Plugin_FlexiblePatcher

User manual

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About the plugin

This plugin it's the main source of fixes and additions along with FLEP.

The new additions are the following:
- Original bridges
- Lift doors
- HK Gun
- Sprite objects
- Old style rollingballs
- Meshswap of Lara meshes
- Exiting game
- Grenadegun
- Mine Cart

Original Bridges

Brings back the original bridges used in TR4, as TRNG bridges have incompatible behaviour.
To use this, **AssignSlot=** command is needed.

Syntax: AssignSlot= <MyUsedSlot>, <Bridge>
Where **<MyUsedSlot>** is the slot that should be used for the bridge and **<Bridge>** is either **OBJ_FLEP_BRIDGE_FLAT**, **OBJ_FLEP_BRIDGE_TILT1** or **OBJ_FLEP_BRIDGE_TILT2**.

Example: AssignSlot= ANIMATING1, OBJ_FLEP_BRIDGE_FLAT

Lift doors

Implements the lift doors from TR5.
To use this, **AssignSlot=** command is needed.

Syntax: AssignSlot= <MyUsedSlot>, <LiftDoor>
Where **<MyUsedSlot>** is the slot that should be used for the lift door and **<LiftDoor>** is either **OBJ_FLEP_LIFT_DOORS1** or **OBJ_FLEP_LIFT_DOORS2**.

Example: AssignSlot= ANIMATING1, **OBJ_FLEP_LIFT_DOORS1**.

Additional customization can be done by the command **Customize= CUST_FLEP_LIFT_DOORS**.
Syntax: Customize= CUST_FLEP_LIFT_DOORS, LiftDoorsSound

LiftDoorsSound: this parameter sets the sound that plays when the lift doors open or close.
Type **IGNORE** or **-1** to not play any sound.

Example: Customize= CUST_FLEP_LIFT_DOORS, 64

HK Gun

Replaces Crossbow with HK Gun from TR5.
Important: make sure to enable **HK Gun** patch inside **FLEP** or the following settings won't work.

Syntax: Customize= CUST_FLEP_HK, GunFlashSlot, FireSound, StopSound, SniperOrder, BurstOrder, RapidOrder, FirstModeSlot, SecondModeSlot, ThirdModeSlot

GunFlashSlot: this parameter sets the slot of the gunflash.
Type **IGNORE** or **-1** to use the default value (**GUN_FLASH**).

FireSound, **StopSound:** these parameters sets the sounds that play when HK is firing and when it stops firing, respectively.
Type **IGNORE** or **-1** to not play any sound. The **FireSound** must have **L** flag set.

SniperOrder, **BurstOrder**, **RapidOrder:** these parameters sets the sequence in which the modes should be selected in the Choose Weapon Mode menu.
Type **IGNORE** or **-1** to use the default values (1 for **SniperOrder**, 2 for **BurstOrder** and 3 for **RapidOrder**).

FirstModeSlot, **SecondModeSlot**, **ThirdModeSlot:** thes parameters sets the slots that should be used for the modes in the Choose Weapon Mode menu.
Type **IGNORE** or **-1** to use the default values (**CROSSBOW_AMMO1_ITEM** for **FirstModeSlot**, **CROSSBOW_AMMO2_ITEM** for **SecondModeSlot** and **CROSSBOW_AMMO3_ITEM** for **ThirdModeSlot**).

Example: Customize= CUST_FLEP_HK, NEW_SLOT10, 370, 371, -1, -1, -1, -1, -1, -1

Sprite objects

Implements objects that always face the camera, as sprites do.
To use this, **AssignSlot=** command is needed.

Syntax: AssignSlot= <MyUsedSlot>, <Sprite>
Where **<MyUsedSlot>** is the slot that should be used for the sprite and **<Sprite>** is **OBJ_FLEP_SPRITE{1..16}**.

If the object has more than one mesh, they will be cycled through, like animated sprites.

Example: AssignSlot= ANIMATING1, OBJ_FLEP_SPRITE1

Old style rollingballs

Provides the rollingballs from TR1/2/3.
Important: the rollingballs from original levels will not work, use these ones instead: https://www.trsearch.org/item/5823.
To use this, **AssignSlot=** command is needed.

Syntax: AssignSlot= <MyUsedSlot>, <Rollingball>
Where **<MyUsedSlot>** is the slot that should be used for the rollingball and **<Rollingball>** is **OBJ_FLEP_ROLLINGBALL{1..16}**.

Example: AssignSlot= NEW_SLOT5, OBJ_FLEP_ROLLINGBALL1

Additional settings can be used, you can also sum these together:
Use OCB 1 to disable the camera bounce effect.
Use OCB 32 to produce a splash if the rollingball falls into water.

Note that the rotation of the rollingball determines their rolling direction.

Meshswap of Lara meshes

Allows Lara meshes to be swapped.
To use this, **Parameters= PARAM_FLEP_LARA_MESHSWAP** command is needed.

Syntax: Parameters= PARAM_FLEP_LARA_MESHSWAP, IdParamList, LaraMesh, SourceSlot, SourceMesh

IdParamList: this parameter sets the ID of the meshswap command, which is then used in the trigger. The ID range goes from 1 to 256.
LaraMesh: this parameter sets the mesh to be swapped, see **LARA_MESH_** constants or type the mesh number.
SourceSlot: this parameter sets the slot that supplies the new mesh. Both the slot name or number can be typed.
SourceMesh: this parameter sets the the number of the new mesh.

Example: Parameters= PARAM_FLEP_LARA_MESHSWAP, 1, LARA_MESH_HEAD, NEW_SLOT10, 0

To trigger a meshswap:
#define @Plugin_FlexiblePatcher 1
TriggerGroup= <TriggerGroupId>, $012000,7,<IdParamList>
#define @plugins CLEAR

Where **<TriggerGroupId>** is the ID of the TriggerGroup (for example 1, 10, 25...) and **<IdParamList>** is the Id of the command **Parameters= PARAM_FLEP_LARA_MESHSWAP**.

Example:

```
#define @Plugin_FlexiblePatcher 1
TriggerGroup= 1, $012000,7,1
#define @plugins CLEAR
```

And to revert a meshswap:
#define @Plugin_FlexiblePatcher 1
TriggerGroup= <TriggerGroupId>, $012000,8,<LaraMesh>
#define @plugins CLEAR

Where **<LaraMesh>** is a **LARA_MESH_** constant, the mesh number can be also typed.

Example:

```
#define @Plugin_FlexiblePatcher 1
TriggerGroup= 2, $012000,8,14
#define @plugins CLEAR
```

Exit game

Exits the game in the same moment it is called.

To exit the game:

```
#define @Plugin_FlexiblePatcher 1
TriggerGroup= <TriggerGroupId>, $012000,9,$0
#define @plugins CLEAR
```

Where <TriggerGroupId> is the ID of the TriggerGroup (for example 1, 10, 25...)

Example:

```
#define @Plugin_FlexiblePatcher 1
TriggerGroup= 1, $012000,9,$0
#define @plugins CLEAR
```

Grenadegun

Modifies the Grenadegun to shoot different types of grenades or crossbow bolts, and also its animations.
Important: make sure to enable **Grenadegun and ammo animations** patch inside **FLEP** or the following settings won't work.
To use this, **Customize= CUST_FLEP_GRENADEGUN** command is needed.

Syntax: Customize= CUST_FLEP_GRENADEGUN, GrenadegunAnimations, FirstAmmoWeapon, SecondAmmoWeapon, ThirdAmmoWeapon, FirstAmmoType, SecondAmmoType, ThirdAmmoType, FirstAmmoSlot, SecondAmmoSlot, ThirdAmmoSlot, FirstAmmoSound, SecondAmmoSound, ThirdAmmoSound, FirstAmmoSmoke, SecondAmmoSmoke, ThirdAmmoSmoke

GrenadegunAnimations: this parameter sets the usage or not of Grenadegun animations
ENABLED : allows the usage of Grenadegun animations.
DISABLED: allows the usage of Crossbow, Shotgun or HK animations.
Type **IGNORE** or **-1** to use the default value (**ENABLED**).

FirstAmmoWeapon, SecondAmmoWeapon, ThirdAmmoWeapon: these parameters sets the type of bolt.
HOLD_CROSSBOW: the ammo is a bolt.
HOLD_GRENADEGUN: the ammo is a grenade.
Type **IGNORE** or **-1** to use the default value (**HOLD_GRENADEGUN**).

FirstAmmoType, SecondAmmoType, ThirdAmmoType: these parameters sets the type of ammo.
1: Normal ammo.
2: Poison/Super ammo.
3: Explosive/Flash ammo.
Type **IGNORE** or **-1** to use the default values (1 for **FirstAmmoType**, 2 for **SecondAmmoType** and 3 for **ThirdAmmoType**).

FirstAmmoSlot, SecondAmmoSlot, ThirdAmmoSlot: these parameters sets the slots containing the meshes of the ammos.
Type **IGNORE** or **-1** to use the default value (**CROSSBOW_BOLT**/**GRENADE**).

FirstAmmoSound, SecondAmmoSound, ThirdAmmoSound: these parameters sets the sounds that play when shooting the ammos.
Type **IGNORE** or **-1** to not play any sound.

FirstAmmoSmoke, SecondAmmoSmoke, ThirdAmmoSmoke: these parameters sets whether the Grenadegun smoke is produced or not when shooting.
ENABLED: Grenadegun smoke is produced when shooting.
DISABLED: no smoke is produced.
Type **IGNORE** or **-1** to use the default value (**ENABLED**).

Example: Customize= CUST_FLEP_GRENADEGUN, ENABLED, HOLD_CROSSBOW, -1, -1, 3, 2, 1, -1, CROSSBOW_BOLT, -1, -1, -1, -1, ENABLED, ENABLED, DISABLED

Mine Cart

Allows to use the Minecart object like TR3 with some additions.
Important: make sure to enable **Mine Cart** patch inside **FLEP** or the following settings won't work.

Minecart controls

The minecart controls are the following:
- **Action:** get in/use the spanner to activate switches
- **Jump:** brake
- **Jump/Roll+left/right:** get out
- **Left/right:** lean lara to the sides
- **Duck:** avoid obstacles by crouching
- **Look:** looking around

Setting the commands

Each script command of the minecart starts with **Customize=** command, followed by these types of customization: **CUST_FLEP_MINE_CART** and **CUST_FLEP_MINE_CART_TRAPS**.

CUST_FLEP_MINE_CART

This is the main command that associates an existing TRNG slot to a required minecart item.

Syntax: Customize= CUST_FLEP_MINE_CART, CartSlot, LaraSlot, ControllerSlot, SwitchSlot, ClunkStartSound, FrontImpactSound, SreechBrakeSound, TrackLoopSound, PullyLoopSound, Alignment

CartSlot: this parameter sets the slot where the minecart object is stored inside your wad.
LaraSlot: this parameter sets the slot where Lara's minecart special animations object is stored inside your wad.
ControllerSlot: this parameter sets the slot where the nullmesh object to manipulate the direction of the minecart is stored inside your wad.
SwitchSlot: this parameter sets the slot where the minecart switch object is stored inside your wad.
ClunkStartSound: this parameter sets the sound ID when the minecart starts moving.
FrontImpactSound: this parameter sets the sound ID when the minecart hits a wall.
SreechBrakeSound: this parameter sets the sound ID when Lara brakes the minecart.
TrackLoopSound: this parameter sets the sound ID when the minecart moves fast.
PullyLoopSound: this parameter sets the sound ID when the minecart moves slowly.
Alignment (ENABLED/DISABLED): this parameter, set as ENABLED, will align the minecart in case the floor is tilted (unlike the original TR3 game).

This is an example script using the given wad slots and TR3 ID sounds inside the package.
Example: Customize= CUST_FLEP_MINE_CART, MINECART, MINECART_LARA, TRIPWIRE, ANIMATING2, 211, 202, 219, 209, 210, ENABLED
You can also just write the IDs of the slots:
Customize= CUST_FLEP_MINE_CART, 504, 505, 161, 429, 211, 202, 219, 209, 210, ENABLED

Notes:
- on “Slot” parameters you can use any object slot but **AI_** (for instance AI_FOLLOW, AI_GUARD etc...), these won't work.
- setting the **Alignment** parameter to **DISABLED** will result in having the same behavior as TR3.
- **LaraSlot** uses mesh 10 (Lara's right hand) for the hand+spanner meshswap.
- **SwitchSlot** and “Sound” parameters are not mandatory, you can type **IGNORE** if you don't need them.

CUST_FLEP_MINE_CART_TRAPS

This command associates a trap with the minecart.

Syntax: Customize= CUST_FLEP_MINE_CART_TRAPS, TrapSlot, HealthLoss, {TrapSlot, HealthLoss array}

TrapSlot: this parameter sets which slot hurts Lara when using the minecart
HealthLoss: this parameter sets the amount of health loss that Lara receives when the minecart collides with the above slot, by setting this to **IGNORE** the defeault health loss it's 8.
Lara's health is measured in 1000 units, so setting it to the max amount will make her die.
{TrapSlot, HealthLoss array}: this is the exact operation explained above, it's the pair of slot and health loss that each different trap causes to Lara.

Example: Customize= CUST_FLEP_MINE_CART_TRAPS, TEETH_SPIKES, 200, ROLLINGBALL, 1000

Note: it's possible to set up to 16 different traps slots and health losses, by typing IGNORE on.

Minecart triggers

You can check whether Lara is in the minecart or not by using the following inside your script:

```
#define @Plugin_FlexiblePatcher 1
TriggerGroup=<TriggerGroupId>,$018000,0,$2,<ExportedTrigger>
#define @plugins CLEAR
```

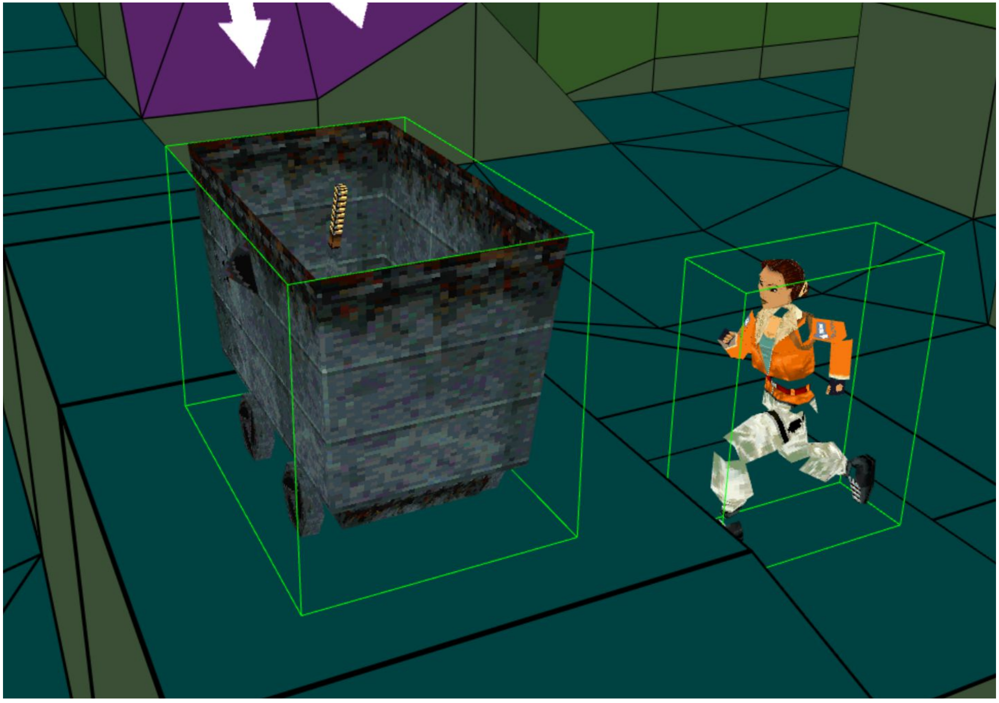
Where **<TriggerGroupId>** is the ID of your TriggerGroup (for example 1, 10, 25...) and where **<ExportedTrigger>** is the trigger or group of triggers that needs to activate when the condition it's true (for example the track that plays in TR3 when you get in the minecart).

You can of course also use this inside a GlobalTrigger, here's an example:

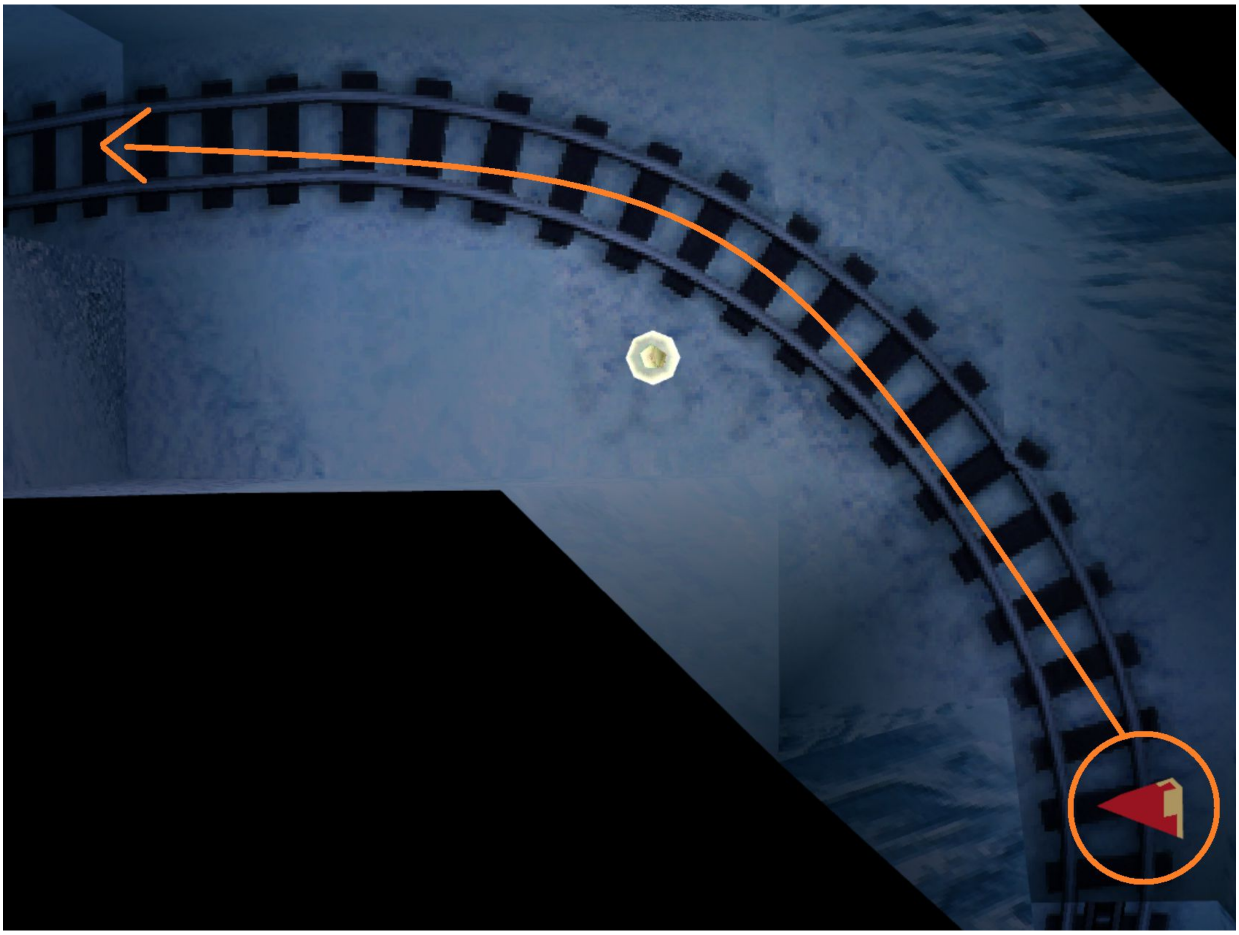
```
#define @Plugin_FlexiblePatcher 1
TriggerGroup= 1, $018000,0,$2 ;lara is inside the minecart
TriggerGroup= 2, $2000,129,$79 ; play track
GlobalTrigger= 1, FGT_SINGLE_SHOT, GT_CONDITION_GROUP, IGNORE, 1, 2, IGNORE
#define @plugins CLEAR
```

Setting up the minecart

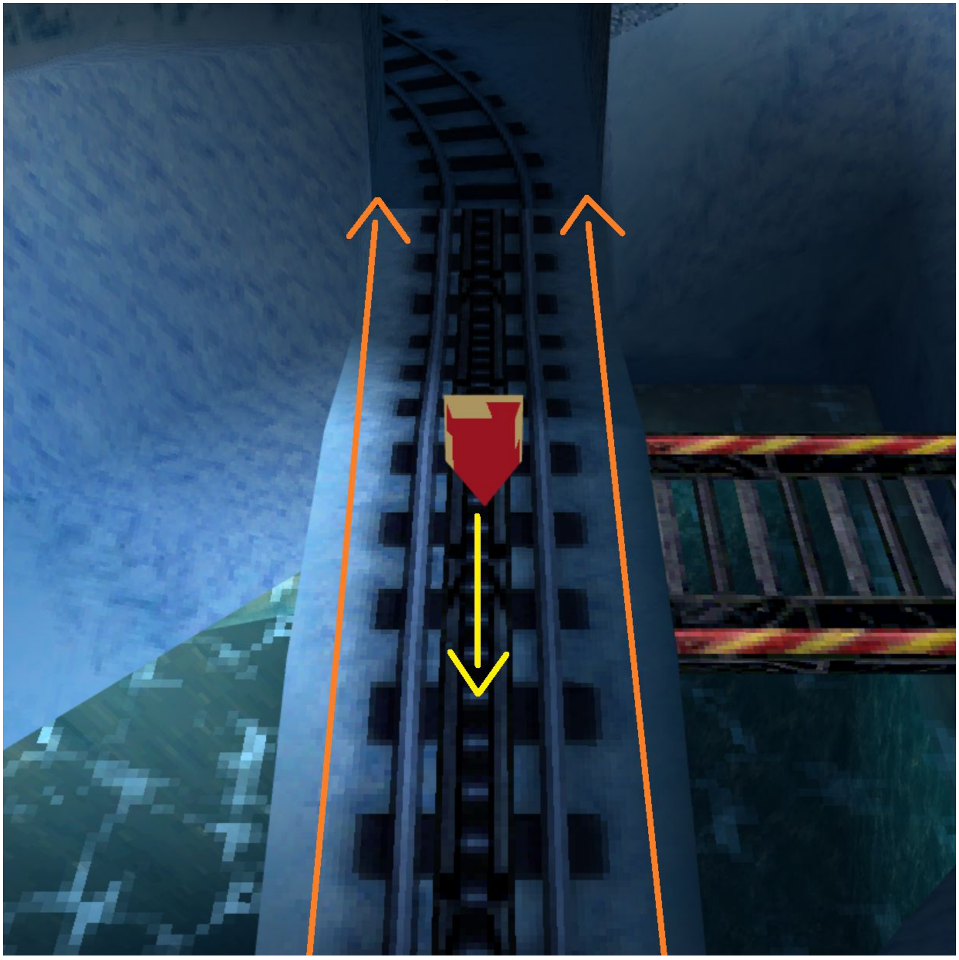
Place the minecart in the direction you want, the front is where you see the brake handle.



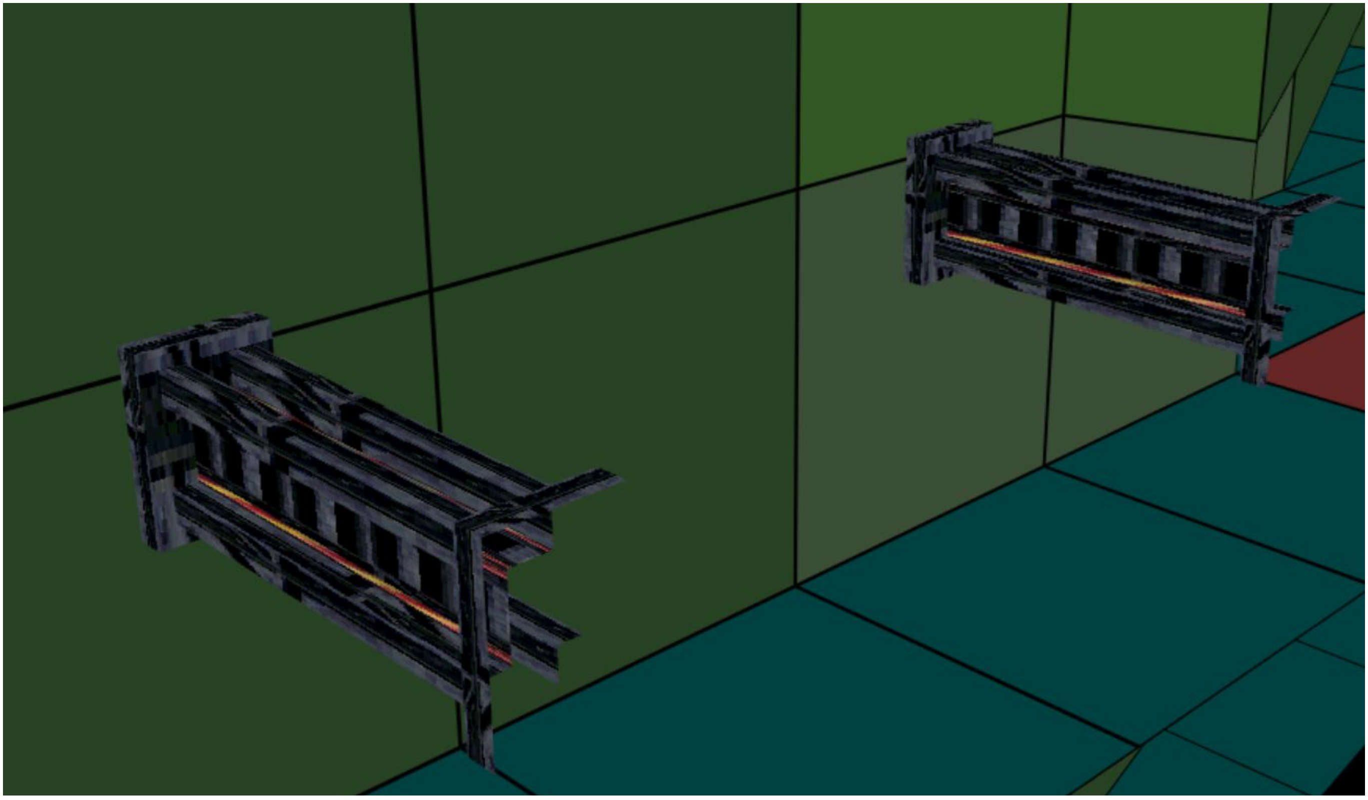
Whenever you want the cart to turn use the nullmesh **ControllerSlot**, the point of the cone is the direction of where the minecart needs to turn.



To stop the minecart, turn the point of the cone against its direction.

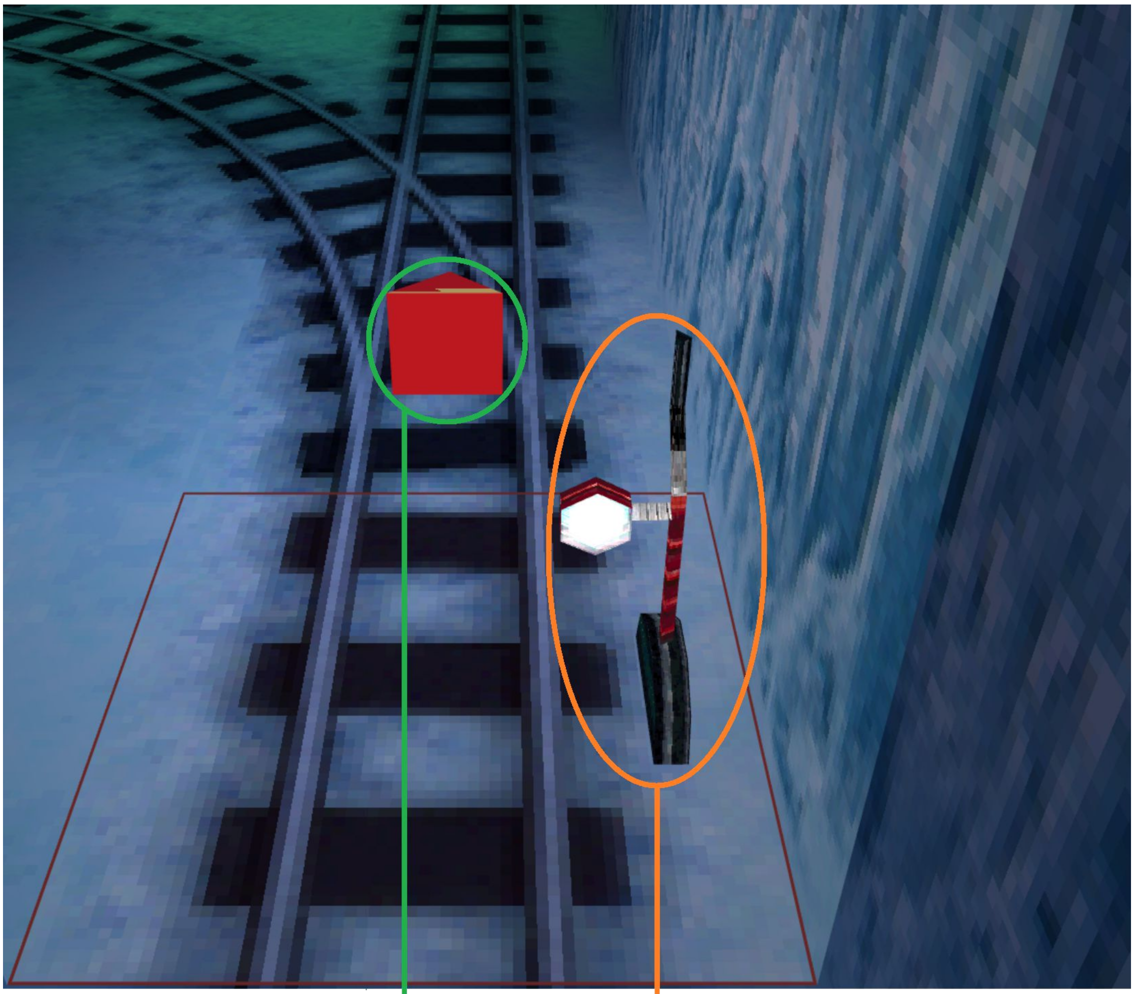


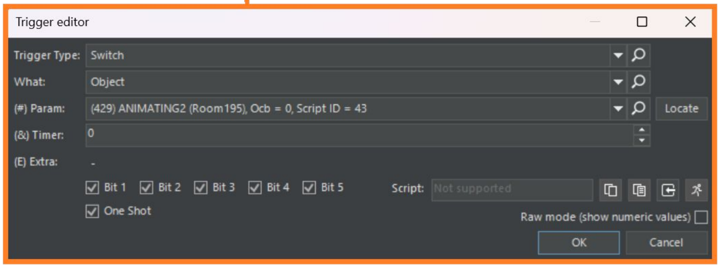
You can use statics as obstacles to hurt Lara during the track.



To change the track direction of the minecart, use the **SwitchSlot** item along with the **ControllerSlot** nullmesh.
To set it up, place a switch type trigger for the switch itself, then use an **Action 11 (A11)** or **Action 12 (A12)** trigger to instantly turn the **ControllerSlot** nullmesh to the desired rotation.
Note: in this setup it's better to set the switch type trigger as **One Shot**, or Lara will be able to pull the already activated switch.

In this example the **ControllerSlot** nullmesh rotates to the left (inverse clockwise) using **Action 12 (A12)**.





Trigger editor

Trigger Type: Switch

What: Object

(#) Param: (429) ANIMATING2 (Room195), Ocb = 0, Script ID = 43

(&) Timer: 0

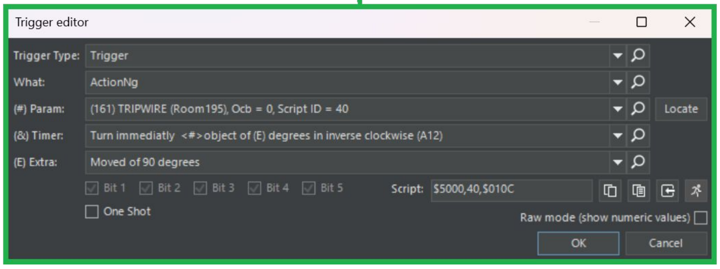
(E) Extra: -

☑ Bit 1 ☑ Bit 2 ☑ Bit 3 ☑ Bit 4 ☑ Bit 5

Script: Not supported

☑ One Shot

Raw mode (show numeric values) □



Trigger editor

Trigger Type: Trigger

What: ActionNg

(#) Param: (161) TRIPWIRE (Room195), Ocb = 0, Script ID = 40

(&) Timer: Turn immediatly <#>object of (E) degrees in inverse clockwise (A12)

(E) Extra: Moved of 90 degrees

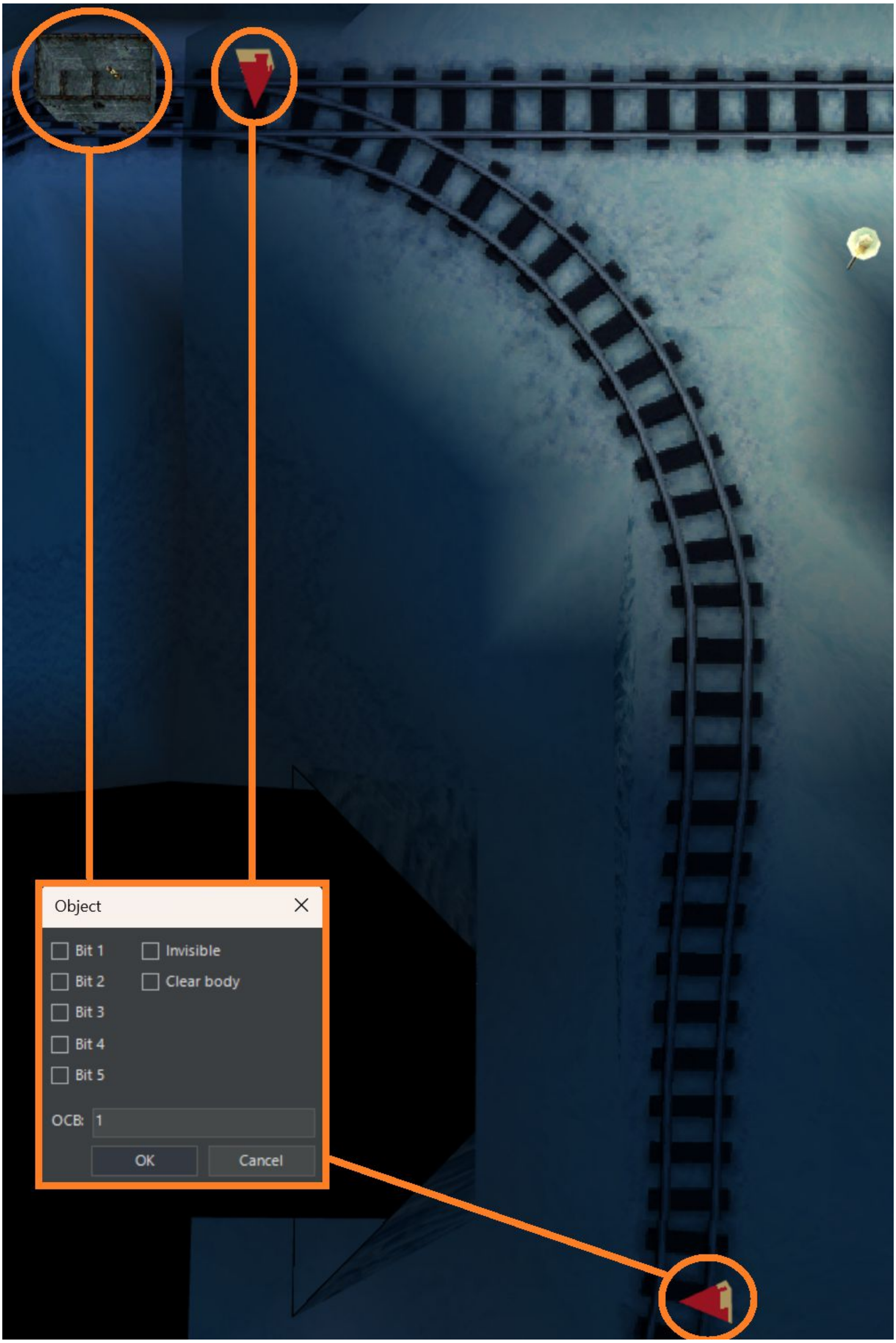
☑ Bit 1 ☑ Bit 2 ☑ Bit 3 ☑ Bit 4 ☑ Bit 5

Script: $5000,40,$010C

□ One Shot

Raw mode (show numeric values) □

You can choose which minecart takes which track using OCB codes.
To do so, **MinecartSlot** and every instance of the **ControllerSlot** which need to take a specific track must have the same OCB code.



Object

☐ Bit 1 ☐ Invisible

☐ Bit 2 ☐ Clear body

☐ Bit 3

☐ Bit 4

☐ Bit 5

OCB: 1

Additional notes: sometimes it's possible that if the player uses the switch too late, the minecart won't change the track direction in time.
In these situations, there are two options you can look forward to:
- give more space between **SwitchSlot** and **ControllerSlot**
- extend the switch trigger forward the **SwitchSlot**
- reduce the animation length of the **SwitchSlot** item, default animation has ID 1 (and 3 is reset animation)