




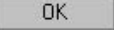
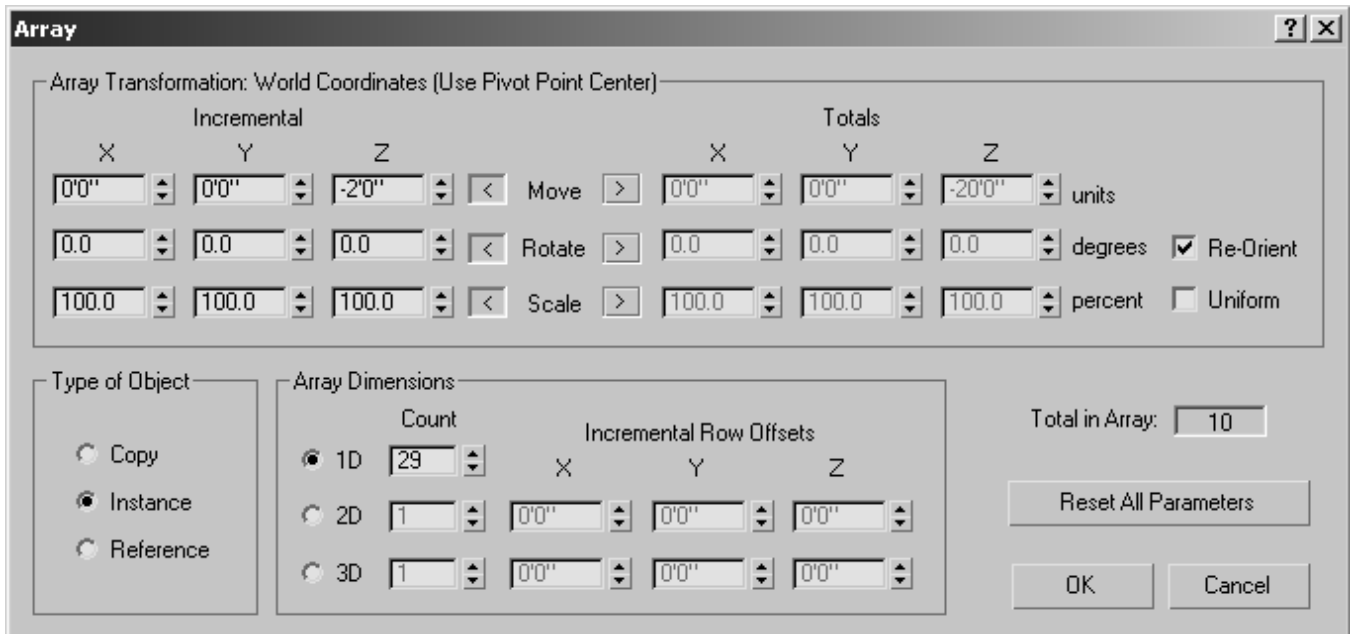

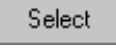



Orientation Constraint

In the past if we wanted to animate a set of Venetian blinds opening and closing we would have to animate each blade, one at a time, write and use a script or even write and use an expression. For some this was intimidating but now we can achieve this by creating a few clones and using the Orientation Constraint.

- Open the file **OrientationConstraint.max** downloaded with this tutorial. (You will notice a window frame with single blind-blade.)
- Press the **Select by Name**  tool. (This opens a floating window)
- Chose **Blade01** and press **Select** . (This selects the existing blade in the scene)
- Activate the **Move**  tool. Press the **Shift** button on your keyboard and move the blade **-2"** on the **Z**-axis. Under **Clone Options** chose **Instance**. (By choosing instance, this will allow to change a blade and have the others being affected as well)
- With **Blade02** active chose **Orientation Constraint** located under the **Animation – Constraint** pull-down menu. You will see a chain following your mouse as you move it around in the viewport, **VIZ** is waiting for you to tell it "who" to be constrained to. Pick **Blade01** in the viewport. (At this moment if you were to rotate **Blade01**, **Blade02** would rotate with it as well)
- With **Blade02** active, under the **Spacing Tool**  fly out chose the **Array**  tool. (This will open the Array menu.)
- The Array is read horizontally. Under Incremental you will see an X, Y and Z to the left of **Move**. Set the **Z** to **-2"**. And chose **Instance** under **Type of Object**. Under **Array Dimensions** set the **1D** count to **29**. Press **OK** . (By choosing instance and the count to 29, you now have created 29 more blades that all reference **Blade01**)



- Press the **Select by Name**  tool, chose **Blade01** and press **Select** .
- Activate the **Rotate**  transform, pick and hold **X-axis** of **Blade01** and move your mouse vertically. (Notice how all the blades are rotating as you rotate **Blade01**.)