



USER MANUAL



4K AI Noise-Reduction
Conference Webcam

FF931

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1. DISCLAIMER AND SAFETY GUIDELINES

1.1 Disclaimer

This product is a premium 4K resolution AI denoising webcam for conferences, which will bring you pleasant experience in stable and high-quality video transfer and production when the connection is working properly and the components are not damaged. Please pay special attention to the cautions and warnings in this User Manual. You can visit our homepage <http://spedal.cc> to get relevant files of this product, including this User Manual, the Webcam Expert software (Mac and Windows versions) and its manual, or learn more about other products. Shenzhen Xinzhuang Gude Technology Co. Ltd. (Spedal) reserves the right to update this User Manual.

The information in this document affects your safety, legal rights and responsibilities. Read this entire document carefully to ensure proper configuration before use. Failure to follow the instructions and warnings in this document may result in product damage or other possible injury or loss. You must strictly follow Spedal's guidelines to install and use the product, and never use non-standard parts. Before assembling, setting up and using, be sure to carefully read all the instructions and warnings in this document. This product is not a toy. Please do not allow children to touch this product or its parts and wires. Please be careful when operating in scenes where children are present.

By using this product, you hereby signify that you have read this disclaimer carefully and that you understand and agree to abide by the terms and conditions herein. The user promises to be responsible for his actions and all consequences arising therefrom. The user promises to use this product only for legitimate purposes, and agrees to all the terms and contents of this document and any related policies or guidelines that Spedal may formulate. You understand and agree that in the absence of videos or photos, Spedal may not be able to analyze the cause of your product damage or accident, and cannot provide you with after-sales service such as warranty.

Spedal is not responsible for all losses caused by the user's failure to use the product in accordance with this User Manual.

In compliance with laws and regulations, Spedal reserves the right of final interpretation of this document and all related documents of this product. If the manual is updated, revised or terminated, we will not notify you separately. Please visit the official website of Spedal for the latest product information. Spedal is a trademark of Shenzhen Xinzhuang Goodo Technology Co. Ltd. and its affiliates. The product names, brands, etc. appearing in this article are all trademarks or registered trademarks of their respective companies.

1.2 Safety Guidelines

1.2.1 Warnings

- Do not install or operate the device with wet hands to avoid accidents;
- Do not install the device in strong magnetic, high temperature places;
- Do not install the device in humid, flammable, explosive gas / liquid places;
- Do not use sharp objects to poke the device and any accessories;
- Do not disassemble, repair or modify the device and its accessories by yourself;
- Please place the device out of reach of children during installation and use;



Note: Please strictly abide by the above warnings. Our company is not responsible for any product failure or personal injury caused by violation of the above warnings.

1.2.2 Cautions

- Do not touch the lens directly with your hands, so as not to leave dirt or prints on it;
- Do not use rough cloth or paper to clean the lens, so as not to damage the lens;
- Do not use abrasive / corrosive solutions to clean the lens, so as not to damage the lens;
- When cleaning the lens, please use dedicated lens cleaning solution and cloth only;
- Do not use a power supply higher than the rated power to supply power to the device, otherwise the device will be damaged;
- Please make sure that the camera has been fixed on the screen or tripod before use to prevent the device from falling;
- Please avoid super bright light or dark environment when using, to ensure the normal performance of the camera dynamic range;
- When using, please make sure that there are no other obstructions in front of the infrared signal receiver of the webcam or the Infrared transmitter of the remote control.

2. INSTALLATION

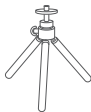
2.1 In the Box

Before using this product, please check whether the product package contains all of the following items. If anything is missing, please contact Spedal or your local agent.

- Webcam



- Tripod



- Remote control



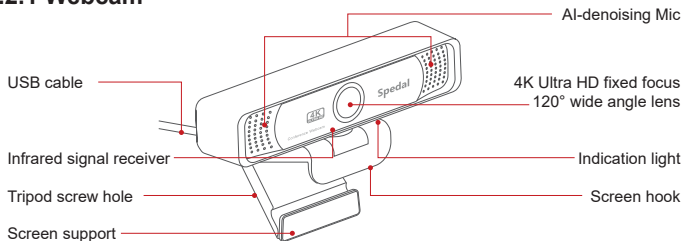
- Lens cloth, Quick Guide



Note: The camera USB cable is 1.6 meters long. If the length is not enough, please use a Type-A USB 2.0 HUB extension cable. If your computer only has a Type-C socket, please use a Type-C to Type-A conversion connector. Do not disassemble and replace USB cables of other lengths or replace cables of other sockets by yourself. Product damage caused by the user's disassembly and replacement of equipment accessories is not covered by the warranty.

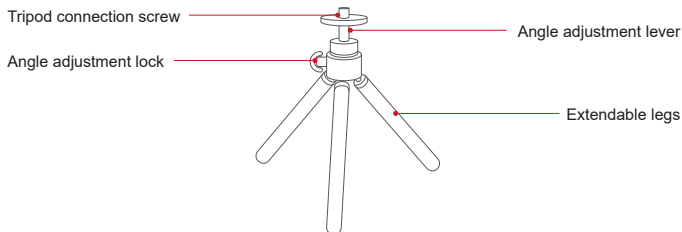
2.2 Product Diagram

2.2.1 Webcam

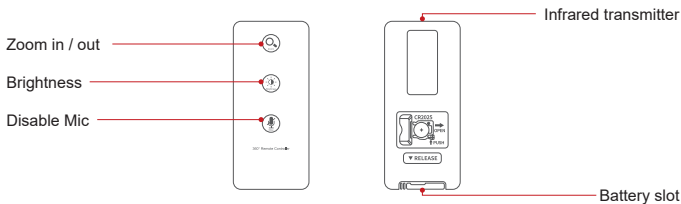


Note: When using the camera, please make sure that there is nothing in front of the infrared signal receiver to block the infrared signal of the remote control to ensure the function of the remote control.

2.2.2 Tripod

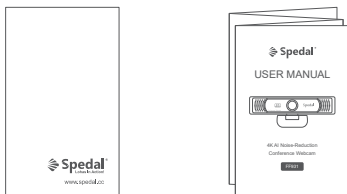


2.2.3 Remote control



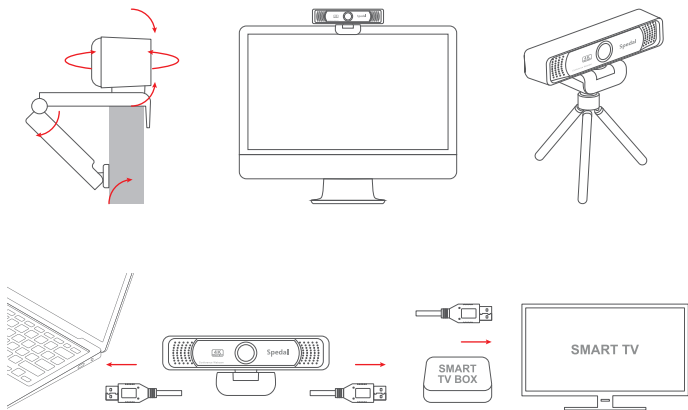
Note: Please make sure to direct the remote control towards the camera for button operation. When removing the battery slot of the remote control, press the left dial of the battery slot to the right, and then pull the battery slot out. The remote control uses CR2025 3V lithium coin cell battery for power supply. Please use a battery of this specification that meets the standard for power supply for this remote control.

2.2.4 Lens cloth, Quick Guide



2.3 Installation

The USB port of this product needs to be plugged into the USB port of the computer to connect the camera and the computer. The product itself can be hung on the computer screen or used with a tripod. as the picture shows:



Note: No matter what method you use to install the camera, please make sure that the camera is in a balanced state to prevent the camera from being unbalanced and falling during use.

3. CONNECTION

This product is a plug-and-play webcam, you don't need to set any settings to use this product theoretically. But if your computer has multiple audio and video input devices (including the computer's built-in camera and internal and external microphones), you may need to configure settings in your computer or software to ensure that this product is an input device when you use it for the first time. We strongly recommend that you, if your computer allows it, please select this product as the default device in the system settings or software settings to facilitate your daily use.

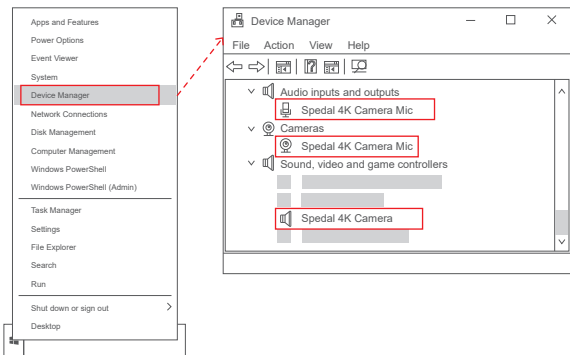
3.1 Windows System Settings

3.1.1 Installation


This Spedal 4K Camera is compatible with most Windows operating systems, including Windows XP SP2, Windows 7, Windows 8, Windows 10, etc. After connecting the USB port of the camera to the computer, the camera is in a callable state without downloading additional drivers.

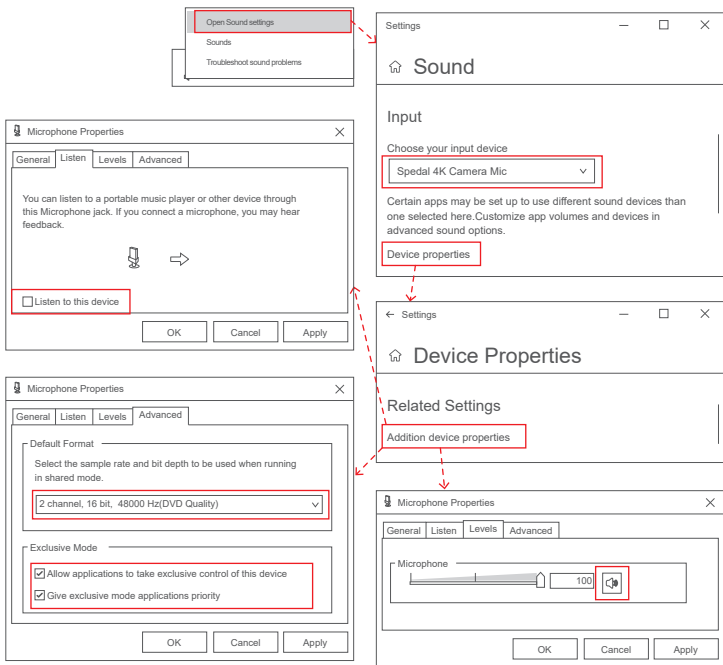
3.1.2 Check

1. Right-click "Start" and select "Device Manager";
2. Pull down "Sound, Video and Game Controller", if it displays "Spedal 4K Camera Mic", the connection is successful;
3. Pull down "Audio Input and Output", if it shows "Spedal 4K Camera Mic", then connect to 4. Pull down "Camera", if it shows "Spedal 4K Camera", then the connection is successful.



3.1.3 Audio input (microphone) settings

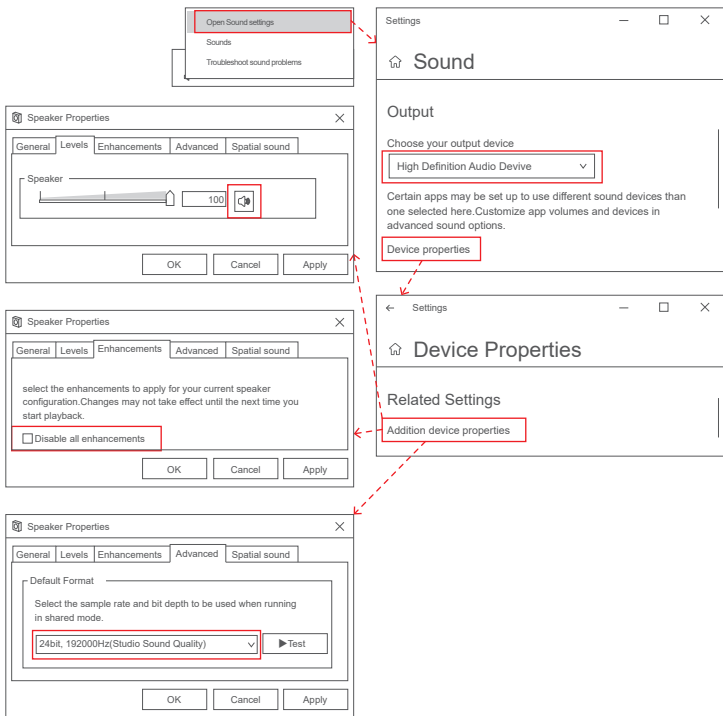
1. Right-click the sound icon "  " on the right side of the taskbar, and select "Open Sound Settings";
2. In "Select Input Device" under "Input", select "Microphone (Spedal 4K Camera Mic)";
3. Click "Device Properties" under "Input", click "Other Device Properties" under "Related Settings";
4. In the pop-up "microphone properties" setting panel, click the "listening" option panel and confirm that "listen to this device" is not checked;
5. Click the "Level" option panel, adjust the volume to an appropriate value, and confirm that the "sound icon" is a non-mute icon;
6. Click the "Advanced" option panel, "Default Format" recommends selecting the above options of "CD Sound Quality", and "Exclusive Mode" confirm to check "Allow the application to control the device exclusively" and "Give exclusive mode application priority".





3.1.4 Audio output (loudspeaker) settings

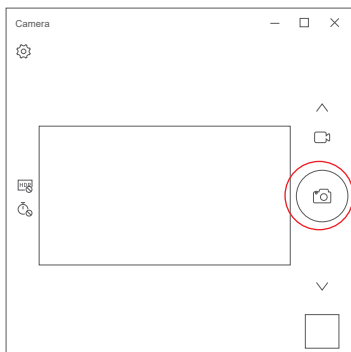
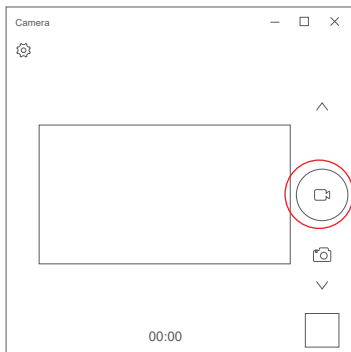
1. Right-click the sound icon "🔊" on the right side of the taskbar and select "Open Sound Settings";
2. Select "High Definition Audio Device" speakers in "Select Output Device" under "Output";
3. Click "Device Properties" under "Output", click "Other Device Properties" under "Related Settings";
4. In the pop-up "Speaker Properties" setting panel, click the "Level" option panel, adjust the volume to an appropriate value, and confirm that it is "sound icon" not "mute icon";

5. Click the "Enhanced" option panel, and make sure to check "Disable all sound effects";
6. Click the "Advanced" option panel, "Default Format" is recommended not to select a sound quality similar to that of the microphone. For example, the preferred sound quality is above 24 bits and higher than 192000Hz.



3.1.5 Camera video recording

1. Click the "Start" menu with the mouse, and click the "Camera" program;
2. In the video mode, click the "  " Video icon to start recording the video;
3. In the photo mode, click the "  " Photograph icon to take the current picture.



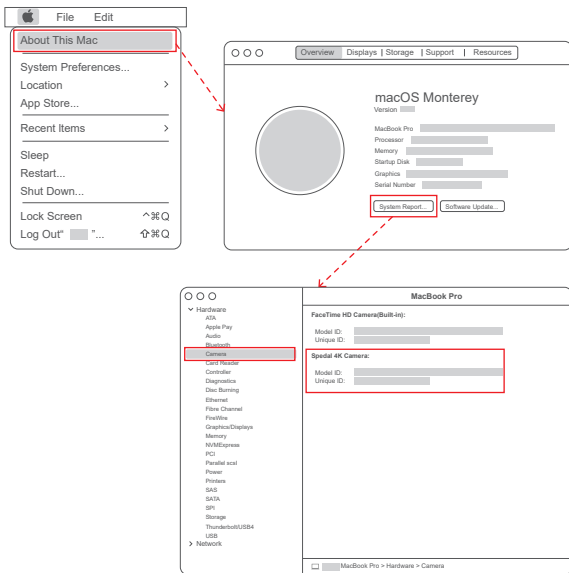
3.2 Mac OS X System Settings

3.2.1 Installation

When you connect the camera to the computer, the camera will be installed automatically. No need to download and install any drivers in advance.

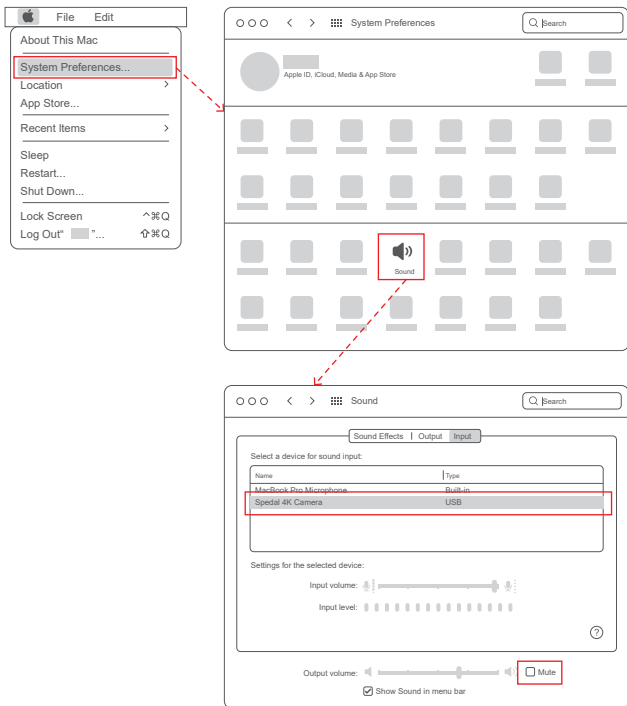
3.2.2 Check

1. Mouse click the apple "menu", click "About this machine", the "System Report" pops up;
2. Pull down "Hardware-Camera", if it shows "Spedal 4K Camera", the installation is successful.



3.2.3 Audio input (microphone), output (loudspeaker) settings

1. On the "System Preferences" page, click the "(Sound)" icon to enter the "Sound" setting page;
2. In "Select a sound input device" under "Input", select "Spedal 4K Camera" and adjust the input volume to a suitable level;
3. Select the appropriate output device under "Output", adjust the output volume to a suitable level, and make sure that "Mute" is not checked.



4. SOFTWARE

Spedal has specially developed collaborative software for our camera products. You can visit our official website <http://spedal.cc> to download the full-featured version of the software (Mac and Windows versions) and its manual on the Support interface.

1.Scene and camera

You can add multiple scenes or multiple cameras to record real-time images from multiple angles and integrate them into the same image. You can also make individual adjustments to the scene or any screen of the camera through other functions of this software.

2.Filter

You can choose different filters to add to the recorded picture, so as to achieve a better picture rendering effect. Since the picture rendering effect is affected by ambient light or other environmental factors, it is recommended that you select and use the appropriate filter, and then further modify the picture through the basic settings in the function module to achieve the best performance effect.

3.Function

The brightness, contrast, gamma, hue shift, transparency, and saturation of the screen can be adjusted to neutralize the lack of ambient light. You can also crop the screen left, right, up and down. When using multiple scenes or multiple cameras, the cropping function can make the multiple images more harmonious.

4.Mixer

The microphone volume of the camera can be adjusted.

5. Other functions

The camera screen can be flipped, rotated, photographed, and recorded through the icons at the bottom of the software interface. The software also supports the function of a virtual camera, which can be used as a video input for third-party software after the screen is modified in the software.

5. APPENDIX

5.1 Frequently Asked Questions

1. What should I do if the remote control is insensitive or unresponsive?

- Please make sure that the infrared signal receiver on your camera and the infrared signal transmitter on the remote control are not damaged;
- Please make sure that your remote control battery has sufficient power. If the battery is low, please replace it with a suitable battery in time;
- When using the remote control, make sure that the webcam connection is stable, and then press the remote control directly towards the webcam.

2. What should I do if there is a delay when using the camera to transmit 4K video?

4K video occupies a large capacity, and when the network condition is poor, the probability of delay is relatively high. When there is a delay, please switch the video resolution to another low-level resolution to ensure the smoothness of video transmission. After the network condition improves, switch back to 4K resolution.

3. What is the reason why the image quality cannot reach 4K when using the camera?

- Network broadband is congested and cannot support 4K resolution transmission;
- The USB port on the computer is 2.0, which does not support 4K transmission;
- The video communication application version does not support 4K resolution;
- The image quality of the video communication application is set to other resolution options.

4. Why is the Spedal Webcam Expert software I downloaded in the App store different from the introduction?

The software in App store is a concise version, which can only implement part of the functions. If you need to experience the full version of the software on the MacOS system, please visit <http://spedal.cc> and download the full functional version of the Mac version of the software in the software download section of support. You may need to enable apps from any source in the security and privacy settings of MacOS preferences to use the software normally.

5. Why is there water ripples or flickering in the images taken by my camera?

This situation is an accidental situation, because the flashing frequency of the camera does not match the frequency of the power grid (50 / 60 Hz) in the user's area. This product has been set up the corresponding flashing frequency in advance according to the country of sale. This situation mainly occurs when the user uses the product in other countries or regions, resulting in a discrepancy in the flashing frequency, or the flashing frequency in the user's area is different from the mainstream frequency in the country . If this kind of problem occurs, please take a photo of the silver label on the camera and contact us. We will determine the flicker frequency based on the information on the label and send the software to the user to flash the machine to solve this problem.

5.2 Specification

Resolution	3840*2160, 1920*1080, 1280*720, 640*480
Format	JPEG, YUY2
Lens	7-layer optical lens
Aperture	F/N2.0
Focus	Fixed focus
Field of view	120°
Mic sensitivity	35dB+
S/N ratio	SNR65d2
Denoise mode	Far-field AI denoising
USB connection	USB2.0 / USB3.0

5.3 Warranty

Thank you for choosing the Spedal 4K resolution AI denoising high-end conference webcam. This product can record ultra-high-definition 4K resolution video and images. The built-in microphone is equipped with unique AI noise reduction technology. It is a powerful tool for audio-visual production and video conferencing.

Customers enjoy a one-year warranty and after-sales service from the date of purchase. During this period, our company will actively respond to customers' questions or problems and provide maintenance services for product failures under normal use. Delivery fee of the product sent to and back from the factory for repair or replacement shall be paid by the product owner or the person asking for repair.

The company reserves the right to reject maintenance requirements caused by the following conditions, including but not limited to:

1. Failure to follow manual instructions and improper use causing device failure or damage;
2. Failure due to unauthorized disassembly, modification or maintenance of equipment;
3. Accidental damages caused by any natural disasters or other force majeure factors;
4. Warranty period of the device has expired;
5. Purchases from unreliable sources such as second-hand products.

Please strictly follow the instructions in this manual to use this product to avoid unnecessary losses. If you have any questions or problems while reading the product manual or using the product, please visit our official website or contact us by email: support@spedaltech.com



<http://spedal.cc>