

JavPlayer Manual

Ver.1.05a

Please do not sell, distribute or publish videos created using JavPlayer without the permission of the copyright holder.

Install

Extract zip to a location that does not contain double-byte characters in the full path and execute JavPlayer.exe.

Uninstall

Delete the extracted folder.

If you delete JavPlayer.udj, user settings can not be able to restore.

Data Save

The content of the setting panel is auto-saved to "JavPlayer/JavPlayer.udj".

Save will be executed when start playback or quit the application.

*In the case of capture, it is saved for **each target application**, not for each video.

Terms

Cell The rectangles that make up the mosaic.

2D-mode Normal video playback mode. VR video is also played back in 2D mode at the beginning.

3D-mode This mode is for rendering VR videos. You can change the orientation of the camera.

VR-mode This is a mode to watch VR videos using goggles.

Equirectangular A conversion format for projecting VR images on a sphere.

ProcessingSettings Parameters for mosaic reduction processing. Adjust to enhance the effect.

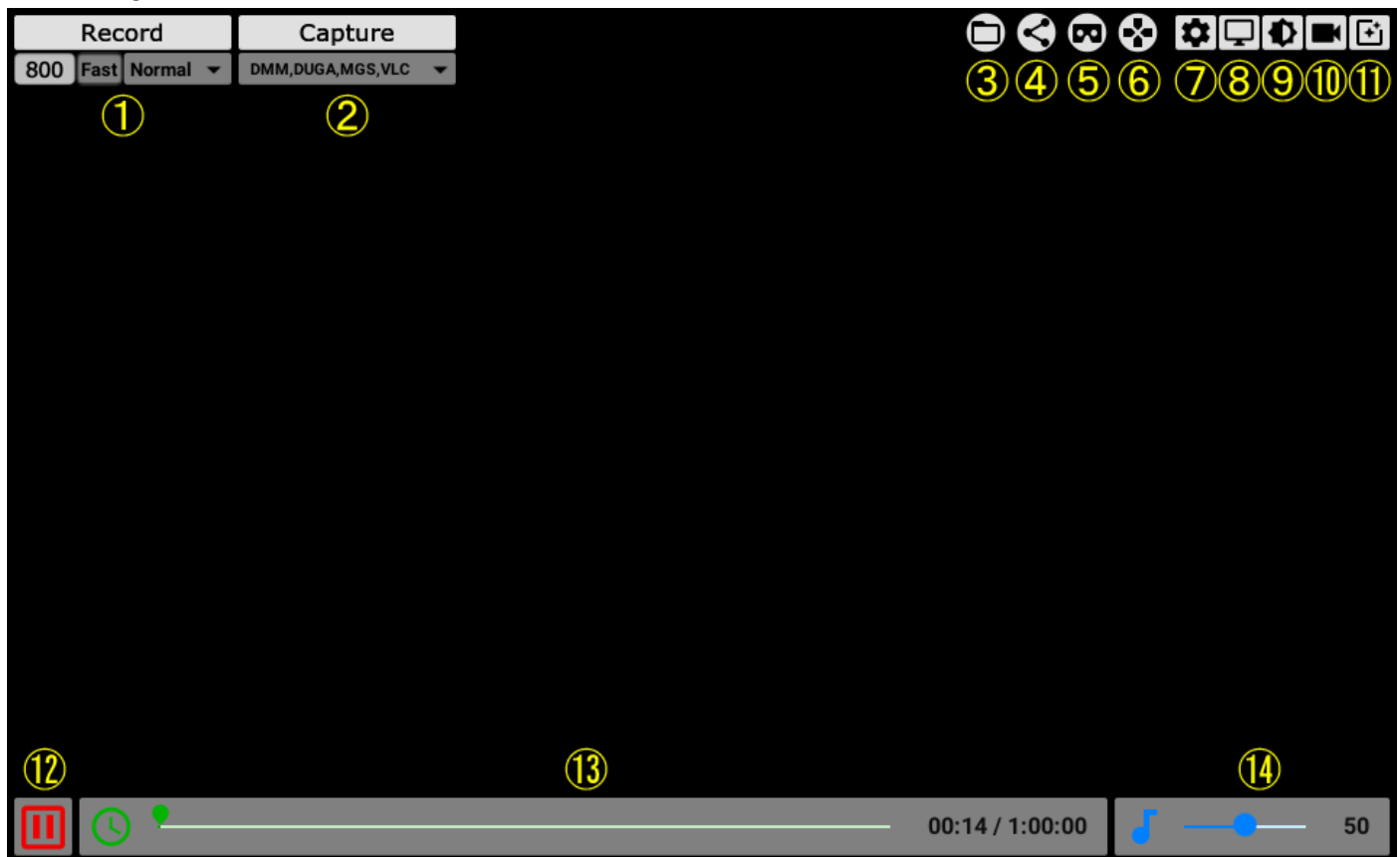
Marker Dividers placed on the seek bar to switch processing settings.

Swipe Operation to slide the mouse while pressing the left button.

MosaicReduction Non-AI super resolution processing by JavPlayer.

Decensoring AI super resolution processing by external tool.

Basic Operation



- ① Record movies during playback or capture.
- ② Capture the screen of the DMM player etc in real time.
- ③ Open the file browser.
- ④ Execute the decensoring process. [You need to install DeepCreamPy in advance.](#)
- ⑤ Switch the VR mode. [You need to select the division pattern in the 3D-View settings panel in advance.](#)
- ⑥ Open the Key Assignment panel.
- ⑦ Open the Environment Settings panel.
- ⑧ Open the 3D-View Settings panel.
- ⑨ Open the Screen Settings panel.
- ⑩ Open the Color Correction panel.
- ⑪ Open the Processing Settings panel.
- ⑫ Pause / Resume [*Same as double-click the screen](#)
- ⑬ Move the handle and seek. [*Horizontal swipe allowed](#)
- ⑭ Move the handle and adjust volume. [*Mouse wheel allowed](#)

Drag and drop the movie file to the window of this application and play it.

The window size will be adjusted automatically according to the movie.

You can also display still images (jpg, png).

If you press the Esc key while in the VR mode, file browser or key assignment, the original screen will be restored.

Toolbar



It is displayed above the seek bar only when the 'toolbar' is ON in the environment settings panel.

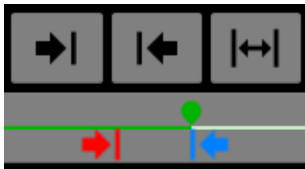
It includes buttons related to screenshot, loop(record) range, play speed, marker editing, and bookmark.

You can assign keys to all functions.

Normally, buttons related to copying and pasting parameters are not displayed.

They are displayed instead of the bookmark buttons only while the markers are placed and the processing setting panel is open.

Range specification



If you set the range with the toolbar buttons or the keyboard, only that part will be played repeatedly.

If only the start point is specified, the end of the movie will be the end point.

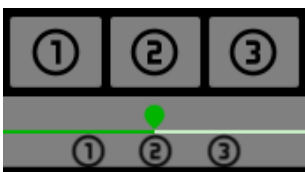
If only the end point is specified, the beginning of the movie will be the start point.

It returns to the start point at the moment past the end point, but before the start point it plays normally.

Loop is not executed during pause.

It is also used to specify **the range to record**.

Bookmark

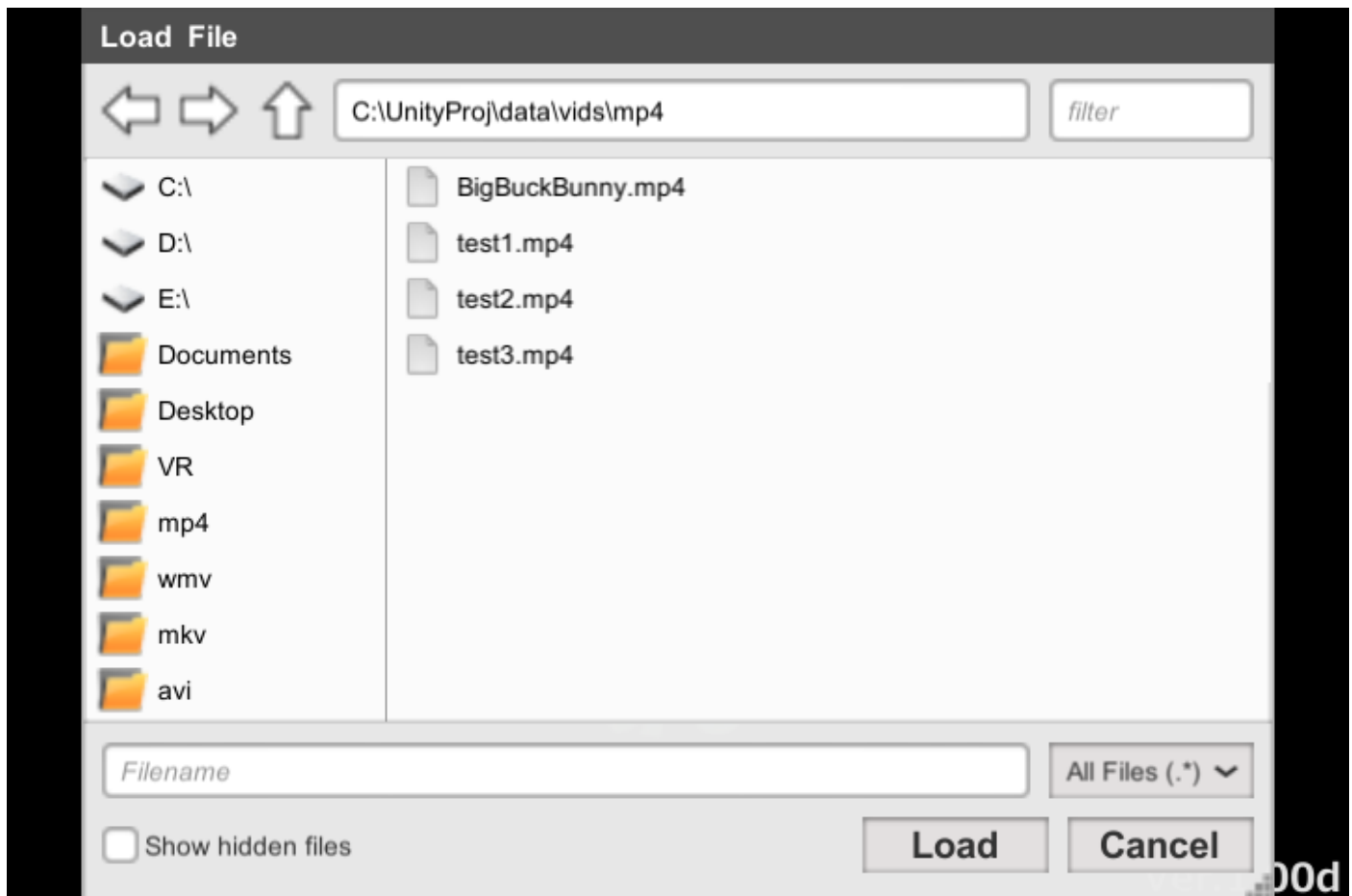


Selecting a bookmark (1-3) with the toolbar button or keyboard will place a bookmark marker at the current playback point.

If the selected bookmark has already been set, it moves (seeks) to the marker position.

If you select a bookmark while holding down the Shift key, the corresponding marker is deleted.

File Browser



Double-click the file to start playback

The folder of the played video will be added to the left folder link. *up to 8

Opening and closing with shortcut keys (default: F key) is convenient when using a file browser frequently.

Sequential Playback

Video switching (default: F7 key, F8 key) is a function to play videos in the same folder continuously.

Intended to be used while wearing goggles in VR mode, but it can also be used for still images (png, jpg).

[You can also load the last file after rebooting.](#)

If you drag and drop multiple videos together, they will be treated as a video group.

The target of video switching is limited to files in a group and can be used as a simple playlist.

Dropping a single file or loading from the file browser will ungroup it.

Key Assignment

			1	2	3				1	2	3
Open / Close file browser	F	Button7				Make the screen size half the video size.	0	----			
Pause / Resume	Space	Button2				Make the screen size same the video size.	1	----			
Specify the start of the loop(record) range.	L_Bracket	Button5				Make the screen size 2 times the video size.	2	----			
Specify the end of the loop(record) range.	R_Bracket	Button6				Make the screen size 3 times the video size.	3	----			
Forward 1 frame.	Period	L_Stick_H +				FullScreen / Windowed	Func11	----			
Rewind 1 frame.	Comma	L_Stick_H -				Take a ScreenShot.	Func12	----			
Forward 10 seconds.	R_Arrow	R_Stick_H +				Hide GUI and operate camera.	Mouse2	----			
Rewind 10 seconds.	L_Arrow	R_Stick_H -				Zoom in (VR video only)	I	Button4			
Forward 1 minute.	U_Arrow	D_Pad_H +				Zoom out (VR video only)	O	Button1			
Rewind 1 minute.	D_Arrow	D_Pad_H -				Enter to VR mode and reset camera.	R	Button8			
Increase playback speed by one level.	PageUp	LR_Trigger +				Turn up the volume.	----	D_Pad_V +			
Decrease playback speed by one level.	PageDown	LR_Trigger -				Turn down the volume.	----	D_Pad_V -			
			1	2	3						
Play the next video in the same folder.	Func8	Button6									
Play the previous video in the same folder.	Func7	Button5									
Paste the copied video URL.	P	----									
Cancel image processing only while pressing.	M	Button3									
Add a processing settings marker.	A	----									
Remove a processing settings marker.	Del	----									
Move to the next marker.	X	----									
Move to the previous marker.	Z	----									
Copy the current processing settings parameter.	C	----									
Paste the copied processing settings parameter.	V	----									
Paste the default processing settings parameter.	D	----									

You can assign up to 2 keys or buttons for each function.

The default is to use a combination of keyboard(101) and pad(Xbox360).

Please change according to your environment.

Skipping will be executed continuously if you keep pressing.

It will be canceled if the start (end) of the range is set continuously at the same position.

Pressing the start and end setting keys simultaneously cancels both.

Process cancellation is a function to check the original mosaic, and it wScreenshots will be stored in "JavPlayer/ScreenShot/*_ XXX.png".

When you reset the camera, the goggle wearer's gaze direction will be in the front.

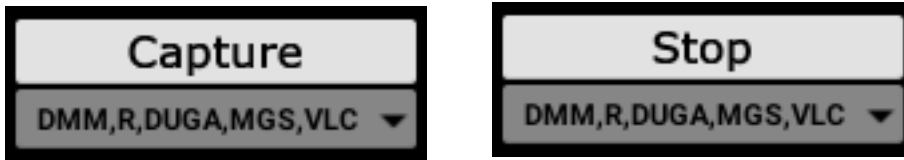
If it is executed only once, it will be reset to the horizontal state.

It will be reset in an inclined state if it is executed twice in a row (if it is facing down, the bottom is front).

Holding down the Shift key while zooming will change the camera's altitude.

Skip(Move playback point) will be executed continuously if you press and hold.

Capturing **updated!**



Please start the target application and press the capture button.

The default target is DMM, R, DUGA, MGS, VLC player.

To capture other applications, please select in the list.

In order to improve image quality, bring the window size of the target closer to the movie.

It automatically retries even if the target window is lost by minimizing or resizing.

Capture is ended by pressing the stop button or start playing a movie.

*DMM Movie Player (UWP ver.) is not able to be captured.

* 'R Player Plus' is the overseas version of DMM player.

In Windows 7, the capture function does not work properly.

If you can not capture, please discontinue use.

VR-Mode

You can switch to VR mode only if you have selected a split pattern in the view settings.

Even when wearing goggles, you can switch to VR mode by executing reset (default: R key, pad button 7).

It is necessary to install SteamVR and connect the corresponding goggles.

Not only OculusRift and HTC-Vive but also OculusGo etc. connected to a PC can be used.

The operation test was performed with a smartphone and its goggle.

The software used is RiftCat2.0 (Windows) and VRidge2.0 (Android).

3D GUI is not implemented yet.

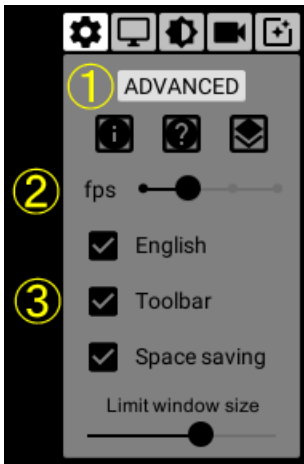
It is inconvenient without the game pad, but no problem.

There are various forms of VR video mosaics, and some of them can not be reduced at all.

It will not be a problem if the mosaic always looks like a square when playing in 2D mode of JavPlayer or a usual video player.

The image deformation process by the switch on the upper right of the processing setting panel is effective for some videos.

Environment Settings



① Open advanced settings panel that contains experimental items.

Please use it after getting used to JavPlayer.

② If you set it to 30 fps, capture delay will increase.

90 is for Oculus Rift and HTC Vive

③ Even if you turn off the toolbar, you can do all the operations with the keyboard shortcut.

Advanced Settings **updated!**

External program execution mode : If Console is selected, You can check the progress of tgmain.exe, ffmpeg.exe, etc.

Recording quality : Even if it is set to default (3), the bit rate will be higher than general mp4.

If video quality is important, 4 is recommended.

Destination folder for movies : The default is 'JavPlayer/Movie'.

Set it if it is troublesome to move the created video.

It is necessary to create a folder in advance and specify it with a full path such as 'D:/JavMovie'.

Advanced Settings(TecoGAN) **new!**

Delete working folder : If 'Before recording' is selected, the converted image will not be deleted even if the recording is completed.

This is useful for finding the cause of troubles and re-recording from the middle.

Extraction and recording speed : Recording during normal playback instead of slow playback.

To avoid dropping frames, it is necessary to record on a sufficiently fast PC without any other work.

When Slow is selected, it is irrelevant because frame-by-frame recording is performed.

Number of parallel processing : Setting 2 or more increases the memory usage proportionally.

Set to 1 if operation becomes unstable.

TecoGAN installation folder : The default is 'JavPlayer/TG'.

Set this if you do not want to write a large amount of data on the drive where JavPlayer is installed.

It is necessary to create a folder in advance and specify it with a full path such as 'D:/JavTG'.

TGMAIN[-CUDA] and TG-MODEL need to be moved to the specified folder.

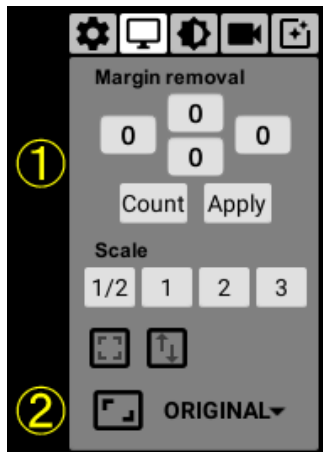
Advanced Settings(waifu2x) **new!**

Command line option to pass to waifu2x-caffe-cui.exe.

Since the option names have not been changed, you can find out more in the waifu2x-caffe documentation.

Only crop_size is replaced with the optimal value below the specified value.

Screen Settings



① If the video contains a black border, press the measurement button and then press the apply button.

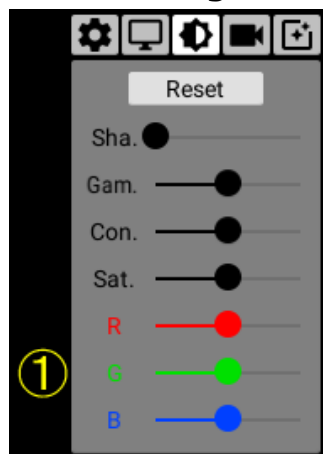
If you measure on a bright screen the correct value will be set usually.

If the capture target contains a non-black frame such as a status bar, you need to input manually.

② Select the aspect ratio of the screen.

While playing VR video in 2D mode, this setting will be ignored.

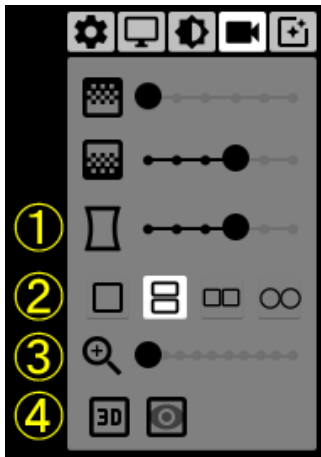
Color Settings



① You can adjust the brightness of the screen when you move R,G,B while holding down the Shift key.

If you leave the parameters on this panel as default, load will be slightly reduced.

3D-View Settings



① This setting is for detecting distorted or tilted mosaics. Normally set to 0.

When it is set to 1 or more, the slider for range setting (for upper and lower) is displayed.

② When VR video is loaded, it will be TopBottom or SideBySide.

If the automatic judgment is incorrect or if it is a fisheye type, set it manually.

[Specifying a division disables mosaic reduction in 2D mode.](#)

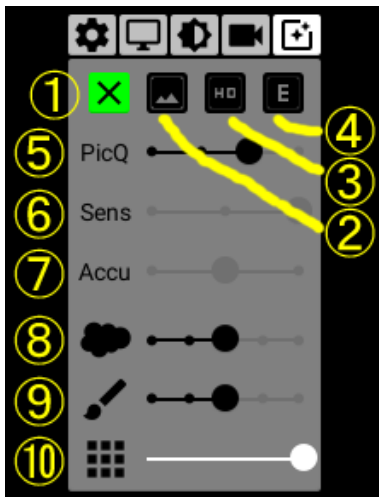
③ Set the zoom factor. The standard viewing angle follows the goggles.

④ If you switch to 3D mode, camera orientation can be controlled with the right drag (default key assign).

Please make mosaic processing settings in 3D mode about VR videos.

[The panel can not be opened in 3D incompatible state such as capturing or still image display.](#)

Processing Settings



Usually applies to whole, but you can use markers to switch between multiple settings.

- ① Parts close to the specified color will be protected from processing.

It is effective in case of the lattice pattern of the white window is misjudged as mosaic.

Do not specify skin color, brown, black, etc.

- ② The part that looks like stripes will not be processed.

Not only the background but also some mosaics may be excluded.

- ③ Perform mosaic judgment in high resolution.

It is effective for fine mosaic videos and VR videos, but processing load will increase significantly.

The button does not appear for low resolution videos below HD.

- ④ Deform the entire equi-rectangler image to detect the mosaic.

Not necessary if the mosaic looks rectangular in 2D mode.

The button is displayed only in TopBottom or SideBySide (non fisheye) videos.

- ⑤ The selected picture quality is reflected in the automatic adjustment of sensitivity and accuracy.

If the mosaic is not processed and remains, try reducing the value.

Normally 0 (automatic adjustment OFF) is not used.

- ⑥ Setting a large value makes it easier to identify fine mosaics, but increase false positives.

It can be set only when the automatic adjustment is OFF.

- ⑦ Smaller values make it easier to identify blurred mosaics, but increase false positives.

It can be set only when the automatic adjustment is OFF.

- ⑧ Adjust the intensity of the paint filter.

Although it can reduce the mosaic without blurring, there is a problem that distortion occurs.

While recording in TG mode, this setting is ignored and fixed at maximum.

- ⑨ Adjust application rate of super resolution filter.

The higher the value, the sharper the image, but the vibration of the processed part increases.

While recording in TG mode, this setting is ignored and maximum.

- ⑩ Set the cell size of mosaic.

Normally the auto is set, but manual is effective only in the section where automatic judgment fails.

In scenes without a mosaic, useless processing can be omitted by setting the left end (Off).

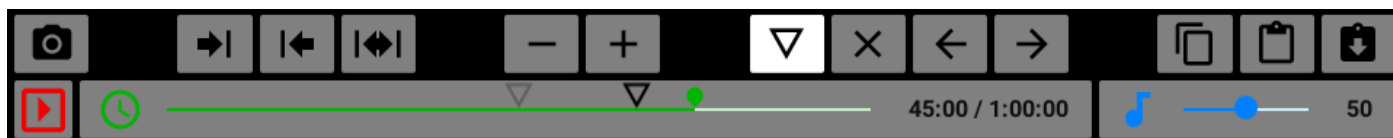
Processing Settings by section

Normally processing settings are applied to the whole movie, but you can also create sections by placing markers.

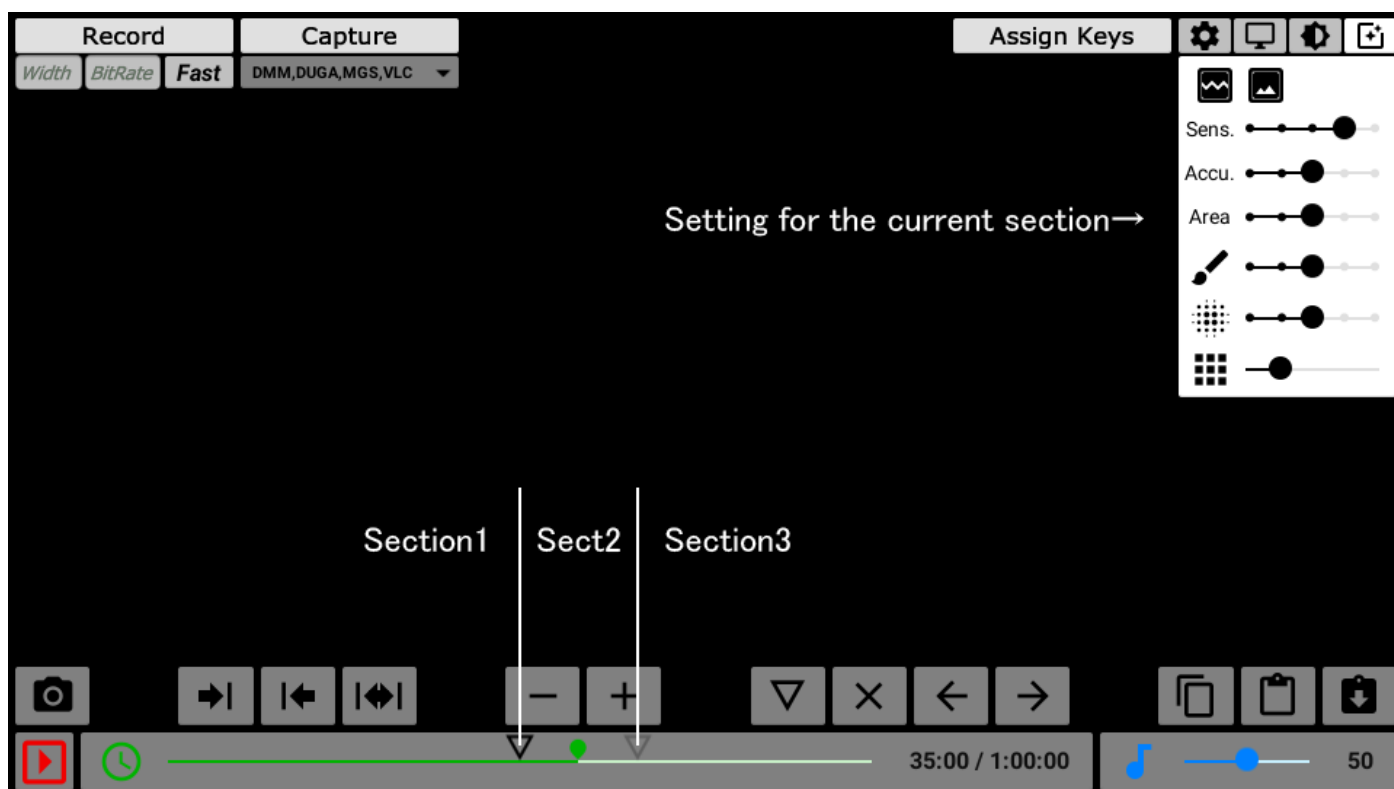
- To reduce misidentification of the mosaic area, set the accuracy for each scene.
- Manually designate only the part where the mosaic roughness can not be measured correctly.

Setting the details as above will give you more effect.

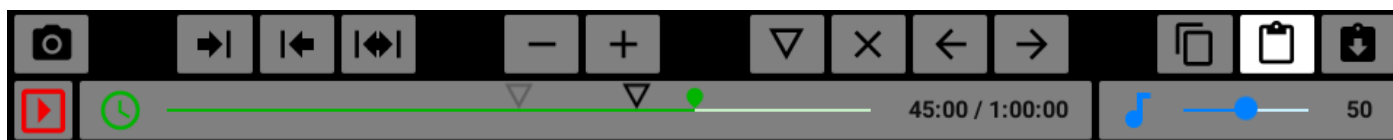
*To see the result of automatic measurement about roughness of mosaic, turn on **Disp infos** in environment settings.



Move the slider handle to the position you wish to divide and then press the Add Marker button on the toolbar or the shortcut key ('A' by default) to create a section.



Move the slider handle to section 2 and change the parameter.



If you copy('C') in section1 and paste('V') to section3, only section2 will be set differently.

Preparation for Recording

The addition of audio requires FFmpeg unless the record setting is 'Fast-Normal'.

<https://ffmpeg.zeranoe.com/builds/>

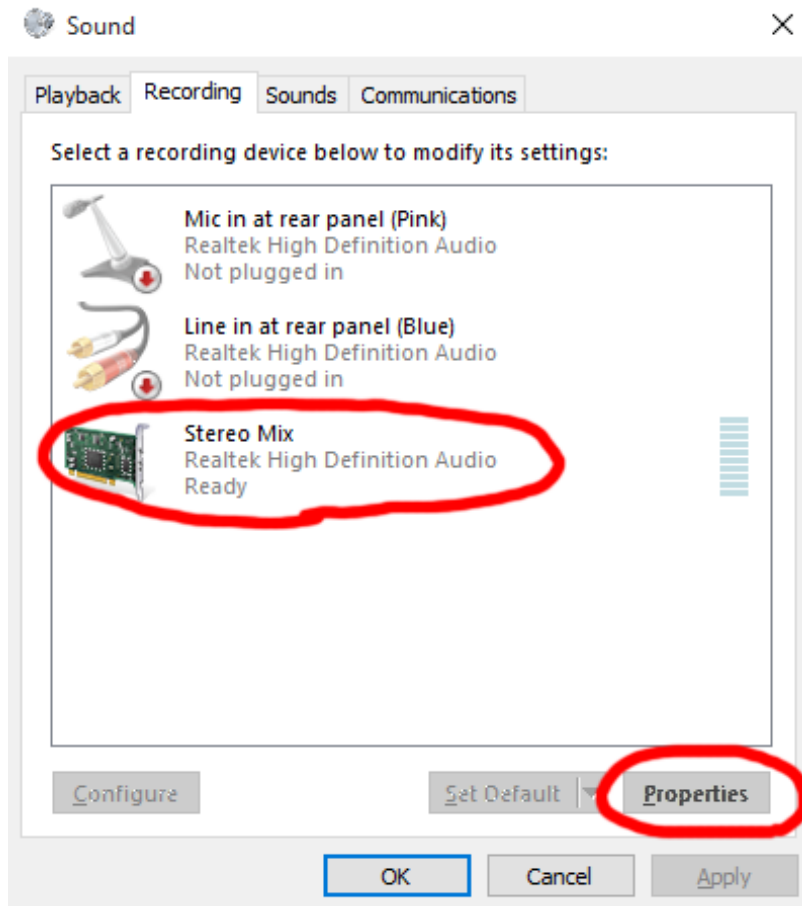
Please install in advance and add the path of the bin folder to environment variable.

You can use it even if ffmpeg.exe is placed in the same folder as JavPlayer.exe.

Preparation for Capture Recording

You need a stereo mixer to record while capturing.

For Windows 10, right click on the speaker icon in the task tray and select the sound and set it.



Since the volume of the speaker output is reflected in the recording level, it is necessary to record with the volume increased.

As it seems that the stereo mixer may become invalid while using the headphones, please deal with it according to your environment.

Check for preparation



You can check whether ffmpeg and stereo mixer can be used by pressing this button immediately after startup.

Recording



Recording is impossible on Windows7 because the installed encoder does not support Windows7!

Normally, only the set range is recorded, but if not set, the whole movie is recorded.

If you do not enter Width, the recording size will be the same as the original movie.

When the recording mode is Fast (real time), frame dropping may occur depending on the performance of the PC and the area of the video.

When the recording mode is Slow (frame advance), it takes several times longer, but frame dropping does not occur.

Normally audio data will be extracted and combined by FFmpeg after silent recording.

You need to install TecoGAN (described later) to use recording modes other than 'Normal'.

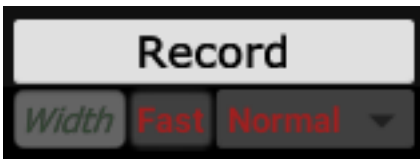
The output destination is "JavPlayer/Movie/OriginalName _XXX.mp4".

*During recording, the frame rate is changed regardless of usersetting.

Capture Recording

Because it can not advance frame by single step to be captured, it is restricted to Fast only.

Because it can not wait for the execution of the external program, it is restricted to Normal only.



Since you can not set the range, you need to manually press the end button.

Both capture and recording are high load, so frame dropping tends to occur more than usual.

It is better to reduce the target window or output resolution (the value of Width).

Streaming

Copy the URL of a playable video and paste it into JavPlayer (default is 'P') then streaming will start.

Please note that there is no function to extract the movie embedded in the web page and **URL of the video** is necessary.

Videos of streaming sites prohibiting playback by external players can not be played.

Stream Recording

It can be executed by the same procedure as ordinary recording, but frame loss increases in Fast mode and it takes a huge time in Slow mode.

It is recommended to record after downloading.

TecoGAN updated!

It is a video super-resolution algorithm under development by MengyuChu, YouXie, LauraLeal-Taixe, and NilsThuerey.

<https://github.com/thunil/TecoGAN>

You need a CPU (SandyBridge or later) that can use the AVX instruction set for execution.

You need Windows10 (64bit) or Windows8 (64bit) for execution.

You can expect much better results than JavPlayer's super-resolution.

However, due to the very high load, you need to create videos in advance.

The procedure to use is as follows.

1) Download TecoGAN for Windows. **Current version is 1.04*

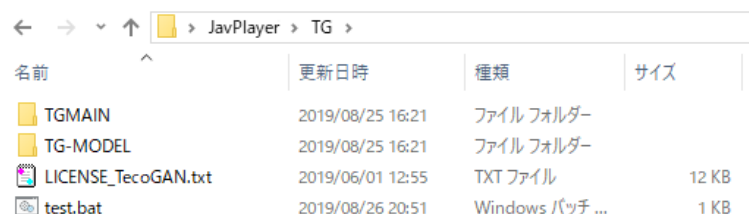
<https://drive.google.com/uc?id=14BgnvsffInM8VcfDnG3t2ftSBp8sGxGp&export=download>

2) Unzip and copy 2 folders (TGMAIN and TG-MODEL) into "JavPlayer/TG/".

3) Play video on JavPlayer and change the recording mode from 'Normal' to 'TG-STD'.

4) Set the speed to Slow and start recording.

After installation, contents will look like this.



名前	更新日時	種類	サイズ
TGMAIN	2019/08/25 16:21	ファイル フォルダー	
TG-MODEL	2019/08/25 16:21	ファイル フォルダー	
LICENSE_TecoGAN.txt	2019/06/01 12:55	TXT ファイル	12 KB
test.bat	2019/08/26 20:51	Windows バッチ ...	1 KB

If your PC is equipped with a CUDA compatible GPU and 2G or more VRAM, I recommend GPU version several times faster.

https://drive.google.com/uc?id=1rAe-W3kvDYqrBzqvwQo_bBzPcqIYHpLm&export=download

Since tgmain-cuda.exe is used in preference to tgmain.exe, there is no problem if both exist.

You also need to install CUDA in advance.

<https://developer.nvidia.com/cuda-downloads>

Even if you use the GPU version, the processing (png extraction, encoding, etc.) that JavPlayer is responsible for will not become fast.

To make those part faster, change the speed setting from Slow to Fast.

Occasionally there is a delay in the progress of the frame, but with enough PC processing power it is no problem.

I confirmed that it has a great effect on videos that are unsuitable for frame-by-frame advance (mainly wmv and mkv).

There is a benchmark button in the upper left corner of the startup screen.

With this, conversion speed of TecoGAN can be measured.

If necessary, specify the number of image folders to be converted with the slider.

If no range is specified, it is treated as a test of TG mode and recording will be end in 5 seconds.

You can create a video of any length by setting the range.

Recording in TG mode takes a long time and there are many trouble factors.

I think it 's better to shorten the video to avoid risk, but if you want to make a longer video, I recommend using suspend and resume.

You can suspend and resume at any time after image extraction is complete, and you can start over from any process. *Excluding TG-X4 (described later)

Even after restarting JavPlayer and loading another video, you can resume it by reloading the last video used in TG mode.

Note that only one information for resumption is saved and will be overwritten.

Selecting 'TG-AFL' as the recording mode enables the flicker reduction filter.

Selecting 'TG-ASH' improves stability when the mosaic roughness changes.

In the mode with '+W' at the end, additional conversion for HD movie creation is performed.

See the section on [waifu2x](#) for details.

JavPlayer has 'Super-resolution for still images to double size' for real-time processing.

In TG mode, this is replaced with 'Super-resolution for videos to quadruple size' of the external program.

Parts other than super resolution (measurement of the area and roughness of the mosaic, composition of the processed image, etc.) are shared.

The processing setting is also valid for TG-recording, but only the super-resolution application rate is ignored and fixed to 100%.

If the mosaic remains after adjustment, the created video will be in the same state.

Recording in TG-mode can not be performed under the following conditions.

- Capturing
- During VR video playback
- During still image display

In the current version, the watermark (message, IP address, MAC address) is displayed.

It will be a hindrance to viewing, but please understand that it is to prevent distribution and sales of modified videos.

Since TG-mode is in testing phase, there may be various problems.

Announcements etc. are done with Twitter account @Javski2.

waifu2x new!

Blur is noticeable due to insufficient resolution of images generated by TecoGAN.

This problem can be alleviated by re-converting the high-resolution converted image with waifu2x.

By doubling the high-resolution converted image of each frame vertically and horizontally, the size is quadrupled.

Pay attention to the free space on the disk drive as working data may exceed 1GB per minute.

The procedure to use is as follows.

1) Install Microsoft Visual C++ 2015 Redistributable Package Update3. *Only if not installed

<https://www.microsoft.com/en-US/download/details.aspx?id=53587>

2) Download waifu2x-caffe.zip and waifu2x-caffe-Difference_From_ver1.1.9.zip.

<https://github.com/lltcggie/waifu2x-caffe/releases>

3) Unpack waifu2x-caffe.zip under 'JavPlayer/TG'. *A folder(TG/waifu2x-caffe) is added.

4) Unpack the zip of difference and copy the contents over to the waifu2x-caffe folder.

5) Play the video on JavPlayer and change the recording mode to 'TG-*+W'.

6) Start recording.

The options of waifu2x can be changed from EnvironmentSettings-ADVANCED-waifu2x.

If you can use CUDA, be sure to set processor to gpu. Processing time can be greatly reduced.

Check other items related to image quality and processing speed.

Please refer to waifu2x-caffe/README.txt for details.

The CUI version ([JavPlayer/TG/waifu2x-caffe/waifu2x-caffe-cui.exe](#)) is executed from JavPlayer.

Using the GUI version ([JavPlayer/TG/waifu2x-caffe/waifu2x-caffe.exe](#)) will deepen your understanding of each option.

TecoGAN(X4) **new!**

In case of processing a mosaic, super-resolution processing is applied to a part of the screen, but it is also possible to improve image quality by enlarging the entire screen by a factor of four.

This is the original use of TecoGAN.

Please note that the conditions for use are very strict.

3GB memory (VRAM) is required to process 320 * 240 pixel video.

8GB memory (VRAM) is required to process 640 * 360 pixel video.

Generally, the main memory is larger than VRAM, so if you can't run it on the GPU version, try using the CPU version.

If you want to create a long movie, at least 2GB of free space on the disk drive is needed.

Check in advance the drive where the working folder (default is 'JavPlayer / TG').

Since it is processed by dividing every minute (1800 frames), it is almost the same regardless of the length of the video.

It's easy to use, just load a video and change the recording mode to TG-X4[+W] and start recording.

'+W' means 'use waifu2x' like other TG recordings, but TecoGAN is sufficient for super-resolution, so only noise removal is performed.

Since the fine pattern will disappear due to noise removal, please choose the one that fits the video.

As with other TG modes, if you record without specifying a range, only 5 seconds will be recorded.

It may take more than an hour to create a 5 second movie depending on the environment you are running on and the video you are using.

It can be interrupted and resumed , but The completed process cannot be redone.

Since it is saved every time the processing for each section (1 minute) is completed, a maximum of 1 minute rewind when resuming.

The recording speed (Slow,Fast) setting is invalid, and image extraction & encoding is performed by ffmpeg.

If you do not specify the width of the video to be created, the converted result that has been quadrupled will be used as it is.

In other words, if you use a full HD video as the source, it will be 7680 * 4320 pixels.

JavPlayer cannot create a video with a width of more than 4000 pixels, so an appropriate value for Width must be set.

DeepCreamPy

Remove the mosaic by an external program called DeepCreamPy.

DeepCreamPy is a color illustration complement tool under development by deeppomf.

<https://github.com/deeppomf/DeepCreamPy>

https://github.com/deeppomf/DeepCreamPy/blob/master/docs/INSTALLATION_BINARY.md

*It is only for 64bit windows

I do not recommend it at this point because you can not get good results.

Decensoring process is done by DeepCreamPy, JavPlayer just prepares and displays the image.

The procedure to use is as follows.

1) Install Visual C++ Redistributable for Visual Studio 2015 Update 3 if necessary.

2) Download the windows binary.

<https://github.com/deeppomf/DeepCreamPy/releases/tag/v1.3.0-beta> *old version

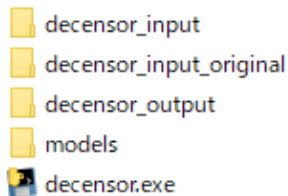
<https://github.com/deeppomf/DeepCreamPy/releases/tag/v2.0.0-beta> *new version

3) Unzip and copy decensor.exe and models folder into "JavPlayer/DCP/".

4) Play the video with JavPlayer and press the desensoring button at the top of the screen.

I have confirmed that the new version can be used, but I have not compared it with the old version.

After installation, DCP folder will look like below.



When the button is focused, the target area for decensoring will be filled with green.

If it is not covered enough, increase the area parameter in processing settings and then execute.

It takes more than 10 seconds to complete after pressing the button.

After completion, please try to change the application rate by vertical swipe.

Cancel the mosaic reduction process if you wish to compare with the original condition.

When the screen is redrawn by resuming or seeking, the display is ended.