

Command sent to IC20/25	Data Returned from IC20/25 if no error	Message Returned if an error occurs	Function
v<CR> (lowercase "v")	Model and version number<CR><LF>	e<CR><LF>	The IC20 will send back the current Model and Version number. Example "IC20 v2.0"
p<CR> (lowercase "p")	Plate Temp<CR><LF>	e<CR><LF>	The IC20 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 HyperTerminal cursor will move to the beginning of the next line.)
s<CR> (lowercase "s")	Setpoint Temp<CR><LF>	e<CR><LF>	The IC20 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 (the HyperTerminal cursor will move to the beginning of the next line.)
l<CR> (lowercase "l")	All logged values delimited by <CR><LF>	e<CR><LF>	The IC20 will send back the all the logged values for the last log session. Each datapoint will be separated by <CR><LF>. 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 "l" (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> (lowercase "b")	s,m, or 5 <CR><LF>	e<CR><LF>	The IC20 will send back the time base for the "Log Options" on the IC20. 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.
i<CR> (lowercase "i")	ok<CR><LF>	e<CR><LF>	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 character (the HyperTerminal cursor will move to the beginning of the next line.)
n(Value)<CR> (lowercase "n")	ok<CR><LF>	e<CR><LF>	The IC20 will go into "Idle Mode". Power to the plate will be turned off, "off" will be displayed as the SetPoint. The actual Plate Temperature will continue to update and be displayed. In Idle Mode, RS232 "s" commands will return "off", and "p" commands will return the current Plate Temperature. To exit idle mode, set a new setpoint using the "s" command over the RS232 line, or press one or both push buttons on the unit, or cycle power to the unit. Change the "Set Point" temperature on the IC20 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 IC20 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:

1. Serial protocol is 9600 baud, 1 stop bit, no parity
2. When the IC20 powers up, "IC20 vx.x" will be sent to the terminal
3. <CR> is the ASCII "carriage control character (d'13)
4. <LF> is the ASCII "line feed" character (d'10)
5. Commands are case sensitive