

# MBB Bo 209 MONSUN

## FLIGHT TESTS

### HOME

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29 October -measured control throws are:

AILERONS - 8MM UP/DOWN

ELEVATOR - 8MM UP/DOWN (MEASURED AT END OF ELEVATOR)

RUDDER - 35 DEGREES LEFT/RIGHT

NOSEWHEEL STEERING - 20 DEGREES LEFT/RIGHT

SYDNEY, Monday 21 October 2001; 1235pm EST. It flies - just beautifully!! Nine months of hard work returned its rewards today, when the Monsun flew superbly on its maiden flight, amidst light rain showers and in a squally south-easterly wind. I can honestly say that my expectations were met or exceeded in every respect - never before have I had a prototype fly "straight off the board" like this one did today. Taking advantage of a couple of free hours in the middle of the day, I had sole use of our flying field, so important for a first flight. Despite the rather inclement weather the wind was actually blowing straight down the strip, and allowed takeoff towards a clear area devoid of trees (a worthwhile precaution incase control problems or a lack of power were in evidence early in the flight). As it turned out, the whole flight was a total anticlimax, and easily the most enjoyable and problem-free first flight I have experienced.

Here is my assessment of today's flight:

As noted in previous posts, ground handling is excellent. The wide-track undercarriage gives an enormous degree of stability, and high-speed taxiing showed that the model can be turned abruptly at high speed without fear of tipping over. The nosewheel steering is very responsive, possibly bordering on being a little too sensitive, but I like it the way it is and shall leave it like that.

The takeoff roll was almost dead straight - just a very slight amount of right rudder required early on then straight as a die. The model accelerated very briskly, and after achieving what was obviously a safe flying speed I eased in a small amount of back-stick and the Monsun lifted gracefully off in a wings-level attitude . A slight increase in the back-pressure had it climbing away very strongly at an angle typical of your normal "40-powered" sport model. I waited until

the model was a hundred feet or so before I eased in aileron for a turn to the right. The aircraft responded as if on rails, and I throttled back to about 2/3 throttle which sustained height and speed comfortably. The propeller chosen for this first flight was a Bolly 12.5 x 6. Thrust was very good, confirmed by a strong rate of climb and brisk ground handling. Pitch speed with only a 6in pitch prop is not high, however inflight speed was very comfortable even at reduced throttle.

It was evident that the model was very stable in pitch, the C of G being perfect for a first flight scenario. Pitch trim was spot on, and did not need adjusting. In fact no trim was necessary in any of the three axes - a first for me! Elevator response was consistent with a forward C of G, and could benefit from a little more throw if the C of G is not brought slightly rearward. Roll response was right on the money - positive and precise without being overly sensitive.

A number of figure of eights were flown to assess the turning behaviour, which was found to be completely benign. This model flies like a big trainer!

The first landing approach was set up for a deliberate low overshoot, after which I positioned for a right-hand circuit to land. On the second approach the model's low drag became very evident, as idle power was used for most of the descent. Control in this low speed configuration was still precise, and the model was landed smoothly at a higher than normal speed due to an allowance for the gusty conditions. Rollout, like the takeoff roll was dead straight, requiring no rudder input. Total flight time was in the order of three minutes. I decided to quit while I was ahead and save the next flight for when a video-camera is in attendance!!

To summarize, I can say that the model exhibits classic handling, has heaps of performance on 14 cells, and has a real "feel good" quality about it. I'm rapt!!

As video/flight photos become available I will post these to this site, along with further investigations of the flight envelope, including aerobatics. I will measure and report control throws soon.

**\*\* STOP PRESS 20 October Monsun Update \*\***

Oops!! Major embarrassment yesterday: when running up to full power during another engine run with a larger prop (Bolly 12.5 x 6) and without the cowl fitted the front former developed a case of the "wobbles" and departed the aircraft, with the motor and prop attached! Bad move running the motor without the cowl which imparts a lot of structural rigidity. Luckily it was easily repaired, and is now as good as new, with an additional full-width 1/4 inch balsa former bracing the rear of the motor as well. I have now run the repaired model up to full power again for about a minute with absolutely no further problems. I won't try to run it without the cowl ever again!!! There is a good chance I may have a window of opportunity to test fly the model on Tuesday 22nd, if the weather behaves itself. Fingers crossed!

**\*\* STOP PRESS 14 October Monsun Update \*\***

Monsun moves under its own power for the first time!! Today with the equipment fitout complete, the assembled model was given its first outing under power. All aspects went very well; the motor at full power ran smoothly with no vibration, plenty of thrust. Taxy testing showed precise ground handling and good stability due to wide track. Nose steering may be a little too sensitive at high speed - further observation required. Looking forward to flight testing - an impossible work schedule for the next fortnight means that this will now not occur until the last week of the month.