

# Gyroskop

Gyroskop ukazuje presné natočenie hráča v rámci súradnicovej sústavy a teda poskytuje dáta aj v prípade, že sa hráč práve nepohybuje.

Dáta z gyroskopu (po ich vykonanej úprave) znázorňujú rotáciu polohy hráča okolo jednotlivých osí (X – dopredu a dozadu, Y – doprava a doľava, Z – smer chôdze vzhľadom na pomyselnú zvislú priamku).

```
gyroscope = gyroscope.rotateOverX(-rotationX).rotateOverY(-rotationY).rotateOverZ(-rotationZ);
```

Dáta z gyroskopu, ktoré zo servera prichádzajú v tvare uhlovej rýchlosti trupu, je potrebné upraviť. Najskôr je nutné získať celkovú polohu hráča a potom túto prekonvertovať z radiánov na stupne.

Úprava dát z gyroskopu

```
rotationX += Math.toRadians(gyroscope.getX() * TIME_STEP);
```

```
rotationX = Angles.normalize(rotationX);
```

```
rotationY += Math.toRadians(gyroscope.getY() * TIME_STEP);
```

```
rotationY = Angles.normalize(rotationY);
```

```
rotationZ += Math.toRadians(gyroscope.getZ() * TIME_STEP);
```

```
rotationZ = Angles.normalize(rotationZ);
```

**AGENT\_MODEL: Gyroscope: 7.16 -7.62 -3.85**

AGENT\_MODEL: Rotation: 6.050491614591326,0.7892194703897707,3.9274006720670704

AGENT\_MODEL: My position: 2.0011807794944496 4.764789076323906 -3.3932924599581824

**AGENT\_MODEL: Gyroscope: 1.48 -2.75 1.66**

AGENT\_MODEL: Rotation: 6.051161492814601,0.790059590241202,3.928008606766997

AGENT\_MODEL: My position: 2.0011807794944496 4.764789076323906 -3.3932924599581824

**AGENT\_MODEL: Gyroscope: 0.77 -1.34 0.81**

AGENT\_MODEL: Rotation: 6.051480207605542,0.7904766924931654,3.928317511075732

AGENT\_MODEL: My rotation: [-0.20746692339572434,0.7853981633974483,  
2.356194490192345

AGENT\_MODEL: My position: 3.0224991015413414, 5.535243315818208, -4.749144712675851

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**AGENT\_MODEL: Gyroscope: 0.55 -0.86 0.53**

AGENT\_MODEL: Rotation: 6.075916657232189,0.7856692204853579,3.927210860695021

AGENT\_MODEL: My position: 3.0224991015413414 5.535243315818208 -4.749144712675851

AGENT\_MODEL: Gyroscope: 1.6 -2.23 1.24

AGENT\_MODEL: Rotation: 6.076371002528098,0.7864181948604685,3.927792084111603

AGENT\_MODEL: My position: 3.0224991015413414 5.535243315818208 -4.749144712675851

AGENT\_MODEL: Gyroscope: 1.34 -1.84 1.08

AGENT\_MODEL: Rotation: 6.076755736802494,0.7870320888014067,3.928290631582682

AGENT\_MODEL: My rotation: [-0.14951118181198883,0.7853981633974483,-2.356194490192345

AGENT\_MODEL: My position: 3.5413106301508037, 5.840372101323397, -5.346272627470111

AGENT\_MODEL: My position: 3.5413106301508037 5.840372101323397 -5.346272627470111

AGENT\_MODEL: Gyroscope: 8.31 1.44 -5.06

AGENT\_MODEL: Rotation: 6.130850407240128,0.7871468783183769,3.9278598804850975

AGENT\_MODEL: My position: 3.5413106301508037 5.840372101323397 -5.346272627470111

AGENT\_MODEL: Gyroscope: 10.49 3.21 -6.57

AGENT\_MODEL: Rotation: 6.126944932926719,0.7889989183006875,3.9289735709055824

AGENT\_MODEL: My position: 3.5413106301508037 5.840372101323397 -5.346272627470111

AGENT\_MODEL: Gyroscope: 11.12 3.24 -7.2

AGENT\_MODEL: Rotation: 6.12279115508478,0.791031933737831,3.930102968589547

AGENT\_MODEL: My rotation: [-0.2986915761170743,0.7853981633974483,-2.356194490192345

AGENT\_MODEL: My position: 3.5413106301508037, 5.840372101323397, -5.346272627470111

AGENT\_MODEL: My position: 3.5413106301508037 5.840372101323397 -5.346272627470111

AGENT\_MODEL: Gyroscope: 11.35 3.11 -7.35

AGENT\_MODEL: Rotation: 5.980178994090464,0.787177899603523,3.928284342713908

AGENT\_MODEL: My position: 3.5413106301508037 5.840372101323397 -5.346272627470111

AGENT\_MODEL: Gyroscope: 11.32 2.96 -7.32

AGENT\_MODEL: Rotation: 5.975905568856876,0.7889862934926422,3.9295796181995555

AGENT\_MODEL: My position: 3.5413106301508037 5.840372101323397 -5.346272627470111