



Grass Valley
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K-Manager Pro

Application Software

User Manual

Issue 2 Rev1

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www.grassvalley.com

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Title K-Manager Pro User Manual

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Grass Valley Technical Support
Corporate Head Office

1 K-Manager Pro

1.1 Acknowledgements

"Microsoft® product screen shots reprinted with kind permission from the Microsoft Corporation™."

1.2 Before Starting

This User Instruction Manual will help you through each stage of the setup, configuration and operation. If you have any questions regarding the use and operation of your K-Watch software, please refer to the Service Support contact details listed at the rear of this manual.

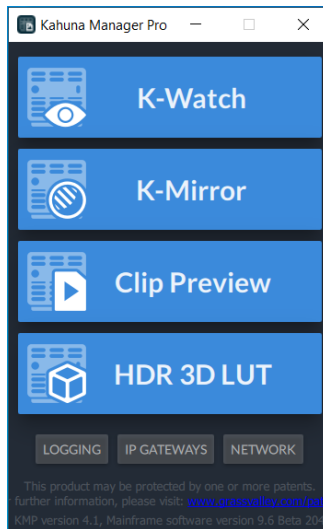
Before you can use this Product

Important:

- Make sure that your Kahuna Mainframe is running V9.6r1 software or greater.
- You have to load Kahuna MSP software onto your PC to have access to K-Manager Pro. When Kahuna MSP is loaded correctly, K-Manager Pro will automatically be installed onto your PC

and you will see a K-Manager Pro  icon in your PC's desktop.

You will see the K-Manager Pro launch screen with a button for each of the four tools



1.3 Minimum System Requirements

Processor: Intel(R) Celeron(R) CPU J3355 @ 2.00GHz, 2001Mhz, 2 Core(s), 2 Logical Processor(s)
Installed Memory (RAM): 4.00 GB (3.85 GB usable)
System Type: 64-bit Operating System, x64-based processor
Operating system: Microsoft Windows 10 Pro
Graphics: Intel(R) HD Graphics
HDD: 64GB.

2 K-Watch

2.1 K-Watch Overview

K-Watch feature can be used in two modes:

- (1) In stand-alone mode where the PC converts stills, clips or audio files and stores them on an internal or external memory device.
- (2) With K-Manager Pro (licence purchase for Kahuna required), the PC converts the stills, clips or audio files and sends them to the Kahuna mainframe over a network.

K-Mirror feature requires a K-manager pro licence purchase

K-Watch works by constantly looking at a "WATCH" folder on your PC. Any video or still files which are placed in that folder will automatically be converted to the Kahuna .SWS format and the required video standard (as set by the user). The converted files are placed into a "DESTINATION" folder.

The New Kahuna Watch software is faster than the original K-Watch software. All popular video, and still formats are supported.

Important Note:

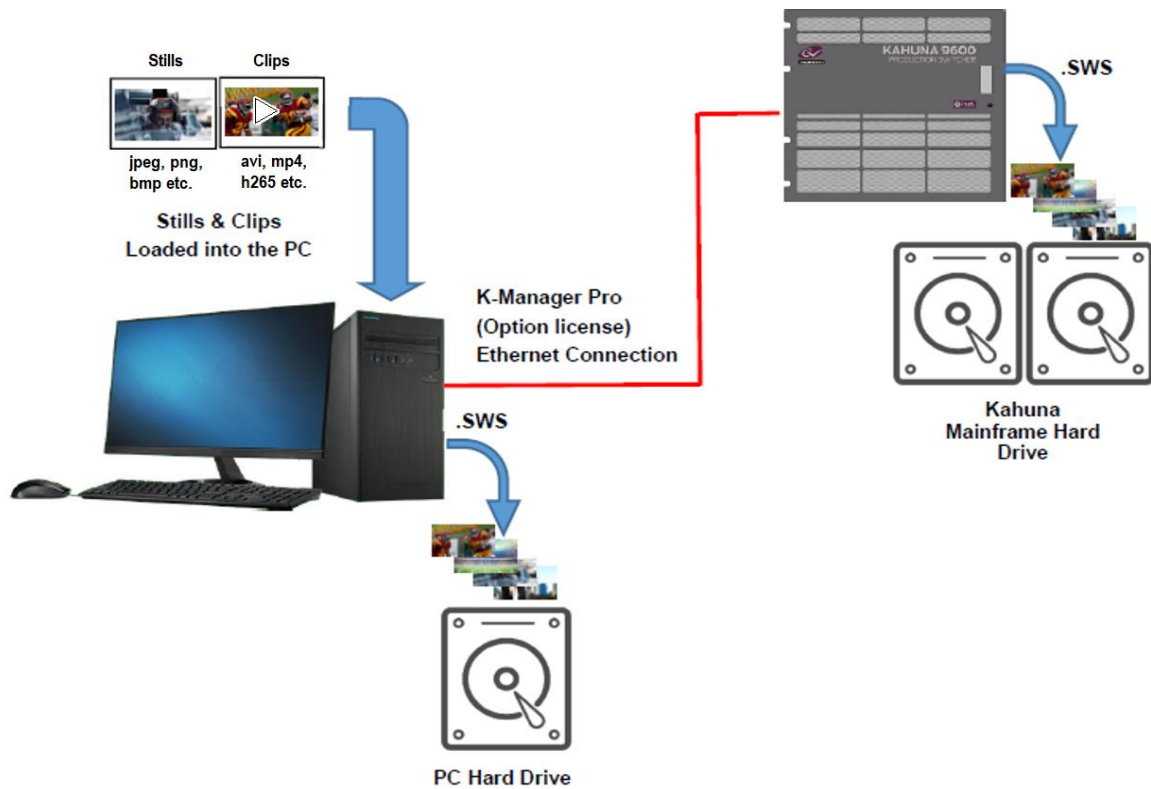
Newer files of same name placed in watch folder, will update previously converted file in destination folder or any existing files with the same file number will be overwritten, if newer!

With K-Manager Pro these files can be automatically uploaded to your mainframe via a network (mainframe option file licence required).

Multiple projects can also be synchronized across mainframes with the **K-Mirror** scan.

You can have several of these watch services running at the same time – each can have different conversion settings.

The .SWS files are sent to a **project** in a specified "**Destination Folder**" on the computer. If the computer is networked to a Kahuna mainframe, the .SWS files will be uploaded to a specified project on the Kahuna mainframe.



2.2 K-Watch Quick Setup

This is a basic step by step overview of how to setup and use K-Watch to convert .TGA files (video clip) into the Kahuna .SWS native format. Convert a .MOV file into a Kahuna .SWS file.

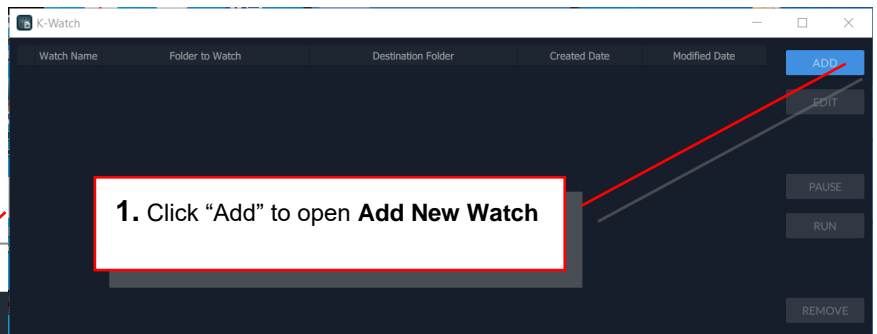
2.3 Step 1 - Setup K-Watch Menus

The first thing to do is to setup a **"Watch"** folder and a **"Destination"** folders on your PC. This is so that K-Watch can receive, convert and place converted files into a Destination folder.

Important:

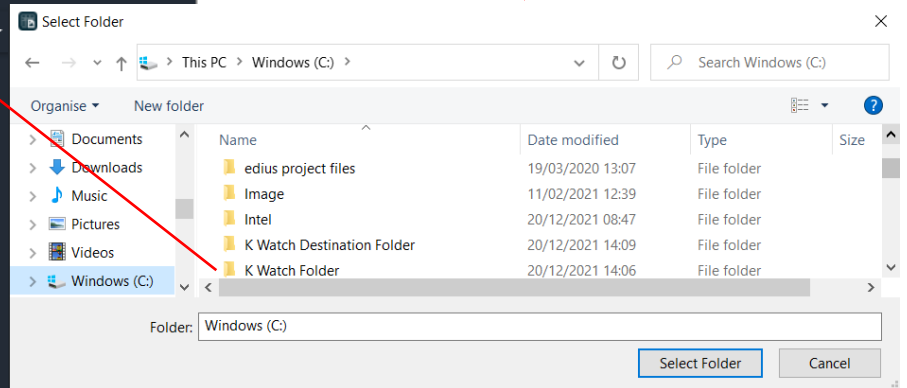
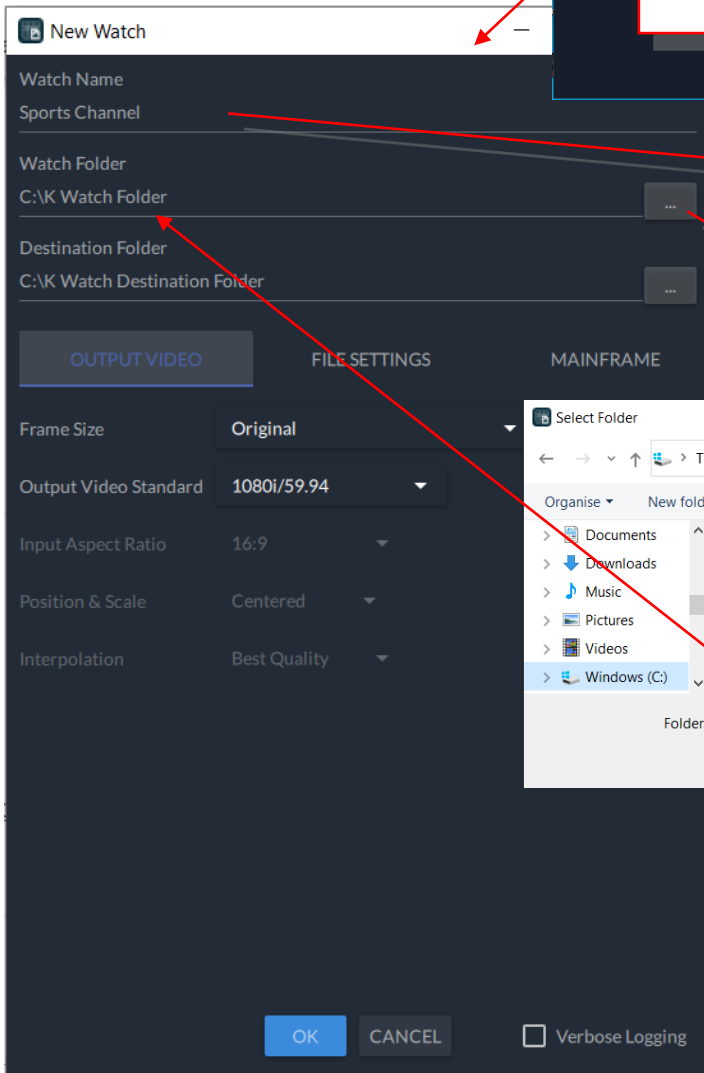
When done, double on the K-Watch icon.

Open K-Watch software and the first menu to be displayed is the **Kahuna Watch** menu.



2. Name the **Watch**, so it can be identified in the Kahuna Watch table in the menu above.

3. Click browse for the **Watch Folder**



New Watch

Watch Name
Sports Channel

Watch Folder
C:\K Watch Folder

Destination Folder
C:\K Watch Destination Folder

OUTPUT VIDEO FILE SETTINGS MAINFRAME

Frame Size Original

Output Video Standard 1080i/59.94

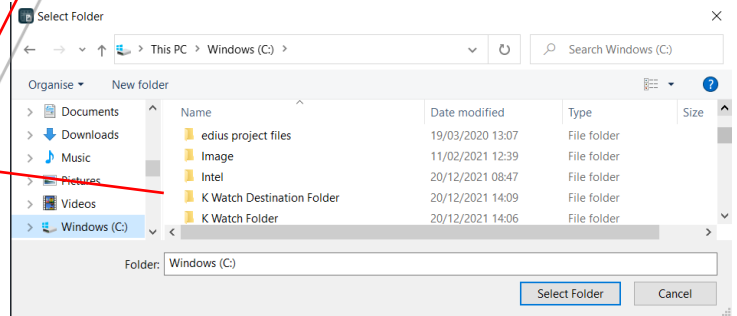
Input Aspect Ratio 16:9

Position & Scale Centered

Interpolation Best Quality

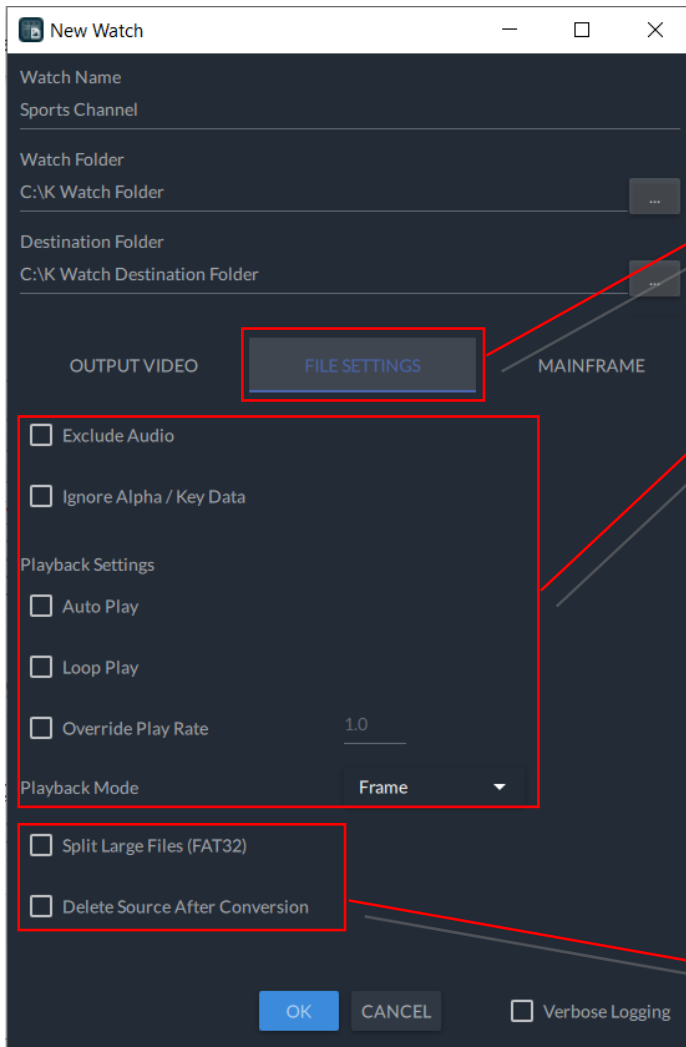
OK CANCEL ☐ Verbose Logging

4. Click browse for the **Destination Folder**



5. Select **Output Video**

6. Select the type of Video Standard the files will be converted to.



7. Select File Settings

8. Set the required File Settings for the clips

9. File Management:

Select "Split Large Files (FAT32)"

Note: Only necessary when importing large files via an external USB device.

Make sure that this is selected at all times just in case the converted .SWS file is larger than 4Gb in size. If it is larger than 4Gb it cannot be loaded into Kahuna.

K-Watch software will split the files down and place them in a .SWS folder, the folder is recognised as a clip when loaded into Kahuna.

Select "Delete Source Files After Conversion"
The original source file will be deleted from the Watch Folder

Important Note:

For Direct Upload to a Mainframe a K-Manager Pro licence is required on the desired Mainframe.

New Watch

Watch Name
Sports Channel

Watch Folder
C:\K Watch Folder

Destination Folder
C:\K Watch Destination Folder

OUTPUT VIDEO FILE SETTINGS **MAINFRAME**

☒ Auto File Transfer

Mainframe 10.127.17.41

Project PRJ00012

OK CANCEL ☐ Verbose Logging

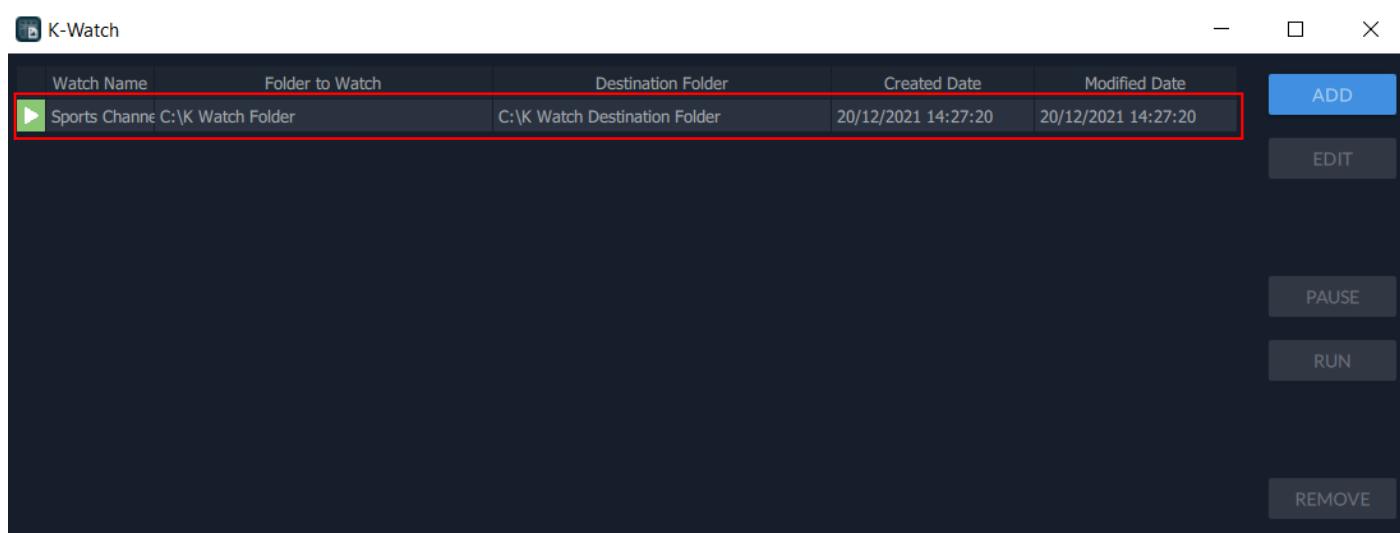
10. For Direct Upload select **Mainframe**

11. Click **Browse** to select from a list of available Mainframes on the network

12. Click **Browse** to set the destination Project on the selected Mainframe

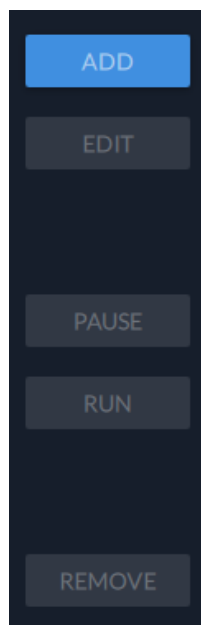
13. When finished, click on "OK"

The **Kahuna Watch** menu will now look like this with the **Watch** and **Destination** folders set



Note: If you close the K-Watch user interface, any watch folders that have been scheduled, will carry on running in the background as a service, if new files are dropped into the “Watch” folder.

2.4 Other Parameter Buttons



Edit – Will display the “Edit Watch” menu, which will allow you to change parameter settings; for example File Attributes or File Settings,

Pause – this can be used to pause the conversion process and K-Watch will wait.

Run – will start the conversion process running once more.

Remove - To remove a file from the K-Watch table, click on an instance to select it, and then press the {Remove} button

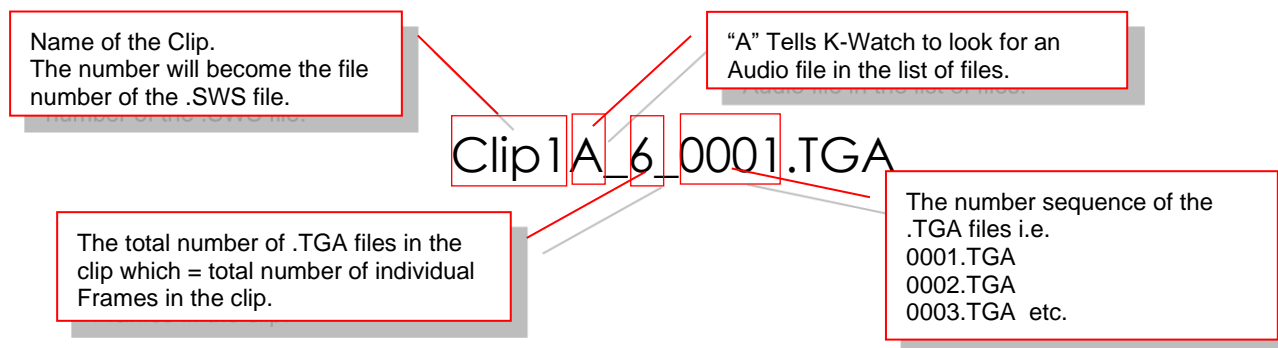
2.5 Step 2 - Naming the Incoming .TGA Files

2.5.1 Supported Formats

A list of supported media file formats can be found at [FFmpeg - 2 Supported File Formats, Codecs or Features](#)

It is important to understand how to name .TGA files before placing them into the Watch folder. **For more detailed information, read the “K-Watch File Naming Conventions” section of this manual.**

When creating a sequence of .TGA files to create a .SWS clip, please follow the naming conventions example below:



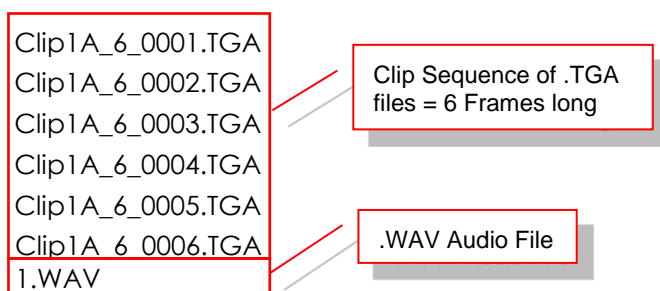
Important:

The watch system scans the file name from right to left looking for naming convention tags. When naming a clip i.e. “Clip1” it's important that the system reads in correctly so caution is required when using an “A”, “F” or “K” character in the name as the software may think that the file contains Audio, Fill or Key files and the .TGA files will not be converted to .SWS.

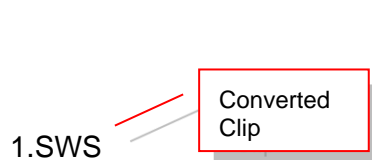
Note:

If the .TGA files have embedded Key data (alpha channel), then there is no need to let the sequence know about ‘F’ Fill or ‘K’ Key data and un-checking the “**Ignore Alpha /Key Data**” function would use the embedded alpha data in the file for the key channel.

The .TGA file sequence will look like this:



The .SWS file will look like this:



Nearly all .TGA Stills and Clips already have Fill and Key (Alpha) data, so the following steps would only need to be taken if a file has no Key data.

If the sequence of .TGA files are made up of 50% "Fill" files and 50% "Key" files, then the naming convention should be as follows:

After "Clip1" in each .TGA file, "F" = Fill, "K" = Key and "A" = Audio

Remember:

Clip1FA_4_0001.TGA
Clip1FA_4_0002.TGA
Clip1FA_4_0003.TGA
Clip1FA_4_0004.TGA
Clip1K_4_0001.TGA
Clip1K_4_0002.TGA
Clip1K_4_0003.TGA
Clip1K_4_0004.TGA
Audio1F_1_0001.WAV

This will create a clip with "Fill" and "Key" portions, with 1 frame of "Audio" attached to the Fill portion of the clip

1.SWS

Converted Clip with Fill, Key and Audio.

2.6 Step 3 - Naming the .MOV File

Naming the .MOV file is very simple.

Example: **Newsclip1.MOV**

Name of the Clip.
The number will become the file number of the .SWS file.

Newsclip1.MOV = 1.SWS

Converted Clip

Any Audio, Fill or Key information will be embedded into the file so that the file will just convert to .SWS.

Note:

If the .MOV file is 2.5Gb or more, the resultant .SWS file will be larger than 4Gb. K-Watch software will split the file down and place the split files into a .SWS folder (shown below).

Newsclip1.mov

Original .MOV clip

1.SWS

Name	Date modified	Type	Size
01_OF_04_XX	15/08/2016 12:25	_XX File	2,097,152 KB
02_OF_04_XX	15/08/2016 12:26	_XX File	2,097,152 KB
03_OF_04_XX	15/08/2016 12:26	_XX File	2,097,152 KB
04_OF_04_XX	15/08/2016 12:26	_XX File	193,045 KB

SWS Folder - The user will see this file in the Destination folder.

The .SWS folder contains these files that are split down to be smaller than 4Gb in size

Note:

When loaded into Kahuna, the .SWS folder is seen as a clip and will run just like any other clip.

Step 4 While K-Watch is Running

Place the .TGA or .MOV files into the "**Watch Folder**" and K-Watch will start to convert the files to .SWS format.

Look in the **Destination** folder for the converted files.

3 K-Watch File Naming Conventions

3.1 Creating Stills

The creation of a still requires the source file name to have the following naming convention fields at the end of the file name:

{Output File Number}
{Optional 'F', 'K' or 'A' character for fill, key or audio}
{Optional 'F', 'K' or 'A' character for fill, key or audio}

Note:

A key channel will automatically be created, if the source file contains a fill and key.

Examples:

Ex 1.

Still001.TGA - This will convert the still to **"1.SWS"**

10.TGA – This will convert single .TGA file to **"10.SWS"**

Ex 2.

Still001F.BMP

This will look for a Key source file **"Still001K.BMP"** before creating **"1.SWS" with Fill + Key**

Ex 3.

Still001A.TGA

This will look for an audio source file **"Still001.WAV"** before creating **"1.SWS" with Fill + Fill Audio.**

Ex 4.

Still001FA.TGA

This will look for key source file **"Still001K.TGA"** and **"Still001.WAV"** before creating **"1.SWS" with Fill + Key + Fill Audio.**

3.2 Creating Clips

The creation of a clip requires the source file name to have the following naming convention fields at the end of the file name:

{Output File Number}
{Optional 'F', 'K' or 'A' character for fill, key or audio}
{Single Non-Numeric Character}
{Maximum Number of Still/Audio files}
{Single Non-Numeric Character}
{Sequence/Audio group number}

Note:

Audio group number in channel pairs:

Audio group number 1 is for channels 1 and 2

Audio group number 2 is for channels 3 and 4

Audio group number 3 is for channels 5 and 6

Audio group number 4 is for channels 7 and 8

Examples:

Ex 1.

Still1_3_0001.TGA

Still1_3_0002.TGA

Still1_3_0003.TGA

This converts all the .TGA files above into a clip called "**1.SWS**" that is 3 frames long.

Ex 2.

Still2F_3_0001.BMP

Still2F_3_0002.BMP

Still2F_3_0003.BMP

Still2K_3_0001.BMP

Still2K_3_0002.BMP

Still2K_3_0003.BMP

This will convert all the .BMP files above into a clip called "**2.SWS**", that is 3 frames long and contains **Fill + Key data**.

Ex 3.

Still3FA_3_0001. BMP

Still3FA_3_0002. BMP

Still3FA_3_0003. BMP

Still3K_3_0001. BMP

Still3K_3_0002. BMP

Still3K_3_0003. BMP,
Audio3F_1_0001.WAV

This will convert all the files above into a clip called "**3.SWS**", that is 3 frames long containing **Fill + Key + Fill Audio data**.

Ex 4.

Still4FA_3_0001. BMP
Still4FA_3_0002. BMP
Still4FA_3_0003. BMP,
Still4KA_3_0001. BMP
Still4KA_3_0002. BMP
Still4KA_3_0003. BMP,
Audio4F_1_0001. WAV
Audio4K_1_0001. WAV

This converts all the files above into a clip called "**4.SWS**" clip that is 3 frames long and contains **Fill + Key + Fill Audio data + Key audio data**.

3.3 AVI Files

The creation of a clip requires the source file name to have the following naming convention field at the end of the file name:

{Output File Number}

Note: Audio data will automatically be added if source file contains audio.

Example:

5.AVI

This will convert the .AVI file into a clip called "**5.SWS**"

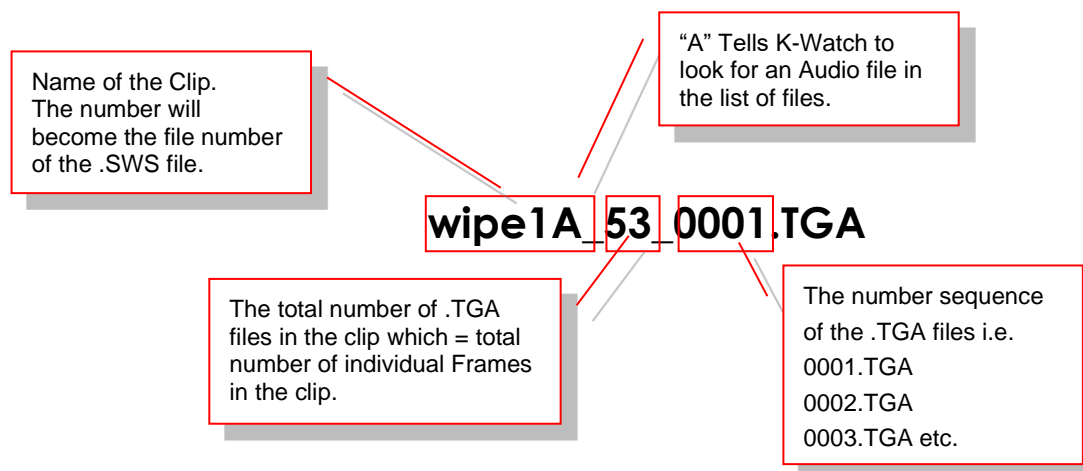
3.4 Naming the Clip

In this example a 53 frame clip will be created using a .TGA file format (3840 x 2160) with embedded alpha channels and a .WAV file for the audio.

Example .TGA = **wipe1A_53_0001.TGA**

Note

The 'A' character is used to let the K-Watch sequence know that it requires an "Audio" file will be associated with the .TGA files.



Important Note:

When giving the clip a name i.e. "wipe1", after the first character in the name, do not have any other capital letters because if an "A", "F" or "K" is added after the first character the software will think that the file contains Audio, Fill or Key files and the .TGA files will not be converted to .SWS.

Example:

wipe1A_53_0001	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0002	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0003	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0004	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0005	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0006	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0007	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0008	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0009	26/11/2015 16:06	TGA File	32,401 KB
wipe1A_53_0010	26/11/2015 16:06	TGA File	32,401 KB

The audio file example name = **audio1.WAV** or **1.WAV**

The audio file should be placed in the "Watch" folder at the same time as the .TGA files so that it can be associated with .TGA files

Important Note:

If the .TGA files have embedded Key data (Alpha channel), then there is no need to let the sequence know about 'F' Fill or 'K' Key data and un-checking the "**Ignore Alpha /Key Data**" would use the embedded alpha data in the file for the key channel.

3.4.1 Start K-Watch Running

After finishing naming the files, place all the .TGA files into the "Watch" folder and the conversion process will automatically start.

3.4.2 Additional Information

Note:

This information would only be needed if the files do not contain a Key (Alpha) data.

From the information above, if the sequence of .TGA files are made up of 50% "Fill" files and 50% "Key" files, then the naming convention should be as follows:

The number of .TGA files needs to increase to 54 to have an even number of Fill and Key files.

wipe1FA_54_0001.TGA

to

wipe1FA_54_0027.TGA

wipe1K_54_0028.TGA

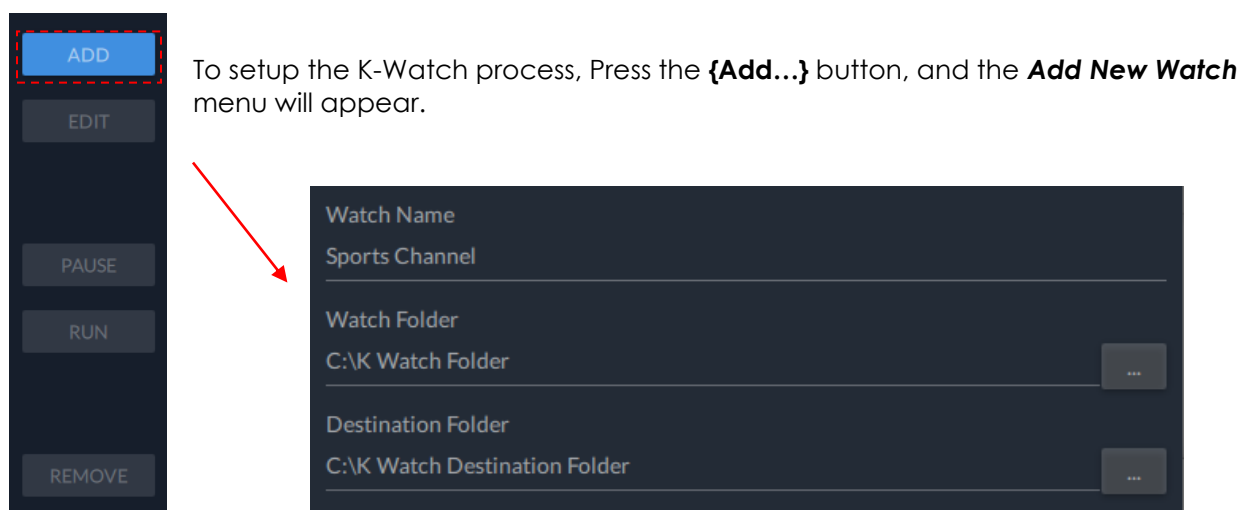
to

wipe1K_54_0054.TGA

audio1F_1_0001.WAV or audio1.WAV or 1.WAV

4 K-Watch Menu Controls Explained

Double click on the K-Watch system tray icon in the bottom right of the Windows Desktop and the **K-Watch** table will be displayed.



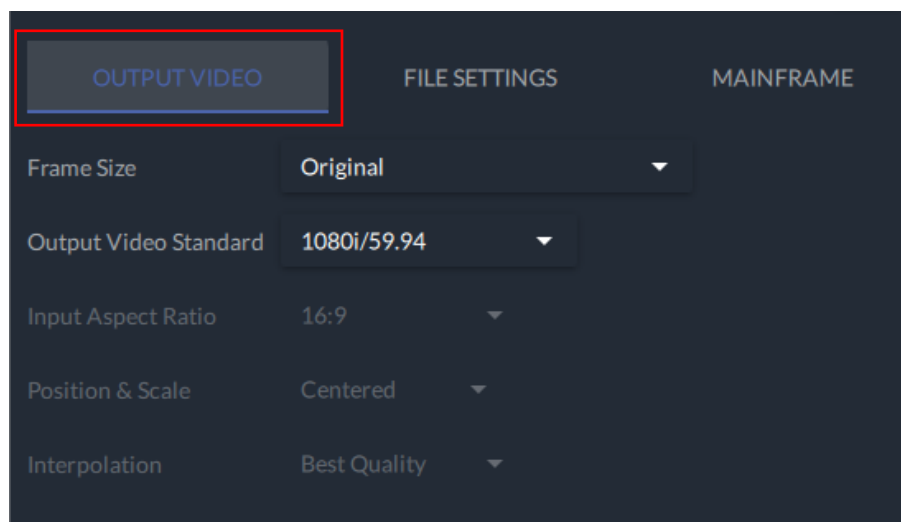
The **Add New Watch** menu is where all the parameters are set for the conversion of the incoming files.

Watch Name – is the name given to the individual Watch project – the name will also be displayed in the K-Watch table.

Watch Folder – here, the user selects the Watch Folder on the PC hard drive, where the **incoming** stills, clips and audio files are placed.

Destination Folder – here the user selects the Destination Folder where the files are placed after the conversion process.

4.1 Output Video Properties:



Frame Size – there are two options for this.

- **Original** - In this mode Watch will not perform any resizing of the image.
- **Match Video Standard** - When this is selected, Watch will resize the image to match the video standard using the parameters below.

Output Video Standard – this drop-down menu selects the video standard for the created .sws file

Input Aspect Ratio –

- **4:3 or 16:9** - defines how images are interpreted for its aspect.
- **Square Pixel** - assumes that the pixels in the input image are square. This setting is ignored for HD video standards.

Position & Scale – this sets the position of the out-going .sws file relative to the Input Aspect Ratio.

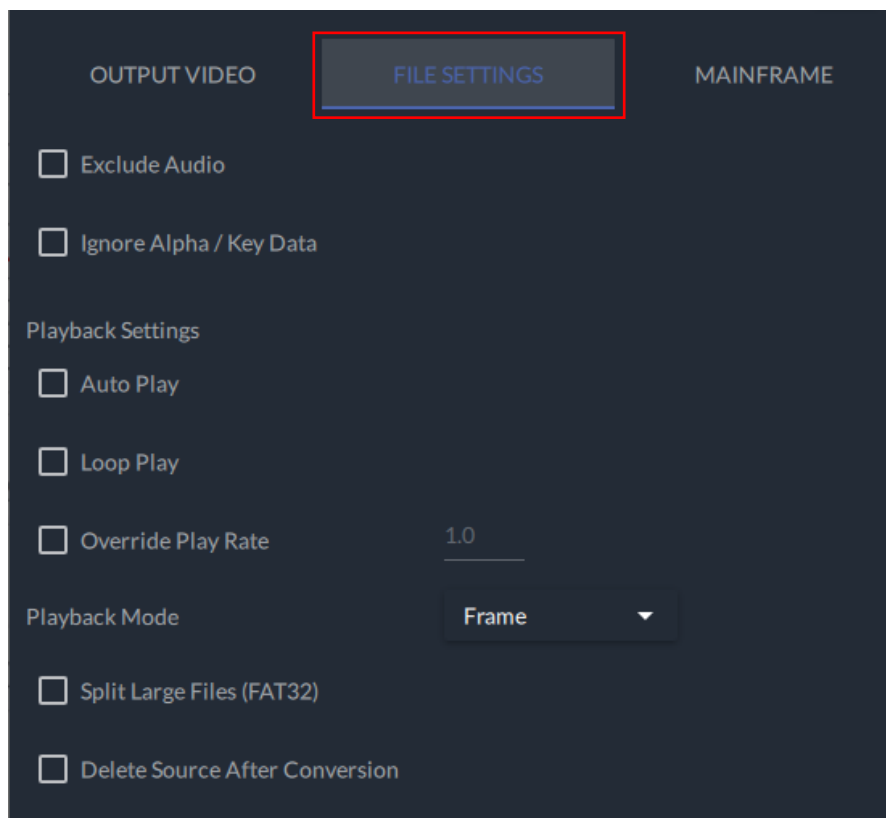
- **Full Width** will set the input image width to follow the output video width while maintaining the aspect ratio.
- **Full Height** will set the input image height to follow the output image height while maintaining the aspect ratio.

Interpolation – selects the type of filter to be used for resizing input image.

- **Best Quality** - recommended interpolation filter designed for resizing video images.
- **Fastest** - standard resize interpolation filter

4.2 File Settings:

In the **File Setting** section, the settings will be applied to **all** the files converted.



Exclude Audio – will only allow the video portion to pass

Ignore Alpha / Key – Nearly all still and clip files will contain Key (Alpha) data. So keep this box unticked. This function is only required if Key (alpha) data is not required when converting files.

Playback Settings:

Auto Play – a clip will automatically play when it is loaded into the Kahuna Store

Loop Play – Loop Mode is selected and the clip will continuously play when it is loaded into the Kahuna Store.

Override play rate – adjusting this parameter will set the play speed of the clip when it is loaded into the Kahuna Store.

Playback Mode

- **Field** – switches playback to interlaced
- **Frame** – switches play back to progressive
- **Field 1 & 2 Only** – will play either interlaced frames 1 or 2 only
- **Field Swap** – will swap Field 1 and Field 2 around at playback

Split Large Files (FAT32) – this will split down a clip that is over 4Gb in size. The split files will go into a .SWS folder so that the folder can be imported into a Kahuna mainframe.

Note:

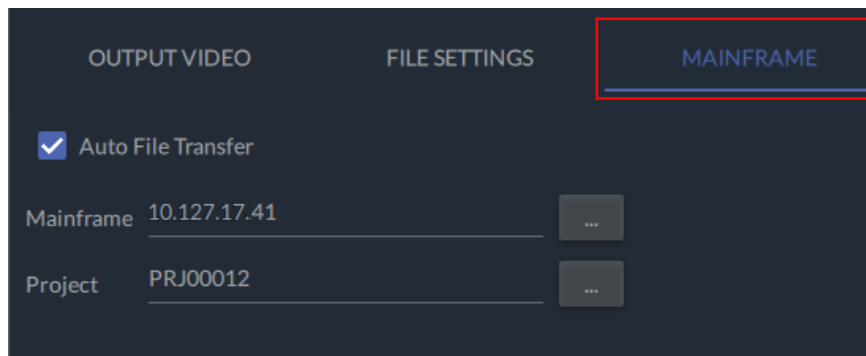
Splitting Large Files - Only necessary when importing files via an external USB device. Not necessary when importing via MSP.

Delete source after conversion – when selected will delete the source file from the Watch Folder.

4.3 Direct Upload to Mainframe:

With the optional **K-Manager Pro** licence installed in your Kahuna Mainframe, K-Watch can transfer the converted files directly into a specific project on a mainframe.

This is setup using the “**Mainframe Connection**” settings.



The file “**browse**” buttons will display a list of available Mainframes and Projects on the selected Mainframe.

Important Note:

Any files in the destination project with the same number will be overwritten.

Once you have set up your Watch, click OK on the dialogue.

Select your new Watch in the table and click on the **Run** button.

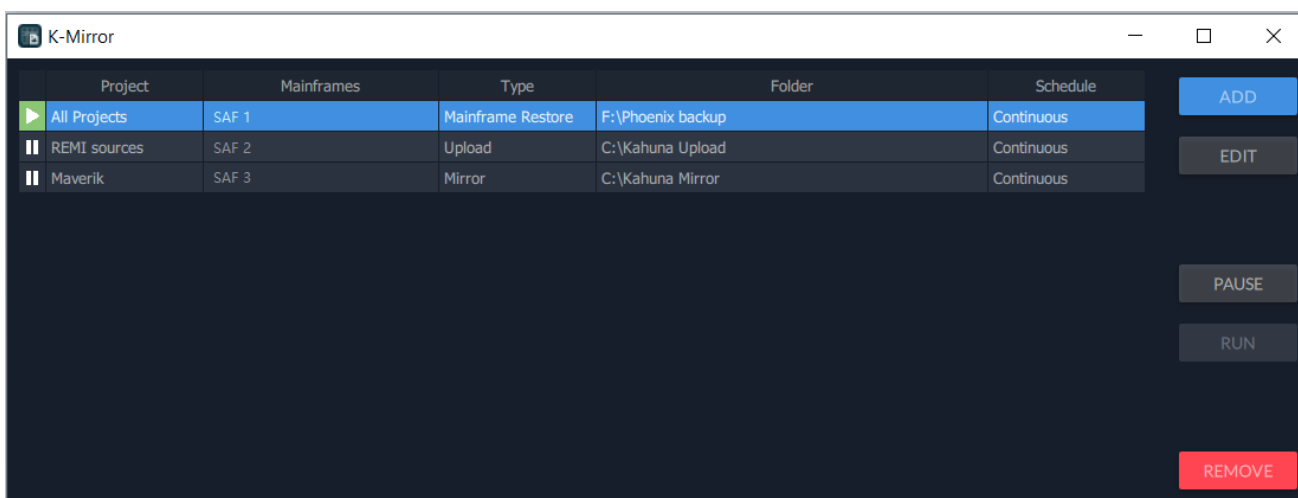
5 K-Mirror

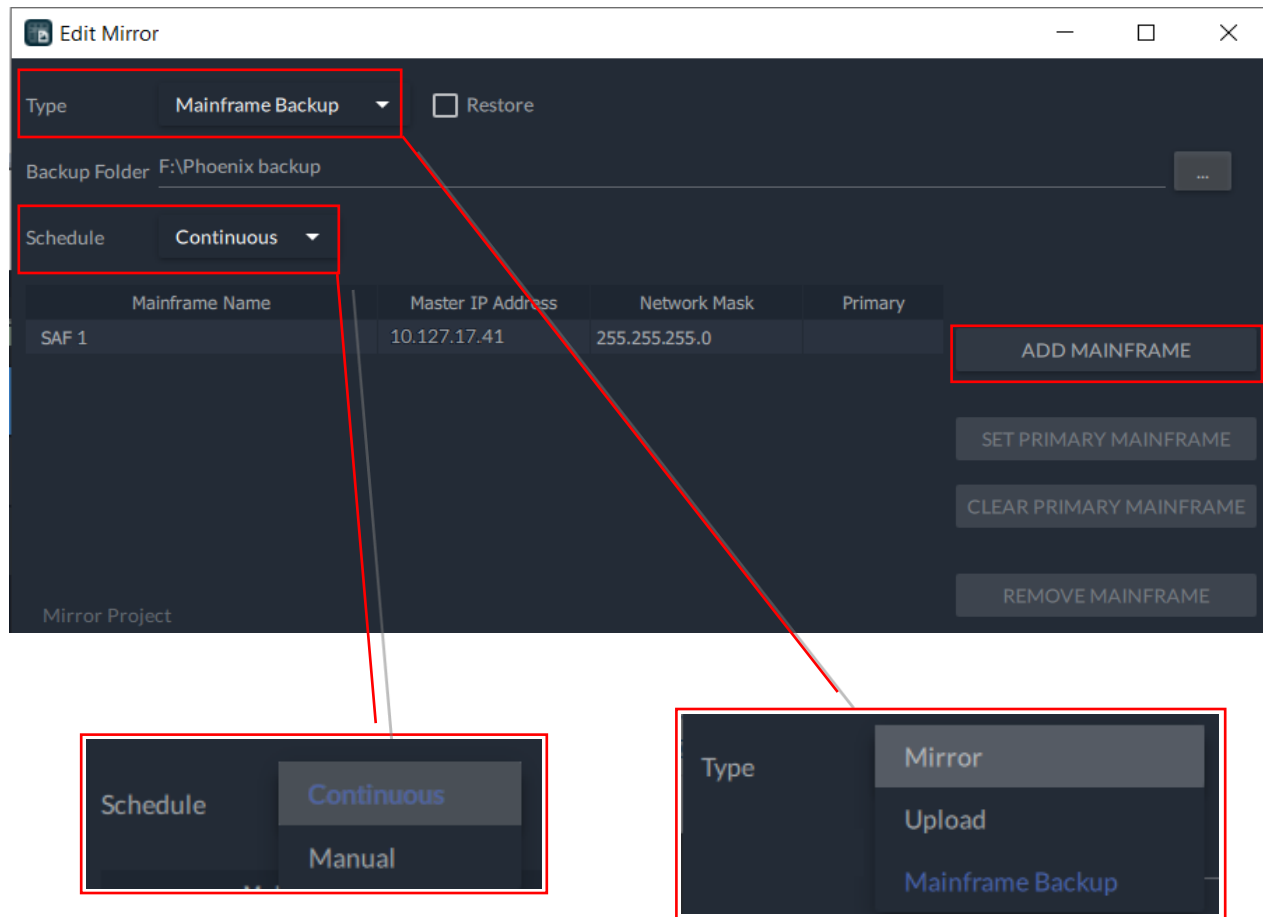
K-Mirror enables the following:

- **Mirror projects** – synchronizes projects across mainframes, based on the most recent files.
It scans the project directory of each mainframe, selects the latest files and downloads to a local Mirror folder on PC. It then uploads the missing or updated files to each of the mainframes, ensuring the whole project is the same across mainframes.
If a file is deleted on any mainframe or local mirror folder, it will be mirrored back. Similarly, if a file is created or updated, it will re-sync.
- **Clone projects** – synchronizes projects across mainframes, based on the primary mainframe's project files.
It scans the primary mainframe project directory, downloads to local folder on PC, then uploads files to other mainframes, keeping them in sync with the primary.
If a file is deleted on the primary mainframe, it would also delete the same file from the other mainframes.
- **Upload projects** – distributes projects from a local folder to multiple mainframes. If a file is deleted on a mainframe, it will re-sync.
- **Mainframe backup** – performs a mainframe back up from local folder on PC with option to restore.

5.1 Setting up a Mirror or Backup service:

To configure a K-Mirror instance, Press the {Add...} button from the K-Manager Pro menu to create a new mirror instance.





Type – select the type of mirror instance to configure project synchronizing.

- **Mirror** – synchronizes the project directory of each mainframe with a mirror folder on PC, as well as replacing any file based on the most recent changes.
- **Upload** – distributes projects from a local folder to multiple mainframes.
- **Mainframe Backup** – creates a copy of the mainframe project into a local folder on PC.

Schedule – select the type of scheduling to perform mirror scanning.

- **Continuous** – keep track of any missing or updates files after synchronization.
- **Manual** – pauses after completing synchronization.

To add a mainframe, Press the **Add Mainframe** button.

Available Mainframes				
Mainframe Name	Master IP Address	Network Mask	Serial Number	Transfer License
SAF 1	10.127.17.25	255.255.254.0	3979-ADC0-B9A9-D639	Yes
SAF 2	10.127.17.26	255.255.255.0	6759-4799-EE5D-F4B4	Yes
SAF 3	10.127.17.27	255.255.255.0	4144-576B-2B91-5FF4	Yes

OK
CANCEL

Select a mainframe you want to mirror, upload or backup. Repeat this to add further mainframes to this Mirror instance.

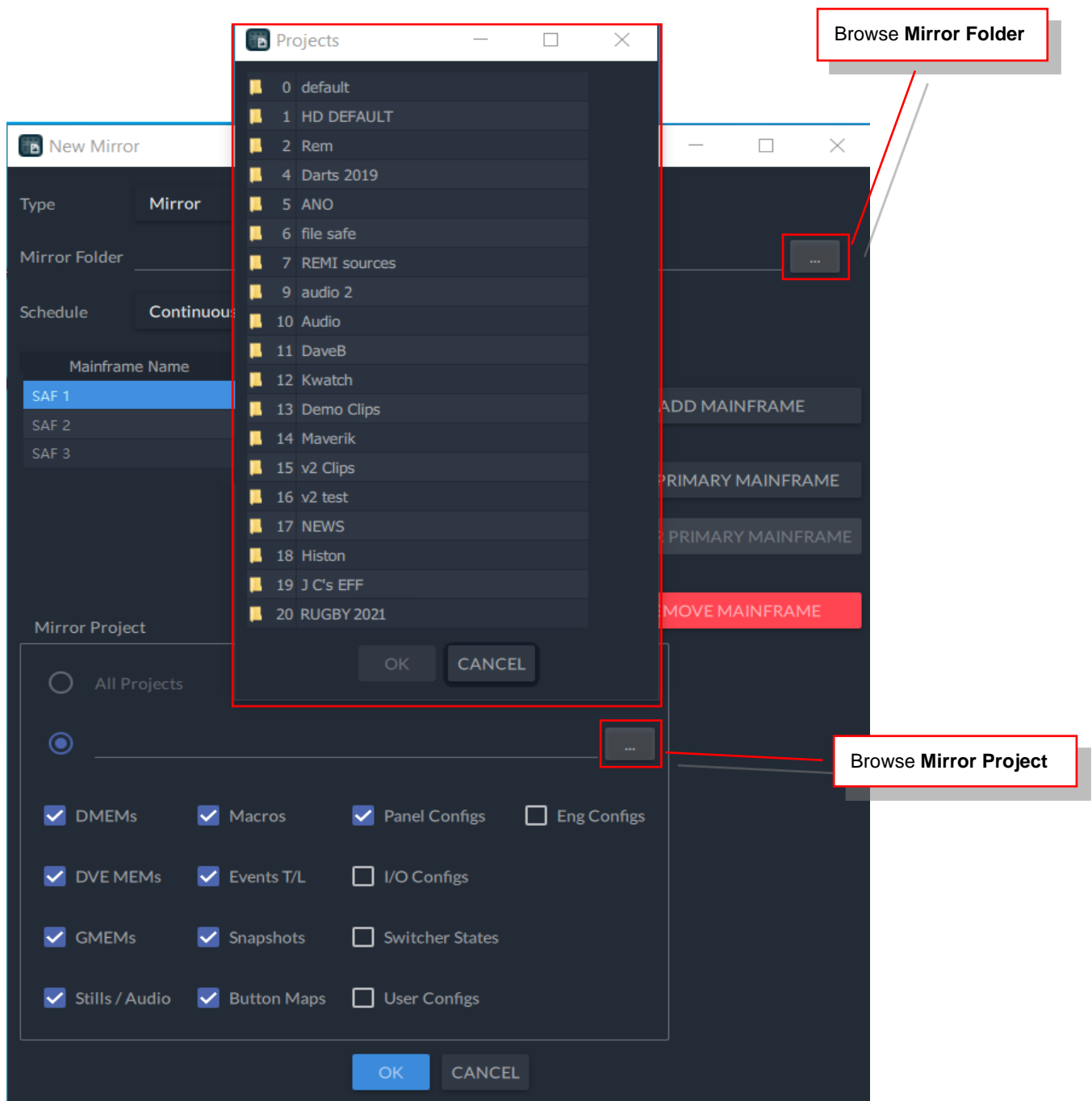
Note:

Only one mainframe can be selected for Mainframe **Backup**.

If you wish to clone projects from a primary mainframe, Press the **Set Primary Mainframe** button. This will enable a clone type system whereby the primary's project directory is cloned across other mainframes.

Mainframe Name	Master IP Address	Network Mask	Primary	
SAF 1	10.127.17.25	255.255.254.0		<div>ADD MAINFRAME</div> <div>SET PRIMARY MAINFRAME</div>
SAF 2	10.127.17.26	255.255.255.0		
SAF 3	10.127.17.27	255.255.255.0		

Note: In **Mirror Project** settings, click the “browse” button to select a project to mirror. You can also select **All Projects** if the mirror instance type is Upload.



After selecting a project, tick the file types you wish to mirror.

The file types Switcher States, User Configs and Eng configs are un-ticked by default.

Important Note: Click on OK button to start the configured mirror project. A Status GUI app will display the running projects' job status.

6 Clip Preview

The KMP Clip Previewer allows the user to **load, trim convert and upload** a single media file directly to a Kahuna using the settings in an existing Watch (KMP licence required for direct upload).

1. Browse PC to find **Media File**

2. Transport controls

- Play
- Pause
- Stop
- Frame Advance

3. Mark **In-Frame**

4. Mark **Out-Frame**

5. Select **Convert**

6. Enter **File Number**

7. Select **Watch**

Note:

The Clip Previewer will use the settings from an existing **Watch service** (see section 2) but the user has the option to **trim** the clip and needs to set the final **File Number**.

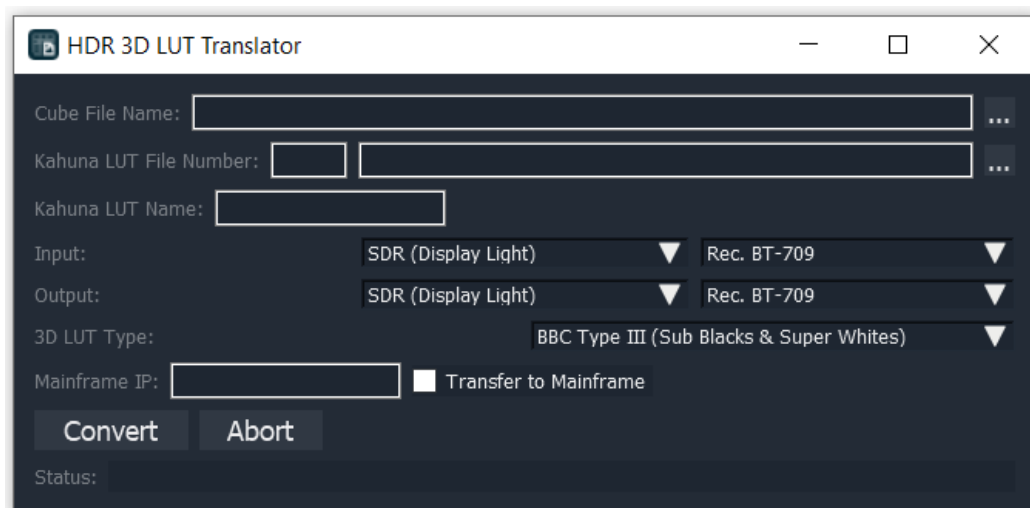
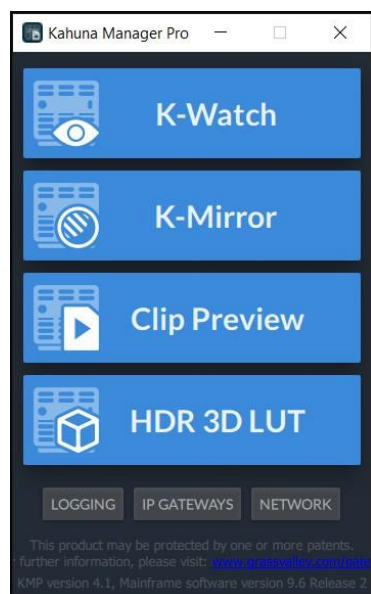
The Watch service used could be set to pause but any Watch Service which is already running will be temporarily paused whilst the Clip Preview conversion and upload is processed. Once this action is completed the Watch will un-pause if it was previously running.

7 HDR 3D LUT Translator


This application is for translating HDR 3D LUT **.cube** files into the Kahuna **.klf** file format, which the Kahuna switcher uses internally for SDR-HDR and HDR-HDR conversions. This feature is available on Kahuna releases from v9.6 onwards

The option to transfer the resultant **.klf** files directly to a Kahuna switcher requires the mainframe to be licensed for K-Manager Pro. HDR conversion requires a FormatFusion4 licence on the Kahuna mainframe. It should also be noted that the 3D LUT files need to be obtained separately from an appropriate source.

Clicking on the **HDR 3D LUT** button opens the Translator tool.

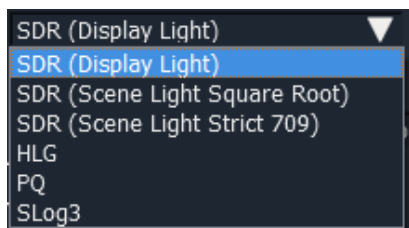


Cube File Name: field, use the  button to navigate to the required **.cube** file on the PC or enter the path and file name directly.

Kahuna LUT File Number: shows two fields. The first should be filled with the File Number to be used in a Kahuna mainframe (0-999). The second field is used to input where on the PC the translated **.klf** file will be saved. Again, use the  button for easy navigation on the PC.

Kahuna LUT Name: This is the name which will be displayed on the Kahuna menu system. Enter a name here to describe the conversion.

Input: There are two drop-down boxes to select the input video format. The first selects the SDR or HDR format of the input:

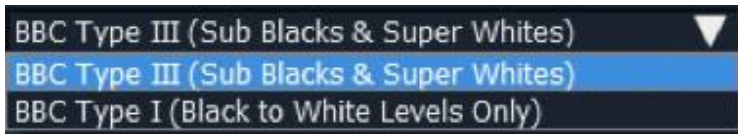


The second is for selecting the color gamut of the input:



Output: These are two more drop-down boxes for selecting the desired output format.

3D LUT Type: This is a drop-down box for selecting the signal range covered by the 3D LUT. There are two options:



Mainframe IP: Where a Kahuna mainframe is licensed for K-Manager Pro, it is possible to transfer the resultant **.klf** file directly to the Kahuna.



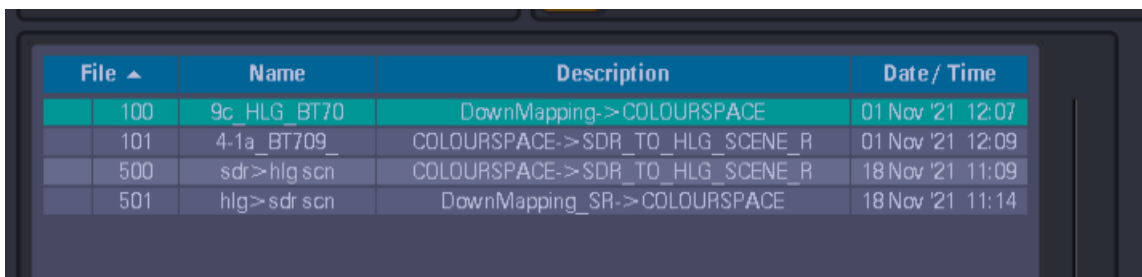
Enter the mainframe's IP address in the field and tick the box (the PC must be able to connect to the mainframe via a network connection).

Finally, once all the selections have been completed the **Convert** button should be clicked.

The translation will take place and the resultant file will be saved on the PC in the folder selected in the **Kahuna LUT File Number** field. Where **Transfer to Mainframe** is selected, the file will be uploaded to the Kahuna mainframe and will appear in the filing system in the **HDR LUT** folder.

7.1 Using 3D LUT Conversions on a Kahuna

The filing system shows the available LUT files in the HDR LUT folder (**menu 1888**).



File	Name	Description	Date / Time
100	9c_HLG_BT70	DownMapping->COLOURSPACE	01 Nov '21 12:07
101	4-1a_BT709	COLOURSPACE->SDR_TO_HLG_SCENE_R	01 Nov '21 12:09
500	sdr>hlg scn	COLOURSPACE->SDR_TO_HLG_SCENE_R	18 Nov '21 11:09
501	hlg>sdr scn	DownMapping_SR->COLOURSPACE	18 Nov '21 11:14

7.1.1 System-Wide HDR / SDR conversion settings

3D LUT conversions can be applied for **SDR to HDR** or **HDR to SDR** conversions on a system-wide basis. They are configured on the main System Standard menu page (menu 8731).



The main SDR or HDR system format needs to be set in the *HDR Format* field.

For SDR to HDR conversion, set *Use Fixed LUT* to *Yes* and select the required LUT file.

For HDR to SDR conversion, set *Use Fixed LUT* to *Yes* and select the required LUT file.

7.1.2 Local Settings for HDR / SDR Input Conversions

It is also possible to set inputs or outputs to use a LUT file independently of the System settings. For Inputs this is done on the Inputs, HDR **menu 8768**.

Select the desired input in the table and set that input to **Local** control:

Conversion

Source	Input BNC	Name	Control	From	Mode	Curve	Gamut	HDR Adjust		SDR to HDR				HDR to SDR		Active LUT	
								Lift	Gain	Bright	Peak	Shadow	Mid	Highlight	White	Black	
Input A1	BNC A1		Local		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	500
Input A2	BNC A2		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A3	BNC A3		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A4	BNC A4		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A5	BNC A5		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A6	BNC A6		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A7	BNC A7		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A8	BNC A8		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A9	BNC A9		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A10	BNC A10		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A11	BNC A11		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input A12	BNC A12		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	
Input B1	BNC B1		System		SDR	Rec. 709	Rec. 709	0.00	1.00	1.00	0.50	2.50	0.75	0.00	0.00	0.00	

Copy & Next

Control

Select **Input A1**

From **Local**

System Format **SDR**

Use Payload **No**

Local Format

HDR Format **Rec. 709**

Exposure Index **BCC ASA**

Gamut **Rec. 709**

Lift **0.00%**

Gain **1.00**

Camera (Scene Light) **Off**

SDR Camera Sq Root **No**

Local SDR to HDR Conversion

Use Fixed LUT **Yes**

Select LUT **sd>hlg sdr**

Brightness (Gain) **1.00**

White Peaking **0.50**

Highlight Boost **Yes**

SDR to HLG Boost **No**

Local HDR to HDR Conversion

Use Fixed LUT **No**

Select LUT **100**

Local HDR to SDR Conversion

Use Fixed LUT **No**

Select LUT **Sc_HLG_BT709**

Shadow Gain **2.50**

Mid Tone Width **0.75**

Highlight Gain **0.00**

White Clip **0.00%**

Black Clip **0.00%**

The Local Format setting for this input and the setting for **System HDR Format** in menu 8731 will determine whether a conversion to or from HDR is available. Local HDR to HDR conversions are also possible for converting between different HDR formats.

7.1.3 Local Settings for HDR / SDR Output Conversions

Setting an **Output** to use a LUT file for conversion is done on **menu 8778**:




This is done in a similar way to inputs.

Conversion




Source	Output BNC Name	Control From	Mode	Curve	Gamut	HDR Adjust		SDR to HDR			HDR to SDR				Active LUT
						Lift	Gain	Bright	Peak	Shadow	Mid	Highlight	White	Black	
A1		Local	Local	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	101
A2		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A3		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A4		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A5		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A6		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A7		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A8		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A9		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A10		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A11		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A12		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A13		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—
A14		System	SDR	Rec. 709	Rec. 709	0.00	1.00	2.50	0.75	0.00	0.00	0.00	1.00	0.50	—





Copy & Next

Control



BNC Output: A1 
Control: Local 
Sys. Format: SDR 





Local Format

HDR Format: Rec. 709 
Exposure Index: 800 ASA 
Gamut: Rec. 709 



Lift: 0.00% 
Gain: 1.00 
Camera (Scene Light): Off 
SDR Camera Sq Root: No 






Local SDR to HDR Conversion

Use Fixed LUT: No 
Select LUT: 9c_HLG_BT709 



To HDR Bright: 1.00 
To HDR Peaking: 0.50 
Highlight Boost: Yes 
SDR to HLG Boost: No 


Local HDR to SDR Conversion

Use Fixed LUT: Yes 
Select LUT: 4-1a_BT709 

To SDR Shadow: 2.50 
To SDR Mid Width: 0.75 
To SDR Highlight: 0.00 
To SDR White: 0.00% 
To SDR Black: 0.00% 

Local HDR to HDR Conversion

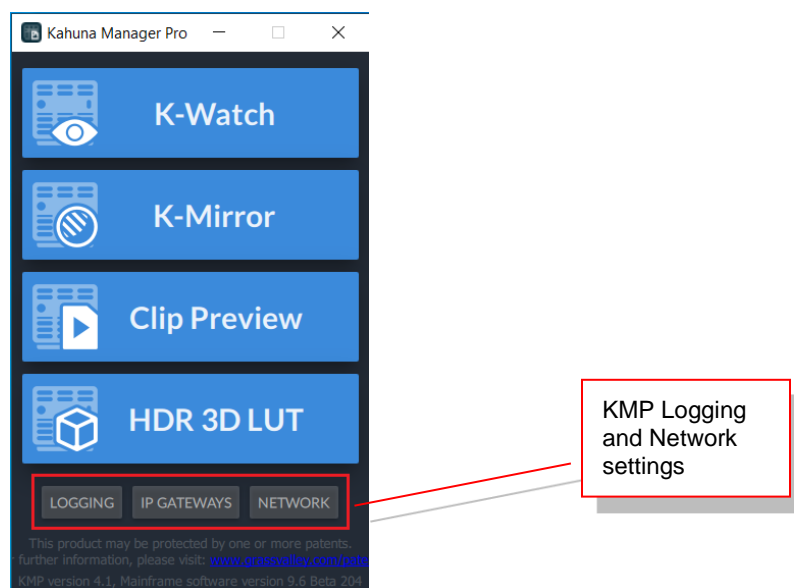
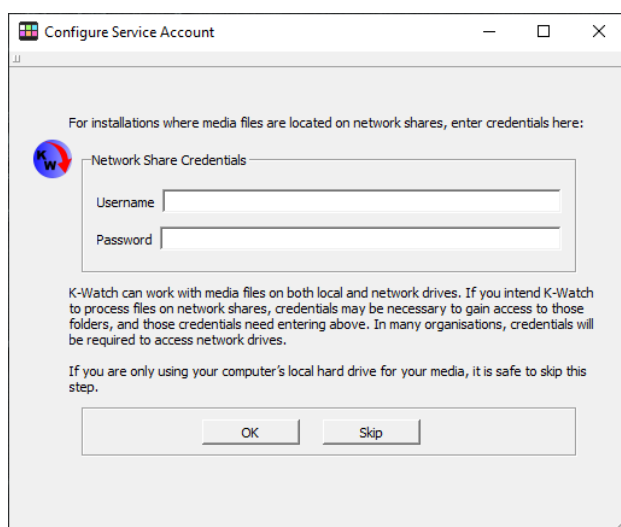
Use Fixed LUT: No 
Select LUT: 100 



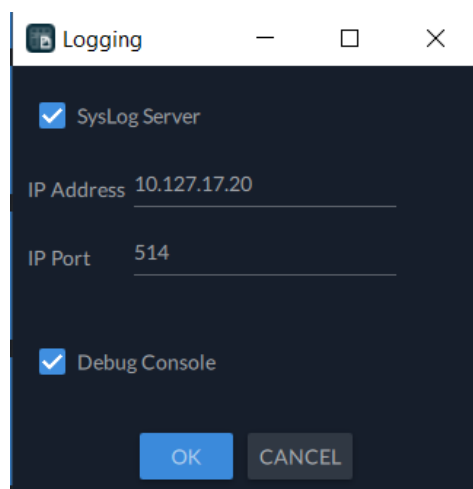
8 K-Manager Pro Settings

K-Watch & K-Mirror can work with media files on both local and network drives. If you intend K-Watch or K-Mirror to process files on network shares, credentials may be necessary to gain access to those folders, and those credentials need entering above. In many organisations, credentials will be required to access network drives.

A dialog box will appear the first time you open the K-Watch software. This allows you to add "Network Share Credentials" to allow K-Manager Pro to connect and use K-Watch on a network. If you only want to use K-Watch locally on your PC, click on the **{Skip}** button.

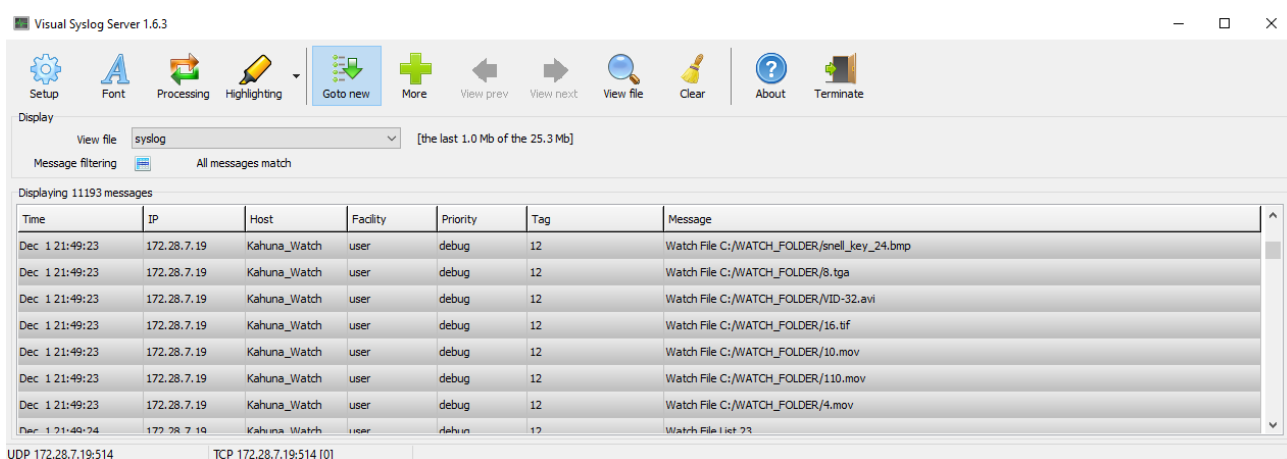


8.1 Syslog Server Logging



K-Watch can use an external Syslog server to save its diagnostic output. Syslog can be used to display log files showing information about files that have been converted, mirrored or any error messages.

Below is an example form a SysLog server showing a list of files that have been converted through K-Watch.

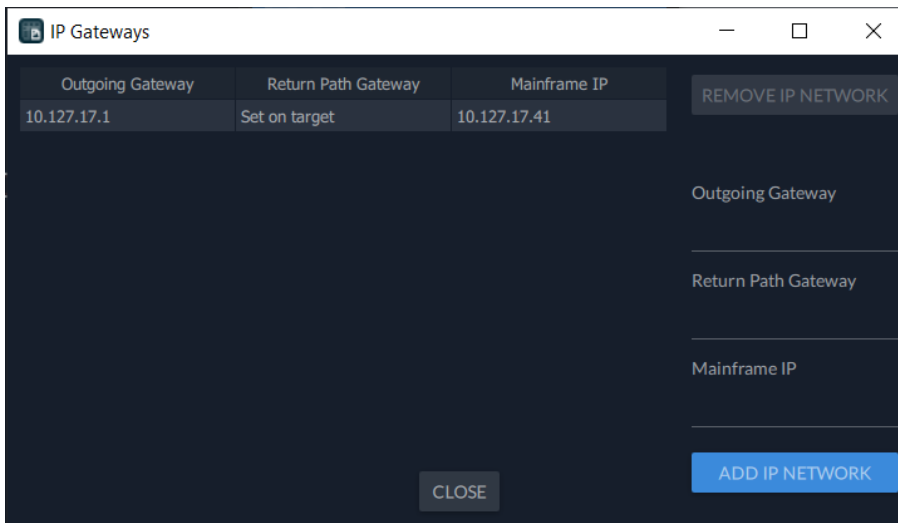


Time	IP	Host	Facility	Priority	Tag	Message
Dec 1 21:49:23	172.28.7.19	Kahuna_Watch	user	debug	12	Watch File C:/WATCH_FOLDER/snell_key_24.bmp
Dec 1 21:49:23	172.28.7.19	Kahuna_Watch	user	debug	12	Watch File C:/WATCH_FOLDER/8.tga
Dec 1 21:49:23	172.28.7.19	Kahuna_Watch	user	debug	12	Watch File C:/WATCH_FOLDER/VID-32.avi
Dec 1 21:49:23	172.28.7.19	Kahuna_Watch	user	debug	12	Watch File C:/WATCH_FOLDER/16.tif
Dec 1 21:49:23	172.28.7.19	Kahuna_Watch	user	debug	12	Watch File C:/WATCH_FOLDER/10.mov
Dec 1 21:49:23	172.28.7.19	Kahuna_Watch	user	debug	12	Watch File C:/WATCH_FOLDER/110.mov
Dec 1 21:49:23	172.28.7.19	Kahuna_Watch	user	debug	12	Watch File C:/WATCH_FOLDER/4.mov
Dec 1 21:49:24	172.28.7.19	Kahuna_Watch	user	debug	12	Watch File List 23

UDP 172.28.7.19:514 TCP 172.28.7.19:514 [0]

8.2 IP Gateways

Configuration of system to see mainframes on different networks.



The IP Gateways window displays a table with the following data:

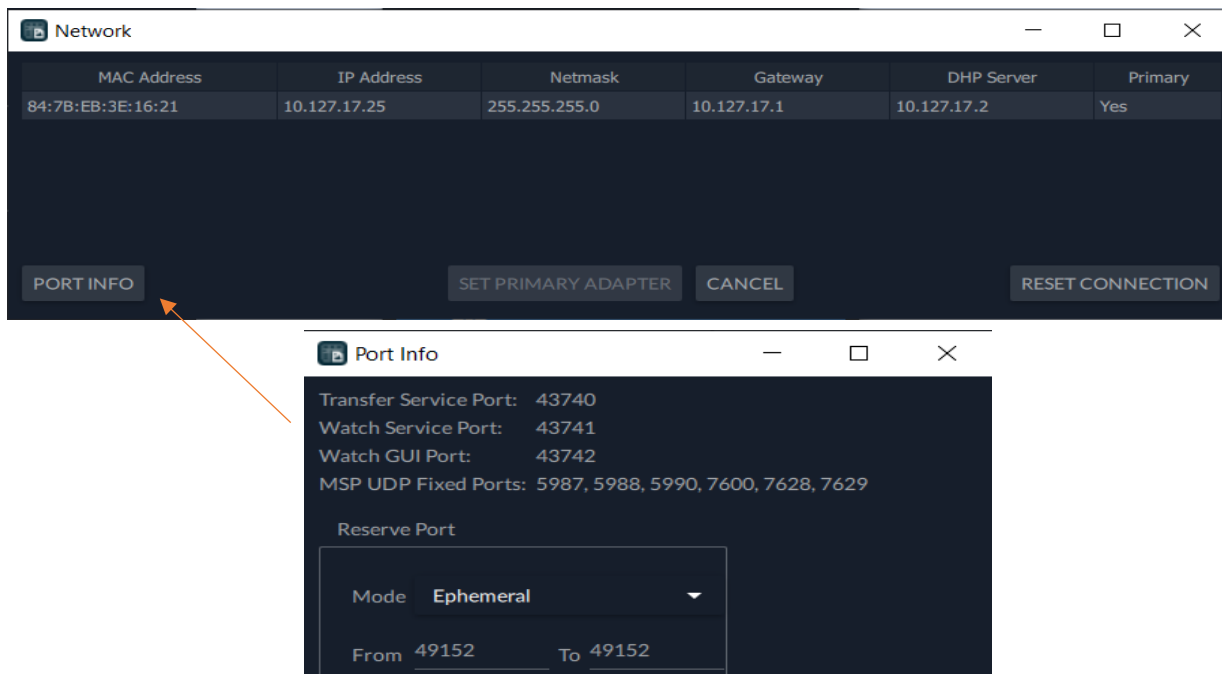
Outgoing Gateway	Return Path Gateway	Mainframe IP
10.127.17.1	Set on target	10.127.17.41

Buttons: REMOVE IP NETWORK, CLOSE, ADD IP NETWORK

Labels: Outgoing Gateway, Return Path Gateway, Mainframe IP

8.3 K-Manager Pro Network

Control of network adapters, IP port number info and resetting connections to services. Press on Port Info button to set up a UDP port range.



The Network window displays a table with the following data:

MAC Address	IP Address	Netmask	Gateway	DHP Server	Primary
84:7B:EB:3E:16:21	10.127.17.25	255.255.255.0	10.127.17.1	10.127.17.2	Yes

Buttons: PORT INFO, SET PRIMARY ADAPTER, CANCEL, RESET CONNECTION

The Port Info window displays the following information:

Transfer Service Port: 43740
Watch Service Port: 43741
Watch GUI Port: 43742
MSP UDP Fixed Ports: 5987, 5988, 5990, 7600, 7628, 7629

Reserve Port

Mode: Ephemeral

From: 49152 To: 49152

9 Technical Information

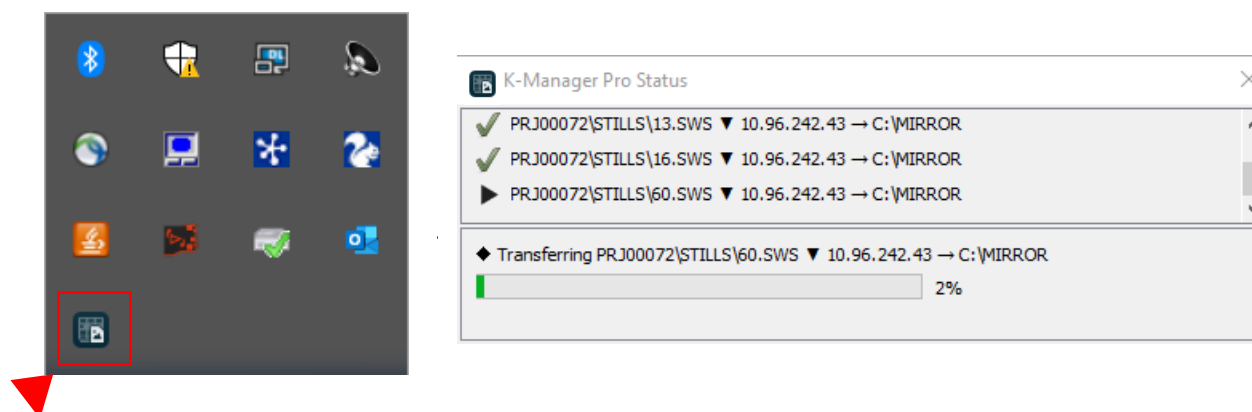
The following is list of K-Manager Pro ports that require privilege on your network. The MSP installer currently sets up group policies to enable this, however your IT department ought to be aware of the following:

MSP fixed ports 5987, 5988, 5990, 7600, 7628, 7629 - UDP communication between K360 mainframe and Kahuna Transfer Service.

K-Manager Pro fixed ports 43740, 43741, 43742, 43743 – TCP communication between Kahuna Watch GUI, Kahuna Watch Service and Kahuna Transfer Service.

10 K-MP Status Display

To view the Status bar, open the status window using the Windows Quick-Launch icon in the Hidden Icons area on the Taskbar.



Grass Valley Technical Support

For technical assistance, contact our international support center, at 1-800-547-8949 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the Contact Us section of Grass Valley's website (www.grassvalley.com).

An on-line form for e-mail contact is also available from the website.

Corporate Head Office

Grass Valley
3499 Douglas-B.-Floreni
St-Laurent, Quebec, H4S 2C6
Canada
Telephone: +1 514 333 1772
Fax: +1 514 333 9828
www.grassvalley.com