Schneider & Zirr engineering GmbH

CF Player®fullHD2.0

Manual V2.3

Firmware Version 1.0.55

english

Content

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1. Technical Data

1.1. SUPPORTED FILE FORMATS

1.1.1. VIDEO

Video Formate	
H.265/HEVC: Main Profil und Main 10 Profil	3840x2160@60p Max. Bitrate: 40Mbit/s
VP9	3840x2160@60p Max. Bitrate: 40Mbit/s
AVC (H.264/MPEG-4 Part 10) mit MVC support	1920x1080@60p Max. Bitrate: 80Mbit/s
MPEG-2	1920x1080@60p Max. Bitrate: 80Mbit/s
VC-1	1920x1080@60i
DivX	1920x1080@60i
MPEG-4 SP (MPEG-4 Part 2)	1920x1080@60i
VP8	1920x1080@60p

Video Container
.mov
.mp4
.mkv
.webm

1.1.2. IMAGES

Bild Formate	
JPG	Maximale Auflösung 8192x8192 Pixel
	Greyscale und YUV 4:4:4, 4:2:2, 4:2:0
	8 bits pro pixel
PNG	Version 1.2. Alle Farbtypen und Bittiefen
	8192x8192 Pixel (8bpp)
	2048 Breite (RGBA)
	1024 Breite (16-bit)

1.1.3. AUDIO

Audio Formate	
AAC	32 kHz, 44.1 kHz, 48 kHz
MP3	32 kHz, 44.1 kHz, 48 kHz
WAV	32 kHz, 44.1 kHz, 48 kHz
FLAC	32 kHz, 44.1 kHz, 48 kHz

1.1.4. DATA STORAGE

Datenspeicher	Dateisystem
SDHC/SDXC Karte	FAT32
	NTFS
	exFAT
USB	FAT32
	NTFS
	exFAT

1.1.5. PORTS

Anschlüsse	
SD Karte	1x Front: SD , SDHC, SDXC
USB	1x Front, 2x Seite, 1x Rückseite
Video Ausgang	HDMI 2.0
Audio Ausgang	SPDIF Optisch
	Analog RCA
Netzwerk	RJ45 Gigabit
RS232 Seriell	DSUB9
GPIO	DSUB25: 24 Eingänge

1.1.6. DETAILS

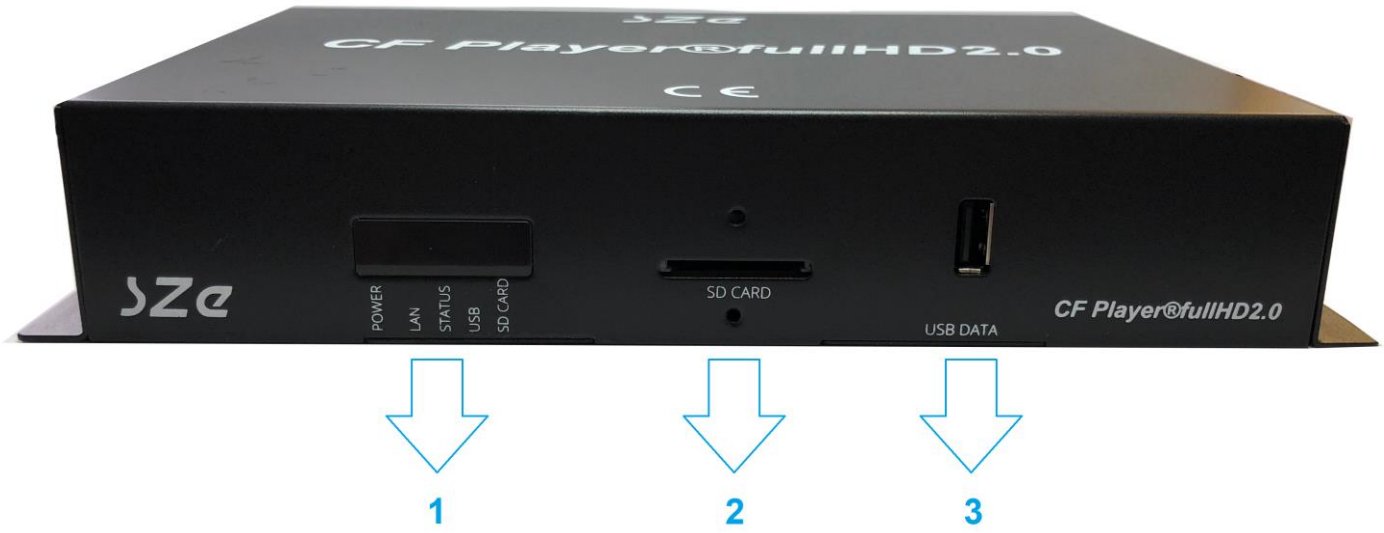
Details	
Länge x Breite x Höhe	238 mm x 177,5 mm x 39,7 mm
Gewicht	940g, Metall-Gehäuse
Anschlußwerte	Weitbereichseingang: 8V bis 16V
Verbrauch	Ca. 12W im Betrieb mit SD Karte
Temperaturbereich	-10 bis +40 °C

1.1.7. SCOPE OF DELIVERY

Lieferumfang
CF Player®UltraHD
Netzteil 12V/3A
8GB SDHC Karte
Bedienungsanleitung auf SD Karte
Software-Tools auf SD Karte

2. HARDWARE OVERVIEW

2.1. FRONT



1. LEDS
2. SD Card
3. USB Data Port

2.1.1. LEDs

LEDs from left to right:

POWER LAN STATUS USB SD CARD

- POWER:
  - Green: CF Player®fullHD2.0 running in playback
  - Orange/Red: CF Player®fullHD2.0 booting
  - Off: CF Player®fullHD2.0 not connected to power
- LAN:
  - Yellow: Network connection established
  - Aus: No network connection available
- STATUS:
  - Green: CF Player®fullHD2.0 running in playback
  - Aus: CF Player®fullHD2.0 booting or in an error state
- SD
  - Blue: SD Card recognized. Flashes when reading from device
  - Off: No SD Card or no read access to device
- USB
  - Blue: USB storage recognized. Flashes when reading from device
  - Off: No USB storage or no read access to device

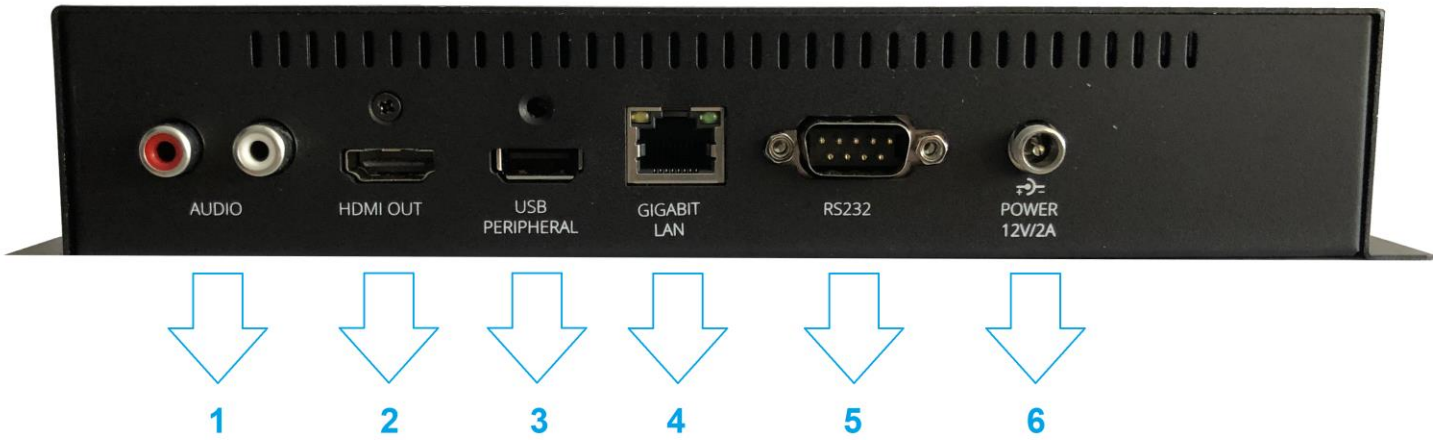
2.1.2. SD Card

Insert the SD Card your playback content. File systems supported are FAT32, NTFS or exFAT. You can secure the SD Card by attaching the retaining clip.

2.1.3. USB Data port

USB 2.0 Port for playback content.
Unterstützte Dateiformate: FAT32, NTFS, exFAT
If a SD Card is present, it will be prioritized.
You can update the SD Card content via the USB storage (USB Content Update).

2.2. BACK



1. Analog Stereo RCA Connectors
2. HDMI2.0b Port
3. USB
4. Gigabit LAN Port
5. RS232 Serial Port
6. Power Connector

2.2.1. Analog Stereo RCA Connectors

To use the stereo analog output, connect your audio devices to these connectors

2.2.2. HDMI2.0b Port

Connect your digital display or projector to this HDMI Port. Resolutions up to 3840x2160 pixels are supported.

2.2.3. USB Datenport

USB 2.0 Port for playback content.
Unterstützte Dateiformate: FAT32, NTFS, exFAT
If a SD Card is present, it will be prioritized.
You can update the SD Card content via the USB storage (USB Content Update).

2.2.4. Gigabit LAN Port

Connect the CF Player® to your local network via the Gigabit RJ45 Port. DHCP will be used per default. This can be changed in the settings.

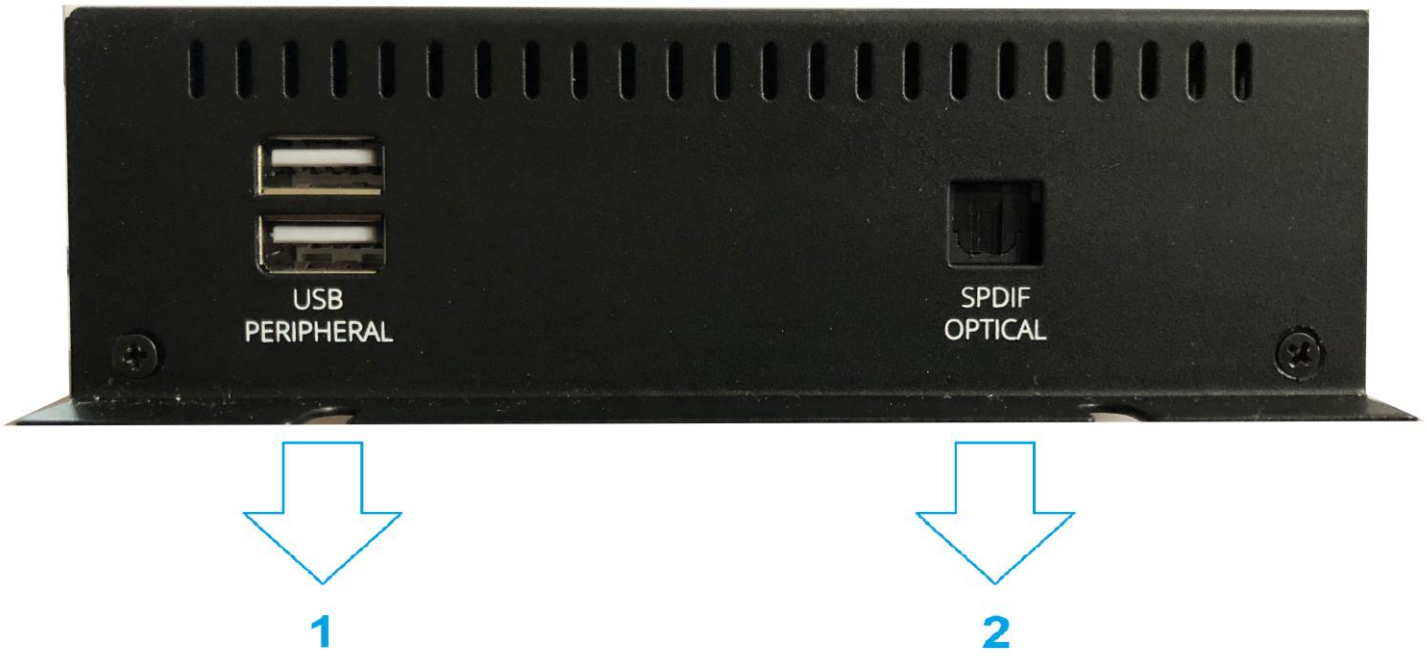
2.2.5. RS232 serial Port

The CF Player® can be controlled by a PC or another device via this standard DE-09 compatible connector. Default configuration is 9600-8-N-1.

2.2.6. Power Adapter

Connect the provided 12V/2A power adapter to this port.

2.3. RIGHT SIDE



1. USB Peripheral
2. SPDIF Optical

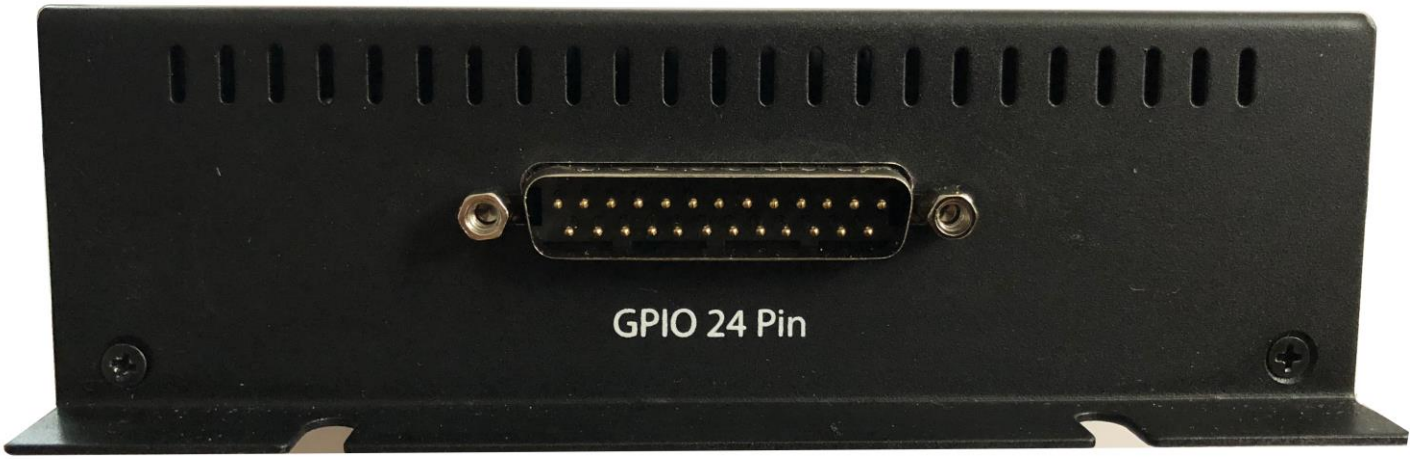
2.3.1. USB Peripheral

USB 2.0 Port to connect external devices: Mouse, Keyboard, Presenter, GPS Antenna, Touchscreens, etc…

2.3.2. SPDIF Optical

Digital audio port.

2.4. LEFT SIDE



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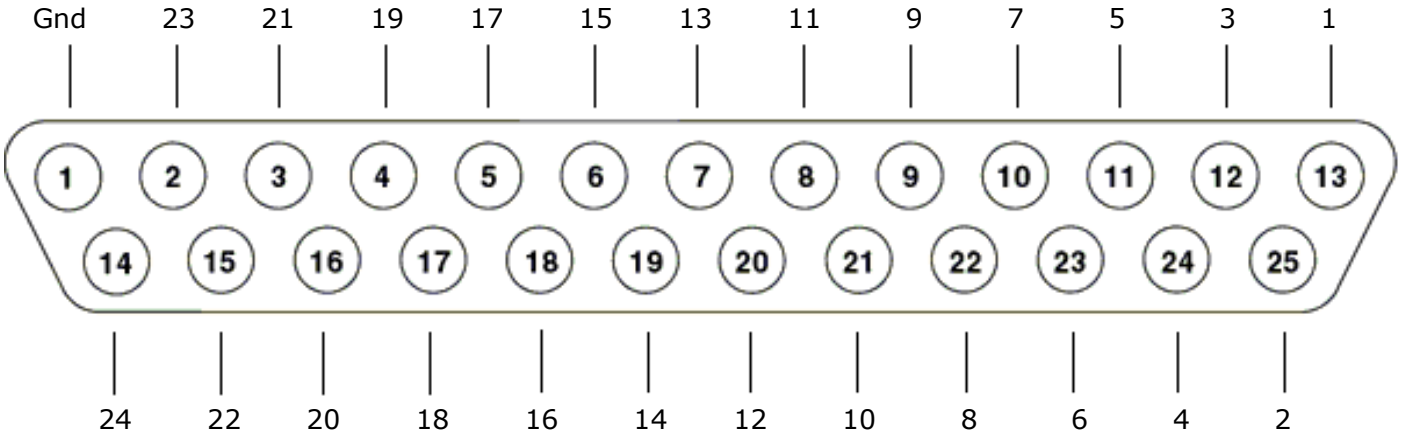
1. DSUB25 GPIO Connector



Obere Reihe													
Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Kontakt	GnD	23	21	19	17	15	13	11	9	7	5	3	1
Untere Reihe													
Pin	14	15	16	17	18	19	20	21	22	23	24	25	
Kontakt	24	22	20	18	16	14	12	10	8	6	4	2	

2.4.1. Using GPIO Contacts

The CF Player® has 24 GPIO Contacs. At the moment these are exclusively for input usage.
You can trigger an input event by shorting one of the 24 signal contacts with the gnd-contact (pin1).

For example: Start item 1 by shorting contact 13 and gnd.

By default, the contacts trigger the item with the corresponding index:

Kontakte													
Kontakt	1	2	3	4	5	6	7	8	9	10	11	12	13
Item	1	2	3	4	5	6	7	8	9	10	11	12	13
Kontakt	14	15	16	17	18	19	20	21	22	23	24	25	
Item	14	15	16	17	18	19	20	21	22	23	24	25	

These item numbers represent the index of your [ITEM X] in the playlist. If you do not use a playlist, the index of the alphanumerical order of the files on your storage will be played.

Ex.: Contact 1 & GnD Playback of Item 1
Ex.:: Contact 2 & GnD Playback of Item 2
Ex.:: Contact 3 & GnD Playback of Item 3
…
Ex.:: Contact 24 & GnD Playback of Item 24

You can reassign other functions to the contacts. Please refer to Chapter (KeyOff)

2.4.2. GPIO Cable

The supplied DSUB25 cable can be connected to the GPIO Port. The colour code related to the contact index can be seen in this table:

Farbcodierung									
Kontakt	GnD	1	2	3	4	5	6	7	8
Kabelfarbe	braun	hell-blau	rot-schwarz	rosa	dunkel-blau	dunkel-grün	grau-schwarz	schwarz	dunkel-braun
Kontakt	9	10	11	12	13	14	15	16	17
Kabelfarbe	weiß	orange-schwarz	lila	hell-braun	dunkel-türkis	hell-grau	grün	hell-lila	orange
Kontakt	18	19	20	21	22	23	24		
Kabelfarbe	blau	hell-rot	hell-grün	hell-gelb	gelb	grau	hell-türkis		

3. FIRST STEPS

3.1. Installation

Unbox the CF Player®fullHD2.0 and place it on a suitable surface.
Do not stack multiple CF Player®fullHD2.0 to avoid overheating.

3.2. Connecting outputs

3.2.1. Video

Connect the CF Player® to your display or projector using the HDMI2.0b port on the rear of the device.

By default, the CF Player® will choose a suitable resolution automatically. If you are not satisfied with the result, you can adjust the resolution in the settings.

When neither SD Card nor USB storage are present, you will see the setup screen on the display.

3.2.2. Audio

You can choose between three audio outputs:

1. Digital audio via HDMI port on the rear.
2. Digital audio via SPDIF port on the side.
3. Analog audio via Stereo RCA connectors.

The outputs are active simultaneously. You do not need to change any settings except the volume.
Die Audioausgänge sind parallel aktiviert, d.h. Sie müssen keine weiteren Einstellungen vornehmen.

3.3. Connect the CF Player® to your Network

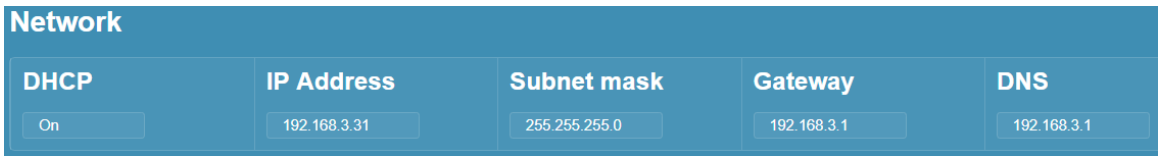
The following features will only be usable, if the CF Player® is connected to your local network

- Configuration via webinterface
- Synchronous playback of multiple CF Player®s
- UDP Control
- FTP access or automatic FTP download
- Set time and date via NTP server

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

I. Connect a CAT5 Ethernet cable to the Gigabit LAN Port on the back.
II. IP Address:
By default, DHCP is activated. If you have a DHCP Server in your network, you do not need to configure anything. The obtained IP can be seen on the display, if neither SD Card nor USB storage is present.
To assign a static IP address, you can either to it via the settings screen on the display or the CFPSetup.txt file.

a. On screen:
Connect a USB Mouse, Touchscreen, or USB Keyboard to one of the USB Ports. Either remove SD Card and USB storage, or press "CTRL+S" on the keyboard.
The IP can be set on the Maininfo page.



b. With CFPSetup.txt:

Create a text file called "CFPSetup.txt" or edit the one provided on the SD Card. Set DHCP to Off, or any IP setup will be ignored. Follow this syntax:
DHCP Off
IP 192.168.0.2
Subnet 255.255.255.0
Gateway 192.168.0.2

Save this file on the SD Card or USB storage and insert it into the CF Player®. The new setting will be applied instantly.

III. Via Computer, Tablet, Smartphone

Your PC and the CF Player® must be in the same IP Range.

If you want to connect the CF Player® directly to your PC with a RJ45 cable, you must assign a static IP address.

IV. Enter the IP address of the CF Player® in a web browser of your choice. Now you can proceed with the configuration.

3.4. Starting the CF Player®fullHD2.0

Connect the 12V/2A power adapter to the POWER port on the rear of the CF Player®. The Power LED on the front will change from orange to red and you will see a boot screen on the display. As soon as the CF Player® is starting the playback the LED will change to green and your content or the setup screen will appear on the display.

3.5. Playback files

Copy your media files to the root directory of the SD Card or USB storage.
Playback will start in alphanumerical order. After the last file has ended, playback will continue with the first item.
If you want to change the playback order, you can create a Playlist.

4. Configuration of the CF Player®fullHD2.0

There are two ways to configure the CF Player®.

1. Via the webinterface
2. Via the Setup file "CFPSetup.txt"

Hint: New Users should begin with the Webinterface.
The CFPSetup-files can be very useful, when multiple CF Player®s have to be configured equally.

4.1. The Webinterface of the CF Player®fullHD2.0

Without SD Card or USB storage present, you will see the Webinterface on the connected display. It is also visible, if you press "CTRL+S" or "CTRL+F5" on a connected USB Keyboard.
Once the CF Player® is integrated in your network, you can access the Webinterface with any webbrowser. Then you will see the Main Page.

4.1.1. MainInfo

All pages of the Webinterface show the navigation on top:

- Maininfo (Audio, Video, Network, Sync setup, Playmode, DMX,USB,RS232, Log)
- Date & FTP Setup (Date, FTP Server and automatic FTP download)
- Remote Access (Control the playback remotely)
- SD Card (Content of the SD Card & Playlist Editor)
- USB storage (Content of the USB storage & Playlist Editor)
- System (Custom name, Security, Reboot, Reset, Update Firmware)
- German (Change language to German)

Next line is:

1. Current time and date
2. Serial
3. Firmware-Version
4. Custom name (ex.: Entrance, First floor, …)

4.1.1.1. Video and Audio Setup

- HDMI Auto
  - Off: Your chosen settings are applied.
  - On: The CF Player® will apply the resolution recommended by the display.

- Resolution
  - Choose a resolution. Non-supported resolutions are displayed in red.

- Aspect ratio
  - Aspect ratio of content. Default is auto and will be chosen to match your video resolution. The ratio is only applied to video files.

- Color Space
  - RGB
  - YCbCr 4:4:4
  - YCbCr 4:2:2
  - YCbCr 4:2:0
  - Auto: Choose automatically

- Color Depth
  - Auto: Choose automatically
    Some displays request a 10 bit Color Space but do only support 8 bit. In case you see a black screen, please set this manually to 8 bit
  - 8 Bit
  - 10 Bit

- HDR (High Dynamic Range)
  - HDR10
  - SDR
  - HLG (Hybrid Log-Gamma)
  - Auto: HDR will be activated if the video file supports it. If the video is only SDR, HDR will be deactivated.

- Volume
  - Values from 0 to 10
    - 0 is mute
    - 8 approx. 0dB
    - 10 is max

4.1.1.2. Network

- DHCP
  - Off: Your IP, Subnet, Gateway, DNS settings will be applied.
  - An: IP settings will be provided by DHCP server. Custom values will be ignored.

- IP Address
- Subnetmask
- Gateway
- DNS
- UDP Port: Default Port is **4950**. For Sync Playback, all CF Player®s have to use the same port.

4.1.1.3. Synchronized Playback

You can synchronize multiple CF Player®s. You can even combine CF Player®fullHD2.0 and CF Player®UltraHD.
Videowalls can be realized with this setting.

IMPORTANT: All CF Player® MUST be in the same network and have to use the same UDP Port! Otherwise Sync will fail

IMPORTANT: If you are using a PLAYLIST, the ITEM numbers have to match on all CF Player®s. For example, if ITEM 5 is started on the Master, ITEM 5 will be started on all slave players.

- Activation
  - Off
  - On

- Type
  - Master: This is the Master player, that controls all. If you want to use any external control, you should only send commands to this player. It will forward all commands to the other players.
    IMPORTANT: Only **ONE** Master is permitted per Sync Group!

  - Slave: A Slave player is controlled by the Master in his Sync Group. You can add as many Slave Players, as your network supports.

- Group
  - Assign a Sync Group to the player
  - You can choose between the Group 01 to Group 10
  - Different Sync Groups are indepent

- Accuracy You can choose the accuracy of the synchronization.
  - Min: Sync Commands will only be sent on start of the ITEM
  - Low: Sync will be accurate with a tolerance of +- 1s
  - Medium: Sync will be accurate with a tolerance of +- 33ms
  - High: Sync will be accurate with a tolerance of half frame at 60fps

- Playback Mode You can choose between three playback modes, when not using a PLAYLIST
  - Repeat All:
    All files will be looped in alphanumerical order.
  - Repeat first:
    First ITEM will be played in loop. If another ITEM is triggered, it will be played and at the end of the file, the first ITEM will be looped again.
  - Repeat current:
    First ITEM will be played in loop. If another ITEM is triggered, this file will be played in loop.

4.1.1.4. Timecode Commands

You can schedule events related to the current timecode of a video or picture. These can be UDP Telegrams to other devices, you can pause playback automatically at a specific moment or you can set DMX Channels.
All you need is to create a file with the exact filename of the video and the file extension and add the special extension ".sze". Detailed information of the structure of this file can be found in the containing chapter.

Example:
File name: Movie1.mp4
SZe file: Movie1.mp4.sze

- Timecode Commands
  - Off
  - On

4.1.1.5. DMX Setup

You can control DMX Hardware via simple USB to DMX adapter.

- DMX
  - Off
  - On

- DMX Device
  - OPEN DMX
  - DMX USB PRO

4.1.1.6. Other settings

- RS232 Device (DSUB9 on the rear)
  - Terminal: Standard RS232 communication with other RS232 devices
  - Digital-I/O-Adapter: Cable for connecting up to 16 input contacts to the CF Player®

- Baud Rate
  - Diffferent rates: Default is 9600-8N-1

- USB Type
  - Numpad: USB Numpad
  - Touch: USB Touchscreen
  - Presenter: Wireless USB Presenter
  - GPS: USB GPS Antenna
  - RFID: USB RFID Reader
  - RFID Show: Not yet implemented

- Picture Displaytime
  - Displaytime in seconds:
    Duration that images or HTML content ist displayed on screen in seconds.

- Log Activation
  - A log file can be written if activated here. Events like item start, end, break, errors can be logged.

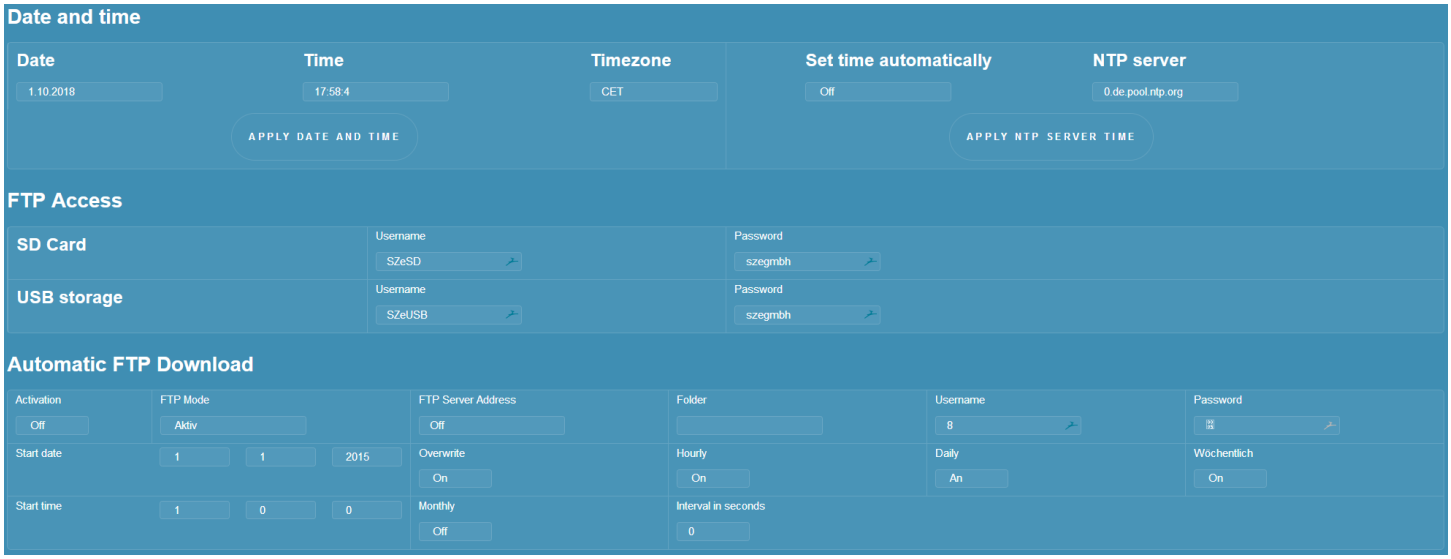
- Log Folder
  - Specify a subfolder on the SD Card or USB storage, where the log file will be stored.

4.1.1.7. Apply settings or create CFPSetup.txt

On the bottom of the page you will find the two buttons for applying the settings or creating and downloading the CFPSetup.txt to your PC.

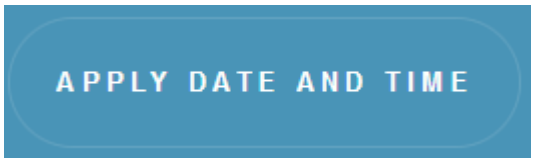
IMPORTANT: If a SD Card or USB storage is present, the containing CFPSetup.txt will be renamed to CFPSetupAlt.txt and the new settings will be stored in the new CFPSetup.txt

4.1.2. Date & FTP Setup



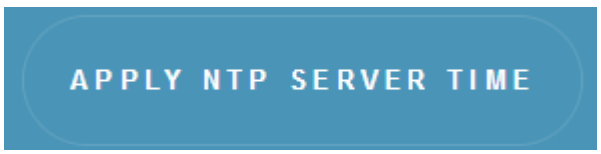
4.1.2.1. Date and time

- Date
- Time
- Timezone



Apply the changes to time, date and timezone.

- Set time automatically
  - Off: Date and time have to be set manually and keeps counting continously
  - On: At every new boot of the CF Player®. The date and time of the ntp server will be applied
- NTP server
  - URL of the NTP server chosen for your time synchronization



Synchronize with ntp server now.

4.1.2.2. FTP Access

An ftp server is running on the CF Player®fullHD2.0 that grants you access to the SD Card and USB storage. You can connect with a FTP Client (FileZilla https://filezilla-project.org/) and modify the contents on the storage.

- SD Card
  - Username: Default is ***SZeSD***
  - Password: Default is ***szegmbh***
- USB storage
  - Username: Default is ***SZeUSB***
  - Password: Default is ***szegmbh***

After changing one of these values, please reboot the CF Player® once to fully apply the changes.

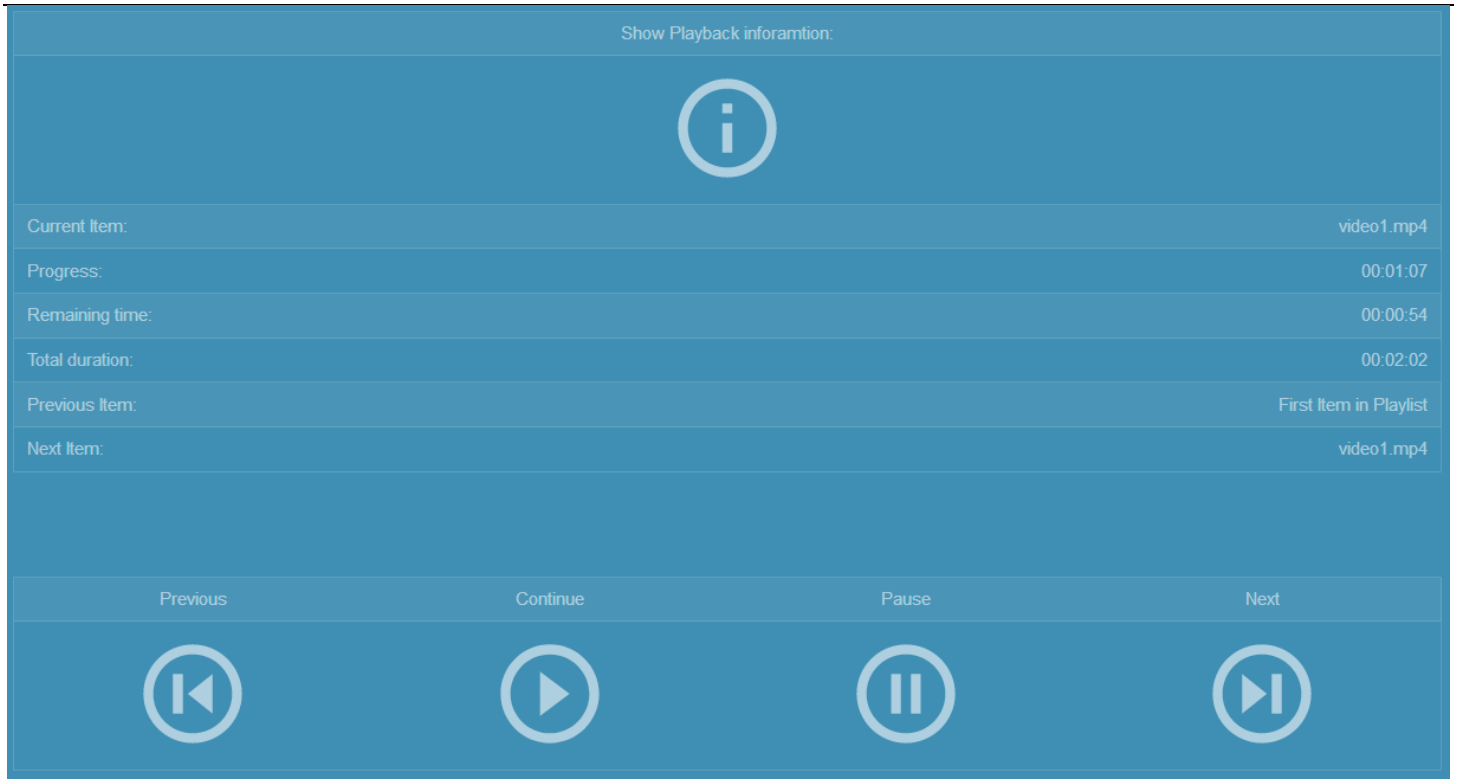
4.1.2.3. Automatic FTP Download

The CF Player® can be configured to download new content from a chosen ftp server.

- Activation
  - Off: FTP Autodownload deactivated
  - On: FTP Autodownload activated
- FTP Server Address
  - IP Addresse of remote ftp server
- Folder
  - Subfolder on remote ftp server for this player
- Username
  - Login Username of remote ftp server
- Password
  - Login Password of remote ftp server
- Start date
  - Date of first automatic ftp download
- Start time
  - Time of first automatic ftp download
- Overwrite
  - Off: Playback continues while download runs in background
  - On: Playback is suspended until download is completed
- Hourly
  - Start download every 60 minutes starting from first date and time.
- Daily
  - Start download every 24 hours starting from first date and time.
- Weekly
  - Start download every 7 days starting from first date and time.
- Monthly
  - Start download every 4 weeks starting from first date and time.
- Interval in seconds
  - Start download every X seconds starting from first date and time.

4.1.3. Remote Access

Control the CF Player®fullHD2.0 remotely or retrieve information about current playback.



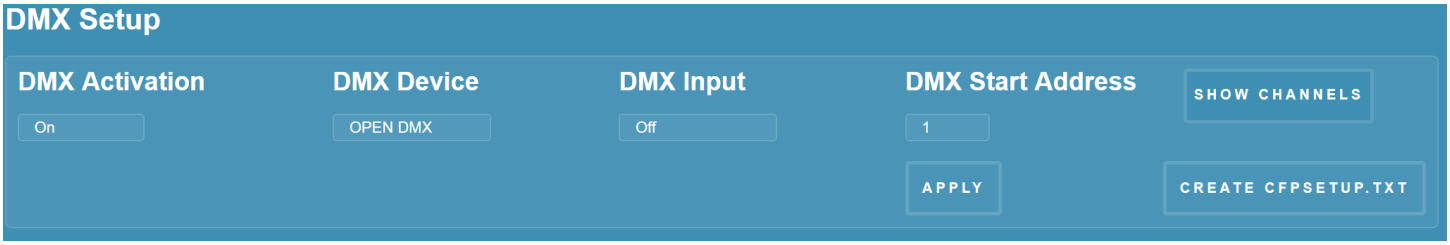
Clicking the i-Icon will give you information about the current playback. These contain:

- Current item
- Progress
- Remaining time
- Total duration
- Previous item
- Next item

Control the playback with the 4 buttons the information.

- Previous: Jumps to previous item
- Continue: Resume playback, in case it was stopped
- Pause: Pause playback
- Next: Jump to next item

4.1.4. DMX Setup



4.1.4.1. DMX Setup

- DMX Activation
  - Off DMX Function deactivated
  - On DMX Function activated

- DMX Device
  - OPENDMX ENTTEC OPENDMX USB

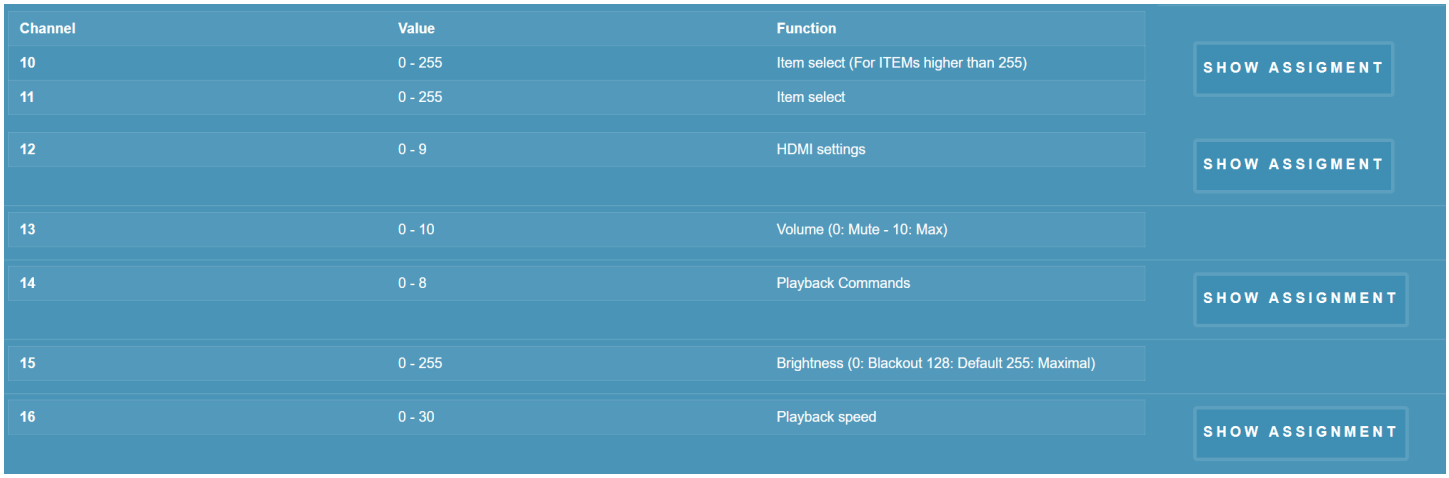
- DMXUSBPRO ENTTEC DMXUSB PRO

- DMX Input
  - Off DMX Input deactivated
  - On DMX Input activated

- DMX Start Address Start address of DMX Control
  - First Channel that is listened to

- Show Channels
  - Channel assignment is shown

4.1.4.1.1. Show Channel assignment

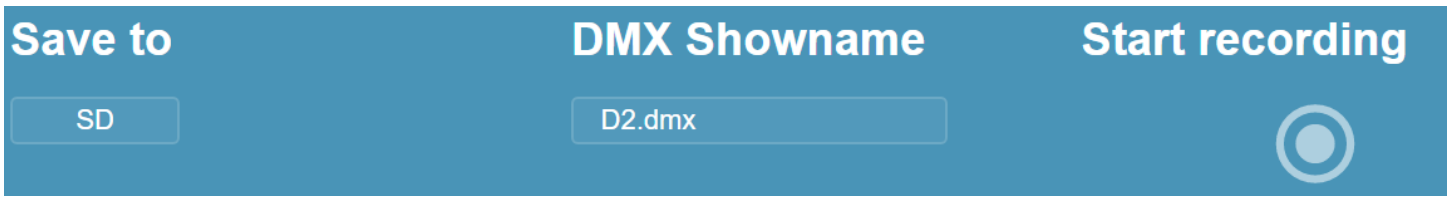


This table shows the assignment of DMX Channels to CF Player functions.
The channel addresses depend on your chosen DMX Start Address. In the example above, the selected start address is 10. Therefore, the first channel, that controls the Item Select is channel 10.

For further information, please refer to chapter DMX Functions. Or click the „show assignment" button on the right side. This will open the detailed description of the channels.

4.1.4.2. DMX Recorder

The CF Player® can record any input on the DMX Input for 1 DMX512 universe. These shows can be played back at any time.
To enable this feature, you MUST use the ENTTEC DMXUSB PRO device.

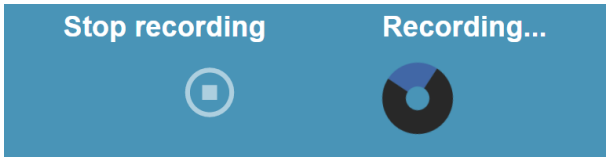


- Save to
  - SD DMX file will be stored on SD Card
  - USB DMX file will be stored on USB storage

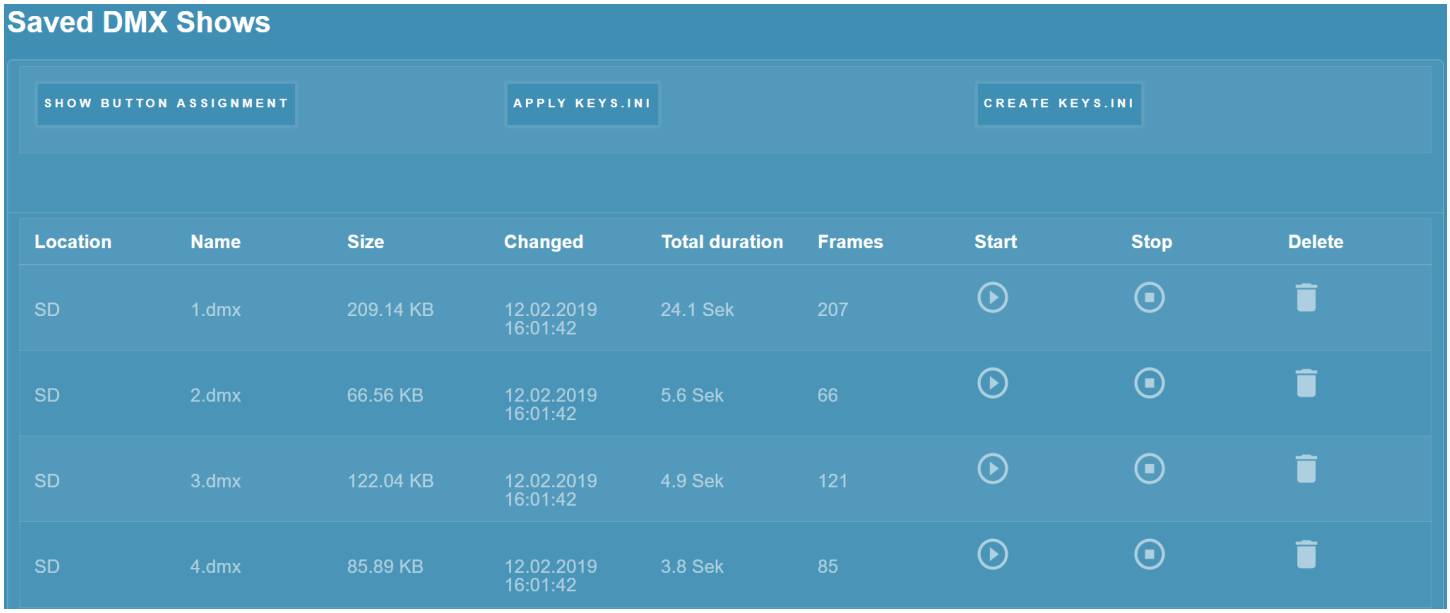
- DMX Showname
  - Name of the DMX file. The filename extension .dmx is enforced.

- Start recording
  - This will start the recording of incoming DMX data. As soon as you press this button, all incoming DMX512 will be recorded into one DMX512 universe. The recording will continue

until the stop recording button is pressed. This button will appear when recording has started.



4.1.4.3. Saved DMX Shows

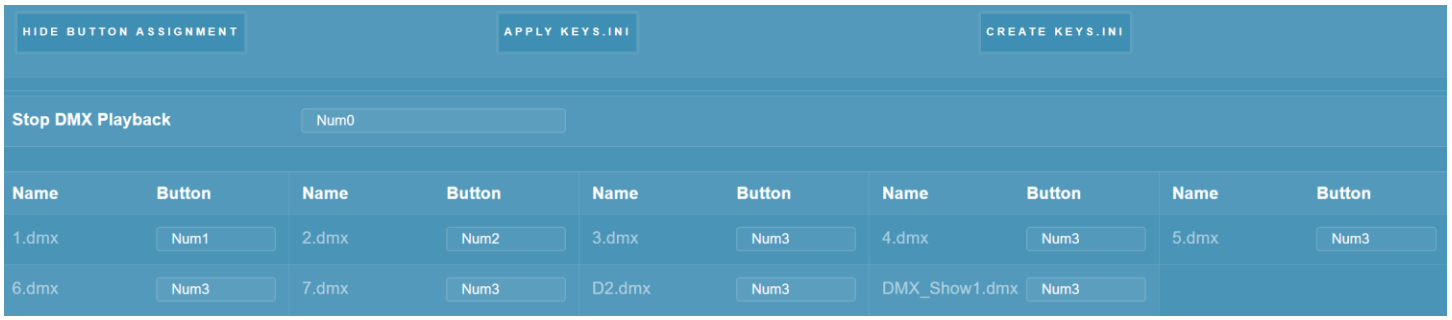


4.1.4.3.1. DMX Show file list

All files with the filename extension .dmx are listed here.

- Location
  - SD Card or USB Storage
- Name
- Size
- Changed
- Total duration
  - Total duration in seconds
- Frames
  - Number of Frames of record. One Frame consists of all 512 DMX channels including their value.
- Start
  - Start playback of DMX Show LIVE at CF Player®
- Stop
  - Stops all running DMX Shows. Including those scheduled by Playlist or started by any other input.
- Delete
  - Selected DMX file will be deleted. **CAUTION**: Cannot be undone!

4.1.4.3.2. Show Button assignment



- Show button assignment
  - Current Keys.ini is read. If no Keys.ini exists, all values will be initialized with "none". Each .dmx file will be listed and can be assigned to a button.
- Apply Keys.ini
  - Keys.ini will be created on SD Card with the selected values.
- Create Keys.ini
  - Keys.ini file will be created and can be saved locally on your PC WITHOUT being applied on the CF Player®.

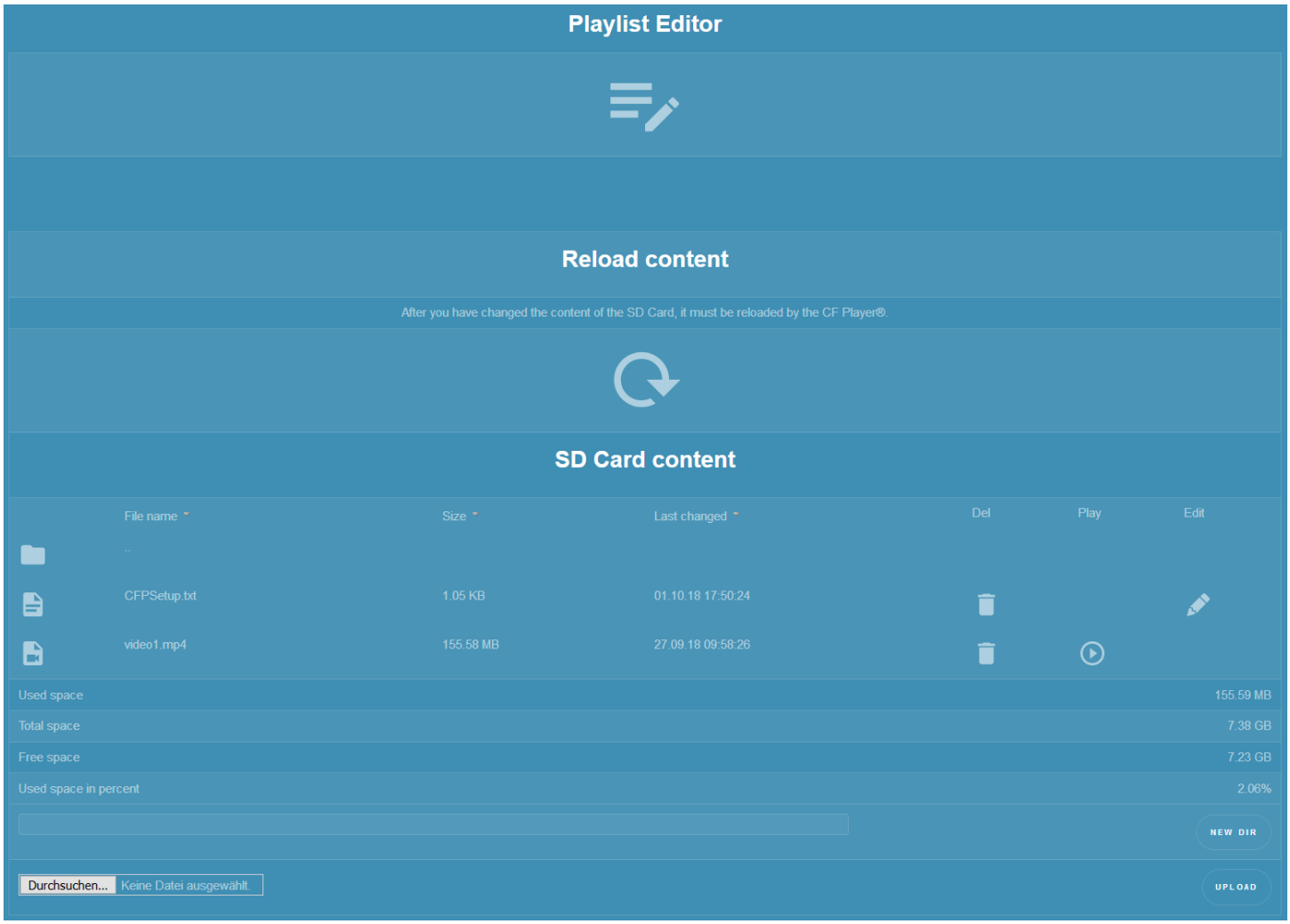
First row shows „Stop DMX Playback" and the assigned button.
This command will stop **ALL ACTIVE DMX SHOWS** immediately whether they were started by button, playlist or any other input.

Below all .dmx files are listed. Each file can be assigned to a button, that will start the playback when pressed.

Possible Buttons:

- None — No button is assigned
- Numblock
  - Num0 to Num9: — Number keys of USB Numblock.
  - NumMinus — Minus-Key of USB Numblock.
  - NumPlus — Plus-Key of USB Numblock
- Keys
  - Key1 to Key16 — Contacts of Digital-I/O-Adapter cable

4.1.5. SD Card / USB Storage



- Playlisten Editor
  - Create a PLAYLIST by connecting a USB Mouse/Keyboard. More information can be found below.

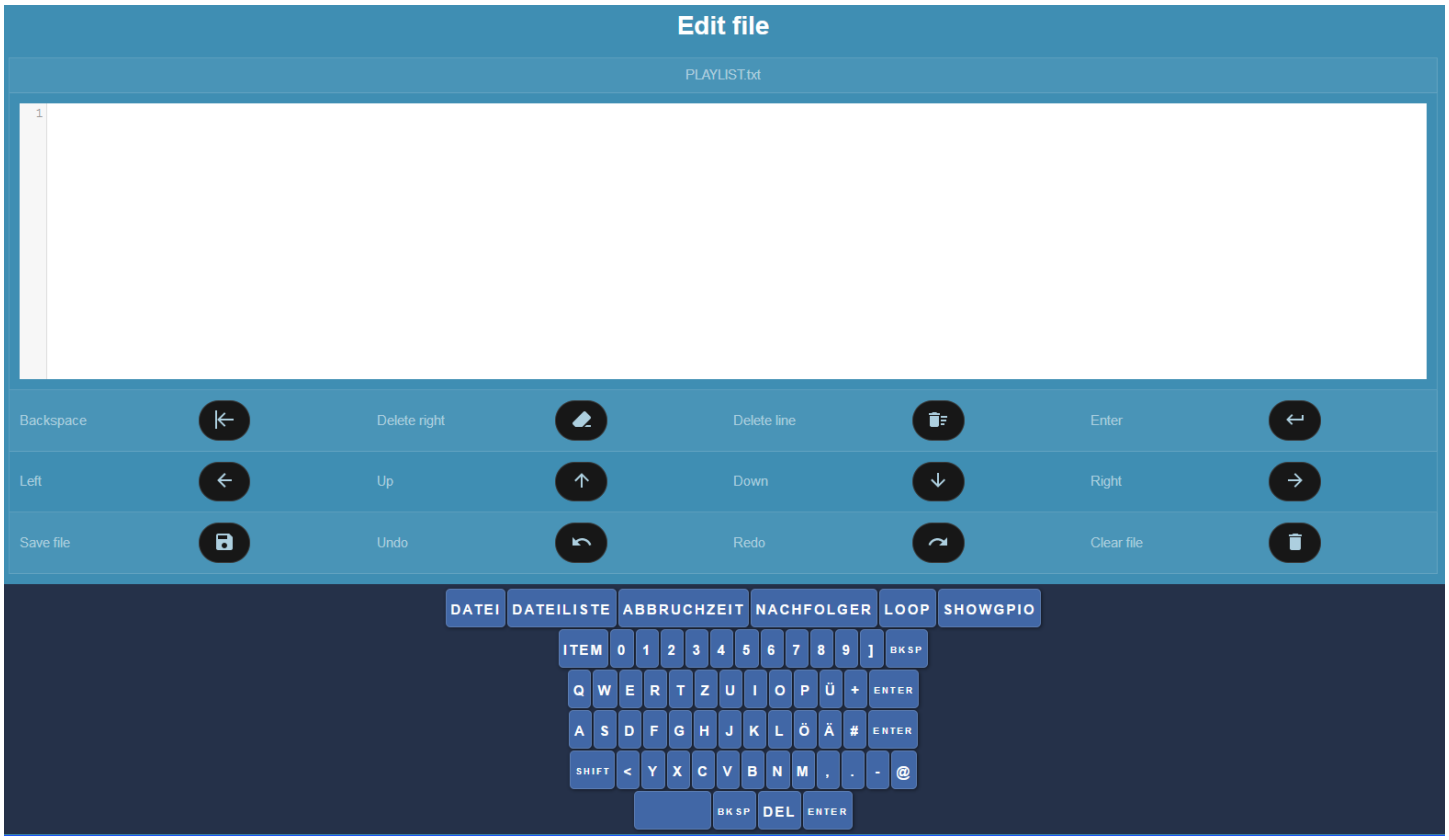
- Reload content
  - If you change any content here or through ftp access, you must reload the content here. Otherwise the CF Player® will need a reboot to play the new files or stop playing deleted ones.

- File browser
  - List all files on SD Card/USB storage with details and these file operations
    - Delete (Trash icon): Deletes file from SD Card
    - Play: Play file now on CF Player®
    - Edit (Pen iconl): Text or setup files can be edited

- New folder
  - Create a new folder on the SD Card/USB storage
  - **IMPORTANT**: only working on external browser. Option not visible on display.

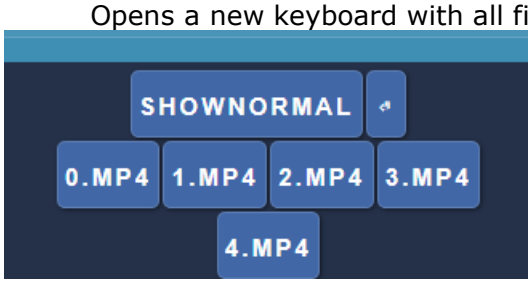
- Upload
  - Only small files can be uploaded (< 2MB). I.e. PLAYLIST or CFPSetup.txt
  - **IMPORTANT:** No upload of media files!
  - **IMPORTANT:** After upload, Reload content must be activated!

4.1.5.1.1. Playlist Editor



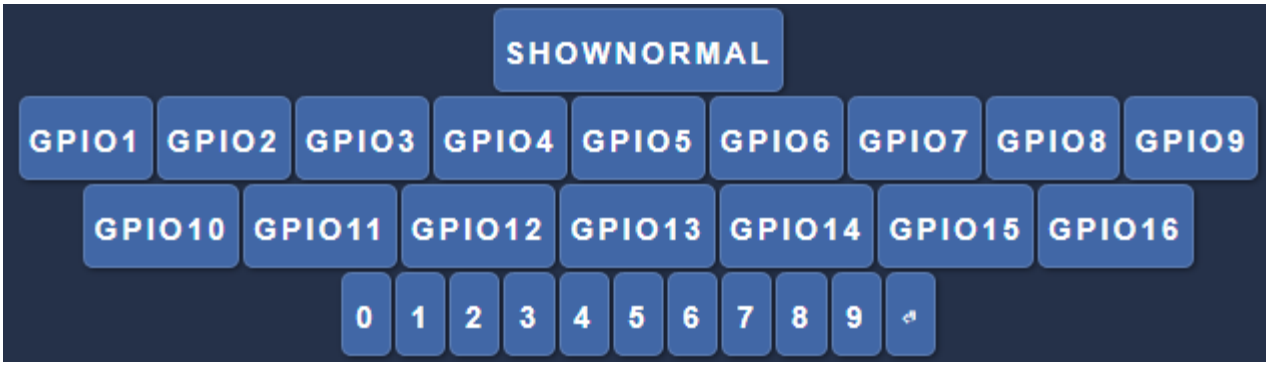
Create or edit a PALYLIST.txt easily with this editor. You can either edit it with a USB Keyboard or by using the on-screen keyboard that is visible on the lower part of the site.
This keyboard offers the following buttons (all in german, but description in English):

- DATEI Inserts "Datei=" line (=file)
- DATEILISTE Opens a new keyboard with all files on the storage.



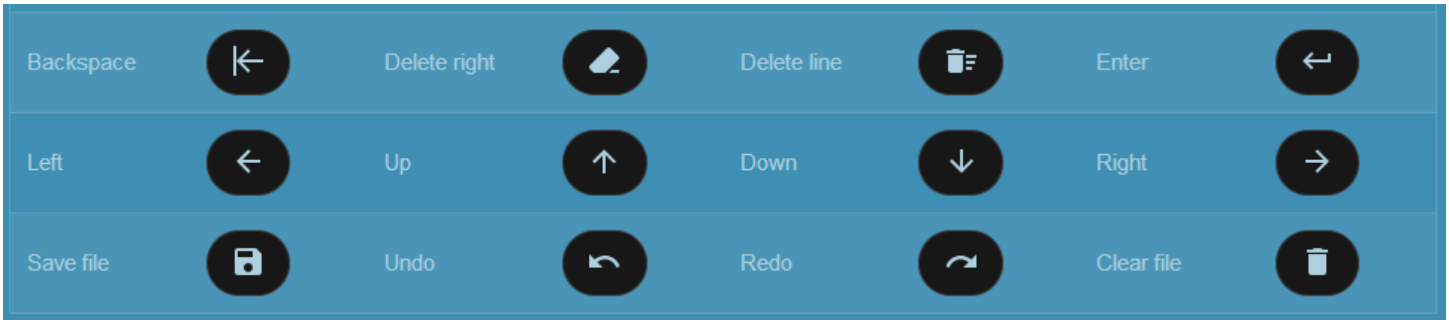
  - SHOWNORMAL Return to normal editor keyboard
  - Click on a name and it will be inserted in PLAYLIST after "Datei="
- ABBRUCHZEIT Displaytime for images or HTML content
- NACHFOLGER Successor of this item
- LOOP Loop entry for this item

- SHOWGPIO Switch to GPIO Keyboard

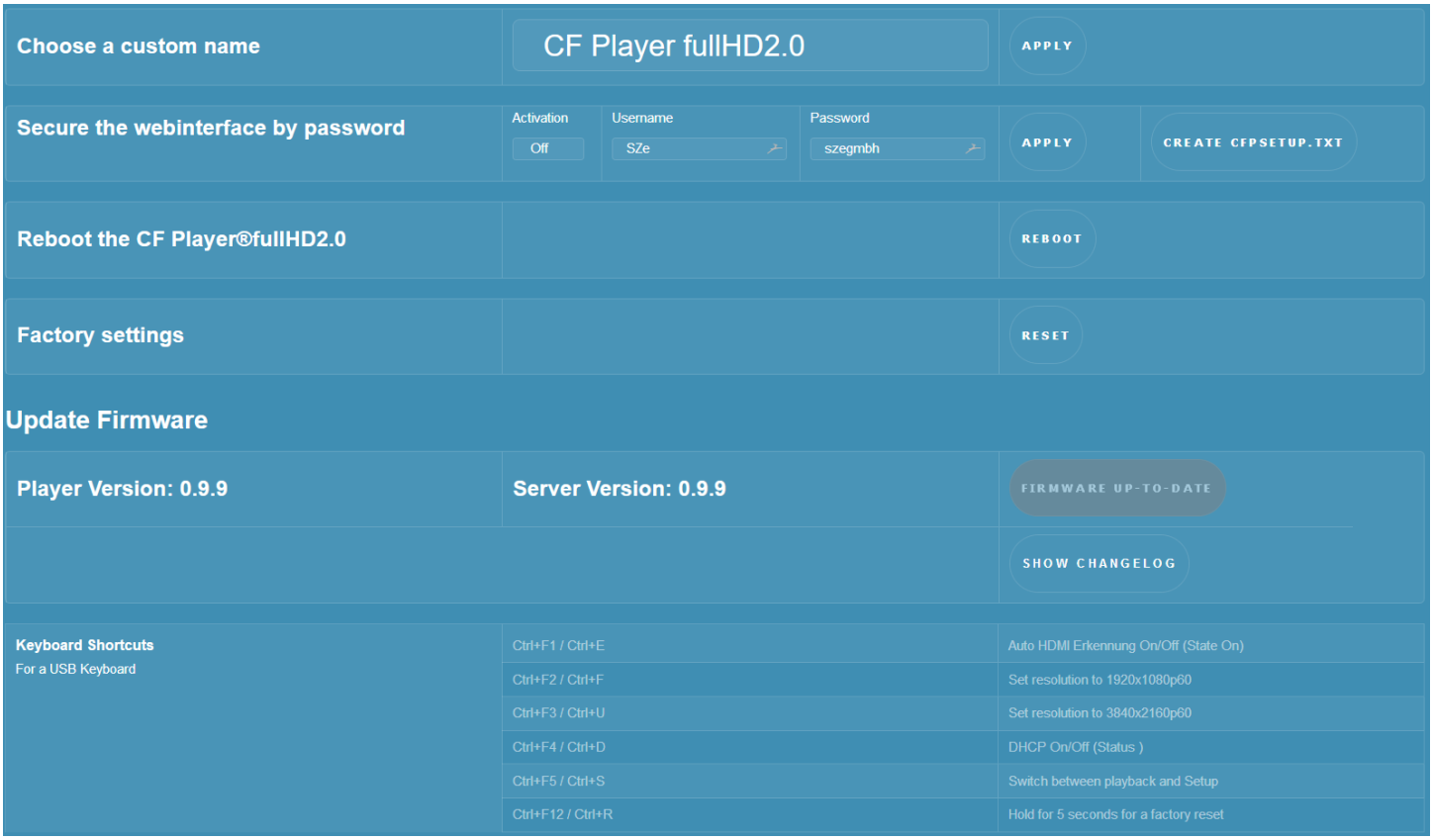


  - SHOWNORMAL Return to normal editor keyboard.
  - GPIOX Adds „GPIOX=", X is the index of the button
  - Exxample GPIO1=5 (GPIO1 starts playback of ITEM 5)
- ITEM Add „[ITEM"
- BKSP Backspace
- ENTER Enter / Return
- DEL Delete right character

The on-screen keyboard has limitations regarding the deletion or navigation in previously existing content of the PLAYLIST. Therefore, the buttons below offer various functions:



4.1.5.2. System



4.1.5.2.1. Choose a custom name

- Give a custom name to this CF Player®. For example "First floor"…

4.1.5.2.2. Secure the Webinterface by password

- Activation Login on/off
- Username Login-Username
- Password Login-Password
- Apply
- Create CFPSetup.txt
- **IMPORTANT:** The password login will be activated only after a reboot of the CF Player®

4.1.5.2.3. Reboot CF Player®fullHD2.0

- Reboot now

4.1.5.2.4. Factory Settings

- Revert all settings to default values

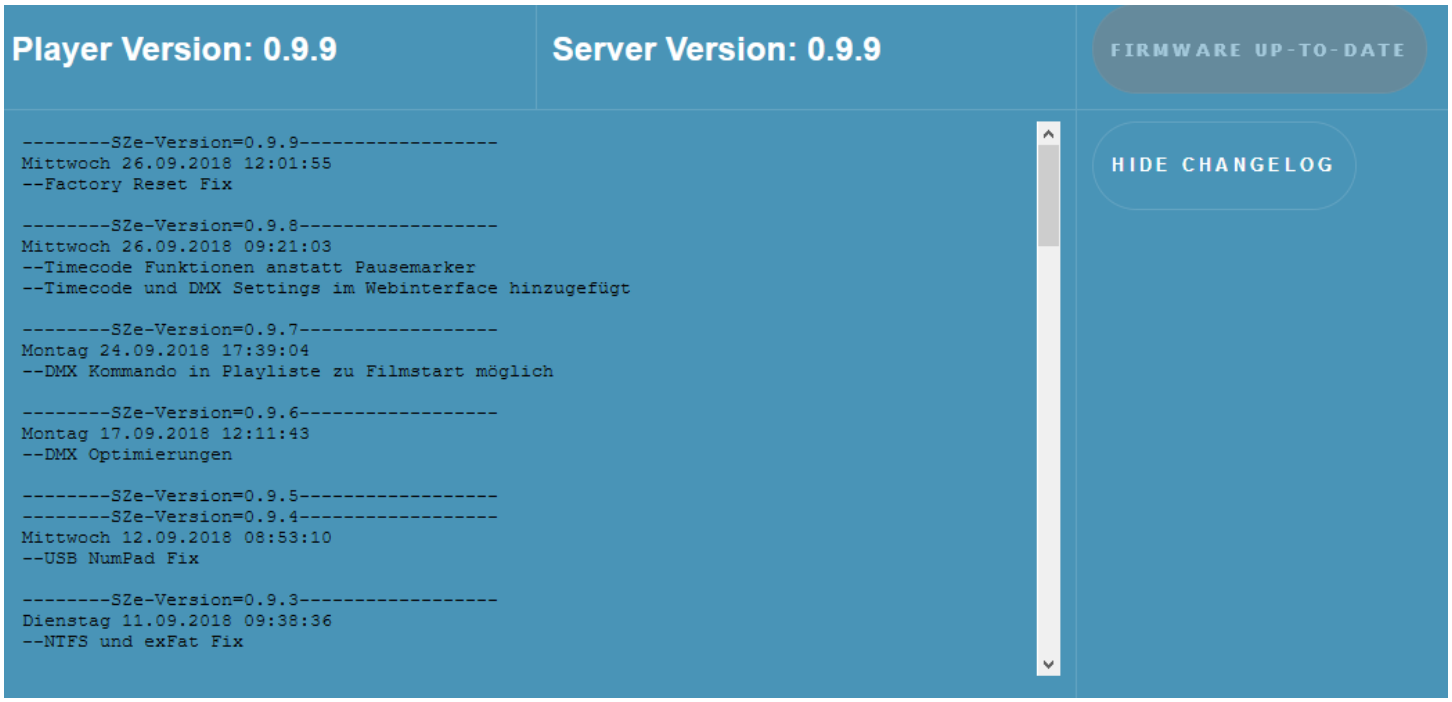
4.1.5.2.5. Update Firmware

Install a newer firmware.
The CF Player® needs a working internet connection!

- Player Version Current firmware version of your CF Player®fullHD2.0
- Server Version Most recent available firmware
- Update Button 4 values possible
  - Firmware Up-To-Date
  - Server Offline Can not contact update server
  - No SD Card or USB storage The Update can only be started with a SD Card or USB storage present

- Update — Update can be started

- Show Changelog — Currently only available in german



4.1.5.2.6. Keyboard Shortcuts

With a connected USB keyboard, you can use these shortcuts:

Keyboard Shortcuts For a USB Keyboard		
	Ctrl+F1 / Ctrl+E	Auto HDMI Erkennung On/Off (State On)
	Ctrl+F2 / Ctrl+F	Set resolution to 1920x1080p60
	Ctrl+F3 / Ctrl+U	Set resolution to 3840x2160p60
	Ctrl+F4 / Ctrl+D	DHCP On/Off (Status)
	Ctrl+F5 / Ctrl+S	Switch between playback and Setup
	Ctrl+F12 / Ctrl+R	Hold for 5 seconds for a factory reset

4.2. CFPSetup.txt File

Currently exclusively in german. All translations can be found here.

Wiedergabe Modus Alle
HDMI Auto An
Resolution 3840x2160p60
Farbraum Auto
Farbtiefe 8bit
HDR Auto
Aspekt Auto
Volume 5
Synchronisierung Aus
Synchron Master
Synchron Genauigkeit Minimal
Synchrongruppe 1
DHCP An
IP 192.168.0.2
Subnetz 255.255.255.0
Gateway 192.168.0.1
DNS 192.168.0.1
UDP Port 4950
NTP Zeit An
NTP Zeitserver 0.de.pool.ntp.org
Zeitzone CET
Standard Abbruchzeit 5
FTP Server An
FTP SD Benutzername SZeSD
FTP SD Passwort szegmbh
FTP USB Benutzername SZeUSB
FTP USB Passwort szegmbh
Log Aus
Log Ordner Log
RS232 Terminal
Baudrate 9600
USB Type Numpad
Timecode Funktionen Aus
DMX Aus
DMX Gerät DMXUSBPRO
Webinterface Login Aus
Webinterface Benutzername SZe
Webinterface Passwort SZe
FTP Download Aus
FTP Download Server leer
FTP Download Benutzername
FTP Download Password leer
FTP Download Modus passiv
FTP Download Datum 1.1.1970

FTP Download Zeit 1:0:0
FTP Download stündlich Aus
FTP Download täglich Aus
FTP Download wöchentlich Aus
FTP Download monatlich Aus
FTP Download Intervall 0
FTP Download Serverordner Off
FTP Download Überschreiben Aus

4.2.1. Playback Mode

Wiedergabe Modus Alle

The playback mode defines the playback behaviour, if no PLAYLIST is present:

- Playback Mode
  - Alle (All):
    All Items will be played in a row.
  - Erster (Repeat First):
    First Item is played in loop. If another Item is selected, the first Item will be playback in succession.
  - Schleife (Repeat selected):
    Current Item is played in loop. If another Item is selected, it will be played in loop.

4.2.2. Video and Audio setup

HDMI Auto An
Resolution 3840x2160p60
Farbraum Auto
Farbtiefe 8bit
HDR Auto
Aspekt Auto
Volume 5

- HDMI Auto
  - Aus (Off): Deactivated. The video settings you selected will be applied.
  - An (On): The CF Player® will receive the preferred EDID resolution of the connected display and apply it to the output. Settings that you choose for Resolution, Color Space,etc… will be ignored

- Resolution
  - Choose a resolution. Non-supported resolutions are displayed in red.

- Farbraum (Color Space)
  - RGB
  - YCbCr 4:4:4
  - YCbCr 4:2:2
  - YCbCr 4:2:0
  - Auto: Choose automatically

- Farbtiefe (Color Depth)
  - Auto: Choose automatically
    Some displays request a 10 bit Color Space but do only support 8 bit. In case you see a black screen, please set this manually to 8 bit
  - 8 Bit

- 10 Bit

- HDR (High Dynamic Range)
  - HDR10
  - SDR
  - HLG (Hybrid Log-Gamma)
  - Auto: HDR will be activated if the video file supports it. If the video is only SDR, HDR will be deactivated.

- Aspekt Aspect ratio of content. Default is auto and will be chosen to match your video resolution. The ratio is only applied to video files.

- Lautstärke (Volume)
  - Values from 0 to 10
    - 0 is mute
    - 8 approx. 0dB
    - 10 is max

4.2.3. Synchronized Playback

Synchronisierung Aus
Synchron Master
Synchrongruppe 1
Synchron Genauigkeit Minimal

You can synchronize multiple CF Player®s. You can even combine CF Player®fullHD2.0 and CF Player®UltraHD.
Videowalls can be realized with this setting.

IMPORTANT: All CF Player® MUST be in the same network and have to use the same UDP Port! Otherwise Sync will fail

IMPORTANT: If you are using a PLAYLIST, the ITEM numbers have to match on all CF Player®s. For example, if ITEM 5 is started on the Master, ITEM 5 will be started on all slave players.

- Synchronisierung (Synchronized Playback)
  - Aus (Off)
  - An (On)

- Synchron (Type)
  - Master: This is the Master player, that controls all. If you want to use any external control, you should only send commands to this player. It will forward all commands to the other players. **IMPORTANT**: Only ONE Master is permitted per Sync Group!

  - Slave: A Slave player is controlled by the Master in his Sync Group. You can add as many Slave Players, as your network supports.

- Synchrongrouppe (Sync Group)
  - Assign a Sync Group to the CF Player®
  - You can choose between Group 01 to Group 10
  - Different Sync Groups are indepent

- Synchron Genauigkeit (Accuracy)
  You can choose the accuracy of the synchronization.

  - Minimal (Min): Sync Commands will only be sent on start of an item.
  - Niedrig (Low): Sync will be accurate with a tolerance of +- 1s
  - Mittel (Medium): Sync will be accurate with a tolerance of +- 33ms

- Hoch (High): Sync will be accurate with a tolerance of half frame at 60fps

4.2.4. Network

DHCP An
IP 192.168.0.2
Subnetz 255.255.255.0
Gateway 192.168.0.1
DNS 192.168.0.1
UDP Port 4950

- DHCP
  - Aus (Off): Your IP, Subnet, Gateway, DNS settings will be applied.
  - An (On): IP settings will be provided by DHCP server. Custom values will be ignored.

- IP Adresse (IP Address)
- Subnetzmaske (Subnet mask)
- Gateway
- DNS
- UDP Port Default Port is 4950. For Sync Playback, all CF Player®s have to use the same port.

4.2.5. Date and Timezone

NTP Zeit An
NTP Zeitserver 0.de.pool.ntp.org
Zeitzone CET

- NTP Zeit (Set time automatically)
  - Aus (Off): Date and time have to be set manually and keeps counting continously
  - An (On): At every new boot of the CF Player®. The date and time of the ntp server will be applied

- NTP Zeitserver (server)
  - URL of the NTP server chosen for your time synchronization.

- Zeitzone (Timezone)
  - Time zone, the CF Player® should apply.

4.2.6. Picture Displaytime

Standard Abbruchzeit 5

Default Displaytime.
Duration that images or HTML content are displayed on screen in seconds by default.

4.2.7. FTP Server

FTP Server An
FTP SD Benutzername SZeSD
FTP SD Passwort szegmbh
FTP USB Benutzername SZeUSB
FTP USB Passwort szegmbh

An ftp server is running on the CF Player®fullHD2.0 that grants you access to the SD Card and USB storage. You can connect with a FTP Client (FileZilla https://filezilla-project.org/) and modify the contents

on the storage.

- FTP Server
  - Aus (Off)
  - An (On)
- FTP SD — FTP access to SD Card
  - Benutzername (Username): Default is ***SZeSD***
  - Passwort (Password): Default is ***szegmbh***
- FTP USB — FTP access to USB storage
  - Benutzername (Username): Default is ***SZeUSB***
  - Passwort (Password): Default is ***szegmbh***

4.2.8. Automatic FTP download

FTP Download Aus
FTP Download Server leer
FTP Download Benutzername
FTP Download Password leer
FTP Download Modus passiv
FTP Download Datum 1.1.1970
FTP Download Zeit 1:0:0
FTP Download stündlich Aus
FTP Download täglich Aus
FTP Download wöchentlich Aus
FTP Download monatlich Aus
FTP Download Intervall 0
FTP Download Serverordner Off
FTP Download Überschreiben Aus

The CF Player® can be configured to download new content from a chosen ftp server.

- FTP Download
  - Aus (Off): FTP Autodownload deactivated
  - An (On): FTP Autodownload activated
- FTP Download Server
  - IP addresse of remote ftp server
- FTP Download Benutzername
  - Login username of remote ftp server
- FTP Download Password
  - Login password of remote ftp server
- FTP Download Datum (Start date)
  - Date of first automatic ftp download
- FTP Download Zeit (Start time)
  - Time of first automatic ftp download
- FTP Download Stündlich (hourly)
  - Start download every 60 minutes starting from first date and time
- FTP Download Täglich (daily)
  - Start download every 24 hours starting from first date and time
- FTP Download Wöchentlich (weekly)
  - Start download every 7 days starting from first date and time.
- FTP Download Monatlich (monthly)
  - Start download every 4 weeks starting from first date and time.
- FTP Download Intervall in Sekunden (Interval in seconds)
  - Start download every X seconds starting from first date and time.
- FTP Download Serverordner (Folder)

  - Subfolder on remote ftp server for this player

- FTP Download Überschreiben (Overwrite)
  - Off: Playback continues while download runs in background
  - On: Playback is suspended until download is completed

4.2.9. Log

A log file can be written. Events like item start, end, break, errors can be logged including a timestamp.

Log Aus
Log Ordner Log

- Log
  - Aus (Off)
  - An (On)

- Log Ordner (Folder)
  - A log file can be written if activated here. Events like item start, end, break, errors can be logged.

4.2.10. External Devices

RS232 Terminal
Baudrate 9600
USB Type Numpad

- RS232 DSUB9 on the rear
  - Terminal: RS232 communication with other RS232 devices
  - Digital-IO: Cable for connecting up to 16 buttons

- Baudrate
  - Different rates: Default is 9600-8N-1

- USB Type
  - Numpad: USB Numpad
  - Touch: USB Touchscreen
  - Presenter: Wireless USB-Presenter
  - GPS: USB GPS Antenna
  - RFID: USB RFID Reader
  - RFID Show: Not implemented yet

4.2.11. Webinterface login

Webinterface Login Aus
Webinterface Benutzername SZe
Webinterface Passwort SZe

- Webinterface Login
  - Aus (Off) Login deaktivated
  - An (On) Login activated
- Webinterface Benutzername Login Username
- Webinterface Passwort Login Password

IMPORTANT: The password login will be activated only after a reboot of the CF Player®

4.2.12. Timecode Commands

Timecode Funktionen Aus

- Timecode Funktionen (Commands)
  - Aus (Off)
  - An (On)

4.2.13. DMX Setup

DMX Aus
DMX Gerät DMXUSBPRO

- DMX
  - Aus (Off) DMX features deactivated
  - An (On) DMX features activated

- DMX Gerät (Device)
  - OPENDMX ENTTEC OPENDMX USB
  - DMXUSBPRO ENTTEC DMXUSB PRO

5. Playback

5.1. Without Playlist

The easiest way to playback media files is to:

1. Copy the files to the root directory of the SD Card / USB storage.
2. Plug the SD Card / USB storage into the CF Player®.

The CF Player® starts the playback of the files in alphanumerical order (0-9, A-Z). Videos will be played once, pictures and HTML5 content are displayed for the duration defined as Displaytime (Default is 5 seconds)
Once all files have been played, the cycle will restart with the first item.

Special cases:
- Single video on SD Card: Will be looped seamlessly (no black frame)
- Single picture on SD Card: Will be displayed continuously

Example of the alphanumerical playback order:

1. 0.jpg
2. 05_movie5.mp4
3. 1.mp4
4. movie1.mov
5. picture2.jpg

5.1.1. Playback mode

You can choose between three different playback modes, that define the playback behaviour without PLAYLIST present on the SD Card or USB storage:

- Wiedergabe Modus (Playback mode)
  - Alle (Repeat all):
    All files will be looped in alphanumerical order.

  - Erster (Repeat first):
    First ITEM will be played in loop. If another ITEM is triggered, it will be played and at the

end of the file, the first ITEM will be looped again.

- Repeat current
  First ITEM will be played in loop. If another ITEM is triggered, it will be played and at the end of the file, the first ITEM will be looped again.

5.2. With Playlist (PLAYLIST.txt)

If you want to have full control over the order in which the items will be played, or if you want to use advanced features during playback, you can create a PLAYLIST.txt.

It is realized as a normal text file, that contains the file names and optional entries, that control the succession of an item or advanced features.

You can choose between three possibilities to create such a PLAYLIST.txt:

- Create a text file with a text editor or your choice and name it "PLAYLIST.txt"
- Use the provided Java tool HDMan and add items by drag'n'drop
- Use the Webinterface of the CF Player®. Navigate to the SD Card / USB storage tab and choose Playlist editor. Additional information can be found in chapter **Playlist Editor.**

Example:

```
[ITEM 0]
File=Movie1.mp4

[ITEM 1]
File=Pic1.jpg
Displaytime=12

[ITEM 2]
File=Movie2.mp4
```

5.2.1. Required parameters

IMPORTANT: Most parameters can be written in English, but Playlist Editor and HDMan will use the german definition.

- **[ITEM #]**

  Every item in the playlist must begin with this entry. Replace # with the index, that the file should have. This index defines the position of the item in the overall playback order.
  First index is 0.

  - Ex.: [ITEM 0]

- **File=Name**

  Filename incl. file extension. Case sensitive! Spaces in the filename are not permitted.

  - Ex.: File=Film1.mp4

- **German**: **Datei=**

5.2.2. Optional parameters

- **Displaytime=#** Value in seconds, that image or HTML5 content will be displayed until the next item starts.
  Default is 5 seconds.
  If you want to display the item permantently, enter -1.
  - Ex.: **Displaytime=6**
    Item will be displayed 6 seconds

    Displaytime=-1
    Item will be displayed permantently.
  - **German:** **Abbruchzeit=**
- **Succ=#** Successor of the current item.
  - Ex.: **Succ=1**
    Next will be ITEM 1.
- **Loop=#** Defines, if current video should be looped
  - Ex.: **Loop=-1**
    Movie looped continuously

    Loop=5
    The movie is looped 5 times until playback of next item starts.
- **Volume=#** Change volume for an item without changing the overall volume.
  0 (0%) to 10 (100%)
  - Ex.: **Volume=3**
- **Interruptible=** Can the item be interrupted by an external command or will it play until the end.
  - Ex.: **Interruptible=TRUE**
    File may be interrupted

    Interruptible=FALSE
    File may not be interrupted
  - **German:** **Unterbrechbar**
- **Random** The successor will be random
  - Ex.: **Random**
  - **German:** **Zufall**
- **IP xxx.xxx.xxx.xxx** Send an UDP message to the IP xxx.xxx.xxx.xxx and Port PORT
  - Ex.: **IP 192.168.0.5 4095 Lamp On**

    Send the message „Lamp On" to the IP 192.168.0.5 and Port 4095
- **RS232** Send a RS232 message via the serial interface

- Ex.: **RS232 Lamp On**

  Send the message "Lamp On" via RS232

- **DMX_Set** Set DMX Channels to a value
  - Ex.: **DMX_Set 1:255,2:255,3:255,4:255**

    Set channels 1,2,3,4 at the start of the filet to the value 255.
    Channels: 1 to 512
    Values: 0 to 255

- **DMX_Fade** Fade channels in X steps from a start to an end value
  - Ex.: **DMX_Fade(0,255,500,20) 1,200,300,512**
    Channels 1,200,300 and 512
    set to start value of 0 in 500 steps, each with a duration of 20 milliseconds to the end value of 255
- **DMX_Hold** DMX Channels will be set to a value for a given duration
  - Ex.: **DMX_Hold(5000) 1:255,2:255,3:255,500:255**
    Channels 1,2,3,500 set to the value 255
    After 5 seconds the previous value will be restored.

5.2.3. Scheduler Playlist

You can define time windows, in which a file is valid for playback. You can define start and end dates as well as start and end times. Additionally, you can define weekdays.

IMPORTANT: Please make sure, that the CF Player® is set to the correct time and date.

Example:

```
[ITEM 0]
File=Movie1.mp4
Start date=25.5.2018
End date=01.08.2018
Start time=00:05:00
End time=16:00:00
Weekdays=Mon,Tue,Sat

[ITEM 1]
File =Movie2.mp4
Start date=8.8.2008
End date=23.9.2008
Start time=10:15:0
End time=12:30:0
```

- Start date= First day that an ITEM is allowed to play
  Format: dd.mm.yyyy
  - Ex.: Start date=25.05.2018
    Don't play ITEM before 25.5.2018
- End date= Last date the ITEM is allowed to play
  Format: dd.mm.yyyy

- Ex.: End date=01.08.2018
  ITEM will be played until 1.8.2018. It will not be played anymore on 2.8.2018

- Start time= Start time
  Format: hh:mm:ss
  - Ex.: Start time=14:00:00
    ITEM plays after 14:00:00.

- End time= End time
  Format: hh:mm:ss
  - Ex.: End time=18:00:00
    ITEM will be played until 18:00:00.

- Weekdays= Weekdays, on which the ITEM is allowed to play.
  Format: Mon,Tue,Wed,Thu,Fri,Sat,Sun
  - Ex.: Weekdays=Mon,Tue,Sat,Sun
    ITEM is only allowed to play on Mondays, Tuesdays, Saturdays and Sundays.

IMPORTANT: These are time windows. A movie will not be stopped as soon as the end time is reached. It will continue playing until the end of the file and then not be started anymore if past the end time.

5.2.4. HTML5 Browser

You can display HTML5 files on the internal Webbrowser of the CF Player®.

The browser is capable of displaying HTML5, php, css, javascript, etc…
It is based on a webkit-browser, which means you have to use the webkit- syntax for advanced CSS features:
(i.e. -webkit-transition: …)

There are two possibilities to display HTML5 content:

1. Copy all files including subfolders to the SD card / USB storage. Even the main html/php files may be located in subfolders.

Example:

```
[ITEM 0]
HTML=Website1/index.html
Displaytime=120
```

- **Displaytime=#** Displaytime in seconds. Default is 5 seconds. You can change the default value in the configuration (**Default Displaytime**).
  If you want to display the item permantently, enter -1.
  - Ex.: **Displaytime=6**
    Content will be displayed for 6 seconds.

    Displaytime=-1
    Content will be displayed permanently.

- **HTML=** Filename of the main file of your HTML5 project. The paths are relative to the root directory of the SD card or USB storage.

2. Choose an online HTML source to display. Make sure to define complete URL including http://.

Example:

```
[ITEM 0]
HTML=http://www.sze.com
Displaytime=-1

[ITEM 1]
File=Movie2.mp4
```

You can mix HTML content and videos and images in the PLAYLIST.txt.

IMPORTANT: The URL must be accessible! Otherwise the ITEM will be skipped instantly.

6. Synchronized Playback

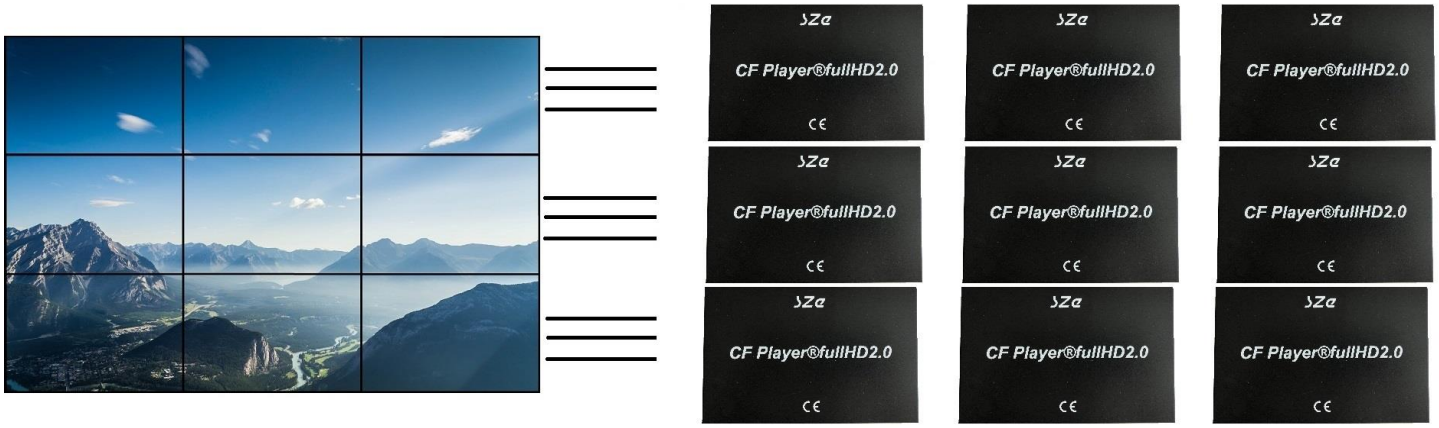
Multiple CF Player®s can be frame synchronized via network to create multi-display projects or videowalls. The synchronization is actively regulated, which means even if on CF Player® is added later, it will instantly be resynchronized with the other players.
You can even mix CF Player®fullHD2.0 with CF Player®UltraHD!

There is one master player that controls the slave players. If you want to use any interactivity, only control the master player. It will forward the commands to the slave players.

You can create up to 10 different Sync Groups within the same network. They operate independently.

IMPORTANT: All the CF Player®s of a Sync Group must be in the same local network **AND** use the same UDP Port!

Example of a Videowall with 9 CF Player®fullHD2.0 (possible resolution 9 * fullHD (9* 1920 * 1080 pixel)):



There is no limitation to the number of players that can be synced apart from the limitations of the IP4-protocol.

6.1. Setup Videowall

6.1.1. Prepare the content

For a perfect Synchronization, there are a few factors to be respected.

Videos must have:

1. the exact same duration
2. the exact same frame rate
3. the same, if possible fixed, bitrate

6.1.2. Distribute content to different players

Copy the content onto the SD card / USB storage according to the arrangement of the displays.

6.1.3. Playback

6.1.3.1. Without PLAYLIST.txt

The files will be played in alphanumerical order. If you have chosen another Playback Mode, it will define the order.

IMPORTANT: Synchronization could fail, if the alphanumerical order of the files is not consistent throughout all players in a Sync Group.

Ex.:

CF Player®fullHD2.0 number 1 content:
Movie1_left.mp4
Movie2_left.mp4
Movie3_left.mp4

CF Player®fullHD2.0 number 2 content:
Movie1_center.mp4
Movie2_center.mp4
Movie3_center.mp4

(etc …)

6.1.3.2. With PLAYLIST.txt

IMPORTANT: The ITEM numbers and the total amount of ITEMs must be consistent throughout all players in a Sync Group.

Ex.:

CF Player®fullHD2.0 number 1 PLAYLIST.txt:

```
[ITEM 0]
File=Movie1_left.mp4

[ITEM 1]
File=Movie2_left.mp4
```

CF Player®fullHD2.0 number 2 PLAYLIST.txt:

```
[ITEM 0]
File=Movie1_center.mp4

[ITEM 1]
File=Movie1_center.mp4
```

6.1.4. Integrate CF Player®s into a local network

All players must be in the same network. Details can be found in Chapter Network Setup.

6.1.5. Sync Options

```
Sync Control On
Sync Type Master
Sync Accuracy min
Sync Group 1
```

- Sync Control
  - Off
  - On

- Type
  - Master: This is the Master player, that controls all. If you want to use any external control, you should only send commands to this player. It will forward all commands to the other players.

    IMPORTANT: Only **ONE** Master is permitted per Sync Group!

  - Slave: A Slave player is controlled by the Master in his Sync Group. You can add as many Slave Players, as your network supports.

- Group
  - Assign a Sync Group to the player
  - You can choose between the Group 01 to Group 10
  - Different Sync Groups are independent

- Accuracy You can choose the accuracy of the synchronization.
  - Min: Sync Commands will only be sent on start of the ITEM
  - Low: Sync will be accurate with a tolerance of 1000ms
  - Medium: Sync will be accurate with a tolerance of 16ms
  - High: Sync will be accurate with a tolerance of 3ms

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.

IMPORTANT: All CF Player® of a Sync project should have the same Sync Accuracy
Content Update

7. DMX Functions

DMX Features:

- **DMX Input:**
  - Control the playback.
    - Item selection
    - Pause/Play / Jumping in Video
  - Setup the display.
  - Adjust brightness.
  - Adjust volume
  - Adjust playback speed

- **DMX Recorder:**
  - Record complete DMX shows. You can record one DMX512 universe. Save the show to SD or USB.
  - Playback of DMX show anytime.
    - By Playlist
    - By button press
    - By touch
    - By Webinterface
  - Playback of multiple shows simultaneously. (i.e. Show 1 Channel 5-10, Show 2 Channel 10-100 …)

- **DMX Output:**
  - Control DMX512 channels

- By Playlist
- By timecode

The following DMX Adapters are currently supported.

1. **ENTTEC DMXUSB PRO (Input & Output)**
2. **ENTTEC OPENDMX USB (Input ONLY!)**

1.DMXUSB PRO

2.OPENDMX USB

These are connected by USB to the CF Player®.

You can activate the DMX Control by adding the following entry to the CFPSetup.txt:

DMX On

You must define, which DMX Device is connected to the CF Player®:

DMX Device OpenDMX

oder

DMX Device DMXUSBPRO

After you have changed this value, you must reboot the CF Player® for the new setting to be applied.

7.1. DMX Input

If you want to use the DMX Input, you MUST use the **ENTTEC DMXUSB PRO** device!

To activate the DMX Input for controlling the CF Player® with DMX Channels or to use the DMX Recorder features, you must set the DMX Input to on:

DMX Input On

7.1.1. Control by DMX Channels

The CF Player® can be controlled by 11 DMX Channels currently. This might change in the future. The Start Address can be selected either in the Webinterface or the CFPSetup.txt:

DMX Address 10

This means that the first DMX Channel that the CF Player® reacts to, is the Channel number 10. Any Address from 1 to 502 (512 - 10) can be chosen. The following Tables show a Start Address of 10.

7.1.1.1. ITEM Select

Channel	Value	Function
10	0 - 255	Item select (For ITEMs higher than 255)
11	0 - 255	Item select

With the DMX Channels 1 and 2 (Channel 10 and 11 in the example), media files can be started. A total of 65025 items can be selected directly. Channel 1 (Channel 10 in the example) is used as a multiplier for the value 256 and the value of Channel 2 (Channel 11 in the example):

ITEM number = (Channel 10) * 256 + (Channel 11)

ITEM	Ch 10	Ch 11	ITEM	Ch 10	Ch 11	ITEM	Ch 10	Ch 11
0	0	0	10	0	10	250	0	250
1	0	1	11	0	11	251	0	251
2	0	2	12	0	12	255	0	255

ITEM	Ch 10	Ch 11	ITEM	Ch 10	Ch 11	ITEM	Ch 10	Ch 11
256	1	0	512	2	0	1024	4	0
257	1	1	513	2	1	25000	97	168
258	1	2	768	3	0	65535	255	255

You can calculate the values for Channel 1 and 2 (Channel 10 and 11 in the example) by entering the Item number you want to select. As soon as you click somewhere else, the values for the Channels will be calculated and displayed:

Calculate the values

ITEM	Channel 10	Channel 11
555	2	43

7.1.1.2. HDMI Setup

12	0 - 9	HDMI settings

You can configure the HDMI Output with the DMX Channel 3 (Channel 12 in the example)
The following settings are possible:

Value	Function	Value	Function	Value	Function	Value	Function	Value	Function
0	Output Off	2	HDMI Auto On	4	1080p60	6	2160p60	8	720p60
1	Output On	3	HDMI Auto Off	5	1080p50	7	2160p50	9	720p50

7.1.1.3. Volume

13	0 - 10	Volume (0: Mute - 10: Max)

You can adjust the volume with the DMX Channel 4 (Channel 13 in the example).

7.1.1.4. Playback Commands

14	0 - 8	Playback Commands

You can control the playback with the DMX Channel 5 (Channel 14 in the example).

Value	Function	Value	Function	Value	Function	Value	Function
0	Continue	2	Next	4	Jump forward (Value of Channel 20)	6	Show Setup
1	Pause	3	Prev	5	Jump backward (Value of Channel 20)	7	Show Playback

Value 4 jumps X seconds forward in the media file.
Value 5 jumps X seconds backward in the media file.

The Value of X is the value of DMX Channel 11 (Channel 20 in the example).

Value 6 shows the Setup Screen on the display.
Value 7 shows the Playback on the display.

7.1.1.5. Brightness / Dimmer

15	0 - 255	Brightness (0: Blackout 128: Default 255: Max)

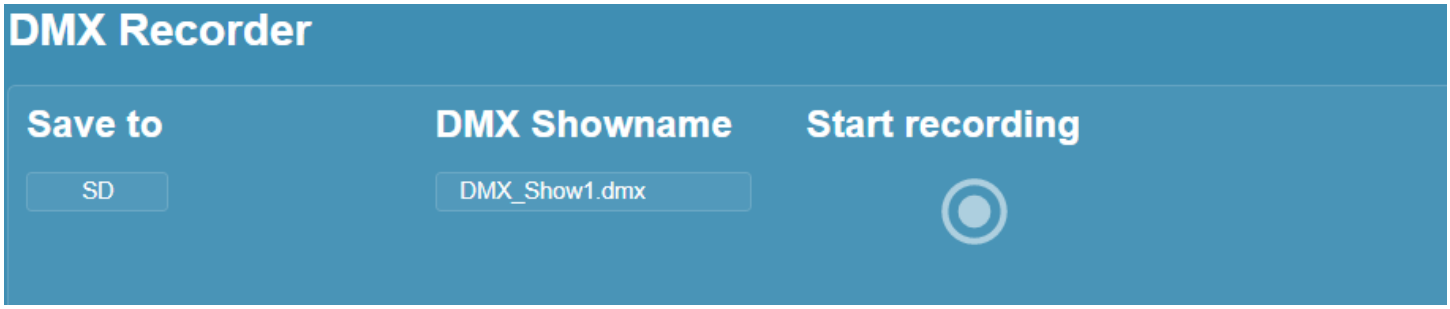
7.1.1.6. Playback Speed

16		0 - 30		Playback speed	
Value	Function	Value	Function	Value	Function
0	Pause	10	Forward 1/10	20	Forward 9/10
1	Backward 10x	11	Forward 2/10	21	Forward 1x
2	Backward 5x	12	Forward 1/4	22	Forward 1.25x
3	Backward 4x	13	Forward 3/10	23	Forward 1.5x
4	Backward 2x	14	Forward 4/10	24	Forward 1.75x
5	Backward 1.5x	15	Forward 1/2	25	Forward 2x
6	Backward 1x	16	Forward 6/10	26	Forward 3x
7	Backward 3/4	17	Forward 7/10	27	Forward 4x
8	Backward 1/2	18	Forward 3/4	28	Forward 5x
9	Backward 1/4	19	Forward 8/10	29	Forward 10x

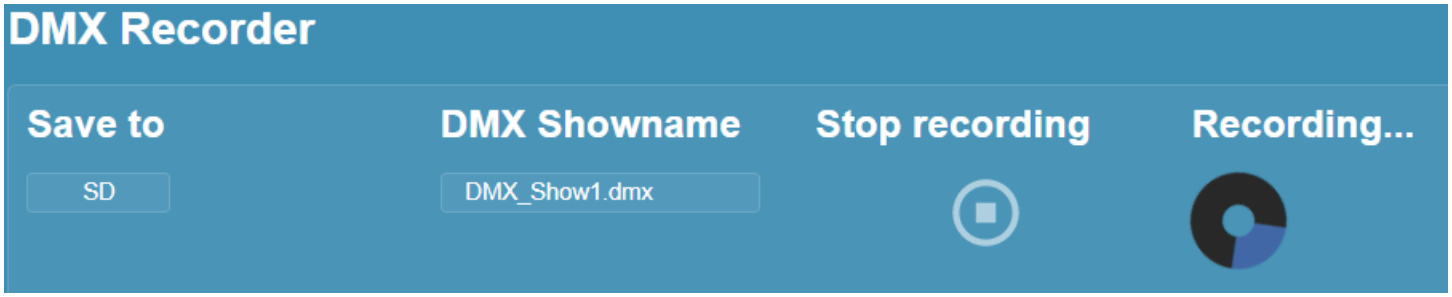
7.1.2. DMX Recorder

You can use the CF Player as a DMX Recorder.
You can only playback DMX Shows recorded with the CF Player®. The syntax and contents of the *.dmx files will be explained in a future version of this manual.

7.1.2.1. Recording a DMX Show



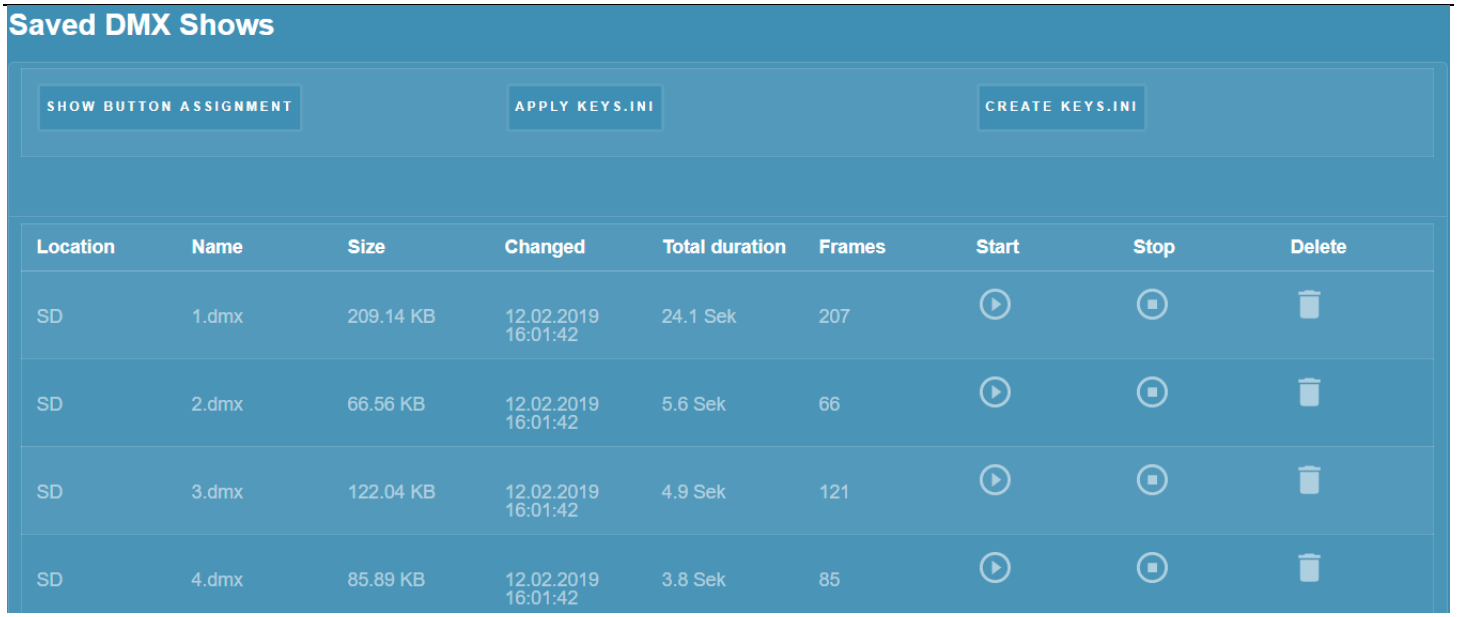
1. To start a DMX Record, first you need to choose a location to save the file to. This can be either SD Card or DMX storage.
   IMPORTANT: There is no check if the device is present.
2. Choose a name. The file name extension is fixed to be .dmx.
3. Start the record immediately by pressing the "Start recording" button.
4. A "Stop recording" button and a "Recording…" icon will appear.
5. To stop the record immediately, press the "Stop recording" button.



6. As soon as the show has been saved, it will appear under Saved DMX Shows.

7.1.2.2. Saved DMX Shows

All *.dmx files found on the SD Card or USB Storage will be listed in a table. Each entry is listed with name, size, date and time of last edit. Also, the total duration in seconds and the number of frames, that the DMX show counts. A frame consists of 512 DMX Channels and their value.
Each *.dmx file starts with the line "SZE DMX SHOW". Followed by the value 2 and then 512 Channel values separated by comma.
Then follows a new line with the break time between two DMX Frames in milliseconds.



The playback of a DMX Show can be started by clicking "Start". If you click on any of the "Stop" buttons, Playback **ALL** DMX Shows will be stopped.
You can delete a show by clicking on the trashcan icon.

IMPORTANT: Deleting a file cannot be undone!

7.1.2.3. Playback of a DMX Show

There are several ways to play back DMX Shows:

- Entry in Playlist (Chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**)
  - DMX Show will start synchronously with media item.
- CuePoint in *.sze file (Chapter 8)
  - DMX Show can be started at any moment during playback of a media file.
- Start by button in Playlist:
  - Key1=DMX_Show 1.dmx
    Num1=DMX_Show 1.dmx
    Show is started by pressing Key1/Numblock1.
    Only valid during playback of ITEM, that has the entry in Playlist.
- Start by button in Keys.ini file:
  - Key1=DMX_Show 1.dmx
    Show is started by pressing Key1/Numblock1. Always valid and not linked to a specific ITEM in Playlist.
- Start by Webinterface
  - Click on „Start" button in Saved DMX Shows.

7.1.2.4. Stopping of a DMX Show

There are several ways to stop the playback DMX Shows:

- Entry in Playlist (Chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**)
  - All DMX Shows will be stopped when Playback of ITEM starts.
- CuePoint in *.sze file (Chapter 8)

- DMX Show can be stopped at any moment during playback of a media file.

- Stop by button in Playlist:
  - Key1=DMX_Stop
    Num1=DMX_Stop
    Playback of **ALL** DMX Shows is stopped by pressing Key1/Numblock1.
    Only valid during playback of ITEM, that has the entry in Playlist.

- Stop by button in Keys.ini file:
  - Key1=DMX_Stop
    Playback of **ALL** DMX Shows is stopped by pressing Key1/Numblock1.
    Always valid and not linked to a specific ITEM in Playlist.

- Stop by Webinterface
  - Click on any „Stop" button in Saved DMX Shows.

7.1.3. DMX Output

7.1.3.1. Available DMX Commands

- **DMX_Show** Playback of a saved DMX Show from SD Card or USB storage
  - Ex.: **DMX_Show 1.dmx**

    As soon as playback of this item starts, the DMX Show will start.

- **DMX_Set** Set DMX Channels to a value
  - Ex.: **DMX_Set 1:255,2:255,3:255,4:255**

    Set channels 1,2,3,4 at the start of the filet to the value 255.
    Channels: 1 to 512
    Values: 0 to 255

- **DMX_Fade** Fade channels in X steps from a start to an end value
  - Ex.: **DMX_Fade(0,255,500,20) 1,200,300,512**
    Channels 1,200,300 and 512
    set to start value of 0 in 500 steps, each with a duration of 20 milliseconds to the end value of 255

- **DMX_Hold** DMX Channels will be set to a value for a given duration
  - Ex.: **DMX_Hold(5000) 1:255,2:255,3:255,500:255**
    Channels 1,2,3,500 set to the value 255
    After 5 seconds the previous value will be restored.

7.1.3.2. Send at start of media item by Playlist

Add the line with the DMX Command under the ITEM of your choice.

Ex.1:

```
[ITEM 0]
File=Film1.mp4
DMX_Set 1:255,2:255,3:255,4:255
```

Ex.2:


```
[ITEM 0]
File=Film1.mp4
DMX_Fade(0,255,500,20) 1,200,300,512
```

Ex.3:

```
[ITEM 0]
File=Film1.mp4
DMX_Hold(15000) 1:255,2:255,3:255,4:255
```

7.1.3.3. CuePoints by Timecode with *.sze file

First the CuePoints must be activated:

```
Cuepoints On
```

A CuePoint-file *.sze must be created as described in Chapter 8.

1. Create a simple text file with the same name as the media file **INCLUDING** the file extension. Add .sze to the file name.

   Example:
   Filename: Movie1.mp4
   Cuepoint-filename: Movie1.mp4.sze

2. Add a new line starting with the „@" symbol.
3. Add one space.
4. Specify the timecode, at which the command should be executed.
   Format: **hh:mm:ss.ms** (hour:minute:second.millisecond)
5. Add one space.
6. Choose the command:

   a. DMX Show:
   Add a „>" symbol and another space and the following text:

   DMX_Show Showname

   Showname: Name of the DMX Show to be played

   b. DMX Command:
   Add a „>" symbol and another space and one of the available DMX Commands:

   @ 0:0:1.500 > DMX_Fade(0,255,255,1) 1,2,3,4
   @ 0:0:2.500 > DMX_Hold(2055) 1:120,2:120,3:110,4:100
   @ 0:0:3.800 > DMX_Set 1:255,2:255,3:255,4:255

Media filename: Movie1.mp4

CuePoint filename: Movie1.mp4.sze

```
@ 0:0:1.500 > DMX_Fade(0,255,255,1) 1,2,3,4
@ 0:0:2.500 > DMX_Hold(2000) 1:120,2:120,3:110,4:100
@ 0:0:5.500 > DMX_Set 1:255,2:255,3:255,4:255
@ 0:10:25.000 > DMX_Show show1.dmx
```

At 1.5 seconds a fading of DMX Channels 1,2,3,4 is started.
At 2.5 seconds the DMX Channels 1,2,3,4 are set to 120,120,110,100 for 2 seconds.

At 5.5 seconds the DMX Channels 1,2,3,4 are set to 255.
At 10 minutes and 25 seconds playback of DMX Show "show1.dmx" is started.

8. CuePoints (*.sze file)

The CuePoint functionality can be activated in the Webinterface or the CFPSetup.txt:

```
Cuepoints On
```

If this feature is enabled, you can schedule many different commands at a specific timecode during a media item. These are also available for picture items (timecode will be calculated).

8.1. Creating the Cuepoints *.sze file

The CF Player will search for a matching .sze file at the beginning of each media item.
This file must be named identical to the media item, **INCLUDING** the filename extension of the item (.mp4,.mp3, jpg…), and have a new filename extension .sze.

Example:
Filename: Movie1.mp4
Cuepoint-filename: Movie1.mp4.sze

Filename: Pic1.jpg
Cuepoint-filename: Pic1.jpg.sze

1. Add a new line starting with the „@" symbol.
2. Add one space
3. Specify the timecode, at which the command should be executed.
   Format: **hh:mm:ss.ms** (hour:minute:second.millisecond)
   IMPORTANT: Add a . between seconds and milliseconds

The accuracy is one frame at 60 frames per second: 16ms.

Example:

```
@ 0:0:1.500
```

8.2. Available Commands

8.2.1. Pause

IMPORTANT: No „>" Sign or other parameter needed

Syntax @ 00:00:01.500

Function Pause the ITEM until it is resumed manually.

Example @ 00:00:01.500

8.2.2. Pause_Hold

Syntax @ 00:00:01.500 > Pause_Hold Holdtime

Function Pause the ITEM for a duration in seconds

Parameter Holdtime: Duration in seconds the item should pause

Example @ 00:00:01.500 > Pause_Hold 25

8.2.3. UDP Message

Syntax @ 00:00:01.500 > IP PORT Message

Function Send a UDP message to a specific IP and PORT

Parameter
IP: IP Address of receiver
PORT: Port of Receiver
Message: Message to send

Example @ 00:00:01.500 > 192.168.178.50 4950 Lamp On

8.2.4. RS232 Message

8.2.4.1. ASCII

Syntax @ 00:00:01.500 > RS232 Message

Function Send a RS232 message via RS232 port.

Parameter
Message: Message to send
Optional
[CR]: Add a Carriage Return (0x0d)
[LF]: Add a Line Feed (0x0a)

Example @ 00:00:01.500 > RS232 Lamp On[CR][LF]

8.2.4.2. Hexadecimal

Syntax @ 00:00:01.500 > RS232_HEX Message

Function Send a RS232 hexadecimal message.

Parameter Message: Message to send in hexadecimal representation: 0x00-0xFF

Example @ 00:00:01.500 > RS232_HEX 0x54 0x45 0x53 0x54 0x0D 0x0A

8.2.5. Relay

Syntax @ 00:00:01.500 > Relay Nr:State

Function Close or open a Relay of USB Card

Parameter
Nr: ID of Relay to be controlled
With one USB Relay Card 1 bis 8
With two USB Relay Cards 1 bis
State: On: Relay is closed
Off: Relay is opened

Example
@ 00:00:01.500 > Relay R1:On,R2:Off,R7:Off
@ 00:00:07.500 > Relay R1-R7:Off
@ 00:00:10.500 > Relay R3-R6:On

8.2.6. DMX Commands

8.2.6.1. DMX_Set

Syntax @ 00:00:01.500 > DMX_Set Channel1:Value1,Channel2:Value2,…

Function Set DMX Channels to a value.

Parameter
Channel: DMX Channel (1 - 512)
Value: DMX Value (0 – 255)

Example @ 00:00:01.500 > DMX_Set 1:115,2:255,110:255,510:123

8.2.6.2. DMX_Fade

Syntax @ 00:00:01.500 > DMX_Fade(Startvalue,Endvalue,Stepcount,Stepduration) Channel1,Channel2,Channel3,…

Function Fade channels in X steps from a start to an end value

Parameter
Startvalue: 0 to 255
Endvalue: 0 to 255
Stepcount: number of steps to fade
Stepduration: duration of each step in milliseconds
Channel: 1 to 512

Example @ 00:00:01.500 > DMX_Fade(0,255,255,1) 1,2,3,4
Channels 1,2,3,4 set to startvalue 0 and in 255 steps, each with a duration of 1 millisecond, to the endvalue of 255.

.

8.2.6.3. DMX_Hold

Syntax @ 00:00:01.500 > DMX_Hold(Dauer) Channel1:Value1,Channell2:Value2

Function DMX Channels will be set to a value for a given duration.

Parameter
Channel: 1 to 512
Dauer: Duration in milliseconds
Value: DMX Value (0 – 255)

Example @ 00:00:01.500 > DMX_Hold (5000) 1:255,2:255,3:255,500:255
Channel 1,2,3,500 set to 255. After 5 seconds the Channels will be reset to their previous values.

8.2.6.4. DMX_Show

Syntax @ 00:00:01.500 > DMX_Show Showname.dmx

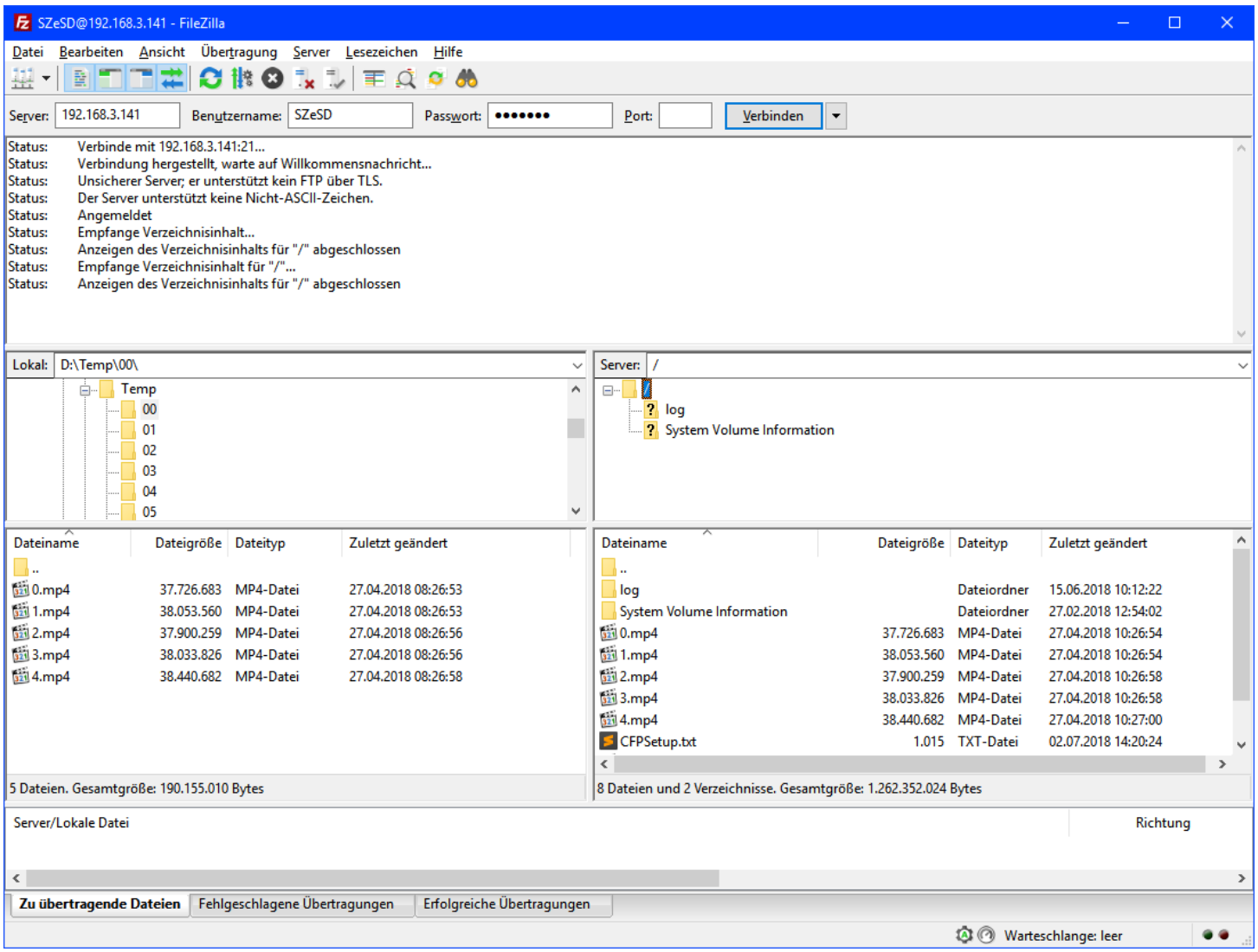
Function DMX Show is played back.

Parameter Showname: Name of DMX Show including .dmx filename extension.

Example @ 00:00:01.500 > DMX_Show Blau_1.dmx

9. Content Update

9.1. Manual access via ftp client



An ftp server is running on the CF Player®fullHD2.0 that grants you access to the SD Card and USB storage. You can connect with a FTP Client (FileZilla https://filezilla-project.org/) and modify the contents on the storage.

You can either access the SD card or the USB storage. Usernames and passwords can be defined in the CFPSetup.txt or the Webinterface.
Defaults are:

- Access SD Card: **Username: SZeSD** **Password: szegmbh**
- Access USB storage: **Username: SZeUSB** **Password: szegmbh**

On the left you can navigate through your local files on your PC. On the right side are the files of the player. You can either Drag'n'Drop new files to the right window or right click on a file and select "upload".

IMPORTANT:
You must apply any uploads or deletion of files by clicking "Reload Content" on the SD or USB page of the Webinterface.

9.2. Automatic Content Update via FTP

You can configure the CF Player® to download new files periodically from a predefined server.
They can be updated every hour, day, weekly, monthly or after a custom interval in seconds.

FTP Download On
FTP Download Server none
FTP Download Username test
FTP Download Password test
FTP Download Mode passive
FTP Download Date 1.1.2012
FTP Download Time 1:0:0
FTP Download hourly Off
FTP Download daily Off
FTP Download weekly Off
FTP Download monthly Off
FTP Download Interval 0
FTP Download Server Folder /
FTP Download Overwrite Off

- FTP Download
  - Off: FTP Autodownload deactivated
  - On: FTP Autodownload activated
- FTP Download Server
  - IP address of remote ftp server
- FTP Download Username
  - Login username of remote ftp server
- FTP Download Password
  - Login password of remote ftp server
- FTP Download Date
  - Date of first automatic ftp download
- FTP Download Time
  - Time of first automatic ftp download
- FTP Download hourly
  - Start download every 60 minutes starting from first date and time
- FTP Download daily
  - Start download every 24 hours starting from first date and time
- FTP Download weekly
  - Start download every 7 days starting from first date and time.
- FTP Download monthly
  - Start download every 4 weeks starting from first date and time.
- FTP Download Interval in seconds
  - Start download every X seconds starting from first date and time.
- FTP Download Server Folder
  - Subfolder on remote ftp server for this player

- FTP Download Overwrite
  - Off: Playback continues while download runs in background
  - On: Playback is suspended until download is completed

9.2.1. With FileList.txt

First, the file „FileList.txt” will be downloaded. This file defines the additional operations.
Available are:

1. Delete files on SD / USB
2. Download files to SD /USB

- **FileList.txt**

```
SD:test1.mp4
SD:PLAYLIST.txt
Delete_SD:test.mp3
USB:test2.mp4
Delete_USB:test5.mp4
```

  - ***SD:*** File should be downloaded to SD card
  - ***Delete_SD:*** File should be deleted from SD card
  - ***USB:*** File should be downloaded to USB storage
  - ***Delete_USB:*** File should be deleted from USB storage

9.2.2. Without FileList.txt

All files from the ftp server will be downloaded.

9.3. USB Content Update

IMPORTANT: Does only work with a SD card present.

You can update the files on a SD card by inserting a USB storage into the CF Player®.

9.3.1. With FileList.txt

First, the FileList.txt on the USB storage will be interpreted.

- **FileList.txt**

```
SD:test1.mp4
SD:PLAYLIST.txt
Delete_SD:test.mp3
```

  - ***SD:*** File should be copied to SD card
  - ***Delete_SD:*** File should be deleted from SD card

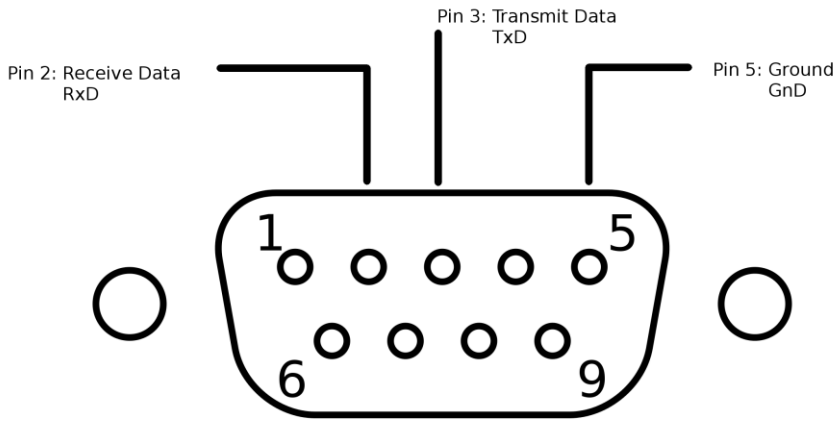
9.3.2. Without FileList.txt

All files from the USB storage will be copied to the SD Card.
During the transfer, the playback will be aborted, and a USB update screen will appear on the display. As soon as all operations are completed, playback will resume with the new files.

10. External Control

10.1. Control via serial RS232-Interface

The pin assignment of the DSUB9 connector:



Baud rate:	9.600 Baud (default)
Data:	8 bit
Parity:	none
Stop:	1 bit
Flow Control:	none
Code:	ASCII
Control symbols:	Carriage Return <CR> and Line Feed <LF> to terminate the command string
Syntax:	<command><argument>[CR LF]
Ex.:	**NEXT <CR><LF>** The next ITEM will be triggered.

- Entry in CFPSetup.txt:

RS232 Terminal
Baudrate 9600
Possible Baudrates: 2400, 4800, 9600, 19200, 57600, 115200

10.2. Control via UDP (User Datagram Protocol)

The CF Player® can be controlled via UDP messages. You can access the player with its IP address and the configured UDP Port. The default Port is 4950 but can be assigned freely (Network).

10.3. Playback Commands

10.3.1. PAUSE

Syntax	PAUSE
Alternative	PAUS
Function	Playback is paused

10.3.2. CONTINUE

Syntax	CONTINUE
Alternative	CONT / FORTSETZEN / RESUME / RESU

Function Continue playback of a paused ITEM

10.3.3. PAPL

Syntax PAPL

Alternative PAUSEPLAY

Function Pause/Play toggles Pause and Continue.
If playback is paused, it will continue.
If playback is running, it will be paused.

10.3.4. STATUS?

Syntax STATUS?

Function Return the current playback state: playing, paused oder stopped

10.3.5. NEXT

Syntax NEXT

Function Triggers the next ITEM
If the current ITEM is the last ITEM, playback will restart with the first ITEM.

10.3.6. PREV

Syntax PREV

Function Triggers the previous ITEM

10.3.7. PLAY

Syntax PLAY=nnnn

Alternative PLAYINDEX=nnnn

Function Starting playback of ITEM with index nnnn

Parameter nnnn Index of ITEM to be played
The index is either the ITEM number in the PLAYLIST.txt [ITEM nnnn] or the position of the file in alphanumerical order on the SD card / USB storage.

Example PLAY=2 Playback of ITEM 2 is started

10.3.8. PLAYFILE

Syntax PLAYFILE=Filename.fileextension

Alternative PLAYDATEI=Filename.fileextension

Function Start playback of given file

Parameter Filename including file extension

Example PLAYFILE=FILM1.mp4

10.3.9. SYNC (Only UDP)

Syntax SYNC=nnnn

Function Starting playback of ITEM with index nnnn

Parameter nnnn nnnn Index of ITEM to be played
The index is either the ITEM number in the PLAYLIST.txt [ITEM nnnn] or the position of the file in alphanumerical order on the SD card / USB storage. If current ITEM is already nnnn, nothing will happen.

Example SYNC=2 Playback of ITEM 2 is started

10.3.10. JUMP

Syntax JUMP=nnnn

Alternative JUMPTIME=nnnn

Function Jump to a given position in a video.

Parameter nnnn Position to be jumped to in milliseconds.
Values from 0 to total duration of video.

Example: Jump=20000 Jump to 20 seconds.

10.3.11. RUNTIME?

Syntax RUNTIME?

Alternative LAUFZEIT?

Function Returns the runtime of the ITEM

Example RUNTIME?
Returns: RUNTIME=25000
Current runtime of ITEM is 25 seconds

10.3.12. TIMETOFINISH?

Syntax TIMETOFINISH?

Alternative RESTLAUFZEIT?

Function Returns the remaining duration of the ITEM in milliseconds

Example TIMETOFINISH?
TIMETOFINISH=25000
Current ITEM has a remaining duration of 25 seconds

10.3.13. SPEED=

Syntax SPEED=nnn

Function Set playback speed

Parameter nnn Playback speed in percent

Example SPEED=25 Set playback speed to 25%

10.3.14. SPEED?

Syntax SPEED?

Function Get the current playback speed

Example SPEED?
Speed=100
Current playback speed is 100%

10.3.15. RS232TIMECODE (RS232 only)

Syntax RS232TIMECODE

Function Current timecode is sent every 16ms.
Format: TC hh:mm:ss:msmsms (CR LF line ending)

Example RS232TIMECODE
Example Reply: TC 00:00:35:033

10.3.16. RS232TIMECODEOFF (RS232 only)

Syntax RS232TIMECODEOFF

Function Stops the Timecodeausgabe

10.3.17. RS232MONITOR (RS232 only)

Syntax RS232MONITOR

Function Playback information messages are sent.

Messages **PLNG x:** Sent at start of ITEM. x is the ITEM number of current ITEM.

DONE x: Sent at end of ITEM. x is the ITEM number of currently ended ITEM.

Example RS232MONITOR

10.3.18. RS232MONITOROFF (RS232 only)

Syntax RS232MONITOROFF

Function Stops the playback information.

10.3.19. UDPMONITOR=IP (UDP only)

Syntax UDPMONITOR=IPAddress

Function Playback information messages are sent.

Messages **PLNG x:** Sent at start of ITEM. x is the ITEM number of current ITEM.

DONE x: Sent at end of ITEM. x is the ITEM number of currently ended ITEM.

Example UDPMONITOR=192.168.0.44

10.3.20. UDPMONITOROFF (UDP only)

Syntax UDPMONITOROFF

Function Stops the playback information.

10.3.21. SPEED=

Syntax SPEED=nnn

Function Change the playback speed

Parameter nnn Playback speed in percent

Example SPEED=25 Set playback speed to 25%

10.3.22. SPEED?

Syntax SPEED?

Function Get the current playback speed

Example SPEED?
Example Reply: Speed=100
Current playback speed is 100%

10.4. Audio Commands

10.4.1. VOLUP

Syntax VOLUP

Function Increase volume by one step

Example VOLUP

10.4.2. VOLDOWN

Syntax VOLDOWN

Function Decrease volume by one step

Example VOLDOWN

10.4.3. VOLUME=

Syntax VOLUME=nn

Function Set the volume

Parameter nn 0 (Mute) to 10 (max)

Example VOLUME=8

10.4.4. VOLUME?

Syntax VOLUME?

Function Get current volume

Example VOLUME?
Example Reply: Volume=8
Current volume is 8

10.4.5. MUTE

Syntax MUTE

Function Muting audio output

Example MUTE
Volume is set to 0

10.4.6. UNMUTE

Syntax UNMUTE

Function Unmute audio output

Example UNMUTE
Volume is set to previous value

10.4.7. MUTE?

Syntax MUTE?

Function Get current muting state

Example MUTE?
Example Reply: Mute=0
Mute=0 Muting deactivated
Mute=1 Muting activated

10.4.8. AUDIOTRACK=

Syntax AUDIOTRACK=nn

Function Choose the audiotrack of ITEM, if it has more than one

Parameter nn Audiotrack to select

Example AUDIOTRACK=3
Third audiotrack is selected

10.4.9. AUDIOTRACK?

Syntax AUDIOTRACK?

Function Get current audiotrack

Example AUDIOTRACK?
Example Reply: Audiotrack=1
Current audiotrack is 1.

10.5. File Commands

10.5.1. INDEXLIST?

Syntax INDEXLIST?

Function Get the indexlist of all files on SD Card / USB Storage

Example INDEXLIST?
Example Reply:
0:Movie1.mp4
1:Movie2.mp4

10.5.2. PLAYLISTUPDATE

Syntax PLAYLISTUPDATE

Function Content of SD Card / USB Storage is rescanned. Necessary, if new files have been uploaded or deleted remotely.

Example PLAYLISTUPDATE

10.5.3. PLAYLIST?

Syntax PLAYLIST?

Function Get contents of Playlist

Example PLAYLIST?
Example Reply:
[ITEM 0]
File=1.jpg
Displaytime=2

[ITEM 1]
File=2.mp4

10.5.4. FOLDERLIST?

Syntax FOLDERLIST?

Function Get content of SD Card or USB Storage

Example FOLDERLIST?
Example Reply:
1.jpg
2.mp4
PLAYLIST.txt
CFPSetup.txt

10.5.5. STARTFTPDOWNLOAD?

Syntax STARTFTPDOWNLOAD?

Function Start the FTP Download from a FTP Server

Example STARTFTPDOWNLOAD?

10.6. System Commands

10.6.1. DATE=

Syntax DATE=TT.MM.JJJJ SS:MM:ss

Function Set time and date on CF Player®

Parameter Time and date that should be set

Example DATE=04.07.2018 10:15:00

10.6.2. WEBINTERFACE

Syntax WEBINTERFACE

Function Show Webinterface on display. Playback is continued in the background.

Example WEBINTERFACE

10.6.3. SHOWPLAYBACK

Syntax SHOWPLAYBACK

Function Show playback, if Webinterface is currently shown on display.

Example SHOWPLAYBACK

10.6.4. OUTPUTON

Syntax OUTPUTON

Function Activate HDMI output

Example OUTPUTON

10.6.5. OUTPUTOFF

Syntax OUTPUTOFF

Function Deactivate HDMI output

Example OUTPUTOFF

10.6.6. SYNCON

Syntax SYNCON

Function Synchronized playback is activated

Example SYNCON

10.6.7. SYNC_AUS

Syntax SYNCOFF

Function Synchronized playback is deactivated

Example SYNCOFF

10.7. Digital-I/O-Adapter at serial interface

- Entry in CFPSetup.txt:

RS232 Digital-IO

The digital-I/O-adapter allows you to connect up to 16 buttons to the CF Player®. The red cable is the common signal. As soon as you connect the red cable to any of the other signals the corresponding command will be sent to the CF Player®.

The following table shows the colors of the cable and the corresponding button index:

Cable color	Keycode	Action
red		common signal
blue	Key1	[ITEM 1] in PLAYLIST / Index 1 without PLAYLIST
green	Key2	[ITEM 2] in PLAYLIST / Index 2 without PLAYLIST
yellow	Key3	[ITEM 3] in PLAYLIST / Index 3 without PLAYLIST
white	Key4	[ITEM 4] in PLAYLIST / Index 4 without PLAYLIST
black	Key5	[ITEM 5] in PLAYLIST / Index 5 without PLAYLIST
brown	Key6	[ITEM 6] in PLAYLIST / Index 6 without PLAYLIST
purple	Key7	[ITEM 7] in PLAYLIST / Index 7 without PLAYLIST
pink	Key8	[ITEM 8] in PLAYLIST / Index 8 without PLAYLIST
Only valid for 16 contact I/O adapter		
grey	Key9	[ITEM 9] in PLAYLIST / Index 9 without PLAYLIST
white/green	Key10	[ITEM 10] in PLAYLIST / Index 10 without PLAYLIST
white/yello	Key11	[ITEM 11] in PLAYLIST / Index 11 without PLAYLIST
brown/green	Key12	[ITEM 12] in PLAYLIST / Index 12 without PLAYLIST
grey/pink	Key13	[ITEM 13] in PLAYLIST / Index 13 without PLAYLIST
brown/yellow	Key14	[ITEM 14] in PLAYLIST / Index 14 without PLAYLIST
brown/grey	Key15	[ITEM 15] in PLAYLIST / Index 15 without PLAYLIST
red/blue	Key16	[ITEM 16] in PLAYLIST / Index 16 without PLAYLIST

10.7.1. Custom assignment with KeyOff

If you want to assign custom functions to the contacts, you can use the parameter "KeyOff" in the PLAYLIST.txt

```
KeyOff
```

This entry is only valid for the ITEM it is part of. The next ITEM will use the default assignments, if no KeyOff is added,

Example:

```
[ITEM 1]
File=001.jpg
Displaytime=-1
Succ=0
KeyOff
Key1=6
Key2=5
Key3=4
Key4=3
Key5=2
Key6=1
```

Special commands

Code	Type	Parameter	Function	Example
.d	Distance	+ Number of items - Number of items	Jump forward X items Jump backward X items	Key1=+1.d Key2=-1.d
.t	Trickmode	+1 (PAUSE) -1 (PLAY) 2 (PAPL)	Pause Resume Pause/Play	Key1=+1.t Key2=-1.t Key3=2.t
.v	Volume	+ Number (Max: 10) - Number (Min: 0)	Increase volume Decrease volume	Key1=+5.v Key2=-5.v
.j	Jump	+ seconds forward - seconds backward	jump X seconds forward in video jump X seconds backward in video	Key1=+10.j Key2=-10.j
.x	Random	1	Random jump in Playlist	Key1=1.x Key2=1.x
.a	Audiotrack	ID of audiotrack	Select audiotrack of video	Key1=1.a Key2=2.a

10.8. USB Touchscreen

The CF Player® can be controlled by a Touchscreen connected via USB.

With most Touchscreens the CF Player® can be configured by a Touchscreen.
Starting from Firmware Version 1.0.40 there is a new setting "Touchscreen" in the Setup. This settings has priority over the selected „USB Type"

This setting allows you to use a Touchscreen simultaneously to other USB devices.

- Entry in CFPSetup.txt

Touchscreen An

Touchscreen	Contact us for supported models
○ Off	Touchscreen events are ignored. Except for setup screen navigation
○ On	Touchscreen with 1920x1080 scaling.
○ Raw	Touchscreens, that use custom touch resolution. See info below.

For every ITEM in the Playlist a total of 127 touch fields can be defined. These fields are only active during the playback of this ITEM.

The touch fields are defined by X and Y coordinates and their height and width.

10.8.1. Natively supported Touchscreens

The CF Player® scales the touchscreen coordinates for most Touchscreens to the resolution

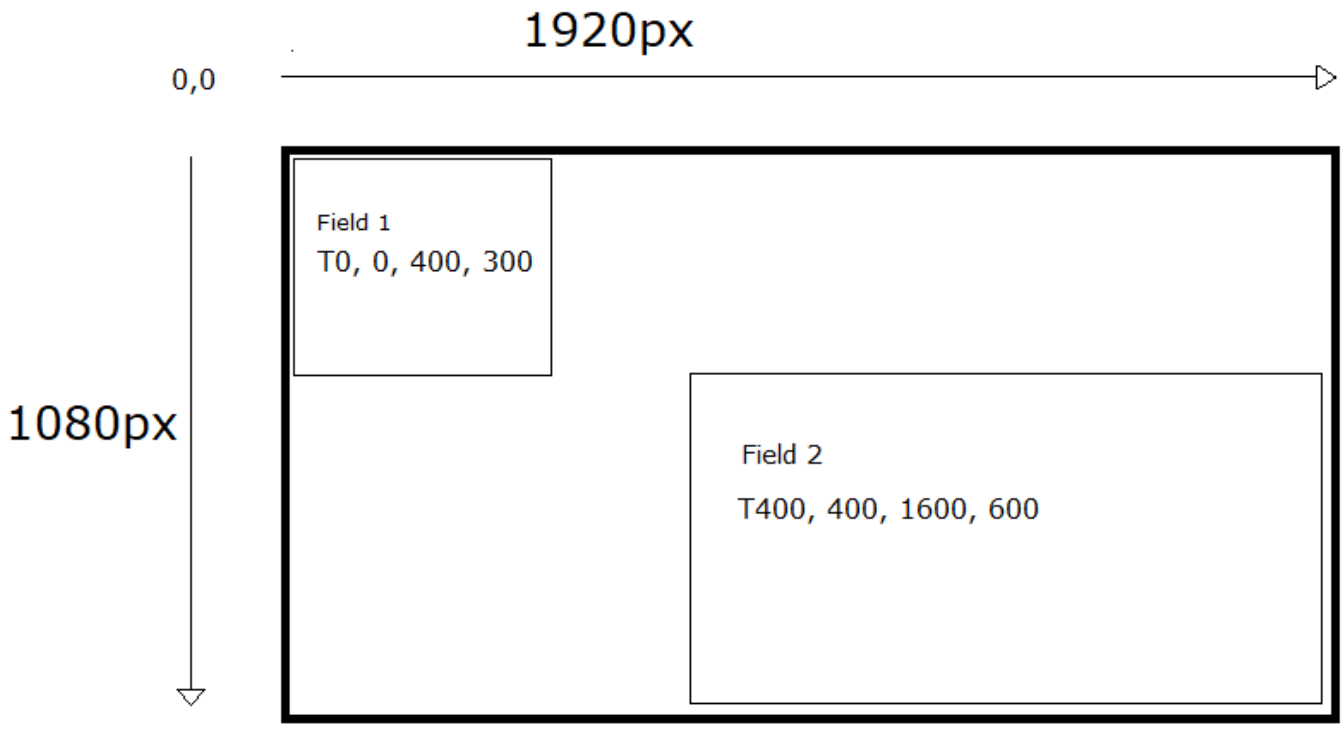
1920 X 1080 pixels (except for special case!)

The coordinate X:0 and Y:0 is located at the top left.

You can easily determine, whether your touchscreen is supported natively, by trying to control the Setup Screen by touch events. This is independent of the setting for the Touchscreen.
If the CF Player® reacts to touching the display, your touchscreen is automatically scaling the coordinates to 1920x1080 pixels.

IMPORTANT: **HTML Touch control only works with such touchscreens!**

If no reaction to touch events on the Setup Screen happens, you must follow the instructions for other touchscreens. The basic principle is identical, but the touch coordinates can have different values (e.g. 0 – 4095. Or 0 - 65535…).
Also, the 0,0 point can be located on the top-right or bottom-right/left.



Playlist for the example above:

```
[ITEM 0]
File=Film1.mp4
T0, 0, 400, 300, 0=PLAY 1
T400, 400, 1600, 600, 0=PLAY 3

[ITEM 1]
File=Film2.mp4
T0, 0, 1920, 1080, 0=PLAY 0
```


	Txxxx, yyyy, wwww, hhhh, a, cccc[=pppp]
T	Syntax for touch
xxxx,	X-coordinate of upper-left Edge of Touch field
yyyy,	Y-coordinate of upper-left Edge of Touch field
wwww,	Width of Touch field
hhhh,	Height of Touch field
a=	1: React on press 0: React on release
cccc	Command
[=pppp]	Optional parameter. e.g. Item number at "PLAY=2"
Example	T0, 0, 1280, 720, 0=PLAY 0

Command	Function
PAUSE	Pause playback
CONTINUE	Continue playback
PAPL	PAUSE/PLAY
NEXT	Start next item
PREV	Start previous item
PLAY nn	Start playback of item "nn".
VOLUME=nn	Set volume to nn (Min: 0; Max: 10)
AUDIOTRACK=nn	Select audiotrack nn

10.8.2. Other Touchscreens

If no reaction to touch events on the Setup Screen happens, your touchscreen is not supported natively and you must select a different touchscreen mode.

Entry in CFPSetup.txt:

Touchscreen Raw

To see, if your touchscreen works with the CF Player® and to determine the touch coordinate system (resolution and 0,0-point), you must choose this "USB Type":

USB Type TouchCalibrate

IMPORTANT: HTML control by touch does not work with such touchscreens!

When you touch the screen a window with the recognized coordinates will appear for 5 seconds.

These values must be used to create the playlist for the touch project.

10.9. USB Numblock

You can use any USB Numblock to control playback on the CF Player®.

- Entry in CFPSetup.txt:

USB Type Numblock

By default, pressing Keys 0-9 will start ITEM 0-9.

Key 1: ITEM 1
Key 2: ITEM 2
…

You can define custom commands to the keys, as described in chapter 10.7.1.

```
[ITEM 1]
...
KeyOff
Num0=0
Num1=1
Num2=2
Num3=3
```



```
Num4=4
Num5=3
Num6=3
Num7=3
Num8=3
Num9=3
NumPlus=1.d
NumMinus=-1.d
```

10.10. USB Presenter

You can use a USB Presenter to control the playback. Currently supported are Logitech models like R400.

- Entry in CFPSetup.txt:

```
USB Type Presenter
```

Default assignment of the 4 keys:
Prev (Key25), Next (Key26), Play/Pause (Key27/28), Jump to first Item(Key29)
Play/Pause key is toggling Key27 und Key28.
Key27 – Klick – Key28 – Klick – Key27 – Klick – Key28 …

You can define custom commands to the keys, as described in chapter 10.7.1.
Die 4/5 Keys are Key25 to Key29.

```
[ITEM 1]
...
KeyOff
Key25=0
Key26=1
Key27=2
Key28=3
Key29=4
```

10.11. USB GPS Antenna

You can connect a GPS USB Antenna to the CF Player® and control the playback depending of the geolocation of the device. Please contact us for further information, if you are interested in this feature.

10.12. USB RFID Reader

You can connect a FID Reader via USB to the CF Player®.

- Entry in CFPSetup.txt:

USB Type RFID

You can define IDs in the PLAYLIST.txt, that are linked to certain commands.

```
[ITEM 0]
File=Bild1.jpg
Displaytime=-1
RFID 04AF821A0A4080 PLAY 1
RFID 04D0821A0A4080 PLAY 2
RFID 04D1821A0A4080 PLAY 3

[ITEM 1]
File=Bild2.jpg
Displaytime=20
RFID 04AF821A0A4080 PLAY 1
RFID 04D0821A0A4080 PLAY 2
RFID 04D1821A0A4080 PLAY 3
```

The available commands are equal to the Touch commands.

Command	Function
PAUSE	Pause playback
CONTINUE	Continue playback
PAPL	PAUSE/PLAY
NEXT	Start next item
PREV	Start previous item
PLAY nn	Start playback of item "nn".
VOLUME=nn	Set volume to nn (Min: 0; Max: 10)
AUDIOTRACK=nn	Select audiotrack nn

10.13. USB Keyboard

You can connect a USB keyboard to the CF Player® and control the Setup Screen or the HTML5 browser. Additionally, there are some keyboard shortcuts available:

Keyboard shortcut		Action
Ctrl+F1	Ctrl+E	AutoHDMI On/Off
Ctrl+F2	Ctrl+F	Set resolution to 1920x1080p60
Ctrl+F3	Ctrl+U	Set resolution to 3840x2160p60
Ctrl+F4	Ctrl+D	DHCP On/Off
Ctrl+F5	Ctrl+S	Show/Hide Setup Screen
Ctrl+F12	Ctrl+R	Hold for 5 seconds for a factory reset

10.14. USB Maus

You can connect a USB mouse to the CF Player® and control the Setup Screen or the HTML5 browser. For the text input fields, a virtual keyboard will be displayed.

10.15. Customized Webinterfaces

You can create customized Webinterfaces as HTML files for web access and control of the CF Player®. These are stored on the SD Card or USB Storage.

10.15.1. "Websites" Folder

Create a folder called „Websites" on the SD Card. Place your HTML and other files inside this folder and optional subfolders.

10.15.2. Open URL in browser

Open the URL in your web browser: http://PlayerIP/Websites/YourPage.html

10.15.3. Embed Commands in HTML

To embed Commands in HTML, these must be implemented as Links.
Use the following syntax:

<a href="../Commands.php?Command=CustomPlay&PlayID=3 ">

10.15.3.1. Play

Syntax	Command=Play&PlayID=nnnn	
Function	Starting playback of ITEM with index nnnn	
Parameter	PlayID=nnnn	Index of ITEM to be played The index is either the ITEM number in the PLAYLIST.txt [ITEM nnnn] or the position of the file in alphanumerical order on the SD card / USB storage.
Example	Command=Play&PlayID=2 Playback of ITEM 2 is started	

10.15.3.2. Jump

Syntax	Command=Jump&Milliseconds=nnnn	
Function	Jump to a given position in a video.	
Parameter	Milliseconds=nnnn Position to be jumped to in milliseconds. Values from 0 to total duration of video.	
Example	Command= Jump&Milliseconds=20000	Jump to 20 seconds

10.15.3.3. Switch Audiotrack

Syntax	Command=Audiotrack&Track=nn	
Function	Choose the audiotrack of ITEM, if it has more than one	
Parameter	nn	Audiotrack to select
Example	Command= Audiotrack&Track=nn Third audiotrack is selected	

10.15.3.4. Increase volume

Syntax	Command=VolPlus&Value=nn
Function	Increase volume by value
Example	Command=VolPlus&Value=2 Increase volume by two steps

10.15.3.5. Decrease volume

Syntax Command=VolMinus&Value=nn

Function Decrease volume by value

Example Command= VolMinus&Value=2
Decrease volume by two steps

```
<!DOCTYPE html>
<html lang="en"><head><meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<meta name="keywords" content="">
</head>

<body>
  <table>
    <tr>
      <td>
        <a href="../Commands.php?Command=Jump&Milliseconds=28000"><img src="1.png" /></a>
      </td>
      <td>
        <a href="../Commands.php?Command=Jump&Milliseconds=200"><img src="2.png" /></a>
      </td>
    </tr>
    <tr>
      <td>
        <a href="../Commands.php?Command=CustomPlay&PlayID=3"><img src="3.png" /></a>
      </td>
      <td>
        <a href="../Commands.php?Command=CustomPlay&PlayID=4"><img src="4.png" /></a>
      </td>
    </tr>
  </table>
</body>
</html>
```


11. Appendix

11.1. Update Firmware

11.1.1. Automatic Update

You can update the firmware automatically by accessing the Webinterface remotely and open the System page. You can also open the Setup Screen with the Ctrl+S(Ctrl+F5) shortcut and then navigate to the System tab.
IMPORTANT: You **MUST** have an SD Card or USB Storage inserted in the CF Player® for the Update to be possible.

11.1.2. Download files

You can update the firmware locally by downloading the files from our FTP Server and then copy them onto an SD Card or USB Storage.
Connect with any FTP Client to our Server using the following details:

Server: ftp.sze.com
Username: szeweb493web3ftp5
Password: SZeKunden18!

There you will find the folders

- fullHD2.0
  - Firmware (Update files)
  - Manual (English and German version)
  - Release Card (All files of SD Card included in delivery)
  - Release Karte (German Version)

- UltraHD (ignored in this manual. Files for CF Player®UltraHD)

Inside the Firmware folder:

- Recovery (Only for emergency. In case that CF Player® does not boot anymore)
- Release (Update files for normal update)
- Changelog.txt

11.1.3. Release Update

In most cases, you should only work with this folder.
Inside, you will see subfolders named after the firmware version. Choose the highest firmware number.
Included are the following files:

- md5
- SZe_X.X.X.cfp

Download these files and copy them onto a SD Card. Insert this SD Card into the CF Player® and power on the device.
Please wait until the update process is completed and the CF Player® has rebooted and resumed playback.

IMPORTANT: DO NOT REMOVE THE SD CARD OR POWER OFF THE CF PLAYER® UNTIL UPDATE IS COMPLETED!!!

11.1.4. Recovery Update

For the very rare case, that the CF Player® is not working properly at all, even after a factory reset. E.g. Does not boot properly, etc.… You can completely reformat the device.

Download all files inside the recovery folder with the highest firmware number:

- Kernel
- Md5
- recovery.cfp
- Serial.txt (Please enter the Serial Number of the CF Player® manually)
- sysinit.txt

Copy all files on a USB Stick that is formatted as FAT32. Plug the USB Stick into any of the USB Ports of the CF Player®.
The CF Player® will start the process of reformatting.
When the process is completed, the CF Player® will start playback.

11.2. EC – DECLARATION OF CONFORMITY

We herewith declare that the product

Product Name: ***CF Player®fullHD2.0***

Description: Device to playback digital video files stored on SD Cards

conforms with the provisions of the directive:

89/336/EEC (EMC directive)
amended by 91/263/ECC, 92/31/ECC, 93/68/ECC

The application of this directive is according to the declaration in the instruction manual.

And furthermore, declare that the following parts of standards and documents have been applied:

EN61000-6-1 Immunity for residential, commercial and light industrial

EN61000-6-3 Emissions for residential, commercial and light industrial

SZe Schneider & Zirr engineering GmbH
Ledenweg 43A
D-01445 Radebeul

Radebeul, 18.05.2018

