orxBODY_JOINT structure

Summary

Revolute Joint

```
[RevoluteJoint]
Type = revolute;
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
Rotation = [Float]
MinRotation = [Float]
MaxRotation = [Float]
MotorSpeed = [Float]
MaxMotorTorque = [Float]
```

Prismatic Joint

```
[PrismaticJoint]
Type = prismatic;
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
Rotation = [Float]
TranslationAxis = [Vector]
MinTranslation = [Float]
MaxTranslation = [Float]
MotorSpeed = [Float]
MaxMotorForce = [Float]
```

Spring Joint

```
[SpringJoint]
Type = spring
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
Length = [Float]
Frequency = [Float]
Damping = [Float]
```

Rope Joint

```
[RopeJoint]
Type = rope
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
Length = [Float]
```

Pulley Joint

```
[PulleyJoint]
Type = pulley
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
ParentGroundAnchor = [Vector]
ChildGroundAnchor = [Vector]
ParentLength = [Float]
MaxParentLength = [Float]
ChildLength = [Float]
MaxChildLength = [Float]
LengthRatio = [Float]
```

Suspension Joint

```
[SuspensionJoint]
Type = suspension;
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
TranslationAxis = [Vector]
MinTranslation = [Float]
MaxTranslation = [Float]
MotorSpeed = [Float]
MaxMotorForce = [Float]
```

Weld Joint

```
[WeldJoint]
Type = weld;
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
```

```
Rotation = [Float]
```

Friction Joint

```
[FrictionJoint]
Type = friction;
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
MaxForce = [Float]
MaxTorque = [Float]
```

Gear Joint

```
[GearJoint]
Type = gear
ParentAnchor = [Vector]
ChildAnchor = [Vector]
Collide = true|false
ParentJoint = [String]
ChildJoint = [String]
JointRatio = [Float]
```

Details

Common

Here's a list of common properties for the joints. Note that not all of the joins support these properties.

- `Type`: Defines the type of the joint. Available types are: revolute, prismatic, spring, rope, pulley, suspension, weld, friction and gear.
- `ParentAnchor`: The position the parent object is joined at, defined in local parent's space.
- `ChildAnchor`: The position the child object is joined at, defined in local child's space.
- `Collide`: Defines if collision between parent and child object is allowed.
- `Rotation`: Default rotation between parent and child bodies, in degrees. If none is provided, the current rotation difference between both bodies will be used.
- `MotorSpeed`: Only used if MaxMotorTorque is also defined. In degrees / seconds.
- `MaxMotorTorque`: Only used if MotorSpeed is also defined.

Revolute Joint

- `MinRotation`: Only used if MaxRotation is also defined.
- `MaxRotation`: Only used if MinRotation is also defined.

Prismatic joint

- `TranslationAxis`: Should be normalized.
- `MinTranslation`: In meters, only used if MaxTranslation is also defined.
- `MaxTranslation`: In meters, only used if MinTranslation is also defined.

Spring Joint

- `Length`: In meters. If not defined, the current distance between parent and child bodies will be used.
- `Frequency`: In hertz.
- `Damping`: Between 0 (min) and 1 (max)

Rope Joint

- `Length`: In meters. If not defined, the current distance between parent and child bodies will be used.

Pulley Joint

- `ParentGroundAnchor`
- `ChildGroundAnchor`
- `ParentLength`: In meters. If not defined, the current distance between parent and its ground anchor will be used;
- `MaxParentLength`: In meters. If not defined ParentLength + LengthRatio * ChildLength will be used;
- `ChildLength`: In meters. If not defined, the current distance between child and its ground anchor will be used;
- `MaxChildLength`: In meters. If not defined ParentLength + LengthRatio * ChildLength will be used;
- `LengthRatio`

Suspension Joint

- `TranslationAxis`: Should be normalized;
- `MinTranslation`: In meters; Only used if MaxTranslation is also defined;
- `MaxTranslation`: In meters; Only used if MinTranslation is also defined;

Weld Joint

Does not have any properties except those defined in the summary.

Friction Joint

- `Collide = true|false`: Allows collision between joint's parent and child bodies. Defaults to false;
- `MaxForce`:
- `MaxTorque`:

Gear Joint

- `ParentJoint`: Should be a revolute or prismatic joint already existing on the parent.
- `ChildJoint`: Should be a revolute or prismatic joint already existing on the child.
- `JointRatio`

From:
https://www.orx-project.org/wiki/ - **Orx Learning**

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Last update: **2025/09/30 17:26 (14 months ago)**