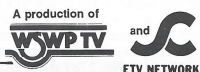


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## AH-64 Longbow Apache Instructions

No. 620



### HISTORY

The **McDonnell Douglas AH-64 Apache Attack Helicopter** was designed and built to fulfill the U.S. Army's need for a rugged "frontline" battlefield weapon. Apache production began in 1982 and ran through the 1980's.

With the ability to quickly concentrate anti-tank and suppressive firepower on targets day or night - and in all kinds of weather - the Apache satisfies its mission profile. It is a twin-engine machine with four-bladed main and tail rotors, and three-point landing gear. The pilot sits in the back seat of a tandem cockpit. Advanced and innovative design features facilitate maintenance and increase battlefield "survivability".

Weapons systems include Hellfire anti-tank missiles, the M-230 30mm Chain Gun, Stinger air defense missile launchers, and a 2.75 inch aerial rocket system pod.

The **Longbow Apache** variant gives the chopper increased effectiveness at longer range and the ability to operate in bad weather by virtue of the Longbow radar system. This radar unit has been installed at the top of the main rotor offering a 360 degree field-of-view for optimum target tracking capability.

### SPECIFICATIONS

Engines	2	1,723 hp T700-GE-701 turboshafts
Rotor Diameter	48.0 ft.	
Overall Length	48.16 ft.	
Height	15.25 ft.	
Weight	21,000 lbs. max. loaded	
Max. Speed	184 mph	
Endurance	3 hours	
Service Ceiling	21,000 ft.	
Ordnance (max.)	3,300 lbs.	

### REFERENCES

**McDonnell Douglas (Hughes) AH-64 Apache**,  
Lyle Monson and Kenneth Peoples  
Aerofax Publishers

### 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.





## 2 PARTS 10 - 13

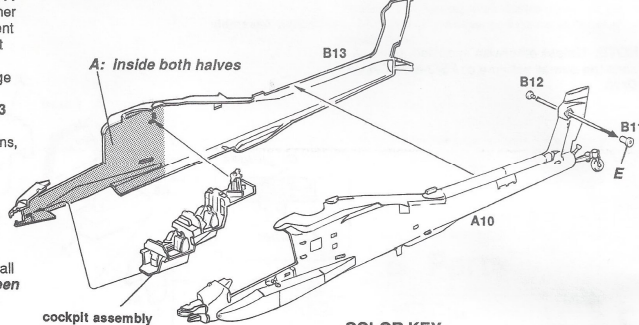
### Preliminary Painting

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

### Assembly

1. Insert (*do not cement*) tail rotor hub B11 into fuselage half A10. Cement retainer B12 to B11 **only**. Do not allow cement to touch fuselage half A10. B11 must be free to rotate.
2. Cement cockpit assembly to fuselage half B13 as shown.
3. Cement fuselage halves A10 and B13 together as shown. Hold halves together with rubber bands, clothespins, or adhesive tape until dry.

Fuselage Assembly



**NOTE:** Unless otherwise specified, paint all parts the overall scheme of FS 34086 Green Drab.

## 3 PARTS 14 - 30

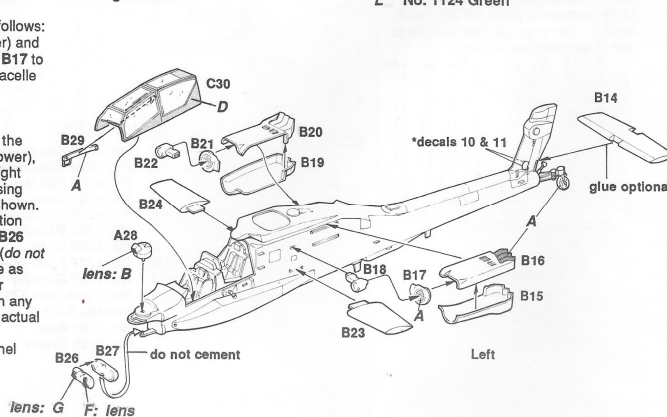
### Preliminary Painting

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

### Assembly

1. Attach horizontal stabilizer B14 to fuselage, glue if desired. Glue left stub wing B23 and right stub wing B24 to sides of fuselage.
2. Assemble left engine nacelle as follows: cement nacelle halves B15 (lower) and B16 (upper) together. Glue inlet B17 to B15/16. Cement entire engine nacelle to left side of fuselage as shown. Cement gearbox housing B18 to fuselage as shown.
3. Assemble right engine nacelle in the same manner using parts B19 (lower), B20 (upper) and B21. Cement right engine nacelle and gearbox housing B22 to right side of fuselage as shown.
4. Cement halves of Target Acquisition Designation Sight (TADS) turret B26 and B27 together. Gently press (*do not cement*) turret to front of fuselage as shown. Pilot Night Vision Sensor (PNVS) part A28 may be glued in any position since this rotates on the actual aircraft.
5. Carefully glue circuit breaker panel B29 to inside of canopy C30 as shown. Then glue canopy onto fuselage.

Fuselage Details



### COLOR KEY

A	No. 1749 Flat Black FS 37038
B	No. 1790 Chrome Silver FS 17178
C	No. 1768 Flat White FS 37875
D	No. 1787 Green Drab FS 34086
E	No. 1795 Gunmetal
F	No. 1772 Blue Angel Blue FS 15050
G	No. 1744 Gold
H	No. 1712 Field Green FS 34097
J	No. 1723 Gunship Gray FS 36118 or mix 2 parts No. 1749 Flat Black and 1 part No. 1768 Flat White
K	No. 1103 Red
L	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.

\*see APPLYING DECALS on pg. 7

## 4 PARTS 25, 31 - 47

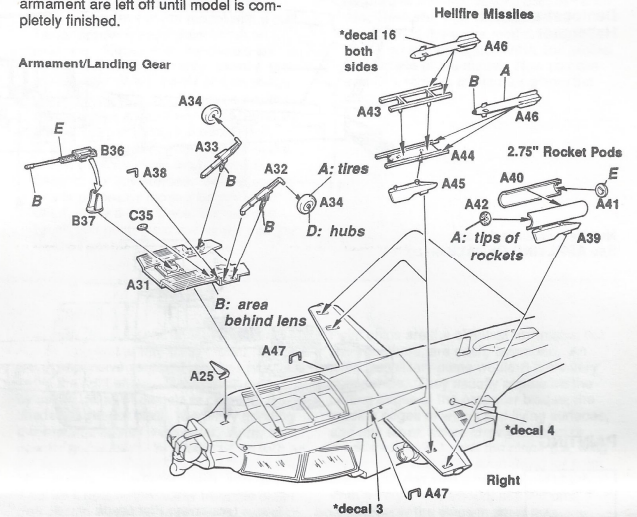
### Preliminary Painting

Paint parts as indicated by *italic* letter callouts using the COLOR KEY on pg. 4.

### Assembly

1. Apply two decals 16 to each Hellfire Missile. Cement main wheels A34 to right side of fuselage (see APPLYING DECALS on pg. 7).
2. Glue bottom panel A31 to fuselage. Cement main wheels A34 to struts A33 (left) and A32 (right). Glue struts into holes in A31 as shown.
3. Cement wire cutter A25, lens C35 and handle A38 to bottom panel. Glue 30mm Chain Gun B36 to support B37. Glue support to A31. Cement handles A47 to sides of fuselage as shown.
4. Hellfire Missiles: Cement upper rail A44 to wing pylon A45, glue two Hellfire missiles A46 to rail. Cement lower rail A43 to upper rail A44, glue two missiles to lower rail. Make two assemblies and set aside to dry.
5. 2.75" Rocket Pods: Cement halves A39 and A40 together. Glue front cap A42 and rear cap A41 in place. Make two pods.
6. Cement one Hellfire missile rack to inside of each stub wing as shown. Cement one rocket pod to outside of each stub wing as shown.

Armament/Landing Gear



## 5 PARTS 48 - 64

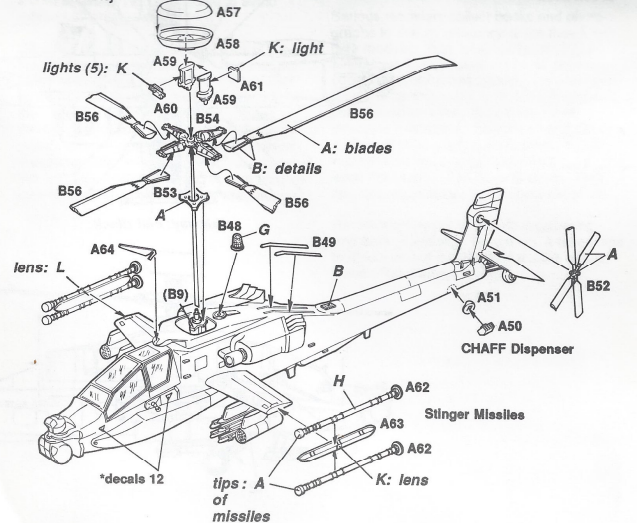
### Preliminary Painting

Paint parts as indicated by *italic* letter callouts using the COLOR KEY on pg. 4.

### Assembly

1. Cement InfraRed counter measure device B48 to top of fuselage as shown. Cement two dorsal strakes B49 to top of fuselage. Glue CHAFF Dispenser A50 to base A51, cement both to left rear of tail as shown. Glue wire cutter A64 to top of fuselage.
2. Stinger Missiles: Glue one launcher A63 to each stub wing tip. Cement two missiles A62 to each launcher.
3. Carefully cement tail rotor B52 to hub B11 (from Step 2) **only**, do not let glue touch fuselage or rotor will not rotate. Cement B53 to B9 (from Step 1) as shown.
4. Cement four rotor blades B56 to rotor hub B54, allow cement to dry.
5. Cement A59, A60, and A61 together as shown. Cement Longbow radar disc halves A57 and A58 together then into place on A59 as shown.
6. Place (*do not cement*) rotor hub B54 onto the shaft of B9. Carefully cement Longbow radar assembly to shaft of B9 **only**. Rotor should rotate freely.
7. Construction of your model is now complete. It is now ready for application of decals and final finishing.

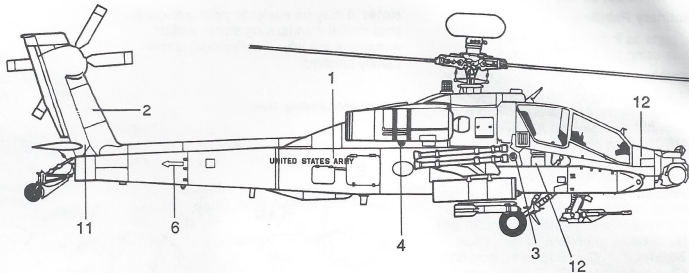
Final Assembly



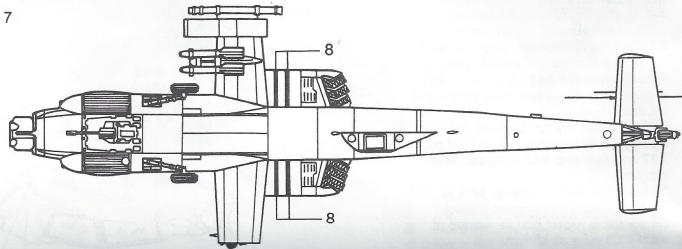
\*see APPLYING DECALS on pg. 7



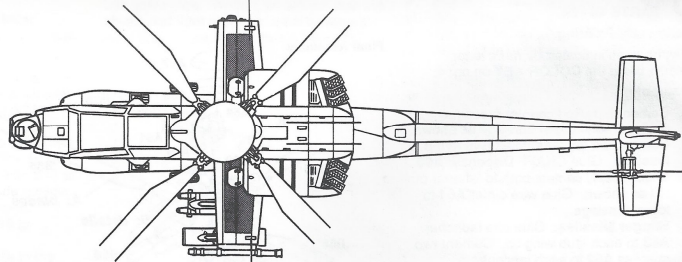
### AH-64 Longbow Apache Demonstration Helicopter



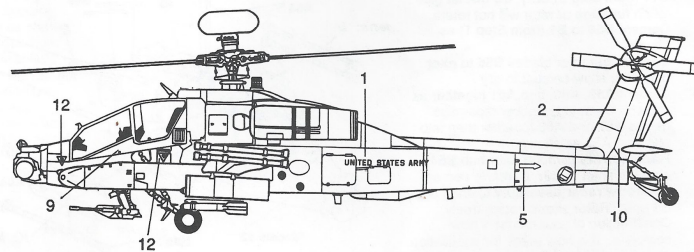
Numbers indicate decals.  
See **APPLYING DECALS** on pg. 7



walkway: Flat Black



walkway: Flat Black



### PAINTING



No. 1787  
FS 34086  
Green Drab

### APPLYING DECALS

- After carefully masking clear areas, spray entire model with Testor *Model Master Gloss Clear Lacquer No. 1961*. Decals adhere best to a smooth surface and the shinier the finish the smoother it is. Allow the *Gloss Clear Lacquer* to dry thoroughly before going further.
- Select the decals you plan to use and cut them from the decal sheet with scissors or a Testor Hobby Knife.
- 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.
- 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 if care is not taken. Work slowly and carefully.
- 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 (rivets, curves, etc.). 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 into the desired position.
- When the decals are completely dry (usually overnight), apply a coat of Testor *Model Master Flat Clear Lacquer 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.

### WEATHERING HINTS

Nearly all military aircraft show some signs of wear. The process by which the modeler imparts this look to the model is referred to as **weathering**. Many times the weathering, that is, the representing on the model of soot, oil stains, or chipped paint, etc., can really make a model stand out and give it amazing authenticity.

After you have painted your model the proper colors, you can add the decals. If you first paint your model with Testor Glosscote, the decal carrier film will seem to disappear. Apply one or two coats of Glosscote for a smooth, glossy finish. Then, after this dries, apply the decals. This gives them a "painted on" look. If you want your model to have a matte finish, wait 24 hours for the decals to dry. Then spray on one or two coats of Testor Dullcote. When dry, you can begin weathering.

Always try to be logical in applying weathering techniques. For instance, you wouldn't want to put exhaust stains on a model and then apply a bright clean decal to the sooty area. Airplanes are normally well cared for, so they don't usually appear very battered. However, soot stains do tend to collect behind exhaust stacks and sometimes oil leaks onto the outside of the plane.

There are two methods of showing exhaust stains. The first is with an airbrush. This is a rather expensive item and requires practice to get the right effect. The second method is by using soft artist pastels or charcoal in shades of gray or black. Begin by grinding this material into a fine powder. Apply the powder to the model by rubbing it on with an old paint brush. Apply the color thicker and blacker near the exhaust outlet, and feather it out as it gets further away from the outlet. You should practice this on an old model or on a scrap of paper before trying it on your model. This technique is not very permanent, so it is a good idea to give your model a coat or two of Testor Dullcote to avoid rubbing off the stains.

Oil stains should be done very subtly. Oil really has very little color, so it only leaves light stains. Tint a small amount of thinner lightly with black paint. Add a small drop to the area you want to appear oily. Now with a strong breath, blow the "oil" back along the plane. Keep in mind the direction in which the planes flies, making sure you are blowing the "oil" from front to back. It is very easy to overdo this - one or two places are enough.

Paint chips are the simplest technique, but like the others, are easily overdone. An average military plane wouldn't have very many chips. They usually appear on the cutting edges of the propeller blades, the leading edges of wings and flying surfaces, and any areas where crew members or mechanics walk across the plane (i.e. wing roots). Use *No. 1781 Aluminum* for paint chips, applying with a fine pointed brush. With a very small amount of paint on the brush, apply the chips in small dots, the smaller the better. Large chips will look too obtrusive. Be wary of fabric covered control surfaces though; they don't chip.

Serious modelers collect books and photographs to use as reference when they finish their models. Your local hobby shop can help. Last, but certainly not least, your own observation will prove helpful. Visit museums and local airports, look at buildings and vehicles around you. Notice how rust streaks a metal roof. See the oil and dirt on a piece of road grading equipment. Study railroad boxcars and locomotives to see what the weather has done to them. Your own observation can be the best aid of all.

Remember: try not to overdo weathering - and *keep practicing*. Be patient, it takes time to discover and master all the tricks of this fascinating hobby.