

Universal Spektrum brick set up

First try the set up in the document “DSM multiprotocol radio set up”.

If you find you cannot bind OR the motor won't start, then try the following.

Thank you to Greg E for the following.

1. 3 or 4 Channel ((Aileron) Elevator, Throttle, Rudder) *plus* a channel for stabilization mode (if applicable).
2. By convention the Aileron stick is set to control the Rudder for a 3 channel model. So that the primary “turning” stick, is consistent across 3 and 4 channel models.
3. Stabilizer - unlikely
4. **If** you use “Companion” on your computer, then set **your** radio type in Companion with Settings -> Radio profiles.

IMPORTANT

1. The choice of switches and pots/sliders shown below, suits my radio and my style. *You need to allocate switches etc, to suit your radio and your style. BUT, this does **NOT** affect the basic model set up, nor affect output channel allocation on the pictures that follow.* For example, choose a 2 position switch for Thr cut and a 3 position switch for the 3 stabilization options.
2. My radio is RadioMaster Zorro, Mode 2, again this does not alter basic model set up.

Radio channel allocation (MUST be “AETR” for any multiprotocol transmitter)

Channel Num	Order	Use
1	A	Aileron – if used. Can also have a Rudder + Aileron mix.
2	E	Elevator
3	T	Throttle
4	R	Rudder - allocated Aileron input for 3 channel receiver OR Ail + Rud option

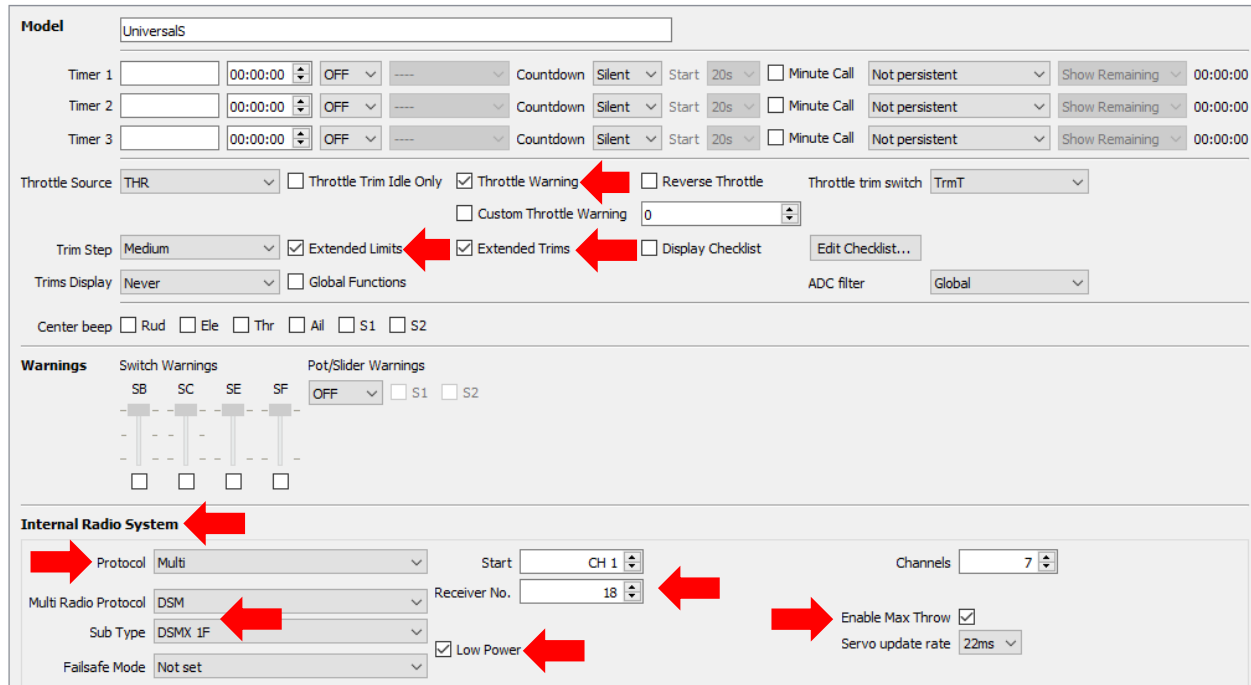
Note – The multiprotocol module automatically rearranges the transmitter output order, to suit the receiver protocol selected.

Protocol – settings. See “1- Setup” next page.

Setting	Value
For an Internal Protocol Module	Internal Radio System
For an External Protocol Module	External Radio System
Protocol	Multi
Multi Radio Protocol	DSM
Sub Type	DSM2 1F (or other variants)

Cont'd over

1 - Setup – SET THIS FIRST



Notes:

Set Internal Radio System **OR** External Radio System as above.

Important:

1. Set the protocol sections as shown.
2. Set the Receiver Number to a UNIQUE number for each receiver that you use.
3. For the DSM planes that auto bind, they bind better when “Low Power” is selected as shown above. For indoor flying this should stay in this mode to lessen interference with the other close by radios & planes. *Once bound, untick this if flying this model outdoors.*
4. “Enable Max Throw” – **VERY IMPORTANT for DSM receivers!!**
5. For receivers that are a problem to bind or won’t start the motor then turn on “Extended Limits” and “Extended Trims”.

Throttle Warning

Set this so you are warned if the throttle is not all the way down before the transmitter is activated.

2 - Inputs – BEST IF ORDER IS “AETR” for page consistency.

I1:Ail	Ail Weight (+100%) Expo (40%) Switch (SF↑) [Hi Rat]
	Ail Weight (+80%) Expo (40%) Switch (SF↓) [Lo Rat]
I2:Ele	Ele Weight (+100%) Expo (40%) Switch (SF↑) [Hi Rat]
	Ele Weight (+80%) Expo (40%) Switch (SF↓) [Lo Rat]
I3:Thr	Thr Weight (+100%)
I4:Rud	Rud Weight (+100%) Expo (40%) Switch (SF↑) [Hi Rat]
	Rud Weight (+80%) Expo (40%) Switch (SF↓) [Lo Rat]

See **IMPORTANT** note re switch allocation at the start of this document.

See appendix 1 for an example of a line above.

Set this next.

3 - Outputs – ORDER MUST BE 'AETR'.

The multiprotocol unit will rearrange the order to suit the particular protocol/receiver selected.

#	Name	<input type="checkbox"/> GV	Subtrim	<input type="checkbox"/> GV	Min	<input type="checkbox"/> GV	Max	Direction
CH1	AiO	<input type="checkbox"/>	0.0%	<input type="checkbox"/>	-100.0%	<input type="checkbox"/>	100.0%	INV
CH2	EiO	<input type="checkbox"/>	0.0%	<input type="checkbox"/>	-100.0%	<input type="checkbox"/>	100.0%	---
CH3	ThO	<input type="checkbox"/>	0.0%	<input type="checkbox"/>	-120.0%	<input type="checkbox"/>	120.0%	---
CH4	RuO	<input type="checkbox"/>	0.0%	<input type="checkbox"/>	-100.0%	<input type="checkbox"/>	100.0%	---



Notes:

1. CH1 is left blank if this is a 3 channel model without Ailerons.
2. "EiO" is "Elevator Output" & the rest of the labels follow suit.
3. If any output goes the wrong way, e.g. aileron moves the wrong direction when you move the aileron stick, then change the **direction** on this screen.

Important notes:

The above has the throws for all surfaces at +/-100%. Gently test each control surface and make sure that the servo moves smoothly from one extreme to another.

If the servo stops moving when you get to say 80% movement of the stick, then you must reduce the throws shown above or risk damaging the servo if it is held at max throw for any length of time.

The Thr throws are deliberately extended to +/- 120%. This is required for some DSM bricks to enable the motor to start.

You may find that the motor speed increases very rapidly as you move the Thr stick up.

You can remedy this by decreasing the "Max" down to 100% or lower, if this in turn does not introduce any other weird behavior in the throttle action. Don't alter the -120%!

Now set this

4 - Mixes

CH1:AiO	I1:Ail Weight (+100%)
CH2:Ele	I2:Ele Weight (+100%)
CH3:Thr	I3:Thr Weight (+100%)
CH4:RuO	I4:Rud Weight (+100%)
	+= I1:Ail Weight (+100%) [Ail Mx]

Notes:

1. CH1 is left blank if there are no Ailerons on this model.
2. CH1 can also have a Rudder + Aileron mix for aileron models.
3. CH4 Rudder as shown above uses the Aileron input and/or the Rudder Input.

5 - Logical Switches :: Not used

6 - Special functions :: Not Used

Appendix 1 – Sample aileron **INPUT** set up as used above.

The image shows a software configuration window titled "Edit I1:Ail". The window contains the following settings:

- Input name: Ail
- Line name: Hi Rat
- Source: Ail
- Scale: 0.0
- Include Trim: ON
- Weight: GV 100
- Offset: GV 0
- Curve: Expo GV 30
- Flight modes: 0 1 2 3 4 5 6 7 8 (all checked)
- Switch: SF↑
- Stick Side: ALL

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