

2024 F2 TEAM CANADA WC REPORT

MUNCIE, INDIANA, USA



AUGUST 11 – 17, 2024
AMA INTERNATIONAL MODELING CENTER

F2 TEAM CANADA 2024 WORLD CHAMPIONSHIPS

REPORT



2024 F2 TEAM CANADA

TEAM MANAGER: John McFayden MAAC 14681L

ASST. TEAM MANAGER: Kim Doherty MAAC 32008

F2A PILOT: Yury Shvedenkov MAAC 16308

F2B PILOTS: Konstantin Bajaikine MAAC 61045L

Chris Cox MAAC 7149L

Len Bourel MAAC 14801L

F2D PILOTS: Pat MacKenzie MAAC 8177L

Ivan MacKenzie MAAC 23820L

Maksim Svetlakov MAAC 87000

Brad LaPointe (F2D Mechanic) MAAC 5147L

F 2 A

F2A PILOT: Yury Shvedenkov

HOMETOWN: Lindsay, Ontario

SPEED: 268.4 kph

PLACING: 13th



2024 FAI F2 Control Line World Championships – Muncie, Indiana, August 11-17

F2A Report by Yury Shvedenkov with photos by Fred Cronenwett and Alexander Valishev

Another Control Line World Championship (32nd since inception of the FAI series in 1960) was successfully completed. The AMA International Aeromodelling Center in Muncie, Indiana welcomed 175 fliers from 28 countries in four classes – F2A speed, F2B stunt, F2C team racing, and F2D combat. Regretfully, the participation in F2A was significantly lower than anticipated: out of the 30 preliminary entries only 16 contestants from 9 countries made it to Muncie. Nevertheless, this fact did not affect the level and complexity of the competition – as expected at a World Championships, there were dramatic turns, ups and downs for all involved. The preceding World Cup contest and the World Championships lasted for ten days, which presented ample opportunities for us to test fly, break and repair equipment, share ideas but above all contributed to building and strengthening lasting relationships among modelers.

Regarding the excellent organization it has to be pointed out that the whole idea and the subsequent organization of the World Championships belongs to the brave dedication of Bill Lee. The F2A contest operation was the responsibility of the North American Speed Society and in my opinion the competition went without a hitch. Under the leadership of Glen and James Van Sant, and the watchful eyes of the contest officials John Moll (TransiTrace operator), Mike Hazel (height judge), Dave Rigotti (line check), and Carl Dodge (technical checks), all aspects ran smoothly. The only minor inconvenience was how far spread the flying sites for different classes were: with the largely synchronized schedules this made it quite impossible for F2A contestants to watch the other classes.

Over the years the Muncie site is known for some difficulties to tune F2A models for top performance. The AMA site is at an altitude of 974 ft (297 m) above sea level, resulting in the barometric pressure lower than at most other sites. However, that is not the only issue. Very often the low pressure combines with high temperature and high humidity. This leads to the air density and the oxygen content that are considerably lower than in the standard atmosphere. Moreover, humidity and temperature change considerably over the course of the day adding more instability to the already challenging conditions. The low air density results in less available power for our normally aspirated engines, but beyond that running motors on leaner mixture changes the ignition characteristics, exhaust gas temperature and other relevant characteristics.

As a warmup a World Cup competition at the World Championship site right before the main event took place. The Laird “Doc” Jackson World Cup was flown on 8-9 of August, two rounds each day. There were 13 contestants from 4 countries. The World Cup podium was all-American: Alex Valishev 1st, Ivan Valishev 2nd, Bill Hughes 3rd. Almost everyone got a score in the contest and gained important knowledge. As for me, being the World Champion (2017) in

FAI F1C (free-flight) does not really help flying control line models. So, my goal was to focus on practicing my piloting skills, and I flew my trainer model at 193.3 and 195.5 kph.

The first round of the World Championship started promptly at 10:00AM on Tuesday August 13, the honors to open the flying belonging to Remi Pasturel from France. The weather was good for Muncie – light wind, the temperature of 78-80F, pressure of 987 mbar (29.1 in Hg), and 60% humidity. At this round both Alex and Ivan Valishev gained an identical speed, 303.4 kph. Well, these were already winning results. The testing of the previous days yielded good results for most of the contestants: the USA– B. Hughes had 293.6, P. Hempel 292.3 and C. Montagino 287.2; the French – M. Perret 290.4, R. Pasturel 290.7; the Germans N. Schmitz 283.2 and W. Naemura 286.0. This time I switched to a real asymmetrical F2A model with a Halman Special engine and gained 249.8 kph using a two-bladed propeller.

On Wednesday, the day of the second round, the weather was noticeably warmer – by the end of the round the air temperature reached 87F. Despite this, several contestants improved their results: Bill Hughes did 295.3, Chris Montagino 293.8, Marcio Silveira (Brazil) got 291.1, and Niels Lyhne-Hansen (Denmark) recorded 290.5 kph. Among this group of people, I also improved my result to 251.4 kph.

For the third round on Thursday, the pressure dropped, and the humidity went up, but the temperature was not as high at around 75 degrees F, which was at least good for humans. At 10:50 Niels Lyhne-Hansen (Denmark) burst into third place with a superb accelerating run at 297.0 kph. Ivo Popov (Austria) finally got a score of 286.7, Marcio Silveira (Brazil) improved his 2nd round result to 292.2. Alex decided to fly the model/engine/propeller combination that set the world record two years ago but based on the observations and prior statistics the propeller was de-pitched by ½ degree to compensate for the lack of available horsepower. This proved a successful strategy and the run was clocked with winning 305.9 kph. Yari Valo's KMV (Kostin-Metkemeijer-Valo) engine showed a glimpse of promise, the run had four laps at above 300 kph but not enough for a complete flight. I was capable of improving my personal best result and did 264.7 kph.

Friday was dedicated to free practice. It appears everyone was exhausted, so only a few contestants spent considerable time at the circle. Matthieu Perret was first at the field and probably the last to leave. Bill Hughes, Alex, Ivan and me also tested. The air quality kept deteriorating making for difficult tuning: the temperature reached 84 degrees F while the pressure dropped further to 978 mbar (28.87 in Hg) at a high humidity of 68-70%. Matthieu swapped engines between models and tried endless combinations of tuned pipes, propellers and plugs.

The fourth round presented the most difficult conditions: the barometric pressure was the lowest at 976 mbar (28.83 in Hg), high temperature and humidity with a gusty wind of around 15 mph. Two contestants had zero scores in the first three rounds: Rafael Blanco (Cuba) was drawn to fly first, and he finally recorded a speed of 267.9 to a well-deserved round of

applause. Jari Valo (Finland) followed but had to take an attempt. I improved yet again to 268.4 yielding another personal best. Flying 9th at around 10:50AM, Matthieu Perret (France) materialized all the potential and the testing of the previous days in a superb run at 297.6 kph, which ended up being the best time of the day and earned him a well-deserved third place finish, because the very last competitor to fly, Niels Lyhne-Hansen (Denmark) did not record a score.

In the end, the podium was Alexander Valishev (USA) 1st, Ivan Valishev (USA) 2nd, Matthieu Perret (France) 3rd. In the team competition, the USA took Gold, France won Silver, and Germany earned Bronze medals. The prizegiving ceremony was held at the field and had to be done in an abbreviated format because of rain but a few raindrops did not ruin the festivities.

This time all contestants used Profi engines with the small exception of myself (Halman Special) and Yari Valo (KMV - Kostin-Metkemeijer-Valo).

Everyone used stock aluminum Profi tuned pipes, again with the small exception. Since 2018 Ivan and Alex Valishev have been flying the electroformed Nickel pipes that were marketed by Profi a few years ago. These pipes have the same internal shape as the aluminum units but thinner walls.

The glow plugs were predominantly of two types: the Italian TCA screw-in plugs that have a Nelson-style thread and steel body, and the Ukrainian Profi Aluminium flat-seat drop-ins. All plugs had Glo-Bee style flat coil elements with the wire thickness between 0.007-0.008” (0.18-0.2 mm).

I would like to close this write-up with my deepest appreciation to the Canadian team that accepted me as F2A member and was effective and supportive, Paul Gibeault for help and navigating me to the team, Alexander Valishev and Matthieu Perret whose “instigative” (one year ago) idea of me competing at the Control Line World Championship became the reality.

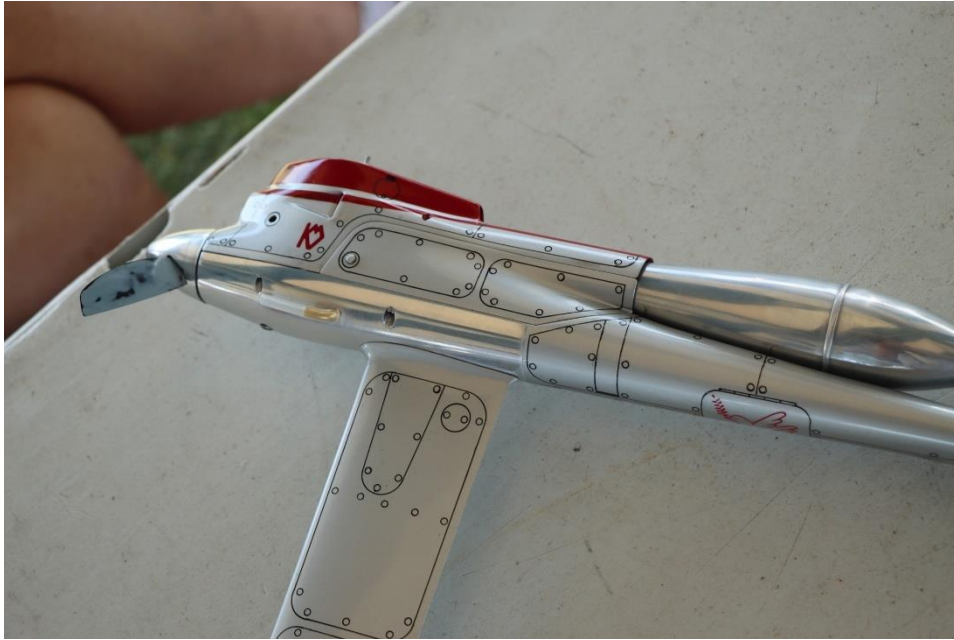
Yury Shvedenkov



Yury Shvedenkov with his Halman Special Irvine powered ship.



Overall view of winning model. Alexander Valishev (USA).



Jari Valo's (Finland) work-of-art.

The score table.

Overall Place	Jr Place	Fem Place	Score	CompID	Name	Country	Flight1	Flight2	Flight3	Flight4
1			305.9	A014	VALISHEV Alexander	USA	303.4	299.2	305.9	0.0
2			303.4	A013	VALISHEV Ivan	USA	303.4	296.8	291.1	0.0
3			297.6	A008	PERRET Matthieu	FRA	290.4	291.9	288.2	297.6
4			297.0	A006	LYHNE Niels	DEN	0.0	290.5	297.0	0.0
5			295.3	A015	HUGHES William	USA	293.6	295.3	0.0	0.0
6			293.8	A016	MONTAGINO Christopher	USA	287.2	293.8	0.0	282.3
7			292.5	A002	SILVEIRA Marcio	BRA	0.0	291.1	292.2	292.5
8			292.3	A017	HEMPEL Patrick	USA	292.3	290.7	0.0	283.5
9			290.9	A010	PASTUREL Remi	FRA	290.7	288.7	285.5	290.9
10			289.5	A012	SCHMITZ Norbert	GER	283.2	289.5	0.0	0.0
11			286.7	A001	POPOV Ivaylo	AUT	0.0	0.0	286.7	0.0
12			286.0	A011	NAEMURA William	GER	286.0	285.3	0.0	0.0
13			268.4	A003	SHVEDENKOV Yury	CAN	249.8	251.4	264.7	268.4
14			268.1	A004	RIVERO Alexis	CUB	268.1	174.2	259.7	253.8
15			267.9	A005	BLANCO Rafael	CUB	0.0	0.0	0.0	267.9
16			0.0	A007	VALO Jari	FIN	0.0	0.0	0.0	0.0

F 2 B

F2B PILOT: Konstantin Bajaikine

HOMETOWN: Burlington, Ontario

MODEL: StarLight II, Electric

PLACING: 9th

TEAM CANADA PLACING: 5th





PILOT: Len Bourel
HOMETOWN: Dresden, Ontario
MODEL: Tiger Shark, PA .61
PLACING: 27th
TEAM CANADA PLACING: 5th





PILOT: Chris Cox
HOMETOWN: Delta, BC
MODEL: F6F Hellcat, electric
PLACING: 15th
TEAM CANADA PLACING: 5th



F2B TEAM and TECHNICAL REPORT

The 2024 F2B Canada was selected via a Team Trial conducted in Winnipeg Manitoba held on Sept 29 – 30th 2023.

The Team consisted of Konstantin Bajaikine MAAC 61045L, Chris Cox MAAC 7149L and Len Bourel MAAC 14801L.

Konstantin flew his new StarLight II. A fiberglass, foam and molded carbon fibre composite model powered by a BadAss electric motor, using a 6 cell 2800 mAh LiPo battery pack and an Igor Burger active timer/ESC.

Chris Cox flew his molded F6F Hellcat. The model also features an Igor Burger active timer/ESC but uses a lighter weight Lithium-Ion battery pack that Chris assembles himself. The Hellcat is beautifully finished complete with detailed panel lines.

Len Bourel flew his nitro-powered piped Precision Aero .61 Tiger Shark. The Tiger Shark is of traditional balsa construction.

The dominant power system at this edition of the F2B World Championships was electric. About 90% of the models processed and flown were electric. All of the electric models contain an active timer and ESC, the most prevalent being that developed by Igor Burger. 3 blade carbon fiber props are the standard. There were 2 contra-rotating prop set-ups (Polish models).

Nitro planes were generally piped and of .60 to .75 displacement.

Many competitors and attendees referred to this event as a Shark-Fest, owing to the immense popularity of the Discovery Control Line Models Shark series of molded models. The “Yatsenko Sharks” are designed and constructed by brothers Yuriy and Andrey Yatsenko. The models fly extremely well in both calm or windy conditions.

The AMA had completely repaved the famous L-Pad in preparation for the World Championships. The L-Pad features 4 fully outlined competition circles. The fresh pavement allowed for extremely smooth take-offs and landings. The fresh black pavement also made very hot conditions for the judges, pull-testers, pilots and pitmen working in the sun laden skies of Muncie. There were also very well manicured grass circles available for practice flights nearby.

The weather for the Qualification rounds was perfect. Wind was very light and for a change, not blowing directly into the sun. Temperatures were warm but tolerable. All 3 of Canada’s F2B entries completed their 4 competition flights without incident. Their equipment worked flawlessly and at the end of all those flights, both Konstantin Bajaikine and Chris Cox had made the Final 15 Fly-Off. A first for Canadian F2B at a World Championships.

Top 15 Finals Fly-Off

The weather changed. A violent thunderstorm blew through Muncie about 6 am. After the storm passed, the wind was very strong and turbulent. Extremely challenging conditions replaced the “Stunt Heaven” of the Qualification rounds.

Konstantin made adjustments to his power system to face the windy conditions. The next decision was from where to start the take-off roll. In front of the judges and risk a tail lift and prop scrub or start downwind and risk a low-scoring floating lift-off.

Konstantin chose the riskier but potentially higher point earning upwind take-off. A great choice as the StarLight II rolled out and lifted off beautifully. Konstantin put in an excellent flight to earn a 1032 flight score.

Chris Cox flew less than an hour later. With the winds still blowing, Chris positioned the judges, selected his take-off point a little left of them and put his F6F Hellcat through the pattern. Chris landed with a score of 999.

Round 2 was flown after lunch. The wind remained strong and turbulent. Having experienced the impact of these winds during Round 1, Konstantin and Chris made more adjustments to their set-ups. Both pilots successfully posted higher Round 2 scores, Konstantin 1045 and Chris 1024.

Hope that Round 3 would provide less wind and turbulence was not to be. Round 3 was more of the same, wind, following another early morning rain storm. However, Konstantin and Chris accomplished something that not all the other 13 Finalists did. Both scored a Final Flight score that bested their previous two flights.

The Results

Konstantin finished in 9th, Canada’s highest ever F2B World Championships Pilot placing.

Chris and the Hellcat finished in 15th Place

Along with Len Bourel’s 27th placing, F2B Team Canada finished in 5th out of the 18 countries entered in F2B. This too is Canada’s highest ever placing in F2B World Championships.

Finally, this 2024 F2B event also featured a Concours for “self-built” models. About 17 models were entered in the Concours. The F6F Hellcat, built and flown by Chris, was selected as the Winner of the 2024 F2B WC Concours! Absolutely the correct choice.

John McFayden



F 2 D

F2D PILOT: Ivan MacKenzie

HOMETOWN: Toronto, Ontario

PLACING: 39th

TEAM CANADA PLACING: 8th





PILOT: Patrick MacKenzie

HOMETOWN: Toronto, Ontario

PLACING: 11th

TEAM CANADA PLACING: 8th





PILOT: Maksim Svetlakov

HOMETOWN: Stouffville, Ontario

PLACING: 24th

TEAM CANADA PLACING: 8th



2024 Control-Line World Championships – F2D Team and Technical Report

Canadian F2D team was selected by taking the results of all 2023 F2D contests taking place on Canadian soil. The team consisted of Patrick MacKenzie, Ivan MacKenzie, and Maksim Svetlakov.

All team pilots flew “ready-built” models. Engines brands used were Fora (Maksim and Ivan) and Zorro (Patrick). Although the war in Ukraine has severely impacted supplies of combat equipment, all team pilots had the equipment needed to compete at the highest level.

(As everything else is pretty much standard...) The only other major flight component of interest is the shut-off. As per by the rules since 2014, on-demand motor shut-off is required at the end of a match:

The Circle Marshal shall give an acoustic signal to terminate the combat heat. The pilot(s) must stop their motor(s) and land after the heat is terminated.

To meet this requirement, all Canadian pilots used on-board electronic shut-offs, activated by the pilot. Pat and Ivan used a servo-based solution, while Maksim employed a solenoid valve-based system. Both systems behaved flawlessly throughout.

Figure 1 - Typical F2D Combat Model Figure 2 – Fora F2D Motor, Servo Based Electronic Shut-Off Figure 3 - Fora F2D Motor, Valve Based Electronic Shut-Off As is the norm for the World Champs, there was a World Cup “pre-contest” prior to the main event. Normally we are unable to compete in the pre-contest, as the models boxes we fly with can only hold around 12 models, just enough for one contest. But this time we were able to compete, as we were driving and could carry many more models to Muncie.

Figure 4 - Pat and Ivan's Models for U.S. Nats, World Cup and World Champs (54 models) The pre-contest, held over 2 days, had 34 competitors. For combat, the weather was just about perfect, and the team running the event did an outstanding job.

Team Canada results for the pre-contest:

Name	Place	Win - Loss Record
Maksim	6 th	4 - 2
Ivan	6 th	4 - 2
Patrick	13 th	2 - 2

Following the pre-contest, we had 3 days with which to fine tune our models and get everything else ready for the World Champs. Given the 1,000 acre size of the Muncie flying site, finding a place to complete these activities was extremely easy.

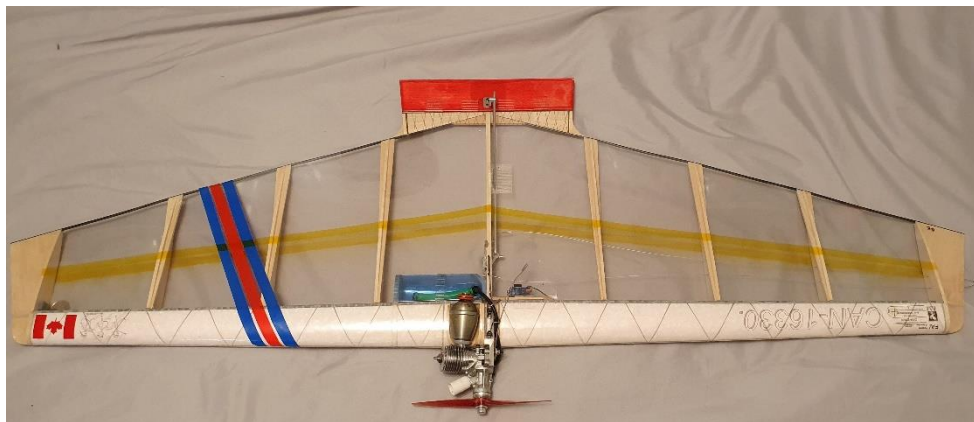
The World Champs, held over 4 days (5 calendar days), had 52 competitors. Once again, for combat the weather was just about perfect, and the team running the event continued the excellent work.

Team Canada result for the World Champs:

Name	Place	Win - Loss Record
Pat	11 th	3 - 2
Maksim	24 th	1 - 2
Ivan	39 th	0 - 2

Naturally not the World Champs results we were hoping for, but at this level wins are tough and making it deep into the contest is even tougher. The finals day was quite the show, with many close matches to ultimately decide the winner, Jussi Forss from Team Finland (now back-to-back F2D World Champ).

Finally, I would like to thank the World Champs organizers, the team running the F2D event, and our team manager John McFayden for all the hard work they put in, making it painless for the F2D team to compete and represent MAAC and Canada. Ivan MacKenzie





2024 F2 WC SIGHTS











F2B Final Rounds

Fly-Off Round 3

Time	CompID		Name	Country
08:00	B050		COLAN, Matthew	USA
08:10	B039		BORZECKI, Krystian	POL
08:20	B007		BAJAIKINE, Konstantin	CAN
08:30	B010	J	LETONG, Xu	CHN
08:40	B025		VALLIERA, Marco	ITA
08:50	B049		HERNANDEZ, Orestes	USA
09:00	B011	F	ZHENG, Liu	CHN
09:10	B009		COX, Chris	CAN
Break				
09:30	B026		NOGOME, Shoichiro	JPN
09:40	B001		HOWELL, Murray	AUS
09:50	B014		JUN, Yang	CHN
10:00	B027		MURAMATSU, Masahiro	JPN
10:10	B013		LIU, Yang	CHN
10:20	B048		FITZGERALD, David	USA
10:30	B012		BINGCHU, Jiang	CHN
Break				





G

