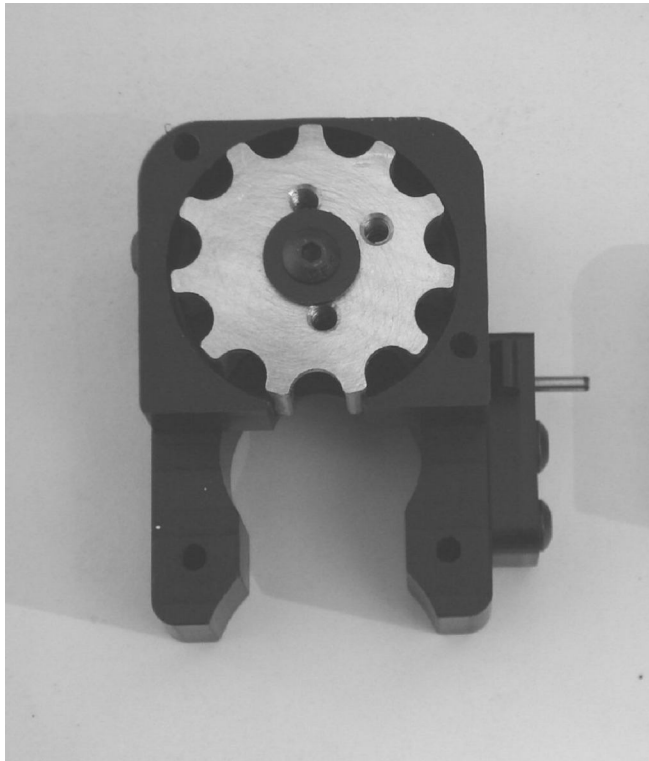


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Disco-RIM Series Rev a 11-09

Rotary Indexing Magazines For the Discovery and Crosman 22xx series air rifles Instruction Manual



Congratulations on your purchase of the **RIM** magazines for your rifle. The rotary indexing magazines are designed to be easy to use and trouble free. Rim Magazines turn your Discovery rifle into a repeater. The magazine holds 8 pellets in .22 and 10 in .177. Once on the rifle ,the magazine is indexed by hand. A ball detent stops the magazine at the index position loading the pellet into the barrel .Please follow the instructions in this short manual for proper operation and installation of your magazine.

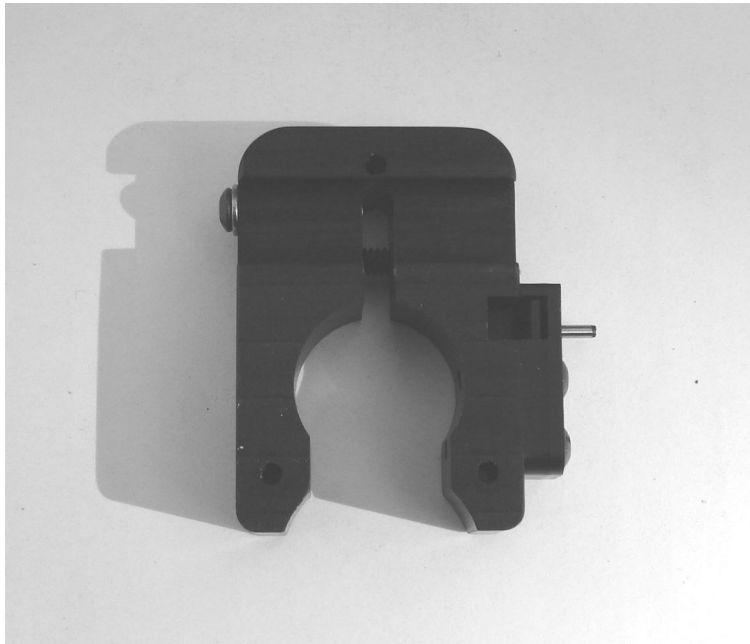
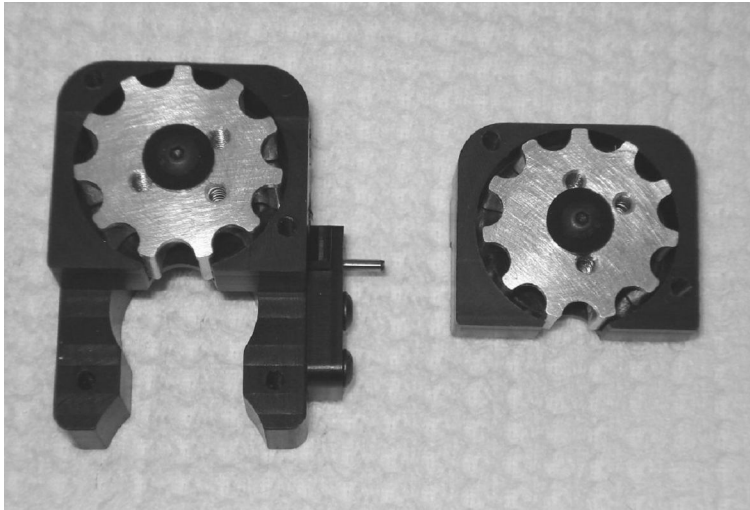
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Parts included

The following parts are included with your magazine kit.

- 1 Anodized aluminum mount
- 1 or more magazines
- 1 allen wrench



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Installation requirements.

Bolt mod or replacement

The DISCO-Rim system can be installed on the Benjamin Discovery and Crosman rifles which use the [22XX long steel breech](#). The bolts on these rifles must be modified to allow extra room for the magazine or you may purchase our custom bolt . It is currently available in .22 cal and the part number is [Disco-bolt-22](#). If you would like to modify your own bolt, the backside that contacts the cocking pin needs to be shortened by approximately 3mm. Removing too much will not allow the rifle to cock. Removing too little and the bolt probe will not clear the magazine.

Using our Custom bolt or modifying your own allows the bolt to be retracted further so that the bolt probe adequately clears the pellet as it drops from the magazine while indexing.

The rifle must have the bolt removed and replaced or modified before using the Rim system The picture on the next page shows a modified stock bolt and the [Custom bolt](#)(less oring) Note the wire probe on the custom bolt for better gas flow. When installing the bolt handle make sure to install from the side with the flat as shown in the photo. Install the handle square to the bolt being careful not to cross thread. This must be done while in the breech. A drop of Loctite thread locker will keep the handle secure once installed. Also note that the probe length on the stock vs the custom bolt are about the same. Both of these bolts have about 3mm or .120" removed from the back end that hits the cocking pin. Refer to the yellow forum or visit the link below to view a disassembly procedure for the Discovery. The procedure for the 22 XX rifles will be similar.

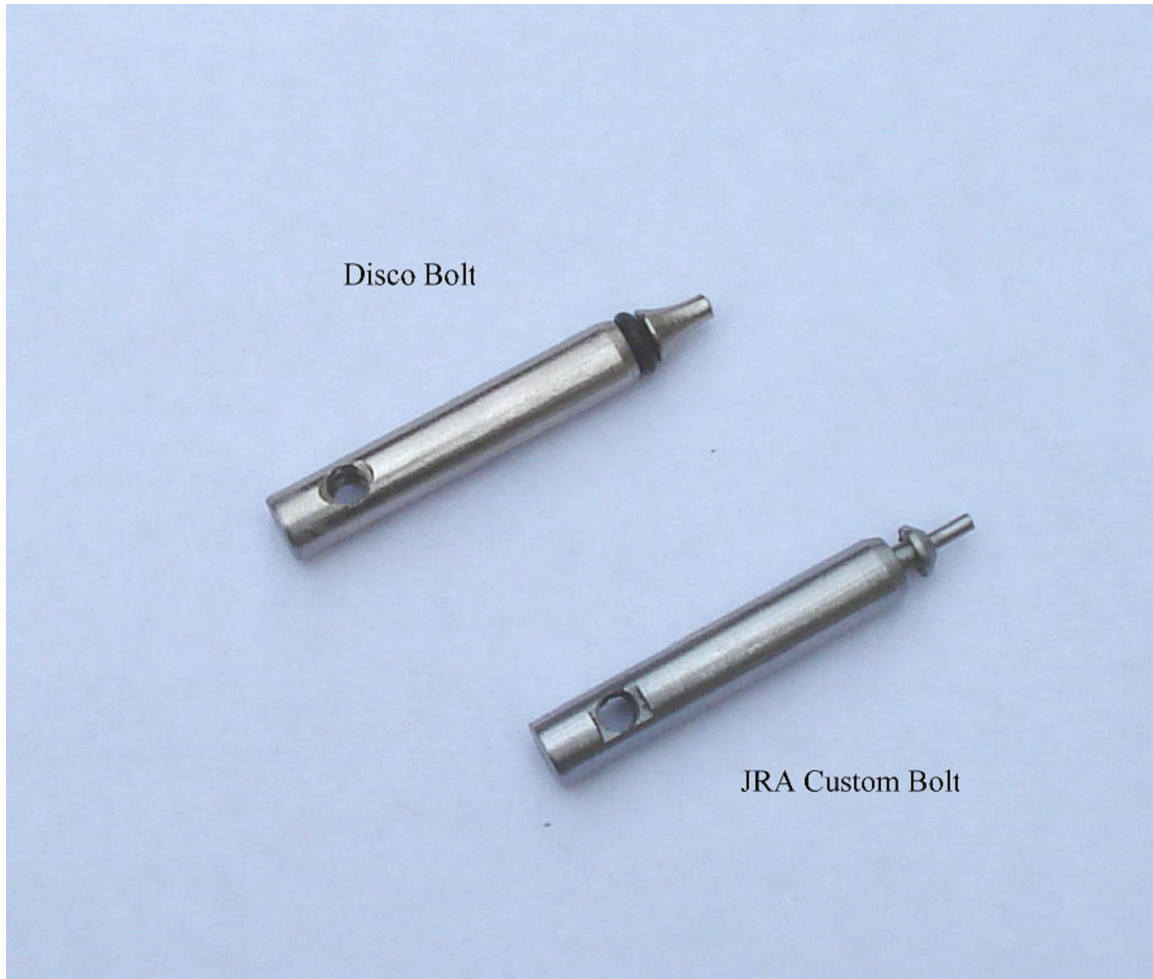
<http://www.airgunfix.com/blog/airguns-assembly-disassembly/benjamin-discovery-disassembly-guide/>

One note here that may save you some time... The rifle will not cock properly with the safety removed. I don't know if that is mentioned in the guide.

Also be safe. Be sure and degass your rifle before working on it

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Bolt probe length

The bolt probe must clear the magazine. This should only be an issue on tuned rifles. Stock rifle probe length is fine but see the note above on shortening the back of the stock bolt. The probe length on our custom bolt is very close to the stock bolt probe length. You may wish to consult your gunsmith or tuner if the bolt probe needs to be shortened.

Scope Mounts and Mag height

Your [Disco-Rim](#) will require the use of high scope mounts. We have had good results with the following mounts and this list is not all inclusive On a Discovery breech the top of the mag mount sits about .825" above the flat that runs the length of the breech

[Tasco Quick Peeps 799DSC](#)

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In general the mounts should be high enough that the scope tube clears the top of the magazine mount. Make sure your scope tube clears the magazine especially where the scope changes shape.



Installation

Your kit should have been shipped with a magazine in the mount so you can see how it should fit properly in the T- Slot. Familiarize yourself with loading and unloading the magazine on the mount first. Remove the magazine from the mount by sliding the latch lever until the latch clears the magazine then slide the magazine out to the left.

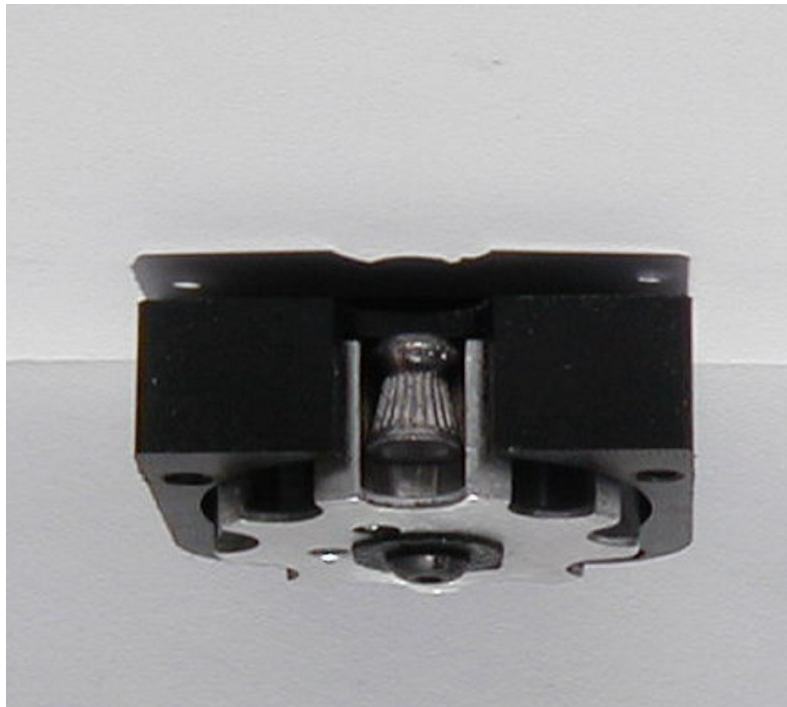
Place the mount open end first over the barrel . Your scope must first be removed from the rifle. The T- slot should be facing the front of the rifle.

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Slide the mount over the breech until it is just past flush with the pellet loading area. Tighten the 6-32 clamp screw until the mount is snug. **Do not over tighten or you may strip the threads or break the screw.**

Make sure the bolt is pulled back on your rifle. Install an empty magazine by sliding it in from the right side of the rifle into the mating T- slot on the mount. The magazine should slide all the way to the stop on the mount. If it does not don't force it. You may need to move the mount a bit more towards the butt end of the rifle. If so loosen the 6-32 screw and re-adjust the mount on the breech. Try sliding the magazine on again.



Installing Pellets

Turn the magazine upside down with the slot facing upwards. Drop pellets into the empty slots on the carousel. The head of the pellet should face the black plastic of the magazine housing(rear of the magazine) as shown. Index the magazine to the next position and repeat the process filling all but 1 slot in the carousel. The unfilled slot should stay at the bottom opening in the Magazine for

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carrying and when loading into the mount. This will prevent any pellets in the magazine from coming out.

Magazine operation

Pull the bolt back on your rifle.

Slide the magazine into the mount from right to left until the magazine stops on the stop screw.

Slide the latch pin towards you to lock the magazine in place.

When empty slide the latch pin away from you and remove the magazine.

Firing

Hold the rifle level.

Index the magazine with your thumb or other finger until the detent stops it and the pellet drops. Remember to hold the rifle relatively level.

Visually inspect the pellet to make sure it has not tipped or been loaded incorrectly.

Slide the bolt forward and shoot.

Pull the bolt back.

Repeat

Pellet Compatability Use and Jamming

Pellet length must be less than 8mm but typically the longer the pellet the better.

Certain shorter round nose and pointed pellets tend to be nose heavy and may want to tip up when loaded just as when loading by hand. It seems certain .177 cal pellets are more prone to tipping or flipping and this caliber seems more sensitive than the .22. Keeping the **barrel level or slightly tipped up** will help to eliminate this problem.

Some Tuned rifles have increased bolt probe length. Sometimes so long that the pellet skirt hits the tip of the probe when dropping. This can cause the pellet to tip up when dropping. To eliminate this problem reduce the length of the bolt probe

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For some pellets better results may be achieved by controlling or slowing the index action with the thumb to let the pellet carefully drop into the barrel. Practice will make perfect. I find the Crosman hollow pointed pellets in .22 want to tip up. Tipping the barrel slightly up when indexing seems to improve loading. If a pellet drops and is improperly oriented gently prodding it with the bolt probe will usually set it straight. Checking the pellet after it drops before pushing the bolt forward will insure jam free operation. As you become accustomed to proper magazine operation very rapid firing can be achieved.

As mentioned before make sure the pellet is clear of the bolt probe when it drops or it will flip the pellet more often than not.

Keep the barrel level when indexing. If the pellets tip try tipping the barrel up slightly

The magazine can be indexed with either hand to accommodate both right and left handed shooters. **Table 1** list some pellets tested and there rating in terms of stability during loading.

Pellet Loading Stability Table 1

<u>Pellet</u>	<u>cal</u>	<u>Rating</u>
JSB exact 14.3g	.22	poor
JSB exact 15.6g	.22	Good
JSB exact 18.2	.22	Excellent
Crosman Field Point	.22	fair
RWS Superdome	.22	Good/Excellent
Gamo Hunter	.22	Good
The Peak Round nose	.22	Excellent
Crosman Premier HP	.22	Fair

Maintenance

No maintenance is necessary. Do not disassemble or tighten screws on unit. Improper torque may adversely effect operation. For ordering or additional product information be sure [to visit us on the web at www.qbmags.com](http://www.qbmags.com)