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Basic Guide to Autocockers

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Intro- Worr Games Products (WGP) developed what I and many consider the best paintball marker platform to date. This elegant design had many variations in the early years of paintball and dominated the tournament scene for many, many years. A plethora of aftermarket machine shops modified WGP bodies and others made aftermarket components that either improved on, simply looked different and/or performed worse than its WGP counterparts. These variations can and have caused confusion in the market place. Given the fact that WGP was in on the early stages of the sport and adapted to its rapid development, it is understandable that there are many advances to this marker platform that may not be apparent to all consumers.

Are you looking for a place to find who made the part you have? Try [here](#).

I am very surprised that there is not really a guide to Autocockers. There are many resources in regards to parts identification and teching out there if you look for them. I do not profess to be the end-all-be-all authority on Autocockers. I have owned literally hundreds of Autocockers, if I had one wish to spend on myself it would be that I could play all of them (and as a sub caveat that I also dominate the field with my prowess!) Below is a description of some Autococker terms that should help when you are looking for ‘cocker parts. I wouldn’t say any of these are in debate, but as is this new world we live in there will always be someone who will “argue” in the negative sense or “refine” in the positive. . I only hope that these clarifications will help. (If you can offer constructive criticism please do send us a message.)

We are continuing to grow our communal Autococker Parts Identification Page on Facebook. Be sure to check this open resource for any parts identification

needs. If you have a part that is not listed here, please do send us a picture of it. [Autococker Parts ID Page](#)

Definitions of Autococker Jargon:

Mech- This refers to the quintessential Autococker. The Autococker is at its very roots a pump that has pneumatically been enhanced to fire with each trigger pull. When the trigger is pulled the gun will fire and re-cock through a series of stages, thus the terminology “Autococker”

Pump - This class removes all of the front pneumatics and relies on the operators hands to re-cock the marker, similar to a shotgun.

Electro - These markers use electronically triggered solenoids to engage mechanical pneumatics and increase the Autococker’s rate of fire.

Pre2K – 2K

In the simplest terms this refers to when the body was made. However the change is a little more complicated. From what I gather the stock bodies of WGP went through a change in 98 (and earlier when referring to the back block). Pre 2K and 2K+ refers in most part to the air chamber in the front of the marker. The frontblock is machined to hold all of the re-cocking mechanisms (3way, ram, LPR IE- pneumatics) however it is the primary indicator if this body was milled to Pre 2K or 2K spec. The banjo bolt is the bolt in the center that holds the frontblock onto the body. I’m going to get in some trouble here, but I’m going to throw some measurements out **I am not a machinist** Pre 2K front blocks have a 3/8 hole and 2K front blocks have a 37/64 hole. 2K is the larger of the two. I cannot comment on the thread type. Once you become comfortable with the difference it will become instantly recognizable. Why the difference? 2k spec is accepted as better because it allows more air volume in the body for every shot. In this case bigger is better!

As far as pneumatics go, it doesn't matter if you have a 2K or Pre 2K all will work.

All trigger frames will work on all body sizes no matter if they are Pre 2K or 2K (Empire Resurrection Cockers/snipers excluded)

Almost all internals are interchangeable. If you have threads in the rear of the lower tube you can use all lowers/internals. If you do not have threads in the rear of the lower tube you need an IVG (Internal Velocity Governor) that is non-threaded and is held in place by the beavertail screw.

You can also use a 2K or Pre 2K back block if you have the correct bolt size

Back Blocks and bolts

Without pulling out the calipers for each type I will attempt to describe each type of back block

Very early pre 2K “Sniper” – from a side profile, the body is squared and the backblock is a full rectangle – uses pre 2K bolts and >.01% of all cocking rods. (Very early models... super rare and.. not crazy valuable so don't quit the day job). You will notice that the milling is very sparse and it is very heavy. These needed a cocking rod that was a bit longer.

Normal pre-2K – From a side profile back block is a trapezoid. Pretty common. Uses pre-2K bolts and 99.9% of all cocking rods .

2K – From a side profile body and back block are squared off. Backblock is a pretty shallow rectangle, but can be milled in different patterns. Uses a 2K bolt and 99.9% of all cocking rods.

Evo/P Block – This refers to the Belsales back block length also known as the STO P-block. Looking at the body from the right side (passenger side) the backblock cuts into the body and resembles a P. The evoblock length bolt is slightly shorter than the 2K and is used in some STO cockers, 05 Prostocks and Karnis.

Halfblock and Midblock – These do not have backblocks, however both of these do have the same both length. These are similar in length to early Planet Eclipse Ego bolts. The difference between these two is in body style and will be explained below.

Body Types

Full body – This is the most common and the longest in length. Standard 03, 04, 05 Prostock Autocockers are a good example. Older “snipers” also hold this design. They have a vertical air adaptor (VASA in front of the grip frame) and have a full back block. These will use full body pump arms and full body timing rods

Mini- This modification is from the mid-late 90s. Machinists cut off about an inch on the front of the body moving the frontblock back. This removed the VASA and directed the air supply through the bottom of the frontblock. This resulted in a weight reduction. * sidenote - when referring to a cockers age there is a serial number guide available, however factory minicockers’ serial number is different than the standard models. If yours is a factory mini cocker, it will have the full serial number on the body. Bodies that were modified will have the serial number cut off. These bodies will require a mini timing rod and a mini pump arm; all other parts are the same as a full body autococker unless they have modifications listed below.

Halfblock – These are full length bodies that had their upper tube cut behind the feedneck. These are similar to modern markers like the Planet Eclipse ego in the fact that they use a smaller bolt and a “sled”. The back block and cocking rod are completely removed as they are unnecessary. These are all aftermarket modifications. There are no stock WGP versions of this. These will use a special bolt, sled, halfblock/midblock pump arm and halfblock/midblock slotted hammer. All other parts are the same as a full sized autococker.

Midblock – These are similar to a halfblock except that the upper tube is only milled to accept a bolt pin from the top like modern markers such as the Pe Ego. The stock WGP 05 Black Magic and the Empire Resurrection are examples of midblock markers. The bolt sled on these models are smaller than the halfblock version due to the lack of space between the upper and lower tube. A halfblock/midblock length pump arm and a halfblock/midblock slotted hammer are also unique to this marker.

Midget – This aftermarket modification is pretty rare, but is out there. This refers to an autococker that has been mini’d, halfblocked and has had about an inch removed from the rear of the lower tube (flush with the back of a

standard trigger frame. These are the smallest and lightest autocockers, but their velocities can be inconsistent.

Pump Arm Lengths

Full Sized body – Fits most Autocockers including Pre2K, 2K and Evo Length Autocockers

Mini – Will fit only Mini Length Cockers

Trilogy – Will fit only WGP Trilogy Autocockers

Full Sized Halfblock/Midblock – These are the same length and will fit the same markers.

Mini Halfblock/Midblock - These are the same length and will fit the same markers

Bolt and Back Block Lengths –

Bolt length will refer to the distance between the bolt pin and the air inlet hole. This distance will change slightly between certain models. There are many models of bolts that were manufactured in different lengths. You will need to pay close attention when making your purchase.

Pre-2K- As stated earlier, there are two types of “Pre2K” backblocks. Very early ones are (when viewed from a side profile) are a large rectangle that is about 1 inch deep. Most of them are a trapezoidal shape for weight reduction. Both types use a “pre 2K spec” bolt

2K-This is the most common bolt length. There are many aftermarket options for these length bolts.

“Evo” – Will fit only Belsales Evolution Length, STO P-Block and Karnivore. May fit others not listed here.

CCM/Works Length – This will only fit CCM milled Works Autocockers

Halfblock/Midblock Length – These are smaller, closer to an early model PE Ego\

Timing Rod Lengths

Full Body – These are only able to be used on Full Body Autocockers with a Vasa.

Mini- these are only able to be used on Minicockers

Trilogy- These are unique in the fact that they have the 3-way shaft integrated into them. Unique to the trilogy Autococker.

Internals

Most (99%) autocockers use the same size 9/16 valve. There are many, many aftermarket parts available for this. Some stock models such as the 05 Black Magic and Trilogy use the 11/16 sized valve.

Pre2K - As stated earlier if you have threads in the rear of the lower tube you can use all lowers/internals. If you do not have threads in the rear of the lower tube you need an IVG (Internal Velocity Governor) that is non-threaded and is held in place by the beavertail screw. These cocker bodies that require the non-threaded IVG will also need larger sized valve retention screw.

Halfblock/Midblock – Since these bodies do not utilize a cocking rod they will require a slotted hammer.

MQ Systems – These systems are pretty rare and expensive, however they allowed electro cockers to remove all mechanical internals and create the fastest shooting Autocockers. They are fraught with challenges in installation and maintenance though.

Drilled- what does it mean?

You will find many listings of Autocockers or Autococker bodies with the words “drilled” or “Not drilled”. In the late 90’s electronic paintball markers were introduced to the world. The race for shooting faster has always been present in the sport, but at that point the arms race accelerated. Planet Eclipse (PE) made a revolutionary development as an add-on to the Autococker platform. The Eblade system was an Electric Trigger System that would enhance the rate of fire of the Autococker platform and keep it relevant for a number of years in the tournament scene.

The Eblade system was so fast though that the hoppers at the time could not keep up with the rate of fire, so that prompted PE to retrofit an electronic eye to prevent the bolt from chopping the paintballs and make this available with their trigger kits.

Installation of this electronic eye onto your marker required that one literally drill 2 holes into the “passengers side (the 3 way side)” of the body. Current hopper designs do not necessitate the need to drill the body of any cocker. That is to say, if you have an ebladed cocker and a highend hopper such as a Rotor or higher, they will feed faster than an Eblade will cycle, there is no need to take out the drill and modify the body.

To be “drilled” means that there are two holes drilled in the side of the body of a marker to house the eye.

If a rare body is drilled it will generally decrease the value. This does all depend on the buyer however and their purpose of the purchase. If the end goal was to make it an E-Cocker then some machining work was done for them and could be a benefit.

You can use a drilled body for a mech or pump autococker. There will be absolutely no loss in performance.

Electronic trigger types

All Planet Eclipse E-frames can use all boards. The mounting hardware is the same and the trigger will register, however.. the E2 board screen is a bit offset compared to an E1 and if one does install an E2 board in an E1 frame it will mask part of the board.

We should separate the types of eblade boards from frames. The following is a description of boards. I will not get into intricacies of each board, but will give a basic overview.

E1 – Red display. Has semi mode and classic mode.

Zero B- Blue display. Is the same as an E2 1.10 but the display fits perfectly in an E1 frame.

E2 – V.24. Blue display. There are probably more talking points than I can think of off-hand, but this is a refined E1. Better battery life and can be upgraded if you know the right guy (not me).

E2 –V. 1.10. Blue display. This is the version that utilizes “ramping” both PSP and NPL. This is the top of Eblade technology.

Worrblade and Select Fire – The Worrblade frame is the WGP “version” of the Eblade. I don’t pretend to know what happened between PE and WGP, but around 2k4 and 2K5 Stock WGP markers started to feature the Worrblade instead of the Planet Eclipse Eblade. The Worrblade is just a different Eblade frame with an integrated rail. This still utilized the PE E1 board. The Select Fire (SF) frame was released around this time, but was different in that it used another WGP exclusive board and the electronics were simplified. There is no screen on the SF frame. The player’s controls were reduced to one button. The lack of a screen does reduce the users options when interfacing with it.

Racegun – I unfortunately have never owned a Racegun equipped Autococker, so I cannot expound upon its virtues. There are players that do love this platform, but finding tech help for one is difficult. The experts in this platform have told me that when they perform well they are better than any Eblade, but when they don’t....

Barrel Threads

AC thread- Congrats! If you are an Autococker lover then you are in luck: This is the most popular barrel type. It is so popular that most other manufacturers have adopted it as their own and allowed their customers the vast array of aftermarket barrel designs. Some include Planet Eclipse, Dye, Bob Long, Empire and many more.

I hope this guide will help you for your introduction to Autocockers. If you have any questions we at Not Lame Games are here to help. Happy Hunting!

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