mp4".
Example:	Delete_SD:01.mp4 Delete_SD:02.mp4 The files 01.mp4 and 02.mp4 will be deleted from the player's SD Card (if present).

COPY FILES

data carrier>:<filename>	
Description:	Copies the specified file from the External FTP server to the root folder of the player's specified data carrier. For <data carrier> enter "SD" or "USB", depending on the data carrier that is currently used by the player.

	For <filename> enter the complete name of the file, including the file extension, e.g. “welcome.jpg”.
Example:	SD:welcome.jpg SD:pause.jpg SD:playlist.txt Copies the files welcome.jpg, pause.jpg, and the new playlist file (playlist.txt) from the External FTP Server to the player’s SD Card (if present).

PLEASE NOTE:

As soon as a “FileList.txt” is used, e.g. to delete files from the player, only the files that are specified in this text document will be downloaded from the external FTP server to the player’s data carrier.

EXAMPLE 1 – WITHOUT FILE LIST

BEFORE Auto Download is started

Content on the Player’s SD Card:	Content on the External FTP server:
01.mp4	Byebye.mp4
02.mp4	Pause.jpg
Event.jpg	Welcome.mp4

AFTER Auto Download is executed

Content on the Player’s SD Card:
01.mp4
02.mp4
Byebye.mp4
Event.jpg
Pause.jpg
Welcome.mp4

As there is no FileList.txt present on the external FTP server, all files are copied from there to the player’s data carrier.

EXAMPLE 2 – WITH FILE LIST

BEFORE Auto Download is started

Content on the Player’s SD Card:	Content on the External FTP server:
01.mp4	Welcome.mp4
02.mp4	Byebye.mp4
Event.jpg	Pause.jpg

	FileList.txt Playlist.txt
--	------------------------------

FileList.txt contains the following text:

Delete_SD:Event.jpg
SD:Welcome.mp4
SD:ByeBye.mp4
SD:Playlist.txt

AFTER Auto Download is executed

Content on the Player's SD Card:
01.mp4 02.mp4 ByeBye.mp4 Welcome.mp4

As defined in the FileList.txt on the external FTP server, the file "Event.jpg" is first deleted, then only the files *Welcome.mp4*, *ByeBye.mp4* and *Playlist.txt* are copied from the FTP server to the player's data carrier.

11.4. .. VIA LOCAL FTP SERVER

The UHD Player hosts a local FTP Server. Using any FTP Client software, you may connect to the UHD Player and delete and/or copy files from/to the player's SD Card.

PLEASE NOTE:

If you have changed the contents on the SD Card through FTP access or the file browser in the Web Interface, the UHD Player needs to rescan the sources. Please click on the [update SD CARD / USB content symbol](#) on the "SD Card" or "USB" page of the Web Interface (depending on which data carrier device is used) to start the scan.

In the Web Interface, click on [ADVANCED SETTINGS] in the [menu bar](#) and then on [LOCAL FTP SERVER]. The drop-down menu will open and the settings for the local FTP Server will appear.

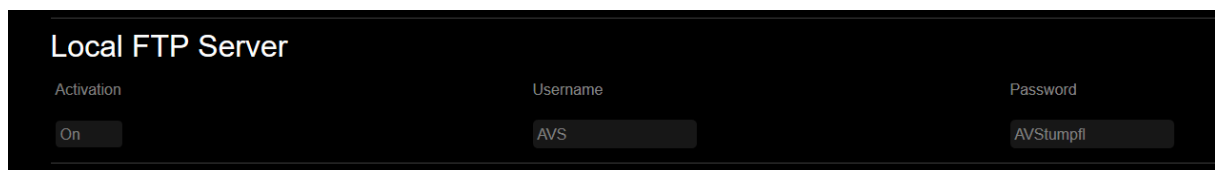


Fig. 31: Local FTP Server settings in the Web Interface

[Activation]

The player's Local FTP Server is activated by default. If you do not want to use this function, you may disable the Server by choosing "Off" from the drop-down list.

[Username]

By default, the user name of the player's local FTP server is set to "AVS". You may change this name to any other by entering it into the text field below.

[Password]

The Password for the Username is set to "AVStumpf1" by default. This can be changed to any other word by entering it into the text field below.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

In the initialization file ("UHDPlayerSetting.ini"), the settings for the player's Local FTP Server can be found at the lower end.

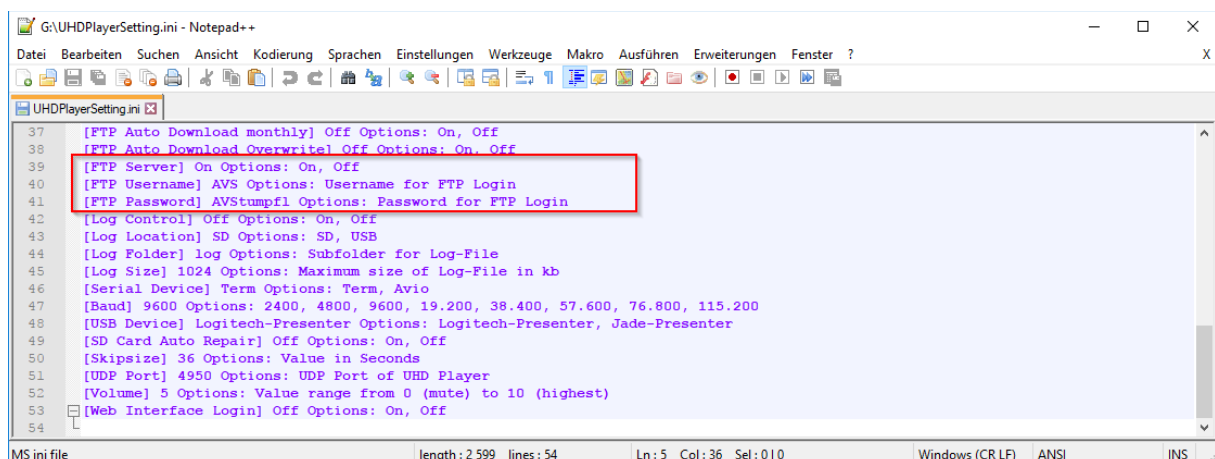


Fig. 32: Local FTP Server options in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

CONNECTING TO THE LOCAL FTP SERVER

You may use any FTP Client Software to connect to the UHD Player's Server, e.g. the freeware FileZilla (<https://filezilla-project.org/>).

Within your FTP Client Software, connect to the player's FTP Server (or host) by entering the player's IP address (e.g. "10.3.1.155"). Enter the defined user name (e.g. "AVS") and the corresponding password (e.g. "AVStumpfl"). The player's local FTP Server uses the standard FTP Server command port 21.

As soon as the connection is established, within your FTP Client software you may transfer content from your computer to the player's data carrier and delete content from the data carrier, as well.

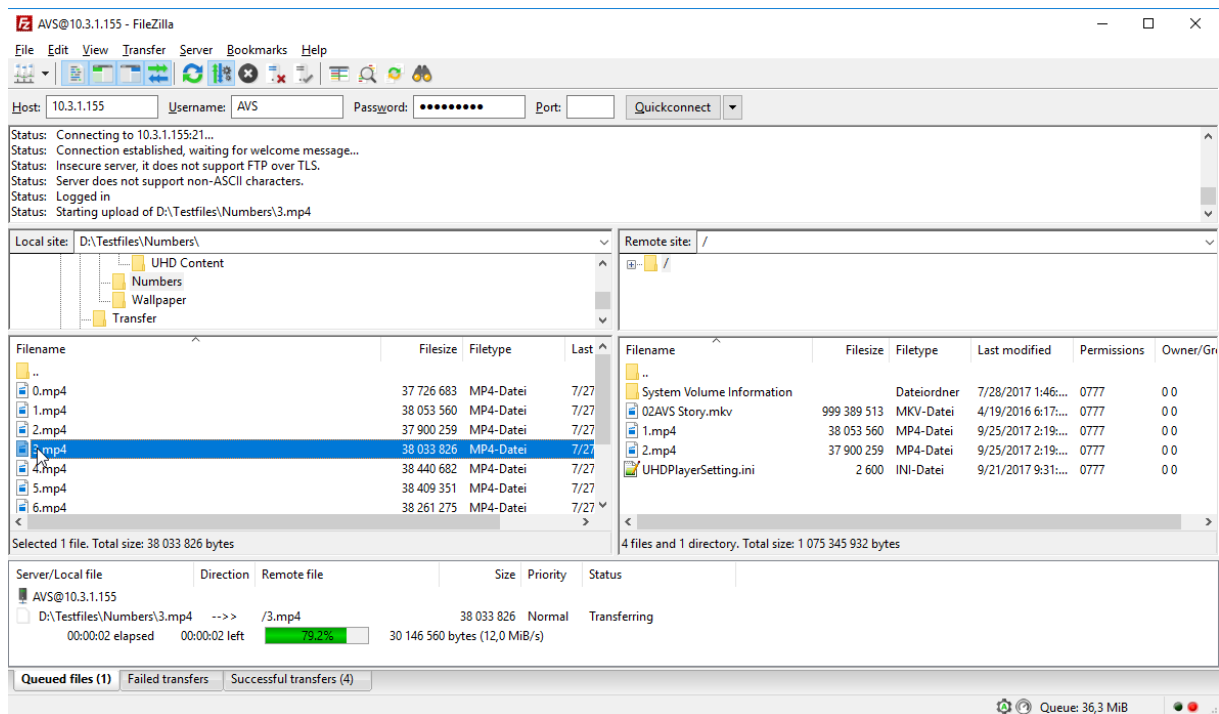


Fig. 33: File transfer via the player's Local FTP Server, using FileZilla

11.5. .. VIA THE WEB INTERFACE

The Web Interface allows you to view all files that are located on the player's data carrier and offers to preview, trigger and delete them. A playlist can be created and edited. The initialization file (UHDPlayerSettings.ini") can also be edited.

PLEASE NOTE:

If you have changed the contents on the SD Card through FTP access or the file browser below, the UHD Player needs to rescan the sources. Please click on the update symbol to start the scan.

Click on [SD CARD] or [USB] in the [menu bar](#) (depending on the data carrier that is plugged into the player) and the root folder of the data carrier with all files and folders will be listed.

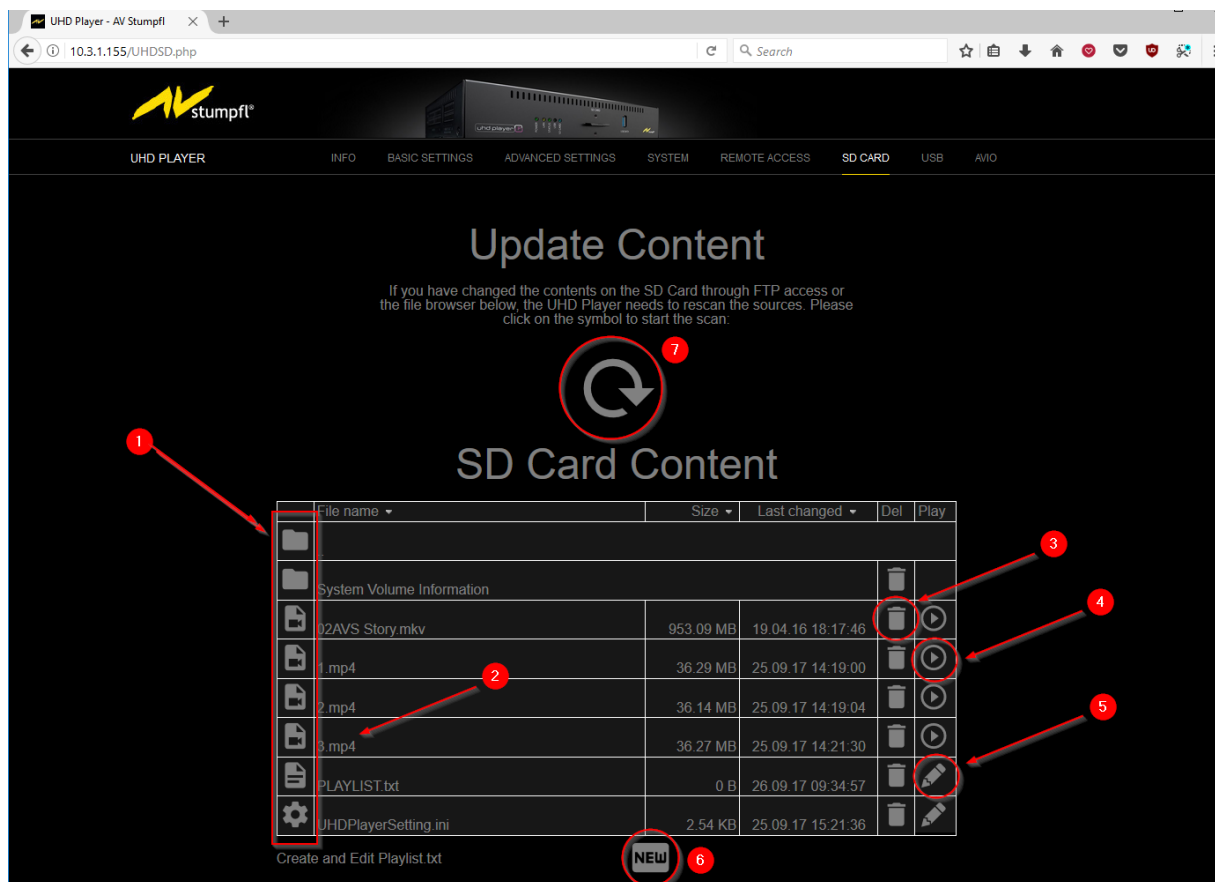


Fig. 34: SD Card file browser in the Web Interface

- 1 FILE TYPES
- 2 MEDIA FILE PREVIEW
- 3 DELETE FILE
- 4 TRIGGER FILE PLAYBACK
- 5 EDIT SETTINGS FILE / PLAYLIST
- 6 CREATE PLAYLIST
- 7 UPDATE SD CARD CONTENT

(1) FILE TYPES

In the first row of the content table, the symbols show the different file types:

Folder, Video, Image, Editable text file, Settings file, Unknown file type


(2) MEDIA FILE PREVIEW

Click on the name of a video, image, settings or text file. Depending on the browser that is used to view the Web Interface, the file will be displayed directly in your browser, or a dialog box will appear and ask whether the file should be opened with a certain program or saved on your computer.

(3) DELETE FILE

Click on the trash symbol and the corresponding file will be deleted from the player's data carrier.

(4) TRIGGER FILE PLAYBACK

Video and image file playback can be triggered directly within the Web Interface. To interrupt the current playback and start another media file, click on the Play Symbol  next to the media file. A pop-up dialog will appear and you will be asked to confirm this action.

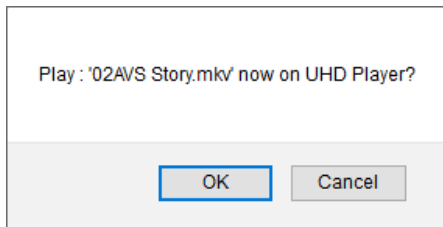



Fig. 35: A Pop-up dialog appears when triggering a media file in the Web Interface.

PLEASE NOTE:

If a [playlist](#) is used, only files that are included in the playlist can be triggered.

If a playlist item uses the playlist entry "[Interruptible=FALSE](#)", another media file cannot be triggered while this file is playing.

(5) EDIT INITIALIZATION FILE / PLAYLIST

The UHD Player's [initialization file](#) ("UHDPlayerSettings.ini") and a [playlist](#) can be edited within the Web Interface. To do so, click on the Edit Symbol  next to the file and it will open in a text editor that is integrated into the Web Interface.

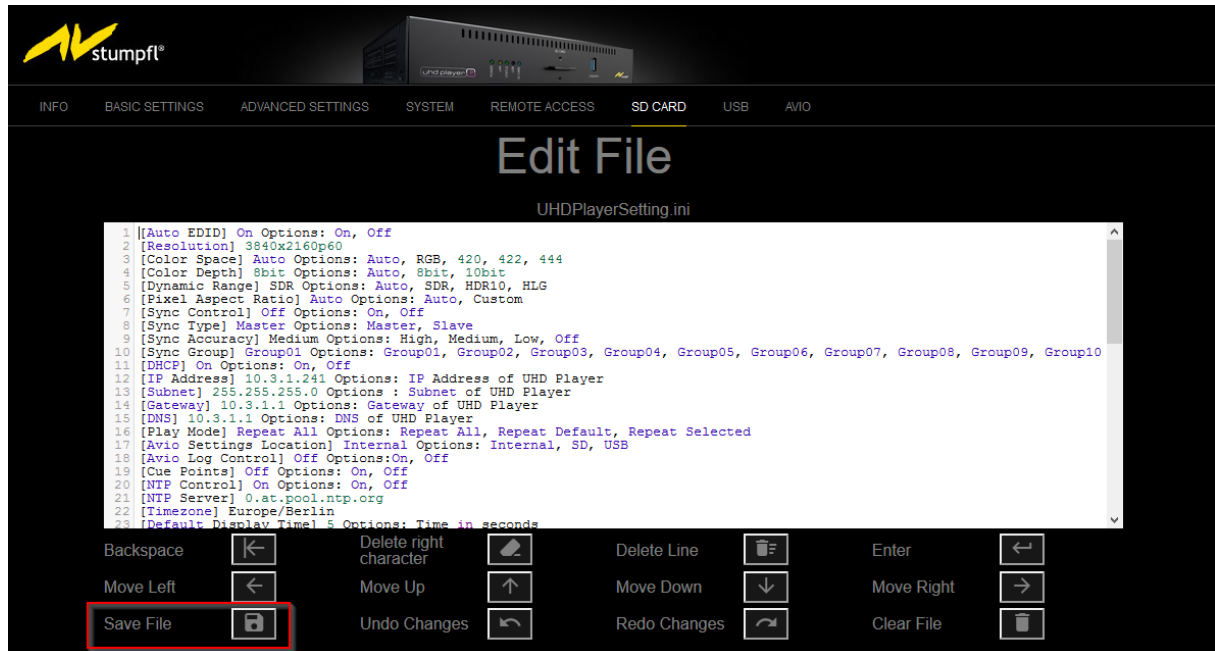


Fig. 36: Initialization file opened in the Web Interface with marked [Save File] button

The file may now be edited by using your computer's mouse and keyboard. Right below the editor's window, you find several function buttons that can be helpful within the editing process.

Additionally, an extended onscreen keyboard opens below the text editor. The first buttons, marked in the figure below, allow you to create and edit a playlist very fast. For a detailed description, please see the [Create Playlist](#) section below.

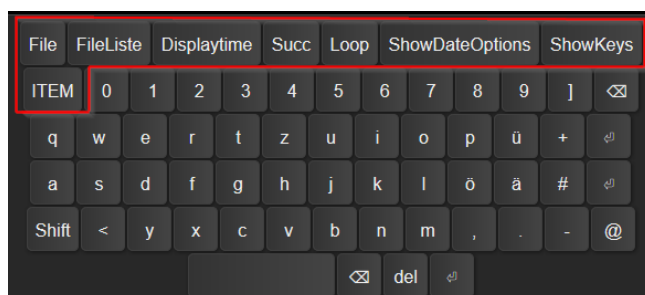



Fig. 37: Extended onscreen keyboard in the Web Interface with marked buttons for fast playlist editing

When all changes are made, save the file by clicking on the save symbol next to [Save File]  in the functional buttons area - see the two marked figures above.

(6) CREATE PLAYLIST

A blank [playlist](#) can be created by clicking on [New] **NEW** below the file browser. If there is already a playlist located in the root folder of the player's data carrier, this one will open in the text editor instead of a blank one.

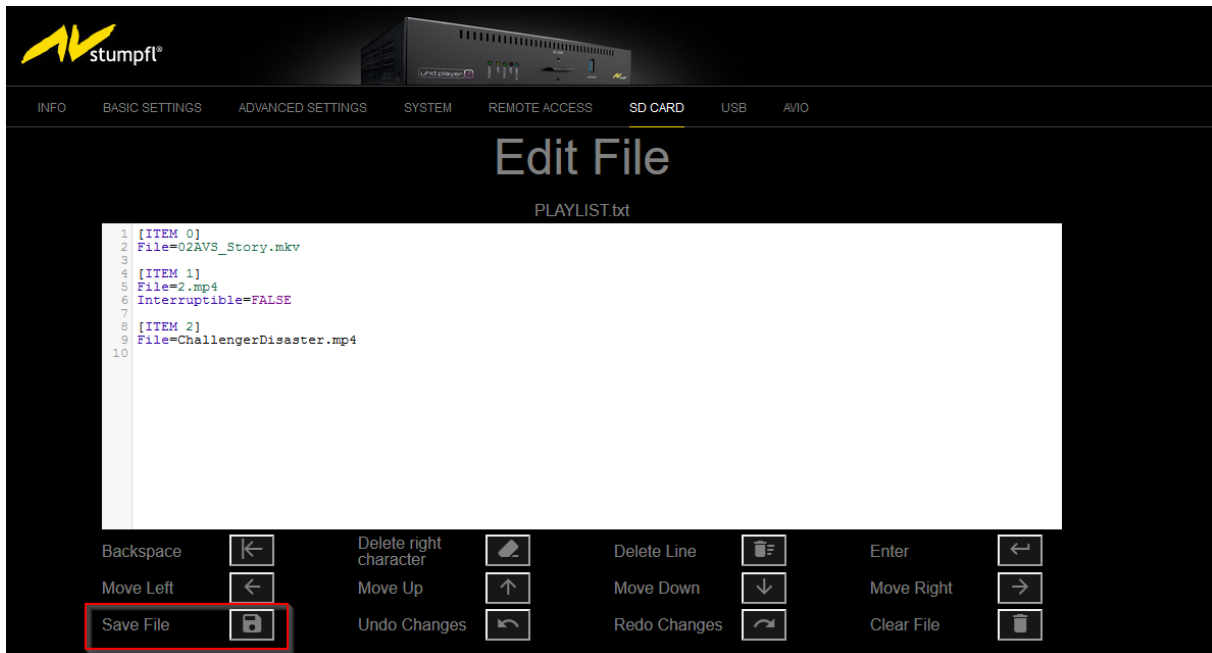


Fig. 38: Playlist file opened in the Web Interface with marked [Save File] button

Write or edit the playlist following the syntax described in the [How to Create and Use a Playlist](#) chapter. The first line of buttons of the extended onscreen keyboard will help you with the correct syntax.

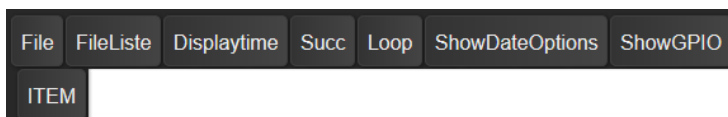


Fig. 39: Helpful buttons for playlist editing of the extended onscreen keyboard in the Web Interface

[ITEM]: Adds the text "[ITEM " to the editor. Now you only have to enter the desired number of the playlist item and "]" to complete the first obligatory entry of a playlist item.

[File]: Adds the text "File=" to the editor. Now the exact name of the media file needs to follow.

Click [FileList] and the onscreen keyboard shows buttons for every media file located on the player's data carrier, see figure below. By clicking one of these buttons, the name of the corresponding media file will automatically be inserted into the text editor. Click on [ShowNormal] and the onscreen keyboard will toggle back to the default buttons view.

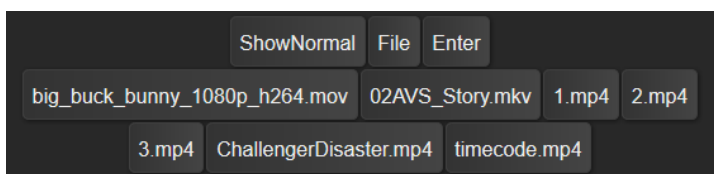


Fig. 40: FileList Buttons of the extended onscreen keyboard in the Web Interface

[Displaytime] adds the entry "Displaytime=". The buttons [Succ] and [Loop] work in the same way.

[ShowDateOptions] will show buttons that allow you to easily enter the syntax for the [scheduler](#) functions, see image below. Click on [ShowNormal] and the onscreen keyboard toggles back to the default buttons view.

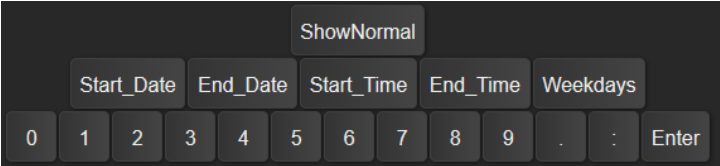


Fig. 41: Date Buttons of the extended onscreen keyboard in the Web Interface

[ShowKeys] will show buttons that allow you to easily enter the syntax for the [GPIO inputs](#), see image below. Click on [ShowNormal] and the onscreen keyboard toggles back to the default buttons view.

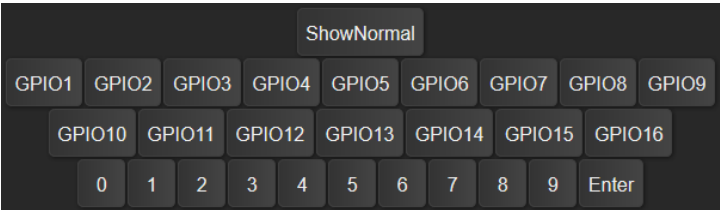



Fig. 42: Key Buttons of the extended onscreen keyboard in the Web Interface

When all changes are made, save the file by clicking on the save symbol next to [Save File]  in the functional buttons area below the editor.

(7) UPDATE SD CARD / USB CONTENT

PLEASE NOTE:
If you have changed the contents on the SD Card through FTP access or the file browser below, the UHD Player needs to rescan the sources. Please click on the update symbol to start the scan.

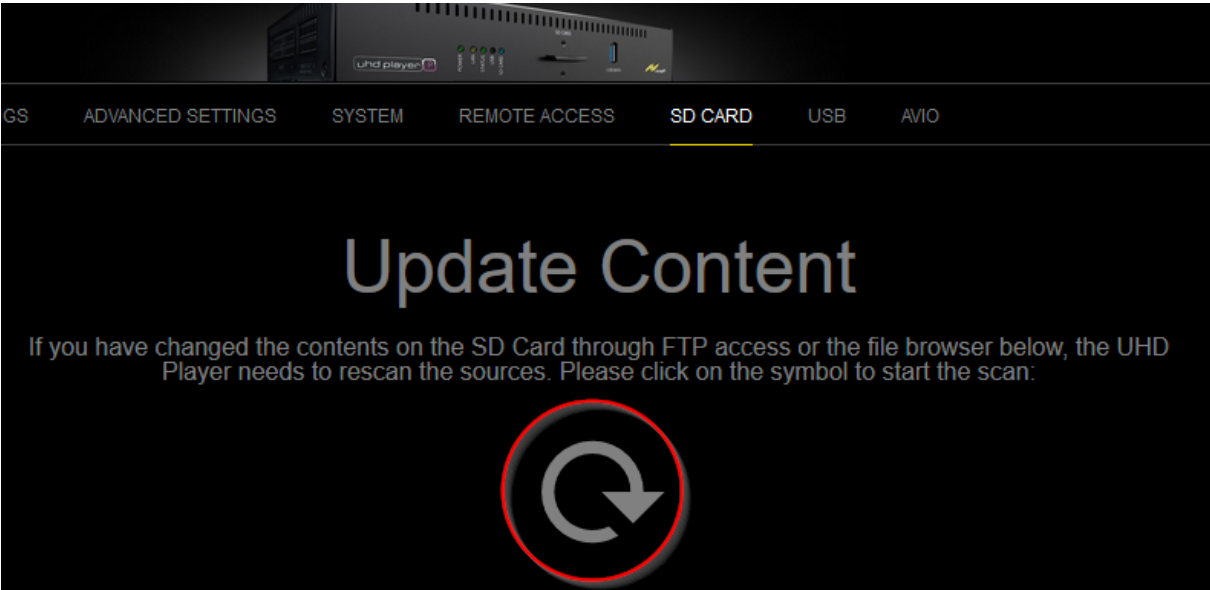


Fig. 43: Update Content button in the Web Interface

A pop-up dialog will appear, informing you that the playback will be suspended. Confirm this to proceed with the SD Card scan.

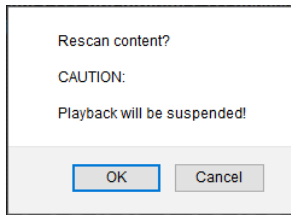


Fig. 44: Pop-up dialog after [Update Content] button was clicked

12. HDMI INPUT

The [HDMI 2.0 Input port](#) on the rear panel enables you to use an external video/audio source as (live) input. The external video/audio source may then be displayed just like media content that is stored on the attached data carrier.

The HDMI Input port supports incoming video signals up to UHD 3840x2160@60p or 4096x2160@24p.

Connect your HDMI video/audio source to the HDMI Input port. To include this HDMI input in your playback, a [playlist](#) must be used.

Assign an incoming HDMI video or audio signal to a playback item from your playlist by using the playlist entry “HDMI INPUT” instead of “File=”. Contrary to video or audio files in your playlist, it is obligatory to define the display time for this HDMI Input.

The complete entry in the playlist should look like this:

```
[ITEM <no.>]
HDMI-INPUT
Displaytime=<seconds>
```

EXAMPLE 1:

```
[ITEM 0]
File=test.mp4

[ITEM 1]
HDMI-INPUT
Displaytime=600
```

The playlist starts with the video file “test.mp4”. Afterward, the HDMI Input is displayed for 600 seconds.

EXAMPLE 2:

```
[ITEM 1]
HDMI-INPUT
Displaytime=-1
```

The playlist perpetually displays the HDMI Input.

13. SYNCHRONIZED PLAYBACK

Multiple UHD Players can be frame synchronized via network to play multi-display presentations. Even if one player goes offline and/or returns to online state at any time, it is automatically resynchronized to the remaining players of the setup. There is no limitation to the number of players that can be synced.

Basically, there is one player that is set up as the master and all others that should be synced to this one will be set up as the slaves. Within a network, it is also possible to run several sync groups separately from each other.

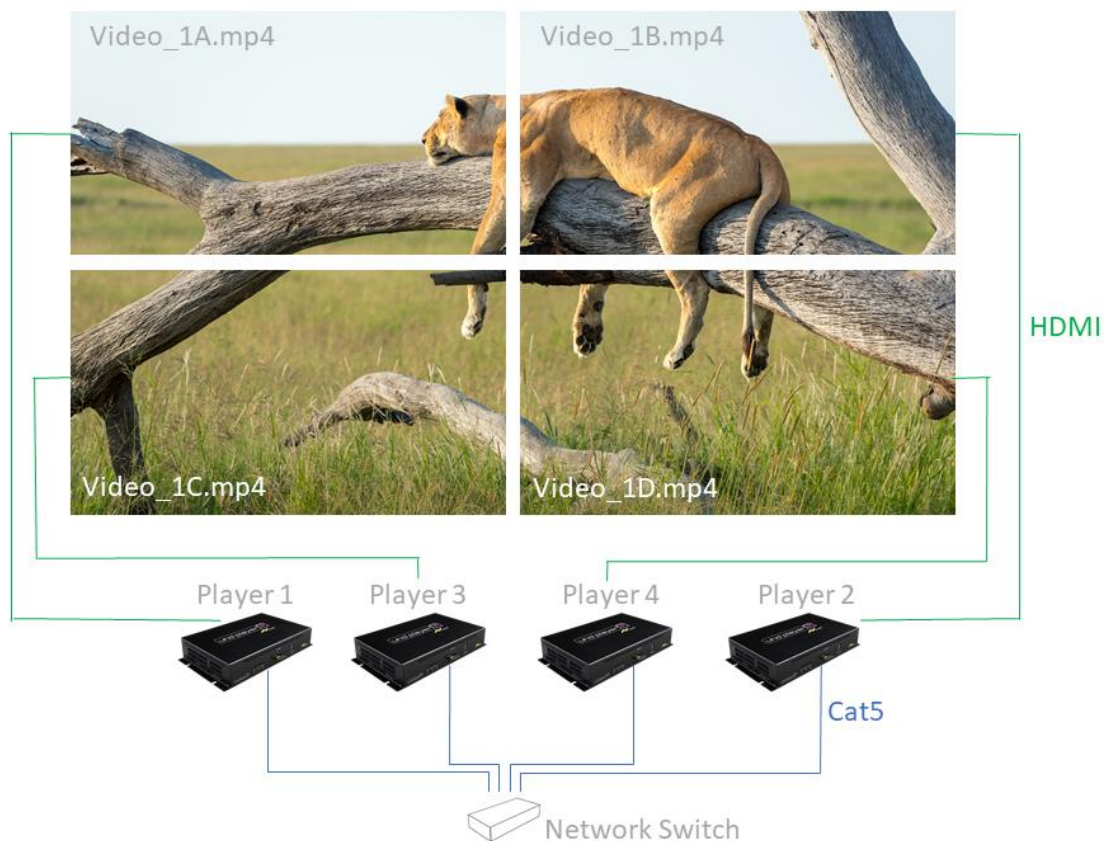


Fig. 45: Multi-display presentation showing four split videos synced to each other

To set up a multi-display presentation like the one represented in the picture above, please follow the steps outlined below.

STEP 1: PREPARE THE CONTENT

To achieve a perfectly synced playback, it is important that all the files of the multi-display presentation have the same file length and framerate!

The file names do not have to be identical, but it is recommended that they be named using the same naming structure, e.g. "Video_1A.mp4", "Video_1B.mp4", "Video_1C.mp4", etc. This is not only to allow for a better overview but also in case there are several split files played without a playlist.

STEP 2: COPY THE CONTENT ON THE DATA CARRIER

Copy the media files for display 1 to the data carrier of player 1, and copy the media files for display 2 to the data carrier of player 2, etc.

You do not have to use the same kind of data carriers, e.g. it is possible to use an SD Card for player 1 and a USB stick for player 2.

STEP 3A: PLAYBACK WITHOUT PLAYLIST

When no playlist is used, the media files on the data carrier will be played in alphanumeric order.

Every player should have the same number of media files on its data carrier.

Please make sure every player uses the same [Play Mode!](#)

Example:

SD Card of Player 1 contains:

BeWelcome_A.jpg
UHDPlayerSetting.ini
Video_1A.mp4
Video_2A.mp4
Video_3A.mp4

SD Card of Player 2 contains:

BeWelcome_B.jpg
UHDPlayerSetting.ini
Video_1B.mp4
Video_2B.mp4
Video_3B.mp4

[...]

STEP 3B: PLAYBACK WITH PLAYLIST

If a [playlist](#) is used, the media files on the data carrier will be played in the order that is determined in the playlist. Please make sure that the playlists of all players are harmonized! They need the same number of items (with identical Item Numbers) and the media (split) files belonging together should be listed in the same order.

EXAMPLE:

SD Card of Player 1 contains:	The playlist of Player 1 contains:
Video_1A.mp4	[ITEM 1]
Video_2A.mp4	File=Welcome_A.jpg
Video_3A.mp4	Displaytime=20
Playlist.txt	
UHDPlayerSetting.ini	[ITEM 2]
Welcome_A.jpg	File=Video_1A.mp4
	[ITEM 3]
	File=Video_2A.mp4
	[ITEM 4]
	File=Video_3A.mp4

SD Card of Player 2 contains:	The playlist of Player 2 contains:
Video_1B.mp4 Video_2B.mp4 Video_3B.mp4 Playlist.txt UHDPlayerSetting.ini Welcome_B.jpg	[ITEM 1] File=Welcome_B.jpg Displaytime=20 [ITEM 2] File=Video_1B.mp4 [ITEM 3] File=Video_2B.mp4 [ITEM 4] File=Video_3B.mp4

[...]

STEP 4: CONNECT PLAYERS VIA NETWORK

It is obligatory that all players are connected to the same network, as the sync control only works over Ethernet. Please see the [Connecting the Player to the Network](#) chapter for further information.

STEP 5: SET UP THE SYNC MODE

In the Web Interface, click on [BASIC SETTINGS] in the [menu bar](#) and then on [Sync Settings]. The drop-down menu will open and the current sync settings will appear.

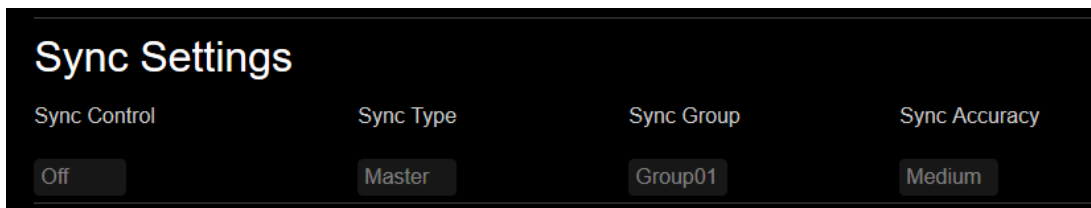


Fig. 46: Sync Settings in the Web Interface

[Sync Control]

The Sync Control of each player (the master as well as all slaves) needs to be set to “On” in order to perform a synced playback.

[Sync Type]

Define one of the players as the “Master” and set all other players as “Slaves”. The “Master” will send out the sync control via network and the “Slaves” will receive the instructions.

[Sync Group]

A Sync Group consists of one master player and one or several slave players. All players that should be synced to one another must belong to the same Sync Group. For example, set all the players of your multi-display presentation to Sync Group “Group01”.

If there are several multi-display presentations in the same network, these presentations can be separated from each other by setting different Sync Groups.

[Sync Accuracy]

The sync accuracy defines how exact the synced playback will be.

- “High“: A deviation of < 16 ms is tolerated
- “Medium“: A deviation of < 50 ms is tolerated
- “Low“: A deviation of < 1000 ms is tolerated
- “Off“: Only the start of a media file is triggered and then the playback is in free-run

The option to set the Sync Accuracy to lower values is implemented in case slave players output audio. When the video sync is very accurate, the slave players re-sync within the shortest intervals to the master’s playback. This can sometimes lead to audio reactions on the slave player. Setting down the Sync Accuracy to a lower value will stop this.

PLEASE NOTE:

All players of the same sync group need the same sync accuracy value!

STEP 6: SYNCHRONIZED PLAYBACK

If there is a master and one or more slave players and the network connection is available, the slave players will sync to the master player’s playback.

If a slave player loses the sync while a media file is playing (because of network problems, etc.), the playback of the media file will continue in free-run. If the sync is still missing at the end of the media file, the player will wait 5 seconds for the master’s sync before it continues the playback with the next media file.

14. EXTERNAL CONTROL

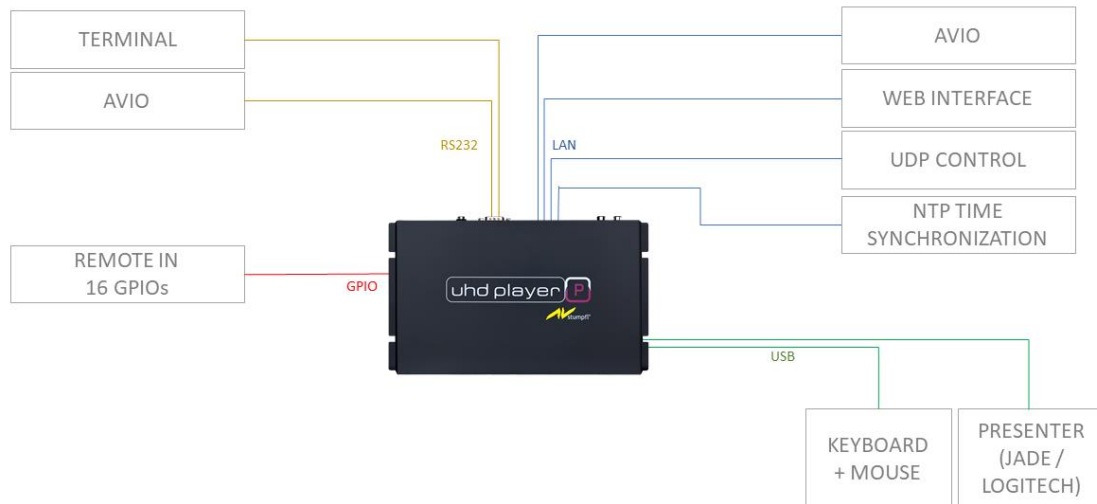


Fig. 47: Overview of External Control Devices

UHD Players can be interactively controlled, e.g. by the Web Interface, proximity sensors, gesture detection or just by push buttons and light barriers. Below is a list of possible control devices:

- Web Interface
- Commands sent via UDP or RS232
- Avio, which can be used to integrate proximity sensors and gesture detection
- Push buttons or light barriers connected to the GPIO interface
- USB presenters ...

14.1. RS232 INTERFACE

The UHD Player offers an [RS232 port](#) for serial communication. This allows the UHD Player to receive commands via any [terminal](#) or send out [serial commands via Avio](#).

The following are the default serial settings for the UHD Player. The baud rate can be changed but all other parameters are fixed.

Baud rate: 9600 (recommended)

Data: 8 bit

Parity: none

Stop: 1 bit

Flow control: None

The Pin assignment of the UHD Player's RS232 interface is displayed below.

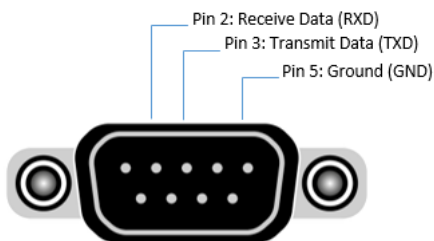


Fig. 48: PIN assignment RS232 interface

Use a null-modem cable without handshake to connect your device to the RS232 interface. You may want to use a null-modem cable that can be purchased from AV Stumpfl (Accessory: STK-C012).

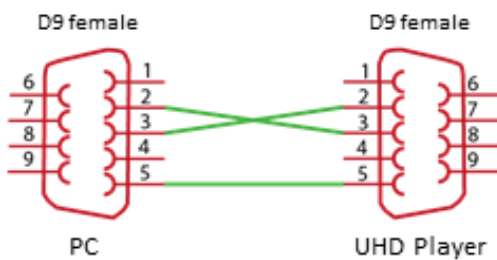


Fig. 49: Null-modem cable without handshake (AV Stumpfl Accessory: STK-C012)

14.1.1. TERMINAL

To receive serial commands from any terminal via the player's RS232 interface, the serial device needs to be set up. Click on [ADVANCED SETTINGS] in the menu bar of the Web Interface and then on [Peripheral Devices].

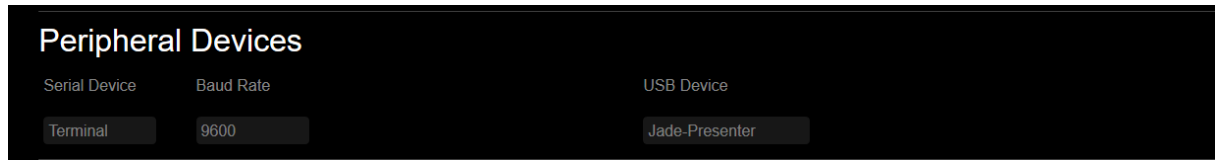


Fig. 50: Peripheral Devices settings in the Web Interface

[Serial Device]

Please choose "Terminal" from the drop-down list.

[Baud Rate]

The default baud rate is set to "9600". If you need a different one that fits to your sending device, choose it from the drop-down list. Other available options are: 2400, 4800, 14.400, 19.200, 28.800, 38.400, 57.600 or 115.200.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

Now that the [RS232 interface](#) is set up on the software side, use a null-modem cable without handshake to connect the UHD Player to your terminal device (e.g. PC).

The UHD Player is now ready to receive your serial command strings.

PLEASE NOTE:

For all serial and UDP commands, the command string must be terminated with carriage return and line feed (CR LF or 0x0D 0x0A)!

When sending commands with arguments, do not put any space character between the command and the argument.

Command: <command><argument> [CR LF]

Example:

Setting the volume to the value "8" using the command "VOLUME="

Command: VOLUME=8 [CR LF]

When the UHD Player receives a command string and determines that it is valid, it performs the command and sends a response to the host device (when using UDP: on the same port).

Command: <command> [CR LF]

Response: Received:<command> [CR LF]

Example

Command: PAUSE [CR LF]

Response: Received:PAUSE [CR LF]

When the UHD Player is unable to perform the command because the command is invalid or contains invalid parameters, the player returns nothing.

When the UHD Player receives a request string (characterized by an ending with a “?”), it will return the corresponding answer.

EXAMPLE:

Request: MUTE? [CR LF]

Response: MUTE=0

For all available commands, see the [RS232/UDP commands](#) chapter in the Appendix.

In the initialization file (“UHDPlayerSetting.ini”), the settings for the player’s peripheral devices can be found at the lower end.

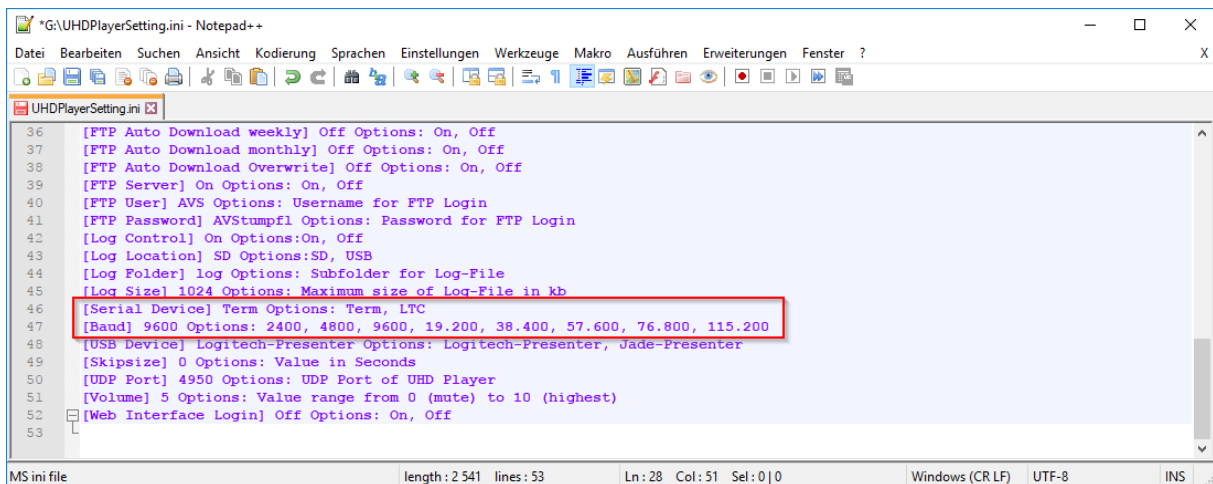


Fig. 51: Peripheral Devices options in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

14.1.2. SERIAL OUT VIA AVIO

When using a UHD Player with an Avio PRO License (you can check the license on the player’s initial Avio Settings screen—see [Avio](#)), Avio can be used to send out serial messages via the RS232 interface from your UHD Player to other devices, instead of only receiving serial messages.

Every UHD Player can be updated to an Avio Pro License. Please contact the AV Stumpfl Sales department.

The RS232 interface needs to be configured to be able to send serial messages. Click on [ADVANCED SETTINGS] in the menu bar of the Web Interface and then on [Peripheral Devices].

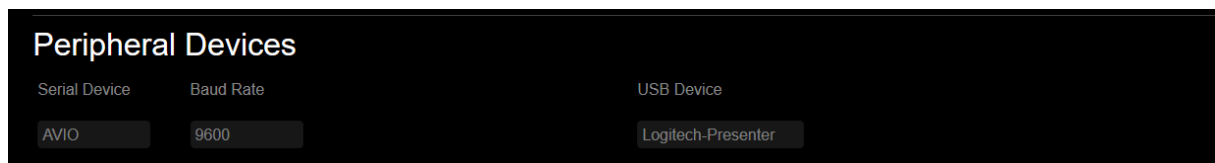


Fig. 52: Peripheral Devices settings in the Web Interface

[Serial Device]

Please choose “Avio” from the drop-down list. If this option is not available, your player does not have the Avio Pro License. In this case, please contact AVStumpfl to upgrade your Avio license.

[Baud Rate]

This baud rate setting only affects the RS232 interface when it is used as Input (see “[Terminal](#)” section). As soon as the interface is controlled via AVIO, the baud rate needs to be set up in the AVIO driver.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

For further information on how to work with Avio, please refer to the Avio manual (in progress).

In the initialization file (“UHDPlayerSetting.ini”), the settings for the player’s peripheral devices can be found at the lower end.

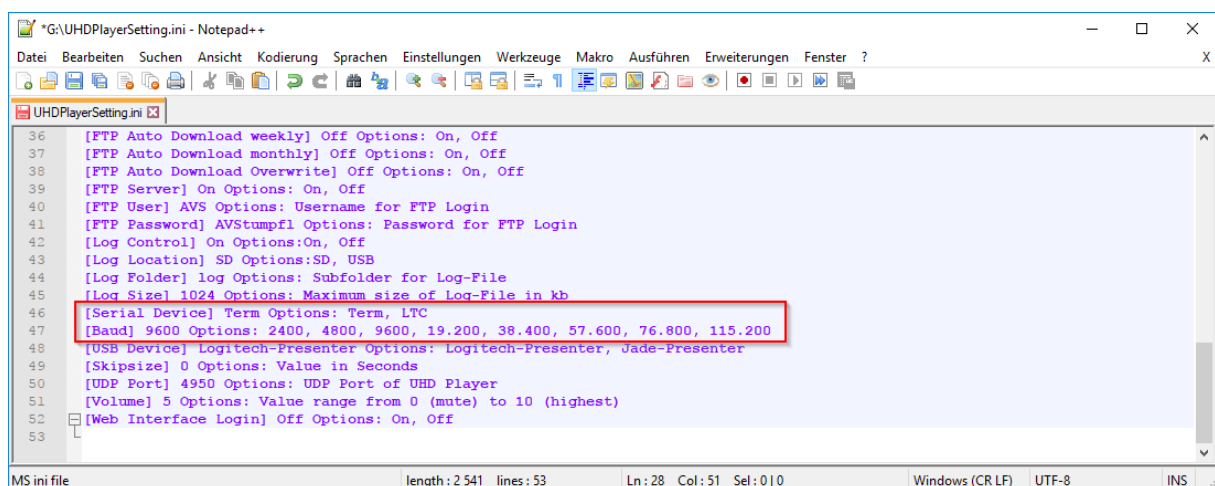


Fig. 53: Peripheral Devices options in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

14.2. UDP CONTROL

The UHD Player can be remotely controlled via UDP network protocol:

Control the playback, edit the player's settings and query the player's file and playback state.

Therefore, the UHD Player needs to be integrated correctly into the network. See the [Network Settings](#) chapter. The UHD Player's receiving UDP port needs to be set up as well. By default, the UDP port is set to 4950. If this port is already in use on your control device, assign a free UDP port in the Web Interface.

PLEASE NOTE:

It is not recommended to change the player's UDP port.

Click on [ADVANCED SETTINGS] in the menu bar of the Web Interface and then on [UDP Port].

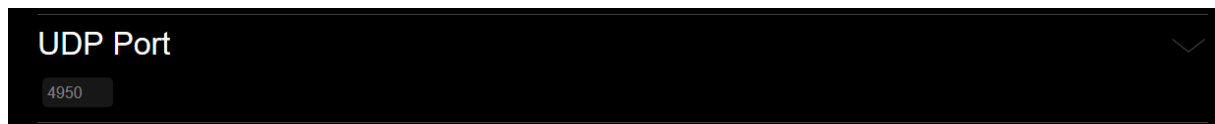


Fig. 54: UDP Port setting in the Web Interface

[UDP Port]

The default UDP Port is set to 4950. Enter the new UDP port in the text field.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

Now that the UDP port is set up, the UHD Player is ready to receive your command strings. In your control device, start a UDP connection to the UHD Player's IP address with the corresponding UDP port for incoming and outgoing messages.

PLEASE NOTE:

Set the same UDP port for all players when they run in sync mode.

PLEASE NOTE:

For all serial and UDP commands, the command string must be terminated with carriage return and line feed (CR LF or 0x0D 0x0A)!

When sending commands with arguments, do not put any space character between the command and the argument.

Command: <command><argument> [CR LF]

Example:

Setting the volume to the value "8" using the command "VOLUME="

Command: VOLUME=8 [CR LF]

When the UHD Player receives a command string and determines that it is valid, it performs the command and sends a response to the host device (when using UDP: on the same port).

Command: <command> [CR LF]

Response: Received:<command> [CR LF]

Example

Command: PAUSE [CR LF]

Response: Received:PAUSE [CR LF]

When the UHD Player is unable to perform the command because the command is invalid or contains invalid parameters, the player returns nothing.

When the UHD Player receives a request string (characterized by an ending with a “?”), it will return the corresponding answer.

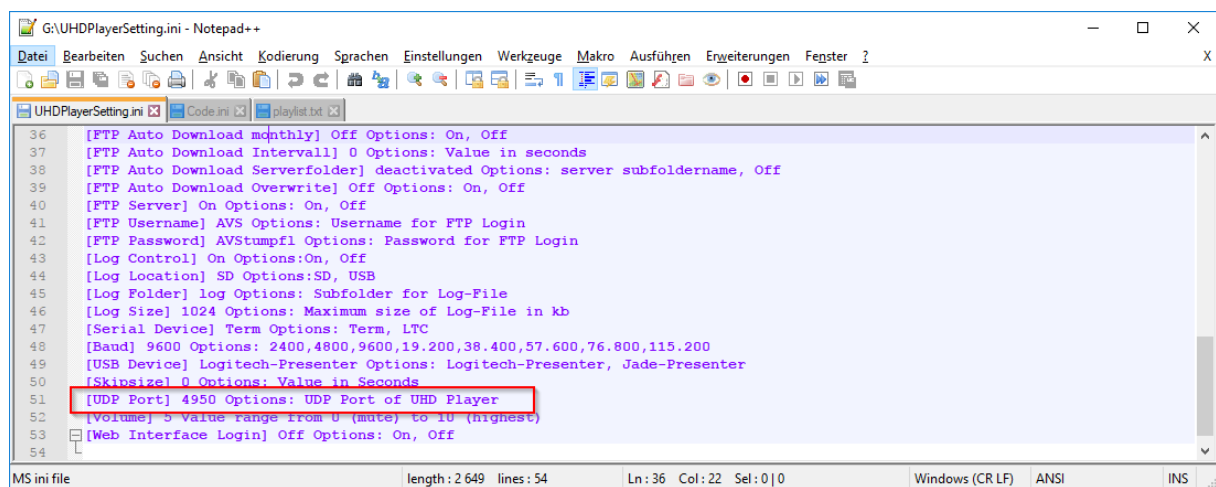
Example

Request: MUTE? [CR LF]

Response: MUTE=0

For all available commands, see the [RS232/UDP commands](#) chapter in the Appendix.

In the initialization file (“UHDPlayerSetting.ini”), the setting for the player’s UDP Port can be found at the lower end.



```
36 [FTP Auto Download monthly] Off Options: On, Off
37 [FTP Auto Download Intervall] 0 Options: Value in seconds
38 [FTP Auto Download Serverfolder] deactivated Options: server subfoldername, Off
39 [FTP Auto Download Overwrite] Off Options: On, Off
40 [FTP Server] On Options: On, Off
41 [FTP Username] AVS Options: Username for FTP Login
42 [FTP Password] AVStumpf1 Options: Password for FTP Login
43 [Log Control] On Options: On, Off
44 [Log Location] SD Options: SD, USB
45 [Log Folder] log Options: Subfolder for Log-File
46 [Log Size] 1024 Options: Maximum size of Log-File in kb
47 [Serial Device] Term Options: Term, LTC
48 [Baud] 9600 Options: 2400,4800,9600,19.200,38.400,57.600,76.800,115.200
49 [USB Device] Logitech-Presenter Options: Logitech-Presenter, Jade-Presenter
50 [Skipsize] 0 Options: Value in Seconds
51 [UDP Port] 4950 Options: UDP Port of UHD Player
52 [Volume] 5 Value range from 0 (mute) to 10 (highest)
53 [Web Interface Login] Off Options: On, Off
54
```

Fig. 55: UDP Port option in the initialization file

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

14.3. USB DEVICES

The UHD Player can be remotely controlled by the following USB devices:

- [Logitech Presenter](#)
- [Jade Presenter](#)
- [Keyboard](#)
- [Mouse](#)

The USB device must be plugged into one of the USB peripheral ports at the UHD Player's right side. The following sections will give you additional information about how to configure and use these devices.

14.3.1. LOGITECH PRESENTER

The Logitech Presenter R400 allows you to control the UHD Player via one of the USB peripheral ports. It has eight buttons that have default actions assigned—see image and list below.



Fig. 56: The Logitech R400 Presenter with default key assignment

Key	Action
Key19	Previous Item
Key20	Next Item
Key21 / Key23	Toggles between Pause and Play
Key22	Jumps to “ITEM 0”— the first file in the list

It is also possible to use customized button assignments via the playlist. Information on how to make your own assignment can be found in the [Playlist - Customized Assignments](#) chapter.

Plug the presenter’s receiver into one of the [USB peripheral ports](#) on the UHD Player’s right side.

In the Web Interface, click on [ADVANCED SETTINGS] in the [menu bar](#) and then on [PERIPHERAL DEVICES]. The drop-down menu will open and the settings for the peripheral devices will appear.

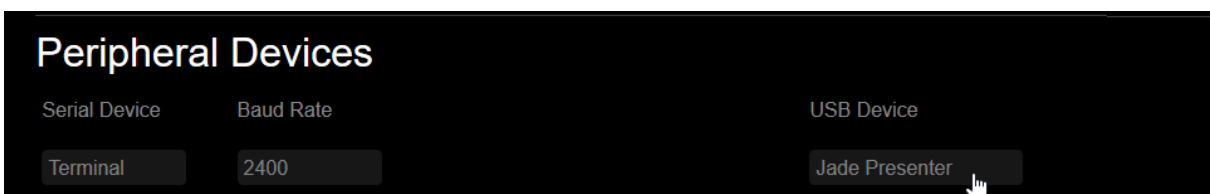


Fig. 57: Peripheral Devices settings in the Web Interface

Click the field below [USB Device], choose your presenter from the drop-down list and click [Apply Settings].

PLEASE NOTE:

While the UHD Player shows its Web Interface, the presenter’s buttons as mentioned above are without function. In this state, the presenter acts as a mouse device: The pointing stick in the middle moves the mouse pointer and the button on the back-side executes a left-mouse-click. Insert the data carrier into the player, or if it is already plugged in, toggle the display back into playback mode using the keyboard shortcut [CTRL+F5] or [CTRL+S].

14.3.2. JADE PRESENTER

The Jade Presenter allows you to control the UHD Player via one of the USB peripheral ports. It has eight buttons that have default actions assigned—see image and list below.



Fig. 58: The Jade Presenter with default key assignment

Key	Action
Key36	Pause
Key37	Play
Key38	Skips forward within the current media file
Key39	Skips backward within the current media file
Key40	Next Item
Key41	Stop
Key42	Previous Item
Key43	Audio Ducking—reduces the current volume by 5 values and toggles it back to the initial value by the next click

It is also possible to use customized button assignments via the playlist. Information on how to make your own assignment can be found in the [Playlist - Customized Assignments](#) chapter.

Plug the presenter’s receiver into one of the [USB peripheral ports](#) on the UHD Player’s right side.

In the Web Interface, click on [ADVANCED SETTINGS] in the [menu bar](#) and then on [PERIPHERAL DEVICES]. The drop-down menu will open and the settings for the peripheral devices will appear.

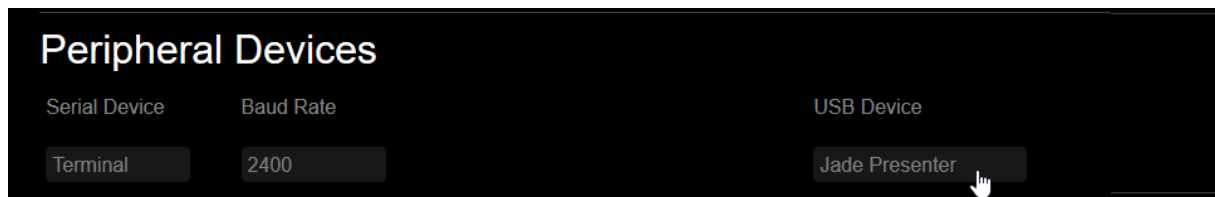


Fig. 59: Peripheral Devices settings in the Web Interface

Click the field below [USB Device], choose your presenter from the drop-down list and click [Apply Settings].

PLEASE NOTE:

While the UHD Player shows its Web Interface, the presenter’s buttons as mentioned above are without function. In this state, the presenter acts as a mouse device: The pointing stick in the middle moves the mouse pointer and the button on the back-side executes a left-mouse-click. Insert the data carrier into the player, or if it is already plugged in, toggle the display back into playback mode using the keyboard shortcut [CTRL+F5] or [CTRL+S].

14.3.3. KEYBOARD

Connect a keyboard to one of the [USB peripheral ports](#) on the UHD Player’s right side. The following functions can be activated by executing the corresponding keyboard shortcut.

Keyboard Shortcut		Function
Ctrl+F1	Ctrl+E	Toggle Auto EDID
Ctrl+F2	Ctrl+F	Set Resolution to 1920x1080p60
Ctrl+F3	Ctrl+U	Set Resolution to 3840x2160p60
Ctrl+F4	Ctrl+D	Toggle DHCP
Ctrl+F5	Ctrl+S	Toggle Settings / Playback
Ctrl+F12	Ctrl+R	Load Default Configuration (press for 5 Seconds for a factory reset)

The keyboard shortcuts are also listed in the player’s Web Interface on the “System” page.

14.3.4. MOUSE

The complete configuration of the UHD Player via the [Web Interface](#) can be done using a mouse. Simply connect your mouse to one of the [USB peripheral ports](#) on the UHD Player’s right side and then remove the data carrier from the player (or press Ctrl+S if a keyboard is also attached), then the Web Interface will appear.

You may browse through all functions, like you do when connecting to the player’s Web Interface via your internet browser. An on-screen keyboard will open when text fields need to be edited.

14.4. GPIOs - REMOTE IN

The UHD Player provides 16 GPIOs that can be used to control the playback with various, customized devices, e.g. buttons, switches and any kind of sensor. The GPIO triggers listen for pin state changes and then perform their default action or a customized one.

The GPIO1 ... GPIO16 are specified as Key1 ... Key16.

The default key assignment is:

“Key1” starts playback [Item 1], “Key2” starts playback [Item 2], etc.

When no playlist is used, “Key1” triggers the first item on the data carrier in alphanumeric order, and “Key2” triggers the second one, etc.

By using a playlist, it is possible to assign a different action to a GPIO trigger. See the list below for available actions:

Attribute	Function
Distance (.d)	Allows you to jump a certain amount of items forward or backward in the playlist
Trick Mode (.t)	Toggles the playback between pause and play. “1” pauses the playback, “-1” resumes the playback
Volume (.v)	Increases or reduces the volume by a certain amount of values (volume’s value range extends from 0 (muted) to 10 (approx. 0 dB))
Jump (.j)	Allows you to jump a certain amount of seconds forward or backward within the current playback
Random (.x)	Enables a random playback order (the value is always “1”)

See the [Playlist - Customized Assignments](#) chapter for details of how to perform user defined actions when a GPIO is triggered.

14.5. AVIO

Avio is a network protocol and a sophisticated control logic system developed for AV installations. The idea behind Avio is to bring all devices of an AV installation, e.g. media servers, players, show controllers, lights, effects, projectors, switchers, scalers, etc., to the same abstraction layer.

All device ports and controls show up automatically in a tree-view topology of the network and can be “wired” to each other using a simple Drag & Drop editor. It is possible to connect the button of a touch panel with a light bulb, but it is also possible to connect the gesture controls of a Microsoft Kinect unit with the playback parameters of a UHD Player.

Avio is not working as a central server handling all connections and control logics; it follows a different approach. Its design is decentralized, which makes it fail-passive. There is no central server or computer required. Every Avio device communicates directly with the other devices and stores its connection information. If one device fails, only the affected connections are interrupted, and the only maintenance work required is the exchange of that single device for a new one with the configuration (which is stored on a data carrier) of the existing one.

The UHD Player’s Avio Settings can be configured via the player’s Web Interface. Click on [AVIO] in the [menu bar](#) and a new page with a design differing from all others will appear.

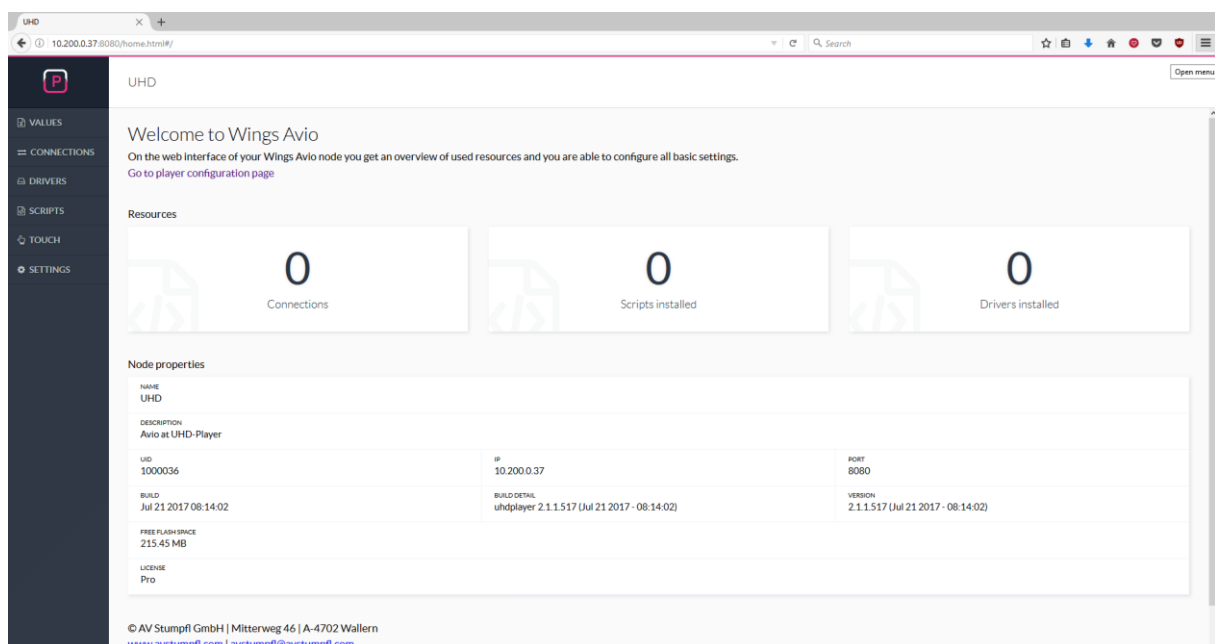


Fig. 60: Avio settings overview in the Web Interface

The location where all the UHD Player’s Avio settings will be saved can be chosen in the Web Interface. Click on [ADVANCED SETTINGS] in the menu bar and then on [AVIO].

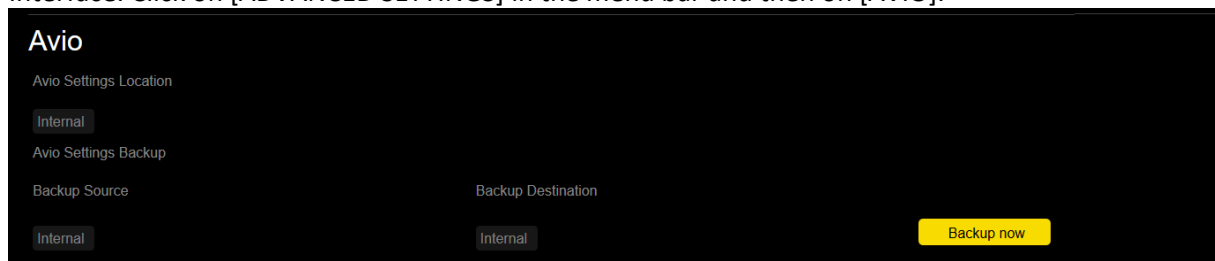


Fig. 61: Avio settings location in the Web Interface

[Avio Settings Location]

The player will use the location that is entered here for its Avio settings (save changes and operate). By default, the location of all Avio Settings is the SD Card. You may change this option to operate from a USB data stick or from the player's internal storage.

HOW TO BACK UP AVIO SETTINGS AND COPY THEM TO ANOTHER PLAYER

When a backup of all Avio Settings should be done from the Internal Storage (when operating from this location) to the SD Card, choose "Internal" as [Backup Source] and "SD" as [Backup Destination]. Then click [Backup now] and all settings will be copied to the SD Card.

To transfer these Avio Settings to another player, insert the SD Card into that player and open its Web Interface. Choose "SD Card" as [Backup Source] and, for example, "Internal" as [Backup Destination], when operating from the Internal Storage. Then click [Backup now] and all settings will be copied from the SD Card to the backup destination. Former Avio Settings that were saved to the internal storage will be overwritten by this action.

PLEASE NOTE:

If you want to copy Avio Settings or content from one player to another one without changing any player configuration (e.g. resolution, IP address), please be sure that there is no UHDPlayerSettings.ini-File on the SD Card that you insert into the player. Otherwise, this initialization file will overwrite the player's previous settings.

Please confirm your changes by pressing [Apply Settings] at the bottom of the page.

For further information on how to control the player via Avio, please refer to the Avio manual (in progress).

15. SYSTEM SETTINGS

15.1. DATE & TIME

By default, the UHD Player's date and time will automatically be set by an external NTP Server, using the time zone of Europe/Berlin. Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over a network. Please note that internet access is needed on your network. Every time the player is booted, it's date and time will be synchronized with the NTP Server's time, according to the chosen time zone.

Without internet access, the player uses the date and time that is currently set.

Turn off NTP Control if you do not wish to synchronize to an NTP Server at all.

To edit the player's date & time settings, open its [Web Interface](#) in your browser, click on [ADVANCED SETTINGS] in the [menu bar](#) and then on [Date & Time].

The screenshot shows the 'Date & Time' configuration page. It features a dark theme with white text. The title 'Date & Time' is at the top left. Below it, there are two rows of input fields. The first row is for 'Day . Mon . Year' and 'Hour : Min : Sec'. The second row is for 'Timezone'. Below these is a warning message: 'Warning: If you activate NTP Control, the above date and time will be overridden by the ntp server's date and time. The chosen timezone will be used.' At the bottom, there are two rows of input fields for 'NTP Control' and 'NTP Server'. There are also two yellow buttons: 'Set Date' and 'Apply NTP Server Time'.

Fig. 62: Date & Time settings in the Web Interface

[Day.Mon.Year] & [Hour.Min.Sec]

To manually edit the date and time, click on the highlighted fields and choose the correct entry for the day, month and year from the drop-down lists, and then for the hour, minutes and seconds. Confirm your changes by clicking on [Set Date].

PLEASE NOTE:

NTP Control needs to be set to "Off" before, otherwise these changes will not take effect.

[Timezone]

The time zone is only important when using NTP Control. The player then will receive the time from the NTP Server according to your time zone.

To edit the current time zone, click in the text field below and enter the new one. The following website lists the syntax of all time zones that can be set, please refer to column three of the table, named "TZ": https://en.wikipedia.org/wiki/List_of_tz_database_time_zones.

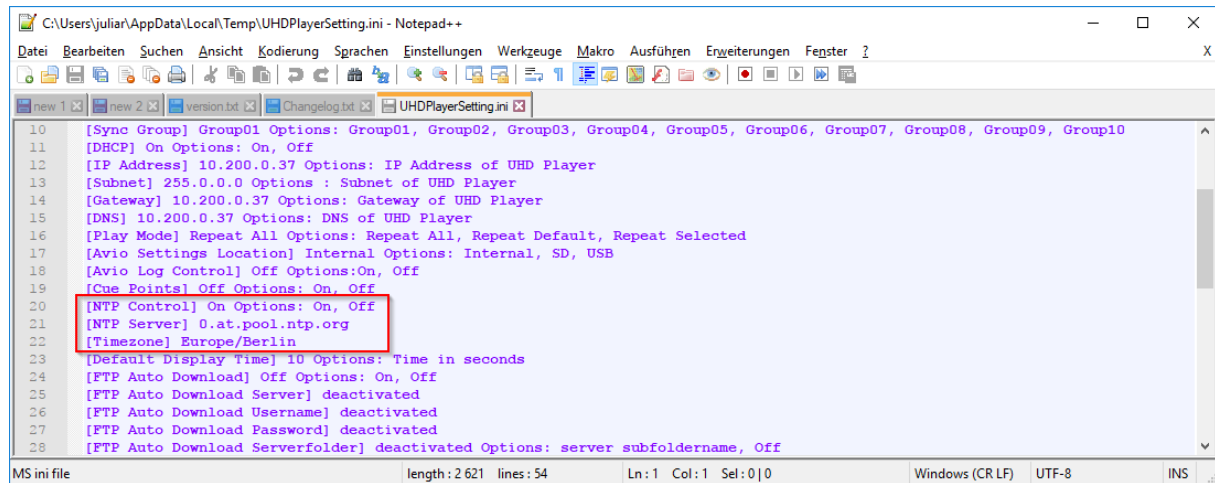
[NTP Control]

By default, NTP Control is set to "On" and the player receives its date and time from the NTP Server after every system boot, using the time zone that is entered above. To synchronize with the NTP Server's clock during the player's run-time, click [Apply NTP Server Time].

Without internet access, the player will continue with the date and time that were used before.

Turn NTP Control to “Off” if you always want to continue without date and time synchronization. Click [Apply Settings] at the bottom of the page to keep your changes.

In the initialization file (“UHDPlayerSetting.ini”), the player’s NTP Server settings can be found in the center of the list. The date and time can’t be set within this file.



```
10 [Sync Group] Group01 Options: Group01, Group02, Group03, Group04, Group05, Group06, Group07, Group08, Group09, Group10
11 [DHCP] On Options: On, Off
12 [IP Address] 10.200.0.37 Options: IP Address of UHD Player
13 [Subnet] 255.0.0.0 Options : Subnet of UHD Player
14 [Gateway] 10.200.0.37 Options: Gateway of UHD Player
15 [DNS] 10.200.0.37 Options: DNS of UHD Player
16 [Play Mode] Repeat All Options: Repeat All, Repeat Default, Repeat Selected
17 [Avio Settings Location] Internal Options: Internal, SD, USB
18 [Avio Log Control] Off Options:On, Off
19 [Cue Points] Off Options: On, Off
20 [NTP Control] On Options: On, Off
21 [NTP Server] 0.at.pool.ntp.org
22 [Timezone] Europe/Berlin
23 [Default Display Time] 10 Options: Time in seconds
24 [FTP Auto Download] Off Options: On, Off
25 [FTP Auto Download Server] deactivated
26 [FTP Auto Download Username] deactivated
27 [FTP Auto Download Password] deactivated
28 [FTP Auto Download Serverfolder] deactivated Options: server subfoldername, Off
```

Fig. 63: NTP Server settings in the Initialization File

For more information about how to handle the initialization file, please refer to the [Configuration via the Initialization File](#) chapter.

15.2. CHANGE UHD PLAYER NAME

By default, the UHD Player’s name is “UHD Player”. This name can be found on the player’s Settings/Information Screen, which is displayed when no data carrier is used or when it is called via [keyboard shortcut](#). When using several players, a unique player name could be very helpful.

To edit a player’s name, open its [Web Interface](#) in your browser and click on [SYSTEM] in the [menu bar](#). In the upper area of this page, you will find the option “Change UHD Player Name”.



Fig. 64: UHD Player Name setting in the Web Interface

To edit the player’s default name, “UHD Player”, click in the text field on the right and enter the new name, consisting of maximum 64 characters. Click on [Set Name] to apply your changes.

The UHD Player’s name can’t be changed via the initialization file.

15.3. UNDO LAST CHANGES

The Web Interface offers the possibility to undo the last 5 changes that were made in the UHD Player’s configuration. Definition of the term “change”: A change is performed after a setting in the Web Interface was edited and applied by clicking on [Apply Settings].

To undo the last configuration changes, open the player’s [Web Interface](#) in your browser and click on [SYSTEM] in the [menu bar](#). In the upper area of this page, you will find the option “UNDO LAST CHANGES”.

Undo Last Changes

Restore previous configuration (last 5 configurations are stored until reboot)

Undo

Fig. 65: Undo Last Changes option in the Web Interface

To undo the last change in the player's configuration, click on [Undo] here in the system's tab. Alternatively, click on [UNDO] at the bottom of the pages in [BASIC SETTINGS] or [ADVANCED SETTINGS]. The last change will be undone by this; the Web Interface will reload. Please note: The last 5 configurations are stored until the player is rebooted.

15.4. SAVE & LOAD CONFIGURATION

The Web Interface allows you to manually save and reload player configurations to and from these three locations: Internal Storage, SD Card or USB data carrier.

Why should you do this? Imagine that your player is used on different setups and, depending on the setup, different configuration settings are needed, like a different resolution or play mode setting. For such a case, setup A could be stored as "setup-A.ini" in the internal storage, and setup B as "setup_B.ini". After the setup is changed, you can easily reload the corresponding setup file from the internal storage and optionally save it as "UHDPlayerSettings.ini" on the data carrier that is attached to the player.

To achieve the Save & Load Configuration option, open the player's [Web Interface](#) in your browser and click on [SYSTEM] in the [menu bar](#). In the lower area of this page, you will find the option "Save & Load Configuration".

Save & Load Configuration

Load configuration

Delete

SD: UHDPlayerSetting.ini

Load Configuration

Save active configuration

Internal

UHDPlayerSetting.ini

Save Configuration

Fig. 66: Save & Load Configuration option in the Web Interface

[Save active configuration]

To save the player's active configuration with a special name and in a certain location, choose the storage location (Internal Storage, SD Card or USB data carrier) from the drop-down list (first grey field on the right). The configuration can be given a unique name. To do so, enter the name in the text field (second grey field on the right). Make sure to keep the file ending ".ini". Click [Save Configuration].

[Load configuration]

To load a certain player configuration, choose the initialization file from the drop-down list (second grey field on the right). Click [Load Configuration] to set this configuration as active configuration. If you want to delete a configuration that was stored and is not needed any more, choose it from the drop-down list and click on [Delete].

15.5. REBOOT

The UHD Player can be rebooted by manually power cycling it or by a trigger via external control. To perform a reboot via the Web Interface, open the player's web interface in your browser and click on [SYSTEM] in the menu bar. In the lower area of this page, you will find the "Reboot" option.

Reboot

Perform a reboot of the UHD Player

Reboot

Fig. 67: Reboot option in the Web Interface

Click [Reboot] on the right side to reboot the player.

15.6. FACTORY RESET

The Web Interface can perform a factory reset on the UHD Player. This will set the player to its factory defaults, including the network settings.

To do so, open the player's Web Interface in your browser and click on [SYSTEM] in the menu bar. In the lower area of this page, you will find the "Factory Reset" option.



Fig. 68: Load default Settings option in the Web Interface

Click [Reset] to immediately perform a full factory reset. During this process, the player will reboot. Attention: there will be no further dialog that needs to be confirmed!

Alternatively, the factory reset can be performed with a USB keyboard attached directly to the player. Press the [keyboard shortcut](#) CTRL+F12 and hold it down for at least 5 seconds.

15.7. FIRMWARE UPDATE

If there is a new firmware update available for the UHD Player, the UHD Player can be easily updated via its [Web Interface](#). This requires internet access and an SD Card or USB data carrier MUST be present. Alternatively, the player can be updated manually by downloading the Update-Files and performing the update via the player's SD Card.

A firmware update does not affect any UHD Player settings that have been made to the player before.

UPDATE VIA THE WEB INTERFACE

Open the player's Web Interface in your browser and click on [SYSTEM] in the menu bar. In the lower area of this page, you will find the "Firmware Update" option.



Fig. 69: Firmware Update settings option in the Web Interface: Server is not available

The player can't be updated via the Web Interface without internet access. If the internet connection is missing, the button on the right reports "Server offline", as in the figure above. Please check your internet connection. If you can't get it running, you may manually update the Firmware, as outlined in "Update via Manual Download" in the section below.

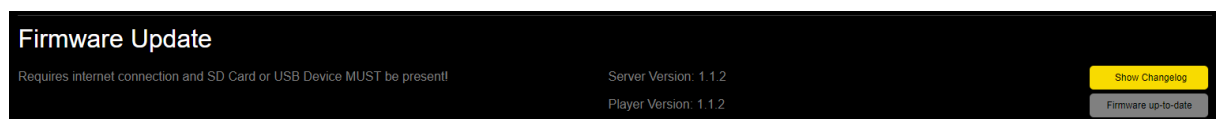


Fig. 70: Firmware Update Settings option in the Web Interface: Player is up-to-date

The UHD is up-to-date when the server's Firmware Version matches the player's Firmware Version. The second button on the right then displays [Firmware up-to-date]. Click on [Show Changelog] to view all changes that were done in the firmware versions.

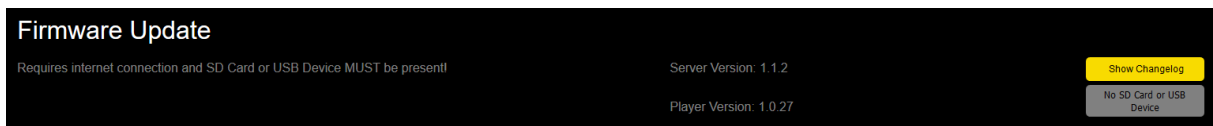


Fig. 71: Firmware Update settings option in the Web Interface: Missing Data Carrier

When there is a new firmware version available, the Update Server reports that there is an available version that is higher than the player's current version. To perform the firmware update, an SD Card or USB data carrier must be present. If there is no data carrier plugged into the player, the message "No SD Card or USB Device" will be displayed on the second button on the right. Insert a data carrier, refresh the Web Interface in your browser and the grey button will turn yellow, displaying [Update].



Fig. 72: Firmware Update settings option in the Web Interface: Player Version needs to be updated

If a new firmware version is available and there is a data carrier plugged into the player, click [Update] to start the firmware update.

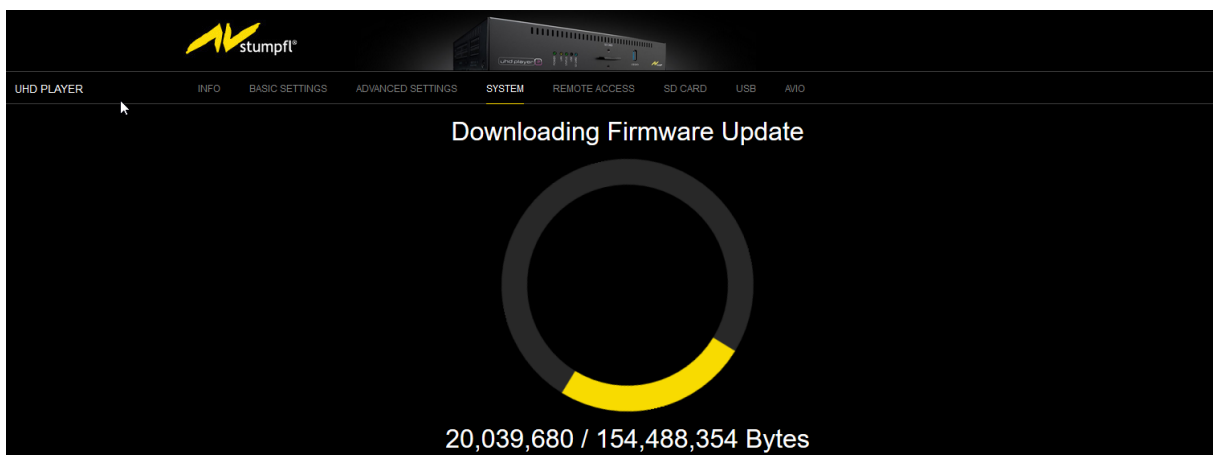


Fig. 73: A Firmware Update is running. The Web Interface displays the download progress.

The update will be downloaded from the Firmware Update Server and the Web Interface will display the download progress.

Do not power off the player while the firmware update is running. After a reboot, the player will again be ready for operation. With some browsers, the Web Interface needs to be refreshed in order to display the System's page again with all settings.

UPDATE VIA MANUAL DOWNLOAD

If the player needs to be updated manually, download the latest UHD Player Firmware Version from <http://update.avstumpfl.com/UHD-Release/Update/>. The firmware contains two files: md5 and UHD_<Firmware-Version-Number>.cfp. Copy these two files to the root folder of an SD Card and plug it in the player's SD Card slot. Reboot the player. During the boot, the player will output the message "Firmware update is running" on the display that is attached. As soon as the player reboots after the

Firmware Update is complete, the player is then ready for operation and the Update-Files may be deleted from the SD Card.

16. BACKUP AND RESTORE

It is very easy to back up a complete UHD Player, as all relevant media and settings files are already bundled on the player's data carrier. Just remove the player's SD Card or USB device and copy the entire content to your computer's hard drive or any other data storage.

To run another UHD Player with this backed up content and setup, copy the backup files to an empty SD Card or USB device and insert this data carrier into the player. The player will read the UHDPlayerSettings.ini file from the data carrier and automatically accept it as a new configuration.

BACKUP WHEN USING [AVIO](#)

PLEASE NOTE:

If you run Avio on the player that you want to back up, please check the Avio settings location first before backing up the player!

To edit the Avio settings location, click on [ADVANCED SETTINGS] in the menu bar of the Web Interface and then on [AVIO].

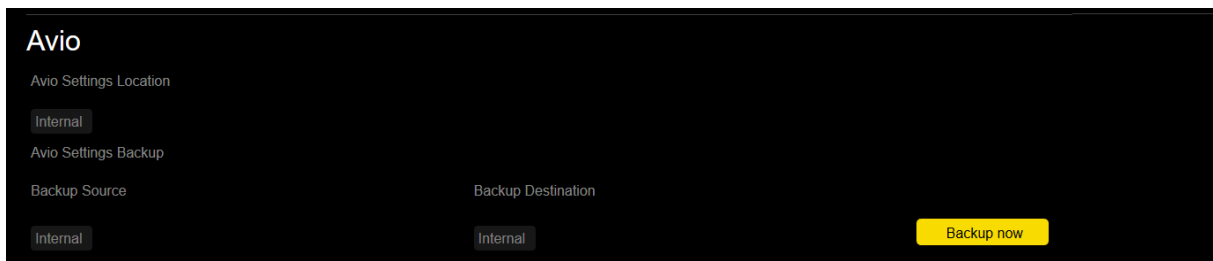


Fig. 74: Avio settings location in the Web Interface

If the Avio Settings Location is set to "Internal", as it is by default, the AVIO settings need to be copied from the player's internal storage to your data carrier:

Choose "Internal" as Backup Source and "SD" or "USB" (depending on your setup) as Backup Destination. Then click [Backup now] and all Avio settings will be copied to the SD Card or USB device.

If the Avio Settings Location is already set to the data carrier that is used, nothing needs to be done within the Avio settings. Now the backup of the player can be done as outlined above.

To run a UHD Player with the backup including Avio settings, copy the backup files to an empty SD Card or USB device and insert this data carrier into the player. The player will read the UHDPlayerSettings.ini file from the data carrier and automatically accept it as a new configuration.

PLEASE NOTE:

Make sure that the player adopts the Avio settings from the backup!

Take one of the following steps:

- Set the Avio settings location to “SD” or “USB”, depending on the data carrier that contains the backup. Then the player will read the Avio settings from this location and changes in the Avio configuration will also be stored here.

OR

- Copy the Avio settings from the data carrier to the internal storage, if the player should store the Avio settings here. To do this, choose “SD” or “USB” (depending on the data carrier that contains the backup) as Backup Source. The Backup Destination must be set to “Internal”. Click [Backup Now] and the Avio settings will be copied from your data carrier to the internal storage.

17. TROUBLESHOOTING

DISPLAY TURNS BLACK AND THEN SHOWS THE SETTINGS SCREEN AFTER SD CARD WAS INSERTED

1. Please verify that the SD Card is recognized correctly by the player. Insert it until it snaps in the slot.
2. Are you using a [playlist](#)? If yes, remove the playlist from the SD Card and insert it again. If the player then starts to play your media files, some of the syntax in the playlist is wrong.
3. If your media files won't play without a playlist, please check if the file formats and codecs match the [supported file formats](#).

LAST ITEM OF PLAYLIST DOES NOT SHOW UP

If all playlist items work fine but the last one is always skipped, please make sure that the last line in your playlist.txt file is terminated by pressing the ENTER key.

Furthermore, every item must be separated from the next item by a blank line. No blank lines are allowed between the individual parameters.

18. APPENDIX

18.1. RS232/UDP CONTROL COMMANDS

GENERAL

The UHD Player can be controlled remotely by sending the ASCII commands (listed Below) within a UDP packet sent to the default UDP port 4950 (or the one you entered in the [UDP Port configuration](#)) or via the player's RS232 interface.

PLEASE NOTE:

For all serial and UDP commands, the command string must be terminated with carriage return and line feed (CR LF or 0x0D 0x0A)!

When sending commands with arguments, do not put any space character between the command and the argument.

Command: <command><argument> [CR LF]

Example:

Setting the volume to the value "8" using the command "VOLUME="

Command: VOLUME=8 [CR LF]

When the UHD Player receives a command string and determines that it is valid, it performs the command and sends a response to the host device (when using UDP: on the same port).

Command: <command> [CR LF]

Response: Received:<command> [CR LF]

Example

Command: PAUSE [CR LF]

Response: Received:PAUSE [CR LF]

When the UHD Player is unable to perform the command because the command is invalid or contains invalid parameters, the player returns nothing.

When the UHD Player receives a request string (characterized by an ending with a "?"), it will return the corresponding answer.

Example

Request: MUTE? [CR LF]

Response: MUTE=0

See below for all remote commands, listed thematically.

18.1.1. PLAYBACK

PAUSE	
Description:	Pauses the current playback
Example:	PAUSE [CR LF]

RESUME or PLAY	
Description:	Resumes the playback of a paused media file When the playback is stopped, it starts the playback from the beginning of the playlist (or alphanumeric order when no playlist is used).
Example:	RESUME [CR LF] or PLAY [CR LF]

PAUSEPLAY	
Description:	Toggles between playback and pause
Example:	PAUSEPLAY [CR LF]

STOP	
Description:	Stops the playback, the display turns black
Example:	STOP [CR LF]

PLAYSTATE?	
Description:	Returns the current playback mode (playing, paused, stopped)
Example:	PLAYSTATE? [CR LF] Example response: Playstate: Playing SD

NEXT	
Description:	Jumps to the next media file
Example:	NEXT [CR LF]

PREV	
Description:	Jumps to the previous media file
Example:	PREV [CR LF]

PLAYINDEX=	
Description:	Plays the media file with the specified index (according to the item number in the playlist or alphanumeric order when no playlist is used) Please note: the play index of alphanumeric order starts with "0"!
Example:	PLAYINDEX=2 [CR LF] Plays the media file of item 2 in the playlist / plays the 3 rd media file in alphanumeric order when no playlist is used

PLAYFILE=	
Description:	Plays the media file according to the specified file name (exact file name)
Example:	PLAYFILE=01.mp4 [CR LF] Plays the media file "01.mp4"

SPEED=	
Description:	It sets the playback speed of the current media file (in %). The playback speed of media files with audio output can only be set to a value between 50% and 120%.
Example:	SPEED=75 [CR LF] Sets the playback speed to 75%

SPEED?	
Description:	Returns the current playback speed (in a common fraction)
Example:	SPEED? [CR LF] Example response: SPEED=75/1 (this corresponds to 75%)

SKIPSIZE?	
Description:	Returns the current skipsize
Example:	SKIPSIZE? [CR LF] Example response: SKIPSIZE=6

SKIPSIZE=	
Description:	Sets the skipsize (in seconds)
Example:	SKIPSIZE=6 [CR LF] Sets the skipsize to 4 seconds.

SKIPFORWARD	
Description:	Skips forward within the playback with the defined skipsize
Example:	SKIPFORWARD [CR LF]

SKIPBACKWARD	
Description:	Skips backward within the playback with the defined skipsize
Example:	SKIPBACKWARD [CR LF]

JUMPTIME=	
Description:	Jumps to a certain location within the playback (in milliseconds)
Example:	JUMPTIME=5000 [CR LF] Jumps to the time "5 seconds" within the current media file

PLAYBACKTIME?	
Description:	Outputs the current playback time (in ms)
Example:	PLAYBACKTIME? [CR LF] Example response: PLAYBACKTIME=5500 The current media file has already been played for 5500ms = 5.5 secs.

TIMETOFINISH?	
Description:	Returns the remaining playback time of the current media file (in seconds)
Example:	TIMEFOFINISH? [CR LF] Example response: TIMETOFINISH=80 The current media file will end in 80 seconds.

18.1.2. AUDIO

VOLUP	
Description:	Increases the volume by 1 step
Example:	VOLUP [CR LF]

VOLDOWN	
Description:	Reduces the volume by 1 step
Example:	VOLDOWN [CR LF]

VOLUME=	
Description:	Sets the volume to a specific value: value range from 0 (mute) to 10 (highest)
Example:	VOLUME=3 [CR LF] Sets the volume to the value "3"

VOLUME?	
Description:	Returns the current playback volume
Example:	VOLUME? [CR LF] Example response: VOLUME=5

MUTE	
Description:	Mutes the audio
Example:	MUTE [CR LF]

UNMUTE	
Description:	Unmutes the audio
Example:	UNMUTE [CR LF]

TOGGMUTE	
Description:	Toggles between mute/unmute audio
Example:	TOGGMUTE [CR LF] Mutes the audio if it was unmuted before and unmutes the audio if it was muted before

MUTE?	
Description:	Returns the Mute Mode 0: Player is unmuted 1: Player is muted
Example:	MUTE? [CR LF] Example response: MUTE=1

AUDIOTRACK=	
Description:	It selects the (stereo) audio track of a video file. If there is only one audio track available, this one will be active, even if another one was chosen. This function is often used to change the language of a video file.
Example:	AUDIOTRACK=2 [CR LF] Selects audio track number 2 of the current video file

AUDIOTRACK?	
Description:	Returns the active audio track of the current media file
Example:	AUDIOTRACK? [CR LF] Example response: Audiotrack=1

18.1.3. FILE ORGANISATION

INDEXLIST?	
Description:	It returns a list of all media files on the data carrier with assigned play index, whether there is a playlist in use or not. The first play index number is always "0".
Example:	INDEXLIST? [CR LF]

UPDATEPLAYLIST	
Description:	Scans the data carrier again to update the playlist file
Example:	UPDATEPLAYLIST [CR LF]

PLAYLIST?	
Description:	It returns all files that are included in the playlist with their play index. The index corresponds to the item number. When there is no playlist available, a list of all media files on the data carrier will be returned.
Example:	PLAYLIST? [CR LF]

FOLDERLIST?	
Description:	Returns the list of all folders and files located in the SD data carrier's root folder
Example:	FOLDERLIST? [CR LF]

USBFOLDERLIST?	
Description:	Returns the list of all folders and files located in the USB data carrier's root folder
Example:	USBFOLDERLIST? [CR LF]

STARTAUTODOWNLOAD	
Description:	Starts the Auto Download from the defined FTP server
Example:	STARTAUTODOWNLOAD [CR LF]

18.1.4. SYSTEM

DATE=	
Description:	Sets date or date and time. Syntax: <DD.MM.YYYY> <HH:MM:SS>
Example:	DATE=31.12.2017 23:59:59 [CR LF]

SHOWMAININFO	
Description:	It shows the Main Info Page of the player's Web Interface on the output device. Use the command SHOWPLAYBACK to leave this view again.
Example:	SHOWMAININFO [CR LF]

SHOWPLAYBACK	
Description:	Shows the current playback again when the Main Info Page is called
Example:	SHOWPLAYBACK [CR LF]

CONFIG?	
Description:	Returns the player's configuration as listed in the <u>UHDPlayerSetting.ini</u> -file.
Example:	CONFIG? [CR LF] Example response: [Auto EDID] Off Options: On, Off [Resolution] 3840x2160p60 [Color Space] Auto Options: Auto, RGB, YCbCR 4:2:0, YCbCR 4:2:2, YCbCR 4:4:4 [Color Depth] 8bit Options: Auto, 8bit, 10bit [Dynamic Range] Auto Options: SDR, HDR10, HLG, Auto [Pixel Aspect Ratio] Custom 1x1 Options: Auto, Custom XxY

SYNCON	
Description:	Enables the Sync Control
Example:	SYNCON [CR LF]

SYNCOFF	
Description:	Disables the Sync Control
Example:	SYNCOFF [CR LF]

OUTPUTOFF	
Description:	Switches the output device off via CEC protocol (only possible via HDMI)
Example:	OUTPUTOFF [CR LF]

OUTPUTON	
Description:	Switches the output device on via CEC protocol (only possible via HDMI)
Example:	OUTPUTON [CR LF]

REBOOT	
Description:	Reboots the UHD Player
Example:	REBOOT [CR LF]