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THE MAGAZINE
FOR JET MODEL FLYING

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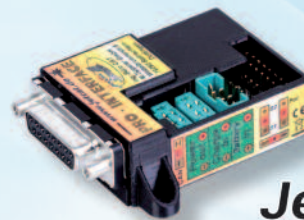
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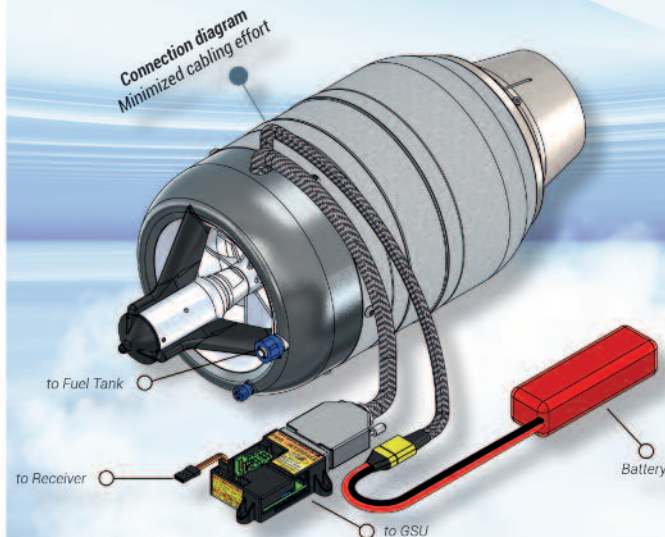
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1x	Engine Mounting Clamp	41152-0248
1x	JetCat PRO-Interface	61168-0010
1x	JetNet	61128-0052



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- Charging outputs can optionally be connected in parallel (e.g. for only one receiver battery)
- The voltage of the charge outputs is already set to 2s LiPo/ 2s Li-Ion

Hello, dear readers,



I am pleased to be able to present to you in this issue an old-timer from the early years of jet aviation in a new guise. It is the Boomerang Sprint V2, now produced in the USA. The era of the twin fuselage jet was founded with the Boomerang models, which unfortunately are only available in a few copies today. These all-round models are not only suitable for beginners in jet flying, but are also ideal for aerobatic training. One of the major jet events in the USA is the Florida Jets, founded by Frank Tiano, which after his death continues to be organised by his wife and friends in a tried and tested manner and attracts jet pilots from all over the world year after year. Despite the increasing problems with transporting models from Europe to the USA, this year's meeting was once again attended by international participants.

Enjoy the pictures of the extraordinary models that were on display there.

But also in our country, the entire model building scene has revived considerably after Corona. The first event was the Pro Wing, which continues to lead the way with its trade fair concept and which we wish many more successful years. Although I have observed a trend towards more relaxed meetings or club flying days, the number of participants in the German championship for jet models and in formation flying is pleasingly high.

But the truth is that these model flying events are almost always organised by the "old people" in the clubs. The young people would rather show what they can do than organise and take responsibility in the club.

I can understand that and yet it leads to more and more problems in our clubs, because many of the "old ones" would like to quit, but there are only a few who want to take over the job. In discussions about this topic, the term "last generation" often comes



up jokingly. These are the people who have made model aviation what it is today for decades with their commitment. But they also like to remember the times when model flying was freer and perhaps also more beautiful because it required more initiative and cohesion.

But now back to the new JETPOWER, which is again full of interesting topics about jet aviation. Of course, we also take a look at the "greats" again, because they are our role models in many things.

Have fun and, as always, happy landings, because Peter has finally delivered flying weather.

Winfried Olgert

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Fahrwerke
und alles, was man
sonst noch so braucht!**

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Int. German Championship in formation flying with Jet models

The competition will take place from 21 to 23 July 2023 in Herrieden-Stadel. Eleven teams have registered so far, including our Italian friends Sandro Rosina and son.

We are expecting more teams from Europe. The Bishops from England, who are among the winners of this competition, will most likely be there again. The competition starts on Friday, 21 July at noon. On Saturday evening, there will be a big night air show with fireworks and an after-show party.

Admission is free on all days and we look forward to many spectators who will not miss this unique competition.

Günther Knörr, Horst Westerholt, Winnie Ohlgart



Model flying with a handicap: readers report

In the penultimate issue of JETPOWER we talked about model flying with or despite disabilities. I asked the readers to report on their experiences if they are affected. In fact, we received quite a few letters, most of them dealing with the situation very skilfully and coping very well with everyday (model) flying. I would like to give the floor to Mr Buch, who reports on his experiences:

You asked for contact if one is also a model pilot with a handicap. I have been one of them for about nine years, but due to my own stupidity I have been put into an active wheelchair. Fortunately, I have not suffered any limitations in my manual skills as a result. I was already a model pilot before that (wild flyer), but because of my disability I had to become a club pilot. Without appropriate support, e.g. for launching or recovering the model, it would not have been possible to pursue this hobby. I first had to find a club that had a terrain suitable for wheelchairs. Small ditches or steep slopes between the car park and the flying field are not a big problem for a pedestrian, but with a wheelchair, which is moved by muscle power, the situation is unfortunately different.

I found a suitable club by asking in various RC forums on the internet. So now I am with the HMSV in Vaihingen/Enz. The reception in the club, first as a guest pilot, later as a member, was very friendly and I feel very comfortable. There is always help when I need it, although accepting help or asking for it was very difficult for me at the beginning. But that is a common problem when you change from a pedestrian to a wheelchair user.

Of course, there have also been changes in the practice of the hobby. The models got smaller. My favourite model used to be a Rival /Abachi from FVK, now it's a Phönix 2000. Transporting it from the car to the preparation area was no problem with the Riva either. But picking up the parts or the model from the ground with one hand and then assembling it on your lap is more than borderline at 2.8 m, even for the surroundings. At two metres it is much easier.

Other restrictions arise as a side effect of the paraplegia. For example, I only have a limited time window for staying at the airfield, because I have to catheterise every four to five hours, but there is no disabled toilet at the airfield.

is available on the airfield. But that would also be an almost impossible task for a small club. There are also slight limitations in terms of weather, as the temperature exchange between the paralysed lower and upper half of the body is somewhat restricted. This means that in cool weather my legs can get cold and I only notice it later. In hot weather, I am more of a candidate for heat stroke. I don't know exactly where the critical mark lies, but I am not eager to find out in practice. For me, this all falls more under the heading of "annoyances" and less under "disability".

Many greetings
Harald Buch

Dates 2023

It's amazing how full the calendar for the new year already is. It starts with the 23rd Rookie Meeting at MFC Hohenroda. I would like to take this opportunity to thank the Aero Club Bad Königshofen and the club at the Zell Haidberg EDNZ glider airfield for their willingness to host the 2023 Rookie Meeting. I ask that you send me any other planned jet dates (w.ohlgart@t-online.de) so that we can all prepare in good time for the new 2023 season.

21. – 23. July 2023 Int. German Championship in formation flying with jet models in Herrieden-Stadel

Contact: Winnie Ohlgart
E-mail w.ohlgart@t-online.de

12. August 2023 Horizon Airmeet

www.horizonhobby.de

19. – 26. August 2023 14th Jet World Masters in Italy

Rivanazzano, Voghera Airfield
www.jwm2023.it

23. – 24. September 2023 Nitro Days in Niederöblarn

Contact: Peter Cmyral
E-mail peter.cmyral@cmyral.eu

Please let us know your jet dates by emailing w.ohlgart@t-online.de.

Taylormade Decals supports German Jet World Championship Team

The team captain of the German Jet World Championship team, Michael Wagner, informed me that unfortunately Ralle Schneider from Taylormade Decals was forgotten in the list of sponsors. Michael apologises for this error and would like to take this opportunity to thank Ralle, who has supported the team financially and in word and deed for many years.



Books for pilots

TRANSPORT AIRCRAFT FROM THE SOVIET UNIO

The war in Ukraine has brought Russia's military capabilities back into the public eye. Air transport capacities are also of central importance here. In Soviet times, enormously powerful aircraft were built, including the legendary Antonov An-225 (a one-off), which was tragically destroyed beyond repair during the fighting. Michael Normann, himself a former member of the NVA, describes the flying transporters from Soviet times in a proven expert and detailed manner, many of which are still in service today. An up-to-date reference book.

Michael Normann, Transportflugzeuge aus der Bilder, Format 230x265 mm; € 29.90.



In line and in rank

Workshop: Rivet application made easy

Applying rivets is not necessarily one of the favourite tasks of model builders - but they are indispensable for a scale replica that is as true to the original as possible. Markus Tisius knows the subject of rivets all too well from his scale projects and presents two of his procedures in his workshop, which are also easy to handle.

That's all the material you need to apply rivets to a hull.



Enhancing models with rivets

Whether semi or full scale, the small details make the difference and enhance the overall appearance of a model. This includes rivets on a fuselage. There are many possibilities to realise them. I would like to present two practical examples here. First and foremost, it will be about creating glue rivets. But don't

worry: applying rivets is definitely not witchcraft or science. With a little practice you will quickly get good results.

Some manufacturers offer specially coloured rivet glue. You can quickly tell from the colour whether the rivet meets your expectations. But standard glue (e.g. Ponal Express) will also work.



The combing method is basically simple: dip the rivet comb into the glue...



... and make sure that no large lumps form on the comb (as seen here).



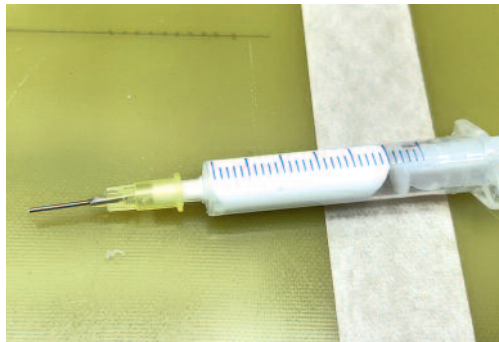
Then press the rivet comb into the desired place and pull it away upwards.



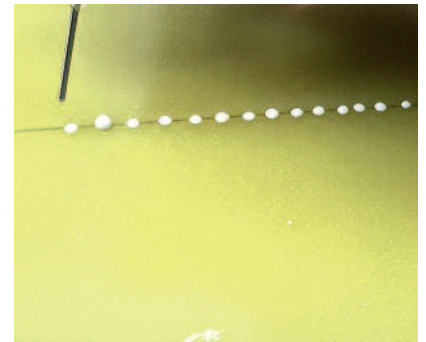
The basic equipment for the "syringe" method is a cannula from the pharmacy. Here a cannula with 0.9Å ~ 40 mm shortened to about 20 mm



For clean results, guide lines are advisable.



Let's go: The first step is to fill the glue syringe and press the contents lightly.



Now apply rivet by rivet. Do not press too hard on the syringe, otherwise too much glue will come out and the rivets will be of different sizes.

Possible variations

Comb method

Special rivet combs are available in shops (e.g. VARIO). In my example, a comb was used for a different purpose - simply dip it in and press the comb to the hull with glue. However, this method is not one of my favourites. It gets difficult with the curves and thick lumps quickly form between the tines.

My personal favourites are two methods that give the best results:

Apply glue rivets with a syringe.

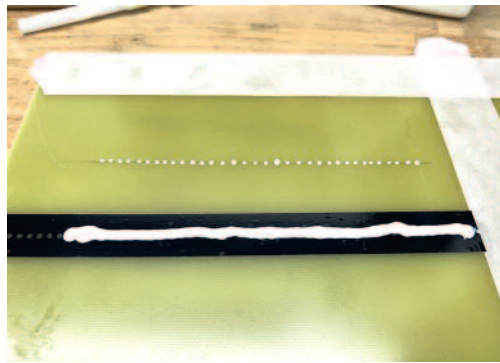
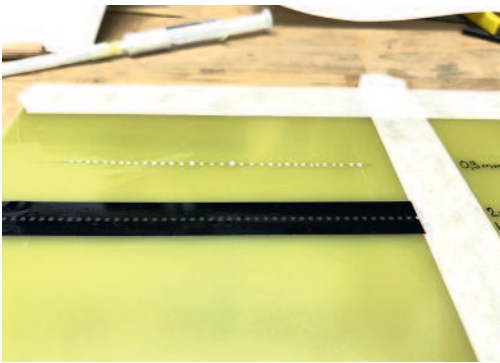
Depending on the desired rivet diameter, preliminary tests should be carried out with different needles. I often use a 0.9Å ~ 40 mm cannula shortened to a length of about 20 mm. One advantage is that the costs for syringes and cannulas are very manageable. It is important not to forget to clean the tools at the end of the work. It is sufficient to rinse the syringe and especially the cannulas several times with warm water. For complica-

ted rivet patterns it is advisable to use guide lines. Without guide lines, there may be a slight misalignment.

Making rivets with glue rivet tape

The procedure is basically simple: glue on the rivet tapes, apply the glue, be patient and let the glue set briefly, then slowly pull off the rivet tapes slowly. The result is impressive. The dis-

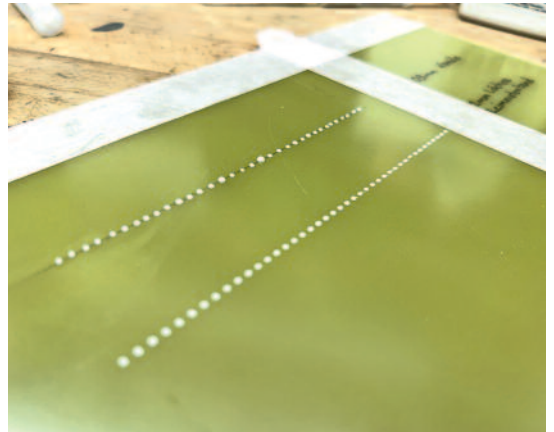
“ Basically, it is advisable to make practice patterns before you venture on your model. Testing with different diameters is also helpful to achieve the desired result.



Step 2: Apply the glue to the glue rivet tape and wait a while.

With the glue rivet tape, you quickly get a neat result.

The procedure for glue rivet tape is simple. **Step 1: Apply the rivet tape to the desired position.**



Step 3: After a short waiting time (approx. 60-90 seconds), slowly pull the rivet tape upwards.

tances are already predefined and the work is easy, especially on straight surfaces such as stern booms or hull surfaces. Depending on the model, however, curves on the doors can be a bit of a challenge.

Basically, it is advisable to make practice patterns before attempting your model. Testing with different diameters is also helpful to achieve the desired result. With large surfaces and even spacing

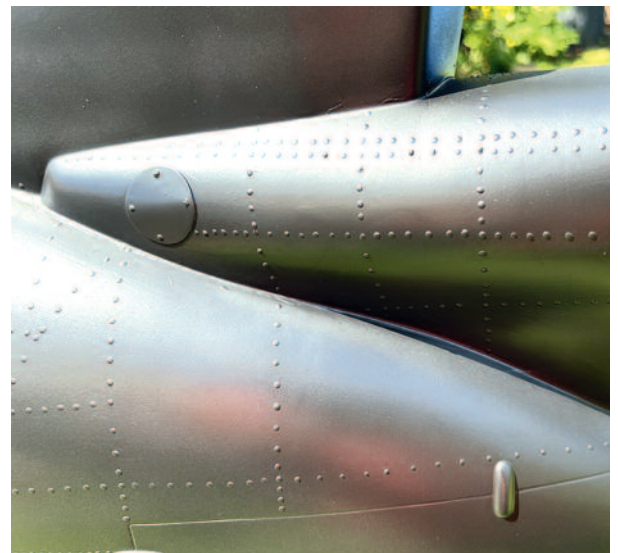
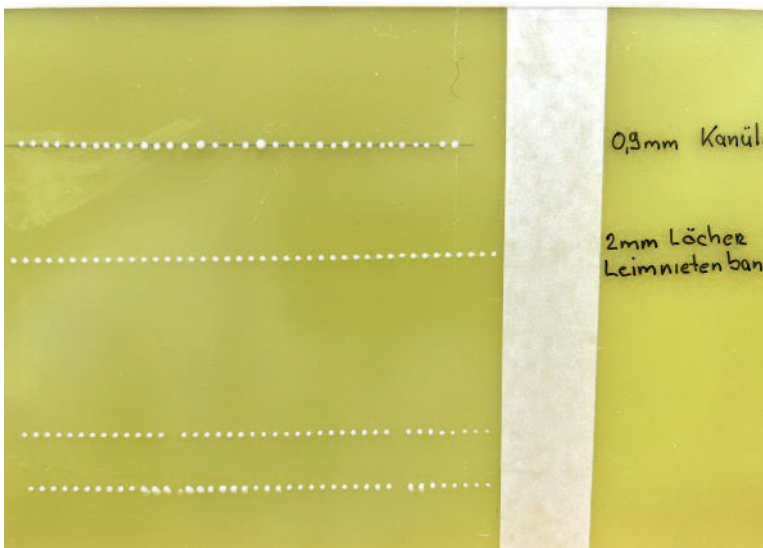
the glue rivet strips show their true strength. By the way, the glue rivet tapes presented here come from Scale-Print and are available in different diameters.

Another tip: Even with this method, auxiliary lines are essential for clean results in order to obtain a straight and prototypical rivet pattern. And now have fun and success testing and trying out.

JP

Here is a direct comparison: The first row of rivets was applied with the syringe, the second with the glue rivet tape. Rows 3 and 4 were made with glue residue from the glue rivet tape.

On this Hughes 500, the rivet pattern was partially created without guide lines - syringe and rivet tape were used.



FÜR ALLE, DIE WIND UND WELLEN LIEBEN.

26.08. – 03.09.2023



Leidenschaft, die verbindet. Entdecken Sie auf dem CARAVAN SALON eine riesige Auswahl an Campervans, Faltcaravans und anderen Freizeitfahrzeugen. Ziehen Sie außerdem neue Outdoor-Ausrüstungen an Land und entdecken Sie Ihr nächstes maritimes Reiseziel.

25.08.2023 Preview Day

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Skymaster F/A-18 Hornet

in scale 1:5,75

In the JETPOWER issue 03/2022 I reported about the construction of the F/A-18C Hornet by Skymaster, then in JETPOWER01/2023 about the first flight experiences. At that time, the focus was on the non-acting elevators with the flaps set. After these experiences I replaced the wiring from the PowerBox to the tailplane servos with cables with a larger cross-section, installed a backup capacitor at each servo and fitted new Futaba A700 Air tailplane servos. After that the Hornet changed hands. Hajo and I are in constant contact and of course I asked to be informed about the results of the modifications. Now I have finally received the feedback: Exactly as expected, the elevator action now behaves as it should with the flaps set. Everything now works perfectly and the model flies superbly in every flap position.



Conclusion

In the case of large pendulum rudders, pay attention to the correct wiring, use the support capacitor, install appropriately strong servos; also compare the current consumption. This is not to be neglected in these applications! Furthermore, pay particular attention to whether the force applied by the servos was measured from the movement or from the standing po-

sition. In my opinion, force data measured from the movement are not suitable for our applications. So, for this type of tail unit, feel free to reach into the upper force shelf. Rarely has the phrase "having is better than needing" applied as well as it does to this topic.

JP



“Powerful servos are especially important for jets with large control surfaces. Seldom has the sentence "It's better to have than to need".



Ulrich Rockstroh presented an L-39 Albatros with a wingspan of 2,400 mm and a take-off weight of 24,500 grams.

Model Building Days Tulln/Austria

After a long Corona thirst, there is once again a model building fair in Austria for us model airplane pilots. This year's venue is the 10,000 m² exhibition centre in the town of Tulln on the Danube, not far from Vienna. Unexpectedly for us jet pilots, there was also a lot of interesting stuff to see.

The weather on the weekend of 14 to 16 April 2023 was ideal for a visit to the fair - rainy and cloudy. It was therefore no surprise that a veritable storm of visitors descended on the exhibition grounds after the opening on Friday afternoon. During the three days, model flying found its home in Hall Six, where, in addition to the Austrian Aeroclub, the exhibitors Modellbau Kirchert and Horizon Hobby also had their stands. At the stand of the Austrian Aeroclub, visitors could experience the unique experience of flying on a glider simulator in combination with VR goggles. In the hall there was also an area separated from the public where

indoor flight demonstrations were held for the visitors. Here, the wide spectrum, from simple motor models to scale helicopters, was presented. Markus Mittermüller and Peter Zarfl, Federal Section Leader of the Austrian Aeroclub's Model Aviation Section, acted as moderators.

In the exhibition area, several interesting jet and turboprop models in various sizes were on display. The exhibition area was supported by the company uni-Light. The owner Ulrich Rockstroh also provided jet models for the exhibition. Here, for example, was the Grob 120 TP with a wingspan of 3,400



Visitors were able to experience the unique experience of a simulated flight on a glider simulator in combination with VR glasses at the stand of the Austrian Aeroclub.



The exhibition area also featured the Grob 120 TP Turprop with a wingspan of 3,400 mm and a take-off weight of 24,300 grams.



The Rafale model on display was very impressive and had a colourful special French Air Force livery. The wingspan is 1,600 mm and the take-off weight is 17,000 grams. The all-GFK Rafale belongs to Thomas Schaidler and is powered by a Frank ST-180.



The Aermacchi MB-339 by Mario Kainz was one of the larger Jet models on display. With a wingspan of 2,990 mm and a take-off weight of 24,800 grams, the model has enormous dimensions.

mm and a take-off weight of 24,300 grams. The model, powered by a Kingtech K100TP, belongs to Ulich, who again presents the Grobimmer in flight at airshows. He also presented an L-39 Albatros with a wingspan of 2,400 mm and a take-off weight of 24,500 grams.

Right next to the Grob 120 TP, the Eurofighter from the manufacturer CARF was on display. The model has a wingspan of 1,680 mm, a dry weight of 16,000 grams and is powered by a Frank FT160 turbine. The Eurofighter, made of solid GRP, belongs to Roman Schaidler. In addition to the Eurofighter, Roman also exhibited a Classic Flash turbine trainer from CARF. The wing span is also 1,680 mm, with a take-off weight of 11,400 grams. The full GRP model is powered by a Jetcat P120 SE.

One of the larger jet models exhibited was the Aermacchi MB-339 by Mario Kainz. With a wingspan of 2,990 mm and a take-off weight of 24,800 grams, the model has enormous dimensions. A KingTech 210-G2 turbine provides for real steam in flight. Very impressive and with a colourful special paint scheme of the French Air Force was the exhibited Rafale model with a wingspan of 1,600 mm and a take-off weight of 17,000 grams. The full-GfK Rafale belongs to Thomas Schaidler and is powered by a Frank ST-180. Another turboprop model, the Pilatus PC-21, was on display. It has a wingspan of 2,000 mm and weighs 11,500 grams. The GRP model is powered by a KingTech 30TP-

G4, the owner is Adi Hermanke. Almost a classic is the Viper Jet with a wingspan of 2,300 mm and a take-off weight of 12,000 grams. The owner of the GRP model is Peter Koch, and the Viper Jet is powered by a Swiwin 140 turbine.

On the following days of the weekend, a large number of visitors took advantage of the opportunity to view the exhibited models and make use of the offer of the fair. According to the latest information from the fair management, the fair will be continued next year due to its great success. We model pilots are curious to see how this new fair will develop.

JP



In the exhibition area in Hall 6, visitors could take a look at a number of jet and turboprop models. The range of jet models ranged from small, handy to large models that require approval.



Salon de Provence Airshow 2023

70 years Patrouille France

The hosts, Patrouille France, proved their absolute skills in front of the largely French audience. There, the team was celebrated like rock stars!



Under the motto 70 Ans Patrouille France, the Salon de Provence Airshow took place once again at Base Aérienne 701 (L'Ecole de l'Air) in southern France. The French aerobatic team was officially founded in 1953. Of course, they were the highlight of the airshow with their Alpha Jets. Visitors had the opportunity to see the parked Alpha Jets, Fouga Magister, Rafale, Mirage, PC-21 etc. at close range. Visitors were also able to enter an Airbus A400, which was later flown in the display.



Some aircraft could be inspected at close range. The A400 was even allowed to be inspected from the inside.

Other squadrons such as the Patrouille Suisse, the Spanish Patrouille Aguila, the Croatian Wings of Storm or the helicopter squadron Patrulla Aspa also flew excellent displays.



Shortly after 10 am, the airshow opened with the flight of a Fouga Magister. At the beginning, it caused some irritation that the flight did not take place above the runway as usual, but on the opposite side. But the spectators were right in the middle of it! Unthinkable in Germany. Because of the great distance between the runway and the flight sector, people had to decide whether they wanted to see the take-offs and landings up close or have a better view of the airshows.

Other aerobatic teams celebrated Patrouille France's birthday with them. Among them were the Spanish helicopter squadron Patrulla Aspa, the Patrouille Suisse, the Patrouille Aguila, the Croatian Wings of Storm and the Saudi Hawks.



The Belgian Dream Viper F-16 by Steven de Vries was no less spectacular. The afterburner was allowed to prove its function for almost the entire flight.

The solo displays such as the Belgian and Greek F-16, the Rafale Solo Display, the Suisse Hornet Display, the A400M Display, the Wingwalker, an F-86 and many more made the show a grandiose experience.



In addition to modern equipment, there were also jet oldies like the F-86 Sabre to be seen. It was presented in camouflage colours and not in "classic" natural metal.

Unfortunately the weather was not very typical for the South of France, but the rain was very necessary for the nature there. Nevertheless the Salon de Provence Airshow is a very recommendable event. The pictures are impressive proof of this. **JP**

Before the display began, there was a flyover in formation with Rafale and A400.



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The C-130 Fat Albert lands after a display. In the foreground the McDonnell Douglas F/A-18Hornet No. 4 of the Blue Angels.

Legendary Aerobatic Squadron



The Blue Angels aerobatic team with Fat Albert in formation. (Image: US Navy)

History

The Blue Angels aerobatic squadron was founded on 24 April 1946 and is part of the United States Navy, which also includes members of the United States Marine Corps. The Blue Angels are stationed at Naval Air Station Pensacola in Florida and are under the command of the Naval Air Training Command. It is the command area responsible for the training of Navy aviators. The current operational type is the Boeing F/A-18 E/F Super Hornet, which replaced the McDonnell Douglas F/A 18 A/B Hornet in November 2020 after a record 34 years of service. The Super Hornet is a twin-engine, carrier-based, multi-role combat aircraft that is primarily used by the US Navy and has since replaced the older Hornets and F-14 Tomcat. The current aerobatic squadron consists of six aircraft, four of which remain together in different formations during the flight

The Blue Angels

demonstration, while the other two fly solos as well as individual manoeuvres.

It all started with a formation of three Grumman F6F Hellcats in July 1946 at the Southeastern Air Show in Jacksonville, Florida. The 17-minute flying display consisted of only a few flights in formation, which were subsequently shown at many events in the USA, including New York. During the squadron's stay in New York, the name Blue Angels was made the official squadron name, derived from a New York nightclub. A little later in August, the change to the Grumman F8F Bearcat followed and the team was increased to four and later to five aircraft. From 1950 onwards, the Blue Angels used jets for the first time with the Grumman F9F-2 Panther. During the Korean War, the Blue Angels were disbanded because experienced pilots were urgently needed.

On 25 October 1951, the Blue Angels were revived and officially re-established, taking delivery of the improved Grumman F9F-5 Panther and, in 1955, the Grumman F9F-8 Cougar. After changing airfields several times, the Blue Angels landed in Pensacola, Florida, their current home base. The Grumman F11F Tiger was a flop for the US Navy, but served in the aerobatic

squadron from 1957 to 1969. The Blue Angels also flew a lot abroad, and were the highlight of the Paris Air Show in 1965. In 1970, the Tiger was replaced by the McDonnell Douglas F-4J Phantom II. Due to the more powerful jet, the aerobatics programme could be expanded by many manoeuvres. The Blue Angels also flew at many shows in South America, the Far East and Europe. The time of the double-sounding F-4J did not last long, however, and in 1975 the Blue Angels converted to the smaller, more manoeuvrable and more agile Douglas A-4 Skyhawk. With the Skyhawk, the time of many foreign missions was over and the Blue Angels were mainly used for airshows in the USA, with the focus on recruiting pilots for the US Navy.

The Skyhawk was in service for over ten years, then in 1987 the changeover to the twin-engine, carrier-based F/A-18 Hornet took place and after 19 years there were again appearances abroad. The Blue Angels made several appearances in countries of the former Eastern Bloc. On their return flight to the States, the squadron also stopped in the Federal Republic of Germany, but was not allowed to perform due to the strict flight safety regulations in force. In 1998, the jets even landed on the



Current lettering of the Blue Angels with which all operational machines are provided.



Board of all Blue Angels operational aircraft 1946 to 2021. (Image: US Navy)



The official emblem of the Blue Angels, which is displayed on every operational machine.

One of the first Blue Angels squadrons, four F6F Hellcat in formation. (Picture: US Navy).



**TECHNICAL DATA
F / A-18 E / F SUPER HORNET**

- Wingspan** | 13,63 m
- Length** | 18,32 m
- Height** | 4,88 m
- Max. take-off mass** | 29.937 kg
- Top speed** | Mach 1,82
- Engines** | 2 x General Electric F414-GE-400-Turbofans
- Thrust** | 2 x 63.47 kN (dry)
2 x 97.86 kN (wet)

In service with the Blue Angels from 1957 onwards: the F11F Tiger.



This was followed in 1970 by the supersonic, twin-engine F-4J Phantom II (Image: US Navy).



The A-4F Skyhawk II, which entered service in 1975, was considerably smaller but more manoeuvrable. (Picture: US Navy)



After more than ten years in service, the Skyhawk/F/A-18 Hornet followed in 1987 and served with the Blue Angels until 2021.





The F/A-18 Super Hornet has been the Blue Angels' current operational type since 2021.

US aircraft carrier USS Harry S. Truman (CVN-75), a testimony to the high level of training of the Blue Angels' pilots. For their last European visit, on the occasion of their 60th anniversary, the Blue Angels participated in 2006 with an impressive display at the Royal Netherlands Air Force Open Days Airshow at the airbase in Leeuwarden. After 34 years of the F/A-18 Hornet, the Blue Angels will be using the successor model F/A-18 E/F Super Hornet, which has also replaced the Hornet in the US Navy, from 2021.

JP

“The history of the Blue Angels began shortly after the end of the Second World War. When they were founded, they were still called the "Navy Flight Exhibition Team".

Take-off preparation and landing

The procedure for take-off preparations and after landing is a standardised procedure that is celebrated before every take-off for a demonstration and after landing. Above all, the ground staff, the technicians and the 1st attendant are involved here,

handing over the aircraft to the pilots in a technically perfect condition and assisting the pilots in boarding the aircraft.

The standardised procedure is an effective measure to avoid mistakes during the hectic pace of an event.

Six F/A-18 Hornets are lined up ready for flight preparation by the technical staff or the aircraft's first maintainer. The technical equipment is ready. An F-16 B of the Royal Netherlands Air Force lands in the background.



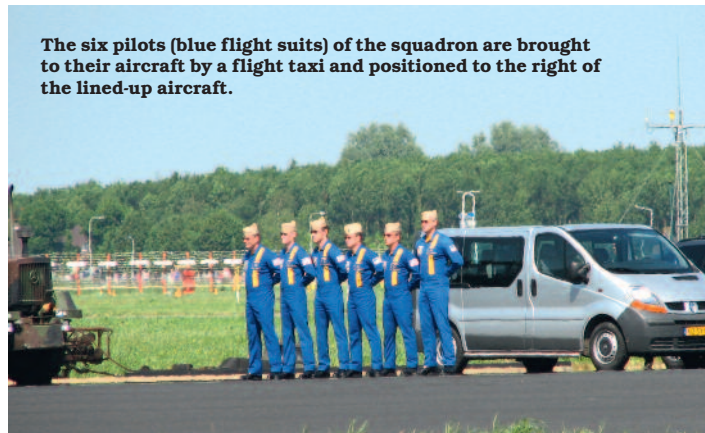
The technical staff arrives in step. Four technicians per machine get them ready for take-off and the tasks are clearly distributed.



When the machine is ready for take-off, the technicians position themselves at predetermined points on the machine and wait for the pilots.



The six pilots (blue flight suits) of the squadron are brought to their aircraft by a flight taxi and positioned to the right of the lined-up aircraft.





In step we go to the aircraft.



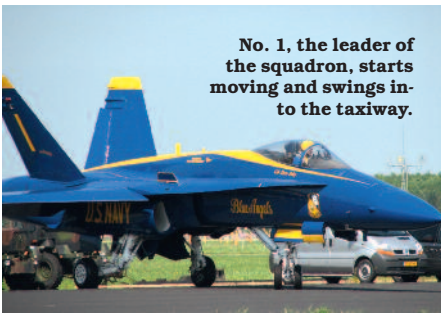
The 1st Wart reports the aircraft ready for take-off to the pilot.



The first attendant assists in entering the cockpit. Handing over the pilot's helmet, breathing mask and focusing the ejection seat. All is ready to start the engines. All six aircraft close cockpit canopies on command.



At the same time, the engines are started on command. This is followed by the test of the smoke generator system.



No. 1, the leader of the squadron, starts moving and swings in to the taxiway.



No. 2 to 6 follow her and head for the runway.



As the squadron moves towards the runway, the technicians retreat at the same pace.

The Blue Angels are waiting in starting position for the go-ahead.



The technicians await their machines after the show. The first machine comes in for landing.

The Blue Angels - a grandiose and impressive show!

All six machines roll back safely to their parking places.







C-130T Hercules Fat Albert

The Blue Angels' flying toolbox



The C-130 Fat Albert lands after a display. In the foreground the F/A-18 Hornet the No. 4 of the Blue Angels.



An impressive Fat Albert short launch assisted by the RAZO/JATO missiles.

Who is Fat Albert?

"Fat Albert" is the Lockheed C-130T Hercules that serves as an escort aircraft for the Blue Angels aerobatic squadron of the US Navy and Marines and is also known as the "flying toolbox". But Fat Albert does not only play an important role in the squadron's transport tasks during redeployments. The "Rocket assisted take-off" of Fat Albert is a highlight in the show flight programme. With eight RAZO/JATO rockets attached to the side of the fuselage, the aircraft shoots upwards in a spectacular short take-off. With subsequent fast flybys, steep turns and steep landings, the strikingly painted Hercules was the secret star of the flight programme. Affectionately nicknamed Fat Albert by the pilots of the aerobatic team, the C-130 Hercules, built in 1991, logged some 30,000 flying hours with the Blue Angels team from 2001 and retired in 2019. Fat Albert was moved from Pensacola to Fort Worth and now serves as a ground trainer. As a replacement, the Blue Angels team received a C-130J Super Hercules. The new Fat Albert naturally also wears the Angels' distinctive blue and yellow livery.

On my business trips to the USA, I saw the Blue Angels with Fat Albert at the NAS Oceana / Virginia airshow, a magnificent show. A few years later, in 2006, the Blue Angels were on tour in Europe at the "Open Days" of the Royal Netherlands Air Force in Leeuwarden, where I was able to take close-up pictures of Fat Albert shooting into the sky with the JATO rocket support. With the JATO missiles, the C-130 needs only 800 metres of runway, takes off after about 500 metres and reaches an altitude of 300 metres in a few seconds. Since the rockets are no longer produced, the rocket launch had to be taken out of the flight programme. In order not to do without the spectacular JATO rocket launch, the US Navy is working on a replacement programme.

The original

The Lockheed C-130T Hercules transport aircraft is equipped with four turboprop engines from the manufacturer Allison, whereby the variant for the US Navy and US Marines can be equipped with additional underwing tanks. The shoulder wing has a very robust landing gear, so that take-offs and landings on runways are possible without any problems. The C-130 also copes well on ice and snow runways in arctic regions with special landing skids, and with the pressurised cabin it reached altitudes of up to 9,000 m. A distinctive feature of both C-130s are the quite wide but short four-blade propellers from the manufacturer Aeroproducts Company USA. The latest variant, the C-130J Super Hercules, has the latest generation of sickle-shaped six-batt propellers. The C-130 Hercules was developed in the early 1950s and made its maiden flight on 23 August 1954. Introduced into service in 1956, over 2,500 have been built to date and it is the longest-running production aircraft in the world at over 60 years.

The model

The eBay ad "Lockheed C-130 kit for sale" from a Dutch seller aroused my interest last year. The deal was quickly closed and after a few days DPD arrived at my door with a large package containing the C-130T Fat Albert of the Blue Angels from the manufacturer AVIOS China. The first thing I noticed when I unpacked it was the finely detailed surface of the components and the paintwork that matched the original with the matching decor. That fits! I have seen the original in the flesh several times. The main parts of the C-130, like fuselage, tail unit and wings are completely made of EPO foam, only the add-on parts like the pitot tubes, windscreen wipers and aerials are made of plastic. The already installed 14 9g servos only have to be connected to the rudder and landing flaps. The retractable nose and main landing gear is based on the original and is equipped with sequencers for the landing gear flaps, which are already programmed, so that the flap control of the nose wheel flap corresponds to the function of the original. The large tailgate is controlled by a servo and can therefore be opened in flight, e.g. to drop loads or parachutists. The four motor nacelles with the 1,000kV brushless motors and 16A brushless controllers are fully assembled and only need to be fitted with the 6.6x6" propellers. The four-blade propellers with spinners are also cleanly modelled on the original, and this is what I like about this model, not even the exact labelling of the individual prop blades is missing.

The design of the landing flaps is interesting. The two inner flaps are only designed as zap flaps, the outer flaps as flaps and are each controlled via a servo channel. This makes it possible to adjust the way the flaps operate by changing their travel. The

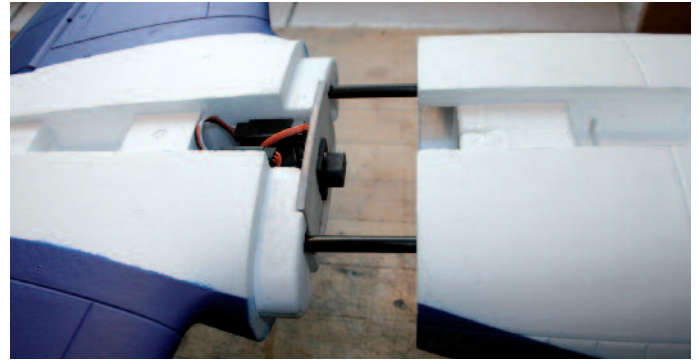
model is also equipped with extensive illumination in the form of powerful LEDs as position lights, landing lights, taxi lights and anti-collision lights.

Assembly

An important note before you start assembling the C-130: the model's paintwork is very sensitive, so it is important to handle the components with care, otherwise there will be unsightly marks on the surface. To start with, it takes just about 60 minutes to assemble the C-130, and after adjusting the rudders and flaps and programming the RC system, Fat Albert is ready to fly in just under an hour and a half.

No glue is used to assemble the fuselage with the tail section and the fins and tailplane; the components are screwed together. The tail section with the complete moulded tailplane is pushed onto the end of the fuselage by means of two 4 mm carbon rods which are guided in sleeves, after the servo cables of the two elevator servos have been connected to the receiver cable. The rudder with the two connecting pins is now positively attached to the fuselage after the servo cable of the rudder has been connected to the receiver cable. The two pins of the rudder root ensure an exact, straight fit in the fuselage of the C-130. Two M3 screw connections of the tail section with the pins of the rudder, they are provided with M3 drive-in nuts, secure the complete tail section. A well thought-out, pragmatic assembly solution. With the connection of the control rods for the left and right elevator and the rudder to the servos, the fuselage is ready for the wedding. In aircraft construction, the term "marriage" refers to the construction phase when the structure is joined to the fuselage.

The engine nacelles are already attached to the wings, fitted with the motors and controllers and wired up. Only the pro-



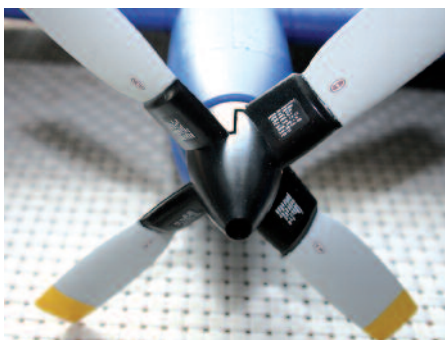
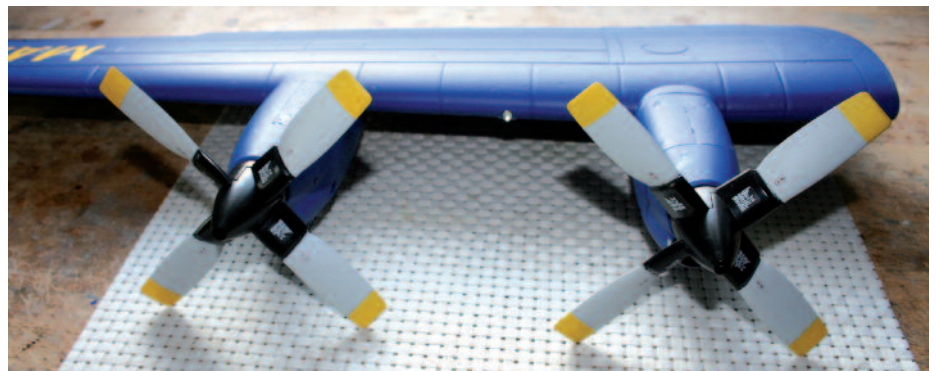
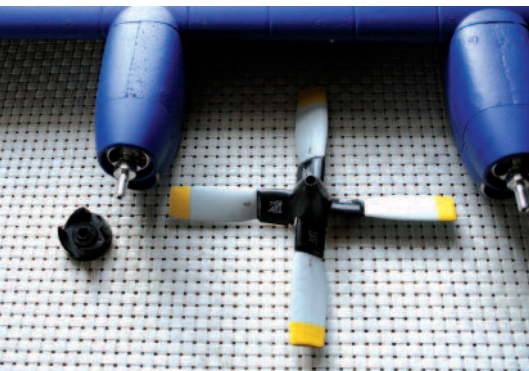
Sufficient strength is brought into the fuselage-tail unit connection by means of carbon rods, which is simply plugged in and screwed to the vertical tail unit used.

Only two screws are needed to securely connect the horizontal and vertical tail.

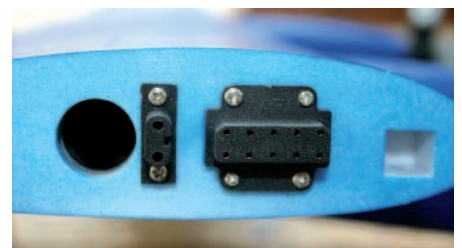


The rear part of the spinner is pushed onto the hub, the air screw is pushed on, the spinner nose is pushed on and screwed on with an M3 screw. Complete!

The propellers on the left wing are clockwise and the propellers on the right wing are anti-clockwise. Thus, the torques of the propellers are balanced.

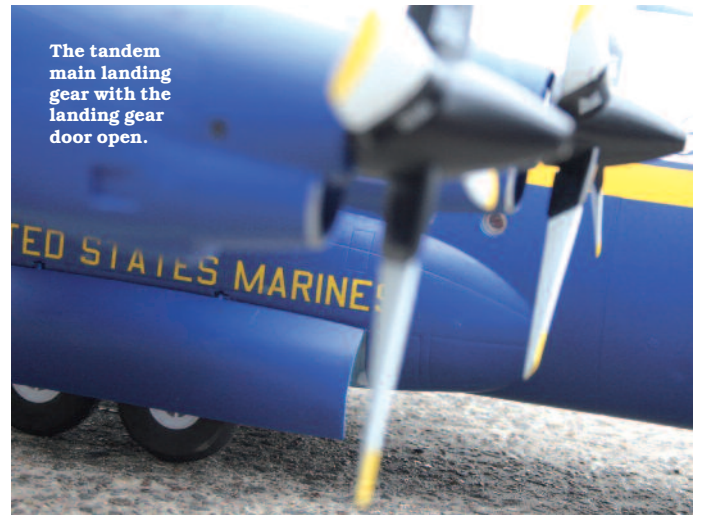


The controllers and motors as well as the servos for aileron and landing flaps are supplied with power via the fuselage and wing plug connections. No cable clutter, a perfect solution.





The add-on parts such as antennas, pitot tubes and windscreen wipers are not missing.

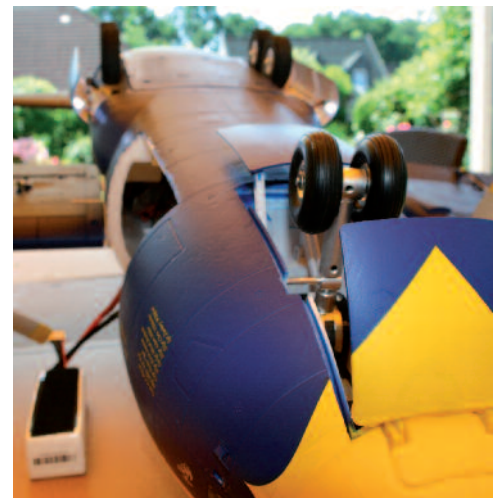


The tandem main landing gear with the landing gear door open.

A large Blue Angels crest is emblazoned on Fat Albert's vertical tail.



View of the landing gear door system that is controlled by a sequencer. It takes time until all flaps are down. This should be taken into account when flying.



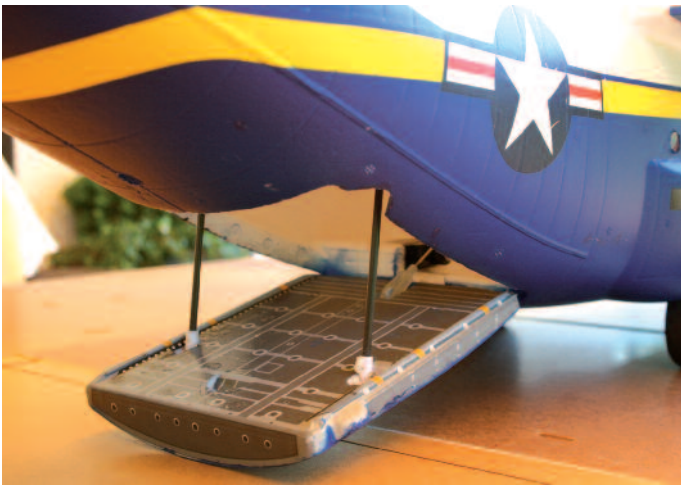
pellers still have to be mounted. This is done by sliding the spinner rear parts onto the motor shafts and putting on the propellers with the spinner nose, which are screwed on with 3mm Allen screws. The spinner teeth ensure a perfect fit of the propellers. Make sure that the propellers of the right wing are mounted counterclockwise and the propellers of the left wing clockwise. The direction of rotation of the motors is already preset by the manufacturer. The wings prepared in this way are ready for mounting on the fuselage. To do this, insert the 16 mm diameter CfK plug-in tube into the fuselage guide sleeve and push the wing on both sides until it is flush with the fuselage. The plug-in connections from the fuselage to the wing are already installed in the fuselage and wing and connect all electrical connections to the ailerons, landing flaps, governor controls, motors and lights with one click. This is another innovative solution that is a joy to use, prevents cable tangles and allows for quick installation on the flying field. Two M3 Allen screws, which are screwed to the two pins of the left and right wing, prevent the wings from slipping out.

After connecting the control rods to the ailerons and gluing the pitot tubes, windscreen wipers and aerials, the assembly work is complete. Connect the control rods to the flaps only after the electronics have been started up to prevent damage to the servos or flap linkages by incorrect or excessive servo travel. Up to this point, it is a well-rounded product. Cleanly manufactured and well-fitting components using innovative components.

Launch

In the thick fuselage all electrical connections of the 14 servos, BL controller, power supply for the motors, retractable undercarriages, sequencer and the lighting come together and are combined in a cable harness. All the connections intended for the receiver are labelled by the manufacturer, so that fitting the receiver is problem-free. I use a Spektrum nine-channel receiver, which is fully loaded with the required functions. The power tracking is done by an external 5A BEC, which is fed by the flight battery. Access to the interior of the

“The C-130 Hercules "Fat Albert" is far more than just the "Flying" The Blue Angels' tool box, which transports the material when the squadron is moved. The machine is an important part of the air show and the »rocket assist take offs« are a very special experience.



The large tailgate can also be operated via an RC channel.

Access to the RC system and the flight battery is guaranteed via the side loading compartment door, which is held in position with magnets.



fuselage is via the left front cargo door, which is closed by two magnets. Behind it is the space for the flight battery, which is designed for a 4s /2,450mAh up to 3,000mAh LiPo, and the receiving system.

Now it gets exciting! Fat Albert is energised for the first time. The external BEC is connected to the receiver and the flight battery, a 4s/2,450mAh LiPo, is connected. The four brushless ESCs switch on one after the other and after a few seconds the four motors signal that they are ready to start. Slowly and carefully, the throttle is pushed forward; all four

motors start cleanly, and even with the correct direction of rotation. My first impression at full load, which is only needed for the start phase: The drives push enormously.

All servos, landing gears and the lighting system work and the rudder settings and travels can be programmed, so the servo linkages to the landing flaps can now be connected. The rudders and flaps are adjusted according to the settings given in the assembly instructions and approx. 30% Expo is added for elevator, rudder and aileron. The centre of gravity is also set according to the instructions and is 65 mm from the leading edge of the leading edge.

Rolling tests

The first roll tests of the C-130 on the hangar apron, a large concrete area in front of Hangar 5 at the Ahlhorn airbase, were also part of the announced photo session. After the pictures were taken, a high-speed roll test was on the agenda. So we put in the LiPo, closed all the flaps and off we went. A little cautiously at first, however, to test the controllability of the aircraft. So far everything went smoothly, the C-130 was easy to manoeuvre on the ground. As already mentioned, the four engines with the small but wide scale propellers develop a very high static thrust, which now comes into play during the high speed taxi tests. Fat Albert accelerated normally and would be in the air after only a few metres of taxiing. So the throttle is opened and a left turn is initiated, the tyres of the left nose wheel roll over the runway, a few seconds later the right nose wheel tyre follows and Fat Albert slides over the concrete runway on the damaged rims. What had happened? When turning in, the fill-ree rim struts could not withstand the load and so the left rim wall broke away and the tyre detached from the rest of the rim. Conclusion: The wheels used by the AVIOS were not able to withstand the loads and I replaced them with two 38mm wheels with aluminium rims and thus solved the problem. The four wheels with a diameter of 50mm of the main undercarriages are considerably more stable in construction and probably withstand the loads during taxiing and landing. I see a need for action here for the manufacturer AVIOS.

Take-off

In take-off position: final engine check, the throttle stick slowly moves to the forward position and all four engines move evenly to "full power". You have to hold the C-130 tightly to prevent it from

The plastic rims of the nose gear with twin tires could not withstand the stresses of rolling and had to be replaced with aluminum rims.





slipping out of your hands. It's amazing what the four engines with the short four-blade propellers can do. Take-off from a grass runway, which should be in good condition to avoid damage to the complex landing gear flap systems during take-off or landing. As a take-off aid, the lift aids (landing flaps) are moved to 20° and off we go, the C-130 starts to move. Thanks to the powerful thrust of the engines, the C-130 lifts off the grass runway after a few metres of taxiing (approx. 15 metres) and climbs into the northern German sky as if it had never done anything else. It follows the control inputs exactly and, fully satisfied, Uli retracts the landing gear, but before that the engine power is reduced by 1/3. It takes a while until the landing gear is retracted and all the wheels and the many flaps are sorted out. With the throttle set to about 60-70%, the C-130 has the right speed to match the original. At full throttle it would fly like a jet.

It lies like a board in the air and Uli's comment "It flies like a taxi" (former beginner low-wing glider from Graupner). Even in slow flight there is no tendency to smear over the wing. In a stall, it merely puts the nose down and picks up speed again. Nothing of what one could read in some forums or see on Youtube regarding stall behaviour has occurred. Youtube videos show the C-130, which was apparently flown very tail-heavy, which explains the flight behaviour. As already mentioned, my Fat Albert was trimmed somewhat top-heavy. For the landing, the lift aids (combination of zap and spread flaps) were set to 20° again and the landing gear extended. Again, it is a matter of waiting until the landing gear is extended and the sequencer has closed the large nose gear cover. With the engines throttled back, it floats in for a landing and touches down

Fat Albert with lift aids set and landing gear extended on final approach.

TECHNICAL DATA LOCKHEED C-130 T

Wingspan | 40,41 m
Length | 29,79 m
Height | 11,68 m
Max. Take-off mass | 70.308 kg
Max. Payload | 20.412 kg
Engines | 4 x Allison T56-A-15 Propeller turbine
Power | 4 x 3.160 kW / 4.240 PS
Max. Speed | 540 km / h

TECHNICAL DATA MODEL

Wingspan | 1.600 mm
Length | 1.195 mm
Flight weight | approx. 2.400 g, depending on battery
Engine | 4 x 2627-1000 KV brushless drives
ESC | 4 x 18 A brushless ESCs
BEC | 5 V / 3 A
Blades | 4 x 6,6 x 5" 4-blade propeller
Battery | 4s / 2.000 – 3.000 mAh LiPo
Manufacturer/Supplier | AVIOS China

on the grass runway at low speed. A great first flight, beautiful flight shots and a safe landing. What more could you want, Uli and I, we are fully satisfied.

On the second flight I put the camera aside and took over the control sticks and can only confirm it, the C-130 Fat Albert is a great four-mot in the air with an impressive flight pattern. Flight time with a 4s/2,450mAh Li-Po battery was 5.30 minutes with 22% remaining capacity.

Summary

The trigger for my contribution was the AVIOS RC model, which happened to fall into my hands and which I think deserves to be presented in this magazine. Even with a few small imperfections, the Fat Albert is a model that is second to none in terms of equipment, design and flight characteristics. The flight shots say it all!

JP

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Maxon motor available	●	●
Trunion Hole diameter	6 to 13 mm	8 to 16 mm
Retraction angles	75 to 100 degrees	75 to 100 degrees

info@electron-retracts.com www.electron-retracts.com

JP

BOOMERANG SPRINT 2

Text/Pictures: Winfried Ohlgart

Boomerang Sprint

Version 2



The Boomerang models are among the classic entry-level and all-round jets that had become very quiet in recent years. Designed in England by Alan Cardash and distributed by Ripmax in Europe, they helped to spread the new jet aviation all over the world. After a long year of silence, the Boomerang series has now been relaunched with the Boomerang Sprint, Boomerang Elan and Boomerang Super Elan version 2. Even 20 years after their first appearance in the still young jet scene, these models still enjoy great popularity.



The history of the Boomerang

But before we get into the model, let's let Alan Cardas tell us how the Boomerang(s) came to be: It all started in 2001 when my Kangaroo jet trainer and the Simjet turbine inside it met a sad and total end (honest!) shortly after my return from Florida due to a radio failure. In an expectant moment, I decided to go to FloridaJets in early 2001. When I saw all these impressive models with their great paint jobs, I became really ambitious. I wanted something like a BVM Bandit, only a little cheaper! I replaced the Simjet with a JetCat P80 and came across a special offer on a Cyclone kit. I put a lot of effort into the paintwork and details and even went so far as to join a club that flew on a hard runway, because it was clear that this model could not be flown on my club's somewhat bumpy grass field.

It was beautiful, but after flying it for a while, it dawned on me that this was not my kind of flying. I quickly found the limited manoeuvrability boring. Apart from rolls, big loops and wide turns, it was mainly the high speed that gives the pilot a thrill. From horizon to horizon in five seconds. Amazing! But for me the attraction was over after the twentieth low pass. I wanted my plane to do more and be able to take off repeat-

TECHNICAL DATA

Wingspan | 1.920 mm
Length | 1.850 mm
Weight | 9,7 kg (dry)
Tank | 3,5 litres
Turbine | 80 to 100 N
Price | from \$ 1.749,-
Manufacturer/ supply | Boomerang RC Jets; www.boomerangrcjets.com

edly from a bumpy grassy field without having to constantly watch the landing gear. I therefore sold the Cyclone with no regrets.

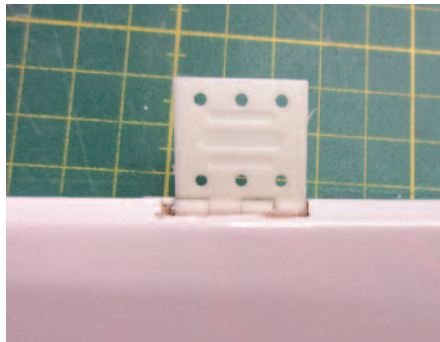
I decided to design my own jet. The aircraft had to be able to take off and land comfortably on our typical English club ground, even in taller grass. A short take-off and a low landing speed were essential. Flaps that would double as airbrakes to allow controllable but slow steep approaches. I also wanted good aerobatic performance but not a finicky flying, nervous model. This meant thick wings with a large wing area and a relatively low wing loading. The top speed should be jet-like, but of course not excessive. Above all, it had to be a jet that was fun to fly! Simplicity of structure was also high on the list.

I chose thick wing and tail profiles, and to avoid the use of a horizontal stabiliser, the use of two outriggers made sense. This also meant that the model could be disassembled to fit easily into my car. The thrust axis was to be exactly on the centreline of the wing, and the tailplane was raised to avoid the hot exhaust gases. I drew the wing plan and had a pair of foam wings and a tailplane cut out. A fixed landing gear with relatively large wheels was planned. I drew the fuselage and the fuselage sides directly on the wood, and the frames were more

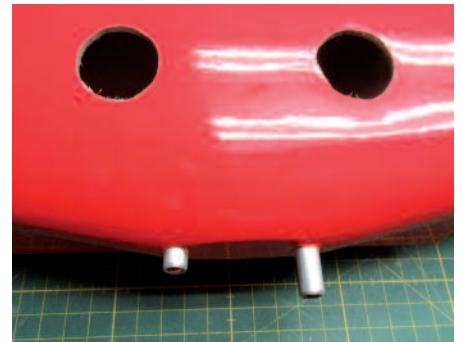
A very narrow slot has better rudder action.



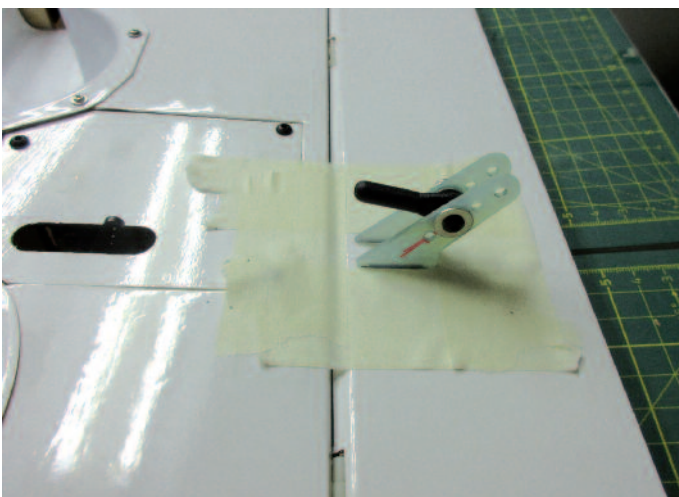
The plastic hinge is recessed in the rudder blade.



The fastening bolt on the centre section is too short.

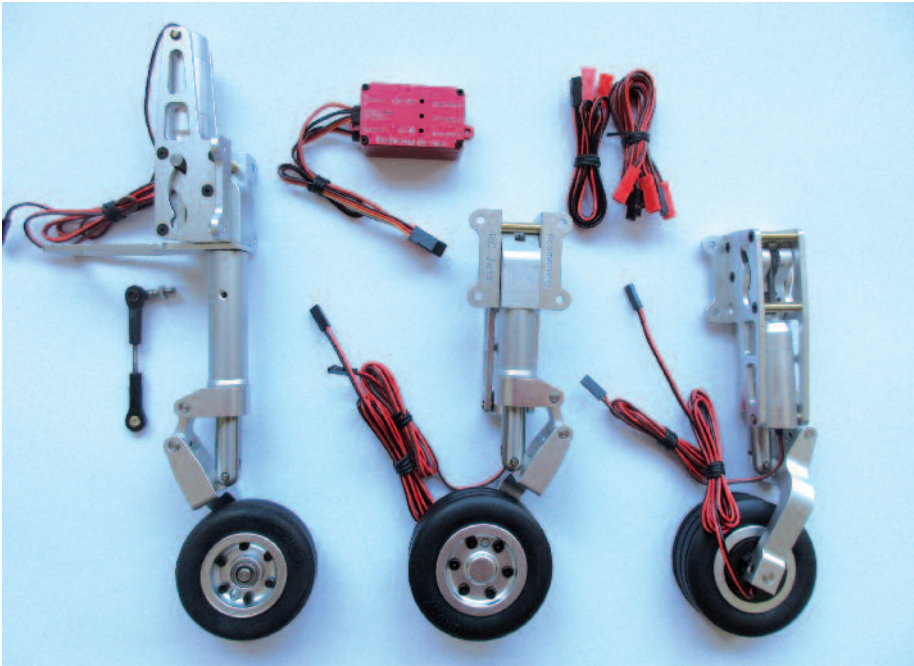


Attachment of the inverted control horns to the airbrake.

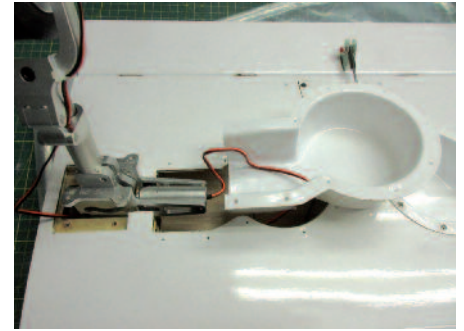


Without recessed hinges, the slits are too large.

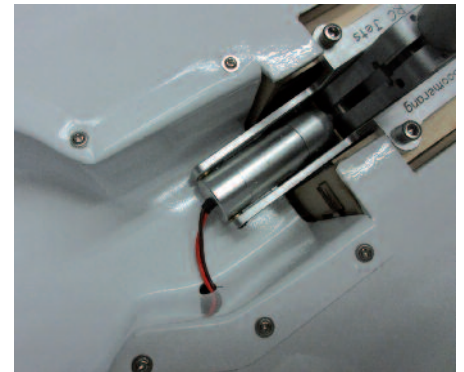




The powerful chassis, here still with the original steering.



The cover was removed to lay the undercarriage cables.



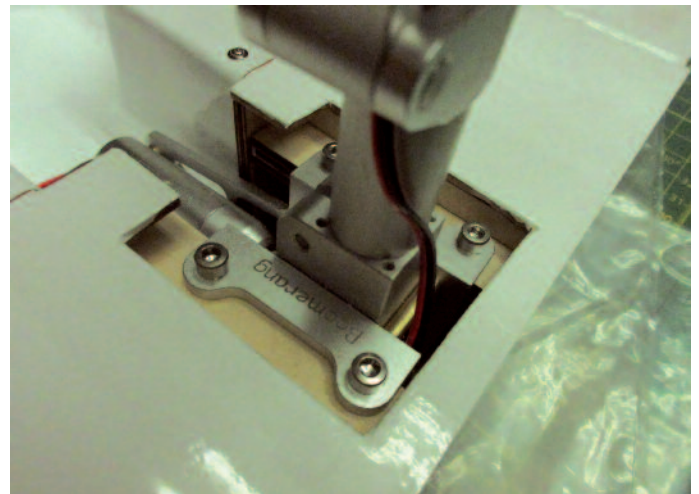
Laying the connection cables.

or less made by themselves. The first Boomerang was on its wheels a few weeks later. It was initially powered by a JetCat P80, later by a JetCat P120. From the first flight it was clear that this plane could do everything I wanted and more.

At one of the Jet Modelers Association meetings, I asked Ali Machinchy to try out the model, and I just stood there in amazement as he flew the Boomerang through manoeuvres that no one would have thought a turbine model could do after a few introductory rounds. My heart was in my mouth, not because of his flying skills, which are fantastic, but because I just hoped that the plane would be able to withstand all the stresses he was putting it through. Obviously I had built it right because there were never any problems. He loved it and we became a kind of team at the meetings. We both flew it, but I had so much fun watching Ali push the limits that he flew it more than I did!

I wanted to go to the Florida Jets again, but this time to fly and not just to watch the others. We arrived in February 2002, the Boomerang causing curious looks from the other guys. To be honest, I was a little embarrassed to show up with my big, basically "fun model" covered with foil, in the midst of all these absolutely beautiful jet models with their great details. I think it cost more to paint most of them than my whole plane! The whole weekend was filled with questions about the model and when a kit would be available. The pressure was on to make a decision. At the final meeting on Saturday evening, Ali and I were presented with the Exceptional Performance Award.

Back in England, it became clear that in my enthusiasm for jet flying, I had "over-designed" the model in many areas. I kept the basic outline of the design and reworked the basic structure, keeping in mind the possibility of a kit version with retractable landing gear, etc. I modified the structure to make it more airworthy. I modified the structure to make it lighter and the flight performance was better than ever. Other changes were made to simplify the design. Finally, the whole thing was



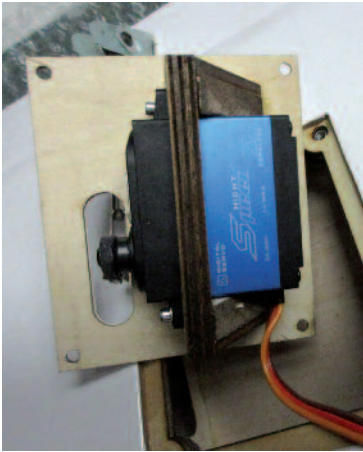
Laying the brake cable.

ready and I started production. We are now on the second series. They have been delivered to seven states in the USA, Cyprus, Europe, the Middle East and Australia, not to mention the UK. What's next? The feedback from the planes has been great and the Boomerang is becoming a real success story, so let's keep it going!

Alan Cardash (excerpts from a longer article from 2002).

The Boomerang Sprint V2

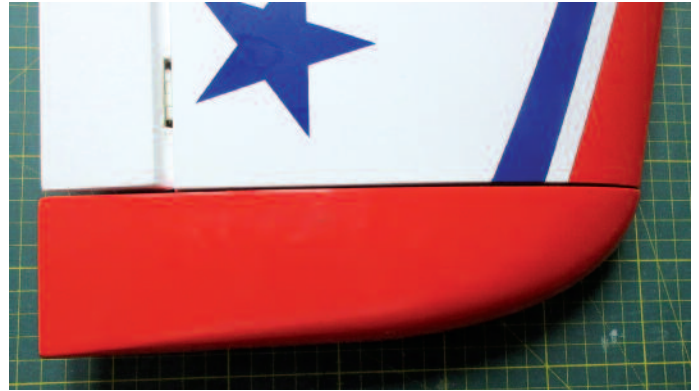
So much for the history of the Boomerang, which is now available in different sizes and designs as an ARF model. As I received one of the first Boomerang Sprint V2s, the building instructions had not yet been adapted, so some brainpower had



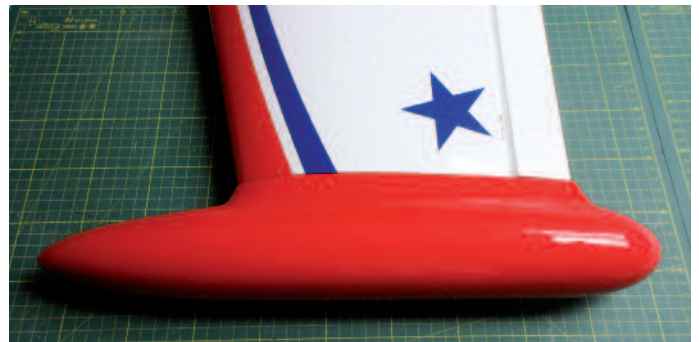
Servo installation in the finished frame in the cover.



Attach the tail boom to the wing centre section with a plywood plate and screw.



The wings can be built with clubs or, as shown here, with normal edge arches.



I opted for the clubs, although the holes for the retaining bolts were poor or non-existent.

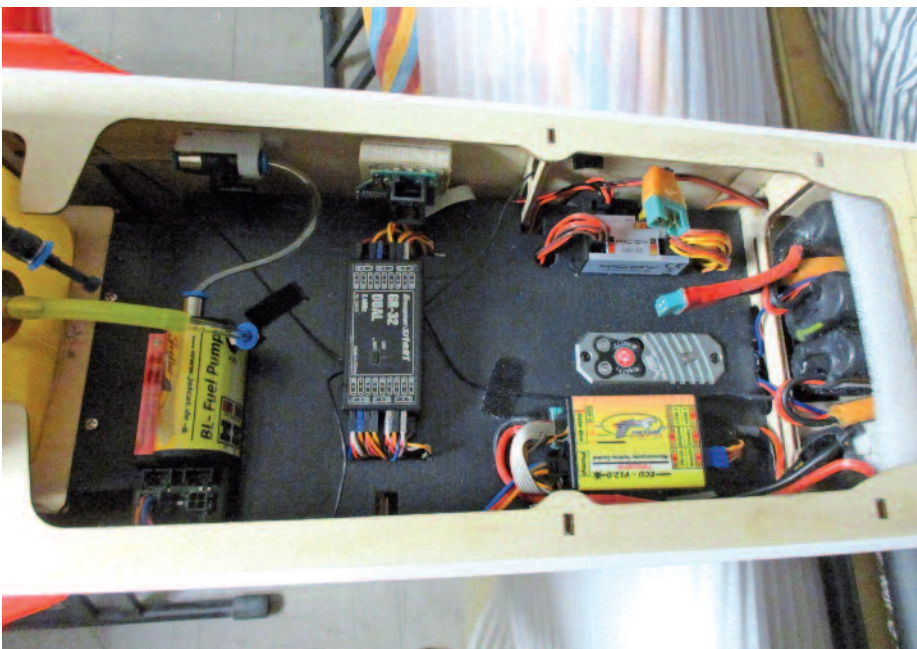
to be invested in building it, but that was no problem. The model arrived well packaged and without damage in a sturdy box including tank and electric retractable landing gear at my home. I had chosen Red, White and Blue for the foil finish. The foil is cleanly processed and did not need to be re-ironed even after a long time in the workshop and on the flying field.

The hinge slots on all control surfaces are pre-milled and fitted with foil hinges, but not glued. I have replaced them with plastic hinges and recessed them into the rudders so that the rudder gap is minimal. The rudder horns are not exactly small and if you like, you can shorten them, but I did not do that. The wing centre section is attached to the fuselage with two bolts at the front and screws at the rear. The large airbrake is located at the end of the wing and is attached to the bottom of the fuselage. Here I shortened the rudder horns and installed them twisted to have a better power transmission. Unfortunately, one of the fastening bolts was too short, but this was easily corrected, it was heated with the soldering iron, pulled out and then glued again.

The electric undercarriage supplied is stable and can withstand even hard landings. During installation you have to take care that nothing is under tension or jammed when routing the brake and landing gear cables. I removed the plastic shells into which the landing gear retracts, drilled the appropriate holes, pulled the cables through and then reinstalled them together with the landing gear. The rudders of the two tail units were fixed to the damping surfaces and the servos were screwed to

the mounted brackets after extending the connecting cables in the covers. Make sure that there is a left and a right cover. The linkages of all rudders are made with sturdy, pre-deflected 2.5 mm steel wires, which are threaded at both ends, onto which the matching ball heads or spandrel links are screwed.

The attachment of the wings, which are connected to the centre section with a 2.5 cm carbon tube, consists of two 8 mm aluminium rods, which have a thread at one end and notches at the other end for the screws with which the wings are then attached. These aluminium rods, which are screwed into the wing centre section, are also used to attach the tail unit to the fuselage



View of the RC electronics.



It doesn't always have to be Boomerang

On the German market, Peter Adolfs (PAF) offers two models in similar configurations models in similar configurations, the JETCO and the JETCO XL with a wingspan of 1.5 and 2.04 metres respectively comparable good flight characteristics.

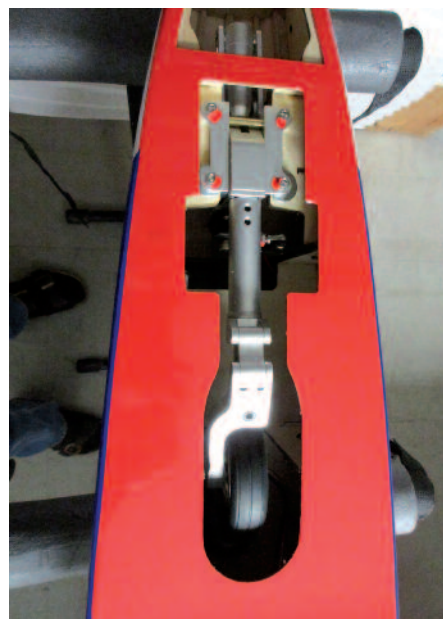
For more information simply send an e-mail to info@paf-flugmodelle.de

centre section. To ensure that the correct distance is maintained, proceed as follows: First, push the aluminium rods into the wings and screw them to the notches from above with the wing screws. Then mark the rods on the root rib with a felt pen. Now take the rods out of the wings again and push them with the threaded part through the tail boom into the holes in the centre section and screw them in until the markings are flush with the tail boom. The servos are screwed into the prepared covers and the ailerons are connected with the pre-fabricated threaded rods. Now you can decide whether you want to attach normal edge bends or lobes to the wing ends.

I decided to go for the legs, but the holes for the retaining bolts were bad or not there at all.

The fuselage has a large, well locked cover flap over almost the entire length, which exposes all the innards. The air in-

The retracted main landing gear.



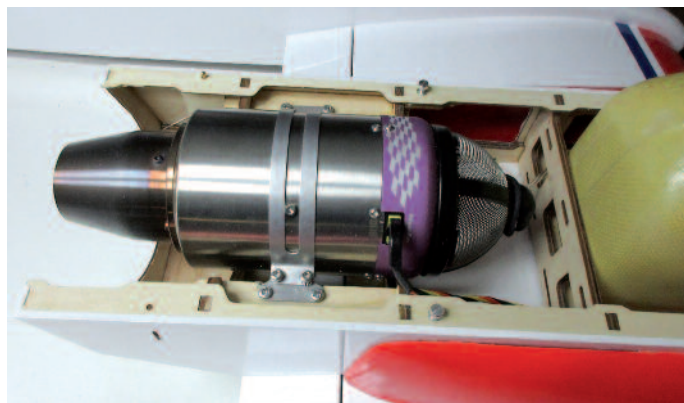
The nose landing gear.



The JetCat RX 130 is a bit oversized for the Boomerang, but you don't always have to fly full throttle.



The Boomerang is made ready for the first flight.



takes on the left and right must be glued on after removing the film in front of the fuselage cut-outs and at the gluing points. I did this with UHU Plus and lots of tape. If the original tank is used, two ribs must be cut out of the fuselage cover, which are only attached and not completely glued, because otherwise the cover will not close. Unfortunately, the fuselage cover had a gap in the front towards the fuselage nose, which I filled with balsa and made invisible with a strip of foil. The nose gear retracts to the rear and the steering servo is attached so that it swivels with it.

A somewhat longer fiddling is the feed-through of all cables of the wings and the tail unit through the two large cut-outs in the wing centre section. After the tailplane supports have been pushed onto the wing rods, the tailplane can be screwed on with four screws. Since the model fits in my car with the wings removed, I have also screwed the tailplane supports to the wing centre section to give the whole thing more support with the wings removed. After the installation of the system and the batteries, the first function tests of the landing gear were carried out, whereby the control unit supplied soon gave up the ghost. An enquiry with the manufacturer revealed that this was not an isolated case and I was therefore advised to use the Xicoy LGC-22 controller. This works perfectly and the adjustment of the brakes is also very simple. To determine the centre of gravity, the plane was placed on the CGWagge, which told me that 191

g of lead were needed in the nose. The empty weight of the model is 9.7 kg.

Because nothing else was available, I installed the new Jet-Cat RX 130, which will be reported on separately. The model certainly has a bit too much power with this turbine, but you don't have to fly at full throttle. This became apparent during the first flights. The model started rolling on the runway at idle speed and was in the air at half throttle after 50 metres. The recommended rudder deflections proved to be correct. With 45% expo on cross and altitude the model could be flown smoothly and balanced. Only when the flap is extended does the model still climb significantly. Since flying in does not mean "flying once", the centre of gravity is first corrected in the direction of top-heavy and then, if necessary, depth rudder is added. These flights are still pending, because the editorial deadline was sooner. But I will report on the results later.

For me, the Boomerang Sprint V2 is still the recommended model for starting out in jet flying, as it is a model with which you can have fun for a long time, because it is also suitable for all aerobatic manoeuvres. The reissue shows that these twin fuselage jets have lost none of their fascination even after more than 20 years. The price of \$1,749 for the complete model including landing gear is certainly an argument, if it weren't for customs!

JP

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ProWing International 2023

in Soest - Bad Sassendorf / Germany

The ProWing International fair stands for an overwhelming selection of suppliers around model aircraft construction, an action-packed and informative air show and a pleasant atmosphere. What once began with just a few exhibitors has since become one of the largest outdoor fairs for model aviation in Europe, if not worldwide. In 2023, ProWing International opened its doors for the 11th time. In addition to the exhibitor airshow, there were other show flight highlights this year as well.



The beautiful Fiat G-91 by Marc Petrak. Designed, built and painted to perfection by Andreas Ruppert. The beauty is powered by a JetCat P400 turbine.



Sven Felbinger demonstrated his Tomahawk L-39 Albatros to the large audience. It is worth noting that the aircraft is now almost ten years old, but is still one of the highlights of the airshows. This is not least due to the pilot.



For us jet pilots certainly a feast for the eyes. Five Jetlegend F-16s in 1:5 scale. These models are powered by JetCat P250 turbines.



Unfortunately, the weather forecast for the weekend of the fair was not good, so the organisers were initially sceptical as to whether the many spectators they had hoped for would come. But after a rain shower on Friday morning, Peter showed mercy and it was dry all weekend, except for a few small showers. On Sunday there was even sunshine and blue skies and the spectators flocked to the site as hoped. The flying programme was carried out without any delays, which was also due to the discipline of the exhibitors and their pilots. Each slot was finished on time so that the next one could start immediately. After a detailed briefing for the pilots, the flight demons-

The Legendary Fighters ready for take-off.



The flightline was well filled throughout the day, giving spectators plenty to scout.



Two Epic Victory. These flew in formation. One of the few handy jet models at the show!



Models from various decades were represented. From the vintage F-86, to an aircraft from the 1970s, the L-39 Albatros, to the modern 3D jet, the Mephisto.

trations began punctually at 10 a.m. and were repeatedly interspersed with special show flights. These included jet highlights such as the large AirClassics Fiat G-91 and the TomahawkFutura 3D XXXL. Both were flown by Marc Petak. Other crowd favourites were the F-16 squadron and the formation flights of the Me 163.

In the 200-metre-long tent and in the outdoor area, 110 exhibitors offered everything the model pilot's heart desires, from tools to propulsion systems to model kits. There, one could obtain detailed information and also make good purchases, as there were also many favourable trade fair offers. With over 11,000 visitors, the ProWing set a new visitor record. On some days this led to long traffic jams on the access road and demanded a lot of patience from the visitors until they finally reached the car park. The organisers received mostly positive feedback from exhibitors and visitors.

After a three-year break, ProWing 2023 celebrated a very positive comeback, which was also supported by the moderate admission and catering prices. It was an event that was organised and carried out with a great deal of commitment, a thoroughly successful trade fair, and we look forward to 2024!

JP



The large B-25, flown by Roland Sabatschus. The completely wooden model is powered by two Moki radial engines.



This really is the original! The Yak 110. Here, two Yak55s were screwed together without further ado, and an additional turbine can't do any harm!

Hot glue gun

MobileGlue 3011 from Steinel



The Steinel cordless glue gun complete with inserted Bosch battery.

Today, a hot glue gun is standard equipment in every workshop. Whether in the home or in model making, these glue guns have proven themselves many times over. I use hot glue in model making to secure plugs, to fix cables in difficult places and to fix soldered joints on plugs and sockets.

The only disadvantage of many hot glue guns is the connecting cable, which is either in the way or too short. Disconnecting the gun from the power supply has the disadvantage that the gluing time is short because the gun cools down quickly and the glues may no longer hold.

All these problems no longer exist with the new MobilGlue 3011 cordless hot glue gun from Steinel. An 18V/2.5Ah Bosch Power For All battery provides a gluing time of up to 90 minutes, with two temperature settings, 130° and 200°C, available. The unit switches off automatically after five minutes without use to save battery power. A charge indicator shows whether the battery needs to be changed or recharged. Three glue sticks are included with the charger. All 11 mm glue sticks can be used, although Steinel offers more.

A complete gluing system for a wide range of applications is available for all glue guns:

- MR polyurethane Temperature and moisture resistant for outdoor use (130°C)
- Low Melt for temperature-sensitive materials (130°C)
- Universal the all-rounder for everyday use (190°C)
- Flex long curing time for correct positioning (190°C)
- Nearly short curing time for fast fixation (190°C)
- Acrylic-high ageing and temperature resistance (200°C)

Two optional interchangeable nozzles are available for these different sticks. The weight of the battery ensures that the gun stands securely and is easy to handle, making fatigue-free working possible.

JP



The gun with charger and battery.



The Bosch Power For All battery on the charger. The flashing green LED indicates that charging is in progress. A continuous light indicates a full battery.



The gun is switched on by pressing one of the two temperature switches for a longer time. The illuminated switch flashes until the selected temperature is reached. After about two minutes, the light is on continuously and the gun is ready to start.



A classic application is the welding of solder joints on an MPX connector.

The result.



The nozzles are interchangeable.



TECHNICAL DATA

Manufacturer |
Steinel
Source |
www.steinel.de

Florida Jets 2023



Jet Together

The RC jet season in the USA opened recently with the roar of turbines and electric impellers on a cold sunny day in Lakeland, Florida. Everyone was looking forward to seeing their friends again, flying their jets and burning some jet fuel or draining their batteries. Each day there were nine and a half hours of flying time and about 500 flights, making a total of almost 2,000 flights. Over 100 pilots and 500 jet models enjoyed the sunny Florida skies with four days of good weather. There was a food stand on site with hot dogs, hamburgers, ice cream, milkshakes, muffins, soft drinks and coffee. RV parking was allowed at Paradise Field, giving participants more time to meet with fellow pilots in close proximity.

Florida Jets would not be possible without the help of the Imperial RC Club, who run the flightline and a raffle with three great prizes.

Numerous traders, such as Warbirdpilots here, were also on site.





The Kinetix was designed by Mariano Gostanian and received the Best Sport Jet Award.



Gregory Clark with his BVM F/A-18 with JetCentral Dragon300 turbine.



Dwayne Woods Elite Aerosparts Picaro.



Roberto Zelaya had the MB-339 by Daniels Design with him.



The Gina in American colours was also flown by Roberto Zelaya.

We all miss the founder of Florida Jets, Frank Tiano, and he would have been very proud of his wife Carol Tiano, the Florida Jets staff and all his friends who carry on the traditions of Florida Jets and Top Gun. Frank Tiano set up Paradise Field from the beginning so that the sun would be in the back of the pilots, which is much appreciated by all photographers and of course the pilots. Florida Jets would not be possible without the help of the Imperial RC Club, Lakeland, who volunteer on the flight line,

man recovery and fire trucks and keep everyone safe. There was also a raffle with three electric planes as the main prizes. The official competition manager Greg Foushi ensured that everything ran smoothly and quietly. The camaraderie at Paradise Field is very contagious and spreads quickly among all the manufacturers, builders and pilots. Zavi Machinchy joined young Brady Freeman as he flew the Monster RebelPro jet. The young pilot quickly improved his jet piloting skills with Zavi's support.



1

[1] Zavi and Ali Machinchy with Ali's Concorde with two KingTech K55G4 turbines. The Concorde won the Best Scale Jet Performance and Best Multi Engine Jet Performance Award.



2

[2] Salvatore Becheranno and his L-39.



3

[3] Roberto Zelaya and his new CARF MiG-17.



4

[4] Salvatore Becheranno and his Integral.



5

[5] Jayleigh Melendez and Marley Muentes with the latest BVM King Cat (left) and the original BVM King Cat (right).

The current and new models of the various manufacturers, designers and pilots are examined with great interest at Florida Jets. Pablo Fernandez, founder and owner of Elite Aero-sports, always has the opportunity to introduce a new, attractive model to the RCJet community at Florida Jets. This year it was the BDXS, a smaller version of the BDX. I asked Pablo how EliteAerosports' jets withstand the extreme G-forces they are subjected to when flying. He told me that they have a mechanical engineer who designs the Elite jets to withstand the most extreme G-forces.

Bob Violett Models introduced four new models at Florida Jets. The Desperado, a new version of the King Cat, a new ver-





BVM's new Tomahawk Hawk 100: 2.7 m length, 2.85 m wingspan, 220 turbine.

Rob Lynch with the new Tomahawk Hawk 100 from BVM.



“Each day there were nine and a half hours of flying time and about 500 flights, resulting in a total of almost 2,000 flights. Over 100 pilots and 500 jet models enjoyed the sunny Florida skies with four days of good weather.

Leo Becerras IA-63 Pampas Jet.



THE AWARDS GIVEN AT A GLANCE

Best Scale Jet Runner Up	Horizon Hobby	Sal Becherano	L-39
Best Scale Jet	Elite Aerosports	Chris Gleason	F-22
Best Sport Jet Runner Up	Banana Hobby	Pablo Fernandez	BDX
Best Sport Jet	Boomerang RC	Federico Cereseto	Kinetix
Best Sport Jet Performance	Your Pal Sal	Zavi Machinchy	Vantage
Best Scale Jet Performance	CARF Models	Ali Machinchy	Concord
Electric Jet Performance	PowerBox Americas	Rob Snyder	Futura
Best Multi Jet Performance	Aeropanda/Jet Central	Ali Machinchy	Concord
Best Craftmanship	BVM	Chris Gleason	F-22
Best Cockpit Interior	War-Bird-Pilots.com	Ralph Esposito	Tucano
Most Outstanding Jet Flight	JR Propo	Marc Petrak	Futura
Just Plane Crazy	Pacific RC Jets	Dwayne Woods Jr.	EA Sports Picard
Special Recognition	Dr. Jet	Andy Davis	747 HSD Jets
Special Recognition	Best in the West	Frankie Mirandes	BVM F-16
Special Recognition	Riff Raff	Lukey Martinez	BVM F-18
Special Recognition	Ray & Robin's Hobby Center	Leo Beccerra	Pampa
Special Recognition	Model Airplane News	Rei Gonzalez	TZ Buckeye
Special Recognition	ZAP Glue/Pacer Tech	Greg Aldermann	Super Elan
Special Recognition	Frank Tiano Enterprises	Dustin Buescher	MB339
Special Recognition	Tailslide Aviation	Becky Jackman	
Super Suave Award	Fly Girls	Adrian Valencia	
Critic's Choice Award Runner Up	RC Jets International	Sal Becherano	L-39
Critic's Choice	Frank Tiano Enterprises	Roberto Zelaya	MB339



Zavi Machinchy's Rebel Pro in low flight.



Turboprops were also represented, here Frankie Mirandes-Marchetti Comp ARFSF-260 with Jet-Cat turbine.

sion of the Renegade and a beautiful new TomahawkHawk 100. The new King Cat has new landing gear legs in the nose and main landing gear as well as a removable nose cone and canopy that requires no tools. The BVM Renegade has a length and span of three metres and uses a 220-260 class turbine. The Desperado has a wingspan of 262 cm, a length of 315 cm and is equipped with a 220N turbine. The new BVM Tomahawk Hawk 100 is 3.7 metres long, has a wingspan of 2.5 metres and uses a 220 turbine.

Horizon Hobbies introduced its first balsa turbine jet model, the MB-339, which is suitable for pilots who are new to flying a turbine jet or are transitioning from an electric jet. Ali Machin-

chy was the product developer of the MB-339 and Manny Rodriguez from Aeropanda introduced the Kinetic Jet and had two spy pilots from Brazil fly in for a great intermission show that no one wanted to miss. The Kinetic Jet won the award for best sports jet.

Although Florida Jets is not a competition, all pilots are very excited about the opportunity to win one of the coveted prizes. The awards are presented at the annual banquet, which is attended by all participants and sponsors. Chris Moe Gleason has spent countless hours recreating his T1 F-22 Raptor to such a scale that the model is indistinguishable from the real F-22 in photographs. Chris and his F-22 took home a whole load





Mark Petrak flew his CARF Futur with thrust vector control and deservedly won the "Most Outstanding Jet Flight" award.



The Brazilian Navy's scheme suits Eduardo Esteve's CARF A-4KUSkyhawk II very well.



Larry Grela's new BVM Renegade.



of awards: "Best Craftsmanship", "Best Scale Jet" and "Most Photogenic Jet". Sal Becherano flew an L-39 and took home several awards, including Best Scale Jet-Runner-Up. Roberto Zaylaser won the Critic's Choice for his MB-339 and many other awards are listed below.

Congratulations to Carol Tiano, Becky Jackman, Greg Foushi and all involved for another successful Florida Jets! If you want to attend Florida Jets2024, please visit franktiano.com and register in time. We are looking forward to it!

JP



Manny Rodriguez's Kinetix just over the edge of the lawn.



Elite Aerosports BDX with Spectrum colour scheme.



The L-39 Albatros by Marvin Radcliff with King-Tech K23 turbine.





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Wolfgang Semler presents the F-100 with its history and a so-called walkaround in detail in words and pictures. Since there are several F-100 jet models from our manufacturers, the pictures can be a valuable help for the scale fan when building a model.



North American Aviation

F-100D Super Sabre

Development

At the end of 1948, the aircraft manufacturer North American decided to build a fighter aircraft that could operate in the supersonic range beyond Mach one. The time for such a project was now ripe, because the prerequisites were now in place. On the third of February 1949, North American's then vice-president of engineering Raymond H. Rice gave his de-

sign team the task of further developing the newly developed F-86 Sabre for supersonic flight. The first completed design included the fuselage of the existing F-86 Sabre with a new wing swept back at 45°. However, further investigations showed that the fuselage had too much drag in supersonic flight, which meant that an engine with very high thrust would have to be used. Since such an engine was not available on



Four 20mm cannons are mounted on the underside of the fuselage and can be fired in pairs above or below or all four cannons simultaneously.



The undercarriage leg, which is hydraulically sprung with oil, moves backwards into the covered undercarriage shaft in the fuselage. The nose gear has two high-pressure tyres.



Like the nose gear, the main gear is hydraulically sprung against shocks during landing. However, the undercarriage leg has only one high-pressure wheel.

the one hand and did not fit into the planned fuselage on the other, the design was soon discarded.

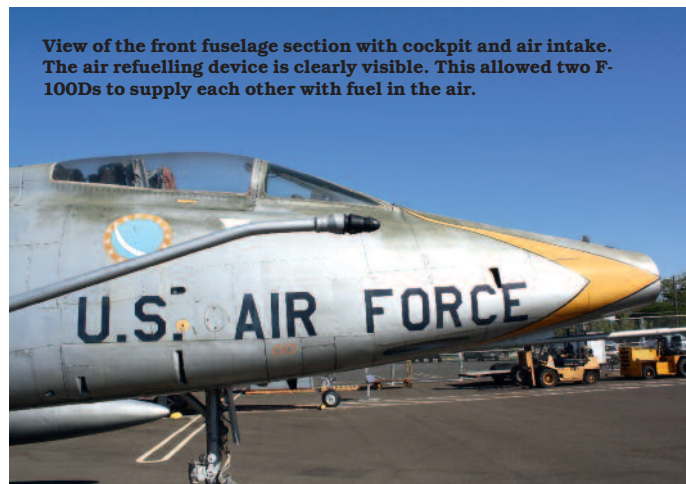
Only with the appearance of the General Electric J47 engine with 13,000 pounds of thrust in afterburner mode, a suitable engine for the planned supersonic fighter seemed to have been found. On 14 September 1949, NAA engineers began to design a new fighter around the J47 engine with a flying speed of Mach 1.03 at 35,000 ft. This proposal, now called the F-86E, featured a redesigned, slimmer fuselage with a nose-mounted air intake. But even this projected supersonic fighter did not meet with the approval of the USAF.

Sabre 45 design

On 14 May 1951, NAA presented the design that ultimately led to success, called "Sabre 45". It combined the two previous proposals of the F-86D and E into the present study. The designation "45" referred to the 45° sweep of the wing. Since the now projected fighter had larger dimensions and a higher weight than the original F-86, NAA needed a more powerful engine for propulsion. With the support of the USAF, this was found at Pratt & Whitney in the form of the J57 turbofan engine, which later became legendary. With a thrust of 14,000 pounds including afterburner, it provided enough thrust to allow the

Sabre 45 to fly at supersonic speeds. On 14 May 1951, NAA presented the new design to the USAF and requested the construction of two prototypes. A few months later, on the first of November 1951, the USAF placed an order for the construction of the two prototypes and signed a letter of intent for the construction of 94 Sabre 45s. The final official designation of the type F-100 was given by the USAF on the seventh of December 1951. However, these showed that the projected flight speed of Mach 1.3 at the intended flight altitude was not possible with the current design. Therefore, the technology began a new, comprehensive revision of the aircraft.

One of the most significant changes was the thinning of the inlet lip of the air duct in the nose area to supply the engine. This reduced the air resistance so that more "breathing air" was available for the engine. In addition, the nose segment of the



View of the front fuselage section with cockpit and air intake. The air refuelling device is clearly visible. This allowed two F-100Ds to supply each other with fuel in the air.

In addition to the fuel tanks located in the fuselage, the F-100D has a 450-gallon (1,700-litre) streamlined tank under the wing on the right and left sides.



The rear part of the fuselage is made of titanium alloy to protect it from the hot exhaust gases of the afterburner. For aerodynamic reasons and to guide the flow along the fuselage, the rear part of the fuselage tapers down to the thrust nozzle.



fuselage was lengthened by nine inches (22.86 cm). Another significant change was the reduction of the rudder/tailplane root/thickness ratio by 50%. The new ratio was now 3.5%.

Production of the F-100

The first series of the F-100 Super Sabre was produced in Inglewood, at the NAA plant near Los Angeles International Air-

TECHNISCHE DATEN

Length	15.200 mm
Span	11.810 mm
Height	4.950 mm
Weight empty	9.500 kg
Max. Weight	15.800 kg
Weight	with normal load 13.085 kg
Wing area	37 m ²
Engine	1 x Pratt & Whitney J57-P-21/21A Turbojet
Thrust without afterburner	45 kN
With afterburner	71 kN
Max. Speed	1.390 km/h
Range	3.210 km
Service ceiling	15.000 m
Rate of climb	114 m / s
Wing loading	352 kg / m ²
Thrust-to-weight ratio	0,55

port. From September 1954, a second production line, mainly for the C and D series aircraft, was added at the Columbus, Ohio plant. Titanium alloys were used in large quantities in the F-100 Super Sabre for the first time in the history of aircraft construction. Production of the first prototype officially began in January 1952. More than a year later, on 24 April 1953, the YF-100 took off on its maiden flight.

F-100D

The F-100D was the most produced and used variant with 1,274 units. It was specially designed for use as a fighter-bomber and took an active part in the fighting in the Vietnam War from 1961 to 1971. It made its maiden flight on 24 January 1956 and the first aircraft entered service with the 405th Fighter Wing at Langley Air Force Base on 29 September 1956. Also new was the air-to-air refuelling system, which could also be



The wing of the F-100D has a sweep of 45° and a seven percent thickness ratio at the thickest point and a 3.5% ratio at the weakest point. Compared to the previous variants, the D-pattern has leading edge slats.



View of the F-100D from the rear position. The internal ailerons, flaps and the boundary layer fence on the upper wing surface are clearly visible.



The elevator is designed as a pendulum rudder and is located at the lower end of the fuselage.



During take-off and landing, a spur extends in the rear area of the fuselage. This protects the rear of the fuselage from damage, especially during steep approaches or take-offs..

used as a "buddy system". Here, one F-100 could refuel the other in the air. To extend the range, there was an additional tank with a capacity of 450 gallons (1,700 litres) on each side under the wing. Alternatively, larger tanks of 200 (757 litres), 275 (1,040 litres) and 335 gallons (1,270 litres) could be used. Due to the higher total weight, which led to a higher speed during landing, the F-100D was equipped with additional flaps, also called slats, on the leading edge of the wing. At the trailing edge of the wing, between the rudder and the root of the wing, additional landing flaps complemented the slow flight charac-

teristics of the F-100D. They gave the wing its distinctive bend, which is regarded as an essential criterion for distinguishing the D series from the other variants.

Unfortunately, the F-100 series was not very reliable from the beginning, so that problems with the electronics and the wiring harnesses in the fuselage occurred again and again. All these



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The air intake to supply the engine is designed as a thin lip on the F-100D to reduce air resistance. In addition, this special design of the inlet optimises the supply of air to the engine, which has led to an increase in the performance of the Pratt & Whitney J57 turbine.



The attachment of the auxiliary tank under the wing has a streamlined body to reduce drag.



The aileron is located in the inner part of the wing for stability reasons. Wind tunnel tests have shown that an external aileron causes the relatively thin wing to flutter and oscillate in flight.



A boundary layer fence is mounted on the upper side of each wing half to optimise the airflow.



The teardrop-shaped cockpit canopy consists of one piece and can be opened and closed in normal operation by means of an electromechanical drive with an angle of 22°. In case of danger, the canopy is blown off the fuselage by an explosive charge, so that the pilot can eject safely with the ejection seat.

shortcomings led to extensive troubleshooting work on 700 D series aircraft in 1965. Over the course of its service life, the F-100D underwent several modification and overhaul programmes that included electronics replacement, structural improvements and maintenance simplification. The largest refurbishment programme to extend the service life from 3,000 to

7,000 hours took place in 1967. The programme involved a comprehensive overhaul of the entire structure of the machine. Another comprehensive modification programme involved the replacement of the afterburner of the J57 engine. The installation of the new afterburner also changed the appearance of the F-100D in the tail section. The replacement programme started in the 1970s and also solved some maintenance problems with the old engine. From 1972 onwards, the F-100 was no longer in active service with the USAF; only the Air National Guard continued to operate the aircraft until 1979.

Armament

Like all variants of the F-100, the series had two 20mm cannons on the underside of the fuselage near the cockpit. On both wing halves and the underside of the fuselage, the F-100D originally had seven mounting points for weapon pylons. This meant that it could carry four 500kg loads, such as fuel tanks, eight 370kg bombs and ten 250kg bombs. However, each weapon pylon had a triple load, which was not usual in normal combat operations. In regular flight operations, the loading was limited to one load per pylon, either with additional tanks or bombs. As an alternative to commercial bombs, the F-100 could be armed with nuclear weapons as a bomber.

JP

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ChaServo



The two different designs: lying on the left, standing on the right.

HV-3512 and HV-3512H

ChaServo is a new manufacturer of high-quality, high-performance servos. The brand's goal is to develop new servos in other sizes, types and performance classes.

The range extends from the small 6-gram servo to the standard servo weighing only 55 grams, which is presented here in more detail.

In addition to the standard accessories such as screws, damping rubbers and servo arms made of plastic, the scope of delivery also includes a high-quality aluminium servo arm. As a special feature, the servo is available as a horizontal (H) and vertical low-profile version. Despite the metal housing and steel gearbox, the weight is only 55 grams! According to the manufacturer, the

gearbox has been tested for a load capacity of up to 135 kg. This means that the specified 40 kg at the peak can also be powerfully implemented.

The workmanship and the smooth running of the servo can be described as very high quality. Due to the possible travel of more than 180 degrees, the servo can also be used as a flap servo. In

addition to this short presentation, I will test the servo extensively in practice and share my experiences with JETPOWER readers at the end of the season.

JP



This is how the servo comes out of the box.

The scope of delivery. The enclosed metal servo arm with M2 threads makes a very high-quality impression.



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Sparkswitch RS, RPM-Probe and PBR 26XS by PowerBox Systems

The SparkSwitch RS is a powerful ignition switch in compact design with speed measurement and optional voltage regulation for 6V ignitions. With the SparkSwitch RS, the ignition can be switched on and off conveniently from the transmitter. The external LED or telemetry status message indicates the switching status at any time. The SparkSwitch RS not only makes handling petrol engines easier, but also increases safety. The engine is quickly switched off in emergency situations, such as a defective throttle servo.

The RPM-Probe is connected directly to the induction or magnetic sensor of the ignition. The signal is amplified and conditioned so that the output sends accurate RPM pulses to the SparkSwitch RS, which then provides the RPM to the remote control telemetry system. The connection cable is simply plugged in between the ignition and the induction or reverberation sensor. Especially with DA engines that work with an induction sensor, the signal is picked up and amplified without loading the pulses.

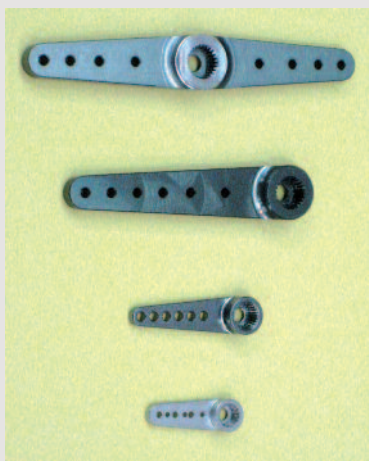
The PBR-26XS serves as a small receiver unit for all PowerBox systems or as an external receiver extension for PBR receivers. Due to the extremely flat design of only 4mm, the PBR-26XS can be installed even in thin fins for best reception. The connection of the PBR-26XS communicates not only PowerBox protocols such as P²-BUS and FastTrack Out, but also PPM12 and S.BUS. This means that the receiver can also be used for flight simulators or third-party helicopter gyro systems.

Further info: www.powerbox-systems.com



Servo arms and servos at PAF

New at PAF are aluminium servo arms T15-4-4,5/13,2 KST (€ 8,-) suitable for 7 and 8mm KST servos; aluminium servo arms T25-5V2-



7,5/20mm KST (€ 8,-) for servos A13-610; DS125 new generation with steel gear; DS135 new generation with steel gear; DS145 new generation with steel gear; DS215 new generation with steel gear; DS225 new generation with steel gear; DS315 new generation with steel gear; MS320;

MS325; X10; X10 Mini; X12-508. The servo arm does not fit the servo generation with aluminium gearbox. The aluminium servo arms are. T25-12,5/40mm KST/Futaba/Savox/Graupner (€ 11,-) and T25-12,5/30mm KST/Futaba/Savox/Graupner (€ 18,-) are available.

New in the PAF range is now also the low profile KST servo CM653 for € 29,90.

Further info: www.paf-flugmodelle.de



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FMS VIPER V2 by D-Power

The 15th anniversary edition of the FMS 70mm Viper has been improved on the previous version by replacing the wire landing gear with a shock-absorbing CNC metal landing gear (also known as a "kneeling nose"), digital servos with metal gears and ball-head linkage rods for precise control. The clip-on cockpit design facilitates access to the battery and ensures that the cockpit does not fall off even during violent manoeuvres. Lightweight EPO materials increase the aircraft's durability and precision. The optimised aerodynamic design of the airframe and the long wings reduce drag and make the whole aircraft's attitude clearer. The 12-blade impeller unit, 2860 high-speed internal rotor and 70A speed controller combine with the recommended 6s LiPo battery to provide excellent vertical performance, a wide speed range and instant throttle response in flight. Technical data: wingspan 1,100 mm; flying weight approx. 1,795 g. The model is available from specialist dealers.

Further info: www.d-power-modellbau.com



Avionic-Holder-DS-Jeti from Schambeck Luftsporttechnik

The Avionic-Holder-DS-Jeti is a great accessory for e.g. GPS pilots and fits Jeti-DUPLEX DS-14/16/24. The very light holder is simply plugged onto the display of the transmitter, so no screwing or similar is necessary. The price is € 34.90.

Further info: www.schambeck-luftsporttechnik.de



PowerBox iESC 65.8 and iESC 125.8

The PowerBox iESC is based on the latest generation of controllers for brushless motors with a 32-bit processor and advanced functions such as telemetry and adjustability directly from the transmitter.

Further info: www.powerbox-systems.com



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German Championship for Jet Models

The German Championship for Jet Models from 30 June to 2 July 2023 in Bölsdorf is the last competition for the members of the Jet National Team before the World Championship in August. At the same time, this competition already marks the beginning of the qualification process for the 2025 World Championships in Finland.

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