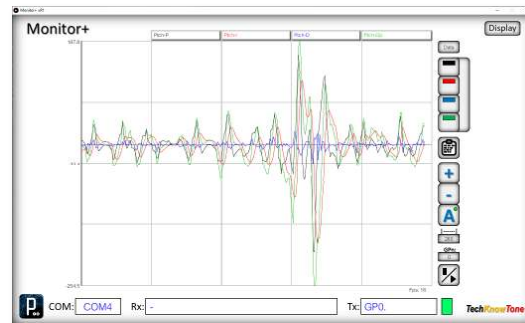


BallBot 4x4 (ESP32) – Functions



Monitor+ app



Tech:

- ESP32 microcontroller 240MHz 32-bit
- ICM-42607-P 3-axis gyro & accelerometer
- 4 x 6v DC geared motors (130rpm)
- 4 x 48mm Omni directional drive wheels
- 4 x DRV8833 MOS PWM Dual H-Bridge Drivers
- 1.28" Round TFT Display - GC9A01
- 12 x WA2812B RGB LEDs
- 2 x 18650 Lithium 3000 mAh batteries
- 3-D printed construction

Features:

- Adjustable wheel angles to match ball sizes
- Safe start, with LED indicators
- Orientation and topple detection
- Upright SW0:
 - Long press – changes display mode
- Upright SW1:
 - Long press – force calibration
 - 1 – enter 'balance' mode full PID
- Upside down SW0/SW1:
 - 1 – enter wheel demo mode
- Wii controller steering, 'Z' speed increase
- Battery sensing with PWM adjust & cut-off
- PID controller + graphing tool
- Wheel guard crash protection

Enhancements:

- TBD.

Issue: 1.0

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