

REAL SWORD TYPE 97 – REVIEW (as of Oct 13, 2008)

BY

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This is my personal review and impression of the gun. Please note that this is a work in progress so I will be updating this as my experience with this gun grew.

After 6 months of waiting it finally arrived! And the irony there was I'm off to Japan the next day for a business trip. So again another one week had passed before I finally had the opportunity to have a closer inspection of the gun.

When I first opened the cardboard box, I took out the gun and held it the feel was totally different from the other AEG I have. Solidly built from muzzle to butt pad!

Without looking at the nice takedown manual the came with it, I was able to field strip the gun in just a matter of seconds! (That's what you get from reading articles on the gun for six months).

Appearance and handling:

The looks can be very deceiving!!!

I have several friends who are in military service really thought that the gun is real, from the feel, weight and even the smell! Its only when you look into the mag well that you will realize that it's just a replica! The steel barrel and frame is solid as rock and has the coating that can really take up the abuses. The nylon parts are very sturdy and inspite of the fact that the entire steel assembly is being held to the nylon parts by two steel pins, after so many assembly and disassembly I have not seen any wear on the holes of the nylon lower receiver.

The gun's balance is at the rear of the hand grip, but once shouldered in a firing position the front end is light and can easily be maneuvered like in CQB scenarios. At 3.2 kgs it's in the same weight class with my all metal M4 with full load out.

Range and accuracy is the plus factor of this gun even at stock format. Although, having said this, I have to do some field test with measurements.

But from what I have experienced I can easily outgun some of my friends L85s and M16s with barrel lengths in excess of 480mm.

The motor:

I also replaced for comparison purposes the stock high torque motor with an ICS T3000, the swap is relatively easy but the problem is that the ejection port cover is difficult to close due to the very strong magnet of the T3K. Comparing between the two motors at different spring settings showed only a slight increase in the ROF using the T3000 so I replaced back the stock motor because I missed the “clank” sound when you operate the cocking handle.

One interesting to note is that the T3000 seems a bit longer than the RS motor because when I tried fitting the spacer at the back end the “play” of the motor against the housing was gone plus the noise of the gear box had increased indicating that the mating of the bevel gear/pinion is too much that would cause premature wear on gears.



Hop up Bucking:

The hop up bucking or rubber is different from version 2; the lip on the bucking for the RS is slightly longer than the V2 by as much as 3mm. But it seems that this design has a better sealing. I tried searching on the RS website for a separate hop up rubber/bucking but what they got on stock is the entire assembly



(Left is a V2, Right is the type 97)

Air Nozzle:

The air nozzle is similar to a V2 because I tried it and had no difficulties in loading the BBs nor FPS was affected.

Inner Barrel:

Stock barrel is made of brass has a 480mm length x 6.05 (using analog caliper I guess), and fits snugly inside the outer barrel. I had no difficulty changing with the PDI 6.01mm x 455mm as the outside diameter is same. My next up grade for this is by using a PDI 6.01 by 509mm but I have to takeout some steel in the stock flash hider to allow the barrel to pass through.

Gearing and gear box:

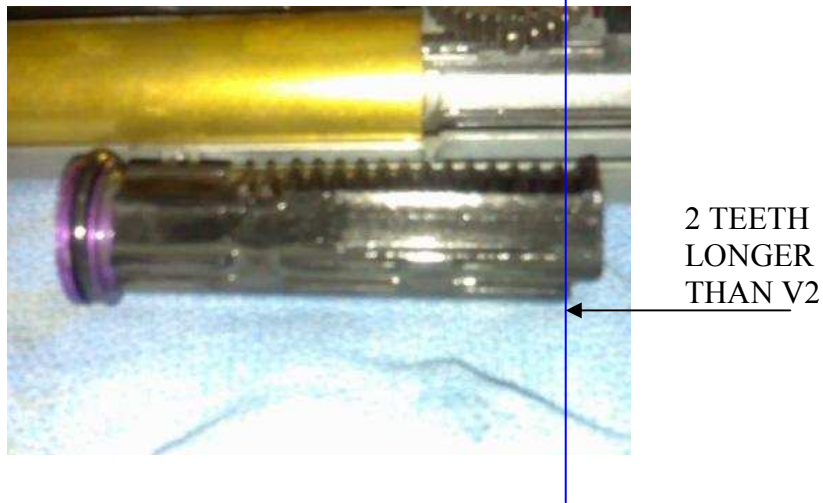
RS really took the time to design the new T1 gear box. It's so compact and yet strong enough to take the pounding of SP 140 springs. Disassembly is so simple that it only requires the removal of one screw at the end of the gear box to pull it out of the gun. The gears are of high quality steel material and the sector gear is of one piece construction in which the gear teeth extends the entire thickness of the sector gear.

Spring Guide:

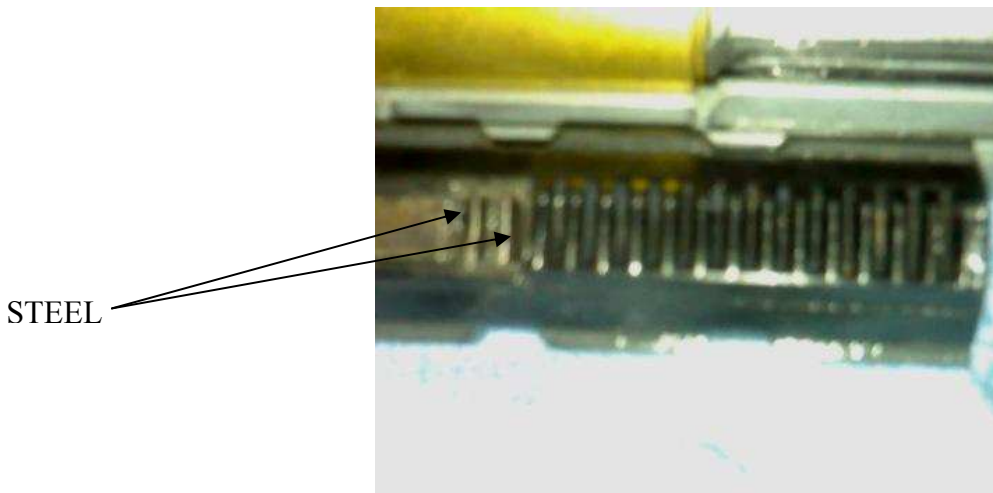
The stock spring guide is of a version 3 type with no bearing swapping with a bearing type V3 is so simple as to removing the screw from both, transferring the lug guide and screwing back.

Piston Body:

The piston body is made of polycarbonate material and much longer than the V2 by as much as 2 teeth and the last 2 teeth are made of steel rather than usual a single tooth.



As shown below (sorry, the picture is not clear) the condition is pristine even after several months of use with an SP 130 spring. From what I have seen, this is a very sturdy piston body I have seen so far even outlasting a deepfire with Ti tooth having the same setup.



The modifications:

Below are the list of modification I made in the last several months and the performance:

- A. At stock configuration FPS is 295 ave. @ 0.2gr BB
 - 1) Changed the stock spring guide to a version 3 guide with bearing.
 - 2) Replaced the stock piston head with an ICS piston head with bearing (The stock piston head has no bearing).
 - 3) Changed the stock inner barrel to a PDI 6.01 455mm length, I was hoping to get a 6.01 x 480mm (stock length) but my favorite airsoft shop has no stock at that point I time.
 - 4) Change the spring with guarder SP130 spring (settled)

- B. After the above modification the FPS went up to the following @ 0.2gr BB
 - 1) Using stock 480mm length barrel = 460 average
 - 2) Using PDI 6.01 x 455 = 480 average

I played with the above setup for three Sunday games averaging 1 kilo of 0.2 BBs per game. I stripped down the gear box and checked for any wear and tear. To my surprise, there were no signs of wear marks on any of the gear's teeth considering that the piston body is made of polycarbonate, this is one strong piston body! I have used deep fire Ti, systemas etc but usually marks will show by this time.

The next was I replaced the spring with a brand new SP130 in which the FPS went to 505 average and after 4 Sundays again, the piston body is in immaculate condition! After what I have seen, I was able to muster enough courage to up the spring's ante to SP 140 (what worry me is that if I stripped the teeth, spares are hard to come by) the FPS went up to 550 average and after 2 Sundays the piston body rack had scratch marks on the first tooth only.

For now I'm using the 130 again as I still don't have any spares for the gun.

Battery Issue:

Due to the confined space I have to think of ways of increasing the battery voltage to achieve higher ROF. I was able to successfully fit a Lipoly chicklet between the barrel and cocking handle but due to the low current rating of 1200 mah I decided to make my own battery pack.

I utilized a red alert battery and modified the wirings as shown below (I made 2 battery packs so that I will have a reserved)



Installation at first is a challenge but once you got the hang of it changing the battery is just a breeze.



To install the battery the lower receiver has to be removed and the two batteries forming the letter L (1 & 2) are to be installed. Part one (1) goes into the hand grip while the other part two (2) lies flat as below.



Next is to connect the deans plug between the battery and the gun (see below). Please note also that I have installed a mosfet switch not only to increase ROF but to prolong the lifespan of the switch's contact.



Install back the lower receiver but make sure that the third battery is outside of the gun. Then install the last battery aft of the front sight as shown below.



Reassemble the rest of the gun.



The magazine:

I tried fitting ICS, JG, TM and Boyi mags and all worked and no issue of misfeeding.

Other Issues:

Here are some of the problems I have encounter with the type 97 during the first few months and at stock form.

1) The shafting of the secondary gear was broken into two pieces in which until now I have no idea what had happened. This was noticed during the

regular cleaning and maintenance work of the gun. But surprisingly, the gun performed well inspite of the broken shafting. I sent an email to RS and they are very accomodating and offered to change for free the secondary gear. Although, I have not received the gear to date they are waiting on me. But for the meantime, I fabricated a new shafting using tool steel so that I could still use the gun.

2) Next is while measuring fps I noticed a drop from my usual 480 down to 440, when I checked for leaks (how to check for leak? – I removed the cylinder from the gear box, inserted the piston body/piston assembly into the cylinder and manually push the piston body while covering the cylinder head brass tube and at the same time poured liquid soap along the connections between the cylinder /cylinder head and the cylinder head brass tube.) Bubbles came out between the brass tubing and the cylinder head the area is where the brass tube almost met the edge of the cylinder head, this is I believe the weakest point, since not much material is there. I hope RS could improve on this or better yet use a one piece cylinder head such as the version 2 in which the tube is machined to the cylinder head.

For the meantime, I put some glue “mighty bond” along the periphery of the tubing to seal it but I got to get some spares and avoid Gerry-rigging this gun.

More updates to come!!!

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