FREE FLIGHT news

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FFn DIARY

No contests during April or May

March 13-16 Last BMFA Competition before close down.

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COVID-19

Ian Kaynes

During February the only significant of the virus was from the USA stopping travel from China stopping competitors from China attending Fab Feb events at Lost Hills. Then all the action moved to Europe. The FFTC met at Leicester on March 11 and at that stage there was no formal restrictions which would prevent competitions happening in UK. As usual I travelled to the FFTC meeting by train, but I was concerned about the crowded rush hour underground trains between the London stations, so I walked from Waterloo to St Pancras. That didn't need much longer than the underground but on the way back in the dark I tripped and hit my face on a kerb so ended up with a black eye.

Travel restrictions isolation requirements were appearing all over Europe with limits on large or organised meetings. Almost immediately after FFTC we had two F1E competitions at Minninglow, entailing two trips north each with 2 nights in hotels. By the time we returned from the second one the UK had followed most other countries of Europe in advising to limit movements, eventually ramping up to rules on isolation, social distancing and against non-essential travel.

BMFA FFTC cancelled BMFA events up to the end of May, including the Free Flight Nationals. At first it was thought that Salisbury Plain would continue to be available but soon there was a blanket ban on use of MOD facilities until July.

CIAM postponed the Plenary meeting scheduled to have been in Switzerland in April, the March Indoor World Championships were postponed by Romania and World Cup events were cancelled by organisers. Then CIAM introduced a ban on competitions, which was optimistically limited to the one month. until April 20. The FAI chose to start looking for a new venue for their October General Conference, which had been to be hosted by a little-known city in China. Since that city was Wuhan it was thought that participants might be a little reluctant to travel there. Wuhan have been given the 2021 conference. Instead.

Sports cancellation came thick and fast, with all activities stopping and football moving their European tournament to next year and likewise the Olympics being pushed back to 2021, met with little with surprise and no complaints. Just before the CIAM meeting on the subject of Championships, the BMFA decided to withdraw all British teams from 202 championships – just 9 days after our work to select an F1E team!

CIAM Bureau

The CIAM Bureau had been discussing the competition situation continually during March, in particular what to do about Championships scheduled for 2020. One camp favoured postponing events for some months and to wait and see how things developed. The other side considered that all Championships should be cancelled for this year because by the time lockdown might have finished in most countries it would leave too little time for practice and travel limitations might still be in force. In the latter case there was a split between

a) shift all future events back by one year (2020 events flown in 2021, 2021 events flown in 2022. etc. This would mean that all categories would have their 2 -year cycle between World Championships replaced by one 3-year period.

b) Lose the 2020 events and continue with the planned 2021 events and keep to the existing odd/even years for different classes. The advantage of this was to allow continued planning for the countries selected last year as the hosts for 2021 events. But on the other hand some categories would have no change in their 2-year cycle while the even-year categories would have 4 years between their world Championships. This would be particularly unfair on juniors planning to compete this year, many of whom would be over the qualifying age by 2022.

CIAM Bureau held a Zoom meeting on March 31 to discuss the way ahead on CIAM events.

Category 1 events (Championships)

The views of CIAM delegates and National Aero Clubs had been requested and Narve Jensen summarised these and reported 60% favoured option (b). Bruno Delors had summarised the opinions of Championships organisers and suggested that each could be reviewed two months before it was due to be held, with little support from others. His suggestion to review each individual event was accepted and it was concluded that a combination of cancellation or moving to 2021 or 2022 would be appropriate. The Bureau decided not to run any Championships in 2020. Because of organiser agreements and FAI authority this is currently a recommendation to organisers.

The likely changes in free flight are:

F1D Indoor. The March 2020 World Championships have been postponed to December 2020 but it was noted that Romania is also awarded the European Championships in March 2021. Since two events within three months did not seem ideal it was proposed that the World Championships be held in March 2021 and the European Championships lost. There will then be another World Championships in 2022 to continue on the established sequence of even tears.

F1ABP Junior. The World Championships was scheduled for August this year in Romania. Next year the Junior European Championships was to be held in conjunction with the F1ABC World Championships in France in August 2021. It was agreed that France could upgrade the Junior event from European to World Championships and the European Championships 2021 would be lost. Romania and others could bid for the 2022 Junior World Championships.

F1ABC. The European Championships in North Macedonia in August this year will be lost. The senior F1ABC events would then continue on the normal schedule, France for World Championships in 2021 and 2022 European Championships open for bids.

F1E. The European Championships was to be held in Romania in July 2020. This will now be lost and F1E continue in sequence with the World Championships as awarded to Romania for 2021.

In all the 2021 events involving Juniors it is proposed to increase the age limit by one year in 2021 only so that Juniors preparing for this year's events will still be eligible next year for their delayed events in 2021.

Category 2 (Open Internationals including World Cup)

Events had been cancelled up to April 20. The Bureau agreed to extend this to May 31, with the expectation that further extension may be needed.

It was anticipated that limits on travel or sporting events could continue well after May and a World Cup classification would not be representative of all participation. Thus all World Cups have been suspended for 2020.

The cancellation of events so far and the removal of World Cup status gives organisers two options:

i) They could run their events as Open Internationals possibly on a new date later in the

year. It is hoped that a draft calendar will be drawn up et the end of May, but these events can be changed at any time with one month notice and without regard for date clashes.

ii) They can reschedule their event as a World Cup event in 2021, in which case their registration fee paid this year will be transferred to the 2021 event.

Another Bureau Zoom meeting is planned soon, but what to do about the Plenary meeting has not yet been decided.

NEWS FROM BMFA FF TECH COMMITTEE

During this period the FFTC will send out the occasional message to update the free flight community during this shut down period.

These notes are sent to supplement what is put out on the BMFA website. The FFTC urge all to keep up to date with what is being published on the BMFA site. These notes are sent as a supplement with specifics as they effect free flight.

In essence the organised free flight competition scene is non-operational until the end of May. We will wait to see what transpires after this date. We will act according to what restrictions are applied. As soon as we are able, we will get things operational again. What we will do for the remainder of the 2020 is open to debate and circumstance.

The information we sent a few days ago can now be updated.

All of our national competition sites are off limits until at least the 1st July. This is the directive that we have received from the MOD. (and includes Salisbury Plain) This at best allows us 6 months of the year to complete the calendar. If the 1st July becomes a reality, we can then decide on the shape of that calendar. We will know if this will happen as we get closer to that date.

Remember to follow the government guidelines as to what is expected of each and everyone of us. Read the BMFA guidelines and keep safe and well.

BMFA F1E

Since we had been unable to fly any BMFA F1E events during 2019, an additional series of dates during March were arranged to select a team, as required by BMFA. To give maximum chance of flyable weather these were set as a number of days around the first and third weekends of March. The weather in the first period was so bad that it was a complete write off, while the forecast for the second period suggested two flyable days but these were separate days – the Friday and Monday.

The forecast for the Friday showed a 3 m/s northwest wind in the morning, turning to south or southwest and dropping to nothing by the end of the afternoon. For the variable wind direction I chose flying at Minninglow and the forecast proved reasonably accurate. The hill works for winds from northwest round to south, but on the west side is the High Peak Trail, a long distance path on a disused railway line. To the northwest of the hill the path is on a high embankment which is faced with a stone wall and to the west of the hill the country behind Trail has a disused quarry and a dense wood.

The initial wind was 4 m/s northerly but moving more towards northwest during the morning while dropping. We flew to two minute maximum and the first two rounds were maxed except for Paul Fynn dropping time. For the third round the wind had just about dropped with any drift apparently coming from the east (down the slope). There was some reluctance to fly in this until I flew and demonstrated that there was plenty of space across the valley to max, although it gave a distance of 725m and some muddy fields for retrieval. The others then flew and maxed except that Steve Philpott dropped a few seconds. It had been a good day's flying in warm sunny weather and then rained heavily for the drive away from Minninglow.

We gathered at the same site on the Monday with the forecast for a westerly wind increasing from 3m/s to 6 m/s during the day. Steve flew first and maxed with a good flight drifting north along the windward side of the north ridge. I thought he had been close to blowing back over the hill so flew with a little ballast to keep forward. However it was too effective and the model worked forwards which took it close to the embankment, which it hit 19 seconds short of the max. At least the impact and slide down the stones only broke the front fin and the rest of the model was undamaged. Chris and Paul both maxed. For round 2 the wind was stronger and coming directly over the wood. I maxed but with the model being thrown around in the turbulence even when it had climbed quite high. With the advantage of flying F1E in wind it drifted back on DT and landed just 120m upwind of launch position. Steve also maxed but the others dropped, Chris with a dramatic dive to the ground when the model appeared to have settled. The wind was up to 6 m/s for the third round. Steve and Paul had short flights, I managed exactly one minute without having climbed significantly. Chris made the last flight and drifted back round the south side of the hill and soared as blowing downwind and out of sight behind the hill after 98 seconds, which became the 100% score for the round.

And so ended the last BMFA Free Flight competition for some time/.

March 13			**March16**		
1	C Morton	300.00%	1	I Kaynes	245.39%
1	I Kaynes	300.00%	2	C Morton	238.33%
3	S Philpott	285.00%	3	S Philpott	224.49%
4	P Fynn	215.00%	4	P Fynn	147.55%

Cover photo by Steve Philpott shows Chris Morton, Paul Fynn, Ian and Chris Kaynes

JOULEBOX 210 BY HARRY GROGAN

This model appeared in NFFS and is presented here with thanks to NFFS and to Harry for providing additional details. I had considered re-drawing the plan to show the internal structure, but the photos of wing and tailplane serve to illustrate this.

Harry Grogan set a new AMA record in the E-36 event on September 7, 2019 during the RJK Follies at Muncie, IN. He made 20 maxes flying a modified Joulebox. Here is his story of how he accomplished this string of maxes.

The Model

Since becoming interested in electric powered free flight about six years ago, it looks like two approaches to E-36/F1S design have emerged. One is to fly a relatively small and lightweight model in pursuit of the elusive 120 gram minimum weight. In order to survive contest conditions, these models usually weigh 140-150 grams. The other approach is to use a heavier RC drone motor with a larger battery and a high current controller. In other words, use gonzo power in the quest of gaining more altitude in spite of the additional weight. These models can weigh in the 180-200 gram range. My models have evolved into the latter category. In early 2019 I decided to build a Joulebox 190 Mk II kit from CB Model Designs. Being a slow builder, the idea was to build a kit instead of my own design. However, numerous modifications stretched out the construction time quite a bit. The first change was to reduce the wing tip dihedral and shorten the main panels so that the projected span did not exceed 36 inches. The new wing area is 210 square inches (flat) so I call my version a Joule Box 210. Full span carbon fibre cap strips were added to the main spar top and bottom, and 1/64 in. plywood shear webbing was glued to both sides of the spar in the centre

section. All three dihedral joints were reinforced with 1/64 in. plywood on both sides of the spar and behind the leading edge. Carbon fibre cap strips were bonded to the trailing edges across the dihedral joints. This made the wing strong enough to withstand RDT at full speed. For additional torsional stiffness, diagonal ribs were added to every rib bay between the spar and leading edge, carbon fibre capped top and bottom. The rear diagonal ribs were also carbon capped, but on the top only. The wing is covered with tissue and dope for maximum torsional stiffness. I am not a big fan of plastic coverings in general. Initially it was covered with Icarex, which I like, but test flying at the Nationals in August showed that the wing was still twisting at high speed.

The stabilizer has carbon fibre cap strips on the spar, and diagonal ribs were added to every rib bay in front of the spar. A 3 inch long piece of 1/64 in. plywood shear webbing was added to the back of the spar. The covering was Risteen Microlite.

The fuselage is my own pod and boom design. Other than the motor, all of the electrical components are inside the nose pod. This is a very low drag configuration yet allows easy access to the electronics through a side hatch. The basic box is made out of 1/16 in. balsa laminated to 1/64 in. plywood with 1/8 in. lite ply bulkheads. The construction is very strong and can survive crashes with little or no damage. A removable music wire skid protects the model when landing on hard surfaces.

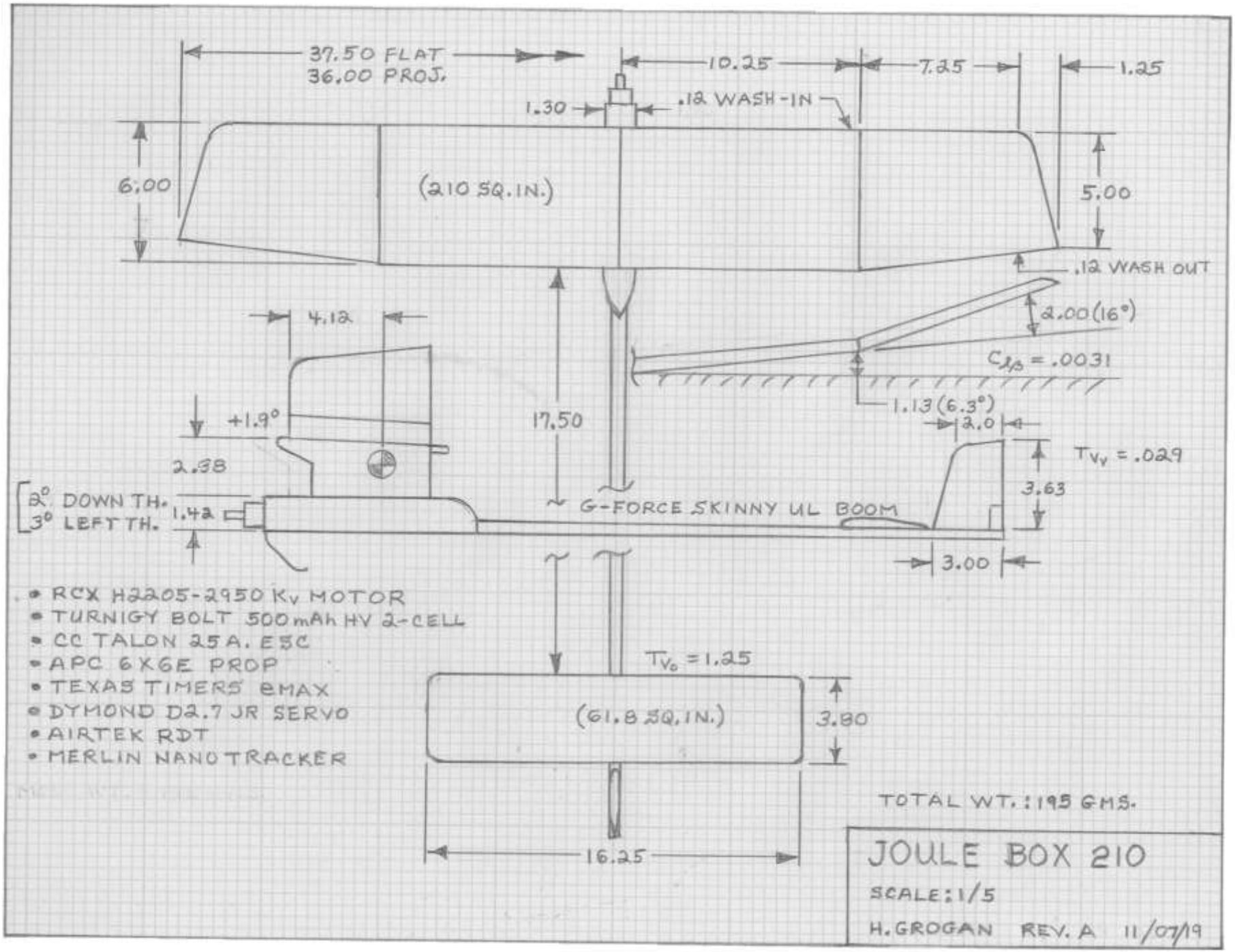
The power system consists of an RCX H2205-2950 Kv drone motor, a Turnigy Bolt 500 mAh HV 2-cell battery, a CC Talon 25 A. ESC, a Texas Timers eMax timer, a Dymond D2.7JR servo, an Airtek RDT, and a Merlin Nano Gold tracker. The model's total weight is 195 grams, not exactly lightweight, but the climb is very good turning an APC 6 x 6-E propeller. The glide is also good but I have not done any altimeter testing to quantify its performance.

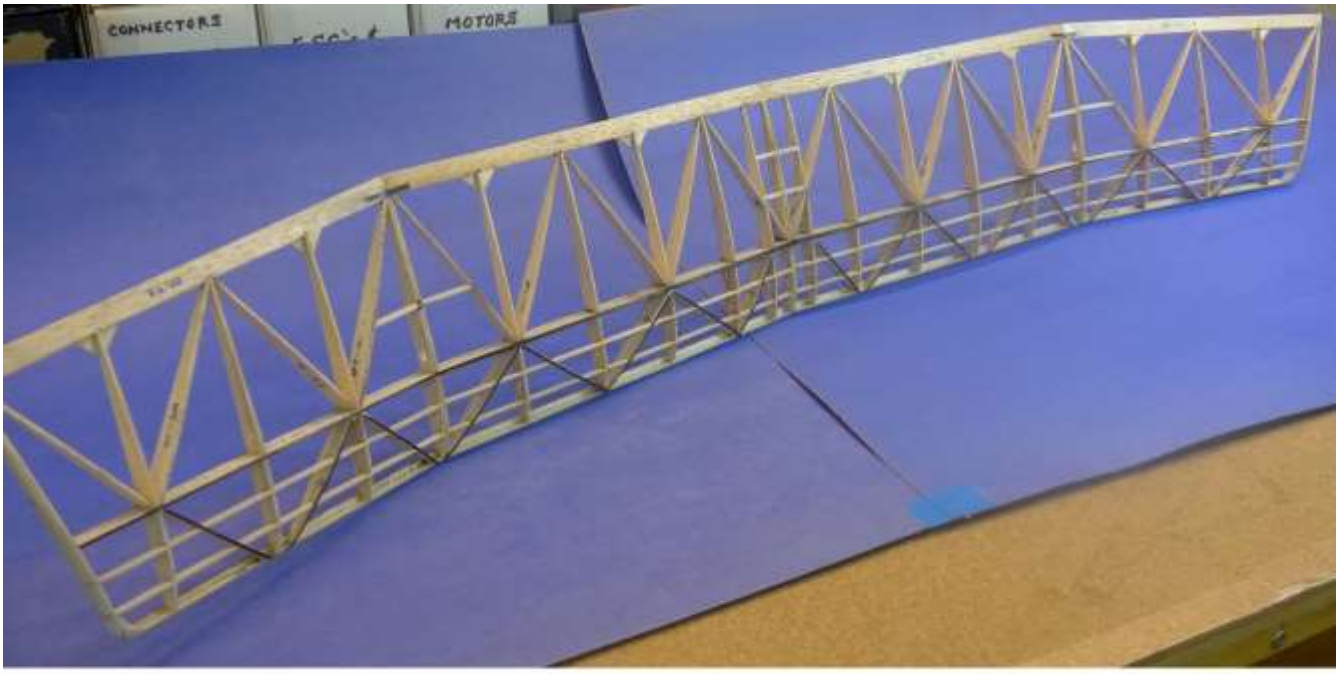
The Record

The day started out with a heavy overcast and temperatures in the 60s. There was no particular hurry to fly official flights because the conditions were not favourable. I alternated flights with friends while timing their flights in E-36. My first four official flights were easy using 10 second motor runs, but the next several flights with 5 second motor runs were harder to max. I managed to find decent air or at least avoid bad air. For all of the 5-sec. flights I took advantage of the extra energy of the high voltage batteries, charging them to 8.70 volts. The contest ended at 5:00 PM and by then I had 12 maxes, enough to win the event. On one flight I had a bit of luck. The launch was not good and it went straight up and then to the left instead of its normal right-hand climb. The transition was poor and things looked bad at that point. However, it wandered around going mostly upwind and caught some lift. It maxed with just a few seconds to spare. Sometimes you have to have luck on your side!

The overcast had burned off by then leaving small cumulus clouds that had a habit of consistently blocking the sun. Since the conditions were deteriorating, I decided to wait for a while. Around 6:30 or so it got cooler and calmer, so I decided the air might be stable enough to fly again. It was, so I put in flights as quickly as possible. By the time it was dark enough to barely see the airplane, I had put in eight more flights for a total of 20 maxes! What a day. I never had any idea it would turn out that way. It was a thrill and an honour to beat Stan Buddenbohm's record of 15 maxes.

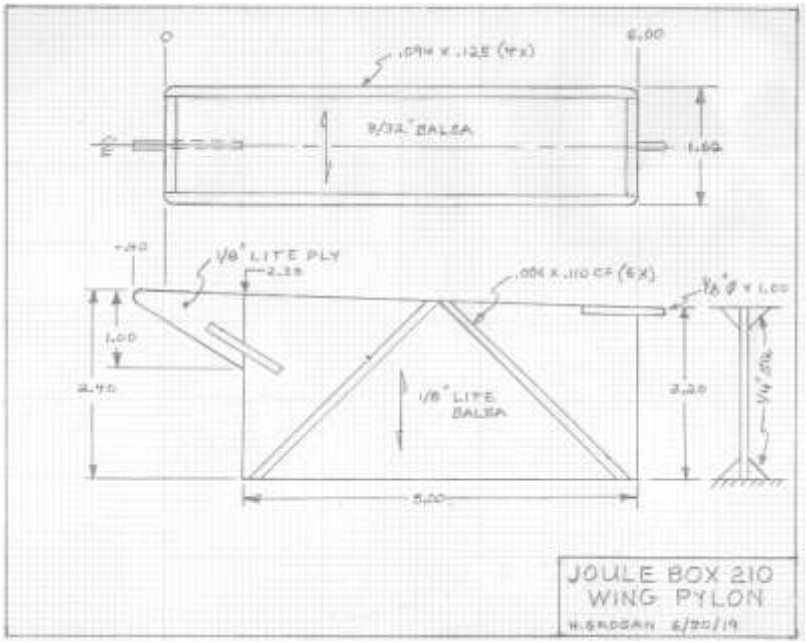
I would like to thank all those who helped and especially Graham Webster and Dale Elder for their support and encouragement that day. Graham timed all of my flights in the contest and Dale timed the rest. Dale's bubble machine was a big help and he is one of the best at picking thermals. Sometimes I think he *creates* thermals. Hmmmm …….

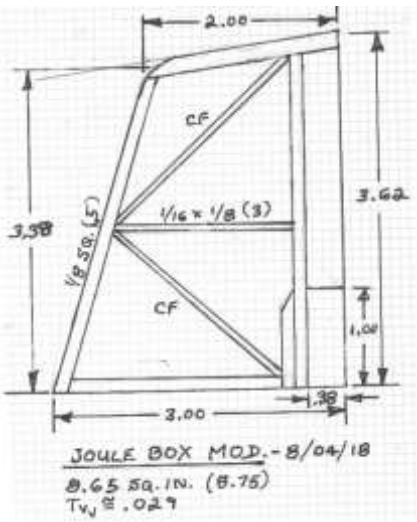

37.50 FLAT
36.00 PROJ.
10.25
7.25
1.25
1.30
.12 WASH-IN
6.00
(210 SQ. IN.)
5.00
.12 WASH OUT
2.00 (16°)
4.12
C_{l_β} = .0031
1.13 (6.3°)
2.0
+1.9°
17.50
T_{V_V} = .029
2.38
3.63
2° DOWN TH.
3° LEFT TH.
1.42
G-FORCE SKINNY UL BOOM
3.00
• RCX H2205-2950 Kv MOTOR
• TURNIGY BOLT 500mAh HV 2-CELL
• CC TALON 25A. ESC
• APC 6X6E PROP
• TEXAS TIMERS eMAX
• DYMOND D2.7 JR SERVO
• AIRTEK RDT
• MERLIN NANO TRACKER
T_{V_0} = 1.25
(61.8 SQ. IN.)
3.80
16.25
TOTAL WT.: 195 GMS.
JOULE BOX 210
SCALE: 1/5
H. GROGAN REV. A 11/07/19



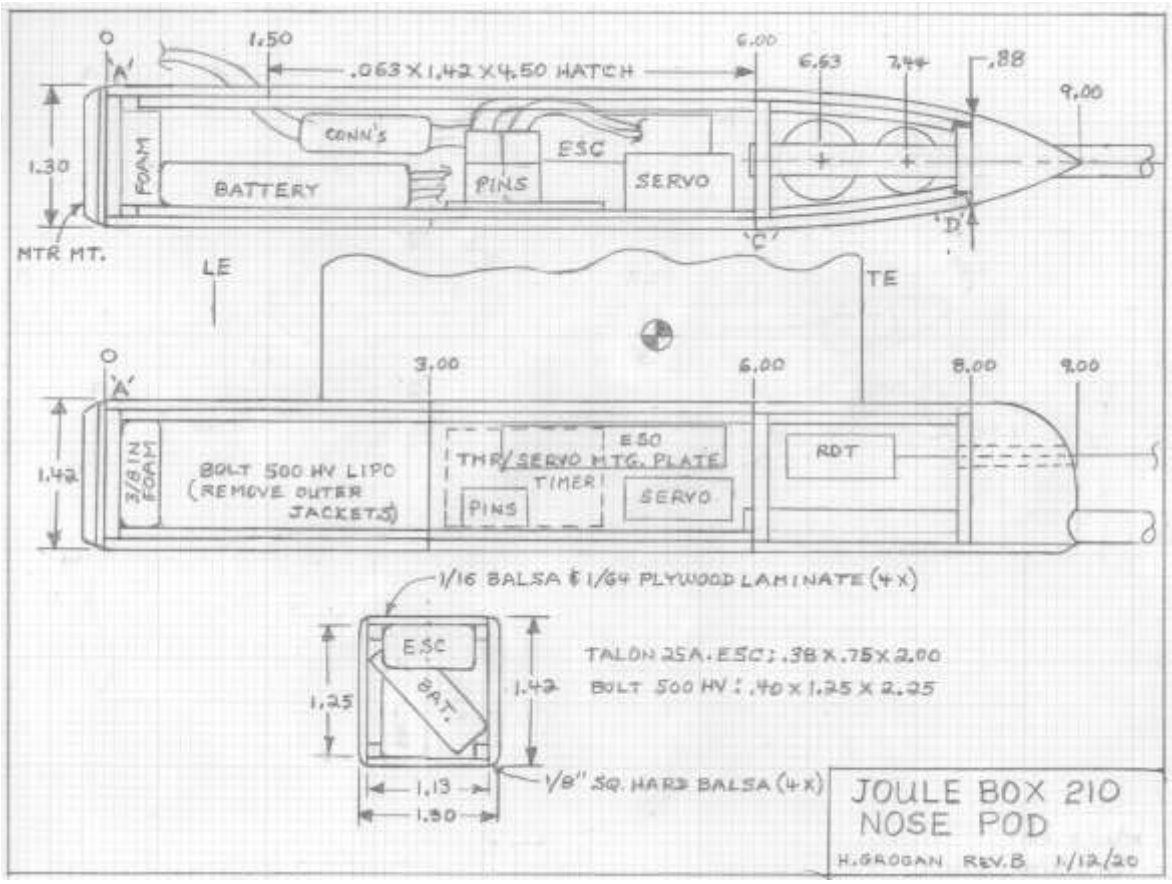
Wing structure

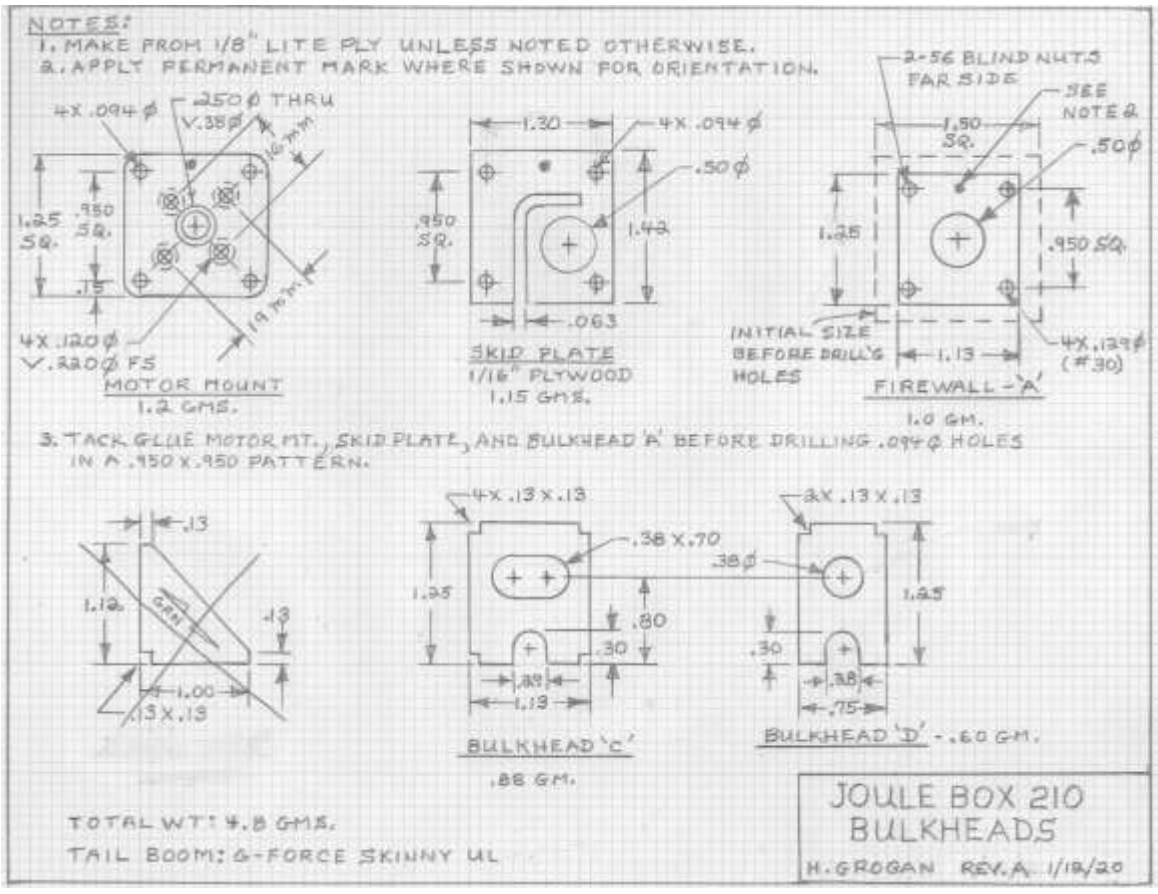
Tailplane

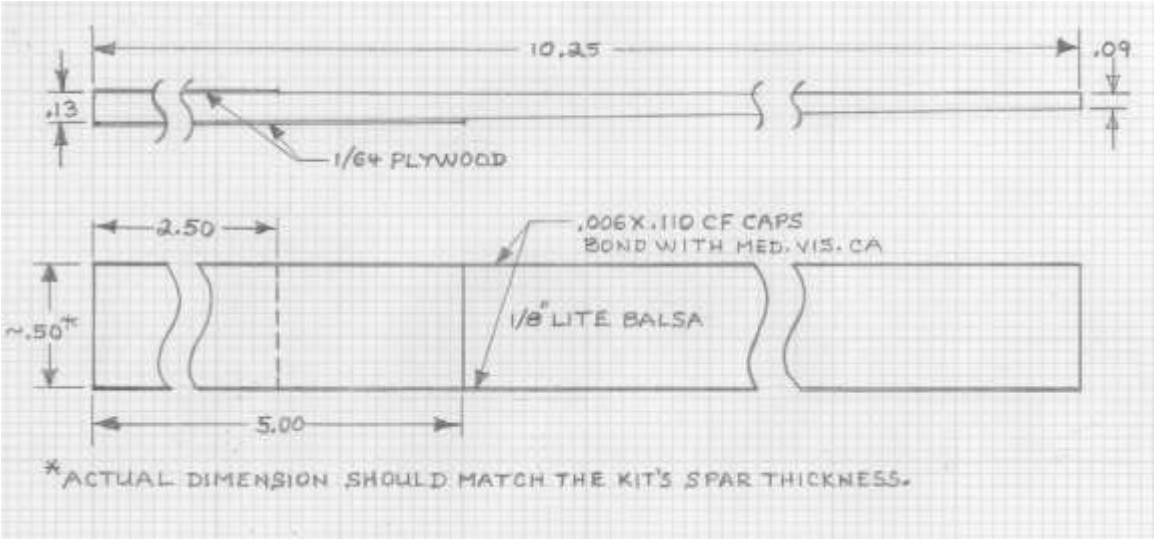




Fin


1.50
.063 X 1.42 X 4.50 HATCH
6.00
6.63
7.44
.88
9.00
1.30
FOAM
CONN'S
BATTERY
PINS
ESC
SERVO
'A'
'C'
'D'
MTR MT.
LE
TE
3.00
6.00
8.00
9.00
1.42
3/8IN FOAM
BOLT 500 HV LIPO (REMOVE OUTER JACKET)
ESC
THR/SERVO MTG. PLATE
TIMER
PINS
SERVO
RDT
1/16 BALSA & 1/64 PLYWOOD LAMINATE (4X)
ESC
BAT.
1.25
1.42
1.13
1.50
1/8" SQ. HARD BALSA (4X)
TALON 25A. ESC: .38 X .75 X 2.00
BOLT 500 HV: .40 X 1.25 X 2.25
JOULE BOX 210
NOSE POD
H. GROGAN REV. B 1/12/20


NOTES:
1. MAKE FROM 1/8" LITE PLY UNLESS NOTED OTHERWISE.
2. APPLY PERMANENT MARK WHERE SHOWN FOR ORIENTATION.
4X .094 ⌀
.250 ⌀ THRU
V .38 ⌀
1.25 SQ.
.950 SQ.
.15
4X .120 ⌀
V .230 ⌀ FS
MOTOR MOUNT
1.2 GMS.
1.30
4X .094 ⌀
.50 ⌀
.950 SQ.
1.42
.063
SKID PLATE
1/16" PLYWOOD
1.15 GMS.
2-56 BLIND NUTS FAR SIDE
SEE NOTE 2
1.50 SQ.
.50 ⌀
1.25
.950 SQ.
INITIAL SIZE BEFORE DRILL'G HOLES
1.13
4X .129 ⌀ (#30)
FIREWALL - 'A'
1.0 GM.
3. TACK GLUE MOTOR MT., SKID PLATE, AND BULKHEAD 'A' BEFORE DRILLING .094 ⌀ HOLES IN A .950 X .950 PATTERN.
.13
1.12
GRAIN
.13
1.00
.13 X .13
4X .13 X .13
.38 X .70
.38 ⌀
1.25
.80
.30
.38
1.13
BULKHEAD 'C'
.88 GM.
3X .13 X .13
1.25
.30
.38
.75
BULKHEAD 'D' - .60 GM.
TOTAL WT: 4.8 GMS.
TAIL BOOM: G-FORCE SKINNY UL
JOULE BOX 210
BULKHEADS
H. GROGAN REV. A 1/19/20



UK COMPETITION NEWS

ALL EVENTS at least until the end of May and the Dreaming Spires in June are cancelled

SOUTHERN AREA BMFA FREE FLIGHT GALA. Following the loss of Odiham this year as a venue for this event, it will now be held at Abingdon, Oxfordshire on the 12th July, **Covid -19 permitting**. The following competitions will take place from 10.00 to 16.00

Vintage Lightweight Rubber, Vintage / Modern Coupe Combined (three rounds only), Vintage / Classic Glider combined, A1 Glider, E36, P30, Vintage HLG/CLG combined.

The flying of small sport free flight models will also be allowed. The airfield at Abingdon is easily accessed off the A34, following signs to Dalton Barracks. Postcode OX13 6JA. BMFA insurance required. Entrance Fee £13 payable at entrance. Contacts:

Chris Redrup 01483 487273 / 07544 533509 chrisredrup@yahoo.com

Peter Carter 01256 352922 p.carter34@btinternet.com

FAI FREE FLIGHT RANKING

Ranking for March 1. Full details at www.freeflightnews.org.uk/ranking/latest.htm

		country	points	place change	points change	recent results and comments
F1A						
1	Mikhail Kosonozhkin	RUS	3376	0	18	points gain from losing effect of poor result at Szabo Miklos 2018
2	Per Findahl	SWE	3298	0	93	MM20=548
3	Dusan Fric	CZE	3028	0	-40	points loss from reduced contribution from win Krka Cup 2018
4	Allard van Wallene	NED	2850	2	87	points gain from reduced effect of poor results in 2018
5	Anton Gorsky	RUS	2841	-1	12	points gain from reduced affect of poor result at Srem Cup 2018
6	Matija Hrast	SLO	2752	-1	-32	points loss from reduced contribution from 2nd at Krka Cup 2018
7	Ivan Bezak	SVK	2608	6	97	points gain from reduced effect of poor results in 2018
8	Vitek Rossler	CZE	2588	-1	24	points gain from reduced effect of poor results in 2018
8	Valeriy Polyaev	RUS	2588	0	32	points gain from reduced effect of poor results in 2018
10	Filip Klobusicky	SVK	2576	1	50	points gain from reduced effect of poor results in 2018
11	Jim Parker	USA	2568	7	267	KW20=346-20 NA20=337-16
12	Luka Biteznik	SLO	2553	-1	27	points gain from reduced effect of poor results in 2018
F1B						
1	Mykola Kovalenko	UKR	3120	0	11	points gain from reduced effect of poor results in 2018
2	Adam Krawiec	POL	2907	0	25	points gain from reduced effect of poor results in 2018
3	Alexander Andriukov	USA	2790	3	91	NA20=543+6
4	Bernd Silz	GER	2789	0	12	points gain from reduced effect of poor results in 2018
5	Stepan Stefanchuk	UKR	2774	3	118	KW20=510+6 NA20=506+6
6	Vitaly Man	ISR	2758	-1	15	points gain from reduced effect of poor results in 2018
7	Mickael Rigault	FRA	2616	0	-82	points loss from reduced effect of win at Poitou 2018
8	Bill Booth	USA	2608	28	955	KW20=547+43 NA20=419+30
9	Jan Cihak	CZE	2598	1	15	points gain from reduced effect of poor results in 2018
10	Michael Seifert	GER	2569	18	833	KW20=483+23 MM20=363+10 NA20=275
11	Oleg Kulakovsky	UKR	2556	-8	-225	NA20=0-56 MM20=0-56 KW20=0-90
12	Iln Makhmutov	RUS	2519	-1	-30	reduced effect of 4th place at FF Holiday Mongolia 2018
F1C						
1	Mariusz Gasiorowski	POL	3046	0	0	
2	Nikolay Rekhin	RUS	2951	0	0	
3	Yury Shvedenkov	CAN	2835	0	68	NA20=426-3 MM20=0-26
4	Volodymyr Sychov	SLO	2607	0	-53	points loss from reduced effect of win at Krka Cup 2018
5	Viacheslav Aleksandrov	UKR	2562	0	16	points gain from reduced effect of poor results in 2018
6	Roy Summersby	AUS	2403	11	919	MM20=518+6 NA20=513+6 KW20=427
7	Vadim Pecheritsa	UKR	2158	-1	0	
8	Yuan Gao	CHN	2008	-1	-143	points loss reduced effect of win Sierra Cup 18, 3rd Kiwi Cup 19
9	Oleksandra Shapiro	UKR	1999	39	1208	KW20=514+20 MM20=387+20 NA20=257+10
10	Larissa Savukhina	RUS	1966	0	11	KW20=258-10 NA20=0-16 MM20=0-26
11	Michael Sondhauss	GER	1896	0	-53	points loss from reduced effect of 3rd place Sierra Cup 2018
12	Erdenebayar Ulzii	MGL	1864	-3	-117	points loss from reduced effect of good results 2018 and MM 2019
F1E						
1	Alexander Winker	GER	2967	0	0	
2	Florian Winker	GER	2819	0	-29	points loss from reduced effect of 4th place Volare Lessini 2018
3	Vojtech Zima	CZE	2780	0	40	points gain from reduced effect of poor results in 2018
4	Jaromir Orel	CZE	2667	1	13	points gain from reduced effect of poor result at Martin Cup 2018
5	Andre Trachez	FRA	2616	-1	-41	points loss from reduced effect of 4th place Poitou Moncontour 2018
6	Franciszek Kanczok	POL	2437	0	24	points gain from reduced effect of poor results in 2018
7	Marian Popescu	ROU	2220	0	-94	points loss from reduced effect of good results in 2018
8	Czeslaw Ziober	POL	2212	1	-57	points loss from reduced effect of 4th place Ukraine 2018
9	Stanislaw Kubit	POL	2171	1	-17	reduced effect of good and bad results in 2018
10	Giuseppe Berto	ITA	2151	-2	-131	points loss from reduced effect good results E/Ch and Martin 2018
11	Mihnea Prodanel	ROU	2118	2	2	
12	Jacek Zurowski	POL	2067	0	-62	points loss from reduced effect of 2nd place at Martin 2018

BMFA FREE FLIGHT FORUM REPORT

Martin Dilly

The 2020 BMFA Free Flight Forum Report has been published. The contents are:

Warps - Right way? Wrong way? What way? - Mike Woodhouse

Moment Arm - A Novel Stability and Control Arrangement - George Seyfang

How Big Should I Build My Next Coupe? - Alan Brocklehurst

Scale Matters - Ivan Taylor

Evgeny Verbitski - An Appreciation - by Mike Fantham, Ken Faux and Peter Watson

Do Freewheelers Drag? - Spencer Willis

The Hammer and the Feather - Aram Schlosberg

The Performance of Rubber Motors - John Gibbings

Gurney Flaps - George Seyfang

Gyros in Free Flight Scale - Ivan Taylor

A Glass Act - Russell Peers

A Glider for Every Occasion - Stuart Darmon

A Love Letter to the Free Flight Community - Bernard Guest.

The UK price is £12.00 including postage; to Europe it's £15 and everywhere else £17. Sales of the Forum Reports help to defray the heavy expenses of those representing Great Britain at World and European Free-Flight Championships. Cheques should be payable to 'BMFA F/F Team Support Fund' in pounds sterling, drawn on a bank with a UK branch; you may also order by credit card, which is a lot easier (and cheaper).

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BMFA 1ST AREA MEETING, MARCH 1

P30

1	C Redrup	Crookham	5.32
2	Peter Hall	Crookham	4.00
3	S Willis	Croydon	3.51
4	K Taylor	East Grin	2.04

CAT/HLG

1	K Taylor	East Grin	2.52
1	P Ball	Grantham	2.52
3	G Percival	Grantham	2.42
4	M Cook	Crawley	2.31
5	N Allen	East Grin	2.21
6	B Taylor	East Grin	2.04
7	S Willis	Croydon	1.47
8	A Cameron	Crawley	1.10

Combined Glider

1	D Etherton	Crookham	7.28
2	G Oulds	Crawley	3:31

Combined Rubber

1	P Ball	Grantham	6.32

Combined Power

1	D Cox	Crookham	5.47

Combined Electric

1	T Shepherd	Crookham	5.52

F1J

1	R Vaughn	Crookham	4.00
2	N Allen	East Grinstead	3:01

Plugge

1	Crookham	375
2	East Grinstead	75
3	Croydon	50

FREE FLIGHT SUPPLIES

Mike Woodhouse reports: Free Flight Supplies is still operating. I have made arrangements to both receive and despatch materials. If you need stuff I can supply, it just might take a bit longer to get things to you. Carry on building! Stay safe and look after yourselves.

CRANFIELD 60 POSTAL

Simon Dixon: Due to the current worldwide situation with Corona virus I have extended the deadline for the Cranfield 60 classic power postal event, run via Facebook vintage FAI page to the end of the year - 31 Dec midnight UK time. Hope this gives us a chance to get some flights in.