TK-6818
LadyInWhite's BUILD GUIDE
(with tips for women, by women)

Always a work in progress!

Hi! This guide is for both sexes, particularly for those just starting out. I started it because I was procrastinating my first cut, building up anxiety about my abilities, and teeming with excitement. Now it feels like "old hat" but if you're still unsure about your build, **procrastinate here**.

My first armor is Authentic Props (AP) armor. Other armor may differ slightly from AP, but what I try to capture here is more or less the essentials that have no bearing on what armor you purchase. Occasionally I mention specific AP tips and quirks.

I am by no means an expert at this. But I got through it and you can too, with the help of all the great guys and gals at FISD. If you want to contribute, add a link or a tip, or share any insights of any kind, please please please! feel free to add to this! If possible, just color it purple so it doesn't get mixed up with my first-person narrative.

Within the general build tips are some tips and "thoughts" specific to women. Some of these tips might be a little sensitive or embarrassing for men, so we will put them in blue. You know if it's blue you can skip over it. If you're a woman, you'll want to pay particular attention to the blue text, because you will probably have many of the same thoughts and challenges.

Getting Started: ***The Shopping List*** http://forum.whitearmor.net/index.php?showtopic=18735

Order your do-it-yourself Fan Kit here...

THIS JUST IN: A GREAT THREAD SHOWING TWO ATA BUILDS - one for a woman or smaller trooper, and one for a man-sized manly man trooper, side-by-side, with a list of differences in build. http://forum.whitearmor.net/index.php?showtopic=18243

ONE LAST THING: (update Aug. 27, 2012)
I built with Centurion in mind from the get-go. The CRL requirements for EI and Centurion are incredibly simple add-ons - a few extra holes and rivets, choosing glue over rivets, an elastic band... really! It doesn't take much extra work at all and doesn't take much extra money either! My EI upgrade was merely the new mic tips and a d-ring on the hyperfirm. Some kits come with EI-ready mic tips. Centurion was merely the latex hand guards and filling the drop boxes. Absolutely everything else was part of my build from DAY 1. Seriously, this is not difficult or costly to achieve by ANY means!

CONTENT

b. Display


1. Remove items from box.
2. Cut, measure, sand, assemble, tape, remeasure, retape, cut, trim, sand, glue, glue more, sand, take apart, re-glue....
3. Assemble with fingers crossed.
5. Any Questions?

1. ARMOR ARMOR EVERYWHERE!

That's right, with a little purchase you, too, can turn your home into a plastic armory. Now if only we had a few droids to help with precision cutting and to avoid breathing in the fumes of adhesive horror! (3M tape gives me headaches!)

You took the plunge, made the commitment, invested in a nice, shiny white suit of armor. Unfortunately, unlike some of those eBay and online costume type TK suits, yours didn't come fully assembled and ready to wear! But that's half the fun of it. You wouldn't walk around in someone else's smelly hockey gear - you need armor built and tailored to your unique form, *especially* if you're a female TK.

Out of the box, this is pretty much what my AP armor came like. You can see that most pieces are cut but not fully cut, and a few are still on the flats.

Daunting or exhilarating? Or maybe a little of both?

Now you need to take a deep breath, settle in somewhere (living room, guest room, garage, neighbor's garage with all the shiny tools...) and get to work making that TK suit entirely YOUR OWN!

2. GETTING STARTED

None of this “unfinished business” is a problem, because you have the handy cutting tools you’ll need:

- industrial straight shears
- industrial-strength box cutter
- curved modeling scissors

… all of which must be capable of cutting thick plastic (i.e. ABS 0.80 or 0.90 thickness). The shears I bought are for cutting pipes and aluminum sheeting, and they work great for ABS with one tiny exception: they have little serration lines that sometimes bite into your plastic. So try to find some that don’t have serration lines on the blades. They are for “gripping” what you cut but they will damage your edges if you’re not extremely careful.

UPDATE: You don’t actually need any of those tools. You can get away with a blade and scoring... I like cutting close to my final edge and then trimming away with the exacto.

Tools & Tips

Tools differ from person to person. I found the above cutting tools to be the essentials. I also used an exacto knife, but the heavy-duty-ness of the box cutter made me feel more secure and fit in my hand better. The blade is interchangeable so if it starts to get dull, I can swap it for a new one. In fact, at one point I broke the tippy tip off the box cutter blade! I’ve never done that with an exacto, so take your pick :)

Update: I’ve broken 7 Exacto tips and 4 box cutter tips over the course of 1 year!

You will also need, at a bare minimum:

- about a thousand industrial-strength clamps (okay, maybe 12 will do)
- #1 wood clamps, also known as clothes pins
- painter’s masking tape (3M tape’s adhesive smells so bad I had to stop using it)
- sandpaper, 600 grade seems popular for fine sanding, 350 for initial/roughing
- a straight-edge metal ruler (not wood with the metal piece, that can bend)
- a pencil or six
- scrap paper
- some kind of drill i.e. a cordless electric power drill
- e6000 or some other kind of glue specific to plastic*
- acetone (i.e. nail polish remover) for making ABS Goo
- a shop towel or six (I like microfiber cloths)
- goggles, breathing mask, first aid kit, work gloves, etc. depending on how clumsy, er, skilled you are

* A note: as a crafter I hate e6000 and gorilla glue, which goop and drip and never stop coming out of the tube; they're messy, they take forever to cure, and they try my patience at every turn. However, everyone apparently uses it, and Jnnfr72, my build buddy, said:

TIP: "Because it cures slowly, you can make adjustments even after the glue is on."

(Believe me, this is great advice!)

In addition to those things, some builders might like other basic tools, like:

- a Dremel (R) tool*
- more sandpaper, heavier and finer, for some details and harder-to-reach areas
- hobby iron and iron sock for making return edges

These two lists are just tools, not the accessories you might also want, such as:

- jean snaps
- industrial strength velcro
- canvas strips
- a garter belt (possibly modified for snaps)
- black webbing

* A note: my dremel tool belonged to my grandfather-in-law or something. It's ancient and noisy! And I swear it is left-handed. That said, I don't recommend you use this unless you've had some practice. Choosing which tool to put on it is half the battle. I usually resort to an orange grinding cylinder, though for the ear pieces I used a rough sanding bit. I put a ding in every audience-facing part at least once, not all of which sanded out, and that's *with* experience! So be careful with this one.

Construction Procedures

This is just a quick overview of the different ways you could proceed through your build, regardless of how they are ordered in this or any other tutorial.

MY PREFERENCE (but not reality):

1. cut everything out
2. size everything
3. trim/edge everything
4. size again, tape
5. glue the gluey parts
6. build the chassis
7. paint, polish, etc.

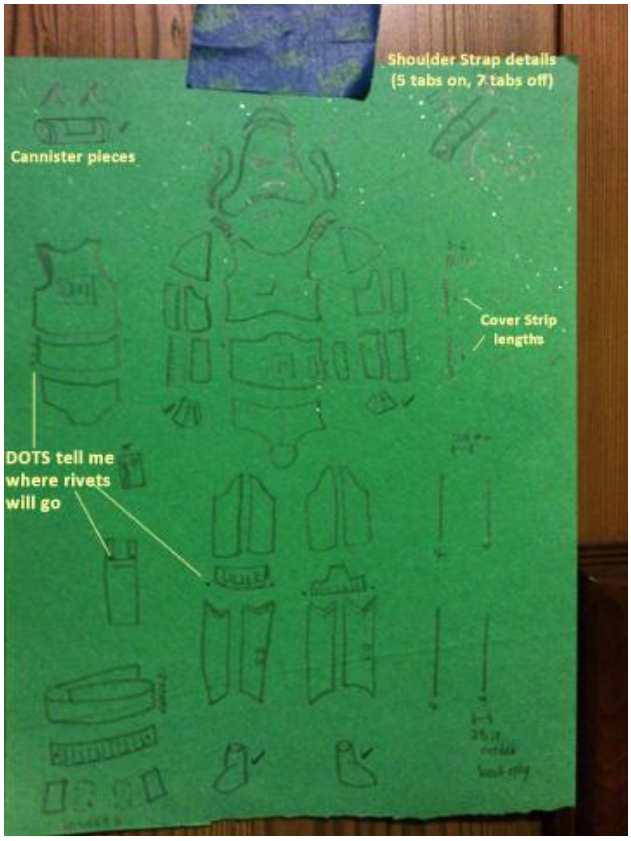
Some people like to do one type of work at a time, and some like to do one piece of armor at a

time. Some people (myself included) have a general method but end up with a half hour here, an hour there, and do whatever works in the time given, kind of piecemeal. One thing for sure, I am going to have all or almost all of my pieces ready to attach before I move on to snaps and chassis building.

TIP: Start where you're most comfortable and go with the flow (aka your intuition).

Drawing Your Diagram

Any piece of paper and writing implement will do. Simply draw a diagram of every piece you have, every piece you need, and every thing that might help you along the way. Here is an example of mine, drawn in pencil on a piece of my son's "sparkly" construction paper. It is crude and I am not an illustrator, but it gets my message across to myself for what I need and where I am with things.



Another tip: read about everyone else's trials and errors on the forums before you begin. It helps to have a "build buddy" who has recently endured the pain and torment you are about to undertake. Their triumphs and problem solving will be like having a mentor in your pocket, and most people are so happy to talk about their experience that you're sure to find someone to coach and encourage you. (Just don't be a bother or a jerk.)

And here we go!

3. PRACTICE ON YOUR O2 CANISTER

I was pretty sure that if I even *looked* at a pair of scissors my "investment" in this armor would vanish in a puff of clumsy smoke. I'm the kind of person who spends more time ripping seams than sewing them (did I mention yet that I stink at sewing?) and the last thing I want to do is do something wrong or backward or stupid to this gorgeous armor, because you can't just run out and buy a replacement piece.

I read the message boards about a hundred times (not exaggerating!!) probably half to procrastinate and half to try to build confidence. Well, not only did I find out that many, many people (guys too!) have this "first cut" anxiety, I also came to realize that confidence is only going to come from cutting.

So I thought, what to cut first? I know, I'll cut something that I can make myself if I totally screw it up. I mean, how hard can the O2 canister be? And the original hand plates were made from latex or something so surely I could make those, too, if I screwed them up, right? Surely! So that's where I started. (Don't call me Shirley.)

Your first cut - don't throw up!

To make your first cut, start by doing some deep breathing. A little yoga also helps procrastinate AND prepare. Then, with scissors in hand, cut some practice cuts on the empty parts of the flat plastic sheet. See how it feels. See where the shears make serrations. Feel how the sheet moves in your other "holding" hand.

Then, when you're feeling like it's now or never, do a few more deep breaths and then go for it. The first thing I cut was the rectangular cover plate for the O2, then the semi-circles at the ends. Then circles around the end caps. Then I got clever and measured a line around the end cap that was even all the way around (I fixed a pencil at the right height and spun the cap on its top to mark all the way around the outside). I finished by cutting out the hand plates.

If you screw up, try this:
http://forum.whitearmor.net/index.php?showtopic=12084&st=0&p=148625&#entry148625

TIP: Cut a little bit away from what you think is the edge, especially if you plan to sand it to spec.

Soon, your house will be a full fledged mess. I know some people sand in their living room, then vacuum it up; others use the dining table for a workbench. Me, I like having a guest room bed as a staging area. (I put a masonite sheet on the floor to spare my hardwood from crafting errors.) After this mess, I am certain no one will ever sleep comfortably in my guest bed again. (That might be a good thing.)

Industrial shears, cutting board, towel, curved scissors, box cutter, and one hell of a mess!

Then I used the leftover plastic as a practice tool for my dremel, which you can do as well or just use it to practice whatever fine-edging technique you plan to apply. I dremeled a nice, flat edge on my end caps, flattened the curved bit on the long edges of my cover plate, and so forth, until I felt pretty good about it.

The hand plates were weird because I wasn't sure if they should have a little bit of a return edge (which comes already on the hand plate!) or be flat/flush. The photos of latex ones from the films seem to be thick, not necessarily with a return. I decided on a tiny return, and sanded down to just that point. My hands are pretty big, so if yours are smaller you might want to trim it a little smaller and then you'll have to put a return edge on it if you want one.

LASTLY I spray-painted the PVC tube that came with the kit and put the end caps on. I saved gluing, however, for later because I wanted to drill the holes for the money clips first. Here's a little before-and-after.

Edgework & Returns

Good edges make for a more professional look. Blunt edges with good sanding are fine. Most people seem to prefer the return edge to give the armor that finished and slightly thicker look.

The key to edges starts with good measuring. AP armor (and I believe most other vacuum-formed armor) has a kind of natural return resulting from the flashing / shape of the pull, which you can use if the lengths are a good fit for you. But if you have to trim more than that, I recommend picking top or bottom (usually bottom, which is less visible to your audience) to shorten. Keep the top return edge as best you can and later you will put on a new return to the bottom edges that you trimmed. That said, any edge can have a return (except where it's not supposed to, like forearms) that you put there yourself.

I found that on my biceps and a few other pieces, where the returns wouldn't be noticed or where things needed to be flat to fit me properly, I was able to fake a return-look by sanding a curve onto the blunt edge. It is curved almost flat.

TIP: To make sure you have room for a return edge (if you plan to make one), leave about ⅛ of an inch extra at the edge of your measured pieces.

More on return edges after you've done all the hard work of cutting (below).

NOTE: Personally I find it damn near impossible to get a return using a heat sealing iron. (http://forum.whitearmor.net/index.php?showtopic=2313) Maybe I just don't have the patience or can't get the technique down. I'm glad I'm "big" enough to have kept all the original returns on the pieces themselves, and where I have to fudge it (i.e. cod piece) I just round the edge instead and/or sand a fake one in. I'm going to figure this out eventually.

But smaller ladies, you'll probably need to do a lot more trimming. Return edges aren't critical, but they look nice, so it's personal preference whether your extra trim should be folded any more or whether you even have the patience.

TIP: If you are Dremel challenged, try using a hobby knife (i.e. Exacto blade) to shave down the edges. I found this to be less messy and more accurate at getting close to the final edges. Then I put stuff in a box and carted it out to the garage to grind/sand the final bits and edges.

NEW TIP!: Places you don't really need any return edge that make it easy to trim especially if you're a lady:

- bottom of the forearms
- bottom of the ab plate (covered by belt) and top of the ab plate (covered by chest)
- sides of the ab & kidney plates
- top of the cod (should snug under belt or ab)
- top of the butt (nobody should be lookin' at yer bum)
- top of the bicips (it's under the shoulder bell)
- neckline
- bottom of the greaves/shin/calves
- inside top of the thighs (the part covered between your legs)

Wow, I'm almost done! This photo was taken after all edging was completed - which happened to be after *I had glued all my cover strips. (See below) I had worked on arms first, then shins, then realized I needed to finish the body before I could measure my thighs properly.*

Side Note: I was not almost done. It felt like a huge milestone - and it was! - but boy did I have a long way to go!

4. GENERALITIES

There are a hundred or so build threads on the nets, especially http://www.whitearmor.net/fisd/Tutorials-armor, so if you have been reading through those and following along, you might not need this section. For me, there were a lot of gaps. Take, for example, the cut seam on the back of my shins - it tapers to a triangle. Wait, is that normal? Do I use a cover strip to cover that? I had to scour Google Images to find photos of the backs of troopers' armor to see how they solved those problems. So I am going to try to cover some of those details here, and if I'm wrong, let me know so I can update this with the correct information!

Here's the order I did things (mostly), just to give you an idea. You can do them in whatever order makes you comfortable, of course.

1. I practiced with the hand plates and O2 canister for practice as mentioned above.
2. Then I started with the body because it was already mostly separated. I just cut to near-trim level and tried things on. I decided to separate the cod and ab piece because I needed to shorten both. If the cod piece is too low, it will flap around on your thighs. And the ab section is too long even for my unusually long torso. It was pushing my breasts up quite uncomfortably. I trimmed the cod down to almost bikini size and took about half an inch off the TOP of the ab piece, which will be under the chest plate. Fortunately my chest isn't so big that the chest piece sits on me just fine, but I don't think I'll have room for a voice changer/speaker in there. I also separated the butt and kidney plates mainly because they were separate in the movies, but also to be able to adjust for my kidney to match up with where my ab plate ends up sitting.
3. Next I did the arms. This was good practice for cutting and trimming, measuring and gluing cover strips, matching pieces, etc. I built a lot of confidence in doing the arm pieces. I also discovered that AP armor has the same Left and Right forearm pieces, which are identical, so it sits nicely on one arm and is a little weird on the other. But not in a bad way.
   NOTE: I had to taper the forearms a bit, and I think my cover strips are a bit weird at the bottom due to this tapering effect. And they STILL don't fit right. Could use more tapering.
4. Then I did the shins. I already have boots so it's easier to determine length and fit. NOTE: I am a woman of about the same size and build of the man-size intended for the armor. However, when i was taping on my shins, my husband discovered that my calves are about ¾ inches thicker than his! "How are you going to fit in those?" he asked. Well, I made them work, and so can you.
5. I wanted to move to the thighs, but when i taped them on, I realized they are, well, all wrong! Actually it's my legs that are all wrong. A woman's legs generally taper more than a man's - that is, we are wider at the hip and narrower at the knee. Also, they are supposed to "angle in" a bit, so that the shin and thigh cover strips form a kind of skinny "Y" shape. However, on me this was ridiculously exaggerated, so I added padding to the

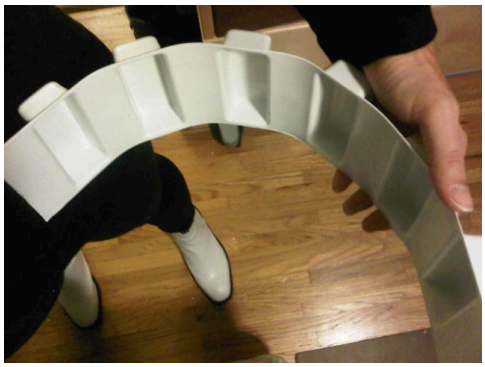
outsides above the knee. (inside the armor, but on the outside of the leg) This will do two things: 1, it will make me look less knock-knee'd (and probably help me walk better as a result), and 2, it will prevent the edges from cutting in to my inner thigh fat at the top and my outer knee joint at the bottom. Genius!

6. I trimmed, shaved, sanded, etc. all edges of all components. I cut out the belt and other accessories. I used a heat gun to curve parts. And I glued on one shoulder piece. I was going to do both but I can't see to make them even while the one is clamped.


7. Notice I have not touched the helmet or ear pieces yet, as those are going to require my most tried and true hand and best techniques! The bucket is not a part I can replace easily and I really want to take my time with it.

HEAT GUN

I used the heat gun to bend my bendy parts: belt, battery pack on knee, and shoulder straps. Wearing my work gloves, I held the gun with one hand, pressed part of the belt against my hip, heated the section I wanted to bend, and worked my way along. You have to be careful not to melt the plastic because it will twist, warp, or bend too much, and once it cools it stays that way. You also have to be careful not to burn yourself or your clothes!



Bending that baby to my will

5. BUILDING THE ARMOR

COVER STRIP SIZING CHART for BUTT JOINS

Once you have cut out your arm and leg pieces, finished the edges, and taped them together, measure the length of the cover strips you will need. If you want inner cover strips as well, you should double the quantity here.

You have to accommodate the knee ammo boxes on the right thigh, so your front strip might be a little shorter. Depending on your armor, your left shin front strip might also need to be adjusted accordingly. On some armor it may fit underneath the sniper plate anyway. Also, try to make your front covers as screen accurate as possible, and adjust the back covers to accommodate size differences, etc.

In the table below (print it!) you can enter the lengths in inches or cm.

	Front-facing strip	**Rear-facing strip**	Notes
width ~ **15mm**			
Left Bicep			
Right Bicep			
Left Forearm			
Right Forearm			
width ~ **20-25mm**			
Left Thigh			
Right Thigh			Don't forget to measure for the ammo strip
Left Shin			Don't forget to measure for the sniper plate
Right Shin			

If you prefer an overlap join, you will want to make sure the "open" side is facing inward (i.e. on the left calf, the "open" part should be facing the right). Personally I would recommend a butt join on the front and then leave the option of an overlap join in the back for velcro. This just looks more screen accurate and finished to me.

Also, on my AP armor, not only does nothing line up correctly, but the pieces sometimes "shape" differently at the joins, especially around pointy corners. So you can heat those slightly and

shape them to butt up more accurately, or you can just use the cover strip to press and/or hide those unseemly corners. (I don't think my e6000 glue was strong enough to force some of my corners flush.)

Cutting Cover Strips

My armor came with some long white flat strips of ABS. I discovered they were not all straight edges, which made my particular bane of scoring much worse. I hate scoring strips. I especially hated scoring anything on the armor itself because none of it is flat. How do you press your ruler flat and get a flat, straight line on a curved surface? Anyway here's what I did to cut strips. I used the score-and-break method which I think works great for thermoplastics and people who don't own or use big power tools.

1. Measure and mark. I started with the edge of the strip that was straightest, and if neither side was perfect, I sanded it as straight as I could get it. Enough not to be too noticeable on a 15mm wide shim on the back of my bicep, for example.

2. Secure the merchandise. First position the ruler along your cut line as accurately as possible. Unlike a pencil marking, the blade of the knife will cut exactly directly on the edge of the ruler. Then you want to secure it in place; holding it down with your hand will spell disaster. I used a kitchen cutting board and two of my clamps to secure the strip, metal ruler, and cutting board together, so that the ruler would not slip. This is why I hate scoring: I can't cut a straight line to save my life. (Explains my sewing, too!)

Normally my other hand would be pressing on the "Helix" part of the ruler.

3. Slowly cut along ruler edge. That's right, I said SLOWLY. Your first cut has to be accurate, so take your time. After that, each cut kind of stays in the groove and the groove gets deeper. At least, that's what you're aiming for: a deep enough groove that you can bend and snap.

4. Bend and snap! If your strips are already narrow, you will find this difficult unless you managed to cut very deeply into your plastic. Me, I could not even after ten slices and pushing hard. I must be a wuss. But if the strips are narrow, it's hard to get a grip to bend. So what I did was double up a towel or foam and pinch it onto the strip, then pinch *that* with needle nose pliers in one hand and the rest of the strip in the other. It worked about 99% well. Work your way along the cut until the whole thing will bend open, and then Snap! If it doesn't come all the way off, bend back and forth along the fold until it snaps cleanly. Minimal sanding will finish off that edge.

Work it, baby! Normally my other hand is holding the other side of the cut.

Gluing Cover Strips

Once cut, sand the edges. Sand or score the side that will be glued on (shiny side out, usually!). And trim your corners so they're ever-so-slightly rounded. This saves you and your photo guests some potential snags (and I think it's movie accurate too). You can also sand the part of the armor it will be attached two (the edges of the two halves). Dust it all off, apply glue, press on, make sure it's straight, and clamp that mofo down with spring clamps, magnets, and whatever else you can find. Use other strips for shims and tape - pretty much anything will work if it presses the pieces together correctly. I even once used a bag of pennies in the middle where a wood shim wouldn't quite cut it.

TIP: Start with the inside shims. Good practice, no need to be as accurate, and helps to hold the stuff together as you build. Also, if you blow it (see note below), any errors you make will be inside the armor instead of outside.

NOTE: I had a piece come apart even while taped AND clamped with those spring clamps. I can't even fathom how it slipped out. Here's a photo. You can see how it cured with a big gap between the two halves at the top, and you can also see the glue where it had been before slipping away. I think this was partly my fault for not securing it well enough and partly the armor which doesn't line up perfectly.

Needless to say, learned **two valuable lessons**. 1) This stuff ain't permanent. I ripped that baby off (carefully, with my hands and the help of a hobby knife) and I replaced the cover strip with one that was slightly longer and clamped that baby, taped the inside AND outside, and checked on it periodically. And 2) Put the inner cover strips on FIRST so it's easier to see this sort of separation or other problems right away.

Oopsie!

VELCRO

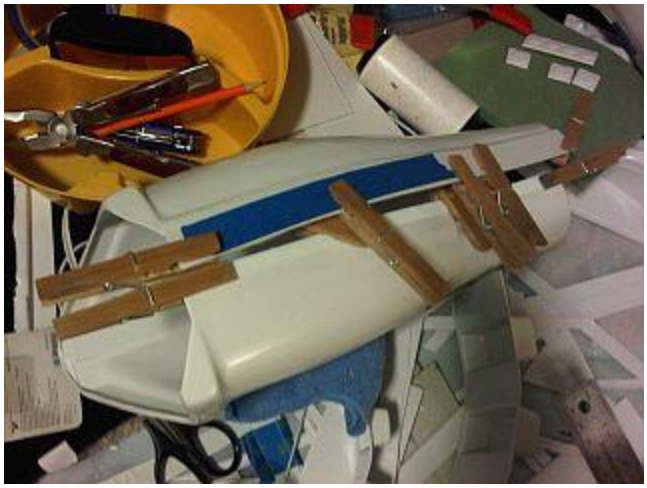
Because the shins need some wiggle room, I decided to go with the velcro closure in the back. However, I have tremendous problems with velcro. Even industrial strength will, when damp or temperamental, come off. The thing I've discovered in crafting and costuming is that *the hook & loop is always stronger than the adhesive*. So I know already this is not going to be a jolly good time.

Also, the curve of the two halves that overlap doesn't match perfectly. This is not a complaint, but a challenge. I had to figure out where the velcro will stick effectively and where the gap will be too big to bother. But I put it almost everywhere just in case.

Just to be sure, I bought both Industrial Strength Velcro which I cut into strips (don't need that $30 strip stuff, just a few skinny slices for $5) and Velcro brand glue, which is supposedly specifically designed to work with Velcro adhesive to make it stronger. I am really crossing my fingers on this one. So far so good.

I cut the Velcro strips (for me it's 3 per calf) and glued them into both sides, making sure the hook & loop parts don't touch. They have to cure for 24 hours to be maximum strength. It's the ends that always pull up so I made sure those were held on fairly well by wood clamps, which also helped to keep the part separated.

TIP: Always put fuzzy (loop) side facing in toward your skin. Even though you'll have a skin suit on, fuzzy is less scratchy and won't snag your skin suit either. Hooks face out. Take it from me after years of hook-and-loop fasteners in various hockey equipment. Avoid hook exposure.



Believe it or not, this is organized.

This is something that happens when your rivet tool is faulty. I had to get creative to get the tool off the rivet without destroying my poor plastic. Basically I clamped on the wire cutter, turned the whole thing upside down, and used the mallet on the hand tool. That made enough of a gash on the pin to bend it until it broke. It also damaged the hand tool's wire cutter blades, but it's a cheapie anyway. Then I used a special dremel fiberglass cutter to "sand" down the rivet pin that remained sticking out. It was probably a dangerous thing to do but I lived.

Well, uh, it wasn't a power *tool, so...*

BODY - AB to KIDNEY

This is probably my last big challenge. With all the snap plates in place and things "hanging" as they presumably should, and sized just about right... it takes an extra pair of hands to really get the Ab & Kidney to line up and size right.

SIDE NOTE: Like my oversized calves, I appear to have a bit more girth around the middle. I have seen on some forum threads between women TKs that the AP apparently "runs smaller" or something... which i don't remember reading about but doesn't matter. I should, in most ways,

size exactly to the average trooper of the films, so any armor should work for me. Right? But then there's that 'beer belly' girth issue. Well, needless to say, and sorry to admit, I had to add shims to the sides. Some instructions said to add them to the kidney plate, but as my extra girth comes from the front I thought it would look more appropriate adding them to the ab, so that's what I did.

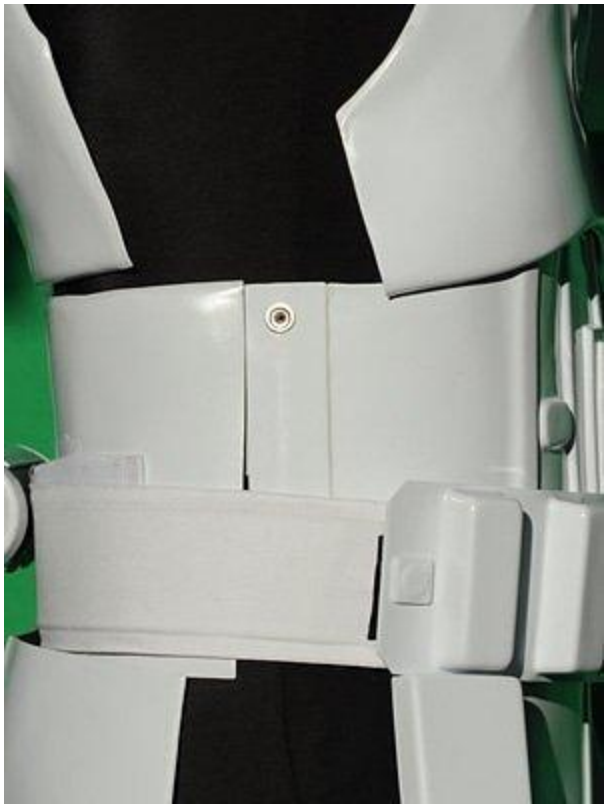
So what I did is take some extra cover strip material and double and size it to the edges of the ab plate. I then used another strip like a cover strip on the inside to butt-join the two. It looks and seems to hold just fine. You can do this to the kidney instead if you prefer.

Dieting is over-rated.

I filled in the gap with some white modeling putty.

My big challenge now is the enclosure. I am a little confused by threads showing that the original armor had the six rivets and the one snap on either side: was the snap functional? Should I make my snap functional? I'd rather not, but I can put one there just for show. And I'm going to simply use two-prong brads for the six rivets in the rivet holes, and enclose the whole thing with super mega velcro and white stretchy something. (Or should it be black? I've seen both used. I have no preference.)

UPDATE: Here is a pic of the inverted snap on the right side of the ab.



Dunno what it's supposed to attach to... my rib?

COD WHAT?!?!?!

With everything snapped into place, my cod and butt plates snapped together with a stretchy, and so far so good... except that my large female hockey-playing arse makes my butt plate stick out funny (there will be no hiding the fact that I'm a woman now!) which makes gaps at the edges between the kidney and butt. I attached additional velcro (not snap) strips to try to hold it together, and am now hoping the belt will cover that … and it stretches the crotch tab more than I had measured for... ← This is all the bad stuff.


Bikini Cod Piece vs. Proper Cod Piece

NOTE: A note for women in the above pics: you can see that my cod was too high in the first

pic, and I lowered it slightly to the very edge of the bottom of the ab in the second. The Belt covers the ‘gap’ but it’s really not much of a gap anyway, but it looks so much better. The cod does not fit like a bikini any more; it’s actually lower than my crotch as if I had some baggage there to protect. It looks a little less girlie this way, which is what I wanted to achieve. It still snaps to the butt plate but the belt keeps it from tilting backward like a bikini bottom.

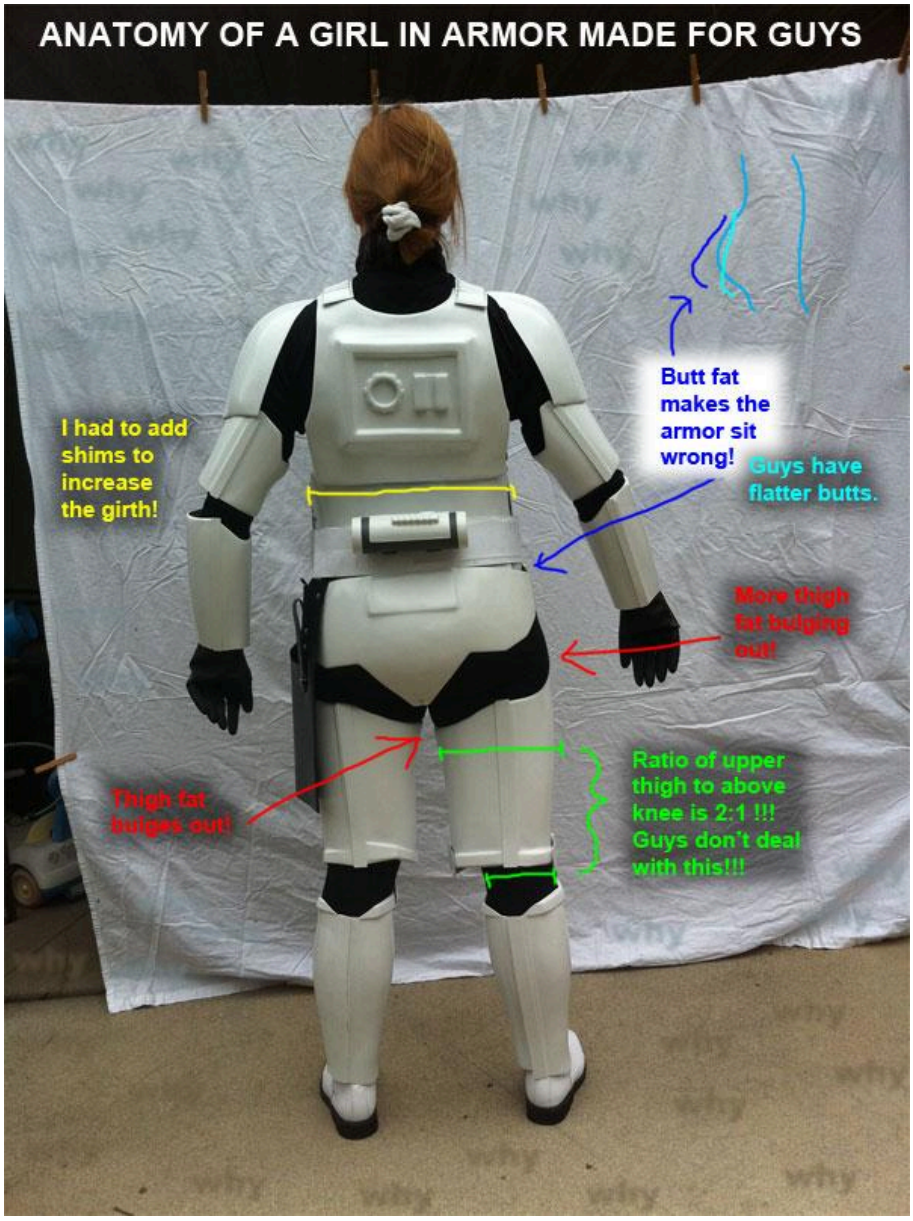
PAINT:
The blue I used is Blue Angel Blue, Model Master 4867 (buttons only).
Also Testors 1138 Gray (buttons, teeth, ears) and 1147 Gloss Black (ears only).
(I researched these, but hope to goodness they were the correct ones!!!)

Does this make my butt look big?

Okay so I am "differently proportioned" than a guy of my equivalent height/weight.

I am in a 90-day exercise challenge with some friends, and boy is this really motivating. Take a look at my horrible "final build" photo and you'll see what I mean. I don't think any guys are going to help me with suggestions because, well, they'd have to say I'm fat!

Ironically, and I might have mentioned this earlier, my calf is also larger than my husband's.



It's pretty embarrassing to admit that my waist is **larger** *than a comparable man's!*

THIGH TROUBLE

Apparently many troopers have trouble with some clacking of the inner thighs. This makes me feel a little better about having skating legs, but doesn't bode well for the best fit. You can see above that from the back my armor has some weird flat square thing going on at the bottom. This is partly how the armor is... and partly me not tailoring right.

My GML suggested putting foam in the thighs to help them fit right, avoid the clacking, and help prevent knee plate crimping. I think I also mentioned elsewhere that I put foam on the OUTSIDE LOWER THIGH (above the knee) to push the thigh pieces outward so there is less of that

dramatic “Y” shape going on. The Y emphasizes my hips, which makes me feel too female and not proper androgynous trooper.

Might need a little more padding in there?

Someone on a thread also suggested recutting the thighs to be more tapered. I can probably do this by removing the inner and outer back cover strips, cutting as more of a V (because I have no room to shrink the top), and then re-gluing. This would be helpful for making the thighs a little more shapely to my leg, hopefully without emphasizing my thighs. But I am what I am, I guess... I’ll let you know how that goes when i try it.

Update: I did the tapering. You can see the cut below.

Open

Closed

FINAL TWEAKS

At the end of the road, I went through three “photo shoots.” In the first, things were all off. Thighs too low, cod too high, forearms too big, shoulder bells not quite in the right place, etc. So I looked at my photos, wrote down all the changes, made as many as I could, and

One of the biggies was making a garter belt that actually kept my darn thighs up. I put a snap in the inside front (see above photo) and sewed some webbing straps onto a web belt. (I have yet to remove the buckle and figure that out.) I made about 3 of these, one with jean rivets that fell apart, one with elastic straps that stretched under the weight of the thigh pieces, and then gave up on having flexibility and went for this non-stretch webbing-sewed-on thing. It seems to move and flex fine, so I’m going to keep this one. THREE snaps on the lower straps give me the ability to adjust based on where the stupid belt is on my belly.

#FAIL

So Sexy

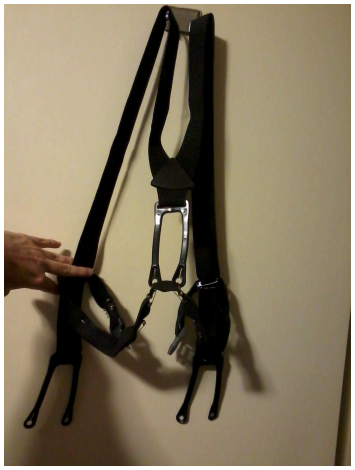
HARNESS #2

The pure webbing harness failed. Because it has no give, it ripped the snap plate off. Just before a group 501st photo. And a day of trooping. Yep. No amount of crazy glue or emergency mending helped. I held my thigh piece up with my thumb for 3 hours!!! OUCH!!! (On the plus side I learned a new blaster-pointing action pose.)

NEW HARNESS - adaped HOCKEY SUSPENDERS (intended to hold up pants, not socks) which have the U-shaped rubber loops to hook over the buttons. So I put buttons inside the thigh plate. First I measured to make sure the rubber wouldn't show. Then I made LONGER stupid snap plates with the buttons protruding. (I also tested that the buttons don't bite into my thighs, they don't, lucky me.) You can see where the old snap plate is... this is not the one that came off.

Second I attached a folded 2" wide elastic strap for my waist. Right now it's all held together with safety pins, but I *will* get my sewing machine on that puppy for some zig-zag stitchery. I also attached a buckle (see third pic) on the waist to close it. Now it goes on like a vest, with the back suspender loops attached to the waist.

Lastly I will put a piece of webbing across my chest from suspender to suspender, with snaps to hold it on at least one side, to attach my Aker amp so it sits perfectly in the "gap" inside my chest plate. (Cuz those lady parts fill up most of the space.)


#FAIL

At least if I lose one of these, the other should hold, right?

The little problem these began to have is the elastic stretched too much and started to show above the top of the thigh. The rubber holder is fine, but the elastic isn't. So I have something new in mind for this system, but first...

HARNESS #3

Don't laugh. I went back to the original belt. I added regular pants suspenders and attached to the belt to keep it from pulling down my waist. Then I added new snap plates with TWO snaps each (notice my tabs below have 3). This totally survived Celebration VI without a problem!

Why do I feel so exposed?

OTHER ADJUSTMENTS

The second time around, I was still disgusted with a few things. I moved the snap on my shoulder about ½" forward so that the shoulder bell would fall more "closed" with the chest plate

from the front. Looks better, I think, but still not right, and that left shoulder bell just won't lay where I want it. That means:

NEW STRAPS under the shoulder straps. Yep, I made all new straps on both sides so that the dang thing would sit right. (It was easier than trying to pull out a snap.) I also moved the shoulder bell's snap plate down a tiny bit, bringing the apex of the bell to the edge of the shoulder strap. This helped everything lay more nicely.

1  2  3 

I also raised the bicep about 1" on both arms, which helped my forearms fit better as well as the shoulder/bicep combo in general.

I then cut ½ inch off the non-return end of my forearms. (I still have to trim about ¼ inch off the entire perimeter of my hand plates.)

Below you see before thigh & cod adjustment and after. ***Huge*** difference.

All right, no more crotch shots!!

6. HELMET (BUCKET)

Basically, my helmet came in four main pieces: the face, the cap, and the two ear pieces. Plus all the screws, decals, rubber, and more. I was amazed that all this came with the helmet, which I did not realize until after I'd made a trip to the hardware store, etc. So thanks, Mark, for the extras that come with the AP kit.

I followed these directions almost to the letter, and it has been turning out awesome. http://forum.whitearmor.net/index.php?showtopic=14806 (Thanks, Panda Trooper!)

The main exception is that I did not use the dremel tool on the face. I used the hobby knife (Exacto) exclusively and it worked excellently for both eyes and teeth.

Say cheese!

Note: Like everything else in the armor and especially the helmet, nothing is symmetrical, so don't stress over it. The AP's right eye has the little bump in the bottom but that's just like some of the ones in the films, so I left it in. Teeth holes, forget it. But it's all good.

One thing I discovered, to my dismay, is that although I placed my brow ridge higher than the top of the eyes, I was not paying enough attention to that detail when fitting my ear pieces. After I screwed in the ear pieces I found that my brow had dropped all the way to the top of the eyes. I personally don't like this look, but I'm not sure I can do anything about it now. I might try fiddling with it all later, but for now this will do.

Some kind of disembodied vacationer.

Update: I was able to unscrew everything, adjust the brow, and re-screw using the same holes. It still collapses a bit but not as badly as before. It's live-able.

I had painted my ear pieces with the gray base before assembling, just because I happened to have the gray out for the ab buttons. Everything else I waited until after assembly and polishing.

How do I dye her hair red?

I am considering slits in the back "vents" as suggested by another trooper. For now I will just

finish them with black stripes and add my tube stripes as decals. I can update later. Lastly, the innards... and voila!

He's pretty mean looking... er, I mean SHE.

Note: I have posted on the forums asking for tips on getting the green cellophane to be more flush. I can't get it flush. It looks warped … well, from far away, like photo-distance, it probably is just fine. Maybe I shouldn't stress it.

Update: I ordered a welding shield on Amazon. It seems to work better for "flat" but even after removing some flashing it isn't flush against the inside of the helmet. I'm still working on that.

Here you can see the warping of my cellophane, though from the front you can't really tell.

I will say this: getting this thing on and off is entirely non-functional. I can see why the guys call it "a bucket" because, well, it's essentially just a bucket on your head. It would be groovy to make some kind of hinge for the front or back to open it a bit. As it is, I have to turn it 90-degrees to get it on, and then twist it into place once my head is in it - and there's no hope of putting it on while my glasses are on. I'm wondering if it's possible to enlarge the back bottom or something for a little more space. But the rubber thing that goes around the bottom is exactly the right size. No problem... just have to watch out for the long screws! (I'm going to replace them with smaller ones.)

My hand painting came out great. I did use decals on the tube stripes. I can see now how the aerator tips (mic tips) are not screen accurate (or EIB acceptable) with the AP set but that's all right for now, I'll work on updating them, no one will be the wiser in the meantime! Finally got the Novus shine going... man that was not as simple as it seemed at first. Lots of elbow grease.

PAINT (again)

I used Testors 1138 Gray and 1147 Gloss Black. That's right, **1138** Gray. I can't make this stuff up!

It takes a very steady hand...

Does this go here? Apparently yes. **TIP:** use a few dots of glue if necessary. To be replaced for Centurion status some day.

It's a trap!

NOTE: AP bucket comes with the "U" type rubber so if you want to be Centurion you need to get the "S" type (available at http://trooperbay.com/).

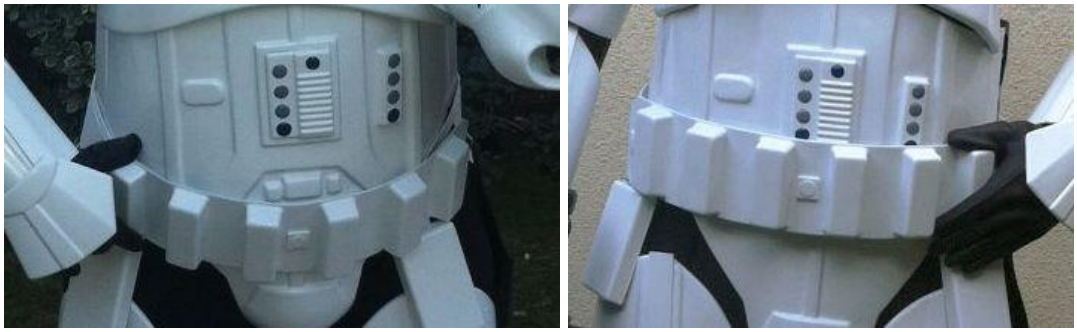
7. OTHER STUFF

BELT & ACCESSORIES

My AP armor came with two sides of the webbing for a belt I assume to be attached to either side of the plastic belt part. I hadn't realized this was in my package ... I am apparently too excitable to be observant ... and decided to purchase from someone whose info I will hunt down again and post here (see last pages). The belt I ordered was made to my specified length and very nicely done. The holster I bought from the AP vendor looks and works great with it is EIB ready with just the two visible rivets.

However, I think I royally screwed up my belt, but *cest la vie* at this point. I can make it work with velcro or something. Update: It's fine. Need to sew on some velcro patches.

I put male? screw-in snaps onto the ab plate and their corresponding non-screw female counterpart into the belt, webbing only. This seems to work pretty well. You can see the difference below, saggy vs. horizontal fitting.



Saggy belt vs. proper belt.

Also in the first pic, my drop boxes are too forward (and crooked). I moved them "outside" a bit. They are still open in back for now, with adhesive velcro inside the box and on the inside back of the webbing (remember which way to face the loops vs. hooks!). They are hung by a 3" black piece of webbing. I will build better snaps for them.

POLISHING & SANDING

Thanks to Rob "matt black," I learned how to properly sand and polish my suit. I had done some major damage at a TV shoot that needed serious work, and he walked me through the process, but it's pretty easy.

The ABS has a pretty normal "dull" shine to it, which is totally fine, but I found I was jealous of the much shinier stuff some of my garrison-mates were wearing and I wanted to polish up a bit

anyway. So now I have repaired the damaged bit but also polished the entire suit to a really glossy shine. (Which hopefully isn't awful!)

Here's my before picture:

Here's what you need:

- Sandpaper: 600, 800, 1000, 1500 (optional), *and* 2000 grit (wet-dry)
- A compound polish like Novus - I found Maguiar's Ultimate Compound to be more effective and less work than Novus.
- Microfiber cloths.

i.e.

Here's what you do:

1. Put a couple inches of mild soapy water (I used a dash of dish soap) in a bucket or large bowl. Not too sudsy.
2. Be sure to clean off the bit you're going to sand, and also slosh the sandpaper in the water a bit to wet it and clear off any loose grit.
3. Cut the sheet into fourths. Fold one quarter in half to give your hand a grip, and wet it.

4. Using long, straight strokes, not cirucular, not in multiple directions, and not a lot of pressure, sand until it is 100% smooth, no scratches visible or by fingernail check. Let the paper do the work, and make sure you keep adding the water. Wipe occasionally with a microfiber cloth.
    a. You will eventually see a milky white substance form, which you can clean off and continue; this is your plastic residue coming up and I think it also fills in some of the cracks like abs goo or like the chalk in toothpaste fills in the micro-abrasions on the enamel of your teeth.
    b. I got to about 99% and was about to give up on two tiny invisible scratches, but Rob was persistent and sure enough they came out!
5. When satisfied (100%!), rinse and repeat with the 800. Now, however, you are just sanding the micro-abrasions from the 600, so you don't need to do it for nearly as long. You can apply more pressure. Let the paper do the work, keep it wet, long straight strokes.
6. Repeat step 5 with the other paper, getting progressively higher, until the abs is as smooth as a baby's bum and there are zero scratches or abrasions. It will probably be as white and creamy and non-shiny as milk.
7. POLISHING: Using the microfiber cloth, rub in a liberal amount of compound in all directions (circular, straight, sideways, whatever it takes) and with a little pressure. Rub a little, wipe it off. Don't let it dry. "Wax on, wax off." This is a very fine sanding process that finishes off all abrasions and fills with a nice shine. Do this until you get the shine you like - mostly shiny, dull shine, or super duper mega shiny like you can see your face in it.

That's it!

Here's the result:

(pic coming shortly)

THE END!!!

Here are my final photos. I still have some tweaking to do, especially on those monster thighs, but at least I'm approved now! Update: Monster thighs trimmed by making a V cut in the back, now narrower and more tapered, but still fit great - even more snugly now.


E-11 Blaster: I bought this Sci-Fire from TK-6768 aka Lewis :D It's amazingly realistic, well painted, and lightweight considering it's entirely cast in some kind of rubber!

Boots (size 8): I bought from Trooper Supplies, they are very soft, very comfy, and so shiny I'm afraid to scuff them up.

EIB-compliant Mic Tips: The AP kit's Hovi "Mic" tips (in most of my pics) are not EIB ready, so I bought replacement tips (not shown) on Trooperbay.com; these are Sskunky's version and you can get from him as well. Here's a new pic.

Web Belt: I bought from Robert TK7143, g r e a t belt.

Neck Seal: Thank you, LadySewForUs!

Here's a link to my EIB Submission Thread

Here's a picture of me IN ACTION (after some of the modifications like thighs mentioned above). This was my first troop. I'm the TK on the *LEFT*. I think I accomplished my "look like a dude" goals, though that was just a personal one for me, and I'm always thrilled when I see other women TKs whether they fool me or look gorgeous!!!

Some teen girls slapped my bum and ran off giggling. Little do they know...

Diana and I prove that you can sit in AP armor. On a wooden bench no less. The butt plate felt kind of flexy-soft. I wouldn't do it normally, but I just wanted to see what would happen. And it was nice to take a load off my feet after a day of trooping, droid hunting, shoot-a-trooper, and the big 501st Legion photo and FISD photos.

Here’s my big Centurion photo...

DISPLAY

I’m going to attempt to make this home-made Mannequin:
http://forum.
whitearmor.net/index.php?showtopic=18720