# Proxima™ Encoder Manual

Media  Archive Solution Co.,Ltd.

Proxima™ Encoder Manual

Proxima Encoder is an encoding/decoding software to make your own video server. Proxima Encoder is based on the software codec

1. Installation
    - Installing Proxima Encoder is an easy task to do. Just double clicking the install program will be doing all necessary installation for you.
        i. Go to MediaArchiveSolution website (http://www.marchive.mov) and open the Product/download page if you do not have an installation package.

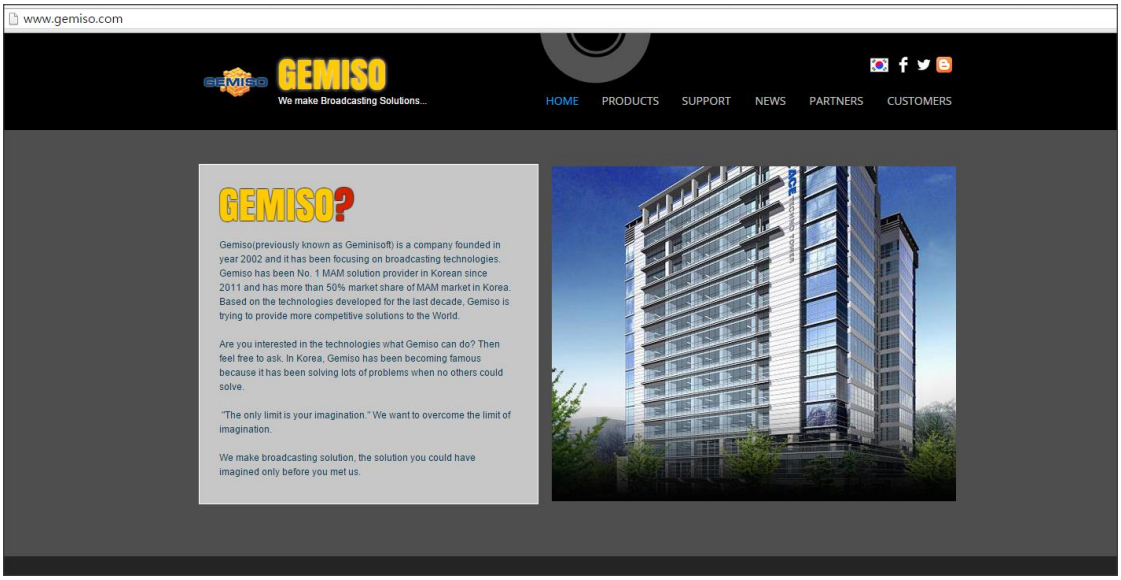



**Image 1) Gemiso Website, www.gemiso.com**

You will find **“Product”** page from MediaArchiveSolution website and you can find the link to download page. There must be several versions and the version you need to download is the latest version.

ii. If you finish downloading the latest installer, you can use it to install on your PC. Running the exe file will start the installation process.

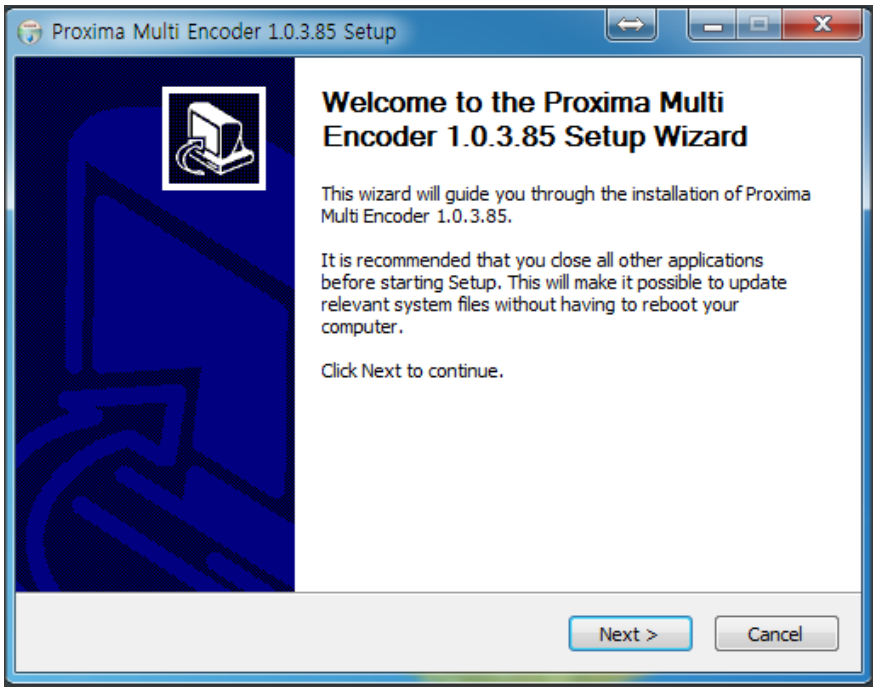



**Image 2) Welcome page of Installer**

When you run the install program, you will see some picture like above. Then please follow the instruction from the installer.

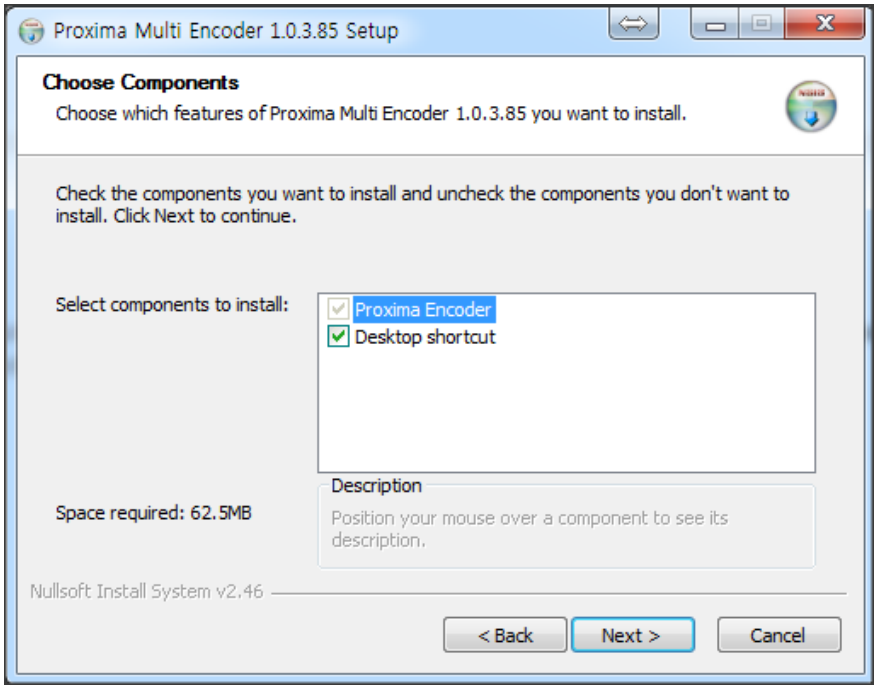
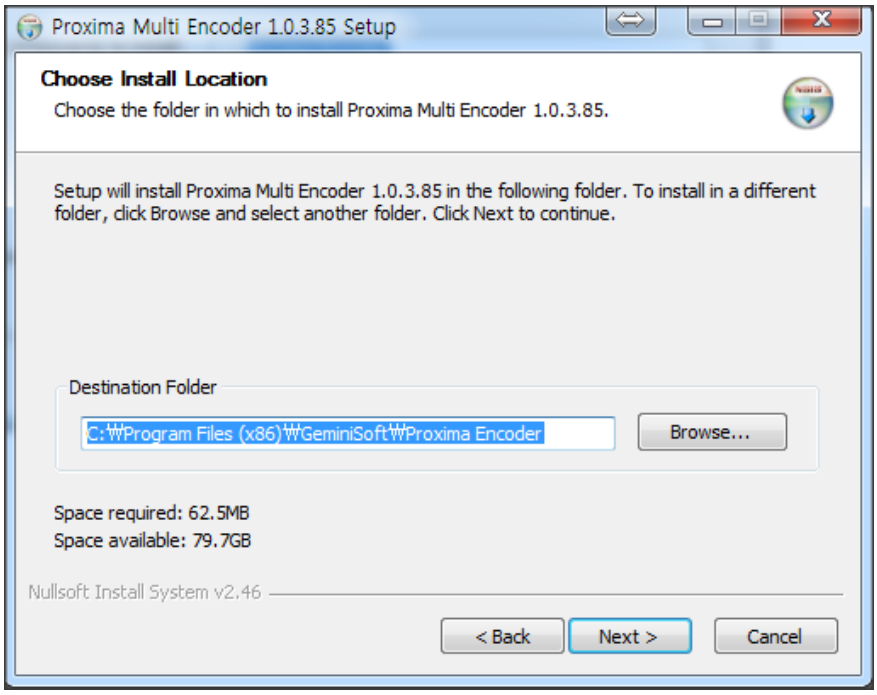
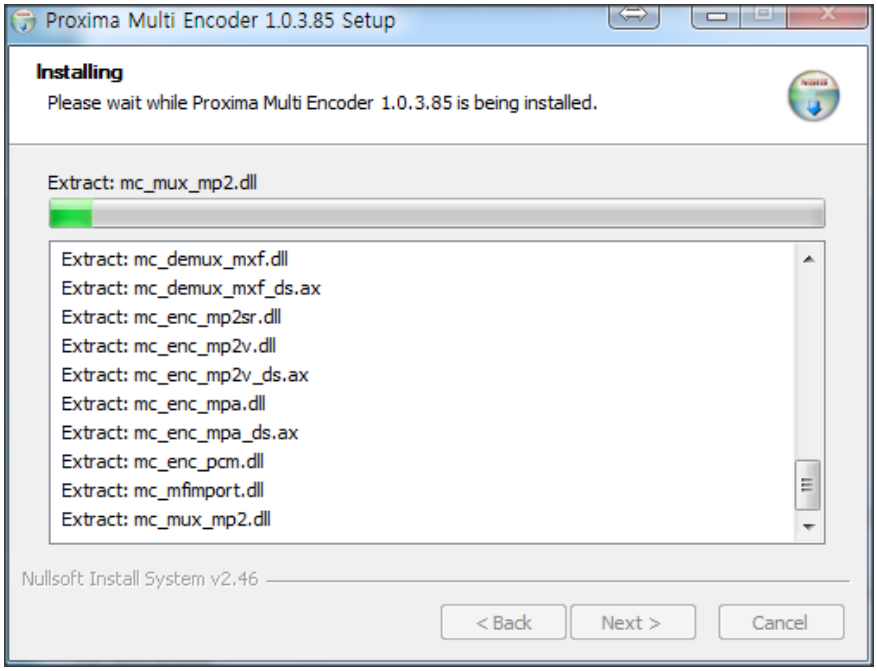



**Image 3) Choose compenents page**

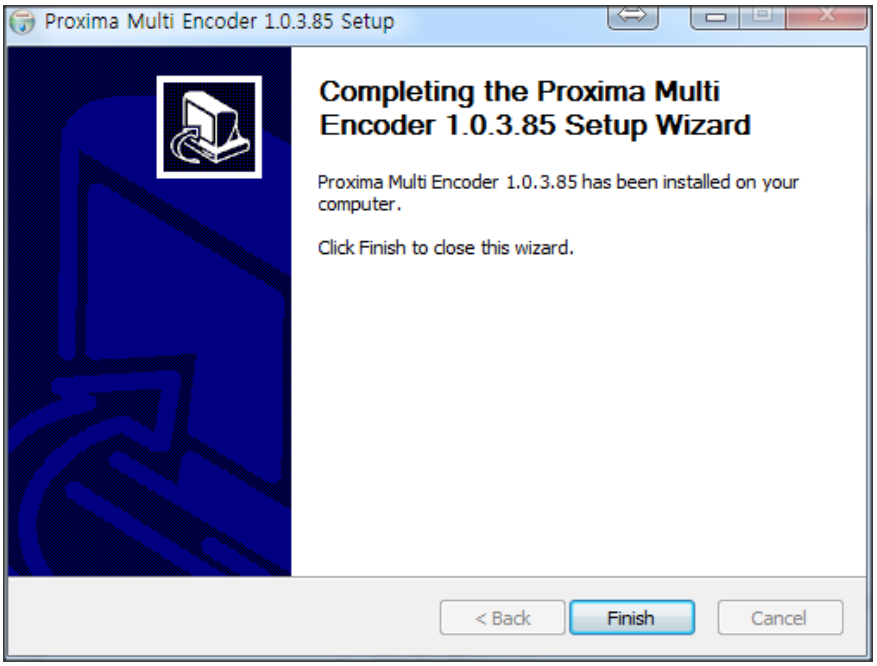
Just click “Next” button to proceed. Automatic installation processes will copy all the files and register all necessary settings on your computer.




You can select the path to install. We recommend not to change the destination folder.




The installer will copy and register all the necessary files and settings on your computer system.




When the installation process is done, you will see the page like above.

You now have completed the installation.

2. General Explanation
   Proxima Encoder is encoding software but we have been trying our best to make this system can be used as emergency decoding system as well. Proxima Encoder is named as an “Encoder” but actually is a Video server based on software codec.

- General User Interface

  Proxima Encoder looks like the picture below. It has a list, showing the recorded files and channel windows up to 4 windows. Each channel window can be configured as Play or Rec mode.

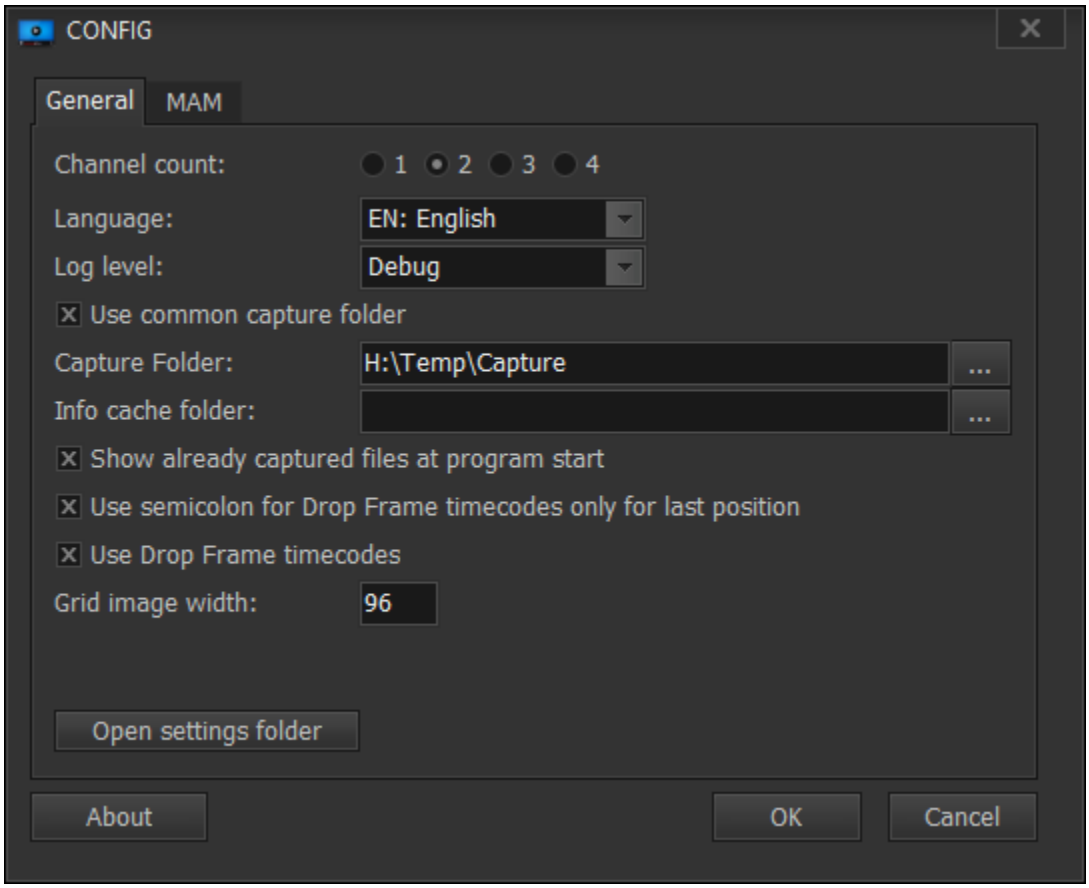

**Image 4) Proxima Encoder with 4 channels**

- Global Setting
  Global setting window can be opened by clicking “CONFIG” button in the right-top part of application.


  When you click the button, it will open the window in the next page.

  In the Global Setting, CONFIG window, you can set up the followings.

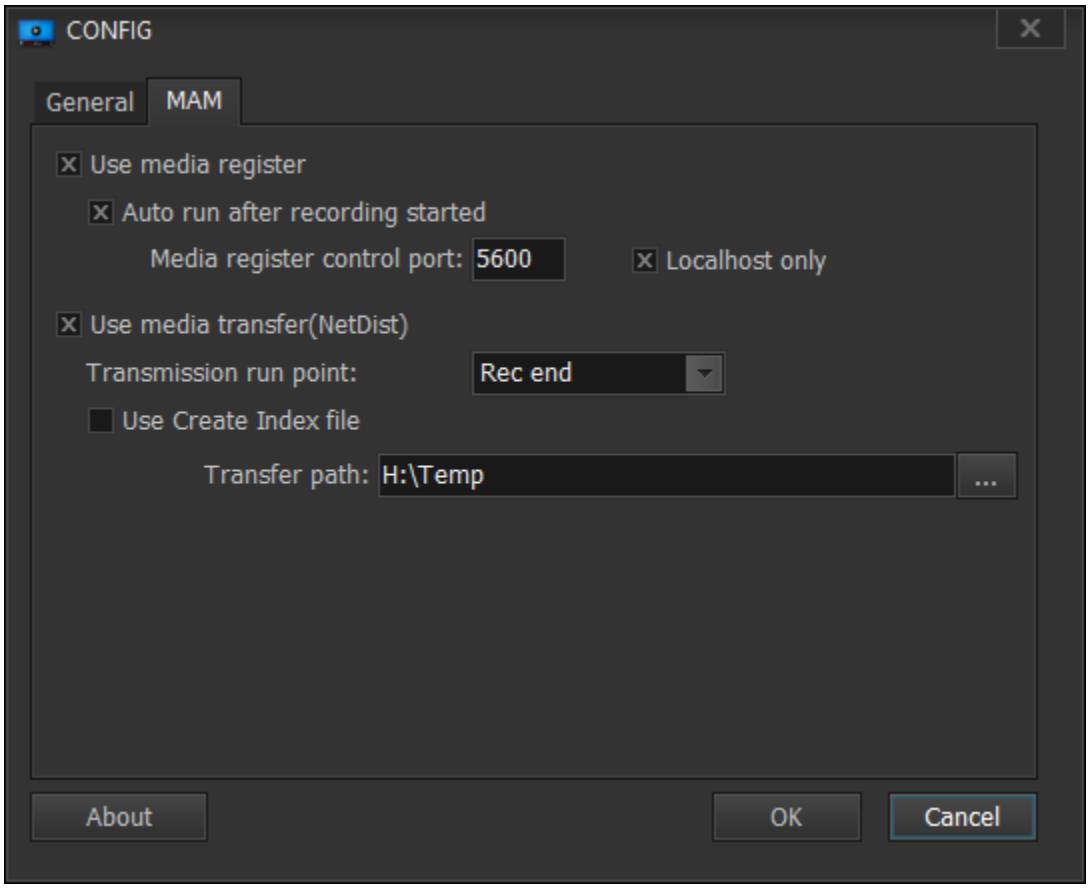
General tab.




- Channel Count : It is based on the channels of your IO card; Bluefish or Decklink card.
- Language : You can set up which language you want to use.
- Log level: verbosity level of logging.
- Common Capture Folder: If you set up this folder, it will be the folder for every channel will save the recorded file.
- Info cache folder: if empty then POE creates subfolder named PEncoderCache under capture folder and stores there XML files with clips metadata. Otherwise specified here folder is used.
- Use Drop Frame timecodes: for NTSC framerate use Drop Frame timecode format.
- Grid image width: you can set up width of thumbnails in the Media Browser list

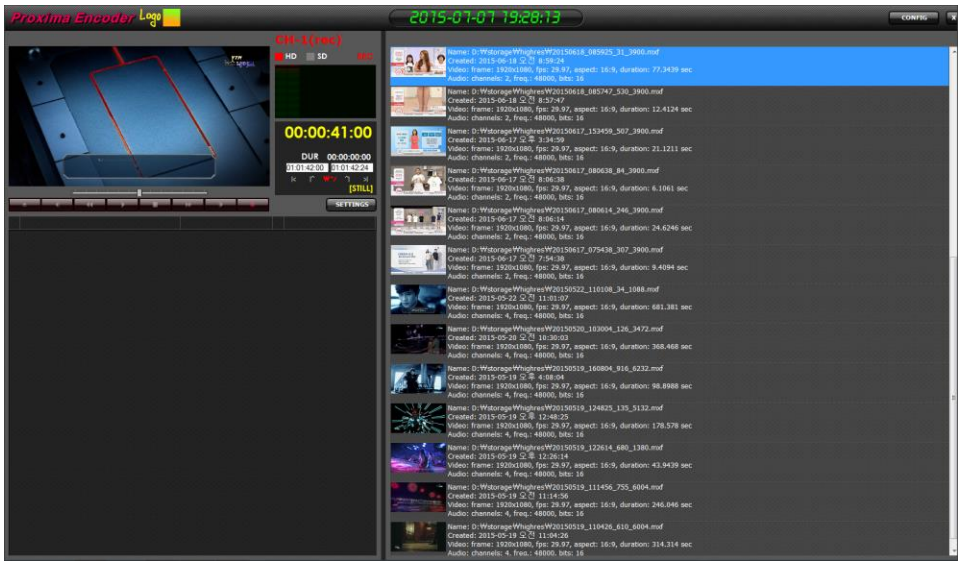
There is also “Open setting folder” button. If pressed then explorer window opens with folder where settings and log files are located.

MAM tab



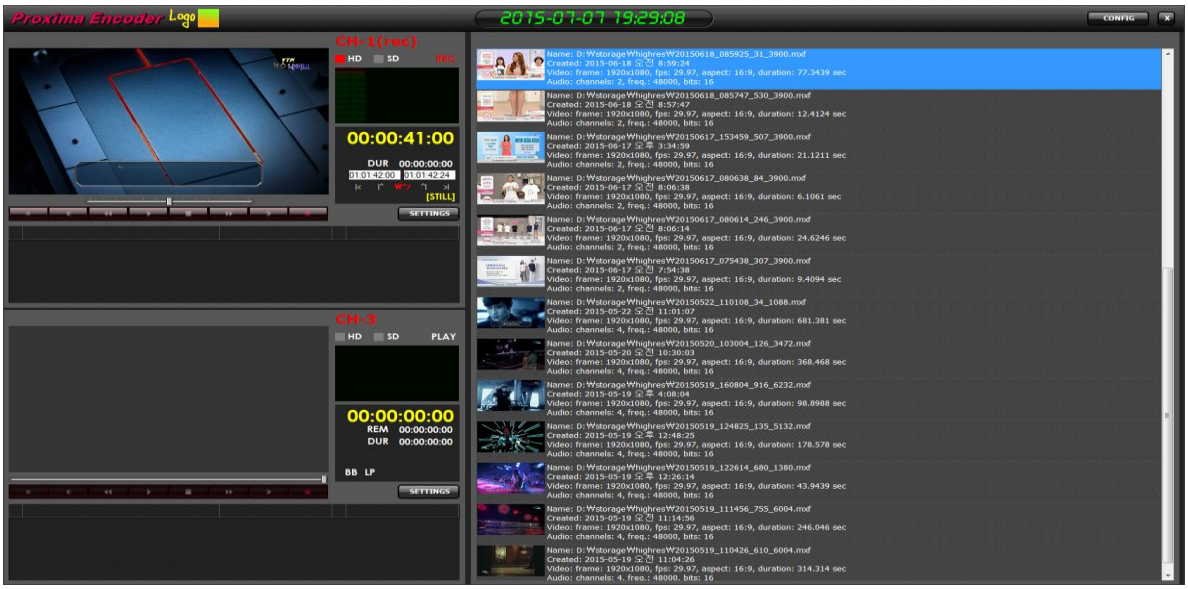

- Use media register : enable it to use MAM registration module during file capture. Registration module execution file should be specified in settings INI file manually in MAM.MediaRegisterModuleFullName key.
- Media register control port: MAM registration process includes registration info feedback from MAM server. POE opens specified port and waits metadata there.
- Localhost only: if enabled then media register control port, specified earlier, accepts connections only from local system and declines remote ones.
- Use media transfer: enable this to use NetDist module. It copies file to a new location after capture. Module execution filename must be specified manually in MAM.NetDistModuleFullName key of settings INI file.
- Transmission run point: select when to run NEtDist: at recording start or end.
- Use Create Index file: this value passed to NetDist executable
- Transfer path: target path, passed to NetDust executable

- 1 Channel Interface



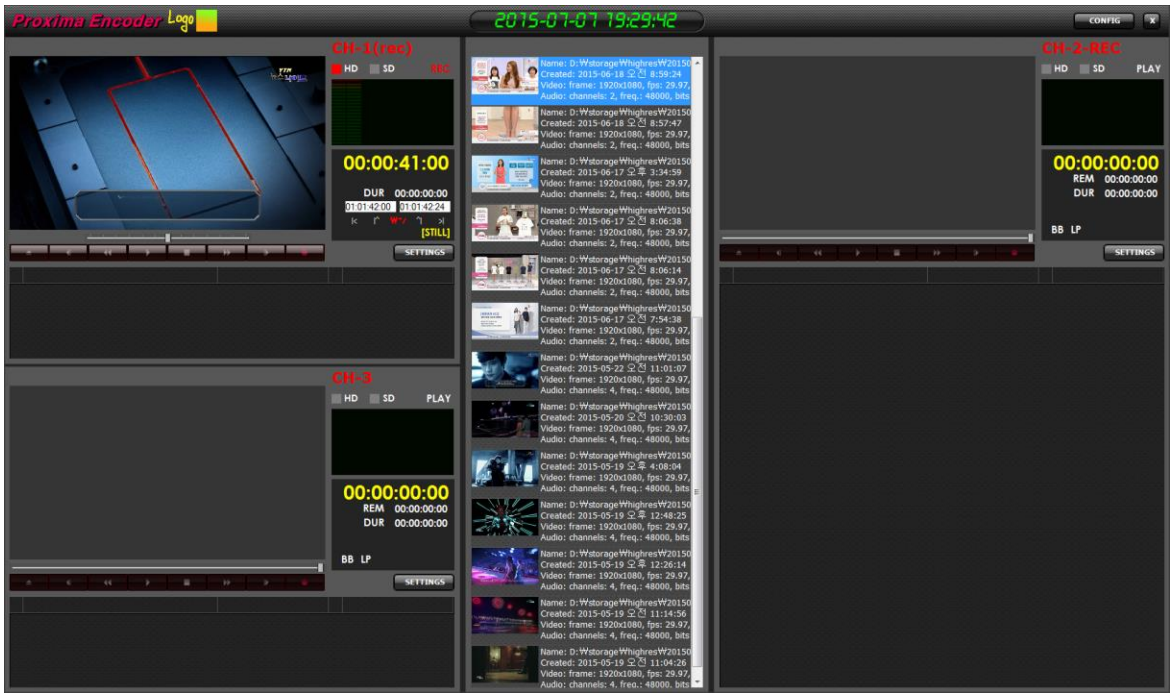

If you have a Decklink or Bluefish IO card with just one channel, you can set up 1 channel for your Proxima Encoder.

- 2 Channels Interface



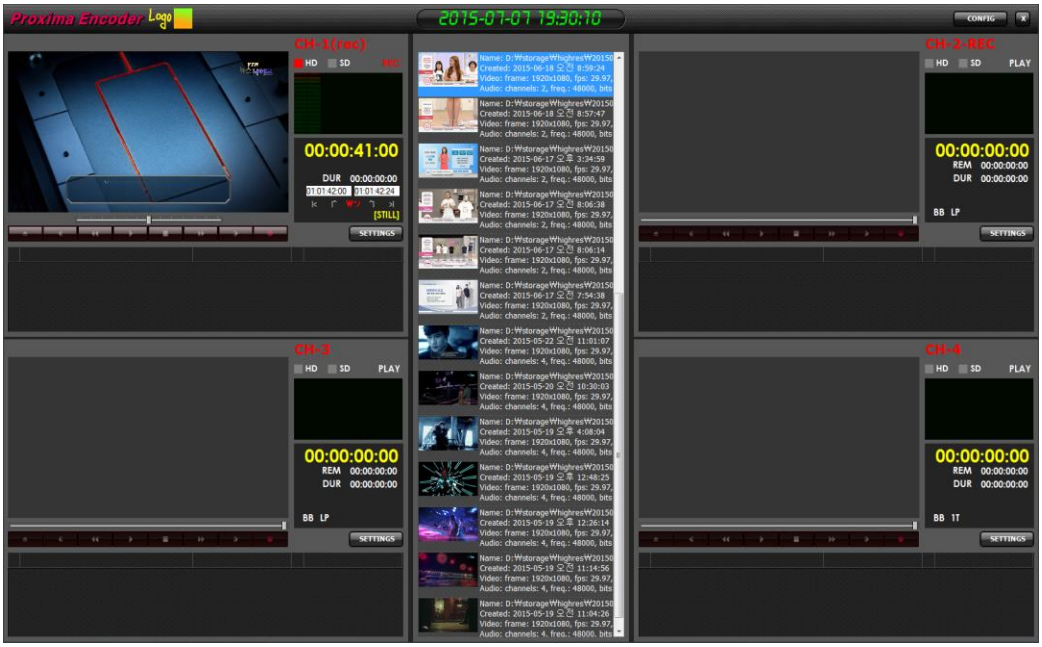

If you have 2 channel interface card, then you can set up 2 channels. Then the User interface will look like above.

- 3 Channels Interface




In case of 3 channels, Proxima Encoder will have 2 channels on the left side and 1 left channel on the right side.

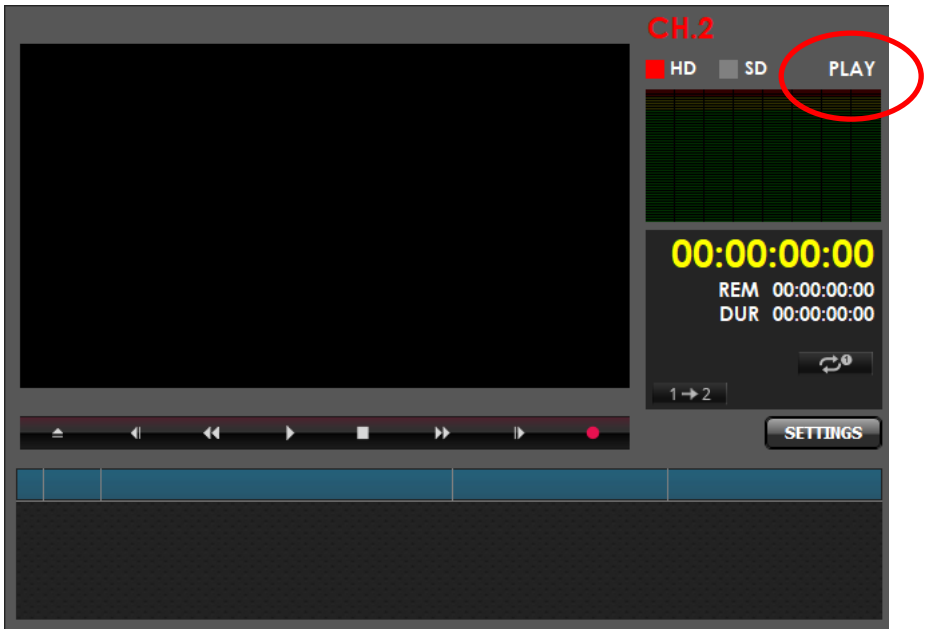
- 4 Channels Interface




With 4 channels, Proxima Encoder will show 4 channels at the same time.

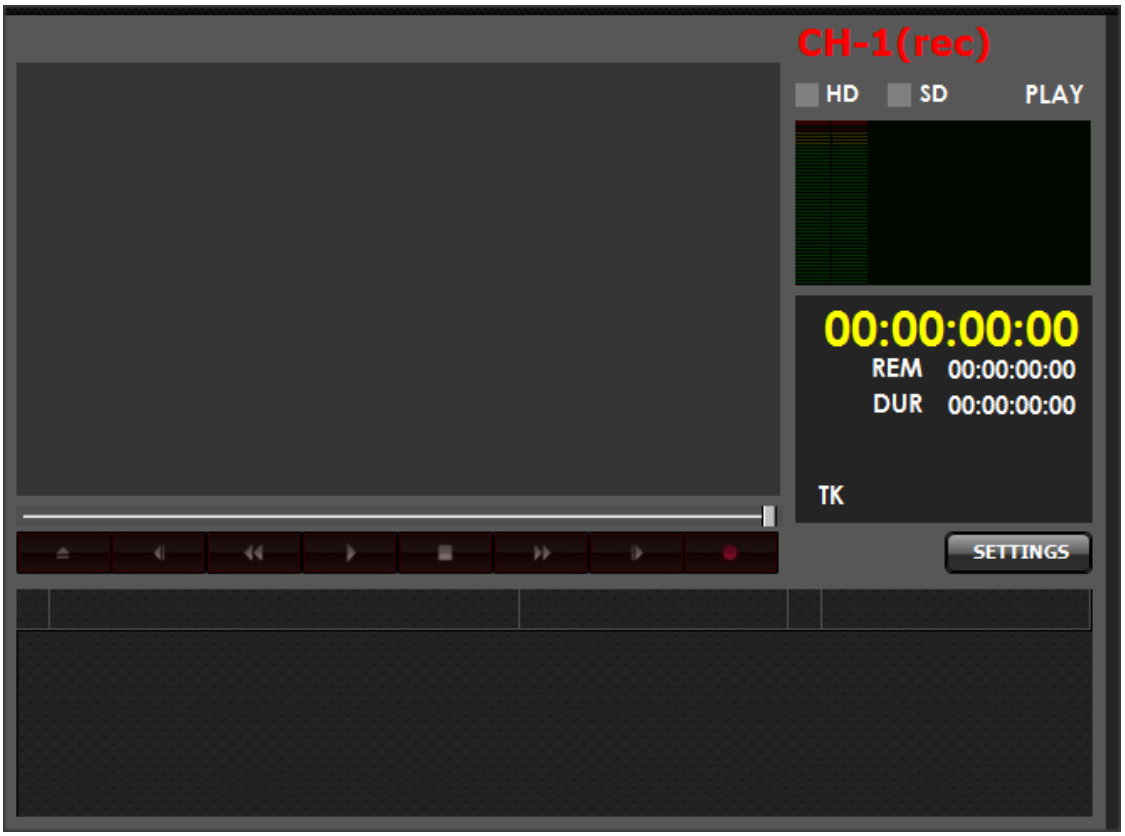
3. Each Channel
    - Switching between Record mode and Player mode

Each channel can be configured as a PLAY mode or a REC mode. You can send your movie into SDI form in PLAY mode. And you can record video from SDI input in REC mode.
You can change mode clicking the label “PLAY” or “REC.”




From the picture above, you see the PLAY. When you click the PLAY label, it will be changed to REC(in red color) and the channel will be changed to Record mode.

- Play mode
  In PLAY mode, you can play almost any kind of video formats available on the market. From XDCAM MXF to h.264/mp4, most of video codecs are supported by Proxima Encoder.



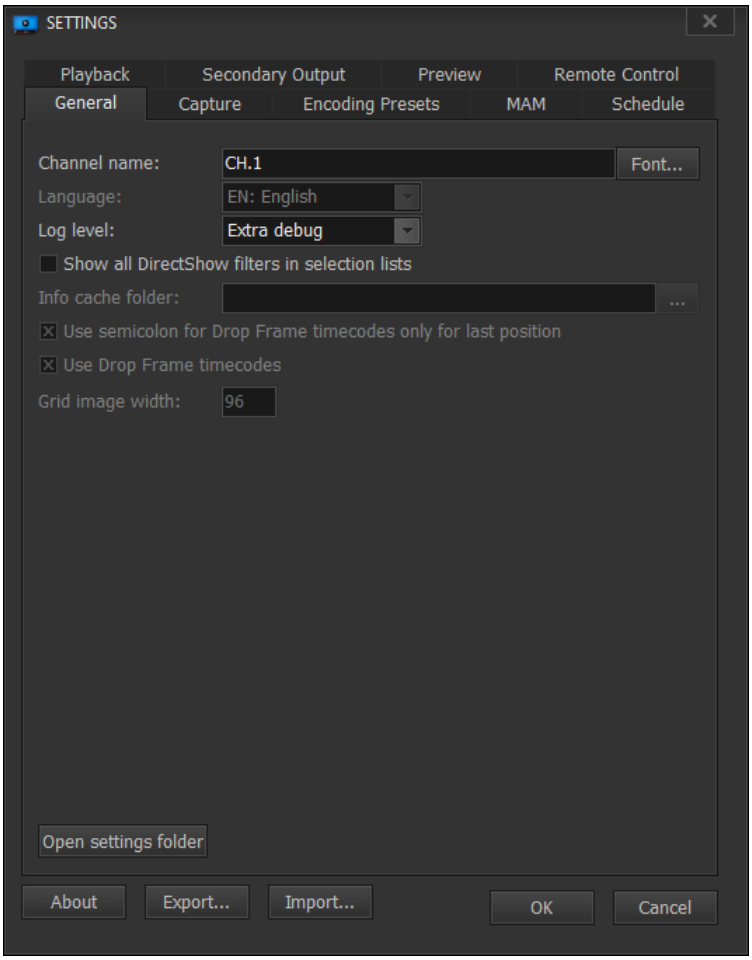

- Record mode
  In RECORD mode, you can record input video to digital file. As well as the High resolution files, you can record low resolution files at the same time with the proper settings.
  - High Resolution formats :
    - Default codec : HD – XDCAM MXF / SD – IMX MXF
    - Optional codec : DV25/DVCPRO50/DVCPRO-HD/AVC-Intra50/AVC-Intra 100
  - Low Resolution formats : h.264/AAC/mp4
- Play/Record List
  Each channel has a list at the bottom. You can simply drag one of more files to play out from Media Browser or Windows File Explorer to add to play list. If you record files, those files will be added to the list automatically.

4. Media Browser


Media Browser is located on the right side or center side. The location is depending on the number of channels. If you have 1 or 2 channels to en/decode then the Media Browser will be on the right side. Otherwise it will be in the center.
Media Browser will show you all the files recorded from the computer.
You can delete or remove the file from the list or also from the disk.

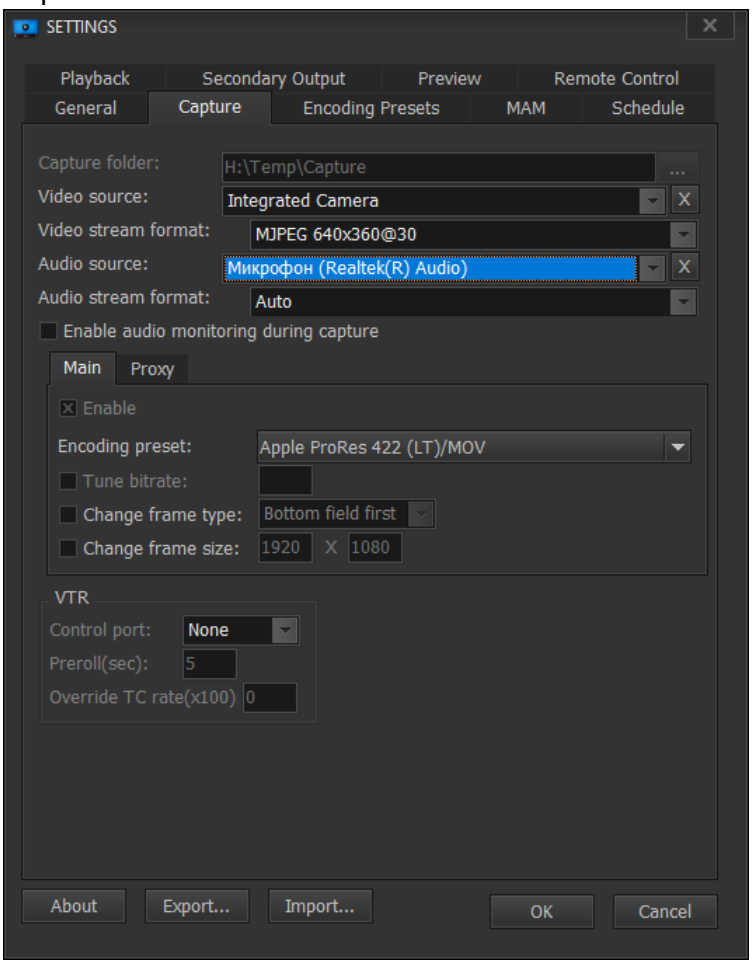
5. Configuring each channel
   Now you are ready to use Proxima Encoder and you understand everything for Proxima Encoder.
   You can press SETTING button to open window where are various channel properties can be tuned.

General tab.

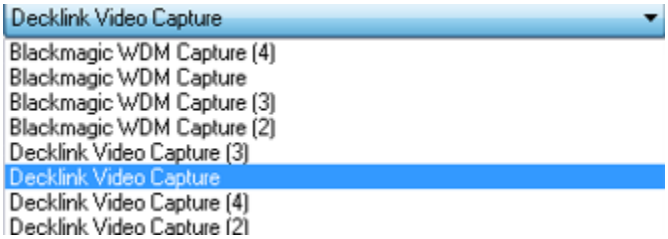



- Channel name: You can give a name for each channel to distinguish with other channels. It will be effected right away.
- Language, Info cache folder and other options here are greyed out because they are controlled by Global Settings screen.
- Show all DirectShow filters…: enable this to see all DirectShow filters in a selection lists in Settings window instead of showing only Renderers filters. Useful for some rare cases with poorly designed filters.

Capture tab.

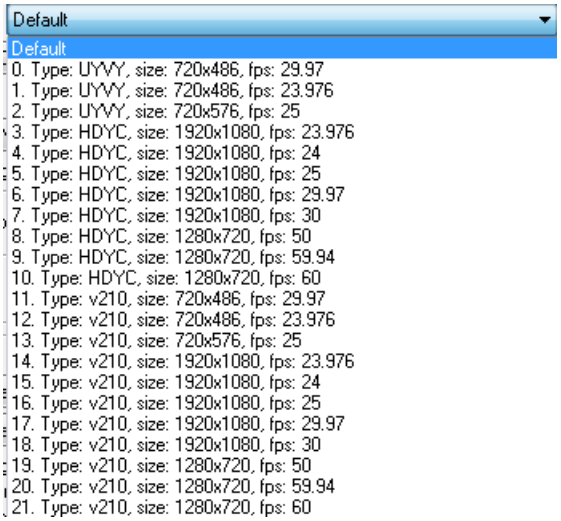



- Capture video source: You need to define which source will be used for the encoding. If you have a 4-channel Decklink card, then you will see like following. You can select from the list shown in the Capture video source combo list.




- Input video stream format : It will define the resolution, color space and framerates. Each board may have different settings, so please consult your local

resellers to set up properly. This list is shown differently for each board. The picture below is based on Blackmagic Decklink.




Some common selection :

SD NTSC - size : 720x486, fps: 29.97
SD PAL - size : 720x576, fps: 25
HD 60i - size : 1920x1080, fps: 29.97
HD 50i - size : 1920x1080, fps: 25

Also note : This value will be applied to the output signal at the same time.

- Capture audio source : You need to define which audio source will be used for the encoding. Select “Selected video device” to use capture device that produces both video and audio streams.
- Input audio stream format : All supported audio stream formats will be shown in the combo list. You can select one that fits to your environment.

Two things are important to record the file without performance issue: disk performance and CPU performance. If you do not have a very good HDD or RAID inside of your Encoding PC, then you can configure each encoding channel to use a different HDD to avoid performance issues.

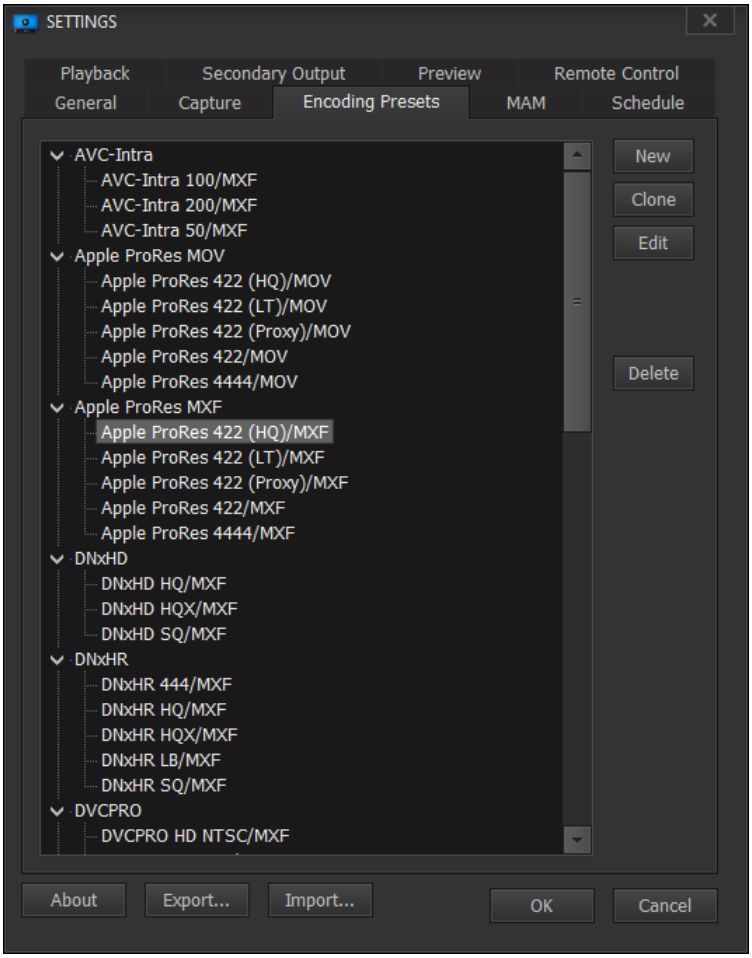
- Enable audio monitoring during capture: You can hear the audio from your Encoding PC speaker if you have checked this option.

Each Proxima Encoder channel can capture input into one or two media files simultaneously. Thus encoding settings for each file – Main and Proxy following:

- Enable: use this encoding format
- Encoding preset: select encoding preset from list of known presets(see Encoding Presets tab)
- Tune bitrate: if preset allows then user can modify video bitrate here

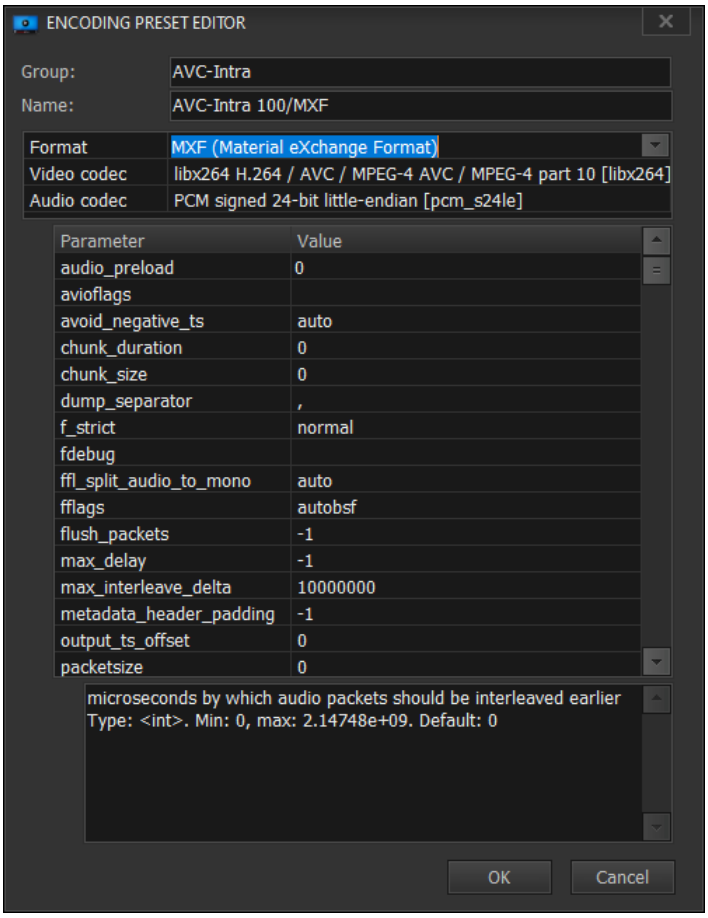
- Change frame type: user can change input frame type, for example to “Progressive” to deinterlace video.
- Change frame size: user can resize input video before encoding. Useful for Proxy format to create small size proxy file
- VTR control port : If you have a VTR to ingest or to outgest, then you can set up the control port from here. Also for the VTR ingest, you should set up the preroll time here. 5 seconds are recommended.
- Override TC rate: in a case when timecode frame rate is shown wrong user can specify correct one here. Value must be integer equal framerate multiplied by 100, for example 2997 for NTSC.

Encoding Presets tab.




There is the list of all known encoding presets here. User can create new, modify, clone and delete existing presets using appropriate buttons.
Also user can use context menu for these actions.
Presets organized in groups by codec and format.  Group name must be unique.

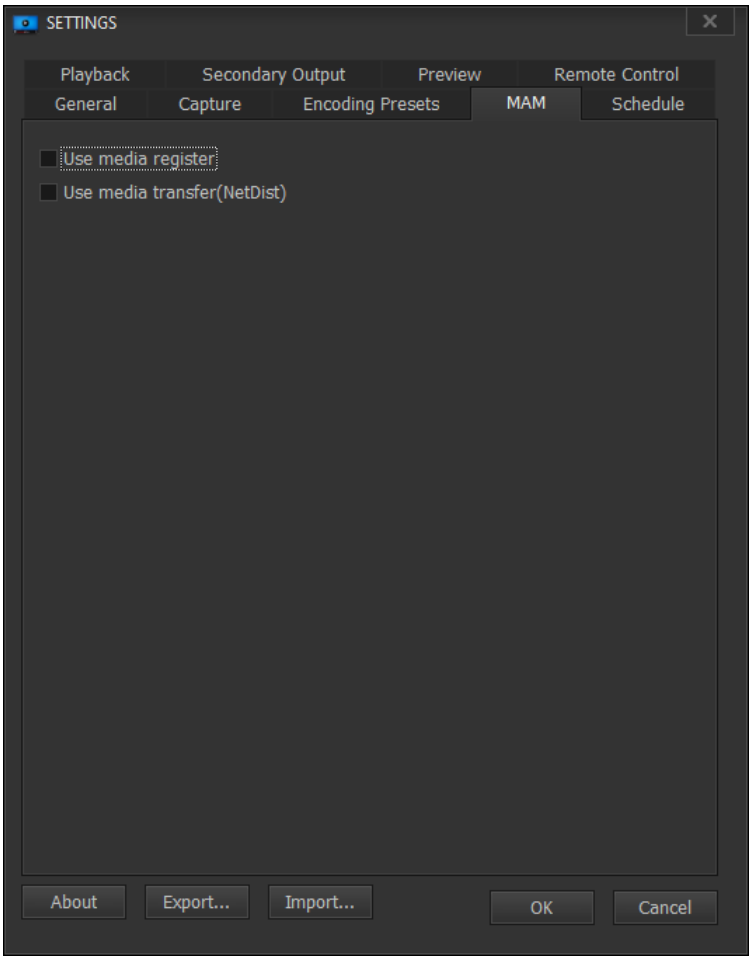
Preset Editor.




- Group: preset group name
- Name: preset name
- Format: select container format from the list of possible formats
- Video codec: select video codec to use for encoding from a list of codecs that supported by selected format
- Audio codec: select audio codec to use for encoding from a list of codecs that supported by selected format

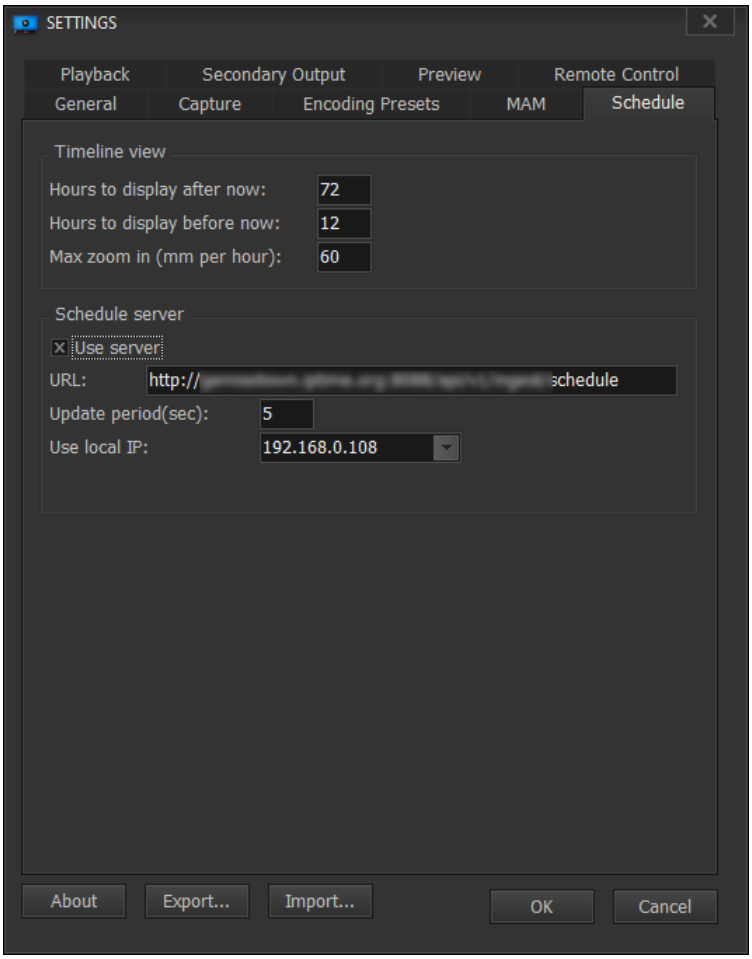
When user selects any of above item(format or codec) then following Table of Parameters updates and displays all tunable parameters for this item.
User can see and modify any of these values.
Depending of parameter type value can be selected from a list or typed as a string or a number. Flags are shown as a checklist.
When user selects one of parameters in this table then short parameter description, including its type and possible values, is displayed below the table.

MAM tab.



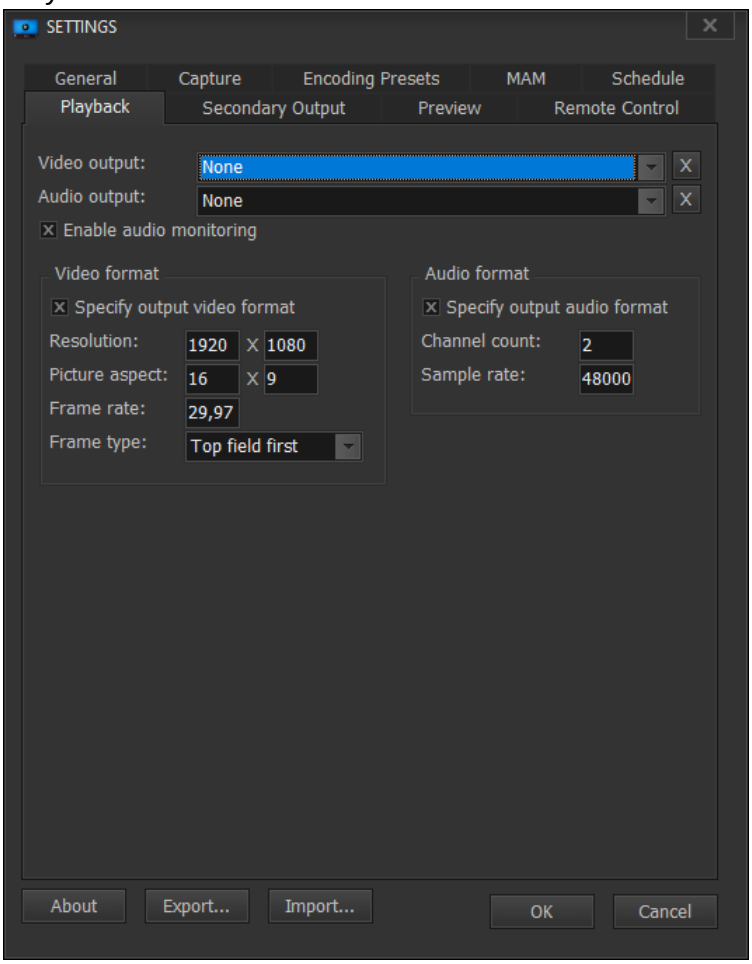

- Use media register: enable Media Register module for this channel
- Use media transfer: enable NetDist module for this channel

Schedule tab.
Settings for scheduled capturing mode.

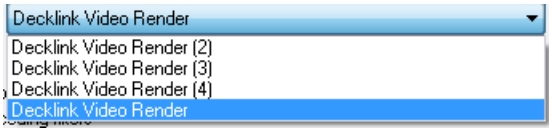



- Hours to display after/before now: user can set duration of Timeline view – how many hours before and after now should be visible
- Max zoom in: Timeline view allows a changing of scale via zooming in and out by mouse wheel and Ctrl key. To prevent unnecessary magnification there is the limit – maximum size in mm that one hour can take.
- Use server: turn on downloading schedules from schedule server
- URL: specify URL of schedule server
- Update period: period of checking for updates
- Use local IP: user can select IP from the list of presented in a system or specify it manually. This IP is sent to the schedule server in a schedule update request.

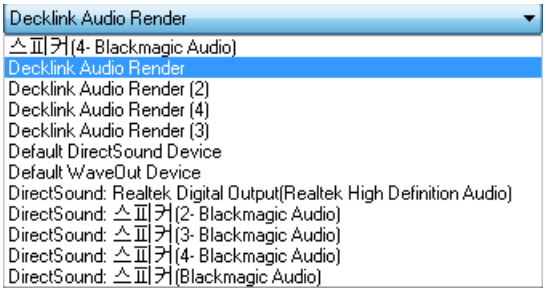
Playback tab.




- Video output : You should set up which DirectShow renderer will be used for playout.



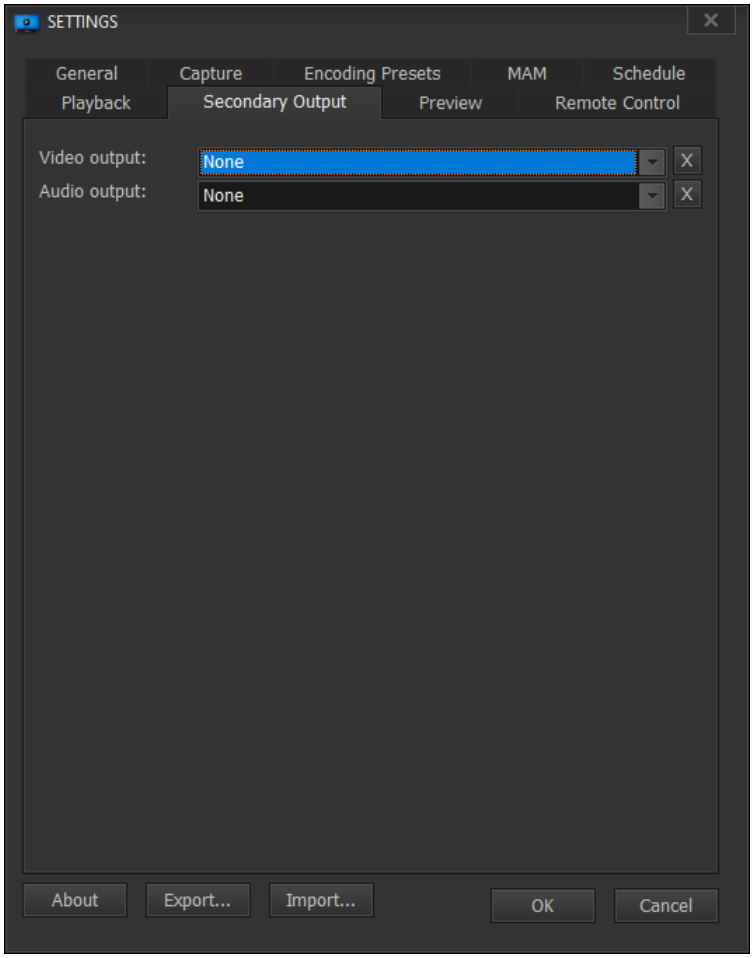

- Playback audio output : You should set up which channel will be used for playout. Note that you should not set the DirectSound Speaker(Blackmagic Audio).




- Enable audio monitoring : With this option, audio can be monitored through your PC speaker.

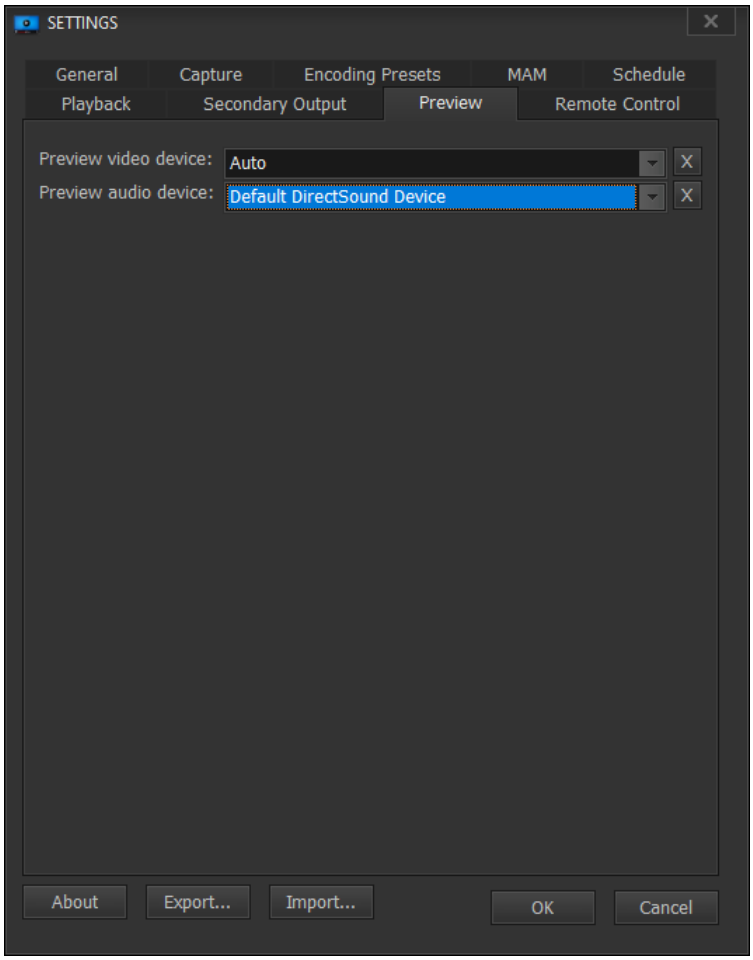
- Specify output video format: user can set up video format that should be used for output device. All video is conformed to this format. If format is not specified then default format is used
- Specify output audio format: user can set up audio format that should be used for output device. All audio is conformed to this format. If format is not specified then default format is used

Secondary output tab.



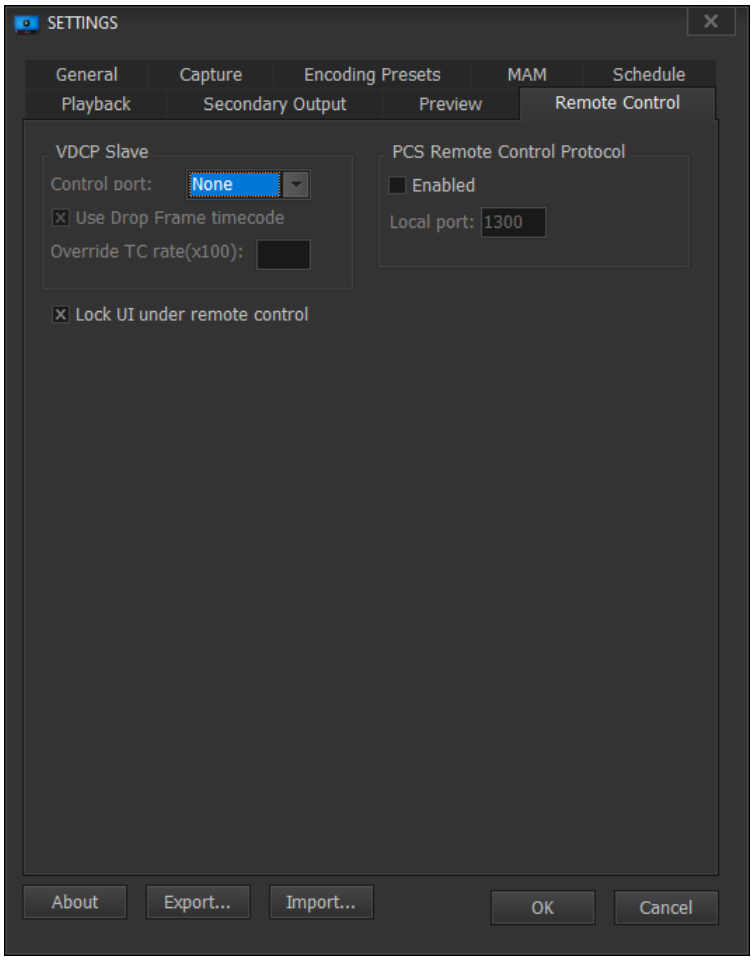

Proxima Encoder can output playback to two outputs simultaneously if needed. Here user can specify devices which secondary output should use.

Preview tab.




User can select what DirectShow renderer application must use for video and audio preview

Remote Control tab.




Proxima Encoder supports several remote control protocols.

VDCP slave mode.

- Control port: select serial port to listen for controller commands
- Use Drop Frame timecode: select timecode format for NTSC framerate
- Override TC rate: in a case when timecode frame rate is shown wrong user can specify correct one here. Value must be integer equal framerate multiplied by 100, for example 2997 for NTSC.

PCS Remote Control Protocol

- Enabled: turn it on and off
- Local port: select listen port to use

- Lock UI under remote control: if one of remote control protocols is enabled then protect interface so user cannot interfere application working

There are common buttons in this window:

- Export: You can save the settings for later use as a file form. It can be used for setting backup.
- Import: You can load the settings from files.
- OK: Save and affect the settings to this channel.
- Cancel: Do not save and exit this window.

1. Using Record mode

   Record mode has 3 modes; VCR mode, Instant and Schedule mode. VCR mode can be only enabled when it has a connection with VCR.
   Instant and Schedule mode can be working without any special device.

   6. VCR mode: VCR is the source device and Proxima Encoder will control the VCR to get the Encoding source signal. The VCR should support the SONY RS422 compatible control protocol.
   7. Instant mode: Instant mode is the recording mode to start/stop recording instantly.
   8. Schedule mode: Schedule mode allows you to record according to a schedule. Local or using a schedule server.

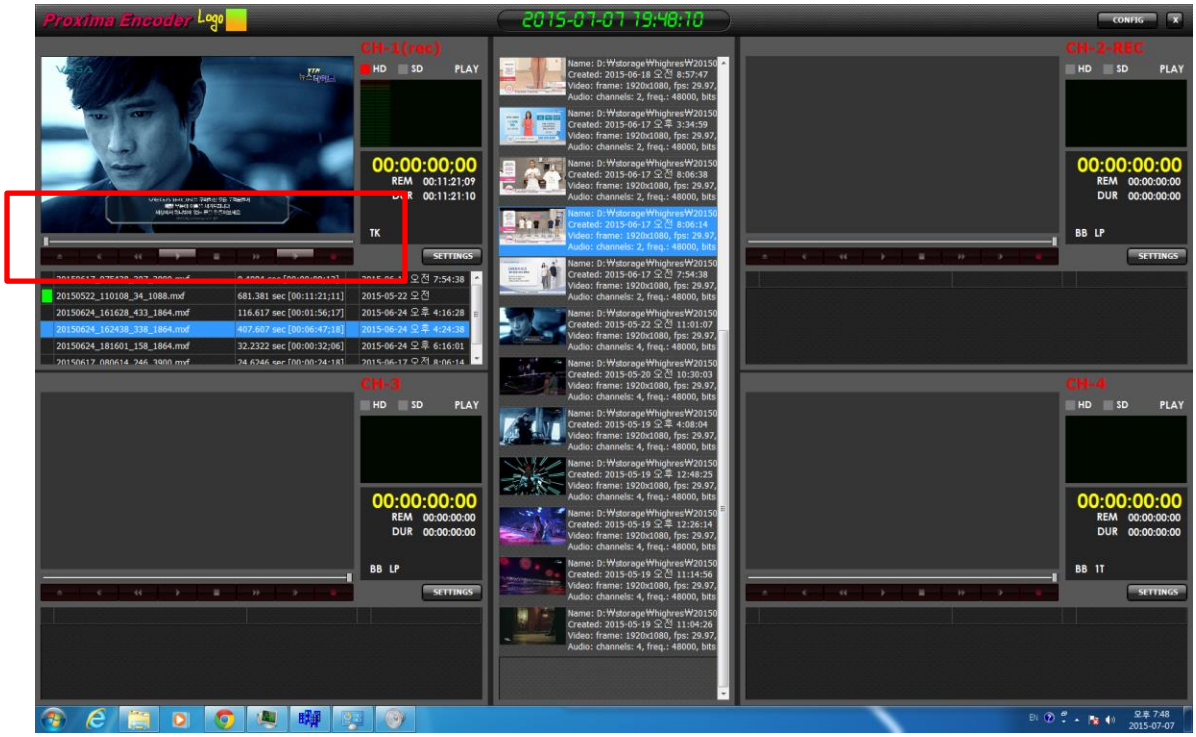
2. Using Play mode

   Play mode has four modes: Back-to-back with looping, back-to-back without looping, Take and Tape Out mode.
   9. Back-to-back mode : This mode plays the file in the playlist without any interval between files. If Looping is on, the playlists will be played again and again before you click “Stop.”

      In the back-to-back mode, the track bar will be changed to “Timeline” style to show you where the play position is. If there are multiple files on playlist, it will be shown like below.

10. Take mode : File only plays one file even there are more files in the playlist. This mode is good for play back in the studio for insert video. In this mode, cued file will be played alone and other files will not be cued.

11. The track bar's timeline will be disappear and it only shows the play position in the file.



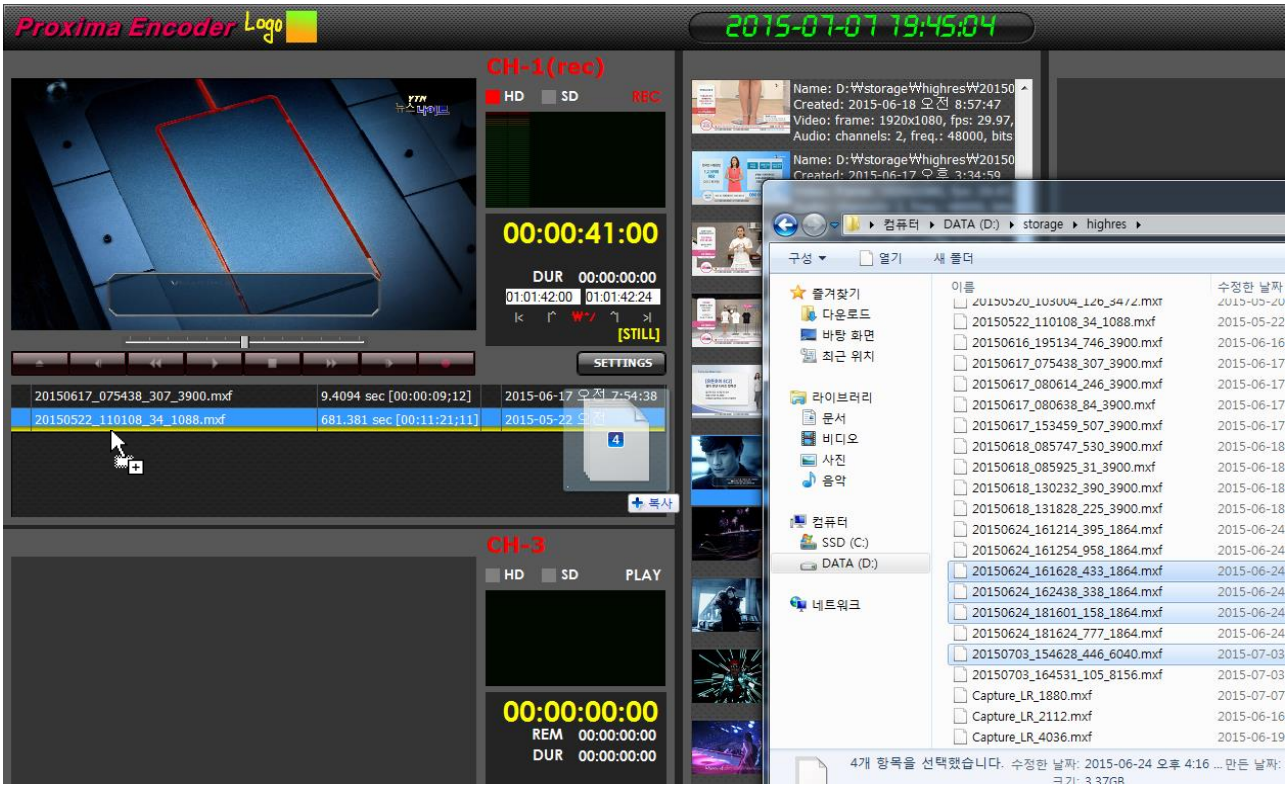

12. Tape Out mode: In this mode it is possible to playback video and record it on VCR using SONY RS422 compatible control protocol to control the process.

Adding files into playlist

Adding files into playlist is really simple. You can just drag and drop files into the playlist that you want.

When dragging is finished and you dropped the file, then there will be the file on the playlist. Also you can drag multiple files from Media Browser.

One other way to add files into playlist is using the “Windows File Explorer.” You can drag files from Windows File Explorer into the playlist too.




The above picture shows you how you can drag files from Windows File Explorer to Proxima Encoder.

Also the yellow bar will be appearing when you start dragging and show which place the files are located after dropping.

3. Maintenance

   If there's any problem in using Proxima Encoder, please collect the following logs files and configuration files. With the log and configurations, it will be much easier to find the problem you are facing.

   a. Collecting configuration files.
   b. Collecting log files

   These files a located in %Public%\Documents\Gemiso\ProximaMultiOpenEncoder folder. Main configuration files is in folder root, main application log files are in Logs subfolder.

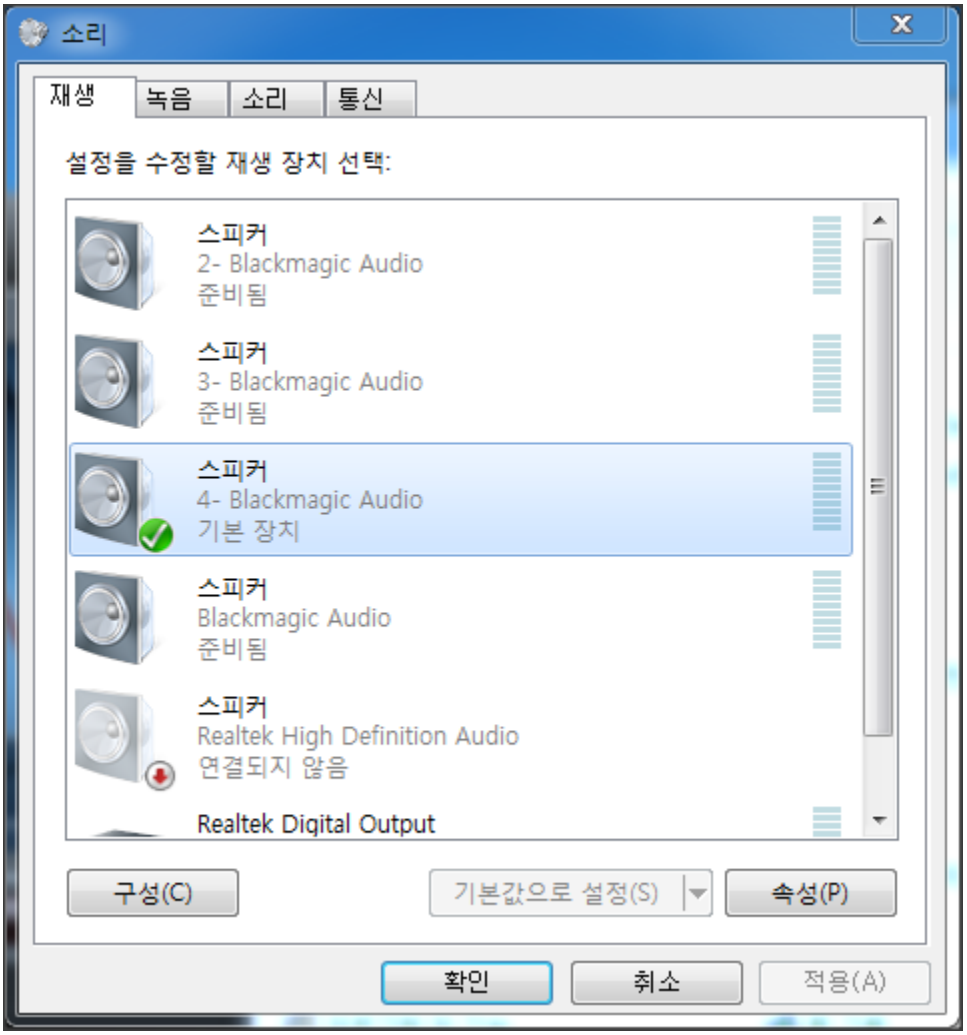
   Each channel files are in a separate subfolder named ChannelX where X is from 1 to 4. Similarly, there are channel configuration files and Logs subfolders.

F.A.Q

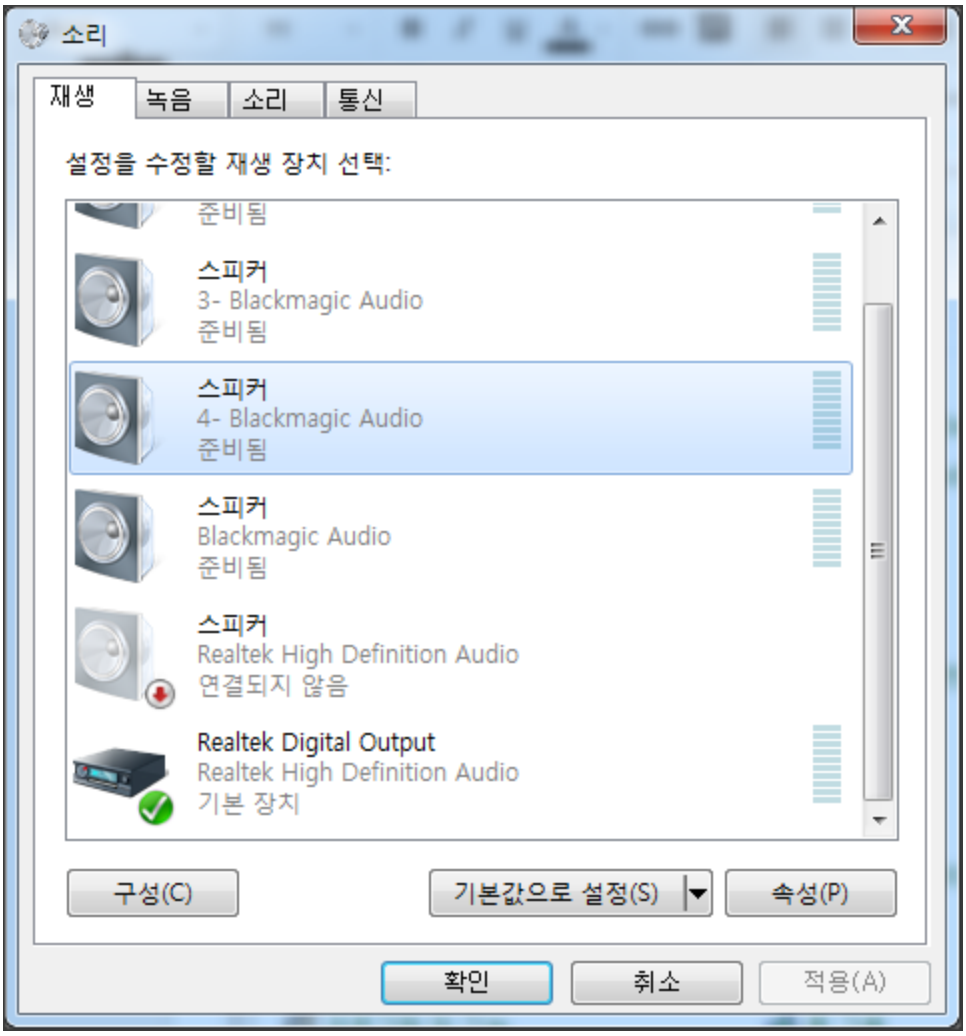
1. Sound from recording audio channel are sent to other SDI like noise.

Answer :

If you have set up the Blackmagic Audio device as default speaker and default device, it can be happening. The picture below shows “4-Blackmagci Audio” is the default speaker for the PC-sound.




So you should change the other PC sound card as the default sound system like the picture below.


소리
재생
녹음
소리
통신
설정을 수정할 재생 장치 선택:
준비됨
스피커
3- Blackmagic Audio
준비됨
스피커
4- Blackmagic Audio
준비됨
스피커
Blackmagic Audio
준비됨
스피커
Realtek High Definition Audio
연결되지 않음
Realtek Digital Output
Realtek High Definition Audio
기본 장치
구성(C)
기본값으로 설정(S)
속성(P)
확인
취소
적용(A)