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DVSHD

HD compact video player

Manual iss1.10 24-07-23

Features

- 1080P output resolution
- Cost effective
- Compact unit with integral fixing points
- Screw terminals for ease of installation
- Line out for driving external amplifiers
- 8 direct access trip inputs
- Power Supply included
- Supports many file formats
- RS232 control
- Autoplay on power up
- Watchdog monitoring

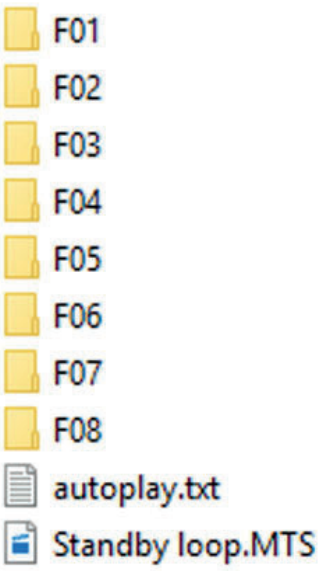
Modes:
The DVSHD has 3 main modes of operation, Auto-play, Fast mode and Slideshow mode

Auto-play on power up (no trips used)
The unit will play any video or still image files loaded on to the card in a sequential loop based on the file name. The files are placed in the root.
No control files are needed for this mode to work and the trip inputs are inoperative.

Auto-play on power up (Triggered files)
This mode allows triggering of video files from contact closures. There are 8 trip inputs. You may have a still or video playing while in standby by placing one or more files in the root of the SD card. These files will play sequentially while no other tripped file is active.
If no standby files exist, the 'GoldingAudio.com' logo will be shown in standby.

This mode requires that the video and / or still images are stored in separate folders, one for each trip input.
There is also a text file 'Autoplay.txt' which defines what the trip inputs trigger.

Contents of Root of SD card.



The 8 folders contain the video files that are to be played by the trip inputs 1-8.
If more than one file is in the folder, the files will play in alphabetical sequence.
The name of the folder must be the same as what is stated in the 'Autoplay.txt' file.
The 'Standby loop.MTS' is a video file that will play on power up when no trips are activated.
The name of the standby file can be whatever you like.
You may have more standby files and they will play in alphabetical sequence when no trips are activated.
Stills can be used instead of video files, the display time and transition is set by the remote control.
If no standby files exist, then the 'GoldingAudio.com' logo will be shown instead.

Contents of 'Autoplay.txt'

```
01=F01/          ;Trip 1 plays folder F01
02=F02/          ;Trip 2 plays folder F02
03=F03/          ;Trip 3 etc
04=F04/          ;Trip 4
05=F05/          ;Trip 5
06=F06/          ;Trip 6
07=F07/          ;Trip 7
08=F08/          ;Trip 8
```

Each of the numbered folders will be triggered by the corresponding trip number.
For example, Trip input 1 will play the contents of folder 'F01'

Note:
When a trip is activated, there will be a blank screen shown for around 1-2 seconds while the new video file is fetched. If this black screen is an issue for your application then we suggest using 'Fast-mode'.

Fast mode

This mode allows seamless playback of the video files when triggered. There will not be any black shown between files. The jump from standby to the triggered video segment is virtually instantaneous with no black frames shown.
The single video file can be any length up to 60 minutes.

For this mode to work correctly, all of your video files must be joined together and saved as one file.
This means that all the files should be the same format and resolution.
Video editing programs such as Adobe Premiere, Magix / Sony Movie Studio or similar can be used to join the videos and save as one file.
A fairly typical scenario would have a still image shown when none of the main videos are playing and then when a trip is activated, the still image would dissolve or fade into the triggered video.
At the end of the triggered video, the still image would fade or dissolve back in.

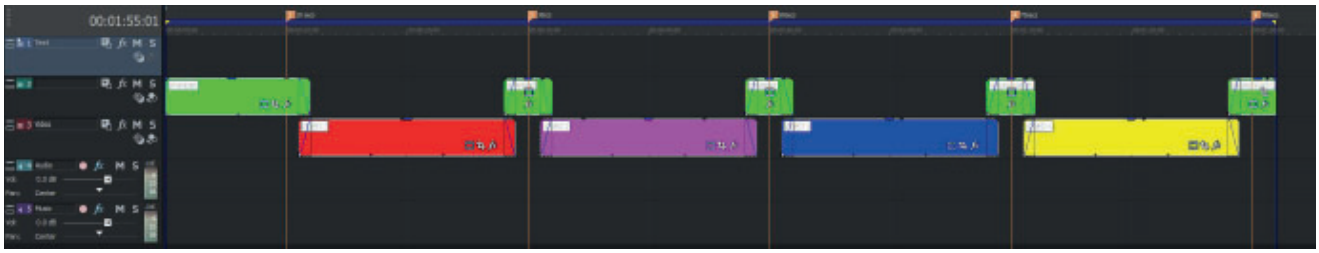
Method:
Let's assume we want to have a 'standby' still image and 4 triggered videos.
Our standby 'still' image is converted into a 10 second video file
Triggered video 1 is ~20 seconds long
Triggered video 2 is ~15 seconds long
Triggered video 3 is ~30 seconds long
Triggered video 4 is ~25 seconds long

We would join the videos together in order:
Standby / video 1 / video 2 / video 3 / video 4

This would produce one video file of 100 seconds long.

We need to allow some overlap between videos as the player can only jump roughly in 1 second intervals. This is due to the way the compressed video is formatted.
It's best to allow 1-2 seconds overlap. With this in mind, the first and last second of each video should not contain important information. A suggestion would be to have the start and end of the main videos with the same still image as the standby video.
You can then dissolve from the still into the main video track seamlessly.
This will provide a very smooth transition from standby to the selected video.

Example:



Green is the standby 'still' image converted to video.
Red is video track 1
Purple is video track 2
Blue is video track 3
Yellow is video track 4

Where the tracks overlap is where the transition or dissolve is placed.
The markers indicate the point in time where the trips will start playing. See below.

Timeline of created video

0-12 secs	Standby 'still' video
11 secs	Dissolve transition into Video 1
11-29 secs	Video 1
29 secs	Dissolve transition into standby 'still' video
29-31 secs	Standby 'still' video
31 secs	Dissolve transition into Video 2
31-44 secs	Video 2
44 secs	Dissolve transition into standby 'still' video
44-46 secs	Standby 'still' video
46 secs	Dissolve transition into Video 3
46-74 secs	Video 3
74 secs	Dissolve transition into standby 'still' video
74-76 secs	Standby 'still' video
76 secs	Dissolve transition into Video 4
76-99 secs	Video 4
99 secs	Dissolve transition into standby 'still' video
99-101 secs	Standby 'still' video then jumps back to 0 seconds (standby)

Next, we need to create a text file to inform the player how to play these files as we require.
The text file is named 'Fastmode.txt.

Contents of 'Fastmode.txt'

```
00=0,10      ; Standby plays from 0 to 10 seconds (looping)
01N=10,30    ; Trip 1 plays from 10 secs to 30 secs (Video segment 1)
02N=30,45    ; Trip 2 plays from 30 secs to 45 secs (video segment 2)
03N=45,75    ; Trip 3 plays from 45 secs to 75 secs (video segment 3)
04N=75,100   ; Trip 4 plays from 75 secs to 100 secs (video segment 4)
```

The times must be expressed as seconds therefore 10 minutes and 13 seconds would be written as 613.

Priority control characters.
These can be inserted after the trip number and before the '=' sign to specify how the trips are handled.

N Non-interruptible, the file has to end before any other trip will be accepted.
X The file will play and then pause on the last frame of the video.
L The file will loop continuously until another file is selected.

Card contents.
The SD card will contain just two files, the video file and the 'fastplay.txt' file

Note: if using RS232, the 'END-?' string will not be sent in 'L' looping mode.

Slideshow mode.

Copy your still image files onto the SD card without the 'autoplay.txt' or 'Fastmode.txt' files. You may also have a folder named 'audio' with audio tracks within, these will play alongside the still images.

Select 'Menu' on the remote control to set the time for each still and the transition if required.

The slideshow will run in a loop on power up.

RS232 Control.

The DVSHD can be controlled from a PC or control system using RS232 commands.
The RS232 commands can be used in conjunction with the 'Autoplay.txt' file or 'Fastplay.txt' file to trigger specific files directly.

Protocol
Baud rate: 9600
Bits: 8
Parity: none
Stop bits: 1

Connection Pinout
Pin 2: TXD
Pin 3: RXD
Pin 5: Gnd

A 'Fastmode.txt' or 'Autopolay.txt' file is required to define which files play with which code. See above definitions of these files.

Syntax:
@00:01$

@ Start character
00 Player address (default is 00)
: Separator
01 Command (item 01 in the playlist file)
$ End character
If using the 'Autoplay.txt' file:
To play files within folder 'F01', send the command @00:01$
To play files within folder 'F02', send the command @00:02$
To play files within folder 'F03', send the command @00:03$

If an RS232 command is received and actioned, the player will respond with an acknowledgment string and at the end of the file or segment, an 'END' string will be sent.

Examples

Send	Receive ack	End of play
@00:02$	RS232: 2 =>	END-2
@00:03$	RS232: 3 =>	END-3

Notes:

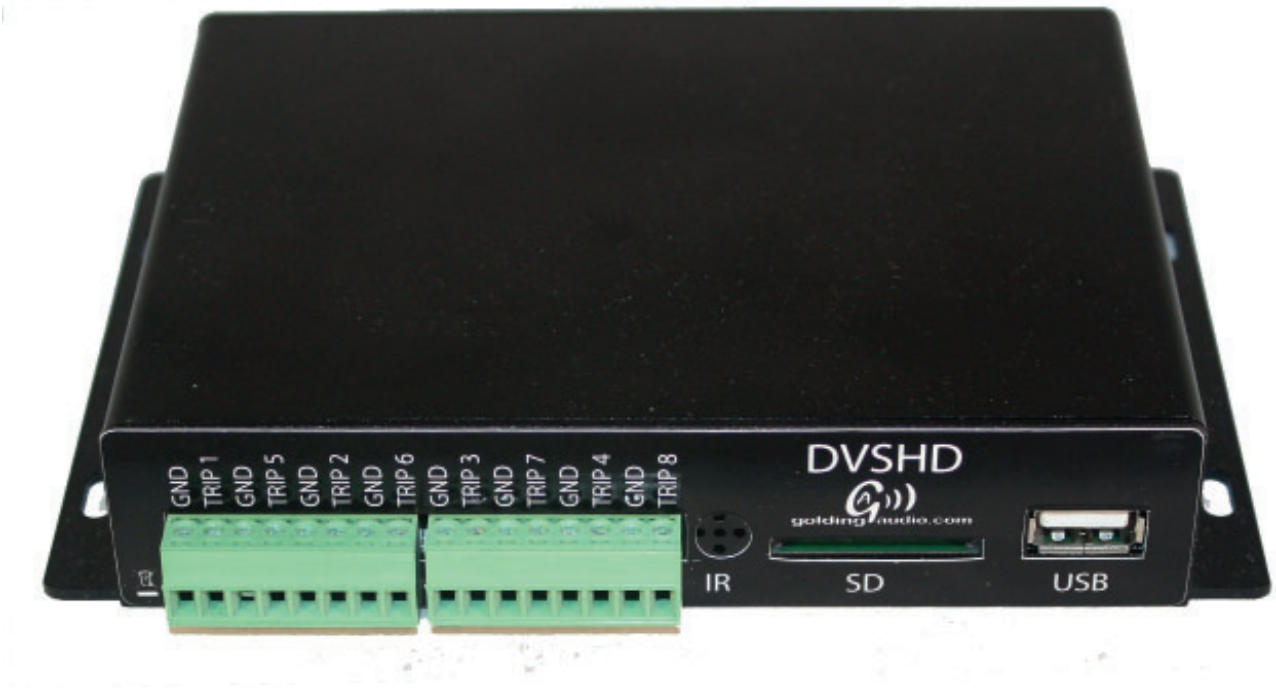
1. Carriage return and line feed should not be sent after the command.
2. The 'END-?' is only sent if the file is allowed to finish without interruption.
3. The 'END-?' is not sent if the file is looping.
4. No <cr><lf> is sent back with the ACK string when using direct file access.

Commands: Use in conjunction with 'Fastplay.txt' playlist file.

NEXT	Play next item in playlist (1st if playing standby video)
PREV	Play previous item in playlist (Plays standby file if playing item 01)
STOP	Pauses currently playing video
PLAY	Resumes paused video
PAUSE	Toggle between pause and play
VOL+	Increase audio output
VOL-	Decrease audio output
MUTE	Toggles audio mute on / off

Send	Receive
@00:NEXT$	RS232: NEXT<cr><lf>
@00:PREV$	RS232: PREV<cr><lf>
@00:STOP$	RS232: STOP<cr><lf>
@00:PLAY$	RS232: ENTER<cr><lf>
@00:PAUSE$	RS232: PAUSE<cr><lf>
@00:VOL+$	RS232: VOL+<cr><lf>
@00:VOL-$	RS232: VOL-<cr><lf>
@00:MUTE$	RS232: MUTE<cr><lf>

Connections



Trip Inputs:	8 trip inputs (5v pullups, switch to ground)
IR:	Infrared reciever for the remote control
SD:	SD card socket. For the media content. Supports SD, SDHC and SDXC card format.
USB:	USB socket. Supports media content on USB memory stick and Firmware upgrades.
Power:	12V DC, 2.1mm x 5.5mm socket
HDMI OUT:	Supports the following resolutuions; 1080P 60/50Hz 1080i 60/50Hz 720P 60/50Hz 576P, 480P, PAL, NTSC With the following Aspect Ratio; Pan Scan 4:3, Letter Box 4:3, 16:9, 16:10

AUDIO:	3.5mm stereo jack socket for Line out audio.
CVBS:	Composite Video output.
OPTICAL:	Optical output for audio
I/O:	No Function
RS232:	RS232 control connection.
	Pin 2: TXD
	Pin 3: RXD
	Pin 5: Gnd

Settings

To access the players settings press the 'Setup' button on the remote control, then use the arrow keys, the 'OK' and 'Return' buttons to navigate through the options. (Defaults in **Bold**)

System	Menu Language	**English**	
		Espanol	
		Francais	
		Deutsch	
		Italiano	
		Dutch	
	Text Coding	**Unicode(UTF8)**	
		Western	
		Turkish	
		Central European	
		Greek	
		Cyrillic	
		(MS-1255)	
		SE European	
	Time	Manual	
		Time Zone	
	R/RW Auto-Play	Off	
		On	
	Screen Saver	Timings	Off
			2 Minutes
			5 Minutes
			10 Minutes
		Options	**Defaults**
			Photo Album
	MiniKBD Language	**English Lower**	
	Scan storage	**Auto scan on**	
		Auto scan off	
		Resume scan	
	Resume Play	Off	
		On	
	Format		
	Factory Default		
Audio	Night Mode	**Off**	
		On	
		Comfort	
	HDMI Ouptut	**LPCM**	
		RAW	
	SPDIF Output	**LPCM**	

		RAW
	Surround Sound	**Don t Care**
		AC3
Video	Aspect Ratio	Pan Scan 4:3
		Letter Box 4:3
		16:9
		16:10
	TV System	**1080P 60Hz**
		1080P 50Hz
		1080i 60Hz
		1080i 50Hz
		720P 60Hz
		720P 50Hz
		576P
		480P
		PAL
		NTSC
		HDMI Auto
	Video Zoom	**Off**
		On
	1080P 24Hz	**Off**
		On
	Deep Color	**Auto**
		12 bit
		10 bit
		Off
MISC	Version Info	
	USB upgrade	

Specification:

Storage Media	SD card (SD, SDHC, SDXC) / USB Memory stick / USB HD
Storage format	FAT / FAT32 / NTFS
Video formats	MPEG1 / MPEG2 / MP4 (H264) / Motion Jpeg
Video file extensions	MP4 / MOV / M4V / MKV / TS / MTS / M2S / DAT / MPG / MPEG / VOB / ISO
Still image formats	JPEG / BMP / TIFF / PNG / GIF
Audio formats	MPEG1/2 / MP3 / WMA / AC3 / LPCM
Video Output	HDMI 1080P 60/50Hz 1080i 60/50Hz 720P 60/50Hz 576P, 480P, PAL, NTSC Composite
Aspect Ratio	Pan Scan 4:3, Letter Box 4:3, 16:9, 16:10
Audio Output	Line level (3.5mm jack) Digital Optical
External trips	8 trip inputs (5v pullups, switch to ground)
Serial control	RS232 9600 8N1
Power	12VDC @ 500mA
Dimensions (WxDxH)	157mm x 118mm x 29mm