Commands for the B12 mobile robot base control PIC

Created: April 26, 2001; Last modified: May 14, 2001

This document covers the commands recognized by the control PIC. Throughout this document, commands are denoted as (x,y), where x is a command type integer in [0,255], and y is an integer argument in [0,255]. For more information, refer to the document *Signal specifications for the B12 mobile robot base control PIC*.

1 Supported commands

Specifying an undefined command type code is equivalent to specifying a nop.

	Command name	Parameter description	Description
$(0, y)$	nop	unused	executes a null operation and immediately waits for a new command
$(1, y)$	forwardAvoid	the distance to move in tens of centimeters (for example, specifying 23 as the parameter would result in a net translation of 230 centimeters)	moves the base forward by the specified amount using obstacle avoidance; continues obstacle avoidance until the base has moved by the specified distance in the direction that was "forward" when the command was issued; after the forward travel, the base is left in the rotational orientation it was in when the command was issued
$(2, y)$	rotateLeft	the amount to rotate in 1/256 rotations	rotates the base to the left, or counter-clockwise if looking down at the base; specifying a parameter value of 128 will rotate the base 180°; there is no way to specify a rotation of a complete 360°, as this is equivalent to a rotation of 0°
$(3, y)$	rotateRight	the amount to rotate in 1/256 rotations	rotates the base to the right, or clockwise if looking down at the base; see rotateLeft for more information
$(4, y)$	flashLight	the number of times to flash the light	flashes a light attached to pin B3; each light pulse is 500ms long, and the gap between pulses is also 500ms long