

75mm Anti-Aircraft Gun

SKYSWEEPER

FROG

DE-LUXE

MODELS



INTERESTING FACTS ABOUT THE SKYSWEEPER

Guarding the skies above our cities is the **SKYSWEEPER** 75mm Radar Anti-Aircraft Gun. It was developed toward the end of World War II by Army Ordnance and cooperating American industries. Included among these were Sperry Gyroscope Co., A.C. Spark Plug Division of General Motors Corp., Aetna Standard Engineering Co. and American Machine and Foundry Co.

SKYSWEEPER is unique in that it is the first major caliber anti-aircraft weapon to have all of the fire control equipment mounted directly on the gun carriage. The fire control is oriented with the gun and therefore no leveling or complicated aligning of the sights is necessary prior to firing. This permits the weapon to be employed on rough terrain or on a slope and still be ready for firing in approximately 2 minutes.

On the left side of the **SKYSWEEPER** is a radar set which both locates and tracks targets. This radar sweeps the entire sky automatically once every 40 seconds and detects aircraft

within a 15 mile radius regardless of weather conditions — even when aircraft are invisible in a blanketing fog.

On the right side of the **SKYSWEEPER**, a mechanical computer automatically translates the target position data from the radar into the information necessary for correctly aiming the gun. The power controls permit the gun to track a plane moving at 750 mph with ease. **SKYSWEEPER** is equipped with a 75mm gun which fires a 12½ lb. projectile using either a proximity fuse or a point detonating fuse. The gun is equipped with a magazine and fires automatically at a rate of 45 shells per minute. Complexity of entire unit makes necessary one of Army's longest training courses for maintenance personnel — 37 weeks. This is conducted at the Ordnance School, Aberdeen Proving Ground, Maryland.

Working as a team **SKYSWEEPER** and **NIKE*** guided missile systems seek out and destroy enemy aircraft and robot bombs that have penetrated outer defenses.

* Frog Nike Kit also available in Series "M" scale.

MADE OF DURABLE HIGH-IMPACT POLYSTYRENE PLASTIC



SERIES

M

S C A L E

3/8 in. = 1 ft.

INTERNATIONAL MODEL AIRCRAFT LTD. LONDON S.W.19

SKYSWEEPER M552

assembly instructions

FROG DE-LUXE MODELS

READ CAREFULLY BEFORE BEGINNING ASSEMBLY

YOUR FROG DE-LUXE MODEL

This 75mm Radar SKYSWEEPER Model you have obtained is unparalleled for strict adherence to specifications contained in Official U.S. Army blueprints. We wish to take this opportunity to express our gratitude to the U. S. ARMY ORDNANCE CORPS and the Office of the Chief of Information and Education, for generously furnishing complete and accurate data. This data enabled our engineering staff to develop a model that is truly the mirror image of the actual SKYSWEEPER.

This unique model embodies virtually all of the movable features of the actual weapon and is fully operational from Traveling Position through Firing Position.

GENERAL INSTRUCTIONS

A. Notice that all parts are identified with a part number which is either stamped on the back of the piece or on a small detachable disc. Remove this disc once you properly identify it with the assembly you are working on.

B. Examine pieces and remove any other

- 15 COMMANDER
- 16 RADAR OPERATOR
- 17 COMPUTER OPERATOR
- 18 LOADER
- 19 ASSISTANT LOADER



"NO-SHOW" CEMENT TECHNIQUE

NO-SHOW CEMENTING is designed into your kit. The parts have been specifically engineered to enable you to complete a model which is free of burns and smears. The instructions and drawings have also been designed to carry out the "NO-SHOW" cementing feature, through the use of blue tones to indicate cementing areas. These design features will enable you to obtain favorable results and reward you with a model you will be proud to display.

1. First, locate and fit pieces together, prior to cementing.

2. Then, APPLY CEMENT SPARINGLY ONLY TO THE AREAS INDICATED IN BLUE ON THE INSTRUCTION DRAWINGS. Hold or clamp parts until a permanent bond is assured.

LEGEND

- Cementing area.
- Special "No-Show" Cementing Points. Apply cement here after parts are in assembled position.
- Hidden cementing areas.

Follow numbered steps carefully for ease of assembly

NOTE: Circled numbers are ONLY for parts identification and have no bearing on assembly sequence.



1 gun, gun cradle

CHECK FIT OF PIECES & PAINT NECESSARY PARTS BEFORE ASSEMBLY

Attention: Moving parts—Cement carefully

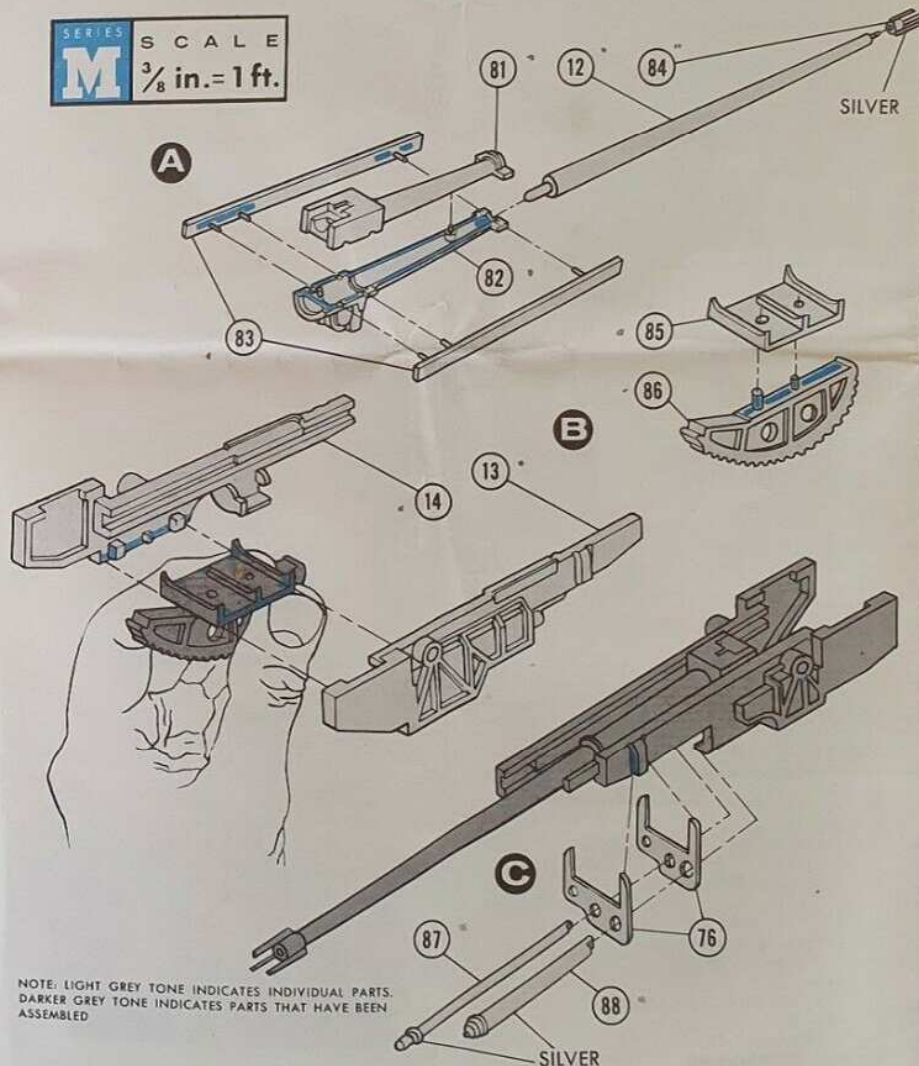
A. Top and bottom Breech Halves (81)-(82) are cemented together by applying cement as shown. Side Rails (83) are attached to both sides of Breech, applying cement as shown. Flash Suppressor (84) is cemented to Gun Barrel (12) and then Gun Barrel is cemented to Breech. Make sure the Gun Barrel lines up with Breech. Hold in proper alignment until dry.

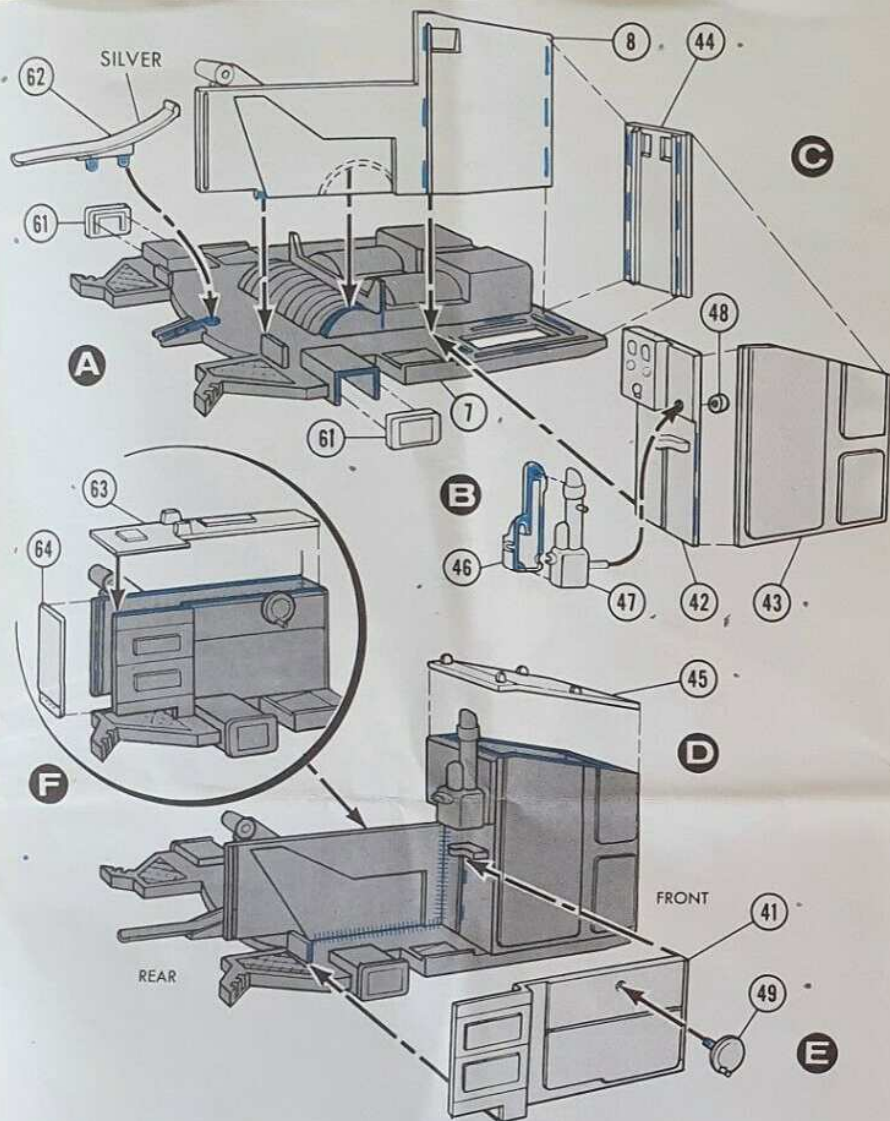
B. Remove excess plastic from flat of Elevating Gear (86) and cement to Cradle Brace (85). Let parts dry thoroughly. Apply cement to Left Gun Cradle (14) on the three locating tabs, and assemble Cradle Brace

as shown. Allow a few minutes for cement to set, and then cement Right Cradle (13) to Cradle Brace. When dry, insert Gun Assembly into grooves in Cradle. Slide Rails should slide freely.

C. Place a very small amount of cement in grooves on outside surfaces of Cradle, and carefully position Cylinder Brackets (76) with smallest hole directly under Right Gun Cradle. Allow to dry. Insert Recoil Cylinder (87) through Brackets, rotating Cylinder until notch on end seats securely on flat surface provided, and cement in place. Repeat for Floating Cylinder (88).

SERIES M SCALE
3/8 in. = 1 ft.





2 computer (right side)

CHECK FIT OF PIECES & PAINT NECESSARY PARTS BEFORE ASSEMBLY

Attention: Moving parts - cement carefully

A. Shell Case Chute (62) is cemented to the Platform (7) seating Chute securely in its channel at the rear. Tool Box Covers (61) are cemented over openings in sides of Platform.

B. Periscope Halves (46)-(47) are cemented together. Use no cement and insert pin on Periscope through the hole in the Computer Instrument Panel (42). Periscope Washer (48) is inserted over pin and cement applied to pin in hole locking the Periscope to the Instrument Panel. Periscope should pivot freely.

C. Computer main panel (8) is now attached to the platform, applying cement to semi-circular area on platform as shown. Using very small amounts of cement, as shown, assemble the computer Instrument

Panel (42), the Computer Side Panel (43), and the Computer Front Panel (44), forming a four sided box open at the top.

D. Be careful not to get cement on periscope washer and apply cement to the special "No Show" cement areas at the seams from the inside of the box and at the seam between the Platform and the Main Panel. The computer Top Panel (45) is cemented on to close the box.

E. Follow the same procedure to assemble Elevation Case Side (41) to Platform. Hand Wheel (49) is attached by applying cement from inside.

F. Cement Elevation Case Rear (64) to Elevation Case Side. Attach Elevation Case Top (63) to complete right side.

3 radar (left side)

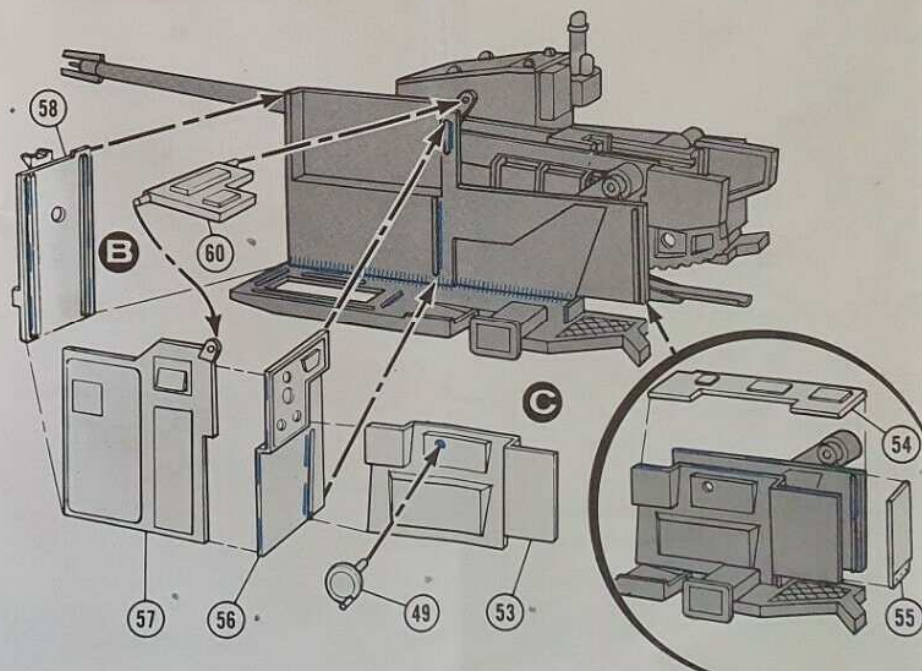
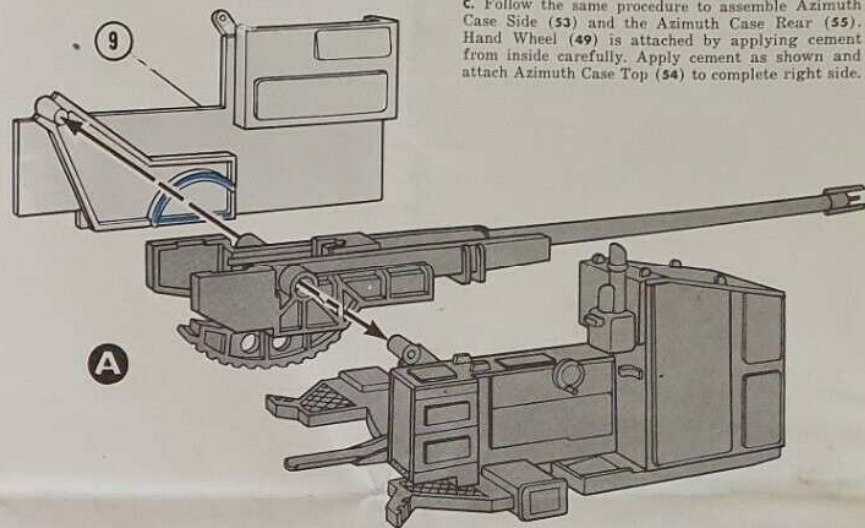
CHECK FIT OF PIECES & PAINT NECESSARY PARTS BEFORE ASSEMBLY

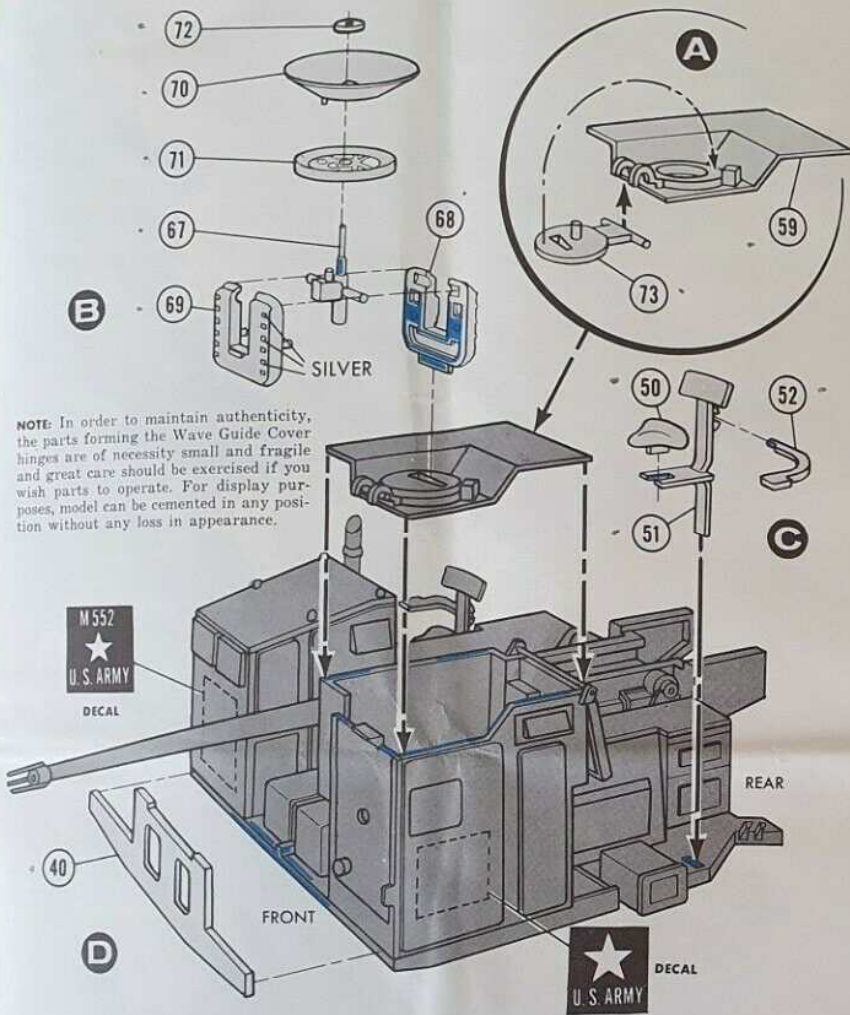
Attention: Moving parts - cement carefully

A. Apply cement to semi-circular area on Radar Main Panel (9) as shown. Fit Gun Cradle assembly (Completed in Step 1) over the large pin on the Radar Main Panel. Cement the Radar Main Panel to the Platform locking the Gun Cradle in place between the Computer and the Radar Main Panel. Allow to dry. Gun Cradle should then elevate to any angle from zero to ninety degrees with a positive clicking action.

B. Apply cement as shown to the Radar Instrument Panel (56), and the Radar front Panel (58) and position in place. Then cement the Radar Side Panel (57) in position locking the Radar Instrument Canopy (60) between the two eyelets as shown. This forms a four sided box open at the top. Now apply cement as shown to the special "No Show" cement areas at the seams inside the box, and at the seam between the Platform and the Main Panel.

C. Follow the same procedure to assemble Azimuth Case Side (53) and the Azimuth Case Rear (55). Hand Wheel (49) is attached by applying cement from inside carefully. Apply cement as shown and attach Azimuth Case Top (54) to complete right side.





NOTE: In order to maintain authenticity, the parts forming the Wave Guide Cover hinges are of necessity small and fragile and great care should be exercised if you wish parts to operate. For display purposes, model can be cemented in any position without any loss in appearance.

4 antenna, seats, brace

CHECK FIT OF PIECES & PAINT NECESSARY PARTS BEFORE ASSEMBLY

Attention: Moving parts - Cement carefully

A. Wave Guide Cover (73) is now positioned under the two hooks on the Radar Top Panel (59). **NOTE:** In open position, pin on Wave Guide Cover will face up. For ease in assembly, close Wave Guide Cover, and then cement Radar top panel as shown being careful not to get cement on Canopy or Wave Guide Cover hinges.

B. Lock the Nutator (67) in place between the Trunnion Halves (68)-(69) by applying cement only where shown. The Nutator should pivot freely within the Trunnion. Position Reflector Back (71) over the Nutator. Locating pin should seat in the hole provided. Now place small amount of cement on thick section of Nutator pin, as shown. Now assemble the

Reflector Dish (70) seating pin in hole provided. Then carefully attach the Antenna Ring (72) with recess facing Nutator. Apply cement to the tab on the bottom of the Trunnion and insert it correctly into the Wave Guide Cover (73) (Previously assembled to the Radar.)

C. Construct the Radar Operator's Seat and the Computer Operator's Seat by cementing the Seats (50) to the Seat Backs (51). Allow part to set. Insert both Seats into the slots on the Platform and cement from underside. Then cement the Arm Rests (52) to each Seat as shown.

D. The Brace (40) is now cemented to the front of the Platform.

5 pedestal

CHECK FIT OF PIECES & PAINT NECESSARY PARTS BEFORE ASSEMBLY

Attention: Moving parts - Cement carefully

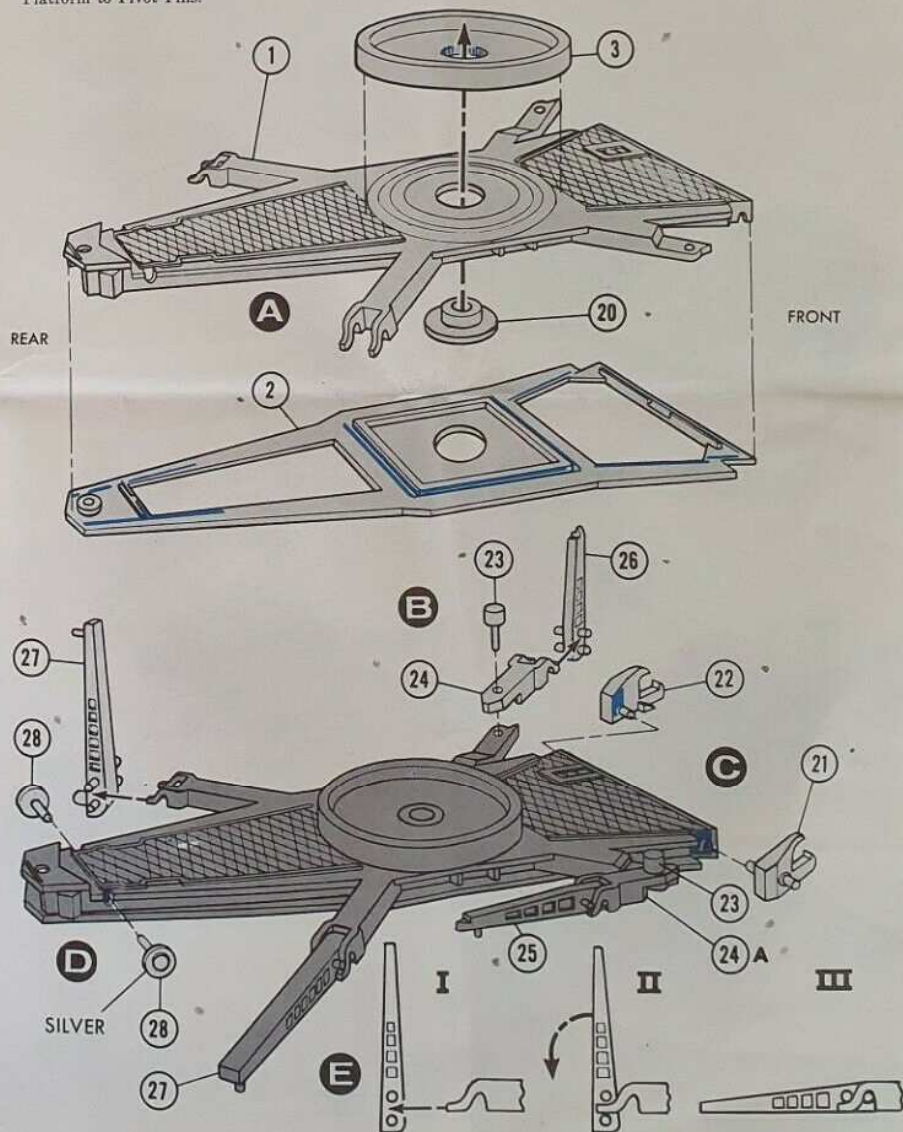
A. Place the Bearing Retainer (20) through the hole in the Pedestal Top (1) from below as shown. Now, firmly seat the Bearing Ring (3) into the Bearing Retainer, sandwiching the Pedestal Top between them. Apply cement to the Bearing Retainer, **FROM THE TOP.** When properly assembled, the Bearing should turn freely in the Pedestal Top. Pedestal Bottom (2) is now assembled to the Pedestal Top cementing as shown.

B. Pivot Pins (23) are inserted through holes in Left and Right Inside Arms (24)-(24A) and assembled to front of Pedestal, as shown. In order for Inside Arms to swivel freely, cement is applied from underside of Platform to Pivot Pins.

C. Cement Left and Right Suspension Hooks (21)-(22) into holes in front of Pedestal as shown. Allow to dry thoroughly.

D. Sheaves (28) are inserted into holes in rear of Pedestal and cemented from inside of Pedestal.

E. The two Front Outriggers (25)-(26) and the two Rear Outriggers (27) are all assembled in the same way. (I) Hold the Outrigger in a vertical position near the "S" shaped hook. (II) Slide the Outrigger into the "S" shaped hook so that the hook fits between the two pins on each side of the Outrigger. (III) Rotate the Outrigger down to a horizontal position. Do this for all four Outriggers.



6 front & rear suspension

CHECK FIT OF PIECES & PAINT NECESSARY PARTS BEFORE ASSEMBLY

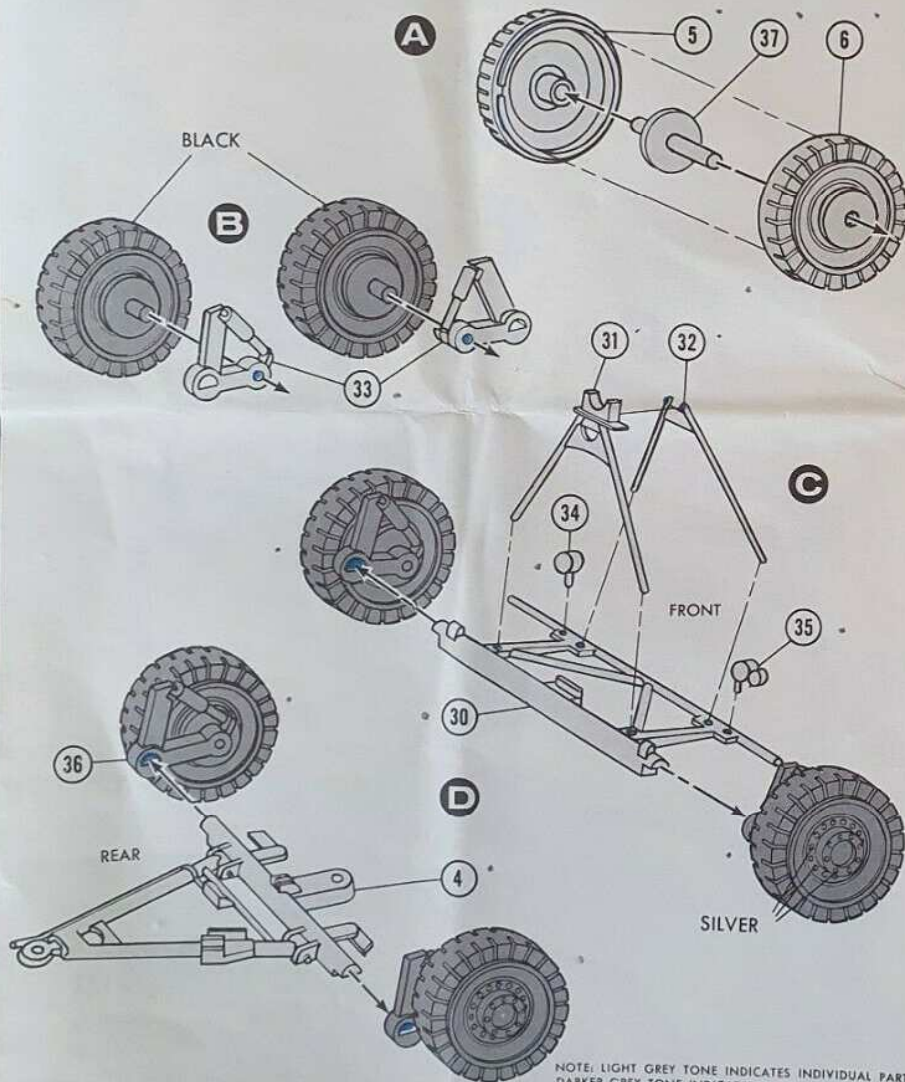
Attention: Moving Parts - Cement carefully

A. Use no cement and insert Axle (37) into hole in Wheel Half (6). Now cement on Wheel Half (5) matching notch with tab in Wheel Half (6). The Wheels should now turn freely on the axle. Do this for all four wheels.

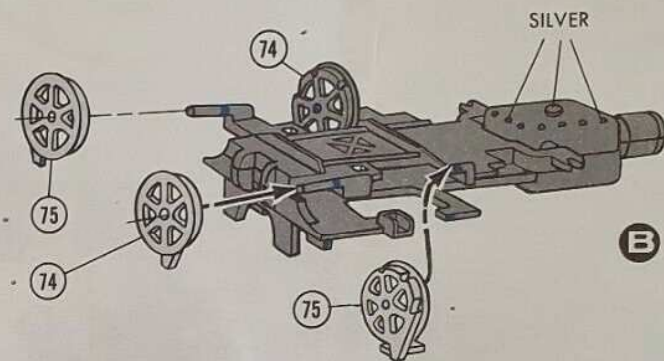
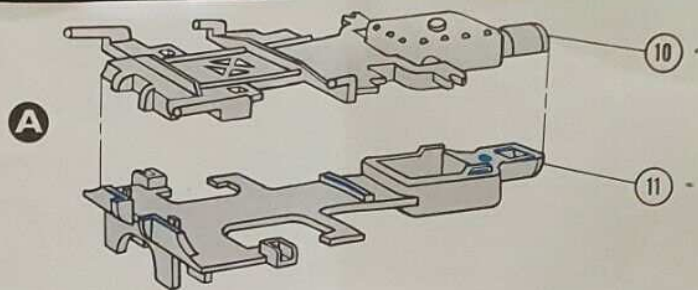
B. One Front Shock Absorber (33) is cemented to an Axle with semi-circular hole positioned to the left. Do the same with the other Front Shock Absorber, positioning the semi-circular hole to the right. Set aside to dry and repeat procedure with the remaining two Wheels and the two Rear Shock Absorbers (36).

C. Cement the top of Barrel Rest Brace (32) to the top of Barrel Rest (31) forming a pyramid. Allow cement to set. Attach Barrel Rest assembly to Front Suspension (30) as shown. The Left Light (34) and the Right Light (35) are cemented to the Front Suspension.

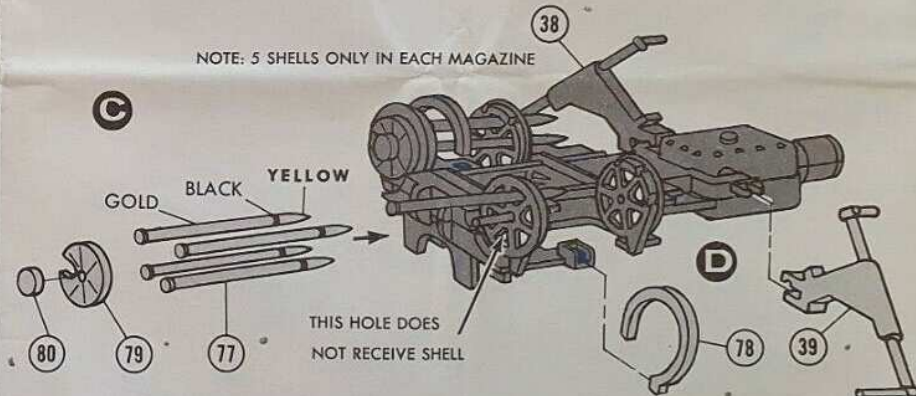
D. Cement the assembled Front Wheels and Shock Absorbers to the Front Suspension. When properly assembled, the Wheels should clear the front draw bar by 1/16 inch. Repeat this procedure with the Rear Suspension (4).



NOTE: LIGHT GREY TONE INDICATES INDIVIDUAL PARTS. DARKER GREY TONE INDICATES PARTS THAT HAVE BEEN ASSEMBLED.



NOTE: 5 SHELLS ONLY IN EACH MAGAZINE



7 loader

CHECK FIT OF PIECES & PAINT NECESSARY PARTS BEFORE ASSEMBLY

Attention: Moving parts - Cement carefully

A. Loader Halves (10)-(11) are cemented together.

B. Take one each of Magazine Reel End (74)-(75) and cement on rear pins of Loader, cementing at three points as shown. Make sure that notched surfaces face front. Now position and cement in front Magazine Reel Ends (74)-(75) with notched surfaces facing the rear. STUDY DRAWING CAREFULLY TO OBTAIN CORRECT LOCATION FOR EACH REEL.

C. Carefully remove all excess plastic from sides and ends of 75mm High Explosive Shells (77). Use no cement and load five Shells in each Reel. Use no

cement and assemble Magazine Retainers (79) to rear pins. Now place a very small amount of cement in each Magazine Retainer Nut (80) and attach to pin ends. Retainers should rotate freely allowing shells to be removed and loaded again one at a time through "U" shaped notch.

D. Assemble both Magazine Center Rings (78) in place by seating thinner end into square hole on the Loader Top. Work other end over and around Shells until it seats into notch provided, cementing as shown. Finally snap Left Telescope Sight (38) to left side of Loader and Right Telescope Sight (39) to right side of Loader. Telescopic sights can be removed if desired.

8 final assembly

CHECK FIT OF PIECES & PAINT NECESSARY PARTS BEFORE ASSEMBLY

A. Apply cement to top of Bearing Ring as shown and attach entire Platform assembly to it.

B. Cement loader to top of Cradle in the slots provided as shown, being careful to avoid getting cement on moving parts.

C. Right Ammunition Platform (66) is inserted into the two rectangular slots on the right side of the Platform. When properly seated, the Ammunition Platform can be raised and lowered on its hinge. Repeat for Left Ammunition Platform (65).

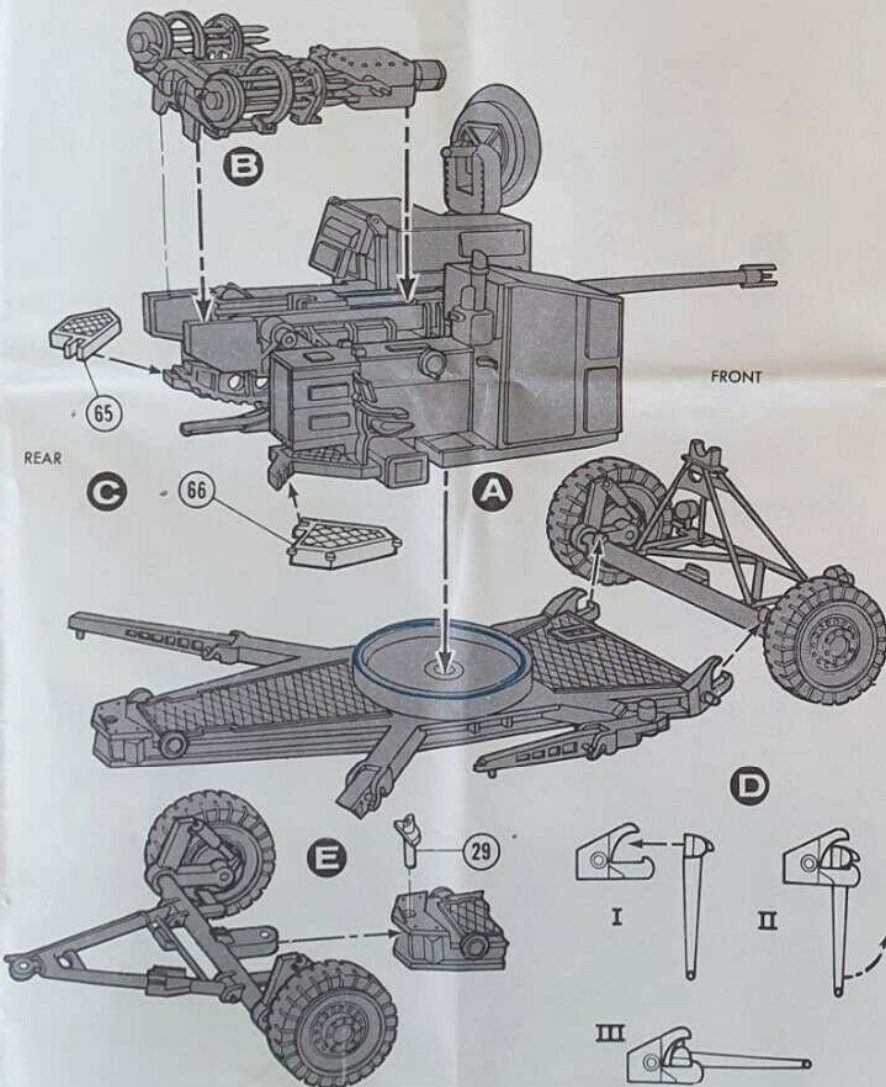
D. Use no cement and connect front suspension to Pedestal as shown.

(I) Hold Front Suspension in vertical position near Suspension Hooks.

(II) Push the Front Suspension into the Suspension Hooks.

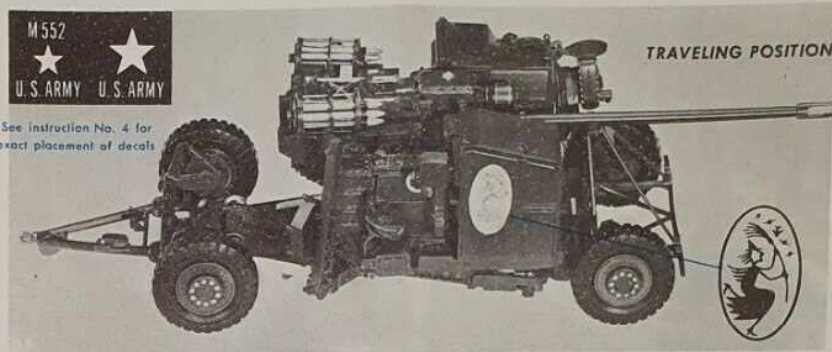
(III) Rotate the entire suspension up to a horizontal position. Reverse this procedure to remove Front Suspension for firing position.

E. Use no cement and connect Rear Suspension to Pedestal with Swivel Pin (29) as shown. Remove Swivel Pin to disconnect Rear Suspension for firing position.



In Traveling Position: The Front and Rear Suspension are attached to Pedestal. The Gun fits over the Barrel Rest on the Front Suspension. Antenna and Periscope are folded down. Ammunition Platforms and Rear Outriggers are folded up. Front Outriggers swing back and under Platform. Telescopic sights are removed. The entire unit is then pulled along backwards to be immediately available for action in any strategic area.

TO APPLY DECALS: First see instructions on back of decals. Then cut decals apart INSIDE the dotted lines. See illustration for correct location, then apply one subject at a time. Slide decal partly off paper backing, hold decal in correct position on model, then slip backing from beneath decal. Adjust position if necessary, then smooth out any wrinkles and blot with a soft cloth.



See instruction No. 4 for exact placement of decals

NOTE: Do not become alarmed if Decals appear milky white against the olive drab background. This will disappear when Decals are thoroughly dry.

In Firing Position: The above procedure is reversed. In emergencies, however, the SKYSWEEPER may be fired with Front and Rear Suspensions on. Crewmen are designed to fit positions as shown in the photograph, but they are adaptable to other combat locations. Your model is one of our SERIES "M", which are scaled 3/8 in. = 1 ft. thus making possible a collection wherein all models are in true scale to each other.

