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Subject: Could you advice me for building 6mm minis?  
Posted by [ouais25](#) on Sun, 25 Nov 2012 09:18:46 GMT  
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Hello,

I'm new to minis and to 3D printing.

But I'm thinking about starting with both at once

My idea is to build some micro armies at 6mm scale (1:144 for vehicles) (it's similar to micro playmobil if you know).

I'd like for example to have some soldiers, mechas, tanks and stuff like that.

I'm not a designer, and I know sketchup a little (I've made some simple models for my house to help me choose tiles, etc.).

And I know there are a lot of available designs on internet (sketchup for example).

Do you have some advice for helping me get started?

How to select appropriate models?

Shall I care about the level of details or will it be smoothed during stl conversion or during printing?

Do you think there will be much work to check it'll be OK for printing?

When shall I care about scaling (in sketchup, in shapeways?)?

What material is best for this purpose?

Shall I group some minis in the same model or is it better to separate?

Thanks,

Ouais

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Subject: Re: Could you advice me for building 6mm minis?  
Posted by [CGD](#) on Mon, 26 Nov 2012 03:00:03 GMT  
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I think 6mm is 1:285

1:144 is 12mm

CGD

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Subject: Re: Could you advice me for building 6mm minis?  
Posted by [Dragoman](#) on Mon, 26 Nov 2012 16:24:48 GMT  
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ouais25 wrote on Sun, 25 November 2012 09:18Hello,  
I'm new to minis and to 3D printing.  
But I'm thinking about starting with both at once

Welcome to the community

Quote:

My idea is to build some micro armies at 6mm scale (1:144 for vehicles) (it's similar to micro playmobil if you know).

As CGD already mentioned, 6 mm figures is 1/285 or 1/300 - depending on who you ask. So about half the size of 1/144 models. Better be clear what you want to do.

Quote:

I'd like for example to have some soldiers, mechas, tanks and stuff like that.

I'm not a designer, and I know sketchup a little (I've made some simple models for my house to help me choose tiles, etc.).

Something like a year ago, I was in a similar situation. Now I have some 40 models on my shop.

Quote:

And I know there are a lot of available designs on internet (sketchup for example).

Do you have some advice for helping me get started?

How to select appropriate models?

Do stuff you are interested in, on a subject you like. Start with fairly simple, boxy models, trucks

perhaps, or APCy

Be patient. It took me a few weeks of dabbling (in Blender) to get my first model right, and several test runs before it would print. Now I am much quicker than that. You will learn from experience.

Check out the advice on this website, on the Shapeways forums and on the websites supporting whatever software you use.

Have a look at what other Shapeway shops offer in this scale - including my own

Quote:

Shall I care about the level of details or will it be smoothed during stl conversion or during printing?

STL conversion will not really affect detail, but printing will. See the material info on this site and look at fotos of models here. Even with teh best material. anything smaller than 0.1 mm will not be visible, and things smaller than about 0.5 won't come out clearly. Scaled to life-size that would be between 3 cm and 15 cm. So: forget about rivets, small-calibre gun barrels also won't work

Quote:

Do you think there will be much work to check it'll be OK for printing?

Depends on the shape. Best start with simple shapes A common problem are thin pices and thin walls.

Quote:

When shall I care about scaling (in sketchup, in shapeways?)?

I personally always design with real-life dimensions, and scale down just before I export to .stl format

Quote:

What material is best for this purpose?

Depends on the size of your models and the level of details you want.

Larger models become expelnsive in anything but WSF (or sandstone if you want colour). FUD has the best detail. I like Black Detail as a good compromise, with Transparent Detail for models with large windows.

Quote:

Shall I group some minis in the same model or is it better to separate?

Smaller items, such as soldiers, jeeps and light tanks should be grouped on a sprue. The handling fees would otherwise be a large part of the price.

Greetings  
Dragoman

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Subject: Re: Could you advice me for building 6mm minis?

Posted by [Phxman](#) on Tue, 27 Nov 2012 07:36:32 GMT

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CGD wrote on Mon, 26 November 2012 03:00I think 6mm is 1:285

1:144 is 12mm

CGD

6mm would approximate to 1:51 scale.

whereas 12mm would be 1:25.5 scale

Scale is a ratio, and generally scaled to 1 foot.

$1/144 \times (12\text{inches} \times 25.4\text{mm}) = 2.12 \text{ mm}$

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Subject: Re: Could you advice me for building 6mm minis?

Posted by [CGD](#) on Tue, 27 Nov 2012 07:55:06 GMT

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Phxman wrote on Tue, 27 November 2012 07:36

6mm would approximate to 1:51 scale.

whereas 12mm would be 1:25.5 scale

Scale is a ratio, and generally scaled to 1 foot.

$$1/144 \times (12\text{inches} \times 25.4\text{mm}) = 2.12 \text{ mm}$$

My maths is not that good. But since 2002 I've been working with 1/144 and my products always worked well with 12mm miniatures.

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Subject: Re: Could you advice me for building 6mm minis?  
Posted by [Dragoman](#) on Tue, 27 Nov 2012 09:22:29 GMT  
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Phxman wrote on Tue, 27 November 2012 07:36CGD wrote on Mon, 26 November 2012 03:00I think 6mm is 1:285

1:144 is 12mm

CGD

6mm would approximate to 1:51 scale.

whereas 12mm would be 1:25.5 scale

Scale is a ratio, and generally scaled to 1 foot.

$$1/144 \times (12\text{inches} \times 25.4\text{mm}) = 2.12 \text{ mm}$$

This depends on what miniatures hobby you are talking about.

In wargaming, the convention is to quote scale as the height of a human figure 6 feet tall in real life. So 6 mm is around 1:300, 15 mm around 1:120.

In railroad modelilng, scale is quoted as Phxman says - or as a ratio, or by letter code (e.g. HO scale).

Pretty confusing overall.

The only consistent and unit-independent way is to quote the ratio of the model to the real object. E.g. 1:285 = 1 mm on the model is 285 mm in real life. And this is the same in Imperial units: 1/285 = 1 Inch on the model is 285 Inches real size.

Greetings

Dragoman

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Subject: Re: Could you advice me for building 6mm minis?  
Posted by [wedge](#) on Wed, 28 Nov 2012 14:40:15 GMT  
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Quote:  
6mm would approximate to 1:51 scale.

whereas 12mm would be 1:25.5 scale

NO

Quote:  
Scale is a ratio, and generally scaled to 1 foot.

here is the mistake!

the Size 6, 12, 28mm means th size of a normal human and not 1 foot!  
Asume a human is 1,80m  
1800mm / 6mm -> ca. 300 -> 1:300  
as Manton by the Writers before.  
Th Problem with the size scale is, it is no realy scale ...

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Subject: Re: Could you advice me for building 6mm minis?  
Posted by [ouais25](#) on Wed, 28 Nov 2012 15:54:30 GMT  
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hello all,

Thanks for your reply.

Sorry for the confusion. I mixed the scales.  
I was taking a shortcut to my initial findings when I was looking for some minis to start wargaming (boardgame).

I planned to go with very small minis for a lot of good reasons.

6mm soldier minis were quite OK for that.

I could accept to associate them with memoir' 44 tanks which are 1:160 and which are usually compatible with 8mm-10mm.

The idea being to have the cheapest solution (a box of memoir' 44 has unbeatable price for plastic tanks: 48 tanks for ~50â,-).

Until I discover 3D painting.

I guess and I hope that with 3D printing I can easily gather small armies with minis I like most for cheap.

@dragoman: thanks for your detailed reply.

I was afraid I had to create all minis by myself

It takes time, requires time and I hoped I could reuse any model available for free on either sketchup or whatever DB and convert it to print it.

I've checked your shop and I agree it's more or less what I'm aiming at.

Your models are very effective for small scale and very convincing, at least on pictures.

And the prices seem correct, compared to some other shops were the printed models would cost more than what can be found in standard minis shops :/

I wonder if making such minis would require less efforts than trying to convert complex models found for free on sketchup.

I need to browse a bit more to see what kind of models I could gather for which price.

At last, for information, the types of minis I like most are the ones found in those games:

- rivet wars
- dust tactics
- at 43

I like to have infantry with AMP suits like in avatar or tacarms like in AT43, coupled with some mechas and tanks, in a old-fashioned or cartonnish style.

But looks like very difficult to design

Ouais

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Subject: Re: Could you advice me for building 6mm minis?

Posted by [Phxman](#) on Thu, 29 Nov 2012 04:11:02 GMT  
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@Wedge,

I saw what I considered was the misnomer, and now accept it.

Please scrub my entries.

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