

# 1/48 MITSUBISHI J2M3 INTERCEPTOR RAIDEN



Photo of Completed Model

In September 1939, aircraft manufacturers Nakajima and Mitsubishi received an unofficial order to trial-manufacture the Raiden, the Japanese Navy's first interceptor (a fighter to undertake the air defence of land bases). It was finally decided, however, that the development and trial-manufacture of the Raiden should be conducted only by Mitsubishi. It was in April of 1940 that the plane was designated "14-Shi Interceptor (J2M1)" and official requirements were set out by the Navy. The requirements gave priority to climbing power, maximum speed and high-altitude performance. Aircraft engines of those days that could meet all these requirements were only the air-cooled engine "Kasei" type 11 trial-manufactured by Mitsubishi for the Type 1 Attack Bomber (G4M) "Betty" and the liquid-cooled engine "Atsuta" trial-manufactured by Aichi. Because of the Navy's poor experience in liquid-cooled engines and Atsuta's insufficient reliability, the Navy was forced to employ the air-cooled engine Kasei which, having larger engine diameter and giving larger air resistance, was not best suited to be used in a fighter. The Raiden was designed by engineer Jiro Horikoshi and his designers who had taken charge of the Zero Fighter. To lessen air resistance, the propeller shaft of the engine was made longer and the cowling was made slenderer. To obtain higher cooling efficiency, the forced-cooling fan was used. The body was spindle-shaped with its largest section at the 40% of its overall length. The wing load

was as large as 145 kg/m<sup>2</sup> and, in due consideration of dogfights, Fowler flaps were employed. The retracting system and propeller pitch changing system of the electric type were employed in place of those of the hydraulic type which had a bad reputation. The 14-Shi Interceptor made its first flight at Kasumigaura Airfield on 20th March, 1942. As a result of various test flights made thereafter, defects such as insufficient power of the Kasei engine, bad vibration of the extended propeller shaft and poor visibility were pointed out. A production type which bettered visibility by shortening the nose and remodelling the canopy and mounted the more powerful Kasei 23 engine equipped with the water-methanol injection system made its first flight on 13th October, 1942. The production type also developed many troubles in the engine and other sections, and it was in December 1943 that the plane was accepted for use under the name of Raiden Type 11 (J2M2). In the meantime, the Raiden Type 21 (J2M3), an anti-bomber fighter which had more powerful armament consisting of four belt-fed 20mm machine guns, was completed in October 1943 and now became the main object of production. The production of the Type 21 totalled about 300. The Raiden Type 21 first saw action in the Battle of Mariana in September 1944. Subsequently, some were sent to the Philippines and Formosa and took part in actions, but the result was not as good as the Japanese had expected.

It was in air defence actions for the mainland by the Raiden unit of the 302nd Air Group based on Atsugi that the Raiden exercised its own power to the full and showed the most brilliant activity. The Raiden unit distinguished itself by shooting down a total of about 300 enemy planes in the short period from the end of 1944 to the end of the war. It owed much of its success to the fact that it could readily obtain necessary material from the nearby Koza naval air arsenal which produced the Raiden, the geographical conditions that its base Atsugi was located near the course of B29 bombers intruding into the Kanto district, and the best consolidated air defence system and air defence control by means of radar network.

《Main Data of the Raiden Type 21 (J2M3)》  
 Engine: One Mitsubishi Kasei 23a 14-cylinder double-row radial air-cooled engine.  
 Nominal horsepower of 1,575 hp/1,800 m  
 Propeller: VDM constant-speed 4-blade.  
 Diameter of 3.30 m.  
 Span: 10.85 m. Length: 9.695 m.  
 Height: 3.875 m.  
 Weight: Loaded, 3,435 kg (Empty, 2,574 kg)  
 Maximum speed: 587 km/h/5,300 m.  
 Climbing time: 6 minutes and 14 seconds (to the altitude of 6,000 m).  
 Maximum cruising range: 2,520 km (with a droppable fuel tank).  
 Armament: Four 20 mm machine guns and two 30-60 kg bombs.

## PAINTING

Paint the wide areas with a 10 to 20mm wide flat brush. Use a smaller brush (a 00 or even 000 size) to paint narrow parts. When you use spray gun, mask off the model with masking tape etc. to cover the areas to remain unpainted prior to spray painting. Only do your spray painting in the ventilated place. Avoid work near fire. The paints do not adhere well to a greasy plastic surface. Wash the model in tepid water in which a drop of washing-up fluid has been dissolved. Then follow up with another bath of cold water, drying off each section in the dust-free condition before proceeding to the painting work. Use paints only for plastic. The paint may be thinned down with plastic thinner. Clean off the brush by dipping it in thinner at the end of your painting session. Then dry the thinner out with an old rag and return it to store.

## Painting of Raiden

**Basic Painting**  
 Fuselage, main wing, tailplane (upperside)... Dark green (Japanese Navy type).... (underside).... Light grey. Uppersurface of the plane nose (from top to meter panel)..... Anti-glare blue black (black 3: blue 1). Front edge of main wing (from center to joint).... Orange yellow identifying colour stripe.  
**Other Details**  
 All inside surfaces (strut cover inside and landing gear well) are painted in clear greenish blue paint. The detail paintings are as follow;  
 Red brown: Propeller, spinner, head rest.  
 Brown: Antenna stay.  
 Rusty iron (black + brown + silver): Exhaust pipes.  
 Black: Radio apparatus, strut, tyres, machine guns.  
 Silver: Landing gear wheel, forced cooling fan, strut inside cylinder, top of pitot tube, propeller hub.  
 The detail paintings are given in assembly figures.

## PAINTING

Painting & Ap  
 Propeller & spinner (red brown)  
 (Blue black)  
 Identification (orange yellow)

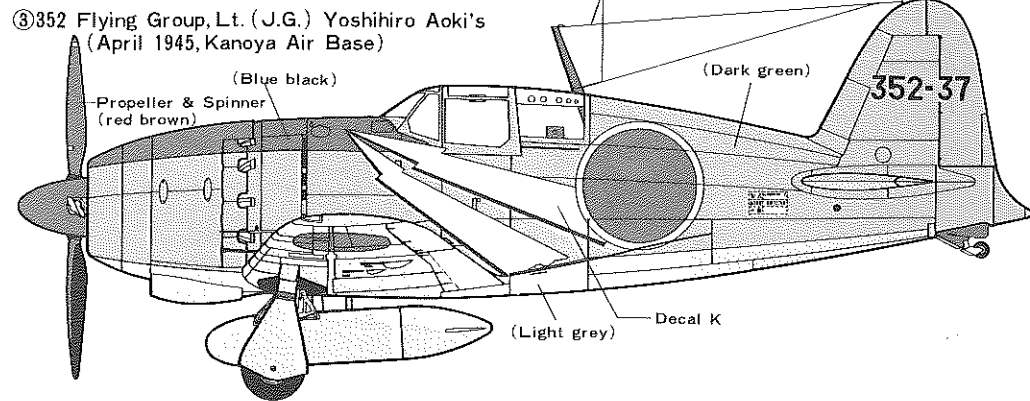
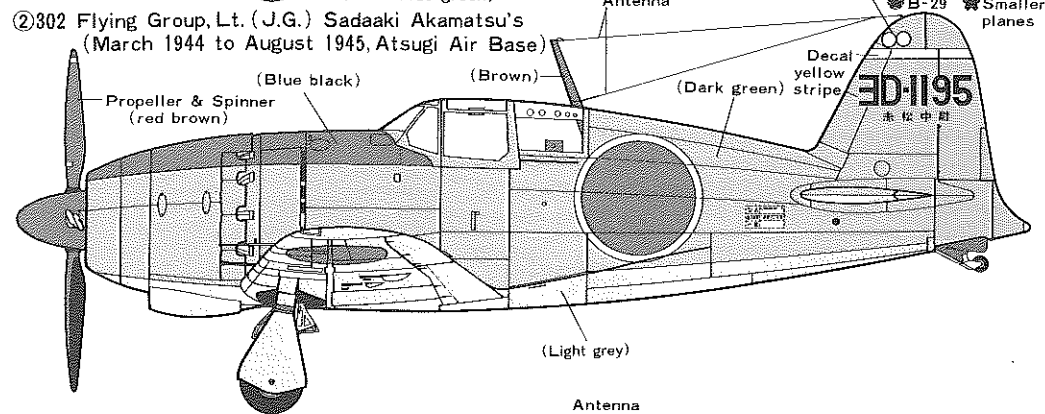
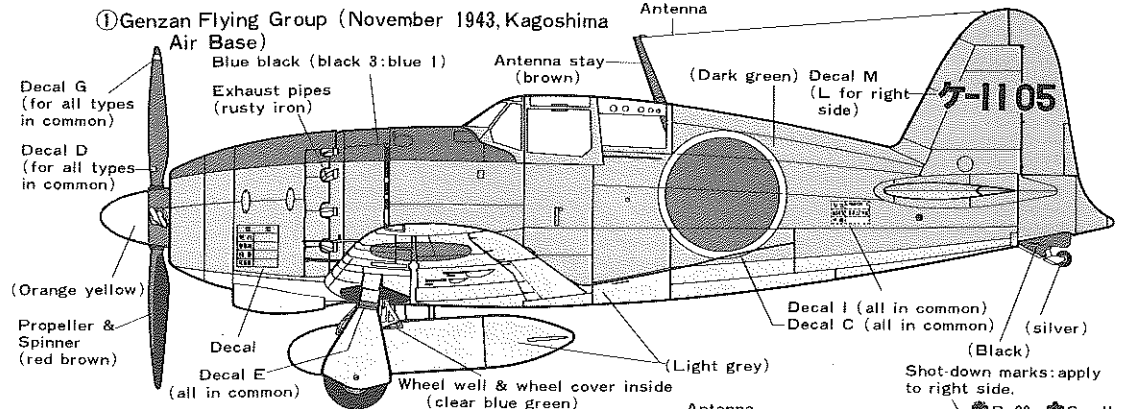
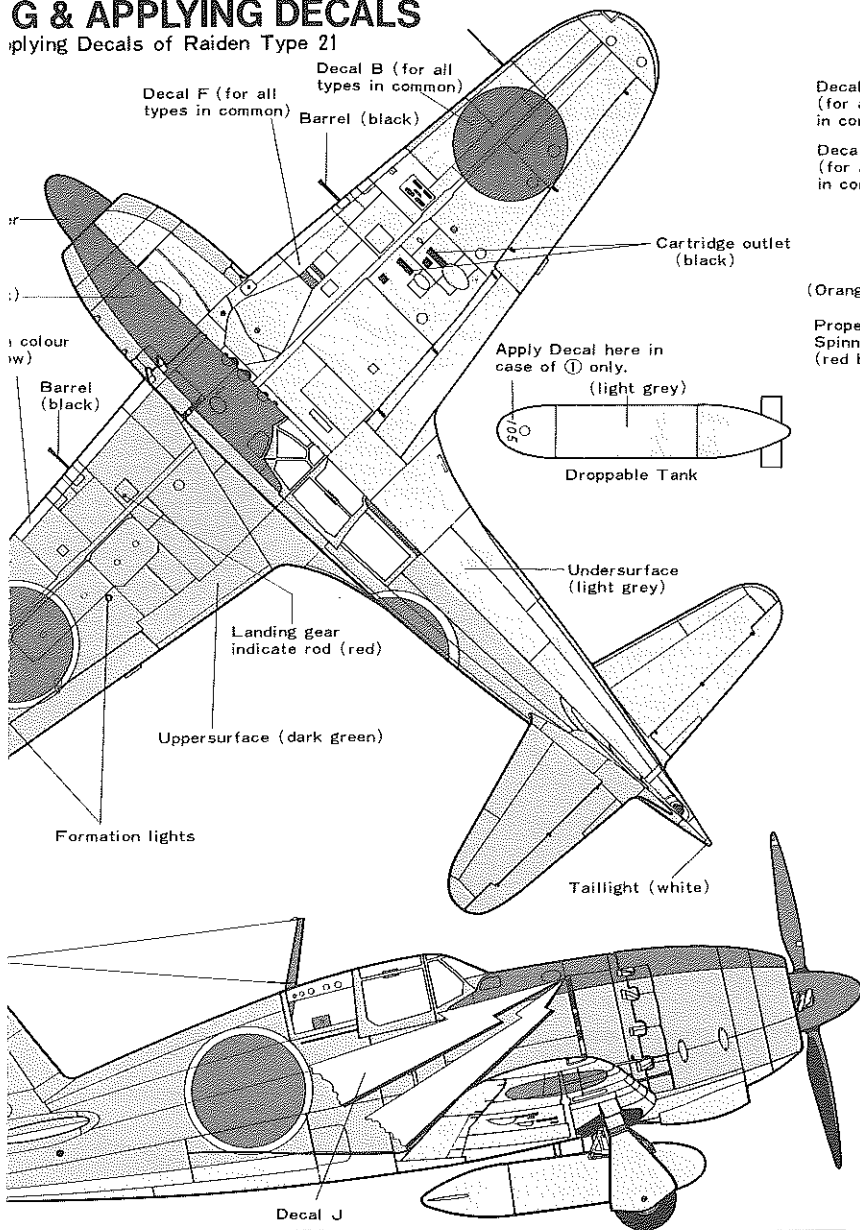
Decal A (for all types in common)  
 Top of pitot tube (silver)

Wing tip lights right (blue) left (red)



# G & APPLYING DECALS

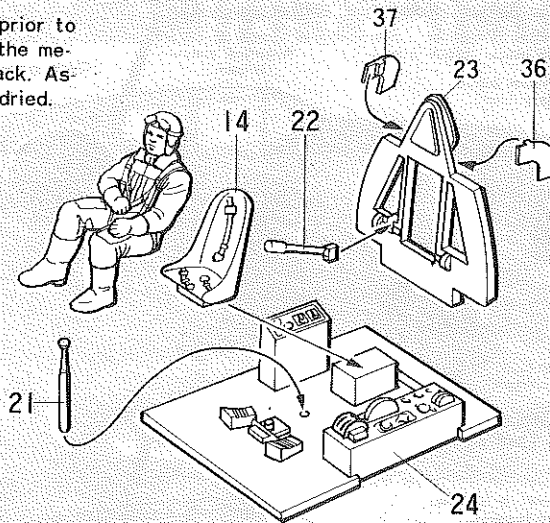
Applying Decals of Raiden Type 21



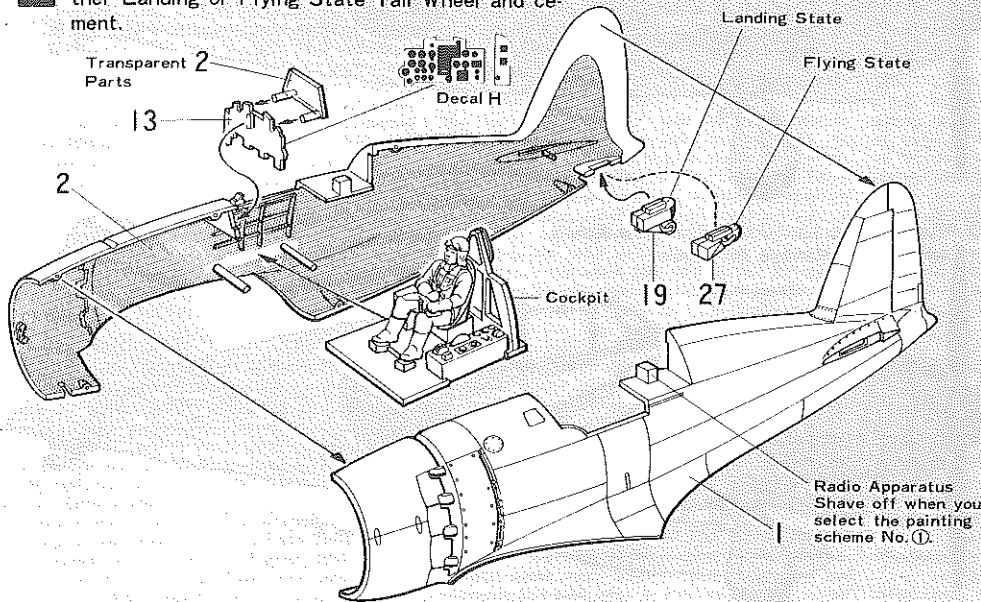
**1** Construction of Cockpit  
Paint Figure and Seat etc. prior to cementing together. Paint the meters on cockpit inside in black. Assemble after the paint has dried.

**Painting of Cockpit**

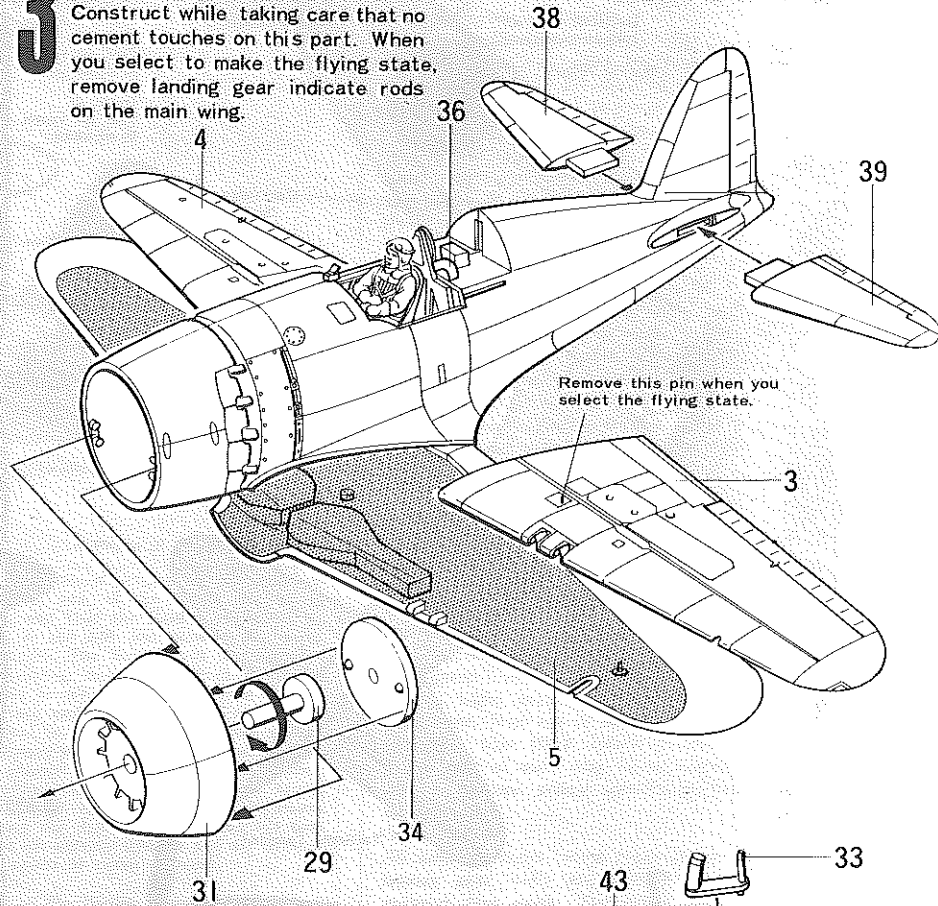
- Control Stick ..... Silver
- Top of Stick ..... Black
- Seat ... Silver
- Cockpit inside ..... Blue Green (Clear)
- Base... Silver
- Seat Harness ..... Green
- Meter Panel ..... Blue Green (Clear)



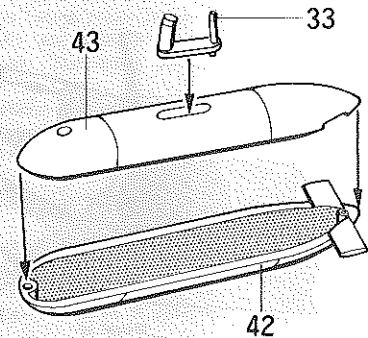
**2** Construction of Fuselage  
First apply Decal H to Meter Panel 13. Cement Meter Panel & Seat to Right Fuselage Half, and cement Left Fuselage Half together. Select either Landing or Flying State Tail Wheel and cement.



**3** Fixing of Wing  
Propeller Shaft 29 can be rotated. Construct while taking care that no cement touches on this part. When you select to make the flying state, remove landing gear indicate rods on the main wing.



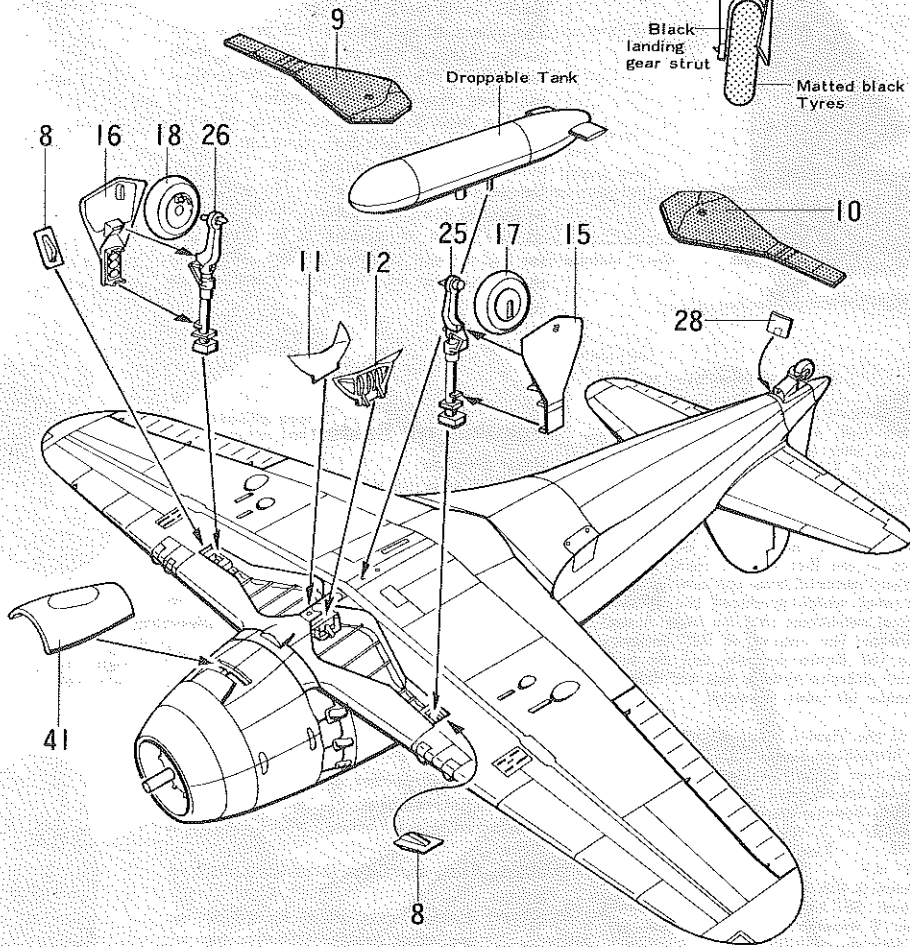
**4** Construction of Droppable Tank  
Do not confuse the front and rear of Part 33 and fix in position.





## 5 Fixing of Landing Gear

The fixing angle of Landing Gear must be inclined to inside and forward. Make sure of parts, right or left, and cement. Bend one clawed edge of Landing Gear Covers 11 & 12 as per figure so that Droppable Tank can be attached. On flying state, cement Parts 9 & 10. Make sure of cementing Tail Wheel Cover 28.



## 6 Fixing of Propeller & Canopy

Fix Machine Gun & Pitot Tube. Cement Forced Cooling Fan and Propeller/Spinner assembly together and fix to Propeller Shaft. Cement Antenna to both Fuselage and Cockpit, and cement Canopy. Part 20 is a stand for Standing Pilot Figure.

