

# INFO EDUARD

VOL. 12 • ISSUE 1 • JANUARY 2012

**HISTORY**  
**Su-27**

**BUILT**  
**F6F-3K 1/48**

**PE-SETS**  
**P-61A 1/48**  
**Black Widow**

HAVE EDUARD CHRISTMAS  
WHOLE YEAR OF 2012

# INFO EDUARD

**VOL. 12 • ISSUE 1 • JANUARY 2012**

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Editorial and Graphics - Marketing department, Eduard-Model Accessories, Ltd.

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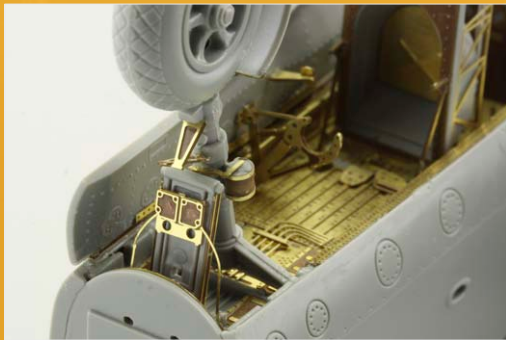
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ON APPROACH

February 2012



**eduard**

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# EDITORIAL



As suspected...the new year is upon us! I was sure this time last year that it would be, and in quick order, too. With it comes the almost obligatory looking back, which I am not so sure is always a good idea. But, here it is. 2011 sure had its downs, with combinations of natural disasters, political turbulence and economic instability. Many things point towards a justified pessimism, but there have been things to report on that push 2011 into being a sort of a catalyst for good things to come in our hobby. Certainly, our MiG-21MF and SMT brought a ray of sunshine into many modelers' lives, and in two scales to boot. The 1/72nd scale Hellcat is up there in terms of quality in that scale, and points to good things yet to come in the near future. I am happy to report that we will be ringing in new kits in the two smaller scales. What was not released as hoped and predicted last January, will be released in very short order with our Bf 109E in 48th scale in February, the Bf 110E in 72nd scale in the summer, some small scale surprises in September for E-day, and a big shot of good stuff next Christmas.... assuming there is a Christmas next year....

You can find more about our expected products in this newsletter, but what is also important to know, is how to contact us. So, first, try our web site, which has developed into the best source for learning of our ideas and activities. Then, you can meet us personally at many fairs and shows. First, we will be at Nürnberg like every year, and the first model convention we visit will be Panthers Cup in Prosek in Prague in March. Then, we traditionally attend Mosonmagyaróvár in Hungary in April. We can't miss the IPMS Nationals in August, and we close out the tour year in September with our E-day. E-day 2011 was a very nice event, although it was held one day only. We found the one day format too short, certainly a little

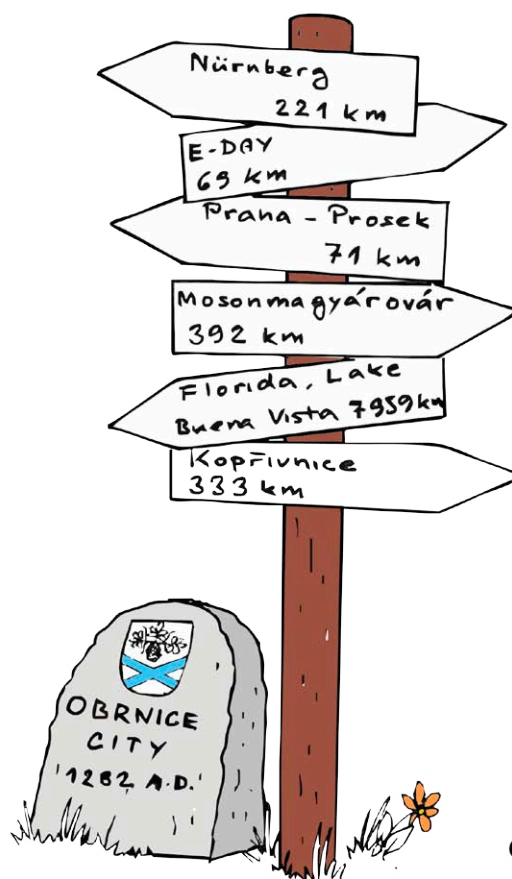
bit too hectic for us, and we decided to revert back to the two, respectively three, day model. We decided to improve on the Czech national holiday on the 28th of September, and open the convention on Thursday, September 27 in the late afternoon, with the main day of the convention being Friday September 28th. The convention then ends on Saturday, September 29th, at 3 p.m.. Actually, it takes its inspiration for this timing from the US convention, E-day is just one day shorter. I am anxious to see how this new timing format will work in the middle of Europe. Besides the timing, we will also revamp the organization of the Eduard booth, and also the organization of the interaction with all visitors, our customers, our fans, and those of you who are simply interested enough to come on by. The idea is that competent people, who understand our design and manufacturing processes, as well as marketing operations, will answer your question immediately in the booth area. It doesn't mean that the traditional kettle of discussion will be cancelled – of course not. It, too, will be improved with a better location and improved sound. E-day will be simply great, and there is still no mention of the entry kit! I will not tell you which kit the entry kit will be, but I can hint, can't I? – so, it will be small, but nevertheless a great, scaled down quarter scale kit planned for the second quarter of 2013, which will be introduced at E-day, too. Well, I hope that helps :-)

A very important change is expected with our web site. There will be some smaller improvement after the new year, but I expect a more general and very significant change later this year. I still don't know the complete extent of the change, but I'm sure it will bring great feedback!

So, enough small talk. I know most interest centres around our future plans, and so here they are! Have a great New Year, and all the best in 2012, and work hard – remember, the end of the world is coming, and you only have a few more months to get rich and enjoy your money!

Keep on Modelin'!

Vladimir Sulc



**Su-27 LIMITED EDITION****1/48 Cat.No. 1167**

Su-27SK, Indonesian Air Force, 11th Sqdn,  
Hasanuddin Air Base, August, 2003



Su-27, 689th GIAP, Chkalovsk Air Base, Russia, May, 2003



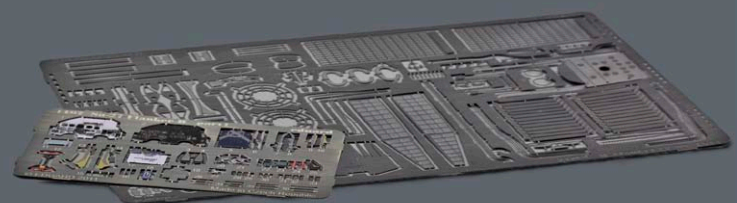
Su-27, Uzbek Air Force, 62nd Fighter Regiment,  
Karshi Air Base, 2010



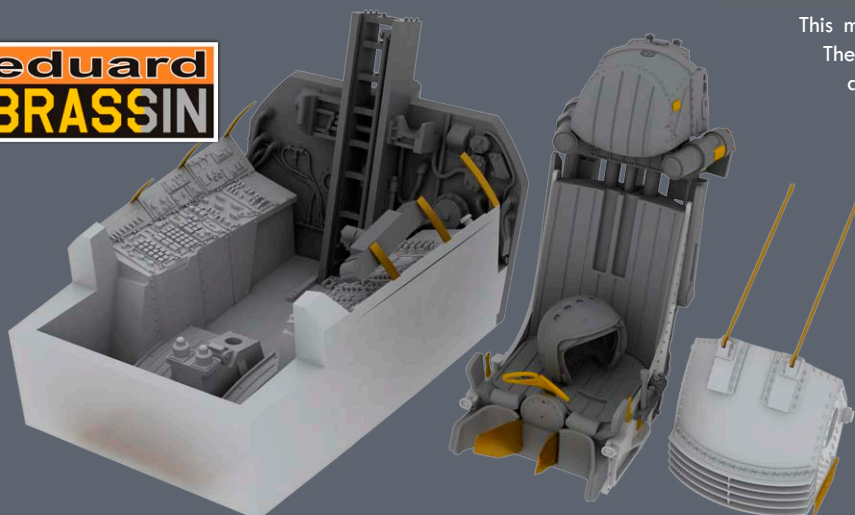
Su-27, Ukrainian Air Force, 831st Tactical Aviation  
Brigade, Mirgorod Air Base, 2009



Su-27, 54th GvIAP / 148th Combat and  
Training Centre, Savasleyka AB, Russia,  
1998



**eduard**  
**BRASSIN**

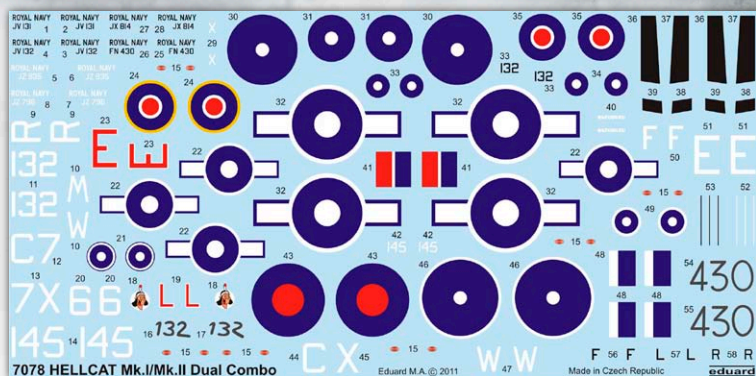


This most probably represents the top of our January kit releases. The original is the Academy kit, upgraded by Academy just a month ago. The Academy upgrade was the main reason for the move of this release to January. Eduard adds a BRASSIN cockpit interior including seat and front landing gear fender, large color photo-etched set, canopy mask sheet and large decal sheet printed by Cartograf. The kit seems to be quite expensive, but it brings great value for such a high price in terms of the base kit (not cheap in its own right), the resin, the photoetched and the decals. Remember 1500 pcs only will be released, and it is expected that this will be one of those fast sellers. Poof! Gone. Frankly speaking, I am not expecting a chance for a second run, so plan your orders carefully.

**BUY Su-27 1/48**

## Hellcat Mk.I/Mk.II ProfiPACK

1/72 Cat.No. 7078



Third of the 1/72nd scale Eduard Hellcats in the Profipack line. This item fully follows the successful 1/48th scale release with the same marking options used in the 1/48th scale Eduard kit (8223 HELLCAT Mk.I/Mk.II DUAL COMBO PROFIPACK). This kit will also be released in the DUAL COMBO format. It costs more than a single kit, but we have found that this is the best way to release the Royal Navy Hellcats in terms of price point.

**BUY F6F-3 HELLCAT 1/72**



Hellcat Mk.I JV132, Lt. Blythe Ritchie, 800 Sqn FAA, HMS Emperor, May 8, 1944



Hellcat Mk.I JV131, 800 Sqn FAA, HMS Emperor, June, 1944



Hellcat Mk.I FN430, 1844 Sqn FAA, P/O Hannay, HMS Indomitable, August 24, 1944



Hellcat Mk.II JZ935, 1839 Sqn FAA, HMS Indomitable, Sub-Lieutenant T. B. Speak, April 5, 1945



Hellcat Mk.II JZ796, 808 Sqn FAA, Sub-Lieutenant Oscar Lorenzo, HMS Khedive and HMS Trincomalee, Ceylon, 1945



Hellcat Mk.II JX814, 1844 Sqn FAA, Sub-Lieutenant W.M.C. Foster, HMS Indomitable, Okinawa, April 12, 1945

# P-39N Airacobra Weekend

1/48 Cat.No. 84163



G. Dolnikov, 100. GIAP,  
9. GIAD, 1945

New re-incarnation of the popular Eduard's Airacobra in Russian WWII marking in Eduard's economy class. One marking option only, no photo-etch, no complications. You supply the weekend!

**BUY P-39N Airacobra 1/48**

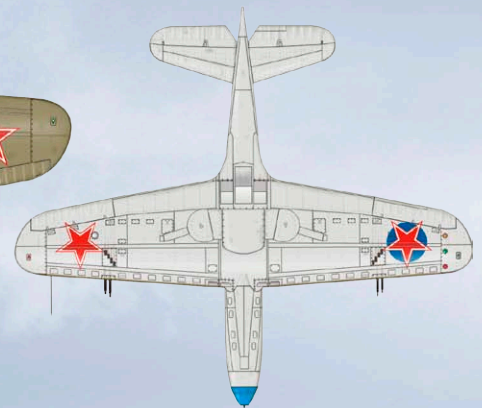
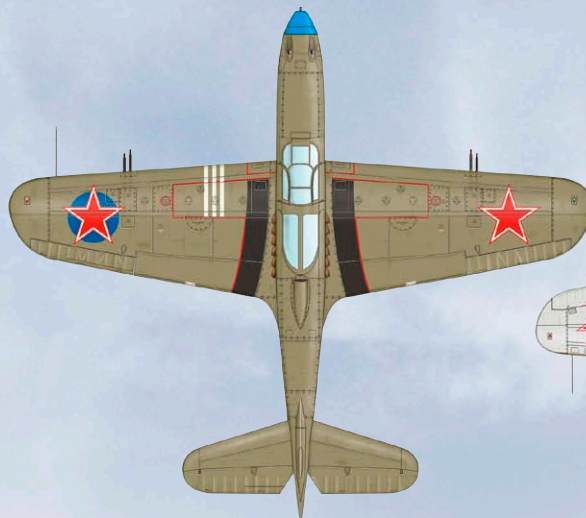
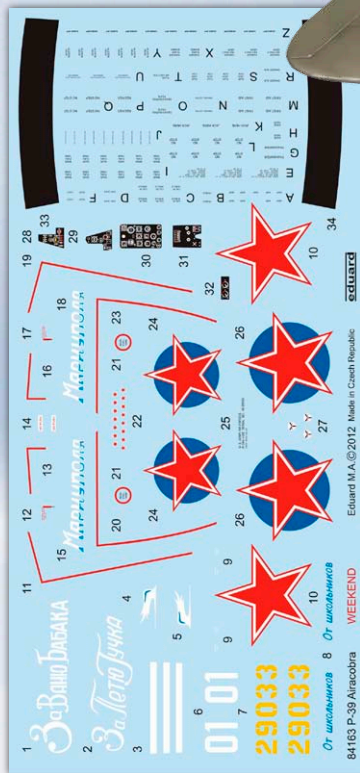
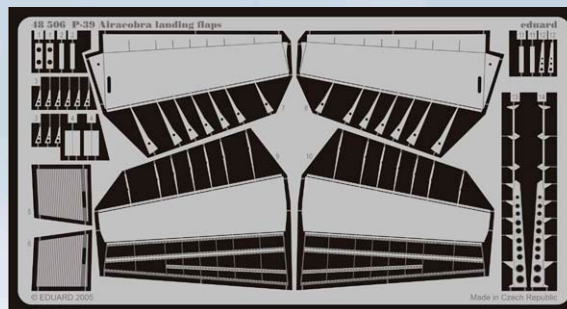


Photo-etched accessories and mask for your P-39:

**49238 P-39N/Q**

**48506 P-39 landing flaps**

**EX250 P-39/P-400 Weekend**



**BUY 49238**



**BUY 48506**



**BUY EX250**

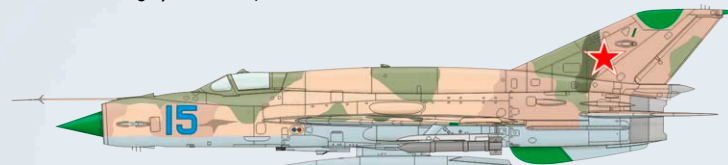


**MiG-21SMT SUPER44****1/144 Cat.No. 4426**

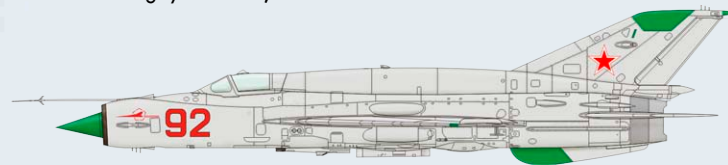
The first „new age“ Eduard 1/144th scale release, MiG-21MF, has received very intensely positive feedback, and also the sales are better than we expected when we decided to re-enter the 1/144th scale market. This January release represents the long-range MiG-21 version, used by Soviet AF in the early years of the Afghanistan conflict. The kit uses identical parts to the previous MiG-21MF. The marking options are five, and they are actually the same as in the 1/48th scale MiG-21SMT (8233). We added instrument panel and side panels to the decal sheet, which will increase the value of the kit especially for younger and less experienced modelers. Next 1/144th scale Dual Combo kit, MiG-21BIS, will be released in April 2012.



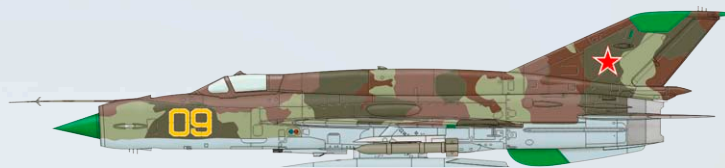
MiG-21MT, Serial Number 96.40.14,  
Dolgoye Ledovo, Russia



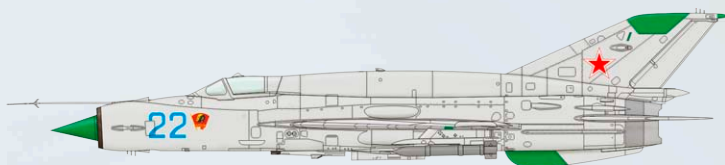
MiG-21MT, Serial Number 96.40.15,  
Dolgoye Ledovo, Russia



MiG-21SMT, 296th IAP, Soviet Union



MiG-21SMT, 582nd IAP, Chojna Airfield, Poland,  
Late Eighties



MiG-21SMT, Krasnodar Higher Aviation Training Facility,  
Soviet Union, ca 1980

**BUY MiG-21SMT 1/144**





8261 Bf 109E-1 1/48 ProfiPACK

# KITS 2012

## FEBRUARY:

### 8261 Bf 109E-1 PROFIPACK 1/48th SCALE

This kit is scaled-down 1/32nd scale Bf 109E, with some improvements. The quarter scale Bf 109E kit brings exceptionally high level of detail combined with superb fit. It is something rarely seen in the word of kit production. Each new Eduard kit shows an improvement over the preceding kits, and this Emil is surely on the top of our current production standard. The instruction sheet is also consistent with the Eduard standard with full color painting and marking guide, contains five marking options, identical to the older 32nd scale kit. The decal sheet represents the well-proven combination of Eduard design and Cartograf printing. The color PE detail set and the canopy mask are mandatory for each Profipack boxing, of course, and so are there as well. And yes, this kit comes with the corrected canopy and slats!

The E-1 is the starting point for the complete Emil family, the E-4 will follow in June, and the E-3 in August. We are also planning a return to the ROYAL CLASS boxing thanks to this Bf 109E. The Royal Class is expected in April, with two kits included, a huge colorful decal sheet and other valuable bonuses.

### 1160 I-16 OVER SPAIN LIMITED EDITION 1/48th SCALE, DUAL COMBO

Two complete I-16 Type 10 kits, large PE set, eight marking options representing both sides of the Spanish Civil War. Four of them depict Republican wartime aircraft and four of them are the Nationalist and Spanish post war schemes, because most of the I-16 which survived the war, or were even built in Spain after the war, served well into the fifties with the Spanish Air Force. Only 1500 boxes available!

### 7415 F6F-5 HELLCAT WEEKEND EDITION 1/72nd SCALE

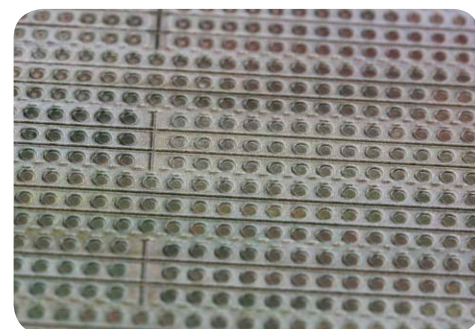
What is the best 72nd scale Hellcat can't miss either, and as a member of the Weekend line pushes the price point even lower. Notice once again the quality of the new Eduard decals. These new prints easily attain top decal quality with nice, crisp detail, realistic colors and modeler friendly application.



7415 F6F-5 HELLCAT 1/72

### 8820 PSP COLOUR 1/48th SCALE

Eduard plastic model bases are still well known in their natural plastic color. This new release represents the new generation of pre-painted model bases. More pre-painted model bases in plastic as well as in photo-etch will follow during 2012. The first photo-etched color model base is available this month, too. See the relevant section of this newsletter.



1160 I-16 over Spain 1/48 LIMITED EDITION

## MARCH:

### 8172 Fw 190A-7 PROFIPACK 1/48th SCALE

We have still never released an A-7, and the time seems right for some versions never seen before in Eduard boxings. The A-7 comes with correct combination of wing and fuselage, as well as the other surface and inner details. Five marking options, PE sheet, mask sheet are all included.

### 1168 Su-27UB 1/48th SCALE LIMITED EDITION

Two seat version follows the single seater. The concept is the same, with complete resin interior combined with PE details, resin seat and nose landing gear fender. Decals are printed by Cartograf, designed by Eduard. Five marking options offered.



8172 Fw 190A-7 1/48



1168 Su-27UB 1/48 LIMITED EDITION

### 7416 L-39ZA/ZO ALBATROS 1/72nd SCALE WEEKEND

Two additional WEEKENDs.



### 84131 MiG-21BIS 1/48th SCALE WEEKEND



## APRIL:

### R0007 Bf 109E 1/48th SCALE ROYAL CLASS

We're back with the ROYAL CLASS edition. This one offers a nice combination of plastic parts for two kits, a huge decal sheet printed by Cartograf for 10 marking options, a big PE sheet, resin details and special bonuses. Remember the Fw 190A Royal Class offer of March, 2007? This will be something very similar, and most probably will represent the apex of this year's Eduard kit production.

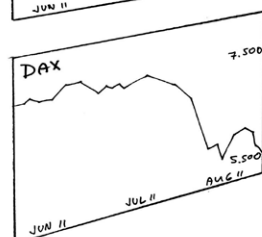
### 8224 F6F-5 HELLCAT 1/48th SCALE PROFIPACK

Re-edition of the Hellcat dash 5 in quarter scale. This kit will contain five marking options for late Dash 5s only, so there will be new marking options.

### 84144 Bf 110E 1/48th SCALE WEEKEND

### 4427 MiG-21BIS 1/144th SCALE SUPER44

This is the final planned release of this 144th scale project. The same marking options as in the 48th scale release.





4427 MiG-21BIS 1/144

## MAY:

### 7079 F6F-3/5N HELLCAT 1/72nd SCALE PROFIPACK

This 72nd scale kit won't follow its 48th scale bigger brother with all marking options. We plan on changing most of them to give you a better selection of NAVY and MARINE Nightcats.

### 1170 P-38J 1/48th SCALE LIMITED EDITION

This LIMITED EDITION will come with the same configuration as the latest LIMITED EDITION kits, with resin and PE accessories in combination with Cartograf printed decals. This one will be a very nice Lightning, guys!

### 7417 Ni 23 1/72nd SCALE WEEKEND

### 8469 I-16 type 10 1/48th SCALE WEEKEND

Two additional WEEKENDS again. Too many I-16s? And how would you feel about a Chinese one?



## JUNE:

### 8263 Bf 109E-4 1/48th SCALE PROFIPACK

Emil marches on! Expect the same marking options as in the 32nd scale E-4, with similar PE as in the 48th scale E-1, and brand new canopy mask because of the different canopy. Corrected? Yes, for sure!

### 1171 MiG-21MF/BIS in INDIAN SERVICE 1/48th SCALE, LIMITED EDITION.

Very similar release to the 'MiG-21MF in Czechoslovak Service'. Similar number of marking options, and similar PE. Indian MiGs are famous for their colorful appearances, and we feel that to use just one in the Profipack kit is a crime! So, we will be giving the multitude of colorful options their own special edition kit.

### 7418 L-39C 1/72 WEEKEND

### 84134 HELLCAT Mk.I 1/48th SCALE WEEKEND

And a pair of WEEKEND edition kits for the end of the first half of 2012.

To be continued? Yes, of course. We are working hard on the Bf 110 in 72nd scale, and the first release, a Bf 110E, is expected in the summer, with the other, a Bf 110G-4, during the fall. That MiG-15 bis in 72nd scale is also expected during the same time. The real big item will come before Christmas? Not right now. If you want to know more, you'll have to come and see us at e-Day. See you there, boys!



7083 Bf 110E 1/72



7084 Bf 110G-4 1/72

8263 Bf 109E-4 1/48



# SELECTED PHOTO-ETCHED SETS

As usual, there are many PE sets in the January collection of new items, so we will comment on just some of them in the limited space we have.

## 1/35th SCALE

Please note two new color diorama sets, 36196 FAUNA/BIRDS, and 36204 GRAPEVINE.

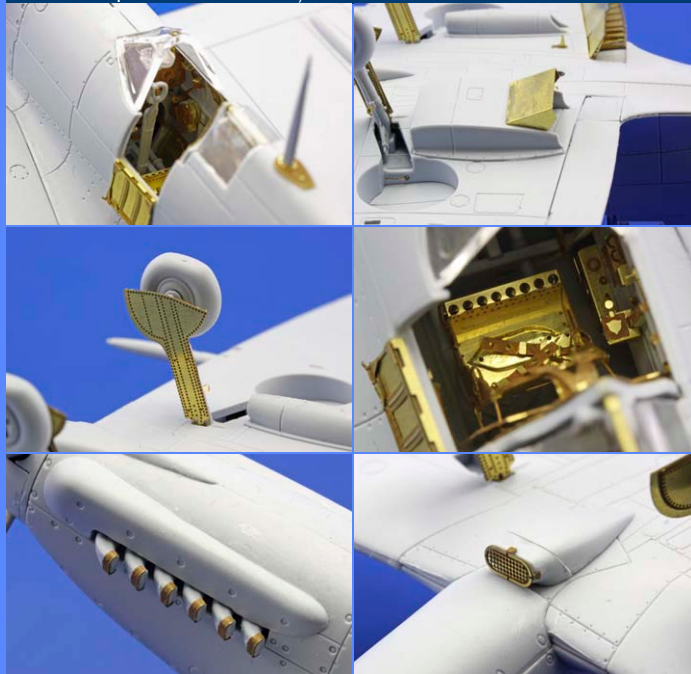
## 1/32nd SCALE

Three sets are now available for the P-40M (Hasegawa). Note the Spitfire Mk.XVI exterior set, which is closely related to the December interior set. It is a similar scene with the A-4E sets, where the January collection complements the sets already released in December.

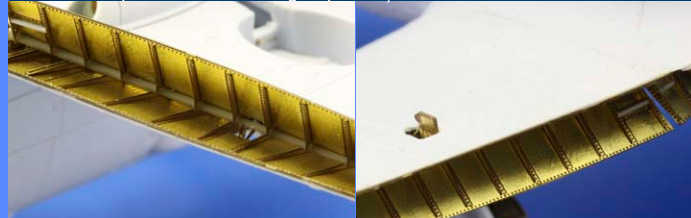
## 1/48th SCALE

There are always potential bestsellers in this scale range! Three sets for the new and highly publicized P-61 (Great Wall Hobby) will surely be among them. It is important to say, that the sets for the old Monogram P-61 are still selling extremely well and we don't doubt that this new release will be more than good complement to the old Monograms item.

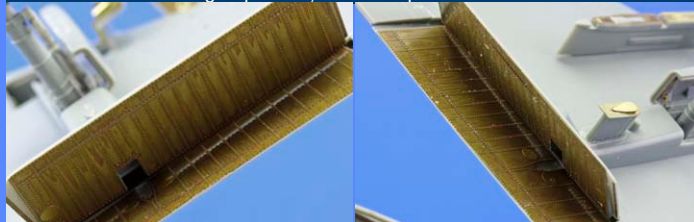
49586 Spitfire Mk.XII S.A. 1/48 Airfix



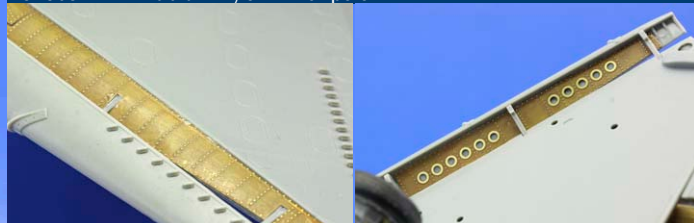
48717 Spitfire Mk.XII landing flaps 1/48 Airfix



32304 A-4E landing flaps 1/32 Trumpeter



32305 A-4E slats 1/32 Trumpeter

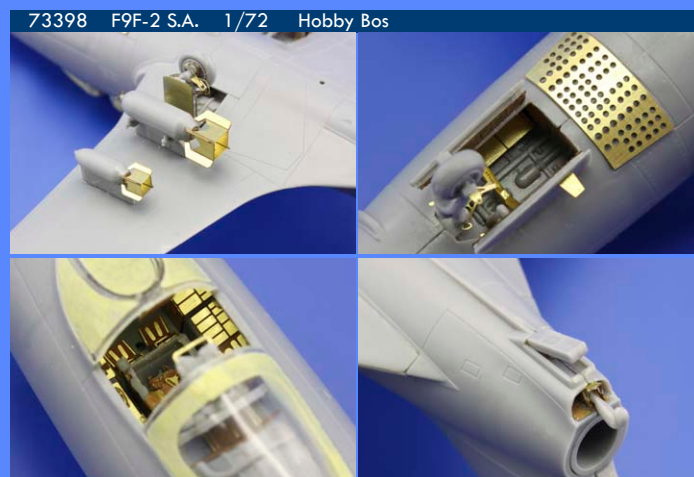
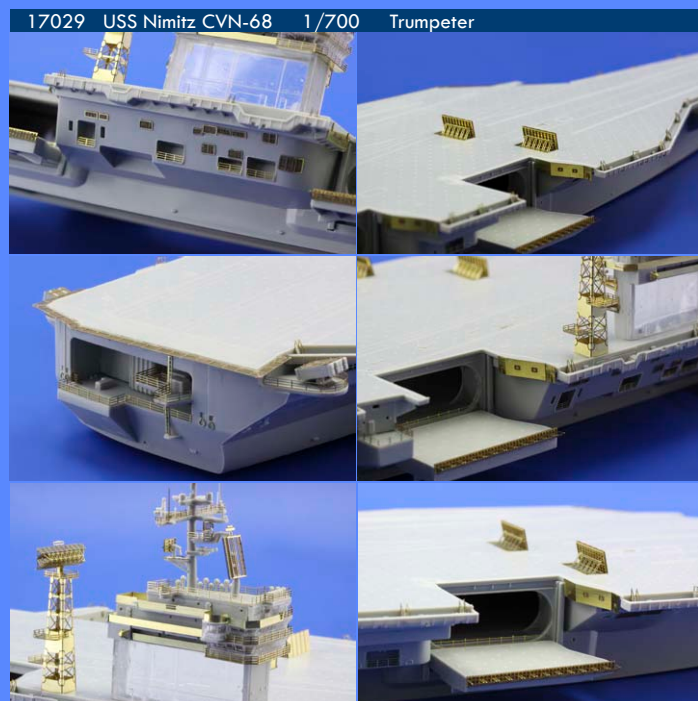


49586 Spitfire Mk.XII S.A.  
1/48 Airfix



For whole actual  
Photo-Etched sets production  
see page 18.

## PHOTO-ETCHED SETS



### 1/72nd SCALE

There is only one set released in January in this scale, and attends to the F9F-2 Panther.

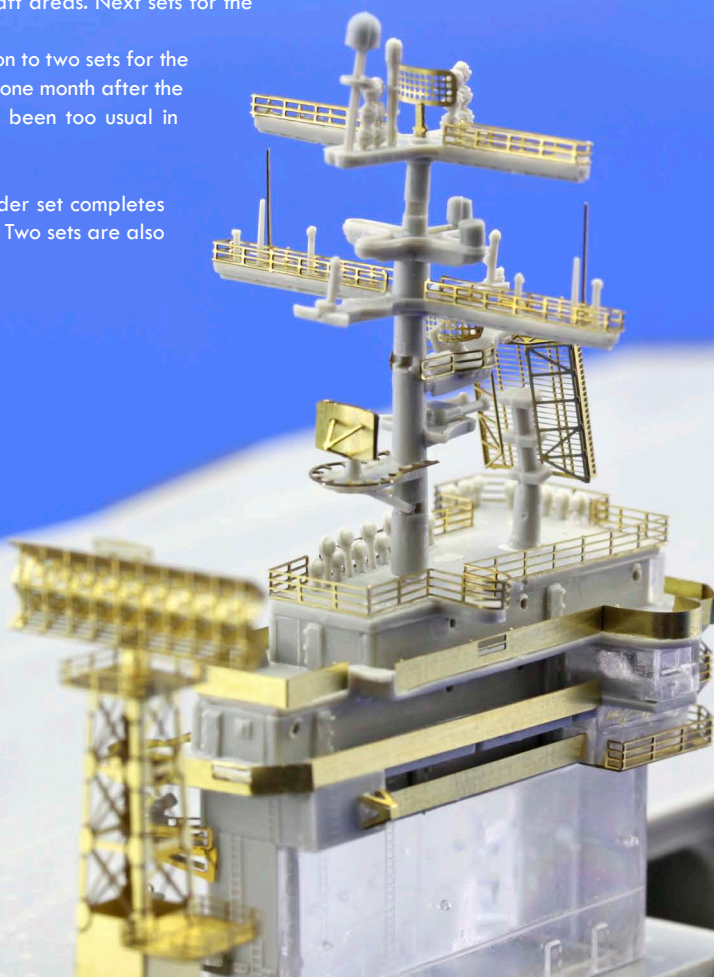
### SHIP SETS 1/350 & 1/700 SCALES

Two sets of accessories are available in 1/350 scale, and there is one detail set for the USS NIMITZ and one accessory set in 1/700 scale. We are now using a harder metal to produce these ship sets, which will hopefully lead to better sales of the ship sets.

All these sets are exceptionally large to allow the correct detailing of the various upgraded aircraft areas. Next sets for the P-61 will follow in February.

We want to also draw your attention to two sets for the Eduard MiG-21 BIS. They come just one month after the MiG-21 BIS release, which has not been too usual in our production past.

Item 48707 Sea Vixen FAW.2 ladder set completes the December Sea Vixen offerings. Two sets are also ready for the Airfix Spitfire Mk.XII.



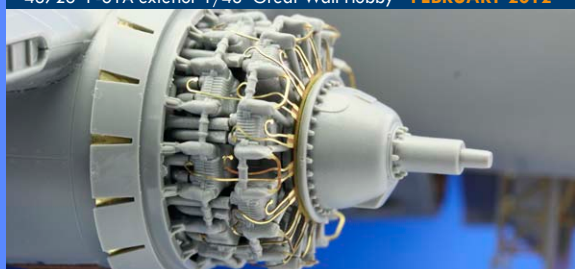
# P-61A Black Widow 1/48



Foto: US NARA, via Fold3



48726 P-61A exterior 1/48 Great Wall Hobby FEBRUARY 2012



The January list of new items is not without sets covering the significant new release by China's Great Wall Hobby. The kit was well received in the modeling community on the internet and by the paper media alike. As with all popular kits, we felt inclined to cover this Black Widow with the development of photoetched sets.

The process typically begins with the collection of all available reference material, and comparing the kit moldings to them. Then, the decisions are made as to what components would be well represented in brass when compared to the plastic. Special kudos in this process must go out to my colleague Karel Krejci.

The castings of the Great Wall kit were also, and inevitably I suppose, compared to the comparatively ancient Monogram kit, and we drew one significant conclusion. The Chinese kit designers allowed themselves to be greatly influenced by the older kit. They certainly succeeded in offering a kit that utilizes current technologies and standards, but they ignored a list of vices, too. Typically, we separate sets into interior and exterior categories. With that, we try to offer the modeler a more specific choice of what they want to improve upon, and what their experiences may dictate. This same principle was applied in the development of the P-61A sets, going a bit further in also offering undercarriage sets, and separating the cockpits into front and rear. This arrangement also promoted the expansion of parts.

The Black Widow is a very visible airplane, in terms of the interior and the amount of glass. The kit pilot cockpit is some 5mm longer than it should be. Also, the forward part of the nose well is missing, a component of the front cockpit. We decided that this could be well represented as a photoetched piece. We had to shorten the side consoles to correspond to the plastic parts.

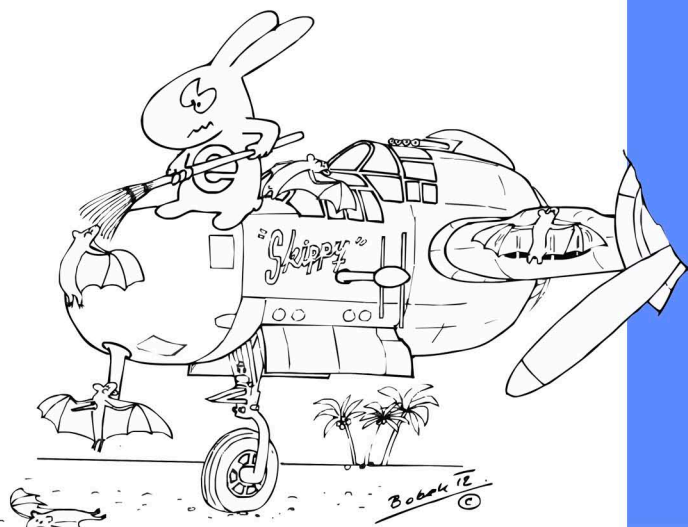
The P-61A typically flew minus the upper gun turret, which reduced the crew from three to two. For this reason, I recommend not gluing the gunner's seat in the cockpit. These gunners did not fly in the vast majority of cases, nor were they expected to in the future. The seat then becomes redundant.

The operator's cockpit needed a general redoing in terms of electronic equipment. The plastic parts offer up a strange mix, which, for example, uses a radio compass LORAN 9, which wasn't used until 1945! So, the photoetched components offer equipment consistent with the 1943 standard.

I wanted to design the undercarriage set to first and foremost improve the wells. These are very 'plastic' in the kit, and not entirely accurate. A part of the nose well are steps with a crawlway that allowed the pilot (and gunner as needed) access to the cockpit. This is also represented in the photoetched set, and should make it worthwhile to open it all up. The final thing I wanted to pay some attention to was the ailerons. The Chinese manufacturer provides only a smooth surface, and furthermore did not study sufficiently its use and shape.

Test fitting of all of the brass into the kit was very satisfactory. I hope that you find great enjoyment in the use of these sets, and that you will be more than pleased with the result.

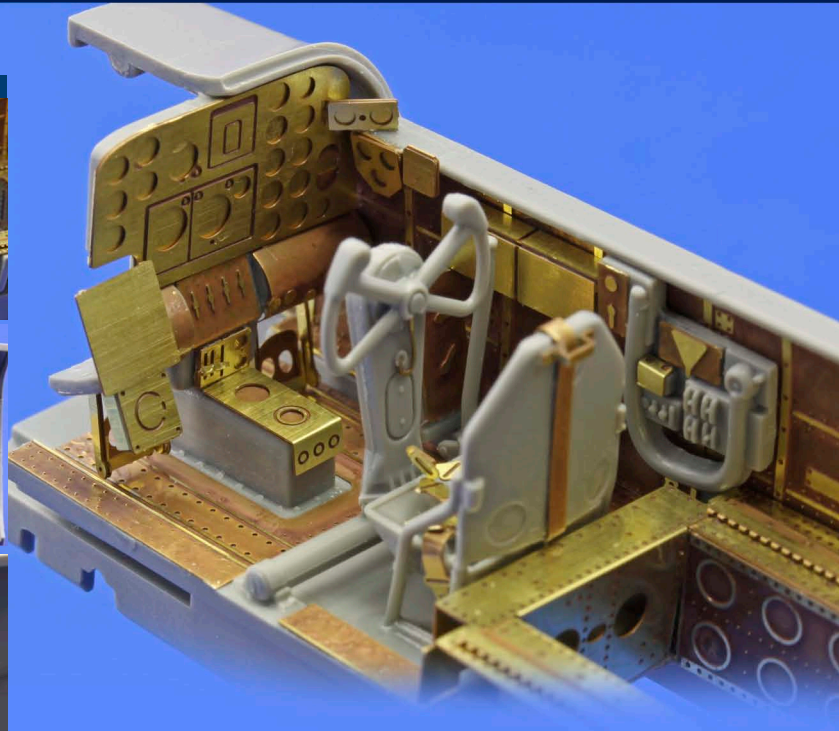
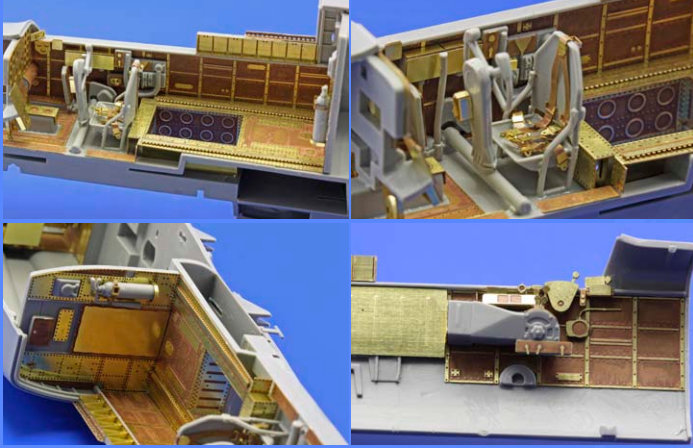
Lubos Zach



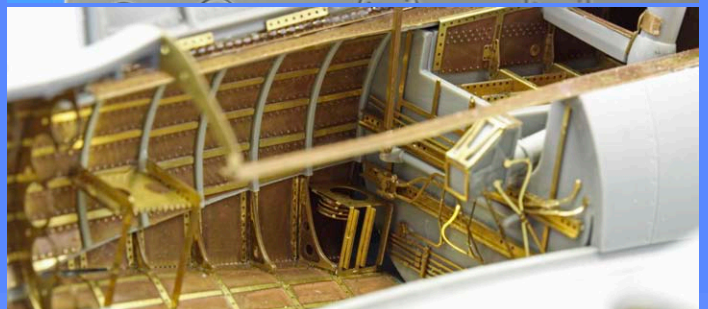
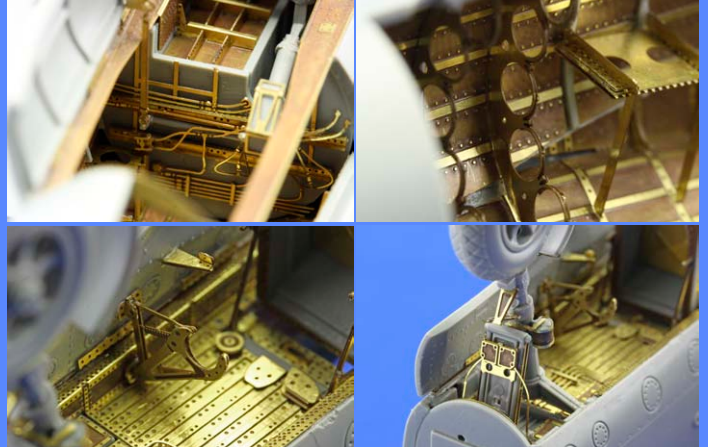
# PHOTO-ETCHED SETS

## P-61A Black Widow 1/48

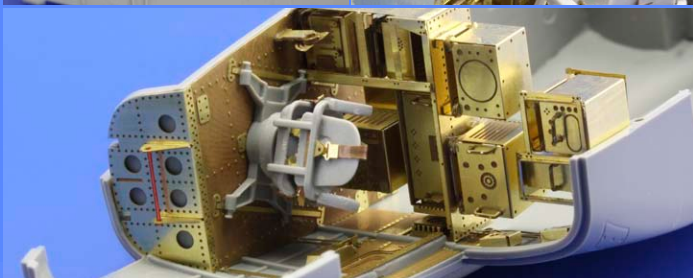
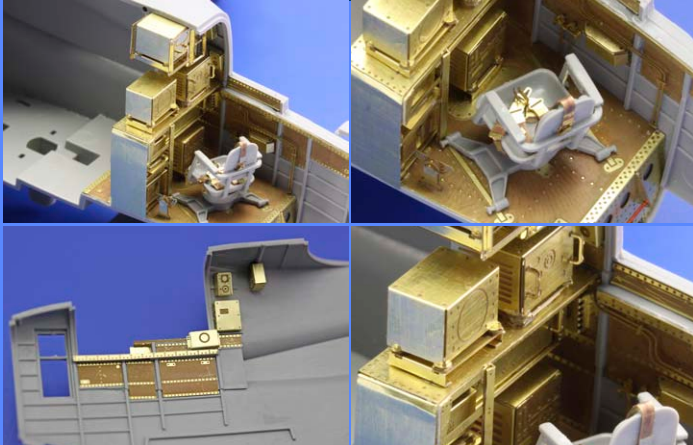
49590 P-61A front interior S.A. 1/48 Great Wall Hobby



48715 P-61A undercarriage 1/48 Great Wall Hobby



49595 P-61A rear interior S.A. 1/48 Great Wall Hobby



# BIG ED



72513 Mi-24V Hind E exterior (BIG7272)



48693 Mirage 2000B/D/N exterior (BIG4962)



32254 AV-8B exterior (BIG3308)



32254 AV-8B exterior (BIG3308)

There is the usual collection of four new BIG ED packs, three of them are developed for aircraft kits, the fourth one is a little bit unusual, a ship set for the USS GEARING DD-710 (1945) in 1/350 scale.

## BIG7272 MI-24V HIND E 1/72 ZVEZDA

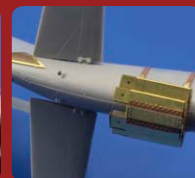
72513 Mi-24V Hind E exterior



73368 Mi-24V Hind E Interior S.A.



CX278 Mi-24V Hind E



## BIG4962 MIRAGE 2000N 1/48 KINETIC

48693 Mirage 2000B/D/N exterior



49557 Mirage 2000N Interior S.A.



49009 Remove Before Flight



EX325 Mirage 2000B/D/N

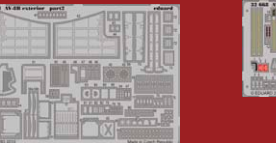


## BIG3308 AV-8B 1/32 TRUMPETER

32254 AV-8B exterior



32672 AV-8B Interior S.A.



32668 AV-8B seatbelts



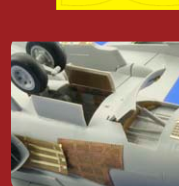
32672 AV-8B Interior S.A.



32501 Remove Before Flight



JX105 AV-8B



## BIG5310 USS GEARING DD-710 (1945) 1/350 DRAGON

53056 USS Gearing DD-710 (1945) railings



53057 USS Gearing DD-710 (1945)



17513 Naval Figures US S.A. (2 pcs)



BIG7272 MI-24V HIND E 1/72 ZVEZDA

BIG4962 MIRAGE 2000N 1/48 KINETIC

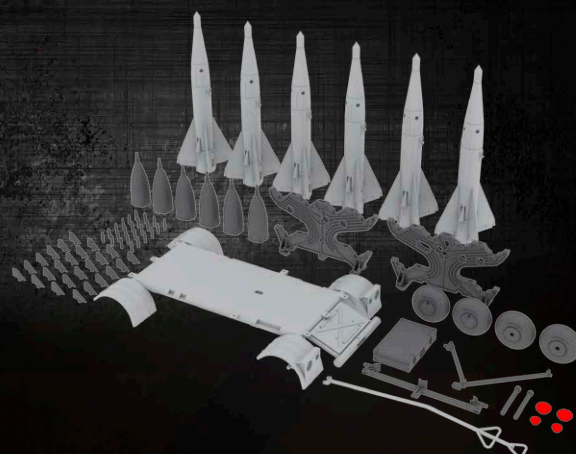
BIG3308 AV-8B 1/32 TRUMPETER

BIG5310 USS GEARING DD-710 (1945) 1/350 DRAGON

**648045**

**RS-2US / AA-1**

**Alkali service cart**



A pair of RS-2US air to air rockets on their service cart. This set looks simply great, it can be used together with all versions of the MiG-21 and many other Russian jet fighters. This set is related to, and can be used in conjunction with, the previously BRASSIN set 688040 RS-2US/AA-1 ALKALI which contains four rockets with racks.

**1/48**

**BUY RS-2US / AA-1 Alkali service cart**

**648047**

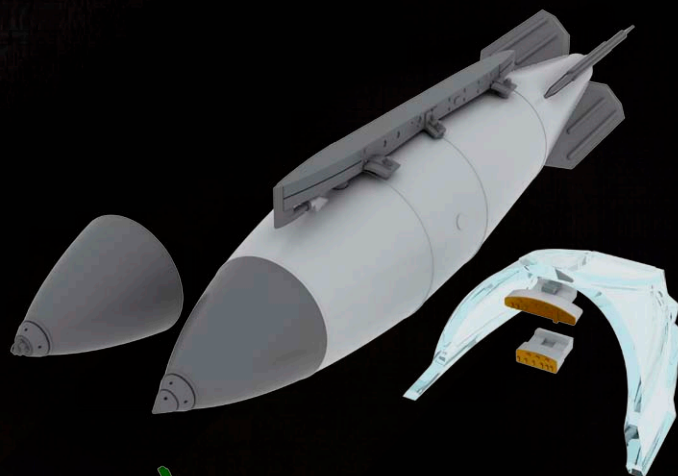
**IAB-500 imitation atomic bomb**

**1/48**

This is a resin kit of the Soviet nuclear weapon used for training. It was used to hone pilot skill for ground attacks with the real article. This training bomb had the same height as the real bomb, and contained explosive material which would simulate the visual and acoustic effect of the actual atomic explosion. It was used during large scale Soviet exercises. It is possible to install this bomb under all versions of the MiG-21, mainly under the MiG-21MF and SMT.

**1/48**

**BUY IAB-500 imitation atomic bomb**



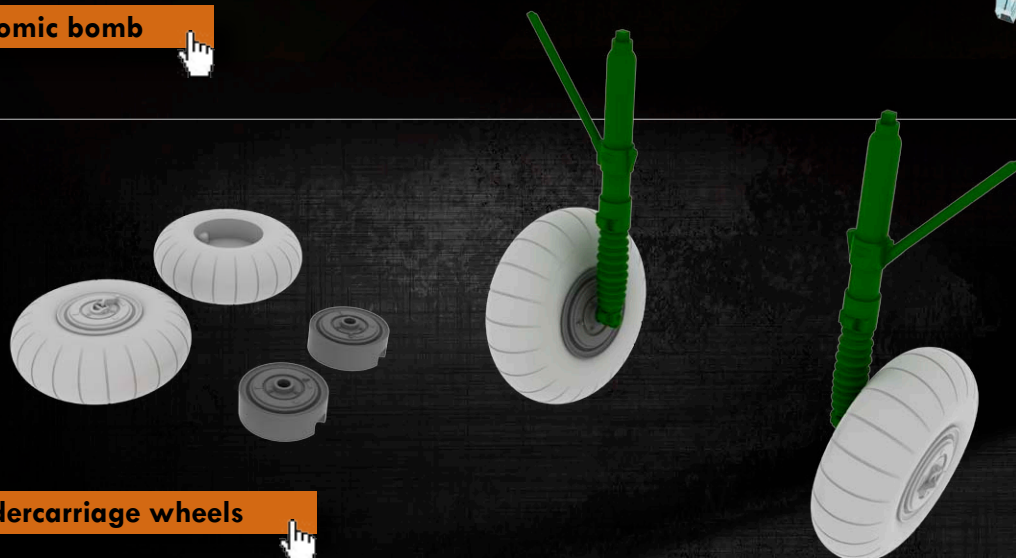
**648052**

**Bf 110 C/D main undercarriage wheels**

This set offers wheels for early Bf 110s. Contains two main undercarriage wheels.

**1/48**

**BUY Bf 110 C/D main undercarriage wheels**



**KITS**

4426 MiG-21SMT Dual Combo  
 1167 Su-27  
 7078 Hellcat Mk.I / Mk.II Dual Combo  
 84163 P-39N Airacobra

1/144 SUPER44  
 1/48 Limited Edition  
 1/72 ProfiPACK  
 1/48 Weekend

**PE-SETS**

17029 USS Nimitz CVN-68 1/700  
 32284 P-40M gun bay  
 32285 P-40M landing flaps  
 32287 Spitfire Mk.XVIe exterior  
 32304 A-4E landing flaps  
 32305 A-4E slats  
 32704 P-40M interior S.A.  
 36196 fauna - birds colour  
 36200 Defender 110 hardtop  
 36204 Grapevine/vinná réva (white) colour  
 48707 Sea Vixen FAW.2 ladder  
 48717 Spitfire Mk.XII landing flaps  
 48718 MiG-21BIS exterior  
 48725 P-61A undercarriage  
 49580 Me 262A-1 S.A.  
 49586 Spitfire Mk.XII S.A.  
 49587 MiG-21BIS interior S.A.  
 49590 P-61A front interior S.A.  
 49595 P-61A rear interior S.A.  
 73398 F9F-2 S.A.  
 99030 Railings 45' 3 bars long 1/350

1/700 Trumpeter  
 1/32 Hasegawa  
 1/32 Hasegawa  
 1/32 Tamiya  
 1/32 Trumpeter  
 1/32 Trumpeter  
 1/32 Hasegawa  
 1/35  
 1/35 Hobby Boss  
 1/35  
 1/48 Airfix  
 1/48 Airfix  
 1/48 Eduard  
 1/48 Great Wall Hobby  
 1/48 Hobby Boss  
 1/48 Airfix  
 1/48 Eduard  
 1/48 Great Wall Hobby  
 1/48 Great Wall Hobby  
 1/72 Hobby Boss  
 1/350

99038 USN ladders 1/700  
 99051 IJN ship windows 1/350

1/700  
 1/350

**ZOOMS**

33090 P-40M interior S.A. 1/32  
 FE580 Me 262A-1 S.A.  
 FE586 Spitfire Mk.XII interior S.A.  
 FE587 MiG-21BIS interior S.A.  
 FE590 P-61A interior S.A.  
 SS398 F9F-2 S.A.

1/32 Hasegawa  
 1/48 Hobby Boss  
 1/48 Airfix  
 1/48 Eduard  
 1/48 Great Wall Hobby  
 1/72 Hobby Boss

**MASKS**

CX302 F-14A 1/72  
 EX345 F8F 1/48  
 EX347 F-14B 1/48  
 EX348 F-84 1/48  
 EX349 P-61 1/48  
 JX138 Spitfire Mk.Vb/Trop 1/32  
 JX139 A-4F 1/32

1/72 Hobby Boss  
 1/48 Hobby Boss  
 1/48 Hobby Boss  
 1/48 Italeri/ Kinetic  
 1/48 Great Wall Hobby  
 1/32 Hobby Boss  
 1/32 Trumpeter

**BIG ED SETS**

BIG3308 AV-8B 1/32  
 BIG4962 MIRAGE 2000N 1/48  
 BIG7272 Mi-24V HIND E 1/72  
 BIG5310 USS GEARING DD-710 (1945) 1/350

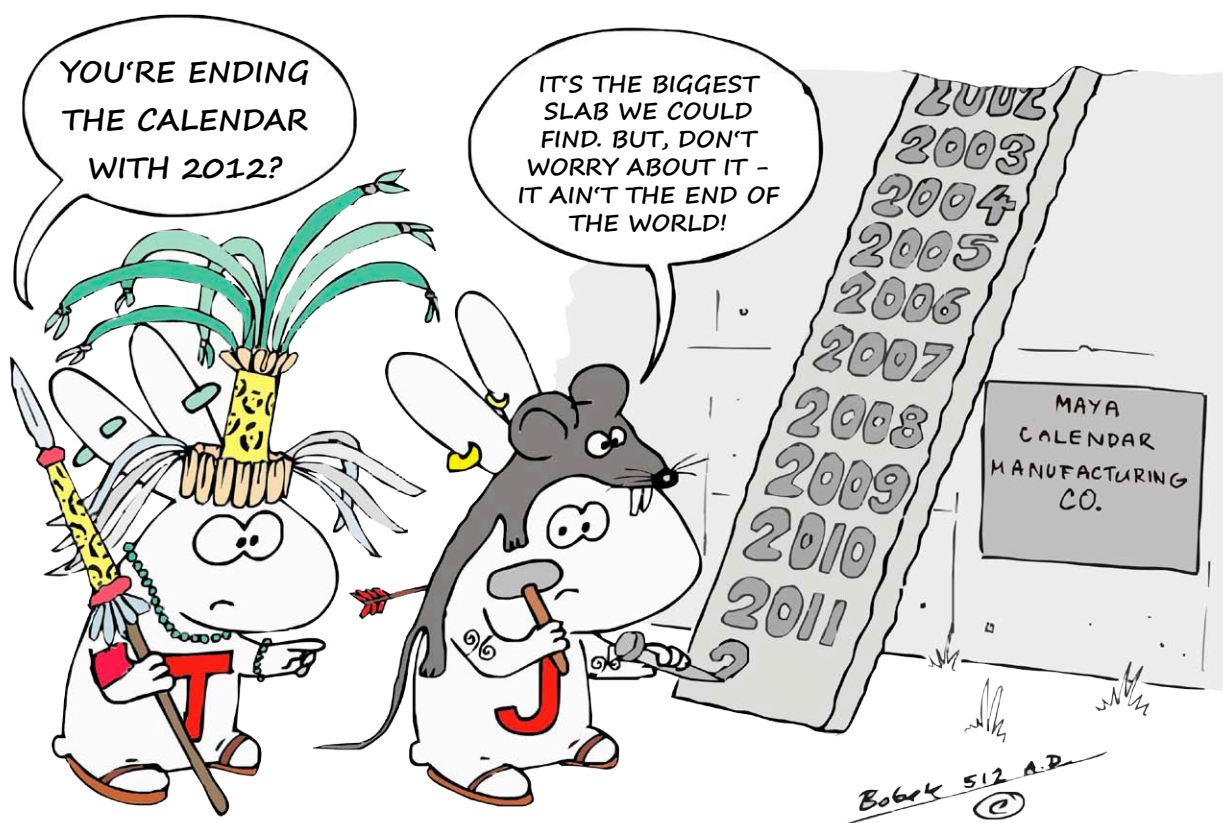
1/32 Trumpeter  
 1/48 Kinetic  
 1/72 Zvezda  
 1/350 Dragon

**BRASSIN**

648045 RS-2US / AA-1 Alkali service cart 1/48  
 648047 IAB-500 imitation atomic bomb 1/48  
 648052 Bf 110 C/D main undercarriage wheels 1/48

**BUY on Eduard store**

## Comments and input from J&T





JOHN BUBAK

# THE FLANKER FILE

## PART 1

I vividly recall the first impression I had as I gazed at the Czech publication L+K's photos of the Su-27 in PVO service. I noted instantly the curved profile, and the aggressive elegance of the bird, and I was impressed. Along with the MiG-29, this was the Soviet fourth generation fighter.

Stated admittedly in an extremely oversimplified manner, the United States' XB-70 Valkyrie program scared the Soviets into developing the MiG-25, which in turn scared the Americans into developing the F-15. Maintaining the tit for tat pattern, the Soviets recognized the need to develop a PVO and VVS fighter that would be able to meet and greet any western opponent in the foreseeable future. The American FX program, which led to the McDonnell Douglas F-15, was studied intently by the Soviets.

An intuitive need for such a development in the Soviet Union was recognized, and some early study work was already carried out by the design bureaus on their own initiative prior to the issuing of the official 'PFI' (Prospective Tactical Fighter) project specs. The first layout proposals were sketched out in 1969/70, under the Sukhoi factory designation T10 (not to be confused with the later T10 prototypes), and the still secret Air Force designation Su-27. The initial design concept represented a departure from the normal conservatism often present in Soviet

development circles, and the blended body was to ensure considerable effectiveness in terms of lift and internal fuel capacity. The design also featured prominent LERX (leading edge root extensions) to generate vortices that intensified as the AoA (angle of attack) increased, to the point where sub-vortex depressions generated greater lift from beneath the wing. It was a carefully detailed design. The type was also to feature pitch only FBW (fly by wire) for the first time in a Soviet fighter, and the system was already being developed in the T-4 prototype. The FBW system was significant, because it allowed the integration of longitudinal instability into the design, making the aircraft potentially much more maneuverable. The horizontal stabilizers were designed to augment the blended body and wing lift generated by their upward deflection, raising maneuverability to unprecedented levels.

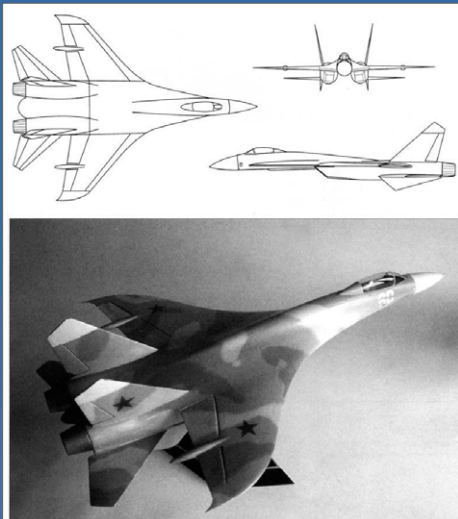
The Central Aero and Hydrodynamics Institute, or TsAGI, strictly urged a much less innovative approach, due in large part to its aforementioned conservatism and from interpretation of research data abroad, notably of the F-15. This led to a second T10 concept (again, not to be confused with the actual T10 prototypes) to be developed in the form of a layout lacking the blended wing concept, among other innovations that were also dropped. It was decided to go into wind tunnel testing with both ideas represented,

as it was deemed relevant to test them against each other. The result was that the conservatism was badly misplaced. A large number of wind tunnel models were used to analyze several blended body, wing, landing gear and engine nacelle configurations.

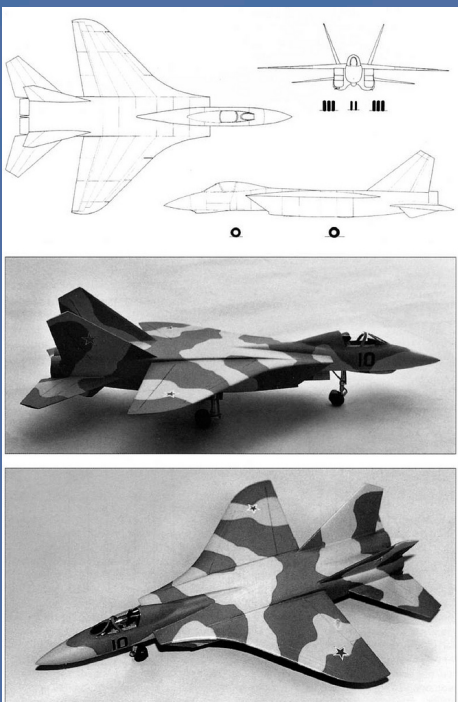
Using what was known of the F-15 as a benchmark, the Air Force issued requirements the PFI was to fulfill. Specs included a top speed M2.35 to M2.5, a climb rate up to 350m/sec, a service ceiling of 22,000m, range at high altitude of 2500km, and g-limits of -8 to +9g. It was to perform a wide range of mission profiles, ranging, among others, from recon to point defense to escort and to effectively threaten any western type to be fielded simultaneously.

As well as the carefully designed aerodynamic innovations introduced, a fourth generation engine was developed. It would give the Su-27 a thrust to weight ratio of greater than 1.

The T10 program was constantly nagged by the weight restrictions that were imposed on it by the aerodynamics. Not that the aerodynamics were flawed, by any stretch, but crossing the weight limits would degrade the advantages that were offered by them. The weight was kept down by the use of titanium alloys and advanced construction methods, although composite materials



Prototype evolution



were also looked into. Composite materials were used in the MiG-29 already, and there were some bugs to be ironed out. It was deemed just as effective to go with the titanium alloy – construction technique route.

Conceptual studies were finalized in 1975, and authorization was given to produce shop drawings, and initiate prototype production. The first two prototypes were the T10-1 and T10-2 (not to be confused with the same designations used in the conceptual stages). These were true to the initial concept, except heavier and larger. The aircraft power was to be supplied by longtime Sukhoi

partner Saturn in the form of the AL-31F, which was in development for eleven years. It was to be designed with compatible goals in terms of range (ie. be very fuel efficient). In any case, the AL-31F wasn't ready for installation when the T10-1 was ready to accept it, and so the first T-10s were powered by the AL-21F that also powered the Su-22 and Su-24. In the end, the AL-31F offers significant advantages over the American F100 and F110 engines powering the F-15 and F-16 series in terms of efficiency, thrust and service life.

Based on the specs issued by the defense ministry, a new avionics fit and armaments system was developed. This would include multimode capability with ECM resistance and look up/look down target acquisition and tracking. A close combat IRST (InfraRed Search and Track) system was developed as well. As with the F-14, the aircraft was initially seen as a pure interceptor, but had a bomb delivery capability built-in from the start.

The T10-1 was completed in early 1977 and was delivered to the Zhukovsky based LII Flight Research Centre. American surveillance photographs placed the aircraft at Ramenskoye, and misnamed it the 'RAM-K'. As mentioned previously, the bird was powered with the AL-21F engine, and so had certain intake and nacelle features not found in later aircraft fitted with the AL-31F. The aircraft powered by the older engine were used for stability and aerodynamic verification testing. This was deemed much preferable to waiting for the intended engine, and allowed much of the testing to be conducted immediately. The T10-1 chief test pilot was Maj.Gen. Vladimir Ilyushin, and the first flight took place May 20th, 1977. The T10-0 was developed in conjunction for static testing.

It was clear early on that the T10-1 was flawed, but the Sukhoi OKB deemed it advantageous to finish the flight testing 'as is' prior to a redesign to create a reference point for comparison. Problems with lateral stability needed attention without affecting the vortices generated that would degrade the design's ability to generate



Maj.Gen. Vladimir Ilyushin, test pilot

lift. The initial testing phase looked at the blended wing design and performance, followed by testing the FBW and armament control systems. The T10-1 carried out no missile firing tests, but did carry two missiles under each wing, and two under the fuselage as part of the aerodynamic study.

The T10-1 was joined by the T10-2 in early 1978. It was coded '210', and was very similar to the T10-1. The first flight was on May 16th, 1978, but the aircraft crashed on July 7th, killing the T10-2 project test pilot Yevgeniy Solovov. This was attributed to unexpected behavior of the aircraft, for which the pilot overcompensated and subsequently overstressed the aircraft.

The next prototypes to be delivered were the T10-3 and -4, and were the first to be powered by the AL-31F. The engine is smaller than the AL-21F, and this required the redesign of the intakes and nacelles. Progressive avionics installation and committing cooling air for turbine blade cooling from the compressor caused a shift in the centre of gravity and an increase in specific fuel consumption respectively. Furthermore, detailed calculations indicated that the Su-27 aerodynamics, as they were, were inferior to the F-15, and that a total redesign was, in fact, in order. Also, the avionics failed to meet weight requirements (part of that ever present nagging weight thing), and the engine specific fuel consumption was also unacceptable. This was recognized by Sukhoi, MAP and the VVS alike, and nothing was left without scrutiny. All simple solutions, such as moving the centre of gravity, were rejected if they came at the expense of instability, and, by extension, maneuverability. Studies had shown that once the horizontal stabilizer AoA exceeded that of the wing (a combination that was



to augment lift), flow separation degraded the nose down effect on the aircraft. This was a similar problem that was encountered by General Dynamics in the F-16, but the GD solution was to simply limit AoA to 25°. It was suggested by the Siberian Research Institute (SibNIA) to increase wing area aft of the centre of gravity. The flaps and ailerons were replaced by flaperons, and a leading edge flap was added.

There were factors that worked in favor of the redesign process, such as an almost unprecedented willingness of Project Chief Simonov's willingness to co-operate directly with SibNIA, helping to smooth out and accelerate the process.

Moving the vertical tail surfaces further apart so that they rested outboard of the engines was used not only to give access to the engine accessories, which now were mounted on top of the engine rather than on the bottom, but also to maintain control of the aircraft in crosswind situations. Crosswind aerodynamic turbulence coming off the windward wing degraded the windward tail performance, but the arrangement meant that the leeward tail was unaffected and maintained effect on control. Air intakes needed not to be changed, but they were made slimmer, another advantage of moving the AL-31F engine accessories to the top of the engine.

The original landing gear doors doubled as speed brakes on the original T10 prototypes, much like the Su-24, and this caused severe buffeting across the tail surfaces, and so this arrangement was dropped. A new speed brake was mounted on top of the fuselage, much the same as it was on the F-15. The nosegear was moved aft by over 3m, and as such, carried a greater load, and so was accordingly strengthened.

All of these changes incorporated led to the new designation T10S. The blended wing was reduced by some 15%, leading to a drop in supersonic drag by up to 20%,

The first T10S prototype was the T10-7, and took to the sky for the first time on April 20th,



1981. It did not carry avionics or armament, as it was used to verify the aerodynamic concepts. It crashed on September 3rd.

The T10-12 was delivered in March, 1981, and first flew on November 27, 1981, but its career was also short lived, crashing on December 23rd, killing the test pilot Alexandr S. Komarov. It broke up at high speed and altitude, and logged only 5 ½ hours of flight time.

Several more T-10 prototypes joined the acceptance trials. The T10-15, -17, -18, -19, -20, -21, -22, -23 and -27 did not follow the production sequence. The first T10S built to full production standard was the T10-17, and it first flew on May 26th, 1982, flown by A Isakov. This aircraft bore the brunt of the testing program and also carried out live fire tests.

T10 accidents continued. A T10-17 wing pa-

nel came off, striking the vertical tail surface, but test pilot Nikolai Sudovnikov was able to skillfully bring the bird home minus a part of the wing and half a vertical fin, allowing a full analysis to be made. On May 25th, 1984, T10-21 crashed after another structural failure, and test pilot V.I. Loychikov ejected safely.

These crashes led to further modifications and refinements. The T10-15 was modified to become the P-42 record breaking aircraft. The tests were generally completed in 1985, and the aircraft attained IOC in the summer of that year.

Several other T10s were built and tested, even after the completion of the state acceptance trials.

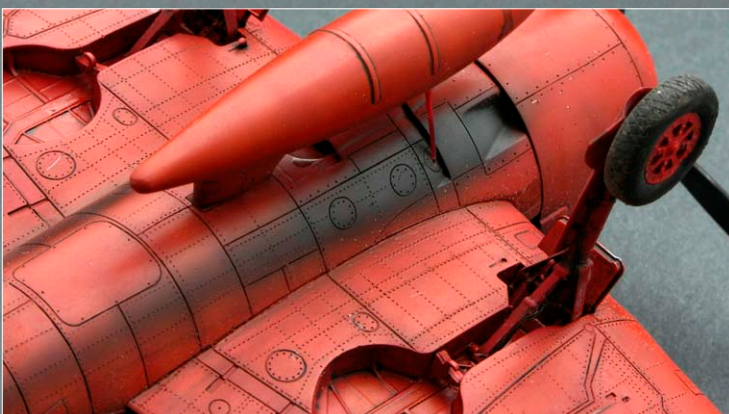
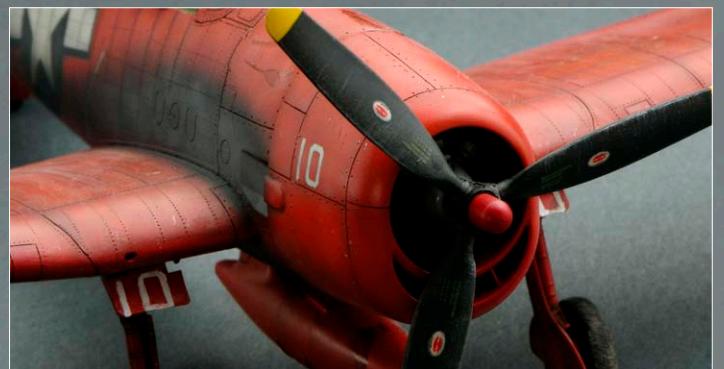
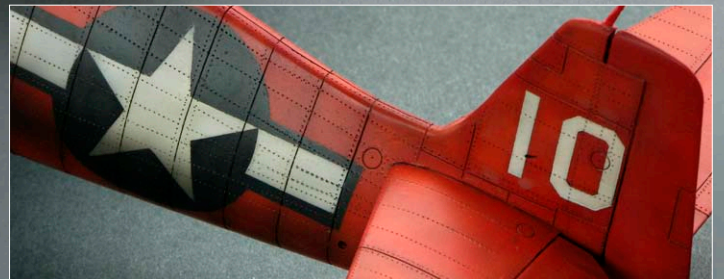
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# F6F-3K 1/48

Built by Jan Petr



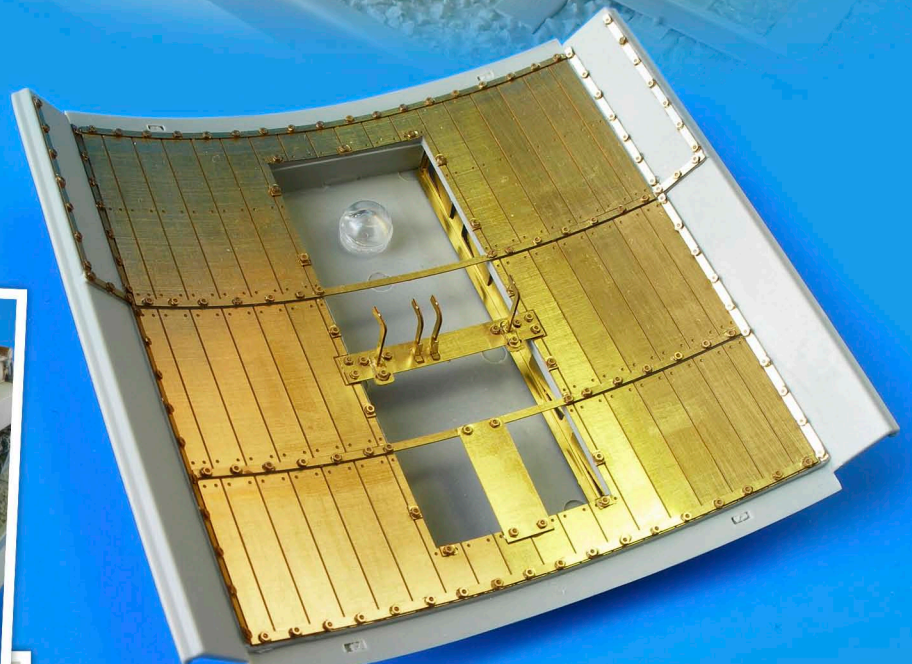
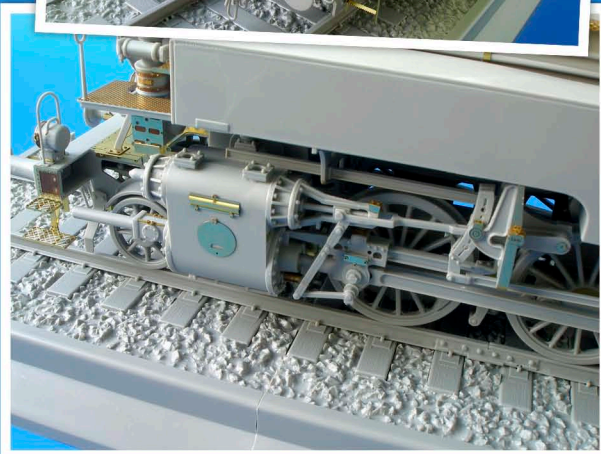
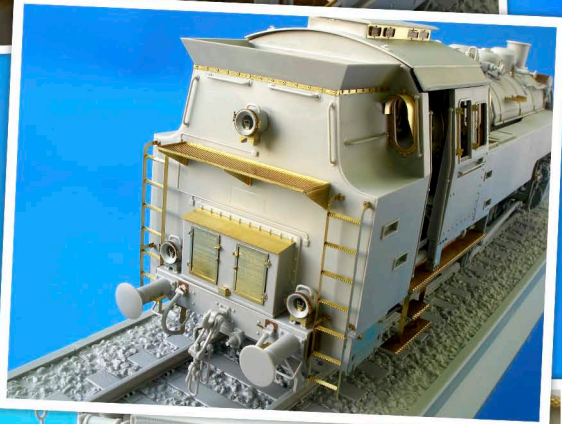
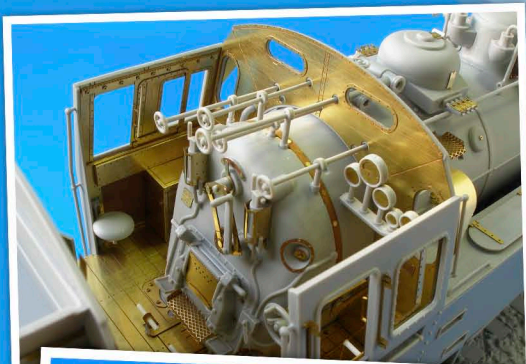
BUY F6F-3 1/48

BUY F6F-3 1/72

# BR 86

1/35

PHOTO-ETCHED BIG ED SET  
FOR BR 86 1/35 TRUMPETER



**FEBRUARY 2012**

# BIG ED

set

XT159 BR 86 1/35  
36174 BR 86 exterior  
36175 BR 86 floor plate  
36176 BR 86 interior

[www.eduard.com](http://www.eduard.com)

8261  
Bf 109E-1  
1/48 ProfiPACK

1/48!

1160  
I-16 Type 10 over Spain  
Dual Combo!  
1/48 LIMITED EDITION

7415  
F6F-5 Hellcat  
1/72 Weekend

## BIG ED

FEBRUARY 2012

Four sets, as usual. Check the collection for the BR 86 in 1/35th scale. These steam engines are always very suggestive subject, aren't they?

BIG3573 BR 86 1/35 Trumpeter

BIG3309 MiG-23ML FLOGGER G 1/32 Trumpeter

BIG3310 P-51D EARLY 1/32 Tamiya

BIG4963 F-100F 1/48 Trumpeter

Soviet air-to-ground rocket launcher, one piece, with service/loading cart. The set also contains the transport box for four pods. Useful for diorama builders, could be also displayed together with Soviet and Russian fighters and fighter bombers including the MiG-23, MiG-29, Su-17, Su-22, Su-25K, Su-27 etc.

648046



648049



648048

Modern Soviet air-to-air heat seeking AA missiles for fighters such as the MiG-29 and Su-27 and their respective derivatives.

eduard  
BRASSIN

FEBRUARY 2012

648046

Rocket launcher B-8M1 and loading cart  
1/48

648048

R-27T/T1 / AA-10 Alamo-B  
1/48

648049

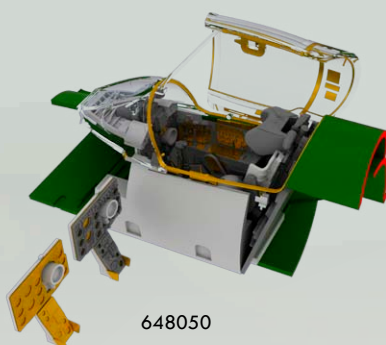
MiG-21 wheel wells  
1/48 Eduard

648050

MiG-21BIS interior  
1/48 Eduard

648051

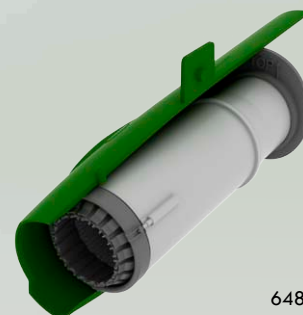
MiG-21BIS exhaust nozzle  
1/48 Eduard



648050

Cockpit detail set for the Eduard MiG-21BIS in 1/48th scale, including the ejection seat, late version.

TO BE CONTINUED? Yes, certainly! We want be very active with the Brassin line, and we want to bring more new releases every month. There will even be a new BRASSIN line called BIGSIN, which is to be a resin counterpart to the BIG ED line in PE range. Each BIGSIN set will be a combination of existing sets. The first set, for the Bf 109E in 1/32nd scale, is to be released in FEBRUARY, 2012.



648051

The exhaust nozzle with interior details for the Eduard MiG-21BIS.

## PHOTO-ETCHED SETS

FEBRUARY 2012

## PE-SETS

144001	MiG-21MF 1/144	1/144	Eduard	49588	EA-18G ejection seat	1/48	Hasegawa
17028	Admiral Hipper 1940 1/700	1/700	Trumpeter	53064	UKURU escort ship Type A 1/350	1/350	PitRoad
32279	Su-25 Frogfoot weapon	1/32	Trumpeter	72527	Hellcat Mk.II exterior	1/72	Eduard
32286	P-40M exterior	1/32	Hasegawa	73397	F-86E S.A.	1/72	Airfix
32291	Il-2m landing flaps	1/32	Hobby Boss	73406	Hellcat Mk.II S.A.	1/72	Eduard
32299	A-4E armament	1/32	Trumpeter	73416	USN Carrier Deck 1943-44 lift area	1/72	
32301	Bf 109G-6 exterior	1/32	Trumpeter	99041	USN ship doors and windows 1/700	1/700	
32713	Il-2m interior S.A.	1/32	Hobby Boss	99044	IJN Carrier Aircraft 1/700	1/700	
32718	EA-18G avionics bay	1/32	Trumpeter	99052	IJN cable reel 1/350	1/350	
32726	Bf 109G-6 interior S.A.	1/32	Trumpeter				
36194	ASU-85 SPG (1956)	1/35	Trumpeter				
48713	Seafire F.XVII landing flaps	1/48	Airfix	<b>ZOOMS</b>			
48716	EA-18G exterior	1/48	Hasegawa	33094	Il-2m interior S.A. 1/32	1/32	Hobby Boss
48720	Bf 109E-1	1/48	Eduard	33100	Bf 109G-6 interior S.A. 1/32	1/32	Trumpeter
48723	Sea Vixen landing flaps, folded wing	1/48	Airfix	33108	A-4F interior S.A. 1/32	1/32	Trumpeter
48726	P-61A exterior	1/48	Great Wall Hobby	FE585	EA-18G interior S.A.	1/48	Hasegawa
48727	MiG-21 surface panels S.A.	1/48	Eduard	SS397	F-86E S.A.	1/72	Airfix
49585	EA-18G interior S.A.	1/48	Hasegawa	SS406	Hellcat Mk.II S.A.	1/72	Eduard

## PHOTO-ETCHED SETS in FEBRUARY:

The February photo-etch collection comes with two very interesting and eye-catching premiere releases! See more!

## 1/144th SCALE - AIRCRAFT

Premiere No.1, MiG-21MF detail set. Eduard never released PE sets in this small scale, and we have had to find a good way to bring in a valuable set. The 1/144th scale details could be often too thin even for the finesse of photo-etching, which is the reason for the innovative combination of the etched metal and printed decal. We hope this will be a nice inspiration for 1/144 collectors. Right now, we plan to create the new sets for our own kits only, but the future of this line will be dictated by feedback.

## 1/72nd SCALE - AIRCRAFT

Premiere No.2, the resin base representing a US WWII aircraft carrier deck. Very colorful and eye-catching, this pup's a real gem! We trust this could be a bestseller like the color seatbelts or 'Remove Before Flight' tags. More such bases will be coming soon!

Note also the two sets for the Eduard Hellcat Mk.II and the single set for the Airfix F-86E.

## 1/48th SCALE - AIRCRAFT

Three of the eight quarter scale sets in 1/48th scale are designed for the new EA-18G released by Hasegawa. As promised, we are carrying on with the P-61A for the Chinese Great Wall Hobby kit, and similarly, with the Airfix Sea Vixen, offering a set for the landing flaps and folded wing inner structure. February seems to be 'NAVY Month', with many Navy sets – one is designed for the Seafire Mk.XVII landing flaps, for the Airfix kit as well.

There are two extremely interesting sets created for Eduard's own kits. The MiG-21 surface panel set gives a nice opportunity to make the surface of the model more plastic. This is a self-adhesive set, which makes the panel application easy with a great result.

The Bf 109E-1 set is important. It wasn't common in the past to release a PE set for our premiere release in the same month with the basic kit. This is probably the first time it has happened, which makes us proud and happy. We are hopeful that the timing specifically will help in sales of the PE kit, and is something we would also like to maintain.

## 1/32nd SCALE - AIRCRAFT

Another set is now available for the P-40M, together with the final set for the Su-25K and A-4E. Both are for the Trumpeter kits, and both are weapon sets. There is an avionics bay set for the EA-18G (Trumpeter, as well), two sets for the Bf 109G-6 (Trumpeter yet again) and the first two PE sheets for the Il-2m (this is from Hobby Boss - enjoy the different manufacturer!). Too many 32nds, right?

## 1/35th SCALE - AFV

Well, too many 32nds are compensated by only one 35th scale set. ASU-85 was a rather small Soviet airborne tank destroyer, which operated in the early days of the Soviet invasion of Czechoslovakia in 1968.

## 1/350 &amp; 1/700 SCALES SHIP SETS

The NAVY month of February is complete with five ship sets in various scales. Check out the UKURU 1/350 set first; it is a nice one designed for a beautiful kit! The other detail set is for the

Admiral Hipper in 1/700 scale, for the Trumpeter kit. The other three sets are accessories in both main scales, 350 and 700.

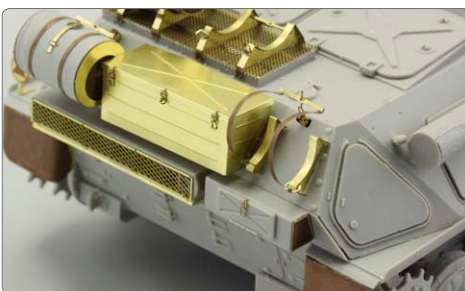
## ZOOM PE SETS

All the February ZOOM sets are the usual derivatives of main sets.

TO BE CONTINUED? Naturally! You will see more diorama sets, mainly with various foliage and other vegetation subjects, and we will release more model bases. We would like to also release the sets faster in the coming year. We'll look back in December and see if it really happened. If the end of the Earth doesn't force us to change our plans, of course!



17028 Admiral Hipper 1940  
1/700 Trumpeter



36194 ASU-85 SPG (1956)  
1/35 Trumpeter



73397 F-86E S.A.  
1/72 Airfix



**FEBRUARY 2012  
RELEASE**

**BIG BRASSIN = BIGSIN**

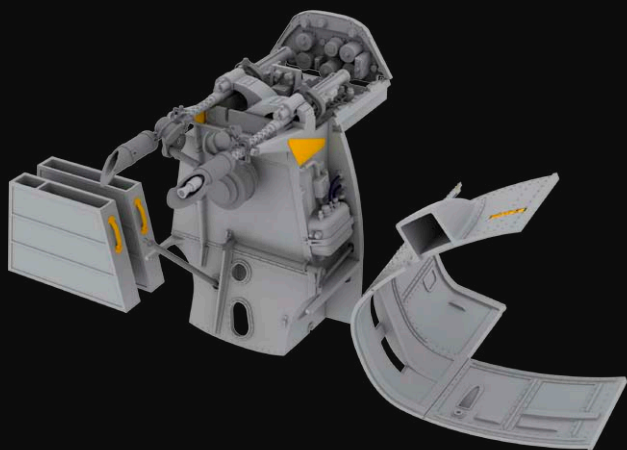
# Bf 109E

BIGSIN set

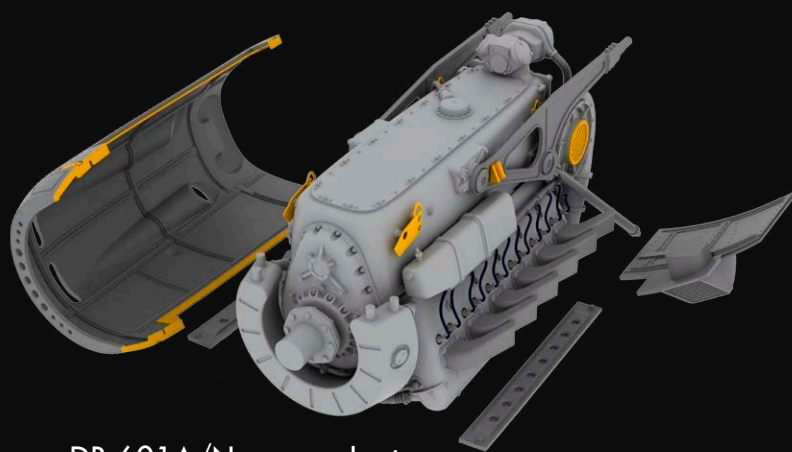
632003 DB 601A/N powerplant

632004 Bf 109E wheels

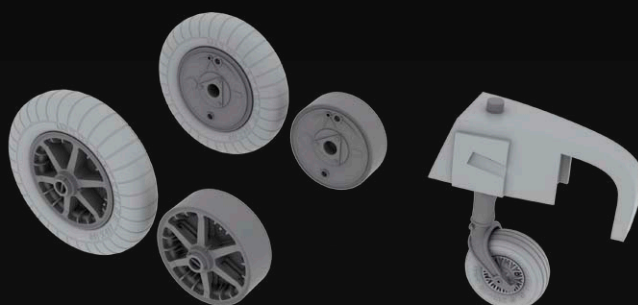
632009 Bf 109E MG 17 mount



Bf 109E MG 17 mount



DB 601A/N powerplant



Bf 109E wheels

eduard



# Fw 190A-7 1/48

**ProfiPACK Cat. No. 8172**

**MARCH 2012**