

Technovision DV75N Video Media Player Guide

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A. Introduction

This quick start guide will show you how to set-up:

1. a single DV75N player to loop one video or a series of videos
2. multiple DV75N players for synchronized looped playback of videos of identical duration

Along with this pdf document you will have downloaded some dspconfig files to automatically configure the menu system of the player(s). These files are arranged according to video output.

In addition, the package includes some video encoding presets for Adobe Media Encoder if you are using Adobe software. Part B of the guide explains the alternatives.

The DV75N media players are manufactured by Technovision Interactive in Pickering, Ontario. If you are curious, please refer to their website for more detailed documentation.

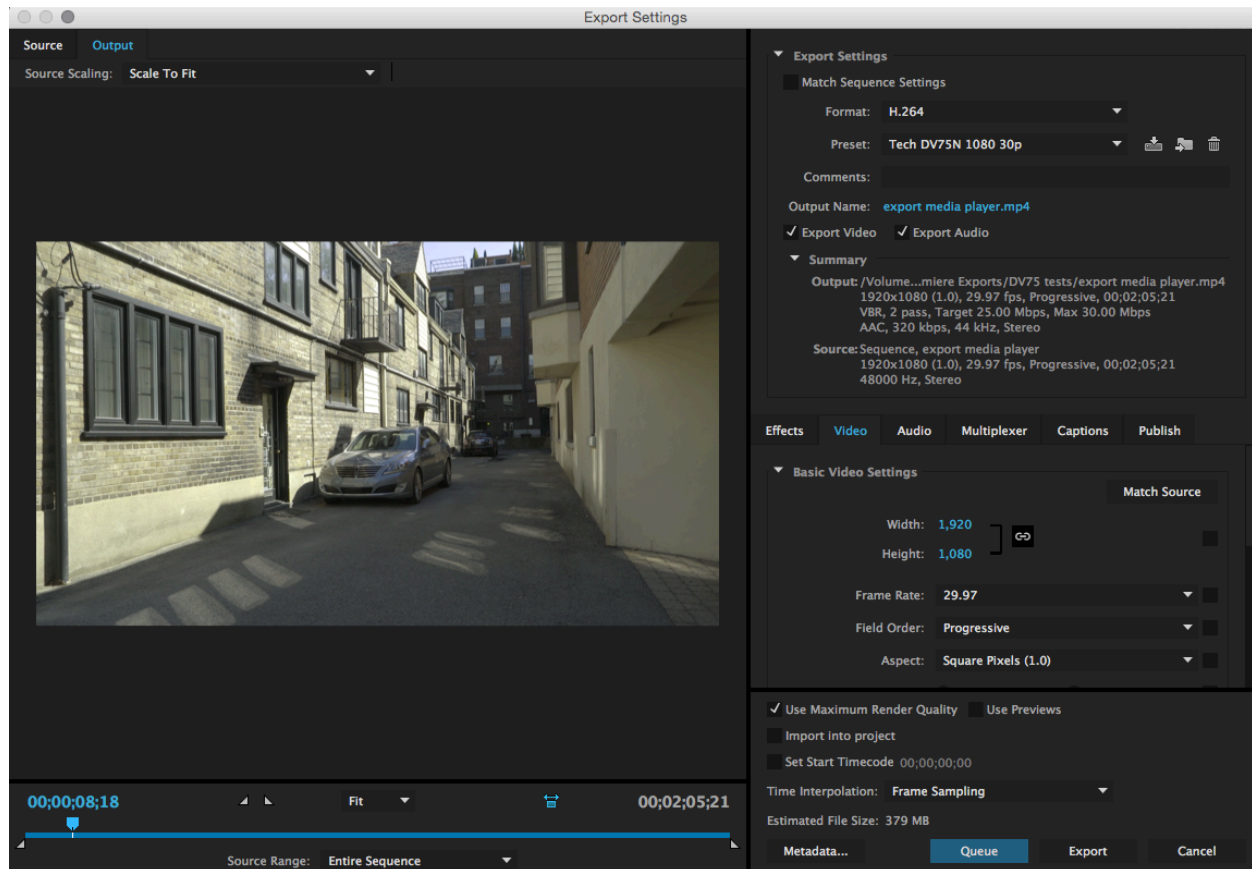
<http://technovision.com/>

B. Encoding Video

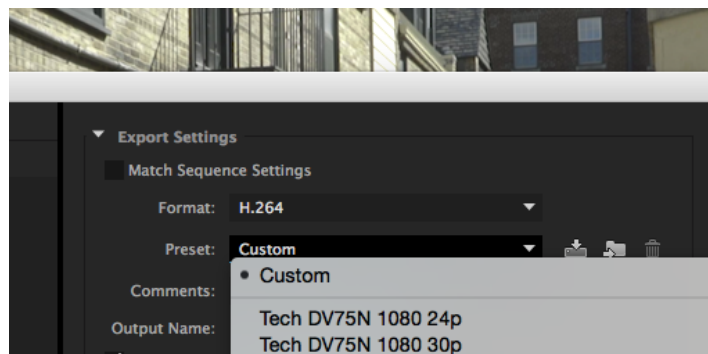
Your video must be properly encoded to play back correctly from the media player. The DV75N accepts a number of video codecs and containers. In this guide I suggest using the popular H.264 codec in a mp4 container. The DV75N can play back HD video at 1080p (24p and 30p), at 720p (24p, 30p and 60p) and also SD video 480p.

If you are working in Adobe Premiere, you can encode the video directly from your sequence using **File/Export/Media**. If you are working at the **CDA** you will find presets in Adobe Premiere (and Adobe Media Encoder) under the **H.264 format**. These presets are called Techno DV75N. The presets are in the following common image sizes and frame rates: 1080 24p (1920 x 1080), 1080 30p, 720 24p (1280 x 720) and 720 30p. Select the preset that corresponds to your sequence or desired output.

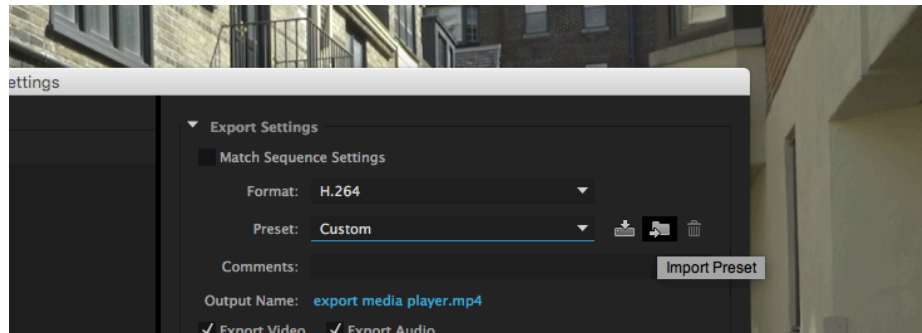
Here is the export settings window in Premiere with the correct preset chosen for a 1080 30p sequence. Under Export Settings, once the correct Format of H.264 is chosen, the presets will appear in the Preset window.



Choose H.264 in Export Settings/Format:



If you are working elsewhere with Adobe Premiere you can import the Adobe Media presets included in the downloaded zip file. These are the **.epr** files. Select H.264 as the Format in the Export Settings window and then select the import preset button to the right.



Of course, there are many alternatives to Adobe software. If you wish to use the same H.264 settings in other applications, here are the specifications:

H.264, High Profile, Level 4.1

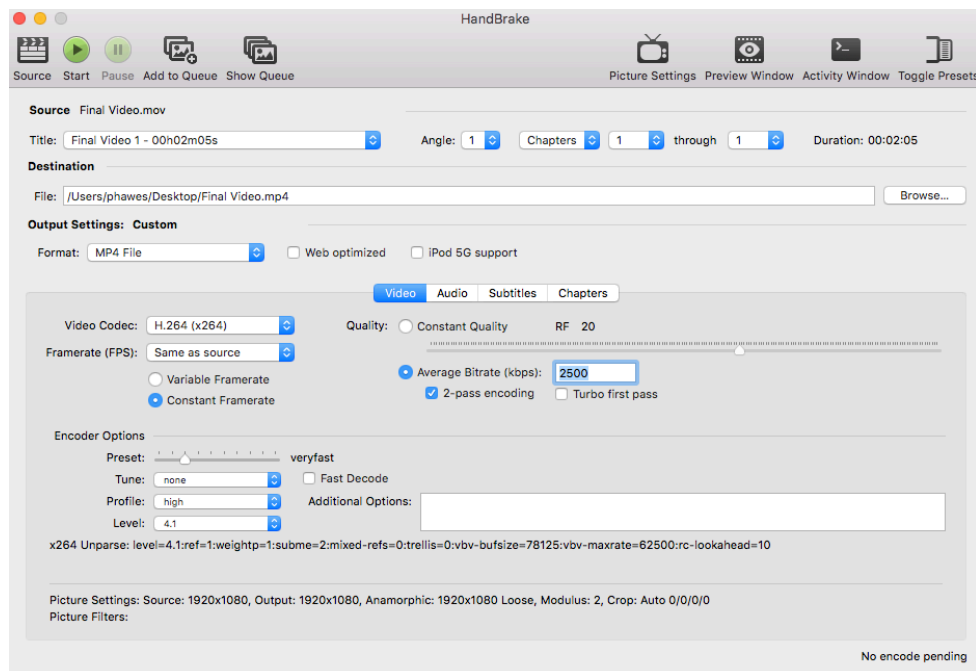
Constant Framerate (Progressive)

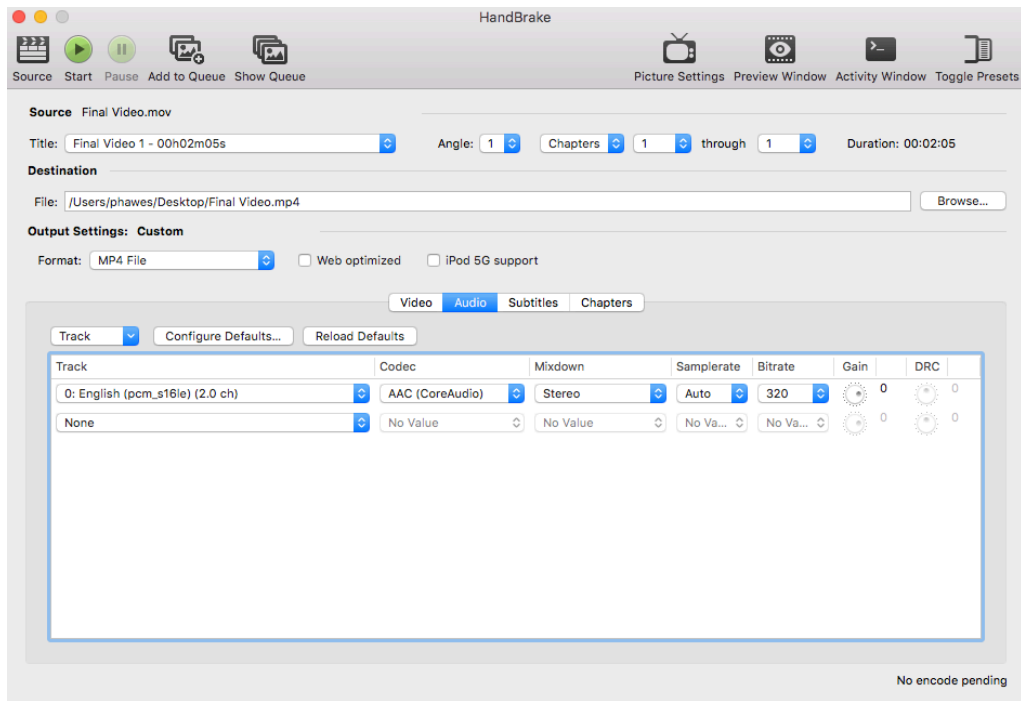
VBR (2 pass): Target Bitrate 25 Mbps, Maximum Bitrate 30 Mbps

Key Frame Distance: 30 (for 30 fps), 24 for 24 fps (one key frame per second)

Audio: AAC 44100 Hz Stereo, High Quality, 320 kbps

I recommend Handbrake for Mac OS. Here are the same H.264 settings in Handbrake.





Naming Video files for a Series

The DV75N can play a single video file or a series of video files. If you wish to play a series, I suggest naming the files as follows: 001, 002, 003, etc.

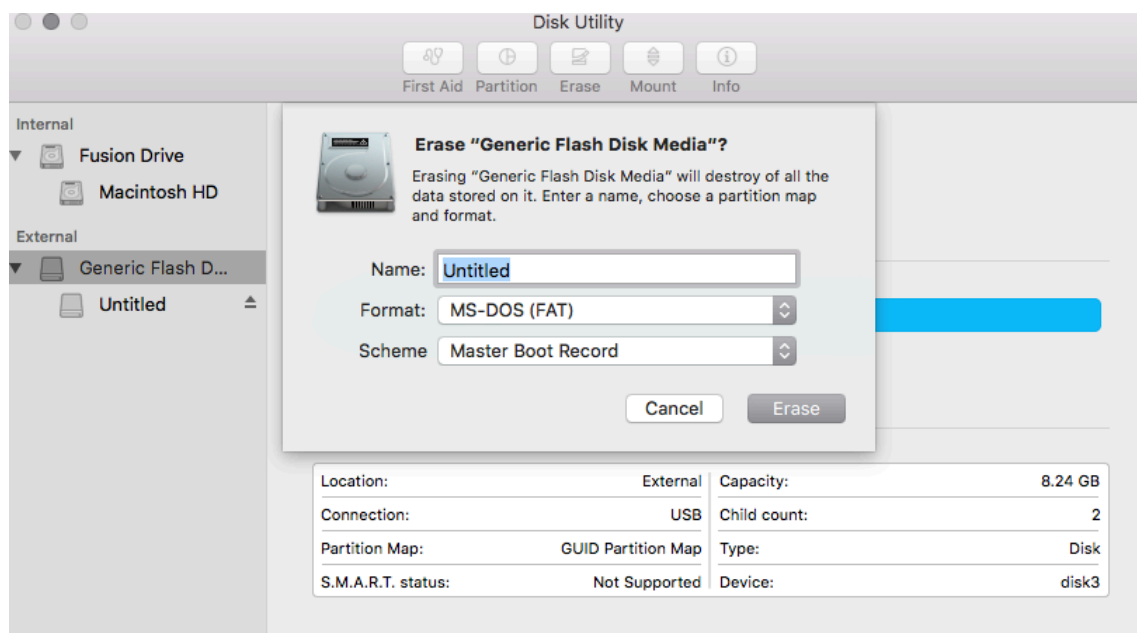
For the multiple player synchronization it is better to have only one video file on each player.

C. Preparing the USB Flash Drive (USB Key)

This step seems like it would be the simplest. It is more complicated because the DV75N will not properly read a USB flash drive from which files have been trashed (there are hidden trash files). Read this section carefully.

The DV75N has an internal SD card for playing back videos. Transfer your video into the SD card via a USB flash drive. Playing back the video directly from a USB flash drive is not recommended since some flash drive speeds are too slow. Follow these instructions exactly to load the video into the SD card.

The USB flash drive must be freshly formatted (this will erase all the files on your drive). If you are using an Apple computer go to Applications/Utilities/Disk Utility. Hit the **Erase** button to format the drive. Format the DRIVE not the volume. In the image below the drive is called Generic Flash, the volume is called Untitled. Format as **MS-DOS (FAT 32)** with the Master Boot Record scheme.

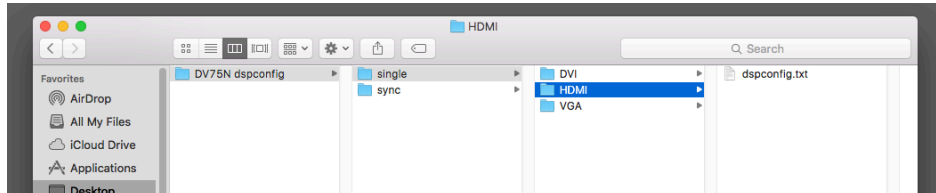


Fat 32 formatting only supports files of 4 GB in size. If your video file is larger than 4 GB you will have to reformat the flash drive as **ExFAT** and then ask the CDA Equipment Depot to reformat the internal SD card of the DV75N player to NTFS (Windows format).

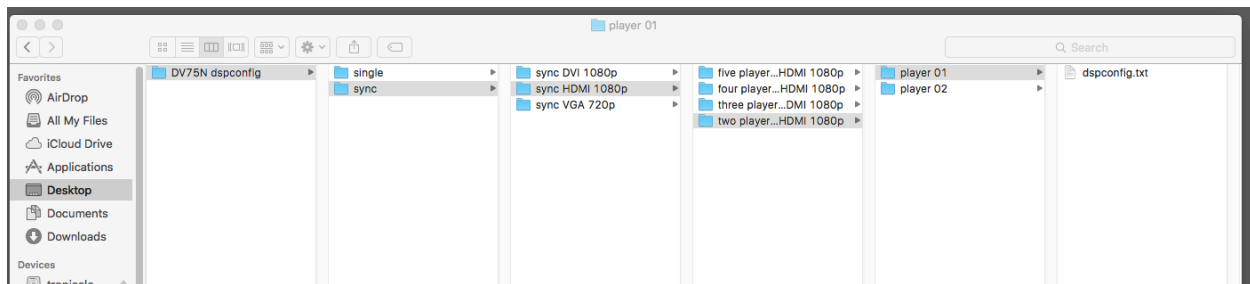
Once the drive is formatted, copy your properly encoded video file into it. Then copy the appropriate dspconfig file. This file sets all the menus in the DV75N. The dspconfig files are organized by **single** player or **sync** (multiple players) and video output type (see section E for details on recognizing video outputs). It is important to know the video output type before you

load the dspconfig file. HDMI and DVI dspconfig files expect a 1080p video file, VGA outputs expect a 720p video file.

Here, for example, is the dspconfig file you will pick for a single player outputting to an HDMI device:



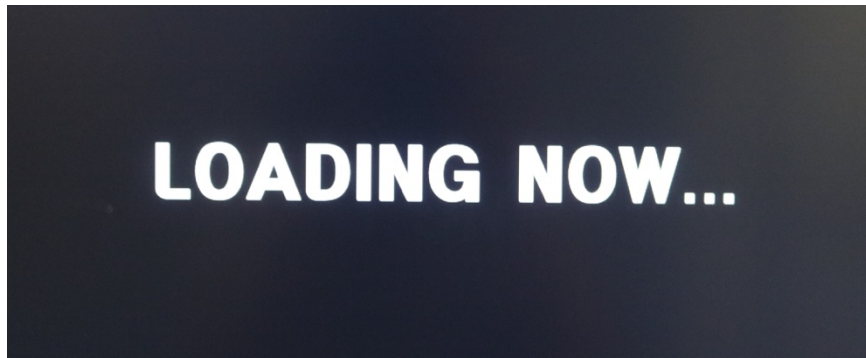
Note that there is a separate dspconfig file for each player in a multiple player set-up. All these files are named **dspconfig.txt**. Do not rename them. Just make sure you are selecting the file from the correct folder.



When preparing multiple players for synchronized playback it is easiest to have one USB flash drive per player. This avoids confusion. But if, for example, you have only one flash drive then you must reformat this drive each time, before copying new files onto it. **Do not erase any files from the flash drive once it is formatted.** If you mistakenly copy the wrong file into the drive, you will have to reformat all over again. **These steps must be followed exactly for each player: format the drive, copy over the video file, the dspconfig file and then eject the drive. Then plug the drive into the DV75 N.**

D. Copying Video Files Into the Player

When you power up the DV75N the screen will show the following:

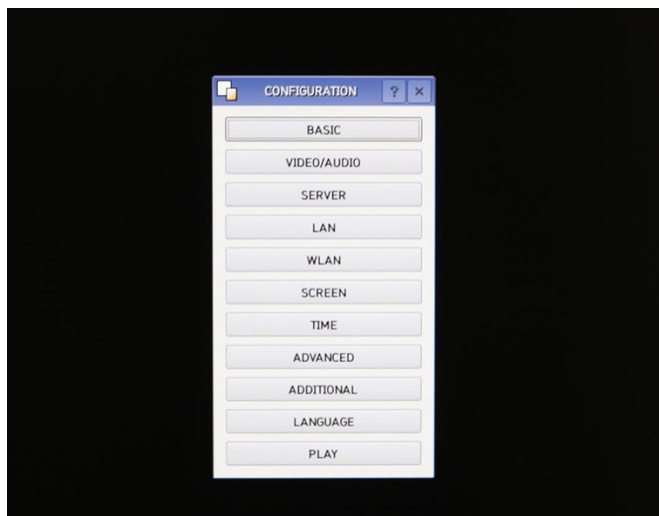


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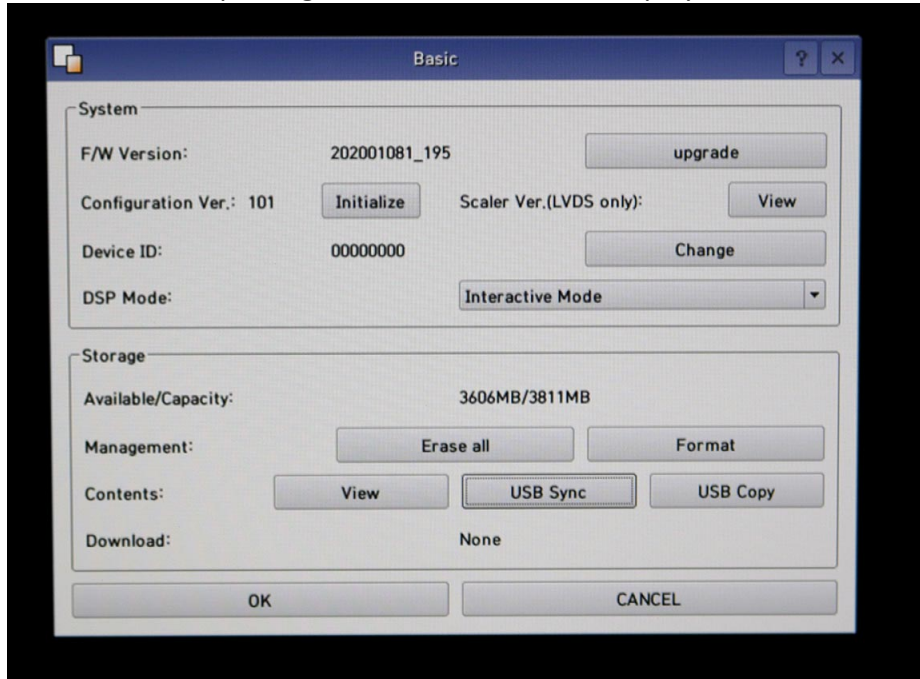


Press the **Menu** button on the remote.
If the configuration menu does not appear then press the **V Mode** button. This button cycles between the three outputs on the player. Each time you press the V Mode button wait five seconds for the player to switch outputs. If you still do not see the Menu appear then check your video connections.

Once the configuration menu appears, select the **Basic** Menu.



In the Basic menu select **USB Sync**. This will erase the internal SD card and then copy over your video file and dspconfig file to the SD card in the player.



Select OK.



Once the copying has finished, you can now safely eject your USB key.

If you are using a single player. You can now return to the main menu page and select PLAY. The player will continuously loop your video file. If you have a multiple player set-up, read section F.

E. Video and Audio Outputs

The DV75N can be hooked up to LCD TVs, digital projectors or older analog displays. It has three video outputs on the back: a digital **HDMI** output, an analog component video **VGA** (labelled RGB) output and an analog composite video 1/8" **AV** output.



HDMI is the best option for HD video. It can support a 1920 x 1080 HD image at 24p and 30p. Some older digital projectors may not have HDMI inputs, only DVI inputs. In this case you will use an HDMI to DVI adapter. This is available from the CDA depot.

The **VGA** (RGB) is an analog component video output. It supports 720p video. It is best to encode your video at the 1280 x 720 image size if you are forced to use this output. Older or cheaper projectors will have this input.

AV output: I don't ever recommend using the composite **AV** output for anything other than audio. The AV video output is only useful for this function or for hooking up to only analog TVs. The CDA depot has the correct three pin cable for using this output.

Audio

HDMI and Stereo Audio

HDMI also carries the audio signal to your LCD TV or digital projector. When you are working with HDMI you have a choice of how to route a stereo signal to speakers. You can allow the audio to travel to the projector via HDMI and then use the audio output from the projector to a pair of speakers. Or, you can use the DV75N AV output for audio. Audio is automatically sent from the AV output simultaneously to your video output. Just ask for the correct cable. Usually you will need a 1/8" three pin to RCA cable. It depends on the speakers.

HDMI and Surround 5.1 Audio

HDMI also supports surround sound 5.1 audio. If the audio has been Dolby encoded, you will need a Dolby decoding amplifier or a breakout decoding box plus a 5.1 speaker set-up. This equipment may or may not be available to you from the CDA depot depending on your department.

DVI and VGA and Audio

Neither DVI nor VGA outputs carry an audio signal. In these cases, the audio must be sent from the AV output. Adjust the audio output in the Video/Audio menu according (as shown above in the HDMI and Stereo Audio section).

F. Setting Up Multiple Players in Sync

In order for multiple players to operate in sync (synchronization) the videos must be exactly the same length (to the frame). The process of encoding the video, preparing the flash drive and copying the video into the internal SD card of the player is the same. Afterwards you have some more connections to do before the synchronization can happen.

Here is a diagram of a set-up of two DV75N players in sync.

Synchronization requires setting up an Ethernet network between the players. The dpsconfig files that you have placed on the players have created this network for you. All you have to do is make the appropriate connections. Connect the Ethernet cable from the LAN output on the back of the DV7N to an Ethernet Hub (cables and hub are available at the CDA Depot). Because of the cable lengths, it is important to consider how the players will be placed in the gallery in relation to the display equipment.

Here is a photo of one player hooked up to an Ethernet hub. The cable for the second player is also connected to the hub.



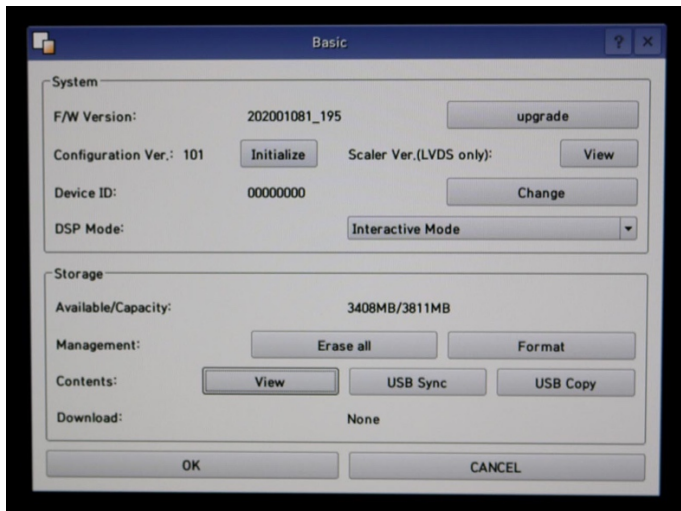
Once the players are hooked up, simply plug them all in (or if they are already plugged in-unplug and then replug) and after a few minutes they should start playing in sync. There are

lights on the front of the player. If the green LAN light is on, the network is established. Once the green SD light is flashing, the videos will start playing.



G. Erasing Video Files from the SD card

You may wish to erase your video file from the internal SD card when you are finished. To do this, go to the Menu/Basic Menu and press View.



This shows the contents of the SD card. Select a file to delete it. Then press EXIT.

