

communication protocol																	
Lower computer (for receiving data) data protocol format																	
General protocol	state of motion			rotate		whistle		accelerate and decelerate		shake left and right		stop		swing		servo reset	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
data packet header	Command bit	Separator symbol	Command bit	Separator symbol	Command bit	Separator symbol	Command bit	Separator symbol	Command bit	Separator symbol	Command bit	Separator symbol	Command bit	Separator symbol	Command bit	Separator symbol	Command bit
stop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
run	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
back	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
turn left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
turn right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
turn left in place	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
turn right in place	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
whistle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
accelerate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
decelerate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shake left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shake right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
stop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
light	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
outfire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
servo reset	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sensor reading	Command bit	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol
Notes	4WD	CSB	VALUE		PV	VALUE		GS	VALUE		LF	VALUE		HW	VALUE		
for example	\$4WD	CSB125	PV18	0.05214	LF1011	HW01	GM10#										
manipulator reading	Command bit	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol
Notes	4WD	MP1	VALUE	0-180°	MP2	VALUE	0-180°	MP3	VALUE	0-180°	MP4	VALUE	0-180°	MP5	VALUE	0-180°	
Gyro reading	Command bit	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol
Notes	4WD	MP1gy	VALUE		MP2gy	VALUE		MP3gy	VALUE		MP4gy	VALUE		MP5gy	VALUE		
manipulator reading	Command bit	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol
Notes	4WD	Servo1	VALUE	0-180°	Servo2	VALUE	0-180°	Servo3	VALUE	0-180°	Servo4	VALUE	0-180°	Servo5	VALUE	0-180°	
Control servo	Command bit	Separator symbol	Command word	value	Data Packet tail												
Notes	4WD	PTZ	VALUE	0-180°	#												
control colorLED	Command bit	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Separator symbol	Command word	value	Data Packet tail			
Notes	4WD	CLR	VALUE	0-255	CLG	VALUE	0-255	CLB	VALUE	0-255							
Choose mode	Command bit	Separator symbol	Command word	value	Data Packet tail												
Notes	4WD	MODE	VALUE		#												
for example	\$4WD	MODE31#	open obstacle avoidance mode														
	\$4WD	MODE30#	close obstacle avoidance mode														
			10: remote control mode														
			20: tracking mode														
			30: obstacle avoidance mode														
			40: color led														
			50: light-seeking mode														
			60: follow mode														
			second bit: 0: close														
			1: open														

[illegible]