

# Re: Object rotation

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*Source:*

<http://www.tech-archive.net/Archive/Development/microsoft.public.win32.programmer.directx.managed/2005-04/ms>

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- *From:* "Phillip Stafford" <[prstafford@xxxxxxxx](mailto:prstafford@xxxxxxxx)>
  - *Date:* Tue, 12 Apr 2005 10:54:40 -0400
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Wow! So simple to do...thanks a lot! Made all the difference in the world.  
Another question?

For each object drawn, can you have only one "Device.Transform.World = ""???  
I've tried breaking it up in multiple lines yet only the last one goes into effect.

Thanks again.

"Phil Taylor" <[ptaylor@xxxxxxxxxxxxxxxxxxxx](mailto:ptaylor@xxxxxxxxxxxxxxxxxxxx)> wrote in message  
[news:%234lkqWxPFHA.2680@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:%234lkqWxPFHA.2680@xxxxxxxxxxxxxxxxxxxxxxxx)  
> in addition, if the default location isnt centered around the origin, you  
> need to translate back to the origin first, then rotate, then translate to  
> new position.  
>  
> most people author objects centered around the origin, though, so you can  
> simply apply the transformations in the proper order, as ZMan suggested.  
>  
> "ZMan" <[zman@xxxxxxxxxxxxxxxx](mailto:zman@xxxxxxxxxxxxxxxx)> wrote in message  
> [news:O7iyVgwPFHA.1268@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:O7iyVgwPFHA.1268@xxxxxxxxxxxxxxxxxxxxxxxx)  
>> Transformations need to be done in a specific order to get the effect you  
>> intended. For example rotations are ALWAYS around an axis so if you  
>> translate it first you get a different effect that translating it after.  
>>  
>> I'm not 100% sure what result you are looking for but switching the  
>> Translation and the rotation in your formula will give you a different  
>> result.  
>>  
>>  
>> --  
>> ZMan ([zman@xxxxxxxxxxxxxxxx](mailto:zman@xxxxxxxxxxxxxxxx))  
>> <http://www.thezbuffer.com>  
>> News and Information for Managed DirectX  
>>  
>>  
>> "Phillip Stafford" <[prstafford@xxxxxxxx](mailto:prstafford@xxxxxxxx)> wrote in message  
>> [news:OOOndndG1moqZLsffRVn-ig@xxxxxxxxxxxxxxxx](mailto:news:OOOndndG1moqZLsffRVn-ig@xxxxxxxxxxxxxxxx)

## Re: Object rotation

>>> Isit possible to rotate an object on the Z axis without rotating the  
>>> world?  
>>>  
>>> I am working on some commands that move a mesh in 3d world space.  
>>> Currently, by pressing the arrow keys, the object moves to the left,  
>>> right, up, or down. When I move it left, I would like the object to  
>>> rotate on the Z axis yet still move to the left as if it had not rotated  
>>> (basically, moving left on the original X axis). Currently what happens  
>>> is it rotates, then moves on the new x axis after the Z rotation.  
>>>  
>>> The code originally was...  
>>>  
>>> device.Transform.World = Matrix.Scaling(Scale, Scale, Scale) \*  
>>> Matrix.Translation(XLocation, YLocation, ZLocation);  
>>>  
>>> For the rotation, I have changed to ...  
>>> device.Transform.World = Matrix.Scaling(Scale, Scale, Scale) \*  
>>> Matrix.Translation(LocationX, LocationY, LocationZ) \*  
>>> Matrix.RotationZ(angle);  
>>>  
>>> I have been searching the web for the past 2 hours and can't seem to  
>>> find a solution. Maybe I am missing something very obvious..I don't  
>>> know. Any help is greatly appreciated.  
>>>  
>>>  
>>>  
>>>  
>>  
>>  
>  
>

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### • *Follow-Ups:*

- ◆ **Re: Object rotation**  
◇ *From: Phil Taylor*

### • *References:*

- ◆ **Object rotation**  
◇ *From: Phillip Stafford*
- ◆ **Re: Object rotation**  
◇ *From: ZMan*
- ◆ **Re: Object rotation**  
◇ *From: Phil Taylor*

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Re: Object rotation

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