



**WARNING: ADHERE STRICTLY TO THESE AND ALL OTHER SAFETY INSTRUCTIONS AND GUIDELINES.**

Warnings for safe Eclipse Ego handling:

- The Eclipse Ego is not a toy.
- Careless or improper use, including failure to follow instructions and warnings within this User Manual and attached to the Eclipse Ego could cause death or serious injury.
- Do not remove or deface any warnings attached to the Eclipse Ego.
- Paintball industry standard eye/face/ear and head protection designed specifically to stop paintballs and meeting ASTM standard F1776 (USA) or CE standard (Europe) must be worn by user and any person within range.
- Persons under 18 years of age must have adult supervision when using or handling the Eclipse Ego.
- Observe all local and national laws, regulations and guidelines.
- Use only professional paintball fields where codes of safety are strictly enforced.
- Use compressed air/nitrogen only. Do not use Co2
- Always follow instructions, warnings and guidelines given with any first stage regulator you use with the Eclipse Ego.
- Use 0.68 calibre paintballs only.
- Keep the Eclipse Ego switched off until ready to shoot.
- Treat every marker as if it is loaded.
- Never point the Eclipse Ego at anything you do not intend to shoot.
- Do not shoot at persons at close range.
- Always measure your markers velocity before playing paintball, using a suitable chronograph.
- Never shoot at velocities in excess of 300 feet (91.44 meters) per second, or at velocities greater than local or national laws allow.

**WARNING: ADHERE STRICTLY TO THESE AND ALL OTHER SAFETY INSTRUCTIONS AND GUIDELINES.**

- Do not fire the Eclipse Ego without the bolt in the breech, as high-pressure gas will be emitted.
- Do not fire the Eclipse Ego without the bolt pin locked securely in place.
- Never look into the barrel or breech area of the Eclipse Ego whilst the marker is switched on and able to fire.
- Never put your finger or any foreign objects into the paintball feed tube of the Eclipse Ego.
- Never allow pressurised gas to come into contact with any part of your body.
- Always switch off the Eclipse Ego when not in use.
- Always fit a barrel-blocking device to the Eclipse Ego when not in use on the field of play.
- Always remove all paintballs from the Eclipse Ego when not in use on the field of play.
- Always remove the first stage regulator and relieve all residual gas pressure from the Eclipse Ego before disassembly.
- The Eclipse Ego can hold a small residual charge of gas, typically 2 shots, with the first stage regulator removed. Always discharge the marker in a safe direction to relieve this residual gas pressure.
- Always remove the first stage regulator and relieve all residual gas pressure from the Eclipse Ego for transport and storage.
- Always follow guidelines given with your first stage regulator for safe transportation and storage.
- Always store the Eclipse Ego in a secure place.

NOTE: THIS USER MANUAL MUST ACCOMPANY THE PRODUCT IN THE EVENT OF RESALE OR NEW OWNERSHIP. SHOULD YOU BE UNSURE AT ANY STAGE YOU MUST SEEK EXPERT ADVICE (SEE SERVICE CENTERS)

ADVANCED SET-UP

This section contains in-depth information on setting up the Eclipse Ego.

- > SETTING THE TRIGGER
- > THE SET-UP MENU
- > THE MODE PARAMETER
- > ADJUSTING THE MODE PARAMETER
- > THE TIMING MENU
- > RATE OF FIRE CAP (ROF CAP)
- > MAXIMUM RATE OF FIRE (WITH BBSS OFF)
- > DWELL (DWELL)
- > FIRST SHOT DROP OFF (FSDO)
- > THE FILTER MENU
- > USING THE BREAK-BEAM SENSOR SYSTEM
- > SETTING THE EMPTY BREECH DETECTION TIME (EMPTY)
- > SETTING THE BALL DETECTION TIME (BALL)
- > USING THE FILTERING SYSTEMS
- > SETTING THE DEBOUNCE LEVEL
- > SETTING THE TRIGGER PULL TIME (PULL)
- > SETTING THE TRIGGER RELEASE TIME (RELEASE)
- > SETTING THE BAND HI VALUE
- > SETTING THE BAND LO VALUE
- > BASIC TRIGGER FILTER SET-UP
- > ADVANCED TRIGGER FILTER SET-UP
- > USING THE RESET PARAMETER

USING YOUR EGO

This section provides more detailed information on how to use and interact with the Eclipse Ego via its user interface.

- > SETTING UP
- > INSTALLING A PRESET AIR SYSTEM
- > INSTALLING AN ADJUSTABLE AIR SYSTEM
- > ATTACHING A LOADER
- > SWITCHING ON
- > SCREEN LAYOUT
- > THE MAIN MENU
- > THE EDIT INDICATORS
- > THE DISPLAY MENU
- > USING THE DISPLAY MENU
- > THE GAME TIMER MENU
- > USING THE GAME TIMER MENU
- > UNDERSTANDING THE BBSS OPERATION
- > ADJUSTING VELOCITY
- > ADJUSTING THE LPR PRESSURE

ORIENTATION

This section names the component parts of the Eclipse Ego Marker. This section is essential reading for everyone.

- > GET TO KNOW YOUR EGO
- > THE EGO NAVIGATION CONSOLE

QUICK SET-UP

This section provides details on how to get up and running quickly with your Eclipse Ego. This section is essential reading for everyone.

- > INSTALLING A BATTERY
- > SWITCHING ON THE ECLIPSE EGO.
- > SWITCHING OFF THE ECLIPSE EGO.
- > FIRING THE ECLIPSE EGO.
- > USING THE ECLIPSE BREAK-BEAM SENSOR SYSTEM



DISPLAY MENU TREE

This section provides a quick reference to the user interface.

MAINTENANCE

This section acts as a guide to performing routine maintenance.

- > CLEANING THE BREAK-BEAM SENSOR SYSTEM
- > STRIPPING AND CLEANING THE INLINE REGULATOR
- > STRIPPING AND CLEANING THE LPR
- > CLEANING AND LUBRICATING THE RAMMER
- > HOW TO STRIP THE ECLIPSE EGO
- > ASSEMBLING THE ECLIPSE EGO
- > CLEANING AND LUBRICATING THE BOLT
- > STRIPPING AND CLEANING THE SOLENOID

FAULT FINDING

This section provides information on how to resolve any problems that might arise with your Eclipse Ego.

SERVICE CENTRES

This section provides information on the location of your nearest Eclipse Ego Service Centre.

PARTS LIST

This section provides a table of components that make up the Eclipse Ego.

GLOSSARY

This section provides an explanation of the terminology used in the Eclipse Ego manual.

WARRANTY CARD

Tear-out product registration card to be completed and returned to Planet Eclipse. Alternatively register online at www.planeteclipse.com

SPARES & ACCESSORIES

Available upgrade / repair kits for your Eclipse Ego.



- This Users Manual is in English.
- It contains important safety guidelines and Instructions.
- Should you be unsure at any stage, or unable to understand the contents within this manual you must seek expert advice.



- Le mode d'emploi est en Anglais.
- Il contient des instructions et mesures de sécurité importantes.
- En cas de doute, ou s'il vous est impossible de comprendre le contenu du monde d'emploi, demandez conseil à un expert.



- Este manual de (operarios y) usuarios está en Inglés.
- Contiene importantes normas de seguridad e instrucciones.
- Si no esta seguro de algún punto o no entiende los contenidos de este manual debe consultar con un experto.



- Diese Bedienungs - und Benutzeranleitung ist in Englisch.
- Sie enthält wichtige Sicherheitsrichtlinien und -bestimmungen.
- Sollten Sie sich in irgendeiner Weise un sicher sein. Oder den inhalte dies heftes nicht versthén, lassen Sie siche bitte von einen Experten beraten.

FOR YOUR RECORDS

Please complete the details to keep a permanent record of your purchase of an Eclipse Ego. Please note, the form is intended for your personal records only, and will not act as a suitable warranty card for your purchase. Please complete the warranty card provided in the manual or the online warranty form, which can be found at WWW.PLANETECLIPSE.COM to validate your Eclipse warranty.

PRODUCT PURCHASED	COLOUR
DATE OF PURCHASE	PURCHASED FROM
PURCHASE PRICE	SERIAL NUMBER

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QUICKGUIDE

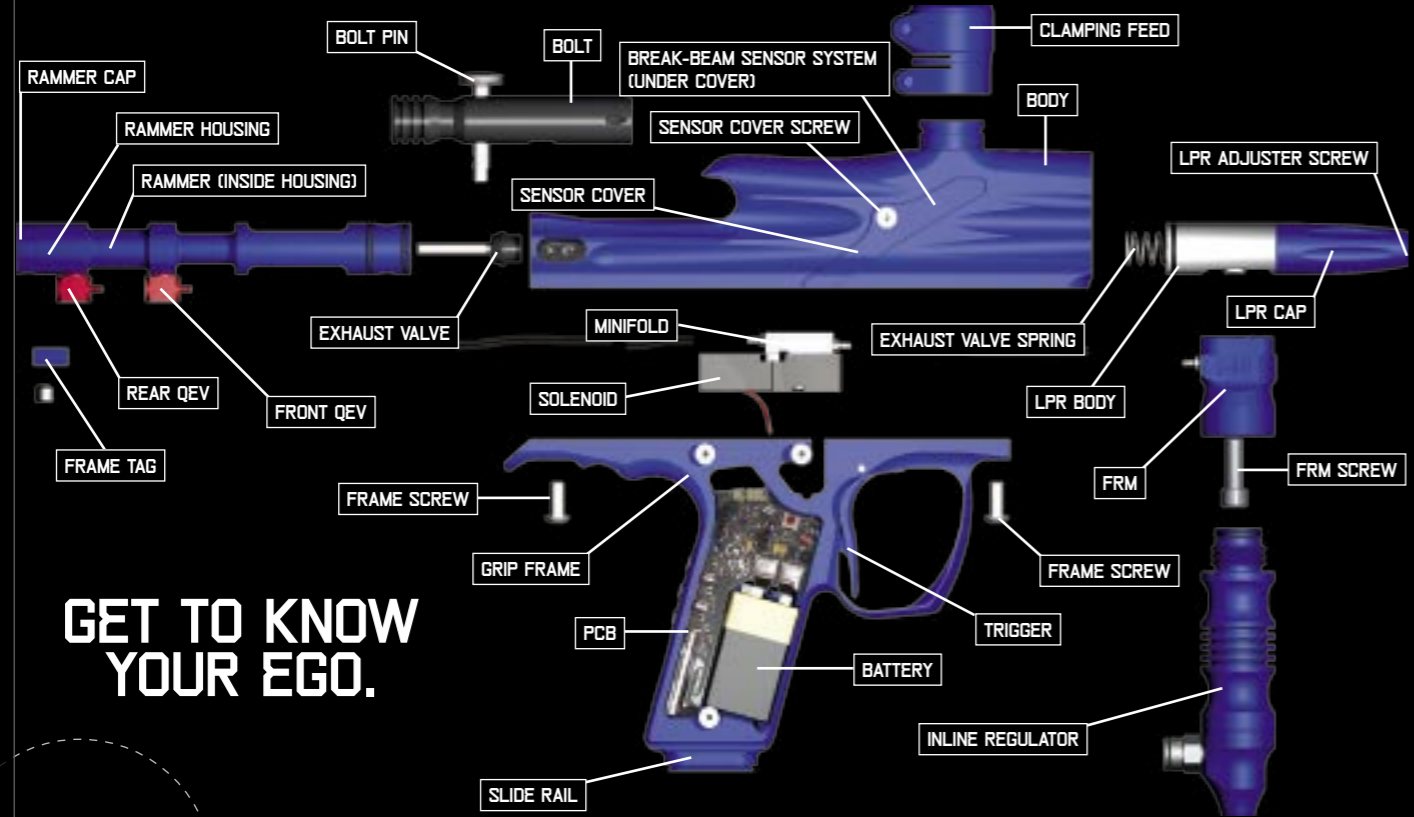
ORIENTATION

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EGO

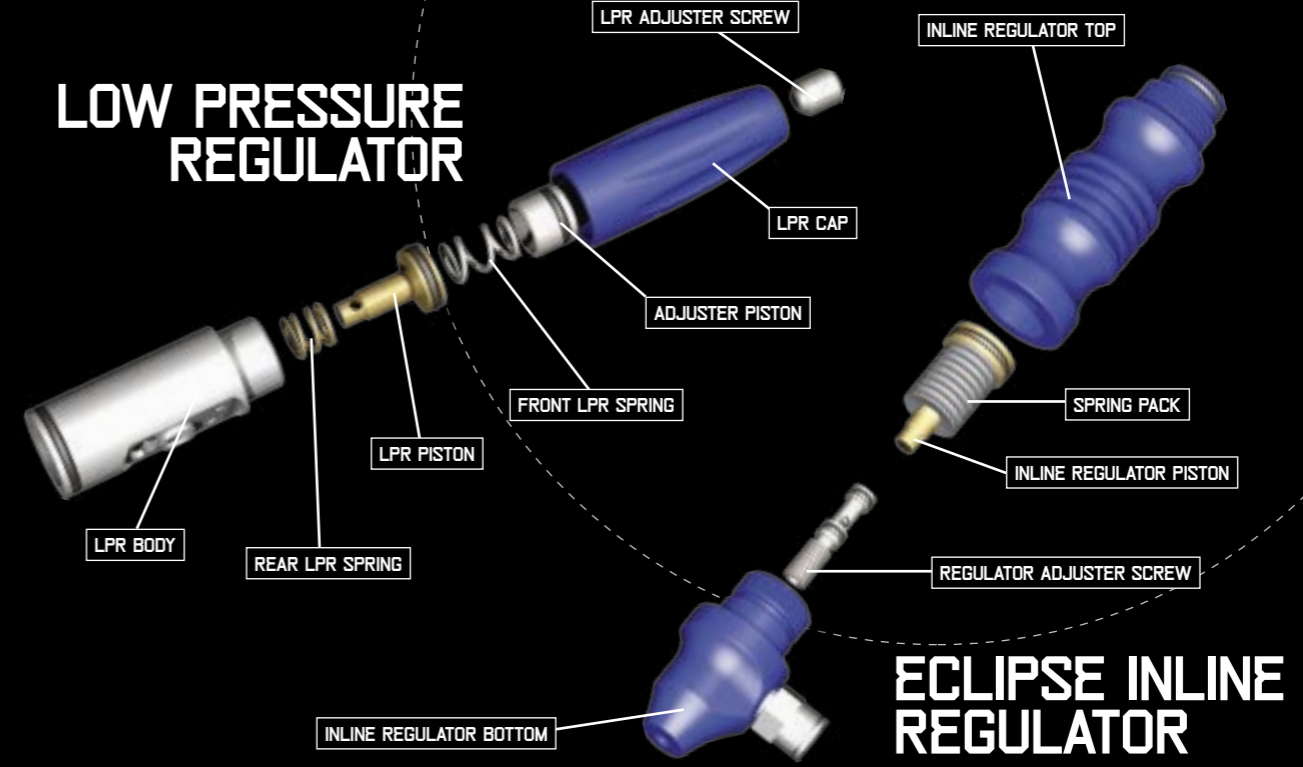
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GET TO KNOW YOUR EGO.









LOW PRESSURE REGULATOR



FOR A MORE DETAILED EXPLANATION OF PARTS PLEASE SEE THE GLOSSARY SECTION

THE EGO NAVIGATION CONSOLE

At the rear of the Ego's grip frame you will find the **Navigation Console**. The Navigation Console is used for several purposes including:

- TURNING THE EGO ON AND OFF USING THE  BUTTON
- SCROLLING THROUGH MENU CHOICES WITH  AND  BUTTONS
- SELECTING PARAMETERS TO EDIT USING THE  BUTTON
- EDITING PARAMETERS USING THE  AND  BUTTONS
- TURNING THE EGO BBSS ON AND OFF USING THE  BUTTON
- RESETTNG CERTAIN DISPLAY FEATURES USING THE  BUTTON



 FWD / RAISE

 SELECT

 BACK / LOWER



INSTALLING A BATTERY

Ensure that the Eclipse Ego is switched off. Lay the marker on a flat surface in front of you, with the feed tube furthest away and with the barrel pointing to the right.

Use a 5/64" hex wrench to remove the three countersunk screws that hold the rubber grip onto the frame (Note: a 2mm hex key can also be used). Peel the grip to the right to expose the electronics within the frame.

If present, remove the existing battery by sliding your thumb into the recess below the battery and levering the battery out of the frame (SEE FIGURE 2.1).

DO NOT pull on the top of the battery to remove it as this can cause the battery terminals to bend and will result in a poor electrical connection.

Fit a 9-volt alkaline battery (type PP3, 6LR61 or MN1604) into the recess with the battery terminals away from you. The positive terminal should be on the right hand side, nearest to the side of the frame (SEE FIGURE 2.2).

Ensure that all of the wires are within the recess of the frame then replace the rubber grip and replace the three countersunk screws.

DO NOT OVER-TIGHTEN THE SCREWS.





FIG 2.1



FIG 2.2

SWITCHING ON THE ECLIPSE EGO

At the rear of the frame is the **Ego Navigation Console**. Press and hold the  button (SEE FIGURE 2.3). After one second the Eclipse Ego logo will be displayed. Release the  button and the display will revert to the designated run screen (Average Rate of Fire, Peak Rate of Fire, Shot Counter or Game Timer).

SWITCHING OFF THE ECLIPSE EGO



Press and hold the  button for 1 second. The display will read OFF. Release the  button and re-press it to turn off the Eclipse Ego. Alternatively when the display reads OFF, you can also pull the trigger once to turn off the Eclipse Ego.






FIG 2.3




FIRING THE ECLIPSE EGO



Pull the trigger to fire the Eclipse Ego. The entire firing sequence is controlled electronically by the Eclipse Ego circuit board and solenoid, enabling any user to achieve high rates of fire easily.

USING THE BREAK-BEAM SENSOR SYSTEM

To switch off the Break-Beam Sensor System, press and hold the  button for one second (SEE FIGURE 2.4).

The eye on icon  in the top left hand corner of the LCD screen will change to the eye off icon  indicating that the Break-Beam sensor has been disabled.

To switch the Break-Beam Sensor System back on, press and hold the  button for one second. The eye off icon  in the top left hand corner of the LCD screen will change to the eye on icon  indicating that the breech sensor has been enabled.

When the Break-Beam Sensor System is enabled, the icon will change depending on if the system has detected a ball or not. When no ball has been detected the icon looks like this  when a ball has been detected the icon changes to look like this .

Additional features of the egos Break-Beam Sensor System are covered in full in the "Using Your Ego" section of this user manual.

NOTE: WHEN TURNING ON THE ECLIPSE EGO, THE BREAK-BEAM SENSOR SYSTEM IS AUTOMATICALLY ENABLED



FIG 2.4

SETTING UP

Before you can begin to use your Eclipse Ego, there are a few necessary components that are required to enable the Eclipse Ego to function; namely an air system and a loader of your choice.

NOTE: THE ECLIPSE EGO CANNOT BE USED WITH CO₂. IT CAN ONLY BE POWERED BY COMPRESSED AIR OR NITROGEN.



FIG 3.1



FIG 3.3

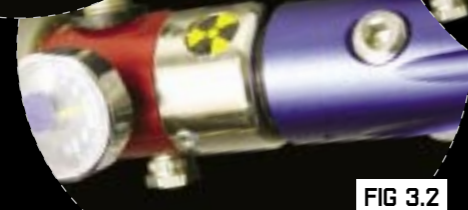


FIG 3.2

INSTALLING A PRESET AIR SYSTEM

Every Eclipse Ego comes complete with an Eclipse On/Off System allowing a preset regulator and tank to be screwed straight in for immediate use. Before screwing the preset into the Eclipse On/Off ensure that the On/Off knob is wound out approximately half way [SEE FIGURE 3.1].

Be careful not to unscrew the On/Off knob too far as it will come completely out of the Eclipse On/Off System. If this happens, replace the On/Off knob by screwing it back into the Eclipse On/Off system in a clockwise direction.

Screw the preset air system into the Eclipse On/Off System [SEE FIGURE 3.2] so that the bottle screws in all the way and is tight. Slowly turn the On/Off knob in a clockwise direction allowing the Eclipse On/Off System to depress the pin of the preset air system causing the Eclipse Ego to become pressurized, providing that there is sufficient air in your tank [SEE FIGURE 3.3].

You have now installed a preset air system onto your Eclipse Ego.

NOTE: WHEN USING AN ECLIPSE ON/OFF ON YOUR ECLIPSE EGO, THE ECLIPSE EGO WILL STILL HAVE STORED AIR IN THE VALVE CHAMBER, GAS LINE AND INLINE REGULATOR AFTER YOU HAVE SWITCHED THE ECLIPSE ON/OFF OFF. PLEASE REMEMBER TO DISCHARGE THE STORED AIR IN A SAFE DIRECTION AS YOU ARE UNSCREWING THE ON/OFF KNOB ON THE ECLIPSE ON/OFF SYSTEM.

INSTALLING AN ADJUSTABLE AIR SYSTEM

Firstly disconnect the 1/4" hosing from the elbow attached to the Eclipse On/Off system at the base of the grip frame [SEE FIGURE 3.4].

Unscrew the On/Off knob completely from the Eclipse On/Off system and using a 3/32nd hex key turn the two screws on the left hand side of the integrated slide rail at the base of the grip frame in a counter clockwise direction so that the Eclipse On/Off can be removed from the rail by sliding it backwards [SEE FIGURE 3.5].

As well as the integrated slide rail at the base of the Eclipse Egos grip frame, there are also two 10-32 UNF threaded screw holes which will accept all standard bottom line screws [SEE FIGURE 3.6].

Attach the air system of your choice, taking care to ensure that you use the correct length and size of hosing to accommodate your requirements.



FIG 3.4

FIG 3.6



FIG 3.5

WARNING: BEFORE ATTACHING ANY FIXED AIR SYSTEM, PLACE ATTACHING SCREW IN DESIGNATED SLIDE RAIL AND MEASURE PROTRUDING SCREW LENGTH. SCREW LENGTH MUST NOT PROTRUDE MORE THAN 10MM/0.40" OTHERWISE THE EGO PRINTED CIRCUIT BOARD WILL BECOME DAMAGED.



ATTACHING A LOADER

Using a 5/32" hex key, turn the top screw of the clamping feed tube counter clockwise until the feed neck of your loader can easily be pushed into the top of the clamping feed tube (SEE FIGURE 3.7). Push your choice of loader firmly into the clamping feed tube so that it rests on the shelf inside the clamping feed tube (SEE FIGURE 3.8). Using a 5/32" hex key, tighten the top screw of the clamping feed tube by turning it clockwise until the loader is firmly gripped (SEE FIGURE 3.9).

You have now attached a loader to your Eclipse Ego. Once you have filled your loader and air tank you will then be ready to begin using your Eclipse Ego.



FIG 3.7

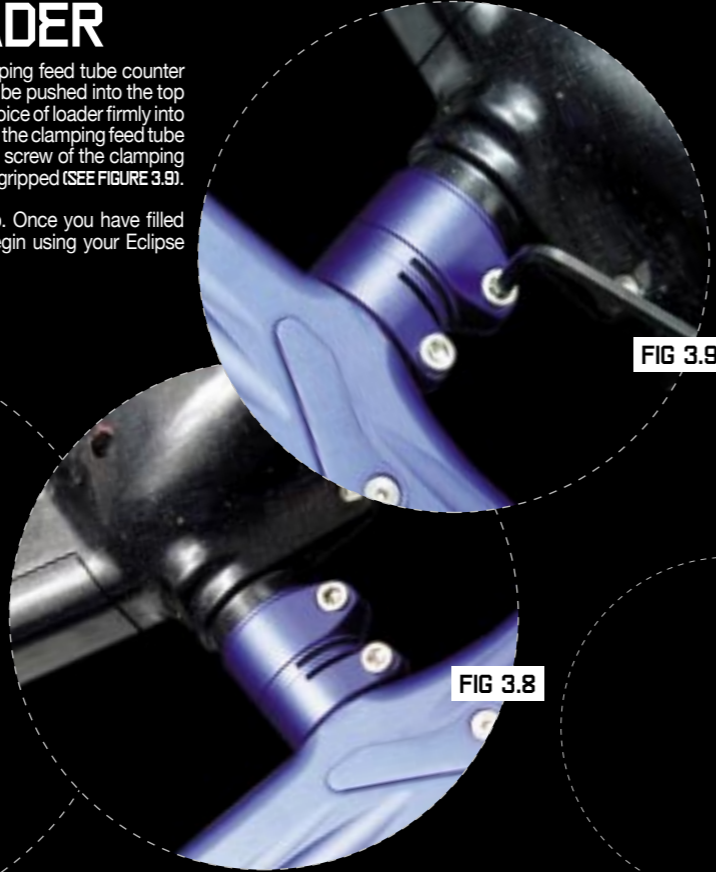
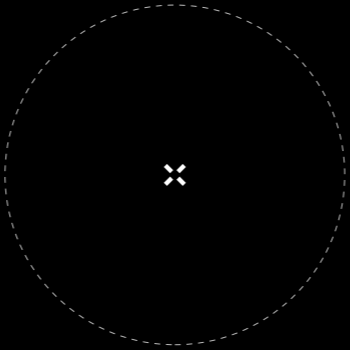




FIG 3.8



FIG 3.9

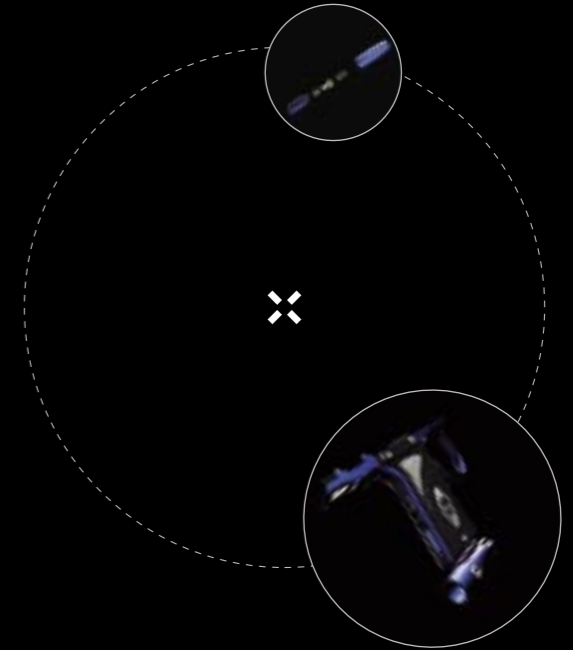
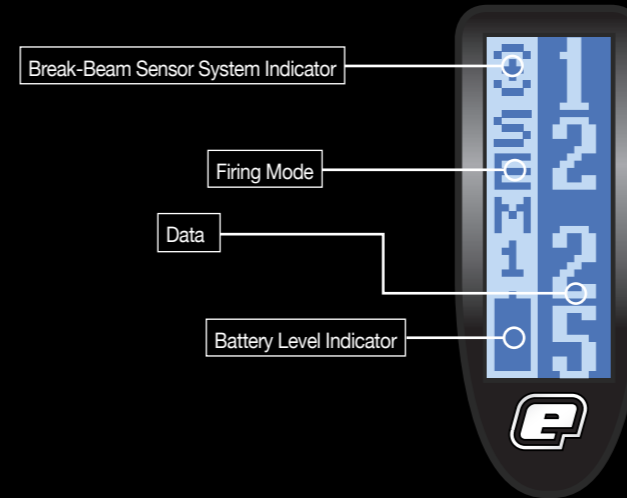


SWITCHING ON

Pressing and holding the  button will switch the Eclipse Ego on. The LCD display will show the Eclipse Ego logo. When the  button is released, the LCD display will show the selected display.

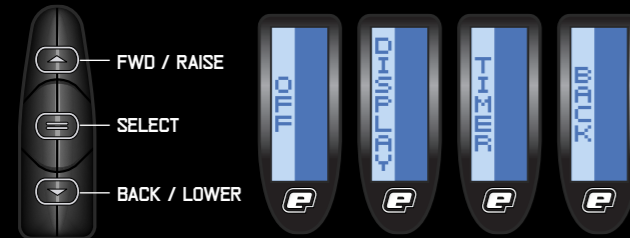
SCREEN LAYOUT

The standard layout of an Eclipse Ego display is as follows:



THE MAIN MENU

To activate the Main Menu (providing the Eclipse Ego is already turned on), press and hold the button. After one second OFF will be displayed. This is one of the options on the Main Menu, as shown below:



Press the button to scroll down through each of the options on the menu. Once the last option on the menu has been displayed, pressing the button will cause the first option to be displayed.

Press the button to scroll up through each of the options on the menu. Once the first option on the menu has been displayed, pressing the button will cause the last option to be displayed.

Press the button to select the displayed option.

Selecting the BACK option will exit the main menu and return to the display from which the Main Menu was selected.

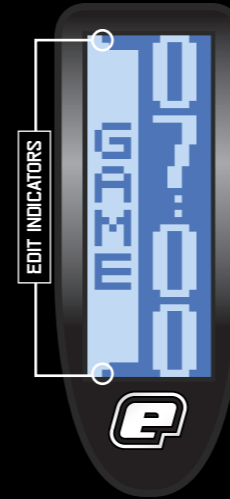
THE EDIT INDICATORS

Whenever you wish to edit a parameter that has been selected from any of the menu options, press the button and the Edit Indicators will appear on screen, as shown below:

With the Edit Indicators present on screen, you can use the button and the button to edit the chosen parameter accordingly.

Once you have finished editing the parameter, press the button to confirm the setting and the Edit Indicators will disappear from the screen.

You can now successfully edit a parameter.



THE DISPLAY MENU

Scroll through the main menu until the DISPLAY option is displayed and then press . This has now activated the DISPLAY Menu.

The left hand side of the screen shows DISPLAY, the name of the parameter that is currently shown, whilst the right hand side of the screen can be changed by using the and buttons to scroll through the different DISPLAY options as detailed below:



To display the Game Timer when the frame is in normal use, simply select the TIMER option from the DISPLAY Menu.

To display the Shot Counter when the frame is in normal use, simply select the SHOTS option from the DISPLAY Menu.

To display the Average Rate of Fire Indicator when the frame is in normal use, simply select the AVG ROF option from the DISPLAY menu.

To display the Peak Rate of Fire Indicator when the frame is in normal use, simply select the PEAK ROF from the DISPLAY Menu.

To return to the Main Menu, scroll to the CANCEL option and press .

NOTE: THE OPTION CHOSEN IN THE DISPLAY MENU WILL BE THE DESIGNATED RUN SCREEN WHEN THE ECLIPSE EGO IS IN NORMAL USE, AND WHEN THE MARKER IS FIRST SWITCHED ON.

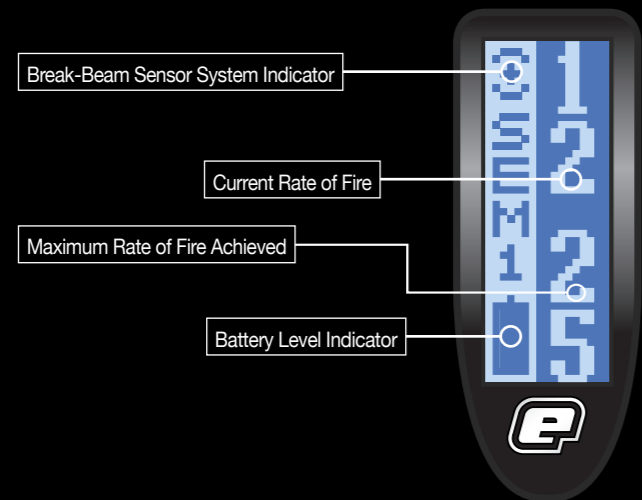


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QUICKGUIDE

USING THE DISPLAY MENU

As both the **TIMER** and the **SHOTS** options from the **DISPLAY** Menu are covered in their respective sections in the following pages we will start by looking at the Rate of Fire options.



THE AVERAGE RATE OF FIRE OPTION

The Average Rate of Fire (**AVG ROF**) option is one of two ways in which you can monitor your rate of fire whilst using the Eclipse Ego. The Average Rate of Fire screen looks like the screen to the left.

Unlike some other markers the Average Rate of Fire on the Eclipse Ego is measured over a period of one second.

The current Average Rate of Fire is displayed in the top right hand corner of the display, whilst the maximum Average Rate of Fire is displayed in the bottom right hand corner of the display.

To reset the maximum Average Rate of Fire simply push and hold the **SELECT** button for a one second period.

With the Break-Beam Sensor System enabled and paint present, the Average Rate of Fire is only limited by the speed of your loader. To achieve the highest rates of fire we recommend using a high speed loader such as the Reloader B, Q-loader or new VL Evolution. With the Break-Beam Sensor System enabled and no paint present, the rate of fire will be 0 as your Ego will be unable to fire.

To use the Average Rate of Fire screen without shooting paint, simply switch the Break-Beam Sensor System off using the **BACK / LOWER** button. In this scenario the Average Rate of Fire is only limited to whatever value you have selected in the **OFF ROF** option in the **TIMING** Menu.

THE PEAK RATE OF FIRE

The Peak Rate of Fire (**PEAK ROF**) option is one of two ways in which you can monitor your rate of fire whilst using the Eclipse Ego. The Peak Rate of Fire screen looks like the **screen below**:



The Peak Rate of Fire option calculates both the current and maximum Peak Rate of Fire achieved based on the time between the closest two consecutive shots.

The current Peak Rate of Fire is displayed in the top right hand corner of the display, whilst the maximum Peak Rate of Fire is displayed in the bottom right hand corner of the display.

To reset the maximum Peak Rate of Fire simply push and hold the **SELECT** button for a one second period.

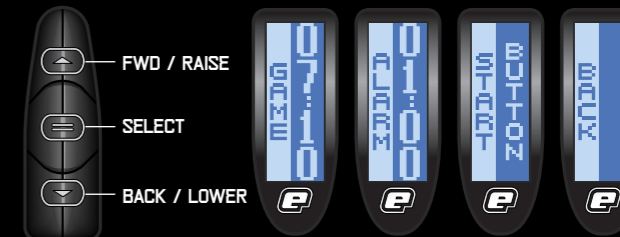
With the Break-Beam Sensor System enabled and paint present, the Peak Rate of Fire is only limited by the speed of your loader. To achieve the highest rates of fire we recommend using a high speed loader such as the Reloader B, Q-loader or new Velocity Loader. With the Break-Beam Sensor System enabled and no paint present, the rate of fire will be 0 as your Ego will be unable to fire.

To use the Peak Rate of Fire screen without shooting paint, simply switch the Break-Beam Sensor System off using the **BACK / LOWER** button. In this scenario the Peak Rate of Fire is only limited to whatever value you have selected in the **OFF ROF** option in the **TIMING** Menu.

THE GAME TIMER MENU

Scroll through the Main Menu until the **TIMER** option is displayed and then press **SELECT**. You have now entered the **GAME TIMER** Menu.

By using the **BACK / LOWER** and **FWD / RAISE** buttons, you can scroll through the menu as **illustrated below**:



To set the game timer, simply select the **GAME** option.

To set the alarm timer, simply select the **ALARM** option.

To set the starting method of the game timer, simply select the **START** option.

To return to the Main Menu, scroll to the **BACK** option and press **SELECT**.

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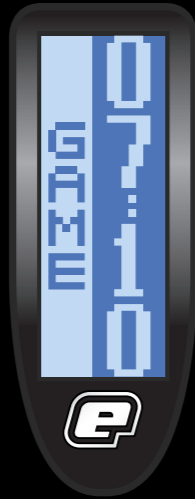
SETTING THE GAME TIMER

Once the **GAME** option has been selected from the **TIMER** menu, the preset game time will be displayed on the right hand side of the screen, the factory setting for which is 7 minutes and 10 seconds, as **shown below**.

To increase the preset game time, repeatedly press and release the  button. Each time that the button is pressed, the game time will increase by 10 seconds. To increase the time more rapidly, press and hold the  button. The maximum preset game time is 60 minutes and 0 seconds, once this value has been exceeded the game timer will wrap around to 0 minutes and 0 seconds.

To decrease the preset game time, repeatedly press and release the  button. Each time that the button is pressed, the game time will decrease by 10 seconds. To decrease the time more rapidly, press and hold the  button. The minimum preset game time is 0 minutes and 0 seconds, once this value has been exceeded the game timer will wrap around to 60 minutes and 0 seconds.



Once you have set the game timer to the time that you require, press the  button to save the value. The Edit Indicators will disappear, indicating that the time has been accepted.






SETTING THE ALARM TIME

As well as a game timer we have an added **ALARM** feature that allows you to set a designated time during the game timer at which the **ALARM** feature will be activated. When the game timer reaches the Alarm time the display will flash continually to indicate this.

Once the **ALARM** option has been selected from the **GAME TIMER** Menu, the edit indicators will appear and the preset alarm time will be displayed on the right hand side of the screen, the factory setting for which is 1 minute and 0 seconds.



To increase the preset alarm time, repeatedly press and release the  button. Each time that the button is pressed, the alarm time will increase by 10 seconds. To increase the time more rapidly, press and hold the  button. The maximum preset alarm time is 60 minutes and 0 seconds, once this value has been exceeded the alarm timer will wrap around to 0 minutes and 0 seconds.

To decrease the preset alarm time, repeatedly press and release the  button. Each time that the button is pressed, the alarm timer will decrease by 1 second. To decrease the time more rapidly, press and hold the  button. The minimum preset alarm time is 0 minutes and 0 seconds, once this value has been exceeded the alarm timer will wrap around to 60 minutes and 0 seconds.

Once you have set the alarm time to the preset time that you require, press the  button to save the value. The edit indicators will disappear, indicating that the time has been accepted.

SETTING THE START METHOD OF THE GAME TIMER

Once the **START** option has been selected from the **GAME TIMER** Menu, the edit indicators will appear and the method of starting the Game Timer will be displayed on the right hand side of the screen, the factory setting for which is **BUTTON**.

To change the starting option for the Game Timer, simply use the  or  buttons to scroll through the menu choices:



BUTTON means that pressing the  button will start the game timer (when displayed).

TRIGGER means that pulling the trigger will start the game timer (when displayed).

Selecting **CANCEL** returns to the **TIMER** Menu.


STARTING THE GAME TIMER


When **TIMER** has been selected as the designated display screen, the Game Timer will be displayed.

Starting the Game Timer depends on whether you have chosen **BUTTON** or **TRIGGER** in the **START** option of the **GAME TIMER** Menu.

By starting the Game Timer using your chosen method, the timer will start to count backwards, in seconds, towards zero.

To stop the game timer, push and hold the lower button for 0.5 seconds. The game time will pause at whatever time it had counted down to.

The  button, or trigger, depending on your choice of starting method can be used to restart the Game Timer if required.

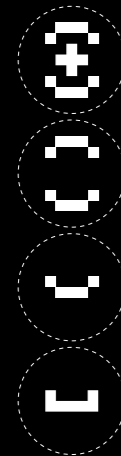
To now reset the Game Timer, press and hold the  button for 2 seconds. The Game Timer will return to its preset value. The Game Timer will also be reset whenever the Eclipse Ego is switched off.



UNDERSTANDING THE BBSS OPERATION

The BBSS is able to switch itself off in the event that a blockage or contamination prevents it from functioning correctly. In this instance, the BBSS will switch itself back on once the blockage is cleared and the correct operation can be resumed.

The BBSS icon on the main screen is used to indicate the six possible states of the BBSS as follows:



The BBSS is enabled and a ball is detected. The Ego can be fired at the maximum rate of fire determined by the chosen firing mode.

The BBSS is enabled and no ball is detected. The Ego cannot be fired.

The BBSS is disabled. The Ego can be fired at a maximum rate of fire as set by the DFF ROF parameter (see page 32).

A BBSS fault has been detected and the system is disabled. The Ego can only be fired at a maximum rate of fire of 10bps, regardless of the chosen firing mode.



A BBSS sensor fault has been cleared and the sensor has been re-enabled. A ball is detected and the Ego can be fired at the maximum rate of fire determined by the chosen firing mode.

A BBSS fault has been cleared and the sensor is enabled. No ball is detected so the Ego cannot be fired. To reset the BBSS icon, use the button to switch off the BBSS and then back on again.

ADJUSTING YOUR VELOCITY

When using your Eclipse Ego, you may wish to change the velocity at which your Eclipse Ego is firing. This is done by inserting a 1/8th" hex key into the adjuster screw at the bottom of your Eclipse Ego Inline regulator and adjusting it accordingly (SEE FIGURE 3.10). By turning this adjuster screw clockwise you decrease the output pressure of the inline regulator and consequently the velocity, by turning the adjuster screw counter clockwise you increase the output pressure of the inline regulator and consequently the velocity.

NOTE: AFTER EACH ADJUSTMENT FIRE TWO CLEARING SHOTS TO GAIN AN ACCURATE VELOCITY READING. NEVER EXCEED 300FPS.



ADJUSTING YOUR LPR PRESSURE

When using your Eclipse Ego, you may wish to change the output pressure of your LPR. This is easily done by inserting a 5/32nd" inch hex key into the adjuster screw at the front and adjusting it accordingly (SEE FIGURE 3.11).

By turning the adjuster screw clockwise, you decrease the output pressure of your LPR and consequently reduce the pressure driving your rammer back and forth. By turning the adjuster screw counter clockwise, you increase the output pressure of your LPR and consequently increase the pressure driving your rammer back and forth.

NOTE: TURNING THE ADJUSTER SCREW OUT TOO FAR WILL CAUSE IT TO FALL OUT.



QUICKGUIDE

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SETTING THE TRIGGER

There are four adjustment points on the trigger – the **FRONT STOP TRIGGER SCREW**, the **REAR STOP TRIGGER SCREW**, the **MAGNET RETURN STRENGTH SCREW** and the **SPRING TENSION SCREW**.

As standard each Eclipse Ego comes with a factory set trigger travel of approximately 2mm in total length; one millimeter of travel before the firing point and one millimeter of travel after the firing point.

The **FRONT STOP TRIGGER SCREW** is used to set the amount of trigger travel prior to the marker firing. Turn this screw clockwise to reduce the amount of travel. Do not turn the screw too far or the trigger will be pushed past the firing point and the marker will not work. Turn this screw counter clockwise to increase the amount of trigger travel [SEE FIGURE 4.1].

The **REAR STOP TRIGGER SCREW** is used to set the amount of travel after the marker has fired. Turn this screw clockwise to reduce the amount of travel. Do not turn the screw too far or the trigger will be prevented from reaching its firing point and the marker will not work. Turn this screw counter clockwise to increase the amount of travel [SEE FIGURE 4.2].

The **MAGNET RETURN STRENGTH SCREW** is used to adjust the amount of force with which the trigger is returned to its rest position by the magnet. Turn the screw clockwise to increase the amount of force. Do not turn the screw too far or it will negate the position of the Front Stop Trigger Screw. Turn the screw counter clockwise to reduce the amount of force. Do not turn the screw too far or there will not be enough force to return the trigger [SEE FIGURE 4.3].

The **SPRING TENSION SCREW** is used to adjust the amount of spring tension behind the trigger when it is pulled. Turn the screw clockwise to increase the amount of spring tension. Turn the screw counter clockwise to reduce the amount of spring tension [See FIGURE 4.4].

Once you have set the trigger to your preference, refer to setting the **BAND HI** and **BAND LO** (SEE PAGE 37), as it is very important that the **BAND HI**, **BAND LO** and trigger pull are set up together for the trigger filtering to work correctly.



THE SET UP MENU

To activate the **SET-UP** Menu, first remove the three rubber grip screws from the right hand side of the frame (SEE FIGURE 4.4) and peel back the rubber grip to expose the PCB inside the frame. Press and hold the **SET-UP** button, which is located on the PCB above the battery (SEE FIGURE 4.5). After one second, the **MODE** parameter will be displayed - this is the first item on the **SET-UP** Menu as illustrated below:

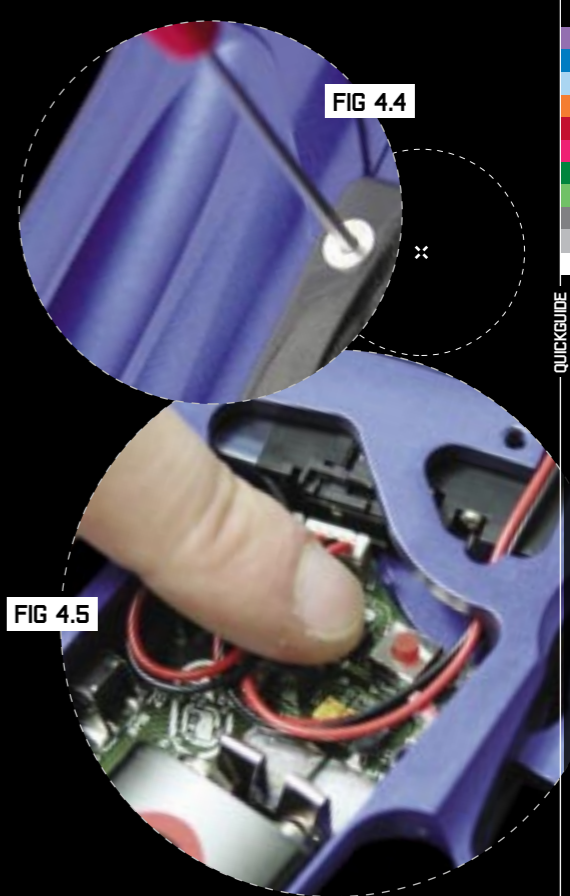


Press the **SELECT** button to scroll down through each of the items on the menu. Once the last item has been displayed, pressing the **SELECT** button will cause the first item to be displayed.

Press the **FWD / RAISE** button to scroll up through each of the items on the menu. Once the first item has been displayed, pressing the **FWD / RAISE** button will cause the last item to be displayed.

Press the **BACK / LOWER** button to select the displayed item.

Selecting **BACK** will return the display to the display from which the **SET-UP** Menu was selected.



THE MODE PARAMETER

The **MODE** parameter is used to control the firing mode of the Ego. Each of the selectable modes has its own features as outlined below:

SEMI (Semi 1) - This is the default firing mode which produces one shot for every pull of the trigger and is uncapped with the Break-Beam Sensor System (BBSS) enabled.

SEM2 (Semi 2) - This mode is the same as the Semi 1 mode but the maximum rate of fire is capped at 15bps.

RMP1 (Ramp 1) - This mode allows the rate of fire to ramp to a maximum set by the **ROF CAP** parameter once the trigger has been pulled four times at a minimum rate of 5 pps (pulls per second), and allows this rate of fire to be maintained as long as trigger pull rate is maintained. After the last trigger pull, the ramp can be restarted with a single pull if that pull occurs within one second.

RMP2 (Ramp 2) - This mode is the same as the Ramp 1 mode but without the 1 second ramp restart.

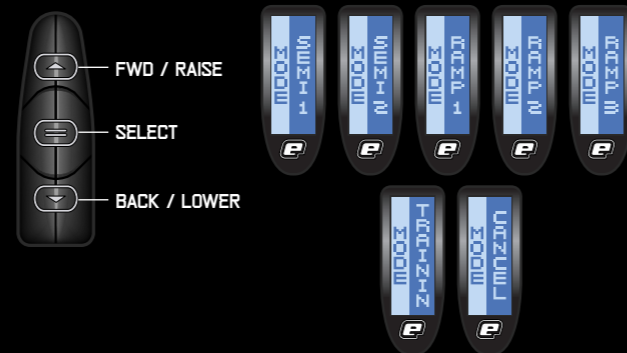
RMP3 (Ramp 3) - This mode is the same as the Ramp 2 mode but activates at a minimum rate of 7.5 pulls per second.

TRNG (Training) - This mode is the same as the Semi 1 mode but the rammer is prevented from striking the exhaust valve, the BBSS is permanently disabled and the rate of fire is uncapped. This mode is compatible with the neighbours!

PLEASE NOTE: Certain modes may only be available in certain countries and on certain models of the Eclipse Ego. If in doubt, the current firing mode is displayed at all times on the main screen.

ADJUSTING THE MODE PARAMETER

Scroll through the **SET-UP** menu until the **MODE** parameter is displayed. The current firing mode is shown on the right-hand side of the display. To change the **MODE** parameter press **SELECT** and the edit indicators will appear. You have now entered the **MODE** parameter. The options for the **MODE** parameter are displayed below:



Press the **SELECT** button to scroll down through each of the available firing mode options. Once the last option has been displayed, pressing the **SELECT** button will cause the first option to be displayed.

Press the **BACK / LOWER** button to scroll up through each of the available firing mode options. Once the first option has been displayed, pressing the **BACK / LOWER** button will cause the last option to be displayed.

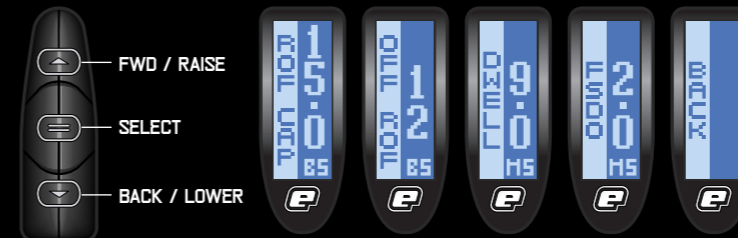
Press the **SELECT** button to change the firing mode to the displayed option.

Selecting **BACK** will return the display to the **SET-UP** Menu.

THE TIMING MENU

The **TIMING** Menu provides access to parameters which control the Ego's firing cycle.

Scroll through the **Set-up** Menu until **TIMING** is displayed and then press **SELECT**. This will display **ROF CAP** the first item on the **TIMING** Menu.



Press the **SELECT** button to scroll down through each of the items on the **TIMING** Menu. Once the last item has been displayed, pressing the **SELECT** button will cause the first item to be displayed.

Press the **BACK / LOWER** button to scroll up through each of the items on the **TIMING** Menu. Once the first item has been displayed, pressing the **BACK / LOWER** button will cause the last item to be displayed.


Press the **SELECT** button to edit the displayed parameter.

Selecting **BACK** will return the display to the **SET-UP** Menu.




RATE OF FIRE CAP



The **ROF CAP** is used to control how fast the Ego can cycle in each of the capped firing modes (**SEMI 2**, **RAMP 1**, **RAMP 2** and **RAMP 3**).


Scroll through the **TIMING** Menu until the **ROF CAP** parameter is displayed.

The current value of the **MAXIMUM RATE OF FIRE** is shown in balls per second on the right hand side of the display. Press the  button to enter the edit function see below:



Press and release the  button to increase the **ROF CAP** value in 0.1 ball per second increments, up to a maximum of 15.4 bps. Press and hold the  button to a maximum of 15.4 bps. Press and hold the  button to increase the **ROF CAP** value more rapidly.

Press and release the  button to decrease the **ROF CAP** value in 0.1 ball per second increments, down to a minimum of 10 bps. Press and hold the  button to decrease the **ROF CAP** value more rapidly.

Press  to save the **ROF CAP** value and the edit indicators will disappear from the display to indicate that the value has been accepted.


You have now returned to the **TIMING** Menu.



MAXIMUM RATE OF FIRE (WITH BBSS OFF)



The **OFF ROF** parameter is used to control how fast the Ego cycles when the Break-Beam Sensor System is disabled. This parameter should be set to match the slowest speed of the loading system in use.


Scroll through the **TIMING** Menu until the **OFF ROF** parameter is displayed.



The current value of the **MAXIMUM RATE OF FIRE (WITH BBSS OFF)** is shown in balls per second on the right hand side of the display. Press the  button to enter the edit function see left.

Press and release the  button to increase the **OFF ROF** value in 1 ball per second increments, up to a maximum of 15 bps. Press and hold the  button to increase the **OFF ROF** value more rapidly.

Press and release the  button to decrease the **OFF ROF** value in 1 ball per second increments, down to a minimum of 1 bps. Press and hold the  button to decrease the **OFF ROF** value more rapidly.


Press  to save the **OFF ROF** value and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the **TIMING** Menu.



DWELL



The **Dwell** parameter controls the amount of time that the solenoid is energised and therefore the amount of gas that is released with each shot.


Scroll through the **TIMING** Menu until the **DWELL** parameter is displayed. The current value of the **DWELL** is shown on the right hand side of the display **see below**.

Press the  button to enter the edit function and the edit indicators will appear on the display.



Press and release the  button to increase the **DWELL** time in 0.1 millisecond increments. Press and hold the  button to increase the **DWELL** time more rapidly.

Press and release the  button to decrease the **DWELL** time in 0.1 millisecond increments. Press and hold the  button to decrease the **DWELL** time more rapidly.

Press  to save the **DWELL** time and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the **TIMING** Menu.


FIRST SHOT DROP OFF



First shot drop off is a reduction in velocity of the first paintball to be fired after the Ego has been left un-fired for more than 4 minutes. The **FSD0** parameter is used to define an increase in dwell time for the 'First Shot' in order to combat this problem.



Scroll through the **TIMING** Menu until the **FSD0** parameter is displayed.


The current value of the **FIRST SHOT DROP OFF** is shown on the right hand side of the display **see below**.



Press the  button to enter the edit function and the edit indicators will appear on the display.

Press and release the  button to increase the **FSD0** value in 0.1ms increments. Press and hold the  button to increase the **FSD0** value more rapidly.

Press and release the  button to decrease the **FSD0** value in 0.1ms increments. Press and hold the  button to decrease the **FSD0** value more rapidly.



Press  to save the **FSD0** value and the edit indicators will disappear from the display to indicate that the value has been accepted.



You have now returned to the **TIMING** Menu.

THE FILTER MENU

The FILTER Menu provides access to parameters that are used to control the various software filters.

Scroll through the SET-UP Menu until the FILTER is displayed and then press Select. This will display EMPTY, the first item on the FILTER Menu **see below**.

Press the  button to scroll down through each of the items on the FILTER Menu. Once the last item has been displayed, pressing the  button will cause the first item to be displayed.

Press the  button to scroll up through each of the items on the FILTER Menu. Once the first item has been displayed, pressing the  button will cause the last item to be displayed.

Press the  button to edit the displayed parameter.

Selecting BACK will return the display to the SET-UP Menu.



USING THE BREAK-BEAM SENSOR SYSTEM

During the firing cycle, the breach sensor looks first for an empty breach and then for a paintball within the breach. Only when the sensor has detected both conditions will it allow the Eclipse Ego to be fired. The sensor software filter allows you to fine tune the operation of the Break-Beam Sensor System by allowing you to specify how long the sensors have to see an 'empty' breach for and how long they have to see a ball for.






SETTING THE EMPTY BREECH DETECTION TIME



Custom and third party bolts can fool the BBSS if they have slots or holes that allow the Break-Beam to pass through. To overcome this problem the EMPTY parameter defines how long the Break-Beam has to be in-tact before the breach is considered to be empty.


Scroll through the FILTER Menu until the EMPTY parameter is displayed.

The current value of the EMPTY BREECH DETECTION TIME (EMPTY) is shown on the right hand side of the display **see below**.

Press the  button to enter the edit function and the edit indicators will appear on the display.

Press and release the  button to increase the EMPTY value in 1 millisecond increments. Press and hold the  button to increase the EMPTY value more rapidly.

Press and release the  button to decrease the EMPTY value in 1 millisecond increments. Press and hold the  button to decrease the EMPTY value more rapidly.

Press  to save the EMPTY value and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the FILTER Menu.






SETTING THE BALL DETECTION TIME

The BALL parameter defines how long a paintball has to sit in the breach before it is considered ready to fire.


Scroll through the FILTER Menu until the BALL parameter is displayed.

The current value of the BALL DETECTION TIME (BALL) is shown on the right hand side of the display **see below**.

Press the  button to enter the edit function and the edit indicators will appear on the display.

Press and release the  button to increase the BALL value in 1-millisecond increments. Press and hold the  button to increase the BALL value more rapidly.

Press and release the  button to decrease the BALL value in 1-millisecond increments. Press and hold the  button to decrease the BALL value more rapidly.

Press  to save the BALL value and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the FILTER Menu.



USING THE FILTERING SYSTEMS

The Eclipse Ego incorporates two different filtering systems to allow the maximum amount of fine tuning when setting up your marker. Both the INTELLIGENT DEBOUNCE FILTER (ID FILTER) and the TRIGGER TRANSITION FILTER (TT FILTER) are fully adjustable and can be used to completely eliminate bounce.

The ID FILTER is intended to be used independently of the TT FILTER, with the user having the option to turn the TT FILTER on or off as and when it is required.

Both the ID FILTER and the TT FILTER work by analyzing each trigger pull and determining whether or not that trigger pull is a legitimate pull of the trigger by the user, or one that has been caused by the gun bouncing, in which case the algorithm will take steps to stop that bounce by varying the cycle time of the marker.

There are five adjustable parameters associated with the ID FILTER:

DEBOUNCE

This parameter is used to choose from 5 groups of standard filter settings for your Ego and is also used to turn the TT FILTER on or off. The higher the Debounce value, the less the marker is able to bounce.

TPUL

This parameter defines the amount of time that the trigger must be pulled for in order to register a valid trigger pull. The greater the TPUL value, the less the marker is able to bounce.

TREL

This parameter defines the amount of time that the trigger must be released for in order to register a valid trigger release. The greater the TREL value, the less the marker is able to bounce.

BAND HI

This parameter defines the point in the triggers movement at which the ID FILTER begins to register a trigger pull. The greater the BAND HI value, the less

the marker is able to bounce.

BAND LO

This parameter defines the point in the triggers movement at which the ID FILTER begins to register a trigger release. The lower the BAND LO value, the less the marker is able to bounce.

There is one adjustable parameter associated with the TT FILTER:

TT TOLERANCE

This parameter works in conjunction with BAND HI and BAND LO and defines how strictly the TT Filter applies its anti-bounce algorithm. The lower this value is, the less the marker will be able to bounce



SETTING THE DEBOUNCE LEVEL

This parameter is used to set the level of DEBOUNCE (anti-bounce) on your Ego. It can also be used to turn the TT Filter on or off. Selecting the TT option from the available parameters turns the TT Filter on, whilst selecting DEBOUNCE 1-5 turns the TT Filter off.

Scroll through the Filter menu until the DEBOUNCE parameter is displayed.

The current value of the DEBOUNCE setting is shown on the right hand side of the display **see below**.

Press the button to enter the edit function and the edit indicators will appear on the display.



Press and release the button to increase the DEBOUNCE level in increments of 1. Press and hold the button to increase the DEBOUNCE value more rapidly.

Press and release the button to decrease the DEBOUNCE level in increments of 1. Press and hold the button to decrease the DEBOUNCE value more rapidly.

Press to save the DEBOUNCE level and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the FILTER menu.

SETTING THE TRIGGER PULL TIME

Scroll through the FILTER Menu until the PULL parameter is displayed.

The current value of the TRIGGER PULL TIME (PULL) is shown on the right hand side of the display **see below**.

Press the button to enter the edit function and the edit indicators will appear on the display.



Press and release the button to increase the PULL value in 1-millisecond increments. Press and hold the button to increase the PULL value more rapidly.

Press and release the button to decrease the PULL value in 1-millisecond increments. Press and hold the button to decrease the PULL value more rapidly.


Press to save the PULL value and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the FILTER Menu.



SETTING THE TRIGGER RELEASE TIME



Scroll through the FILTER Menu until the RELEASE parameter is displayed.


The current value of the TRIGGER RELEASE TIME (RELEASE) is shown on the right hand side of the display **see below**.

Press the  button to enter the edit function and the edit indicators will appear on the display.



Press and release the  button to increase the RELEASE value in 1-millisecond increments. Press and hold the  button to increase the RELEASE value more rapidly.

Press and release the  button to decrease the RELEASE value in 1-millisecond increments. Press and hold the  button to decrease the RELEASE value more rapidly.


Press  to save the RELEASE value and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the FILTER Menu.



SETTING THE BAND HIGH VALUE



Scroll through the Filter menu until the BAND HI parameter is displayed.


The current value of the BAND HI setting is shown on the bottom right hand side of the display **see below**.

Press the  button to enter the edit function and the edit indicators will appear on the display.



Press and release the  button to increase the BAND HI value in increments of 1%. Press and hold the  button to increase the BAND HI value more rapidly.

Press and release the  button to decrease the BAND HI level in increments of 1%. Press and hold the  button to decrease the BAND HI value more rapidly.


Press  to save the BAND HI value and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the FILTER menu.



SETTING THE BAND LOW VALUE



Scroll through the Filter menu until the BAND LO parameter is displayed.


The current value of the BAND LO setting is shown on the bottom right hand side of the display **see below**.

Press the  button to enter the edit function and the edit indicators will appear on the display.

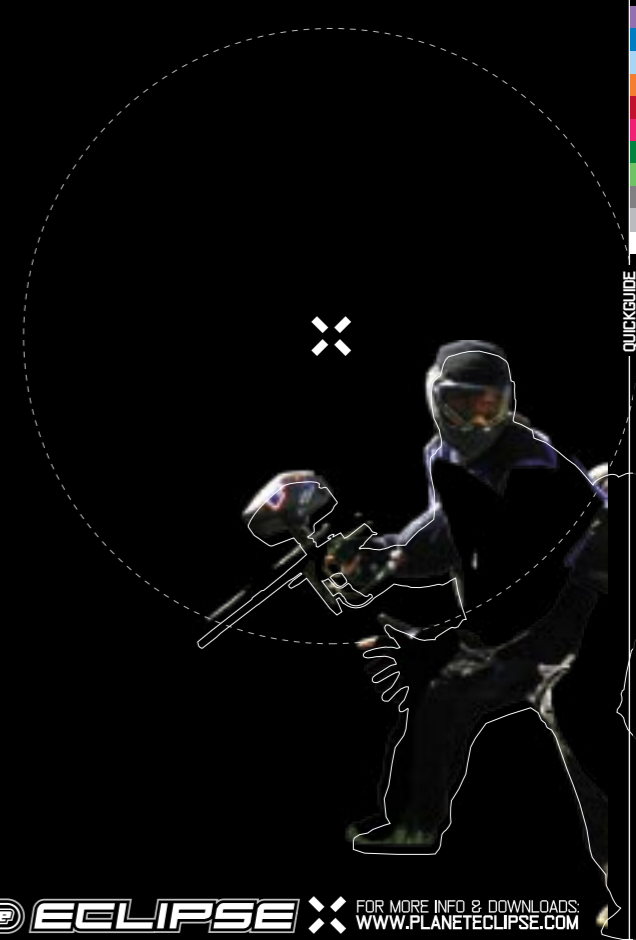


Press and release the  button to increase the BAND LO value in increments of 1%. Press and hold the  button to increase the BAND LO value more rapidly.

Press and release the  button to decrease the BAND LO level in increments of 1%. Press and hold the  button to decrease the BAND LO value more rapidly.

Press  to save the BAND LO value and the edit indicators will disappear from the display to indicate that the value has been accepted.

You have now returned to the FILTER menu.



BASIC TRIGGER FILTER SET UP

95% of trigger bounce problems can be eliminated by utilizing one of the five fixed debounce parameters (Debounce 1-5). In attempting to eliminate trigger bounce it is advisable to try the five fixed debounce parameters before attempting any advanced set up of the trigger filters.

ADVANCED TRIGGER FILTER SET UP

In order to optimize the ID FILTER it is necessary to have the BAND HI parameter set as high as possible and the BAND LO parameter set as low as possible:

1. Select the BAND HI parameter. Observe that the graphical bar rises and falls as the trigger is pulled and released. The actual value of the graphical bar is displayed in the top right of the display.
2. Set the REAR STOP TRIGGER SCREW as required, ensuring that the bar is as close to 100% as possible when the trigger is fully depressed against the set screw. It is advisable to allow for some extra travel in the trigger pull once the bar has reached its maximum value.
3. Adjust the BAND HI parameter so that when the trigger is fully depressed the bar settles above the indicator on the left hand side of the screen [SEE PAGE 36].
4. Select the BAND LO parameter. Observe that the graphical bar rises and falls as the trigger is pulled and released. The actual value of the graphical bar is displayed in the top right of the display.
5. Set the FRONT STOP TRIGGER SCREW as required, ensuring that the bar is as close to 0% as possible when the trigger is fully released against the set screw. It is advisable to allow for some extra travel in the trigger release once the bar has reached its minimum value.

6. Adjust the BAND LO parameter so that when the trigger is fully released the bar settles beneath the indicator on the left hand side of the screen [SEE PAGE 37].

7. Set the MAGNET RETURN STRENGTH SCREW and the SPRING TENSION SCREW as required, making both the spring tension and the return force as strong as possible without compromising the "feel" of the trigger.

Optional (only if TT had been selected in Debounce parameter):


8. Select the TT TOL parameter. With the gun gassed up and preferably fitted with loader and firing paint, try to get the marker to bounce by pulling the trigger very slowly. If the marker bounces, then reduce the TT TOL value until it no longer does so. If the marker does not bounce then increase the TT TOL value until it starts to bounce and then reduce it again until the bouncing stops.

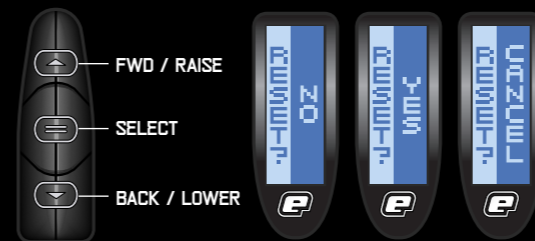
Whilst this set up process should completely eliminate bounce, it may result in a trigger pull that is not ideally suited to the user, in which case it will be necessary to make adjustments to the trigger and then modify the ID FILTER parameters accordingly.



NOTE: THE FASTEST WAY TO SHOOT AN ECLIPSE EGO IS TO WALK THE TRIGGER WITH TWO OR MORE FINGERS. FEATHERING (NOT FULLY RELEASING) THE TRIGGER WILL CAUSE THE FILTERING SYSTEM TO REDUCE THE RATE OF FIRE DOWN IN ORDER TO ELIMINATE WHAT IT PERCEIVES AS TRIGGER BOUNCE.



USING THE RESET PARAMETER


The RESET parameter gives the user a simple way of resetting their Eclipse Ego to the factory default settings; without having to individually go through and adjust each parameter.

Scroll through the Set-up Menu until the RESET parameter is displayed and then press the  button to enter the RESET parameter **see below**.



Press the  button to scroll down through each of the available options. Once the last option has been displayed, pressing the  button will cause the first option to be displayed.

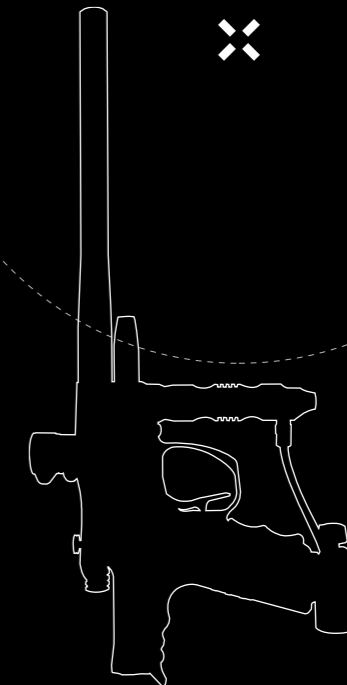
Press the  button to scroll up through each of the available options. Once the first option has been displayed, pressing the  button will cause the last option to be displayed.

Press the  button to select the displayed option.

To reset the Eclipse Ego to factory default settings, select the YES option.

To keep the Eclipse Ego settings the same, select the NO option.

Selecting CANCEL will terminate the selection mode leaving the original choice unchanged and return you to the SET-UP Menu.





MAIN MENU	
OFF DISPLAY	Turn the Eclipse Ego Off.
TIMER	Display the Game Timer
SHOTS	Display the Shot Counter
AVG ROF	Display the Average Rate of Fire
PEAK ROF	Display the Peak Rate of Fire
CANCEL	Return to the Main Menu
TIMER	
GAME	Adjust the Game Timer
ALARM	Adjust the Alarm Time
START	Choose how to start the Game Timer
BACK	Return to the Main Menu
BACK	Return to the Main Menu

SET-UP MENU	
MODE	
SEMI 1	Select Semi 1 Mode
SEMI 2	Select Semi 2 Mode
RAMP 1	Select Ramp 1 Mode
RAMP 2	Select Ramp 2 Mode
RAMP 3	Select Ramp 3 Mode
TRAININ	Select Training Mode
CANCEL	Return to the Set-Up Menu
TIMING	
ROF CAP	Set the Rate of Fire Cap
OFF ROF	Set the Rate of Fire with BBSS disabled
DWELL	Set the Dwell Time
FSDO	Set the First Shot Drop-Off value
BACK	Return to the Set-Up Menu
FILTER	
DBOUNCE	Set the Debounce Setting
EMPTY	Set the Empty Breech Detection Time
BALL	Set the Ball Detection Time
PULL	Set the Trigger Pull Time
RELEASE	Set the Trigger Release Time
BAND HI	Set the Band High Value
BAND LO	Set the Band Low Value
TT TOL	Set the Trigger Transition Tolerance
BACK	Return to the Set-Up Menu
RESET	
NO	Do not reset the Eclipse Ego to Factory Se
YES	Reset the Eclipse Ego to Factory Settings
CANCEL	Return to the Set-Up Menu
BACK	Return to the Regular Display Mode

- SPARES & ACCESSORIES
- GLOSSARY
- PARTS LIST
- SERVICE CENTERS
- FAULT FINDING
- MAINTENANCE
- DISPLAY MENU TREE
- ADVANCED SET-UP
- USING YOUR EGO
- QUICK SET-UP
- ORIENTATION
- CONTENTS

CLEANING THE BREAK-BEAM SENSOR SYSTEM



WARNING: DE-GAS YOUR MARKER, DISCHARGING ANY STORED GAS IN A SAFE DIRECTION, AND REMOVE THE BARREL AND LOADER TO MAKE THE EGO EASIER TO WORK ON.

Undo the retaining screw for the Break-Beam Sensor Cover on the left hand side of the Eclipse Ego using a 5/64th" hex key (SEE FIGURE 6.1)

Remove the Sensor Cover to expose the back of the Break-Beam Sensor unit (SEE FIGURE 6.2). Using a dry Q-tip, carefully remove any debris, paint or moisture from the back of the sensor unit and from inside the Sensor Cover.

Carefully slide the sensor unit down approximately half an inch (SEE FIGURE 6.3), allowing it to be lifted free from the Eclipse Ego body and using another dry Q-tip, remove any grease or debris build-up from the front of the sensor unit (SEE FIGURE 6.4).

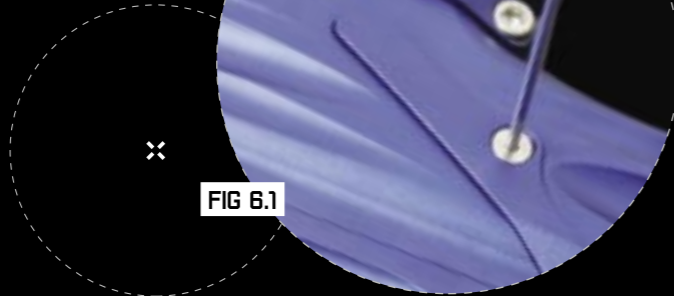


FIG 6.1



FIG 6.2

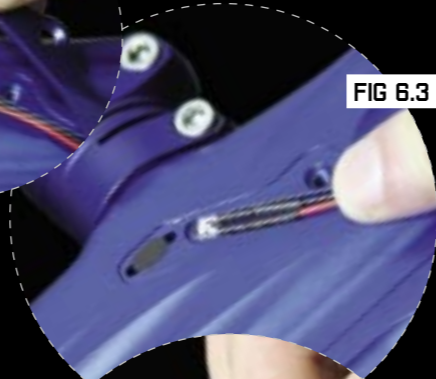


FIG 6.3



FIG 6.4

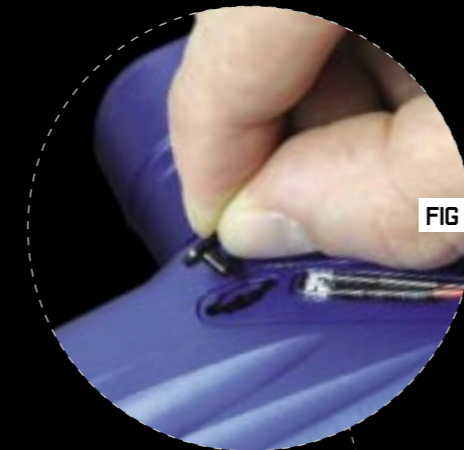


FIG 6.5

Remove the rubber finger detent and using a dry Q-tip clean the detent and it's location point in the Eclipse Ego Body. Replace clean detent back into the Eclipse Ego body (SEE FIGURE 6.5) and slide sensor unit back into place (SEE FIGURE 6.6).

Replace the Sensor Cover and using a 5/64th" hex key, replace the Break Beam Sensor Cover retaining screw to hold the sensor cover in place (SEE FIGURE 6.7).

BE CAREFUL NOT TO CROSS-THREAD THE SCREW. DO NOT OVER TIGHTEN THE SCREW.

Repeat procedure for opposite side of the Eclipse Ego.

You have now cleaned your Break-Beam Sensor System.

NOTE: WHEN CLEANING BREAK-BEAM SENSOR SYSTEM INSPECT CONDITION OF RUBBER FINGER DETENTS AND REPLACE IF NECESSARY. ENSURE THAT THE RECEIVER SENSOR (INDICATED BY A RED MARK & RED HEAT SHRINK) IS LOCATED ON THE RIGHT-HAND SIDE OF THE MARKER BODY.



FIG 6.6



FIG 6.7

Continued >



ECLIPSE



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WWW.PLANETECLIPSE.COM

CLEANING THE INLINE REGULATOR

WARNING: DE-GAS YOUR MARKER, DISCHARGING ANY STORED GAS IN A SAFE DIRECTION, AND REMOVE THE BARREL AND LOADER TO MAKE THE EGO EASIER TO WORK ON.

Disconnect the hosing from your Inline Regulator allowing it to be unscrewed from the Front Regulator Mount (FRM) (SEE FIGURE 6.8).

Turn the Inline Regulator upside down and carefully unscrew the two sections, taking care not to lose any of the washers that form the spring pack inside the regulator (SEE FIGURE 6.9).

By firmly gripping the exposed end of the brass regulator piston, carefully remove the piston and spring stack in its entirety (SEE FIGURE 6.10).

The spring pack comprises of 16 sprung washers, which must be in the correct configuration for the inline regulator to perform at the required pressure range (SEE FIGURE 6.11).

Insert a 1/8th inch hex key into the adjuster screw in the bottom half of the inline regulator, and wind the screw clockwise through the bottom section of the regulator body (SEE FIGURE 6.12) and pull free when it will no longer turn upwards anymore.



FIG 6.8



FIG 6.9

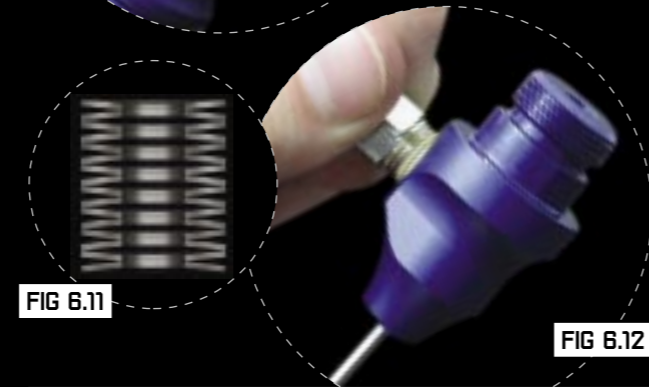


FIG 6.10

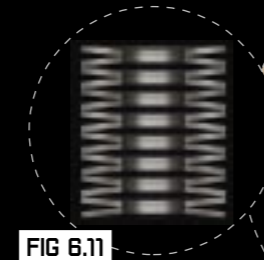


FIG 6.11



FIG 6.12

NOTE: THE ADJUSTER SCREW CAN ONLY BE REMOVED BY TURNING IT UPWARDS THROUGH THE BOTTOM SECTION OF THE INLINE REGULATOR. THE REGULATOR WILL BECOME DAMAGED IF THE ADJUSTER SCREW IS REMOVED INCORRECTLY.

Continued >

Using a dry Q-tip, clean the seal that sits at the top of the body of the bottom section of the Inline regulator (SEE FIGURE 6.13). Using a light oil and a fresh Q-tip, re-lubricate the seal ready for re-assembly.

Thoroughly clean the two o-rings on the adjuster screw and lubricate ready for re-assembly (SEE FIGURE 6.14). Inspect top face of adjuster unit for any excessive wear or damage as this could cause inline regulator to creep (SEE FIGURE 6.15).

NOTE: The sealing face on the inline regulator piston can also cause the regulator to creep or "supercharge", so this should also be checked.

With the threaded section towards to the base of the regulator body, re-insert the adjuster screw into the bottom half of the regulator body (SEE FIGURE 6.16). Apply light pressure to the top of the adjuster screw and using a 1/8th" hex key wind the adjuster screw counter clockwise until it stops at the base of the regulator body. Turn the adjuster screw three and a half turns in a clockwise direction to set the inline regulator pressure at approximately 300 - 350 psi.

Next take the piston and spring stack and clean the seal at the top of the piston, re-lubricating it with a light smear of Vaseline ready for re-assembly (SEE FIGURE 6.17). Insert the piston and spring stack into the top half of the inline regulator body (SEE FIGURE 6.18).



FIG 6.13

Keeping the top half of the inline regulator upside down, screw the two halves of the inline regulator together (SEE FIGURE 6.19).

You have now stripped, cleaned, lubricated and assembled your inline regulator.



FIG 6.14

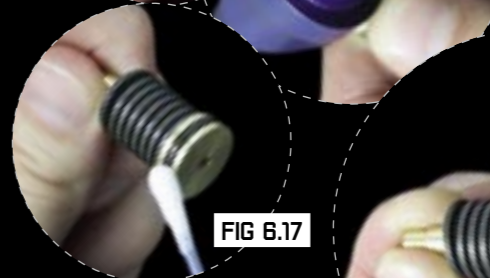


FIG 6.15



FIG 6.16



FIG 6.17



FIG 6.18



NOTE: IF ANY SEALS ARE DAMAGED, REPLACE AS NECESSARY. EXTRA SEALS ARE AVAILABLE IN EGO PARTS KITS AVAILABLE ONLINE AT WWW.PLANETECLIPSE.COM.

CLEANING THE LPR

WARNING: DE-GAS YOUR MARKER. DISCHARGING ANY STORED GAS IN A SAFE DIRECTION, AND REMOVE THE BARREL AND LOADER TO MAKE THE EGO EASIER TO WORK ON.

The Inline regulator can be removed if needs be.

Unscrew the low-pressure regulator cap from the marker body (SEE FIGURE 6.20).

Remove the LPR piston and rear spring from the LPR cap (SEE FIGURE 6.21).

Cupping the palm of one hand, turn the LPR cap upside down and tip the front spring out into your palm (SEE FIGURE 6.22).

Remove the rear spring from the LPR piston and using a dry Q-tip, carefully clean the seal on the LPR piston (SEE FIGURE 6.23). If the seal is damaged, replace as necessary. Once the seal has been cleaned, lubricate with a light smear of Vaseline, so that it is ready for re-assembly.



FIG 6.20



FIG 6.21



FIG 6.22



FIG 6.23

NOTE: THE ADJUSTER PISTON (COLOURED CAP THAT THE FRONT SPRING RESTS IN) DOES NOT NEED TO BE REMOVED FROM THE LPR CAP FOR REGULAR MAINTENANCE.

Continued >

Insert the silver coloured spring into the LPR cap, so that it rests neatly in the adjuster piston (SEE FIGURE 6.24).

Place the gold coloured spring onto the LPR piston and insert piston and spring into the LPR cap, o-ring end first (SEE FIGURE 6.25).

Before screwing the LPR cap back onto your Eclipse Ego, use a dry Q-tip to clean the seal inside the LPR body (SEE FIGURE 6.26). Lubricate this seal using a light 3 in 1 oil.

Replace the LPR cap by screwing it onto the LPR body in the Eclipse Ego (SEE FIGURE 6.27).



FIG 6.24



FIG 6.25



FIG 6.26

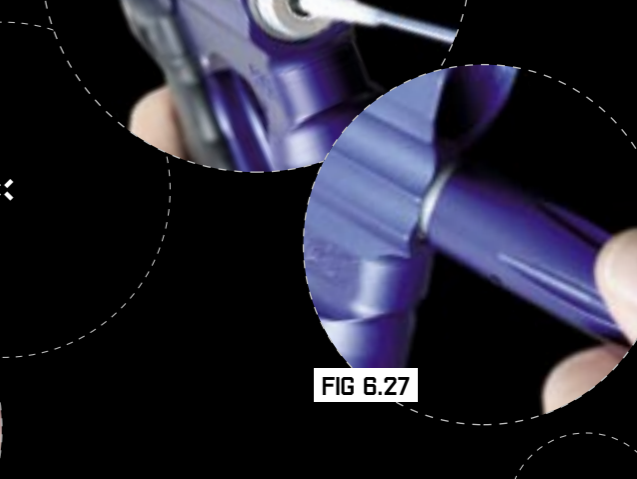


FIG 6.27

CLEANING AND LUBRICATING THE RAMMER

WARNING: DE-GAS YOUR MARKER, DISCHARGING ANY STORED GAS IN A SAFE DIRECTION, AND REMOVE THE BARREL AND LOADER TO MAKE THE EGO EASIER TO WORK ON.

Pull the bolt pin upwards so that it dis-engages the rammer, allowing the bolt to be removed via the rear of the Eclipse Ego (SEE FIGURE 6.28).

Using a 3/16" hex key, unscrew and remove the rammer cap at the rear of the Eclipse Ego (SEE FIGURE 6.29).

Raise the front of the Eclipse Ego and tap the Eclipse Ego onto your hand until the rammer falls into the palm of your hand (SEE FIGURE 6.30).

Thoroughly clean the rammer shaft and all of its seals, paying special attention to the seal on the middle of the shaft (SEE FIGURE 6.31), the rear seal (SEE FIGURE 6.32) and the condition of the bumper at the rear of the shaft (SEE FIGURE 6.33).

Replace any worn seals/bumpers using authentic Eclipse Ego spare parts.

FIG 6.28



FIG 6.29



FIG 6.30



FIG 6.31

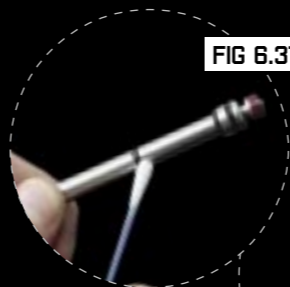


FIG 6.32

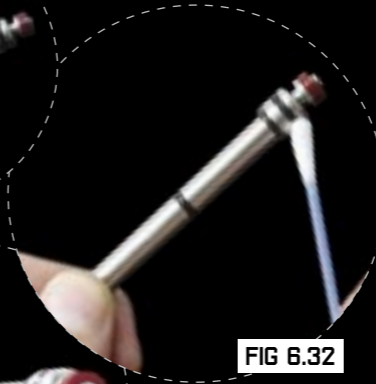
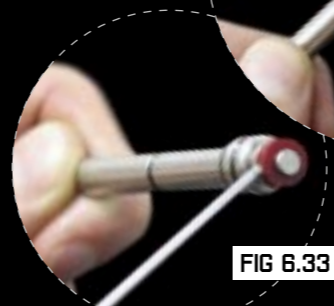


FIG 6.33



Lubricate all of the seals on the rammer shaft and replace the rammer into the rear of the Eclipse Ego body with the bumper at the back (SEE FIGURE 6.34). Note: Use light paintgun oil.

Replace the rammer cap, using the 3/16" hex key to secure it into the Eclipse Ego body (SEE FIGURE 6.35).

Noting the position of the rammer in the Eclipse Ego body (SEE FIGURE 6.36), replace the bolt and locate the bolt pin into the designated groove in the rammer shaft (SEE FIGURE 6.37).

FIG 6.34



FIG 6.36



FIG 6.37



FIG 6.35



Continued >

HOW TO STRIP THE EGO

WARNING: DE-GAS YOUR MARKER, DISCHARGING ANY STORED GAS IN A SAFE DIRECTION, AND REMOVE THE BARREL AND LOADER TO MAKE THE EGO EASIER TO WORK ON.

Remove the bolt and bolt pin, disconnect any hosing and unscrew the inline regulator from the front bottle mount as detailed above.

Using a 5/64th" hex key remove the six screws that attach the Eclipse Ego grips to the Eclipse Ego frame (SEE FIGURE 6.38).

Unplug the solenoid and unplug the Break-Beam sensors from their ports on the Eclipse Ego printed circuit board (SEE FIGURE 6.39).

Using a 1/8th" hex key undo the two frame retaining screws (SEE FIGURE 6.40) and remove the frame from the Eclipse Ego body, taking care not to damage any wires (SEE FIGURE 6.41).

Using a 1/8th" hex key loosen the set screw that retains the frame tag, and slide the frame tag rearwards until it is free from the marker body (SEE FIGURE 6.42).

Free the hose from the barb fitting at the rear of the front regulator mount, using a pick or other suitable implement (SEE FIGURE 6.43).

Carefully lift the low-pressure hose, which runs from the rear Eclipse QEV to the minifold, clear from its groove in the Eclipse Ego body, so that the rammer assembly is ready to be removed from the Eclipse Ego body (SEE FIGURE 6.44).

FIG 6.40



FIG 6.41



FIG 6.42



FIG 6.43



FIG 6.39



FIG 6.44



Continued >

Using a 1/8th" hex key, remove the valve plug from the underside of the Eclipse Ego body (SEE FIGURE 6.45).

Gently slide the rammer assembly rearwards until the minifold lines up with the access slot in the bottom of the Eclipse Ego body. With the Eclipse Ego upside down and facing forward, tilt the solenoid and minifold to the left freeing the right hand side of the minifold allowing both the minifold and solenoid to be freed from the Eclipse Ego body (SEE FIGURE 6.46).

Slide the rammer assembly out of the rear of the Eclipse Ego, remembering to remove the valve and valve spring (SEE FIGURE 6.47).

Remove the exhaust valve and valve spring from the rammer assembly, and inspect the sealing face of both the rammer assembly body and exhaust valve for any excessive wear or damage (SEE FIGURE 6.48). If the exhaust valve or brass bushed valve guide is damaged then replace using authentic Eclipse Ego parts.

FIG 6.45



Taking the Eclipse Ego body, turn it so that the underside of the front regulator mount (FRM) is visible, exposing the retaining screw (SEE FIGURE 6.49). Using a 3/16th" hex key remove the FRM retaining screw and remove the FRM from the Eclipse Ego body (SEE FIGURE 6.50).

Once the FRM has been removed the LPR body is exposed through the bottom of the Eclipse Ego body. Slide the complete LPR out of the Eclipse Ego body (SEE FIGURE 6.51).

You have now stripped down your Eclipse Ego.

FIG 6.46



FIG 6.47



FIG 6.48



FIG 6.50



FIG 6.49



FIG 6.51



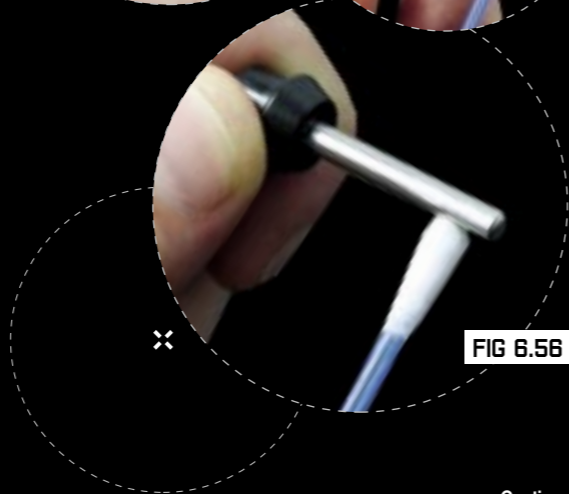
ASSEMBLING THE EGO...

Having stripped down the Eclipse Ego, here is a guide of how best to re-assemble it.

Clean and lubricate the seal at the back of the LPR body (SEE FIGURE 6.52). Slide the entire LPR back into the Eclipse Ego body, so that the bottom of the LPR body lines up with the FRM window in the bottom of the Eclipse Ego body (SEE FIGURE 6.53).

Insert the FRM, ensuring that all of the seals are in the correct place and that the FRM lines up with the bottom of the LPR body (SEE FIGURE 6.54). Using the 3/16th" hex key tighten down the FRM retaining screw to secure both the FRM and LPR in place.

Lubricate the two seals at the front of the rammer assembly (SEE FIGURE 6.55) and lubricate the exhaust valve shaft before inserting exhaust valve into the brass bushed valve guide (SEE FIGURE 6.56).



Continued >

Remembering to include the valve spring, begin to insert the rammer assembly into the Eclipse Ego body, taking care not to damage any of the low-pressure hoses. Line the rammer assembly up so that the manifold can slide into the groove in the bottom of the Eclipse Ego body (SEE FIGURE 6.57).

By applying slight pressure to the back of the rammer assembly (SEE FIGURE 6.58), hold the rammer in place against the exhaust valve spring tension, so that the valve plug can be replaced (SEE FIGURE 6.59).

NOTE: DO-NOT OVERTIGHTEN THE VALVE PLUG SCREW.

Line the low-pressure hose up neatly in the groove provided in the Eclipse Ego body, so that it doesn't get in the way when re-attaching the grip frame (SEE FIGURE 6.60) and attach low-pressure hosing to the barb at the back of the FRM (SEE FIGURE 6.61).

Replace the frame tag, and using a 1/8th" hex key secure the frame tag in place (SEE FIGURE 6.62).

NOTE: DO-NOT OVERTIGHTEN THE FRAME TAG SCREW.



Continued >

...ASSEMBLING THE EGO

Carefully thread the solenoid and Break-Beam Sensor leads through the access hole in the top of the grip frame (SEE FIGURE 6.63), and reattach the grip frame to the marker, tightening the grip frame screws using a 1/8th" hex key (SEE FIGURE 6.64).

Ensure that the Break-Beam Sensor cables lie neatly in the slots provided for them in the Eclipse Ego grip frame (SEE FIGURE 6.65). Connect the solenoid and the Break-Beam Sensors into their relevant places on the Eclipse Ego PCB (SEE FIGURE 6.66) and re-attach the Eclipse Ego grips by securing the six grip screws using a 5/64th" hex key (SEE FIGURE 6.67).

Screw the inline regulator back into the FRM (SEE FIGURE 6.68) and connect any hosing that was disconnected (SEE FIGURE 6.69). Replace bolt and locate bolt pin in the designated groove in the rammer.

You have now assembled your Eclipse Ego.

NOTE: CHECK THAT NO WIRES ARE TRAPPED BEFORE TIGHTENING DOWN THE FRAME SCREWS.

FIG 6.63

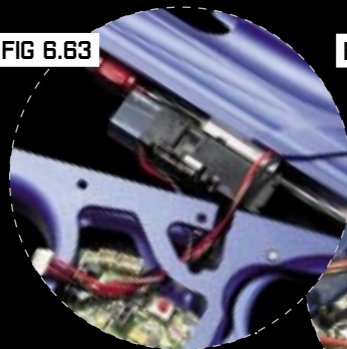


FIG 6.64



FIG 6.65

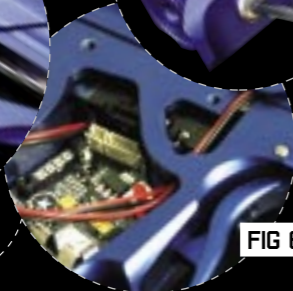


FIG 6.66



FIG 6.67



FIG 6.68



FIG 6.69



CLEANING AND LUBRICATING THE BOLT

This procedure can be performed with the Eclipse Ego gassed up as well as de-gassed.

Raise the bolt pin and remove the bolt and bolt pin from the Eclipse Ego marker body.

Using a dry Q-tip remove any paint or grease from the surface of the bolt (SEE FIGURE 6.70).

Lubricate the bolt and replace the bolt, locking the bolt pin into the designated slot in the rammer.

NOTE: WE RECOMMEND THE USE OF LIGHT PAINTGUN OIL ON THE EGO RAMMER AND BOLT.

✕

FIG 6.70



STRIPPING AND CLEANING THE SOLENOID

Remove the three rubber grip screws from the right hand side of your grip frame and unplug the solenoid and BBSS from the PCB. Remove the two frame screws allowing you to remove your frame, Inline regulator and hosing set-ups from your Ego so that you are left with the solenoid exposed (SEE FIGURE 6.71).

Using a small Philips head screw driver, undo the two solenoid retaining screws (SEE FIGURE 6.72) and remove the solenoid from the manifold taking care not to loose the 3 small o-rings from the face of the manifold.

With the solenoid detached from the manifold, use a small flat instrument to gently lever the two solenoid retainer clips off the solenoid (SEE FIGURE 6.73). This will allow you to split the solenoid into two and access the spool valve.

Using a pair of needle-nose pliers remove the spool from the front section of the solenoid (SEE FIGURE 6.74). Note that it is the flat side of the spool valve facing you when you remove the spool valve. It may be necessary to also remove the front cap of the solenoid to push the spool out, if it cannot be pulled out with the needle nose pliers.

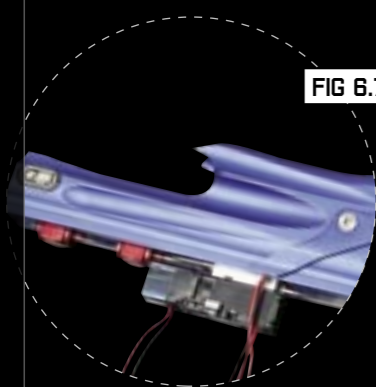


FIG 6.71



FIG 6.72

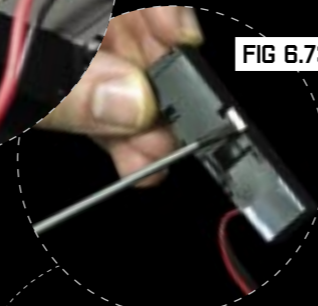


FIG 6.73

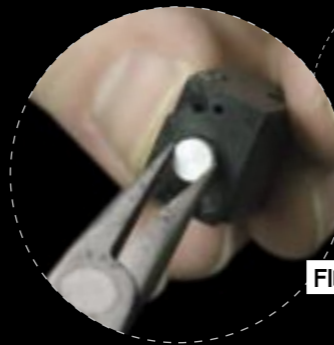


FIG 6.74

Thoroughly clean and inspect the spool and its O-rings for any debris or dirt (SEE FIGURE 6.75). Lubricate the o-rings using Dow 33 or similar lubricant and re-insert the spool into the solenoid body.

FIGURE 6.76 and FIGURE 6.77 show the difference between the flat end of the spool and the raised end of the spool.

Replace the two solenoid retaining clips to the sides of the solenoid body and having ensured that the manifold o-rings are in place; screw the solenoid back into the correct position on the manifold. For reference, the end of the solenoid with the wire attached should be towards the rear of the marker.

Replace the Inline regulator, grip frame and hosing set-up, taking care to feed the solenoid and BBSS leads through the grip frame correctly so that they do not get caught or damaged. Having screwed in the three rubber grip screws to finish the process.

You have now stripped and cleaned your Ego solenoid.

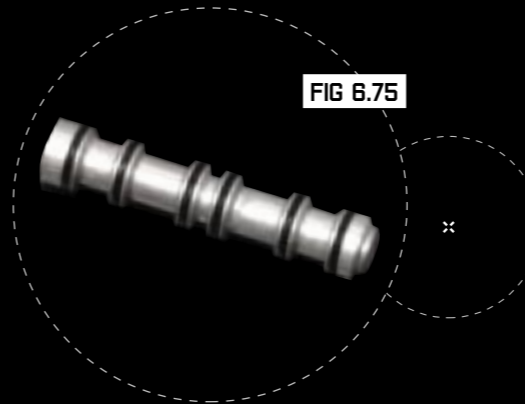
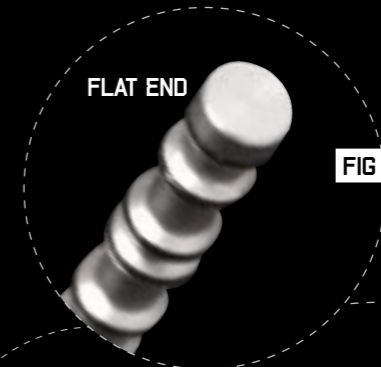
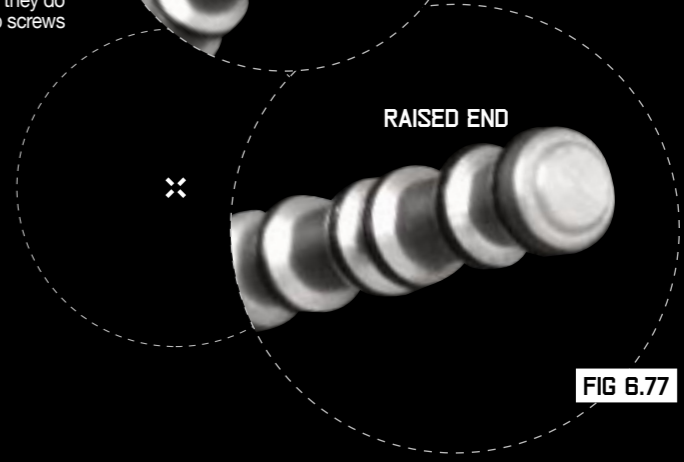


FIG 6.75



FLAT END

FIG 6.76



RAISED END

FIG 6.77

Continued >

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Although a fresh battery has been fitted, the Eclipse Ego will not switch on.	The Battery has been fitted incorrectly.	Fit the Battery correctly with the positive terminal nearest to the side of the frame.
	The Battery terminals are not making proper contact with the battery.	Remove the Battery, gently bend the terminals towards where the Battery will sit and then replace the Battery.
The Battery does not seem to last very long.	The Battery type is of a low quality.	Use an alkaline or metal hydride battery. Do not use a low quality or rechargeable battery.
The Eclipse Ego leaks from the Solenoid	Check that 3 solenoid seals are intact and seated correctly in their designated pockets in the Minifold.	Replace seals if damaged using Eclipse Ego Parts kit. Ensure seals are sealed correctly.
	Dirt on Spool of Ego Solenoid.	Strip and clean Solenoid (See Maintenance Section).
	Damaged Eclipse Ego Solenoid.	Replace Eclipse Ego Solenoid.
	LPR is supercharging causing intermittent leaking.	Clean LPR Piston seal.
		Inspect regulator seal (in LPR Piston) and regulator seat (in LPR Body). Replace if necessary.
	Check for damaged or incorrect seals on Rammer.	Replace seals.
Is it leaking from the Barbs?	Check hose for cuts or replace barbs.	

SYMPTOM	POSSIBLE CAUSE	SOLUTION
The Eclipse Ego leaks down barrel	Leaky Exhaust Valve.	Replace Exhaust Valve.
	Damaged Valve Seat.	Replace Rammer Housing.
	Incorrect seal on front of Rammer Housing.	Replace front seals on Rammer Housing with 016 seals.
Gas vents quickly down barrel as soon as it is gassed up.	The Exhaust Valve has become jammed in the brass valve guide.	Replace Exhaust Valve and brass valve guide as necessary (see Maintenance Section).
The marker is chopping or trapping paint.	The Break-Beam Sensor System is switched off.	Switch on the Break-Beam Sensor System. Increase the breech open time.
	The Bolt is dirty, causing the sensor system to incorrectly detect a retracted bolt.	Clean the Bolt.
	The Break-Beam Sensor System is dirty causing the incorrect detection of paintballs.	Clean the Break-Beam Sensor System.
The Eclipse Ego fires yet bolt doesn't move.	Bolt pin is not located in Rammer correctly.	Lift Bolt pin and line up with position of rammer correctly (See Maintenance Section).

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Rear QEV leaks.	Main Rammer seal is damaged.	Replace 011 seal on Rammer Shaft.
	Faulty seals inside QEV.	Strip QEV and inspect seals for debris or damage.
Front QEV leaks.	Fault Seals inside QEV.	Strip QEV and inspect seals for debris or damage.
The Eclipse Ego does not fire.	Trigger is set up incorrectly.	Set trigger up correctly (See Advanced Set-Up Section).
	Solenoid is not plugged into the Eclipse Ego PCB.	Plug solenoid into port on the Eclipse Ego PCB.
	The Break-Beam Sensor System is enabled but there is no paint.	Fill loader with paint.
Low Velocity First Shot.	FSDO parameter is too low to overcome stiction on Solenoid and / or Rammer O-rings.	Increase FSDO parameter.
High Velocity First Shot.	FSDO parameter set too high.	Reduce FSDO parameter.
	Inline Regulator pressure creeping.	Strip and clean Inline Regulator. Replace Inline Regulator piston if necessary.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
My Trigger is very "Bouncy", how can I reduce it?	Increase the Filter settings.	Check that your trigger pull is within the limits of your BAND HI and BAND LO settings and that your TT TOL suits your current set-up.
	Lengthen and strengthen your trigger pull.	Refer to Advanced Set-Up Section for guidelines of how to adjust your Ego Trigger accordingly.
The Break-Beam Sensor System does not appear to be reading correctly.	The Break-Beam Sensor System is dirty.	Keep the Break-Beam Sensors clean to ensure correct readings (See Maintenance Section).
	Break-Beam Sensors are the wrong way around.	Check that the red receiver is on the right-hand side of the Breech.
The Break-Beam Sensor System is not reading at all.	There is a broken wire or contact, or a short circuit on either of the Breech Sensor ribbon cables.	Check the plug of the cables. Check for cuts or pinches in the sensor cables.
	Either sensor is back to front.	Check that the sensors face each other when installed.
Two or more balls are being fed into the breech.	If the Eclipse Ego is being used with a force feed loader, it is possible that the loader is forcing balls past the ball detent.	Change the rubber finger detent.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Eclipse Ego is inconsistent.	Inline Regulator is supercharging.	Strip and clean Inline Regulator (See Maintenance Section).
Leaking Rammer Assembly (Leak gets louder when bolt is removed).	Front ram shaft seal deteriorated.	Replace front Rammer Shaft seal.
How can I get the best performance out of my gun?	Check your set-up.	Using a force-fed loader (Halo B, VL eVLution II) with the Break-Beam Sensor System enabled will give the highest performance.
Eye turns itself off after firing.	Eye is dirty.	Clean the eyes.
	Eye is faulty.	Replace the eyes.
	Eye is out of place.	Re-Install Eyes. Check alignment.
When the Ego powers up, no game timer / shot counter / rof indicator is displayed and the gun will not fire.	The trigger is permanently depressed.	Turn the front stop set screw in the top of the Trigger counter-clockwise until the display reads correctly. If there is sufficient trigger adjustment then turn the return force set screw counter clockwise also.

CERTIFIED ECLIPSE SERVICE CENTERS



Are you unsure of where to send your Eclipse Ego to be repaired or serviced? If your local Eclipse dealer can't assist you, why not contact your nearest Certified Eclipse Service Center and arrange to send it into them to undertake any work that you require.

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Visit: www.planeteclipse.com

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Email: salesforce@paintball.de
Visit: www.paintball.de

CAMP

Paris - France
Call: ++33(0) 1 42 68 10 00
Fax: ++33(0) 1 42 68 12 96
Visit: www.paintballcamp.com

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Rhode Island - USA
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Fax: 401 247 0931
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Visit: www.planeteclipse.com

PEVS PAINTBALL

Manassas - USA
Call: 703 257 5090
Visit: www.pevs.com

PAINTBALL SUPPLY SHACK

Rhode Island - USA
Call: 401 353 6040

VIP PAINTBALL SUPPLY

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Call: 787 782 9650
Fax: 787 792 4569
Visit: www.vippaintball.com

PAINTBALL CENTRAL

Hawaii
Call: 808 533 0462
Fax: 401 247 0931
Email: ron@pbchawaii.com
Visit: www.pbchawaii.com

VELOCITY PAINTBALL

Southern California - USA
Call: 619 479 3533
Fax: 619 479 3630
Visit: www.velocitypaintball.com

EXTREME SKATE & PAINT

Florida - USA
Call: 305 248 3145
Email: mikecanto1@msn.com

BADLANDS

Canada
Call: 416 245 3856
Fax: 416 245 4517
Email: info@badlandspaintball.com
Visit: www.badlandspaintball.com













DGX PAINTBALL

Northern California - USA
Call: 707 255 5166
Email: dcravea@speakeasy.net

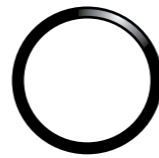




LINKS

WWW.PBNATION.COM
WWW.EGOOWNERS.COM

SCREW SIZE CHART

SCREW	QTY	DESCRIPTION
	x3	PCB SCREW
	x8	RUBBER GRIP SCREW (6), BBSS COVERS SCREW (4)
	x2	FEED NECK SCREW
	x2	FRAME SCREW
	x1	FRONT REGULATOR MOUNT SCREW
	x1	INLINE REGULATOR ADJUSTER SCREW
	x1	TRIGGER PIN SCREW
	x4	TRIGGER ADJUSTMENT SCREW
	x2	SLIDE RAIL SCREW
	x1	VALVE PLUG
	x2	LPR ADJUSTER SCREW (1), BOLT PLUNGER SCREW (1)
	x1	ON / OFF BLANKING PLUG

O-RING SIZE CHART

O-RING	LOCATION
016 	Rammer Housing, LPR Body, Feed Stub.
015 	Bolt O-ring, Inline Regulator piston.
014 	Large O-Ring on top of Front Reg Mount.
013 	LPR Piston.
012 	Adjuster Piston.



PARTS LIST

No.	PART NAME
01	Rammer Housing
02	Valve Guide
03	Rammer Housing O-Ring
04	QEV
05	Rammer Cap
06	Rammer Cap O-Ring
07	Valve Plug
08	Rammer Shaft
09	Front Rammer O-Ring
10	Front Rammer Bumper O-Ring
11	Rear Rammer O-Ring
12	Rear Rammer Bumper
13	Exhaust Valve Assembly
14	Ego Solenoid
15	Ego Minifold
16	Ego Minifold Barb
17	Ego Solenoid Retaining Screw
18	Ego Low Pressure Hose
19	LPR Cap
20	LPR Adjuster Screw
21	LPR Piston
22	LPR Piston O-Ring
23	Adjuster Piston
24	Adjuster Piston O-Ring
25	LPR Spring Heavy (Gold)
26	LPR Spring Light (Silver)
27	9 Volt Battery
28	Front Regulator Mount
29	FRM Barb
30	FRM Main Seal
31	LPR Inlet/Outlet
32	LPR Body
33	LPR Body O-Ring
34	LPR Body Groove O-Ring
35	FRM Bolt
36	Frame Tag
37	Ego Frame
38	Ego Trigger
39	Ego Printed Circuit Board
40	Magnet
41	Ego Trigger Adjuster Screw
42	Ego Trigger Pin Locking Screw
43	Push Button
44	Display Window
45	Ego PCB Screw
46	Ego Grip Screw
47	Navigation Console
48	Ego Frame Screw
49	Ego Trigger Pin
50	Ego Sensor Cover (Left)
51	Ego Sensor Cover (Right)
52	Ego Cover Screw
53	Ego Break-Beam Sensor System
54	Inline Regulator Top
55	Inline Regulator Bottom
56	Inline Regulator Piston
57	Inline Regulator Piston O-Ring
58	Inline Regulator Belleville Spring
59	Inline Regulator Adjuster
60	Inline Regulator Adjuster O-Ring
61	Inline Regulator Top O-Ring
62	Anti-Double Ball Finger
63	Ego Valve Spring
64	Ego Bolt
65	Ego Bolt Pin
66	Ego Bolt Plunger
67	Ego Bolt Plunger Spring
68	Ego Bolt Spring Retaining Screw
69	Ego Bolt O-Ring
70	Ego Clamping Feed Tube
71	Ego Clamping Feed Tube Screw
72	Ego Clamping Feed Tube O-Ring
73	EgoShaft Solo Barrel
74	Ego 06 Body
75	1/4" Elbow
76	1/4" Hose

ACCESSORIES

77	Ego Comprehensive Spares Kit
78	Ego Detent Kit
79	Ego Contrast Colour Upgrade Kit
80	Ego D.A.R.T Bolt
81	Ego Star FRM & LP Gauge
82	Ego Star Swivel Inline Reg
83	Ego Nexus Bolt
84	Ego Star Frame
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ALARM

ALARM refers to adjusting the Alarm Timer in the TIMER Menu.

AVG ROF

AVG ROF refers to the average Rate Of Fire screen in the DISPLAY Menu

BALL

BALL refers to the Ball detection time, a feature of the Filter section of the Set-up Menu.

BAND HI

BAND HI Refers to the higher of the two BAND settings in the FILTER Menu.

BAND LO

BAND LO Refers to the lower of the two BAND settings in the FILTER Menu.

BARREL CONDOM

A safety device, that when used properly restricts paintballs from leaving the end of the barrel, when fired unintentionally.

BBSS

An abbreviation for the Break Beam Sensor System.

CHRONOGRAPH

A device that is used to measure the speed of the paintballs being fired from your Eclipse Ego.

DETENT

A device to prevent more than one paintball being loaded into the breech. In Egos case dual rubber finger detents.

DWELL

The amount of time that the exhaust valve is held open by the rammer.

ECLIPSE

The custom house and now manufacturers of the Eclipse Ego.

EGO

The first Eclipse Genuine Original marker.

EMPTY

EMPTY refers to the Empty Breech detection time, a feature of the Filter section of the Set-up Menu.

FACTORY

FACTORY refers to the Factory Settings Menu in the Set-up Menu

FRAME TAG

A small rectangular component that slides underneath the rammer assembly allowing the rear frame screw to be attached.

FRM

The Front Regulator Mount (FRM) allows the inline regulator to be connected to the Eclipse Ego and splits the air supply between the valve and the LPR.

FSDO

FSDO refers to First Shot Drop Off, a feature of the Timing section of the Set-up Menu.

GAME

GAME refers to adjusting the Game Timer in the TIMER Menu.

INLINE REGULATOR

The inline regulator regulates the gas flow from your air system into the Eclipse Ego. The Inline regulator setting also determines the velocity of your Eclipse Ego.

LCD

The Liquid Crystal Display that is on the rear of the Eclipse Ego grip frame.

LPR

The Low Pressure Regulator (LPR) controls the amount of air directed via the solenoid to the rammer.

PEAK ROF

PEAK ROF refers to the Peak Rate of Fire screen in the DISPLAY Menu.

ROF CAP

ROF CAP refers to the adjustable Rate Of Fire cap in the timing menu.

OFF ROF

OFF ROF refers to the adjustable Rate Of Fire when the BBSS is disabled, as featured in the timing menu.

PCB

An abbreviation for the Printed Circuit Board.

PULL

PULL refers to the Trigger Pull time in the Filter Menu.

RAMMER

A combination ram and hammer assembly utilised in the Eclipse Ego.

RELEASE

RELEASE refers to the Trigger Release time in the Filter Menu.

ROF

ROF refers to the Rate of Fire display, a feature of the Main Menu.

SEMI

SEMI refers to Semi-automatic mode in the Mode Menu.

SHAFT SOLO

14" one-piece barrel that is included with the Eclipse Ego.

SHOTS

SHOTS refers to the Shot Counter, a feature of the Main Menu.

SOLENOID

The solenoid controls the air supply to either side of the rammer.

START

START refers to choosing your preferred Game Timer start method in the TIMER Menu.

TIMER

TIMER refers to the Game Timer Menu, a feature of the Main Menu. It also applies to viewing the Game Timer when using the DISPLAY Menu.

TT TOL

TT TOL refers to the Trigger Transition Tolerance setting in the Filter Menu.

VELOCITY

The speed at which a paintball is fired from your Eclipse Ego.

EGO CCU KITS
CONTRAST COLOUR UPGRADE KITS.
 This unique kit allows you to swap and customize the look of your Ego marker by replacing these key components.



CREATE YOUR OWN STYLES!

Various colours available.



D.A.R.T. BOLT.

Players are constantly looking to shoot more fragile paint. The Ego D.A.R.T (Dyanmic Air Release Technology) Bolt has been designed to help achieve just that.

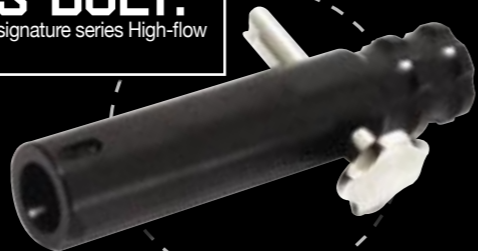
CLEVER FEED.

Makes fitting your loader a breeze. Available in various colours.



NEXUS BOLT.

The Nexus team signature series High-flow Ego Bolt.



STAR SWIVEL INLINE REG.

Taking the excellent Ego Inline Regulator internals and performance and packaging it up in a unit with a swivel collar.

DETENT KIT.

10 Replacement rubber Detents for your Eclipse Ego.



STAR FRONT REG MOUNT+LP GAUGE.

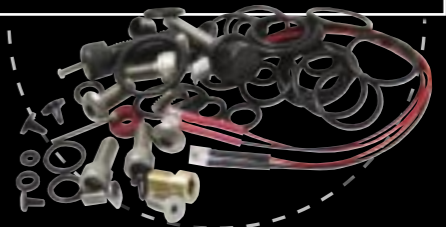
The STAR FRM replaces your standard EGO FRM and allows you to monitor your LPR pressure.



Various colours available.

COMPREHENSIVE SPARES KIT.

Kit features a combination of all the required spares for Eclipse Ego.



SPARES & ACCESSORIES

- GLOSSARY
- PARTS LIST
- SERVICE CENTERS
- FAULT FINDING
- MAINTENANCE
- DISPLAY MENU TREE
- ADVANCED SET-UP
- USING YOUR EGO
- QUICK SET-UP
- ORIENTATION
- CONTENTS

QUICKGUIDE

