

Helmet TIPS & MEASUREMENTS

REMOVAL

PRODUCTS THAT MAY REMOVE AUTOGRAPHS FROM HELMETS

You can use any of the following items to remove an autograph from your helmet (mini or full ize):

1. ELO (Easy Lift Off)
2. Goo Gone
3. Alcohol pens
4. Lighter fluid
5. Blue Magic Metal Polish Cream
6. Wright's Silver Cream polish

REMOVING OLD OR SMEARED AUTOGRAPHS

You can use "lighter fluid" to clean gunk off full size VSR-4 helmets. This will probably remove those Sharpie black and blue and Sanford silver and gold markers also. It should not hurt your mini helmet since nothing bad ever happened to mine. It might even put a shine to them. Lighter fluid is also pretty cheap and can be found in the barbecue or charcoal section of any hardware or grocery store.

As long as you follow these steps, you should be okay:

1. Take a clean cloth and wrap it around your index finger.
2. Hold this cloth over the top of the bottle.
3. Tip the bottle upside down for a second, so that some of the lighter fluid runs into the cloth.
4. Next rub the helmet until the marks are removed from it.
5. Immediately take another clean cloth to remove the excess the lighter fluid, making sure to rub in one motion then rub in another motion so that it's cleaned off evenly.

REMOVING WARNING LABELS

Use a plastic ruler (or metal one if you're really careful) to remove the warning label and lighter fluid to remove the glue. (Jeff Kramer)

REMOVING OLD DECALS (See also, "REAPPLYING OLD DECALS")

Removing decals from Riddell mini helmets should not be a problem. What you should do is run a hair dryer over the decal to remove for about 15 seconds. This will warm up the decal a bit and allow the adhesive to stick onto the decal better (rather than the shell) and it makes the decal softer and more flexible thus making it easier to peel off. If you plan on using the decals in the future you can peel them away with the help of old decal backing. Just peel back a corner of the decal then put the backing under it. Each time you get more of the decal pulled away adjust the backing so that it covers it more. This helps prevent any unwanted fingerprints on the decal adhesive. As you are removing the decal, make sure you pull it off as close to the shell as possible. This will prevent the decal from stretching or tearing. You do not need to use Goo-Gone on it at all. If there's any glue left on the shell, all you have to do is rub it off with your fingers. You might even be able to save the feather decal for use later. This method applies to any decal on a Riddell shell. Some decals may not be salvageable though, but use patience.

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REMOVING FRONT AND REAR BUMPERS

Some members use "Goo Gone" or "Goop Off" to get the old bumper residue off of their mini helmets. However, Warren Willis says your best bet is to always buy some Riddell mini shells, as the adhesive used on these is much easier to remove than Wingo Remarkable shells. The Riddell adhesive can usually be removed by rolling it off with your fingers, whereas the Wingo adhesive is very tough to remove. It usually takes nearly an hour to completely remove all the adhesive from Wingo shells when removing bumpers. Start with an X-Acto knife that has a chisel-type blade, and scrape off as much as you can, down to the bare plastic. Then, using wet-n-dry sandpaper, I wet-sand the areas (starting at 400-grit then ending around 3000 or 3500-grit). Next, follow this with Plastic or Machine Polish. It's a LOT of work, but the results look very good.

The Wingo shells are coated with a lacquer clearcoat, and many times the adhesive eats into this clearcoat, and it becomes noticeable. In that case, the only option is very careful and patient wet-sanding (described above), going slow to avoid heating up the clearcoat by friction and causing even more of it to separate from the shell (and thereby creating more work for yourself). You have to be careful when using adhesive removers, as most of them remove lacquer regardless of the wetsanding and polishing.

If you ever use Wingo electro-plated shells, do not remove the bumpers on these. The electro-plating does not extend beneath the bumpers, and there is no reasonable way to make these areas blend into the electro-plating on the rest of the shell unless you have the entire shell re-plated (in which case you wasted money on purchasing them electro-plated in the first place).

As for the adhesive on the chinstrap snap posts, this is also a pain to remove. Start with an X-Acto blade and scrape the adhesive out of the threads (this is very time-consuming and tedious). If this is too excessive, then take a large set of dykes (wire cutters) and snip off the threaded post as close to the nut as possible. Next, then remove the nut and throw the threaded post/bolt/machine screw away and use new ones that come with Wingo Chinstrap kits.

CLEANING

CLEANING HELMET INTERIORS

Try using diluted bleach using water or Lysol to cut the odor in used helmets but be careful not to bleach the shell color. After each game, some NFL equipment managers clean the inside of each helmet with a disinfectant spray. I am not sure exactly what they use.

CLEANING HELMET SURFACES

Try using soap and water to remove as much dirt on the surface of the helmet as possible. Use a plastic ruler to remove the warning label and a lighter fluid to remove the glue. (Jeff Kramer)

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RE-GLUING/RE-APPLYING

RE-GLUING BUMPERS

For bumpers that haven't stuck too well, use a glue stick. It does a decent job; not quite as good as the original, but it's the best you can use.

RE-APPLYING OLD DECALS

There are a couple ways. Some members think that spray adhesive helps when reapplying old decals. Others have tried using Elmer's glue stick. It dries clear and

holds the larger decals in place. Another idea is to get a clear piece of vinyl and lay it over the top of the original decal (basically doubling the decal). Still another way is to get all of the old adhesive off and reapply 3M double-sided adhesive. It comes on little rolls and you can get a roller dispenser to apply. If you use this method, just heat up the decal with a hair dryer afterwards to get any imperfections out of the adhesive.

MAKING/CREATING YOUR OWN

MAKING YOUR OWN MINI HELMET TAPE

Buy clear electrical tape. If I need 1/4" stripes, roll out the 1/2" tape and affix to one edge of a melamine board spray a coat of Krylon Primer (not really necessary, but does improve the adherence) then paint the color you want. Let it dry. Then with an ex-acto knife cut the tape in 2 and you have 2 1/4" stripes. Just peel off and apply. Most hardware stores should have other colors and come in 1/2" and 3/4" stripes.

MAKING SINGLE-BAR FACE MASKS (Mike Stanhope)

Note: This method was used before Wingo Sports produced the 1-Bar face mask for mini helmets.

Materials Used (you can purchase at any hardware/home improvement store):

1. 1/2 or 3/4" copper piping
 2. 1" plastic tubing (bendable vinyl) - Mike Stanhope uses "filter tubes" from a fish store!
 3. 1 can Krylon spray primer
 4. 1 can Krylon spray paint (your color choice)
 5. A drill
 6. A pair of snips
 7. Chinstrap hardware
- Cut plastic tubing with snips about 7 or 8" depending on how much you like the mask to stick out.
 - Then cut the copper pipe 1 1/2-2" shorter than the tubing.
 - Take the plastic and prime it with light strokes to prevent running. Let dry (about 30-45 minutes) then paint on your choice color of paint using light strokes to prevent running and let dry (about 30-45 minutes).
 - Feed the copper pipe through the plastic tubing and gently bend with your hands into the shape you desire, being careful not to break the pipe in half, lining up the ends with the helmet, the hollow part of the plastic should overlap the hole designated for the 2 bar mask/chinstrap hardware.
 - Take your drill and drill holes through the tubing to line up with the holes for insertion of the chinstrap hardware. Then just insert the hardware snaps and screws through the mask and holes and you're done!
 - You will need to buy longer screws than provided with the chinstrap hardware. Use 1 1/4" screws for this.

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PATRICK LAROUÉ'S CUSTOM NOPO-SW THROWBACK MINI MASK

Email: patrick@laroue.com

Materials Used:

1. Plastic tube sterine
2. Standard coat hanger
3. Model glue
4. Rubber compound spray (I forget the brand)
5. Flat gray model paint

- I guessed at the measurements and got lucky with the angles.
- I started with the bar that goes across the forehead.
- I inserted the coat hanger wire into the tube sterine and molded it until it came out the way I wanted it. I broke a few in the process until I got it right. The coat hanger wire never gets perfectly straight, but the plastic tube compensates well.
- I attached the first bar to the helmet to make sure the fit was right. I think I ended up just leaving that on and continued to build it out. The mini-helmet gets the crap kicked out of it doing it this way but I figure it's your only choice.
- Next was the middle horizontal bar. Again, I measured (actually guess-timated) and cut away. I used wire cutters to get through the coat hanger and tube sterine. I also used a round file to file down the contact points. I'd file both sides of the tube (where the contact points were), most times right down to the coat hanger and glue them.
- When it was dry, I took it off the helmet. I then used this spray...found at the hardware store, to simulate the rubber compound found on the real-deal. It worked fine, but I might suggest buying to "dip version" for a better all around finish.
- When that was dry I did a couple more coats. This fills in any of the cracks at the contact points. Finally I painted it.

It's pretty sturdy. It's not something you'd let a kid play with but for a decoration on an office shelf. I like it because it's the exact mask my father had when he played...and makes the helmet much more personal.

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PAINTING

PAINTING FACE MASKS (Mike Simmerman)

I just use a quick drying Krylon spray paint (\$3-\$4 a can at Lowe's or Home Depot) and have never had any problems with any of the Krylon colors I've used- black, white, yellow, royal and navy to paint 1 and 2 bar masks. I just take them outside and untie a wire coat hanger, hang one end over a tree limb or clothesline and hook the other through the hole of the mask. Then spray the mask with light strokes and coats to prevent drips. The mask usually dries between coats in about 10-15 minutes depending on the humidity outside. After about 2-3 coats the mask is good to go. I've done about a dozen or so masks and have never used primer and have never had a problem with peeling or cracking.

FIXING HELMET CRACKS

If you have any mini helmet shell that is cracked or broken, there is a reliable solution to fix them. Of course, if the crack goes through an autograph, there is no guarantee it. You can purchase a general-purpose plastic adhesive called "Weld-On" from a plastic supply house. This works but you will need to use all of the recommended cautions (and use it outside because of the odor). You'll also need several packages of cheap paintbrushes to apply the glue. Dispose of the brushes after use since the adhesive gums up the bristles and it's nearly impossible to clean them afterwards. (Warren Willis)

PRIMING AND PAINTING HELMETS (Warren Willis)

The first thing you need to do is thoroughly wash the surface to be painted. Then, after everything is masked off, USE A PRIMER. This will seal the surface and give "gription" for the paint to be applied.

Basically the primer can be used to fulfill several functions: (a) To block the helmet color from "bleeding" through the paint (yellow and red pigments in the plastic are notorious for this), (b) to provide a "gripping" surface for the paint coats to adhere to, (c) and to fill in small gouges and scratches. If I am spraying a medium to light-tone paint (such as white or light blue), then I use white primer. If the color will be dark, or a dark metallic (like gold), then a medium or dark gray primer is fine. The primer coats also allow slight flaws and scratches to appear, so that you may sand or fill them; that way the flaws/scratches will not appear in your final color coats. If you are only interested in a newer finish of the same color as the original, and don't want to go through the process of filling, priming, and sanding, then by all means just spray the new color over the old, after you have cleaned the surface thoroughly with soap & water, or degreasing agents. Be careful with the metallics, as they run very easily; so be sure to apply thin coats in several layers and stages. Recently when refinishing an older Riddell WD-1 Sunflower Yellow helmet, the yellow bled right through my white primer. I had to seal it with a couple of coats of dark gray Rust-Oleum automotive primer, then more coats of white primer, before applying the final color coats.

The "best bang for the buck" I have found yet are Wal-Mart spray enamels (usually only \$.88 per can). I have tried several lacquer sprays but the Wal-Mart sprays remain my favorites. Rust-Oleum also makes great colors that are easy to spray and work with. I also have used the PreVal sprayers and they work very well too. I enjoy using them, as the cleanup/setup is easier than with a compressor & sprayer/airbrush. If you want custom-mixed colors, go to an auto body & paint supply shop; they can custom-mix just about any color of urethane or lacquer paint you desire, but it is sold by the pint (in little pint cans). Prices generally start around \$30-40/pint. This is perfect for use in a PreVal sprayer, as I've done it several times. Urethanes are beautiful and won't yellow either!

When spraying, spray several thin coats rather than a few heavy coats; this will prevent drips. If you live in a humid area, it will take longer for the paint to start to dry. When spraying enamels, you need to recoat within 20 minutes of each coat; otherwise, you will need to wait a minimum of 48 hours or else the paint will "orange peel". Lacquers don't seem to have this problem.

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If you are spraying mini helmets, then I prefer Tamiya lacquers. When using lacquers, they are very "hot", and will etch themselves into the plastic, so you MUST prime the shell before painting with lacquers! Tamiya lacquers spray very thinly and evenly, especially when heated. Now that summer is about upon us, leave the can in the sun for a few minutes to heat up, and you will immediately notice a difference. I wouldn't use Tamiya sprays on a full-size helmet, since they are expensive and will require 3-4 cans to completely cover the helmet.

If you need a specific color not available in spray cans, go to an automotive paint & body supply shop, and have them custom mix the color(s) you need, in either lacquer or urethane. The minimum quantity they will custom-mix is a pint, enough to fill 3 or 4 spray cans. They can either load the paint into spray cans for you, or you can use an inexpensive PreVal sprayer to apply the paint. I use the PreVal sprayer, as it is cheaper & easier to use and you're not contaminating the environment with empty spray can containers.

If you have any questions about the auto body & paint portion, ASK THE EMPLOYEES AT THE SHOP. They can answer your questions better than I can. I won't answer questions about the best thinning/curing agent for urethane paints or anything else, as you need to ask the paint & body shop employees this. They can help you much better than I can. This should be obvious, but I still get a ton of technical questions related to this process that I am just not qualified to answer. So please check with the paint employees.

Oh, and be sure to tell the employees that you're painting helmet shells...the ones I deal with think it's fascinating, and demand that I bring in some samples to show them! They have come to recognize me by sight, and go out of their way to help me. So don't be afraid to tell them what you're doing, as most likely they're fans too, and you might even be able to swing some deals with them.

POLISHING AND COATING HELMETS

1. You can use a good car wax or Blue Magic Metal Polish Cream, which is what's best according to many helmet collectors. This is similar to the creams you use to wax your car. Polishes that are used for spas also work well. Apply the wax onto your helmet. Wait about 10 min. then buff it out.
2. There is a product called Brilliance found at ACE Hardware. The bottle reads, "NEW ANTI-STATIC CLEANER and POLISH for PLASTICS and any shining surfaces". You can use this product on dulled and faded helmets after dusting. Just spray it onto your helmets then wipe it down with a wash cloth. It sparkles like glass after buffing. It also gives it that ultra smooth feeling like when your car just gets waxed. It brings out the shine and color of your helmets. There is NO streaking so you don't have to buff any streaks out.
3. There is also a similar product called Novus Plastic Clean & Shine. This 8oz. pump bottle cleans, shines and protects for use on all plastic products (particularly for acrylic display cases). On the bottle it reads, "antifog, antistatic and dust repellent". I can tell you that it doesn't really repel dust (since dust will fall onto any surface), but it does clean plastic pretty well. However, I do not know if it is better than the product described above.
4. To give each helmet exterior an acrylic coat, use Future Floor Finish liquid floor wax on them. This product will also renew the exterior surface shine. In order to protect their full size helmets from scratches, many football equipment managers will use Future, which applies an acrylic protective coat to the helmets. When applying Future, make sure you use a very soft towel or rag; otherwise you will get streaks on the helmet. Pour this liquid wax into a small container. Using a soft white cotton sock, soft towel or soft rag, dip it into the container of Future. Make one swipe over the exterior helmet surface to complete this task.

Another Note: Armor All or Pledge is not recommended to clean or polish your mini helmets, as many collectors think. Armor All is for automotive vinyl only. Both of those products will only add a slimy film to your minis, which you will end up rubbing off in the process while trying to put a shine on them.

Helmet TIPS & MEASUREMENTS

DECALS

VECTORED LOGOS

Vectored logos, artwork etc. are images that use lines and curves called vectors, which also included the colors. The colors, etc., are determined by the color of the lines. Bitmap graphics are images that use dots within a grid (the outline of a logo so to speak) called pixels. In Bitmap images the colors, etc., they are determined by the positioning of each dot. What this all means is that you can take a vectorize graphic and resize it up or down no matter what the original sized and lose no detail. If you try to enlarge a bitmap graphic you will definitely lose quality because the dots will expand, which distorts them. This won't happen to vector graphics. The lines simply stretch or shrink and stay the exact way they started. To do vector graphics you need Adobe Illustrator since they cannot be viewed or altered without it. To make a bitmap into a vector image, you use the bitmap as a template and draw the lines over the top of it; hence creating a vectorized logo. This takes a number of hours to create. Most decal companies want you to have your logo in Illustrator form because they can't really screw up from there.

APPLYING DECALS TO HELMETS

Question: When placing decals on the sides of a helmet, do you center the decals using your eye or do you use reference points?

The answer is, you really have to do both. I eye it as well as use reference points when placing decals. Unless you have photos to judge from, you also have to decide whether you are placing decals with the intent that the helmet is just sitting on a table or shelf or in the position that a player would be wearing it. The angle of the helmet is different.

APPLYING LARGER DECALS TO HELMETS

Just add a couple drops of liquid dish soap to a pan of warm water, and using either a paper towel or a washcloth (I use a washcloth to keep pieces of the paper towel from getting on the helmet) dip into the soapy water mix and wet the area on the helmet where the decal will be applied. Then, remove the decal from its backing and dip the entire decal into the soapy water. Slap it onto the helmet, position it where you want it, and squeegee out the water from behind it. (Warren Willis)

CLEAR OUTLINE AROUND DECALS

I do not suggest trimming or removing the clear outlines on decals. Clear parts on decals are referred to as the "cut line" on the artwork. If a decal has a clear outline, then it has not been "die-cut". They are only on the decals so that when the decal companies "cut" the decals, they do not cut part of the logo as well. Many times, I ask that the clear outlines get removed on throwback decals since you usually never see them. Most of the current teams' decals have the clear outline. I do not have a problem with them if a team has them on their decals already.

GUMBALL HELMET CONTAINERS

"Tuff Tainers" have 24 compartments and gumball helmets fit perfectly in them. They are slightly opaque. Home Depot used to carry them. There is a company called MEI Research Corporation in California, which sells them for \$4.50 each. Home Depot used to sell them for \$2.99. The model number is FLF-5004. Their phone number is 714-223-0322.

Helmet TIPS & MEASUREMENTS

POCKET PRO HELMETS

Removing Logos

By simply removing logos, this allows for a few more throwbacks:

- Remove the logos from a current Patriots helmet then paint the facemask gray. This can make a Lions TB.
- Removing TB logos can make Giants TB
- Remove the blue center stripe on a Patriots TB then swap on a gray mask will make another Patriots TB.

The first thing you'll need to make custom Pocket Pros is a product called Blue Magic metal polish cream. This product is a paste and will remove the logos with rubbing, and leave the helmet nice and shiny. The next product you need is Easy Lift Off (ELO). This is used to remove stripes if you need to. It usually requires leaving the product on for about 8 hours before the stripes will dissolve. This is a liquid product, and will be a little messier to work with.

Unfortunately ELO cannot be used on the painted metallic shells since it will remove that paint also. You can also use this to remove logos if you want, but I usually use the Blue Magic because I think it is gentler on the helmet and works great on the painted shells.

Visit these websites for the products listed above (you might find them locally):

Easy Lift Off:

<http://www.ares-server.com/Ares/Ares.asp?MerchantID=RET01229&Action=Catalog&Type=Product&ID=60875>
<http://www.hobbylinc.com/htm/flo/flof542143.htm>

Blue Magic Liquid - 8 oz. Bottle:

<http://www.acehardware.com/product/index.jsp?productId=1420325>

Blue Magic Paste - 7 oz. Jar:

<http://www.acehardware.com/product/index.jsp?productId=1420324>

Blue Magic Paste - 3.5 oz. Tube:

<http://www.midwayautosupply.com/detailedproductdescription.asp?10129>

MAKING YOUR OWN FACEMASKS ON POCKET PROS ("AUTHENTI-KIT" STYLE)

You could probably assemble a facemask using "sprue" from plastic model kits -- should be relatively simple to heat and bend and very easy to glue together. Either that or get out the solder and some copper "rods"/wire (small gauge avail. at hobby shops). Dip the assembled mask in Plasti-Dip (or spray on). "RUBBERIZE-IT" may work like Plasti-Dip. (James Hamilton)

Pocket Pro Stripe Measurements

Ratio on stripes:

Full Size P/P

1"	5/32" (Center)
3/4"	1/8" (Sides)
1/2"	3/32" (Sides)
7/16"	5/64" (Sides)
3/8"	1/16" (Sides)
1/4"	3/64" (Sides)
3/16"	1/32" (Sides)
1/8"	1/64" (Sides)

Helmet TIPS & MEASUREMENTS

HELMET SIZES/MEASUREMENTS*

MEASUREMENTS

Gumball = 1-1/2" (at the base of helmet from rear to face mask) ** by ** 1-1/8" wide ** by ** almost 1-1/4" high

Pocket Pro (P/P) = 2" (at the base of helmet from rear to face mask) ** by ** 1-1/2" wide ** by ** almost 1-3/4" high

Micro = Measurements unknown

Mini = 5-1/4" (at the base of helmet from rear to face mask) ** by ** 3-1/2" wide ** by ** almost 4-3/4" high

Full Size (F/S) = 11" (at the base of helmet from rear to face mask) ** by ** 6-3/4" wide ** by ** almost 9-3/4" high

SIZES

Gumball = Not measured yet (2 different styles)

P/P = nearest size was 1-1/4 (actual 1.21 as compared to a mini)

Micro = 2-5/8 (2.63)

Mini = 3-5/8 (3.63)

F/S = 7-1/4 (This is an average "Large" full size helmet at the 7.25 size)

RATIOS** (these ratios are based upon helmet sizes, not measurements)

By increasing a P/P decal x 3 = Mini size decal (e.g. .5" wide decal P/P x 3 = 1.5")

By increasing a P/P decal x 2 = Micro size decal (e.g. .5" wide decal P/P x 2 = 1" approx.)

By increasing a P/P decal x 6 = F/S size decal (e.g. .5" wide decal P/P x 6 = 3")

By increasing a Micro decal x 1.5 = Mini size decal (e.g. 1" wide decal Micro x 1.5 = 1.5")

By increasing a Micro decal x 3 = F/S size decal (e.g. 1" wide decal Micro x 3 = 3")

By increasing a Mini decal x 2 = F/S size decal (e.g. 1.5" wide decal Mini x 2 = 3")

By reducing a Mini by 72% = Micro size decal (e.g. 1.5" wide decal Mini x 72% = 1" approx.)

By reducing a Mini by 34% = P/P size decal (e.g. 1.5" wide decal Mini x 34% = almost .5")

By reducing a F/S by 16.5% = P/P size decal (e.g. 3" wide decal F/S x 16.5% = .5")

By reducing a F/S by 50% = Mini size decal (e.g. 3" wide decal F/S x 50% = 1.5")

Helmet TIPS & MEASUREMENTS

RIDDELL REAR BUMPER DIMENSIONS (Mini)

Top line: 2.5"
Sides: 7/16"
Bottom line: 3-4/16"

STRIPES

P/P - Center stripe = $5/32$ " (others on each side of the center are $3/32$ " and $1/32$ ")

Micro** - Center stripe = $3/8$ " (others on each side of the center are probably $1/4$ " and $3/16$ ")

Mini - Center stripe = $1/2$ " (others on each side of the center are $3/8$ " and $1/4$ ")

F/S - Center stripe = 1" (others on each side of the center are $3/4$ " and $1/2$ ")

NFL Shield Decals

A full size NFL shield decal on a Proline helmet measures $28/32$ " wide by $1-1/8$ " high. Based on this measurement, a mini decal (50% less than a full size) should be $14/32$ " wide by $18/32$ " high. A Riddell Authentic Mini NFL decal shield measures $14/32$ " wide by $18/32$ " high so this is exactly 50% smaller than the Proline decal. These measurements are all edge-to-edge on the blue border (not the outer white border).

* A gumball helmet was not included in the measurements since Riddell does not make them. However, the newer style gumball helmet is slightly smaller than a pocket pro.

** The micro helmet sizes are only estimates based on the helmet size above, since I do not own a Micro to prove that I am correct.