MBC-IQ-LAB Protocol communication

MBC-IQ-LAB uses an USB to RS232 converter to communicate. Below is the list of commands:

Communication channel:

<u>RS232 link settings:</u>

115200bps

1 stop bit

No parity

No data flow control

Set command:

Allows you to change parameters

Commands	Parameters	Possible values (#)	Step	Unit	Returned value	Examples
RMX ####	Running mode 1/2/3	AUTO or MAN	NA	NA	OK or ERR	RM1 A (command for Auto mode)
DAX ####	Dither amplitude 1/2	10 to 1000	1	mV	*Sent parameter or ERR*	*DA1 110 (set dither amplitude to 110mV)*
PG #	Photodiode gain	0 to 127	1		*Sent parameter or ERR*	*PG 100 (set photodiode gain to 3)*
PP ####	Photodiode polarity	INV or NOT	NA		*Sent parameter or ERR*	*PP INV (set photodiode polarity to INV)*
BVX #####	BIAS value 1/2/3	-13500 to 13500	1	mV	*Sent parameter or ERR*	*BV1 4521 (set Bias voltage to 4,521V)*

SR	Scan Restart	NA	NA	NA	*OK or ERR*	*SR*
Q#	DC3 Polarity: QUAD+ or QUAD-	+ or -	NA	NA	*OK or ERR*	*Q+* *(set polarity to QUAD+)* *Q-* *(set polarity to QUAD-)*

Each command must end with a carriage return "\r" (carriage return 'CR' ASCII code 13)

If the command is valid, the board will return the sent value or « OK » depending on the command.

If an error occurs, the board will return: « ERR »

GET commands:

Returns a parameter's value

Commands	Parameters	Possible returned values	Units
RMX?	Running mode 1/2/3	AUTO or MAN	NA
DAX?	Dither amplitude 1/2	10 to 1000	mV
PG?	Photodiode gain	0 to 127	-
PP?	Photodiode polarity	INV or NOT	
BV?	BIAS value	-13500 to 13500	mV
Q?	DC3 Polarity (QUAD+/-)	Q+ or Q-	NA

Each command must end with a carriage return "\r" (carriage return 'CR' ASCII code 13)

If the command is valid, the board will return the value of the corresponding parameter.

If an error occurs, the board will return: « ERR »