SR6 Beta Jacked Frames

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NOTE: If you are using JX servos, please get the JX versions below, they have slightly different mount patterns than most servos, which is enough to cause some alignment issues with M4 bolts. Thanks geogan for bringing this issue to my attention and helping to test fit the edited versions!

BOM:

- M4x14mm (x25) (Required)
- M4 Hex Nut (x1) (Required)
- M3x5x4 Heat Set Inserts (x4) (Optional, can replace with M3 Hex Nuts)
- 20mmx20mmx5mm or smaller adhesive heatsinks (x6, or more if you are using tiny ones.) (Optional)

These are the frames I am personally using and I really like them. They are drop in replacements for the stock Beta frames, however they do **require** the use of M4 hardware to attach the servos.

I moved to M4 button head fasteners (M4x14mm BHCS x24) because they retain the servo much better than M3 plus a washer. Servo mounts typically have a 4.5mm hole and are made out of plastic, which can wobble around during use causing wear on the servos and the plastic parts.

I prefer button head here for aesthetics and having a sufficiently wide head without using a washer. However any M4 screw between 10mm and 16mm should be sufficient to retain the servos as there is now only 0.18mm of space between thread and servo mount holes, versus 0.75mm on stock.

No nut or inserts needed, just screw them directly into the plastic.

Here's an aliexpress link to the M4 BHCS 14mm fasteners I used:

https://www.aliexpress.com/item/10000148429238.html?

The M3 heat set insert slots to retain the lid are optional, there are M3 hex nut slots that can also be used, but they must be inserted before the servo is fitted. (see above images)

I used M3x5mm(OD)x4mm(Depth) inserts, like these:

https://www.aliexpress.com/item/1005002897983868.html?

I also added room for adhesive heatsinks on each servo. A small case fan (such as the tray fan I recently posted, or one added in a similar spot to the case) will push air around the servos, and they'll cool off even better with these cheap aluminum adhesive heatsinks. Any heatsink up to 20mm x 20mm x 6mm will fit, however I personally used 19mm x 19mm x 5mm because it's what I had available. Insert the servos first, partially screw them in, then peel and slide in the adhesive heat sink, pressing it firmly against the side of the servo. Fully tighten and align servos as usual. You will get a better result if you clean off your servo case gently with isopropyl alcohol, to remove factory grease.

Here's an amazon link to the heatsink assortment I got. You'll end up using these on other random electronics too, they're very useful: https://www.amazon.com/Easycargo-Development-Transistor-Southbridge-Northbridge/dp/B07KZG5433/

Finally, I added a little more clearance for servo wires. I use ds3235sg servos which happen to be quite short, and stock frames were pinching my wires more than I liked. There's also zip tie holes if you'd like to retain your cables a bit.

Both frames are attached in one STL, no supports needed, I recommend 4 perimeters (approximately 2mm thick walls for most people's print setup) and 40% infill for these parts (gyroid preferred, not very important).

There are two small tabs that are break off supports for the servo wire clearance, check above image.

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