# *Object Rotation 101*

## By EEPROM

(How to rotate objects perfectly)

The trick is quite simple. First, I build all my maps starting with the original placement rotation. For example, when I through down a base object to start with, that will be the rotation I will build the whole map off of (0 0 0). If you look in the F2 screen when you have an object selected you will see a setting for rotation. There are three numbers there (0 0 0). If you simple place an object down and do not rotate it in any way those three numbers remain at zero (0 0 0). Most objects work off the standard degree values. For example, if you change one number value to 90 it will rotate that object 90 degrees. If you change one number to 180 it will rotate that object 180 degrees. However, this is not true with animated objects such as packs, turrets, fields, doors, stations, objectives, gens, panels and even markers. They use some other degree value that I have not completely understood yet but I'm getting close and will supply values for rotation later in this tutorial.

Now, each number in the rotation value part of the F2 screen is linked to a key function. For example, if you hold down the shift key when moving an object it will simple rotate the object left or right. This is linked to the last number of the rotation value. Turn the object left and you values may change from (0 0 0) to (0 0 27) depending on which way and how for you rotate the object. If you hold down the ALT key and move the object it will rotate it vertically changing the rotation value from (0 0 0) to (0 27 0) depending on how fare you rotate it. The first value in the rotation settings will also rotate the object in the opposite way that the second rotation value does but I have not found a key link to that value yet.

Now that you are completely confused let me tell you how I get these objects to rotate perfectly. What I do, instead of rotating the objects manually I simple enter values into the rotation value fields of the F2 screen. For example I will use the object “scargo2” under the HumanCargo group that I use for teleports. Now, If I want the create to stand up straight I simple change its original value from (0 0 0) to (0 90 0). This will make it stand up straight. If, after I make it stand up straight but it needs to be rotated left or right I simple change the rotation value from (0 90 0) to (0 90 90). No my object (the cargo create) is standing straight up on end and has been rotated left (or right) so that the longer side is facing in on the teleport. Starting to get the picture? I hardly ever rotate an object manually; I mostly just edit the values directly in the F2 screen. This is easiest when the base is built at a simple rotation (0, 90 or 180 degrees). If you start building your base at some weird rotation like 20, 30, 40 degrees then rotating your other objects will be harder and take more time.

Now, lets look at the first number in the rotation values. We will use the object “logo1” of the HumanLogo group for an example. If you place a logo down at (0 0 0) rotation, then edit the first value to 90 degrees like this (90 0 0) it will make the logo lay perfectly flat. If you instead edit the second value to 90 degrees like this (0 90 0) it will make the logo lay perfectly on its side. If you edit the last

value to 90 degrees like this (0 0 90) it will rotate the object left 90 degrees. If you use negative values like -90 then it will rotate the object in the opposite direction. For example if I edit the first rotation value of the logo to 90 degrees like this (90 0 0) it will make the logo lay perfectly flat with the logo facing down (which means the logo is now on the bottom of the object). If I use -90 like this (-90 0 0) the logo is now facing up on the object.

You should be getting the picture by now so let me give you some hints and values:

Bridges: Editing the second rotation value like this (0 90 0) will flip the bridge on its side. Use 180-degree value and it will flip it completely up-side-down. Edit the first rotation value like this (90 0 0) and it will make the bridge stand straight up. Use 180-degree value and it will rotate it all the way up-side-down. Of course, editing the first two values in a combination will give you weird rotations. All three will give you even more weird rotations and if you're a Math Matition then you could rotate these objects in any given rotation you can think of.

Animated objects: These work in the same way but have a different degree value. A value that is used to turn standard objects is not the same with animated objects like the ones I have listed at the start of this tutorial. They use a much smaller value. For example, if I wanted a force field (not a force field door but a misc field) to lay flat then I would need to edit the rotation value like this (1.568999 0 0). I know, this is confusing. I take it that 90 degrees = 1.568999. 180 degrees is something like 3.12365 or something like that. It's weird and like I said I have not figured it all out completely yet. The same is true with markers when rotating doors and elevators. Simple edit the marker rotation value and the door or elevator will rotate too but it uses the smaller rotation value too.

Now, last but not least, some times after editing the rotation settings of an object (and this is true if you edit all three values) the editor will rotate that object but the values you entered may end up changing completely. I guess the editor finds a better value to achieve your suggested rotation, I guess. Don't worry about it; your object will still rotate just as you instructed it to do.

Remember, edit the rotation value in the F2 screen, hit apply and your object will rotate. Use simple values like 90, 180 and 0 to get the feel for it. Negative values like -90 will rotate the object in the opposite direction.

Hope this wasn't too long but I wanted to help you understand how easy this can be when rotating objects.