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NEARITY AW-C45

NEARITY C45 2K Video Conference Webcam User Manual

Model: AW-C45

1. PRODUCT OVERVIEW

The NEARITY C45 is an all-in-one video conference system designed to provide high-quality audio and video for online meetings. It integrates a 2K camera, multiple noise-canceling microphones, and a high-fidelity speaker into a single device, offering a comprehensive solution for various meeting environments.



Image: The NEARITY C45 unit, showing its cylindrical design, camera lens, top controls, and fabric-covered speaker base. Included accessories, a remote control and a USB-C to USB-A cable, are also visible.

Key Features:

- **All-in-one Design:** Combines a 120° ultra-wide-angle camera, 4 AI noise-canceling microphones, and a premium high-fidelity loudspeaker.
- **High-Resolution Video:** Delivers 2K@30fps and 1080p@60fps images with a 5MP premium CMOS sensor.
- **Optimized Audio:** Features a full-duplex speaker for clear communication and an omnidirectional microphone array with compressed neural network technology for noise and echo cancellation.
- **AI-Powered Auto Framing:** Utilizes self-developed face recognition technology to precisely frame single and multiple participants, adjusting automatically.
- **5X Zoom Capacity:** Allows users to focus on essential details with remote control.
- **Plug-and-Play Setup:** Driver-free installation via a single USB cable.
- **Diverse Compatibility:** Works seamlessly with Windows, macOS, Linux, ChromeOS, and popular VC platforms like Zoom, Teams, Google Meet, Webex, etc.

All-in-one Conference Webcam

Powered by premium sensor, 4-microphone-array and premium speaker for immersive meetings.



Image: An exploded view diagram illustrating the key internal components of the NEARITY C45, including the premium CMOS sensor and lens assembly, the 4 noise-cancelling microphone array, and the premium Hi-Fi speaker.

2. SETUP GUIDE

2.1 What's in the Box

- 1x C45 Webcam Unit
- 1x USB cable with C-to-A adapter
- 1x Remote control
- 1x Power adapter (with regional plugs)
- 1x User manual (this document)

2.2 Connecting the Device

1. **Connect the USB Cable:** Insert the USB-C end of the provided cable into the C45 webcam unit. Connect the other end (USB-A or USB-C, using the adapter if necessary) to an available USB port on your computer (desktop or laptop).
2. **Connect Power Adapter (Optional):** For increased speaker volume and stable performance, connect the power adapter to the C45 unit and then to a power outlet. The device can operate solely on USB power, but the adapter is recommended for optimal audio output.
3. **Placement:** Place the C45 on a stable surface, such as a desk or conference table, ensuring the camera lens has a clear view of the participants. The unit also features a threaded tripod adapter on the bottom for alternative mounting options.

Strong Compatibility

Tested with mainstream video conferencing platforms such as Zoom, Teams, Google Meet, WebEx and more.



Zoom



Teams



Google Meet



Webex



Skype



Youtube



Twitch



Tiktok

Image: The NEARITY C45 webcam connected to a laptop via USB and to a power strip via its power adapter, demonstrating a typical setup for use with various video conferencing platforms.

2.3 Initial Setup and Compatibility

The NEARITY C45 is a driver-free, plug-and-play device. Once connected, your operating system (Windows, macOS, Linux, or ChromeOS) should automatically recognize it as a webcam, microphone, and speaker.

- **Operating Systems:** Compatible with Windows, macOS, Linux, and ChromeOS.
- **Video Conferencing Platforms:** Works seamlessly with popular applications such as Zoom, Microsoft Teams, Google Meet, Webex, Hangouts, GoToMeeting, and more.
- **Software Configuration:** For advanced settings and firmware updates, download and install the [NearSync application](#) from the official NEARITY website. This application allows customization of audio parameters, image brightness, and saturation.

3. OPERATING INSTRUCTIONS

3.1 Device Controls

The C45 can be controlled using the physical buttons on top of the unit or the included remote control.

- **Top Buttons:** Provide quick access to essential functions such as volume control, microphone mute/unmute, and camera on/off.
- **Remote Control:** Offers comprehensive control over camera functions including zoom (5x optical zoom), pan/tilt (digital), AI auto-framing activation/deactivation, and audio settings.

3.2 Light Ring Status Indicators

The LED light ring at the top of the C45 indicates the device's real-time status:

- **Yellow:** Indicates the device has power.
- **White:** The device is on and connected, ready for use.
- **Purple:** The speaker (audio output from the device) is muted.
- **Red:** The microphone is muted.
- **Orange:** The camera video output is blacked out (privacy mode).

3.3 AI Auto-Framing and Zoom

The C45 features advanced AI capabilities to enhance your meeting experience:

- **AI Auto-Framing:** The camera automatically adjusts its frame to keep all participants in view. As more participants join or leave, the frame dynamically adjusts to ensure everyone is optimally positioned. This feature is exclusively supported under 1080P@30fps mode.
- **5X Zoom:** Use the remote control to zoom in or out, allowing you to highlight specific details or individuals during a presentation or discussion.

AI-Powered Auto-Framing

With auto-framing enabled, the camera dynamically zooms in on participants, ensuring clear visibility and perfect centering.



Kindly activate or deactivate the auto-framing function by pressing the button.
(A feature exclusively supported under the 1080P@30fps mode)

Image: A visual comparison demonstrating the AI-Powered Auto-Framing feature. The top image shows Auto-Framing ON, with participants centered. The bottom image shows Auto-Framing OFF, with a wider, less focused view, alongside the remote control used to activate/deactivate this function.

Zoom on Things That Matter

5x digital zoom capability ensures crystal-clear capture of important details



Image: A demonstration of the 5x digital zoom capability, showing how the camera can focus on a whiteboard with written notes from a distance, ensuring clear capture of important details during a meeting.

3.4 Noise Cancellation

The C45's 4-element omnidirectional microphone array, enhanced by compressed neural network technology, actively suppresses background noise and cancels echoes. This ensures clear voice pickup and distortionless sound, even in environments with high ambient noise.

Deliver Noise Cancellation for All

Empowered by compressed neural network
on consumer chipsets



Image: An illustrative diagram showing how the NEARITY C45's noise cancellation technology processes audio. It depicts sound waves before and after processing, highlighting the suppression of background noise and enhancement of voices for clearer communication.

4. MAINTENANCE

4.1 General Care

- Keep the device clean by wiping it with a soft, dry cloth.
- Avoid using harsh chemicals or abrasive cleaners.
- Ensure the camera lens is free from dust and smudges for optimal video quality.
- Store the device in a cool, dry place when not in use.

4.2 Firmware Updates

Regularly check for firmware updates using the NearSync application. Firmware updates can improve performance,

add new features, and resolve potential issues. Follow the instructions within the NearSync application for a safe and successful update process.



Image: A screenshot of the NearSync application interface, showing options for device information, video settings (brightness, contrast, hue), audio settings, and device update functionality, including selecting a local upgrade file.

5. TROUBLESHOOTING

Problem	Possible Cause	Solution
No video output / Camera not detected	Loose USB connection. Camera privacy mode activated. Incorrect camera selected in software.	Ensure USB cable is securely connected to both the C45 and your computer. Check the light ring for Orange status; press the camera button on the unit or remote to deactivate privacy mode. In your video conferencing software settings, select "NEARITY C45" as the video input device.
No audio output from speaker / Speaker not detected	Speaker muted. Incorrect speaker selected in software. Low volume setting.	Check the light ring for Purple status; press the speaker button on the unit or remote to unmute. In your video conferencing software settings, select "NEARITY C45" as the audio output device. Increase volume using the C45's controls or your computer's system volume.
Microphone not picking up sound / Microphone not detected	Microphone muted. Incorrect microphone selected in software.	Check the light ring for Red status; press the microphone button on the unit or remote to unmute. In your video conferencing software settings, select "NEARITY C45" as the audio input device.
AI Auto-Framing not working	Not in 1080P@30fps mode. Feature deactivated.	Ensure your video conferencing software is set to 1080P@30fps resolution. Activate auto-framing using the remote control.

6. SPECIFICATIONS

Feature	Detail
Brand	NEARITY
Model Number	AW-C45
Item Weight	2.38 pounds
Package Dimensions	13.7 x 5.9 x 5.5 inches
Country of Origin	China
Photo Sensor Technology	CMOS
Video Capture Resolution	2K (2560x1440) @ 30fps, 1080p (1920x1080) @ 60fps
Maximum Focal Length	2.26
Video Capture Format	MJPEG, YUV, H264
Supported Audio Format	AAC, PCM
Connectivity Technology	USB
Optical Zoom	5x
Special Features	Auto-Framing, AI Noise Cancelling, 120° Ultra-Wide Angle Lens

7. WARRANTY AND SUPPORT

For warranty information, please refer to the warranty card included with your product or visit the official NEARITY website. For technical support, firmware updates, and additional resources, please visit the NEARITY support page:

www.nearity.co/support

The NearSync application is also a valuable tool for managing your device settings and ensuring it is up-to-date.