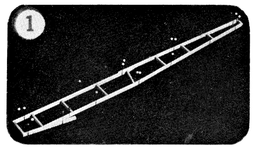
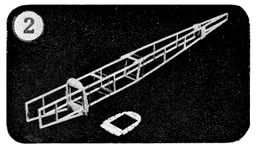
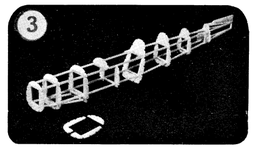


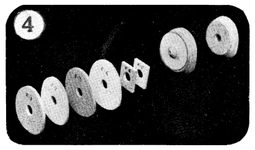
BUILD THE FUSELAGE SIDE FRAMES ON THE SHADED LAYOUT OF THE FUSELAGE SIDE VIEW. PUT WAX PAPER OVER THE PLAN TO KEEP THE FRAMES FROM STICKING TO IT. USE SMALL STRAIGHT PINS TO HOLD PIECES IN PLACE UNTIL GLUE DRIES.



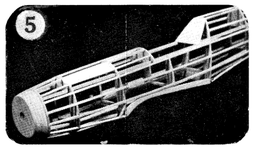
CEMENT KEY FORMER TOGETHER. CUT CROSSBRACES (USING TOP VIEW OF FUSELAGE). SLIP KEY FORMER OVER SIDES AND PIN IT IN PLACE, TO SQUARE UP FUSELAGE. CEMENT CROSSBRACES IN PLACE, USING RUBBER BANDS TO CLAMP SIDES. NOTE TAPER AT REAR END.



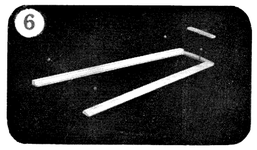
ADD REST OF CROSSBRACES. CEMENT ALL FORMERS IN PLACE. ADD RIDGE STRINGER AND F-21.



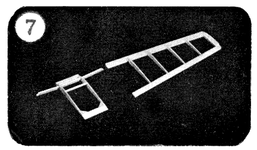
THIS PHOTO SHOWS THREE STAGES OF MAKING A NOSE BLOCK. CEMENT PIECES F-0 THROUGH F-4 TOGETHER. USE A PIECE OF 5/16" DOWEL (OR THE THRUST BUTTON) TO LINE THEM UP. KEEP ALL NUMBERS LINES UP. CUT DISC PATTERN FROM PLANS. USE THIS AS A GUIDE WHEN SANDING NOSE BLOCK TO SHAPE.



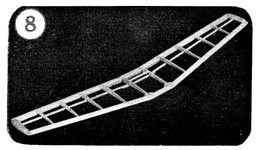
CEMENT ALL STRINGERS IN PLACE. MAKE THEM LAY STRAIGHT. ADD F-23 AND F-27. SAND FUSELAGE SMOOTH WITH SANDING BLOCK. SAND FORMERS DOWN FLAT BETWEEN STRINGERS - MAKES SMOOTHER COVERING. ADD GUN TROUGHS AND WING MOUNT PINS.



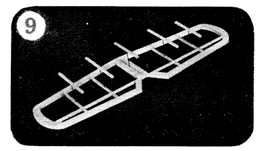
SHAPE TRAILING EDGES. PIN THEM DOWN OVER PLAN. CEMENT AND PIN DOWN LEADING EDGE PEICES AND TIPS. NOTE THAT LEADING EDGE IS SQUARE AT THIS STAGE.



CEMENT RIBS IN PLACE. GET THEM STRAIGHT. NOTE THAT WING IS MADE IN THREE SECTIONS. MAKE CENTER SECTION AS PHOTO SHOWS. W-10 AND TWO RIBS ARE ASSEMBLED FIRST.



BEFORE COMPLETING ASSEMBLY, SHAPE LEADING EDGE AS SHOWN ON PLAN. NEXT BEVEL WING ROOT ENDS (CHECK PLAN). CEMENT WING SECTIONS TOGETHER USING W-10 TO DETERMINE ANGLE. DOUBLE-CHECK AND SEE THAT BOTH SIDES HAVE 1" UP AT TIPS (SEE FRONT VIEW). ADD SPARS AND W-12 GUSSETS. COAT DIHEDRAL JOINTS WITH EXTRA CEMENT.



STABILIZER IS BUILT OVER PLAN. CEMENT MAIN FRAME TOGETHER. ADD SPAR AND RIBS. CEMENT ANOTHER 1/16" RIB ON TOP OF EACH RIB. THIS GIVES THICKNESS FOR A GOOD SECTION. BUILD RUDDER AS SHOWN ON PLAN.

Tip section.

Handley-Page slots. Use thin strip of black tissue, or ruling pen and India ink.

Make machine guns from balsa, pins and thread.

Dihedral brace W10.

Bevel for dihedral.

Your model must balance at these arrows.

See picture 1 "How to Fly Your Model".

Landing gear fits in slot. Add W11 and glue well.

Spar 3/32" Sq.

Leading edge 5/32" X 3/16".

1/16" X 3/16".

W1 W2 W3 W4 W5 W6 W7 W8 W9

Model must balance at wing tip arrows. See "How To Fly Your Model".

Typical wing section.

LEFT WING

Wing walk.

WING CENTER

Wing assembly
Shape trailing edge before assembly.

Shape leading edge after assembly but before dihedral.

Cut radiators from sheet #3, then form and cement them to model.

Left wing radiator.

Right wing radiator.

RIGHT WING

Trailing edge 1/8" X 1/2".

Aileron separation.

Flap separation.

Cut thru with razor blade for trim tab. See "How To Fly Your Model".

Pre-set left trim tab 1/16" down, to correct for torque.

Bevel for dihedral.

Note: W-12 gussets and 3/32" Sq. center spars added after dihedral is in.

Color scheme:
Top all surfaces forest green. Lower sides light blue. Spinner yellow.

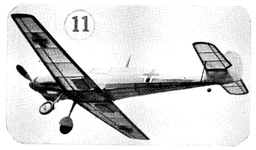
1" dihedral.

Glue seed bead on end of wire as wheel keeper.

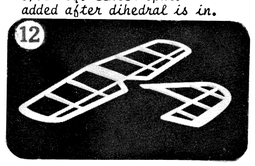
AIRPLANE FRONT VIEW

F2 F3 F4

Dope Note:
To prevent warped surfaces, plasticize the dope by adding 6 to 10 drops of castor oil per ounce of dope. Mix thoroughly.



THE ME-109 HAS EXCELLENT PROPORTIONS FOR A FLYING SCALE MODEL. THE RUBBER BAND MOUNTED WING PREVENTS DAMAGE ON HARD LANDINGS, AND ALLOWS EASY PITCH ADJUSTMENTS (CLIMB-DIVE AXIS).



TAIL SURFACES SANDED TO AIRFOIL SHAPE AND READY TO COVER. BE CAREFUL WITH TRAILING EDGE OF STAB AS YOU THIN IT. COVER THESE SURFACES (SEE COVERING INSTRUCTIONS) BEFORE ASSEMBLY ON FUSELAGE.

Build stabilizer on this layout. See picture 9.

Stabilizer-elevator separation.

Ribs are built up of 1/16" Sq.

3/32" X 3/16"

Tail strut location

STABILIZER

S1 S1

Crossbraces located at dots on side frame.

Motor peg 1/8" dowel.

Stabilizer position

Note: Sides beveled on inside.

Exhaust port housing.

Key former

F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20 F21 F22 F23 F24 F25 F26 F27

Gun troughs

Aerial post F22.

FUSELAGE TOP VIEW

Nose block

disc pattern.

Shape noseblock to match spinner.

Noseblock may be made removable by adding 2 F0 formers to act as plug.

Note: Building this model is fun, but it's even more fun to finish it and start flying. Best way to do this: read instructions, work carefully.

F26 oil cooler

Straight pins glued to back of F13, for wing mount bands.

Insulators, glass beads.

Radio aerial (thread).

To stab tip

Rudder tab. See "How To Fly Your Model".

Fin-rudder separation.

R1 R2 R3

RUDDER

3/32" X 3/16"

Dots show crossbrace location.

Color line:
All area below this is light blue. All above, forest green.

Ridge stringer

Tail strut 1/16" sq.

1/16" X 3/32"

3/32" sq.

Put pin thru tail wheel and bend to this shape.

Cut stringer notches in F20 after gluing to frame.

1/16" sq. stringers

Aerial post F22. Mount after covering.

Note: Not all stringers shown on plan.

Formed plastic canopy.

Black dope, or black tissue strips.

Instrument panel on F11

6" plastic prop

thrust button

Washer

Soda straw cannon

Plastic spinner.

Backplate F24

Glue 1/4 oz. weight inside nose.

Two #16 rubber bands looped together & thru the fuselage hold wing in place.

Key former See layout below.

Exhaust housing position.

Two 1/16" sq. stringers between F-11 and F-14.

Stringers 1/16" sq.

Fuselage main frame 3/32" sq.

Center of gravity (balance point)

C.G.

FUSELAGE SIDE VIEW

Engine radiator front view.

radiator

Wrap gear strut with masking tape. Glue wheel cover only to strut (taped).

Wing radiator

This model has removable wing. This allows easy trim adjustments. Get C.G. balance point correct, then if model dives put 1/16" shim here (T.E.) to increase wing angle of attack.

Cut wheel discs out and glue to center of wheel. Dope tires black.

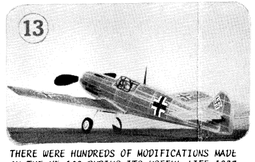
1-1/4" dia. hardwood wheel.

Key Former
Assemble key former over plan.

F10 F9 F4 F9

3/32" sq.

Power:
6 strands (3 loops) 1/8" flat rubber 13" long.



THERE WERE HUNDREDS OF MODIFICATIONS MADE ON THE ME-109 DURING ITS USEFUL LIFE 1937 TO 1944. THIS MODEL, BF-109 E, WAS FLYING FIGHTER MISSIONS IN 1940 OVER AFRICAN DESERTS, AND IN THE SKIES OVER LONDON. IT WAS USED IN NEARLY EVERY THEATER OF ACTION IN WW-II.

W10 W11

Bend landing gear to fit this shape. Cut slot in front of W10 and glue gear in place with W11.

NOTE THE LONG LANDING GEAR. THIS ALLOWS A LARGE PROP, WHICH MEANS BETTER PERFORMANCE. THE LANDING GEAR IS SHOCK ABSORBING, THE WHEELS LARGE FOR EASY TAKEOFFS.

This model was designed to fly like the real one....Fast-t-t. Keep it light and warp free. For best performance carve a balsa prop.

Better known as "ME-109".

MESSERSCHMITT BF 109 E

WINGSPAN 18" KIT 3306

LENGTH 18 - 11/16"

DESIGNED & DRAWN BY Larry Conover

COMET

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