



NAGASAKIYA HATA

A Fighter Kite Plan from Peter Stauffer

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The kite and resulting plans and instructions, I have made because of a request by Uli Wahl and Rico Argent, as Rico does not have access to all the traditional materials to make a Hata. This meant that he could not fly and experience the wonders of these beautiful fighters from Japan. I have tried to reproduce the Hata as close as possible, in modern materials. In doing so, if I have offended any of the Japanese kite makers, I am truly sorry and I hope they accept my deepest apology, as my intentions are only honourable in an effort to introduce the kite to people who are not fortunate enough to experience a traditional Hata.

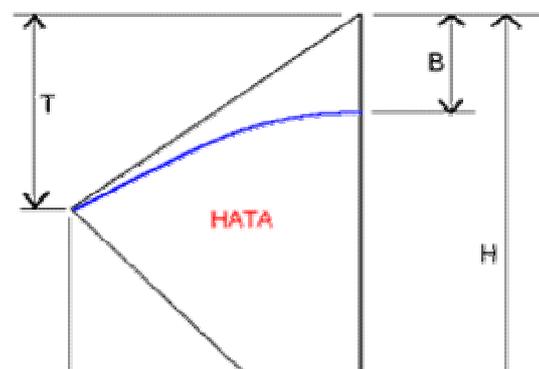


MEASUREMENTS FOR 3 DIFFERENT SIZE, NAGASAKIYA HATA'S MADE BY 3 JAPANESE KITE MAKERS.

(I do not know the kite maker's names.)

	NO 1	NO 2	NO 3
W	387	380	385
H	585	593	595
T	266	276	273
B	150	146	155

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BOW

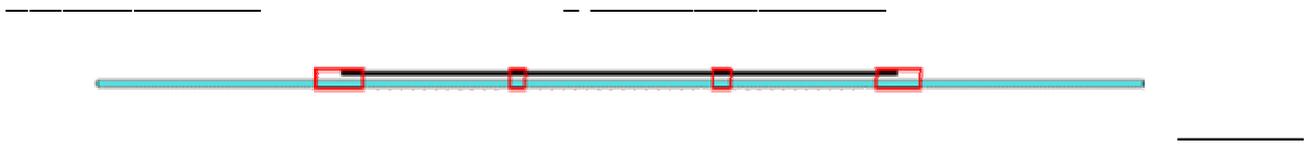
The Japanese refer to the frame of the kite as its bones.

Main Bow section: - 3mm Fibreglass

Centre Bow Section: - 2.2mm Carbon fibre, 380mm long

Joining Tube: - Neoprene fuel tube, 2 off 5mm long,
2 off 10mm long

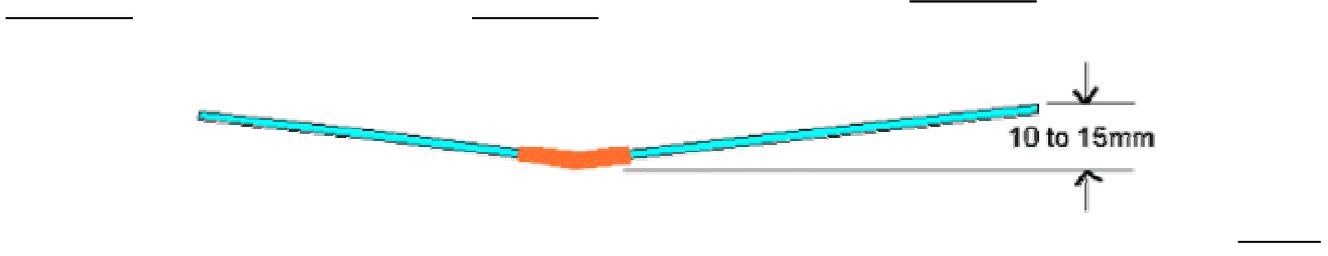
Neoprene tube holds the two rods together. This bow will give you the compound curve in the bow that is close to the bamboo Bow. It can also be used for trim adjustment for straight-line flight by offsetting the carbon rod 5, 10 or 15mm to one side of centre of the main bow.



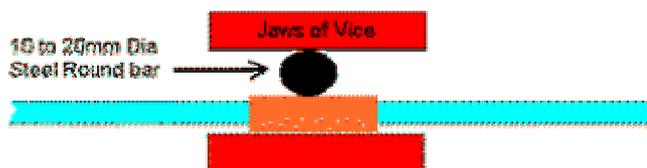
SPINE

Main section: - 6mm Fibreglass rod

Bending Tube: - Brass 25mm long



Bending Spine



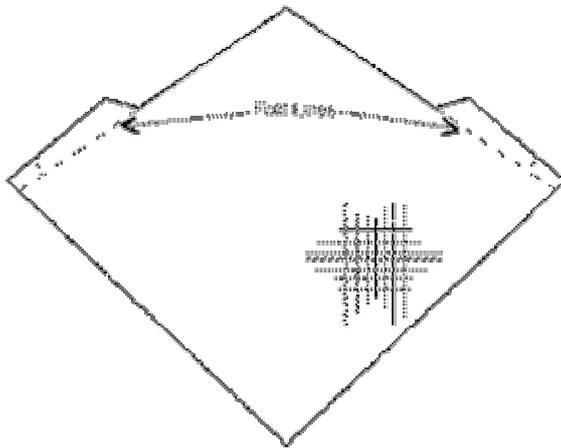
1. Mark spine at distance T.
2. Slide brass tube onto spine.
3. Glue tube onto spine with super glue.
4. Before glue dries, place spine horizontally in vice with round bar placed vertically across the spine at distance T.

5. Tighten vice to kink tube and spine, bending the bow 10 to 15mm.

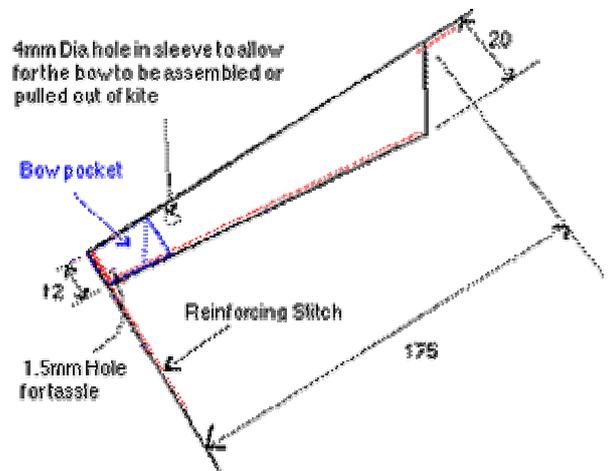
SAIL

Ripstop Nylon :- Colour, Red, White & Blue. Black can be used also.

SAIL SHAPE Detail



BOW POCKET & SLEEVE Detail

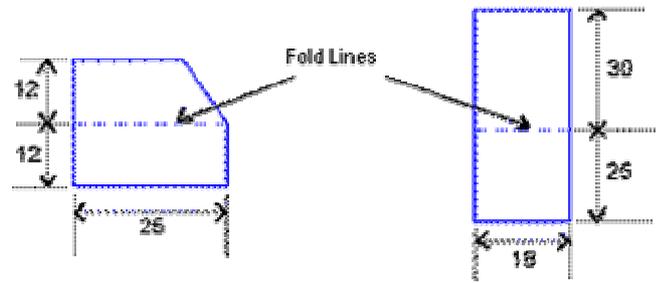


Spine Pocket Detail



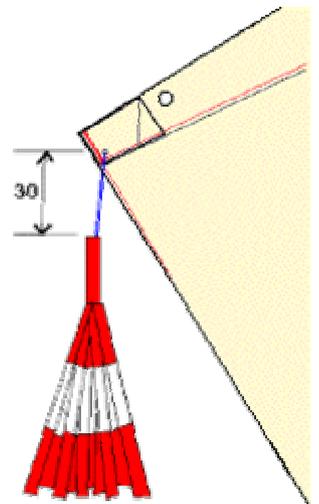
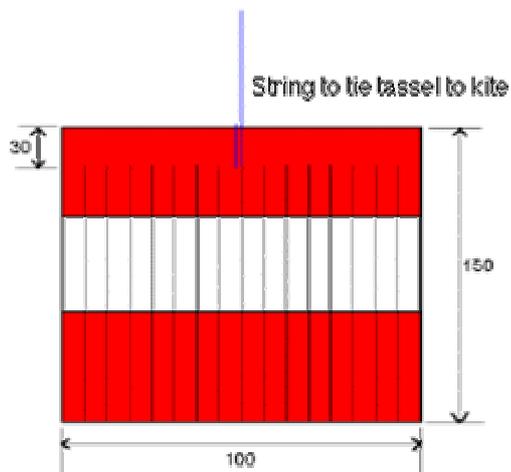
Bow Pocket
cut from 4oz
dacron

Spine Pocket
cut from 4oz
dacron



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Tassels



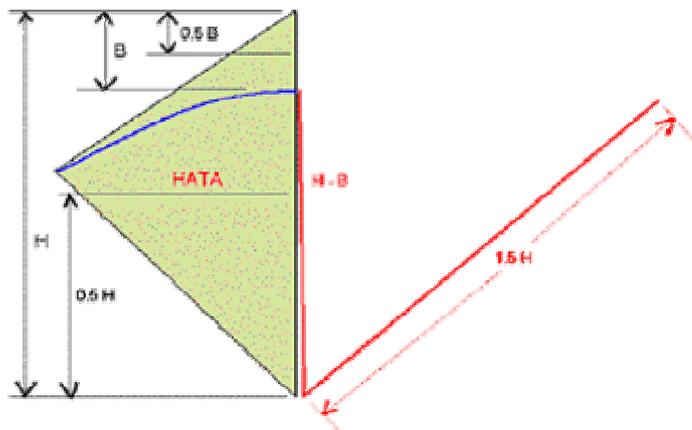
1. Using 3 strips of Ripstop nylon (2 Red, 1 White), tape together with double-sided tape and sew with straight stitch to form a rectangle 100 by 150mm.
2. Except for the top 30mm, cut the rectangle into 6mm wide strips with a hot knife as per left hand drawing.
3. In the centre of the rectangle, loop the string down through the middle cut, then up the back of the material and back down beside itself, as per left hand drawing.
4. Using super glue on half of the 30mm uncut section, fold and glue the material in half width ways, gluing the string to the nylon at the same time.
5. Before this glue dries, place glue on the 30mm uncut section, and from the folded side where the string is, roll up the tassel.
6. Melt 2 hole, one in the bottom corner of each Bow pocket as per right hand drawing.

7. Tie the tassel to the ends of the bow pockets with 30mm of string between tassel and kite.

BRIDLE

The traditional Hata uses a two -leg bridle.

TOP BRIDLE:- $(H-B)+1.5*H$

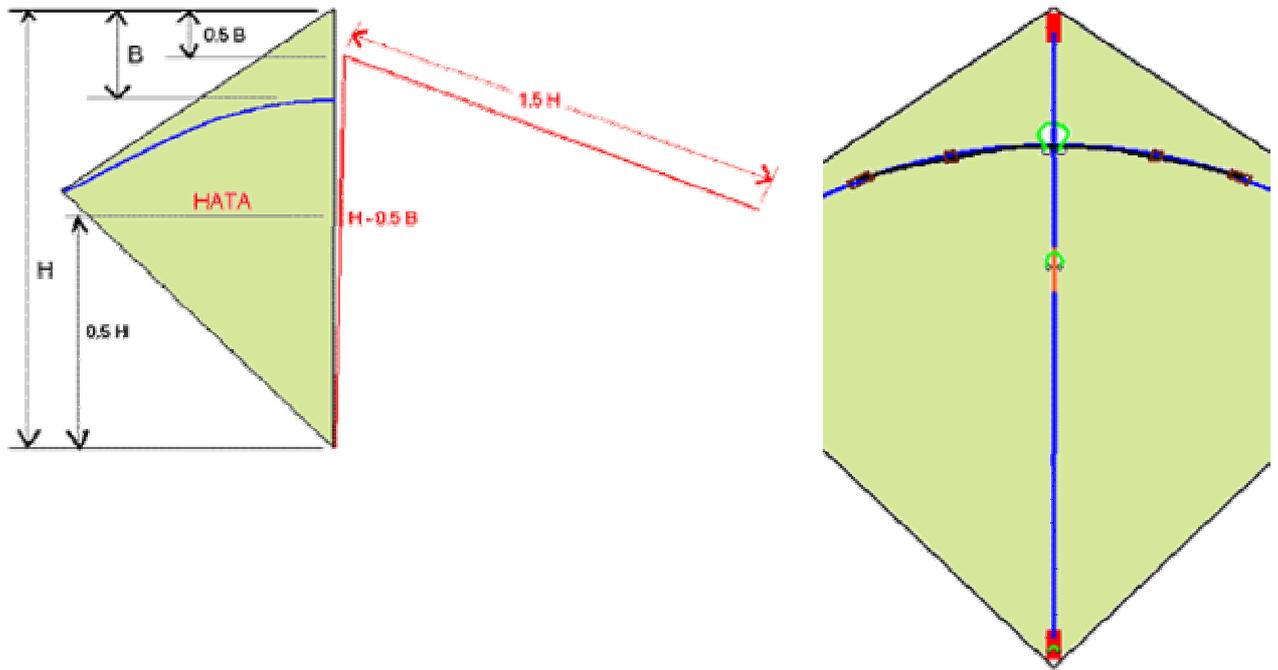


Bridle line 50lb breaking strain.

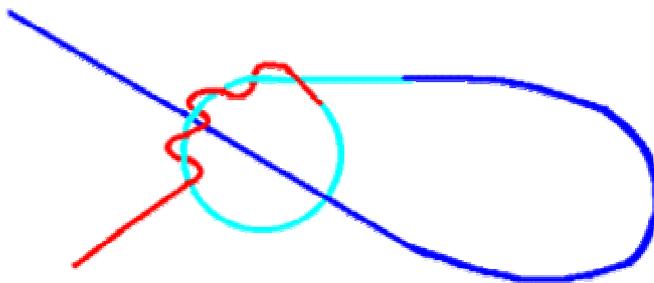
The Hata does not fly as well from a short bridle.

With a hot needle melt 6 holes, 3 on either side of the spine for the bridles.

BOTTOM BRIDLE:- $(H-0.5B)+1.5H$



The Blood Knot

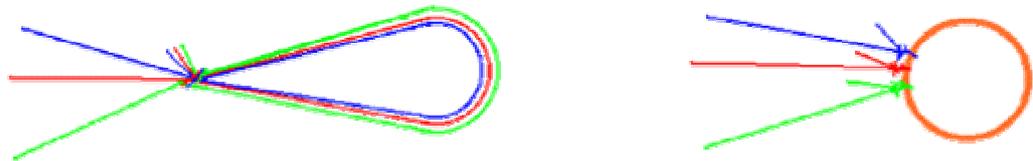


Tie the bridles to the kite using a triple overhead or blood knot around the bridle line, as per Detail 9 and pull bridles tight. This knot will hold firm, but will still allow you to slide it up the bridle line and loosen the bow from the spine to remove bow for transport when required.

I have changed the colour of the line to make it easier to see how the knot is done.
 To loosen the knot, with one hand grab the tail and wiggle it side ways. At the same time with the other hand pull the bow away from the spine till they are about 25mm apart. You can now remove the Bow for transport.

I used a bamboo Spine 7 by 4mm for my Hata. The round fibreglass spine will rotate around in flight if a two-leg bridle is used. To stop this happening use a third bridle tied to the bend in the spine at distance T as per Detail 10. SPINE MUST BEND FORWARD, to copy as close as possible the natural bend of a bamboo spine.

Measure and mark, top and bottom bridles to length. Then add the third bridle making sure all three bridles are of even tension when there is a 10 to 15mm bend forward in the spine. Next, loop the ends around and tie all lines with a single overhead knot as shown on the left.



Alternatively use a metal ring, tying the top and bottom bridles first then the middle one tied to the ring in between the other two knots, as shown on the right. I have not found a need to adjust this bridle. If you want to adjust the bridle then make the top and bottom bridle's, one line and tie it to the ring with a larks head hitch. Tie the middle bridle to the ring in the middle of the larks head hitch.

When bridled, hold the wingtips against your fingers, with the back of the kite facing you. Push your finger inward, flexing the bow several times. At the point where the bow crosses the spine the bow must not move up or down the spine when you are flexing the bow.

FLYING LINE

Flying line 20lb minimum breaking strain.

When a bamboo and washi Hata is in flight, the sail does not flap. This combined with the minimal bend in the Spine and the strong Bow makes it a very fast, strong pulling kite.

The skills and knowledge I have used to make this kite have been

MEASUREMENTS FOR A TRADITIONAL FULL SIZE HATA

W	490
H	870
T	365
B	190

acquired from many places over years of my kite making. It is impossible for me to remember where they all came from for these skills have been passed down from Guru to Chela for centuries in one form or another and because of this I do not put copyright on this information as it belongs to everyone. All that I ask of those who are wanting to use this material is that they give proper recognition to where they acquired this material as I have tried to do in the reference and acknowledgment sections.

Have a wonderful time with this magical fighter from Japan.

REFERENCES

Manjha News No 8

ACKNOWLEDGMENT

Abdul Rauf, my kite making Guru, for his patience while teaching me the techniques to make Indian Fighters.

Peter (P-air 2) Lloyd, for showing me how to sew almost as neat as he can (well not quite that good) and for the spine bending technique.

Masami Takakuwa

Philippe Ravel

Masato Horikiri

All past and present Japanese kite Masters

All other past and present fighter kite masters

All modern kite makers
