

ROV Minimalist Protocol

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Version: This protocol will be designated as SCINI Mark Ic.

All packets sent to the microcontroller should, but do not have to be, terminated with a line feed. All packets returned from the micro will be terminated with a line feed and carriage return ('nr'). The escape character (0x1B) sent to the micro will clear any started transmission. Null characters are always ignored with no response but should not be inserted in the middle of a transmission. An enquiry character (0x05) will return an acknowledge packet (0x06).

All hex values should have digits or lowercase characters only; a packet containing other hex characters will be accepted but ignored.

Packets

'N' is a digit (0,9); 'X' is a lowercase hex character (0,f).

Format	Definition
i	identify, returns an alive character ('.', 0x2E)
I	identify, returns an identification string
sNNXX	set variable NN to hex value XX
gNN	get variable NN, returns vNNXXXX
!!!	enter interactive mode

Variables

Number	Definition
00 to 09	PWM outputs; 00 to 05 are for motor controllers and bounded to valid servo control values; 06 to 07 are for light dimming etc and the value determines the proportion of time the output pin is set high. Getting these returns the current value, setting them sets the output value, bounded to 8-bit (0,255).
10 to 19	Analog inputs; setting these has no effect, getting them returns the most recently read value, bounded to 10-bit (0,1023).
20 to 29	Smoothed analog inputs; setting these to any value clears the averaging, reading returns a smoothed value for the corresponding input channel.

