

Modular Tanks: Tau Devilfish/Hammerhead



Introduction & Overview

This guide deals with the construction of modular Tau tanks that are easily convertible between the Devilfish and Hammerhead configurations. At the time of this articles writing, these are the only two official tanks available to the Tau and are both based around the same chassis. There are of course various other models and conversion kits from Forge World, also based around the same chassis.

This guide will cover the construction of the Hammerhead, and how to make it convertible to and from a Devilfish, with the use of magnets to hold parts together instead of plastic glue. Also provided are alternatives for materials, methods, and ways to convert already built models.

Origins

This guide was originally written for Tau Online by **mace**, heavily inspired by a thread on 40k Online forums by **She-and-Ski**. This guide itself is written by **mace**, as an update of the Tau Online thread. Many thanks to all the members who have contributed to the threads on both forums and to **Joeboy V.** for providing the magnets that have made this conversion guide possible.

The original 40k Online thread can be found here: <http://40konline.com/community/index.php?topic=55642.0> and the Tau Online thread here: <http://forums.tauonline.org/index.php?topic=4750.0>

Materials

For a complete conversion, you will need the following:

- 1x Tau Hammerhead Kit
- Plastic Glue
- Super Glue
- A set of small files – similar to the Citadel ones
- 5x Small Rare Earth magnets (per Hammerhead) – 3mm x 1.5mm should be sufficient
- Drill bits – the same diameter as the magnets – 3mm or 1/8"
- Spare bits of sprue – there should be plenty left over from the Hammerhead kit
- A ruler with millimeter divisions
- *Optional* Pin vice, with drill bits and wire of the same diameter, for pinning the hatches

If you can't get hold of some magnets, some blu-tac will do the job temporarily.



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Construction – The Complete Guide

This guide focuses on two main sections: the top weapons turret on the hammerhead, and the front weapons/sensor turret in the devilfish and hammerhead respectively.

General Construction -----

This part may be pretty obvious, but before you begin, file any mould lines etc off the pieces, this will help later when gluing together the model.

There are four hatches on the model – one at the back, the top crew hatch and one on each side. The rear hatch is designed to be able to open and close, and would obviously not require any glue. The side and top hatches however, are designed to be glued in place. If you want to allow them to open and close, now would be a good time to *pin* them. I'm not exactly an expert in this, but its basically drilling a hole through the pivot point on the hatch, and some holes in the hull, and inserting a piece of wire through the holes so that it creates a hinge. For more details and proper instructions, contact your local hobby shop or search online on various forums/hobby websites.

The engines are designed to be able to pivot whilst attached to the model, and so won't need gluing. This can be assembled separately, as per the instructions included with the kit.

Assemble the main hull of the tank, without any of the top turret parts or any of the front turret parts. You should now have something that looks like this:



Note: If you want to paint the interior of the tank, don't glue on the sides of the tank, you can do this later. The pieces can be primed

separately, then after priming, you can then file off any basecoat spray paint on the areas where gluing is needed, and apply plastic glue.

The hammerhead weapon drones (without weapons attached) and the burst cannons and smart missile system can be constructed normally – do not glue the weapons to the drones.

Up to now, you should have assembled:

- 1x hull/chassis (or at least partially constructed)
- 2x engines
- 2x weapons drone without weapons
- 2x burst cannons and smart missile system assembled
- 1x top crew hatch



The parts so far...

Front Turret -----

I've seen and read of various methods to make the targeting array and burst cannon interchangeable in the front turret – this method seems to be the most efficient and requiring the least effort. The most important part – is to not glue in anything to do with the front turret, that is; the two pieces that hold the burst cannon in place (the 'C' ring and the hemisphere like piece), the 't' shaped piece and the burst cannon and targeting array itself. Basically only two modifications are required – adding a magnet in both the hull and the 't' shaped piece, and adding some sprue onto the targeting array.

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Here are the two pieces of the front turret that require modification – on the left is the 't' shaped piece, and on the right is the targeting array:



Drill a 3mm hole in the 't' piece (don't drill all the way through!) and in the hull, about 1mm from the edge, as shown (outlined & labeled):



Glue in a rare earth magnet into each hole, using some superglue. Be sure to check the polarity of the magnets to ensure that you don't glue them in the wrong way, otherwise they will never fit together. It might help to use a pen to put a mark on one side of each magnet as a reference to their polarity. Having some sort of standard (such as all sides that have a mark on them are of the same polarity) would be useful for future conversions, and ensuring that parts containing magnets can be used with other corresponding parts on other tanks, if you decided to repeat this guide for more tanks.

Now for the second part – the targeting array. Find an intersection point (a 'T' shape) from some spare sprue, and cut it out with about 6mm in each direction along the top of the 'T' and about 8mm along the vertical part of the 'T'. This

should leave plenty of room for the cutting process to occur, whether it is with clippers, or a hobby saw, though clippers are quicker. Now take this piece, and trim the horizontal part of the 'T' so that it is 9mm wide. With the vertical part of the 'T' in the center (so that the piece resembles a 'T' of course!), you should end up with something like this that will fit in with the 'C' piece:

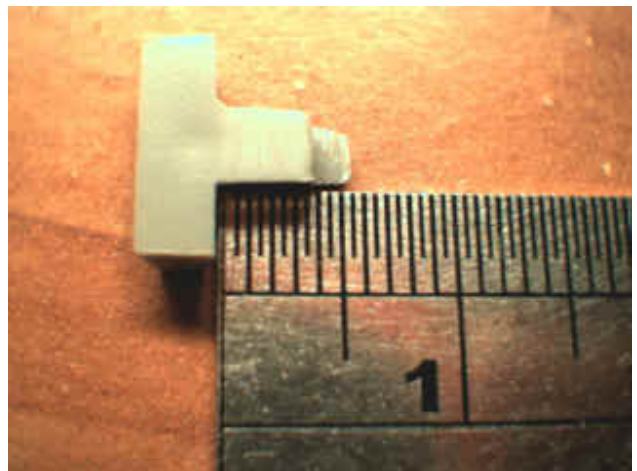


The next step is to get the vertical part of the 'T' piece the correct length, and to cut a small lip into it so that it can be glued to the targeting array.

This part needs a bit of precision, but also some trial and error to get right.

After a fair bit of cutting and filing, the vertical part of the 'T' piece is 5.5mm from the point of intersection, with an approx. 1.5mm lip that is just over 1mm deep.

The piece can be seen here:



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Once glued to the targeting array, the piece should look like this (one I prepared earlier):



Don't glue it in just yet though, as this is just for reference.

This piece fits in to the front turret like so (also prepared earlier):



Using the pictures as a reference, try out a 'dry-fit' with the parts, checking that they fit together and line up.

Once you're happy with the sprue bit, glue it to the back of the targeting array. Try to keep it as centered as possible. Once it has dried, check to make sure it fits together nicely, assembling the front turret in the same way as with the burst cannon (i.e. placing the 'C' ring on last).

That is basically the front turret covered so you're done (for now anyway).

Other methods involve cutting slots into the front turret, and mounting magnets at the back of the turret, with more magnets in the back of one burst cannon and another behind the targeting

array. This method can be seen in the two forum threads mentioned at the end of the first page of this guide. It does require some butchering of parts though, and doesn't allow normal movement of the burst cannon, and also uses up more parts and more magnets.

Main Turret -----

The main turret presents many choices as to how to mount it and attach the gun to the mount. Unfortunately, the kit only comes with one of the small mounting pieces that connect the gun to the mount, and all it to track up or down.

Various methods that could be used (detailed in the 40k Online forum thread – link on the first page) include casting another of the mounting pieces from modeling putty/green stuff, using small model train screws to hold the gun in place, or just using blu-tac.

The option I have chosen is the embedding of a rare earth magnet in the mounting piece, and another in some filler material within each weapon.

To do this, get a 3mm drill bit, and just twist it into the middle of the mounting piece – this can be done by hand without the need for an actual drill. You do not have to drill very far, just a few millimeters into the plastic – enough to mount the magnet so that it's flush (or fairly close to it). Ensure that you have checked the polarity of the magnet in the mounting piece, as it will become important later on so that it's compatible with the weapons. At this point, the mounting piece can be glued into the main turret itself.

In order to mount magnets inside the Railgun and Ion Cannon, some form of filler material can be used to hold the magnet. This can be in the form of modeling putty or green stuff, with just a blob inside the gun with the magnet pressed into it, so that when the mounting piece is inserted, the two magnets will come in contact, or close to it (pretty self explanatory), or for example, placing the magnet on some plasticard within the gun. The latter method can be found in the Tau Online Forum thread (see link on first page).

Both methods are viable, though I've gone for another method that is slightly more economical. For one thing, it's free! I've cut up and glued

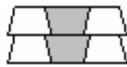
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together various bits of sprue to form sprue bricks:



The one on the left will be placed inside the railgun, whilst the one on the right will go in the ion cannon.

How were they made? I used 6 15mm lengths of sprue that are of equal thickness, and glued them in pairs of two, one over the other. The three pairs were then glued sideways to each other like so (end view):



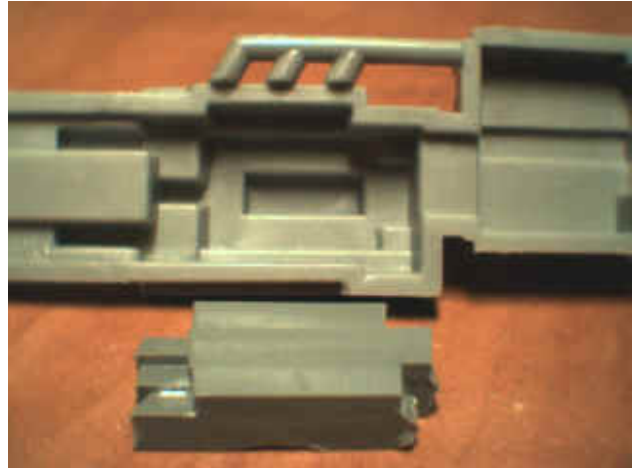
It is then filed so that one end is flat and smooth, and the other end is relatively flat, with a 3mm diameter/2mm deep hole in it to fit the magnet. The piece measures 12mm in length. Filing of the sides may be necessary to ensure the Ion Cannon can be glued together properly whilst this piece is inside.

This will glue to the inner top flat section of the ion cannon, as can be seen here:



Note: Don't drill the piece until the glue has definitely set, otherwise the piece will split.

The railgun piece is similar, but is just constructed in layers to match the recess within the railgun:



The railgun piece may need some filing on the top side (in picture) so that a better surface for gluing is obtained.

Once both pieces are in place and they appear to fit properly and position the magnet close enough to the mounting piece (when attached), glue the pieces to their respective weapons, and then glue the halves of the weapons together.

You should then have two guns with magnets held securely within them.



Railgun with embedded magnet.

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Ion Cannon with embedded magnet.

This should adequately hold the magnets in place, and bring them close enough to be held securely.

If assembled correctly, the Ion cannon should have minimal 'drooping' of the gun (due to the front heaviness). However the same cannot be said for the Railgun in many cases. To fix this, the magnets just have to come into direct contact. To achieve this, you will have to file down the insides of the railgun mount, where the plastic would usually sit on the mounting piece and allow it to track up or down. All you have to do is to get a file and smooth down the slots, so that its completely flat, allowing the railgun to sit lower on the mounting piece.



The slots cut into the railgun.

Misc. Parts -----

You may notice that there are various parts of the kit have not mentioned yet in this guide – such as the landing gear, seeker missile, various sensors/spines and the crew member. These can be filed and added on however you please, and

glued if needed, though mine are still attached using some blu-tac or just press-fitted into place (in the case of the landing gear and seeker missiles). If you need a place to attach the seeker missiles, they can be pushed into the slots at the back of the front fins, just behind where the drones sit. As for the landing gear, if you wish to use the clear stand and to have the landing gear retracted, you will need to cut off the top part of the landing gear so that it can fit into the recesses. If you have hinged the crew hatch, you can just place the crew member inside with the hatch open or remove him and close the hatch as you please.

Assembling/Swapping between the DF & HH -----

Putting together the final tank is as simple as clicking the parts into place, as they should hold by themselves thanks to the rare earth magnets.



All the parts.

For the weapon drones on the Hammerhead, the burst cannons/smart missile systems can be held in place without any glue, so they can track up and down etc. They can also be removed by gently prising apart the drone mount, so that the burst cannon can be used on the front turret for the Devilfish.

For the Devilfish, you just insert the crew hatch into the top of the tank, and place the burst cannon into the front turret and attach it to the hull.

When you want a Hammerhead, simply replace the burst cannon with a targeting array, and move the crew hatch to the main weapons turret, add in whichever weapon you choose, and place

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it on top – and you’re done! It’s as simple as that. You now have a complete modular Tau tank that is interchangeable between the Devilfish and Hammerhead configurations, and as a free bonus, compatible with the Forge World Hammerhead conversion kits that attach to the top of the Hammerhead.



Completed Devilfish.



Completed Hammerhead (RG + BC).



Completed Hammerhead (Ion + SMS).

Other tips

If you don’t have the necessary parts listed on the first page, you can always use alternatives, just be creative. Blu-tac can be used in the place of magnets, for holding the front turret together and the gun to the main turret. If you don’t have any spare sprue lying around to glue onto the targeting array, again, blu-tac can be used to secure it in place. In fact, blu-tac is pretty much a complete temporary solution if your missing things like magnets, as you can always just remove it and apply the necessary modifications afterwards.

If you have a devilfish kit instead, or an already assembled hammerhead, you can still follow this guide where applicable, depending on whether or not parts are glued together (see *next section*).

I’ve actually had this guide in mind when I constructed my first hammerhead, and haven’t had access to rare earth magnets until recently, and so I’ve been using blu-tac instead.

Converting an existing model -----

Assuming that the weapon options and front turret haven’t been glued in place, the steps are the same for modifying the front turret and the mounting piece of the main turret. Using green stuff/modeling putty would be the easiest method for mounting magnets within the weapons themselves, as the gun would presumably already be constructed.

Conclusion

To finish up, the tank and its components can be painted separately, and the magnets can be painted over, as the paint won’t affect them.

Hopefully this guide has been helpful to you in building a modular Tau tank. You should keep in mind, that although this guide is based around Tau tanks, the same principles can be applied to other models in the Games Workshop Warhammer 40k model range, such as Dreadnoughts, Crisis Suits, Carnifexes and other tanks – basically anything large enough to fit magnets that have different options for weapons etc.

Feedback would be greatly appreciated via the Tau Online forum thread, linked to on the first page.

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References:

Original Guide/Tips on 40k Online, written by She-and-Ski with a helpful contribution by Zustiur:

<http://www.40konline.com/community/index.php/topic,55642.0.html>

Tau Online thread with a contribution from Catsy:

<http://forums.tauonline.org/index.php?topic=4750.15#msg123635>

Magnets provided by: <http://www.hobbytoolz.com>

Other Guides you might be interested in:

"Maki My Fish" by ShasEl_Tael – A series of tutorials on Devilfish construction, with guides on pinning, magnetic doors, interior detailing, and many other modelling and painting tips. Look to this for more detailed information on pinning etc, which I haven't covered here. The tutorials can be found at:

<http://forums.tauonline.org/index.php?topic=12487.0>

ShasEl_Tael - <http://www.eastern-empire.com/>

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Version 1.0
13/10/2005

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