

## HISTORY

The *F-5E Tiger II* carries forward the use concept originated by its predecessor the F-5A/B Freedom Fighter. The original F-5A was developed for the Military Assistance Program which helped provide underdeveloped allied countries with a high performance low-cost fighter. The F-5 program did, and still continues to, provide our less technologically advanced allies with a modern fighter plane that can hold its own with the more sophisticated weaponry of the world's super powers.

The *F-5E Tiger II* is the result of a 1969 proposal by Northrop to upgrade the original Freedom Fighter with the installation of more potent J85-GE-21 engines. Other changes include the addition of maneuvering flaps, a two-position nose gear strut to improve take-off performance, an arrestor hook, additional wing area and a longer and wider fuselage which provides increased fuel capacity. Improved avionics give the *Tiger II* a better chance of hitting aerial targets with its 20mm cannon and Sidewinder missiles.

Although the *Tiger II* was developed for use by foreign countries, its most interesting deployment is with the U.S. Navy and Air Force Aggressor Squadrons where it is flown using Soviet tactics to simulate MiG-21 and MiG-23 fighters, which they closely resemble in size and performance. The Aggressors are used against all types of American and Allied aircraft as a training aid to improve the combat skills of our pilots.

## SPECIFICATIONS

Wing Span	26 ft 8 in
Length	48 ft 2 in
Height	13 ft 4 in
Weight (empty)	9,588 lbs
Weight (max. loaded)	21, 818 lbs
Engines	2 General Electric J85-GE-21 Axial Flow turbojets of 5,000 lbs thrust
Armament	2 Sidewinder missiles
	2 M-39 20mm cannon with 280 rounds per gun

## REFERENCES

**F-5E & F in detail & Scale**, Bert Kinzey  
(Aero Publishers)

**F-5 in Action**, Aircraft No. 38, Lou Drendel  
(Squadron/Signal Publications)

## BEFORE STARTING

1. Study the illustrations and sequence of assembly before beginning.
2. Decide how much detail you wish to add to your model and whether or not you intend to modify or "convert" the basic model in any way. Study carefully all available reference material before beginning to ensure an authentic model.
3. Due to the amount of parts in this kit, do not detach the parts from the runner of the parts tree until you need them. This helps avoid confusion and lost parts.
4. When cementing the parts together, check the way one part fits together with another. This assures a neat job with no surprises.
5. Always remember when working with plastic model cement and paint to keep your work area well ventilated. The fumes from plastic modeling products can be harmful if inhaled.

## PREPARATION OF PARTS

1. Never tear parts off the runner (parts tree). Use a Testor Hobby Knife, fingernail clippers, or a small wire cutters to remove the parts from the tree.
2. It is possible some parts may require a little attention with a file or sandpaper to ensure a proper fit and neat appearance. Hobby files and Testor Hobby Sanding Films appropriate for model building are available in most good hobby shops.
3. If you desire you may fill any seams (where parts go together) or imperfections with Testor Contour Putty for Plastic Models which is also available at good hobby shops.

## PAINTING

You can obtain an excellent finish on your model using Testor finish preparation products and paints. Detailed descriptions of paint types and color are included on the pages that follow.

Good brushes are essential for proper detailing. Testor **Model Master** brushes are recommended and available at good hobby stores. Be sure you have the entire selection for all your modeling needs. Always clean them in Testor thinner, wash in soap and water, and store with bristles upward when not in use.

Wash plastic parts before detaching them from the parts tree. Warm water and liquid dishwashing detergent will remove the oils left from the manufacturing process. Let the parts dry and avoid excessive handling. Immediately before painting, wipe the parts with a "tac rag" (available at auto parts stores) to remove dust and lint.

Most small parts are best painted while still attached to the parts tree. You can also detach them and hold with tweezers or "magic" tape while painting. Paint in one direction only. If your paint is the correct thickness brush strokes will disappear as the color dries. If the paint seems too thick, thin with Testor Paint Thinner. Wheels may be detached from the parts tree and fit onto toothpicks or matchsticks for painting. Just hold the paintbrush against the edge of the wheel and rotate the stick and wheel to obtain a neat finish.

Let the paint dry completely before handling. When the parts are dry, assemble the model, following the directions closely. Remember cement will not hold strongly to painted surfaces. Use your Testor Hobby Knife to carefully remove paint from all surfaces to be cemented. After you have assembled the model you can touchup areas where cement might have marred the finish.

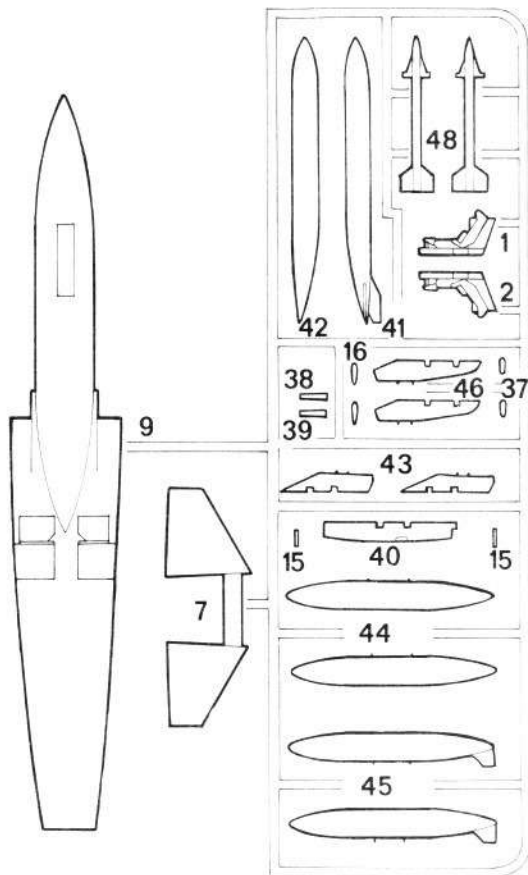
Use the drawings of the complete parts trees as a part locating reference while building the model.

Tweezers will be useful in assembling the many small parts in this kit. The type used by postage stamp collectors is recommended.

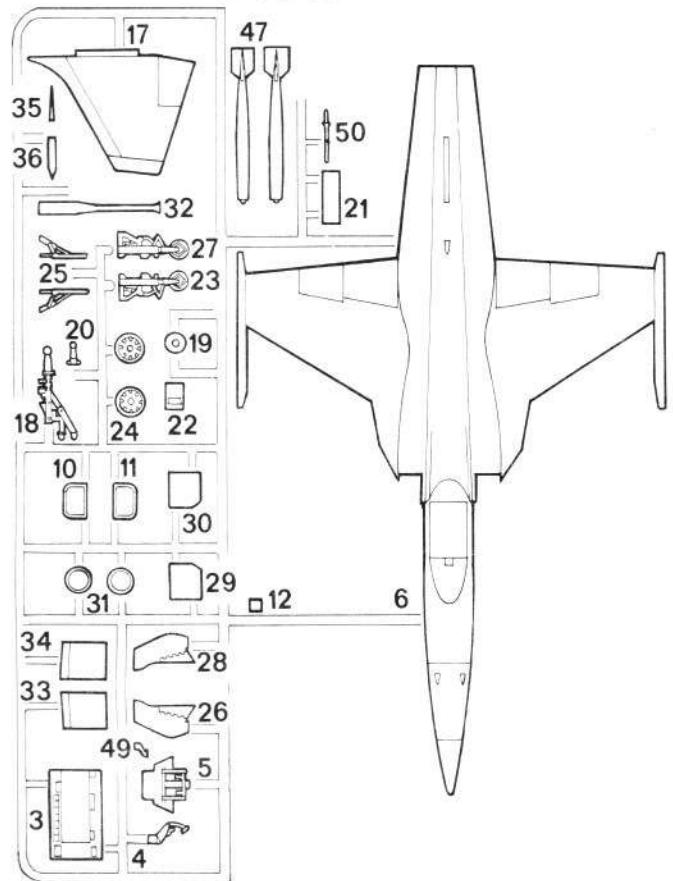
Liquid cement, Testor #3502, is recommended for construction since it can produce the neatest, quickest, and strongest glue joints. Apply small amounts of cement, using the tip of a Testor **Model Master** No. 2 brush, to the surfaces to be joined while holding the parts in place. **Do not** use large amounts of cement.

The Testor **Model Master** paint system is specially designed to be used on military models. The **Preliminary Painting** instructions on this sheet indicate which **Model Master** colors to use as indicated by name and Federal Standard (FS) number. These colors are called out by **bold italic type**. Wherever **Model Master** colors are not applicable the required Testor color will be called out by number and name in **regular bold type**.

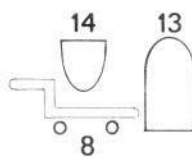
**A Parts**



**B Parts**



**C Parts**



Your *F-5E* model may be finished in one of three different markings. Since these versions vary in some assembly details, it is suggested that you decide which version you prefer before proceeding. (See drawings on pages 6, 7 and 8.)

# 1 PARTS 1 - 9

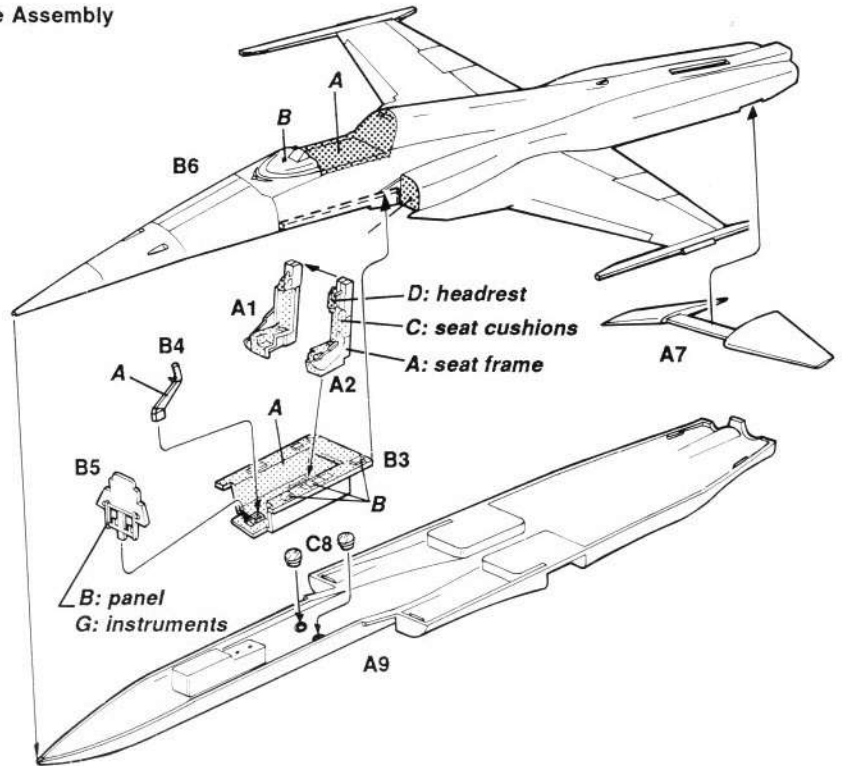
## Preliminary Painting

Paint parts as indicated by *italic* letter callouts using the **COLOR KEY** on this page.

## Assembly

1. Cement ejection seat halves **A1** and **A2** together, then cement seat onto square locator inside cockpit module **B3**. Cement control column **B4** to small locator in front cockpit as shown. Glue instrument panel **B5** into slot at front of floor and to projecting tabs at front of side consoles.
2. Cement cockpit assembly into notched portion in underside of upper fuselage half **B6**. Cement stabilator **A7** into notched portion at rear of upper fuselage, note that the stabilators should slant slightly downwards. Glue one fuselage light **C8** into each hole on inside of lower fuselage half **A9**. Glue upper and lower fuselage halves **B6** and **A9** together and set aside to dry.

## Fuselage Assembly



## COLOR KEY

- A** No. 1728 Light Ghost Gray FS 36375
- B** No. 1747 Flat Black FS 37038
- C** No. 1711 Olive Drab FS 34087
- D** No. 1705 Insignia Red FS 31136
- E** No. 1780 Steel
- F** No. 1790 Chrome Silver FS 17178
- G** No. 1745 Insignia White FS 17875
- H** No. 1104 Red
- J** No. 1124 Green

**Note:** Clear parts are best glued in place with white glue. White glue will not mar the plastic and thus results in a better appearance than conventional model cement.

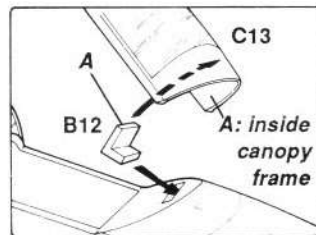
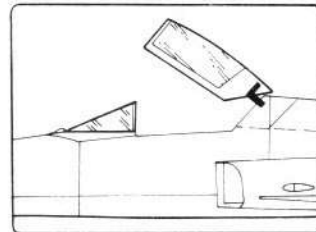


Figure A (open canopy only)



# 2 PARTS 10 - 17

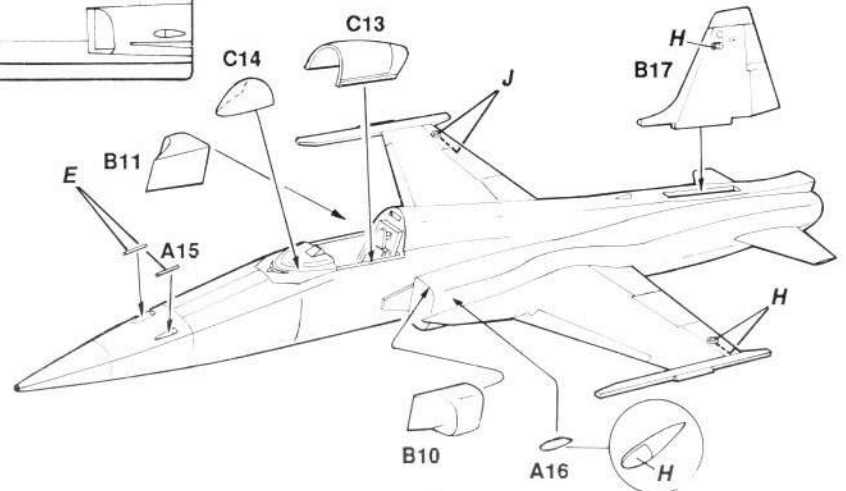
## Preliminary Painting

Paint parts as indicated by *italic* letter callouts using the **COLOR KEY** on this page.

## Assembly

1. Cement left intake scoop **B10** to left side of fuselage. Cement right intake scoop **B11** to right side. If you wish to display your model with an open canopy, glue canopy hinge **B12** into slot at rear of cockpit and *carefully* glue canopy **C13** to hinge as shown in **Figure A**. If you wish to display your model with closed canopy, glue canopy **C13** in place over cockpit. Glue windscreen **C14** over instrument panel fairing at front of cockpit.
2. Cement one machine gun barrel **A5** into each slot on top of nose. Glue one position light **A16** to side of left intake as shown. Use the drawings on pages 6, 7 and 8 as a reference for position. Cement vertical fin **B17** into slot at rear of fuselage.

**NOTE:** All lights should be painted after the model has been painted overall and decals applied.



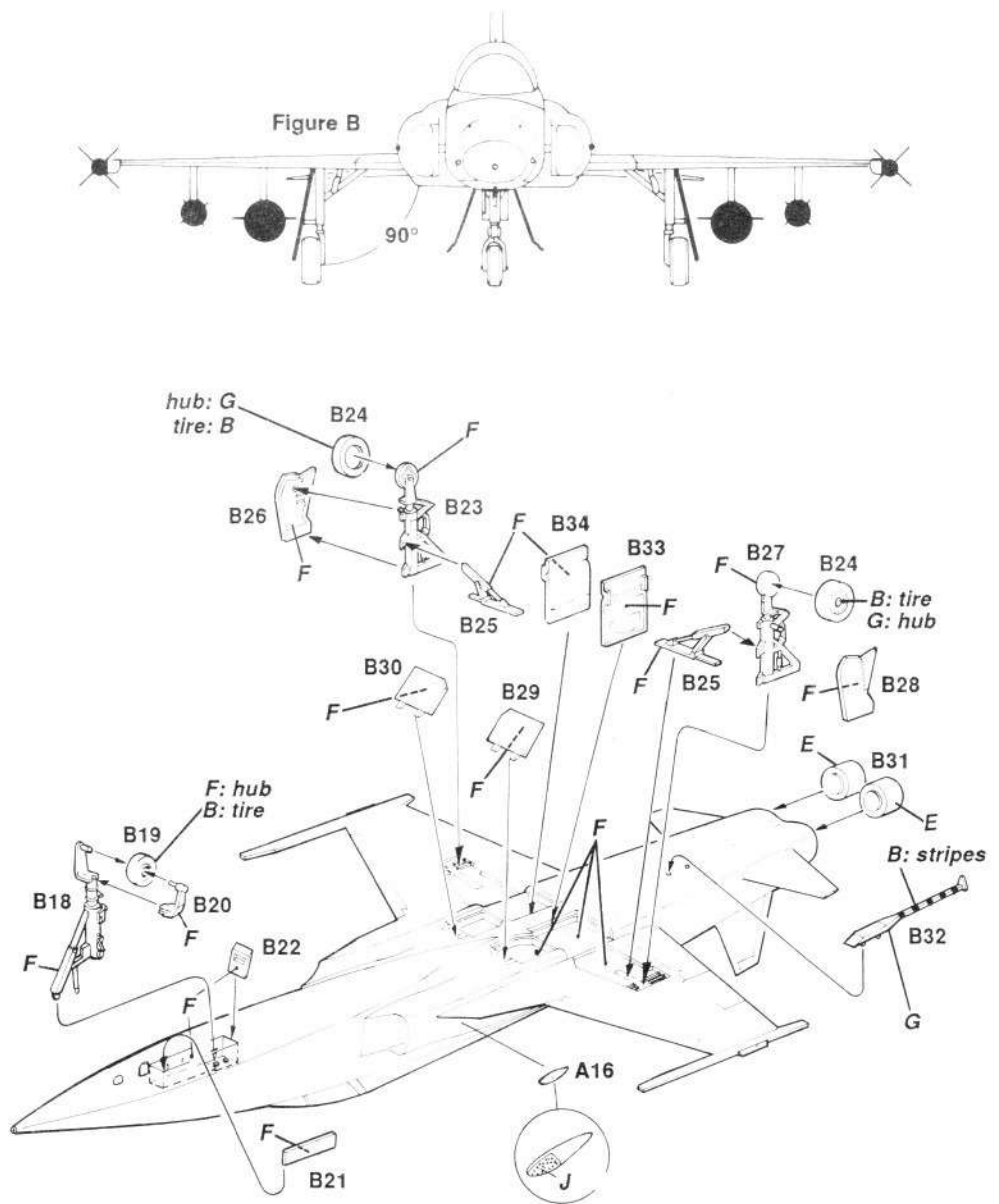
### 3 PARTS 16, 18 - 34

#### Preliminary Painting

Paint parts as indicated by *italic* letter callouts using the **COLOR KEY** on pg. 5.

#### Assembly

1. Glue remaining position light **A16** to right intake. Glue nose wheel **B19** to nose gear strut **B18**. Cement fork **B20** to nose wheel and nose gear strut. Glue nose gear door **B21** to right edge of wheel well as shown. **NOTE:** This door should be glued in *closed position* for **Swiss version**. Cement rear door **B22** to rear edge of wheel well.
2. Glue one main wheel **B24** to left main gear strut **B23**, then cement **B23** into locator inside left main wheel well, see **Figure B** for correct angle of strut. Repeat procedure for right main gear strut **B27**. Glue one actuator **B25** to each wheel well and main gear strut. Cement left and right outer gear doors **B26** and **B28** to main gear struts as shown in assembly drawing and **Figure B**.
3. Glue right and left speed brakes **B29** and **B30** to positions indicated in front of speed brake wells. Cement exhaust cones **B31** into openings at rear of fuselage. Glue arrestor hook **B32** into holes on underside of fuselage.
4. Cement inner main gear doors **B33** and **B34** to inner edges of wheel wells as shown, **Figure B** shows correct angle for these doors. **NOTE:** These doors normally remain open when the plane is on the ground, however, on the **Swiss Air Force version** these doors *normally* close once the main gear has extended (see Step 4 below). If you are not building the **Swiss version**, skip Step 4 and proceed to Step 5.



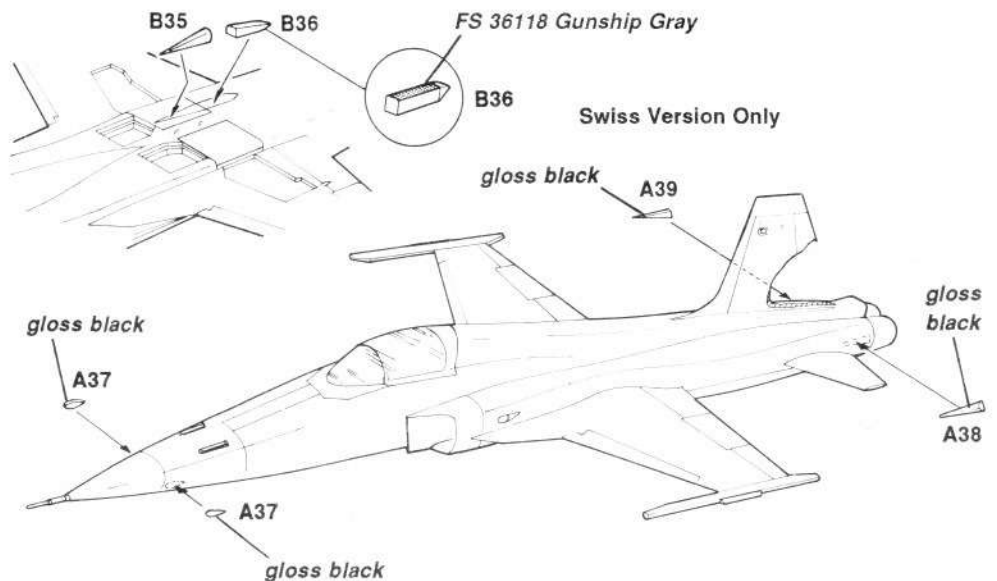
### 4 SWISS VERSION ONLY PARTS 35 - 39

#### Preliminary Painting

Paint parts as indicated by *italic* letter callouts using the **COLOR KEY** on pg. 5.

#### Assembly

1. Cement fairing **B35** to position scribed on left inner main gear door. Glue fairing **B36** to position scribed on underside of fuselage immediately behind door. Cement RHAW (Radar Homing and Warning) blisters **A37** to either side of nose at positions shown (also see drawings on page 8 for position). Glue rear RHAW blisters **A38** and **A39** to left and right sides of rear fuselage respectively.



# 5 PARTS 40 - 50

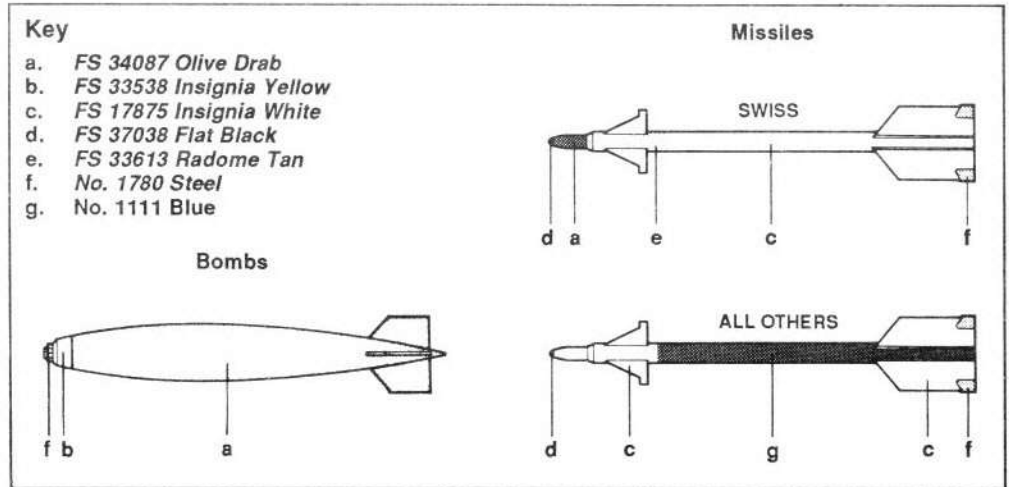
## Preliminary Painting

Paint parts as indicated by *italic* letter callouts using the **COLOR KEY** on this page.

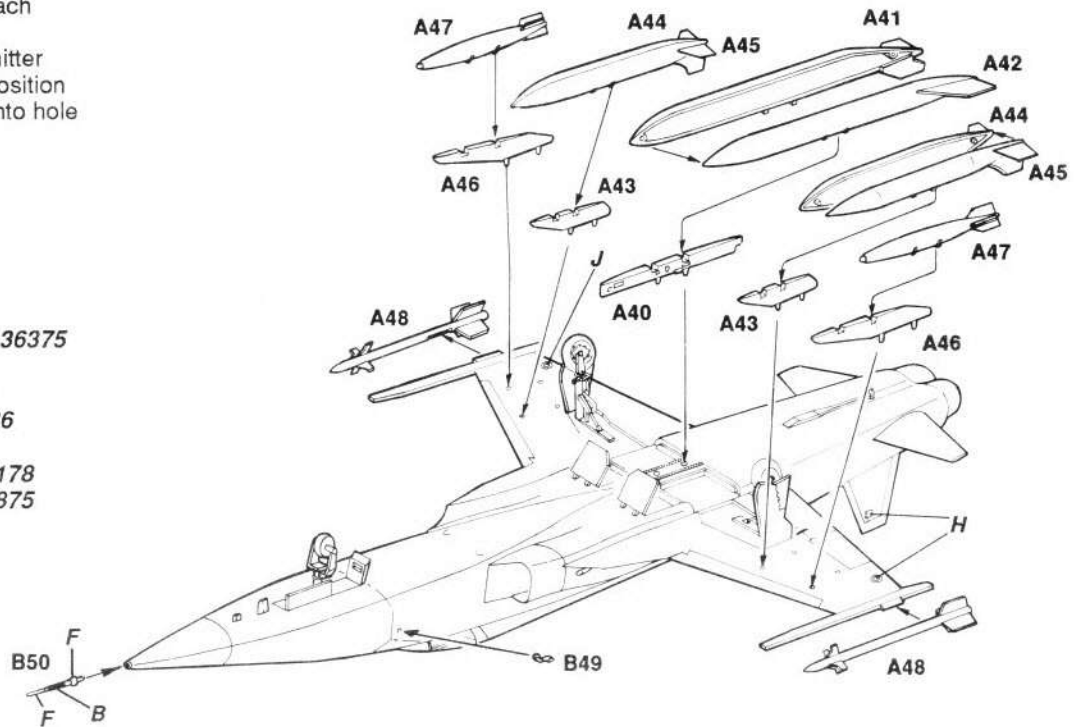
### Assembly

1. **NOTE:** U.S. Navy and Air Force Aggressors usually carry Sidewinder missiles, and sometimes are equipped with the centerline rack and drop tank. However, Aggressor aircraft *do not* carry underwing racks or stores of any kind. If you are building the **U.S. Navy or Air Force Aggressor versions**, omit underwing racks, bombs and tank parts **A43**, **A44**, **A45**, **A46** and **A47**. With this exception, all stores are optional for all versions. It will be easier to finish your model if these parts are left off until painting is completed.
2. Cement centerline rack **A40** into holes on underside of fuselage. Cement centerline tank halves **A41** and **A42** together, then glue to pins on centerline rack **A40**. Glue inboard wing racks **A43** to positions shown under each wing. Cement wing tank halves **A44** and **A45** together making 2 tanks, then glue one tank to each rack **A43**. Cement outboard wing racks **A46** to positions shown under each wing. Glue one bomb **A47** to each rack **A46**. Cement one Sidewinder missile **A48** to each wing tip launch rail.
3. Glue angle of attack vane transmitter **B49** to right side of fuselage at position shown. Cement pitot tube **B50** into hole in tip of nose.

Bombs and missiles should be painted as shown in this diagram.



### Armaments



### COLOR KEY

- A No. 1728 Light Ghost Gray FS 36375
- B No. 1747 Flat Black FS 37038
- C No. 1711 Olive Drab FS 34087
- D No. 1705 Insignia Red FS 31136
- E No. 1780 Steel
- F No. 1790 Chrome Silver FS 17178
- G No. 1745 Insignia White FS 17875
- H No. 1104 Red
- J No. 1124 Green

**COLOR KEY**

 **FS 35109 Dark Blue** (mix 5 parts No. 1172 Flat Sea Blue, 3 parts FS 34227 Pale Green and 1 part FS 35622 Duck Egg Blue).

 **FS 35414 Blue Gray** (mix 5 parts FS 35622 Duck Egg Blue, 1 part FS 34227 Pale Green and 1 part FS 35164 Intermediate Blue).

 **FS 35164 Intermediate Blue**

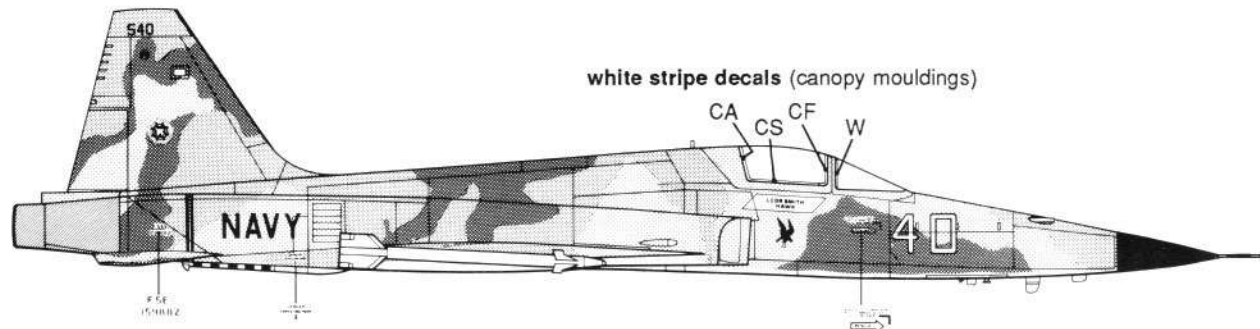
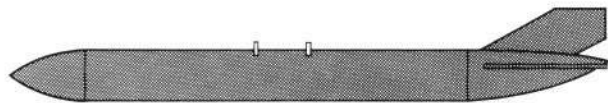
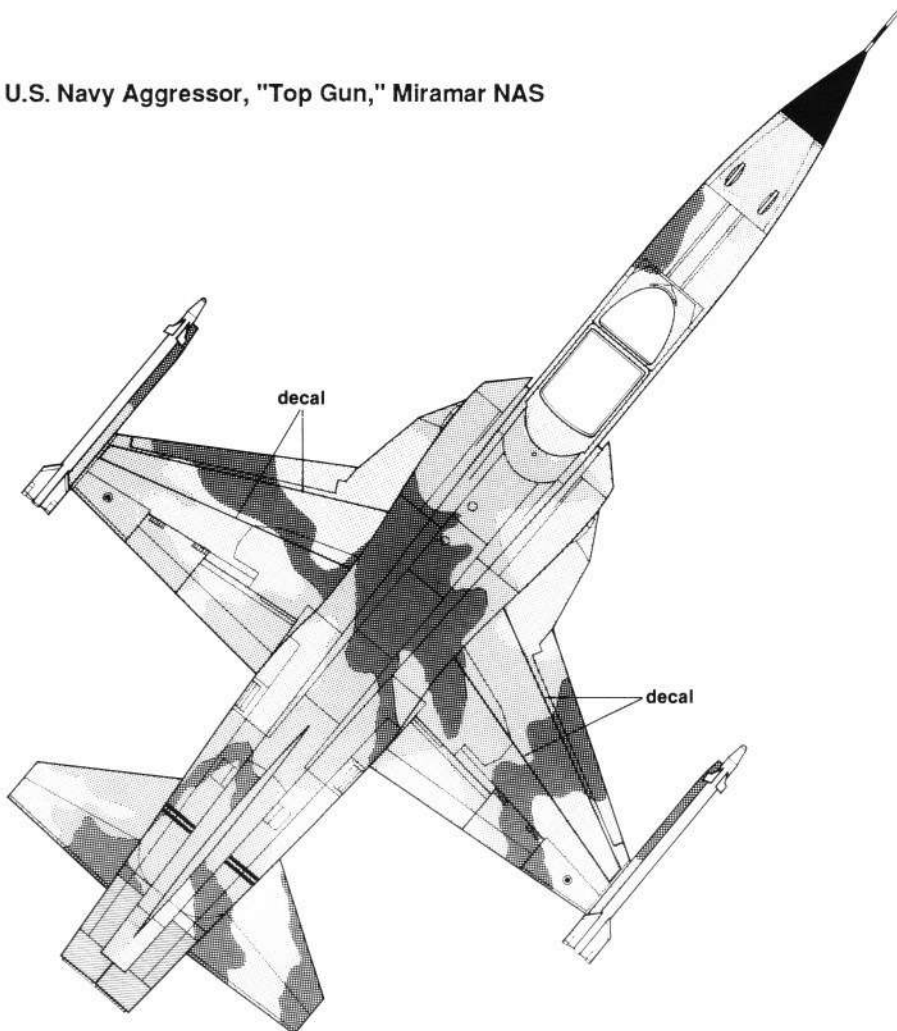
 **FS 35622 Duck Egg Blue\***

 **FS 37038 Flat Black**

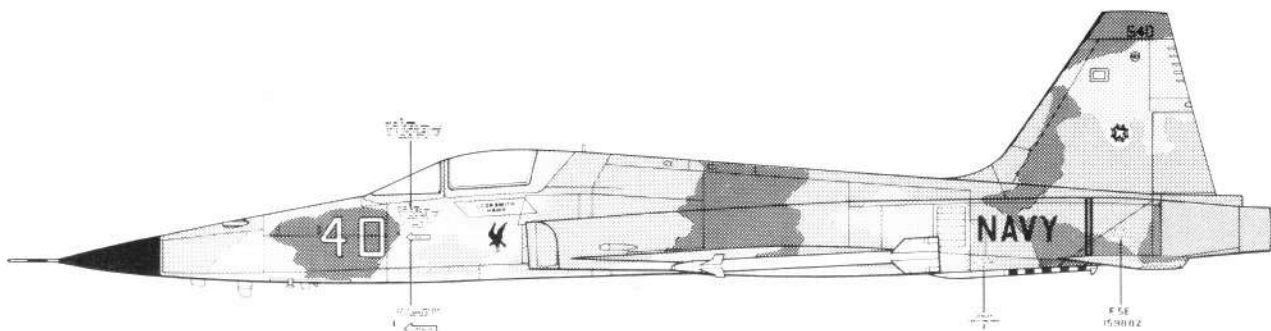
 **No. 1780 Steel**

\*Undersurfaces only.

**F-5E U.S. Navy Aggressor, "Top Gun," Miramar NAS**



white stripe decals (canopy mouldings)



**NOTE:** A more realistic appearance may be achieved if the nose radome is over painted with *Testor Model Master Semi-Gloss Lacquer spray No. 1959.*

COLOR KEY



FS 33531 Sand



FS 30118 Field Drab

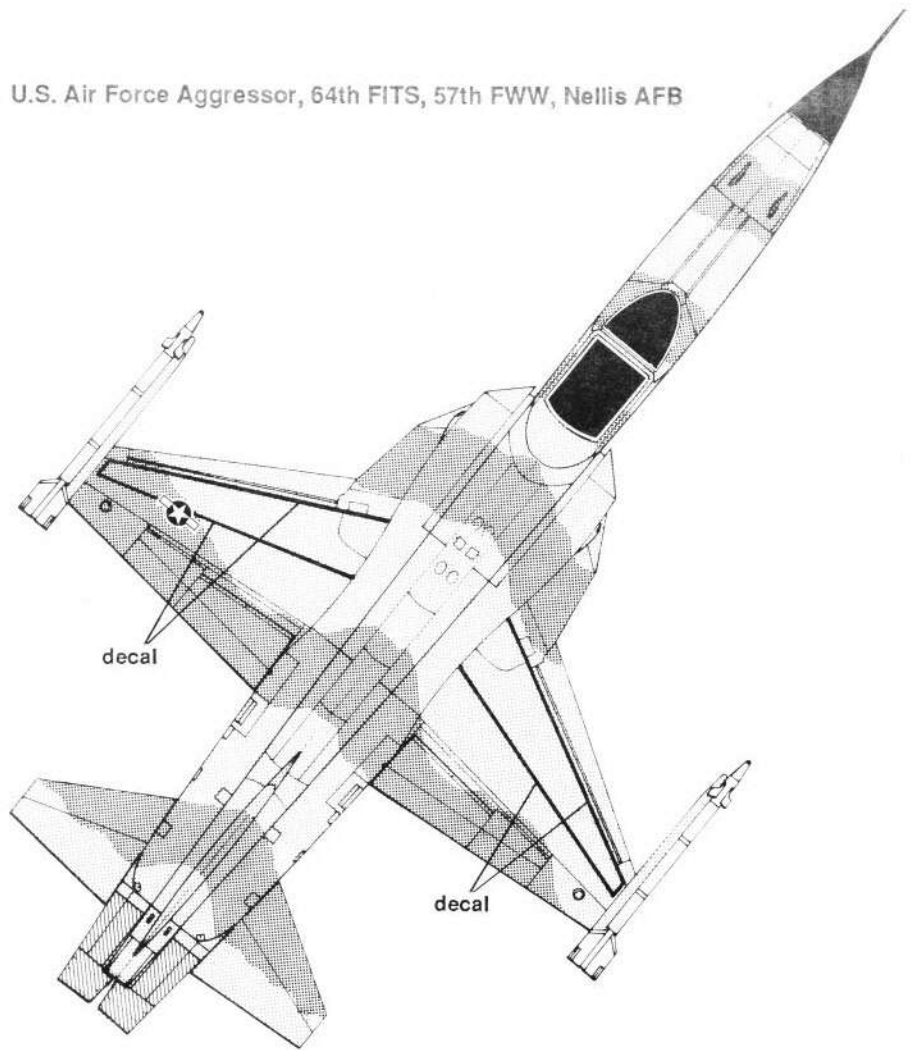


FS 37038 Flat Black

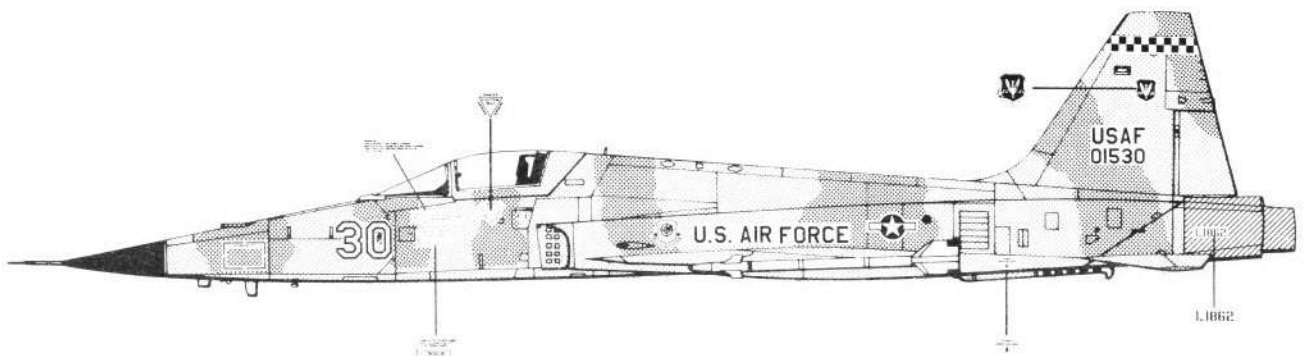
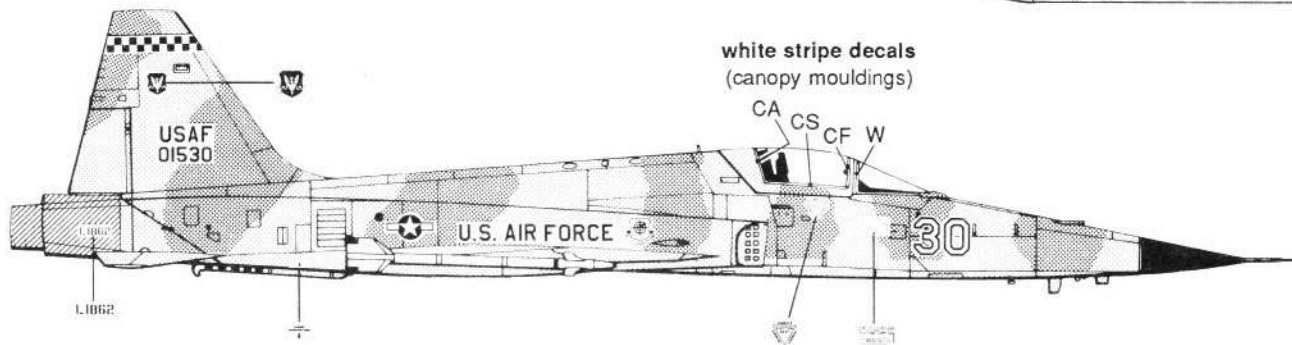
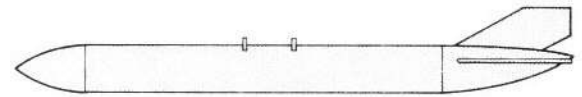


No. 1780 Steel

F-5E U.S. Air Force Aggressor, 64th FITS, 57th FWW, Nellis AFB



NOTE: A more realistic appearance may be achieved if the nose radome is over painted with *Testor Model Master Semi-Gloss Lacquer spray No. 1959.*



## COLOR KEY



FS 36320 Dark Ghost Gray



FS 36375 Light Ghost Gray



FS 37038 Flat Black

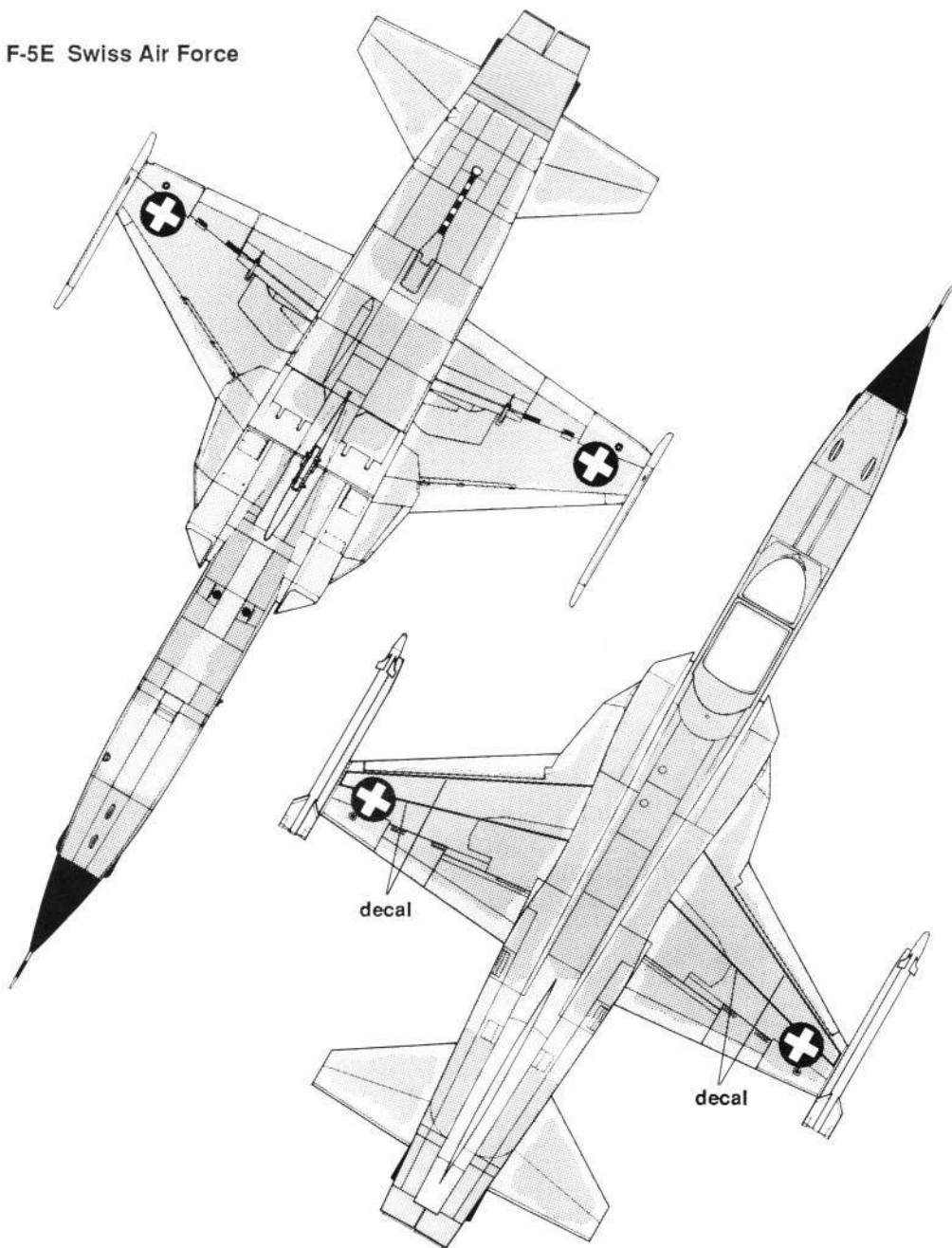


No. 1780 Steel

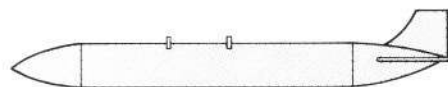
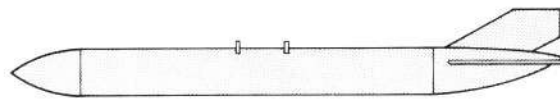
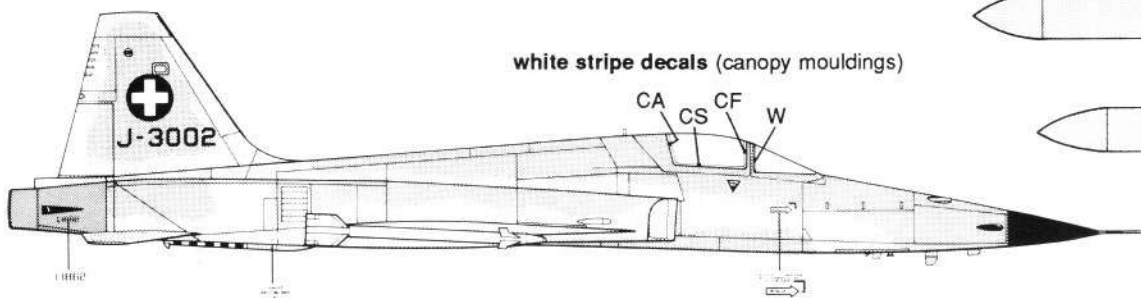
## APPLYING DECALS

1. After carefully masking clear areas, spray entire model with Testor **Model Master Gloss Clear Laquer No.1961**. Decals adhere best to a smooth surface and the shinier the finish the smoother it is. Allow the **Gloss Clear Laquer** to dry before going further.
2. Select the decals you plan to use and cut them from the decal sheet with scissors or a Testor Hobby Knife.
3. Working with only one decal at a time, dip the decal in clear water for no more than five seconds. Remove it from the water and place on a dry paper towel for about one minute.
4. When the decal slides easily on the backing paper, slide it to the edge of, and onto, the surface of the model with a soft Testor **Model Master** paint brush or tweezers. Remember the decals are very thin and can be easily ripped. Work slowly and carefully.
5. Once the decal is in the desired position apply a small amount of Testor **Decal Set #8804**. This will help the decal conform to any irregularities in the surface of the model. Allow the decal to dry undisturbed. Should you desire to purposely move it before it has dried, apply a little Decal Set to a soft brush and push the decal slowly to the desired position.
6. When the decals are completely dry (usually overnight), apply a coat of Testor **Model Master Flat Clear Laquer No.1960**, to the entire model. This will give it an authentic, dull finish and protect the surface of the model. Now you can carefully remove the masking from the clear parts.

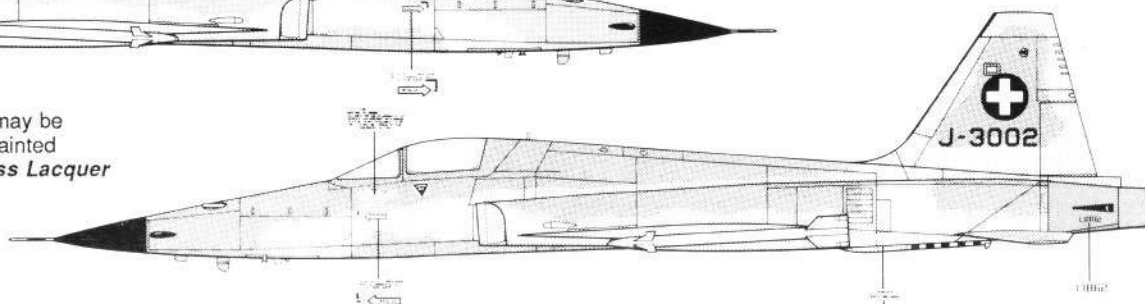
F-5E Swiss Air Force



white stripe decals (canopy mouldings)



**NOTE:** A more realistic appearance may be achieved if the nose radome is over painted with Testor **Model Master Semi-Gloss Lacquer spray No. 1959**.



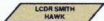


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U.S. AIR FORCE



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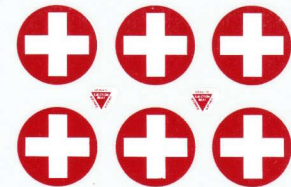
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