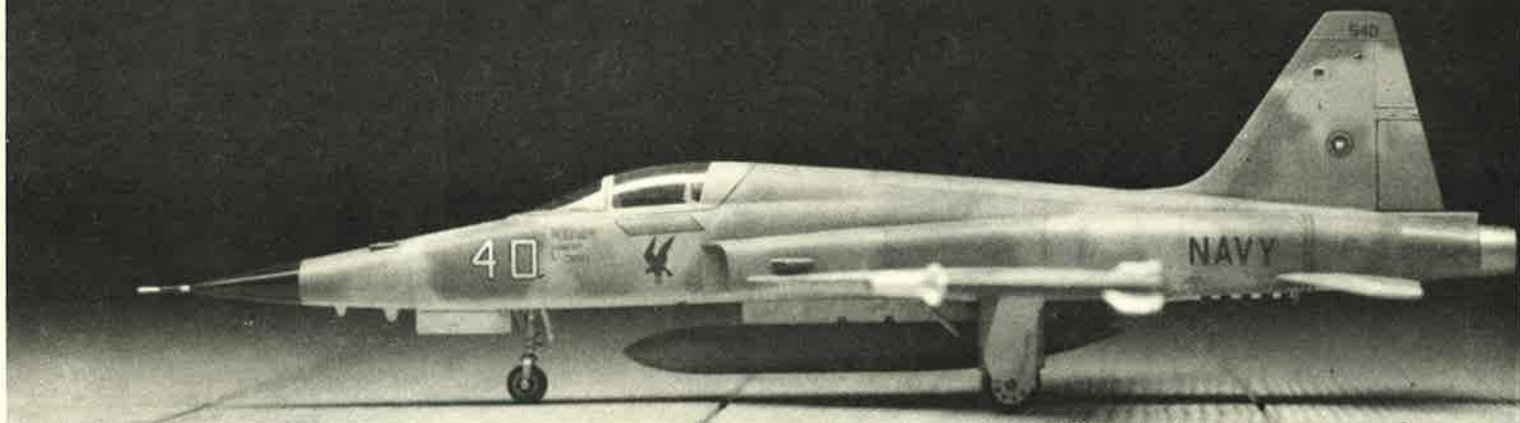


F-5E TIGER II

No. 686

TESTORS



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 was created to help provide underdeveloped allied countries with a high performance low cost fighter. The requirements for the *F-5* were that it be inexpensive and easy to fly and maintain. 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. This proposal was to improve the *F-5* to the point where it would be a match for Soviet Fighters and thus be optimized for air-to-air fighter interceptor role. 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.

The *F-5* is presently in the inventory of over twenty foreign airforces. With the creation of the new *F-5G Tigershark*, equipped with the new *F404* engine, power output will be increased by 60% over that of the *F-5E*. This plane will carry the Military Assistance Program epitomized by the *F-5* airplane, into the 21st century.

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
Engine	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

Reference Sources

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 runners (sprue) until you need them. This helps avoid confusion and lost parts.
4. When cementing the parts together, check the way in which one part fits together with another. This ensures a neat job.
5. Always remember, when working with plastic model cement and paint, make sure your work is well-ventilated. The fumes from plastic modeling products can be harmful if inhaled.

PREPARATION OF PARTS

1. Never tear parts off the runners (sprue). Use a Testor Hobby Knife, nail clippers, or small wire cutters.
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 Sandpaper 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 Enamels. Parts of the model are painted individually, and then the entire model is oversprayed when you have finished construction.

First of all, be sure your brushes are soft, clean and flexible. (Keep them that way by cleaning them thoroughly with Testor Paint thinner.) Never use inexpensive brushes! A selection of Testor Shed-Proof Brushes will serve you well.

Wash plastic parts before detaching them from the sprue. Warm water and liquid detergent 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 automotive centers) to remove dust and lint.

Most parts are best painted while still attached to the sprue or they may be detached and held with tweezers or "magic" type transparent tape. Paint in one direction only. If your paint is the correct consistency, brush strokes will disappear as the color dries. If the paint seems too thick, thin it with Testor Paint Thinner. Wheels may be detached from the sprue and fit onto toothpicks or matchsticks for painting. Then just hold the paintbrush against the edge of the wheel and rotate the wheel to obtain a neat clean finish.

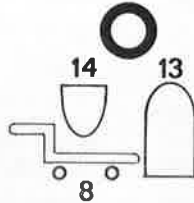
Let the paint dry completely before handling. When the parts are dry, assemble the model, following the directions closely. Remember cement will not stick to painted surfaces. Using your Testor Hobby Knife, carefully remove paint from all surfaces to be cemented. After you have assembled your model you may touch up areas where cement has marred the finish.

When your model is completed, apply a coat of Testor Dullcote #1260 to the entire model. This will give it an authentic, dull finish and protect the surface of the model.

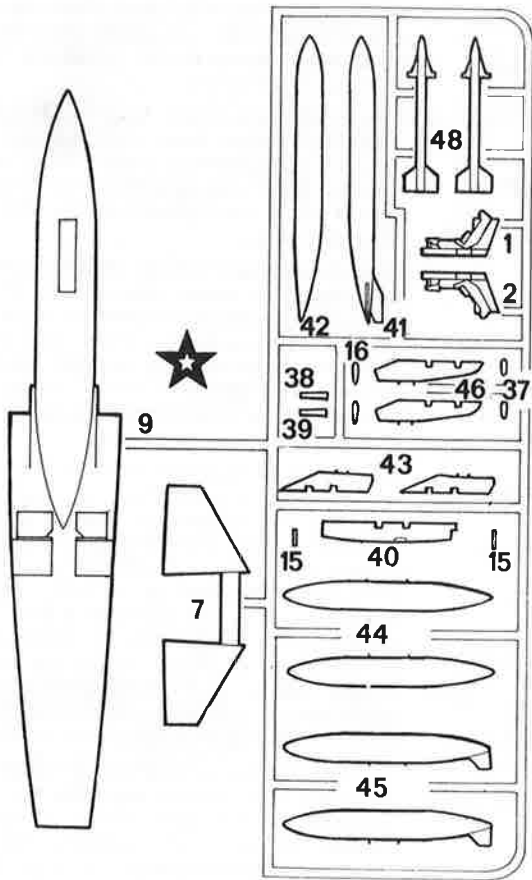
Remove this page from the instruction sheet by cutting along indicated line. Use the drawings of the complete sprue as a part-locating reference when building the model.

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 00 brush, to the surfaces to be joined while holding the parts in place. Do **not** use large amounts of cement.

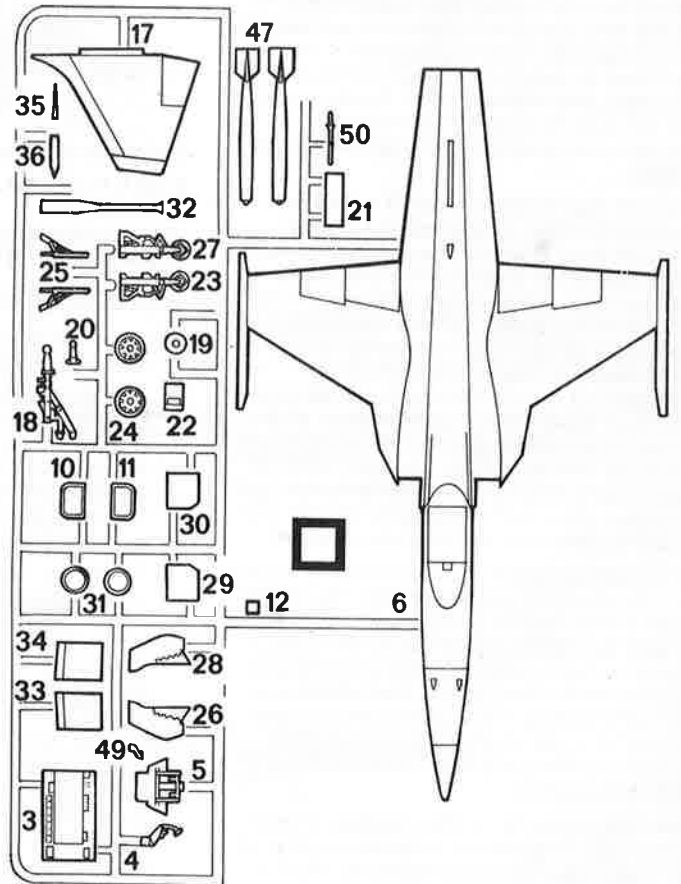
Tweezers will be useful in assembling the many small parts in this kit. The type used by postage stamp collectors is recommended.



Parts from this section are identified with this symbol: ○



Parts from this section are identified with this symbol: ☆



Parts from this section are identified with this symbol: □

Cut and remove this sheet.

The Testor **Model Master** paint system is specially designed to be used on military models. The **Preliminary Painting** instructions in this sheet indicate which **Model Master** colors to use by FS number and name. 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**.

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

1 PARTS 1-9

Preliminary Painting

☆1, ☆2, □3, □5; □6 interior of cockpit area only:

FS 36375 Light Ghost Gray

□3, □5 instrument and control details; □6 instrument panel fairing and flat area at front of intakes; □4:

FS 37038 Flat Black

☆1, ☆2 headrest only:

FS 31136 Insignia Red

☆1, ☆2 seat cushion only:

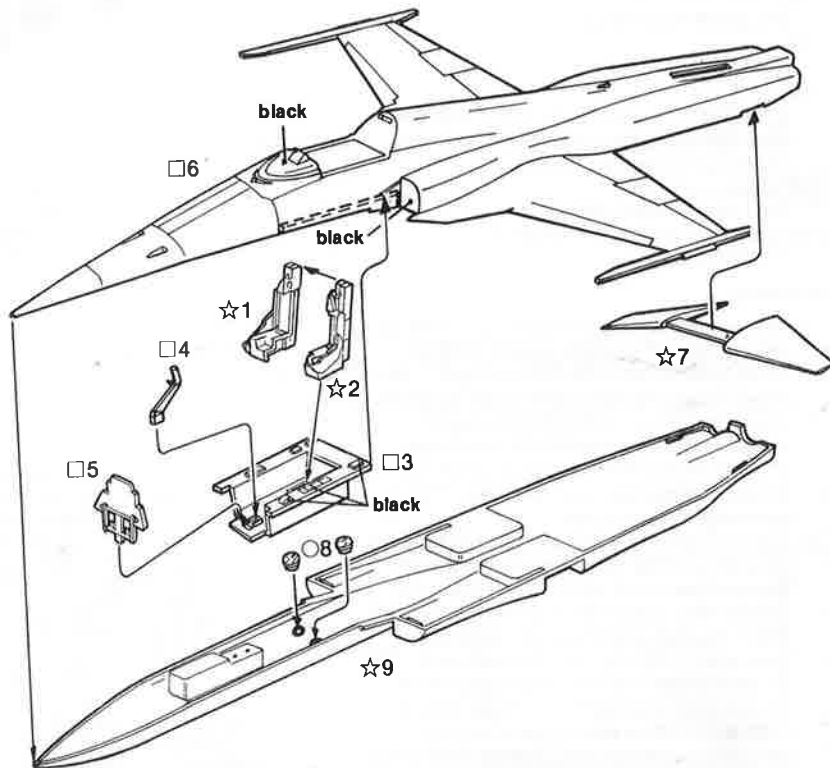
FS 34087 Olive Drab

Assembly

1. Cement ejection seat halves ☆1 and ☆2 together, then cement seat onto square locator inside cockpit module □3. Cement control column □4 to small locator in front cockpit as shown. Glue instrument panel □5 to slot at front of floor and projecting tabs at front of side consoles.

2. Cement cockpit assembly into notched portion in underside of upper fuselage half □6. Cement stabilator ☆7 into notched portion at rear of upper fuselage, note that the stabilators should slant slightly downwards. Glue one fuselage light ○8 into each hole on inside of lower fuselage half ☆9. Cement upper and lower fuselage halves □6 and ☆9 together and set aside to dry.

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



2 PARTS 10-17

Preliminary Painting

○13 inside of canopy frame; □12:

FS 36375 Light Ghost Gray

☆15:

#1780 Steel

Navigation lights on top and bottom of right wing:

#1124 Green

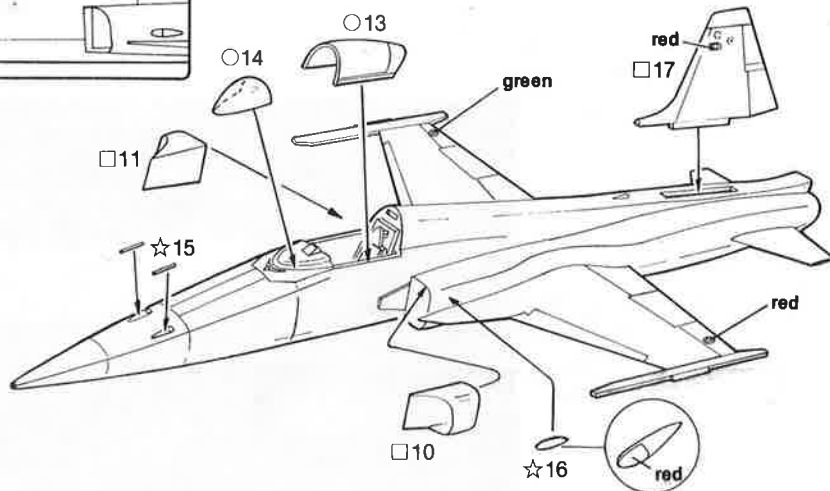
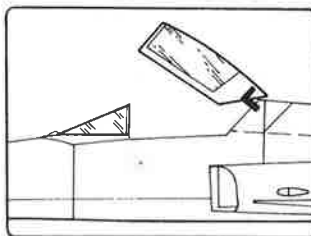
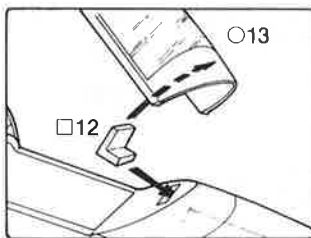
Navigation lights called out in drawing:

#1104 Red

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

Assembly

1. Cement left intake scoop □10 to left side of fuselage. Cement right intake scoop □11 to right side of fuselage. If you wish to display your model with an open canopy, cement canopy hinge □12 into slot at rear of cockpit and carefully glue canopy ○13 to hinge as shown in **fig. a**. If you wish to display your model with closed canopy, glue canopy ○13 in place over cockpit. Glue windscreen ○14 over instrument panel fairing at front of cockpit.
2. Cement one machine gun barrel ☆15 into each slot on top of nose. Cement one position light ☆16 to side of intake as shown, use box photos as a reference for position. Cement vertical fin □17 into slot at rear of fuselage.



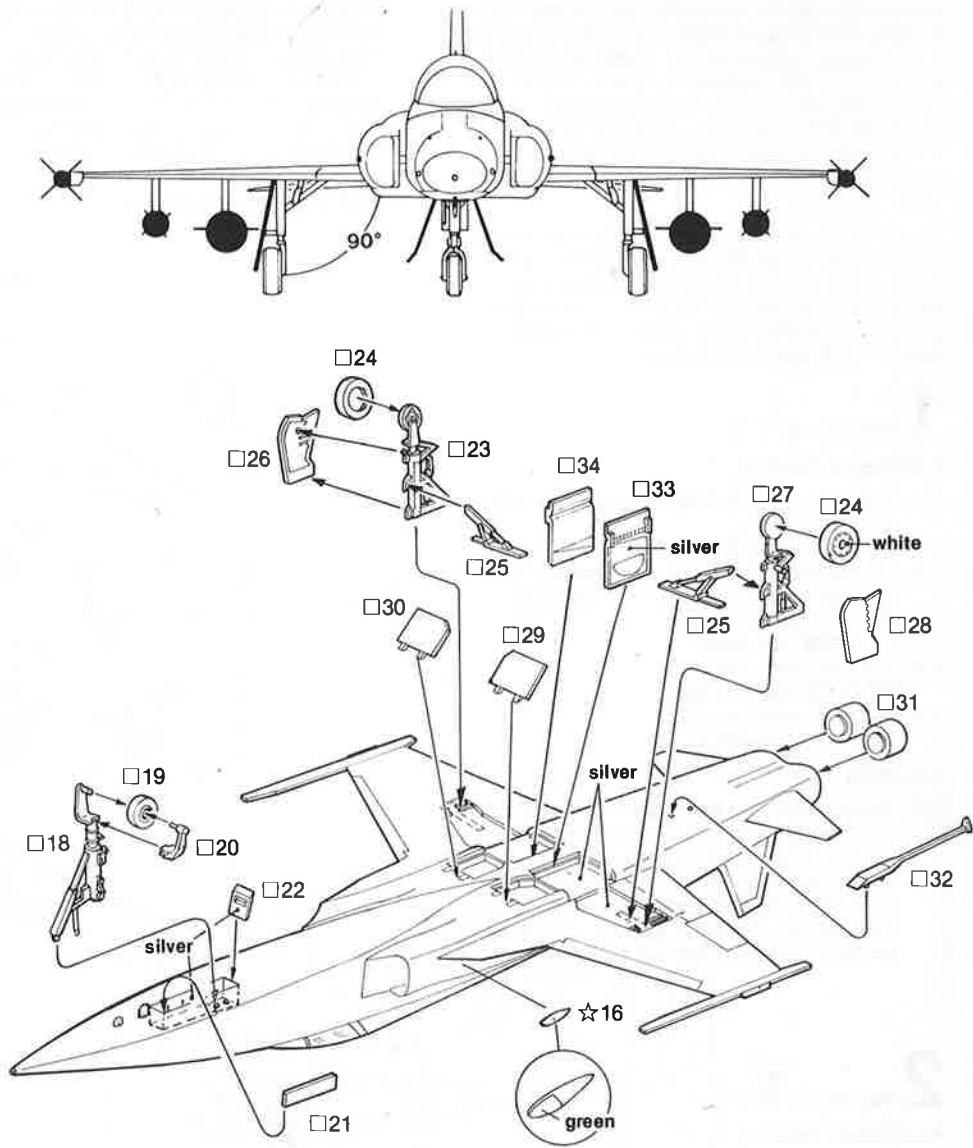
3 PARTS 16, 18-34

Preliminary Painting

- 21, □22, □26, □28, □29, □30, □33, □34 inner side only; □19 wheel hubs only; interiors of wheel and speed brake wells; □18, □20, □23, □25, □27:
FS 17178 Chrome Silver (natural metal)
- 19, □24 tires only:
FS 37038 Flat Black
- 31:
#1780 Steel
- 32:
FS 17875 Insignia White with **FS 37038 Flat Black** stripes (see box photos and drawings on pgs. 6, 7 and 8).
- 24 wheel hubs only:
FS 17875 Insignia White
- ☆16 portion shown in drawing:
#1124 Green

Assembly

- 1. Cement remaining position light ☆16 to right intake. Glue nose wheel □19 to nose gear strut □18. Cement fork □20 to nose wheel and nose gear strut. Cement nose gear door □21 to right edge of wheel well as shown. **NOTE:** this door should be glued in *closed position* for **Swiss version**. Cement rear door □22 to rear edge of wheel well.
- 2. Cement one main wheel □24 to left main gear strut □23, then cement □23 into locator inside left main wheel well, see frontal view drawing for correct angle of strut. Repeat procedure for right main gear strut □27. Cement one actuator □25 to each wheel well and main gear strut. Cement left and right outer gear doors □26 and □28 to main gear struts as shown in assembly and frontal view drawings.
- 3. Cement right and left speed brakes □29 and □30 to positions indicated in front of speed brake wells. Cement exhaust cones □31 into openings at rear of fuselage. Glue arrestor hook □32 to holes on underside of fuselage.
- 4. Cement inner main gear doors □33 and □34 to inner edges of wheel wells as shown, frontal view 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 on next page). 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

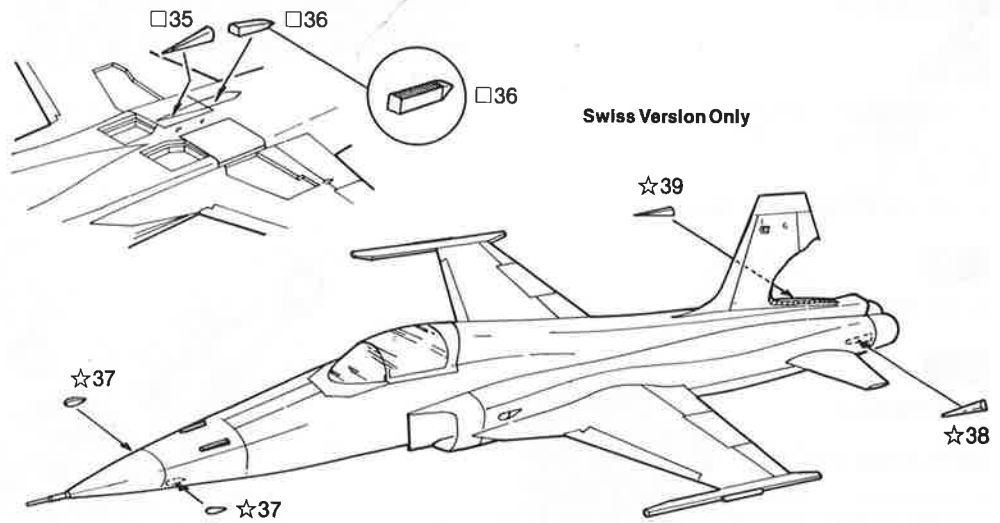
☆37, ☆38, ☆39:

FS 17038 Gloss Black

□36 shaded portion on drawing:
"Dark Gray" (mix 5 parts **FS 36375 Light Ghost Gray** and 1 part **FS 37038 Flat Black**)

Assembly

1. Cement fairing □35 to position scribed on left inner main gear door. Cement fairing □36 to position scribed on underside of fuselage immediately behind door. Cement RHAW (Radar Homing and Warning) blisters ☆37 to either side of nose at positions shown (also see drawings on page 6 for position). Cement rear RHAW blisters ☆38 and ☆39 to left and right sides of rear fuselage respectively.



5 PARTS 40-50

Preliminary Painting:

□48; □50 center section only:

FS 37038 Flat Black

□50 all except center section (see drawings pgs. 6, 7 and 8):

FS 17178 Chrome Silver

☆40, ☆43, ☆46:

Overall Undersurface Color (differs depending on which version you are building, see drawings on pgs. 6, 7, 8 and insert page).

Bombs and missiles should be painted as shown in diagram at right.

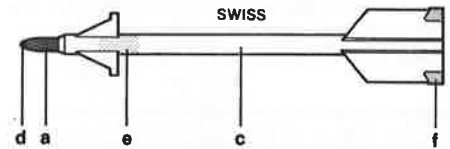
Assembly

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 Aggressor version, omit underwing racks, bombs and tanks parts ☆43, ☆44, ☆45, ☆46 and ☆47. 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 ☆40 to holes on underside of fuselage. Cement centerline tank halves ☆41 and ☆42 together, then cement to pins on centerline rack ☆40. Glue inboard wing racks ☆43 to positions shown under each wing. Cement wing tank halves ☆44 and ☆45 together making two tanks, then cement one tank to each rack ☆43. Cement outboard wing racks ☆46 to positions shown under each wing. Cement one bomb ☆47 to each rack ☆46. Cement one Sidewinder missile ☆48 to each wing tip launch rail.
3. Cement angle of attack vane transmitter □49 to right side of fuselage at position shown. Cement pitot tube □50 into hole in tip of nose.

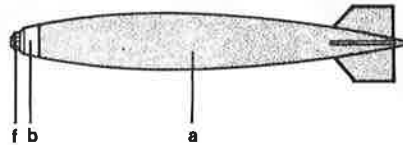
Key

- a. **FS 34087 Olive Drab**
- b. **FS 33538 Insignia Yellow**
- c. **FS 17875 Insignia White**
- d. **FS 37038 Flat Black**
- e. **FS 33613 Radome Tan**
- f. **#1780 Steel**
- g. **#1111 Blue**

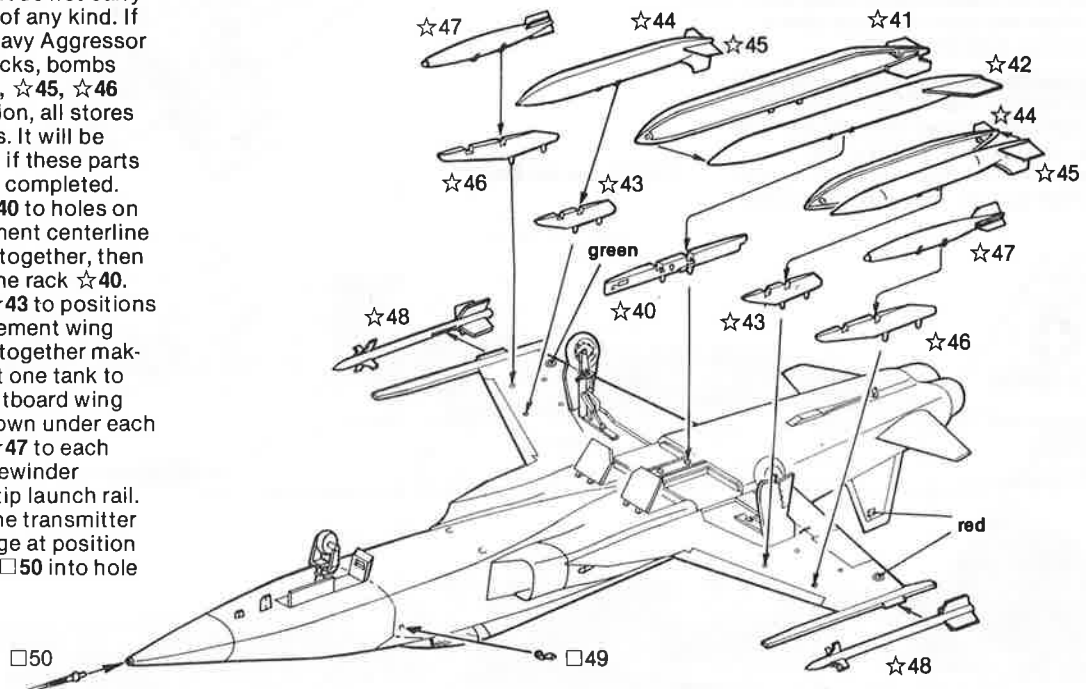
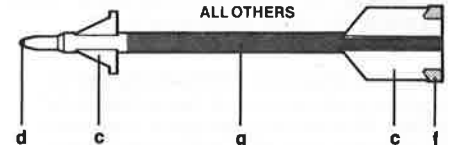
Missiles



Bombs



ALL OTHERS



COLOR KEY



1. FS 36320 Dark Ghost Gray



2. FS 36375 Light Ghost Gray



3. FS 37038 Flat Black

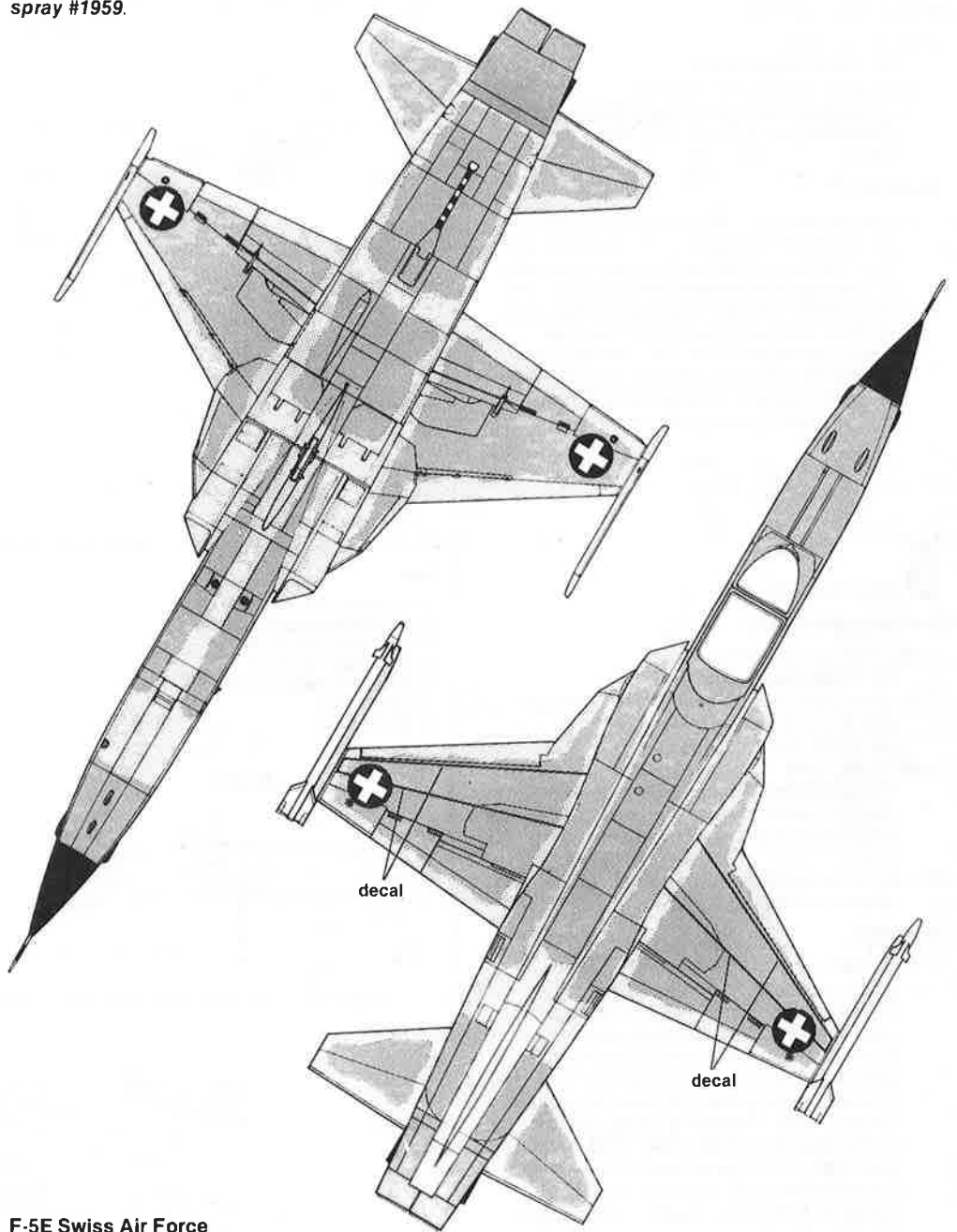


4. #1780 Steel

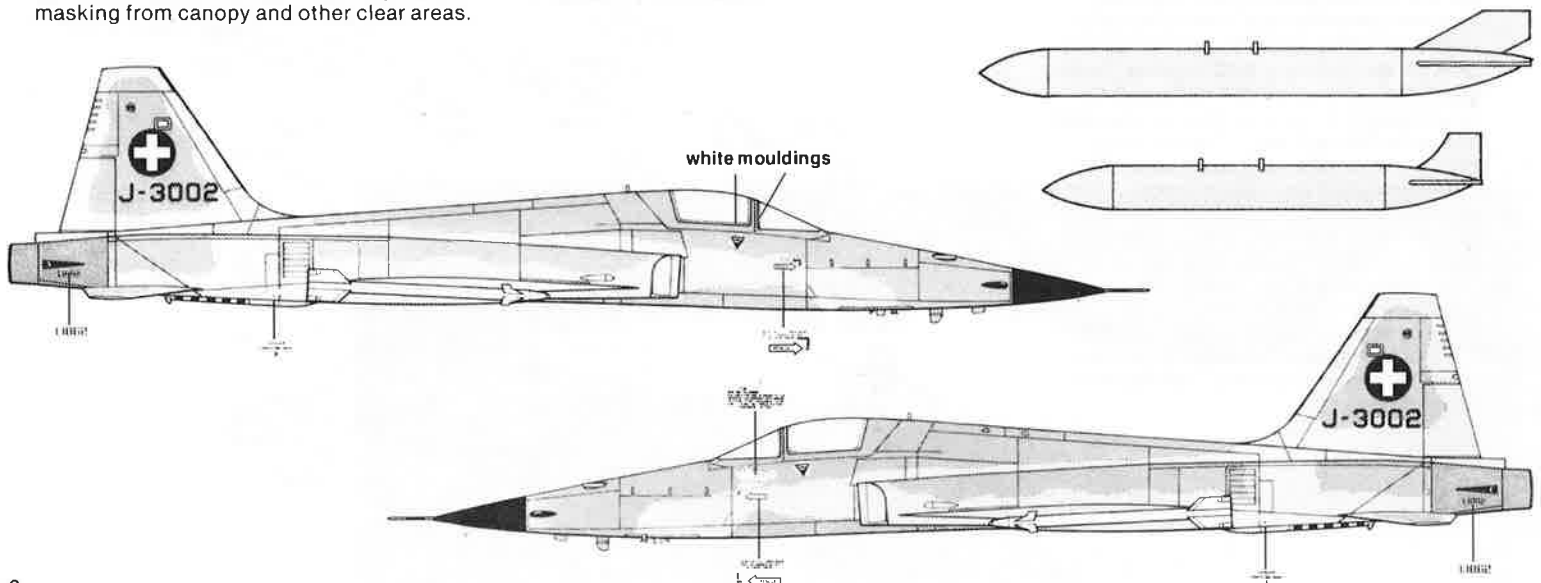
APPLYING DECALS

1. After carefully masking canopy and other clear areas, spray entire model with Testor Glosscote #1261. Decals adhere best to a smooth surface and the shinier the finish, the smoother it is. Allow the Glosscote to dry thoroughly before going further.
2. Select the decals you plan to use, and cut each of them out from the decal sheet with small scissors or Testor Hobby Knife.
3. Working with only one decal at a time, dip the decal in clear water for no more than five seconds, then 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 the paper and onto the surface of the model with a soft paintbrush or tweezers. Remember: the decals are very thin and can be easily ripped if care is not taken. Work slowly and patiently.
5. Once the decal is in the desired position, apply a small amount of Testor Decal Set #8804. This will help the decal to conform to any irregularities in the surface of the model (rivets, curves, etc.). Allow the decal to dry undisturbed. Should you find the decal has moved or should you desire to purposely move it, apply a little Decal Set to a soft brush and push the decal slowly into the desired position.
6. When the decals are completely dry (usually overnight), apply a coat of Testor Dullcote #1260 to the entire model. This will give it an authentic, dull finish and protect the surface of the model. Then carefully remove masking from canopy and other clear areas.

NOTE: A more authentic appearance may be achieved if the nose radome is over painted with **Testor Model Master Semi-Gloss Lacquer spray #1959.**



F-5E Swiss Air Force



COLOR KEY



1. FS 34079 Dark Green



2. FS 34102 Medium Green



3. FS 30219 Dark Tan



4. FS 36622 Camouflage Gray*



5. FS 37038 Flat Black

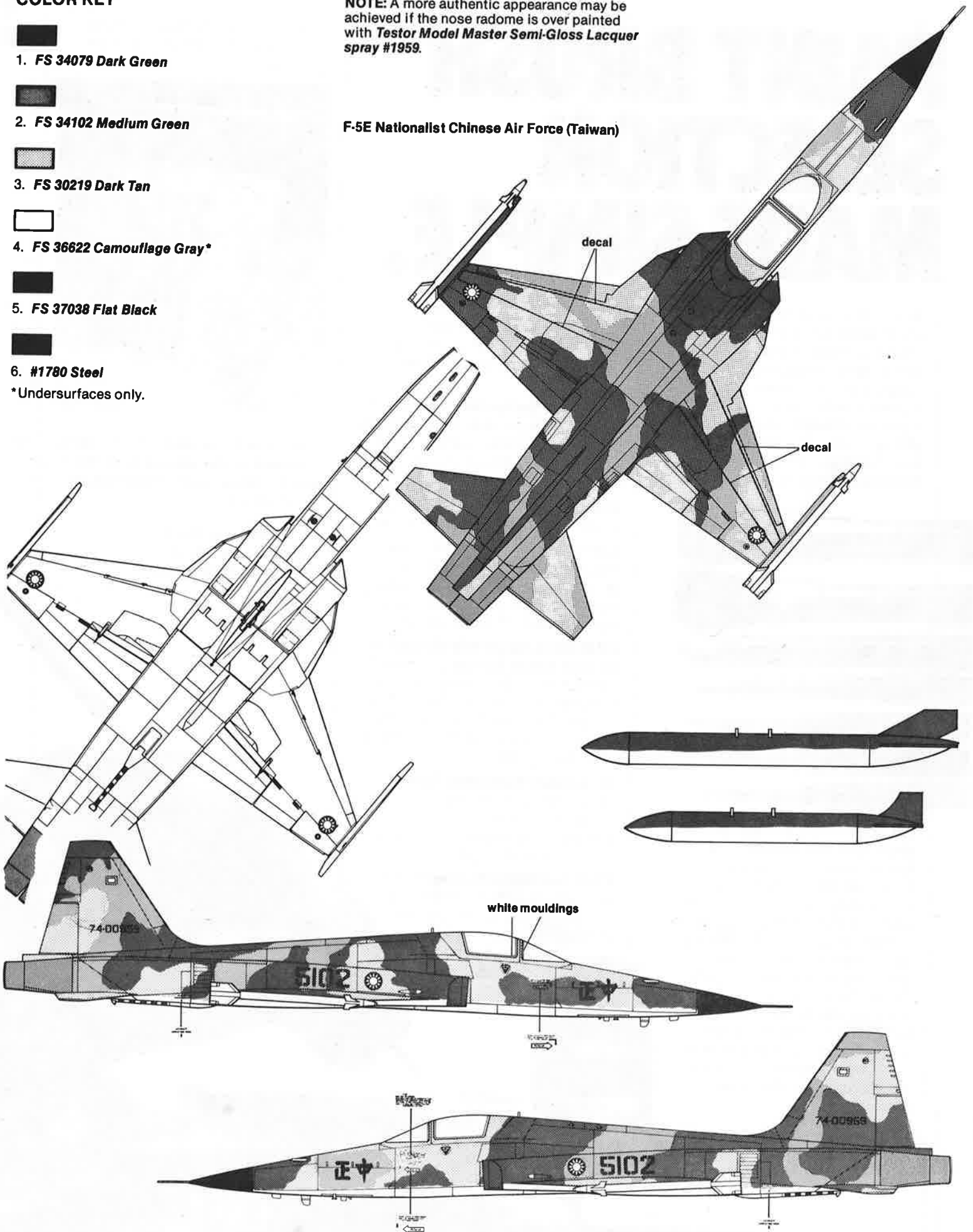


6. #1780 Steel

*Undersurfaces only.

NOTE: A more authentic appearance may be achieved if the nose radome is over painted with *Testor Model Master Semi-Gloss Lacquer spray #1959.*

F-5E Nationalist Chinese Air Force (Taiwan)



PAINT BRUSH SELECTION MADE SIMPLE.

Look for the Model Master professional brush display at your local hobby shop.

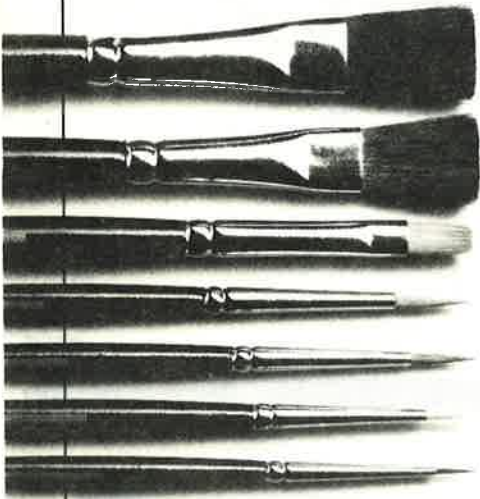


The Testor Corporation is committed to providing the serious hobbyist with the finest quality model finishing products.

The Testor Corporation
620 Buckbee Street
Rockford, Illinois 61101



To a professional model builder, brush selection is one of the most critical aspects of painting and finishing. After contacting serious hobbyists, IPMS members, and professional model builders, we confirmed there are different brushes for different uses. The Model Master line of professional brushes makes the proper selection simple.



We determined, for example, that when selecting a brush, it is important to remember that the point of the brush determines its usefulness for detailing. A thick, round brush with a tip that comes to a point is perfect for detail work. It will lay down precise lines and dots and carry enough paint to get the job done. Thin brushes do not consistently retain their fine tip and paint dries too quickly on the brush. For these reasons, there are no #0000 or smaller-sized brushes in the Model Master line.

Model Master brushes are manufactured to exacting standards. Each type and size has been designed for performing specific techniques.

1/2" Black Sable Flat is for broad area color applications and washes. Because its bristles are fairly stiff, it is good for subtle drybrush effects on larger models.

3/8" Camel Hair Flat is for large areas and applying gloss finishes.

1/4" Golden Synthetic Chisel should be chosen for detail drybrush effects and painting medium sized areas (such as secondary patterns on 1/72 scale aircraft).

#2 Golden Synthetic Round and **#2 Red Sable Round** are ideal for painting individual parts, small assemblies and figures. They can also be used for pinpoint washes. The natural bristles of the Red Sable are preferred by artists.

#0 Golden Synthetic Round is perfect for applying liquid cement. It is also recommended for shading and blending of uniforms of figures 1/35 scale and larger.

#3/0 Red Sable Round should be used for precise small-scale work such as facial features, car chrome moulding strips and aircraft cockpit details.



COLOR KEY

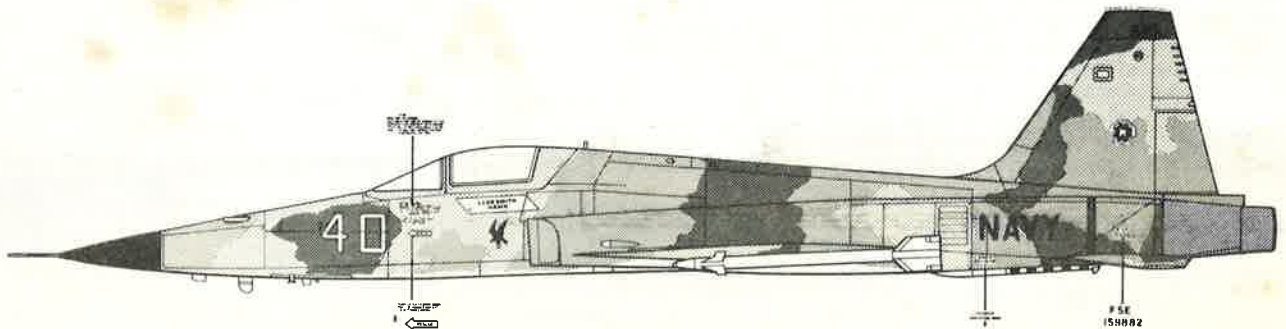
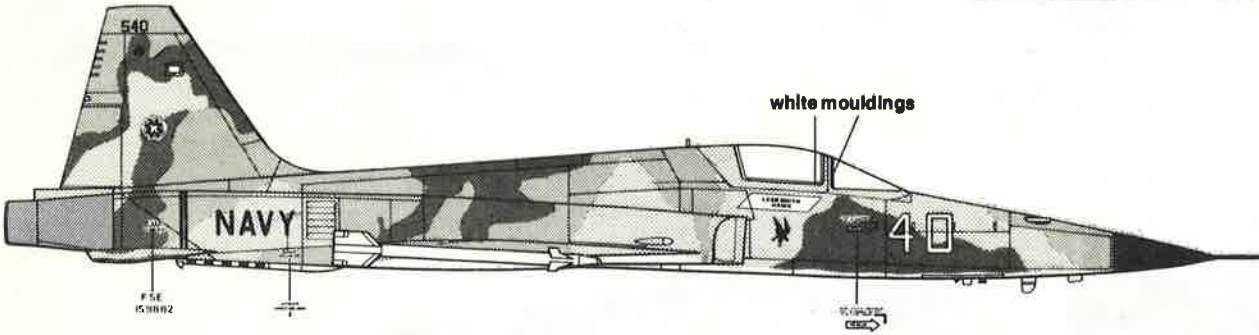
- 1. FS 35109 Dark Blue (mix 5 parts #1172 Flat Sea Blue, 3 parts FS 34227 Pale Green and 1 part FS 35622 Duck Egg Blue).
- 2. FS 35414 Blue Gray (mix 5 parts FS 35622 Duck Egg Blue, 1 part FS 34227 Pale Green and 1 part FS 35164 Intermediate Blue).
- 3. FS 35164 Intermediate Blue
- 4. FS 35622 Duck Egg Blue*
- 5. FS 37038 Flat Black
- 6. #1780 Steel

*Undersurfaces only.

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



NOTE: A more authentic appearance may be achieved if the nose radome is over painted with **Testor Model Master Semi-Gloss Lacquer spray #1959**.



COLOR KEY



1. **FS 30140 Brown** (mix 1 part **FS 30219 Dark Tan** and 1 part **FS 30117 Military Brown**).



2. **FS 20400 Sand Tan** (mix 1 part **FS 33613 Radome Tan** and 1 part **#1735 Wood**).



3. **FS 34079 Dark Green**



4. **FS 35622 Duck Egg Blue***



5. **FS 37038 Flat Black**



6. **#1780 Steel**

*Undersurfaces only.

F-5E Royal Jordanian Air Force

NOTE: A more authentic appearance may be achieved if the nose radome is over painted with **Testor Model Master Semi-Gloss Lacquer spray #1959**.

