

MODEL RECTIFIER CORPORATION
80 NEWFIELD AVENUE
EDISON, NEW JERSEY 08837
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Made in the U.S.A.

# AH-1T+ SuperCobra "Gold Cobra"

1/35 Scale Model

"Realism in the right scale"

**KIT #BA105** 



#### MRC'S 1/35th SCALE HELICOPTER SERIES

The quality of any military model is best measured by the intensity of the reality it creates; the finer the finish and more infinite the detail, the more convincing that model becomes. 1/35th scale dioramas have long provided the perfect stage for military modeling's best efforts, but the total lack of aircraft kits in this scale posed a serious problem to military helicopter enthusiasts. At MRC, we responded to demand and created a series of topical and historical 1/35th scale military helicopter kits, each one with precisely detailed cockpit instrumentation, surface riveting and recessed panel lines, and featuring opening panels and access doors to expose the engines, ammo bays and armament. With the arrival of this new MRC Series, there is finally a selection of precision helicopter kits to compliment the most popular scale for modeling armor, military figures and dioramas. MRC's striking AH-1T+ "Gold" SuperCobra is a museum quality kit; it brings you the highest levels of detail and the tightest fitting flash-free parts available - and it's in 1/35th scale!

#### COBRA DEVELOPMENT

During the early stages of the war in Viet Nam, American forces pioneered the "Airmobile" concept of transporting troops into combat zones by helicopter. As this practice developed operationally, it became apparent that a heavily armed "gunship" helicopter would be of great value to protect and assist the troop carriers. In response, many modifications were made to standard UH-1 Hueys, but it soon became clear that only a purpose-built gunship would do.

In 1965, as a private venture without government funding, Bell Helicopter began development of the model 209. The 209's design drew heavily on the earlier Huey troop transport's proven transmission, rotor system and power plant, but these components were to be installed into a newly designed narrow fuse-lage with its pilots sitting in tandem, one behind the other. The new "Cobra" first flew on September 7, 1965, and it had taken Bell only six months to complete the prototype.

In March of 1966, the Cobra was accepted by the U.S. Army with the designation AH-1G. Delivery of production aircraft began in May of 1967 and by September, Cobras were deployed with many operational units in Viet Nam. By 1971, the Army and Marine Corps had acquired over 900 Cobras and had used them extensively for combat in Southeast Asia. With the development of later Cobra models such as the Army's AH-1S and the Marines' AH-1T Sea Cobra, the Cobra gunship grew consistently more effective and far more lethal.

In 1986, the U.S. Army had become increasingly more involved in its AH-64 Apache program, but the USMC began the development of an improved, twin-engine attack helicopter that could take advantage of the latest advancements in weapons and aircraft technology systems. Thus, the AH-1T ultimately became the AH-1T+ SuperCobra, or "Gold Cobra," the prototype for this innovative 1/35th scale MRC kit.

# THE AH-1T+ SUPERCOBRA.... A LETHAL FLYING WEAPONS PLATFORM

The AH-1T+ SuperCobra evolved from the earlier AH-1T (TOW) Sea Cobra, and cut a sharp silhouette with its sleek, stylized cobra painted in gold over the jet black finish of its compact fuselage. This new attack helicopter boasted two T-700 GE-401 power plants for increased speed, power and performance, and initial evaluations revealed that it could hit a top speed of 199 mph and sustain a level flight speed of 193 mph. The twin GE engines would let the AH-1T+ hover at 3,000 feet on a 91.5 degree day, even with a full load of fuel and nearly a ton of ordnance. The new SuperCobra had a 30% improvement in rate of climb; it could take off on one engine and still climb at more than 800 feet per minute. In addition to its awesome speed and power, the dual engine configuration increased crew survivability. Additionally, a crash-worthy fuel system, dual ALE-39 chaff dispensers and an infra-red jammer were also installed on the AH-1T+.

The deadly SuperCobra attack ship was little more than three feet wide, a tough target and a formidable weapons platform. Boasting tremendous firepower, the AH-1T+ could carry eight TOW II missiles or Hellfire missiles for anti-armor missions, and up to eight Sidewinder or Stinger Missiles for anti-aircraft purposes. Aside from these missile types, the main armament of the SuperCobra was its M-197mm gun located in the nose

turret with 750 rounds of ammunition carried under the cockpit. This gun could fire up to 675 rounds of standard ammunition per minute from its three barrels and could also use the Navy's Phalanx gun system ammo, a depleted uranium round similar in performance to the 30mm round used in the Air Force's A-10 tank buster. With the use of the SuperCobra's TSU (Telescopic Sighting Unit) or the HUD (Head-Up Display), each pilot had full weapons capability in addition to full flying control from either chair.

In 1986, shortly after its acceptance, the AH-1T+ was redesignated as the AH-1W SuperCobra. Before taking on the AH-1W's new "Whiskey" tag and more familiar camouflage scheme, a total of only 36 AH-1T+ SuperCobra's had been delivered. As the AH-1W, SuperCobras would glorify themselves once again in the skies over Grenada and Somalia, and in operations over Iraq throughout Operations Desert Shield and Desert Storm. Today, further developments promise to extend the SuperCobra's operational life into the year 2010, proving, beyond all doubt, the long-range dedication to service behind Bell's original 1965 design.

If you enjoy assembling this AH-1T+ Gold Cobra kit, we're sure you'll be pleased to know that the AH-1W Desert Shield/Desert Storm SuperCobra is also available in MRC's 1/35th Scale Helicopter Series (kit # BA100). It is essentially the same kit as the Gold Cobra, but with dramatic changes in its decal markings and color scheme.

#### **WARNINGS!**

 Work only in well lit, adequately ventilated areas when using paints and/or glues.



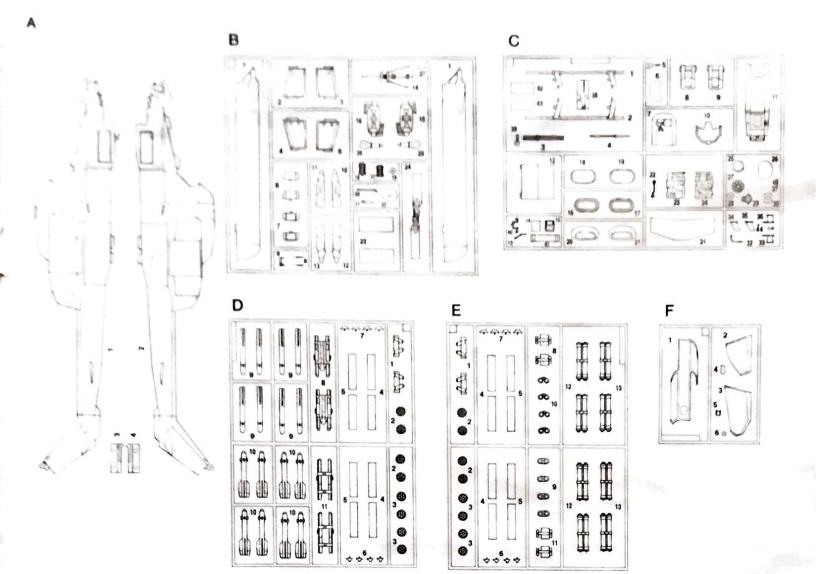
Most paints are highly flammable. Never paint near an open flame or pilot lights.



- Use extreme caution and care when working with hobby knives and other tools. When cutting or trimming parts, always cut "away from yourself."
- Always protect your work area. Cardboard, a thick layer of newspaper or an old place mat offer useful protection for furniture while providing excellent working surfaces.
- Be careful not to remove small mounting tabs or pins when separating parts from plastic trees.



- Do not use paint thinner to clean paint from your skin; thinner can be absorbed into your skin. Instead, clean your skin with a safe abrasive-type soap or pine based cleaner.
- Do not snap or twist parts from trees. Snip the part away with a diagonal cutter, then trim any rough edges with a sharp hobby knife.



#### **FINISHING SUPPLIES:**

Clean, Protected Work Surface with Adequate Lighting Razor Knife and #11 Blades

Wire Cutter or Diagonal Cutter (to cut parts from parts trees) Tweezers (for handling small parts)

Masking Tape and Rubber Bands (to hold while glue dries) Plastic Model Cement (Testor, etc.)

Liquid Plastic Model Cement (Micro-Weld, Testor, etc.) Fast Drying, Two-Part Epoxy (Devcon, Hobbypoxy 4, etc.) Medium Cyano-Acrylate Adhesive (Pacer Zap-A-Gap, etc.) White Glue (Elmer's or Titebond Aliphatic Resin, etc.)

Flat Colors:

**Paintbrushes** 

Optional:

India Ink

Gold Metal Foil

58 - Zinc Chromate

307-Flat Dark Gray

80 - Flat Light Green

12 - Flat or Semi-Gloss Black

#### **Gloss Colors:**

- 1 White
- 2 Black
- 3 Red
- 4 Yellow
- 8 Silver
- 10 Bright Gold
- 18 Gun Metal (Steel)
- 90 Clear Red
- 93 Clear Blue

# **BEFORE YOU BEGIN:**

In order to get the best results from your new SUPERCOBRA kit, we urge you to read all the manual's Pro-Tips, Cautions, Notes and Warnings contained in this assembly folder. The SUPERCOBRA kit's design and instructions are intended to make assembly easy and enjoyable, however, a degree of modeling experience is always helpful to a project such as this. You can learn more about plastic modeling by asking a friend with modeling experience, by reading modeling books and magazines available through local hobby shops, or by visiting with a local modeling club. If you have questions specifically concerning the AH-1T+ SUPERCOBRA kit, please call our Customer Service Number, (908) 225-6360.

#### **Brush Cleaner** IF YOU HAVE A QUESTION OR PROBLEM:

Please contact Model Rectifier Corporation, 80 Newfield Avenue. Edison, New Jersey 08837. If you prefer, you may call us at (908) 225-6360 weekdays from 9:00 a.m. to 5:00 p.m. Eastern Standard Time.



Paint Before Assembly:

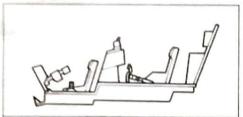
Cockpit Structure and Panels C6, C7, C8, C9, C10 and C11: Semi-Gloss Black Seat Cushions C8 and C9: Flat Light Green

Controls C22, C39, C40, C41 and C44: Semi-Gloss Black with

Red Buttons

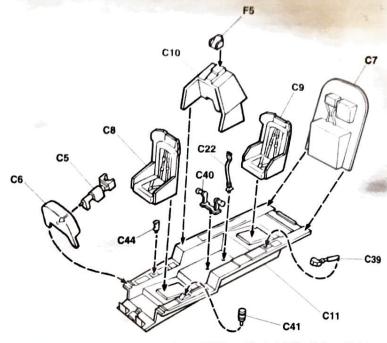
Instruments on C6 and C10: Black Faces

with White Characters Cockpit Floor: Flat Black

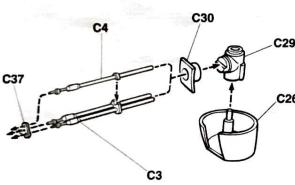


After Painting, Cement Parts In the Following Order: Rear Bulkhead C7 to Cockpit C11, Rotor Pedals C40 to C11 Front Gunner's Seat C8 to C11, Rear Pilot's Seat C9 to C11 Pilot's Cyclic Stick C22 to C11, Pilot's Collective C39 to C11 Gunner's Collective C41 to C11, Gunner's Cyclic C44 to C11 Instrument Panel C10 to C11, Head Up Display F5 to C10 Telescopic Gun Sight C5 to Gunner's Instrument Panel C6 C6 to C11

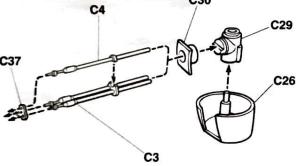
HELI-FACT: The SuperCobra is officially crewed by two pilots. The pilot or gunner can each fly the Gold Cobra independently, and both stations can operate the on-board weapons systems.



PRO-TIP: Light applications of Silver Rub 'n' Buff (available at hobby shops, craft and art supply stores) can be used to simulate bare metal showing through paint in areas of excessive wear.



HELI-FACT: The SuperCobra's M-197 20mm gun has a built-in safety feature that automatically stops the gun from firing when a missile is launched. This feature prevents rounds from striking and detonating a missile near the helicopter.



After Painting, Cement Parts in the Following Order: Gun Mantel C30 to Gun Base C29

**20MM CANNON** 

Barrel End Support C37: Gun Metal

Gun Barrels C3 and C4: Gun Metal

Paint Before Assembly:

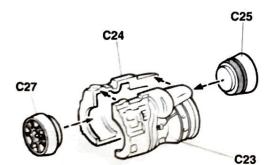
Turret Cover C26: Black

C29 to Turret Cover C26 - USE NO GLUE! Upper Gun Barrel C4 to Lower Gun Barrels C3 Barrel End Support C37 to Joined Gun Barrel Assembly

Gun Base C29 and Mantel and C30: Gun Metal

Completed Gun Barrel Assembly to Gun Mantel C30





# Before Painting, Cement Parts In the Following Order:

Engine Half C23 to Engine Half C24 Exhaust Duct C25 to Joined Engine Halves Intake Duct C27 to Joined Engine Halves

#### Paint After Assembly:

Completed Engine: Gun Metal

Exhaust Duct C25: Burned Gun Metal with Gold Ring All Tube, Hose and Cable Detail: Aluminum or Steel

All Wiring Detail: Black or Yellow

PRO-TIP: Reduce (thin) india ink with rubbing alcohol and brush the mix lightly over the engine. This "wash" technique will help to bring out many of the engine's engraved details.

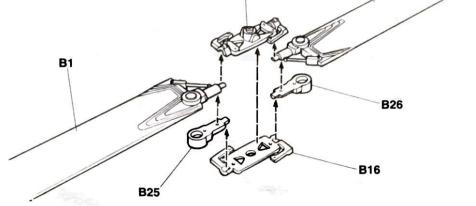


# Before Painting, Cement Parts in the Following Order:

Main Rotor Linkage B25 to One Rotor Blade B1
Main Rotor Linkage B26 to Other Main Rotor Blade B1
Linkage Head Top B15 to Linkage Head Bottom B16
Completed Rotor Blades into Completed Linkage Head



Rotor Blades B1: Semi-Gloss Black Linkage Head Assembly: Silver



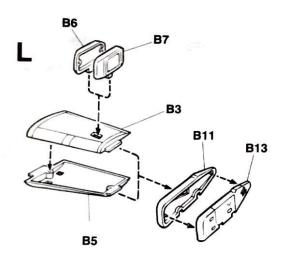
**B15** 

**HELI-FACT:** Thanks to its powerful General Electric T700-GE-401 engines, the SuperCobra has the highest power to weight ratio of any combat helicopter in the world.

**PRO-TIP:** Bare metal showing through worn or weathered paint can be simulated with Silver Rub 'n' Buff.

**B1** 

# 5 STUB WINGS



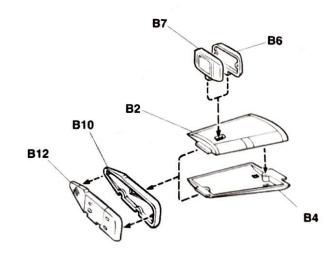
#### Paint After Assembly:

Chaff Dispensers: Burned Gun Metal Right Dispenser Face: Clear Blue Left Dispenser Face: Clear Red

# Before Painting, Cement Parts in the Following Order:

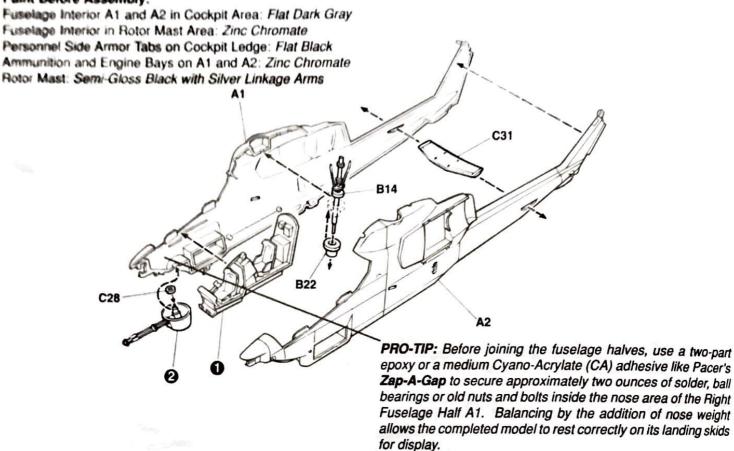
Two Chaff Dispenser Faces B6 to Chaff Dispenser Backs B7 Left Stub Wing Top B3 to Left Stub Wing Bottom B5 Left Outer Weapons Pylon Half B11 to opposite Left Half B13 Right Stub Wing Top B2 to Right Stub Wing Bottom B4 Right Outer Weapons Pylon Half B12 to opposite Half B10

**Note**: Chaff Dispensers should not be cemented to the Stub Wings until the Stub Wings have been cemented to the fuse-lage.



# 6 FUSELAGE

#### Paint Before Assembly:



IMPORTANT NOTE: At this stage in assembly, you must choose between leaving the Super Cobra Fuselage in its original molded color or painting the entire fuselage black. If your Gold Cobra Fuselage is to be left in its molded black color, apply Gold Fuselage Decals #1, 2, 3 and 6 to Fuselage Sides now, before continuing with Step 6. If your fuselage is to be painted, do not attempt to paint until instructed to paint in Step 7, then apply Decals #1, 2, 3 and 6 to the fuselage after painting. In either case, Decals are extremely fragile and must be allowed to dry thoroughly before assembly continues! Refer to Step 13 for decal application.

**PRO-TIP:** The Gold Cobra's long Fuselage Decals #1 and 2 may be very difficult for less experienced modelers to handle correctly. Please consider cutting these Decals at the locations indicated by the dotted lines. To ensure proper alignment, the rear sections should be applied first.

PRO-TIP: Krassal Micro-Sol (sold in hobby shops) helps Decals conform to raised surface details like rivets and panel lines. Apply Decals in the normal manner, then, after the Decals have dried, brush a light coat of Micro-Sol over each Decal. Micro-Sol will soften the Decals and cause them to hug the surface of your Gold Cobra much more closely. Repeat this process, if necessary, then allow the Decals to dry thoroughly before proceeding with assembly.

After Painting, Assemble Parts in the Following Order: Synchronized Elevator C31 into slot in A1 - USE NO GLUE! Completed 20mm Cannon Assembly to A1 - USE NO GLUE!

Then Cement Parts in the Following Order:

Retaining Ring C28 to Cannon Turret
(Fit should be snug, but Turret must be free to rotate)
Secure Ring C28 with a glue drop
Retaining Ring B22 to Rotor Mast B14
(Fit should be snug, but Mast must be free to rotate)
Secure Ring B22 with a glue drop
Completed Cockpit Assembly to Right Fuselage Half A1
Left Fuselage Half A2 to Right Half A1 - Apply glue carefully;
Avoid gluing Elevator, Rotor Mast or Cannon Turret

PRO-TIP: Liquid cement is a useful adhesive for this step. Ensure a good bond by "priming" each gluing area with a small amount of glue and allowing the glue to dry. Afterward, the parts can be held together while another coat of glue is brushed into the seam. Capillary action will draw the glue into the seam, creating an exceptionally strong bond between the parts.

PRO-TIP: If you wish to display your Gold Cobra with the Engine Bay Doors open, carefully separate the two sections of B12 with a hobby knife. Instead of trying to cut the doors apart, scribe the separation line repeatedly with the back of the knife blade, then snap the doors cleanly apart. If necessary, edges can be cleaned with fine sandpaper or a fine file before painting.

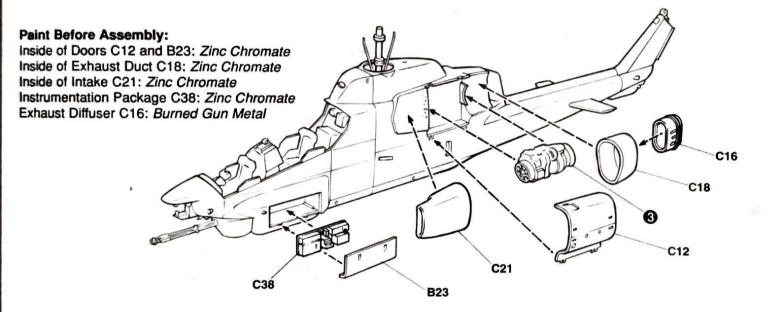
IMPORTANT NOTE: If you plan to paint your Gold Cobra's Fuselage, we recommend doing so now. Spraying is the preferred method and we suggest using an airbrush or high quality hobby spray can for application. Before painting, protect the Engine, Cockpit, Rotor Mast, 20mm Cannon and other previously painted details from over spray or brushing error, then paint the following parts Black:

Right and Left Fuselage Sides A1 and A2 (already joined)
Synchronized Elevator C31 (already installed)
Completed Stub Wings and Weapons Pylons Assemblies
Outside of Exhaust Ducts C18 and C19
Outside of Intakes C20 and C21
Outside of Ammo Bay Doors B23
Outside of Engine Bay Doors C12 (one-piece or separated)
Telescoping Sight Unit Turret Halves C14 and C15

When paint has thoroughly dried, apply all Gold Fuselage Decals #1, 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16



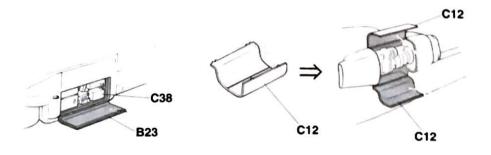
#### **ENGINE AND LEFT SIDE FUSELAGE PARTS**

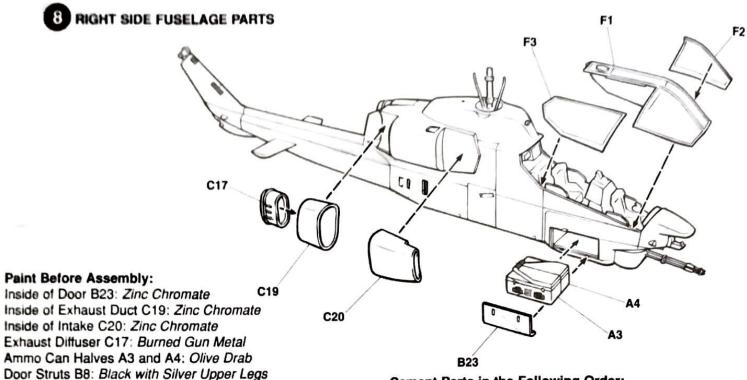


#### Cement Parts in the Following Order:

Completed Engine to Engine Bay in Fuselage Side A2
Open or Closed Engine Bay Doors C12 to A2
(One-piece Doors if closed, separated if open)
Intake C21 to A2
Exhaust Diffuser C16 to Exhaust Duct C18
Exhaust Duct C18 to A2
Instrument Package C38 to A2
Ammo Bay Door B23 to A2 in Open or Closed Position

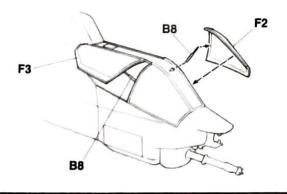
**OPEN DOOR OPTIONS** 





PRO-TIP: If you wish to display your Gold Cobra Canopy with its Doors open, refer to the canopy drawing and prop Doors F2 and F3 open with Door Struts B8.

Canopy Frames F1, F2 and F3: Black



#### Cement Parts in the Following Order:

Intake Duct C20 to Right Fuselage A1 Exhaust Diffuser C17 to Exhaust Duct C19 Exhaust Duct C19 to A1 Ammo Can Half A3 to Ammo Can Half A4 Completed Ammo Can to A1 Ammo Bay Door B23 to A1 in Open or Closed Position

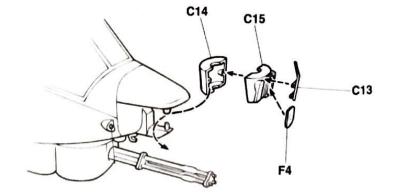
#### Use White Glue to Attach Canopy Parts in the Following Order:

Main Cockpit Canopy F1 to Fuselage Door F2 to F1 - Add B8 if Door is to be displayed open Door F2 to F1 - Add B8 if Door is to be displayed open



#### Paint Before Assembly:

Telescopic Sight Unit Turret Halves C14 and C15: Black Cable Deflector C13: Yellow



#### Cement Parts in the Following Order:

Telescopic Sight Turret Half C14 to Fuse - USE NO GLUE! Front Half of TSU Turret C15 to Back Half C14 (Do not allow cement near pins; Turret must be free to rotate) Cable Deflector C13 to TSU Turret Half C15 Clear Window F4 to TSU Turret Half C15

PRO-TIP: Clean the joints around the two pins at the nose of the Fuselage. A fine jeweler's file can help to access tight areas.

# MAIN COMPONENT ASSEMBLY

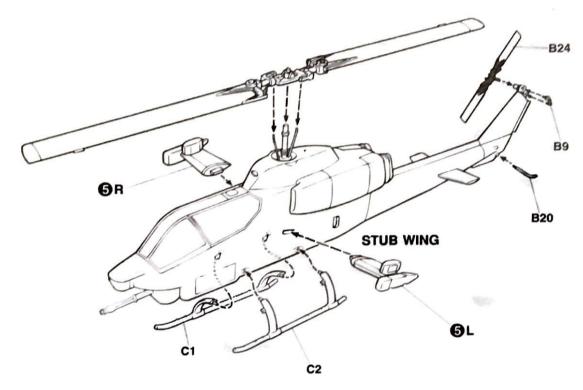
### Paint Before Assembly:

Landing Skids C1 and C2: Black

Tail Skid B20: Black

Tail Rotor B24: Flat Black Blades, Yellow Tips, Silver Linkage

Tail Rotor Linkage B9: Gun Metal



#### After Painting, Cement Parts in the Following Order:

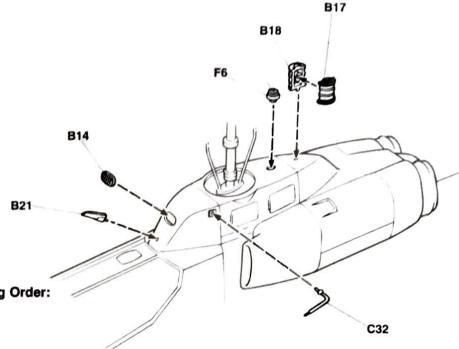
Landing Skids C1 and C2 to Fuselage
Completed Left and Right Stub Wings to Fuselage
Tail Skid B20 to Fuselage
Tail Rotor Linkage B9 to Fuselage
Tail Rotor B24 to Fuselage
Completed Main Rotor Assembly to Fuselage
\* Parts C33, 34, 35, 36 are not used on the AH-1T+.

**HELI-FACT:** The SuperCobra's Stub Wings are not solely for the purpose of generating aerodynamic lift. Their primary purpose is to carry ordnance.



#### Paint Before Assembly:

Vent Screen B14: Semi-Gloss Black Pitot Tube C32: Silver Upper Cable Cutter B21: Black Rotating Beacon F6: Clear Red



After Painting, Cement Parts in the Following Order:

Rotating Beacon F6 to Fuselage Pitot Tube C32 to Fuselage Upper Cable Cutter B21 to Fuselage Vent Screen B14 to Fuselage

**PRO TIP:** Use white glue or two-part epoxy when adding small details to your SuperCobra. They tend to dry clear and during assembly, excess glue can be removed with a soft cloth wetted with rubbing alcohol.

Before Painting, Cement Parts in the Following Order: Left Infra-Red Jammer Half B17 to Right Half B18

#### Paint After Assembly:

Completed Infra-Red Jammer B17 and B18: Semi-Gloss Black on Top and Bottom with Bright Gold Center Section

PRO TIP: To duplicate the gold color on the sides of the I/R Jammer, use Gold Bare Metal Foil (sold in hobby shops).

After Painting, Cement Parts in the Following Order: Completed Infra-Red Jammer to Fuselage

**HELI-FACT:** The Infra-Red Jammer confuses the heat sensors on enemy missiles, preventing them from locking onto the SuperCobra.



#### Before Painting, Cement Parts in the Following Order:

#### 2.75" Rocket Pod Assemblies

Right Rocket Pod Half D4 to Left Half D5 - Make Four Pods
One Pod Front D2 to Each Rocket Pod
One Pod End D3 to Each Rocket Pod
Two Pod Connectors D6 or E6 to Each Rocket Pod
Pod Offset D1 to Only Two of the Four Rocket Pods
(Note direction of Pod Fronts when attaching Offsets. Offsets are used only on *Inboard* mounted Rocket Pods *only*.)

**HELI-FACT**: During Desert Storm, the Marine Corps often flew with two of these pods, one mounted to each of the Cobra's inboard pylons.

#### **Hellfire Missile Assemblies**

Hellfire Missile Upper Half D9 to Lower Half D10 - Make Eight Weapons Rack Bottom D11 to Rack Top D8 - Make Two Two Weapons Rack Connectors D7 to Each Rack Top D8 Four Completed Missiles to Launch Rails of Each Rack

**HELI-FACT:** During Operation Desert Storm, fitting Hellfire Missiles to one outboard pylon and TOW Missiles to the opposite outboard pylon was commonplace.

#### **TOW Missiles**

TOW Missile Tube Pair Upper Half E12 to Lower Half E13 - Repeat to Make Four Pair

One Missile Pair Front E9 to Front of Each Missile Tube Pair (Missile front has smaller pins) - Repeat for All Four

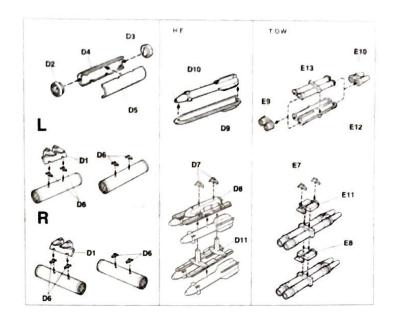
One Debris Director Pair E10 to Back of Each Tube Pair - Repeat for All Four

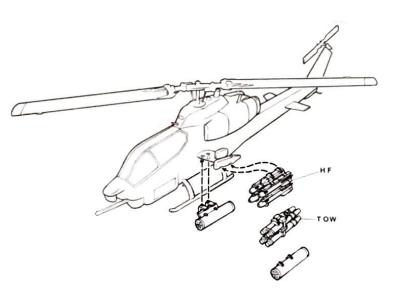
One Control Assembly E8 to Two Missile Tube Pair (Note direction of Missile Tubes when attaching Control Assembly. Lone Brace is to Front)

One Control Assembly E11 to Two Missile Tube Pair (Note direction of Missile Tubes when attaching Control Assembly. Lone Brace is to Front)

Two Weapons Rack Connectors E7 to Each Control E11
Two Missile Tube Pair with E11 and Connectors E7 to
Top of Two Tube Pair with E8

**HELI-FACT:** TOW Missiles differ greatly from Hellfire Missiles. Hellfire Missiles are laser guided, homing in on laser spots provided by a laser designator. TOW Missiles are optically guided by the gunner through a thin wire that stays attached to the helicopter.





After Painting Cement Parts in the Following Order: Completed 2.75" Rocket Pod Assemblies to Stub Wings Completed Hellfire Missile Assemblies to Stub Wings Completed TOW Missile Assemblies to Stub Wings

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#### Apply Decals as Shown

