

KOWA SL-19 plus

KOWA SL-19 App



 Troubleshooting

The KOWA SL-19 App is an application software used for the capture, display and recording of images using the camera version of the KOWA SL-19 hand-held slit lamp (SL-19 plus). Please purchase the SL-19 plus prior to using this application.

For information on how to use the SL-19 plus and associated precautions, kindly refer to the SL-19 plus instruction manual.

This document describes troubleshooting for this application.

For details on how to use this application, kindly ensure refer to "Basic Operation" and "Other Operation" user guides.

This application software is not classed as a Medical Device. Displayed/Recorded imaging data (including enlarged images) are for reference use only. Diagnosis should only be made by direct visual inspection through the SL-19 plus.

Operation of this application does not normally cause damage to the SL-19 plus, however if you experience any abnormality during use, kindly contact us or your Kowa distributor immediately.

Operating environment of this application

This application is for the iPad series running iPadOS operating system software version 15.4 or later.

Disclaimer

Kowa Company shall not be liable for accidents caused by the iPad Mobile Device on which this application is installed.

Kowa Company can not be held responsible for any damage such as data corruption or loss of data on the iPad Mobile Device due to the use of this application.

When using the data sharing function, please ensure that the data being shared is sent to the correct destination. Kowa Company can not be held responsible for any damage caused when sharing data.

This document is based on information accurate as of the copyright date.

Recommended operating environments, functions, etc. are subject to change without notice. Please note that the contents of this document may differ.

The application operates using a one-to-one wireless LAN connection with the SL-19 plus. Recorded images may be transferred to other personal computers, devices etc... When connecting to a network using the sharing function, kindly ensure that cybersecurity is present.

1 Problems and problem solving

This section describes what to do when a problem occurs in this application.

If an error occurs within the application, first check the following items and take the appropriate action as indicated in the list below.

If, after following the instructions your problem still persists. Please contact Kowa Company or your Kowa distributor.

Abnormal App performance								
Action	Problem	Things to check	Solution					
Patient ID entry	When determining the ID, an error occurs	Check that the maximum number of ID digits has not been exceeded in the in "User settings".	Adjust if necessary.					
		Check if you have entered any invalid characters. Accepted character types: alphanumeric characters, "-" (hyphen) * Characters are not case sensitive.	Delete any invalid characters.					
	Barcode cannot be read.	Check the type of barcode used. Accepted barcodes types: <table><tr><td>Categories</td><td>Types</td></tr><tr><td>1D barcodes</td><td>codabar, code39, code93, code128, interleaved2of5</td></tr><tr><td>2D barcodes</td><td>aztec, dataMatrix, microPDF417, microQR, pdf417, QR</td></tr></table>	Categories	Types	1D barcodes	codabar, code39, code93, code128, interleaved2of5	2D barcodes	aztec, dataMatrix, microPDF417, microQR, pdf417, QR
Categories	Types							
1D barcodes	codabar, code39, code93, code128, interleaved2of5							
2D barcodes	aztec, dataMatrix, microPDF417, microQR, pdf417, QR							

Abnormal App performance				
Action	Problem	Things to check		Solution
Recording, Setting	When connecting to the SL-19 plus via wireless LAN, a network connection error occurs.	Check the lighting status of the camera indicator on the SL-19 plus.	Off	Turn on the camera of the SL-19 plus.
			Steady green	Wait until it changes to blinking blue and connect again.
			Blinking blue	Make sure that the "SSID" and "Encryption key" in the "SPECIFY THE SL-19 plus TO CONNECT" match the settings of the SL-19 plus.
			Steady blue	Another device is already connected to the SL-19 plus. Disconnect the wireless LAN of the unused device.
Recording	After connecting to the SL-19 plus via wireless LAN, the connection confirmation screen is displayed again immediately.	After connecting to the SL-19 plus via wireless LAN, communication may have failed. Check that the "IP address" in the "SPECIFY THE SL-19 plus TO CONNECT" match the settings of the SL-19 plus. (Default IP address: 192.168.42.1)		If you have previously changed the IP address settings of the SL-19 plus, refer to your records and re-enter the correct details. If you do not know the IP address set for the SL-19 plus, a device re-set will be required. Please contact Kowa Company or your Kowa distributor.

Abnormal App performance			
Action	Problem	Things to check	Solution
Recording	Video frames rate are dropped.	Check if there are any other devices that use wireless LAN that may already be connected. Communication speed may be reduced if multiple devices are using the same wireless channel.	Change the "Channel" in the " SL-19 plus NETWORK SETTINGS."
		Are you recording fine patterns in full screen mode? The frame rate may drop when recording high-contrast and finely patterned subjects.	Try the following: • Avoid fine patterns when recording. • Dim the lights.
	L/R setting cannot be changed. L/R icon cannot be selected.	Is recording in progress? L/R setting cannot be changed whilst the device is recording.	Recording must be stopped in order to change the L/R setting.
	Recording stops unintentionally.	Check the "Auto-Lock" in "Display & Brightness" in the Settings app on your iPad. If the iPad has been left to idle, the device auto-lock will activate. If this applications, the recording will be automatically terminated.	Set your device auto-lock time to longer than the recording time (maximum of 10 minutes). For cybersecurity reasons, it is not recommended to set the "Never".
		Did you exit the App? When exiting the App, the recording will automatically be terminated.	DO NOT exit the App whilst recording is in progress.

Abnormal App performance							
Action	Problem	Things to check	Solution				
Export	Connection error to the shared folder occurs.	Depending on the network environment, you may not be able to connect by computer name.	Set the IP address of the personal computer to be exported to in "Shared computer name or IP address" in "EXPORT SETTINGS".				
Export setting	An input validation error occurs when updating the shared computer name or IP address.	Check the number of characters entered. Accepted character types and limits: <table><tr><td>Accepted characters</td><td>No limit</td></tr><tr><td>Number of characters</td><td>0 - 15</td></tr></table>	Accepted characters	No limit	Number of characters	0 - 15	Adjust if necessary.
	Accepted characters	No limit					
	Number of characters	0 - 15					
	An input validation error occurs when updating the shared name.	Check the number of characters entered. Accepted character types and limits: <table><tr><td>Accepted characters</td><td>No limit</td></tr><tr><td>Number of characters</td><td>0 - 80</td></tr></table>	Accepted characters	No limit	Number of characters	0 - 80	Adjust if necessary.
Accepted characters	No limit						
Number of characters	0 - 80						
An input validation error occurs when updating the user name.	Check the character types and number of characters entered. Accepted character types and limits: <table><tr><td>Accepted characters</td><td>No limit</td></tr><tr><td>Number of characters</td><td>0 - 256</td></tr></table>	Accepted characters	No limit	Number of characters	0 - 256	Delete any invalid characters. Adjust if necessary.	
Accepted characters	No limit						
Number of characters	0 - 256						
An input validation error occurs when updating the password.	Check the number of characters entered. Accepted character types and limits: <table><tr><td>Accepted characters</td><td>No limit *Case-sensitive</td></tr><tr><td>Number of characters</td><td>0 - 256</td></tr></table>	Accepted characters	No limit *Case-sensitive	Number of characters	0 - 256	Adjust if necessary.	
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Export setting	An input validation error occurs when updating the SSID.	Check the character types and number of characters entered. Accepted character types and limits: <table><tr><td rowspan="5">Accepted characters</td><td colspan="8">Letters, numbers, spaces and symbols</td></tr><tr><td>!</td><td>“</td><td>#</td><td>\$</td><td>%</td><td>&</td><td>‘</td><td>(</td></tr><tr><td>)</td><td>*</td><td>+</td><td>,</td><td>-</td><td>.</td><td>/</td><td>:</td></tr><tr><td>;</td><td><</td><td>=</td><td>></td><td>?</td><td>@</td><td>[</td><td>¥</td></tr><tr><td>]</td><td>^</td><td>_</td><td>`</td><td>{</td><td> </td><td>}</td><td>~</td></tr><tr><td colspan="9">* Case-sensitive</td></tr><tr><td>Number of characters</td><td colspan="8">1 - 32</td></tr></table>	Accepted characters	Letters, numbers, spaces and symbols								!	“	#	\$	%	&	‘	(	)	*	+	,	-	.	/	:	;	<	=	>	?	@	[	¥	]	^	_	`	{		}	~	* Case-sensitive									Number of characters	1 - 32								Delete any invalid characters. Adjust if necessary.
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	An input validation error occurs when updating the encryption key.	Check the character types and number of characters entered. Accepted character types and limits: <table><tr><td rowspan="5">Accepted characters</td><td colspan="8">Letters, numbers, spaces and symbols</td></tr><tr><td>!</td><td>“</td><td>#</td><td>\$</td><td>%</td><td>&</td><td>‘</td><td>(</td></tr><tr><td>)</td><td>*</td><td>+</td><td>,</td><td>-</td><td>.</td><td>/</td><td>:</td></tr><tr><td>;</td><td><</td><td>=</td><td>></td><td>?</td><td>@</td><td>[</td><td>¥</td></tr><tr><td>]</td><td>^</td><td>_</td><td>`</td><td>{</td><td> </td><td>}</td><td>~</td></tr><tr><td colspan="9">*Case-sensitive</td></tr><tr><td>Number of characters</td><td colspan="8">8 - 63</td></tr></table>	Accepted characters	Letters, numbers, spaces and symbols								!	“	#	\$	%	&	‘	(	)	*	+	,	-	.	/	:	;	<	=	>	?	@	[	¥	]	^	_	`	{		}	~	*Case-sensitive									Number of characters	8 - 63								
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		Accepted characters	Single-byte numbers, "." (dot)																																	
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Network setting of the SL-19 plus	An input validation error occurs when updating the SSID.	Check the character types and number of characters entered. Accepted character types and limits: .		Delete any invalid characters. Adjust if necessary.																																
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		Accepted characters	Single-byte numbers, "." (dot)																																	
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	An input validation error occurs when updating the netmask.	Check the character types and number of characters entered. The available character types and range are as follows.		Delete any invalid characters. Check that the IP address is within the available character types and range.																																
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		Range	0.0.0.0 - 255.255.255.255																																	

Abnormal App performance				
Action	Problem	Things to check	Solution	
Network setting of the SL-19 plus	An input validation error occurs when updating the DHCP starting address.	Check the character types and number of characters entered. The available character types and range are as follows.	Delete any invalid characters. Check that the IP address is within the available character types and range.	
		Accepted characters		Single-byte numbers, "." (dot)
		Range		0.0.0.0 - 255.255.255.255
	An input validation error occurs when updating the DHCP ending address.	Check the character types and number of characters entered. The available character types and range are as follows.	Delete any invalid characters. Check that the IP address is within the available character types and range.	
		Accepted characters		Single-byte numbers, "." (dot)
		Range		0.0.0.0 - 255.255.255.255
	Writing the IP address settings to the SL-19 plus fails.	Check the IP address and netmask entered.	If unsure, check with the facility's network administrator.	
		Check the DHCP starting address and DHCP ending address. The starting and ending addresses may be reversed.	Set the DHCP starting address to be smaller than the DHCP ending address. If unsure, check with the facility's network administrator.	
		Check the DHCP starting address and DHCP ending address. The network address determined from the IP address and netmask may be out of range.	The DHCP starting address and DHCP ending address should be within the range of network addresses. If unsure, check with the facility's network administrator.	

2 Error messages

This section describes the "Error messages " that is displayed when an error occurs in this application.

Error message		
Display	Description	Applicable remedy
The ID you entered contains a digit error or characters that cannot be used.	The ID contains more than the maximum number of digits or invalid characters.	Check that no characters other than alphanumeric characters and "-" (hyphens) are entered.
		Check that the number of characters exceeds the "Max ID digits" in "User settings".
Format error or contains characters that are not allowed.	Invalid characters or invalid format strings have been is entered in the setting items.	Check that valid characters are entered.
		Check that valid format strings are entered. (e.g., entering a non-IP address in a field that requires an IP address, etc.)
Failed to save the image.	Could not save the image.	Check that the iPad has enough free space. Delete unnecessary still images and videos.
Failed to record the video.	Could not save the video.	Check that the iPad has enough free space. Delete unnecessary still images and videos.
Failed to connect to the Wi-Fi access point.	Could not connect to the Wi-Fi access point to which exporting.	Check "SSID" and "Encryption key" in "Export Settings".
		Check that the wireless LAN access point to which exporting is operating properly.

Error message		
Display	Description	Applicable remedy
Failed to upload the file to the shared folder.	Failed to connect to the shared folder during export.	Check "Shared computer name or IP address", "Shared name", "Shared user name", and "Shared password" in "Export Settings".
		Check that the shared folder has been created.
		Check that the wireless LAN connects to the wireless LAN access point where exporting.
Failed to create directory.	Failed to create a subfolder within the shared folder when exporting.	Check that the user has write permission to the shared folder.
Failed to upload the file to the shared folder.	Failed to copy files to a shared folder during export.	Check that the user has write permission to the shared folder. Check the amount of free space in the shared folder.

Error message		
Display	Description	Applicable remedy
Failed to get SL-19 plus settings.	The error occurred during execution of the get settings command.	Check that the wireless LAN connects to the SL-19 plus.
		If the SL-19 plus is connected to the wireless LAN, check if you have changed the IP address setting of the SL-19 plus in the past. If you have changed the IP address settings in the past, check the record (memo, etc.) when changing the settings. Check that the "IP address" in the "SPECIFY THE SL-19 plus TO CONNECT" match the settings of the SL-19 plus. If you do not know the IP address set for the SL-19 plus, you need to initialize the SL-19 plus. Contact Kowa or your Kowa distributor.
Failed to update settings.	The error occurred when executing the get settings command.	Check that the SL-19 plus is connecting to the wireless LAN.
		Check that valid values are entered. (e.g., IP address, netmask, DHCP start and end addresses, etc.)
The integrated camera cannot be used.	The camera failed to start due to no permission to use the iPad internal camera.	Tap "SL-19 App" in the iPad's Settings app, then turn on the camera.

Error message		
Display	Description	Applicable remedy
Failed to communicate with SL-19 plus.	Network has been disconnected during recording.	Check that the SL-19 plus is connecting to the wireless LAN.
Recording stopped due to a write frame error. There may be insufficient storage space.	Could not save the video.	Check that the iPad has enough free space. Delete unnecessary still images and videos.
Recording stopped due to exceeding the maximum recording time or file size.	Maximum recording time or maximum file size has been reached.	This is normal for data protection. Please shorten the recording time.
SL-19 plus camera reboot failed.	The error occurred when executing the restart command.	Check that the SL-19 plus is connecting to the wireless LAN.
Failed to save the video.	Failed to move videos to data folder.	Contact Kowa Company or your Kowa distributor.
Failed to delete the selected data.	Failed to delete the images or videos.	Contact Kowa Company or your Kowa distributor.
Failed to update the selected data.	Failed to rename the images or videos.	Contact Kowa Company or your Kowa distributor.
Failed to initialize the shared library.	Failed to initialize the shared library during export.	Contact Kowa Company or your Kowa distributor.



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