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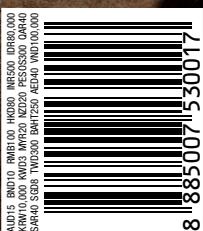
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HOLLYWOOD JET PROPS

by Katrina Balmaceda



JETS! CAMERA! ACTION!

HOW MOVIE PROPS TAKE FLIGHT IN TINSELTOWN

TWO THOUSAND EXTRAS, 85 CAMERAMEN, 187 PILOTS AND 37 AEROPLANES. Even by today's standards, the logistics of Howard Hughes' 1930 *Hell's Angels* film are mind-boggling. Less known, but equally daunting, is the production story behind *The Aviator*, the film that portrayed Hughes' turbulent affairs with flight, women and himself. Filming *The Aviator*, director Martin

Scroggins Aviation specialises in large aircraft and airliners and can simulate crash scenes

Image courtesy of Scroggins Aviation

Scorsese faced a major hurdle — how to portray Hughes’ aircraft realistically without the original aeroplanes. “Of those needed for the major flying sequences, one no longer existed and the other two were on permanent display in a museum, unable to fly,” says Joseph Bok, CEO of Aero Telemetry, a company which creates unmanned aerial vehicles.

Directors of films with aerial scenes know the dilemma well. Digital recreation is usually not an option — it is costly, time-consuming and falls short of convincing the audience to suspend disbelief. The typical solution is to use real aircraft, create static mock-ups, or build scale replicas. And this is how Aero Telemetry entered behind *The Aviator*’s scenes. It happened to have a flyable quarter-scale model of the Hughes H-1 Racer, the plane Hughes flew when he first beat the world landplane speed record.

After film testing the model with a motion control rig and using forced perspective camera angles, visual effects director Rob Legarto convinced Scorsese to have Aero Telemetry build models of later planes, the Hughes XF-11 and the Hughes H-4 Hercules. The latter was a monumental seaplane and cargo carrier best known as the ‘Spruce Goose’. A man named Jim Wright had built a faithful H-1 replica, which was to be used for the film. Alas, Wright crashed his racer, and the task of building a large-scale H-1 model fell to Bok’s team.

Time spent designing, planning, material sourcing and building meant it would take one year to create a single, large-scale, custom flyable model. All Bok’s team had was three months. Not for each model, but for all three. “They made it pretty clear that if we didn’t show up on shooting day, or if the model didn’t fly, they would have >>

“BIGGER IS BETTER FOR THE MOST BELIEVABLE FLYING SCENES”

The Aviator, an award-winning film starring Leonardo DiCaprio that portrayed the turbulent life of inventor Howard Hughes, received much acclaim for its aircraft scenes

The background and foreground can help make an aircraft model look larger than it really is

Images courtesy of Warner Brothers



>> USD4 million worth of people and equipment standing idle,” says Bok. It brings to mind Hughes’ own crew and aircraft waiting endlessly for the perfect clouds to appear. Fortunately for the producer’s pockets, *The Aviator* was no *Hell’s Angels*. In the end, California forest fires stalled filming, which helped Aero Telemetry gain a little more time. It ended up building a total of 11 aircraft models for the film. “Bigger is better for the most believable flying scenes,” says Bok.

The Aviator ends at an optimistic time for Hughes’ Trans World Airlines, which was poised to rival Pan American World Airways. We know today that Pan Am became the US’ first international airline. It crafted a romantic image of first-class flight, in which stylish travellers dined finely in the sky and were served by elegant flight stewardesses. This golden age inspired the 2011 ABC television series *Pan Am*.

Pan Am’s flight scenes showed the stewardesses on duty inside the cabin of a 1960s Boeing 707 airliner, which had ceased production in 1979. Supplier Scroggins Aviation provided a static cabin taken from a Boeing 727 fuselage, and modified its interiors to achieve a vintage look. This also entailed changing details like the instrument configuration from the 727’s three-engine version to the 707’s four-engine setup. The visual effects team added CGI (computer-generated imagery) scenery outside the windows to achieve the illusion of being in the sky.

Static cabin mock-ups give cameramen room to shoot

from more angles. “We [can] make the windshield and instrument panel removable so that the actors sitting in the pilot and co-pilot seats can be filmed interacting with someone in the rear area of the cockpit,” says the company’s founder, Doug Scroggins. Scroggins’ previous career as a director of photography for television has proven advantageous, as he is able to advise on cabin layout.

Aerial action film producers seek aircraft prop suppliers’ advice, too. “We are usually brought in before the film is actually started. We advise the director and producer on what planes are the right choices to make the scene look real, and what types of angles and stunts will be best for the way the scene is written,” says Dave Riggs, a stunt pilot with Mach One Aviation, which leases real aircraft to film crews.

Mach One Aviation has six aircraft on hand and can access 50 more through its associates. Being primarily an aerobatic training company, it operates former military jets like the Aero L-39 Albatros, MiG-15 and Lockheed T-33 Shooting Star. Its links to the warplane community has

STATIC CABIN MOCK-UPS GIVE CAMERAMEN ROOM TO SHOOT FROM MORE ANGLES



Scroggins Aviation supplies static mock-ups — such as cockpits for the television series *Pan Am* — that give cameramen room to shoot from different angles

Image courtesy of Scroggins Aviation



CLOCKWISE FROM TOP

When featuring historical aeroplanes, producers take care to accurately depict details like aircraft livery and markings

Stunt pilots like the high-performance L-39 jet trainer for its ability to do difficult rolls and stunts

Pilot Dave Riggs, through Mach One Aviation and Incredible Adventures, regularly performs aircraft manoeuvres for the camera

Images courtesy of Mach One Aviation

The Aviator used a large scale model of Howard Hughes' H-4 Hercules or 'Spruce Goose', the largest seaplane ever built. Aero Telemetry, a maker of unmanned aerial vehicles, created the flyable model

Image courtesy of Aero Telemetry

made it one of the go-to sources for World War II planes. It has supplied aircraft for films like *Jarhead*, *Air Force 1*, *The Right Stuff*, *Fast Glass* and *Iron Man*.

The L-39 is a great photo plane — it “gives you excellent agility and the ability to do rolls and stunts impossible with any other plane,” says Riggs. Mach One also hangs a camera from a Bell 206A JetRanger, choosing it for its stability. Air-to-air filming works with a photo plane that films other aircraft as they fly close by. The photo plane may also follow the other aircraft as they fly. It is dangerous work.

“We strongly advise on... how the aeroplanes can be flown, where they can be flown, flight times and aerobic limitations,” says Bok. It’s a good thing Bok worked with Scorsese — had he lived and worked a few decades earlier, his advice might have fallen on Hughes’ deaf ears. As a filmmaker and an aviator, Hughes was bull-headed and pushed aircraft to their limits. And on hindsight, we’re all glad he did. 

AERIAL ACE

The Grand Canyon is often used in films as a stunning, feel-good backdrop. But for stunt pilot Dave Riggs, it was the setting for the most thrilling dogfight he has ever enacted. “Two jets in the Grand Canyon for a film — very small space for such high speed jets,” says Riggs. Preparation for aerial manoeuvres includes lots of sleep and water intake, as stunt pilots can experience up to 8G forces on the job. “It’s a high-stress occupation,” Riggs adds. In some films, as in *Top Gun*, *Air Force* or naval pilots themselves enact the dogfight scenes.