

Assembly and Use Guide for the KAPtery Picavet Kit

3D printing guide at KAPtery.com/guides

Technical support: <http://kaptery.com/contact>

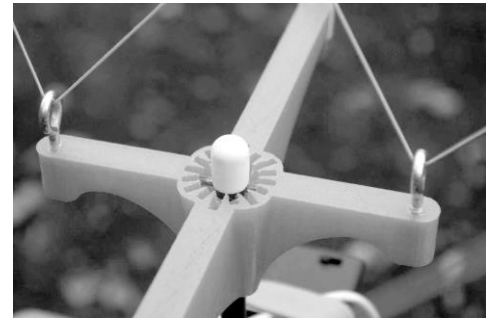


The 3D printed cross and all the hardware needed to make a working Picavet suspension.

The Picavet is the most popular camera suspension system with kite aerial photographers. The Picavet lines slide freely through four eyes on the Picavet cross. The three inch shaft between the cross and the rig acts as a moment arm to allow the mass of the camera to keep the rig level. The Picavet does not work as well on a balloon line when there is little wind and the line is close to vertical.

more stable. The top of the cross has a star of slots for locking the shaft. This allows you to quickly point the camera in any of 16 different directions.

This Picavet cross has a long (21 cm) and short (10 cm) dimension. With the long dimension perpendicular to the kite line, the rig is



The star allows the camera rig to be pointed in 16 directions.

Assembly (requires about an hour)

Attach eye bolts

The Picavet line passes through four eye bolts on top of the cross. The four eyebolts will self-thread into the holes at the ends of the Picavet arms. Screw the bolts in until the bolt ends are flush with the lower side of the Picavet arms. The eyes of all the bolts should be parallel with the long axis of the Picavet cross.

Assemble the shaft

Glue the short metal rod exactly half way through the single hole at one end of the black fiberglass shaft. Superglue works well but *dries very quickly* on fiberglass.

Push the white vinyl cap onto the end of the shaft near the metal rod. A drop of glue will ensure that it never falls off the end of the shaft.



The eyebolts should be aligned with the long axis of the cross.

Insert the shaft

Insert the completed shaft into the center hole in the Picavet cross from the top. The locking rod should fit into any of 16 positions.

Thread the Picavet line

Refer to the diagram on the last page to lace the 30 foot line through the four eye bolts, the two KAPsnaps, and the small white nylon ring. Tie a good knot to connect the ends of the line.

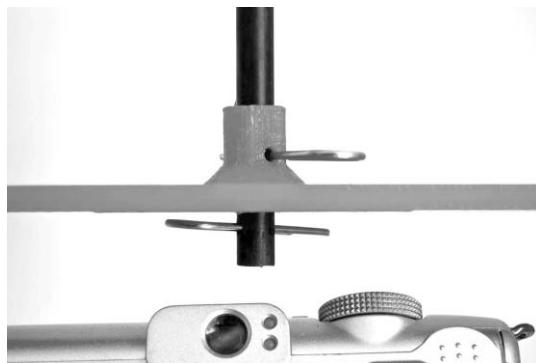
To store the line: Join the two KAPsnaps with a rubber band. Stretch the line and wrap it around the Picavet cross (a figure 8 works well). Secure the KAPsnaps to the cross with a second rubber band.

To avoid tangles be vigilant about *never* letting the KAPsnaps or the Picavet cross mingle with the lines. Store the line as above as soon as the flight has ended.

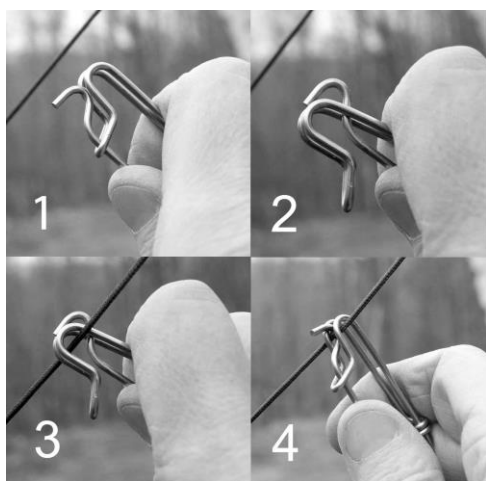
Attach the Picavet to a camera rig

The lower end of the Picavet shaft has two holes for cotter pins. Both are important to secure the rig.

1. Insert the shaft through the top bracket on the rig and insert a cotter pin through the lowermost hole until the pin locks.
2. Line up the second hole with the hole in the bracket and insert the other cotter pin so it locks.
3. Both cotter pins are important. One prevents rotation of the rig and the other prevents catastrophe if the other pin fails.



Attaching the KAPsnaps to the flying line and launching



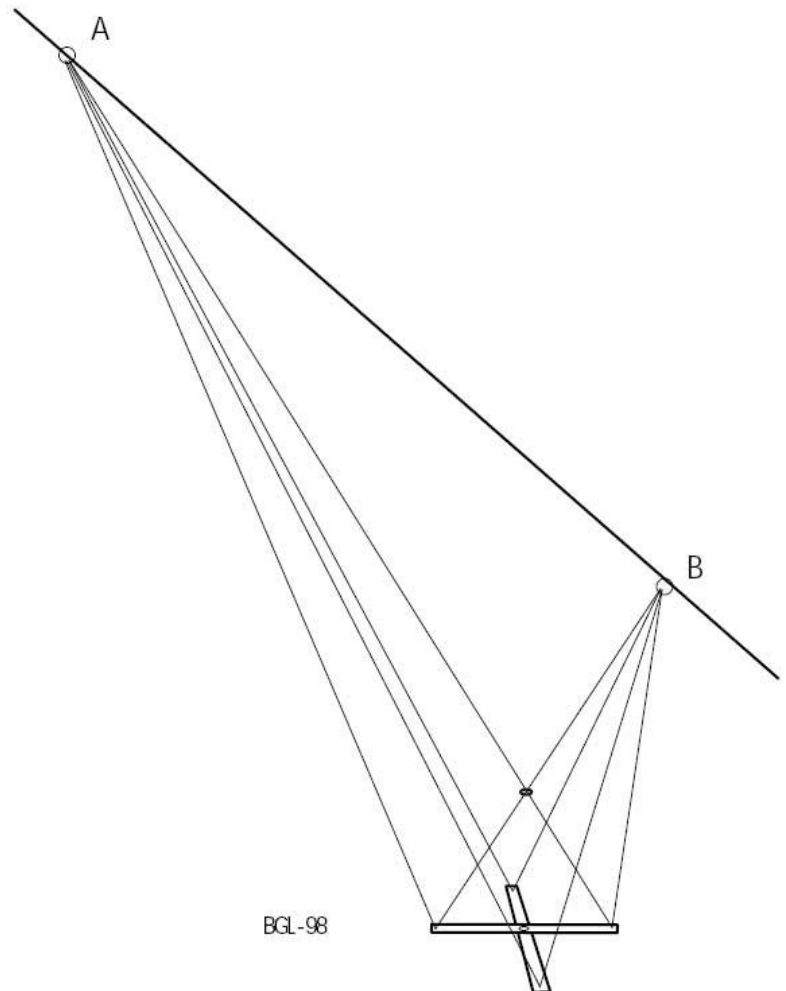
1. Attach the KAPsnaps about five or six feet apart on the flying line. (Adjust the clips with pliers for a better grip on thin line.)
2. Ensure that the Picavet lines can run freely through the KAPsnaps (remove twists) and the eyebolts on the cross.
3. Rotate the Picavet shaft in the Picavet cross to point the camera in the desired direction, then lower it into the "star" to lock the position.
4. Check camera operation.
5. Let her fly.

Caution: The Picavet cross is 3D printed from poly lactic acid (PLA) which will deform if it gets too hot. *Don't leave the rig in a closed car in direct sunlight on a hot day.*

Lacing diagram for a Picavet suspension

After Brooks Leffler. Adapted from a design by Pierre L. Picavet, France – 1912

- A and B are the KAPsnaps and are mounted 5 - 6 ft apart.
- Be sure the line runs freely through points 1 to 4.
- The line can also run freely through A and B, or the line ends can be tied to A or B.
- The long axis of the Picavet cross (3-4) is perpendicular to the kite line.



- The camera hangs below the Picavet cross.
- The long axis of the cross is 3 to 4.
- The cross is connected to the flying line by a continuous 30 foot length of braided Dacron® line.
- KAPsnaps or other attachments are clipped on the flying line at A & B.
- Screw eyes (or pulleys) are at 1 through 4.
- The suspension line is passed through A, then laced as follows:
A – 1 – ring – B – 2 – ring – A – 3 – B - 4 and back to A where the two ends are tied together or tied to A.

