



“STICKY FINGERS”

IPMS HORNCHURCH – MAGAZINE



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Club Secretary. Dave Ryan.
Editor. Daniel Alvisse.

Eastbury Manor House.



The Theme at the House was Planes, Trains and Automobiles, and if it was not for the Hornchurch club attending this show they should have crossed out Planes and Automobiles as all there was were Trains and some Craft stalls.

Overall it was a very nice Day out plenty of people in and out of our room sitting and chatting with the public, what more to say, we had a very good Display over the six tables we were allocated. We had Trains, well Dave's lovely Leopold, Planes galore and automobiles as well.

Dave's Divulgences.

Hi pungawallers,

Hope that all ideas are going well for your next project.

On Saturday 2nd October Danny, John L, John H, Phil, Bob, Carole and I went to Eastbury Manor House "As an invite" from Barking & Dagenham Railway Club, And what a Day we had. We had six tables to fill which we just managed. We had a lot of feedback from the public and we might have some new members. Although it was a small show but it was interesting some very good Railway layouts, Arts n Crafts, The A.T.C. R.N. cadets and Army Cadets. We enjoyed it very much. But aint it a pity that a show so close that only the usual lads turned up, and on the last club night I am sure that a lot of hands went up?

On another hand here is something that I found in the Daily mail, it made me think. (Bet that was hard Ed!!)

For Merchant Navy Day:

HEROES.

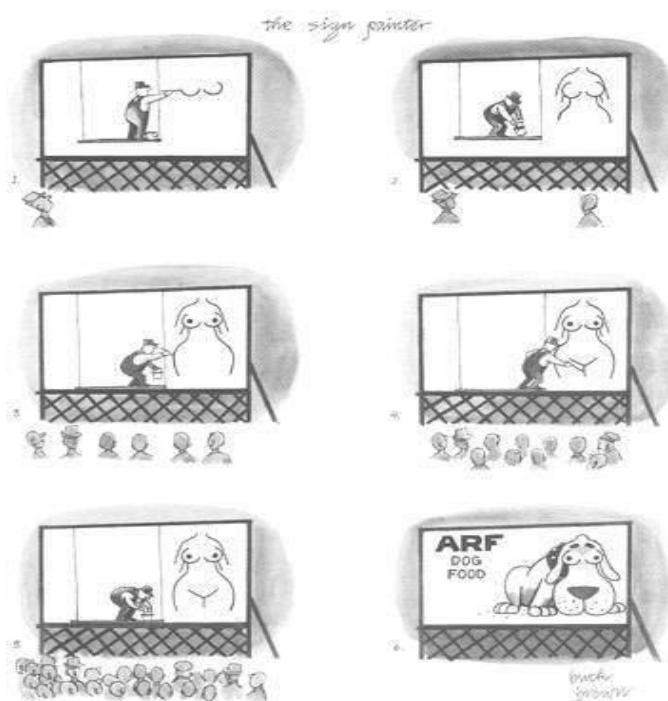
Don't speak to me of heroes until you've heard the tale
Of Britain's merchant seamen who sailed through storm and gale

To keep those lifelines open in our nation's hour of need
When a tyrant cast a shadow across our island breed.

Captains, greasers, cabin boys, mates and engineers
Heard the call to duty and cast aside their fears.

They stoked those hungry boilers and stood behind the wheel
While cooks and stewards manned the guns on coffins made of steel.
They moved in icy convoys from Scapa to Murmansk
And crossed the western ocean, never seeking thanks.
They sailed the South Atlantic where raiders lay in wait

And kept the food lines open from Malta to the Cape.
 Tracked by silent U-boats which hunted from below,
 Shelled by mighty cannons and fighters flying low,
 They clung to burning lifeboats where the sea had turned to flame
 And watched their shipmates disappear to everlasting fame.
 I speak not of a handful but 30,000- plus,
 Some whose names we'll never know in whom we placed our trust.
 They never knew the honour of medals on their chests
 Or marching bands and victory and glory and the rest.
 The ocean is their resting place, their tombstone is the wind,
 The seabirds' cry their last goodbye to family and friend.
 Freighters, troopships, liners and tankers by the score,
 Fishing boats and coasters, 2,000 ships and more
 Flew the proud Red Duster as they sank beneath the waves
 And took those countless heroes to lonely ocean graves.
 Their legacy is freedom to those who hold it dear,
 To walk with clear horizons and never hide in fear.
 So when you speak of heroes,
 Remember those at sea
 From Britain's Merchant Navy who died to keep us free.
 Ha! Ha!



Model of the Year Competition.

RULES.

1. Only Models that have been shown in at least one club competition during the previous 12 months will be eligible for entry.
2. Members may enter two models of any subject and of any scale.
3. The competition will be judged by a person with No connection to the Hornchurch Club. The Judges decision is final.
4. A Trophy will be awarded to the winner, to be held for One Year. The winner will also receive an award to be held in perpetuity. (for ever)
5. Models must be solely the work of the Entrant.

2004-2005 Schedule

November 15 th	Competition: Miscellaneous.
December 20 th	Quiz and Nibbles.
January 17 th	Competition: Aircraft.
February 21 st	*Theme Night: Animals. Also Theme for Southern Expo.
March 21 st	Competition: Miscellaneous.
April 18 th	Model of the Year. Special prize on night.
May 16 th	Of course the AGM.

*Anything with an Animal name in it e.g.: Tiger Tank, Eagle Aircraft, Jaguar Car etc.... or an Animal.

Zimmerit: History and How-to

Article by Paul A. Owen

I do not think there is another word in model building that causes as much fear as "Zimmerit" does for modellers of WW2 German armour. Lets face it, no matter which method is used, it is seems difficult to pull off a good Zimmerit job. There have been several new and innovative products introduced over the past few years to make this job a little less troublesome. But first a little history may alleviate some of this fear.

Zimmerit History

Zimmerit was first made available during the summer of 1943 as a counter to magnetic and adhesive anti-tank mines. The British had an adhesive "sticky bomb" for this purpose, and the Germans had lost several panzers to it during the attacks on France and the Low Countries, Greece and North Africa. The Soviets may have received these sticky bombs from Britain as part of the Lend-Lease agreements. In addition, the Germans' themselves had a shaped charge magnetic AT mine and it was a common German practise to develop a counter to weapons which they themselves possessed.

Most popular modelling literature has stated that zimmerit was a plaster or concrete, however this is not correct, according to a British war-time report, "Zimmerit", Anti-Magnetic Plaster for AFVs", (reported by Major J.W. Thompson and Mr. C.E. Hollis, July 1945). In fact, zimmerit was a mixture of polyvinyl acetate, 25%, which formed the matrix, 10% saw dust used as a filler. Additionally Zimmerit included 40% barium sulphate and 10% zinc sulphide in the mix, but the report did not state why. Its dark yellow colour was achieved with the addition of 15% ochre pigment. Zimmerit was developed in Berlin by the C.W. Zimmer Company, (this was where Zimmerit got its name), it was ready for use in the summer of 1943.

Zimmerit was applied to all tanks and closed top SP guns but rarely to anything else, however, there are photographs of a Marder III Ausf. M and a Sd. Kfz. 251 Ausf. D with zimmerit. Application was done at the factory, but it appears that many vehicles received field applications before zimmerit was actually available. There were orders issued late in 1942 that outlined several temporary measures for use before production zimmerit became available. Including the field application of readily available materials such as concrete, thick coatings of mud, and in winter conditions, thick build-ups of ice, (which would make an interesting model). This explains the variety of zimmerit patterns and applications on odd vehicles during the first half of 1943.

Production zimmerit was applied only to an AFV's vertical surfaces, and the protection gained was twofold: first, it created a rough surface and consequently reduced the area of contact - this defeated the "sticky bombs"; second, it put distance between the hull and the mine - this defeated magnetic mines. It is important to note that zimmerit possessed no "anti-magnetic" properties of its own, rather it defeated the mines in the previous manners. In mid 1944, however, the application of zimmerit was phased out due to its being rendered obsolete by greatly improved AT weapons. It is interesting and worth noting, that the British were looking into the use of captured stocks of zimmerit for their AFVs in the Pacific, however the war against the Japanese ended before this plan could be implemented.

"Standard" Vehicle Patterns

Photographic evidence suggests that certain "standardised" patterns were applied to certain vehicles. This may have been the result of preferences at particular plants. Below is a table showing which vehicle received what pattern, (this is only a general guide, contradictions abound, photographs of a Panther Ausf. A with the ridged pattern exist for example).



Ridged Pattern on a Jagdtiger

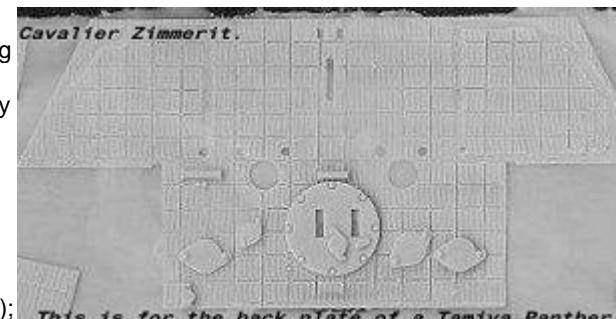
Vehicle Name	Pattern	Note's)
Brummbar	Ridged	All but very early and final
Elephant	Ridged	Not on Ferdinand
Hetzer	Unknown	Not known if applied
Jagdpanther (very early)	Checker	Early mantlet vehicles only
Jagdtiger	Ridged	Possibly only on Porsche suspension vehicles
Kingtiger (early, mid)	Ridged	All Porsche turrets and early Henschel
Panther D(late), A(all), G(early)	Vertical ridged with secondary cross-hatch	Ausf. D rebuilds only
Pz. III M,N (late)	Ridged	Very rare
Pz. IV H(mid/late), J(early)	Ridged	Sometimes on side skirts
Pz. IV L/70 (early)	Ridged	-
Pz. Jg. IV Ausf. F	Ridged	All
StuG III G (early, mid)	Waffle	-
StuG. IV (early, mid)	Ridged, "zigzag" on hull sides.	-
Sturmtiger	Ridged	Zimmerit left over from conversion
Tiger I (mid, late)	Raked on hull, ridged on turret.	All late

Survey of Zimmerit Depiction Methods

Zimmerit has the reputation of being difficult to reproduce in scale. There are several methods, each with its own advantages and disadvantages. Here is a list of all the methods which I have come across along with their pros and cons.

Cavalier Zimmerit Sheets

A new product from Australia has recently been released by Cavalier. I have not seen these parts yet but they are described as being made of a latex material in sheets with the exact panels for a particular AFV kit moulded into them. I have heard that acrylic based paints like Tamiya Color turn glossy when applied directly to these sheets; to prevent this prime with an enamel base first. Pros: Easy and realistic; Cons: Currently hard to find outside of Australia. Restricted to one pattern. Looks a little too thick.



Hot Knife Scribing Method

Often touted by Francois Verlinden, this method employs a hot knife to scribe the zimmerit pattern into the kit parts. For best results the hot knife should have a rheostat to control its temperature. It is essential that a pattern is drawn on the model beforehand as a guide. The zimmerit is melted into the model's surface by following this pattern. The results are not very convincing, but it may have its uses for applying a pattern to thin styrene parts like schurzen which plastic putty warps. Pros: Free (assuming you have the tools.); Cons: Pattern looks fake. Only one shot at a good pattern. Easy to destroy model. Difficult to model damage zimmerit.

Injection Moulded Styrene Sheets

Italeri started this trend with the release of their Panther Ausf. A which includes a complete set injection moulded zimmerit sheets and where appropriate, replacement parts. Italeri now include these as part of an accessory kit. At this point I believe that Academy have included a similar zimmerit set in their new Tiger I kit (however this is unsubstantiated.) The Italeri parts are a good first attempt, they are quite acceptable as is, however they should be thinned out by sanding from the back (much like a vacuform aeroplane kit.) Also the pattern is a little suspect - missing the secondary pattern of grid lines; which can be added by scribing before thinning them. Pros: Easy to use. Readily available. Cons: Expensive. Needs thinning out (at least Italeri parts do.) Need to modify for different vehicles.

Putty Texturing

By far the best method, and the one which I use exclusively, is textured model putty. This method looks the best because it is exactly the same way in which the Germans applied zimmerit to their AFVs' (in scale of course.) I can't understand why modelers are afraid of this method, it is not difficult, it just sounds difficult. Later on in this article I will fully describe the procedure. Pros: The most realistic DIY method. Free! Cons: Intimidating at first. Time consuming.

Putty Raking - "The Tamiya Method"

This method is similar to the previous Putty Texturing method except instead of stamping the pattern in with a trowel it is made by dragging a serrated tool across its' surface. Tamiya produce a set of tools (catalogue number 35187) specifically made for this purpose - hence the name "The Tamiya Method". But any number of tools can be used including razor saws, corrugated metal, etc. The pattern produced looks good but personally I don't think it captures the true trowelled pattern well, however for those vehicles which received raked on zimmerit coats, such as on the Tiger I's hull, this method is perfect. A number of materials besides plastic and epoxy putty can be used with this method including "Spackle", which is a household patching compound similar to plaster. If mixed with Latex paint the material becomes more plastic and easier to use. The major benefit to using this material is since it is water based it can be washed off. Pros: The easiest and most fool proof of the DIY methods. Free! Cons: Only accurate for "raked" pattern, as on Tiger I hulls.

Resin Replacement Parts

Most notably, Kirin and Accurate Armour have zimmerit kits for several of the new popular kits (Tamiya Panthers and King Tigers.) While the zimmerit patterns are good, often they require more time to fix up, removing moulding lugs, filling in bubbles, and so on, than using any other method. In the case of Kirin's kit for the King Tiger, the engine deck has been simplified, so extra time is needed to reopen the air vents - fun stuff. Pros: Perfect zimmerit representation (assuming the guy who did the master was good!); Cons: Very expensive. Vehicle specific. Difficult to modify. Replacement kit parts often simplified.

R&J Products Zimm-it-rite

This material is currently available from R&J Products is very similar to epoxy putty, but it is much softer and a lot easier to work with. It is used in the same way as plastic putty in the Textured putty method. I recently obtained some Zimm-it-rite and have been testing it out. I have been most impressed, it is the best method available currently for simulating Zimmerit. Pros: Excellent material for use with the textured putty method, as it has a long working life and doesn't affect the plastic; Cons: None.



Textured Paper Dinner Napkins

This rather strange method was described in an old issue of FineScale Modeller and employs paper dinner napkins embossed with the appropriate pattern. Once a good pattern is found, cut the napkin up into roughly the shape needed and coat them with something for strength; I tried plastic goo (sprue dissolved in liquid cement) and Krazy Glue, as the goo takes forever to set, I recommend the latter. Now trim to exact size and glue to the model. Pretty simple. This is the best method for smaller scales, 1/48th, 1/72nd and 1/76th, it is thin enough and there are patterns fine enough for these scales. Pros: Almost free. Easy. Fun to use (I tried it and it was!); Cons: Pattern may look soft. Restricted to one pattern.

The Show Modelling Embossed Paper Sheets

Being more popular than deserved, thus illustrating just how fearful the average modeller is of doing zimmerit, these "quick fix" zimmerit sheets show just how much expense some people will endure to get a fast and easy passable zimmerit job. While The Show Modelling should be praised for such an innovative concept, their execution is lacking. These embossed paper sheets just don't look convincing at all, the pattern is too indistinct. Additionally it is almost impossible to get the sheets, which do not stretch, to cover an area with compound curves (a surface which curves in more than one axis.) Pros: Easy. Was the best "quick fix" method until Cavalier's Zimmerit came out; Cons: Expensive. Difficult to fit to compound curves. Looks fake - too smooth.

Zimmer-it Embossing Tools

Now available for use with plastic and epoxy putties are a set of patterned stamps, from a company called Zimmer-it. They can be used either as "combs" or "stamps" to texture the putty. I played around with them for a while but not enough to completely master them. I would recommend that you purchase them to try for yourself.

A Special Case - Early Jagdpanther Pattern

Fortunately because of the simple nature of this pattern, (see the photograph to the right), it is very easy to duplicate with scribed sheet styrene. I have tried 0.015 stock cut to the same size as the hull plate I wanted doing and scribed in the pattern with the backside of an X-Acto blade and straight edge. To finish up I roughed it up with coarse sand paper and re-smoothed with steel wool. It looks very good and is a lot easier than trying to get a smooth, uniformly thick coat of putty.



How To - The Putty Texturing Method



The best method for modelling zimmerit in scale is by texturing putty. Here is a description of how to do it. Study some good photographs to see what small variations are specific to the vehicle, such as how the pattern forms around hull fixtures.

The photograph to the right shows my Tamiya Pz.IV Ausf.J with Zimmerit applied using the textured putty method. I used plastic putty, in this case Squadron's Green Putty and R&J Product's Zimm-it-rite, (which are the light grey areas). The Zimm-it-rite was the superior of the two materials because it had a much longer working time -- hours as opposed to minutes as for the Green Putty. Also, since it does not attack the plastic, it is very forgiving, Zimm-it-rite can easily be washed off before it sets. I recommend Zimm-it-rite as the best material for modelling Zimmerit.

So, using putty, either Green Putty, Milliput or Zimm-it-rite, I recommend the use Zimm-it-rite however, follow the steps below to produce an authentic and in scale Zimmerit pattern. I wrote this description with Zimm-it-rite in mind, but I have noted differences in brackets for plastic putty, and for other epoxy putties the techniques should be the same.

Planning

Determine which details to fix before or leave off until after the zimmerit is applied. Generally small parts such as tools, headlights, mufflers, etc., should be fixed after, while parts that are integral to the hull such as Saukopf mantlets are best fixed before the zimmerit. Using the reference photographs as a guide, pencil in some guide lines. This may seem pointless since you will obscure the lines with putty but they do help you visualise the finished plate as you are working on it, thus keep the pattern consistent. If damaged zimmerit is to be shown then these areas should be masked off now. I use ordinary masking tape. Be sure to check reference photos to see how real zimmerit falls off too.

Surface Preparation

The surface should be washed to remove grease and then roughened up with coarse sand paper to give the Zimm-it-rite something to grip. **This roughening up step is the key to a good Zimm-it-rite application**, (for plastic putty: you can skip this step since solvent based putty dissolves the plastic).

It is quite easy to fix stowage, tools and such on after the Zimmerit is applied if small squares of 0.015" sheet stock are glued to the points where these fittings are fixed to the hull. If you look closely at reference photographs you can see that this is actually how the tool racks are fitted, so there is a space between the hull and tool rack, (especially on Panthers). The putty is spread just thick enough to leave the tabs showing - after texturing the fittings can be glued directly to these tabs; referring to fig.1 below, note the tabs are circled in red. Also, just to be on the safe side, its a good idea to mask any areas where zimmerit is not supposed to go.

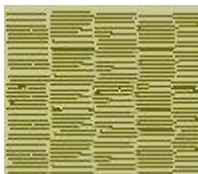
Application

Now it's time to apply the zimmerit! It is important to do one side per session, since soft putty is easily disturbed when handling the model. For each of the standard patterns there is a slight variation. If you goof up or do not like the pattern then Zimm-it-rite can be scraped off easily and reapplied, (for plastic putty: scrape the putty off right away, let the plastic harden up and sand smooth).

Make a trowel from scrap sheet stock, 0.030 is best, the business end should be around 5mm in width and sanded to a taper, (for plastic putty: make several, as this putty tends to destroy them).

Select on logical area to work, such as an entire hull side, and apply the Zimm-it-rite. The best tool to use is your finger, just push it on and around until it covers the entire surface. Now smooth it out, the best tool I have found for this is an artist's paint knife, (check at an art supply store). It is important to wet the tools with water and to keep them clean. If you had previously applied the small tool-tabs then you will notice that this smoothing out process cleans and leaves them exposed. Expect to spend up to one half an hour getting the application of Zimm-it-rite smooth. The actual thickness doesn't really matter but it does have to be uniform. For complex surfaces such as the front of the Pz.IV (see photograph above) I find that an X-Acto knife is the best tool for application. Getting a smooth coat of uniform thickness is the single most important factor with this technique. So lots of practice beforehand is essential. If you are starting out then it is best to try a clean flat surface first, like the Kingtiger hull side below, before something more complex.

For plastic putty the technique is a little different. Since this putty dries within minutes, only small areas can be worked per application. Basically follow the patterning methods below but apply small squares about 30mm x 30mm and press the texture in after a "skin" has formed. Leave a bit of the putty unworked to blend into the next application, apply another section, texture it and continue until the surface is done. Using plastic putty has no advantages over Zimm-it-rite other than it is essentially free - but it is quite troublesome and a lot of practice is needed to master its use.



Ridged Pattern (Most prevalent)

I find that Zimm-it-rite textures easier if it is left to set up for about half an hour, (this time will vary depending on ambient temperature and the amount of mixing done). Water prevents Zimm-it-rite from sticking to the tools so it is essential that the trowel be kept wet and clean. Wetting the Zimm-it-rite beforehand will help to prevent this from happening too.

Hold the trowel perpendicular to the surface and gently press in the ridges, being careful not to push the putty around the model, if it does move then wait a short time for it to set up a bit more. Start at the top of a column and work down until the entire column of ridges is done, then move to the right and start another, (I suppose if you are left handed then move to the left). When done remove any masking tape while the putty is still soft. That's it! Easy!

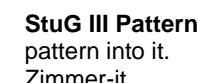


Panther Pattern

Almost the same as for the ridged pattern, but the ridges are vertical and a secondary grid pattern must be over laid. I find the second pattern easier to make with a straight piece of 0.010 stock. The Zimmer-it stamps for the Panther pattern from R&J could be used too. I tried them out and they

seem to work

well, but I did not spend enough time to master them.



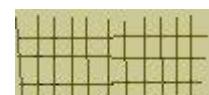
StuG III Pattern

Using the same technique as for the Ridged Pattern, but make a different trowel. Take a 7mm x 7mm square of very thick stock and saw the "waffle" pattern into it. Mount this onto a handle made from sprue and use it as a stamp to create the pattern. There is a set of stamps available with this pattern from Zimmer-it.



StuG IV Pattern

Using the same technique as for the Ridged Pattern, and the same trowel, but angle the trowel at about 45deg. Work up a column, move one column over and then work down, thus creating the zigzag pattern. I find that this kind of pattern looks better if the putty spread on a little thicker, (don't ask me why).



Early Jagdpanther Pattern

Make a different texturing tool from a long straight piece of 0.010" sheet plastic, sandwiched between 0.020" sheet stock for strength, (be sure to exposed). Use this tool to impress the checker board pattern into the Zimm-it-rite.



Bit of a Giggle...

**Did you ever stop to wonder what would happen if you're Dog's name was Mypenis? **

-Mypenis ate my Homework.

-Oh no! Mypenis is foaming at the mouth!

-Sorry I'm late, I was playing with Mypenis.

-I'm sorry, Officer, I didn't realize I had to keep Mypenis on a leash.

-Mypenis doesn't come when I call it.

-Mypenis likes to crawl between the legs of guests.

-I love giving Mypenis a bath.

-At night, I sleep with Mypenis in my hands.

-Mypenis likes it when people pet him.

-Mypenis needs to get more exercise. He weighs over 50 pounds.

-Playing with Mypenis really wears me out.

-Would you like to see a picture of Mypenis?

-Sometimes I wake up, Mypenis is already active.

-I think Mypenis has a mind of its own.

-I keep a picture of Mypenis in my wallet.

-Whenever I get lost, Mypenis points me in the right direction.

-I think Mypenis is getting old because he won't get excited anymore, he just plays dead.

-Mypenis got out last night; I think he's sleeping with the lady next door.

-If Mypenis was a Weiner dog, he would be long and hairy and hard to carry.

-Mypenis loves to chase pussies in dark alleys.

-Help! I can't find Mypenis!

-Sorry to be driving so slow, officer, but I was looking for Mypenis.

-Mypenis gets excited whenever the mailman comes.

-Sorry to be driving so fast, officer- I have to take Mypenis to the Hospital.

-Oh No! Something bit Mypenis!

NAME	SURNAME	ADDRESS	TELEPHONE	E-MAIL ADDRESS	INTERESTS
Daniel	Alvisse	44 Listowel Road, Dagenham, Essex. RM10 7QP	020 8593 7860	stickyfingersmag@aol.com	Armour, Aircraft, Cars etc
Wally	Arrowsmith	14 Linkway, Hornchurch, Essex. RM11 3RW	01708 473038	southernexpo@yahoo.co.uk	Civil & Military Aircraft.
Peter	Bagshaw	25 Repton Drive, Gidea Park, Essex. RM2 5LP	01708 726102	PeterBagshaw@tiscali.co.uk	1/72 & 1/144 Aircraft & AFVs.
Robin	Bellamy	160 Farringdon Avenue, Harold Hill, Essex. RM3 8JT	01708 376508	robinbellamy@btinternet.com	WW2 Aircraft, German Aircraft.
John	Bennett	5 Walmer Close, Romford, Essex. RM7 8QH	01708 748287		Airliners.
Paul	Bennett	67c Northbrook Road, Ilford, Essex. IG1 3BP	020 8514 0358	PaulBennett48@aol.com	Fighters 1935 to date.
Gregory	Brand	15 Victoria Court, Victoria Road, Romford, Essex.	01708 721695		1/24 & 1/25 cars/trucks. 1/72 & 1/144 Aircraft.
Ian	Brown	40 Tylers Crescent, Hornchurch, Essex. RM12 6SY	01708 475156		Prop Liners, WW2, Cars.
Alan	Carr	5 Roslyn Gardens, Gidea Park, Essex. RM2 5RH	01708 747849	Acarr.jaglancia@virgin.net	US Navy Aircraft, Cars.
Kevin	Curley	26 Gloucester Avenue, Hornchurch, Essex. RM11 3EB	01708 453237		Military interests mostly BEF.
Trevor	Davies	12 Chestnut Close, Hockley, Essex. SS5 5LJ	01702 202649		Aircraft Armour.
Lee	Dowling	218a Rush Green Road, Romford, Essex. RM7 0AL	07108 4898605		Fast Jets, Helicopters.
Kevin	Foley	28 Primrose Avenue, Chadwell Heath, Romford, Essex. RM6 4QB	020 8590 2585	kevinfoleyuk@yahoo.co.uk	Cars.
Ralph	Hebron	18 Ambleside Avenue, Hornchurch, Essex. RM12 5ES	01708 708905	Ralph.hebron@ntlworld.com	All Modelling.
Jim	Hirons	321 Roman Road, Mountnessing, Essex. CM15 0UJ	01277 353972		Cars & Aircraft.
John	Hone	9 Lincoln Close, Hornchurch, Essex. RM11 3HD	01708 441147		F1 Cars, Military Aircraft.
John	Huston	287 Ivyhouse Road, Dagenham, Essex. RM9 5RT	020 8262 1974	Huston.j@ntlworld.com	BMW Competition Cars, BMW engine Aircraft.
Paul	Kirby	7 Stebbing Way, Thames View Estate, Barking, Essex. IG11 0RD	020 8591 1470		Land, Sea, Air.
Lee	Lacey	379 Valance Avenue, Dagenham, Essex. RM8 3RB	020 8517 7465		Aircraft, Railways, Aviation Art.
Dave	Langley	337 Rainham Road, Rainham, Essex. RM13 7TB	01708 523989		Military Vehicles.
Brian	Lay	46 Peak House, Woodberry Down, London. N4 2NW	020 7503 7173	BRIAN@asofmod.freeserve.co.uk	Sci-fi, Aircraft.
Jon	Lowe	33 Rush Green Gardens, Romford, Essex. RM7 0NR	01708 735016		Modelling in General.
Adrian	McCarthy	30 Belfairs Drive, Chadwell Heath, Romford, Essex. RM6 4EB	020 8590 1240		Aircraft, AFVs, Modern Jets.
Keith	Money	232 Chigwell Road, South Woodford, London. E18 1HA	020 8924 5908	Keith.Money1@ntlworld.com	Aircraft, U.S Jets, Dioramas.
Paul	O'Reilly	78 Brisbane Road, Ilford, Essex. IG1 4SL			All Modelling.
David	Page	69 Water Lane, Mardyke Park, Purfleet, Essex. RM19 1GT	01708 868442		All Types of Models.
Nick	Pedley	59 Crows Road, Epping, Essex. CM16 5DH	07989 366547	Nicholaspedley@npedley.freeserve.co.uk	U.S Navy, Post WW2, What ifs? Luftwaffe.
Mick	Pitts	115 Warren Drive, Hornchurch, Essex. RM12 4QU	01708 457666		All types of models.
Bob	Plumridge	6 Harvey House, Crabtree Avenue, Chadwell Heath, Essex. RM6 5HA	020 8597 3813		U.S Navy Aircraft, Liberators, PBY-4, Sci-Fi, Cars.
Ricky	Prager	"Newlands" Brumstead Rd, Stalham. NR12 9DE	01692 580114	Ricky.Prager@btinternet.com	Pre 1914 Aircraft, WW1 Aircraft, 1918-39 Biplanes.
Peter	Quinn	32 Essex Street, Forest Gate, London. E7 0HL	020 8534 3816	PETEQUINN@phothog.freeserve.co.uk	U.S Navy Aircraft, Dioramas, Cars & Tanks.

Malcolm	Robinson	Dapplelights, Wyatts Green Road, Brentwood, Essex. CM15 0PT	01277 821638	Malcolm.robinson@btinternet.com	WW2 & Post War Aircraft, 1/24 Cars, Dioramas.
Bob	Ryan	31 Rowdowns Road, Dagenham, Essex. RM9 6NJ	020 8220 5802		WW2 Aircraft, Ships, General.
Dave	Ryan	55 Lexham House, 2 Saint Margerets, Barking, Essex. IG11 7TQ	07891 603732		1/35 Armour, 1/48 WW2 Aircraft, Sci-Fi.
Bob	Sinfield	77 Sheringham Avenue, Romford, Essex. RM7 9BX	01708 754772	Anubis_001uk@yahoo.co.uk	Figurines 54mm & 90mm, 1/8 & 1/10 Busts.
Kevin	Smith	503 Valance Avenue, Dagenham, Essex. RM8 3RB	020 8491 8441		Old Cars, Fast Bikes.
Robert	Smith	5 Copford Close, Billericay, Essex. CM11 2DX	01277 626687		Aircraft & Armour.
Steve	Smith	170 Ibscott Close, Dagenham, Essex. RM10 9YX			AFVs.
Laurie	Smithers	82 Ilchester Road, Dagenham, Essex. RM8 2YU	020 8595 1908	tinalaurie@currantbun.com	Aircraft.
Ken	Sparks	8 Brockdish Avenue, Barking, Essex. IG11 9DS	020 8591 1506	Ken_joy_sparks@msn.com	WW2 Aircraft, AFVs, Modern Jets.
Alf	Swindell	39 Tiptree Crescent, Clayhall Avenue, Ilford, Essex. IG5 0SZ	020 8551 3474		Aircraft, WW2
Ted	Taylor	31 Windsor Road, Forest Gate, E7 0QX	020 8555 9386	Ted-taylor@scale-models.fsnet.co.uk	Aircraft & Trucks.
Charles	Thompson	33 Cross Road, Romford, Essex. RM7 8AU	01708 705844		1/72 Aircraft.
Geoff	Web	161 Church Elm Lane, Dagenham, Essex. RM10 9RR	020 8924 2438		U.S Aviation (Navy, Air force & Army).
Phil	Worth	89 Laburnum Avenue, Hornchurch, Essex. RM12 4HA	01708 706091		Panzers, Aircraft, Ships, Figures.
Alan	Wright	47 Devonshire Road, Hornchurch, Essex. RM12 4LG	01708 472523		1/72 WW2 Aircraft, 1/72 Soviet Jets, Modern Jets, Buses.
Carmell	Zammitt	3 MacDonald Avenue, Dagenham, Essex. RM10 7DJ	020 8596 9006		Luftwaffe.

IPMS Hornchurch Address List. 2004.