

Error Codes – Gemini rom v4.05

The errors are numbered in relationship to possible causes as follows:

- error numbers 100-199: Errors possibly caused by improper use of instrument.
- error numbers 200-299: Errors probably due to a Main board failure or an error in the firmware code
- error numbers 300-399: Instrument errors due to either a Main board failure or other system failure
- error numbers 400-499: Errors due to failure or improper initialization of the instruments Non-Volatile memory (NVRAM)

Bold face error are considered fatal. If detected during power up, instrument will abort power up sequence and display fatal error number on LCD panel. The **status** will drop into fatal and the instrument could give unreliable results if used.

ERROR CODE	ERROR MESSAGE	NOTES
100	command not found	Command string not recognized.
101	invalid argument	Command Argument not recognized.
102	invalid data	Command argument out of range.
103	too many arguments	Too many arguments after command
104	not enough arguments	Missing arguments.
105	input line too long	Too many characters in the input line
106	command error, system busy	Instrument could not perform the give command because it was busy doing another task. Example: Request a wavelength while the monochromator is in motion.
107	command error, measurement in progress	Instrument could not perform command because a measurement was in progress
108	command error, no data available	Inputting transfer when there's no data in the buffer
109	data buffer full	Too many data sets in the buffer. Can be caused by setting up a long kinetic and disconnecting computer or SoftMax Pro is pre-empted by another application
110	error buffer full	More than 65 errors in the buffer

Gemmini rom v404 Error Code

Error Type

Error Causes

112	Invalid read settings	Incompatible instrument settings were selected before issuing the read command. Can be caused by readType, mode or number of wavelengths.
200	attempt to free invalid address	firmware error
201	NVRAM structure error	firmware error
202	write of NVRAM failed	
203	read of NVRAM failed	
204	invalid NVRAM address	firmware error
205	user generated bus error	result of improper use of certain commands
206	Invalid baud rate	firmware error
207	bad error number	firmware error
208	unexpected interrupt	hmmm?
209	receive buffer overflow	Caused by external device sending too much data over serial port and ignoring flow control.
210	serial port parity error	Parity bit error detected with incoming serial data.
211	serial port overrun error	Caused by host computer sending too much data and ignoring the flow control signal
212	illegal state	firmware error
213	cmd generated too much output	firmware error
214	fatal trap	most likely a firmware error. Instrument locks up
215	returned from MAIN	firmware error
216	memory allocation failed	firmware error
217	Power up diag failed	See attached message for more info. If a “slave memory error” could be caused by faulty optics pcb

218	Gain calibration failed	Power up calibration and check of signal path gain is out of tolerance. Could be due to bad or disconnected pre-amp or excessive stray light
220	Reference gain check fail	Power up check of Reference amplifiers gain out of tolerance. Could be due to bad or disconnected pre-amp board or excessive stray light
221	DMA timeout	Problem with communication between the Master and Slave CPU. Possible faulty optics controller pcb.
222	DMA busy	Problem with communication between Master and slave CPU
223	IPC drawer error	most likely a firmware error
224	IPC filter error	most likely a firmware error
225	IPC stage error	most likely a firmware error
226	PMT over-current error	Very high pre-integrate value, could be light leak.
227	PMT auto-range fail	PMT voltage changes could not get target value in range. Will use default or closest voltage.
300	temp sensor faulty	unable to read a reasonable thermistor value. Thermistor faulty , disconnected, Main board problem, or ambient temperature out of range
301	safe temperature limit exceeded	a temperature of over 50 deg C detected on one or more of the 4 thermistors. Temperature will be shut off and remain off until a successful completion of power up reset.
302	low light measurement	Not enough light detected to make a accurate measurement.
303	unable to cal dark current	Too much stray light detected on power up, faulty or disconnected pre-amp boards
304	mono photo switch failure	On power up, monochromator spins until photo interrupt trips. If this doesn't happen in a reasonable time, this error is logged.
305	carriage motion time out	Carriage did not move to either of its photo interrupts in a reasonable time

306	Ex grating motion time out	Excitation monochromator grating didn't move to where it was commanded to in a reasonable time
307	Ex filter wheel motion time out	Excitation filter wheel didn't move to where it was commanded to in a reasonable time
308	plate air calibration failed	See attached error message for more details
309	Measurement aborted	Should never see this error, instead, the problem that caused the measurement to abort will be reported
310	Signal level saturation	
311	Plate air cal fail, low light	Minimum signal/reference ratio not meet during air calibration
312	Can't find zero-order	On power up, monochromator could not find zero-order home position
313	Wavelength out of calibration	Wavelength accuracy not checked on SpectraMax Plus
315	Can't find home on filter wheel	Power up error
316	Stray light plate	Light leak in reading chamber, faulty pre-amp boards.
317	LCD time-out	LCD front panel bad or disconnected
318	Stage top timeout	Stage top didn't move to where it was commanded to in a reasonable time
319	Em grating motion time-out	Emission monochromator grating didn't move to where it was commanded to in a reasonable time
320	Em filt wheel motion time-out	Emission filter wheel didn't move to where it was commanded to in a reasonable time
321	photo switch failure	Problem with the optical bench photo interrupt.
322	alignment timeout	Alignment calibration of carriage or stage top did not finish in a reasonable search distance.
323	Low lamp level warning	Problem with lamp intensity detected in bootup test.
324	Pmt cal coefficient check failed	Coefficient value out of range or repeatability problem.

Gemmini rom v404 Error Code**Error Type****Error Causes**

400	NVRAM Pathlength checksum corrupt	Pathlength data is corrupt.
402	mono cal NVRAM data error	monochromator calibration data is unreasonable
405	PMT sensitivity NVRAM error	PMT sensitivity value is unreasonable
406	RFU Multiplier NVRAM error	RFU Multiplier value is unreasonable
407	Axis Scale factor NVRAM error	X or Y Axis Scale factor value is unreasonable
408	PMT cal volts NVRAM error	PMT cal volts value is unreasonable