

# **AstroMenace script manual.**

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# 1. Common information.

Script syntax: script language (and syntax) based on xml

Abbreviations, terms, common information:

Rand – randomized value, 120Rand mean value from 0 till 120. This is for your information only, don't use this as parameter!

float – float value.

int – integer value.

string – string value.

Camera speed is 10 units per second.

Game point (at the start is 0,0,0) every second z coordinate are increasing on 10 units. All relative coordinates calculating relative to Game point.

For future purposes (game camera rotation), object rotation could be different (base coordinate system, relative coordinate system).

## 2. Loading script elements (<Load> nested elements)

*Loading script elements, must be nested in the <Load> element, and can not be nested into other elements:*

### ***Texture loading elements:***

**StarSystem1** – load StarSystem 1 SkyBox textures.

**StarSystem2** – load StarSystem 2 SkyBox textures.

**StarSystem3** – load StarSystem 3 SkyBox textures.

**Planet** – load planets textures.

**Asteroid** – load asteroids (small and big) textures.

**AlienFighter** – load alien fighters textures.

**BasePart** – load pirate base textures.

**AlienMotherShip** – load alien motherships textures.

**Building** – load buildings textures.

**Pirate** – load all pirate data (vehicles, military buildings, ships...) textures.

### ***Mission setup elements:***

**AIFile** – aimode file for this level. Please, do not use game main ai file ("DATA/SCRIPT/aimode.xml"). This file could be changed without any warnings.

**LayersTransp** - setup stars tile layers (first and second) transparency for this mission. Must be float type, from 0.0 till 1.0.

- **FirstStart**, (float), not required (by default 0.2)
- **FirstEnd**, (float), not required (by default 0.7)
- **SecondStart**, (float), not required (by default 0.1)
- **SecondEnd**, (float), not required (by default 0.7)

### 3. Main script elements (<Action> nested elements)

*Main script elements, must be nested in the <Action> element, and can not be nested into other elements:*

#### Debug

Debug mode.

**showline**, (int), required (by default 0, off)

Above all 3d objects, will showed numbers of the line of it's creation.

0 – off.

1 – on.

**undead**, (int), not required (by default 0, off)

Undestroyable player ship. (Not invulnerable!, but undestroyable)

0 – off.

1 – on.

**showbb**, (int), not required (by default 0, off)

Draw debug boxes.

0 – off.

1 – only AABB.

2 – AABB and OBB.

3 – all: AABB, OBB and HitBB.

Example:

```
<Debug showline="1"/>
```

Notes:

1) should be placed before 3d objects creation elements.

2) AABB is drawing by red, OBB is drawing by green, HitBB is drawing by blue.

#### StarSystem

Create space background (SkyBox and twinkling stars).

**system**, (int), required

Star system number (different by SkyBox'es)

0 – system without SkyBox at all.

1-3 – system SkyBox num.

**anglex**, **angley**, **anglez**, (float), not required (by default all equal 0)

Base angles for SkyBox drawing with rotation.

Example:

```
<StarSystem system="1"/>
```

#### Label

Label for goto element.

**name**, (string), required

Label name.

#### Goto

Jump to the label script element (Label).

label, (string), required  
Label name for jumping.

Example:

```
<Label name="Label1"/>
```

~~~~~

AstroMenaceScript nested elements...

~~~~~

```
<Goto label="Label1"/>
```

## TimeLine

Time line. Script point connected with time.

**value**, (float), not required (by default 0)

Daley value in seconds. Next (or nested) elements will start after this value is out.

Example, 1.5 sec delay:

```
<TimeLine value="1.5"/>
```

Example, create objects after 1.5 sec:

```
<TimeLine value="1.5"/>
```

~~~~~

TimeLine nested elements... (see TimeLine nested elements below)

~~~~~

```
</TimeLine>
```

## Light

Create light source.

**type**, (int), not required (by default 1)

Type of the light source.

1 – like star (this source is too far, so we use only light direction, we don't need position)

**status**, (int), not required (by default 1)

Light source status.

0 – off.

1 – on.

**dirx**, **diry**, **dirz**, (float), not required (by default 0,0,1)

Light direction, after setup will be normalized.

**diffx**, **diffy**, **diffz**, **diffa**, (float, 0.0-1.0), not required (by default 0,0,0,1)

Diffuse component of the light (RGBA). Should be not less then 0, and not more then 1.

**specx**, **specy**, **specz**, **specu**, (float, 0.0-1.0), not required (by default 0,0,0,1)

Specular component of the light (RGBA). Should be not less then 0, and not more then 1.

**ambx**, **amby**, **ambz**, **ambu**, (float, 0.0-1.0), not required (by default 0,0,0,1)

Ambient component of the light (RGBA). Should be not less then 0, and not more then 1.

Example:

```
<Light dirx="0.5" diry="0" dirz="1" diffx="1" diffy="1" diffz="1" specx="1" specy="1" specz="1"
ambx="1" amby="1" ambz="1"/>
```

Notes: light source could be created in any time.

## MissionComplete

Marker for end mission.

Do not required parameters.

Example, end mission after 5 seconds:

```
<TimeLine value="5"/>
<MissionComplete />
```

*Notes: after this element script will not work, so, this element should be last in the script.*

## MissionCompleteAtNoEnemy

Marker for end mission at no enemy.

**ships**, (int), not required (by default 0)

1 – check enemy ships.

0 – do not check enemy ships.

**grounds**, (int), not required (by default 0)

1 – check enemy ground objects (turrets, jeeps, apc's, tanks).

0 – do not check enemy ground objects (turrets, jeeps, apc's, tanks).

**delay**, (float), not required (by default 0.0f)

Delay in the seconds.

Example, end mission after 3 seconds when all enemy ships are destroyed:

```
<MissionCompleteAtNoEnemy ships="1" delay="3"/>
```

*Notes: after this element script will not work, so, this element should be last in the script.*

## Text

Draw text message.

**life**, (float), not required (by default -1.0)

Drawing time, seconds.

-1.0 – draw all time, without time limitation.

**text**, (string), required

Text message.

**posx, posy**, (int), not required (by default point 0,0)

Text drawing position. Point (0,0) in the left upper corner.

**color**, (int), not required (by default 0)

Text color.

0 – white

1 – yellow

2 – red

3 – green

4 – orange

5 – gray

*Notes: internal game resolution is 1024x768 (Do not look at real window resolution).*

## Music

Start playing music.

**theme**, (int), required

1 – usual game theme.

2 – «boss» or «dangerous» theme.

Example:

```
<Music theme="2"/>
```

*Notes: at the mission start, game theme (1) will be start automatically.*

## AsteroidField

Setup asteroid field generation by script.

**status**, (int), required

Asteroid field generation status.

0 – off.

1 – on.

**persec**, (float), not required (by default 2)

Asteroids creation quantity per second.

**w**, (float), not required (by default 280)

Asteroid field width.

**h**, (float), not required (by default 7.5)

Asteroid field height.

**posx**, **posy**, **posz**, (float), not required (by default 0,-10,340)

Asteroid field position.

**slow**, (float), not required (by default 5)

Asteroids speed.

**fast**, (float), not required (by default 35)

Minimal asteroid speed for fast flying asteroids.

## CreatePlanet

Create planet 3d object.

**type**, (int), required

1 - 6, type of the planet.

**speed**, (float), not required (by default 0)

Planet speed to player (camera). Do not dependent from planet orientation.

**posax**, **posay**, **posaz**, (float), not required (by default point 0,0,0)

Position of the planet in the absdute coordinates.

**anglax**, **anglay**, **anglaz**, (float), not required (by default 0,0,0)

Orientation.

Example:

```
<CreatePlanet type="1" posax="500" posay="-250" posaz="800" anglax="45" anglaz="15"/>
```

***TimeLine nested elements:*****CreateAsteroid**

Create asteroid.

**maxrad**, (float), not required (by default 0)

Maximum asteroid radius.

**speed**, (float), not required (by default 0)

Start asteroid speed.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to the Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

**rotx, roty, rotz**, (float), not required (by default 100+50Rand,20+20Rand,0)

Rotation speed around center of the object.

Example:

```
<CreateAsteroid speed="5" posx="-75" posy="-8" posz="190" angly="180"/>
```

**CreateMine**

Create space mine (also known as pirate space mine).

**type**, (int), required

1 - 4, type of the mine.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**status**, (int), not required (by default 1)

1 – enemy.

2 – allies.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to the Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

Example:

```
<CreateMine posx="-75" posy="-8" posz="190" angly="180"/>
```



## EarthFighter

Create earth fighter. Could include nested elements (TimeSheet , see below).

**type**, (int), required

1 - 22, type of the ship.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)

Fighter speed Forward-Backward (if negative).

**speedlr**, (float), not required (by default 0)

Fighter speed Left-Right (if negative).

**speedud**, (float), not required (by default 0)

Fighter speed Up-Down (if negative).

**speedbycamfb**, (float), not required (by default 0)

Fighter speed Forward-Backward (if negative) by camera movement vector

**speedbycamlr**, (float), not required (by default 0)

Fighter speed Left-Right (if negative) by camera movement vector

**speedbycamud**, (float), not required (by default 0)

Fighter speed Up-Down (if negative) by camera movement vector

**armour**, (int), not required (by default 0)

0 – 7, armor.

**weapon1**, ..., **weapon6**, (int), not required

1 – 19, type on the weapon.

*Notes:*

1) Different ships have different quantity on the weapon slots.

2) You should take into account level of the weapon slot and weapon.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax**, **posay**, **posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx**, **posy**, **posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax**, **anglay**, **anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx**, **angly**, **anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

**aimode**, (int), not required

Number of the preset AI mode. Used with aimode.xml file.

*Notes: if object have aimode attribute, speed parameter will be skipped.*

Example:

```
<EarthFighter type="2" speed="10" armour="4" posax="200" posay="10" posaz="10" anglay="90"/>
```

## AlienFighter

Create alien fighter. Could include nested elements (TimeSheet , see below).

**type**, (int), required

1 - 17, type of the ship.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)  
Fighter speed Forward-Backward (if negative).

**speedlr**, (float), not required (by default 0)  
Fighter speed Left-Right (if negative).

**speedud**, (float), not required (by default 0)  
Fighter speed Up-Down (if negative).

**speedbycamfb**, (float), not required (by default 0)  
Fighter speed Forward-Backward (if negative) by camera movement vector.

**speedbycamlr**, (float), not required (by default 0)  
Fighter speed Left-Right (if negative) by camera movement vector.

**speedbycamud**, (float), not required (by default 0)  
Fighter speed Up-Down (if negative) by camera movement vector.

**onhide**, (int), not required (by default 1)  
Destroying mode.  
0 – do not destroy object automatically.  
1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)  
Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)  
Object position in the relative coordinates system (Relative to Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)  
Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)  
Object orientation in the relative coordinate system (need for movement calculation).

**aimode**, (int), not required  
Number of the preset AI mode. Used with aimode.xml file.  
*Notes: if object have aimode attribute, speed parameter will be skipped.*

Example:

```
<AlienFighter type="1" aimode="2" posx="30" posy="-2" posz="230" angly="180"/>
```

## PirateShip

Create pirate ship. Could include nested elements (TimeSheet, see below).

**type**, (int), required  
1 - 10, type of the ship with weapon;  
11-15, the same as 5-10, but with flares only.

**id**, (int), not required (by default 0)  
Identification number (for internal using).

**speed**, (float), not required (by default 0)  
Fighter speed Forward-Backward (if negative).

**speedlr**, (float), not required (by default 0)  
Fighter speed Left-Right (if negative).

**speedud**, (float), not required (by default 0)  
Fighter speed Up-Down (if negative).

**speedbycamfb**, (float), not required (by default 0)  
Fighter speed Forward-Backward (if negative) by camera movement vector.

**speedbycamlr**, (float), not required (by default 0)  
Fighter speed Left-Right (if negative) by camera movement vector.

**speedbycamud**, (float), not required (by default 0)  
Fighter speed Up-Down (if negative) by camera movement vector.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

**aimode**, (int), not required

Number of the preset AI mode. Used with aimode.xml file.

*Notes: if object have aimode attribute, speed parameter will be skipped.*

Example:

```
<PirateShip type="1" aimode="2" posx="30" posy="-2" posz="230" angly="180">
```

## AlienMotherShip

Create alien mothership ship (could be mission “Boss” ship too). Could include nested elements(TimeSheet , see below).

**type**, (int), required

1 - 8, type of the ship.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)

Fighter speed Forward-Backward (if negative).

**speedlr**, (float), not required (by default 0)

Fighter speed Left-Right (ifnegative).

**speedud**, (float), not required (by default 0)

Fighter speed Up-Down (ifnegative).

**speedbycamfb**, (float), not required (by default 0)

Fighter speed Forward-Backward (if negative) by camera movement vector

**speedbycamlr**, (float), not required (by default 0)

Fighter speed Left-Right (ifnegative) by camera movement vector.

**speedbycamud**, (float), not required (by default 0)

Fighter speed Up-Down (ifnegative) by camera movement vector.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

**aimode**, (int), not required

Number of the preset AI mode. Used with aimode.xml file.

*Notes: if object have aimode attribute, speed parameter will be skipped.*

Example:

```
<AlienMotherShip type="1" aimode="2"posx="30" posy="-2" posz="230" angly="180"/>
```

## CreateBasePart

Create part of the pirate space base.

**type**, (int), required

- 1 – chose random; 11,12,13,14,15, small platform based on asteroid.
- 2 – chose random; 21,22,23,24,25, big platform based on asteroid.
- 3 – engine.
- 4 – road.
- 5 – girder.
- 6 – chose random; 61,62,63,64,65, big platform based on asteroid.
- 7 – big platform.
- 8 – chose random; 81,82,83,84,85, big platform based on asteroid.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)

Speed.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax**, **posay**, **posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx**, **posy**, **posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax**, **anglay**, **anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx**, **angly**, **anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

Example:

```
<CreateBasePart type="1" posx="30" posy="-2" posz="230" angly="180"/>
```

## CreateBigAsteroid

Create big asteroid.

**type**, (int), required

- 1 – chose random; 11,12,13,14,15, big asteroid (for background only!).
- 2 – chose random; 21,22,23,24,25 big asteroid (undestroyable).

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)

Speed.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax**, **posay**, **posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx**, **posy**, **posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

Example:

```
<CreateBigAsteroid type="11" posx="30" posy="-2" posz="230" angly="180"/>
```

## CreateMBuilding

Create pirate military building (turrets).

**type**, (int), required

1-7, type of the turret.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)

Speed.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

**aimode**, (int), not required

Number of the preset AI mode. Used with aimode.xml file.

*Notes: if object have aimode attribute, speed parameter will be skipped.*

Example:

```
<CreateMBuilding type="1" posx="30" posy="-2" posz="230" angly="180"/>
```

## CreateBuilding

Create pirate civilian building.

**type**, (int), required

1-11, type of the building.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)

Speed.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

Example:

```
<CreateBuilding type="1" posx="30" posy="-2" posz="230" angly="180"/>
```

## CreateTracked

Create pirate tracked vehicle.

**type**, (int), required

1-11, type of the vehicle.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)

Speed.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

**aimode**, (int), not required

Number of the preset AI mode. Used with aimode.xml file.

*Notes: if object have aimode attribute, speed parameter will be skipped.*

Example:

```
<CreateTracked type="1" posx="30" posy="-2" posz="230" angly="180"/>
```

## CreateWheeled

Create pirate wheeled vehicle.

**type**, (int), required

1-8, type of the vehicle.

**id**, (int), not required (by default 0)

Identification number (for internal using).

**speed**, (float), not required (by default 0)

Speed.

**onhide**, (int), not required (by default 1)

Destroying mode.

0 – do not destroy object automatically.

1 – destroy object automatically, if didn't rendered during one second or more (out of the view).

**posax, posay, posaz**, (float), not required (by default 0,0,0)

Object position in the absolute coordinate system.

**posx, posy, posz**, (float), not required (by default 0,0,0)

Object position in the relative coordinates system (Relative to Game point).

**anglax, anglay, anglaz**, (float), not required (by default 0,0,0)

Object orientation in the base coordinate system (need for movement calculation).

**anglx, angly, anglz**, (float), not required (by default 0,0,0)

Object orientation in the relative coordinate system (need for movement calculation).

**aimode**, (int), not required

Number of the preset AI mode. Used with aimode.xml file.

*Notes: if object have aimode attribute, speed parameter will be skipped.*

Example:

```
<CreateWheeled type="1" posX="30" posY="-2" posz="230" angly="180"/>
```

***TimeSheet element, used as nested for EarthFighter, AlienFighter, AlienMotherShip, PirateShip, CreateMBuilding, CreateTracked, CreateWheelal elements:***

***For EarthFighter, AlienFighter, AlienMotherShip, PirateShip, CreateTracked, CreateWheeled, CreateMBuilding elements:***

**time**, (int), not required (by default 0)  
Execution time in seconds.  
-1 mean repeat infinitely (loop).

**aimode**, (int), not required  
Number of the preset AI mode. Used with aimode.xml file.  
*Notes: will ignore all parameters except «time».*

**fire**, (int), not required (by default 0)  
Fire (if object able to fire).  
0 – do not fire.  
1 – open fire.

***For EarthFighter, AlienFighter, AlienMotherShip, PirateShip, CreateTracked, CreateWheeled elements:***

**speed**, (float), not required (by default 0)  
Fighter speed Forward-Backward (if negative).

**acceler**, (float), not required (by default 1.0)  
Object acceleration for Forward-Backward movement.

**rotx, roty, rotz**, (float), not required (by default 0,0,0)  
Rotation angles.

**rotacx, rotacy, rotacz**, (float), not required (by default 1,1,1)  
Rotation acceleration.

***For EarthFighter, AlienFighter, AlienMotherShip, PirateShip elements:***

**speedlr**, (float), not required (by default 0)  
Fighter speed Left-Right (ifnegative).

**speedud**, (float), not required (by default 0)  
Fighter speed Up-Down (ifnegative).

**speedbycamfb**, (float), not required (by default 0)  
Fighter speed Forward-Backward (if negative) by camera movement vector.

**speedbycamlr**, (float), not required (by default 0)  
Fighter speed Left-Right (ifnegative) by camera movement vector.

**speedbycamud**, (float), not required (by default 0)  
Fighter speed Up-Down (ifnegative) by camera movement vector.

**accelerlr**, (float), not required (by default 1.0)  
Object acceleration for Left-Right movement.

**accelerud**, (float), not required (by default 1.0)  
Object acceleration for Up-Down movement.

**accelerbycamfb**, (float), not required (by default 1.0)  
Object acceleration for Forward-Backward movement by camera movement vector.



**accelerbycamlr**, (float), not required (by default 1.0)

Object acceleration for Left-Right movement by camera movement vector.

**accelerbycamud**, (float), not required (by default 1.0)

Object acceleration for Up-Down movement by camera movement vector.

***For CreateMBuilding, CreateTracked, CreateWheeled, PirateShip elements:***

**targeting**, (int), not required (by default 0)

Targeting on enemy (if object able for this).

0 – targeting off.

1 – targeting on.

***For AlienMotherShip, PirateShip elements:***

**bossfire**, (int), not required (by default 0)

Fire with powerful weapon (if object able to bossfire).

0 – do not fire.

1 – open fire.

## Annex A. aimode.xml file.

You can also use aimode file as storage of preset NPC actions.

Please, do not use game main ai file ("DATA/SCRIPT/aimode.xml"). This file could be changed without any warnings.

Example of the aimode file:

File name: your\_aimode\_file.xml

```
<?xml version="1.0" encoding="utf-8"?>
<AstroMenaceAI name="AstroMenace AI script">
  <!-- Zig-zag movement for AlienFighter (type 1) -->
  <AI num="1">
    <TimeSheet time="2" speed="15" roty="90" rotacy="0.9"/>
    <TimeSheet time="4" speed="15" roty="-180" rotacy="0.9"/>
    <TimeSheet time="2" speed="15" roty="90" rotacy="0.9"/>
  </AI>
</AstroMenaceAI>
```

For use this preset action in the your mission you need:

1. In the «Load» section, connect your aimode file. For example:

```
<AIFile>DATA/SCRIPT/your_aimode_file.xml</AIFile>
```

2. Set this action active. For example:

```
<AlienFighter type="1" aimode="1" posx="30" posy="-2" posz="230" angly="180"/>
```

## Annex B. list.xml file.

list.xml is the file, contained all information about available mission.

### ***GameMainMusic element (not required)***

Override main game music theme.

**nested text**, (string), required

File name. OGG only file format are supported.

### ***GameBossMusic element (not required)***

Override danger/boss game music theme.

**nested text**, (string), required

File name. OGG only file format are supported.

### ***GameDeathMusic element (not required)***

Override mission failed/death game music theme.

**nested text**, (string), required

File name. OGG only file format are supported.

### ***Mission nested elements:***

#### **Title**

Mission title information.

**color**, (int), not required (by default 4)

Mission title color.

0 – white

1 – yellow

2 – red

3 – green

4 – orange

5 – grey

**type**, (int), not required (by default 0)

Title text interpretation type.

0 – title is text.

1 – title is marker for internal text.xml file (need for base levels).

**nested text**, (string), required

Title text.

#### **Descr**

Mission description information.

**color**, (int), not required (by default 0)

Mission description color.

0 – white

1 – yellow

2 – red

3 – green

4 – orange

5 – grey

**type**, (int), not required (by default 0)

Description text interpretation type.

0 – description is text.

1 – description is marker for internal text.xml file (need for base levels).

**nested text**, (string), required

Description text.

### Icon

Mission icon file. Must be 64x64 pixels, supported graphics formats: tga, jpg.

**nested text**, (string), required

Icon file name with path.

### File

Mission file.

**nested text**, (string), required

Mission file name with path.

list.xml example:

```
<?xml version="1.0" encoding="utf-8"?>
<AstroMenaceMissionsList name="AstroMenace Missions List">
  <!-- Mission 1 -->
  <Mission>
    <Title color="4" type="1">6_Mission1Title</Title>
    <Descr color="0" type="1">6_Mission1Descr</Descr>
    <Icon>DATA/SCRIPT/mission1_icon.tga</Icon>
    <File>DATA/SCRIPT/mission1.xml</File>
  </Mission>
  <!-- Mission 2 -->
  <Mission>
    <Title>Mission 2</Title>
    <Descr>Really cool mission!</Descr>
    <Icon>DATA/SCRIPT/mission2_icon.tga</Icon>
    <File>DATA/SCRIPT/mission2.xml</File>
  </Mission>
</AstroMenaceMissionsList>
```

*Please note: missions quantity must be less or equal 100, this limitation connected to experience calculation array stored in the game data file.*