Sun Fonder Pico-4WD Car

Network Protocol

Content

Framing

Connection is a WebSocket connection which uses text Mode only. No binary data exchange.

The Data content is a single Text line which has a singe non nested json object.

All json object are transmitted periodically without any request.

The WebSocket Server is inside the 8266.

After init the UART RXD and TXD contains the WebSocket text data's.

! Must use as main examples/app_control.py

Messages

From Car to client

Status message from car

This message must be send periodically or the client makes no connection

{ "Name“: "MC_Cindy", "Type": "PICO-4WD Car", "Check": "SunFounder Controller"}

Name: any Name (Shown on screen)

Type: must be “PICO-4WD Car"

Check: must be "SunFounder Controller"

To Car from Client

Control Message

{"":null,"A":0,"K":"stop","G":true, “H“ : 0}

““: ?? must be null

A: acceleration/speed; number between 0 and 100

K:direction; one of: “stop“.“forward“.“backward“,“left“,“right“

??? optional elements ???

G:lights; one of: true false

H: illumination strength or ignored (not used ????)

Reverse Engineered

at every control message the servo changes the ultrasonic direction and gives the information at the

next status message.

Status Message after first control


```
{"H": [11362, 15011, 7329], "D": [-70, 40.817], "Name": "my_4wd_car", "Check":
"SunFounder Controller", "Type": "PICO-4WD Car", "C": 2.000661, "B": 20.73}
```


“H“ : Array with 3 numbers [Integer raw AD Values]

Photoelectric barrier @ bottom of front wheels

“Name“: as startup message

"Check": as startup message

"Type": as startup message

“D“ : Array with 2 numbers [Integer angle in degrees, Distance in cm ?????]

"C": mileage [cm ?????]

"B": speed [unit ??? cm/sec ???]