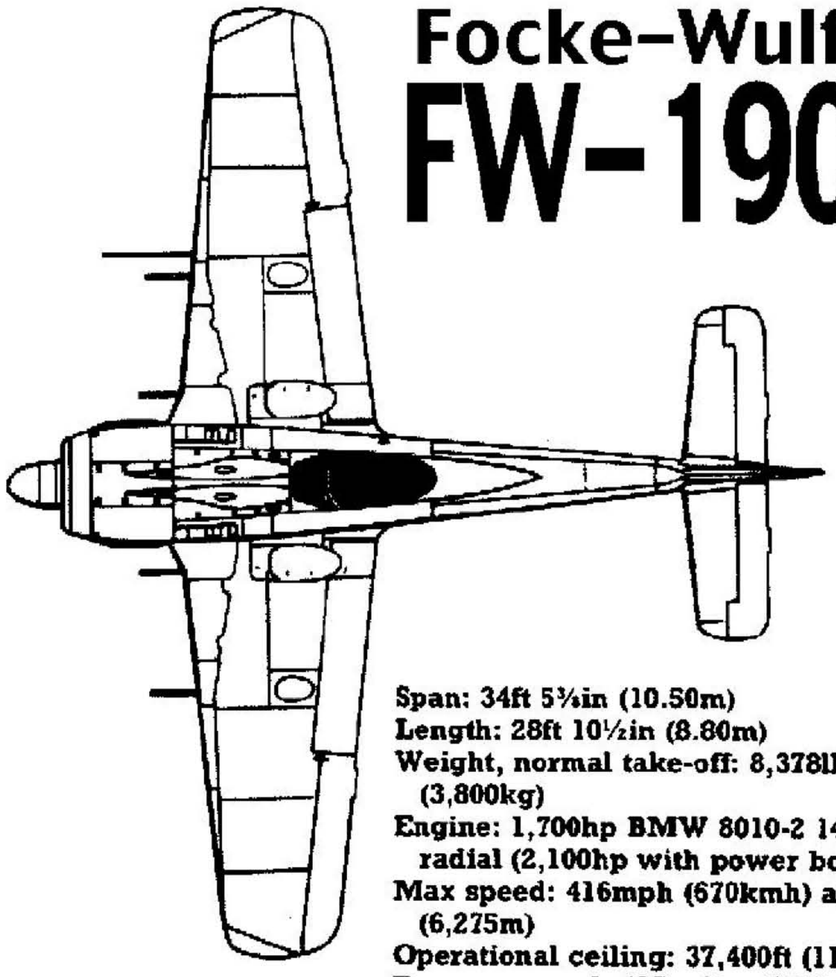
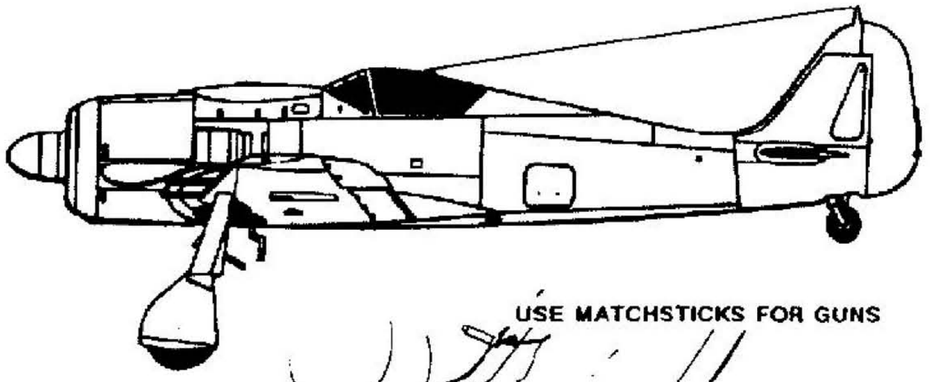
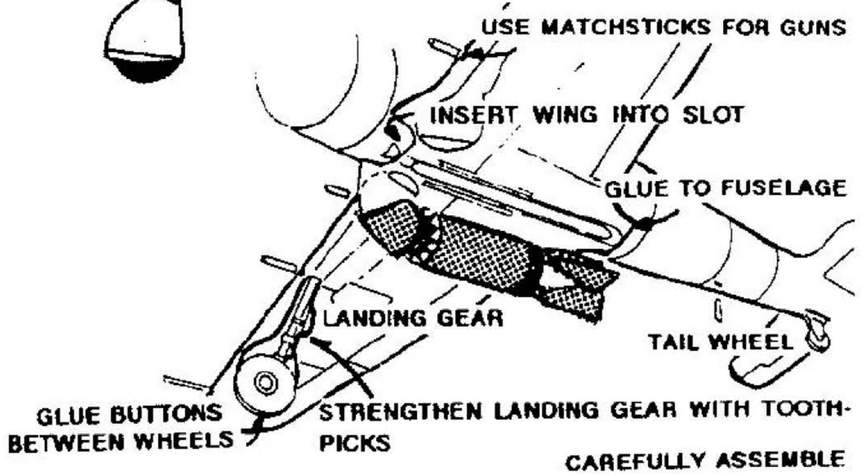
Focke-Wulf FW-190

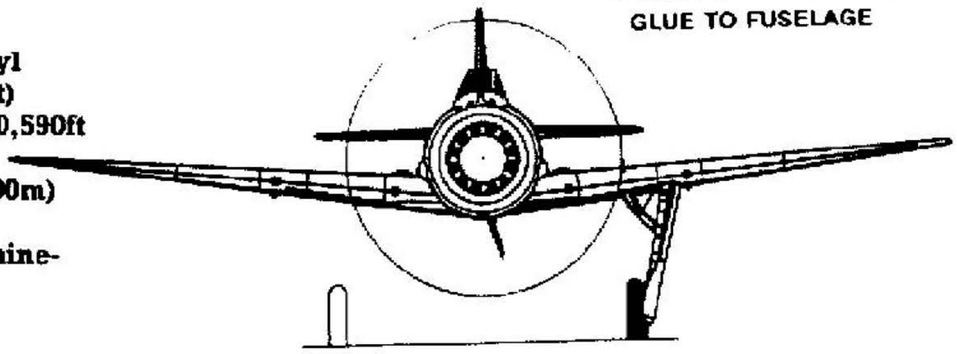






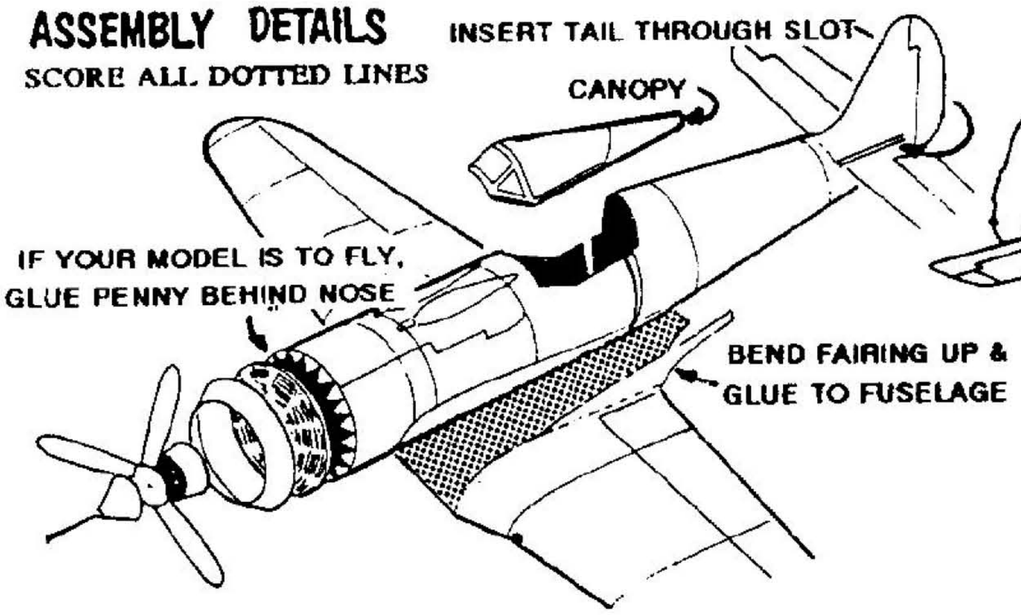
Span: 34ft 5⅜in (10.50m)
Length: 28ft 10½in (8.80m)
Weight, normal take-off: 8,378lb (3,800kg)
Engine: 1,700hp BMW 8010-2 14-cyl radial (2,100hp with power boost)
Max speed: 416mph (670kmh) at 20,590ft (6,275m)
Operational ceiling: 37,400ft (11,400m)
Range, normal: 497 miles (800km)
Armament: 2×7.9mm MG 17 machine-guns; 1×20mm MG151 cannon; 1×20mm MGFF cannon

CAREFULLY ASSEMBLE BOMB AS SHOWN AND GLUE TO FUSELAGE

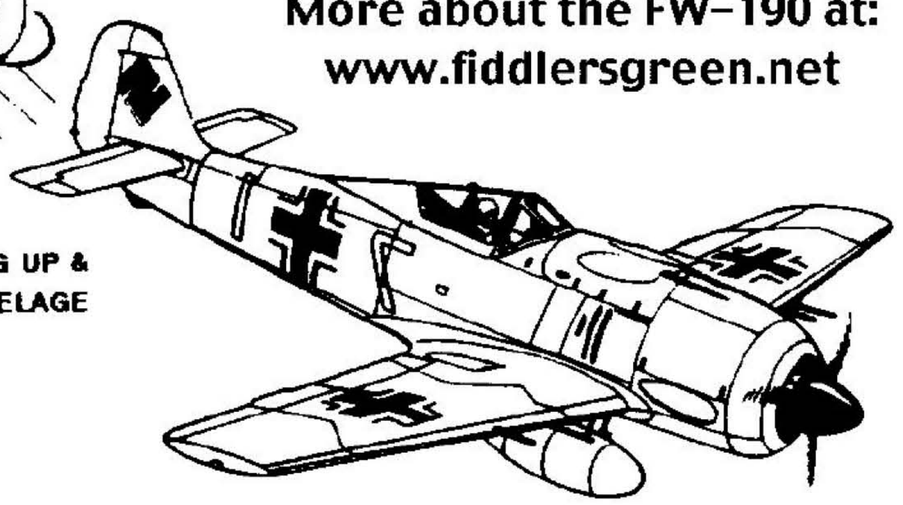


ASSEMBLY DETAILS

SCORE ALL DOTTED LINES



More about the FW-190 at: www.fiddlersgreen.net



The Fw 190, designed by Dipl-Ing Kurt Tank, was one of the technically most advanced, and operationally most eminent, fighter/fighter-bombers of 1939-45. One of two designs submitted by Focke-Wulf in response to a 1937 RLM specification, the prototype Fw 190V1 (D-OPZE) flew on 1 June 1939, powered by a 1,550hp BMW 139 radial, as was the second prototype. Subsequently, the larger 1,600hp BMW 801 was substituted. In 1940 18 pre-production Fw 190A-0s were ordered, most with a 3ft 3¼in (1.00m) increased in span that became standard. Delivery began in June 1941 with 100 A-1s. Armament was increased to six guns in the A-3, powered by a 1,700hp BMW 801Dg. The Fw 190 was used in low-altitude hit-and-run raids over southern England in 1941-42. By the end of 1942 nearly 2,000 had been built and the Fw 190 was serving in North Africa and on the Russian Front in even greater numbers than in Europe. Variants included the A-4; the A-4/U8 with fewer guns but carrying drop-tanks and a 500kg (1,102lb) bomb load, and the rocket-carrying A-4/R6; the A-5, for night fighting and close-support duties; the A-6 and A-7 had increased firepower; the A-8, A-9 and A-10 were mostly fighter-bombers, with different BMW 801 versions. A few Fw 190B and C prototypes were completed, with supercharged inverted-V DB603s. They were discarded in favour of the Fw 190D powered by the liquid-cooled 1,776hp Junkers Jumo 213A-1 whose annular radiator duct presented a radial-engined appearance and characterised by its longer nose and rear fuselage and (on the D-1) increased fin area. The initial D-0 and D-1 aircraft were evaluated in spring and summer 1943. The first major production D was the D-9, an interceptor, entering service in 1943; subsequent versions, equipped for ground attack, included the D-11, D-12 and D-13. Following the D was the Fw 190G fighter-bomber which could carry up to 1,800kg (3,968lb) of bombs. The F followed. Both were powered by the BMW 801D. Total Fw 190 production, excluding prototypes, was 20,051, over 6,500 of which were fighter-bomber variants. The DB603-engined Ta 152, developed from the Fw 190D, succeeded it in production, but served only in small numbers before the war ended.

FW-190

Best Prop Fighter in the German Luftwaffe!!

BOMB

GLUE

ROLL ALL PARTS

WSAM= 93%

FINS

BEND FILLETS

END PIECES

CURVE UPPER WING SURFACES BEFORE GLUING TOP TO BOTTOM

DON'T FORGET ABOUT DIHEDRAL

and score all bend lines

PROP

SPINNER

strengthen landing gear with toothpicks

TAIL GEAR

LANDING GEAR

GLUE TO TOP

GLUE TO TOP

LOWER WING SURFACE

CANOPY

COWLING (ROLL & GLUE)

HORIZONTAL TAIL

FOLD

ENGINE PLATE

11

11

CUT OUT THIS AREA AFTER FUSELAGE IS COMPLETE. THE WINGS GO HERE

BEND

BEND

FIND OUT MORE ABOUT THE FW-190 AT www.fiddlersgreen.net

MUDGET 92

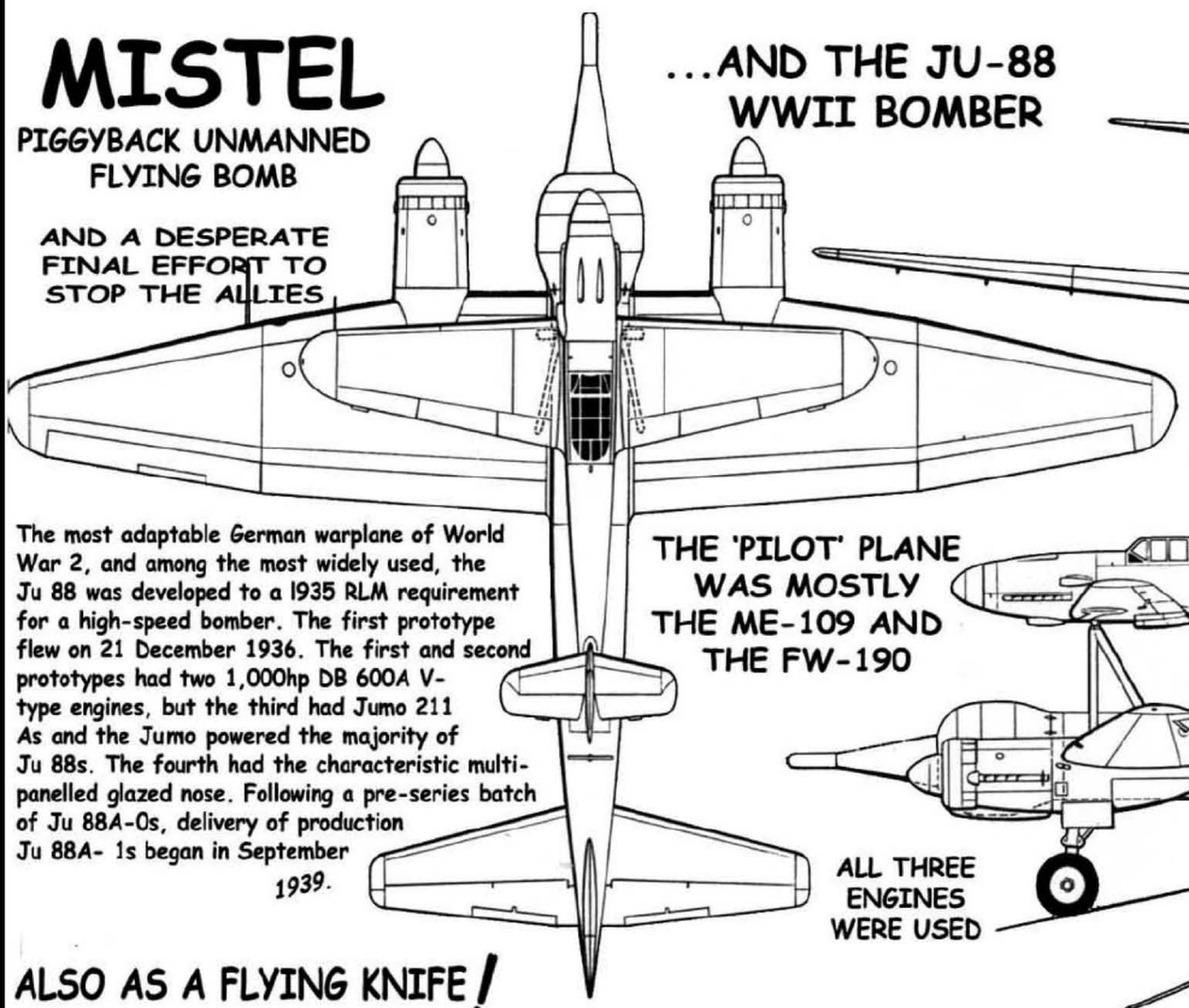
REDRAWN-99/2M

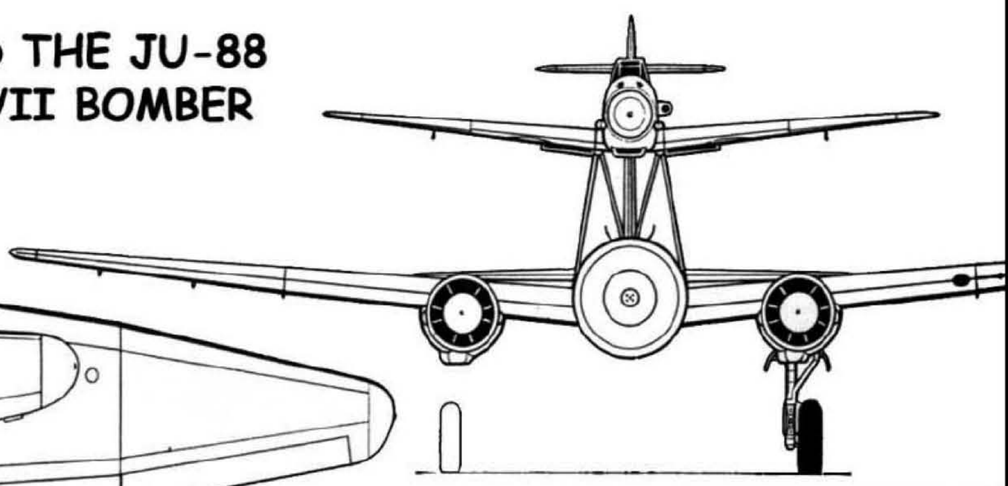
MISTEL

PIGGYBACK UNMANNED FLYING BOMB

AND A DESPERATE FINAL EFFORT TO STOP THE ALLIES

...AND THE JU-88 WWII BOMBER

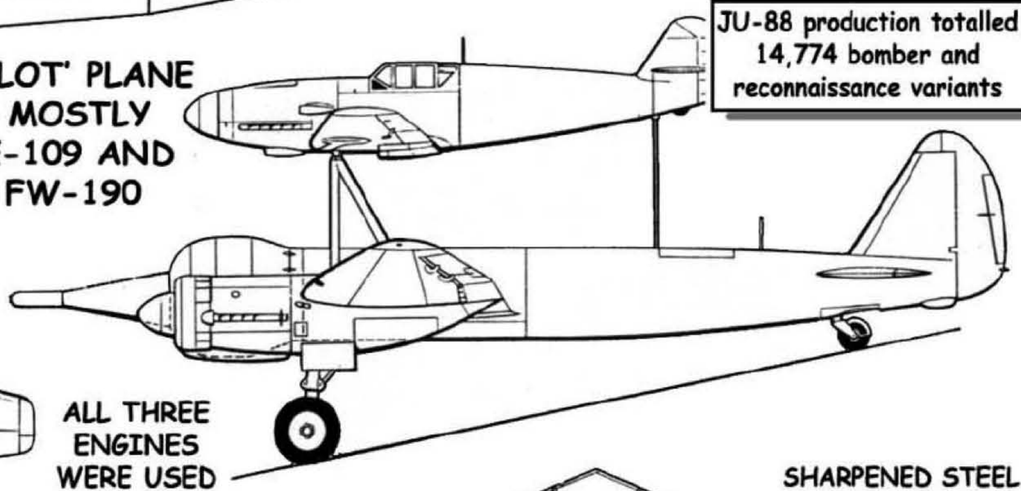




The most adaptable German warplane of World War 2, and among the most widely used, the Ju 88 was developed to a 1935 RLM requirement for a high-speed bomber. The first prototype flew on 21 December 1936. The first and second prototypes had two 1,000hp DB 600A V-type engines, but the third had Jumo 211 As and the Jumo powered the majority of Ju 88s. The fourth had the characteristic multi-panelled glazed nose. Following a pre-series batch of Ju 88A-0s, delivery of production Ju 88A- 1s began in September 1939.

JU-88 production totalled 14,774 bomber and reconnaissance variants

THE 'PILOT' PLANE WAS MOSTLY THE ME-109 AND THE FW-190

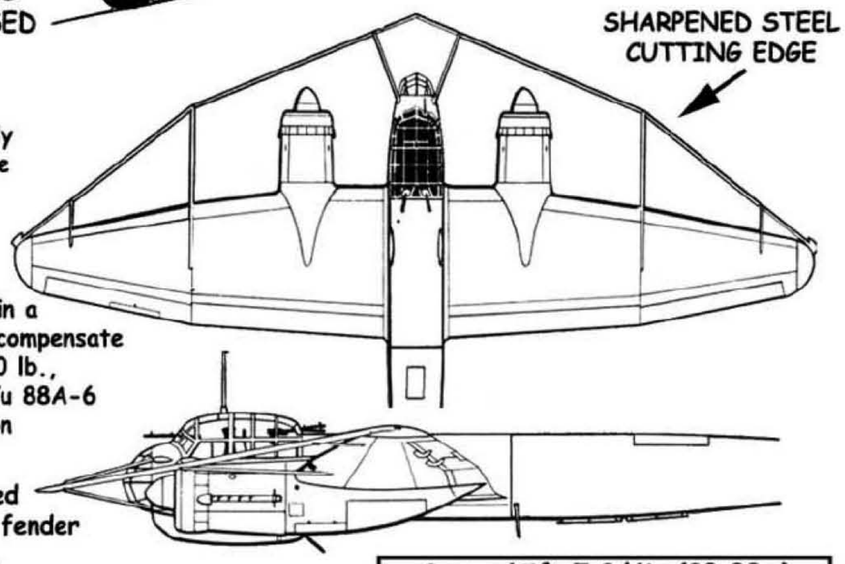


ALL THREE ENGINES WERE USED

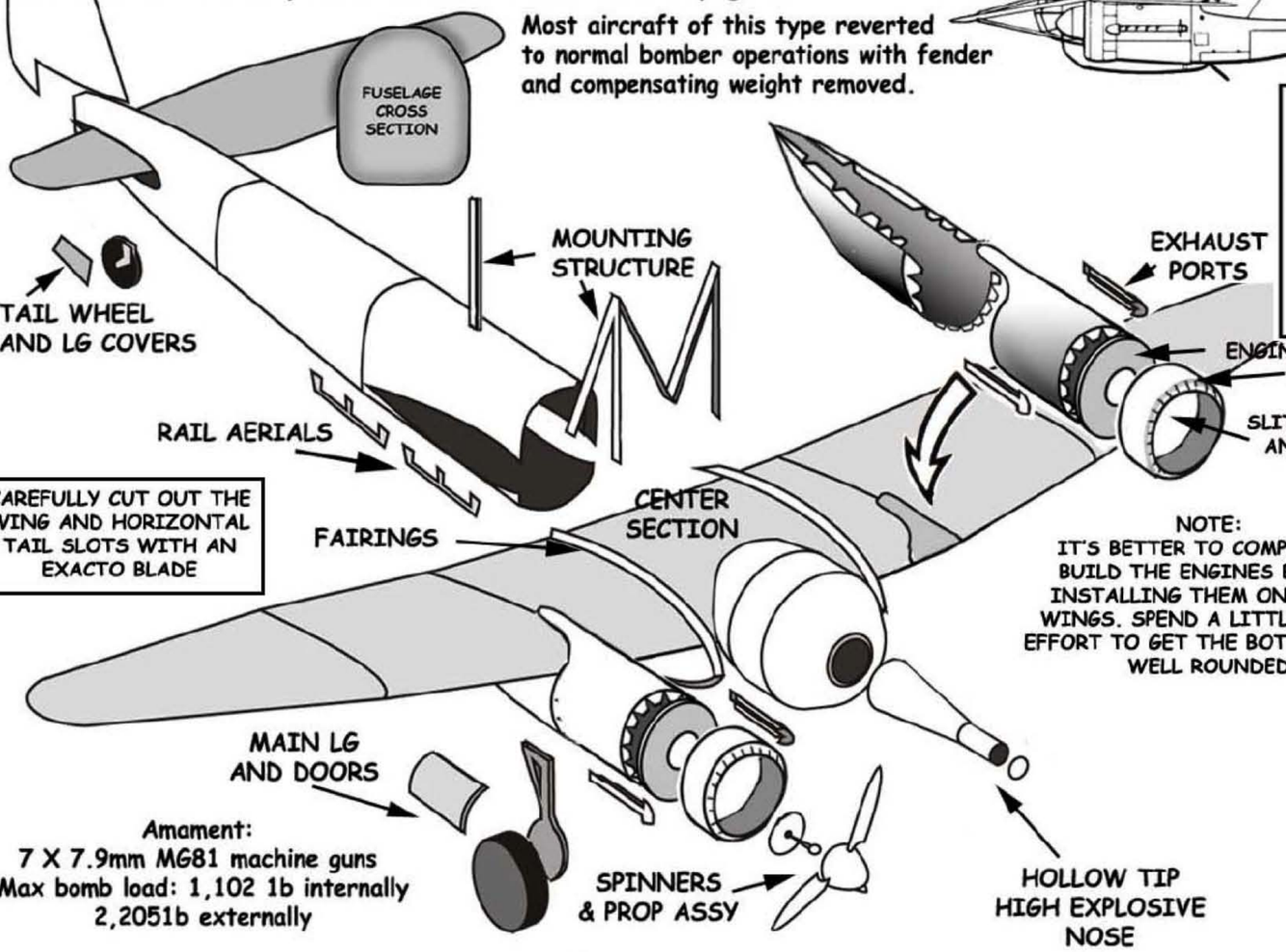
ALSO AS A FLYING KNIFE!

The balloon barrages protecting British industrial centers had begun to prove extremely troublesome, rendering low-level pinpoint attacks difficult, and an attempt to overcome this problem was represented by the Ju 88A-6, this being the Ju 88A-5 adapted for the task of balloon destroying, the scheme being to send a formation of Ju 88A-6s against the target in advance of the main force. Carrying a reduced bomb load, the Ju 88A-6's primary task was the removal of the balloon hazard, and for this it was equipped with a balloon-cable fender which terminated at each winglip in a cable-cutting device. A 130-lb. trimming weight was mounted in the rear fuselage to compensate for the weight of the fender forward, total weight of the entire installation being 840 lb., and the drag reducing maximum cruise speed by 19 m.p.h. The fender rendered the Ju 88A-6 extremely vulnerable to fighter interception, and the limited success that it enjoyed on operations resulted in its early withdrawal from the balloon-destroying role.

SHARPENED STEEL CUTTING EDGE



Most aircraft of this type reverted to normal bomber operations with fender and compensating weight removed.



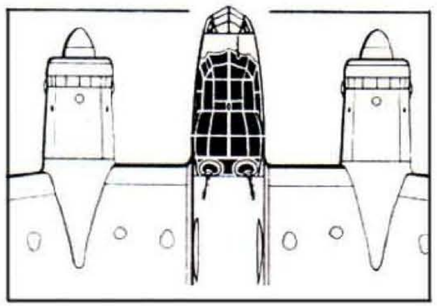
Span: 65ft 7 3/4in (20.00m)
Length: 47ft 2 7/8in (14.40m)
Weight: 30,865 LB (14,000KG)
Engines:1,340hp Junkers Jumo 2115 12-cyl inverted V-type
Max speed: 269 mph
Operational ceiling 26,900ft
Range; 1,112 miles

CAREFULLY CUT OUT THE WING AND HORIZONTAL TAIL SLOTS WITH AN EXACTO BLADE

NOTE:
IT'S BETTER TO COMPLETELY BUILD THE ENGINES BEFORE INSTALLING THEM ONTO THE WINGS. SPEND A LITTLE EXTRA EFFORT TO GET THE BOTTOM PART WELL ROUNDED

THIS IS ANOTHER MODEL FROM THE FIDDLERS GREEN WWII COLLECTION

Amament:
7 X 7.9mm MG81 machine guns
Max bomb load: 1,102 1b internally
2,2051b externally



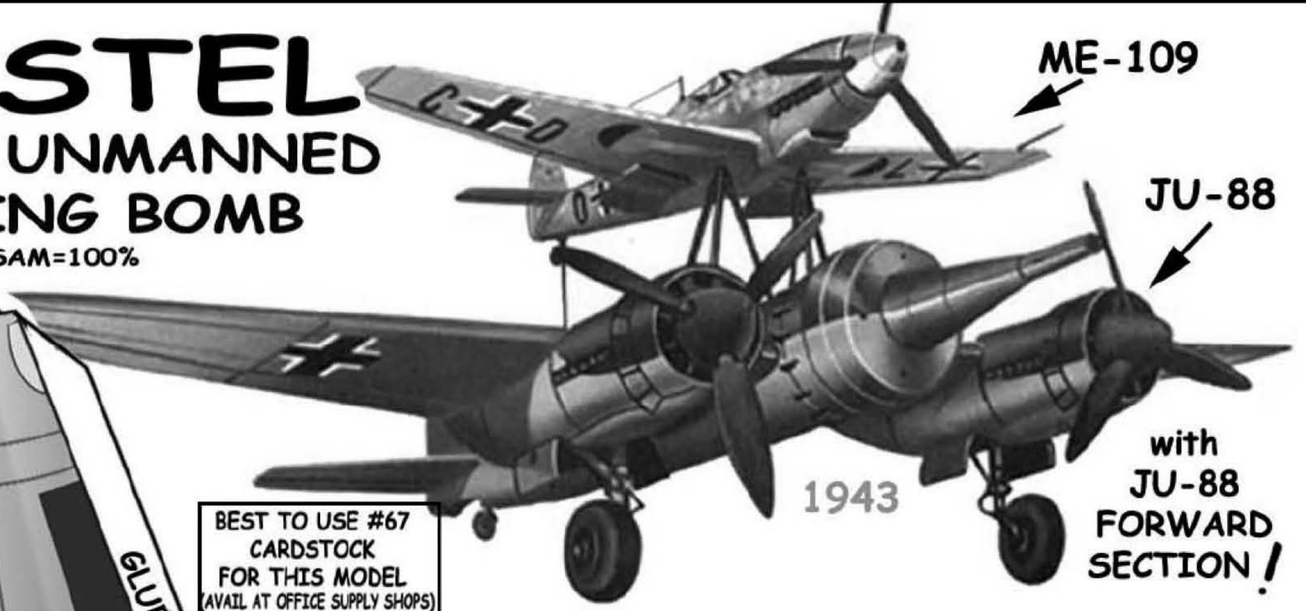
TOP VIEW OF FWD SECTION

MORE INFO AT:WWW.FIDDLERSGREEN.NET

MISTEL
WWII UNMANNED FLYING BOMB

WSAM=100%

FUSELAGE CROSS SECTION



with JU-88 FORWARD SECTION!

BEST TO USE #67 CARDSTOCK FOR THIS MODEL (AVAIL AT OFFICE SUPPLY SHOPS)

FOLD

TAIL LG COVERS

GLUE

GLUE

GLUE

CUT THIS AREA OUT AFTER THE FUSELAGE IS ASSEMBLED

GLUE

FUSELAGE
(shape as shown above n xsection)

In 1941, the German Air Ministry (ReichluftMinisterium or RLM) began to investigate composite aircraft, and a suggestion was made that the scheme could be used to allow a fighter to guide an unmanned war-weary Junkers Ju-88 bomber packed with explosives to a target. The idea wasn't popular, but then experiments using a piggyback aircraft to tow a glider demonstrated the feasibility of composite aircraft, and interest in the possibility of using a piggyback fighter to direct a flying bomb aircraft increased.

The RLM authorized a development project codenamed BEETHOVEN to build such a weapon, and the result was the "Mistel (Mistletoe)" composite flying bomb, with the name apparently derived from the fact that Mistletoe is a parasitic plant. The first Mistel flew in July 1943, and featured a Messerschmitt Bf-109E fighter fitted on a set of struts to the top of an unmanned, explosive-packed Ju-88A bomber.

The piggyback fighter was wired to the bomber's throttles and flight controls. The fighter pilot took the composite into the air, flew to the target area, flew straight at the target, and then released his fighter from the bomber. The bomber flew into the target on autopilot Although some sources mention that a few of the bombers were radio controlled, it doesn't seem to have been general practice if it was done at all.

ROLL & GLUE

GLUE

Mistels were expended in piecemeal attacks, mostly against bridges in hopes of stemming the flood of Allied forces towards Germany. Under unceasing pressure, the Luftwaffe was never able to accumulate enough Mistels to make the big blow.

GLUE TO FUSELAGE

GLUE

GLUE

NOSE EXTENSION
(ROLL AND GLUE)

EXPLOSIVE LADEN NOSE
(SEE INSTR)

GLUE

JU-88
SHEET 2

ENGINE FRONT
(CUT AND CURVE)

SPINNER

ENGINE
DISC

PROPELLER
BLADES

FORWORD (TOP)
OF ENGINE

FOLD

LANDING
GEAR DOORS
(OPTIONAL)

RH ENGINE

CURVE &
GLUE TO
BOTTOM OF
WING

CURVE TO FORM
A ROUNDED
LEADING EDGE

SCORE, BEND & GLUE

SLIDE INTO AFT FUSELAGE

GLUE
ALONG
TRAILING
EDGE

VERTICAL
TAIL

BEND

CURVE
ALL
LEADING
EDGES

FOLD

TAIL WHEEL

LANDING
GEAR

SCORE, BEND & GLUE

HORIZONTAL
TAIL

EXHAUST PORTS
(OPTIONAL)

MAIN LG
WHEELS
(ROLL &
GLUE)

SPINNER
DISC

THIS PART
GOES ALONG
THE TOP
OF THE WING

FOLD
&
GLUE

LH ENGINE

THIS IS THE
LEFT HAND
ENGINE

JU-88

SHEET THREE

LH WING

LIGHTLY SCORE THIS FOLD LINE AND FORM THE UPPER WING SURFACES OVER A ROUNDED SURFACE

CENTER SECTION

GLUE

GLUE

SCORE AND FOLD THESE GLUING TABS

GLUE AND FORM ENTIRE ENGINE FIRST

THEN AFIX TO THIS GRAY AREA

GLUE

GLUE

NOTE DIHEDRAL!

WING FAIRINGS

GLUE

GLUE

START WITH THIS SECTION FIRST

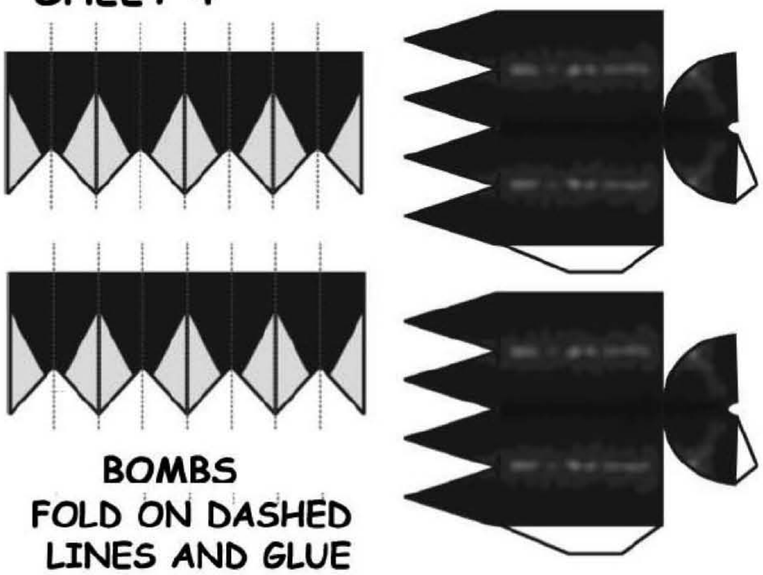
GLUE

BE SURE TO KEEP THE TRAILING EDGES NICE AND STRAIGHT

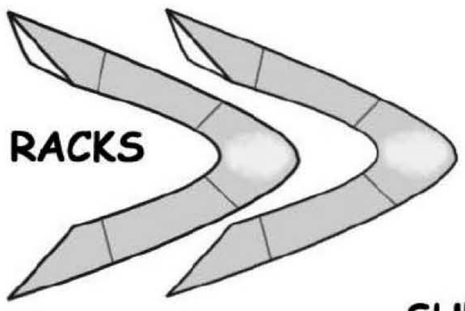
SLIDE THE WINGS THROUGH THE CUT-OUT IN THE JU-88 FUSELAGE AFIX WITH A SPOT OF GLUE

JU-88
SHEET 4

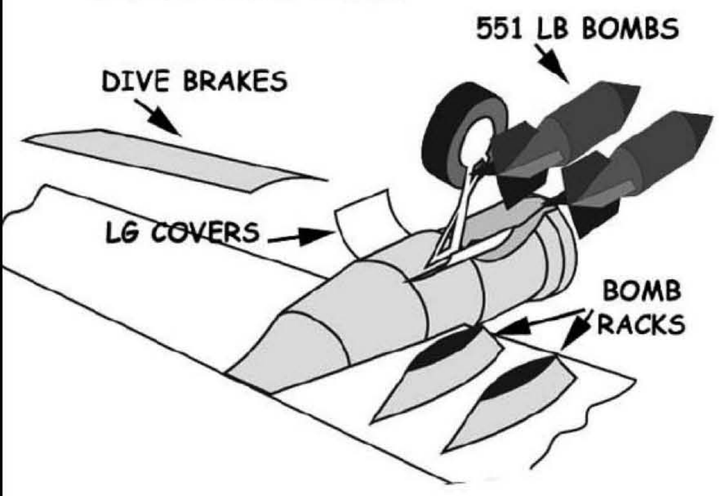
JUST ABOUT EVERYTHING ON THIS PAGE IS OPTIONAL AND IS HERE FOR THE MORE ADVANCED MODELER.

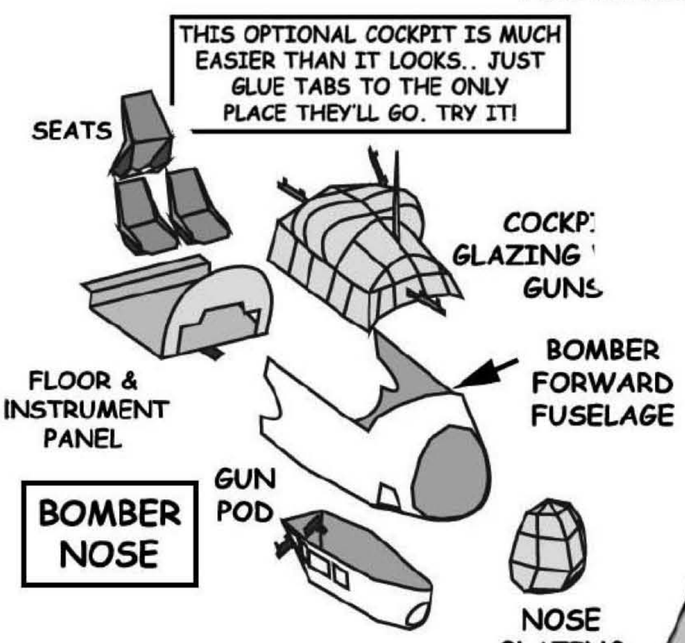


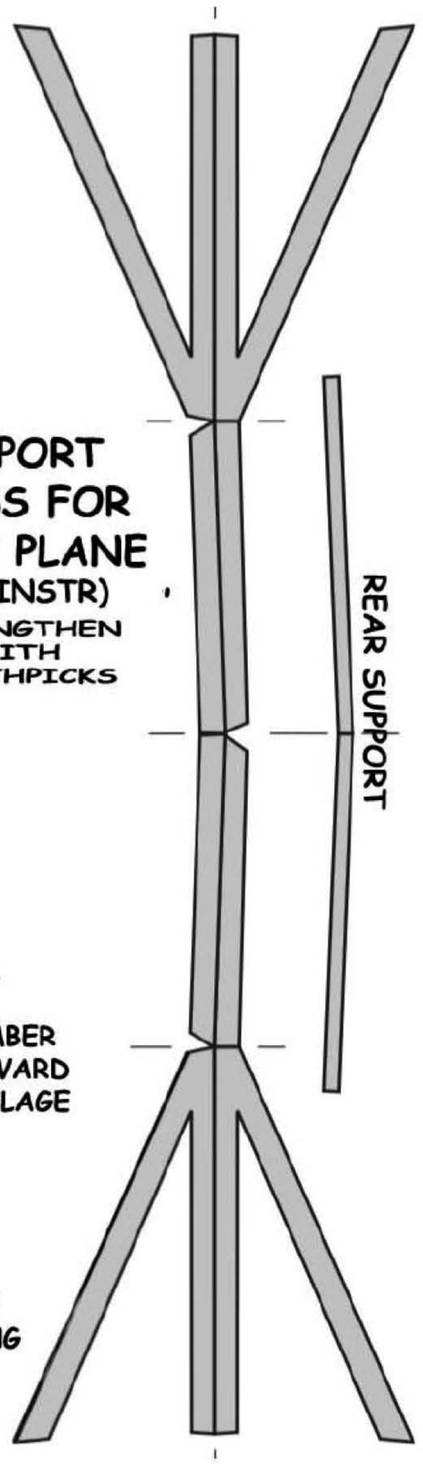
BOMBS
FOLD ON DASHED LINES AND GLUE



RACKS







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