

The Kantun S electronic components are all centrally located as shown between the mainsheet post and the mast well. The starboard (bottom) well is enclosed and the port side is open to the hull interior, and here the plastic lid is removed. This one has no switch, so the system turns on when the battery is connected via the yellow XT-60 plugs.

Kantun S – Sheeting System Setup

By Bob Wells with Zvonko Jelacic's review & approval

Even if you purchase your Kantun S with the interior components pre-installed and the sheet lines set at their proper length ready to fit the Jelacic Sailing rig, eventually you have to maintain the components. When I look at the interior of my Kantun S it is not obvious how to maintain it. Yet when I see Zvonko working on the sheet lines inside my boat it is a fast smooth operation not stressful at all. My goal is that this document will help us assemble and maintain our boats in top condition like Zvonko designed it. Videos by Zvonko and the drawing by David Jensen, from my Seattle MYC, are your key visual aids.

Zvonko developed his interior sheeting/electronic systems for his CRO PikantoRG and continued with it on his Kantun S as he finds it dependable plus he likes the fast gybes the large spiral drum will provide. I find the cord he uses for sheets very durable and small diameter for low friction. Still I was surprised when Zvonko told me that he hadn't touched the interior of his boat for two years at the 2015 King's Regattas in Thailand. If I don't touch my boat after two years of sailing, I will have forgotten how to maintain it. It is good that I can fall back on this document for reference. It would be even better if I practiced reassembling my sheeting/electronic systems so I'm efficient in making repairs if ever needed at a regatta.

This is a relatively long document because it is written for newcomers to radio sailing or Kantun S ownership. More experienced radio sailors will no doubt skip over much of this material.



The Interior Components:

- RMG Model 280EF (or the new 290EF) sail winch – the fast option from RMG.
- RMG 55ZS4st drum (again the “spiral” fast one) provided by Jelacic Sailing. The drum is built by RMG to Zvonko’s specifications, and it is not self-tensioning. Jelacic Sailing supplies the drum with springs for the return line tension and the sheet line. More later on both springs.
- 80 lb. cord (Zvonko uses Berekley 0.66” diameter Fireline Braid 80lb.) for the drum’s pull and return lines with two (2) M2 nuts to terminate the two lines.
- 40 lb. sheet cord (Zvonko uses Berekley 0.33” dia. Fireline Braid 40lb.) Note the sheet cord is less strength so it breaks first if the system binds as a failsafe. It is easier and faster (and potentially cheaper) to replace a broken sheet line.
- A swivel is provided with your boat that links the drum’s pull/return cord with the jib/main sheets.
- Futaba BLS155 rudder servo (Note that production has stopped for this model, but Zvonko can still supply some, while he sources a alternate). A substitute with similar performance is fine also. Zvonko prefers this expensive fast strong servo because it centers accurately and is very dependable. He prefers to sail with the rudder centered and the rig tuned so it responds to lifts/headers with the rudder centered. (This is the opposite technique from those that chose to “drive” the boat ala Brad Gibson, which performs fine with cheap analogue servos.)
- Receiver/battery/transmitter are all typically added by the owner, but available from Jelacic Sailing.
- On/off switch is optional, and Zvonko chooses to not have one on his boat, as it is one less thing to go wrong and to save a few grams. If you do order one, Zvonko wires it so if it fails you simply unplug and eliminate the circuit so you can continue sailing. Also you can operate the button with the lid on, a nice feature in rain.

Your Kantun S “goals” include:

- Jib boom will swing from pointed at shrouds to about 85° from center.
- Main boom will swing from centerline to touching shrouds.
- To achieve this the RMG power and return lines need 280 mm of sheet travel from “fully sheet out to fully sheet in” positions. If everything is OK, the sheet spring/swivel assembly will be 10 mm short of the forward block and aft fairlead, and you will use EPA (end point adjustment) on your transmitter to refine the sheet travel.
- Rudder will swing from centerline to about 50° from center (a little beyond pointed at transom corners). For more on this see Zvonko’s “Instructions for Use” document. (Rudder setup is not part of this.)

Suggested Tools:

- Sharp scissors to cut Spectra cord, such as those sold to fishermen. (My preferred alternate is the Berekley Hot Line Cutter because it cuts quickly and seals the ends of the chord.)
- Cigarette lighter. This is to melt your Spectra cord into a “ball” on the end. Zvonko much prefers knots held by this “ball” (explained in video below) to knots secured with CA glue.
- Phillips screwdriver (to remove/install the drum).
- Tweezers help me grab an errant line in the boat, but Zvonko doesn’t seem to need them.
- Lubricating oil to occasionally lube metal parts and/or a rust preventative like Corrosion-X.

1. Installing/Removing the RMG Sail Winch: It is a tight space and you have to rotate it to install or remove - see the pictures below of how to rotate into place from Zvonko’s “Instructions for Use” document that are self-explanatory. Also available is Zvonko’s step-by-step youtube.com video of the RMG installation (2:10): <https://www.youtube.com/watch?v=T9gxyRGpLo4>.



2. Pre-installing the Sheets & Pull line: Zvonko's step-by-step youtube.com video of pre-installing the sheets and pull line is self-explanatory (3:35): <https://www.youtube.com/watch?v=1ZpMm-pgVMU>.

1:20 **Installing the forward turning block:** *The forward turning block is best placed with a custom prong tool and held in place with light sheet tension. Shake the boat without sheet tension to retrieve the block. (Note that earlier Kantun S models such as my hull #9 have the forward block fixed, so I keep it well lubricated and coated with Corrosion-X so it has a long life fixed in that position.)*



This is the Jelacic Sailing “sheet spring” for gust response, a strong little stainless spring with the resting coil about 7mm long. Bow is to the right as is the pull line leading to the bow block. The swivel is aft, and the return line & sheets all tie off aft on the swivel. The pull line ties at both ends of the spring to allowing it to expand up to plus 20mm in a gust.

3. Installing the Rx: Zvonko's step-by-step youtube.com video includes a few tricks to make this more efficient (2:43): <https://www.youtube.com/watch?v=-XqFGaTXAr0>.

4. Installing the Drum with Pull/Return Lines: Zvonko's step-by-step youtube.com video includes a few tricks to make this more efficient too (12:01): <https://www.youtube.com/watch?v=h5AYKZnsyzc>

The following written step-by-step summarizes this video for dummies like me:

0:00 **Attach aft spring:** *The video begins with attaching the return line tension spring to the aft deck with 40 lb. cord – final adjustment is later in this video.*

0:45 **Attach the power line to drum:** *Loosely attach the 80lb pull line to the drum via the underside hole on the spiral side using an M2 nut. Adjust the knot for max sheet-out as shown. This means the RMG is set at max sheet-out (Tx trim lever stays at max sheet-in); with the drum on the RMG the pull line runs forward and the knot is positioned forward; and finally the sheet spring/swivel is spaced 10mm from the stainless steel guide (located in front of mast). Connect the pull line to the drum with a “ball” knot as seen on the video.*

4:05 **Route the return line:** *80lb x 1m(+) long return line is routed as shown (or see drawing at the end of this document) then attached the aft end of the sheet spring/swivel with just two (2) half hitches (as it is lightly loaded). Route the return line aft (over RMG and under the drum) through the tension spring and then forward to the drum (outboard side) – see the video and/or the drawing below. Leave it loose for a moment.*

5:40 **Connect the jib and mainsheet:** *Tie the jib and main sheets to the aft end of the sheet spring/swivel, paying attention so the run fair. Zvonko just uses two half hitches and leaves a few cm of extra length for later adjustment if the sheets shrink.*

6:43 **Connect power line with drum:** *Wind the power line onto the drum spiral and place the*

drum into full sheet-in position (drum knot is forward). Max sheet-in is later fine-tuned (eased slightly) by the radio transmitter.

- 7:55 **Connect return line with drum:** The drum is removed to tie the return line to the same M2 nut as the pull line used with another “ball” knot. Note the return line leads to the outboard side of the drum like the pull line. The drum is reattached adding another return line loop on the drum (counter-clockwise) if needed for light tension.
- 10:30 **Adjust the aft line tension:** Finally adjust the aft line for proper tension to where the spring is about 4-5cm long, and tie off the knot to the deck.



The receiver (or Rx) in a Kantun S ready to sail: rudder servo connected to Channel 1, RMG to channel 3, and the RMG setup lead (single yellow wire) is stored on a ‘positive pin’ on channel 6 (or any open pin on the middle row). To set the RMG’s EPA read 0:45, 2:50, and 3:45 below. For reference the Rx signal pin is any open pin along the inside row (left of positive pin here), an industry standard. (For this photo the Rx is pulled from the Velcro and set horizontal.)

5. Final Sheet Setup Using the Tx: Zvonko’s step-by-step youtube.com video completes the job (5:32): https://www.youtube.com/watch?v=E4SIsplH_Ms.

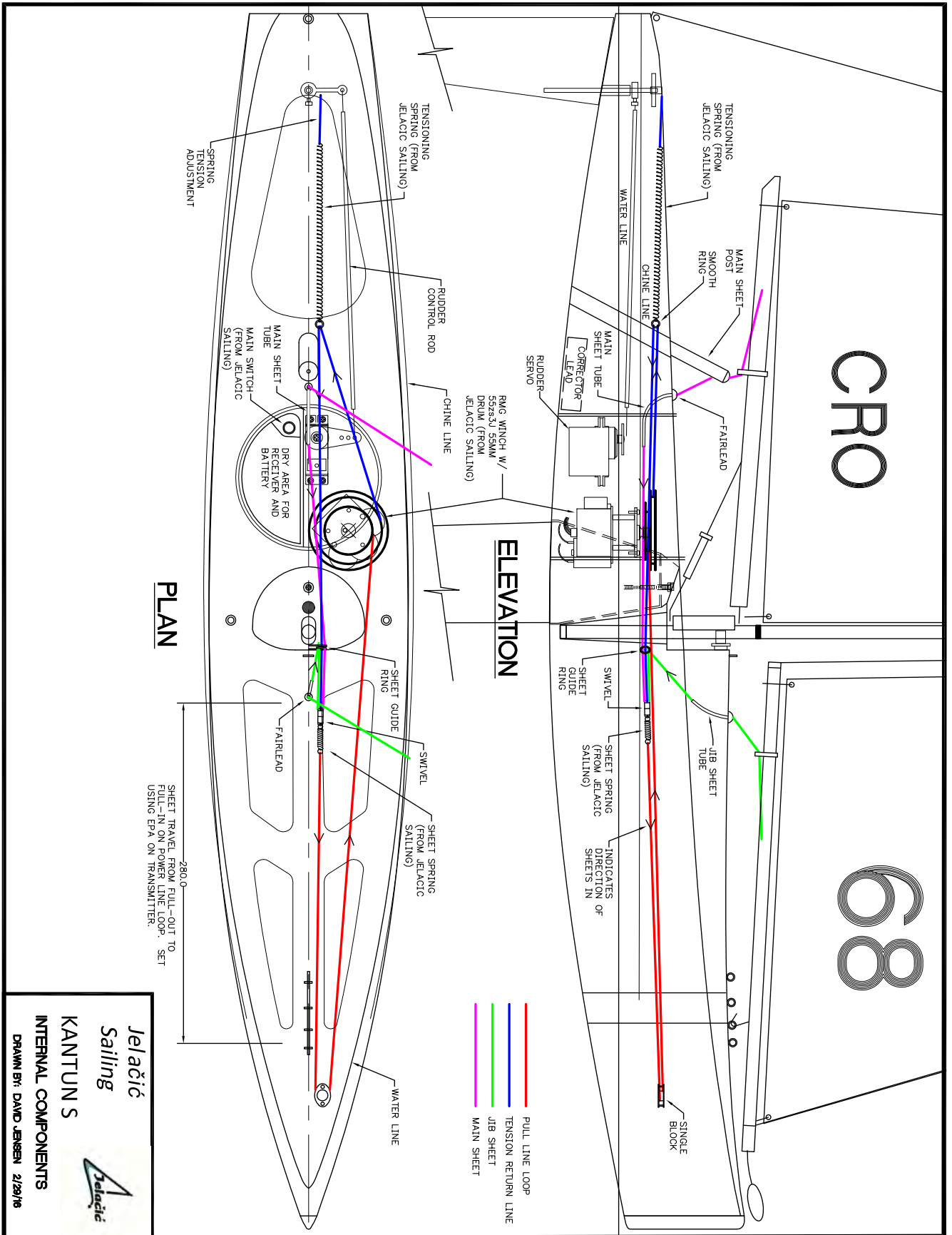
There is no Zvonko commentary on this video, but the following summarizes each step and fills in detail. Note that Zvonko recommends the Futaba T6J transmitter, used in this video demonstration: (The video begins with the drum removed and the pull/return lines and sheets connected, although sheet length is yet to be set. Link or bind your transmitter (Tx) to your receiver Rx first - not shown on the video.)

- 0:00 **Mark reference points:** Mark on the foredeck reference points for sheet length at 280mm and 350mm measured from the front bumper.
- 0:17 **Reverse the RMG:** Using the Tx the RMG (Channel 3 on Tx) direction is reversed.
- 0:35 **Preset the Tx’s EPA:** With the Tx still in Channel 3, the Tx’s end point adjustment (EPA) is preset to 120% for both full ‘sheet In’ and ‘sheet out’.
- 0:45 **Preset the RMG’s EPA** (This is an important failsafe to limit the powerful winch’s movement to protect your boat if things go wrong somehow): Connect the RMG to the battery - note the RMG’s ‘signal’ when connected. Then connect the RMG setup lead to an Rx signal pin (*) to set the EPA for full ‘sheet in’. Wait about 3 seconds for the ring tone confirmation, and move the stick to full sheet out to get that ring tone confirmation. Move Tx stick back to ‘full in’ to complete. Leave the setup lead in the signal pin for now.
- * The Rx signal pin is any open pin along the inside row, an industry standard. Later you will store the setup lead on the Rx positive pin, which is the center row.
- 1:18 **Place drum with power line:** The drum is set in place on the RMG with the power line attached on spiral part of drum. The video shows how Zvonko spins the drum

- counterclockwise as needed until it all fits. The power line/drum connection faces forward when properly placed.
- 2:17 **Install return line:** With some tension on the aft spring set the loose return line on the drum, running clockwise around drum. (Note I find it easier to remove the drum to wind the return line with my fat fingers.) Then the aft line is adjusted to proper spring tension – Zvonko recommends 4-5cm long. Tie the knot off at the deck.
- 2:50 **Set RMG EPA for ‘full out’:** Slowly and carefully move the sheets to full out with the Tx stick, and confirm that the sheet spring/swivel is spaced 10mm from the stainless steel guide. Set the RMG at 120% EPA by simply disconnecting the setup lead from the Rx signal pin. It is best practice to now store the setup lead on the Rx positive pin, which is the center row.
- 3:25 **Set jib sheet length for ‘full in’:** Move the sheets to ‘full in’ with the Tx, and readjust the Tx EPA to 100% for ‘full in’ and ‘full out’, leaving the Tx stick at ‘full in’. Jib sheet length is measured to the mark 280mm from the bow and tied there with a loop knot.
- 4:07 **Set jib sheet length for ‘full out’:** Move the sheets to ‘full out’ with the Tx, and the Tx EPA is readjusted to where the loop matches the forward edge of the bow bumper – in this case it required 108% EPA. Confirm both in and out settings hit their marks, and we’re good! Jib length is set.
- 4:50 **Set mainsheet length:** Mainsheet is fed through the mainsheet post; length is measured to the 350mm from the bow and tied with a loop knot. The main sheet is set.
- 5:27 Zvonko says “total” – sheeting system setup is complete. And we don’t have to listen to Zvonko’s incessant Croatian radio music anymore!



Former IOM Worlds Champion Zvonko Jelacic sailing his Kantun S at the 2013 Worlds on the briny Med in Sdot Yam, Israel – he finished 5th at this one. Hanneke Gillissen © Photo.



Jelacić Sailing
 KANTUN S
 INTERNAL COMPONENTS
 DRAWN BY: DAVID JENSEN 2/29/16