MiTo Honeycomb Grille Guide

Like most things on the MiTo, if you have the tools, the time and the inclination, you can save money by doing a task yourself.

The key thing is that you have the tools. In our Newsletters and How-To Guides we try to give advice and procedures but unless you either have the tools or buying the correct tools is worthwhile (i.e. you will use them again in the future) then for one-off jobs it is often more cost-effective to have a specialist do the job for you.

And that is the case for making your own honeycomb grille. I've done it a couple of times but I already have a Dremel and a hot-glue gun which I've used several times over many years. But if you don't have those types of tools (or can't foresee a use for them in the future) then achieving a honeycomb grille is probably best achieved by buying one from one of our Italian friends who make a bit of extra money selling their creations on eBay and other places.

But if you're up for doing it yourself, it's actually relatively simple. So here goes…

Remember, to change your front grille, you have to remove your bumper. Do not believe people who say you can do it with the bumper on - there are four screws accessible from behind with the bumper off.

If you are going to create your own grille then of course you can modify your existing one, but I don't tend to spend a whole weekend doing just one job so I simply obtained a reasonable condition used grille so I could use that as a base and not have to remove the bumper until I was ready to fit my completed creation.

What you will need

Fairly obviously, you will need a grille which will be destroyed in the process (there is no going back!). But remember there are a few different grilles for the different years and models of MiTo, so check you are using the correct one for your car (examine your existing one closely if you are buying another used one to work on). The grille I am working on is the early version with a black plastic surround and chrome inserts only in the centre, not around the outside. Yours may be different!

Also fairly obviously, you will need some honeycomb plastic to insert into your re-worked grille. The first time I did this I just bought some honeycomb sheet from eBay, and that's what is fitted to my grey QV (now the Scuderia MiTo car) above. But this time I've used the Kamei Sportgrill (04420901) which comes in an unnecessarily large sheet measuring 86cm x 41cm. A friend of mine in Germany told me this honeycomb is used by the German Audi modifiers and it is the best quality, and I have to say I agree. But, I think it's pretty expensive (he sent me some at mates rates) so shop around and don't get too hung up - all honeycomb looks good on the MiTo as long as it is roughly the same size pattern as the lower grilles.

You will also need a Dremel or similar rotary tool with cutting blades (I've had mine for years but there are options these days starting at around £35). You will need safety goggles (an absolute must as the plastic flies everywhere!), a selection of wet and dry paper, a hot glue gun and some black glue sticks (you can get these pretty cheap these days, all for about £15). Finally, to finish it off nicely you will need some satin or matt black paint from Halfords or elsewhere.

One final item you might want to consider is a new Alfa Romeo badge. You will see from the one I'm using that the badge is definitely for the bin, but depending on whether your existing one is in good condition there is no better time to replace it than when you do this job.

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Step 1. Decide which final result you want

This may sound daft, but there are broadly two end results you can aim for, and one of them is a little simpler for you to make.

The standard grille houses the Alfa Romeo badge which is mounted on a protruding circular piece of plastic. I love this feature so throughout this guide I will retain that. But that means a slightly more complicated process to retain the circular mount and fit the honeycomb around it. A slightly simpler solution is to completely remove that mount and install a flat honeycomb insert and either glue or screw the Alfa Romeo badge to the flat honeycomb surface. This is generally the type of grille that our Italian chums make, then you just stick a badge on the surface.

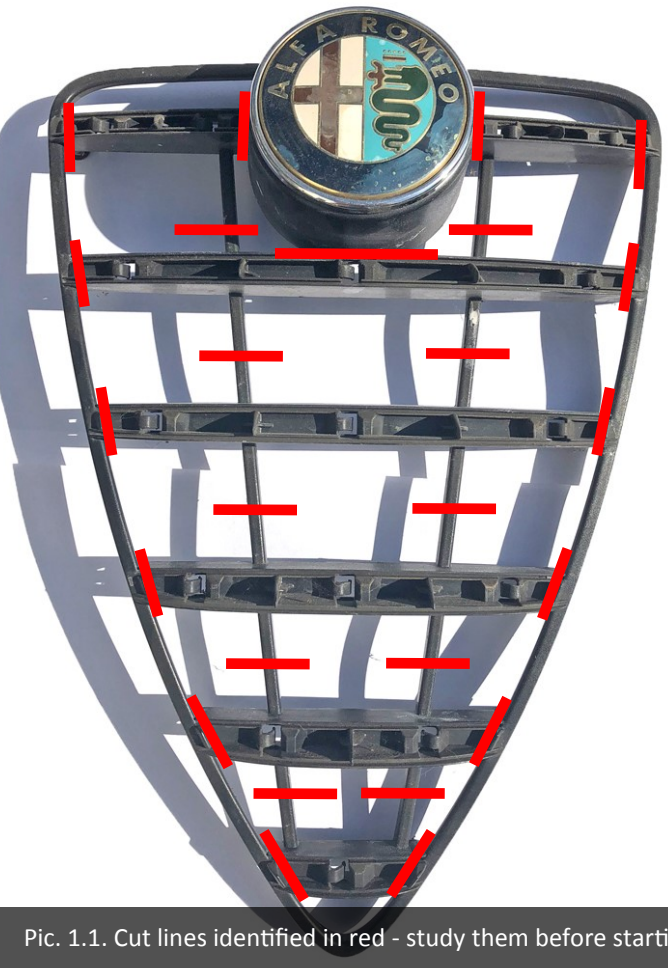
My issue with this is that if you look just above your current grille, there is a deliberate "cut-out" of the bumper to allow for the badge. So if you fit the badge flat to the honeycomb, my personal view is that this doesn't look quite right. But lots of people do this, so it's up to you.

So decide now if you want the slightly more difficult solution that retains the protruding circular mount, or if you are going for the simpler solution with a flat-mounted badge.

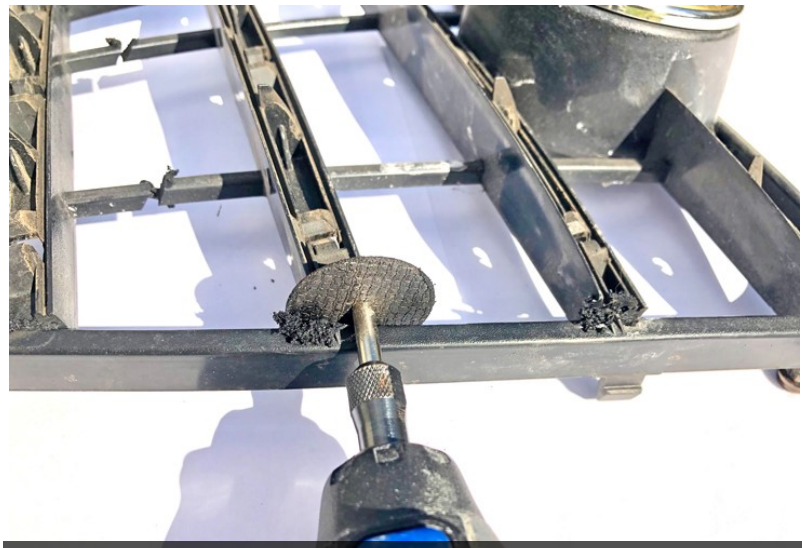
Step 2. Start cutting!

It is imperative that you wear protective goggles when cutting. I'm not saying this to avoid being sued or because I'm a health and safety nerd: cutting plastic with a high-speed Dremel genuinely fires hot pieces of tiny plastic at you! So wear goggles!

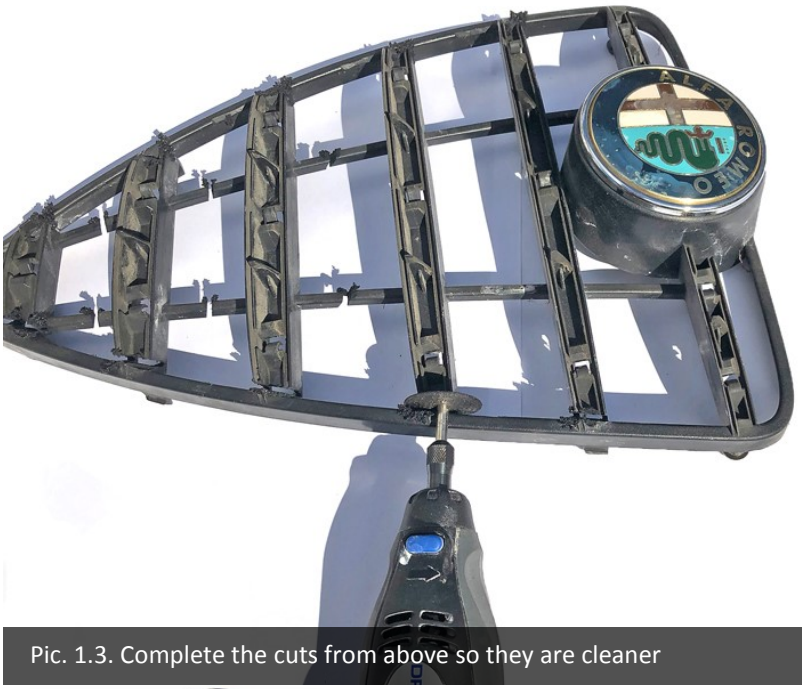
Using a thin cutting blade attached to a Dremel, begin cutting the centre sections from the grille identified in Pic. 1.1. initially from below (i.e. the underside of the grille), then complete the cuts from above (the



Pic. 1.1. Cut lines identified in red - study them before starting!



Pic. 1.2. Begin by carefully cutting from below



Pic. 1.3. Complete the cuts from above so they are cleaner

Pic. 1.4. Once complete, the outer grille remains (needing a tidy up)

upper side of the grille).

Important: take great care whilst doing this. It does not have to be super-neat as you can clean it up in the next step, but you do not want huge chunks cut out of the outer frame!

Step 3. Tidy up the cuts

Those first steps sound simple enough, but the reality is that the grille is a curved, moulded plastic part and you are cutting with a flat blade. So you will be left with lots of little bits sticking out which you need to tidy as best you can.

Do this first with the same blade you've been using, taking great care to simply trim any excess plastic.

Particular care should be taken around the protruding badge mount (Pic. 3.1) where you want to retain as much of the circular shape as possible.

But you can further tidy up all the cuts in the next step, so do not go too aggressive while you still have the cutting blade attached.

Step 4. Sanding

There is only so much you can achieve with the cutting blade, so now you need to attach a sanding or grinding bit to the Dremel to smooth out all the cuts as best you can.

NOTE: in my experience, do not apply any pressure to the Dremel when doing this - simply allow the tool bit to do it's work when rotating, otherwise you may sand too much!

Use the sanding to gently make the front surface of the grille flat, then the inner surfaces.

You will find lots of spiky bits where you cut off the centre sections, so gently work your way around with the sanding, never apply pressure, just letting the tool remove the excess (Pic. 4.1).

Particular attention should be paid to the circular badge mount (if you have retained it), and the four screw mounts (see Pic. 4.2).

The circular badge mount should be carefully sanded to be as smooth as possible as much of it is visible from the front when the grille is complete.

The screw mounts need to be gently rounded, ensuring you leave enough plastic in place. Just gently sand until you are happy with how they look from the front. This is all that will be seen once the grille is finished, so don't worry too much about the rear of the grille.

Step 5. Mark out the new honeycomb

A key part to your success is now accurately cutting out you honeycomb. But do not be tempted to re-attach the cutting disc to the Dremel just yet!

The MiTo grille is actually slightly curved, so working out the maths to accurately measure the new centre section of honeycomb is a bit difficult. I also am not convinced that we can simply create a re-producible template - I still have the one from my first grille and it is a very slightly different size to this one!

Thankfully, there is a simple method which seems to work quite well (subject to a bit of fiddling).

Get yourself some study cardboard and simply (but carefully) draw around the grille.

Do not put any pressure on the grille (it is curved so will be

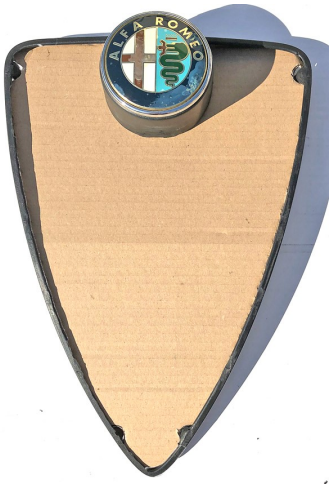
Pic. 3.1. Take extra care around the badge mount

Pic. 4.1. Gently sand with no pressure on the Dremel

Pic. 4.2. Take care to achieve a flat surface, but gently round off the plastic around the four screws - do not take off too much plastic!

arched up from the cardboard), simply draw around it with a pen or pencil (see Pic. 5.1 to the right of the page).

Cut out the cardboard on the line and it pretty much fits the internal shelf within the frame of the grille. You will need to trim around the screws and possibly some slight trimming around the edges, but



broadly this seems to work.

The result is a cardboard template which you can trim (or cut again if you make any mistakes) to make it a perfect fit.

Once you are entirely happy with your cardboard template, you can then mark and cut the honeycomb.

Step 6. Mark and cut the honeycomb

Before doing anything, measure and mark the centre of the template at the top and the bottom of the cardboard.

It is critically important that the centre lines up with the centre line of a row of holes in the honeycomb, otherwise the grille will look all wrong (see Pic. 6.1).

Marking the plastic of the honeycomb is not as simple as it sounds as you need to be able to see your markings to make the cuts. I used a silver Sharpie so it was visible, but it did occur to me that I could use a Stanley knife to make a mark.

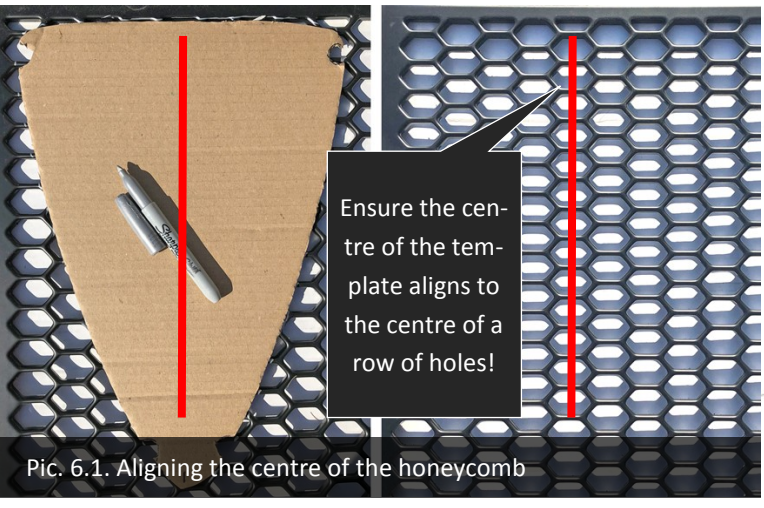
It might also be possible to stick or tape the template to the honeycomb from behind. But if you try this, ensure it is firm and cannot move when you are marking or cutting.

Check and double-check your template against your markings, then using the cutting blade in the Dremel carefully cut on the marks you have made on the plastic round the template.

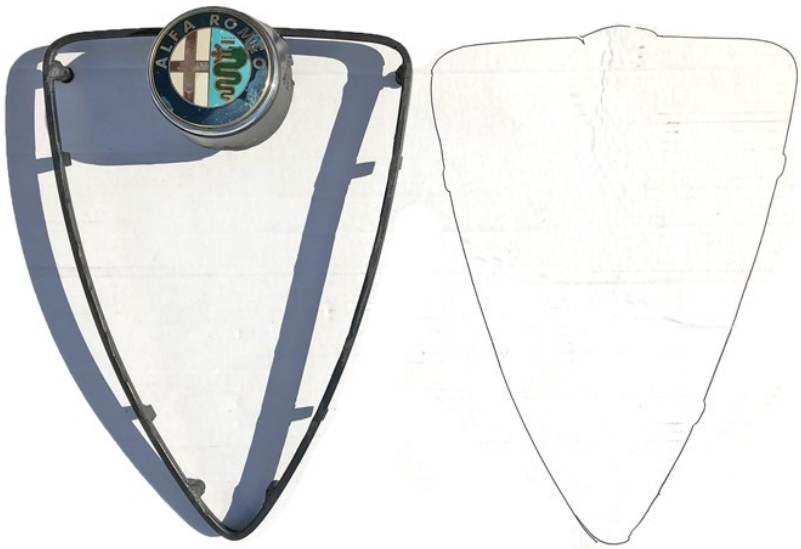
Take your time, make single cuts at a time on each leg of the honeycomb, always following your markings precisely.

Once finished, you should have a relatively grille-shaped piece of honeycomb which you can test-fit into your grille frame (Pic. 6.2. on the right).

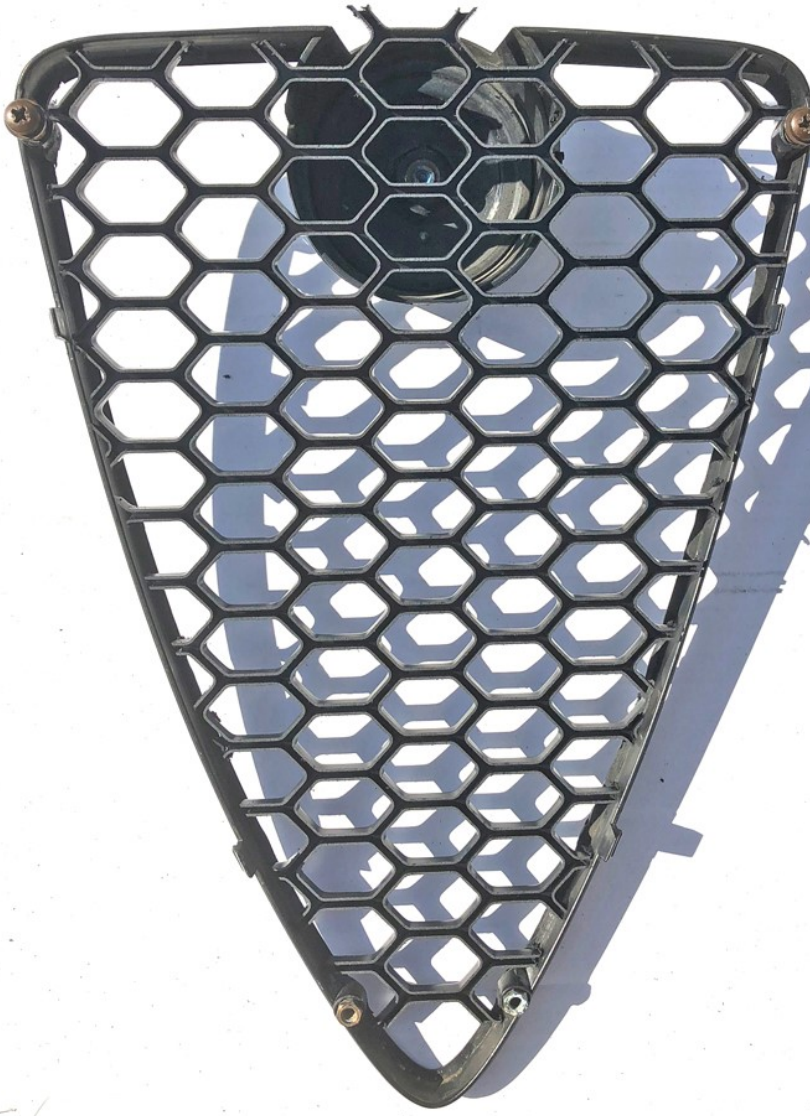
You are likely to need to make very tiny trims, particularly around the top screw mounts, but it should fit nicely into the grille frame. If not, check where the problems are - you may be able to fix it rather than start again (note, it won't fit flush yet because of the circular Alfa Romeo badge mount).



Pic. 6.1. Aligning the centre of the honeycomb



Pic. 5.1. Carefully draw round the outside grille onto cardboard



Pic. 6.2. Cut honeycomb test-fit into the grille surround/frame

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Step 7. Mark and cut the circular Alfa Romeo badge mount (if applicable)

If you want to retain the circular badge mount, you will need to mark and cut the new honeycomb to fit the circle.

This is relatively simple - again I used the silver Sharpie (see Pic. 7.1) and very carefully marked the circle with the honeycomb in place in the grille frame.

Once you are happy with your markings, carefully cut to reveal the circular hold and check for accurate fitment. Make any tiny small cuts to ensure the new honeycomb fits neatly inside the grille as a whole.

Step 8. Glue!

If you haven't used a hot glue gun before, don't panic, just have a little practice on cardboard.

Most good glue guns need to be plugged in to start heating, then after a minute or so the trigger will slowly release glue through the tiny nozzle. It's *relatively* easy to control, but don't worry too much about making it super-neat and certainly don't worry about the very fine "strings" of glue that can occur between your deliberate glue blobs.

The key is to use elastic bands to hold the grille and the new honeycomb tight before you start gluing. Failure to do this could result in the new honeycomb and the frame moving whilst you are trying to glue it.

So fit your new honeycomb in the grille frame and apply some elastic bands (see Pic. 8.1) then get your glue gun ready with the black glue inserts. There are some specialist plastic and motorsport glues but you only need the standard glue sticks which, I've learned over the years, stick pretty much everything (as is evident from the grille which is still in-tact and racing around race circuits on the front of the Scuderia MiTo car).

Once your gun is hot, start gently applying the glue around the underside (back) of the grille, ensuring you cover all of the honeycomb ends where they meet the frame, but being careful not to apply too much glue or it will be visible from the front or (worse) drip down to the front whilst you are gluing.

Once you have gone all the way round, simply leave it to dry. You will find that it is dry quite quickly.

As you can see from picture below, I am absolutely no expert! I find the whole process pretty awkward, though not difficult. But the end result (from the front) looks fine.

Step 9. Finishing

The finishing steps are up to you. I use fine wet'n'dry paper to finish it nicely (it's sometimes easier to remove any excess glue with a Stanley knife rather than sanding) then I simply give it a couple of coats of Halfords satin or matt black paint (one can of 500ml for £7.99 will do several coats).

I'm sure proper paintshop folks would want to paint a few coats of primer first, but I've never bothered (you can, obviously).

Overall, is it worth the effort and cost? Not really. It's one of those little jobs that you do when you're bored one weekend or you just do it because you want to.

I wouldn't recommend doing it unless you already have all the tools, and this second one is certainly better than my first so you do get better at this stuff.

Pic. 7.1. Mark out the circular badge mount if you plan to remove

Pic. 8.1. Use elastic bands to hold the grille together before glueing