

SUPERCAST X LIVE4K

HDMI CAPTURE CARD

SKYCAPTURE PROGRAM MANUAL _ V3.0

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1. How to use Program

Getting Started

Welcome to SkyCapture!
SkyCapture Program is an operational program of SuperCast capture card series by Skydigital Inc. In order to skillfully operate the program, you should get used to and familiarize yourself with two menu systems. You will have to go through with them before you move ahead.

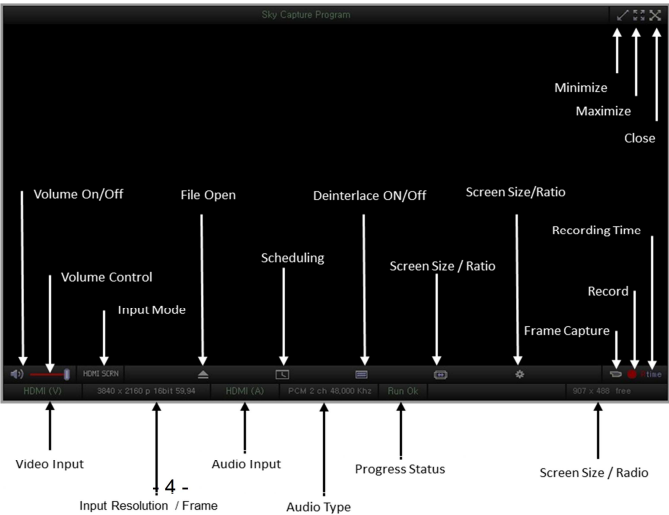
1.1 Program Menu

There are two menus mostly used during the session with SKY Capture Program. One is Program Screen Menu and the other is Pop-up menu. You can use them at your convenience. Program Screen Menu is more likely a monitor, recorder and player. And it consists of 4 portions



- ① Title Bar : Minimize, maximize and close the screen menu
- ② Screen : Displays the contents.
- ③ Control Bar : You may click on the icons to bring up function
- ④ Status Bar : Displays current values for the input, resolution, progress, screen size and so on.

These title bars, control bars, and status bars are always visible (fixed), or if necessary, adjustments such as (OnMouse) that appear when you mouse over them are possible. You can check the contents in the 2.3 Program menu.



1.2 Control Bar & Status Bar functions

Menu	Icon	Function/Feature
Control Bar	Volume On/Off	Volume On/Off(Mute)
	Volume Control	Adjust Volume
	Input Mode	Select input mode according to the cable, Video, S-Video, Component or HDMI
	File Open	Opens up video file folder for playback.
	Reservation, Scheduling	Bring up the record scheduling window to record at a preset time.
	Deinterlace ON/Off	Turn on or off the afterimage removal function. The afterimage removal is used to remove the afterimages that appear on the screen in interlace mode such as 480i or 1080i. In progressive mode such as 480p / 720p, it does not affect even if it is On. This works for only analog video, ex. HDMI, Component, etc..
	Screen Ratio Adjustment	Adjusts screen ratio. Clicking on it will switch to each ratio. As you click on the button, it changes to 16: 9 / 16:10 / 3: 2/4: 3 / Free.
	Configuration	Configuration window pops up.
	Frame Capture	Captures the frame into an image
	Recording Start/Stop	Start or stop manually recording contents in the current screen. If you place cursor over the red dot, not clicking on it, the balloon will pop up showing the current file format.
	Recording time	Use to specify the recording time. Press the "R" button during recording to set the time and the menu will appear. At this time, if you set the time in minutes and press the "Ok" button, the recording will end automatically after the specified time elapses from the present time.
Status Bar	Video Input	Displays selected video input mode from "Input Mode", Component, HDMI or File (HDMI / SCRNI)
	Input Resolution/Frame	Display current, real-time video resolution and frame rate (per Sec.) calculated by the system. When there's no incoming frame, the rate would be '0'.
	Audio Input	The current audio input mode. Line-In/SPDIF/HDMI
	Audio Type /Sampling rate	Similar to Input Resolution, this is sampling-measured values for incoming audio stream. The value goes to '0' when there's no sampling data.
	Progress Status	Shows the current status. 'Run()'/Pause()'/Stop()' or any other critical string.
	Screen Size/Ratio	Size of the current screen and ratio (16:9/16:10/ 3:2/4:3/ Free/Customized ratio)

1.3 Pop-Up Menu

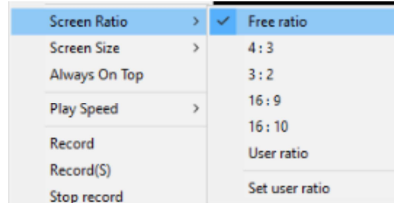
Pop-up menu is a sort of shortcut to functions and, the most frequently used menu that is vital in the program operation. The pop-up menu appears when you right-click on the screen window.

Menu	Description
Config	Config (Configuration)
Schedule	Schedule
Ch Manager	Ch manager
KBD command	KBD command
Open File	Open file
A/V Source	A/V source
Deinterlace	Deinterlace
Timeshift	Timeshift
Closed Caption	Closed Caption
SubTitle	Subtitle
Language	Language
Sleep	Sleep
Screen Ratio	Screen ratio
Screen Size	Screen size
Always On Top	Always on top
Play Speed	Play speed
Record	Record (S)
Record(S)	Stop record
Stop record	Capture Image
Capture Image	Zoom
Zoom	Monitor H/W
Monitor H/W	About
About	Close
Close	

1.4 Pop-Up Menu Setting

■ Screen Ratio

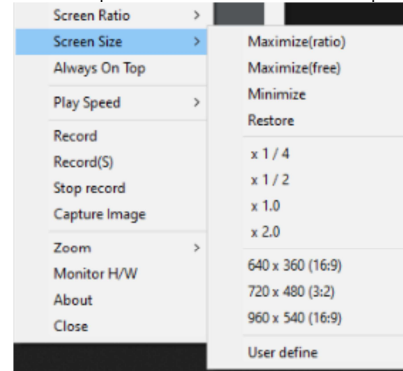
Use it to adjust the aspect ratio of the screen among these options - 4:3/3:2/16:9/16:10/16:9/user-ratio.
The user ratio is a method for using the current screen window size ratio as the user ratio. This setting will be fixed at the previously set ratio when selecting the user's ratio in the Aspect Ratio menu.



■ Screen Size

Change the screen size. You can maximize the screen window at a fixed ratio, or maximize without certain ratio, minimize, and restore to the previous screen size.

You can also adjust from the current screen size to 1/2 small size / current size / double large screen, or you can set it to a specific resolution ratio or a user-specified size.



■ Magnifier

Magnify the screen to read small text or images in 4K high-resolution.

• How to use

① Run Magnifier

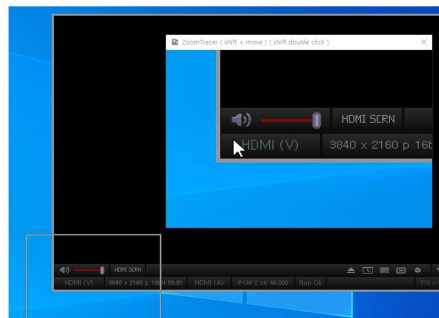


② Point the first point with Mouse

③ Shift + move

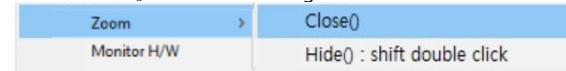
After Magnified window is fixed, position the selected range to magnify.

④ Enter Shift-Key twice to show or hide the magnified window in toggle

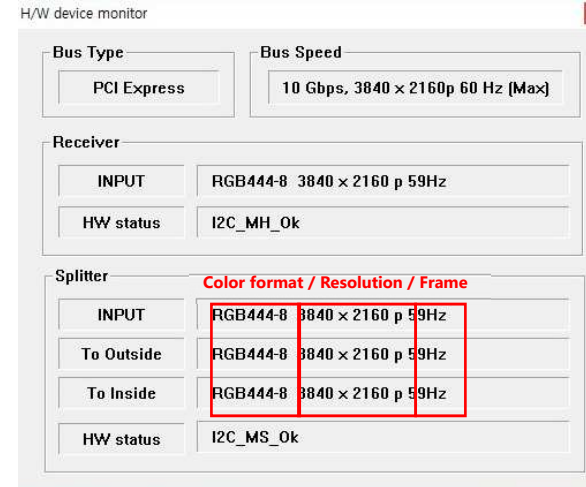


⑤ Close Magnifier

Select Close() and close the magnifier



■ H/W device status / monitoring



• Bus Type

SUPERCAS X 4K / SUPERCAS X LIVE 4K equipped slot type

• Bus Speed

Display Frequency, Max Resolution and Frame where Supercast X 4K/Live 4K installed PCI Express slot can be supported. To support 4K resolution 10Gbps shall be supported.

• Receiver

- INPUT

► Supercast X 4K : Display the Color-format, Resolution and Frame-rate of Video source

► Supercast X LIVE 4K : Display the Color-format, Resolution and Frame-rate of Video source coming through HDMI Receiver by embedded Splitter

- HW status : Display EDID communication status

• Splitter (SUPERCAS X LIVE 4K only)

- INPUT : Color format, resolution and frame display of the video source input through the HDMI IN terminal

- To Outside : Display color format, resolution, and frame output through HDMI-OUT

- To Inside : Display color format, resolution and frame of video source transmitted to HDMI Receiver

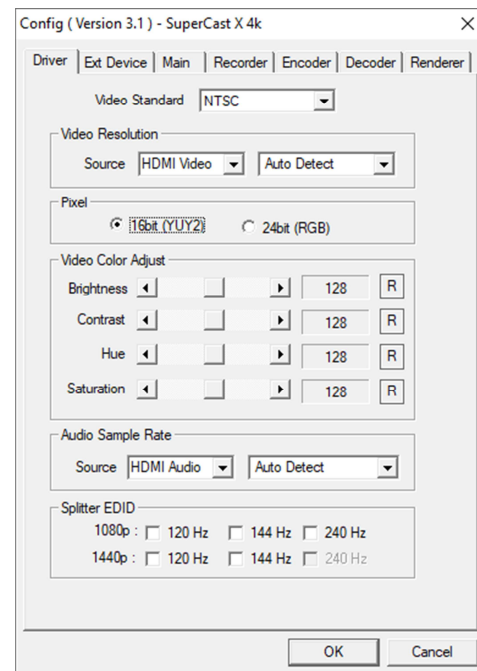
- HW status : Display EDID communication status

2. Program environment setting

To set up the Capture program, click the environment setting icon (⚙️) on the control bar or right-click on the screen to display a pop-up menu, then select "Environment Settings" to bring up the setting window.

2.1 Driver

The driver menu consists of the part controlled by the driver side of the capture board as a menu, and you can set video and audio input settings and color settings.



■ Video standard
In external input mode, this menu is used to select the video standard to match the video standard of the country. For Korea and North American regions, NTSC format is used. The PAL method is used in Europe and the SECAM method in some regions such as France.

■ Video resolution
In the video resolution menu, you can select the input mode and the input resolution/frame rate that can be set in each input mode.

- Auto Detect
The Auto Detect function is a function that automatically detects the input resolution and automatically sets the screen to fit the size. If you set Auto Detect in the video resolution menu, it automatically recognizes and sets the frame rate that matches the resolution as well as the input resolution.

If you select a resolution other than the Auto Detect option, you may not be able to get the correct resolution. Please select Auto Detect if you do not know the exact resolution and frame rate because the program does not

support upscaling or downscaling.

■ Color
Select the color format of the video image being input.
The default recommended setting is 16bit (YUY2). 24bit (RGB) may not be supported or the screen may not be displayed normally depending on the system environment or various complex situations.

■ Video Color Adjustment
This menu is a menu that allows you to adjust the color (brightness, contrast, hue, saturation) of the input image. Since it is set in the input state, the color values set during playback and recording are applied. Adjustment can be adjusted by dragging with the mouse.

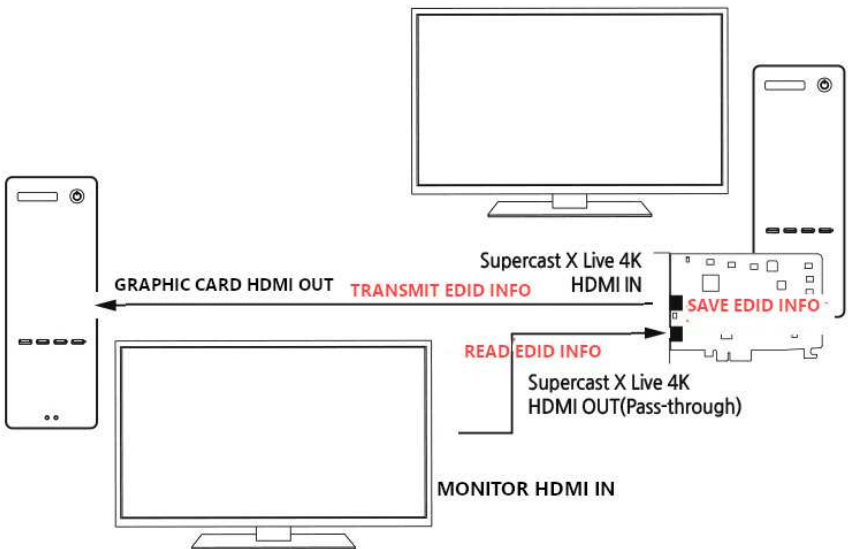
■ Audio Sampling Rate

You can select the audio sampling rate. The audio sampling rate output from most video equipment is 48KHz. However, if the connected device outputs at 44.1KHz, it can be input at 44.1KHz in the Capture Program. In general use, it is recommended to select "Auto Detect".

■ Splitter EDID

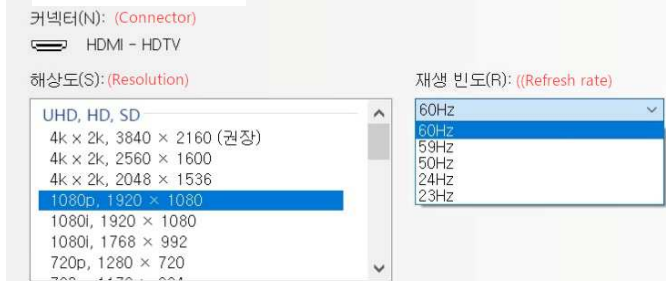
★ Caution ★
This function is not a function that can be used unconditionally. If the monitor does not support the resolution and refresh rate, the screen may not be displayed, and unexpected problems may occur depending on the monitor. It's supported only with Supercast XLive4K which has embedded splitter.

In addition to the EDID information received from the display, you can add the desired resolution and refresh rate information to the built-in splitter flashrom. Some monitors may use resolutions and refresh rates that are not included in the EDID information. This is a function to utilize the hidden specifications of these monitors.



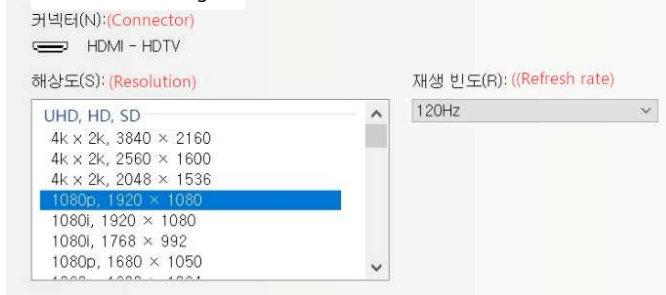
For example, in case the monitor connected to the Supercast X Live4K HDMI-Out terminal is a monitor that supports 4K resolution, but the screen refresh rate is only displayed in the resolution setting window at 1080P 60Hz.

2. Resolution Setting

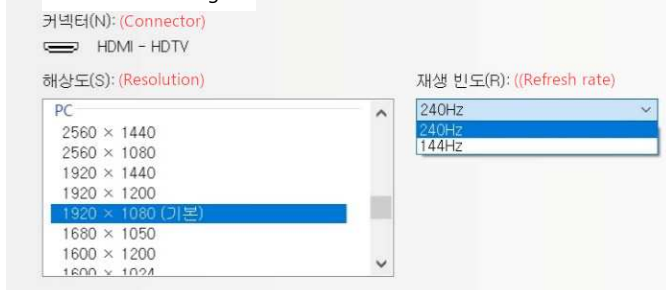


If you check the 120Hz, 144Hz, and 240Hz options in the Splitter EDID option, you can see that 120Hz, 144Hz, and 240Hz are also added to the refresh rate option in the graphics card resolution setting window so that they can be selected.

2. Resolution Setting



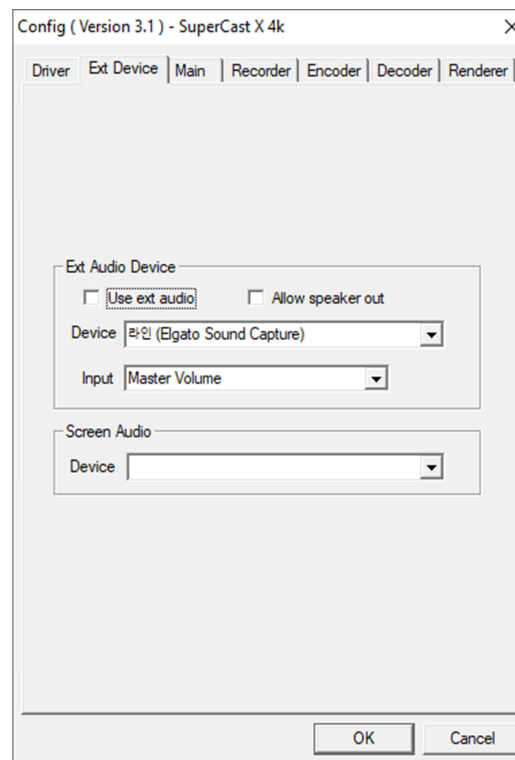
2. Resolution Setting



If the screen does not display or does not display normally after selecting the resolution and refresh rate among 120Hz/ 144Hz/ 240Hz, the monitor is not supported. Please wait until the screen is restored to the previous resolution.

2.2 External device

In this menu, it is an option to play or record using an external audio input rather than using HDMI input audio (when playing or recording). For external audio, you can use the line-in or microphone-in terminal of the sound card (chipset), or you can use the audio device of the webcam. Also, in Screen mode, which requires the use of a stereo mix device, you must set up a stereo mix through an external device for normal audio playback and recording.



■ Ext Audio Device

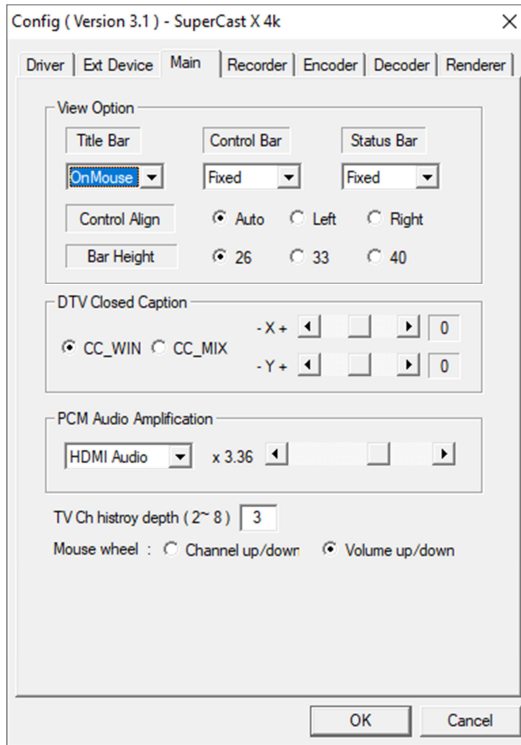
- Use external audio
External audio input will be used instead of using audio input via HDMI.
- Speaker output
If you check the speaker output, you can hear the sound input from the external audio even during playback, and the sound input from the external audio is recorded even during recording.
- However if speaker output is not selected, external audio is not played but sound input from external audio is recorded only when recording.
- Device
Set the external audio device you want to use. Depending on the device type, you can select the sound card name or webcam, but there are cases where you can select an integrated audio mixer device depending on the sound driver or settings.
- Input
If you select a sound chipset or device, set the device you want to input (line in or microphone in, etc.).

■ Screen Audio

- Device
Select the audio device of the screen mode function as a stereo mixer.

2.3 Program

This is a menu for the basic settings of the program, and it is configured to set the bar option for the control / status / screen title and audio amplification.



side of the program.

-Bar size
Adjust the bar size in 3 steps of 25/33/40.

■ PCM audio amplification

When the volume of the input audio is very low, this function amplifies the volume with the software and applies to both playback and recording. Amplification is possible only for PCM audio, and digital audio such as AC3 or DTS cannot be amplified. Moving the scroll bar to the right boosts the volume level of the input audio.

◆ Note ◆

DTV subtitles / number of previous TV channels / mouse wheel option are supported only on TV receiving cards.

■ Bar options

You can adjust the display status of the title bar / control bar / status bar. Since each bar can be set to be visible or invisible, bars that are frequently used can be set to appear, and bars that are not used frequently can be displayed with the mouse.

▶ Fixed:

The bar is unconditionally displayed in the program.

▶ OnMouse: When the mouse cursor is moved to the bar position, the bar automatically appears, and when the mouse cursor is moved to another place, the bar disappears.

▶ None : Doesn't show that bar.

- Arrangement of control buttons
This menu is used to adjust the positions of the buttons displayed on the control bar.

▶ Auto: The menu buttons on the control bar are automatically arranged according to the program size.

▶ Left: Arrange the control bar menu buttons by positioning them to the left side of the program.

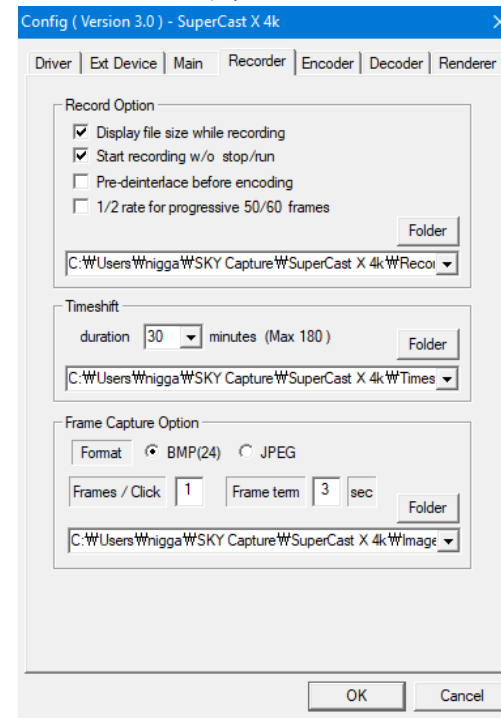
▶ Right: Arrange the control bar menu buttons by positioning them to the right

2.4 Recording Setting

It consists of a menu for recording options, time shift settings, and frame capture (still image saving) for recording settings.

■ Recording options

- Recorded file size display



This menu shows the recorded capacity in real time during recording.

If you select this menu, you can check the file size and recording format (MP4, MKV) saved in real time.

- Start recording without Stop/Run
In the case of normal recording, when recording starts, a filter is configured so that recording can be performed, and a stop-run process is performed.

There is a delay of about 1 to 2 seconds during this process, so it is inconvenient if you need to record immediately. The advantage of selecting this option is that you can start recording from the point you want.

However, it is recommended to turn off the option in general recording situations as recording may not be possible depending on the characteristics of the encoder.

- Input to the encoder after applying deinterlace in advance

Normally, most of the encoders used for compressed recording have a built-in afterimage removal (deinterlace) function, so that the afterimages are removed from the recorded recording. However, depending on the encoder, some encoders do not support de-interlacing. In this case, after applying de-

interlacing in the Capture program, you can compress and save through the encoder.

This function is used at this time, but it is not recommended for general recording because it differs according to the characteristics or types of encoders.

The resolution required for deinterlacing (image removal) is an interlaced resolution such as 480i or 1080i, and in the case of progressive images such as 720P / 480P that do not require afterimage removal, the function will not be executed even if this function is turned on.

-Progressive 50/60 frames recorded in 1/2 (half)

This function cuts the progressive 50 (PAL) or 60 (NTSC) frames such as 480p or 720p in half to record at 25 or 30 frames. In other words, the recorded video retains the progressive method, but because it stores only half of the frames, it has the advantage of reducing the capacity in half without losing quality.

However, since the number of frames is 1/2, the smoothness during playback may be slightly less than for 60 (or 50 frames) frames in moving images with fast camera movement.

◆ Note ◆

When recording at 1/2 frame, you need to cut the bit rate of the set encoder in half to cut the capacity in half. If you set the bit rate to the original bit rate with the progressive 50/60 frame 1/2 recording function set, the recording capacity will not decrease.

-Automatic creation of year/month folder

Select the hard disk drive and folder you want to save. However, after the folder set for collective management, a folder in which the year and month are recorded is additionally created, and the recordings are recorded in the folder. In other words, for recordings made in May 2020, a folder named "2020_05" is created under the folder set in the storage folder, and the recordings are recorded under that folder.

■ Time shift

This function is only supported by DVT receiving card, and is not supported by capture card.


■ Frame Capture

- Format

When saving as a still image, specify the format.

BMP method and JPG method are supported, and JPG method is a compressed format, so it can be saved with less capacity than BMP method.

- Frames per click

This is the menu to set how many screens are saved when the still image save button  is pressed.

If the frame per click is set to 1, one screen is saved each time the still image button is pressed, and if it is set to 5, five screens are saved each time the button is pressed.

-Frame spacing

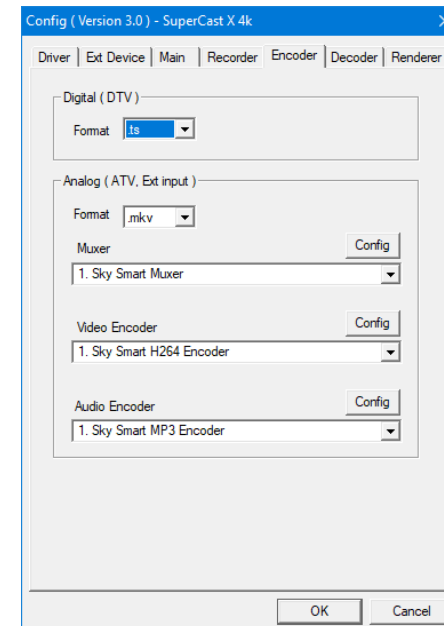
When capturing multiple frames per click, this feature is an option to set how many seconds to capture each frame.

2.5 Encoder

It is a menu where you can set the file format and compression codec (encoder) during recording, and you can record in MP4, MKV, etc. methods.

◆ Note ◆

The file format setting of the digital (DTV) option is a function not used in the capture board.



■ Analog (ATV, external input)

- Select the recording file format

This is a menu to select the recording format when saving the input video as a video. For 4K high resolution recording, the performance of the hardware encoder built into the graphics card is important. Until now, only GTX 1050 or higher graphics cards among nVIDIA series graphics cards are supported normally. Intel and AMD series are not supported. The file format must be selected from two types, MP4 and MKV.

- Recording muxer, video encoder, audio encoder settings

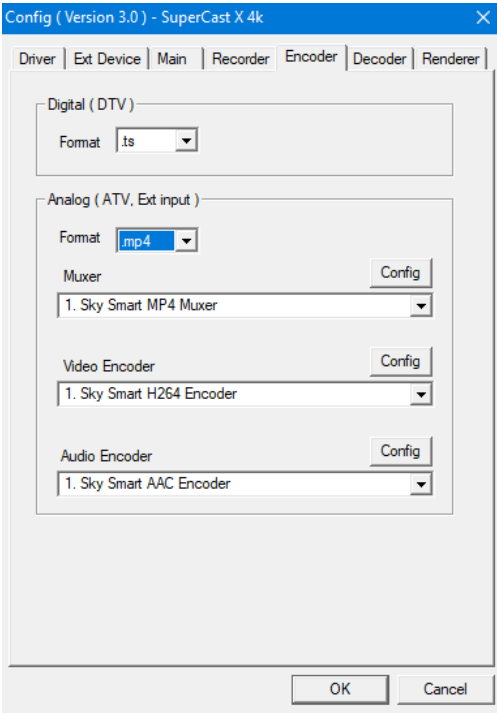
This is a menu where you can specify video encoder, audio encoder, and mux for each recording format for compressed storage when saving videos. Among them, in the case of MP4 and MKV, which basically provide encoders, the user can of course set a separate encoder or muxer, but the encoder and muxer are basically set to suit the recording format. It is recommended to use the default setting after selecting the file format. The quality can be set by pressing the setting button on the video encoder.

◆ Note ◆

In the compression codec (encoder) separately installed by the user, the video and audio may be out of sync or the image quality may be degraded depending on the performance and settings of the codec (bit rate, etc.), and recording may not be possible.

2.5.1 MP4 Recording

In MP4 recording, both video and audio are compressed and saved.



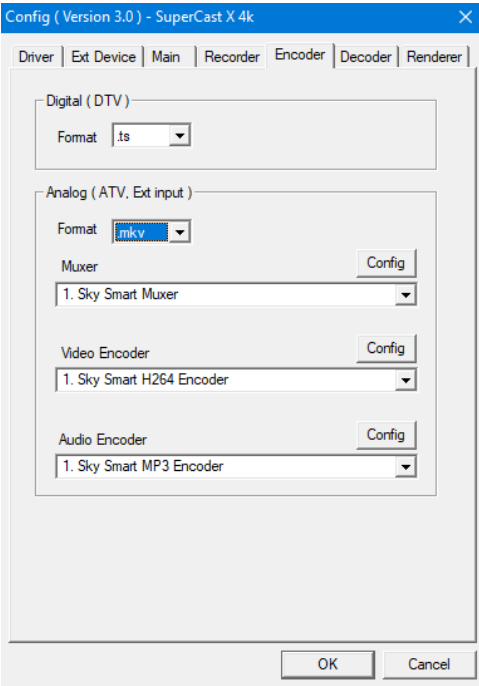
When recording in MP4 format in the SKY Capture program, the encoder and muxer provided by default

- ▶ Video Encoder : SKY Smart H.264 Encoder
SKY Smart H.265 Encoder (Recommended)
- ▶ Audio Encoder : SKY Smart AAC Encoder
- Video and Audio processing flow chart for MP4 recording



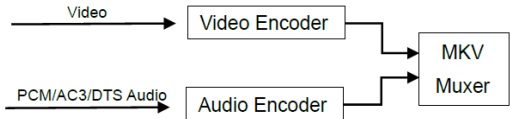
2.5.2 MP4 Recording

In MKV recording, both video and audio are compressed and saved.



When recording in the MKV method in the SKY Capture program, the basic encoder and muxer provided by default

- ▶ Video Encoder : 1. SKY Smart H.264 Encoder
2. SKY Smart H.265 Encoder (recommended)
- ▶ Audio Encoder : 1. SKY Smart MP3 Encoder
2. LAME Audio Encoder

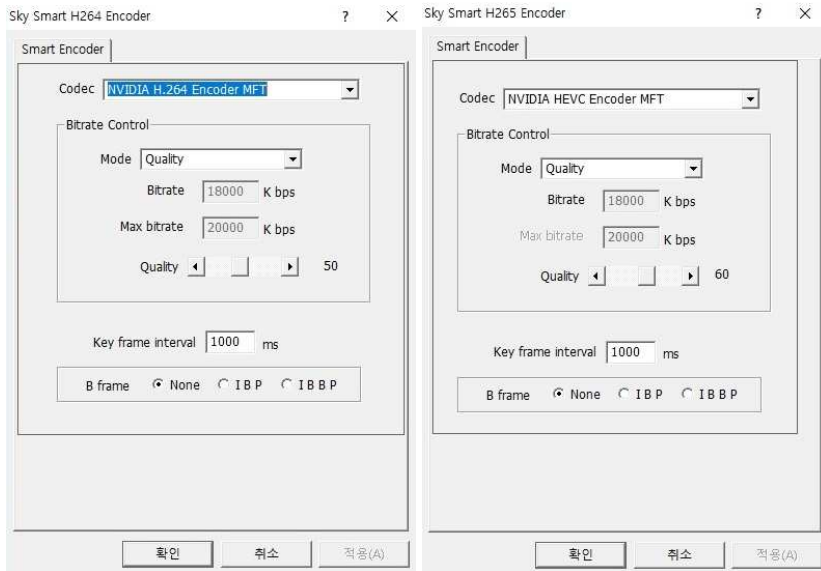


2.5.3 Video encoder detailed settings

This setting is for recording by compressing the input video effectively.

It is used to set the codec type, bit rate (quality) mode, setting value, and key frame interval.

If you click the "Settings" button on the right of "SKY Smart H264 Encoder" or "SKY Smart H265 Encoder" set in the video encoder category, the following setting screen appears.



■ H.264 / H.265 Video Encoder

In order to encode 4K resolution, MFT using hardware acceleration of the graphics chipset must be set, and only nVIDIA graphics chipset MFT is supported normally (refer to recommended specifications).

■ Bit rate control method

In Mode setting, you can select Quality / VBR_Constrained / VBR_Unconstrained / CBR method.

- **Quality** – This is an encoding method in which a variable bit rate is applied automatically according to the optimal image quality according to the quality level. (Default **recommended** option)
- **VBR_Constrained** - Limited variable bit rate setting method.
This is a method of changing the quality of the image to be recorded according to the motion and size of the input image. This is a method of recording with limited maximum and minimum values of the image size.
- **VBR_Unconstrained** – Unconstrained variable bit rate setting method This is a method of changing the quality of the image to be recorded according to the motion and size of the input image. It is a method that allows unlimited recording without setting the maximum/minimum value of the video size.
- **CBR** - Constance bit rate setting method
This is a recording method to compress the input video into a uniform capacity regardless of the motion and size.

■ Bitrate / Max rate

It is a unit representing the data size of an image that needs to be processed per second. (Bit Per Second)
The higher the bit rate is set, the larger the video data, the better the quality and the larger the file size.
If the bit rate is set smaller, the image data size decreases, so the file size decreases, but the quality deteriorates.

Max rate can be selected only when the bit rate control method is 'VBR_Constrained'.

It corresponds to the maximum bit rate value that can be processed when compressing the input video.

Please refer to the settings below for the recommended bit rate by resolution.

Input Video Resolution	Max rate (kb/s)	Bit-rate (kb/s)
480i	4000	2500
480p	6000	4000
720p	10000	8000
1080i	15000	12000
1080p	20000	18000
2160p	30000	25000

■ Keyframe spacing (for advanced setters)

The key frame interval option is the same concept as GOP (Group Of Picture), and is an option to set how far the key frames are to be arranged between frames of consecutively input images.
It can be specified in units of ms (1/1000 sec), and the default is 1000ms (for advanced setters).

■ B frame (for advanced setters)

B frame setting is a menu to set the order in which each frame is arranged.

Depending on this setting, the capacity and quality will differ, and the Seek can be affected when playing back recorded recordings.

- **None** - This is the default setting for recording at the lowest capacity by configuring only B frames.
- **IBP** - This refers to the method of processing (encoding) the frame arrangement in the GOP in the order of I Frame / B Frame / P Frame.
In this way, when compressed recording is performed and then played, it has the advantage of being able to quickly move to the designated location during Seek, but it has the disadvantage of taking up more space.
- **IBBP** - This refers to the method of processing (encoding) the frame arrangement in the GOP in the order of I Frame / B Frame / B Frame / P Frame.

It is the intermediate setting of NONE and IBP and a frame arrangement method that does not significantly change the capacity while moving the position effectively during playback.

◆ Note ◆

When B frame is set to IBP or IBBP, it is difficult to process Full Frame when using Intel QuickSync MFT in EVR renderer.
Unless there is a special case, it is recommended to use "None" in the H.264 / H.265 encoder setting.

■ What is I/B/P frame?

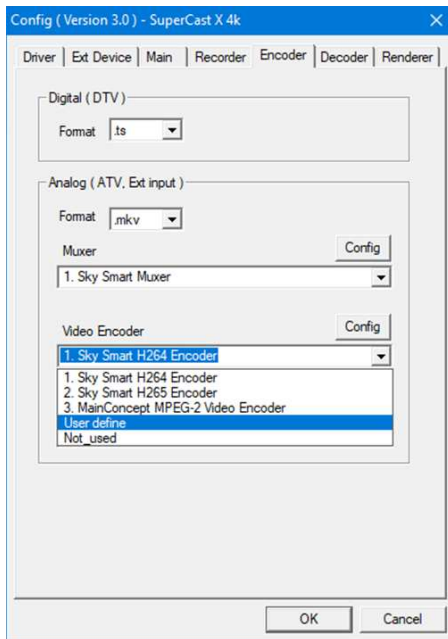
● I Frame (Intra Frame)– refers to the frame that is the reference when determining the key frame interval and refers to an independent image frame that does not refer to the previous or subsequent frames. The more I Frames are inserted, the more advantageous it is to move the Seek to a specific point when playing the result, but the file size increases as there are more complete image frames irrespective of the previous/post movement.

● P Frame (Prediction Frame) – This refers to a frame that contains data in the forward direction, that is, the part where the change of the frame to come in the future occurs. Compared to I frame, the capacity is smaller and the compression rate is better.

● B Frame (Bi Directionally Frame)
It refers to a frame that contains only the data of the part where the previous/after frame change occurred. This frame has the smallest capacity and good compression rate, but its image quality is relatively deteriorated, and it is a frame that puts a little more burden on decoders or seeks when playing back recordings.

2.5.4 External Encoder Setting

The SKY Capture program provides basic encoders and muxers for compressed recording. If you want to set an encoder other than the encoder provided by our company, please proceed as follows.

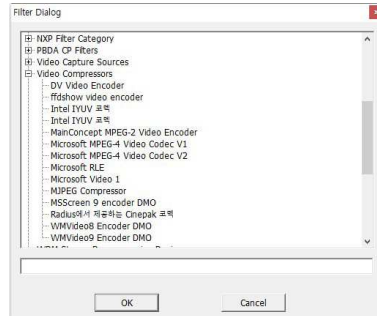


External encoders can be additionally specified only when the standard DirectShow-based codec is installed on Windows. We do not provide encoders that can be further configured other than the default encoder.

① Select the recording format (MP4, MKV) you want to record in "File Format".

② As shown in the picture on the right, you can select the item you want to set in Muxer / Video Encoder / Audio Encoder. Click the [] button and select "User_Define".

③ In the Filter Dialog window, select the codec (encoder, muxer etc.) you want to set and click the OK button.



④ When the codec setting is completed, you can proceed with compression recording using the selected codec.

◆ Note ◆

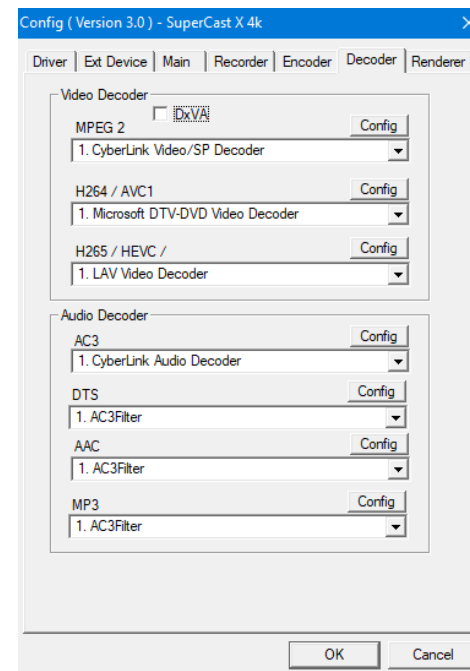
External encoders must use a codec consisting of a video encoder, audio encoder, and muxaga set. If you set up each encoder and muxer, there may be a connection problem.

2.6 Decoder Setting

Decoder is a codec used to decompress a compressed stream.

For SuperCast X 4K products, the preview video is processed as it is without any compression, so it has nothing to do with the decoder setting.

However, in the case of digital compressed audio (AC3, DTS, etc.), you can hear normal sound only when the decoder is set for each.



■ Video decoder

It is used to play files compressed with MPEG2 / H.264 / H.265.

■ Audio decoder

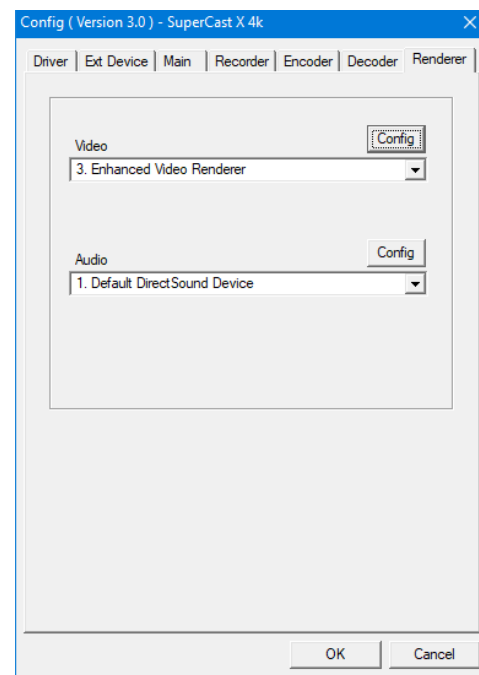
Decoder settings for decoding (decompressing) compressed digital audio. In the SKY Capture program, Cyberlink Audio Decoder and AC3 Filter decoder are provided as codecs for decoding when digital audio such as AC3 or DTS is input.

◆ Note ◆

AC3, DTS supported by SKYCapture Program can normally support up to 6Ch digital audio. DTS HD audio may not be processed normally. AAC Audio and other digital audio will be supported through future review.

2.7 Renderer Setting

This is a function that outputs digital video or audio to the screen and speakers.



■ Video renderer

The renderers supported by this program are EVR / VMR9 / VMR7 /. Video renderer support varies depending on the OS environment.

-EVR: It is a video renderer that is a little more advanced than the VMR9 renderer. Like VMR9, it uses system memory to set and render a video area.

EVR Renderer is a video renderer designed to work well with Aero (transparent effect) of Windows 7.

Accordingly, various types of renderers are provided, so it is recommended to set and use the renderer that is most suitable for your system.

-VMR9: It is a video renderer that can render in the area allocated by system memory without using an overlay. You can run more than one video like the VMR7.

However, VMR9 renderer takes slightly higher CPU usage than Overlay, and compatibility may not be good for each OS or graphics card driver.

-VMR7 (Video Mixing Renderer): A video renderer that can use both overlay mode and system memory.

The feature of this renderer is that when the video is executed alone, it operates in Overlay mode, and when the video is already executed in Overlay mode, it allows you to view the video using the system memory.

■ Audio Renderer

It is a renderer that allows you to output sound through a speaker.

Audio renderers can use DirectSound and Wave Out renderers.

Among them, the DirectSound renderer is capable of mixing with other sounds, so if you run the Capture program even when the sound output program is running, you can output the sound output from the Capture program to the speaker as well.

In contrast, the Wave out audio renderer cannot be used with other sound output programs because mixing is not possible.

3. Still image storage & video recording

3.1 Save still image (frame capture)

This is a function to save the image displayed on the screen by screen unit. While the screen to be saved is displayed, if you press the "Save Still Image" (📷) button on the player, you can save it in BMP and JPG file formats.



Still image format supports JPG/BMP format, and saving folder and format selection, and still image saving options are described in "2. Program Environment Setting"- Refer to the "2.4 Recording Setting" section.

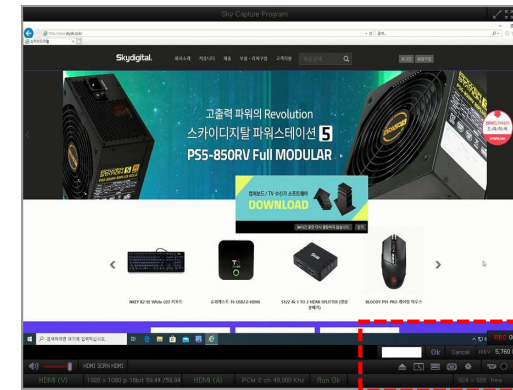
3.2 Saving video (record)

This is a function that allows you to record a video from the TV screen or external input.

Press the "Record" (📹) button to start saving the movie, and press the record button again to end saving.




To specify the recording end time during recording, press "R" (⌂). A menu appears so that you can specify the recording time. If you enter the recording ending time in minutes and press the OK button, the recording continues until the specified time is up and then the recording ends.

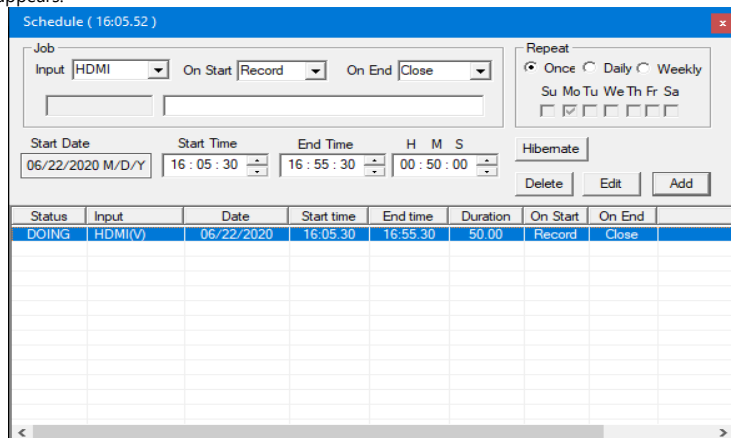


◆ Note ◆

In HDMI mode, recording is only possible with devices that are not HDCP locked. If a device with HDCP lock is input, playback is possible but recording is not possible.

4. Reservation Setting

Scheduled recording is a function to automatically record at a time specified by the user. When you press the "Reservation Setting" [] button in the Capture program, the reservation setting window as shown below appears.



-Input: Set the mode (HDMI) or command for scheduled recording.

-At Start: Select the function you want to run when the reserved time is reached. You can select Record / Record (S) / Watch / Frame Capture.

-On End: Select an option when the reservation function ends. You can select the current status / close (end the program) / hibernation (enter the hibernation mode after executing the scheduled function / shut down the PC).

-Time setting: Set the start time and end time to be reserved.

-Repeat option: Specify the repeat option to execute the reservation. If you select ONCE, the schedule will run only once, and you can select Daily or Weekly to set the schedule to run on a specified day or every day.

-Hibernation: This function allows you to enter the hibernation mode immediately after setting all the reservation functions.

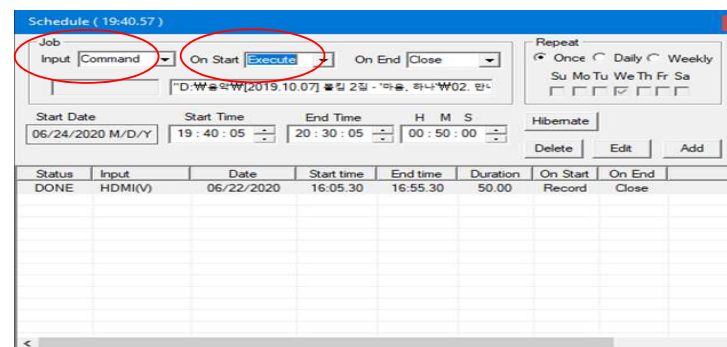
• How to set reservation

- ① Set the mode (HDMI / command) to be reserved.
- ② Set the reservation time. First, select the date you want to reserve and then set the start time and end time respectively.
- ③ Set the scheduled Execution option and the End option. Select "Record" to schedule normal recording, "Record (S)" to schedule stealth recording, "Watch" to only watch without recording, and "Frame Capture" to save as a still image. The On Shutdown option is to set whether to shut down programs and computers after the scheduled function runs or leave it alone.
- ④ Set the repeat option. Select "Once" to execute the scheduled function only once, or "Daily" or "Every week" to execute multiple times repeatedly depending on the condition.
- ⑤ When all reservation settings are completed, click the "Add" button.
Check if the settings have been added to the list at the bottom of the reservation settings.

• Command execution

- With the Reservation function, not only watching and recording, but also executing other programs on the window at a desired time or alarm function at a specific time can be performed.
- To use the Command function, set the "Input" menu to "Command" and select "Run" in the "At Startup" option, and a dialog box to load the Exe file (exe) appears.

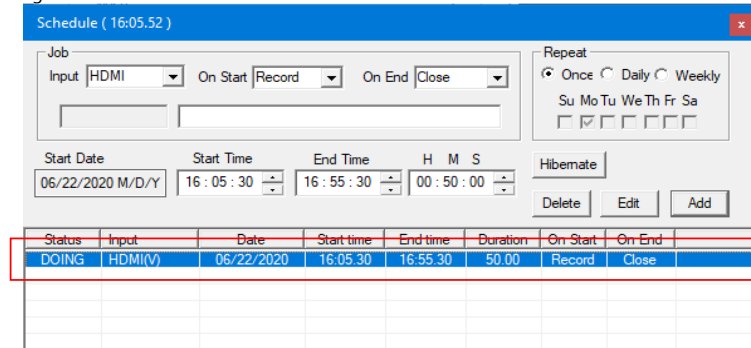
- When the Windows program Exe file (*.exe) to be executed is loaded, the path of the file to be executed is displayed under the execution option as shown below.



-Also, since it is possible to execute certain conditions (parameter setting) at execution time, setting conditions (parameter values) at the end of the command line allows execution to meet the corresponding conditions.

• To edit (change) the added reservation

To change the added reservation item, click the item you want to edit and click the "Edit" button. Then, the progress of the item being edited is displayed as "[]", and the set contents are displayed. If you change the content you want to edit and click the "Finish" button, the reservation details will be changed and registered again.



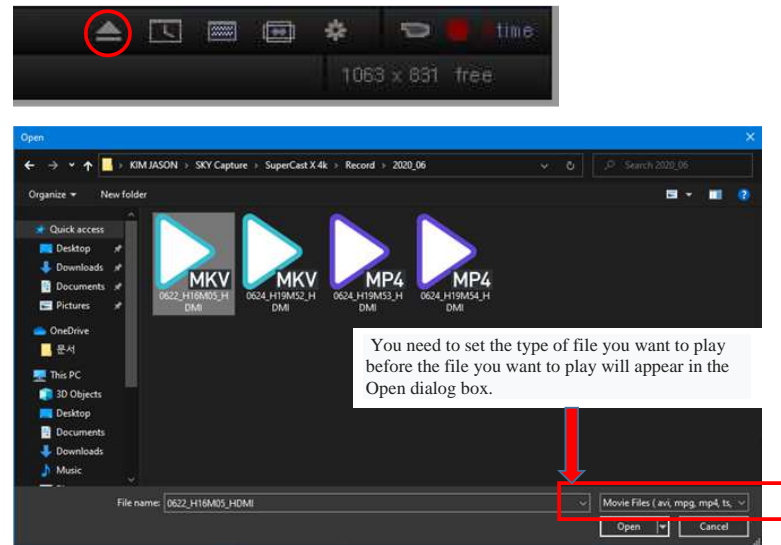
• Shut down in hibernation mode after setting reservation

The reservation program does not provide a power-on function. Instead, if you shut down your PC in hibernation mode, it can stay almost the same as turning it off. Therefore, if you have to wait too long from the current time or if you are away from the current time, it is recommended to turn the computer into hibernation mode after setting the reservation recording.

After setting the reservation, click the "Shut down hibernation" button to shut down the computer in hibernation mode. When "Hibernation End" is done, it ends in hibernation mode at the same time by pressing the button, and it automatically returns from hibernation mode at the reserved time, and reservation functions (reserved recording, watching, command execution, etc.) can be used.

5. File playback mode

The file play mode is a function that allows you to play videos saved with the SKY Caputre program.
The file formats that can be played on the player are TP, MPEG1, MPEG2, and AVI (uncompressed) video files.
Of course, if you install a separate decoder for playback, you can play MP4 or other multi-format video files in addition to the above formats.
If you click the "Play File" (📄) button as shown in the figure below, the Open dialog box for playing the video will appear.



5.1 Preview of File playback

SKY Capture program supports a preview function using the Seek bar when playing files.
As shown in the figure below, if you place the mouse cursor on the seek bar using the mouse cursor in the file playback mode, you can see the preview screen of the current playback point.



5.2 Change Playback speed

Play Speed >	Normal (1.0)
Record	Faster (+ 0.1)
Record(S)	Slower (- 0.1)

SKY Capture 프로그램에서는 파일

During playback, you can change the playback speed slower or faster than the original speed.
You can adjust slow or fast by selecting "Play Speed" from the pop-up menu that appears by clicking the right mouse button on the screen window.

The playback speed can be adjusted from 0.5 to 1.5 times.

5.3 Files to playback

The file playback function is used to play the recorded material in the Capture program.
The recording formats that can be played back without separate settings in the Capture Program are MP4 and MKV files.

In the file playback function, video files of other formats can be played in addition to recordings, and video files of that format can also be played if the codec (decoder) required for playback is installed.
When playing a specific format file (movie file in a format other than the recorded recording file) in the Capture program, the decoder installed in the system is automatically connected and played.
Therefore, if a decoder for playback is not set, or even if there is a decoder, if the internal properties are different or the connection method is not correct, an error may occur during file playback.



When the file play mode starts, the control panel related to the progress changes as shown below.

To move the playback position, drag the progress position move bar with the mouse to play at the desired point. You can also use the progress control buttons to play/pause, move to the beginning, and play to the last move.

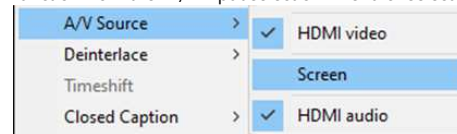
6. Use Screen function

■ Screen input (Screen)

Screen input function is a function that receives a specific area on a window as it is and shows it with a control program. Therefore, if you use this function, it is used for the purpose of saving as a still image or video easily because it is possible to input the web browser (internet window), game screen, or various program screens as they are as a capture program.

■ Execute Screen input function

Right-click on the screen of the Capture program. When the pop-up menu appears, select the "Screen" function from the "A/V input selection" menu or select "SCRN" from the Capture program control bar.



■ Limitations of the screen input function

- It is not possible to capture the game screen running in full screen using DirectDraw.
In other words, it can be used only in programs running in window mode (games, Internet or specific screens), and full screens other than window mode are not available.
- Input is not possible (black screen) in the window area using the overlay surface. (Videos using the overlay renderer cannot be entered on the screen.)

■ Definition of Screen input function terms



• Screen input window

As shown in the picture above, it is a window that is displayed to receive the desired area by executing the "Screen" function.

• Capture size

It is the size that is actually received in the program screen window through the screen input window. In other words, since the resolution of the screen input window and the size of the program screen are different, it is a function to set the screen input window and the program screen window to the same resolution, or to select the size specified during input.

The resolution set in Capture Size is applied when saving still images or movies. (Example) If you save a still image with the Cap Size set to 640x480, the saved image is output as 640x480.

The capture size can be set in 4 steps as follows.

Scr(W) x Scr(H) (same size as the screen input window)
320 x 240
640 x 480
720 x 480

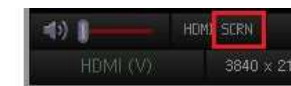
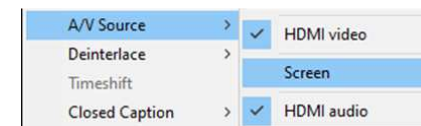
- Program Screen window - Refers to the screen window that appears when you run the capture program. The screen inputted through the screen input window is enlarged or reduced to the size selected in the capture size, and then enlarged and reduced to fit the program screen window.

6.1. Screen function Quick Guide

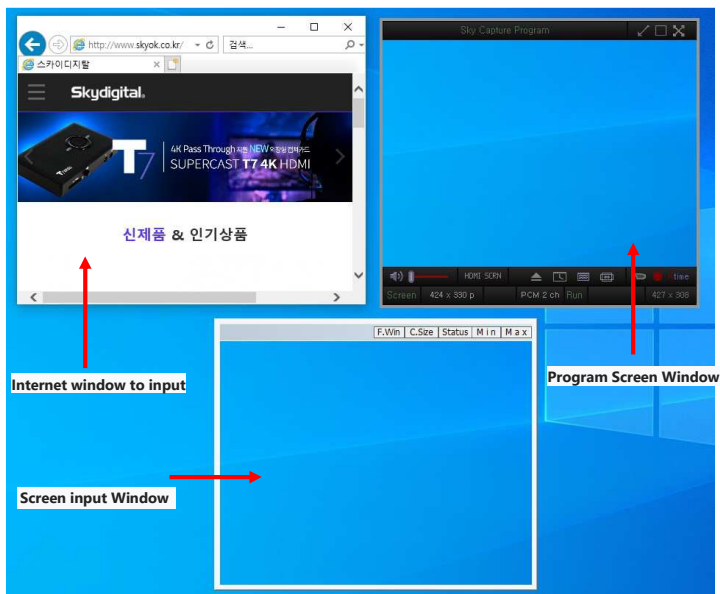
- Run the Capture program and the program to receive input (window). First, open the window where you want to enter the screen, such as a video or game screen, Internet screen, or a specific area of the window. The description below explains how to enter the Internet window (browser) screen.



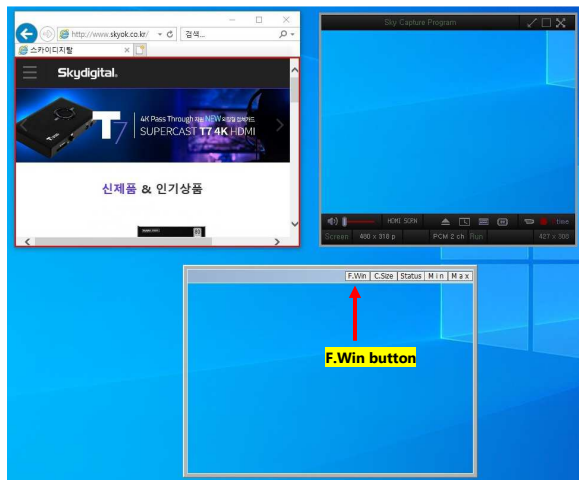
- Click the right mouse button on the screen window of the Capture program. When the pop-up menu appears, select the "Screen" function from the "A/V input selection" menu or select "SCRN" from the Capture program control bar.



- When the function is executed, another window will appear as shown in the figure below. This window is a window for receiving screen input by the Capture program.



- ④ Click the "F.win" button on the screen input window to move the mouse pointer to the window to be input. If you hover the mouse over the window to receive input (eg, Internet window), the area that can be input is displayed in red if desired.



- ⑤ At this time, if you select the red area with the mouse again, the input screen appears on the program screen.

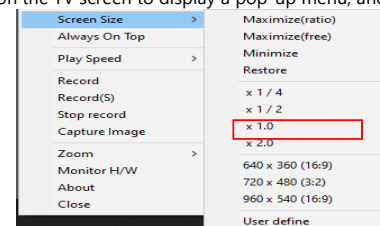


- ⑥ Set the capture size of the TV screen. Press the "C.Size" button on the screen input window and set the capture size. If you select ScrW x ScrH, the size of the input window (internet window) then the size of the TV screen are set to 1:1 size. In order to save still images or movies of a specific resolution, select one of 320x240 / 640x480 / 720x480.

(The screen below is the selection screen of ScrW x ScrH.)



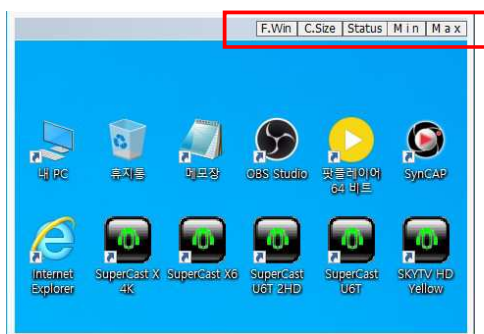
- ⑦ Even if the input window and TV window are selected 1:1, only the original size is the same but the window size is different, the screen of the TV window will not be the same as the screen of the input window. In order to set the screen of the TV window to the same size as the screen of the input window, right-click on the TV screen to display a pop-up menu, and then select "1.0 x size" from "Screen size".



- ⑧ Now you can save the screen input to the screen input window by pressing the Save Still Image [] or Save Movie [] button of the control program.



6.2 Screen Input window



■ **F.Win**-This function is used to select a window unit area (window screen) for screen input.

■ **C.Size**-Refers to the 'capture size' described in the definition of terms above.

The correlation between the screen input window, C.Size and TV window is shown below.

- ScrW x ScrH-Set the capture size to the same size as the screen input window (1:1 size).
- 320 x 240-Sets the resolution of the TV screen to 320x240. When saving still images and movies, it is saved in 320x240 size.
- 640 x 480-Sets the resolution of the TV screen to 640x480. When saving still images and movies, they are saved in 640x480 size.
- 720 x 480-Sets the resolution of the TV screen to 720x480. When saving still images and movies, they are saved in 720x480 size.

Whenever the size of the screen input window is changed, you must select ScrW x ScrH to actually change the capture size.

■ **Status** - Shows the current status of the screen. (Screen input frame / Screen input size / Capture size)



• **Frame Rate**: Displays the number of frames per second of the screen received through the screen input window. The maximum is 29.97 FPS based on 30 FPS. If it is displayed above 29 FPS, you can input and record without feeling that the screen is not smooth or broken.

- **Win Size**: Displays the size (resolution) of the screen input window.
- **Cap Size**: Displays the size (resolution) of the capture program screen. If C.Size is set to ScrH x ScrW, the size (resolution) of Win Size and Cap Size are set the same.

■ **Minimize** - Minimizes the screen input window.
Even if the screen input window is minimized, the screen input location and size remain same.

6.3 How to input Screen Function

■ How to move the screen input window above it by designating another window using the F.Win function

This is the content introduced in "Using the Screen Function Step by Step (Quick Guide)".

Press the F.win button and move the mouse to place it on the desired window. Once the window is detected, a green border area that can be selected appears. At this time, if you click the left mouse button, the screen input window moves to the selected location and appears. If you want to cancel, just click the right mouse button.

Press the F.win button and move the mouse to place it on the desired window. If the window is detected, a green border area that can be selected appears. At this time, if you click the left mouse button, the screen input window moves to the selected location and appears.

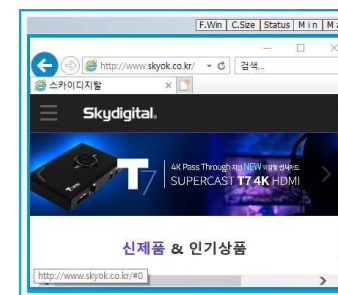
■ How to designate the area by moving the position of the screen input window

As with the TV window, the screen input window can be freely adjusted in position or size using the mouse.

If you move the title bar of the screen input window to fit the area you want to input, and adjust the size with the mouse, the area selected in the screen input window will appear in the capture program window as it is.



(How to enter the window by pressing the F.Win button)

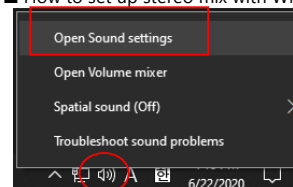


(How to designate an area by moving the position of the screen input window)

6.4 How to input Audio

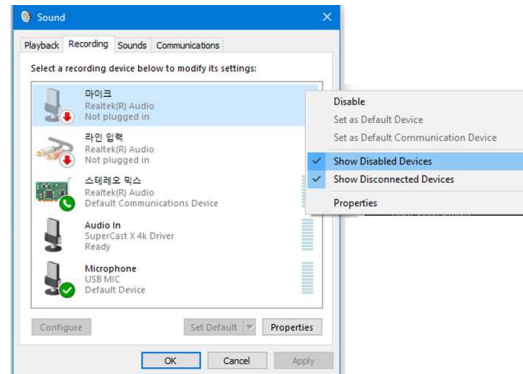
When using the screen input function, the final output should be input incoming through the sound card. Therefore, you can record sound even if you set up a stereo mix among the input mixers (recording mixers) supported by the sound card. Also, in order to do voice dubbing through a microphone in analog mode, the microphone mixer must also be activated. Most of the stereo mix is supported by the driver of the sound card, but there are cases where it is not supported.

■ How to set up stereo mix with Windows10

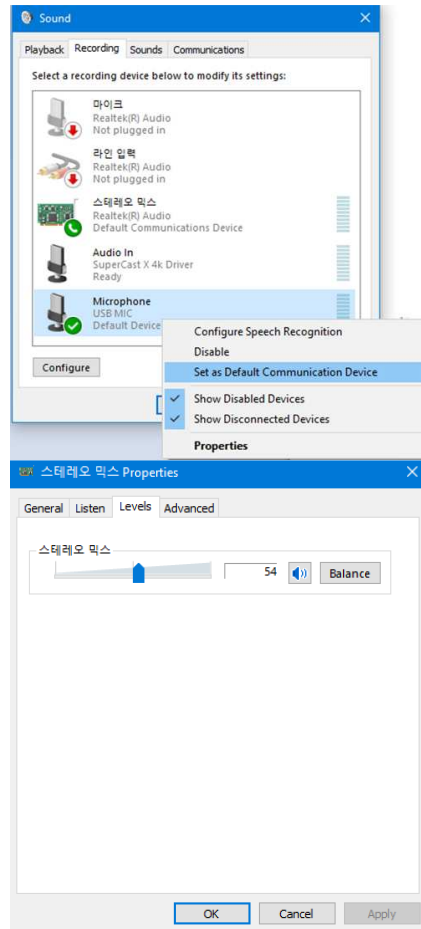


① Right-click the speaker-shaped shortcut icon in the tray bar at the bottom right of the window and select "Sound Setting Open"

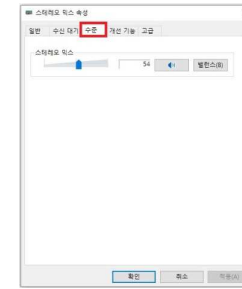
② When the recording device menu appears, click the right button of the mouse and check both "Show disconnected devices" and "Show disabled devices" in the pop-up menu to set all recording mixers to be displayed.



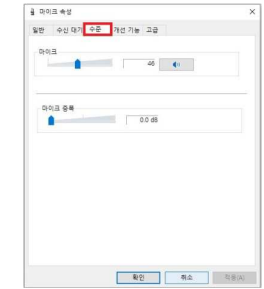
③ When all devices are displayed, right-click each of the microphone and stereo mix items and select "Set as default device". If you are not using the voice dubbing function through the microphone, you do not need to select the microphone.



④ Then right-click on the Stereo Mix set as the default device and select "Properties". If you select "Property"-"Level", you can adjust the volume when recording.

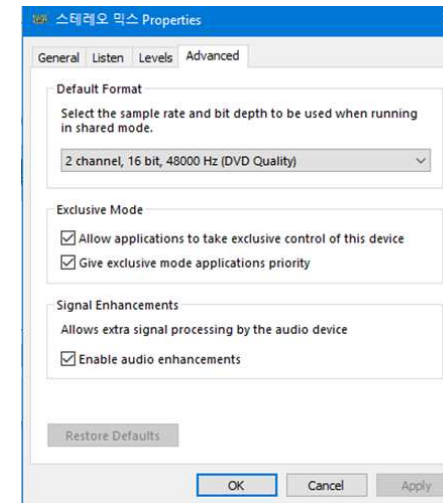


(Adjust the volume of stereo mix)



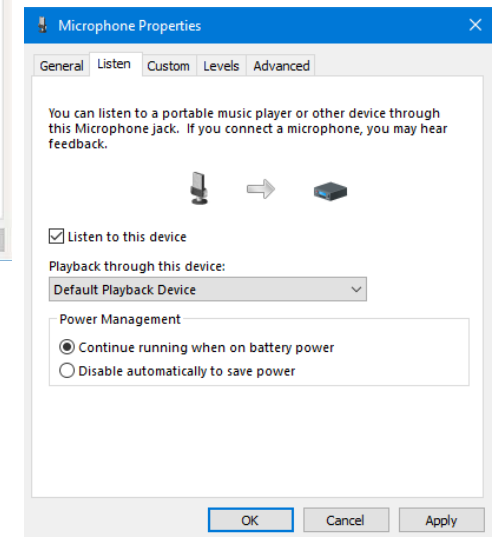
(Adjust the volume of the microphone device)

⑤ Also, select "Advanced" from "Properties". In the case of our program, sound input and recording is possible only at 16bit / 48KHz, so it must be set to 16bit 48000Hz as shown below.



And in order to record screen as well as record voice dubbing through the microphone, you need to select an option as shown below.

Make sure to turn on the "Listen to this device" option in the "Standby" option in the microphone mixer settings.



SUPERCAST *LIVE4K*

HDMI CAPTURE CARD

SKYCAPTURE PROGRAM MANUAL _ V3.0

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