Bridge City FPV

Burnside Assembly Guide

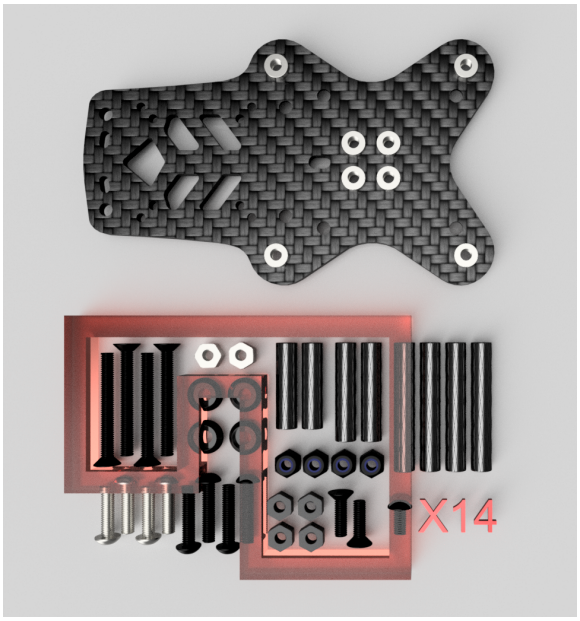
Frame Package Contents

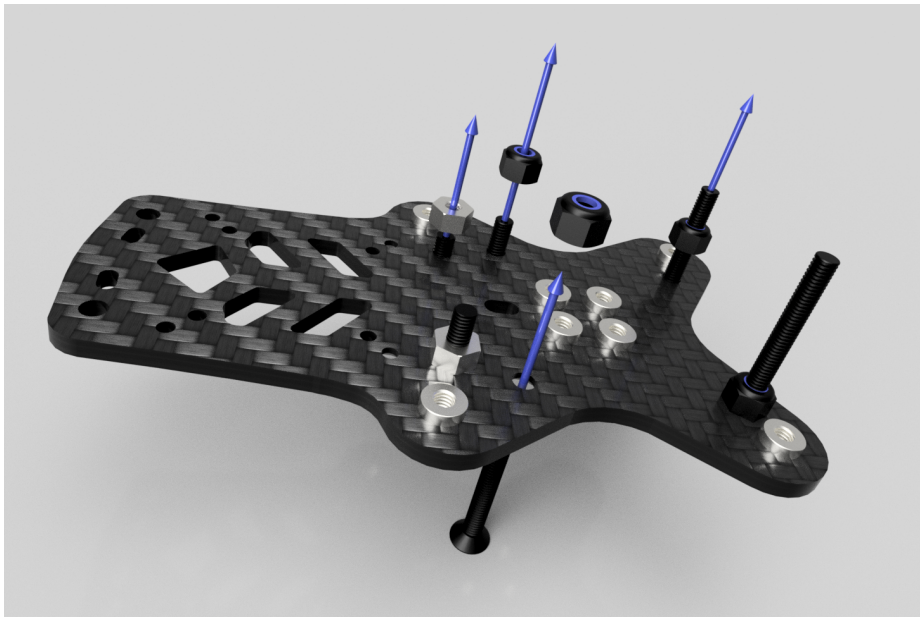
The Burnside frame includes the following items:

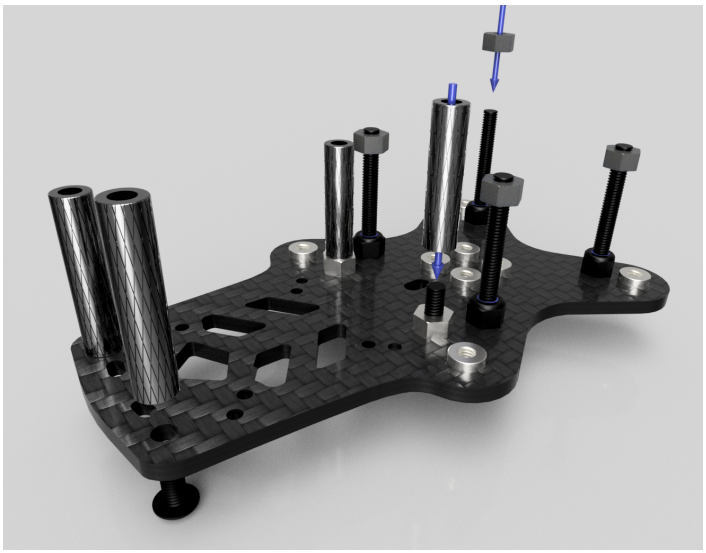
- **Carbon fiber parts-** top-plate, mid-plate, bottom-plate, 4 arms and 2 camera plates.
- **Hardware kit-** 4x m3x12, 4x m3x14, 4x washers, 4x lock nuts, 4x 22mm stack screws, 4x nylon nuts, 2x m3x10mm countersunk, 2x m3 nuts.
- **Aluminum standoffs-** 4x 30mm, 2x 23mm, 2x 20mm
- **Injection molded skids-** We know they're not perfect, molds are really expensive…

All 3d print files available here: https://www.thingiverse.com/thing:5328440

Step 1 - Assemble the mid-plate

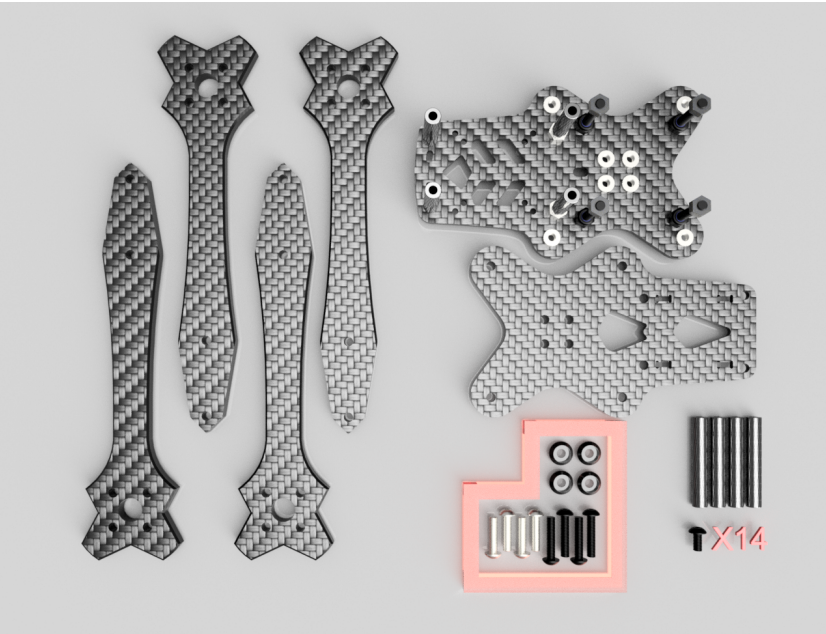






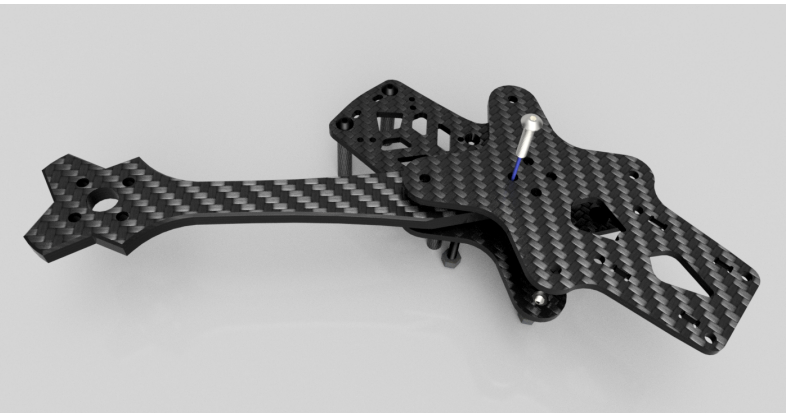
- Using picture as a guide, locate the rearmost countersunk holes and install m3x10mm countersunk screws with m3 nuts (non-locking style)
- In the remaining countersunk holes, install stack screws with locking nuts
- Install 20mm standoffs on top of the short screws with nuts, as shown
- Install 23mm standoffs in rearmost holes with short screws

Step 2 - Arms



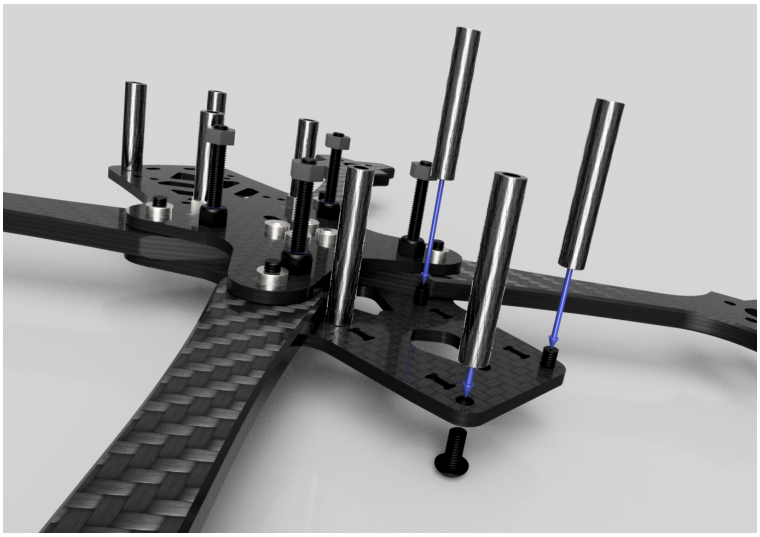
- Important! 12mm silver screws are for the inner arm holes

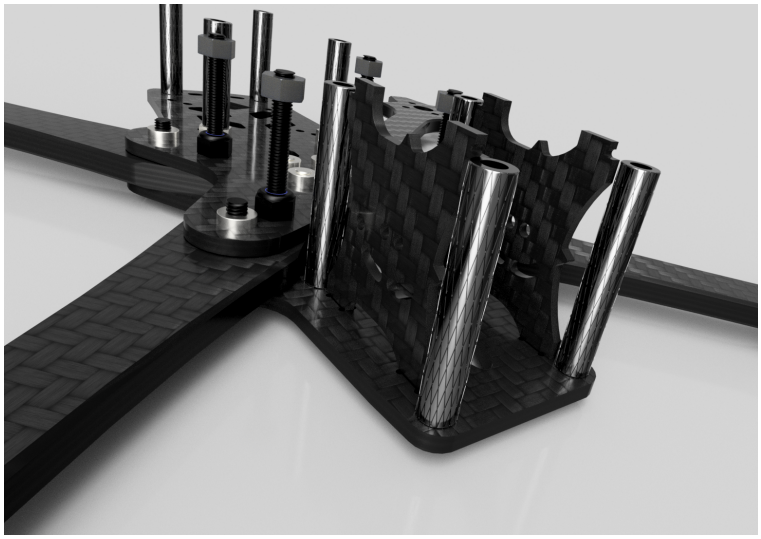
- Important! 14mm black screws must be installed with the included washers.



- Starting with one arm, the bottom plate and one silver screw, assemble as the picture indicates. Do not tighten the screw all the way.
- Install outer arm screw (black) with washer, but do not tighten all the way
- Working your way around, install each arm as you did the first. Do not tighten any arms.
- Once all arms are in place, securely tighten all screws.

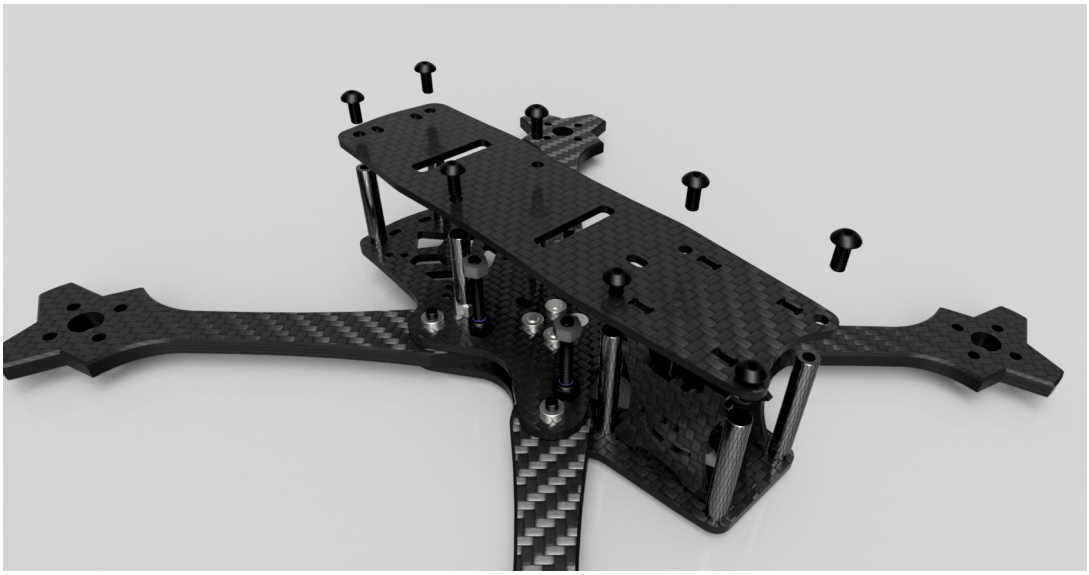
Step 3 - Front End Assembly





- Install four 30mm standoffs using short screws as shown.
- Install camera plates.
    - The cone indicators should point up and forward for the standard DJI camera and most others.
    - The cone indicators should point up and back for DJI cam with 1.8 lens.
    - The plates work with most cameras available today in one of the two above positions.
    - The slots in the top and bottom plates are intentionally loose to accommodate 19 or 20mm wide cameras.

Step 4 - Top-Plate



- Install the top-plate using 8 small screws.
    - Prefered battery strap must be installed prior to top plate installation.

Assembly and Component Recommendations

The Burnside from Bridge City FPV is designed to be as send proof as possible. It is a full out street-style freestyle rig that can take hits that not many frames can take. It packs all of the critical electronics as tightly as possible to keep the tail and nose tucked behind the arm ends, minimizing breakage. The true-x, toilet tank design is there to keep the weight of the battery and HD camera as centralized and balanced as possible making for a frame that is not only durable as heck but also flies amazing. The injection molded Poly-Propylene feet support amazing skid maneuvers as well as impressive arm end durability and motor protection.

The Burnside frame has been kept simple and intentional. Some “features” that are highlighted on other frames for ease of assembly or cool looks have been dismissed. Keeping these things in mind, this frame is not the easiest build and may not be the right choice for a first build.

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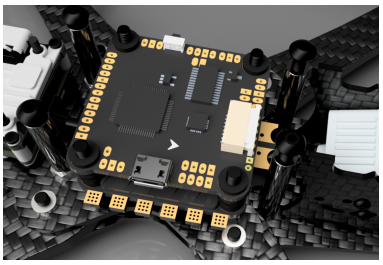
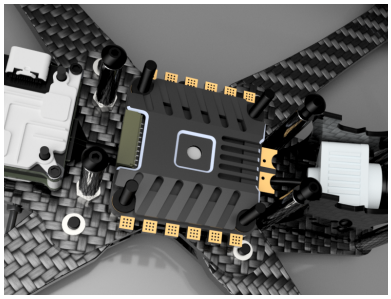
Recommendations

FC



- Designed for 30x30 stack, 20x20 will require an adapter and is not optimal.
- All Kiss format FC hardware, CL Racing F7, TMotor, and other corner to corner FC's. Larger form factor boards like the Kakute or similar will often run into clearance issues with the standoffs.
- FC cannot be significantly oversized, most all in ones will not fit without diagonal custom mounting methods.

ESC



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- High Amp rating Foxeer Reaper, T-Motor Pro, CLRacing 45amp, or iFlight (most).
- Use the recommendations above as a guide for sizing. The critical areas of concern are overall length front to back and the width of the battery tab.
- DJI or Avatar builds typically face the battery tab forward.

VTX

- DJI Vista has plenty of room while the Walksnail Avatar has just enough.
    - Avatar requires special attention as screws must be installed before arm installation.
    - Vista or Digital camera cable is usually first run underneath the ESC.
- 20x20 analog vtx or similar, Rush Tank Mini, TBS Crossfire SIXTY9

Motors

- We recommend 2207 or 2306 motors in 1900kv and 6s.
- Race wire is recommended for easy motor swaps in the field and a clean build.

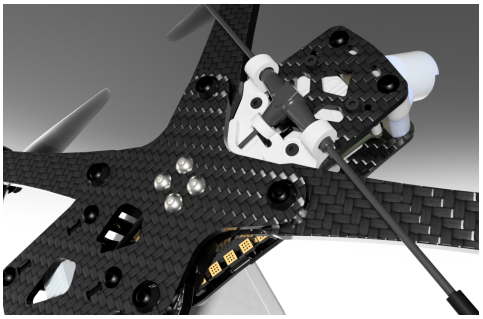
Skids

- The injection molded feet can be a tight fit. For easiest assembly:

- Press foot onto arm end, it should click in place.
- You must use 10mm long screws! (Socket head Aluminum prefered)
- Place m3x10mm screws through. This step can be tough as they are intentionally tight.
- Once all four screws are sticking out of the motor side of the arm, line up the screws as best you can and get them started.
- Start all screws a couple of turns before you fully tighten any down.
- The plastic is thicker in the foot at the inside holes to keep screws away from motor windings.

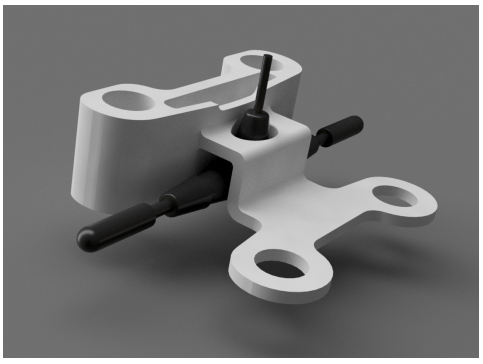
Antennas

Crossfire



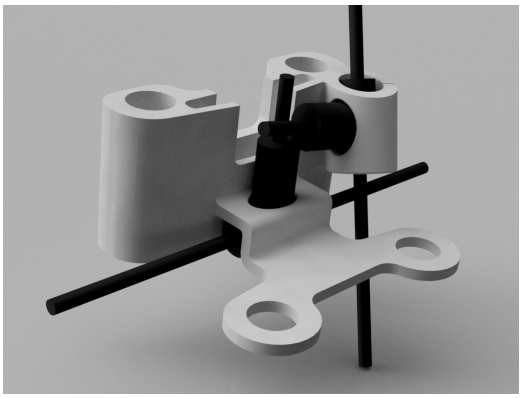
- This 3d print is held in place by the bottom plate and the 2 forward vista mounting holes. There is a hole in the mid-plate to allow the cable to pass under the ESC.
- It is easier to install if you do it before the ESC is installed.

ELRS/Ghost



- This 3d print is held in place by the 2 rear standoffs. The pocket is designed to hold a Tiny's brand 4-6s LED perfectly. The LED shines brightest with clear or white TPU but colors work too.
- The tab folds under and locks in place with the standoffs. Installation works much better with a heat gun.

Tracer



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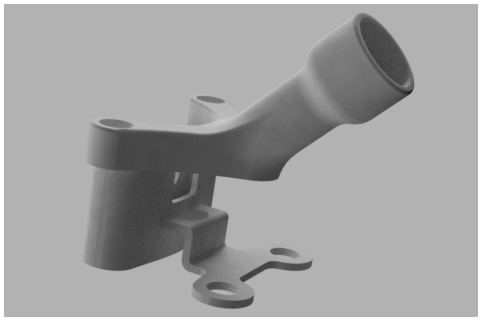
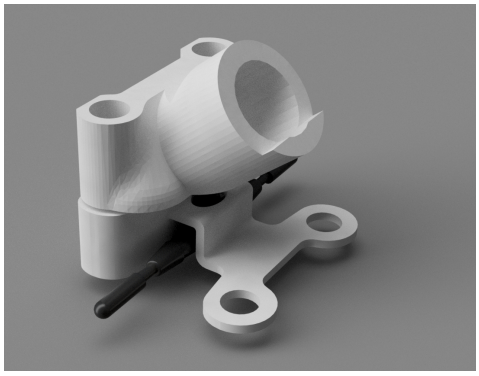
VTX Antennas

Vista/Analog

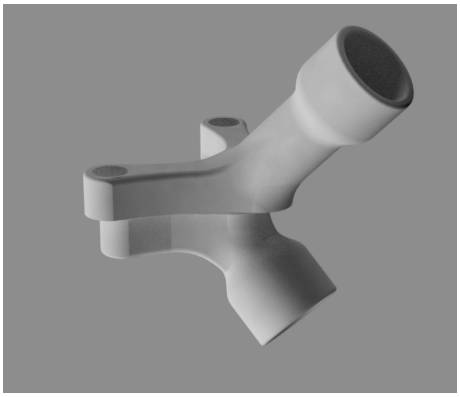


- This 3d print is held in place by the 2 rear standoffs. The antenna "legs" stretch to fit the standoffs and allow flex to absorb impacts.
- Matches with tall style rear antenna and LED holders.
- Available in 11mm and 16.7mm sizes



- This is the stubby antenna mount that keeps the antenna tucked in as close as possible.
- Matches with short style rear antenna and LED holders.
- Two sizes work with 11mm and 11.75mm antennas.

Avatar



- This 3d print is held in place by the 2 rear standoffs. The antenna "legs" stretch to fit the standoffs and allow flex to absorb impacts.
- Best performance is achieved by printing the longer 11mm vista mount for the top and using the shorty avatar mount for the bottom.