

**SYSTEMA PROFESSIONAL CHALLENGE KIT**

# TW5-A4

**Assembly Manual**

*Systema PTW  
by Lupo69*

**POLICE**



**SYSTEMA Co.**

## **SYSTEMA PROFESSIONAL CHALLENGE KIT**

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## **Preface**

We would like to take this opportunity to thank you for purchasing our **SYSTEMA TW5-A4** Challenge Kit.

In our T.W. series this is our second, as the first challenge kit was for the M4-A1 series. We utilized the experience from our previous designs of the M4-A1 Challenge Kit to create easy to understand parts to better ease the assembly process.

One word of advice to get the knack of assembly is to “follow the steps” thoroughly.

For those who are experienced at assembling challenge kits we would imagine that they would know the position of the components relative to where they are situated at first glance; however we recommend following the manual to grasp a more precise and beautifully finished project.

We recommend that you follow the manual as you assemble the challenge kit.

Without further ado, we welcome you to enjoy assembly of one of the worlds most evolved AEG.

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### ① Tools necessary for 1 assembly

■ Hex-Torque Driver/Wrench (driver type in millimeters: 1.5, 2, and 2.5) will be required. Especially the 2.5mm Hex-wrench will be needed therefore please have this wrench available for use.

■ Phillips Head Screw driver (sizes 00, 01, and 02) will be required for assembly.

Using screw drivers that does not fit properly places undue stress on the screws therefore please use drivers that fit the appropriate screws.

■ Hammers (Plastic, Nylon, and Steel) are needed tools for this project.

These three types of hammers that we introduced is not used as a means to control the force of the hammer struck onto the target part but rather the hardness of the varying heads controls the necessary pressure thus greatly increases the precision and greatly decrease any mistake. In this manual the use of the various hammers are designated. We ask that you prepare these tools in advance.

■ Pin Punch Set

When one set is procured it will be a very useful tool not just for this project.

■ Pliers

Please see the attached image.

We recommend two varieties of pliers; one that has a resin tip and a standard steel tip. This will aid in the progress of this project greatly.

■ Radio pliers

This tool is greatly beneficial especially when grasping springs, or loosening tangled cords.

### ② Adhesive

■ When locking screws (we recommend a strong type of adhesive) For example Loctite© 248

### ③ Grease

■ SYSTEMA Cylinder Grease

■ SYSTEMA Gear Grease

### ④ Soldering Iron Set

■ Solder

Please use Lead Free Electrical Use Solder

■ Soldering Iron

Anything that is 30W or more is sufficient.

■ Flux

### ⑤ Cleaning agents (such as a brake cleaner) used to remove access grease.

Spray type is recommended.



## **1: Assembly of the Receiver**

- ① Assembling the Barrel
- ② Assembly of the Front Sight Section
- ③ Assembly of the Magazine Catch Section
- ④ Assembly of the Rear Sight Section
- ⑤ Assembly of the Bolt Handle

## **2: Assembly of the Cylinder Unit**

- ① Application of the Cylinder Grease
- ② Assembly of the Cylinder Unit

## **3: Assembly of the Grip Frame**

- ① Assembly of the Gear Box
- ② Installation of the Selector Lever
- ③ Adjusting the Selector Lever and the Grip Frame to assemble the Gear Box.
- ④ Incorporating the Motor
- ⑤ Cyclic testing

## **4: Total Assembly**

- ① Incorporating the Inner Barrel Assembly
- ② Installation of the Cylinder Unit
- ③ Installation of the End Block
- ④ Receiver and Grip Frame Assembly
- ⑤ Assembling the Fixed Stock

## **5: Completion and Test Firing**

- ① Hop Adjustment
- ② Installation of real steel accessories

## **■ Conclusion**





**① Assembly of the Receiver****■ Assembly of the Outer Barrel and the Barrel Base.**

Firstly confirm that the outer barrel (MP-BR-001) can lock securely all the way through the barrel base (MP-RE-002). After confirming remove the barrel from the barrel base then spray the barrel and the barrel base with brake cleaner to remove any grease residue. Please pay particular attention to the outer barrel while cleaning as the outer barrel was shipped out from our factory with a special rust preventing coat of grease. After cleaning, apply a screw adhesive (i.e. Loctite©) to the threaded end of the outer barrel and secure that to the barrel base.

Wipe off any excess adhesive with a rag as necessary.

**■ Installation of the Barrel and the Barrel Base to the Receiver**

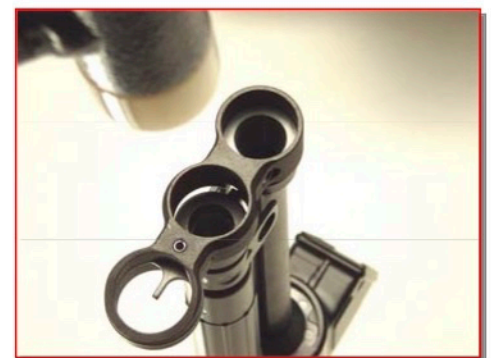
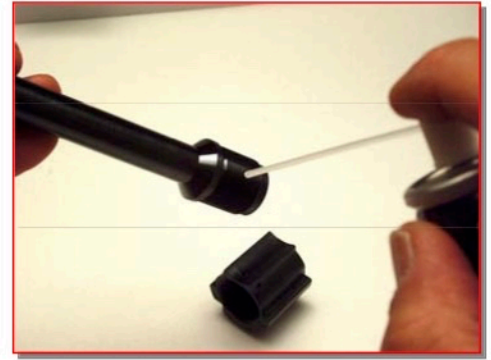
With the four affixed screws (MP-RE-003), we will install the outer barrel and the barrel base that was put together from the previous paragraph to the receiver (MP-A-RE-001). Because the barrel base has a tapered shape it will fit the receiver without temporarily joining and making adjustments, therefore please install the base to the receiver without hesitation. There may be slight deviations that make it hard to put together, therefore please use a nylon hammer and lightly tap the tip of the outer barrel while installing. Please work carefully not to be misaligned from the center of the threaded bore. After applying screw adhesive to all four screws slowly tighten the screws equally to secure the barrel to the receiver. The barrel base is cast of Zinc therefore to prevent damage please do not over tighten.

**② Assembly of the Front Sight Section****■ Putting together the Front Sight**

Because the front sight (MP-BR-004) is press manufactured there is a front and a back side. Run your finger through the break section of the piece and you will notice a slight deviation; face this side towards the shooter and put together. With this procedure a sharp sight acquisition will be achieved. Adjust the position between the Front Sight with the Front Sight Post (MP-BR-003) and from the muzzle (MP-BR-002) side tap the roll pin (MP-BR-005) in with a steel hammer.

**■ Installing the Front Sight Post**

With the incorporated the front sight and the front sight post insert it onto the receiver. From the shooters side of the front sight post there is a 4mm edge, therefore after aligning it with the recoil tube (MP-BR-009) lightly tap it into place using a plastic hammer and assemble.





### ■ Installation of the fixed front sight post sleeve.

In the preceding paragraph as long as the front sight post was assembled correctly the side hole of the front sight post and the R-shape from the outer barrel should be aligned. After confirming the position install the fixed front sight post sleeve (MP-BR-006) using a nylon hammer and tap it into place.

In case it is very difficult to install, rather than forcing it in apply a very thin coat of gear grease onto the sleeve, realign the holes, then tap into place using the nylon hammer.



### ■ Assembling the Front Sight Swivel Ring

Face the hole from the fixed front sight post sleeve towards the muzzle (MP-BR-002), then screw the front sight post swivel ring locking screw (MP-BR-007) onto the receiver's right side, on the opposite side lock in the front sight swivel ring (MP-BR-008). Remember to apply a screw stopping agent to prevent premature loosening of the screw (i.e. Loctite©)



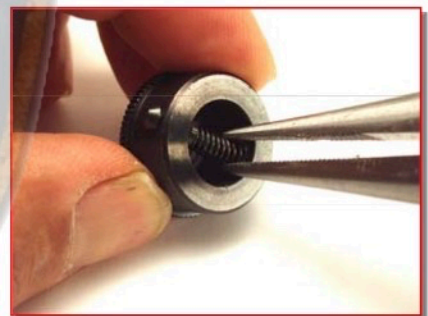
### ■ Assembly and the installation of the Recoil Tube Cap

Assemble the recoil tube cap (MP-BR-011).

Insert the recoil tube cap plunger (MP-BR-012) into the recoil tube cap.

After that insert the recoil tube cap plunger spring (MP-BR-013) using radio pliers; compress the spring while inserting. Insert the completed recoil tube cap onto the front sight post.

Align the holes on the slanted portion of the front sight post, in case there is a light coat of paint it may be difficult to insert therefore lightly tap into place using a plastic hammer.

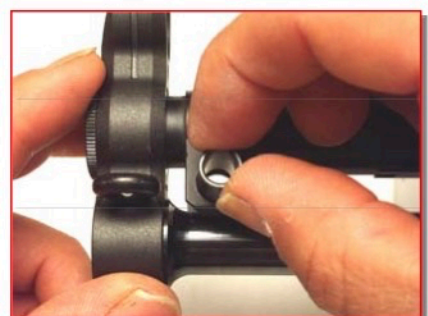


### ■ Installation of the Recoil Tube Sleeve.

There may be a possibility that the recoil tube sleeve (MP-BR-010) has a coating of paint to make it difficult to assemble, however please do not force it in.

The tongue on the recoil tube may warp and become damaged.

For the assembly of this portion adhesive is not necessary.



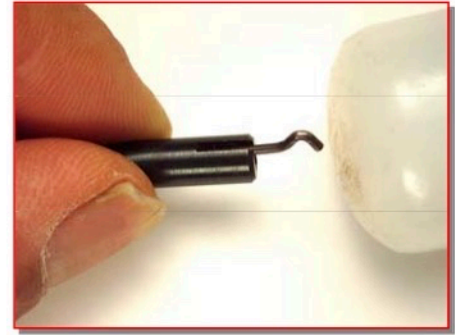


### ■ Assembly of the Magazine Catch Pin

Please refer to the picture, insert the magazine catch pin detent spring (MP-BR-016) onto the magazine catch pin (MP-BR-015) groove.

Using a nylon hammer lightly tap the spring into place.

Confirm that the magazine catch pin detent spring is in place by looking through the hole on the side of the magazine catch pin.



### ■ Installation of the Hand Guard

Install the hand guard (MP-BR-014).

While pushing the hand guard strongly towards the stock, insert the magazine catch pin.



### ■ Confirmation of the inner barrel assembly installation

Confirm the possibility of assembling the inner barrel assembly (ASS-MP-BR-001) with the receiver.



### ■ Installing the muzzle piece

With the inner barrel assembly inserted apply a thin coat of screw adhesive to the threaded portion of the muzzle piece (MP-BR-002) then screw into place.

As the barrel of the TW5-A4 is screwed into place the position of the barrel will never be uniformed.

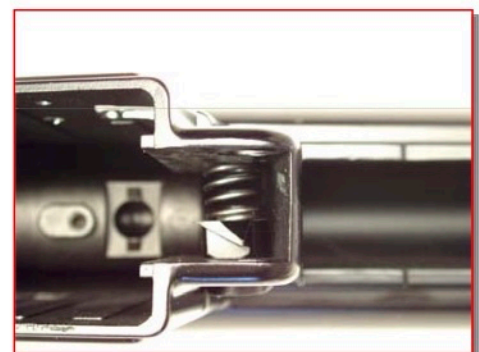
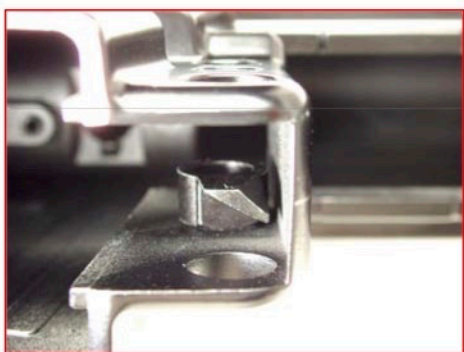
Therefore if the muzzle piece is assembled prior, there is a possibility that the inner barrel may not fit.



## ③ Assembly of the Magazine Catch Section

### ■ The assembly of the Magazine Catch Plunger as well as the Magazine Catch Plunger Spring

Please see the attached picture. Firstly determine the direction of the magazine catch plunger (MP-RE-005), then insert it into the receiver. After which, compress and fit the spring (MP-RE-006) between the gap of the magazine catch plunger and the receiver. Caution is necessary to not place too much stress on the spring while doing this task.





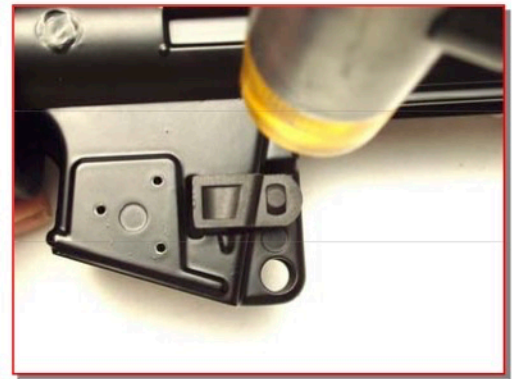
### ■ Installing the Magazine Catch

After aligning the position of the magazine catch plunger, insert the magazine catch (MP-RE-004) through the D-Cut hole.

For the magazine catch there is a push out indent made of die-cast.

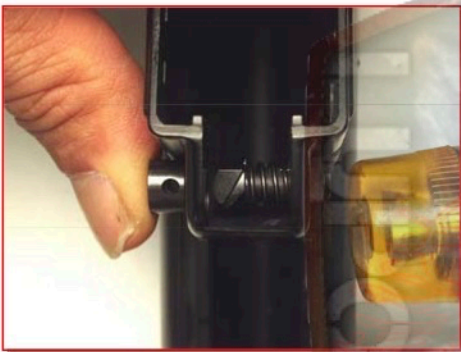
This is designed to prevent slippage therefore instead of scraping off this piece tap it using a plastic hammer.

not to use a nylon hammer as a coating may scrape off accidentally.



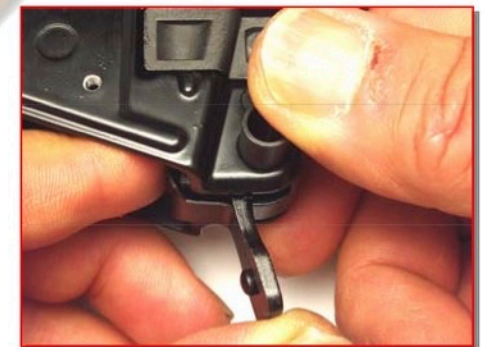
### ■ Installation of the Magazine Catch Button as well as the Fixed Magazine Catch Button Pin.

Cover the magazine catch with the magazine catch button (MP-RE-009) then tap in the roll pin (MP-RE-010).



### ■ Installing the magazine catch lever and the magazine catch sleeve.

Firstly, confirm that the magazine catch sleeve (MP-RE-007) fits by doing a test fit. If there is difficulty in fitting it may be due to a thin coat of paint that requires it to be scraped off; use the tip of a razor to scrape a slight layer of paint and then attempt to re-insert. When actually installing the components together be sure to apply a layer of gear grease between the contact points of the magazine catch plunger and the magazine catch lever (MP-RE-008). Insert the magazine catch lever into the receiver, after aligning the holes insert the magazine catch sleeve.



### ■ Assembly of the Front Swivel Plate.

The front swivel plate (MP-RE-013) is secured via three button cap screws. Be sure to apply screw lock adhesive onto the screw threading when securing the swivel plate.

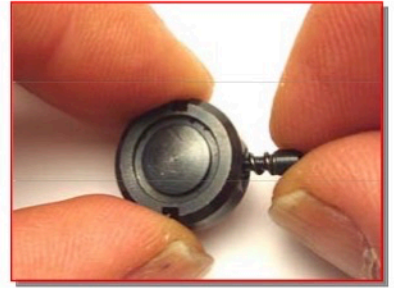




#### ④ Assembly of the Rear Sight Section

##### ■ Assembly of the Rear Sight Drum

With the rear sight click drum plunger (MP-RE-019) in the rear sight click drum (MP-RE-016) install the rear sight click drum plunger spring (MP-RE-020). Insert the spring securely till the base of the plunger. Next position the rear sight click drum towards the rear sight drum (MP-RE-015) so that the four indents are aligned; then apply some masking tape onto the tip of a pin punch and lightly tap the plunger into place with the punch.



##### ■ Installation of the Rear Sight Drum

Tap the roll pin (MP-RE-017) into the rear sight base (MP-RE-014), align the holes of the rear sight drum, then use the masking taped pin punch to tap it into place. Next, fit the E-Ring (MP-RE-018) on the back side of the rear sight base using a radio pliers.



##### ■ Installation of the Rear Sight Assembly

Temporarily secure the Windage Screw (MP-RE-021) onto the right side of the Receiver's Rear Sight Mount. Match the lower section groove of the Rear Sight Base with the temporarily secured Windage Screw and fasten. While securing the Windage Screw with a screw driver, make certain that the rear sight assembly is centered with the Receiver by performing necessary adjustments. Set the washer (MP-RE-023) on the upper portion of the Rear Sight Base, then secure the fixed Rear Sight Base Screw (MP-RE-022) onto the Rear Sight Assembly.



#### ⑤ Assembly of the Bolt Handle

##### ■ Installation of the Dummy Bolt Stopper

The dummy bolt stopper (MP-RE-037) is attached by tapping the roll pin (MP-RE-038) through the dummy bolt stopper into the bolt spring guide (MP-RE-032). prevent any snags be sure to tap the roll pin all the way through.



##### ■ Installation of the Dummy Bolt Cap

Attach the dummy bolt cap (MP-RE-036) onto the bolt spring guide; be sure to apply thread adhesive onto the screw portion when attaching the dummy bolt (MP-RE-035).

The dummy bolt has a setting direction. Assemble the dummy bolt cap from the shorter thread portion first. Using a sharp edge such as a tooth from a saw blade tighten the dummy bolt cap. By applying a thin layer of cylinder grease inside of the dummy bolt will provide a smooth operation.



##### ■ Installation of the Bolt Handle Guide

After applying thread adhesive onto the remaining threaded portion of the dummy bolt, screw tight the bolt handle guide (MP-RE-039).

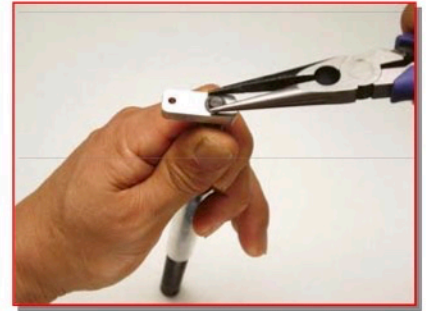




### ■ Installation of the Bolt Spring Guide Base

Insert the bolt spring (MP-RE-034) into the bolt spring guide, then insert it into the bolt spring guide base (MP-RE-030).

While compressing the spring, lock the E-Ring (MP-RE-033) onto the bolt spring guide.



### ■ Assembly of the Bolt Handle

Insert the assembled dummy bolt assembly into the receiver; align the holes. Insert the bolt handle (MP-RE-040) into the indent found on the receiver, move the bolt handle to the last indent.

Tip the handle approximately 30 degrees, then a screw hole will appear from the hole in the receiver, using an M3 plate screw (MP-RE-041) secure the handle.



This concludes assembly of the receiver portion.

Professional  
Challenge Kit

## 2. Assembly of the Cylinder

### ① Application of the Cylinder Grease

Apply cylinder grease to the cylinder case (MP-CU-001).

This is a very important task; if too much cylinder grease is applied the muzzle velocity will be poor as well as the groupings will be erratic. On the other hand if not enough cylinder grease is applied, muzzle velocity as well as overall durability will suffer. Due to factors such as the surroundings as well as climate and temperature determines the sufficient amount; unfortunately there is no set amount that we can recommend. We recommend to test out different variations of cylinder grease application that best suits your environment. From our experience we noticed that a smaller amount of grease than most would expect produces better results.

### ② Assembly of the Cylinder Unit

#### ■ Inserting the Piston Assembly

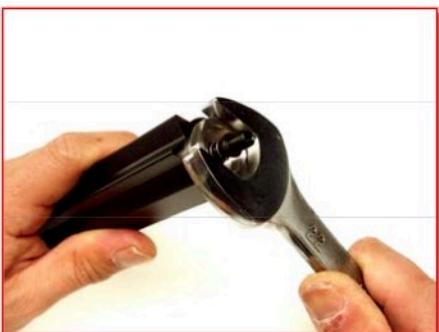
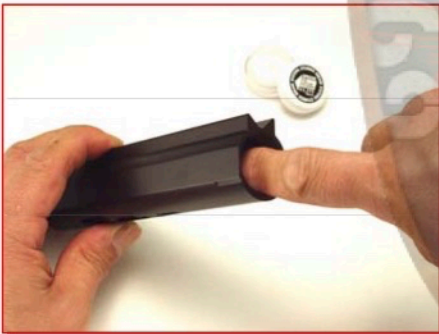
Insert the piston assembly (ASS-MP-CU-002) into the cylinder case.

From the spring guide (ASS-MP-CU-003) side of the cylinder case insert the handle of a small screw driver and use that handle to adjust and align the rail then it will be easy to put together.

#### ■ Installation of the Cylinder Head Assembly

Screw in the cylinder head assembly (ASS-MP-CU-001) into the cylinder case.

After that lightly tighten with a monkey wrench.





### ■ Installation of the Main Spring

After applying a very thin layer of gear grease to the outside portion of the main spring (MP-CU-002) insert into the piston.



### ■ Installation of the Spring Guide Assembly

Firstly, apply some gear grease onto the shaft portion of the spring guide.

Next, push in the spring guide assembly into the cylinder case.

Insert the two knock pins (included in this kit) through the hole in the spring guide and lock into place using pliers.



This concludes the Cylinder Unit Assembly.

## Professional Challenge Kit 3. Assembly of the Grip Frame

### ① Assembly of the Gear Box

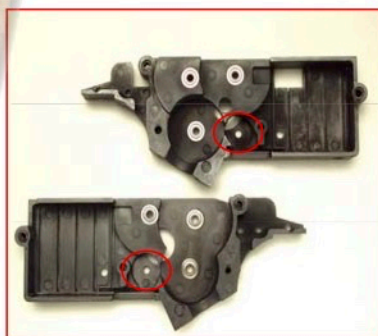
#### ■ Gear Shimming adjustment

Using the illustration as reference prepare the prescribed amounts of shims. It is important to use the thin shims for the inside portion of the gears. By applying a very thin layer of gear grease onto the gear shaft prior to undergoing the shimming will ensure that once the shims are in place they will not accidentally fall out.



#### ■ Setting the Bearing

Apply a thin layer of gear grease to the hole of the gear case (MP-GB-001) (MP-GB-002) where the bearings sit then set the bearings (MP-GB-003).



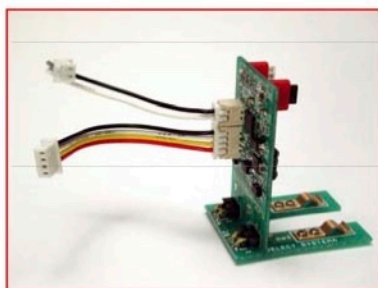
#### ■ Pre-assembly application of grease to operating components

Prior to assembly apply a thin layer of gear grease to the areas that are pointed out in the picture.



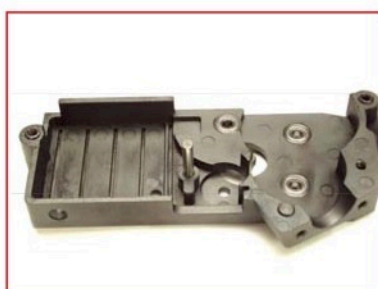
#### ■ The installation of the control cable for the SYSTEMA Electrical Control Unit as well as the Bolt Stop Cable.

Insert the control cable (MP-EL-006) as well as the bolt stop cable (MP-EL-005) into the S.E.C.U. (MP-EL-001) sockets.



#### ■ Installation of the Trigger Pin

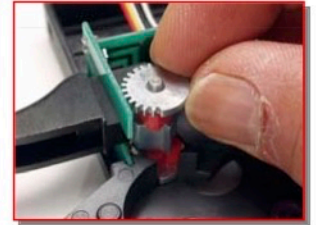
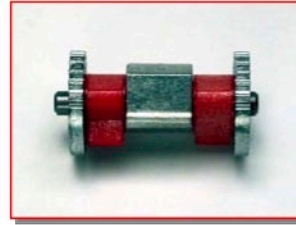
On the right side of the case (the side where the square hole which the cord passes through is not found) insert the trigger pin (MP-GB-010). This pin will not require the use of a hammer to secure.





### ■ Installation of the Detection Board, Trigger, and the Selector Drum.

Well now, this procedure is a bit difficult. Pass the trigger (MP-GB-009) through the two way indentations of the S.E.C.U. Align both the trigger pin and the trigger hole then gently lower both till just about half way. At this stage, set the selector drum (MP-GB-0019). The selector drum has both a top and bottom direction. The pin that sticks out a bit longer is the pin that is secured on the right side of the gear case. Please work carefully during this procedure to not damage the board.



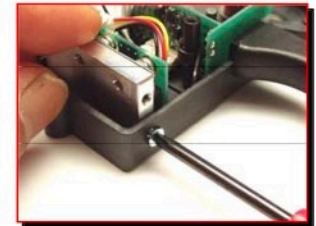
### ■ Installation of the Trigger Spring and the Trigger Spring Post

Set the trigger spring (MP-GB-011) into the trigger spring post (MP-GB-012). Rest the longer leg of the trigger spring into the square hole of the S.E.C.U. Pass the set screw (MP-GB-013) through the right side face of the gear case, then secure onto the trigger spring pole. Rather than securing all of the screws all the way from the beginning, it is important to confirm that there is no unnecessary stress prior to tightening the screws.



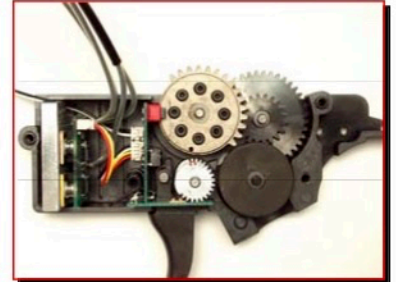
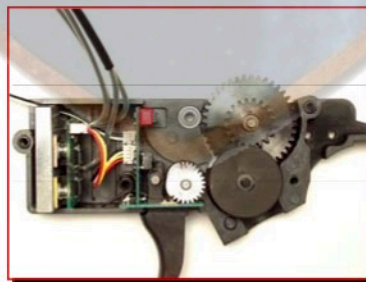
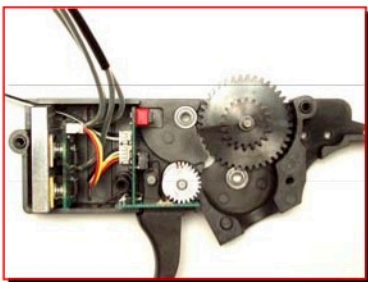
### ■ Temporary coupling of the Switch Device

From the cable the S.E.C.U. connect one end of that cable to the Switch Device (MP-EL-002). While taking caution not to pinch or break the bolt stop cable set the Switch Device in place and tighten the set screw (MP-EL-003) to about half way. At this stage, leave the partially completed situation as is. Take the bolt stop cable out.



### ■ Installation of the Gear Set

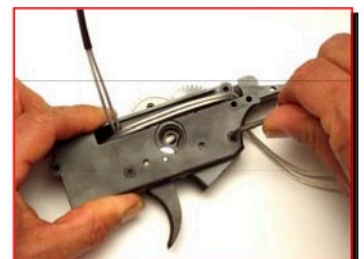
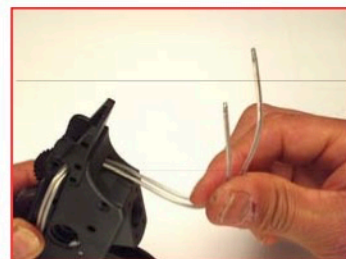
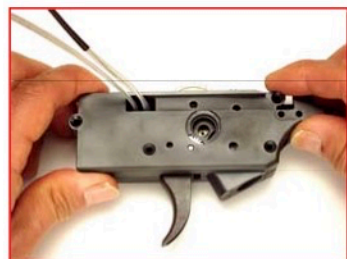
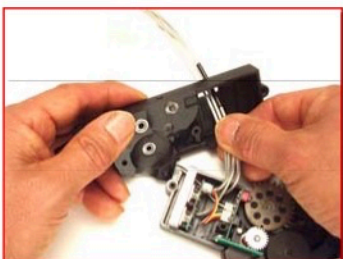
Place the pre-shimmed gears into the gear case. Thoroughly check to see if any of the shims did not fall out from the gears prior to assembly. The order of setting the gears are: Spur Gear (MP-GB-005) → Bevel Gear (MP-GB-004) → then the Sector Gear (MP-GB-006).



### ■ Cord/Cable placement

Pass the four cables from the Switch Device through the right side hole of the case.

Please refer to the picture for the order of the cable position.





## ■Assembly of the Case

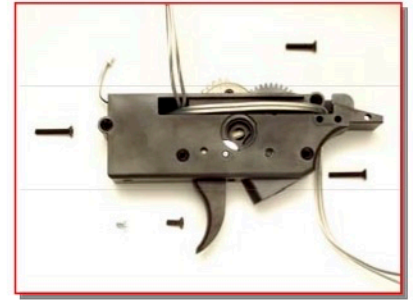
Join the left case panel gently with the right case panel.

At this stage approximately align the Switch Device hole with the case hole. The next stage is very important. Prior to tightening the screws, from the four cords that were positioned earlier, be sure to pass the two motor cords on both left and right sides of the case respectively.

Secure the left and right panel of the case with the screws (MP-GB-017) (MP-GB-018).

Among the screws used to secure the case be sure to confirm that the screw hole and the surrounding areas are clear from any potential binding or pinching of the Switch Device.

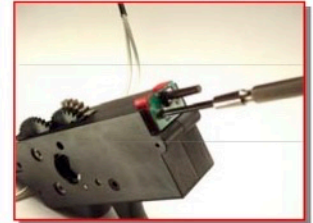
Be careful to not exert too much torque as that will damage the screws and/or the threads on the case.



## ■Installing the Bolt Stop Board

Connect the bolt stop cable to the bolt stop board (MP-EL-004).

Secure the bolt stop board stay (L and R) onto the case with the accompanied screws.



## ■Installment of the Grip Chassis

Lock the grip chassis (MP-GB-007) onto the gear case and secure using the three knock pins (MP-GB-008). Be careful not to damage any cords while securing with the knock pins.

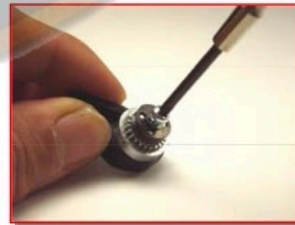


## ②Assembly of the Selector Lever

### ■Assemble the left side of the selector lever (ASS-MP-GF-001)

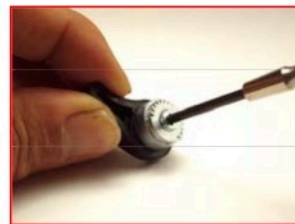
Secure the selector click drum (MP-GF-004) onto the left side of the selector drum (MP-GF-003), while being careful not to damage the pin gently tap it using a plastic hammer.

Finally place a shim (MP-GF-005) onto the pan screw (MP-GF-006) then secure into place.



### ■Assembly of the right portion of the Selector Lever (ASS-MP-GF-002)

Secure the right side of the selector drum (MP-GF-008) using the plate screws (MP-GF-009).



### ■Application of grease on the Selector Lever

Apply a very thin coating of gear grease to both the left and right sides of the selector lever (ASS-MP-GF-001) (ASS-MP-GF-002) gears.

Also, apply a little to the grip frame (MP-GF-001) portion as well.



### ③ Installation of the Gear Box onto the Grip Frame.

#### ■ Placement of the cords outside of the Gear Case

Prior to installing the gear box into the grip frame reconfirm the positions of the four cords.

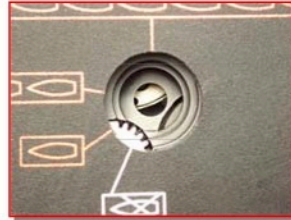
If this procedure is not done carefully there is a high probability that the cord will be damaged between the grip frame.



#### ■ Installation of the left side Selector Lever

Insert the gear box into the grip frame, set the position of the left side selector lever (ASS-MP-GF-001).

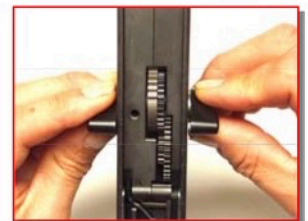
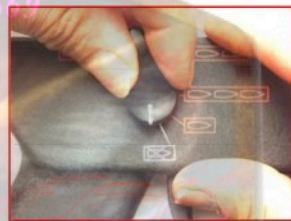
Confirm that the selector lever lightly turns at this point.



#### ■ Installation of the right side of the Selector Lever

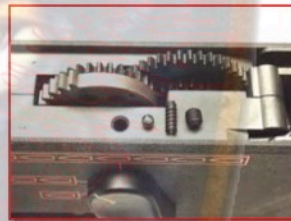
Next, set the position of the right side of the selector lever (ASS-MP-GF-002).

Similar to the left side, confirm that the selector lever turns with little



#### ■ Selector Click Ball installation

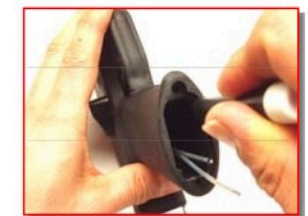
Set both the selector click ball (MP-GB-014) and the spring (MP-GB-015) and temporarily screw in the hollow set screw (MP-GB-016) about half way.



#### ■ Securing the Gear Box with the screws

After confirming the direction of the motor cord positions, pass through the cords through the hole found in the grip frame.

Starting from the direction of the grip end (MP-GF-010) secure the gear box with the four screws (MP-GF-012). This procedure requires that the screws are tightened equally; please verify while undergoing this step to ensure that the selector lever moves properly. Take your time while doing this step. If you notice the selector lever's movement becomes a bit stubborn while tightening the screw it may be that the gear box is not set in the correct position, therefore temporarily loosen the screw then make adjustments by lightly tapping the grip chassis with a plastic hammer towards the muzzle direction.

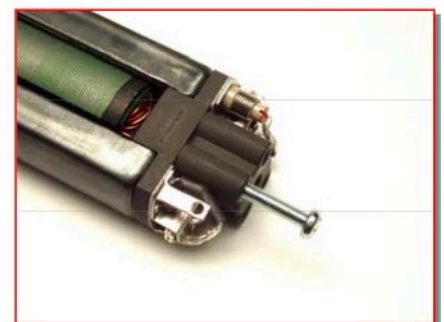


### ④ Incorporating the Motor

#### ■ Secure the Motor Set Screw

When setting the motor (MP-MT-001), secure one screw into the end bell.

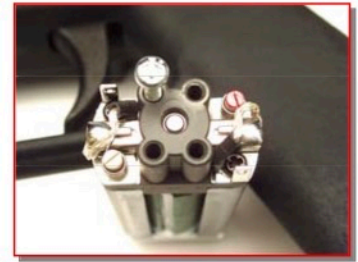
This procedure will not require the use of a screw driver; hand tightening is sufficient.





### ■ Placement of the Motor Cord

Firstly raise the grip frame and support it so that it comes up towards the muzzle side. With that in mind, with the negative side of the motor cable (the longer cord), while the muzzle side is raised place the cable through the right side. The positive side (red marked cable) is placed on the stock side and insert it a total of about half the way.



### ■ Placing solder onto the Motor Cord

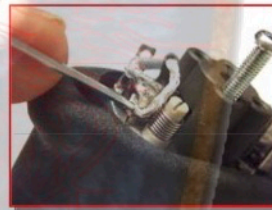
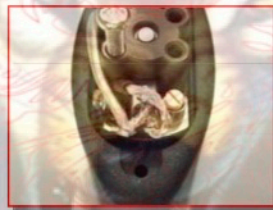
Melt a preliminary light layer of solder onto both ends of the motor brush case.

On the positive side motor cord (shorter wire) apply a preliminary light spot of solder then bend it to an L shape.

After passing the cords through till they reach the motor sufficiently insert the grip frame, then apply solder.

The key point to this procedure is to first secure the grip frame onto a vice, after gripping the motor set screw with pliers lower the motor till the connection piece reaches the cord end and then solder the tip onto the motor.

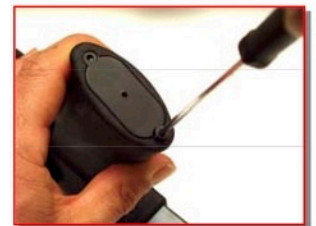
As mentioned previously secure the motor position, then securely fasten the negative motor cord into the grip frame, and finally apply solder of the motor cord onto the motor.



### ■ Installation of the Grip End.

Finally cover the motor with the grip end (MP-GF-010) and push it into the grip frame until the end.

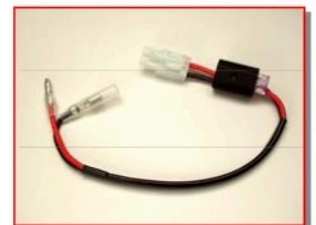
Screw the two fixed screws (MP-GF-011) onto the grip end.



## ⑤ Cyclic testing

### ■ Temporary connection of the Battery Cord

Connect the battery cable (MP-EL-007).



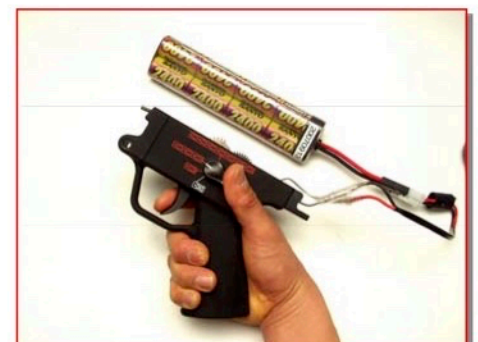
### ■ Dry Run / Movement Assessment

Connect the battery to the battery cable examine each position and its subsequent movement.

Finally always remember to select to semi-auto and cycle it to return the Sector Gear to the true position.

Also verify the tension of the selector lever.

Adjustments to the selector lever can be made by using an enamel set to give it just the right feeling.





### ① Incorporating the Inner Barrel Assembly

While having the muzzle piece inserted put in the inner barrel assembly.

### ② Installation of the Cylinder Unit

Insert the cylinder unit.

### ③ Installation of the End Block

#### ■ Install the Stock Pin Sleeve

Incorporate the end block (MP-RE-027) with the receiver.

Align the holes between the end block and the receiver then insert the stock pin sleeve (MP-RE-026).

#### ■ Install the End Block Fixed Screw

Secure the end block with the 4 set screws.

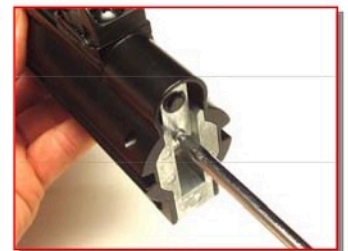
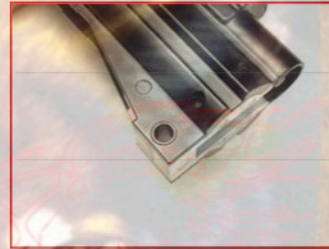
The short screw (MP-RE-029) goes above while the longer screw (MP-RE-028) is to be secured below.

It is important to screw all 4 screws in equally.

#### ■ Affixing the Bolt Spring Guide Base

While adjusting the End Block bottom, set the Bolt Spring Guide Base (MP-RE-030).

With the Screw secure the Bolt Spring Guide Base (MP-RE-031).



### ④ Receiver and Grip Frame Assembly

Position the grip frame around the magazine catch sleeve hole, while twisting it from down to up secure onto the receiver.

Take caution to not damage the bolt stop switch board while doing this procedure.

Insert the magazine catch pin (MP-RE-011).





## ⑤ Assembling the Fixed Stock

### ■ Connecting the Battery Cord

Pass the battery cord (MP-EL-007) through the hole in the end block then connect.



### ■ Assembly of the Fixed Stock

Confirm that the grip chassis is firmly set in the receiver.

Secure the fixed stock (MP-FST-001) onto the receiver.

Due its rigidity of this part for the TW5-A4 this component may be a bit hard to install.

Please do not use force, rather please use a nylon hammer and slowly tap it into place.

Attention is necessary to not overshoot the stock pin hole.

Insert the stock pin (MP-RE-024).



### ■ Assembly of the Butt Plate

Assemble the reinforcement plate (MP-FST-003) onto the butt plate (MP-FST-002) then install onto the stock.





### ① Hop Adjustment

The adjustment of the HOP can be done with the enclosed wrench via the magazine housing.

At the time of the factory shipment, it has already been zeroed in based on a shooting range of 20 meters using a 0.2g / BB.

With a right turn the HOP will slacken, while with a left turn the HOP spin will strengthen.



### ② Installation of real steel accessories

For the TW5-A4 any real steel firearms accessory can be attached on with absolutely no modifications necessary.

For example few companies such as Knights Armament Co.© with their rail system, A.R.M.S. Inc. © and their flat top scope mount will work fine with no adjustments. For the possibility of those who wish to add a laser sight into the recoil tube we daringly chose not to seal it with an adhesive. For those who wish not to install such a device we recommend to seal it with an adhesive to supplement the durability.



## **SYSTEMA PROFESSIONAL CHALLENGE KIT**

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*Systema PTW  
by Lupo69*  
**Conclusion**

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**Were you able to enjoy assembling this project?**

**The choice of firearms as well as the choices of various accessories is greatly influenced by the owner (user) thus creating individuality.**

**Hence, there are so many various custom parts out in the public today.**

**However it is our belief that to truly own the weapon, building it from the ground up with their hands is the epitome of expressing ones ownership.**

**Even when we produce our completed product; regardless of following the principles of hand building each item we cannot defy the effectiveness of mass production.**

**Therefore we make a clear distinction of our T.W. Challenge Kit as the ultimate embodiment of an airsoft hobby compared with other custom airsoft guns.**

**One of the biggest things to consider is with even the slightest of scratches experienced in the process of putting together your own project will be understood and appreciated.**

**We believe that the completed TW5-A4 before you is a collaboration of your efforts with our philosophy.**

**We sincerely ask for your continued patronage of our products.**

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