

Desert Storm MH-53J Pave Low conversion

By Phil Smith



Background

The Sikorsky MH-53J Pave Low is a modified version of the HH-53 Super Jolly Green Giant helicopter used extensively during the Vietnam War for special operations and rescue of downed airmen. Under the Pave Low program some of these helicopters were modified for night and adverse weather operations. Their modifications included forward-looking infrared, an inertial global positioning system, Doppler navigation systems and a terrain-following and terrain-avoidance radar.

The helicopter is armed with a 7.62 mini gun mounted on the rear cargo ramp, and two .50 caliber machine guns positioned in each of the front windows



MH-53J's were used for a variety of missions during Desert Storm. Pave Lows were among the first aircraft into Iraq when they led US Army AH-64 Apaches to destroy Iraqi early warning radars and opened a hole in enemy air defenses for the opening air strikes.

The inspiration

After the Gulf War I was inspired to build many of the aircraft that participated in the conflict. Many of the USAF aircraft that had taken part in the war had deployed from their normal bases in Europe and so first hand reference material was readily available. Included amongst these were the MH-53J's of the 21SOS from Woodbridge air base in Suffolk. Unlike most US aircraft that took part in Desert Storm, the Special Operations aircraft were painted in a new desert camouflage of sand and brown. Like most coalition helicopters they also received white identification bands on the tail boom and front cockpit.

The conversion

The model was based on the huge Revell 1:48th scale HH-53C. This is a big model, its length is 1 foot 9 inches and its width is 1 foot 5 inches, so it takes up a lot of display case when completed. It was combined with the MH-53J conversion kit from High Flight Replicas. The resin kit provided most of the external parts needed for the modification, but some other parts such as the guns had to be acquired from other sources.

The most obvious addition necessary was the huge radar and FLIR bulge grafted onto the nose section of the helicopter. This came in two sections, the main bay and the FLIR pod. I spent a lot of time filling and sanding the joint between the resin nose extension and the kit's nose section. The adequate refueling probe from the kit was added to the nose. A small search light with its cable was added to the underside to finish off the nose section.

The resin kit provided the two Infra Red Counter Measures (IRCM) devices that are attached to the fuel tank sponsons. Photographs taken at air shows showed that they needed the addition of rear support braces from plastic rod and rubber cabling. The multifaceted lenses on the IRCM reflect gold, green and purple light depending on the angle you are looking at them. This effect was achieved using Humbrol metallic paints.

The fuel tanks provided with the kit were replaced with the much larger resin 650 US gallon tanks used by the MH-53J. The instructions gave a template for cutting the tanks' fins from plastic card.

The conversion kit proved the many sensors that cover the helicopter's fuselage. Care had to be taken to position them at the correct angles. The various radio and GPS antenna were all cut from plastic card according to the instructions. The windshield wipers came from an etched brass accessory kit, and finish off the nose section very nicely.

On the real helicopter the upper windows are tinted green to reduce solar heat in the cockpit. I used Humbrol clear green spayed on lightly to achieve this effect.

The conversion kit did not include any of the armament carried by the MH-53J. The .50 cal machine guns were provided by Aeroparts and mounted on scratch built brackets in the open front windows. The impressive rotary mini-gun mounted in the tail was scratch built from various parts. The ammo chutes were cut from tank-tracks, the ammo boxes from 1:35th armor boxes. The black and yellow warning hash markings were from a decal sheet I'd found, which saved the job of masking and painting them.

The distinctly patterned engine intake filters had to be carefully picked out with black paint. There was no way I was going to drill out all 200 holes!

The finished model was camouflaged in FS20400 Sand and FS30140 Brown. No two MH-53J had the exact same pattern, so I opted for the version I had the most information on. Light exhaust staining was reproduced with the airbrush.

Materials

Revel CH-53 1:48th scale
High Flight Replicas MH-53J conversion kit
Aeroparts .50 caliber guns
XtraColour X145 FS20400 Sand
Humbrol 119 FS30140 Brown

Reference material

Fine Scale Modeler	November 1991
Gulf War Debrief	Color photos pages 98, 195
The Fury of Desert Storm	Color photo page 96
Desert Storm Air War	Color photo page 16
US Air Power	Color photo page 47

Foot note

Last Christmas I managed to bring the completed model over from England with out any damage! I had carefully secured it in a large cardboard box with bulkheads shaped to minimize movement. My only fear was that customs would want to inspect the box when I reached O'Hare!

The Photographs

All photographs of the model were taken by my brother outside on a sunny day in England (yes, we do have them). I prefer full sun light photography since it creates stronger light contrasts than artificial light.

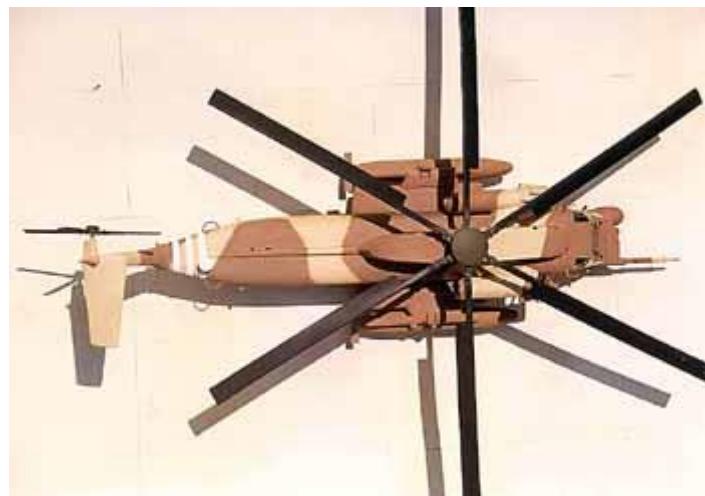
The desert photograph was achieved by scanning an image of the model into Microsoft Picture It, cutting the image out, and pasting onto a real background. (It is actually the dry salt lake bed near Salt Lake City, which has the same gray-sand appearance of the southern Iraqi desert.)



These two views show the added resin to the Revell CH-53 kit. Although there are many, these are the most obvious changes



Aft end detail featuring scratch built mini gun.



Topside view showing the desert camouflage to good effect.