



VideoClip 4K

Manual

V1.1

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Safety Guide

Please observe the following when installing this device

Warning

- This product is not designed to be resistant to moisture or excessive dirt/dust. When deciding on a suitable installation point ensure there is reasonable protection from environmental damage.
- If you require this unit to be installed outdoors or in a dusty, damp environment use a certified IP rated enclosure and seal any entry/exit holes of wiring etc. If the unit needs to be periodically updated, you will need to select an enclosure with an easy to remove lid and gasket seal. This product should not exceed its operating temperature.
- If there is damage to the power supply in any way, arrange for a replacement unit by contacting blackbox-av. They may require you to send the defective power unit back so in this case do not dispose of the power supply unless prompted to do so. If you wish to source your own power supply a CE or FC certified double insulated and regulated supply is required. The VideoClip has an output rating of 12V DC at 2A, 24W. Using a power supply with a higher voltage will irreparably damage the VideoClip unit.
- Do not place the unit in direct sunlight for prolonged periods as this may cause the product to overheat.
- Disposal of old electrical equipment: Please follow the guidelines associated with your country/territory or ship the unit back to blackbox-av and we will dispose/recycle the unit. The symbol on the left indicates that this product should not be treated as household waste. Instead it should be handed to an applicable collection point for the recycling of electronic equipment. If you dispose of this unit correctly you will be helping to prevent future harm to the environment caused by poor waste management of this type of equipment.



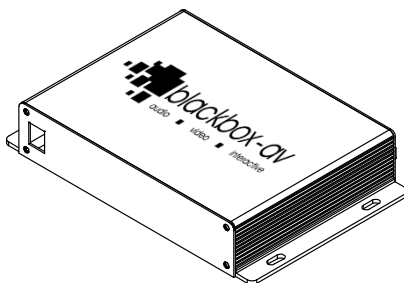
Precautions of Use

- Whilst the unit is connected to a mains outlet and the power is switched on it is providing energy for operating the device. If the unit is not being used for long periods of time it is recommended to turn off the power as it will prolong the life of its electronic circuitry.
- Do not operate the unit below -10 or above 50 degrees Celsius. Do not bring the unit from a very cold environment to a warm environment without allowing it time to acclimatise as condensation may affect its operation.
- When using different types of push buttons, PIRs and other hardware connected to the button inputs and GPIO connections, make sure they are compatible with the device. Please see the technical spec page for details on these connections. Failure to use care with these connections may result in damaging the device and subsequently affect the blackbox-av warranty.
- When attaching headphones or speakers please use certified and good quality accessories. Failure to use care with these connections may result in damaging the device and subsequently affect the blackbox-av warranty.

Your new VC-4K

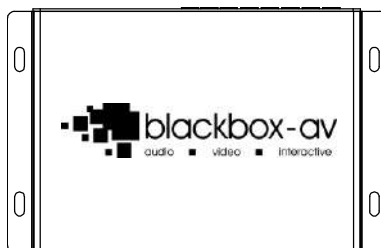
In the box

1. VideoClip 4K Unit
2. HDMI Cable
3. 12V Power Adapter
4. Remote Control
5. Button Cables
6. Headphone-to-terminal adapter.
7. USB Stick or SD Card (4GB)
8. Remote
9. User Manual



VideoClip-4K

The VC-4K is a compact, stand-alone, high definition media player. It can be used to display and distribute videos, images and audio over a screen/monitor that is connected to the device via HDMI input.



Power Adapter

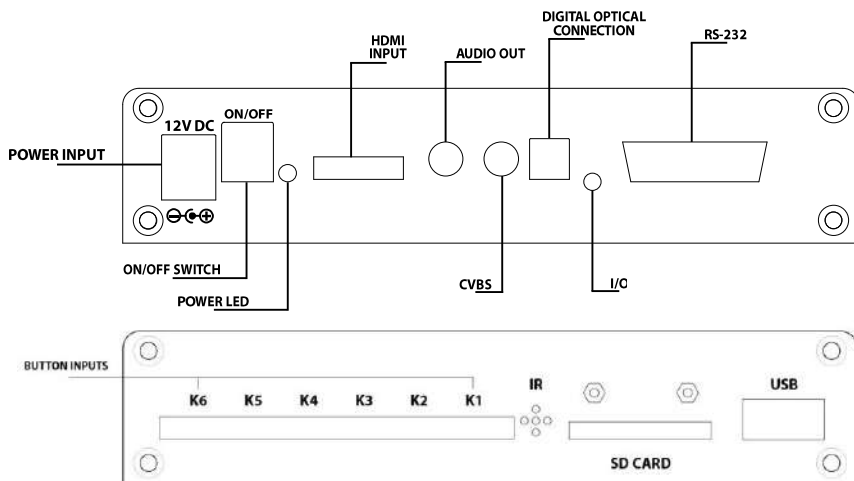
Connect your supplied 12V DC adapter to the '12V DC in' to give power to the device. Once turned on, the Power LED will light up.

Remote

The provided remote will allow for access to more advanced settings and functions beyond what's listed in the manual. We recommend newcomers refer to the manual for now.



Setting Up



Overview

Button Inputs

The VideoClip-4K can accept up to 12 standard or 6 illuminated buttons / triggers.

Audio Output

This device has 1 x stereo high-quality 3.5mm jack output.

On / Off Switch

To turn on the device via the switch, the power adapter must be connected.

USB / SD Card

Store your content on either a USB or SD Card (one will be supplied, with 4GB of storage).

IR Sensor

If using a remote control, direct it towards the IR Sensor (shown in the drawing above).

Connections

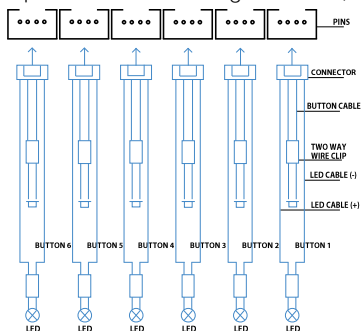
The VideoClip supports the following connections:

Headphones

A headphone device can be connected through the 3.5mm jack.

Activation Buttons

If you wish to use button activated content or allow user volume control, attach the required number of buttons using the button wires supplied to the appropriate input as seen in the diagram below;



1. The button cable comes attached to the connector. Simply connect to the pin as demonstrated above (ensure the connector is facing the correct way).
2. Connect the button cable to a two-way wire clip.
3. Connect the other button cable from your push button (not supplied) to the alternate end of the two way wire clip. You will need to program the button as explained on pages 9-12

LED's & Illuminated Buttons

If you wish to use LED's / illuminated buttons, simply connect the LED cables into a separate two way wire clip and connect your button/LED into the alternate end. The positive LED cable outputs at 5V.

1. When powered correctly and sat idle, the volume buttons should light up and consistently stay lit while content plays on a loop (depending on the setup).
2. When a content button is pressed, the button in question should light up and shine until the content is fully played and then should power off.
3. If a volume button is pressed, no change should be made to the light formation.

TV / Monitor

Simply connect one end of the HDMI cable to the 'HDMI Out' on the back of your VC-4K, connect the remaining end to the HDMI slot of your device.

PIR

To utilise a single PIR trigger, simply connect via the I/O output. The PIR can be used to activate a folder of content; this can include video, audio or image files. Read more on page 14.

Autoplay

If you have purchased a VideoClip for AutoPlay functionality, plug the provided two way connector into the I/O port, then insert the black wire into the L port and the red and white wires into the R port, as seen here;



Read more on page 13.

Digital Optical Connection

Utilise the VideoClip 4K with surround sound speakers. Simply connect your 5.1 encoder to the output & ensure your media is configured to 5.1 audio. To fully activate surround sound, you must access the menu via the remote control &

make sure these settings are set correctly;

HDMI Output – LPCM

SPDIF Output – RAW

Surround Sound – AC3

Formatting

Converting your Content

Before putting the content onto the provided storage device (USB or SD card) it needs to be in the right format as listed below. Your storage device must be formatted to FAT32.

Below displays the file requirements that need to be met for the VideoClip 4K:

Video	Category	Codec / FourCC	Max Res	Max Bitrate
	MP4	MP4 / H.264	3840x2160 30fps	10M
Photo	Sub Type	Codec	Max Res	Size
	JPG	YUV400 YUV420 YUV422 YUV440 YUV444	3840x2160	No Limit
Audio	Category	Codec	Sample Rate	Bitrate
	MP3	MP3	64-320Khz	32Kbps- 448kbps

Image Display

For optimal image display, we recommend images be 3840x2160 pixels and saved as a JPEG.

Video Playback

For optimal video playback it is recommended that your video is 3840x2160 pixels and runs at 30 frames per seconds in MP4 / H.264.

Audio Playback

For optimal audio playback it is recommended that your audio file is formatted to MP3 and has a bitrate of 44.1Khz.

Uploading Content

Programming – Attractor / Looping

This section will tell you how to set your VideoClip to play in a looping fashion (requiring no user input). This can be used to display looping content, create an attractor screen or even button listings.

Content for the VideoClip is stored on a USB stick or SD Card (one will be supplied pre-programmed). We suggest you use this as a template for uploading your own content.

Should you need to use a different USB / SD card we suggest you format the new card first to 'FAT32'.

To program your content, you will need;

1. A PC or laptop with Windows OS
2. Your content formatted correctly
3. USB Stick / SD Card (supplied)

1. Windows OS

Windows OS is required to program your VideoClip using a PC or laptop (xp – 10).

MacOS is not supported due to hidden files generated by the OS.

2. Looping your Content

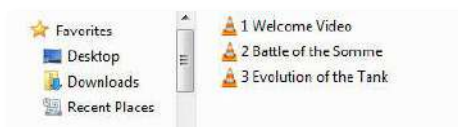
The VideoClip will play content stored in the root of the storage device on a constant loop as standard. Content is played in numerical order:

Track 1 – “001.MP4”
Track 2 – “002.MP4”
Etc.

It is important to note that the VideoClip can loop video, images and audio. The order in which content plays depends on the media type and name of your file.

The media type is prioritised, so videos are played first, followed by images and lastly audio. This means the file type supersedes the file name.

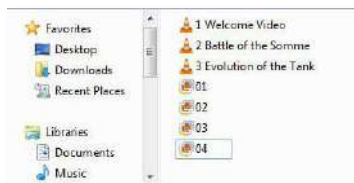
3. Video



This configuration allows the player to loop constantly through all videos in the following order:

- 1 Welcome Video
- 2 Battle of the Somme
- 3 Evolution of the Tank
- 1 Welcome Video
- 2 Battle of the Somme
- Etc...

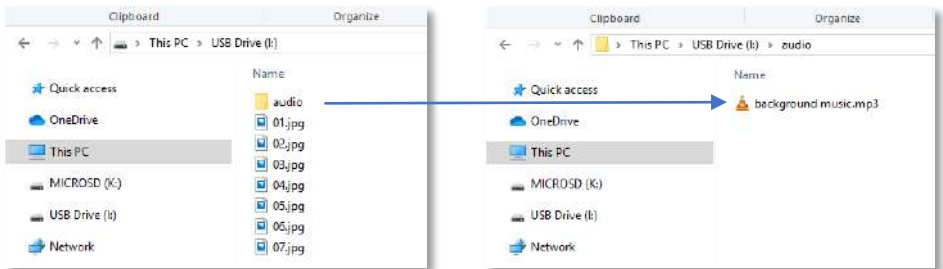
4. Video & Images



This configuration will play through all videos and images in the following order:

- Video - 1 Welcome Video
- Video - 2 Battle of the Somme
- Video - 3 Evolution of the Tank
- Image - 01
- Image - 02
- Etc...

5. Looping Images with Audio



This configuration will constantly loop through the images, it will also play the audio file located in the folder 'audio' as background music. The audio will restart with the slideshow.

Programming – Button Activation

This section will tell you how to set your VideoClip to play in a button activated fashion. See page 11 for button configuration instructions.

There are 12 programmable buttons available with the VideoClip.

As explained previously, to program your content you will need;

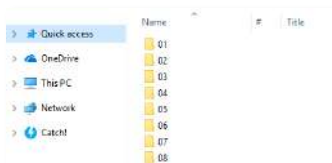
1. A PC or laptop with Windows OS
2. Your content formatted correctly
3. USB Stick / SD Card (supplied)

1. Windows OS

Windows OS is required to program your VideoClip using a PC or laptop (XP – 10). **MacOS is not supported due to hidden files generated by the OS.**

2. Your Content

Place your files into the folders as seen below.



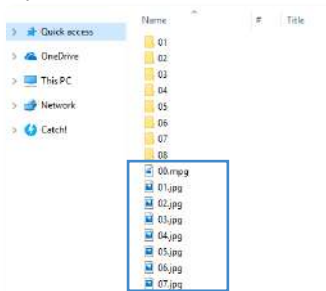
Folder 01 – Button 1

Folder 02 – Button 2

Etc.

3. Loop Files

As mentioned previously, any files left in the root of the USB / SD will be played in a loop when button content is not being played.



4. File Order

You can store up to 99 files within each folder. Should you require more than one file in each button activation folder, you must number your files 01 – 99.

The order in which content plays depends on the media type and name of your file.

The media type is prioritised, so videos are played first, followed by images and lastly audio. This means the file type supersedes the file name.

Below are some scenarios in which the files will be played:

Scenario 1

- 004.mp4 (Played first)
- 003.jpg (Played second)
- 001.mp3 (Played third)
- 002.mp3 (Played fourth)

Scenario 2

- 001.mp4 (Played first)
- 002.mp4 (Played second)
- 003.jpg (Played third)
- 004.mp3 (Played fourth)

Button Configuration

This section will instruct you on how to program your buttons as well as other options, such as the default volume levels.

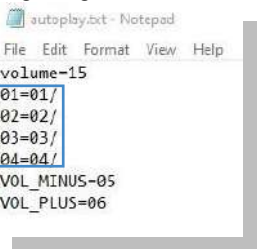
The VideoClip can associate two buttons as volume control, leaving the other 6 for content. Our test content, which is pre-loaded has a configuration file called Autoplay.txt.



Note: The naming of this file does not determine whether your VideoClip has AutoPlay functionality. The name is the same for both Standard and AutoPlay units.

Button Assignment

To configure your buttons, open the Autoplay.txt file. The command "irmode=1" must be defined at the beginning of the file.

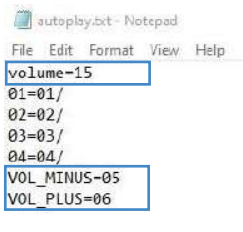


This image shows the default button assignments. In the box above, the number on the left defines the button and the number on the right defines the folder it is associated with. In the above example, buttons 01 - 04 are associated with folders 01 - 04, respectively.

Pressing a button will play the files inside its associated folder.

Volume Buttons

Below shows an example volume configuration:



The first box defines the default volume (0-15). This will be the volume played upon looping.

The second box shows the volume button assignment.

VOL_PLUS and VOL_MINUS are extra commands which, in the example above are assigned to buttons 05 and 06 to control the volume.

Autoplay Configuration

If you have purchased a VideoClip for AutoPlay functionality, it's important to read through your specific headphone manual for more information on hardware instructions and to recap the Autoplay section on page 6. This page will instruct you on the AutoPlay Configuration for your VideoClip.

Your AutoPlay Content must be programmed into folder01 on your USB stick / SD card. It's important to be aware that button input 01 is reserved when in AutoPlay mode, button inputs 02-12 can be programmed as normal.

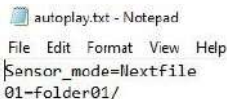
Button 01 – Reserved for AutoPlay trigger e.g. Auto-Play Hanger.

Buttons 02-12 – These can be programmed as Activation or Volume buttons.

To configure AutoPlay mode, open the Autoplay.txt file. The command "Sensor_mode=Nextfile" must be defined at the beginning of the file.

AutoPlay without Activation/Volume Buttons

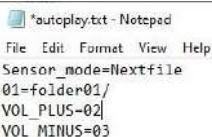
If you wish to have AutoPlay content only, your text file should look like the image below:



```
*autoplay.txt - Notepad
File Edit Format View Help
Sensor_mode=Nextfile
01=folder01/
```

AutoPlay with Volume Buttons

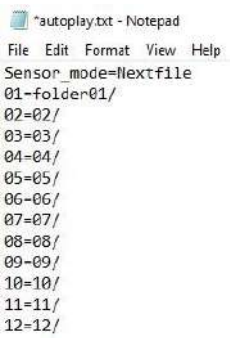
If you wish to have AutoPlay with Volume Control, your text file should look like the image below:



```
*autoplay.txt - Notepad
File Edit Format View Help
Sensor_mode=Nextfile
01=folder01/
VOL_PLUS=02
VOL_MINUS=03
```

AutoPlay with only Activation Buttons

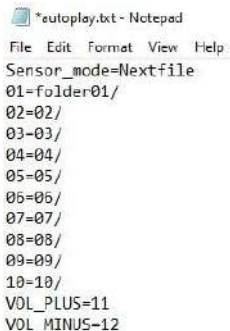
If you wish to have AutoPlay content with Activation buttons, your text file should look like the image below:



```
*autoplay.txt - Notepad
File Edit Format View Help
Sensor_mode=Nextfile
01=folder01/
02=02/
03=03/
04=04/
05=05/
06=06/
07=07/
08=08/
09=09/
10=10/
11=11/
12=12/
```

AutoPlay with Activation & Volume Buttons

If you wish to have AutoPlay with both Activation & Volume buttons, your text file should look like the image below:



```
*autoplay.txt - Notepad
File Edit Format View Help
Sensor_mode=Nextfile
01=folder01/
02=02/
03=03/
04=04/
05=05/
06=06/
07=07/
08=08/
09=09/
10=10/
VOL_PLUS=11
VOL_MINUS=12
```

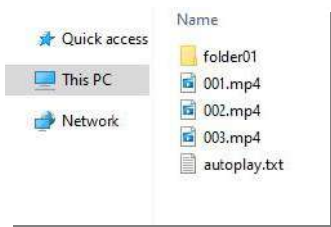
For more details, read page 14

PIR Activation

The VideoClip can be programmed to play content upon PIR activation.

Simply connect the PIR to the I/O input. A looping display can be utilised in PIR mode just as in the previous modes, this means the VideoClip can display video or images in a looping fashion until the PIR activates content stored in the folder.

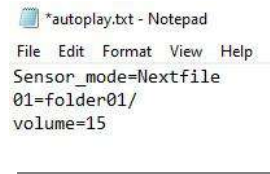
PIR File Structure



The above content will loop through the 3 images until PIR activation. Once triggered it will play the file located in folder '01', before returning to the looping 3 images.

PIR Configuration

To configure PIR mode, open the autoplay.txt file. The command "Sensor_mode=Nextfile" must be defined at the beginning of the file.



The above text file assigns the PIR to play content in folder '01'. The default volume (0-15) is set to 15.

Note: The PIR is sold separately and must be connected via the I/O port.

Once connected, the VideoClip is set to uninterruptible playback which means any files located in folder '01' will be played through in their entirety before PIR can be activated again.

Additional Programming Commands

The VideoClip can be configured with additional commands should you wish, these can be included in the Autoplay.txt file.

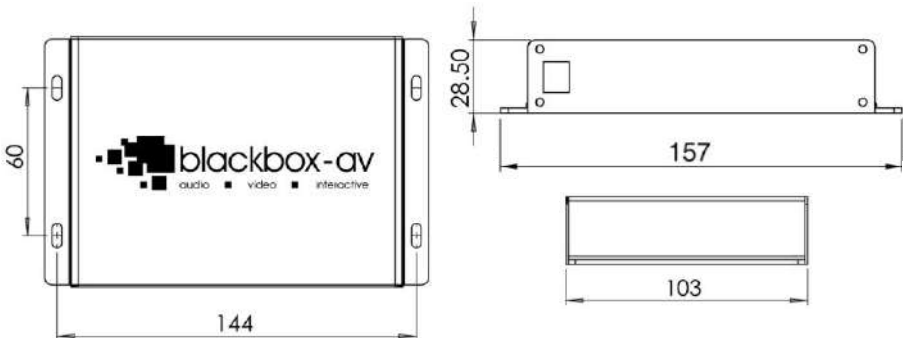
Command	Example	Description
[vol:--]	01[vol:10]=01	Presets the volume of the content to be played, overriding the default volume. The value range is 0-15. In the example, Button 1 will trigger Folder 1, presetting the volume to 10.
[n]	02[n]=02	Sets the content to be uninterruptible. In the example, Button 2 will trigger Folder 2. This content cannot be interrupted via another button being pressed.
Mute=	Mute=03	A button can be set to control the VideoClip mute command. In the example, button 3 will mute / unmute the audio
Pause=	Pause=05	Assign a button to pause/resume playback. In the example, button input 5 will be a Pause button.
Next=	Next=07	Skips to the next track (should you have multiple files in a currently selected folder) to be played. In the example, button input 7 is assigned to Next.
Prev=	Prev=08	Skips to the previous track (should you have multiple files in a currently selected folder) to be played. In the example, button input 7 is assigned to Prev.
Stop=	Stop=09	The stop command can be assigned to a button so that playback will return to the beginning of the loop file when pressed. If the loop is being played it will start from the beginning. If content is being played inside a folder, playback will stop and return to the beginning of the loop file.

Technical Information

Unit Weight	0.3KG
Packaged Weight	1KG
Unit Dimensions	157 (W) x 103 (D) x 28.50 (H)
Package Dimensions	280 (W) x 200 (D) x 55 (H)
Message Storage Medium	SD Card / USB Stick (up to 32GB of Storage supported)
Maximum Number of Audio Files	99 Files
Number of Buttons/Trigger Inputs	6 illuminated or 12 standard
Message Encoding Format	.MP3, .MP4, .JPG
Video Output Resolution	3840x2160p, 30fps
Headphone Audio Out	1 x 3.5mm audio jack
Power	DC12V 2A

Technical Drawings

Drawings not to scale



Notes

Notes

Notes

