

This document was developed to help users of **Eagle Scan** identify and resolve potential issues while using the equipment.

Here you will find **practical troubleshooting guidance**, with step-by-step instructions to check, correct, and prevent potential operating issues. Our goal is to ensure the equipment always operates with **maximum performance and reliability**, while maintaining the quality of the results obtained.

 Troubleshooting Eagle Scan	
LOW FPS	
Possible Cause	Solution
➤ The computer does not meet the minimum requirements specified in the product manual.	✓ ✓ Use a computer that meets the minimum required specifications. Computer requirements: Operating system: Windows 10 or later SSD: 50GB or more Port: USB 3.0 CPU: 13th Gen i7 Memory: 16GB RAM or more (DDR4 or higher) GPU: NVIDIA RTX 4060, 8GB VRAM or higher
➤ Power Mode is set to something other than "Performance".	✓ Adjust: Settings -> System -> Power & Battery -> Power Mode: Performance
➤ On desktop computers with more than one HDMI output, the monitor is connected to an HDMI port that is not connected to the NVIDIA graphics card.	✓ Identify the HDMI output connected to the graphics card and connect the monitor correctly.
➤ Energy Saver is set to something other than "Off".	✓ Adjust: Settings -> System -> Power & Battery -> Energy Saver: Off
➤ Other programs are open while the scanner is in use. Antivirus software, browsers, virtual drives, automatic Windows updates, and similar programs reduce performance.	✓ Keep only the scanning software open.
➤ Internal dust in the notebook may limit cooling capacity and cause overheating.	✓ Clean the cooling system and properly reapply thermal paste when applicable.
➤ Does the notebook charger have adequate wattage? Similar notebooks may use chargers that look alike but have very different power ratings.	✓ Check that the charger wattage matches the nominal power required by the computer.

➤ On a desktop computer, is the power supply sufficient to get maximum performance from the graphics card? (1000W is usually sufficient.)	✓ Check the power supply wattage.
➤ The notebook is not plugged into a power outlet. Performance drops significantly when running on battery power, and the notebook should not be used for scanning in this condition.	✓ Plug the notebook into a power outlet.
➤ Graphics card drivers are out of date.	✓ Update the graphics card drivers.
➤ The computer is sharing its screen while scanning. Screen sharing or Wi-Fi screen streaming can significantly reduce performance depending on the computer hardware.	✓ Use only the notebook display or the primary desktop monitor during scanning.
➤ Windows is out of date.	✓ Update Windows.
➤ The notebook performance mode is set to Silent or Balanced in the fan control software, such as Alienware Command Center or Acer NitroSense.	✓ Open the fan control software and change the performance mode to Maximum Performance or Turbo Mode, ensuring the fans are set to high speed while using the scanning software.
➤ The computer has been running for many days.	✓ Restart the computer.
➤ There is insufficient free disk space.	✓ Free up more disk space.
➤ On new computers, if FPS remains low even after disabling power-saving settings, there may be an additional hidden power-saving setting.	✓ Format the computer and reconfigure the performance settings.

SCANNING IS NOT SMOOTH EVEN AT HIGH FPS	
Possible Cause	Solution
➤ Scanner calibration may have been compromised by a drop or impact.	✓ Contact technical support.
➤ AI is turned off for intraoral scanning. AI is used to remove mobile tissue, optimizing the scan so the user does not need to constantly separate these tissues from the scanned area.	✓ Turn on AI.
➤ Excessive touch-ups. Repeatedly rescanning the same areas may generate artifacts in the mesh.	✓ For a full arch, aim to complete the scan within 1500 to 2500 frames.
➤ Failure to establish the scanning reference.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.

➤ Scanning speed is too high. High scanning speed can create noise caused by motion blur from hand movement.	✓ Use the ideal scanning speed, aiming for a preferred range of 1500 to 2500 frames for a full arch.
➤ The scanner tip is too far from the teeth. The product was designed for scanning close to the tooth, and resolution is optimized in the area nearest the tip.	✓ Perform the scan with the scanner tip as close to the teeth as possible.
➤ The scanner is connected to a USB 2.0 port instead of USB 3.0.	✓ Identify a USB 3.0 port and connect the scanner to it.
➤ AI is turned on when scanning plaster models or prosthetic components.	✓ Turn off AI when scanning plaster models or prosthetic components, when necessary.
➤ AI is turned on when scanning the soft palate.	✓ Turn off AI to scan these areas more effectively.
➤ Reflections. Reflections from teeth or other materials such as zirconia may create optical inconsistencies in the scan.	✓ Scan using varied incidence angles, such as 45 degrees. This technique reduces reflections and also provides greater coverage of the occlusal reference, producing better results.
➤ There is too little overlap between the occlusal reference and the new mesh.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ The scanning area is too bright. The scanner is an optical instrument, and external light may interfere with scanning.	✓ Reduce the ambient lighting.
➤ The scanner tip is too close to the tooth, allowing the tooth to enter the tip. When the tooth enters the mirror optical path, a duplicated and mirrored surface may be detected and added to the scan. This surface is often removed by the algorithm, but the issue can be avoided by moving the scanner tip farther away.	✓ Move the scanner tip farther away.
➤ The protocol does not use a zigzag pattern in the critical region; improper angle.	✓ Use a zigzag pattern on the incisors; vary the angle/height of the scanner tip.
➤ The notebook performance mode is set to Silent or Balanced in the fan control software, such as Alienware Command Center or Acer NitroSense.	✓ Open the fan control software and change the performance mode to Maximum Performance or Turbo Mode, ensuring the fans are set to high speed while using the scanning software.
➤ The USB cable is not connected directly to the computer. The use of USB hubs or similar devices is not recommended.	✓ Connect the scanner directly to the computer using a USB 3.0 port.
➤ Is the scanner mirror dirty?	✓ Clean the scanner.
➤ Excess saliva in the mouth increases reflections and may cause irregularities.	✓ Dry the mouth before scanning.
➤ The computer is sharing its screen while scanning. Screen sharing or Wi-Fi screen streaming can significantly reduce performance depending on the computer hardware.	✓ Use only the notebook display or the primary desktop monitor during scanning.
➤ Power Mode is set to something other than "Performance".	✓ Adjust: Settings -> System -> Power & Battery -> Power Mode: Performance

➤ Energy Saver is set to something other than "Off".	✓ Adjust: Settings -> System -> Power & Battery -> Energy Saver: Off
➤ The notebook is not plugged into a power outlet. Performance drops significantly when running on battery power, and the notebook should not be used for scanning in this condition.	✓ Plug the notebook into a power outlet.
➤ Computer requirements: Operating system: Windows 10 or later SSD: 50GB or more Port: USB 3.0 CPU: 13th Gen i7 Memory: 16GB RAM or more (DDR4 or higher) GPU: NVIDIA RTX 4060, 8GB VRAM or higher	✓ Use a notebook that meets the minimum required specifications.
➤ There is insufficient free disk space.	✓ Free up more disk space.
➤ Other programs are open while the scanner is in use. Antivirus software, browsers, virtual drives, automatic Windows updates, and similar programs reduce performance.	✓ Keep only the scanning software open.
➤ Internal dust in the notebook may limit cooling capacity and cause overheating.	✓ Clean the cooling system and properly reapply thermal paste when applicable.
➤ Windows is out of date.	✓ Update Windows.
➤ The computer has been running for many days.	✓ Restart the computer.
➤ On desktop computers with more than one HDMI output, the monitor is connected to an HDMI port that is not connected to the NVIDIA graphics card.	✓ Identify the HDMI output connected to the graphics card and connect the monitor correctly.

MESH OVERLAP	
Possible Cause	Solution
➤ Scanner calibration may have been compromised by a drop or impact.	✓ Contact technical support.
➤ There is too little overlap between the occlusal reference and the new mesh.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ The protocol does not use a zigzag pattern in the critical region; improper angle.	✓ Use a zigzag pattern on the incisors; vary the angle/height of the scanner tip.
➤ Failure to establish the scanning reference.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ The scanner tip is too far from the teeth. The product was designed for scanning close to the tooth, and resolution is optimized in the area nearest the tip.	✓ Perform the scan with the scanner tip as close to the teeth as possible.

➤ AI is turned off for intraoral scanning. AI is used to remove mobile tissue, optimizing the scan so the user does not need to constantly separate these tissues from the scanned area.	✓ Turn on AI.
➤ Excessive touch-ups. Repeatedly rescanning the same areas may generate artifacts in the mesh.	✓ For a full arch, aim to complete the scan within 1500 to 2500 frames.
➤ Scanning speed is too high. High scanning speed can create noise caused by motion blur from hand movement.	✓ Use the ideal scanning speed, aiming for a preferred range of 1500 to 2500 frames for a full arch.
➤ The scanning area is too bright. The scanner is an optical instrument, and external light may interfere with scanning.	✓ Reduce the ambient lighting.
➤ Is the scanner mirror dirty?	✓ Clean the scanner.
➤ Excess saliva in the mouth increases reflections and may cause irregularities.	✓ Dry the mouth before scanning.
➤ AI is turned on when scanning plaster models or prosthetic components.	✓ Turn off AI when scanning plaster models or prosthetic components, when necessary.
➤ AI is turned on when scanning the soft palate.	✓ Turn off AI to scan these areas more effectively.
➤ Reflections. Reflections from teeth or other materials such as zirconia may create optical inconsistencies in the scan.	✓ Scan using varied incidence angles, such as 45 degrees. This technique reduces reflections and also provides greater coverage of the occlusal reference, producing better results.
➤ The scanner tip is too close to the tooth, allowing the tooth to enter the tip. When the tooth enters the mirror optical path, a duplicated and mirrored surface may be detected and added to the scan. This surface is often removed by the algorithm, but the issue can be avoided by moving the scanner tip farther away.	✓ Move the scanner tip farther away.
➤ Computer requirements: Operating system: Windows 10 or later SSD: 50GB or more Port: USB 3.0 CPU: 13th Gen i7 Memory: 16GB RAM or more (DDR4 or higher) GPU: NVIDIA RTX 4060, 8GB VRAM or higher	✓ Use a notebook that meets the minimum required specifications.
➤ Graphics card drivers are out of date.	✓ Update the graphics card drivers.
➤ Windows is out of date.	✓ Update Windows.
➤ The notebook is not plugged into a power outlet. Performance drops significantly when running on battery power, and the notebook should not be used for scanning in this condition.	✓ Plug the notebook into a power outlet.

LOW FILL	
Possible Cause	Solution
➤ Scanner calibration may have been compromised by a drop or impact.	✓ Contact technical support.
➤ Failure to establish the scanning reference.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global reference for the

	scan. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ AI is turned off for intraoral scanning. AI is used to remove mobile tissue, optimizing the scan so the user does not need to constantly separate these tissues from the scanned area.	✓ Turn on AI.
➤ The scanning area is too bright. The scanner is an optical instrument, and external light may interfere with scanning.	✓ Reduce the ambient lighting.
➤ The USB cable is not connected directly to the computer. The use of USB hubs or similar devices is not recommended.	✓ Connect the scanner directly to the computer using a USB 3.0 port.
➤ Scanning speed is too high. High scanning speed can create noise caused by motion blur from hand movement.	✓ Use the ideal scanning speed, aiming for a preferred range of 1500 to 2500 frames for a full arch.
➤ AI is turned on when scanning plaster models or prosthetic components.	✓ Turn off AI when scanning plaster models or prosthetic components, when necessary.
➤ AI is turned on when scanning the soft palate.	✓ Turn off AI to scan these areas more effectively.
➤ Excess saliva in the mouth increases reflections and may cause irregularities.	✓ Dry the mouth before scanning.
➤ Reflections. Reflections from teeth or other materials such as zirconia may create optical inconsistencies in the scan.	✓ Scan using varied incidence angles, such as 45 degrees. This technique reduces reflections and also provides greater coverage of the occlusal reference, producing better results.
➤ There is too little overlap between the occlusal reference and the new mesh.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ The scanner tip is too far from the teeth. The product was designed for scanning close to the tooth, and resolution is optimized in the area nearest the tip.	✓ Perform the scan with the scanner tip as close to the teeth as possible.
➤ Is the scanner mirror dirty?	✓ Clean the scanner.
➤ The scanner tip is too close to the tooth, allowing the tooth to enter the tip. When the tooth enters the mirror optical path, a duplicated and mirrored surface may be detected and added to the scan. This surface is often removed by the algorithm, but the issue can be avoided by moving the scanner tip farther away.	✓ Move the scanner tip farther away.
➤ The protocol does not use a zigzag pattern in the critical region; improper angle.	✓ Use a zigzag pattern on the incisors; vary the angle/height of the scanner tip.
➤ Computer requirements: Operating system: Windows 10 or later SSD: 50GB or more Port: USB 3.0 CPU: 13th Gen i7 Memory: 16GB RAM or more (DDR4 or	✓ Use a notebook that meets the minimum required specifications.

or higher) GPU: NVIDIA RTX 4060, 8GB VRAM or higher	
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DIMENSIONAL ERROR / HIGH DISTORTION	
Possible Cause	Solution
➤ Scanner calibration may have been compromised by a drop or impact.	✓ Contact technical support.
➤ Failure to establish the scanning reference.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ Scanning speed is too high. High scanning speed can create noise caused by motion blur from hand movement.	✓ Use the ideal scanning speed, aiming for a preferred range of 1500 to 2500 frames for a full arch.
➤ There is too little overlap between the occlusal reference and the new mesh.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ Excessive touch-ups. Repeatedly rescanning the same areas may generate artifacts in the mesh.	✓ For a full arch, aim to complete the scan within 1500 to 2500 frames.
➤ The protocol does not use a zigzag pattern in the critical region; improper angle.	✓ Use a zigzag pattern on the incisors; vary the angle/height of the scanner tip.
➤ The USB cable is not connected directly to the computer. The use of USB hubs or similar devices is not recommended.	✓ Connect the scanner directly to the computer using a USB 3.0 port.
➤ The scanner tip is too far from the teeth. The product was designed for scanning close to the tooth, and resolution is optimized in the area nearest the tip.	✓ Perform the scan with the scanner tip as close to the teeth as possible.
➤ AI is turned off for intraoral scanning. AI is used to remove mobile tissue, optimizing the scan so the user does not need to constantly separate these tissues from the scanned area.	✓ Turn on AI.
➤ Is the scanner mirror dirty?	✓ Clean the scanner.
➤ The scanning area is too bright. The scanner is an optical instrument, and external light may interfere with scanning.	✓ Reduce the ambient lighting.
➤ Reflections. Reflections from teeth or other materials such as zirconia may create optical inconsistencies in the scan.	✓ Scan using varied incidence angles, such as 45 degrees. This technique reduces reflections and also provides greater coverage of the occlusal reference, producing better results.
➤ Excess saliva in the mouth increases reflections and may cause irregularities.	✓ Dry the mouth before scanning.
➤ The scanner tip is too close to the tooth, allowing the tooth to enter the tip. When the tooth enters the mirror optical path, a	✓ Move the scanner tip farther away.

A duplicated and mirrored surface may be detected and added to the scan. This surface is often removed by the algorithm, but the issue can be avoided by moving the scanner tip farther away.	
➤ Does the notebook charger have adequate wattage? Similar notebooks may use chargers that look alike but have very different power ratings.	✓ Check that the charger wattage matches the nominal power required by the computer.
➤ On a desktop computer, is the power supply sufficient to get maximum performance from the graphics card? (1000W is usually sufficient.)	✓ Check the power supply wattage.
➤ Power Mode is set to something other than "Performance".	✓ Adjust: Settings -> System -> Power & Battery -> Power Mode: Performance
➤ Energy Saver is set to something other than "Off".	✓ Adjust: Settings -> System -> Power & Battery -> Energy Saver: Off
➤ Windows is out of date.	✓ Update Windows.
➤ Graphics card drivers are out of date.	✓ Update the graphics card drivers.
➤ AI is turned on when scanning plaster models or prosthetic components.	✓ Turn off AI when scanning plaster models or prosthetic components, when necessary.
➤ AI is turned on when scanning the soft palate.	✓ Turn off AI to scan these areas more effectively.

IMAGE ARTIFACTS	
Possible Cause	Solution
➤ Scanner calibration may have been compromised by a drop or impact.	✓ Contact technical support.
➤ There is too little overlap between the occlusal reference and the new mesh.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ The protocol does not use a zigzag pattern in the critical region; improper angle.	✓ Use a zigzag pattern on the incisors; vary the angle/height of the scanner tip.
➤ Failure to establish the scanning reference.	✓ Scan according to the recommended protocol: the first pass covering the entire occlusal surface must be well formed, creating the global scan reference. The incisor region should be scanned in a zigzag pattern, covering the buccal and lingual surfaces. The turn while establishing the occlusal reference should be made at a molar for a better reference.
➤ The scanner tip is too far from the teeth. The product was designed for scanning close to the tooth, and resolution is optimized in the area nearest the tip.	✓ Perform the scan with the scanner tip as close to the teeth as possible.
➤ Scanning speed is too high. High scanning speed can create noise caused by motion blur from hand movement.	✓ Use the ideal scanning speed, aiming for a preferred range of 1500 to 2500 frames for a full arch.
➤ Excessive touch-ups. Repeatedly rescanning the same areas may generate artifacts in the mesh.	✓ For a full arch, aim to complete the scan within 1500 to 2500 frames.
➤ AI is turned off for intraoral scanning. AI is used to remove mobile tissue, optimizing the scan so the	✓ Turn on AI.

user does not need to constantly separate these tissues from the scanned area.	
➤ Is the scanner mirror dirty?	✓ Clean the scanner.
➤ The scanning area is too bright. The scanner is an optical instrument, and external light may interfere with scanning.	✓ Reduce the ambient lighting.
➤ Excess saliva in the mouth increases reflections and may cause irregularities.	✓ Dry the mouth before scanning.
➤ AI is turned on when scanning plaster models or prosthetic components.	✓ Turn off AI when scanning plaster models or prosthetic components, when necessary.
➤ AI is turned on when scanning the soft palate.	✓ Turn off AI to scan these areas more effectively.
➤ Reflections. Reflections from teeth or other materials such as zirconia may create optical inconsistencies in the scan.	✓ Scan using varied incidence angles, such as 45 degrees. This technique reduces reflections and also provides greater coverage of the occlusal reference, producing better results.
➤ The scanner tip is too close to the tooth, allowing the tooth to enter the tip. When the tooth enters the mirror optical path, a duplicated and mirrored surface may be detected and added to the scan. This surface is often removed by the algorithm, but the issue can be avoided by moving the scanner tip farther away.	✓ Move the scanner tip farther away.
➤ Computer requirements: Operating system: Windows 10 or later SSD: 50GB or more Port: USB 3.0 CPU: 13th Gen i7 Memory: 16GB RAM or more (DDR4 or higher) GPU: NVIDIA RTX 4060, 8GB VRAM or higher	✓ Use a notebook that meets the minimum required specifications.
➤ Graphics card drivers are out of date.	✓ Update the graphics card drivers.
➤ Windows is out of date.	✓ Update Windows.
➤ The notebook is not plugged into a power outlet. Performance drops significantly when running on battery power, and the notebook should not be used for scanning in this condition.	✓ Plug the notebook into a power outlet.

METAL ARTIFACTS	
Possible Cause	Solution
➤ Metal Mode is turned off.	✓ Turn on Metal Mode.
➤ AI is turned off for intraoral scanning. AI is used to remove mobile tissue, optimizing the scan so the user does not need to constantly separate these tissues from the scanned area.	✓ Turn on AI.
➤ AI is turned on when scanning plaster models or prosthetic components.	✓ Turn off AI when scanning plaster models or prosthetic components, when necessary.
➤ AI is turned on when scanning the soft palate.	✓ Turn off AI to scan these areas more effectively.

➤ The scanning area is too bright. The scanner is an optical instrument, and external light may interfere with scanning.	✓ Reduce the ambient lighting.
➤ Reflections. Reflections from teeth or other materials such as zirconia may create optical inconsistencies in the scan.	✓ Scan using varied incidence angles, such as 45 degrees. This technique reduces reflections and also provides greater coverage of the occlusal reference, producing better results.
➤ Excessive touch-ups. Repeatedly rescanning the same areas may generate artifacts in the mesh.	✓ For a full arch, aim to complete the scan within 1500 to 2500 frames.

SOFTWARE DOES NOT OPEN	
Possible Cause	Solution
➤ Antivirus software is incorrectly deleting system files.	✓ Reinstall the software and add it to the antivirus exceptions.
➤ Other programs are open while the scanner is in use. Antivirus software, browsers, virtual drives, automatic Windows updates, and similar programs reduce performance.	✓ Keep only the scanning software open.
➤ There is insufficient free disk space.	✓ Free up more disk space.
➤ Graphics card drivers are out of date.	✓ Update the graphics card drivers.
➤ Computer requirements: Operating system: Windows 10 or later SSD: 50GB or more Port: USB 3.0 CPU: 13th Gen i7 Memory: 16GB RAM or more (DDR4 or higher) GPU: NVIDIA RTX 4060, 8GB VRAM or higher	✓ Use a notebook that meets the minimum required specifications.
➤ Power Mode is set to something other than "Performance".	✓ Adjust: Settings -> System -> Power & Battery -> Power Mode: Performance
➤ Energy Saver is set to something other than "Off".	✓ Adjust: Settings -> System -> Power & Battery -> Energy Saver: Off
➤ The notebook is not plugged into a power outlet. Performance drops significantly when running on battery power, and the notebook should not be used for scanning in this condition.	✓ Plug the notebook into a power outlet.
➤ Internal dust in the notebook may limit cooling capacity and cause overheating.	✓ Clean the cooling system and properly reapply thermal paste when applicable.
➤ The computer has been running for many days.	✓ Restart the computer.
➤ Windows is out of date.	✓ Update Windows.
➤ Does the notebook charger have adequate wattage? Similar notebooks may use chargers that look alike but have very different power ratings.	✓ Check that the charger wattage matches the nominal power required by the computer.
➤ Metal Mode is turned off.	✓ Turn on Metal Mode.

