



DOUBLE-ALPHA
ACADEMY

Mr. Bulletfeeder® GEN-2

by Double-Alpha

US Patent 7497155

WWW.DOUBLEALPHA.BIZ



Mr.Bulletfeeder® GEN-2 **by Double-Alpha**

User Manual

US Patent 74975155

Thank you for choosing Mr.Bulletfeeder® GEN-2 by Double-Alpha!

This newly designed product will give you years of reliable service. It will make your reloading sessions easier and faster than ever before!

It is critically important that you set up your bullet feeder correctly, so PLEASE take the time to read through this instruction manual before starting to assemble and use your bullet feeder. You will save considerable time and effort by reading these instructions first.

For further information, please visit our website www.doublealpha.biz. There you can view detailed video tutorials on how to set up and use your bullet feeder. If you have any questions, email us at daa@doublealpha.biz.

WARNING:

Reloading ammunition is inherently hazardous. BE SAFETY CONSCIOUS AT ALL TIMES and ALWAYS USE EYE and EAR PROTECTION. Maintain a sturdy, clean, organized reloading bench.

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Index

What's In the Box, and Exploded View of Assemblies.....	1
Assembling and Adjusting the Powder Funnel.....	5
Assembling and Adjusting the Dropper.....	8
Assembling and Adjusting the Collator Mounting System.....	10
Adjusting the Nose Guide and Flip Ramp.....	13
Assembling the Output Tube and Lead Spring Assembly.....	17
Wiring Up.....	19

What's In the Box

Inside the box you will find:

1. Collator Assembly
2. Dropper Assembly
3. Powder Funnel (for pistol calibers only)
4. Power Supply
5. Mount Assembly (dismantled)
6. Lead Spring Assembly
7. Instruction Manual

Rifle Caliber users:

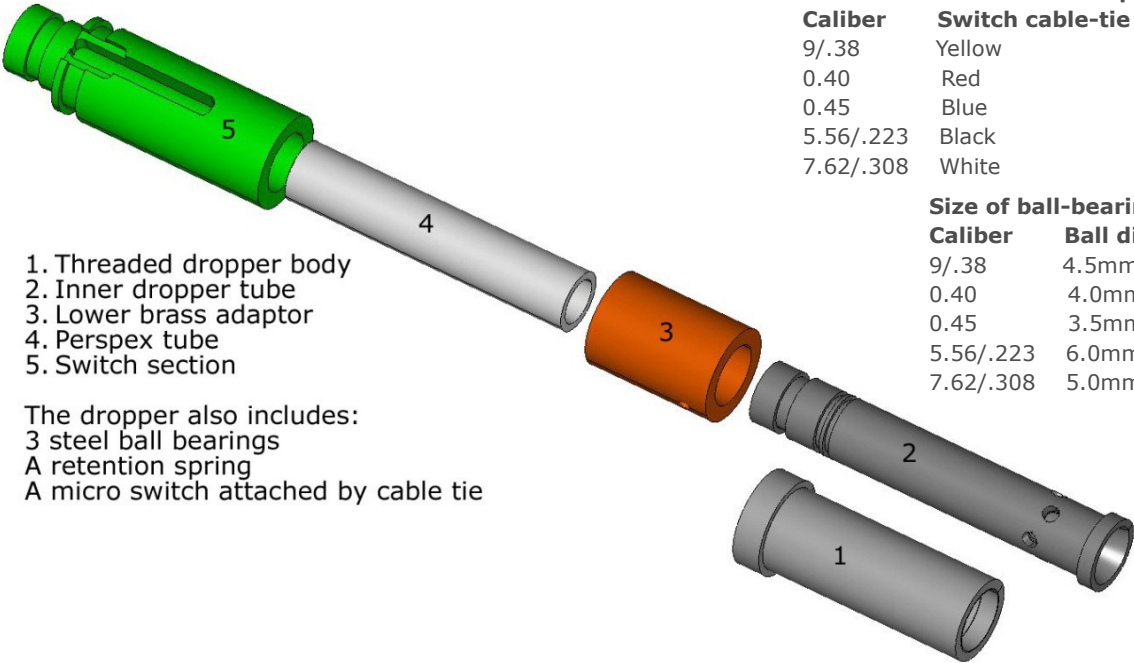
Specific information related to setting-up and using MR.Bulletfeeder in the .223 or .308 rifle calibers can be found online at www.doublealpha.biz under the FAQ/Support - Mr.Bulletfeeder - Rifle Calibers section.

Collator Assembly



Dropper Assembly

Inside the square telescopic packaging tube you will find the dropper assembly, the powder funnel (for pistol calibers), and a set of spare stainless steel balls for the dropper, as per your caliber. Note that some calibers have transitioned away from the Lower Brass adaptor, replacing that with adjustable tension springs. Over time the Spring solution will replace the brass weight in all calibers.



- 1. Threaded dropper body
- 2. Inner dropper tube
- 3. Lower brass adaptor
- 4. Perspex tube
- 5. Switch section

The dropper also includes:
 3 steel ball bearings
 A retention spring
 A micro switch attached by cable tie

Color identification for dropper assemblies:

Caliber	Switch cable-tie color
9/.38	Yellow
0.40	Red
0.45	Blue
5.56/.223	Black
7.62/.308	White

Size of ball-bearings per caliber:

Caliber	Ball diameter
9/.38	4.5mm
0.40	4.0mm
0.45	3.5mm
5.56/.223	6.0mm
7.62/.308	5.0mm

Mount Assembly

The mount assembly is shipped disassembled and you have to assemble it before use. Included in the kit are the two aluminum brackets which make up the hanger, and all bolts, washers and nuts required for the assembly as shown below.

Note that this hanger can be assembled to the left side or the right side of your Bullet Feeder collator. You can choose which side suites your needs best, and assemble accordingly. Typically you will want to assemble the collator hanger so that the Bullet Feeder Collator can hang off the side of your case feeder, positioning the collator in such a way as to allow some slack in the output tube spring, so as not to tension the dropper assembly.

The included rubber pads can be used between your case feeder and Bullet Feeder Hanger, to help keep the collator horizontal and prevent marring of your case feeder.



Installing and Adjusting the Powder Funnel

Your Mr.Bulletfeeder® GEN-2 is supplied with a newly designed and improved powder funnel. The powder funnel is a very important component of a bullet feeder of any kind, as it prepares the brass correctly so that the bullet can be seated in the case, and not tip over as you index the shell plate. To achieve this, we have redesigned the powder funnel to allow for just the right amount of expansion, without over flaring or stressing your brass.

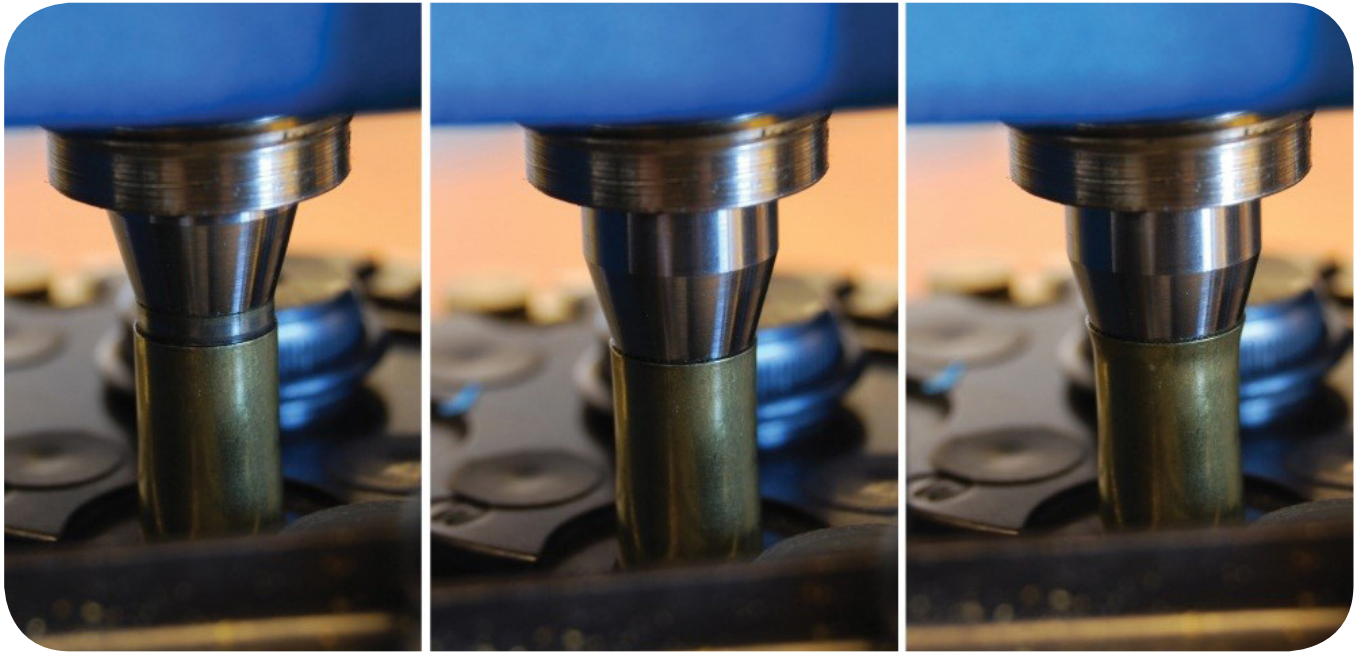
It is recommended that you adjust your powder funnel first, before assembling the dropper, as you will need properly prepared brass when adjusting the dropper.

Note that our droppers are somewhat shorter than the standard ones provided by Dillon, so you will most likely need to adjust your powder measure die down. It is best to do this with an empty powder measure.

Place a resized brass under the powder measure, and cycle the handle of the machine down. Adjust the die of the powder measure down in small steps until it makes full contact with the brass and is operated fully (charge bar slides forward and backward).

Note how far the powder funnel tip enters into the brass before it is released. You should aim to adjust the funnel down until the top edge of the case just starts to push up onto the tapered section of the powder funnel, achieving a minimum amount of rim flare. In this position, the lower section of the powder funnel has entered into the case, expanding the top just a few millimeters, enough to allow the bullet to sit correctly in the case and not tip over as the machine indexes.

A good test is manually to place a bullet into a case you have cycled through the powder station. With a well-adjusted powder funnel, the bullet should be seated smoothly a couple of mm into the case, and should not fall out easily, even when you turn it upside down.



The picture on the left shows a powder funnel not adjusted far enough down. The funnel enters into the case, but does not go down far enough. The bullet may not be seated deeply enough, and may tip over as you index the machine. The center image shows a correctly adjusted funnel – the case enters up far enough to just reach the chamfered area of the funnel and receive a slight bellling. The image on the right shows a funnel set too deep. The case is excessively belled and will fatigue quickly - it may not hold the bullet straight.

The resulting bullet seating of the three powder funnel heights. The left bullet is not seated well, as the funnel is too high – and as a result the bullet is likely to tip over as you index the machine. The middle bullet is well tapped into place, and will remain straight and true as you index. The right bullet shows the result of bellling the case too much. The deformation in the case will cause rapid case fatigue, and the bullet may not remain straight as you seat it.



Installing and Adjusting the Dropper

For ease of handling, you can remove the top section of the dropper and use only the lower steel assembly. To do this, open the small lock screw in the lower brass section of the dropper and gently remove the upper part of the assembly – from the brass section up – and set it aside.

Note: As of August 2023, the 9mm and 223 droppers ship with the dual spring assembly instead of the brass weight. Other calibers will also transition to this configuration over time.

Since the dropper is generally installed in the station following the powder measure, place a properly prepared case in the shell plate below that station, and cycle the press handle all the way down.

Note: If you are using a powder check in the station following the powder measure, you will need to install the bullet dropper in the next station. On a 650/750, this means you will need to use a combined seating and crimp die in the final station.

Slowly screw the dropper's threaded body into the tool head for 2 or 3 turns and then fill the dropper tube with bullets, all base down. You can fit 5 or 6 bullets into that section.

Continue to screw the threaded body down until you see that the inner section stops moving down – it has made contact with the rim of the case beneath it. Very slowly continue to screw the threaded body down until you hear and see the column of bullets inside the tube drop down. Turn the threaded body another quarter turn, and tighten the nut by hand. This is the correct height position.

Raise the tool head.

You should see one bullet sitting firmly in the case. Note that the dropper does not seat the bullet to length and only lightly taps the bullet in, so that it does not fall when the machine is indexed.

Do not over-tighten the locking nut! It is not necessary and you may damage the threaded body, which is thin-walled. Tighten by hand or lightly using a spanner/wrench. There is no force applied to the dropper body during function, so there is no risk of it moving. If desired, a drop or two of low strength Loctite may be applied.

Do a final check by cycling the press a few times. Use your prepared case and 5 or 6 bullets in the tube for each cycle. Confirm that each time one bullet is dropped and tapped into place on the case. Your dropper is now correctly adjusted.

Note that different brass may have slightly different lengths, even within the same caliber. Should you change your brass, you may find you need to adjust both the powder funnel and the height of the dropper for best results.

Now assemble the top part of the dropper back into place, and tighten the lockup screw in the brass section. Make sure that the dropper assembly is not rubbing up against any section of the powder measure. In some machines, these can be positioned very close together. You may need to slightly rotate the powder measure a little, and/or rotate the retention spring in the dropper assembly. It is important that the dropper moves freely up and down, without any interference.

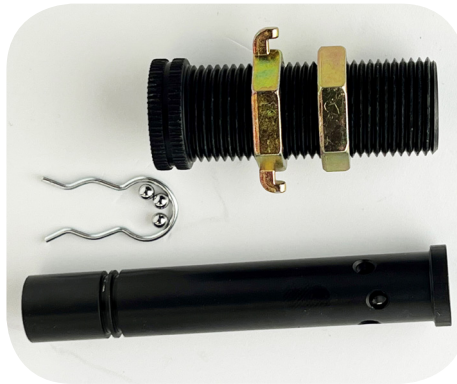
Dismantling the Dropper Body

Should you need to dismantle the dropper body, do so above a bowl as the small steel ball-bearings inside fall out and are easily lost! Take care not to bend the micro-switch arm out of shape. It must be free to move in and out of the slot.

First remove the top section by unscrewing the lockup screw in the brass section. Remove the top section and set it aside. This part cannot be dismantled, and should not need to be. You can clean it by running through a cloth or a bore-robe type cleaner.

To dismantle the lower section, first remove the retention spring. Then the inner tube can slide down and out of the threaded die body. As you push it down, the three steel ball-bearings will fall out – be sure you are over a bowl to catch them!

Three extra steel ball-bearings are included as spares. You should not need to dismantle the dropper often.



The picture above shows the dismantled dropper lower section. Once the clip is removed, the inner tube can be slid out downwards. Note the three small ball-bearings, which are caliber specific. Always dismantle over a bowl as the small balls will drop out when you remove the inner tube from the threaded body.

In the inner tube you will notice two rows of three holes. The lower level is normally only used for very short bullets (perhaps 90 gr 9 mm or very short .40s). It is better to use the upper row of holes as it will allow the column of bullets to drop a little further, thereby better tapping the lower bullet into place. (Rifle caliber tubes may have three rows of holes).

To reassemble, slide the inner tube into the threaded body from below until the row of holes is just visible. Position the three steel balls on the same level of holes (each separated by 120 degrees) and slide it further up until the threaded body retains the balls. Then slip the retention spring back into place. Use the upper groove when using the upper row of steel-ball pockets (normal setup) and the lower groove when the steel balls are positioned lower for very short bullets.

Assembling and Adjusting the Collator Mounting System

The Mr.Bulletfeeder GEN-2 is supplied with a hanger assembly, designed to allow you to hang your BF collator on the side of your case feeder.

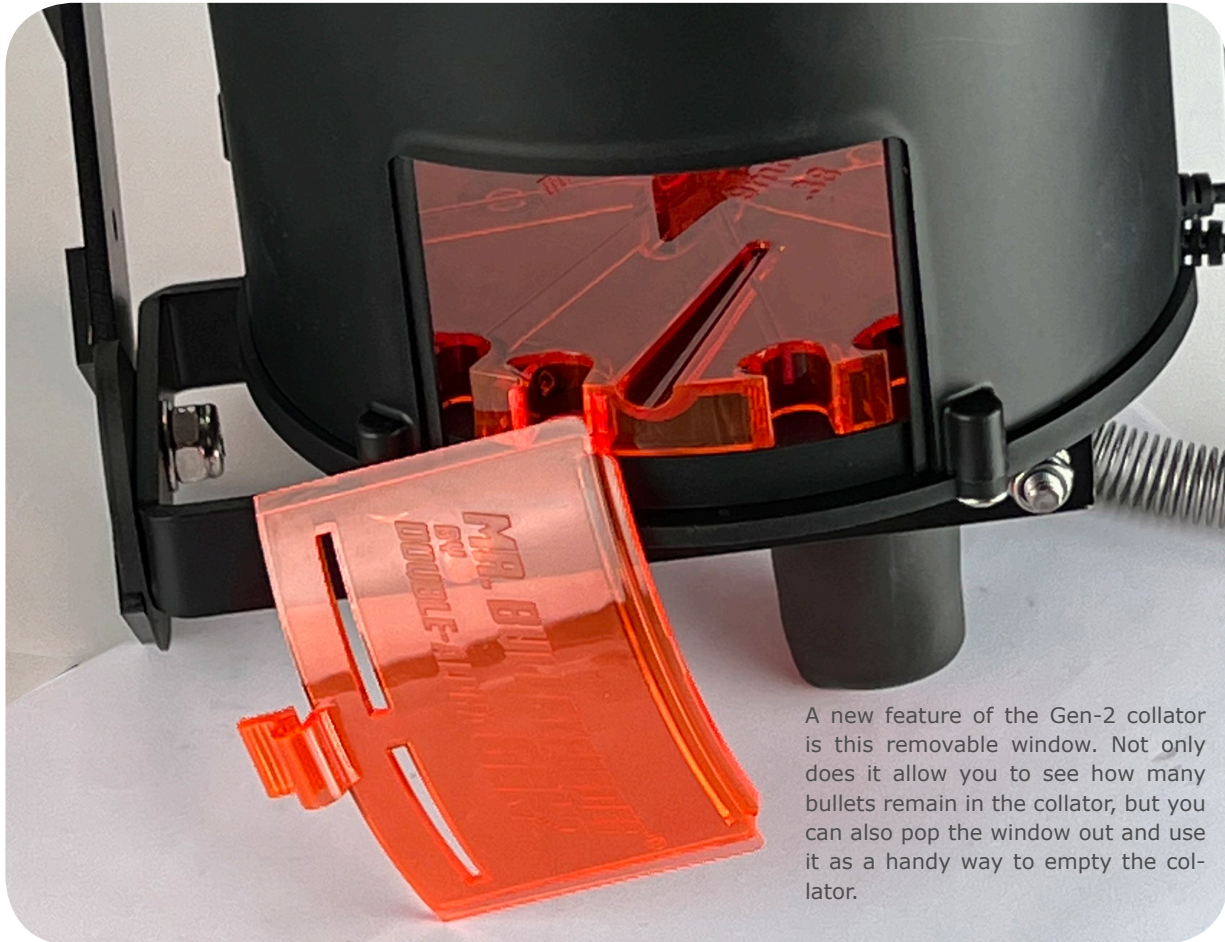
Make sure there is no tension on the output spring, even when the tool-head is in the down position. Tension on the Output spring will prevent the dropper from moving freely up and down, and this will lead to double-drops of bullets. As the case retracks, the dropper must be free to move quickly and friction-free downwards.

Tilt adjustment can be achieved by loosening the M8 center screw of the brackets positioned below the collator tub, adjusting the angle and tightening it back up. Make sure it is well tightened before loading up the collator with bullets!

The default angle should be 45deg. That will be ideal for most bullet types.

The included plastic dial read out, should be assembled between the brackets and will help you determine which angle the collator is being held at. You might find that some calibers require a steeper angle than others. Take notes, or make a mark on this plastic plate for each of your calibers.





A new feature of the Gen-2 collator is this removable window. Not only does it allow you to see how many bullets remain in the collator, but you can also pop the window out and use it as a handy way to empty the collator.

Adjusting the Nose Guide and Flip Ramp

The nose guide and flip ramp of the collator are the “business end” of the system, and they are what make the collator work so efficiently.

Other bullet feeders utilize a rejection type system: when a bullet enters a pocket the wrong way up, it is rejected and has to be inserted again. These systems are always rather slow on feeding bullets, and, in some cases, very slow.

Not so Mr.Bulletfeeder® GEN-2 by Double-Alpha! Mr.Bulletfeeder’s patented system has the ability to allow the bullets that are the right way up to pass on down the tube, and those that are nose down, to be flipped in their pockets, so not wasting any time feeding them down the tube base down. This is achieved by the nose guide and flip ramp.

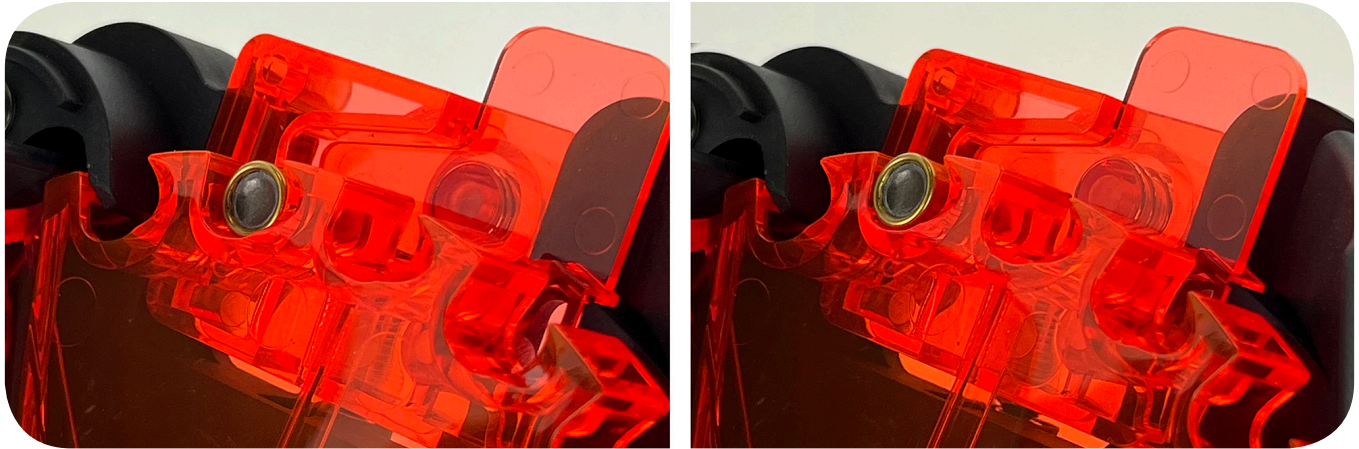
Adjusting the Nose Guide

The Mr.Bulletfeeder GEN-2 is equipped with the all new Pre-set Nose Guide assembly. This device makes adjusting for a caliber and bullet profile quick and easy. Also, should you often change calibers or bullet types, you can purchase additional Pre-set Nose guides, and have them pre adjusted and ready to be dropped in without needing to adjust again, each time you change calibers.

The Pre-Set nose guides allow you to adjust the two critical dimensions:

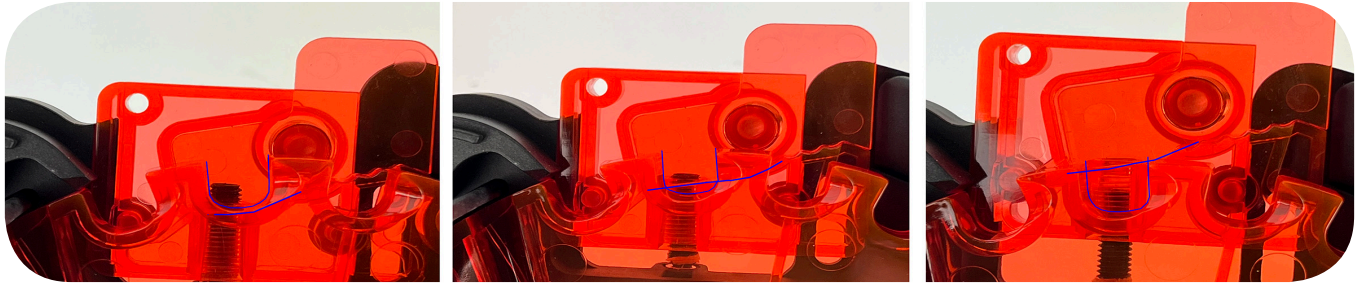
1. The depth of the Nose Guide Pocket. This is done by turning the screw on the bottom of the part. This will lower or raise the platform at the bottom of the cutout pocket.
2. By turning the M6 set screw you can move the Nose Guide assembly inwards and outwards, thereby correctly positioning the ledge of the Nose Guide pocket. Precise correct position of this ledge is what allows the base-down bullets to ride over the Nose-Guide undisturbed, while the point-down bullets slide into the Nose-Guide pocket and get rotated around.

Adjust the depth of the pocket so that, when the head of the bullet falls down into the slot and rests on top of the adjustable platform, the base of the bullet is not raised above the upper edge of the collator plate. In fact, it should be slightly below the top edge at all times. If the bullet drops too low, adjust the platform up by turning the screw. You may need to experiment a little for best performance.



In the left image, the platform is adjusted too low for this 124 gr 9 mm bullet, and consequently the bullet's base is dropping too low below the level of the top of the collator plate. In the right image, the platform has been adjusted correctly and the bullet is now entering to the correct depth.

The second critical adjustment in the nose guide is to position it correctly so that the right amount of ledge shows inside the pocket. This ledge allows bullets, which are base down, to ride over it and not fall into the groove in the nose guide, while allowing bullets which are nose down to fall in and be rotated. The amount of ledge you want really depends on the caliber and profile of the bullets you are loading, and should be adjusted as needed.



The left image shows the nose guide positioned too low, too inwards, and so no ledge is showing. All the bullets, regardless of their orientation, will drop into the slot and be turned. The middle image shows the correct amount of ledge showing in the pocket. With this correct setting, the bullets which are base down will ride past the slot and not be rotated, while the bullets which are nose down will fall in and rotate to the correct orientation. The image on the right shows the nose guide set too far out – too much ledge showing – and so no bullets will fall in, and none will be rotated.

** The blue lines are added to make the ledge and outline of the pocket easier to see.*

To adjust the nose guide, turn the M6 headless(set) screw inwards or outwards to drive the pre-set nose guide assembly in or out. When you find the perfect position for a particular bullet type, make note of the nose guide position, so the next time you can adjust directly to this setting. Or, slide the Pre-Set Nose guide out and keep it preset. Use a 2nd and 3rd Nose Guide as needed. This can save you considerable time if you change bullet calibers/profiles often.

Adjusting the Flip Ramp

The Mr.Bulletfeeder GEN-2 Flip Ramp has been redesigned and no longer requires adjustment between calibers. It's new wider ramp surface allows each bullet length to make contact in the perfect line for best performance. You should not need to move it at all. However, it should not be pressing against or making contact with the collator disk, so move it outwards slightly if it has shifted in transit and is touching the disk.



The newly designed much wider flip ramp of the GEN-2 Mr. Bulletfeeder requires no adjustment. As you can see pointed out by the blue arrow, each projectile makes contact on the ramp at the point needed, and the ramp flips the bullet into the pocket.

If the flip ramp is pressing against the disk, and you wish to adjust it outwards, loosen the M5 screw from below the collator base, and rotate the flip ramp further from the collator plate as needed. Then tighten it up.

Assembling the Output Tube and Lead Spring Assembly

The Mr.Bulletfeeder GEN-2 collator output tube is of a new design which includes a tool-less bayonet type assembly. Note that it is "keyed" in such a way to allow assembly in one orientation only – that which positions the debris slot on the downward side. If you rotate it 180 degrees and try to assemble – you will find that it won't fit into the collator base.

Insert the part into the collator base, pressing up against the base (support the collator with your other hand) push tightly and rotate the output assembly clockwise to engage the lock. The Red O-ring creates pressure between the parts and they are held securely in place. You will feel it click and lock into place.



The spring adaptor cap fits on top of the switch section in the dropper assembly, with its flat side facing the switch. There is a set screw in the side of the part – screw that in to hold it in place. The screw will enter into a groove in the switch section. Again, do not over tighten!

The output tube is positioned so that the debris slot is on the downward side, allowing debris to fall out.



Note the position of the spring's adaptor cap as it attaches to the top of the dropper assembly. Its flat side fits snugly around the micro switch.

Adjusting the Spring Length

The spring is supplied long enough to suit the most extreme case we have found – that of the old XL650, with the case feeder set off to the left of the machine. In that setup, the spring needs to be used at its full length of 38cm.

With the newer Dillon XL650/750, or 1050/1100, you may find that you can cut a little off from the spring to get better performance. You need the spring to reach down to the dropper without pulling on it at all, as that tension can cause the dropper to snag. However, you don't want the spring to be too long – that can cause a bend in the spring which could trap bullets midway down, causing them not to slide down as they should. Find the best position for your collator which allows the straightest possible route down towards the top of the dropper, so the bullets can slide easily.

Special note regarding 1050/1100 setup

Here the length of the spring is even more critical! Since the tool-head (dropper assembly) is moving up and down as you reload, the spring should not be cut too short. You do not want the spring to pull up on the dropper as you lower the tool head. Therefore, when you position the collator unit and adjust the spring, check the length with the tool-head all the way down. Make sure the spring is long enough not to pull on the dropper. You may then find that, when you bring the tool-head up, a bend is created in the spring, but if the collator is well positioned, this should not become a bullet trap. Check this as you set up. You can also make a further improvement by improvising a supporting loop midway down the spring, perhaps attached to the case feeder, which prevents the bend from being too pronounced in the spring.

Wiring Up

The power supply provided with your unit is dual voltage, and includes a choice of two mains cables: one for the US market (110v) and one for Europe (220v). Select and attach the correct one for your region.

The 12v DC cable is long enough to allow you to position the power supply in an accessible position on your reloading bench. Plug that connector snugly into the female jack protruding from the side of the collator base.

The micro switch on the dropper serves to stop the collator from turning and feeding bullets when the dropper tube is full. Since the bullet feeder can collate bullets much faster than you can use them, it is necessary to have this cut off switch to prevent the bullets filling up the lead spring all the way to the collator and jamming it.

Attach the two terminals at the end of the retractable cord to the two terminals of the micro switch, and push firmly into place. There is no polarity to be concerned with: either wire can be attached to either terminal.

Your unit is now ready to run.

The power supply provides an adjustable potentiometer switch, which allows you to supply the default full 12v power that will provide maximum speed. You may find that some bullets collate better at a slightly slower speed, and you can run the collator on 9v or less as well.

CAUTION: Should the collator stall for any reason, be sure to turn the power off before trying to clear it. It can be dangerous if it suddenly starts turning while your fingers are close to the collator plate. The plate turns with considerable force!



Connect the end terminals of the retractable cable to the two terminals of the micro switch, as shown. There is no polarity to be concerned with.



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