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### Introduction

**IMPORTANT:** This tutorial is neither supported by the creators nor by the publishers of the game.

This is a very short introduction to the so called Bounding-Box, it tells you what the Bounding-Box is, what for and where it is used.

### Credit, THANK YOU to

- DRAGON\_JM for giving me the motivation to finish and relase this draft as a tutorial
- Ritual Entertainment for the superior Übertools delivered with Star Trek: Elite Force II


## Tutorial

Star Trek: Elite Force II is based on the good old Quake3 Engine (id Tech 3 Engine), upgraded with Rituals Übertools. Some parts are still the same like they were in Quake3, the best example is the Bounding-Box.


The **Bounding-Box** is a **Box** which exists around **EVERY** entity. A Entity is a Level-object, like a player, a door, a actor , a weapon, a projectile, a trigger , a bot, a model, script\_object, etc. The most Bounding-Boxes are solid, and is used for collision detection. A Trigger- , Item-, Bounding-Box is not solid, it is used to check if the player touches or is inside this field. If Inside or touching the field the player triggers the trigger (and pick-up the item).

The id Tech 3 Engine uses units for level objects (brushes) and Bounding-Boxes. One unit is one vector '1 1 1'. The Engine can handle vectors until 6 slots after the comma '1.000006 1 1'. The Bounding-Boxes are ment to use only integer vectors, .5 → '0.5 1 1' would be a float in the first coordinate and most not valid as Bounding-Box.

**Brush with 1 x 1 x 1 Units in the 2D-View of the Überradiant**



**Brush with 1 x 1 x 1 Units in the 3D-View of the Überradiant**




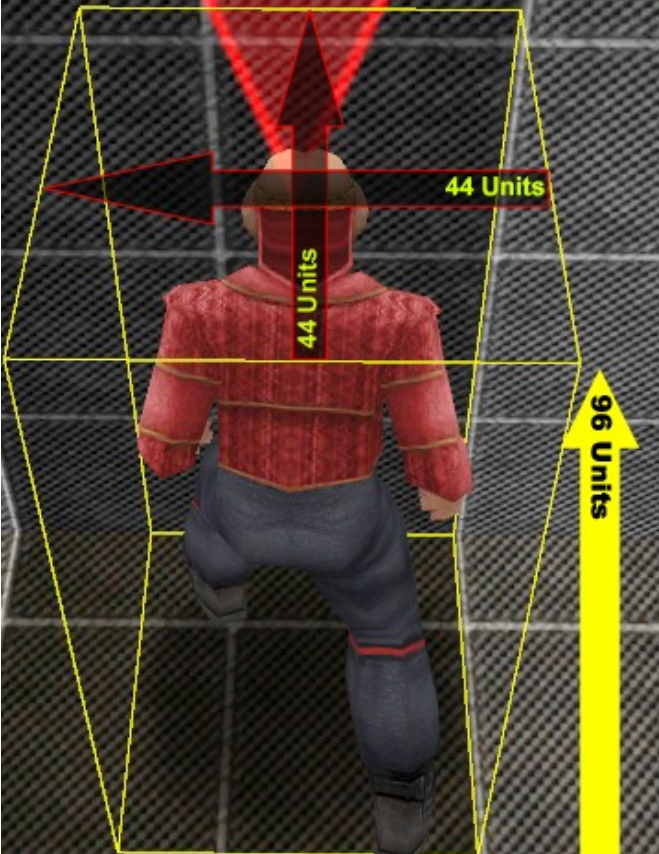
**Star Trek Elite Force II  
Player Model: Boundingbox**

The Bounding box is a Box which exists around every entity, it is used for collision detection.

The box is used for collision detection, player with world (Physics) and player with projectiles

The head of the model below is outside the box, you can shoot right through it, it does not collide with the world.

If you build a tunnel with 49 units in height the player could walk inside there when crouched but the player would look out of the tunnel, the camera is located higher than the 49 units of the bounding box. If you build a tunnel for couched use only, use 64 units at minimum.

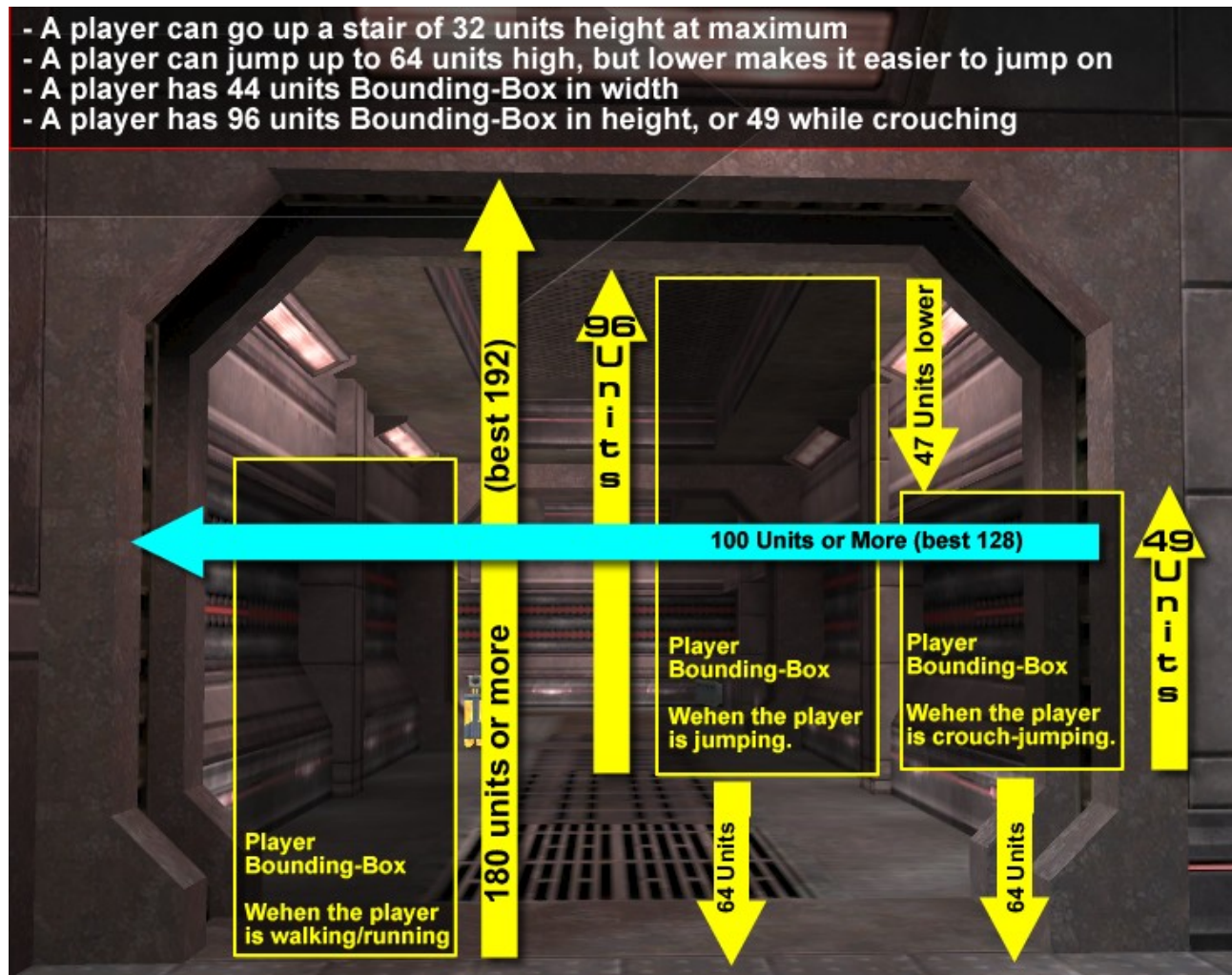


A unit is 1 x 1 grid in size in the radiant at the finest grid. To select the finest grid press the key 1, at your keyboard while the Radiant is in focus. You can select grid size from 1 to 9, 0 hides/shows the grid.

▯The head and the right hand of the player is outside the Bounding-Box, they do not collide nor take damage.

To build a good level you should be aware of the units system used in the game.

As for example if a object is higher as 32 units the player does not walk over it any more, the player needs to jump to get on top of the object. So a stair if you wish the player to climb it properly needs to be 32 units or lower, best is 8 to 24.



A example of the Player Bounding-Box in different situations compared to a regular CTF map corridor.

You can make Boundingboxes visible with the command `sv_showbboxes 3` in the singleplayer, it requires to have cheats enabled.

That's it, thanks for your intrest :)