



**Patrick Hempel at work.**

The weather forecast for the days ahead had Hurricane Helene making landfall in Florida on the Friday so there was a general agreement that the USA World Cup would be completed in one day as it was unlikely that any flying could take place on the second day. As there were only 8 competitors running 4 rounds in one day is achievable.

With no practice possible I set the needle according to the weather readings I obtained from my Race Air meter. I have used this method to set the needle since 2008. It's possible through record keeping notes to set the needle at any site anywhere in the world and get a flight. The RAD for the whole day varied between 95.5 and 94.3. There was no wind on the circle as it's in a very sheltered spot in Buder Park. The area is quite low lying and has flooded previously to the point where cars had to be abandoned in a local underpass.

In the first round my motor sounded a bit rich and I made 298.5 kph with the set up that did 301.3 kph at the Barton Nats. RAD for this flight was lower than Barton so a slower speed might have been expected. In the second round the temperature had increase to 23 deg so I used a shorter pipe and lower pitch hoping for more rpm. I made 299.0 kph. In this round Matthieu Perret scored 300 kph. In the 3rd round I reduced compression again with the shorter pipe hoping for more rpm. I was rewarded with a 301.0 kph flight. RPM were still not as high as they should be. In the 4th round I tried another rebuilt motor and after some adjustments and multiple launches I made a rich 297.9 kph with this set.

The winner was always in no doubt. Alex Valishev has reached a level of performance that since 2018 is consistently well above most other flyers. He also has multiple sets that do similar speeds. He made 2 very fast flights in this competition in 1st round (305 kph) and in

round 4 (307.3 kph). The other improver is Bill Hughes who broke his best motor at the Muncie World Champs. He had repaired this motor and with an Alex Valishev prop it made 301.3 kph to put me into 3rd place with Matthieu Peret 4th at 300.0 kph. It is not often that the first 4 places achieve 300 kph + at a championships let alone a world cup competition.

The weather did what was expected and the following morning (Friday) it was pouring with rain and blowing a gale. This confirmed that we had made the correct decision to run 4 rounds the previous



**General view of the covered pit area at Buder Park. Perfect place in the shadow to prepare all equipment.**

day. In the morning we made up some lines for Yuri in the hotel corridor whilst trying to appease the cleaners. In the afternoon we went to the St Louis tower museum which I found quite informative. It was pointless going up the tower as the top was in cloud. St Louis was the original gateway to the West in the 1840's to 1870's. Until a bridge was built there across the Mississippi it was extremely difficult to forge the way west to California. The bridge was followed by a railroad and so the original river trading up and down the Mississippi and Missouri rivers became less important. Some of the historical exhibits were challenging. In one you had to imagine you were travelling west on a limited budget. You chose the supplies you needed and then travelled west. I tried it twice and died before I had got half way to California! Friday finished with the banquet and prize giving at a local barbecue restaurant. It was here that I started conversing with Fred Cronenwett who writes for Model Aviation and whom I wish to thank and credit for the pictures accompanying this article.

Saturday dawned with the rain gone but some residual wind though I recognised that it would not cause a problem at the flying circle. In the first round of the Canadian World Cup, I used the same motor that achieved 301.0 kph in the USA comp but with more compression. This time it sounded rich but made 301.1 kph. The RAD was 94.8 rpm were still below what I was trying to achieve so I used a



**Front view of a speed model without engine.**



**Paul Eisner's airplane ready to fly.**