



Welcome to the inaugural issue of the Central South Carolina AMPS Chapter newsletter, *The Wildcat*. A little info about the club's mascot and logo is probably in order. As you will recall, we discussed the logo a little during our first meeting on July 28, 2010, but time was short, and we had a lot of other important things to talk about. So here's the entire story.

“The Wildcat” and the 81st Division at Camp Jackson, SC

The black silhouette wildcat in the circular background was selected by the 81st Division as its distinctive unit shoulder sleeve insignia during WW I. The division was established by War Department orders dated August 5, 1917, and it was physically organized at Camp Jackson, SC on August 25, 1917 with the division commander also filling the duty of camp (installation) commander. The 81st Division was one of the new National Army Divisions. These NA divisions were composed of draftees (as opposed to the volunteers of the Regular Army and National Guard divisions). The 81st men were drafted from Florida, North Carolina, and South Carolina.

According to the Fort Jackson web site:

A military uniform tradition was established at Camp Jackson by the 81st Division. Men of this unit, training on the southeast corner of the reservation near Wildcat Creek, began to wear crude cloth emblems of wildcat heads on their sleeves. The emblem was designed by Corporal Dan Silverman of Company I, 321st Infantry Regiment. As the 81st “Wildcat” Division joined the American Expeditionary Force in France in August 1918, this custom found wide popularity and eventually these unique unit identification patches were worn throughout the Army.

The newsletter banner is also borrowed from the 81st Division. Its newsletter, published at Camp Jackson and later while in France as part of the AEF, was also called *The Wildcat*. The issue shown here was published in May, 1919 and features the mascot charging through the trenches during the Meuse-Argonne and Vosges campaigns. Obviously, the Doughboys on occupation duty had the All-American pastime on their minds in that long ago spring – the two wildcats on either end of this issue's banner are playing baseball!



Here's an enlarged view of that banner. I've tried my feeble best to do a bit of justice to the designers, writers, and editors of the original *Wildcat*, but being a relative luddite when it comes to the potentials possible in



the computer-age, my feeble best is, well, a bit feeble.

The 81st Division's shoulder sleeve insignia originally incorporated different colors for the various subordinate division units. The cat was in different colors, according to the brigade, as follows: Headquarters, Machine Gun Battalion, and Engineers - black; 161st Infantry Brigade - white; 162nd Infantry Brigade - light blue; 156th Field Artillery Brigade and Ammunition Train - red; Field Signal Battalion - orange; Sanitary Train - green; and Supply Train - buff.



An original WWI 81st Div. insignia for the 162nd Infantry Brigade is shown at the right. There were numerous slight variations in the design of the cat and construction of the patch, and today these patches are relatively scarce and highly sought after by collectors.



The slightly more modern and up-dated Wildcat emblem that forms our logo is actually the latest version as approved by the US Army's Institute of Heraldry.

It is currently worn by the 81st Regional Support Command, headquartered at Fort Jackson, SC. The 81st RSC is the largest US Army Reserve command, encompassing eight states (including SC) and providing command and control over almost 100,000 reserve soldiers. It traces its lineage and honors all the way back to the original 81st Division of WW I fame.

So, the Wildcat soldiers on over a century after Corporal Silverman and his comrades waded through Wildcat Creek and scratched chigger bites in the piney woods of Camp Jackson while learning the fine arts of the bayonet and Springfield rifle! The emblem has a long and significant history that is closely connected to central South Carolina and Fort Jackson, and it's an appropriate symbol for our club, as well, giving us an historical connection to hearth and home, neighbor and kin.

A minor footnote: When originally established, the 81st Division was officially known as the "Stonewall" division (after "Stonewall Jackson," of course). I couldn't find any information about what the "powers that be" (hmmm... "powers that were"?) thought about the troops adopting the wildcat for a mascot and name instead of wholeheartedly getting behind the "official nickname." This is really only significant because of the minor confusion it can cause when researching the division. Some references list the division as the "Stonewall" division instead of the "Wildcat" division.

What follows now is sort of a hyper-extended minutes of our first meeting with some editorializing on my part. Each of these areas is also something that we discussed, and I think that I captured most of the ideas that everyone was throwing out. However, if I missed something, please don't hesitate to get with me or bring the issue up again at the next meeting.

“The Internet Lounge:” Armor Modeling Forums Where We Hang-out

An item of discussion at the last meeting was the armor-related websites and discussion forums where various club members “hang-out.” Here're some of the places on the world-wide-web that I (and a few others that I know about) regularly frequent and my general opinions about each.

AMPS Homepage: <http://www.amps-armor.org/> I don't believe that actual membership in the national organization is required to establish an account here and join in on the discussion groups. Registration is required, though. Actual names are used, but except national AMPS business there's unfortunately not much “model building” talk here. It is a good place to keep up with AMPS contests and shows. Check out the “AMPS Contest Rules” and “Show SOP” (under the “Shows and Conventions” tab). If you don't know how AMPS conducts its judging, you might be surprised at the philosophy, goals, and how detailed the actual procedures are. If you think you know how AMPS conducts its judging, but have never actually attended an AMPS show, you might also be surprised that much of what you've heard is wrong or incomplete. AMPS' judging is much, much more than a simple bronze-silver-gold system. Check it out.

(Come to think about it, AMPS contest rules and their underlying principles and the judging implementation procedures would make a very good topic for discussion at a meeting sometime.)

You can find me on the AMPS Discussion Groups.

Armorama: <http://www.armorama.com/> This is a very good site that does an excellent job of keeping up with new releases. There are also some great build logs. Most of the folks here are nice, the discussions are generally pleasant, and there's very little “elitism” (at least IMHO). There are some manufacturers and their minions who hang out here hawking their wares. There're all generally open about it, but as with all of these sites, some skepticism about glowing reviews of new products is in order. Registration is required for posting, but almost all the forums are open to reading. User names (called “callsigns”) and club members on Armorama:

Keith Frape – “Keef1648”

Jeff Nelson – “majjanelson”

Mike Roof – “SdAufKla”

BTW: Armorama has a sister site in the KitMaker Network called **Historicus Forma:** <http://www.hfmodeling.com/> It's a site for figure modelers that's pretty good but under patronized. Still, there are some interesting things there for figure painters. If you register for one site on the KitMaker Network, you simple use the same user name on the other forums.

Missing-Lynx: <http://www.missing-lynx.com/> A great web site with some outstanding discussions and a wealth of detailed knowledge for the asking. The site and some of its regulars can get a bit “snooty” and patronizing, though. I just tune out of any discussions that start leaning that way. There are some “heavy hitters” on this site (nationally and internationally recognized modelers, writers, publishers, manufacturers, etc.) and a lot of “wanna-be-hangers-on” who are a bit like that annoying little sycophant cartoon dog: “Right Spike?! Ain’t that right Spike? Huh, huh Spike?” One good thing here, though, is the absolute adherence by the moderators to the “real names” rule. This generally keeps the flammers and trolls to a minimum. The quality of work in the “Constructive Comments” discussion group is astounding! There are some model builders there that make me want to say: “When I grow up, I wanna build models just like that!” Registration is required for posting on the forums but not reading.

I post here fairly regularly.

Track-Link: <http://www.track-link.net/> This is another good site with some really excellent and detailed build logs. I find the way the forum threads require each individual post to be opened separately to be very tedious, especially for long threads. The moderator here doesn’t require posters to use their actual names (preferred but not required), so sometimes things can get a bit out of hand, but Paul Owens (the owner-moderator) will hit the delete button in a heart beat to avoid any controversy. The overall feel on Track-Link is quite a bit more casual than on Missing-Lynx. No registration is required for posting on the forums.

Tony Kelly and I post here.

Tanks & Things: <http://tanksandthings.com/> This site is a relative new-comer to the armor-related website gig. The moderators here are a pretty “chatty” bunch and, although there are some excellent model builders on the site, there seems to be a refreshing “let’s not take ourselves too seriously” attitude. Registration is required for posting but not for reading. They also do a quarterly newsletter that’s pretty nice and very professionally done. I lurked about this site for almost a year before registering and waited after that for some months before I made my first posts just because the attitude was so different from some of the other sites. There are several modelers from up-state near Greenville-Spartanburg (IPMS Piedmont Scale Modelers) that post regularly there, and if you frequent the IPMS shows up-state, you might know some of them.

My user name here is “SdAufKla.”

Overall, all of these sites are user-friendly internet places, and you can find some excellent armor model building on each of them. When I have serious questions, I tend to post the most on Missing-Lynx and Armorama. I generally surf onto Track-Link and check out the builds and forums for info of interest but don’t post there very often. I’m still trying to get a feel for Tanks & Things. I’ve met some interesting guys from up-state there so, so far, so good.

I can see that this listing of sites with club members and their user names could be developed and kept up-dated in each newsletter. You guys let me know what you think. If you like that idea, send me the sites (if not already listed) and your user names on them, and I’ll include that info in the next edition.

Armor Build References: Asking for Help with Information Requirements

Another subject that came up during our discussions was about sharing information and getting help with references on our projects. I think that the general consensus was that collectively we probably have enough armor-related books to fill a good-sized public library reference section. We only talked about how to share that information just long enough to raise the issue, so we didn't arrive at any definitive ideas. However, after some thought, one possible solution occurs to me. (You guys might have some other ideas about how to do this too. Don't be shy if you do.)

If one of our members is planning or is in the midst of a new project, and if he or she was able to have that subject listed in the newsletter, then other members with related references could bring those references (or maybe a list) to the next meeting. Whether or not you would want to actually loan your materials to the club member looking for information, at least he or she could get a look at some materials that might answer their research questions.

We could also do something similar for actual building problems. If you get stuck on how-to-do something on a project or how something should look when finished, send me a note and I'll include your problem in the newsletter. Maybe someone has finished the same kit (and could bring in the finished build), or maybe someone has tackled a very similar problem and could come to the next meeting ready to give you some advice or assistance. (Think back on the story that Keith told about the Sherman DD.)

Finally, as I was typing down a bit further in the section on the New Member Survey, I saw that someone that they'd like to do spare-part swaps at the meetings. That's a great idea! So, in addition to the "shout out" for help with references or building problems, we could also include a request for particular subject spare parts. I know my spares box (boxes!) are really too much to schlep to and from each meeting, but if I knew, for example, that someone was looking for Tiger I spare parts, those I could easily pull out and take with to a meeting. So, add "spare-parts" needs to your newsletter "classified ads" and send 'em in.

Give these ideas some thought, and if you need some help with references for a project, send me your information needs, and I'll post them in the next newsletter. If another club member has something that might help you out, then he or she can know what you need and pull the books off the shelf for the next meeting.

I'll go first:

"Classified Ads:" Research Assistance / Info Needs

Mike Roof: Right now I'm trying to collect information on the British "Rota Trailer" (aka "Rotatrailer" or "Roto Trailer") which was towed behind some Churchill and Valentine tanks in Tunisia. I have the new David Doyle Ampersand Churchill book which has a tiny photo of the trailer on page 55, but that's all I can find in my library. I'd like to get enough info to scratch-build one for my AFV Club Churchill III. I know that Bovington has one on display, and the placard for it has an official stowage diagram on it. Also, Accurate Armour (Mr. Models) and Armo / Jada both have resin kits, but if I can get the info, I'd like to build my own.

We could maybe improve the format (as a regular newsletter feature, perhaps a more tabular layout would be better), but you get the idea. Any suggestions or comments on this?

New Member Survey Results / Inaugural Meeting Statistics

I hope all of you thought our first meeting went as well as I did! IMO, it was a complete success, and I appreciate everyone taking the time to attend. I'm sure it was a leap of faith for a lot of you to just show up to a group of virtual strangers hoping for the best. I do believe that the group did justice to that faith and that we have a great bunch of model builders who want to take their skill and craft to new levels by sharing and helping each other.

For the record, we had 13 people in attendance (11 new members and 2 guests). That was an excellent start!

In so far as the survey results:

The number one thing that everyone wanted to get out of their membership in a local AMPS chapter was to improve their skills and share techniques.

The number two reason was to socialize with other model builders who share the same interests.

Both of these desires seem to me to be two sides of the same coin, and by doing either, we can't help but to accomplish the other.

It seems that most guys were a bit modest about the skills, knowledge, or abilities that they would be willing to share. However, from what I saw of the models present, I think a lot of you are hiding your light under a bush, so to speak. You guys brought some excellent work to share, so there're obviously some talents that we can leverage from among the group to the benefit of all. Of those who weren't too shy, we have airbrushing, scratch-building, and CAD drawing. I know that I would benefit from some improvement in all those skills and then some! I expect that we can develop all of those areas into some good demos and presentations.

In so far as the kinds of activities everyone would like to participate in at the meetings, it was a virtual tie between Show & Tell of builds and WIP's and demos of various techniques. Those seem to be a pretty good foundation to anchor our meeting agendas on, so we'll do everything we can to emphasize both of those each month.

Other activities mentioned were intra-club contests, spares swaps, and museum visits. (I never knew that the SC National Guard Museum had so many really interesting exhibits, but after talking with Jeff after the meeting, it is definitely on my "soon to-do" list. So, maybe a club fieldtrip to the museum is in order, perhaps in place of, or in addition to, one of our regular meetings.)

In so far as the techniques or information that you would like to have someone present, show, or demonstrate, there was a three-way tie for number one. The top three items were weathering, flat finishes, and figure painting. Other techniques that some of you would like to have demos on were decals, model photography, assembling link-to-link tracks, and general painting / finishing techniques.

I'd like to think, given the high quality of the models at the meeting, that we should be able to find guys in the club who can cover each of those areas and then some.

If one of these areas sounds like something that you think you would like to present to the group (or if you have some other demo / presentation ideas), please let me know, and we can organize something. I'll be happy to work with you on organizing and planning any demos or presentations that you'd like to do. So, if you've never done anything like that, don't worry. We can make it happen.

Hopefully, you guys didn't think doing the surveys was completely crazy. It's good for us to get a feel for what everyone else is expecting from their membership and have some idea of the direction we should be going in to satisfy those expectations. Unless everyone believes that their membership is of value, the group won't last long. Given the relatively consistent answers to the survey questions, though, it seems that we all pretty much want the same things out of our membership, so, as long as we don't lose sight of why we joined in the first place, satisfying those needs should be easy and enjoyable for all of us!

Membership Cards and Hobby Shop Discounts

While wearing his HobbyTown USA hat, Keith brought up the subject of having some way to verify / validate AMPS membership in order to qualify for the store discount. Without putting too fine a point on it, we all owe the store and its proprietors a debt of gratitude for sponsoring our club. By providing us a place to hold our meetings, they quite literally make it possible for us to exist as an organization. This is no small thing!

(Trust me. When I started looking into the potential venues where we could hold our meetings, the list was almost unbelievably short. Without paying out a significant fee for each meeting, there was almost no place where we could hold meetings in the greater Columbia area that would allow us to do any kinds of crafts or hands-on demos.)

Now, having said the above, I'm sure the store is hoping for some reciprocal return on their sponsorship by way of increased sales, etc. There's nothing wrong with that, in my opinion. They're nice guys, but business is business. However, even with the understanding that our relationship is two-way, there's no reason for us to be unappreciative or ungrateful.

So, to help the hobby shop keep track of "who's who in the zoo," I've provided them with a copy of our membership roll (such as it is). I've also cacked-up membership cards for each of us. Please, voluntarily (even proactively?) present your membership card to the store clerk on duty when you make purchases at either of the HobbyTown USA stores. They should have no problems then giving you the 10% discount offered to our members.

BTW: The membership roll that I have given the store only has our names on it. Period. There's no other personal information included with it (no addresses, no phone numbers, no nutin'). If, however, you don't like the idea of the store having your name on such a list, please let me know, and I'll remove your name.

As an aside, if you do any traveling and checking out new hobby shops, it never hurts to present your membership cards (IPMS and / or AMPS) and ask if they give a discount. You never know, and I've gotten discounts from all over just by asking.

Up-coming Events of Interest

Let me know if you're planning on attending any of these, and I'll include that info with the events in the next newsletter. That way, maybe we can coordinate / share rides, etc.

August 11, 2010, 6:00 pm (1800): Our next meeting at the HobbyTown USA store on Two Notch Road.

September 8, 2010, 6:00 pm (1800): AMPS Central SC Meeting, HobbyTown USA, Two Notch Road.

September 18, 2010: "ScaleModel Fest," Piedmont Scale Modelers, IPMS, Byrnes High School, 150 East Main Street, Duncan, SC.

September 25, 2010: "1st Annual Model Contest," Midlands Chapter, SCMA, Redbank Community Center, Lexington, SC. The IPMS / Mid-Carolina Swamp Fox chapter will be judging all of the non-automotive categories.

October 13, 2010, 6:00 pm (1800): AMPS Central SC Meeting, HobbyTown USA, Two Notch Road.

October 16, 2010: "12th Annual Fall Model Contest and Show," Charleston Chapter, SCMA, Cokesbury United Methodist Church Gym, 4990 Dorchester Road, North Charleston, SC.

November 10, 2010, 6:00 pm (1800): AMPS Central SC Meeting, HobbyTown USA, Two Notch Road.

December 8, 2010, 6:00 pm (1800): AMPS Central SC Meeting, HobbyTown USA, Two Notch Road.

February 18-20, 2011: "AMPS Atlanta 2011" in conjunction with "34th Annual Model Figure Show," Jointly hosted by AMPS Atlanta and The Atlanta Military Figure Society, Atlanta Marriott Century Center, 2000 Century Blvd, Atlanta, GA.

April 6-11, 2011: "17th AMPS International Convention," Fredericksburg, VA

August 11 Meeting Agenda

6:00 pm (1800): Meeting starts / Admin Business

6:10 pm (1810): Show & Tell: Builds and WIP's

6:50 pm (1850): Break / Shopping / Mixer

7:00 pm (1900): Reconvene / Continue Show & Tell: Builds and WIP's

7:15 pm (1915): Presentation / Demo: Weathering Pigments (Mike Roof)*

8:00 pm (2000): Meeting ends (officially)

*With apologies to Bob and Ralph who had to suffer through it all at last month's IPMS meeting!

“The Day Room”

Well folks, that’s about all for this issue (a “Feature Article” starts on page 10, below). I can’t believe that I’ve babbled-on so much, but there was a lot of info to get out this time, and I didn’t want it all to be just the boring stuff.

I’ve already started to “rationalize” the format for the next newsletter, so hopefully you’ll find the next issue organized a bit better than this one.

Just to keep everybody up on the communications with the national organization, I have informed the 2nd VP for the Eastern Region, Chuck Willis, that we have successfully formed our chapter, the number of members, our chapter name, and our regular meeting time and place. We should see our chapter listed ASAP on the AMPS web-site, and we should be listed in the *Boresight* Vol. 18, No. 4. (We missed by one day the cut-off for the next issue, V18N3. The editor, John Robinson, had just sent everything off to the printers the day before we held our first meeting.)

So, it’s official – We’re bona fide!

See ya at the next meeting. (Don’t forget to bring your latest models, finished or WIP.)

Happy modeling,

Mike Roof
Chapter Contact
AMPS #1632

The Wildcat Feature Article:

“Scale Sized Slotted Screw Heads?! How’d he do that?”

Problem: How to make slotted screw heads (recessed, flush, or standing proud) on a model?

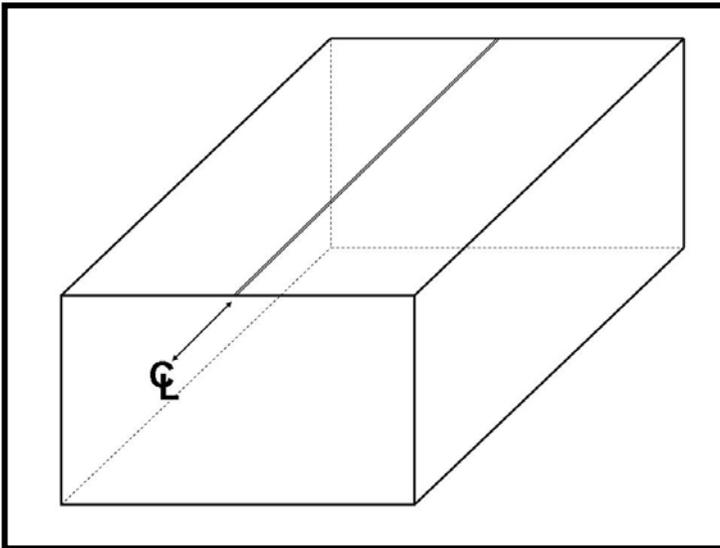
Solution: Make a jig and a fine saw blade to cut slots in the end of styrene rod of various diameters. The slotted rod can then be set into holes drilled on the model with the slotted end either recessed, flush, or standing proud of the model surface.

Tools and supplies needed:

1. Styrene stock – Rectangular and round rod. The dimensions on the rectangular stock are not too important. The stock just needs to be large enough to handle (i.e. sized to fit your minimum finger / hand grasping capacity). The diameter of the rod depends on the size of the screws you want to make. I’ve used .025 and .035 rod effectively. Note that Evergreen Styrene rod stock varies in diameter from the nominal size listed on the package. My .025 rod runs from about .024- to about .026+. My .035 rod runs from about .034- to about .036+.
2. Miniature drill bits and a pin vise. For .025 (nominal) diameter rod, numbers 73 through 70 will work. For .035 (nominal) diameter rod, numbers 66 through 64 will work.
3. X-acto knife (number 1 handle will be fine) and a new No. 11 blade.
4. A ruler (with fine gradations) for marking the centerline of the rectangular styrene stock. By the way, I use metric for all my work because the math is easy. A dial caliper makes laying out the center line very easy. (You can use it to measure and scribe in one step.)
5. Fine, 0000 steel wool. This is for buffing the screw holes on the model surface after they’ve been drilled. This buffing will slightly relieve the edges of the holes and allow your hard work to show after painting. (A set of micro hole-reamers - sometimes, incorrectly, called broaches - is useful, but not essential.)
6. A sanding block, Flex-i-File, fine sanding stick, etc. This will be used to put a flat end on the rod stock before you slot it.
7. Dremel Tool with a metal cut-off wheel. The cut-off wheels are the thin salmon-colored ceramic metal cutting disks.

Step 1.

Mark the centerline (CL - centerline) of the rectangular styrene stock. The purpose of this is to increase the accuracy of the work by providing a reference line. It’s more important that the line be parallel to the sides of the stock than in the exact center of it. (You can use a dial caliper, compass or parallel cutter to scribe this line. By scribing twice, once along each side, you will make two lines parallel to each other with the exact center between them. This will compensate for any inaccuracy in measuring.)

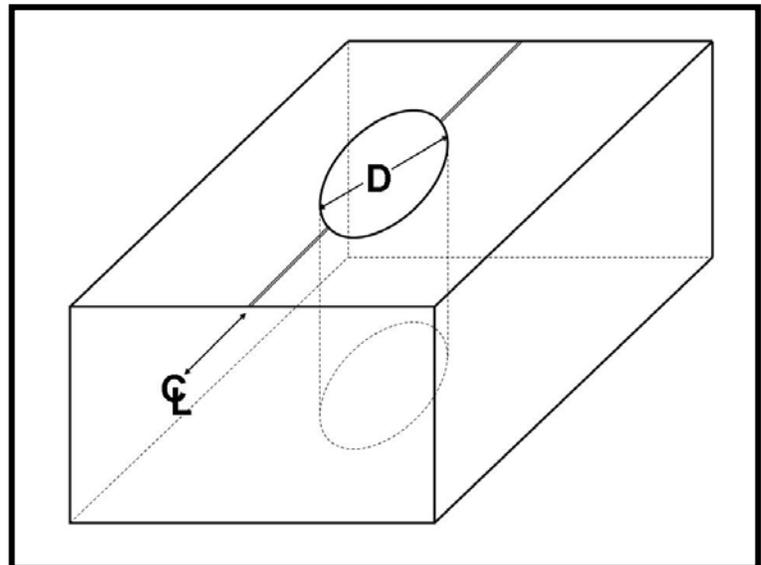


The rectangular stock will become the slotting jig, and while you're making it, you can drill it for several sizes of rod. The length of the jig depends on how many holes you're going to drill and how long a piece you need for comfortable work. Longer is better to start with. You can always cut it down to a shorter length later.

Step 2.

Drill holes for the size (D – diameter) rod you will use for the screws through the rectangular stock. Test fit the rod in the holes to make sure it will fit through without any excessive play. You may find (like I

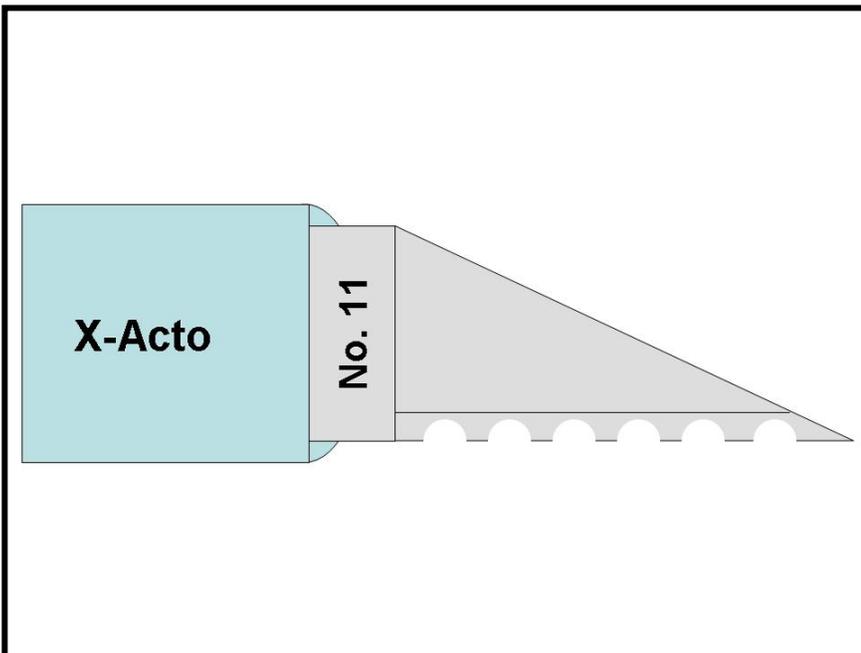
did) that for each size of rod, I needed to drill 3 or 4 slightly different sized holes. After I drilled the holes on my jig, I scribed the hole-sizes on the side of the jig for future reference.



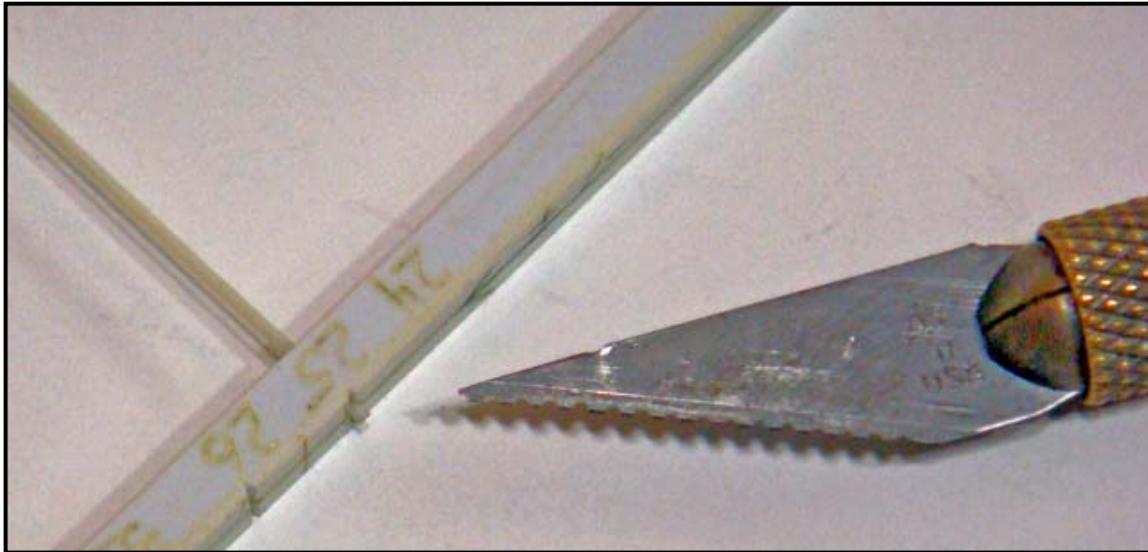
Step 3.

Make an “ultra-fine” saw blade from a number 11 blade. Chuck the blade in a handle and use your Dremel Tool to notch the edges of the blade, forming saw teeth along the blade. I spaced the notches about the thickness of the cut-off

wheel apart. These notches don't need to be very deep (about 1 mm or less). More teeth are better than fewer. Spacing should be as even as you can get, but it's not critical and eyeballing it will be good enough.



I know of all of that was overly complicated to explain, so here's a look at the actual jig and saw blade. You can see in the photo below that, despite the appearance of engineering perfection, it's really more “field expedient.”

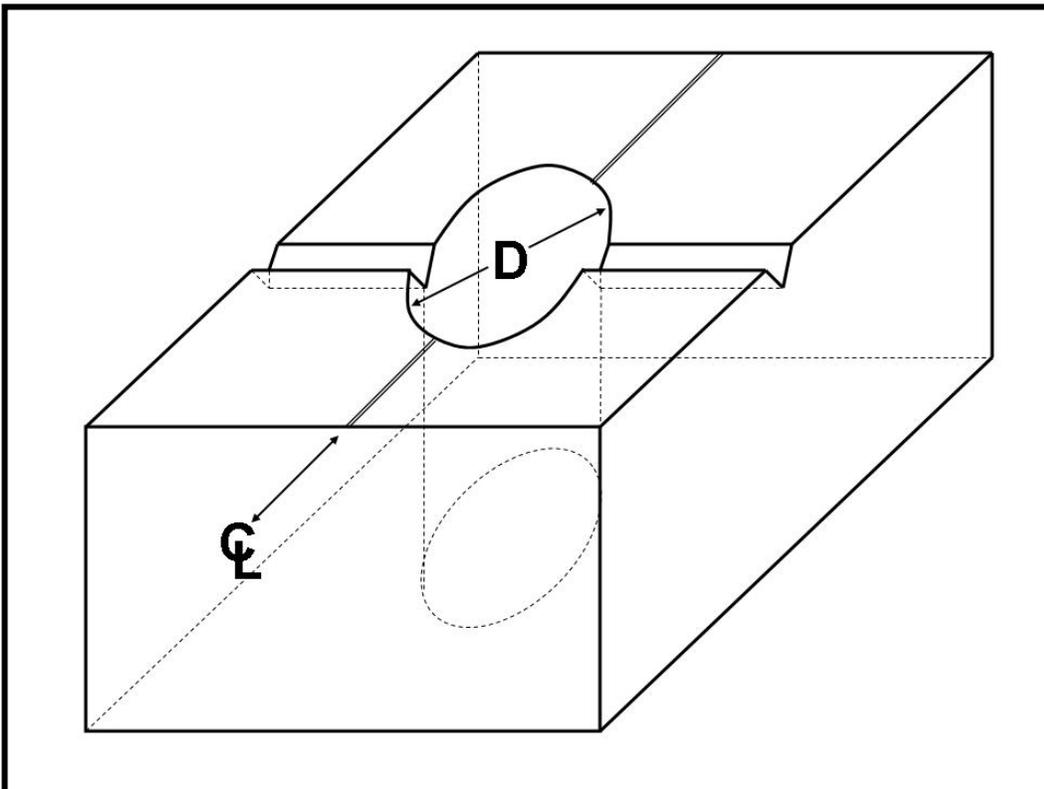


Note in the photo that there are holes marked 24, 25, and 26. These are for the minor differences in the diameter of the Evergreen

styrene rod, which has a nominal diameter (in this case) of .025 inches. I just use the hole-size that the rod fits best into so that it will not rock in the jig as I cut the slots. I don't usually find that I need to drill different sized holes in the model since I relieve the outside edges to emphasize the added screw heads. (See "Additional Tips and Thoughts" and the examples below to see what I mean by "relieving" the edges of the holes to make the screws more visible.)

Step 4.

Using your new "ultra-fine" saw blade, cut a shallow slot across the center of each hole you drilled in the rectangular stock. This slot will act as a guide for the saw as you cut the slots in the ends of the rod stock



So, now that you have all these new, homemade tools...

How do you use the slotting jig?

You've obviously already done your homework (research), and you know where you want to put screw heads on your model (and whether they should be recessed, flush, or standing proud of the surface).

I usually make a copy of the appropriate plan view of the prototype that I'm building. Most often you can download something useful from the internet. If not, I make a photocopy (scan and print, actually) of plans in a reference book. I use these copies for notes as I peruse my other references, so that when I see details that I want to add to my model, I make notations and sketches on the photocopy instead of in my prized books. (Actually, many of my books are filled with pencil notes, too – oh, well...)

Step 1.

Make a note of how many screws you want based on your references, etc.

Step 2.

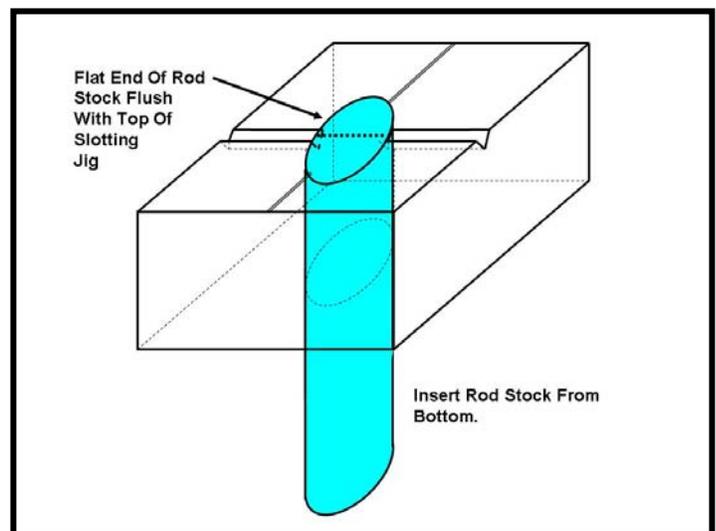
Cut enough pieces of your styrene rod for the number of screws you want. Cut these at least long enough to pass through your slotting jig with a bit left over for you to hold. The exact length isn't as important as leaving yourself enough to comfortably hold and work with. You'll trim the excess off the model later. Chopping these to length on a piece of glass (which is a very good cutting surface, rough on blades, but prevents the plastic or PE from distorting) is the easy way.

Step 3.

Take each piece and sand one end flat (as viewed from the end, of course). The other end can be left with the wedge shape from cutting (chopping) with an X-acto (don't use your new made saw blade, though). These flat ends will be the ends that get slotted. Putting the rod pieces through the slotting jig helps when holding them to sand the ends and provides a reference for nice right angles.

Step 4.

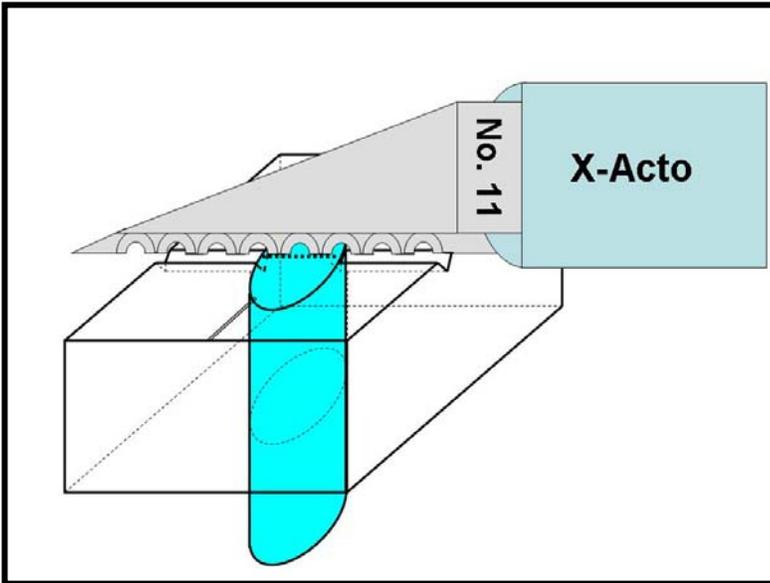
Push the flat ends through your slotting jig so that the flat end is flush with the top of the jig (where you made the saw guide). Hold the rod and the jig together from the bottom of the jig so that the rod won't slide up and down as you cut the slot.



Step 5.

Cut the slot in the end of the rod by making a few light passes with the "ultra-fine" saw blade (using the top of the jig like a miter box). As you make a few screws you'll note that if you don't hold the saw blade as perpendicular as possible to the surface of the jig and the end of the rod,

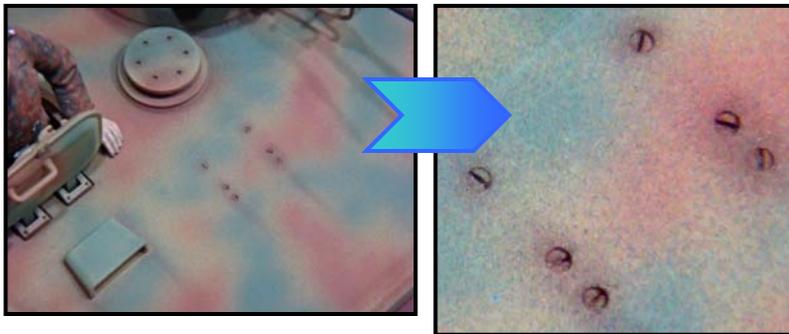
the slots “wander” off-center. Compensate by tilting the blade to the opposite side. That should get things back in the groove, so to speak. If not, maybe your jig has worn out. If that’s the case, drill another hole in it.



Step 6.

Insert the screws into appropriately sized holes on your model. Do this from the outside to the inside to preserve the detail on the slotted ends. Glue from the inside (if possible). After the glue dries or sets, trim the excess from underneath (or leave if it won’t be visible or interfere with other assemblies).

Some Examples of the effects that you can achieve using this technique:



Here’s a Tiger I (late) turret. It’s the Tamiya kit, and the earlier releases didn’t include the screw heads for the hardware that mounts the internal travel lock for the main gun. I added the screw heads seen here using the homemade jig and saw blade shown earlier.

On the same model a ring of plug-bolt heads around the Nahvertidigungs Waffe (close defense weapon behind the loader’s hatch) need to be added.



In this case, the prototype bolt heads are actually inverted cones without screw slots (plug-bolts). The screw heads in the actual weapon are part of the On The Mark Models PE.

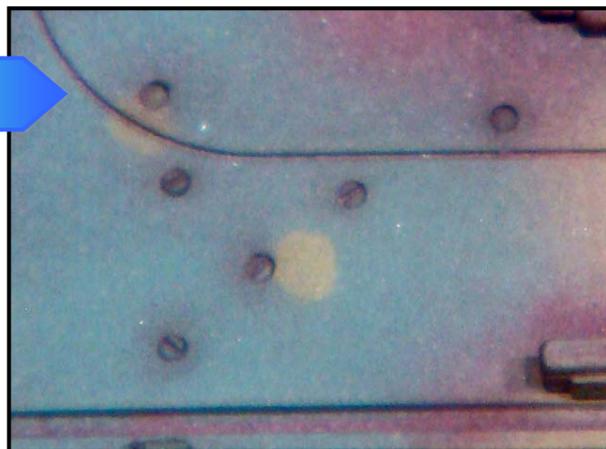
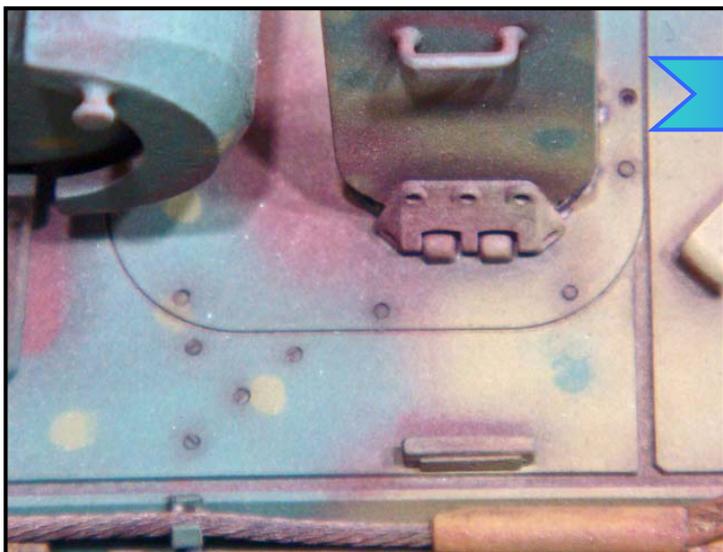


A similar problem exists on the Tamiya Panther G (late) kit. The screws are missing from the turret top for both the internal travel lock and around the Nahvertidigungs Waffe. I used the

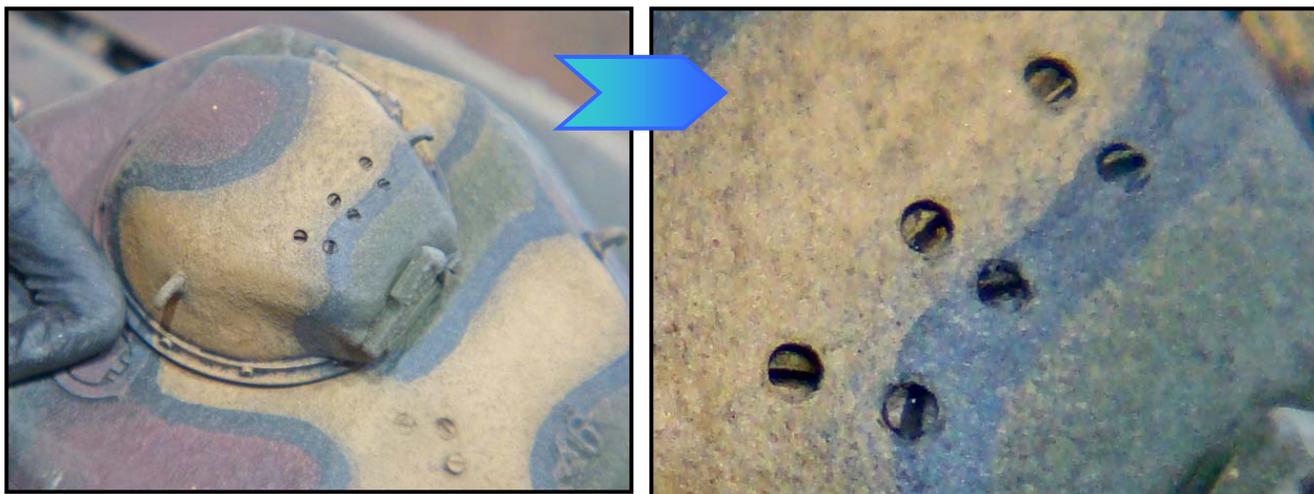
exact same solution. Note again that the screw heads on the weapon are also the kit part. Only the ring of plug-bolts was added.



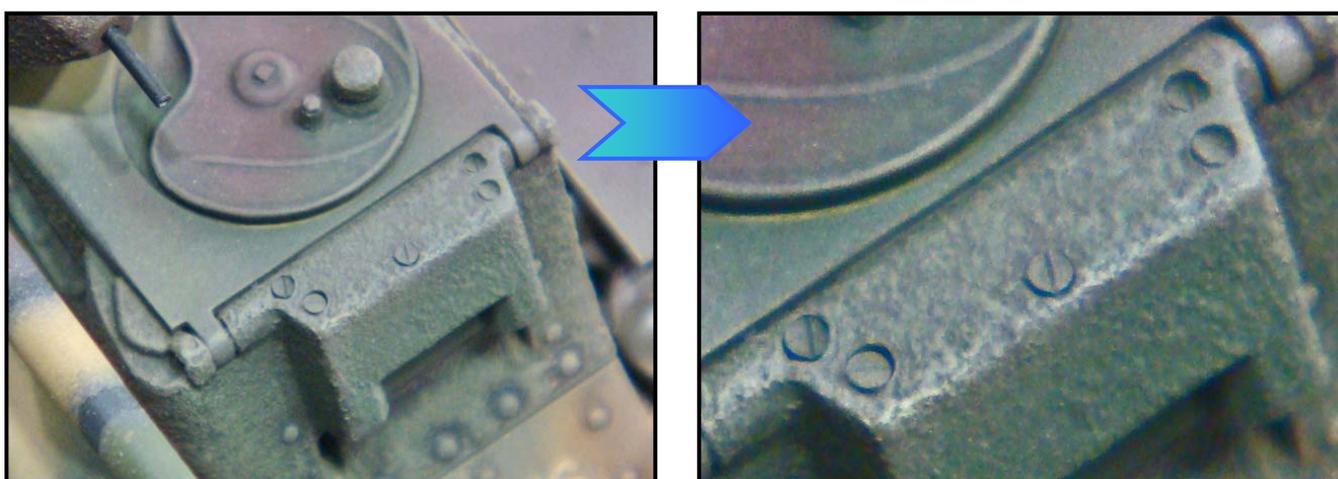
The Panther G also needs a lot of screw head detail added around the driver's and radio operator's hatch area. Again, the slotting jig, homemade saw, and styrene rod provide the solution. Note that here, again, there's a mix of slotted screw heads and conical plug-bolts. References, references, references....



But wait! There's more... The Tamiya Char B1 bis is an all-round fantastic kit. It does, however, have a weak area – Its turret and the commander's cupola both need quite a bit of work to get them accurate. Among the changes needed are, you guessed it, screw heads! Here's my fix, once again using the slotting jig and saw.



You'll note the three screw heads on the turret roof forward of the cupola. Those are a commercial product: small brass machined screw heads! They are pretty darned nice, but still, they only come in a diameter down to about .6 mm, so for anything smaller, you still have to fab-up the parts yourself. I also used these commercial screw heads across the top of the Char B's driver's vision flap.

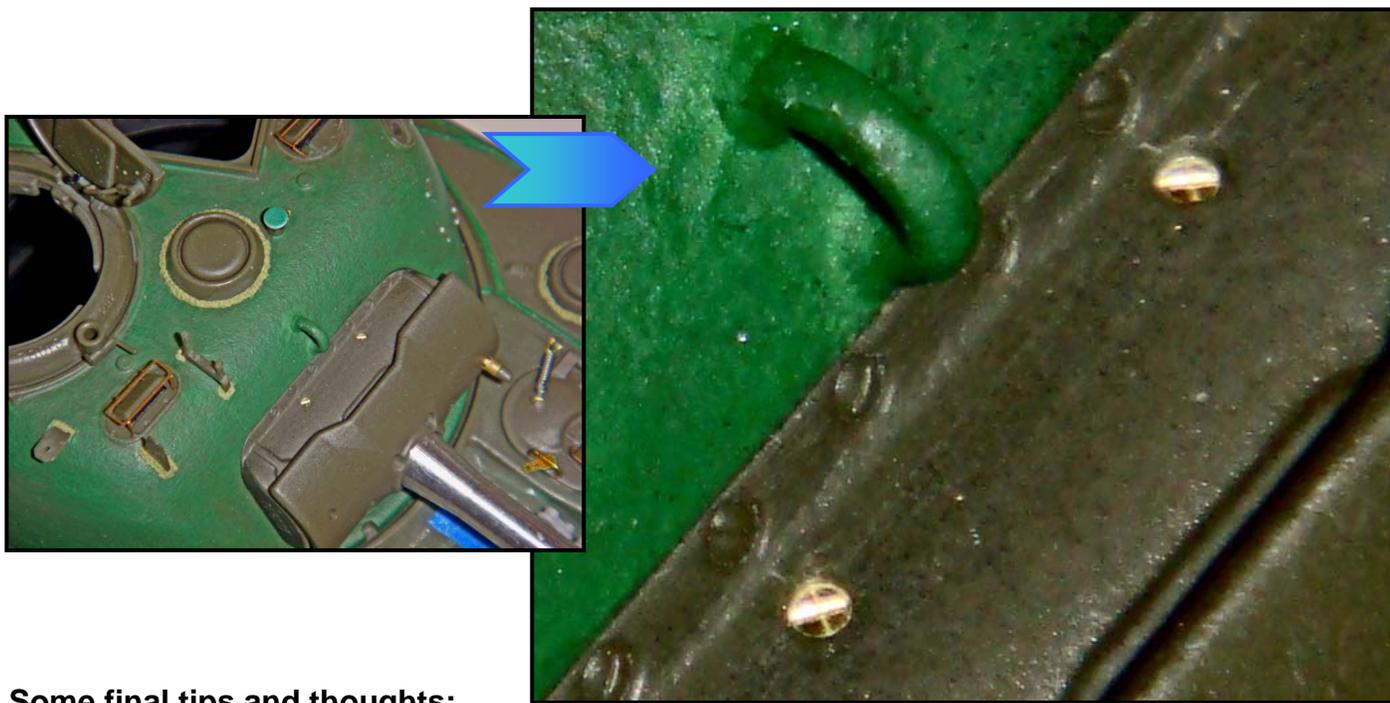


Here's a picture of the commercial screw heads. The ones that I've been using are from Lion Marc and come in packages of about 100 along with a correctly sized drill bit. These are also what I used most recently on the upper mantlet on my Tasca Sherman Firefly, shown below.



*Lion Marc Model Designs
Brass Screw Heads in .6 and
.9 mm Diameters.*

Tasca Sherman Firefly Mantlet Details with Lion Marc Screw Heads



Some final tips and thoughts:

After drilling the screw holes on your model, buff the holes with fine steel wool to slightly relieve the edges so that the screws will not disappear under a coat of paint. Using a set of micro hole-

reamers to cleanup the screw holes will also work. I try to leave a slight gap around the edges of the screws so that they remain visible.

The number 11 “ultra-fine” saw blade is useful in other situations besides slotting the styrene rod. It works pretty good for scribing around convex curved surfaces and will actually make good (if shallow) saw cuts, for example on sprue attachment points.

The fine, 0000 steel wool is an all around good item to have on-hand, too. I tend to buff almost all model parts along the mold seams to take out the fine scratches left from the filing and sanding needed to clean up those seams. It also is handy for smoothing out white metal parts (which often seem to have a rough, grainy texture from the talc used by a lot of manufacturers as a mold release agent).

I mentioned using a dial caliper in the “Tools and Supplies” section. If you’re expanding your skill set to do progressively more scratch building, it is one handy thing to have. The one I have is a Mitutoyo brand which will open up to 150 mm. It costs about \$35 some twenty years ago, and can still be had for less than most Tamiya kits today. Besides the obvious measuring, the caliper can be used to scribe lines (for layout and deeper for panels) and the points on the inside measuring arms will accurately layout and “punch” evenly spaced points (like for rivets, bolts and screws). Certainly not an essential piece of kit, but when you need it, nothing else works as well.

Of course, the jig, saw, and styrene rod are an “old school” solution to the problem (sounds like Paul Sr. on “American Chopper”... “I said OLD SCHOOL, Mikey!!!”). In addition to the Lion Marc screw heads, at least one other firm markets similar products: Scale Hardware, www.scalehardware.com. They produce “simulated micro fasteners” in numerous profiles (hex head, rivets, screws, etc) in brass and stainless steel. I haven’t used any of the Scale Hardware products yet, but I’m guessing it’s only a matter of time before I do.

So, in the end, the whole “scratch-built” aspect of the problem can be outsourced to an aftermarket manufacturer. I guess this isn’t really so bad. I’ve been using Grandt Line products for years, so I don’t have any fundamental problems giving up my slotting jig if something better comes along. I am slow, but I’d like to believe that I’m “trainable.”

That’s about it. To give credit where credit is due, the original idea for using slotted styrene rod for screw heads was published by Shep Paine in Modeling Tanks and Military Vehicles, Kalmbach Books, 1982. I got the idea for the “ultra-fine” number 11 saw blade from a reader tip in “Fine Scale Modeler” many (many!) years ago. The slotting jig is my own idea, but I’m sure that I’m not the only person in the world who has thought of it.

And, as if all of the above isn’t enough, though, there is a method that uses a hollow, circular punch (i.e. a piece of metal tubing with a beveled end edge) to emboss the edge of the screw into the surface followed by a chisel edge to emboss the slot inside the circle. I’ve not made screw head detail this way, yet, but, hey, like I said, I’m slow, but “trainable.” You can’t stop learning new tricks. Stop swimming, and you’ll die. Inertia leads to atrophy... and all that other existential stuff.

Mike Roof
AMPS #1632