

## Elevator Tutorial: erick

### **NOTE:**

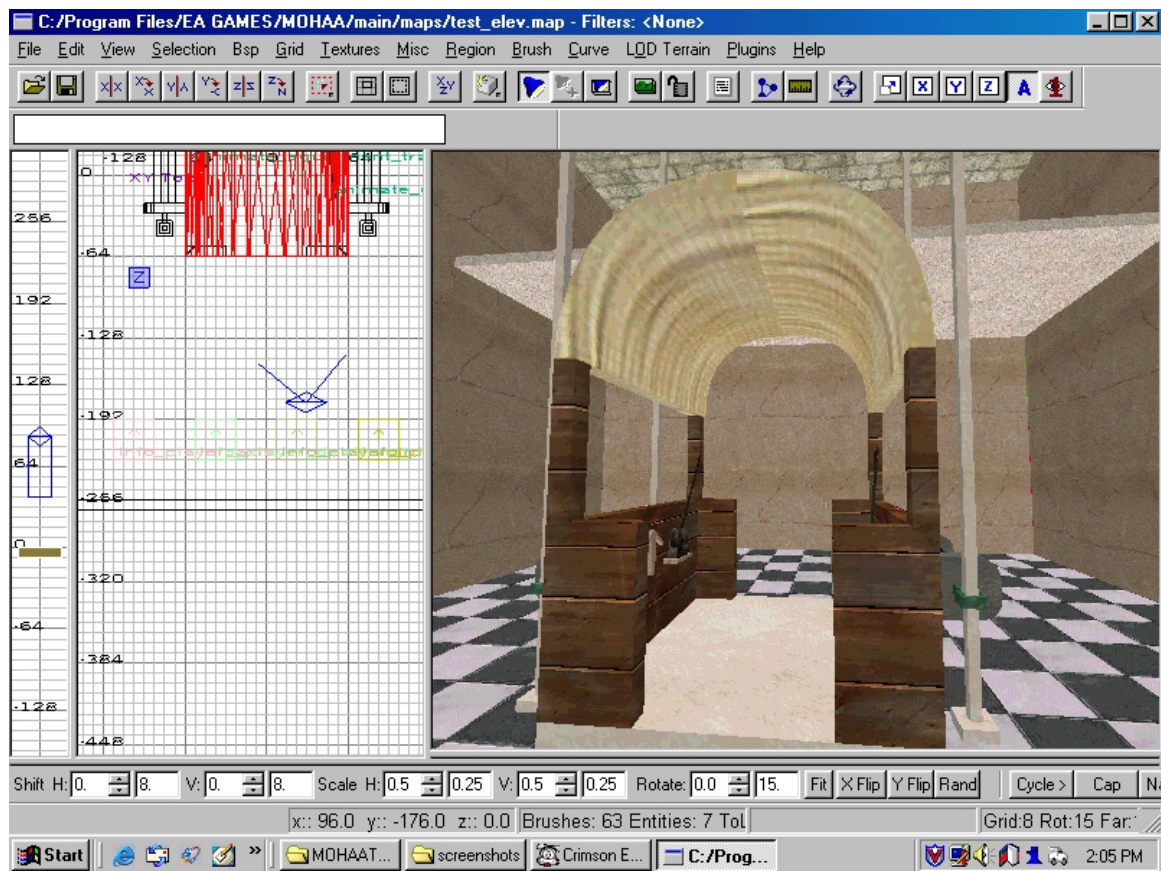
**When using this for multiplayer follow this:**

Where it says "\$player" in the script replace this with "local.player" and add  
"local.player = parm.other" in the line above this

This tutorial will explain the basics about elevators, along with some of the more intermediate/advanced concepts of elevators.

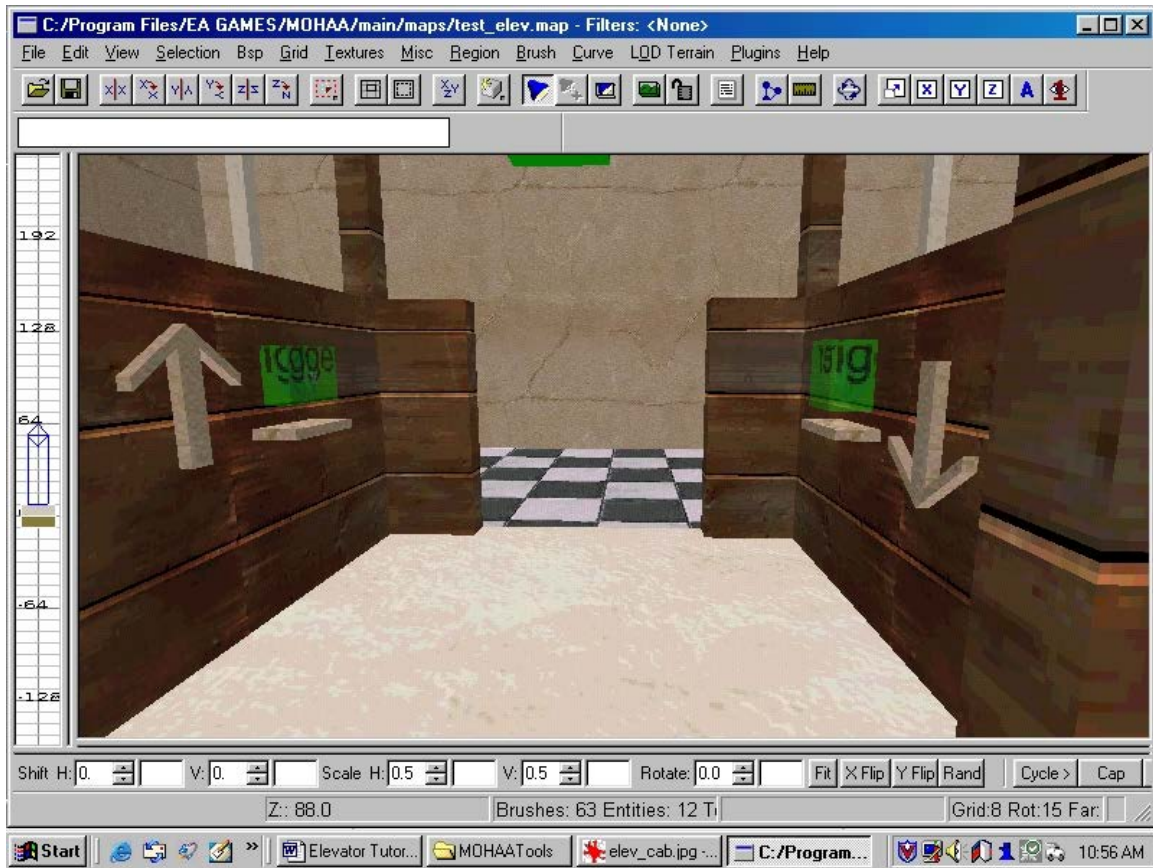
First start off by building the elevator cab, the part the player rides in, in radiant. I made a simple cab that was open on all sides.

[put "elev\_cab.jpg" here]



You may notice that I don't have an elevator shaft. The elevator shaft is just to add looks to the elevator. For example a shaft would be good for indoor areas while an open shaft may be better for outside areas. My elevator cab moves up and down on the cables to the left and right of it. You really don't need anything but one brush for an elevator to move. The other brushes are to make it look realistic and eye-catching. After you make your

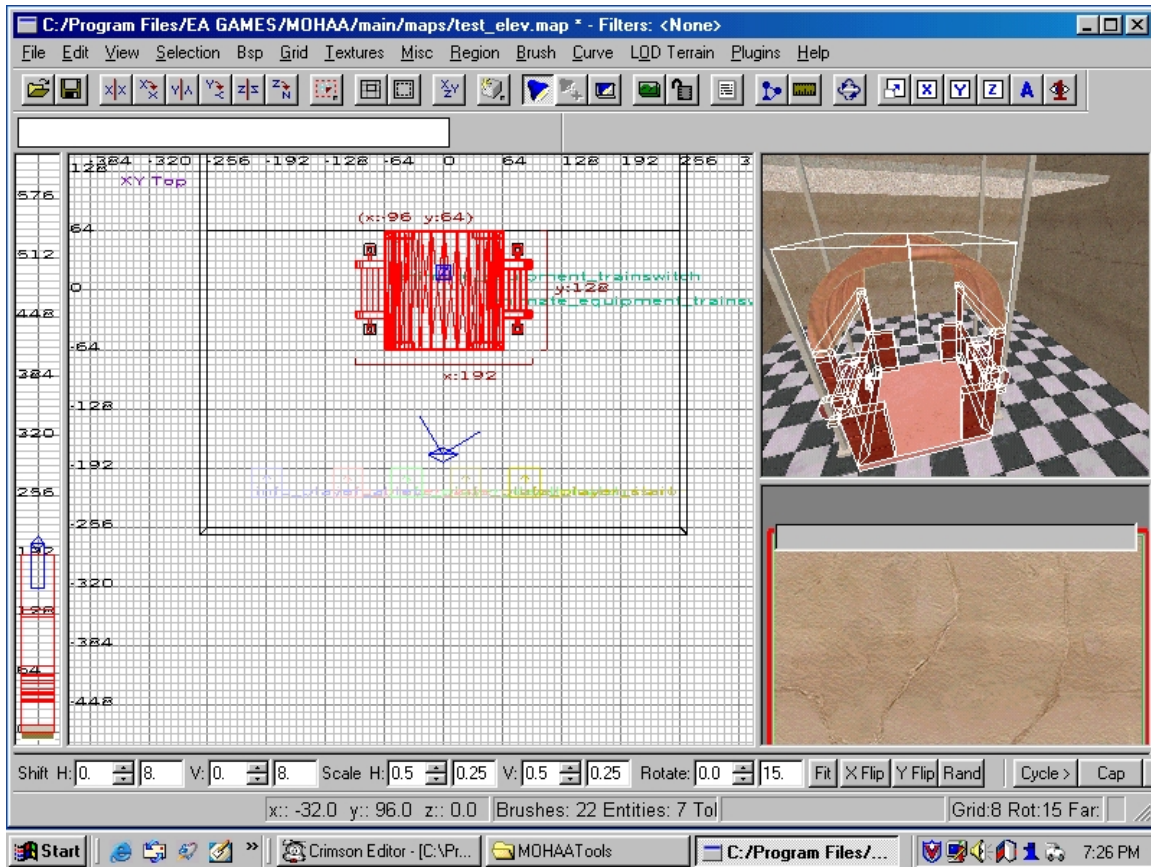
elevator shaft and cab (if you have one) you need to add triggers to make it useable. I used `animate_equipment_electric-switch_pulse`. You can use anything for your triggers.  
[put “elev\_switches.jpg” here]



My elevator operates on cables instead of a shaft. You can see an up arrow and a trigger, along with a down arrow and its trigger. The trigger with an up arrow will move up one floor every time the trigger is triggered until it reaches the top floor. I will explain the scripting later. The trigger with the down arrow will move down one floor every time the trigger is triggered until it reaches the bottom floor. I have made a multiple floor elevator so you need to trigger the trigger four times to get to the top. You can also add call triggers, but I will explain that process later. Call triggers are merely to make it so someone could trigger a trigger on a different floor and have the elevator come to them.

Now make your triggers (don't forget the `trigger_use` brush). There is a slight difference between the triggers on a 2-floor elevator and the triggers on a multi-floor elevator. I will explain that later so keep reading! Make an indication of which trigger is up and down. Use a custom texture or just make arrows like I did. Give your up-switch

(the actual switch not the trigger) the **key/value** of **targetname/up\_switch**. And the up-trigger the **key/value** of **targetname/up\_trigger**. If you have more than one elevator you may want to add **targetname/up\_trigger1** or **2** or **3** ect. Repeat these steps for the down trigger. [put “turnto\_script\_object.jpg” here]



With all the triggers and switches named, select the whole elevator\_cab (every brush except triggers and switches) and make it into a script\_object. Then give the script object the targetname of **elevator\_cab**. Next add your waypoints where you want the elevator to stop at. I have five, one for each floor. Targetname all of these **floor1**, **floor2** ect. up to the top floor. If you don't know how to add waypoints then ask in the forum. With your waypoints added, we can start on the script.

Script:

```
//Elevator tutorial
```

main:

```
level waittill prespawn
```

```

    $down_switch bind $elevator_cab //<---bind the switches to the elevator so it
doesnt look weird
    $up_switch bind $elevator_cab
    $down_trigger bind $down_switch //<--bind triggers to the switches
    $up_trigger bind $up_switch
        $elevator_cab movedown 8
        $elevator_cab time 0 //---I had it moved up for lighting
        $elevator_cab move
$elevator_cab speed 64 //sets the speed to 64 units per second
level.elepos = 1 //starts on floor 1
$elevator_cab2 speed 64

level waittill spawn

thread elevator_prep

end

elevator_prep:
thread movedown
thread moveup
end

movedown:
$down_trigger waittill trigger //waits until the player triggers the trigger

if (level.elepos == 1) //if the elevator is on floor 1 then end because it cant go down
anymore
end

$up_trigger nottriggerable //turns off the triggers until the elevator is done moving
$down_trigger nottriggerable

local.position = level.elepos //sets another variable
    $down_switch anim turn //turns the switch

    $elevator_cab loopsound lighthouse_run //makes some noise
        $elevator_cab moveto $("floor" + (local.position - 1)) //says to move to
the floor below the one that it is on
        $elevator_cab waitmove
    $elevator_cab stoploopsound

    $down_switch anim idle
        level.elepos-- //tells the variable to minus 1 from itself. Makes the variable
set to the correct floor

```

```

        $down_trigger triggerable
        $up_trigger triggerable    //--turns the triggers back on

goto elevator_prep

end

moveup:
$up_trigger waittill trigger

if (level.elepos == 5) //if the elevator is at the top then end because it cant go up anymore
end

$down_trigger nottriggerable
$up_trigger nottriggerable
    local.position = level.elepos
        $up_switch anim turn
        $elevator_cab loopsound lighthouse_run
        $elevator_cab moveto $("floor" + (local.position + 1))
        $elevator_cab waitmove
        $elevator_cab stoploopsound

    $up_switch anim idle
        level.elepos++
            $up_trigger triggerable
            $down_trigger triggerable
goto elevator_prep

end

[put "firstfloor.jpg" here]

```





Well that is your multi floor elevator script!☺

You can add call triggers anywhere on the elevator floors but those add tons more lines of code.

## **Two Floor Elevator**

To make a two-floor elevator you use the same process as above but there are some differences. First make your elevator cab and shaft if you have one. Then put one trigger and switch inside the elevator. (Give them targetnames) Now select the whole elevator, besides the trigger and switch and make it a script object and give it the name of elevator\_cab or elevator\_cab2 or 3 ect.. Just leave it plain if it is the first elevator you have in your map. If it is the second add a 2 to the end. This is how I keep my elevators organized. With that completed, add your waypoints. One for the first floor, and one for the second. Waypoints have to be in the exact middle of the elevator so that the elevator cab doesn't shift when it is moving. Name your waypoints anything you want. With that done you are ready for the script.

Script:

main:

level waittill prespawn

```

level.elepos = 0 //either 0 or 1 depending on what floor the elevator is on. 0 is bottom
floor. 1 is the top.
level waittill spawn
    thread elevator_standby
end

elevator_standby:
$elevator_cab speed 64
    $selev_switch bind $elevator_cab //replace the names with the ones that you used
    $selev_trigger bind $selev_switch
thread move
end

move:
$selev_trigger waittill trigger
if (level.elepos == 0) //if it's on the bottom floor...
{
    goto moveup
}
else //else go down to the first floor
{
    goto movedown
}
end

moveup:
    $selev_switch anim turn //animation for animate_equipment_electric-
switch_nopulse
    $selev_trigger nottriggerable
    $elevator_cab loopsound lighthouse_run //makes a machine sound
    $elevator_cab moveto $stopfloor //move to the 2nd floor
    $elevator_cab waitmove
    $elevator_cab stoploopsound //stop the sound
    $selev_switch anim idle //turn off the switch
    $selev_trigger triggerable
level.elepos = 1
    goto move
end

movedown:
    $selev_switch anim turn //animation for animate_equipment_electric-
switch_nopulse
    $selev_trigger nottriggerable
    $elevator_cab loopsound lighthouse_run
    $elevator_cab moveto $bottomfloor
    $elevator_cab waitmove

```

```

$elevator_cab stoploopsound
$elev_switch anim idle
$elev_trigger triggerable
level.elepos = 0
goto move
end

```

There is your 2 floor elevator. For information on call triggers and such look at <http://gronnevik.se/rjukan/index.php?n=Main.Elevator>

### **Beyond the Basics**

You can modify an elevator to do anything. Elevators don't even have to go up and down they could go sideways or even diagonally. I have put together an elevator that goes up and down but the player controls how much the elevator goes up and down. This is great for an outdoor area.

[put "liftavator.jpg" here]



Make an elevator cab with two triggers. One for going up and, one for going down. I have trainswitches for the switches. Give these all targetnames. (\$up\_switch, \$up\_trigger and so on)

Here is the script

Script



main:

level waittill prespawn  
level.liftavator = 1 //this is the world units in height  
\$elevator\_cab2 speed 64

level waittill spawn

thread liftavator\_prep  
end

liftavator\_prep:  
    \$up\_trigger2 triggerable  
    \$down\_trigger2 triggerable  
    \$elevator\_cab2 stoploopsound  
    \$up\_switch2 anim idle  
    \$down\_switch2 anim idle  
        \$elevator\_cab2 bind \$elev\_liftup  
        \$piece1 bind \$elevator\_cab2  
        \$piece2 bind \$elevator\_cab2  
        \$up\_switch2 bind \$piece2  
        \$down\_switch2 bind \$piece1  
        \$up\_trigger2 bind \$up\_switch2  
        \$down\_trigger2 bind \$down\_switch2

thread up  
thread down

end

up:

\$up\_trigger2 waittill trigger

if (level.liftavator == 832) //this is the top floor height in world units

{  
    goto liftavator\_prep  
}  
    \$down\_trigger2 nottriggerable //turn it off for no conflict  
    \$up\_switch2 anim move

while (\$player.useheld) //when the player is holding the use key do this

{  
    if (level.liftavator == 832)  
    {  
        goto liftavator\_prep  
    }

\$elevator\_cab2 loopsound lighthouse\_run

```

$elev_liftup moveup 1
$elev_liftup waitmove
level.liftavator++

}
    $elevator_cab2 stoploopsound
    $down_trigger2 triggerable
        goto liftavator_prep

end

//////////-----go down-----
down:

$down_trigger2 waittill trigger

if (level.liftavator == 1)
{
    goto liftavator_prep
}
    $up_trigger2 nottriggerable //turn it off for no conflict
    $down_switch2 anim move
while ($player.useheld) //when the player is holding the use key do this
{
    if (level.liftavator == 1)
    {
        goto liftavator_prep
    }
    $elevator_cab2 loopsound lighthouse_run
    $elev_liftup movedown 1
    $elev_liftup waitmove
    level.liftavator--
}
    $elevator_cab2 stoploopsound
    $up_trigger2 triggerable
        goto liftavator_prep

end
[put "bothvators.jpg" here]

```



If you need any help ask in the forum or pm me (erick).