Motionless and Translational Motion

No	Motion mode	Xdot	Ydot	Zdot	thetadot	phidot	animation name
1	Motionless	0	0	0	0	0	000000
2	Translational	1	0	0	0	0	100000
3		0	1	0	0	0	010000
4		0	0	1	0	0	001000
5		1	1	0	0	0	110000
6		0	1	1	0	0	011000
7		1	0	1	0	0	101000
8		1	1	1	0	0	111000

Rotational Motion

No	Motion mode	Xdot	Ydot	Zdot	thetadot	phidot	animation name
1	x-axes	0	0	0	1	0	000100

Setting:

```
x = l * sin(theta) * sin(phi)
y = l * cos(theta)
z = l * sin(theta) * cos(phi)
```

2	y-axes	0	0	0	1	0	000010

Setting:

```
x = l * cos(theta)
y = l * sin(theta) * sin(phi)
z = l * sin(theta) * cos(phi)
```

3	z-axes	0	0	0	1	0	000001

Setting:

```
x = l * sin(theta) * cos(phi)
y = l * sin(theta) * sin(phi)
z = l * cos(theta)
```

4	yz-axes	0	0	0	1	0	000101

Setting:

```
theta0 = -np.pi/4
phi0 = np.pi/4
```

```
thetadot = 1
x = l * sin(theta) * sin(phi)
y = l * cos(theta)
z = l * sin(theta) * cos(phi)
```

5	xz-axes	0	0	0	1	0	000101

Setting:

```
theta0 = np.pi/4
phi0 = - np.pi/4
thetadot = 1
x = l * sin(theta) * sin(phi)
y = l * cos(theta)
z = l * sin(theta) * cos(phi)
```

6	xy-axes	0	0	0	0	1	000110

Setting:

```
theta0 = - np.pi/4
phi0 = - np.pi/4
phidot = 1
x = l * sin(theta) * sin(phi)
y = l * cos(theta)
z = 0
```

7	xyz-axes	0	0	0	1	0	000111

Setting:

```
theta0 = np.pi/4
phi0 = - np.pi/4
thetadot = 1
phidot = 1
x = l * sin(theta) * sin(phi)
y = l * cos(theta)
z = l * sin(theta) * cos(phi)
```

For combined motion, the settings are a combination of rotation and translation