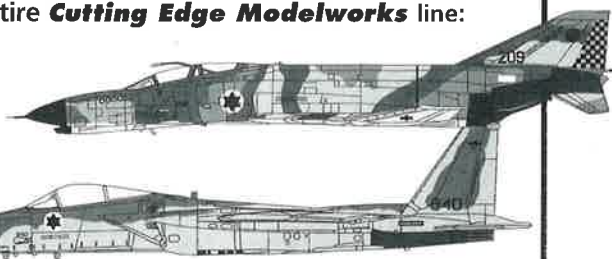


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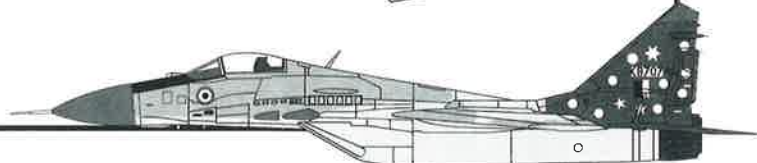
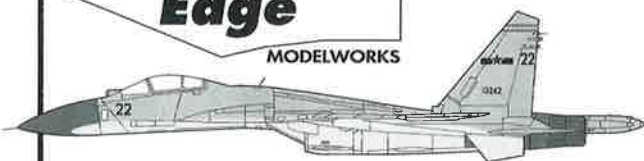
Decals!

Conversions!

Kits!



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MODELWORKS



Write, call, or e-mail for our 80+ page catalog of decals, kits, conversions, tools, books, magazines, etc., and we'll send it to you right away!

Applying the Decals

You probably already know all this stuff, so feel free to use your regular process...however, if you're new to aftermarket decals, here goes:

- Generally, use the Microscale Finishing System. We don't recommend extremely strong decal solvents such as Solvaset.
- Your model must have a smooth, glossy surface, as decals won't adhere well to matte surfaces. Use gloss paints or your favorite clear gloss overspray over matte or semigloss paint.
- Cut each subject out *without* trimming off the slight excess film (this helps the decal film disappear when dry).
- Put the decal in warm water that has a drop or two of liquid dishwashing soap or photo-flo for 10 seconds.
- When the decal will slide off the backing paper without forcing it, apply it to the proper position on your model. Slide the backing paper out from underneath.
- Gently blot off excess water and smooth out bubbles under the decal surface. If you wish, carefully brush on a mild decal softener such as Micro-Sol.
- When all decals are completely dry, gently wash off all excess decal adhesive.
- Finally, overcoat your model with a good quality gloss coat, followed by your choice of matte or eggshell clear topcoat.

Good luck and good modeling!

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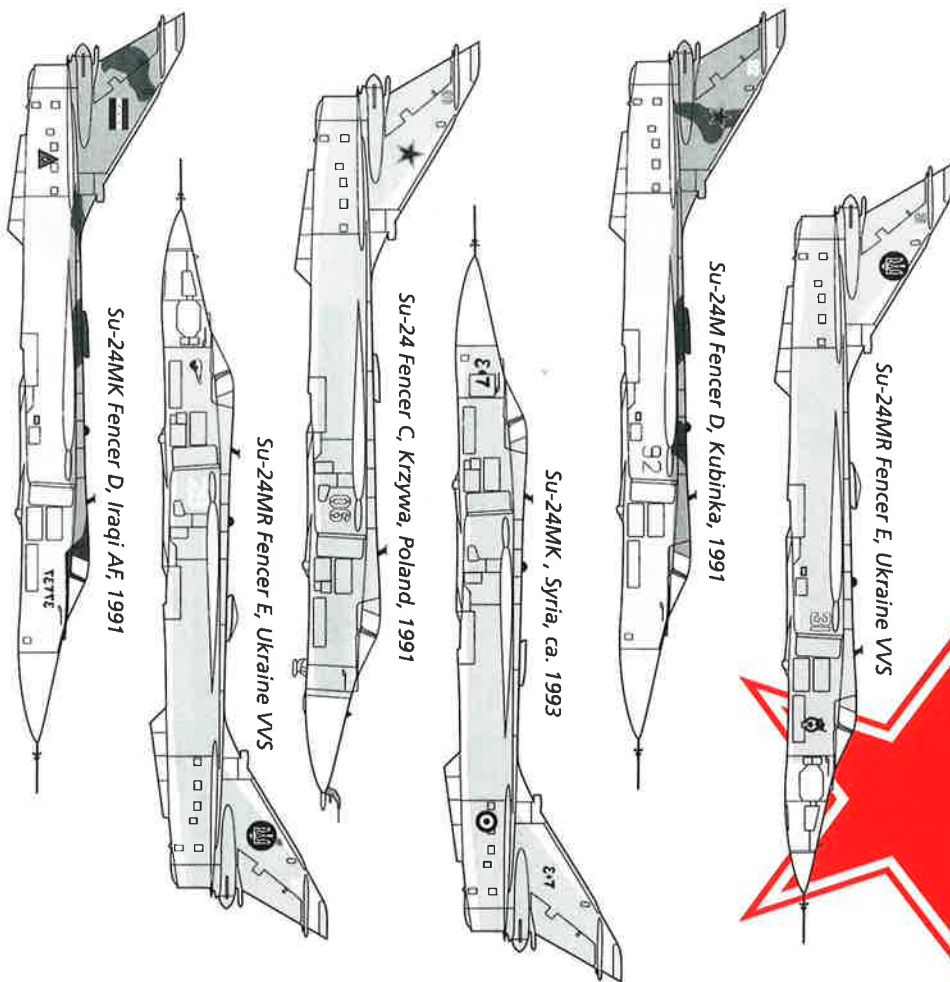
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USA

Recommended kits:
1/72: Dragon/DML
1/48: Cutting Edge Modelworks



Su-24MK Fencer D, Iraqi AF, 1991

Su-24MR Fencer E, Ukraine VVS

Su-24 Fencer C, Krzywya, Poland, 1991

Su-24MK, Syria, ca. 1993

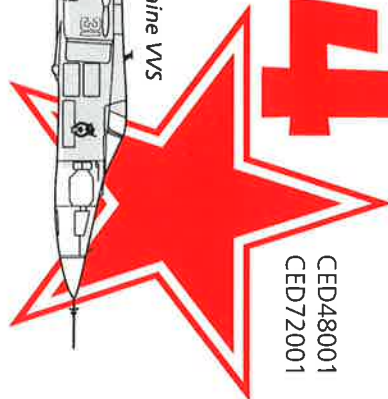
Su-24M Fencer D, Kubinka, 1991

Su-24MR Fencer E, Ukraine VVS

LIMITED EDITION!

Sukhoi Su-24 FENCER

CY-24



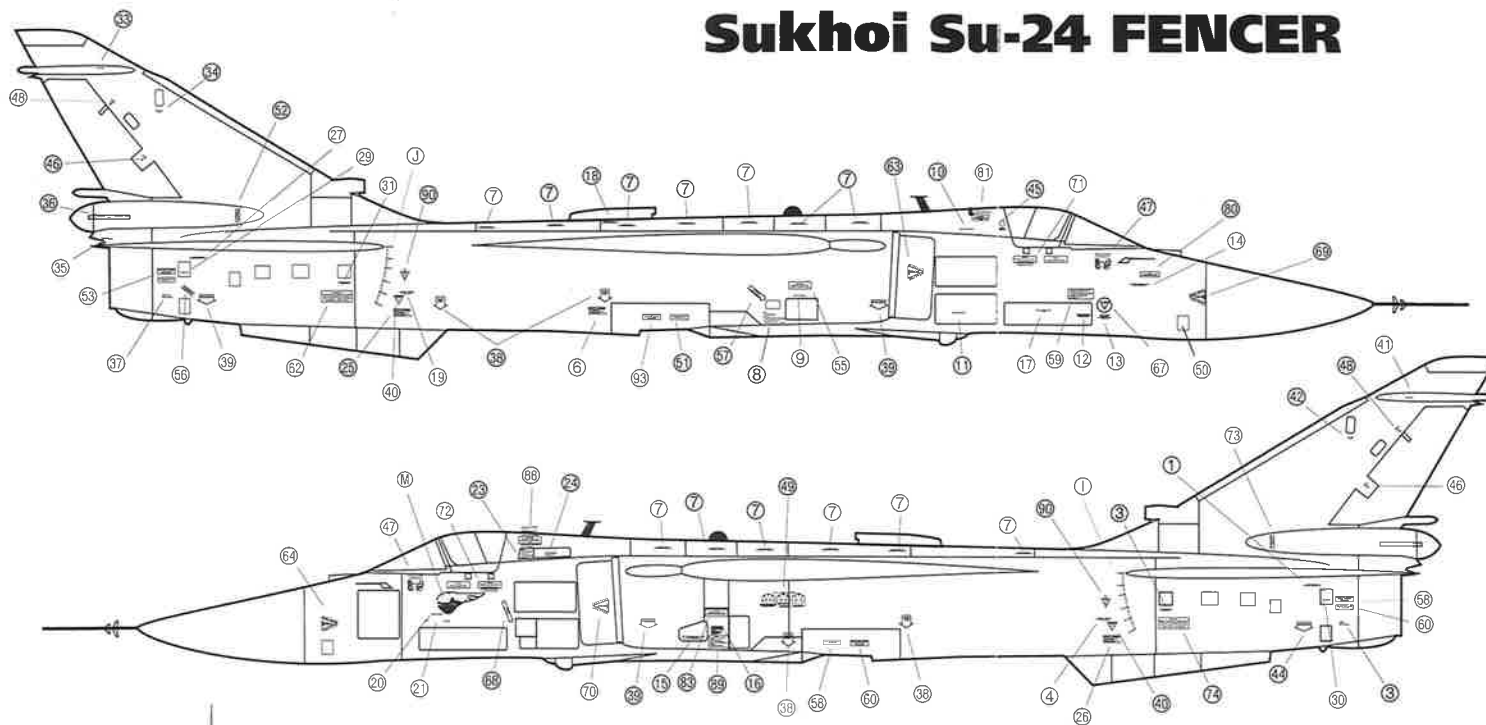
CED48001
CED72001

...includes complete and accurate
Cyrillic stenciling details!

Sukhoi Su-24 FENCER

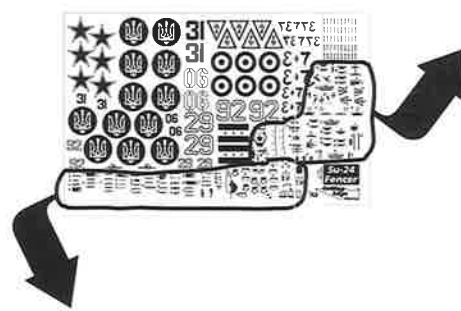
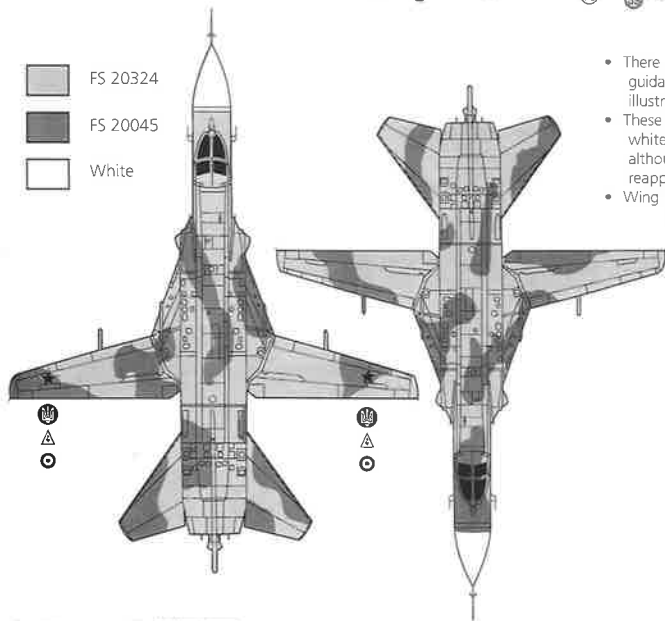
Artwork by DHK Graphics

© Cutting Edge Modelworks, 1995

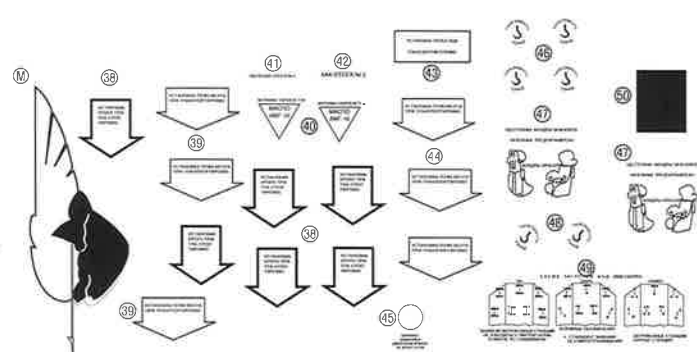
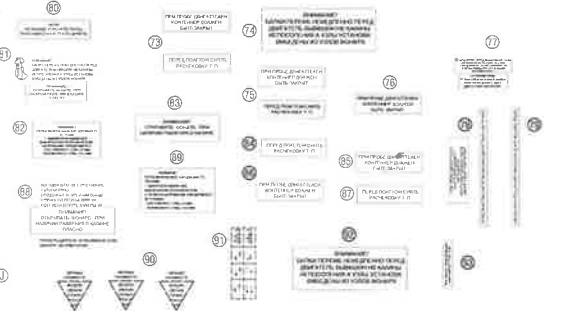
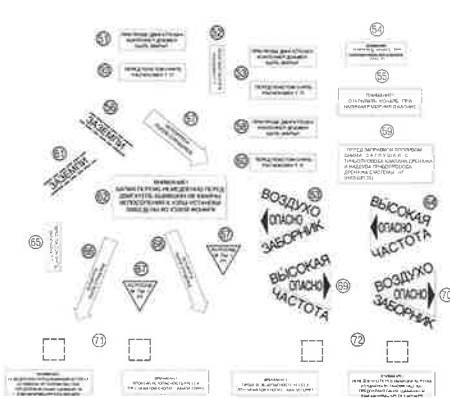


-  FS 20324
-  FS 20045
-  White

- There are many pattern variations between aircraft; so many that it appears no guidance was issued for the camouflage scheme. Two known patterns are illustrated.
- These camouflage colors were roughly spray painted over the original gray/white camouflage. The stencilling was also nearly always overpainted as well, although we've seen a photos of a couple of aircraft that had a few stencils reapplied.
- Wing insignia are placed above and below each wing in the positions indicated (all countries). The top points of the Russian stars are parallel to the centerline when the wings are fully forward.



- This decal sheet contains correct Cyrillic stenciling for the Fencer. There are, however, many variations among the different models and even between different aircraft of the same type. We've tried to give you the alternative markings you might need (especially 38, 39, 43, 44 and others). As always, check your references!
- Because we give you numerous stenciling variations, not all stencils are used on a single airplane (use them for another project—impress your friends).
- The little colored dots are described elsewhere in this instruction sheet.



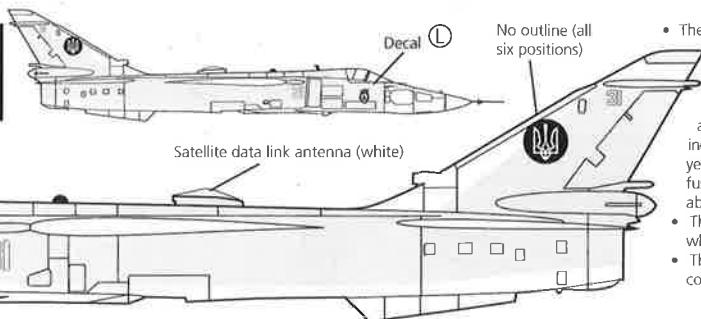
- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

Su-24MR Fencer E

48th Gwardija Razvedchik Aviatsionniy Polk
(Independent Guards Reconnaissance Regiment),
Kolomyia, Ukraine, 1991

References:
PKL 14, p 36
АэроХобби, p 12
Russian Falcons, pp 27-31

NOTE: In the Cyrillic alphabet, a "R" is written as "P," therefore, the Russian designation for this variant is Su-24MP. We have elected to use the common Western designation for convenience.

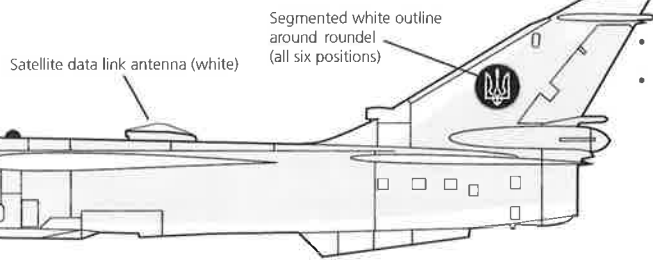
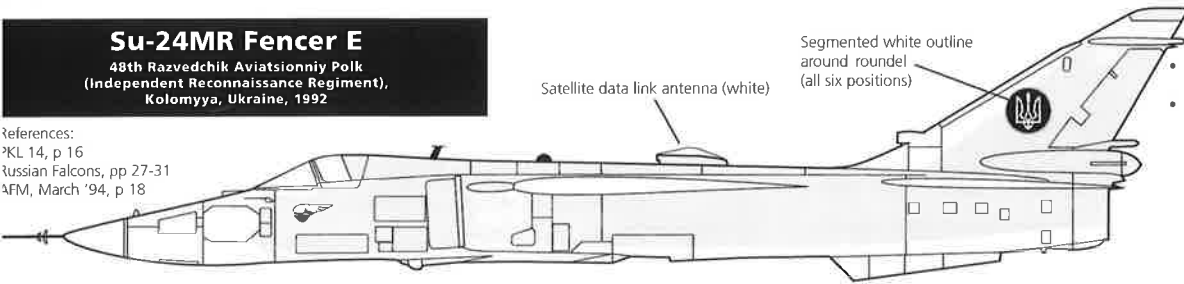


- The Fencer E is based on the Fencer D airframe—see the modifications drawings elsewhere in this instruction sheet.
- Ukrainian aircraft insignia was in a state of flux in the early 1990s. These markings are accurate for this aircraft for the time period indicated. Later, the now-standard Ukrainian yellow/blue roundel was likely added to the fuselage air intake sides and replaced the tridents above and below the wings.
- This aircraft uses the trident roundels without a white outer ring
- This aircraft has the large wing glove fences commonly seen on Fencer Ds

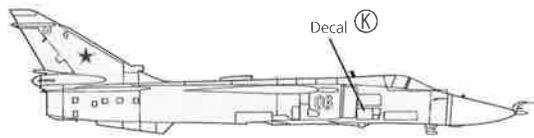
Su-24MR Fencer E

48th Razvedchik Aviatsionniy Polk
(Independent Reconnaissance Regiment),
Kolomyia, Ukraine, 1992

References:
PKL 14, p 16
Russian Falcons, pp 27-31
AFM, March '94, p 18



- This aircraft has the large wing glove fences commonly seen on Fencer Ds.
- The VVAPJ article states the Fencer E has a "smaller nosecone" than the Fencer D. Actually the shapes are similar, although the Fencer E has a much smaller radar and therefore the part of the nose covered by the nose radome doesn't extend as far back toward the cockpit (see 1772 diagram elsewhere).

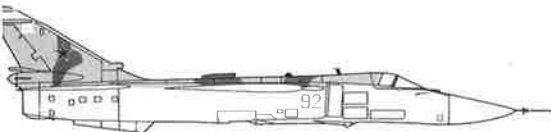
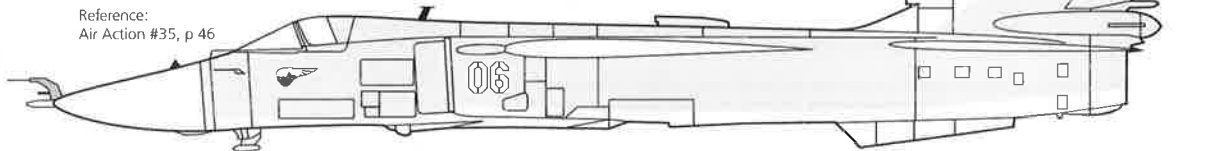


Su-24 Fencer C

3d Bombardirovovnyi Aviatsionniy Polk
(Bomber Regiment),
Krzywa (Kreibau), Poland, 1991

Reference:
Air Action #35, p 46

- This Fencer C did carry the triangular "Sirena" RWR antennas on the upper air intakes—early Fencer Cs did not have them.
- No wing fences.

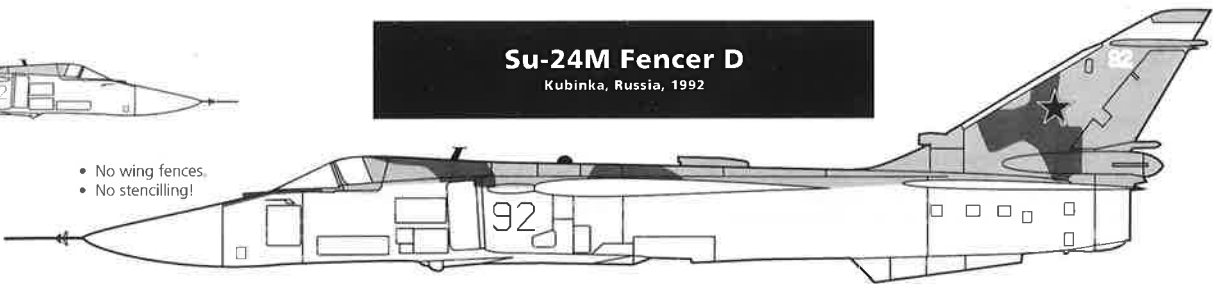


Su-24M Fencer D

Kubinka, Russia, 1992

References:
PKL 16, p 32
Military Aircraft of Eastern Europe (2)
KFI #62, p 29
Air Forces Monthly #47, p 50

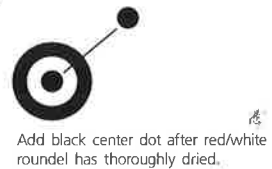
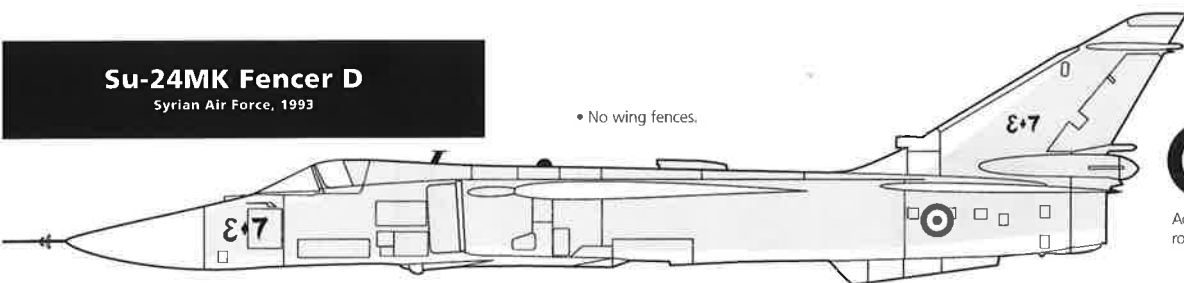
- No wing fences.
- No stencilling!



Su-24MK Fencer D

Syrian Air Force, 1993

- No wing fences.



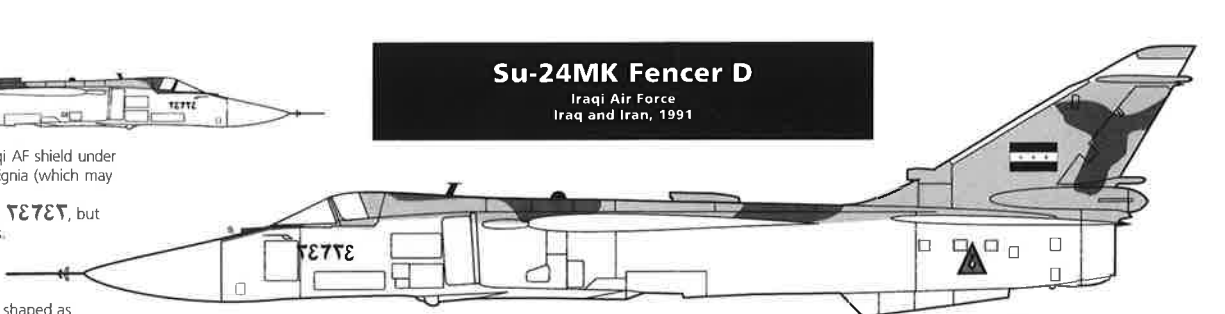
Su-24MK Fencer D

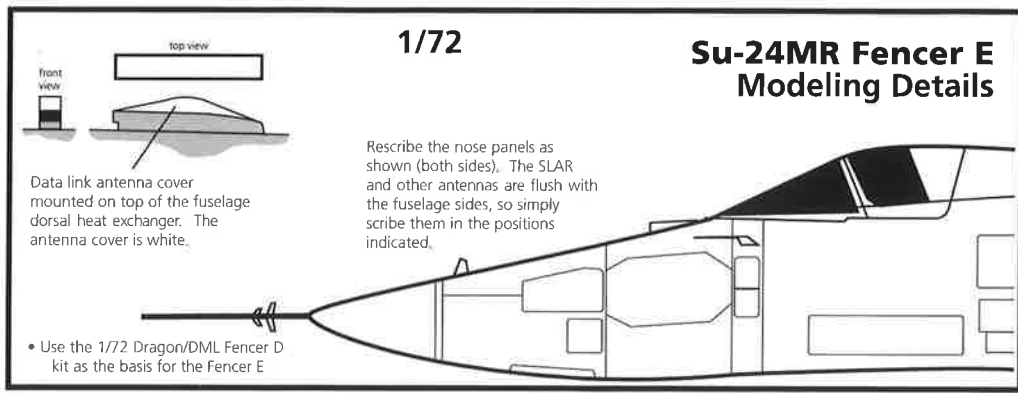
Iraqi Air Force
Iraq and Iran, 1991

Iraqi aircraft are frequently drawn with the Iraqi AF shield under the cockpit; this aircraft did not carry this insignia (which may have been applied only for public display). This plane's number has also been depicted as ٣٤٧٤٣, but the number shown here is correct per photos. Iraqi insignia styles varied widely between aircraft types and even among aircraft of the same type. While the triangles were often equilateral, the Fencer carried triangles shaped as shown here. Many Iraqi Fencers fled to Iran during the Gulf War and are now flying with the Iranian AF.

- No wing fences.
- No stencilling!

References:
Air International, Mar 91, p 118
Zlinek 2/91, pp 18-19





1/72

Su-24MR Fencer E Modeling Details

Rescribe the nose panels as shown (both sides). The SLAR and other antennas are flush with the fuselage sides, so simply scribe them in the positions indicated.

Data link antenna cover mounted on top of the fuselage dorsal heat exchanger. The antenna cover is white.

• Use the 1/72 Dragon/DML Fencer D kit as the basis for the Fencer E



Sukhoi Su-24 FENCER CY-24

General

- The Su-24 is called the "tchemodan" (suitcase) by its Russian crews.
- The Fencer is a pretty old airplane, almost as old as the F-111. Because of this, a great deal of speculative (and wrong) information about the aircraft has been published. The information in this decal set has been taken from photos of the actual aircraft and in many cases, original Russian and Ukrainian published sources. If anyone has *confirmed* information contrary to what we state here, please contact us immediately!
- First test flights were in May 1970 and series production of the Fencer B was started in 1972, followed by production of the Fencer C. Design work to incorporate in-flight refueling, better avionics, guided weapons delivery systems, etc., began in 1975 and series production in 1978. The improved variant is called the Su-24M (the less capable export versions is called the Su-24MK (for kommercheski [commercial]), The Su-24MR (Fencer E) and MP (Fencer F) are variants based on the Fencer D airframe.
- Wing sweep angles are 16° (takeoff and low speed), 35° for subsonic cruise, 45° for combat maneuvering, and 69° for supersonic dash.
- Two early K-36D ejection seats are fitted, which are similar to the K-36DM seats available from several aftermarket manufacturers, but have slightly different headrests. See photos of the real aircraft for a comparison.
- In recent years, the Russian/CIS air forces have had little money to spend on maintaining or improving the appearance of their aircraft (except air show performers). In fact, since 1990, most combat aircraft have gradually become rather shabby looking, much like US Navy carrier aircraft at the end of a long cruise. The planes tend to have extremely faded paint, and spray paint touch-up is common. Touch-up colors tend to be full strength, which makes them quite a bit darker and stronger than the older paint on the aircraft.
- Lotsa Dots! Our decal sheets includes a zillion colored dots of the type the Soviet/CIS air forces use to show maintenance ground crew the proper orientation for replacing removable panels—see the description box below.
- The massive horizontal stabilators use differential control. This means they can be locked together to provide normal up-down pitch control, but they also rotate separately to provide turning and banking control! Amaze your friends and dumbfound the contest judges by pointing one slightly up and one slightly down.
- The Sukhoi Archer logo (a factory inspection marking indicating "suitable for operations"), which is sometimes incorrectly called a "sniper," is always worn on the left side of the fuselage under the cockpit of Soviet/CIS Fencers. Note the red color is ALWAYS correct for the Fencer (but not necessarily for other Sukhoi aircraft—the Flanker always uses a blue archer). Drawings showing this badge on the tail are incorrect.
- For all aircraft on this sheet, the national insignia is carried on both sides of the tail and above and below each wing.
- Extra Soviet/CIS standard "maintenance badges of excellence" are included on this sheet. This badge is awarded to the aircraft (in effect, the maintenance ground crew chief) for overall maintenance excellence.
- For two-part decals, apply the background decal first, allow to dry, then apply the top decal.



Color Cross References:

(taken from the IPMS Color Cross-Reference Guide—used with permission)

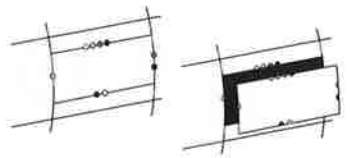
Gray/White Scheme	
FS 36373	Tamiya XF5. NOTE: this color has also been described as close to FS 25107 (but lighter); this was a match from photos with far too much blue content and isn't even close
White	Any white paint (bright white with no blue or yellow)
Variegated Scheme	
FS 20324	None (Use FS 20219 with 20% white—20219 is available as Gunze Sangyo H310, Modelmaster 1742, Mr Color 310, Xtracolor X102, and others)
FS 20045	Tamiya XF10
FS 25550	None (Xtracolor X606 with 50% white would be close)

Bibliography

- Military Aircraft of Eastern Europe (2) Bombers & Attack Aircraft, by Piotr Butkowski, Concord Publications, 1992
- Modern Soviet Warplanes, Fighters & Interceptors, by Steven J. Zaloga, Concord Publications, 1991
- Modern Soviet Warplanes, Strike Aircraft & Attack Helicopters, by Steven J. Zaloga, Concord Publications, 1991
- Red Stars Over Europe, by Markus Fülber, Concord Publications, 1993
- Russian Falcons, The New Wave of Russian Combat Aircraft, by Steven J. Zaloga, Concord Publications, 1992
- Air Action #35, June-July-August 1992, "Les 'Escrimeurs' de Krzywa" (The Fencers Of Krzywa), by C. Piotrowski & Robert Senkowski, pp 38-46
- Air International Vol 40, No 3, March 1991, "Gulf air sorties top 67,000," unattributed, p 118
- Air International, Vol 43, No 3, September 1992, "Fencer Unveiled," by John Fricker, pp 129-136. This remains the definitive source on the Fencer in the English language.
- Koku-Fan Illustrated #62, The Modern Soviet Military Aircraft, 9/2/2, Bunrin-Dō
- Koku-Fan Illustrated #75, 94/4, Super Fighters, Bunrin-Dō
- Przeglądu Konstrukcji Lotniczych (PKL) #14, 2/93, SU-24, by Jefim Gordon
- World Air Power Journal, Vol 5, Spring 1991, "Sukhoi Su-24 'Fencer' Soviet Striker," pp 42-49. Note that although this article contains a great deal of useful information, it was written in 1990 & 1991, prior to the release of a large amount of definitive Fencer information and therefore contains a considerable number of errors—reasonable for its time, but surpassed by newer information. This article has served as a source for many other articles, so these errors appear frequently in other publications as well.
- World Air Power Journal, Vol 20, Spring 1995, "Red Stars Over Germany," pp 52-101, Zlinek 2/91, "Kity letounu Su-24 'fencer,'" pp 18-19
- АэроХобби (Ukrainian Aviation Magazine), Грозный «Фехтовальщик», 2/94, pp 2-12
- Крылья Родины, 1/93, «Штык» И «Шпили» «СЧ», pp 4-5

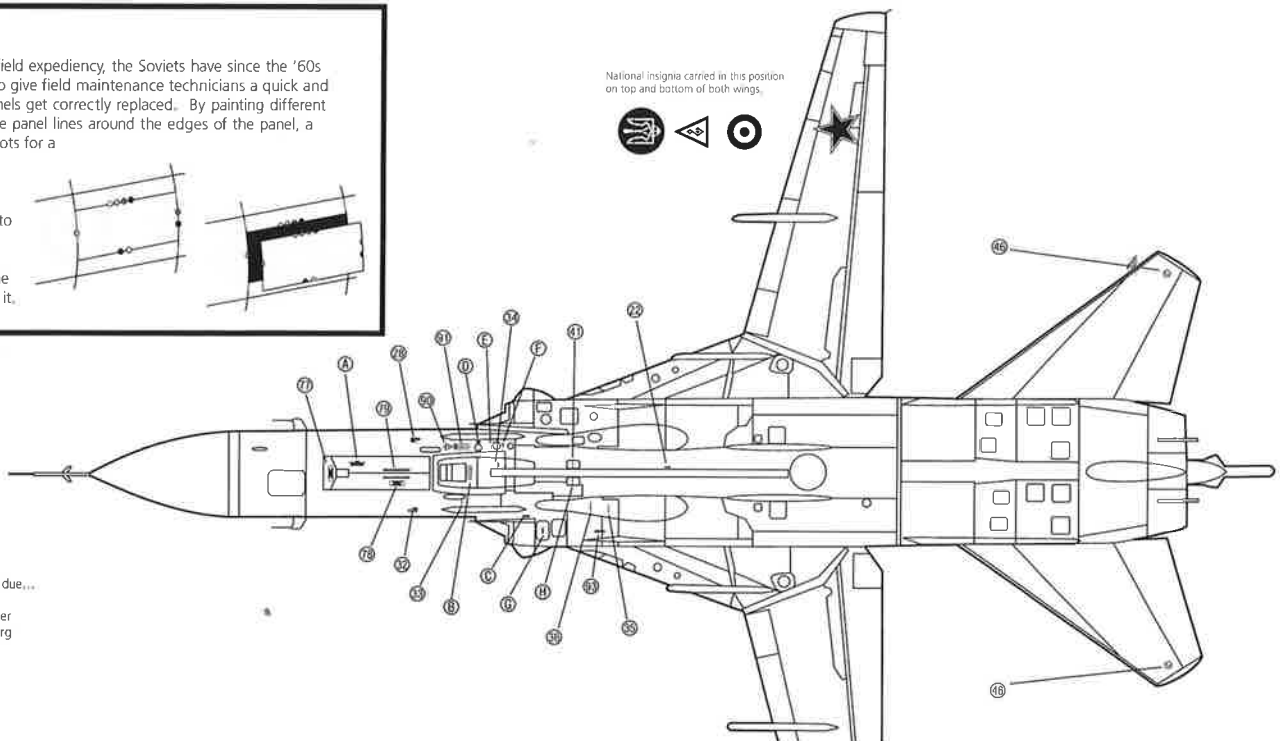
Lotsa Dots!

With their practiced eye towards field expediency, the Soviets have since the '60s used a simple color code system to give field maintenance technicians a quick and dirty way to ensure removable panels get correctly replaced. By painting different numbers of colored dots across the panel lines around the edges of the panel, a technician need only line up the dots for a correct fit every time. Various combinations of numbers of dots and colors are used, so use your imagination when applying them to your model!



This system works so well, even the newest Flankers and Fulcrums use it.

Credit where it's due...
Dave Klaus
Bruce Buchner
Bill Strandberg



National insignia carried in this position on top and bottom of both wings.

