## SC20/25 Serial Communication Command Set

Command sent to SC20/25	Data Returned from SC20/25 if no error	Message Returned from SC20/25 if an error occurs	Function
v <cr> (lowercase "V")</cr>	Model and version number <cr><lf></lf></cr>	e <cr><lf></lf></cr>	The SCC20/25 will send back the current Model and Version number. Example "SC25 v1.0"
p <cr></cr>	Plate Temp <cr><lf></lf></cr>	e <cr><lf></lf></cr>	The SC20/25 will send back the current plate temperature
			HyperTerminal example: type the letter "p" (no quotes) and hit the "enter" key If the current plate temperature is 20C, "20" will be sent back followed by a carriage return and line feed character (the <u>HyperTerminal cursor will move to the beginning of the next line.</u> )
s <cr></cr>	Setpoint Temp <cr><lf></lf></cr>	e <cr><lf></lf></cr>	The SC20/25 will send back the current setpoint temperature HyperTerminal example: type the letter "s" (no quotes) and hit the "enter" key
			If the current setpoint temperature is -9C, "-9" will be sent back followed by a carriage return and line feed character
I <cr></cr>	All logged values delimited by <cr><lf></lf></cr>	e <cr><lf></lf></cr>	The SC20/25 will send back the all the logged values for the last log session. Each datapoint will be separated by <cr><lf>.</lf></cr>
			HyperTerminal example: Capture the log data to a text file by selecting "Transfer" then "Capture Text" from the HyperTerminal menu. Give the file a name and add ".csv" to the name (example "filename.csv) and click on the "Start" button. Then type the letter "I" (no quotes) in the terminal window and hit the "enter" key. The data will be displayed in the terminal window and captured to the file. Stop the log capture by selecting, "Transfer" then "Capture Text" then "Stop" from the HyperTerminal menu. The saved log file may now be opened directly from an application like Microsoft Excel for charting or analysis.
b <cr></cr>	s,m, or 5 <cr><lf></lf></cr>	e <cr><lf></lf></cr>	The SC20/25 will send back the time base for the "Log Options" on the SC20/25. If temperatures are logged every second, "s" will be returned. If temperatures are logged every minute, "m" will be returned. If temperatures are logged every 5 minutes, "5" will be returned. HyperTerminal example: type the letter "b" (no quotes) and hit the "enter" key
			If the "Log Option" selection is once every second, "s" will be sent back followed by a carriage return and line feed char.
r <cr></cr>	Current orbital mixing speed <cr><lf></lf></cr>	e <cr><lf></lf></cr>	The SC20/25 will return the current Orbital Mixing Speed setting 0(off) to 9.
m{value} <cr></cr>	ok <cr><lf></lf></cr>	e <cr><lf></lf></cr>	Change the Orbital Speed setting. Value must be 0(off) to 9.
			HyperTerminal example: type "m5" (no quotes) and hit the "enter" key The Orbital Speed setting will change to "5" and the shaker will adjust to that speed. NOTE: If you write your own control code from something like Visual Basic, provide a 1 second delay before and after executing the "Change the Orbital Speed" command.
n{value} <cr></cr>	ok <cr><lf></lf></cr>	e <cr><lf></lf></cr>	Change the "Set Point" temperature on the SC20/25 to a new value. The new value must be in the range –10 to 90. HyperTerminal example: type "n73" (no quotes) and hit the "enter" key The Set Point on the SC20/25 will change to 73C and "ok" will be sent back followed by a carriage return and line feed character (the HyperTerminal cursor will move to the beginning of the next line.) NOTE: If you write your own control code from something like Visual Basic, provide a 1 second delay before and after executing the "Change Set Point" command.

## Notes:

- Serial protocol is 9600 baud, 1 stop bit, no parity
  When the SC20/25 powers up, "SC20/25 vx.x" will be sent to the terminal
  <CR> is the ASCII "carriage control character (d'13')
  <LF> is the ASCII "line feed" character (d'10)

- 5. Commands are case sensitive