**TRANSMISSION**

options:

1.we make our own transmitter and receiver with eg. lora

modules that can be used for such occasion are:

esp-01

nrf24L01

Ra-01 sx1278

Ra-02 sx1278

esp-8266

in any case the layout is the following

arduino pro mini + transmitter -> arduino pro mini + receiver + potentiometers

in this option we only have instructions for navigation

2.

we use a commercial wireless controller with its receiver

only if option 1 goes to hell

3.

we can use the onboard wifi module that the raspberry pi features.

this is our goal

the layout is the following:

pi + (wireless adaptor) -> computer +(wireless adaptor) or pi +(wireless adaptor)

all the above have integrated wifi modules but the wireless adaptor gives us more range in the transmission.

this can be achieved with wifi direct or making the one pi an access point or other ways i don’t yet know.

video can be transmitted this way.

Details for the modules above:

ESP-32 and ESP-8266 are modules that use wifi protocols and bluetooth(802.11 b/g/n, P2P, AP, STA modes). The first mentioned is newer and better. Esp-01 is a smaller version of esp-32. SPI connection with arduino.

AP mode: the module becomes an access point and you connect to it and receive or display data.

STA mode: the module connects to your LAN network and you connect to it with its IP.

this mode gives the opportunity to control it via the internet.

!check AT commands

nRF24L01 is a tranceiver that sends binary data from one arduino to another. Also uses some protocol for error detection. It can send data to about 1 km far. 2Mbps speed. Works with 3.3V. Works at 2.4 GHz.

Lora are dedicated for long range transmissions(10-15 km). Uses 433MHz.