Mirage 304K (Bm.1)
Status System

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GENERAL

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WARRANTY

Products are warranted under Christie's standard limited warranty, the complete details of which are available by contacting your Christie dealer or Christie. In addition to the other limitations that may be specified in Christie's standard limited warranty and, to the extent relevant or applicable to your product, the warranty does not cover:

  a. Problems or damage occurring during shipment, in either direction.

  b. Projector lamps (See Christie's separate lamp program policy).

  c. Problems or damage caused by use of a projector lamp beyond the recommended lamp life, or use of a lamp other than a Christie lamp supplied by Christie or an authorized distributor of Christie lamps.

  d. Problems or damage caused by combination of a product with non-Christie equipment, such as distribution systems, cameras, DVD players, etc., or use of a product with any non-Christie interface device.

  e. Problems or damage caused by the use of any lamp, replacement part or component purchased or obtained from an unauthorized distributor of Christie lamps, replacement parts or components including, without limitation, any distributor offering Christie lamps, replacement parts or components through the internet (confirmation of authorized distributors may be obtained from Christie).

  f. Problems or damage caused by misuse, improper power source, accident, fire, flood, lightening, earthquake or other natural disaster.

  g. Problems or damage caused by improper installation/alignment, or by equipment modification, if by other than Christie service personnel or a Christie authorized repair service provider.

  h. Problems or damage caused by use of a product on a motion platform or other movable device where such product has not been designed, modified or approved by Christie for such use.

  i. Problems or damage caused by use of a projector in the presence of an oil-based fog machine or laser-based lighting that is unrelated to the projector.

  j. For LCD projectors, the warranty period specified in the warranty applies only where the LCD projector is in "normal use" which means the LCD projector is not used more than 8 hours a day, 5 days a week.

  k. Except where the product is designed for outdoor use, problems or damage caused by use of the product outdoors unless such product is protected from precipitation or other adverse weather or environmental conditions and the ambient temperature is within the recommended ambient temperature set forth in the specifications for such product.

  l. Defects caused by normal wear and tear or otherwise due to normal aging of a product.

The warranty does not apply to any product where the serial number has been removed or obliterated. The warranty also does not apply to any product sold by a reseller to an end user outside of the country where the reseller is located unless (i) Christie has an office in the country where the end user is located or (ii) the required international warranty fee has been paid.

The warranty does not obligate Christie to provide any on site warranty service at the product site location.

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

REGULATORY

The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

CAN ICES-3 (A) / NMB-3 (A)

이 기기는 업무용(A급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

ENVIRONMENTAL

The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

Content

Mirage 304K status system

This guide contains information about the values and fault conditions that can be reported by the status system on Mirage 304K devices.

The status system provides an overview of the device at the current point in time. It contains a number of groups, which contain a set of status items. Each status item represents a component or sub-component of the system. Obtain specific details regarding a warning or error for a status item using the log system.

The numbers next to the status items in this guide correspond directly to the status item index within each group.

The device presents the information contained in this document in the language selected by the operator.

Product documentation

For installation, setup, and user information, see the product documentation available on the Christie Digital Systems USA Inc. website. Read all instructions before using or servicing this product.

Mirage 304K

1. Access the documentation from the Christie website:

    *   Go to *http://bit.ly/2Fx47O4* or

        https://www.christiedigital.com/en-us/business/products/projectors/3-chip-dlp/3d-projectors

    *   Scan the QR code using a QR code reader app on a smartphone or tablet.

2. On the product page, select the model and switch to the **Downloads** tab.

Related documentation

Additional information on the projector is available in the following documents.

*   *Mirage 304K Installation and Setup Guide (P/N: 020-102013-XX)*
*   *Mirage 304K User Guide (P/N: 020-101778-XX)*

- *Boxer Product Safety Guide (P/N: 020-101780-XX)*
- *Boxer 4K Service Guide (P/N: 020-101699-XX)*
- *Mirage 304K Serial Commands Guide (P/N: 020-101776-XX)*

Status system states

The status system has three states to indicate the health of the device.

	OK	No known issue
	Warning	A problem with this item should be addressed.
	Error	A problem with this item prevents the projector from properly displaying video or turning on the projector.

Alarm Group (SST+ALRM?)

Displays any status items in the warning or error state. This group contains a dynamic number of status items. If everything in the projector is OK, this group is empty.

Configuration Group (SST+CONF?)

The Configuration Group provides values and fault conditions for configuration-related items in Mirage 304K.

#	Status	State	Value	Description
0	Projector Model		\<projector model\>	Displays the model for the Mirage 304K projector.
			Unknown	Cannot retrieve the model information.
			Jig Mode	Reserved for engineering use.
1	Projector S/N		\<serial number\>	Displays the serial number of the projector.
			Unknown	The storage device containing the information is inaccessible or the data on the device is corrupted.
2	Output Resolution		\<horizontal\>x\<vertical\>	Displays the native output resolution of the projector.
3	Projector Build Date		\<YYYY\>/\<MM\>/\<DD\>	Displays the build date of the projector.

#	Status	State	Value	Description
		☐	Unknown	The storage device containing the information is inaccessible or the data on the device is corrupted.

System Group (SST+SYST?)

The System Group provides values and fault conditions relating to the system and its health for Mirage 304K.

Some of the lamp driver and memory module statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
0	Projector Hours	☐	<hours>:<minutes>	Displays the total amount of time that the projector has been on (including warm up and cool down times).
		🟧	N/A	Cannot retrieve or update the value.
1	Pitch/Roll	☐	<pitch value>/<roll value>	Displays the physical orientation of the projector: • A negative pitch means that the projector is pointing down. • A negative roll means the projector is tilted counter clockwise as seen from the rear.
		☐	Communication Fault	Information is not available due to a hardware fault.
5 6 7 8	Lens Motor Horizontal-Axis Lens Motor Vertical-Axis Lens Motor Zoom- Axis Lens Motor Focus- Axis	☐	Calibrating	Currently calibrating the lens motor.
		☐	Calibrated	The motor range has been properly calibrated.
		☐	Unknown	The status of the motor is unknown because a problem occurred in the upstream communication path.
		🟧	Uncalibrated	The range for the current lens has not been determined and/or the reported position on the axis may be inaccurate.
		🟧	Failed	During reset or calibration, an error was detected related to the motor and/or sensor.
9	Built-In Self Test	☐	N/A	The built-in self test has not been executed yet.

#	Status	State	Value	Description
		☐	Passed	The built-in self test completed successfully.
		🟧	Failed	The built-in self-test failed.
10	System ID Board	☐	OK	The device has been properly detected and initialized.
		☐	Unknown	The status of the device is unknown.
		🟥	Communication Fault	Cannot communicate with the device.
		🟥	Invalid Data	The information on the device is missing or corrupted.
11	Housekeeping Board	☐	OK	The device has been properly detected and initialized.
		☐	Unknown	The status of the device is unknown.
		🟥	Detection Fault	Cannot read the device hardware information.
		🟥	Initialization Fault	Cannot properly initialize the device.
		🟥	Communication Fault	The device failed to respond or it provided a bad response to a command.
12	Keypad Display	☐	Auto Detect	The projector is attempting to detect the presence of the IKB and PDS.
		☐	Programming	Programming the device with the correct firmware.
		☐	OK	The device has been properly detected and initialized.
		🟧	Detection Fault	Cannot detect the IKB and PDS.
		🟧	Unexpected Behavior	The device is not responding correctly.
		🟧	Upgrade Failed	The device failed to upgrade properly.
13	Power Supply	☐	OK	The power supply has been properly detected and initialized.
		☐	Unknown	The status of the power supply is unknown due to an upstream communication fault.
		☐	Limited Mode	The power supply is running in limited power mode.

#	Status	State	Value	Description
		🟧	Fan Problem	One or more of the power supply fans is not performing to specification.
		🟧	Overtemperature	The power supply is reporting an overtemperature event even though all fans are operational.
		🟧	Overtemperature/Fan Problem	The power supply is reporting an overtemperature event and a fan problem.
		🟥	Communication Fault	Communication either timed out or an error occurred in the transmission/reception of data.
		🟥	Upgrade Failed	The power supply failed to upgrade or downgrade to the correct firmware version.
14	Lamp A1 Driver	⬜	OK	The device has been properly detected and initialized.
15	Lamp A2 Driver			
16	Lamp A3 Driver	⬜	Unknown	The status of the device is unknown.
17	Lamp B1 Driver			
18	Lamp B2 Driver	🟧	Communication Fault	A problem occurred communicating with the device.
19	Lamp B3 Driver			
		🟧	General Fault	The device is not behaving as expected.
		🟧	Upgrade Failed	Failed to upgrade the lamp driver to the correct firmware version.
		🟧	Overheat Protection	The lamp driver is overheating.
		🟧	Low Voltage	The lamp driver is not providing enough voltage to the lamp.
		🟧	High Voltage	The lamp driver is providing too much voltage to the lamp.
		🟧	DC Drive Error	The lamp driver stopped due to a DC drive error.
		🟧	Low Input Voltage	The lamp driver is not receiving enough power.
		🟧	Abnormal Voltage Surge	The lamp driver received an abnormal surge of power.
20	Lamp A1 Memory Module	⬜	OK	The device has been properly detected and initialized.
21	Lamp A2 Memory Module			
22	Lamp A3 Memory Module	⬜	Unknown	The status of the device is unknown because the communication path to the memory module is non-functional.
23	Lamp B1 Memory Module			
24	Lamp B2 Memory Module			
25	Lamp B3 Memory Module			

#	Status	State	Value	Description
		🟧	Communication Fault	Cannot communicate with the device.
		🟧	Invalid Data	The information on the device is missing or corrupted.
26	Lamp Door	⬜	Closed	The lamp door is closed.
		⬜	Unknown	The lamp door status is unknown because the housekeeping board cannot be communicated with. See the Housekeeping Board status item for details about the failure.
		🟥	Open	The lamp door is open.
27	Power Supply Input Voltage	⬜	<voltage>V	The incoming AC voltage into the power supply is OK.
		⬜	Unknown	The status of this output is unknown because the power supply cannot be communicated with.
		🟧	<voltage>V	The incoming AC voltage is out of range.
28	Spare Interlock	⬜	Closed	The interlock is closed.
		⬜	Unknown	The spare interlock status is unknown because the housekeeping board cannot be communicated with. See the Housekeeping Board status item for details about the failure.
		🟧	Open	The interlock is open.
29	Lens ID	⬜	Detected	The lens was detected.
		⬜	Unknown	The communication path to the lens is not working; therefore, the state is unknown.
		🟧	Not Detected	Cannot detect the lens.
30	Main Control Board	⬜	OK	The IMXB FPGA has been initialized at least once and is known to be OK.
		⬜	Unknown	The IMXB FPGA status is unknown because it has not been powered up yet.
		🟥	Initialization Fault	Cannot successfully program the IMXB FPGA.

#	Status	State	Value	Description
32 33 34 35 36 37	Power Supply Output A1 Power Supply Output A2 Power Supply Output A3 Power Supply Output B1 Power Supply Output B2 Power Supply Output B3	☐	OK	The device has been properly detected and initialized.
		☐	Unknown	The status of this output is unknown because the power supply cannot be communicated with.
		🟧	Overcurrent Detected	The lamp driver/lamp on this output rail was drawing too much power.
38 39	Lamp Cartridge A Lamp Cartridge B	☐	Detected	Successfully detected the lamp cartridge.
		☐	Unknown	The status of the lamp cartridge is unknown because a problem exists with the housekeeping board.
		🟧	Not Detected	The lamp cartridge became undetected while the lamps were on.
		🟥	Not Detected	The lamp cartridge is undetected while the lamps are off.
40 41 42 43 44 45	Lamp A1 Memory Module Reader Lamp A2 Memory Module Reader Lamp A3 Memory Module Reader Lamp B1 Memory Module Reader Lamp B2 Memory Module Reader Lamp B3 Memory Module Reader	☐	OK	The device has been properly detected and initialized.
		☐	Unknown	The status of the device is unknown.
		🟧	Communication Fault	Cannot communicate with the device.
46	Status LED Board	☐	OK	The status of the status LED board is OK.
		☐	Unknown	The status of the status LED board cannot be determined because the backplane is nonfunctional.
		🟧	Communication Fault	Cannot communicate with the status LED board.
47	Side Panel NFCT	☐	OK	The side panel NFCT is OK.
		☐	Unknown	The side panel NFCT status is unknown because the IKB is non-functional.
		🟧	Communication Fault	Cannot write to or read from the side panel NFCT.
48	Backplane	☐	Off	The backplane is in standby without any cached errors or warnings.
		☐	OK	The backplane has been properly detected and initialized.
		🟥	Detection fault	The backplane hardware information cannot be read.

#	Status	State	Value	Description
		🟥	Initialization fault	The backplane could not be properly initialized.
		🟥	Runtime fault	The backplane experienced an unrecoverable failure during runtime.
49	Image Processor	⬜	Off	The image processor is in standby without any cached errors or warnings.
		⬜	OK	The image processor has been properly detected and initialized.
		🟥	Detection fault	The image processor hardware information cannot be read.
		🟥	Initialization fault	The image processor could not be properly initialized.
		🟥	Runtime fault	The image processor experienced an unrecoverable failure during runtime.
50 51 52	Formatter-Red Formatter-Green Formatter-Blue	⬜	Off	The formatter is in standby without any cached errors or warnings.
		⬜	OK	The formatter has been properly detected and initialized.
		⬜	Unknown	The formatter status cannot be determined due to an upstream issue.
		🟧	Power Bad	The formatter detected an unexpected power glitch and has started the process of parking the DMD. This is often recoverable.
		🟥	Detection fault	The formatter hardware cannot be read.
		🟥	Initialization fault	The formatter could not be properly initialized.
		🟥	Runtime fault	The formatter experienced an unrecoverable failure during runtime.
		🟥	Failed to configure clock	During initialization the clock could not be configured.
		🟥	Failed to program FPGA	During initialization programming the FPGA failed.
		🟥	Memory calibration failed	During initialization an error occurred with memory calibration.
		🟥	Communication fault	Cannot write to or read from the formatter board.
53 54 55	Option Card 0 Option Card 1 Option Card 2	⬜	Off	The option card is in standby without any cached errors or warnings.

#	Status	State	Value	Description
56 57	Option Card 3 Option Card 4		OK	The option card has been properly detected and initialized.
			Not Present	An option card is not installed in this slot.
			Unknown	The option card status cannot be determined due to an upstream issue.
		■	Detection fault	The option card hardware information cannot be read.
		■	Initialization fault	The option card could not be properly initialized.
		■	Runtime fault	The option card experienced an unrecoverable failure during runtime.

Signal Group (SST+SIGN?)

The Signal Group provides values and fault conditions relating to the video signal status for Mirage 304K.

#	Status	State	Value	Description
0 1 2 3 4 11 12 21 22 31 32 41 42	HDBaseT Input Card 0, Input 1 Card 0, Input 2 Card 0, Input 3 Card 0, Input 4 Card 1 - Input 1 Card 1 - Input 2 Card 2 - Input 1 Card 2 - Input 2 Card 3 - Input 1 Card 3 - Input 2 Card 4 - Input 1 Card 4 - Input 2		N/A	Either the card is not present or the card does not have a single input port.
			<input type> (No Signal)	No signal is detected. Where <input type> : {DP, HDMI, DVI, 3G-SDI}
			<input type>, <active window>@ <v-sync rate> (<status>)	Where <input type> : {DP, HDMI, DVI, 3G-SDI} <active window> : <columns>x<rows> <v-sync rate> : the input frame rate, in Hz (##.##Hz) <status> : {"Master", "No signal", "Inactive", "Locked"}
		■	<input type> <active window> @ <v-sync rate> (<status>)	Where <input type> : {DP, HDMI, DVI, 3G-SDI} <active window> : <columns>x<rows> <v-sync rate> : the input frame rate, in Hz (##.##Hz)

#	Status	State	Value	Description
				<status> : {"Unlocked", "Out of phase"}
50	Output Frequency	☐	N/A	No video is being displayed.
		☐	<rate>Hz	Where <rate> : the output frame rate, in Hertz If the input frequency does not match the output frequency, `Free Running @ XX.YYHz` is displayed.
51	Frame Locked	☐	N/A	No video is being displayed or an internal test pattern is being displayed.
		☐	Locked	The output is locked to the selected input(s).
		☐	Unlocked	The output is not locked to the selected input(s).
52	3D Sync	☐	N/A	There is no 3D signal or 3D mode is set to Off.
		☐	Valid 3D Sync	A valid external 3D synch is detected.
		☐	Internal 3D Sync	The system is using the internal v-sync signal because the video is configured as a Dual-Input. External synch is ignored.
		🟧	Invalid 3D Sync (using internal sync)	There is an external 3D sync detected but it is not locked and/or in phase with the 3D video signal(s). The system is using the internal v-sync signal instead may have L/R swapped.
		🟧	No 3D Sync (using internal sync)	There is no external 3D sync detected. The system is using the internal v-sync signal instead but may have L/R swapped.
53	TSIC Connection	☐	N/A	Either the card is not present or the card does not have a single input port.
		☐	No Signal	No signal is detected.

Lamp Group (SST+LAMP?)

The Lamp Group provides values and fault conditions for lamp-related items in Mirage 304K.

Some of the lamp statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
0	Lamp A1 State	☐	On	The lamp is on.
		☐	Warming Up	The lamp is warming up.
		☐	Off	The lamp is off.
		☐	Cooling Down	The lamp is cooling down.
		☐	Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		🟧	Failed to Strike	The lamp failed to strike.
		🟧	Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
		🟧	Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
		🟧	Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
1	Lamp A1 Hours	☐	\<hours\>:\<minutes\> (h:m)	The total amount of time that the lamp has been on.
		☐	Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp A1 Memory Module status item for details of the failure.
		🟧	\<hours\>:\<minutes\> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
3	Lamp A1 Installation Date	☐	\<YYYY\>/\<MM\>/\<DD\>	Displays the date the lamp was installed.
		☐	Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp A1 Memory Module status item for details of the failure.
4	Lamp A1 S/N	☐	\<value\>	Displays the serial number of the installed lamp.
		☐	Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp A1 Memory Module status item for details of the failure.

#	Status	State	Value	Description
6	Lamp A1 Voltage	☐	<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
		☐	Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp A1 Memory Module status item for details of the failure.
40	Lamp A2 State	☐	On	The lamp is on.
		☐	Warming Up	The lamp is warming up.
		☐	Off	The lamp is off.
		☐	Cooling Down	The lamp is cooling down.
		☐	Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		🟧	Failed to Strike	The lamp failed to strike.
		🟧	Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
		🟧	Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
		🟧	Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
41	Lamp A2 Hours	☐	<hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
		☐	Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp A2 Memory Module status item for details of the failure.
		🟧	<hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
43	Lamp A2 Installation Date	☐	<YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
		☐	Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp A2 Memory Module status item for details of the failure.

#	Status	State	Value	Description
44	Lamp A2 S/N		<value>	Displays the serial number of the installed lamp.
			Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with.
				See the Lamp A2 Memory Module status item for details of the failure.
46	Lamp A2 Voltage		<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
			Unknown	The lamp state is unknown because the lamp driver could not be communicated with.
				See the Lamp A2 Memory Module status item for details of the failure.
50	Lamp A3 State		On	The lamp is on.
			Warming Up	The lamp is warming up.
			Off	The lamp is off.
			Cooling Down	The lamp is cooling down.
			Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
			Failed to Strike	The lamp failed to strike.
			Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
			Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
			Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
51	Lamp A3 Hours		<hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
			Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with.
				See the Lamp A3 Memory Module status item for details of the failure.
			<hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.

#	Status	State	Value	Description
53	Lamp A3 Installation Date	☐	<YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
		☐	Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp A3 Memory Module status item for details of the failure.
54	Lamp A3 S/N	☐	<value>	Displays the serial number of the installed lamp.
		☐	Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp A3 Memory Module status item for details of the failure.
56	Lamp A3 Voltage	☐	<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
		☐	Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp A3 Memory Module status item for details of the failure.
60	Lamp B1 State	☐	On	The lamp is on.
		☐	Warming Up	The lamp is warming up.
		☐	Off	The lamp is off.
		☐	Cooling Down	The lamp is cooling down.
		☐	Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		🟧	Failed to Strike	The lamp failed to strike.
		🟧	Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
		🟧	Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
		🟧	Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
61	Lamp B1 Hours	☐	<hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.

#	Status	State	Value	Description
		☐	Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp B1 Memory Module status item for details of the failure.
		🟧	<hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
63	Lamp B1 Installation Date	☐	<YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
		☐	Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp B1 Memory Module status item for details of the failure.
64	Lamp B1 S/N	☐	<value>	Displays the serial number of the installed lamp.
		☐	Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp B1 Memory Module status item for details of the failure.
66	Lamp B1 Voltage	☐	<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
		☐	Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp B1 Memory Module status item for details of the failure.
70	Lamp B2 State	☐	On	The lamp is on.
		☐	Warming Up	The lamp is warming up.
		☐	Off	The lamp is off.
		☐	Cooling Down	The lamp is cooling down.
		☐	Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		🟧	Failed to Strike	The lamp failed to strike.
		🟧	Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.

#	Status	State	Value	Description
		🟧	Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
		🟧	Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
71	Lamp B2 Hours	☐	<hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
		☐	Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp B2 Memory Module status item for details of the failure.
		🟧	<hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
73	Lamp B2 Installation Date	☐	<YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
		☐	Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp B2 Memory Module status item for details of the failure.
74	Lamp B2 S/N	☐	<value>	Displays the serial number of the installed lamp.
		☐	Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp B2 Memory Module status item for details of the failure.
76	Lamp B2 Voltage	☐	<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
		☐	Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp B2 Memory Module status item for details of the failure.
80	Lamp B3 State	☐	On	The lamp is on.
		☐	Warming Up	The lamp is warming up.
		☐	Off	The lamp is off.
		☐	Cooling Down	The lamp is cooling down.

#	Status	State	Value	Description
		☐	Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		🟧	Failed to Strike	The lamp failed to strike.
		🟧	Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
		🟧	Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
		🟧	Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
81	Lamp B3 Hours	☐	<hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
		☐	Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp B3 Memory Module status item for details of the failure.
		🟧	<hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
83	Lamp B3 Installation Date	☐	<YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
		☐	Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp B3 Memory Module status item for details of the failure.
84	Lamp B3 S/N	☐	<value>	Displays the serial number of the installed lamp.
		☐	Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp B3 Memory Module status item for details of the failure.
86	Lamp B3 Voltage	☐	<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
		☐	Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp B3 Memory Module status item for details of the failure.

Version Group (SST+VERS?)

The Version Group provides values and fault conditions related to software and hardware versions for Mirage 304K.

> Some of the lamp driver statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
0	Main Control Board SW Version	☐	\<version\>	Displays the software version running on the controller board.
		🟧	Unknown	Cannot determine the software version information.
1	Main Control Board HW Version	☐	\<name\>.\<level\>.\<mod\>	\<name\> = Short name of the board \<level\> = Version of the board \<mod\> = Modification level of the board
		🟥	Detection Fault	Cannot read the board type information.
2	Backplane HW Version	☐	\<name\>.\<level\>.\<mod\>	\<name\> = Short name of the board \<level\> = Version of the board \<mod\> = Modification level of the board This information is cached while the projector is in standby.
		☐	N/A	The backplane has never been turned on or initialized.
3	Image Processor HW Version	☐	\<name\>.\<level\>.\<mod\>	\<name\> = Short name of the board \<level\> = Version of the board \<mod\> = Modification level of the board This information is cached while the projector is in standby.
		☐	N/A	The image processor board has never been turned on or initialized.
4 5 6	Formatter-Red HW Version Formatter-Green HW Version Formatter-Blue HW Version	☐	\<name\>.\<level\>.\<mod\>	\<name\> = Short name of the board \<level\> = Version of the board \<mod\> = Modification level of the board This information is cached while the projector is in standby.

#	Status	State	Value	Description
		☐	N/A	The formatter failed to be detected or initialized.
7 8 9 10	Option Card 1 HW Version Option Card 2 HW Version Option Card 3 HW Version Option Card 4 HW Version	☐	<name>.<level>.<mod>	<name> = Short name of the board <level> = Version of the board <mod> = Modification level of the board This is cached information while the projector is in standby.
		☐	N/A	The option card has never been turned on or initialized.
17	Power Supply HW Version	☐	<hardware version>.<boot version>.<main version>	<hardware version> = Hardware version of power supply <boot version> = Version of power supply bootloader <main version> = Version of power supply main firmware
		☐	Unknown	Cannot retrieve the hardware version.
18	Housekeeping Board HW Version	☐	<name>.<level>.<mod>	<name> = Name of the board (such as HKBA) <level> = Hardware version of the board <mod> = Modification level of the board
		☐	Unknown	Cannot retrieve the hardware version.
19	Keypad Display HW Version	☐	<name>.<level>.<mod>	<name> = Name of the board (such as IKB) <level> = Hardware version of the board <mod> = Modification level of the board
		☐	Unknown	Cannot retrieve the hardware version as the board is not ready.
20 21 22 23 24 25	Lamp A1 Driver HW Version Lamp A2 Driver HW Version Lamp A3 Driver HW Version Lamp B1 Driver HW Version Lamp B2 Driver HW Version Lamp B3 Driver HW Version	☐	<version>	Displays lamp driver information.
		☐	Unknown	Cannot retrieve the hardware version of the lamp driver.
34	Option Card 0 HW Version	☐	<name>.<level>.<mod>	<name> = Short name of the board

#	Status	State	Value	Description
				<level> = Version of the board
				<mod> = Modification level of the board
				This information is cached while the projector is in standby.
			N/A	The option card has never been turned on or initialized.

Temperature Group (SST+TEMP?)

The Temperature Group provides values and fault conditions for temperature-related items in Mirage 304K.

📝 Some of the lamp driver statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
2	Air Intake Temperature (Temp 2)		<value> °C	Displays the current temperature of the sensor.
			Unknown	Temperature reading is unavailable.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
4	Main Control Board Temperature		<value> °C	Displays the current temperature of the sensor.
5	Backplane Temperature			
6	Image Processor Scaler Temperature		N/A	Temperature reading is unavailable.
7	Image Processor Warp-Red Temperature			
8	Image Processor Warp-Green Temperature	🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
9	Image Processor Warp-Blue Temperature	🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
10	Formatter-Red Temperature	🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.

#	Status	State	Value	Description
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
11	DMD Waterblock Temperature	⬜	<value> °C	Displays the current temperature of the sensor.
		⬜	Unknown	Temperature reading is unavailable.
		⬜	Not Present	The temperature sensor is not present.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
12 14 16 17 18 19	Formatter-Green Temperature Formatter-Blue Temperature Option Card 1 Temperature Option Card 2 Temperature Option Card 3 Temperature Option Card 4 Temperature	⬜	<value> °C	Displays the current temperature of the sensor.
		⬜	N/A	Temperature reading is unavailable.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
20 23 24 25 26 27 28	Housekeeping Board Temperature Lamp A1 Driver Temperature Lamp A2 Driver Temperature Lamp A3 Driver Temperature Lamp B1 Driver Temperature Lamp B2 Driver Temperature Lamp B3 Driver Temperature	⬜	<value> °C	Displays the current temperature of the sensor.
		⬜	Unknown	Temperature reading is unavailable.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.

#	Status	State	Value	Description
		🟧	\<value\> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	\<value\> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟧	\<value\> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟥	\<value\> °C - Too Cold (shutdown)	Temperature is below the error threshold.
29	Main Control Board FPGA Temperature	⬜	\<value\> °C	Displays the current temperature of the sensor.
		⬜	N/A	Temperature reading is unavailable.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
		🟧	\<value\> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	\<value\> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟧	\<value\> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟥	\<value\> °C - Too Cold (shutdown)	Temperature is below the error threshold.
34 35 36	Power Supply Heat Sink 3 Temperature Power Supply Heat Sink 5 Temperature	⬜	\<value\> °CPower Supply Heat Sink 2 Temperature	Displays the current temperature of the sensor.
		⬜	Unknown	Temperature reading is unavailable.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
		🟧	\<value\> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	\<value\> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟧	\<value\> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟥	\<value\> °C - Too Cold (shutdown)	Temperature is below the error threshold.
37	Option Card 0 Temperature	⬜	\<value\> °C	Displays the current temperature of the sensor.
		⬜	N/A	Temperature reading is unavailable.

#	Status	State	Value	Description
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
		🟧	\<value\> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	\<value\> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟧	\<value\> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟥	\<value\> °C - Too Cold (shutdown)	Temperature is below the error threshold.

Cooling Group (SST+COOL?)

The Cooling Group provides values and fault conditions related to cooling and fans for Mirage 304K.

Some of the lamp and bulb blower statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
0 1 3 4 5 6 8 9 10	Intake A (Fan 19) Intake B (Fan 20) Formatter-Green (Fan 23) LAD Blower A (Fan 26) Card Cage Intake (Fan 32) Card Cage Intake (Fan 33) HIP Blower A (Fan 17) Card Cage Exhaust (Fan 30) Card Cage Exhaust (Fan 31)		\<tach\> RPM	Displays the current tachometer reading.
			Off	Fan is off.
			Unknown	The tachometer reading is unavailable.
		🟧	\<tach\> RPM - Low RPM	Fan tachometer reading is lower than the minimum recommended speed.
		🟧	Off - Overridden	Fan is off. The fan speed has been changed from its default recommended value.
		🟧	\<tach\> RPM - Overridden	Fan is on. The fan speed has been changed from its default recommended value.
12	Liquid Cooling Flow Meter		\<value\> L/min	Displays the amount of liquid flowing past the sensor.
			Off	Liquid cooling is off.
			Unknown	The tachometer reading is unavailable.

#	Status	State	Value	Description
		☐	<value> L/min - Flow Impeded	The flow reading is lower than the minimum recommended threshold.
13	Liquid Cooling Pump	☐	<tach> RPM	Displays the current tachometer reading.
		☐	Off	Fan is off.
		☐	Unknown	The tachometer reading is unavailable.
		🟧	<tach> RPM - Low RPM	Fan tachometer reading is lower than the minimum recommended speed.
15	HIP Blower B (Fan 18)	☐	<tach> RPM	Displays the current tachometer reading.
16	Lamp Driver Exhaust (Fan 22)			
17	Lamp Driver Intake (Fan 21)	☐	Off	Fan is off.
18	Bulb Blower A1 (Fan 6)			
19	Bulb Blower A2 (Fan 5)	☐	Unknown	The tachometer reading is unavailable.
20	Bulb Blower A3 (Fan 4)			
21	Bulb Blower B1 (Fan 3)	🟧	<tach> RPM - Low RPM	Fan tachometer reading is lower than the minimum recommended speed.
22	Bulb Blower B2 (Fan 2)			
23	Bulb Blower B3 (Fan 1)			
24	Lamp Fan A1 (Fan 12)	🟧	Off - Overridden	Fan is off. The fan speed has been changed from its default recommended value.
25	Lamp Fan A2 (Fan 10)			
26	Lamp Fan A3 (Fan 8)			
27	Lamp Fan B1 (Fan 11)	🟧	<tach> RPM - Overridden	Fan is on. The fan speed has been changed from its default recommended value.
28	Lamp Fan B2 (Fan 9)			
29	Lamp Fan B3 (Fan 7)			
31	Formatter-Red (Fan 24)			
33	Radiator Fan A (Fan 13)			
34	Radiator Fan B (Fan 14)			
35	Radiator Fan C (Fan 15)			
36	Radiator Fan D (Fan 16)			
37	LAD Blower B (Fan 27)			
43	Formatter-Blue (Fan 25)			
	Lamp Door Fan 1 (Fan 28)			
	Lamp Door Fan 2 (Fan 29)			
45	Power Supply Fan 1	☐	<tach> RPM	Displays the current tachometer reading.
46	Power Supply Fan 2			
47	Power Supply Fan 3	☐	Unknown	The status of this output is unknown because the power supply cannot be communicated with.

Serial Group (SST+SERI?)

The Serial Group provides values and fault conditions related to hardware serial numbers for Mirage 304K.

#	Status	State	Value	Description
0	Main Control Board S/N	☐	<serial number>	Displays the electronic serial number of the main control board.
		🟧	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly.
1	Backplane S/N	☐	<serial number>	Displays the electronic serial number of the backplane.
		☐	N/A	The information is not currently available (card not present or not powered).
		🟧	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly
2	Image Processor S/N	☐	<serial number>	Displays the electronic serial number of the board.
		☐	N/A	The information is not currently available (card not present or not powered).
		🟧	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly
3 4 5	Formatter-Red S/N Formatter-Green S/N Formatter-Blue S/N	☐	<serial number>	Displays the electronic serial number of the formatter.
		☐	N/A	The information is not currently available (card not present or not powered).
		🟧	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly
6 7 8 9	Option Card 1 S/N Option Card 2 S/N Option Card 3 S/N Option Card 4 S/N	☐	<serial number>	Displays the electronic serial number of the option card.
		☐	N/A	The information is not currently available (card not present or not powered).
		🟧	Missing S/N	Cannot retrieve the value because the serial number was not

#	Status	State	Value	Description
				programmed into the board correctly
14 15	Housekeeping Board S/N Keypad Display S/N	☐	<serial number>	Displays the electronic serial number of the board.
		☐	Unknown	The serial number is unavailable because the board is not ready.
		🟧	Missing Serial Number	Cannot retrieve the value because the serial number was not programmed into the board correctly.
16	Option Card 0 S/N	☐	<serial number>	Displays the electronic serial number of the option card.
		☐	N/A	The information is not currently available (card not present or not powered).
		🟧	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly

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