RS232 Communication

The RG-9 supports getting the intensity through RS-232 at 3.3V, more information on the protocol can be found at
www.rainsensors.com/rg-9-15-protocol

All lines are terminated with a carriage return followed by a new line, this is used for all output. But only the new line is required for commands. The command is processed following the new line.

Cmd (case insensitive)	Description, example response	
R	Read available data. Responses: "R 0" "R 1" "R 0 TooCold" TooCold = appended to message if it is too cold to reliably sense, this will also set the R value to 0.	
K	(Kill) Restarts the device, this will output the header, readjust the emitters and read the DIP switches again. Response: *Device Restarts*	
B <baud Code>	Set the baud rate, if none is specified responds with the current baud rate. Response: "Baud <baud rate>" *sent just before it is changed* "Baud 9600"	**Baud Codes:** 0 = 1200 1 = 2400 2 = 4800 3 = 9600 (Default) 4 = 19200 5 = 38400 6 = 57600
P	Set to polling only mode, outputs a new R message only when requested by the 'R' command. Response: "p"	
C	Set to continuous mode, outputs a new R message when the intensity changes. Response: "c"	

The output keywords can be comma delimited such as
"Emitters 9 10, Emtotal 19", with a space following the comma.

Output Keyword	Description, example output	
Reset	Shows the reason the device was reset.	
	Possible variations: Reset N Reset M Reset W Reset O Reset U Reset B Reset D	N = Normal Power Up M = MCLR W = Watchdog Timer Reset O = Stack Overflow U = Stack Underflow B = Brownout (Low Voltage/ disconnected) D = Other

SW	Firmware version & build date Ex: SW 1.000 2020.06.05
Emitters	Emitter 1 & 2 Levels Ex: Emitters 9 10
EmTotal	Sum of emitters Ex: EmTotal 19
DIP	DIP Switch positions 1234 Ex: DIP 1010
PwrDays	How many days the device has been powered on Ex: PwrDays 13
;	The semicolon is used to indicate that this line doesn't include any data, this is not always followed by a space. ;** ; ; HYDREON MODEL RG-9 RAIN GAUGE
LensBad	The Lens is not able to get sufficient light through for reasonable readings.
EmSat	Emitter is saturated. Can be useful for diagnostics.