

# **USER MANUAL V2.0**



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1.1. Time

1.2. Output data resolution in pixel

1.3. Total and free disk space

1.4. Frame per second. This also means your current video recording frame rate.

1.5. Thermal State as NOMINAL, FAIR, SERIOUS, CRITICAL

#### 2. FLASH

2.1. Auto

<u>2.2. Off</u>

<u>2.3. On</u>

#### 3. TORCH

2.1. Auto

<u>2.2. Off</u>

<u>2.3. On</u>

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# 1. STATUS BAR



Figure 1.1

Luwian comes with a status bar that contains

- 1.1. Time
- 1.2. Output data resolution in pixel
- 1.3. Total and free disk space
- 1.4. Frame per second. This also means your current video recording frame rate.
- 1.5. Thermal State as NOMINAL, FAIR, SERIOUS, CRITICAL
- 2. FLASH



Flash button located top left corner of your screen with three modes

2.1. Auto

2.2. Off

2.3. On

3. TORCH



The torch button is located top right corner of your screen with three modes

- 2.1. Auto
- 2.2. Off
- 2.3. On

# 4. CAMERA STATUS BAR

# F:1/6 ET0:2.25 E8:0.00 IS0:574 W8:5971

Figure 4.1

Luwian comes with a camera status bar that contains five pieces of information

4.1 F:1/6 indicate your camera's current F-Number(F-Stop) value. Even if you are adjusting exposure Luwian will automatically calculate the current F-Number value.

ETO : 2.25 shows Exposure Timer Offset

EB: 0.00 means Exposure Bias

ISO : 574 shows current ISO value

WB : 5971 indicates current White Balance value

# 5. INFORMATION BAR

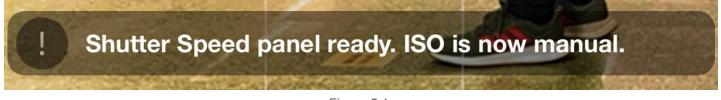


Figure 5.1

The Luwian information bar shows small information when you touch a button or select a function. You can turn off this bar at "19.10. Menu/Info Button"

You can turn it on or off from the Menu panel

# 6. ZOOM AND FOCUS PANEL



Figure 6.1

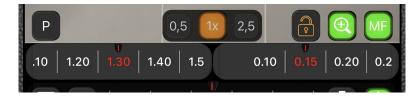


Figure 6.2

# 6.1 Manual Camera Mode

When Zoom or Focus button is selected adjust rulers will appear. Focus and zoom can be adjusted manually. When the lock button is pressed Luwian locks the camera to the current focus value and disables the focus adjust ruler. In "Manual Camera Mode" the zoom adjust ruler does not switch between virtual cameras(0.5,1x,2.5x), only adjusts the currently selected camera zoom value. If you want to virtually switch between cameras automatically please turn Auto Camera Mode on at "19.4. Menu / AUTO Button" Plus in Luwian, you can keep zooming from value 1 to 100 but keep in mind after your camera reaches the optic zoom level rest will be software zoom and your image will get pixelated as you keep zooming.

# 6.2. Auto Camera Mode

In auto camera mode only the zoom button and ruler functions are active and while you keep zooming Luwian will automatically switch between virtual cameras (0.5,1x,2.5x)

# 7. EXPOSURE



Figure 7.1.

In Luwian Exposures are a semi-manual shutter speed and ISO adjustment. When you adjust the exposure shutter speed and ISO values will be automatically adjusted for the best outcome.

# 8. SHUTTER SPEED



Figure 8.1

Shutter speed can be adjusted between values 0-1 and you can observe changes on <u>"4. Camera Status Bar"</u> When the shutter speed is selected ISO also will be manual. Shutter speed control is useful when you want to higher quality image, ISO control, and long exposure at night or low light environment.

# 9. ISO PANEL



ISO panel helps to adjust the camera's ISO value. When activated <u>"8. Shutter Speed"</u> will be activated as well. If <u>"7. Exposure"</u> is selected ISO and <u>"8. Shutter Speed"</u> will be adjusted automatically.

# 10. WHITE BALANCE



The white balance panel contains Auto, Preset and custom adjust features.

# 10.1. Auto

Auto white balance mode is default selected when the camera is opened and adjusts the white balance to the current environment.

### 10.2. Presets

- 10.2.1. Sunny
- 10.2.2. Cloudy
- 10.2.3. Tungsten
- 10.2.4. Shade
- 10.2.5. Flash



Figure 10.2.

### 10.3. Custom

Custom white balance overrides other previously selected white balance values. When activated tint value adjusts ruler will be activated.

# 11. RULER





In Luwian rulers are the main tools to adjust a variety of settings like zoom, exposure, white balance, ISO, and shutter speed.

# 12. CAMERA SWITCH / ZOOM IN AUTO MODE



Figure 12.1.

### 12.1. Manual Mode

In manual mode, zoom buttons function as switch buttons between Wide Angel Camera, Ultra Wide Angle Camera, and Tele Camera. Zoom ruler and pinch zoom only affect the currently selected camera and do not automatically switch between virtual cameras.

### 12.2. Auto Mode

In auto mode, zoom buttons function as zoom preset buttons and automatically switch between virtual cameras while zooming in or out.

# 13. PROGRAM



Figure 13.1.

The program, or in some cases preset, is a savable function that stores current exposure, focus, camera, and zoom value for later use. (Figure 13.2.)



Figure 13.2.

# 14. FRONT BACK CAMERA SWITCH



Switches between the front and back camera.

# 15. SHUTTER BUTTON



Figure 15.1

The shutter button like all other cameras starts the photo-taking and saving process and in other modes functions as the record button, or stop button.

# 16. TIMER AND CONTINUOUS SHOOTING COUNTER

Luwian has two types of timer countdown shutters single shot and continuous shot.



# 16.1. Single Shot Timer Countdown

Trigger the shutter function after the countdown hit zero and stops. Can be set from 1-second to 60-second intervals.



# 16.2. Continuous Shot Timer Countdown

Continuous shooting mode is a very useful feature for taking selfies to catch lightning. Can be set from 1-second to 60-second intervals.

# 17. FILMS AND FILTERS



Figure 17.1.

When film and filters are selected it opens a detailed functions panel divided into three categories; Films, Filters & FX, and Cinetones. With Luwian V2.0 films and filters can be recorded up to 240 Fps in video recording.



Figure 17.2

### 17.1. Films

Luwian Films are carefully selected and crafted from their original chemical features.

### 17.2. Filters & FX

Luwian comes with more than 50 different Filters and FX

### 17.3. Cinetones

Cinetone is a tool that turns your camera into a selected movie's color ambient. Can be used for photo shooting and video recording.

# 18. CAMERA MODE



Luwian comes with 13 advanced camera modes(10 for earlier models than iPhone 11).



Figure 18.0.1.

# 18.1. Photography Mode



Figure 18.1.

Manual camera mode allows you to have full control over iPhone camera hardware like adjusting <u>Shutter Speed</u>, <u>ISO</u>, <u>White Balance</u>, semi-manual <u>Exposure</u> control, <u>Zoom, and Manual Focus</u>. Depending on your device Luwian supports JPEG, HEIF, TIFF, RAW, JPG+RAW, and Apple ProRAW formats.

Additionally, you can use <u>Films & Filters</u> to shoot retro style in an authentic color range. <u>Self-timer</u> is also available with continuous shooting mode you can set your tripod and shoot lightning or ongoing events at up to 60-second intervals.



# 18.2. Photography ND Mode

Figure 18.2. Figure 18.2.1.

In photography, ND or Neutral-density filters reduce the intensity of wavelengths or light in Luwian we do that with an algorithm and a developed version of image stacking.

There are two ND adjustment rulers the upper one controls the number of frames to stack in a one-second frame rate loop and the second ruler controls the actual camera frame rate from 1 to 30 per second. Additionally, the shutter speed can be adjusted up to a 1-second delay to get different results.

After adjustments are done and pressed shutter button a sub-menu appears and gives you four options;

BULB and 5,15,30 second shooting loop. When BULB is selected Luwian expects you to press the shutter button when is convenient. When 5,15,30 second timer is selected Luwian automatically triggers the shutter button.

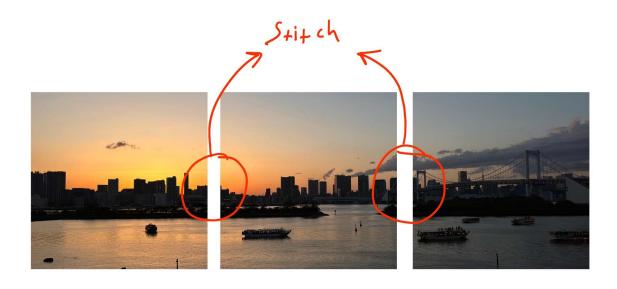


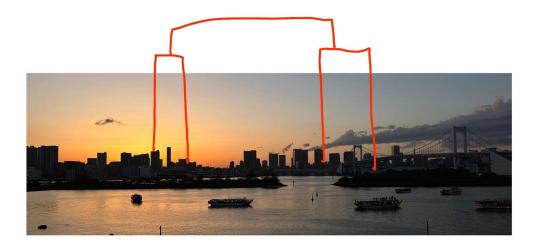
# 18.3. Panoramic Photography



Panoramic mode is different from the iOS default camera app. Luwian uses three captured image that is aligned to stitch and create a high-quality and high mega-pixel panorama image. It also crops in three square pieces that can be instantly shared on social media platforms like Instagram.

The key is capturing panorama with Luwian is that you have to put objects/buildings/trees/persons or any object that contains in each capture stitching point like a loop. And machine learning algorithm finds the connection points and creates a single large panoramic image.





18.4. HDRi Photography



Figure 18.4. Figure 18.4.1.

HDRi means High Dynamic Range Imaging or you may hear it as Multi-exposure hdr capture. HDRi images are a combination of 3 or 4 multi-exposure images that combine into a single image with equally distributed light and shadow that give clear and visible details in low-light environments or high-exposure areas.

Luwian has two different HDRi capture modes one uses exposure adjustment to capture multi-exposure images and the other one uses full manual shutter speed and iso adjustment to capture HDRi images. You can switch between auto and manual modes using <u>19.7. HDRi Auto/Manual Mode Switch</u>

### 18.5. Live Photo Mode



Figure 18.5.

Actually, there is nothing special about live photo capture in Luwian, same as the default camera app does. :)

# 18.6. Video Recording Mode



Figure 18.6.

Luwian gives you easy-to-use and advanced video recording options like setting frame rates from 1 to 240, recording with film and filters, and supporting up to 240 frames per second.

- To set the frame rate select the frame rate button (usually says 30F) and change it as you desire.
- Activate any films or filters using the film roll selection button.
- Select and use HDR recording mode instantly when your device supports.
- Also you can set all video quality options available on your device using <u>19.8.</u> <u>Video Quality Selection</u> in Main Menu.

All recordings are automatically saved to the iPhone gallery and recovery mode is always active if anything happens during your recording you can restore your recording using 20.4. File Recovery in Luwian Librarry. But keep in mind that if the file is corrupted recovery mode can not be able to restore your file.

# 18.7. Video ND Mode



Figure 18.7.

ND or Neutral-density filters reduce the intensity of wavelengths or light in Luwian we do that with an algorithm and a developed version of image stacking.

There are two ND adjustment rulers the upper one controls the number of frames to stack in a one-second frame rate loop and the second ruler controls the actual camera frame rate from 1 to 30 per second. Additionally, the shutter speed can be adjusted up to a 1-second delay to get different results.

### 18.8. Slow Motion Video Mode



Figure 18.8.

Luwian slow motion video mode allows you to set up and control both frame rate and capture quality at the same time. While recording on the screen you can monitor the actual time passed and the slow-motion time at the same time.

Naturally, slow-motion videos actually saved in "High Frame Rate" format and so you can play these types of videos with a player support HFR videos in slow-motion speed. Luckily Luwian comes with an option that allows you to convert HFR videos into slow-motion intact video format by using <u>20.3. Media Details in media library</u>.

### 18.9.Timelapse Mode



Figure 18.9.

Luwian timelapse video recording gives you the ability to control timelapse speed from 2 seconds up to 155 seconds. With this range, you can create incredible timelapse videos.

# 18.10. Microphone Mode



Figure 18.10.

With microphone mode, Luwian turns your iPhone into an audio recording device with the ability to control and select three different microphones that are available with iPhone devices.

Plus you can take pictures and record one minute of environment sound in it using the white microphone icon.

When recording is complete you can revisit, export, and play your recordings using <u>20.5. Saved Audio Files</u> menu in Library.



# 18.11. Depth Photography Mode (aka portrait)

Figure 18.11.

Depth or Portrait mode in Luwian is a combination of machine learning algorithms that gives you the ability to beyond simple portrait shots.

You can use a series of advanced filters like blur, color, comic, pixellate, and goes on.

You can also save both filtered and raw versions of portrait shots that you can edit later.

In addition to that with Luwian, you can save Semantic Segmentation and Marre data. Please see <u>19.15.3</u>. Depth File Saving Options in Settings.

# 18.12. Depth Video Mode



Figure 18.12.

All features described in the previous section <u>18.11</u>. <u>Depth Photography Mode (aka portrait)</u> also available for video mode as well. You can record videos with advanced depth portrait effects.

# 18.13. Multi-Camera Mode

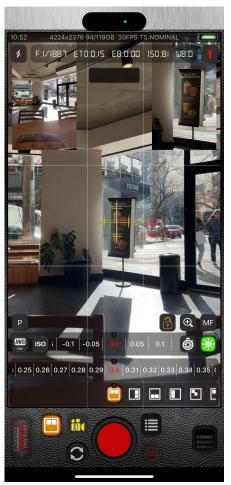


Figure 18.13.

Luwian has the most advanced multi-camera features.

- You can record and save three cameras at the same time and save all inputs separately and plus combine one. So when you record with multiple cameras you will get four output files three for each camera output and one combined version.
- If you have the pro version of the iPhone device you can change one camera from the front to the tele camera using <u>19.15.8</u>. <u>Multi-Camera Settings</u> and you can turn on and off the camera output you want to save or not.

# 19. MENU



Figure 19.0.

Luwian Menu is quick and easy access to the most necessary setups and settings for your daily photography needs. In this section, I will explain each one of them.

# 19.1. View Grid



Figure 19.1.

You can change your grid style using this menu. Available options are Standard grid, detailed grid, target style grid, Golden ratio, and no grid.

# 19.2. Camera Hood (camera case)



Figure 19.2.

Camera hood option designed to give you a sense of SLR / DSLT camera UI feel. Since there is no technical necessity, most of our users report that using a DSLR-like camera hood gives them creativity freedom, and more fun.

### 19.3. Photo File Format



Figure 19.3.

In this menu, you can quickly access file format saving options. For more detailed settings please see <u>19.15.2. Photo File Format Settings</u>.

# 19.4. Manual, Auto Mode Switch Button



Figure 19.4.

Manual and Auto mode switch. For more information please refer to <u>12.1. Manual</u> <u>Mode</u> and <u>12.2. Auto Mode</u>

### **19.5. Timer Mode Selection**



Figure 19.5.

Timer modes in Luwian are simple but most effective in a variety of situations. One is that you can set up a self-countdown from 1 second to 60 seconds.

Continuous Shooting Mode is an advanced feature that gives you flexibility and powerful advantages in a variety of photography needs.

- With continuous shooting mode, you can set count down to one-second place your phone on a tripod, and shoot non-stop photos of lightning or passing objects or meteor showers or star trails.
- You do not want to go that advanced it's okay :) you can shoot continuous selfies till you are satisfied.

# **19.6. Microphone Selection**



Figure 19.6.

In microphone settings, you can select mono, front, or back recording options.

### 19.7. HDRi Auto/Manual Mode Switch



HDRi mode switch is just switching between modes and when you choose one main control will also change. For more information please refer to <u>18.4. HDRi Photography</u> section.

# 19.8. Video Quality Selection



Figure 19.8.

In Luwian, you can set the highest and lowest video capture capabilities of your device. Setting the highest possible video recording option is important but In some situations, you may want to set video recording quality low and gain more disk space advantages.

# **19.9. Screen Brightness Controler**



Figure 19.9.

Screen brightness controls useful features when you want to place your device shooting for a longer period of time like timelapses or continuous shooting mode. When you set brightness lowes Luwian still keeps %1 percent up not completely dark so you can set to normal later.

# 19.10. DOF Adapter ON/OFF Switch



Figure 19.10.

Switch to turn DOF mode on and off. DOF adapters are external optical device that gives you the ability to use DLRS camera lenses on your iPhone. But when you mount one the camera input/output turns upside down so with DOF adapter feature Luwian automatically normalizes camera outputs.

# 19.11. Toch Strength



Figure 19.11.

Ruler to adjust device torch strength.

### 19.12. Multi-Camera Settings



Figure 19.12.

Multi-camera settings button just forward UI to advanced settings for more information please see <u>19.15.8. Multi-Camera Settings</u>

# 19.13. Help Popup ON/OFF Switch



Figure 19.13.

Turns help notifications on and off.

# 19.14. Info Notification ON/OFF Switch



Figure 19.14.

Turns information notifications on and off.

# 19.15. Settings



Figure 19.15.0

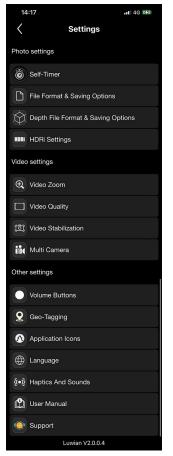


Figure 19.15.0.1

The settings section is a collection of advanced and detailed setups and options.

#### 19.15.1. Timer Settings

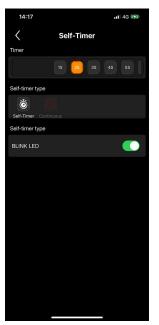


Figure 19.15.1.

In self-timer, you can set a timer countdown from 1 second to 60 seconds, switch between continuous shooting mode to single countdown timer mode, and turn the led blink on or off.

19.15.2. Photo File Format Settings

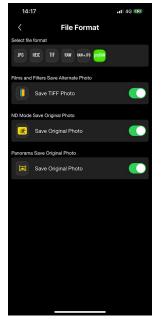


Figure 19.15.2.

File format saving section you can set file formats JPG, HEIC, TIF, RAW, RAW+JPG, and ProRaw formats.

When your device is supported you can switch between 48mp and 12mp image output.

For Film and filters shooting mode you can set "Save Original Version" to keep both the filtered version of your image and the raw version.

In this menu, you can also set it to save the original version when you shooting in ND mode.

Saving unstitched original versions of panorama images is possible if you turn the switch on.

19.15.3. Depth File Saving Options

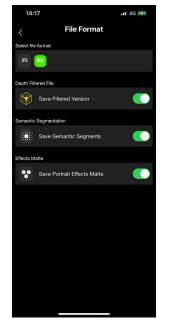


Figure 19.15.3.

File formats available in this mode are JPG and HEIF. You can also set it to save a filtered version of the depth image along with an unedited raw version. If you want to save semantic segmentations and matte effects separately please turn these switches on.

19.15.4. HDRi Settings

14:17		•11 4G 🚧
<	HDR Settings	
Select HDRi format		
Auto Manual		
HDRi Bracketed Un	processed Files	
HDRI Save Ur	nprocessed Files	
HDRi Bracketed Image Quality		
70%   75%	┃ 80%   85%   90%	95%   100%

Figure 19.15.4.

In HDRi settings selecting HDRi shooting format from manual to auto is possible. If you want you can set the Save Unprocessed Files switch on to keep the original images.

HDRi image quality by default is %85 to stay in safe memory management you can set it to maximum or minimum but keep in mind if your device memory is low Luwian may end up crashing.

19.15.5. Zoom Speed



Figure 19.15.5.

With the zoom speed ruler zoom speed can be adjusted for desired behavior when Luwian is in Auto mode.

19.15.6. Video Quality



Figure 19.15.6.

Video quality settings are very easy, HD4K, HD1080, High, HD720, iF720, and iF540. Remember depending on your device setting higher video quality may affect frame per second and the space final video take place on your disk.

Additionally, in the video quality section, you can set your codec type like h264, Hevc, Hevc with Alpha and Jpeg.



Figure 19.15.7.

In the video stabilization menu, you can set auto, cinematic, cinematic extended, off, and standard. Remember some video recording modes like HDR or slow motion video stabilization will not work.

19.15.8. Multi-Camera Settings

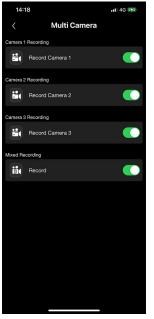


Figure 19.15.8.

Multi-camera settings contain the following functions;

- Camera 1 Recording Switch
- Camera 2 Recording Switch
- Camera 3 Recording Switch
- Front or Tele camera switch
- Mixed recording switch

#### 19.15.9. Volume Buttons Settings

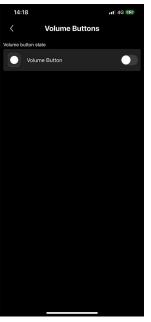


Figure 19.15.9.

Turn on and off volume buttons as a shutter button.

#### 19.15.10. Geo Tagging



Tags your current location on your media metadata.

### **19.15.11.** Theme and App Icon Selection

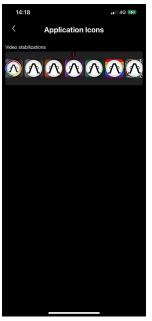


Figure 19.15.11.

Changes app icon and main UI color.

### 19.15.12. Language Selection



Figure 19.15.12.

Changes the UI language. Luwian currently supports English, Turkish, German, Spanish, French, Italian, Japanese, Korean, Portuguese, and Arabic.

19.15.13. Haptics and Sounds



Figure 19.15.13.

Turns haptics and sound on or off.

# 20. LIBRARY



Figure 20.0.

Luwian comes with its own enchanted library browser. Media file browser, audio file browser, and edit features.

## 20.1. Media Files Browser



Figure 20.1.

# 20.2. Album Selection

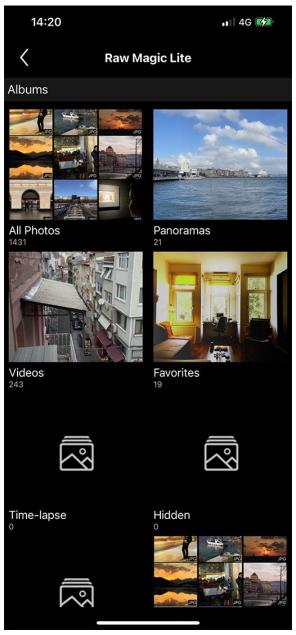


Figure 20.2.

## 20.3. Media Details

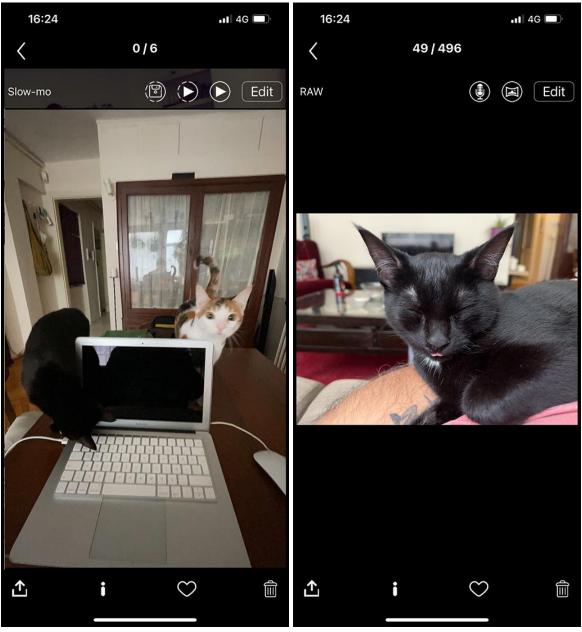


Figure 20.3.0 Figure 20.3.1

In Media detail and preview comes with the following features depending on the file format these features may be disabled or completely hidden.

- Record audio on the image
- Crop panorama
- Edit with Luwian Magic Raw Lite, post-processing editor.
- Share
- Information

- Mark as favorite
- Delete
- Play normal video
- Play slow-motion video
- Export slow-motion video
- 20.4. File Recovery

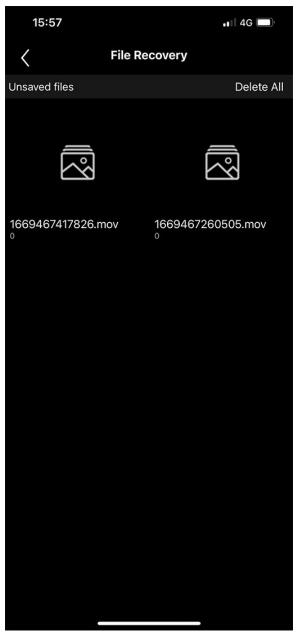


Figure 20.4.

File recovery is the special section where you can restore unsaved video files. But remember as explained in <u>18.6. Video Recording Mode</u> files you trying to save must not be corrupted.

### 20.5. Saved Audio Files



Figure 20.5.

You can review, play or export saved audio files from this section.

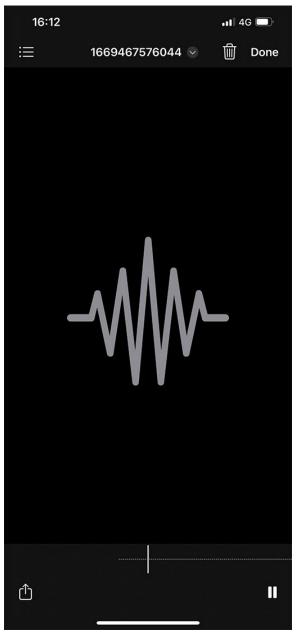


Figure 20.6.

# 21. RAW MAGIC LITE

Luwian Raw Magic Lite is a post-processing photography editor software that comes free with Luwian. With this software, you can edit adjust colors and lights, crop your images, add filters, films, or cinematic effects and finally adjust your depth of field when media has depth data enabled.

## 21.1. Crop

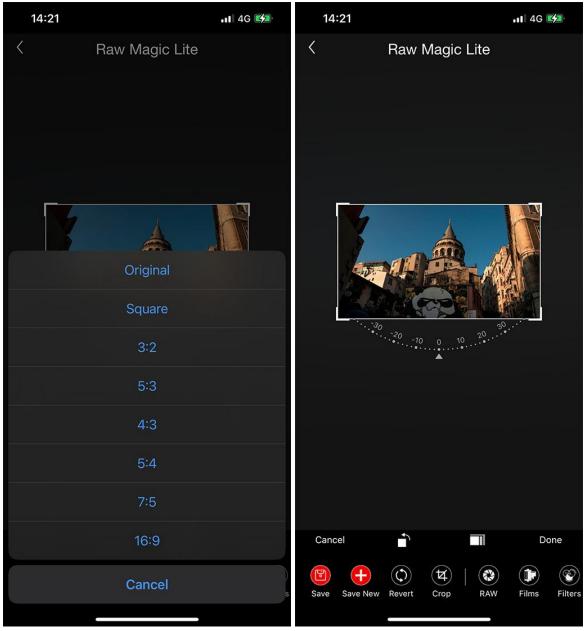


Figure 21.1.0 Figure 21.1.1

## 21.2. Edit

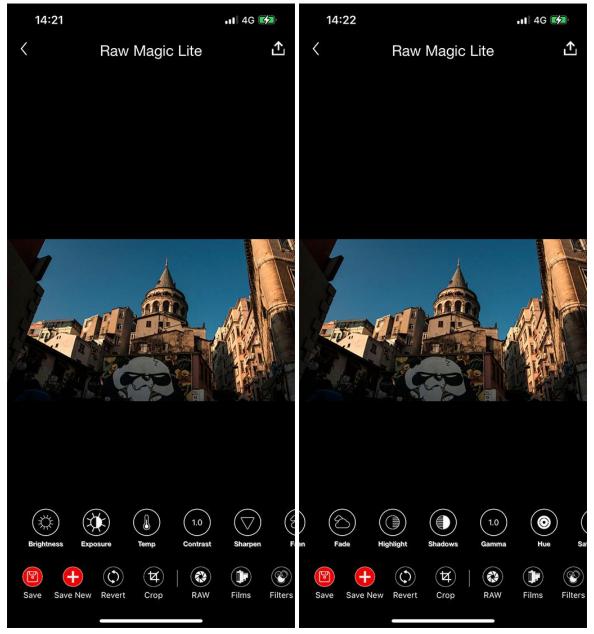


Figure 21.2.0 Figure 21.2.1

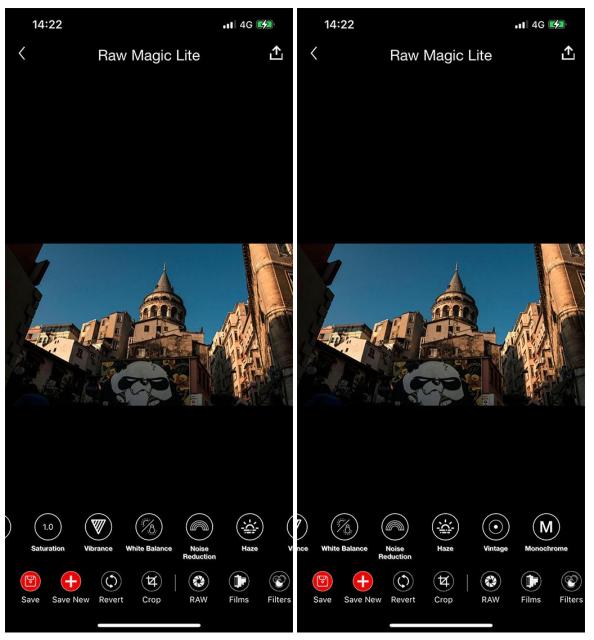


Figure 21.2.2 Figure 21.2.3

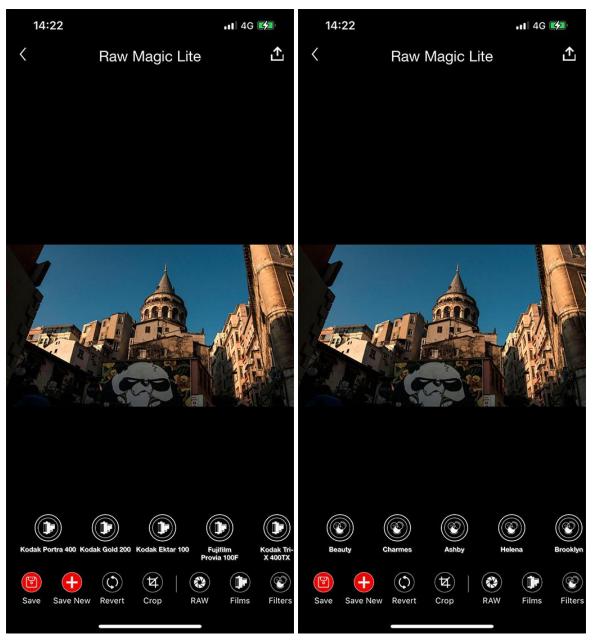


Figure 21.2.4 Figure 21.2.5



Figure 21.2.6