Flying Futaba Newsletter

May 2025

A Series Servos

My first port of call for any technical information is the Futaba factory website. There's a link to it on the "How To"page on my website. You can select Japanese or English.

I was hoping to download the instruction manual for the new A601 servos but it is not there. Ditto for A500 and A301s. Checked the Oz, USA and UK sites as well so I had to wait for the stock to arrive. Now I can read the intructions sheet and answer a few questions. Soft start being one. Are they soft start? Yes.

The prospect of me needing a 41 plus kg/cm torque servo for a model aeroplane is practically nil however the A500 and A301 servos provide good value for money to compete against the likes of SAVOX and other brands.

One thing I don't quite get when owners consider switching to radio systems such as Powerbox and JETI for a few more bells and whistles is this. Those manufacturers do not have an extensive range of servos like Futaba.

Putting an SBus 2 ID label on the top before it goes into the airframe is worth doing

Powerbox offers one coreless motor ball race alloy case 40 plus kg/cm servo. Anything else you are left to your own devices. JETI does not offer any servos. Frankly I'm yet to see any servo out of Europe that matches the performance of Japanese product.

As far servos go the past few years has seen every small importer get their own brand name or logo printed on servo products ex China. I can say with quite a degree of certainty the warranty return rate on aftermarket brands is higher.

Futaba has been manufacturing for decades. Of course there is no such thing as the perfect mass produced product but Japanese companies such as Futaba and OS engines, go as close as you can get. I've been around long enough to point out Futaba was not the leading brand when it first launched into this country. In fact its first servos were not up to the task in F3A.

A bit of a stretch to remember the correct model number but S5 servos used to strip gears at the commencement of three horizontal rolls. The S6 fixed that. It didn't take long and a few years later Futaba knocked Kraft Sytems off its perch as Number 1.

Marketed with very attractive price points HiTech has done very nicely with its range of servos. I've done heaps of flying with that brand of servo, which have been very reliable, but from my own practical experience they do not have the same punch around neutral as a Futaba product. Whether they have enough is an entirely different argument.

Mixing different brand PWM servos hasn't been a problem and digtal encoded servos shouldn't be either, in theory, but for me I would only use genuine SBus 2 Futaba servos. If I flew JR again XBus servos would be the go.

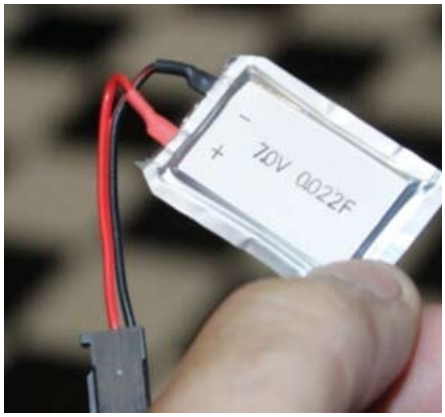
100 inch Extra 300

Now that the A601 servos have arrived I can get on with gearing up the models listed in the April edition. The instruction sheet confirms all A series coreless digital servos are SBus2 with soft start. Also stated is you can connect up to five to a single RX.

For example setting up the Extra 300 with a single R7314 FAASTest RX goes against the manufacturer's instructions. Built with two aileron servos for each wing panel the model needs more than five. A power bus unit is required.

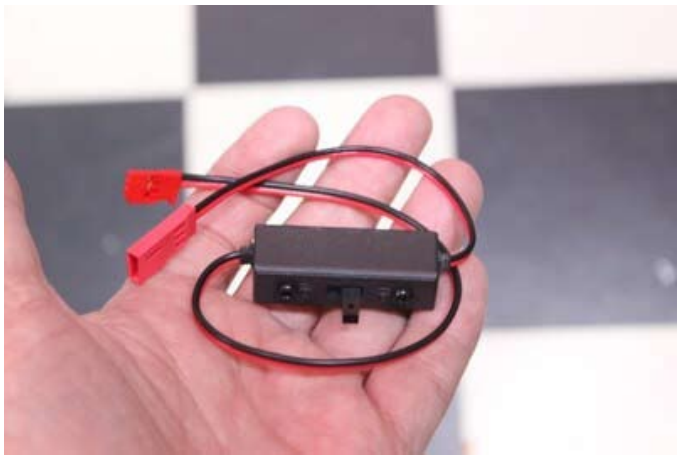
The alternate is a pair of receivers each with its own battery pack and switch harness. R3008 TFHSS or R7318 FAASTest. Connect left hand elevator and right hand aileron to one, vice versa the other. Throttle through one, ignition cut off the other. Take your pick for rudder and other functions. Battery pack capacity becomes the main consideration and in this model I would use a pair of Futaba LiFes through each receiver.

Snap rolls at full throttle require the most servo torque and Futaba's capacitor pro-



2100 uf capacitor

Had to have a peek



5 Amps continuous

3000 mAh LiFe

vides extra oomph to cover any instant power supply demands. Simple.

As mentioned I have no practical use for the grunt of a 601 but having pulled one apart to check it out, it can be used for towline release on a glider tug. Which is what this Extra 300 will geared up for. As well as practicing the old Classic Pattern and early IMAC schedules.

Not the manouvres young blokes are doing with IMAC models today. The roll rate almost catches up with the propellor rotation.

ESW-J FET switch harness handles five amps continuous and a peak ten amp load for thirty seconds. Peak load on ESW-D with a Deans plug is 15 amps and 10 amps continuous.

Futaba 32 MZ remains the go to brand for F3a. When burning fuel was replaced by consuming watts some competitors found the Deans plug switch harness was superior. Reason given was constant plugging and unplugging the battery pack the Deans plug lasted longer than the standard Futaba J connector. I often wondered about that claim because the same happens with aileron and flap connections.

DLPH-2

NXT LiPos

Putting that aside, if you want more servo power fit a LiPo battery pack.

Which is somewhat perplexing because the company does not offer its customers factory LiPo RX packs needed for the 25kg plus market. Which has has been a fast growing category for yonks yet the 3,000 mAh LiFes, with the standard J connector, are not available with XT plugs for the DLPH-2 power bus.

Not a problem if you can solder. I can solder well enough to be comfortable with my own work but it is nowhere near to the standard of factory OEM soldered connections. Most modellers just opt for something already available off the shelf. NXT battery packs in my 3, 4 and 6S electrics have proven a good value for money brand for a few years now and they would be my go to.

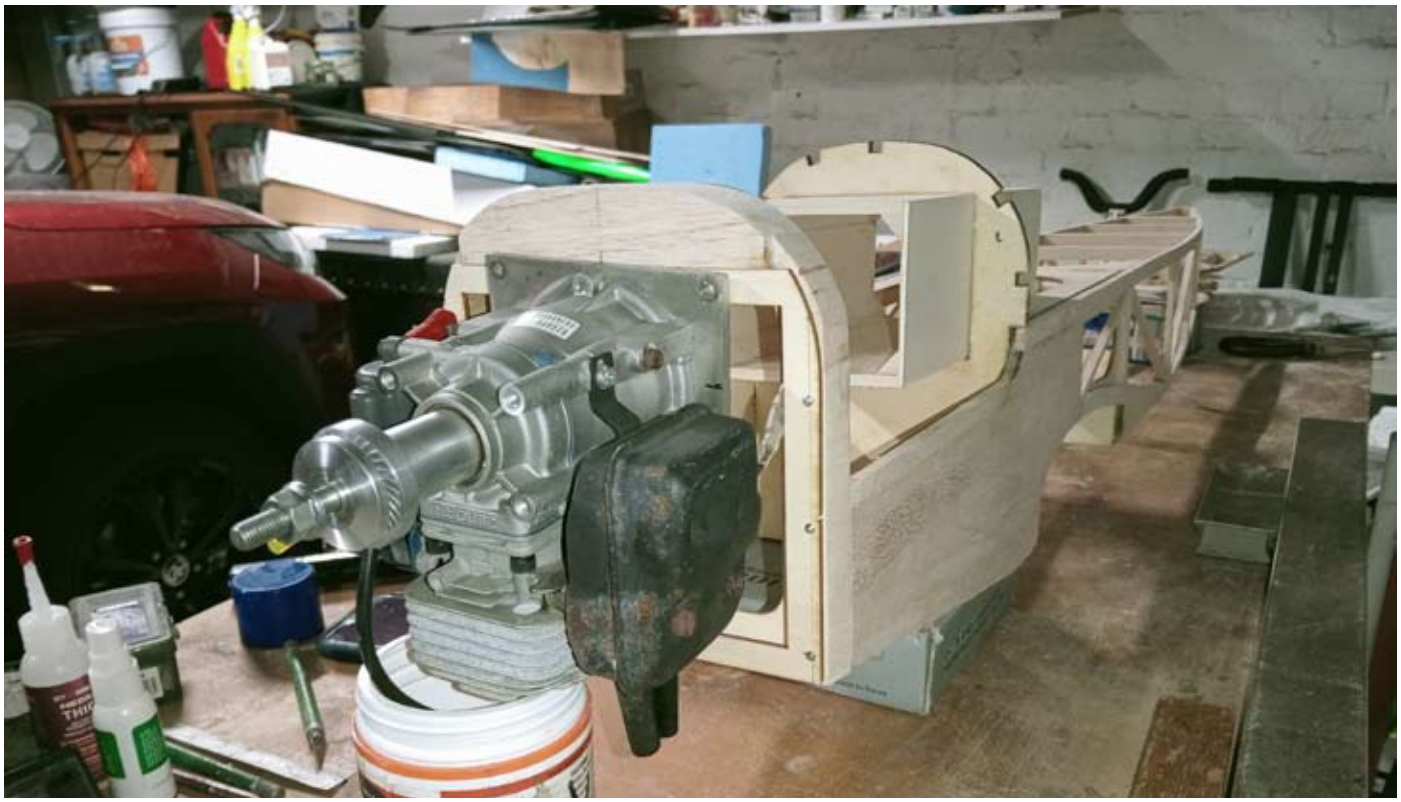
Swapping out FR Sky for Futaba 26SZ and DLHP-2 in this twin 30cc 26 servo Bronco

A while ago a friend of mine purchased this FPV equipped Bronco. It was set up for FR Sky gear. The easy option would have been to purchase a TX but I neither have the time nor inclination to learn how to program that lot. The real problem for me with that gear is insurance related.

Not supported by an exclusive Australian Agent, any number of businesses flogging it do not spend the money to have it ACMA compliant. MAAA published in Wingspan this may cause issues with insurance cover. Problem solved with a 26SZ and DLPH-2.

Losing potential market share to companies offering cheaper product with more features? It's business as usual in 2025. The disastrous mistake JR made converting its loyal 35-36, 72 MHz FM customer base over to Spektrum's 2.4 GHz protocol turned out to be a monty. JR has been re-launched as a competition brand and is backed up by an excellent Australian agent.

Open source software reminds me of crashes by chaps who



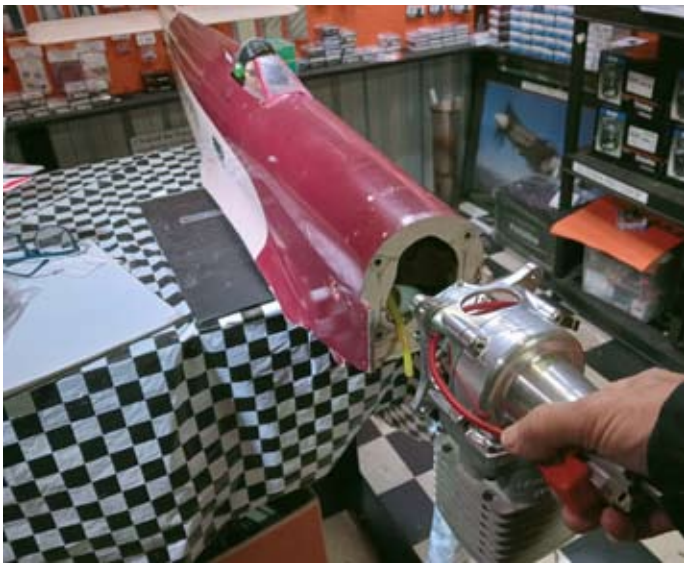
built their own radio from do it yourself kits available in the late 60s. Radio systems cost a lot more then than they do now. A crash followed by "It doesn't really matter the gear was so cheap" is history repeating itself. I cannot help draw a parallel with those examples.

Whether genuine product to complete a product range in the big market segment is in the pipeline I have no idea. At any rate Futaba has a complete product range for my 10cc turbine and scale glider interests.

SE5 or SE5a

Graham Goodson has been plugging away at the 1/4 scale Balsa USA SE-5 and it was time to decide what engine. A Zenoah G26 does not produce the fourstroke sound desired by many but simplicity and ease of operating a single cylinder two stroke is what I want. Plus it has one scale feature that is a nice fit. Magneto igni-

Before sending the donk back the tanks were removed for the second time to install an old fashioned control line primer nozzle



Ready to go back in

tion. That long straight out exhaust pipe and propeller selection should produce a lazy sort of sound.
Servos are U400s.
Cockpit detail needs to go in before the fuselage is sheeted. Grahame's very adept at trawling the web and found an interesting small business. Bang! One 1.4 scale cockpit kit on its way. All the way from USA. Tarrif free.

Looking for a 1/4 scale SLR camera to add detail to your model? The website has lots of nifty little things like that.
www.iflytailies.com

Engines

Loyalty and reminiscing to a particular engine is a thing for a lot of modellers. For me that means something that has served well in competitions. Difference between a sport mil and competition is quite simple.

Easy to start is one thing. That's a case of learning what to do and how to tune it. What about how long does it last? Most sport fliers would never do enough flying to find out but burning heaps of fuel practicing competition aerobatics sorts that out quick smart.

Making the engine work flat out pulling up hill is the requirement. .60 two strokes on glo used to be what sorted that that out in F3a. Sorry chaps but now it's IMAC. Spare parts back up is another consideration for successful competition flying.

Top of that tree are Desert Aircraft engines. Standing behind that brand in Australia is Ian Howard. Getting my Father's Miles Hawk Speed Six going is a great example of back up service. Mod-

When flying is done for the day, disconnecting the battery pack from a FET switch is the most important. Make sure you read and understand the instructions

Mr Smoothie

el was geared up ready to fly a decade ago.

Engine was fired up in the model. Idle was set and run at full throttle for a minute or so. We never got around to flying, let alone racing the Hawk. Engine and gear removed, engine put back in its box. Model now good to go again but I could only get it to run on the prime. Worked through the usual things, fuel supply being number one. Checking and rechecking the fuel system three times a gummed up carburettor was the next suspect. Had a look but saw nothing.

After removing, re-doing the plumbing out came the fuel system again. Then I cracked it and sent it back to DA Aust with a note it wasn't urgent. Engine came back a couple of weeks later. Fantastic service. Thanks very much Ian.

I just have to complete the wheel fairings. Or so I thought. Unfortunately the RX battery pack was dead flat. I had forgotten to disconnect it from the FET switch. This is something you need to be aware off.

Mr Smoothie is

Factory methanol 3W 58cc

Moki 60cc inline glo engine

Raced at Adelaide last century

next in the nostalgia air racing department It just has to have the radio gear and the Moki 60cc inline twin cylinder engine installed again.
Actually the engine is already in but it has to come out for a new piston ring in the rear cylinder. I have spares but snapped up another as new example. Just have to swap the backplate to run the fuel pump. And do something about the large gear doors not blowing off in a full throttle dive.

Four flap wing, single elevator servo, rudder, retracts and throttle. This model requires eight channels. Receiver is R3008 or R7308, in Mode A. The pitot tube on the wing has a larger ID than the Futaba one and my guess is that will be okay. Airspeed sensor measures relative air pressure. If not a GPS is an easy alternative. Two runs on reciprocal headings reveals straight and level airspeed.

Once those are done there are the two scale gliders and a glider tug but eagerness to get the racers flying to promote the air racing event I setup has wained for the time being.

RAA License
Taking break from Air Racing pursuits I got stuck into finishing my license. Went solo and have logged three hours of solo time.

This millenium at Burley Field

AeroPrakt A32 Vixxen

Lilydale to Wangarrata

Now it's off to the training area for more steep turn practice and picking out paddocks for forced landings. Followed by Navs. On that point I had a fantastic experience with Damien Mould in his Christen Eagle flying to a Wings and Wheels show at Wangaratta Airport.

Excellent four point rolls a hundred feet agl by the Ex Roulette PC9 and most interesting a formation flight behind a P51. T28 and P-40 demos, the highlight for me was our flight home. Tracking towards the Glenburn gap in the Great Dividing Range, cloud base assessed as a no go we diverted to Mangalore for fuel. Almost took longer than the flight home.

Enjoyed this display

Working out how to operate what is a stupid system to pay for the fuel was quite problematic. World Fuel's technology leaves Victoria's infamous MyKi public transport card for dead. Haven't they heard of EFTPOS?

For the cost of purchasing lunch I had a first hand look at how a professional pilot assessed what

Another WW11 fighter restoration

bad weather looks like. Limited visibility looking over the long nose becomes immediately apparent during taxi but the workload visually navigating the VFR route back into Melbourne, punching along at 130 knots at low level blew me away.

Getting home safe and sound never an issue for an experience of what VMC looks like with a highly trained and practiced low level endorsed commercial helicopter pilot in the rear seat. Thanks Damo.

EFATO

A subject drummed into full size aviation training but not so with models, my RC flying school days used to cover engine failure after take off.

Test flying a model I do the "What If" and a couple of days spent over Easter flying off private property I had

Wings Wheels and Water?

that occurence with this electric powered Draco. Not engine failure per sea rather loss of thrust just after lift off. Prop hadn't flown off either but the model decelerated instantly. Like it snagged a power line. Yes, I do know what that looks like.

Nose down just in time then it flopped on and turned over. A few drops of Cyano on the slats and rear window she was ready to fly again. Phew! I could have blamed the radio.

Doh

Guess what brand? Hah!

Nope. Getting bettter at flying includes admitting your mistakes. Pilot error was the cause.

I can change between flying Mode 1 and Mode 2 no problem. Not so for the switches. Flap switch on my Mode 2 TX is on the right hand side. Right hand switch above throttle on the DX-18 TX activates the reverse thrust feature instead.

Switches identified and checked with a backwards taxi before take off, selecting flaps clean after lift-off activated reverse thrust. Oops. Offering my switch selections, as a guide, for fixed and rotary wing, glo, petrol and electric propulsion, and telemetry and autopilot are on the last page.

Flying a multitude of types keeps the hobby interesting. Even chugging the old timer Super Quaker around on minimum throttle setting at dusk. Most enjoyable. Not a breath of moving air, the flight lasted thirty five minutes. Noise from the McCoy .60

McCoy 60 with electric start, boating around the Nicholson River

not a problem. Next day it was crosswind practice with my pair of 6S Flex Innovations foamies.

Purchased to release cremated ashes, adding the 2kg payload to just under 7kg AUW makes little

Flexos at the Nicho

practical difference to the performance. One of the many requirements in my RPAS Operators Certificate is to log one hours flight time after uploading software to the TX before doing a commercial flight.

That is not a requirement for model aircraft flying but something to ponder. Such as fitting brand new gear into a brand new high value model? Before swapping out the JR radio from Dad's Spitfire to Futaba I did a short low alti-

Operating from rough ground

TM18 900 MHz system also test flown in the Power Chook

Like most of the models in this hangar the Chook is ready for its next sortie

tude test flight of the receiver in the Power Chook. At extended range, 500 metres out, 100 up. Ditto for the TM 18 system which will go into my RPAs. Why? A crash witnessed years ago remains idlibly stamped.

In 1971 the turn key F3A model in the advertisment below was built for a customer.

It went in on the test flight. Kraft signature series 7 channel radio, Kraft Multicon electric retracts and I think a Kraft .61 engine. A few seconds after lift off Dad selected gear up. The model rolled over onto its back and went in.

Compared to the ever increasing number of large ARFs people are punting around the skies to-

Blipping the ingition during a slow roll?

day the Spitfire is not an expensive model. Scratch built by my Dad, you cannot buy one off the shelf yet a sizeable chunk of dosh flying around up there.The 6 inch True True spinner alone is a few hundred.

I flew the Spitfire in a scale comp at PDARCS and current and FAI Scale World Champion David Law pointed out that my slow and point rolls were downgraded because it was a Mk1. The carburettor engine in that type could not sustain inverted flight. The engine should cough and cut out.

Which is diappointing because this thing looks so graceful stringing out a classic pattern style slow roll. One could suggest this particular version was fitted with fuel injection but that would probably be dismissed by the judges, and put me into the smart arse category. Blipping the ignition cut off during a slow roll? To manage that with some degree of finess, safely, is something I would not practice with this model.

But I have another idea and there is time to be refined for the flying only category in the MAAA Scale Nationals at BADMAC in Gippsland later this year. A couple of friends are also interested in competing.

By then I might have a WW1 fighter to fly. Plus there is Dad's

Quarter scale Enidekker at Baw Baw RC

Fokker E111 to consider. Which needs a replacement strut for the undercarriage. The wing warping needs attention as well. Not enough deflection. The first flights were primarily on rudder. Dad was a qualified aircraft rigger and the wing warping system he did for the scratch built E111 for 2006 Scale World

Plenty of oomph on 6S

Champs in Sweden. That worked just like ailerons. Electric power is a negative with this model though. Rate of climb replicates one of its scale features but no noise.

Cut the power NOW!

Competition Flying

Simple fun comps at club level seem to have completely disappeared in Melbourne. Yarra Valley Aeromodellers had an STOL event proved there was interest in basic task flying. I had planned to go but it slipped my mind on the day. Bummer.
It is inevitable that an inpromptu competition happens whenever Damien Mould and I go flying. At the end of a day a flying the big stuff out comes something small. Most times it is our Super EZ Off which consists of a few simple tasks flying the FMS Super EZ.
Engine failure after take off is one. Once the plane gets airborne the other person calls "CUT". Which can happen as soon as it seems possible to just make it back. Or with enough alttiude to plan the approach. We're both very experienced so to add to the challenge the winning flight is judged by how close the landing roll is to a given spot. Climb and glide is an-

Short Take Off and Landing event organised by Jarrod Goudge

other. Models are fitted with the SBS-01A altitude sensor. Judging the winner is easy. Take off together first one down is out but the landing must be on the runway. Damien keeps cleaning me up on this one.

Then we have our F5B Espadita Off. Which is the same with high performance hotliners. Altitude sensor came in very handy when we had both models in the same thermal.

We do the same with a pair of old timers. His Quaker has a most impressive rate of climb. On paper my Super Quaker should be better in the glide. After all it does have a retractable undercarriage. Haven't yet tried spot landing with our Autogyros. I can fly helicopters but coming to grips with this new contraption is a work in progress for me.

Latest addition to our fleets are paragilders. I'm yet to fly mine but the advice from Damo is zero wind. Flying is flying and the pair of us like flying anything. Simple fun comps help keep few basic skills cur-

rent. There is a lot of fun to be had in the process. It's highly recommended. For the record I am well ahead in the Super EZ repair category.

Argh! Too many models, not enough time. I'm off to Newcastle to collect my Foka

SJG - AUS 5932.

Futaba Pro Shop Price List April 2025

Deciding how much it will cost to set up a new model using a website can be a bit tedious. Here is a more convenient guide. Prices don't included cents and are rounded up to the next dollar. Please note the website is the actual reference for current pricing

Transmitters

32MZ WC	$3990
26SZ	$1625
16iZ Super	$ 985
12K	$ 585
10J	$ 585
6K	$ 383
6L	$ 145

Air Receivers

FAASTest

R7114	$279	R7308	$229
R7306	$159	R7301	$140
R7103	$159		

T-FHSS

R3008	$99	R3006	$89
R3104	$	R3106	$
R2008	$91	R2001	$69

990MHZ

R9001 $192

HV Servos

U301	$31	U400	$45
A301	$78	A500	$171
		AG300	$

Standard Servos

U300 (4.8-6 volt) $20

Gyros

GYA 440 rudder elevator $ 89
GYA441 aileron elevator $ 89
GYA 451 $118
GYA 553 three axis $233
GYA 750 3 axis with RX $

Telemetry Sensors

Altitude 01A	$ 55
Airspeed 01TAS	$130
RPM Opto	$ 45
RPM Magnetic	$ 85
Voltage 01V	$ 52
Current O1C	$ 99
Servo O1VS	$ 49
Temperature TE	$58
Temperature	$125
GPS O2GPS	$225
CARVIN	$ 22

RX Battery Packs

F2FRF 1800 mAh 2S LiFE $76
FTF1800 mAh NiMh 5 cell $70

Switch Harness

ESW-J FET 10 Amp $57
ESW-D FET 30 Amp $81
SSW-J low voltage $17

HD Extension Leads

100mm	$16	150mm	$16
200mm	$16	300mm	$16
400mm	$17	500mm	$17
1000mm	$26	1500mm	$27
Y Lead	$24		

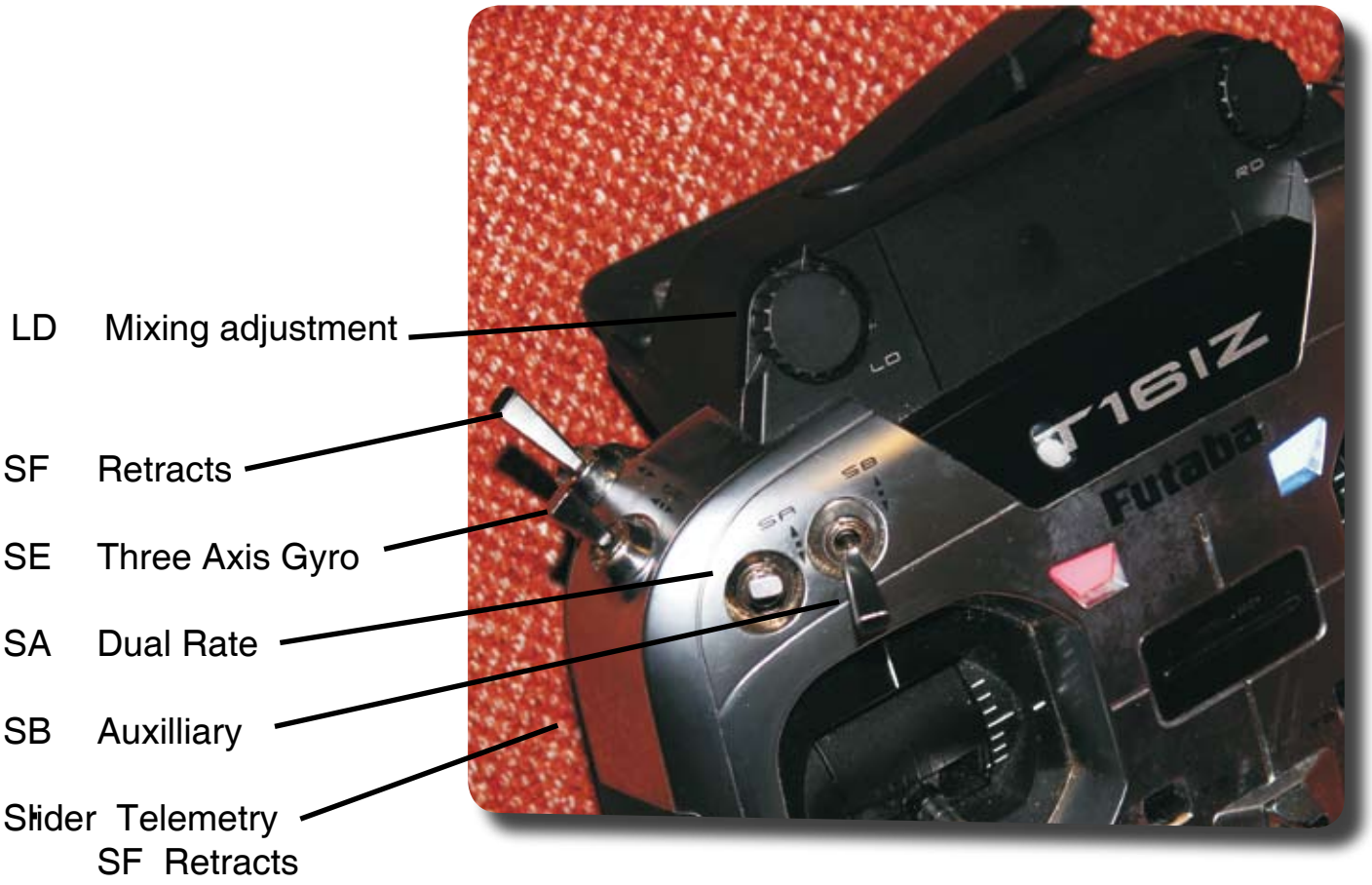
SBus Leads

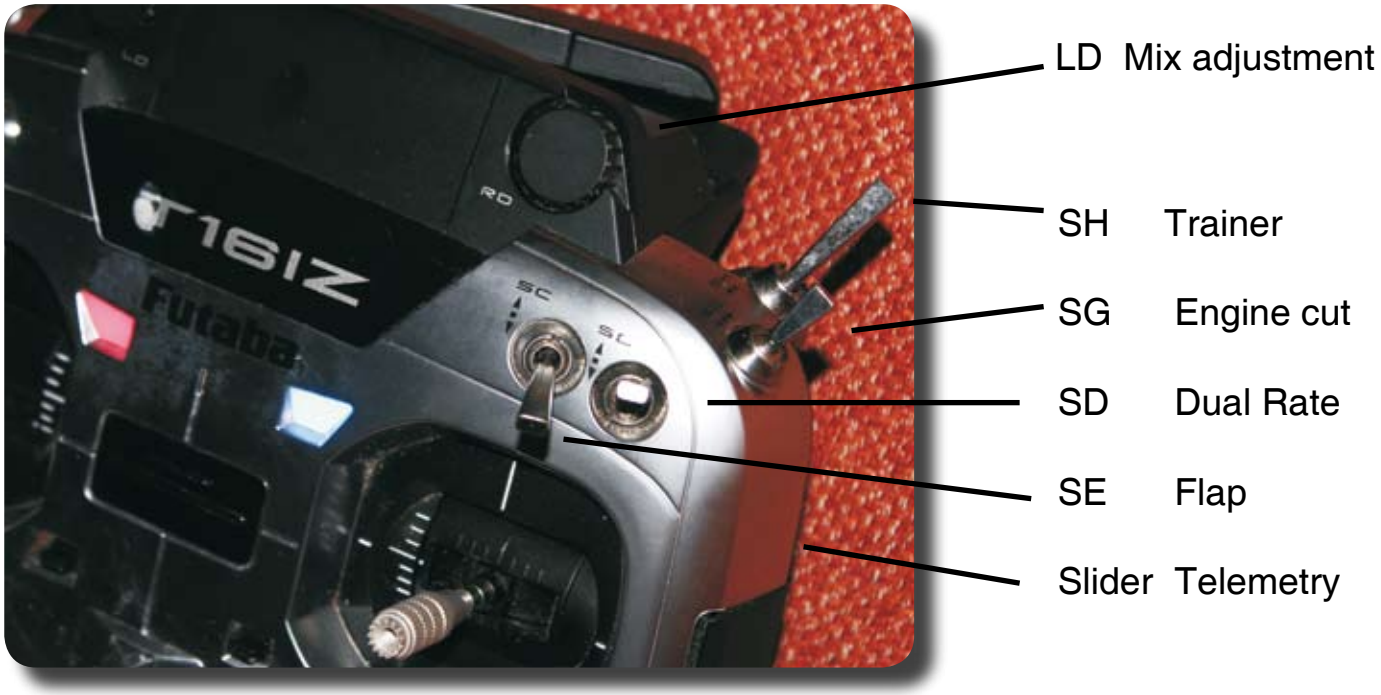
100mm	$35	200mm	$16
300mm	$37	500mm	$39
1000mm	$26	1500mm	$43

SBus Junction Box

4 Point $23 6 Point $26

Transmitter Switch Allocation





This page started with self preservation in mind and I have printed and laminated a couple of copies. One for the hangar and one in the TX case. This transmitter was a production sample on Mode 1 which I converted to Mode 2. My diverse range of model types include Fixed wing and helicopter with glo plug, spark ignition and electric motor, glider with flap and or spoilers, retractable undercarriage, telemetry downlink, gyro systems and flight training it has taken me ages to decide on a standard setup.

Sport flying with mates, competing are other factors. Telemetry switching requirements used for glider towing or air racing differ. Racers use airspeed and RPM on the right slider. Ditto for glider tug with altitude and variometer on the left. Voice gets drowned out as other piston and turbine engines take off so ceiling height limits and low battery alarms are set with the buzzer. Low battery is the most urgent vibration alert.